

# GMK I

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# *Section 1*





**Welcome to**



**GMK Level I**



# GROVE®

## *A History of the Recent Cranes of Krupp and Deutsche Grove*



**The Krupp** family formerly owned and operated steel and armament plants in Germany's industrial Ruhr region. As arms manufacturers, the Krupps provided crucial support for Prussia's and Germany's military ventures in the 19th and 20th centuries.

Founded in 1811, the firm rose to prominence under Alfred Krupp (1812-1887), who in 1851 produced a cannon of pure steel at his factory in Essen. Krupp, who soon became known as the Cannon King, acquired a virtual monopoly on supplying Prussia with arms. At the same time the firm benefited from the expanding railroad construction; a weldless steel railroad wheel that the Krupp factory turned out proved especially profitable.

After the unification of Germany in 1871, the firm became the chief arms supplier of the German Empire, often keeping ahead of the military in the development of new weapons. **The best-known Krupp cannon was "Big Bertha" of World War I fame**, which hurled one-ton shells a distance of more than 15 km (9 mi).

By then the firm had passed first to Friedrich Krupp (1854-1902) and then, after his apparent suicide over a scandal, to his daughter Bertha (1886-1957), although her husband, Gustav Krupp von Bohlen und Halbach (1870-1950), actually ran the operation. Under Friedrich, an exceptionally skillful businessman, the house of Krupp extended its dealings all over the world. The accelerating naval armaments race of the pre-World War I period proved a special boon to the firm. Krupp also became known for its beneficent social policies, providing low-cost housing and food, financial aid, and a pension fund for its workers.

After World War I the firm concentrated on nonmilitary production, from railroad equipment to stainless-steel dentures. Secretly, however, it also manufactured weapons that were banned by the disarmament provisions of the Versailles peace treaty, and it developed new ones against the day when Germany could once again become a military power.

The firm participated wholeheartedly in Adolf Hitler's rearmament drive in the 1930s. During World War II some 70,000 forced laborers and concentration camp inmates toiled for Krupp under inhuman conditions. The firm even set up a concentration camp for the children of these laborers. Alfred Krupp von Bohlen und Halbach (1907-1967), the son of Gustav and Bertha, ran the firm during the war; after the defeat of Nazi Germany, he was sentenced by the Allies to 12 years' imprisonment as a war criminal but was released in 1951. The concern was then returned to the family, which retained control of it until 1968, when it became a corporation.

- 1902 - Ardelts works (engineering design) in Eberswalde, Northeast of Berlin. Began manufacturing cranes of all types in the early days.
- 1945 - Ardelts works moved to Wilhelmshaven
- 1953 - Krupp GmbH in Essen acquired 51% majority share
- 1954 - Renamed Krupp - Ardelts GmbH
- 1964 - Krupp acquires remaining shares and incorporates the company into the group
- 1983 - Renamed Krupp Industries GmbH
- 1987 - Takeover Gottwald Kranetechnologie, supplementing the range of mobile cranes up to 1,000 tonnes. AMK becomes KMK. (Krupp bought the hydraulic division of Gottwald and Demag bought the lattice division).
- 1995 - Krupp Mobilkrane GmbH acquired by Grove Worldwide



Deutsche Grove On The North Sea  
Wilhelmshaven, Germany



## GMT Model History “Gummy Mobile Telescopic” *used until 1989*

<u>European</u>	<u>North America</u>	
<u>Designation</u>	<u>Capacity</u>	<u>Comments</u>
22GMT / AT		
25GMT / AT		
30GMT / AT		
35GMT / AT		
60GMT / AT	80 Tons	
70GMT / AT	80 Tons	Became KMK4070 (axles & springs)
100GMT	120 Tons	
100GMT / AT	130 Tons	
140GMT / AT	165 Tons	Became KMK6140
180GMT	250 Tons	
220GMT	365 Tons	
250GMT	365 Tons	
350GMT	450 Tons	Became KMK8350
500GMT	650 Tons	5 Built

**25 GMT / KMK2025**



- 24-76 ft Boom
- Deutz or Mercedes Power
- Some in North America

**60 GMT (old version)**



- With Faun Carrier
- May be a few in South America and the Islands

**100 GMT**



**80 GMT and 120 GMT**

- Early Truck Cranes
- None in North America



- 42-137 ft Boom
- Smallest Krupp with Luffing Jib
- Approx. 40 in North America

## 120 GMT with Faun Carrier



None in North America

## 140 GMT



Basic Truck Crane



Special Version for German Brown Coal Mines



None in North America  
Model Designation

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## **140 GMT/AT / KMK6140**

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- 48-151 ft Boom
- Rigid Axles with hydrogas
- Many Brought Into North America



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## **180 GMT**

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- 46-144 ft Boom
- Many In North America

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## **250 GMT**

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- 54-172 ft Boom
- 365 ton US Capacity
- Approx. 8 In North America

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## **350 GMT / KMK 8350**

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- 55-171 ft Boom
- Tilt Cab
- Approx. 8 in North America





# 500 GMT

- 5 Built: 1984-89
- None in North America

**650 US ton capacity; 61-187 ft boom**



**Superlift**



**236 ft Luffing Jib**

## **KMK Model History** “Krupp Mobile Krane” *used from 1989 - 1996*

<u>European Designation</u>	<u>North America Designation</u>	<u>Comments</u>
KMK2025	KMK2025	
KMK2035	KMK2035	
KMK3035	KMK3035	
KMK3040	KMK3040	
KMK3045	KMK3045	
KMK3050	KMK3050	
KMK4055	KMK4060	
KMK4070	KMK4070	Series II (Rigid axles with hydrogas, two engines) MEGATRAK (Without super engine) MEGATRAK (Super Hyd. drive motor/pump)
KMK4071	KMK4080	
KMK4072	KMK4085	
KMK4080	KMK4100	Same as GMK4080 / 4100
KMK5090	KMK5110	
KMK5091	KMK5110	Different SS and CW from 5090
KMK5092	KMK5120	Larger carrier than 5091, Same SS as 5091
KMK5100	KMK5130	Same as 100GMT / AT
KMK5110	KMK5125	
KMK5110-1	KMK5130	
KMK5120	KMK5150	Same as GMK5120 / 5150
KMK5140	KMK5175	Same LC as KMK5160



## **KMK Model History** “Krupp Mobile Krane” *used from 1989 - 1996*

(Continued)

<u>European</u> <u>Designation</u>	<u>North America</u> <u>Designation</u>	<u>Comments</u>
KMK5160	KMK5175	Same LC as KMK5140
KMK6140	KMK6140	165 US Tons: had two different booms
KMK6160	KMK6190	Same: 6160 / 6180 / 6190 Early Tele Control
KMK6180	KMK6190	Same: 6160 / 6180 / 6190 Early Tele Control
KMK6190	KMK6225	Same: 6160 / 6180 / 6190 Early Tele Control
KMK6200	KMK6275	Ribs on outside of boom
KMK6201	KMK6300	Smooth Boom
KMK7200	KMK7275	Only one built (6200 on 7-axle carrier)
KMK7250	KMK7300	
KMK8350	KMK8450	Same as 350 GMT
KMK8400	KMK8500	Corrugated boom (Gottwald)
KMK11000	N/A	Only 1 exists (Germany)

## **KMK 2020**

- One “Double” Cab
- 1 or 2 in North America



## ***KMK 2025 “Hi-wheeler”***

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- Hydrostatic Drive
- Approx. 34 in North America
- Canadian Military Has 24

## ***KMK / GMK 2035***

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**6 In North America (recently sold)**

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## **KMK 3045**

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- 33-105 ft Boom
- Single Engine
- 25 in North America  
(sold new and used)



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## **KMK 4060 / 4065**

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- 36-115 ft Boom
- Approx. 30 in North America

## ***KMK 4070 / 70 GMT***

- 38-122 ft Boom
- 2 Engines
- Approx. 20 in North America



## ***KMK 4080 / 4100***



- Komatsu Version maybe the only NON-Japanese crane sold into Japan
- Had some special features, such as a special Rotec bearing for quick un-decking
- 6 made (1 destroyed in fire) All 5 remaining are now in North America
- Commercial Version of 4080 / 4100: Approx. 30 in North America

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## ***KMK 5090 / 5110***

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- 135 ft Boom
- 125+ units in North America



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## ***KMK 5110 / 5125***

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**44-166 ft Boom**



## ***KMK5100 / 5130***

- 43-139 ft Boom
- Axles with Hydrogas

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## **KMK 5120 / 5150**

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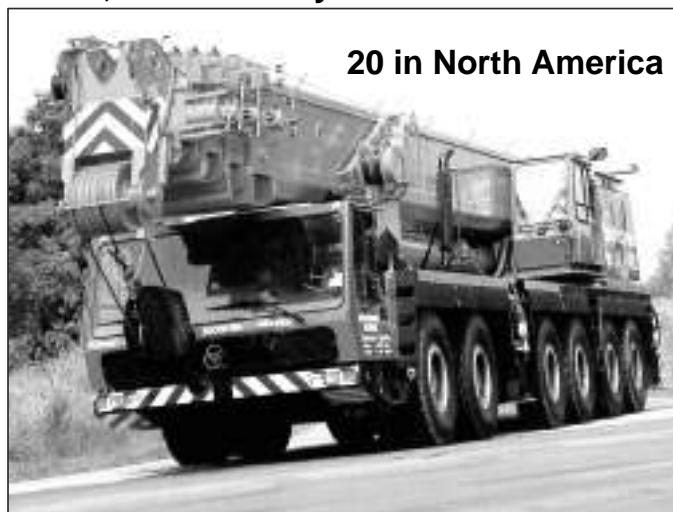
- 44-166 ft Boom
- Approx. 15 in North America

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## **KMK 6160 / 6190    KMK6180 / 6225**

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“Skymaster” Boom: Single cylinder walks inside the boom to extend sections, controlled by “Tele-controller”.



KMK6160 was upgraded to 6180 / 6225 with an updated Tele-controller which allowed additional boom lengths and more capacity.

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## ***KMK6200 / 6275***

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**174 ft Boom  
184 ft Luffing Jib**

**Approx. 25 in North America**

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## ***KMK8400 / 8500***

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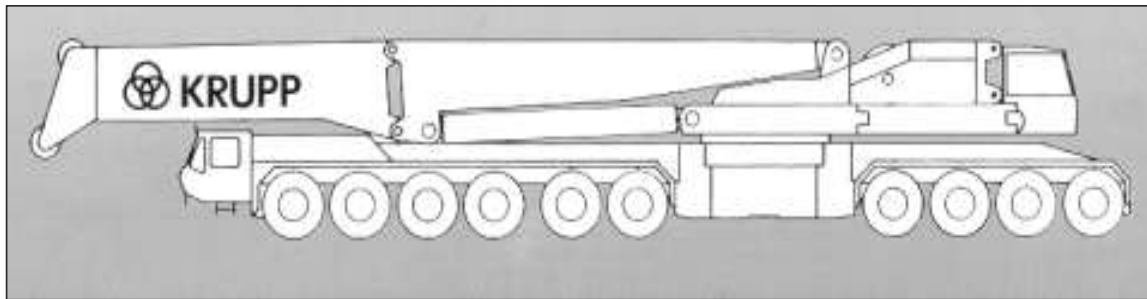


- **53-161 ft Boom**
- **253 ft Luffing Jib**
- **3 in North America, 1 in South America**

## ***KMK 11000***

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- 203 ft Boom
- 236 ft Luffing Jib
- 20k lbs at 275 ft radius
- Largest hydraulic crane ever produced
- Only 1 in existence (Europe)





# Miscellaneous Krupp Models

## **12 GMT** Early Krupp Industrial

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**The Grandfather  
of the YardBoss?**



## ***Rough Terrain***

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**10-25 Tonne Capacity**



## ***Military***

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**Early 25 GMT for  
German Army**



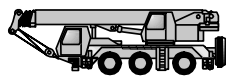
# ***Krupp Rail Crane***

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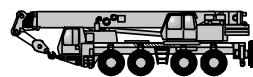


**GROVE®**

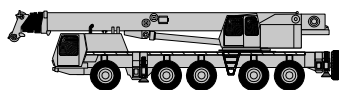
**2002  
All Terrain  
Product Line**



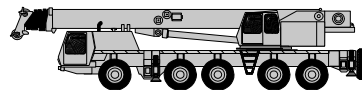
**GMK3050**



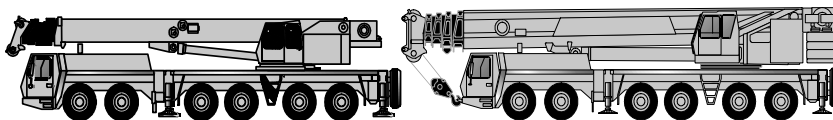
**GMK4090**



**GMK5120B**



**GMK5240**



**GMK6250 / L**

**GMK6350**

**NEW!**

**GMK7550**



# GMK 3050

**55 US Ton Capacity**



**32-125 ft  
5-section full-power  
Max tip height 133 ft  
w/capacity of 17,400 lbs**

**28.5-49 ft Bi-Fold Lattice  
or  
28.5-49 ft Tele swingaway  
Both with hydraulic  
luffing capabilities  
Max tip height of 181 ft**



**Mercedes OM401LA  
Turbo-charged after-cooled**

**Drive:**

**6 x 4 x 6 or 6 x 6 x 6**



**Allison MD3060 6-speed  
Automatic**



<b>Boom :</b>	<b>142 ft 5-section, MEGAFORM, TWIN-LOCK boom pinning system</b>
<b>Extension:</b>	<b>33-56 ft bi-fold swingaway Hydraulic luffing 0 - 40 degrees 20 ft insert</b>
<b>Counterweight:</b>	<b>35,000 lbs power installed and removed</b>
<b>Engine:</b>	<b>Mercedes OM501 LA 422 hp</b>
<b>Transmission:</b>	<b>12-speed ZF ASTRONIC Auto Trans system Single speed transfer case</b>
<b>Suspension:</b>	<b>MEGATRAK</b>
<b>Drive steer:</b>	<b>8x6x8 (axle 2 steer only) Optional 8x8x8</b>



42-167 ft 5-Sec. full-power MEGAFORM boom with TWIN-LOCK boom pinning system  
177 ft Maximum hook height with capacity of 29,200 lbs

5,400 lbs capacity at 150 ft Maximum working radius

- 85 -112 ft Jib (0°, 20°, 40°) (59 ft swingaway + 26 ft fixed inserts)
- Max capacity @ max hook height 4,800 lbs @ 289 ft
- Max capacity @ max radius 1,600 lbs @ 220 ft

## **GMK5120B Boom / Swingaway / Jib**



**10x8x10  
drive/steer**



**Mercedes Benz OM502LA 470 HP  
Daimler Chrysler G 240-16  
Electronic Automatic Shifting  
(EAS) 16 forward 2 reverse**



**Cab tiltable by approximately 20°  
EKS 4 LMI  
Dual-axis joysticks  
Sliding left-side window  
Opening shatter-resistant skylight  
Opening windscreen  
Sliding rear window**



**GMK  
5200  
5240**

**240 US Ton Capacity**





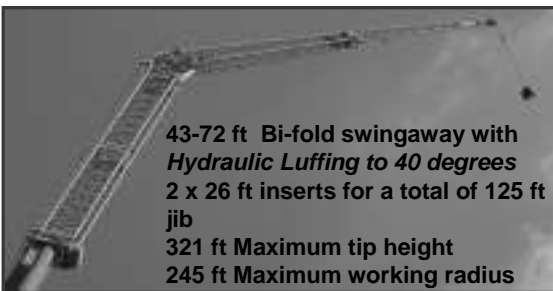
10 x 8 x 10 Drive/Steer  
1, 2, 4 & 5 Driven  
1, 2, 3 & 5 Steered on-road  
Choice of Cummins or Mercedes Power  
with Allison Automatic Trans

**44-197 ft 6-Section full-power MEGAFORM boom with TWIN-LOCK boom pinning system**

**Main Boom:**

**197 ft Maximum hook height w/ 38,800 lb capacity**

**180 ft Maximum working radius w/ 8,600 lb capacity**



43-72 ft Bi-fold swingaway with Hydraulic Luffing to 40 degrees  
2 x 26 ft inserts for a total of 125 ft jib  
321 ft Maximum tip height  
245 ft Maximum working radius

Cab tiltable by approximately 20°  
**EKS 4 LMI**

Dual-axis joysticks  
Sliding left-side window  
Opening shatter-resistant skylight  
Opening windscreen  
Sliding rear window



**GMK  
6220  
6250**

**250 US Ton Capacity**

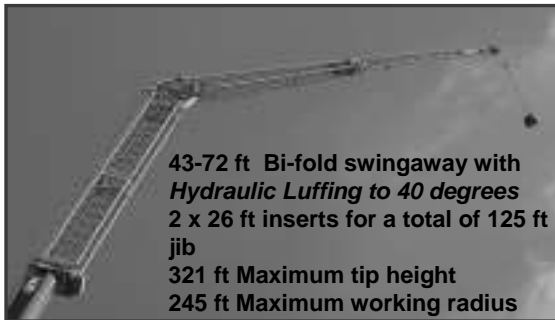


Drive / Steer: 12 x 8 x 12 Drive axles: 1,2,4 & 5  
The **ONLY** 6-axle all-wheel steer AT on the market  
Choice of Cummins or Mercedes Power with Allison Automatic Trans.

44-197 ft 6-Section full-power  
MEGAFORM boom with TWIN-LOCK  
boom pinning system  
197 ft Maximum hook height  
180 ft Maximum working radius



Removable rear outrigger box w/*Cummins* power  
Developed for North American roading laws



43-72 ft Bi-fold swingaway with  
*Hydraulic Luffing* to 40 degrees  
2 x 26 ft inserts for a total of 125 ft  
jib  
321 ft Maximum tip height  
245 ft Maximum working radius

**GROVE®**  
**GMK**  
**6220L**  
**6250L**

**250 US (220 Metric) Ton Capacity**

**GMK6220 / 6250-L**



**Drive / Steer: 12 x 6 x 12 (12 x 8 x 12 OPT)**  
*Grove offers the ONLY 6-axle all-wheel steer all terrain cranes!*



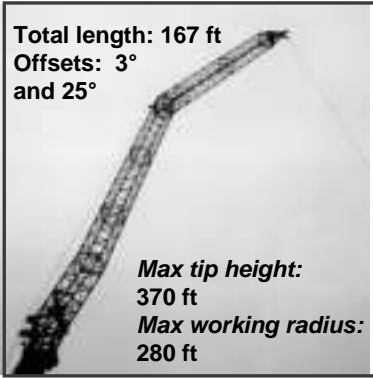


51-197 ft 5-Section MEGAFORM boom with TWIN-LOCK boom pinning system  
 207 ft Max tip height  
 180 ft Max working radius

Luffing jib: 200 ft total length  
 Max tip height: 371 ft  
 Max working radius: 240 ft

**Fixed offset Jib**

Total length: 167 ft  
 Offsets: 3° and 25°



Max tip height: 370 ft  
 Max working radius: 280 ft



Removable rear outrigger box w/ Cummins power



Drive/Steer: 12 x 6 x 12  
 Drive axles: 1,4,& 5  
 Choice of Cummins or Mercedes Power

**GROVE**  
 GMK  
 7450  
 7550



**550 US (450 Metric) Ton Capacity**

# GMK7550



- MEGAFORM / TWIN-LOCK Boom
- 52.5-197 ft (16m-60m) 5-Section



**Stowable SS Cab**



- Removable rear outrigger box
- Developed for North American roading laws



Tag axle option which can be pinned in place of the rear outrigger box for improved roading

- To avoid confusion always ask for details from data plate located on the front or side of the superstructure cab.
- The serial number has 8 digits. The first four digits are the model type - DO NOT accept the remaining 4 digits as a serial number.
- Always ask for the complete 8 digit number.
- 70 tonne models present most problems, sometimes customers are unsure what it is other than 70 tonnes capacity.
- There are now five (GMT-AT- 1, KMK-3, GMK-1) 70 tonne versions.
- With 70 tonne models there are two versions pre-Megatrak.
- Superstructure engine confirms pre-Megatrak.
- Pre-Megatrak = with conventional axles
- Of the two pre-Megatrak models, one has springs=70 GMT-AT and the other suspension cylinders=KMK4070.
- There are three Megatrak versions,
  - 1= KMK 4070 (4071 technical reference)  
Megatrak without super engine
  - 2= KMK 4070 (4072 technical reference)  
Megatrak with superstructure hydraulic drive (motor/pump).
  - 3= GMK 4070-1 (as data plate)

## GMT Model History

Gummy Mobile Telescopic  
*used until 1989*

European Designation	North America Designation	Comments
22GMT/AT		
25GMT/AT		
30GMT/AT		
35GMT/AT		
60GMT/AT	80 Tons	
70GMT/AT	80 Tons	Became KMK4070 (axle & springs)
100GMT	120 Tons	
100GMT/AT	120 Tons	
140GMT/AT	165 Tons	Became KMK6140
180GMT	250 Tons	
220GMT	365 Tons	
250GMT	365 Tons	
350GMT	450 Tons	Became KMK8350
500GMT	650 Tons	5 Built

## KMK Model History

Krupp Mobile Krane

*used from 1989 - 1996*

European Designation	North America Designation	Comments
KMK2025	KMK2025	
KMK2035	KMK2035	
KMK3035	KMK3035	
KMK3040	KMK3040	
KMK3045	KMK3045	
KMK3050	KMK3050	
KMK4055	KMK4060	
KMK4070	KMK4070	Series II ( Ridge axles w/hydragas two eng
KMK4071	KMK4080	Megatrak ( Without super eng)
KMK4072	KMK4085	Megatrak ( Super Hyd. Drive motor/pump )
KMK4080	KMK4100	Same as GMK 4080/4100
KMK5090	KMK5110	
KMK5091	KMK5110-1	Different S/S and CW from 5090
KMK5092	KMK5120	Larger carrier than 5091, Same S/S as 5091
KMK 5100	KMK5130	Same as 100GMT/AT
KMK5110	KMK5125	
KMK5120	KMK5150	Same as GMK 5120 / 5150
KMK5140	KMK5175	Same LC as KMK5160
KMK5160	KMK5175	Same LC as KMK 5140
KMK6140	KMK6140	165 US Tons : had two different booms
KMK6160	KMK6190	Same: 6160/6180/6190 Early Tele Control
KMK6180	KMK6190	Same: 6160/6180/6190 Early Tele Control
KMK6190	KMK6225	Same: 6160/6180/6190 Early Tele Control
KMK6200	KMK6275	Ribs on outside of boom
KMK6201	KMK6300	Smooth boom
KMK7200	KMK7275	Only one built 6200 on 7 axle carrier

## GMK Model History

Grove Mobile Krane

*used since Sept. 1996*

European Designation	North America Designation	Comments
GMK2020	GMK2020	None in N.A.
GMK4072	GMK4085	1 piece CW-Same as KMK4072
GMK4073	GMK4085	2 piece CW
GMK4070-1	GMK4085B	Fully removable CW
GMK4075	GMK4090	Intro 2001
GMK5110-1	GMK5110B	Known as 5130 and 5140 by some
GMK5120	GMK5150	Same as KMK5120/5150
GMK5130	GMK5150B	
GMK5130L	N/A	Long boom version of GMK5130
GMK5160	GMK5175	Same as KMK 5160/5175
GMK6180	GMK6190	Same as KMK 6180/6190
GMK6201	GMK6300	Same as KMK 6201/6300
GMK6250/L	GMK6300B	Long boom version intro 2002
GMK7250	GMK7300	Same as KMK7250/7300
GMK7450	GMK7550	Intro in 2002

# GMK Nomenclature



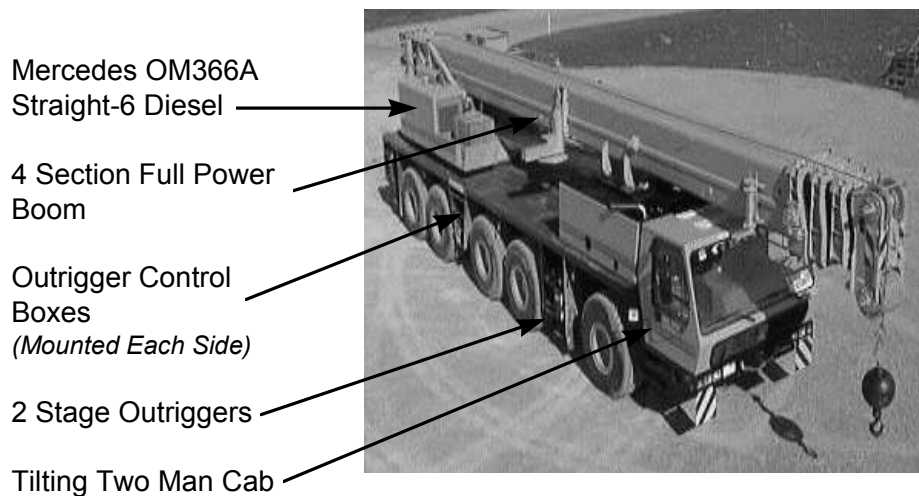
## *Grove Distributor Program*

European	<i>Design Description</i>	Domestic
Lighter	<i>Weight</i>	Heavier
Smaller	<i>Hoists</i>	Larger
Small Diameter <i>more parts of line</i>	<i>Rope Size</i>	Large Diameter <i>fewer parts of line</i>
Slow Cycle	<i>Duty Cycle</i>	Fast Cycle
Gravity Lowering	<i>Boom Lowering</i>	Presurized Rod Side of Piston
Pinned Sections/Lighter	<i>Boom Telescope</i>	Full Function Boom/Heavy

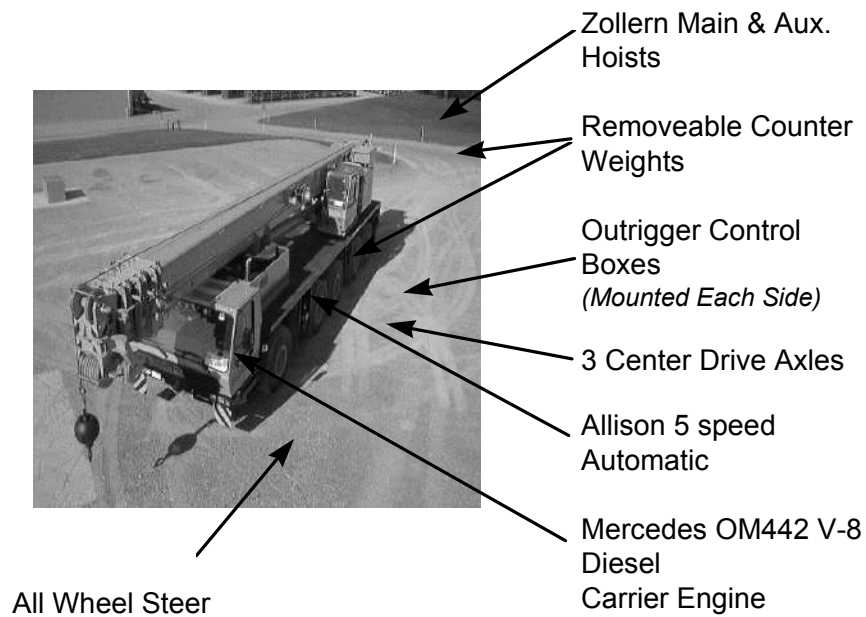


European	<i>Design Description</i>	Domesstic
Curved, Form Fitting	<i>Boom Wear Pads</i>	Flat Rectangular
Not Permitted	<i>Static Steering</i>	Anytime
Smaller	<i>Outrigger Floats</i>	Larger
From Carrier	<i>Outrigger Controls</i>	From Superstructure
No Axles, Fully Independent, Mega-Strut	<i>Suspension</i>	Axle, Springs Walking Beams
	<i>Electronic Controls</i>	

## GMK5130 Nomenclature



# GMK5130 Nomenclature



## Safety Bulletin

- Personnel Handling
  - February 8, 1999
  - No Longer Requires Written Grove Approval
- ASME B30.23-1998<sup>1</sup>
  - Personnel Lifting Systems
  - Less Harzardious Means

## **Use of Grove Crane to Handle Personnel is acceptable provided:**

- Provisions of National, State and Local Safety Codes are Met
- Qualified Crane Operator
- Crane Operator and Occupants have been instructed to the hazards of lifting personnel
- Crane is in proper working order

## **Use of Grove Crane to Handle Personnel is acceptable provided:**

- Crane is equipped with functional anti-two block device
- Cranes Load Capacity is affixed inside Crane's Cab
  - Accessable to Operator
  - Total Weight not to exceed 50% of rated capacity

## **Use of Grove Crane to Handle Personnel is acceptable provided:**

- Crane within 1% of Level
  - Firm footing
  - Outriggers fully deployed as per Manufacturers Specifications
- Crane Operators and Safety Handbook
  - In Crane Cab
  - Readily available to Operator

## **Use of Grove Crane to Handle Personnel is acceptable provided:**

- Platform meets requirements by applicable standards
- Hook can be closed and locked
- Platform is properly attached and secure

## **Safety Bulletin**

- Any Questions refer to actual bulletin for complete text

or

- (888) PSR-DEPT  
(888) 777-3378
- [www.grovetraining.com](http://www.grovetraining.com)

# ***Laws of the Land***

## ***ASME Regulations***

### ***American Society of Mechanical Engineers***

*(formerly American National Standards Institute, ANSI)*

## ASME Crane Operation Standards

- Cranes are only designed for lifting and placing of static loads
- The operator must adhere to all manufacturers specifications
- The load chart must be affixed to the crane cab
- No person other than the operator is allowed on an operating crane

## ASME Crane Operation Standards (cont.)

- Barricades for tail swing must be in place
- No unauthorized, add-on equipment is permitted
- The crane's load chart must not be compromised
- No handling of personnel either by suspended basket or pin on platform is permitted

## ASME Crane Operation Standards (cont.)

- The wire rope being utilized must be the exact style as reflected in the crane's load chart
- The operator is fully responsible for all lifts
- All OSHA regulations must be adhered to
- All crane safety devices and functional equipment must be in perfect operating order.

## ASME Crane Operation Standards (cont.)

- If working on outriggers, the tires must be clear of the ground and the crane must be level
- Limits on close proximity to power lines must be strictly observed.
- Correct reeving and rigging practices shall be employed
- Loads shall have proper tag lines

# ***GMK Unit Operation***

## ***Safety Tips and Recommendations***

### **GMK Operation Standards**

- Larger European units generally have outrigger operation from only the carrier
- When leveling, elevate the boom to approx.. 45° and plumb bob over the front and side
- No backchecking of the swing control is permitted



## GMK Operation Standards (cont.)

- Telescoping with loads is very restrictive, European cranes are designed to operate at fixed boom lengths
- Booming down is usually gravity down and is generally slow
- Hoists tend to be smaller requiring more parts of line

## GMK Operation Standards (cont.)

- Watch out for severe boom deflections
- Multi-function capability is limited by two main hydraulic pumps (except swing)
- No simultaneous operation of lift and telescope functions

## GMK Operation Standards (cont.)

- Newer units do not allow loads to be boomed down to the ground, they must be placed with the hoist
- Swing Speed can be regulated
  - Electrically using a potentiometer
  - Hydraulically using hydraulic trim valve

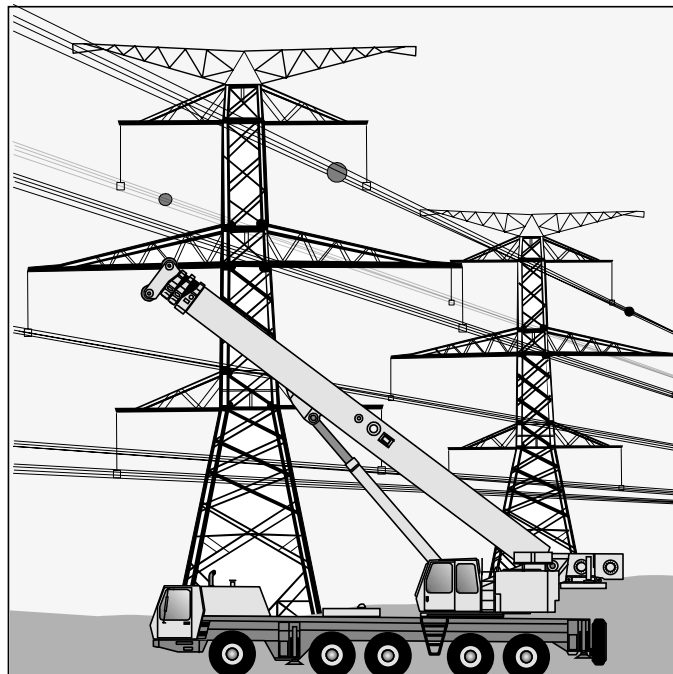
# ***Accidents***

## ***Avoiding the Common Causes***

# Accident Prevention

- The #1 cause of death in cranes is Electrocutation
  - Contact with power lines
- Most accidents are caused by seasoned veterans
- Backward stability in newer cranes
  - Heavy counterweight packages
  - Partial Outrigger Spreads

## What are Safe ..... Power Line Operating Distances?



# Power Line Safe Operating Distances

Voltage (kV)	Regulation Safe Distance	Grove Safe Distance
<50	10	20
above 50 to 200	15	30
above 200 to 350	20	40
above 350 to 500	25	50
above 500 to 750	35	70
above 750 to 1,000	45	90

## Accident Prevention (cont.)

- Cribbing must be employed to properly distribute the loads on the Floats.
  - Consult Outrigger Pad Loading Chart
  - Calculate the Loads empty and max capacity
- Load Moment Indicators are intended as an operator aid
  - Do not rely on as sole indication of condition
  - Use the charts for Planning

## Accident Prevention (cont.)

- When operating on outriggers, Tires must be clear of the ground and the crane must be level

# ***GMK Component Dictionary***

**32,8 ft-Klappspitzenausleger** / 32.8-ft swing-away lattice extension

**52,5 ft-Doppelklappspitzenausleger** / 52.5-ft two-stage swing-away lattice extension

## A

**Abbildung** / illustration

**Abblendlicht** / low-beam headlight

**Abdeckblech** / cover plate

**Abdeckklappe** / cover plate

**Abdeckung** / guard

**abflanschen** / to disconnect

**Abgasrohr** / exhaust pipe

**abgestützt** / on outriggers

**Abhilfe** / action

**abknicken** / to buckle

**abkühlen** / to cool down

**Abkühlung** / cooling

**ablassen von Öl** / to drain

**Ablaßstutzen** / drain plug

**ablegen** / place

**Ablösung** / relief

**Ablösung** / relief operator

**Abmessung** / dimension

**abnehmen** / to remove

**abrüsten** / to remove

**abrüsten** / to unrig

**abrutschen** / to slip off

**Abschaltbereich** / shutdown area

**Abschaltdruck** / cut-out pressure

**abschalten** / to switch off

**Abschaltpunkt** / switching point

**Abschaltungssignal** / cut-out signal

**Abschaltung** / cut-off

**Abschaltung** / shutdown

**Abschaltwert** / shutdown value

**Abschlepppaue** / tow-rod coupling

**Abschleppbetrieb** / towing the crane

**Abschleppen** / to tow away

**Abschleppfahrzeug** / towing vehicle

**Abschleppkupplung** / towbar coupling

**Abschleppstange** / tow-rod

**Abschleppwagen** / breakdown truck

**abschließen** / to terminate

**Abschnitt** / section

**abschrauben** / unscrew

**absenken** / to lower

**absetzen** / to put down

**absichern** / to guard

**absichern** / to secure

**Absperrhahn** / stop cock

**Absperrung** / cordon

**Absprache** / agreement

**Absprache** / arrangement

**Abstand** / distance

**abstellen** / to turn off

**Abstimmung (von Werten)** / modify

**Abstützbasis** / outrigger span

**Abstützbasis** / supporting span

**Abstützbreite** / span

**abstützen** / to put on outriggers

**abstützen** / to support

**Abstützfläche** / surface area of the outrigger

**Abstützkasten** / outrigger housing

**Abstützkasten** / support housing

**Abstützpunkt** / the ground under the outrigger

**Abstütztellerdurchmesser** / outrigger pad dimension

**Abstütztellerfläche** / outrigger pad surface area

**Abstützteller** / outrigger pad

**Abstützträger** / outrigger beam

**Abstützungsbetätigung** / operating the outriggers

**Abstützungszylinder** / outrigger cylinder

**Abstützungszylinder** / support cylinder

**Abstützung** / outrigger

**Abstützvariante** / supporting span

**Abstützzyylinder** / outrigger cylinder

**Abstützzyylinder** / support cylinder

**Abtriebsseite** / drive output

**Abtriebsseite** / drive output side

**abtrommeln** / to reel off

**abtrommeln** / to unreel

**abziehen den Schlüssel** / to remove

**Achsantrieb** / axle drive

**Achsdurchtrieb** / transfer drive axle

**Achse** / axle

**Achshalter** / axle holder

**Achslast** / axle load

**Achslinie** / axle line

**Achsmittenantrieb** / axle centre drive

**Achsmittenge triebe** / axle central drive

**Achtung** / caution

**aerodynamisch** / aerodynamic

**Aggregat** / unit

**akustisch** / acoustic

**Allisongetriebe** / allison gear

**Allradlenkung** / all-wheel steering

**anfah ren** / to start

**Anfahrgang** / starting gear

**anfeuchten** / wet

**Anforderung** / requirement

**anfrieren** / freeze fast

**Angaben hierzu** / details of these

**angeben** / prescribe

**angefahren** / triggered

**angeflanscht** / flanged

**angeschraubt** / screwed on

**angeschüttet** / backfilled

**angeschweißt** / welded to

**angesteuert** / controlled

**angetrieben** / driven

**anhalten** / stop

**Anhängelast** / trailer load

**Anhängepunkt** / hitch

**Anhängerbetrieb** / towing a trailer

**Anhängerblinker** / trailer direction indicator

**Anhängerbremsanlage** / trailer's brake system

**Anhängerbremsventil** / trailer brake valve

**Anhängerelektrik** / trailer's electrical system

**Anhängerkupplung** / towbar coupling

**Anhängerkupplung** / trailer coupling

**Anhänger** / trailer

**Anhängevorrichtung** / attachment device

**anheben** / lift

**anheben** / raise

<b>anklappen</b> / fold	<b>Armaturenblettbeleuchtung</b> / instrument panel lamp
<b>Anlage</b> / system	<b>Armaturenblettleuchte</b> / instrument panel lamp
<b>anlassen</b> / start	<b>Armaturenblett</b> / instrument panel
<b>Anlasserknopf</b> / starter button	<b>Armaturentafel</b> / instrument panel
<b>Anlasser</b> / starter	<b>Armlehne</b> / arm rest
<b>Anlasser</b> / starter motor	<b>Aufbauübersicht</b> / general drawing
<b>Anlaßkraftstoff</b> / starter fuel	<b>Auffahrnunfall</b> / to be run into by the traffic behind
<b>Anlaßstellung</b> / starting position	<b>auffüllen</b> / fill
<b>Anlaßvorgang</b> / starting procedure	<b>auffüllen</b> / top up
<b>anlegen (des Sicherheitsgurtes)</b> / to put	<b>aufgefüllt</b> / backfilled
<b>Annäherung</b> / movement ..toward	<b>aufgeschraubt</b> / bolted-on
<b>Ansaugluft</b> / fresh air	<b>Aufhängepunkt</b> / suspension point
<b>Ansaugluft</b> / suction air	<b>Auflageflächen</b> / surface
<b>Anschlag bis zum..</b> / as far as it will go	<b>Auflaufschiene</b> / stop rail
<b>anschlagen</b> / sling	<b>Aufmerksamkeit</b> / attention
<b>Anschläger</b> / slinger	<b>Aufnahmelasche</b> / recess
<b>Anschlaggehänge</b> / Slinging tackle	<b>aufnehmen</b> / pick up
<b>Anschlagmittel</b> / lifting gear	<b>aufrichten</b> / raise
<b>Anschlagpunkt</b> / attachment point	<b>aufrüsten (des Krans)</b> / rig
<b>Anschlagpunkt</b> / towing point	<b>aufrüsten der Gegengewichte</b> / install
<b>Anschleppen</b> / tow starting	<b>aufstellen</b> / set
<b>Anschlußdose</b> / connection socket	<b>Aufstellungsort</b> / site
<b>Anschlußkabel</b> / connecting cable	<b>Aufstieg</b> / step up
<b>Anschlußkasten</b> / terminal box	<b>auftreten</b> / occur
<b>Anschlußstück</b> / connection plate	<b>aufwärmen</b> / preheat
<b>Anschlußtafel</b> / connection panel	<b>Aufzeichnung</b> / recording
<b>Anschluß</b> / connection	<b>ausfahren</b> / extend
<b>Anstellwinkel</b> / angle	<b>ausfallen Gerät, Sicherung</b> / fail
<b>Antriebsachslinien</b> / driven axle line	<b>Ausfall</b> / failure
<b>Antriebsaggregat</b> / drive unit	<b>Ausgangsposition</b> / original position
<b>Antriebskraft</b> / propulsion power	<b>ausgelenkt</b> / out of position
<b>Antriebsrad</b> / driven wheel	<b>Ausgleich</b> / re-level
<b>Antriebsseite</b> / drive input	<b>Ausladung</b> / radius
<b>Antriebsseite</b> / drive input side	<b>Auslastung bei voller</b> / when the crane is fully loaded
<b>Antrieb</b> / drive	<b>Auslaßverschraubung</b> / outlet screw fitting
<b>Anwahltaste</b> / Selector key	<b>Auslegerfußachse</b> / bottom axle of boom
<b>Anweisung</b> / instruction	<b>Auslegergrundkörper</b> / basic section of the boom
<b>Anzeigefeld</b> / display	<b>Auslegerkopfrolle</b> / sheave on the head of the boom
<b>Anzeigeinstrument</b> / indicating instrument	<b>Auslegerkopf</b> / boom head
<b>Anzeigeleuchte</b> / position light	<b>Auslegerkran</b> / mobile boom crane
<b>Anzeigestift</b> / indicator pin	<b>Auslegerlänge</b> / length of the main boom
<b>Anzeige</b> / status display	<b>Auslegerneigung</b> / boom angle
<b>Anziehdrehmoment</b> / tightening torque	<b>Auslegerrichtung</b> / boom direction
<b>anziehen</b> / tighten	<b>Auslegerschmierung</b> / boom lubrication
<b>arbeiten</b> / operate	<b>Auslegerseite</b> / boom side
<b>Arbeitsbeginn</b> / starting operations	<b>Auslegerspitze</b> / end of the boom
<b>Arbeitsbereichskurve</b> / operating-area curve	<b>Auslegerstellung</b> / boom position
<b>Arbeitsbereich</b> / operating area	<b>Auslegerstütze</b> / boom support
<b>Arbeitsbewegung</b> / movement	<b>Auslegerverlängerung</b> / boom extension
<b>Arbeitsgeschwindigkeit</b> / operating speed	<b>Auslegerwinkel</b> / boom angle
<b>Arbeitsgeschwindigkeit</b> / working speed	<b>Ausleger</b> / boom
<b>Arbeitshandschuh</b> / working gloves	<b>Ausnehmung</b> / recess
<b>Arbeitshub</b> / working stroke	<b>Ausnutzung</b> / degree of utilization
<b>Arbeitskleidung</b> / working clothes	<b>Auspuffgase</b> / exhaust gases
<b>Arbeitskorb</b> / working cage	<b>ausrichten</b> / level
<b>Arbeitsscheinwerfersteckdose</b> / socket for spotlight	<b>ausrüsten</b> / rig
<b>Arbeitsscheinwerfer</b> / spotlight for working area	<b>Ausrüstungsteil</b> / part of equipment
<b>Arbeitsschutzvorschrift</b> / rule for the prevention of accidents	<b>Ausrüstungszustand</b> / how the truck crane is rigged
<b>Arbeitsunterbrechung bei..</b> / stopping work	<b>ausschalten</b> / switch off
<b>Arbeitsvorbereitung</b> / preparation of the job	<b>ausscheren</b> / unreeve
<b>Arbeitszylinder</b> / hydraulic cylinder	<b>ausschieben</b> / extend
<b>Armaturenbeleuchtung</b> / instrument panel lighting	<b>Ausschiebezylinder</b> / extension cylinder
	<b>Austeleskopieren</b> / extend telescoping out

**auswippen** / lower the boom  
**ausziehen des Abstützträgers** / extend  
**Ausziehvorrichtung** / withdrawing device  
**Außenrand** / edge  
**Außenspiegel** / wing mirror  
**Außentemperatur** / outside temperature  
**Außenverzahnung** / external toothing  
**Außerbetriebsetzung** / out of service  
**Automatikgetriebe** / automatic gearbox  
**automatisch** / automatic  
**Axialkolben-Konstantmotor** / axial-piston fixed displacement motor  
**Axialkolben-Verstellpumpe** / axial-piston variable displacement pump

## B

**Bahnkreuzung** / tram intersection  
**Bahnspedition** / railway company  
**Bandschlüssel** / strap wrench  
**Bankett** / verge  
**Batteriehaupschalter** / battery master switch  
**Batteriekasten** / battery box  
**Batteriestopfen** / battery cap screws  
**Batterie** / battery  
**Bauart** / design  
**Baustelle** / site  
**Bauteil** / part  
**beachten** / observe  
**Beaufortgrad** / beaufort scale  
**Beckengurt** / lap belt  
**Bedarf bei ..** / if necessary  
**bedienen** / operate  
**Bedienungsanleitung** / operating instruction  
**Bedienungseinheit** / control unit  
**Bedienungselement** / operating instrument  
**Bedienung** / operation  
**beeinträchtigen** / impair  
**Befestigungslasche** / attachment plate  
**Befestigungsschraube** / retaining bolt  
**befüllen** / fill  
**Befüllnippel** / filler nipple  
**Begleitfahrzeug** / separate vehicle  
**begrenzen** / limit  
**Begrenzungsleuchte** / marker light  
**Begrenzung** / limit  
**Behälterdeckel** / lid  
**Behälter** / reservoir  
**Behälter** / tank  
**beheben (Störung)** / to eliminate  
**beherrschen** / master  
**Beifahrerseite** / passenger side  
**Beifahrersitzkonsole** / passenger seat console  
**Beifahrertür** / passenger door  
**Beifahrer** / passenger  
**Belag rutschiger** / substance slippery  
**Belastungsgrenze** / load limit  
**Belastungstest** / static load test  
**Belastung** / load  
**Beleuchtung** / light  
**belüften** / blow air  
**Belüftungsdüse** / air vent  
**Benutzungshinweise** / instructions for use  
**beobachten** / watch  
**Berechnungsformel** / formula  
**Berechtigungsnaehweis** / authorization certificate  
**Bereich** / range  
**Bereifung** / tyres  
**beschädigen** / damage  
**Beschädigung** / damage  
**beschleunigen** / accelerate  
**Beschleunigungskraft** / acceleration force  
**Beschleunigungsvermögen** / acceleration power  
**Bestimmung** / stipulation  
**betätigen** / to operate  
**Betätigungsvorrichtung** / actuation device  
**Betätigung** / operation  
**betreiben** / to operate  
**Betreiber** / operator  
**betreten** / enter  
**Betriebs- und Hilfsstoffe** / process materials  
**Betriebsanleitung** / Operating Instructions  
**Betriebsanweisung** / operating instructions  
**Betriebsart** / operating mode  
**Betriebsbremse** / service brake  
**Betriebsbremspedal** / service brake pedal  
**Betriebsbremssystem** / service brake system  
**Betriebsdruck** / operating pressure  
**Betriebsicherheit** / operational safety  
**Betriebsstoff** / fuel  
**Betriebsstörung** / malfunction  
**Betriebsstundenzähler** / operating hour counter  
**Betriebsstunde** / operating hour  
**Betriebstemperatur** / operating temperature  
**betriebswarm** / tyres become hot during driving  
**Betrieb** / operation  
**Bewegungskombination** / movement which can be carried out simultaneously  
**Bewegungsmelder** / syncro  
**Bewegungsrichtung** / direction of movement  
**Bewegung** / movement  
**Bezeichnung** / term  
**bindig** / cohesive  
**Binnenland** / inland  
**Blindsteckdose** / dummy socket  
**Blinkanlage** / direction indicators  
**blinken** / flash  
**Blinker** / direction indicator  
**blockieren** / lock  
**Blockierungsventil** / blocking valve  
**Blockierung** / locking system  
**Bodenart** / type of ground  
**Bodenbeschaffenheit** / condition of the ground  
**Bodenfestigkeit** / load-bearing capacity  
**Bodenfreiheit** / ground clearance  
**Bodenpressung** / pressure / load on the ground  
**Bodenstufe** / step in the ground  
**Bodenunebenheit bei..** / if it is sloping  
**Bodenuntersuchung** / to have the ground tested  
**Bodenwelle** / ground undulation  
**Boden** / ground  
**Böe** / gust  
**Bohrung** / bore  
**Bolzenloch** / hole for the pin  
**Bolzen** / pin



**Bordnetz** / electrical system  
**Bordnetz** / on-board network  
**Bordspannung** / on-board voltage  
**Bordwerkzeug** / tool kit  
**Böschungsfreiwinkel** / angle of its chassis  
**Böschungswinkel** / angle of negotiable banks  
**Böschung** / bank  
**Böschung** / slope  
**Bowdenzug** / Bowden control cable  
**Brandgefahr** / danger of fire  
**Brandgefahr** / risk of fire  
**Brandschutzvorschriften** / rules for fire prevention  
**Bremsanlage** / brake system  
**Bremsbeläge** / brake linings  
**Bremsbelagstärke** / brake-lining thickness  
**bremsen** / brake  
**Bremse** / brake  
**Bremskraft** / braking force  
**Bremskreis** / brake circuit  
**Bremsleuchte** / brake light  
**Bremsprobe** / testing the brake  
**Bremswirkung** / braking force  
**Bremszylinder** / brake cylinder  
**Brett** / board  
**Brise** / breeze  
**Buckel im Gelände** / large hump  
**Bügel** / holder

## D

**Dachfenster** / roof window  
**Dachlüfter** / roof fan  
**Dachlüfter** / roof ventilator  
**Dachscheibenwischer** / roof window wiper  
**Dach** / roof  
**Dauerbetrieb** / continuous operation  
**Dauerbremse** / retarder  
**Dauerbremsschalter** / retarder switch  
**Dauerlast** / continuous load  
**Dauersumnton** / continuous buzzer tone  
**Dauerton** / continuous blast  
**Deckelschraube** / cover screw  
**Deckel** / cap  
**Deckel** / cover  
**defekt Sicherung** / blown  
**Demontage** / removal  
**demontieren** / remove  
**Diagnoseschalter** / diagnosis switch  
**Diagnosetaster** / diagnosis switch  
**Dichtmanschette** / packing  
**Dichtring** / sealing ring  
**Diesekraftstoff** / diesel  
**Dieselmotor** / diesel engine  
**Differentialsperre** / differential lock  
**Differentialzylinder** / differential cylinder  
**Dimmer** / dimmer  
**Dokumentation** / documentation  
**Doppelhaken** / double hook  
**Doppelklappspitzenausleger** / two-stage swing-away lattice extension  
**Doppelklappspitze** / two-stage swing-away lattice extension  
**Dosenlibelle** / circular spirit level  
**Drahtbruch** / wire break  
**Drahtseil** / wire cable  
**Drehantrieb** / slew drive  
**Drehbereichsendschalter** / slewing range limit switches  
**Drehbereich** / slewing range  
**Drehbewegung** / slewing movement  
**Drehdurchführungen** / slewing ducts  
**Drehdurchführung** / slewing duct  
**Drehgeschwindigkeitsregulierung** / fine regulation for slewing gear  
**Drehknopf** / knob switch  
**Drehlager** / pivot bearing  
**Drehmelder** / hoist drum synchro  
**Drehmelder** / synchro  
**Drehmomentschlüssel** / torque wrench  
**Drehmomentwandler** / torque converter  
**Drehmoment** / torque  
**Drehpunkt** / pivot point  
**Drehrichtung** / slewing direction  
**Drehschalter** / knob  
**Drehstromlichtmaschine** / alternator  
**Drehstrom** / three phase current  
**Drehtaster** / knob  
**Drehtischbereich** / turntable area  
**Drehtischverbolzung** / locking turntable  
**Drehtischverriegelung** / locking of turntable  
**Drehtisch** / turntable  
**Drehung** / turn  
**Drehwerkbremse** / slewing gear brake  
**Drehwerkfeststellbremse** / slewing gear permanent brake  
**Drehwerknachführung** / free movement of the slewing gear  
**Drehwerkritzel** / slewing gear pinion  
**Drehwerksgeschwindigkeit** / slewing gear speed  
**Drehwerk** / slewing gear  
**Drehwinkel** / slewing angle  
**Drehzahlmesser** / tachometer  
**Drehzahlniveau** / numer of revolutions  
**Drehzahl** / speed  
**Dreifachzahnrad-Konstantpumpe** / triple gear fixed displacement pump  
**Druckbegrenzungsventil** / pressure control valve  
**Druckbelastung** / pressure load  
**Druckentlastung** / pressure relief  
**Druckknopf** / push button  
**Druckluft-Beschaffungsanlage** / air compression system  
**Druckluft-Vorratsspeicher** / compressed air reservoir  
**Druckluftanlage** / compressed-air system  
**Druckluftbehälter** / air reservoir  
**Druckluftbremsanlage** / pneumatic brake system  
**Druckluftbremskreis** / pneumatic brake circuit  
**Druckluftkreis** / compressed-air circuit  
**Druckluftschaltplan** / compressed-air circuit  
**Druckluftversorgung** / compressed-air supply  
**Druckluftvorratsanzeige** / compressed-air gauge  
**Druckluftvorratsbehälter** / compressed-air reservoir  
**Druckluftvorrat** / compressed-air supply  
**Druckluft** / compressed air  
**Drucköl** / hydraulic oil  
**Druckregler** / pressure regulator  
**Druckspeicher** / pressure accumulator  
**Drucktaste** / push button

**Druckteller** / pressure plate  
**Druckzylinder** / pressure cylinder  
**Druck** / pressure  
**Duplex-Trommelbremse** / duplex drum brake  
**Durchbiegung** / deflection  
**durchfahren** / pass  
**Düse** / nozzle

## E

**Eagang** / fast speed  
**eben** / level  
**Eilgang** / fast speed  
**Ein-Mann-Fahrerhaus** / single-occupancy driver's cab  
**Einfachhaken** / single hook  
**einfahren (den Ausleger)** / retract  
**einfahren (den Kran)** / run in  
**Einfahrvorschrift** / running-in instruction  
**einfedern** / ..when the cylinders are compressed..  
**Einfüllmenge** / fill  
**Einfüllstutzen** / filler-neck  
**Einfülltrichter** / funnel  
**Eingabemöglichkeiten** / entry options  
**Eingabetaste** / input key  
**Eingabe** / entry  
**Eingabe** / input  
**eingehängt** / attached  
**eingeschränkte Drehbereich** / limited slewing range  
**Einhakenbetrieb** / operation / working with one hook  
**Einhängeleiter** / hook-on ladder  
**einlegen** / insert  
**einrasten** / engage  
**Einrichtung** / equipment  
**Einsatzbedingung** / operating condition  
**Einsatzland** / country in which you are working  
**Einsatzleiter** / supervisor  
**Einsatzort** / site  
**Einsatzplanung** / applications engineering  
**Einsatzstelle** / site  
**einschalten** / switch on  
**Einscheren** / reeve  
**Einscherung** / fall  
**Einscherung** / reeving  
**einschlagen (der Räder)** / turn  
**Einschränkung** / restriction  
**Einschubbezeichnung** / designation of plug-in module  
**Einschub** / plug-in module  
**einstecken** / insert  
**einstellen** / adjust  
**Eintelekopieren** / retract telescoping in  
**Eintelekopieren** / retraction of the telescoping  
**einweisen ..lassen** / have a banksman to guide  
**Einweiser** / banksman  
**einwippen** / raise  
**Einzelbereifung** / single tyres  
**Einzelbutton** / individual switch  
**einziehen** / retract  
**elektrisch** / electrical  
**Elektrizitätsunternehmen** / electricity company  
**elektrohydraulisch** / electro-hydraulic  
**elektronisch** / electronic  
**elektropneumatisch** / electropneumatically

**elektrostatische Aufladung** / charged with static electricity  
**Endanschlag** / end position  
**Endanziehdrehmoment** / final torque  
**Endbereich** / end  
**Endstellung** / end position  
**enganliegend Kleidung** / close-fitting  
**entfernen** / remove  
**Entfernung** / distance  
**entflammbar** / inflammable  
**Entleerungshahn** / drain cock  
**entlüften** / bleed  
**entlüften** / ventilate  
**EntlüftungsfILTER** / venting filter  
**Entlüftungsschraube** / bleeder screw  
**Entlüftung** / ventilation  
**entriegeln** / release  
**entriegeln** / unlock  
**Entriegelungshebel** / release lever  
**Entriegelungsknopf** / release button  
**entsichern** / release  
**Entwässerungsventil** / drain valve  
**erden** / to earth  
**Erde** / earth  
**Erde** / ground  
**Erdreich** / earth  
**erlöschen** / go out  
**Ersatzsicherung** / spare fuse  
**Ersatzteilliste** / spare parts list  
**Ersatzteil** / spare part  
**ersetzen** / replace  
**explodieren** / explode  
**Explosionsgefahr** / it may explode

## F

**Fabriknummer** / serial number  
**Fabrikschild** / name plate  
**Fachpersonal** / properly qualified personnel  
**Fahrertriebsaggregat** / travel drive unit  
**Fahrbereich (des Getriebes)** / gear  
**Fahrbereich (des Krans)** / driving range  
**Fahrbereichshebel** / driving range lever  
**Fahrertrieb** / driving  
**Fahrdrahtleitung** / trolley-wire cable  
**Fahreigenschaft** / driving characteristic  
**Fahrerhausdach** / roof of the driver's cab  
**Fahrerhausheizung** / heating system for driver's cab  
**Fahrerhauskippeinrichtung** / tipping device for driver's cab  
**Fahrerhausluft** / air from the driver's cab  
**Fahrerhaustür** / door of the driver's cab  
**Fahrerhausverriegelung** / driver's cab locking system  
**Fahrerhaus** / driver's cab  
**Fahrerseite** / driver's side  
**Fahrersitzkonsole** / driver's seat console  
**Fahrersitz** / driver's seat  
**Fahrtgeschwindigkeit** / driving speed  
**Fahrgestellnummer** / chassis number  
**Fahrgestell** / chassis  
**Fahrleistung** / driving speed  
**Fahrlicht** / headlight

<b>Fahrmotorkühlflüssigkeit</b> / coolant for the vehicle engine	<b>Fernlichtanzeige</b> / full beam tell-tale
<b>Fahrmotor</b> / vehicle engine	<b>Fernlicht</b> / headlight - full beam
<b>Fahrpedalstellung</b> / position of the accelerator	<b>festgefahren</b> / stuck in terrain
<b>Fahrpedal</b> / accelerator	<b>festgezurt</b> / lashed securely
<b>Fahrprogramm</b> / driving mode	<b>festhalten</b> / hold fast
<b>Fahrprogramm</b> / gear mode	<b>Festlänge</b> / fixed length
<b>Fahrprogramm</b> / mode	<b>Feststellbremsanlage</b> / parking brake system
<b>Fahrspur</b> / track	<b>Feststellbremse</b> / parking brake
<b>Fahrspur</b> / traffic lane	<b>Feststellbremshebel</b> / parking brake lever
<b>Fahrstellungsschalter</b> / driving position switch	<b>Fettbehälter</b> / grease container
<b>Fahrstellung</b> / driving position	<b>fetten</b> / grease
<b>Fahrstrecke</b> / driving distance	<b>Fettpresse</b> / grease gun
<b>Fahrtbeginn</b> / setting off	<b>Fett</b> / grease
<b>Fahrtenschreiber</b> / trip recorder	<b>feucht</b> / wet
<b>Fahrtgeschwindigkeit</b> / travelling speed	<b>feuergefährlich</b> / highly flammable
<b>Fahrtrichtungsanzeiger</b> / driving direction indicator	<b>Feuerlöscher</b> / fire extinguisher
<b>Fahrtrichtung</b> / direction of travel	<b>Filterelement</b> / filter
<b>Fahrtrichtung</b> / driving direction	<b>Fingerhandschuhe</b> / gloves
<b>Fahrtvorbereitung</b> / preparing to drive	<b>Firmenanweisungen</b> / company directive
<b>Fahrtzustand</b> / driving mode	<b>Flacheisen</b> / flat steel
<b>Fahrt</b> / driving	<b>Flächendruck</b> / surface pressure
<b>Fahrt</b> / journey	<b>Fläche</b> / surface
<b>Fahrweg</b> / road	<b>Flammstartanlage</b> / flame start system
<b>Fahrzeug-Niveauregulierung</b> / carrier level adjustment system	<b>flattern (des Lenkrades)</b> / jolt
<b>Fahrzeugbegrenzung</b> / limits of the vehicle	<b>fluchten</b> / align
<b>Fahrzeugelektrik</b> / vehicle's electrical system	<b>Flügelzellenmotor</b> / vane-type motor
<b>Fahrzeugidentifikation</b> / vehicle identification	<b>Flüssigkeitsstand</b> / fluid level
<b>Fahrzeugkabine</b> / driver's cab	<b>Folgeschaden</b> / consequential damage
<b>Fahrzeugmotor</b> / vehicle engine	<b>Fördermenge</b> / flow rate
<b>Fahrzeugrückseite</b> / rear of the carrier	<b>fördern</b> / convey
<b>Fahrzeug</b> / vehicle	<b>Förderstrom</b> / rate of flow
<b>Fahrzustand</b> / driving mode	<b>Freilauf</b> / overrunning
<b>Fausthandschuhe</b> / mittens	<b>Freileitung</b> / overhead cable
<b>Faustregel</b> / rule of thumb	<b>Freileitung</b> / overhead power line
<b>Federbein</b> / suspension cylinder	<b>freischaukeln</b> / rocking it free
<b>Federdruck-Lamellenbremse</b> / pressure-spring multiple-disk brake	<b>freischleppen</b> / tow free
<b>Federring</b> / lock washer	<b>Freistehend</b> / free on wheels
<b>Federspeicher-Bremszylinder</b> / spring-loaded brake cylinder	<b>Fremdbelüftung</b> / independent ventilation
<b>Federspeicher</b> / spring accumulator	<b>Frischlufbetrieb</b> / fresh air mode
<b>Federstecker</b> / spring cotter	<b>Frischlufgebläse</b> / fresh air blower
<b>Federungsanlage</b> / suspension system	<b>Frischluf</b> / fresh air
<b>Federungsblockierung</b> / suspension locking system	<b>Frontarmaturenbrett</b> / front instrument panel
<b>Federungsgruppe</b> / suspension group	<b>Frontarmaturentafel</b> / front instrument panel
<b>Federungshärte</b> / stiffness of the suspension	<b>Frontgitter</b> / front grille
<b>Federungszylinder</b> / suspension cylinder, suspension cylinders	<b>Frontplatte</b> / front plate
<b>Federung</b> / suspension	<b>Frontscheibenwischer</b> / windscreen washer
<b>Federweg</b> / suspension range	<b>Frontscheibenwischer</b> / windscreen wiper
<b>Fehlbedienung</b> / operating error	<b>Frontscheibe</b> / windscreen
<b>Fehleranzeige</b> / "error" display	<b>Front</b> / front
<b>Fehlererkennung</b> / troubleshooting	<b>Frostschutzmittel</b> / antifreeze
<b>Fehlermeldung</b> / error message	<b>Führungsleine</b> / guide rope
<b>Fehlersuche</b> / troubleshooting	<b>Führungsrolle</b> / guide sheave
<b>Fehler</b> / error	<b>Führung</b> / guide mechanism
<b>Fehlfunktion</b> / it will not function	<b>Füllanschluß</b> / filler connection
<b>Fehlschaltungen</b> / the transfer case will not function properly	<b>füllen</b> / fill
<b>Feineinstellung</b> / fine tuning	<b>Füllflasche</b> / bottle
<b>Felge</b> / wheel rim	<b>Füllstand</b> / level
	<b>Füllventil</b> / filler valve
	<b>Funksprechgerät</b> / walkie-talkie
	<b>Funktionskontrolle</b> / check that it is functioning
	<b>Funktionsprüfung</b> / functional test
	<b>Funktionsstörung</b> / malfunctioning
	<b>Funktionsumschaltung</b> / change-over

**Fußbremse** / foot brake  
**Fußraumdüse** / cab floor nozzle  
**Fußraum** / cab floor  
**Fußschalter** / foot-operated switch  
**Fußstück** / foot section  
**Fußtaster** / foot-operated switch

## G

**Gabelstück** / fork element  
**Gangwechsel** / change of gear  
**gasgeben** / accelerate  
**Gaspedal** / accelerator  
**Gebälseöffnung** / blower opening  
**Gefährdung** / danger  
**Gefahrenbereich** / danger area  
**gefährlich** / dangerous  
**Gefahr** / danger  
**Gefällefahrt** / driving downhill  
**Gefällestrecke** / downhill slope  
**Gefälle** / sloping ground  
**Gegengewichtablage** / counterweight platform  
**Gegengewichtauflage** / counterweight platform  
**Gegengewichtblock** / counterweight block  
**Gegengewichthubwerk** / counterweight lifting gear  
**Gegengewichthubzylinder** / counterweight lifting cylinder  
**Gegengewichtkombination** / counterweight version  
**Gegengewichtplatte** / counterweight section  
**Gegengewichtseite** / counterweight side  
**Gegengewichtsteil** / counterweight section  
**Gegengewicht** / counterweight  
**Gegenmaßnahme** / countermeasure  
**Geländefahrt** / off-the-road driving  
**Geländegängigkeit** / off-the-road handling  
**Geländegang** / off-the-road gear  
**Gelände** / off-the-road  
**Gelenkwelle** / cardan shaft  
**Geradeausfahrt** / straight ahead  
**Geräteidentifikation** / truck crane identification  
**Gesamtgewicht** / total weight  
**Gesamtlänge** / total length  
**Gesamtlast** / total load  
**geschult** / qualified  
**Geschwindigkeit** / speed  
**gesichert** / secured  
**Getriebekette** / gear chain  
**Getriebekühlung** / gearbox cooling system  
**Getriebeöldruckanzeige** / gear oil pressure gauge  
**Getriebeöldruck** / gear oil pressure  
**Getriebeöltemperaturanzeige** / gear oil temperature gauge  
**Getriebeöltemperatur** / gear oil temperature  
**Getriebeöl** / gear oil  
**Getriebesteuerung** / gearbox control  
**Getriebestörung** / gearbox malfunction  
**Getriebeüberwachung** / gear unit control  
**Getriebe** / gear unit  
**Getriebe** / gearbox  
**Gewichtkombination** / counterweight version  
**Gewichtkombination** / different weights  
**Gewichtshälfte** / half of the weight

**Gewicht** / weight  
**Gewindestange** / threaded rod  
**Gewitter** / thunderstorm  
**Gitter** / grille  
**Glasfläche** / glass surface  
**Glätte** / slippery ground  
**Gleitflächen** / slide faces  
**Gleitkufe** / skid  
**Gleitstück** / sliding wear pad  
**GLR-Verstärker** / critical load control amplifier  
**Granulatkartusche** / granulate cartridge  
**Grenzlast-Regelverstärker** / critical load control amplifier  
**Grenzlastbereich** / critical load range  
**Grenzlastregelung** / critical load control CLC  
**Griffflasche** / grip plate  
**Griffloch** / hand hole  
**Griff** / grip  
**Grobsand** / coarse sand  
**Grubenfuß** / base of the pit  
**Grubentiefe** / depth of the pit  
**Grube** / pit  
**Grundgerät Kran** / basic crane  
**Grundkörper** / basic section  
**Gummimanschette** / rubber sleeve  
**Gurtschloß** / belt lock  
**Gurt** / belt

## H

**Haftschmierung** / adhesive lubrication  
**Hakenflaschenablage** / holder for hook block  
**Hakenflaschenhalterung** / hook block holder  
**Hakenflasche** / hook block  
**Hakengeschirr** / hook tackle  
**Hakenhöhenkurve** / hook height  
**Hakenhöhe** / hook height  
**Hakensicherung** / fail-safe device  
**Haken** / hook  
**Haltebolzen** / securing pin  
**Haltebügel** / yoke  
**Haltegriff** / grip  
**Halterung** / holder  
**Halterung** / mounting bracket  
**Halteseilführer** / guide for holding ropes  
**Halteseil** / holding rope  
**Haltestange** / grip  
**Haltestange** / holding rod  
**Handbremse** / handbrake  
**Handbremshebel** / parking brake lever  
**Handgashebel** / choke throttle lever  
**Handgas** / manual throttle  
**Handgriff** / grip  
**Handgriff** / handle  
**Handhebel** / hand lever  
**Handkurbel** / crank handle  
**Handpumpe** / hand pump  
**Handrad** / handwheel  
**Handschuhfach** / glove compartment  
**Handsteuerhebel** / manual control lever  
**Handzeichen** / hand signal  
**Hang** / hill

**Hauptabsperriklappe** / main shutoff flap  
**Hauptausleger austeleskopieren** / extend main boom telescoping  
**Hauptausleger-Festlänge** / main boom fixed length  
**Hauptausleger-Fußachse** / bottom axle of main boom  
**Hauptausleger-Zwischenlänge** / main boom intermediate length  
**Hauptauslegeranstellwinkel** / angle of main boom  
**Hauptauslegerbetrieb** / working with the main boom  
**Hauptauslegerlänge** / main boom length  
**Hauptauslegerwinkel** / main boom angle  
**Hauptausleger** / main boom  
**Hauptbaugruppe** / main assembly group  
**Haupthubseil** / main hoist rope  
**Haupthubwerk** / main hoist  
**Haupthub** / main hoist  
**Hauptschalter** / master switch  
**Hauptteil** / main section  
**Hebelausschlag** / lever deviation  
**Hebel** / lever  
**heben** / lift  
**heben** / lift  
**heben** / raise  
**Hebezeug** / lifting equipment  
**Heizbetrieb (während des -s)** / while the heater is on  
**Heizgerät** / heater  
**Heizlüfter** / heating system blower  
**Heizpatrone** / cartridge heater  
**Heizungsgebläse** / heater fan  
**Heizungspumpe** / heating pump  
**Heizung** / heating system  
**Heizwärme** / heat  
**Helfer** / helper  
**Helligkeitsregler** / dimmer  
**Hemmung** / resistance  
**herausnutschen** / slip out  
**herauswandern Anzeigtift** / to come out  
**Herstelldatum** / date of manufacture  
**herunterklappen** / fold down  
**Hilfs- und Betriebsstoffe** / process materials  
**Hilfsbremsanlage** / auxiliary brake  
**Hilfshubseil** / auxiliary hoist rope  
**Hilfshubwerk** / auxiliary hoist  
**Hilfsskran** / auxiliary crane  
**Hilfsmittel** / equipment  
**Hilfsmittel** / media  
**Hin- und Herteleskopieren** / extending and retracting  
**Hindernis** / obstacle  
**Hinterachslinie** / rear axle line  
**Hinterkante** / rear edge  
**Hinterrad** / rear wheel  
**Hinweisschild** / information sign  
**Hinweis** / note  
**Hochdruckspritzölkanne** / high pressure squirt gun  
**hochfest** / high-strength  
**Hochfrequenzsender** / high-frequency transmitter  
**Hochfrequenzumschaltanlage** / high-frequency switchgear  
**Hochspannung** / high voltage  
**Höchstgeschwindigkeit** / maximum speed  
**Höheneinstellung** / height adjustment  
**Höhenverstellung** / height adjustment  
**Holzbohle** / wooden plank

**Horizontale** / horizontal position  
**Hubeinheit** / hoist unit  
**Hubendschaltergewicht** / lifting limit switch weight  
**Hubendschalter** / lifting limit switch  
**Hubgerüst** / lifting rack  
**Hubhöhe** / length of stroke  
**Hubkraft** / hoisting capacity  
**Hubseilende** / hoist rope end  
**Hubseilstrang** / fall of the hoist rope  
**Hubseilstrang** / rope line  
**Hubseil** / hoist rope  
**Hubwerksbremse** / hoist brake  
**Hubwerkgetriebe** / hoist gear  
**Hubwerksbremse** / hoist brake  
**Hubwerktrummel** / hoist drum  
**Hubwerk** / hoist  
**Hubzylinder** / lifting cylinder  
**Hub** / stroke  
**Hupentaster** / horn button  
**Hupentaste** / horn button  
**hupen** / sound the horn  
**Hupe** / horn  
**Hupsignal** / horn signal  
**Hydraulikanlage** / hydraulic system  
**Hydraulikdruck** / hydraulic pressure  
**Hydraulikleitungen** / hydraulic lines  
**Hydraulikölbehälter** / hydraulic oil tank  
**Hydrauliköldruck** / hydraulic oil pressure  
**Hydraulikölfilter** / hydraulic oil filter  
**Hydraulikölkühlung** / cooling the hydraulic oil  
**Hydraulikölstand** / hydraulic oil level  
**Hydrauliköltemperaturanzeige** / hydraulic oil temperature gauge  
**Hydrauliköltemperatur** / hydraulic oil temperature  
**Hydrauliköl** / hydraulic oil  
**Hydraulikpumpe** / hydraulic pump  
**Hydrauliksystem** / hydraulic system  
**Hydraulikventil** / hydraulic valve  
**Hydraulik** / hydraulic system  
**hydraulisch** / hydraulic  
**Hydrolamellenbremse** / hydraulic multiple disc brake  
**Hydrolenkung** / hydraulic steering  
**hydropneumatisch** / hydropneumatic

## I

**Identifikation** / identification  
**Imbusschraube** / hexagon screw  
**Inbetriebnahme** / initial use  
**Inbetriebnahme** / put into operation  
**Informationsanzeige** / information display  
**Informationswahlschalter** / information selector switch  
**informieren** / inform  
**Inhaltsübersicht** / contents  
**Innenbeleuchtung** / cab lighting  
**Innensechskantschraube** / hexagon screw  
**Inspektionsöffnung** / inspection opening  
**instandhalten** / maintain  
**Instrumentenbeleuchtung** / instrument lighting  
**Instrument** / instrument  
**Intervallschaltung** / intermitten wiper control  
**Intervallwischer** / intermittent setting

**Intervall** / interval  
**isolieren** / insulate

## K

**Kabelverbindung** / cable connection  
**Kabelverbindung** / lead  
**Kabel** / cable  
**Kabel** / rope  
**Kabinenheizung** / cab heating  
**Kabine** / cab  
**Kaltstartmittel** / agent to assist cold start  
**Keilriemen** / V-belt  
**kennzeichnen** / to mark  
**Kennzeichnung** / plates and numbers  
**Kies** / gravel  
**kippar** / tipped  
**Kippgefahr** / it may overturn  
**Kipplast** / tipping load  
**Kippschalter** / toggle switch  
**Kipptaster** / toggle switch  
**klappen** / to fold  
**Klappe** / gate  
**Klappspitzenausleger** / swing-away lattice extension  
**Klappspitzenneigung** / swing-away lattice extension angle  
**Klappspitze** / swing-away lattice  
**Klappstecker** / lynch pin  
**Klemme** / clamp  
**Klemmschraube** / locking screw  
**Klimaanlage** / air-conditioning system  
**Klimakupplung** / air-conditioning cooler coupling  
**Klinke** / catch  
**Klüftung (von Fels)** / fissure  
**Knickgefahr (des Auslegers)** / the boom may buckle  
**Knick** / buckle  
**Knopf** / knob  
**Kolbenbodenraum** / piston head chamber  
**Kolbenflächendruck** / piston area pressure  
**Kolbenfläche** / piston surface  
**Kolbenringfläche** / surface of the piston ring  
**Kolbenstangenraum** / piston rod chamber  
**Kolbenstange** / piston rod  
**Kombischalter** / multipurpose switch  
**Konstantmotor** / displacement motor  
**Konstantpumpe** / displacement pump  
**Kontrolllampe** / indicator lamp  
**Kontrolleinrichtungen** / control  
**Kontrollelement** / control instrument  
**Kontrolleuchte** / indicator lamp  
**Kontrolle** / control  
**Kontrolle** / monitoring  
**kontrollieren** / check  
**Kontrollinstrument** / control instrument  
**Koordinationsfähigkeit** / coordination  
**Kopf des Teleskopteils** / end of telescope  
**Kopffrolenachse** / head sheave axle  
**Kopffrolle** / head sheave  
**Kopfstück** / head  
**Kopfteil** / top section  
**Körpergröße** / height  
**Krabbengang** / crab travel mode

**Kraftbeiwert aerodynamischer** / aerodynamic force coefficient  
**Kraftfahrzeuanlage (elektrisch)** / vehicle's electrical system  
**Kraftfahrzeughydraulik** / vehicle's hydraulic system  
**Kraftfahrzeug** / vehicle  
**Kraftstoffanlage** / fuel system  
**Kraftstoffbehälter** / fuel tank  
**Kraftstofffilter** / fuel filter  
**Kraftstoffspezifikation** / fuel specification  
**Kraftstofftank** / fuel tank  
**Kraftstoffvorratsanzeige** / fuel gauge  
**Kraftstoffvorratsbehälter** / fuel tank  
**Kraftstoffvorrat** / fuel reserve  
**Kraftstoff** / fuel  
**Kraftübertragung** / power transmission  
**Krananlage (elektrisch)** / crane's electrical system  
**Kranarbeit** / working with the crane  
**Kranbedienung** / crane operating  
**Kranbetrieb** / crane operation  
**Kranbewegung** / crane movement  
**Kraneinsatz** / job  
**Kranelektrik** / crane's electrical system  
**Kranfahrer** / crane operator  
**Kranfahrzeughydraulik** / vehicle's hydraulic system  
**Kranführerhaus** / crane operator's cab  
**Kranführerkabinenheizung** / heating system for the crane operator's cab  
**Kranführerkabine** / crane operator's cab  
**Kranführersitz** / crane operator's seat  
**Kranführerwechsel** / crane is handed over  
**Kranführer** / crane operator  
**Kranfunktion** / crane function  
**Kranhydraulik** / crane's hydraulic system  
**Kranmotor** / crane engine  
**Kranoberwagen** / crane superstructure  
**Kranträger** / crane carrier  
**Kran** / crane  
**Kreislauf** / circuit  
**Kreuzgelenk** / universal joint  
**Kreuztaster** / joystick  
**Kreuzungspunkt** / cross-over point  
**kreuzweise** / crosswise  
**Kugelabsperrventil** / stop cock  
**Kugeldrehverbindung** / ball bearing slewing  
**Kugelhahn** / ball valve  
**Kugelkopfverbindung** / spherical-head connection  
**Kugelmutter-Halblock-Lenkung** / semi-integral ball and nut power steering  
**Kühlflüssigkeitsausgleichbehälter** / compensation reservoir for the coolant  
**Kühlflüssigkeitsausgleichbehälter** / coolant compensation reservoir  
**Kühlflüssigkeitsbehälter** / coolant reservoir  
**Kühlflüssigkeitskreislauf** / coolant circuit  
**Kühlflüssigkeitsstand** / coolant level  
**Kühlflüssigkeitsstand** / level of the coolant  
**Kühlflüssigkeitstemperaturanzeige** / coolant temperature gauge  
**Kühlflüssigkeitstemperatur** / temperature of the coolant  
**Kühlflüssigkeit** / coolant  
**Kühlmittelpumpe** / coolant pump  
**Kühlmittelstand** / coolant level

**Kühlmitteltemperatur** / temperature of the coolant  
**Kühlmittelzusatz** / coolant additive  
**Kühlmittel** / coolant  
**Kühlung** / cooling  
**kühl** / cool  
**Kulisse** / connecting link  
**Kundendienst** / after-sales service  
**Kundendienst** / customer service  
**Kunststoff-Blindscheibe** / plastic dummy disc  
**Kunststoff-Stützteller** / outrigger pad made of synthetic material  
**Kunststoffrolle** / sheave made of synthetic material  
**Kunststoffseil** / synthetic rope  
**Kunststoff** / plastic  
**Kunststoff** / synthetic material  
**Kupplungskopf** / coupling head  
**Kupplung** / coupling  
**Kurvenfahrt** / driving around corners  
**Kurvenradius** / turning radius  
**Kurve** / bend  
**Kurve** / corner  
**Kurzschlußstecker** / short-circuit plug

## L

**Ladekontrolleuchte** / charge indicator lamp  
**Ladekontrolle** / battery charge indicator  
**Ladekontrolle** / charge indicator lamp  
**Ladeluftkühler** / charge air cooling system  
**Ladelufttemperatur** / temperature of the charge air  
**Lagerbock** / bearing block  
**Lagerstelle** / bearing point  
**Lagerung** / bearing  
**Lager** / bearing  
**Lamellenbremse** / multiple-disk brake  
**Lampe** / lamp  
**landesspezifische Vorschriften** / regulations in the country in which you are working  
**Landesvorschrift** / national regulation  
**Längs- und Winkelmeßeinheit** / length and angle measuring unit  
**Längsdifferentialsperre** / longitudinal differential lock  
**Längsdifferential** / longitudinal differential  
**Längsneigung** / longitudinal tilt  
**Langsrichtung** / longitudinal direction  
**Lasche** / attachment plate  
**Lastanschläger** / slinger  
**Lastaufnahmemittel** / lifting tackle  
**Lastdurchreißer** / load slipping  
**Lastkraftwagen** / lorry  
**Lastkraftwagen** / truck  
**Lastminderung** / load reduction  
**Lastmomentbegrenzung LMB** / safe load indicator (SLI)  
**Lastmomentbegrenzung** / safe load indicator  
**lastmomentvergrößernde Bewegungen** / movements which increase the load moment  
**Lastmoment** / load moment  
**Lastschaltgetriebe** / power shift gear  
**Lastwechsel** / changing load conditions  
**Lastwert** / load value  
**Lastzustand** / load condition  
**Last** / load

**laufender Motor** / the engine is running  
**Lautsprecher** / loudspeaker  
**Leckstelle** / leak  
**Leerlaufdrehzahl** / idling speed  
**Leerlaufstellung .in** / the accelerator is not pressed  
**Leerlauf** / neutral gear  
**Leerseite** / blank page  
**Leichtmetallbauweise** / lightweight design  
**Leistung Motor** / rating  
**Leiter** / ladder  
**Leitfähigkeit** / conductivity  
**Leitung** / cable  
**Lenkachslinie** / steered axle line  
**lenkbar** / steerable  
**Lenkbewegung** / steering movement  
**Lenkschlag (den gleichen haben)** / the axle lines are aligned  
**Lenkeinschlag** / steering angle  
**lenken** / to steer  
**Lenkfähigkeit** / steering  
**lenkfähig** / ..can still be steered  
**Lenkgelenkwelle** / steering cardan shaft  
**Lenkgestänge** / steering linkage  
**Lenkgetriebe** / steering gear  
**Lenkhebellagerung** / steering arm bearing  
**Lenkhebel** / steering arm  
**Lenkhydraulik** / steering hydraulic  
**Lenkkraft** / steering force  
**Lenkkreis** / steering circuit  
**Lenkpumpe** / steering pump  
**Lenkraddurchmesser** / steering wheel diameter  
**Lenkrad** / steering wheel  
**Lenkrichtung** / steering direction  
**Lenksäule** / steering column  
**Lenkschubstange** / drag rod  
**Lenksperre** / steering lock  
**Lenkspindel** / steering shaft  
**Lenksystem** / steering system  
**Lenktriebachslinie** / steered and driven axle line  
**Lenkumlenkhebel** / steering linkage lever  
**Lenkungssystem** / steering system  
**Lenkungsteile** / steering elements  
**Lenkungsverriegelung** / steering lock  
**Lenkung** / steering  
**Lenkverhalten** / steering behaviour  
**Lenkzustand** / driving mode  
**Libelle** / spirit level  
**Lichthupe** / headlight flasher  
**Lichtmaschine** / alternator  
**LMB** / SLI  
**Lösedruck** / releasing pressure  
**lösen** / loosen  
**lösen** / remove  
**Lösestellung** / released position  
**lose** / slack  
**losfahren** / start  
**lotrecht** / exactly vertical  
**Luftdruck der Reifen** / tyre pressure  
**Luftdruck** / air pressure  
**lüften** / release  
**lüften** / ventilate  
**Lüfterrad** / fan wheel  
**Lüfter** / fan

**Luftfilter** / air filter  
**Luftmenge** / volume of air  
**Luftpressor** / compressor  
**Luftstrom** / air flow  
**Lufttemperatur** / air temperature  
**Lufttrockner** / air drier  
**Lüftungsgitter** / grilles covering vent  
**Luftverteilung** / air distribution  
**Luftvorrat** / compressed air  
**Luft** / air

## M

**Magnetstab** / magnetic rod  
**Magnetventil** / solenoid valve  
**Magnet** / solenoid  
**Manilaseil** / manila hemp rope  
**Manometer** / pressure gauge  
**Masseklemme** / earthing terminal  
**Maßnahme** / measure  
**Maß** / dimension  
**Maximallastbegrenzung** / maximum load restriction  
**Maximalmarke** / maximum mark  
**Mehrpolestecker** / multipin plug  
**Meldepunkt** / signalling point  
**Membrandrucktaster** / diaphragm push button  
**Membranzylinder** / diaphragm cylinder  
**Meßstab** / dipstick  
**Meßwertsender** / data transmitter  
**Metallfläche** / metal surface  
**Metallstab** / metal rod  
**Metrisch Regel-Gewinde** / metric standard screw-thread  
**Mindestabstand** / minimum distance  
**Mindestquerschnitt** / minimum cross section  
**Mischluftbetrieb** / mixed air  
**Mischluft** / mixed air  
**Mitnehmer Tagesschreiber** / hub  
**Mittelachse** / central axis  
**Mittelstand** / medium position  
**Mittelstellung** / central position  
**mittelträge** / semi-time lag  
**Mobilkran** / truck crane  
**momentan** / instantaneous  
**Montagehilfe** / assembly aid  
**Montagekran** / erection crane  
**Montage** / installation  
**montieren** / install  
**Montierhebel** / mounting lever  
**Moorerde** / marsh  
**Motorabdeckklappe** / engine cover plates  
**motorabhängig** / engine-dependent  
**Motorbelastung** / load on the engine  
**Motorbremskraft** / braking power  
**Motordrehzahlregelung** / engine speed control  
**Motordrehzahl** / engine speed  
**Motorkennkarte** / identification card for the engine  
**Motorkraftstoff** / fuel  
**Motorkraft** / power  
**Motorkühler** / engine cooler  
**Motorkühlflüssigkeitstemperatur** / engine coolant temperature  
**Motorkühlflüssigkeit** / engine coolant

**Motorkühlmitteltemperatur** / engine coolant temperature  
**Motorkühlung** / engine cooling system  
**Motorluft-Ansauganlage** / engine's air intake system  
**Motoröldruckanzeige** / engine oil pressure gauge  
**Motorölstand** / engine oil level  
**Motoröl** / engine oil  
**Motorregelung** / accelerator control system  
**Motorstopp-Knopf** / stop engine button  
**Motorstopp-Zug** / stop engine cable  
**Motortemperatur** / engine temperature  
**Motorüberwachung** / monitoring of engine  
**motorunabhängig** / engine-independent  
**Motor** / engine  
**Mutter** / nut

## N

**Nabe** / hub  
**Nachführung** / free movement  
**nachfüllen** / fill  
**nachschmieren** / lubricate  
**Nachtarbeit** / night-time operation  
**Näherungsschalter** / proximity switch  
**Nebelscheinwerfer** / fog lamp  
**Nebelschlußleuchte** / rear fog light  
**Nebenabtrieb** / power take-off  
**Nebenantrieb** / auxiliary drive  
**Nebenverbraucherkreis** / secondary consumer circuit  
**Nebenverbraucher** / secondary consumer  
**neigen** / incline  
**Neigungsverhältnis** / gradient  
**Neigungswinkel** / angle  
**Neigung** / angle  
**Nennderzahl** / rated speed  
**Nennspannung** / nominal voltage  
**Neutralstellung** / neutral position  
**nichtbindig** / non-cohesive  
**Niveauregulierung** / level adjustment system  
**Niveau** / level  
**Normalgang** / normal speed  
**Normallenkung** / normal steering mode  
**Normalstellung** / normal position  
**Notbetätigung** / emergency operation  
**Notbetrieb** / emergency operation  
**Notendschalter** / emergency limit switch  
**Notfall** / emergency  
**Notlenkpumpe** / emergency steering pump  
**Notmaßnahme** / emergency measure  
**nuckweise** / jerkily  
**Nutzlast** / payload

## O

**Obergurt** / upper boom  
**Oberkammer** / upper chamber  
**Oberwagenmotor** / superstructure engine  
**Oberwagenverriegelung** / superstructure lock  
**Oberwagen** / superstructure  
**Ölablaßschlauch** / oil drain hose  
**Ölbehälter** / tank of the crane's hydraulic system



**Oldruckkontrolleuchte** / oil pressure indicator lamp  
**Öldruckmesser** / oil pressure gauge  
**Öldruck** / oil pressure  
**Öleinfüllöffnung** / oil filler opening  
**Öleinfüllstutzen** / oil filler neck  
**Ölfilter** / oil filter  
**Ölkühler** / oil cooler  
**Ölmeßrohr** / oil measuring tube  
**Ölpeilstab** / dipstick  
**Ölrücklaufilter** / return line oil filter  
**Ölspezifikation** / oil specification  
**Ölstandschauflas** / oil level viewing glass  
**Ölstand** / oil level  
**Öltemperatur** / oil temperature

**P**

**Peilstab** / dipstick  
**Perrot-Spreizkeilvorrichtung** / Perrot brake expanding wedge device  
**Planetengetriebe** / planetary gear  
**Platine** / plate  
**Positionsnummer** / item number  
**Power-Tilt-Jib-Grundkörper** / basic section of the power tilt jib  
**Power-Tilt-Jib** / power tilt jib  
**Profilstollen-Ausbrüche** / chunking  
**Pumpenelement** / pump element  
**Pumpenverteilergetriebe** / pump distribution gearbox

**Q**

**Querdifferentialsperre** / transverse differential lock  
**Querdifferential** / transverse differential  
**Quittierung** / Acknowledge

**R**

**Radantrieb** / final drive  
**Radbolzen** / wheel bolt  
**Radbremse** / wheel brake  
**Radialkolbenpumpe** / radial-piston pump  
**Radio** / radio  
**Radlagerspiel** / wheel-bearing clearance  
**Radlastausgleich** / wheel load is transferred equally  
**Radmutter** / wheel nut  
**Radnabe** / wheel hub  
**Radwechsel** / tyre change  
**Rammsonde** / ram probe  
**Rampenspiegel** / ramp mirror  
**Rampe** / ramp  
**Rändelrad einstellen mit dem ..** / turn the dial  
**Rangierfahrt** / manoeuvring  
**Rechner** / processor  
**Rechtseinschlag** / turn to the right  
**Regelthermostat** / thermostat  
**Regenerationsbehälter** / conditioning unit  
**Regenerationsluft** / dry conditioned air  
**Regler** / control unit  
**regulieren** / regulate

**Reifendruck** / tyre pressure  
**Reifenfüllanschluß** / tyre inflation hose  
**Reifenpanne** / puncture  
**Reifenverschleiß** / tyre wear  
**Reifenwechsel** / tyre change  
**Reifen** / tyre  
**Reinigungsmittel** / cleaning agent  
**Reparaturarbeit** / repair work  
**Reparaturfachpersonal** / repair crew  
**Reparatur** / repair  
**reparieren** / repair  
**Reserverad** / spare wheel  
**Resthub** / remaining stroke  
**Retarder** / retarder  
**Richtlinie** / guideline  
**Richtung** / direction  
**Richtwert** / approximate value  
**Ringflächendruck** / ring area pressure  
**Ringfläche** / ring area  
**Ringfläche** / ring surface  
**Ritzeleingriff** / meshing of a pinion  
**Rohrbruchsicherheitsventil** / pipe break safety valve  
**rollen (des Fahrzeugs)** / moving vehicle  
**Rollenkopfhöhe** / height of the single-sheave boom top  
**Rollenkopf** / single-sheave boom top  
**Rolle** / sheaves  
**rollig** / loose  
**Rotationszylinder** / rotary cylinder  
**ruckartig** / harsh  
**Rückenlehne** / back rest  
**Rückfahrleuchte** / back-up light  
**Rückfallstütze** / backstop  
**Rücklaufleitung** / return line  
**Rückleuchte** / tail lamp  
**Rückseite** / back  
**Rückwand** / rear wall  
**Rückwärtsfahrt** / drive backwards  
**Rückwärtsgang** / reverse gear  
**rückwärts** / reverse  
**Rückzugseil** / retracting rope  
**Rückzugskraft** / retracting power  
**Rundgang** / round  
**Rundseil** / endless rope  
**Rundumkennleuchte** / rotating warning light  
**Rüstvariante** / rigging method  
**Rüstvorgang** / rigging  
**Rüstzustandschalter** / rigging mode switch  
**Rüstzustandsvorwahl** / rigging mode selector switch  
**Rüstzustand** / rigging mode  
**Rüstzustand** / working position  
**rutschen** / slip  
**rutschig** / slippery  
**rütteln** / jiggle  
**RVR-Verstärker** / regulating amplifier

**S**

**Sammelmeldung** / central message  
**saugen** / suck  
**Saugleitung** / suction line  
**säulig** / columnar  
**Säuredichte** / acid concentration

<b>Säuredichte</b> / acid density	<b>Schmiermittelpumpe</b> / lubricant pump
<b>säuseln</b> / rustle	<b>Schmiermittel</b> / lubricant
<b>Schaden</b> / damage	<b>Schmiernippel</b> / lubricating nipple
<b>Schäkel</b> / shackle	<b>Schmierstelle</b> / lubricating point
<b>Schalbereich</b> / gear range	<b>Schmierstofftabelle</b> / lubrication chart
<b>Schaltelektronik</b> / electronically operated..	<b>Schmierung</b> / lubrication system
<b>Schaltelement</b> / switch element	<b>Schmierzustand</b> / lubrication
<b>schalten</b> / switch	<b>Schnappverschluß</b> / snap lock
<b>Schalter für Fahrstandumschaltung</b> / switch for "driving control - carrier/superstructure"	<b>Schnellkupplung</b> / quick coupling
<b>Schalter</b> / switch	<b>Schnellverbindung</b> / quick coupling
<b>Schaltkasten</b> / control box	<b>Schnellverschluß</b> / quick-release lock
<b>Schaltplan</b> / circuit diagram	<b>Schräge</b> / bevel top
<b>Schaltsperr</b> / shift lock	<b>Schräglage</b> / incline
<b>Schaltstufe</b> / gear	<b>Schrägzug</b> / dragging
<b>Schaltung</b> / switch	<b>schräg</b> / diagonally
<b>Schaltzeitpunkt</b> / shifting point	<b>Schraub-Schweißklemme</b> / screw clamp for welding work
<b>Schauglasmitte</b> / centre of the inspection glass	<b>Schutzblech</b> / guard
<b>Schauglas</b> / inspection glass	<b>Schutzhandschuhe</b> / protective gloves
<b>Schaumkopf (Welle)</b> / white horse	<b>Schutzhelm</b> / hard hat
<b>Scheibenrad</b> / disk wheel	<b>Schutzkappe</b> / cap
<b>Scheibenwaschanlage</b> / windscreen washing system	<b>Schutzventil</b> / protection valve
<b>Scheibenwascher</b> / windscreen washing system	<b>Schutzvorrichtungen</b> / safety device
<b>Scheibenwischer-Intervallschaltung</b> / intermittent wiper setting	<b>schwanken</b> / sway
<b>Scheibenwischer</b> / windscreen wiper	<b>schweben</b> / suspend
<b>Scheibe</b> / disc	<b>Schweißarbeit</b> / welding
<b>Scheibe</b> / screen	<b>schweißen</b> / weld
<b>Scheinwerfer</b> / spotlight	<b>Schweißklemme</b> / clamp for welding work
<b>scheren</b> / reeve	<b>Schwenkbereich</b> / slewing range
<b>Scherzustandschalter</b> / reeving mode switch	<b>Schwenkbolzen</b> / swivel pin
<b>Scherzustandsvorwahl</b> / reeving mode selector switch	<b>schwenken</b> / to turn
<b>Scherzustand</b> / reeving mode	<b>Schwenklager</b> / pivot bearing
<b>Schichtenfolge</b> / succession of beds	<b>Schwenkzylinder</b> / tilt cylinder
<b>Schiebefenster</b> / sliding window	<b>Schwerpunktlage</b> / centre of distribution
<b>Schiebeleiter</b> / extendable ladder	<b>Schwerpunktlage</b> / centre of gravity
<b>schieben</b> / push	<b>Sechskantschlüssel</b> / hexagon socket spanner
<b>Schieberegler</b> / regulator	<b>Sechskantschraube</b> / hexagon screw
<b>Schiebeträger</b> / beam	<b>Seilablage</b> / rope holder
<b>Schiebetür</b> / sliding door	<b>Seilabweiser</b> / rope guard
<b>schlagen</b> / hammer	<b>Seildurchmesser</b> / rope diameter
<b>Schlamm</b> / mud	<b>Seilende</b> / rope end
<b>Schlauchanschluß</b> / hose connection	<b>Seilendklemme</b> / rope end clamp
<b>Schlauchführung</b> / hose guide	<b>Seilfangbügel</b> / rope grab
<b>Schlauchmantel</b> / hose casing	<b>Seilgeschwindigkeit</b> / rope speed
<b>Schlauchschelle</b> / hose clamp	<b>Seilkausche</b> / rope eye
<b>Schlauch</b> / hose	<b>Seilkeil</b> / rope wedge
<b>Schlaufe</b> / loop	<b>Seilklemme</b> / rope clamp
<b>Schleifringkörper</b> / slip ring assembly	<b>Seillänge</b> / rope length
<b>Schleppauge</b> / towing eye	<b>Seilrolle</b> / sheave
<b>schleppen</b> / to tow	<b>Seilschutzstange</b> / rope guide bar
<b>Schleppfahrzeug</b> / towing vehicle	<b>Seilschutz</b> / rope guide
<b>Schleppkupplung</b> / towing coupling	<b>Seilsicherungsstange</b> / rope holding rod
<b>Schleppstange</b> / tow-rod	<b>Seilstrang</b> / rope
<b>Schließzylinder</b> / lock cylinder	<b>Seiltrommel</b> / cable drum
<b>Schlitten</b> / slide	<b>Seiltrommel</b> / rope drum
<b>Schloß</b> / lock	<b>Seilverlauf</b> / rope running
<b>schlüpfrig</b> / slippery	<b>Seilwindendrehmelder</b> / rope winch synchro
<b>Schlüsselschalter</b> / key-operated switch	<b>Seilwindung</b> / turn on the drum
<b>Schlüsseltaster</b> / key-operated switch	<b>Seilzug</b> / rope pull
<b>Schlüsselweite</b> / spanner size	<b>Seil</b> / rope
<b>Schlußleuchte</b> / tail light	<b>Seitenarmaturen Brett</b> / side instrument panel
<b>schmieren</b> / lubricate	<b>Seitenarmaturentafel</b> / side instrument panel
	<b>Seitenblech</b> / side plate

**Seitenverkleidung** / cover plate  
**Seitenwand** / side wall  
**Sender** / transmitter  
**Senkbremssperrventil** / safety lowering shut-off valve  
**Senkenschalter** / lowering limit switch  
**senken** / lower  
**Senkrichtung** / lowering direction  
**Sensor** / sensor  
**Separat-Lenkung** / separate steering  
**Serviceklappe** / service flap  
**Sicherheitsabstand** / safe distance  
**Sicherheitsausrüstung** / article of protective clothing  
**Sicherheitsbestimmung** / safety regulation  
**Sicherheitseinrichtung** / safety device  
**Sicherheitseinrichtung** / safety equipment  
**Sicherheitsfackel** / torch  
**Sicherheitsgefühl** / sense of security  
**sicherheitsgerecht** / safety-consciousness  
**Sicherheitsglas** / safety glass  
**Sicherheitsgurt** / seat belt  
**Sicherheitshandschuhe** / safety gloves  
**Sicherheitshinweis** / safety instruction  
**Sicherheitsmaßnahme** / safety measure  
**Sicherheitsmaßnahme** / safety precaution  
**Sicherheitsrisiko** / safety risk  
**Sicherheitsrückschlagventil** / safety check valve  
**Sicherheitsschaltung** / safety circuit  
**Sicherheitschuhe** / safety boots  
**sichern** / secure  
**Sicherungsbezeichnungen** / fuse designation  
**Sicherungsbolzen** / locking pin  
**Sicherungsgruppe** / fuse group  
**Sicherungskasten** / fuse box  
**Sicherungsknopf** / lock button  
**Sicherungsnaedel** / retaining pin  
**Sicherungsstange** / retaining rod  
**Sicherungswechsel** / fuse change  
**Sicherung** / safety device  
**sicher** / safe  
**sichtbar** / visible  
**Sichtkontrolle** / visual inspection  
**Sieb** / filter  
**siehe Abschnitt** / refer to section  
**Signaleinrichtung** / indicators  
**Signalhorntaste** / horn button  
**Signalhorn** / horn  
**Signallampe** / signal lamp  
**Signalsystem** / signal system  
**Signalton** / acoustic signal  
**Signal** / signal  
**Simplex-Trommelbremse** / simplex drum brake  
**sinken** / low  
**Sitzfläche** / seat  
**Sitzhöhe** / seat height  
**Sitzschalter** / dead man's button for seat  
**Sitzverstellung** / seat adjustment  
**Sitz** / seat  
**Sonderausführung** / optional equipment  
**Sonderausrüstung** / additional equipment  
**Sonnenblende** / sun screen  
**spannen** / tighten  
**Spannkette** / suitable chain  
**Spannungsabfall** / voltage drop

**Spannungsversorgung** / power supply  
**Spannungswandler** / voltage transformer  
**Spannung** / voltage  
**Speicherfeder** / preloaded spring  
**Speisepumpe** / feed pump  
**sperrbar** / lockable  
**Sperre** / lock  
**Sperrgangschaltung** / gearbox in locked position  
**Sperrventil** / stop valve  
**Spiegelheizung** / mirror heating  
**Spitzenanbau** / jib  
**Spitzenauslegerbetrieb** / working with the lattice extension  
**Spitzenauslegerfußstück** / foot section of the lattice extension  
**Spitzenauslegerfuß** / foot section of the lattice extension  
**Spitzenauslegerlänge** / length of lattice extension  
**Spitzenauslegerteil** / lattice extension section  
**Spitzenauslegerwinkel** / angle of the lattice extension  
**Spitzenausleger** / lattice extension  
**Spritzölkanne** / squirt gun  
**Stahlplatte** / steel plate  
**Stahlseil** / steel rope  
**standhalten** / to withstand  
**Standheizung** / auxiliary heating system  
**Standlicht** / parking light  
**Standort** / position  
**Standicherheit** / stability  
**Standspur** / hard shoulder  
**Stange** / rod  
**Staniolpapier** / staniol paper  
**stapeln** / stack  
**Stärke (einer Sicherung)** / size  
**starr** / rigid  
**starten** / start  
**Starthilfe** / starter spray  
**Startpilotpumpe** / starter spray pump  
**Startpilot** / starter spray  
**Startversuch** / attempt to start  
**staubfreie** / dust-free  
**Staukästen** / storage box  
**Steckbolzen** / socket pin  
**Steckdose** / socket  
**stecken** / fit  
**stecken** / plug  
**Stecker** / plug  
**stehender Motor** / the engine is switched off  
**Steigfähigkeit** / climbing ability  
**Steigung** / uphill  
**steil** / steep  
**Stellung** / position  
**Stellung** / setting  
**Steuerdruckpumpe** / control pressure pump  
**Steuerhebelkonsole** / control lever consoles  
**Steuerhebel** / control lever  
**Steuerkonsole** / control consoles  
**Steuersignal** / control signal  
**Steuerung** / control  
**Stillstand** / standstill  
**Stirnradkettenzug** / spur-wheel chain hoist  
**Störungsbeschreibung** / description of the malfunction  
**Störung** / interruption  
**Störung** / malfunction

**straff** / taut  
**Strangzahl** / number of falls  
**Strang** / line  
**Straßenfahrtniveau** / on-the-road level  
**Straßenfahrt** / on-road driving  
**Straßenfahrzustand** / condition for driving on road  
**Straßenfahrzustand** / on-the-road mode  
**Straßengang** / on-the-road gear  
**Straßenrand** / roadside  
**Straßenverkehrsordnung** / road traffic regulations  
**Straßenverkehr** / road traffic  
**Straße** / road  
**Strecke** / distance  
**strömen** / flow  
**Stromführende Leitung** / electric cable  
**Stromleitung** / electric cable  
**Stromschlag** / electric shock  
**Strömungsbremse** / retarder  
**Stromverbraucher** / current consumer  
**Stromversorgung** / electric power supply  
**Stufe Schalt-** / setting  
**Sturm** / gale  
**Stützbasis** / outrigger span  
**Stützbasis** / span  
**Stützbock** / boom support  
**Stützbreite** / outrigger span  
**Stützbreite** / span  
**Stützdrucktabelle** / outrigger pressure table  
**Stützdruck** / outrigger pressure  
**Stützelement** / support element  
**stützen** / support  
**Stütze** / support  
**Stützkraft** / supporting force  
**Stütztellergröße** / size of the outrigger pad  
**Stützteller** / outrigger pad  
**Suchbeleuchtung** / position lights for indicator lamps  
**Summersignal** / buzzer signal  
**Summton** / buzzer tone  
**Symbol** / symbol

## T

**Tabellenwert** / value given in the table  
**Tabelle** / table  
**Tachometer** / speed indicator  
**Tagesscheibe** / 24-hour disc  
**Tankdeckel** / tank cap  
**tanken** / refuel  
**Tank** / tank  
**Tastereinheit** / switch unit  
**Taster** / switch  
**Taste** / key  
**Taste** / switch  
**technische Regeln** / technical directions  
**Teillast** / partial load  
**Telegraphenleitung** / telegraph wire  
**Teleskop-Klappspitzenausleger** / telescopic swing-away lattice extension  
**Teleskopabstützung** / telescoping outrigger system  
**teleskopieren** / telescope  
**Teleskopierlänge** / telescoping length  
**Teleskopierreihenfolge** / telescoping sequence

**Teleskopierseil** / telescoping rope  
**Teleskopierung** / telescope status  
**Teleskopierwerk** / telescoping gear  
**Teleskopierzustand** / telescoping status  
**Teleskopierzylinder** / telescoping cylinder  
**Teleskopteil** / telescope section  
**Teleskopverriegelung** / telescope lock  
**Teleskop** / telescope  
**Temperaturanzeige** / temperature gauge  
**Temperaturbereich** / temperature range  
**Temperaturregler** / temperature regulator  
**Temperatur** / temperature  
**Tempostat** / cruise control  
**Testprogramm** / test program  
**thermostatgesteuert (wird ..eingeschaltet)** / switched on by a thermostat  
**Thermostat** / thermostat  
**Ton der Hupe** / blast  
**Torf** / peat  
**torsionssteif** / torsionally resistant  
**Totmannschalter** / dead man's switch  
**Totmannschaltung** / dead man's switch system  
**Totmanntaster** / dead man's switch  
**Totmanntaste** / dead man's switch  
**Tragdeck** / carrying deck  
**Träger** / carrier  
**Tragfähigkeitstabelle** / lifting capacity table  
**Tragfähigkeitsverminderungen** / reduction in the lifting capacity  
**Tragfähigkeitswert** / lifting capacity  
**Tragfähigkeit** / lifting capacity  
**Tragfähigkeit** / load bearing capacity  
**Traglastkurve** / load curve  
**Traglast** / load  
**Transportgewicht** / transport weight  
**Transportieren** / transport  
**Transportstellung** / transport position  
**Transportzustand** / transport condition  
**Transport** / transportation  
**Trennpunkt** / separator point  
**Triebachslinie** / driven axle line  
**Triebkopf** / operating head  
**Triebwerk** / power unit  
**Trittstufe** / step  
**Trockenluftfilter** / dry air filter  
**Trocknungsmittel** / drying agent  
**Trocknungsvorgang** / drying process  
**Trommelbremse** / drum brake  
**Trommeldurchmesser** / drum diameter  
**trommeln (des Hubseiles)** / reel  
**Trommel** / drum  
**Tunnel** / tunnel  
**Türschloß** / door lock  
**Türschlüssel** / door key  
**Typenschild** / model plate

## U

**überbrücken** / override  
**Überbrückung** / override  
**Überdruckventil** / pressure relief valve  
**Überlastabschalteneinrichtung** / overload shutdown device

**überlasten** / overload  
**Überlastsicherung** / safe load indicator  
**Überlastung** / overload  
**Übernahme (Taste)** / accept (key)  
**überwachen** / to monitor  
**Überwachung** / monitoring  
**Umdrehung** / turn  
**Umgang** / round  
**umkippen** / overturn  
**Umlenkrolle** / deflection sheave  
**Umluftbetrieb** / recirculated air  
**Umluft** / recirculated air  
**Umrißleuchte** / marker light  
**umschalten** / switch over  
**Umschalthehn** / crossover cock  
**Umschalthebel** / change-over lever  
**Umschlagbetrieb** / loading and unloading work  
**Umwelt** / environment  
**Unfallgefahr** / risk of accidents  
**Unfall** / accident  
**unterbauen** / pack  
**Unterbauhöhe** / height of the packing  
**Unterbaumaterial** / packing material  
**Unterbau** / packing  
**unterbrechen** / disconnect  
**Unterbrechung** / break  
**Unterbrechung** / disconnecting  
**Unterführung** / low headroom  
**Untergrund** / ground  
**Unterkammer** / lower chamber  
**Unterlegkeil** / chock  
**unterstützen** / to assist  
**untersuchen** / examine  
**Unterwagenhydraulik** / carrier's hydraulic system  
**Unterwagenplattform** / carrier platform  
**Unterwagen** / carrier  
**unverwittert** / unweathered ?  
**unverwittert** / unwethered

## V

**Ventil** / valve  
**verantwortlich** / responsible  
**Verbandkasten** / first-aid kit  
**Verbindungsbolzen** / connecting pin  
**Verbindungsstelle** / bearing point  
**verbolzen** / to lock  
**Verbolzungszylinder** / locking cylinder  
**Verbolzung** / locking pin  
**verboten** / prohibited  
**Verbraucheranlage** / consumer system  
**Verbrennung** / combusting  
**verdichtet** / compacted  
**verdrängt** / displaced  
**verfahren** / move  
**verfahren** / move the crane on site  
**Verkehrssicherheit** / road safety  
**Verordnung** / regulation  
**verriegeln** / lock mechanically  
**Verriegelungsbolzen** / locking pin  
**Verriegelungsknopf** / lock knob  
**Verriegelungsposition** / locking position

**Verriegelungsring** / locking ring  
**Verriegelung** / lock  
**Verschlußkappe** / sealing cap  
**Verschlußstopfen** / stopper  
**Verschluß** / plug  
**Verschmutzungsanzeige** / contamination display  
**Verschraubungen** / screw connections  
**Versicherungsbestimmungen** / terms and conditions of insurance policies  
**versorgen** / serve  
**Versorgungsleitung** / pipe  
**Versorgungsleitung** / supply line  
**Versorgungsspannung vorhanden** / power on  
**Verstärker** / amplifier  
**Verstärkungsblech** / reinforcement plate  
**Verstellpumpe** / variable displacement pump  
**Verstellwinkel** / adjusting angle  
**Verteilergetriebe** / transfer case  
**Verteilerkasten** / distribution box  
**Verwendungsdauer** / duration of use  
**Verzögerer** / retarder  
**verzögern** / delay  
**Vierkreis-Schutzventil** / four-circuit protection valve  
**Vollast** / full load  
**Volleistung** / maximum speed  
**Vollgas** / maximum speed  
**Vorarbeiter** / foreman  
**Vorbauspitze** / boom extension  
**Vorderachslinie** / front axle line  
**Vorderrad** / front wheel  
**Vorderwand** / front wall  
**vorgeschrieben** / prescribed  
**Vorglühzeit** / preheating  
**Vorhängeschloß** / padlock  
**Vorratsbehälter** / reservoir  
**Vorratsdruck** / supply pressure  
**Vorrat** / supply  
**vorschriftsmäßig** / prescribed  
**Vorschrift** / requirement  
**Vorsichtshinweis** / precaution  
**Vorsichtsmaßnahme** / safety precaution  
**Vorsteuerung** / pilot control  
**Vortriebskraft** / thrust  
**vorwärmen** / preheat  
**Vorwarngrenze** / warning limit  
**Vorwarnung** / early warning  
**Vorwärtsgang** / forward gear

## W

**wählen** / select  
**Wahlschalter** / selector switch  
**Wahltasterfeld** / selector switch panel  
**Wahltaster** / select with the push button  
**Wahltaster** / selector button  
**Wahltaster** / selector switch  
**wahlweise Anzeigen** / optional status displays  
**Wandlerbereich** / converter range  
**Wandlerölfilter** / converter oil filter  
**Wandlerüberbrückungskupplung** / converter override coupling  
**Wandler** / converter

**Wärmetauscher** / heat exchanger  
**warmfahren** / warm up  
**warmlaufen** / warm up  
**Warnanhänger** / warning tag  
**Warnblinkanlage** / hazard warning light  
**Warnblinkanlage** / hazard warning system  
**Warndreieck** / warning triangle  
**Warnhinweise** / warnings  
**Warnlampe** / warning light  
**Warnleuchte LMB-Vorwarnung** / SLI early warning lamp  
**Warnleuchte** / warning lamp  
**Warnposten** / assign personnel  
**Warnschild** / warning sign  
**warten** / maintain  
**warten** / service  
**Wartungsanleitung** / maintenance manual  
**Wartungsarbeit** / maintenance work  
**Wartungsheft** / maintenance booklet  
**Wartungsintervall** / maintenance interval  
**Wartungsplan** / maintenance plan  
**Wartungszweck** / maintenance purpose  
**Wartung** / maintenance  
**Waschdüse** / washing nozzle  
**wassergekühlt** / water-cooled  
**Wasserumlaufkühlung** / water circulation cooling  
**Wasserzusatzheizung** / additional water heating system  
**Wendekreis** / turning circle  
**Wenderadius** / turning circle radius  
**Wendigkeit** / manoeuvrability  
**Werkzeugkasten** / tool box  
**Werkzeugkiste** / toolbox  
**Werkzeug** / tool  
**Wickelbild (ein gleichmäßiges ... des Seiles)** / the rope must be wound evenly  
**Wimpel** / pennant  
**Windeinfluß** / effect of wind  
**Windfahne** / wind-T  
**Windfläche** / wind surface  
**Windgeschwindigkeit** / wind speed  
**Windlast** / wind load  
**Windmesser** / anemometer  
**Windmeßgerät** / anemometer  
**Windrichtung** / wind direction  
**Windschutzscheibe** / windscreen  
**Windstärke** / wind strength  
**Windstille** / calm  
**Winkelgetriebe** / angle gear  
**Winkelstellung** / angle  
**Winkel** / angle  
**wippen** / derrick  
**Wippschalter** / rocker switch  
**Wippspitze** / luffing jib  
**Wipptaster** / rocker switch  
**Wippwerkgeschwindigkeit** / derricking speed  
**Wippwerk** / derricking gear  
**Wippzylinder-Kopfachse** / derricking cylinder head axle  
**Wippzylinder-Kopfauge** / derricking cylinder head eyelet  
**Wippzylinderkopfbolzen** / derricking cylinder headpin  
**Wippzylinder** / derricking cylinder  
**Wirbelstrom-Retarder** / eddy current retarder  
**Wischer** / wiper

## Z

**Zentralschmierung** / central lubrication  
**Zerstörung** / destruction  
**Zentralelektronik** / central electronic  
**Zentralschmieranlage** / central lubrication system  
**Zentraltaster** / central push button  
**Ziffernblock** / numerical pad  
**Zubehör** / accessories  
**zugelassen** / permitted  
**Zugkette** / tow chain  
**Zugknopf** / pull knob  
**Zugkraft** / tractive force  
**Zugrichtung gerade Z.** / straight line  
**Zuleitung** / line  
**Zünd-Lichtschalter** / combined lighting and ignition switch  
**Zündschloß** / ignition lock  
**Zündschlüssel** / ignition key  
**Zündung** / ignition  
**Zündversuch Heizung** / attempt to start the heater  
**Zündvorgang** / ignition process  
**zusammengestellt** / assembled  
**Zusatzrüstung** / additional equipment  
**Zusatzblöcke Gegengewicht** / additional counterweight block  
**Zusatzeinrichtung** / additional equipment  
**Zusatzheizung** / additional heating system  
**Zusatzrollenkopf** / auxiliary single-sheave boom top  
**zuschaltbar** / ..can be switched on  
**Zuschaltung Antrieb** / activation of drive  
**Zustand** / status  
**Zustandsanzeige** / status indicator  
**Zustandsanzeige** / status display  
**Zustandsmeldung** / status message  
**Zweihakenbetrieb** / two-hook operation  
**Zweikreisbremse** / dual circuit brake  
**Zweikreisbremssystem** / two circuit brake system  
**Zweikreis-Hydraulenkung** / dual-circuit hydraulic steering  
**Zweimannkabine** / two-man cab  
**Zwischenlänge** / intermediate length  
**Zwischenlasche** / attachment plate  
**Zwischenstellung** / intermediate position  
**Zwischenstück** / intermediate section  
**Zylinder** / cylinder  
**Zylinderauge** / cylinder eyelet

**24-hour disc** / Tagesscheibe  
**32.8-ft swing-away lattice extension** / 32,8 ft-  
 Klappspitzenausleger  
**52.5-ft two-stage swing-away lattice extension** / 52,5 ft-  
 Doppelklappspitzenausleger

## A

**accelerate** / beschleunigen  
**accelerate** / gasgeben  
**acceleration force** / Beschleunigungskraft  
**acceleration power** / Beschleunigungsvermögen  
**accelerator** / Fahrpedal  
**accelerator** / Gaspedal  
**accelerator control system** / Motorregelung  
**accept (key)** / Übernahme (Taste)  
**accessories** / Zubehör  
**accident** / Unfall  
**acid concentration** / Säuredichte  
**acid density** / Säuredichte  
**Acknowledge** / Quittierung  
**acoustic** / akustisch  
**acoustic signal** / Signalton  
**action** / Abhilfe  
**activation of drive** / Zuschaltung Antrieb  
**actuation device** / Betätigungsvorrichtung  
**additional counterweight block** / Zusatzblöcke  
 Gegengewicht  
**additional equipment** / Sonderausrüstung  
**additional equipment** / Zusatzausrüstung  
**additional equipment** / Zusatzeinrichtung  
**additional heating system** / Zusatzheizung  
**additional water heating system** / Wasserzusatzheizung  
**adhesive lubrication** / Haftschmierung  
**adjust** / einstellen  
**adjusting angle** / Verstellwinkel  
**aerodynamic** / aerodynamisch  
**aerodynamic force coefficient** / Kraftbeiwert  
 aerodynamischer  
**after-sales service** / Kundendienst  
**agent to assist cold start** / Kaltstartmittel  
**agreement** / Absprache  
**air** / Luft  
**air compression system** / Druckluft-Beschaffungsanlage  
**air distribution** / Luftverteilung  
**air drier** / Lufttrockner  
**air filter** / Luftfilter  
**air flow** / Luftstrom  
**air from the driver's cab** / Fahrerhausluft  
**air pressure** / Luftdruck  
**air reservoir** / Druckluftbehälter  
**air temperature** / Lufttemperatur  
**air vent** / Belüftungsdüse  
**air-conditioning cooler coupling** / Klimakupplung  
**air-conditioning system** / Klimaanlage  
**align** / fluchten  
**all-wheel steering** / Allradlenkung  
**allison gear** / Allisongetriebe  
**alternator** / Drehstromlichtmaschine  
**alternator** / Lichtmaschine  
**amplifier** / Verstärker  
**anemometer** / Windmesser

**anemometer** / Windmeßgerät  
**angle** / Anstellwinkel  
**angle** / Neigung  
**angle** / Neigungswinkel  
**angle** / Winkel  
**angle** / Winkelstellung  
**angle gear** / Winkelgetriebe  
**angle of its chassis** / Böschungsfreiwinkel  
**angle of main boom** / Hauptauslegeranstellwinkel  
**angle of negotiable banks** / Böschungswinkel  
**angle of the lattice extension** / Spitzenauslegerwinkel  
**antifreeze** / Frostschutzmittel  
**applications engineering** / Einsatzplanung  
**approximate value** / Richtwert  
**arm rest** / Armlehne  
**arrangement** / Absprache  
**article of protective clothing** / Sicherheitsausrüstung  
**as far as it will go** / Anschlag bis zum..  
**assembled** / zusammengestellt  
**assembly aid** / Montagehilfe  
**assign personnel** / Warnposten  
**assist** / unterstützen  
**attached** / eingehängt  
**attachment device** / Anhängervorrichtung  
**attachment plate** / Befestigungslasche  
**attachment plate** / Lasche  
**attachment plate** / Zwischenlasche  
**attachment point** / Anschlagpunkt  
**attempt to start** / Startversuch  
**attempt to start the heater** / Zündversuch Heizung  
**attention** / Aufmerksamkeit  
**authorization certificate** / Berechtigungsnachweis  
**automatic** / automatisch  
**automatic gearbox** / Automatikgetriebe  
**auxiliary brake** / Hilfsbremsanlage  
**auxiliary crane** / Hilfskran  
**auxiliary drive** / Nebenantrieb  
**auxiliary heating system** / Standheizung  
**auxiliary hoist** / Hilfshubwerk  
**auxiliary hoist rope** / Hilfshubseil  
**auxiliary single-sheave boom top** / Zusatzrollenkopf  
**axial-piston fixed displacement motor** / Axialkolben-  
 Konstantmotor  
**axial-piston variable displacement pump** / Axialkolben-  
 Verstellpumpe  
**axle** / Achse  
**axle central drive** / Achsmittlengetriebe  
**axle centre drive** / Achsmittlenantrieb  
**axle drive** / Achsantrieb  
**axle holder** / Achshalter  
**axle line** / Achsline  
**axle load** / Achslast

## B

**back** / Rückseite  
**back-up light** / Rückfahrleuchte  
**back rest** / Rückenlehne  
**backfilled** / angeschüttet  
**backfilled** / aufgefüllt  
**backstop** / Rückfallstütze  
**ball bearing slewing** / Kugeldrehverbindung

**ball valve** / Kugelhahn  
**bank** / Böschung  
**banksman** / Einweiser  
**base of the pit** / Grubenfuß  
**basic crane** / Grundgerät Kran  
**basic section** / Grundkörper  
**basic section of the boom** / Auslegergrundkörper  
**basic section of the power tilt jib** / Power-Tilt-Jib-Grundkörper  
**battery** / Batterie  
**battery box** / Batteriekasten  
**battery cap screws** / Batteriestopfen  
**battery charge indicator** / Ladekontrolle  
**battery master switch** / Batterie Hauptschalter  
**be run into by the traffic behind** / Auffahrunfall  
**beam** / Schiebeträger  
**bearing** / Lager  
**bearing** / Lagerung  
**bearing block** / Lagerbock  
**bearing point** / Lagerstelle  
**bearing point** / Verbindungsstelle  
**beaufort scale** / Beaufortgrad  
**belt** / Gurt  
**belt lock** / Gurtschloß  
**bend** / Kurve  
**bevel top** / Schräge  
**blank page** / Leerseite  
**blast** / Ton der Hupe  
**bleed** / entlüften  
**bleeder screw** / Entlüftungsschraube  
**blocking valve** / Blockierungsventil  
**blow air** / belüften  
**blower opening** / Gebläseöffnung  
**blown** / defekt Sicherung  
**board** / Brett  
**bolted-on** / aufgeschraubt  
**boom** / Ausleger  
**boom angle** / Auslegerneigung  
**boom angle** / Auslegerwinkel  
**boom direction** / Auslegerrichtung  
**boom extension** / Auslegerverlängerung  
**boom extension** / Vorbauspitze  
**boom head** / Auslegerkopf  
**boom lubrication** / Auslegerschmierung  
**boom position** / Auslegerstellung  
**boom side** / Auslegenseite  
**boom support** / Auslegerstütze  
**boom support** / Stützbock  
**bore** / Bohrung  
**bottle** / Füllflasche  
**bottom axle of boom** / Auslegerfußachse  
**bottom axle of main boom** / Hauptausleger-Fußachse  
**Bowden control cable** / Bowdenzug  
**brake** / Bremse  
**brake** / bremsen  
**brake circuit** / Bremskreis  
**brake cylinder** / Bremszylinder  
**brake light** / Bremsleuchte  
**brake linings** / Bremsbeläge  
**brake system** / Bremsanlage  
**brake-lining thickness** / Bremsbelagstärke  
**braking force** / Bremskraft  
**braking force** / Bremswirkung

**braking power** / Motorbremskraft  
**break** / Unterbrechung  
**breakdown truck** / Abschleppwagen  
**breeze** / Brise  
**buckle** / abknicken  
**buckle** / Knick  
**buzzer signal** / Summersignal  
**buzzer tone** / Summton

## C

**cab** / Kabine  
**cab floor nozzle** / Fußraumdüse  
**cab floor** / Fußraum  
**cab heating** / Kabinenheizung  
**cab lighting** / Innenbeleuchtung  
**cable** / Kabel  
**cable** / Leitung  
**cable connection** / Kabelverbindung  
**cable drum** / Seiltrommel  
**calm** / Windstille  
**can be switched on** / zuschaltbar  
**can still be steered** / lenkfähig  
**cap** / Deckel  
**cap** / Schutzkappe  
**cardan shaft** / Gelenkwelle  
**carrier** / Träger  
**carrier** / Unterwagen  
**carrier level adjustment system** / Fahrzeug-Niveauregulierung  
**carrier platform** / Unterwagenplattform  
**carrier's hydraulic system** / Unterwagenhydraulik  
**carrying deck** / Tragdeck  
**cartridge heater** / Heizpatrone  
**catch** / Klinke  
**caution** / Achtung  
**central axis** / Mittelachse  
**central electronic** / Zentralelektronik  
**central lubrication** / Zentralschmierung  
**central lubrication system** / Zentralschmieranlage  
**central message** / Sammelmeldung  
**central position** / Mittelstellung  
**central push button** / Zentraltaster  
**centre of distribution** / Schwerpunktloge  
**centre of gravity** / Schwerpunktloge  
**centre of the inspection glass** / Schauglasmitte  
**change of gear** / Gangwechsel  
**change-over** / Funktionsumschaltung  
**change-over lever** / Umschalthebel  
**changing load conditions** / Lastwechsel  
**charge air cooling system** / Ladeluftkühler  
**charge indicator lamp** / Ladekontrolle  
**charge indicator lamp** / Ladekontrollleuchte  
**charged with static electricity** / elektrostatische Aufladung  
**chassis** / Fahrgestell  
**chassis number** / Fahrgestellnummer  
**check** / kontrollieren  
**check that it is functioning** / Funktionskontrolle  
**chock** / Unterlegkeil  
**choke throttle lever** / Handgashebel  
**chucking** / Profilstollen-Ausbrüche



<b>circuit</b> / Kreislauf	<b>converter</b> / Wandler
<b>circuit diagram</b> / Schaltplan	<b>converter oil filter</b> / Wandlerölfilter
<b>circular spirit level</b> / Dosenlibelle	<b>converter override coupling</b> / Wandlerüberbrückungskupplung
<b>clamp</b> / Klemme	<b>converter range</b> / Wandlerbereich
<b>clamp for welding work</b> / Schweißklemme	<b>convey</b> / fördern
<b>cleaning agent</b> / Reinigungsmittel	<b>cool</b> / kühl
<b>climbing ability</b> / Steigfähigkeit	<b>cool down</b> / abkühlen
<b>close-fitting</b> / enganliegend Kleidung	<b>coolant</b> / Kühlflüssigkeit
<b>coarse sand</b> / Grobsand	<b>coolant</b> / Kühlmittel
<b>cohesive</b> / bindig	<b>coolant additive</b> / Kühlmittelzusatz
<b>columnar</b> / säulig	<b>coolant circuit</b> / Kühlflüssigkeitskreislauf
<b>combined lighting and ignition switch</b> / Zünd- Lichtschalter	<b>coolant compensation reservoir</b> / Kühlflüssigkeitsausgleichbehälter
<b>combusting</b> / Verbrennung	<b>coolant for the vehicle engine</b> / Fahrmotorkühlflüssigkeit
<b>come out</b> / herauswandern Anzeigstift	<b>coolant level</b> / Kühlflüssigkeitsstand
<b>compacted</b> / verdichtet	<b>coolant level</b> / Kühlmittelstand
<b>company directive</b> / Firmenanweisungen	<b>coolant pump</b> / Kühlmittelpumpe
<b>compensation reservoir for the coolant</b> / Kühlflüssigkeitsausgleichbehälter	<b>coolant reservoir</b> / Kühlflüssigkeitsbehälter
<b>compressed air</b> / Druckluft	<b>coolant temperature gauge</b> / Kühlflüssigkeitstemperaturanzeige
<b>compressed air</b> / Luftvorrat	<b>cooling</b> / Abkühlung
<b>compressed air reservoir</b> / Druckluft-Vorratsspeicher	<b>cooling</b> / Kühlung
<b>compressed-air circuit</b> / Druckluftkreis	<b>cooling the hydraulic oil</b> / Hydraulikölkühlung
<b>compressed-air circuit</b> / Druckluftsaltplan	<b>coordination</b> / Koordinationsfähigkeit
<b>compressed-air gauge</b> / Druckluftvorratsanzeige	<b>cordon</b> / Absperrung
<b>compressed-air reservoir</b> / Druckluftvorratsbehälter	<b>corner</b> / Kurve
<b>compressed-air supply</b> / Druckluftversorgung	<b>countermeasure</b> / Gegenmaßnahme
<b>compressed-air supply</b> / Druckluftvorrat	<b>counterweight</b> / Gegengewicht
<b>compressed-air system</b> / Druckluftanlage	<b>counterweight block</b> / Gegengewichtblock
<b>compressor</b> / Luftpresser	<b>counterweight lifting cylinder</b> / Gegengewichthubzylinder
<b>condition for driving on road</b> / Straßenfahrzustand	<b>counterweight lifting gear</b> / Gegengewichthubwerk
<b>condition of the ground</b> / Bodenbeschaffenheit	<b>counterweight platform</b> / Gegengewichtablage
<b>conditioning unit</b> / Regenerationsbehälter	<b>counterweight platform</b> / Gegengewichtauflage
<b>conductivity</b> / Leitfähigkeit	<b>counterweight section</b> / Gegengewichtplatte
<b>connecting cable</b> / Anschlußkabel	<b>counterweight side</b> / Gegengewichtseite
<b>connecting link</b> / Kulisie	<b>counterweight version</b> / Gegengewichtkombination
<b>connecting pin</b> / Verbindungsbolzen	<b>counterweight version</b> / Gewichtkombination
<b>connection</b> / Anschluß	<b>counterweight section</b> / Gegengewichtsteil
<b>connection panel</b> / Anschlußtafel	<b>country in which you are working</b> / Einsatzland
<b>connection plate</b> / Anschlußstück	<b>coupling</b> / Kupplung
<b>connection socket</b> / Anschlußdose	<b>coupling head</b> / Kupplungskopf
<b>consequential damage</b> / Folgeschaden	<b>cover</b> / Deckel
<b>consumer system</b> / Verbraucheranlage	<b>cover plate</b> / Abdeckblech
<b>contamination display</b> / Verschmutzungsanzeige	<b>cover plate</b> / Abdeckklappe
<b>contents</b> / Inhaltsübersicht	<b>cover plate</b> / Seitenverkleidung
<b>continuous blast</b> / Dauerton	<b>cover screw</b> / Deckelschraube
<b>continuous buzzer tone</b> / Dauersumnton	<b>crab travel mode</b> / Krabbengang
<b>continuous load</b> / Dauerlast	<b>crane</b> / Kran
<b>continuous operation</b> / Dauerbetrieb	<b>crane carrier</b> / Kranträger
<b>control</b> / Kontrolle	<b>crane engine</b> / Kranmotor
<b>control</b> / Kontrolleinrichtungen	<b>crane function</b> / Kranfunktion
<b>control</b> / Steuerung	<b>crane is handed over</b> / Kranführerwechsel
<b>control box</b> / Schaltkasten	<b>crane movement</b> / Kranbewegung
<b>control consoles</b> / Steuerkonsole	<b>crane operating</b> / Kranbedienung
<b>control instrument</b> / Kontrollelement	<b>crane operation</b> / Kranbetrieb
<b>control instrument</b> / Kontrollinstrument	<b>crane operator</b> / Kranfahrer
<b>control lever</b> / Steuerhebel	<b>crane operator</b> / Kranführer
<b>control lever consoles</b> / Steuerhebelkonsole	<b>crane operator's cab</b> / Kranführerhaus
<b>control pressure pump</b> / Steuerdruckpumpe	<b>crane operator's cab</b> / Kranführerkabine
<b>control signal</b> / Steuersignal	<b>crane operator's seat</b> / Kranführersitz
<b>control unit</b> / Bedienungseinheit	<b>crane superstructure</b> / Kranoberwagen
<b>control unit</b> / Regler	
<b>controlled</b> / angesteuert	

**crane's electrical system** / Krananlage (elektrisch)  
**crane's electrical system** / Kranelektrik  
**crane's hydraulic system** / Kranhydraulik  
**crank handle** / Handkurbel  
**critical load control amplifier** / GLR-Verstärker  
**critical load control amplifier** / Grenzlast-  
 Regelverstärker  
**critical load control CLC** / Grenzlastregelung  
**critical load range** / Grenzlastbereich  
**cross-over point** / Kreuzungspunkt  
**crossover cock** / Umschalthahn  
**crosswise** / kreuzweise  
**cruise control** / Tempostat  
**current consumer** / Stromverbraucher  
**customer service** / Kundendienst  
**cut-off** / Abschaltung  
**cut-out pressure** / Abschaltdruck  
**cut-out signal** / Abschaltungssignal  
**cylinder** / Zylinder  
**cylinder eyelet** / Zylinderauge

## D

**damage** / beschädigen  
**damage** / Schaden  
**damage** / Beschädigung  
**danger** / Gefahr  
**danger** / Gefährdung  
**danger area** / Gefahrenbereich  
**danger of fire** / Brandgefahr  
**dangerous** / gefährlich  
**data transmitter** / Meßwertsender  
**date of manufacture** / Herstelldatum  
**dead man's button for seat** / Sitzschalter  
**dead man's switch** / Totmannschalter  
**dead man's switch** / Totmanntaste  
**dead man's switch** / Totmanntaster  
**dead man's switch system** / Totmannschaltung  
**deflection** / Durchbiegung  
**deflection sheave** / Umlenkrolle  
**degree of utilization** / Ausnutzung  
**delay** / verzögern  
**depth of the pit** / Grubentiefe  
**derrick** / wippen  
**derricking cylinder** / Wippzylinder  
**derricking cylinder head axle** / Wippzylinder-Kopfachse  
**derricking cylinder head eyelet** / Wippzylinder-  
 Kopfauge  
**derricking cylinder headpin** / Wippzylinderkopfbolzen  
**derricking gear** / Wippwerk  
**derricking speed** / Wippwerkgeschwindigkeit  
**description of the malfunction** / Störungsbeschreibung  
**design** / Bauart  
**designation of plug-in module** / Einschubbezeichnung  
**destruction** / Zerstörung  
**details of these** / Angaben hierzu  
**diagnosis switch** / Diagnoseschalter  
**diagnosis switch** / Diagnosetaster  
**diagonally** / schräg  
**diaphragm cylinder** / Membranzylinder  
**diaphragm push button** / Membrandrucktaster  
**diesel** / Dieselkraftstoff  
**diesel engine** / Dieselmotor  
**different weights** / Gewichtkombination  
**differential cylinder** / Differentialzylinder  
**differential lock** / Differentialsperre  
**dimension** / Abmessung  
**dimension** / Maß  
**dimmer** / Dimmer  
**dimmer** / Helligkeitsregler  
**dipstick** / Meßstab  
**dipstick** / Ölpeilstab  
**dipstick** / Peilstab  
**direction** / Richtung  
**direction indicator** / Blinker  
**direction indicators** / Blinkanlage  
**direction of movement** / Bewegungsrichtung  
**direction of travel** / Fahrtrichtung  
**disc** / Scheibe  
**disconnecting** / Unterbrechung  
**disconnect** / abflanschen  
**disconnect** / unterbrechen  
**disk wheel** / Scheibenrad  
**displaced** / verdrängt  
**displacement motor** / Konstantmotor  
**displacement pump** / Konstantpumpe  
**display** / Anzeigefeld  
**distance** / Abstand  
**distance** / Entfernung  
**distance** / Strecke  
**distribution box** / Verteilerkasten  
**documentation** / Dokumentation  
**door key** / Turschlüssel  
**door lock** / Türschloß  
**door of the driver's cab** / Fahrerhaustür  
**double hook** / Doppelhaken  
**downhill slope** / Gefällestrecke  
**drag rod** / Lenkschubstange  
**dragging** / Schrägzug  
**drain** / ablassen von Öl  
**drain cock** / Entleerungshahn  
**drain plug** / Ablaßstutzen  
**drain valve** / Entwässerungsventil  
**drive** / Antrieb  
**drive backwards** / Rückwärtsfahrt  
**drive input** / Antriebsseite  
**drive input side** / Antriebsseite  
**drive output** / Abtriebsseite  
**drive output side** / Abtriebsseite  
**drive unit** / Antriebsaggregat  
**driven** / angetrieben  
**driven axle line** / Antriebsachslinien  
**driven axle line** / Triebachslinie  
**driven wheel** / Antriebsrad  
**driver's cab** / Fahrerhaus  
**driver's cab** / Fahrzeugkabine  
**driver's cab locking system** / Fahrerhausverriegelung  
**driver's seat** / Fahrersitz  
**driver's seat console** / Fahrersitzkonsole  
**driver's side** / Fahrerseite  
**driving** / Fahrbetrieb  
**driving** / Fahrt  
**driving around corners** / Kurvenfahrt  
**driving characteristic** / Fahreigenschaft  
**driving direction** / Fahrtrichtung

**driving direction indicator** / Fahrtrichtungsanzeiger  
**driving distance** / Fahrstrecke  
**driving downhill** / Gefällefahrt  
**driving mode** / Fahrprogramm  
**driving mode** / Fahrtzustand  
**driving mode** / Fahrzustand  
**driving mode** / Lenkzustand  
**driving position** / Fahrstellung  
**driving position switch** / Fahrstellungsschalter  
**driving range** / Fahrbereich (des Krans)  
**driving range lever** / Fahrbereichshebel  
**driving speed** / Fahrgeschwindigkeit  
**driving speed** / Fahrleistung  
**drum** / Trommel  
**drum brake** / Trommelbremse  
**drum diameter** / Trommeldurchmesser  
**dry air filter** / Trockenluftfilter  
**dry conditioned air** / Regenerationsluft  
**drying agent** / Trocknungsmittel  
**drying process** / Trocknungsvorgang  
**dual circuit brake** / Zweikreisbremse  
**dual-circuit hydraulic steering** / Zweikreis-Hydrolenkung  
**dummy socket** / Blindsteckdose  
**duplex drum brake** / Duplex-Trommelbremse  
**duration of use** / Verwendungsdauer  
**dust-free** / staubfrei

## E

**early warning** / Vorwarnung  
**earth** / erden  
**earth** / Erde  
**earth** / Erdreich  
**earthing terminal** / Masseklemme  
**eddy current retarder** / Wirbelstrom-Retarder  
**edge** / Außenrand  
**effect of wind** / Windeinfluß  
**electric cable** / Stromführende Leitung  
**electric cable** / Stromleitung  
**electric power supply** / Stromversorgung  
**electric shock** / Stromschlag  
**electrical** / elektrisch  
**electrical system** / Bordnetz  
**electricity company** / Elektrizitätsunternehmen  
**electro-hydraulic** / elektrohydraulisch  
**electronic** / elektronisch  
**electronically operated..** / Schaltelektronik  
**electropneumatically** / elektropneumatisch  
**eliminate** / beheben (Störung)  
**emergency** / Notfall  
**emergency limit switch** / Notendschalter  
**emergency measure** / Notmaßnahme  
**emergency operation** / Notbetätigung  
**emergency operation** / Notbetrieb  
**emergency steering pump** / Notlenkpumpe  
**end** / Endbereich  
**end of telescope** / Kopf des Teleskopteils  
**end of the boom** / Auslegerspitze  
**end position** / Endanschlag  
**end position** / Endstellung  
**endless rope** / Rundseil

**engage** / einrasten  
**engine** / Motor  
**engine coolant** / Motorkühlflüssigkeit  
**engine coolant temperature** / Motorkühlflüssigkeitstemperatur  
**engine coolant temperature** / Motorkühlmitteltemperatur  
**engine cooler** / Motorkühler  
**engine cooling system** / Motorkühlung  
**engine cover plates** / Motorabdeckklappe  
**engine oil** / Motoröl  
**engine oil level** / Motorölstand  
**engine oil pressure gauge** / Motoröldruckanzeige  
**engine speed** / Motordrehzahl  
**engine speed control** / Motordrehzahlregelung  
**engine temperature** / Motortemperatur  
**engine's air intake system** / Motorluft-Ansauganlage  
**engine-dependent** / motorabhängig  
**engine-independent** / motorunabhängig  
**enter** / betreten  
**entry** / Eingabe  
**entry options** / Eingabemöglichkeiten  
**environment** / Umwelt  
**equipment** / Einrichtung  
**equipment** / Hilfsmittel  
**erection crane** / Montagekran  
**error** / Fehler  
**error display** / Fehleranzeige  
**error message** / Fehlermeldung  
**exactly vertical** / lotrecht  
**examine** / untersuchen  
**exhaust gases** / Auspuffgase  
**exhaust pipe** / Abgasrohr  
**explode** / explodieren  
**extend** / ausfahren  
**extend** / ausschieben  
**extend** / ausziehen des Abstützträgers  
**extend main boom telescoping** / Hauptausleger austeleskopieren  
**extend telescoping out** / Austeleskopieren  
**extendable ladder** / Schiebeleiter  
**extending and retracting** / Hin- und Herteleskopieren  
**extension cylinder** / Ausschiebezylinder  
**external toothing** / Außenverzahnung

## F

**fail** / ausfallen Gerät, Sicherung  
**failure** / Ausfall  
**fail-safe device** / Hakensicherung  
**fall** / Einsicherung  
**fall of the hoist rope** / Hubseilstrang  
**fan** / Lüfter  
**fan wheel** / Lüfterrad  
**fast speed** / Eagang  
**fast speed** / Eilgang  
**feed pump** / Speisepumpe  
**fill** / auffüllen  
**fill** / befüllen  
**fill** / Einfüllmenge  
**fill** / füllen  
**fill** / nachfüllen  
**filler connection** / Füllanschluß

**filler nipple** / Befüllnippel  
**filler valve** / Füllventil  
**filler-neck** / Einfüllstutzen  
**filter** / Filterelement  
**filter** / Sieb  
**final drive** / Radantrieb  
**final torque** / Endanziehdrehmoment  
**fine regulation for slewing gear** /  
 Drehgeschwindigkeitsregulierung  
**fine tuning** / Feineinstellung  
**fire extinguisher** / Feuerlöscher  
**first-aid kit** / Verbandkasten  
**fissure** / Klüftung (von Fels)  
**fit** / stecken  
**fixed length** / Festlänge  
**flame start system** / Flammstartanlage  
**flanged** / angeflanscht  
**flash** / blinken  
**flat steel** / Flacheisen  
**flow** / strömen  
**flow rate** / Fördermenge  
**fluid level** / Flüssigkeitsstand  
**fog lamp** / Nebelscheinwerfer  
**fold** / anklappen  
**fold** / klappen  
**fold down** / herunterklappen  
**foot brake** / Fußbremse  
**foot section** / Fußstück  
**foot section of the lattice extension** / Spitzenauslegerfuß  
**foot section of the lattice extension** /  
 Spitzenauslegerfußstück  
**foot-operated switch** / Fußschalter  
**foot-operated switch** / Fußtaster  
**foreman** / Vorarbeiter  
**fork element** / Gabelstück  
**formula** / Berechnungsformel  
**forward gear** / Vorwärtsgang  
**four-circuit protection valve** / Vierkreis-Schutzventil  
**free movement** / Nachführung  
**free movement of the slewing gear** /  
 Drehwerknachführung  
**free on wheels** / Freistehend  
**freeze fast** / anfrieren  
**fresh air** / Ansaugluft  
**fresh air** / Frischluft  
**fresh air blower** / Frischluftgebläse  
**fresh air mode** / Frischluftbetrieb  
**front** / Front  
**front axle line** / Vorderachslinie  
**front grille** / Frontgitter  
**front instrument panel** / Frontarmaturen Brett  
**front instrument panel** / Frontarmaturentafel  
**front plate** / Frontplatte  
**front wall** / Vorderwand  
**front wheel** / Vorderrad  
**fuel** / Betriebsstoff  
**fuel** / Kraftstoff  
**fuel** / Motorkraftstoff  
**fuel filter** / Kraftstofffilter  
**fuel gauge** / Kraftstoffvorratsanzeige  
**fuel reserve** / Kraftstoffvorrat  
**fuel specification** / Kraftstoffspezifikation  
**fuel system** / Kraftstoffanlage

**fuel tank** / Kraftstoffbehälter  
**fuel tank** / Kraftstofftank  
**fuel tank** / Kraftstoffvorratsbehälter  
**full beam tell-tale** / Fernlichtanzeige  
**full load** / Vollast  
**functional test** / Funktionsprüfung  
**funnel** / Einfülltrichter  
**fuse box** / Sicherungskasten  
**fuse change** / Sicherungswechsel  
**fuse designation** / Sicherungsbezeichnungen  
**fuse group** / Sicherungsgruppe

## G

**gale** / Sturm  
**gear** / Fahrbereich (des Getriebes)  
**gate** / Klappe  
**gear** / Schaltstufe  
**gear chain** / Getriebekette  
**gear mode** / Fahrprogramm  
**gear oil** / Getriebeöl  
**gear oil pressure** / Getriebeöl Druck  
**gear oil pressure gauge** / Getriebeöl druckanzeige  
**gear oil temperature** / Getriebeöltemperatur  
**gear oil temperature gauge** /  
 Getriebeöltemperaturanzeige  
**gear range** / Schaltbereich  
**gear unit** / Getriebe  
**gear unit control** / Getriebeüberwachung  
**gearbox** / Getriebe  
**gearbox control** / Getriebesteuerung  
**gearbox cooling system** / Getriebekühlung  
**gearbox in locked position** / Sperrgangschaltung  
**gearbox malfunction** / Getriebestörung  
**general drawing** / Aufbauübersicht  
**glass surface** / Glasfläche  
**glove compartment** / Handschuhfach  
**gloves** / Fingerhandschuhe  
**go out** / erlöschen  
**gradient** / Neigungsverhältnis  
**granulate cartridge** / Granulatkartusche  
**gravel** / Kies  
**grease** / Fett  
**grease** / fetten  
**grease container** / Fettbehälter  
**grease gun** / Fettpresse  
**grille** / Gitter  
**grilles covering vent** / Lüftungsgitter  
**grip** / Griff  
**grip** / Haltegriff  
**grip** / Haltestange  
**grip** / Handgriff  
**grip plate** / Griffplatte  
**ground** / Boden  
**ground** / Erde  
**ground** / Untergrund  
**ground clearance** / Bodenfreiheit  
**ground undulation** / Bodenwelle  
**guard** / Abdeckung  
**guard** / absichern  
**guard** / Schutzblech  
**guide for holding ropes** / Halteseilführer

**guide mechanism** / Führung  
**guide rope** / Führungsleine  
**guide sheave** / Führungsrolle  
**guideline** / Richtlinie  
**gust** / Böe

## H

**half of the weight** / Gewichtshälfte  
**hand hole** / Griffloch  
**hammer** / schlagen  
**hand lever** / Handhebel  
**hand pump** / Handpumpe  
**hand signal** / Handzeichen  
**handbrake** / Handbremse  
**handle** / Handgriff  
**handwheel** / Handrad  
**hard hat** / Schutzhelm  
**hard shoulder** / Standspur  
**harsh** / ruckartig  
**have a banksman to guide** / einweisen ..lassen  
**have the ground tested** / Bodenuntersuchung  
**hazard warning light** / Warnblinkanlage  
**hazard warning system** / Warnblinkanlage  
**head** / Kopfstück  
**head sheave** / Kopffrolle  
**head sheave axle** / Kopffrollenachse  
**headlight** / Fahrlicht  
**headlight - full beam** / Fernlicht  
**headlight flasher** / Lichthupe  
**heat** / Heizwärme  
**heat exchanger** / Wärmetauscher  
**heater** / Heizgerät  
**heater fan** / Heizungsgebläse  
**heating pump** / Heizungspumpe  
**heating system** / Heizung  
**heating system blower** / Heizlüfter  
**heating system for driver's cab** / Fahrerhausheizung  
**heating system for the crane operator's cab** /  
 Kranführerkabineheizung  
**height** / Körpergröße  
**height adjustment** / Höheneinstellung  
**height adjustment** / Höhenverstellung  
**height of the packing** / Unterbauhöhe  
**height of the single-sheave boom top** / Rollenkopfhöhe  
**helper** / Helfer  
**hexagon screw** / Imbusschraube  
**hexagon screw** / Innensechskantschraube  
**hexagon screw** / Sechskantschraube  
**hexagon socket spanner** / Sechskantschlüssel  
**high pressure squirt gun** / Hochdruckspritzölkanne  
**high voltage** / Hochspannung  
**high-frequency switchgear** /  
 Hochfrequenzumschaltanlage  
**high-frequency transmitter** / Hochfrequenzsender  
**high-strength** / hochfest  
**highly flammable** / feuergefährlich  
**hill** / Hang  
**hitch** / Anhängpunkt  
**hoist** / Hubwerk  
**hoist brake** / Hubwerksbremse  
**hoist brake** / Hubwerksbremse

**hoist drum** / Hubwerktrommel  
**hoist drum synchro** / Drehmelder  
**hoist gear** / Hubwerkgetriebe  
**hoist rope** / Hubseil  
**hoist rope end** / Hubseilende  
**hoist unit** / Hubeinheit  
**hoisting capacity** / Hubkraft  
**hold fast** / festhalten  
**holder** / Bügel  
**holder** / Halterung  
**holder for hook block** / Hakenflaschenablage  
**holding rod** / Haltestange  
**holding rope** / Halteseil  
**hole for the pin** / Bolzenloch  
**hook** / Haken  
**hook block** / Hakenflasche  
**hook block holder** / Hakenflaschenhalterung  
**hook height** / Hakenhöhe  
**hook height** / Hakenhöhenkurve  
**hook tackle** / Hakengeschirr  
**hook-on ladder** / Einhängeleiter  
**horizontal position** / Horizontale  
**horn** / Hupe  
**horn** / Signalhorn  
**horn button** / Hupentaste  
**horn button** / Hupentaster  
**horn button** / Signalhorntaste  
**horn signal** / Hupsignal  
**hose** / Schlauch  
**hose casing** / Schlauchmantel  
**hose clamp** / Schlauchschelle  
**hose connection** / Schlauchanschluß  
**hose guide** / Schlauchführung  
**how the truck crane is rigged** / Ausrüstungszustand  
**hub** / Mitnehmer Tagesschreiber  
**hub** / Nabe  
**hydraulic** / hydraulisch  
**hydraulic cylinder** / Arbeitszylinder  
**hydraulic lines** / Hydraulikleitungen  
**hydraulic multiple disc brake** / Hydrolamellenbremse  
**hydraulic oil** / Drucköl  
**hydraulic oil** / Hydrauliköl  
**hydraulic oil filter** / Hydraulikölfilter  
**hydraulic oil level** / Hydraulikölstand  
**hydraulic oil pressure** / Hydrauliköldruck  
**hydraulic oil tank** / Hydraulikölbehälter  
**hydraulic oil temperature** / Hydrauliköltemperatur  
**hydraulic oil temperature gauge** /  
 Hydrauliköltemperaturanzeige  
**hydraulic pressure** / Hydraulikdruck  
**hydraulic pump** / Hydraulikpumpe  
**hydraulic steering** / Hydrolenkung  
**hydraulic system** / Hydraulik  
**hydraulic system** / Hydraulikanlage  
**hydraulic system** / Hydrauliksystem  
**hydraulic valve** / Hydraulikventil  
**hydropneumatic** / hydropneumatisch

## I

**identification** / Identifikation  
**idling speed** / Leerlaufdrehzahl

**identification card for the engine** / Motorkennkarte  
**if it is sloping** / Bodennebenheit bei..  
**if necessary** / Bedarf bei ..  
**ignition** / Zündung  
**ignition key** / Zündschlüssel  
**ignition lock** / Zündschloß  
**ignition process** / Zündvorgang  
**illustration** / Abbildung  
**impair** / beeinträchtigen  
**incline** / neigen  
**incline** / Schräglage  
**independent ventilation** / Fremdbelüftung  
**indicating instrument** / Anzeiginstrument  
**indicator lamp** / Kontrolllampe  
**indicator lamp** / Kontrolleuchte  
**indicator pin** / Anzeigestift  
**indicators** / Signaleinrichtung  
**individual switch** / Einzeltaster  
**inflammable** / entflammbar  
**inform** / informieren  
**information display** / Informationsanzeige  
**information selector switch** / Informationswahlschalter  
**information sign** / Hinweisschild  
**initial use** / Inbetriebnahme  
**inland** / Binnenland  
**input** / Eingabe  
**input key** / Eingabetaste  
**insert** / einlegen  
**insert** / einstecken  
**inspection glass** / Schauglas  
**inspection opening** / Inspektionsöffnung  
**install** / aufrüsten der Gegengewichte  
**install** / montieren  
**installation** / Montage  
**instantaneous** / momentan  
**instruction** / Anweisung  
**instructions for use** / Benutzungshinweise  
**instrument** / Instrument  
**instrument lighting** / Instrumentenbeleuchtung  
**instrument panel** / Armaturenbrett  
**instrument panel** / Armaturentafel  
**instrument panel lamp** / Armaturenbrettbeleuchtung  
**instrument panel lamp** / Armaturenbrettleuchte  
**instrument panel lighting** / Armaturenbeleuchtung  
**insulate** / isolieren  
**intermediate length** / Zwischenlänge  
**intermediate position** / Zwischenstellung  
**intermediate section** / Zwischenstück  
**intermittent wiper control** / Intervallschaltung  
**intermittent setting** / Intervallwischer  
**intermittent wiper setting** / Scheibenwischer-  
 Intervallschaltung  
**interruption** / Störung  
**interval** / Intervall  
**it may explode** / Explosionsgefahr  
**it may overturn** / Kippgefahr  
**it will not function** / Fehlfunktion  
**item number** / Positionsnummer

## J

**jerkily** / nuckweise

**jiggle** / rütteln  
**jib** / Spitzenanbau  
**job** / Kraneinsatz  
**jolt** / flattern (des Lenkrades)  
**journey** / Fahrt  
**joystick** / Kreuztaster

## K

**key** / Taste  
**key-operated switch** / Schlüsseltaster  
**key-operated switch** / Schlüsselschalter  
**knob** / Drehschalter  
**knob** / Drehtaster  
**knob** / Knopf  
**knob switch** / Drehknopf

## L

**ladder** / Leiter  
**lap belt** / Beckengurt  
**lamp** / Lampe  
**large hump** / Buckel im Gelände  
**lashed securely** / festgezurr  
**lattice extension** / Spitzenausleger  
**lattice extension section** / Spitzenauslegerteil  
**lead** / Kabelverbindung  
**leak** / Leckstelle  
**length and angle measuring unit** / Längs- und  
 Winkelmeßeinheit  
**length of lattice extension** / Spitzenauslegerlänge  
**length of stroke** / Hubhöhe  
**length of the main boom** / Auslegerlänge  
**level** / ausrichten  
**level** / eben  
**level** / Füllstand  
**level** / Niveau  
**level adjustment system** / Niveauregulierung  
**level of the coolant** / Kühlflüssigkeitsstand  
**lever** / Hebel  
**lever deviation** / Hebelausschlag  
**lid** / Behälterdeckel  
**lift** / anheben  
**lift** / heben  
**lift** / heben  
**lifting capacity** / Tragfähigkeit  
**lifting capacity** / Tragfähigkeitswert  
**lifting capacity table** / Tragfähigkeitstabelle  
**lifting cylinder** / Hubzylinder  
**lifting equipment** / Hebezeug  
**lifting gear** / Anschlagmittel  
**lifting limit switch** / Hubendschalter  
**lifting limit switch weight** / Hubendschaltergewicht  
**lifting rack** / Hubgerüst  
**lifting tackle** / Lastaufnahmemittel  
**light** / Beleuchtung  
**lightweight design** / Leichtmetallbauweise  
**limit** / begrenzen  
**limit** / Begrenzung  
**limited slewing range** / eingeschränkte Drehbereich  
**limits of the vehicle** / Fahrzeugbegrenzung

**linch pin** / Klappstecker  
**line** / Strang  
**line** / Zuleitung  
**load** / Belastung  
**load** / Last  
**load** / Traglast  
**load bearing capacity** / Tragfähigkeit  
**load condition** / Lastzustand  
**load curve** / Traglastkurve  
**load limit** / Belastungsgrenze  
**load moment** / Lastmoment  
**load on the engine** / Motorbelastung  
**load reduction** / Lastminderung  
**load slipping** / Lastdurchrreißer  
**load value** / Lastwert  
**load-bearing capacity** / Bodenfestigkeit  
**loading and unloading work** / Umschlagbetrieb  
**lock** / blockieren  
**lock** / Schloß  
**lock** / Sperre  
**lock** / verbolzen  
**lock** / Verriegelung  
**lock button** / Sicherungsknopf  
**lock cylinder** / Schließzylinder  
**lock knob** / Verriegelungsknopf  
**lock mechanically** / verriegeln  
**lock washer** / Federring  
**lockable** / sperrbar  
**locking cylinder** / Verbolzungszylinder  
**locking of turntable** / Drehtischverriegelung  
**locking pin** / Sicherungsbolzen  
**locking pin** / Verbolzung  
**locking pin** / Verriegelungsbolzen  
**locking position** / Verriegelungsposition  
**locking ring** / Verriegelungsring  
**locking screw** / Klemmschraube  
**locking system** / Blockierung  
**locking turntable** / Drehtischverbolzung  
**longitudinal differential** / Längsdifferential  
**longitudinal differential lock** / Längsdifferentialsperre  
**longitudinal direction** / Längsrichtung  
**longitudinal tilt** / Längsneigung  
**loop** / Schlaufe  
**loose** / rollig  
**loosen** / lösen  
**lorry** / Lastkraftwagen  
**loudspeaker** / Lautsprecher  
**low** / sinken  
**low headroom** / Unterführung  
**low-beam headlight** / Abblendlicht  
**lower** / absenken  
**lower** / senken  
**lower chamber** / Unterkammer  
**lower the boom** / auswippen  
**lowering direction** / Senkrichtung  
**lowering limit switch** / Senkendschalter  
**lubricant** / Schmiermittel  
**lubricant pump** / Schmiermittelpumpe  
**lubricate** / nachschmieren  
**lubricate** / schmieren  
**lubricating nipple** / Schmiernippel  
**lubricating point** / Schmierstelle  
**lubrication** / Schmierzustand

**lubrication chart** / Schmierstofftabelle  
**lubrication system** / Schmierung  
**luffing jib** / Wippspitze

## M

**magnetic rod** / Magnetstab  
**main boom** / Hauptausleger  
**main assembly group** / Hauptbaugruppe  
**main boom angle** / Hauptauslegerwinkel  
**main boom fixed length** / Hauptausleger-Festlänge  
**main boom intermediate length** / Hauptausleger-Zwischenlänge  
**main boom length** / Hauptauslegerlänge  
**main hoist** / Haupthub  
**main hoist** / Haupthubwerk  
**main hoist rope** / Haupthubseil  
**main section** / Hauptteil  
**main shutoff flap** / Hauptabsperrklappe  
**maintain** / instandhalten  
**maintain** / warten  
**maintenance** / Wartung  
**maintenance booklet** / Wartungsheft  
**maintenance interval** / Wartungsintervall  
**maintenance manual** / Wartungsanleitung  
**maintenance plan** / Wartungsplan  
**maintenance purpose** / Wartungszweck  
**maintenance work** / Wartungsarbeit  
**malfunction** / Betriebsstörung  
**malfunction** / Störung  
**malfunctioning** / Funktionsstörung  
**manila hemp rope** / Manilaseil  
**manoeuvrability** / Wendigkeit  
**manoeuvring** / Rangierfahrt  
**manual control lever** / Handsteuerhebel  
**manual throttle** / Handgas  
**mark** / kennzeichnen  
**marker light** / Begrenzungsleuchte  
**marker light** / Umrißleuchte  
**marsh** / Moorerde  
**master** / beherrschen  
**master switch** / Hauptschalter  
**maximum load restriction** / Maximallastbegrenzung  
**maximum mark** / Maximalmarke  
**maximum speed** / Höchstgeschwindigkeit  
**maximum speed** / Volleistung  
**maximum speed** / Vollgas  
**measure** / Maßnahme  
**media** / Hilfsmittel  
**medium position** / Mittelstand  
**meshing of a pinion** / Ritzeleingriff  
**metal rod** / Metallstab  
**metal surface** / Metallfläche  
**metric standard screw-thread** / Metrisch Regel-Gewinde  
**minimum cross section** / Mindestquerschnitt  
**minimum distance** / Mindestabstand  
**mirror heating** / Spiegelheizung  
**mittens** / Fausthandschuhe  
**mixed air** / Mischluft  
**mixed air** / Mischluftbetrieb  
**mobile boom crane** / Auslegerkran  
**mode** / Fahrprogramm

**model plate** / Typenschild  
**modify** / Abstimmung (von Werten)  
**monitor** / überwachen  
**monitoring** / Kontrolle  
**monitoring** / Überwachung  
**monitoring of engine** / Motorüberwachung  
**mounting bracket** / Halterung  
**mounting lever** / Montierhebel  
**move** / verfahren  
**move the crane on site** / verfahren  
**movement** / Arbeitsbewegung  
**movement** / Bewegung  
**movement ..toward** / Annäherung  
**movement which can be carried out simultaneously** /  
 Bewegungskombination  
**movements which increase the load moment** /  
 lastmomentvergrößernde Bewegungen  
**moving vehicle** / rollen (des Fahrzeugs)  
**mud** / Schlamm  
**multi-pin plug** / Mehrpolstecker  
**multiple-disk brake** / Lamellenbremse  
**multi-purpose switch** / Kombischalter

## N

**name plate** / Fabrikschild  
**neutral gear** / Leerlauf  
**national regulation** / Landesvorschrift  
**neutral position** / Neutralstellung  
**night-time operation** / Nacharbeit  
**nominal voltage** / Nennspannung  
**non-cohesive** / nichtbindig  
**normal position** / Normalstellung  
**normal speed** / Normalgang  
**normal steering mode** / Normallenkung  
**note** / Hinweis  
**nozzle** / Düse  
**number of falls** / Strangzahl  
**number of revolutions** / Drehzahlniveau  
**numerical pad** / Ziffernblock  
**nut** / Mutter

## O

**observe** / beachten  
**obstacle** / Hindernis  
**occur** / auftreten  
**off-the-road** / Gelände  
**off-the-road driving** / Geländefahrt  
**off-the-road gear** / Geländegang  
**off-the-road handling** / Geländegängigkeit  
**oil cooler** / Ölkühler  
**oil drain hose** / Ölablaßschlauch  
**oil filler neck** / Öleinfüllstutzen  
**oil filler opening** / Öleinfüllöffnung  
**oil filter** / Ölfilter  
**oil level** / Ölstand  
**oil level viewing glass** / Ölstandschauglas  
**oil measuring tube** / Ölmeßrohr  
**oil pressure** / Öldruck  
**oil pressure gauge** / Öldruckmesser

**oil pressure indicator lamp** / Öldruckkontrolleuchte  
**oil specification** / Ölspezifikation  
**oil temperature** / Öltemperatur  
**on outriggers** / abgestützt  
**on-board network** / Bordnetz  
**on-board voltage** / Bordspannung  
**on-road driving** / Straßenfahrt  
**on-the-road gear** / Straßengang  
**on-the-road level** / Straßenfahrtniveau  
**on-the-road mode** / Straßenfahrzustand  
**operate** / arbeiten  
**operate** / bedienen  
**operate** / betätigen  
**operate** / betreiben  
**operating area** / Arbeitsbereich  
**operating condition** / Einsatzbedingung  
**operating error** / Fehlbedienung  
**operating head** / Triebkopf  
**operating hour** / Betriebsstunde  
**operating hour counter** / Betriebsstundenzähler  
**operating instruction** / Bedienungsanleitung  
**Operating Instructions** / Betriebsanleitung  
**operating instructions** / Betriebsanweisung  
**operating instrument** / Bedienungselement  
**operating mode** / Betriebsart  
**operating pressure** / Betriebsdruck  
**operating speed** / Arbeitsgeschwindigkeit  
**operating temperature** / Betriebstemperatur  
**operating the outriggers** / Abstützungsbetätigung  
**operating-area curve** / Arbeitsbereichskurve  
**operation** / Bedienung  
**operation** / Betätigung  
**operation** / Betrieb  
**operation / working with one hook** / Einhakenbetrieb  
**operational safety** / Betriebssicherheit  
**operator** / Betreiber  
**optional equipment** / Sonderausführung  
**optional status displays** / wahlweise Anzeigen  
**original position** / Ausgangsposition  
**out of position** / ausgelenkt  
**out of service** / Außerbetriebsetzung  
**outlet screw fitting** / Auslaßverschraubung  
**outrigger** / Abstützung  
**outrigger beam** / Abstützträger  
**outrigger cylinder** / Abstützungszyylinder  
**outrigger cylinder** / Abstützzyylinder  
**outrigger housing** / Abstützkasten  
**outrigger pad** / Abstützteller  
**outrigger pad** / Stützteller  
**outrigger pad dimension** / Abstütztellerdurchmesser  
**outrigger pad made of synthetic material** / Kunststoff-  
 Stützteller  
**outrigger pad surface area** / Abstütztellerfläche  
**outrigger pressure** / Stützdruck  
**outrigger pressure table** / Stützdrucktabelle  
**outrigger span** / Abstützbasis  
**outrigger span** / Stützbasis  
**outrigger span** / Stützbreite  
**outside temperature** / Außentemperatur  
**overhead cable** / Freileitung  
**overhead power line** / Freileitung  
**overload** / überlasten  
**overload** / Überlastung



**overload shutdown device** / Überlastabschalteinrichtung  
**override** / überbrücken  
**override** / Überbrückung  
**overrunning** / Freilauf  
**overturn** / umkippen

## P

**pack** / unterbauen  
**packing** / Unterbau  
**packing** / Dichtmanschette  
**packing material** / Unterbaumaterial  
**padlock** / Vorhängeschloß  
**parking brake** / Feststellbremse  
**parking brake lever** / Feststellbremshebel  
**parking brake lever** / Handbremshebel  
**parking brake system** / Feststellbremsanlage  
**parking light** / Standlicht  
**part** / Bauteil  
**part of equipment** / Ausrüstungsteil  
**partial load** / Teillast  
**pass** / durchfahren  
**passenger** / Beifahrer  
**passenger door** / Beifahrertür  
**passenger seat console** / Beifahrersitzkonsole  
**passenger side** / Beifahrerseite  
**payload** / Nutzlast  
**peat** / Torf  
**pennant** / Wimpel  
**permitted** / zugelassen  
**Perrot brake expanding wedge device** / Perrot-Spreizkeilvorrichtung  
**pick up** / aufnehmen  
**pilot control** / Vorsteuerung  
**pin** / Bolzen  
**pipe** / Versorgungsleitung  
**pipe break safety valve** / Rohrbruchsicherheitsventil  
**piston area pressure** / Kolbenflächendruck  
**piston head chamber** / Kolbenbodenraum  
**piston rod** / Kolbenstange  
**piston rod chamber** / Kolbenstangenraum  
**piston surface** / Kolbenfläche  
**pit** / Grube  
**pivot bearing** / Drehlager  
**pivot bearing** / Schwenklager  
**pivot point** / Drehpunkt  
**place** / ablegen  
**planetary gear** / Planetengetriebe  
**plastic** / Kunststoff  
**plastic dummy disc** / Kunststoff-Blindscheibe  
**plate** / Platine  
**plates and numbers** / Kennzeichnung  
**plug** / stecken  
**plug** / Stecker  
**plug** / Verschuß  
**plug-in module** / Einschub  
**pneumatic brake circuit** / Druckluftbremskreis  
**pneumatic brake system** / Druckluftbremsanlage  
**position** / Standort  
**position** / Stellung  
**position light** / Anzeigeleuchte  
**position lights for indicator lamps** / Suchbeleuchtung

**position of the accelerator** / Fahrpedalstellung  
**power** / Motorkraft  
**power on** / Versorgungsspannung vorhanden  
**power shift gear** / Lasts Schaltgetriebe  
**power supply** / Spannungsversorgung  
**power take-off** / Nebenabtrieb  
**power tilt jib** / Power-Tilt-Jib  
**power transmission** / Kraftübertragung  
**power unit** / Triebwerk  
**precaution** / Vorsichtshinweis  
**preheat** / aufwärmen  
**preheat** / vorwärmen  
**preheating** / Vorglühzeit  
**preloaded spring** / Speicherfeder  
**preparation of the job** / Arbeitsvorbereitung  
**preparing to drive** / Fahrtvorbereitung  
**prescribe** / angeben  
**prescribed** / vorgeschrieben  
**prescribed** / vorschriftsmäßig  
**pressure** / Druck  
**pressure / load on the ground** / Bodenpressung  
**pressure accumulator** / Druckspeicher  
**pressure control valve** / Druckbegrenzungsventil  
**pressure cylinder** / Druckzylinder  
**pressure gauge** / Manometer  
**pressure load** / Druckbelastung  
**pressure plate** / Druckteller  
**pressure regulator** / Druckregler  
**pressure relief** / Druckentlastung  
**pressure relief valve** / Überdruckventil  
**pressure-spring multiple-disk brake** / Federdruck-Lamellenbremse  
**process materials** / Betriebs- und Hilfsstoffe  
**process materials** / Hilfs- und Betriebsstoffe  
**processor** / Rechner  
**prohibited** / verboten  
**properly qualified personnel** / Fachpersonal  
**propulsion power** / Antriebskraft  
**protection valve** / Schutzventil  
**protective gloves** / Schutzhandschuhe  
**proximity switch** / Näherungsschalter  
**pull knob** / Zugknopf  
**pump distribution gearbox** / Pumpenverteilergetriebe  
**pump element** / Pumpenelement  
**puncture** / Reifenpanne  
**push** / schieben  
**push button** / Druckknopf  
**push button** / Drucktaste  
**put** / anlegen (des Sicherheitsgurtes)  
**put down** / absetzen  
**put into operation** / Inbetriebnahme  
**put on outriggers** / abstützen

## Q

**qualified** / geschult  
**quick coupling** / Schnellverbindung  
**quick coupling** / Schnellkupplung  
**quick-release lock** / Schnellverschuß

## R

- radial-piston pump** / Radialkolbenpumpe  
**radius** / Ausladung  
**radio** / Radio  
**railway company** / Bahnspedition  
**raise** / anheben  
**raise** / aufrichten  
**raise** / einwippen  
**raise** / heben  
**ram probe** / Rammsonde  
**ramp** / Rampe  
**ramp mirror** / Rampenspiegel  
**range** / Bereich  
**rate of flow** / Förderstrom  
**rated speed** / Nennenderzahl  
**rating** / Leistung Motor  
**re-level** / Ausgleich  
**rear axle line** / Hinterachslinie  
**rear edge** / Hinterkante  
**rear fog light** / Nebelschlußleuchte  
**rear of the carrier** / Fahrzeugrückseite  
**rear wall** / Rückwand  
**rear wheel** / Hinterrad  
**recess** / Aufnahmelasche  
**recess** / Ausnehmung  
**recirculated air** / Umluft  
**recirculated air** / Umluftbetrieb  
**recording** / Aufzeichnung  
**reduction in the lifting capacity** /  
 Tragfähigkeitsverminderungen  
**reel** / trommeln (des Hubseiles)  
**reel off** / abtrommeln  
**reeve** / Einscheren  
**reeve** / scheren  
**reeving** / Einscherung  
**reeving mode** / Scherzustand  
**reeving mode selector switch** / Scherzustandvorwahl  
**reeving mode switch** / Scherzustandschalter  
**refer to section** / siehe Abschnitt  
**refuel** / tanken  
**regulate** / regulieren  
**regulating amplifier** / RVR-Verstärker  
**regulation** / Verordnung  
**regulations in the country in which you are working** /  
 landesspezifische Vorschriften  
**regulator** / Schieberegler  
**reinforcement plate** / Verstärkungsblech  
**release** / entriegeln  
**release** / entsichern  
**release** / lüften  
**release button** / Entriegelungsknopf  
**release lever** / Entriegelungshebel  
**released position** / Lösestellung  
**releasing pressure** / Lösedruck  
**relief** / Ablösung  
**relief operator** / Ablösung  
**remaining stroke** / Resthub  
**removal** / Demontage  
**remove** / abnehmen  
**remove** / abrüsten  
**remove** / abziehen den Schlüssel  
**remove** / demontieren  
**remove** / entfernen  
**remove** / lösen  
**repair** / Reparatur  
**repair** / reparieren  
**repair crew** / Reparaturfachpersonal  
**repair work** / Reparaturarbeit  
**replace** / ersetzen  
**requirement** / Anforderung  
**requirement** / Vorschrift  
**reservoir** / Behälter  
**reservoir** / Vorratsbehälter  
**resistance** / Hemmung  
**responsible** / verantwortlich  
**restriction** / Einschränkung  
**retaining bolt** / Befestigungsschraube  
**retaining pin** / Sicherungsnadel  
**retaining rod** / Sicherungsstange  
**retarder** / Dauerbremse  
**retarder** / Retarder  
**retarder** / Strömungsbremse  
**retarder** / Verzögerer  
**retarder switch** / Dauerbremsschalter  
**retract** / einfahren (den Ausleger)  
**retract** / einziehen  
**retract telescoping in** / Einteleskopieren  
**retracting power** / Rückzugskraft  
**retracting rope** / Rückzugseil  
**retraction of the telescoping** / Einteleskopieren  
**return line** / Rücklaufleitung  
**return line oil filter** / Ölrücklaufilter  
**reverse** / rückwärts  
**reverse gear** / Rückwärtsgang  
**rig** / aufrüsten (des Krans)  
**rig** / ausrüsten  
**rigging** / Rüstvorgang  
**rigging method** / Rüstvariante  
**rigging mode** / Rüstzustand  
**rigging mode selector switch** / Rüstzustandvorwahl  
**rigging mode switch** / Rüstzustandschalter  
**rigid** / starr  
**ring area** / Ringfläche  
**ring area pressure** / Ringflächendruck  
**ring surface** / Ringfläche  
**risk of accidents** / Unfallgefahr  
**risk of fire** / Brandgefahr  
**road** / Fahrweg  
**road** / Straße  
**road safety** / Verkehrssicherheit  
**road traffic** / Straßenverkehr  
**road traffic regulations** / Straßenverkehrsordnung  
**roadside** / Straßenrand  
**rocker switch** / Wippschalter  
**rocker switch** / Wipptaster  
**rocking it free** / freischaukeln  
**rod** / Stange  
**roof** / Dach  
**roof fan** / Dachlüfter  
**roof of the driver's cab** / Fahrerhausdach  
**roof ventilator** / Dachlüfter  
**roof window** / Dachfenster  
**roof window wiper** / Dachscheibenwischer  
**rope** / Kabel

