



# Parts Manual



## Allied H6H

### Hydraulic Winch for Liebherr Dozers

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regularly for updates to this manual.  
[www.alliedsystems.com](http://www.alliedsystems.com)

# Customer Edition

A PRODUCT OF

**Allied Systems**  
COMPANY

SHERWOOD, OREGON USA

P/N 599039W-LIEB

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## **Safety Precautions**

**Read, understand and observe the Safety Summary on pages 2 through 4 to prevent injury to personnel and damage to equipment.**

**Winch serial number \_\_\_\_\_**

**Date put into service \_\_\_\_\_**

**NOTE: This publication may be translated to different languages for the sole purpose of easy reference in non-English speaking locations. Should there be differences in interpretations to the text, please refer to the English language edition published by Allied Systems Company as the controlling document.**

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## Safety Summary

### General Safety Notices

The following pages contain general safety warnings which supplement specific warnings and cautions appearing elsewhere in this manual. All electrical and hydraulic equipment is dangerous. You must thoroughly review and understand the Safety Summary before attempting to operate, troubleshoot or service this winch.

The following symbols and terms are used to emphasize safety precautions and notices in this manual:

### DANGER

The “DANGER” symbol indicates a hazardous situation which, if not avoided, will result in serious injury or death. Carefully read the message that follows to prevent serious injury or death.

### WARNING

The “WARNING” symbol appears wherever incorrect operating procedures or practices could cause serious injury or death. Carefully read the message that follows to prevent serious injury or death.

### CAUTION

The “CAUTION” symbol appears where a hazardous situation which, if not avoided, could result in minor to moderate injury and equipment damage.

### NOTICE

This signal word alerts to a situation that is not related to personal injury but may cause equipment damage.

NOTE: ...

The term “NOTE” highlights operating procedures or practices that may improve equipment reliability and/or personnel performance.

### Safety Regulations

Each country has its own safety legislation. It is in the operator’s own interest to be conversant with these regulations and to comply with them in full. This also applies to local bylaws and regulations in force on a particular worksite.

Should the recommendations in this manual deviate from those in the user’ country, the national regulations should be followed.

### Operation, Inspection, and Maintenance Warnings

### WARNING

Multiple hazards.

Ignoring safety warnings may cause equipment damage, personal injury or death.

All possible safety hazards cannot be foreseen and included in this manual. The operator must always be alert to possible hazards that could endanger personnel or damage the equipment.

### Training

- Do not operate the winch unless your are authorized and trained to do so.
- Read, understand, and follow the operating, inspection, and maintenance instructions in this manual.
- Keep yourself informed of any applicable codes, regulations and standards for the job.

### Personnel Safety

- Stay in the operator’s seat when operating the winch.
- Do not stand on the vehicle when operating the winch.

- Avoid winch operation near people or other machines.
- Never stand nor permit others to stand in the bight (loop) of a wire rope.
- Do not stand nor permit others to be near the winch or wire rope when there is tension on the wire rope.

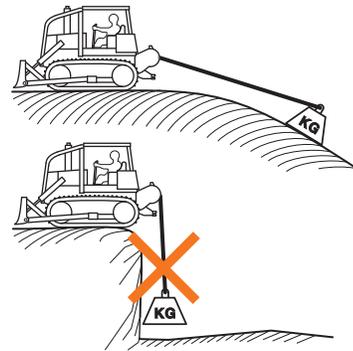


- Make sure ground personnel are in plain view of the operator, and at a distance of at least 1½ times the working length of the wire rope.
- Observe jobsite rules.
- Do not use the control levers for hand holds when entering or leaving the vehicle.
- Be in complete control at all times.
- Do not use the control levers as hangers for clothes, water bags, grease guns, lunch pails, etc.
- Do not leave the vehicle when the winch wire rope is under tension.
- Do not permit riders on the vehicle or load.

### Operation Warnings

- Do not operate the winch unless the vehicle is equipped with a screen to protect the operator if the wire rope breaks.
- Be aware of the ground conditions, and make sure the ground and dozer are stable enough to pull the intended load.
- Do not attempt to pull loads in excess of the rated capacity of the winch.
- Make sure that any hand signals used by ground personnel are clearly defined and understood by everyone involved.

- Do not attempt to “jerk” or “shock” a load free. Doing so can cause loads in excess of the rated capacity of the wire rope, winch, or mounting hardware.
- Your winch may have temperature shut-off system for protection of dozer and winch. Manual override of high temperature shut-off will cause damage to dozer and winch.
- This winch is neither intended, designed, nor rated for any application involved in the lifting or moving of personnel.
- Do not use the winch as an anchor for a double or two-part line.
- Do not pull the hook through the throat or over the drum, which will cause damage.
- When the winch is not in use, make sure the control lever is in **BRAKE-ON** position and the winch brake is applied.
- Do not use winch as a hoist. Dozer and skidder mounted winches are designed for towing.



### Wire Rope Safety

- Always inspect wire rope, tail chain and other rigging components for wear, damage, broken strands or abuse before use.
- Never use wire rope, tail chain or other rigging that is worn-out, damaged or abused.
- Never overload wire rope, tail chain or rigging.
- Wire rope and tail chain will fail if worn-out, overloaded, misused, damaged, improperly maintained or abused.

## **WARNING**

**Wire rope or tail chain failure may cause serious injury or death.**

**Inspect rigging before use and obey all safety warnings.**

- Do not terminate wire rope to tail chain by the use of a knot.
- Do not handle wire rope if the hook end is not free. A load could break away, suddenly tensioning the wire rope, resulting in serious injury or death.
- Stay clear of wire rope entry areas (fairlead or arch rollers, winch drum etc).
- Maintain **a minimum of three (3) complete wraps of wire rope** on the drum for normal operation. It may help to paint the last five wraps of wire rope a contrasting color, to serve as a visual indicator.
- Do not handle wire rope with bare hands. Wear leather gloves at all times.
- Align the dozer with the load to prevent side loading the winch, and to maintain even spooling of the wire rope.
- If applying tension to the wire rope manually during spooling:
  - ... ensure that the operator is winching in slowly,
  - ... keep your hands and clothing well clear of any rollers or the winch drum,
  - ... do not maintain tension by letting the wire rope to slip through your hands,
  - ... use a hand-over-hand technique to maintain tension.