**rope** / Seil  
**rope** / Seilstrang  
**rope clamp** / Seilklemme  
**rope diameter** / Seildurchmesser  
**rope drum** / Seiltrommel  
**rope end** / Seilende  
**rope end clamp** / Seilendklemme  
**rope eye** / Seilkausche  
**rope grab** / Seilfangbügel  
**rope guard** / Seilabweiser  
**rope guide** / Seilschutz  
**rope guide bar** / Seilschutzstange  
**rope holder** / Seilablage  
**rope holding rod** / Seilsicherungsstange  
**rope length** / Seillänge  
**rope line** / Hubseilstrang  
**rope pull** / Seilzug  
**rope running** / Seilverlauf  
**rope speed** / Seilgeschwindigkeit  
**rope wedge** / Seilkeil  
**rope winch synchro** / Seilwindendrehmelder  
**rotary cylinder** / Rotationszylinder  
**rotating warning light** / Rundumkennleuchte  
**round** / Rundgang  
**round** / Umgang  
**rubber sleeve** / Gummimanschette  
**rule for the prevention of accidents** /  
 Arbeitsschutzvorschrift  
**rule of thumb** / Faustregel  
**rules for fire prevention** / Brandschutzvorschriften  
**run in** / einfahren (den Kran)  
**running-in instruction** / Einfahrvorschrift  
**rustle** / säuseln

## S

**safe** / sicher  
**safe load indicator** / Lastmomentbegrenzung  
**safe distance** / Sicherheitsabstand  
**safe load indicator** / Überlastsicherung  
**safe load indicator (SLI)** / Lastmomentbegrenzung LMB  
**safety boots** / Sicherheitsschuhe  
**safety check valve** / Sicherheitsrückschlagventil  
**safety circuit** / Sicherheitsschaltung  
**safety device** / Schutzvorrichtungen  
**safety device** / Sicherheitseinrichtung  
**safety device** / Sicherung  
**safety equipment** / Sicherheitseinrichtung  
**safety glass** / Sicherheitsglas  
**safety gloves** / Sicherheitshandschuhe  
**safety instruction** / Sicherheitshinweis  
**safety lowering shut-off valve** / Senkbremssperrventil  
**safety measure** / Sicherheitsmaßnahme  
**safety precaution** / Sicherheitsmaßnahme  
**safety precaution** / Vorsichtsmaßnahme  
**safety regulation** / Sicherheitsbestimmung  
**safety risk** / Sicherheitsrisiko  
**safety-consciousness** / sicherheitsgerecht  
**screen** / Scheibe  
**screw clamp for welding work** / Schraub-  
 Schweißklemme  
**screw connections** / Verschraubungen

**screwed on** / angeschraubt  
**sealing cap** / Verschlusskappe  
**sealing ring** / Dichtring  
**seat** / Sitz  
**seat** / Sitzfläche  
**seat adjustment** / Sitzverstellung  
**seat belt** / Sicherheitsgurt  
**seat height** / Sitzhöhe  
**secondary consumer** / Nebenverbraucher  
**secondary consumer circuit** / Nebenverbraucherkreis  
**section** / Abschnitt  
**secure** / absichern  
**secure** / sichern  
**secured** / gesichert  
**securing pin** / Haltebolzen  
**select** / wählen  
**select with the push button** / Wahltaster  
**selector button** / Wahltaster  
**Selector key** / Anwahltaste  
**selector switch** / Wahlschalter  
**selector switch** / Wahltaster  
**selector switch panel** / Wahltasterfeld  
**semi-integral ball and nut power steering** /  
 Kugelmutter-Halblock-Lenkung  
**semi-time lag** / mittelträge  
**sense of security** / Sicherheitsgefühl  
**sensor** / Sensor  
**separate steering** / Separat-Lenkung  
**separate vehicle** / Begleitfahrzeug  
**seperator point** / Trennpunkt  
**serial number** / Fabriknummer  
**serve** / versorgen  
**service** / warten  
**service brake** / Betriebsbremse  
**service brake pedal** / Betriebsbremspedal  
**service brake system** / Betriebsbremssystem  
**service flap** / Serviceklappe  
**set** / aufstellen  
**setting** / Stellung  
**setting** / Stufe Schalt-  
**setting off** / Fahrtbeginn  
**shackle** / Schäkel  
**sheave** / Seilrolle  
**sheave made of synthetic material** / Kunststoffrolle  
**sheave on the head of the boom** / Auslegerkopffrolle  
**sheaves** / Rolle  
**shift lock** / Schaltsperre  
**shifting point** / Schaltzeitpunkt  
**short-circuit plug** / Kurzschlußstecker  
**shutdown** / Abschaltung  
**shutdown area** / Abschaltbereich  
**shutdown value** / Abschaltwert  
**side instrument panel** / Seitenarmaturenbrett  
**side instrument panel** / Seitenarmaturentafel  
**side plate** / Seitenblech  
**side wall** / Seitenwand  
**signal** / Signal  
**signal lamp** / Signallampe  
**signal system** / Signalsystem  
**signalling point** / Meldepunkt  
**simplex drum brake** / Simplex-Trommelbremse  
**single hook** / Einfachhaken  
**single tyres** / Einzelbereifung

<b>single-occupancy driver's cab</b> / Ein-Mann-Fahrerhaus	<b>speed indicator</b> / Tachometer
<b>single-sheave boom top</b> / Rollenkopf	<b>spherical-head connection</b> / Kugelkopfverbindung
<b>site</b> / Aufstellungsort	<b>spirit level</b> / Libelle
<b>site</b> / Baustelle	<b>spotlight</b> / Scheinwerfer
<b>site</b> / Einsatzort	<b>spotlight for working area</b> / Arbeitsscheinwerfer
<b>site</b> / Einsatzstelle	<b>spring accumulator</b> / Federspeicher
<b>size</b> / Stärke (einer Sicherung)	<b>spring cotter</b> / Federstecker
<b>size of the outrigger pad</b> / Stütztellergröße	<b>spring-loaded brake cylinder</b> / Federspeicher-Bremszylinder
<b>skid</b> / Gleitkufe	<b>spur-wheel chain hoist</b> / Stirnradkettenzug
<b>slack</b> / lose	<b>squirt gun</b> / Spritzölkanne
<b>slew drive</b> / Drehantrieb	<b>stability</b> / Standsicherheit
<b>slewing angle</b> / Drehwinkel	<b>stack</b> / stapeln
<b>slewing direction</b> / Drehrichtung	<b>standstill</b> / Stillstand
<b>slewing duct</b> / Drehdurchführung	<b>staniol paper</b> / Staniolpapier
<b>slewing ducts</b> / Drehdurchführungen	<b>start</b> / anfahren
<b>slewing gear</b> / Drehwerk	<b>start</b> / anlassen
<b>slewing gear brake</b> / Drehwerkbremse	<b>start</b> / losfahren
<b>slewing gear permanent brake</b> / Drehwerkfeststellbremse	<b>start</b> / starten
<b>slewing gear pinion</b> / Drehwerkritzel	<b>starter</b> / Anlasser
<b>slewing gear speed</b> / Drehwerksgeschwindigkeit	<b>starter button</b> / Anlasserknopf
<b>slewing movement</b> / Drehbewegung	<b>starter fuel</b> / Anlaßkraftstoff
<b>slewing range</b> / Drehbereich	<b>starter motor</b> / Anlasser
<b>slewing range</b> / Schwenkbereich	<b>starter spray</b> / Starthilfe
<b>slewing range limit switches</b> / Drehbereichsendschalter	<b>starter spray</b> / Startpilot
<b>SLI</b> / LMB	<b>starter spray pump</b> / Startpilotpumpe
<b>SLI early warning lamp</b> / Warnleuchte LMB-Vorwarnung	<b>starting gear</b> / Anfahrangang
<b>slide</b> / Schlitten	<b>starting operations</b> / Arbeitsbeginn
<b>slide faces</b> / Gleitflächen	<b>starting position</b> / Anlaßstellung
<b>sliding door</b> / Schiebetür	<b>starting procedure</b> / Anlaßvorgang
<b>sliding wear pad</b> / Gleitstück	<b>static load test</b> / Belastungstest
<b>sliding window</b> / Schiebefenster	<b>status</b> / Zustand
<b>sling</b> / an schlagen	<b>status display</b> / Anzeige
<b>slinger</b> / Anschläger	<b>status display</b> / Zustandsanzeige
<b>slinger</b> / Lastanschläger	<b>status indicator</b> / Zustandsanzeige
<b>Slinging tackle</b> / Anschlaggehänge	<b>status message</b> / Zustandsmeldung
<b>slip</b> / rutschen	<b>steel plate</b> / Stahlplatte
<b>slip off</b> / abrutschen	<b>steel rope</b> / Stahlseil
<b>slip out</b> / herausnutschen	<b>steep</b> / steil
<b>slip ring assembly</b> / Schleifringkörper	<b>steer</b> / lenken
<b>slippery</b> / rutschig	<b>steerable</b> / lenkbar
<b>slippery</b> / schlüpfrig	<b>steered and driven axle line</b> / Lenktriebachslinie
<b>slippery ground</b> / Glätte	<b>steered axle line</b> / Lenkachslinie
<b>slope</b> / Böschung	<b>steering</b> / Lenkfähigkeit
<b>sloping ground</b> / Gefälle	<b>steering</b> / Lenkung
<b>snap lock</b> / Schnappverschluss	<b>steering angle</b> / Lenkeinschlag
<b>socket</b> / Steckdose	<b>steering arm</b> / Lenkhebel
<b>socket for spotlight</b> / Arbeitsscheinwerfersteckdose	<b>steering arm bearing</b> / Lenkhebellagerung
<b>socket pin</b> / Steckbolzen	<b>steering behaviour</b> / Lenkverhalten
<b>solenoid</b> / Magnet	<b>steering cardan shaft</b> / Lenkgelenkwelle
<b>solenoid valve</b> / Magnetventil	<b>steering circuit</b> / Lenkkreis
<b>sound the horn</b> / hupen	<b>steering column</b> / Lenksäule
<b>span</b> / Abstützbreite	<b>steering direction</b> / Lenkrichtung
<b>span</b> / Stützbasis	<b>steering elements</b> / Lenkungsteile
<b>span</b> / Stützbreite	<b>steering force</b> / Lenkkraft
<b>spanner size</b> / Schlüsselweite	<b>steering gear</b> / Lenkgetriebe
<b>spare fuse</b> / Ersatzsicherung	<b>steering hydraulic</b> / Lenkhydraulik
<b>spare part</b> / Ersatzteil	<b>steering linkage</b> / Lenkgestänge
<b>spare parts list</b> / Ersatzteilliste	<b>steering linkage lever</b> / Lenkumlenkhebel
<b>spare wheel</b> / Reserverad	<b>steering lock</b> / Lenksperre
<b>speed</b> / Drehzahl	<b>steering lock</b> / Lenkungsverriegelung
<b>speed</b> / Geschwindigkeit	<b>steering movement</b> / Lenkbewegung
	<b>steering pump</b> / Lenkpumpe

**steering shaft** / Lenkspindel  
**steering system** / Lenksystem  
**steering system** / Lenkungssystem  
**steering wheel** / Lenkrad  
**steering wheel diameter** / Lenkraddurchmesser  
**step** / Trittstufe  
**step in the ground** / Bodenstufe  
**step up** / Aufstieg  
**stiffness of the suspension** / Federungshärte  
**stipulation** / Bestimmung  
**stop** / anhalten  
**stop cock** / Absperrhahn  
**stop cock** / Kugelabsperrventil  
**stop engine button** / Motorstopp-Knopf  
**stop engine cable** / Motorstopp-Zug  
**stop rail** / Auflaufschiene  
**stop valve** / Sperrventil  
**stopper** / Verschlußstopfen  
**stopping work** / Arbeitsunterbrechung bei..  
**storage box** / Staukästen  
**straight ahead** / Geradeausfahrt  
**straight line** / Zugrichtung gerade Z.  
**strap wrench** / Bandschlüssel  
**stroke** / Hub  
**stuck in terrain** / festgefahren  
**substance slippery** / Belag rutschiger  
**succesion of beds** / Schichtenfolge  
**suck** / saugen  
**suction air** / Ansaugluft  
**suction line** / Saugleitung  
**suitable chain** / Spannkette  
**sun screen** / Sonnenblende  
**superstructure** / Oberwagen  
**superstructure engine** / Oberwagenmotor  
**superstructure lock** / Oberwagenverriegelung  
**supervisor** / Einsatzleiter  
**supply** / Vorrat  
**supply line** / Versorgungsleitung  
**supply pressure** / Vorratsdruck  
**support** / abstützen  
**support** / Stütze  
**support** / stützen  
**support cylinder** / Abstützungszyylinder  
**support cylinder** / Abstützzyylinder  
**support element** / Stützelement  
**support housing** / Abstützkasten  
**supporting force** / Stützkraft  
**supporting span** / Abstützbasis  
**supporting span** / Abstützvariante  
**surface** / Auflageflächen  
**surface** / Fläche  
**surface area of the outrigger** / Abstützfläche  
**surface of the piston ring** / Kolbenringfläche  
**surface pressure** / Flächendruck  
**suspend** / schweben  
**suspension** / Federung  
**suspension cylinder** / Federbein  
**suspension cylinder, suspension cylinders** /  
 Federungszyylinder  
**suspension group** / Federungsgruppe  
**suspension locking system** / Federungsblockierung  
**suspension point** / Aufhängepunkt  
**suspension range** / Federweg

**suspension system** / Federungsanlage  
**sway** / schwanken  
**swing-away lattice** / Klappspitze  
**swing-away lattice extension** / Klappspitzenausleger  
**swing-away lattice extension angle** /  
 Klappspitzenneigung  
**switch** / schalten  
**switch** / Schalter  
**switch** / Schaltung  
**switch** / Taste  
**switch** / Taster  
**switch element** / Schaltelement  
**switch for "driving control - carrier/superstructure"** /  
 Schalter für Fahrstandumschaltung  
**switch off** / abschalten  
**switch off** / ausschalten  
**switch on** / einschalten  
**switch over** / umschalten  
**switch unit** / Tastereinheit  
**switched on by a thermostat** / thermostatgesteuert (wird  
 ..eingeschaltet)  
**switching point** / Abschaltpunkt  
**swivel pin** / Schwenkbolzen  
**symbol** / Symbol  
**synchro** / Drehmelder  
**syncro** / Bewegungsmelder  
**synthetic rope** / Kunststoffseil  
**synthetic material** / Kunststoff  
**system** / Anlage

## T

**table** / Tabelle  
**tail lamp** / Rückleuchte  
**tachometer** / Drehzahlmesser  
**tail light** / Schlußleuchte  
**tank** / Behälter  
**tank** / Tank  
**tank cap** / Tankdeckel  
**tank of the crane's hydraulic system** / Ölbehälter  
**taut** / straff  
**technical directions** / technische Regeln  
**telegraph wire** / Telegraphenleitung  
**telescope** / Teleskop  
**telescope** / teleskopieren  
**telescope lock** / Teleskopverriegelung  
**telescope section** / Teleskopteil  
**telescope status** / Teleskopierung  
**telescopic swing-away lattice extension** / Teleskop-  
 Klappspitzenausleger  
**telescoping cylinder** / Teleskopierzyylinder  
**telescoping gear** / Teleskopierwerk  
**telescoping length** / Teleskopierlänge  
**telescoping outrigger system** / Teleskopabstützung  
**telescoping rope** / Teleskopierseil  
**telescoping sequence** / Teleskopierreihenfolge  
**telescoping status** / Teleskopierzustand  
**temperature** / Temperatur  
**temperature gauge** / Temperaturanzeige  
**temperature of the charge air** / Ladelufttemperatur  
**temperature of the coolant** / Kühlflüssigkeittemperatur  
**temperature of the coolant** / Kühlmitteltemperatur

<b>temperature range</b> / Temperaturbereich	<b>towing point</b> / Anschlagpunkt
<b>temperature regulator</b> / Temperaturregler	<b>towing the crane</b> / Abschleppbetrieb
<b>term</b> / Bezeichnung	<b>towing vehicle</b> / Abschleppfahrzeug
<b>terminal box</b> / Anschlußkasten	<b>towing vehicle</b> / Schleppfahrzeug
<b>terminate</b> / abschließen	<b>track</b> / Fahrspur
<b>terms and conditions of insurance policies</b> / Versicherungsbestimmungen	<b>tractive force</b> / Zugkraft
<b>test program</b> / Testprogramm	<b>traffic lane</b> / Fahrspur
<b>testing the brake</b> / Bremsprobe	<b>trailer</b> / Anhänger
<b>the accelerator is not pressed</b> / Leerlaufstellung ..in	<b>trailer brake valve</b> / Anhängerbremsventil
<b>the axle lines are aligned</b> / Lenkeinschlag (den gleichen haben)	<b>trailer coupling</b> / Anhängerkupplung
<b>the boom may buckle</b> / Knickgefahr (des Auslegers)	<b>trailer direction indicator</b> / Anhängerblinker
<b>the engine is running</b> / laufender Motor	<b>trailer load</b> / Anhängelast
<b>the engine is switched off</b> / stehender Motor	<b>trailer's brake system</b> / Anhängerbremsanlage
<b>the ground under the outrigger</b> / Abstützpunkt	<b>trailer's electrical system</b> / Anhängerelektrik
<b>the rope must be wound evenly</b> / Wickelbild (ein gleichmäßiges ... des Seiles)	<b>tram intersection</b> / Bahnkreuzung
<b>the transfer case will not function properly</b> / Fehlschaltungen	<b>transfer case</b> / Verteilergetriebe
<b>thermostat</b> / Regelthermostat	<b>transfer drive axle</b> / Achsdurchtrieb
<b>thermostat</b> / Thermostat	<b>transmitter</b> / Sender
<b>threaded rod</b> / Gewindestange	<b>transport</b> / Transportieren
<b>three phase current</b> / Drehstrom	<b>transport condition</b> / Transportzustand
<b>thrust</b> / Vortriebskraft	<b>transport position</b> / Transportstellung
<b>thunderstorm</b> / Gewitter	<b>transport weight</b> / Transportgewicht
<b>tighten</b> / anziehen	<b>transportation</b> / Transport
<b>tighten</b> / spannen	<b>transverse differential</b> / Querdifferential
<b>tightening torque</b> / Anziehdrehmoment	<b>transverse differential lock</b> / Querdifferentialsperre
<b>tilt cylinder</b> / Schwenkzylinder	<b>travel drive unit</b> / Fahrtriebsaggregat
<b>tipped</b> / kippbar	<b>travelling speed</b> / Fahrtgeschwindigkeit
<b>tipping device for driver's cab</b> / Fahrerhauskippeinrichtung	<b>triggered</b> / angefahren
<b>tipping load</b> / Kipplast	<b>trip recorder</b> / Fahrtenschreiber
<b>toggle switch</b> / Kippschalter	<b>triple gear fixed displacement pump</b> / Dreifachzahnrad- Konstantpumpe
<b>toggle switch</b> / Kipptaster	<b>trolley-wire cable</b> / Fahrdrahlleitung
<b>tool</b> / Werkzeug	<b>troubleshooting</b> / Fehlererkennung
<b>tool box</b> / Werkzeugkasten	<b>troubleshooting</b> / Fehlersuche
<b>tool kit</b> / Bordwerkzeug	<b>truck</b> / Lastkraftwagen
<b>toolbox</b> / Werkzeugkiste	<b>truck crane</b> / Mobilkran
<b>top section</b> / Kopfteil	<b>truck crane identification</b> / Geräteidentifikation
<b>top up</b> / auffüllen	<b>tunnel</b> / Tunnel
<b>torch</b> / Sicherheitsfackel	<b>turn</b> / Drehung
<b>torque</b> / Drehmoment	<b>turn</b> / einschlagen (der Räder)
<b>torque converter</b> / Drehmomentwandler	<b>turn</b> / schwenken
<b>torque wrench</b> / Drehmomentschlüssel	<b>turn</b> / Umdrehung
<b>torsionally resistant</b> / torsionssteif	<b>turn off</b> / abstellen
<b>total length</b> / Gesamtlänge	<b>turn on the drum</b> / Seilwindung
<b>total load</b> / Gesamtlast	<b>turn the dial</b> / Rändelrad einstellen mit dem ..
<b>total weight</b> / Gesamtgewicht	<b>turn to the right</b> / Rechtseinschlag
<b>tow</b> / schleppen	<b>turning circle</b> / Wendekreis
<b>tow away</b> / Abschleppen	<b>turning circle radius</b> / Wenderadius
<b>tow chain</b> / Zugkette	<b>turning radius</b> / Kurvenradius
<b>tow free</b> / freischleppen	<b>turntable</b> / Drehtisch
<b>tow starting</b> / Anschleppen	<b>turntable area</b> / Drehtischbereich
<b>tow-rod</b> / Abschleppstange	<b>two circuit brake system</b> / Zweikreisbremssystem
<b>tow-rod</b> / Schleppstange	<b>two-hook operation</b> / Zweihakenbetrieb
<b>tow-rod coupling</b> / Abschleppauge	<b>two-man cab</b> / Zweimannkabine
<b>towbar coupling</b> / Abschleppkupplung	<b>two-stage swing-away lattice extension</b> / Doppelklappspitze
<b>towbar coupling</b> / Anhängerkupplung	<b>two-stage swing-away lattice extension</b> / Doppelklappspitzenausleger
<b>towing a trailer</b> / Anhängerbetrieb	<b>type of ground</b> / Bodenart
<b>towing coupling</b> / Schleppkupplung	<b>tyre</b> / Reifen
<b>towing eye</b> / Schleppauge	<b>tyre change</b> / Radwechsel
	<b>tyre change</b> / Reifenwechsel
	<b>tyre inflation hose</b> / Reifenfüllanschluß

**tyre pressure** / Luftdruck der Reifen  
**tyre pressure** / Reifendruck  
**tyre wear** / Reifenverschleiß  
**tyres** / Bereifung  
**tyres become hot during driving** / betriebswarm

## U

**unit** / Aggregat  
**universal joint** / Kreuzgelenk  
**unlock** / entriegeln  
**unreel** / abtrollen  
**unreeve** / ausscheren  
**unrig** / abrüsten  
**unscrew** / abschrauben  
**unweathered ?** / unverwittert  
**unwethered** / unverwittert  
**uphill** / Steigung  
**upper boom** / Obergurt  
**upper chamber** / Oberkammer

## V

**V-belt** / Keilriemen  
**valve** / Ventil  
**value given in the table** / Tabellenwert  
**vane-type motor** / Flügelzellenmotor  
**variable displacement pump** / Verstellpumpe  
**vehicle** / Fahrzeug  
**vehicle** / Kraftfahrzeug  
**vehicle engine** / Fahrmotor  
**vehicle engine** / Fahrzeugmotor  
**vehicle identification** / Fahrzeugidentifikation  
**vehicle's electrical system** / Fahrzeugelektrik  
**vehicle's electrical system** / Kraftfahrzeuganlage  
 (elektrisch)  
**vehicle's hydraulic system** / Kraftfahrzeughydraulik  
**vehicle's hydraulic system** / Kranfahrzeughydraulik  
**ventilate** / entlüften  
**ventilate** / lüften  
**ventilation** / Entlüftung  
**venting filter** / EntlüftungsfILTER  
**verge** / Bankett  
**visible** / sichtbar  
**visual inspection** / Sichtkontrolle  
**voltage** / Spannung  
**voltage drop** / Spannungsabfall  
**voltage transformer** / Spannungswandler  
**volume of air** / Luftmenge

## W

**walkie-talkie** / Funksprechgerät  
**warm up** / warmlaufen  
**warm up** / warmfahren  
**warning lamp** / Warnleuchte  
**warning light** / Warnlampe  
**warning limit** / Vorwarngrenze  
**warning sign** / Warnschild  
**warning tag** / Warnanhänger

**warning triangle** / Warndreieck  
**warnings** / Warnhinweise  
**washing nozzle** / Waschdüse  
**watch** / beobachten  
**water circulation cooling** / Wasserumlaufkühlung  
**water-cooled** / wassergekühlt  
**weight** / Gewicht  
**weld** / schweißen  
**welded to** / angeschweißt  
**welding** / Schweißarbeit  
**wet** / anfeuchten  
**wet** / feucht  
**wheel bolt** / Radbolzen  
**wheel brake** / Radbremse  
**wheel hub** / Radnabe  
**wheel load is transferred equally** / Radlastausgleich  
**wheel nut** / Radmutter  
**wheel rim** / Felge  
**wheel-bearing clearance** / Radlagerspiel  
**when the crane is fully loaded** / Auslastung bei voller  
**when the cylinders are compressed..** / einfedern  
**while the heater is on** / Heizbetrieb (während des -s)  
**white horse** / Schaumkopf (Welle)  
**wind direction** / Windrichtung  
**wind load** / Windlast  
**wind speed** / Windgeschwindigkeit  
**wind strength** / Windstärke  
**wind surface** / Windfläche  
**wind-T** / Windfahne  
**windscreen** / Frontscheibe  
**windscreen** / Windschutzscheibe  
**windscreen washer** / Frontscheibenwischer  
**windscreen washing system** / Scheibenwaschanlage  
**windscreen washing system** / Scheibenwascher  
**windscreen wiper** / Frontscheibenwischer  
**windscreen wiper** / Scheibenwischer  
**wing mirror** / Außenspiegel  
**wiper** / Wischer  
**wire break** / Drahtbruch  
**wire cable** / Drahtseil  
**withdrawing device** / Ausziehvorrichtung  
**withstand** / standhalten  
**wooden plank** / Holzbohle  
**working cage** / Arbeitskorb  
**working clothes** / Arbeitskleidung  
**working gloves** / Arbeitshandschuh  
**working position** / Rüstzustand  
**working speed** / Arbeitsgeschwindigkeit  
**working stroke** / Arbeitshub  
**working with the crane** / Kranarbeit  
**working with the lattice extension** /  
 Spitzenauslegerbetrieb  
**working with the main boom** / Hauptauslegerbetrieb

## Y

**yoke** / Haltebügel

## Conversion table for metric measuring units

These operating instructions contain measuring units partly in metric, partly in US units. The following conversion factors apply when converting from metric to US units, and vice versa:

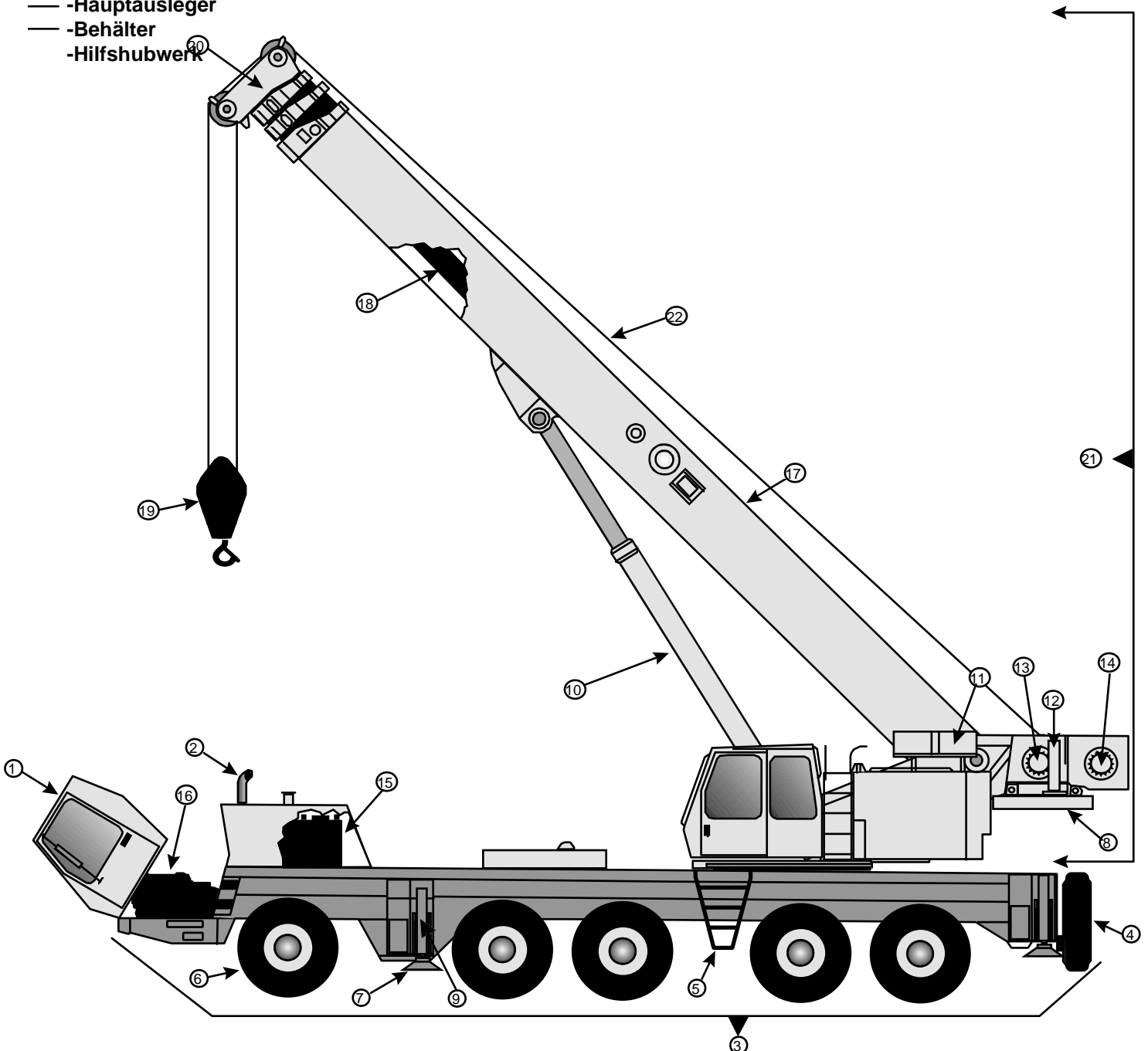
<b>Convert from</b>	<b>to</b>	<b>Multiply by</b>
mm	inches	0.03937
inches	mm	25.4
m	ft	3.28084
ft	m	0.30479
m <sup>2</sup>	ft <sup>2</sup>	10.76391
cm <sup>2</sup>	in <sup>2</sup>	0.155
cm <sup>3</sup>	in <sup>3</sup>	0.061
l	gal (US)	0.264178
kg	lbs	2.204622
lbs	kg	0.45359
t	lbs	2204.622
lbs	t	0.0004536
kN	lbf	224.809
daN/cm <sup>2</sup>	lbf/in <sup>2</sup>	14.50378
lbf/in <sup>2</sup>	daN/cm <sup>2</sup>	0.06895
bar	psi	14.50378
psi	bar	0.06895
m/s	ft/s	3.28084
km/h or km	mph or mi	0.62137
mph or mi	km/h or km	1.60935
Nm	lbf ft	0.7375
°C	°F	1.8 x °C+32
°F	°C	(°F -32) / 1.8
t/m <sup>2</sup>	lbs/ft	2 204.8
m <sup>2</sup> /t	ft <sup>2</sup> /lbs	0.004882



- -Oberwagen
- -Unterwagen
- -Reifen
- -Auslegerkopf
- -Leiter
- -Ölkühle
- -Haupthubwerk
- -Teleskopierzylinder
- -Hebezeug
- -Abstützung
- -Abgasrohr
- -Drahtseil / Kabel
- -Hakenflasche
- -Fahrzeugkabine
- -Motor
- -Gegengewichthubzylinder
- -Gegengewicht
- -Reserverad
- -Stützteller
- -Hauptausleger
- -Behälter
- -Hilfshubwerk

# GMK

## 5130





# *Section 2*





# **Lifting Capacities**

## ***(Cover Page)***

- **Model Number (GMK5130)**
- **Serial Number (reference only)**

***\*Sample Reference Chart use s/n 3016061***

# **Contents Section Pages 1-1 thru 1-4**

- **Information to the Lifting Capacities**
- **Lifting Capacities Tables to the Main Boom**
  - **Fixed Lengths**
  - **Intermediate Lengths**
  - **Telescoping Lengths**

# **Contents Section Pages 1-1 thru 1-4**

- **Lifting Capacities Tables to the Boom Extensions**
  - **32.8 ft.**                      - **52.5 ft.**
  - **78.7 ft.**                      - **105.0 ft.**
  - **131.2 ft.**

# Remarks Section

## Pages 1-5 thru 1-8

- **Lifting Capacity 85%**
- **DIN 15020.1**
- **ISO4301/2 Classification group A1**
- **Caution:**  
**Mixed Loading and Unloading Work Reduce capacities to 70%**
- **Temperature Range**

# Remarks Section

## Pages 1-5 thru 1-8

- **Unique Remarks Section for each manufactured unit**
- **Special Instructions:**
  - **Never Exceed Values**
  - **SLI (EKS) as an Operator Aide**
  - **SLI is not a weighing device**
- **Danger in Two-Hook Operation**

## **Remarks Section Pages 1-5 thru 1-8**

- **SLI monitors only 1 Hook Operation**
- **Correct SLI Code and Falls (Parts) of Line**
- **SLI monitors only if points are observed**
- **Rope Pull 15,400 lbs. for Main and Aux (*Zollerin Hoists*)**  
*(13,700 lbs. on older Siebenhaar Hoist units)*

## **Remarks Section Pages 1-5 thru 1-8**

- **Lifting Capacity Definition**
  - **Load on Hook**
  - **Hook Block**
  - **Lifting Tackle**
- **Cranes must be Level**
- **Check Level during Work Operations**



# Remarks Section

## Pages 1-5 thru 1-8

- **Standard Hookblocks Deductions**
- **Stowed Swingaway Extension Deductions**  
*(when not in use)*
- **Do not Slew with crane on free wheels (unsupported by outriggers)**
- **Danger of overloading and overturning**  
**(use full outrigger and appropriate counterweight)**

# Remarks Section

## Pages 1-5 thru 1-8

- **Erected 32.8 Swingaway, Main Boom Lift Swingaway deduction chart**
- **Erected 52.5 Swingaway, Main Boom Lift Swingaway deduction chart**
- **No Chart for Main Boom lift with 78.7 ft., 105.0 ft. and 131.2 ft swingaway extension erected**

## **Remarks Section Pages 1-5 thru 1-8**

- **Using any listed extension, with block hanging off main boom  
Standard Hookblock deduction chart**
- **Danger of tilting; When raising or lowering main boom with swingaway extension erected, main boom must be fully retracted**

## **Remarks Section Pages 1-5 thru 1-8**

- **Danger of tilting; When raising or lowering main boom with any other extension erected, main boom must be fully retracted  
and turned to the rear**
- **At an angle of more than 15° main boom may be extended to radius values in the chart if monitored by S.L.I. (*see chart*)**

# Remarks Section

## Pages 1-5 thru 1-8

- **At an angle of more than 15° main boom and folding swingaway extension may be extended to radius values in the chart if monitored by S.L.I. (see chart)**

# Counterweight

## Versions Section 1-9

- **59,500 lbs. 8.5 t, 8.5 t, 4.2 t, and (2) 2.9 t cheek weights**
- **46,700 lbs. 8.5 t, 8.5 t, 4.2 t**
- **28,000 lbs. 8.5 t, 4.2 t**
- **9,300 lbs. 4.2 t**

\* **“t” indicates metric tonnes**

# Working Range Curves Sections 1-11 thru 1-15

- **Hookblock Capacities**
- **Distance to Hook** (*deduction from sheave height*)
- **Main Boom Operating Range** (1-11)
- **Boom Extension Operating Ranges** (1-12 thru 1-15)
  - 98.5 ft. Main Boom (1-12)
  - 116.0 ft. Main Boom (1-13)
  - 133.4 ft. Main Boom (1-14)
  - 150.9 ft. Main Boom (1-15)

# Working Range Curves Sections 1-11 thru 1- 15(cont.)

- **Operating Curves Must Not Exceed Listed Radii**
- **Deflection is not calculated for displayed sheave heights**

## Main Boom Charts 2-1 to 2-61

- Counterweight
- Outrigger Span
- Main Boom Lengths (ft.)
- Tele Sections Extended (%)
- Slewing Range
- Capacity Data
- SLI Codes
- Wind Limitations

## Boom Extension Charts 2-1 to 2-61

- Counterweight
- Outrigger Span
- Boom Extension Lengths (ft.)
- Angle of Boom Extension (offset angle)

- Slewing Range
- Capacity Data
- SLI Codes
- Wind Limitations

**This information is  
in addition to  
Main Boom Charts**

# Main Boom Charts Sample Page 2-3

- Counterweight
- Outrigger Span
- Main Boom Lengths (ft.)
- Tele Sections Extended (%)
- Slewing Range

Crane with 99,200 lbs. (45.0t) Counterweight (supporting span 28.1 x 26.9 ft.)						
Main boom - fixed lengths in ft.						
	42.7	57.4	72.2	72.2	72.2	86.9
Tele.sec.I	0.0	0.0	1.0	0.0	0.0	1.0
Tele.sec.II	0.0	0.5	0.0	1.0	0.0	0.5
Tele.sec.III	0.0	0.0	0.0	0.0	0.5	0.0
Tele.sec.IV	0.0	0.0	0.0	0.0	0.5	0.0
Slewing range	360°					
Radius	Lifting capacity in 1000 lbs.					
10.0	266.0	155.0	194.0	155.0	82.0	155.0
15.0	232.0	155.0	180.0	155.0	82.0	155.0
20.0	189.0	144.0	164.0	140.0	73.0	145.0
25.0	159.0	124.0	141.0	122.0	64.0	127.0
30.0		108.0	123.0	107.0	56.0	111.0
35.0		96.0	108.0	95.0	50.0	97.0
40.0		85.0	96.0	85.0	45.0	86.0
45.0		77.0	81.0	78.0	41.0	77.0
50.0			68.0	71.0	37.6	68.0
55.0			58.0	62.0	34.8	58.0
60.0						50.0
65.0						42.8
70.0						37.0
75.0						32.2
SLI-Code	610					
Max. permitted wind speed	6					

## Main Boom Charts Sample Page 2-3

### Counterweight Configuration

Crane with 59,600 lbs. (27,0 t) counterweight (Supporting span 26.1 x 26.9 ft.)								
Main boom - fixed lengths in ft.								
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tele.sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tele.sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tele.sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft.	Lifting capacities in 1000 lbs.							

— Main Boom Lengths

## Main Boom Charts Sample Page 2-3

Crane with 59,600 lbs. (27,0 t) counterweight (Supporting span 28.1 x 26,9 ft.)								
Main boom - fixed lengths in ft.								
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel.sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel.sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel.sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Swinging range	360°							
Radius in ft.	Lifting capacities in 1000 lbs.							

## Telescope Position (Each Section)

**Why are there 3 listings  
for 116.0 ft. ?**

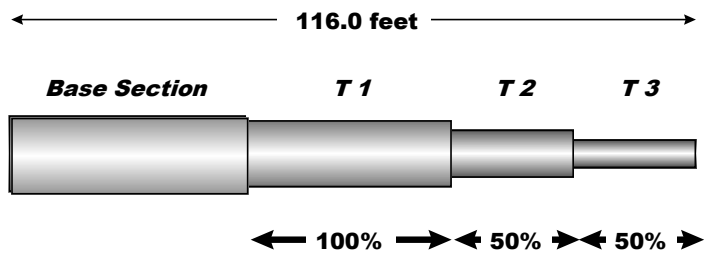
**Check out the boom section lengths!**

	116.0	116.0	116.0
<b>Tele sec. I</b>	<b>1.00</b>	<b>0.50</b>	<b>0.00</b>
<b>Tele sec. II</b>	<b>0.50</b>	<b>0.75</b>	<b>1.00</b>
<b>Tele sec. III</b>	<b>0.50</b>	<b>0.75</b>	<b>1.00</b>

**Are they all the same?**

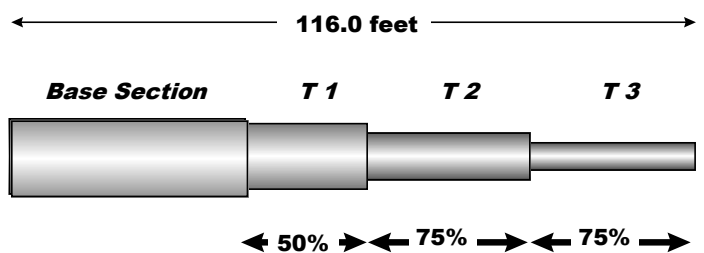
### Look at the boom diagram

	116.0	116.0	116.0
<b>Tele sec. I</b>	1.00	0.50	0.00
<b>Tele sec. II</b>	0.50	0.75	1.00
<b>Tele sec. III</b>	0.50	0.75	1.00



### Look at the boom diagram

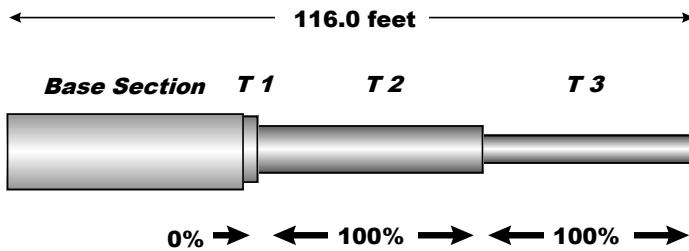
	116.0	116.0	116.0
<b>Tele sec. I</b>	1.00	0.50	0.00
<b>Tele sec. II</b>	0.50	0.75	1.00
<b>Tele sec. III</b>	0.50	0.75	1.00





# Look at the boom diagram

	<b>116.0</b>	<b>116.0</b>	<b>116.0</b>
<b>Tele sec. I</b>	<b>1.00</b>	<b>0.50</b>	<b>0.00</b>
<b>Tele sec. II</b>	<b>0.50</b>	<b>0.75</b>	<b>1.00</b>
<b>Tele sec. III</b>	<b>0.50</b>	<b>0.75</b>	<b>1.00</b>



## Main Boom Charts Sample Page 2-3

	<b>Crane with 59,600 lbs. (27,0 t) counterweight</b> (Supporting span 28.1 x 26,9 ft.)							
	Main boom - fixed lengths in ft.							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tele.sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tele.sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tele.sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft.	Lifting capacities in 1000 lbs.							

## Slewing or Swing Range

# Main Boom Charts Sample Page 2-3

- Radii given in feet\*
- Lifting Capacities in 1000's lbs.\*

2.1 Main Boom		Crane with 99,200 lbs. (45.0t) Counterweight (supporting span 28.1 x 26.9 ft.)				
		Main boom - fixed lengths in ft.				
		42.7	57.4	72.2	72.2	86.9
Tele.sec.I	0.0	0.0	1.0	0.0	0.0	1.0
Tele.sec.II	0.0	0.5	0.0	1.0	0.0	0.5
Tele.sec.III	0.0	0.0	0.0	0.0	0.5	0.0
Slewing-range	360°					
Radius	Lifting capacity in 1000 lbs.					
10.0	286.0	155.0	194.0	155.0	82.0	155.0
15.0	232.0	155.0	180.0	155.0	82.0	155.0
20.0	189.0	144.0	164.0	140.0	73.0	145.0
25.0	159.0	124.0	141.0	122.0	64.0	127.0
30.0		108.0	123.0	107.0	56.0	111.0
35.0		96.0	108.0	95.0	50.0	97.0
40.0		85.0	96.0	85.0	45.0	86.0
45.0		77.0	81.0	76.0	41.0	77.0
50.0			68.0	71.0	37.6	68.0
55.0			58.0	62.0	34.8	58.0
60.0						50.0
65.0						42.8
70.0						37.0
75.0						32.2
SLCCode	610					
Max. permitted wind speed	6					

\* Charts are modified using U. S. standards

# Main Boom Charts Sample Page 2-3

## Capacities given in 1000's of lbs.

Radius in ft.	Lifting capacities in 1000 lbs.								
9.0									
10.0									
15.0	81.0	75.0							
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0		
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2	
30.0	64.0	56.0	64.0	59.0	47.0	53.0	49.0	41.2	
35.0	59.0	50.0	60.0	54.0	42.4	53.0	45.0	41.2	
40.0	55.0	45.0	54.0	49.0	38.4	51.0	41.0	41.5	
45.0	52.0	41.0	49.0	45.0	35.0	46.0	37.8	38.8	
50.0	49.0	37.8	43.8	42.0	32.2	41.6	35.0	36.4	
55.0	44.0	34.8	39.6	39.2	29.6	37.8	32.6	34.2	
60.0	38.6	32.4	36.2	36.6	27.0	34.6	30.2	32.0	
65.0	33.6	29.8	31.8	34.4	25.2	31.6	28.0	30.0	
70.0	29.6	28.2	27.6	30.6	23.6	29.2	26.4	27.8	
75.0	26.0	26.4	24.2	27.0	22.2	25.2	25.0	25.8	

Radius given in Feet

## Try finding the following Capacity?

### Crane Configuration:

**Outrigger Spread:** 28.1 X 26.9 ft., 100% Extended  
**Main Boom:** 116.0 ft. T1 0%, T2 100%, T3 100%  
**Counterweight:** 59,600 lb.  
**Radius:** 43 ft.

**Answer: 35,000 lbs.**

**\*\* When between listings use safer capacity,  
In this case use 45 feet as the radius.**

## Main Boom Charts Sample Page 2-3

SLI code	510
Max. permitted windspeed	14 m/s

**SLI Code**

# What is the SLI?

The **SLI** is the **Safe Load Indicator**.  
You may hear other terms used, such as:

<b>RCI</b>	<b>Rated Capacity Indicator</b>
<b>LMI</b>	<b>Load Moment Indicator</b>
<b>EKS</b>	<b>Elektronik Krane System</b> <i>(German translation)</i>

Each of these terms are describing the same equipment.  
The exception is **EKS** which is a **GMK** exclusive trademark

## Main Boom Charts Sample Page 2-3

SLI code	510
Max. permitted windspeed	14 m/s

**SLI Code 510**

## What does the SLI code mean anything?

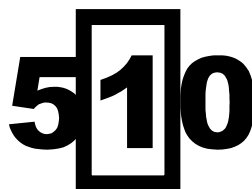
The SLI 510 has significant meaning.  
Take a look at the code numbers:



The “5” indicates the 5th and heaviest *(for this crane)* counterweight configuration. If you were to see a “1” no counterweight would be used. Numbers 2-4 would indicate other progressively heavier counterweights.

## What does the SLI code mean anything?

The SLI 510 has significant meaning.  
Take a look at the code numbers:



The “1” indicates the lifting off the main boom.

“2” indicates use of 32.8 ft. Boom Extension.  
“3” indicates use of 52.5 ft. Boom Extension.  
“4” indicates use of 78.7 ft. Boom Extension.  
“5” indicates use of 105.0 ft. Boom Extension.  
“6” indicates use of 131.2 ft. Boom Extension.

# What does the SLI code mean anything?

The SLI 510 has significant meaning.  
Take a look at the code numbers:

# 510

The "0" indicates the 100% Outrigger Spread.

"2" indicates 50% Outrigger Spread.

## Main Boom Charts Sample Page 2-3

SLI code	510
Max. permitted windspeed	14 m/s

**Wind can be shown in either  
the Beaufort Scale  
or  
Meters/Second**

# Beaufort Wind Chart

<b>WIND</b>	<b>FORCE</b>	<b>WIND VELOCITY</b>	<b>VISIBLE INDICATORS</b>
BEAUFORT SCALE	DESIGNATION	Miles per hour (km per hour)	(Effects of wind as observed on land)
0	Calm	<1 (<2)	No wind; smoke rises vertically
1	Light Air	1 \ 3 (2-5)	Wind direction seen by smoke but not by wind vanes
2	Light Breeze	4 \ 7 (6-11)	Wind felt on face; leaves rustle; wind vane moves slightly
3	Gentle Breeze	8 \ 12 (13 -19)	Leaves / small twigs in constant motion; wind extends flag
4	Moderate Breeze	13 \ 18 (21 - 29)	Raises dust & loose paper; moves small branches
<b>Reduce crane load ratings and operating parameters @ 20 mph (32 kph)</b>			
5	Fresh Breeze	19 \ 24 (31 - 39)	Small trees in leaf begin to sway; on ponds, crested wavelets form
6	Strong Breeze	25 \ 31	Large branches in motion; telegraph wires whistle; difficult using umbrellas
<b>Cease all craning operations @ 30 mph (48 kph) lower &amp; retract boom</b>			
7	Moderate Gale	32 \ 38 (52 - 61)	Whole trees in motion; walking against wind is inconvenient

- **Operating Instructions**

- 0.277 m/s = 1 km/H
- 0.447 m/s = 1mph





# Lifting Capacities

## GMK 5130

Fabrik-Nr.

Wind speed

Wind strength		Wind speed				Effect of wind inland
Beaufort scale	Name	m/sec	ft/sec	km/h	mph	
0	Calm	0 to 0.2	0 to 0.7	1	1	Calm, smoke rises vertically.
1	Light draught	0.3 to 1.5	1.0 to 4.9	1 to 5	0.6 to 3.1	Direction of wind shows by smoke but not by wind vanes.
2	Light breeze	1.6 to 3.3	5.3 to 10.8	6 to 11	3.7 to 6.8	Wind felt on face, leaves rustle, weather vane moved by wind.
3	Gentle Breeze	3.4 to 5.4	11.2 to 17.7	12 to 19	7.5 to 11.8	Leaves and small twigs in constant motion, wind extends light flag.
4	Moderate breeze	5.5 to 7.9	18.0 to 25.9	20 to 28	12.4 to 17.4	Wind raises dust and loose paper, twigs and small branches are moved.
5	Fresh breeze	8.0 to 10.7	26.2 to 35.1	29 to 38	18.0 to 23.6	Small deciduous trees begin to sway. Crested wavelets form on inland waters.
6	Strong breeze	10.8 to 13.8	35.4 to 45.3	39 to 49	24.2 to 30.5	Large branches in motion, telegraph lines whistle, umbrellas used with difficulty.
7	Moderate gale	13.9 to 17.1	45.6 to 56.1	50 to 61	31.1 to 37.9	Whole trees in motion, inconvenience in walking against wind.
8	Fresh gale	17.2 to 20.7	56.4 to 67.9	62 to 74	38.5 to 46.0	Breaks twigs off trees, generally impedes progress.
9	Strong gale	20.8 to 24.4	68.2 to 80.0	75 to 88	46.6 to 54.7	Slight structural damage occurs (chimney pots and slates removed).
10	Full gale	24.5 to 28.4	80.4 to 93.2	89 to 102	55.3 to 63.4	Trees uprooted, considerable structural damage occurs.

To convert meters / second into mph  
 To convert mph into meters / second

Wind speed x 2.237  
 Wind speed divided by 2.237

- 14 m/s ≈ 31.3 mph
- 10 m/s ≈ 22.4 mph
- 8 m/s ≈ 17.9 mph
- 6 m/s ≈ 13.4 mph

**1. Informations to the lifting capacities**

	Page
Contents	1 - 1
Remarks	1 - 5
Empty hook tables	1 - 7
Counterweight versions	1 - 9
Working range - main boom	1 - 11
Working range - boom extension	1 - 12

**2. Lifting capacity tables - main boom**

	supporting span	Slewing-range	Counter-weight	
3 015 670/5 671			(27,0 t)	
3 015 840/5 841 Fixed lengths	A 28.1x26.9ft	0° to the rear 360°	59 600 lbs	2 - 2
3 015 672/5 673			(27,0 t)	
3 015 842/5 843 Intermediate lengths	A 28.1x26.9ft	360°	59 600 lbs	2 - 4
3 015 674/5 675			(27,0 t)	
3 015 844/5 845 Telescoping lengths	A 28.1x26.9ft	360°	59 600 lbs	2 - 6
3 015 680/5 681			(21,2 t)	
3 015 850/5 851 Fixed lengths	A 28.1x26.9ft	0° to the rear 360°	46 700 lbs	2 - 8
3 015 682/5 683			(21,2 t)	
3 015 852/5 853 Intermediate lengths	A 28.1x26.9ft	360°	46 700 lbs	2 - 10
3 015 684/5 685			(21,2 t)	
3 015 854/5 855 Telescoping lengths	A 28.1x26.9ft	360°	46 700 lbs	2 - 12
3 015 690/5 691			(12,7 t)	
3 015 860/5 861 Fixed lengths	A 28.1x26.9ft	0° to the rear 360°	28 000 lbs	2 - 14
3 015 692/5 693			(12,7 t)	
3 015 862/5 863 Intermediate lengths	A 28.1x26.9ft	360°	28 000 lbs	2 - 16
3 015 694/5 695			(12,7 t)	
3 015 864/5 865 Telescoping lengths	A 28.1x26.9ft	360°	28 000 lbs	2 - 18
3 015 700/5 701			(4,2 t)	
3 015 870/5 871 Fixed lengths	A 28.1x26.9ft	360°	9 300 lbs	2 - 20
3 015 702/5 703			(4,2 t)	
3 015 872/5 873 Intermediate lengths	A 28.1x26.9ft	360°	9 300 lbs	2 - 22
3 015 704/5 705			(4,2 t)	
3 015 874/5 875 Telescoping lengths	A 28.1x26.9ft	360°	9 300 lbs	2 - 24
3 015 710/5 711			(0,0 t)	
3 015 880/5 881 Fixed lengths	A 28.1x26.9ft	360°	0 lbs	2 - 26
3 015 712/5 713			(0,0 t)	
3 015 882/5 883 Intermediate lengths	A 28.1x26.9ft	360°	0 lbs	2 - 28
3 015 714/5 715			(0,0 t)	
3 015 884/5 885 Telescoping lengths	A 28.1x26.9ft	360°	0 lbs	2 - 30

		supporting span	Slewing-range	Counter-weight	
3 015 720/5 721				(27,0 t)	
3 015 890/5 891	Fixed lengths	A 28.1x17.8ft	360°	59 600 lbs	2 - 32
3 015 722/5 723				(27,0 t)	
3 015 892/5 893	Intermediate lengths	A 28.1x17.8ft	360°	59 600 lbs	2 - 34
3 015 724/5 725				(27,0 t)	
3 015 894/5 895	Telescoping lengths	A 28.1x17.8ft	360°	59 600 lbs	2 - 36
3 015 730/5 731				(21,2 t)	
3 015 900/5 901	Fixed lengths	B 28.1x17,8ft	360°	46 700 lbs	2 - 38
3 015 732/5 733				(21,2 t)	
3 015 902/5 903	Intermediate lengths	B 28.1x17,8ft	360°	46 700 lbs	2 - 40
3 015 734/5 735				(21,2 t)	
3 015 904/5 905	Telescoping lengths	B 28.1x17,8ft	360°	46 700 lbs	2 - 42
3 015 740/5 741				(12,7 t)	
3 015 910/5 911	Fixed lengths	B 28.1x17,8ft	360°	28 000 lbs	2 - 44
3 015 742/5 743				(12,7 t)	
3 015 912/5 913	Intermediate lengths	B 28.1x17,8ft	360°	28 000 lbs	2 - 46
3 015 744/5 745				(12,7 t)	
3 015 914/5 915	Telescoping lengths	B 28.1x17,8ft	360°	28 000 lbs	2 - 48
3 015 750/5 751				(4,2 t)	
3 015 920/5 921	Fixed lengths	B 28.1x17,8ft	360°	9 000 lbs	2 - 50
3 015 752/5 753				(4,2 t)	
3 015 922/5 923	Intermediate lengths	B 28.1x17,8ft	360°	9 000 lbs	2 - 52
3 015 754/5 755				(4,2 t)	
3 015 924/5 925	Telescoping lengths	B 28.1x17,8ft	360°	9 000 lbs	2 - 54
3 015 760/5 761				(0,0 t)	
3 015 930/5 931	Fixed lengths	B 28.1x17,8ft	360°	0 lbs	2 - 56
3 015 762/5 763				(0,0 t)	
3 015 932/5 933	Intermediate lengths	B 28.1x17,8ft	360°	0 lbs	2 - 58
3 015 764/5 765				(0,0 t)	
3 015 934/5 935	Telescoping lengths	B 28.1x17,8ft	360°	0 lbs	2 - 60

### 3. Boom extension

	Boom extension	Angle	Supporting span	Slewing-range	Counter-weight	
3 015 770					(27,0 t)	
3 015 946	32.8ft	0°;	A 28.1x26.9ft	360°	59 600 lbs	3 - 1
3 015 771					(27,0 t)	
3 015 941	32.8ft	16°;	A 28.1x26.9ft	360°	59 600 lbs	3 - 2
3 015 772					(27,0 t)	
3 015 942	32.8ft	30°;	A 28.1x26.9ft	360°	59 600 lbs	3 - 3
3 015 773					(27,0 t)	
3 015 947	52,5ft	0°;	A 28.1x26.9ft	360°	59 600 lbs	3 - 4

	Boom extension	Angle	Supporting span	Slewing- range	Counter- weight	
3 015 774					(27,0 t)	
3 015 944	52.5 ft	16°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 5
3 015 775					(27,0 t)	
3 015 945	52.5 ft	30°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 6
3 015 810					(27,0 t)	
3 015 980	78,7 ft	0°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 8
3 015 811					(27,0 t)	
3 015 981	78,7 ft	16°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 10
3 015 812					(27,0 t)	
3 015 982	78,7 ft	30°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 12
3 015 813					(27,0 t)	
3 015 983	105,0 ft	0°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 14
3 015 814					(27,0 t)	
3 015 984	105,0 ft	16°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 16
3 015 815					(27,0 t)	
3 015 985	105,0 ft	30°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 17
3 015 816					(27,0 t)	
3 015 986	131,2 ft	0°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 18
3 015 817					(27,0 t)	
3 015 987	131,2 ft	16°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 19
3 015 818					(27,0 t)	
3 015 988	131,2 ft	30°;	A 28.1x26.9 ft	360°	59 600 lbs	3 - 20
3 015 780					(21,2 t)	
3 015 956	32.8ft	0°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 21
3 015 781					(21,2 t)	
3 015 951	32.8ft	16°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 22
3 015 782					(21,2 t)	
3 015 952	32.8ft	30°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 23
3 015 783					(21,2 t)	
3 015 957	52,5ft	0°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 24
3 015 784					(21,2 t)	
3 015 954	52,5ft	16°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 25
3 015 785					(21,2 t)	
3 015 955	52,5ft	30°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 26
3 015 820					(21,2 t)	
3 015 990	78.7ft	0°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 27
3 015 821					(21,2 t)	
3 015 991	78.7ft	16°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 28
3 015 822					(21,2 t)	
3 015 992	78.7ft	30°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 29
3 015 823					(21,2 t)	
3 015 993	105.0ft	0°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 30
3 015 824					(21,2 t)	
3 015 994	105.0ft	16°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 32
3 015 825					(21,2 t)	
3 015 995	105.0ft	30°;	A 28.1x26.9ft	360°	46 700 lbs	3 - 33
3 015 826					(21,2 t)	
3 015 996	131,2 ft	0°;	A 28.1x26.9 ft	360°	46 700 lbs	3 - 34

	Boom extension	Angle	Supporting span	Slewing- range	Counter- weight	
3 015 827					(21,2 t)	
3 015 997	131,2 ft	16°;	A 28.1x26.9 ft	360°	46 700 lbs	3 - 35
3 015 828					(21,2 t)	
3 015 998	131,2 ft	30°;	A 28.1x26.9 ft	360°	46 700 lbs	3 - 36
3 015 790					(12,7 t)	
3 015 966	32.8ft	0°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 37
3 015 791					(12,7 t)	
3 015 961	32.8ft	16°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 38
3 015 792					(12,7 t)	
3 015 962	32.8ft	30°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 39
3 015 793					(12,7 t)	
3 015 967	52,5ft	0°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 40
3 015 794					(12,7 t)	
3 015 964	52,5ft	16°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 41
3 015 795					(12,7 t)	
3 015 965	52,5ft	30°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 42
3 015 830					(12,7 t)	
3 016 000	78.7ft	0°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 43
3 015 831					(12,7 t)	
3 016 001	78.7ft	16°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 44
3 015 832					(12,7 t)	
3 016 002	78.7ft	30°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 45
3 015 833					(12,7 t)	
3 016 003	105.0ft	0°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 46
3 015 834					(12,7 t)	
3 016 004	105.0ft	16°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 47
3 015 835					(12,7 t)	
3 016 005	105.0ft	30°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 48
3 015 836					(12,7 t)	
3 016 006	131.2ft	0°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 49
3 015 837					(12,7 t)	
3 016 007	131.2ft	16°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 50
3 015 838					(12,7 t)	
3 016 008	131.2ft	30°;	A 28.1x26.9ft	360°	28 000 lbs	3 - 51
3 015 800					(4,2 t)	
3 015 976	32.8ft	0°;	A 28.1x26.9ft	360°	9 300 lbs	3 - 52
3 015 801					(4,2 t)	
3 015 971	32.8ft	16°;	A 28.1x26.9ft	360°	9 300 lbs	3 - 53
3 015 802					(4,2 t)	
3 015 972	32.8ft	30°;	A 28.1x26.9ft	360°	9 300 lbs	3 - 54
3 015 803					(4,2 t)	
3 015 977	52,5ft	0°;	A 28.1x26.9ft	360°	9 300 lbs	3 - 55
3 015 804					(4,2 t)	
3 015 974	52,5ft	16°;	A 28.1x26.9ft	360°	9 300 lbs	3 - 56
3 015 805					(4,2 t)	
3 015 975	52,5ft	30°;	A 28.1x26.9ft	360°	9 300 lbs	3 - 57

## 1. Lifting capacities (85%)

The loads do not exceed 85% of the tipping load.

The crane is designed as an erection crane in accordance with DIN 15018.1 and 3 (Lifting capacity class H1) drive group IBm in accordance with DIN 15020.1 resp. ISO 4301/2 classification group A1.

**Caution:** If the crane is used for mixed loading and unloading work, the loads must be reduced to 70% of the permitted loads in the lifting capacity tables.



Temperature range: +40°C to -25°C in accordance with information in the operating instructions.

The following lifting capacity tables only are applicable when planning crane operations and operating the crane.

Values stated on other information sheets accompanying each model are not binding.

Special instructions for the lifting capacity tables:

- \* The crane operator must ensure that the values indicated in the lifting capacity tables for load and radius are not exceeded under any circumstances. The safe load indicator (SLI) does not release him from this duty. It is not permitted to use the SLI as a weighing device.

**Caution: Danger of tilting by two-hook operation**



The (SLI) only covers one-hook operation.  
Two-hook operation is not covered by the SLI.

- \* The intended operating condition if the crane must be set on the SLI (SLI code and reeving mode).

The SLI can only operate correctly and shut down systems at the right time if these points are observed.

- \* Rope pull 15 400 lbs for main and auxiliary hoist
- \* Lifting capacity = load on hook + hook block + lifting tackle
- \* Stated lifting capacities are only valid for cranes which are level horizontally.
- \* Before starting work with the crane ensure that it is level horizontally and check continually that it is still level during operation.

Weight of the hook block:		Weight
Hook block (7-sheaves)	220 500 lbs (100,0t)	2500 lbs
Hook block (3-sheaves)	110 300 lbs ( 50,0t)	1500 lbs
Hook block (1-sheaves)	44 100 lbs ( 20,0t)	720 lbs

- \* When the 32.8 / 52.5 ft swing-away lattice extension is folded against the main boom the lifting capacity of the main boom is reduced as follows:
 

3 telescope section extended by	550 lbs
2 telescope section extended by	700 lbs
1 telescope section extended by	1 000 lbs
No telescope section extended by	1 700 lbs

**Caution:** Do not slew the superstructure with the crane free-on-wheels (unsupported by outriggers) as the crane may tip over.



**Caution: Danger of overloading and overturning!**



Loads can be lifted with the main boom if the 32.8 / 52.5 ft swing-away lattice extension is installed on the main boom head.

This kind of crane work is only permitted if there is a large outrigger span "A" and a counterweight version which is sufficient for swing-away lattice extension operation.

- \* With a 32.8 / 52.5 ft swing-away lattice extension which has already been locked, the lifting capacity on the main boom will be reduced by the values in the following table. These values will not be given correctly in the SLI status display. The SLI must therefore never be used for weighing in this rigging mode.

*With 32.8 ft swing-away lattice extension:*

	Max. permitted wind speed	Swing-away lattice extension	
		without hook block (720 lbs)	with hook block (720 lbs)
Boom lengthte 46.1 - 63.6 ft	14 m/s	3 750 ft	6 600 ft
Boom lengthte 63.6 - 81.0 ft	14 m/s	3 500 ft	6 200 ft
Boom lengthte 81.0 - 98.4 ft	14 m/s	3 300 ft	5 500 ft
Boom lengthte 98.4 - 115.8 ft	10 m/s	3 100 ft	4 850 ft
Boom lengthte 115.8 - 133.5 ft	10 m/s	2 900 ft	4 400 ft
Boom lengthte 133.5 - 150.9 ft	10 m/s	2 650 ft	4 000 ft

*With 52.5 ft swing-away lattice extension:*

	Max. permitted wind speed	Swing-away lattice extension	
		without hook block (720 lbs)	with hook block (720 lbs)
Boom lengthte 46.1 - 63.6 ft	10 m/s	6 600 ft	11 000 ft
Boom lengthte 63.6 - 81.0 ft	10 m/s	6 200 ft	10 400 ft
Boom lengthte 81.0 - 98.4 ft	10 m/s	5 500 ft	9 700 ft
Boom lengthte 98.4 - 115.8 ft	8 m/s	4 850 ft	7 950 ft
Boom lengthte 115.8 - 133.5 ft	8 m/s	4 400 ft	6 600 ft
Boom lengthte 133.5 - 150.9 ft	8 m/s	4 000 ft	5 750 ft

- \* With the 78.7 / 105.0 / 131.2 ft boom extension installed on the main boom, no crane operation shall be executed with the main boom.

- \* When operating the crane with the 32.8 / 52.5 ft swing-away lattice extension resp. 78.7 / 105.0 / 131.2 ft boom extension and reeved hook block on the main boom the lifting capacity is reduced as follows:

	32.8 ft	52.5 ft	78.7 ft	105.0 ft	131.2 ft
with 176 400 lbs ( 80,0t) hook block by	2 450 lbs	2 200 lbs	1 900 lbs	1 700 lbs	1 550 lbs
with 99 200 lbs ( 45,0t) hook block by	1 350 lbs	1 150 lbs	1 050 lbs	950 lbs	850 lbs
with 15 400 lbs ( 18,0t) hook block by	650 lbs	600 lbs	500 lbs	500 lbs	450 lbs

**Caution: Danger of tilting!**



When the swing away lattice extension is installed on the main boom it may be lowered into a horizontal position only, when all telescopic sections have been entered.



**Caution:** When the 78.7 / 105.0 / 131.2 ft boom extension is installed on the main boom it may be lowered into a horizontal position only, when all telescopic sections have been entered and the boom has been turned to the rear, otherwise danger of tilting!



\* At an angle of more than 15° from the horizontal and no load the main boom can be extended (telescoped out) up to the radius values specified in the following table if: Telescoping is monitored by the SLI.

Table - identifications-nr. 3 015 806

Telescope section I			0 - 100	0 - 100	0 - 100	0 - 100	0 - 100
Telescope section II			0	25	50	75	100
Telescope section III			0	25	50	75	100
Counter-weight (lbs)	Supporting span (ft)	Empty hook max (lbs)	Radius in (ft)				
59 600	28.1 x 26.9	11 000 2 200	52.5 72.0	59.0 85.0	72.0 105.0	72.0 111.5	72.0 118.0
	28.1 x 17.8	6 600 2 200	49.0 66.0	52.5 72.0	52.5 72.0	59.0 79.0	59.0 85.0
46 700	28.1 x 26.9	11 000 2 200	52.5 72.0	59.0 85.0	72.0 105.0	72.0 111.5	72.0 118.0
	28.1 x 17.8	6 600 2 200	49.0 66.0	52.5 72.0	52.5 72.0	59.0 79.0	59.0 85.0
28 000	28.1 x 26.9	11 000 2 200	52.5 72.0	52.5 79.0	66.0 85.0	66.0 92.0	66.0 98.0
	28.1 x 17.8	6 600 2 200	46.0 59.0	49.0 66.0	49.0 66.0	52.5 72.0	52.5 72.0
9 300	28.1 x 26.9	11 000 2 200	46.0 66.0	46.0 66.0	49.0 72.0	49.0 72.0	52.5 79.0
	28.1 x 17.8	6 600 2 200	39.0 49.0	39.0 52.5	39.0 52.5	39.0 52.5	39.0 59.0
0	28.1 x 26.9	11 000 2 200	39.0 52.5	39.0 59.0	43.0 59.0	43.0 59.0	43.0 66.0
	28.1 x 17.8	6 600 2 200	26.0 36.0	29.5 39.0	29.5 43.0	29.5 43.0	29.5 43.0

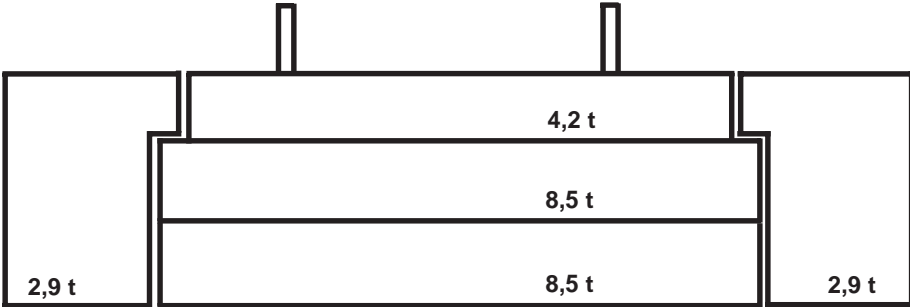
- \* At an angle of more than 15° from the horizontal and no load the main boom with folded swing-away lattice extension resp. boom extension can be extended (telescoped out) up to the radius values specified in the following table if:  
Telescoping is monitored by the SLI.

Table - identifications-nr. 3 015 809

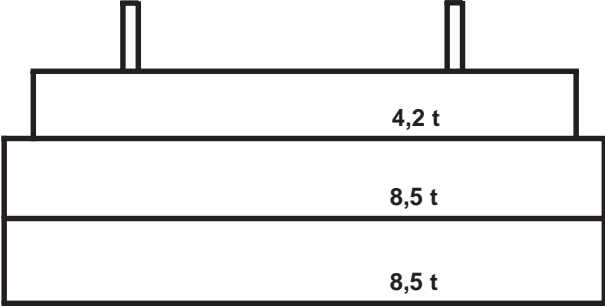
Telescope status to the main boom lengths		46.1 - 150.9 ft + 32.8 ft / 52.5 ft		46.1 - 150.9 ft + 78.7 ft / 105.0 ft		46.1 - 150.9 ft + 131.2 ft	
Counter-weight (lbs)	Supporting span (ft)	Empty hook max (lbs)	Radius in (ft)	Empty hook max (lbs)	Radius in (ft)	Empty hook max (lbs)	Radius in (ft)
59 600	28.1 x 26.9	4 400 2 200	72.0 98.0	4 400 2 200	78.0 124.0	2 200	105.0
46 300	28.1 x 26.9	4 400 2 200	72.0 98.0	4 400 2 200	78.0 124.0	2 200	105.0
27 800	28.1 x 26.9	4 400 2 200	72.0 98.0	4 400 2 200	78.0 124.0	2 200	105.0
9 300	28.1 x 26.9	4 400 2 200	72.0 92.0				

Permitted counterweight versions:

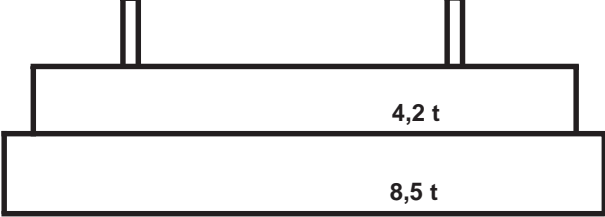
59 500 lbs (27,0 t)



46 700 lbs (21,2 t)



28 000 lbs (12,7 t)



9 300 lbs (4,2 t)





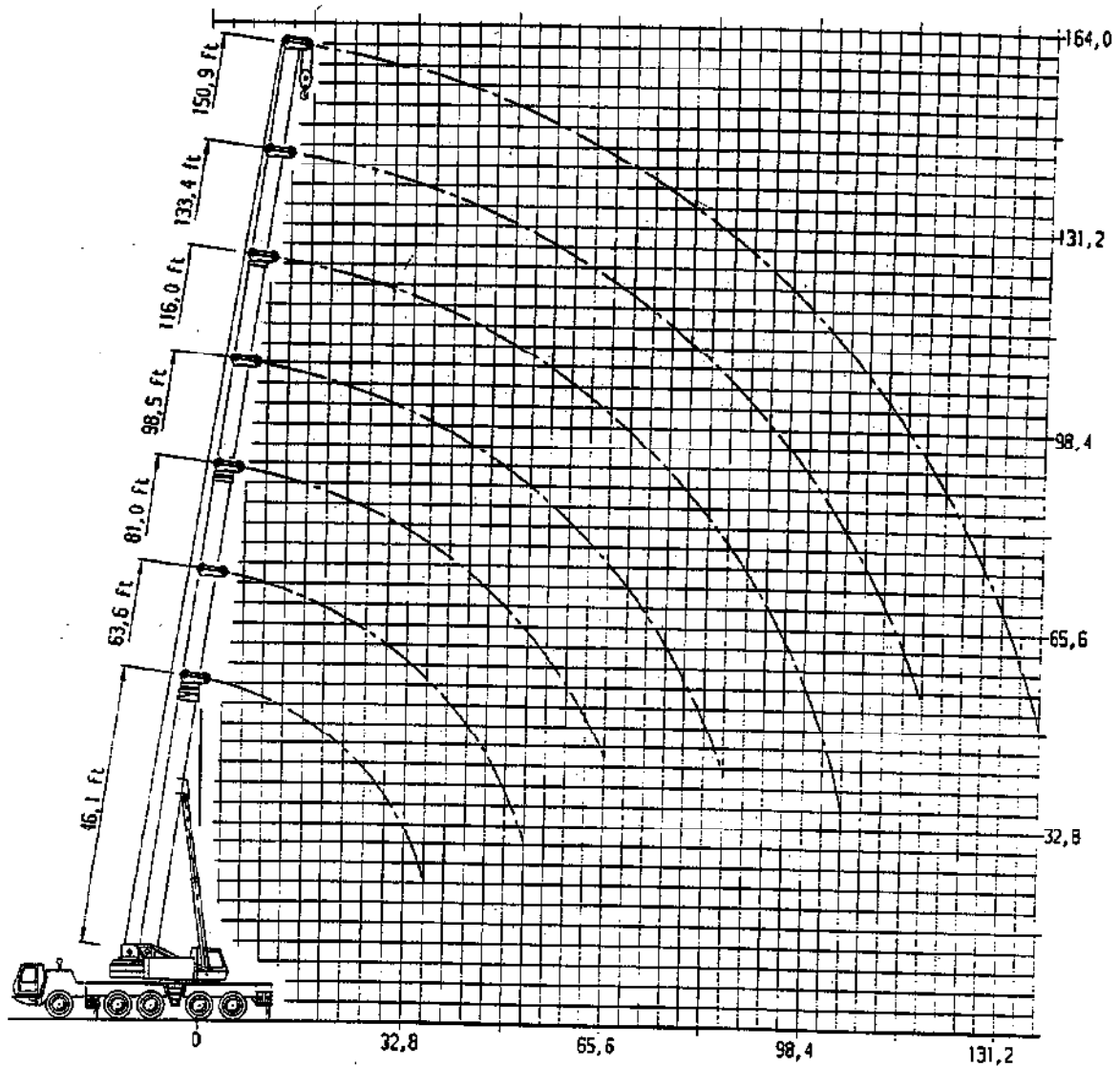
Working range curves - main boom

Hook block

Lifting capacities in lbs	176 400	99 200	39 700
Distance H in ft	10.2	9.9	9.1



Height (ft)



Radius (ft)

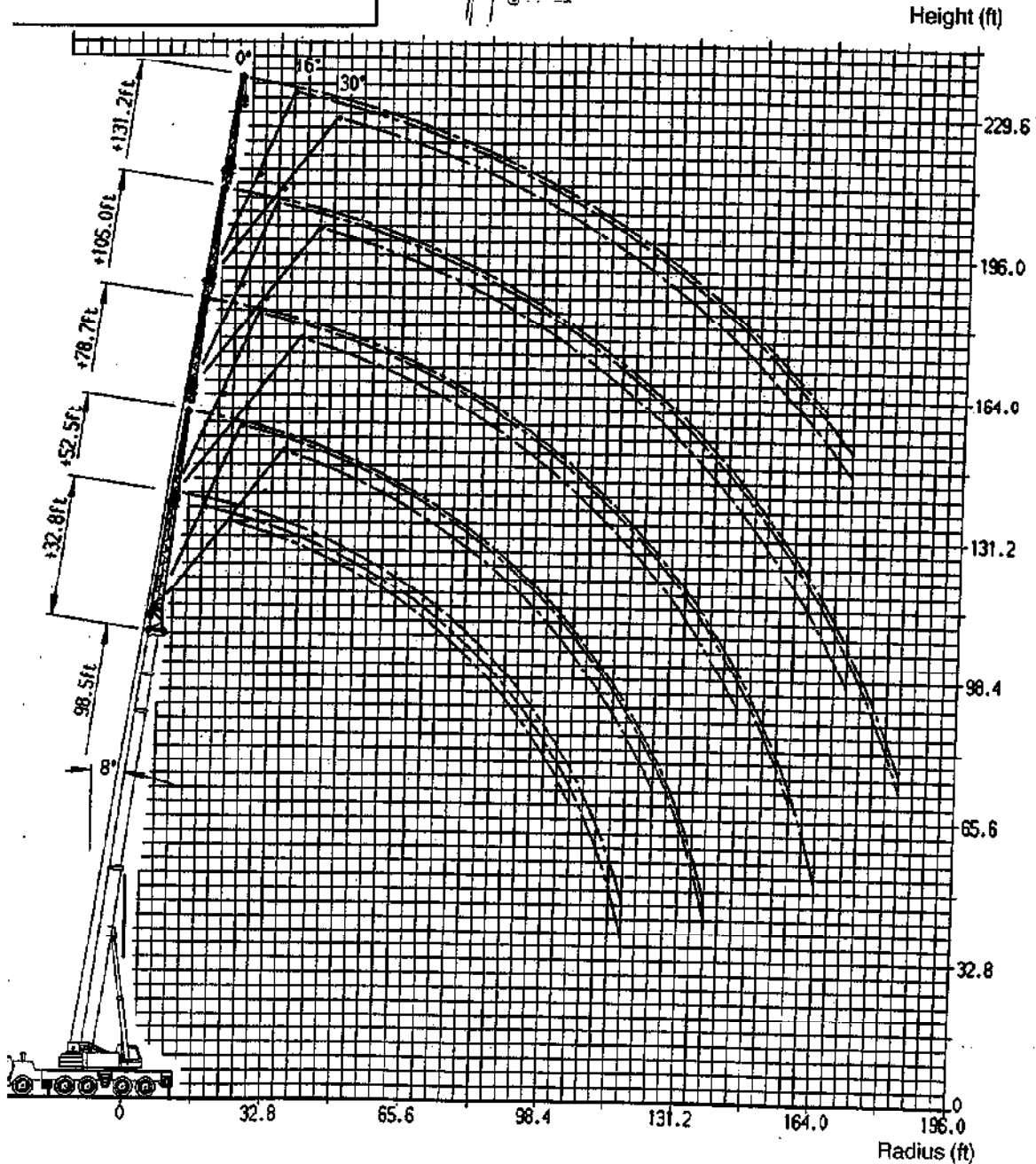
These hook height curves are only valid in conjunction with the radii listed in the lifting capacity tables.

The sheaves and hook heights are calculated theoretically. The actual values deviate from these values due to the deflection of the boom, depending on the load.

Working range curves - boom extension

look block

Lifting capacities in lbs	39 700
Distance H in ft	9.1



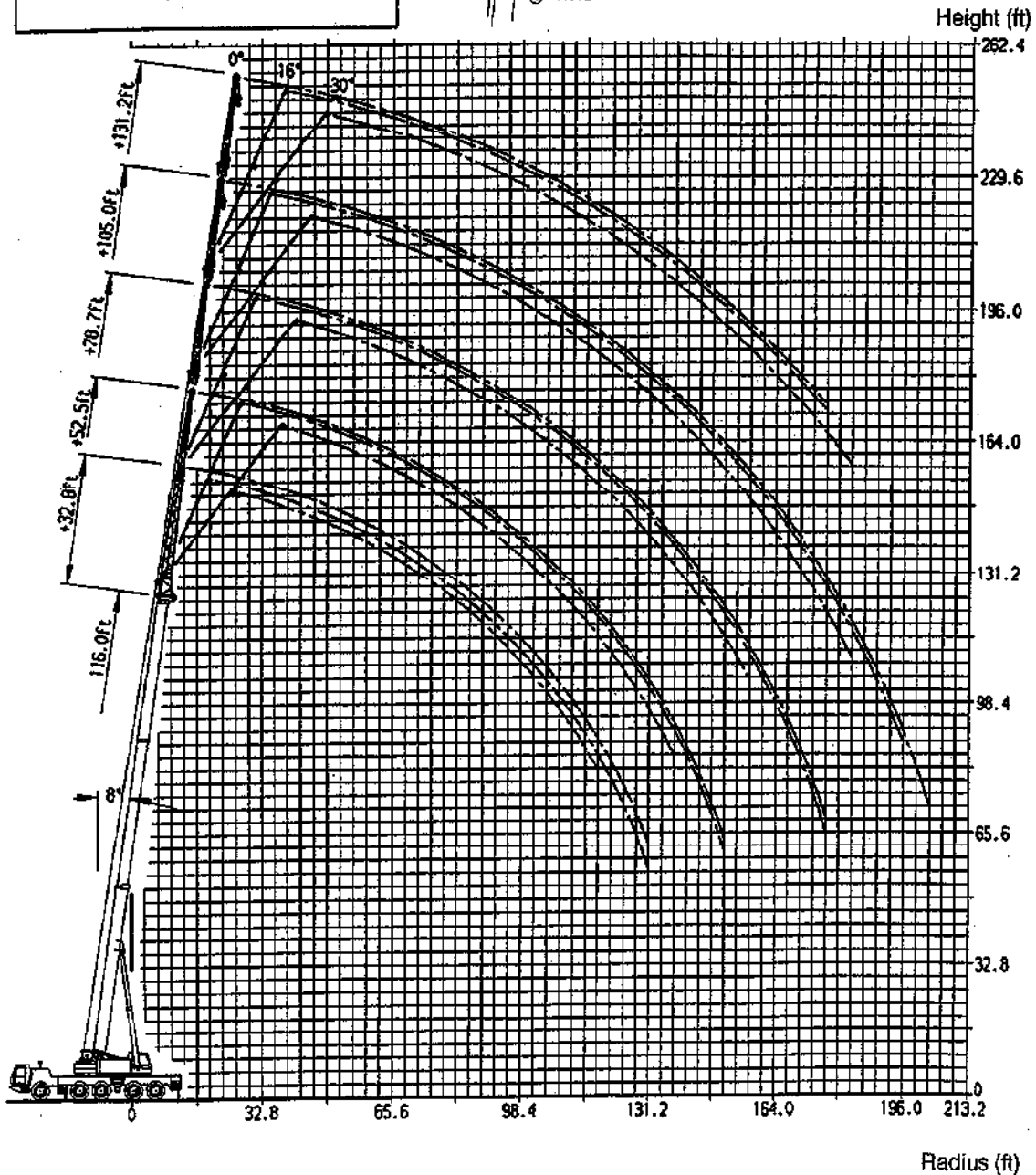
These hook height curves are only valid in conjunction with the radii listed in the lifting capacity tables.

The sheaves and hook heights are calculated theoretically. The actual values deviate from these values due to the deflection of the boom, depending on the load.

Working range curves - boom extension

Hook block

Lifting capacities in lbs	39 700
Distance H in ft	9.1



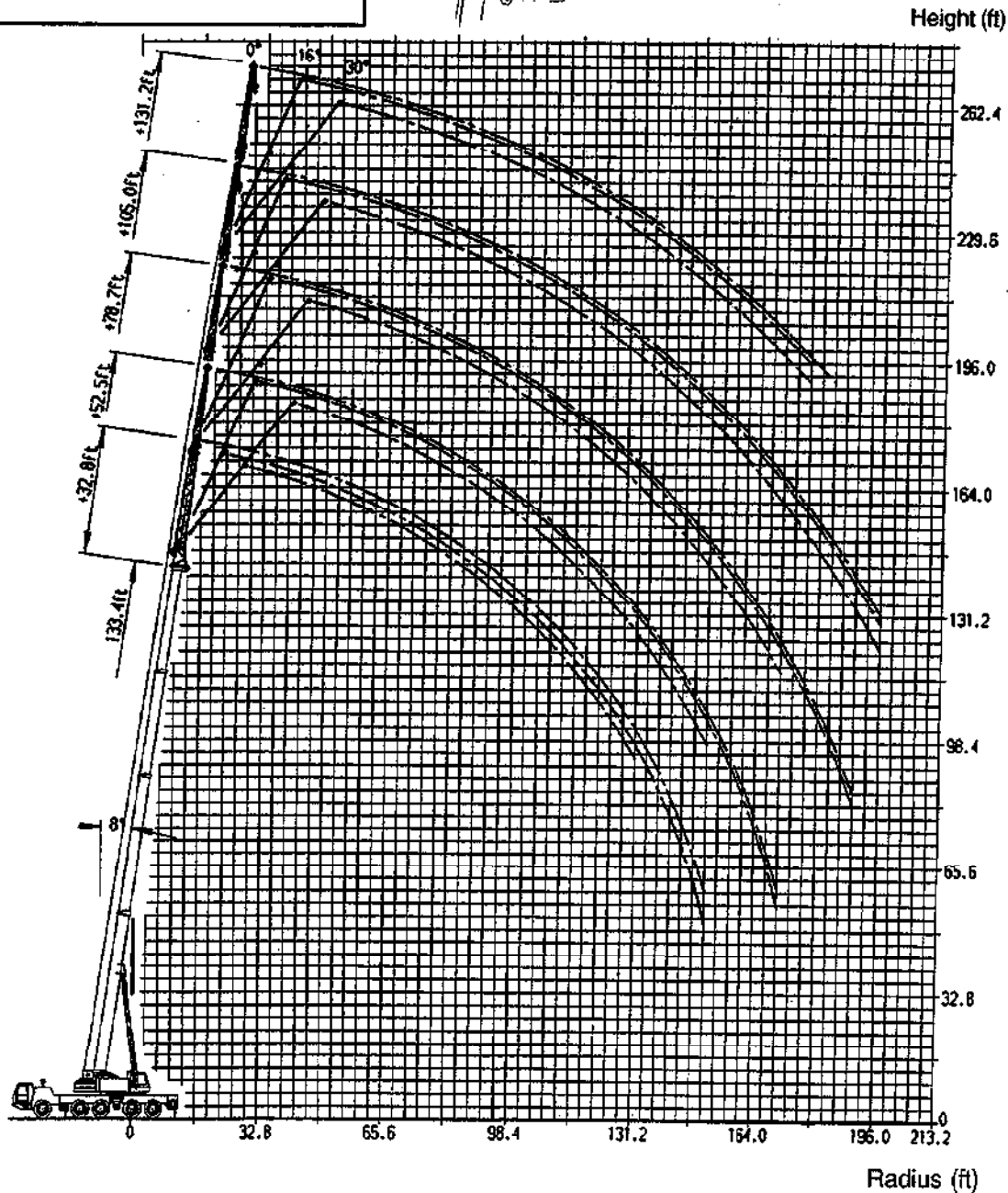
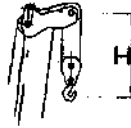
These hook height curves are only valid in conjunction with the radii listed in the lifting capacity tables.

The sheaves and hook heights are calculated theoretically. The actual values deviate from these values due to the deflection of the boom, depending on the load.

Working range curves - boom extension

look block

Lifting capacities in lbs	39 700
Distance H in ft	9.1



These hook height curves are only valid in conjunction with the radii listed in the lifting capacity tables.

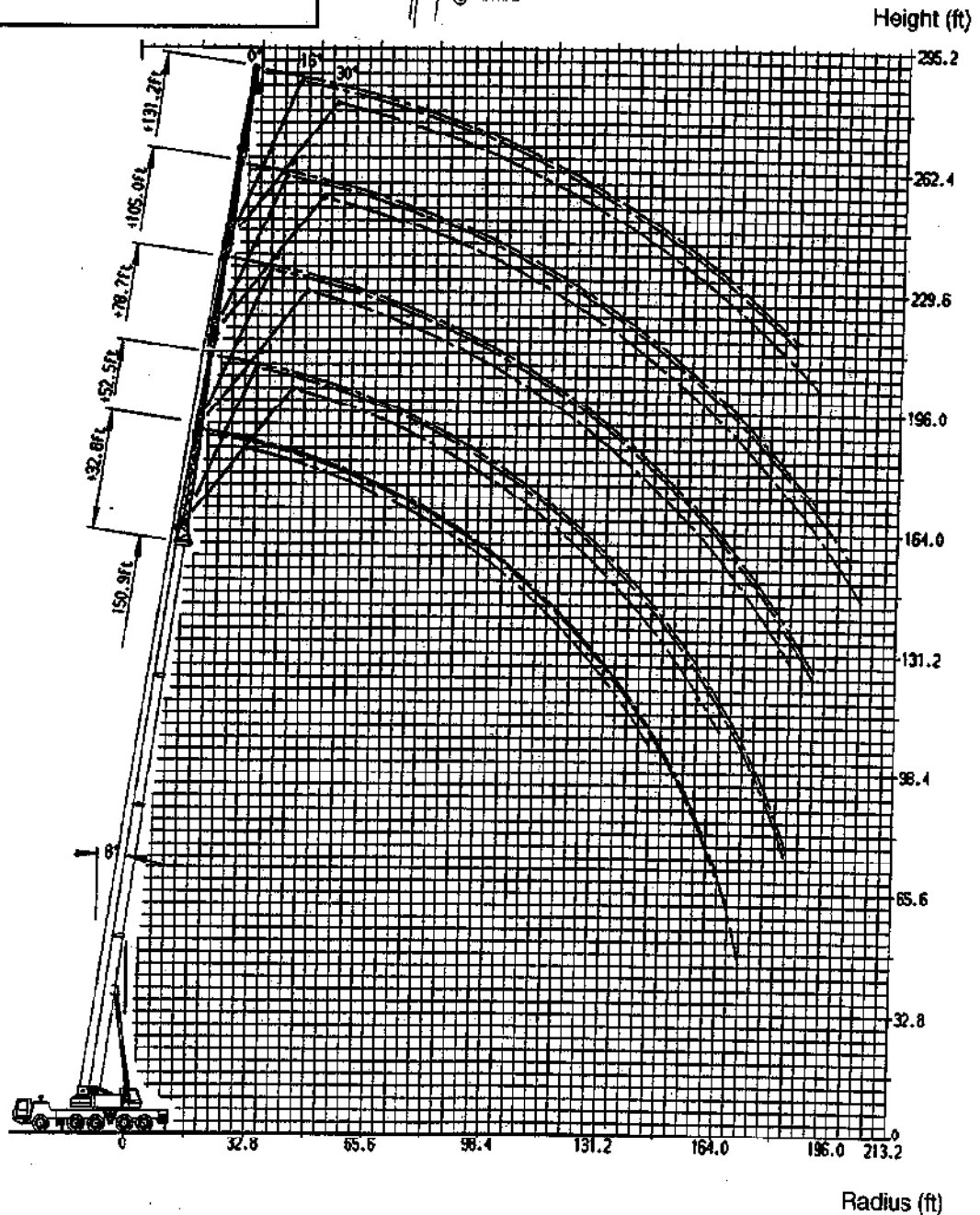
The sheaves and hook heights are calculated theoretically. The actual values deviate from these values due to the deflection of the boom, depending on the load.



Working range curves - boom extension

Hook block

Lifting capacities in lbs	39 700
Distance H in ft	9.1



These hook height curves are only valid in conjunction with the radii listed in the lifting capacity tables.

The sheaves and hook heights are calculated theoretically. The actual values deviate from these values due to the deflection of the boom, depending on the load.

**2. Main boom****3 015 670 / 5 671****3 015 840 / 5 841**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	46.1	46.1	63.6	63.6	81.0	81.0	81.0	98.5
Tel. sec. I	0.00	0.00	0.50	0.00	1.00	0.50	0.00	1.00
Tel. sec. II	0.00	0.00	0.00	0.25	0.00	0.25	0.50	0.25
Tel. sec. III	0.00	0.00	0.00	0.25	0.00	0.25	0.50	0.25
Slewing range	0° to the rear	360°						
Radius in ft	Lifting capacities in 1000 lbs							
9.0	300.0 *							
10.0	290.0	288.0	218.0	85.0	136.0	85.0	85.0	
15.0	220.0	220.0	199.0	85.0	131.0	85.0	80.0	85.0
20.0	174.0	174.0	166.0	85.0	111.0	85.0	71.0	85.0
25.0	133.0	133.0	130.0	85.0	95.0	85.0	65.0	83.0
30.0	105.0	105.0	103.0	85.0	82.0	85.0	59.0	75.0
35.0	87.0	87.0	85.0	85.0	71.0	85.0	54.0	65.0
40.0			70.0	76.0	63.0	73.0	50.0	58.0
45.0			57.0	63.0	56.0	60.0	47.0	52.0
50.0			47.0	53.0	46.0	50.0	43.4	47.0
55.0					38.6	43.0	40.0	41.4
60.0					32.6	37.0	37.2	35.2
65.0					27.8	32.2	35.0	30.4
70.0								26.2
75.0								22.8
80.0								19.8
85.0								17.2
SLI code	<b>511</b>	<b>510</b>						
Max. permitted wind speed	<b>14 m/s</b>							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

**3 015 670 / 5 671**  
**3 015 840 / 5 841**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
9.0								
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2
30.0	64.0	56.0	64.0	59.0	47.0	53.0	49.0	41.2
35.0	59.0	50.0	60.0	54.0	42.4	53.0	45.0	41.2
40.0	55.0	45.0	54.0	49.0	38.4	51.0	41.0	41.2
45.0	52.0	41.0	49.0	45.0	35.0	46.0	37.8	38.8
50.0	49.0	37.8	43.8	42.0	32.2	41.6	35.0	36.4
55.0	44.0	34.8	39.6	39.2	29.6	37.8	32.6	34.2
60.0	38.6	32.4	36.2	36.6	27.0	34.6	30.2	32.0
65.0	33.6	29.8	31.8	34.4	25.2	31.6	28.0	30.0
70.0	29.6	28.2	27.6	30.6	23.6	29.2	26.4	27.8
75.0	26.0	26.4	24.2	27.0	22.2	25.6	25.0	25.8
80.0	23.0	24.8	21.2	24.0	20.8	22.6	23.4	23.4
85.0	20.4	23.4	18.6	21.4	19.4	20.0	22.2	20.8
90.0			16.2	19.0	18.4	17.6	20.0	18.6
95.0			14.2	17.0	17.4	15.6	18.0	16.4
100.0			12.4	15.2	16.4	13.8	16.0	14.6
105.0						12.2	14.4	13.0
110.0						10.6	13.0	11.4
115.0						9.4	11.6	10.2
120.0								9.0
125.0								7.8
130.0								6.8
135.0								6.0
SLI code	510							
Max. permitted wind speed	14 m/s							

3 015 672 / 5 673

3 015 842 / 5 843

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	85.0	65.0	50.0	47.0	85.0	69.0
30.0	85.0	59.0	45.0	43.6	85.0	64.0
35.0	85.0	54.0	40.8	40.2	85.0	59.0
40.0	72.0	50.0	37.0	36.8	70.0	55.0
45.0	60.0	47.0	33.4	33.6	57.0	52.0
50.0	50.0	43.4	30.6	31.0	47.0	49.0
55.0		40.0	28.2	28.6	40.2	43.0
60.0		37.2	26.2	26.6	34.0	37.0
65.0		34.6	24.4	25.0	29.2	32.2
70.0			23.0	23.4		28.0
75.0			21.8	22.2		24.4
80.0			20.4	20.8		21.4
85.0			19.2	19.6		18.8
90.0				18.4		
95.0				17.4		
100.0				16.2		
SLI code	510					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 672 / 5 673

3 015 842 / 5 843

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0						
20.0	57.0	47.0	85.0	71.0	49.0	
25.0	53.0	45.0	83.0	67.0	49.0	39.4
30.0	49.0	43.8	75.0	64.0	48.0	38.6
35.0	45.0	41.4	65.0	60.0	46.0	37.8
40.0	41.2	38.6	58.0	54.0	43.0	37.0
45.0	37.8	36.0	52.0	49.0	40.2	36.0
50.0	34.8	33.4	46.0	43.8	37.6	34.0
55.0	32.2	31.2	38.6	39.6	35.0	32.2
60.0	30.0	29.2	32.6	35.2	32.6	30.4
65.0	28.0	27.4	27.8	30.4	30.8	29.0
70.0	26.6	26.0	23.6	26.2	27.6	27.0
75.0	25.4	24.8	20.2	22.8	24.2	25.0
80.0	23.0	23.2	17.2	19.8	21.2	22.6
85.0	20.4	21.4	14.6	17.2	18.6	20.0
90.0	18.0	19.0		14.8	16.2	17.6
95.0	16.0	17.0		12.8	14.2	15.6
100.0	14.2	15.2		11.0	12.4	13.8
105.0		13.4			10.8	12.2
110.0		12.0			9.4	10.6
115.0		10.6			8.0	9.4
120.0						8.2
125.0						7.0
130.0						6.2
135.0						5.2
SLI code	510					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 674 / 5 675

3 015 844 / 5 845

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	57.0	57.0	45.0	29.0	55.0	55.0
35.0	57.0	54.0	40.8	27.4	55.0	55.0
40.0	57.0	50.0	37.0	26.0	55.0	55.0
45.0	57.0	47.0	33.4	24.8	55.0	52.0
50.0	50.0	43.4	30.6	23.6	47.0	49.0
55.0		40.0	28.2	22.6	40.2	43.0
60.0		37.2	26.2	21.6	34.0	37.0
65.0		34.6	24.4	21.0	29.2	32.2
70.0			23.0	20.2		28.0
75.0			21.8	19.6		24.4
80.0			20.4	19.0		21.4
85.0			19.2	18.4		18.8
90.0				18.0		
95.0				17.4		
100.0				16.2		
SLI code	510					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 674 / 5 675

3 015 844 / 5 845

	Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0			
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	49.0	30.6	55.0	55.0	48.0	32.2
35.0	45.0	29.2	55.0	55.0	46.0	30.6
40.0	41.2	27.8	55.0	54.0	43.0	29.0
45.0	37.8	26.4	52.0	49.0	40.2	28.0
50.0	34.8	25.2	46.0	43.8	37.6	26.8
55.0	32.2	24.2	38.6	39.6	35.0	25.8
60.0	30.0	23.4	32.6	35.2	32.6	24.8
65.0	28.0	22.4	27.8	30.4	30.8	23.8
70.0	26.6	21.6	23.6	26.2	27.6	23.0
75.0	25.4	21.0	20.2	22.8	24.2	22.2
80.0	23.0	20.4	17.2	19.8	21.2	21.6
85.0	20.4	19.6	14.6	17.2	18.6	20.0
90.0	18.0	19.0		14.8	16.2	17.6
95.0	16.0	17.0		12.8	14.2	15.6
100.0	14.2	15.2		11.0	12.4	13.8
105.0		13.4			10.8	12.2
110.0		12.0			9.4	10.6
115.0		10.6			8.0	9.4
120.0						8.2
125.0						7.0
130.0						6.2
135.0						5.2
SLI code	510					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are not monitored by the SLI, however they are within the capacity values programmed for intermediate length configured by the SLI. The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopable load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

**3 015 680 / 5 681****3 015 850 / 5 851**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	46.1	46.1	63.6	63.6	81.0	81.0	81.0	98.5
Tel. sec. I	0.00	0.00	0.50	0.00	1.00	0.50	0.00	1.00
Tel. sec. II	0.00	0.00	0.00	0.25	0.00	0.25	0.50	0.25
Tel. sec. III	0.00	0.00	0.00	0.25	0.00	0.25	0.50	0.25
Slewing range	0° to the rear	360°						
Radius in ft	Lifting capacities in 1000 lbs							
9.0	300.0 *							
10.0	290.0	286.0	218.0	85.0	136.0	85.0	85.0	
15.0	220.0	220.0	199.0	85.0	131.0	85.0	80.0	85.0
20.0	166.0	166.0	163.0	85.0	111.0	85.0	71.0	85.0
25.0	126.0	126.0	123.0	85.0	95.0	85.0	65.0	83.0
30.0	100.0	100.0	97.0	85.0	82.0	85.0	59.0	75.0
35.0	81.0	81.0	78.0	85.0	71.0	82.0	54.0	65.0
40.0			62.0	68.0	60.0	65.0	50.0	58.0
45.0			50.0	56.0	49.0	53.0	47.0	51.0
50.0			41.6	47.0	40.2	45.0	43.4	42.8
55.0					33.2	37.8	40.0	36.0
60.0					27.8	32.2	36.2	30.4
65.0					23.0	27.6	31.6	25.8
70.0								21.8
75.0								18.6
80.0								15.8
85.0								13.4
SLI code	<b>411</b>	<b>410</b>						
Max. permitted wind speed	<b>14 m/s</b>							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.



**3 015 680 / 5 681**  
**3 015 850 / 5 851**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
9.0								
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2
30.0	64.0	56.0	64.0	59.0	47.0	53.0	49.0	41.2
35.0	59.0	50.0	60.0	54.0	42.4	53.0	45.0	41.2
40.0	55.0	45.0	54.0	49.0	38.4	51.0	41.0	41.2
45.0	52.0	41.0	49.0	45.0	35.0	46.0	37.8	38.8
50.0	46.0	37.8	43.8	42.0	32.2	41.6	35.0	36.4
55.0	39.2	34.8	37.6	39.2	29.6	37.8	32.6	34.2
60.0	33.8	32.4	32.0	34.8	27.0	33.4	30.2	32.0
65.0	29.2	29.8	27.4	30.4	25.2	28.8	28.0	29.8
70.0	25.2	28.2	23.4	26.4	23.6	25.0	26.4	25.8
75.0	22.0	25.2	20.0	23.0	22.2	21.6	24.0	22.4
80.0	19.2	22.4	17.2	20.2	20.8	18.8	21.2	19.6
85.0	16.6	19.8	14.8	17.8	19.4	16.4	18.8	17.2
90.0			12.8	15.6	18.2	14.2	16.6	15.0
95.0			11.0	13.8	16.4	12.4	14.6	13.2
100.0			9.4	12.0	14.8	10.8	13.0	11.6
105.0						9.2	11.6	10.0
110.0						8.0	10.2	8.8
115.0						6.8	9.0	7.6
120.0								6.4
125.0								5.4
130.0								4.6
135.0								3.8
SLI code	410							
Max. permitted wind speed	14 m/s							

**3 015 682 / 5 683****3 015 852 / 5 853**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	85.0	65.0	50.0	47.0	85.0	69.0
30.0	85.0	59.0	45.0	43.6	85.0	64.0
35.0	81.0	54.0	40.8	40.2	78.0	59.0
40.0	65.0	50.0	37.0	36.8	62.0	55.0
45.0	53.0	47.0	33.4	33.6	50.0	52.0
50.0	44.0	43.4	30.6	31.0	41.6	45.0
55.0		40.0	28.2	28.6	34.8	37.8
60.0		34.8	26.2	26.6	29.2	32.2
65.0		30.4	24.4	25.0	24.6	27.6
70.0			23.0	23.4		23.6
75.0			21.8	22.2		20.4
80.0			20.4	20.8		17.6
85.0			19.0	19.6		15.2
90.0				17.8		
95.0				15.8		
100.0				14.2		
SLI code	410					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 682 / 5 683

3 015 852 / 5 853

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0			85.0	71.0	49.0	
20.0	57.0	47.0	85.0	71.0	49.0	
25.0	53.0	45.0	83.0	67.0	49.0	39.4
30.0	49.0	43.8	75.0	64.0	48.0	38.6
35.0	45.0	41.4	65.0	60.0	46.0	37.8
40.0	41.2	38.6	58.0	54.0	43.0	37.0
45.0	37.8	36.0	49.0	49.0	40.2	36.0
50.0	34.8	33.4	40.2	42.8	37.6	34.0
55.0	32.2	31.2	33.2	36.0	35.0	32.2
60.0	30.0	29.2	27.8	30.4	32.0	30.4
65.0	28.0	27.4	23.0	25.8	27.4	28.8
70.0	25.2	26.0	19.2	21.8	23.4	25.0
75.0	22.0	23.0	16.0	18.6	20.0	21.6
80.0	19.2	20.2	13.4	15.8	17.2	18.8
85.0	16.6	17.8	11.0	13.4	14.8	16.4
90.0	14.6	15.6		11.4	12.8	14.2
95.0	12.8	13.8		9.6	11.0	12.4
100.0	11.0	12.0		8.0	9.4	10.8
105.0		10.6			7.8	9.2
110.0		9.2			6.6	8.0
115.0		8.0			5.4	6.8
120.0						5.6
125.0						4.8
130.0						3.8
135.0						3.0
SLI code	410					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 684 / 5 685

3 015 854 / 5 855

	Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	57.0	57.0	45.0	29.0	55.0	55.0
35.0	57.0	54.0	40.8	27.4	55.0	55.0
40.0	57.0	50.0	37.0	26.0	55.0	55.0
45.0	53.0	47.0	33.4	24.8	50.0	52.0
50.0	44.0	43.4	30.6	23.6	41.6	45.0
55.0		40.0	28.2	22.6	34.8	37.8
60.0		34.8	26.2	21.6	29.2	32.2
65.0		30.4	24.4	21.0	24.6	27.6
70.0			23.0	20.2		23.6
75.0			21.8	19.6		20.4
80.0			20.4	19.0		17.6
85.0			19.0	18.4		15.2
90.0				17.8		
95.0				15.8		
100.0				14.2		
SLI code	410					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 684 / 5 685

3 015 854 / 5 855

	Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0			
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	49.0	30.6	55.0	55.0	48.0	32.2
35.0	45.0	29.2	55.0	55.0	46.0	30.6
40.0	41.2	27.8	55.0	54.0	43.0	29.0
45.0	37.8	26.4	49.0	49.0	40.2	28.0
50.0	34.8	25.2	40.2	42.8	37.6	26.8
55.0	32.2	24.2	33.2	36.0	35.0	25.8
60.0	30.0	23.4	27.8	30.4	32.0	24.8
65.0	28.0	22.4	23.0	25.8	27.4	23.8
70.0	25.2	21.6	19.2	21.8	23.4	23.0
75.0	22.0	21.0	16.0	18.6	20.0	21.6
80.0	19.2	20.2	13.4	15.8	17.2	18.8
85.0	16.6	17.8	11.0	13.4	14.8	16.4
90.0	14.6	15.6		11.4	12.8	14.2
95.0	12.8	13.8		9.6	11.0	12.4
100.0	11.0	12.0		8.0	9.4	10.8
105.0		10.6			7.8	9.2
110.0		9.2			6.6	8.0
115.0		8.0			5.4	6.8
120.0						5.6
125.0						4.8
130.0						3.8
135.0						3.0
SLI code	410					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI. The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopable load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 690 / 5 691

3 015 860 / 5 861

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	46.1	46.1	63.6	63.6	81.0	81.0	81.0	98.5
Tel. sec. I	0.00	0.00	0.50	0.00	1.00	0.50	0.00	1.00
Tel. sec. II	0.00	0.00	0.00	0.25	0.00	0.25	0.50	0.25
Tel. sec. III	0.00	0.00	0.00	0.25	0.00	0.25	0.50	0.25
Slewing range	0° to the rear	360°						
Radius in ft	Lifting capacities in 1000 lbs							
9.0	300.0 *							
10.0	290.0	286.0	218.0	85.0	136.0	85.0	85.0	
15.0	220.0	220.0	199.0	85.0	131.0	85.0	80.0	85.0
20.0	153.0	153.0	150.0	85.0	111.0	85.0	71.0	85.0
25.0	116.0	116.0	113.0	85.0	95.0	85.0	65.0	83.0
30.0	88.0	88.0	85.0	85.0	82.0	85.0	59.0	75.0
35.0	67.0	67.0	64.0	70.0	62.0	67.0	54.0	65.0
40.0			50.0	56.0	48.0	53.0	50.0	51.0
45.0			39.6	46.0	38.0	43.0	47.0	41.0
50.0			31.6	37.8	30.0	35.0	39.2	33.0
55.0					23.8	28.8	33.0	26.8
60.0					19.2	23.8	28.2	22.0
65.0					15.4	19.8	24.0	18.0
70.0								14.8
75.0								12.2
80.0								9.8
85.0								7.8
SLI code	311	310						
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

3 015 690 / 5 691

3 015 860 / 5 861

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
9.0								
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2
30.0	64.0	56.0	64.0	59.0	47.0	53.0	49.0	41.2
35.0	59.0	50.0	60.0	54.0	42.4	53.0	45.0	41.2
40.0	55.0	45.0	53.0	49.0	38.4	51.0	41.0	41.2
45.0	45.0	41.0	42.8	45.0	35.0	43.6	37.8	38.8
50.0	36.6	37.8	34.6	37.8	32.2	36.4	35.0	36.4
55.0	30.4	34.0	28.4	31.6	29.6	30.0	32.6	31.0
60.0	25.6	29.0	23.6	26.6	27.0	25.2	27.8	26.0
65.0	21.4	25.0	19.6	22.6	25.2	21.2	23.8	22.0
70.0	18.2	21.6	16.4	19.4	22.2	17.8	20.4	18.8
75.0	15.4	18.8	13.6	16.6	19.4	15.0	17.6	16.0
80.0	13.2	16.4	11.2	14.2	17.0	12.8	15.2	13.6
85.0	11.0	14.2	9.2	12.2	14.8	10.8	13.2	11.6
90.0			7.6	10.4	13.0	9.0	11.4	9.8
95.0			6.0	8.8	11.4	7.4	9.8	8.2
100.0			4.6	7.4	10.0	6.0	8.4	7.0
105.0						4.8	7.2	5.6
110.0						3.8	6.0	4.6
115.0						2.8	5.0	3.6
120.0								2.8
125.0								2.0
SLI code	310							
Max. permitted wind speed	14 m/s							

**3 015 692 / 5 693****3 015 862 / 5 863**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	85.0	65.0	50.0	47.0	85.0	69.0
30.0	85.0	59.0	45.0	43.6	85.0	64.0
35.0	67.0	54.0	40.8	40.2	64.0	59.0
40.0	53.0	50.0	37.0	36.8	50.0	53.0
45.0	42.6	46.0	33.4	33.6	39.6	43.0
50.0	34.4	37.8	30.6	31.0	31.6	35.0
55.0		31.6	28.2	28.6	25.4	28.8
60.0		26.6	26.2	26.6	20.6	23.8
65.0		22.6	24.0	25.0	16.8	19.8
70.0			20.6	21.6		16.6
75.0			17.8	18.8		13.8
80.0			15.6	16.4		11.6
85.0			13.4	14.2		9.6
90.0				12.6		
95.0				11.0		
100.0				9.6		
SLI code	310					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.



3 015 692 / 5 693

3 015 862 / 5 863

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0			85.0	71.0	49.0	
20.0	57.0	47.0	85.0	71.0	49.0	
25.0	53.0	45.0	83.0	67.0	49.0	39.4
30.0	49.0	43.8	75.0	64.0	48.0	38.6
35.0	45.0	41.4	62.0	60.0	46.0	37.8
40.0	41.2	38.6	48.0	51.0	43.0	37.0
45.0	37.8	36.0	38.0	41.0	40.2	36.0
50.0	34.8	33.4	30.0	33.0	34.6	34.0
55.0	30.4	31.2	23.8	26.8	28.4	30.0
60.0	25.6	26.6	19.2	22.0	23.6	25.2
65.0	21.4	22.6	15.4	18.0	19.6	21.2
70.0	18.2	19.4	12.2	14.8	16.4	17.8
75.0	15.4	16.6	9.6	12.2	13.6	15.0
80.0	13.2	14.2	7.2	9.8	11.2	12.8
85.0	11.0	12.2	5.4	7.8	9.2	10.8
90.0	9.4	10.4		6.2	7.6	9.0
95.0	7.8	8.8		4.6	6.0	7.4
100.0	6.4	7.4		3.4	4.6	6.0
105.0		6.2			3.4	4.8
110.0		5.2			2.4	3.8
115.0		4.2				2.8
120.0						2.0
SLI code	310					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 694 / 5 695

3 015 864 / 5 865

	Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	57.0	57.0	45.0	29.0	55.0	55.0
35.0	57.0	54.0	40.8	27.4	55.0	55.0
40.0	53.0	50.0	37.0	26.0	50.0	53.0
45.0	42.6	46.0	33.4	24.8	39.6	43.0
50.0	34.4	37.8	30.6	23.6	31.6	35.0
55.0		31.6	28.2	22.6	25.4	28.8
60.0		26.6	26.2	21.6	20.6	23.8
65.0		22.6	24.0	21.0	16.8	19.8
70.0			20.6	20.2		16.6
75.0			17.8	18.8		13.8
80.0			15.6	16.4		11.6
85.0			13.4	14.2		9.6
90.0				12.6		
95.0				11.0		
100.0				9.6		
SLI code	310					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

**3 015 694 / 5 695**  
**3 015 864 / 5 865**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0			
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	49.0	30.6	55.0	55.0	48.0	32.2
35.0	45.0	29.2	55.0	55.0	46.0	30.6
40.0	41.2	27.8	48.0	51.0	43.0	29.0
45.0	37.8	26.4	38.0	41.0	40.2	28.0
50.0	34.8	25.2	30.0	33.0	34.6	26.8
55.0	30.4	24.2	23.8	26.8	28.4	25.8
60.0	25.6	23.4	19.2	22.0	23.6	24.8
65.0	21.4	22.4	15.4	18.0	19.6	21.2
70.0	18.2	19.4	12.2	14.8	16.4	17.8
75.0	15.4	16.6	9.6	12.2	13.6	15.0
80.0	13.2	14.2	7.2	9.8	11.2	12.8
85.0	11.0	12.2	5.4	7.8	9.2	10.8
90.0	9.4	10.4		6.2	7.6	9.0
95.0	7.8	8.8		4.6	6.0	7.4
100.0	6.4	7.4		3.4	4.6	6.0
105.0		6.2			3.4	4.8
110.0		5.2			2.4	3.8
115.0		4.2				2.8
120.0						2.0
SLI code	310					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

**3 015 700 / 5 701****3 015 870 / 5 871**

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	46.1	63.6	63.6	81.0	81.0	81.0	98.5	
Tel. sec. I	0.00	0.50	0.00	1.00	0.50	0.00	1.00	
Tel. sec. II	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Tel. sec. III	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0	286.0	218.0	85.0	136.0	85.0	85.0		
15.0	204.0	199.0	85.0	131.0	85.0	80.0	85.0	
20.0	140.0	137.0	85.0	111.0	85.0	71.0	85.0	
25.0	102.0	97.0	85.0	88.0	85.0	65.0	83.0	
30.0	70.0	67.0	74.0	63.0	70.0	59.0	63.0	
35.0	52.0	48.0	55.0	46.0	52.0	54.0	48.0	
40.0		35.6	42.4	33.8	39.2	44.0	37.0	
45.0		27.0	33.6	25.2	30.4	35.2	28.4	
50.0		20.6	27.0	19.0	24.0	28.6	22.0	
55.0				14.2	19.0	23.6	17.2	
60.0				10.6	15.2	19.6	13.4	
65.0				7.6	12.0	16.2	10.2	
70.0							7.8	
75.0							5.6	
80.0							3.6	
85.0							2.0	
SLI code	210							
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

3 015 700 / 5 701

3 015 870 / 5 871

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2
30.0	64.0	56.0	62.0	59.0	47.0	53.0	49.0	41.2
35.0	53.0	50.0	48.0	52.0	42.4	47.0	45.0	41.2
40.0	41.2	45.0	37.4	41.6	38.4	37.8	41.0	37.4
45.0	32.4	36.2	30.0	33.8	35.0	30.6	34.0	30.6
50.0	25.8	29.6	23.8	27.2	30.4	25.0	28.4	25.2
55.0	20.8	24.6	18.8	22.0	25.2	20.4	23.2	21.0
60.0	17.0	20.4	15.0	18.0	21.2	16.6	19.2	17.4
65.0	13.8	17.2	11.8	14.8	17.8	13.4	16.0	14.2
70.0	11.2	14.6	9.2	12.2	15.2	10.8	13.2	11.6
75.0	9.0	12.2	7.0	10.0	12.8	8.6	11.0	9.4
80.0	7.0	10.4	5.2	8.2	11.0	6.8	9.2	7.6
85.0	5.4	8.8	3.6	6.6	9.2	5.0	7.6	6.0
90.0			2.2	5.0	7.8	3.6	6.0	4.6
95.0				3.8	6.6	2.4	4.8	3.2
100.0				2.6	5.4		3.6	2.0
105.0							2.6	
SLI code	210							
Max. permitted wind speed	14 m/s							

**3 015 702 / 5 703****3 015 872 / 5 873**

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	85.0	65.0	50.0	47.0	85.0	69.0
30.0	70.0	59.0	45.0	43.6	65.0	64.0
35.0	52.0	54.0	40.8	40.2	48.0	50.0
40.0	38.8	42.4	37.0	36.8	35.6	39.2
45.0	30.0	33.6	33.4	33.6	27.0	30.4
50.0	23.6	27.0	28.6	29.6	20.6	24.0
55.0		22.0	23.6	24.6	15.8	19.0
60.0		18.0	19.6	20.4	12.0	15.2
65.0		14.8	16.2	17.2	9.0	12.0
70.0			13.6	14.6		9.6
75.0			11.4	12.2		7.4
80.0			9.4	10.4		5.4
85.0			7.8	8.8		3.8
90.0				7.2		
95.0				6.0		
100.0				4.8		
SLI code	210					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 702 / 5 703

3 015 872 / 5 873

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0			85.0	71.0	49.0	
20.0	57.0	47.0	85.0	71.0	49.0	
25.0	53.0	45.0	82.0	67.0	49.0	39.4
30.0	49.0	43.8	59.0	59.0	48.0	38.6
35.0	45.0	41.4	43.6	45.0	45.0	37.8
40.0	40.0	38.6	33.2	35.2	35.6	36.2
45.0	32.4	32.6	25.2	27.8	28.6	29.4
50.0	25.8	27.0	19.0	22.0	23.2	24.0
55.0	20.8	22.0	14.2	17.2	18.8	19.8
60.0	17.0	18.0	10.6	13.4	15.0	16.4
65.0	13.8	14.8	7.6	10.2	11.8	13.4
70.0	11.2	12.2	5.0	7.8	9.2	10.8
75.0	9.0	10.0	2.8	5.6	7.0	8.6
80.0	7.0	8.2		3.6	5.2	6.8
85.0	5.4	6.6		2.0	3.6	5.0
90.0	4.0	5.0			2.2	3.6
95.0	2.8	3.8				2.4
100.0		2.6				
SLI code	210					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 704 / 5 705

3 015 874 / 5 875

	Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	57.0	57.0	45.0	29.0	55.0	55.0
35.0	52.0	54.0	40.8	27.4	48.0	50.0
40.0	38.8	42.4	37.0	26.0	35.6	39.2
45.0	30.0	33.6	33.4	24.8	27.0	30.4
50.0	23.6	27.0	28.6	23.6	20.6	24.0
55.0		22.0	23.6	22.6	15.8	19.0
60.0		18.0	19.6	20.4	12.0	15.2
65.0		14.8	16.2	17.2	9.0	12.0
70.0			13.6	14.6		9.6
75.0			11.4	12.2		7.4
80.0			9.4	10.4		5.4
85.0			7.8	8.8		3.8
90.0				7.2		
95.0				6.0		
100.0				4.8		
SLI code	210					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.



**3 015 704 / 5 705**  
**3 015 874 / 5 875**

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0	55.0	49.0	
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	49.0	30.6	55.0	55.0	48.0	32.2
35.0	45.0	29.2	43.6	45.0	45.0	30.6
40.0	40.0	27.8	33.2	35.2	35.6	29.0
45.0	32.4	26.4	25.2	27.8	28.6	28.0
50.0	25.8	25.2	19.0	22.0	23.2	24.0
55.0	20.8	22.0	14.2	17.2	18.8	19.8
60.0	17.0	18.0	10.6	13.4	15.0	16.4
65.0	13.8	14.8	7.6	10.2	11.8	13.4
70.0	11.2	12.2	5.0	7.8	9.2	10.8
75.0	9.0	10.0	2.8	5.6	7.0	8.6
80.0	7.0	8.2		3.6	5.2	6.8
85.0	5.4	6.6		2.0	3.6	5.0
90.0	4.0	5.0			2.2	3.6
95.0	2.8	3.8				2.4
100.0		2.6				
SLI code	210					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 700 / 5 701

3 015 870 / 5 871

		<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>						
		Main boom - fixed lengths in ft						
		46.1	63.6	63.6	81.0	81.0	81.0	98.5
Tel. sec. I		0.00	0.50	0.00	1.00	0.50	0.00	1.00
Tel. sec. II		0.00	0.00	0.25	0.00	0.25	0.50	0.25
Tel. sec. III		0.00	0.00	0.25	0.00	0.25	0.50	0.25
Slewing range		360°						
Radius in ft		Lifting capacities in 1000 lbs						
10.0		286.0	218.0	85.0	136.0	85.0	85.0	
15.0		195.0	161.0	85.0	131.0	85.0	80.0	85.0
20.0		121.0	99.0	85.0	84.0	85.0	71.0	78.0
25.0		84.0	68.0	78.0	57.0	65.0	65.0	55.0
30.0		60.0	48.0	57.0	40.4	47.0	54.0	40.2
35.0		42.4	35.8	44.0	29.8	36.2	42.4	30.4
40.0			27.2	35.0	22.2	28.2	34.0	23.4
45.0			20.4	27.2	16.2	22.4	27.8	17.8
50.0			15.0	21.4	11.4	17.6	23.0	13.2
55.0					7.8	13.6	18.6	9.8
60.0					4.8	10.4	15.2	6.8
65.0					2.6	7.6	12.2	4.6
70.0								2.6
75.0								
80.0								
85.0								
SLI code		110						
Max. permitted wind speed		14 m/s						

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

3 015 710 / 5 711

3 015 880 / 5 881

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	61.0	62.0	52.0	57.0	53.0	49.0	53.0	41.2
30.0	45.0	51.0	38.8	43.4	47.0	37.8	41.4	36.2
35.0	35.4	40.4	30.0	34.2	38.2	29.6	33.2	28.6
40.0	28.0	32.6	23.4	27.4	31.2	23.4	26.8	23.0
45.0	22.6	27.0	18.2	22.2	26.0	18.6	22.0	18.4
50.0	18.0	22.4	13.8	18.0	21.8	14.6	18.0	14.6
55.0	14.2	18.8	10.4	14.4	18.2	11.4	14.6	11.6
60.0	11.2	15.6	7.8	11.6	15.2	8.6	11.8	9.0
65.0	8.8	13.0	5.4	9.2	12.8	6.4	9.6	6.8
70.0	6.8	10.6	3.6	7.2	10.6	4.6	7.6	5.0
75.0	5.0	8.6		5.4	8.8	3.0	6.0	3.4
80.0	3.4	6.8		4.0	7.4		4.6	2.2
85.0	2.0	5.4		2.8	6.0		3.2	
90.0					4.6		2.2	
95.0					3.6			
100.0					2.6			
SLI code	110							
Max. permitted wind speed	14 m/s							

3 015 712 / 5 713

3 015 882 / 5 883

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	73.0	65.0	50.0	47.0	59.0	58.0
30.0	52.0	52.0	45.0	43.6	42.6	42.8
35.0	39.8	40.2	39.0	37.4	31.8	33.0
40.0	31.0	32.0	31.4	30.4	24.2	25.8
45.0	23.6	26.0	25.8	25.2	18.2	20.2
50.0	18.0	21.2	21.2	21.0	13.4	15.8
55.0		17.0	17.4	17.4	9.6	12.0
60.0		13.4	14.4	14.4	6.8	9.2
65.0		10.6	11.8	12.0	4.4	6.8
70.0			9.6	9.8		4.8
75.0			7.6	8.2		3.0
80.0			6.0	6.6		
85.0			4.4	5.4		
90.0				4.0		
95.0				3.0		
100.0				2.0		
SLI code	110					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

**3 015 712 / 5 713**  
**3 015 882 / 5 883**

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 26.9 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0			73.0			
20.0	57.0	47.0	50.0	69.0	49.0	
25.0	53.0	45.0		49.0	47.0	39.4
30.0	41.6	40.0	36.0	36.4	35.6	34.8
35.0	32.6	31.6	26.6	27.8	27.6	27.4
40.0	25.8	25.4	19.6	21.2	21.4	21.8
45.0	20.8	20.6	14.0	16.0	16.6	17.2
50.0	16.4	16.6	9.6	11.8	12.6	13.4
55.0	13.0	13.2	6.2	8.4	9.4	10.4
60.0	10.2	10.6	3.4	5.8	6.8	7.8
65.0	7.8	8.2		3.6	4.6	5.8
70.0	5.8	6.4			2.8	4.0
75.0	4.2	4.8				2.4
80.0	2.6	3.4				
85.0		2.0				
SLI code	110					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 714 / 5 715

3 015 884 / 5 885

	Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	52.0	52.0	45.0	29.0	42.6	42.8
35.0	39.8	40.2	39.0	27.4	31.8	33.0
40.0	31.0	32.0	31.4	26.0	24.2	25.8
45.0	23.6	26.0	25.8	24.8	18.2	20.2
50.0	18.0	21.2	21.2	21.0	13.4	15.8
55.0		17.0	17.4	17.4	9.6	12.0
60.0		13.4	14.4	14.4	6.8	9.2
65.0		10.6	11.8	12.0	4.4	6.8
70.0			9.6	9.8		4.8
75.0			7.6	8.2		3.0
80.0			6.0	6.6		
85.0			4.4	5.4		
90.0				4.0		
95.0				3.0		
100.0				2.0		
SLI code	110					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 714 / 5 715  
3 015 884 / 5 885

	Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 26.9 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0	55.0	49.0	
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	50.0	49.0	47.0	34.0
30.0	41.6	30.6	36.0	36.4	35.6	32.2
35.0	32.6	29.2	26.6	27.8	27.6	27.4
40.0	25.8	25.4	19.6	21.2	21.4	21.8
45.0	20.8	20.6	14.0	16.0	16.6	17.2
50.0	16.4	16.6	9.6	11.8	12.6	13.4
55.0	13.0	13.2	6.2	8.4	9.4	10.4
60.0	10.2	10.6	3.4	5.8	6.8	7.8
65.0	7.8	8.2		3.6	4.6	5.8
70.0	5.8	6.4			2.8	4.0
75.0	4.2	4.8				2.4
80.0	2.6	3.4				
85.0		2.0				
90.0						
95.0						
100.0						
SLI code	110					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are not monitored by the SLI, however they are within the capacity values programmed for intermediate length configured by the SLI. The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 720 / 5 721

3 015 890 / 5 891

	Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 17.8 ft)							
	Main boom - fixed lengths in ft							
	46.1	63.6	63.6	81.0	81.0	81.0	98.5	
Tel. sec. I	0.00	0.50	0.00	1.00	0.50	0.00	1.00	
Tel. sec. II	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Tel. sec. III	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0	278.0	218.0	85.0	136.0	85.0	85.0		
15.0	211.0	199.0	85.0	131.0	85.0	80.0	85.0	
20.0	154.0	141.0	85.0	111.0	85.0	71.0	85.0	
25.0	102.0	99.0	85.0	92.0	85.0	65.0	83.0	
30.0	74.0	71.0	77.0	69.0	74.0	59.0	70.0	
35.0	57.0	54.0	60.0	52.0	57.0	54.0	55.0	
40.0		42.4	48.0	41.0	45.0	50.0	43.8	
45.0		34.0	39.6	32.4	37.2	41.0	35.2	
50.0		27.6	33.2	26.0	30.6	34.6	28.8	
55.0				21.0	25.4	29.4	23.6	
60.0				17.0	21.2	25.2	19.6	
65.0				13.6	17.8	21.8	16.2	
70.0							13.4	
75.0							11.0	
80.0							9.0	
85.0							7.2	
SLI code	512							
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.



3 015 720 / 5 721

3 015 890 / 5 891

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2
30.0	64.0	56.0	64.0	59.0	47.0	53.0	49.0	41.2
35.0	59.0	50.0	55.0	54.0	42.4	53.0	45.0	41.2
40.0	47.0	45.0	45.0	48.0	38.4	46.0	41.0	41.2
45.0	38.8	41.0	36.8	39.8	35.0	38.2	37.8	38.0
50.0	32.2	35.4	30.2	33.4	32.2	31.8	34.2	32.4
55.0	27.0	30.4	25.2	28.2	29.6	26.6	29.2	27.6
60.0	22.8	26.2	21.0	24.0	26.8	22.4	25.0	23.4
65.0	19.4	22.6	17.6	20.4	23.2	19.0	21.4	19.8
70.0	16.6	19.6	14.8	17.6	20.2	16.2	18.6	17.0
75.0	14.0	17.2	12.4	15.0	17.8	13.8	16.0	14.6
80.0	12.0	15.0	10.2	13.0	15.6	11.6	14.0	12.4
85.0	10.2	13.2	8.4	11.2	13.8	9.8	12.0	10.6
90.0			6.8	9.6	12.2	8.2	10.4	9.0
95.0			5.4	8.2	10.6	6.8	9.0	7.6
100.0			4.2	6.8	9.4	5.6	7.8	6.4
105.0						4.4	6.6	5.2
110.0						3.4	5.6	4.2
115.0						2.6	4.6	3.2
120.0								2.4
SLI code	512							
Max. permitted wind speed	14 m/s							

3 015 722 / 5 723

3 015 892 / 5 893

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	85.0	65.0	50.0	47.0	85.0	69.0
30.0	74.0	59.0	45.0	43.6	71.0	64.0
35.0	57.0	54.0	40.8	40.2	54.0	57.0
40.0	45.0	48.0	37.0	36.8	42.4	45.0
45.0	36.8	39.6	33.4	33.6	34.0	37.2
50.0	30.2	33.2	30.6	31.0	27.6	30.6
55.0		28.0	28.2	28.6	22.4	25.4
60.0		23.8	25.2	26.2	18.4	21.2
65.0		20.4	21.8	22.6	15.0	17.8
70.0			18.8	19.6		15.0
75.0			16.4	17.2		12.6
80.0			14.2	15.0		10.6
85.0			12.4	13.2		8.8
90.0				11.6		
95.0				10.2		
100.0				8.8		
SLI code	512					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 672 / 5 673

3 015 842 / 5 843

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0						
20.0	57.0	47.0	85.0	71.0	49.0	
25.0	53.0	45.0	83.0	67.0	49.0	39.4
30.0	49.0	43.8	66.0	64.0	48.0	38.6
35.0	45.0	41.4	52.0	53.0	46.0	37.8
40.0	41.2	38.6	41.0	43.4	43.0	37.0
45.0	37.8	36.0	32.4	35.2	36.4	36.0
50.0	32.2	33.4	26.0	28.8	30.2	31.4
55.0	27.0	28.2	21.0	23.6	25.2	26.6
60.0	22.8	24.0	17.0	19.6	21.0	22.4
65.0	19.4	20.4	13.6	16.2	17.6	19.0
70.0	16.6	17.6	10.8	13.4	14.8	16.2
75.0	14.0	15.0	8.6	11.0	12.4	13.8
80.0	12.0	13.0	6.6	9.0	10.2	11.6
85.0	10.2	11.2	4.8	7.2	8.4	9.8
90.0	8.6	9.6		5.6	6.8	8.2
95.0	7.2	8.2		4.2	5.4	6.8
100.0	6.0	6.8		3.0	4.2	5.6
105.0		5.8			3.0	4.4
110.0		4.8			2.0	3.4
115.0		3.8				2.6
SLI code	512					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 724 / 5 725

3 015 894 / 5 895

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	57.0	57.0	45.0	29.0	55.0	55.0
35.0	57.0	54.0	40.8	27.4	54.0	55.0
40.0	45.0	48.0	37.0	26.0	42.4	45.0
45.0	36.8	39.6	33.4	24.8	34.0	37.2
50.0	30.2	33.2	30.6	23.6	27.6	30.6
55.0		28.0	28.2	22.6	22.4	25.4
60.0		23.8	25.2	21.6	18.4	21.2
65.0		20.4	21.8	21.0	15.0	17.8
70.0			18.8	19.6		15.0
75.0			16.4	17.2		12.6
80.0			14.2	15.0		10.6
85.0			12.4	13.2		8.8
90.0				11.6		
95.0				10.2		
100.0				8.8		
SLI code	512					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 724 / 5 725

3 015 894 / 5 895

	Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0	55.0	49.0	
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	49.0	30.6	55.0	55.0	48.0	32.2
35.0	45.0	29.2	52.0	53.0	46.0	30.6
40.0	41.2	27.8	41.0	43.4	43.0	29.0
45.0	37.8	26.4	32.4	35.2	36.4	28.0
50.0	32.2	25.2	26.0	28.8	30.2	26.8
55.0	27.0	24.2	21.0	23.6	25.2	25.8
60.0	22.8	23.4	17.0	19.6	21.0	22.4
65.0	19.4	20.4	13.6	16.2	17.6	19.0
70.0	16.6	17.6	10.8	13.4	14.8	16.2
75.0	14.0	15.0	8.6	11.0	12.4	13.8
80.0	12.0	13.0	6.6	9.0	10.2	11.6
85.0	10.2	11.2	4.8	7.2	8.4	9.8
90.0	8.6	9.6		5.6	6.8	8.2
95.0	7.2	8.2		4.2	5.4	6.8
100.0	6.0	6.8		3.0	4.2	5.6
105.0		5.8			3.0	4.4
110.0		4.8			2.0	3.4
115.0		3.8				2.6
SLI code	512					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are not monitored by the SLI, however they are within the capacity values programmed for intermediate length configured by the SLI. The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 730 / 5 731

3 015 900 / 5 901

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 17.8 ft)								
Main boom - fixed lengths in ft								
	46.1	63.6	63.6	81.0	81.0	81.0	98.5	
Tel. sec. I	0.00	0.50	0.00	1.00	0.50	0.00	1.00	
Tel. sec. II	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Tel. sec. III	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0	274.0	218.0	85.0	136.0	85.0	85.0		
15.0	208.0	199.0	85.0	131.0	85.0	80.0	85.0	
20.0	135.0	123.0	85.0	111.0	85.0	71.0	85.0	
25.0	89.0	86.0	85.0	79.0	85.0	65.0	78.0	
30.0	64.0	61.0	67.0	59.0	64.0	59.0	60.0	
35.0	49.0	46.0	52.0	44.0	49.0	54.0	47.0	
40.0		35.6	41.4	34.0	38.8	43.0	37.0	
45.0		28.0	34.0	26.4	31.2	35.4	29.2	
50.0		22.2	28.0	20.8	25.4	29.4	23.4	
55.0				16.4	20.8	24.8	19.0	
60.0				12.8	17.0	21.0	15.4	
65.0				9.8	14.0	18.0	12.4	
70.0							9.8	
75.0							7.6	
80.0							5.8	
85.0							4.2	
SLI code	412							
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

**3 015 730 / 5 731**  
**3 015 900 / 5 901**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	69.0	62.0	67.0	64.0	53.0	53.0	53.0	41.2
30.0	64.0	56.0	59.0	59.0	47.0	53.0	49.0	41.2
35.0	51.0	50.0	47.0	51.0	42.4	47.0	45.0	41.2
40.0	40.4	43.8	38.2	41.6	38.4	38.4	41.0	38.2
45.0	32.8	36.2	31.0	34.0	35.0	32.0	35.0	32.0
50.0	27.0	30.4	25.0	28.2	31.0	26.6	29.2	27.0
55.0	22.4	25.6	20.4	23.4	26.2	22.0	24.4	22.8
60.0	18.6	21.8	16.8	19.6	22.4	18.2	20.6	19.2
65.0	15.6	18.8	13.8	16.6	19.4	15.2	17.6	16.0
70.0	13.0	16.2	11.2	14.0	16.8	12.6	15.0	13.4
75.0	10.8	14.0	9.0	11.8	14.4	10.4	12.8	11.2
80.0	9.0	12.0	7.2	10.0	12.6	8.6	10.8	9.4
85.0	7.4	10.4	5.6	8.2	10.8	7.0	9.2	7.8
90.0			4.2	6.8	9.4	5.6	7.8	6.4
95.0			3.0	5.6	8.2	4.2	6.6	5.0
100.0				4.4	7.0	3.2	5.4	4.0
105.0						2.2	4.4	3.0
110.0							3.4	2.0
115.0							2.6	
SLI code	412							
Max. permitted wind speed	14 m/s							

**3 015 732 / 5 733****3 015 902 / 5 903**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	85.0	65.0	50.0	47.0	81.0	69.0
30.0	64.0	59.0	45.0	43.6	61.0	62.0
35.0	49.0	52.0	40.8	40.2	46.0	49.0
40.0	38.4	41.4	37.0	36.8	35.6	38.8
45.0	30.8	34.0	33.4	33.6	28.0	31.2
50.0	24.8	28.0	29.4	30.4	22.2	25.4
55.0		23.4	24.8	25.6	17.8	20.8
60.0		19.6	21.0	21.8	14.2	17.0
65.0		16.6	18.0	18.8	11.2	14.0
70.0			15.4	16.2		11.4
75.0			13.2	14.0		9.4
80.0			11.2	12.0		7.6
85.0			9.6	10.4		6.0
90.0				9.0		
95.0				7.6		
100.0				6.4		
SLI code	412					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.



**3 015 732 / 5 733**  
**3 015 902 / 5 903**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0			85.0	71.0	49.0	
20.0	57.0	47.0	85.0	71.0	49.0	
25.0	53.0	45.0	74.0	67.0	49.0	39.4
30.0	49.0	43.8	56.0	57.0	48.0	38.6
35.0	45.0	41.4	43.6	45.0	45.0	37.8
40.0	40.4	38.6	34.0	36.2	36.6	37.0
45.0	32.8	33.8	26.4	29.2	30.2	30.8
50.0	27.0	28.2	20.8	23.4	25.0	25.8
55.0	22.4	23.4	16.4	19.0	20.4	21.8
60.0	18.6	19.6	12.8	15.4	16.8	18.2
65.0	15.6	16.6	9.8	12.4	13.8	15.2
70.0	13.0	14.0	7.4	9.8	11.2	12.6
75.0	10.8	11.8	5.2	7.6	9.0	10.4
80.0	9.0	10.0	3.4	5.8	7.2	8.6
85.0	7.4	8.2	1.8	4.2	5.6	7.0
90.0	6.0	6.8		2.8	4.2	5.6
95.0	4.6	5.6			3.0	4.2
100.0	3.6	4.4				3.2
105.0		3.4				2.2
110.0		2.6				
SLI code	412					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 734 / 5 735

3 015 904 / 5 905

	Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	57.0	57.0	45.0	29.0	55.0	55.0
35.0	49.0	52.0	40.8	27.4	46.0	49.0
40.0	38.4	41.4	37.0	26.0	35.6	38.8
45.0	30.8	34.0	33.4	24.8	28.0	31.2
50.0	24.8	28.0	29.4	23.6	22.2	25.4
55.0		23.4	24.8	22.6	17.8	20.8
60.0		19.6	21.0	21.6	14.2	17.0
65.0		16.6	18.0	18.8	11.2	14.0
70.0			15.4	16.2		11.4
75.0			13.2	14.0		9.4
80.0			11.2	12.0		7.6
85.0			9.6	10.4		6.0
90.0				9.0		
95.0				7.6		
100.0				6.4		
SLI code	412					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 734 / 5 735

3 015 904 / 5 905

	Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0	55.0	49.0	
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	49.0	30.6	55.0	55.0	48.0	32.2
35.0	45.0	29.2	43.6	45.0	45.0	30.6
40.0	40.4	27.8	34.0	36.2	36.6	29.0
45.0	32.8	26.4	26.4	29.2	30.2	28.0
50.0	27.0	25.2	20.8	23.4	25.0	25.8
55.0	22.4	23.4	16.4	19.0	20.4	21.8
60.0	18.6	19.6	12.8	15.4	16.8	18.2
65.0	15.6	16.6	9.8	12.4	13.8	15.2
70.0	13.0	14.0	7.4	9.8	11.2	12.6
75.0	10.8	11.8	5.2	7.6	9.0	10.4
80.0	9.0	10.0	3.4	5.8	7.2	8.6
85.0	7.4	8.2	1.8	4.2	5.6	7.0
90.0	6.0	6.8		2.8	4.2	5.6
95.0	4.6	5.6			3.0	4.2
100.0	3.6	4.4				3.2
105.0		3.4				2.2
110.0		2.6				
SLI code	412					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopable load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 740 / 5 741

3 015 910 / 5 911

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	46.1	63.6	63.6	81.0	81.0	81.0	98.5	
Tel. sec. I	0.00	0.50	0.00	1.00	0.50	0.00	1.00	
Tel. sec. II	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Tel. sec. III	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0	270.0	218.0	85.0	136.0	85.0	85.0		
15.0	186.0	157.0	85.0	131.0	85.0	80.0	85.0	
20.0	107.0	95.0	85.0	85.0	85.0	71.0	83.0	
25.0	69.0	66.0	73.0	59.0	66.0	65.0	59.0	
30.0	49.0	46.0	52.0	43.0	49.0	54.0	44.0	
35.0	36.6	33.6	40.0	32.0	37.0	41.6	34.0	
40.0		25.0	31.4	23.4	28.4	32.8	26.4	
45.0		19.0	25.0	17.4	22.2	26.4	20.2	
50.0		14.2	20.0	12.8	17.4	21.6	15.6	
55.0				9.2	13.6	17.8	11.8	
60.0				6.4	10.6	14.6	9.0	
65.0				4.0	8.2	12.0	6.4	
70.0							4.4	
75.0							2.8	
SLI code	312							
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

3 015 740 / 5 741

3 015 910 / 5 911

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	81.0	75.0						
20.0	75.0	70.0	71.0	68.0	57.0	53.0	53.0	
25.0	64.0	62.0	58.0	63.0	53.0	53.0	53.0	41.2
30.0	49.0	54.0	44.0	48.0	47.0	43.8	47.0	41.2
35.0	38.4	42.6	34.2	38.2	42.0	34.6	38.0	34.4
40.0	30.2	33.8	27.2	30.8	34.4	27.8	30.8	27.8
45.0	23.8	27.4	21.6	25.0	28.0	22.4	25.6	22.6
50.0	19.0	22.4	17.0	20.2	23.2	18.2	21.2	18.6
55.0	15.2	18.6	13.4	16.4	19.2	14.8	17.4	15.2
60.0	12.2	15.4	10.4	13.2	16.0	11.8	14.2	12.6
65.0	9.8	13.0	7.8	10.8	13.4	9.4	11.8	10.2
70.0	7.6	10.8	5.8	8.6	11.4	7.2	9.6	8.2
75.0	5.8	9.0	4.0	6.8	9.6	5.6	7.8	6.4
80.0	4.4	7.4	2.6	5.4	8.0	4.0	6.2	4.8
85.0	3.0	6.0		4.0	6.6	2.6	5.0	3.4
90.0				2.8	5.4		3.8	2.4
95.0					4.4		2.8	
100.0					3.4			
SLI code	312							
Max. permitted wind speed	14 m/s							

**3 015 742 / 5 743****3 015 912 / 5 913**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	85.0	71.0	56.0	52.0	85.0	75.0
25.0	69.0	65.0	50.0	47.0	61.0	62.0
30.0	49.0	52.0	45.0	43.6	45.0	47.0
35.0	36.6	40.0	40.8	40.2	33.6	36.4
40.0	28.0	31.4	32.8	33.6	25.0	28.4
45.0	21.6	25.0	26.4	27.4	19.0	22.2
50.0	17.0	20.0	21.6	22.4	14.2	17.4
55.0		16.2	17.8	18.6	10.6	13.6
60.0		13.2	14.6	15.4	7.8	10.6
65.0		10.8	12.0	13.0	5.4	8.2
70.0			10.0	10.8		6.2
75.0			8.2	9.0		4.4
80.0			6.6	7.4		3.0
85.0			5.2	6.0		
90.0				4.8		
95.0				3.8		
100.0				3.0		
SLI code	312					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

**3 015 742 / 5 743**  
**3 015 912 / 5 913**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0			78.0	71.0	49.0	
20.0	57.0	47.0	55.0	56.0	49.0	39.4
25.0	53.0	45.0				
30.0	47.0	43.8	40.4	41.8	41.8	38.6
35.0	36.8	36.6	30.6	32.2	32.6	33.2
40.0	29.4	29.6	23.2	25.2	25.8	26.6
45.0	23.8	24.2	17.4	19.8	20.6	21.6
50.0	19.0	20.0	12.8	15.6	16.6	17.6
55.0	15.2	16.4	9.2	11.8	13.2	14.2
60.0	12.2	13.2	6.4	9.0	10.4	11.6
65.0	9.8	10.8	4.0	6.4	7.8	9.2
70.0	7.6	8.6	2.0	4.4	5.8	7.2
75.0	5.8	6.8		2.8	4.0	5.6
80.0	4.4	5.4			2.6	4.0
85.0	3.0	4.0				2.6
90.0	1.8	2.8				
SLI code	312					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 744 / 5 745

3 015 914 / 5 915

	Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	57.0	57.0	50.0	30.8	55.0	55.0
30.0	49.0	52.0	45.0	29.0	45.0	47.0
35.0	36.6	40.0	40.8	27.4	33.6	36.4
40.0	28.0	31.4	32.8	26.0	25.0	28.4
45.0	21.6	25.0	26.4	24.8	19.0	22.2
50.0	17.0	20.0	21.6	22.4	14.2	17.4
55.0		16.2	17.8	18.6	10.6	13.6
60.0		13.2	14.6	15.4	7.8	10.6
65.0		10.8	12.0	13.0	5.4	8.2
70.0			10.0	10.8		6.2
75.0			8.2	9.0		4.4
80.0			6.6	7.4		3.0
85.0			5.2	6.0		
90.0				4.8		
95.0				3.8		
100.0				3.0		
SLI code	312					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.



3 015 744 / 5 745  
3 015 914 / 5 915

	Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			55.0			
20.0	55.0	34.4	55.0	55.0	49.0	
25.0	53.0	32.4	55.0	55.0	49.0	34.0
30.0	47.0	30.6	40.4	41.8	41.8	32.2
35.0	36.8	29.2	30.6	32.2	32.6	30.6
40.0	29.4	27.8	23.2	25.2	25.8	26.6
45.0	23.8	24.2	17.4	19.8	20.6	21.6
50.0	19.0	20.0	12.8	15.6	16.6	17.6
55.0	15.2	16.4	9.2	11.8	13.2	14.2
60.0	12.2	13.2	6.4	9.0	10.4	11.6
65.0	9.8	10.8	4.0	6.4	7.8	9.2
70.0	7.6	8.6	2.0	4.4	5.8	7.2
75.0	5.8	6.8		2.8	4.0	5.6
80.0	4.4	5.4			2.6	4.0
85.0	3.0	4.0				2.6
90.0	1.8	2.8				
SLI code	312					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopable load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

**3 015 750 / 5 751****3 015 920 / 5 921**

<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>								
Main boom - fixed lengths in ft								
	46.1	63.6	63.6	81.0	81.0	81.0	98.5	
Tel. sec. I	0.00	0.50	0.00	1.00	0.50	0.00	1.00	
Tel. sec. II	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Tel. sec. III	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0	264.0	218.0	85.0	136.0	85.0	85.0		
15.0	138.0	114.0	85.0	98.0	85.0	80.0	85.0	
20.0	78.0	67.0	77.0	58.0	66.0	71.0	58.0	
25.0	50.0	45.0	54.0	39.2	46.0	52.0	40.2	
30.0	33.8	30.6	37.6	27.0	33.2	39.0	28.6	
35.0	24.2	21.0	27.8	18.8	24.6	29.4	21.0	
40.0		14.6	20.8	13.0	17.8	22.4	15.2	
45.0		9.8	15.8	8.4	13.0	17.4	11.0	
50.0		6.4	12.2	4.8	9.4	13.6	7.6	
55.0				2.2	6.6	10.6	4.8	
60.0					4.2	8.2	2.6	
65.0					2.4	6.2		
SLI code	212							
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.

3 015 750 / 5 751

3 015 920 / 5 921

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	81.0	75.0						
20.0	64.0	70.0	57.0	61.0	57.0	53.0	53.0	
25.0	45.0	51.0	40.0	44.0	49.0	39.6	43.4	38.8
30.0	33.4	38.2	29.0	33.2	37.2	29.4	32.8	29.0
35.0	25.4	29.8	21.6	25.6	29.2	22.4	25.6	22.4
40.0	19.4	23.4	16.2	19.8	23.4	17.0	20.2	17.2
45.0	14.8	18.4	12.0	15.6	19.0	13.0	16.0	13.4
50.0	11.0	14.6	8.6	12.2	15.2	9.8	12.8	10.2
55.0	8.2	11.6	6.0	9.2	12.2	7.2	10.0	7.6
60.0	5.8	9.0	3.8	6.8	9.6	5.0	7.8	5.6
65.0	3.8	7.2		5.0	7.6	3.2	6.0	3.8
70.0	2.2	5.4		3.4	6.0		4.2	2.2
75.0		4.0		2.0	4.6		2.8	
80.0		2.8			3.4			
85.0					2.2			
SLI code	212							
Max. permitted wind speed	14 m/s							

3 015 752 / 5 753

3 015 922 / 5 923

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	85.0	80.0	63.0		85.0	81.0
20.0	71.0	71.0	56.0	52.0	61.0	61.0
25.0	49.0	50.0	49.0	47.0	41.4	43.0
30.0	33.8	37.0	36.8	36.2	29.0	31.2
35.0	24.2	27.8	28.6	28.4	20.8	23.2
40.0	17.4	20.8	22.4	22.6	14.6	17.4
45.0	12.6	15.8	17.4	18.2	9.8	13.0
50.0	9.0	12.2	13.6	14.6	6.4	9.4
55.0		9.2	10.6	11.6	3.6	6.6
60.0		6.8	8.2	9.0		4.2
65.0		5.0	6.2	7.2		2.4
70.0			4.6	5.4		
75.0			3.2	4.0		
80.0			2.0	2.8		
SLI code	212					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 752 / 5 753

3 015 922 / 5 923

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			85.0			
15.0						
20.0	57.0	47.0	54.0	54.0	49.0	
25.0	42.6	41.8	36.2	37.6	37.4	37.4
30.0	31.6	31.4	25.0	26.8	27.4	27.8
35.0	24.0	24.2	17.4	19.6	20.4	21.2
40.0	18.4	18.8	12.0	14.2	15.2	16.2
45.0	14.2	14.8	7.8	10.2	11.2	12.2
50.0	10.8	11.4	4.4	6.8	8.0	9.2
55.0	8.2	8.8		4.2	5.4	6.6
60.0	5.8	6.6		2.0	3.2	4.6
65.0	3.8	4.8				2.8
70.0	2.2	3.2				
SLI code	212					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 754 / 5 755

3 015 924 / 5 925

	Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	55.0
20.0	57.0	57.0	56.0	32.8	55.0	55.0
25.0	49.0	50.0	49.0	30.8	41.4	43.0
30.0	33.8	37.0	36.8	29.0	29.0	31.2
35.0	24.2	27.8	28.6	27.4	20.8	23.2
40.0	17.4	20.8	22.4	22.6	14.6	17.4
45.0	12.6	15.8	17.4	18.2	9.8	13.0
50.0	9.0	12.2	13.6	14.6	6.4	9.4
55.0		9.2	10.6	11.6	3.6	6.6
60.0		6.8	8.2	9.0		4.2
65.0		5.0	6.2	7.2		2.4
70.0			4.6	5.4		
75.0			3.2	4.0		
80.0			2.0	2.8		
SLI code	212					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 754 / 5 755

3 015 924 / 5 925

	Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			55.0			
15.0			54.0	54.0	49.0	
20.0	55.0	34.4	54.0	54.0	49.0	
25.0	42.6	32.4	36.2	37.6	37.4	34.0
30.0	31.6	30.6	25.0	26.8	27.4	27.8
35.0	24.0	24.2	17.4	19.6	20.4	21.2
40.0	18.4	18.8	12.0	14.2	15.2	16.2
45.0	14.2	14.8	7.8	10.2	11.2	12.2
50.0	10.8	11.4	4.4	6.8	8.0	9.2
55.0	8.2	8.8		4.2	5.4	6.6
60.0	5.8	6.6		2.0	3.2	4.6
65.0	3.8	4.8				2.8
70.0	2.2	3.2				
SLI code	212					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI. The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopable load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 760 / 5 761

3 015 930 / 5 931

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	46.1	63.6	63.6	81.0	81.0	81.0	98.5	
Tel. sec. I	0.00	0.50	0.00	1.00	0.50	0.00	1.00	
Tel. sec. II	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Tel. sec. III	0.00	0.00	0.25	0.00	0.25	0.50	0.25	
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0	173.0	123.0	85.0	94.0	85.0	85.0		
15.0	87.0	67.0	78.0	53.0	61.0	69.0	50.0	
20.0	53.0	40.6	50.0	32.8	39.8	46.0	32.2	
25.0	36.0	27.0	35.4	21.4	27.6	33.6	22.0	
30.0	25.4	18.2	26.0	13.6	19.6	25.2	15.0	
35.0	17.8	12.2	19.6	8.4	14.0	19.2	10.0	
40.0		7.8	14.8	4.4	9.8	14.8	6.2	
45.0		4.4	11.2		6.6	11.4	3.4	
50.0		1.8	8.0		4.0	8.8		
55.0					2.0	6.6		
60.0						4.8		
65.0						3.2		
SLI code	112							
Max. permitted wind speed	14 m/s							

\* Lifting loads &gt; 242 500 lbs only lift on with special equipment.



3 015 760 / 5 761

3 015 930 / 5 931

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>							
	Main boom - fixed lengths in ft							
	98.5	98.5	116.0	116.0	116.0	133.4	133.4	150.9
Tel. sec. I	0.50	0.00	1.00	0.50	0.00	1.00	0.50	1.00
Tel. sec. II	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Tel. sec. III	0.50	0.75	0.50	0.75	1.00	0.75	1.00	1.00
Slewing range	360°							
Radius in ft	Lifting capacities in 1000 lbs							
10.0								
15.0	56.0	62.0						
20.0	37.6	42.8	30.8	35.2	39.6	29.6	33.2	
25.0	26.8	31.6	21.6	25.8	29.8	21.2	24.8	20.4
30.0	19.6	24.0	15.2	19.0	22.8	15.4	18.6	15.0
35.0	14.4	18.6	10.4	14.2	17.8	11.0	14.2	11.0
40.0	10.4	14.4	7.0	10.6	14.0	7.6	10.6	7.8
45.0	7.4	11.4	4.2	7.6	11.0	5.0	8.0	5.2
50.0	4.8	8.8		5.2	8.6	2.8	5.8	3.2
55.0	2.8	6.6		3.4	6.6		3.8	
60.0		5.0			5.0		2.4	
65.0		3.4			3.4			
70.0		2.2			2.2			
SLI code	112							
Max. permitted wind speed	14 m/s							

3 015 762 / 5 763

3 015 932 / 5 933

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	85.0	85.0			85.0	
15.0	72.0	66.0	60.0		56.0	53.0
20.0	45.0	44.0	41.4	38.6	35.0	35.0
25.0	30.8	31.6	30.4	28.8	23.4	24.6
30.0	21.8	23.2	22.8	22.0	15.6	17.4
35.0	15.6	17.4	17.4	17.0	10.2	12.2
40.0	11.0	13.0	13.4	13.2	6.0	8.4
45.0	7.6	9.8	10.2	10.2	3.0	5.4
50.0	5.0	7.0	7.8	7.8		3.0
55.0		5.0	5.6	6.0		
60.0		3.2	4.0	4.2		
65.0			2.4	2.8		
SLI code	112					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 762 / 5 763

3 015 932 / 5 933

	<b>Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 17.8 ft)</b>					
	Main boom - intermediate lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			45.0			
15.0			28.2	28.4	27.4	
20.0	33.6	31.8	18.4	19.4	19.2	19.2
25.0	24.2	23.4				
30.0	17.6	17.2	11.6	13.2	13.4	13.8
35.0	12.8	12.8	6.8	8.6	9.2	9.8
40.0	9.2	9.4	3.0	5.0	5.8	6.8
45.0	6.4	6.8		2.4	3.2	4.2
50.0	4.0	4.6				2.2
55.0	2.2	2.8				
SLI code	112					
Max. permitted wind speed	14 m/s					

\* The above lifting capacity values are monitored automatically by the SLI.

\* The boom must be extended to the required intermediate length before the load is lifted.

3 015 764 / 5 765

3 015 934 / 5 935

	Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	46.1 - 63.6	63.6 - 81.0	81.0 - 98.4	98.4 - 115.8	63.6 - 81.0	81.0 - 98.4
Tel. sec. I	0.0	0.0	0.0	0.0	0.50	0.50
Tel. sec. II	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Tel. sec. III	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0	57.0	57.0			55.0	
15.0	57.0	57.0	57.0		55.0	53.0
20.0	45.0	44.0	41.4	32.8	35.0	35.0
25.0	30.8	31.6	30.4	28.8	23.4	24.6
30.0	21.8	23.2	22.8	22.0	15.6	17.4
35.0	15.6	17.4	17.4	17.0	10.2	12.2
40.0	11.0	13.0	13.4	13.2	6.0	8.4
45.0	7.6	9.8	10.2	10.2	3.0	5.4
50.0	5.0	7.0	7.8	7.8		3.0
55.0		5.0	5.6	6.0		
60.0		3.2	4.0	4.2		
65.0			2.4	2.8		
SLI code	112					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI.  
The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopic load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.

3 015 764 / 5 765

3 015 934 / 5 935

	Crane with 0 lbs (0,0 t) counterweight (Supporting span 28.1 x 17.8 ft)					
	Main boom - telescoping lengths in ft					
	98.4 - 115.8	115.8 - 133.5	81.0 - 98.4	98.4 - 115.8	115.8 - 133.5	133.5 - 150.9
Tel. sec. I	0.50	0.50	1.0	1.0	1.0	1.0
Tel. sec. II	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Tel. sec. III	0.50 - 0.75	0.75 - 1.00	0.0 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
10.0			45.0			
15.0			28.2	28.4	27.4	
20.0	33.6	31.8	18.4	19.4	19.2	19.2
25.0	24.2	23.4				
30.0	17.6	17.2	11.6	13.2	13.4	13.8
35.0	12.8	12.8	6.8	8.6	9.2	9.8
40.0	9.2	9.4	3.0	5.0	5.8	6.8
45.0	6.4	6.8		2.4	3.2	4.2
50.0	4.0	4.6				2.2
55.0	2.2	2.8				
SLI code	112					
Max. permitted wind speed	14 m/s					

\* **The above lifting capacity values are not monitored by the SLI**, however they are within the capacity values programmed for intermediate length configured by the SLI. The SLI must adjust of the SLI-Code to the corresponding main boom - counterweight version.

\* The telescopable load depends, however, on the angle of the boom and on how well the sliding wear pads between the telescope sections are lubricated.



**3. Boom extension**

**3 015 770**

**3 015 946**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
20.0	30.8	30.8				
25.0	29.4	28.0	28.6	26.2		
30.0	26.8	25.8	27.0	25.6	24.0	20.6
35.0	24.6	23.6	25.2	24.0	23.8	20.6
40.0	22.6	21.8	23.4	22.4	23.2	20.6
45.0	21.0	20.4	21.8	21.0	22.0	20.6
50.0	19.4	19.0	20.6	19.8	20.8	20.0
55.0	18.2	17.8	19.4	18.8	19.8	19.4
60.0	17.2	16.8	18.2	17.8	18.8	18.6
65.0	16.0	15.8	17.2	16.8	17.8	18.0
70.0	15.2	14.8	16.2	15.8	17.0	17.2
75.0	14.2	14.0	15.4	15.0	16.4	16.6
80.0	13.2	13.0	14.4	14.0	15.6	16.0
85.0	12.6	12.4	13.6	13.4	14.8	15.2
90.0	12.0	11.8	13.2	12.8	14.2	14.6
95.0	11.4	11.4	12.6	12.4	13.4	14.0
100.0	11.0	10.8	12.0	11.8	12.8	13.4
105.0	10.6	10.6	11.6	11.4	12.4	13.0
110.0	10.2	10.2	11.2	11.2	12.0	12.6
115.0	9.8	9.8	10.8	10.8	11.4	11.6
120.0			9.6	10.4	10.2	10.4
125.0			8.6	10.0	9.0	9.4
130.0			7.6	9.6	8.0	8.4
135.0					7.0	7.4
140.0					6.2	6.6
145.0					5.4	5.8
150.0					4.6	5.0
155.0						4.4
160.0						3.6
165.0						3.0
170.0						2.6
SLI code	520					
Max. permitted wind speed	14 m/s			10 m/s		

**3 015 771**

**3 015 941**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 32.8 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	19.2	18.8	19.6			
35.0	18.2	17.8	18.4	18.0	18.4	
40.0	17.0	16.8	17.6	17.2	17.6	17.2
45.0	16.2	15.8	16.6	16.4	16.8	16.6
50.0	15.0	14.8	16.0	15.6	16.2	16.0
55.0	14.0	13.8	15.2	14.8	15.4	15.4
60.0	13.4	13.2	14.4	14.0	14.6	14.6
65.0	12.8	12.6	13.6	13.2	13.8	14.0
70.0	12.4	12.2	13.0	12.8	13.4	13.6
75.0	12.0	11.8	12.6	12.4	13.0	13.2
80.0	11.4	11.4	12.0	12.0	12.6	12.8
85.0	11.0	11.0	11.8	11.6	12.2	12.4
90.0	10.8	10.6	11.4	11.2	11.8	12.0
95.0	10.4	10.4	11.0	10.8	11.4	11.8
100.0	10.0	10.0	10.8	10.6	11.2	11.4
105.0	10.0	10.0	10.4	10.4	11.0	11.2
110.0	9.8	9.8	10.2	10.2	10.8	11.0
115.0	9.6	9.8	10.0	10.0	10.4	10.8
120.0			9.8	9.8	10.2	10.6
125.0			8.8	9.6	9.4	9.8
130.0			7.8	9.4	8.4	8.8
135.0					7.4	7.8
140.0					6.4	7.0
145.0					5.6	6.0
150.0					4.8	5.2
155.0						4.6
160.0						3.8
SLI code	521					
Max. permitted wind speed	14 m/s			10 m/s		



**3 015 772**  
**3 015 942**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 30°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	14.2	14.0				
40.0	13.6	13.4	13.8	13.6	13.8	
45.0	13.2	13.0	13.4	13.2	13.4	13.2
50.0	12.6	12.6	13.0	12.8	13.0	13.0
55.0	12.2	12.2	12.6	12.4	12.8	12.6
60.0	11.8	11.8	12.2	12.0	12.4	12.4
65.0	11.4	11.4	11.8	11.8	12.0	12.0
70.0	11.2	11.0	11.6	11.4	11.8	11.8
75.0	10.8	10.8	11.2	11.2	11.6	11.6
80.0	10.6	10.4	11.0	10.8	11.2	11.4
85.0	10.4	10.2	10.8	10.6	11.0	11.2
90.0	10.2	10.0	10.4	10.4	10.8	11.0
95.0	10.0	9.8	10.2	10.2	10.6	10.8
100.0	9.8	9.8	10.0	10.0	10.4	10.6
105.0			10.0	10.0	10.2	10.4
110.0			10.0	9.8	10.0	10.2
115.0			9.8	9.8	10.0	10.2
120.0					9.8	10.0
125.0					9.6	9.8
130.0					8.6	9.0
135.0						8.0
140.0						7.2
SLI code	<b>522</b>					
Max. permitted wind speed	<b>14 m/s</b>			<b>10 m/s</b>		

**3 015 773**

**3 015 947**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
25.0	15.4	15.4				
30.0	15.4	15.4	15.4	15.2	14.8	
35.0	15.4	15.4	15.4	15.0	14.6	
40.0	14.8	14.0	15.2	14.2	14.0	13.4
45.0	13.4	13.0	14.0	13.4	13.6	13.0
50.0	12.6	12.2	13.0	12.6	13.2	12.6
55.0	11.8	11.6	12.4	12.0	12.6	12.2
60.0	11.0	10.8	11.6	11.4	12.0	11.8
65.0	10.4	10.2	11.0	10.8	11.4	11.4
70.0	9.8	9.8	10.4	10.2	10.8	11.0
75.0	9.4	9.2	10.0	9.8	10.4	10.6
80.0	8.8	8.8	9.4	9.4	9.8	10.0
85.0	8.4	8.4	9.0	8.8	9.4	9.8
90.0	8.0	8.0	8.6	8.6	9.2	9.4
95.0	7.6	7.6	8.2	8.2	8.8	9.0
100.0	7.4	7.2	8.0	7.8	8.4	8.8
105.0	7.0	7.0	7.6	7.6	8.2	8.4
110.0	6.8	6.8	7.4	7.4	7.8	8.2
115.0	6.6	6.6	7.2	7.0	7.6	8.0
120.0	6.4	6.2	7.0	6.8	7.4	7.6
125.0	6.0	6.0	6.6	6.6	7.0	7.4
130.0	5.8	5.8	6.4	6.4	6.8	7.2
135.0	5.6	5.6	6.2	6.2	6.6	7.0
140.0			6.0	6.0	6.4	6.8
145.0			5.8	5.8	6.2	6.6
150.0			5.8	5.8	6.0	6.2
155.0					5.4	5.4
160.0					4.6	4.8
170.0					3.6	3.6
180.0						2.6
185.0						2.2
SLI code	530					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 774**  
**3 015 944**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 52.5 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.8	10.6	11.0			
45.0	10.2	10.0	10.4	10.2	10.4	
50.0	9.8	9.6	10.0	9.8	10.0	10.0
55.0	9.2	9.2	9.6	9.4	9.6	9.6
60.0	8.8	8.8	9.2	9.0	9.2	9.4
65.0	8.4	8.4	8.8	8.6	9.0	9.0
70.0	8.0	8.0	8.4	8.4	8.6	8.8
75.0	7.8	7.6	8.2	8.0	8.4	8.4
80.0	7.4	7.4	7.8	7.8	8.0	8.2
85.0	7.2	7.2	7.6	7.4	7.8	8.0
90.0	7.0	6.8	7.4	7.2	7.6	7.8
95.0	6.8	6.6	7.0	7.0	7.4	7.4
100.0	6.4	6.4	6.8	6.8	7.2	7.2
105.0	6.4	6.2	6.6	6.6	7.0	7.2
110.0	6.2	6.2	6.6	6.4	6.8	7.0
115.0	6.0	6.0	6.4	6.4	6.6	6.8
120.0	5.8	5.8	6.2	6.2	6.4	6.6
125.0	5.8	5.8	6.0	6.0	6.2	6.4
130.0	5.6	5.6	5.8	5.8	6.2	6.4
135.0	5.6	5.6	5.8	5.8	6.0	6.2
140.0			5.8	5.6	6.0	6.0
145.0			5.6	5.6	5.8	6.0
150.0			5.6	5.6	5.8	5.8
155.0					5.6	5.8
160.0					5.0	5.4
165.0					4.4	4.6
170.0					3.8	4.0
175.0						3.4
180.0						3.0
SLI code	531					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 775**

**3 015 945**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.2	8.2	8.4	8.2		
55.0	7.8	7.8	8.0	8.0	8.0	
60.0	7.6	7.6	7.8	7.6	7.8	7.8
65.0	7.4	7.2	7.6	7.4	7.6	7.6
70.0	7.2	7.0	7.4	7.2	7.4	7.4
75.0	6.8	6.8	7.2	7.0	7.2	7.2
80.0	6.6	6.6	7.0	6.8	7.0	7.2
85.0	6.4	6.4	6.8	6.6	6.8	7.0
90.0	6.4	6.4	6.6	6.6	6.8	6.8
95.0	6.2	6.2	6.4	6.4	6.6	6.6
100.0	6.0	6.0	6.2	6.2	6.4	6.6
105.0	6.0	6.0	6.2	6.2	6.4	6.4
110.0	5.8	5.8	6.0	6.0	6.2	6.4
115.0	5.8	5.8	6.0	6.0	6.0	6.2
120.0	5.8	5.8	5.8	5.8	6.0	6.0
125.0			5.8	5.8	5.8	6.0
130.0			5.6	5.6	5.8	5.8
135.0			5.6	5.6	5.8	5.8
140.0					5.8	5.8
145.0					5.6	5.8
150.0					5.6	5.6
155.0						5.6
160.0						5.6
SLI code	532					
Max. permitted wind speed	10 m/s				8 m/s	

	Main boom - fixed lengths in ft					
Tel. sec. I Tel. sec. II Tel. sec. III						
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
SLI code						
Max. permitted wind speed						

**3 015 810**

**3 015 980**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 78.7 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	14.8	15.4				
35.0	14.6	15.0	13.8			
40.0	14.6	14.0	13.6	12.6	11.8	
45.0	14.0	13.4	13.6	12.6	11.8	10.0
50.0	13.2	12.6	13.2	12.6	11.8	10.0
55.0	12.6	12.2	12.6	12.2	11.8	10.0
60.0	12.0	11.6	12.0	11.8	11.6	10.0
65.0	11.4	11.0	11.6	11.4	11.2	10.0
70.0	10.8	10.6	11.0	10.8	11.0	10.0
75.0	10.4	10.0	10.6	10.4	10.6	10.0
80.0	9.8	9.6	10.2	10.0	10.2	9.8
85.0	9.4	9.2	9.8	9.6	9.8	9.6
90.0	9.0	8.8	9.4	9.2	9.6	9.4
95.0	8.6	8.4	9.0	8.8	9.2	9.2
100.0	8.2	8.0	8.6	8.4	9.0	9.0
105.0	8.0	7.8	8.4	8.2	8.6	8.8
110.0	7.6	7.4	8.0	8.0	8.4	8.4
115.0	7.4	7.2	7.8	7.6	8.0	8.2
120.0	7.0	7.0	7.6	7.4	7.8	8.0
125.0	6.8	6.6	7.2	7.0	7.6	7.8
130.0	6.4	6.4	7.0	6.8	7.2	7.4
135.0	6.2	6.2	6.8	6.6	7.0	7.2
140.0	6.0	6.0	6.6	6.4	6.8	7.0
145.0	5.8	5.8	6.4	6.2	6.6	7.0
150.0	5.6	5.6	6.2	6.0	6.4	6.8
155.0	5.6	5.4	6.0	5.8	6.0	6.0
160.0	5.4	5.2	5.4	5.6	5.4	5.4
165.0			4.8	5.6	4.8	4.8
170.0			4.2	5.4	4.2	4.2
175.0			3.8	5.2	3.6	3.6
SLI code	540					
Max. permitted wind speed	10 m/s		8 m/s			

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 78.7 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
					133.4	150.9
Tel. sec. I					1.00	1.00
Tel. sec. II					0.75	1.00
Tel. sec. III					0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
180.0					3.2	3.2
185.0					2.8	2.6
190.0					2.2	2.2
SLI code	540					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 811**

**3 015 981**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 78.7 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.6					
45.0	10.2	10.0				
50.0	9.8	9.6	9.8	9.8	9.6	
55.0	9.4	9.2	9.4	9.6	9.4	9.2
60.0	9.0	8.8	9.2	9.2	9.0	9.0
65.0	8.6	8.6	8.8	9.0	8.8	9.0
70.0	8.4	8.2	8.6	8.6	8.6	8.8
75.0	8.0	8.0	8.2	8.4	8.4	8.6
80.0	7.8	7.8	8.0	8.2	8.0	8.4
85.0	7.6	7.4	7.8	8.0	7.8	8.2
90.0	7.4	7.2	7.6	7.8	7.6	8.0
95.0	7.2	7.0	7.4	7.6	7.4	7.8
100.0	7.0	6.8	7.2	7.4	7.2	7.6
105.0	6.8	6.8	7.0	7.2	7.2	7.4
110.0	6.6	6.6	6.8	7.0	7.0	7.4
115.0	6.4	6.4	6.8	6.8	6.8	7.2
120.0	6.4	6.2	6.6	6.8	6.8	7.0
125.0	6.2	6.2	6.4	6.6	6.6	7.0
130.0	6.0	6.0	6.2	6.4	6.4	6.8
135.0	6.0	5.8	6.2	6.2	6.4	6.6
140.0	5.8	5.8	6.0	6.2	6.2	6.6
145.0	5.6	5.6	5.8	6.0	6.2	6.4
150.0	5.6	5.6	5.8	5.8	6.0	6.2
155.0	5.4	5.4	5.6	5.6	6.0	6.2
160.0			5.4	5.6	5.8	6.0
165.0			5.2	5.4	5.4	5.4
170.0			4.6	5.2	4.6	4.8
175.0			4.0	5.2	4.2	4.2
SLI code	541					
Max. permitted wind speed	10 m/s		8 m/s			



	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 78.7 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
					133.4	150.9
Tel. sec. I					1.00	1.00
Tel. sec. II					0.75	1.00
Tel. sec. III					0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
180.0					3.6	3.6
185.0					3.0	3.2
190.0					2.6	2.6
195.0						2.2
SLI code	541					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 812**

**3 015 982**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 78.7 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.0					
55.0	7.6	7.6	7.8			
60.0	7.4	7.4	7.6	7.8	7.6	
65.0	7.2	7.2	7.4	7.6	7.4	
70.0	7.0	7.0	7.2	7.4	7.2	7.4
75.0	7.0	6.8	7.0	7.2	7.0	7.2
80.0	6.8	6.8	6.8	7.0	6.8	7.2
85.0	6.6	6.6	6.6	7.0	6.8	7.0
90.0	6.4	6.4	6.6	6.8	6.6	7.0
95.0	6.4	6.4	6.4	6.6	6.4	6.8
100.0	6.2	6.2	6.4	6.6	6.4	6.6
105.0	6.2	6.2	6.2	6.4	6.4	6.6
110.0	6.0	6.0	6.2	6.4	6.2	6.6
115.0	6.0	6.0	6.0	6.4	6.2	6.4
120.0	5.8	5.8	6.0	6.2	6.0	6.4
125.0	5.8	5.8	5.8	6.2	6.0	6.2
130.0	5.6	5.6	5.8	6.0	5.8	6.2
135.0	5.6	5.6	5.8	6.0	5.8	6.2
140.0	5.6	5.6	5.6	5.8	5.8	6.0
145.0			5.6	5.8	5.8	6.0
150.0			5.6	5.6	5.6	6.0
155.0			5.6	5.6	5.6	6.0
160.0					5.6	5.8
165.0					5.6	5.8
170.0					5.0	5.0
175.0						4.4
180.0						3.8
SLI code	542					
Max. permitted wind speed	10 m/s		8 m/s			

	Main boom - fixed lengths in ft					
Tel. sec. I Tel. sec. II Tel. sec. III						
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
SLI code						
Max. permitted wind speed						

**3 015 813**

**3 015 983**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 105.0 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	10.8					
40.0	10.4	10.2	10.2			
45.0	10.0	10.0	9.8	9.2	8.6	
50.0	9.8	9.6	9.4	9.0	8.6	7.0
55.0	9.4	9.2	9.2	8.6	8.6	7.0
60.0	9.0	8.6	8.8	8.4	8.2	7.0
65.0	8.6	8.2	8.4	8.0	8.0	7.0
70.0	8.2	8.0	8.2	7.8	7.8	7.0
75.0	7.8	7.6	7.8	7.4	7.4	7.0
80.0	7.4	7.2	7.4	7.2	7.2	6.8
85.0	7.2	6.8	7.2	6.8	7.0	6.6
90.0	6.8	6.6	6.8	6.6	6.8	6.4
95.0	6.4	6.4	6.6	6.4	6.6	6.2
100.0	6.2	6.0	6.4	6.2	6.2	6.0
105.0	6.0	5.8	6.2	6.0	6.2	6.0
110.0	5.6	5.6	6.0	5.8	6.0	5.8
115.0	5.4	5.4	5.8	5.6	5.8	5.6
120.0	5.2	5.0	5.4	5.4	5.6	5.4
125.0	5.0	4.8	5.2	5.2	5.4	5.2
130.0	4.6	4.6	5.0	5.0	5.2	5.2
135.0	4.4	4.4	4.8	4.8	5.0	5.0
140.0	4.4	4.2	4.6	4.6	4.8	4.8
145.0	4.2	4.2	4.4	4.4	4.8	4.8
150.0	4.0	4.0	4.4	4.2	4.6	4.6
155.0	3.8	3.8	4.2	4.0	4.4	4.4
160.0	3.6	3.6	4.0	4.0	4.2	4.4
165.0	3.6	3.4	3.8	3.8	4.0	4.2
170.0	3.4	3.4	3.8	3.6	4.0	4.2
175.0	3.4	3.2	3.6	3.6	3.8	4.0
SLI code	550					
Max. permitted wind speed	8 m/s					

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 105.0 ft</b>					
	<b>Angle of boom extension 0°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
180.0	3.2	3.2	3.6	3.4	3.6	3.6
185.0			3.4	3.4	3.2	3.0
190.0			2.8	3.2	2.8	2.6
195.0			2.4	3.2	2.2	2.2
200.0			2.0	3.0	1.8	
SLI code	<b>550</b>					
Max. permitted wind speed	<b>8 m/s</b>					

**3 015 814**  
**3 015 984**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 105.0 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	9.4	8.8	8.8			
55.0	9.0	8.4	8.6	8.0	8.0	
60.0	8.6	8.0	8.2	7.8	7.8	7.0
65.0	8.2	7.8	7.8	7.6	7.4	7.0
70.0	7.8	7.4	7.6	7.2	7.2	6.8
75.0	7.4	7.2	7.2	7.0	7.0	6.6
80.0	7.0	6.8	7.0	6.8	6.8	6.4
85.0	6.8	6.6	6.8	6.4	6.6	6.2
90.0	6.4	6.2	6.4	6.2	6.4	6.0
95.0	6.2	6.0	6.2	6.0	6.2	5.8
100.0	5.8	5.8	6.0	5.8	6.0	5.8
105.0	5.6	5.6	5.8	5.6	5.8	5.6
110.0	5.4	5.2	5.6	5.4	5.6	5.4
115.0	5.2	5.0	5.4	5.2	5.4	5.4
120.0	5.0	4.8	5.2	5.0	5.2	5.2
125.0	4.8	4.6	5.0	4.8	5.0	5.0
130.0	4.6	4.4	4.8	4.6	5.0	4.8
135.0	4.4	4.4	4.6	4.6	4.8	4.8
140.0	4.2	4.2	4.4	4.4	4.6	4.6
145.0	4.2	4.0	4.4	4.2	4.6	4.6
150.0	4.0	3.8	4.2	4.2	4.4	4.4
155.0	3.8	3.8	4.0	4.0	4.2	4.4
160.0	3.6	3.6	3.8	3.8	4.0	4.2
165.0	3.6	3.4	3.8	3.8	4.0	4.2
170.0	3.4	3.4	3.6	3.6	3.8	4.0
175.0	3.4	3.2	3.6	3.6	3.8	4.0
180.0	3.2	3.2	3.4	3.4	3.6	3.8
185.0			3.4	3.4	3.6	3.6
190.0			3.2	3.2	3.2	3.0
195.0			2.6	3.2	2.6	2.6
200.0					2.2	2.2
SLI code	551					
Max. permitted wind speed	8 m/s					

**3 015 815**

**3 015 985**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 105.0 ft</b>					
	<b>Angle of boom extension 30°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
60.0	7.4	7.4				
65.0	7.4	7.2				
70.0	7.2	7.0	7.2	7.0	7.0	
75.0	6.8	6.8	7.0	6.8	6.8	6.4
80.0	6.6	6.6	6.8	6.4	6.6	6.2
85.0	6.4	6.4	6.4	6.2	6.4	6.0
90.0	6.2	6.0	6.2	6.0	6.2	5.8
95.0	5.8	5.8	6.0	5.8	6.0	5.6
100.0	5.6	5.6	5.8	5.6	5.8	5.6
105.0	5.4	5.4	5.6	5.6	5.6	5.4
110.0	5.2	5.2	5.4	5.4	5.4	5.2
115.0	5.0	5.0	5.2	5.2	5.2	5.2
120.0	4.8	4.8	5.0	5.0	5.2	5.0
125.0	4.6	4.6	4.8	4.8	5.0	5.0
130.0	4.4	4.4	4.6	4.6	4.8	4.8
135.0	4.4	4.2	4.6	4.4	4.6	4.6
140.0	4.2	4.2	4.4	4.4	4.6	4.6
145.0	4.0	4.0	4.2	4.2	4.4	4.4
150.0	3.8	3.8	4.2	4.0	4.4	4.4
155.0	3.8	3.8	4.0	4.0	4.2	4.2
160.0	3.6	3.6	3.8	3.8	4.0	4.2
165.0	3.4	3.4	3.8	3.8	4.0	4.0
170.0	3.4	3.4	3.6	3.6	3.8	4.0
175.0			3.6	3.6	3.8	3.8
180.0			3.4	3.4	3.6	3.8
185.0					3.6	3.6
190.0					3.4	3.4
195.0					2.8	2.8
200.0						2.4
205.0						2.0
SLI code	552					
Max. permitted wind speed	8 m/s					

**3 015 816**

**3 015 986**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 131.2 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	6.4	6.4	6.6	6.6		
45.0	6.2	6.4	6.4	6.4	5.8	
50.0	6.2	6.4	6.2	6.2	5.8	4.8
55.0	6.0	6.2	6.0	6.0	5.6	4.8
60.0	5.8	6.0	5.8	5.6	5.4	4.8
65.0	5.6	5.8	5.8	5.4	5.2	4.8
70.0	5.4	5.6	5.6	5.2	5.2	4.6
75.0	5.4	5.2	5.4	5.0	5.0	4.6
80.0	5.2	5.0	5.2	4.8	4.8	4.4
85.0	5.0	4.8	5.0	4.6	4.6	4.2
90.0	4.8	4.6	4.8	4.4	4.6	4.2
95.0	4.4	4.4	4.4	4.2	4.4	4.0
100.0	4.2	4.2	4.2	4.0	4.2	3.8
105.0	4.0	4.0	4.2	4.0	4.0	3.8
110.0	4.0	3.8	4.0	3.8	4.0	3.6
115.0	3.8	3.6	3.8	3.6	3.8	3.6
120.0	3.6	3.4	3.6	3.4	3.6	3.4
125.0	3.4	3.2	3.4	3.4	3.4	3.4
130.0	3.2	3.0	3.2	3.2	3.2	3.2
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	3.0	2.8	3.0	3.0	3.0	3.0
145.0	2.8	2.8	3.0	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.4	2.4	2.6	2.6	2.8	2.8
160.0	2.2	2.4	2.4	2.4	2.6	2.6
165.0		2.2	2.2	2.4	2.4	2.6
170.0		2.0	2.2	2.2	2.4	2.4
175.0				2.2	2.2	2.4
180.0				2.0	2.2	2.2
185.0						2.2
SLI code	560					
Max. permitted wind speed	8 m/s					



**3 015 817**  
**3 015 987**

	<b>Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 131.2 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	6.6					
55.0	6.2	6.2	5.8	5.8		
60.0	6.0	5.8	5.8	5.4	4.8	
65.0	5.8	5.6	5.6	5.2	4.8	
70.0	5.6	5.4	5.4	5.0	4.8	4.6
75.0	5.4	5.2	5.2	4.8	4.8	4.4
80.0	5.0	4.8	5.0	4.6	4.6	4.2
85.0	4.8	4.6	4.8	4.6	4.4	4.2
90.0	4.6	4.4	4.6	4.4	4.4	4.0
95.0	4.4	4.2	4.4	4.2	4.2	3.8
100.0	4.2	4.0	4.2	4.0	4.0	3.8
105.0	4.0	3.8	4.0	3.8	3.8	3.6
110.0	3.8	3.8	3.8	3.6	3.8	3.6
115.0	3.6	3.6	3.8	3.6	3.6	3.4
120.0	3.4	3.4	3.6	3.4	3.4	3.4
125.0	3.4	3.2	3.4	3.2	3.4	3.2
130.0	3.2	3.0	3.2	3.2	3.2	3.2
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	2.8	2.8	3.0	2.8	3.0	3.0
145.0	2.8	2.6	2.8	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.4	2.4	2.6	2.6	2.6	2.6
160.0	2.2	2.4	2.6	2.4	2.6	2.6
165.0	2.2	2.2	2.4	2.4	2.4	2.4
170.0		2.2	2.2	2.2	2.4	2.4
175.0			2.2	2.2	2.2	2.4
180.0				2.0	2.2	2.2
185.0						2.2
SLI code	561					
Max. permitted wind speed	8 m/s					

**3 015 818**  
**3 015 988**

Crane with 59 600 lbs (27,0 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 131.2 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
70.0	5.6	5.2	5.4	5.0		
75.0	5.2	5.0	5.0	4.8	4.8	
80.0	5.0	4.8	4.8	4.6	4.6	4.2
85.0	4.8	4.6	4.6	4.4	4.4	4.0
90.0	4.6	4.4	4.4	4.2	4.2	4.0
95.0	4.4	4.2	4.4	4.2	4.2	3.8
100.0	4.2	4.0	4.2	4.0	4.0	3.8
105.0	4.0	3.8	4.0	3.8	3.8	3.6
110.0	3.8	3.8	3.8	3.6	3.8	3.6
115.0	3.6	3.6	3.6	3.6	3.6	3.4
120.0	3.4	3.4	3.6	3.4	3.4	3.2
125.0	3.4	3.2	3.4	3.2	3.4	3.2
130.0	3.2	3.0	3.2	3.2	3.2	3.0
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	3.0	2.8	3.0	3.0	3.0	3.0
145.0	2.8	2.8	2.8	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.6	2.4	2.6	2.6	2.8	2.6
160.0	2.4	2.4	2.6	2.4	2.6	2.6
165.0	2.2	2.2	2.4	2.4	2.6	2.4
170.0	2.2	2.2	2.4	2.2	2.4	2.4
175.0		2.0	2.2	2.2	2.4	2.4
180.0			2.0	2.2	2.2	2.2
185.0					2.2	2.2
190.0						2.2
SLI code	562					
Max. permitted wind speed	8 m/s					

**3 015 780**  
**3 015 956**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
20.0	30.8	30.8				
25.0	29.4	28.0	28.6	26.2		
30.0	26.8	25.8	27.0	25.6	24.0	20.6
35.0	24.6	23.6	25.2	24.0	23.8	20.6
40.0	22.6	21.8	23.4	22.4	23.2	20.6
45.0	21.0	20.4	21.8	21.0	22.0	20.6
50.0	19.4	19.0	20.6	19.8	20.8	20.0
55.0	18.2	17.8	19.4	18.8	19.8	19.4
60.0	17.2	16.8	18.2	17.8	18.8	18.6
65.0	16.0	15.8	17.2	16.8	17.8	18.0
70.0	15.2	14.8	16.2	15.8	17.0	17.2
75.0	14.2	14.0	15.4	15.0	16.4	16.6
80.0	13.2	13.0	14.4	14.0	15.6	16.0
85.0	12.6	12.4	13.6	13.4	14.8	15.2
90.0	12.0	11.8	13.2	12.8	14.2	14.6
95.0	11.4	11.4	12.6	12.4	13.4	14.0
100.0	11.0	10.8	12.0	11.8	12.8	13.2
105.0	10.2	10.6	10.8	11.4	11.2	11.6
110.0	8.8	10.2	9.4	11.2	10.0	10.2
115.0	7.6	9.8	8.2	10.8	8.8	9.0
120.0			7.2	10.4	7.6	8.0
125.0			6.2	10.0	6.6	7.0
130.0			5.2	9.4	5.8	6.0
135.0					4.8	5.2
140.0					4.2	4.4
145.0					3.4	3.8
150.0					2.8	3.0
155.0						2.4
160.0						1.8
SLI code	420					
Max. permitted wind speed	14 m/s			10 m/s		

**3 015 781**

**3 015 951**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 32.8 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	19.2	18.8	19.6			
35.0	18.2	17.8	18.4	18.0	18.4	
40.0	17.0	16.8	17.6	17.2	17.6	17.2
45.0	16.2	15.8	16.6	16.4	16.8	16.6
50.0	15.0	14.8	16.0	15.6	16.2	16.0
55.0	14.0	13.8	15.2	14.8	15.4	15.4
60.0	13.4	13.2	14.4	14.0	14.6	14.6
65.0	12.8	12.6	13.6	13.2	13.8	14.0
70.0	12.4	12.2	13.0	12.8	13.4	13.6
75.0	12.0	11.8	12.6	12.4	13.0	13.2
80.0	11.4	11.4	12.0	12.0	12.6	12.8
85.0	11.0	11.0	11.8	11.6	12.2	12.4
90.0	10.8	10.6	11.4	11.2	11.8	12.0
95.0	10.4	10.4	11.0	10.8	11.4	11.8
100.0	10.0	10.0	10.8	10.6	11.2	11.4
105.0	10.0	10.0	10.4	10.4	11.0	11.2
110.0	9.2	9.8	10.0	10.2	10.6	11.0
115.0	8.0	9.8	8.8	10.0	9.2	9.8
120.0			7.6	9.8	8.2	8.6
125.0			6.4	9.6	7.0	7.6
130.0			5.4	9.4	6.2	6.6
135.0					5.2	5.6
140.0					4.4	4.8
145.0					3.6	4.0
150.0					2.8	3.4
155.0						2.6
160.0						2.0
SLI code	421					
Max. permitted wind speed	14 m/s			10 m/s		

**3 015 782**  
**3 015 952**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 30°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	14.2	14.0				
40.0	13.6	13.4	13.8	13.6	13.8	
45.0	13.2	13.0	13.4	13.2	13.4	13.2
50.0	12.6	12.6	13.0	12.8	13.0	13.0
55.0	12.2	12.2	12.6	12.4	12.8	12.6
60.0	11.8	11.8	12.2	12.0	12.4	12.4
65.0	11.4	11.4	11.8	11.8	12.0	12.0
70.0	11.2	11.0	11.6	11.4	11.8	11.8
75.0	10.8	10.8	11.2	11.2	11.6	11.6
80.0	10.6	10.4	11.0	10.8	11.2	11.4
85.0	10.4	10.2	10.8	10.6	11.0	11.2
90.0	10.2	10.0	10.4	10.4	10.8	11.0
95.0	10.0	9.8	10.2	10.2	10.6	10.8
100.0	9.8	9.8	10.0	10.0	10.4	10.6
105.0			10.0	10.0	10.2	10.4
110.0			10.0	9.8	10.0	10.2
115.0			9.0	9.8	9.6	10.2
120.0					8.4	9.0
125.0					7.4	7.8
130.0					6.2	6.8
135.0						5.8
140.0						5.0
SLI code	<b>422</b>					
Max. permitted wind speed	<b>14 m/s</b>			<b>10 m/s</b>		

**3 015 783**

**3 015 957**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
25.0	15.4	15.4				
30.0	15.4	15.4	15.4	15.2	14.8	
35.0	15.4	15.4	15.4	15.0	14.6	
40.0	14.8	14.0	15.2	14.2	14.0	13.4
45.0	13.4	13.0	14.0	13.4	13.6	13.0
50.0	12.6	12.2	13.0	12.6	13.2	12.6
55.0	11.8	11.6	12.4	12.0	12.6	12.2
60.0	11.0	10.8	11.6	11.4	12.0	11.8
65.0	10.4	10.2	11.0	10.8	11.4	11.4
70.0	9.8	9.8	10.4	10.2	10.8	11.0
75.0	9.4	9.2	10.0	9.8	10.4	10.6
80.0	8.8	8.8	9.4	9.4	9.8	10.0
85.0	8.4	8.4	9.0	8.8	9.4	9.8
90.0	8.0	8.0	8.6	8.6	9.2	9.4
95.0	7.6	7.6	8.2	8.2	8.8	9.0
100.0	7.4	7.2	8.0	7.8	8.4	8.8
105.0	7.0	7.0	7.6	7.6	8.2	8.4
110.0	6.8	6.8	7.4	7.4	7.8	8.2
115.0	6.6	6.6	7.2	7.0	7.6	8.0
120.0	6.4	6.2	7.0	6.8	7.4	7.6
125.0	6.0	6.0	6.6	6.6	7.0	7.4
130.0	5.8	5.8	6.4	6.4	6.8	7.2
135.0	5.6	5.6	6.0	6.2	6.2	6.4
140.0			5.2	6.0	5.4	5.6
145.0			4.6	5.8	4.8	4.8
150.0			3.8	5.8	4.0	4.2
155.0					3.4	3.6
160.0					2.8	3.0
165.0					2.4	2.4
170.0						2.0
SLI code	430					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 784**  
**3 015 954**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 52.5 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.8	10.6	11.0			
45.0	10.2	10.0	10.4	10.2	10.4	
50.0	9.8	9.6	10.0	9.8	10.0	10.0
55.0	9.2	9.2	9.6	9.4	9.6	9.6
60.0	8.8	8.8	9.2	9.0	9.2	9.4
65.0	8.4	8.4	8.8	8.6	9.0	9.0
70.0	8.0	8.0	8.4	8.4	8.6	8.8
75.0	7.8	7.6	8.2	8.0	8.4	8.4
80.0	7.4	7.4	7.8	7.8	8.0	8.2
85.0	7.2	7.2	7.6	7.4	7.8	8.0
90.0	7.0	6.8	7.4	7.2	7.6	7.8
95.0	6.8	6.6	7.0	7.0	7.4	7.4
100.0	6.4	6.4	6.8	6.8	7.2	7.2
105.0	6.4	6.2	6.6	6.6	7.0	7.2
110.0	6.2	6.2	6.6	6.4	6.8	7.0
115.0	6.0	6.0	6.4	6.4	6.6	6.8
120.0	5.8	5.8	6.2	6.2	6.4	6.6
125.0	5.8	5.8	6.0	6.0	6.2	6.4
130.0	5.6	5.6	5.8	5.8	6.2	6.4
135.0	5.6	5.6	5.8	5.8	6.0	6.2
140.0			5.8	5.6	6.0	6.0
145.0			5.0	5.6	5.4	5.6
150.0			4.2	5.6	4.6	4.8
155.0					4.0	4.2
160.0					3.2	3.6
165.0					2.6	3.0
170.0					2.0	2.4
SLI code	431					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 785**

**3 015 955**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.2	8.2	8.4	8.2		
55.0	7.8	7.8	8.0	8.0	8.0	
60.0	7.6	7.6	7.8	7.6	7.8	7.8
65.0	7.4	7.2	7.6	7.4	7.6	7.6
70.0	7.2	7.0	7.4	7.2	7.4	7.4
75.0	6.8	6.8	7.2	7.0	7.2	7.2
80.0	6.6	6.6	7.0	6.8	7.0	7.2
85.0	6.4	6.4	6.8	6.6	6.8	7.0
90.0	6.4	6.4	6.6	6.6	6.8	6.8
95.0	6.2	6.2	6.4	6.4	6.6	6.6
100.0	6.0	6.0	6.2	6.2	6.4	6.6
105.0	6.0	6.0	6.2	6.2	6.4	6.4
110.0	5.8	5.8	6.0	6.0	6.2	6.4
115.0	5.8	5.8	6.0	6.0	6.0	6.2
120.0	5.8	5.8	5.8	5.8	6.0	6.0
125.0			5.8	5.8	5.8	6.0
130.0			5.6	5.6	5.8	5.8
135.0			5.6	5.6	5.8	5.8
140.0					5.8	5.8
145.0					5.6	5.8
150.0					4.8	5.2
155.0						4.6
160.0						3.8
SLI code	432					
Max. permitted wind speed	10 m/s				8 m/s	



**3 015 820**

**3 015 990**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 78.7 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	14.8	15.4				
35.0	14.6	15.0	13.8			
40.0	14.6	14.0	13.6	12.6	11.8	
45.0	14.0	13.4	13.6	12.6	11.8	10.0
50.0	13.2	12.6	13.2	12.6	11.8	10.0
55.0	12.6	12.2	12.6	12.2	11.8	10.0
60.0	12.0	11.6	12.0	11.8	11.6	10.0
65.0	11.4	11.0	11.6	11.4	11.2	10.0
70.0	10.8	10.6	11.0	10.8	11.0	10.0
75.0	10.4	10.0	10.6	10.4	10.6	10.0
80.0	9.8	9.6	10.2	10.0	10.2	9.8
85.0	9.4	9.2	9.8	9.6	9.8	9.6
90.0	9.0	8.8	9.4	9.2	9.6	9.4
95.0	8.6	8.4	9.0	8.8	9.2	9.2
100.0	8.2	8.0	8.6	8.4	9.0	9.0
105.0	8.0	7.8	8.4	8.2	8.6	8.8
110.0	7.6	7.4	8.0	8.0	8.4	8.4
115.0	7.4	7.2	7.8	7.6	8.0	8.2
120.0	7.0	7.0	7.6	7.4	7.8	8.0
125.0	6.8	6.6	7.2	7.0	7.6	7.8
130.0	6.4	6.4	7.0	6.8	7.2	7.4
135.0	6.2	6.2	6.8	6.6	7.0	7.0
140.0	6.0	6.0	6.2	6.4	6.2	6.2
145.0	5.6	5.8	5.6	6.2	5.4	5.4
150.0	4.8	5.6	4.8	6.0	4.8	4.8
155.0	4.2	5.4	4.2	5.8	4.2	4.2
160.0	3.6	5.2	3.6	5.6	3.6	3.6
165.0			3.0	5.6	3.0	3.0
170.0			2.6	5.4	2.6	2.6
175.0			2.0	5.0	2.0	2.0
SLI code	440					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 821**

**3 015 991**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 78.7 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.6					
45.0	10.2	10.0				
50.0	9.8	9.6	9.8	9.8	9.6	
55.0	9.4	9.2	9.4	9.6	9.4	9.2
60.0	9.0	8.8	9.2	9.2	9.0	9.0
65.0	8.6	8.6	8.8	9.0	8.8	9.0
70.0	8.4	8.2	8.6	8.6	8.6	8.8
75.0	8.0	8.0	8.2	8.4	8.4	8.6
80.0	7.8	7.8	8.0	8.2	8.0	8.4
85.0	7.6	7.4	7.8	8.0	7.8	8.2
90.0	7.4	7.2	7.6	7.8	7.6	8.0
95.0	7.2	7.0	7.4	7.6	7.4	7.8
100.0	7.0	6.8	7.2	7.4	7.2	7.6
105.0	6.8	6.8	7.0	7.2	7.2	7.4
110.0	6.6	6.6	6.8	7.0	7.0	7.4
115.0	6.4	6.4	6.8	6.8	6.8	7.2
120.0	6.4	6.2	6.6	6.8	6.8	7.0
125.0	6.2	6.2	6.4	6.6	6.6	7.0
130.0	6.0	6.0	6.2	6.4	6.4	6.8
135.0	6.0	5.8	6.2	6.2	6.4	6.6
140.0	5.8	5.8	6.0	6.2	6.2	6.6
145.0	5.6	5.6	5.8	6.0	6.2	6.2
150.0	5.2	5.6	5.4	5.8	5.4	5.6
155.0	4.6	5.4	4.8	5.6	4.8	4.8
160.0			4.0	5.6	4.2	4.2
165.0			3.4	5.4	3.6	3.6
170.0			2.8	5.2	3.0	3.0
175.0			2.4	5.2	2.4	2.6
180.0					2.0	2.0
SLI code	441					
Max. permitted wind speed	10 m/s		8 m/s			

3 015 822

3 015 992

	Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)					
	Boom extension length 78.7 ft					
	Angle of boom extension 30°					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.0					
55.0	7.6	7.6	7.8			
60.0	7.4	7.4	7.6	7.8	7.6	
65.0	7.2	7.2	7.4	7.6	7.4	
70.0	7.0	7.0	7.2	7.4	7.2	7.4
75.0	7.0	6.8	7.0	7.2	7.0	7.2
80.0	6.8	6.8	6.8	7.0	6.8	7.2
85.0	6.6	6.6	6.6	7.0	6.8	7.0
90.0	6.4	6.4	6.6	6.8	6.6	7.0
95.0	6.4	6.4	6.4	6.6	6.4	6.8
100.0	6.2	6.2	6.4	6.6	6.4	6.6
105.0	6.2	6.2	6.2	6.4	6.4	6.6
110.0	6.0	6.0	6.2	6.4	6.2	6.6
115.0	6.0	6.0	6.0	6.4	6.2	6.4
120.0	5.8	5.8	6.0	6.2	6.0	6.4
125.0	5.8	5.8	5.8	6.2	6.0	6.2
130.0	5.6	5.6	5.8	6.0	5.8	6.2
135.0	5.6	5.6	5.8	6.0	5.8	6.2
140.0	5.6	5.6	5.6	5.8	5.8	6.0
145.0			5.6	5.8	5.8	6.0
150.0			5.6	5.6	5.6	6.0
155.0			5.0	5.6	5.2	5.4
160.0					4.4	4.6
165.0					3.8	4.0
170.0					3.2	3.4
175.0						2.8
180.0						2.2
SLI code	442					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 823**

**3 015 993**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 105.0 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	10.8					
40.0	10.4	10.2	10.2			
45.0	10.0	10.0	9.8	9.2	8.6	
50.0	9.8	9.6	9.4	9.0	8.6	7.0
55.0	9.4	9.2	9.2	8.6	8.6	7.0
60.0	9.0	8.6	8.8	8.4	8.2	7.0
65.0	8.6	8.2	8.4	8.0	8.0	7.0
70.0	8.2	8.0	8.2	7.8	7.8	7.0
75.0	7.8	7.6	7.8	7.4	7.4	7.0
80.0	7.4	7.2	7.4	7.2	7.2	6.8
85.0	7.2	6.8	7.2	6.8	7.0	6.6
90.0	6.8	6.6	6.8	6.6	6.8	6.4
95.0	6.4	6.4	6.6	6.4	6.6	6.2
100.0	6.2	6.0	6.4	6.2	6.2	6.0
105.0	6.0	5.8	6.2	6.0	6.2	6.0
110.0	5.6	5.6	6.0	5.8	6.0	5.8
115.0	5.4	5.4	5.8	5.6	5.8	5.6
120.0	5.2	5.0	5.4	5.4	5.6	5.4
125.0	5.0	4.8	5.2	5.2	5.4	5.2
130.0	4.6	4.6	5.0	5.0	5.2	5.2
135.0	4.4	4.4	4.8	4.8	5.0	5.0
140.0	4.4	4.2	4.6	4.6	4.8	4.8
145.0	4.2	4.2	4.4	4.4	4.8	4.8
150.0	4.0	4.0	4.4	4.2	4.6	4.6
155.0	3.8	3.8	4.2	4.0	4.4	4.4
160.0	3.6	3.6	4.0	4.0	4.0	4.0
165.0	3.6	3.4	3.6	3.8	3.6	3.4
170.0	3.4	3.4	3.2	3.6	3.0	2.8
175.0	2.8	3.2	2.6	3.6	2.6	2.4
SLI code	450					
Max. permitted wind speed	8 m/s					

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 105.0 ft</b>					
	<b>Angle of boom extension 0°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
180.0	2.4	3.2	2.2	3.4	2.0	2.0
185.0				3.4		
190.0				3.2		
195.0				3.2		
200.0				3.0		
SLI code	450					
Max. permitted wind speed	8 m/s					

**3 015 824**  
**3 015 994**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 105.0 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	9.4	8.8	8.8			
55.0	9.0	8.4	8.6	8.0	8.0	
60.0	8.6	8.0	8.2	7.8	7.8	7.0
65.0	8.2	7.8	7.8	7.6	7.4	7.0
70.0	7.8	7.4	7.6	7.2	7.2	6.8
75.0	7.4	7.2	7.2	7.0	7.0	6.6
80.0	7.0	6.8	7.0	6.8	6.8	6.4
85.0	6.8	6.6	6.8	6.4	6.6	6.2
90.0	6.4	6.2	6.4	6.2	6.4	6.0
95.0	6.2	6.0	6.2	6.0	6.2	5.8
100.0	5.8	5.8	6.0	5.8	6.0	5.8
105.0	5.6	5.6	5.8	5.6	5.8	5.6
110.0	5.4	5.2	5.6	5.4	5.6	5.4
115.0	5.2	5.0	5.4	5.2	5.4	5.4
120.0	5.0	4.8	5.2	5.0	5.2	5.2
125.0	4.8	4.6	5.0	4.8	5.0	5.0
130.0	4.6	4.4	4.8	4.6	5.0	4.8
135.0	4.4	4.4	4.6	4.6	4.8	4.8
140.0	4.2	4.2	4.4	4.4	4.6	4.6
145.0	4.2	4.0	4.4	4.2	4.6	4.6
150.0	4.0	3.8	4.2	4.2	4.4	4.4
155.0	3.8	3.8	4.0	4.0	4.2	4.4
160.0	3.6	3.6	3.8	3.8	4.0	4.2
165.0	3.6	3.4	3.8	3.8	4.0	4.0
170.0	3.4	3.4	3.6	3.6	3.6	3.6
175.0	3.2	3.2	3.2	3.6	3.0	3.0
180.0	2.6	3.2	2.6	3.4	2.6	2.4
185.0			2.2	3.4	2.0	2.0
190.0				3.2		
195.0				3.2		
SLI code	451					
Max. permitted wind speed	8 m/s					

**3 015 825**

**3 015 995**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 105.0 ft</b>					
	<b>Angle of boom extension 30°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
60.0	7.4	7.4				
65.0	7.4	7.2				
70.0	7.2	7.0	7.2	7.0	7.0	
75.0	6.8	6.8	7.0	6.8	6.8	6.4
80.0	6.6	6.6	6.8	6.4	6.6	6.2
85.0	6.4	6.4	6.4	6.2	6.4	6.0
90.0	6.2	6.0	6.2	6.0	6.2	5.8
95.0	5.8	5.8	6.0	5.8	6.0	5.6
100.0	5.6	5.6	5.8	5.6	5.8	5.6
105.0	5.4	5.4	5.6	5.6	5.6	5.4
110.0	5.2	5.2	5.4	5.4	5.4	5.2
115.0	5.0	5.0	5.2	5.2	5.2	5.2
120.0	4.8	4.8	5.0	5.0	5.2	5.0
125.0	4.6	4.6	4.8	4.8	5.0	5.0
130.0	4.4	4.4	4.6	4.6	4.8	4.8
135.0	4.4	4.2	4.6	4.4	4.6	4.6
140.0	4.2	4.2	4.4	4.4	4.6	4.6
145.0	4.0	4.0	4.2	4.2	4.4	4.4
150.0	3.8	3.8	4.2	4.0	4.4	4.4
155.0	3.8	3.8	4.0	4.0	4.2	4.2
160.0	3.6	3.6	3.8	3.8	4.0	4.2
165.0	3.4	3.4	3.8	3.8	4.0	4.0
170.0	3.4	3.4	3.6	3.6	3.8	4.0
175.0			3.4	3.6	3.4	3.4
180.0			2.8	3.4	2.8	2.8
185.0					2.4	2.4
SLI code	452					
Max. permitted wind speed	8 m/s					

**3 015 826**  
**3 015 996**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 131.2 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	6.4	6.4	6.6	6.6		
45.0	6.2	6.4	6.4	6.4	5.8	
50.0	6.2	6.4	6.2	6.2	5.8	4.8
55.0	6.0	6.2	6.0	6.0	5.6	4.8
60.0	5.8	6.0	5.8	5.6	5.4	4.8
65.0	5.6	5.8	5.8	5.4	5.2	4.8
70.0	5.4	5.6	5.6	5.2	5.2	4.6
75.0	5.4	5.2	5.4	5.0	5.0	4.6
80.0	5.2	5.0	5.2	4.8	4.8	4.4
85.0	5.0	4.8	5.0	4.6	4.6	4.2
90.0	4.8	4.6	4.8	4.4	4.6	4.2
95.0	4.4	4.4	4.4	4.2	4.4	4.0
100.0	4.2	4.2	4.2	4.0	4.2	3.8
105.0	4.0	4.0	4.2	4.0	4.0	3.8
110.0	4.0	3.8	4.0	3.8	4.0	3.6
115.0	3.8	3.6	3.8	3.6	3.8	3.6
120.0	3.6	3.4	3.6	3.4	3.6	3.4
125.0	3.4	3.2	3.4	3.4	3.4	3.4
130.0	3.2	3.0	3.2	3.2	3.2	3.2
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	3.0	2.8	3.0	3.0	3.0	3.0
145.0	2.8	2.8	3.0	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.4	2.4	2.6	2.6	2.8	2.8
160.0	2.2	2.4	2.4	2.4	2.6	2.6
165.0		2.2	2.2	2.4	2.4	2.6
170.0		2.0	2.2	2.2	2.4	2.4
175.0				2.2	2.2	2.4
180.0				2.0	2.2	2.0
SLI code	460					
Max. permitted wind speed	8 m/s					



**3 015 827**  
**3 015 997**

	<b>Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 131.2 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	6.6					
55.0	6.2	6.2	5.8	5.8		
60.0	6.0	5.8	5.8	5.4	4.8	
65.0	5.8	5.6	5.6	5.2	4.8	
70.0	5.6	5.4	5.4	5.0	4.8	4.6
75.0	5.4	5.2	5.2	4.8	4.8	4.4
80.0	5.0	4.8	5.0	4.6	4.6	4.2
85.0	4.8	4.6	4.8	4.6	4.4	4.2
90.0	4.6	4.4	4.6	4.4	4.4	4.0
95.0	4.4	4.2	4.4	4.2	4.2	3.8
100.0	4.2	4.0	4.2	4.0	4.0	3.8
105.0	4.0	3.8	4.0	3.8	3.8	3.6
110.0	3.8	3.8	3.8	3.6	3.8	3.6
115.0	3.6	3.6	3.8	3.6	3.6	3.4
120.0	3.4	3.4	3.6	3.4	3.4	3.4
125.0	3.4	3.2	3.4	3.2	3.4	3.2
130.0	3.2	3.0	3.2	3.2	3.2	3.2
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	2.8	2.8	3.0	2.8	3.0	3.0
145.0	2.8	2.6	2.8	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.4	2.4	2.6	2.6	2.6	2.6
160.0	2.2	2.4	2.6	2.4	2.6	2.6
165.0	2.2	2.2	2.4	2.4	2.4	2.4
170.0		2.2	2.2	2.2	2.4	2.4
175.0			2.2	2.2	2.2	2.4
180.0				2.0	2.2	2.2
185.0						2.2
SLI code	461					
Max. permitted wind speed	8 m/s					

**3 015 828**

**3 015 998**

Crane with 46 700 lbs (21,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 131.2 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
70.0	5.6	5.2	5.4	5.0		
75.0	5.2	5.0	5.0	4.8	4.8	
80.0	5.0	4.8	4.8	4.6	4.6	4.2
85.0	4.8	4.6	4.6	4.4	4.4	4.0
90.0	4.6	4.4	4.4	4.2	4.2	4.0
95.0	4.4	4.2	4.4	4.2	4.2	3.8
100.0	4.2	4.0	4.2	4.0	4.0	3.8
105.0	4.0	3.8	4.0	3.8	3.8	3.6
110.0	3.8	3.8	3.8	3.6	3.8	3.6
115.0	3.6	3.6	3.6	3.6	3.6	3.4
120.0	3.4	3.4	3.6	3.4	3.4	3.2
125.0	3.4	3.2	3.4	3.2	3.4	3.2
130.0	3.2	3.0	3.2	3.2	3.2	3.0
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	3.0	2.8	3.0	3.0	3.0	3.0
145.0	2.8	2.8	2.8	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.6	2.4	2.6	2.6	2.8	2.6
160.0	2.4	2.4	2.6	2.4	2.6	2.6
165.0	2.2	2.2	2.4	2.4	2.6	2.4
170.0	2.2	2.2	2.4	2.2	2.4	2.4
175.0		2.0	2.2	2.2	2.4	2.4
180.0			2.0	2.2	2.2	2.2
185.0					2.2	2.2
190.0						2.2
SLI code	462					
Max. permitted wind speed	8 m/s					

**3 015 790**  
**3 015 966**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
20.0	30.8	30.8				
25.0	29.4	28.0	28.6	26.2		
30.0	26.8	25.8	27.0	25.6	24.0	20.6
35.0	24.6	23.6	25.2	24.0	23.8	20.6
40.0	22.6	21.8	23.4	22.4	23.2	20.6
45.0	21.0	20.4	21.8	21.0	22.0	20.6
50.0	19.4	19.0	20.6	19.8	20.8	20.0
55.0	18.2	17.8	19.4	18.8	19.8	19.4
60.0	17.2	16.8	18.2	17.8	18.8	18.6
65.0	16.0	15.8	17.2	16.8	17.8	18.0
70.0	15.2	14.8	16.2	15.8	17.0	17.2
75.0	14.2	14.0	15.4	15.0	16.4	16.6
80.0	13.2	13.0	14.4	14.0	15.0	15.4
85.0	11.8	12.4	12.4	13.4	13.0	13.4
90.0	10.0	11.8	10.6	12.8	11.2	11.6
95.0	8.4	11.4	9.0	12.4	9.6	10.0
100.0	7.0	10.8	7.6	11.8	8.2	8.6
105.0	5.8	10.6	6.4	10.6	6.8	7.2
110.0	4.8	9.4	5.4	9.4	5.8	6.2
115.0	3.8	8.4	4.4	8.4	4.8	5.2
120.0			3.4	7.6	3.8	4.2
125.0			2.6	6.6	3.0	3.4
130.0				5.8	2.2	2.6
135.0						2.0
SLI code	320					
Max. permitted wind speed	14 m/s			10 m/s		

**3 015 791**

**3 015 961**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 32.8 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	19.2	18.8	19.6			
35.0	18.2	17.8	18.4	18.0	18.4	
40.0	17.0	16.8	17.6	17.2	17.6	17.2
45.0	16.2	15.8	16.6	16.4	16.8	16.6
50.0	15.0	14.8	16.0	15.6	16.2	16.0
55.0	14.0	13.8	15.2	14.8	15.4	15.4
60.0	13.4	13.2	14.4	14.0	14.6	14.6
65.0	12.8	12.6	13.6	13.2	13.8	14.0
70.0	12.4	12.2	13.0	12.8	13.4	13.6
75.0	12.0	11.8	12.6	12.4	13.0	13.2
80.0	11.4	11.4	12.0	12.0	12.6	12.8
85.0	11.0	11.0	11.8	11.6	12.2	12.4
90.0	10.8	10.6	11.4	11.2	11.8	12.0
95.0	9.2	10.4	9.8	10.8	10.4	10.8
100.0	7.6	10.0	8.4	10.6	9.0	9.4
105.0	6.4	10.0	7.0	10.4	7.6	8.0
110.0	5.2	9.8	5.8	10.0	6.4	6.8
115.0	4.0	8.6	4.8	8.8	5.4	5.8
120.0			3.8	7.8	4.4	4.8
125.0			3.0	6.8	3.4	4.0
130.0			2.0	6.0	2.6	3.2
135.0					2.0	2.4
SLI code	321					
Max. permitted wind speed	14 m/s		10 m/s			

**3 015 792**

**3 015 962**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 30°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	14.2	14.0				
40.0	13.6	13.4	13.8	13.6	13.8	
45.0	13.2	13.0	13.4	13.2	13.4	13.2
50.0	12.6	12.6	13.0	12.8	13.0	13.0
55.0	12.2	12.2	12.6	12.4	12.8	12.6
60.0	11.8	11.8	12.2	12.0	12.4	12.4
65.0	11.4	11.4	11.8	11.8	12.0	12.0
70.0	11.2	11.0	11.6	11.4	11.8	11.8
75.0	10.8	10.8	11.2	11.2	11.6	11.6
80.0	10.6	10.4	11.0	10.8	11.2	11.4
85.0	10.4	10.2	10.8	10.6	11.0	11.2
90.0	10.2	10.0	10.4	10.4	10.8	11.0
95.0	9.6	9.8	10.2	10.2	10.6	10.8
100.0	8.0	9.8	8.8	10.0	9.4	10.0
105.0			7.4	10.0	8.0	8.6
110.0			6.2	9.8	6.8	7.4
115.0			5.0	9.0	5.8	6.2
120.0					4.6	5.2
125.0					3.8	4.2
130.0					2.8	3.4
135.0						2.6
SLI code	<b>322</b>					
Max. permitted wind speed	<b>14 m/s</b>			<b>10 m/s</b>		

**3 015 793**  
**3 015 967**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
25.0	15.4	15.4				
30.0	15.4	15.4	15.4	15.2	14.8	
35.0	15.4	15.4	15.4	15.0	14.6	
40.0	14.8	14.0	15.2	14.2	14.0	13.4
45.0	13.4	13.0	14.0	13.4	13.6	13.0
50.0	12.6	12.2	13.0	12.6	13.2	12.6
55.0	11.8	11.6	12.4	12.0	12.6	12.2
60.0	11.0	10.8	11.6	11.4	12.0	11.8
65.0	10.4	10.2	11.0	10.8	11.4	11.4
70.0	9.8	9.8	10.4	10.2	10.8	11.0
75.0	9.4	9.2	10.0	9.8	10.4	10.6
80.0	8.8	8.8	9.4	9.4	9.8	10.0
85.0	8.4	8.4	9.0	8.8	9.4	9.8
90.0	8.0	8.0	8.6	8.6	9.2	9.4
95.0	7.6	7.6	8.2	8.2	8.8	9.0
100.0	7.4	7.2	8.0	7.8	8.4	8.8
105.0	7.0	7.0	7.6	7.6	8.2	8.4
110.0	6.8	6.8	7.0	7.4	7.2	7.4
115.0	5.8	6.6	6.0	7.0	6.2	6.4
120.0	4.8	6.2	5.0	6.8	5.2	5.4
125.0	4.0	6.0	4.2	6.6	4.4	4.6
130.0	3.2	5.8	3.4	6.4	3.6	3.8
135.0	2.6	5.6	2.8	6.2	3.0	3.2
140.0			2.2	5.6	2.4	2.4
145.0				5.0		
150.0				4.4		
SLI code	330					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 794**

**3 015 964**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 52.5 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.8	10.6	11.0			
45.0	10.2	10.0	10.4	10.2	10.4	
50.0	9.8	9.6	10.0	9.8	10.0	10.0
55.0	9.2	9.2	9.6	9.4	9.6	9.6
60.0	8.8	8.8	9.2	9.0	9.2	9.4
65.0	8.4	8.4	8.8	8.6	9.0	9.0
70.0	8.0	8.0	8.4	8.4	8.6	8.8
75.0	7.8	7.6	8.2	8.0	8.4	8.4
80.0	7.4	7.4	7.8	7.8	8.0	8.2
85.0	7.2	7.2	7.6	7.4	7.8	8.0
90.0	7.0	6.8	7.4	7.2	7.6	7.8
95.0	6.8	6.6	7.0	7.0	7.4	7.4
100.0	6.4	6.4	6.8	6.8	7.2	7.2
105.0	6.4	6.2	6.6	6.6	7.0	7.2
110.0	6.2	6.2	6.6	6.4	6.8	7.0
115.0	6.0	6.0	6.4	6.4	6.6	6.8
120.0	5.6	5.8	6.0	6.2	6.2	6.6
125.0	4.6	5.8	5.0	6.0	5.4	5.6
130.0	3.6	5.6	4.2	5.8	4.6	4.8
135.0	2.8	5.6	3.4	5.8	3.8	4.0
140.0			2.6	5.6	3.0	3.2
145.0			2.0	5.4	2.4	2.6
150.0				4.6		2.0
SLI code	331					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 795**

**3 015 965**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.2	8.2	8.4	8.2		
55.0	7.8	7.8	8.0	8.0	8.0	
60.0	7.6	7.6	7.8	7.6	7.8	7.8
65.0	7.4	7.2	7.6	7.4	7.6	7.6
70.0	7.2	7.0	7.4	7.2	7.4	7.4
75.0	6.8	6.8	7.2	7.0	7.2	7.2
80.0	6.6	6.6	7.0	6.8	7.0	7.2
85.0	6.4	6.4	6.8	6.6	6.8	7.0
90.0	6.4	6.4	6.6	6.6	6.8	6.8
95.0	6.2	6.2	6.4	6.4	6.6	6.6
100.0	6.0	6.0	6.2	6.2	6.4	6.6
105.0	6.0	6.0	6.2	6.2	6.4	6.4
110.0	5.8	5.8	6.0	6.0	6.2	6.4
115.0	5.8	5.8	6.0	6.0	6.0	6.2
120.0	5.8	5.8	5.8	5.8	6.0	6.0
125.0			5.6	5.8	5.8	6.0
130.0			4.6	5.6	5.0	5.4
135.0			3.6	5.6	4.2	4.6
140.0					3.4	3.8
145.0					2.6	3.0
150.0					2.0	2.4
SLI code	332					
Max. permitted wind speed	10 m/s				8 m/s	



**3 015 830**  
**3 016 000**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 78.7 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	14.8	15.4				
35.0	14.6	15.0	13.8			
40.0	14.6	14.0	13.6	12.6	11.8	
45.0	14.0	13.4	13.6	12.6	11.8	10.0
50.0	13.2	12.6	13.2	12.6	11.8	10.0
55.0	12.6	12.2	12.6	12.2	11.8	10.0
60.0	12.0	11.6	12.0	11.8	11.6	10.0
65.0	11.4	11.0	11.6	11.4	11.2	10.0
70.0	10.8	10.6	11.0	10.8	11.0	10.0
75.0	10.4	10.0	10.6	10.4	10.6	10.0
80.0	9.8	9.6	10.2	10.0	10.2	9.8
85.0	9.4	9.2	9.8	9.6	9.8	9.6
90.0	9.0	8.8	9.4	9.2	9.6	9.4
95.0	8.6	8.4	9.0	8.8	9.2	9.2
100.0	8.2	8.0	8.6	8.4	9.0	9.0
105.0	8.0	7.8	8.4	8.2	8.6	8.8
110.0	7.6	7.4	8.0	8.0	8.0	8.0
115.0	7.0	7.2	7.0	7.6	7.0	7.0
120.0	6.2	7.0	6.2	7.4	6.0	6.0
125.0	5.2	6.6	5.2	7.0	5.2	5.2
130.0	4.4	6.4	4.4	6.8	4.4	4.4
135.0	3.8	6.2	3.8	6.6	3.8	3.8
140.0	3.0	6.0	3.0	6.2	3.0	3.0
145.0	2.4	5.8	2.4	5.4	2.4	2.4
150.0	2.0	5.2	1.8	4.8	1.8	
155.0		4.6		4.4		
160.0		4.2		3.8		
165.0				3.4		
170.0				3.0		
175.0				2.6		
SLI code	340					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 831**  
**3 016 001**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 78.7 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.6					
45.0	10.2	10.0				
50.0	9.8	9.6	9.8	9.8	9.6	
55.0	9.4	9.2	9.4	9.6	9.4	9.2
60.0	9.0	8.8	9.2	9.2	9.0	9.0
65.0	8.6	8.6	8.8	9.0	8.8	9.0
70.0	8.4	8.2	8.6	8.6	8.6	8.8
75.0	8.0	8.0	8.2	8.4	8.4	8.6
80.0	7.8	7.8	8.0	8.2	8.0	8.4
85.0	7.6	7.4	7.8	8.0	7.8	8.2
90.0	7.4	7.2	7.6	7.8	7.6	8.0
95.0	7.2	7.0	7.4	7.6	7.4	7.8
100.0	7.0	6.8	7.2	7.4	7.2	7.6
105.0	6.8	6.8	7.0	7.2	7.2	7.4
110.0	6.6	6.6	6.8	7.0	7.0	7.4
115.0	6.4	6.4	6.8	6.8	6.8	7.2
120.0	6.4	6.2	6.6	6.8	6.8	7.0
125.0	6.0	6.2	6.2	6.6	6.2	6.2
130.0	5.2	6.0	5.4	6.4	5.4	5.4
135.0	4.4	5.8	4.6	6.2	4.6	4.6
140.0	3.6	5.8	3.8	6.2	3.8	4.0
145.0	3.0	5.6	3.2	6.0	3.2	3.2
150.0	2.4	5.6	2.4	5.4	2.6	2.6
155.0		5.0	1.8	4.8	2.0	2.0
160.0				4.2		
165.0				3.6		
170.0				3.2		
175.0				2.8		
SLI code	341					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 832**  
**3 016 002**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 78.7 ft</b>					
	<b>Angle of boom extension 30°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.0					
55.0	7.6	7.6	7.8			
60.0	7.4	7.4	7.6	7.8	7.6	
65.0	7.2	7.2	7.4	7.6	7.4	
70.0	7.0	7.0	7.2	7.4	7.2	7.4
75.0	7.0	6.8	7.0	7.2	7.0	7.2
80.0	6.8	6.8	6.8	7.0	6.8	7.2
85.0	6.6	6.6	6.6	7.0	6.8	7.0
90.0	6.4	6.4	6.6	6.8	6.6	7.0
95.0	6.4	6.4	6.4	6.6	6.4	6.8
100.0	6.2	6.2	6.4	6.6	6.4	6.6
105.0	6.2	6.2	6.2	6.4	6.4	6.6
110.0	6.0	6.0	6.2	6.4	6.2	6.6
115.0	6.0	6.0	6.0	6.4	6.2	6.4
120.0	5.8	5.8	6.0	6.2	6.0	6.4
125.0	5.8	5.8	5.8	6.2	6.0	6.2
130.0	5.6	5.6	5.8	6.0	5.8	6.2
135.0	4.8	5.6	5.0	6.0	5.2	5.2
140.0	4.0	5.6	4.2	5.8	4.4	4.6
145.0			3.6	5.8	3.6	3.8
150.0			2.8	5.6	3.0	3.2
155.0			2.2	5.0	2.4	2.4
160.0						2.0
SLI code	342					
Max. permitted wind speed	10 m/s			8 m/s		

**3 015 833**

**3 016 003**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 105.0 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	10.8					
40.0	10.4	10.2	10.2			
45.0	10.0	10.0	9.8	9.2	8.6	
50.0	9.8	9.6	9.4	9.0	8.6	7.0
55.0	9.4	9.2	9.2	8.6	8.6	7.0
60.0	9.0	8.6	8.8	8.4	8.2	7.0
65.0	8.6	8.2	8.4	8.0	8.0	7.0
70.0	8.2	8.0	8.2	7.8	7.8	7.0
75.0	7.8	7.6	7.8	7.4	7.4	7.0
80.0	7.4	7.2	7.4	7.2	7.2	6.8
85.0	7.2	6.8	7.2	6.8	7.0	6.6
90.0	6.8	6.6	6.8	6.6	6.8	6.4
95.0	6.4	6.4	6.6	6.4	6.6	6.2
100.0	6.2	6.0	6.4	6.2	6.2	6.0
105.0	6.0	5.8	6.2	6.0	6.2	6.0
110.0	5.6	5.6	6.0	5.8	6.0	5.8
115.0	5.4	5.4	5.8	5.6	5.8	5.6
120.0	5.2	5.0	5.4	5.4	5.6	5.4
125.0	5.0	4.8	5.2	5.2	5.4	5.2
130.0	4.6	4.6	5.0	5.0	5.0	4.8
135.0	4.4	4.4	4.4	4.8	4.2	4.2
140.0	3.8	4.2	3.8	4.6	3.6	3.4
145.0	3.2	4.2	3.2	4.4	3.0	2.8
150.0	2.6	4.0	2.6	4.2	2.4	2.2
155.0	2.2	3.8	2.0	4.0		
160.0		3.6		4.0		
165.0		3.4		3.6		
170.0		3.4		3.2		
175.0		3.2		2.8		
180.0		2.8		2.4		
185.0				2.0		
SLI code	350					
Max. permitted wind speed	8 m/s					

**3 015 834**

**3 016 004**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 105.0 ft</b>					
	<b>Angle of boom extension 16°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	9.4	8.8	8.8			
55.0	9.0	8.4	8.6	8.0	8.0	
60.0	8.6	8.0	8.2	7.8	7.8	7.0
65.0	8.2	7.8	7.8	7.6	7.4	7.0
70.0	7.8	7.4	7.6	7.2	7.2	6.8
75.0	7.4	7.2	7.2	7.0	7.0	6.6
80.0	7.0	6.8	7.0	6.8	6.8	6.4
85.0	6.8	6.6	6.8	6.4	6.6	6.2
90.0	6.4	6.2	6.4	6.2	6.4	6.0
95.0	6.2	6.0	6.2	6.0	6.2	5.8
100.0	5.8	5.8	6.0	5.8	6.0	5.8
105.0	5.6	5.6	5.8	5.6	5.8	5.6
110.0	5.4	5.2	5.6	5.4	5.6	5.4
115.0	5.2	5.0	5.4	5.2	5.4	5.4
120.0	5.0	4.8	5.2	5.0	5.2	5.2
125.0	4.8	4.6	5.0	4.8	5.0	5.0
130.0	4.6	4.4	4.8	4.6	5.0	4.8
135.0	4.4	4.4	4.6	4.6	4.8	4.8
140.0	4.2	4.2	3.8	4.4	4.4	4.4
145.0	4.0	4.0	3.2	4.2	3.8	3.6
150.0	3.4	3.8	2.6	4.2	3.2	3.0
155.0	2.8	3.8	2.0	4.0	2.6	2.4
160.0	2.2	3.6		3.8	2.0	2.0
165.0		3.4		3.8		
170.0		3.4		3.6		
175.0		3.2		3.2		
180.0		3.0		2.8		
185.0				2.2		
190.0				2.0		
SLI code	351					
Max. permitted wind speed	8 m/s					

**3 015 835**

**3 016 005**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 105.0 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
60.0	7.4	7.4				
65.0	7.4	7.2				
70.0	7.2	7.0	7.2	7.0	7.0	
75.0	6.8	6.8	7.0	6.8	6.8	6.4
80.0	6.6	6.6	6.8	6.4	6.6	6.2
85.0	6.4	6.4	6.4	6.2	6.4	6.0
90.0	6.2	6.0	6.2	6.0	6.2	5.8
95.0	5.8	5.8	6.0	5.8	6.0	5.6
100.0	5.6	5.6	5.8	5.6	5.8	5.6
105.0	5.4	5.4	5.6	5.6	5.6	5.4
110.0	5.2	5.2	5.4	5.4	5.4	5.2
115.0	5.0	5.0	5.2	5.2	5.2	5.2
120.0	4.8	4.8	5.0	5.0	5.2	5.0
125.0	4.6	4.6	4.8	4.8	5.0	5.0
130.0	4.4	4.4	4.6	4.6	4.8	4.8
135.0	4.4	4.2	4.6	4.4	4.6	4.6
140.0	4.2	4.2	4.4	4.4	4.6	4.6
145.0	4.0	4.0	4.2	4.2	4.4	4.2
150.0	3.6	3.8	3.6	4.0	3.6	3.6
155.0	3.0	3.8	3.0	4.0	3.0	3.0
160.0	2.4	3.6	2.4	3.8	2.4	2.4
165.0		3.4	1.8	3.8	1.8	
170.0		3.4		3.6		
175.0				3.4		
180.0				2.8		
SLI code	352					
Max. permitted wind speed	8 m/s					

**3 015 836**

**3 016 006**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 131.2 ft</b>					
	<b>Angle of boom extension 0°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	6.4	6.4	6.6	6.6		
45.0	6.2	6.4	6.4	6.4	5.8	
50.0	6.2	6.4	6.2	6.2	5.8	4.8
55.0	6.0	6.2	6.0	6.0	5.6	4.8
60.0	5.8	6.0	5.8	5.6	5.4	4.8
65.0	5.6	5.8	5.8	5.4	5.2	4.8
70.0	5.4	5.6	5.6	5.2	5.2	4.6
75.0	5.4	5.2	5.4	5.0	5.0	4.6
80.0	5.2	5.0	5.2	4.8	4.8	4.4
85.0	5.0	4.8	5.0	4.6	4.6	4.2
90.0	4.8	4.6	4.8	4.4	4.6	4.2
95.0	4.4	4.4	4.4	4.2	4.4	4.0
100.0	4.2	4.2	4.2	4.0	4.2	3.8
105.0	4.0	4.0	4.2	4.0	4.0	3.8
110.0	4.0	3.8	4.0	3.8	4.0	3.6
115.0	3.8	3.6	3.8	3.6	3.8	3.6
120.0	3.6	3.4	3.6	3.4	3.6	3.4
125.0	3.4	3.2	3.4	3.4	3.4	3.4
130.0	3.2	3.0	3.2	3.2	3.2	3.2
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	3.0	2.8	3.0	3.0	3.0	3.0
145.0	2.8	2.8	3.0	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.6	2.4
155.0	2.4	2.4	2.4	2.6	2.2	
160.0	2.2	2.4		2.4		
165.0		2.2		2.4		
170.0		2.0		2.2		
175.0				2.2		
180.0				2.0		
SLI code	<b>360</b>					
Max. permitted wind speed	<b>8 m/s</b>					

**3 015 837**  
**3 016 007**

Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 131.2 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	6.6					
55.0	6.2	6.2	5.8	5.8		
60.0	6.0	5.8	5.8	5.4	4.8	
65.0	5.8	5.6	5.6	5.2	4.8	
70.0	5.6	5.4	5.4	5.0	4.8	4.6
75.0	5.4	5.2	5.2	4.8	4.8	4.4
80.0	5.0	4.8	5.0	4.6	4.6	4.2
85.0	4.8	4.6	4.8	4.6	4.4	4.2
90.0	4.6	4.4	4.6	4.4	4.4	4.0
95.0	4.4	4.2	4.4	4.2	4.2	3.8
100.0	4.2	4.0	4.2	4.0	4.0	3.8
105.0	4.0	3.8	4.0	3.8	3.8	3.6
110.0	3.8	3.8	3.8	3.6	3.8	3.6
115.0	3.6	3.6	3.8	3.6	3.6	3.4
120.0	3.4	3.4	3.6	3.4	3.4	3.4
125.0	3.4	3.2	3.4	3.2	3.4	3.2
130.0	3.2	3.0	3.2	3.2	3.2	3.2
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	2.8	2.8	3.0	2.8	3.0	3.0
145.0	2.8	2.6	2.8	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.4	2.4	2.6	2.6	2.6	2.6
160.0	2.2	2.4	2.6	2.4	2.4	2.2
165.0	2.2	2.2		2.4		
170.0		2.2		2.2		
175.0				2.2		
180.0				2.0		
SLI code	361					
Max. permitted wind speed	8 m/s					



**3 015 838**

**3 016 008**

	<b>Crane with 28 000 lbs (12,7 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 131.2 ft</b>					
	<b>Angle of boom extension 30°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
70.0	5.6	5.2	5.4	5.0		
75.0	5.2	5.0	5.0	4.8	4.8	
80.0	5.0	4.8	4.8	4.6	4.6	4.2
85.0	4.8	4.6	4.6	4.4	4.4	4.0
90.0	4.6	4.4	4.4	4.2	4.2	4.0
95.0	4.4	4.2	4.4	4.2	4.2	3.8
100.0	4.2	4.0	4.2	4.0	4.0	3.8
105.0	4.0	3.8	4.0	3.8	3.8	3.6
110.0	3.8	3.8	3.8	3.6	3.8	3.6
115.0	3.6	3.6	3.6	3.6	3.6	3.4
120.0	3.4	3.4	3.6	3.4	3.4	3.2
125.0	3.4	3.2	3.4	3.2	3.4	3.2
130.0	3.2	3.0	3.2	3.2	3.2	3.0
135.0	3.0	3.0	3.2	3.0	3.2	3.0
140.0	3.0	2.8	3.0	3.0	3.0	3.0
145.0	2.8	2.8	2.8	2.8	3.0	2.8
150.0	2.6	2.6	2.8	2.6	2.8	2.8
155.0	2.6	2.4	2.6	2.6	2.8	2.6
160.0	2.4	2.4	2.6	2.4	2.6	2.6
165.0	2.2	2.2	2.4	2.4	2.2	2.2
170.0		2.2		2.2		
175.0		2.0		2.2		
180.0				2.2		
SLI code	<b>362</b>					
Max. permitted wind speed	<b>8 m/s</b>					

**3 015 800**  
**3 015 976**

Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 32.8 ft						
Angle of boom extension 0°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
20.0	30.8	30.8				
25.0	29.4	28.0	28.6	26.2		
30.0	26.8	25.8	27.0	25.6	24.0	20.6
35.0	24.6	23.6	25.2	24.0	23.8	20.6
40.0	22.6	21.8	23.4	22.4	23.2	20.6
45.0	21.0	20.4	21.8	21.0	22.0	20.6
50.0	19.4	19.0	20.6	19.8	20.8	20.0
55.0	18.2	17.8	19.4	18.8	19.8	19.4
60.0	17.2	16.8	18.2	17.8	18.8	18.6
65.0	14.6	15.8	15.4	16.8	15.8	15.8
70.0	12.0	14.8	12.6	15.8	13.2	13.4
75.0	9.8	14.0	10.4	15.0	11.0	11.2
80.0	7.8	13.0	8.4	13.0	9.0	9.4
85.0	6.2	11.2	6.8	11.2	7.4	7.8
90.0	4.8	9.8	5.4	9.8	6.0	6.2
95.0	3.4	8.4	4.2	8.4	4.6	5.0
100.0	2.4	7.2	3.0	7.2	3.4	3.8
105.0		6.2	2.0	6.2	2.4	2.8
110.0		5.2		5.4		
115.0		4.4		4.4		
120.0				3.6		
125.0				3.0		
130.0				2.4		
SLI code	220					
Max. permitted wind speed	14 m/s			10 m/s		

**3 015 801**  
**3 015 971**

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 32.8 ft</b>					
	<b>Angle of boom extension 16°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
30.0	19.2	18.8	19.6			
35.0	18.2	17.8	18.4	18.0	18.4	
40.0	17.0	16.8	17.6	17.2	17.6	17.2
45.0	16.2	15.8	16.6	16.4	16.8	16.6
50.0	15.0	14.8	16.0	15.6	16.2	16.0
55.0	14.0	13.8	15.2	14.8	15.4	15.4
60.0	13.4	13.2	14.4	14.0	14.6	14.6
65.0	12.8	12.6	13.6	13.2	13.8	14.0
70.0	12.4	12.2	13.0	12.8	13.4	13.6
75.0	11.0	11.8	11.6	12.4	12.2	12.6
80.0	9.0	11.4	9.6	12.0	10.2	10.6
85.0	7.2	11.0	7.8	11.6	8.4	8.8
90.0	5.6	10.4	6.4	10.4	6.8	7.2
95.0	4.2	9.0	5.0	9.0	5.6	6.0
100.0	3.0	7.6	3.8	7.8	4.2	4.8
105.0		6.6	2.6	6.8	3.2	3.6
110.0		5.6		5.8	2.2	2.6
115.0		4.6		4.8		
120.0				4.0		
125.0				3.2		
130.0				2.6		
SLI code	221					
Max. permitted wind speed	14 m/s			10 m/s		

**3 015 802**

**3 015 972**

Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 32.8 ft						
Angle of boom extension 30°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
35.0	14.2	14.0				
40.0	13.6	13.4	13.8	13.6	13.8	
45.0	13.2	13.0	13.4	13.2	13.4	13.2
50.0	12.6	12.6	13.0	12.8	13.0	13.0
55.0	12.2	12.2	12.6	12.4	12.8	12.6
60.0	11.8	11.8	12.2	12.0	12.4	12.4
65.0	11.4	11.4	11.8	11.8	12.0	12.0
70.0	11.2	11.0	11.6	11.4	11.8	11.8
75.0	10.8	10.8	11.2	11.2	11.6	11.6
80.0	9.6	10.4	10.4	10.8	11.0	11.4
85.0	7.8	10.2	8.6	10.6	9.2	9.6
90.0	6.2	10.0	7.0	10.4	7.6	8.0
95.0	4.6	9.2	5.4	9.4	6.0	6.6
100.0	3.2	8.0	4.2	8.2	4.8	5.4
105.0			3.0	7.0	3.6	4.2
110.0			2.0	6.0	2.6	3.0
115.0				5.0		2.2
SLI code	222					
Max. permitted wind speed	14 m/s		10 m/s			

**3 015 803**  
**3 015 977**

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 52.5 ft</b>					
	<b>Angle of boom extension 0°</b>					
	<b>Main boom - fixed lengths in ft</b>					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
25.0	15.4	15.4				
30.0	15.4	15.4	15.4	15.2	14.8	
35.0	15.4	15.4	15.4	15.0	14.6	
40.0	14.8	14.0	15.2	14.2	14.0	13.4
45.0	13.4	13.0	14.0	13.4	13.6	13.0
50.0	12.6	12.2	13.0	12.6	13.2	12.6
55.0	11.8	11.6	12.4	12.0	12.6	12.2
60.0	11.0	10.8	11.6	11.4	12.0	11.8
65.0	10.4	10.2	11.0	10.8	11.4	11.4
70.0	9.8	9.8	10.4	10.2	10.8	11.0
75.0	9.4	9.2	10.0	9.8	10.4	10.6
80.0	8.8	8.8	9.4	9.4	9.8	10.0
85.0	8.4	8.4	8.6	8.8	8.8	9.0
90.0	7.0	8.0	7.2	8.6	7.4	7.6
95.0	5.6	7.6	6.0	8.2	6.2	6.4
100.0	4.4	7.2	4.8	7.8	5.0	5.2
105.0	3.4	7.0	3.8	7.4	4.0	4.2
110.0	2.6	6.6	2.8	6.6	3.0	3.2
115.0		5.8	2.0	5.6	2.2	2.4
120.0		5.0		4.8		
125.0		4.4		4.2		
130.0		3.6		3.6		
135.0		3.0		3.0		
140.0				2.4		
SLI code	230					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 804**  
**3 015 974**

Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.8 ft)						
Boom extension length 52.5 ft						
Angle of boom extension 16°						
Main boom - fixed lengths in ft						
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
40.0	10.8	10.6	11.0			
45.0	10.2	10.0	10.4	10.2	10.4	
50.0	9.8	9.6	10.0	9.8	10.0	10.0
55.0	9.2	9.2	9.6	9.4	9.6	9.6
60.0	8.8	8.8	9.2	9.0	9.2	9.4
65.0	8.4	8.4	8.8	8.6	9.0	9.0
70.0	8.0	8.0	8.4	8.4	8.6	8.8
75.0	7.8	7.6	8.2	8.0	8.4	8.4
80.0	7.4	7.4	7.8	7.8	8.0	8.2
85.0	7.2	7.2	7.6	7.4	7.8	8.0
90.0	7.0	6.8	7.4	7.2	7.6	7.8
95.0	6.8	6.6	7.0	7.0	7.4	7.4
100.0	5.8	6.4	6.2	6.8	6.4	6.6
105.0	4.6	6.2	5.0	6.6	5.2	5.6
110.0	3.6	6.2	4.0	6.4	4.2	4.4
115.0	2.6	6.0	3.0	6.4	3.4	3.6
120.0		5.6	2.2	5.6	2.4	2.6
125.0		4.8		4.8		2.0
130.0		4.0		4.0		
135.0		3.4		3.4		
140.0				2.8		
145.0				2.2		
SLI code	231					
Max. permitted wind speed	10 m/s				8 m/s	

**3 015 805**

**3 015 975**

	<b>Crane with 9 300 lbs (4,2 t) counterweight (Supporting span 28.1 x 26.8 ft)</b>					
	<b>Boom extension length 52.5 ft</b>					
	<b>Angle of boom extension 30°</b>					
	Main boom - fixed lengths in ft					
	98.5	98.5	116.0	116.0	133.4	150.9
Tel. sec. I	1.00	0.00	1.00	0.00	1.00	1.00
Tel. sec. II	0.25	0.75	0.50	1.00	0.75	1.00
Tel. sec. III	0.25	0.75	0.50	1.00	0.75	1.00
Slewing range	360°					
Radius in ft	Lifting capacities in 1000 lbs					
50.0	8.2	8.2	8.4	8.2		
55.0	7.8	7.8	8.0	8.0	8.0	
60.0	7.6	7.6	7.8	7.6	7.8	7.8
65.0	7.4	7.2	7.6	7.4	7.6	7.6
70.0	7.2	7.0	7.4	7.2	7.4	7.4
75.0	6.8	6.8	7.2	7.0	7.2	7.2
80.0	6.6	6.6	7.0	6.8	7.0	7.2
85.0	6.4	6.4	6.8	6.6	6.8	7.0
90.0	6.4	6.4	6.6	6.6	6.8	6.8
95.0	6.2	6.2	6.4	6.4	6.6	6.6
100.0	6.0	6.0	6.2	6.2	6.4	6.6
105.0	5.4	6.0	5.8	6.2	6.2	6.4
110.0	4.2	5.8	4.8	6.0	5.2	5.4
115.0	3.0	5.8	3.6	6.0	4.2	4.4
120.0	2.0	5.8	2.8	5.8	3.2	3.4
125.0				5.2	2.4	2.6
130.0				4.4		
135.0				3.6		
SLI code	<b>232</b>					
Max. permitted wind speed	<b>10 m/s</b>				<b>8 m/s</b>	





# *Section 3*



# **GMK I**

## ***Pad Loads***

**GROVE**  
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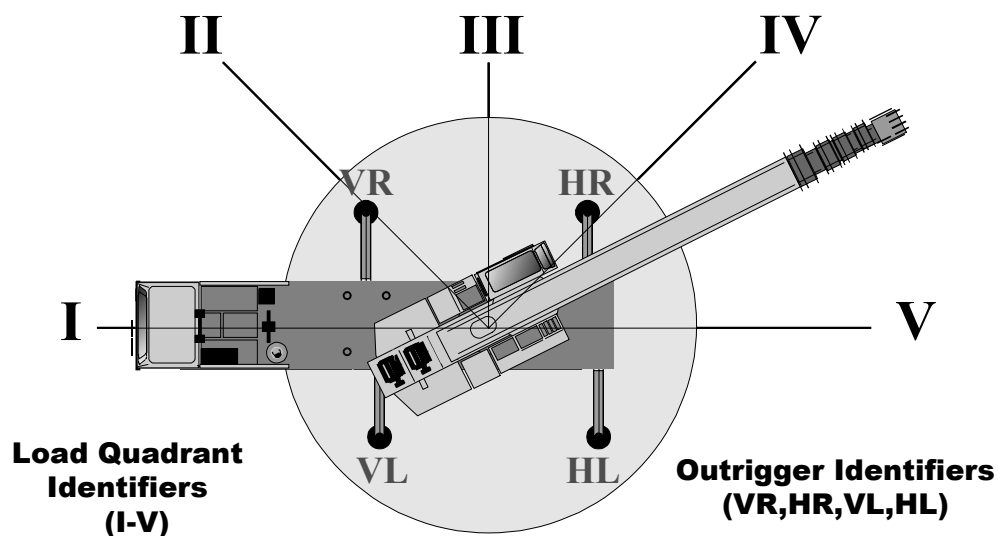
### **Why do we need to know about Outrigger Pad Loads?**

- **What forces are acting on the ground?**
- **Are these forces constant?**
- **What cribbing is required for this lift?**
- **Who is responsible to know this information?**

# Section Contents

- **Load Positioning Map**
- **Definitions**
- **Formula**
- **Sample Exercise**
- **Sample Help Sheet**

## Load Positioning Map



## **Quadrant Identification**

- I = Boom over front of carrier**
- II = Boom over front right corner**
- III = Boom over the right side  
90 degrees**
- IV = Boom over right rear corner**
- V = Boom over the rear of the carrier**

## **Outrigger Pad Identification**

- VL = Front Left**
- VR = Front Right**
- HL = Rear left**
- HR = Rear Right**

# Definitions

- **Nominal Load**
- **Nominal Load'**
- **P<sub>n</sub>**
- **P<sub>n</sub>'**

## Nominal Load'

- **Actual Lifting Load**

# Nominal Load

- **The maximum load chart capacity**
- **This will be listed in either the load chart or the proper Outrigger Load Table**

## **P<sub>n</sub>**

- **Highest Pad Loading**
- **At Maximum Capacity**
- **Appropriate Outrigger Load Table**

# Pn'

- Highest Pad Loading
- At Zero Capacity
- Appropriate Outrigger Load Table

## GMK Outrigger Pad Loads

<b>GMK 5130</b>		<b>Outrigger Loads</b>																<b>Base # 3.015.840</b>			
		( in 1,000 lbs )																			
<b>MAIN BOOM :</b>		<b>46.9 feet</b>																			
<b>Telescoping:</b>		<b>Tel. 1 = 0.00</b>				<b>Tel. 2 = 0.00</b>				<b>Tel. 3 = 0.00</b>											
<b>COUNTERWEIGHT:</b>		<b>59520 lbs</b>																			
<b>Outrigger base:</b>		<b>26.9 x (17.22 + 10.91 ) feet</b>																			
<b>Slewing range:</b>		<b>360°</b>																			
		←----- Load positions -----→																			
A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	28.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1



<b>GMK 5130</b>	<b>Outrigger Loads</b>	<b>Base # 3.015.840</b>
	( in 1,000 lbs )	
<b>MAIN BOOM :</b>	<b>46.9 feet</b>	
<b>Telescoping:</b>	Tel. 1 = 0.00    Tel. 2 = 0.00    Tel. 3 = 0.00	
<b>COUNTERWEIGHT:</b>	<b>59520 lbs</b>	
<b>Outrigger base:</b>	<b>26.9 x (17.22 + 10.91 ) feet</b>	
<b>Slewing range:</b>	<b>360°</b>	

←----- Load positions -----→

<b>A</b>	<b>Crane Configuration</b>																					
<b>Ft.</b>																			<b>HL</b>	<b>HR</b>		
10																				170.9	170.9	
10																					31.6	31.6
15																					159.2	159.2
15																					33.2	33.2
20																					149.9	149.9
20																					34.8	34.8
25																					136.2	136.2
25																					36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2	
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1	

**GMK 5130                      Outrigger Loads                      Base # 3.015.840**

<b>MAIN B</b>	<b>Load Radius given in feet</b>
<b>Telescop</b>	
<b>COUN</b>	
<b>Outrigge</b>	
<b>Slewing r</b>	

←----- Load positions -----→

<b>A</b>		<b>Load Radius given in feet</b>																			
<b>Ft.</b>	<b>P (**)</b>																				
		<b>I</b>				<b>II</b>				<b>III</b>				<b>IV</b>				<b>V</b>			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	28.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

GMK 5130

Outrigger Loads

Base # 3.015.840

MAIN E  
Telescop  
COUN  
Outrige  
Slewing

**Max. Load (as per Load Chart)**  
**also identified as Nominal Load**  
**0.0 indicates no/empty load condition**

←----- Load positions ----->

A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	36.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	0.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	32.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	1.6	31.5	55.0	55.0	40.9	28.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	20.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	3.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	19.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	4.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	12.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	6.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

**Boom Position**  
**broken into 5 quadrants**  
**(see quadrant map)**

15.840

←----- Load positions ----->

A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	28.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

GMK 5130                      Outrigger Loads                      Base # 3.015.840

# Outrigger Pad Identifiers

**VL = Front Left    VR = Front Right**  
**HL = Rear Left    HR = Rear Right**

←----- Load positions -----→

A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	28.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

GMK 5130                      Outrigger Loads                      Base # 3.015.840

# PN = 143.500 lbs.

**Max. Pad Load at Max. Capacity**  
**(Top Number)**

←----- Load positions -----→

A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	28.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

GMK 5130                      Outrigger Loads                      Base # 3.015.840

**PN' = 30,600 lbs.**  
**Max. Pad Load at Zero Capacity**  
**(Bottom Number)**

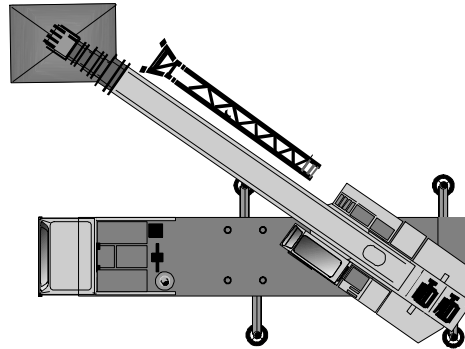
←----- Load positions -----→

A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	26.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

**In Quadrant I,**  
**the forces exerted**  
**on each O/R pad**  
**in 1000's lbs.**

A	P	I				II				III				IV				V			
		VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR	VL	VR	HL	HR
10	288.0	136.9	137.0	93.5	93.7	103.2	147.8	70.0	139.6	66.9	129.6	82.8	181.8	48.7	92.9	124.9	194.6	59.6	59.6	170.9	170.9
10	0.0	30.0	29.9	56.6	56.6	40.7	26.4	64.3	41.7	52.6	32.3	60.1	28.1	58.5	44.2	46.5	23.9	55.0	55.0	31.6	31.6
15	220.0	132.8	132.9	63.6	63.8	91.8	146.3	34.5	120.5	46.3	123.8	50.3	172.6	23.9	78.4	102.4	188.4	37.4	37.4	159.2	159.2
15	0.0	31.6	31.5	55.0	55.0	40.9	26.5	61.7	42.0	51.3	33.6	58.0	30.1	56.4	44.0	46.2	26.5	53.4	53.7	33.2	33.2
20	174.0	120.7	128.8	44.7	44.9	83.6	143.5	12.7	107.3	33.5	118.8	30.1	164.7	8.8	68.8	87.4	182.1	23.6	23.6	149.9	149.9
20	0.0	33.2	33.2	53.4	53.4	41.1	30.6	59.1	42.3	50.0	34.9	56.0	32.2	54.3	43.8	45.9	29.1	51.7	51.7	34.8	34.8
25	133.0	119.6	119.7	33.3	33.5	75.5	134.1	1.9	94.6	26.5	109.9	19.9	150.7	2.3	61.0	75.1	167.7	16.8	16.8	136.2	136.2
25	0.0	34.0	34.8	51.8	51.7	41.4	32.6	56.4	42.6	48.7	36.2	53.9	34.3	52.3	43.5	45.6	31.8	50.1	50.1	36.4	36.4
30	105.0	112.7	112.8	26.2	26.4	65.6	131.0	0.0	81.5	22.3	103.3	12.3	140.2	0.0	54.6	65.6	157.9	12.9	12.9	126.2	126.2
30	0.0	36.4	36.4	50.2	50.1	41.6	34.7	53.8	43.0	47.7	37.6	51.8	36.4	50.2	43.3	45.2	34.4	48.5	48.5	38.1	38.1

# Now let's check your understanding?



**GMK 5130**

**Outrigger Loads**

**Base # 3.015.840**

( in 1,000 lbs )

**MAIN BOOM :** 46.9 feet

Telescop

COU

Outrig

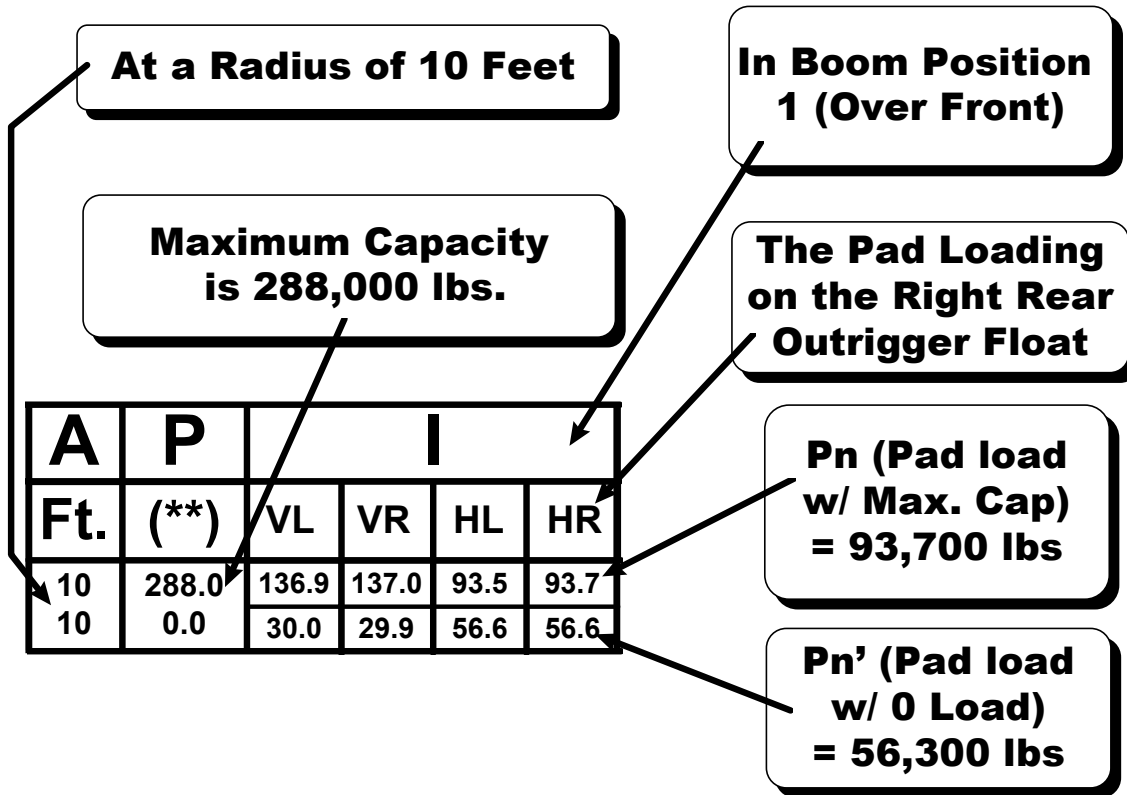
Slewin

*Using this Chart find:*

**Nominal Load, Pn & Pn'**  
**for**  
**Quadrant I**  
**Right Rear Outrigger Pad**  
**at 10' Radius**

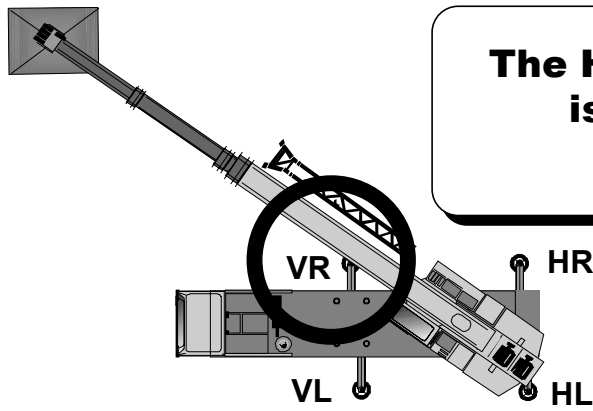
A
Ft.
10
10
15
15
20
20
25
25
30
30

HR
170.9
31.6
159.2
33.2
149.9
34.8
136.2
36.4
126.2
38.1



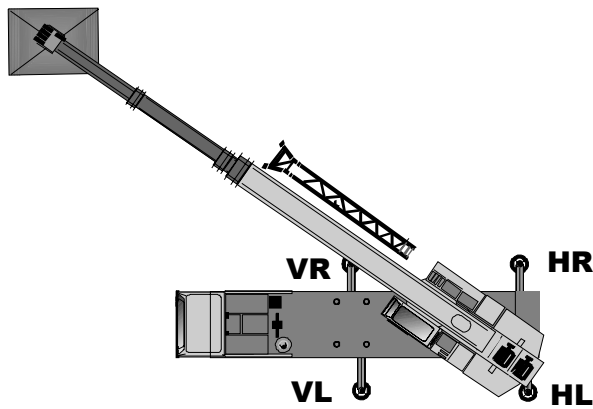
*Using the same Chart find:*

**Nominal Load, P<sub>n</sub> & P<sub>n</sub>'  
for  
Quadrant II  
Highest Outrigger Pad Load  
at 20' Radius**



**The Highest Pad Loading is the Right Front Outrigger Float**

A	P	II			
		VL	VR	HL	HR
20	174.0	83.6	143.5	12.7	107.3
20	0.0	41.1	30.6	59.1	42.3



**P<sub>n</sub> (Pad load w/ Max. Cap) = 143,500 lbs**

**P<sub>n</sub>' (Pad load w/ 0 Load) = 30,600 lbs**

A	P	II			
		VL	VR	HL	HR
20	174.0	83.6	143.5	12.7	107.3
20	0.0	41.1	30.6	59.1	42.3

# GMK Outrigger Pad Loads

## Formula

$$\frac{(P_n - P_n') \times \text{Nominal Load}'}{\text{Nominal Load}} + P_n' = t \text{ ( Pad Loading )}$$

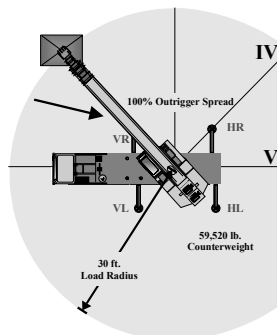
**This formula is to be used when a specific corner pad load is required that falls between the maximum (P<sub>n</sub>) and the pad load with 0 load (P<sub>n'</sub>) on the crane.**

## Sample Exercise

Configuration	Unit Used:	GMK 5130-8015
	Position II:	45 Degrees Over the Front Pad (VR)
	Outrigger Spread:	28.1 x 26.9 100% extended
	Main Boom:	46.1 ft. All Sections Fully Retracted
	Counterweight:	59,520 lb. Installed
	Load to be Lifted:	92,000 lb.
	Radius:	30 ft.

### Configuration

- 1) The **Nominal Load** is your maximum lifting capacity as stated in the appropriate load chart.
- 2) The **Nominal Load'** is your actual lifting load.
- 3) The **P<sub>n</sub>** is the Highest Pad Loading at the maximum capacity as stated in the appropriate outrigger load table.
- 4) The **P<sub>n'</sub>** is the Highest Pad Loading at zero load capacity as stated in the appropriate outrigger load table.
- 5) The formula to calculate outrigger pad loading is as follows:





# Sample Exercise Definitions

- **Nominal Load**                      **105,000 lb.**
- **Nominal Load'**                      **92,000 lb.**
- **Pn**                                      **131,000 lb.**
- **Pn'**                                      **34,700 lb.**

## First, Let's construct the Formula

$$\frac{(P_n - P_n') \times \text{Nominal Load}'}{\text{Nominal Load}} + P_n' = t \text{ ( Pad Loading )}$$

$$\frac{(131,000 - 34,700) \times 92,000}{105,000} + 34,700 = t \text{ ( Pad Loading )}$$

$$\frac{(96,300) \times 92,000}{105,000} + 34,700 = t \text{ ( Pad Loading )}$$

---

$$\frac{(96,300) \times 92,000}{105,000} + 34,700 = t \text{ ( Pad Loading )}$$

---

$$\frac{8,859,600,000}{105,000} + 34,700 = t \text{ ( Pad Loading )}$$

---

$$84,377 + 34,700 = t \text{ ( Pad Loading )}$$

---

$$119,077 \text{ lbs.} = t \text{ ( Pad Loading Force)}$$

## Pad load Exercises

## Outrigger Pad Loading Formula

(Pn)                  minus                  (Pn')

Highest pad load at max capacity - Highest pad load at zero capacity

**X**

(Nominal load')

actual load to be lifted

---

Divided by  
(Nominal load)

Maximum capacity on load chart

**+**

(Pn')

Highest pad loading at zero capacity

**||**

Outrigger pad loading

# *Section 4*



# **GMK I**

## ***Carrier Operation***

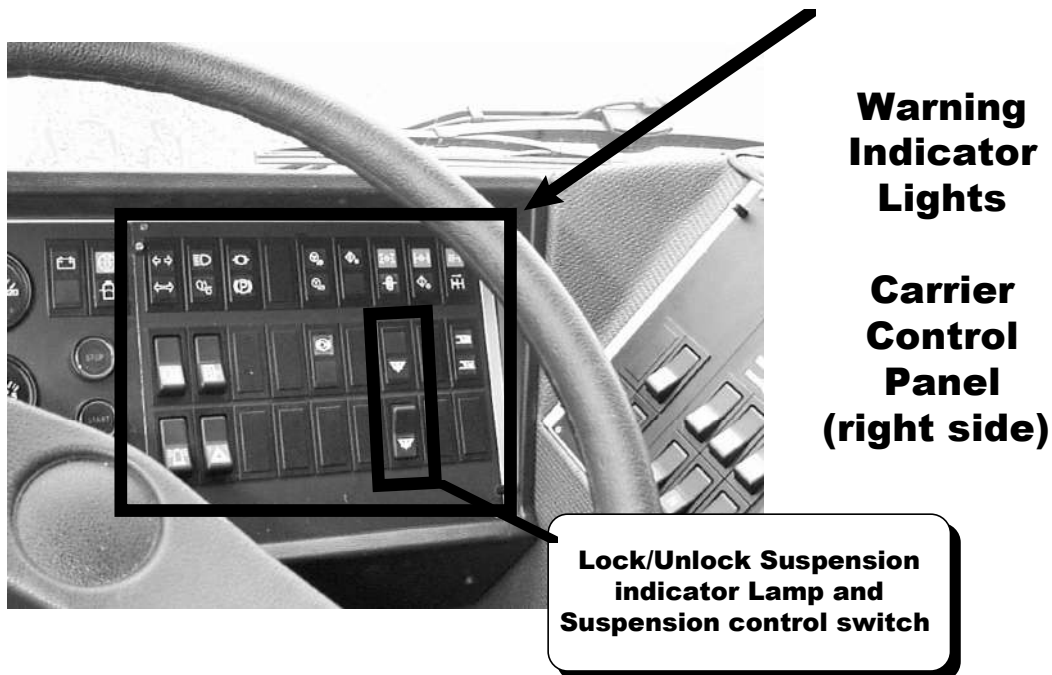
**GROVE**  
TRAINING INSTITUTE



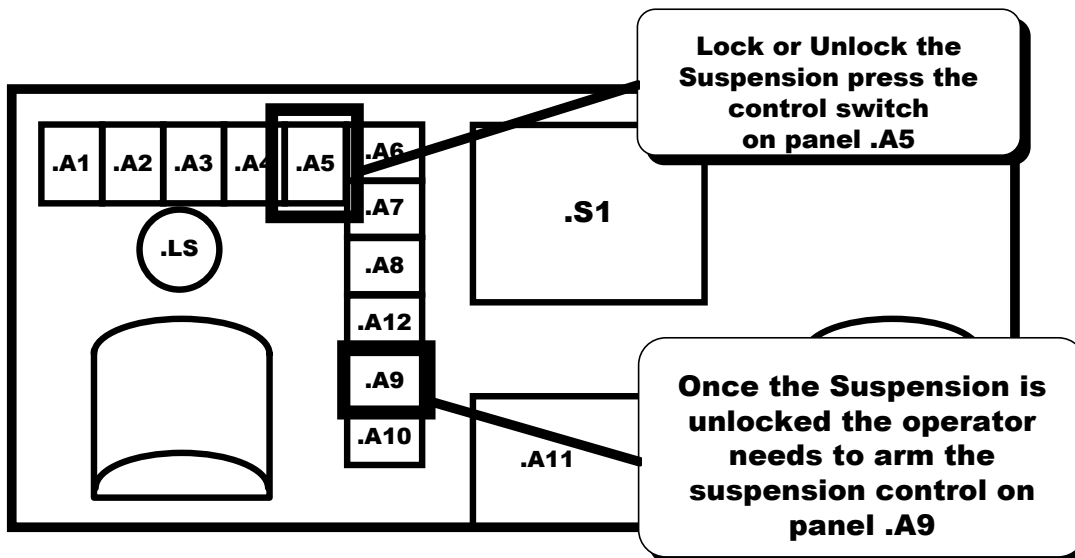
### **GMK 5130 Carrier Cab**



## Driver's Cab Control Panel .A5

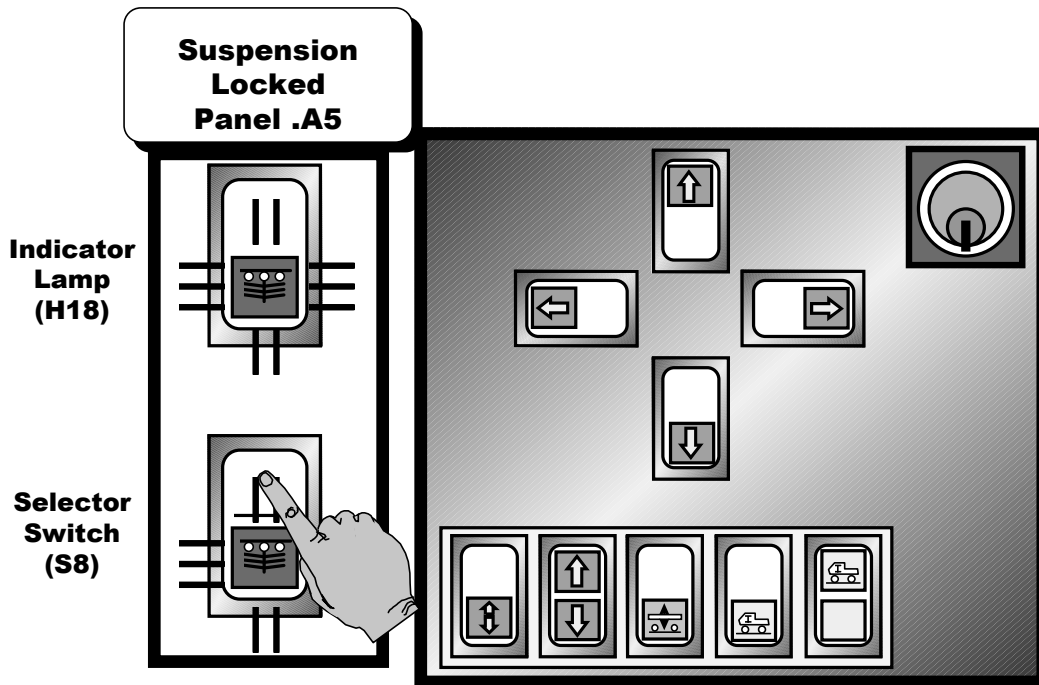


# GMK 5130 Carrier Cabin Layout

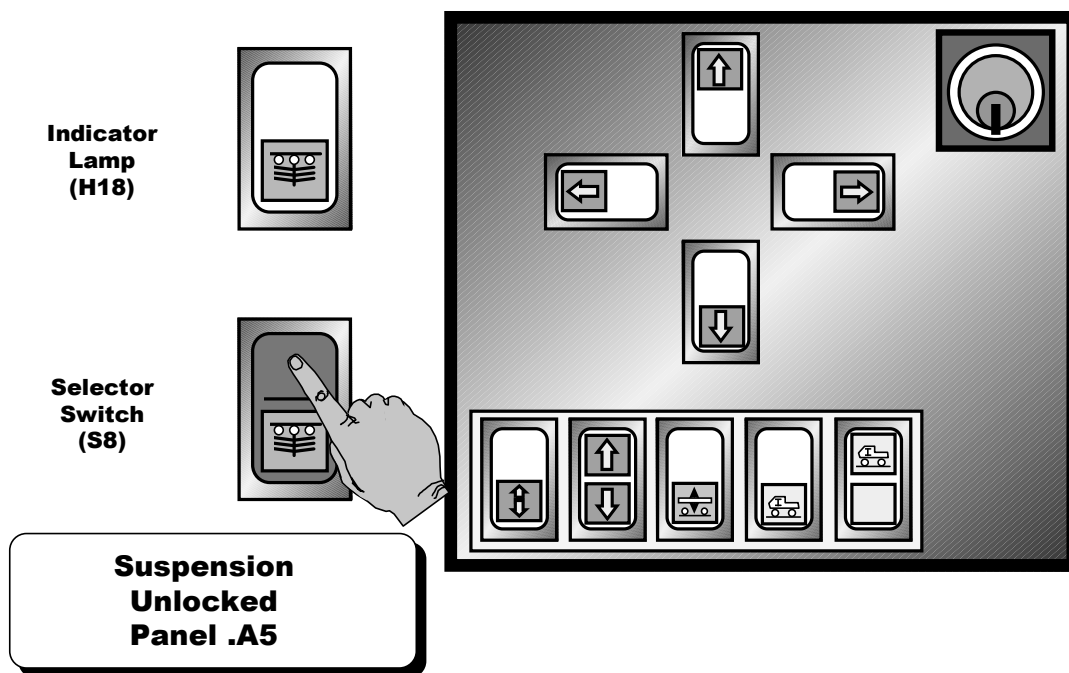


Print #30080887 Unterwagen GMK5130/5130 Cummins Equipped

# Suspension Lock/Unlock



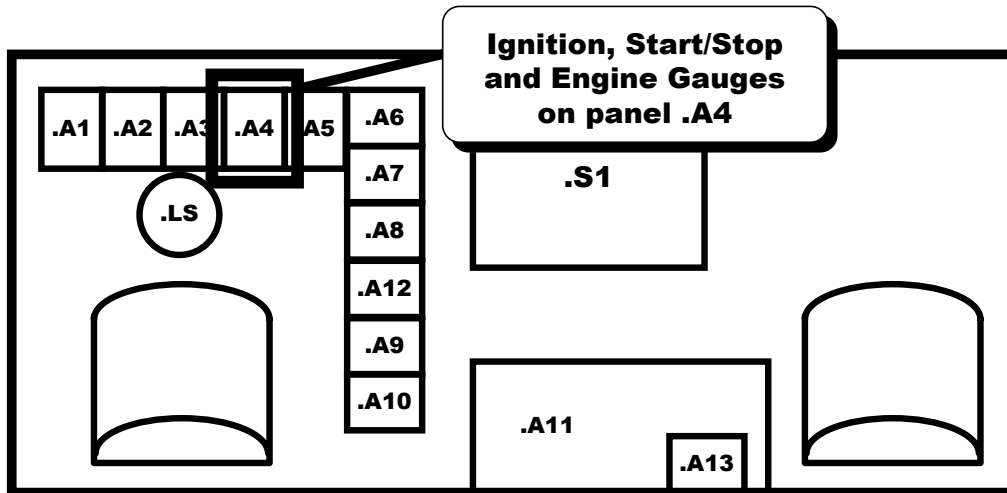
# Suspension Lock/Unlock





# GMK 5130

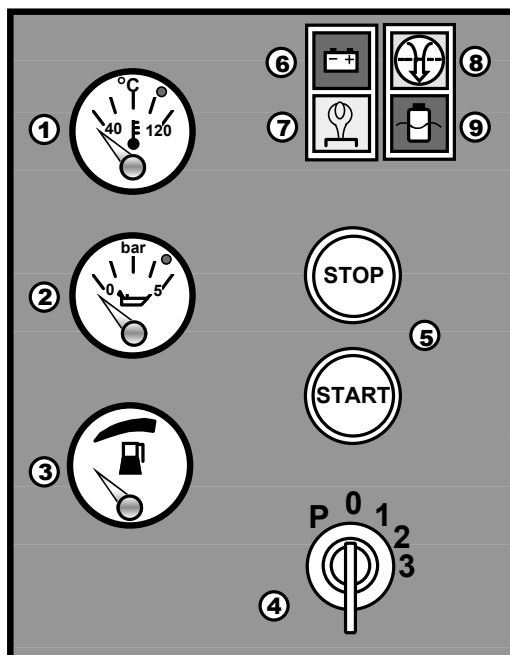
## Carrier Cabin Layout



*Print #30080887 Unterwagen GMK5130/5130 Cummins Equipped*

### Front Center Carrier Console

1. Engine Coolant Temp. Warning Light (+100°C)
2. Engine Oil Pressure Warning Light (-0.4 bar)
3. Fuel Gauge
4. Combined Lighting and Ignition Switch
5. Starter / Stop Switch
6. Warning Lamp for Charge Indicator
7. Indicator Lamp for Flame Start
8. Indicator Lamp for Vehicle Engine Air Filter
9. Indicator Lamp for Vehicle Engine Coolant Level

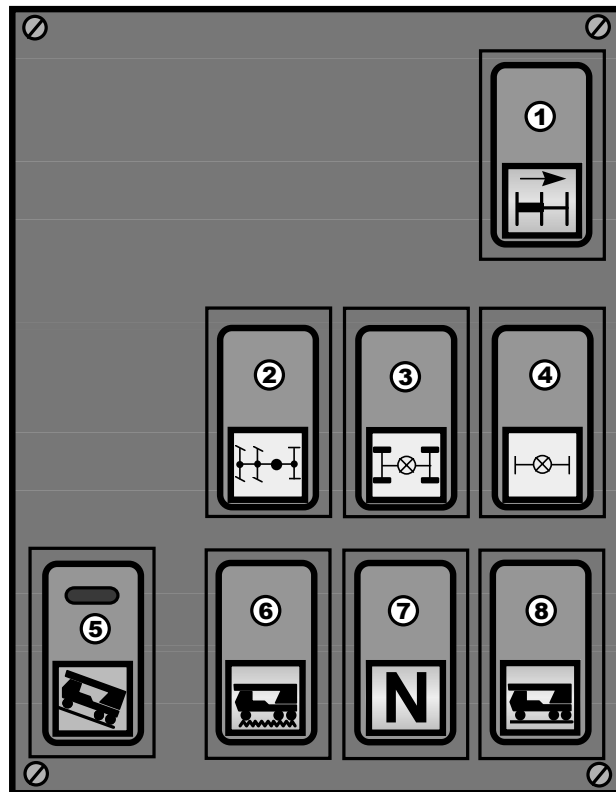


**Electrical Panel .A4**

## Transmission/Transfer Case Operator Controls



1. R/S for drive of the third axle line
2. R/S for longitudinal differential lock in transfer case
3. R/S for longitudinal differential lock in transfer drive axle of 4th axle line (optional, 10x8 drive)
4. R/S for transverse differential lock in all driven axle lines
5. R/S with lock button for automatic gearbox driving mode
6. R/S for transfer case off-the-road gear
7. R/S for transfer case neutral position
8. R/S for transfer case on-the-road



**Carrier Console A.6**

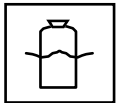
# Carrier Instrument Switches & Lights

## Vehicle engine



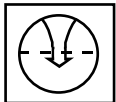
### Indicator lamp for flame start system

Illuminates when the ignition is switched on and the vehicle engine is cold. Goes out when the vehicle engine is ready to run (waiting period of up to 50 seconds depending on the temperature of the engine coolant).



### Indicator lamp for vehicle engine coolant level

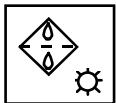
Illuminates if the coolant level is too low



### Indicator lamp for vehicle engine air filter

Illuminates when the air filter is dirty  
Change the filter element

## Automatic gearbox



### Warning lamp for gear box oil filter

Illuminates if the gear box oil filter is dirty. Change the filter element



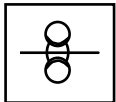
### Switch with diagnostic warning lamp for automatic gearbox

For determining an error code when the automatic gearbox malfunctions.



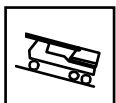
### Warning lamp for shift lock in automatic gearbox

Illuminates if a malfunction occurs in the automatic gearbox. An acoustic signal sounds for 10 seconds and the gearbox is locked in position



### Indicator lamp for convertor override coupling

Illuminates with overridden torque converter

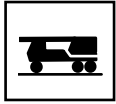


### Rocker switch with lock button for automatic gearbox driving mode

Driving mode **E** (=Economy, push switch up) : The gear box will only shift at lower engine speeds into the next highest gear. Driving mode **E** for driving on flat, even surfaces.

Driving mode **P** (=Power, push switch down) : The gear box will shift at higher engine speeds into the next highest gear. Acceleration power and speed on inclining routes is higher than that of driving mode **E**. Driving mode **P** for driving uphill or off-road.

## Transfer case



### Rocker switch for transfer case on-the-road gear

May only be pressed when the vehicle is stationary and the automatic gearbox is in neutral position **N**.

Activate on-the-road gear: Press the rocker switch down.



### Indicator lamp for on-the-road gear

Illuminates when on-the-road gear is active.

Goes out in neutral position and off-the-road gear.



### Rocker switch for transfer case off-the-road gear

May only be pressed when the vehicle is stationary and the automatic gearbox is in neutral position **N**.

Engaging the off-the-road gear: Press the rocker switch down.



### Indicator lamp for on-the-road gear

Illuminates when off-the-road gear is active.

Goes out in neutral position and on-the-road gear.

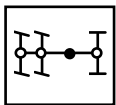


### Rocker switch for transfer case neutral position

May only be pressed when the vehicle is stationary and the automatic gearbox is in neutral position **N**.

## Axle drive

*The longitudinal differential locks, the transverse differential locks and the drive of the third axle line (for drive 10x8 only, accessory) may only be engaged if the level adjustment system key switch has been switched on.*

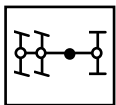


### Rocker switch for transfer case longitudinal differential lock

Locks the longitudinal differential in the transfer case.

May only be pressed when the vehicle is stationary or is moving at a speed of no more than 3 km/h (1.9 mph). Activate: Press rocker switch down.

Deactivate: Press rocker switch up.

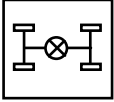


### Indicator lamp for transfer case longitudinal differential lock

Illuminates if longitudinal differential lock in the transfer case has been activated.

Goes out if longitudinal differential lock in the transfer case has been deactivated.

### **Rocker switch for longitudinal differential lock in transfer drive axle (additional equipment, only with 10x8 drive)**

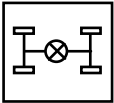


Locks the longitudinal differential in the transfer drive axle.

May only be activated when the vehicle is stationary or is moving at a speed of no more than 3 km/h (1.9 mph). Activate: Press rocker switch down.

Deactivate: Press rocker switch up.

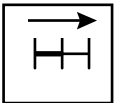
### **Indicator lamp for longitudinal differential lock in transfer drive axle (additional equipment, only with 10x8 drive)**



Illuminates if longitudinal differential lock in the transfer drive axle has been activated.

Goes out if longitudinal differential lock in the transfer drive axle has been deactivated.

### **Rocker switch for the drive of third axle**

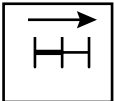


Activates the drive of the first and fifth axle lines as well as the drive of the third axle line.

May only be activated when the vehicle is stationary or is moving at a speed of no more than 3km/h (1.9 mph). Activate: Press rocker switch down

Deactivate: Press rocker switch up.

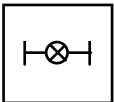
### **Indicator lamp for the drive of third axle line**



Illuminates if the drive of the third axle line is switched on.

Goes out if the drive of the third axle line is switched off.

### **Rocker switch for transverse differential lock in all driven axle lines**

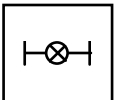


Locks the transverse differentials in all driven axle lines.

May only be activated when the vehicle is stationary or is moving at a speed of no more than 3 km/h (1.9 mph). Activate: Press rocker switch down.

Deactivate: Press rocker switch up.

### **Indicator lamp for transverse differential lock in all driven axle lines**

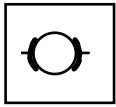


Illuminates if all transverse differential locks have been switched on.

Flashes if all transverse differential locks have not been switched on or off.

Goes out if all transverse differential locks have been switched off.

## Brakes



### Rocker switch for longitudinal differential lock in transfer drive axle (additional equipment, only with 10x8 drive)

Locks the longitudinal differential in the transfer drive axle.

May only be activated when the vehicle is stationary or is moving at a speed of no more than 3 km/h (1.9 mph). Activate: Press rocker switch down.

Deactivate: Press rocker switch up.



### Indicator lamp for vehicle parking brake

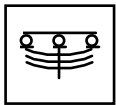
Goes out if parking brake is released.



### Indicator lamp for Telma eddy current retarder (additional equipment)

Illuminates when the Telma eddy current retarder is switched on.

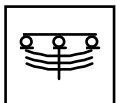
## Suspension



### Rocker switch for suspension locking system

Locks all suspension cylinders in the respective position.

Activate: Press rocker switch down. Deactivate: Press rocker switch up.



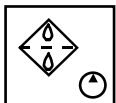
### Indicator lamp for suspension locking system

Illuminates if the suspension is locked.

Goes out if suspension locking system is released.

## Hydraulics

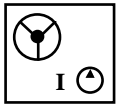
*The hydraulic oil temperature should not exceed 70° C (158° F) in normal driving mode.*



### Indicator lamp for hydraulic oil return flow filter

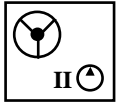
Illuminates if both the filters are dirty. CHANGE the filter elements.

## Steering



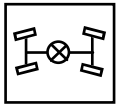
### Warning lamp for steering circuit I

Illuminates if the oil pressure in steering circuit I decreases while driving. Does not go out until the truck crane is travelling at a speed of approx. 10km/h (6.2 mph).



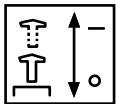
### Warning lamp for steering circuit II

Illuminates if the oil pressure in steering circuit II decreases while driving.



### Rocker switch with lock button and indicator lamp for separate steering release

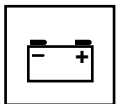
Lock the steering of the fourth axle line in straight position (for on-road driving): Press the rocker switch up. Unlock the steering of the fourth axle line (for separate steering): Release rocker switch and press down.



### Warning lamp for separate steering release

Illuminates when the steering of the fourth axle line is unlocked.

## Electrical system



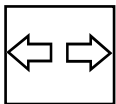
### Warning lamp for charge indicator lamp

Illuminates if the ignition is switched on and the vehicle engine is switched off. Goes out after the vehicle engine is started.

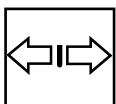


### Warning lamp for slewing gear freewheel

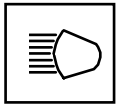
Illuminates when the slewing gear freewheel is blocked. A warning signal sounds simultaneously.



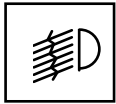
### Indicator lamp for driving direction



### Indicator lamp for driving direction for trailer (additional equipment)

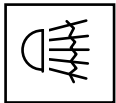


### Indicator lamp for full-beam headlight



### Rocker switch with indicator lamp for fog lamp (additional equipment)

The fog lamps may only be switched on with low-beam headlight. Fog lamp on: Press rocker switch down  
Fog lamp off: Press rocker switch up.



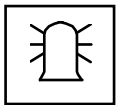
### Rocker switch with indicator lamp for rear fog lamp

The rear fog lights can only be switched on with low-beam headlight/rear light. Rear fog lamp on: Press rocker switch down  
Rear fog lamp off: Press rocker switch up.



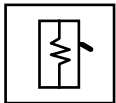
### Rocker switch with indicator lamp for hazard warning system

Activate: Press rocker switch down. The indicator lamp in the rocker switch flashes. Deactivate: Press rocker switch up.



### Rocker switch with indicator lamp for rotating warning beacon

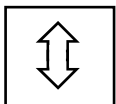
Activate: Press rocker switch down. The indicator lamp in the rocker switch illuminates. Deactivate: Press rocker switch up.



### Rocker switch with indicator lamp for wing-mirror heating

Activate: Press rocker switch down. The indicator lamp in the rocker switch illuminates. Deactivate: Press rocker switch up.

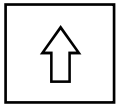
## Level adjustment



### Rocker switch for raising/lowering vehicle level

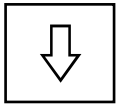
To preselect the verticle direction of movement for the *Level adjustment left / forward / backward / right* rocker switch.  
Raise vehicle level: Press rocker switch up.  
Lower vehicle level: Press rocker switch down.





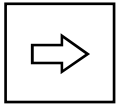
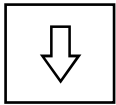
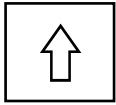
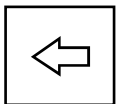
### Indicator lamp for raising vehicle level

Illuminates if the *Raise/lower vehicle level* rocker switch has been pressed up.



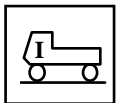
### Indicator lamp for lowering vehicle level

Illuminates if the *Raise/lower vehicle level* rocker switch has been pressed down.



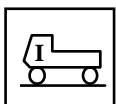
### Rocker switch for left / forward / backward / right level adjustment

Raises or lowers the truck crane to the left, forward, backward or to the right (depending on the position of the *Raise / lower vehicle level* rocker switch).



### Indicator lamp for no on-the-road level

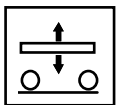
Illuminates when the truck crane *Level adjustment* key switch is not at on-the-road level.



### Rocker switch for on-the-road level

Activate: Press the rocker switch down, until on-the-road level is reached.

The No on-the-road level indicator lamp goes out when the truck crane has reached the on-the-road level.

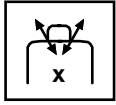


### Rocker switch for raising / lowering truck crane

Raise truck crane: Press rocker switch up

Lower truck crane: Press rocker switch down

## Heating system

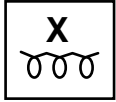


### Rocker switch for roof ventilator

Ventilate: Press rocker switch up

Off: Rocker switch in central position

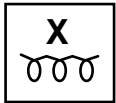
Blow air: Press rocker switch down



### Rocker switch with indicator lamp for additional heating (additional equipment)

Activate: Press rocker switch down. The indicator lamp in the rocker switch only indicates that the switch has been activated. It does not indicate whether the heating system ignited.

Deactivate: Press rocker switch up. The indicator lamp in the rocker switch goes out.



### Indicator lamp for additional heating system (additional equipment)

Illuminates when the heating system has ignited.

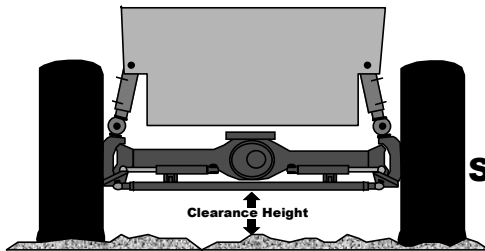
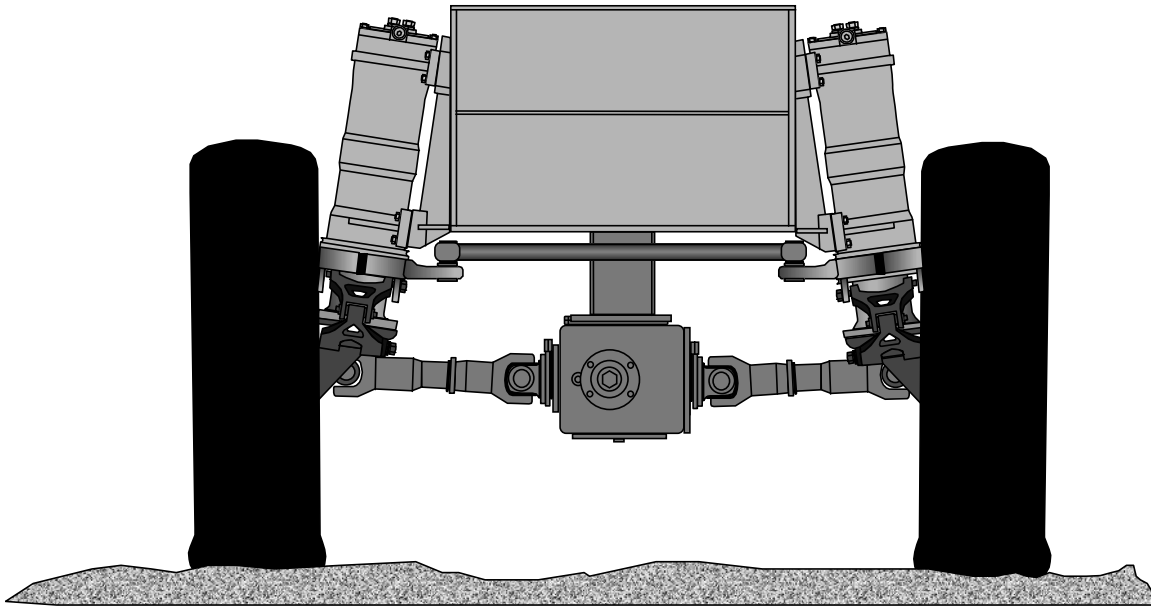
## Other operating instruments



### Warning lamp for driver's cab locking system

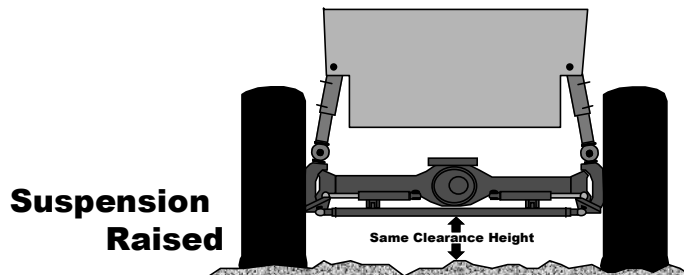
Illuminates if the driver's cab is not locked in normal position.

# Megastrut Suspension Operation

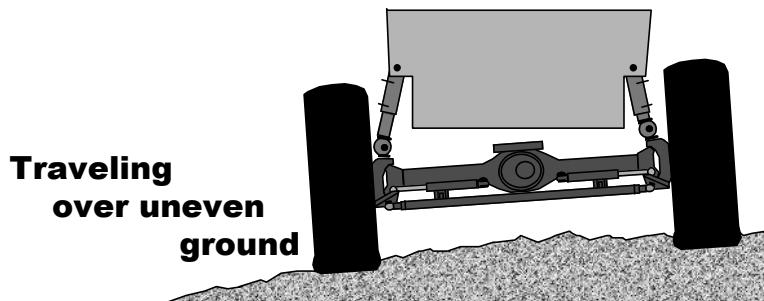


**Suspension Lowered**

***Conventional Suspension***

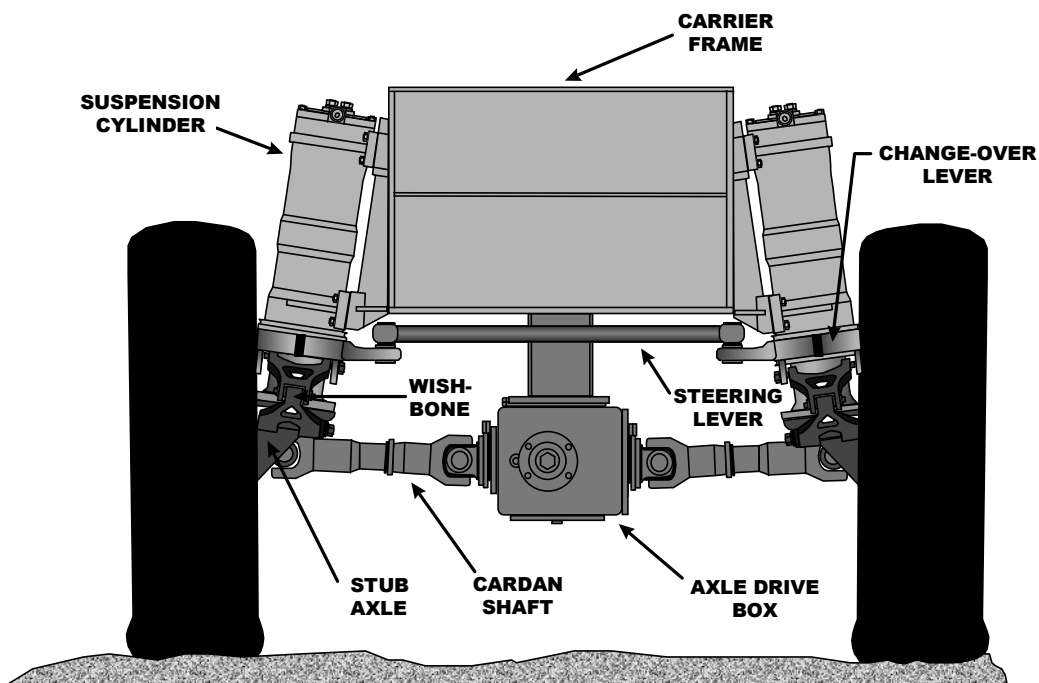


**Suspension Raised**

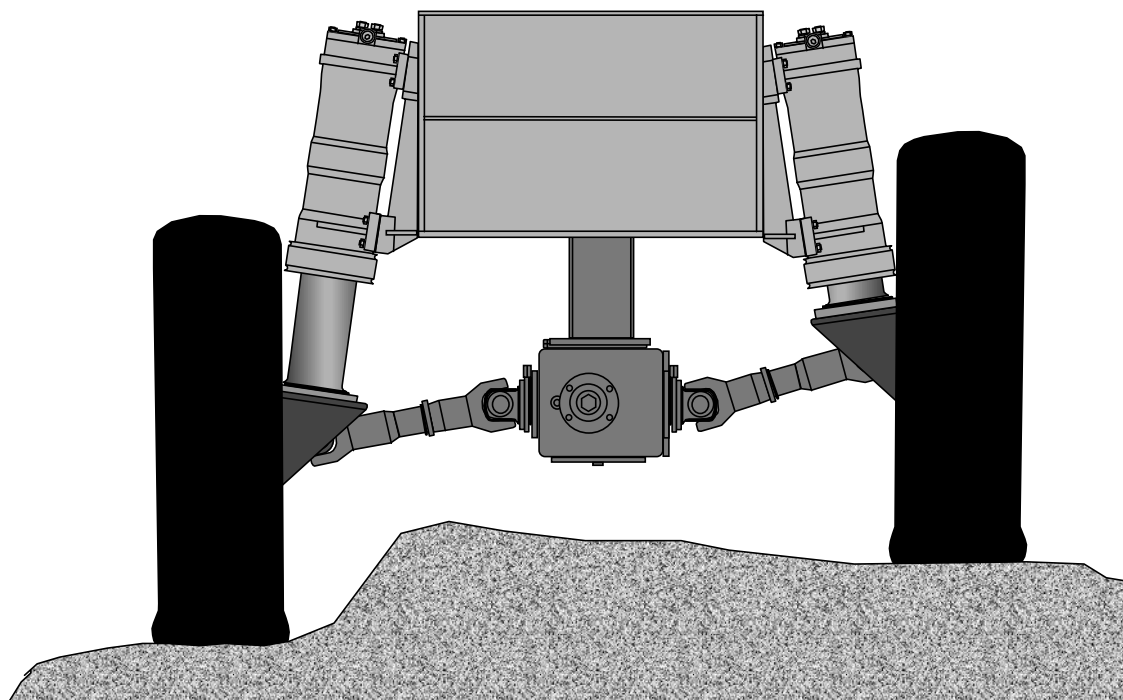


**Traveling over uneven ground**

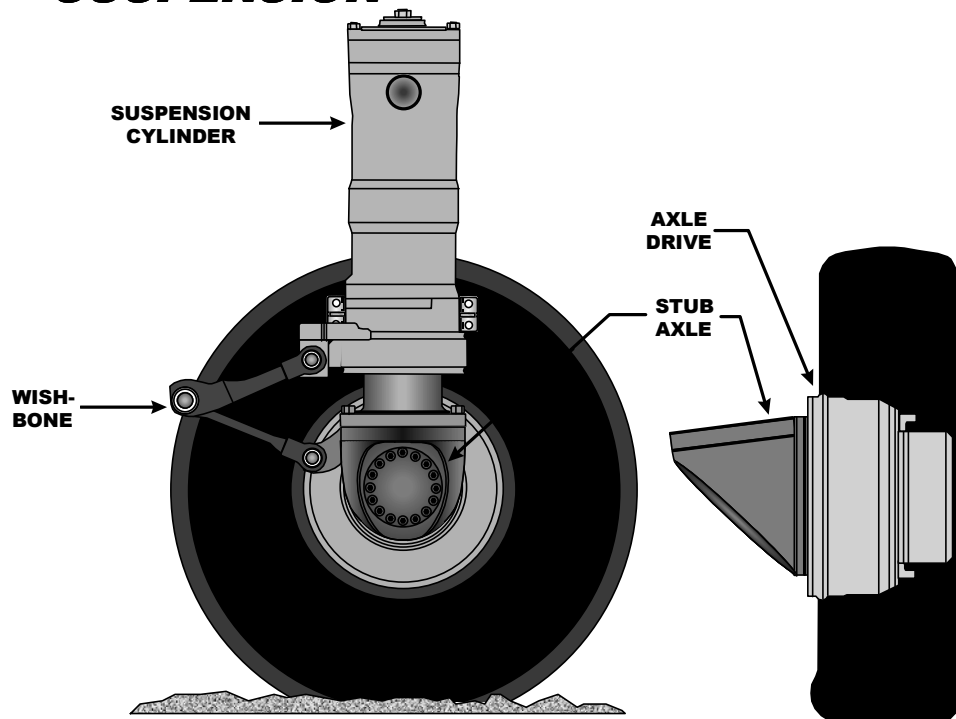
# MEGA-TRACK SUSPENSION



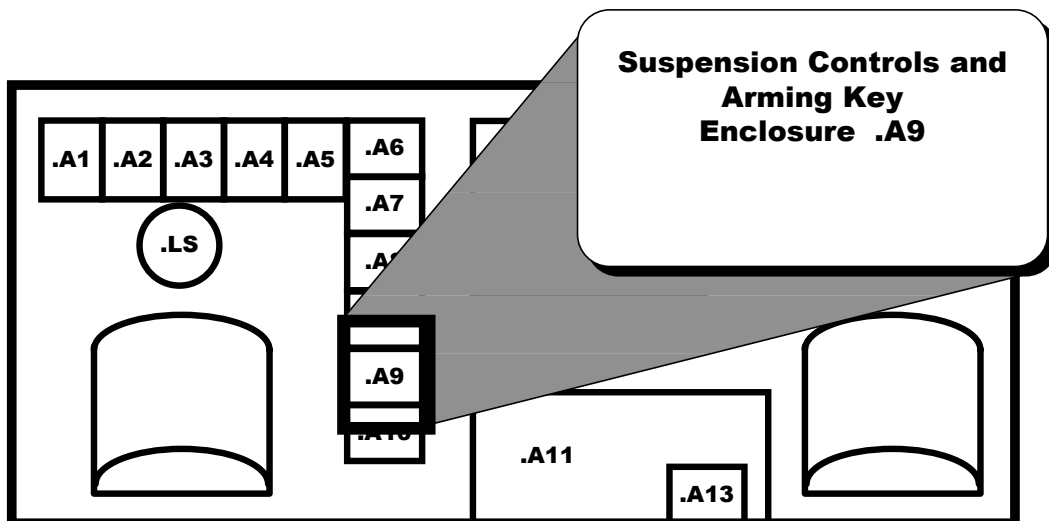
## OFF-ROAD VERSATILITY



# MEGA-TRACK SUSPENSION

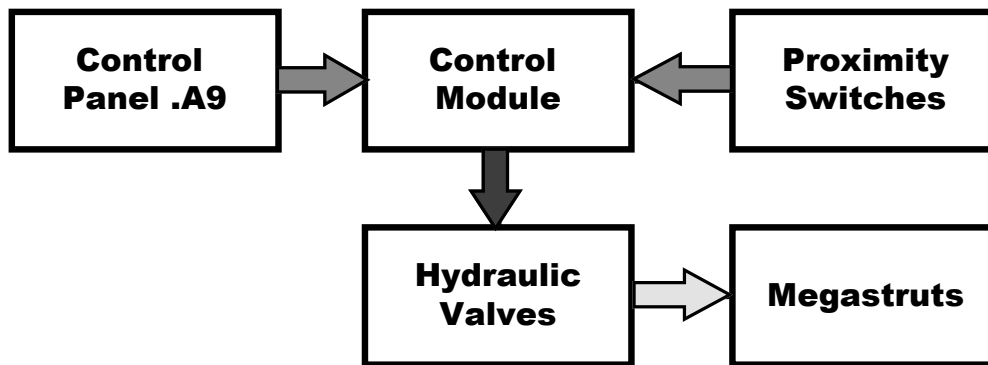


## GMK 5130 Carrier Cabin Layout

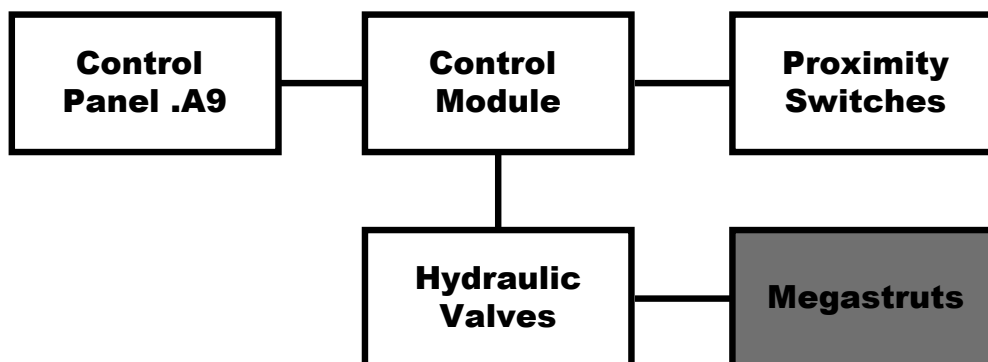


Print #30080887 Unterwagen GMK5130/5130 Cummins Equipped







# ***Megatrack Suspension System Layout***

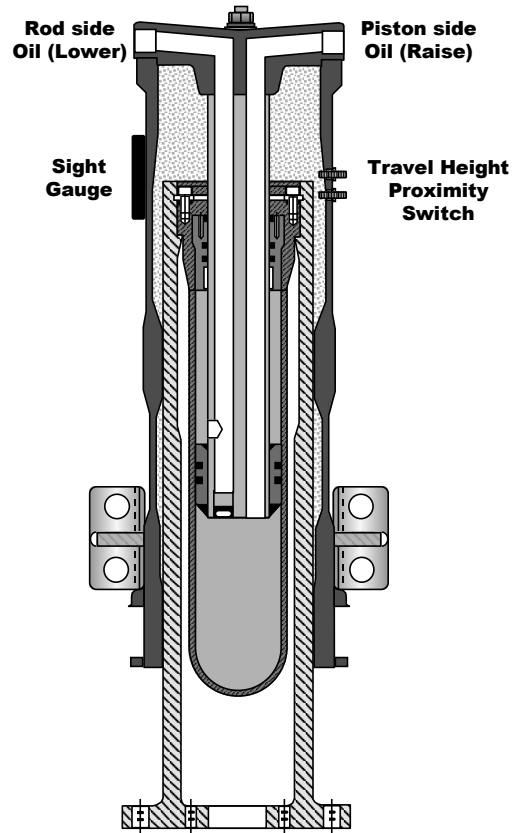


# ***Megatrack Suspension System Layout***

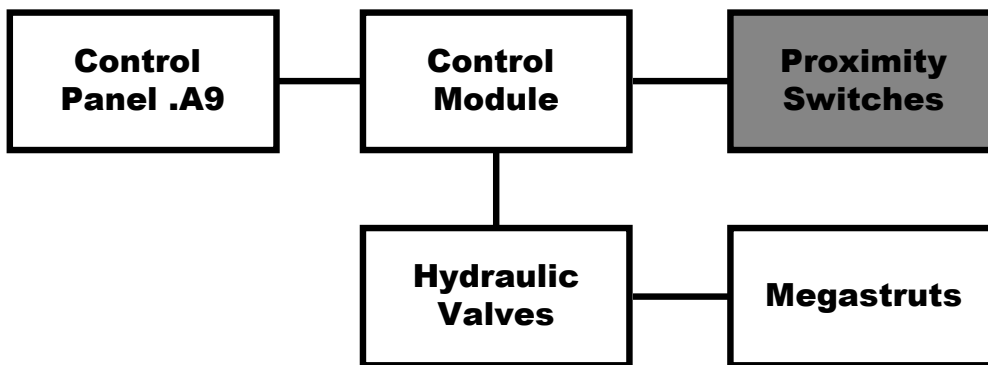


# MEGA-STRUT

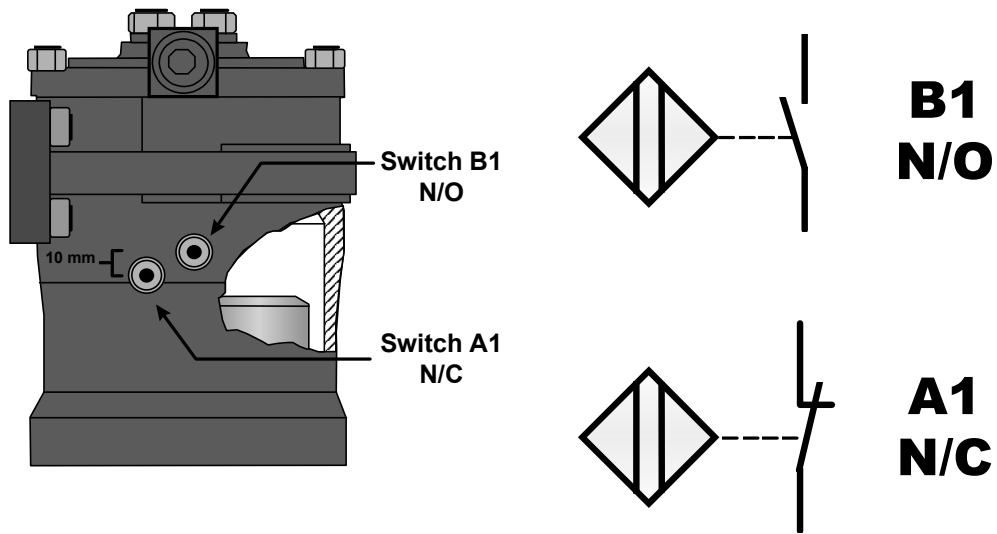
-  Outer Cylinder
-  Main Hydraulic Piston
-  Inner Hydraulic Cylinder
-  Protective Cylinder Attached to Inner Cylinder
-  Inner Cylinder & Protective Cylinder Attached
-  Strut Lube (SKD-170 Revolver part #1373 458)



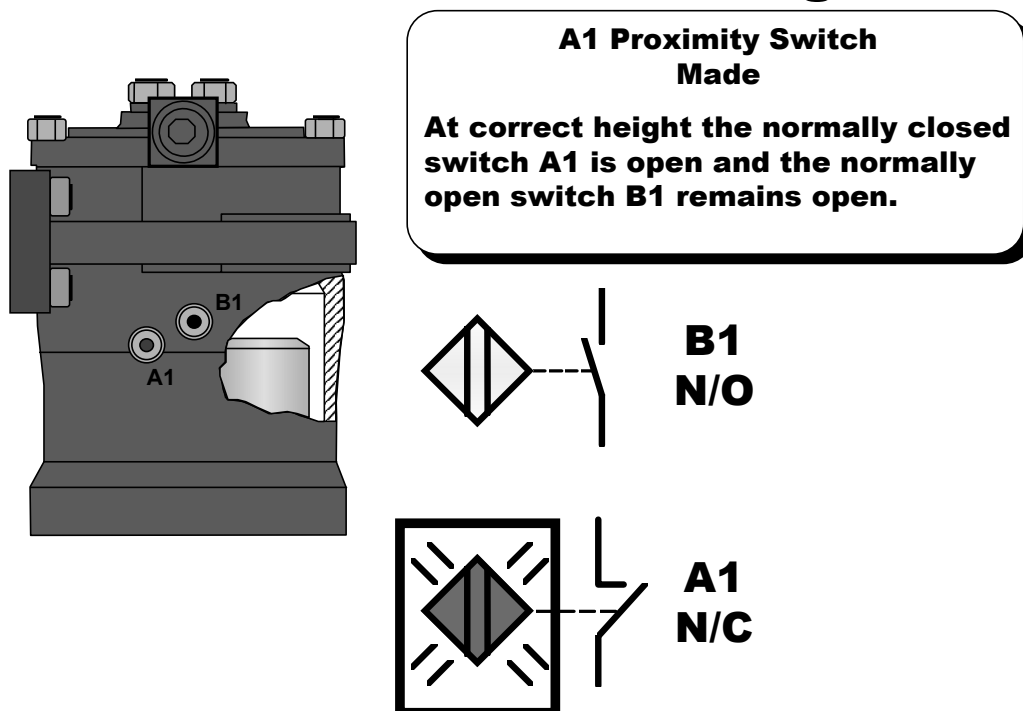
## Megatrack Suspension System Layout



# Suspension Proximity Switches

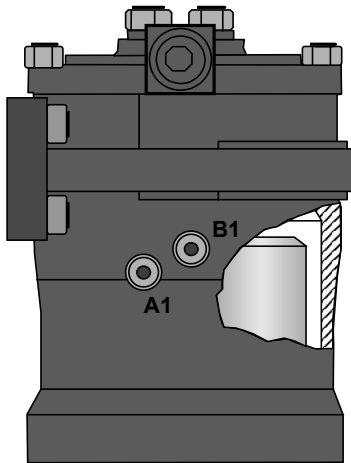


## Strut at Auto Ride Height



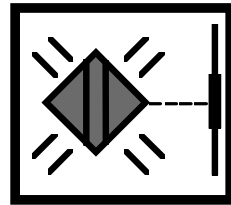


# Vehicle is Low

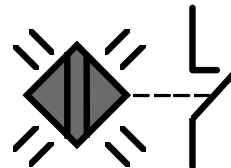


**B1 Proximity Switch Made**

With the vehicle below highway travel height the N/O switch B1 will be closed and the N/C switch A1 will be open. This will cause a command voltage to be routed back to the electronic module which then the direction and flow valves will be energized and the vehicle will begin to rise.

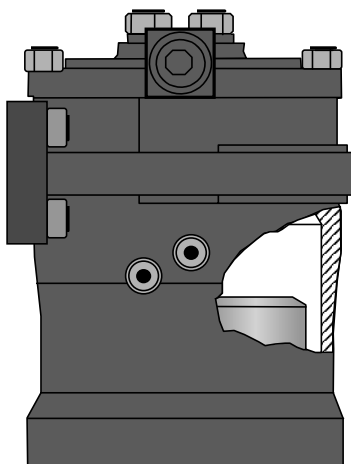


**B1  
N/O**



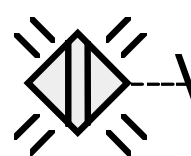
**A1  
N/C**

# Vehicle is High

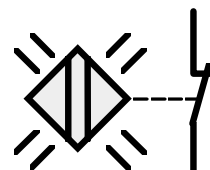


**A1 Proximity Switch Not Made**

Switch A1 is closed and B1 switch is open which will cause a command voltage to be routed back to the electronic module energizing the direction valves and the vehicle will begin to lower. (Hydraulic pressure is not required, as the vehicle will lower by its own weight).

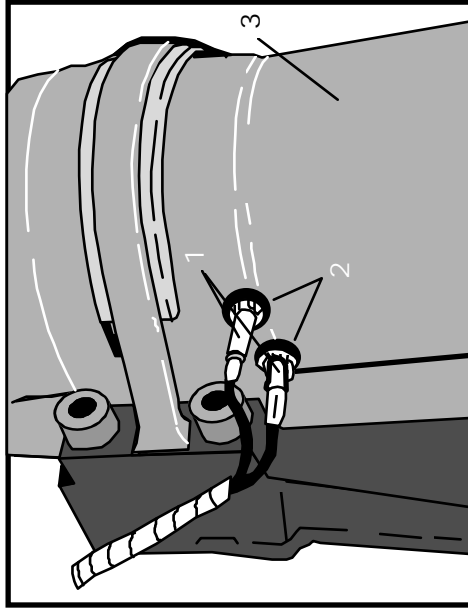


**B1  
N/O**

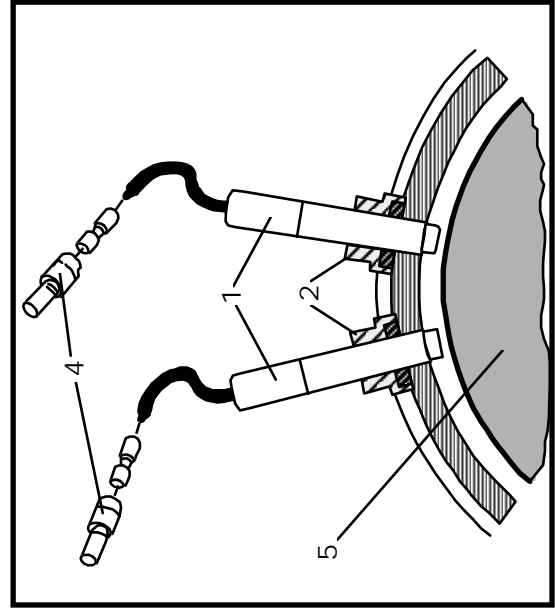


**A1  
N/C**

## Replacing suspension proximity switches:



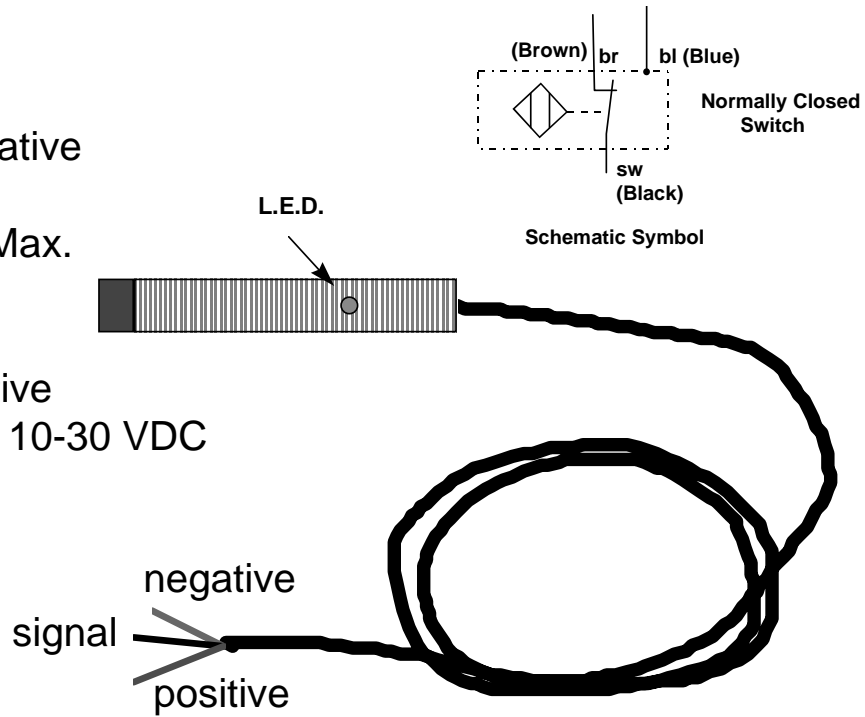
1. Completely lower the crane with the carrier level adjustment system.
2. Switch off the diesel engine and secure to prevent unauthorized starting.
3. Disconnect plug connector (4) of the corresponding proximity switch on the inside of the carrier frame from the cable tree.
4. Loosen lock nut (2) and unscrew the defective proximity switch (1) from the suspension cylinder (3).
5. Screw in new proximity switch tight up against the supporting element (5), then back off three turns.
6. Tighten lock nut.
7. Start diesel engine.
8. Actuate automatic carrier level adjustment system.



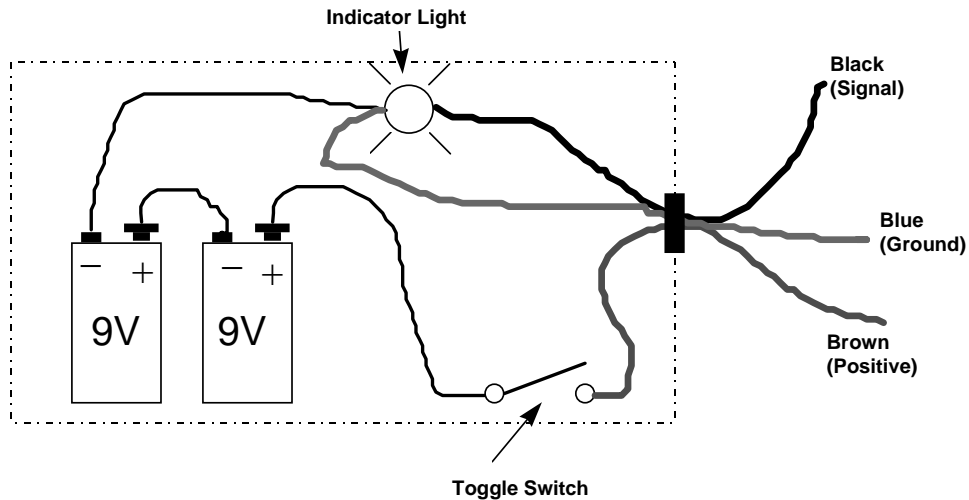
\*\* The carrier must adjust to the “on-the-road” level and the warning light must go out.

### Proximity Switch

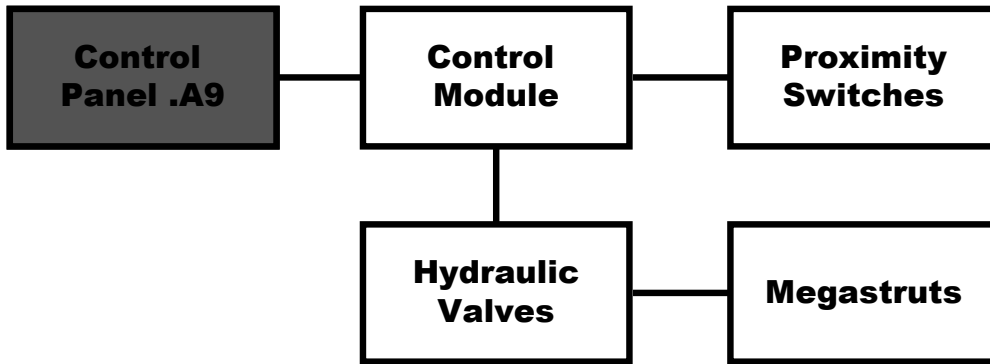
- 1. Blue wire - Ground or Negative
- 2. Black wire - Signal Output Max. 200mA
- 3. Brown wire - Supply or Positive Voltage Range 10-30 VDC



### Proximity Switch Test Box

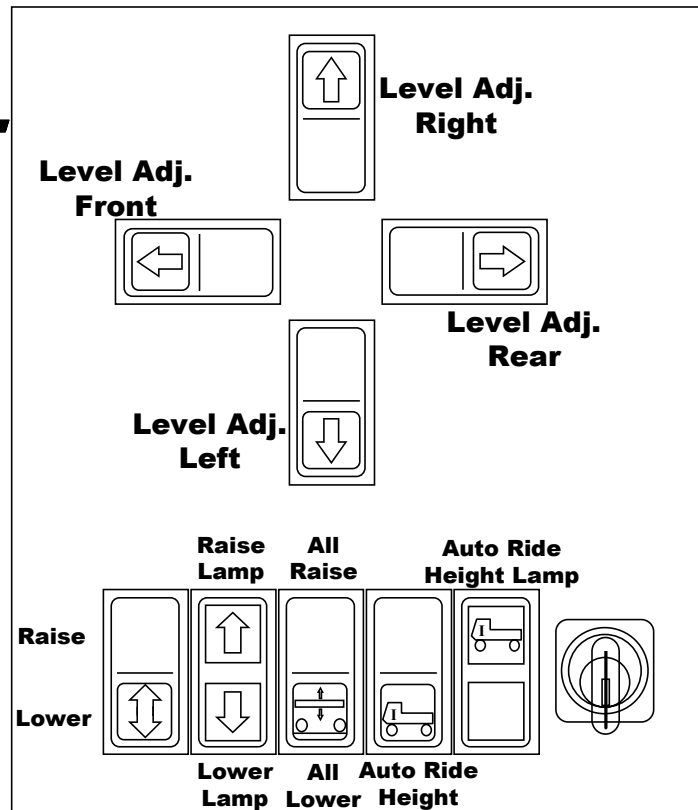


# Megatrack Suspension System Layout

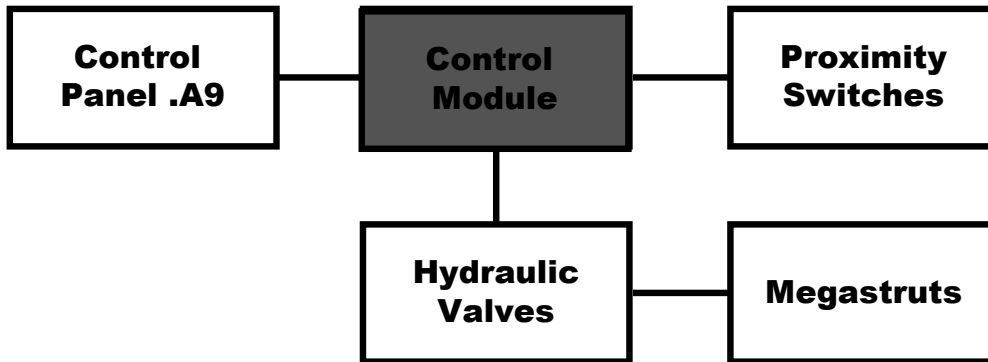


## MEGA-STRUT

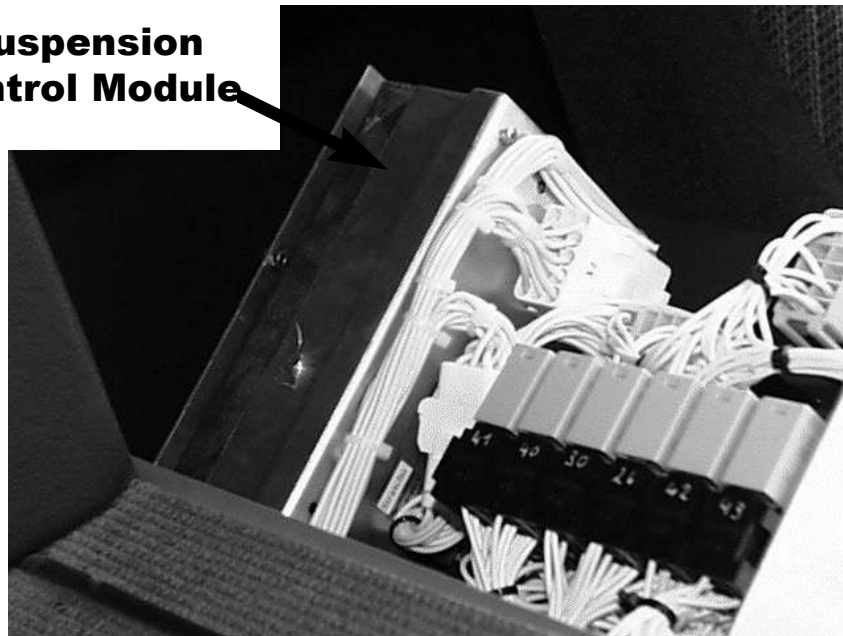
### Control Panel .A9



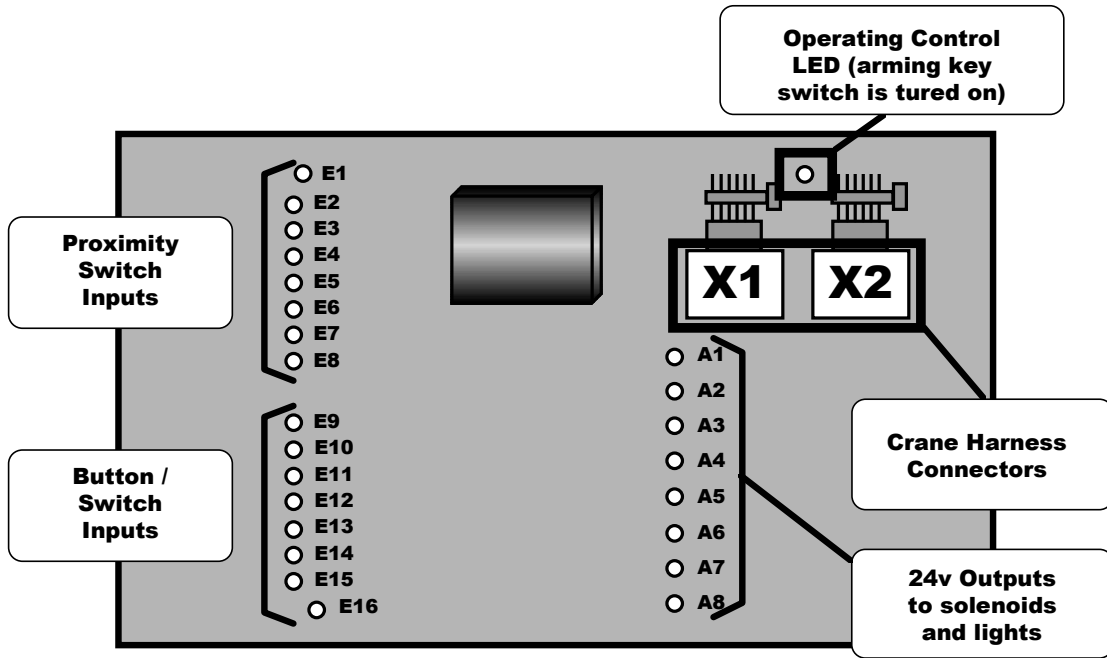
# Megatrack Suspension System Layout



**Suspension Control Module**

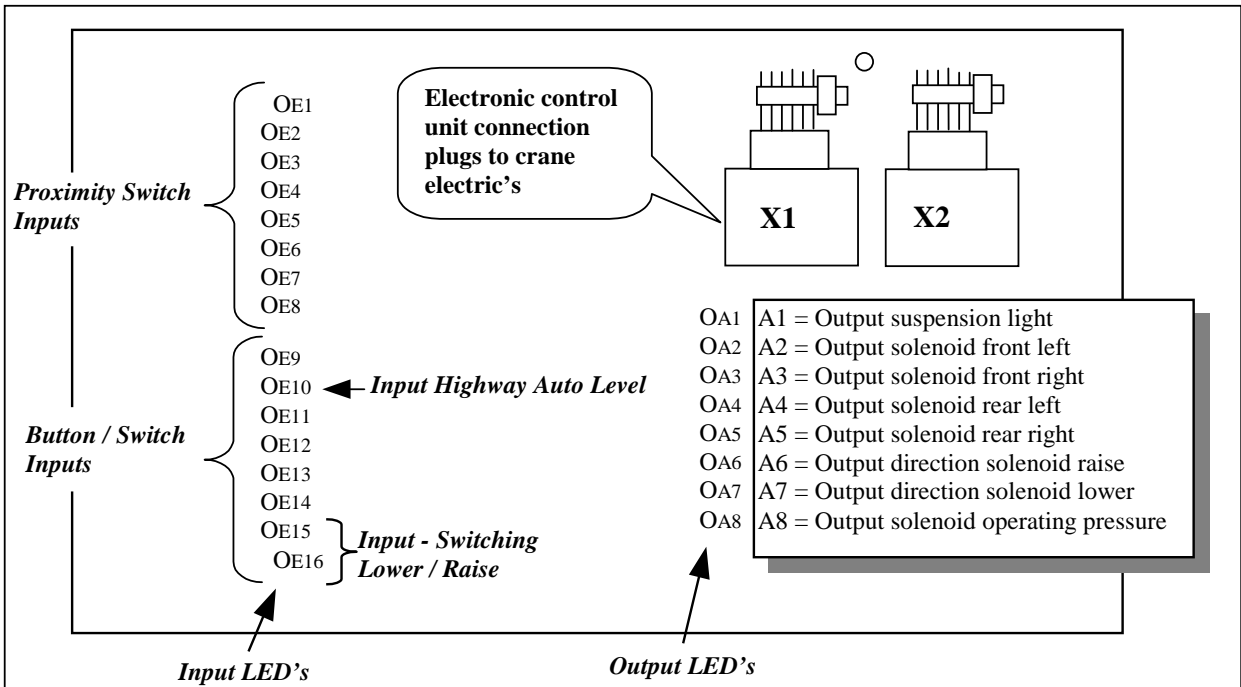


## **.A9 Carrier Enclosure Right Side**



## Electronic Suspension Control

This unit is located below the suspension control module in the driver's cab.



- E1 = Input B1 front left
- E2 = Input A1 front left
- E3 = Input B2 front right
- E4 = Input A2 front right
- E5 = Input B3 rear left
- E6 = Input A3 rear left
- E7 = Input B4 rear right
- E8 = Input A4 rear right
- E9 = Input front
- E10 = Input auto suspension
- E11 = Input right
- E12 = Input rear
- E13 = Input all
- E14 = Input left
- E15 = Input raise
- E16 = Input lower

**Connection plug X1**

- X1/1 = Identification key
- X1/2 = Output suspension level light
- X1/3 = Input highway auto level
- X1/4 = + 24 volt power supply
- X1/5 = E9 input front
- X1/6 = E11 input right
- X1/7 = E12 input rear
- X1/8 = E14 input left
- X1/9 = E13 input all
- X1/10 = E16 Input lower
- X1/11 = E15 Input raise
- X1/12 = 24 volt power for solenoids
- X1/13 = 0 volt ground for solenoids
- X1/14 = 0 volt ground for proximity switches
- X1/15 = Output to solenoid, operating pressure

**Connection plug X2**

- X2/1 = E3 input from B2 front right
- X2/2 = Identification key
- X2/3 = E1 input from B1 front left
- X2/4 = E7 input from B4 rear right
- X2/5 = E5 input from B3 rear left
- X2/6 = E4 input from A2 front right
- X2/7 = E2 input from A1 front left
- X2/8 = E8 input from A4 rear right
- X2/9 = E6 input from A3 rear left
- X2/10 = Output to direction solenoid lower
- X2/11 = Output to direction solenoid raise
- X2/12 = Output to solenoid valve front right
- X2/13 = Output to solenoid valve front left
- X2/14 = Output to solenoid valve rear right
- X2/15 = Output to solenoid valve rear left

**Proximity switch function**

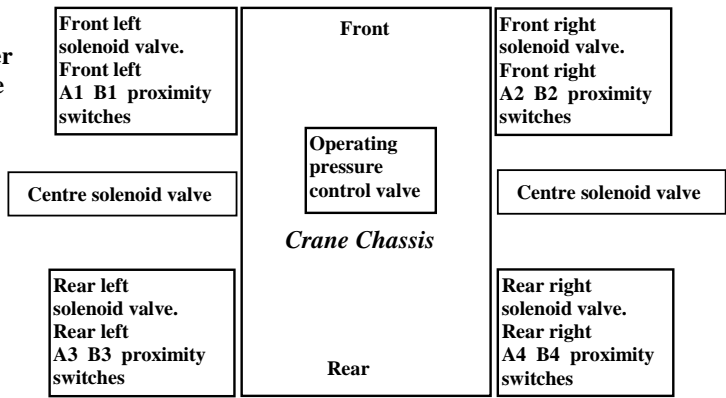
Crane below switch reference  
(Raise) AX = open / BX = closed

Crane above switch reference  
(Lower) AX = closed / BX = open

Crane at highway ride height  
(At switch reference) AX = open / BX = open

Defect  
(No function) AX = closed / BX = closed

A = N/C lower  
B = N/O raise







## Suspension

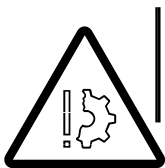
### Checking the oil level in the suspension cylinders

The suspension cylinders of the individual wheel suspension units are bolted to the vehicle frame (carrier).

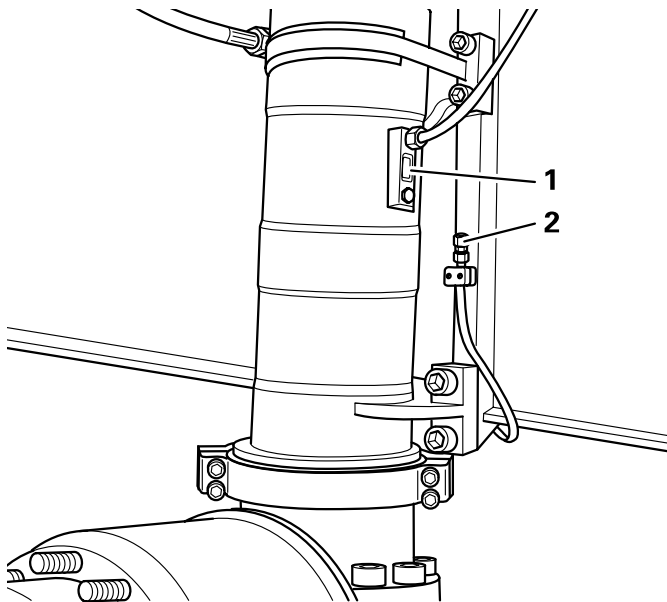
- Use the level adjustment system to lower the truck crane completely and then raise it to *on-the-road level* again (☞ *Operating manual*, Chapter *Driving with the truck crane*, Section *Vehicle height control*).



The initial complete lowering is necessary to produce the correct oil level reading.



If the oil level is above the upper marking on the inspection glass the suspension cylinder is defective and must be replaced. Inform GROVE Product Support.



- Check the oil level at the respective inspection glasses (1). The oil level must be between the markings.

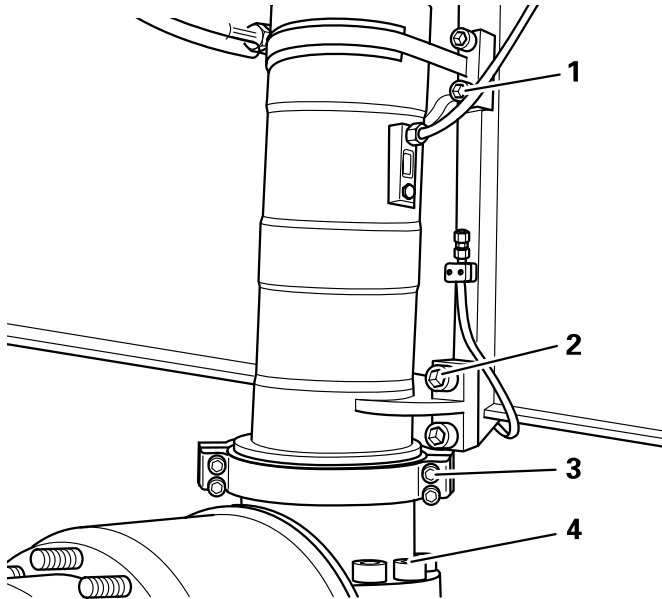
If the oil level is too low:

- Screw the high pressure squirt gun (supplied tool) to the filler connection (2).
- Inject oil up to the level of the lower marking. Only use oil specified in the *Maintenance plan*, p. 5-8.



It is difficult to inject the oil. Even so, do not fill oil through the inspection glass connections. It would not reach all lubricating points.

## Checking the tightness of retaining bolts on the suspension cylinders



- Check the tightening torques of the retaining bolts:
  - between vehicle frame/upper guide case (1)
  - between vehicle frame/lower guide case (2)
  - between support element/steering split shell (3)
  - between support element/cab with engine (4)

The tightening torques may be found in section 10.2.

## Suspension cylinder assembly

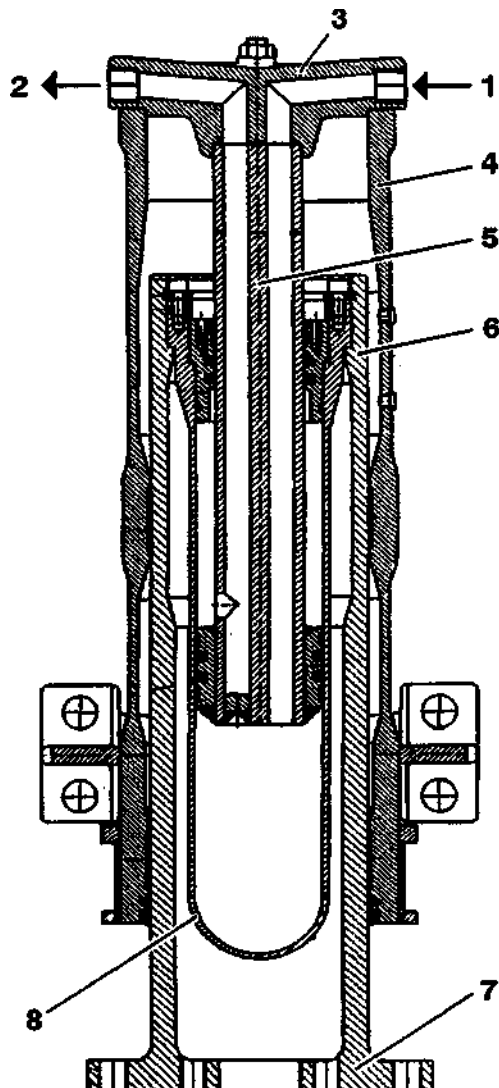
### Design and function

In the suspension struts' guide case (4) the support element (6) can be turned and is installed so that it slides horizontally, which enables it to follow the steering movements of the operating heads and to simultaneously compress and decompress.

In the support element you will find the hydraulic cylinder (8) which contains the oil entry. The hydraulic cylinder can be turned and is installed so that it can slide horizontally on the oil entry.

The suspension strut is continually supplied with hydraulic oil via the connection (1). To prevent sudden emptying when the cylinders are compressed there are throttle bores in the oil exit side of the hydraulic cylinder which reduce the oil flow to the connection (2).

The support element is lubricated by an oil filling in the guide case.



The suspension struts consist of the following components:

- 3 Housing cover
- 4 Guide case
- 5 Oil entry
- 6 Support element
- 7 Mounting flange for wheel head
- 8 Hydraulic cylinder

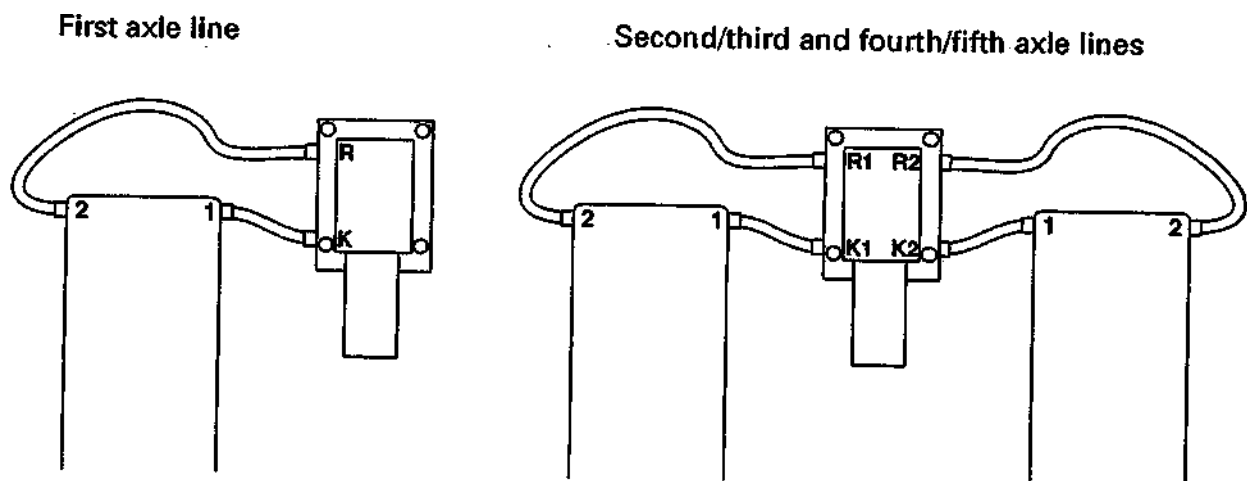
## Suspension Cylinder Connections

The connections of the suspension cylinder assembly are marked '1' and '2' on the cover. There are two types of suspension cylinder assembly. These can only be differentiated by marking the connections on the cover.

### Caution:

When replacing a suspension cylinder assembly make sure that the connections on the new suspension cylinder assembly are marked exactly the same as the old one's. If the markings are different you must turn the cover of the suspension cylinder assembly 180 degrees.

The suspension cylinder assemblies on both sides of the vehicle are, in accordance with the diagram, connected with the connections of the stop valves. The diagram portrays the left side of the vehicle (the right side is a mirror image of this).



**Technical specifications**

Length:	915 mm
Piston diameter:	100 mm
Piston stroke (total):	300 mm divided on on-the-road level into 170 mm raising 130 mm lowering
Operating pressure:	Max. 330 bar
Weight:	165 kg
Lube oil capacity:	1.8 Liters, (18 Liters total 5 axle machine) GMK7450 3.4 Liters for strut with top mounted steering

## **Troubleshooting**

**Error :** The suspension cylinder does not stay in the required position.

**Cause:** Seals in hydraulic cylinder defective.

**Remedy:** Replace Suspension cylinder

**Error:** The suspension cylinder leaks at the support element

**Cause:** Seal defective

**Remedy:** Replace suspension cylinder

## Repair work

### Preparing repair work

The level adjustment system and the suspension must not be locked, the indicator lamps in the front instrument panel must not light up.

- With repairs on the fourth or fifth axle lines: Put in off-the-road gear. The second spring accumulator of these axle lines will now be switched on.
- Lower the truck crane completely with the level adjustment system. The spring accumulators of the suspension system are depressurized in this way.
- 4 Apply parking brake.
- Activate the suspension locking system now.
- Lift up the truck crane with the outrigger.

### **Warning: A Risk of injury from rotating parts!**

Before commencing repair work, switch off the motor, take out the ignition key and make sure that the truck crane can not be used by any unauthorized persons.

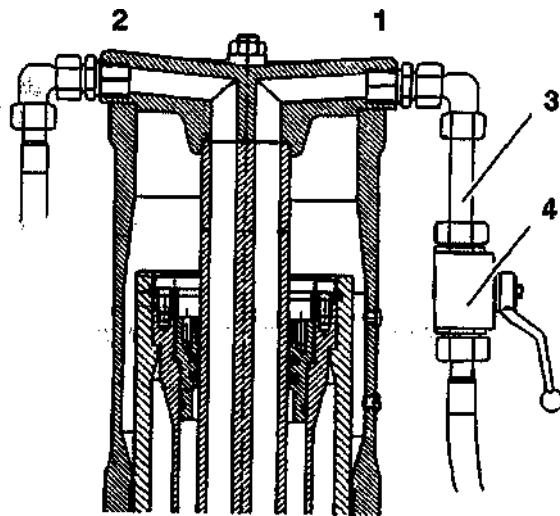
- Turn off motor, take out ignition key and make sure that the truck crane cannot be used by any unauthorized persons.

### **Caution: Pollution warning!**

When you unscrew hydraulic hoses hydraulic oil is discharged and this can damage the environment. Always collect discharged hydraulic oil in a suitable container and dispose of it properly.

## Checking Piston Seal

You yourself must make the shut-off device (consisting of the hydraulic pipe and stop cock) for checking the piston seal (do this according to the description). For this you need a seamless pipe 20 x 3 x 100 mm of St 37.4 quality (operating pressure 400 bar) with two cap nuts and cutting rings and a stop cock NW 16.



- Prepare repair work:
- Unscrew hydraulic hose on the connection (1) and collect the discharged hydraulic oil.
- Install shut-off device (3) and (4) between the connection (1) and the line to the stop valve.
- Open stop cock (4).

- Start the motor and retract outrigger.
- Lift the vehicle to on-the-road level with the level adjustment system.
- Turn off motor, take out ignition key and make sure that the truck crane cannot be used by any unauthorized persons.
- Close stop cock.
- Mark the on-the-road level on the suspension cylinder assembly's support element with chalk and then check if the suspension cylinder assembly sinks. If the suspension cylinder assembly sinks on its own the seals in the hydraulic cylinder are defective.

If this is the case, replace the suspension cylinder assembly:

- Turn off motor, take out ignition key and make sure that the truck crane cannot be used by any unauthorized persons.
- Remove the shut-off device on the suspension cylinder assembly's connection (1) again.



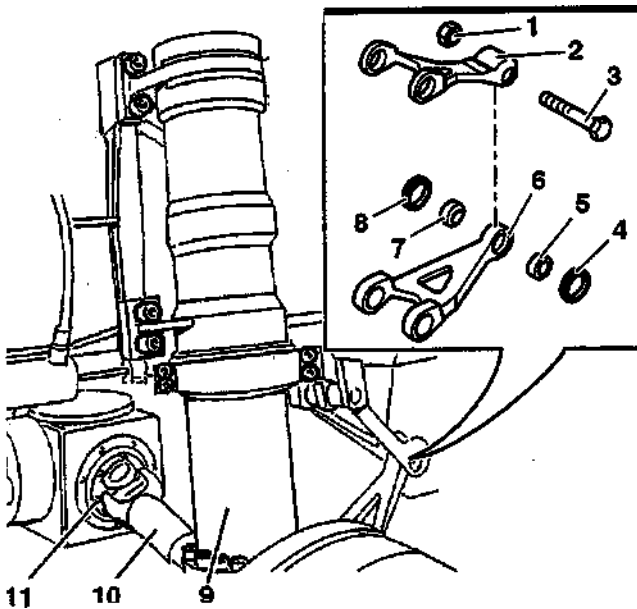
## Replacing suspension cylinder assembly

**Caution:** Make sure that the connections on the new suspension cylinder assembly are marked exactly the same as the replaced one's. If the markings are different you must turn the cover of the suspension cylinder assembly

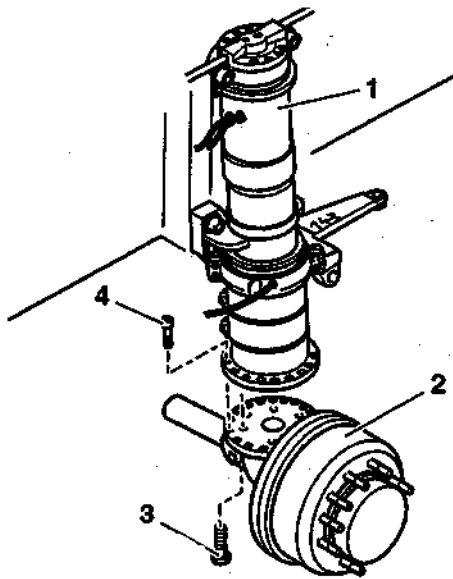
- Remove the wheel:.
- Prepare repair work:

### **Warning: Risk of damaging the suspension cylinder assembly !**

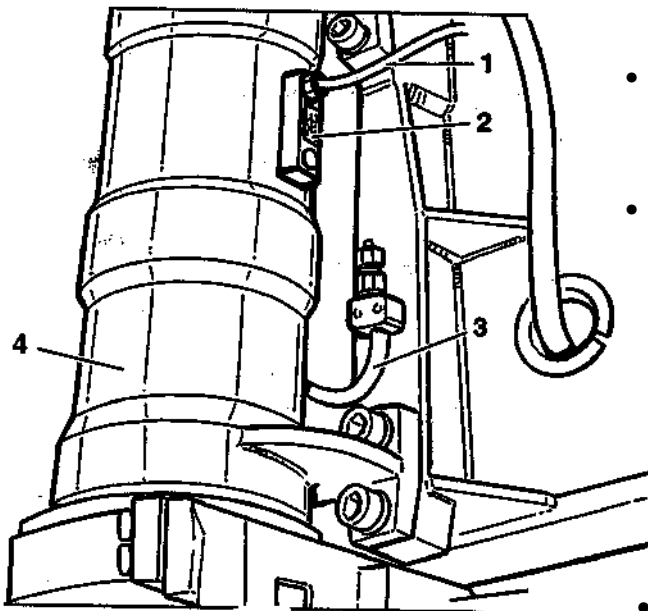
Without protection, the uncovered support element of the suspension cylinder assembly may become faulty. The suspension cylinder assembly will then leak. Protect the uncovered support element of the suspension cylinder assembly before you begin repair work.



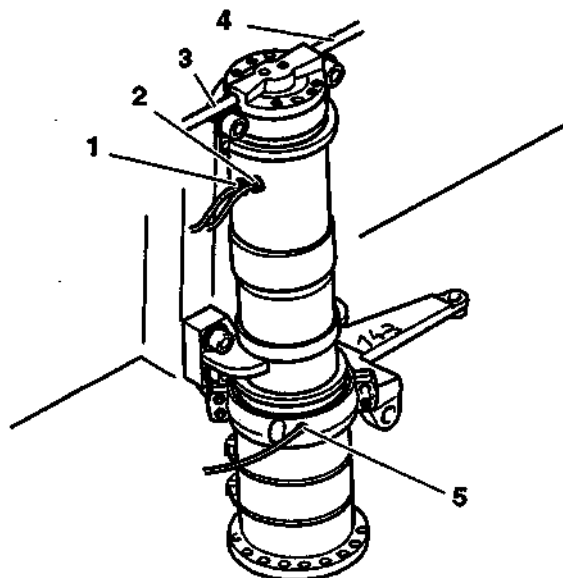
- To protect the uncovered support element (9) of the suspension cylinder assembly you can use, for example, a rubber mat secured with a cable binder.
- Unscrew and remove screw (3) and nut (1).
- Separate forced levers (2) and (6) whilst keeping an eye on V-rings (4) and (8) and axle bearings (5) and (7).  
Only for second and fifth axle lines:
- Unscrew the retaining bolts (11) of the relevant cardan shaft (10) from the flange on the central gear
- Remove cardan shaft from central gear.
- Tie both parts of the cardan shaft together with wire.



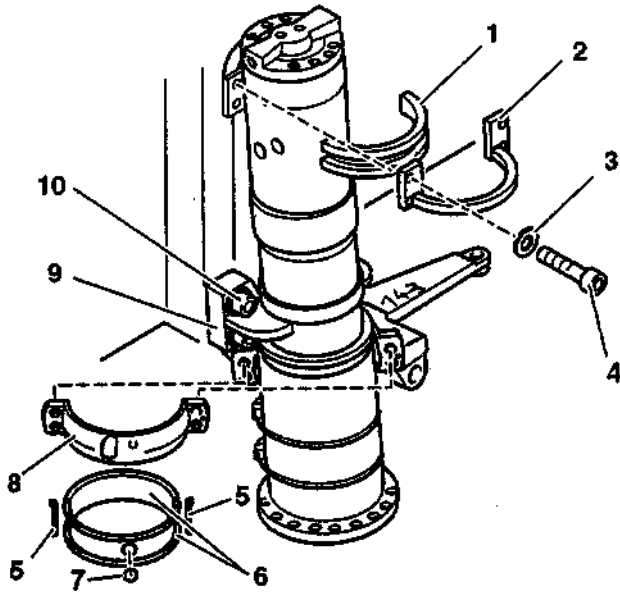
- Unscrew inside retaining bolts (3) from below out of the suspension cylinder assembly (1).
- Support wheel hub (2) from underneath with a suitable lifting device (e. g. a fork lift truck).
- Screw retaining bolts (4) out of the suspension cylinder assembly.
- Remove wheel hub and place on a suitable support.