### **Maintenance Warnings**

- Do not permit other people near the control area when you inspect or repair a machine.
- Never inspect, repair, or perform maintenance on a machine that is in motion.
- Inspect the winch before each use:
  - ... Make sure that the controls and instruments operate correctly.
  - ... Report the need for repairs immediately.
  - ... Do not work with a damaged or worn wire rope.
  - ... Do not use a winch that needs repairs.

... If the wire rope and ferrule must be removed from the drum, make sure the end of the wire rope and ferrule are controlled when the ferrule is released. The end of the wire rope can suddenly move from the drum like a compressed spring when the ferrule is released, and cause an injury.

- Replace any parts only with genuine Allied Winch parts.
- Use only the lubricants listed in the Recommended Oil List. See page 4.
- The hydraulic system must be kept clean and free of contamination at all times.
- Do not weld on any part of the winch. Contact Allied Systems if weld repairs are needed.

### **Hydraulic Hazards**

- Wear personal protective equipment, such as gloves and safety glasses, whenever servicing or checking a hydraulic system.
- Assume that all hydraulic hoses and components are pressurized. Relieve all hydraulic pressure before disconnecting any hydraulic line.
- Never try to stop or check for a hydraulic leak with any part of your body; use a piece of cardboard to check for hydraulic leaks.
- Small hydraulic hose leaks are extremely dangerous, and can inject hydraulic oil under the skin, even through gloves.

## **DANGER**

**Injection hazard.**

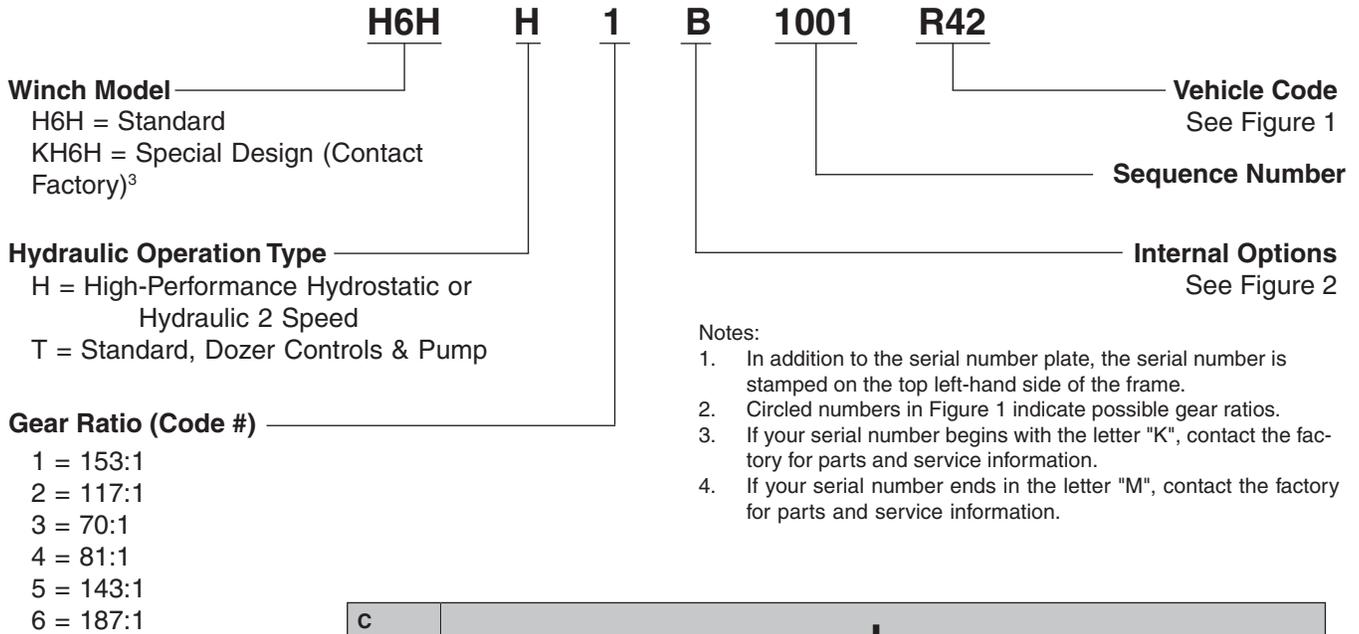
**Infection and gangrene will result when hydraulic oil penetrates the skin. See a doctor immediately to prevent loss of limb or death.**

**Use a piece of cardboard to check for hydraulic leaks.**



## Unit Identification

Allied Winch Serial Number Nameplate Data For Dozer Mountings



**Notes:**

1. In addition to the serial number plate, the serial number is stamped on the top left-hand side of the frame.
2. Circled numbers in Figure 1 indicate possible gear ratios.
3. If your serial number begins with the letter "K", contact the factory for parts and service information.
4. If your serial number ends in the letter "M", contact the factory for parts and service information.

C O D E	L Liebherr
<b>39</b>	PR716 ⑤⑥
<b>41</b>	PR724 ⑤⑥
<b>410</b>	PR726 ⑤⑥
<b>42</b>	PR734, PR736 ①
<b>421</b>	PR734, PR736 ①
<b>44</b>	PR734-4 ⑥

**Figure 1 - Dozer or Skidder Identification Codes and Available Gear Ratios**

Circled numbers in Figure 1 indicate possible gear ratios.

	B	D	E	U	BN	DN	EN	DE	DU
<b>FREESPOOL</b>	X	X	X	X				X	X
<b>BRAKE-OFF</b>	X	X		X	X	X			X
<b>OVERWIND</b>	X	X	X		X	X	X	X	
<b>2-SPEED CONTROL</b>		X				X		X	X

**Figure 2 - Internal Options**

**When the part number and the next higher assembly is not known:**

1. Determine the function and application of the part required. Turn to the illustrated index page immediately behind the front cover, and select the most appropriate area.
2. Use the table of contents at the beginning of each chapter to determine the assembly which would normally contain the part required. Proceed then to locate the part on the assembly breakdown page.

**When the part number is not known and the next higher assembly is known:**

1. Determine the assembly the required part is used on. Turn to the master index (which immediately follows the illustrated index).
2. Locate the assembly on which the required part is used, and turn to the page indicated for that assembly. Proceed to locate the part on the assembly breakdown page.

**When the part number is known:**

Use the numerical index to find the part number. Turn to the page listed and locate the part as indicated by the reference number.

**General:**

The assembly breakdowns include part numbers, descriptions, quantities required, keys and footnotes to help in selecting the correct parts.

Keys are used to show effective serial numbers for two or more similar assemblies, LH and RH assembly parts, etc. Select the appropriate key, "A," "B," "C," or "D" and the corresponding quantity column to find the required parts.