- Unscrew hose (1) on oil level gauge glass (2) and collect discharged oil.
- Unscrew hose (3) on suspension cylinder assembly (4) and collect discharged oil.



- **Only for first and fifth axle lines:**
  - Mark both proximity switches (1) and (2)
  - Remove Lock nuts and
  - Unscrew proximity switches.
- Unscrew lubricating connection (5) on the steering split shell (6).
- Support suspension cylinder assembly from below with an appropriate stand.
- Mark hydraulic hoses (3) and (4) and unscrew them from the suspension cylinder assembly and collect discharged hydraulic oil.



- Seal the connections on the suspension cylinder assembly tightly with plugs.
- Remove steering split shell (8).
- Remove seals (5), bearing boxes (6) and O-ring (7).
- Support the suspension cylinder assembly on the holder (9) with a fork lift truck.
- Unscrew retaining bolts (4) and remove spring washers (3), bracket (2) and intermediate layer (1).
- Unscrew retaining bolts (10).  
Remove suspension cylinder assembly from carrier.

**Caution! Risk of damaging the suspension cylinder assembly !** Without protection, the ungalvanized support element of the suspension cylinder assembly may become faulty. The suspension cylinder assembly will then leak. Protect the uncovered support element of the suspension cylinder assembly before you begin repair work.

- To protect the uncovered support element of the new suspension cylinder assembly you can use, for example, a rubber mat secured with a cable binder.
- Proceed in the reverse order to install the new suspension cylinder assembly, whilst:
  - Positioning the suspension cylinder assembly so that the borings coincide with the tap holes of the inner and outer retaining bolts,
  - Cleaning the bearing boxes and the seals in the steering arm,
  - Using a new O-ring (7) and
  - Checking, and if necessary replacing, the O-rings in the screw connections of the hydraulic hoses.

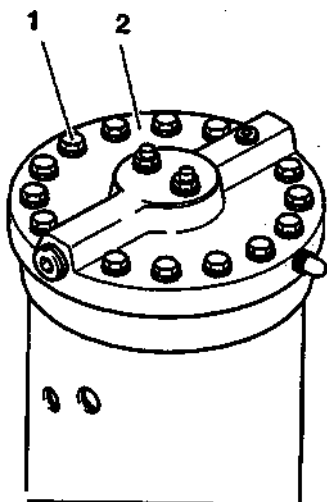
- **Only for first and fifth axle lines:**

- Screw the proximity switch according to the markings as far as possible in the suspension cylinder assembly and then unscrew for three turns.
- Tighten lock nut.
- Check oil level in suspension cylinder assembly: *Maintenance manual*.
- Check hydraulic oil level: *Maintenance manual*.
- Check toe-in

**Turning the suspension cylinder assembly's cover**

**Caution!** Turn the cover only when a new suspension cylinder assembly's markings on the connections do not correspond with those of the replaced suspension cylinder assembly.

**Caution!** When the cover is turned the seals in the cover must be replaced. Have new seals ready when you turn the cover.



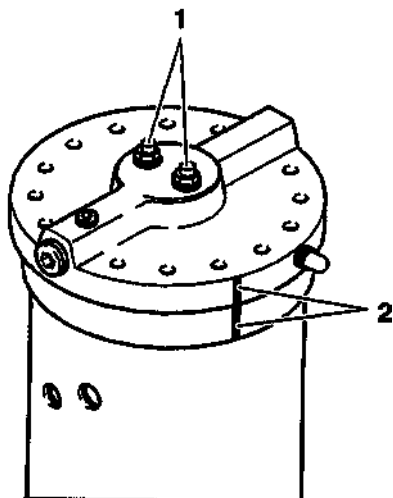
- Remove all retaining bolts (1) of the cover (2).

- Turn the cover 180° whilst holding the suspension cylinder assembly secure.

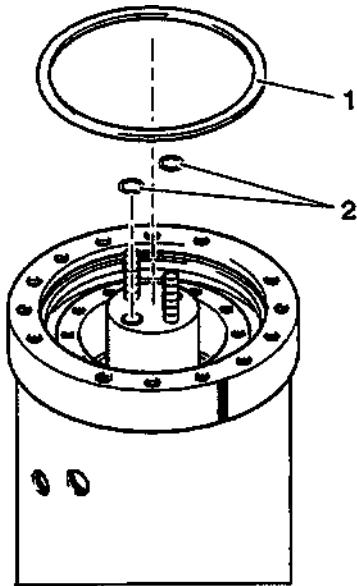
- Mark the position of the cover (2).

- Remove nuts (1).

- Remove cover.



### Suspension cylinder assembly

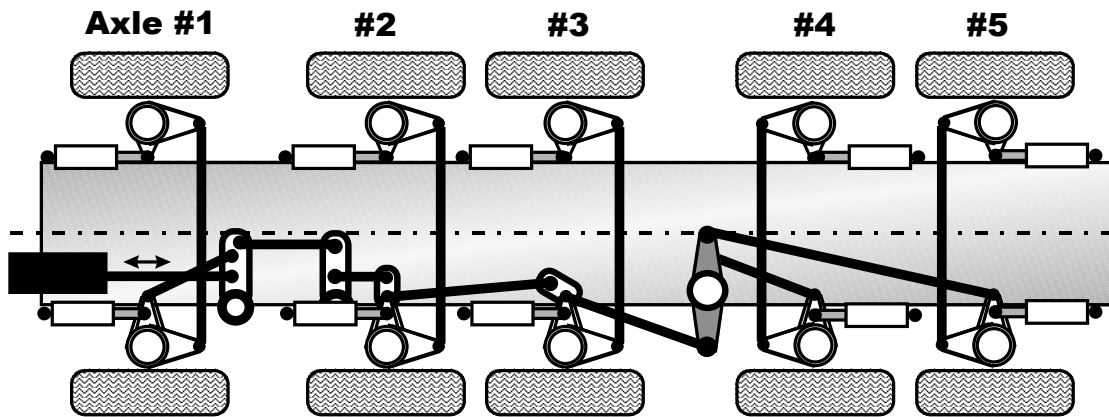


- Replace seal (1) and O-rings (2).
- Position the cover again according to the markings.
- Tighten nuts.
- Tighten retaining bolts.

# **GMK I**

## ***Steering***

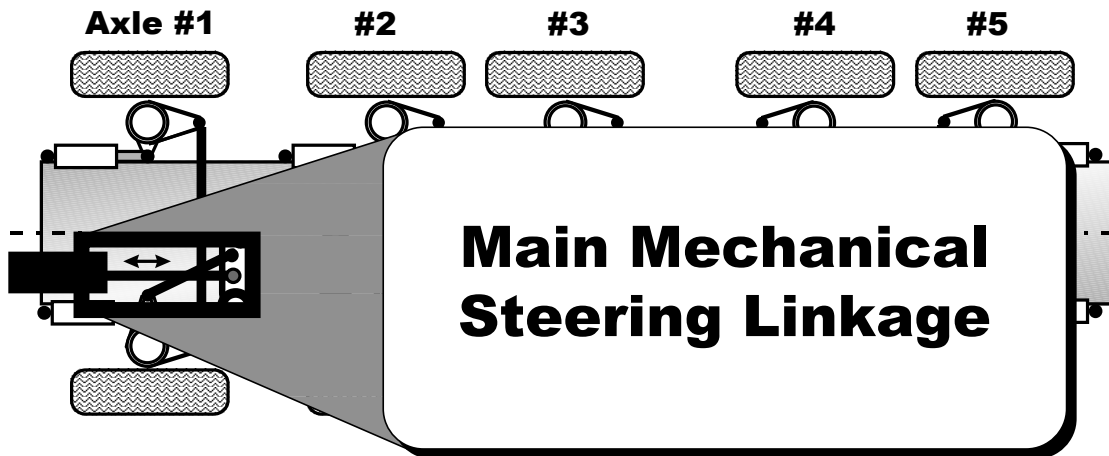
**GROVE**<sup>®</sup>  
TRAINING INSTITUTE



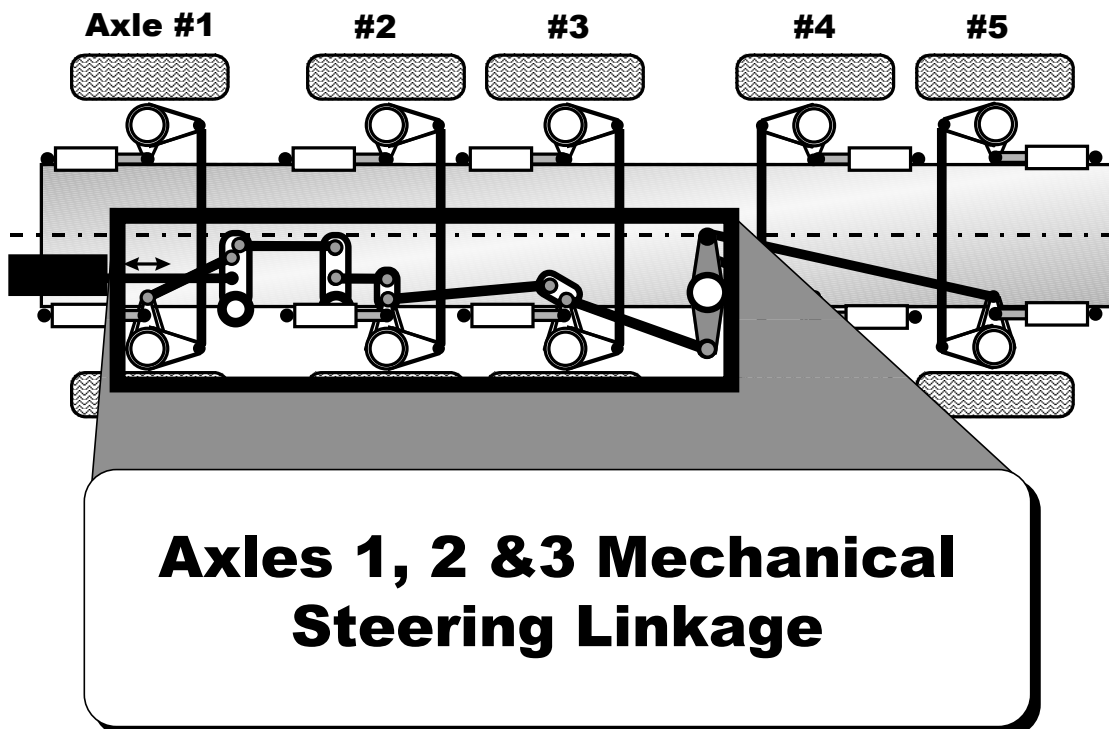
**GMK 5 Undercarriage View**



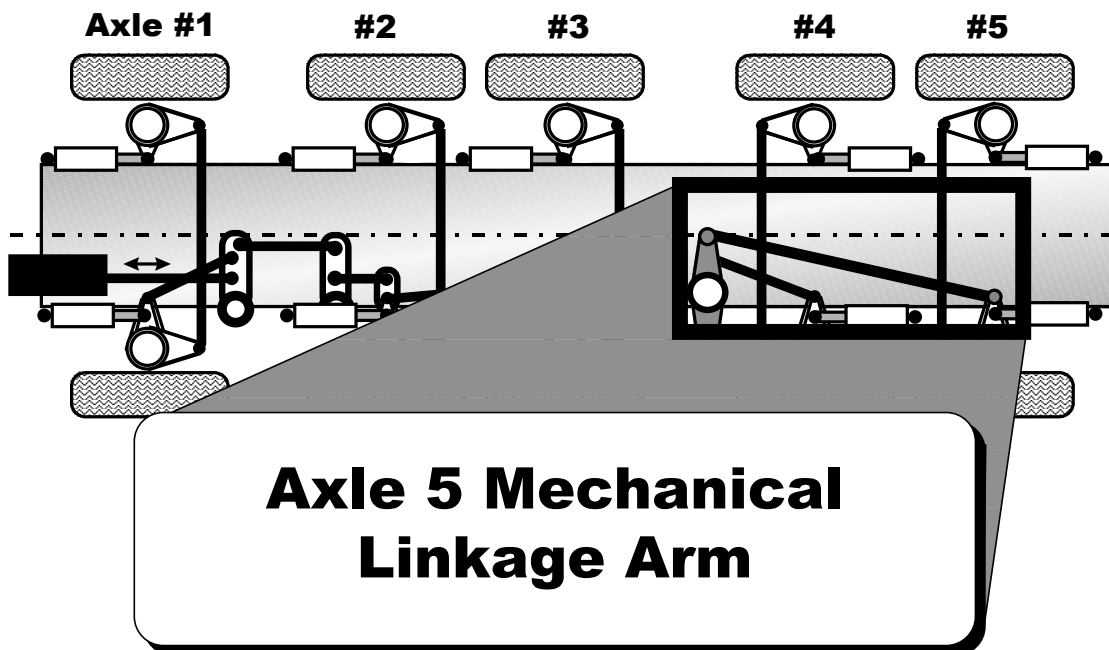
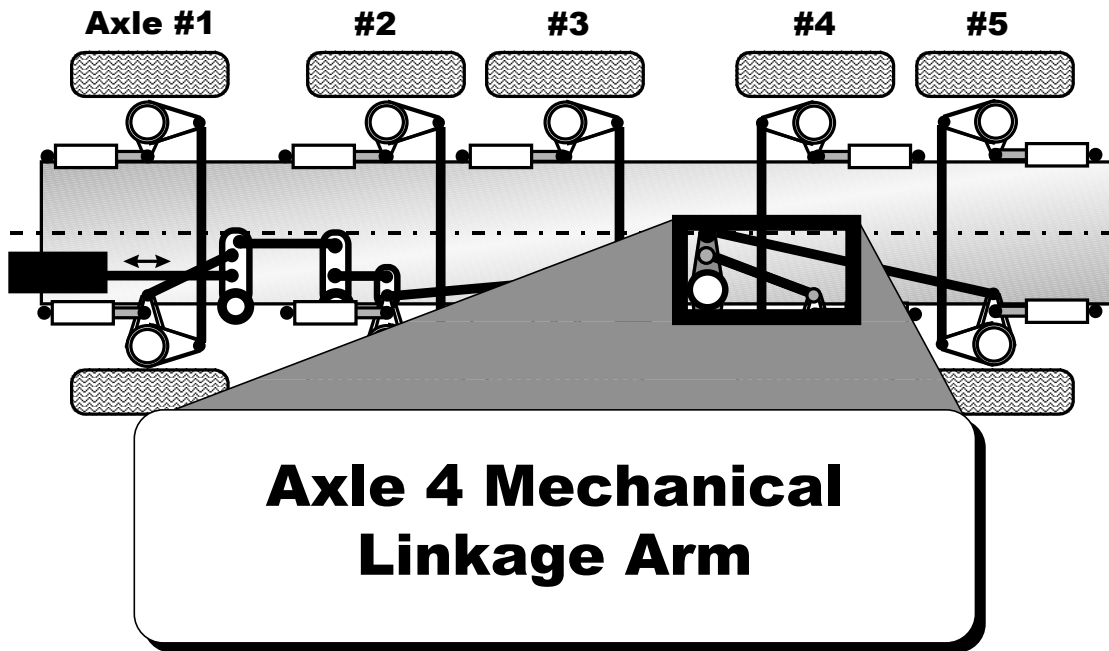
**Undercarriage Components**

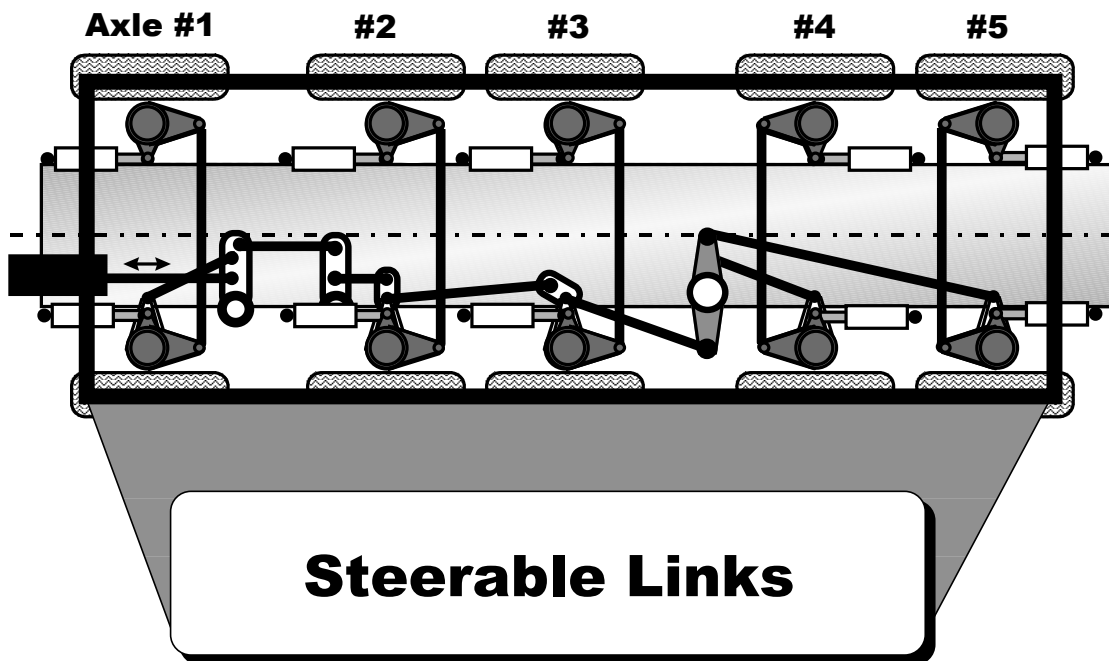
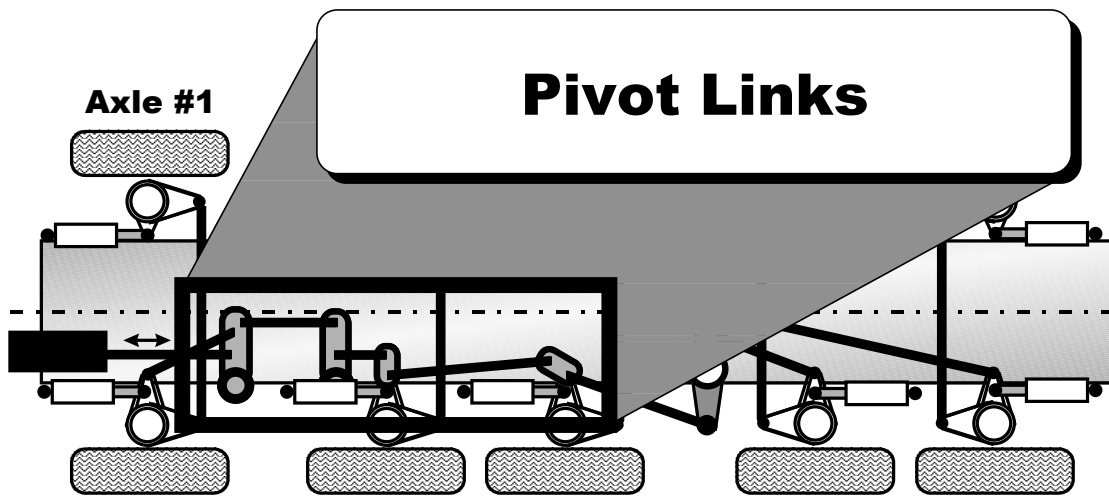


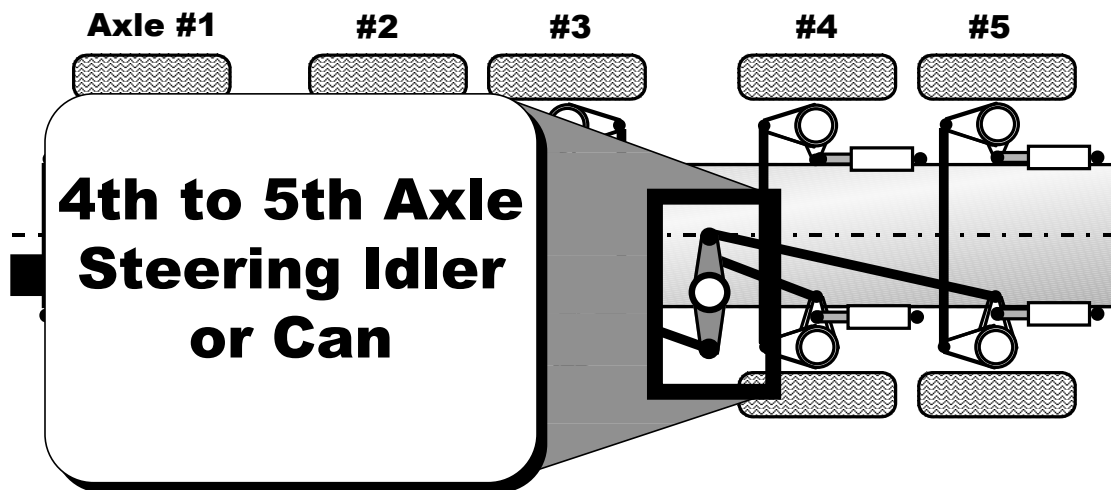
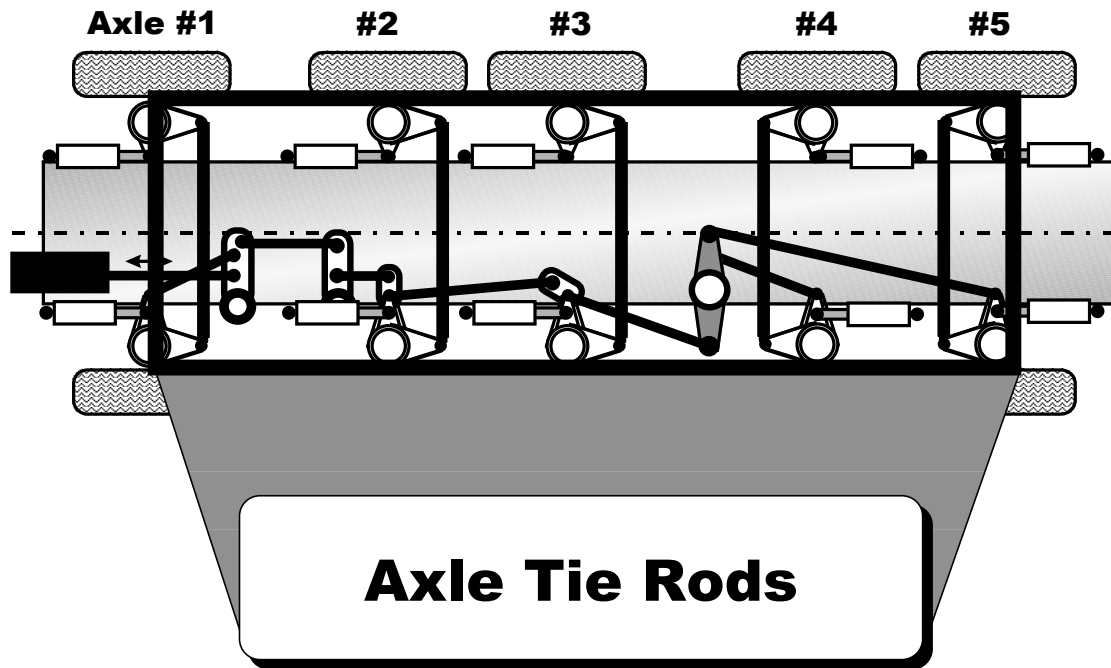
## Undercarriage Components



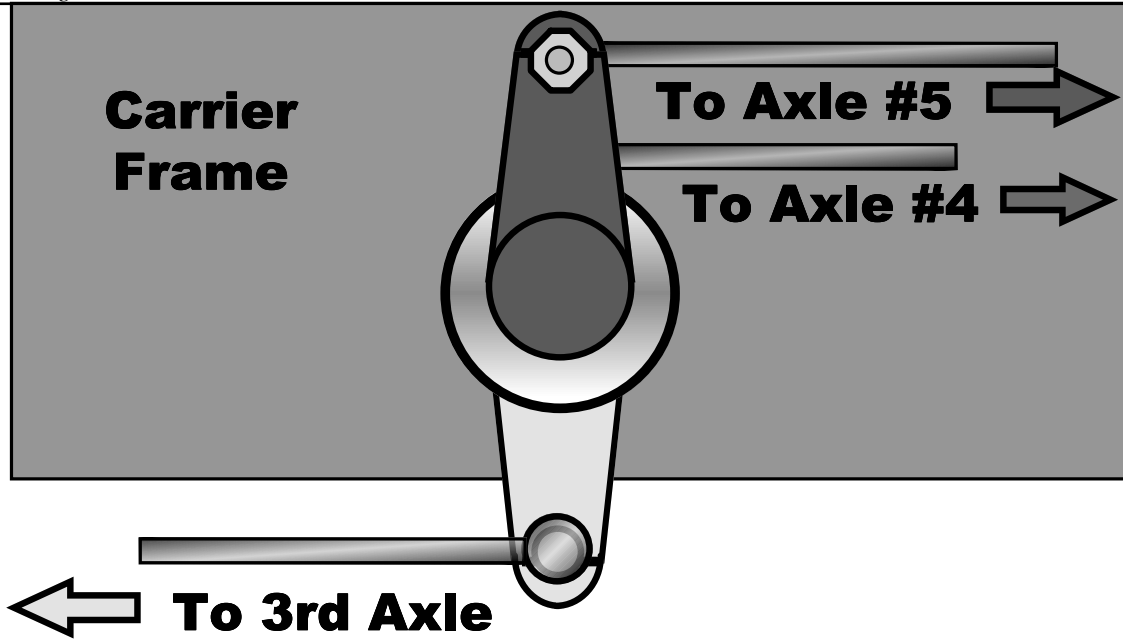




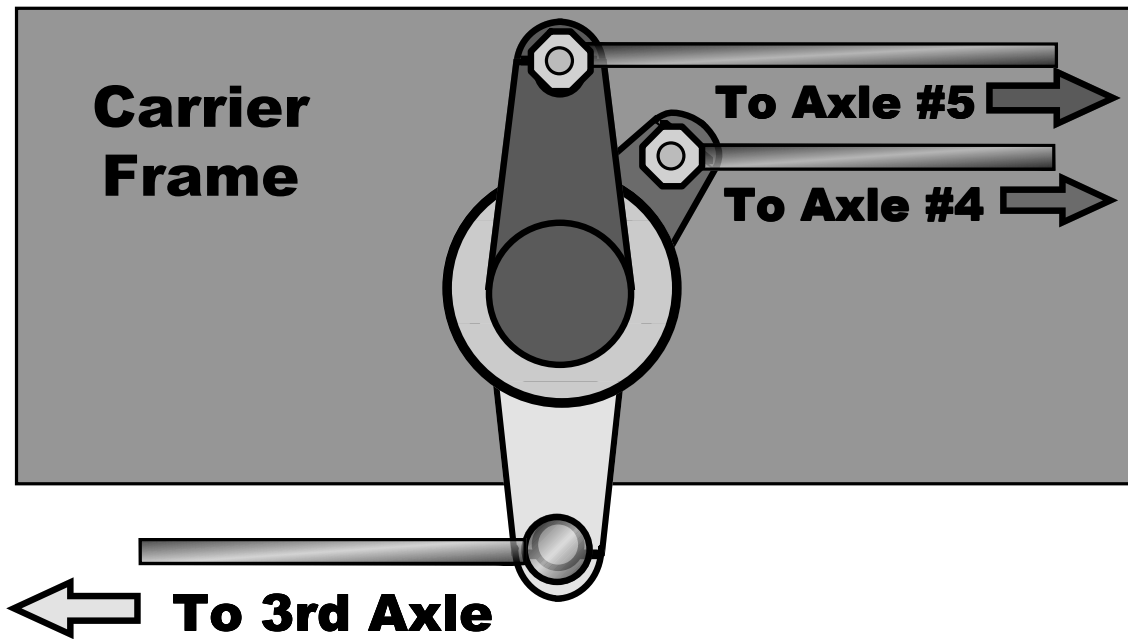




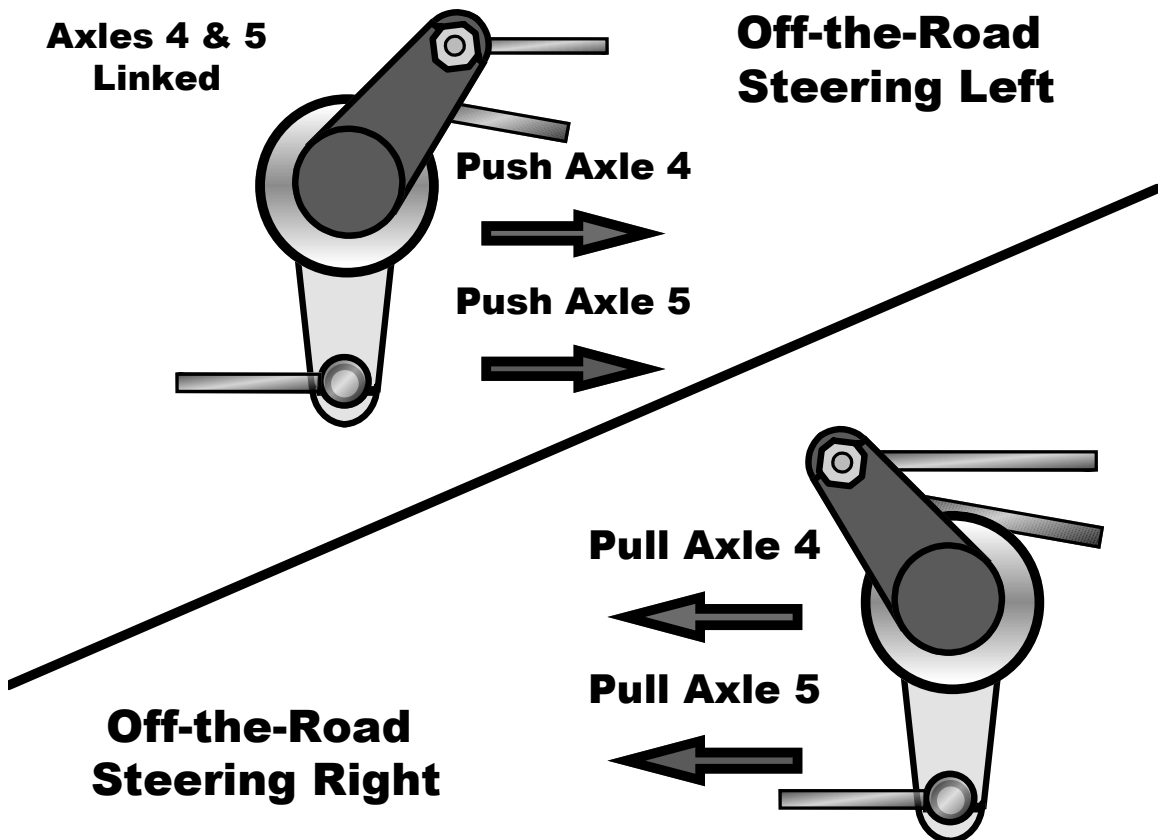
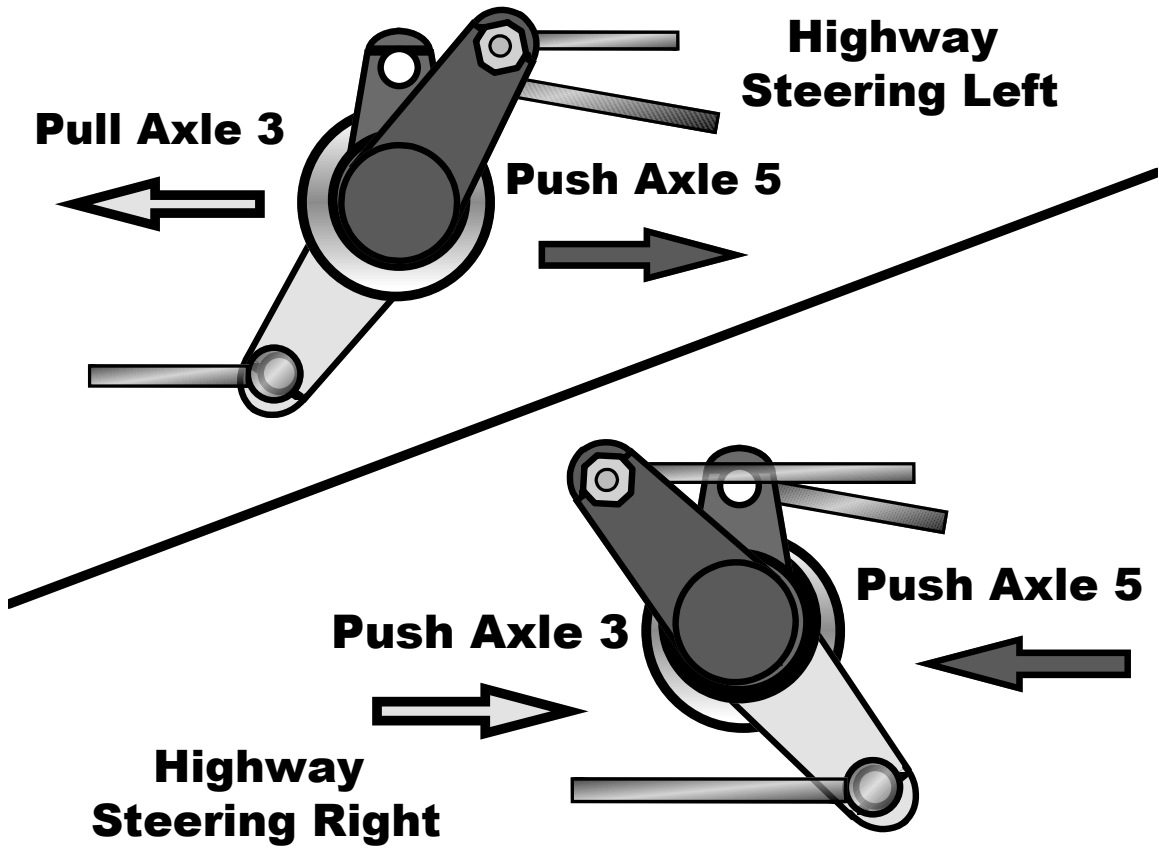
## Undercarriage Components

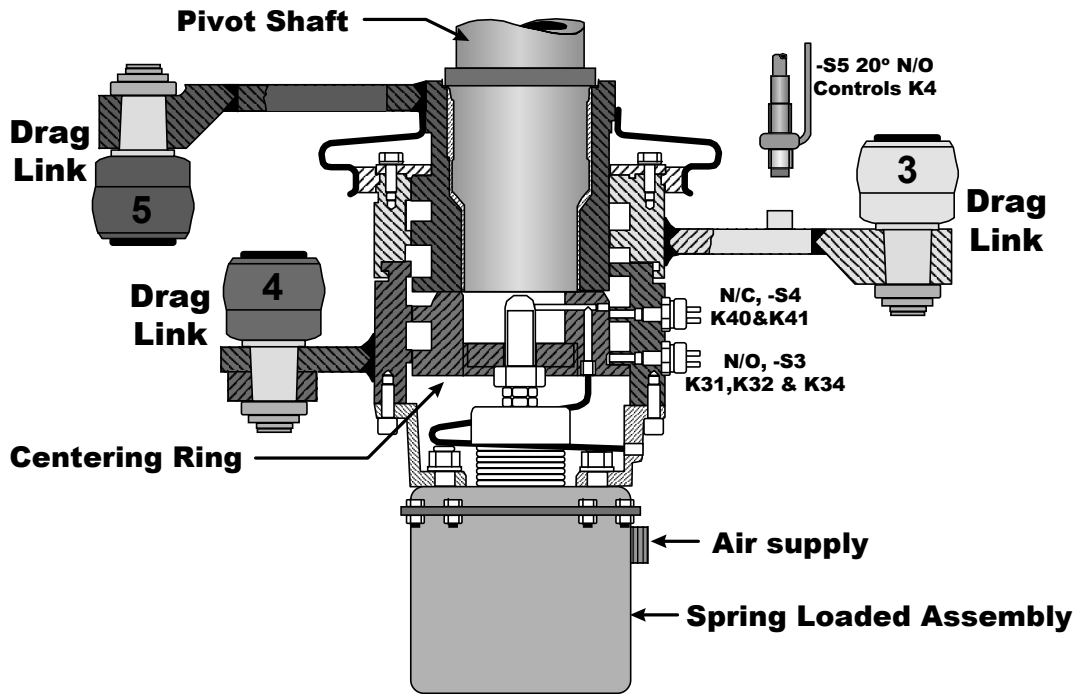


**GMK 5 Axle Steer Idler Can**

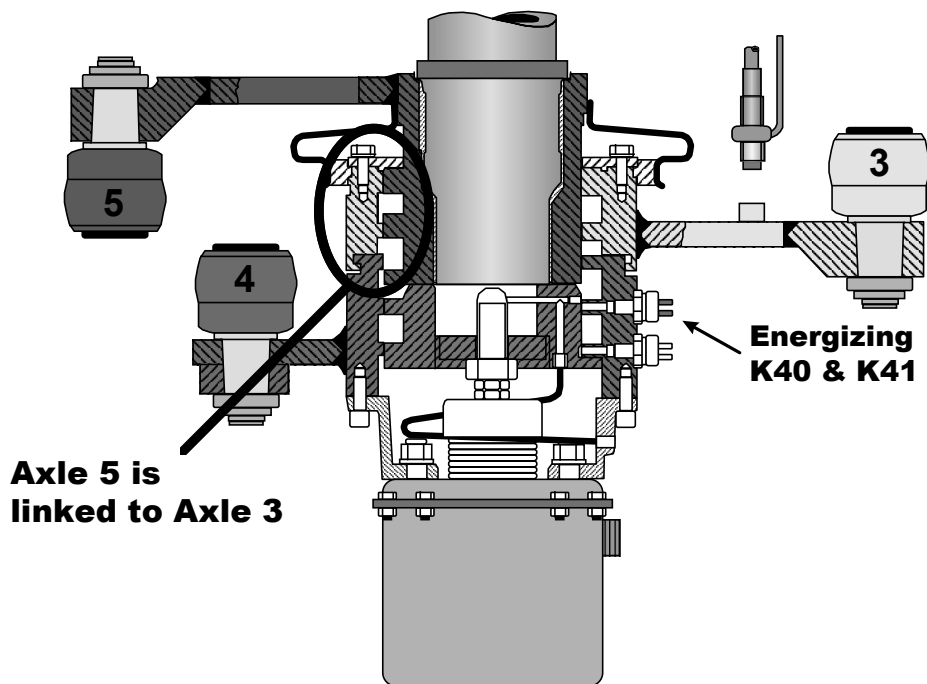


**GMK 5 Axle Steer Idler Can**

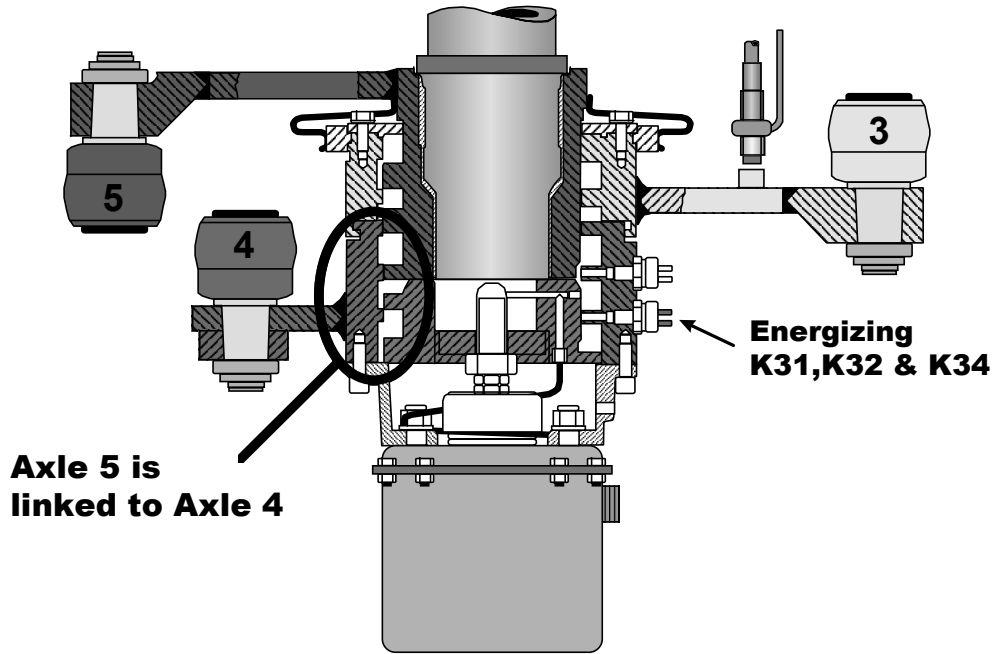




## GMK 5 Axle Steer Idler Can

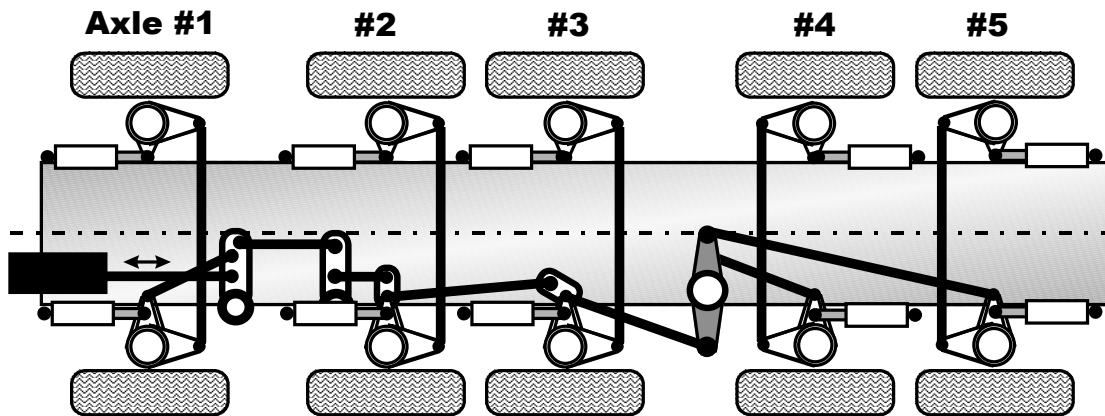


## Highway Travel



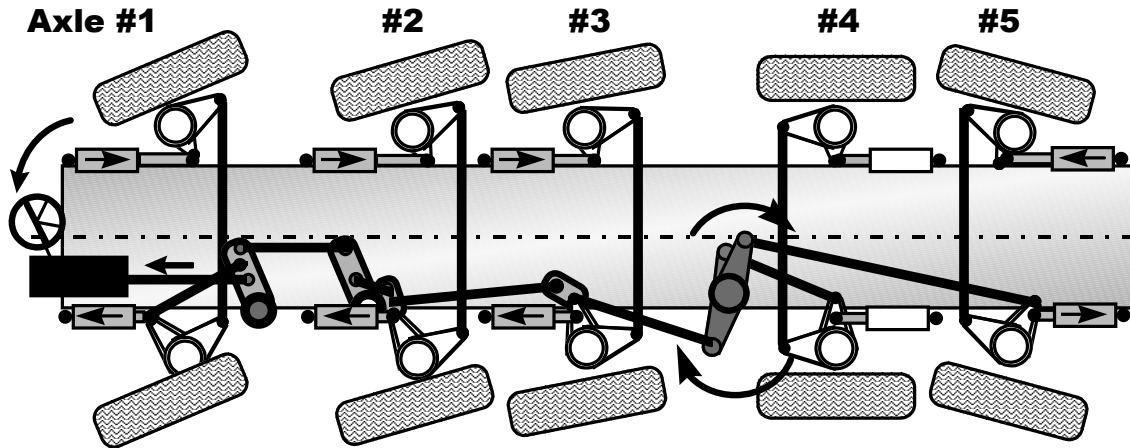
### All - Wheel steer

### Highway Steering



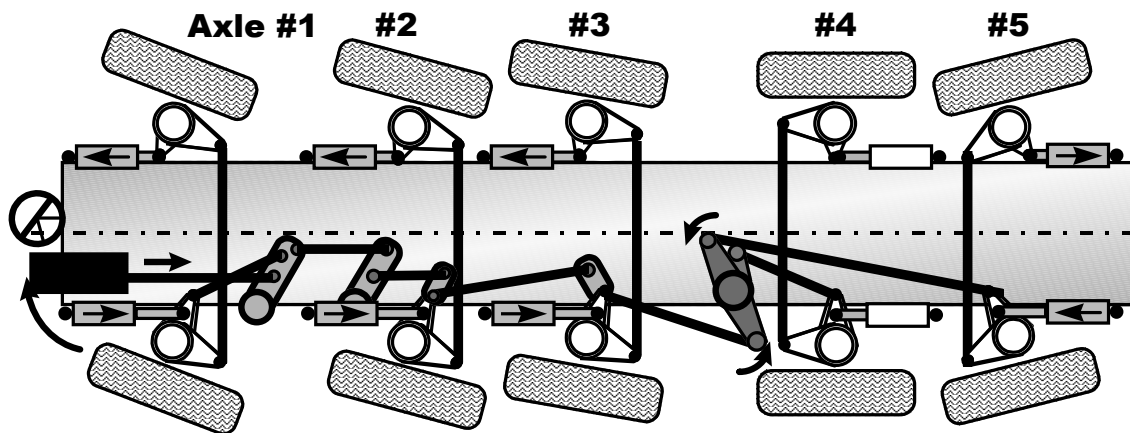
**Axes 1, 2 & #3 Steer in the Same Direction, Axle #5 Steers Opposite**

# Highway Steering



**Steering Wheel to the Left**

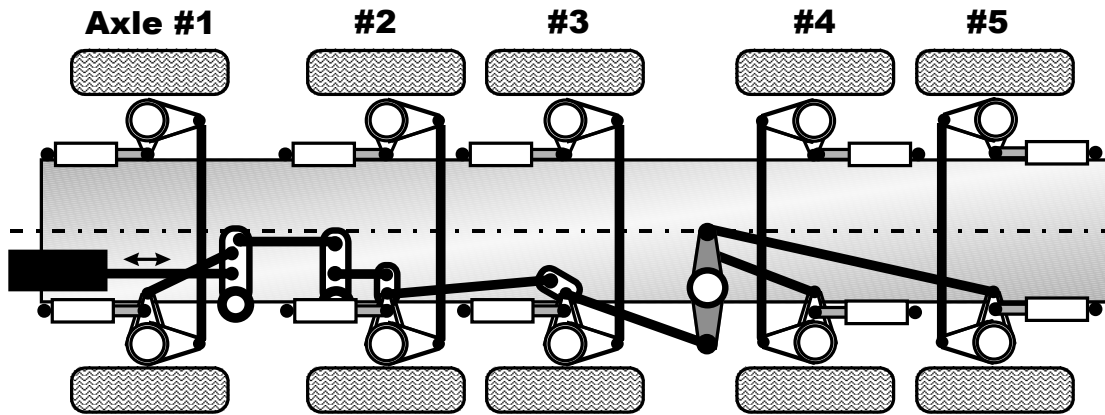
# Highway Steering



**Steering Wheel to the Right**

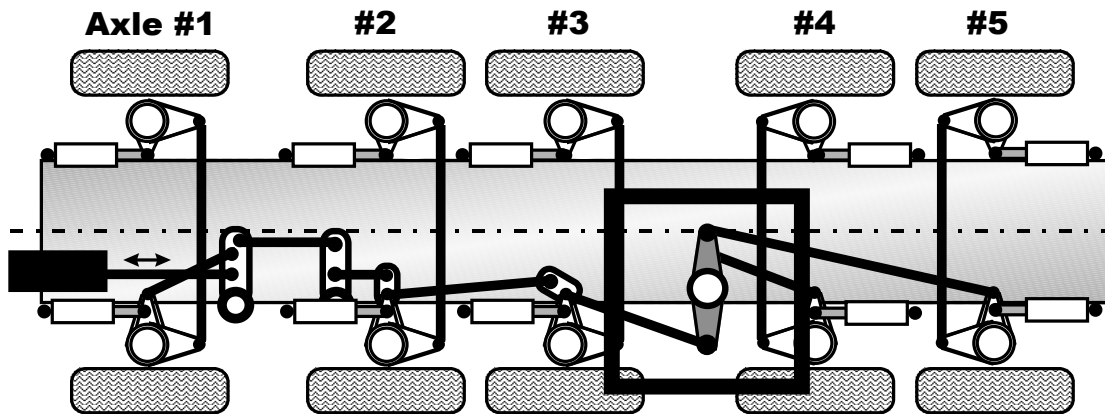


# Off-the-Road Steering



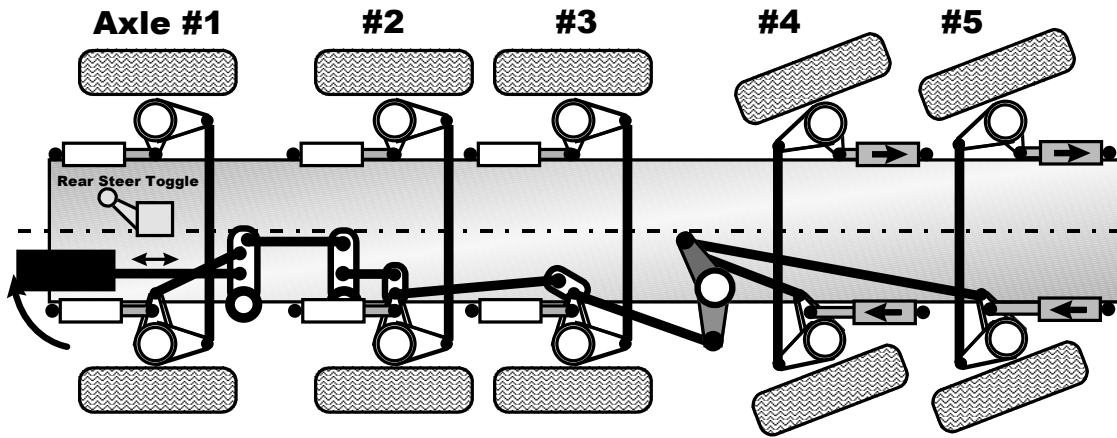
## Unlocking Rear Steering 4th & 5th Axle Steer Together

# Off-the-Road Steering



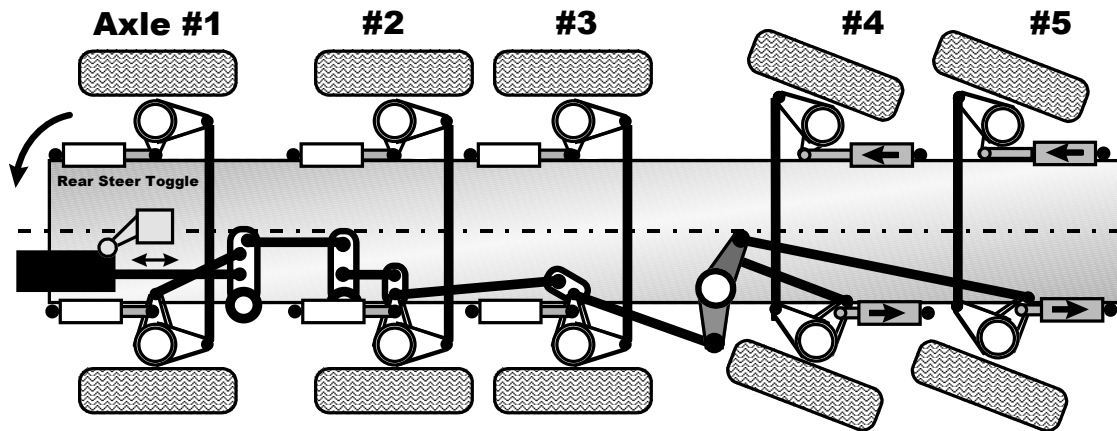
## Steering Idler Can Couples 4th & 5th Axle

# Off-the-Road Steering



## Rear Steering Right

# Off-the-Road Steering



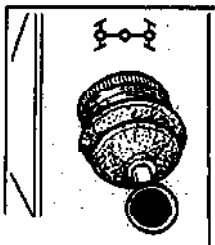
## Rear Steering Left

## Separate steering (additional equipment)

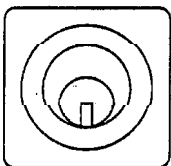
Maneuverability on the site may be increased by steering with the fourth axle line. To this end,

- the steering lock on the fourth axle line must be raised,
- the drag rods between the third and fifth axle lines must be separated,
- and the fourth and fifth axle line drag rods must be connected with each other.

Deutsche GROVE GmbH recommends switching to Separate steering when driving on the construction site at low speeds, or when the machine is on outriggers.



The first, second and third axle lines are then steered with the steering wheel, the fourth and fifth axle lines with the Separate steering toggle switch on the rear left-hand side of the driver's cab.



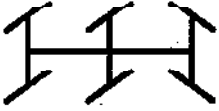
- Operation of the separate steering is inhibited by the Level adjustment system key switch. Leave the key switch on when the steering on the fourth axle line is unlocked. Relock the steering on the fourth axle line as soon as possible. Turn off the key switch and remove the key.

Only gears 1 and 2 may be used when the steering is unlocked in driving range D

When the steering is unlocked, you may drive in both all-wheel steering mode and crab travel mode.

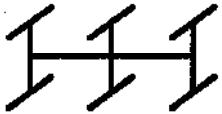
### All-wheel steering mode:

The turning circle of the truck crane will become smaller if you turn the wheels of the front and rear axle lines in opposite directions.



### Crab travel mode:

The truck crane will move diagonally to the side if you turn the wheels of the front and rear axle lines in the same direction.



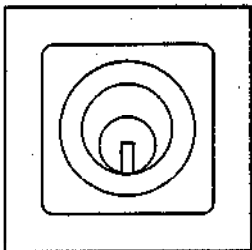
**Accidents may occur if the steering of the fourth axle line is unlocked during on-road driving !**

Return the truck crane to normal steering mode and relock the steering on the fourth axle line after driving with separate steering.

The *Release separate steering* indicator lamp must not illuminate!

### Unlocking fourth axle line, connecting fourth and fifth axle line

- Switch on the Level adjustment system key switch.

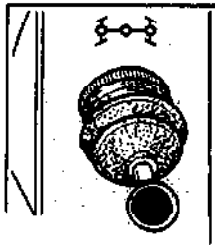




- Press the Release separate steering rocker switch down. This requires pressing the lock button down.



The Release separate steering indicator lamp illuminates when the steering is unlocked.

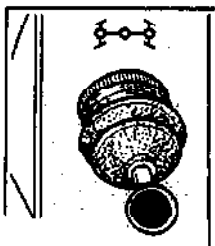


- Turn the fourth axle line with Separate steering toggle switch, until the fourth and fifth axle lines have the same steering angle.

The connection between the fourth and fifth axle lines snaps audibly into place and the wheels of the fourth and fifth axle lines move together.

The steering system is now switched to all-wheel steering.

## Steering fourth and fifth axle lines



You steer the wheels of the fourth and fifth axle lines with the Separate steering toggle switch:

Steer to left:                      Push switch to left.

Steer to right:                      Push switch to right.

The steering angle changes for as long as the toggle switch is pushed down.



The wheels of the first, second and third axle lines are steered with the steering wheel.



**Accidents may occur if the steering of the fourth axle line is unlocked during on-road driving!**

After driving in all-wheel steering mode, return the truck crane to normal driving mode with the steering lock engaged at the fourth axle line and the drag rods connected between the third and fifth axle lines. The normal driving mode is reestablished when the *Separate steering release* indicator lamp is extinguished.

## Detaching fourth and fifth axle line, locking steering of fourth axle line

For on-road travel

- the fourth axle line steering must be locked,
- the drag rods of the third and fifth axle lines must be connected with one another.



**Accidents may occur if the steering of the fourth axle line is unlocked during on-road driving!**

Normal steering mode with locked steering on the fourth axle line is not activated until the Release separate steering indicator lamp has gone out.

- Turn the wheels of the front axle lines as far as possible to the left or right using the steering wheel.



If the wheels on the front axle lines are not turned as far as they will go the steering lock on the fourth axle line cannot be engaged.

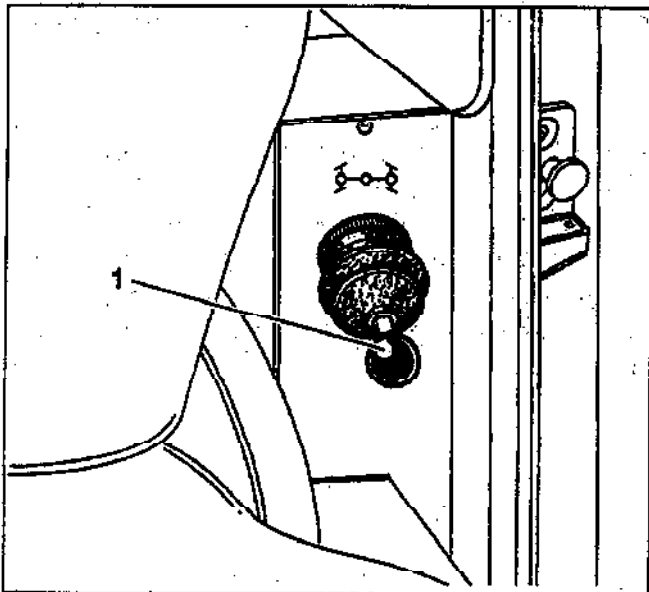


- Press the Release separate steering rocker switch up.



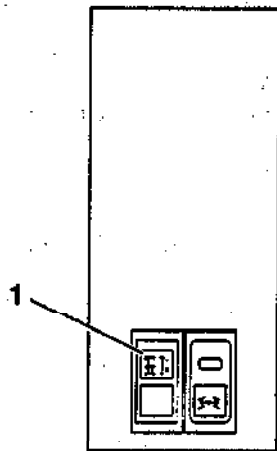
The *Release separate steering* indicator lamp remains illuminated.

The drag rods of the third and fifth axle lines must be connected to each other first.



- Steer the wheels of the rear axle lines with the toggle switch (1) into the relevant position for on-road driving corresponding to the turned front, wheels, e. g.:  
front wheels are turned to the right — rear wheels are turned to the left.

The drag rods between the third and fifth axle line are connected to each other if only the wheels of the fourth axle line turn when the toggle switch is actuated.



- The steering lock of the fourth axle line must now be locked mechanically. Using the toggle switch, turn the wheels of the fourth axle line to Straight ahead position, so that they cannot turn any more.

The steering lock of the fourth axle line is locked when the warning lamp (1) goes out.

The steering system is set to mode.



Accidents may occur if the steering of the fourth axle line is unlocked during on-road driving!

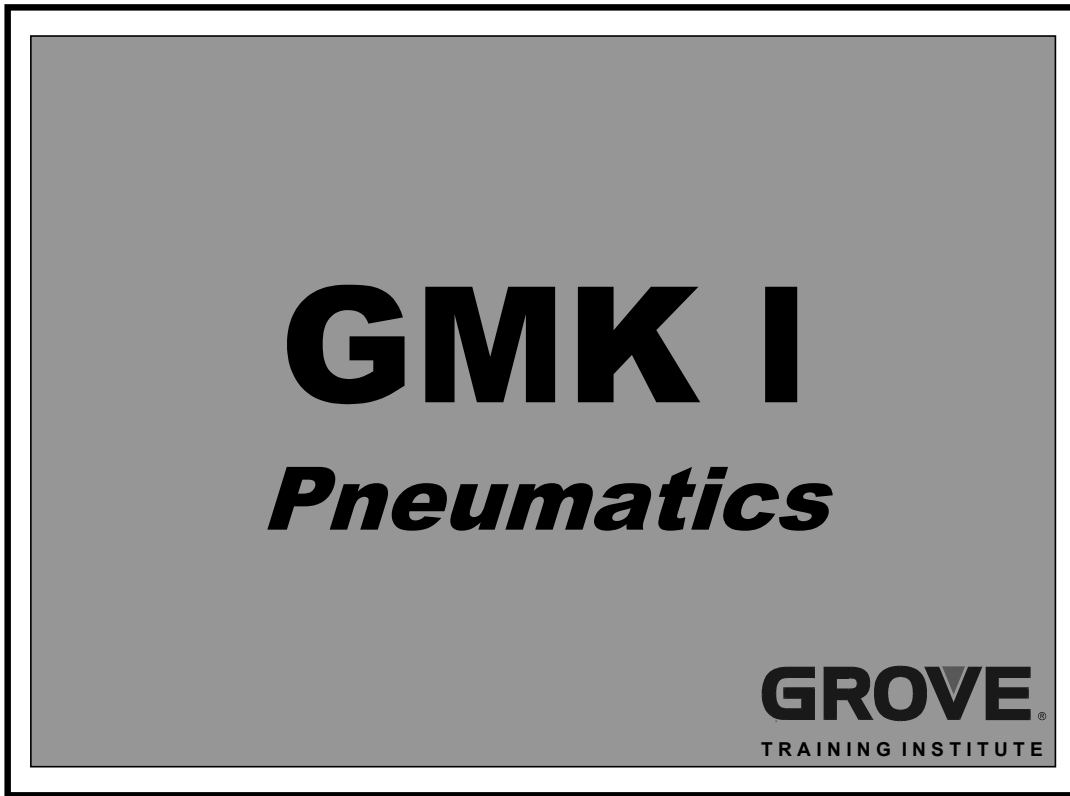
If you deactivate the ignition or the Level adjustment system key-operated switch, before the steering is locked, the magnetic valve in the separate steering is inactivated, without locking the steering of the fourth axle line. When the ignition is restarted, separate steering is immediately reactivated and the Release separate steering indicator lamp illuminates. This results in a dangerous driving mode!

- Switch off the *Level adjustment system* key operated switch. normal steering



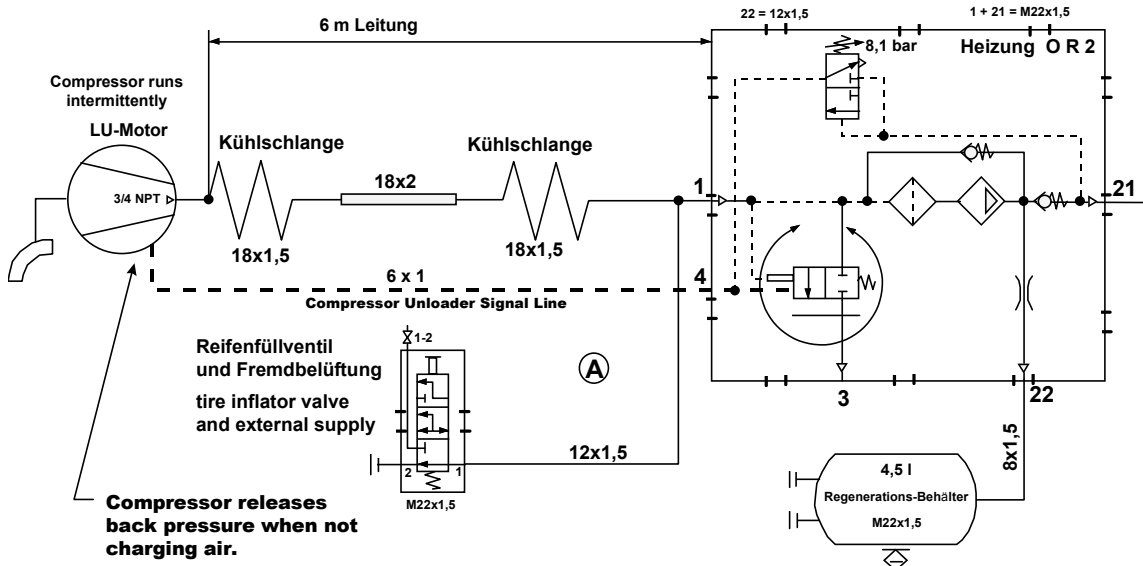
# *Section 5*





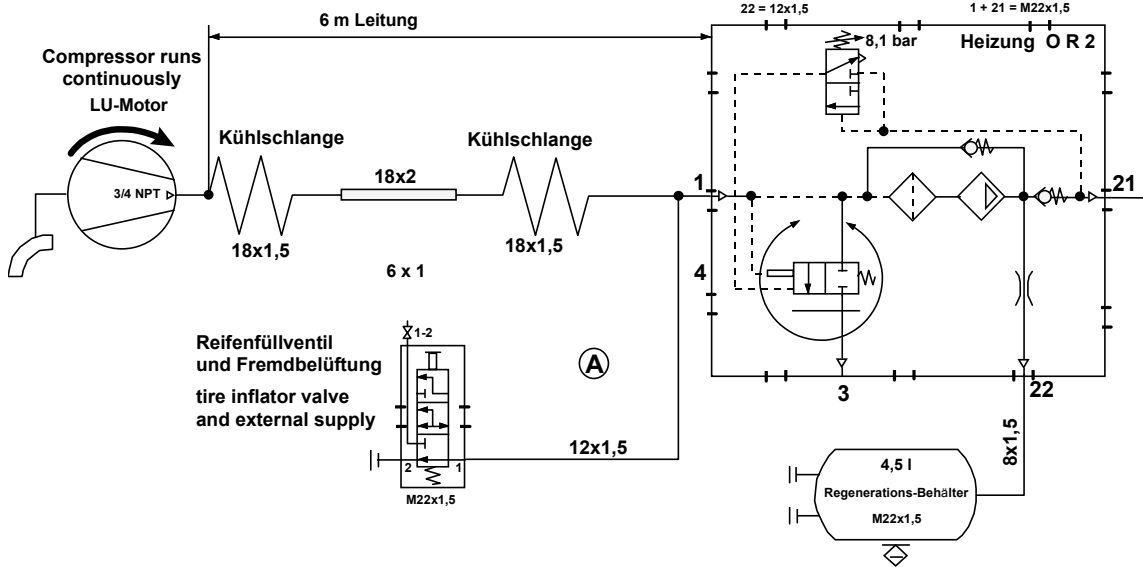
**GMK Machines  
equipped with  
Cummins**  
valid since 1998

air drying aparatus  
Lufttrockner mit Druckregler  
auf 8,1 bar eingestellt

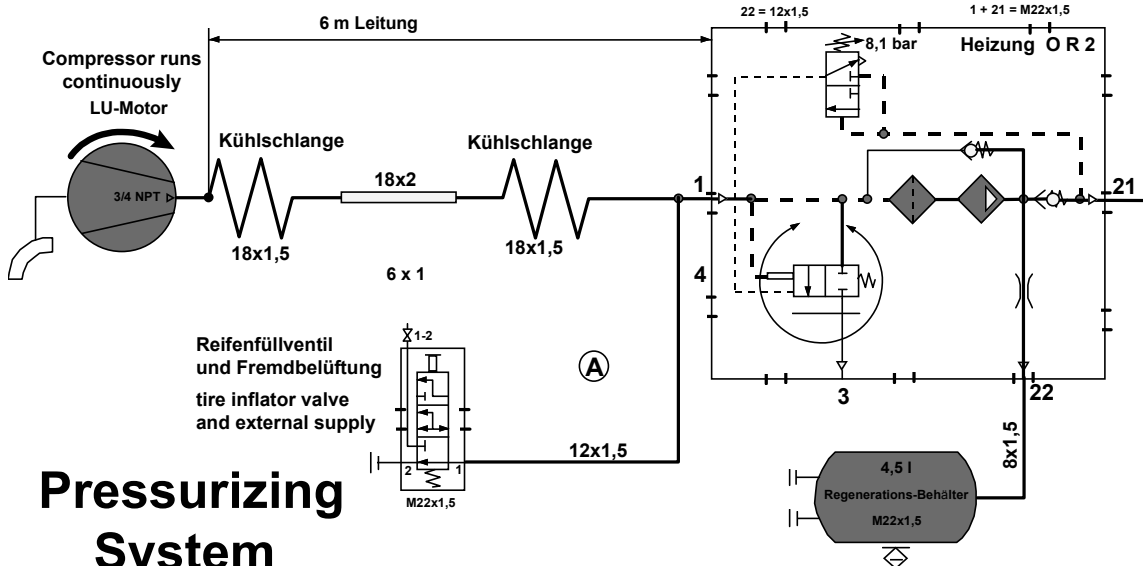


# GMK Equipped with Mercedes Engine

air drying aparatus  
Lufttrockner mit Druckregler  
auf 8,1 bar eingestellt

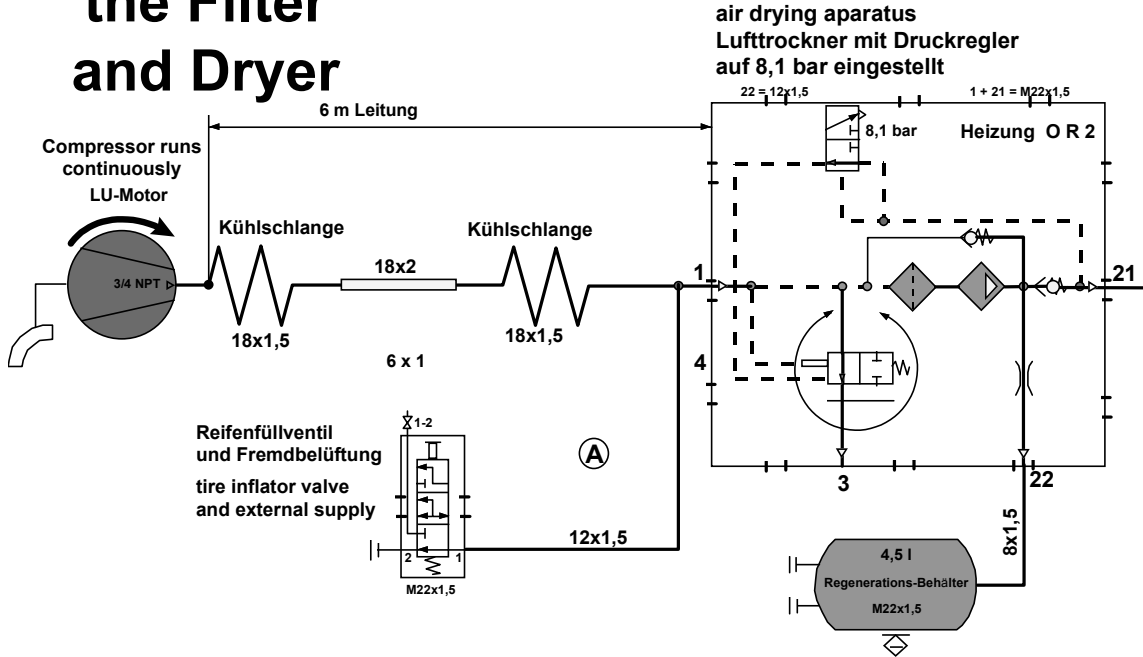


air drying aparatus  
Lufttrockner mit Druckregler  
auf 8,1 bar eingestellt



# Pressurizing System to 8.1 Bar

# Backflush the Filter and Dryer



## Compressor

**Air Compressor**

Located looking in engine compartment from drivers side  
Cab tilted shown at left.



## Pneumatic Circuit Diagrams

The identification of connections used in conjunction with the graphic symbols are in accordance with DIN 74254 whereby the first digits signifies:

- 0=Intake connection
- 1=Energy input
- 2=Energy output....not to atmosphere
- 3=Connection to atmosphere
- 4=Control connection...or pilot inlet on component
- 5=Not used
- 6=Not used
- 7=Antifreeze Connection
- 8=Lubricating oil connection...on compressor
- 9=Coolant connection....on compressor

A second digit is to be provided if there are several similar connections, e.g.

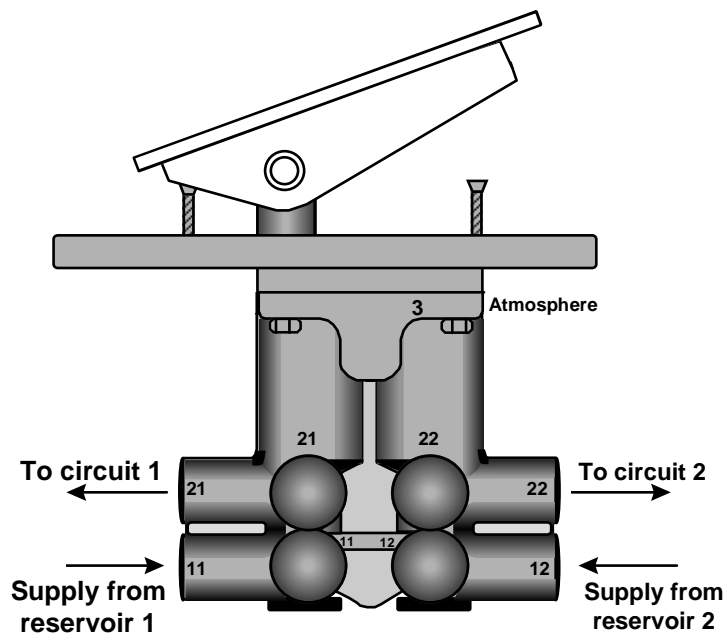
- 21=Energy output to energy storage device (compressed air reservoir 1)
- 22=Energy output to energy storage device (compressed air reservoir 2)

If one connection can fulfill several functions, it must be identified by two (first) digits. These are to be separated from each other by means of a dash, e.g.

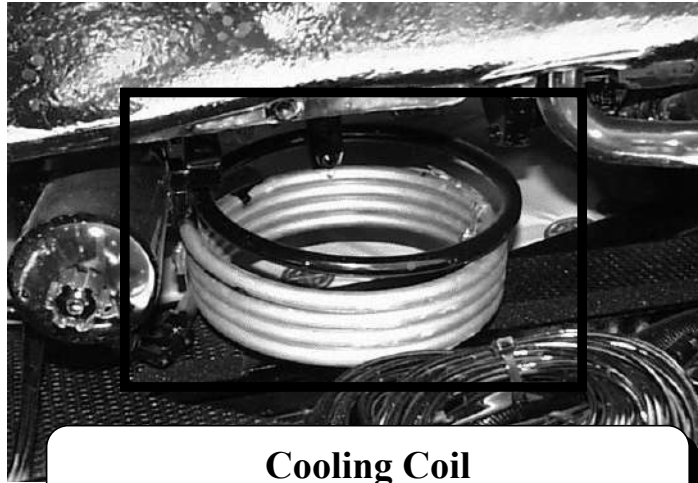
1-2=Either energy input or energy output, e.g. External air input or tire inflator connection.

Please look at the illustration of the foot brake valve for examples of port identifications:

- 11=Energy input from compressed air reservoir 1
- 21=Energy output via brake valve from compressed air reservoir 1
- 12=Energy input from compressed air reservoir 2
- 22=Energy output via brake valve from compressed air reservoir 2



# Cooling Coil

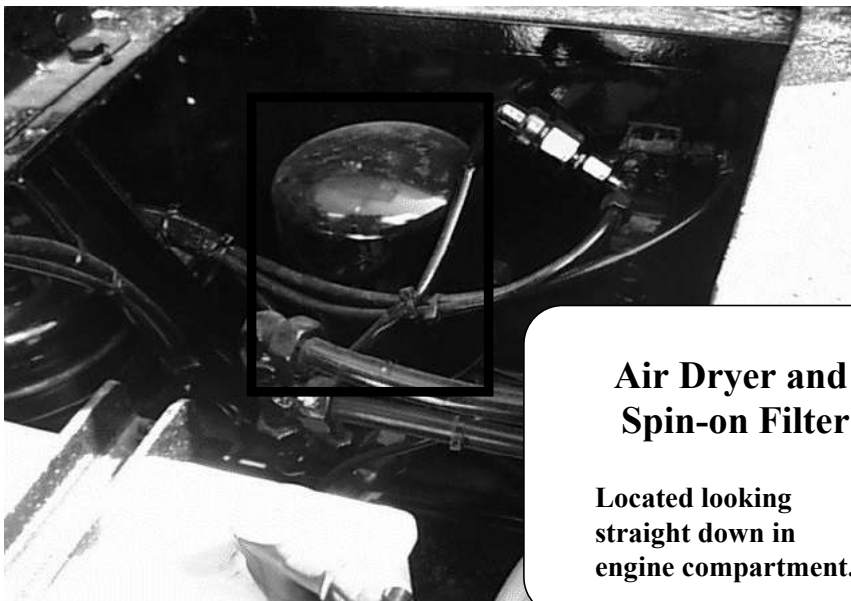


## Cooling Coil

Located looking up from underneath in engine compartment.

**GROVE**  
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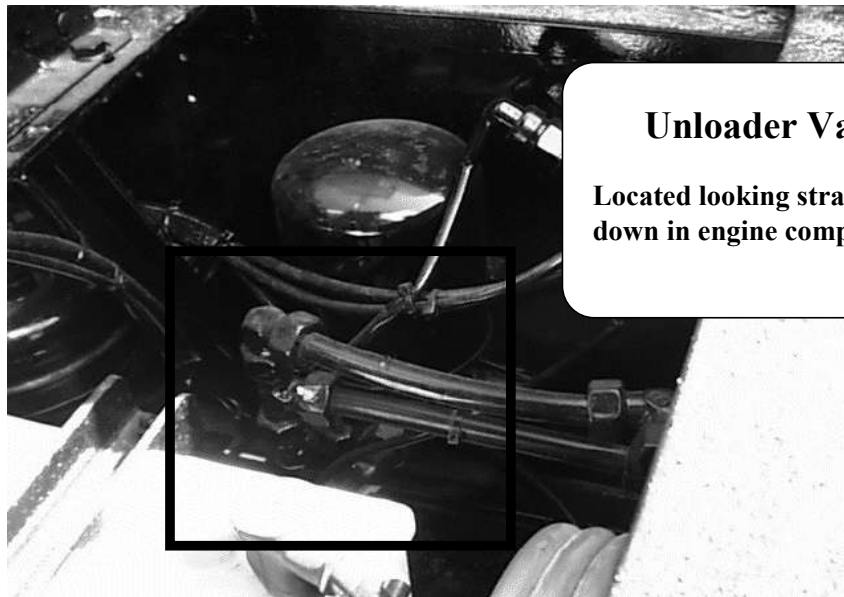
# Air Dryer



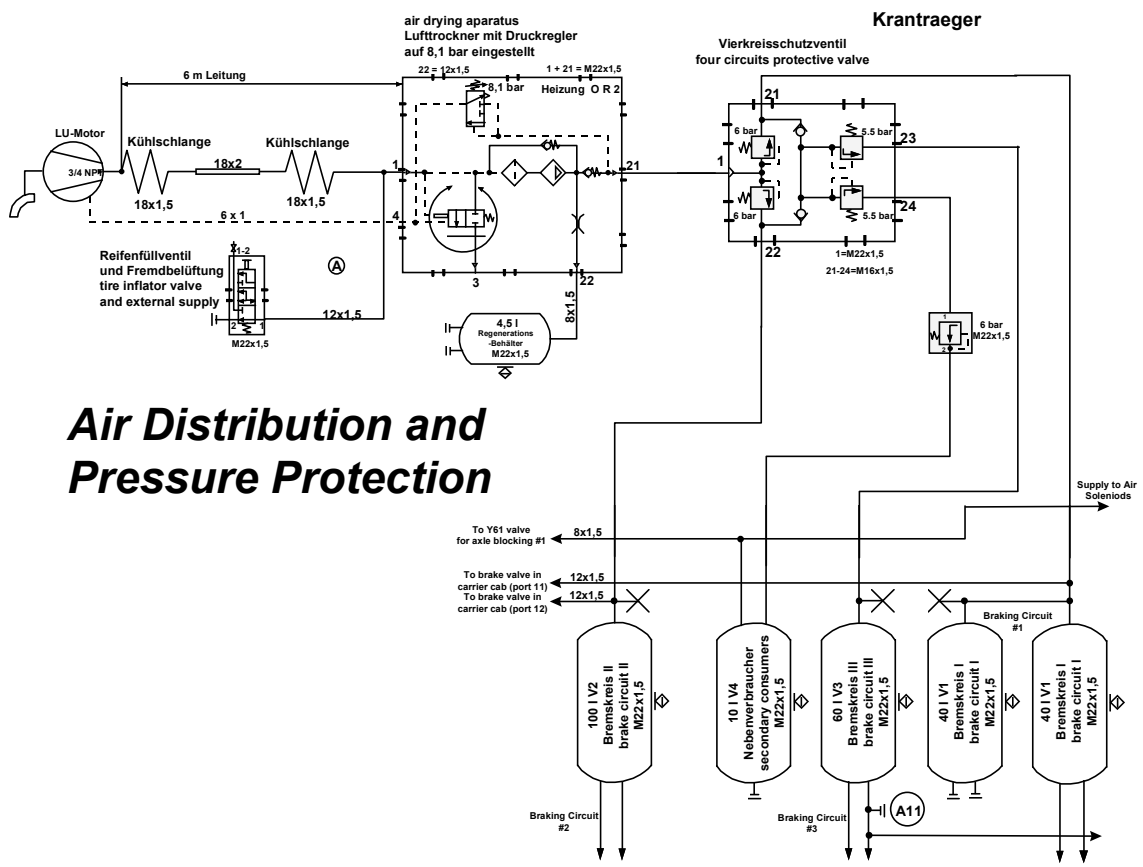
## Air Dryer and Spin-on Filter

Located looking straight down in engine compartment.

# Unloader Valve

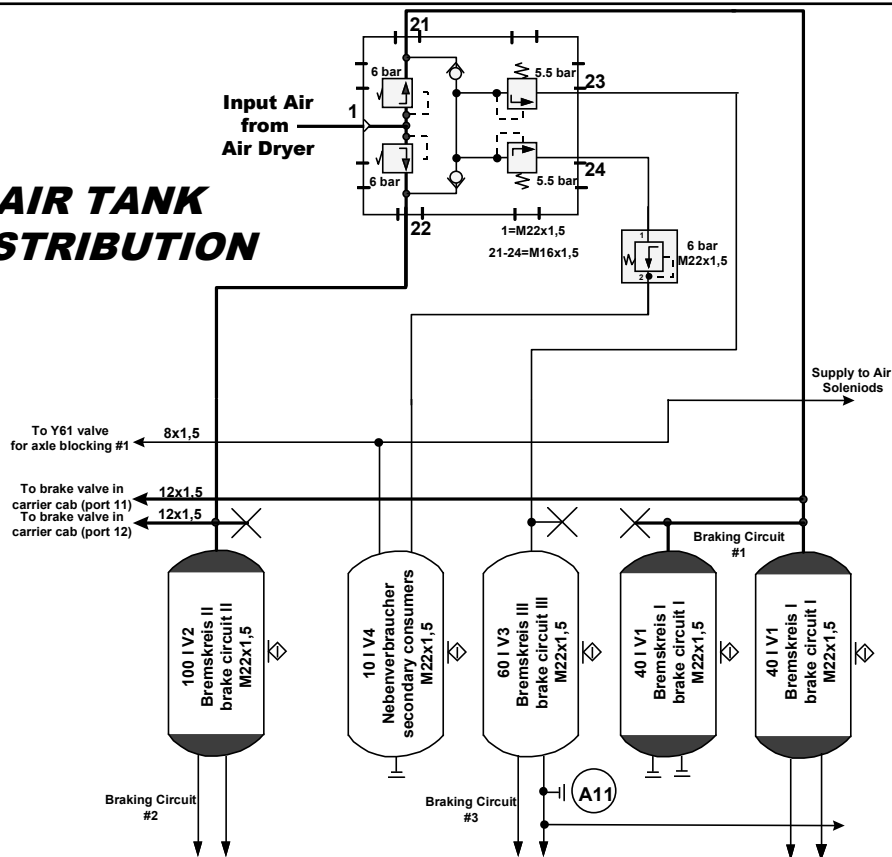


**Unloader Valve**  
 Located looking straight down in engine compartment.

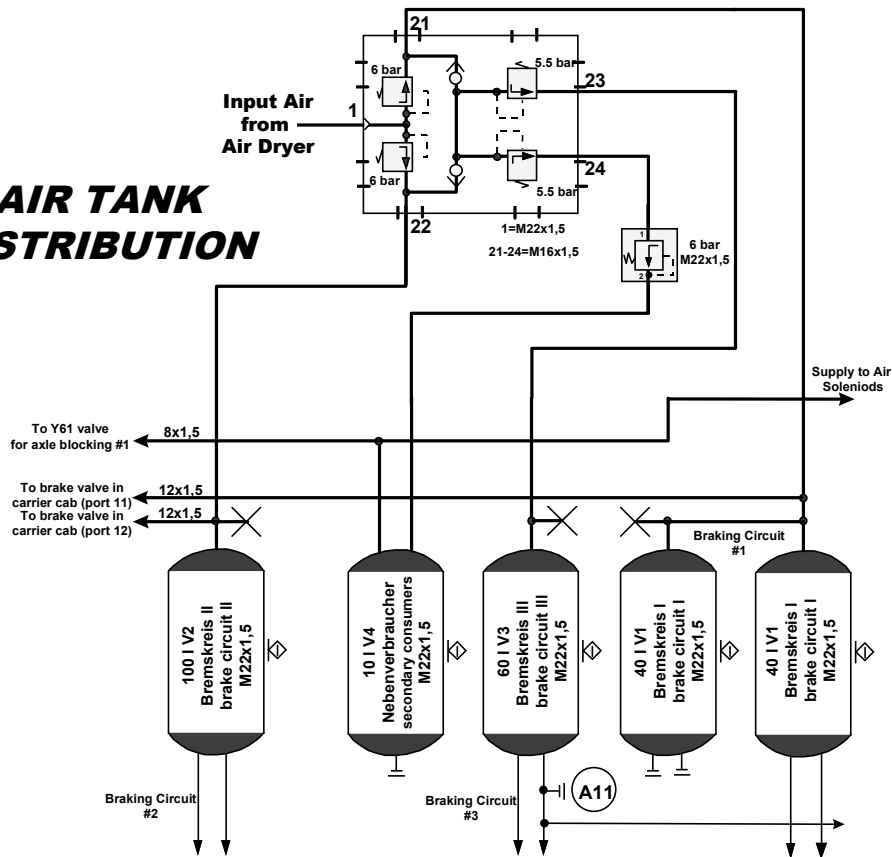




# AIR TANK DISTRIBUTION

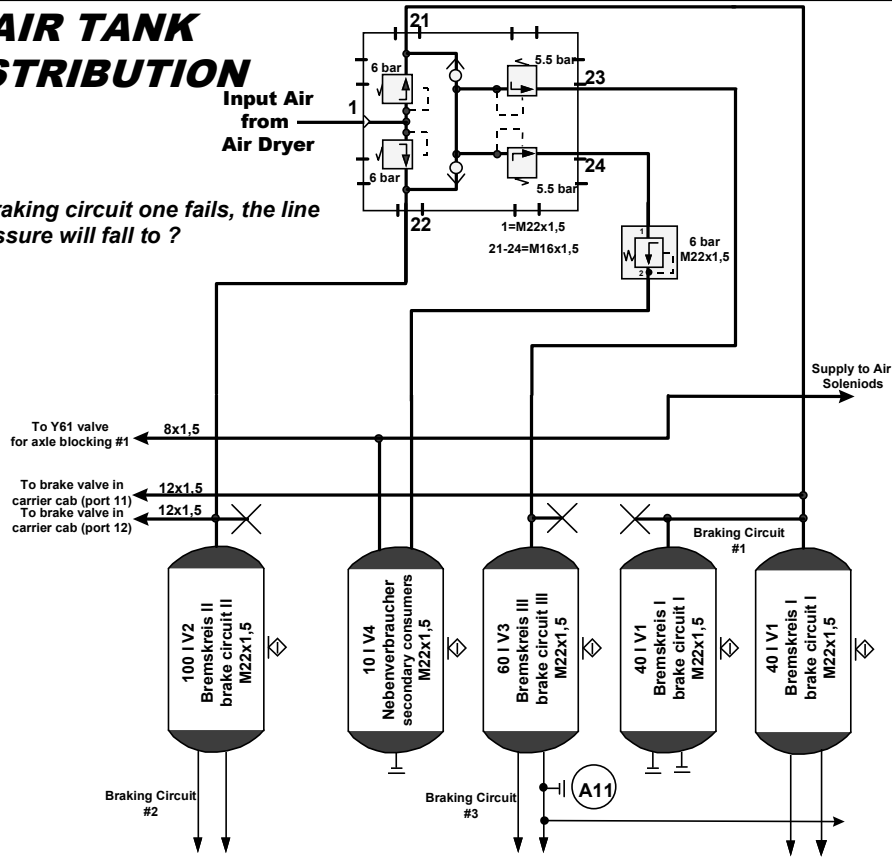


# AIR TANK DISTRIBUTION



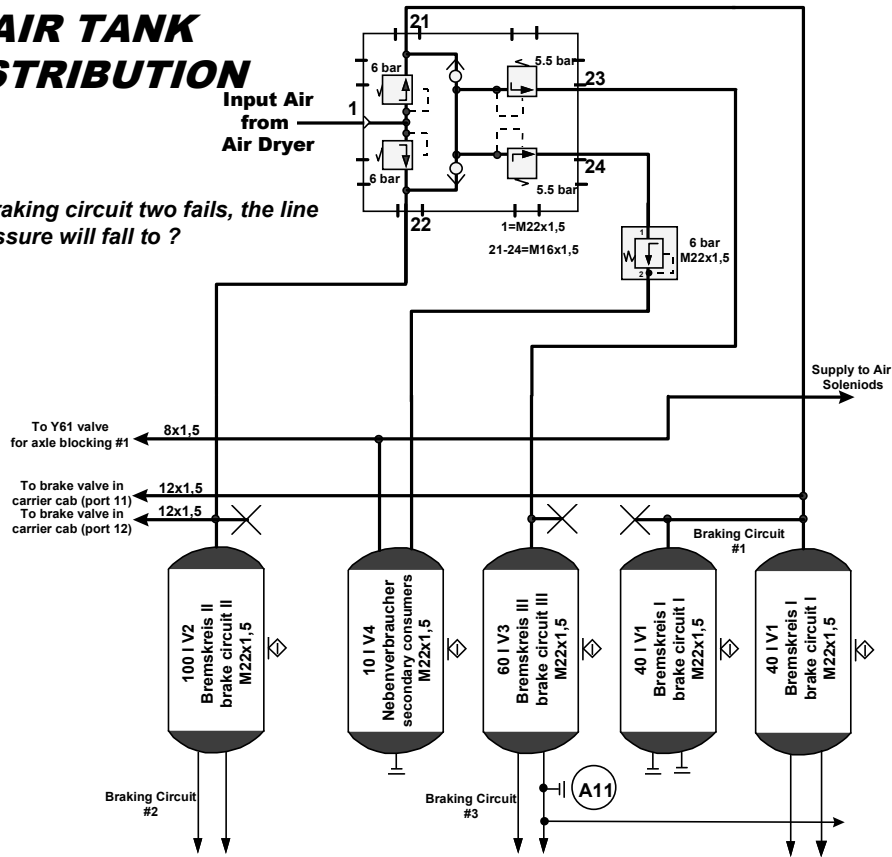
# AIR TANK DISTRIBUTION

If braking circuit one fails, the line pressure will fall to ?



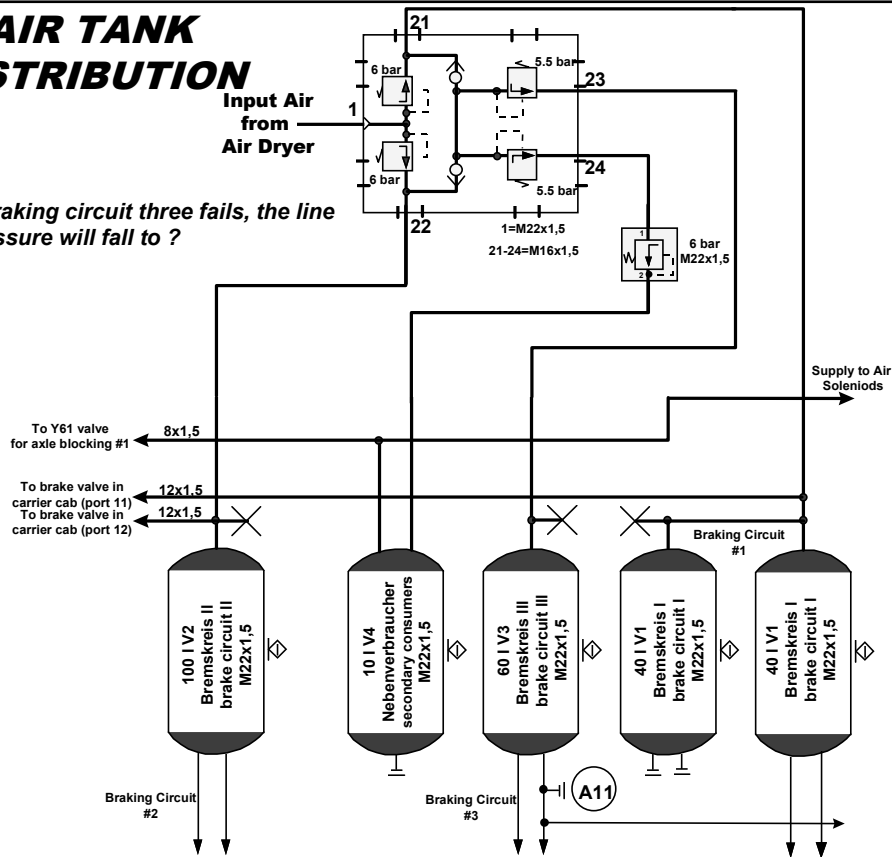
# AIR TANK DISTRIBUTION

If braking circuit two fails, the line pressure will fall to ?



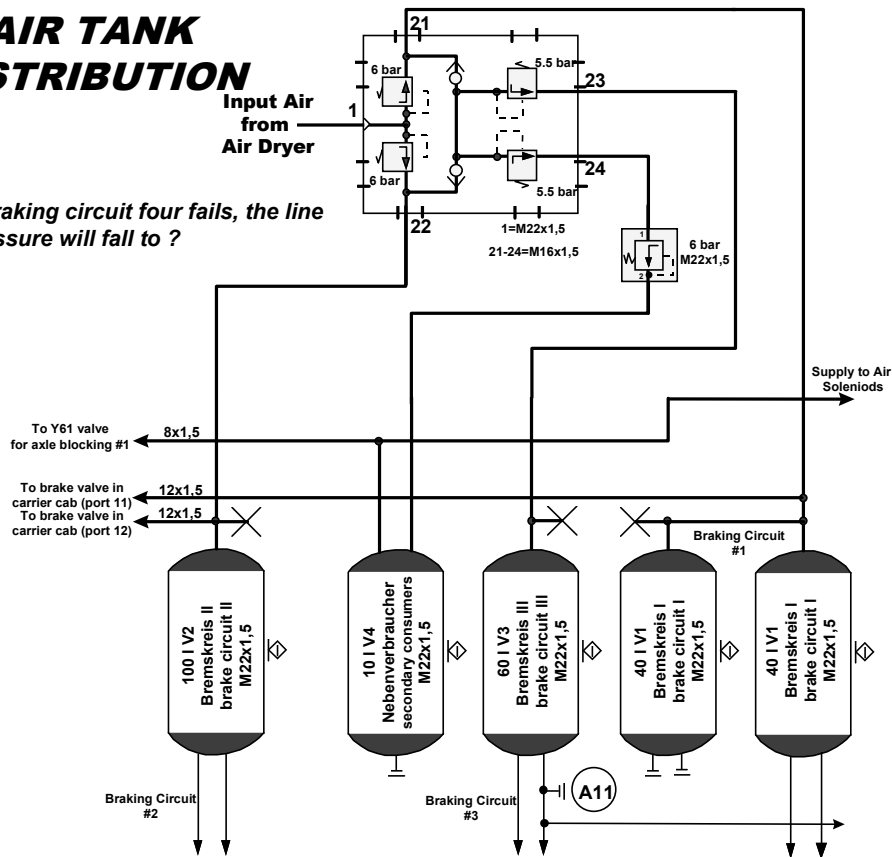
# AIR TANK DISTRIBUTION

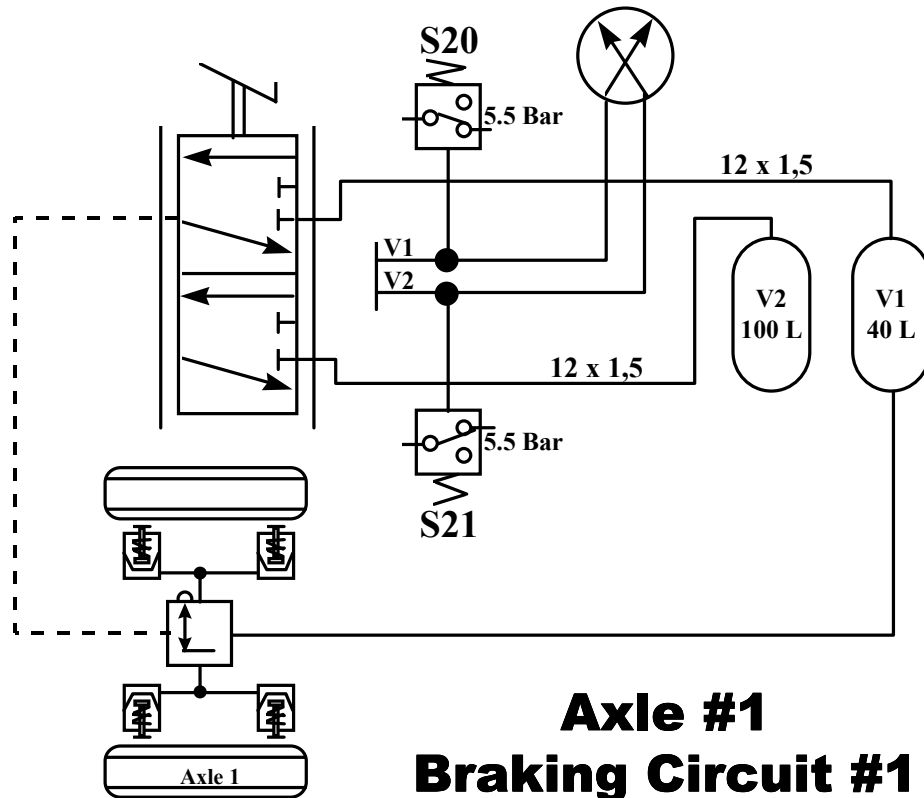
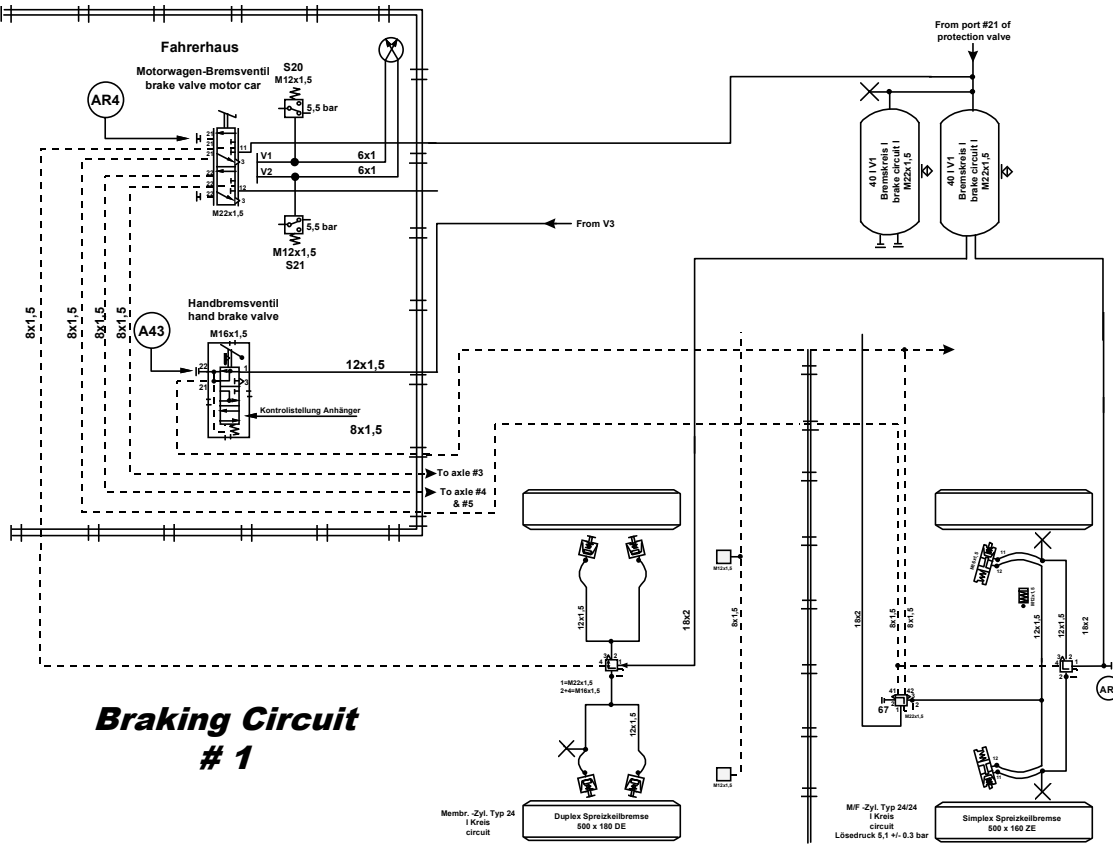
If braking circuit three fails, the line pressure will fall to ?

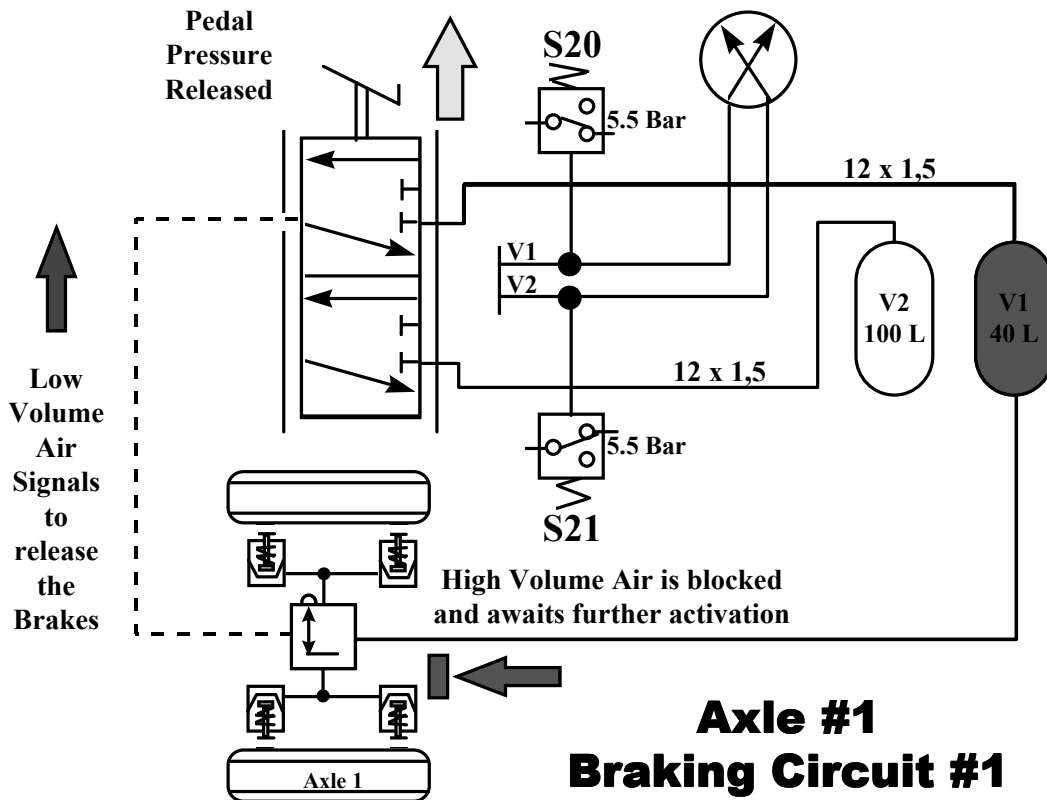
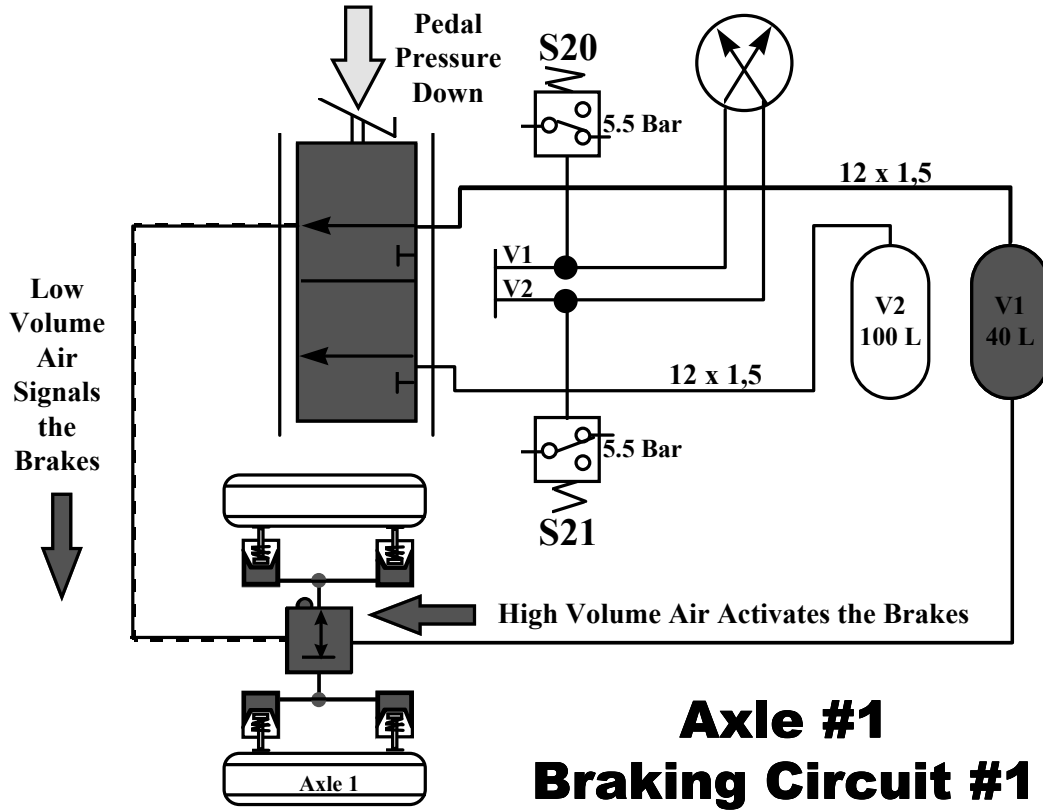


# AIR TANK DISTRIBUTION

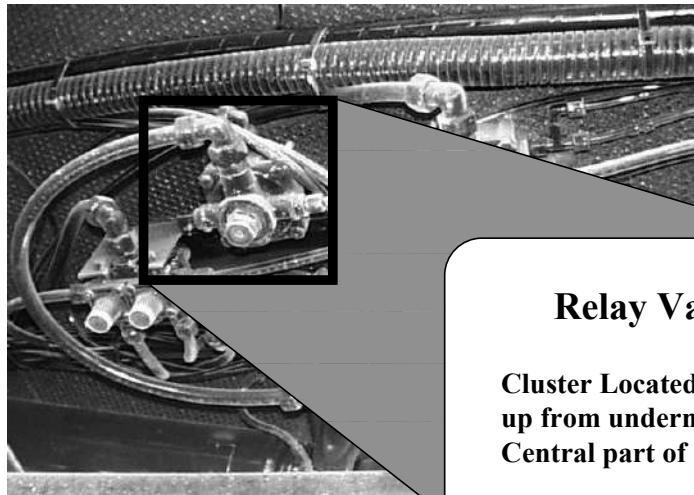
If braking circuit four fails, the line pressure will fall to ?





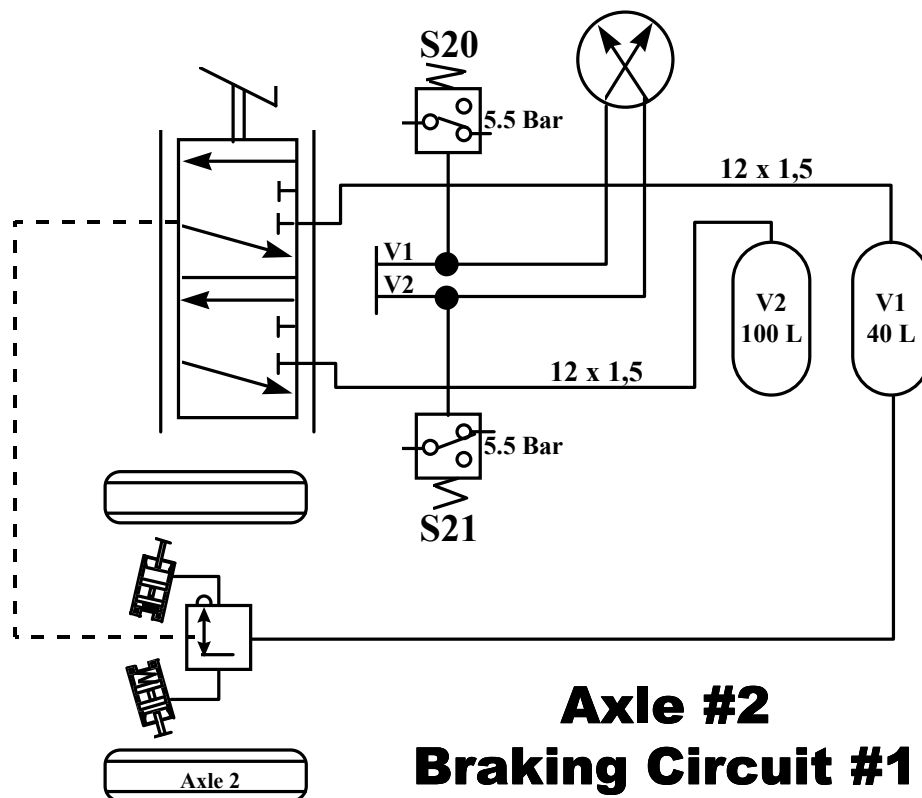


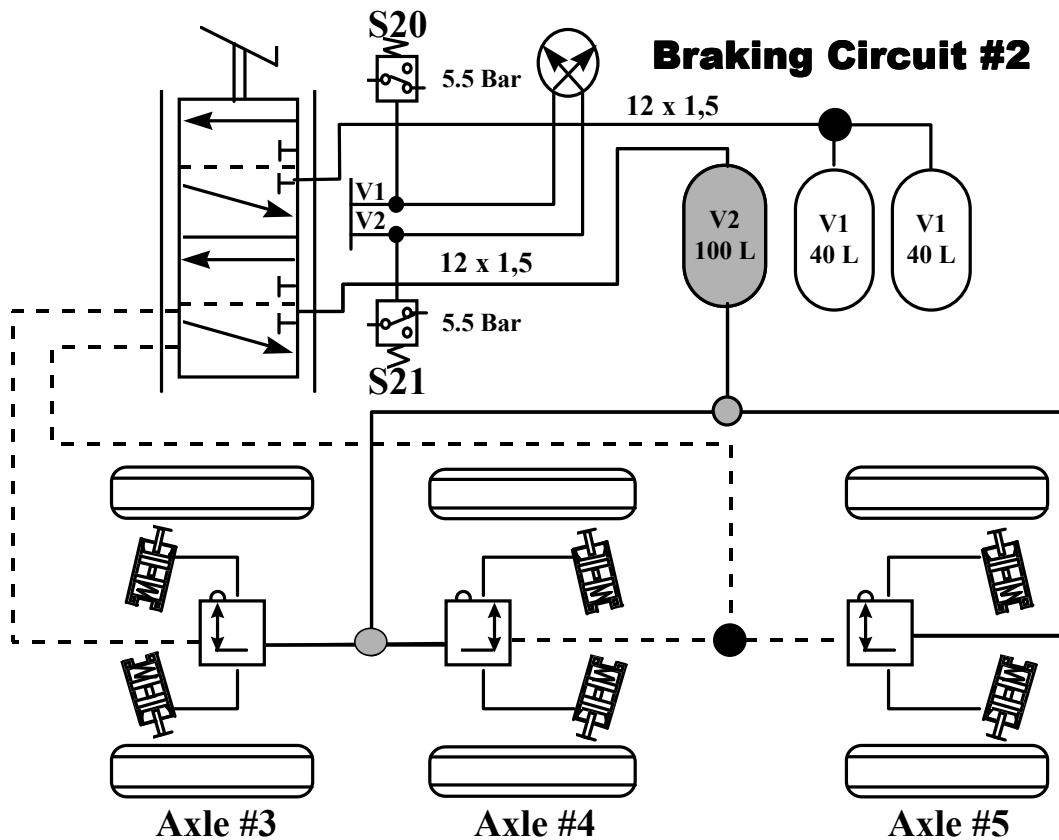
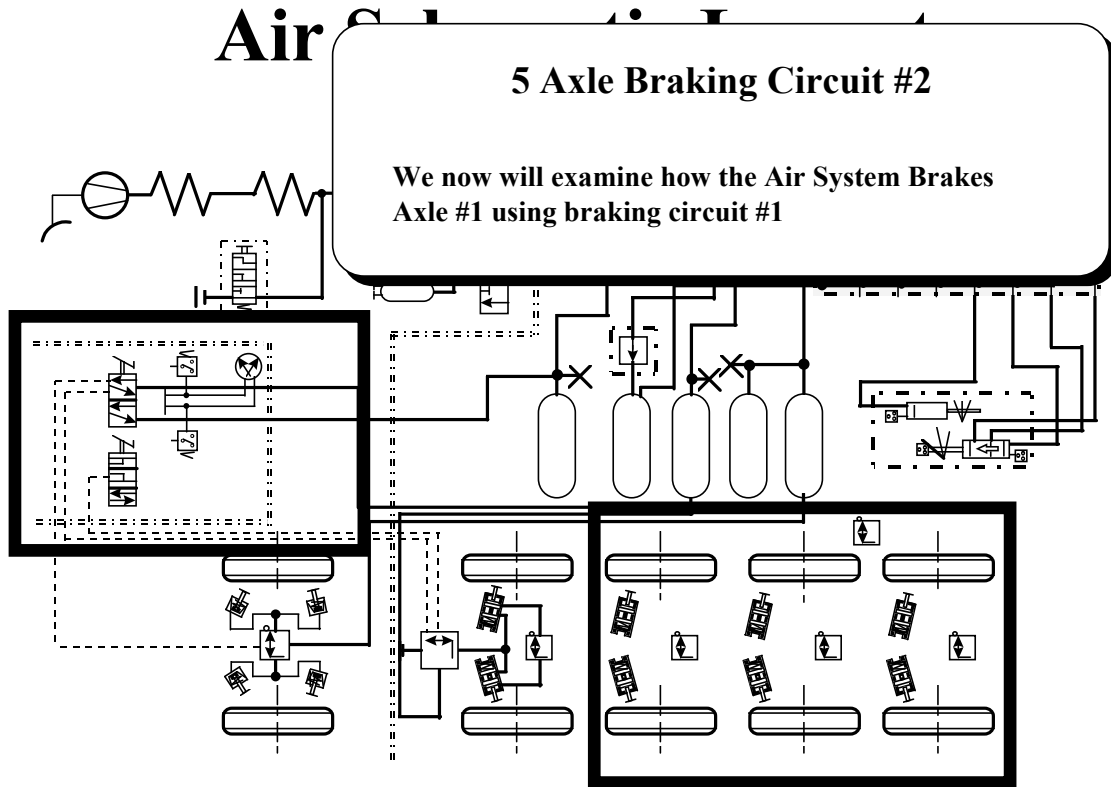
# Relay Valve

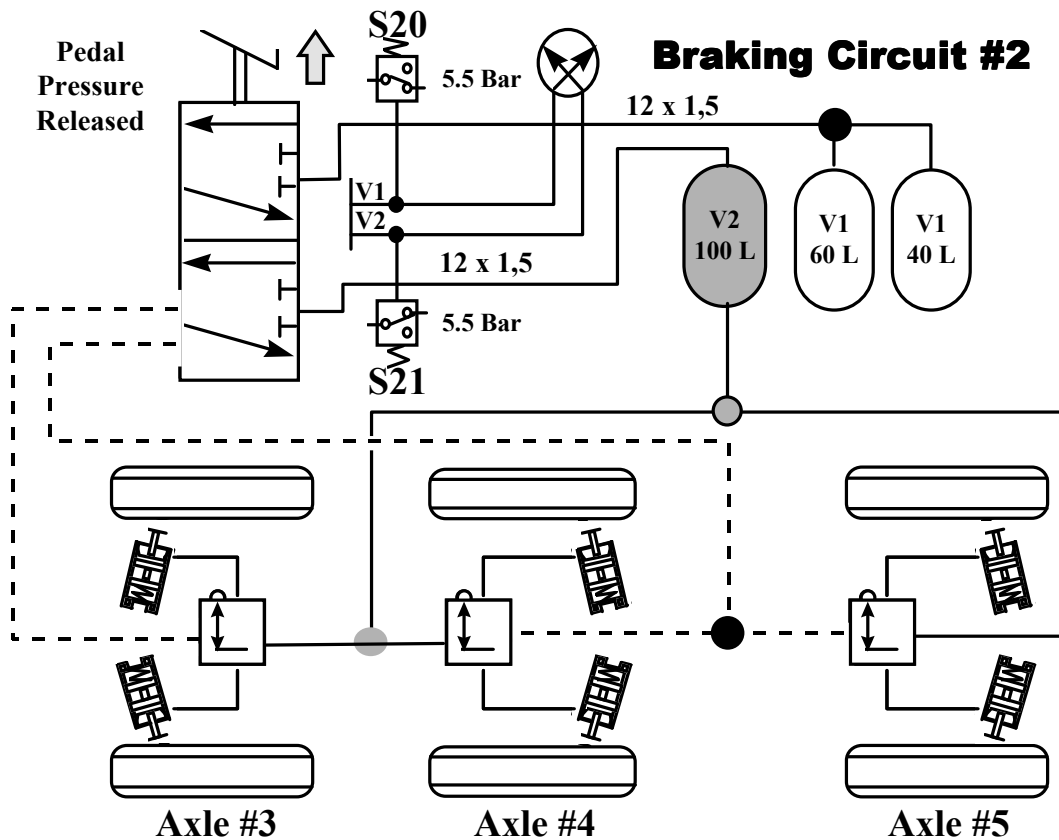
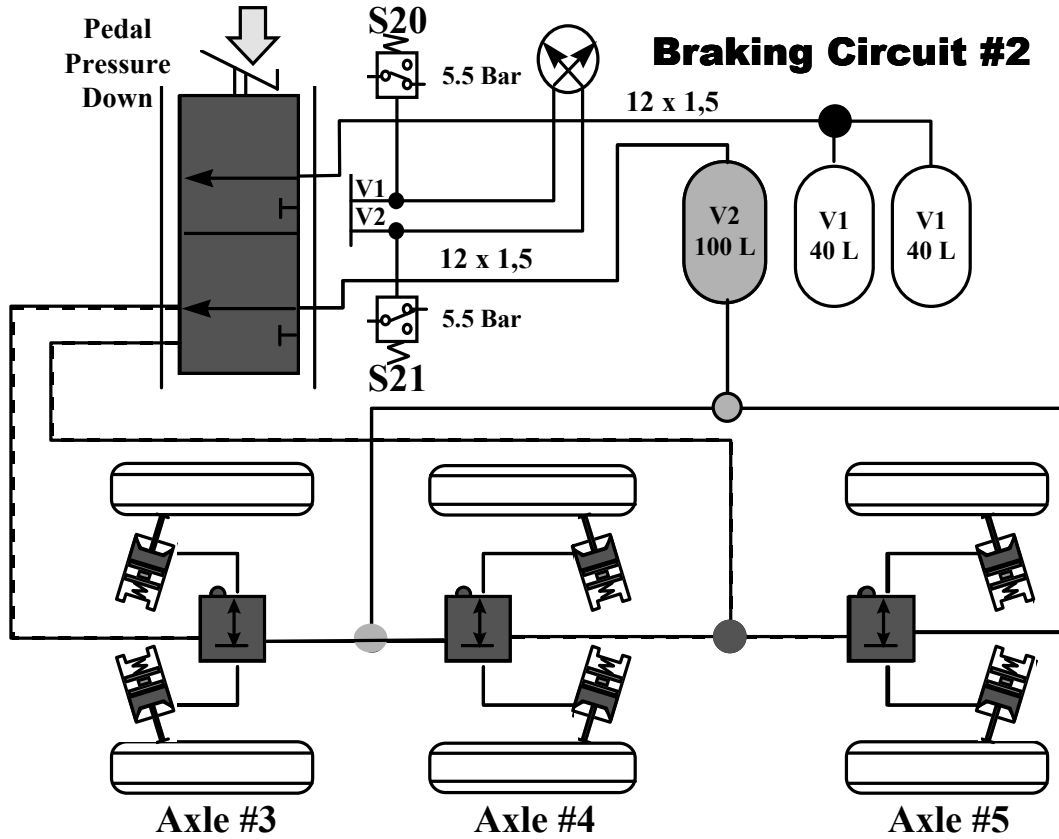


**Relay Valve**

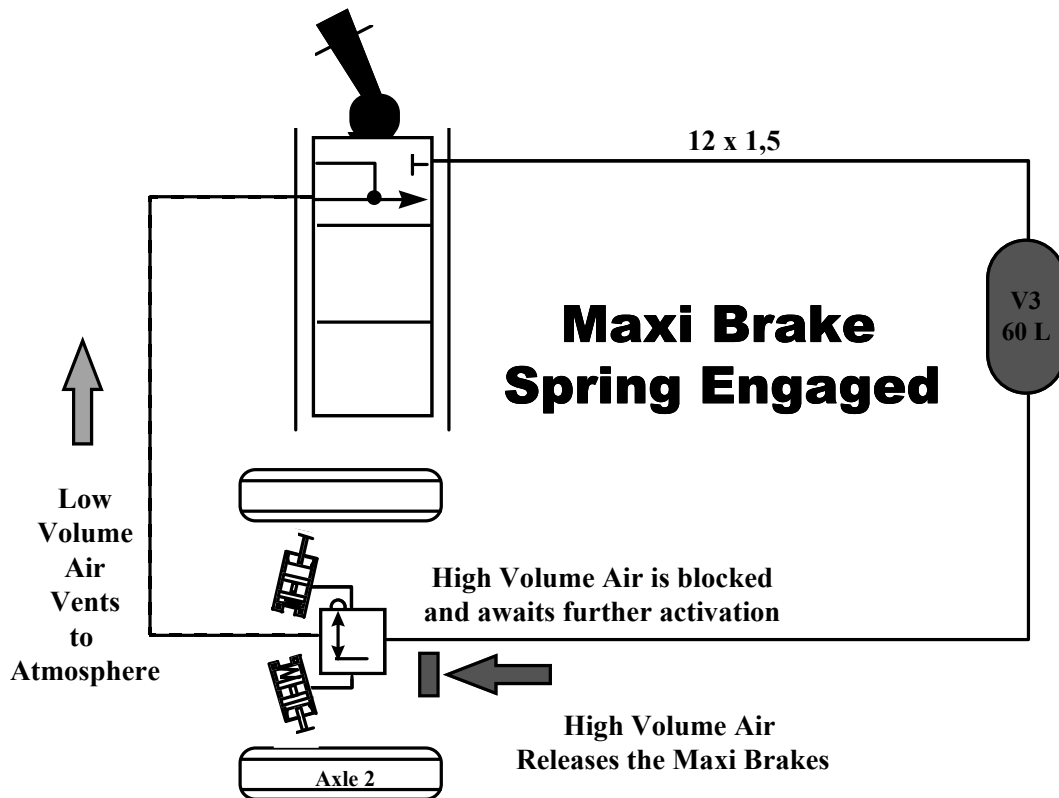
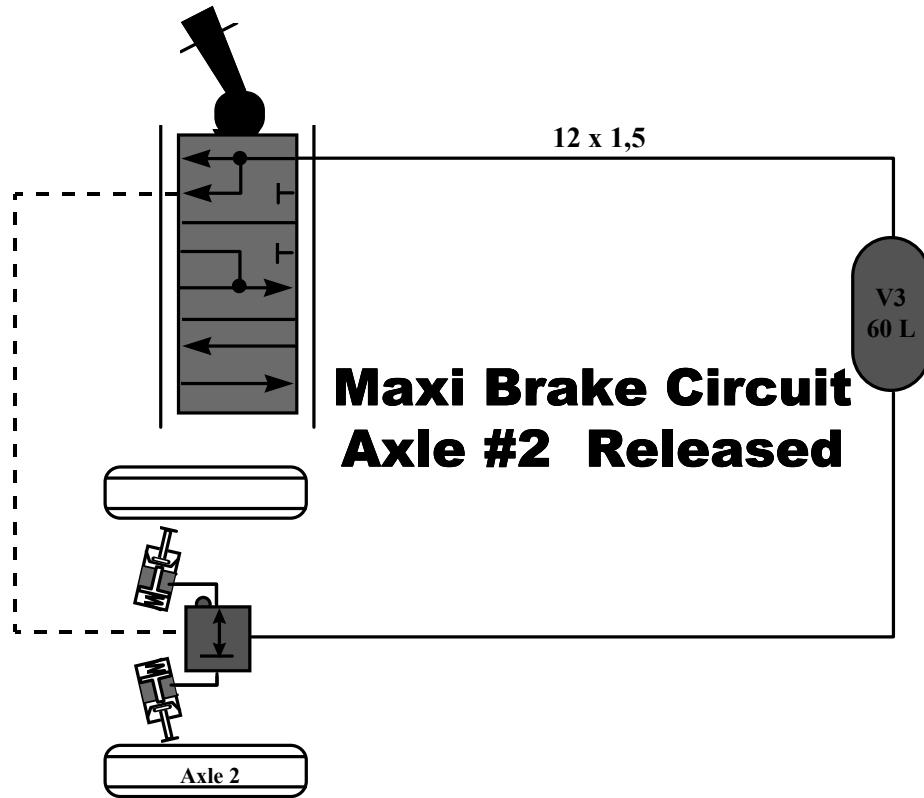
Cluster Located looking up from underneath. Central part of Carrier

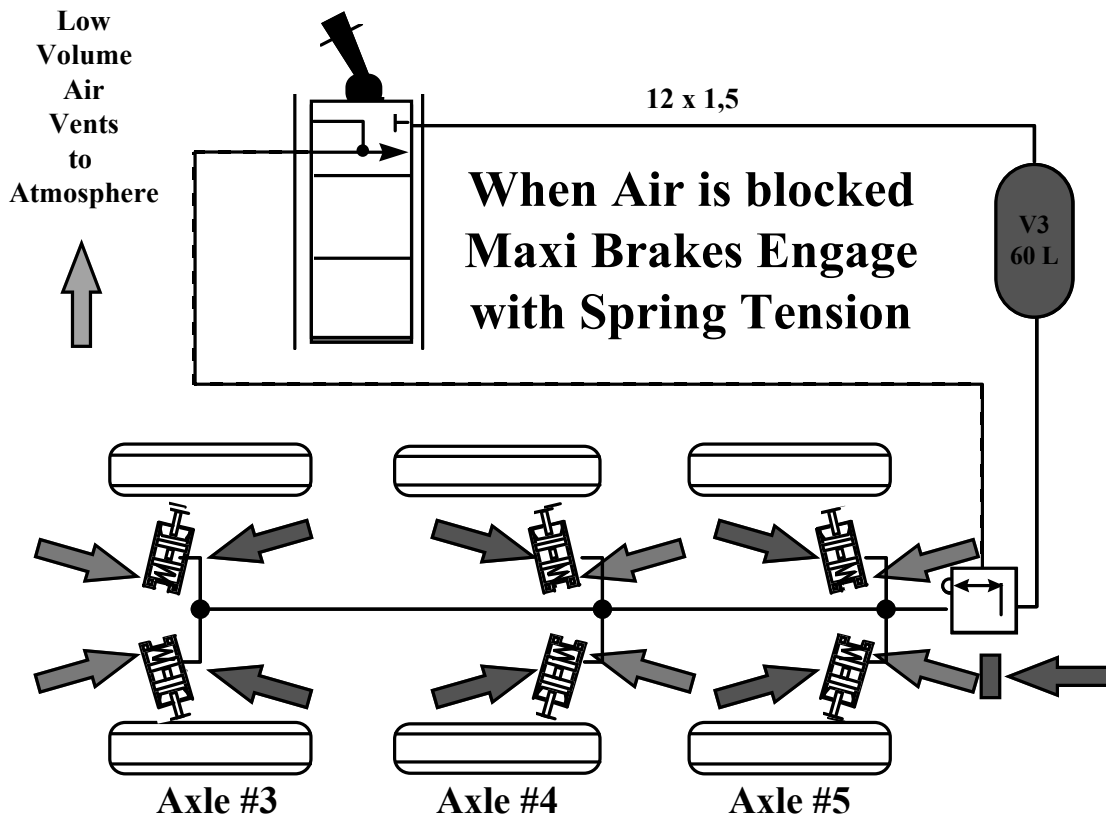
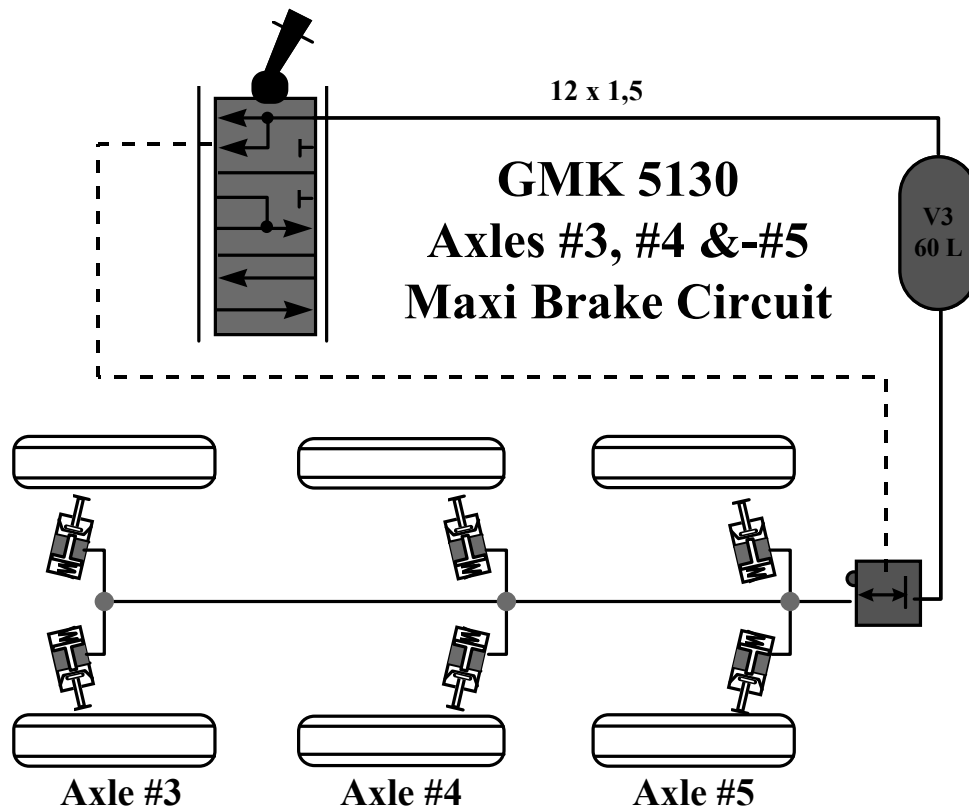


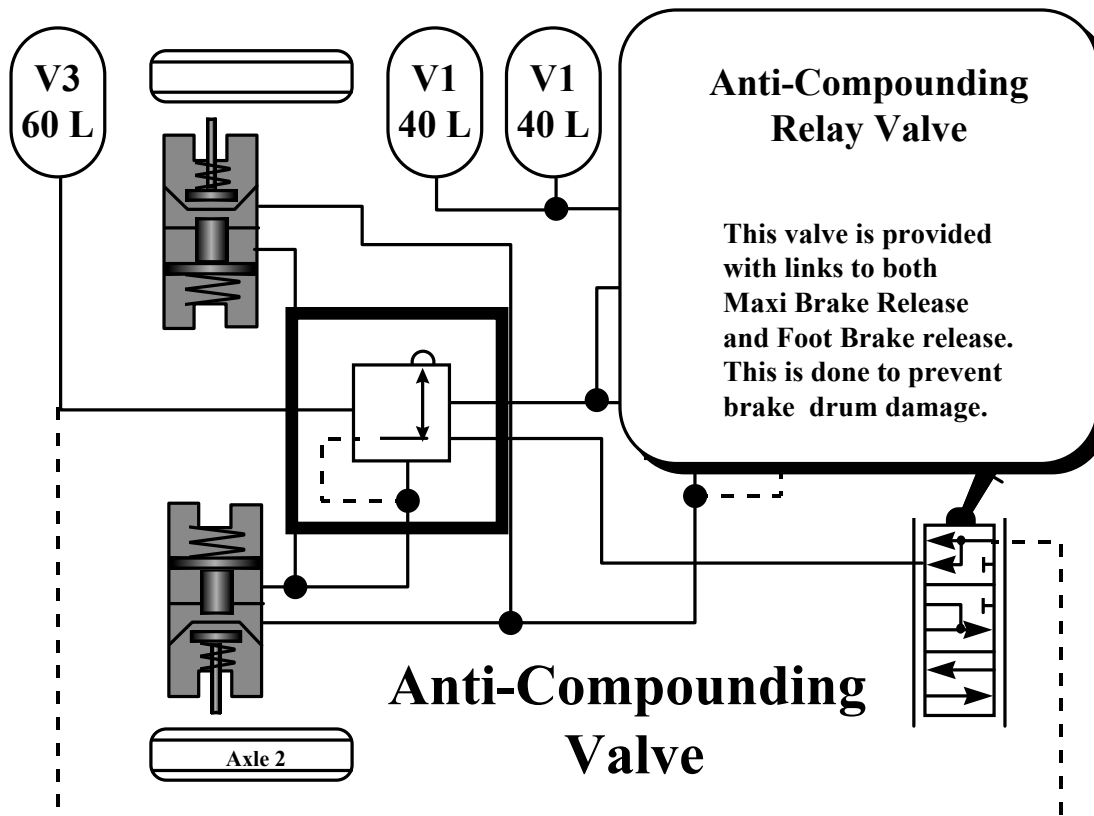
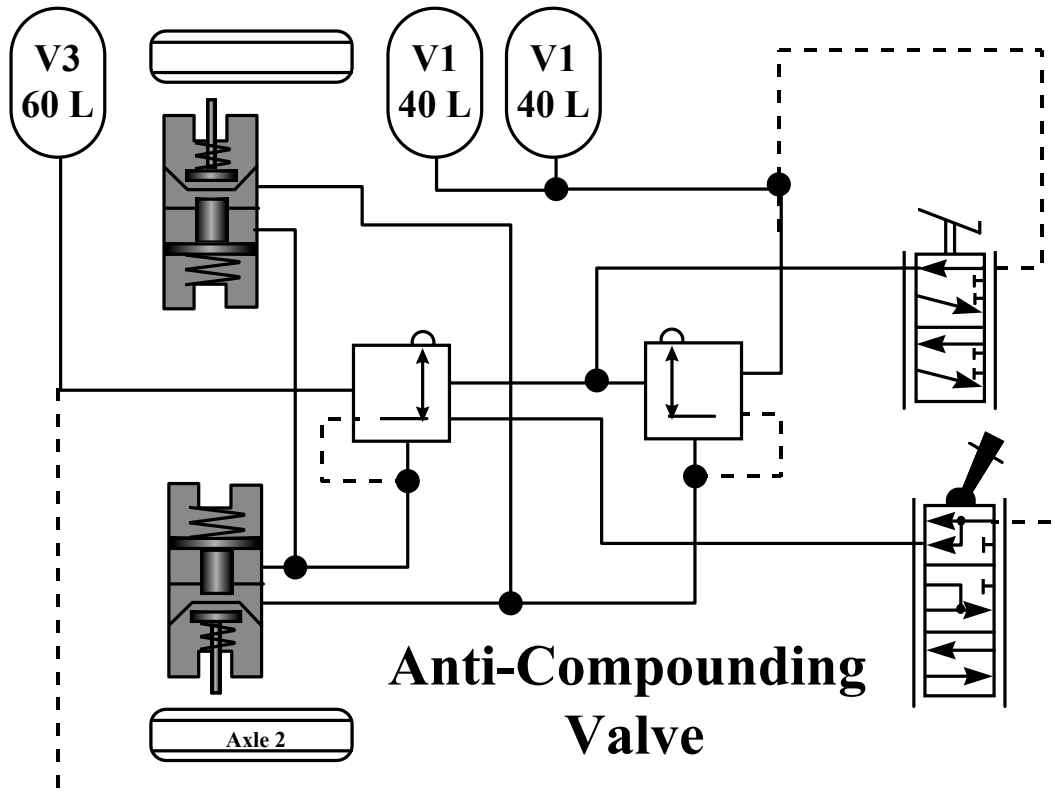


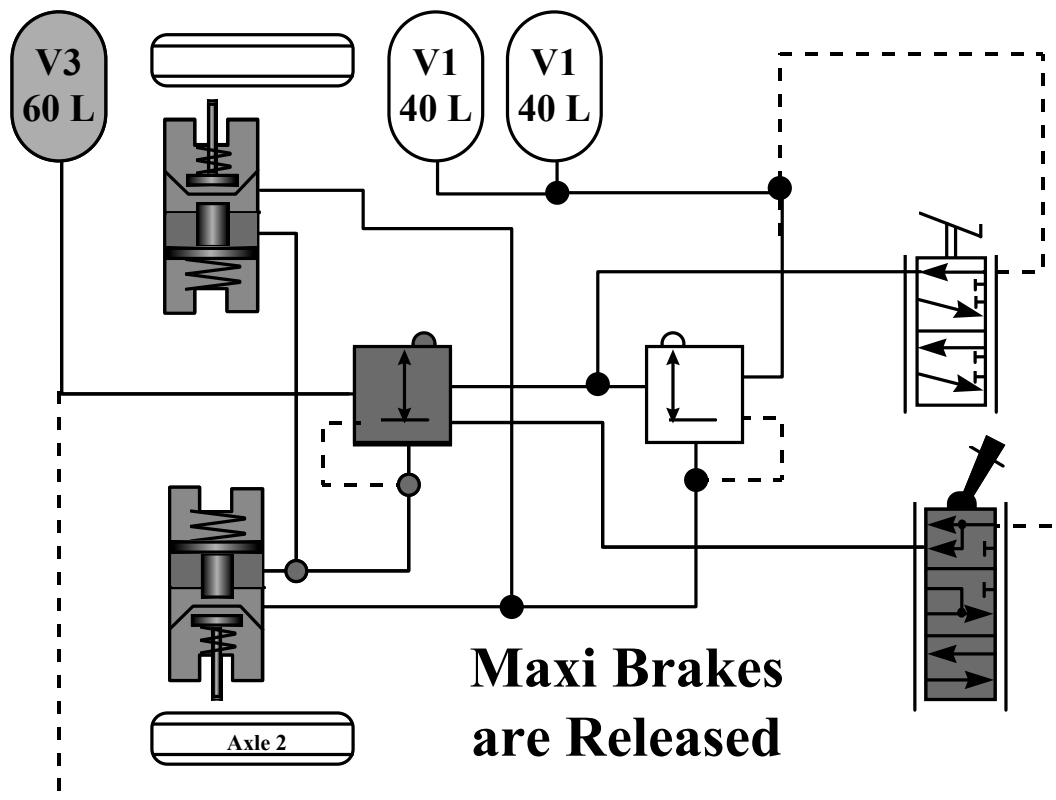
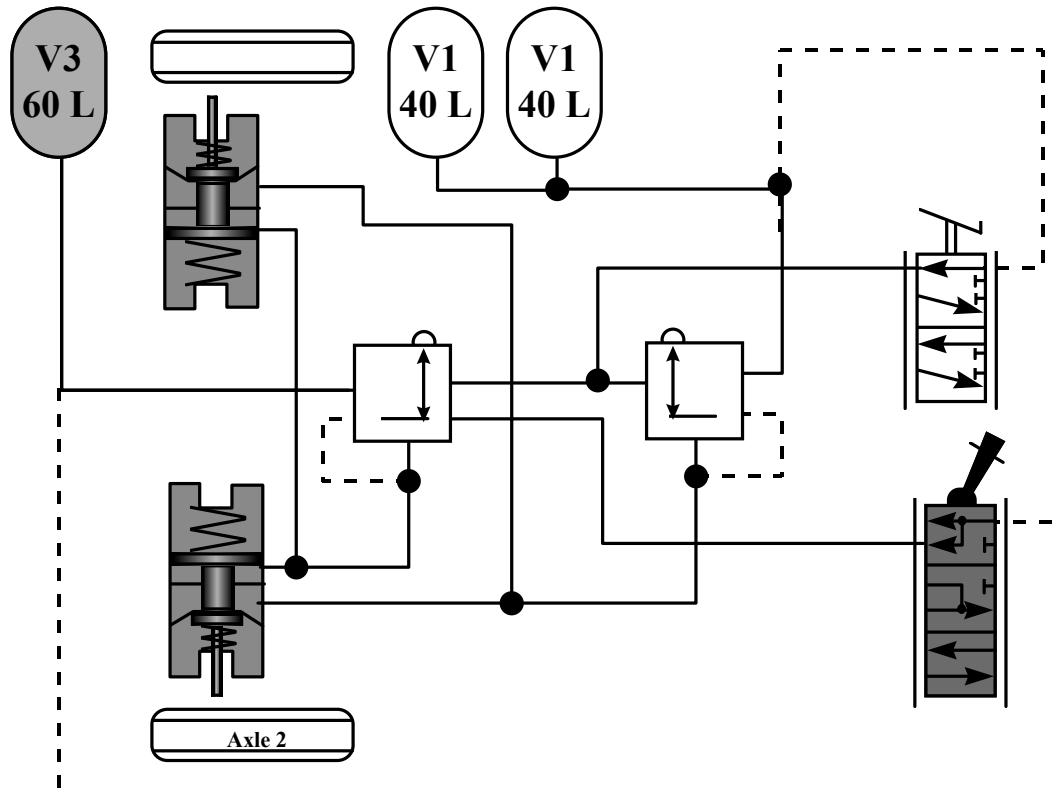


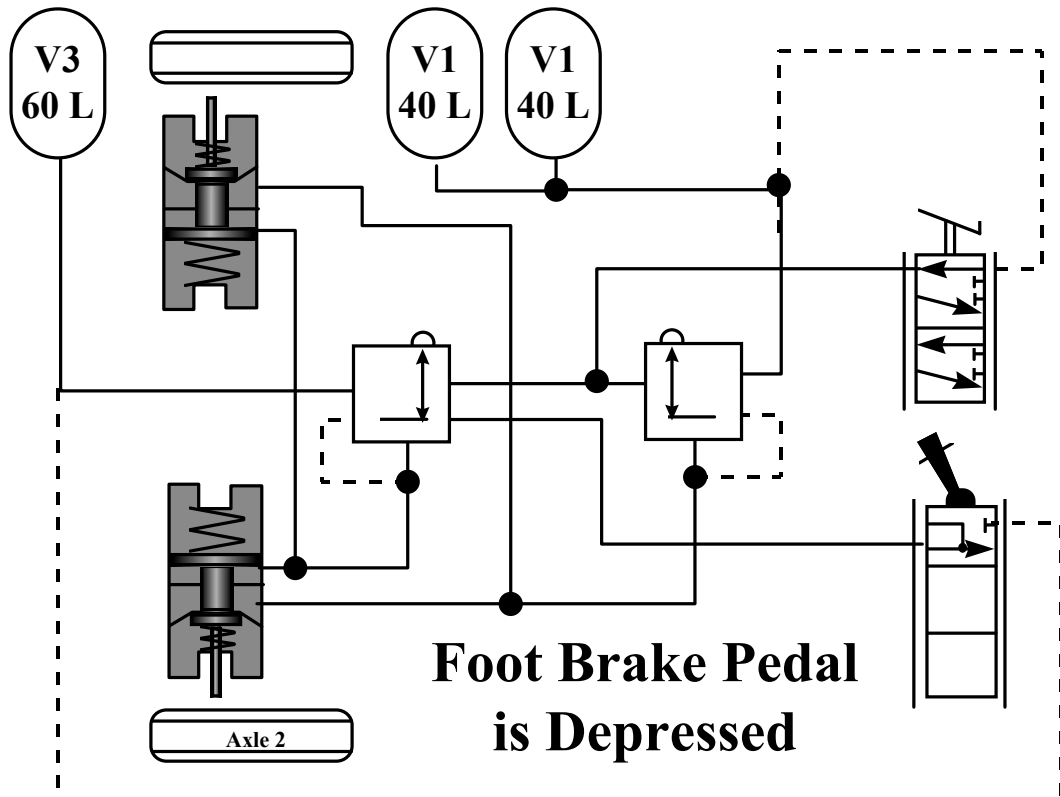
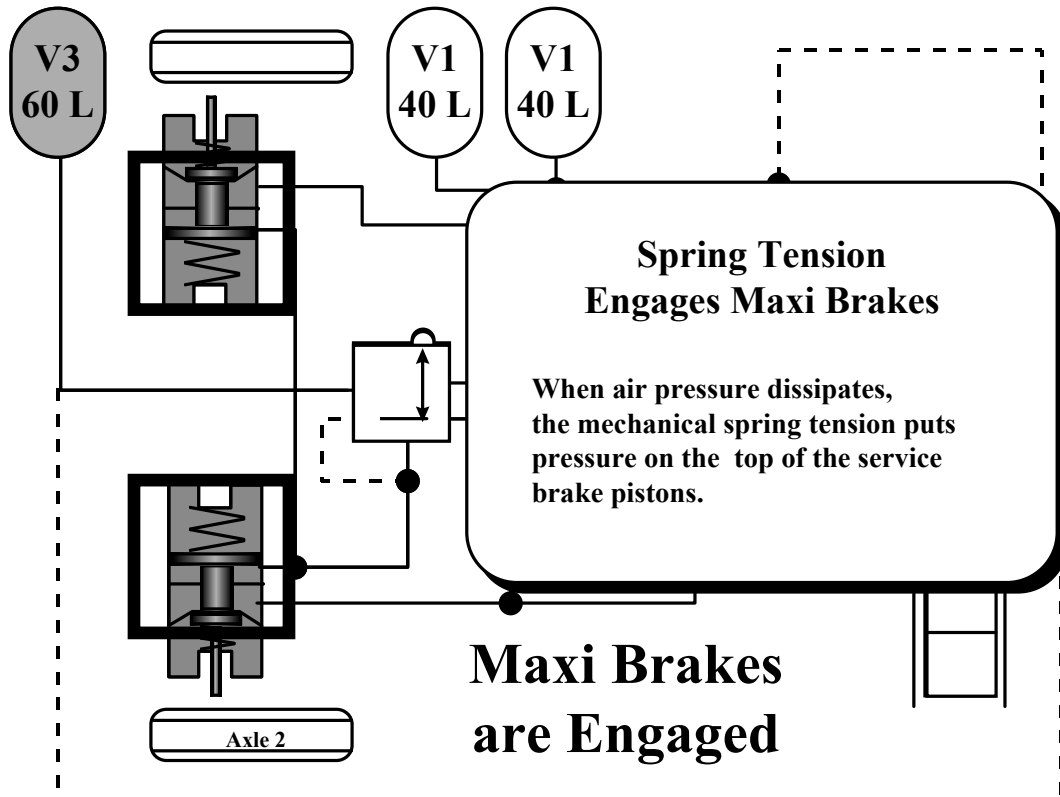


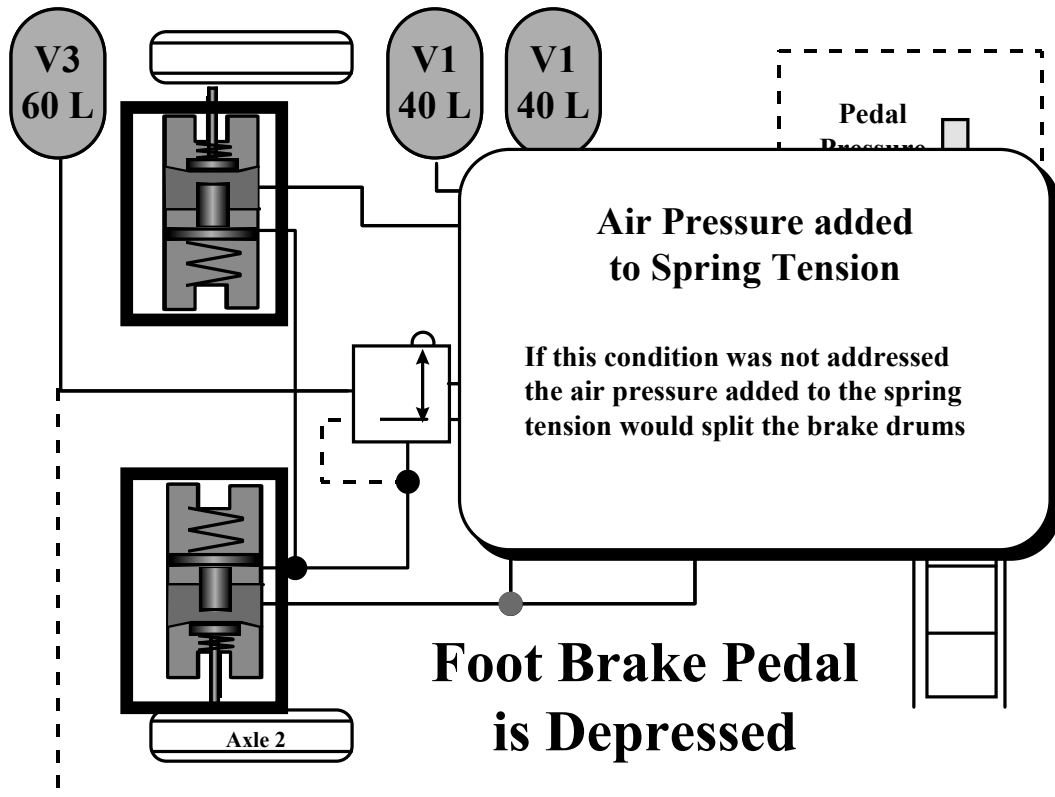
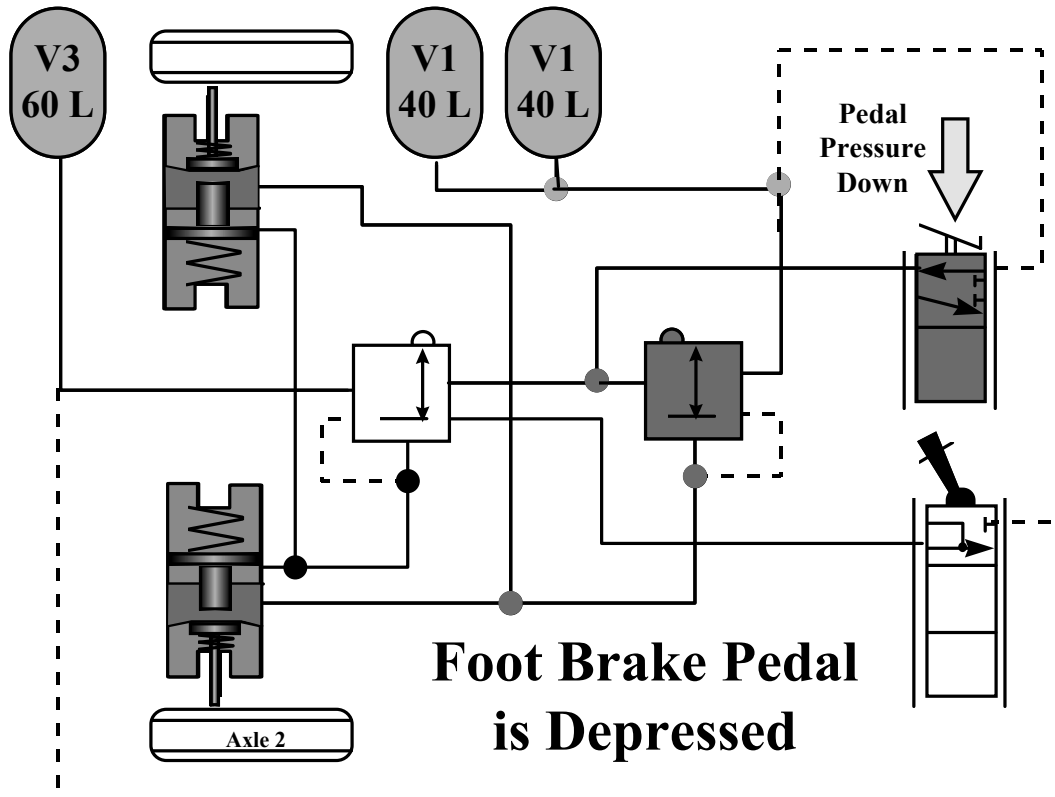


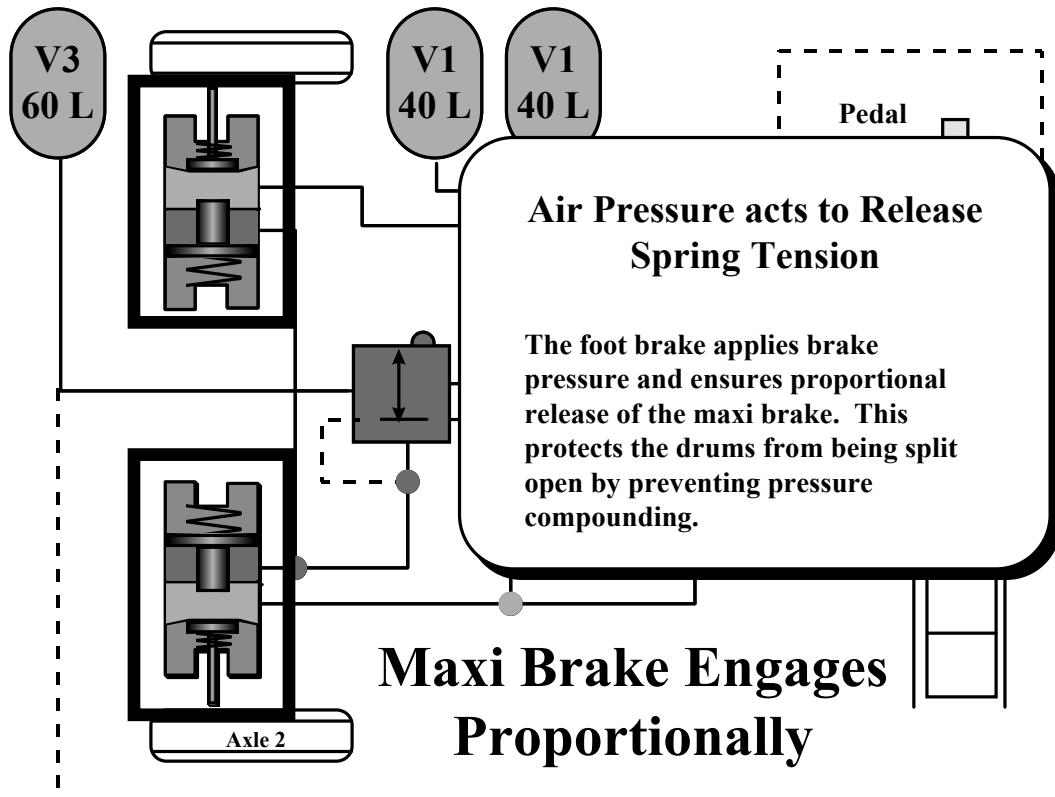
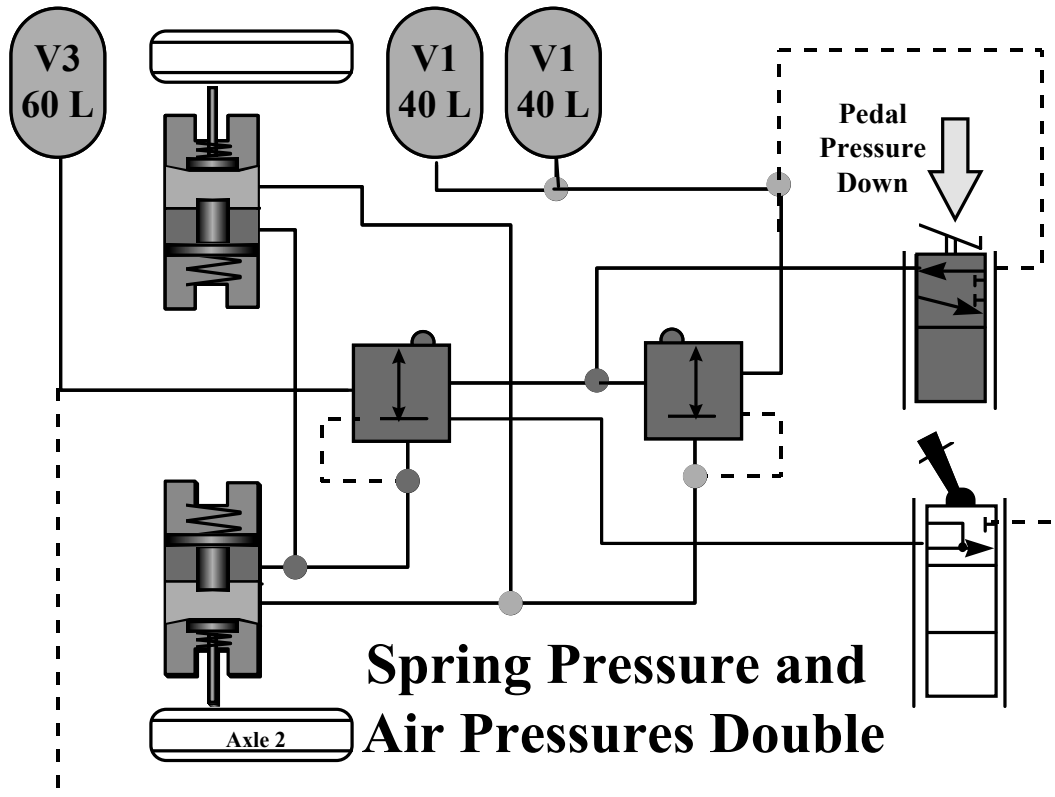




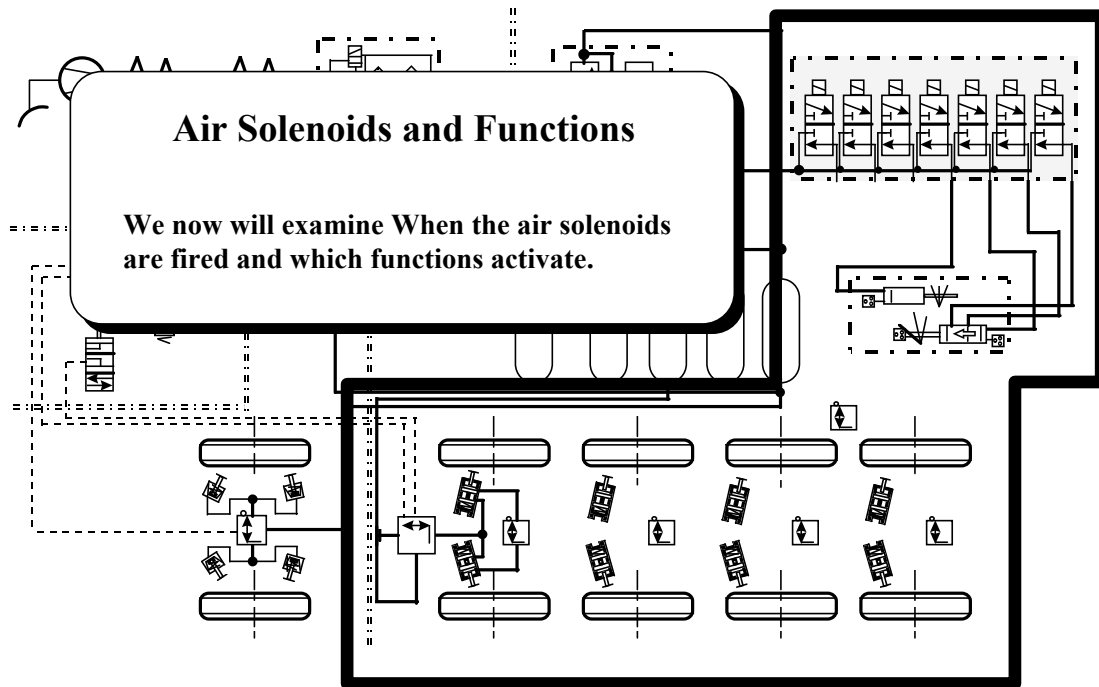






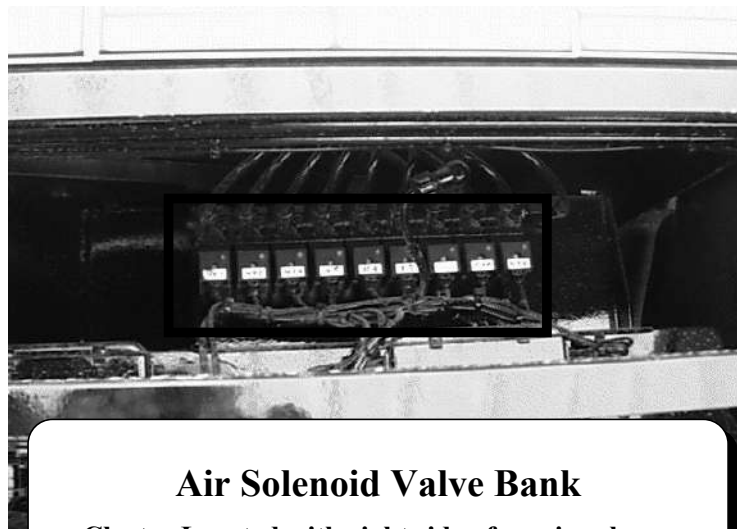


## Air Schematic Layout



**GROVE**  
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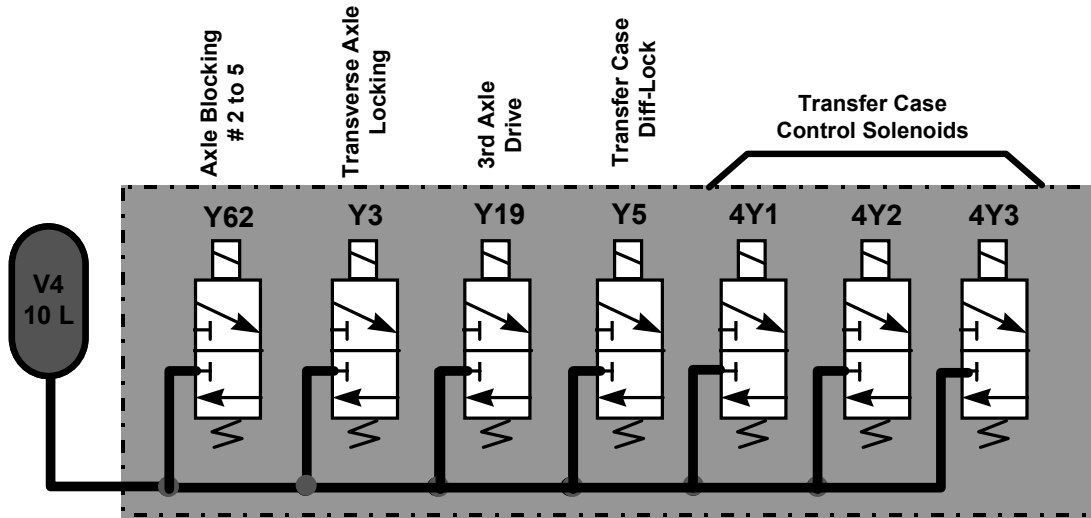
## Air Solenoid Bank



### Air Solenoid Valve Bank

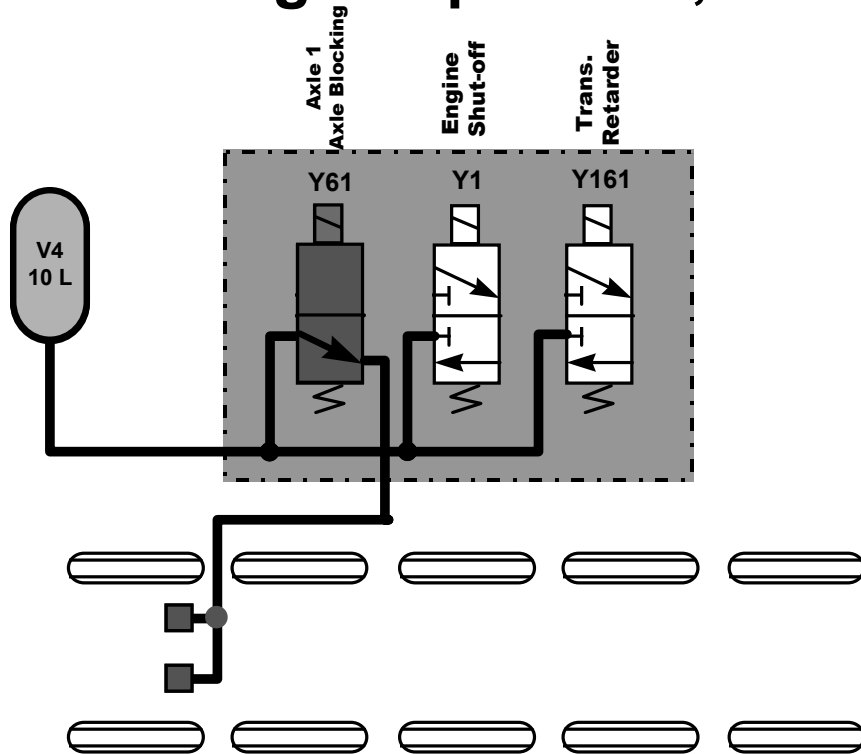
Cluster Located with right side of carrier above outrigger box



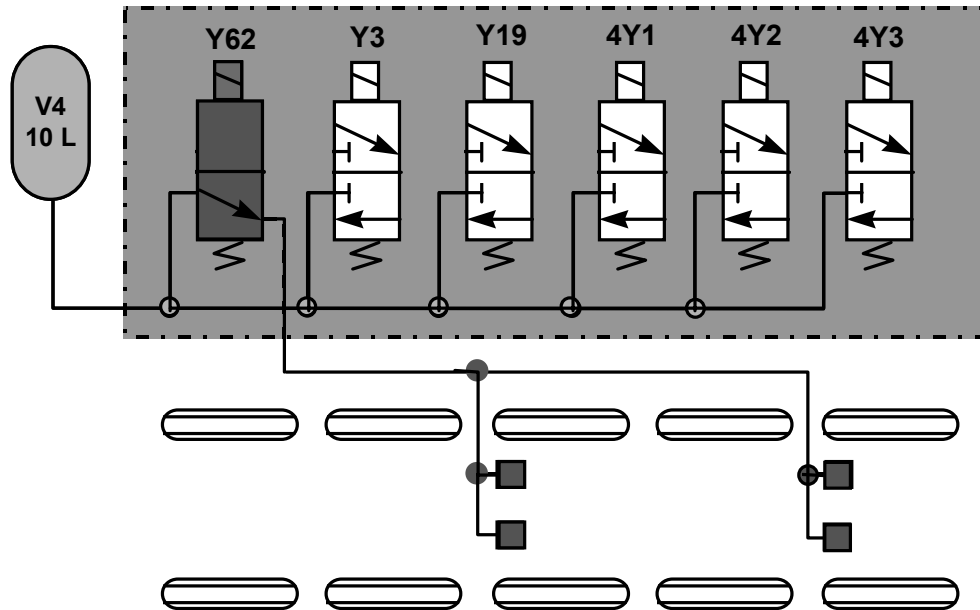


## GMK 5130 -Axle Air Solenoids

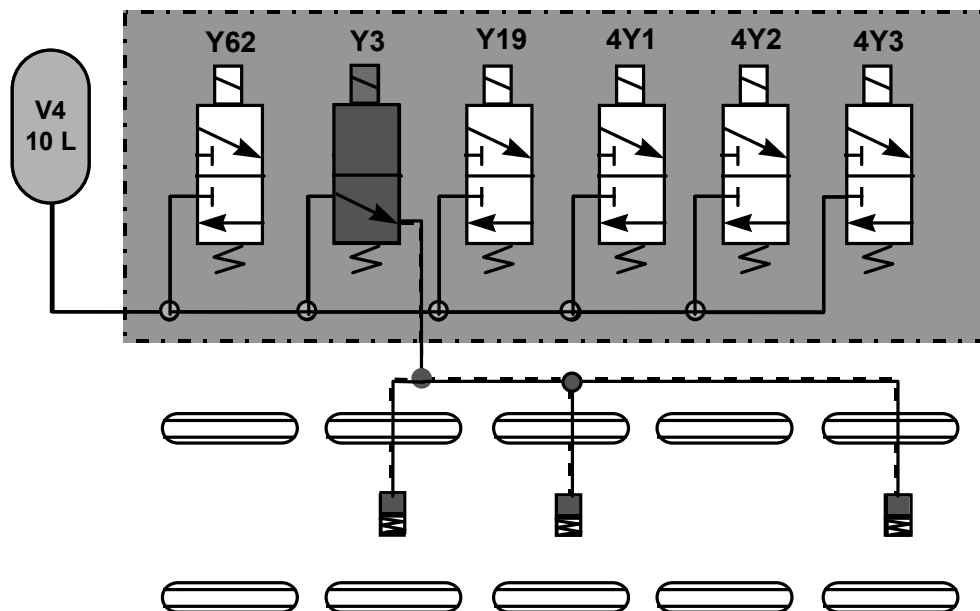
### Unlocking Suspension, Axle 1



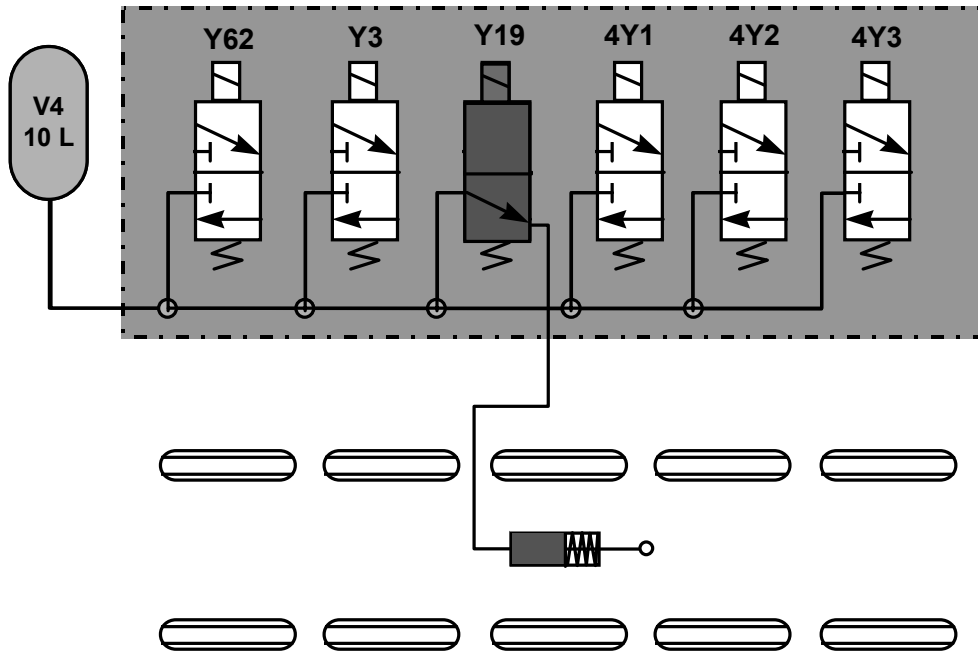
# Unlocking Suspension Axles 2 thru 5



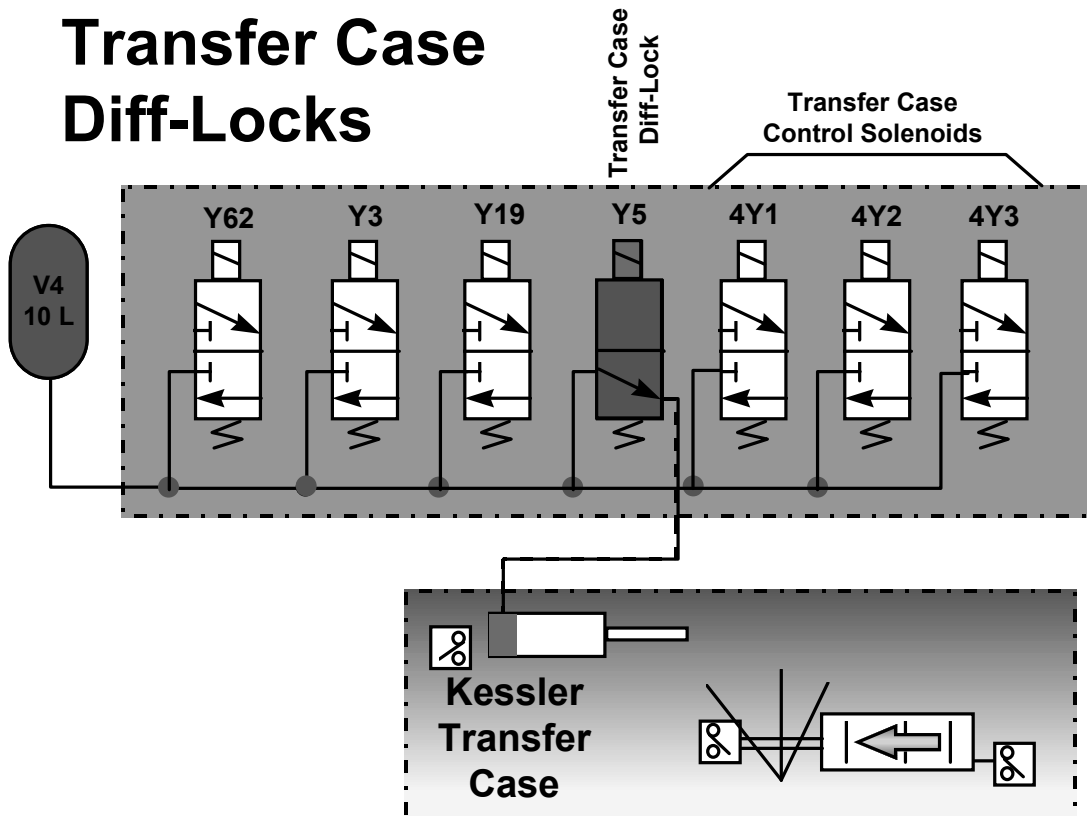
# Transverse Axles Locking



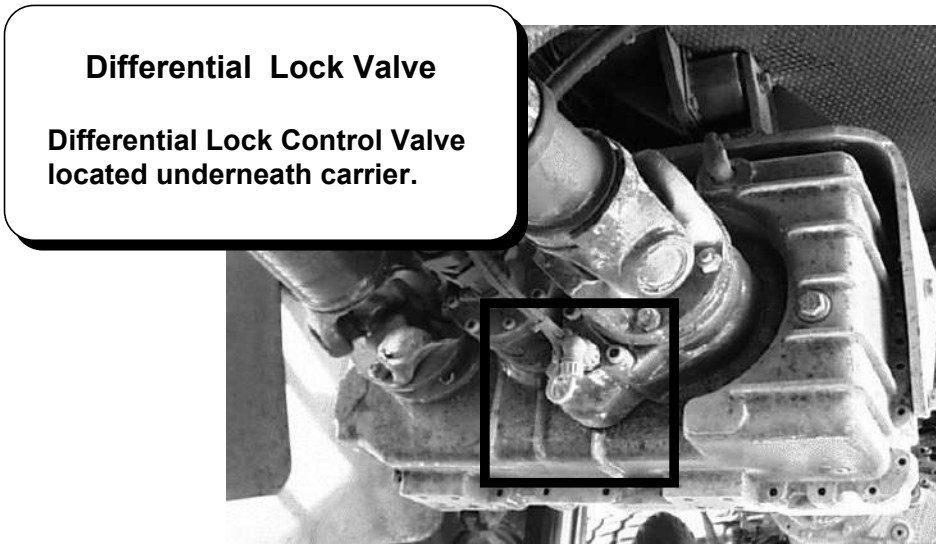
# Engage 3rd Axle Drive



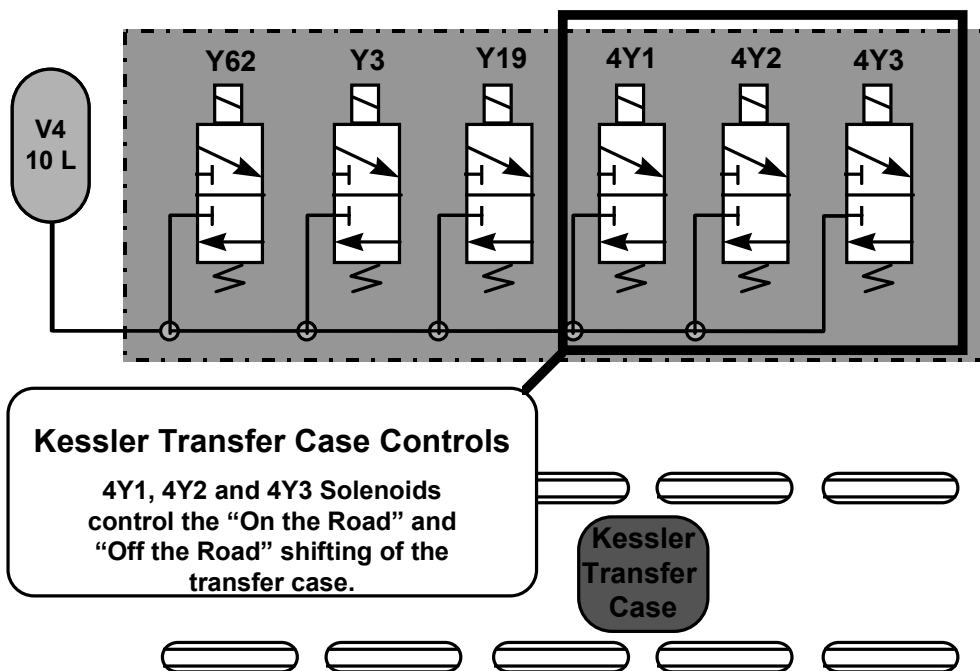
# Transfer Case Diff-Locks



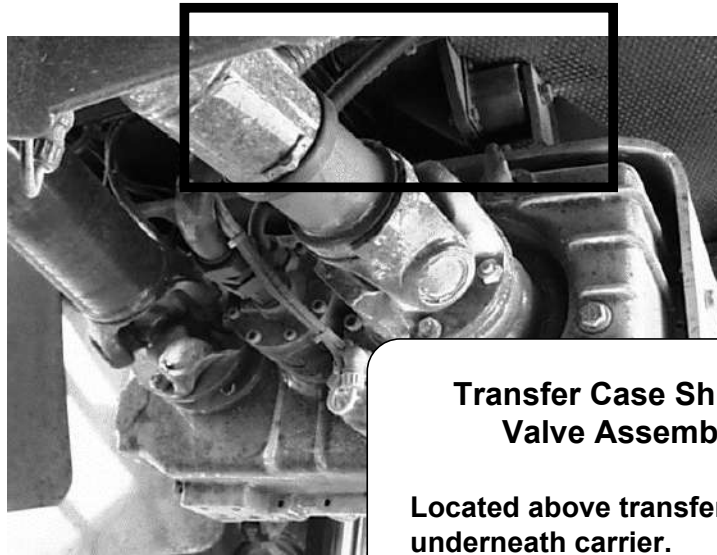
# Kessler Transfer Case



## Kessler Transfer Case Controls



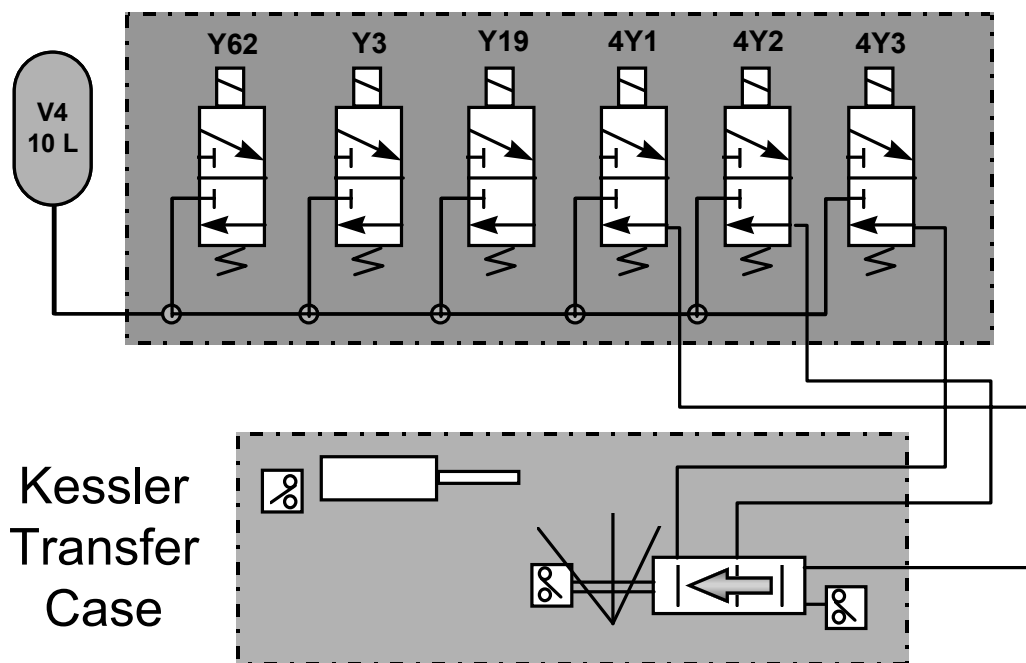
# Kessler Transfer Case



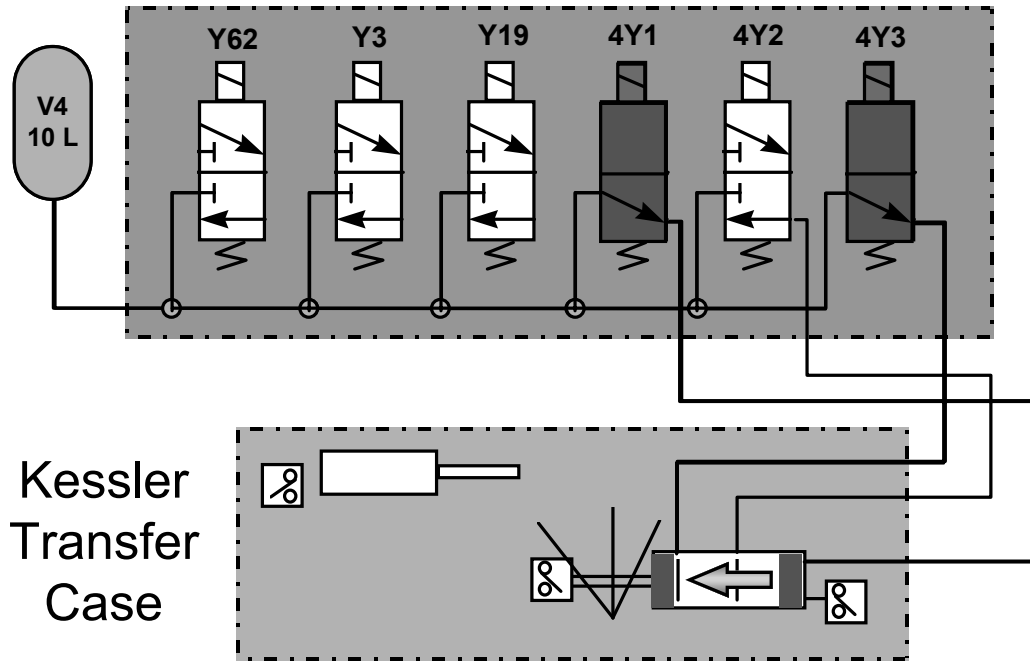
**Transfer Case Shifting Valve Assembly**

Located above transfer case underneath carrier.

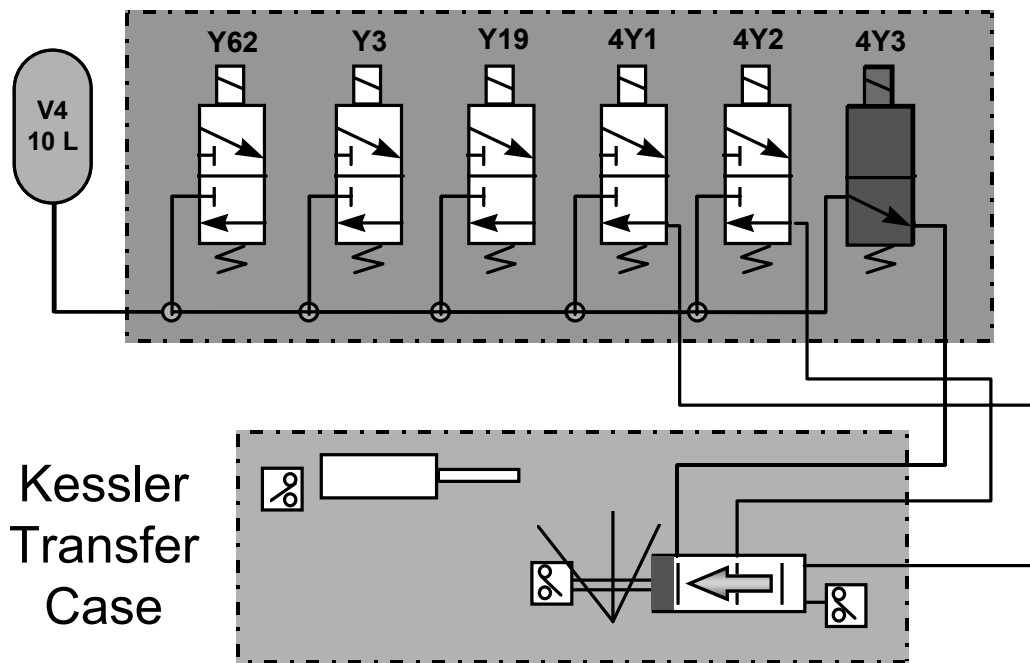
# Kessler Transfer Case Controls



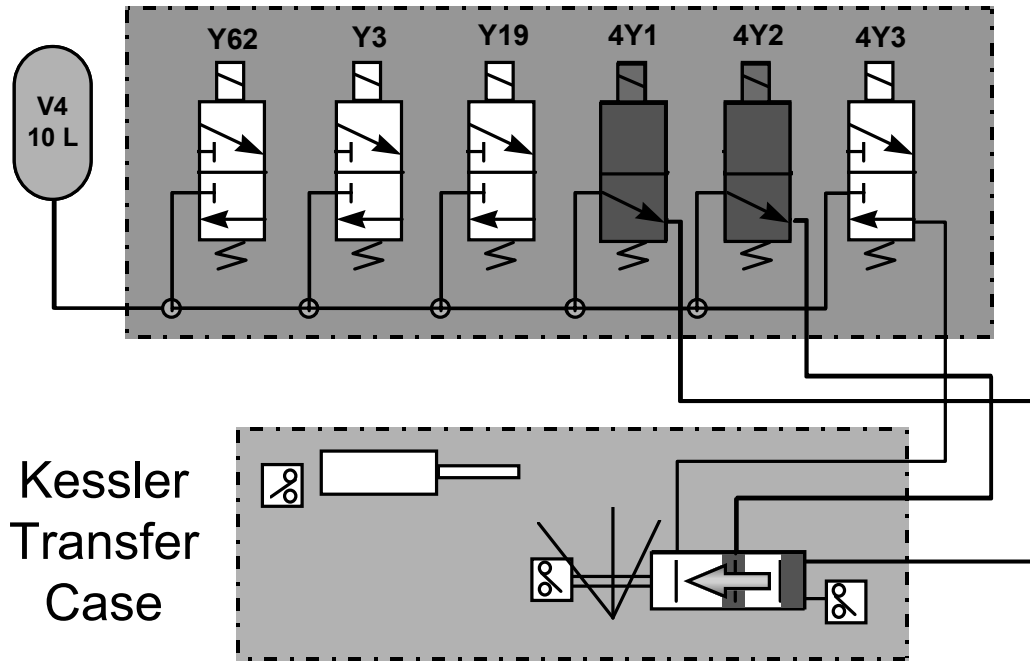
# Engage Neutral



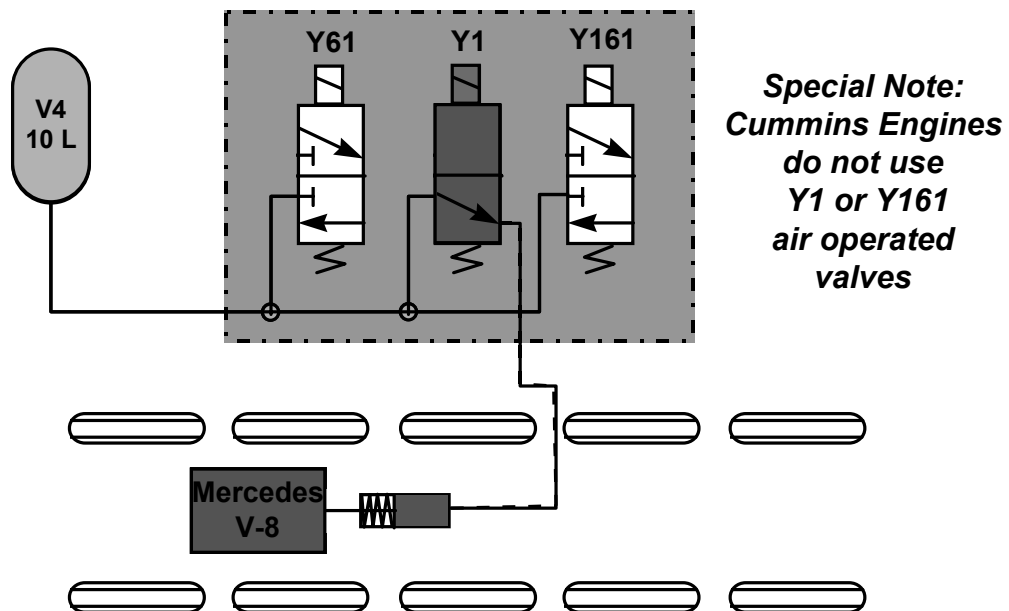
# Engage "On the Road"



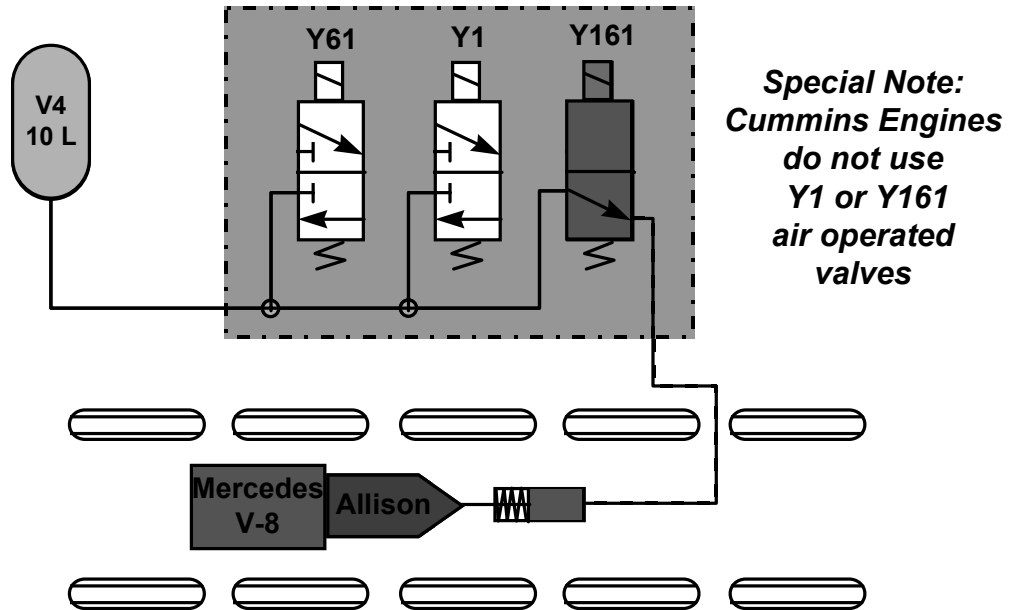
# Engage "Off the Road"



# Engine Shut-Off



# Transmission Retarder







## Carrier compressed air system

### Design and function

The pressure produced by the compressor goes via the pressure regulator (which ensures the pressure in the system remains constantly at 8.1 bar) to the air dryer. Here the water vapour is removed from the compressed air and fed through the ventilation of the drier into the open air.

At temperatures of around 10 °C (50 °F) a cartridge heater is turned on, which assists the drying process.

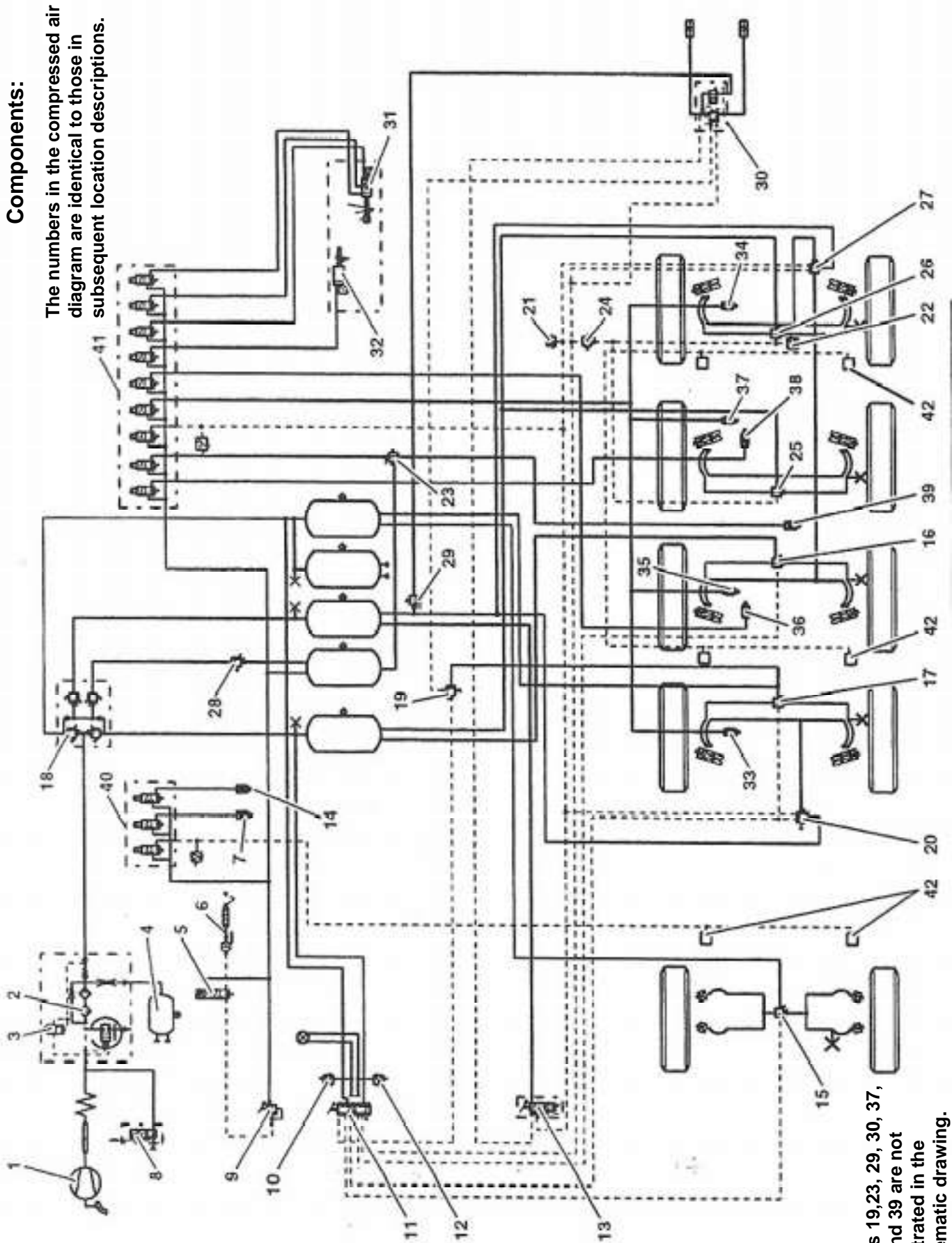
The dried compressed air goes to the four-circuit protection valve. The four-circuit protection valve distributes the compressed air into four separate circuits. This ensures that, if there is a defect with one or more circuits, the intact circuits will not suffer a drop in pressure.

Compressed air circuit 1 serves the service brake's first brake circuit (first and second axle lines).

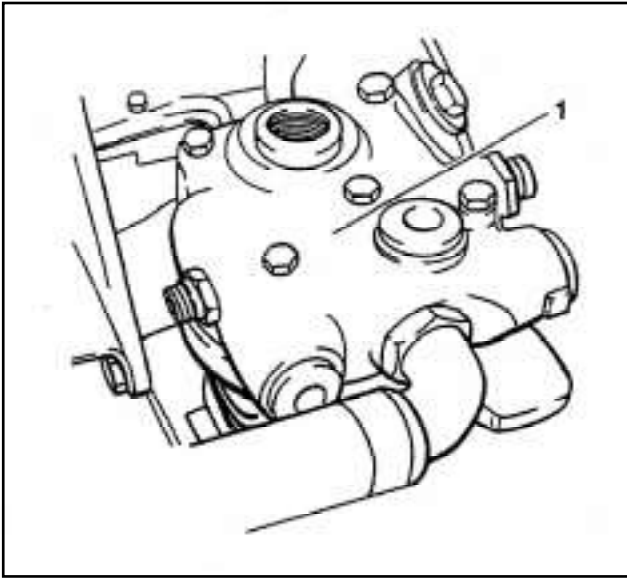
Compressed air circuit 2 serves the service brake's second brake circuit (third to fifth axle lines).

Compressed air circuit 3 serves the service parking brake.

Compressed air circuit 4 serves all secondary consumers and the speed adjustment of the engine in the carrier.

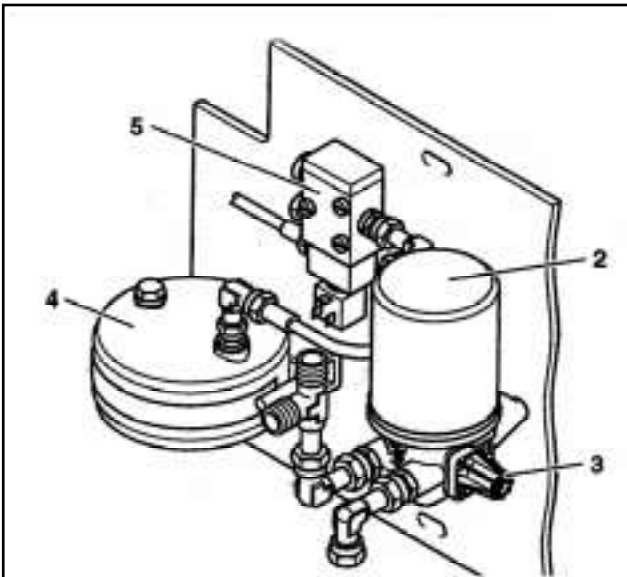


Items 19,23, 29, 30, 37, 38 and 39 are not illustrated in the schematic drawing.



The compressors (1) on the motor are on the fly-wheel's side of the engine and are at 90 o angles to each other. You can only reach these by tilting the driver's cab.

The cables above the compressor are not illustrated in this diagram.



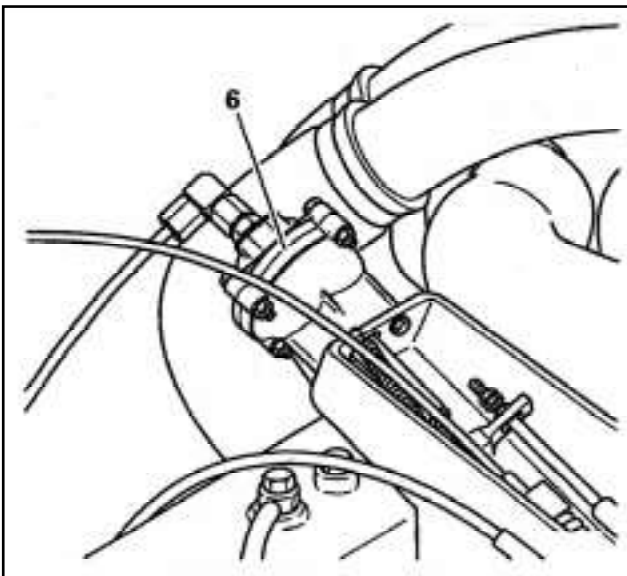
2 Air drier

3 Pressure regulator

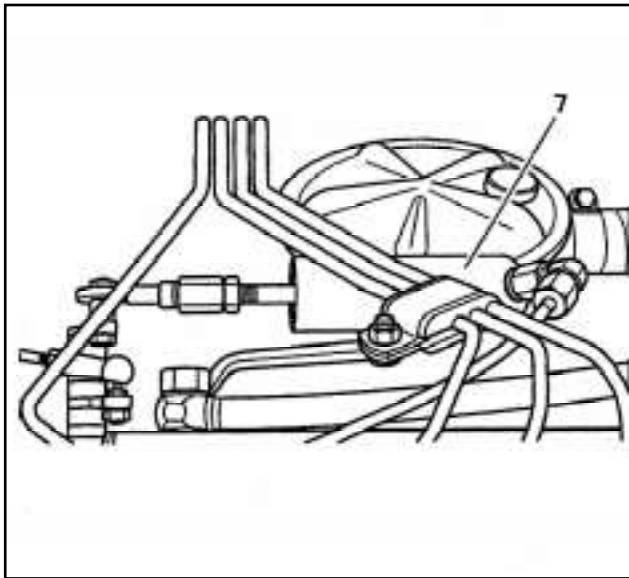
4 Conditioning unit

5 Anti-gas valve Y17

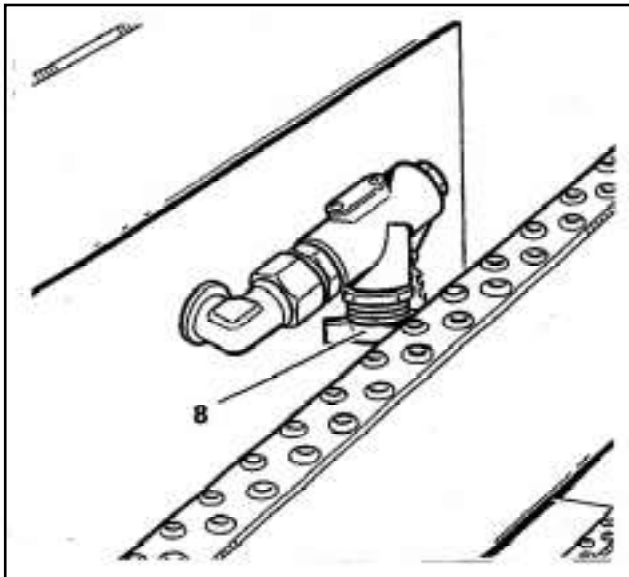
The components are on a base plate on the left side of the vehicle underneath the driver's cab (only accessible by tilting the drivers cab).



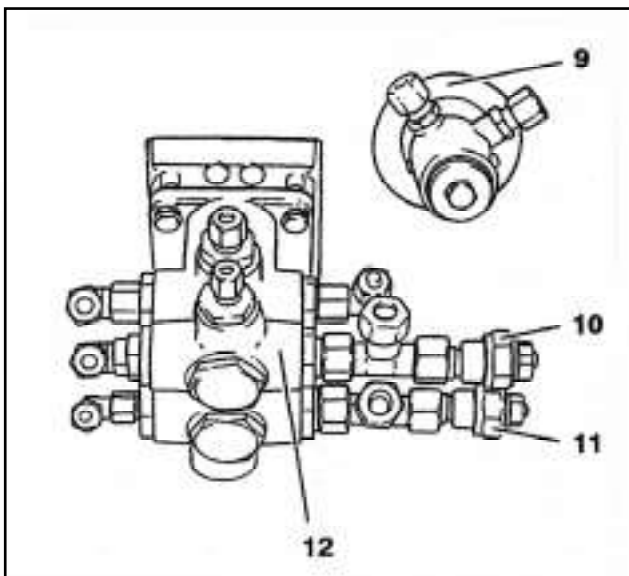
Throttle control (6) is on the motor (only accessible by tilting the driver's cab).



Motor stop cylinder (7) is on the motor  
(only accessible by tilting the drivers cab)



The tire and external inflation connections  
(8) are behind the steps under the drivers  
cab's left door.



Pedal plate with:

9 Accelerator

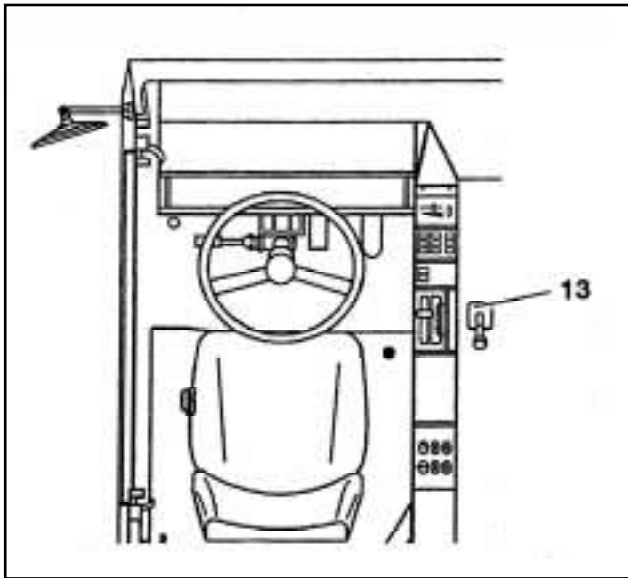
10 Pressure switch S20 (monitors brake  
circuit one)

11 Pressure switch S21 (monitors brake  
circuit two)

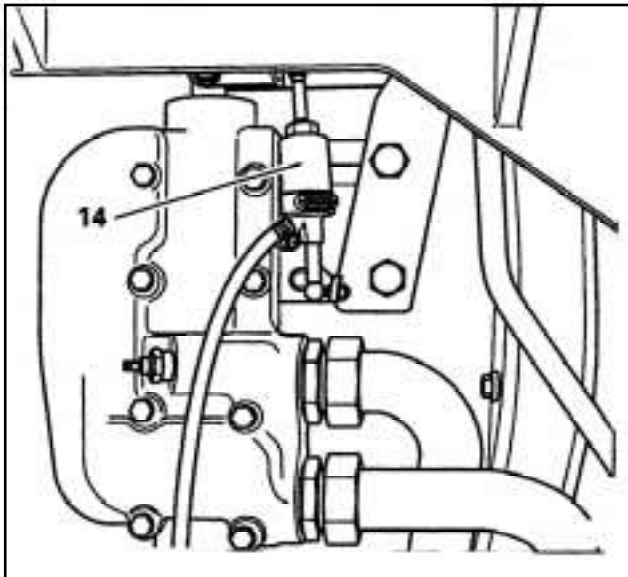
12 Brake valve (service brake)

The valve and pressure switches are at the  
front left underneath the base plate of the  
drivers cab.

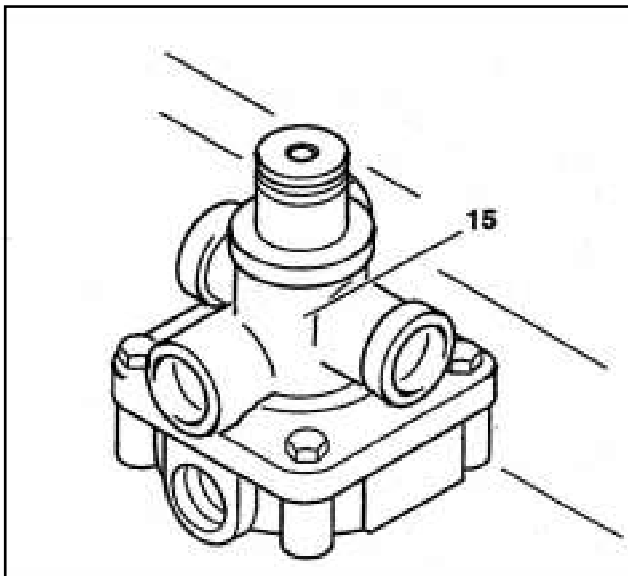
In order to access these components you  
need to tilt the driver's cab.



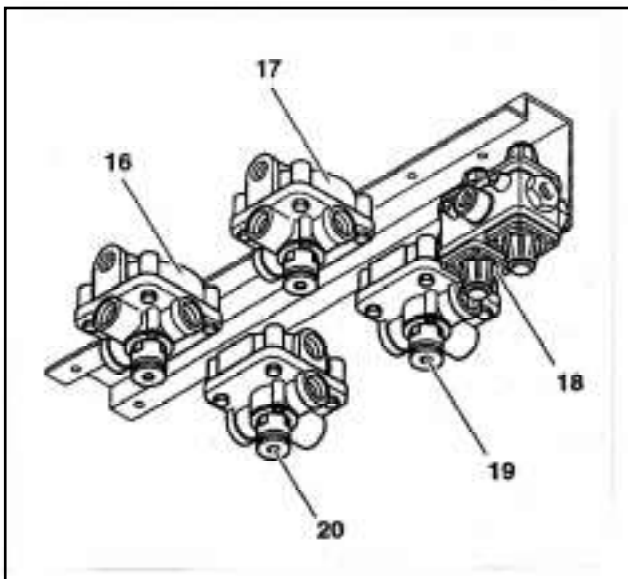
- 13 Valve for parking brake  
The hand-operated valve for the parking brake is in the driver's cab (on the engine cover, on the right hand side next to the driver's seat).



- 14 Retarder cylinder on the automatic gear-box

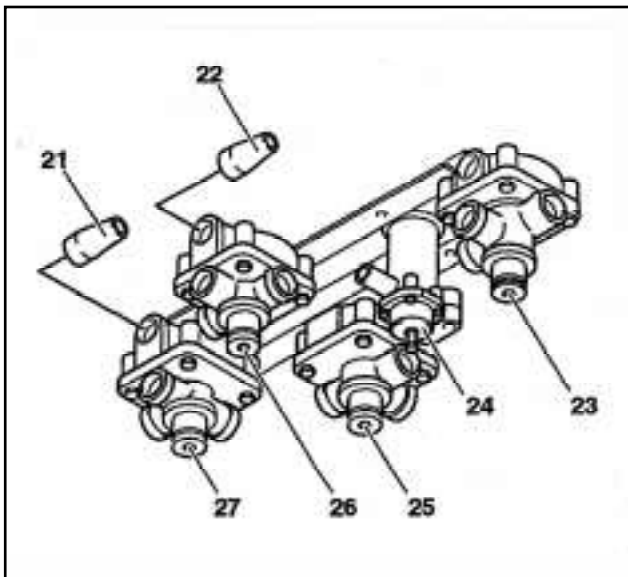


- 15 Relay valve first axle line under the crane on the support housing in the direction of the first axle line.



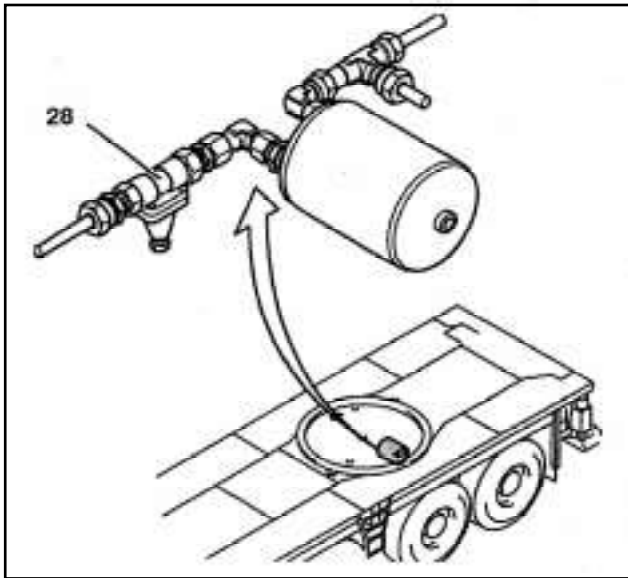
Valve support 1 on the underside of the vehicle between the second and third axle lines.

- 16 Relay valve third axle line
- 17 Relay valve second axle line
- 18 Four circuit protection valve
- 19 Relay valve towing trailer
- 20 Relay valve parking brake second axle line

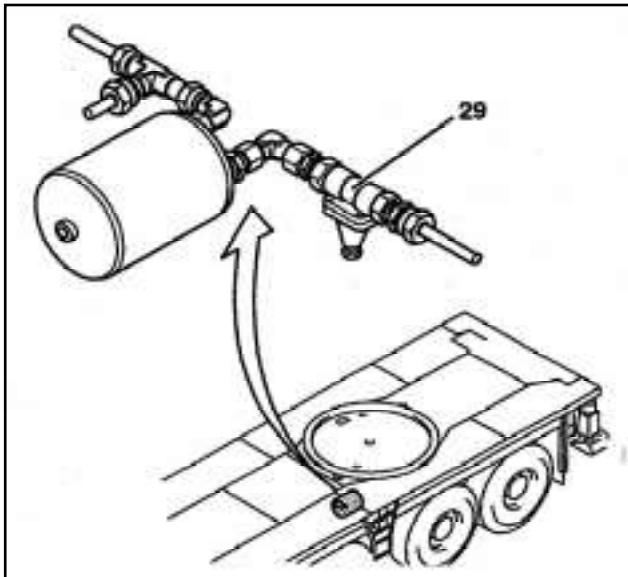


Valve support 2 on the underside of the vehicle between the fourth and fifth axle lines.

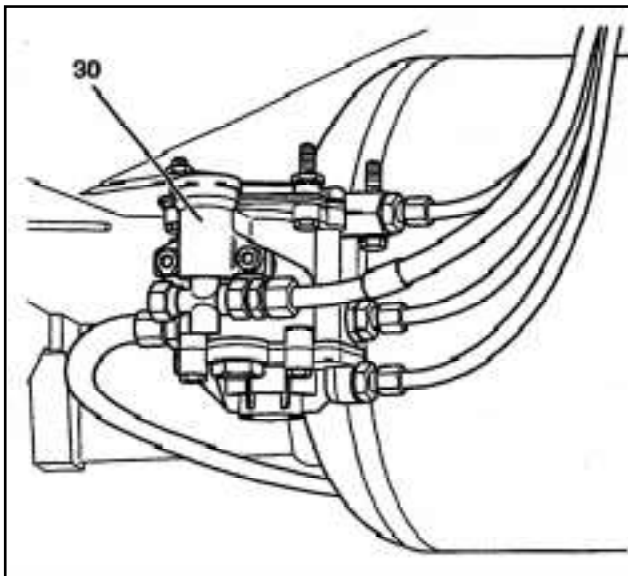
- 21 Pressure switch S22, display parking brake
- 22 Pressure switch S8, stop light
- 23 Relay valve separate steering
- 24 5.5 bar pressure control valve
- 25 Relay valve fourth axle line
- 26 Relay valve fifth axle line
- 27 Relay valve parking brake third to fifth axle lines



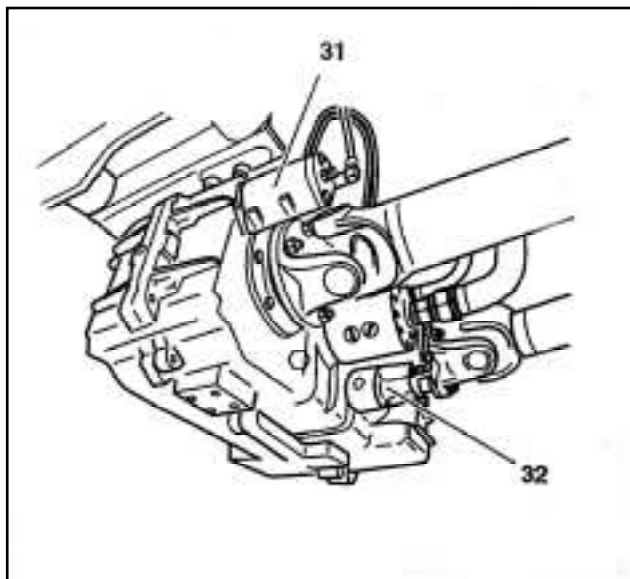
28 6 bar Overflow valve on the pressure tank of compressed-air circuit four



29 6 bar Overflow valve on the pressure tank of compressed air circuit three.



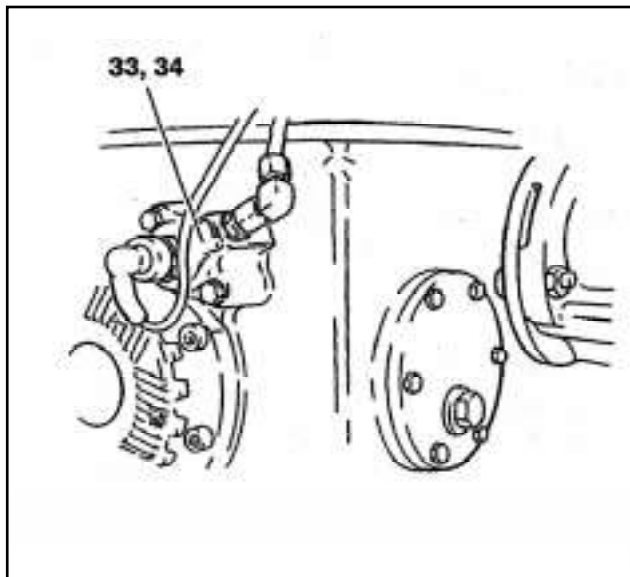
30 Trailer control valve on the rear right next to the air reservoir for circuit three under the carrier.



31 Three position control cylinder for switching on-the-road gear - neutral position - off-the-road gear.

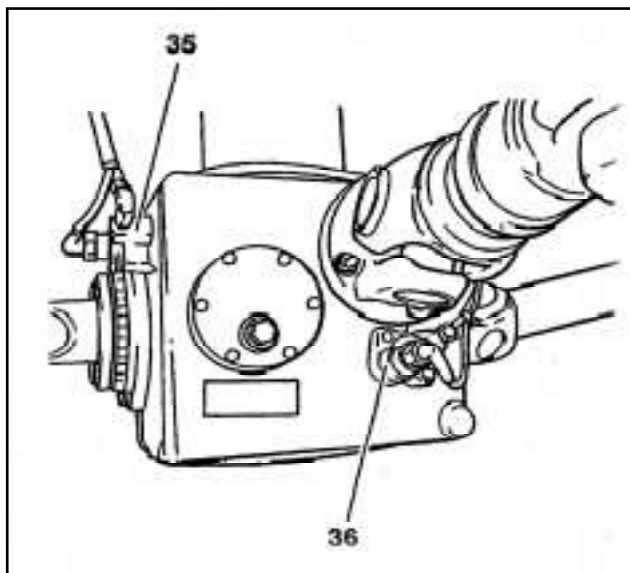
32 Longitudinal differential lock

The longitudinal differential lock and the three position control cylinder are on the front side of the transfer case.



33 Transverse differential lock second axle line on the second axle line's central gear.

34 Transverse differential lock fifth axle line on the fifth axle line's central gear.

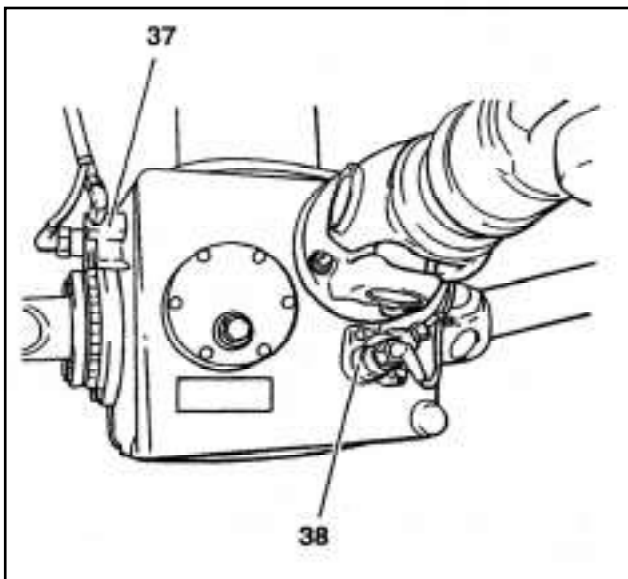


35 Transverse differential lock third axle line

36 Connection third axle line

both are on the third axle line's central gear.

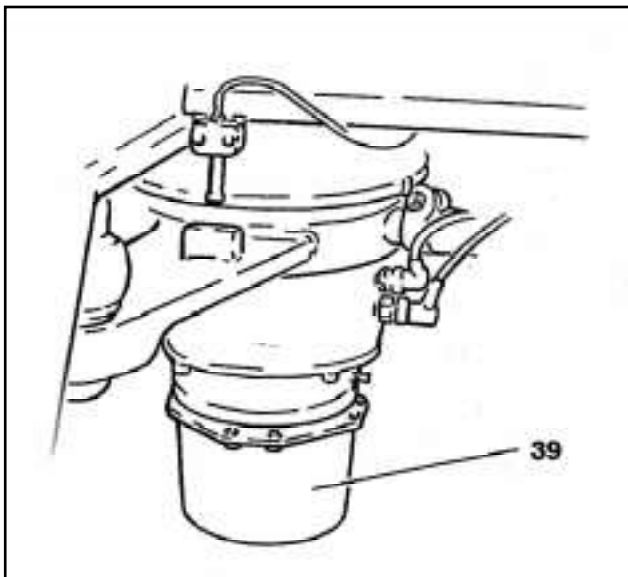




37 Transverse differential lock fourth axle line

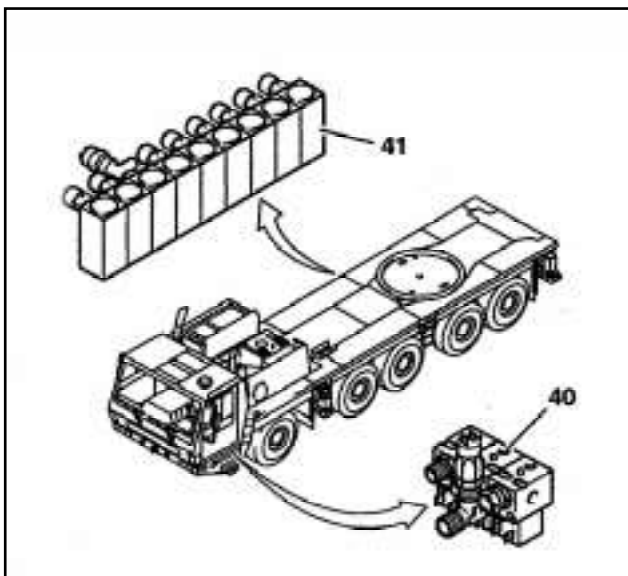
38 Longitudinal differential lock fourth axle

Both are on the third axle line's central gear.



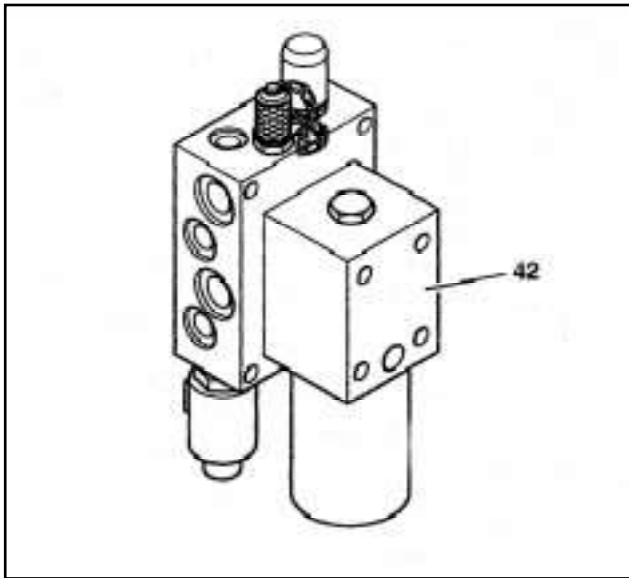
39 Lock all-wheel steering

The spring loaded cylinder for the locking and unlocking of the all wheel steering is under the steering linkage lever in a right driving direction, in front of the fourth axle line.

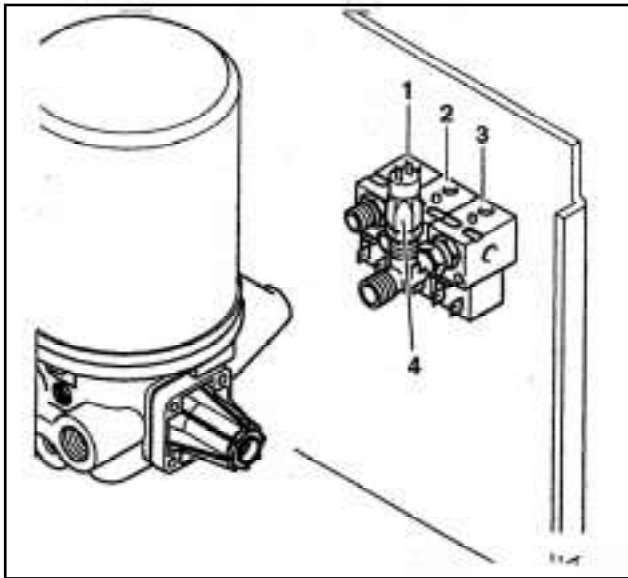


40 Valve block 1 solenoid valve compressed air circuit four (page 11) on the left side of the vehicle underneath the driver's cab (only accessible by tilting the driver's cab).

41 Valve block 2 solenoid valve compressed air circuit four (page 11) on the right side of the vehicle behind the steps to the superstructure.

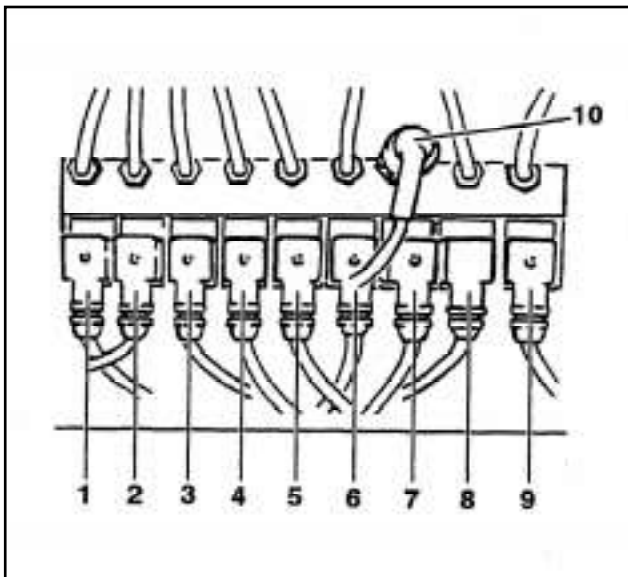


42 Stop valves for level adjustment and suspension.

**Solenoid valves compressed air circuit IV:**

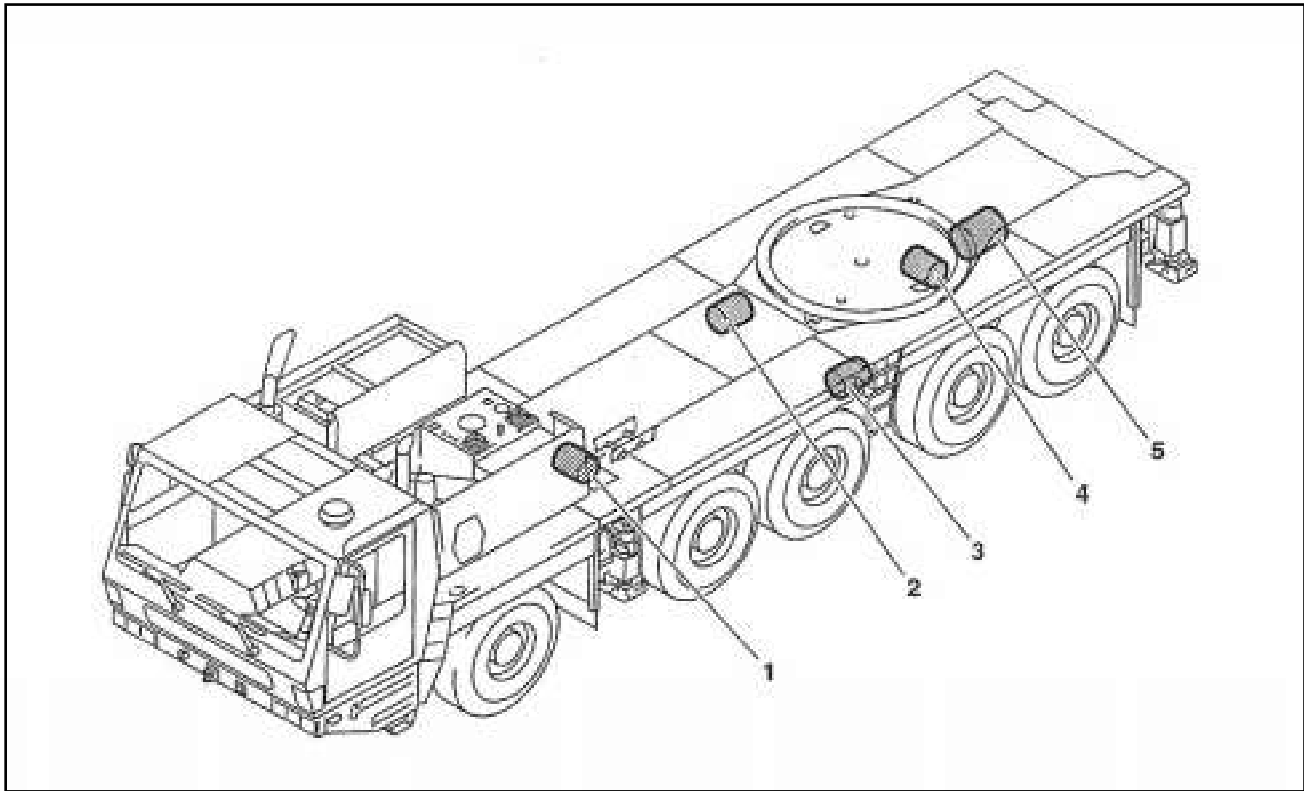
## Valve block 1

- 1 Retarder Y161
- 2 Engine cutout Y1
- 3 Suspension locking system first axle Y61
- 4 Pressure switch S62 (display suspension locking system)



## Valve block 2

- 1 Transfer case 4Y3
- 2 Transfer case 4Y2
- 3 Transfer case 4Y1
- 4 Longitudinal differential lock transfer case Y5
- 5 Activation of drive third axle line Y19
- 6 Transverse differential locks Y3
- 7 Suspension locking second to fifth axle lines Y62
- 8 Locking pin fourth axle line (separate steering) 6Y1
- 9 Longitudinal differential lock fourth axle line 4Y4
- 10 Pressure switch S61 (display suspension locking system)

**Air reservoir:**

- 1 Air reservoir circuit three with measuring point
- 2 Air reservoir circuit one with measuring point
- 3 Air reservoir circuit one
- 4 Air reservoir circuit four with measuring point
- 5 Air reservoir circuit two with measuring point

**Technical specifications:**

Compressor:	2 single cylinder compressors (flanged on the engine)
Air drier:	Air drier with integrated cartridge heater and separate 4.5 l conditioning unit.
Pressure regulator:	Installed in the air drier  cut-out pressure 8.1 bar
Air reservoir:	Compressed air circuit I: 2x40 l Compressed air circuit II: 1x100 l Compressed air circuit III: 1x60 l Compressed air circuit IV: 1x10 l, limited to 6 bar

**Repair work:**

The compressed air system is carried out when the engine is running (in neutral gear) and when there is air pressure on the manometer in the driver's cab. The pressure on the manometer must be 6 bar.

**Depressurize the compressed air system completely**

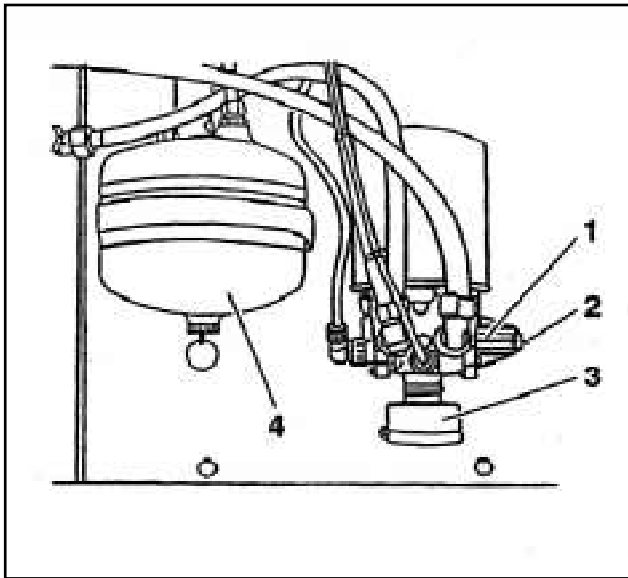
- Lift up the truck crane with the outrigger.



Risk of injury from rotating parts and from compressed air !  
Switch off the engine before commencing repair work.  
Release the pressure from the compressed air system completely.  
Take out the ignition key and make sure that the truck crane can not be used by any unauthorized persons.

- Switch off the engine.
- Partially depressurize the compressed air system by applying the service brake several times.
- Completely ventilate all air reservoirs via the drain valves.
- The compressed air manometer in the driver's cab must display 0 bar.
- Take out ignition key and make sure that the truck crane cannot be used by unauthorized persons.

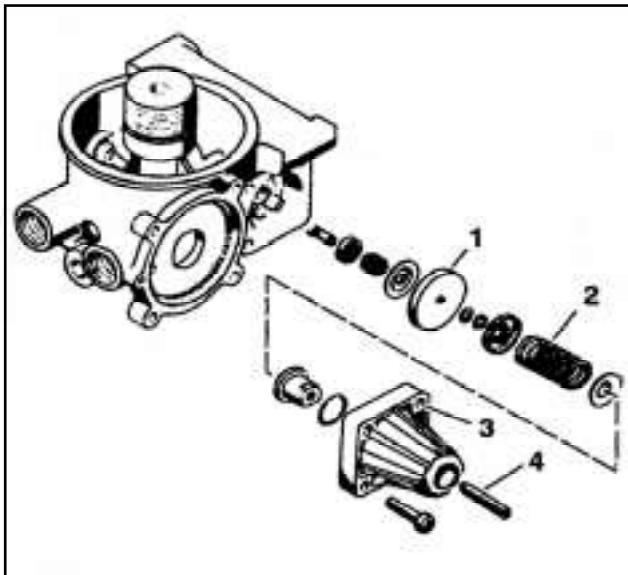
### Checking and/or replacing the pressure regulator:



Check pressure regulator (1) while the engine is running.

If the vent valve in the muffler (3) deflates before the cut out pressure (8.1 bar) is reached, check the pressure regulator and replace it if necessary.

- Prepare repair work and depressurize the compressed air system completely: (page 14)
- Completely ventilate the conditioning unit (4) via the drain valve.
- Pull out adjusting screws (2) on the regulator completely.



• Remove retaining bolts (3) unscrew regulator and check: replace pot collar (1) or spring (2) if these are defective.

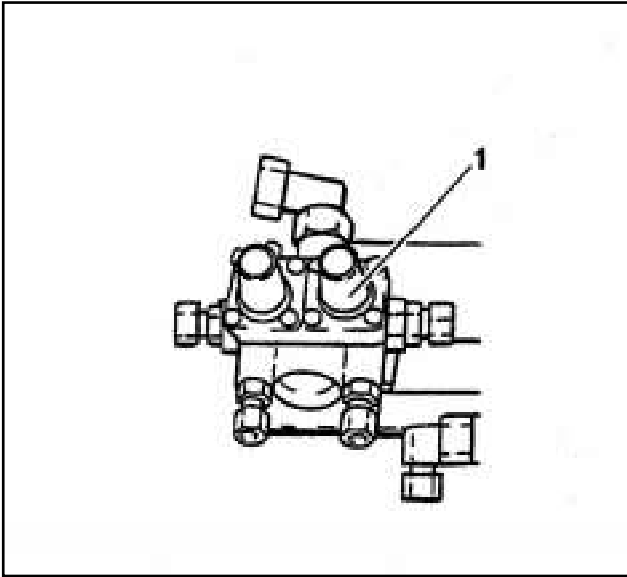
• Proceed in the reverse order to install.

• Fill compressed air system and check the function.

• Adjust the pressure regulator: Adjust the adjusting screw (4) until the manometer in the driver's cab displays 8.1 bar.

**Replacing four-circuit protection valve:**

Prepare repair work and depressurized the compressed air system completely. (page 14)

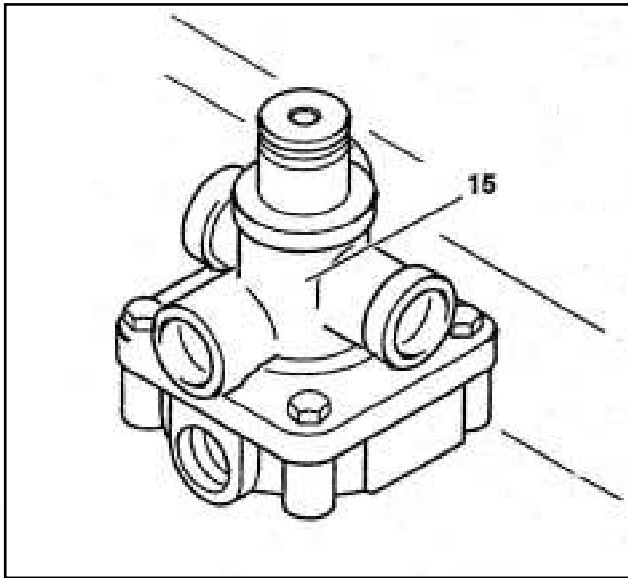


- Mark compressed air lines and unscrew from four circuit protection valve (1)
- Replace four circuit protection valve.
- Re-connect compressed air lines to the new four circuit protection valve.
- Start up the compressed air system and check if it is working and then adjust the pressure regulator if necessary. (page 15)



**Replacing relay valve:**

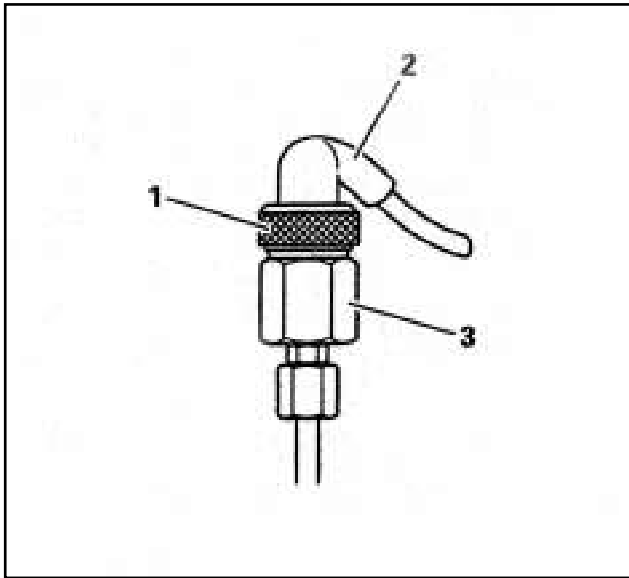
Prepare repair work and depressurized the compressed air system completely. (page 14)



- Mark compressed air lines and unscrew from four circuit protection valve (15)
- Replace relay valve.
- Re-connect compressed air lines to the new relay valve.
- Start up the compressed air system and check if it is working.

## Replacing pressure switch

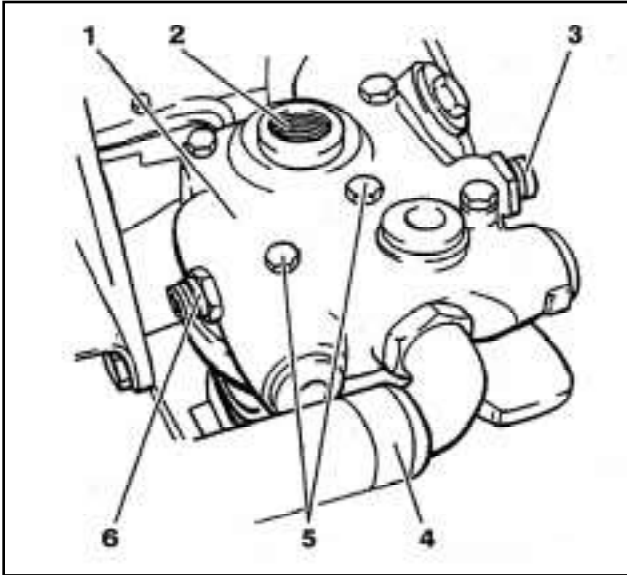
Prepare repair work and depressurized the compressed air system completely. (page 14)



- Remove cap nut (1).
- Remove plug (2) from the pressure switch (3).
- Unscrew pressure switch.
- Screw in new pressure switch with new seal.
- Position plug.
- Tighten cap nut.
- Start up the compressed air system and check if it is working.

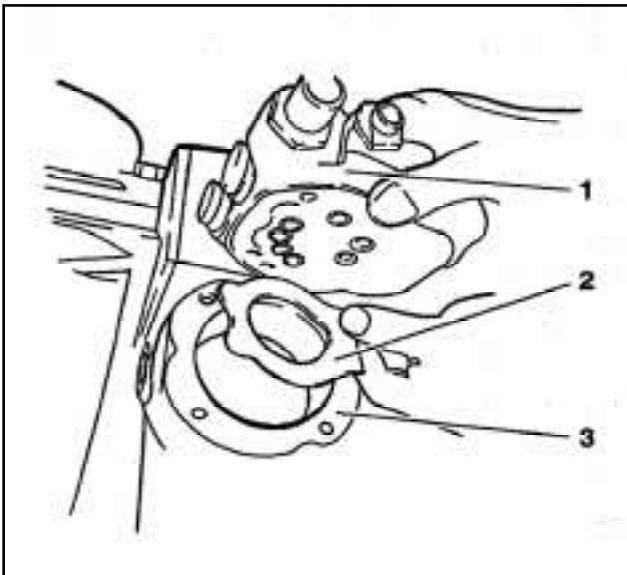
## Replacing compressor

- Prepare repair work and depressurized the compressed air system completely. (page 14)
- Tilt driver's cab forward.
- Remove the leads above the compressor so that the compressor is accessible.



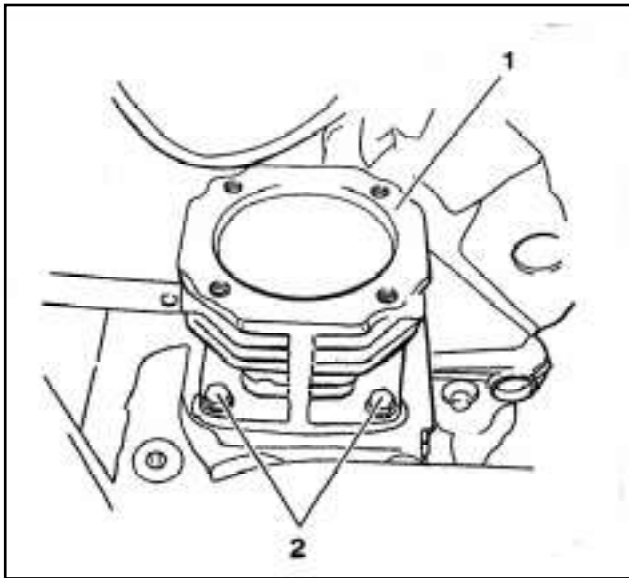
Unscrew the compressed air and air suction lines (2 and 4), and the coolant lines (3 and 6) from the compressor's cylinder head (1)

Unscrew retaining bolts (5).

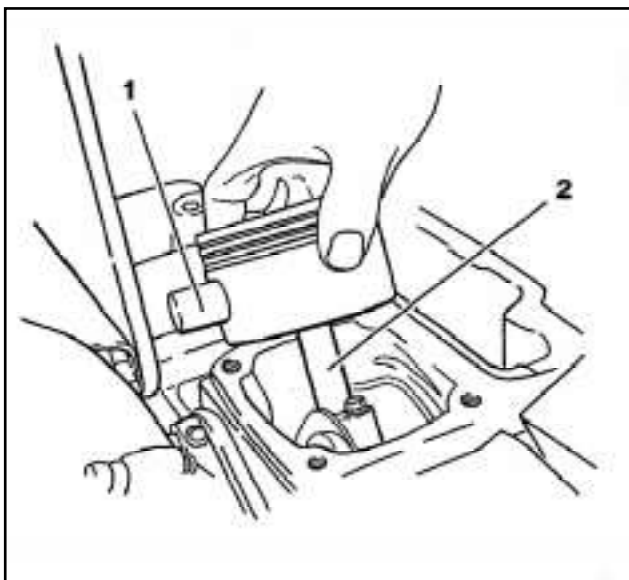


Remove the cylinder head (1) with the intermediate plate (2) from the cylinder liner (3).

\*\* For Mercedes-Benz you need these tools:  
 open ring spanner no. 000 589 07 03 00  
 clamping strap for piston rings no. 000 589 20 61 00



Unscrew the retaining bolts (2) of the cylinder liner (1) from the control housing and remove the liner.



Dismantle the locking ring for the piston pins (1), remove the piston pins and then remove the piston from the connecting rod(2).

Proceed in the reverse order and use new components and new seals to install.

Turn the piston ring joints 180°.

Tightening torques:

cylinder head 30 Nm

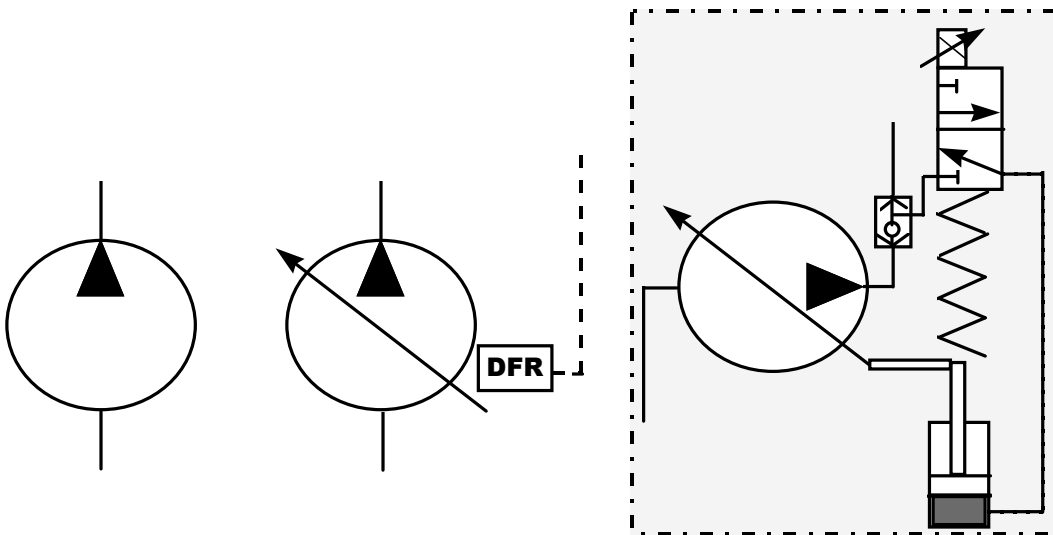
retaining bolts of the cylinder liner and sealing cover 25 Nm.

# *Section 6*

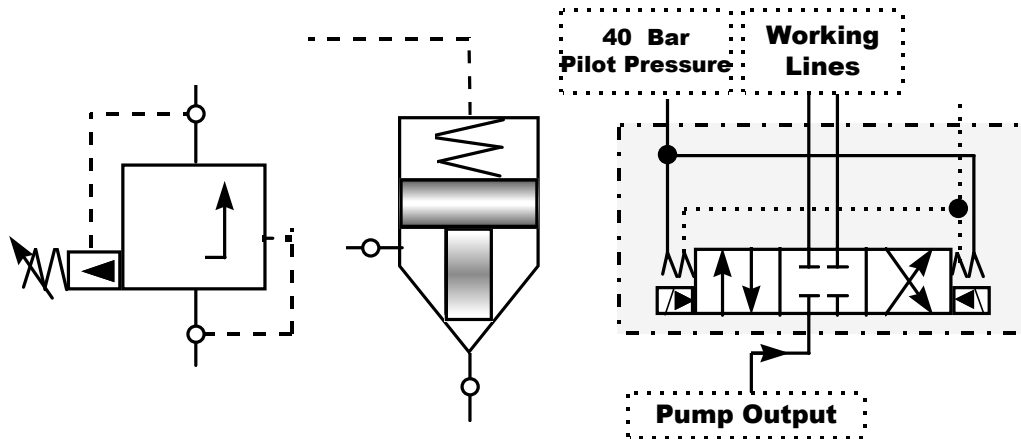




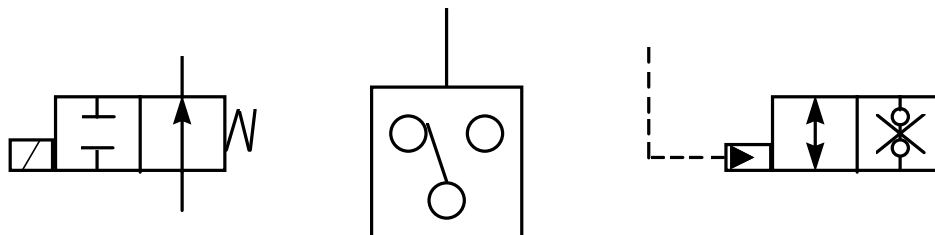
## GMK Hydraulic Symbols



# GMK Hydraulic Symbols

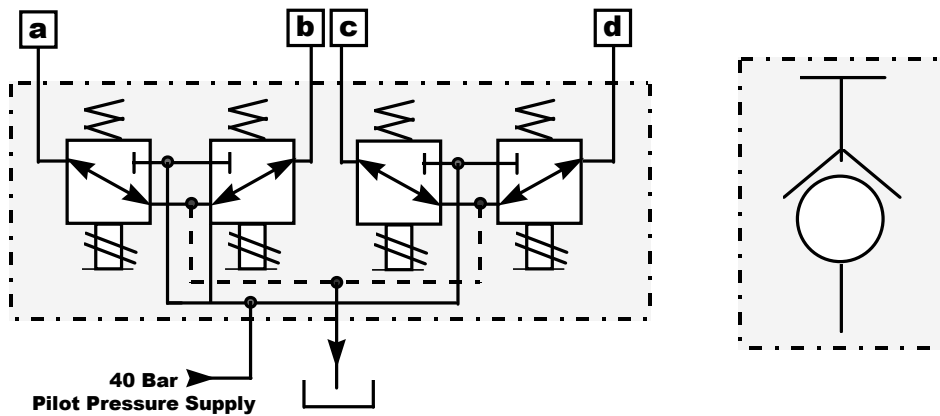


# GMK Hydraulic Symbols

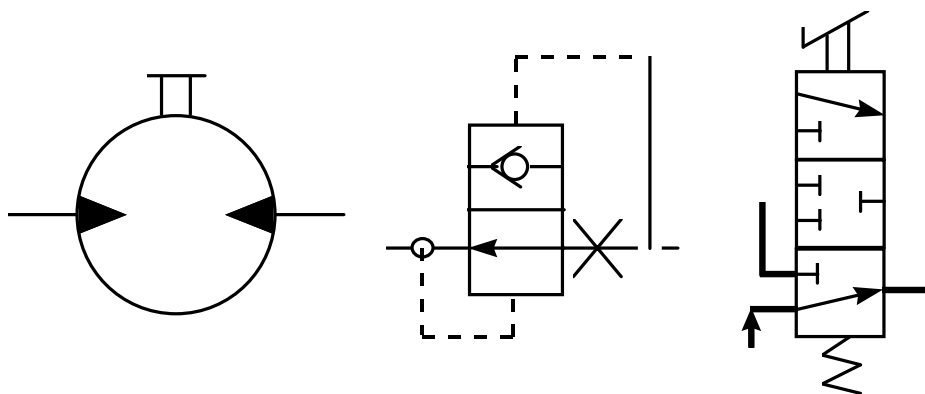




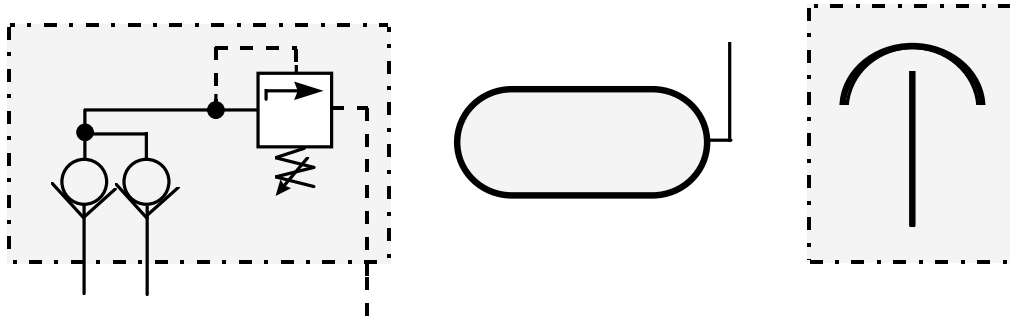
# GMK Hydraulic Symbols



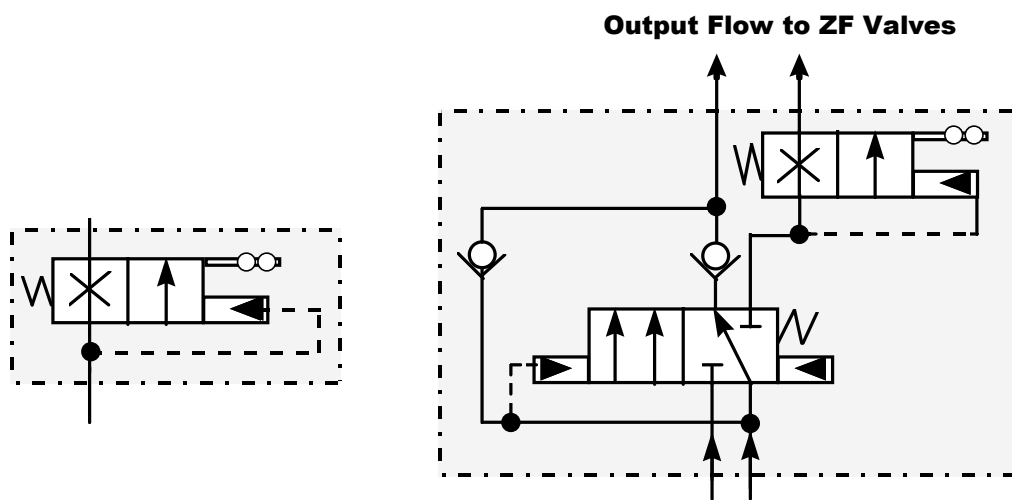
# GMK Hydraulic Symbols



# GMK Hydraulic Symbols

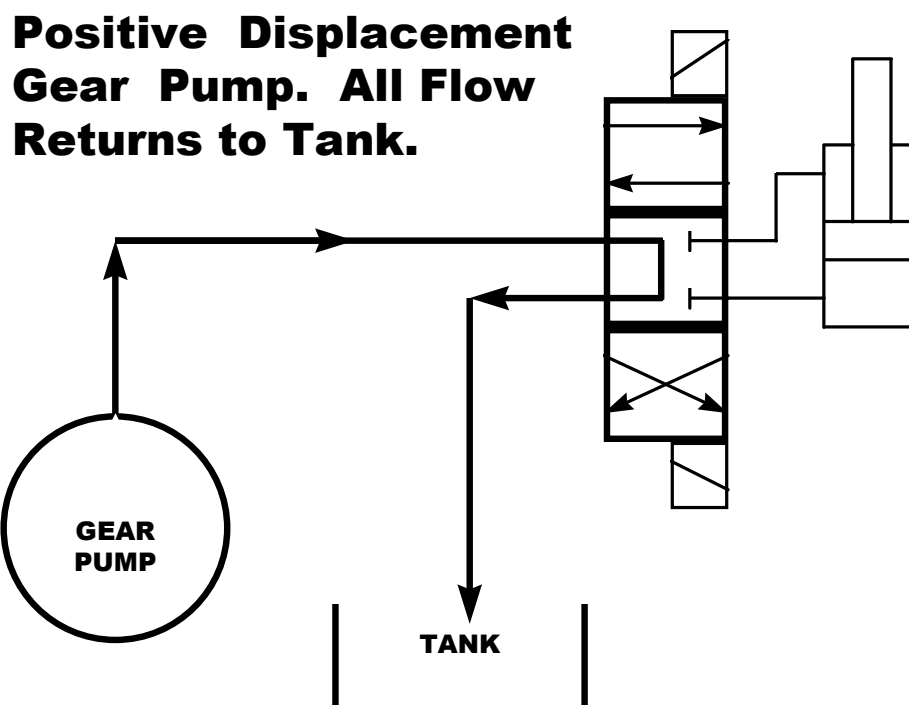


# GMK Hydraulic Symbols

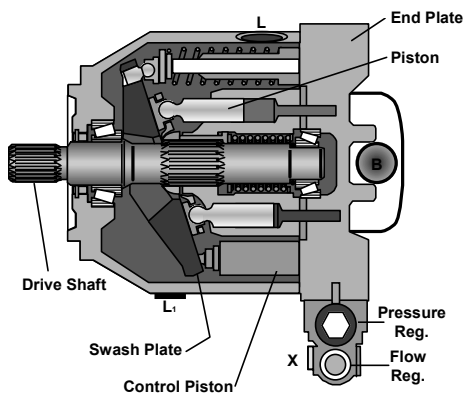
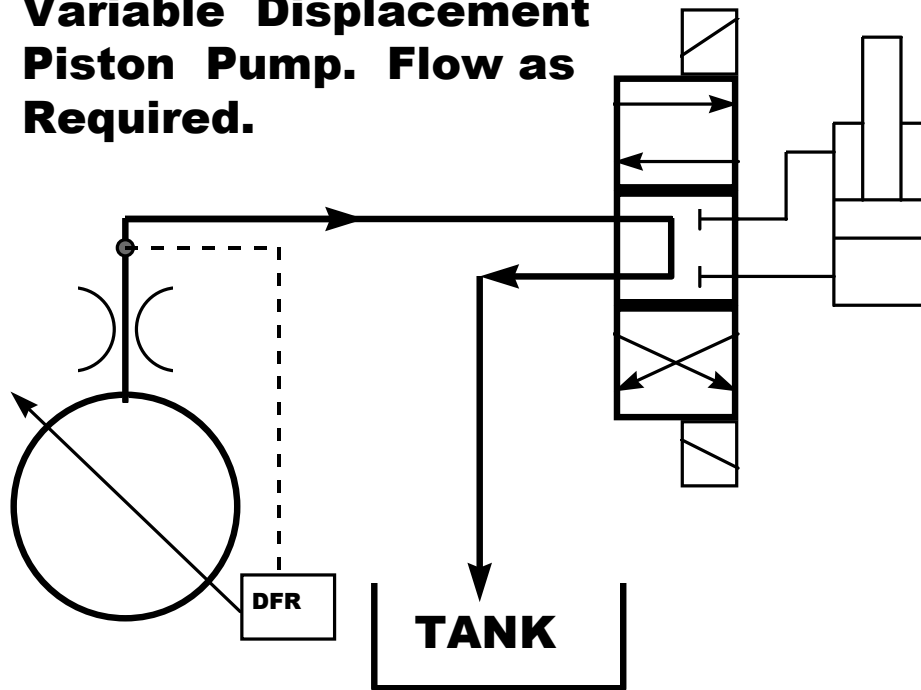


# GMK5130 Hydraulic Components

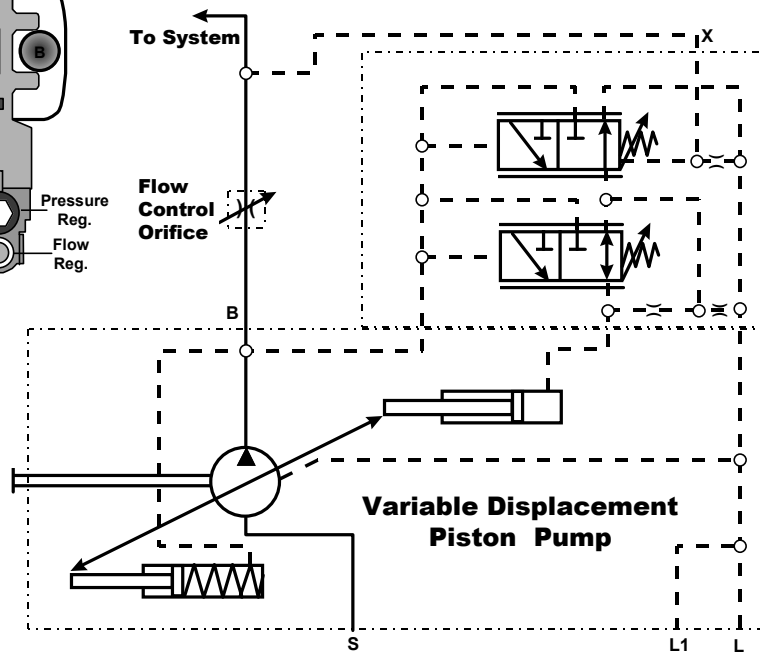
## Circuit Functions

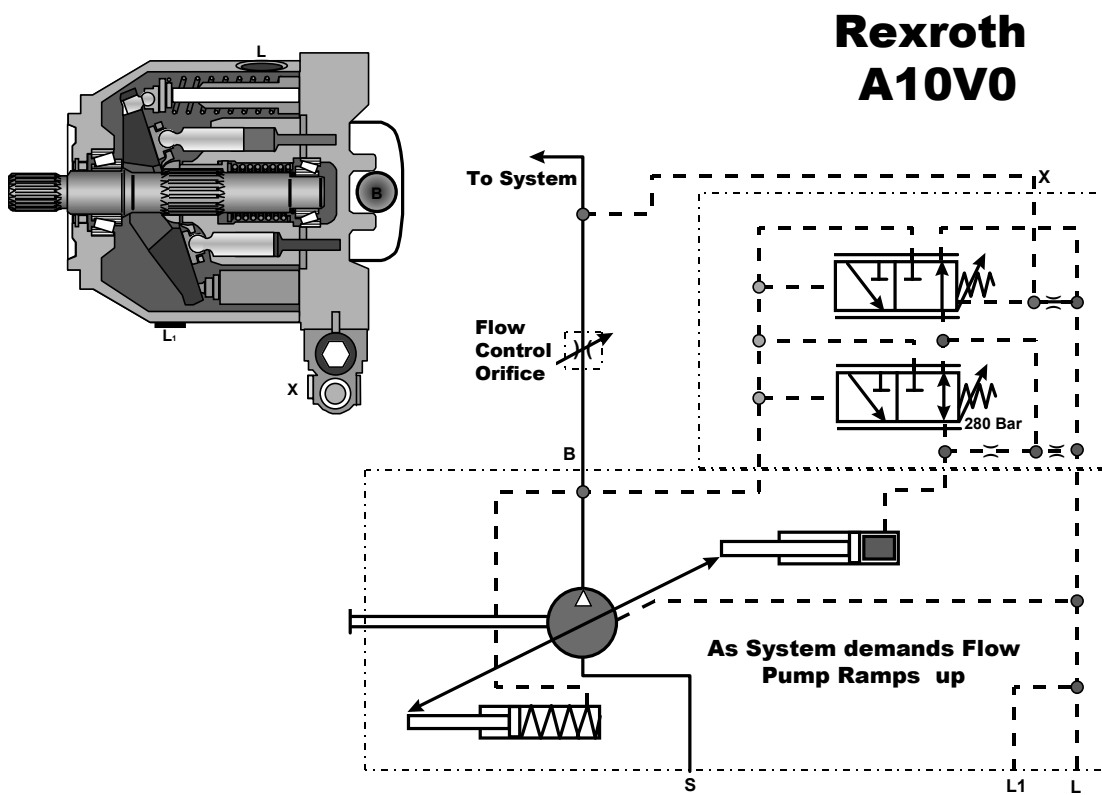
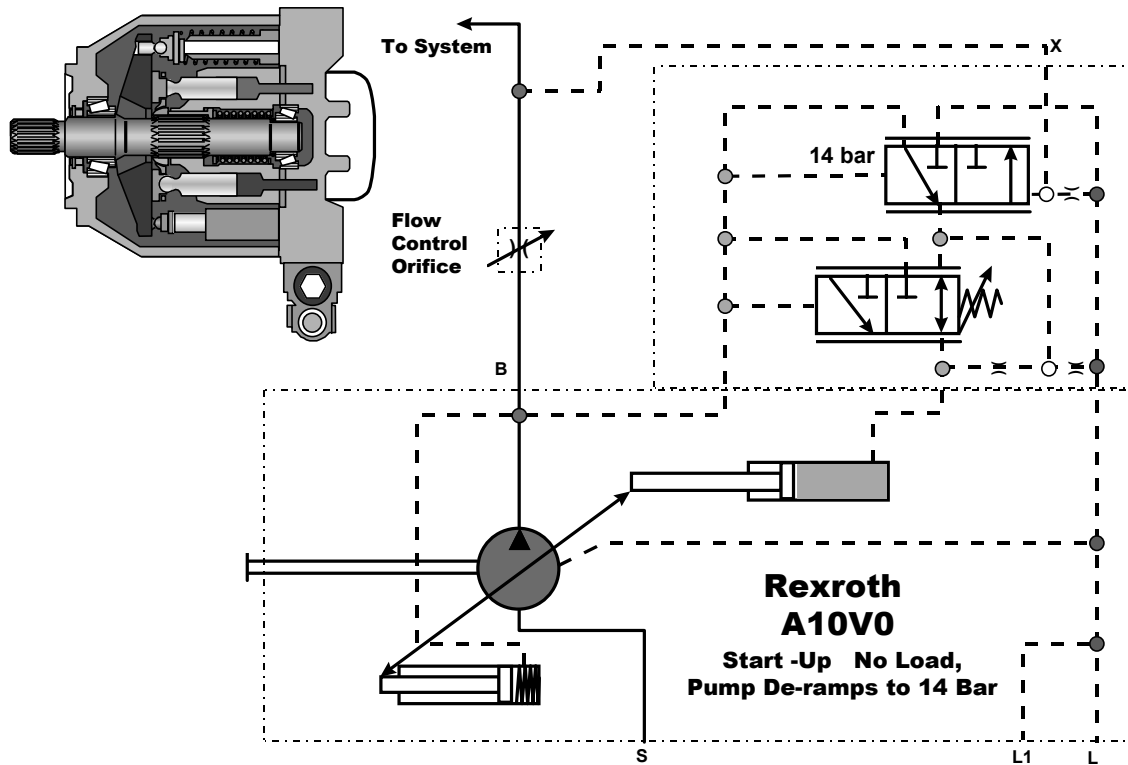


# Variable Displacement Piston Pump. Flow as Required.



## Rexroth A10V0





## Procedure for pressure adjustments

Note: The following procedure is intended to be used for training purposes. Always refer to the service manual for detailed instructions for checking or setting hydraulic pressures on your specific model. Additionally, please refer to hydraulic schematic and/or service manual for the maximum pressure values for your specific model.

### 1. Adjustments of P1 stand-by pressure:

Connect two pressure gauges @ 60 bar to the measuring points M1 & M4. With engine speed at 1400-1800 RPM, the pressure at M4, without selecting a function, must be 12 bar higher than at M1. To make any adjustments, the adjusting screw for the differential pressure at pump P1 must be adjusted. For adjusting screw details see figure.1

**Caution: Do not function any circuits during the above checks. Higher pressures occur, which will destroy the pressure gauges..**

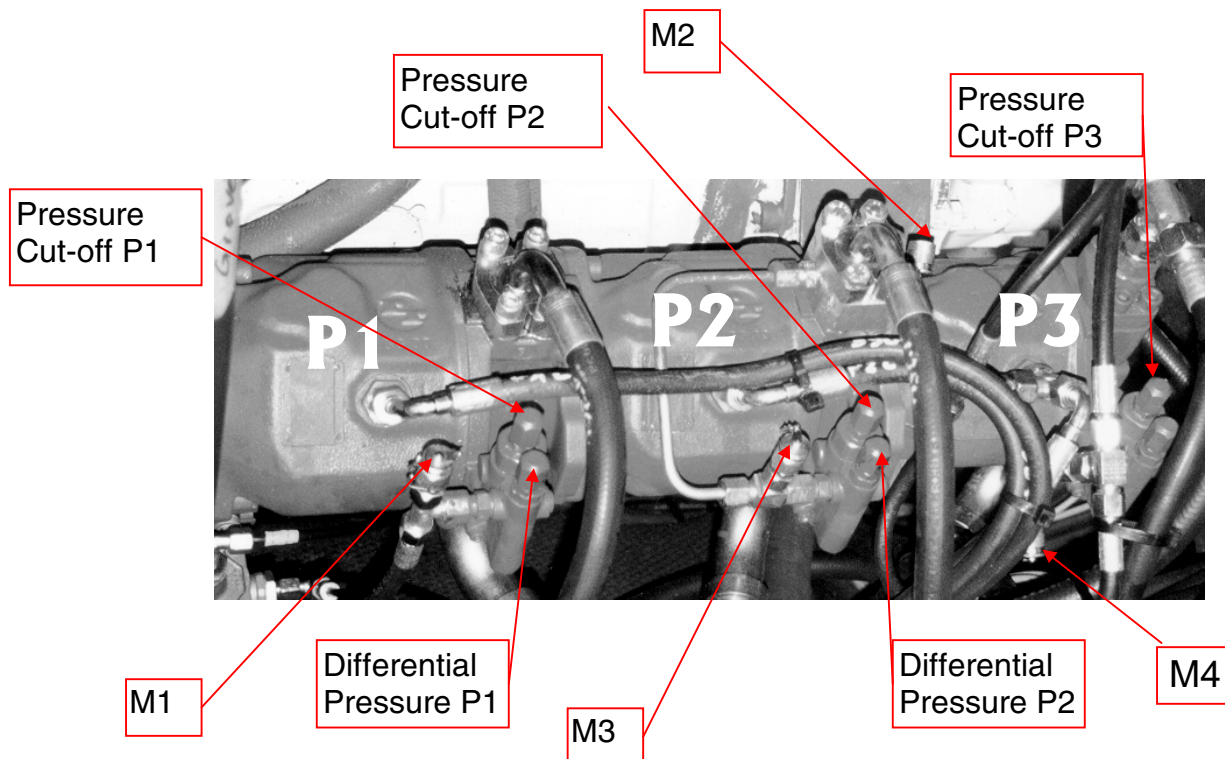


Figure 1: Combination pumps

## 2. Check 315 bar adjustment of the pressure build up valve -8Y1

Connect a pressure gauge of 400 bar to the measuring point M4 and activate the function “Retract outrigger beam “. First, the cut-off regulator at the axial piston pump P1 must be adjusted to a higher value. The pressure cut-off regulator is integrated into the pump P1. Check the 315 bar pressure build-up valve (tolerance +5bar) . If the measured pressure is not correct, adjust as necessary (see figure 2). Afterwards, the pressure cut-off regulator on P1 is to be adjusted back to **280 bar** ( tolerance +5 bar) . The pressure can be read via a pressure gauge at the measuring point M1 (see figure1).

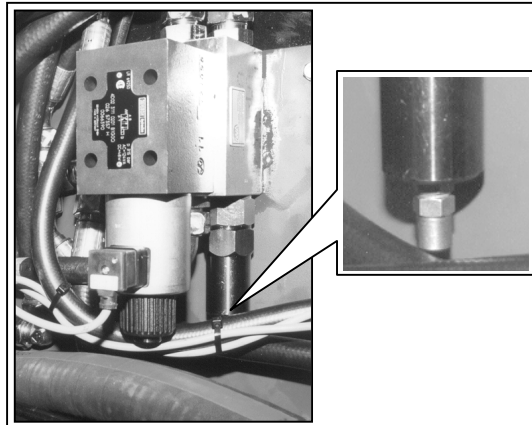


Figure 2: Adjustment detail of Valve =44Y9

### 3. Check the 75 bar adjustment of the outrigger beam extend function

(-9Y1,2,3,4,) Connect pressure gauge (250 bar) to the measuring point M5 and activate the “outrigger beam extend function” (at idle speed). The allowable tolerance amounts to +5 bar. Otherwise, the adjustment of the pressure control valve of the respective outrigger valve block is to be re-adjusted (see figure 3 for a typical location).

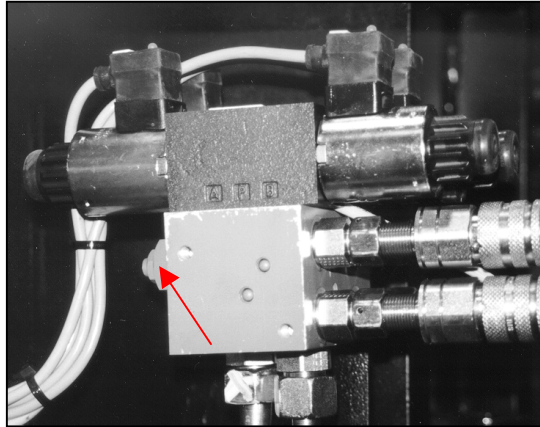


Figure 3: Typical outrigger 75 bar relief valve

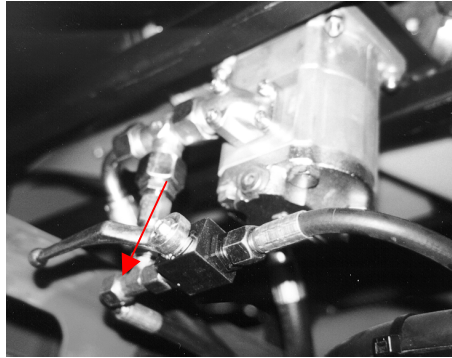
### 4. Check the 150 bar adjustment for all-wheel steering

**All-wheel-steering axle 4/5.** Two pressure gauges @ 250 bar are to be connected to a steering cylinder of axle 4 or 5. The function “all wheel steering left or right” is to be activated (-6Y3 and -6Y2). At the steering limit of the wheels (engine rpm 1800), the pressure must be **150 bar** (tolerance +5bar). Otherwise, a correction of the adjustment at the pressure control valve is to be made at the directional control block.



Figure 3: Control block all-wheel-steering





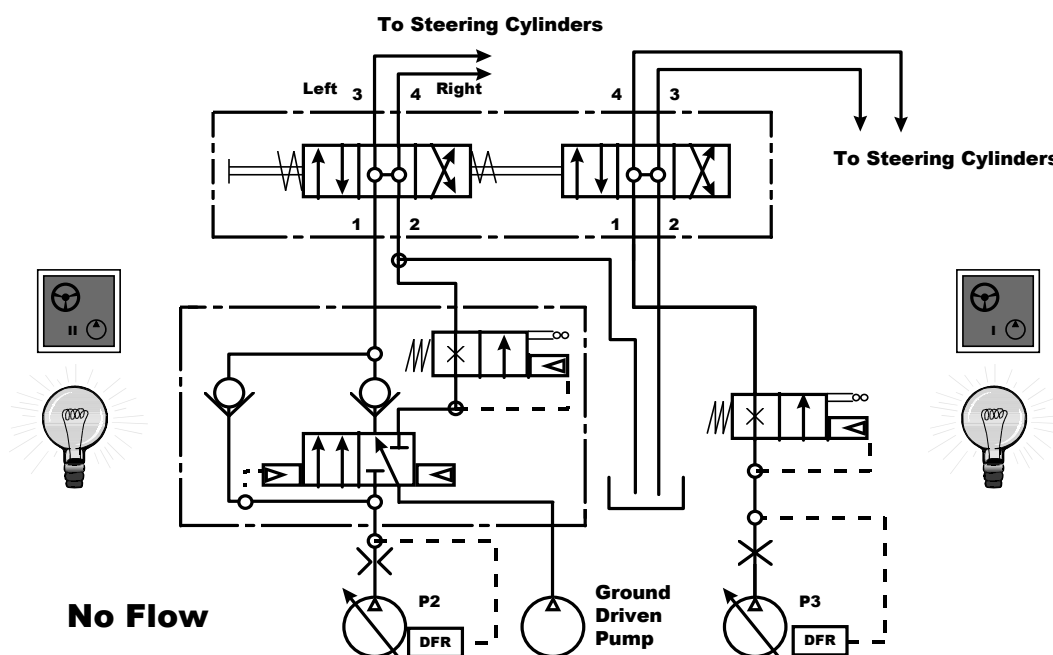
**Figure 4: Ball valve location**

#### **5. Check 280 bar adjustment of the cooling fan**

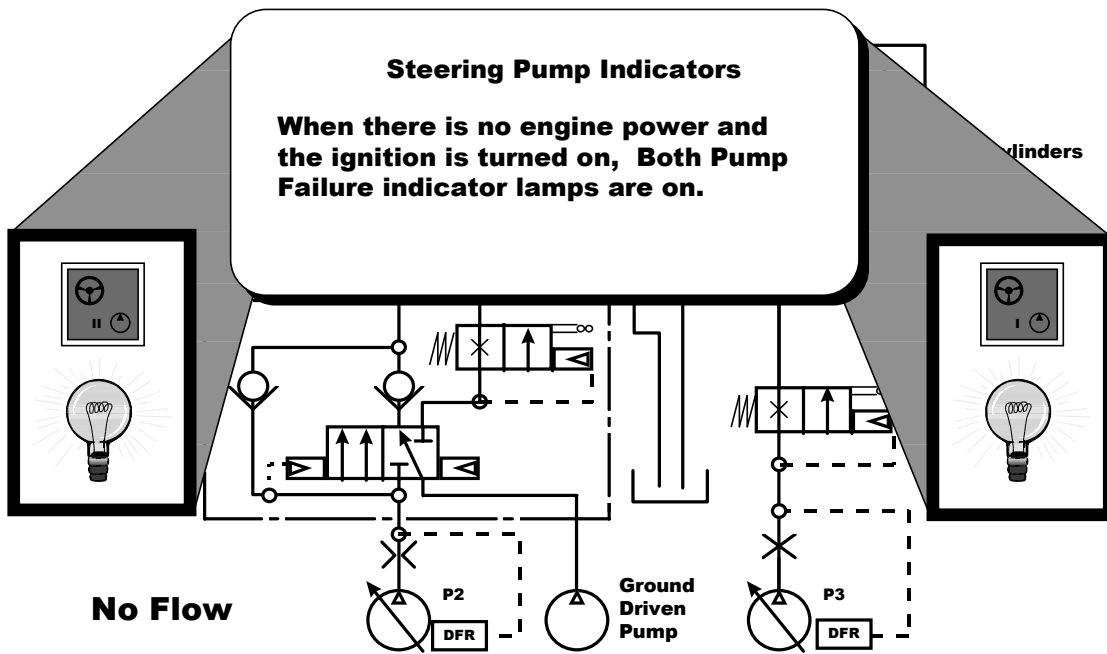
Connect a 400 bar pressure gauge at the measuring point M1. The ball valve before the thermostatic valve is to be closed (see figure 4 ). With maximum speed, the pressure is to be re-set via the adjusting screw of the pressure cut-off on piston pump1.

# GMK5130 Carrier Hydraulics

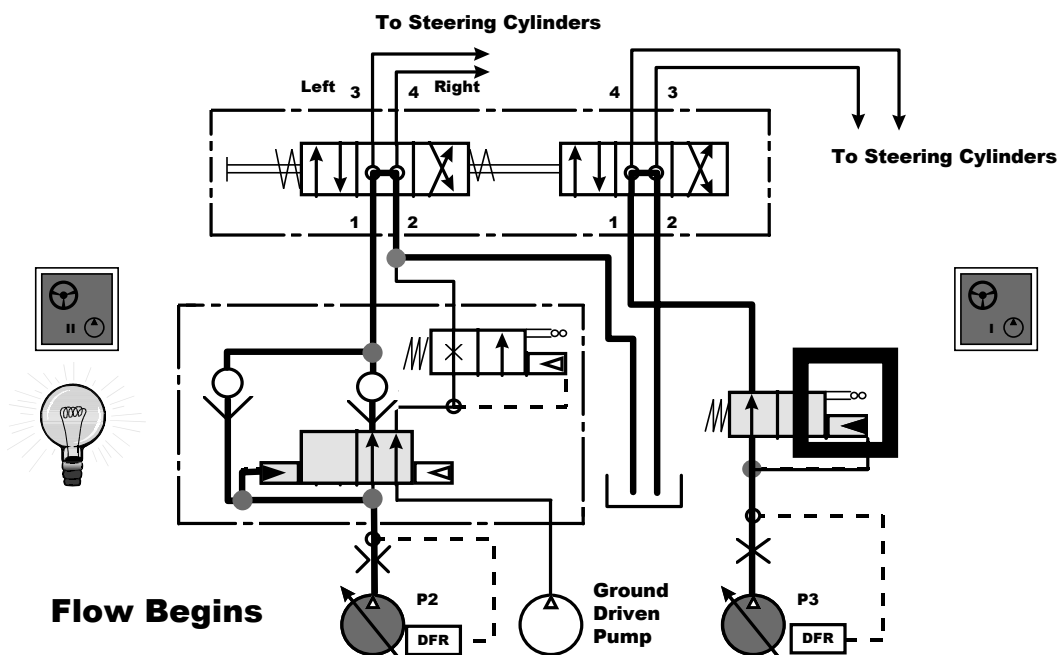
## GMK ZF Steering Circuit



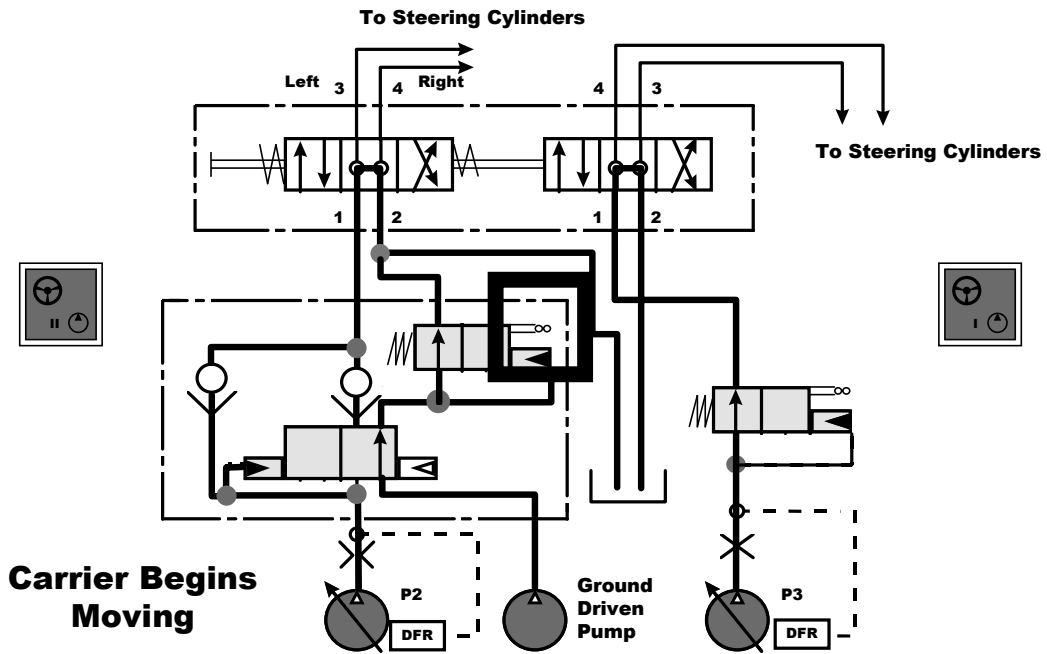
# GMK ZF Steering Circuit



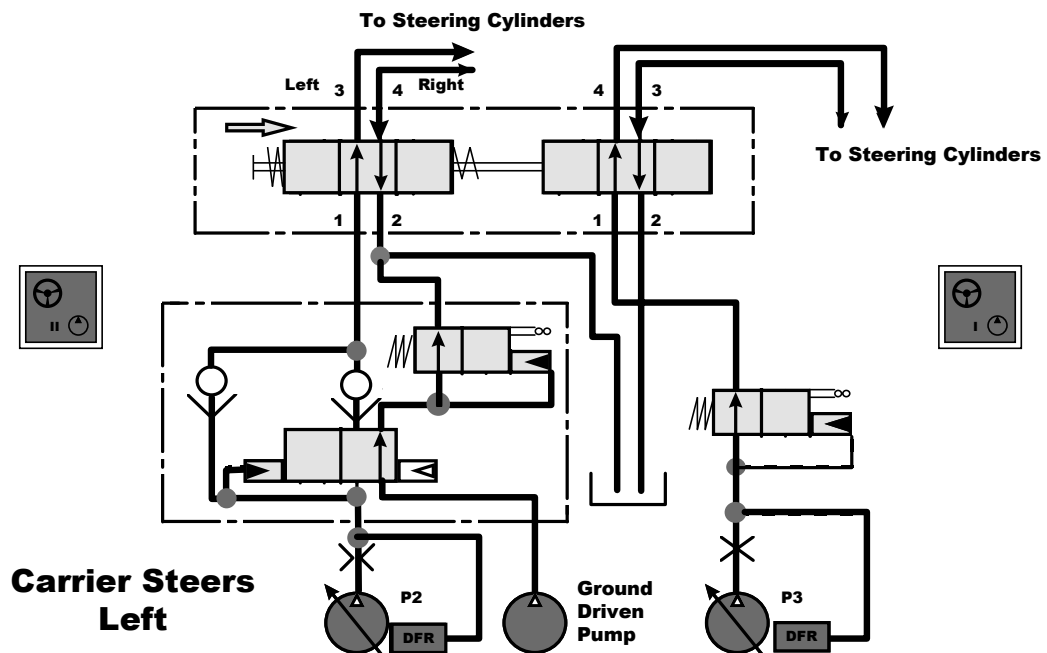
# GMK ZF Steering Circuit



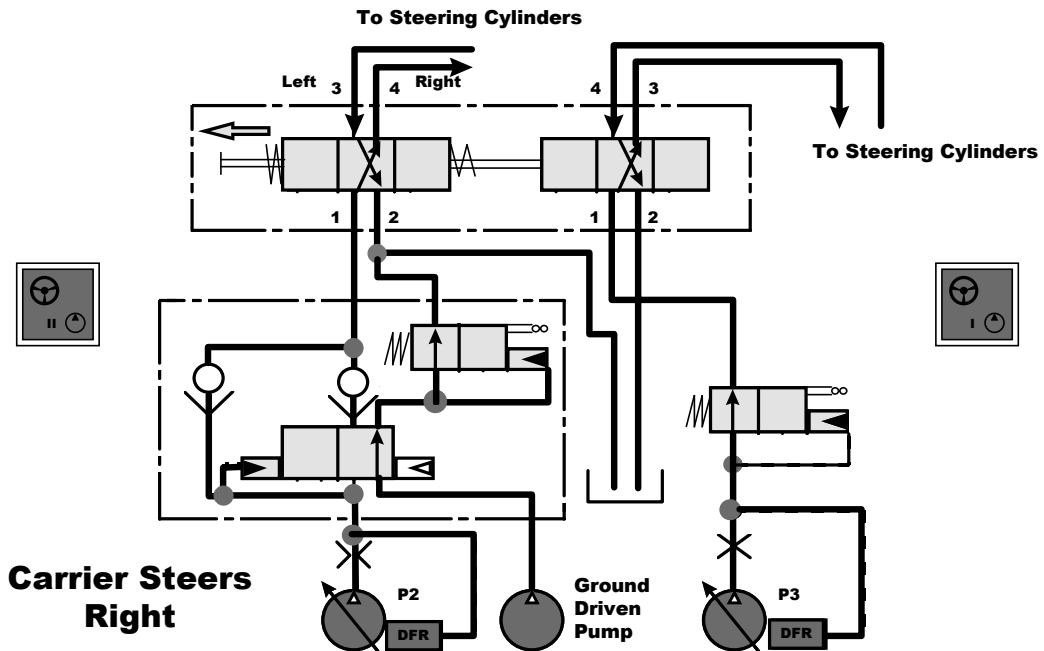
# GMK ZF Steering Circuit



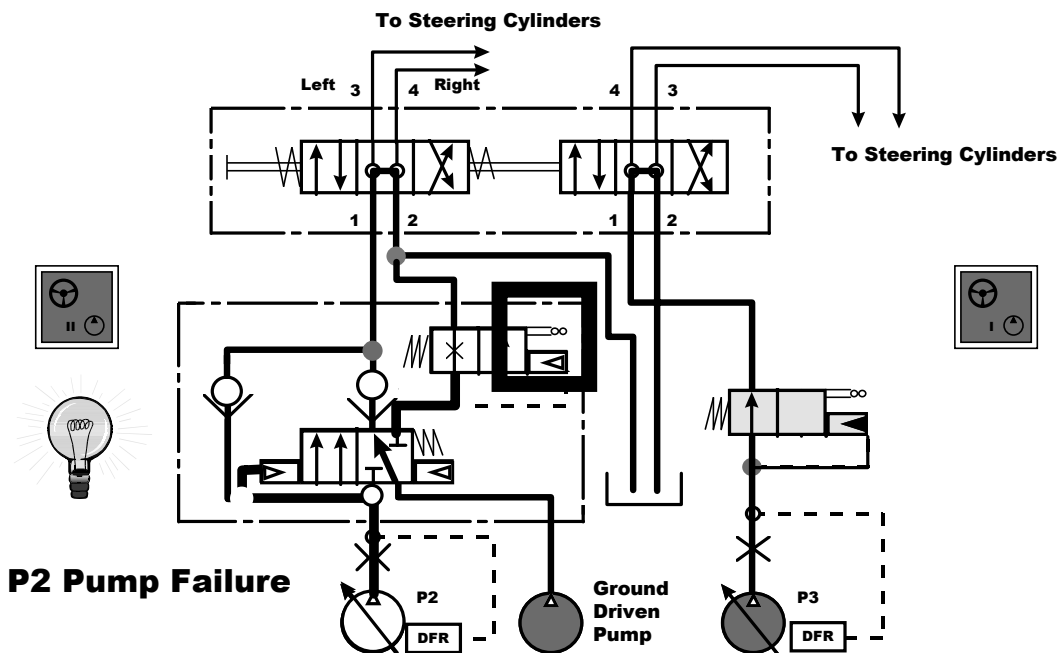
# GMK ZF Steering Circuit



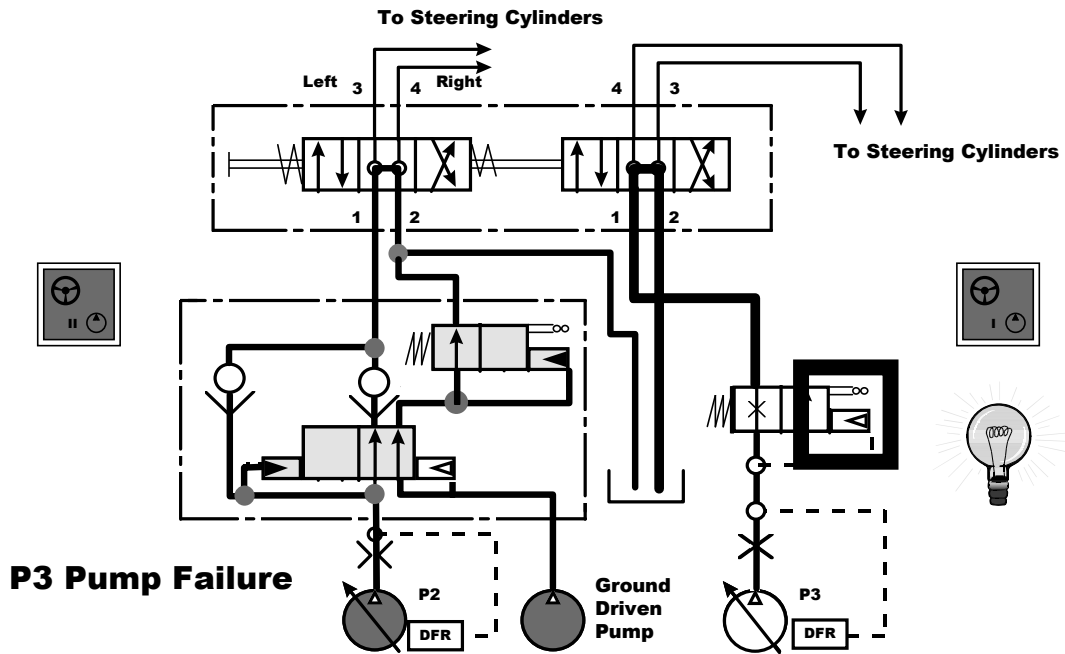
# GMK ZF Steering Circuit



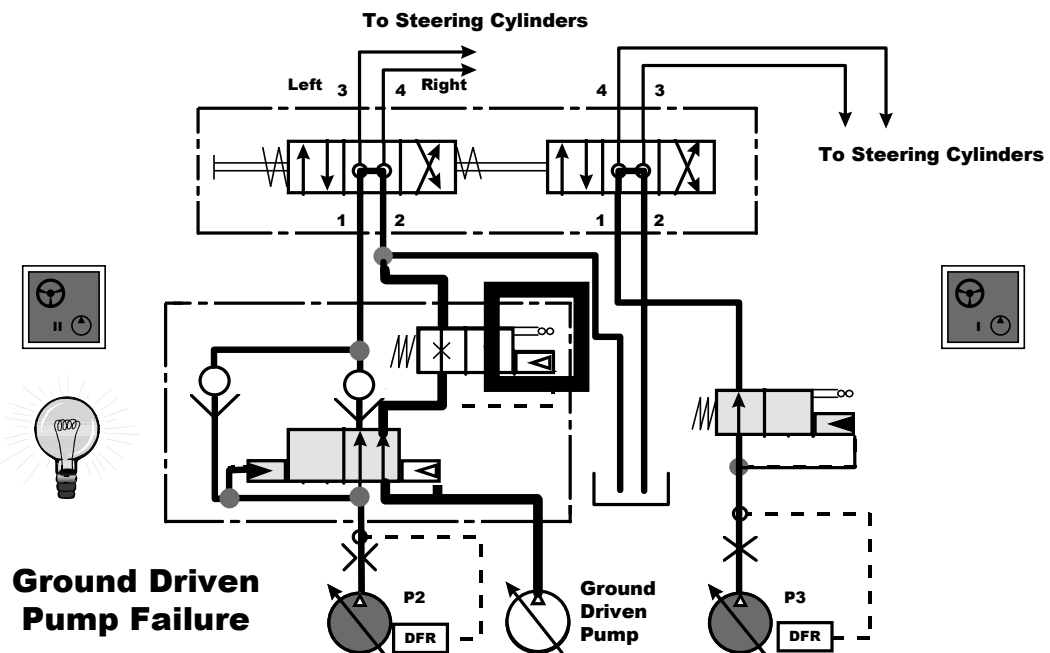
# GMK ZF Steering Circuit



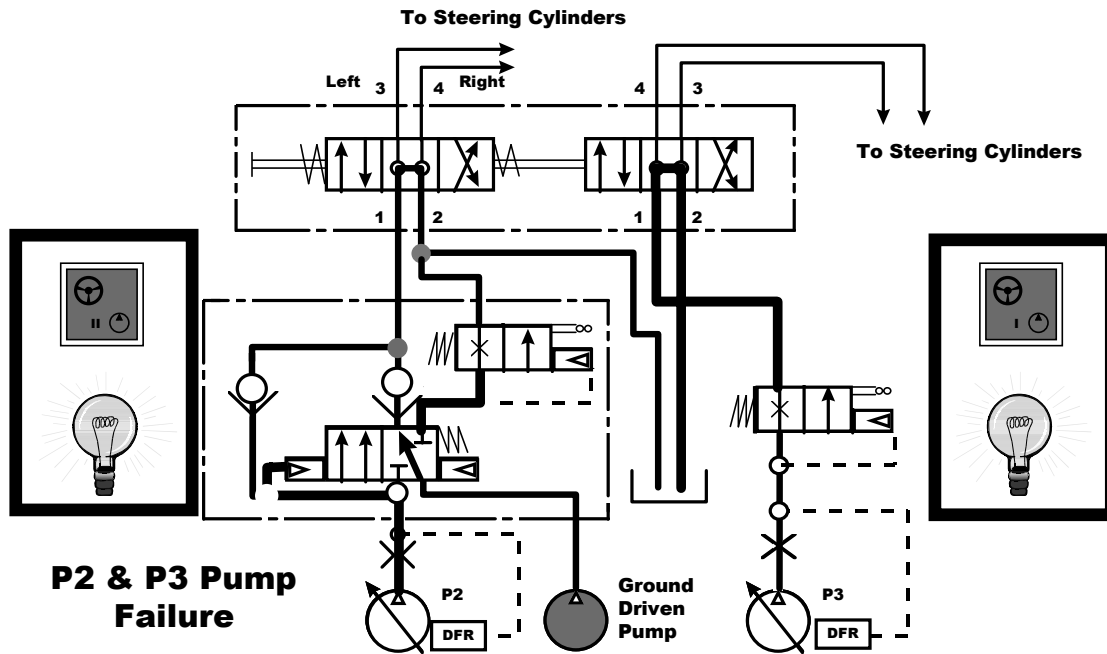
# GMK ZF Steering Circuit



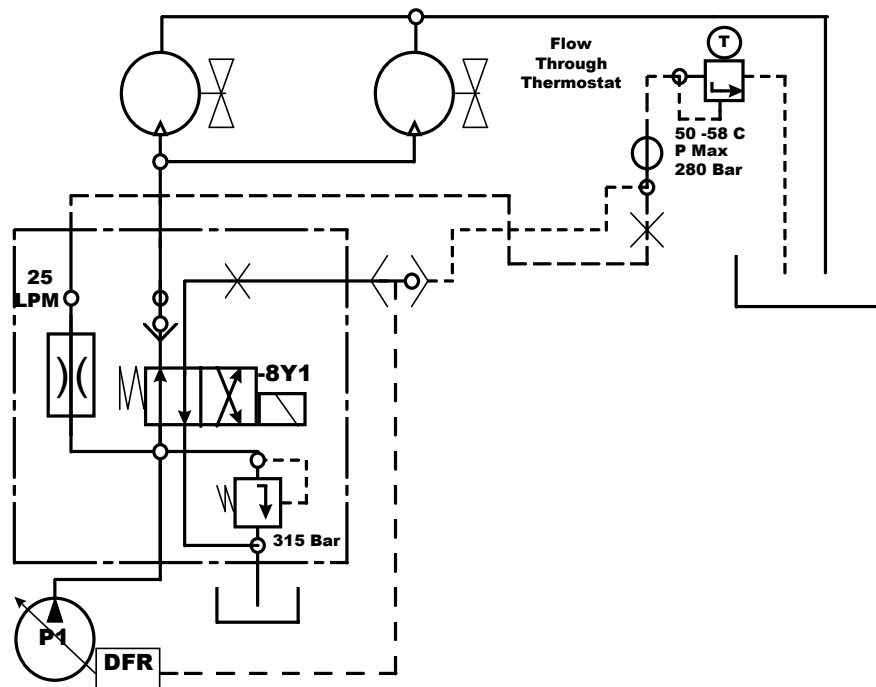
# GMK ZF Steering Circuit



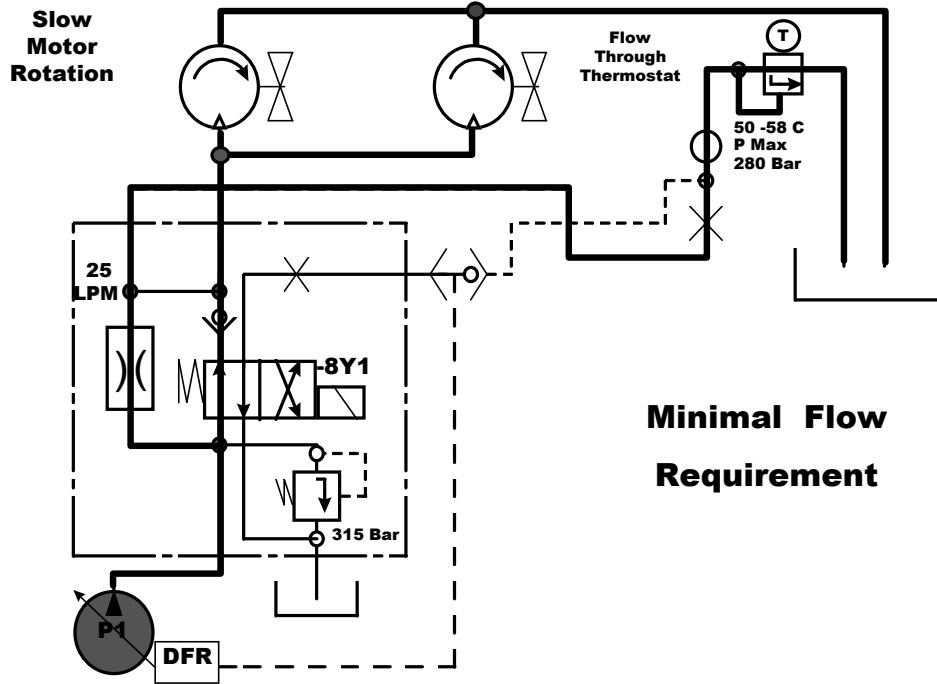
# GMK ZF Steering Circuit



# GMK 5 -Axle Cooling Circuit

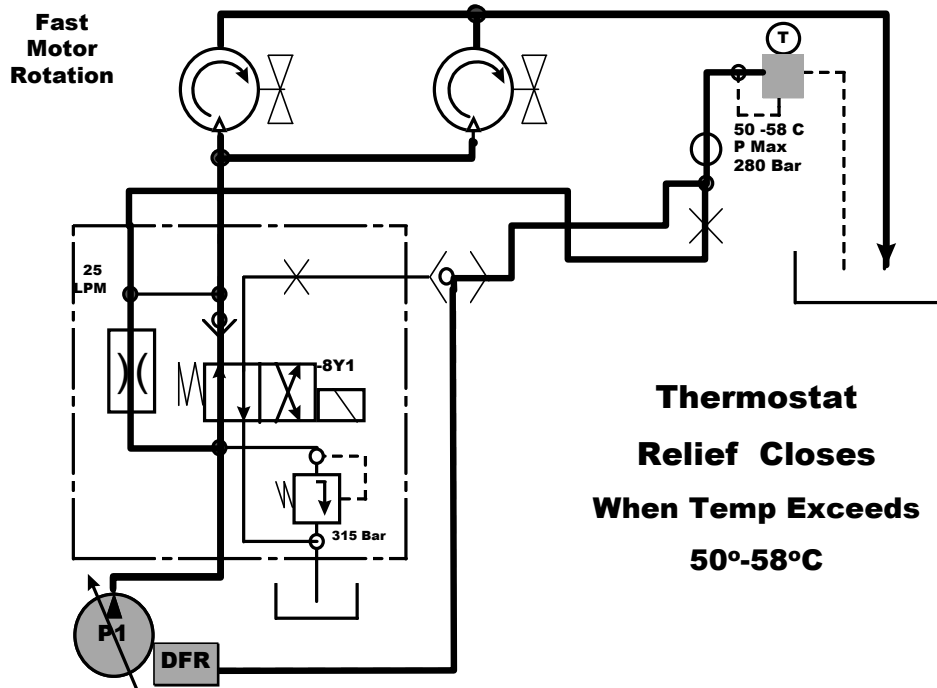


### GMK 5 -Axle Cooling Circuit



**Minimal Flow Requirement**

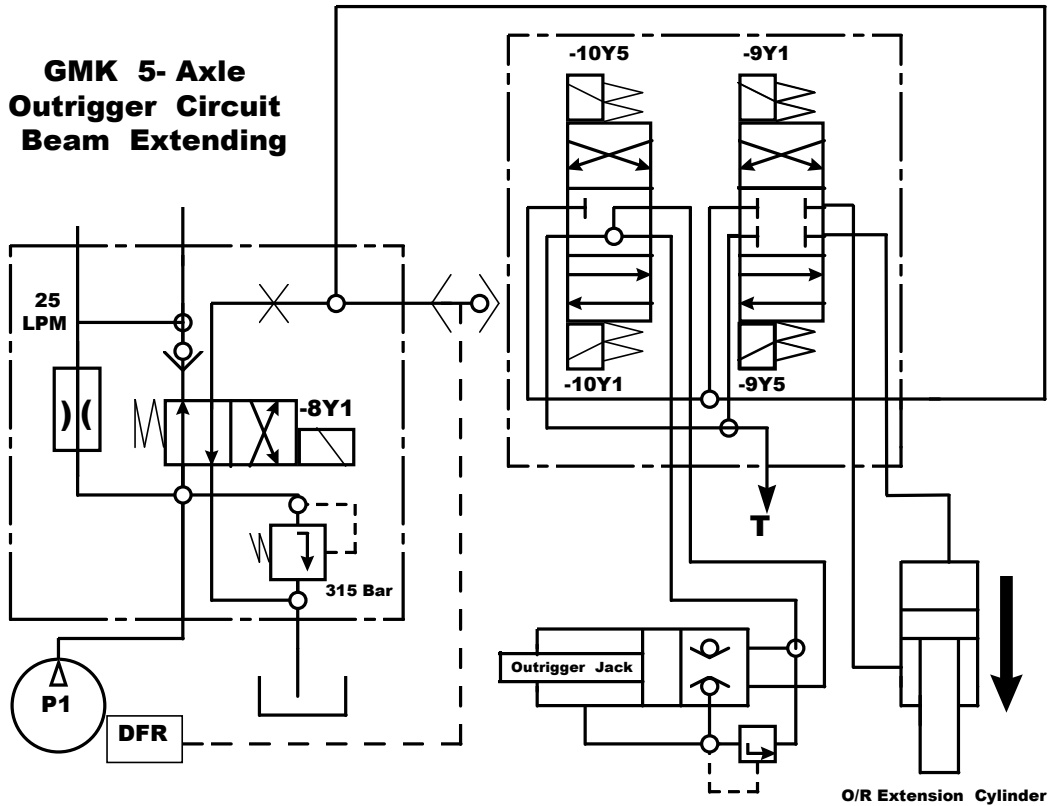
### GMK 5 -Axle Cooling Circuit



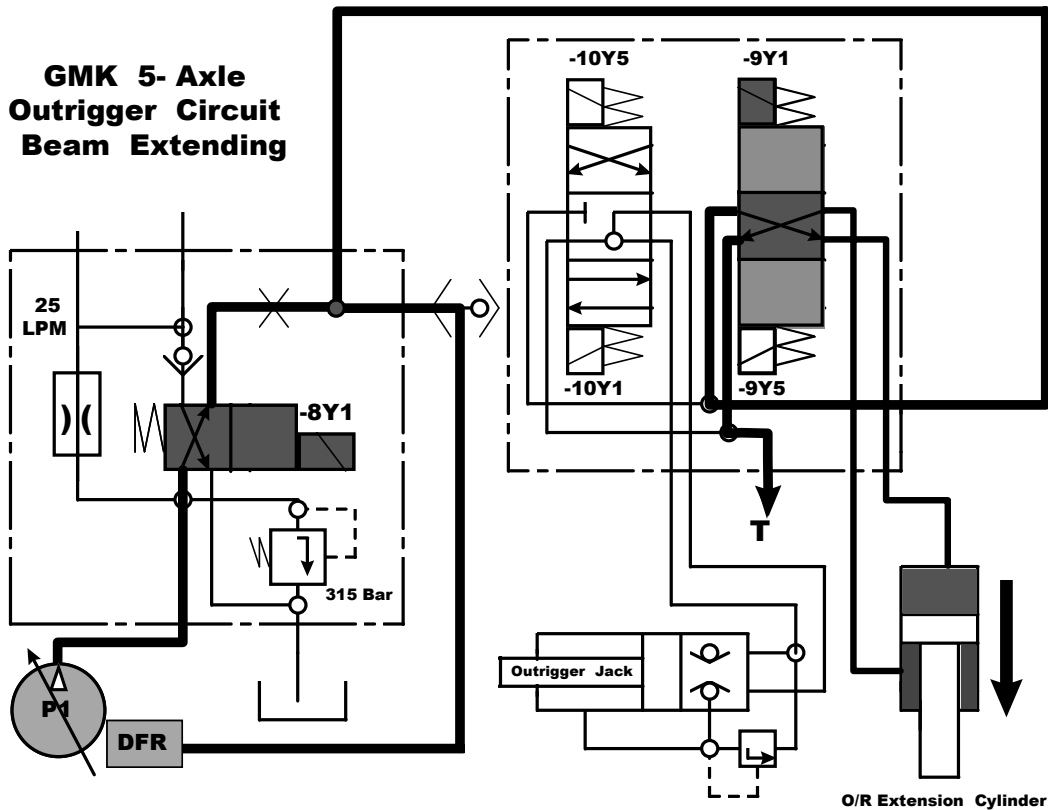
**Thermostat Relief Closes When Temp Exceeds 50°-58°C**

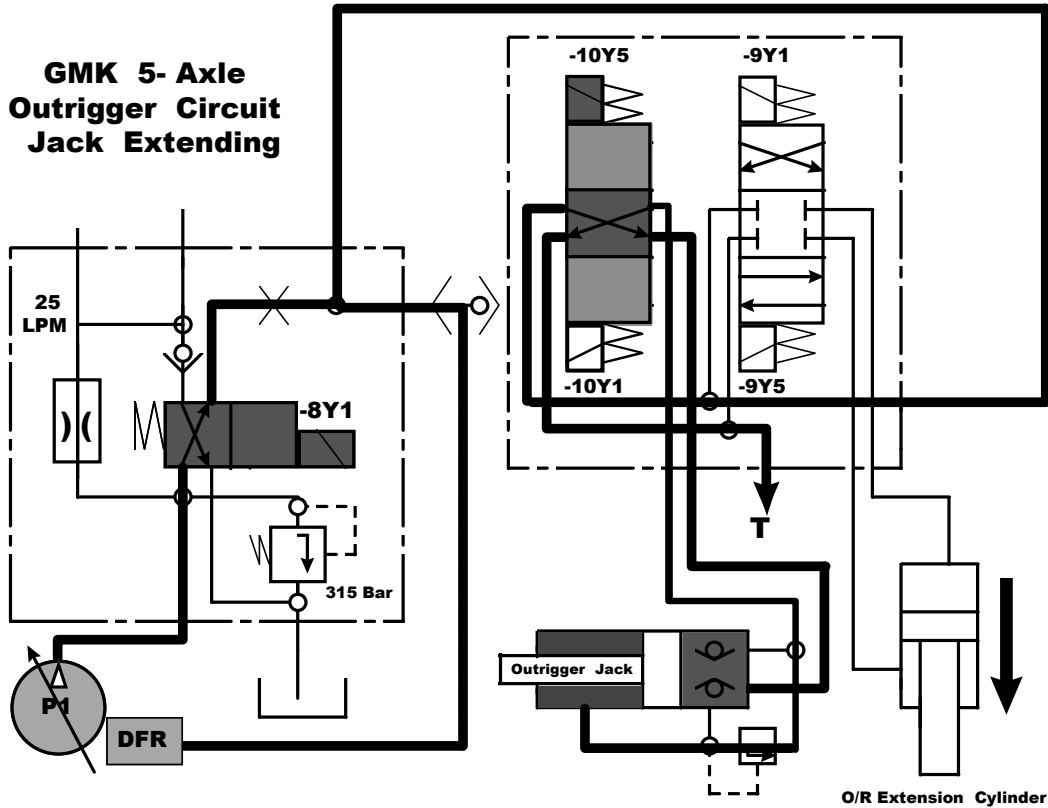


### GMK 5- Axle Outrigger Circuit Beam Extending

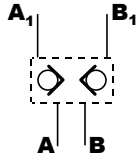


### GMK 5- Axle Outrigger Circuit Beam Extending



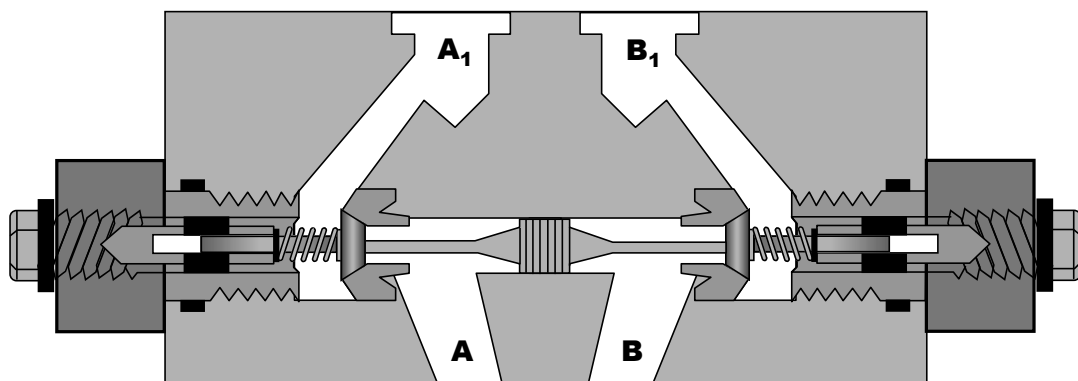
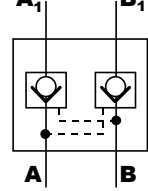


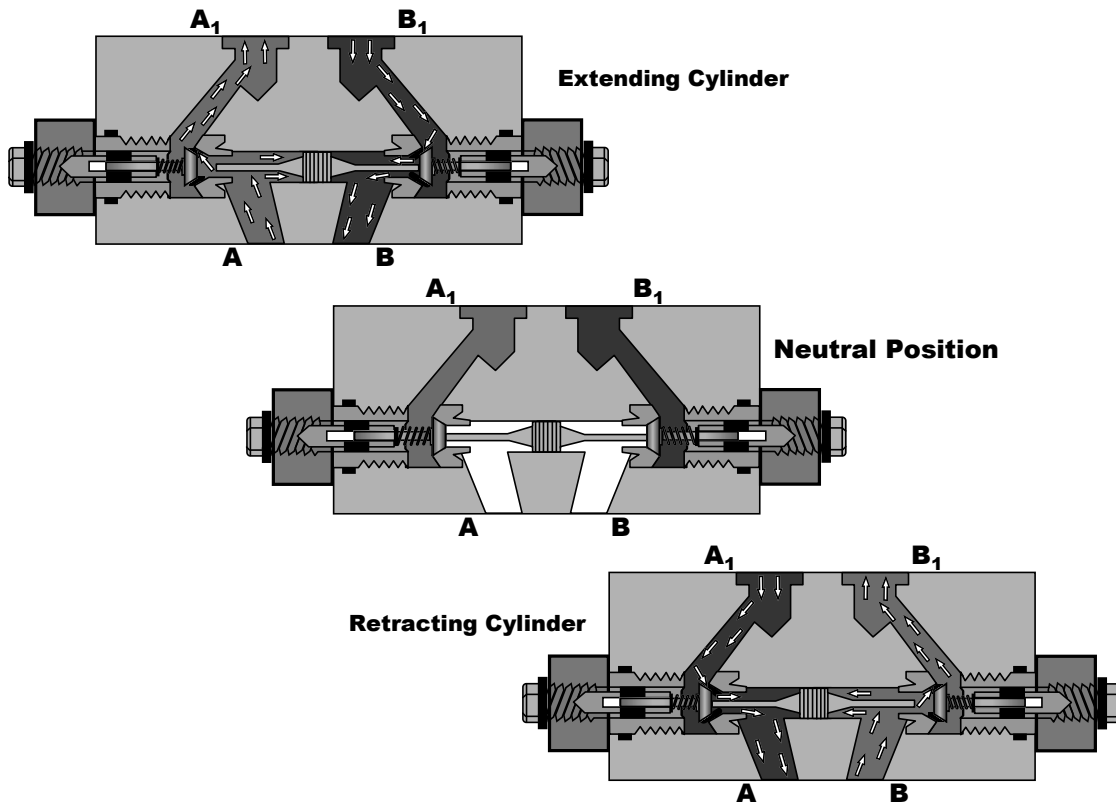
**Simplified**



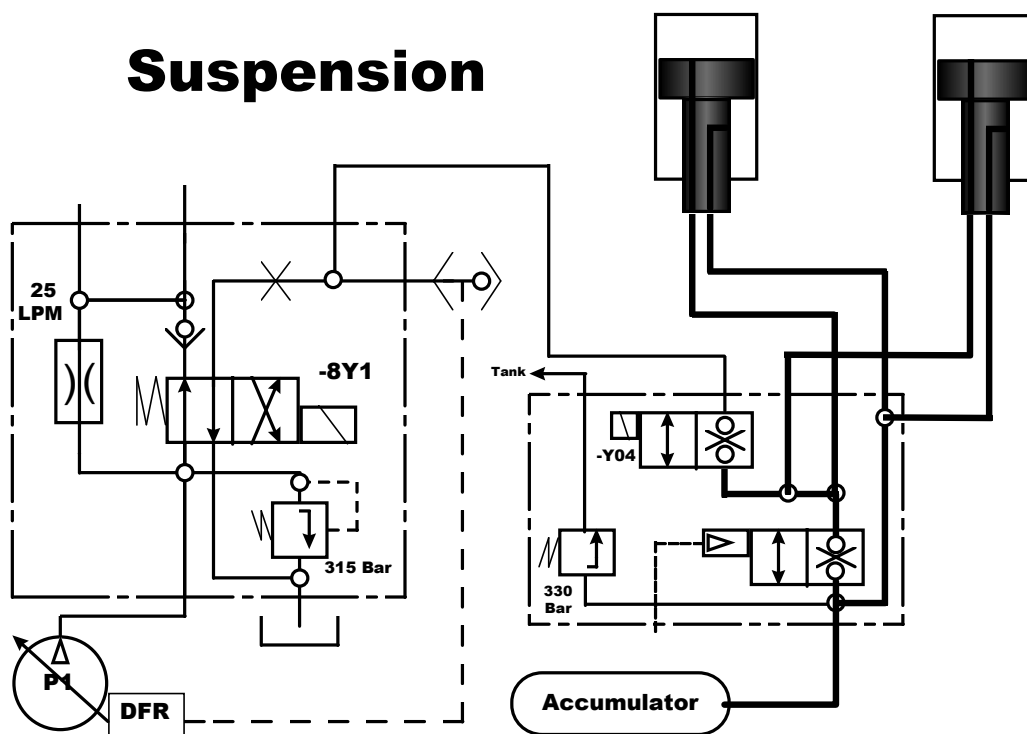
**Double Check Valve**  
(double pilot operated valve)

**Detailed**

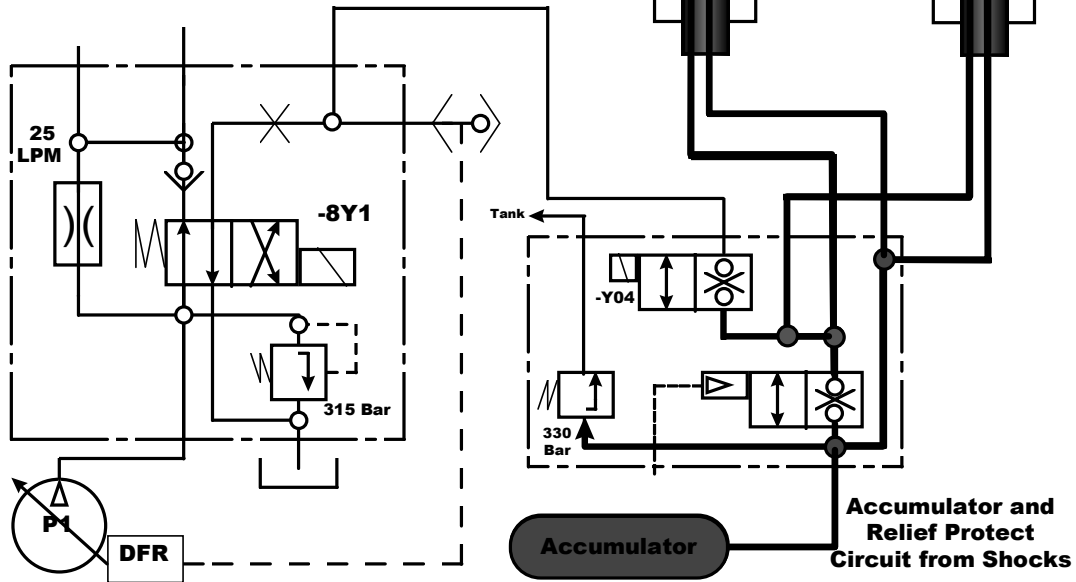




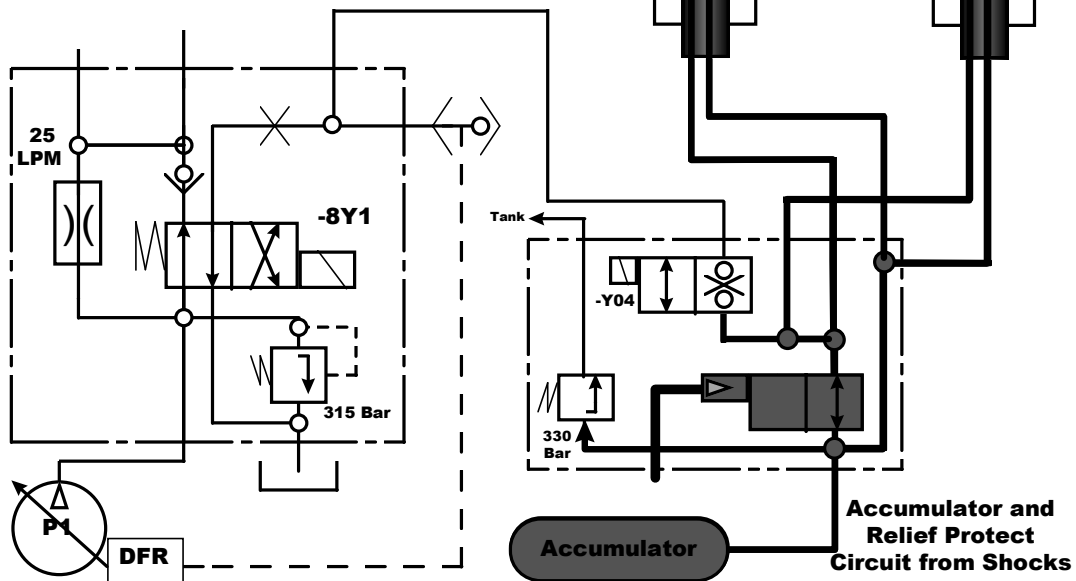
## Suspension



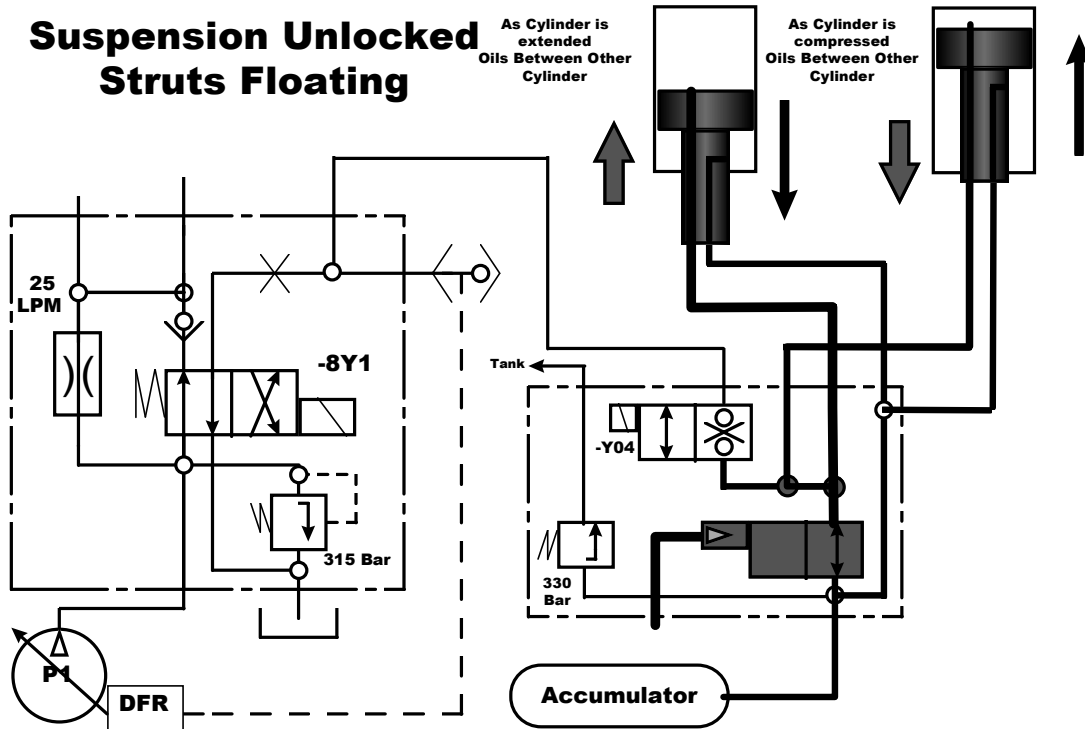
# Suspension Locked



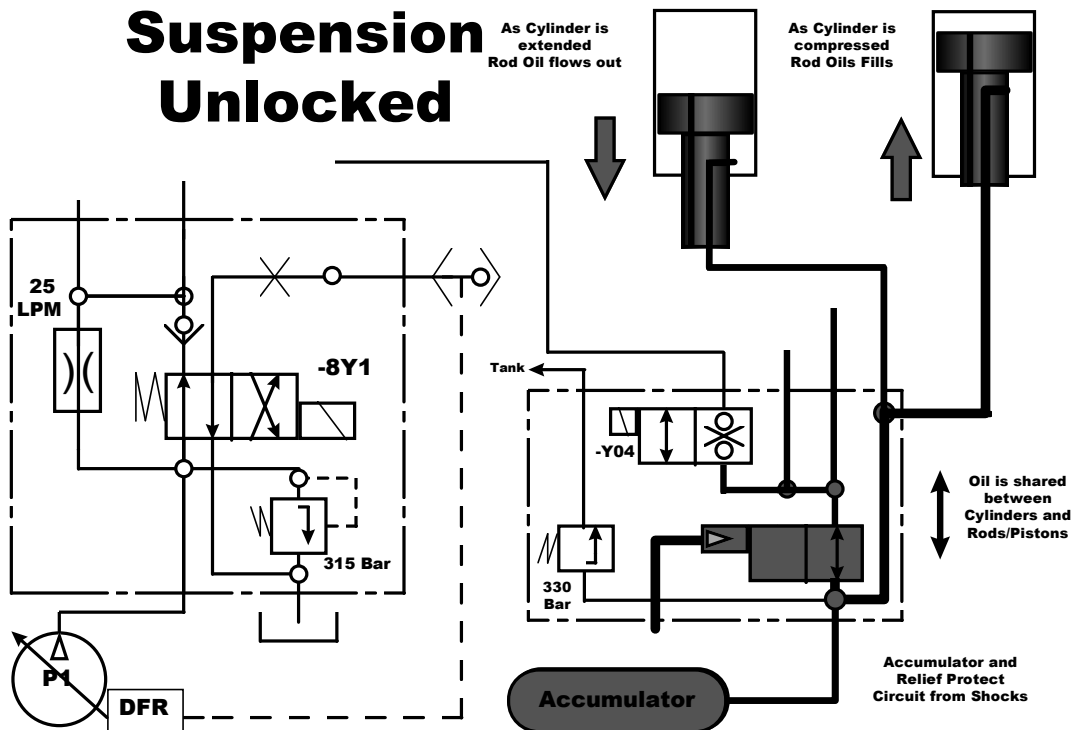
# Suspension Unlocked



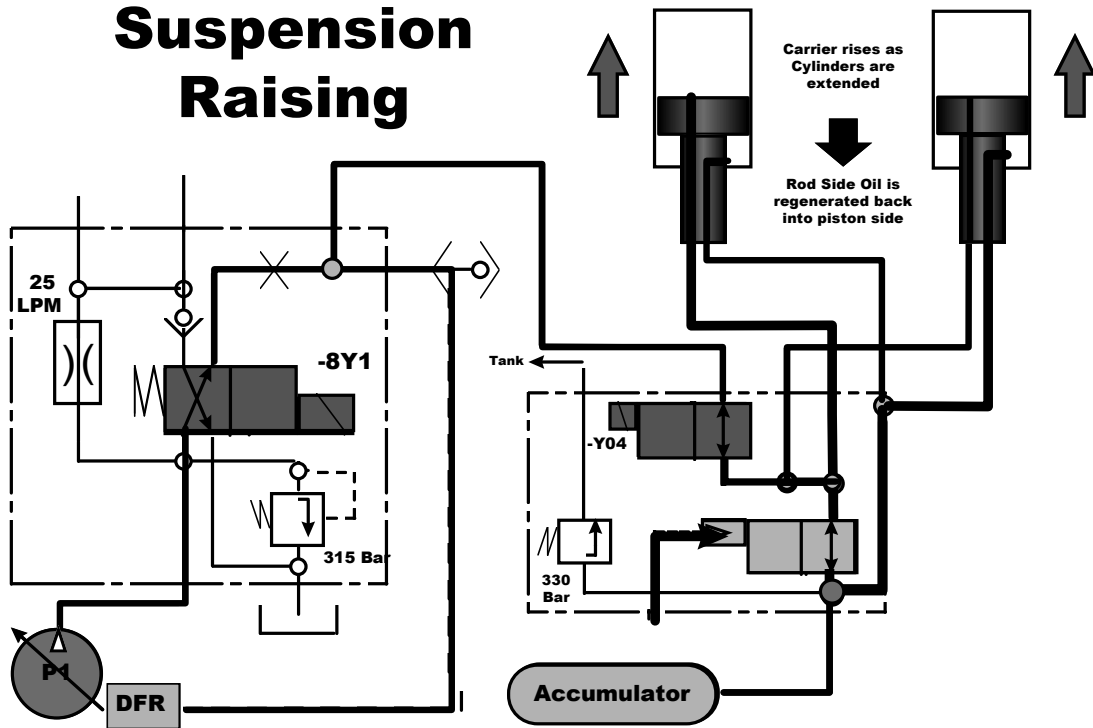
### Suspension Unlocked Struts Floating



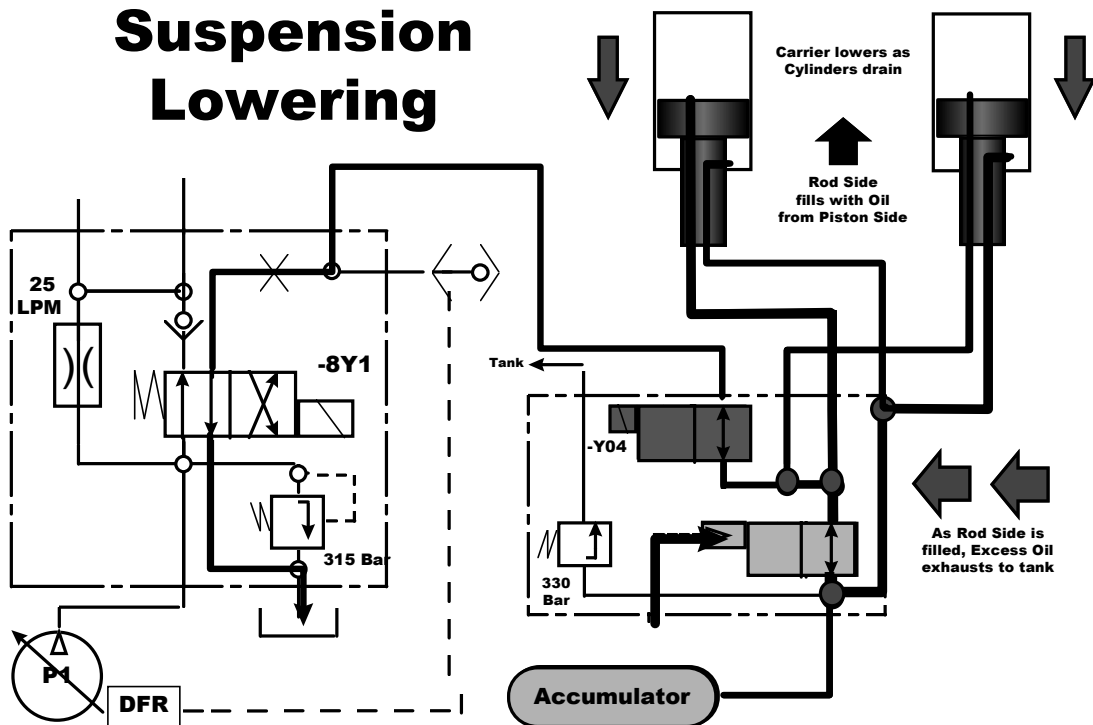
### Suspension Unlocked

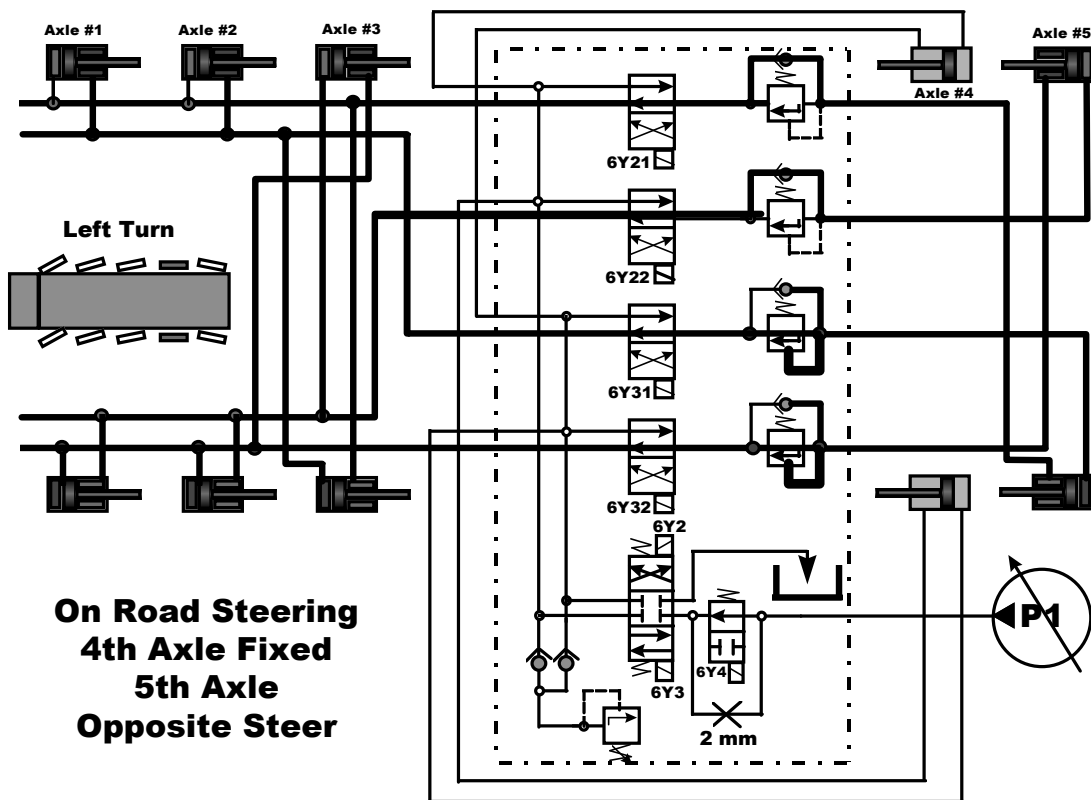
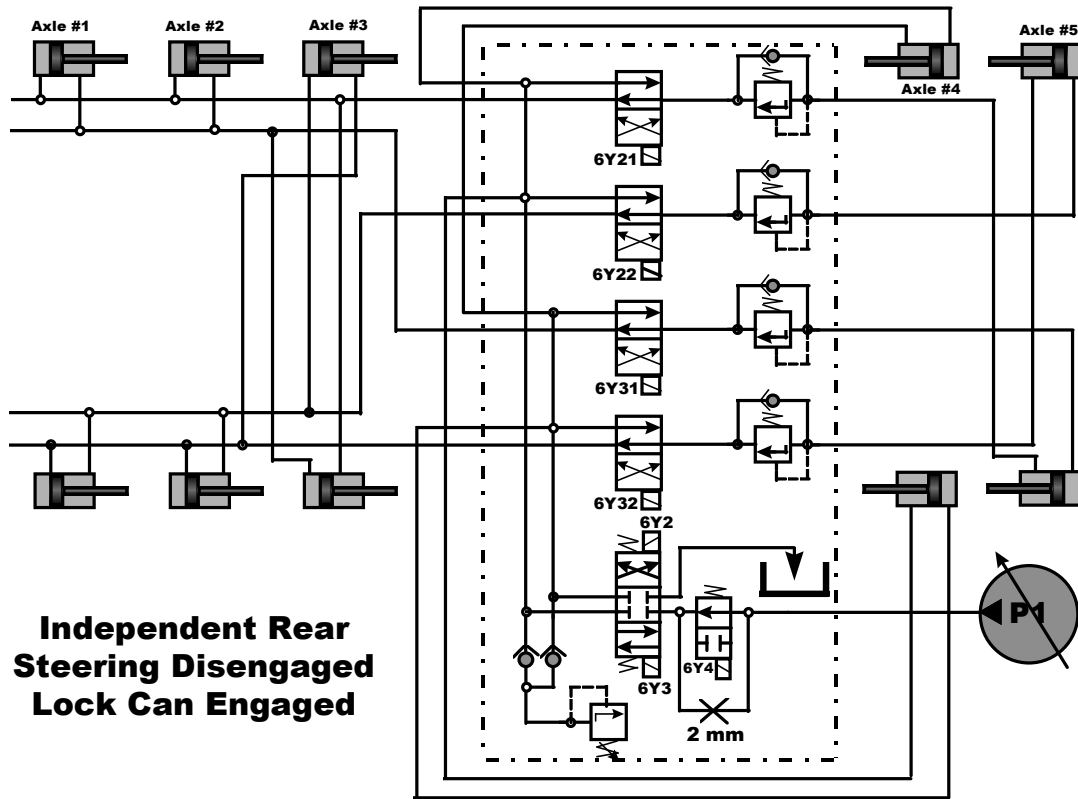


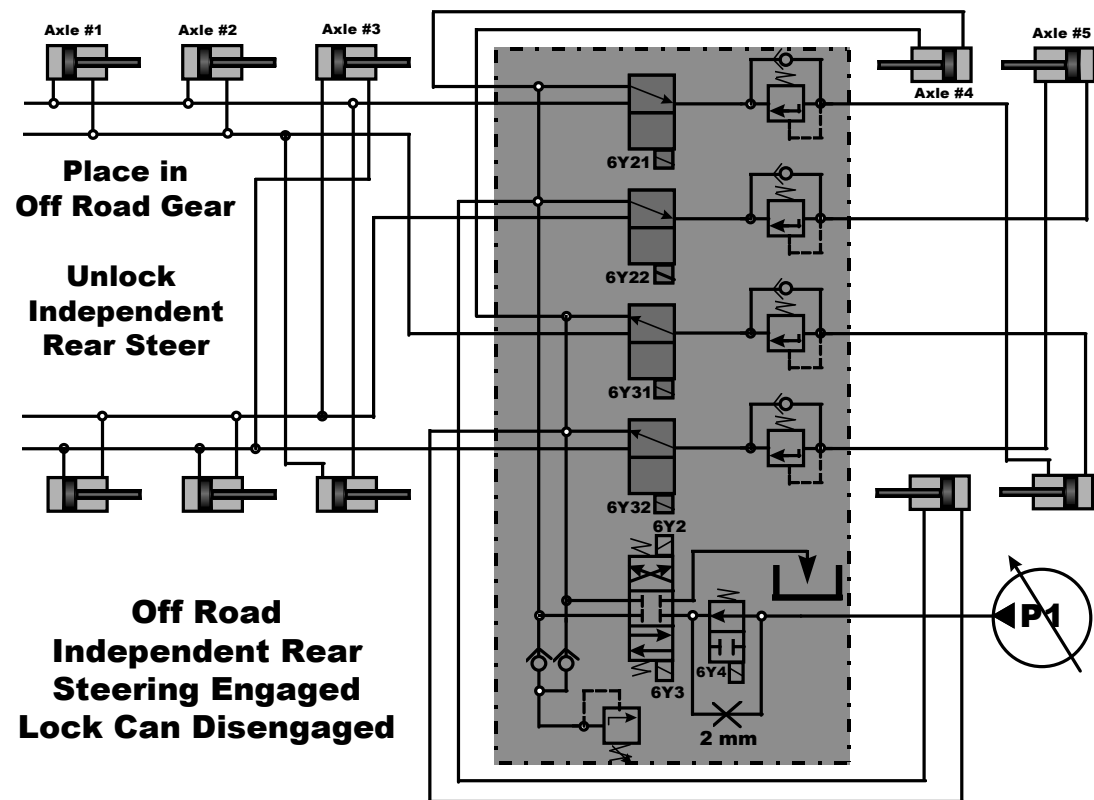
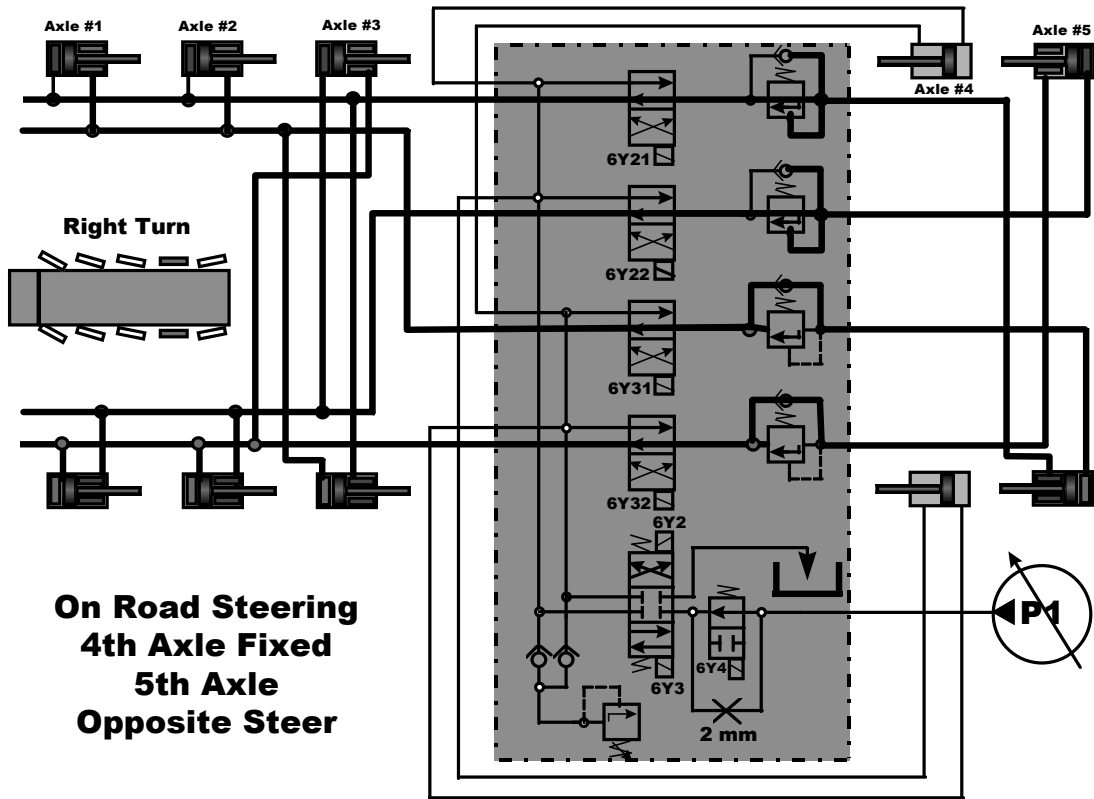
# Suspension Raising



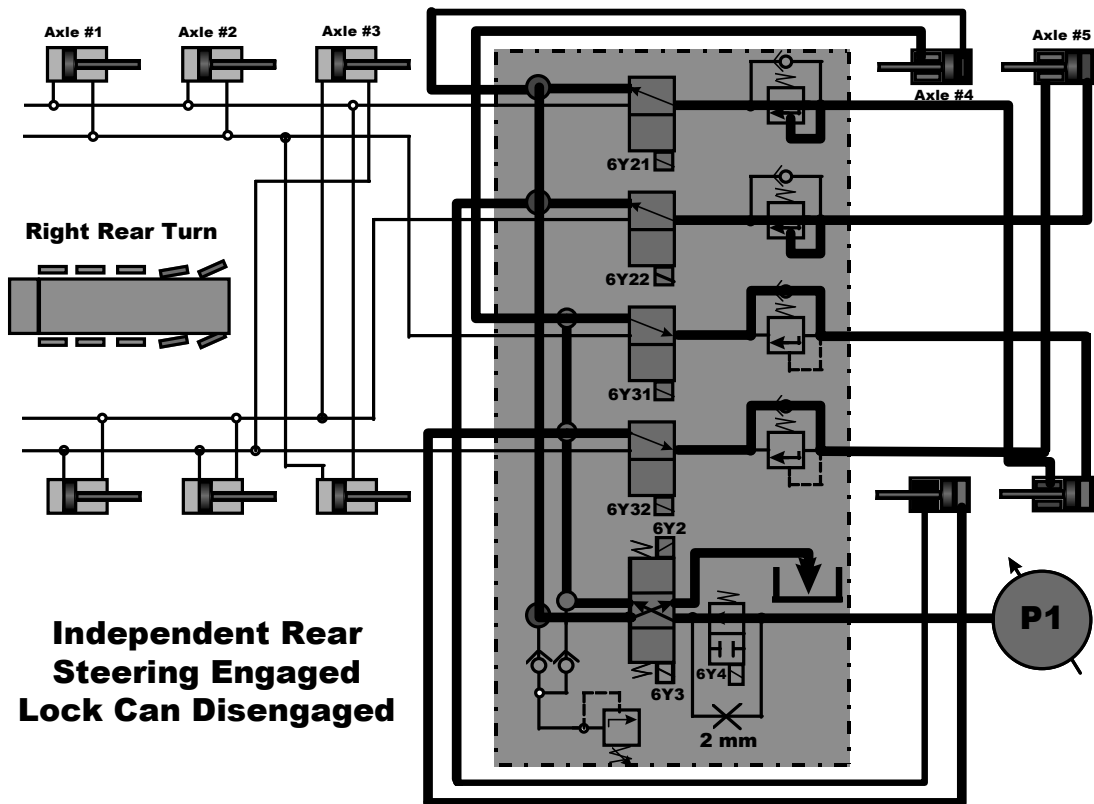
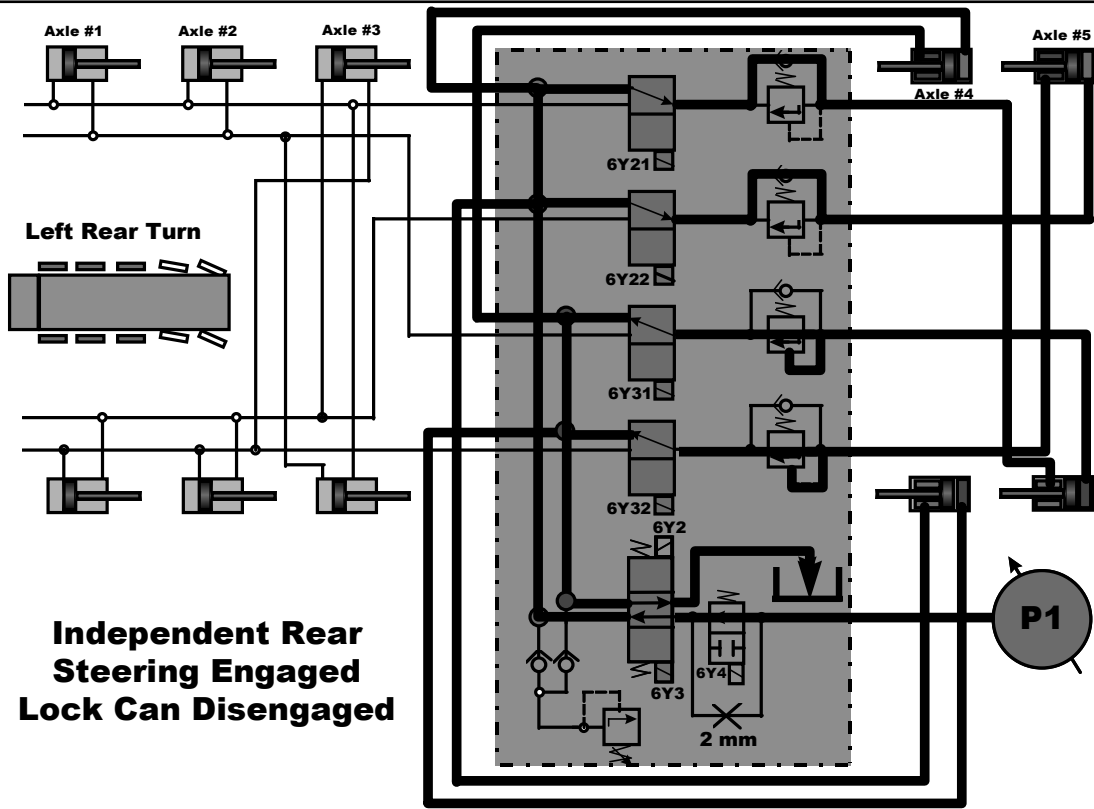
# Suspension Lowering













# *Section 7*



# GMK I

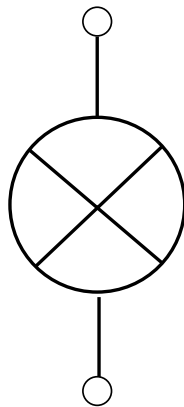
## *Carrier Electric*

**GROVE**  
TRAINING INSTITUTE

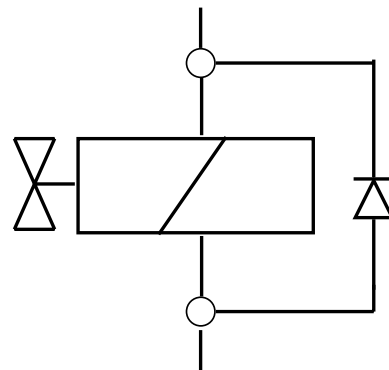
### GMK Electrical Symbols



Fuse

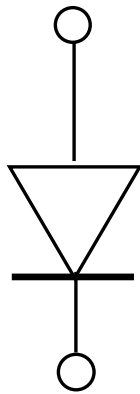


Indicator  
Light



Solenoid  
Valve

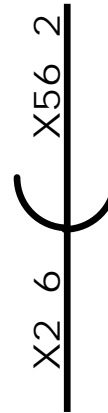
# GMK Electrical Symbols



Diode

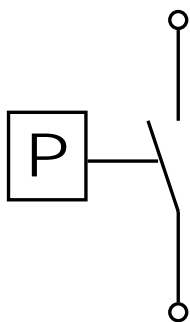


Slip Ring

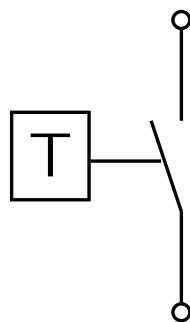


Terminal/  
Connection

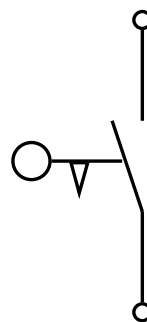
# GMK Electrical Symbols



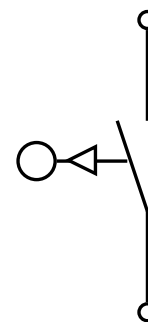
Pressure  
Switch



Temp.  
Switch

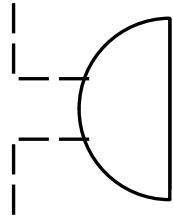


Toggle  
Switch

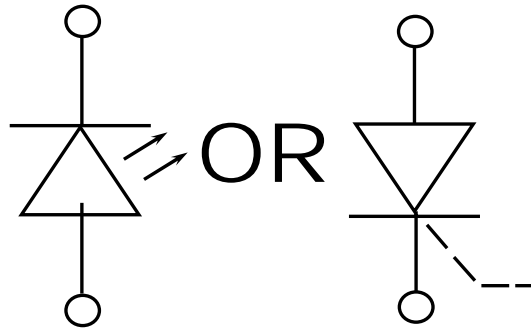


Momentary  
Switch

# GMK Electrical Symbols

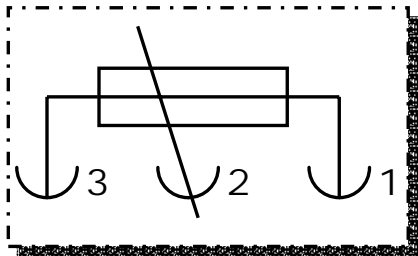


Horn or  
Buzzer



L<sub>ight</sub> E<sub>mitting</sub> D<sub>iode</sub>

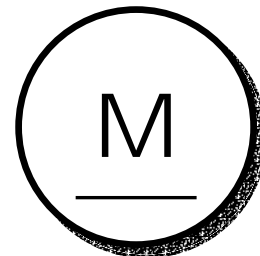
# GMK Electrical Symbols



Potentiometer

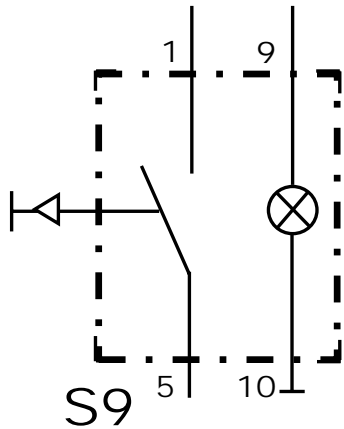


Relay  
Box or Card

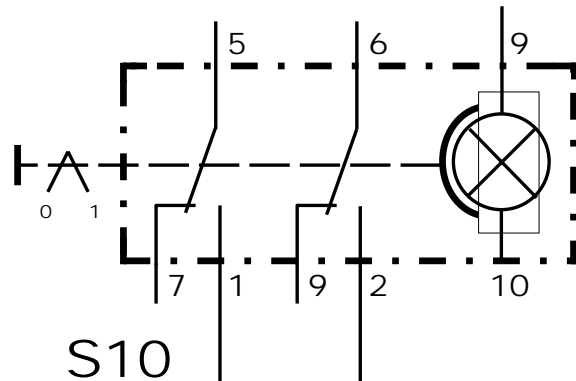


Electric  
Motor

## GMK Electrical Symbols

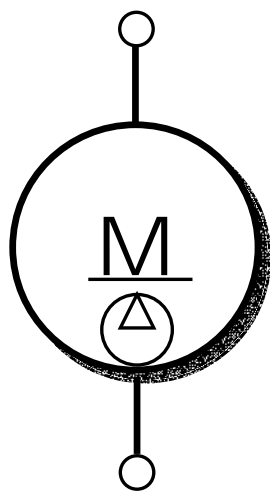


Single Pole Switch

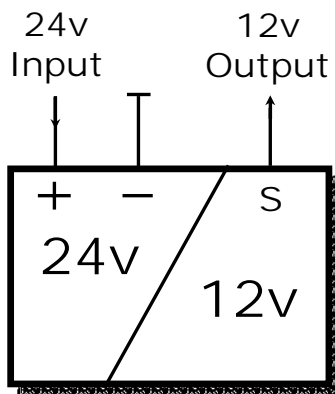


Double Pole Switch With Illumination

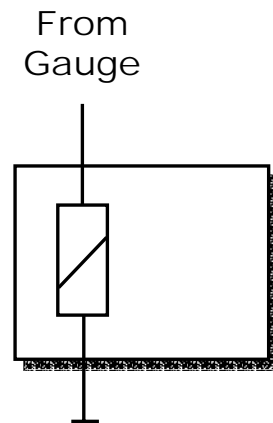
## GMK Electrical Symbols



Wiper Motor With Washer Pump



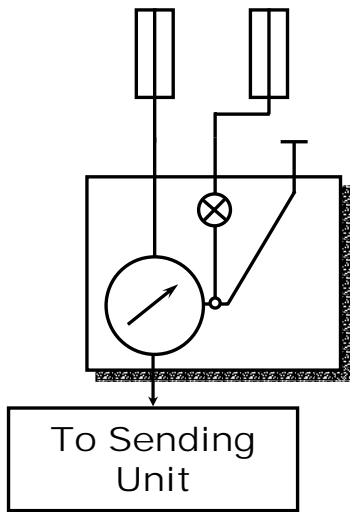
24 to 12v Converter



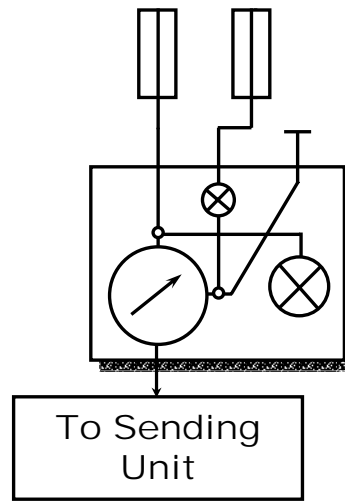
Sending Unit



# GMK Electrical Symbols

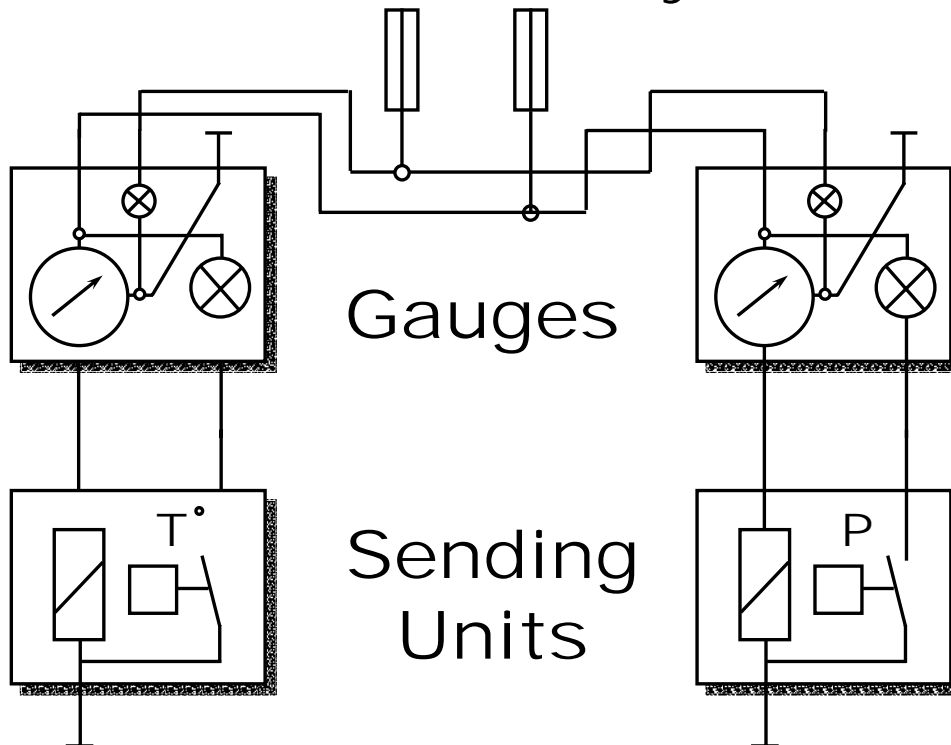


Fuel Gauge

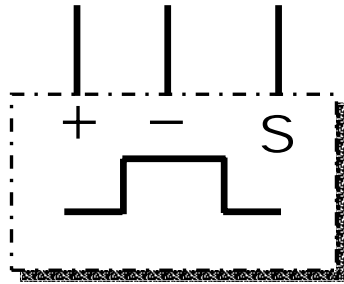


Gauge With Warning Light

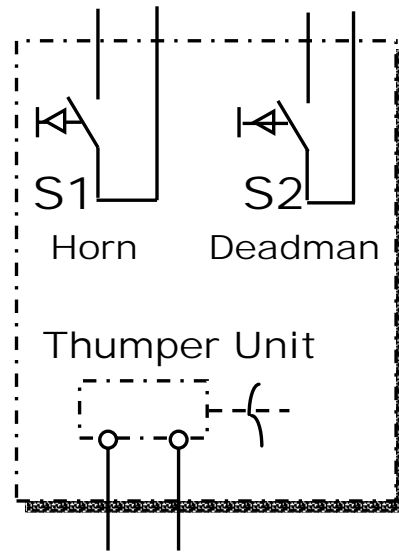
# GMK Electrical Symbols



# GMK Electrical Symbols

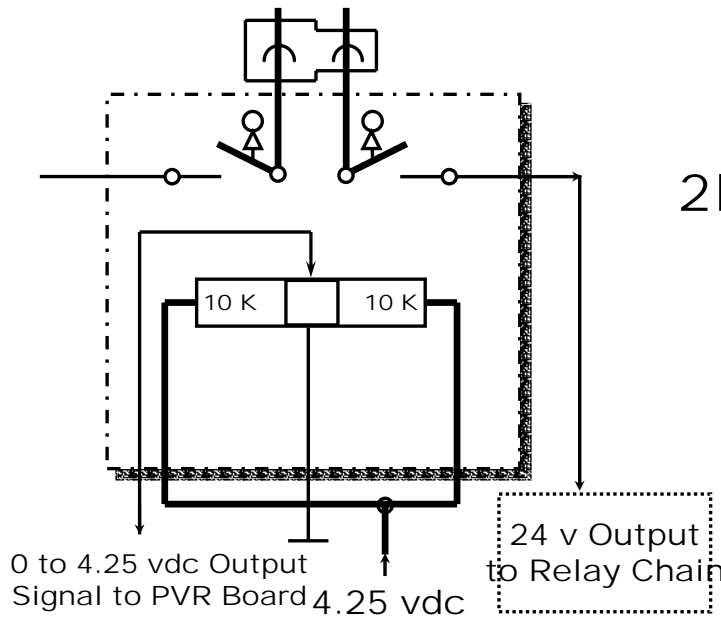


Rotation Indicator Transmitter

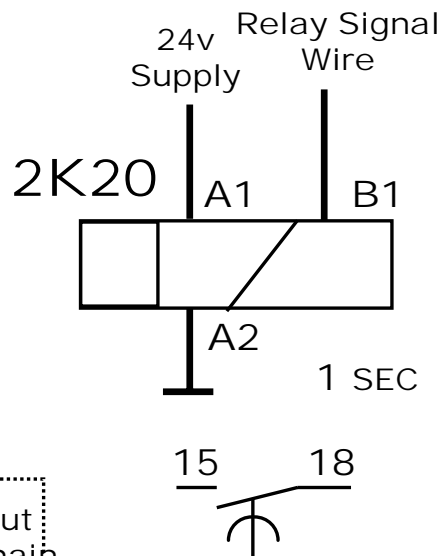


Joystick

# GMK Electrical Symbols

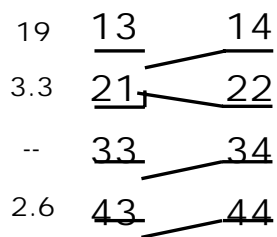
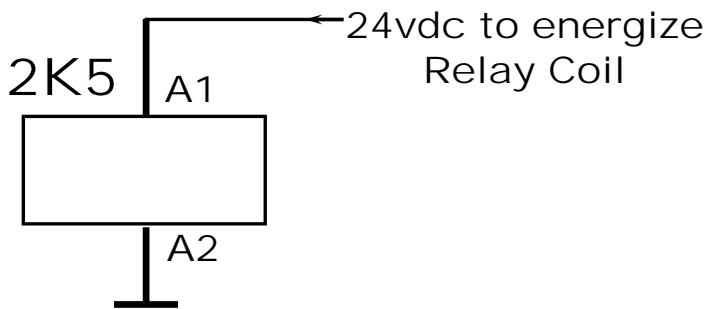


Electric Controller



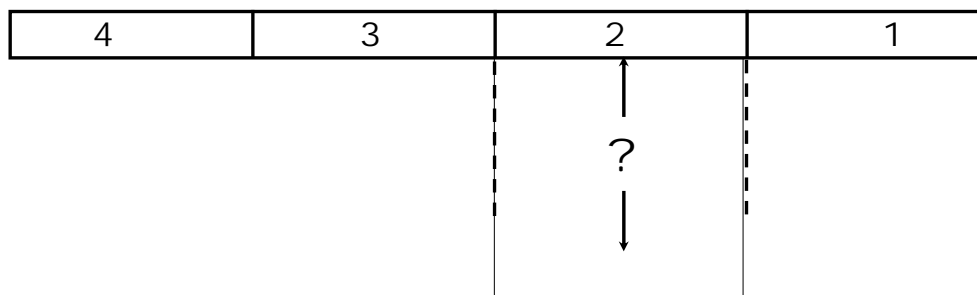
Time Delay Relay

# GMK Electrical Symbols



Siemens Multi-Contact Relay

# Schematic Navigation



## Abbreviations

The following abbreviations are used in the electric circuit diagrams:

+BE	Assembly group
-A	Module/Plug-in module
+	Plus
-	Minus
-B	Sensor/Proximity switch
S	Switch/Push button
-F	Fuse
G	Generator
M	Motor
H	Lamp
K	Relay
Ö	Relay contact, NC contact
S	Relay contact, NO contact
P	Pressure switch, Pressure and temperature gauge
V	Diode
X	Plug/Terminal connection
Y	Electrically operated valve

### Identification of cables and conductors:

rt	red
sw	black
ge	yellow
gr	grey
rs	pink
bl	blue
br	brown
gn	green
ws	white
vio	purple

### Relays

Without any prefix = SLI/hoist limit/engine control	K9
With prefix 0 = Pump control	OK9
With prefix 1 = Main hoist	1K2
With prefix 2 = Auxiliary hoist	2K5
With prefix 3 = Telescope/Derricking	3K1

### Pump

**Pump P1** = Main hoist/auxiliary hoist (normal operation)

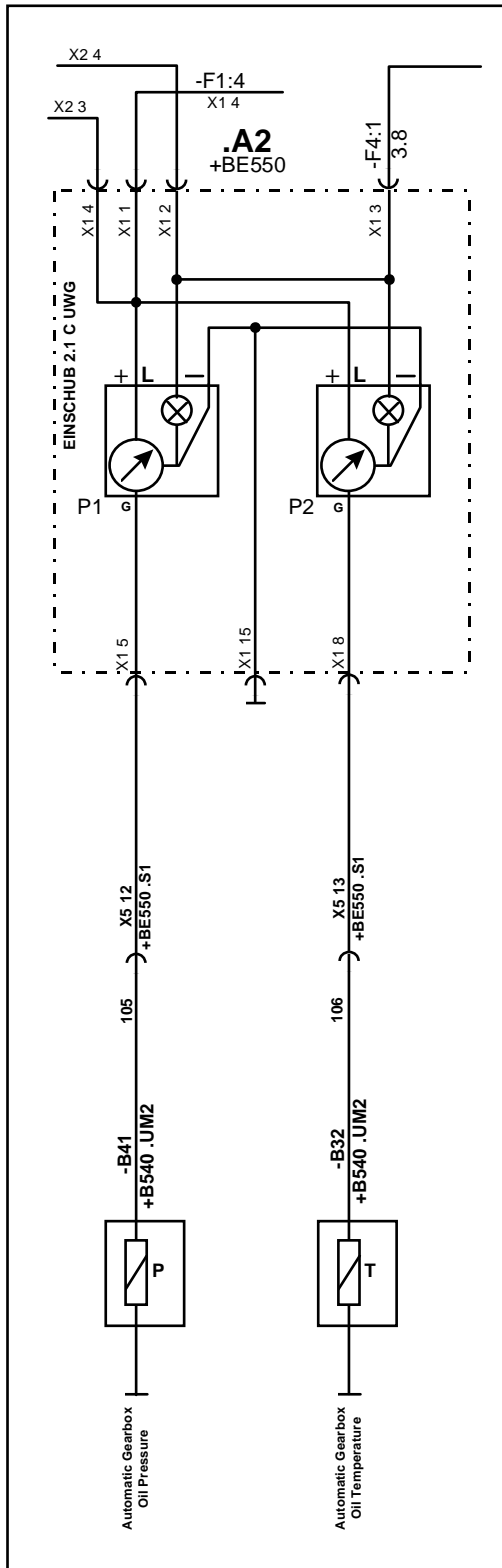
**Pump P2** = Telescope/Derricking

When not in use either pump can be selected for combined flow (twospeed).