Indent dots are used to indicate assemblies and sub-parts of assemblies. No dot indicates the major Assy. Part descriptions which are indented with dots are sub-parts of the major assembly shown above.

Quantities shown are for one assembly. Note that when two assemblies are shown, but the quantity of the sub-parts is indicated as three, this means three per assembly - for a total of six. AR means As Required, and NSS indicates Not Sold Separately.

Serial numbers are shown to allow for the most current parts information to be incorporated into the parts manual. See page 0-6 for serial number information.

**Abbreviations**

Abbreviations are used both on the winch and in this manual. for example, a manifold may have a port stamped "FS". That port is related to the "freespool" circuit. this abbreviation is also used on pages in this manual that reference this port, or the ports connected to this port. Figure 3 lists the most common abbreviations used in this manual.

Abbreviation	Full Name
P	Pressure
T	Tank
BO	Brake Off
FA	Filter Outlet
FE	Filter Inlet
FS	Freespool
HS	High Speed
LS	Load Sense
PD	Pilot Drain
PP	Pilot Pressure
PS	Pilot Supply
RI	Reel In
RO	Reel Out
TP	Test Port
TS	Temperature Switch

**Figure 3 - Abbreviations**

## Oil Specifications

### Oil Selection

To get the most suitable temperature-viscosity characteristics, choose one of the oils listed below.

Manufacturer	Winch Case (Gear Train)
Exxon-Mobil (standard)	Mobil Trans HD Series
Chevron (optional)	Drive Train Fluids HD
Caterpillar (optional)	TO-4

Figure 4 - Recommended Oil List

Factory fill is Exxon-Mobil Trans HD 30.

**Note: This winch uses hydraulic fluid from the dozer. See Figure 4 for recommended gear train fluids. Contact the factory if alternate oils are required.**

**Use of a non-recommended oil may void the warranty.**

### Oil Capacity

Oil capacity for the H6H winch is 4 gallons (15 liters).

Viscosity Grade		Oil Operating Temperature Range		Typical Ambient Temperature Range	
ISO	SAE	°F	°C	°F	°C
VG 22	10W	-5 to 140	-20 to 60	-5 to 40	-20 to 4
VG 32	15W	10 to 160	-12 to 71	10 to 55	-20 to 13
VG 46	20	20 to 180	-7 to 82	20 to 70	-7 to 21
VG 68	20	30 to 200	-1 to 93	30 to 90	-1 to 32
VG 100	30	40 to 220	4 to 104	40 to 110	4 to 43

Figure 5 - Viscosity Chart

## Ordering Parts

When ordering replacement parts, give the unit serial number, part number, name of part and quantity required.

For any further information on parts, service or ordering, consult your local winch dealer, or contact Allied Systems Company:

**Allied Systems Company**  
21433 SW Oregon Street  
Sherwood, OR 97140 U.S.A.

Phone: 503-625-2560

Fax: 503-625-5132

E-mail: [parts@alliedsystems.com](mailto:parts@alliedsystems.com)

Also see our website, [www.alliedsystems.com](http://www.alliedsystems.com), where the most current copy of this manual is always available.

**NOTE: This publication may be translated to different languages for sole purpose of easy reference in non-English speaking locations. Should there be differences in interpretations to the text, please refer to the English language edition published by Allied Systems Company as the controlling document.**

## Nameplate & Decals

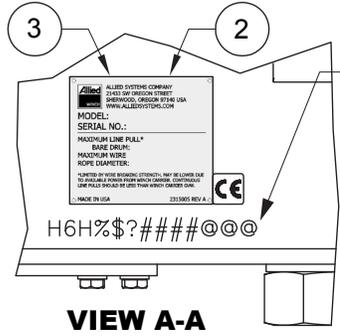
**Allied** WINCH  
 ALLIED SYSTEMS COMPANY  
 21433 SW OREGON STREET  
 SHERWOOD, OREGON 97140 USA  
 WWW.ALLIEDSYSTEMS.COM

MODEL: H6H 20##  
 SERIAL NO.: H6H%\$?#####@@@

MAXIMUM LINE PULL\*  
 BARE DRUM: 88,800 LBS  
 MAXIMUM WIRE  
 ROPE DIAMETER: 1 INCH DIA

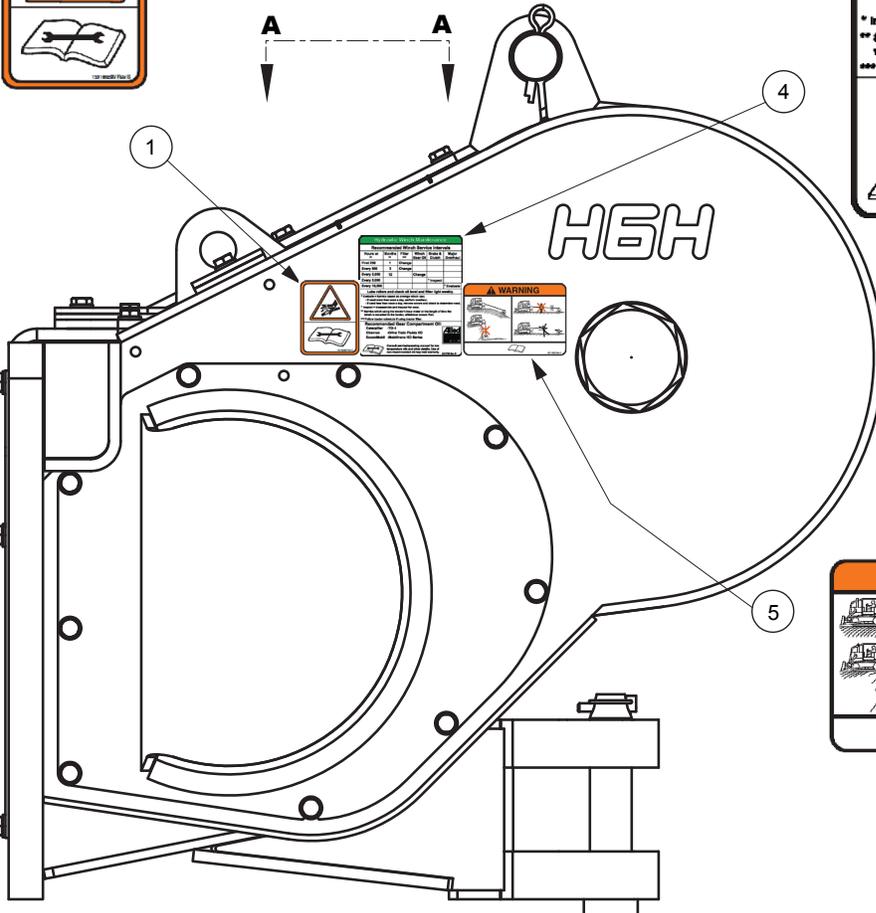
\*LIMITED BY WIRE BREAKING STRENGTH. MAY BE LOWER DUE TO AVAILABLE POWER FROM WINCH CARRIER. CONTINUOUS LINE PULLS SHOULD BE LESS THAN WINCH CARRIER GVW.

MADE IN USA 2315005 REV A



STAMP NAMEPLATE AND FRAME AS SHOWN  
 % = H (HI-PERFORMANCE) OR T (STANDARD)  
 \$ = GEAR RATIO CODE  
 ? = INTERNAL OPTIONS  
 ##### = SEQUENCE NUMBER  
 @@@ = VEHICLE CODE  
 SEE DRAWING 231271

40



**Hydraulic Winch Maintenance**

Recommended Winch Service Intervals					
Hours or	Months	Filter	Winch Gear Oil	Brake & Clutch	Major Overhaul
First 250	1	Change			
Every 500	3	Change			
Every 2,000	12		Change		
Every 5,000				* Inspect	
Every 10,000					* Evaluate

Lube rollers and check oil level and filter light weekly.  
 \* Evaluate = Service based on average winch use:  
 - If used more than once a day, perform overhaul.  
 - If used less than once a day, remove covers and check to determine need.  
 \* Inspect = disassemble and inspect for wear.  
 \*\* Service winch using the tractor's hour meter or the length of time the winch is mounted to the tractor, whichever occurs first.  
 \*\*\* Follow tractor schedule if using tractor filter.

**Recommended Gear Compartment Oil:**  
 Caterpillar -TO-4  
 Chevron -Drive Train Fluids HD  
 ExxonMobil -Mobiltrans HD Series

Consult service/operating manual for low temperature oils and other details. Use of non-recommended oil may void warranty. 2310796 Rev D



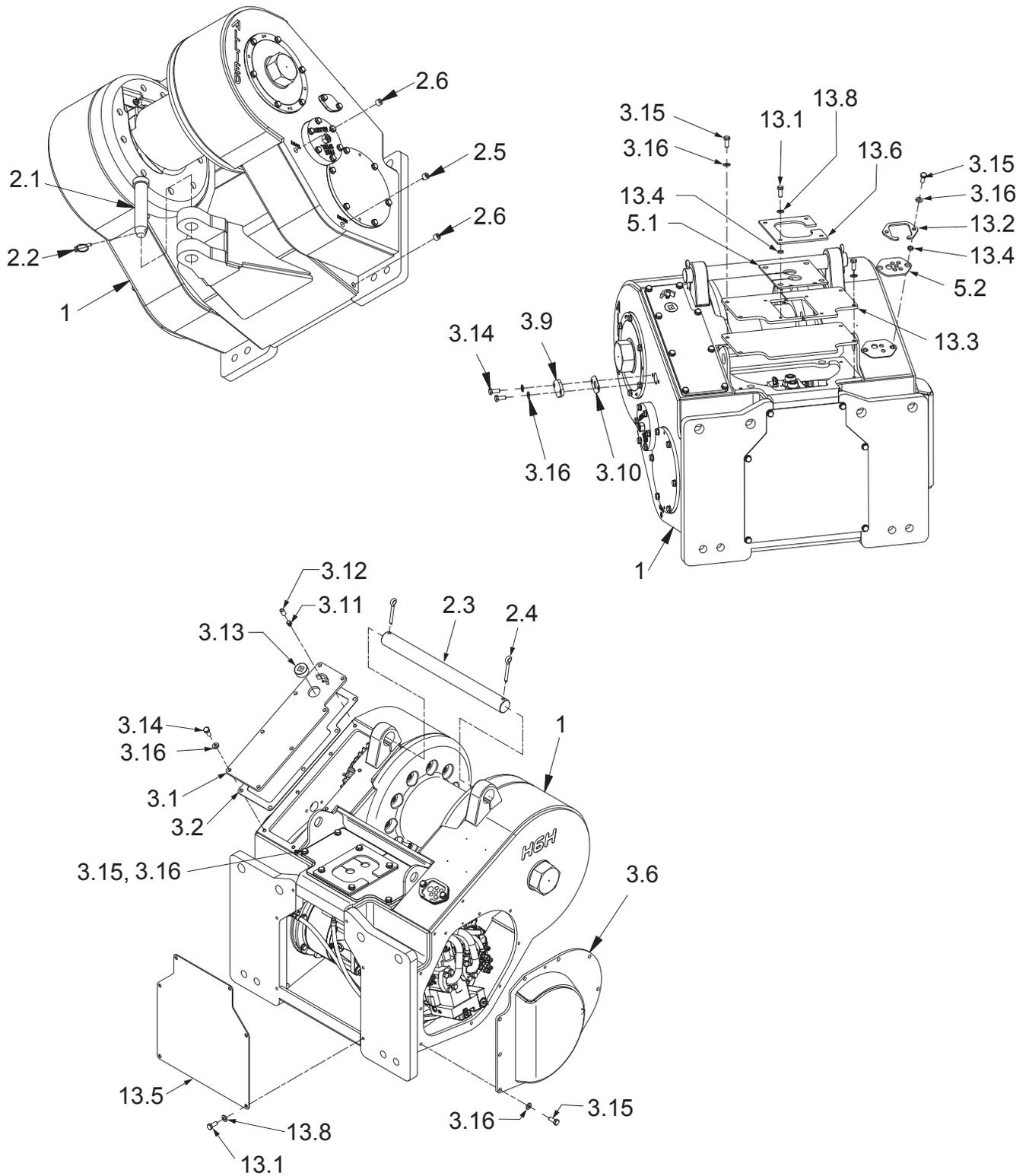
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	1321665W	2	Decal, Warning	40	-----	AR	Label - CE Mark
2	2315005	1	Nameplate				
3	16602W	4	Screw				
4	2310796	1	Decal, Maintenance				
5	2311330	1	Decal, Load & Wire Rope				

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**Section 1**  
**Frames/Covers/Mounting Parts**