This is only possible for main/auxiliary hoist (normal operation) and telescope/derrick functions.

NOTE: Multiple functions in two speed is not possible.

## Circuit Diagrams



The hydraulic oil temperature is measured by sensor -B32. This is part of assembly group +BE540 .UM2.

The sensor cable number is 106. The cable end plugs into X5 13.

A connection cable ends in plug/terminal X1 8 on module -A2 (plug-in module 2.1C UW - carrier)

Module -A2 is part of assembly group +BE550 (Driver's cab), plug-in module S1.

The temperature gauge P2 in assembly group -A2 is connected to the cable of the sensor -B32 and indicates the oil temperature.

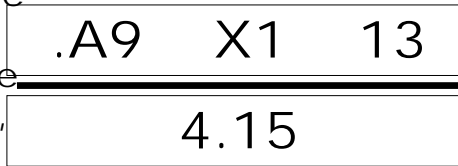
Temperature gauge P2 is supplied with power from fuse group -F1, fuse 4, via the plug/terminal X1 4 of assembly group -A1.

The instrument panel lighting is supplied with power from fuse group F4, fuse 1, via plug/terminal X1 3 of assembly group -A1.

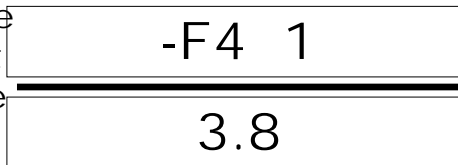
Fuse group -F4 is shown on sheet 3, grid 8, of the circuit diagram of the carrier.

# Following Wiring

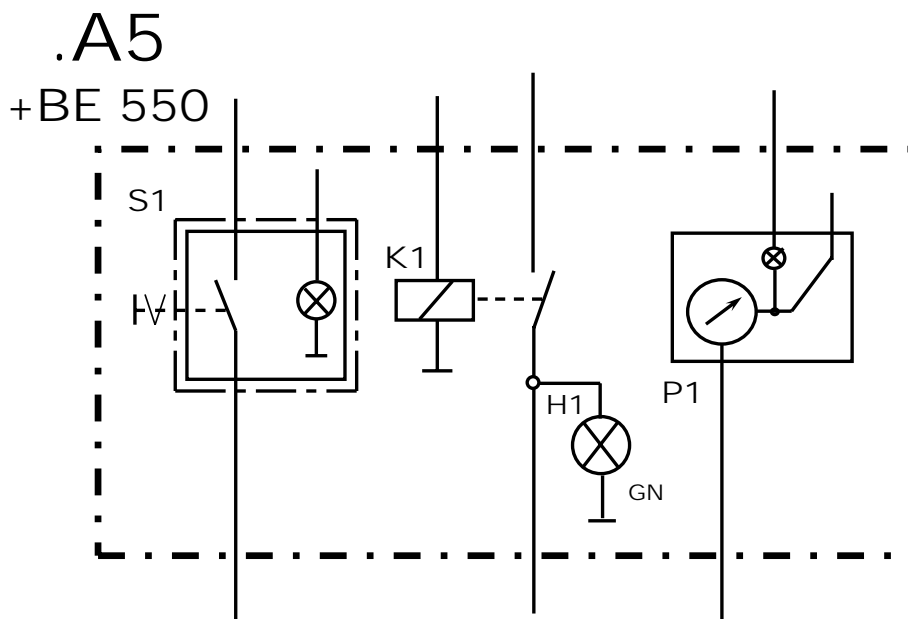
This wire will continue  
on page 4, Grid #15  
It will enter enclosure  
.A9 on connector X1,  
pin #13



This wire will continue  
on page 3, Grid # 8 It  
will terminate at Fuse  
bank 4, fuse #1

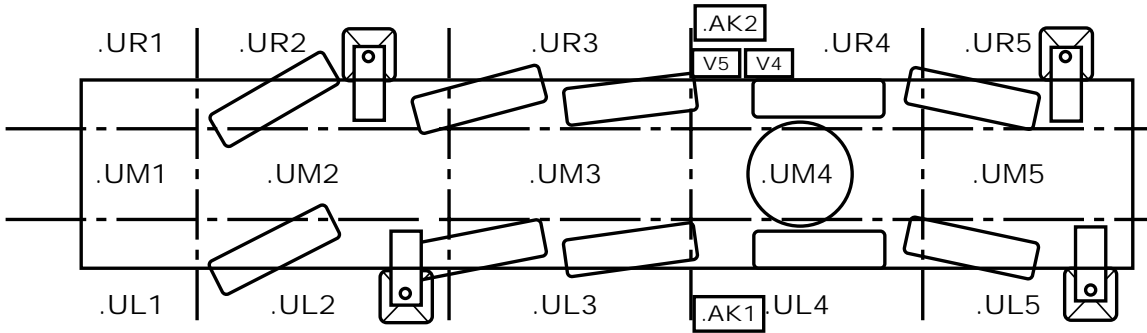
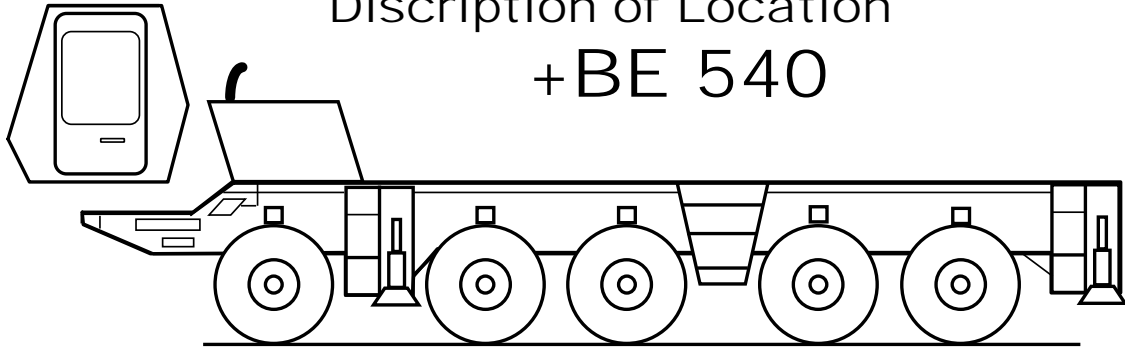


## The Enclosure Method



# +BE 550

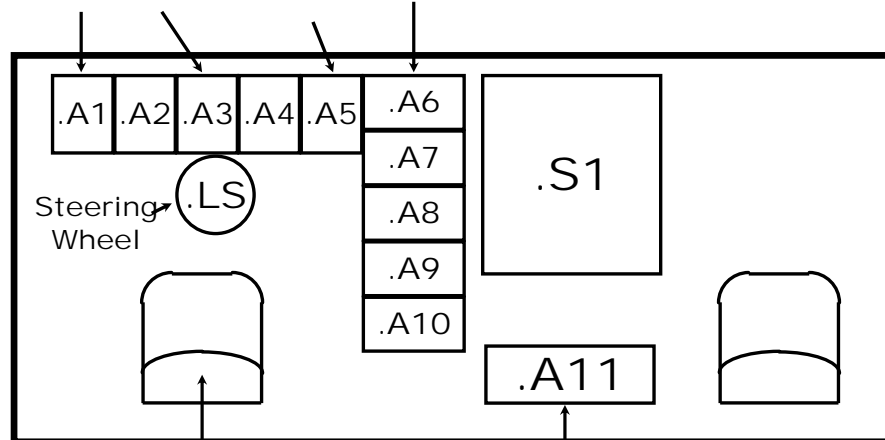
## Discription of Location +BE 540



# Carrier Cab

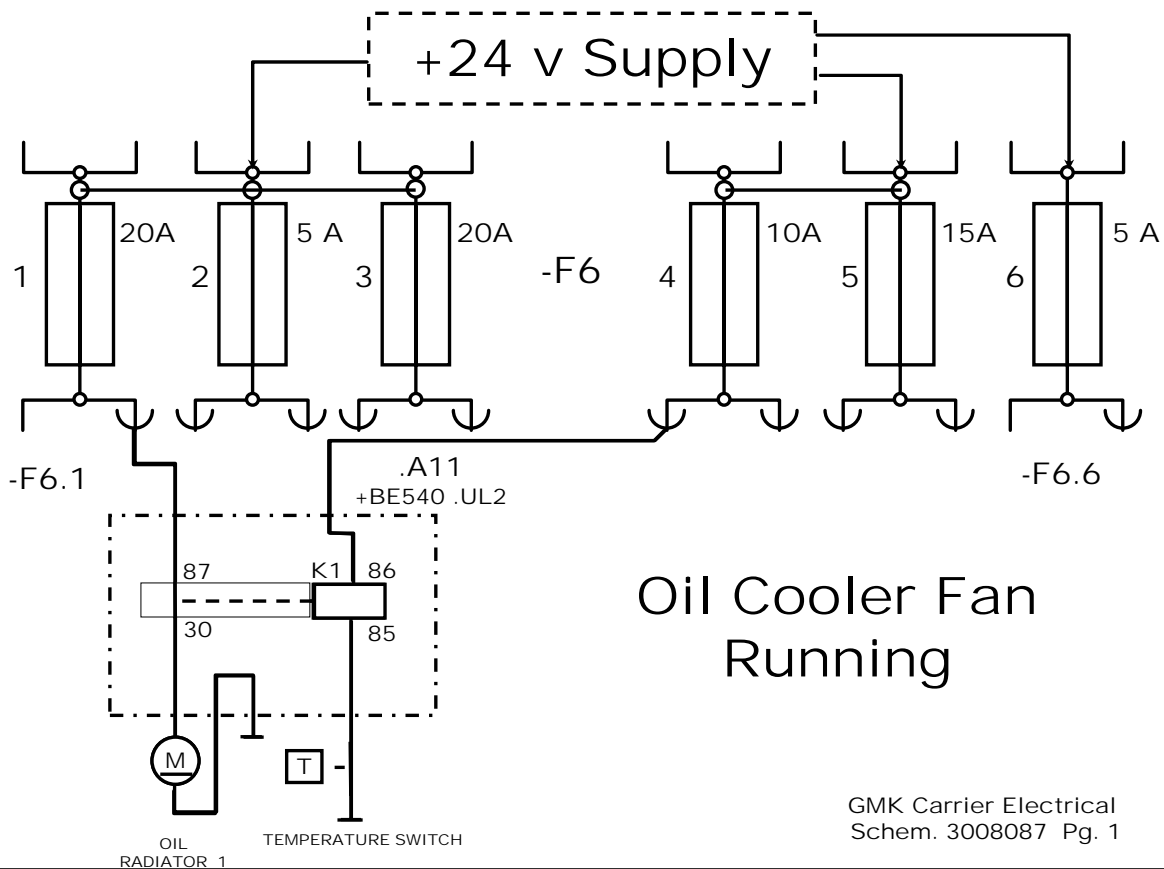
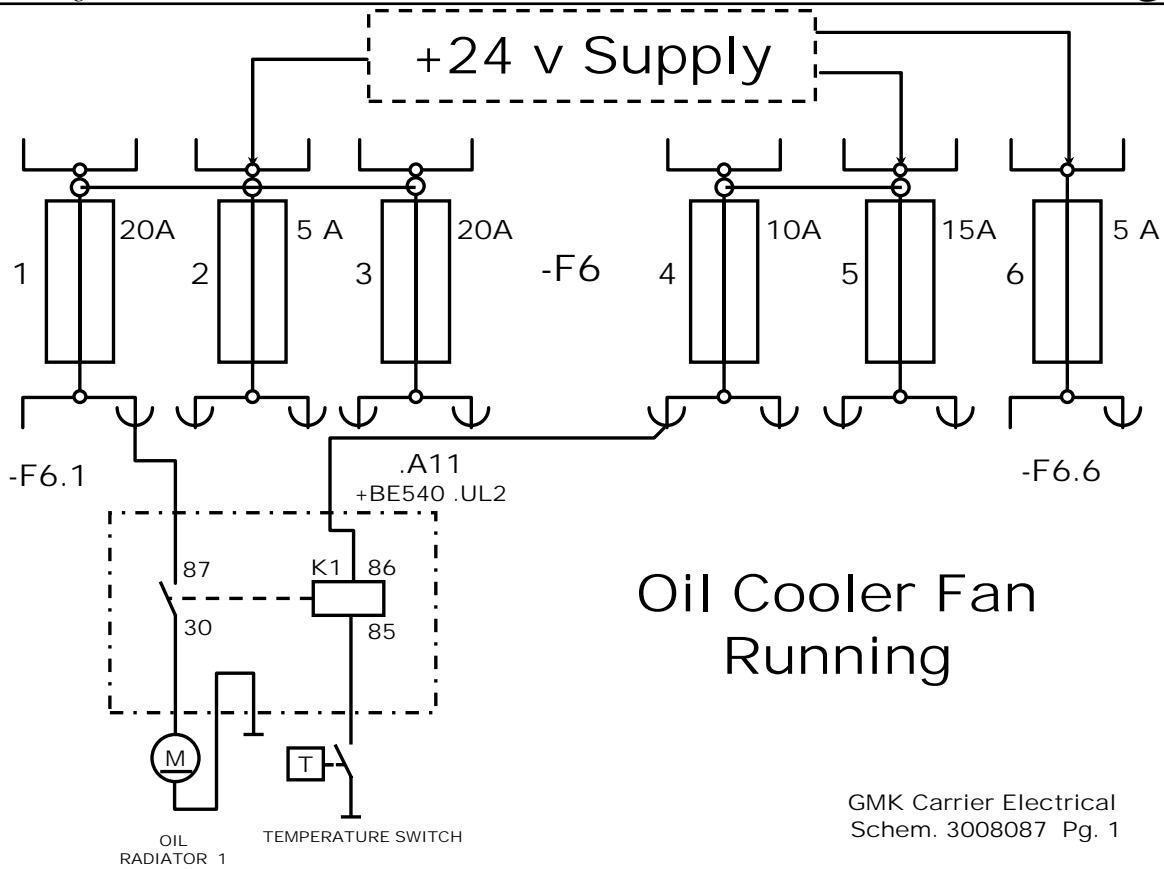
## +BE 550

Dash Panel Enclosures

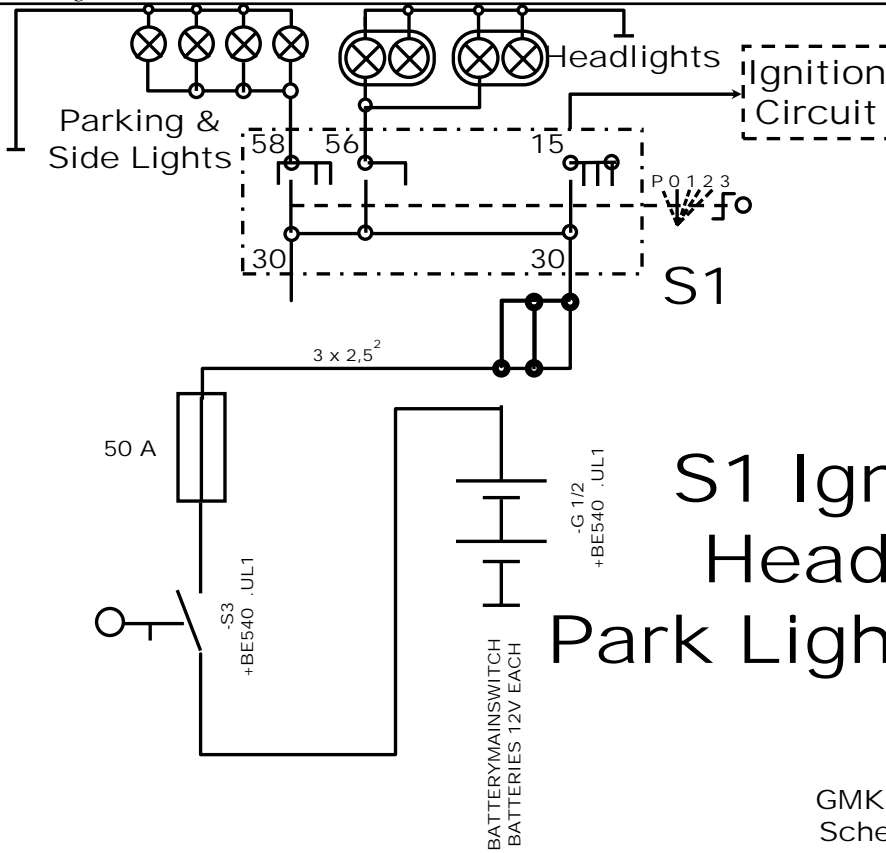


Drivers Seat

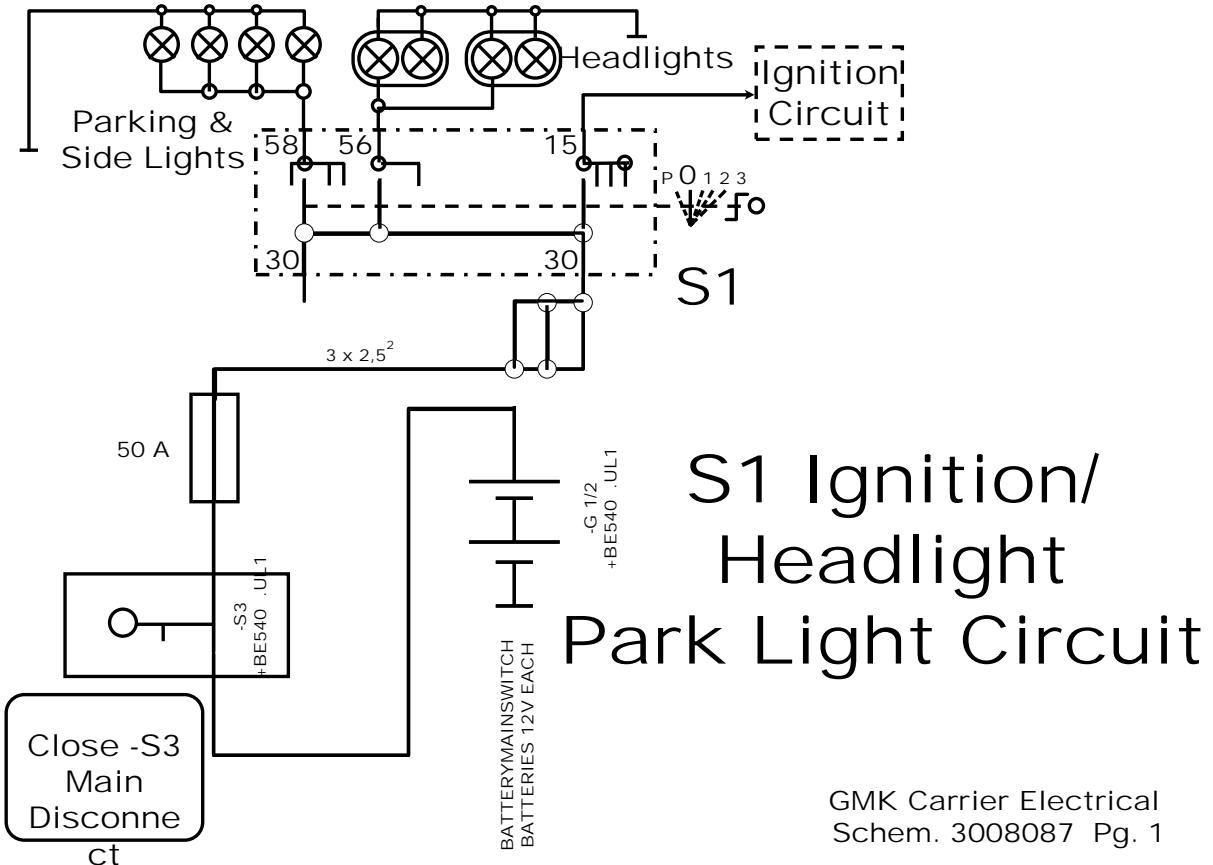
Relay Box



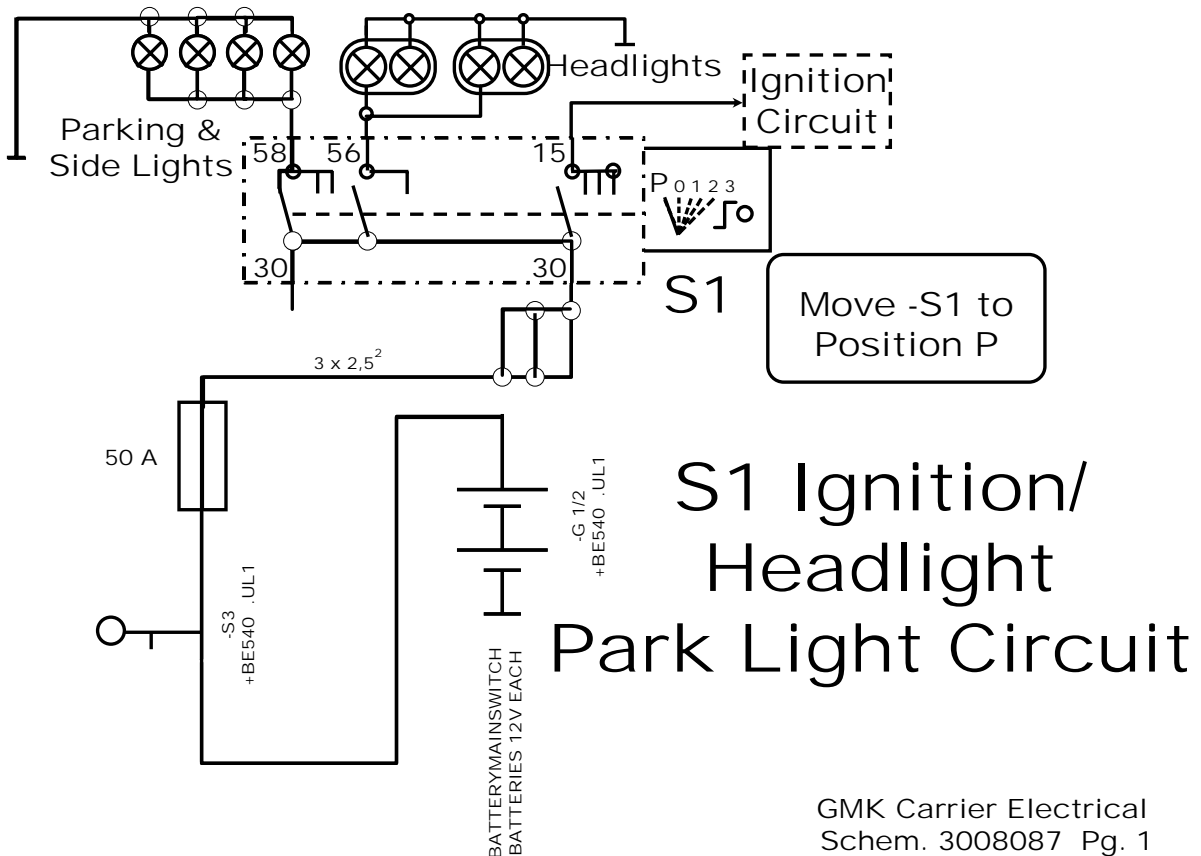
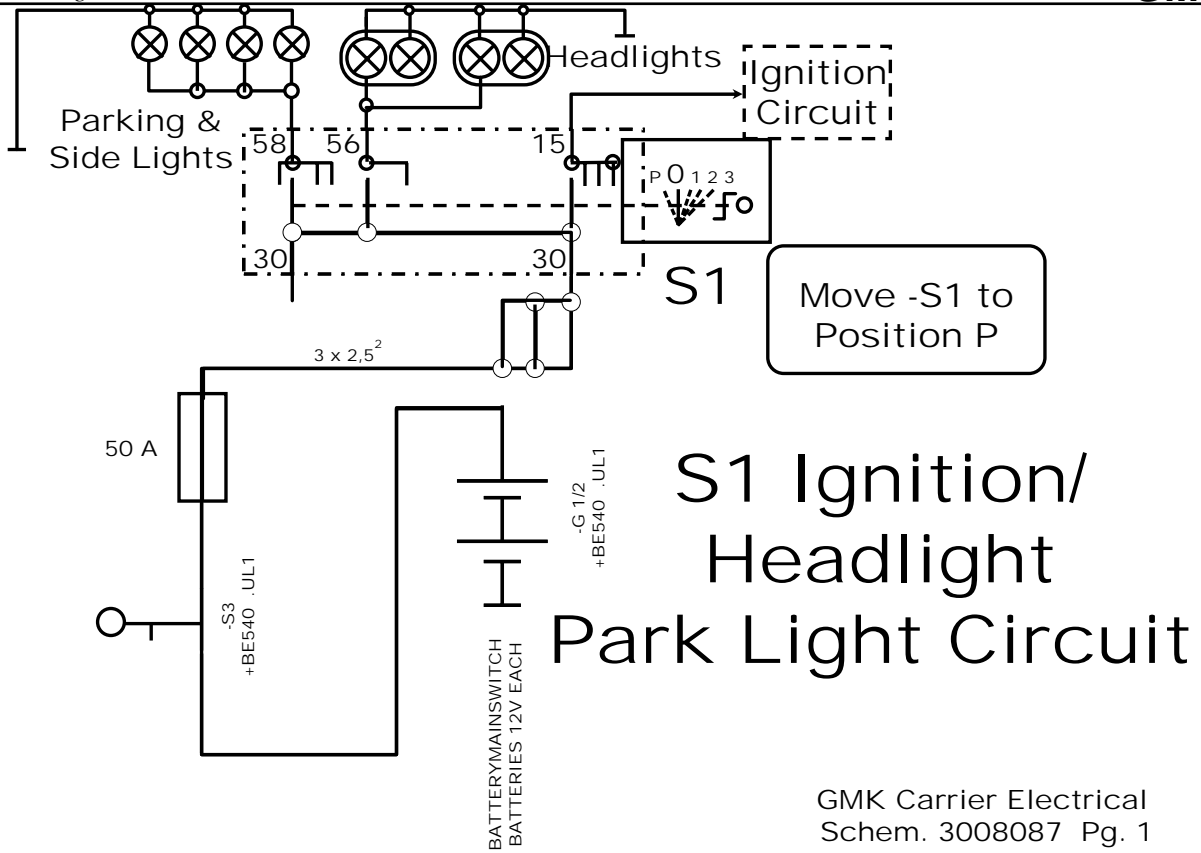


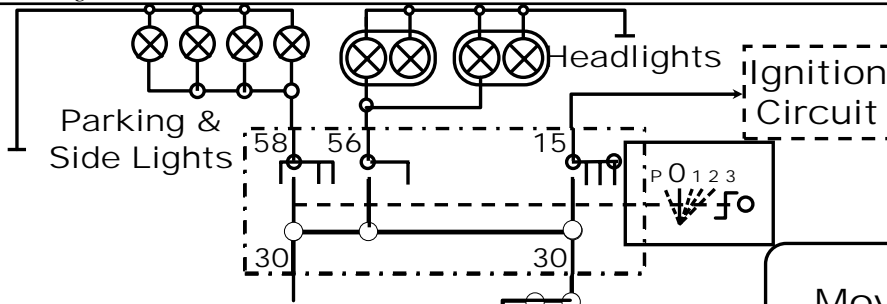


GMK Carrier Electrical Schem. 3008087 Pg. 1



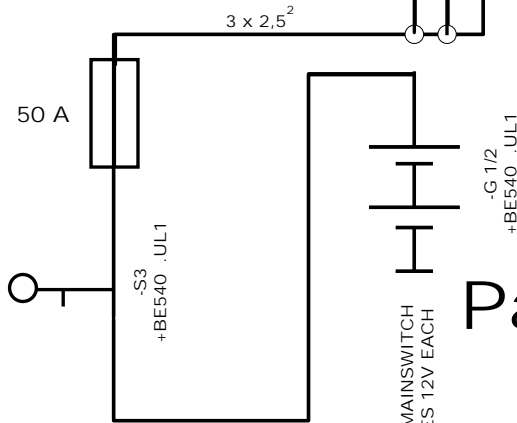
GMK Carrier Electrical Schem. 3008087 Pg. 1





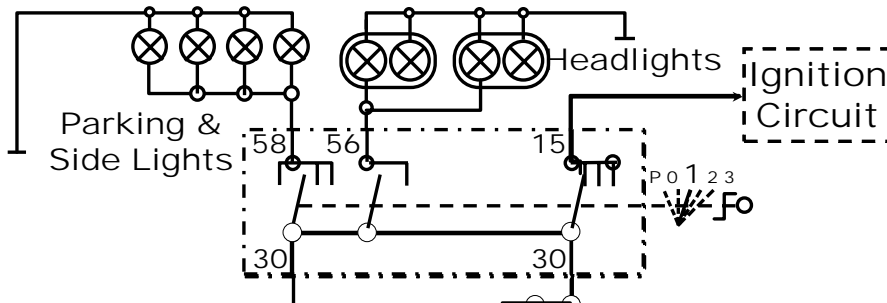
Move -S1  
to Position  
1

# S1 Ignition/ Headlight Park Light Circuit

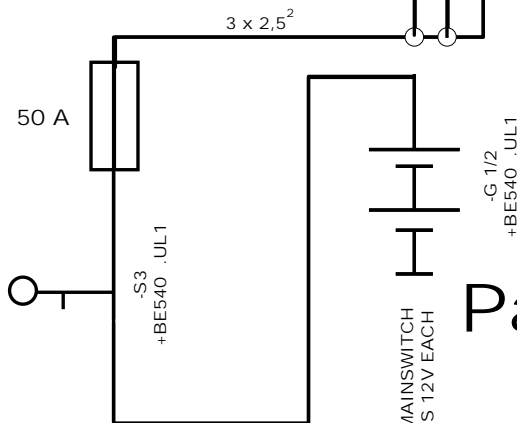


BATTERY MAIN SWITCH  
BATTERIES 12V EACH

GMK Carrier Electrical  
Schem. 3008087 Pg. 1

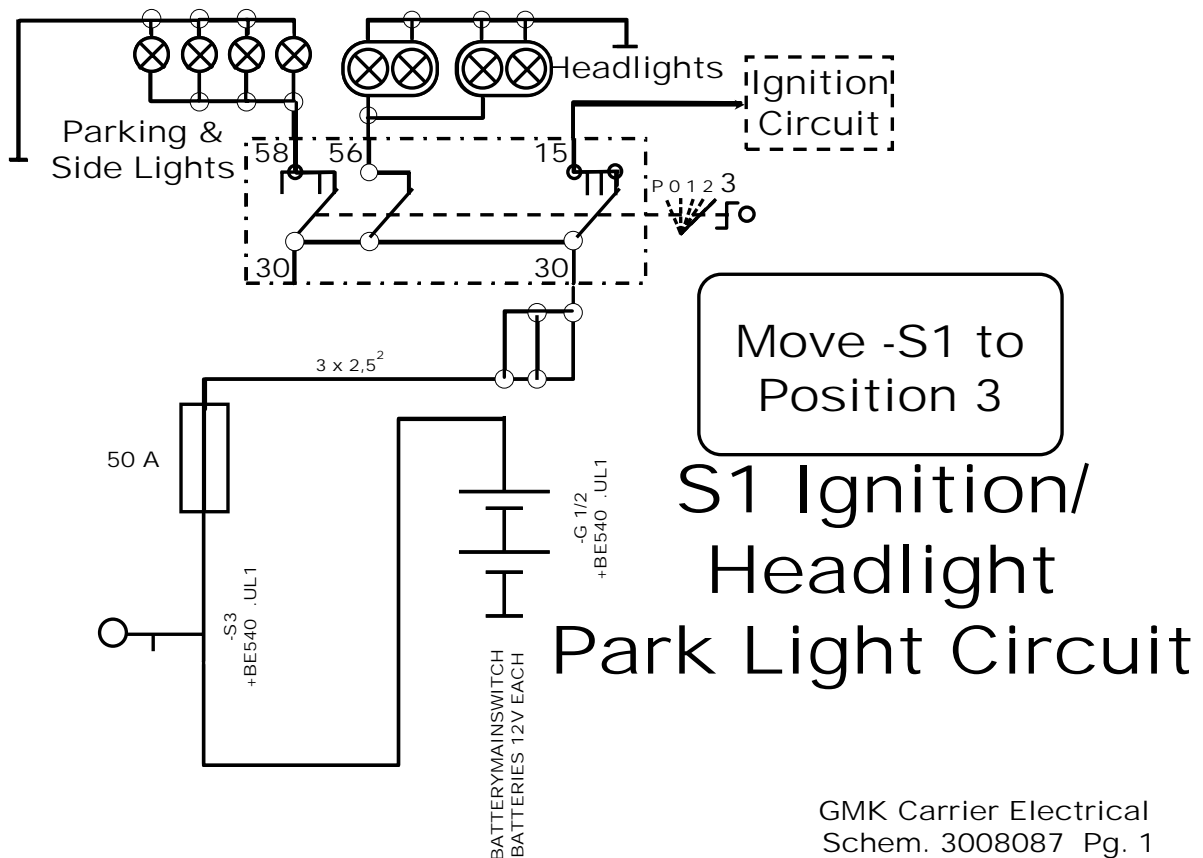
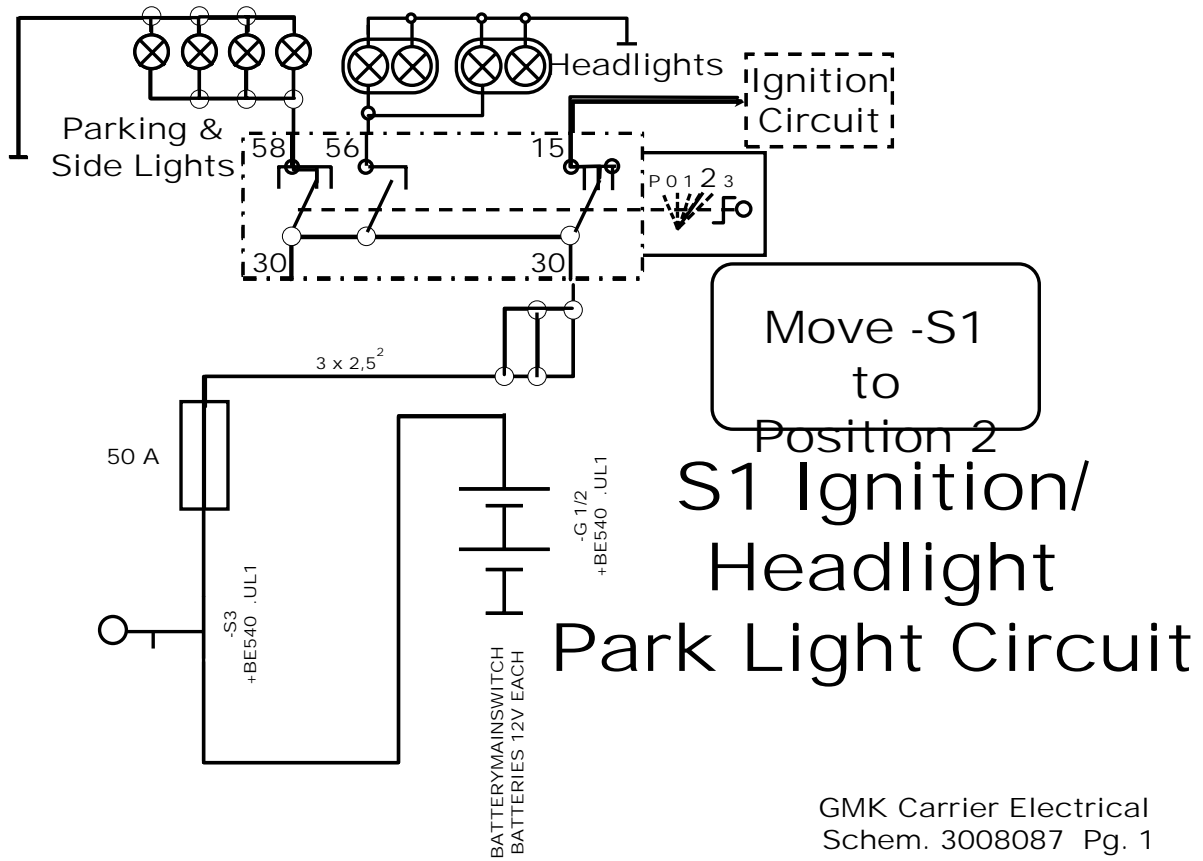


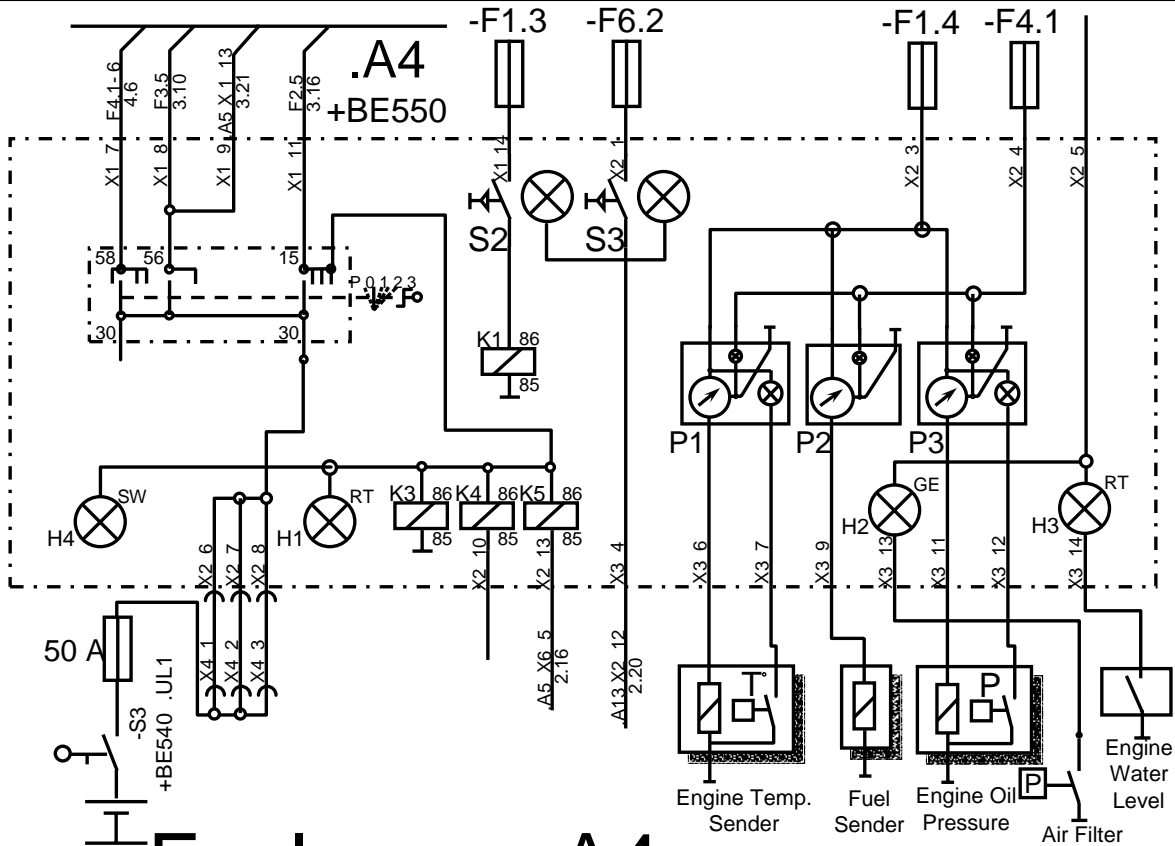
# S1 Ignition/ Headlight Park Light Circuit



BATTERY MAIN SWITCH  
BATTERIES 12V EACH

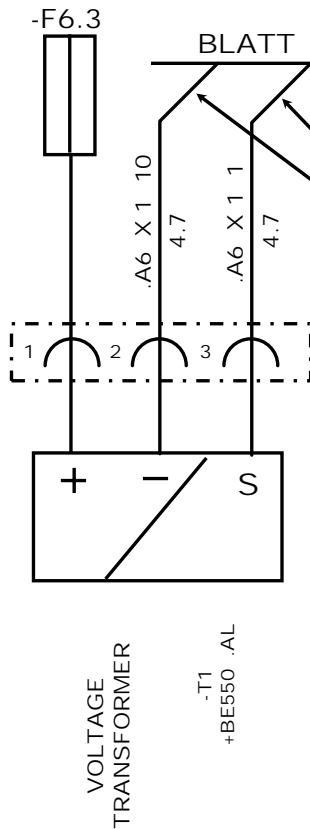
GMK Carrier Electrical  
Schem. 3008087 Pg. 1



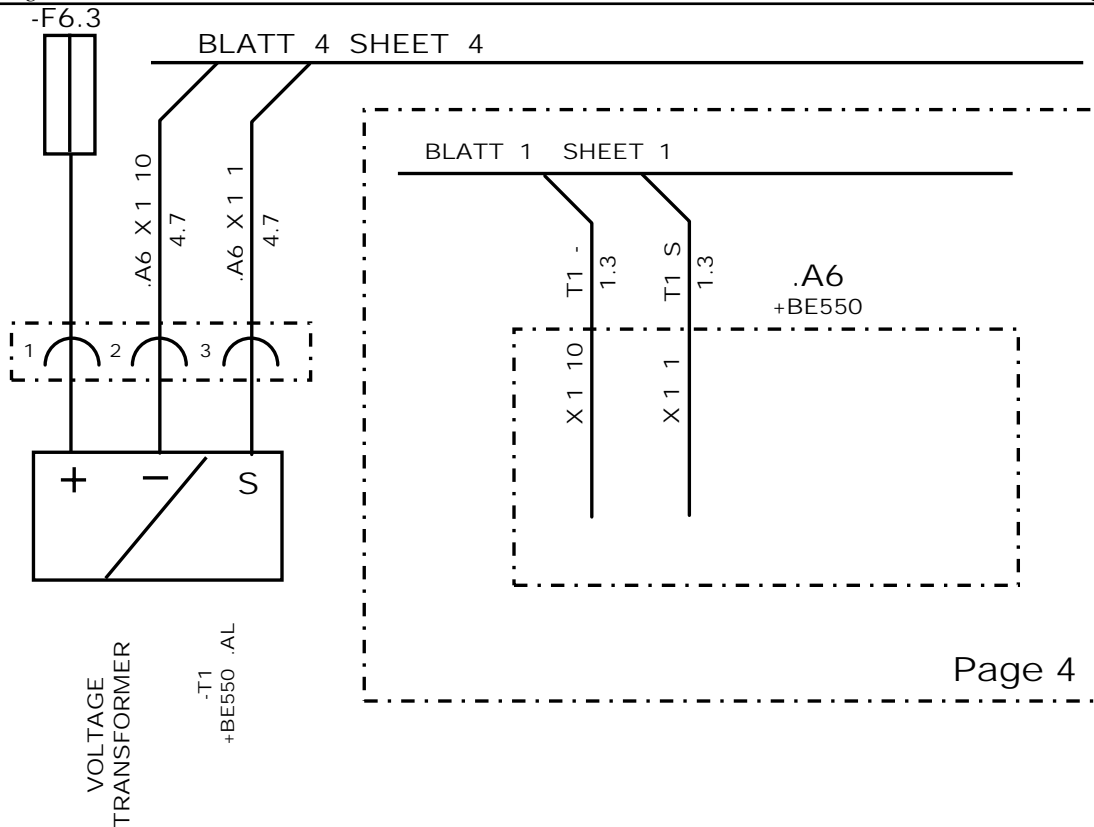


# Enclosure .A4

Schem. 3008087 Pg. 1

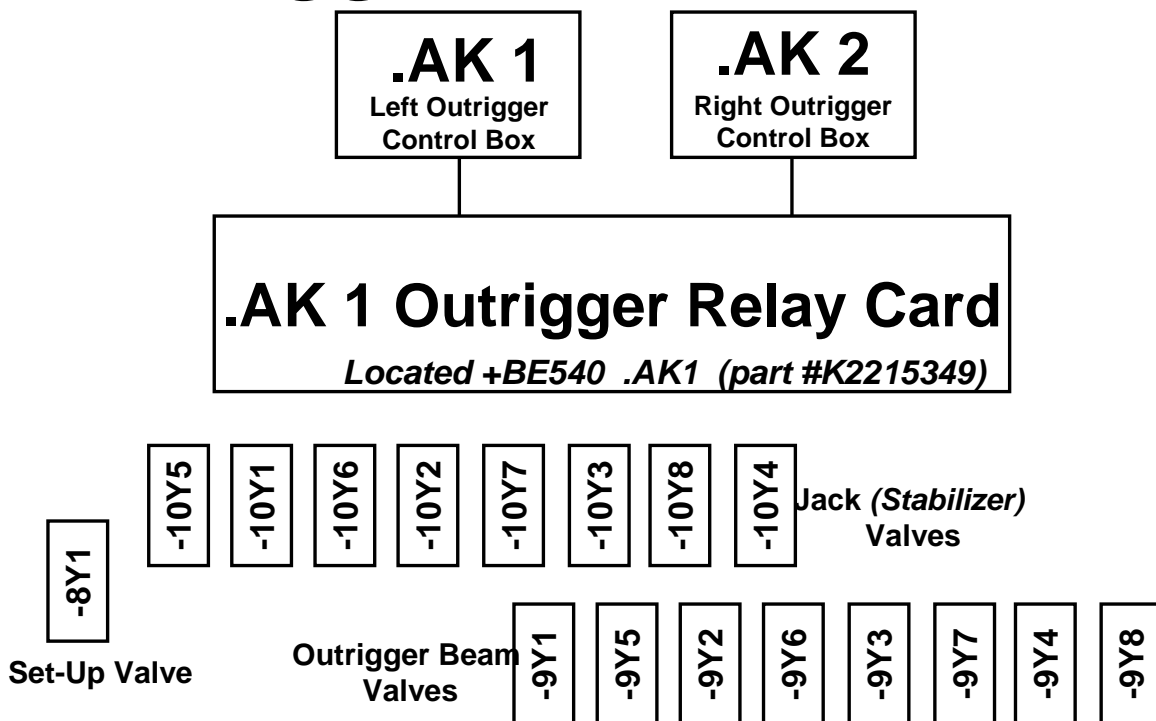


Follow these two wires to the appropriate page, grid #, enclosure, connector and pin number



Schematic Navigation Schem. 3008087 Pg. 1

# Outrigger Control Circuit



## Outrigger controls

The outriggers are controlled hydraulically from the direction control solenoid valve block modules; these are adjacent to the outrigger beams.

The outriggers are operated from control boxes on both sides of the carrier between axles three and four. The master control box is on the left-hand side, it contains the printed circuit board and encapsulated micro relays. These micro relays are controlled by toggle switches on the face of the control boxes. Subject to the setting of the toggle switches, a particular sequence of micro relays will be energized to operate the required hydraulic direction and flow diverter valves (build up pressure). There are eleven micro relays within the master control box. Each micro relay has its own LED to indicate that it is energized.

### Micro relay functions

For safety reasons, the power supply within each outrigger control box is routed through a master switch. -S1 for each control box. This means that two switches, the master and the selected function switch must be operated on each control box for any outrigger function.

For additional safety, it is only possible to operate the extension beams on the visible side. This is achieved by interlocking the power supply to the blind side via -S3 toggle switches. Blocking diodes are also installed to prevent inverse power supply.

**K1 & K2 (Stabilizer/ beams)** are both controlled by toggle switches -S3. Both relays have double contacts = two N/C and two N/O. Subsequently, we have four switched circuits from the N/C position to the N/O position when both relays are energized. When de-energized, the stabilizer circuit is selected. When energized, the extension beam circuit is selected.

**K3 & K4 (Stabilizer retract/extend)** are both controlled by K7, N/C. Both K3 & K4 relays have double contacts. Again we have four switched circuits from N/C to N/O. When de-energized, the stabilizer retract circuit is selected. When energized, the stabilizer extend circuit is selected.

**K5 & K6 (Extension beam extend/retract)** are both controlled by K7, N/O. Both K5 & K6 relays have double contacts. Again, we have four switched circuits from N/C to N/O. When de-energized, the extension beam extend circuit is selected. When energized, the extension beam retract circuit is selected.

**K7 (Extend/retract)** is controlled by toggle switches — S2 via diodes to prevent inverse power supply. Relay K7 has only a single contact leg, N/C and NO. This gives only two switched circuits, N/C to energize K3 & K4 and N/O to energize K5 & K6.

**K8 (Front left)** is controlled by switch — S7. K8 has only a single contact leg. Only the N/O contact is used to energize solenoid 8Y1 (build up pressure) and supply hydraulic oil to the outrigger circuit.

**K9 (Front right)** is controlled by switch S6, K9 has only a single contact leg. Only the N/O contact is used to energize solenoid 8Y1 (build up pressure) and supply hydraulic oil to the outrigger circuit.

**K10 (Rear left)** is controlled by switch S5, K10 has only a single contact leg. Only the N/O contact is used to energize solenoid 8Y1 (build up pressure) and supply hydraulic oil to the outrigger circuit.

**K11 (Rear right)** is controlled by switch S4 . K 11 has only a single contact leg. Only the N/O contact is used to energize solenoid 8Y1 (build up pressure) and supply hydraulic oil to the outrigger circuit.

**Note:** Although the respective LED may be illuminated, that in its self does not prove that the corresponding solenoid is energized.

The left - hand master control box has the schematic designation +BE540.AK1.

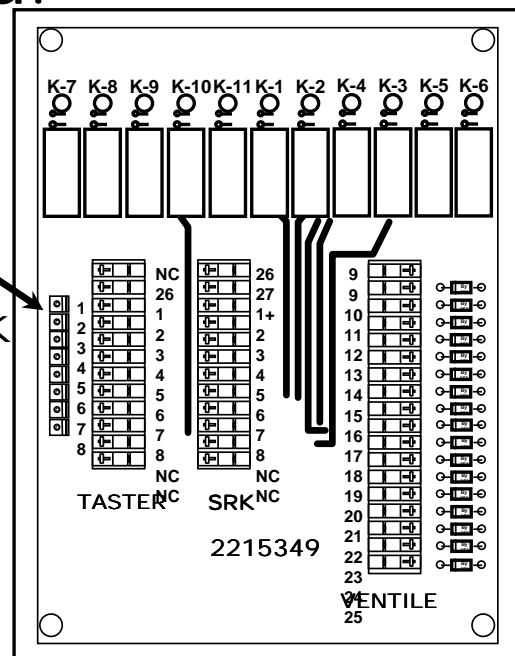
The right - hand control box has the schematic designation +BE540.AK2



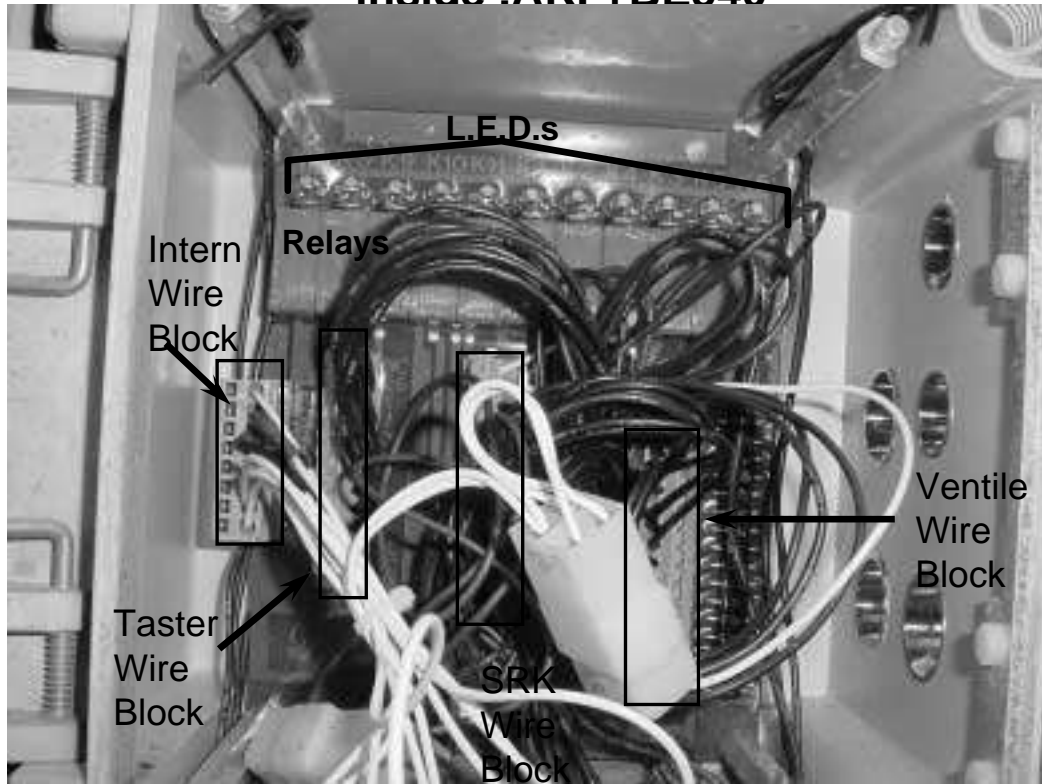


## Outrigger Control Relay Card:

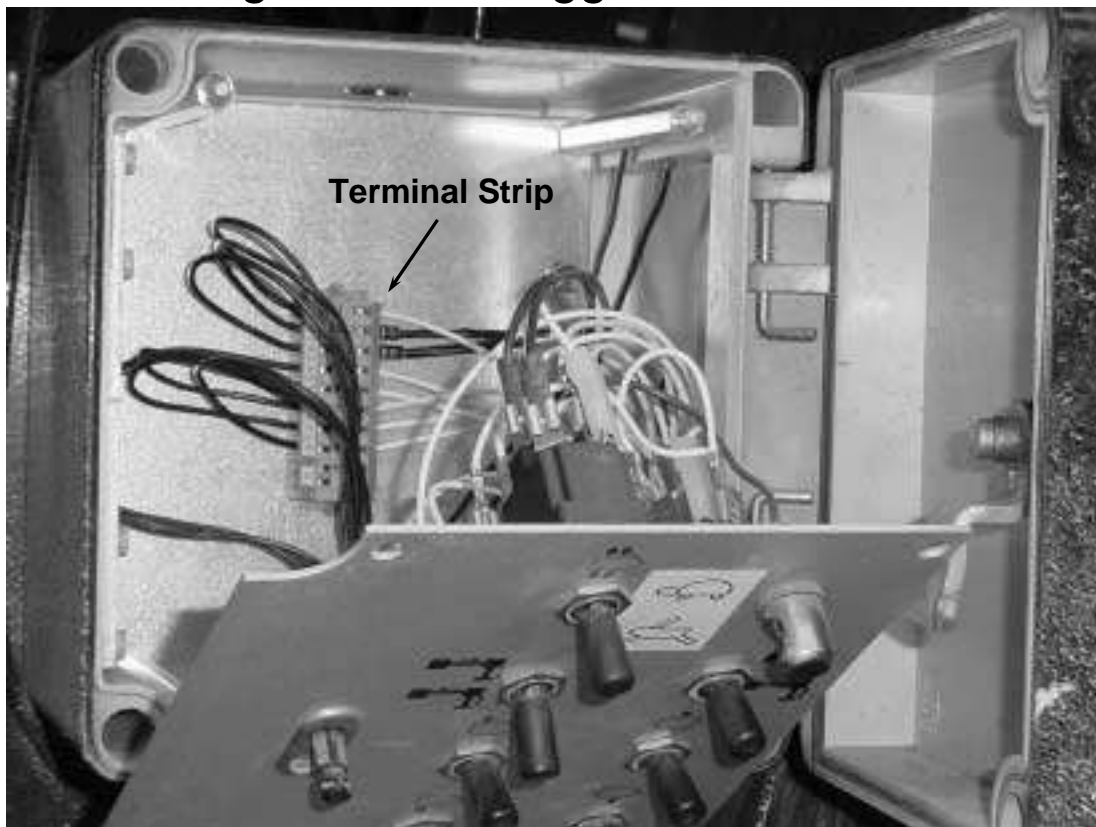
- Board Relay LEDs
- Relay Modules
- INTERN Wire Block (Quick Disconnect)
- TASTER Wire Block (Push Buttons)
- SRK Wire Block (Sliprings, used on 4080 S/S)
- VENTILE Wire Block (Quick Disconnect)
- Diodes (Arch Suppression)

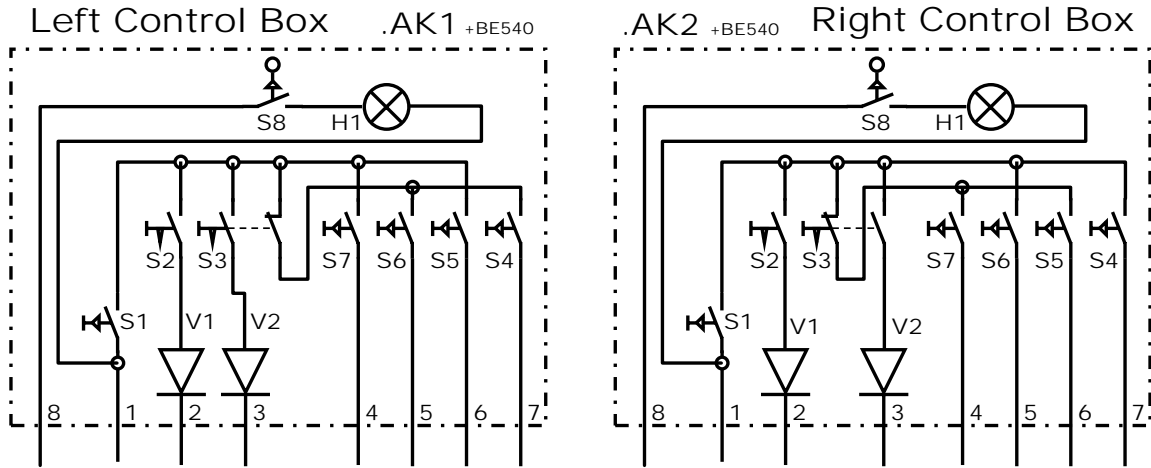


### Outrigger Control Relay Card inside .AKI +BE540



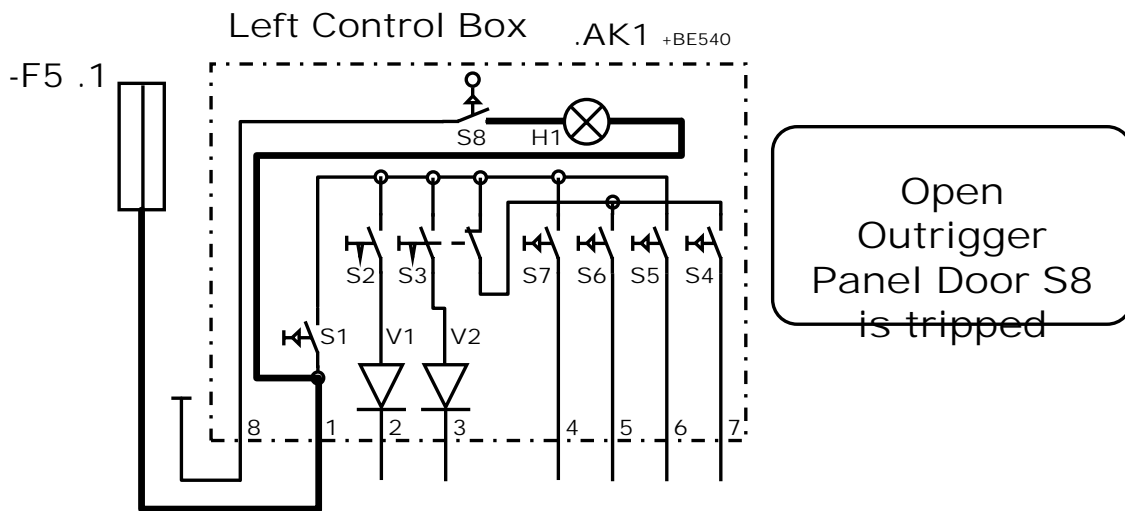
### Right side Outrigger Control .AK2 +BE540





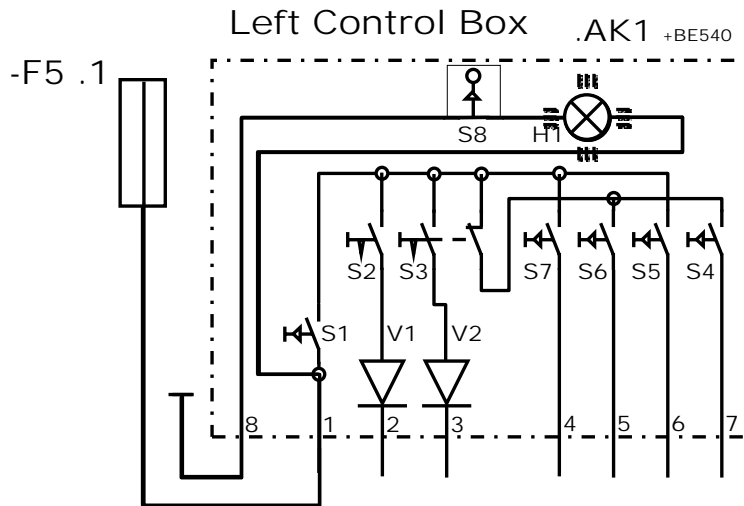
- |                |                 |
|----------------|-----------------|
| S1 Powerswitch | S6 Front Right  |
| S2 Out In      | S7 Front Left   |
| S3 Jack Beam   | S8 Illumination |
| S4 Rear Right  |                 |
| S5 Rear Left   |                 |

**GMK Outrigger Circuit**  
Schem. 3008087 Pg. 4



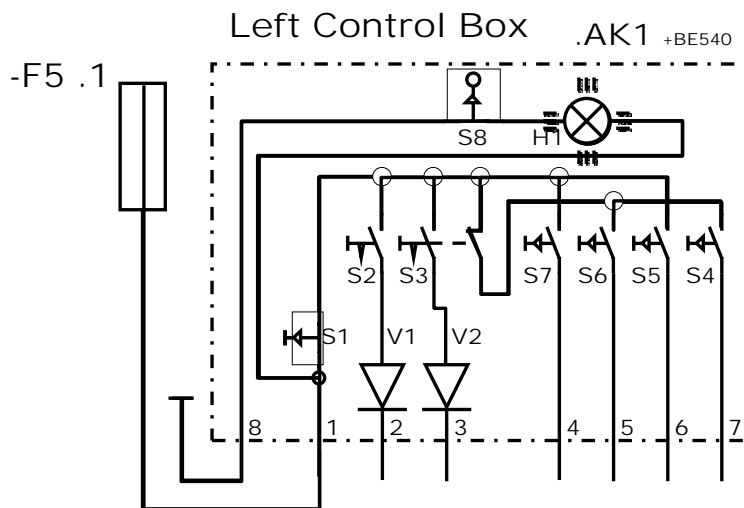
- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

**GMK Outrigger Circuit**  
Schem. 3008087 Pg. 4



- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

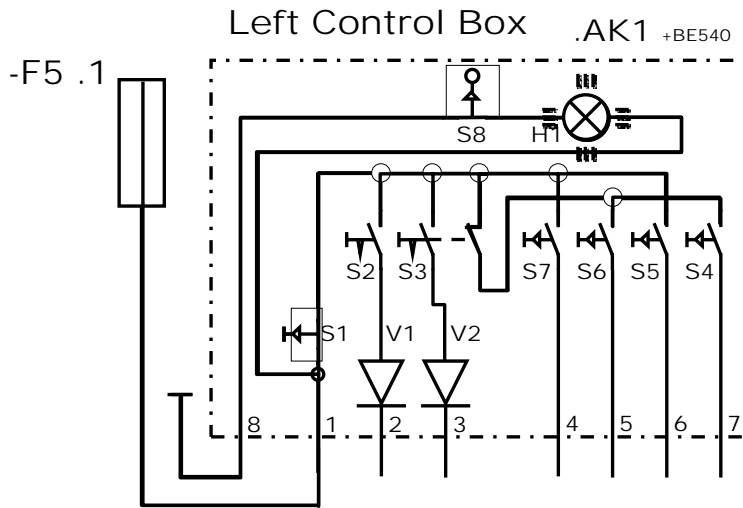
GMK Outrigger Circuit  
Schem. 3008087 Pg. 4



S1 Main Power Switch must be depressed to supply power to all switches

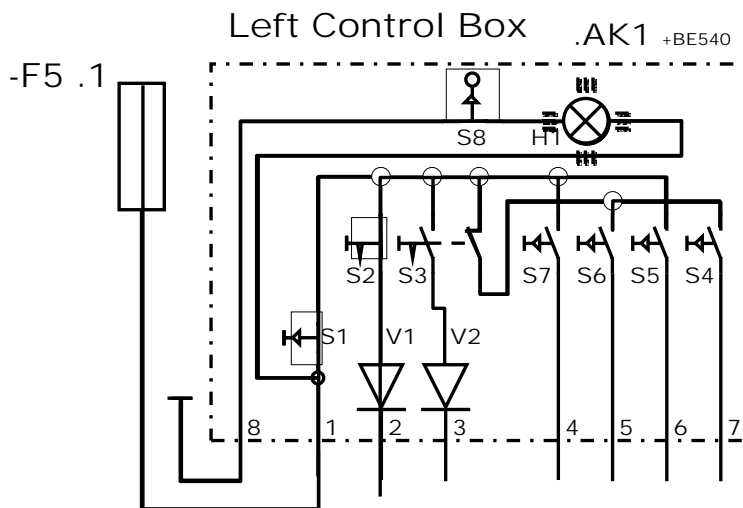
- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

GMK Outrigger Circuit  
Schem. 3008087 Pg. 4



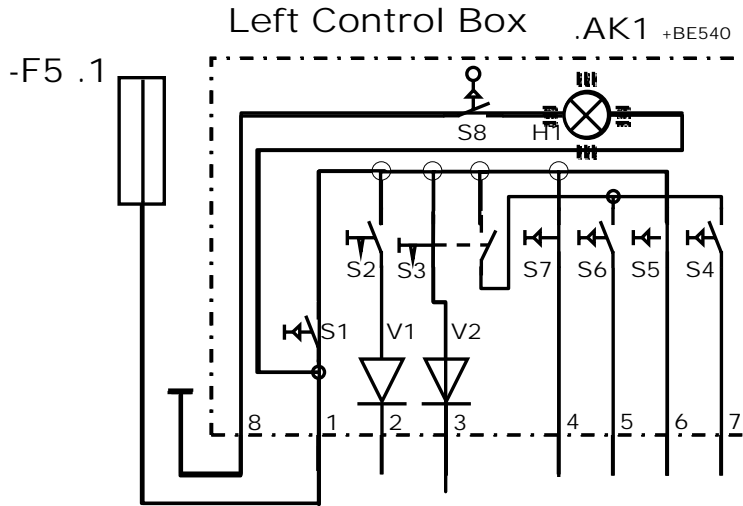
- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

GMK Outrigger Circuit  
Schem. 3008087 Pg. 4



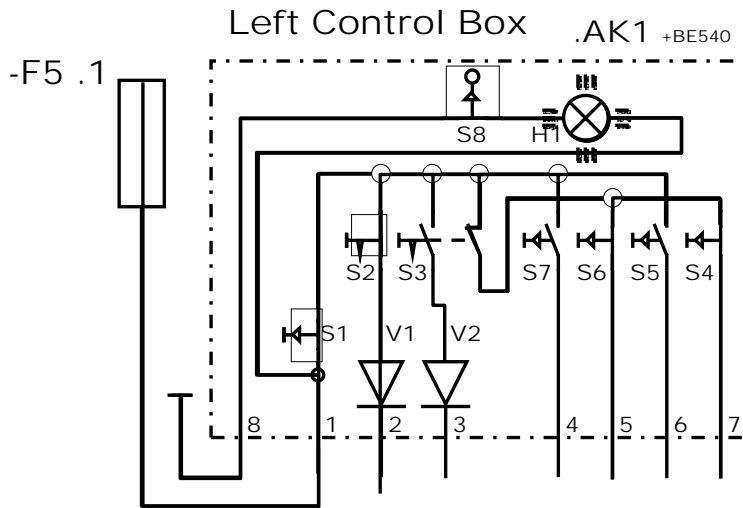
- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

GMK Outrigger Circuit  
Schem. 3008087 Pg. 4



- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

**GMK Outrigger Circuit**  
Schem. 3008087 Pg. 4

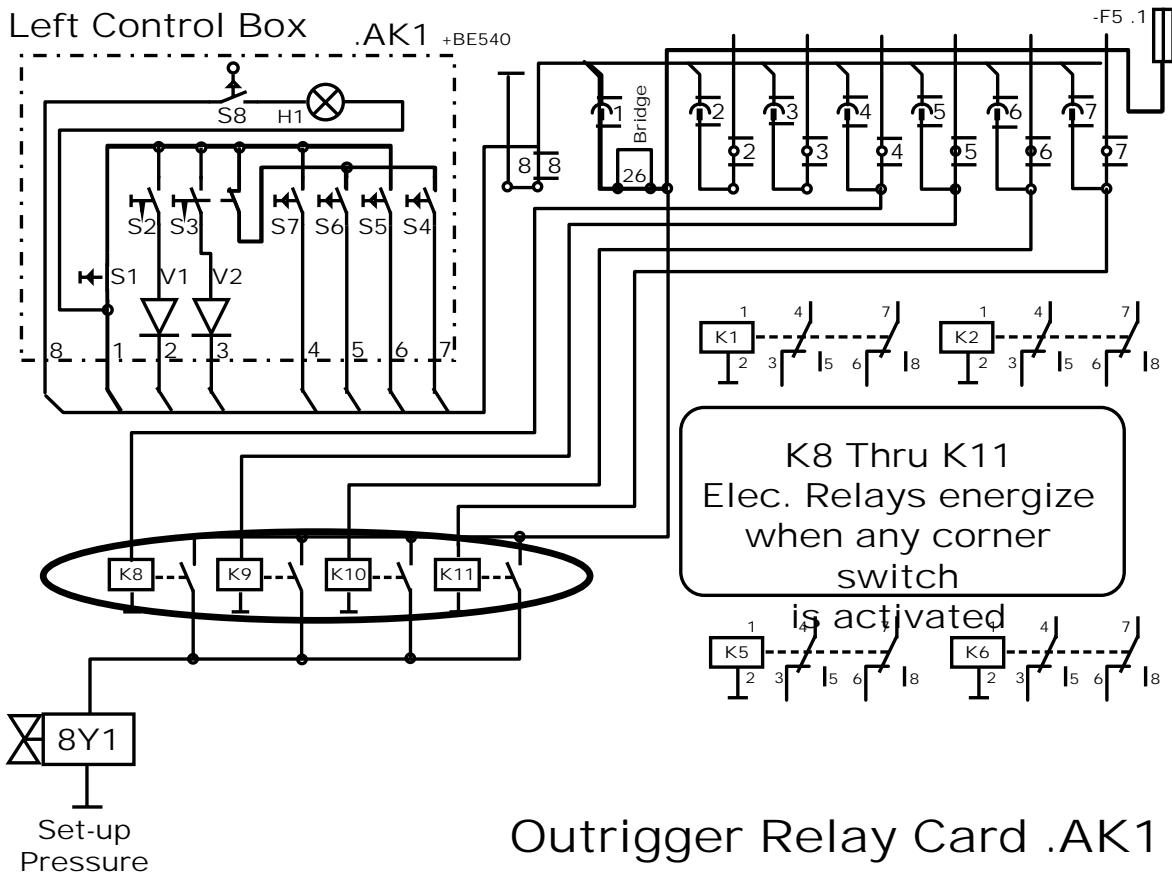
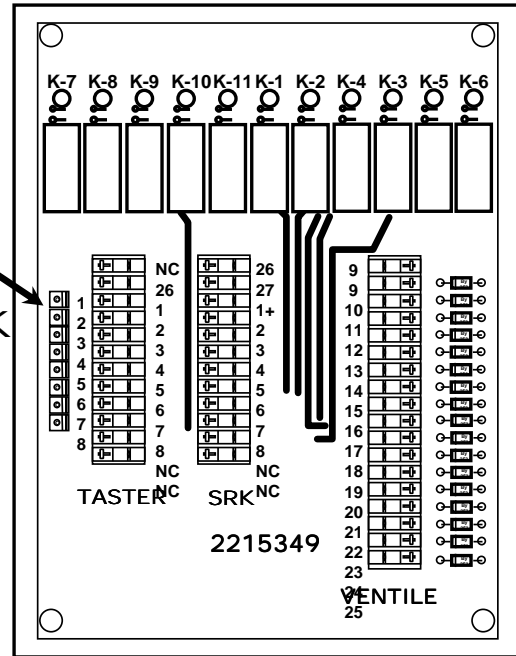


- |                                   |                 |
|-----------------------------------|-----------------|
| S1 Powerswitch                    | S6 Front Right  |
| S2 Out $\diagup$ In $\text{—}$    | S7 Front Left   |
| S3 Jack $\diagup$ Beam $\text{—}$ | S8 Illumination |
| S4 Rear Right                     |                 |
| S5 Rear Left                      |                 |

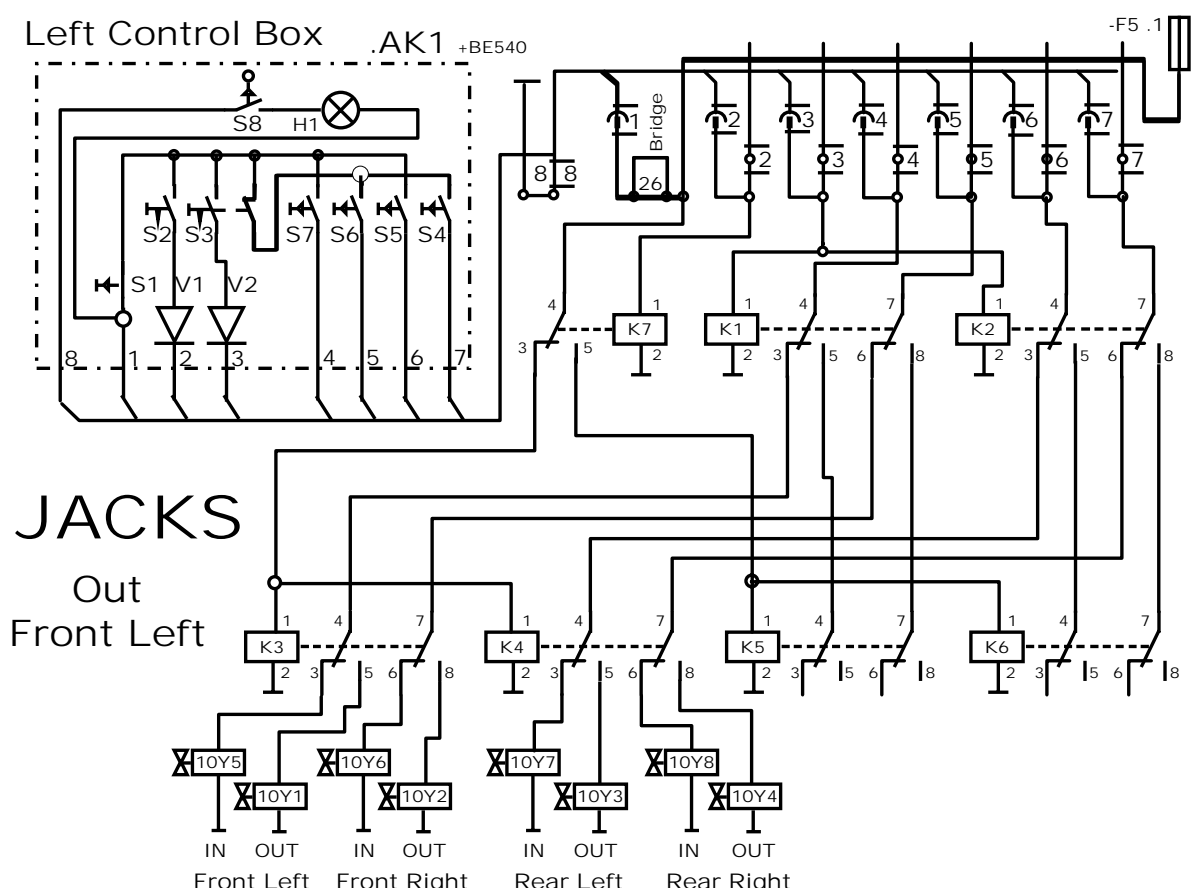
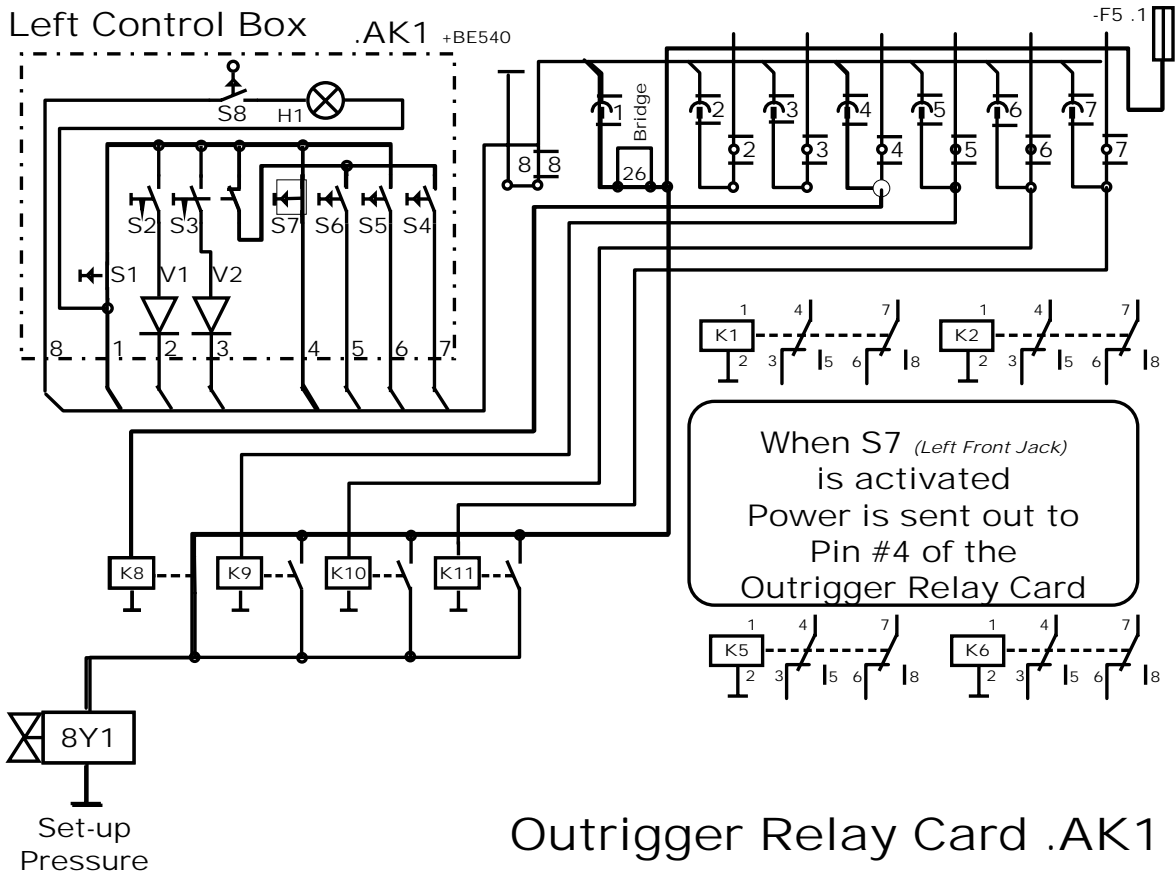
**GMK Outrigger Circuit**  
Schem. 3008087 Pg. 4

# Outrigger Control Relay Card:

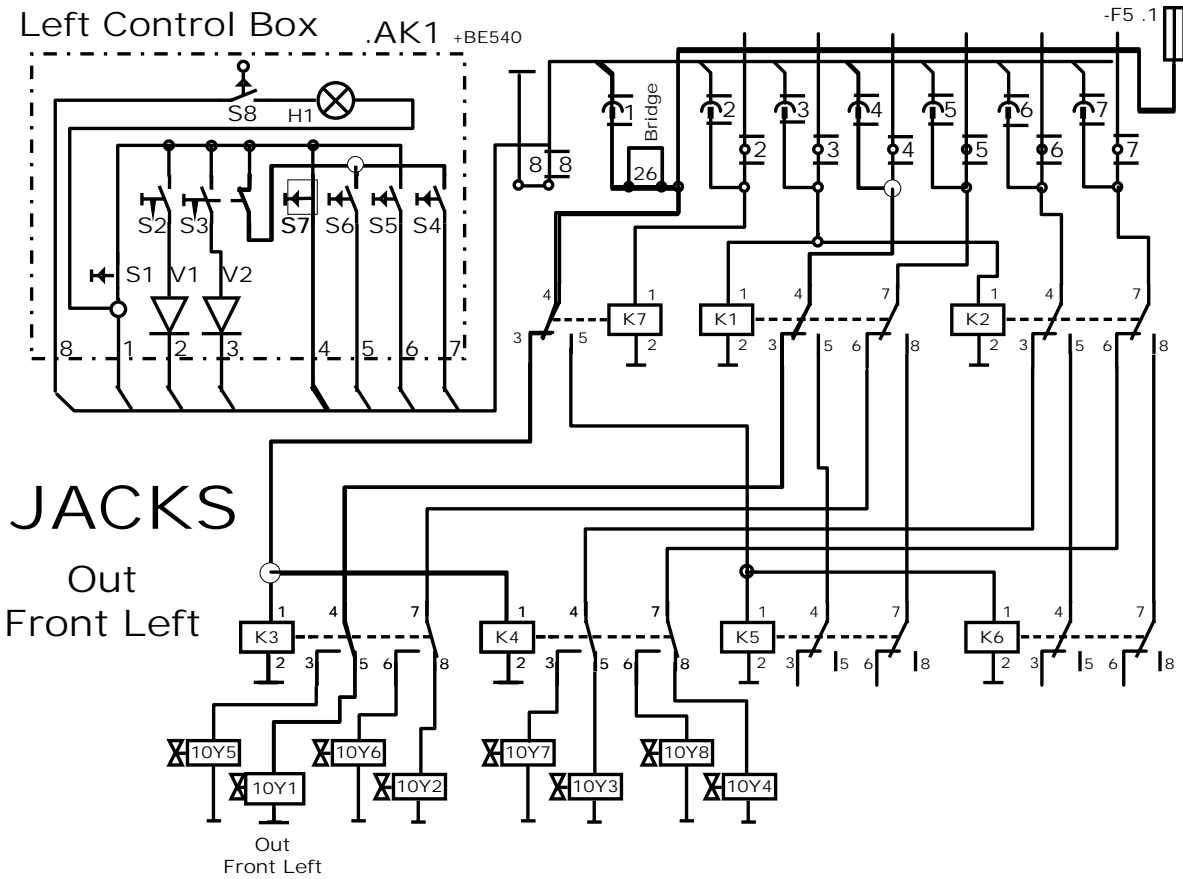
- Board Relay LEDs
- Relay Modules
- INTERN Wire Block (Quick Disconnect)
- TASTER Wire Block (Push Buttons)
- SRK Wire Block (Sliprings, used on 4080 S/S)
- VENTILE Wire Block (Quick Disconnect)
- Diodes (Arch Suppression)



Outrigger Relay Card .AK1





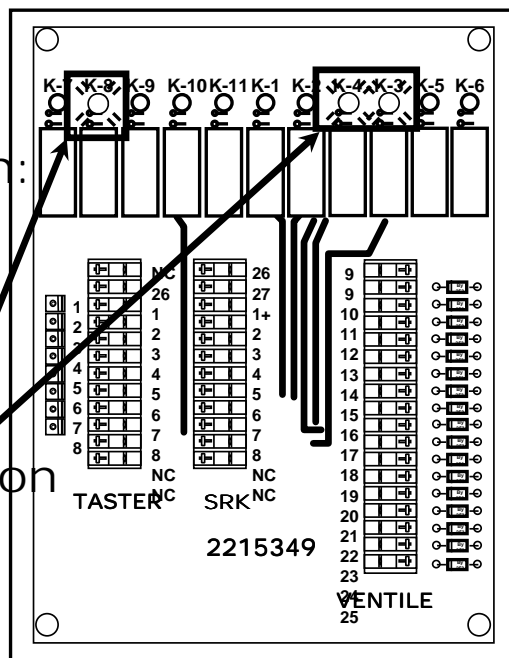


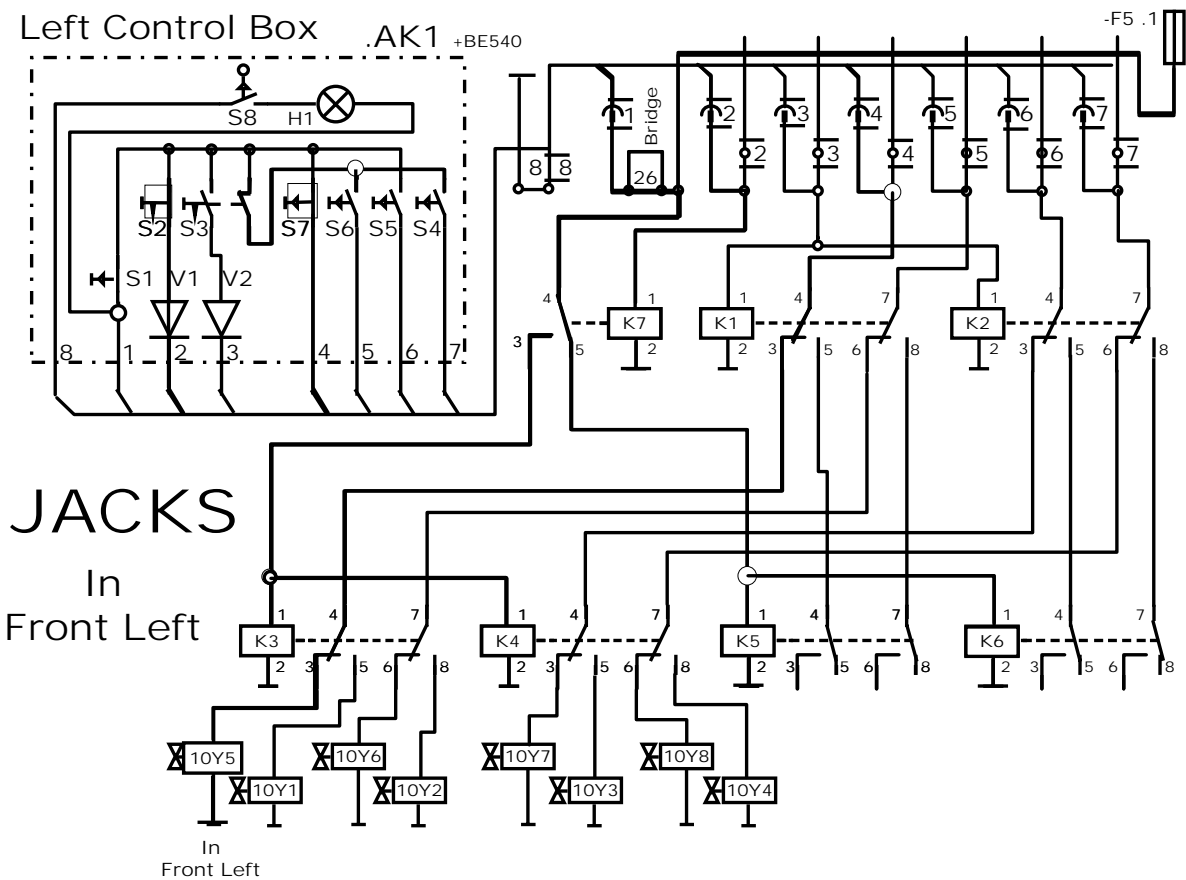
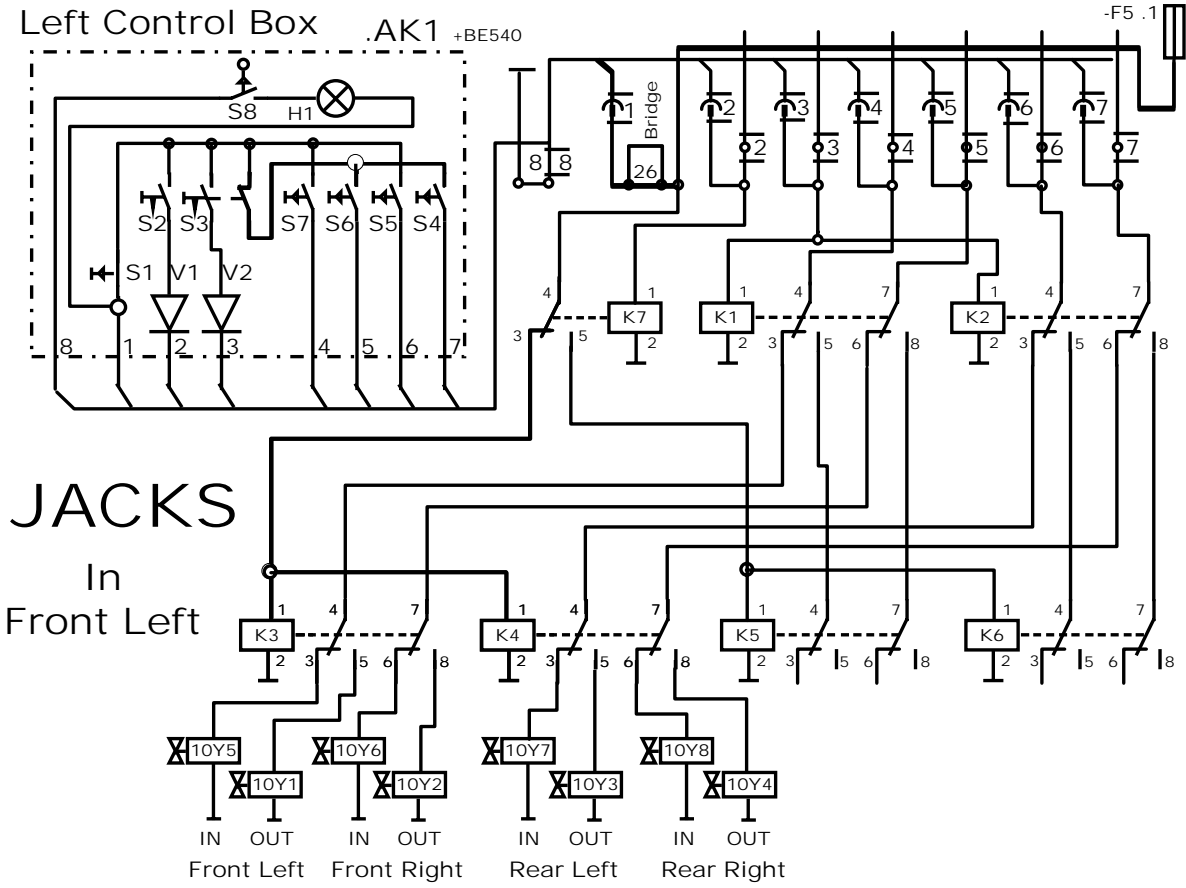
### LED Illumination:

For the previous outrigger configuration:

### Front Left Jack Out/Extend

K8, K3 & K4 LED's are on



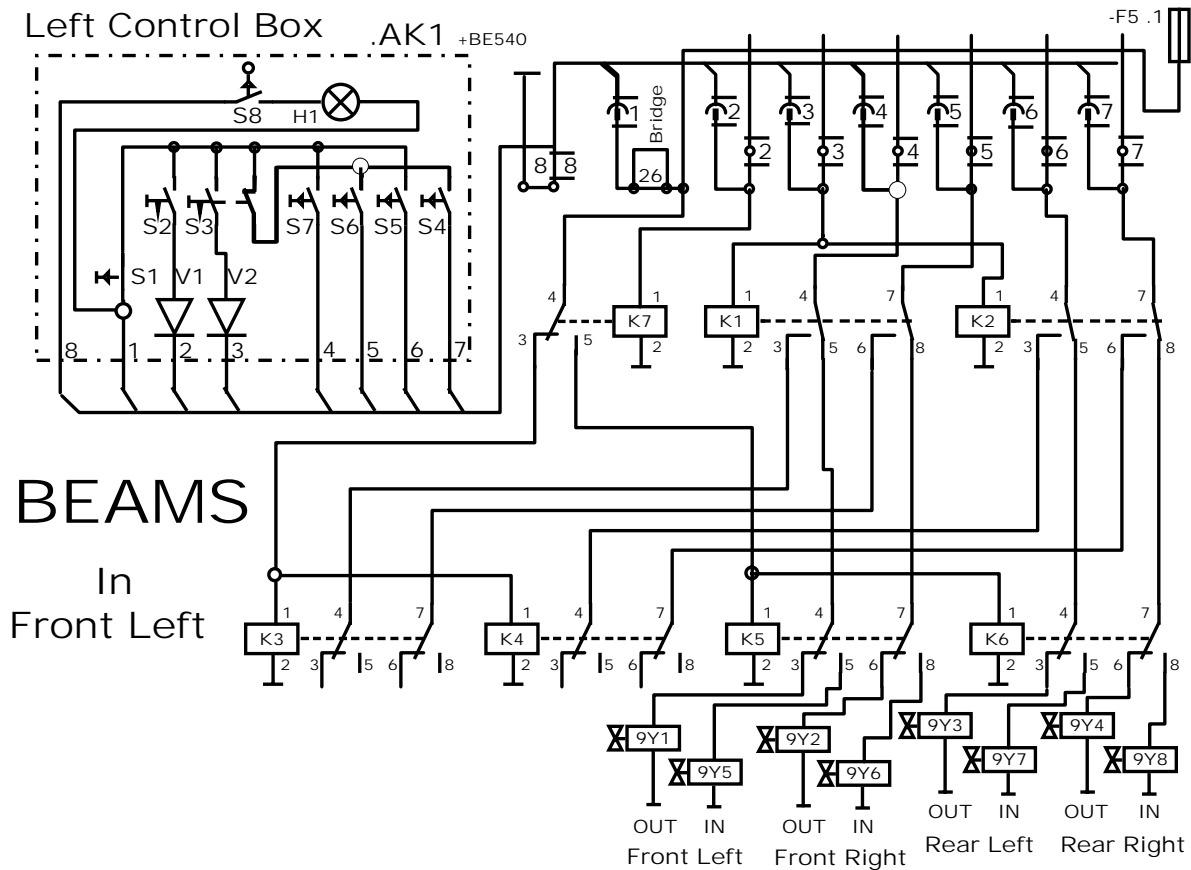
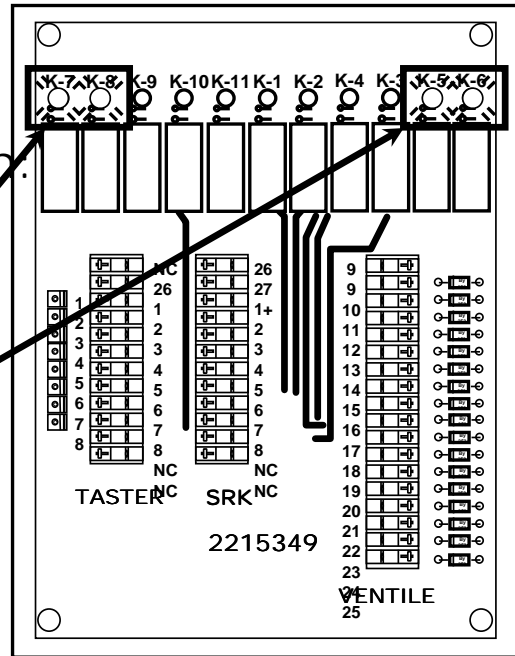


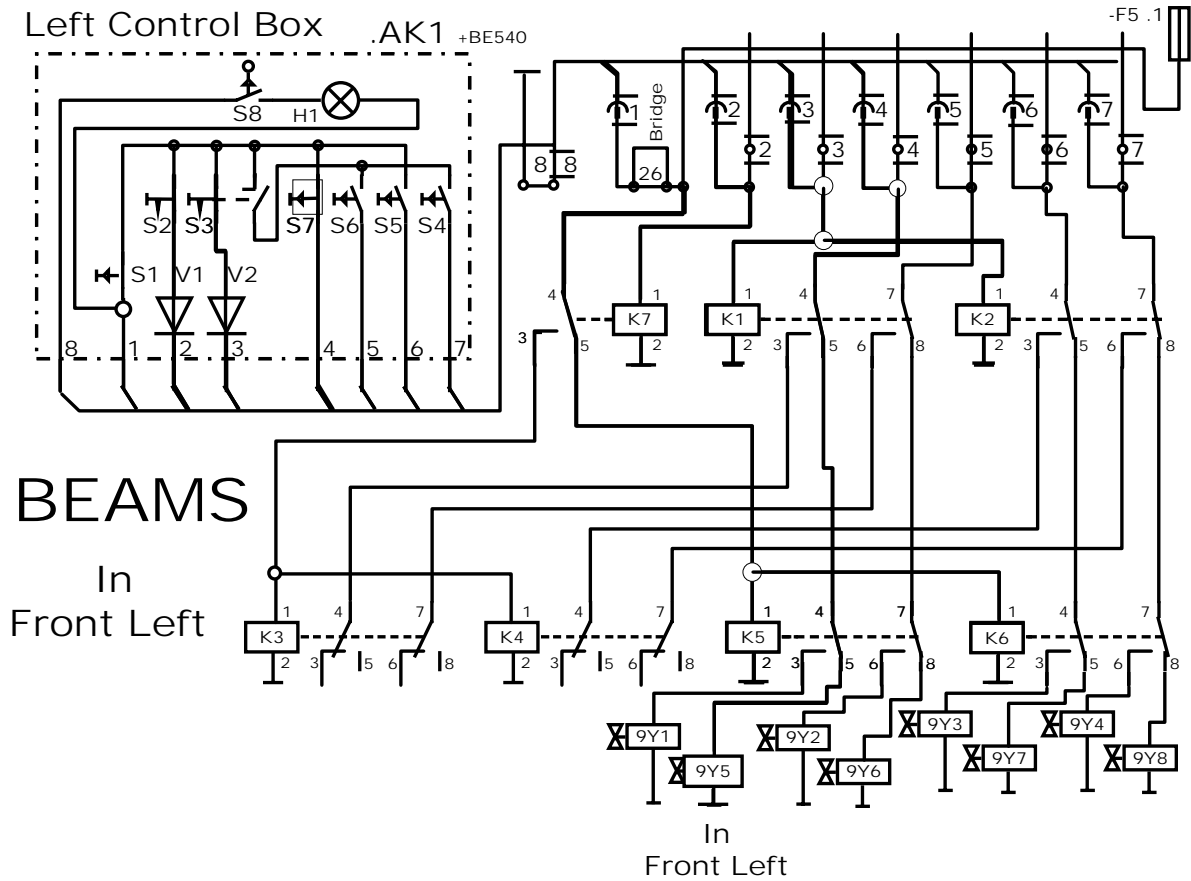
# LED Illumination:

For the previous outrigger configuration.

## Front Left Jack In/Retract

K8, K7, K5 & K6 LED's are on



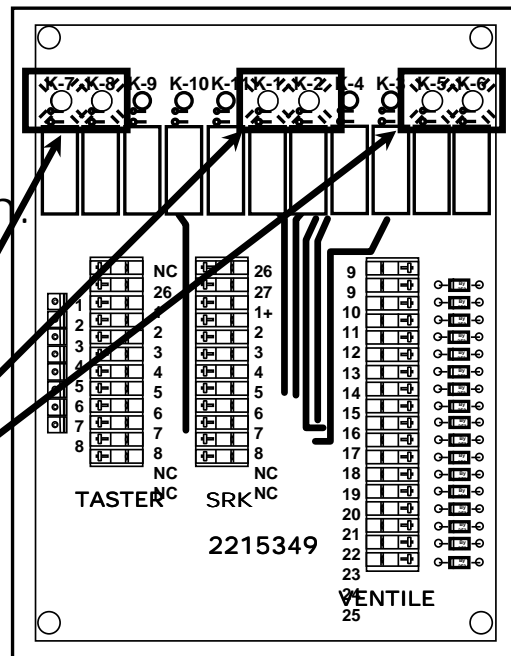


## LED Illumination:

For the previous outrigger configuration.

### Front Left Beam In/Retract

K8, K7, K5, K6, K1 & K2 LED's are on



# GMK 5130 Outrigger Control Truthtable

	Function	Out/Extend or In/Retract	Valves Energized	Control Box Switches	-8Y1 Valve Relay	Relays Energized
1	Front left Jack	In/Retract				
2		Out/Extend				
3	Front right Jack	In/Retract				
4		Out/Extend				
5	Rear left Jack	In/Retract				
6		Out/Extend				
7	Rear right Jack	In/Retract				
8		Out/Extend				
9	Front left Beam	Out/Extend				
10		In/Retract				
11	Front right Beam	Out/Extend				
12		In/Retract				
13	Rear left Beam	Out/Extend				
14		In/Retract				
15	Rear right Beam	Out/Extend				
16		In/Retract				



# *Section 8*





# **GMK I**

## ***Superstructure Operation***

**GROVE**  
TRAINING INSTITUTE



## **GMK 5130 Superstructure Cab**

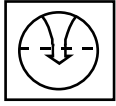


**Superstructure  
Control Panel**

**EKS3  
&  
Engine Controls**

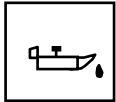
# Superstructure Instrument Switches & Lights

## Crane engine



### Indicator lamp for crane engine air filter

Illuminates when the air filter is dirty.  
Change the filter element.



### Warning lamp for crane engine oil pressure

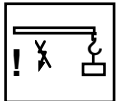
Illuminates if the oil pressure is too low.

## Main hoist



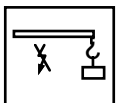
### Rocker switch for main hoist shutdown (right hand armrest)

Shuts off the main hoist to prevent inadvertent operation.  
Deactivate main hoist: Press rocker switch down.  
Activate main hoist: Press rocker switch up.



### SLI early warning lamps

Illuminates when 100% of the permissible load has been reached. An intermittent buzzer tone sounds at the same time.



### Warning lamps for SLI shutdown

Illuminates if the SLI has shut down crane movements which increases the load moment because the maximum load has been reached or an error message has been received. A continuous buzzer tone sounds at the same time.



### Warning lamp for lifting limit switch shutdown

Illuminates when shutdown of the hoisting gear is triggered by the lifting limit switch. A continuous buzzer tone sounds. The SLI displays no error messages.

## Auxiliary hoist

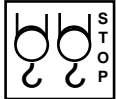


### Rocker switch for auxiliary hoist shutdown (left hand armrest)

Shuts off the auxiliary hoist to prevent inadvertent operation.

Deactivate auxiliary hoist: Press rocker switch down.

Activate auxiliary hoist: Press rocker switch up.



### Rocker switch for two-hook operation shutdown (left hand armrest)

Both hoists may be operated at the same time with different speeds and in different directions during two-hook operation.

Deactivate two-hook operation: Press rocker switch down.

Activate two-hook operation: Press rocker switch up.

## Slewing gear



### Rocker switch for slewing gear permanent brake (left hand armrest)

Closes the slewing gear permanent brake when the crane engine is running and secures the left control lever for slewing crane movement against unintentional activation.

Close the slewing gear permanent brake: Press rocker switch down.

Open the slewing gear permanent brake: Press rocker switch up.



### Indicator lamp for slewing gear permanent brake (left hand armrest)

Illuminates when the slewing gear permanent brake is closed.

## Derricking gear

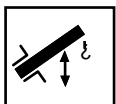


### Rocker switch for preselection of derricking gear / telescoping gear control lever function (right hand armrest)

Switches the control lever function from derricking gear to telescoping gear and vice versa.

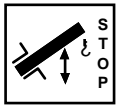
Derricking control lever function: Press rocker switch down.

Telescoping control lever function: Press rocker switch up.



### Indicator lamp for right-hand control lever in derricking function (right hand armrest)

Illuminates when the *Derricking gear* control lever function is selected.



### Rocker switch for derricking gear shutdown system (right hand armrest)

For deactivating the *Derricking* function to prevent inadvertent activation.

## Telescoping gear

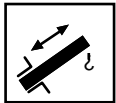


### Rocker switch for preselection of derricking gear / telescoping gear control lever function (right hand armrest)

Switches the control lever function from derricking gear to telescoping gear and vice versa.

Telescoping control lever function: Press rocker switch up.

Derricking control lever function: Press rocker switch down.



### Indicator lamp for right-hand control lever in telescoping function (right hand armrest)

Illuminates when the *Telescoping gear* control lever function is selected.

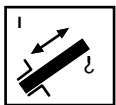


### Rocker switch for telescoping preselection, telescope sections I or II/III (right hand armrest)

Switches control lever function between telescope section I and telescope sections II / III.

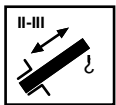
Extend telescope section I: Press rocker switch up.

Extend telescope sections II and III: Press rocker switch down.



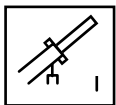
### Indicator lamp for telescoping section I (right hand armrest)

Illuminates when the *Telescoping section I* control lever function is selected.



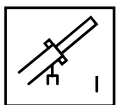
### Indicator lamp for telescoping section II/III (right hand armrest)

Illuminates when the *Telescoping section II/III* control lever function is selected.



### Indicator lamp for telescoping section I basic section not locked

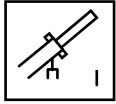
Illuminates when the *Telescoping section II/III* control lever function is selected.



### Indicator lamp for telescoping section I basic section not locked

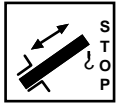
The red indicator lamp illuminates when telescope section I is not locked to the basic section of the boom.

It flashes if the pin is moved for locking or unlocking.



## Rocker switch for telescope section I / basic section locking system

To lock telescope section I: Press rocker switch up  
To unlock telescope section I: Press rocker switch down

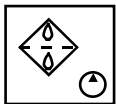


## Rocker switch for telescoping gear shutdown (right hand rest)

For deactivating the Telescoping function to prevent inadvertent activation.

## Hydraulic system

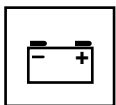
*The hydraulic oil temperature should not exceed 70°C (158°F) while working with crane. See associated gauge for results.*



## Warning lamp for hydraulic oil filter

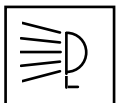
Illuminates if both the filters are dirty. CHANGE the filter elements.

## Electronics



## Warning lamp for charge indicator

Illuminates if the ignition is switched on and the vehicle engine is switched off.  
Goes out after the vehicle engine is started.

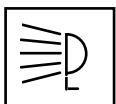


## Rocker switch for socket for spotlight

(middle and right-hand rocker switch)

The two sockets in front of the crane cab for the *Crane cab working spotlights* are standard components. The working spotlights are used to illuminate the working area in front of the crane cab.

Activate working spotlights: Press rocker switch down.  
Deactivate working spotlights: Press rocker switch up.



## Rocker switch for hoist rope control spotlight (additional equipment)

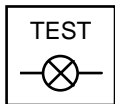
(Left-hand rocker switch)

A spotlight can be connected as additional equipment for illuminating the rope drum. This enables the orderly reeling in of the hoist rope even when its dark.

Activate spotlights: Press rocker switch down.  
Deactivate spotlights: Press rocker switch up.

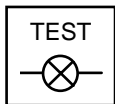
## Other operating instruments

### Lamp test



Briefly press down the Lamp test and SLI displays dimmer rocker switch. All displays, warning and indicator lamps illuminate for approx. 2 seconds with maximum brightness, then with automatically adjusted brightness.

### Dimmer for SLI displays



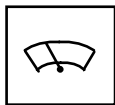
To switch on the *SLI displays dimmer* function briefly press up the *Lamp test and SLI displays dimmer* rocker switch.

To adjust the brightness of the SLI displays briefly press the rocker switch up or down again:

SLI display brighter: Press rocker switch up.

SLI display darker: Press rocker switch down.

### Rocker switch for windscreen wiper

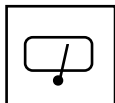


Used to activate the windscreen wiper on the crane cab.

Activate: Press rocker switch down

Deactivate: Presss rocker switch up

### Rocker switch for roof window wiper

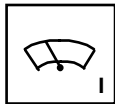


Used to activate the roof window wiper on the crane cab.

Activate: Press rocker switch down

Deactivate: Presss rocker switch up

### Rocker switch for intermittent wiper operation, windscreen and roof window

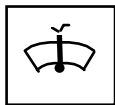


Used to activate the intermittent wiper function for the windscreen and roof window.

Activate: Press rocker switch down

Deactivate: Presss rocker switch up

### Rocker switch for windscreen wiper / washing system



Used to activate the wiper / washing function on the windscreen of the crane cab.

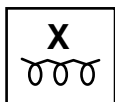
Activates the water pump and the windscreen wiper several times.

Activate: Press rocker switch down

Deactivate: Presss rocker switch up

## Crane cab heating system

### Rocker switch with indicator lamp for additional heating (additional equipment)



Activate: Press rocker switch down.

Deactivate: Press rocker switch up.

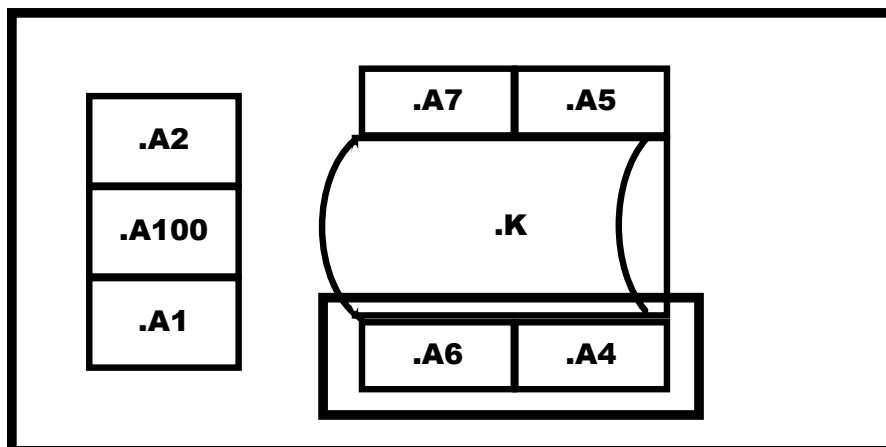
# GMK 5130 Superstructure Cab

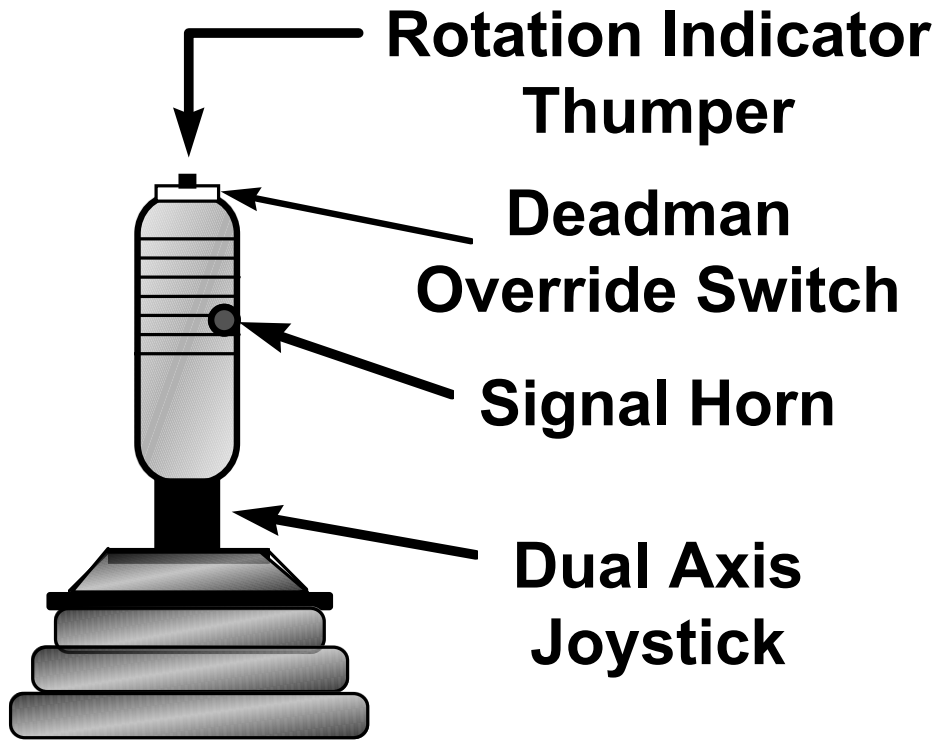
**Fuse Panel  
Rapid Motion  
(foot switch)**



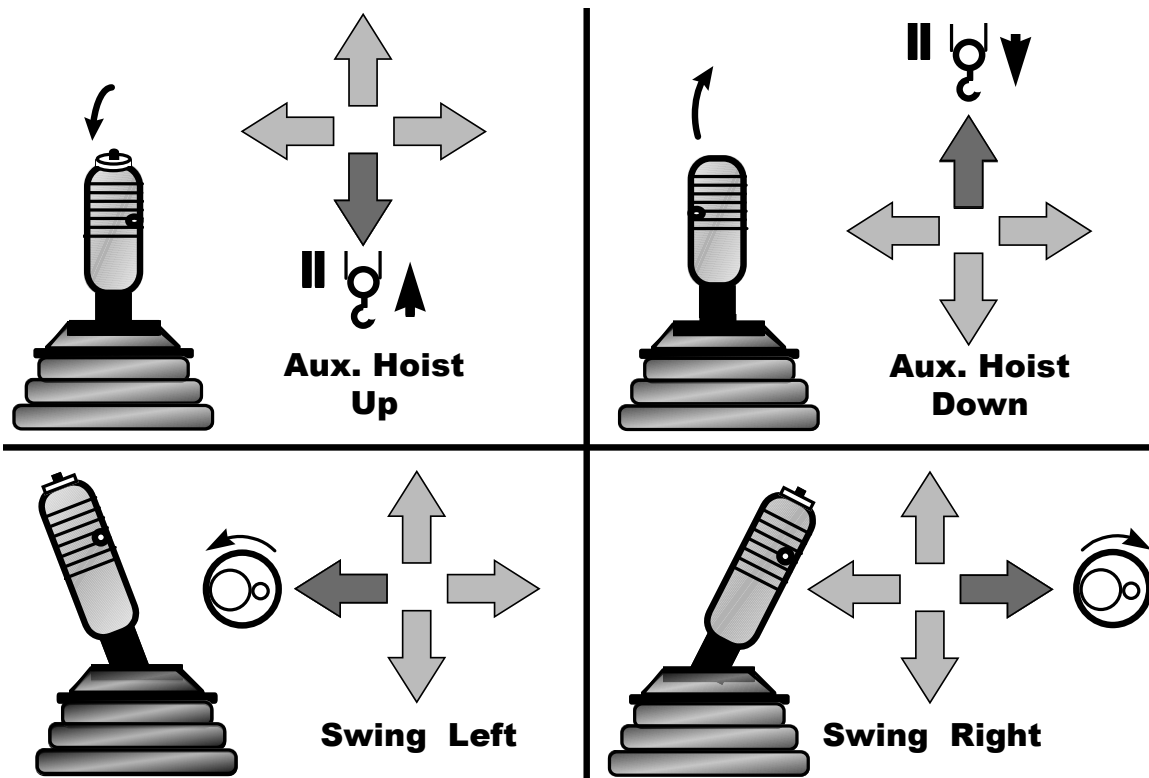
## GMK 5130

### **Left Armrest Controls**



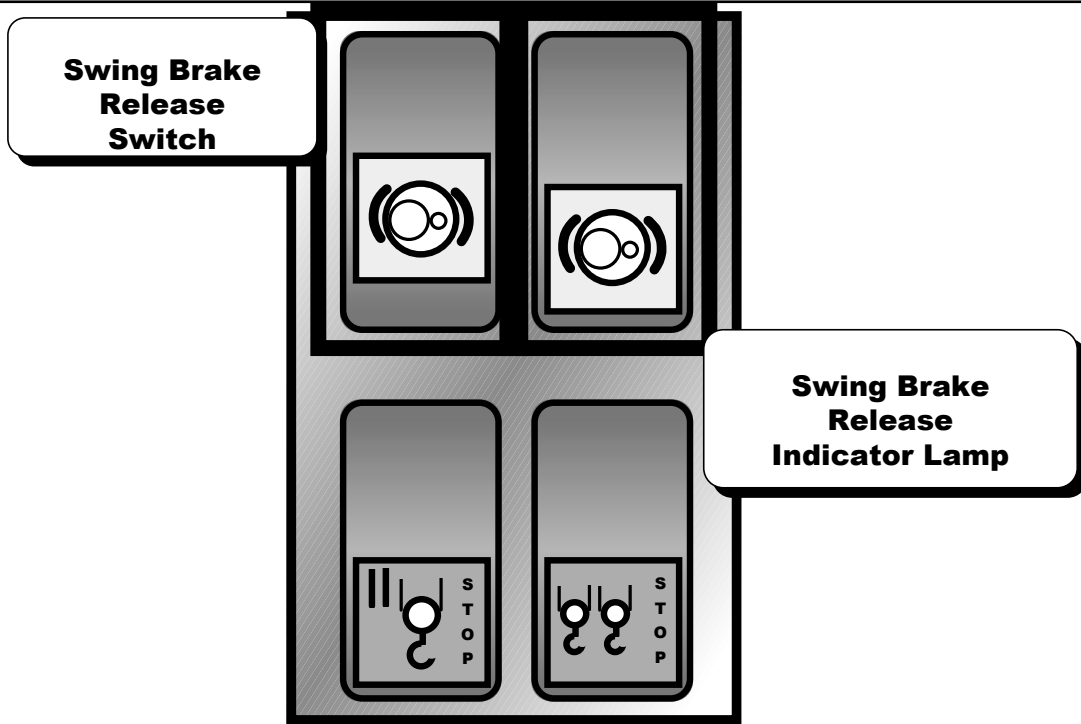


### Left Armrest Controller

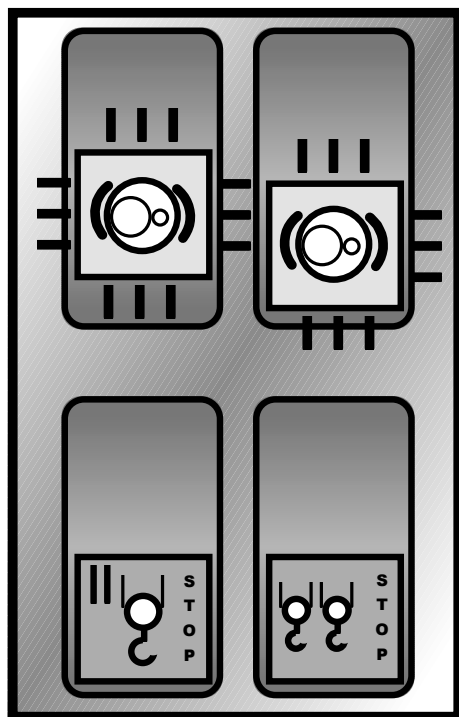


### Left Armrest Controller



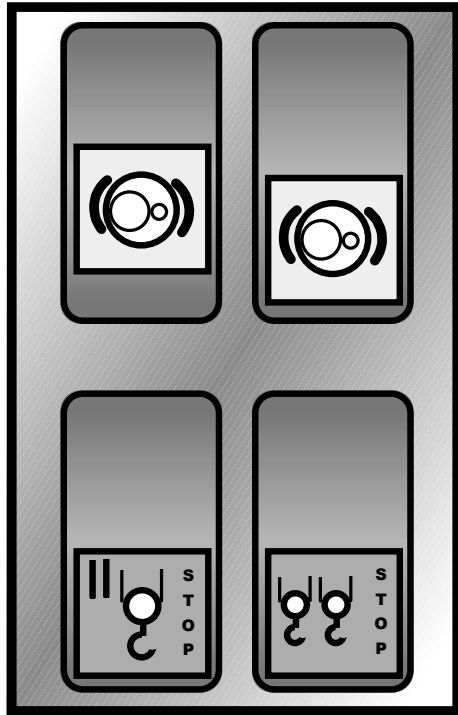


## GMK 5130 Left Armrest Switches



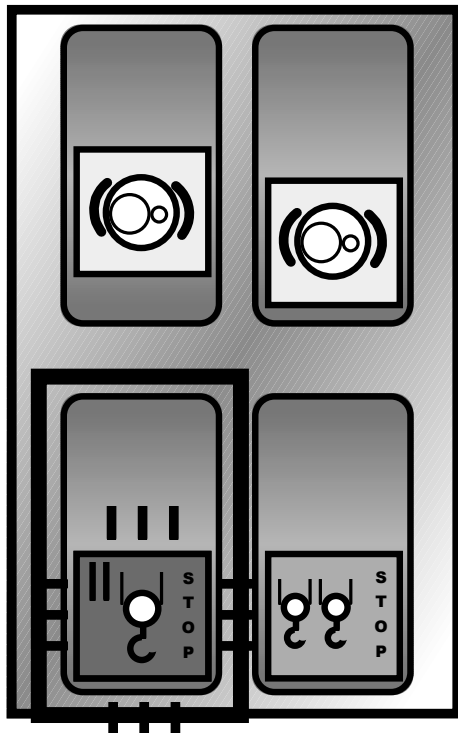
**Swing Brake Applied**

## GMK 5130 Left Armrest Switches



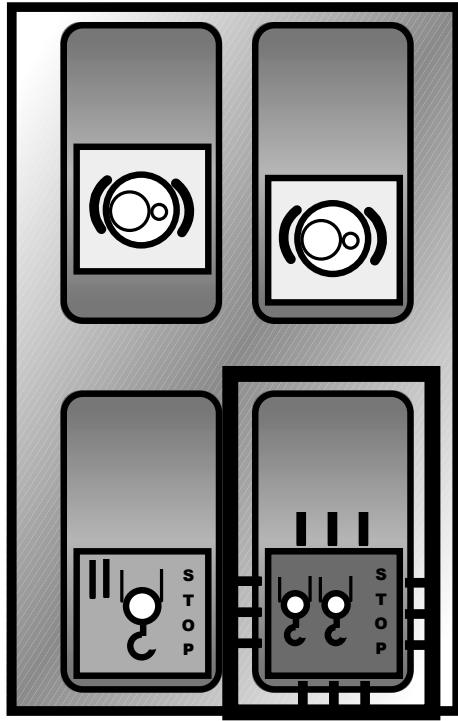
**Swing Brake Released**

**GMK 5130 Left Armrest Switches**



**Aux. Hoist Shut Down**

**GMK 5130 Left Armrest Switches**



**Two Hook  
Operation  
Deactivated**

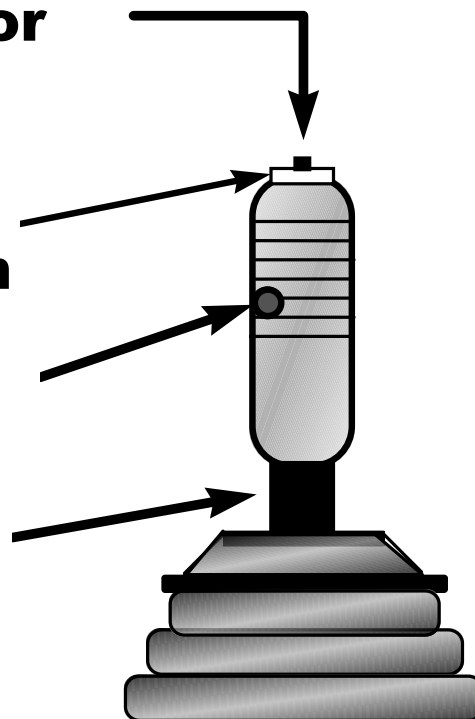
**GMK 5130 Left Armrest Switches**

**Rotation Indicator  
Thumper**

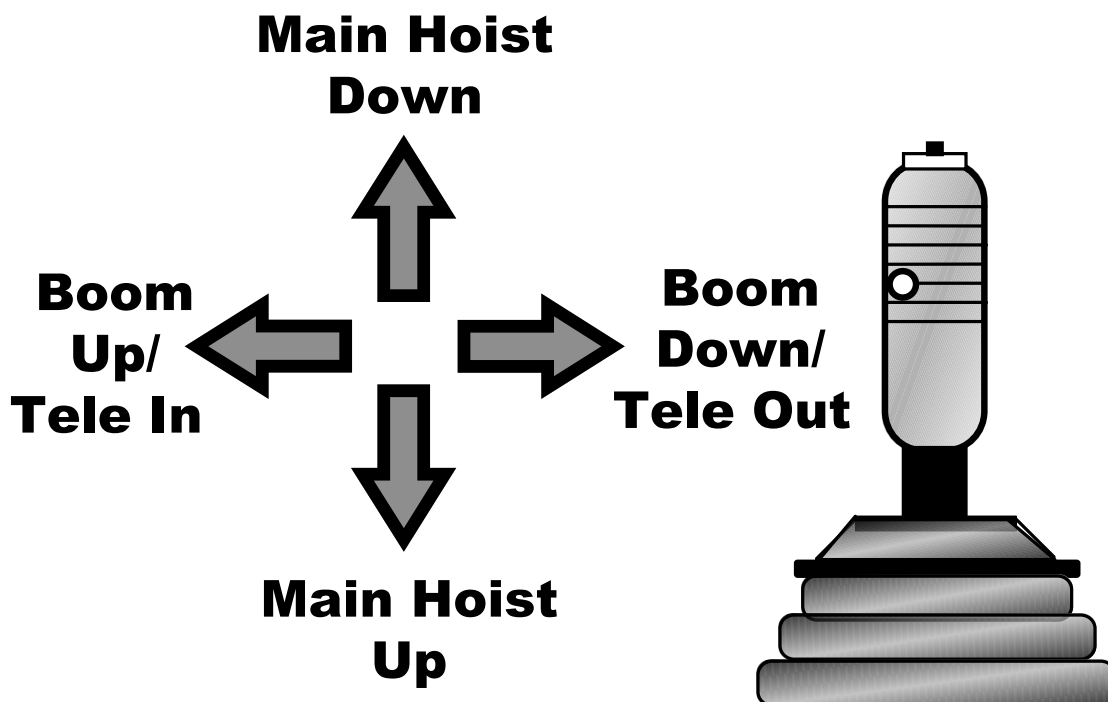
**Deadman  
Override Switch**

**Signal Horn**

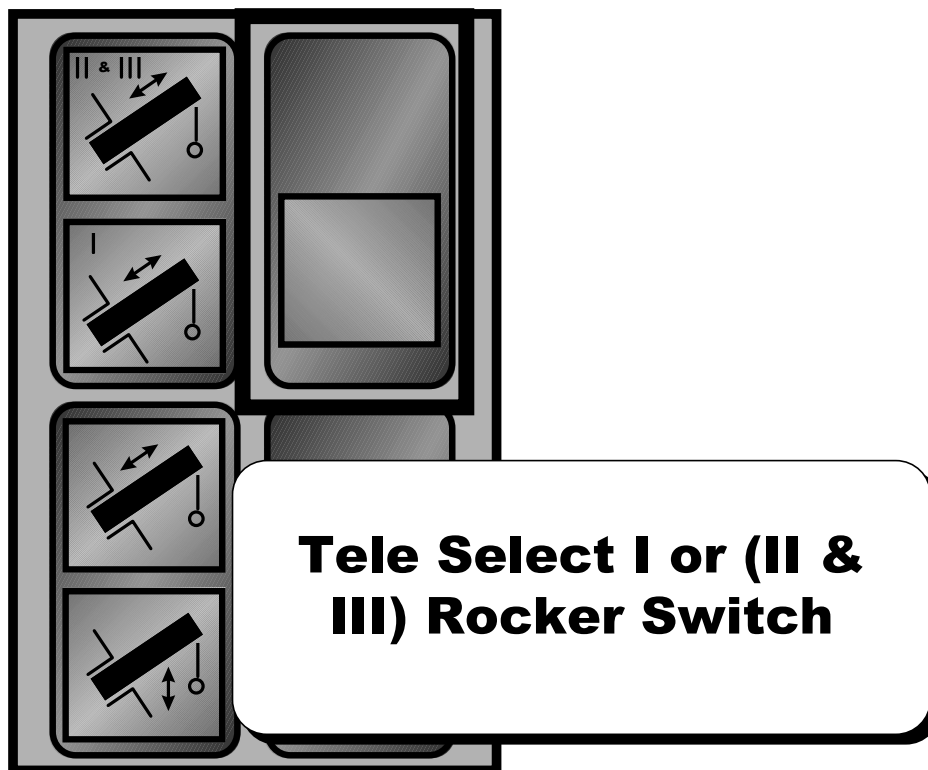
**Dual Axis  
Joystick**



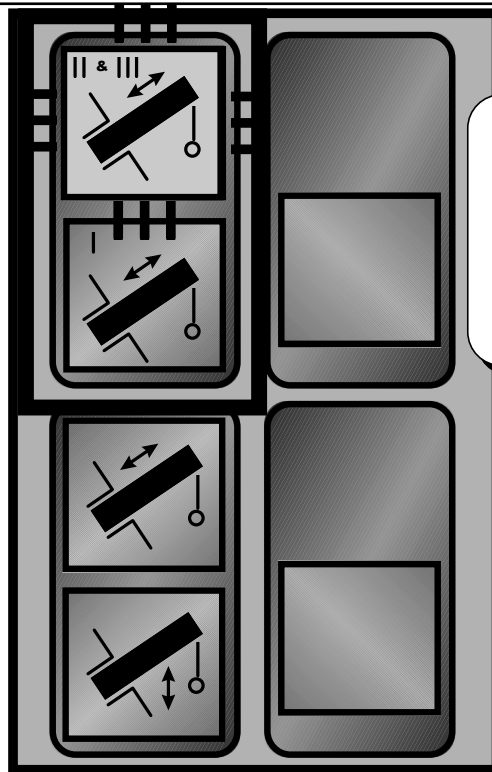
**Right Armrest Controller**



## Right Armrest Controller

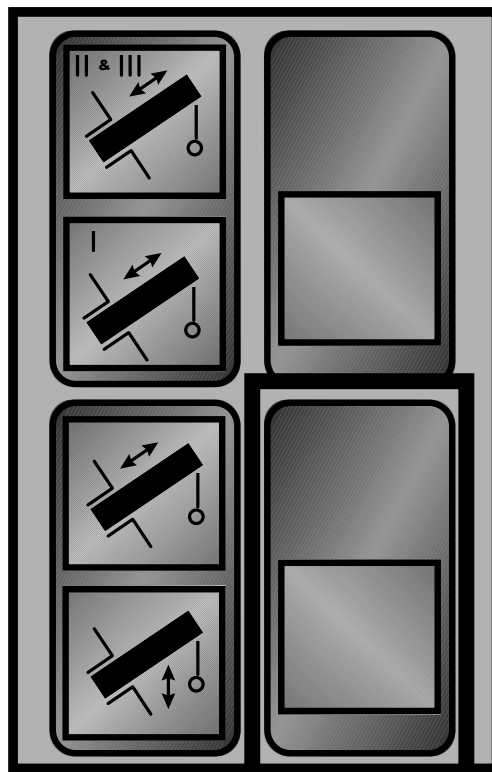


## GMK 5130 Right Armrest Switches



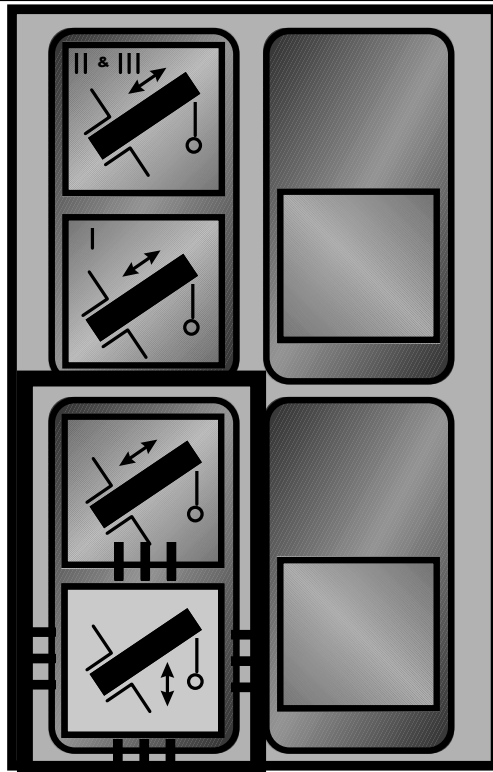
**Tele Select I or (II & III) Indicator Lamps**

**GMK 5130 Right Armrest Switches**



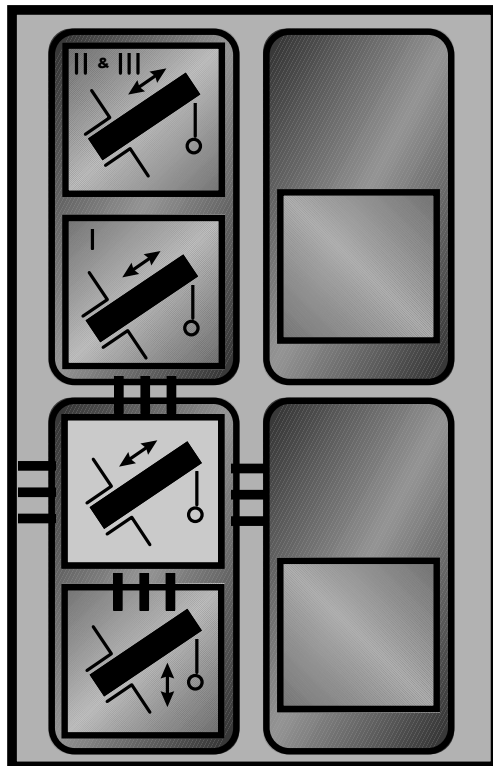
**Select  
Tele / Lift**

**GMK 5130 Right Armrest Switches**



## Select Lift

**GMK 5130 Right Armrest Switches**



## Select Tele

**GMK 5130 Right Armrest Switches**

# *Section 9*



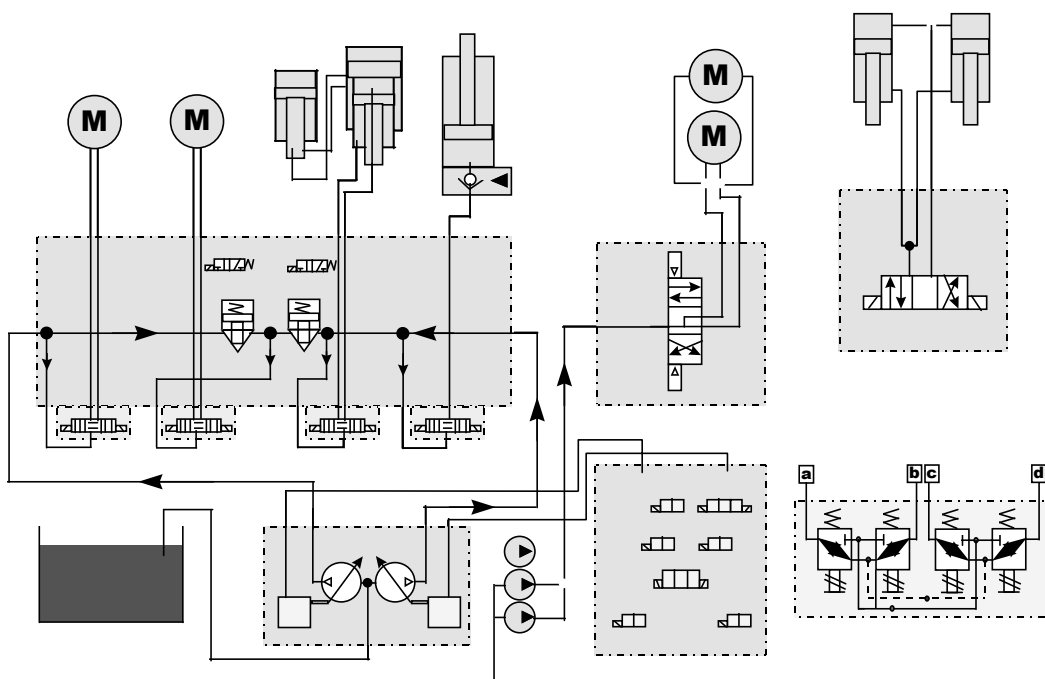


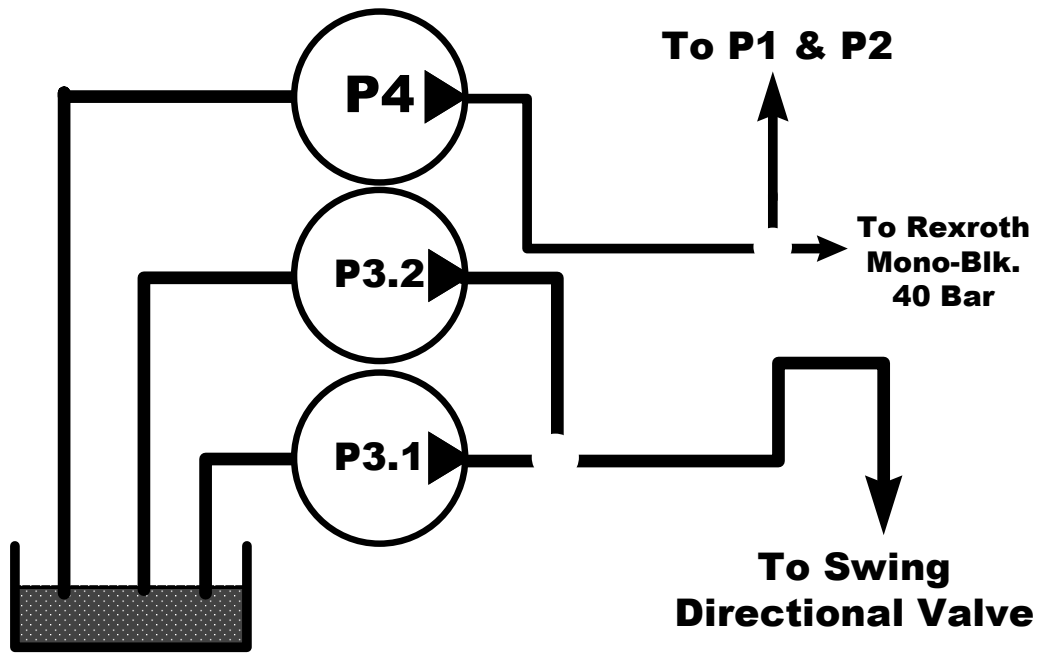
# GMK I

## *Superstructure Hydraulic*

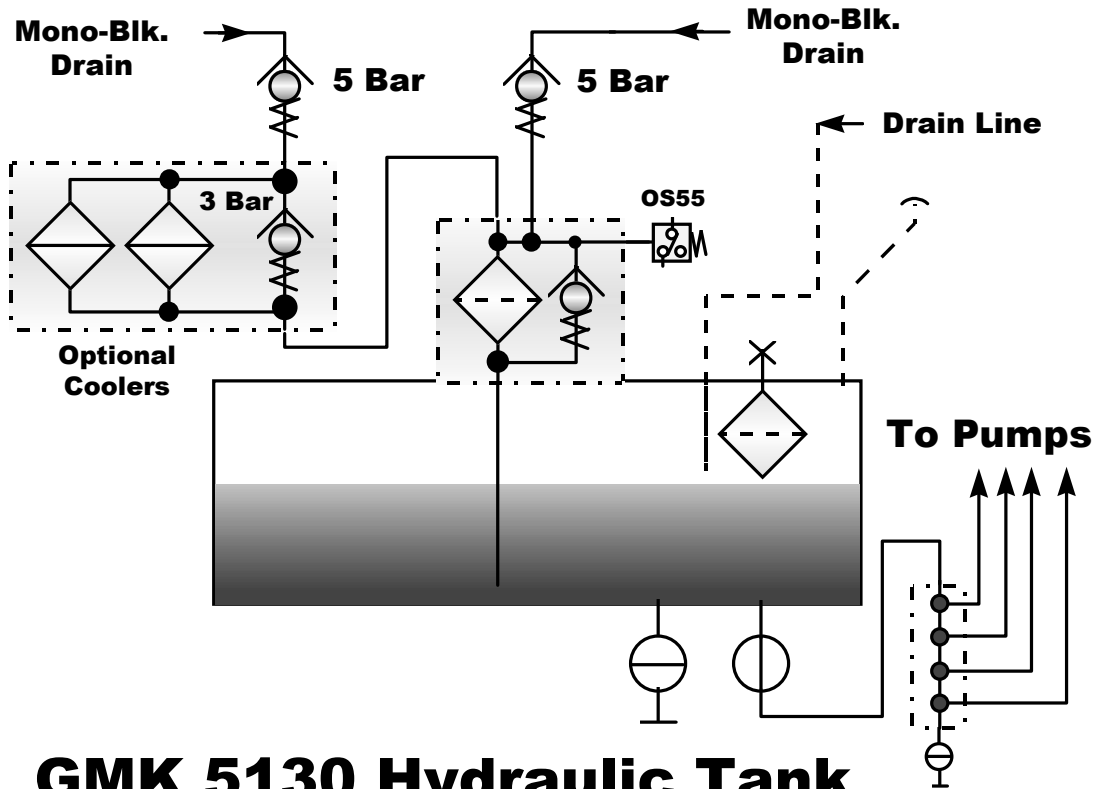
**GROVE**  
TRAINING INSTITUTE

### GMK 5130 S/S Hydraulics



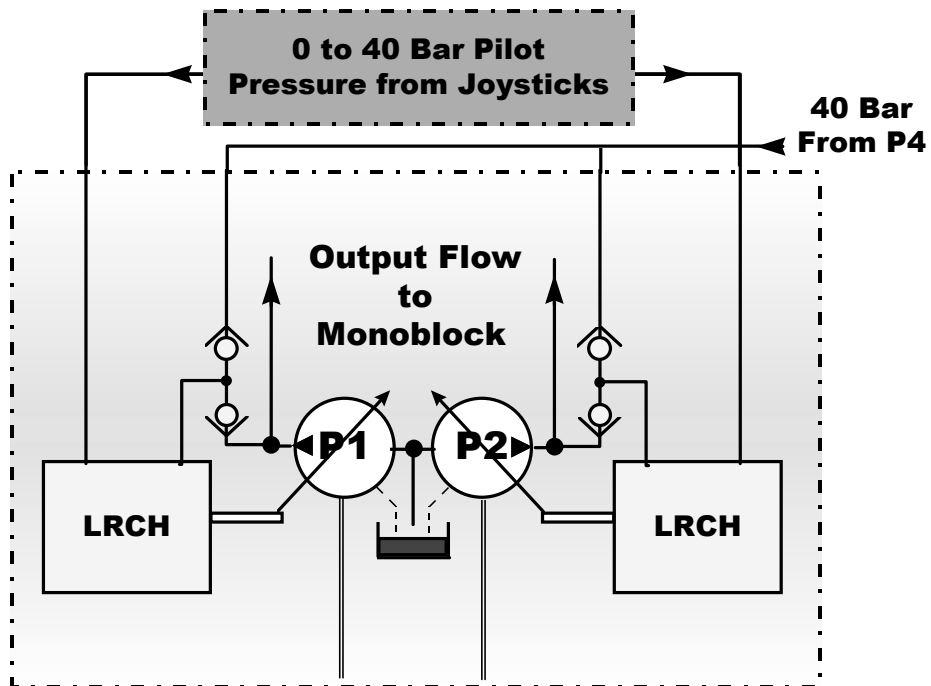
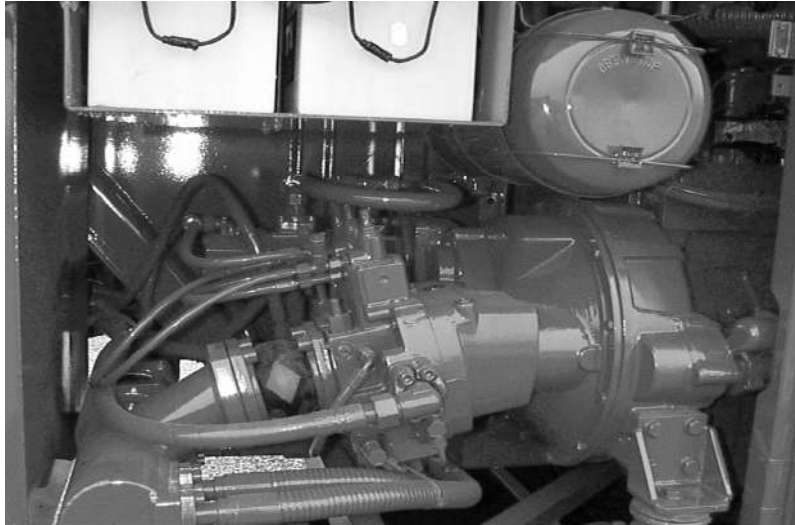


**GMK 5130 Gear Pumps**



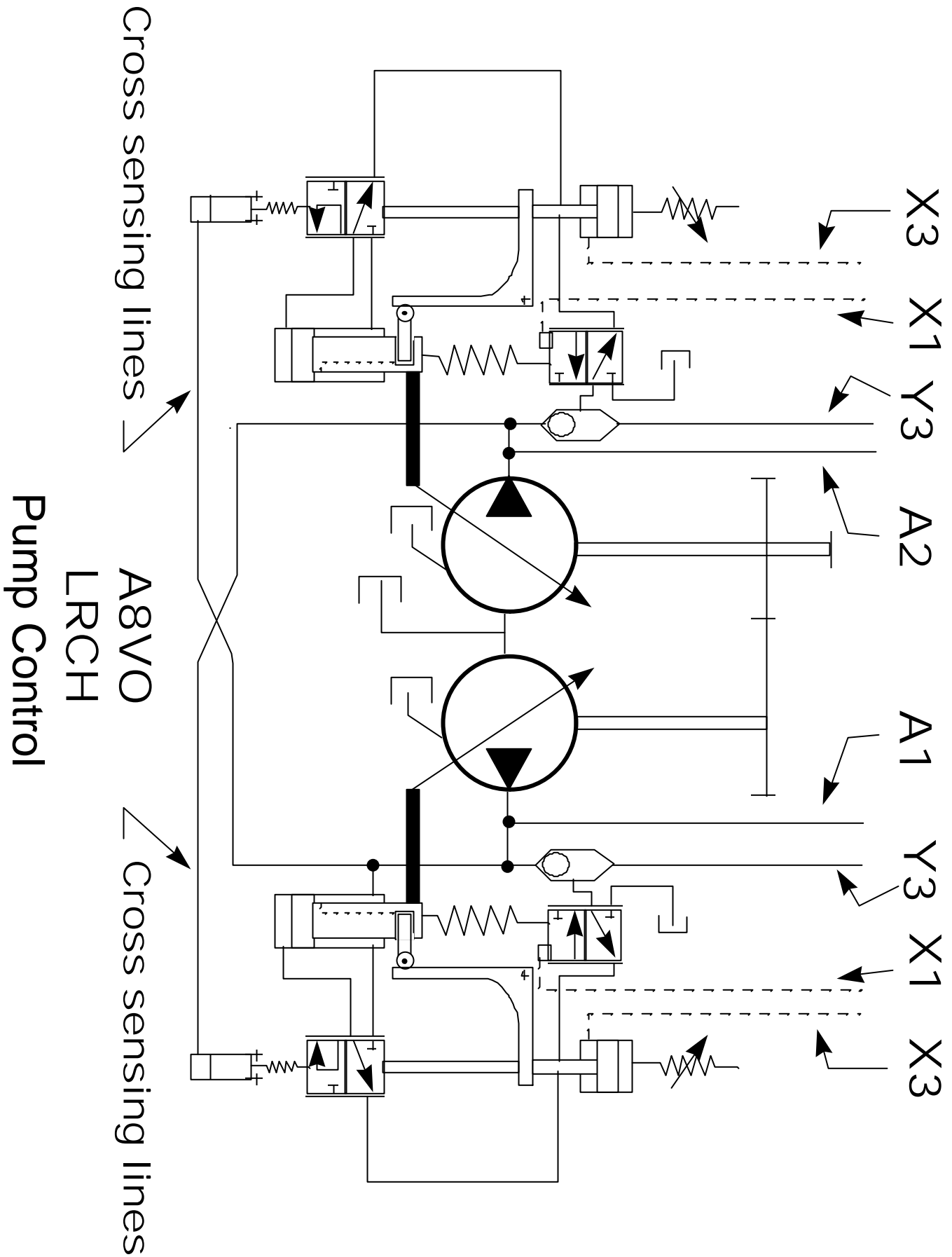
**GMK 5130 Hydraulic Tank**

## Main Pumps GMK 5130 (superstructure)

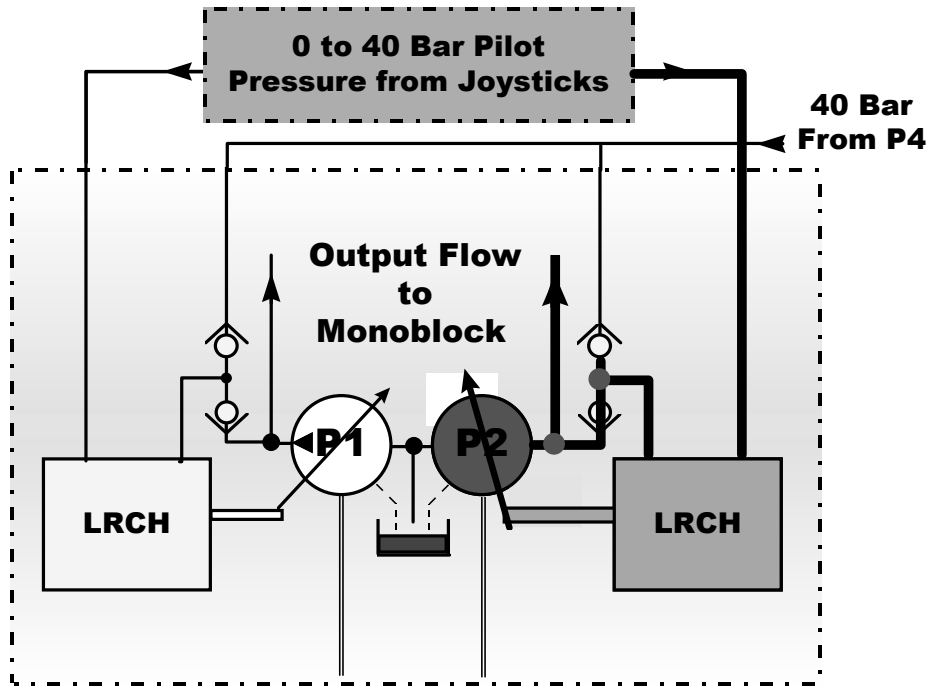


### GMK 5130 Rexroth Pumps

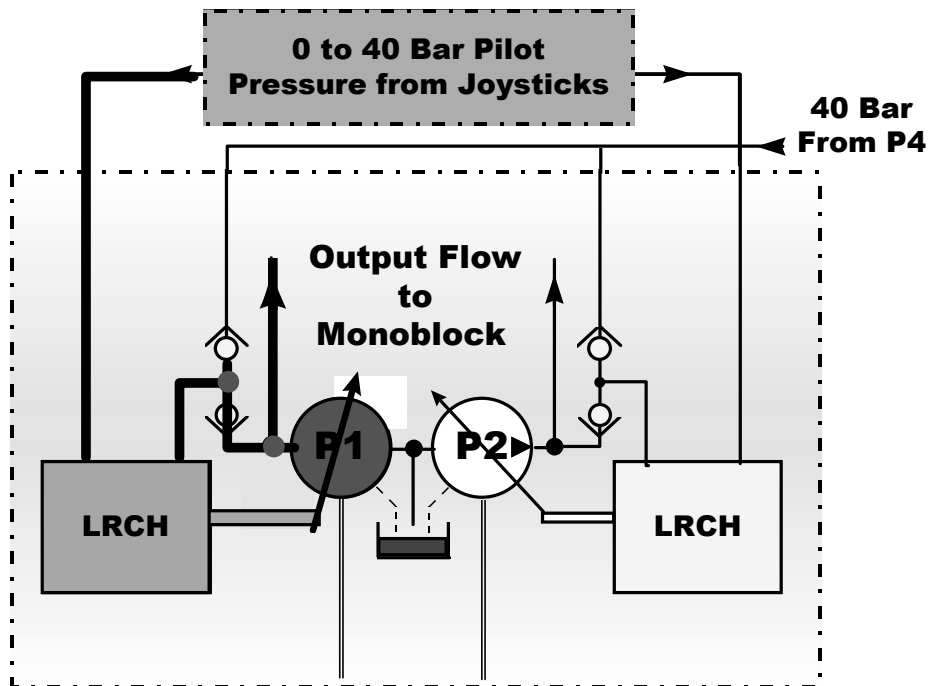
Q= 187cubic decimeter or 49.4 gal/m X 2



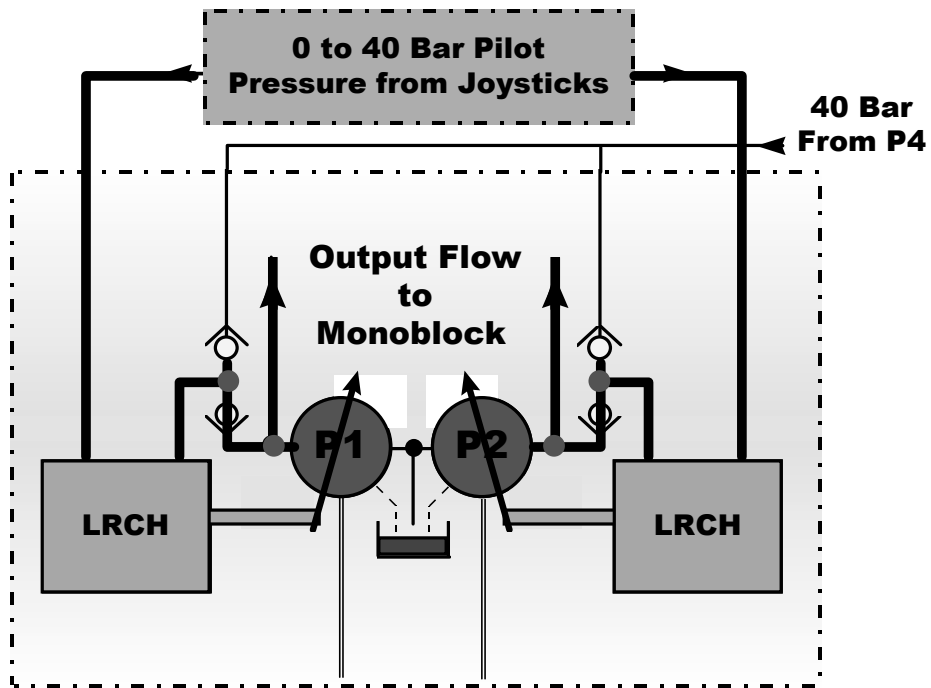
- X3 -Feed back from swing pumps
- X3 -Feed back from swing pumps
- X1 -Ramping signal from joystick for Pump #1
- X1 -Ramping signal from joystick for Pump #2
- Y3 -Pilot Pressure input signal from Pump #4
- Y3 -Pilot Pressure input signal from Pump #4
- A1 -Output from Pump #1 to Mono-Block
- A2 -Output from Pump #2 to Mono-Block



**P2 Ramping Up**



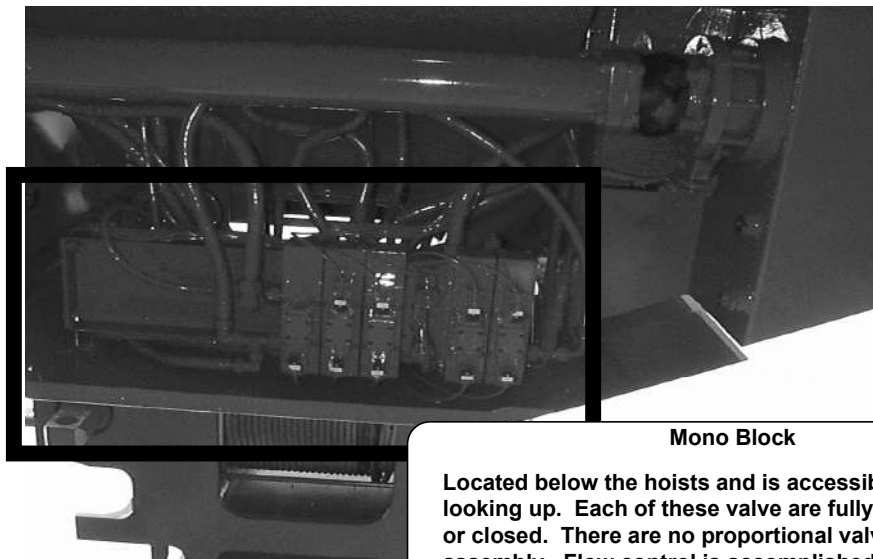
**P1 Ramping Up**



## P1 & P2 Ramping Up

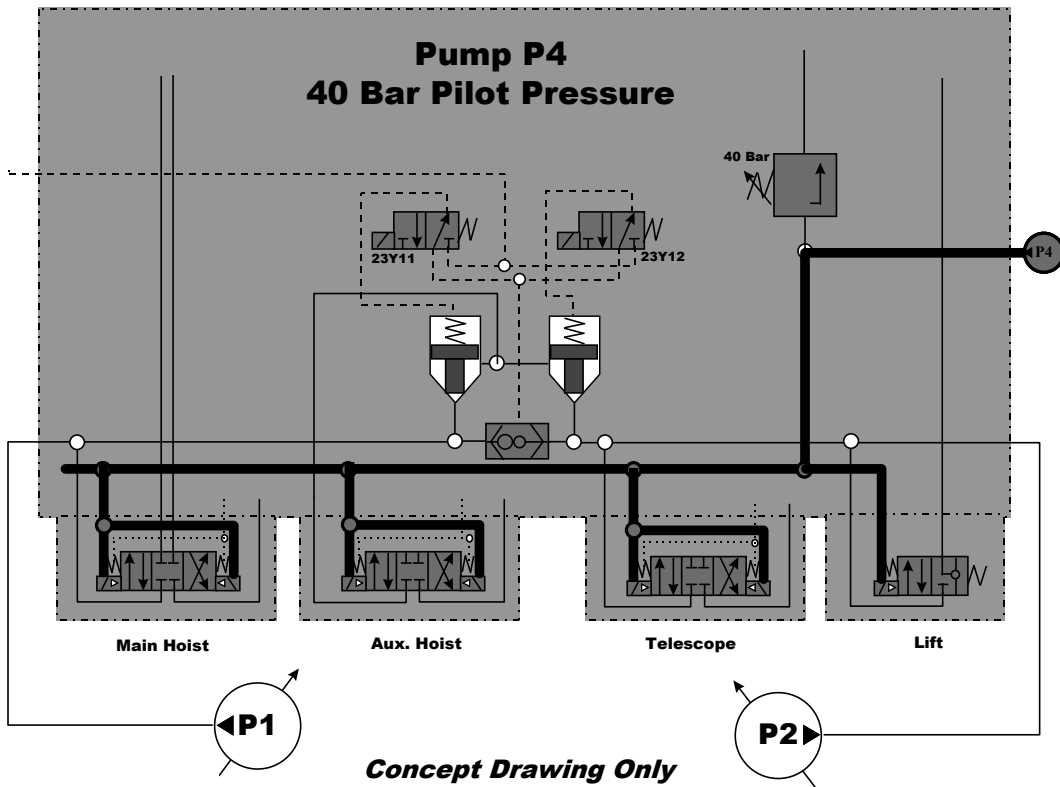
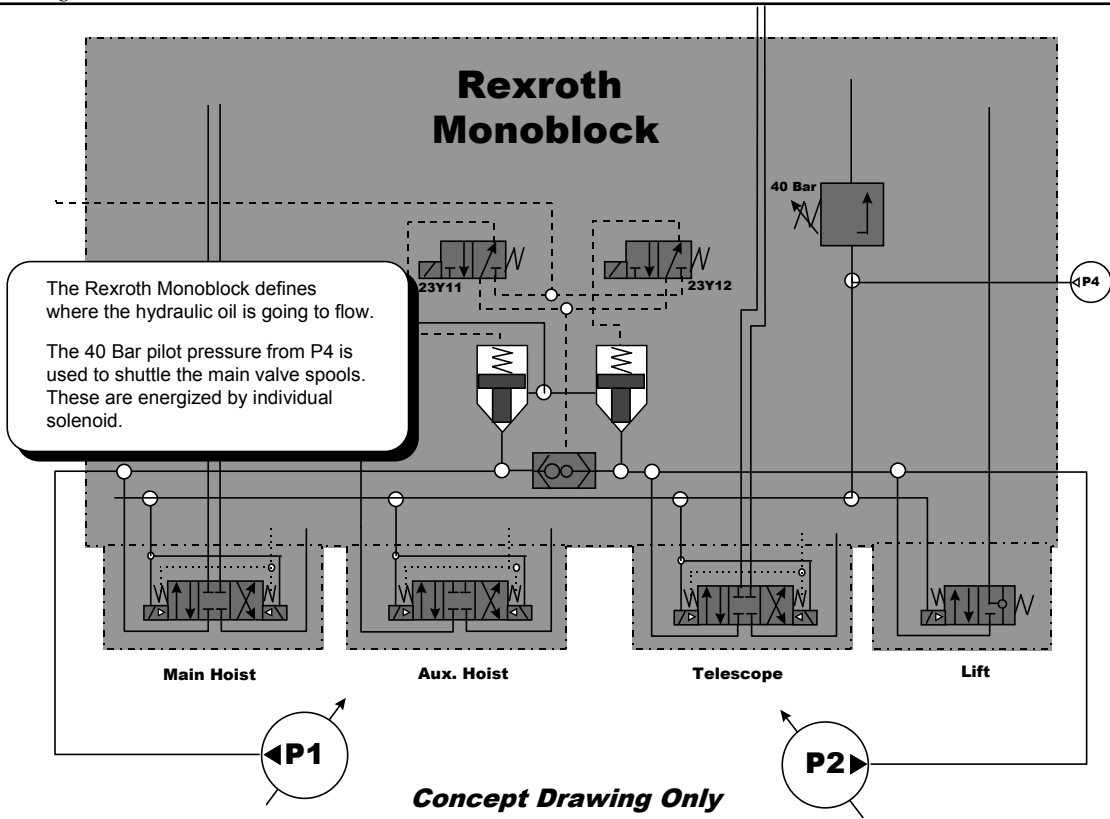