Frame/Covers

Page 1 of 2



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**Frame/Covers**

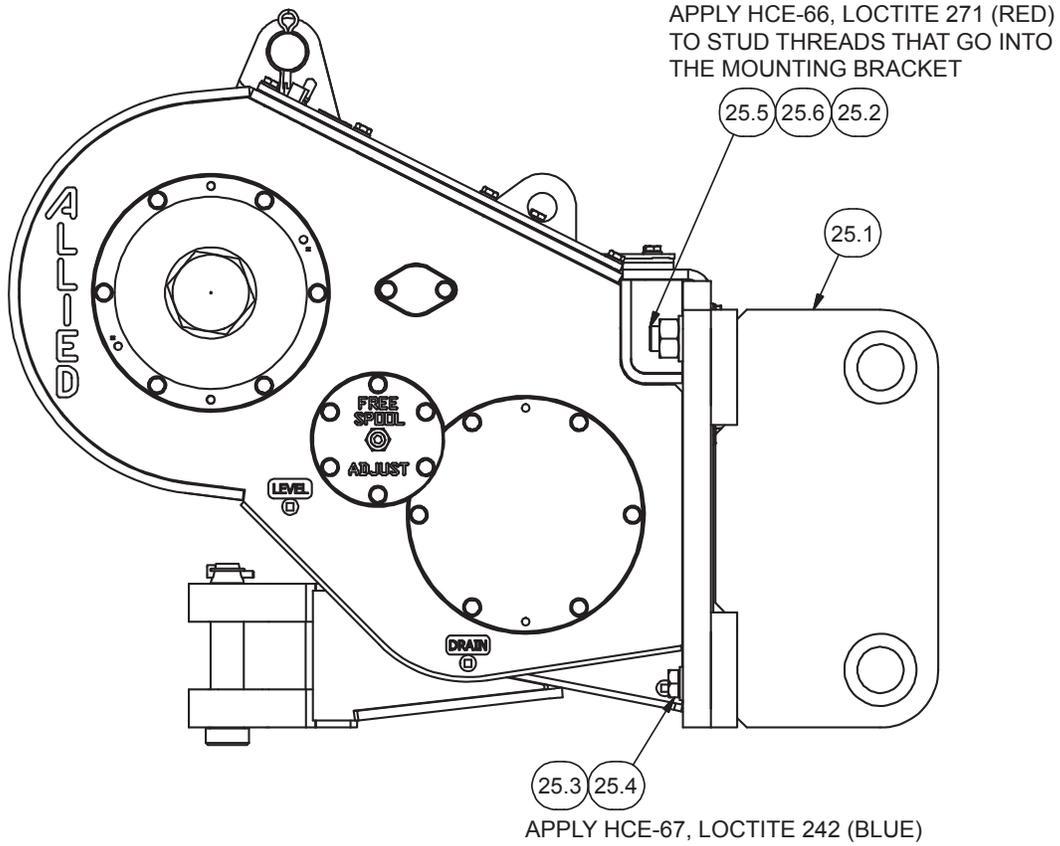
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	-----	1	Frame, H6H	3.15	293645W	15	Capscrew
2.1	95959W	1	Pin, Drawbar	3.16	296422W	25	Washer
2.2	2303221W	1	Pin, Retaining	5.1	2312009	1	Seal, Top
2.3	2312580	1	Rod, Tie	5.2	2312208	1	Gasket, Hose Seal
2.4	15272W	2	Pin	13.1	293645W	10	Capscrew
2.5	15290W	1	Fitting	13.2	2312117	1	Cover
2.6	15315W	2	Fitting	13.3	2313380	2	Cover, Top
3.1	2312048	1	Cover, Top RH	13.4	2312119	6	Spacer
3.2	2312045	1	Gasket, Top RH	13.5	2312046	1	Cover, Front
3.6	2316162	1	Cover, LH	13.6	2312006	1	Clamp, Top
3.9	151589W	1	Cover, Freespool	13.8	296422W	10	Washer
3.10	151646W	1	Gasket, Freespool				
3.11	21420W	1	Plug, Breather				
3.12	2300962W	1	Cap, Breather				
3.13	15319W	1	Fitting				
3.14	2312486	10	Capscrew				

**Mounting Parts**

Liebherr PR716 (H6HT5B\*\*L39)

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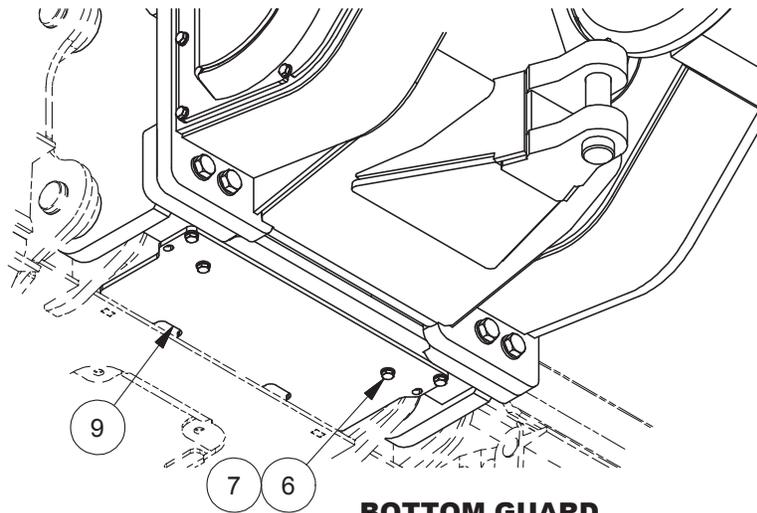


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
25.1	2316655	1	. Bracket - Mounting	25.4	296434W	4	. Washer
25.2	2312090	4	. Stud	25.5	296440W	4	. Washer
25.3	274044W	4	. Capscrew	25.6	2312089	4	. Nut

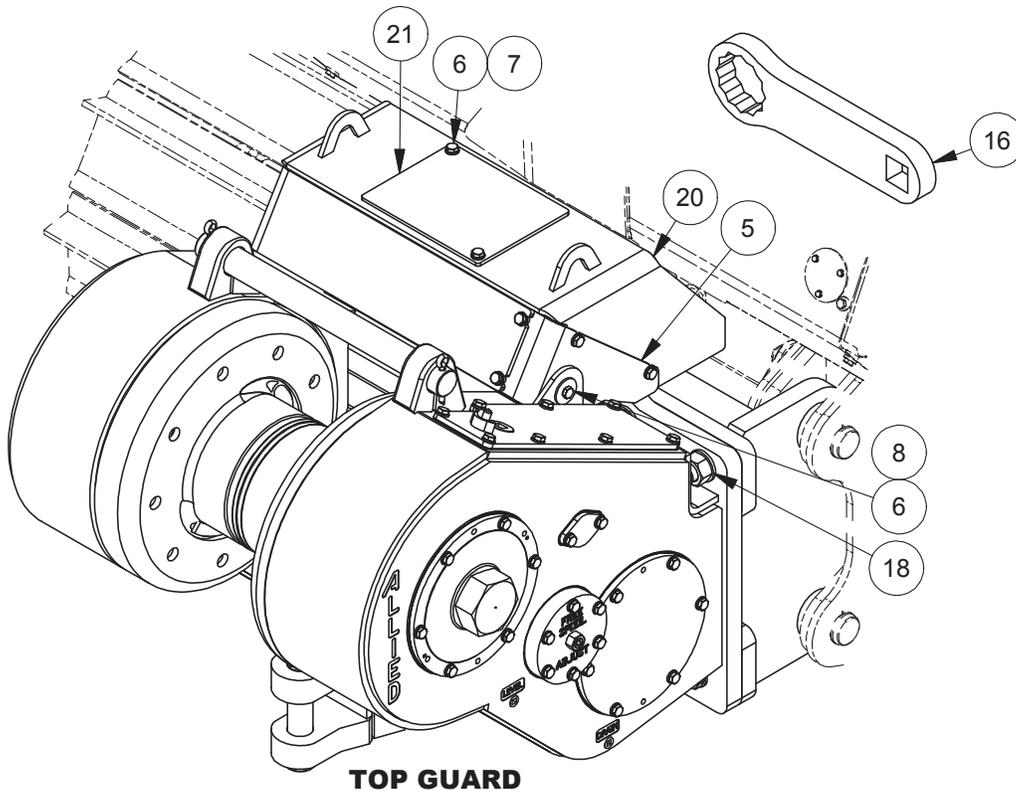
### Mounting Parts

Liebherr PR716 (H6HT5B\*\*L39)

Page 1 of 1



**BOTTOM GUARD**

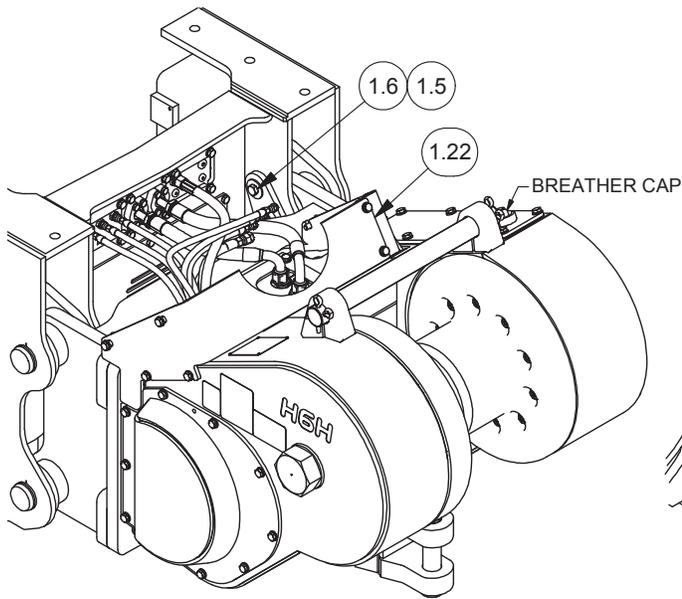
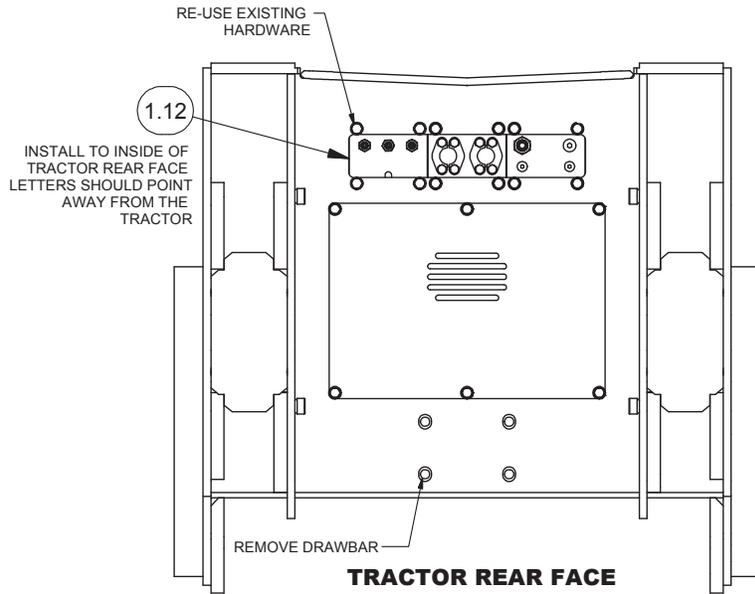
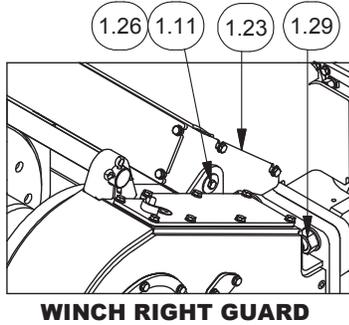
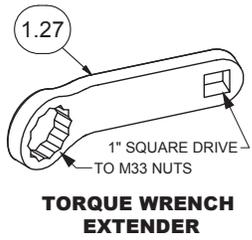