## GMK 5130 Mono Block

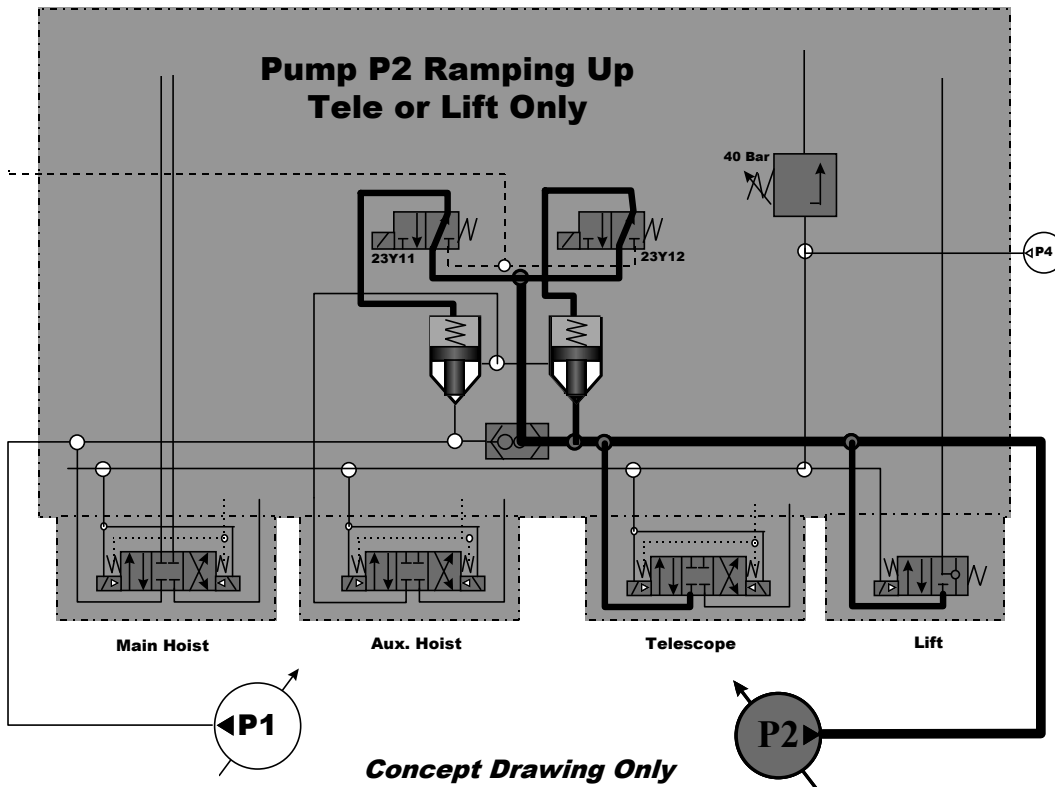
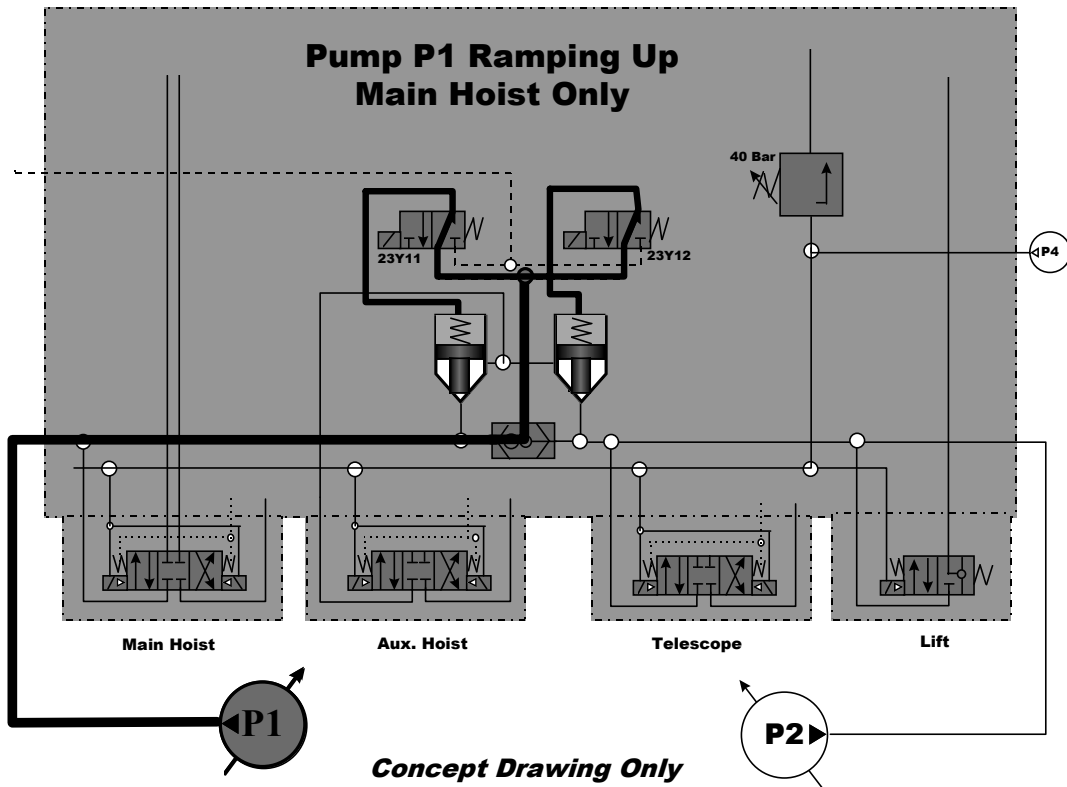


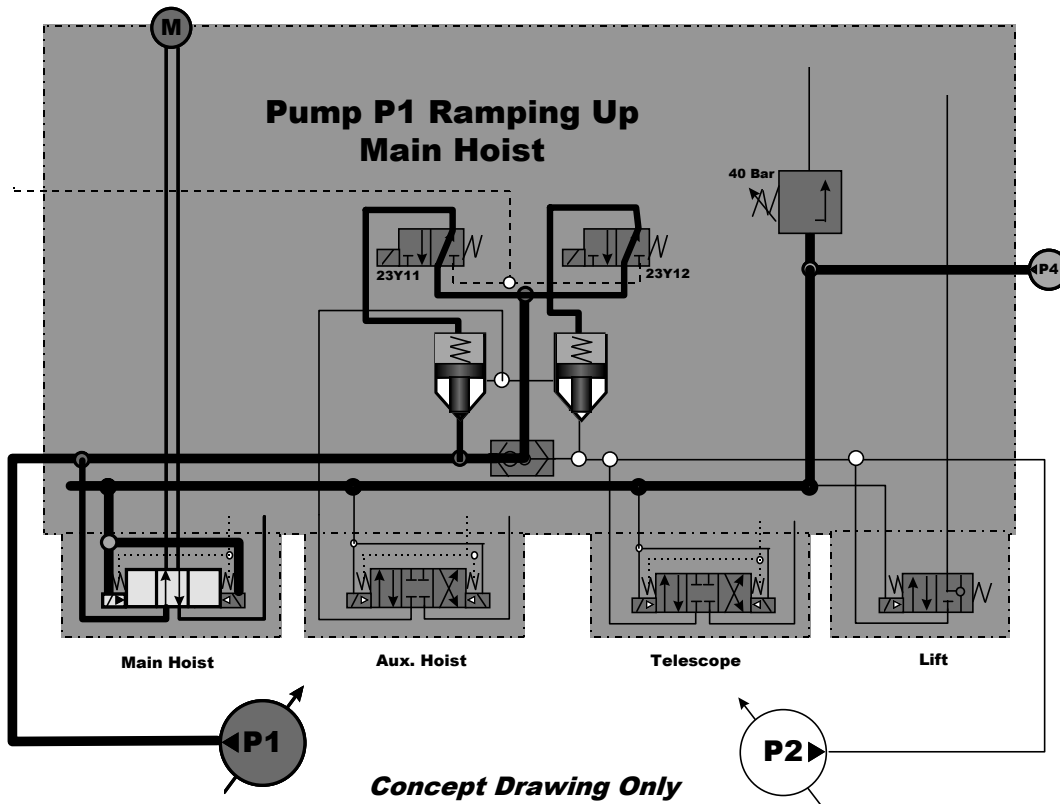
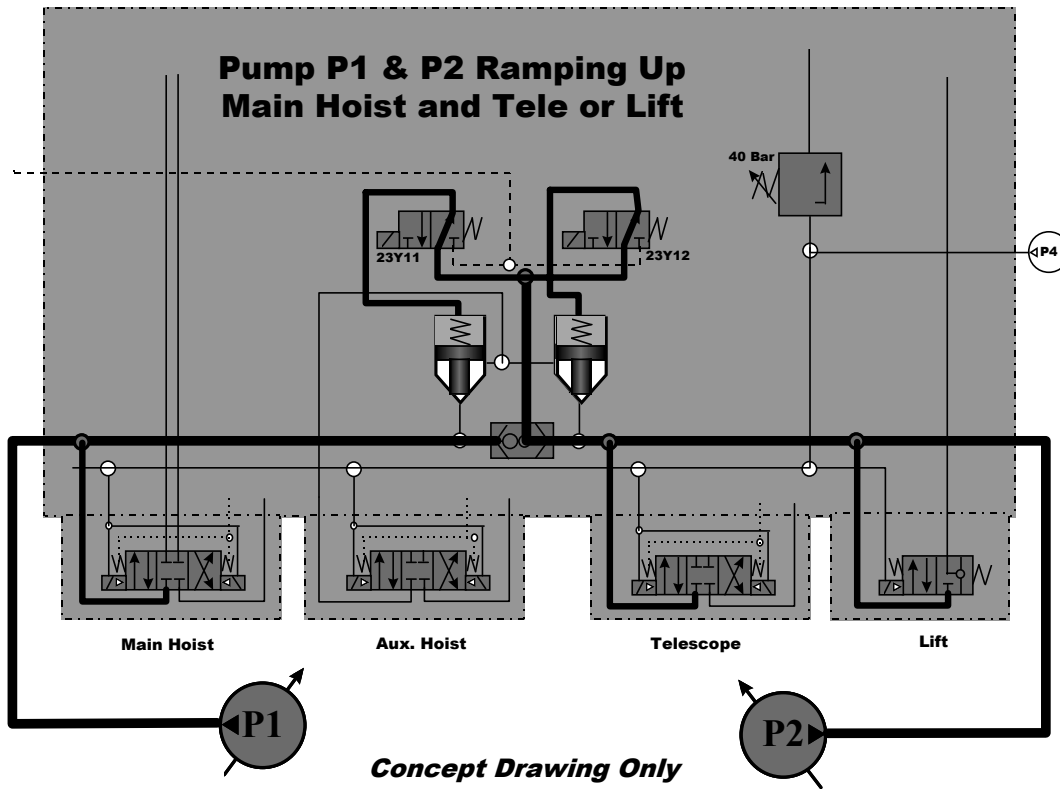
Mono Block

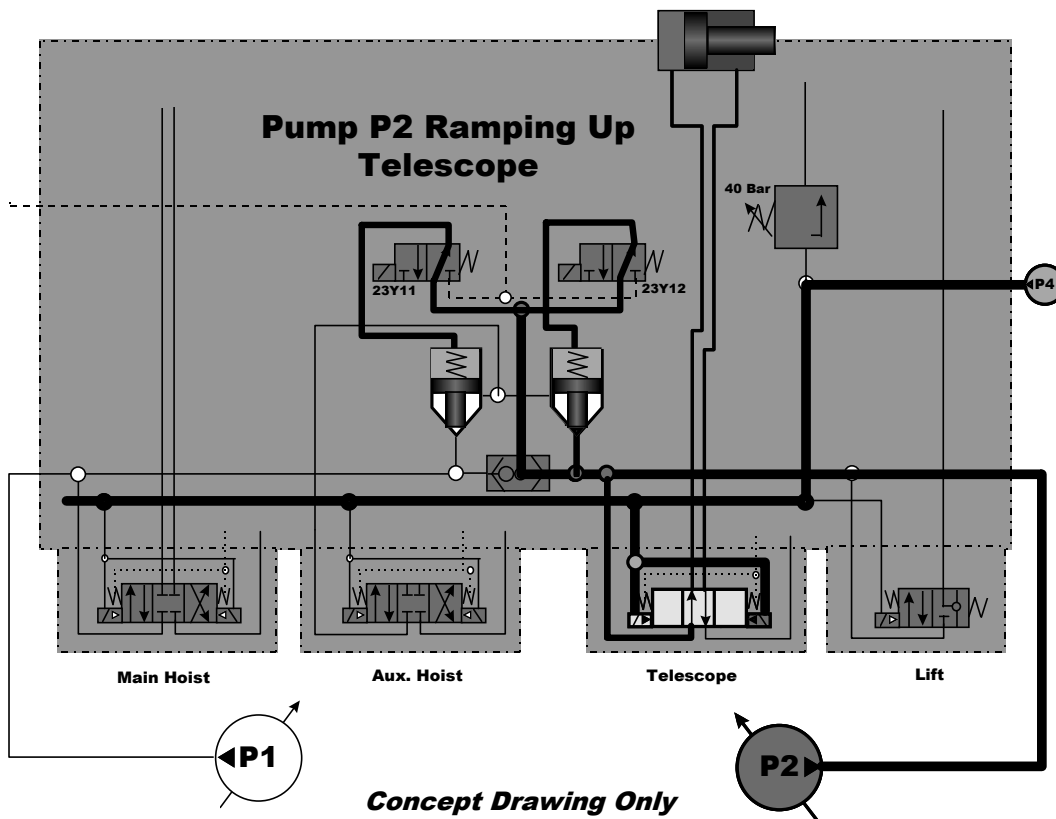
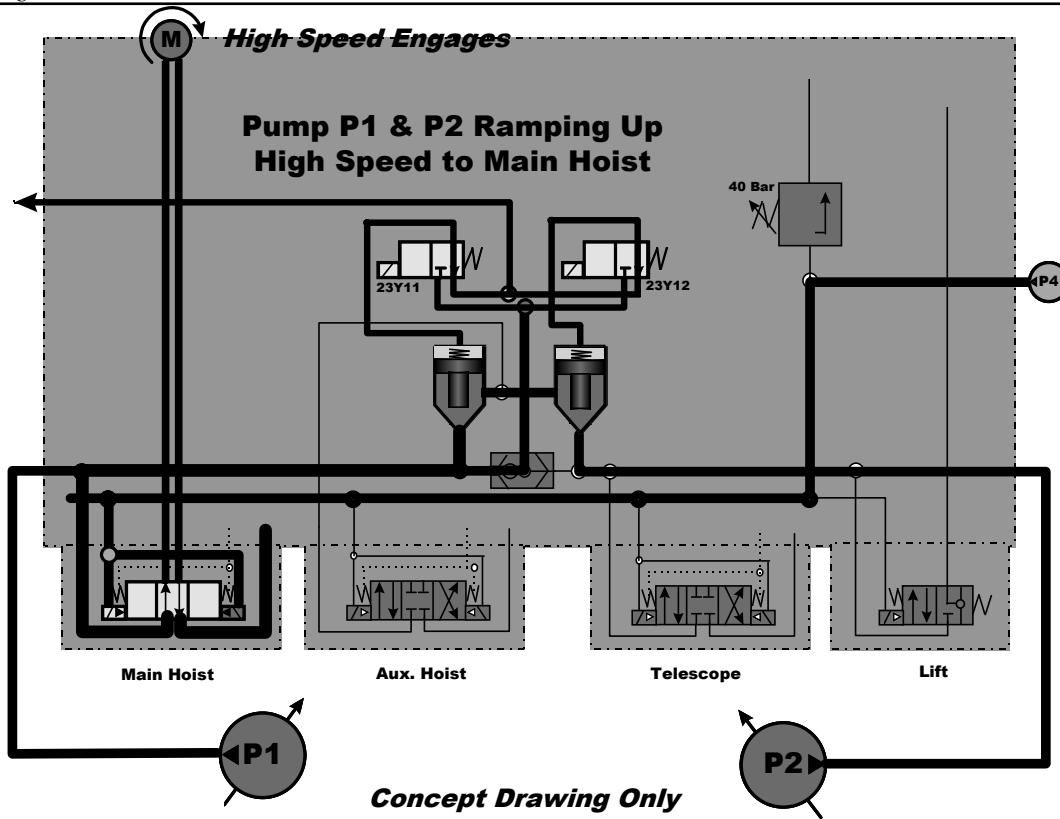
Located below the hoists and is accessible looking up. Each of these valve are fully opened or closed. There are no proportional valves in this assembly. Flow control is accomplished by stroking and destroking the pumps

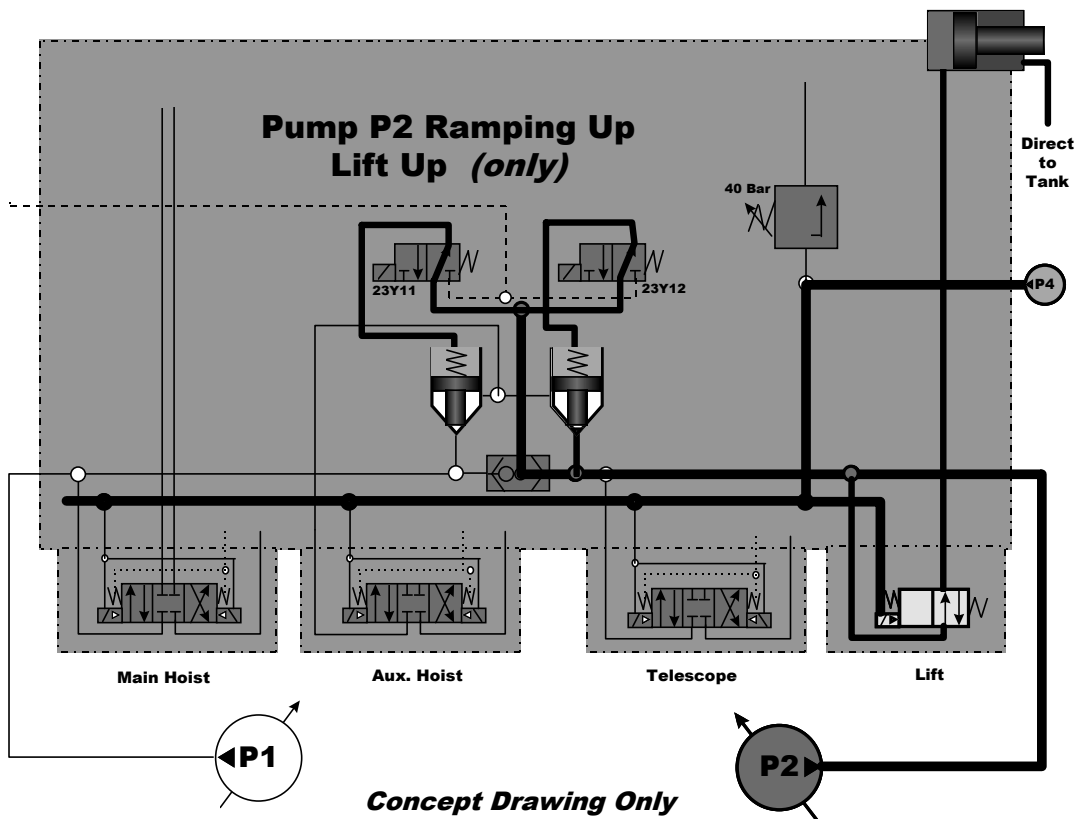
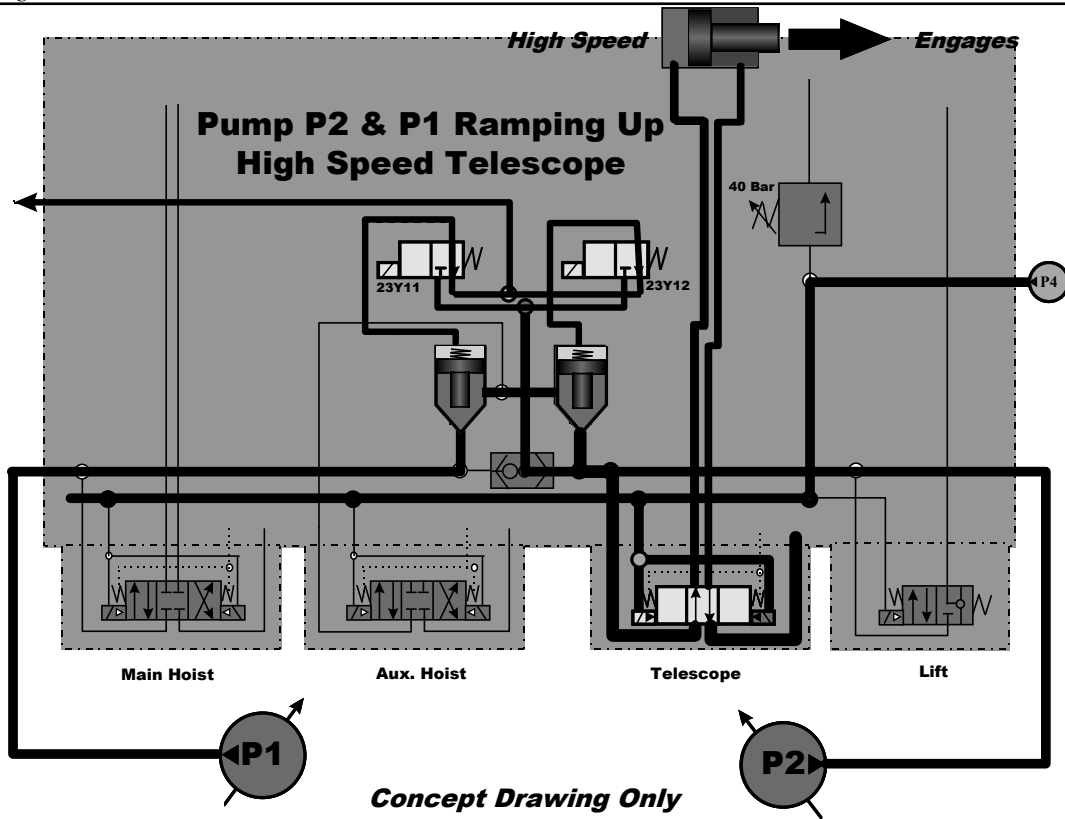


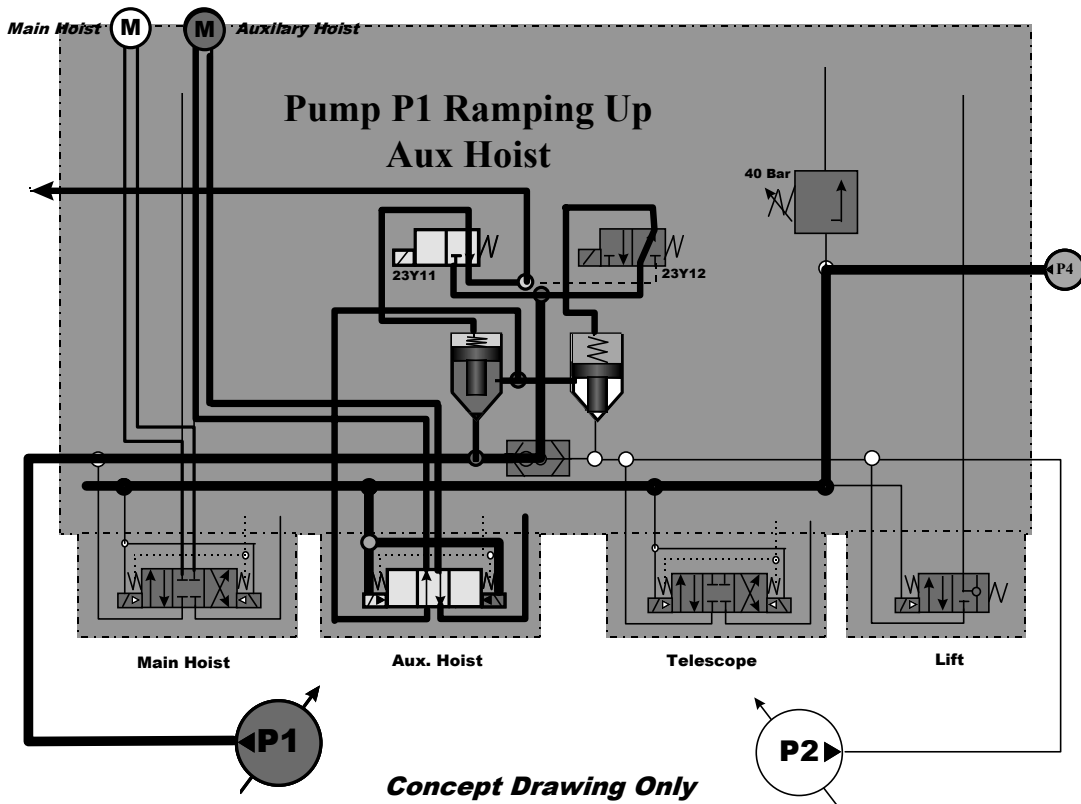
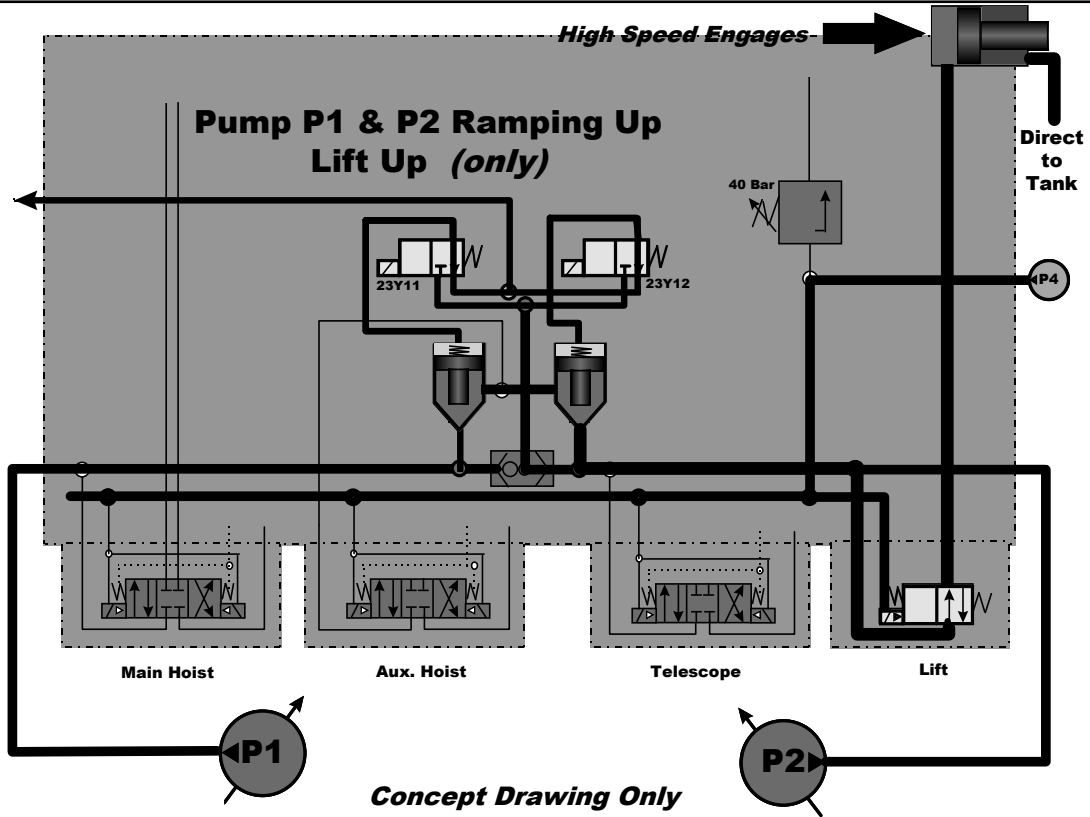


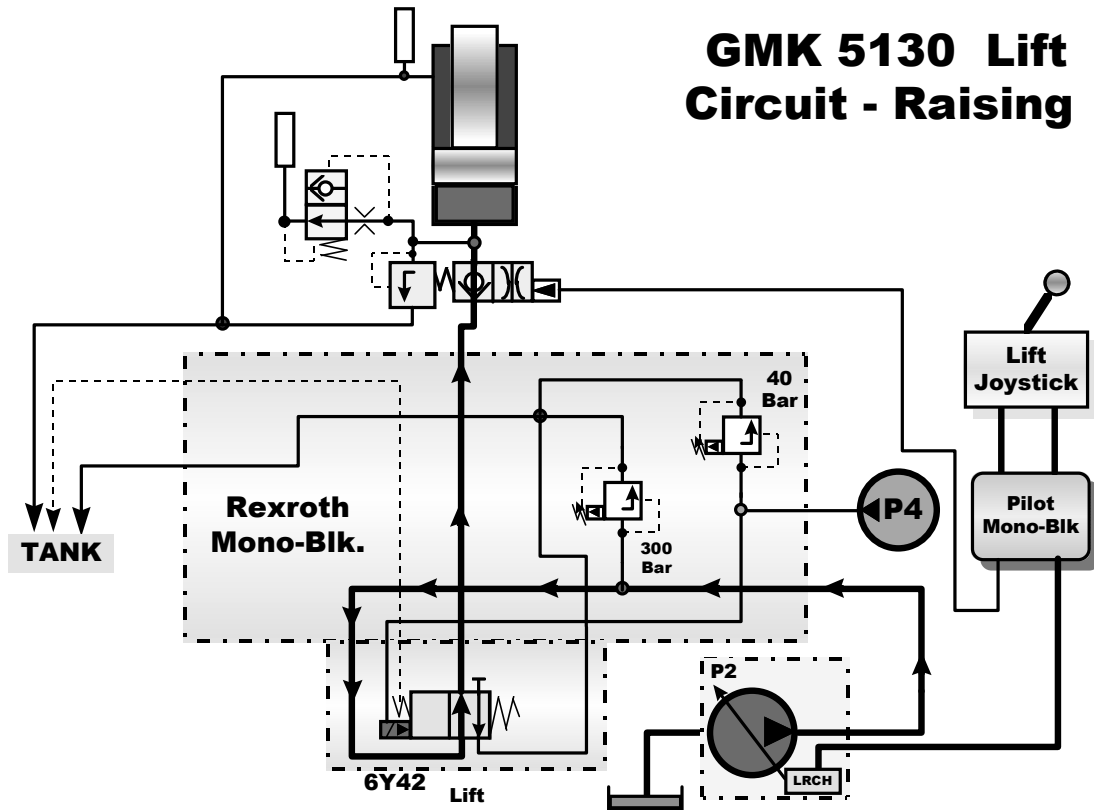
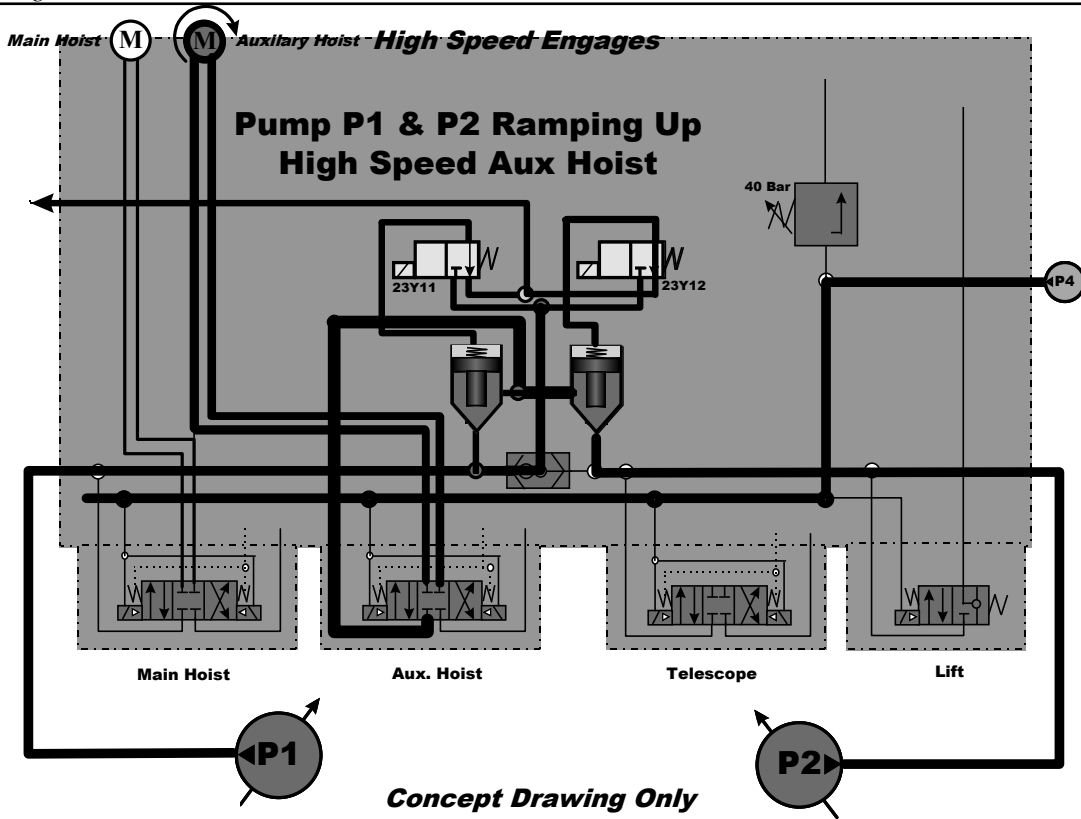




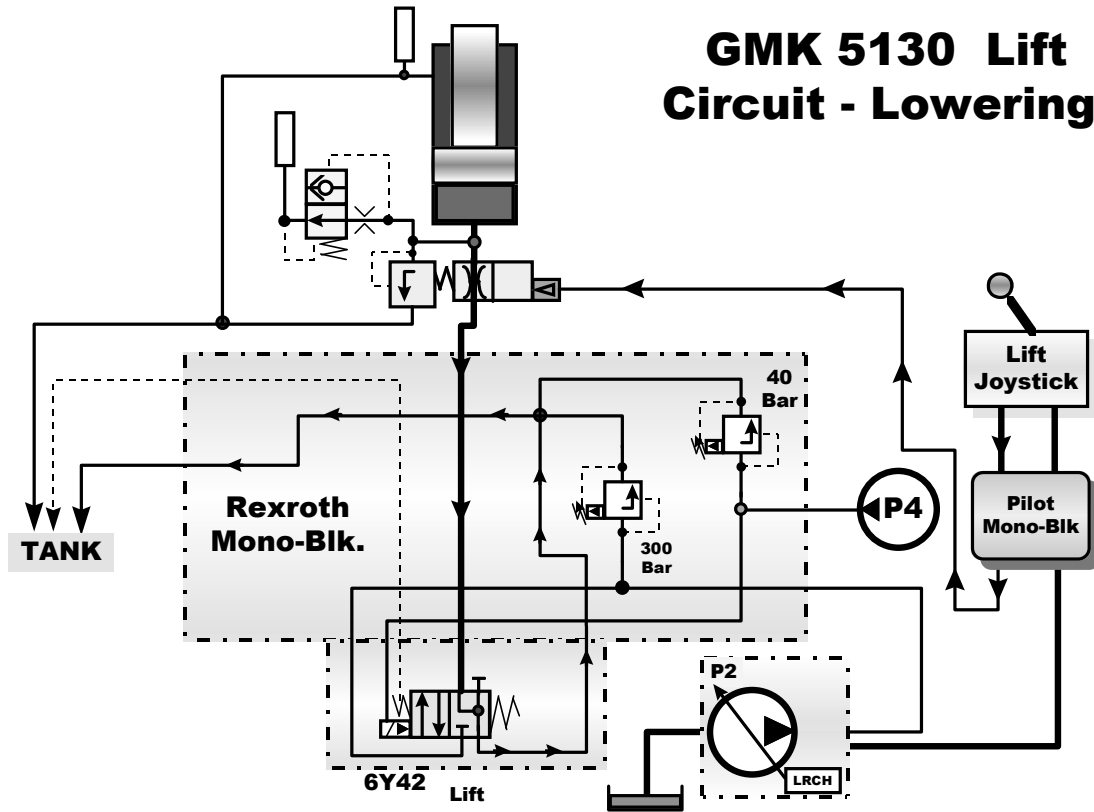




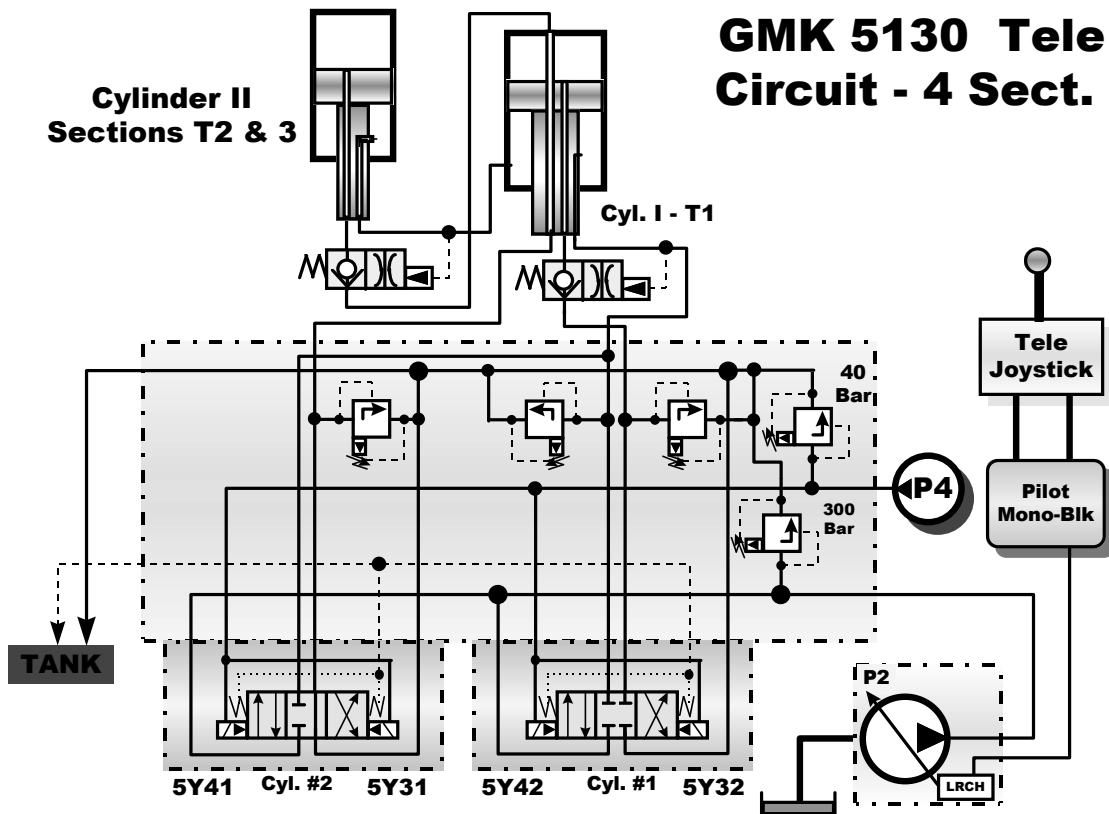


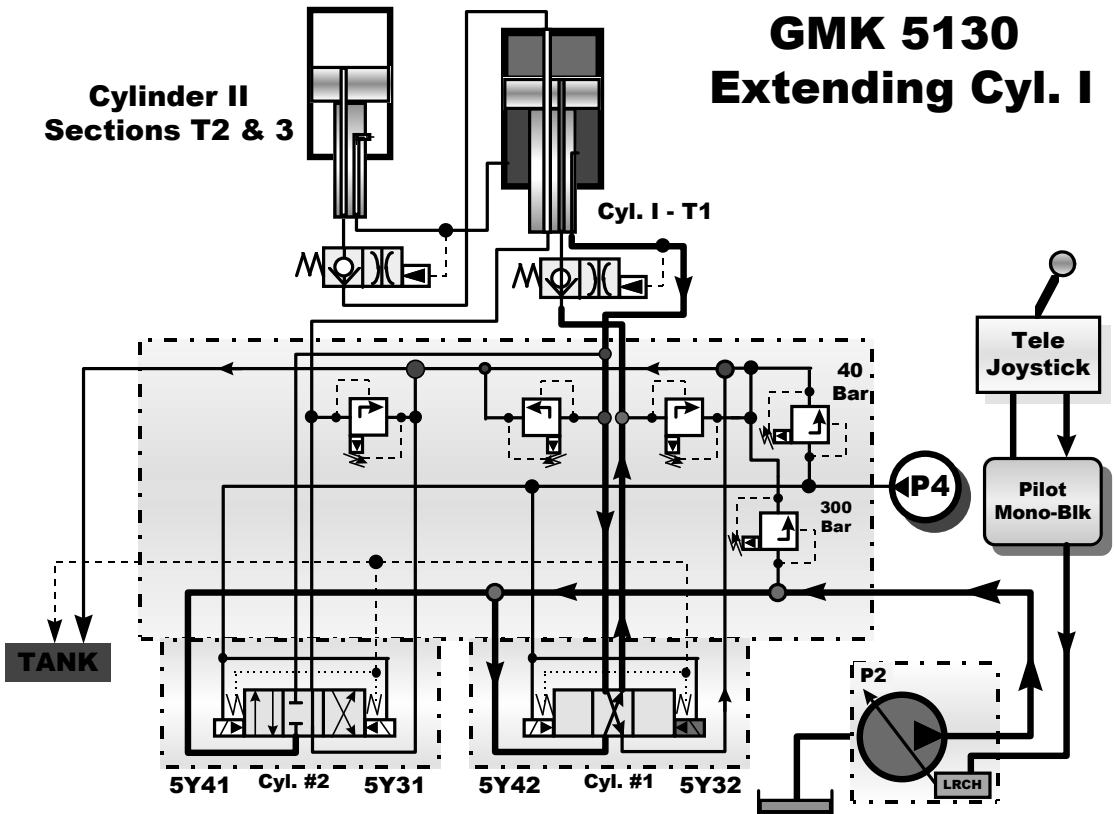
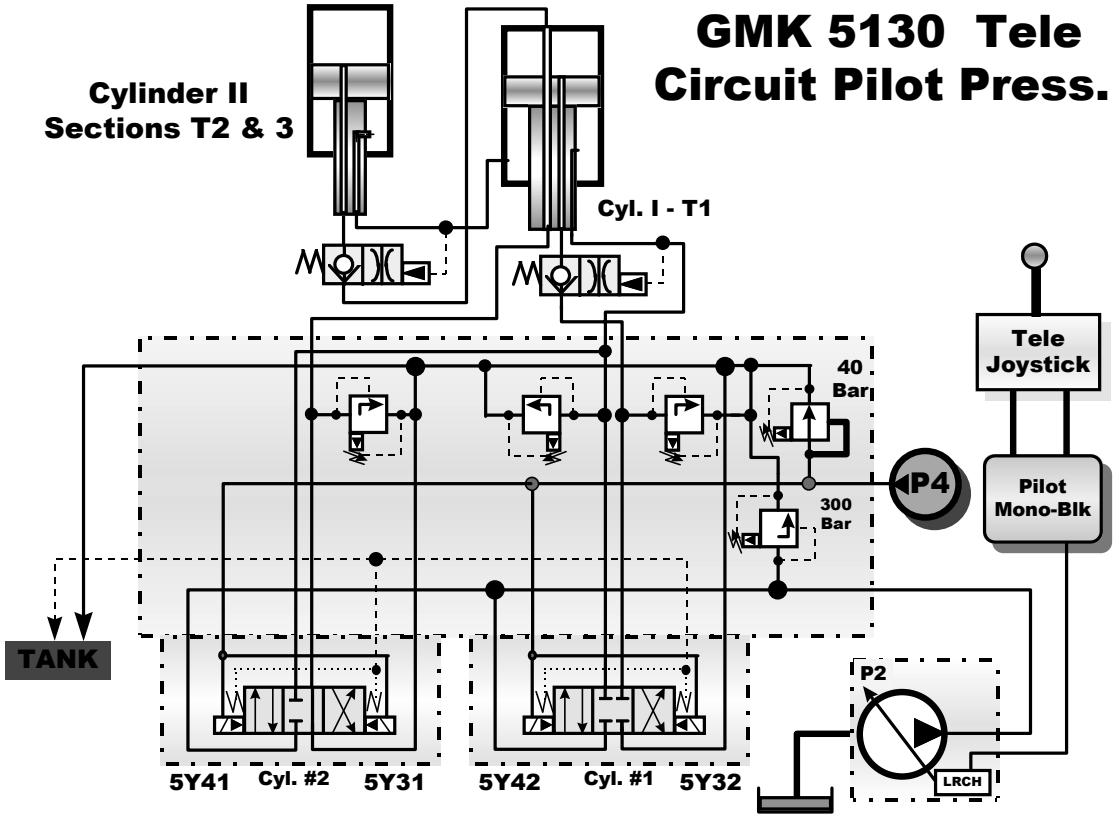


### GMK 5130 Lift Circuit - Lowering

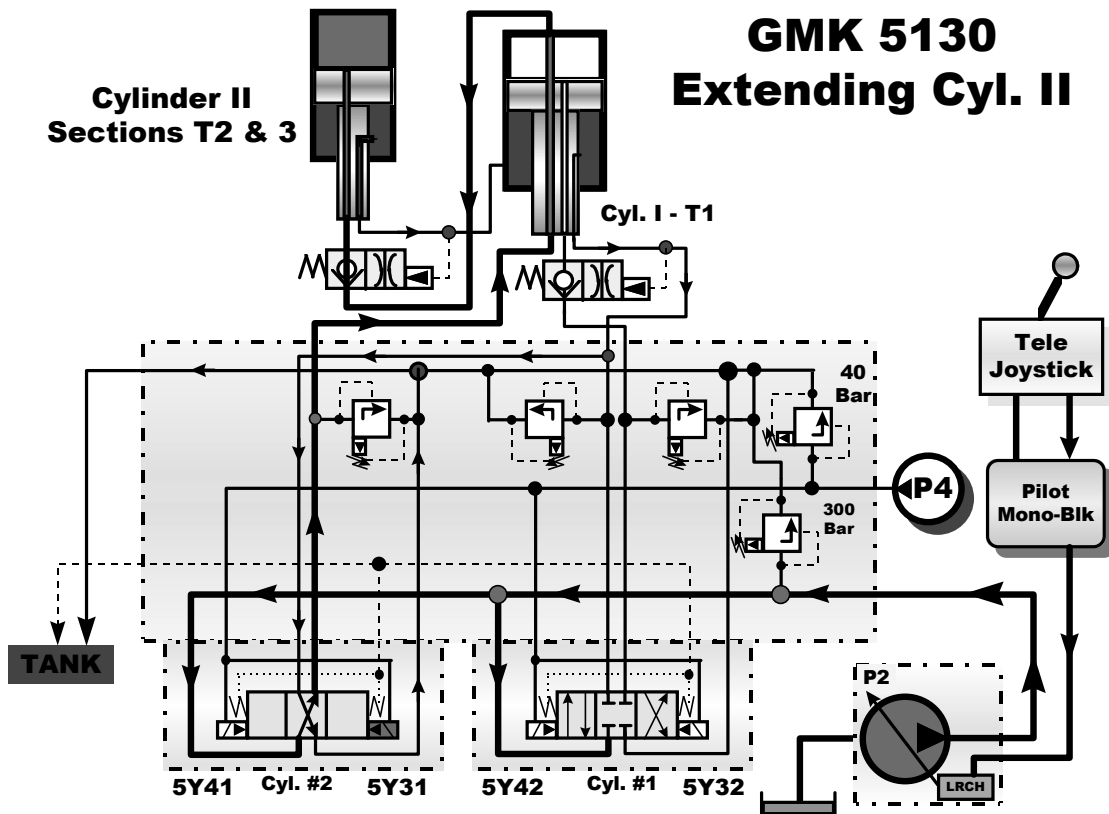
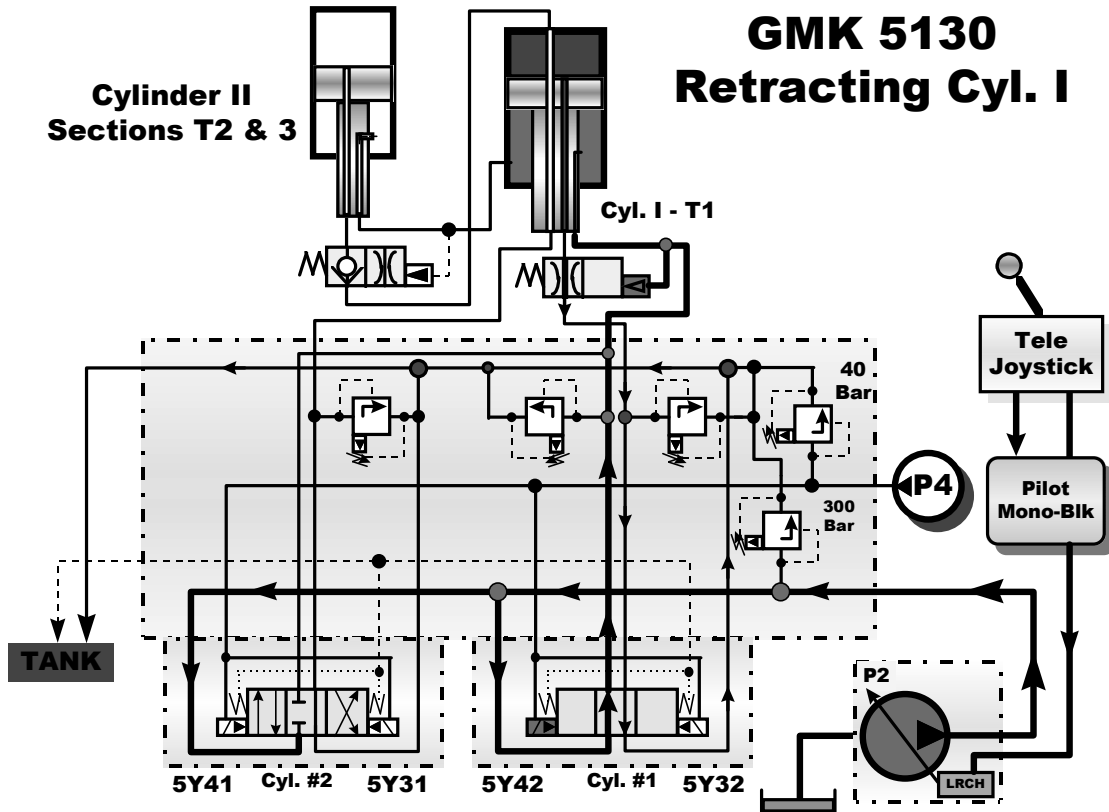


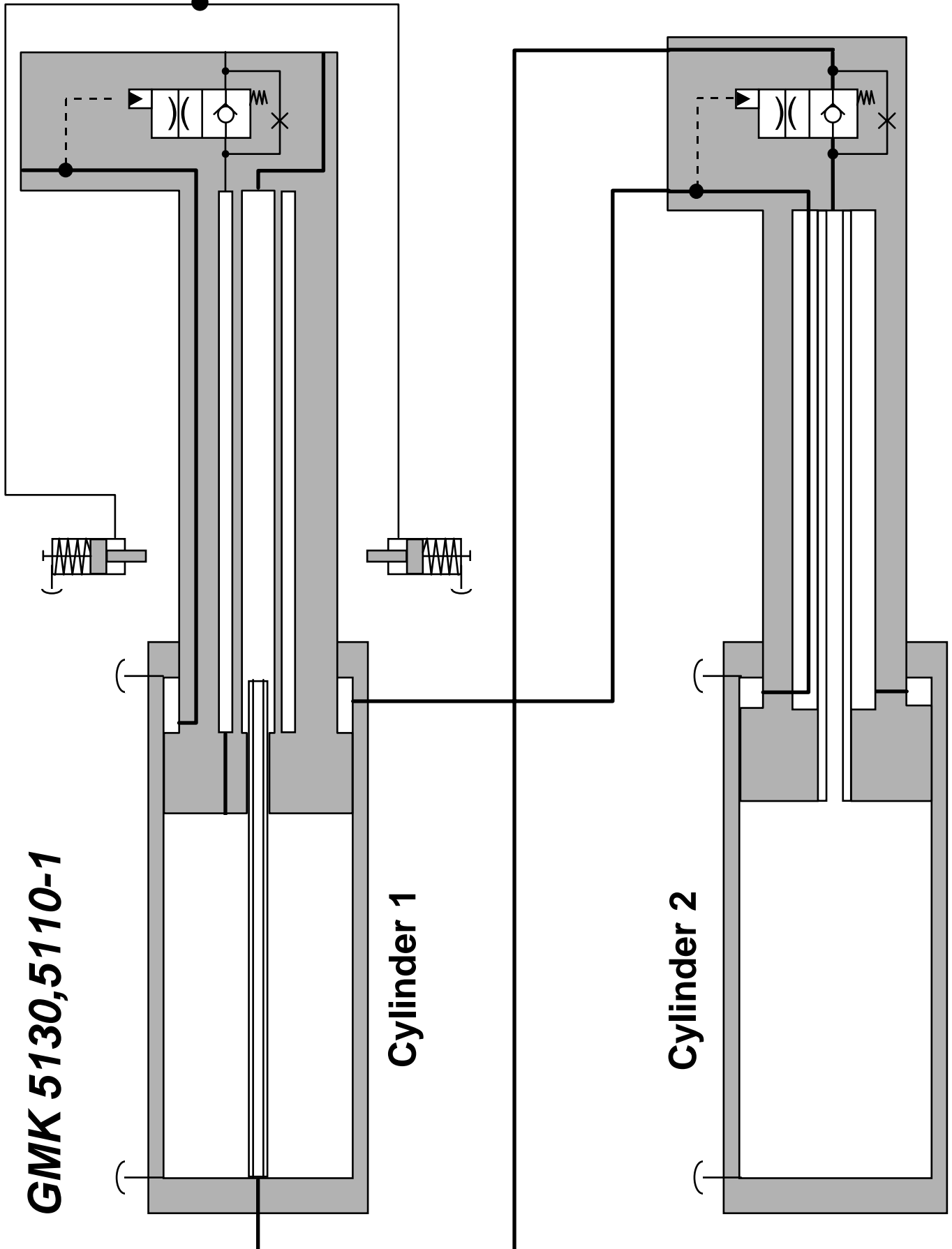
### GMK 5130 Tele Circuit - 4 Sect.









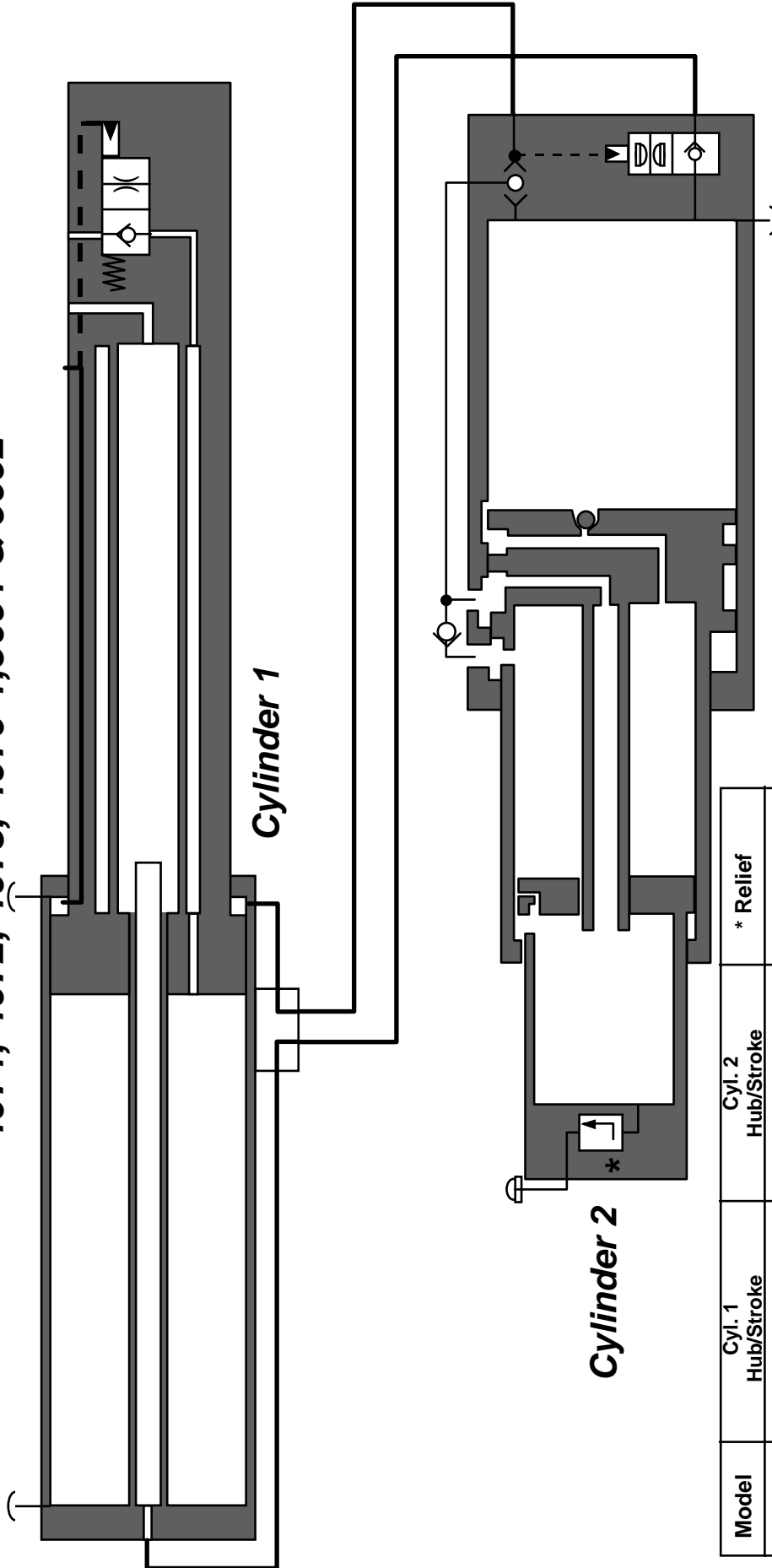


**GMK 5130,5110-1**

**Cylinder 1**

**Cylinder 2**

**4071, 4072, 4073, 4070-1, 5091 & 5092**



**Cylinder 1**

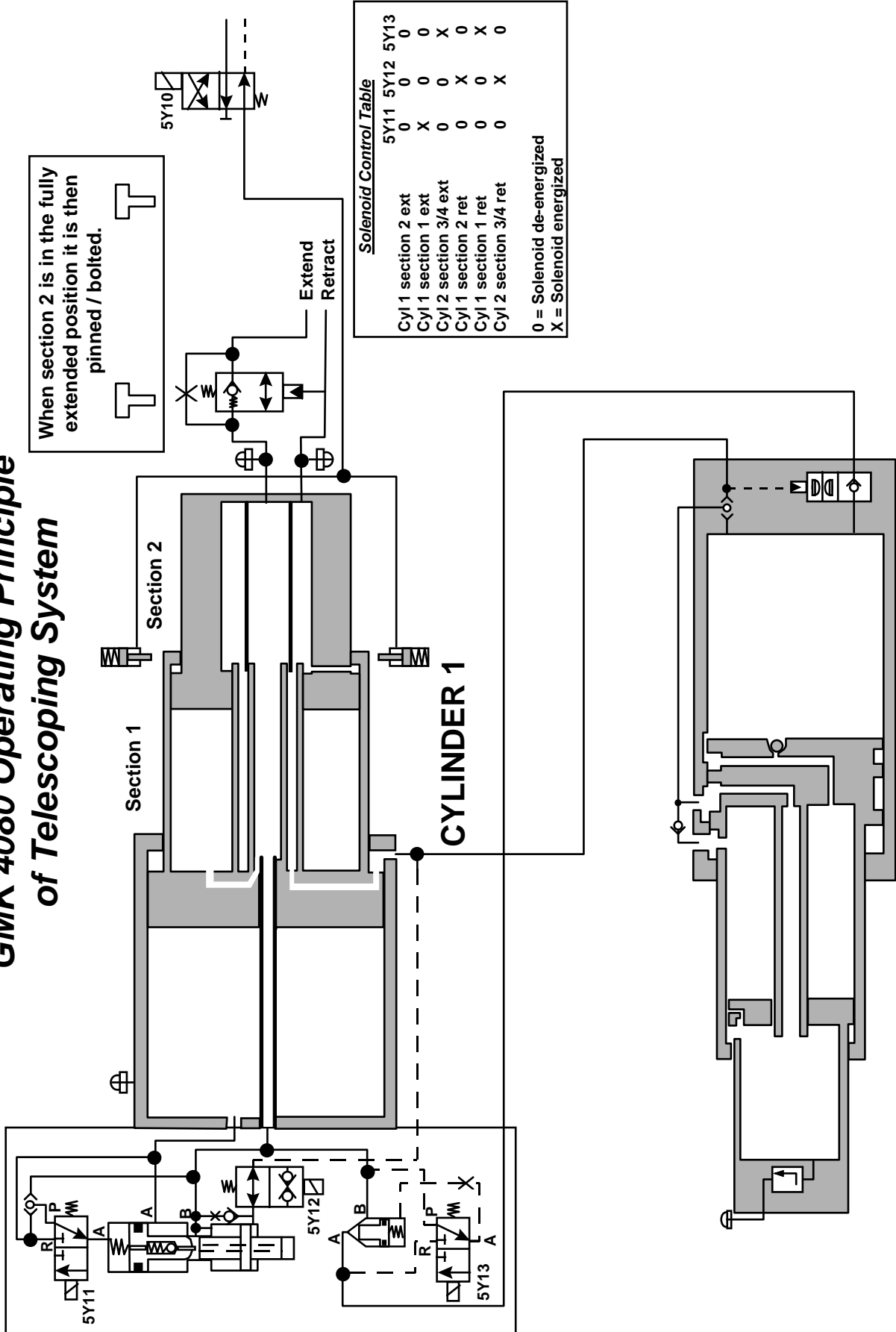
**Cylinder 2**

**4071, 4072, 4073,  
4070-1, 5091 &  
5092**

Model	Cyl. 1 Hub/Stroke	Cyl. 2 Hub/Stroke	* Relief
4071	180/160-8800	180/165-8850	300bar
4072	180/160-8800	150/125-8850	300bar
4073	180/160-8800	180/165-8850	300bar
4070-1	180/160-8800	150/125-8850	300bar
5091	235/200-9450	205/181-9450	285bar
5092	235/200-9450	165/140-9450	285bar

Example: 180mm/165mm-8850mm = 7.02inch/6.24inch-345.15inch(28.8ft.)  
300bar=4350psi

# GMK 4080 Operating Principle of Telescoping System



## TWO STAGE TELESCOPE CYLINDER

### THEORY OF OPERATION

Page 1 of 2

The following text refers to color illustration of telescope cylinder.

#### **Cylinder component identification**

- A. Piston area, first stage.
  - B. Annular area, first stage.
  - C. Piston area, second stage.
  - D. Annular area, second stage.
  - E. Extend line for first and second stage.
  - F. Retract line for first and second stage.
- (1) Cylinder outer body.
  - (2) First stage telescope section
  - (3) Second stage telescope section.
  - (4) First and second stage holding/lock valve
  - (5) Shuttle valve (transfers oil from annular to piston area extend sequence only)
  - (6) Pressure compensating check valve for first / second telescope (this valve keeps the first telescope section in fully extended position to maintain, transfer port alignment, when the second telescope is extended and under load. It also maintains correct retraction sequence.
  - (7) Anti pressure intensification valve (prevents annular intensification on first stage extension, when transfer ports are covered by the first stage piston).

#### **Operating sequence**

- 1 **Extending first stage** - oil flow through line (E) causes pressure increase within piston area first stage (A). This causes shuttle valve (5) to move to the right. The piston area (A) and annular area (B) are now connected via external transfer tube. As pressure acts against compensating check valve (6) it will be held on it's seat, resulting in the first stage piston (2) being forced to move. Although the piston and annular areas remain connected the cylinder still extends due to (Pascal's Law). The annular oil is displaced and is routed to the piston area via external transfer tube and shuttle valve (5).

## TWO STAGE TELESCOPE CYLINDER

### THEORY OF OPERATION

Page 2 of 2

- 2 **Extending first stage** - As the piston (2) approaches fully extended position the annular transfer port is covered. The anti pressure intensification valve (7) allows the otherwise trapped oil access to the transfer tube.

THE FIRST STAGE IS NOW FULLY EXTENDED.

- 3 **Extending second stage** - The internal transfer galleries within the first stage piston (2) are now aligned with the cylinder body transfer ports. Oil flow / pressure from (E) / (A) is then allowed access to the piston area of the second stage (C). As the second stage begins to extend, displaced annular oil (D) is routed via internal transfer tube, galleries and ports to external transfer tube, this oil re-joins the extend cycle via shuttle valve (5) and piston area (A) until the second stage is fully extended.

THE SECOND STAGE IS NOW FULLY EXTENDED.

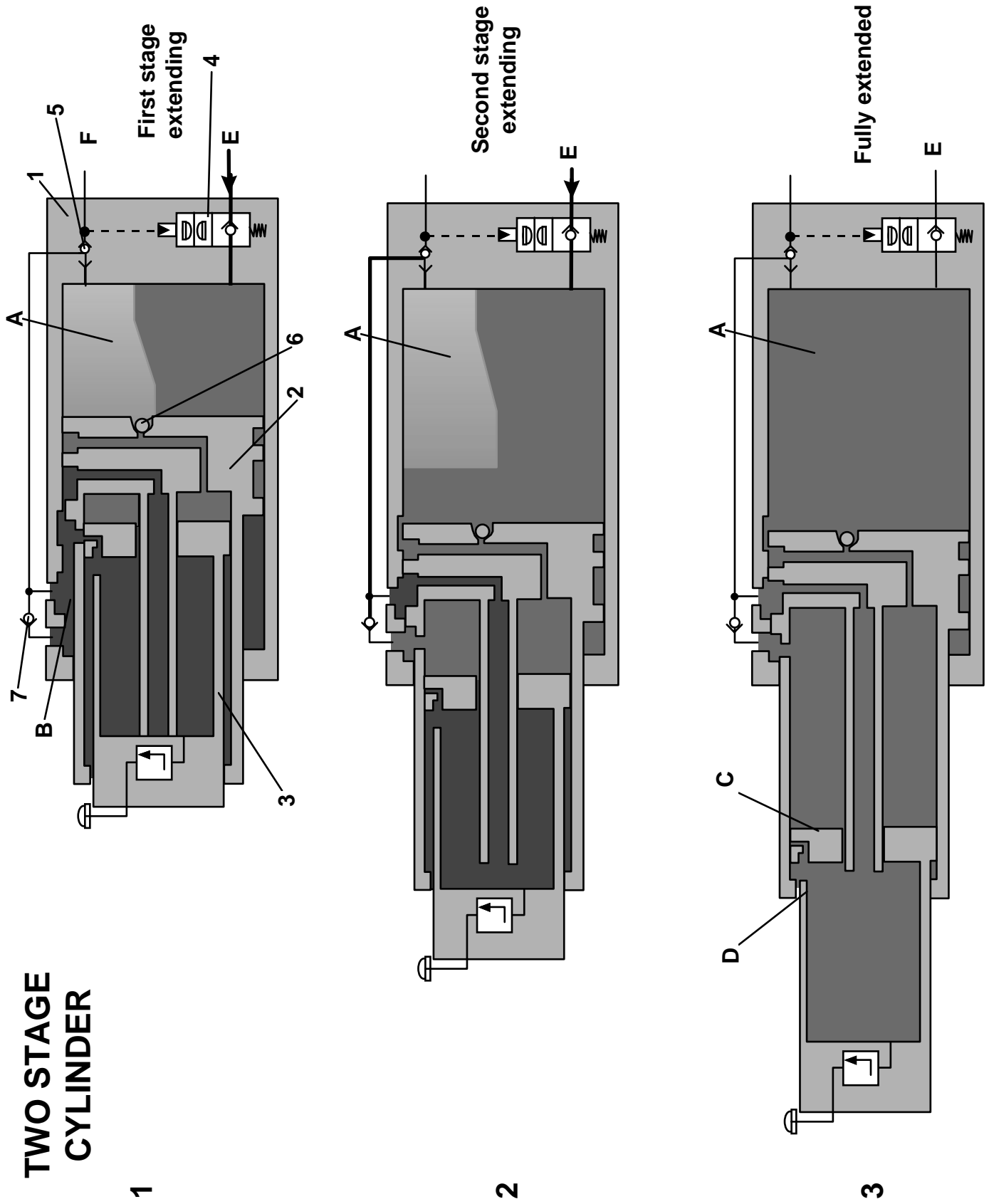
- 4 **Retracting second stage** - Oil flow through line (F) causes the shuttle valve (5) to move to the left. The resulting pressure acts on the first and second stage holding / lock valve (4). This pressure holds the valve open, allowing oil to flow from (A) to (E). The oil flow / pressure from line (F) also has access to the annular area (D) via external transfer tube, ports, galleries and internal transfer tube. This causes the second stage to retract, the displaced piston area oil is routed through the internal transfer galleries and ports to the first stage piston area (A). It is then returned to the tank through line (E). As the second stage piston approaches the fully retracted position, the annular transfer ports will be in alignment.

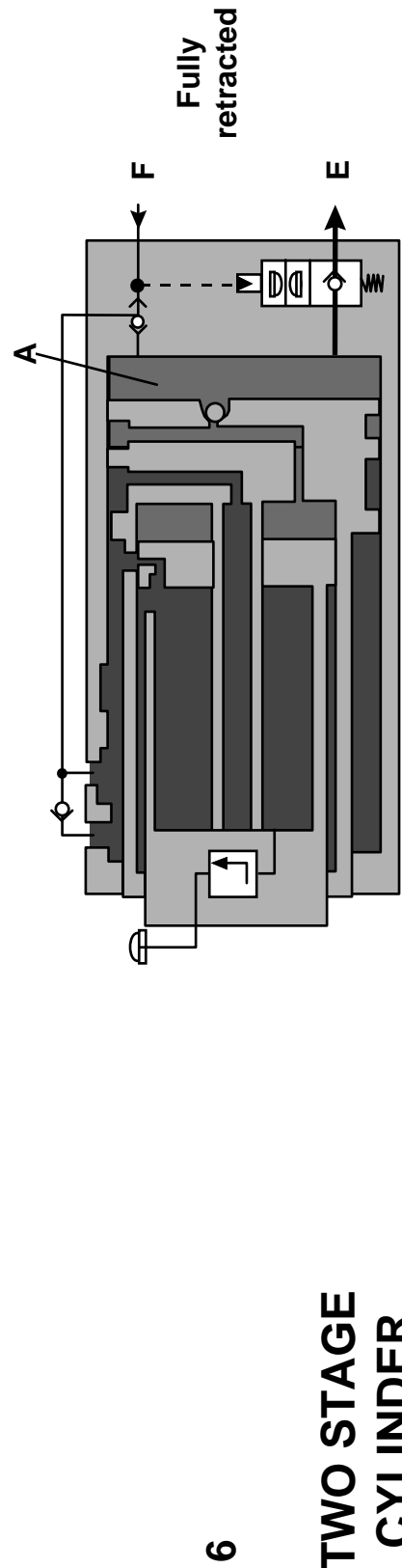
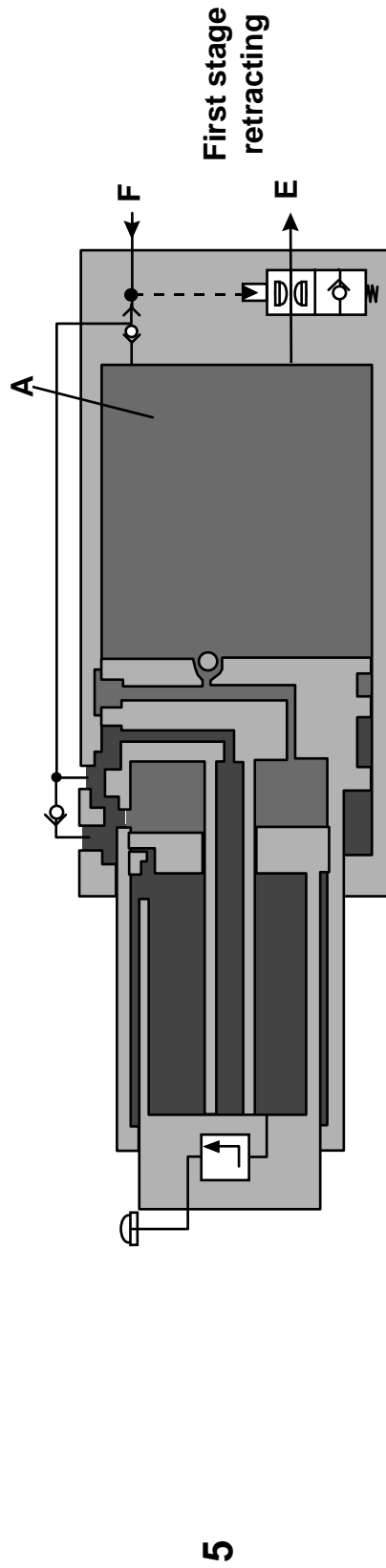
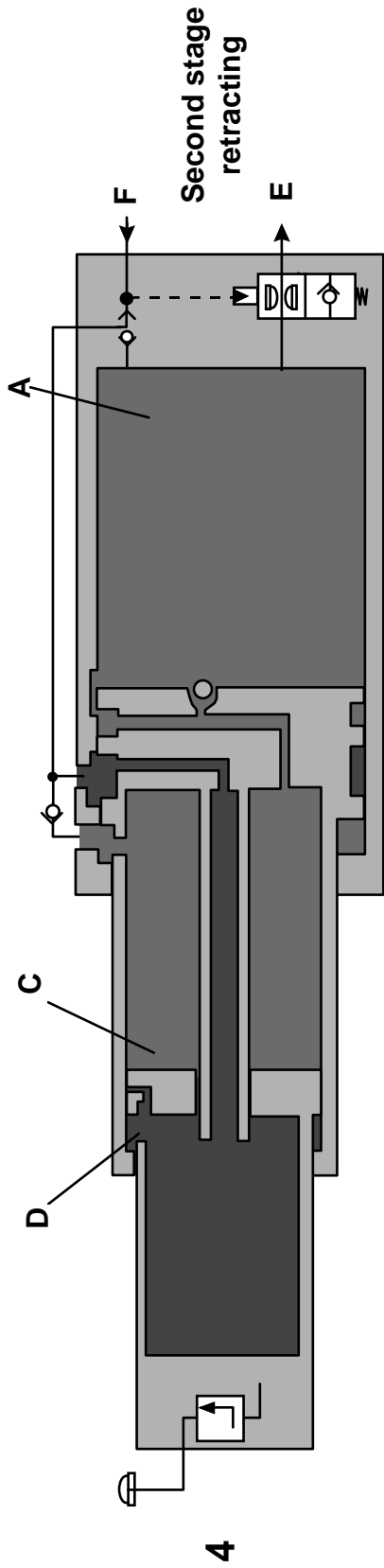
THE SECOND STAGE IS NOW FULLY RETRACTED

- 5 **Retracting first stage** - Oil flow through line (F) causes the shuttle valve (5) to move to the left. The resulting pressure acts on the first and second stage holding / lock valve (4). This pressure holds the valve open, allowing oil to flow from (A) to (E). The oil flow / pressure from line (F) also has access to the annular area (D) / (B) via external transfer tube, ports, galleries and internal transfer tube. This causes the first stage to retract, as the piston (2) moves the internal transfer galleries move out of alignment, at the same time an additional port is uncovered. This port allows flow / pressure direct access to annular area (B). Displaced piston area oil (A) is returned to tank through line (E).

THE FIRST STAGE IS NOW FULLY RETRACTED.

# TWO STAGE CYLINDER

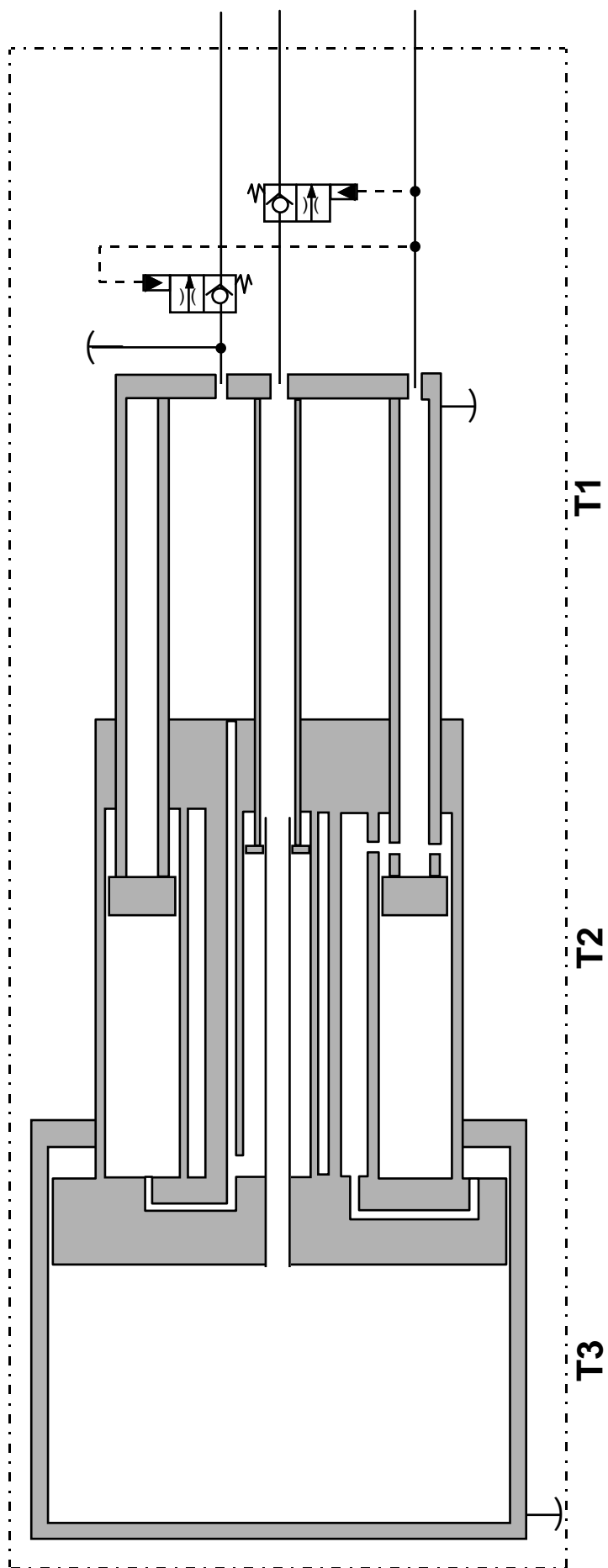




**TWO STAGE  
CYLINDER**

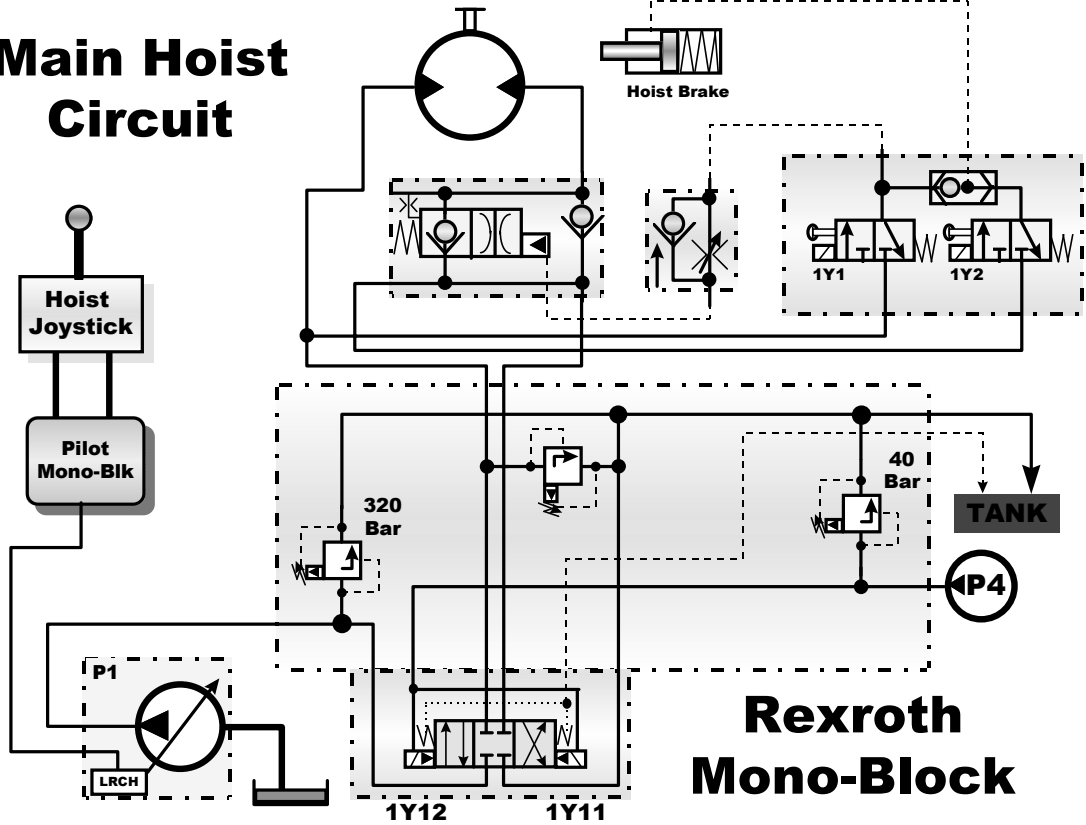


**KMK 3050 telescope cylinder**

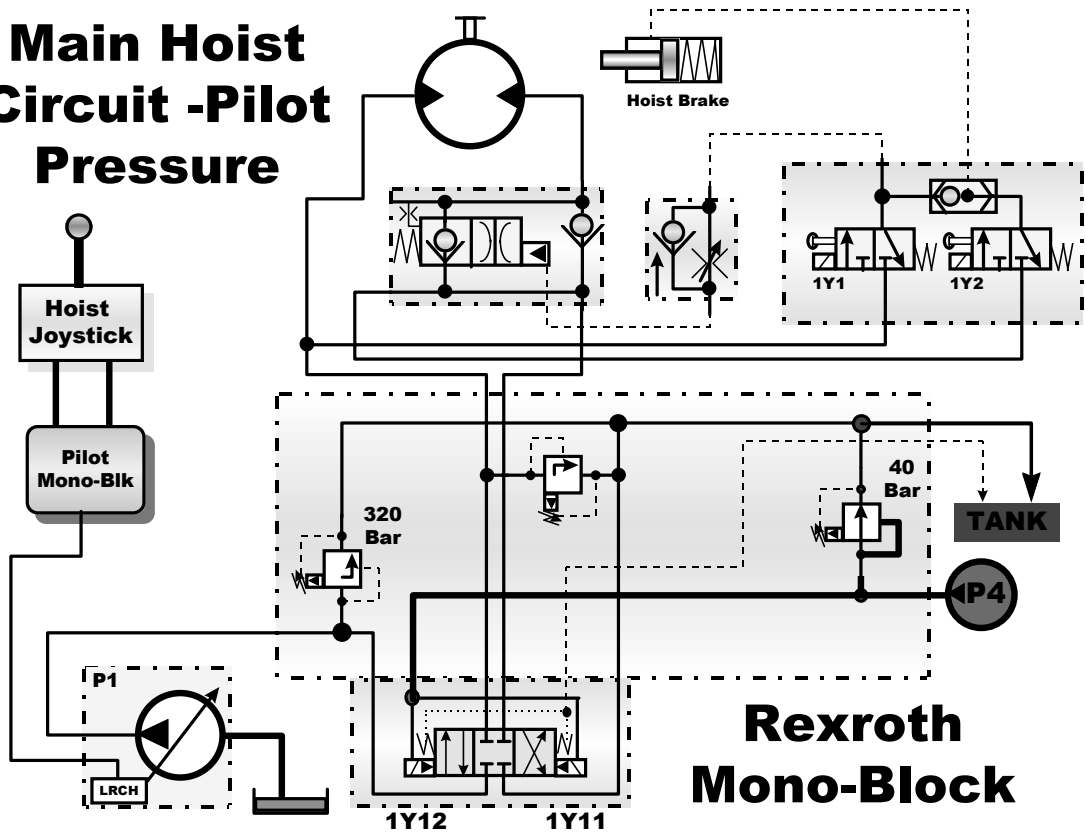


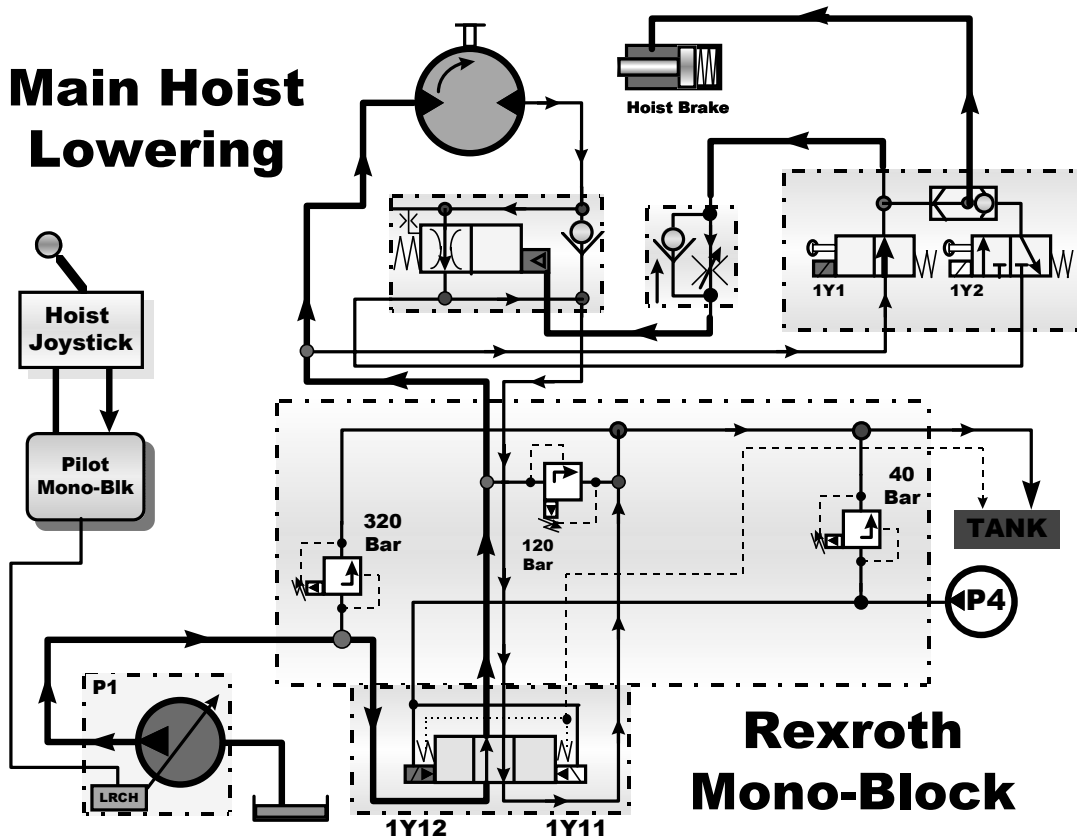
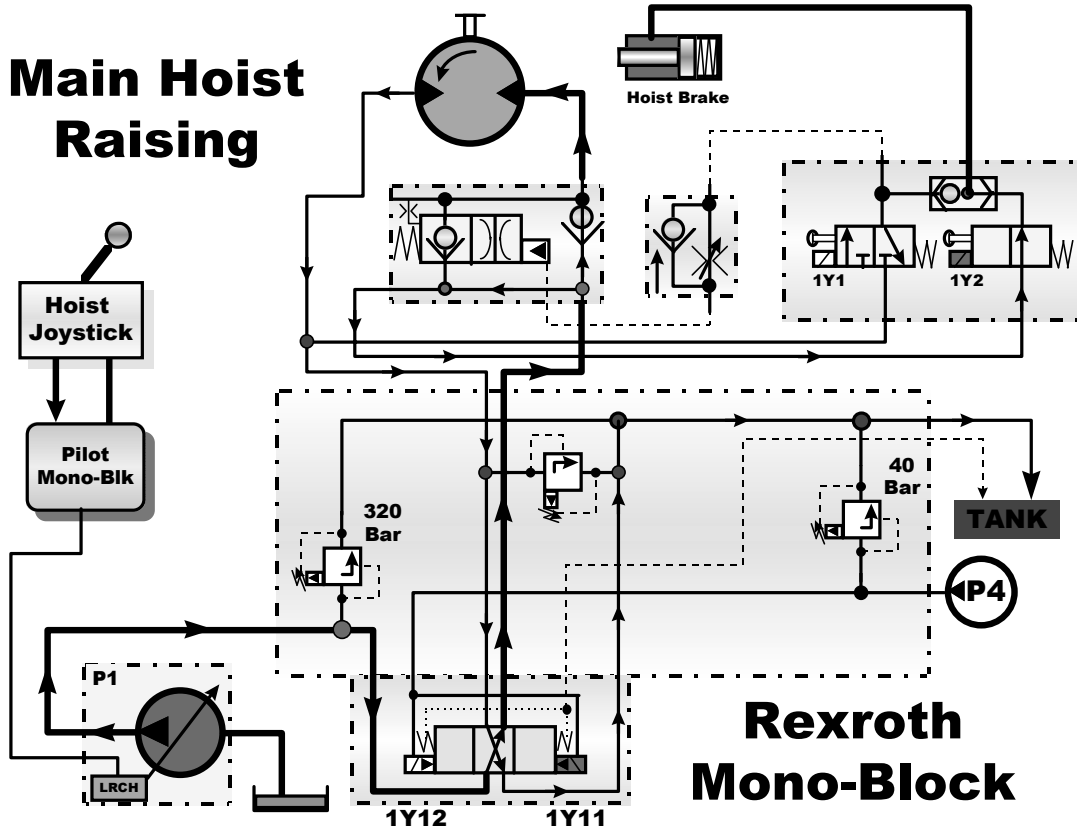
**T4 & T5 are cable extended**

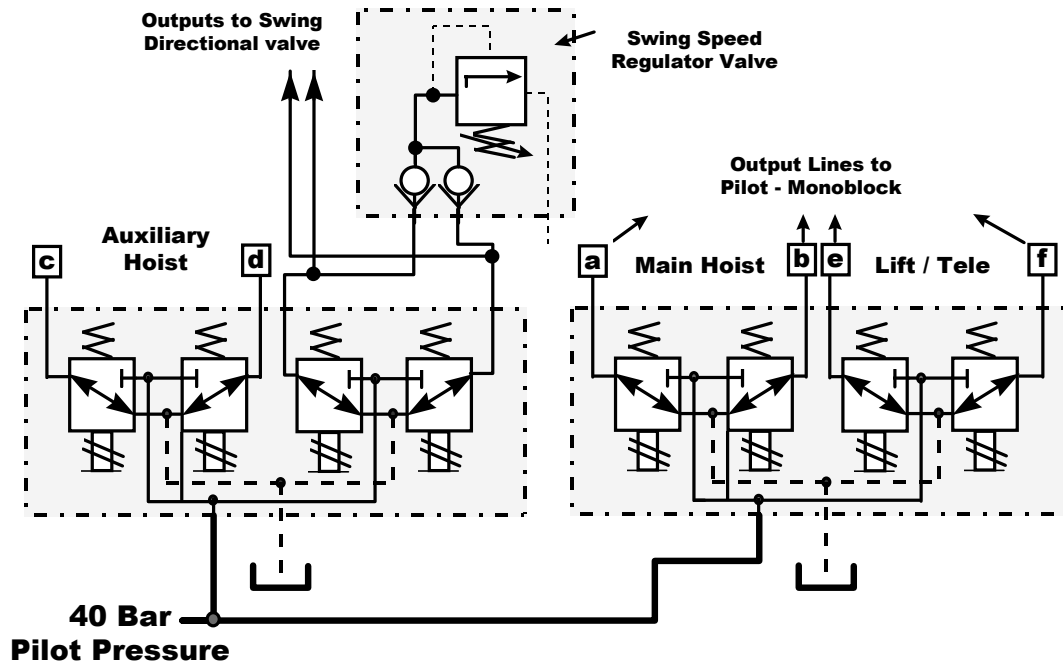
# Main Hoist Circuit



# Main Hoist Circuit - Pilot Pressure



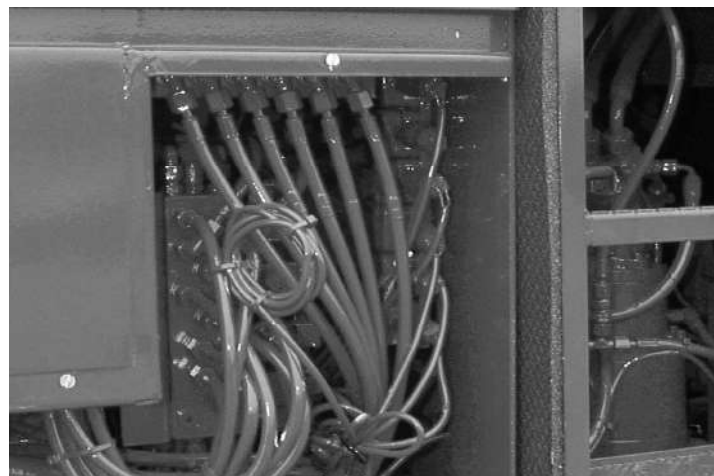


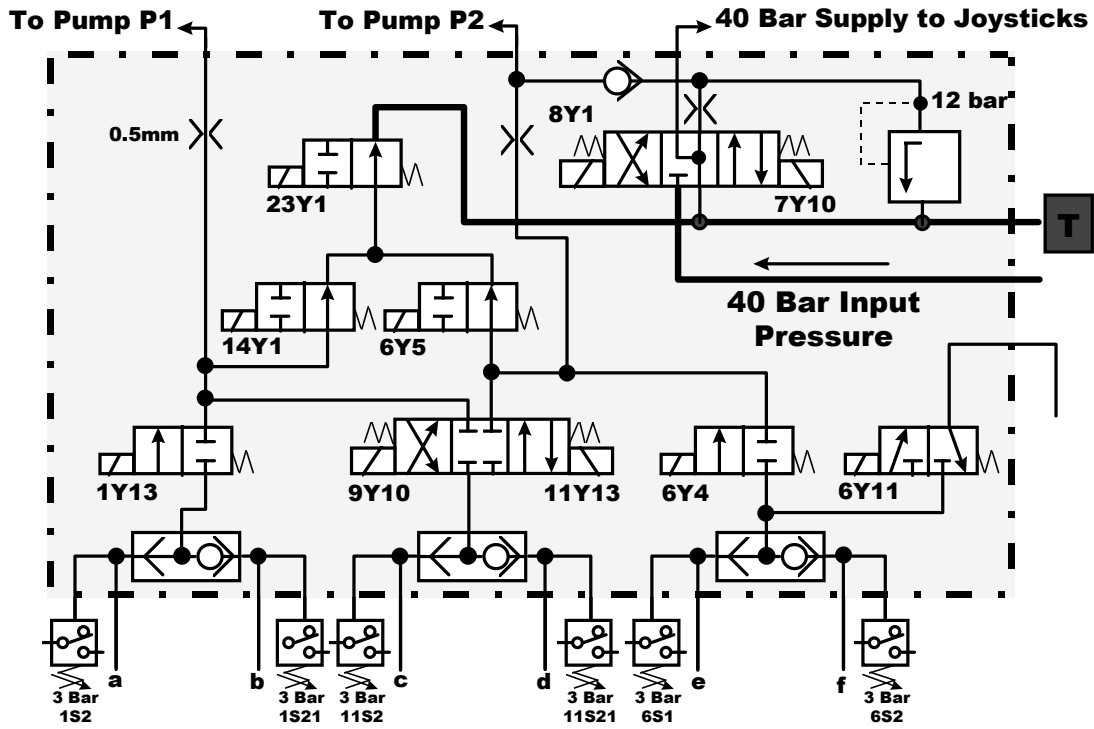


### GMK 5130 Hydraulic Joysticks

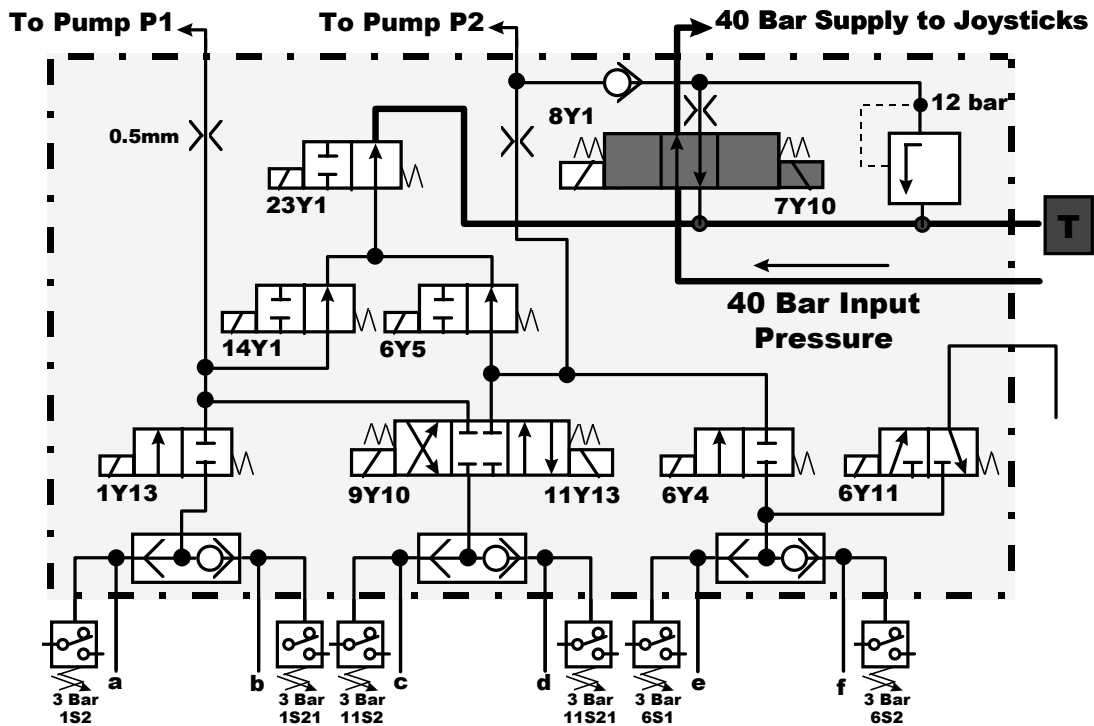


### GMK 5130 Pilot -Monoblock

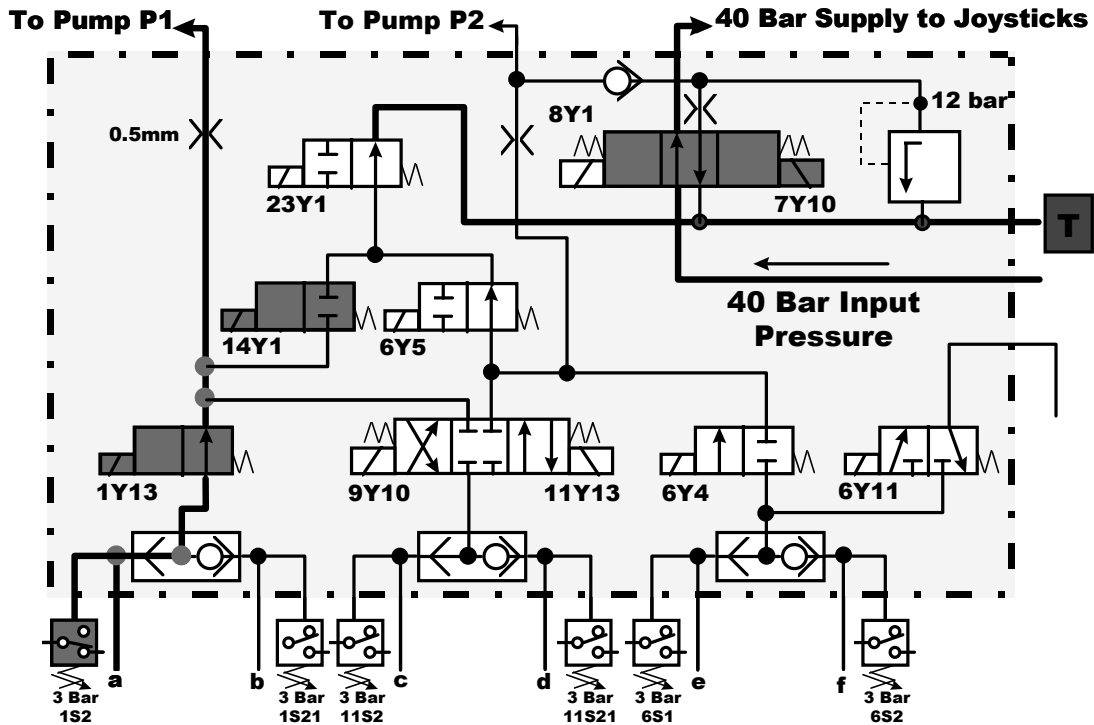




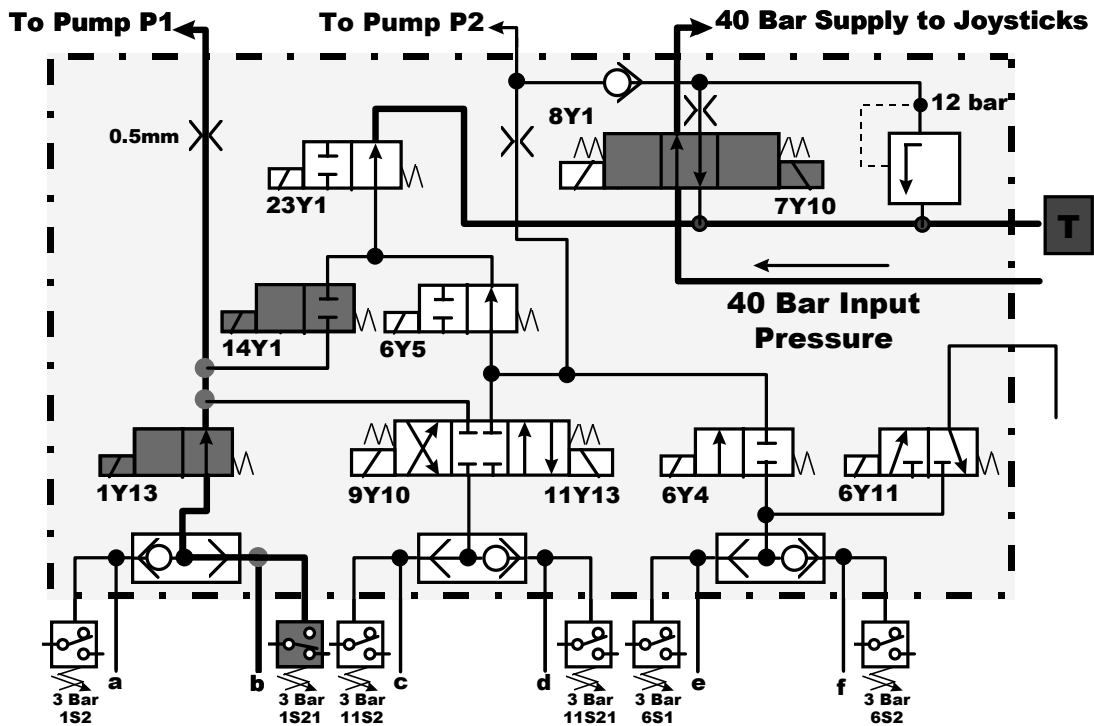
## GMK 5130 Pilot - Monoblock



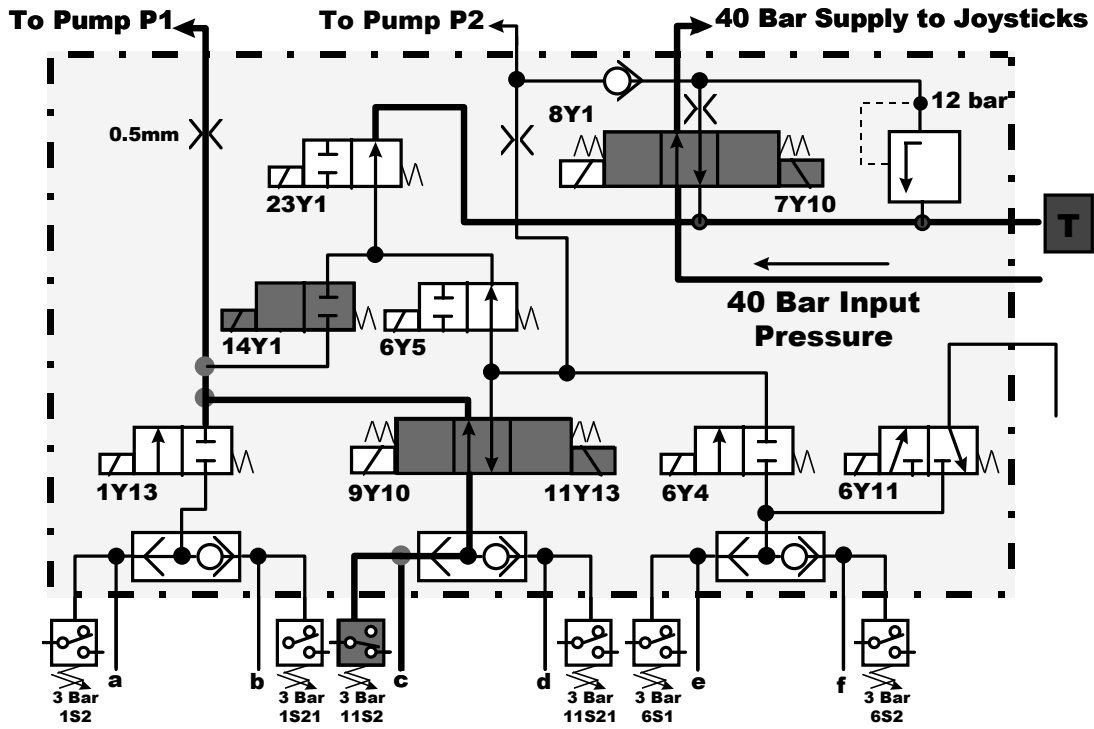
## Seatswitch / Deadman Circuit



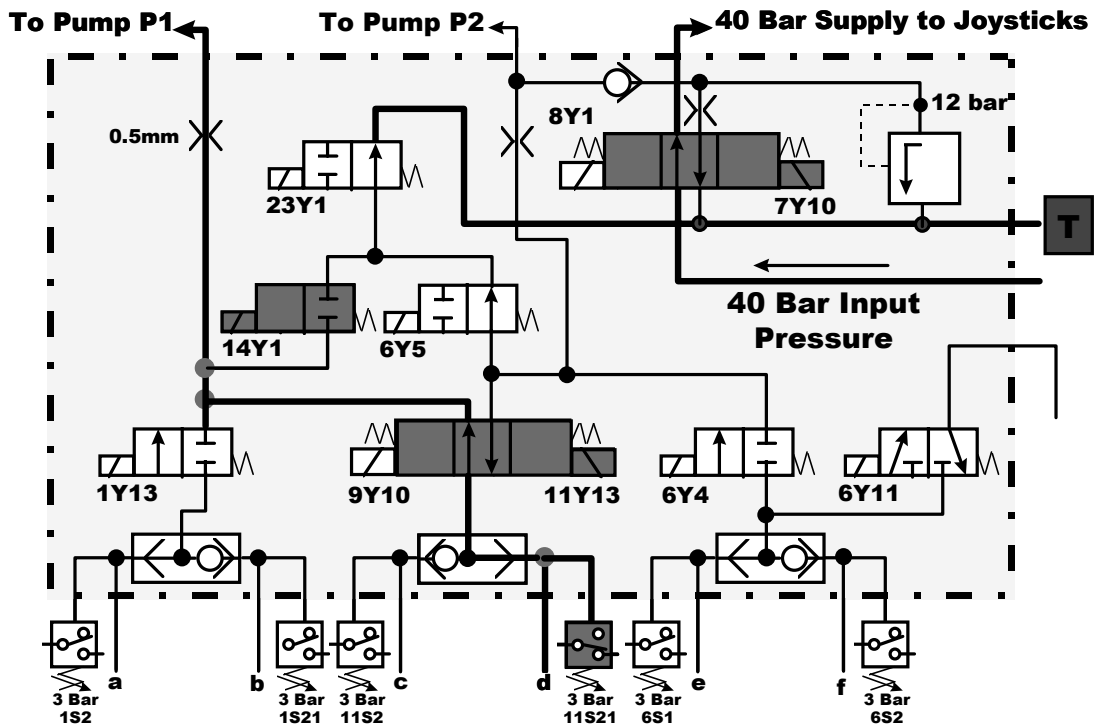
**Main Hoist Raise Circuit**



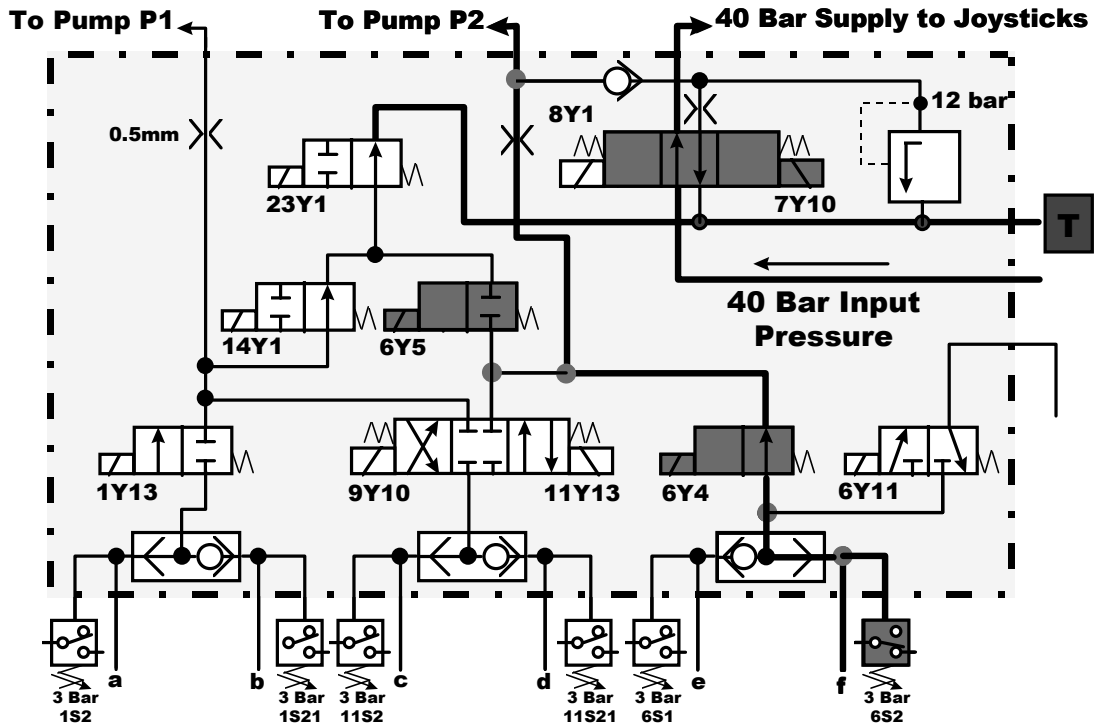
**Main Hoist Lower Circuit**



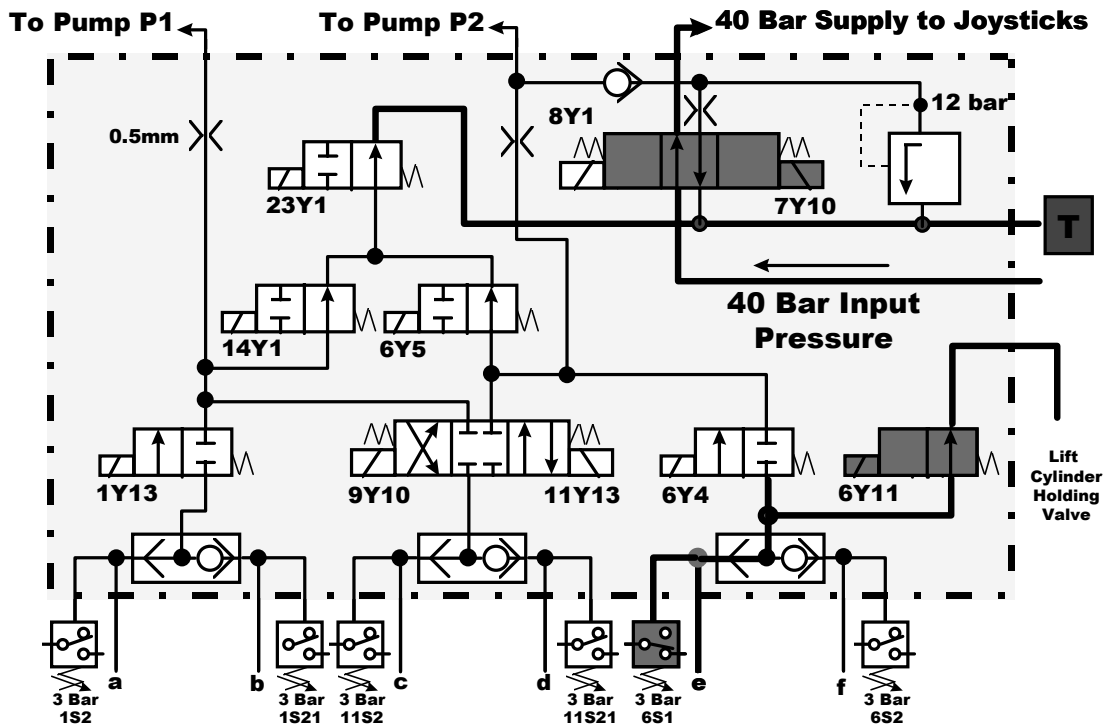
## Auxiliary Hoist Raise Circuit



## Auxiliary Hoist Lower Circuit

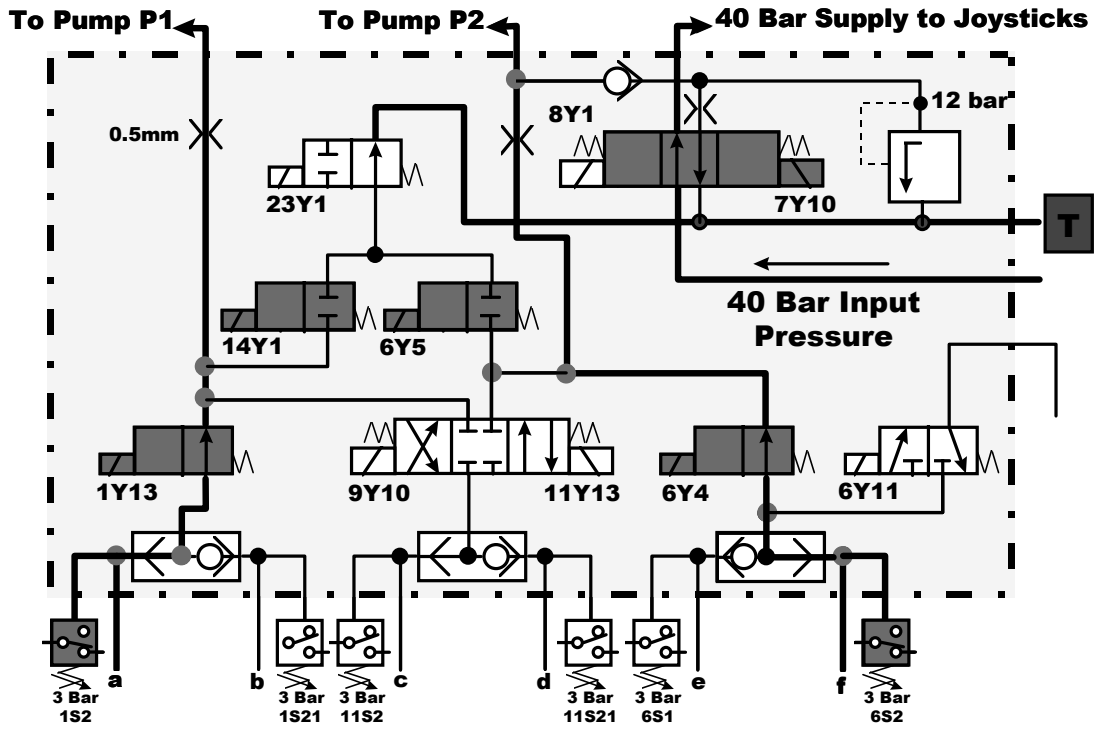


## Lift Up / Tele In Circuit

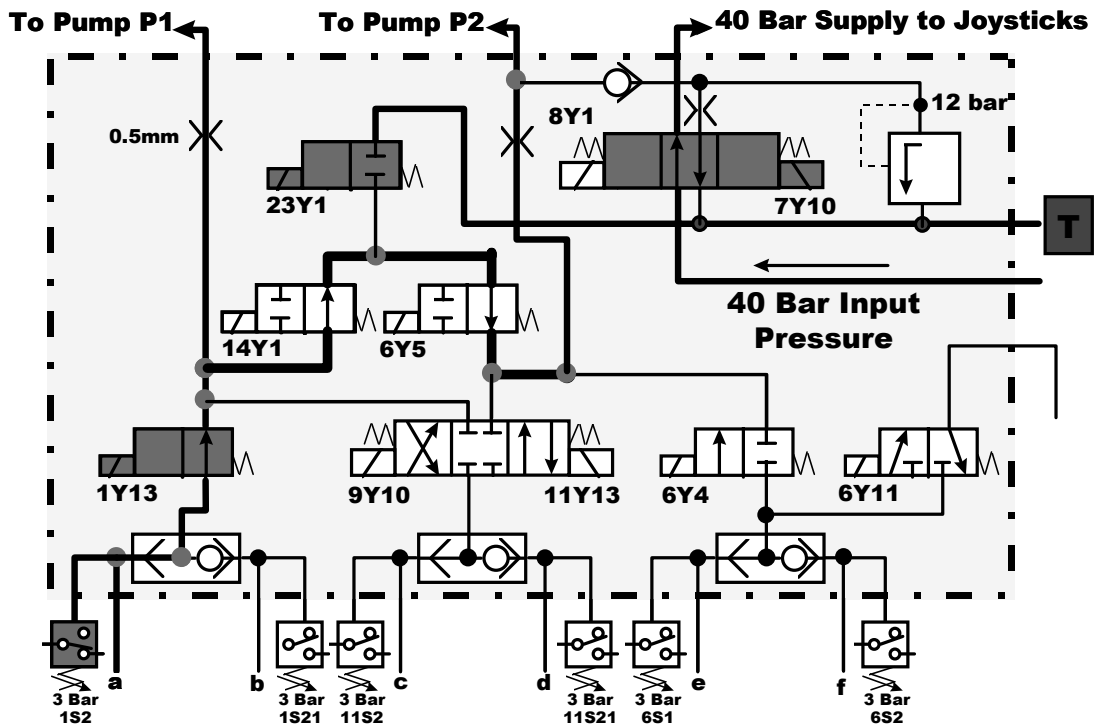


## Lift Down (Boom Down) Circuit

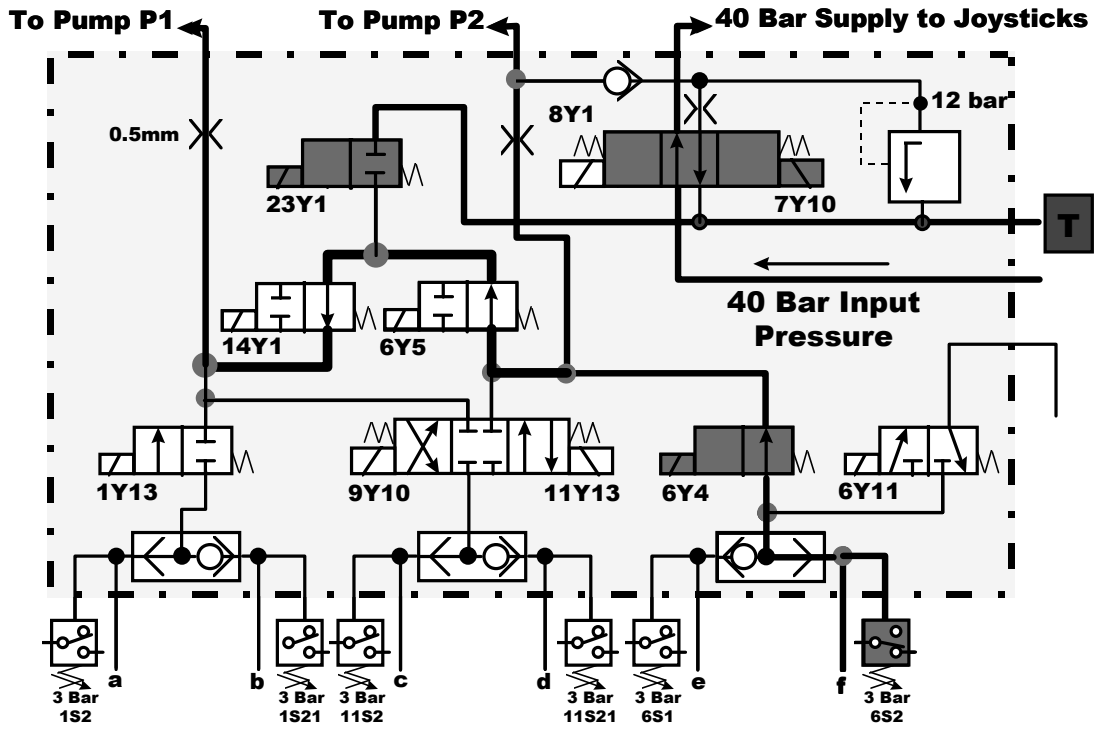




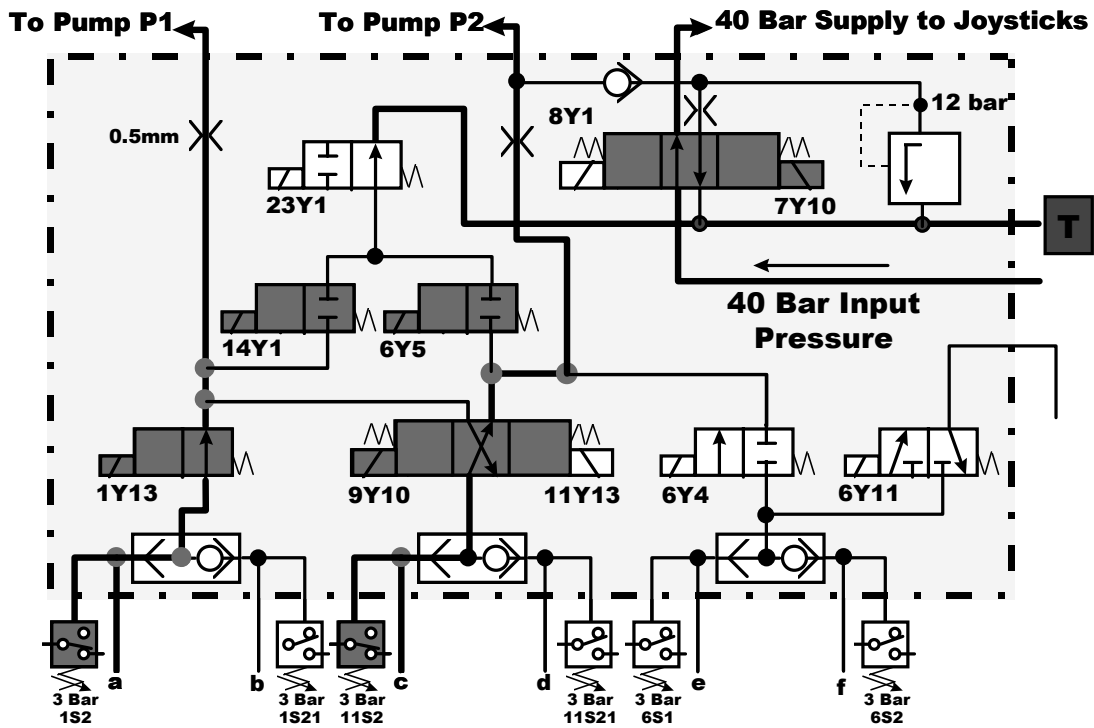
**Lift Up & Main Hoist Up Circuit**



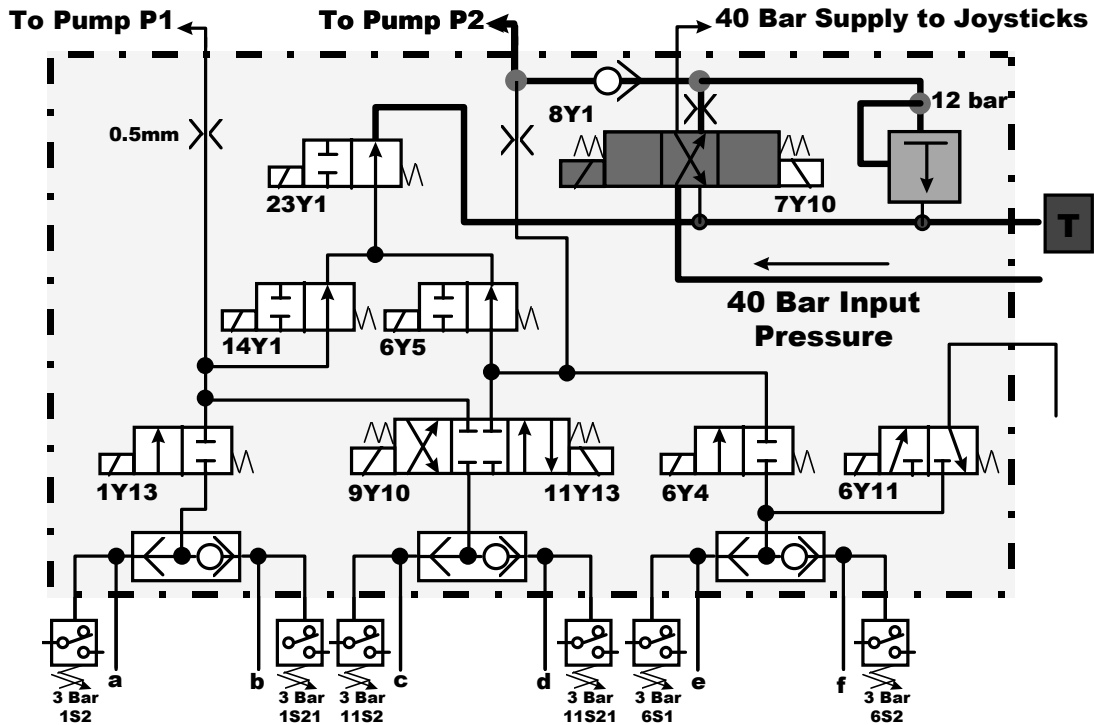
**Main Hoist Raise Hi-Speed Circuit**



## Lift Up Hi-Speed Circuit



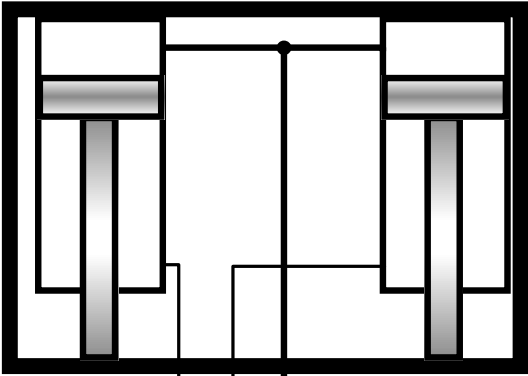
## Two Hook Operation - Main & Aux



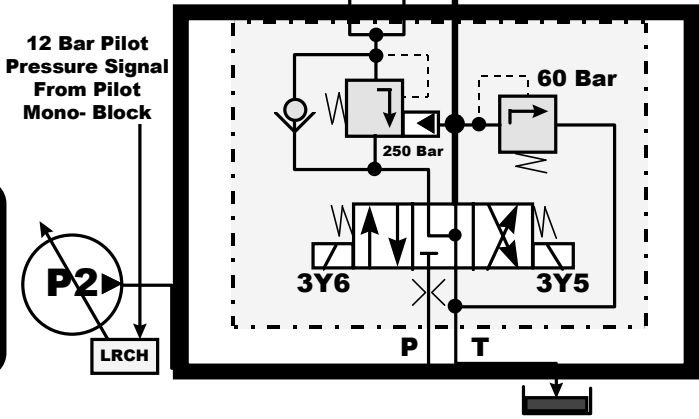
## Counterweight Circuit

### GMK 5130 Counterweight Circuit

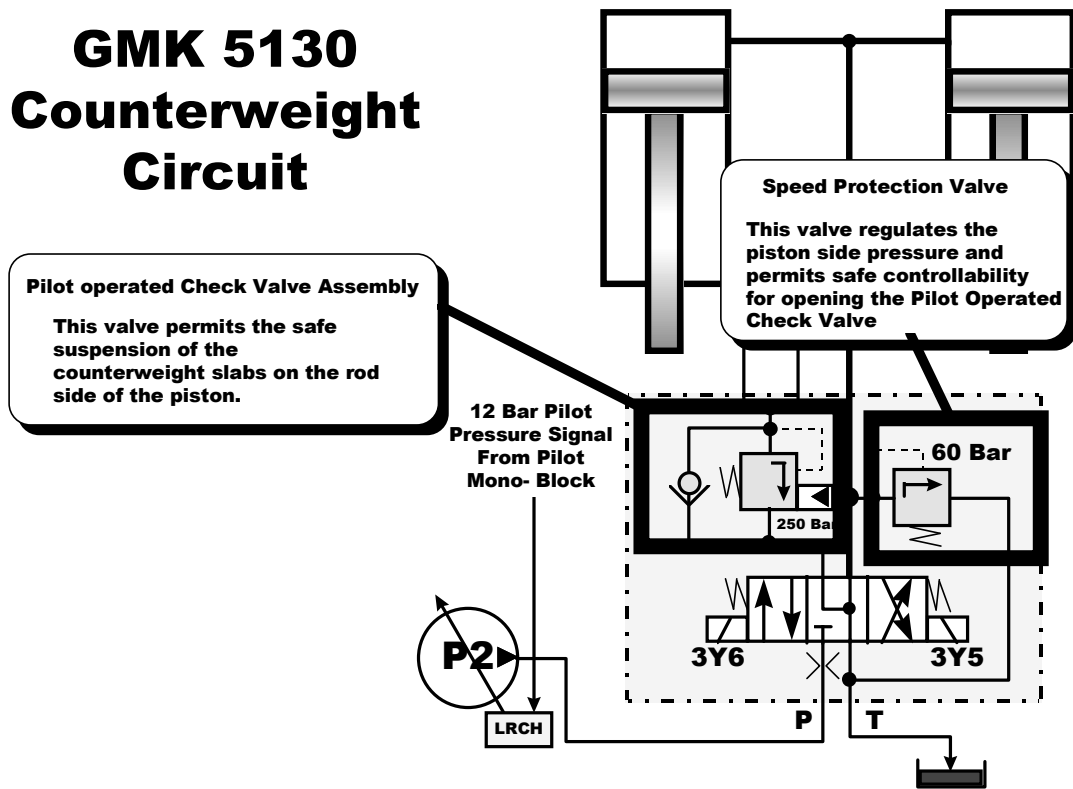
**Counterweight Hoisting Cylinders**  
 These cylinders suspend the counterweight slabs permitting manual pinning.



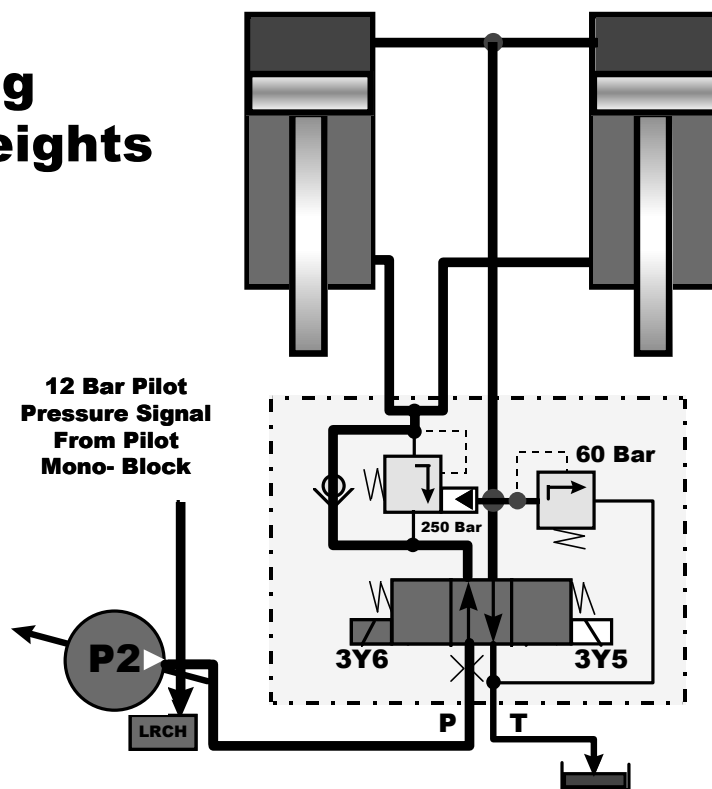
**Counterweight Directional Valve and Pilot operated Check Valve Assembly**  
 Houses the Directional Valve and Pilot Operated Check Valve. Located just above the Pilot Mono-Block



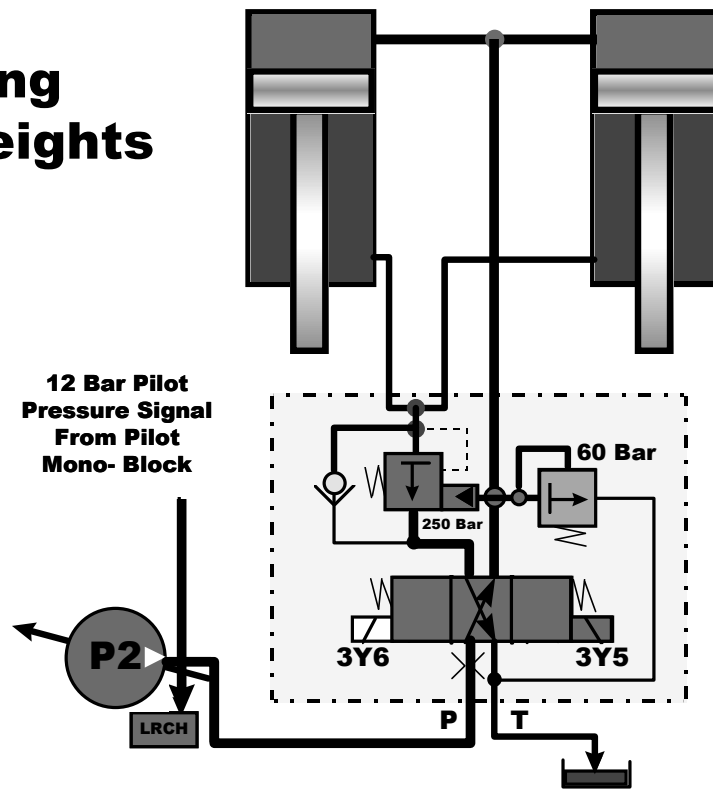
# GMK 5130 Counterweight Circuit



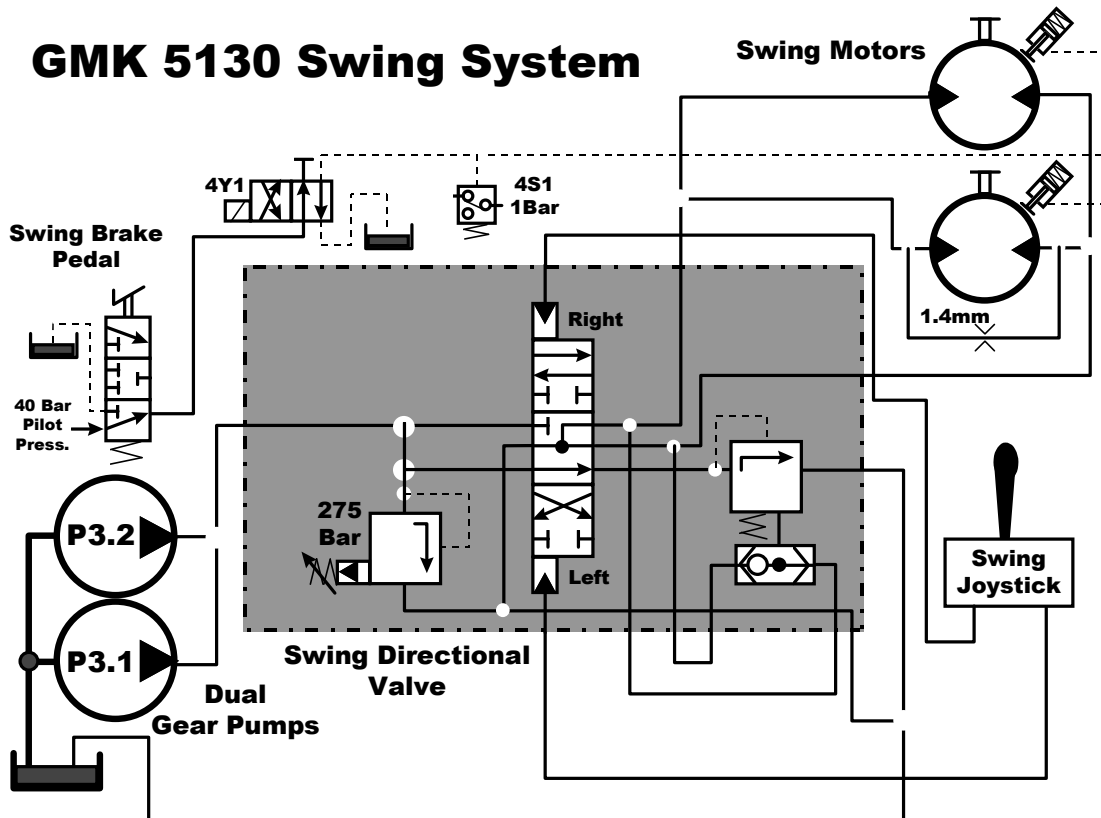
# Raising Counterweights



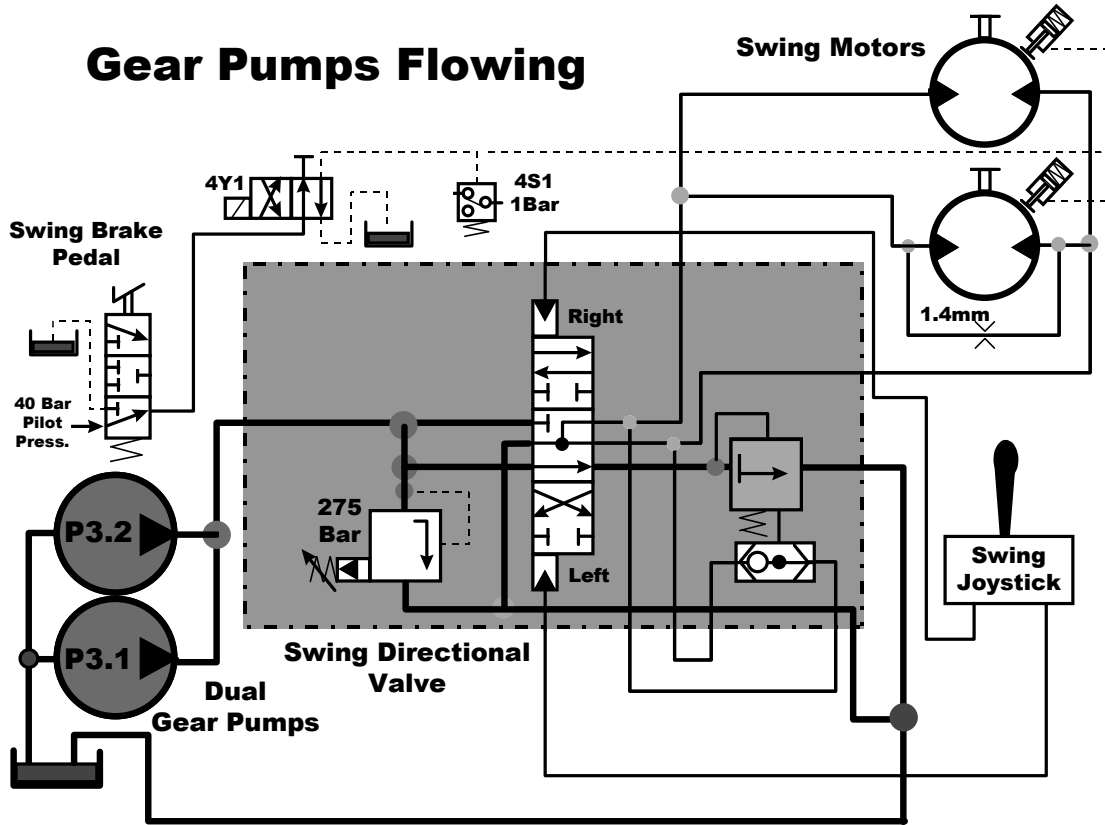
# Lowering Counterweights



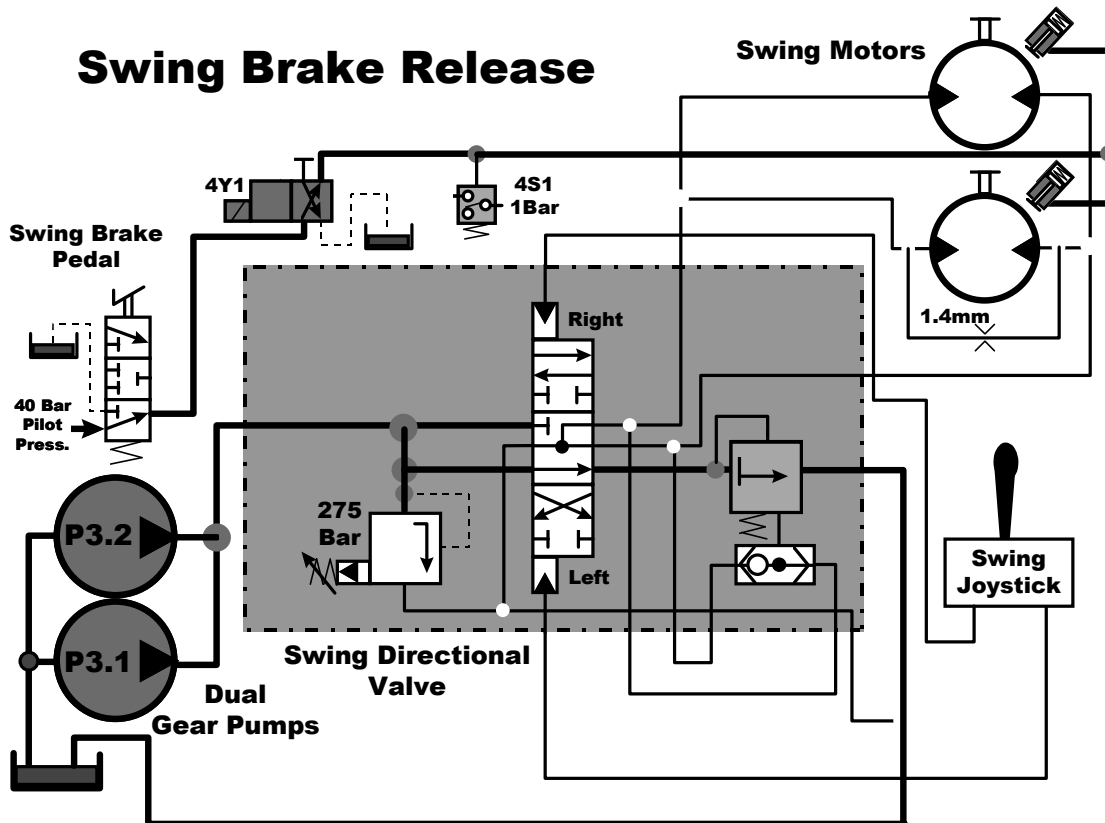
# GMK 5130 Swing System

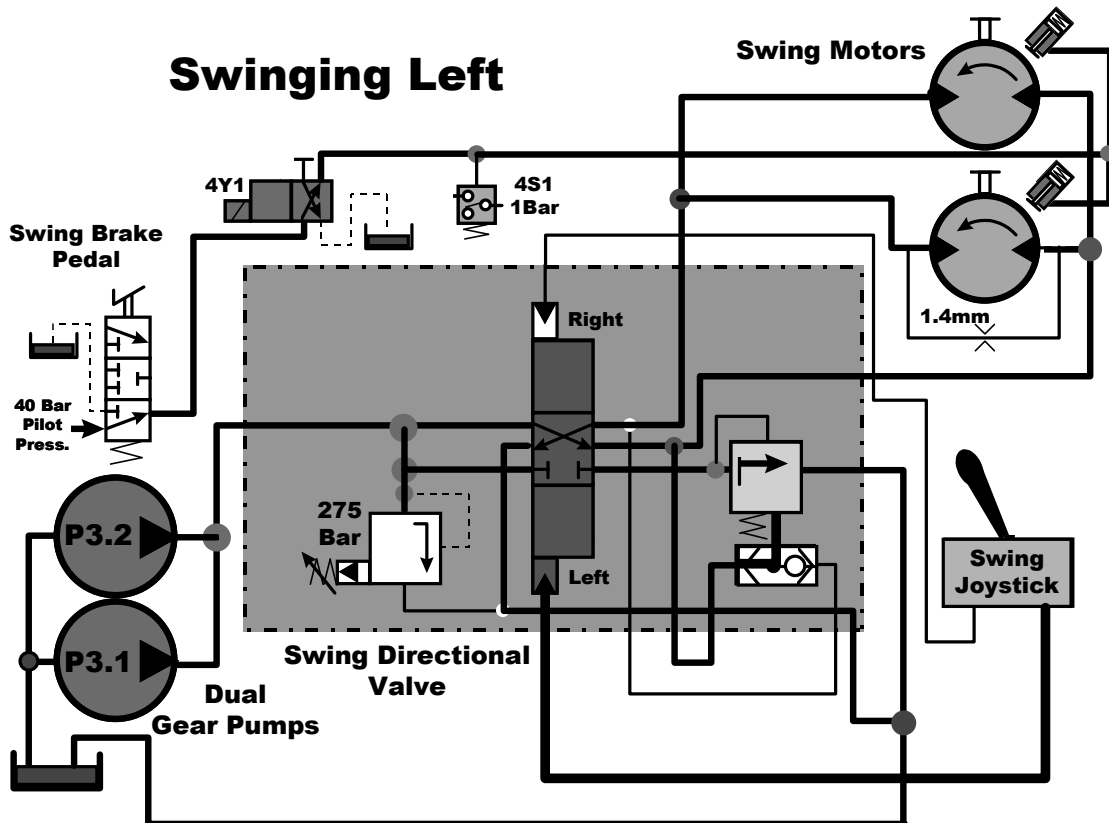
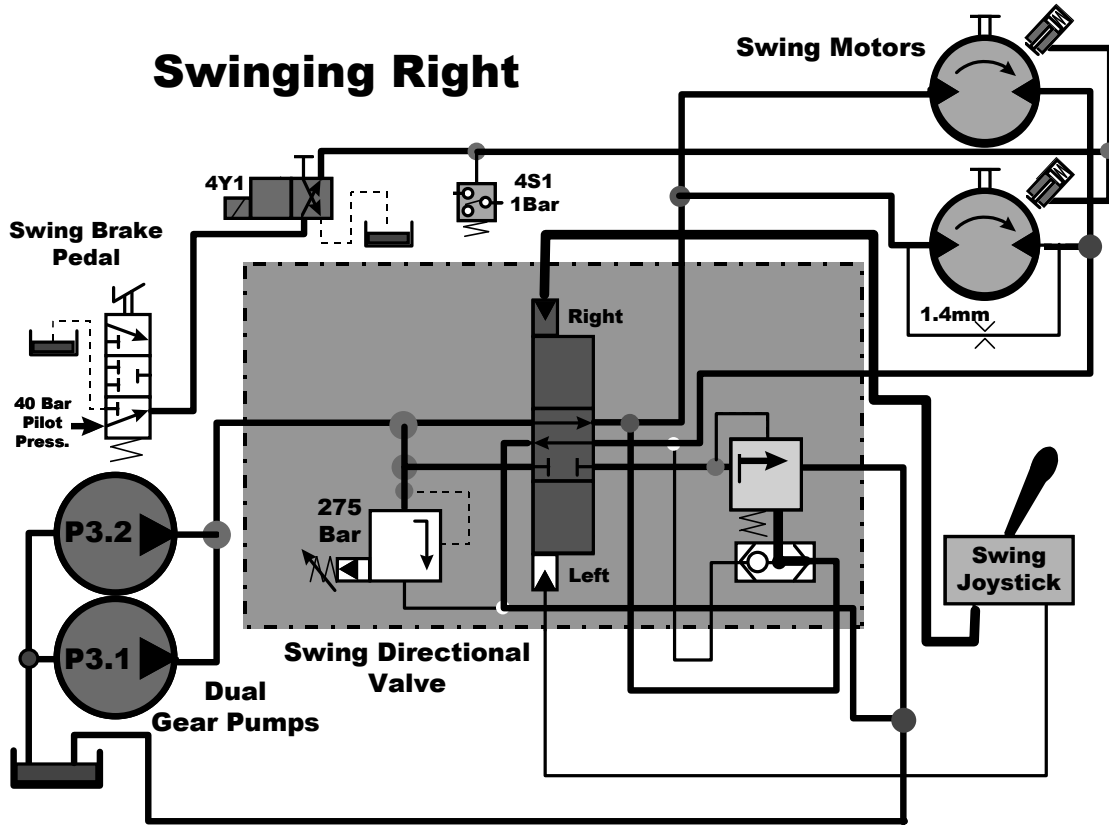


### Gear Pumps Flowing



### Swing Brake Release









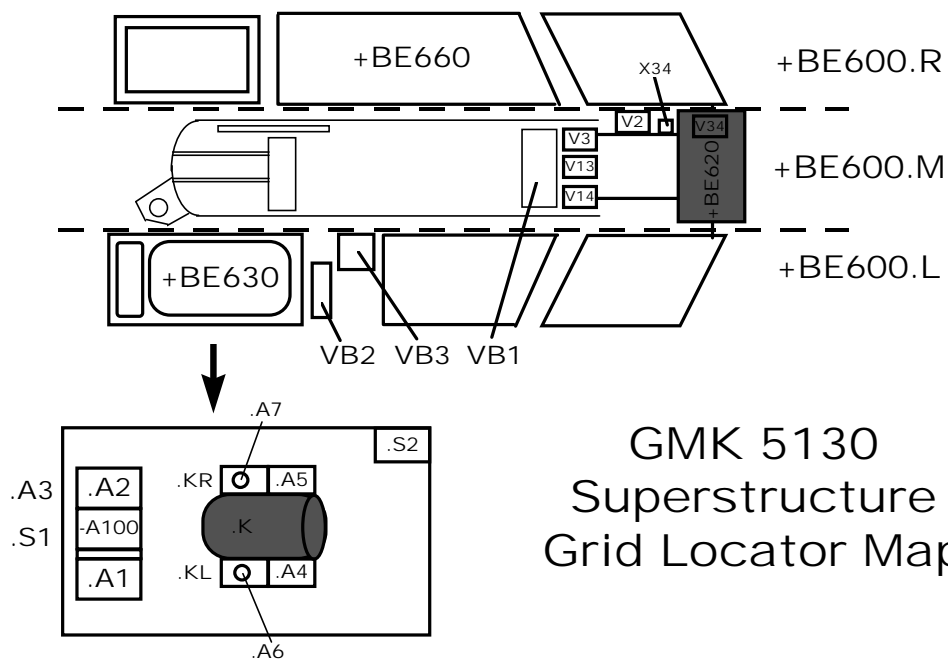
# *Section 10*



# GMK I

## *Superstructure Electric*

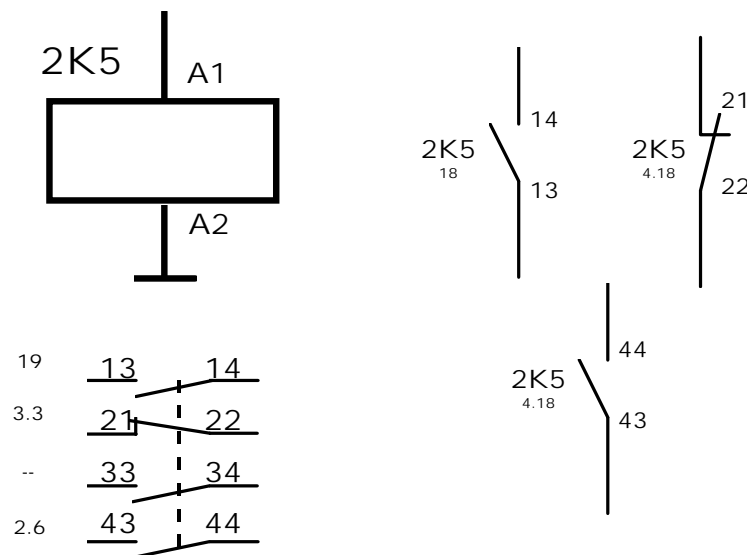




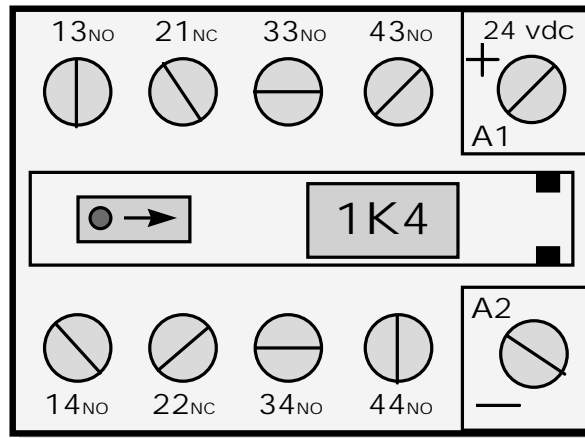
GMK 5130  
Superstructure  
Grid Locator Map

# GMK S/S Electrical Relay Prefix Guide

Prefix 0 =	Pump Control	0K9
Prefix 1 =	Main Hoist	1K2
Prefix 2 =	Aux. Hoist	2K4
Prefix 3 =	Tele/Lift	3K1
Prefix 4 =	Swing	4K5



Locating the Remote  
Relay Contacts

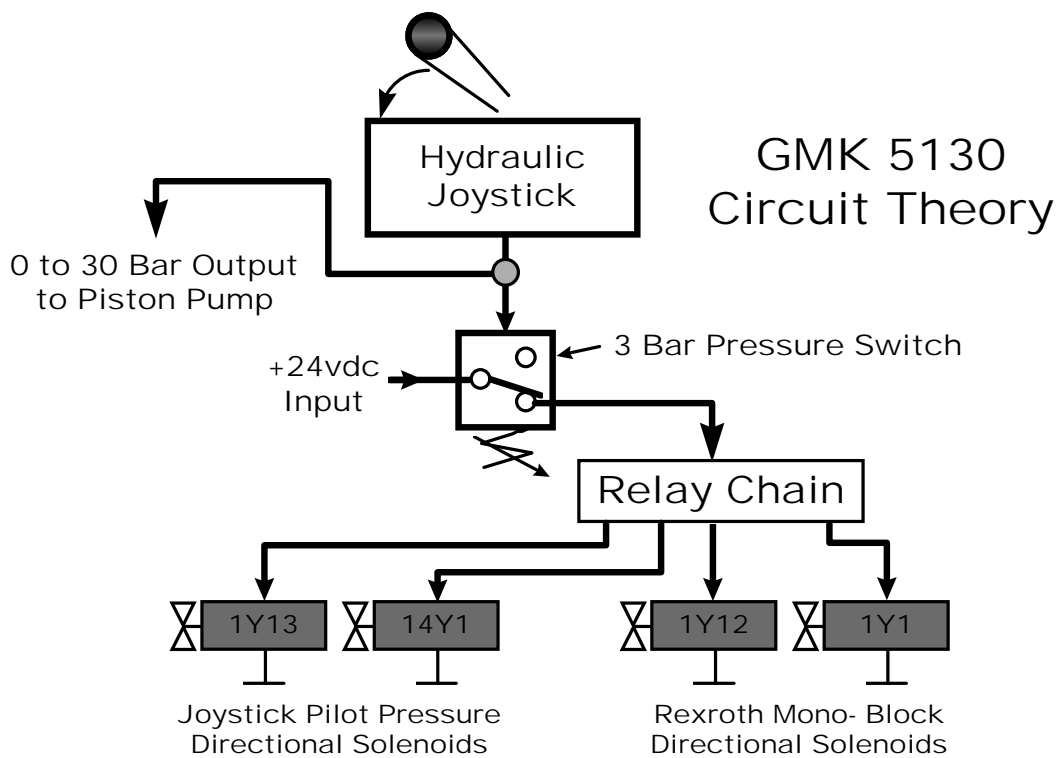
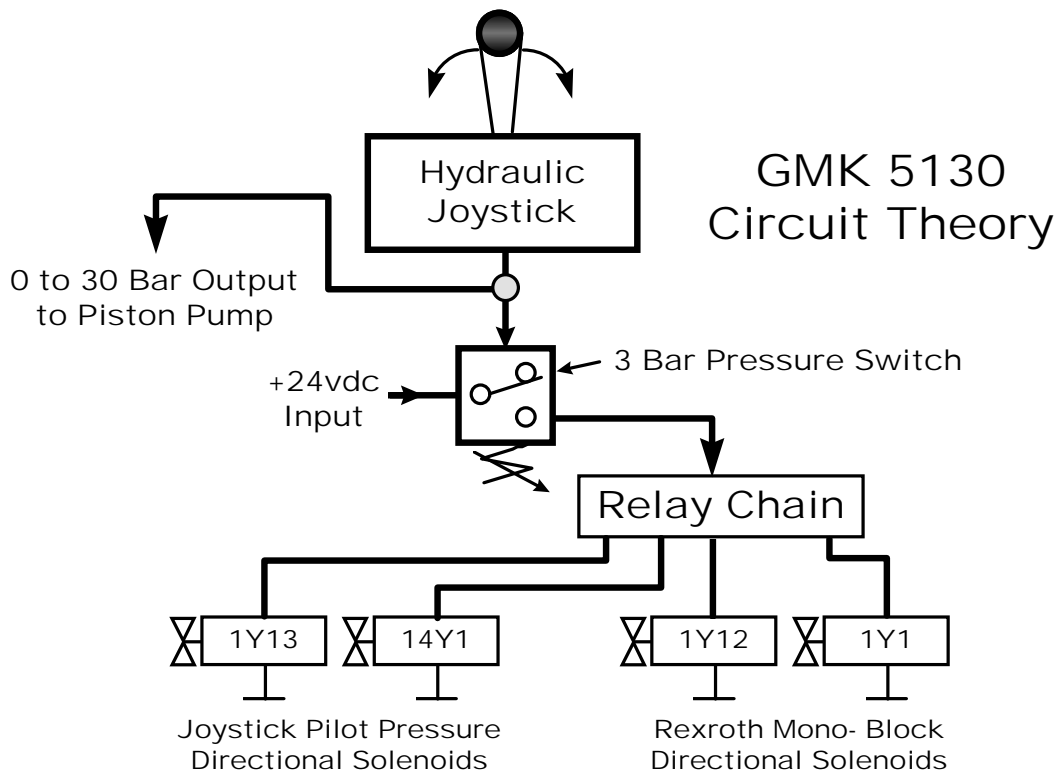


## Siemens Multi - Contact Relay

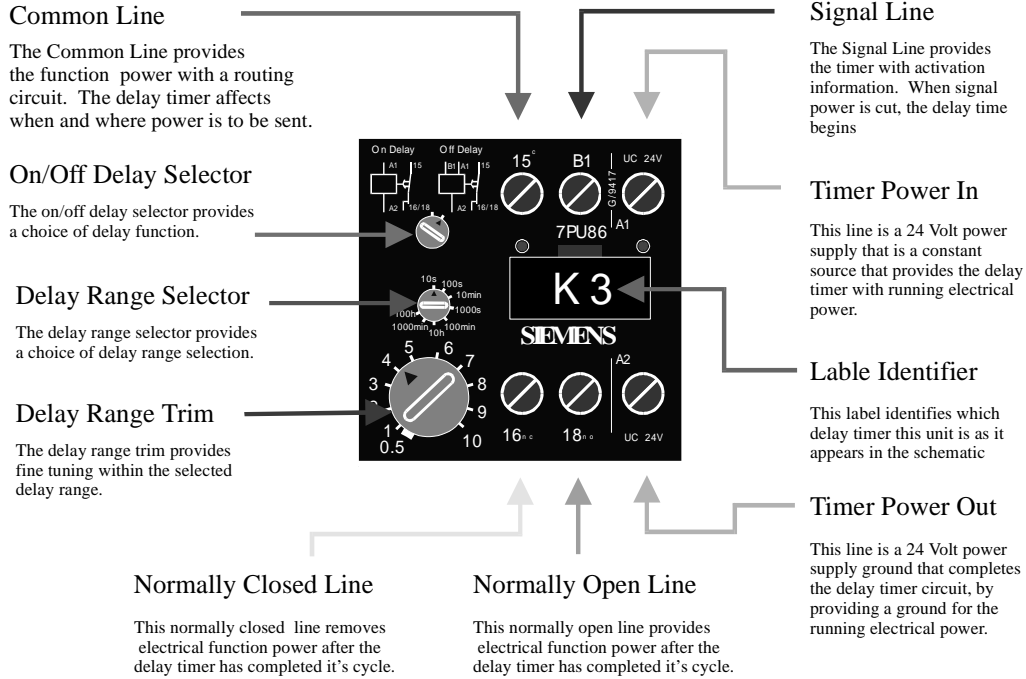


## S/S Access Door Relays

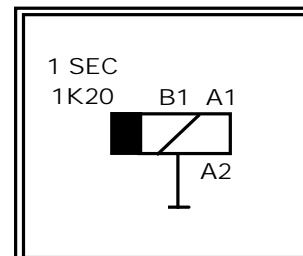
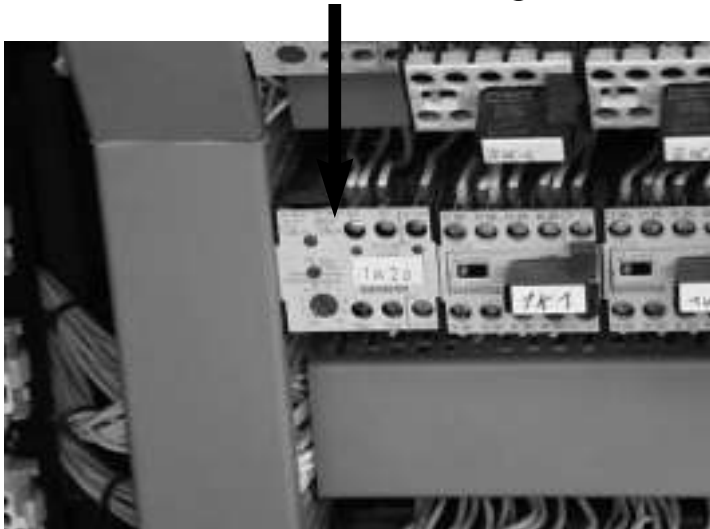


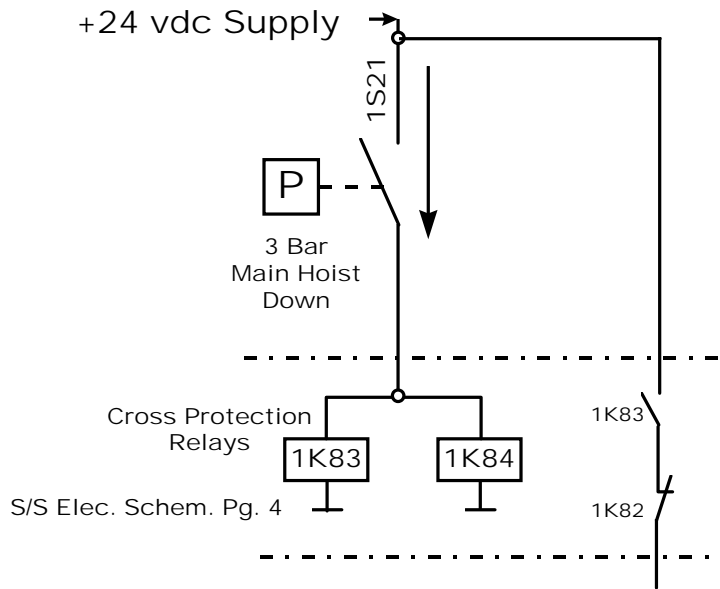


# TIME DELAY RELAY

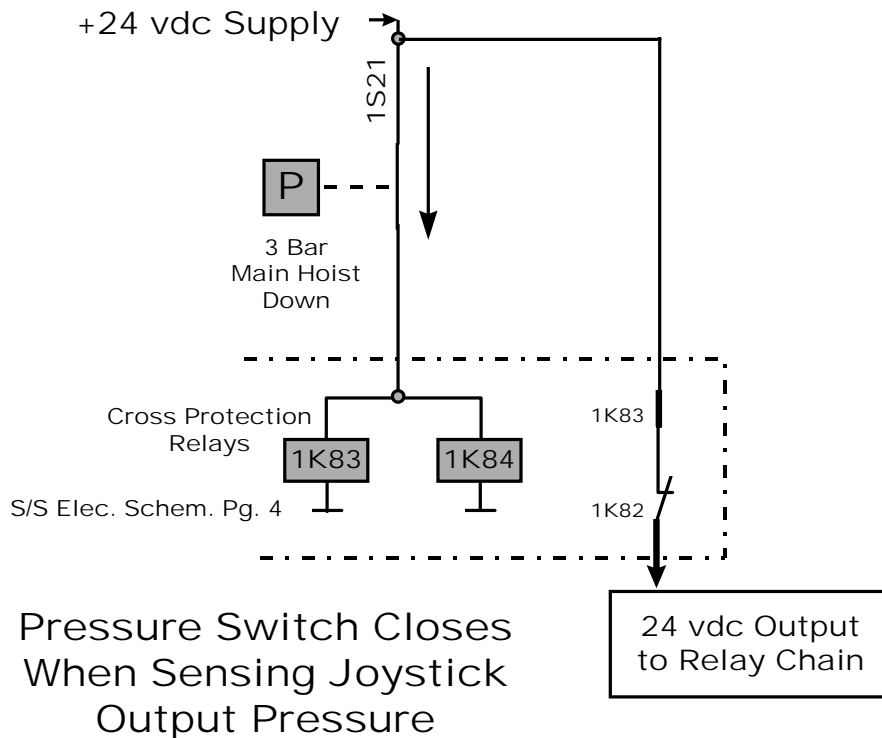


## Timer Relay



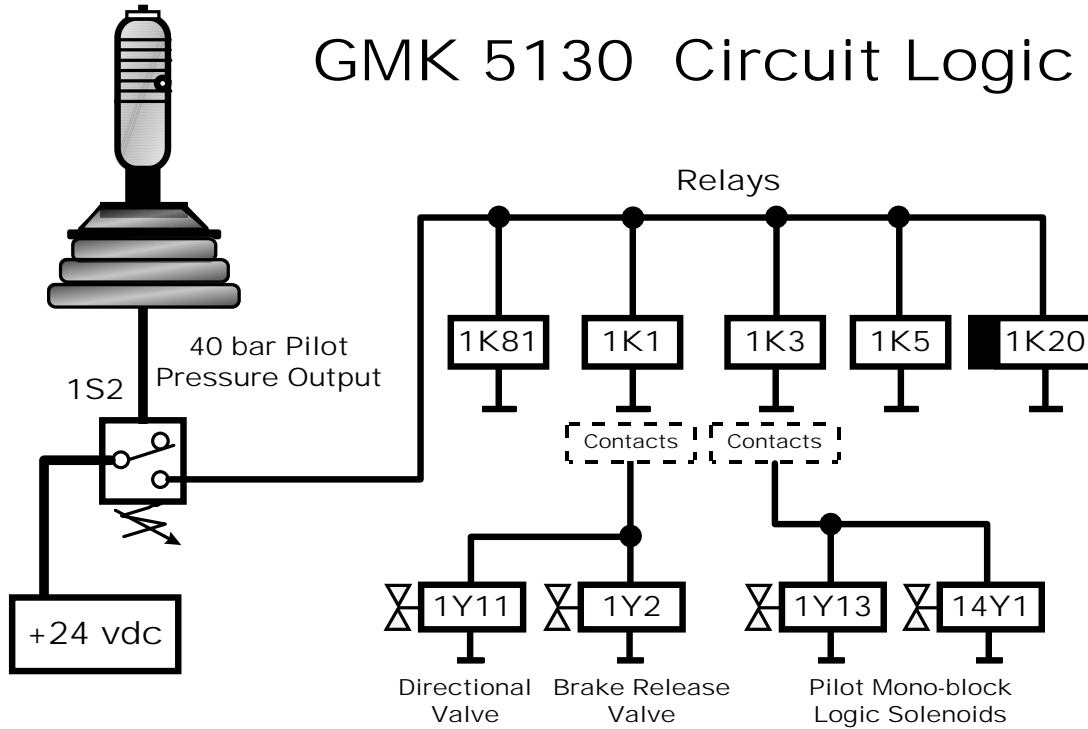


All Craning Functions Begin at the 3 Bar Pressure Switch



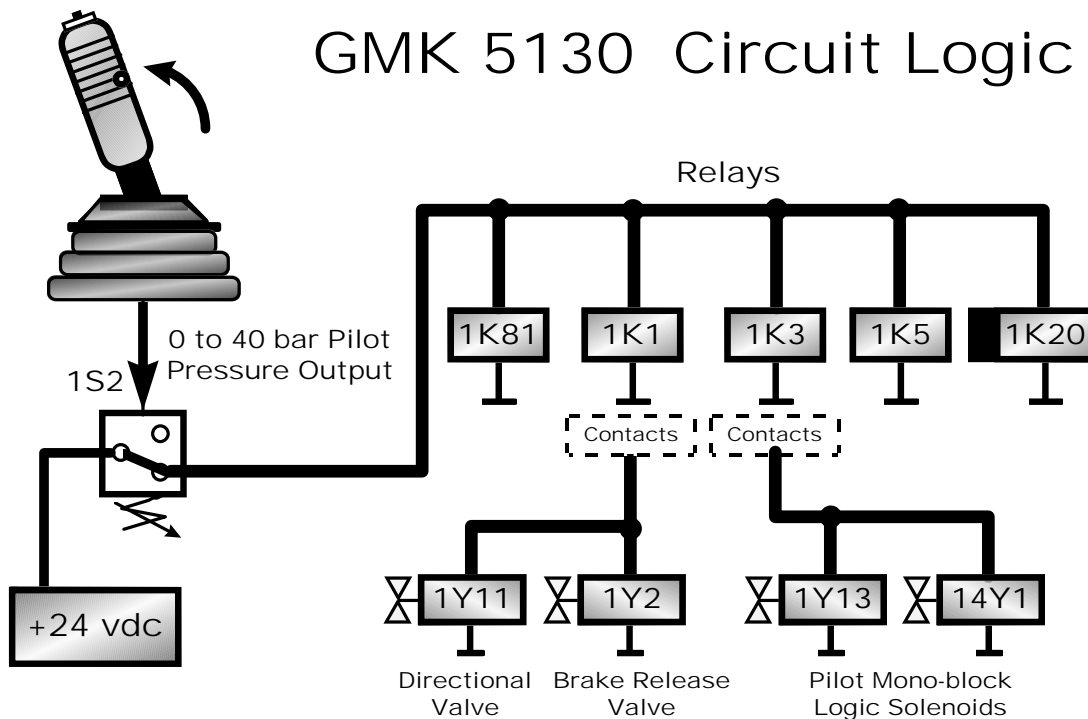


# GMK 5130 Circuit Logic

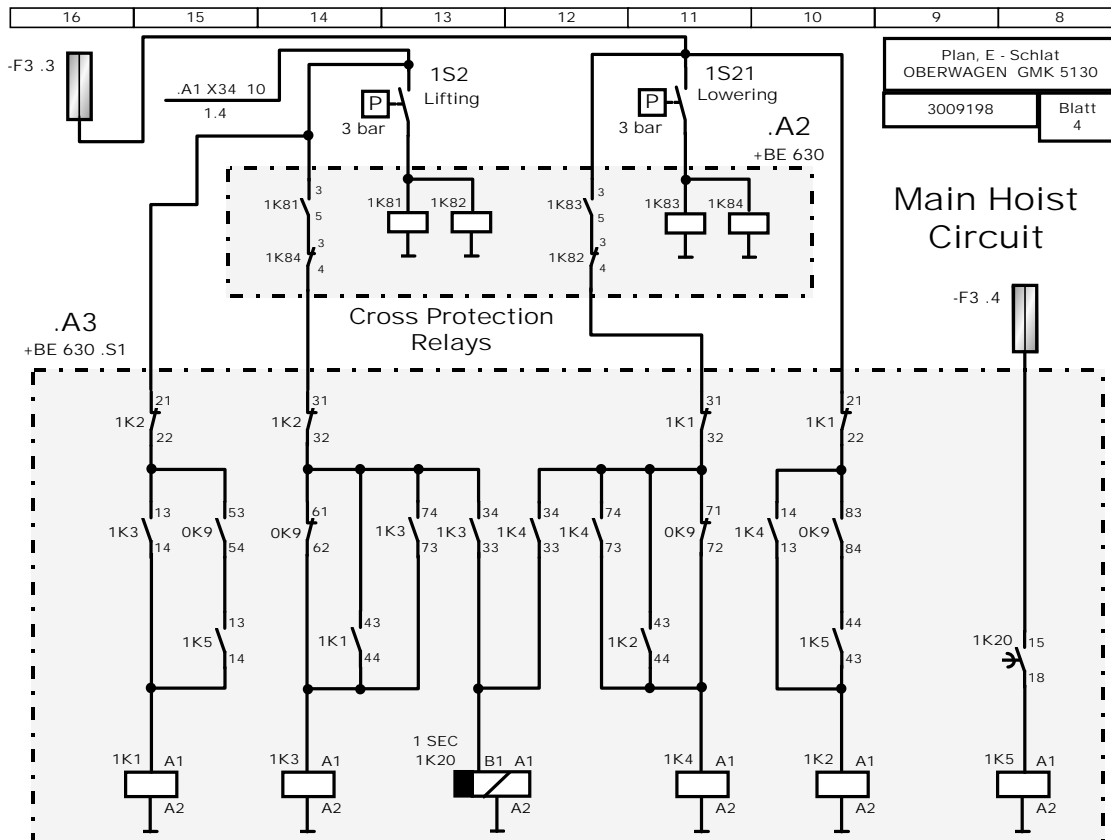
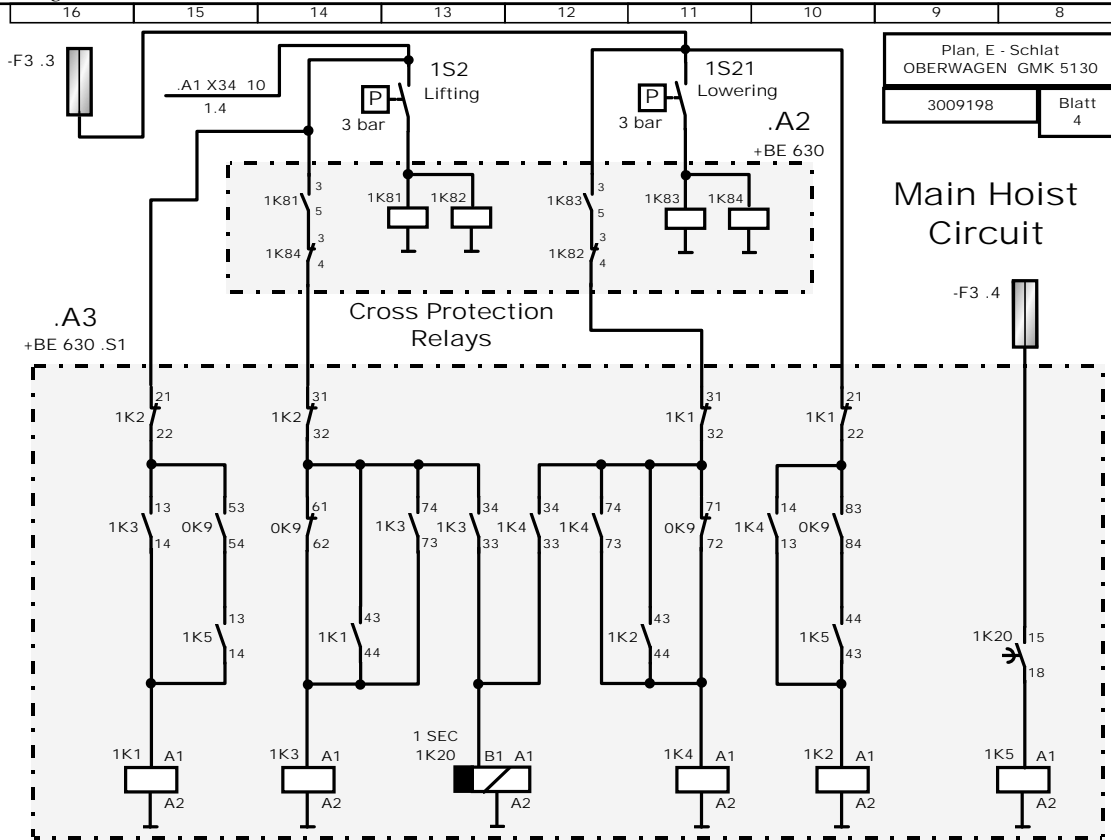