**TOP GUARD**

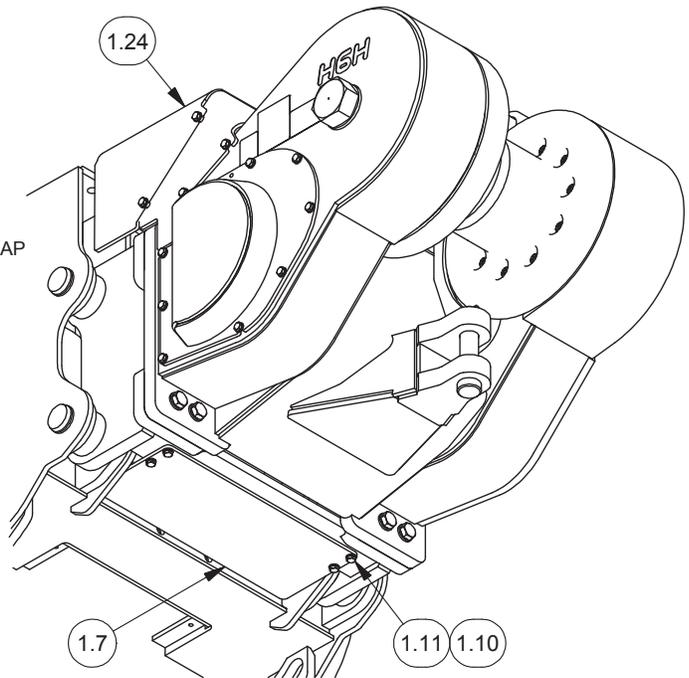
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
5	2312840	1	. Guard - RH	18	318702W	1BTL	. Threadlock
6	293646W	15	. Capscrew	20	2316669	1	. Guard, Top
7	296422W	14	. Washer	21	2312917	1	. Cover
8	2305715W	1	. Washer				
9	2313599	1	. Guard - Bottom				
16	2313682	1	. Wrench - Torque				

# Mounting Parts

Liebherr PR724 (H6H\*\*L41)  
Page 1 of 2



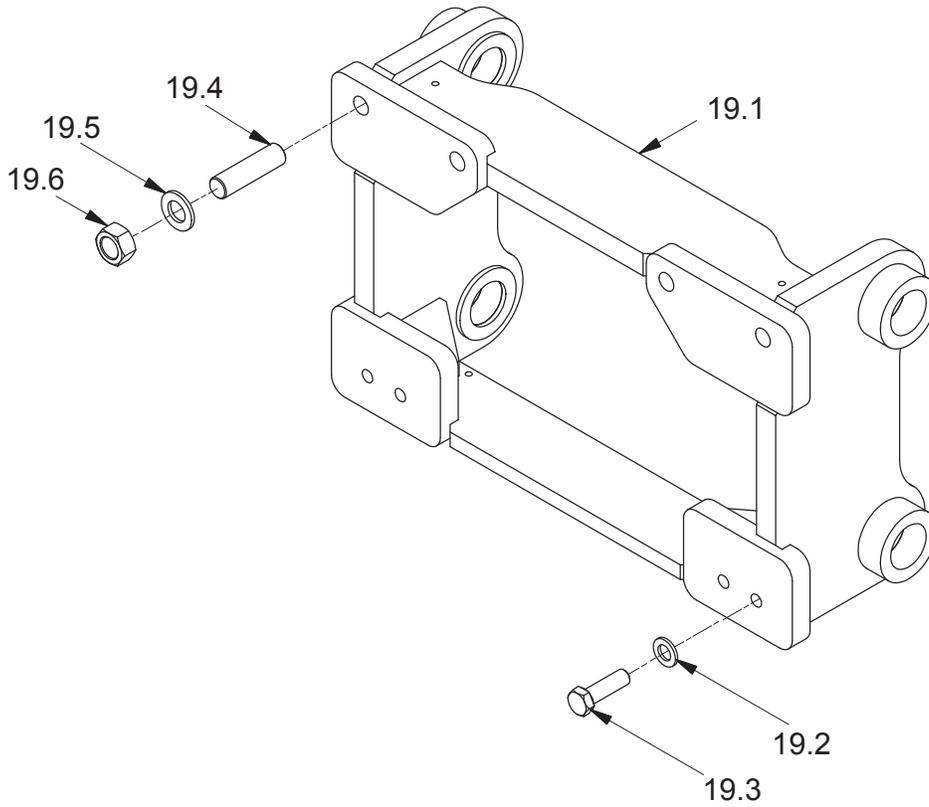
ITEM 1.24 UPPER GUARD REMOVED  
TO SHOW HOSE CONNECTIONS



**Mounting Parts**

Liebherr PR724 (H6H\*\*L41)