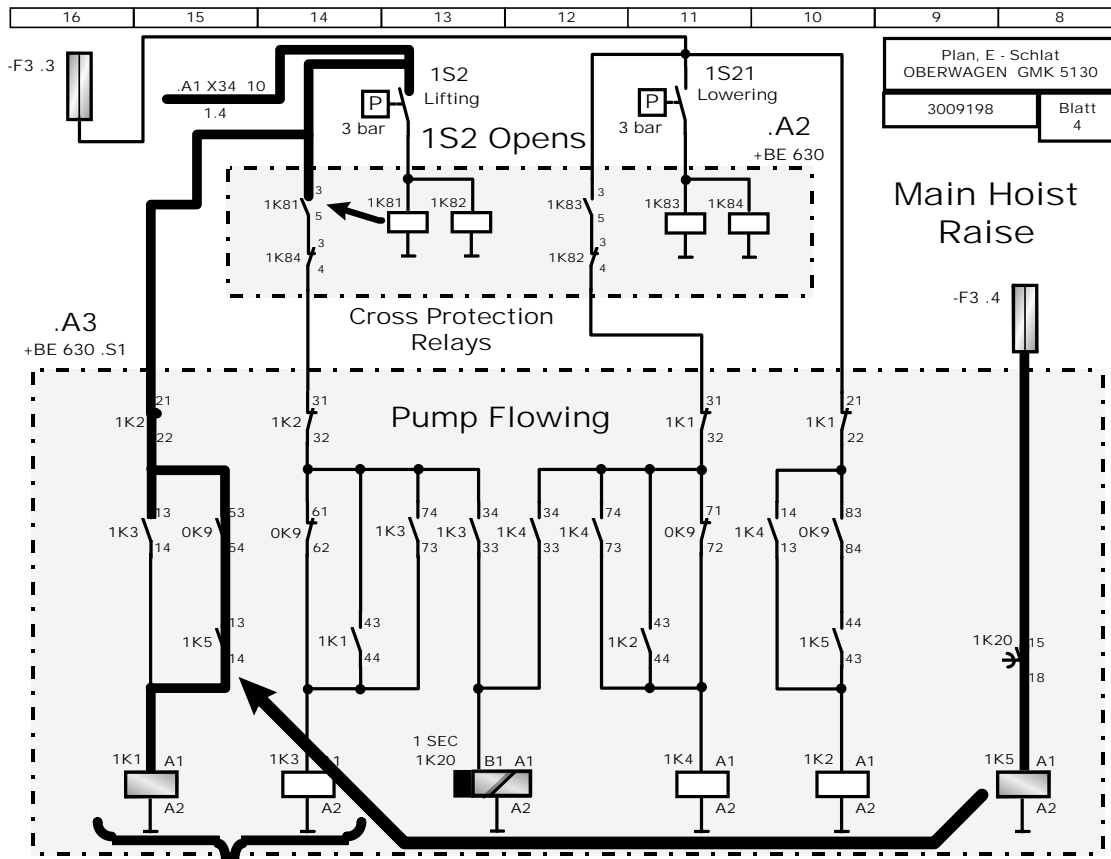
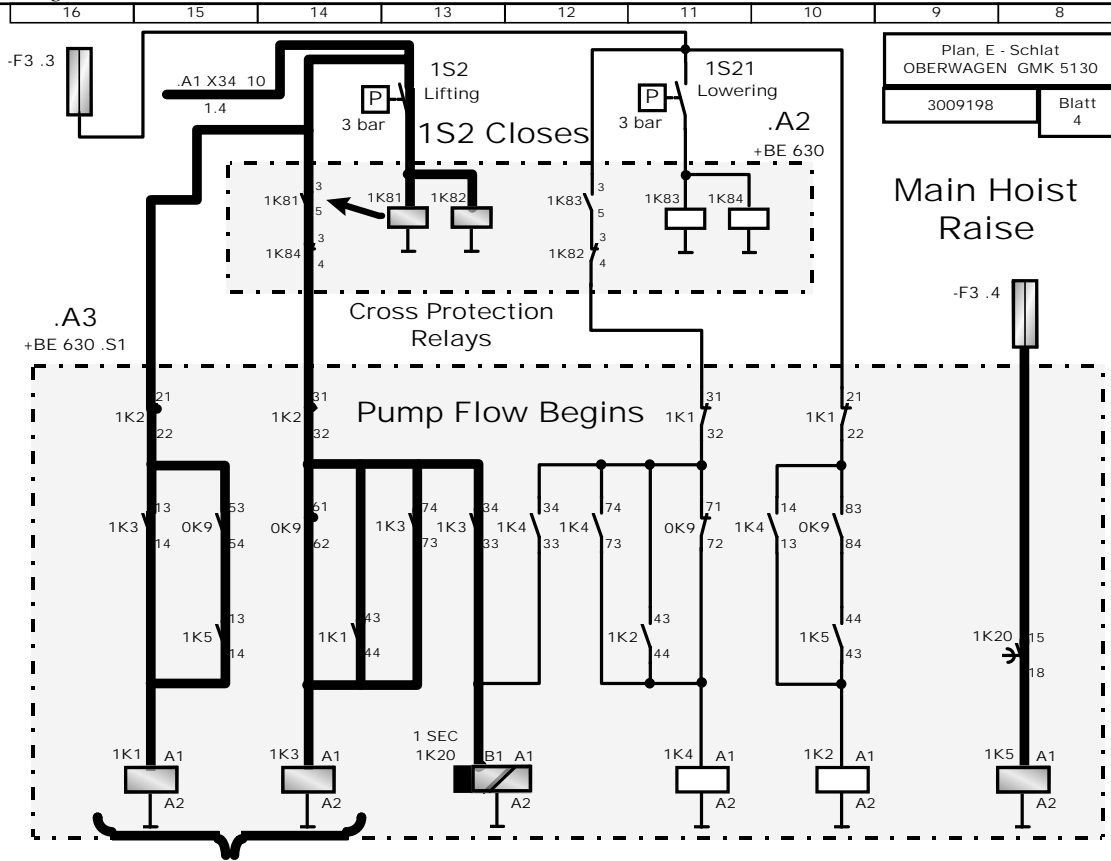
## Main Hoist Raise

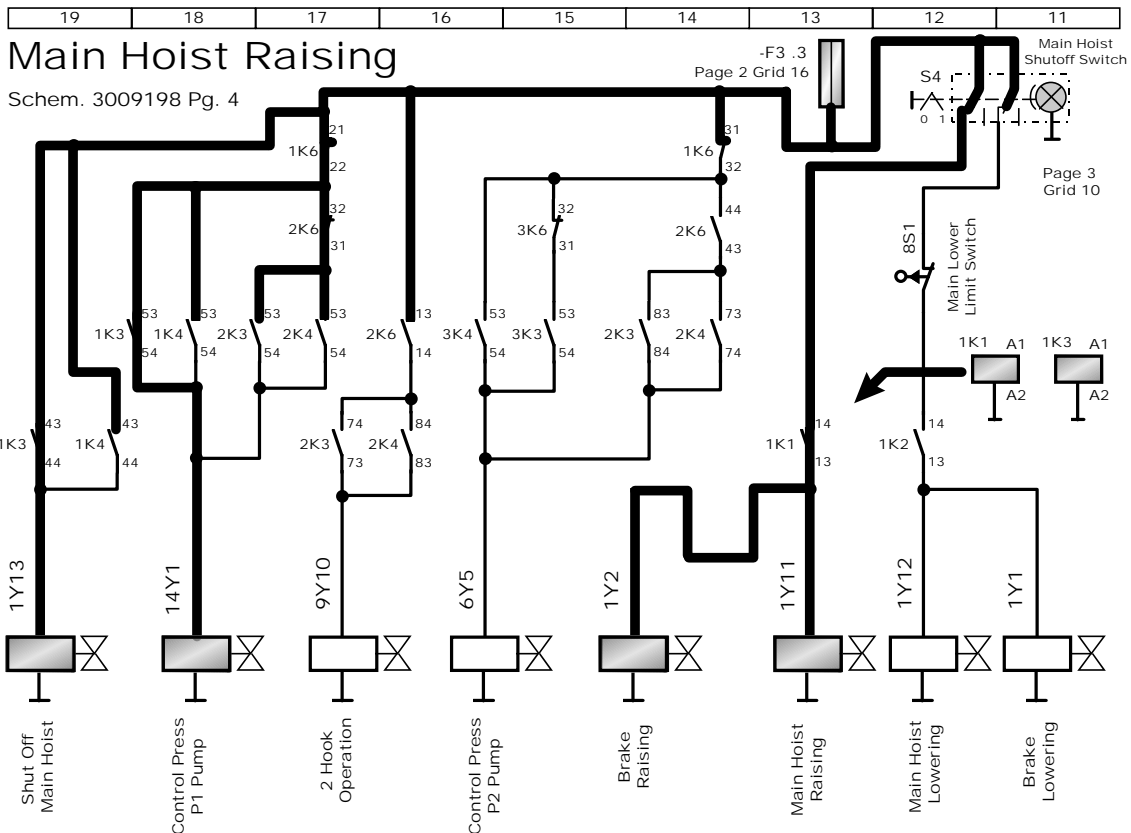
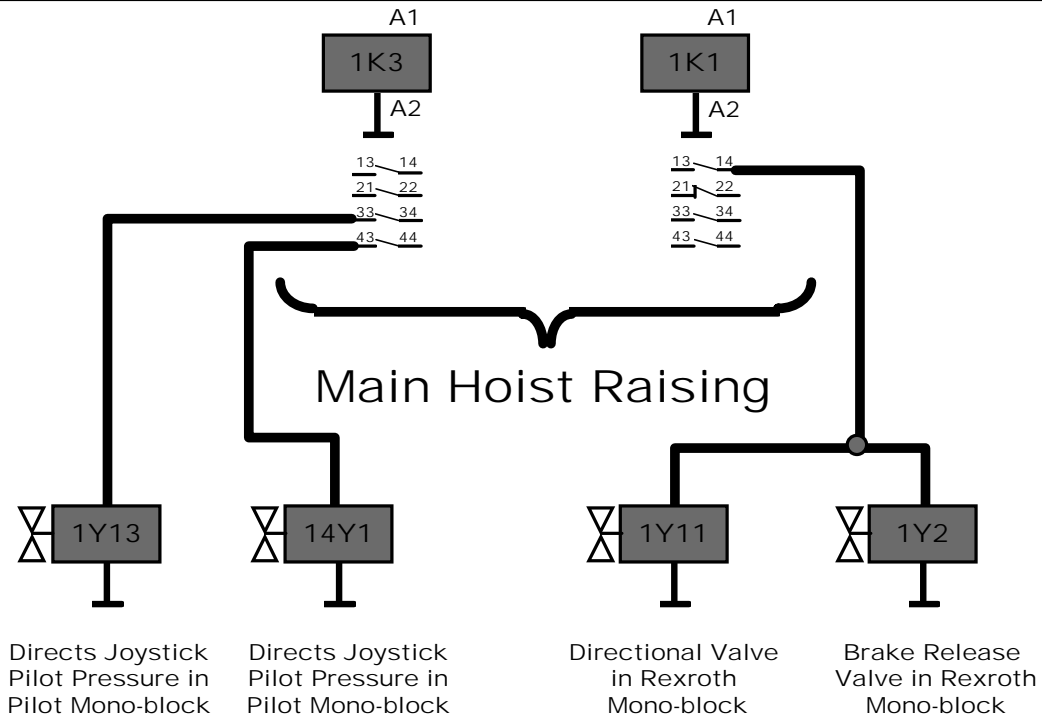
# GMK 5130 Circuit Logic



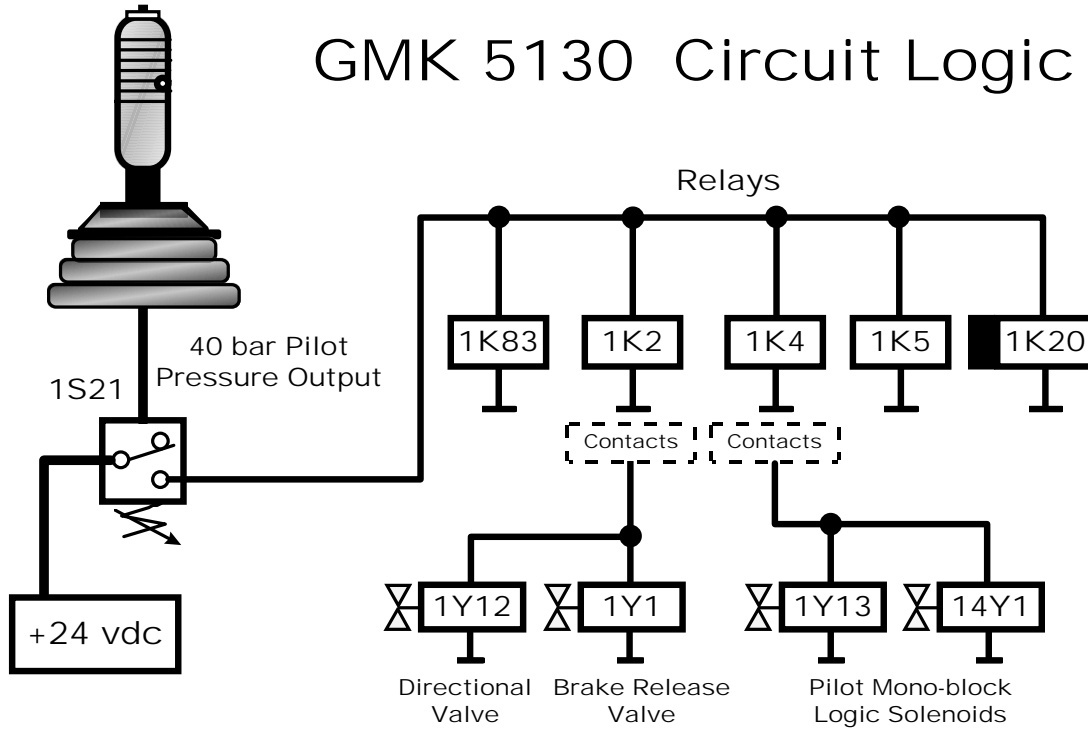
## Main Hoist Raise



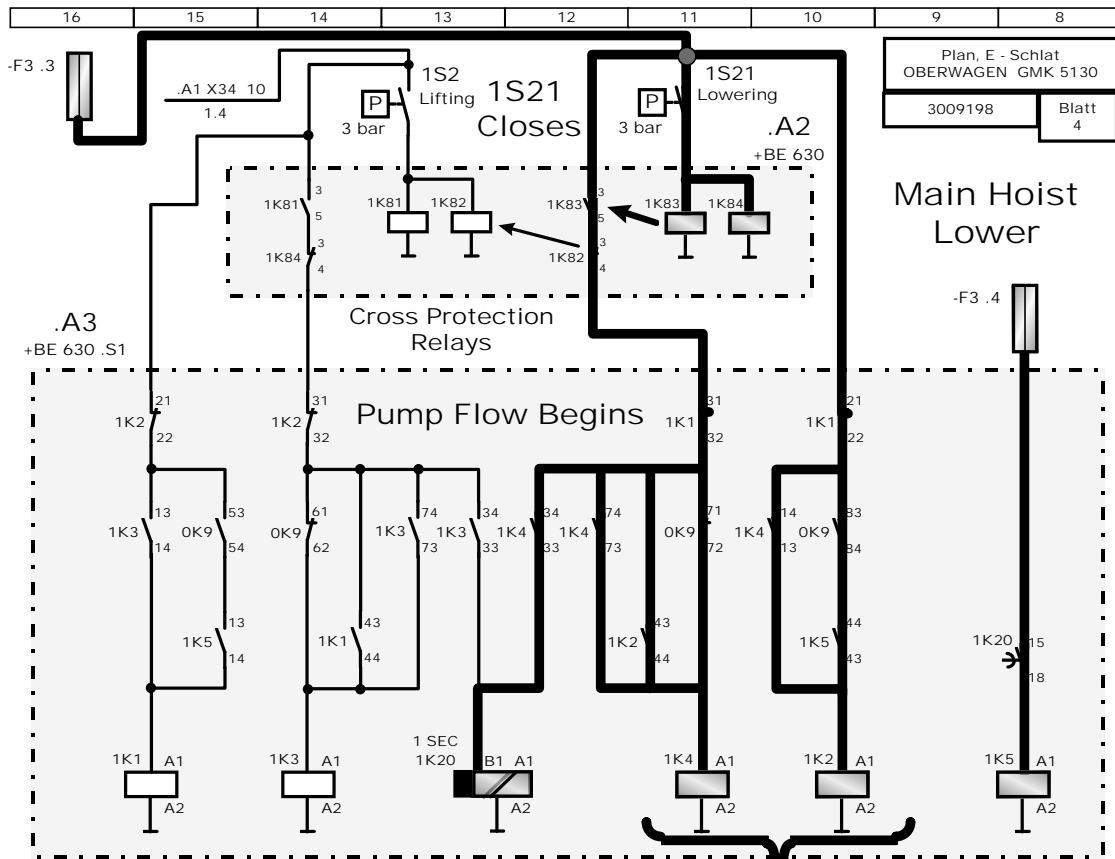


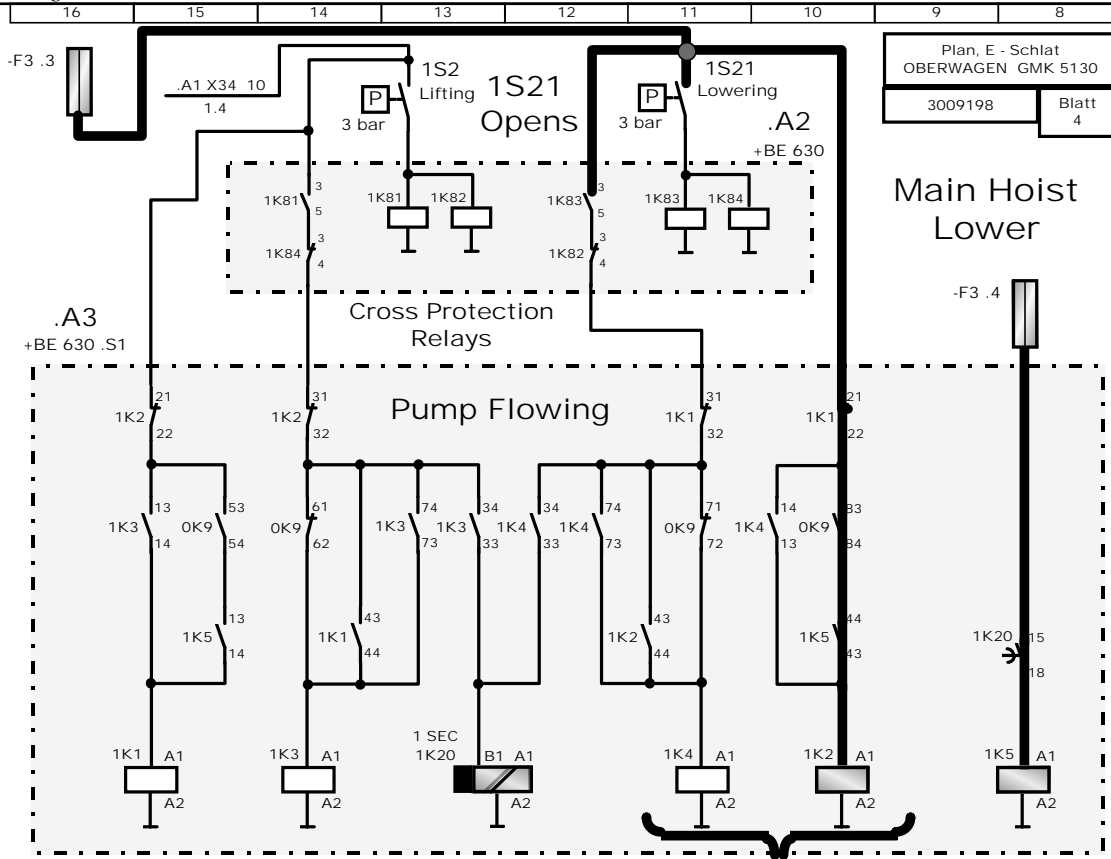


# GMK 5130 Circuit Logic

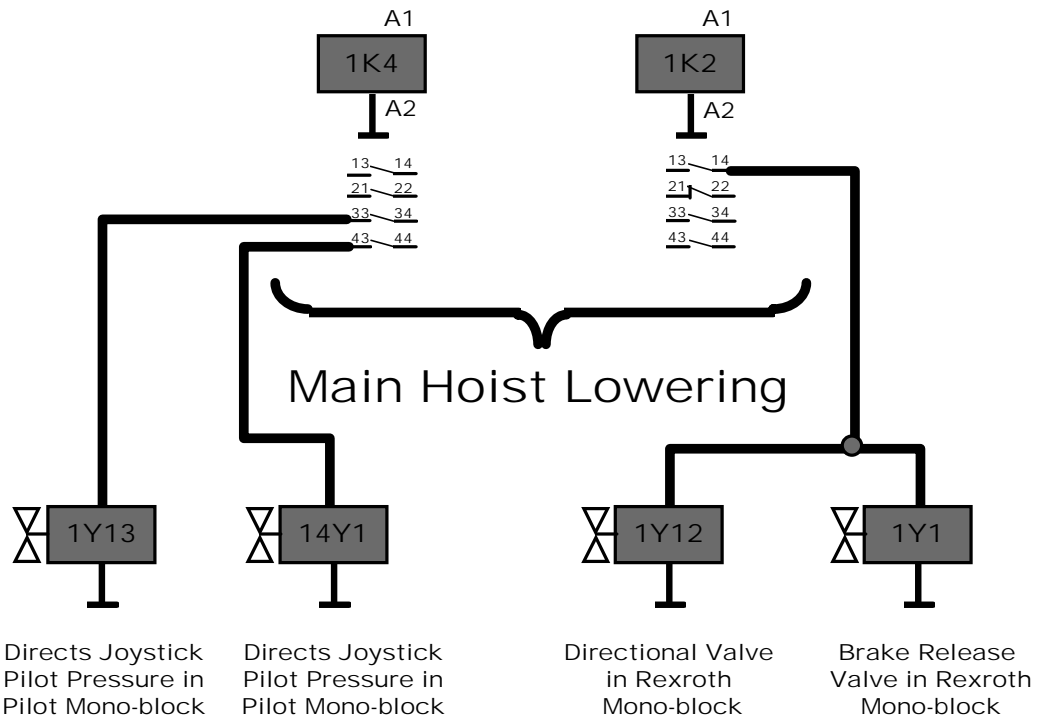


## Main Hoist Lower



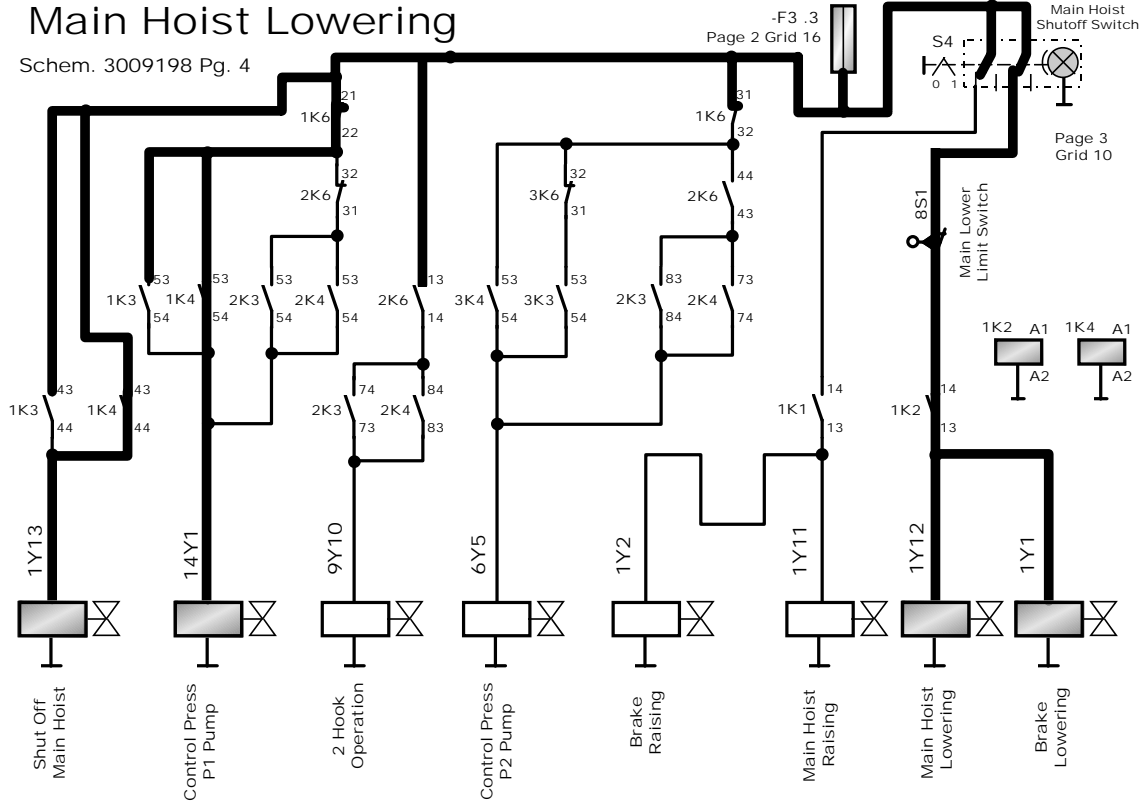


Plan, E - Schlat  
 OBERWAGEN GMK 5130  
 3009198 Blatt  
 4



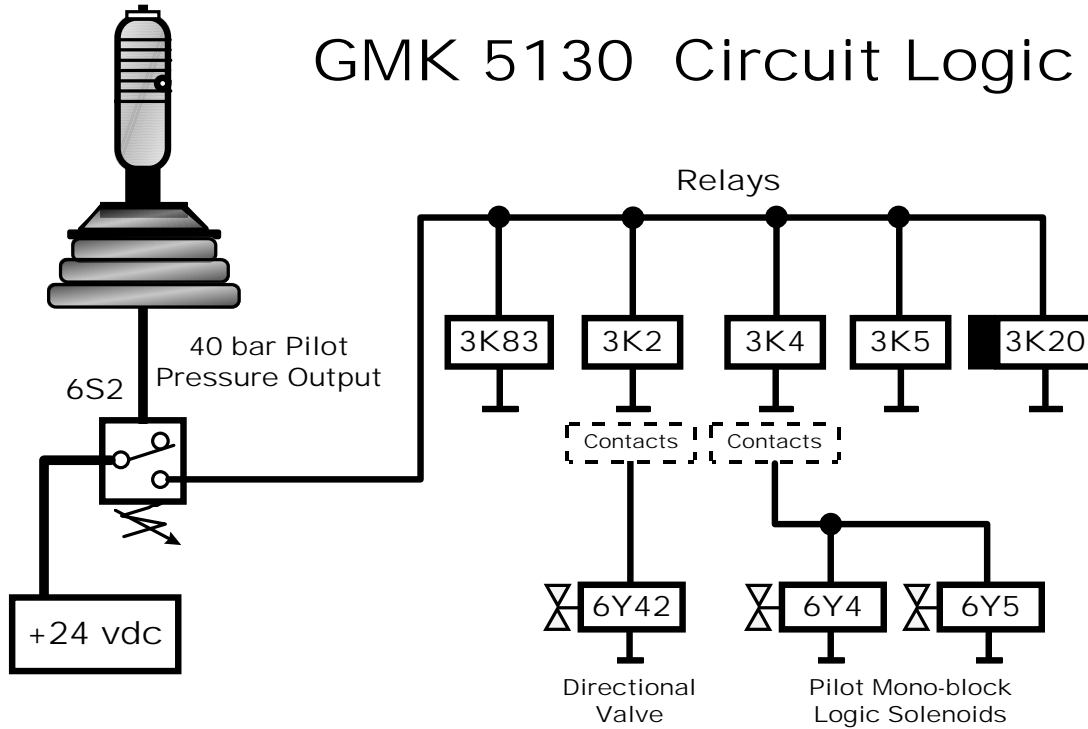
# Main Hoist Lowering

Schem. 3009198 Pg. 4

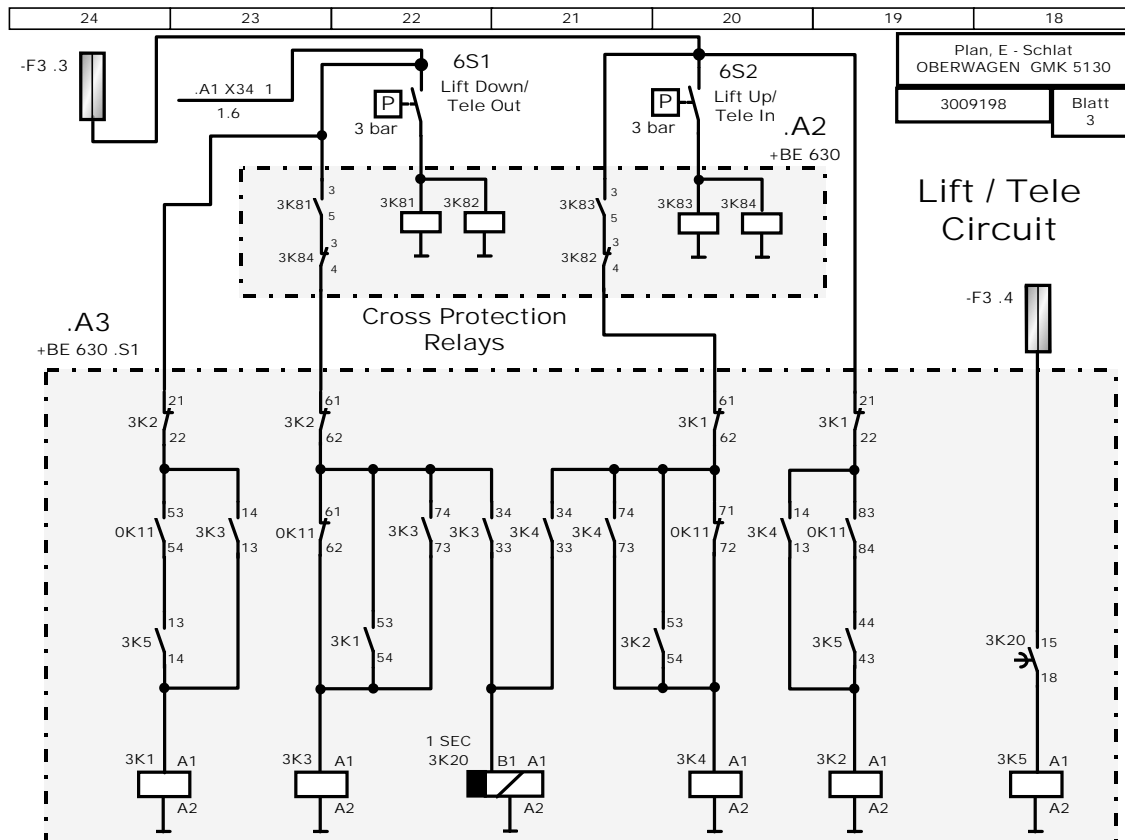


*Group #1 Exercise:  
Use Schem. Pages **2,3 &4**  
Try to find: Pressure  
Switches, Relay and  
Directional Solenoids  
for LIFT UP*

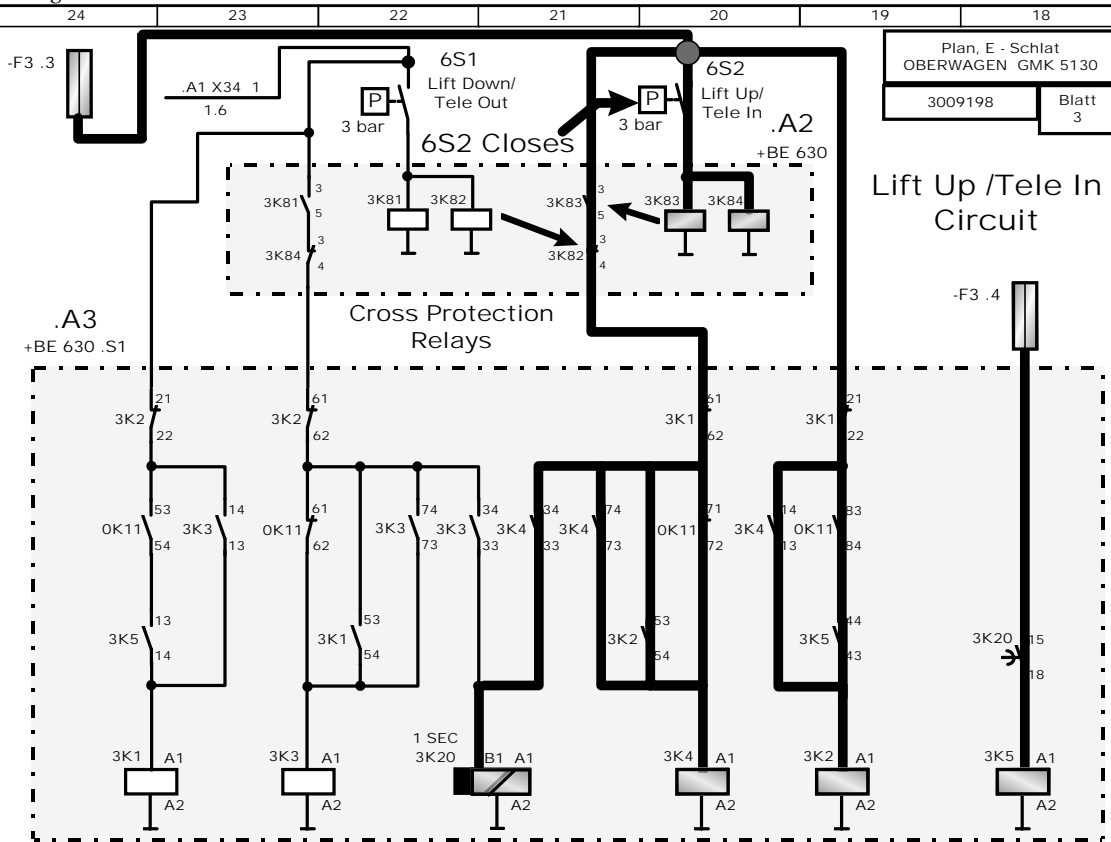
# GMK 5130 Circuit Logic



## Lift Up Circuit

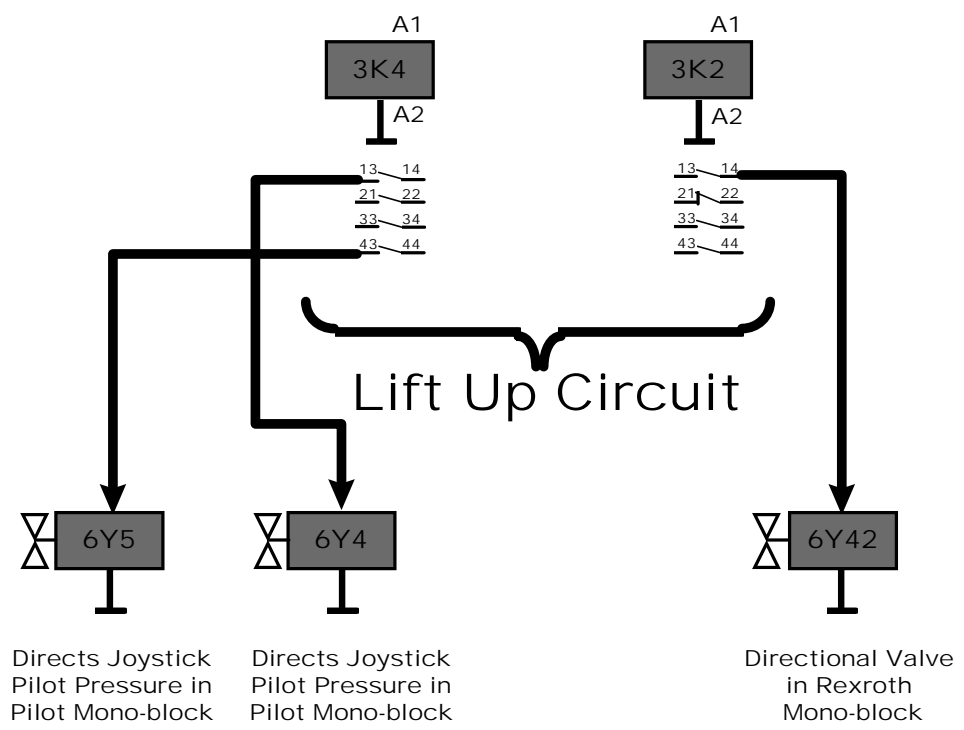


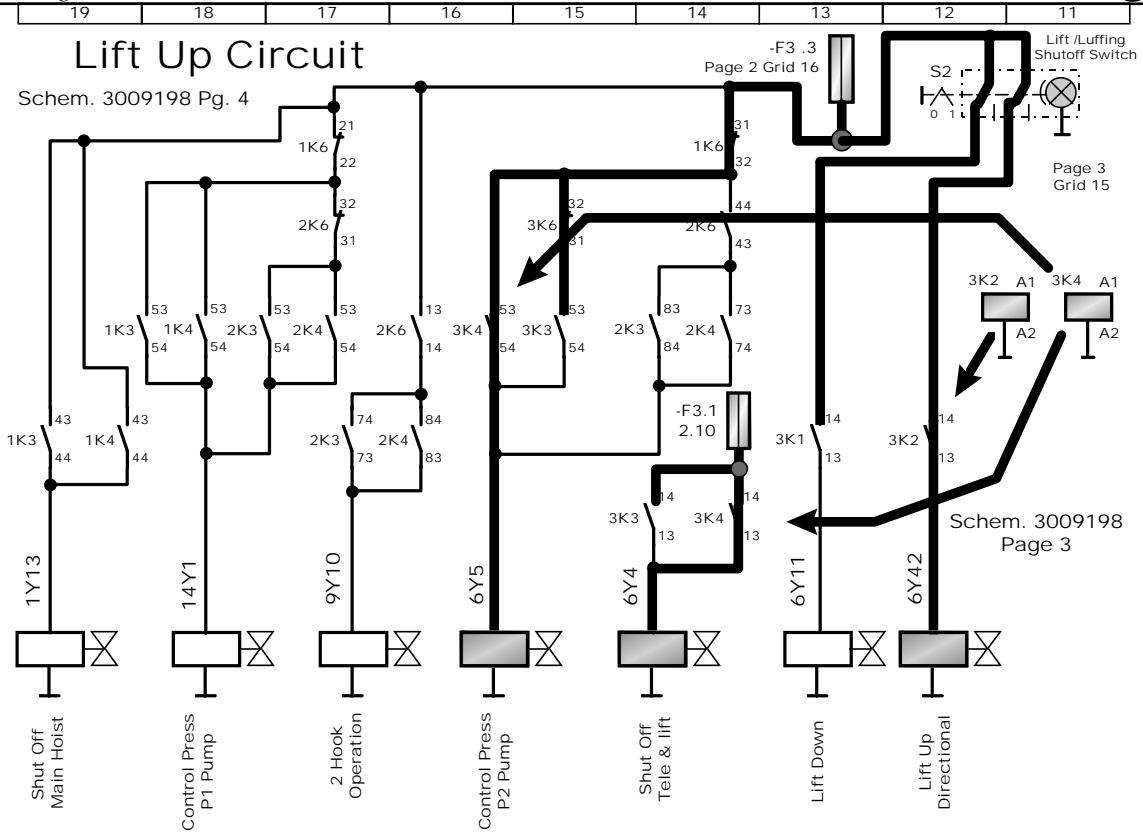




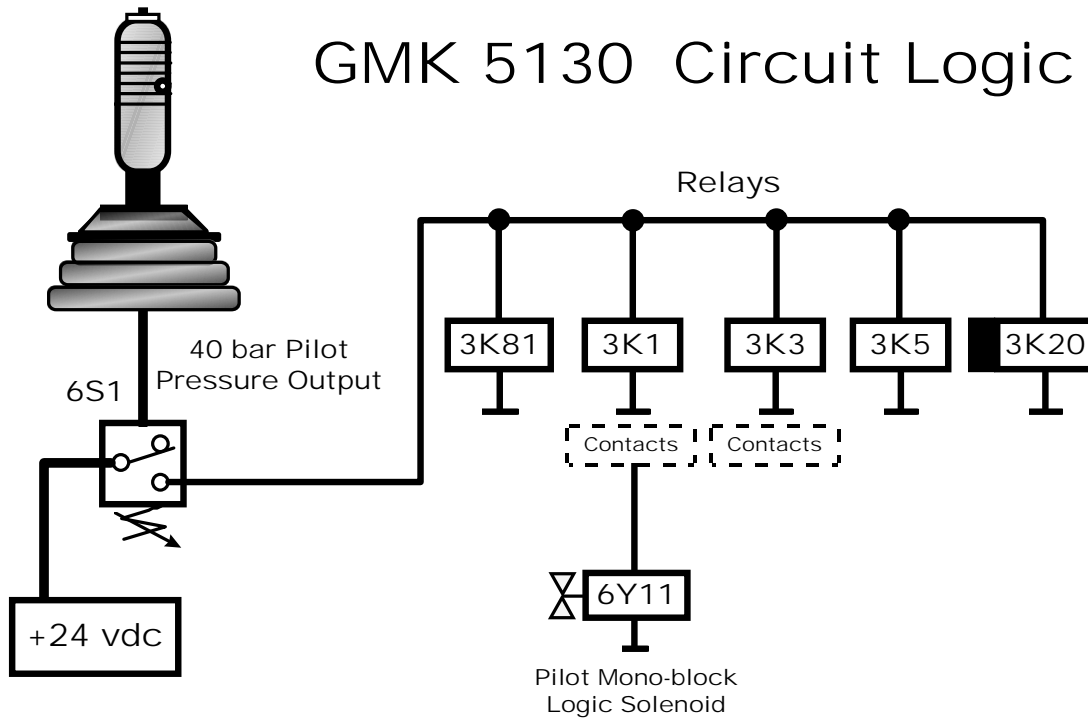
Plan, E - Schlat  
 OBERWAGEN GMK 5130  
 3009198 Blatt 3

Lift Up /Tele In  
 Circuit

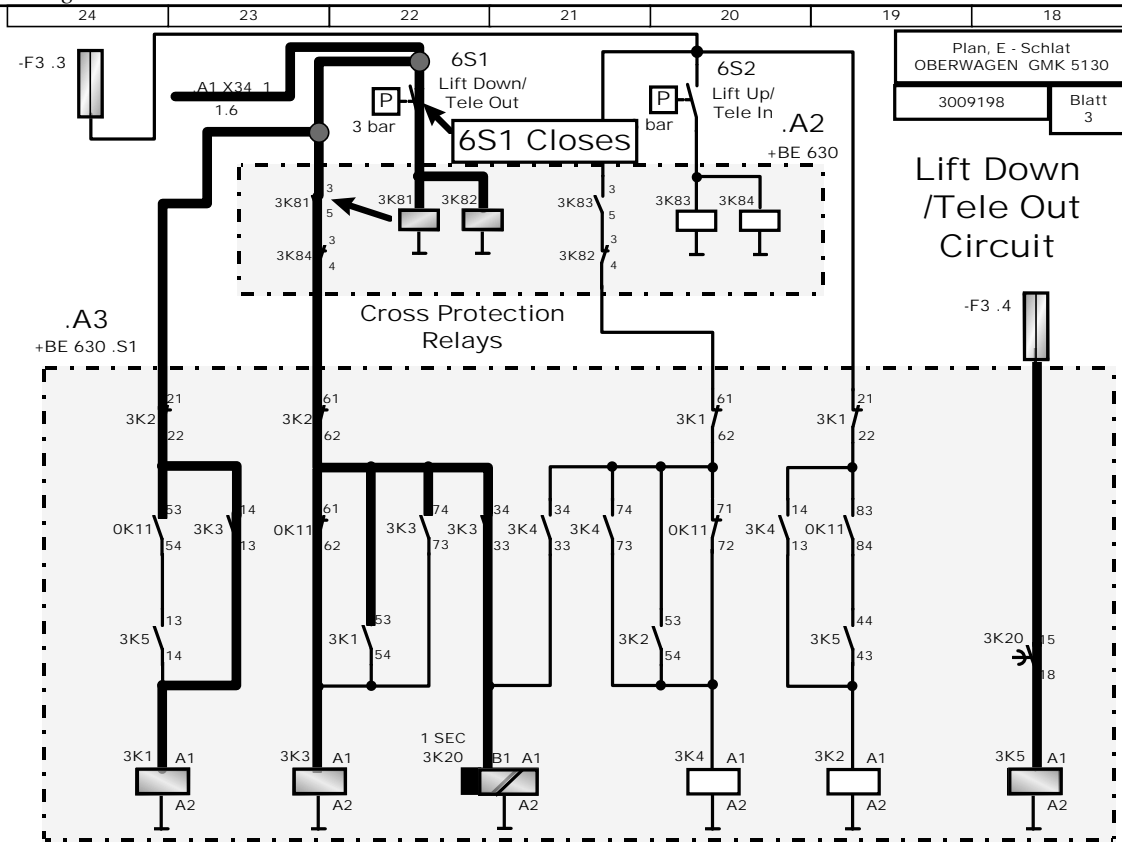




## GMK 5130 Circuit Logic

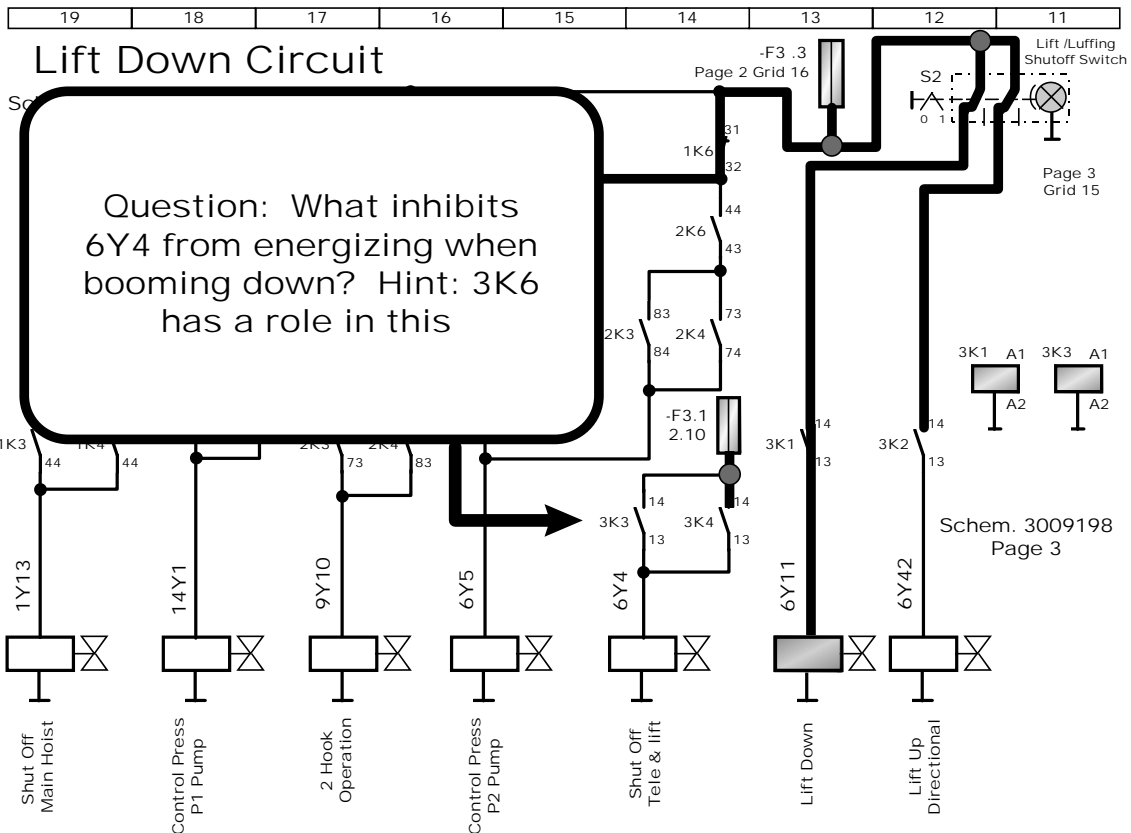


## Lift Down (Lower) Circuit



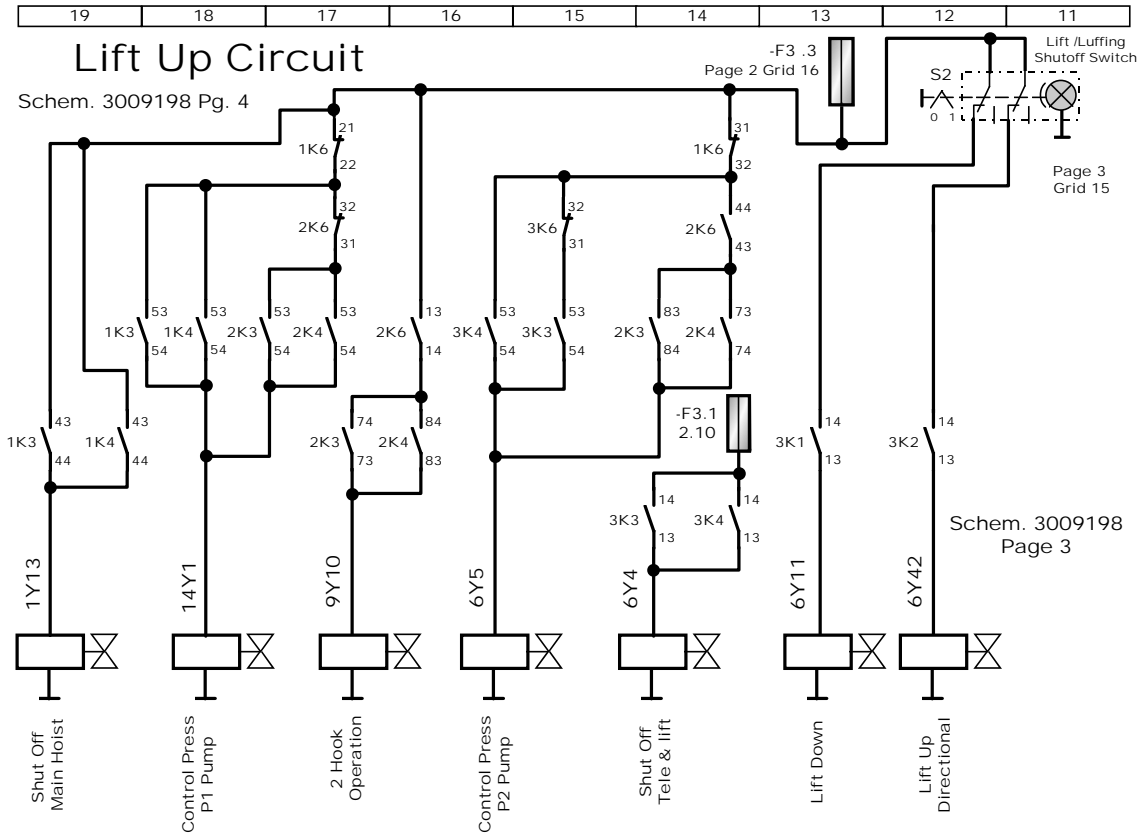
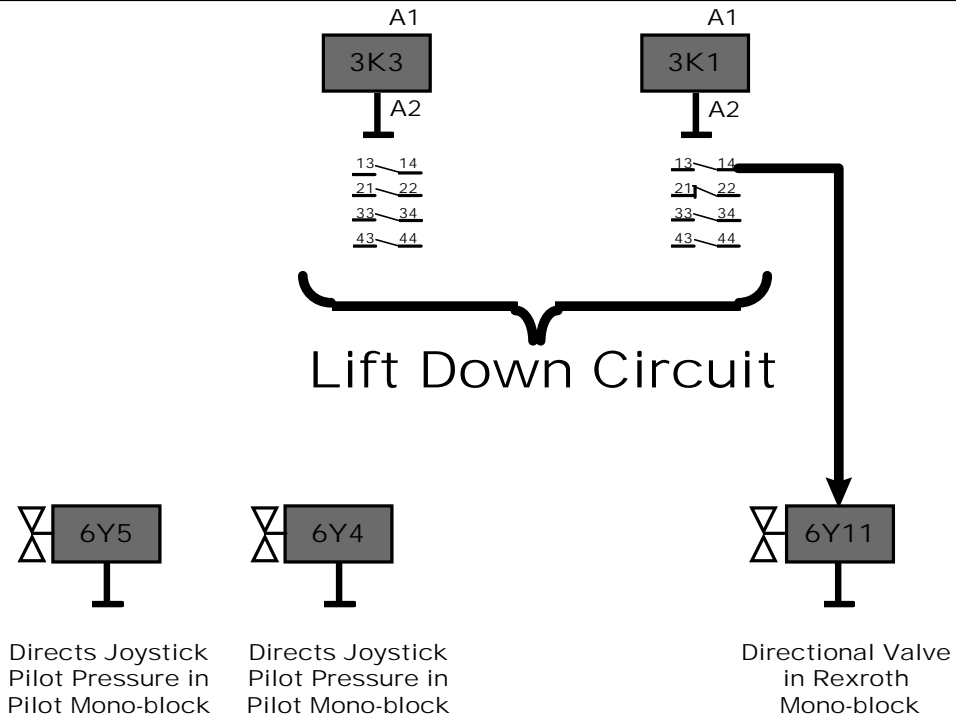
Plan, E - Schlat  
OBERWAGEN GMK 5130  
3009198 Blatt  
3

### Lift Down /Tele Out Circuit

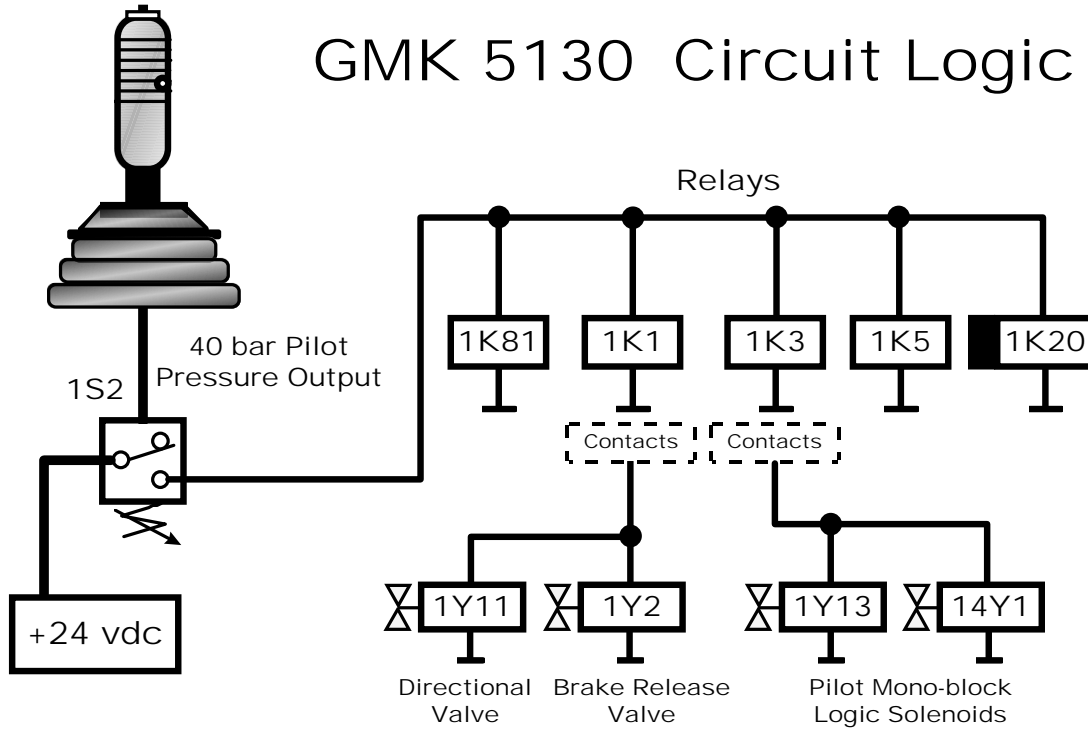


### Lift Down Circuit

Question: What inhibits 6Y4 from energizing when booming down? Hint: 3K6 has a role in this

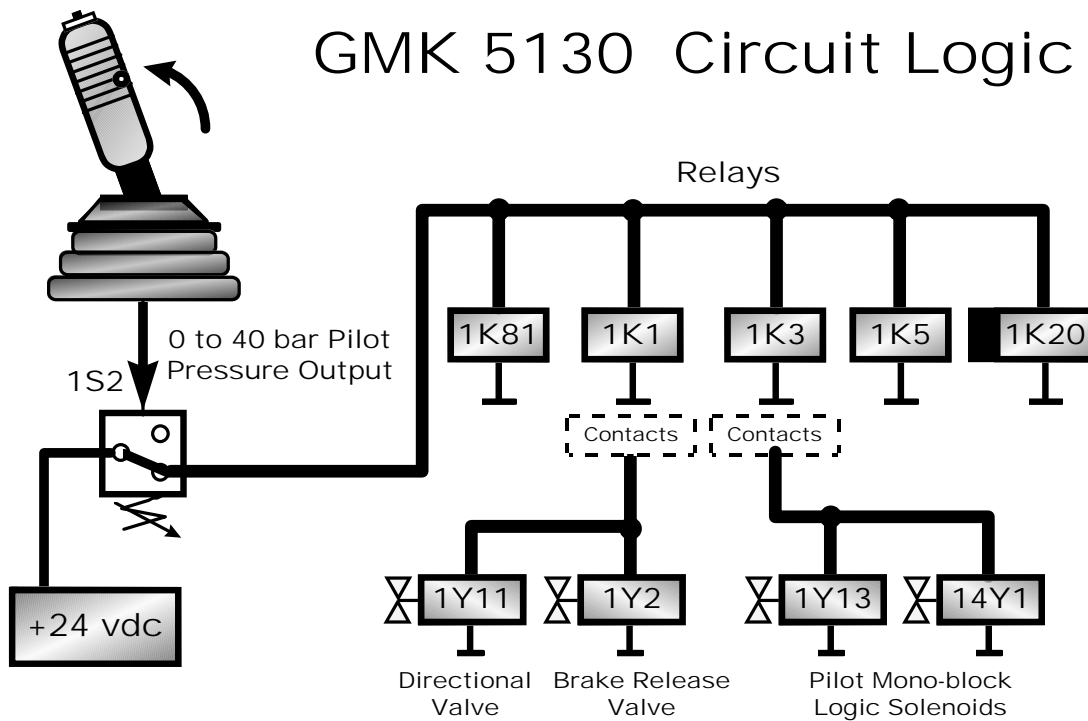


# GMK 5130 Circuit Logic



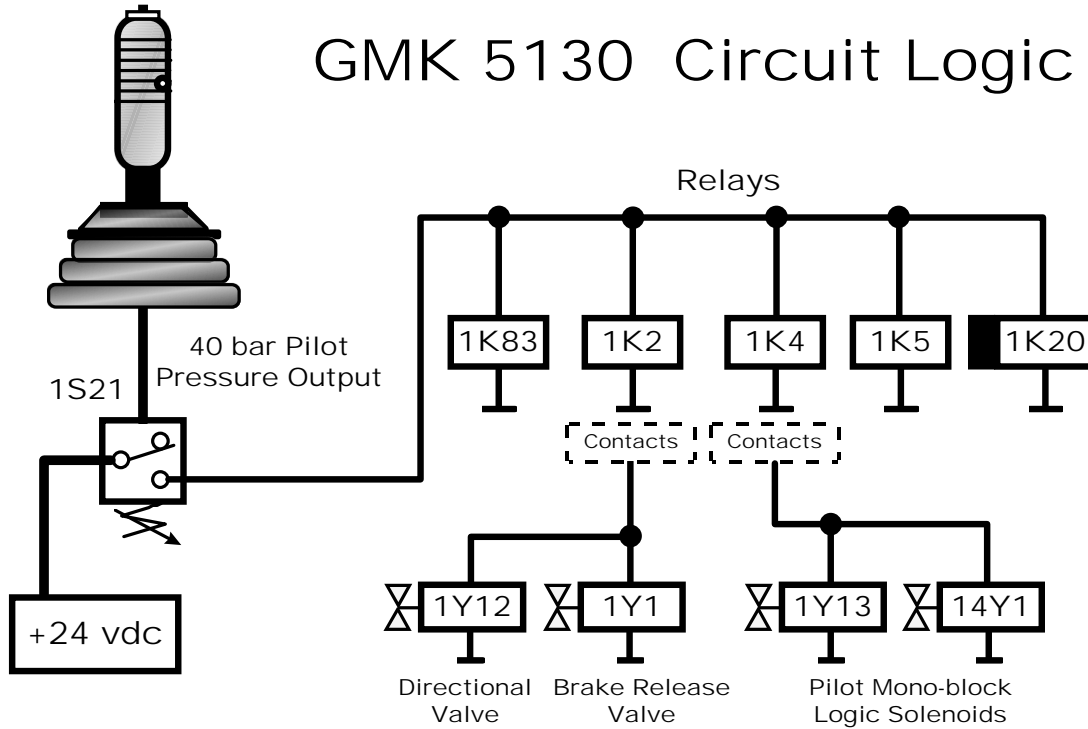
## Main Hoist Raise

# GMK 5130 Circuit Logic



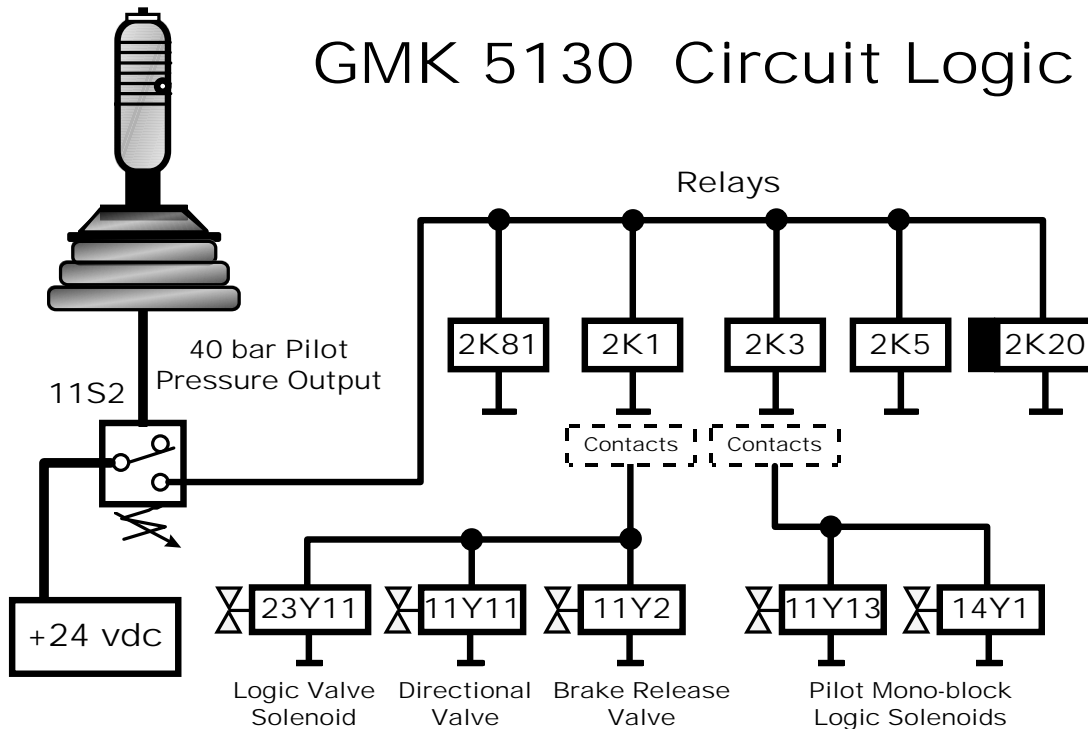
## Main Hoist Raise

# GMK 5130 Circuit Logic



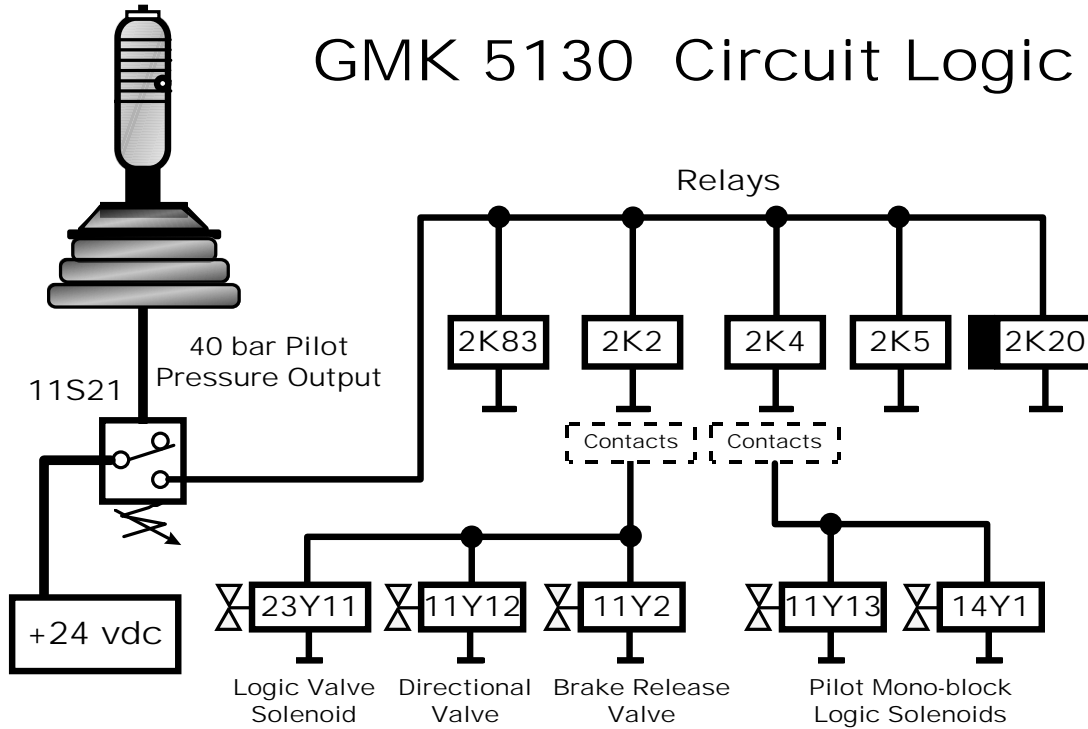
## Main Hoist Lower

# GMK 5130 Circuit Logic



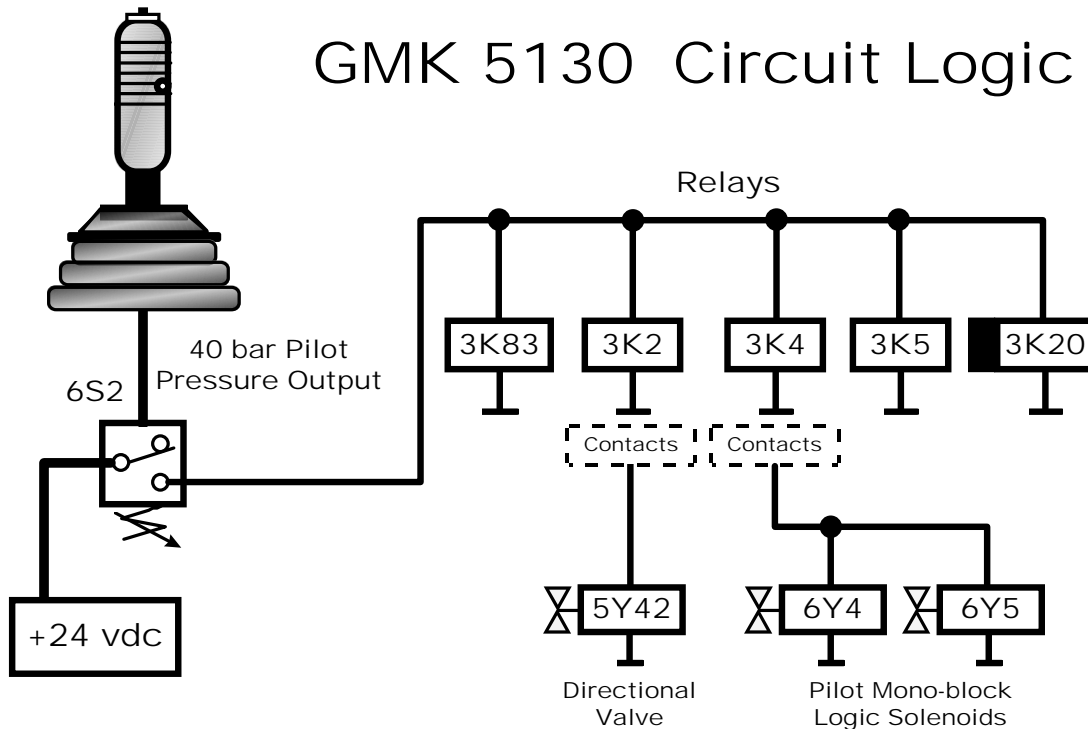
## Auxiliary Hoist Raise

# GMK 5130 Circuit Logic



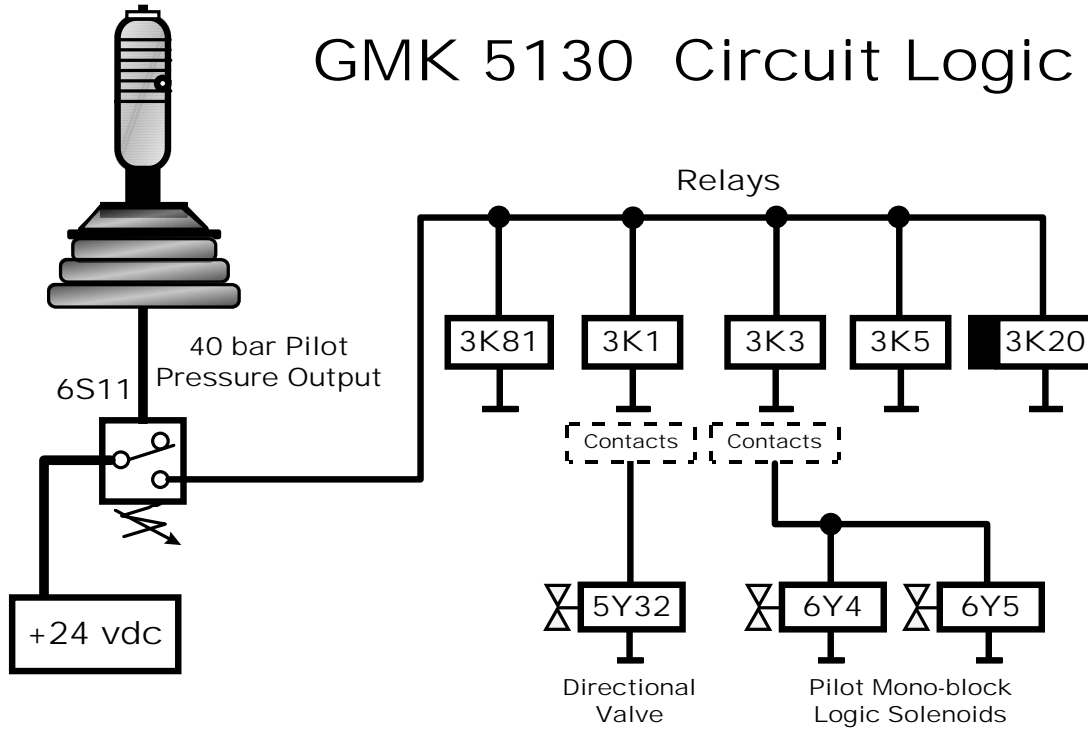
## Auxiliary Hoist Lower

# GMK 5130 Circuit Logic



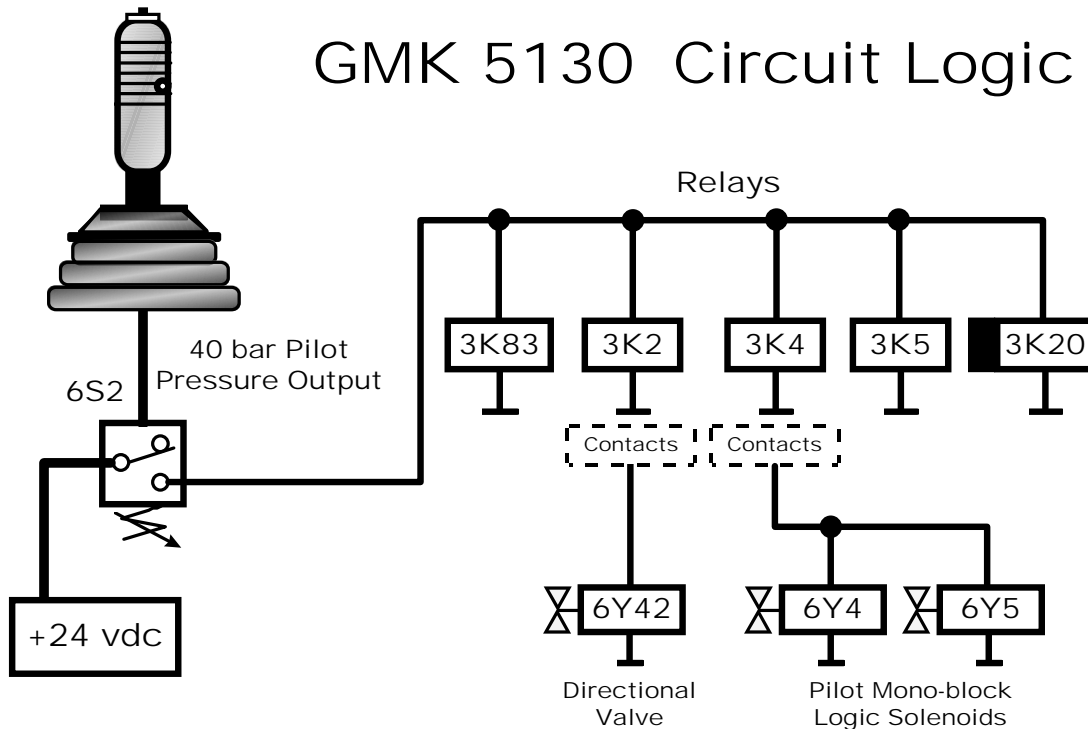
## Telescope In Circuit

# GMK 5130 Circuit Logic



## Telescope Out Circuit

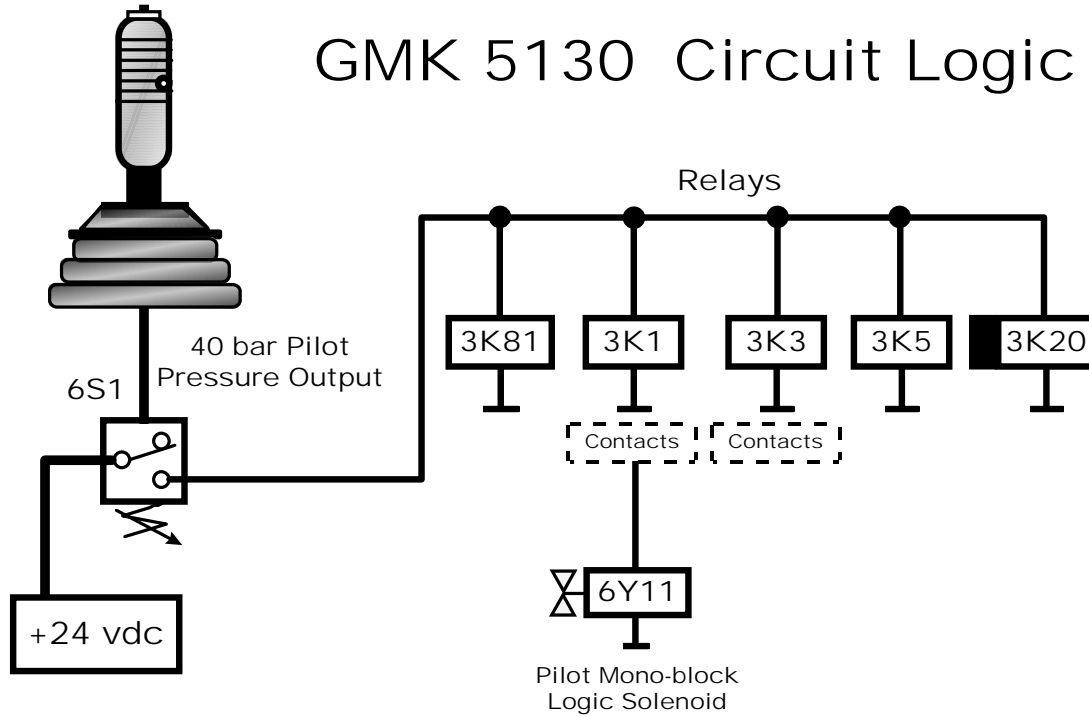
# GMK 5130 Circuit Logic



## Lift Up Circuit



# GMK 5130 Circuit Logic



## Lift Down (Lower) Circuit

SOLENOID VALVE	FUNCTION
1Y13	LOCATED IN PILOT-MONO BLOCK. OPENS TO ALLOW JOYSTICK OUTPUT TO PUMP P1 , MAIN HOIST
9Y10	LOCATED IN PILOT MONO-BLOCK. OPENS TO SEND AUX. HOIST JOYSTICK OUTPUT PRESS. TO PUMP P2.
11Y13	LOCATED IN PILOT-MONO BLOCK. OPENS TO SEND AUX. HOIST JOYSTICK OUTPUT PRESS. TO PUMP P1
6Y4	LOCATED IN PILOT-MONO BLOCK. OPENS TO SEND LIFT /TELE JOYSTICK PRESS. TO PUMP P2.
6Y11	LOCATED IN PILOT-MONO BLOCK. OPENS TO SEND LIFT DOWN JOYSTICK PRESS. TO OPEN HOLDING VALVE
14Y1	LOCATED IN PILOT MONO-BLOCK. CLOSSES TO ALLOW P1 PRESS. FOR MAIN & AUX. HOIST. COMBINES P1 & P2.
6Y5	LOCATED IN PILOT MONO-BLOCK. CLOSSES TO ALLOW P2 PRESS. FOR LIFT .TELE AND AUX. HOIST WHEN IN 2 HOOK. COMBINES P1 & P2 IN RAPID MOTION.
23Y1	BLOCKS DUMP OF JOYSTICK PRESSURE WHEN IN RAPID MOTION (HIGH SPEED).
8Y1	LOCATED IN PILOT MONO-BLOCK. ALLOWS REDUCED PILOT PRESS. TO RAMP P2 FOR CWT. CYLINDERS.
7Y10	LOCATED IN PILOT MONO-BLOCK. ALLOWS PILOT PRESS. OF 40 BAR TO FEED BOTH JOYSTICKS.
23Y11 & 23Y12	LOCATED IN REXROTH MONO-BLOCK. ENERGIZE TO OPEN LOGIC VALVES TO COMBINE P1 & P2 PUMPS

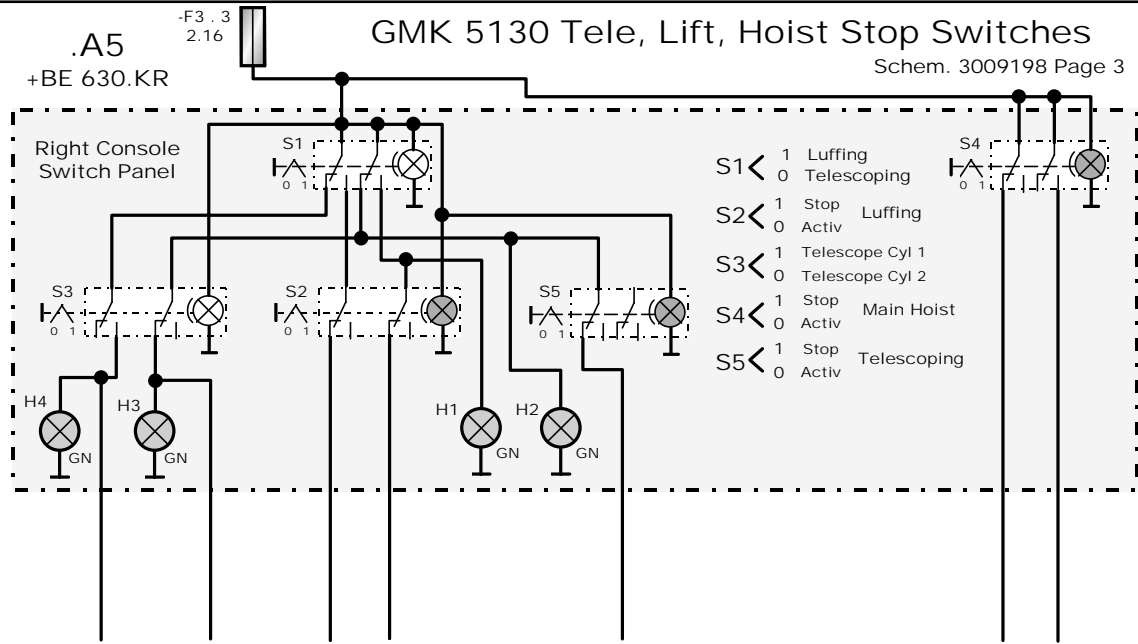
FUNCTION	1Y13	9Y10	11Y13	6Y4	6Y11	14Y1	6Y5	23Y1	8Y1	7Y10	23Y11	23Y12
MAIN HOIST	●		×			●		×	×	●	×	
MAIN HOIST HIGH SPEED	●	×	×	×		×	×	●	×	●	●	●
AUX. HOIST	×	×	●			●		×	×	●	●	×
AUX. HOIST HIGH SPEED	×	×	●	×		×	×	●	×	●	●	●
AUX. HOIST IN TWO HOOK		●	×	×			●	×	×	●	×	●
LIFT DOWN				×	●				×	●		
LIFT UP		×		●	×		●	×	×	●		×
LIFT UP HIGH SPEED	×	×	×	●		×	×	●	×	●	●	●
TELESCOPE		×		●			●	×	×	●		×
TELESCOPE HIGH SPEED	×	×	×	●		×	×	●	×	●	●	●
DEADMAN										×		
COUNTERWGT.									●	×		
TWO HOOK HIGH SPEED								×	×		×	

● ENERGIZED  
 × DEENERGIZED

## GMK 5130 S/S Solenoid Chart

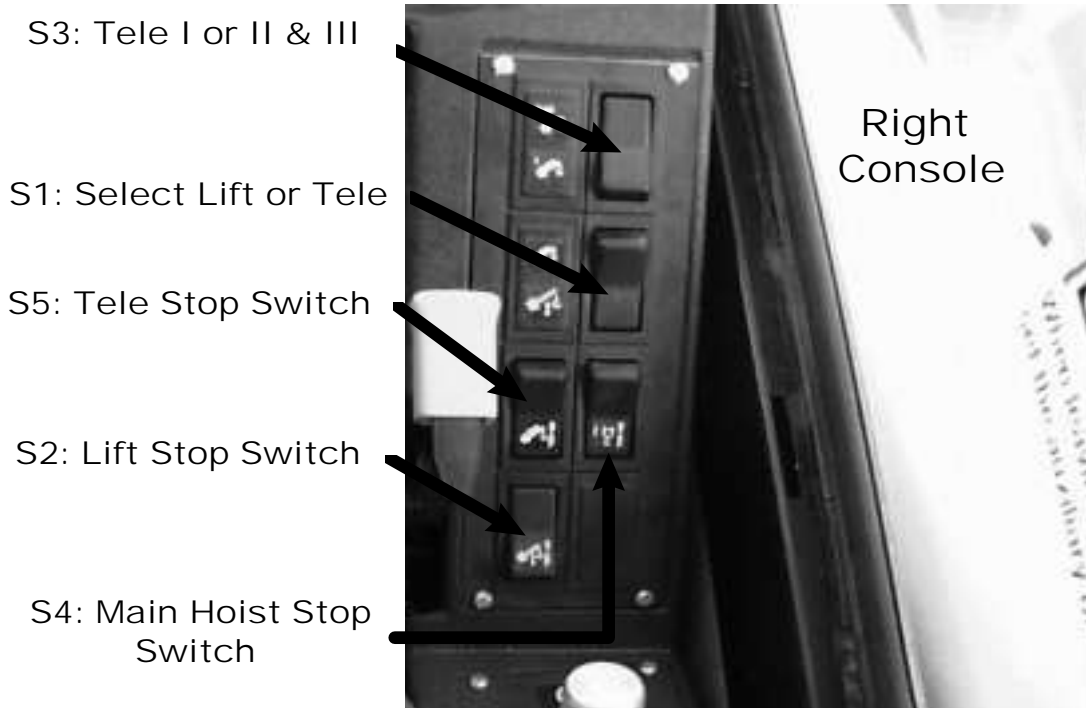
FUNCTION	RELAYS	HYD. SOLENOIDS
AUX. HOIST UP	2K3 2K1 2K5 2K81 2K20	11Y13 14Y1 23Y11 11Y11 11Y2
AUX. HOIST DOWN	2K4 2K2 2K5 2K20 2K83	11Y13 14Y1 23Y11 11Y12 11Y1
MAIN HOIST UP	1K3 1K1 1K5 1K81 1K20	1Y13 14Y1 1Y2 1Y11
MAIN HOIST DOWN	1K4 1K2 1K5 1K20 1K83	1Y13 14Y1 1Y1 1Y12
TELESCOPE IN	3K83 3K4 3K2 3K20 3K5	6Y4 6Y5 5Y42
TELESCOPE OUT	3K81 3K3 3K1 3K20 3K5	6Y4 6Y5 5Y32
LIFT DOWN	3K81 3K3 3K1 3K20 3K5	6Y11
LIFT UP	3K83 3K4 3K2 3K20 3K5	6Y4 6Y5 6Y42
RAPID MOTION	1K6 1K61	
TWO HOOK OPERATION	2K6 2K7 2K8	

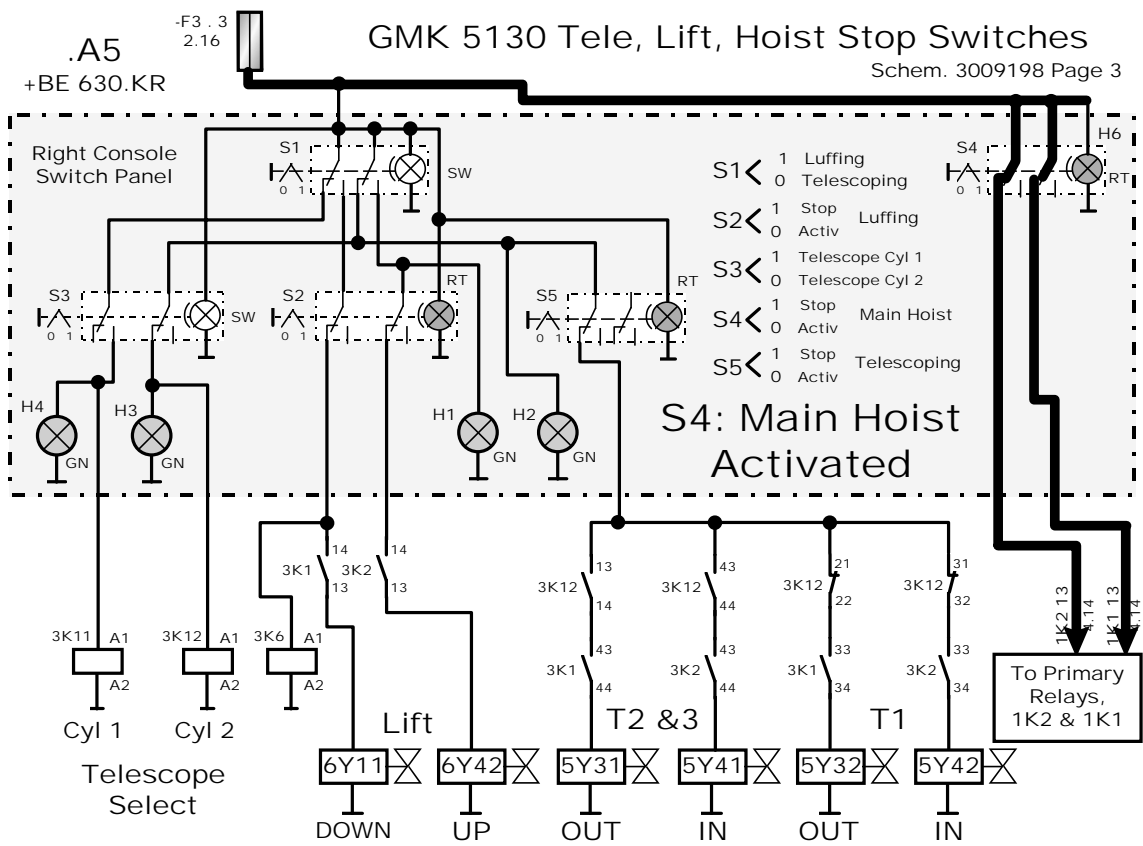
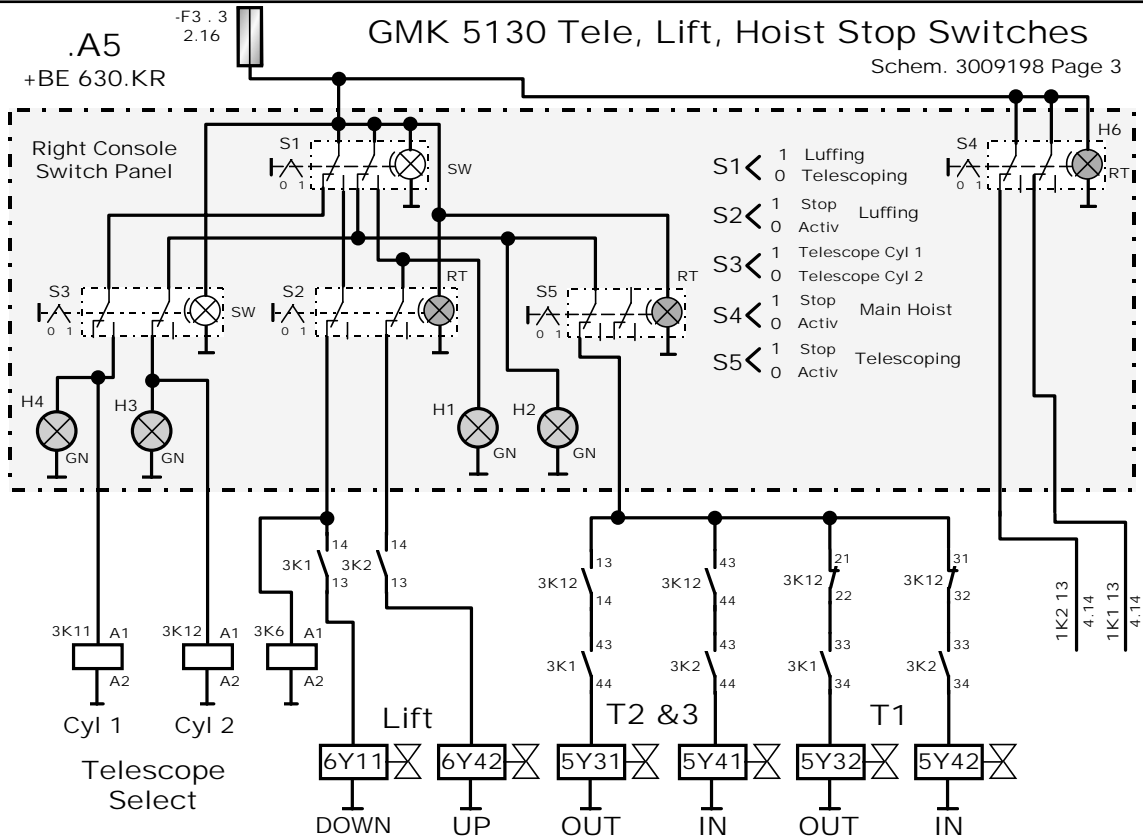
## GMK 5130 Solenoid/ Relay Chart

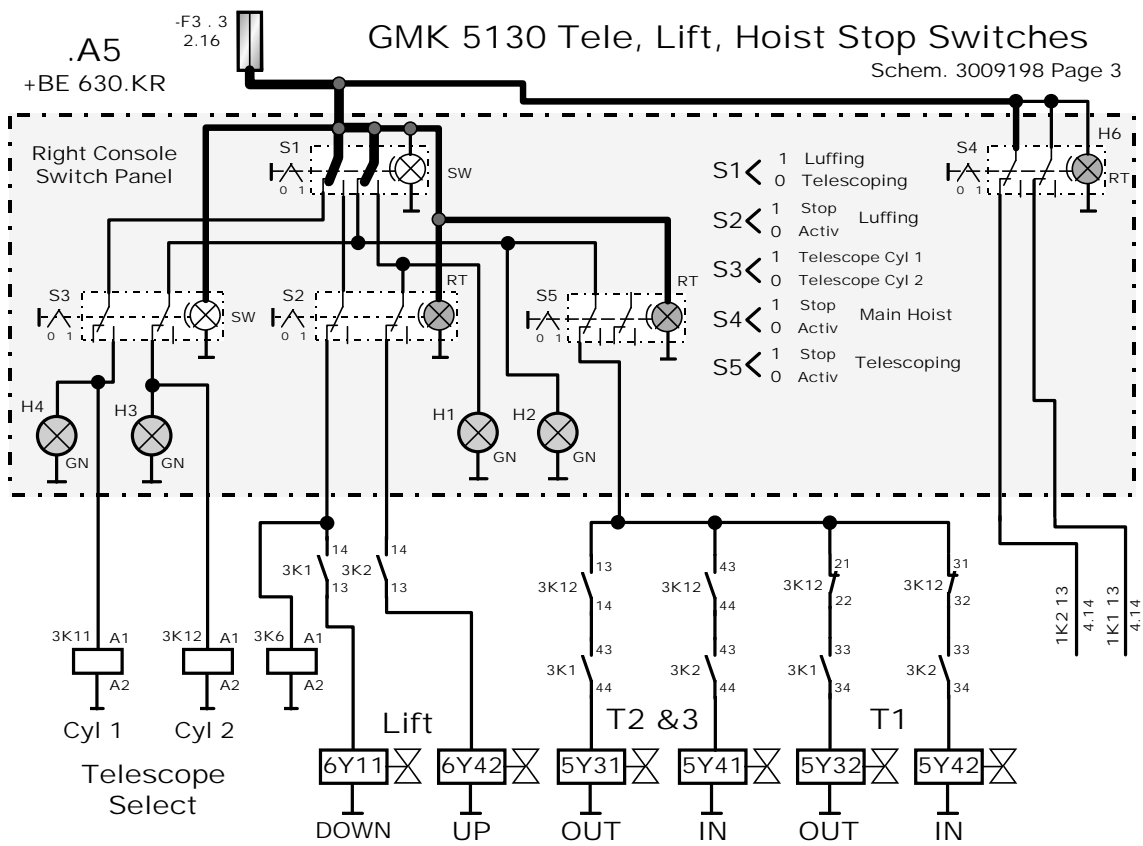
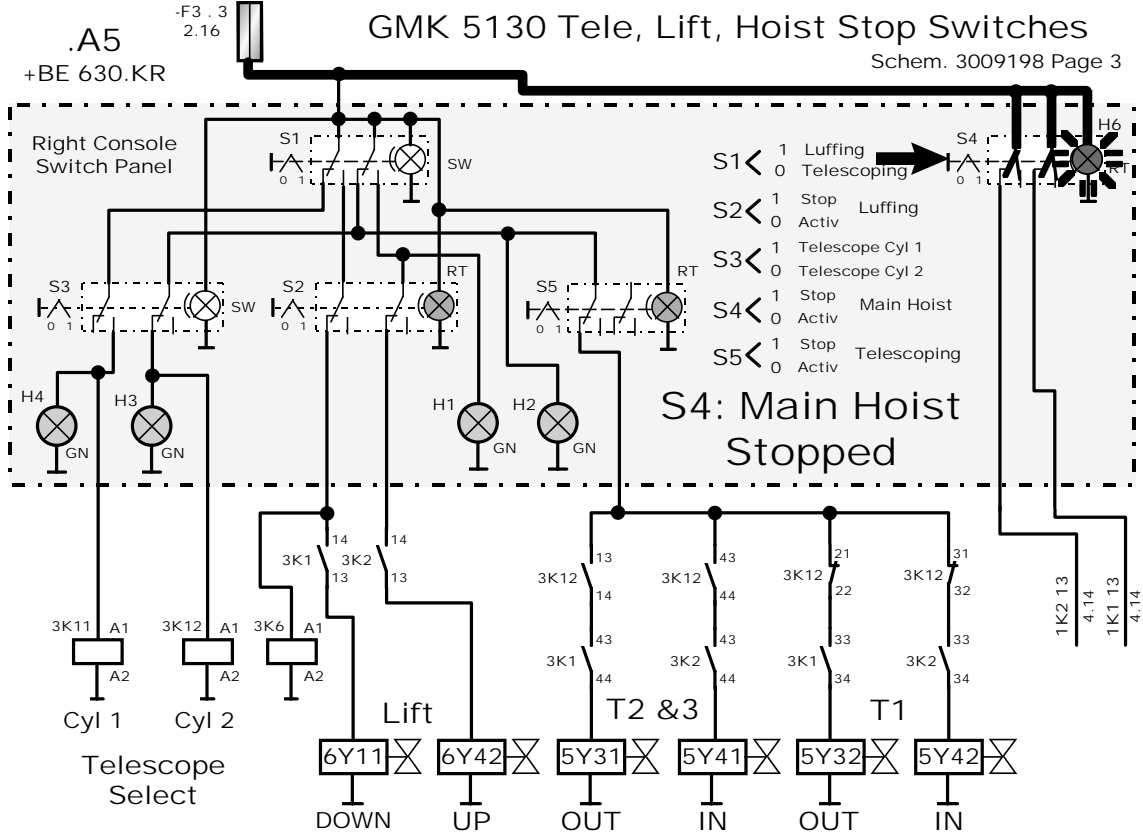


# Switch Identification

## Right Console Switch Panel









# *Section 11*







## "E-lan" Schematic Organization

### Main Structure

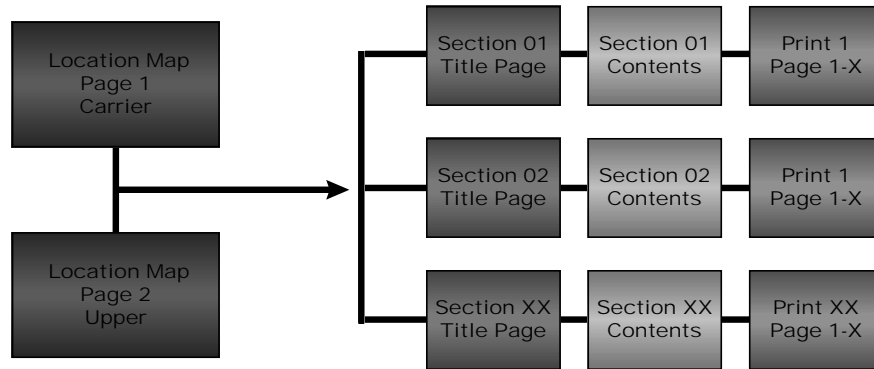
- Carrier Location Map
- S/S Location Map
- \*Extensions Map
- \*Other Components
- \*Section Contents

### Section Structure

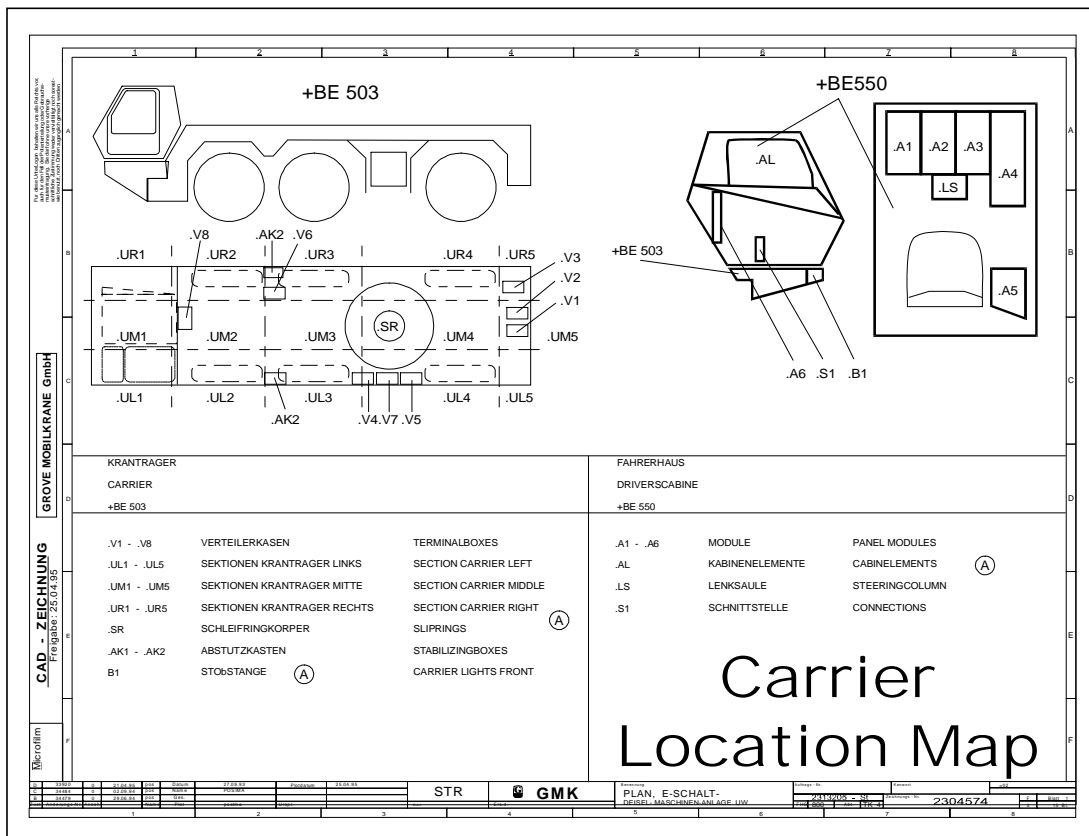
- Section Title Page
- Section Contents Page
- Schematic Print Pages (Blatts)

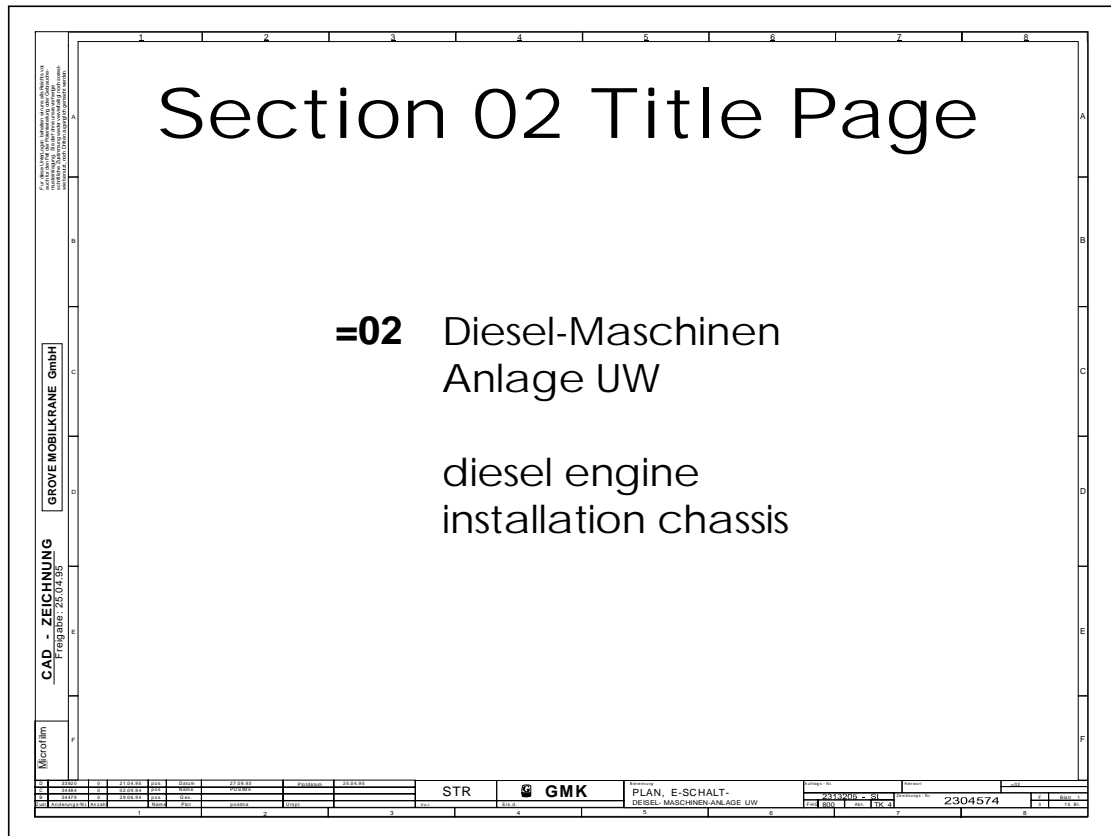
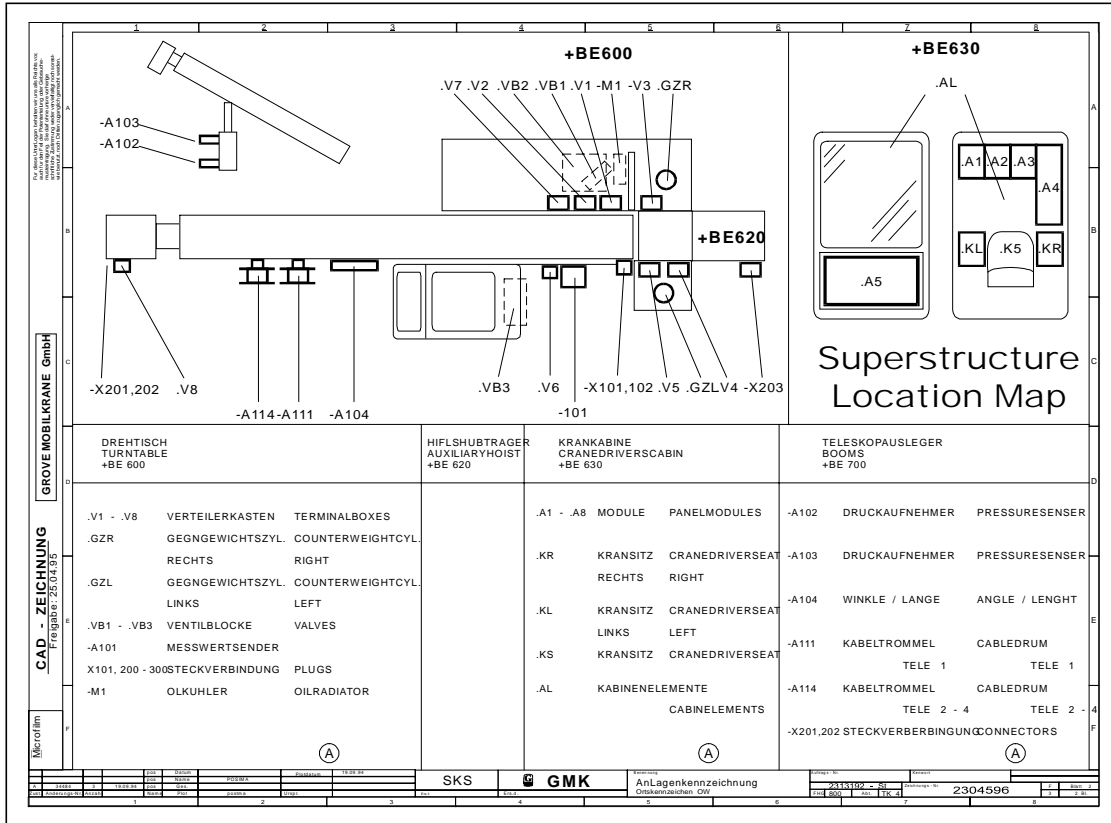
*\* These E-lan Sheets may be found on other GMK machines using E-lan. However the GMK3050 does not use these pages.*

# GMK3050 "E-lan" Schematic Structure



**\*\*Other GMK Cranes using E-lan\*\***  
 may have additional Map Location Pages, Section Contents and Sections  
 Not to be found in the GMK3050 E-lan





# Section 02 Contents Page

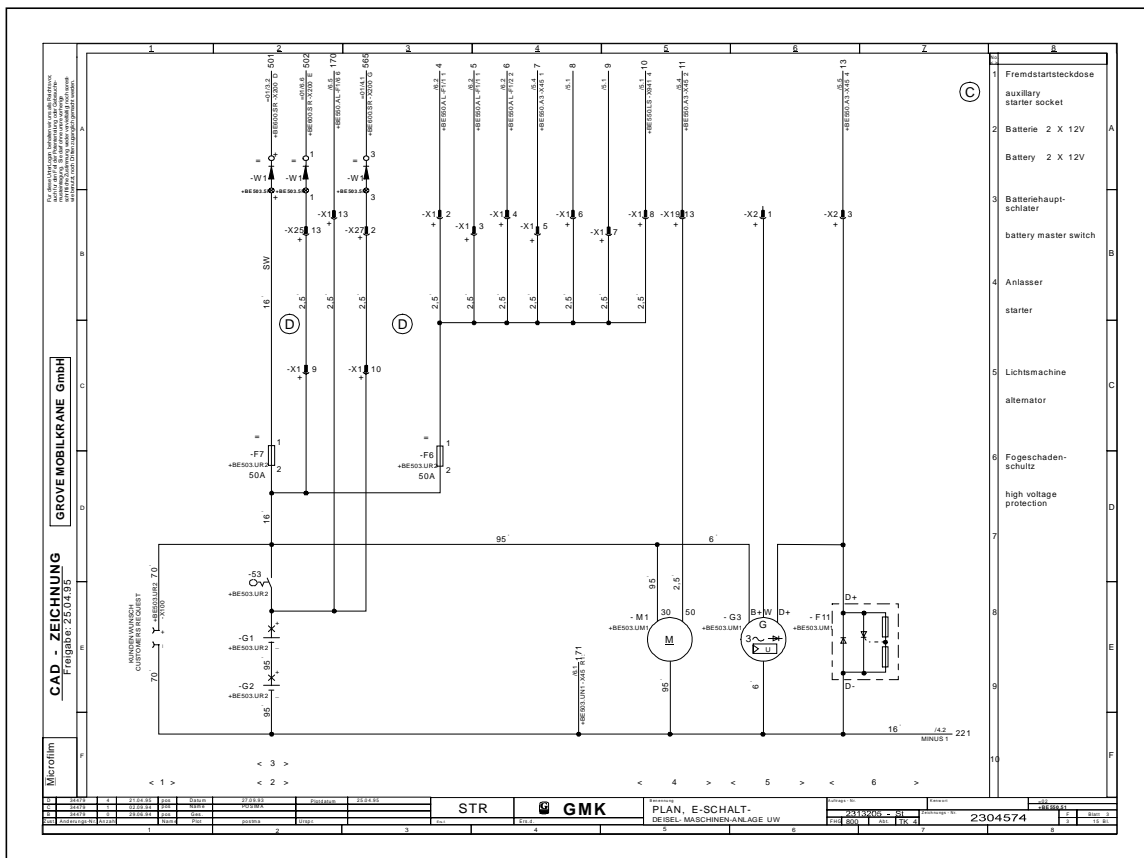
Blatt sheet Nr.	Benennung specification	Bemerkung remarks
1	PLAN, E-SCHALT - ELEKTIC DIAGRAM	DECKBLATT COVER
2	PLAN, E-SCHALT - ELEKTIC DIAGRAM	INHALTSVERZEICHNISS INDEX
3	PLAN, E-SCHALT - ELEKTIC DIAGRAM	BATTERIEN ANLASSER LICHTMASCHINE BATTERIES, STARTER, DYNAMO
4	PLAN, E-SCHALT - ELEKTIC DIAGRAM	MASSEVERTEILUNG GROUND TERMINAL
5	PLAN, E-SCHALT - ELEKTIC DIAGRAM	ZUNDSTARTSCHALTER ANLASSKETTE LADEKONTROLLE IGNITION SWITCH, LOAD CONTROL
6	PLAN, E-SCHALT - ELEKTIC DIAGRAM	FLAMMSTARTANLAGE SPANNUNGSWANDLER 24/12V SICHERUNGEN FLAME START INSTALLATION, VOLTAGE DIMER, FUSES
7	PLAN, E-SCHALT - ELEKTIC DIAGRAM	SICHERUNGEN LUFTTROCKNER FUSES, AIR DRYER
8	PLAN, E-SCHALT - ELEKTIC DIAGRAM	SICHERUNGEN FUSES
9	PLAN, E-SCHALT - ELEKTIC DIAGRAM	SICHERUNGEN FUSES
10	PLAN, E-SCHALT - ELEKTIC DIAGRAM	ANZEIGEN MOTOR, GETRIEBBE INDICATOR MOTOR, GEAR
11	PLAN, E-SCHALT - ELEKTIC DIAGRAM	ANZEIGEN TANK, LUTFILTER, HYDRAULIKFILTER INDICATOR TANK, AIR FILTER, HYDRAULIC
12	PLAN, E-SCHALT - ELEKTIC DIAGRAM	FAHRTENSCHRIEBER TACHOGRAPH
13	PLAN, E-SCHALT - ELEKTIC DIAGRAM	ZENRALSMIERNUNG CENTRAL LUBRICATION
14	PLAN, E-SCHALT - ELEKTIC DIAGRAM	MOTORELEKTRONIK ELECTRONIC MOTOR
15	PLAN, E-SCHALT - ELEKTIC DIAGRAM	MOTORELEKTRONIK ELECTRONIC MOTOR

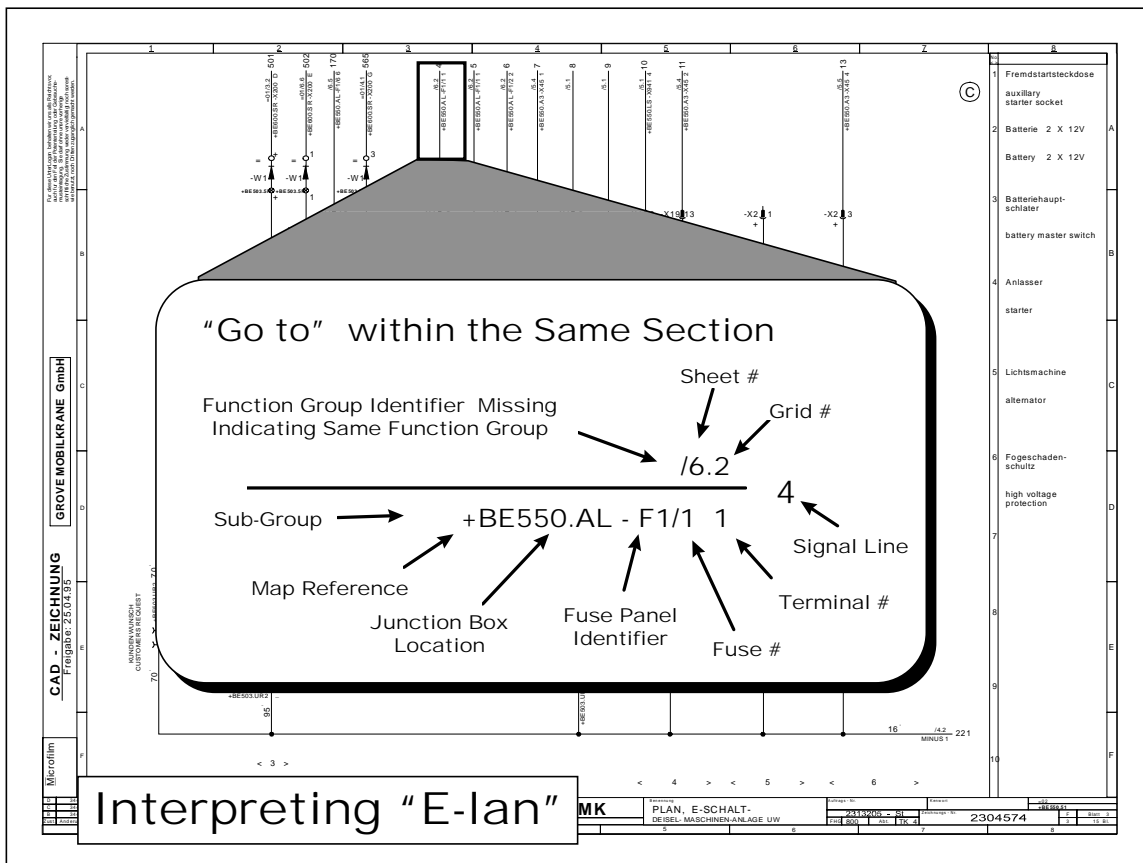
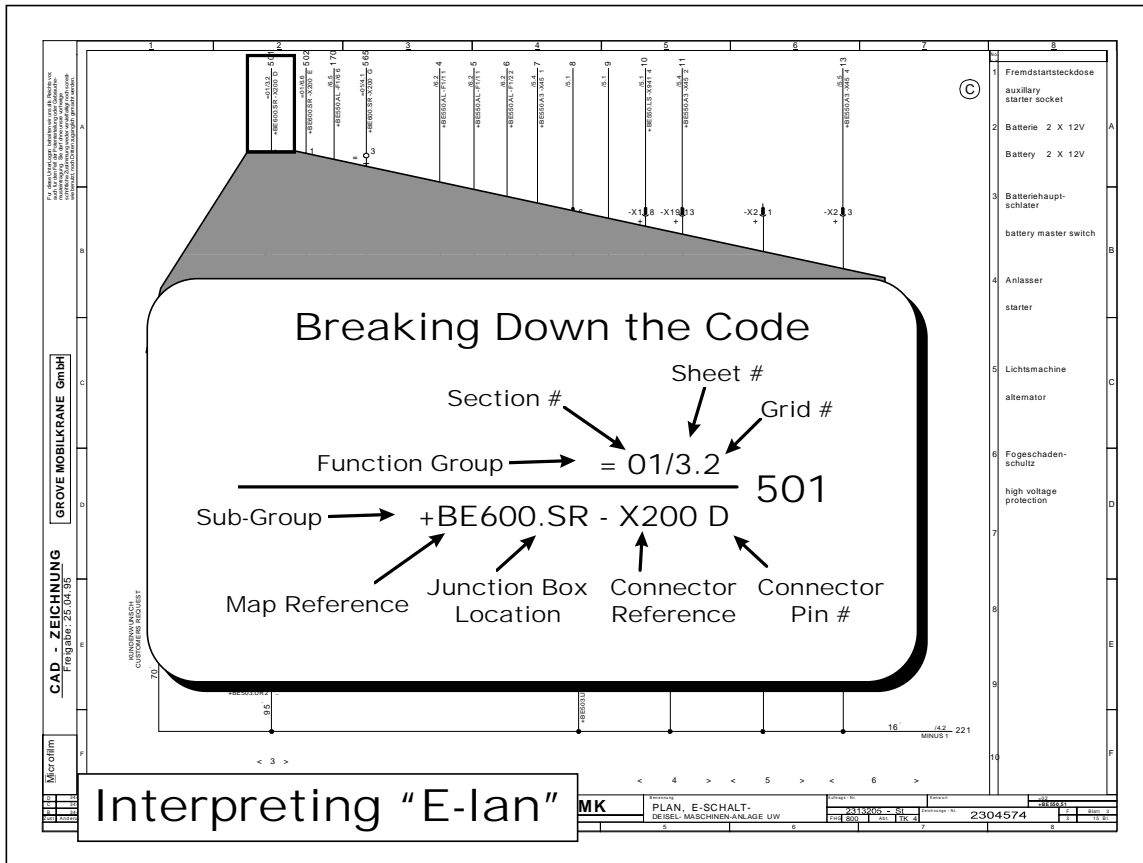
Microfilm

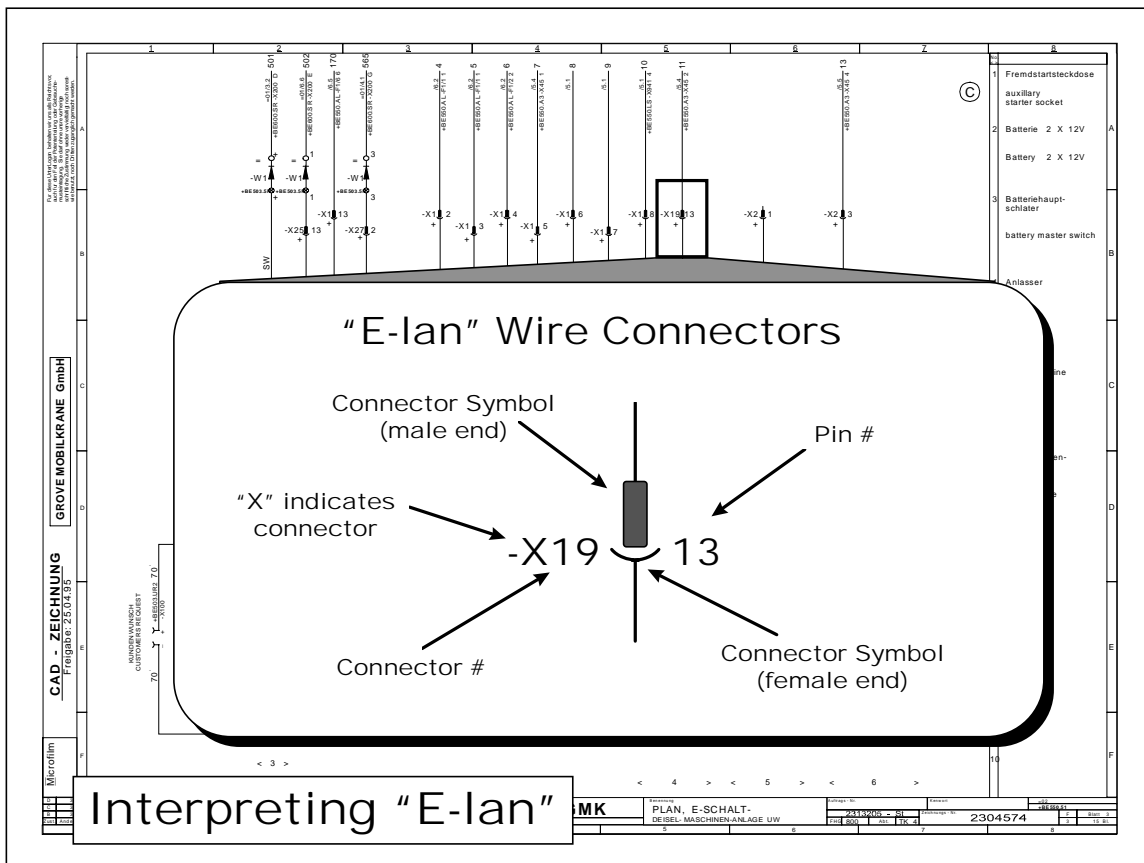
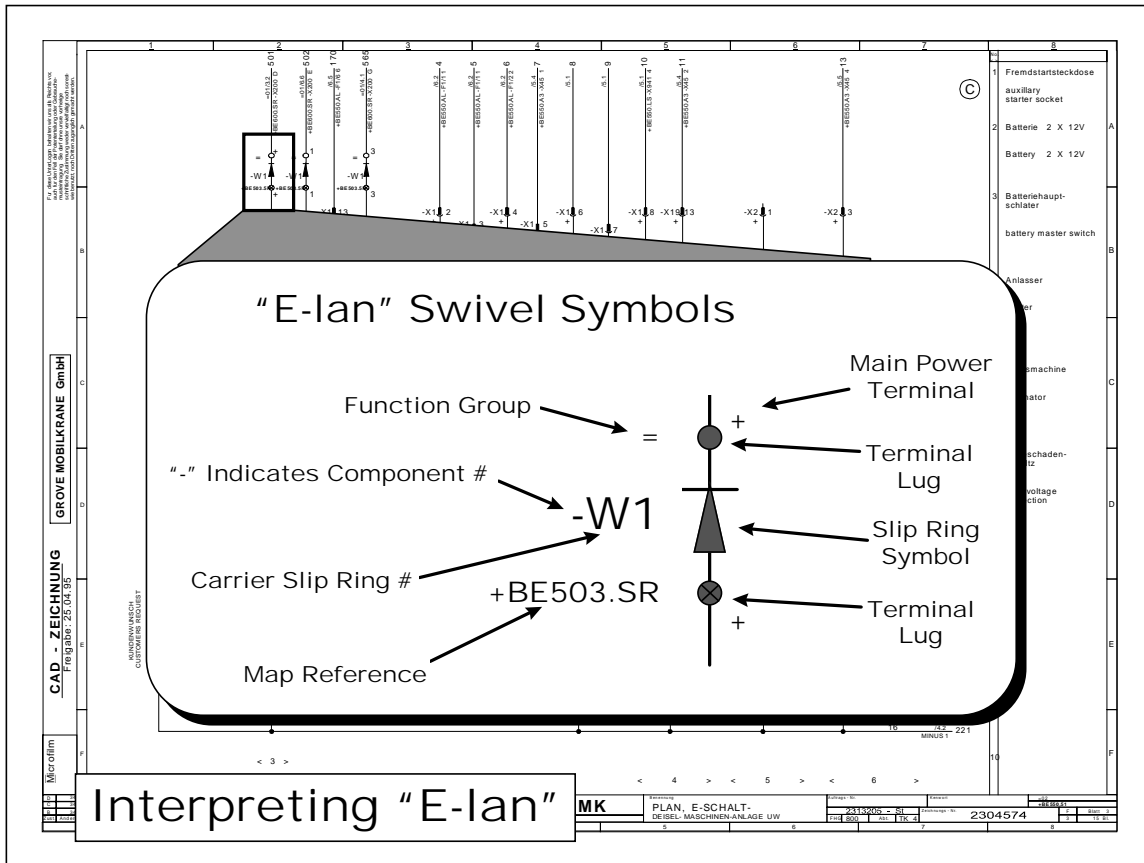
CAD - ZEICHNUNG  
Prüfung Nr. 25.04.93

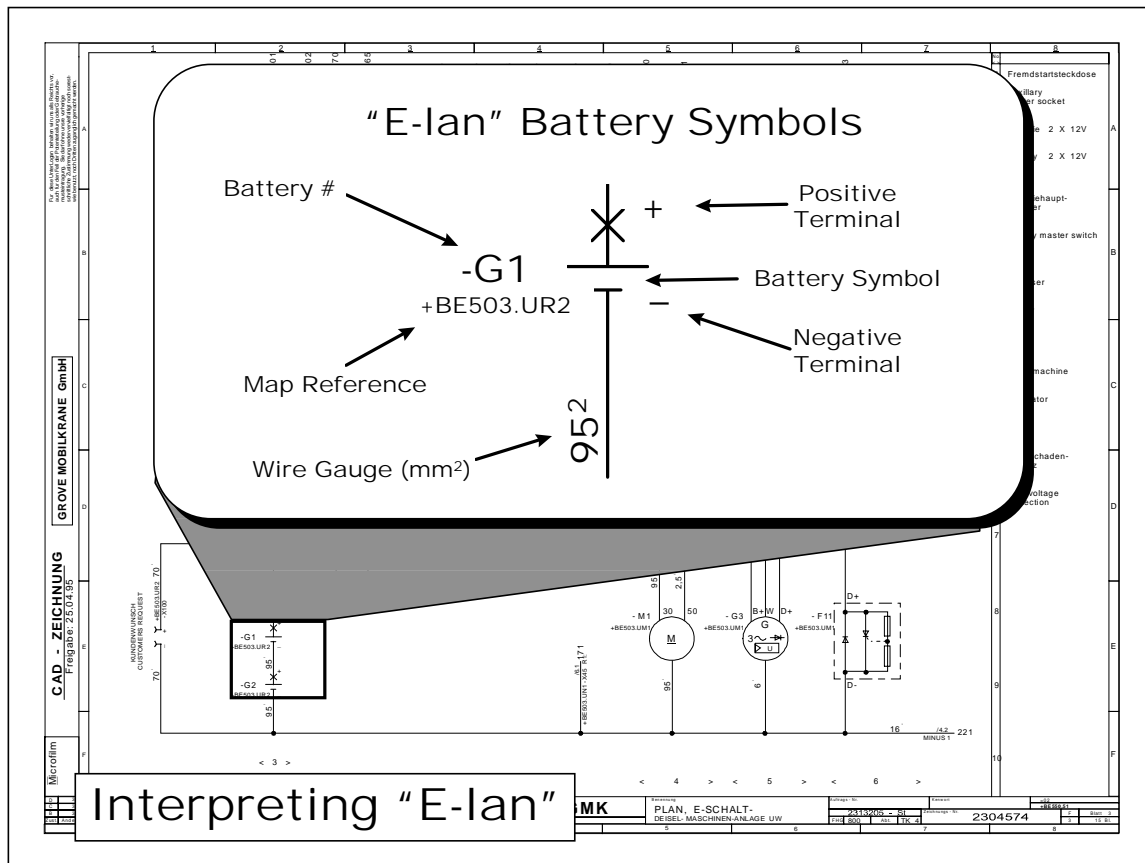
GROVE MOBILKRANE GmbH

STR	GMK	PLAN, E-SCHALT - DEISEL MASCHINEN-ANLAGE UW	2304574
-----	-----	---------------------------------------------	---------







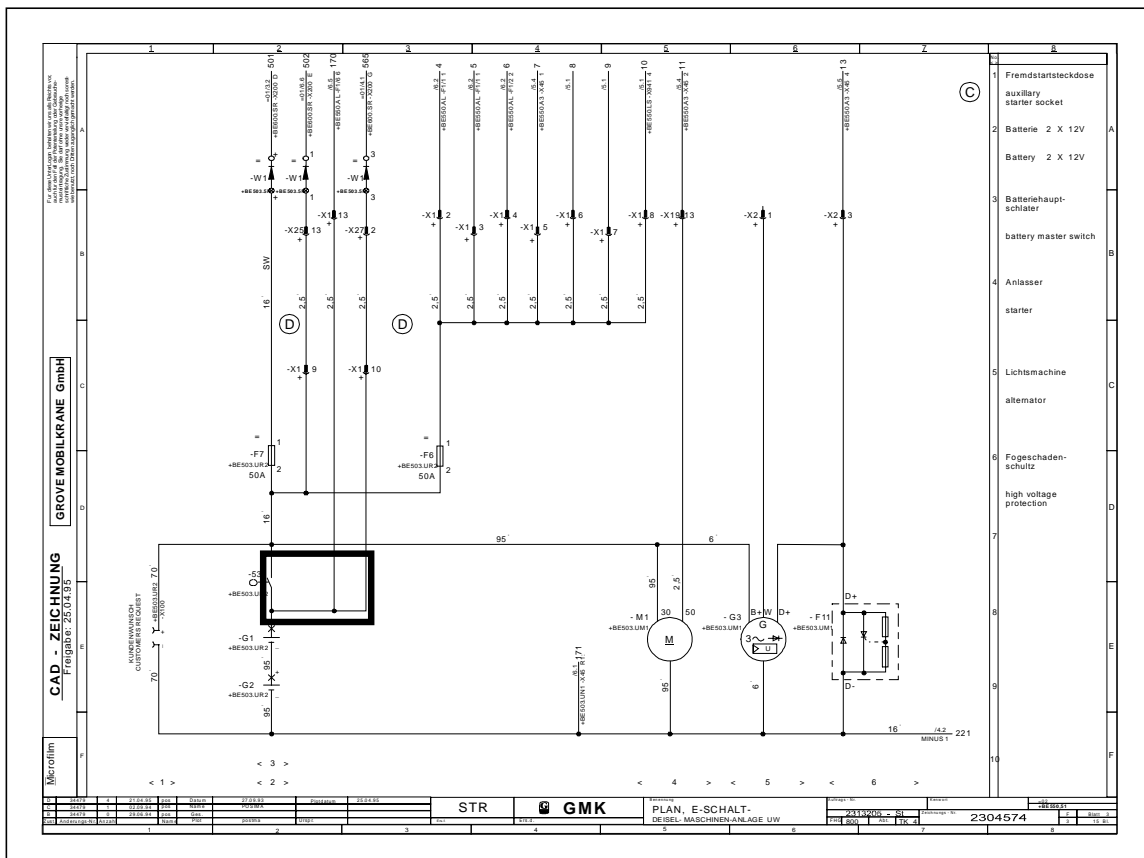


## Navigating the "E-lan" Print

- Where does main power come in from?
- Where does the main power go to?
- Where are the Batteries?
- Where is the Superstructure Ignition Circuit?

# Navigating the "E-lan" Print

- Start with the source of power (the batteries)
- Turn to Section 02 Contents Page "diesel engine installation chassis"
- Blatt #3 Batteries, Starter, Dynamo
- Locate the Batteries







## Navigating the “E-Ian” Print

- How are these components connected?
- Do I start at the Batteries or Ignition Switch?
- How do I know where to look?

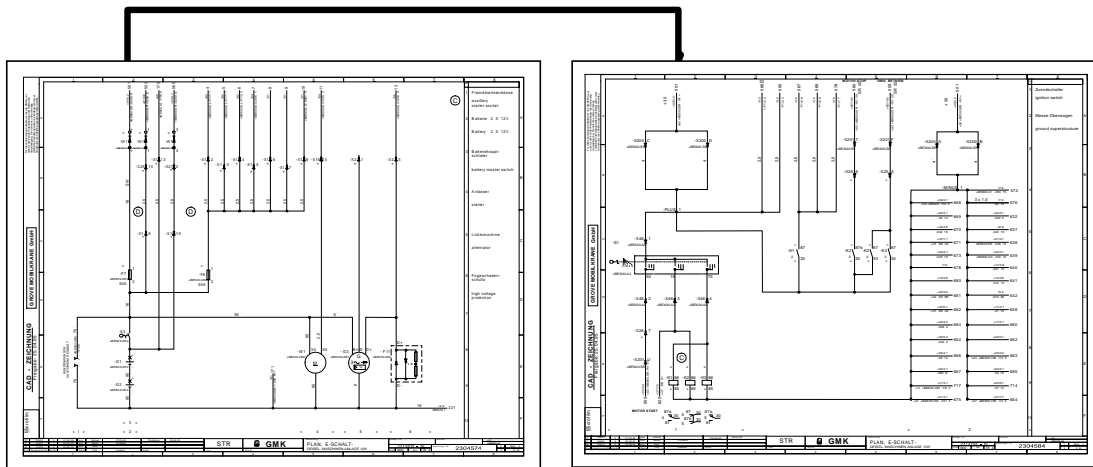
## Navigating the “E-Ian” Print

- If you do not know where to start;  
Start with what you do know!
- Where are the Batteries on the Crane?
  - Check the Carrier Location Map
  - Identify and note the Group Numbers
- Identify likely sections where these components are to be found!

# Navigating the "E-Ian" Print

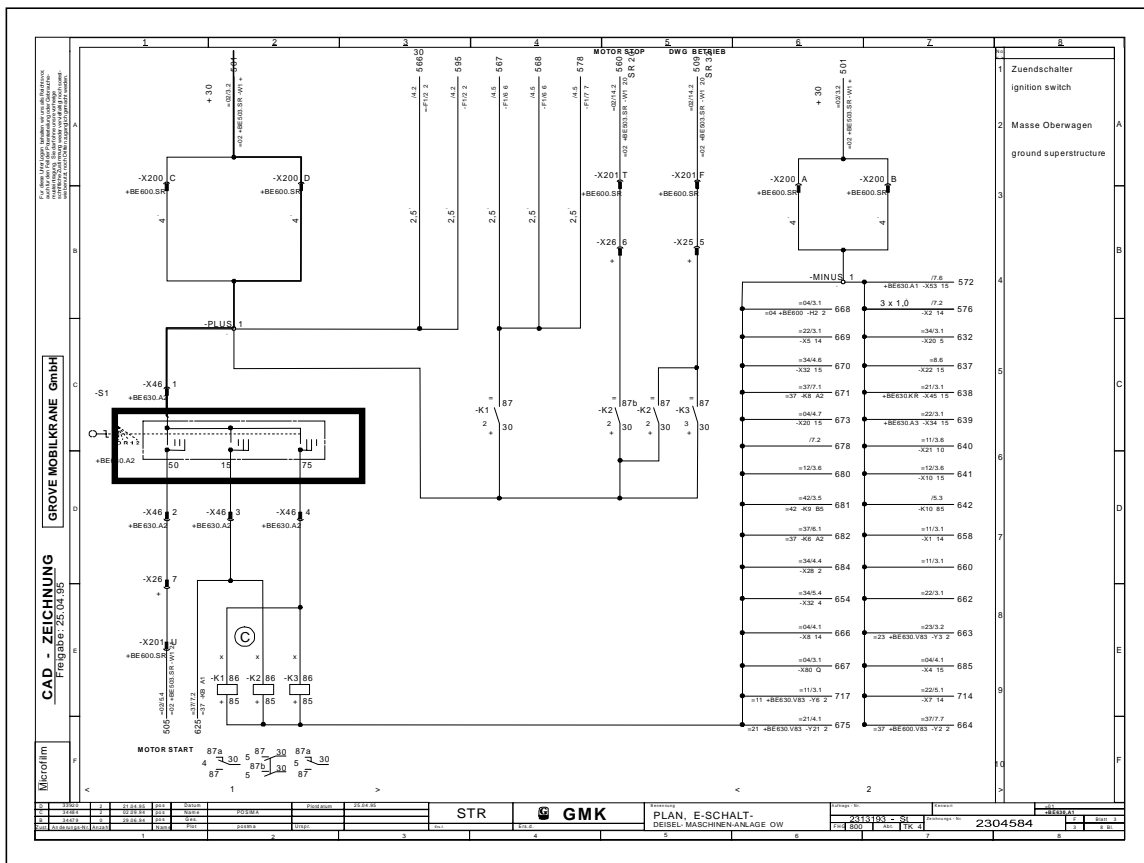
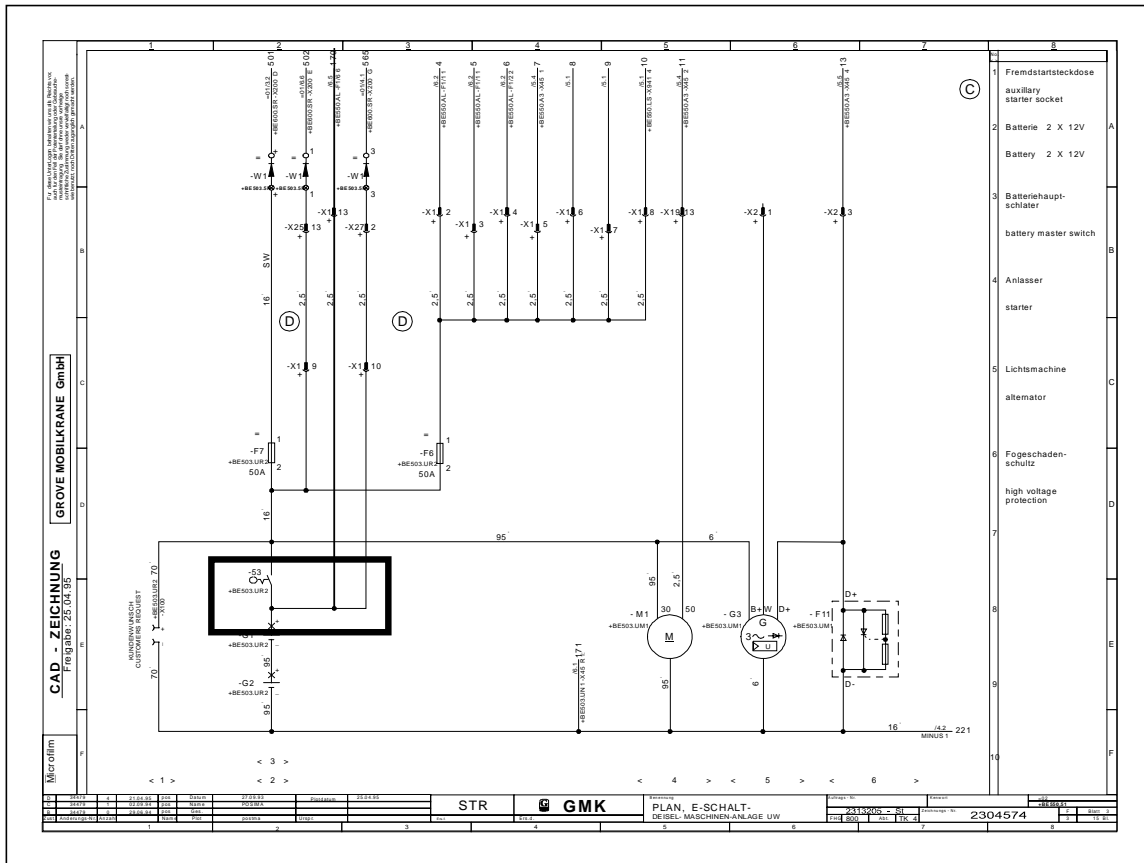
- Where is the Ignition Switch on the Crane?
  - Check the Upper Location Map
  - Identify and note the Group Numbers
- Identify likely sections where this component(s) are to be found!
- Look on the top edge of these prints for common signal line numbers!

Signal Wire #501  
connects the print pages



(Section) =02/3.2 (Sheet.Grid)

(Section) =01/3.2 (Sheet.Grid)



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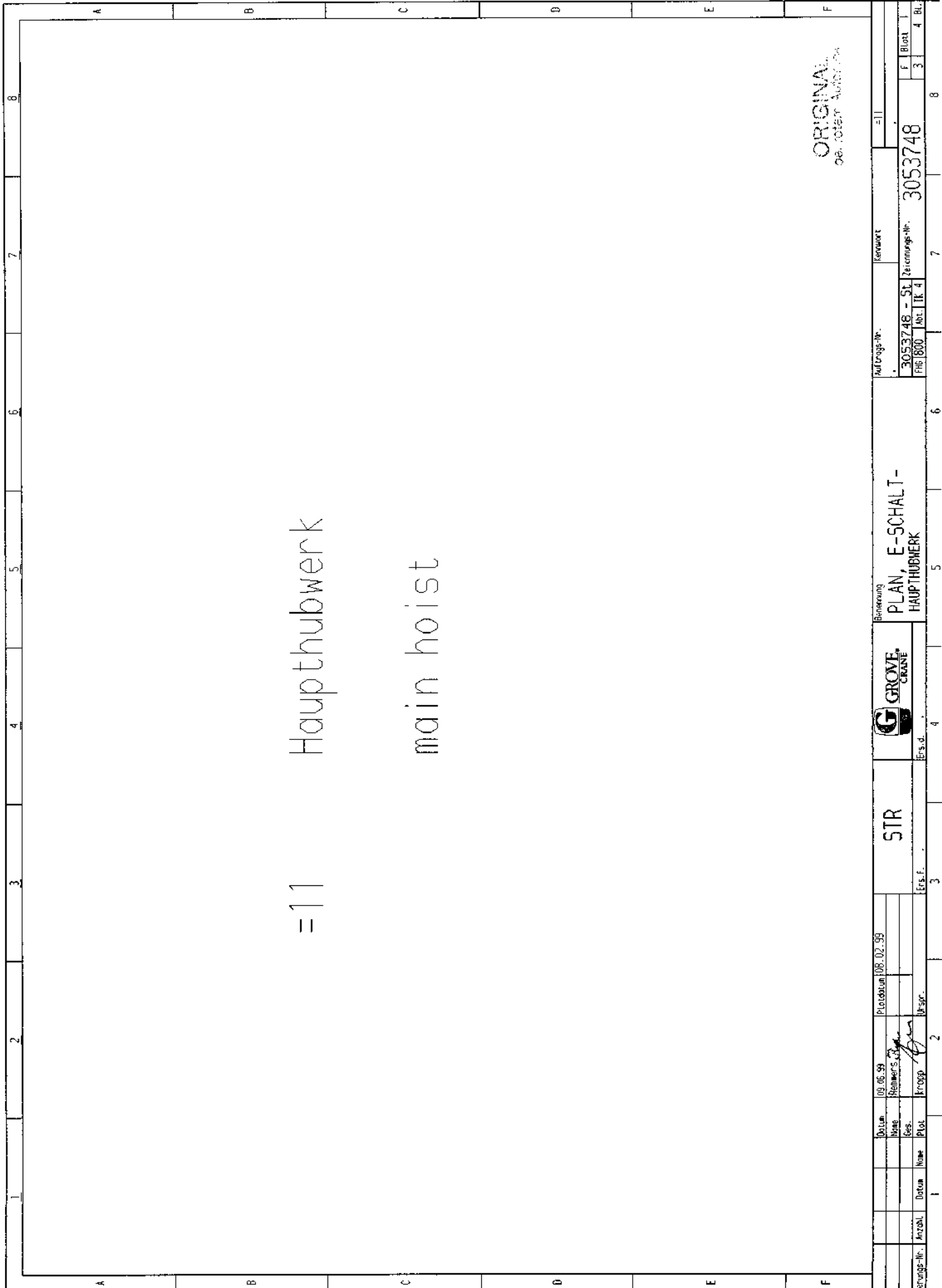
Deutsche GROVE GmbH

CAD - ZEICHNUNG  
EVA Freigabe: 08.02.00

Microfilm

=11 Haupthubwerk  
main hoist

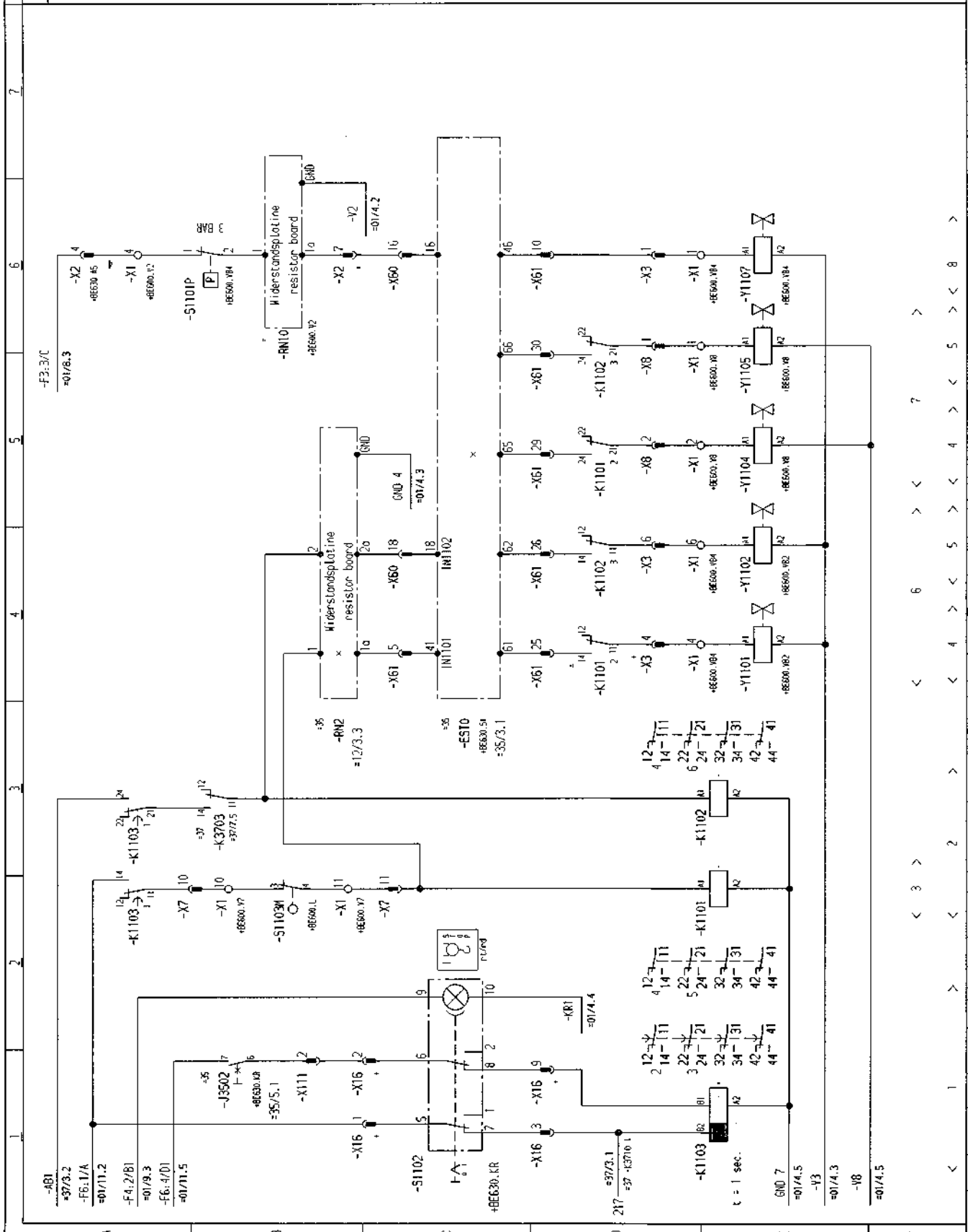
ORIGINAL  
des rotierten Aufbaus



Zugl.-		Anzahl		Datum		Name		Plat.		Ers.f.		Ers.d.		STR		GROVE CRANE		Benennung		Auftrags-Nr.		Serien-Nr.		=11	
Anzahl		Anzahl		08.02.99		Remmers		Ersgr.		Ers.f.		Ers.d.		STR		GROVE CRANE		PLAN, E-SCHALT- HAUPTHUBWERK		3053748 - 51		3053748		F Blatt 1	
Anzahl		Anzahl		08.02.99		Ersgr.		Ers.f.		Ers.d.		STR		GROVE CRANE		Benennung		Auftrags-Nr.		Serien-Nr.		=11		F Blatt 1	
Anzahl		Anzahl		08.02.99		Ersgr.		Ers.f.		Ers.d.		STR		GROVE CRANE		Benennung		Auftrags-Nr.		Serien-Nr.		=11		F Blatt 1	
Anzahl		Anzahl		08.02.99		Ersgr.		Ers.f.		Ers.d.		STR		GROVE CRANE		Benennung		Auftrags-Nr.		Serien-Nr.		=11		F Blatt 1	



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 Nach für den Fall der Falschinterpretation oder Nachsch.  
 Verantwortung überträgt sich auf die Kunden. Die  
 Gewährleistung wird nicht übernommen.



No.	7	8
1		Triebwerk sperren power unit locking
2		Richtungsfreigabe release of direction
3		Senkenschalter Lowering limit switch
4		senken down
5		heben up
6		Haupthubwerk Richtung main hoist direction
7		Bremse Haupthubwerk brake main hoist
8		Geschwindigkeit Pumpe pump speed
9		
10		x) Kundenwunsch customers request

Produktion 08.02.99		Kernwert	
Datum 08.06.99	Rechner: Heilmann, Ust.	Auftrags-Nr. +B6630.A5	
Zeichner: Kropp	Prüfer: Kropp	3053748 - SL	
Zust. Änderungs-Nr.	Anzahl	F. Blatt 3	
		3	
		4 Bl.	
STR		3053748	
PLAN, E-SCHALT- HAUPTHUBWERK		3053748	





# *Section 12*





## What is SLI?

The SLI is the Safe Load Indicator.  
You may hear other terms used, such as:

RCL	Rated Capacity Limiter
RCI	Rated Capacity Indicator
LMI	Load Moment Indicator
LMB	Load Moment Indicator ( <i>German equivalent</i> )
EKS	GMK System

Each of these terms are describing the same general equipment. The exception is EKS which is a GMK exclusive trademark

# What is EKS?

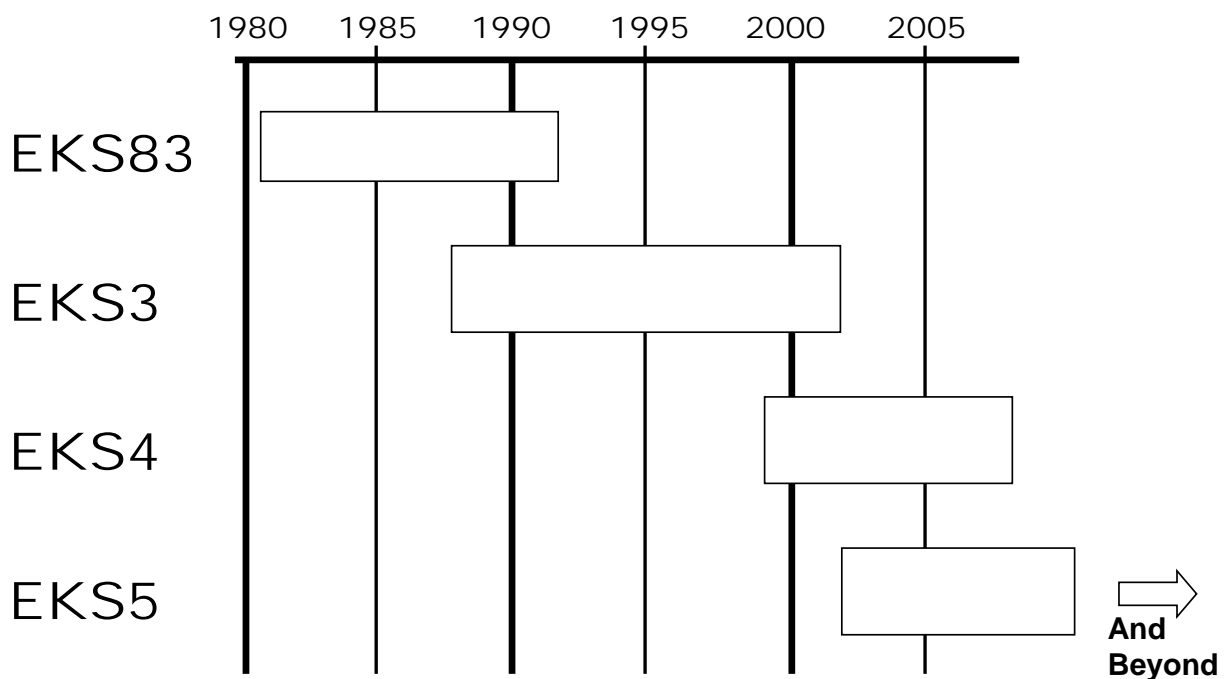
The EKS is the GMK version of a LMI system.  
It is exclusively designed and manufactured by:

Deutsche Grove GmbH,  
a Grove Worldwide Company

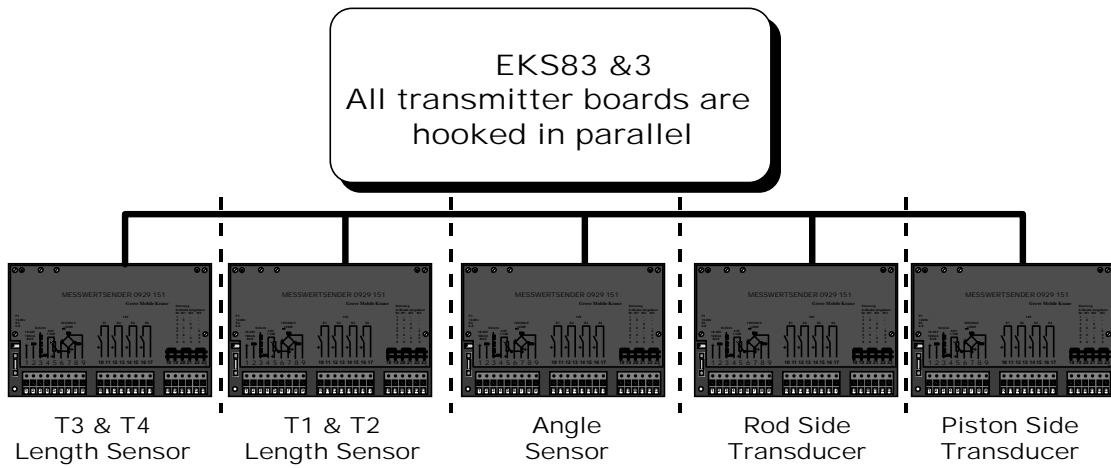
## What is EKS stand for?

*Elektronik Krane System*

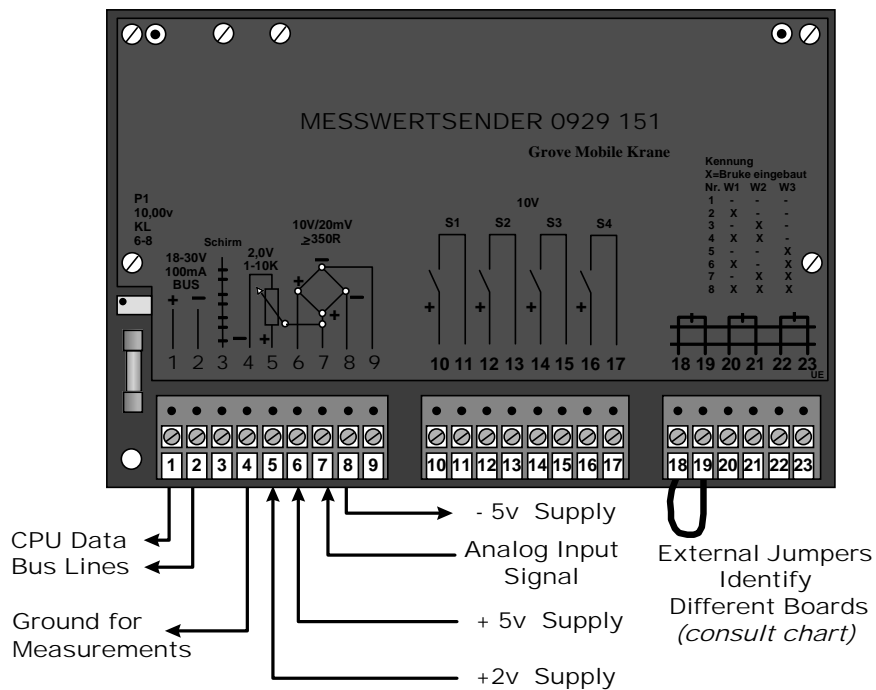
## EKS History



# EKS83 & EKS3 Component Map



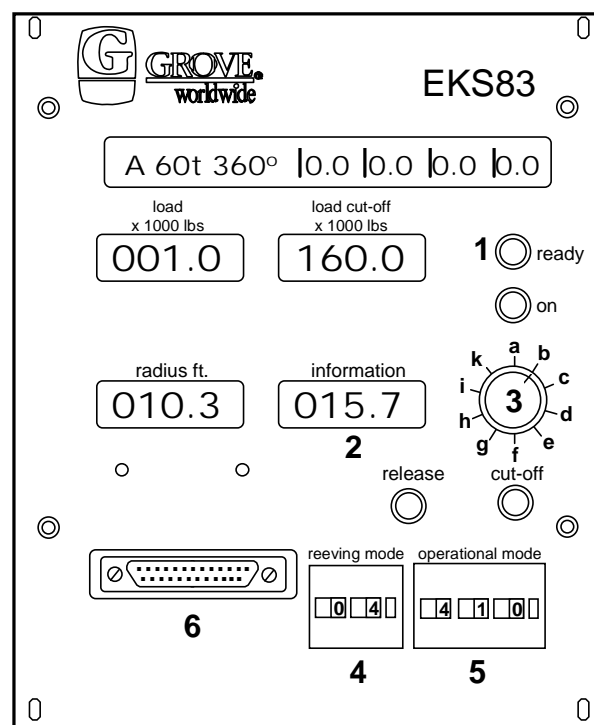
# EKS Transmitter Board



# EKS83

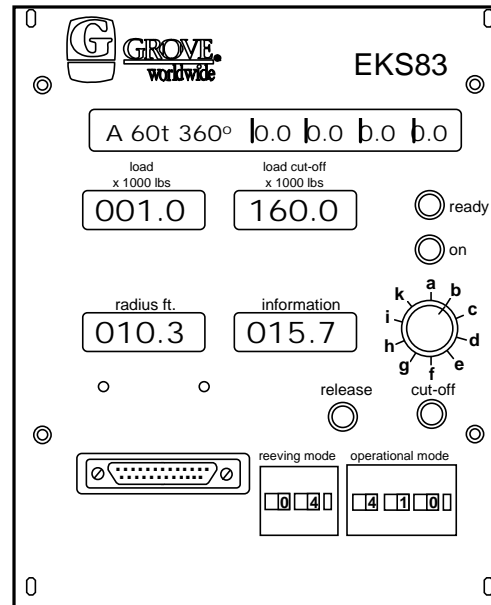
## EKS83 Control Panel

1. Ready Indicator
2. Information Display
3. Information Selector
4. Reeving Thumbwheel
5. Operational Code Thumbwheel
6. Calibration Port Cover



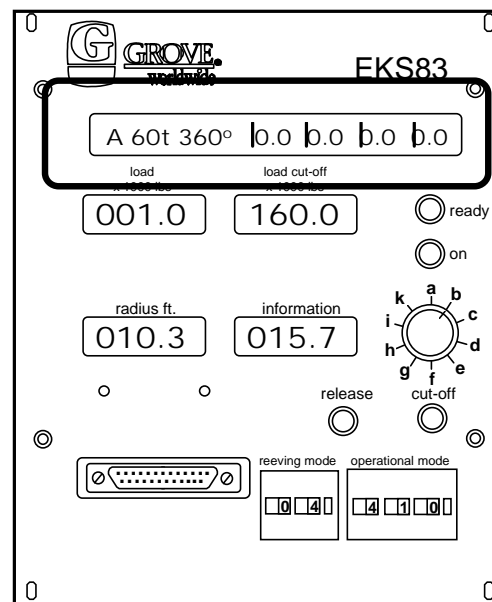
## EKS83 Control Panel

- **Status Display**
- **Actual Load**
- **Capacity Limit**
- **Load Radius**
- **100% Warning Indicator**
- **104% Lockout Indicator**
- **Release Button**



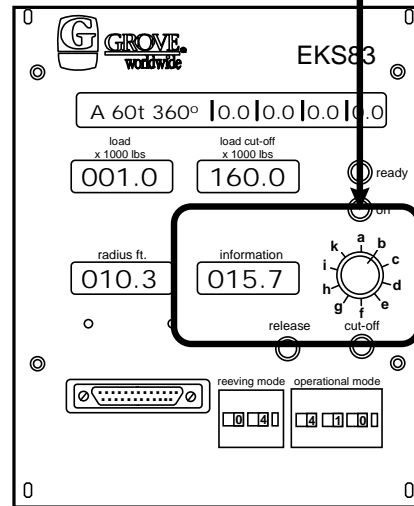
## EKS83 Status Display

- **Outrigger Configuration**
- **Counterweight** (*metric tonnes*)
- **Swing Range**
- **Extend % Section T1**
- **Extend % Section T2**
- **Extend % Section T3**
- **Extend % Section T4**



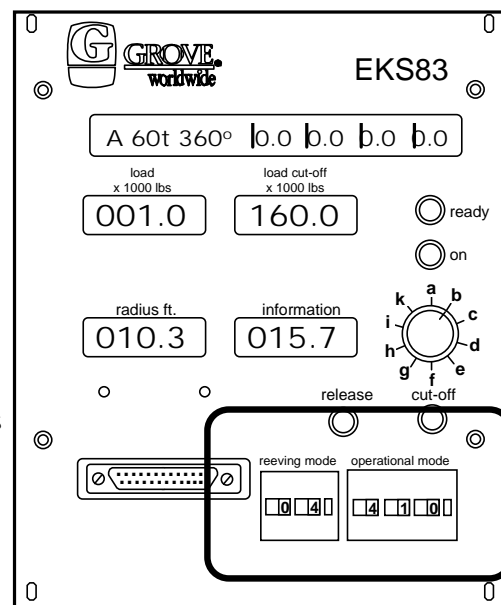
# EKS83 Information Display

- **A = Capacity Utilization %**
- **B = Hook Height (meters)**
- **C = Boom Length (meters)**
- **D = Main Boom Angle**
- **E = Not in Use**
- **F = Piston Side Pressure**
- **G = Rod Side Pressure**
- **H...K = Not in Use**



# EKS83 Thumbwheels

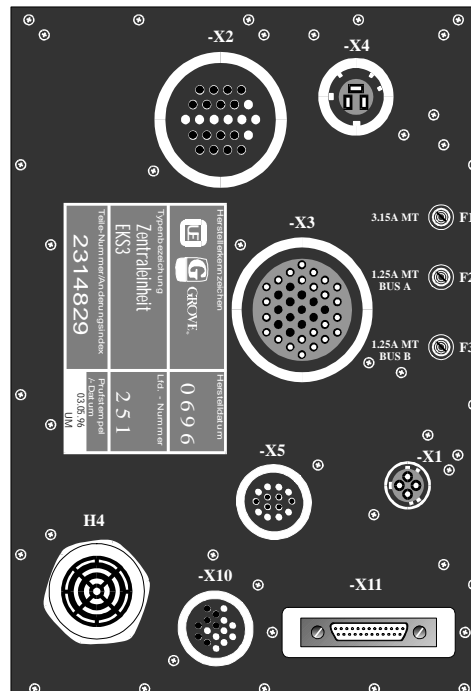
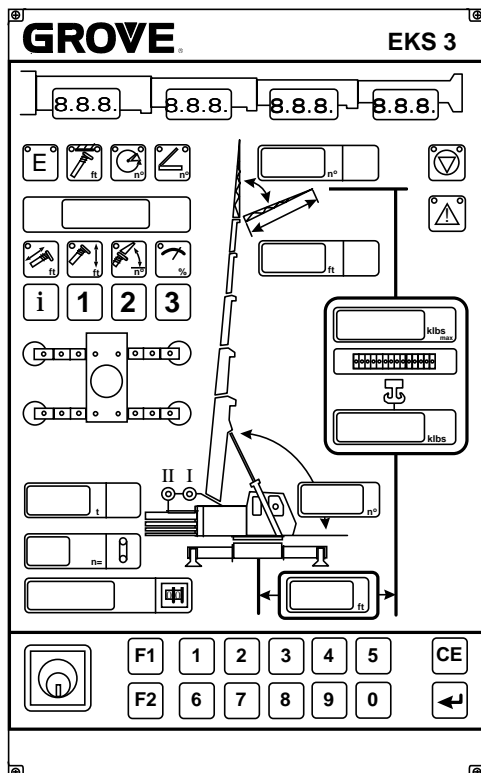
- Reeing
  - 1 thru 24 parts of line
- Operational Codes
  - Digit #1  
Counterweight Configurations
  - Digit #2 & #3  
Main & Jib Configurations





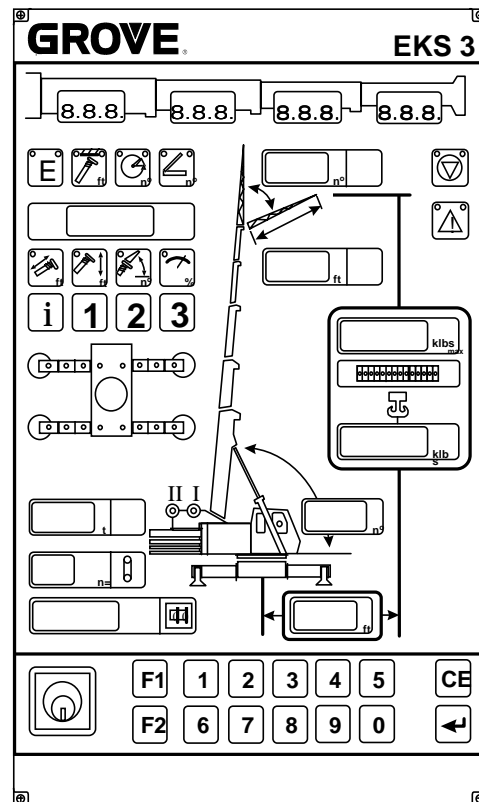
# EKS3

EKS3 Front/Rear Panel



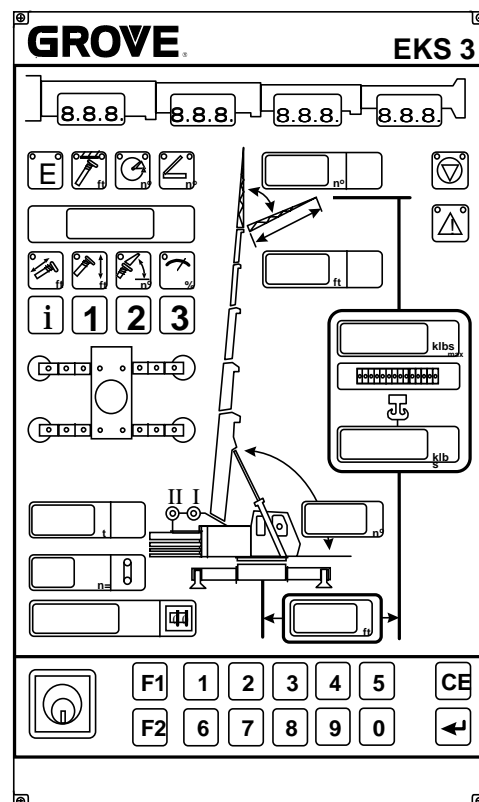
# EKS3 Front Panel Display

- Telescope Extend %
- Information Display
- Outrigger Configuration
- Counterweight, Reeving and Configuration Code
- SLI Shutdown and Warning Indicators
- Extension/Jib Indicators
- Load Status



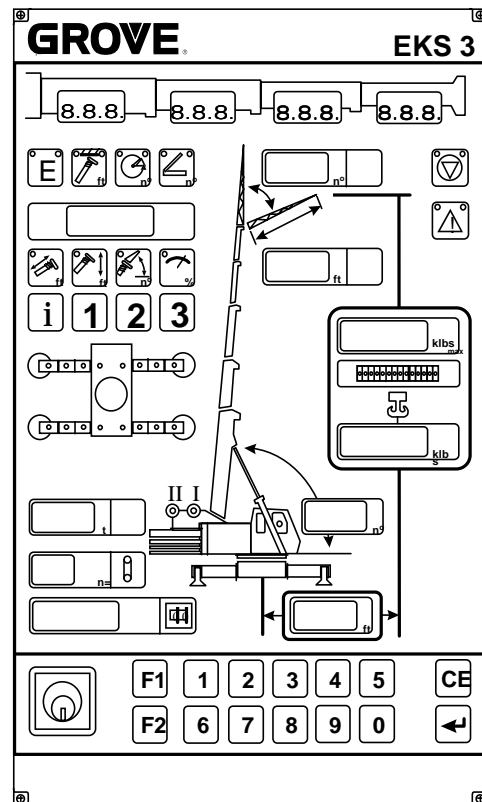
# EKS3 Front Panel Display

- Error Warning Selector
- Tip Height Limit Preset  
*(under development not in use)*
- Slewing Angle & Warning  
*(Also known as Swing Angle)*
- Boom Angle Preset
- Active Hoist
- Boom Angle Display
- Load Radius Display



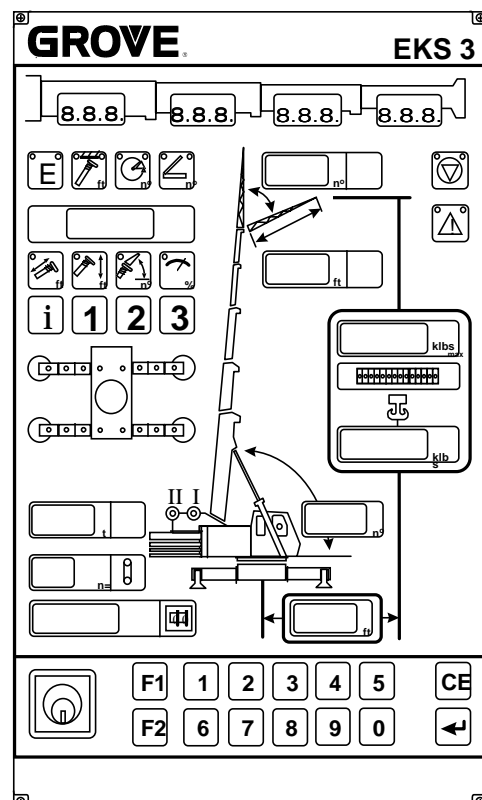
# EKS3 Front Panel Display

- Boom Length Display
- Tip Height Display
- Lattice Angle Input
- Percent Utilization
- Information *(not active)*
- #1 Piston Side Pressure
- #2 Rod Side Pressure
- #3 Future Function



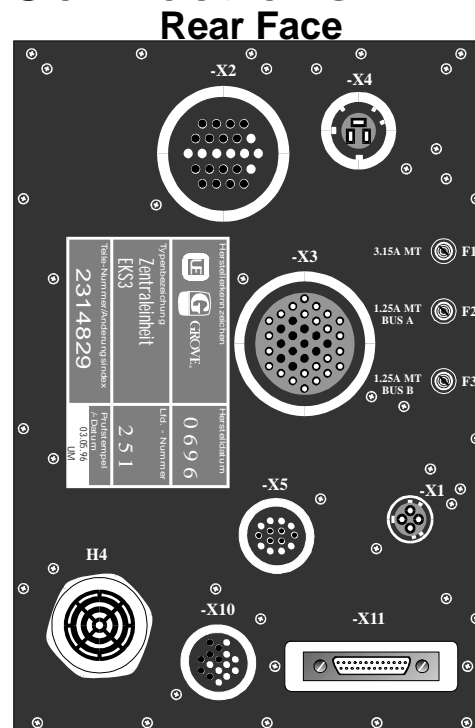
# EKS3 Front Panel Display

- EKS Override Lockout Key
- F1 Function *(not active)*
- F2 Function *(not active)*
- Numerical Input Pad 0-9
- Acknowledge Entry Key
- Input Confirmation Key
- Panel Dimmer Sensor



## EKS3 Rear Panel Connections

- -X2 Connector
- -X4 Connector
- -X3 Connector
- -F1 3.15A Fuse
- -F2 1.25A Fuse
- -F3 1.25A Fuse



## EKS3 Rear Panel Connections

- -X1 Connector
- -X5 Connector
- -X10 Connector
- -X11 Connector
- -H4 Warning Horn
- Unit Placard