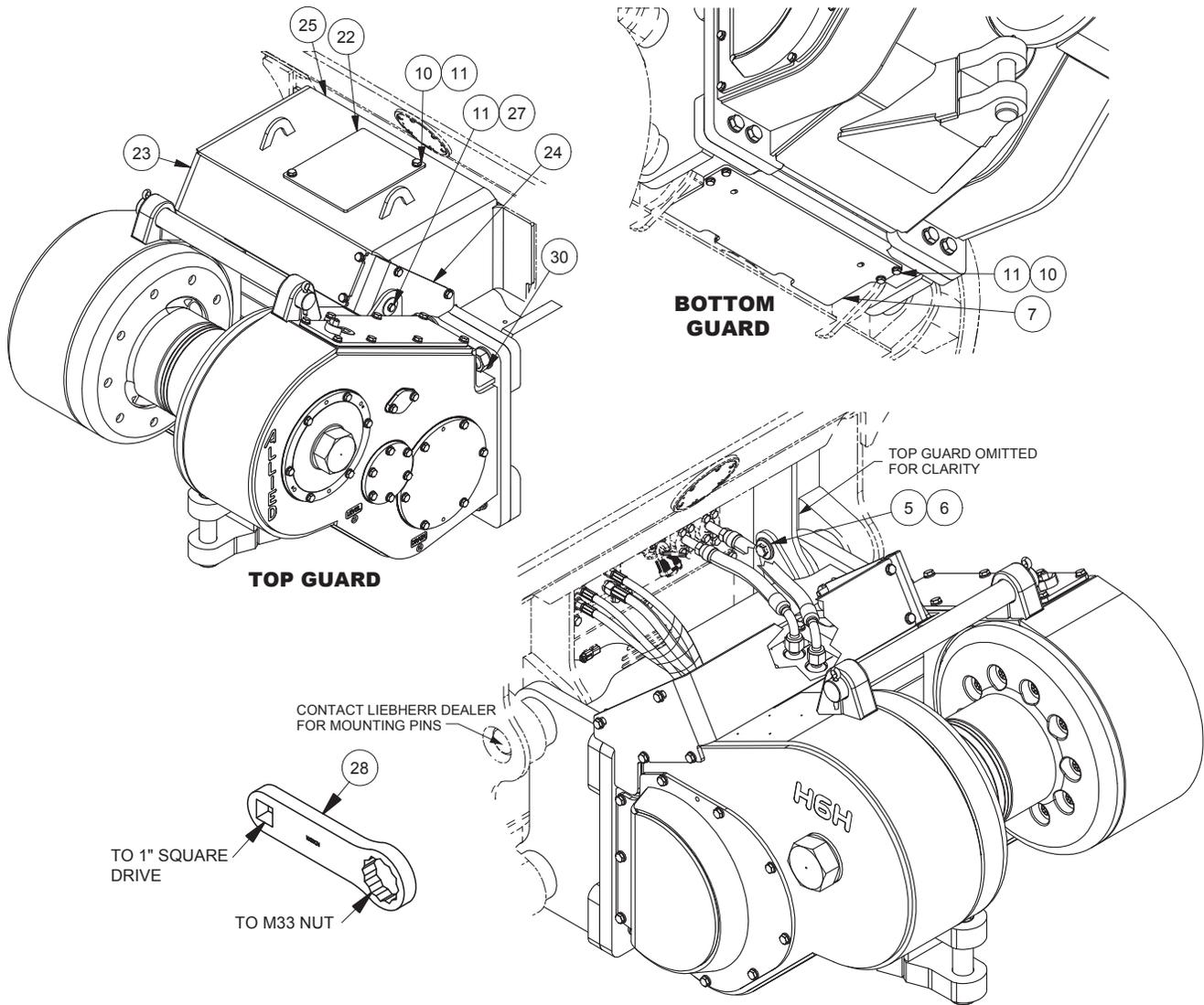
Page 2 of 2



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.5	2313598	4	Washer - Fender	1.29	318702W	1BTL	Thread Lock, Med. Strength
1.6	Y09C-M1620	4	Capscrew	19.1	2313464	1	Bracket, Mounting
1.7	2313599	1	Guard - Bottom	19.2	296434W	4	Washer
1.10	296422W	12	Hard Washer	19.3	274044W	4	Capscrew
1.11	293646W	13	Capscrew	19.4	2312090	4	Stud
1.12	2313614	1	Bulkhead Weldment	19.5	296440W	4	Washer
1.22	2312842	3	Guard - LH	19.6	2312089	4	Nut
1.23	2312840	1	Guard - RH				
1.24	2313600	1	Guard - Upper				
1.26	2305715W	1	Washer				
1.27	2313682	1	Wrench - Torque, Extension				

## Mounting Parts

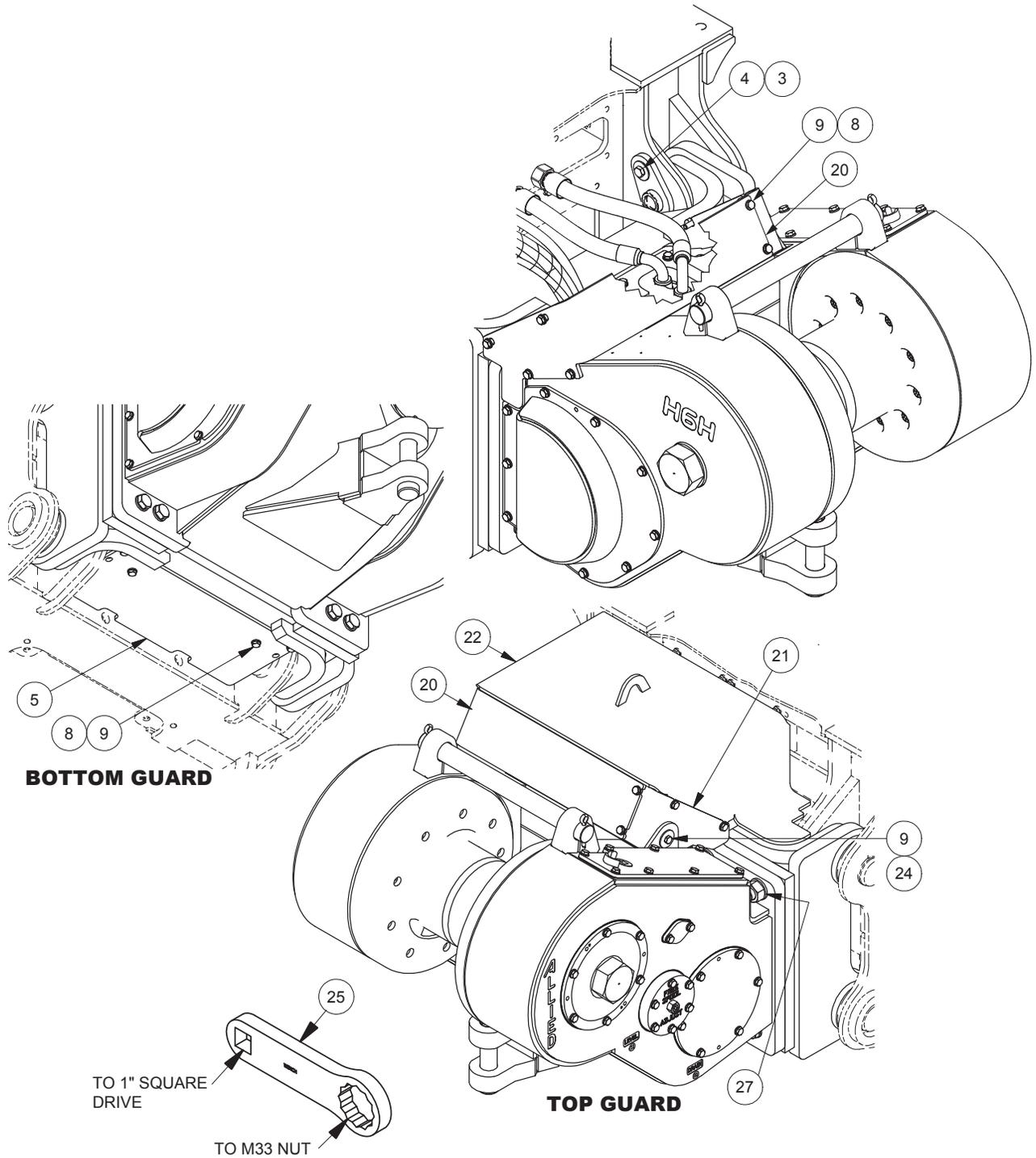
Liebherr PR726 (H6HT1B\*\*L410)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
5	2313598	4	Washer	27	2305715W	1	Washer
6	Y09C-M1620	4	Capscrew	28	2313682	1	Wrench - Torque, Extension
7	2313599	1	Guard - Bottom	30	318702W	1BTL	Thread Lock, Med. Strength
10	296422W	14	Hard Washer				
11	293646W	15	Capscrew				
22	2312917	1	Cover				
23	2312842	1	Guard - LH				
24	2312840	1	Guard - RH				
25	2316450	1	Guard - Top				

## Mounting Parts

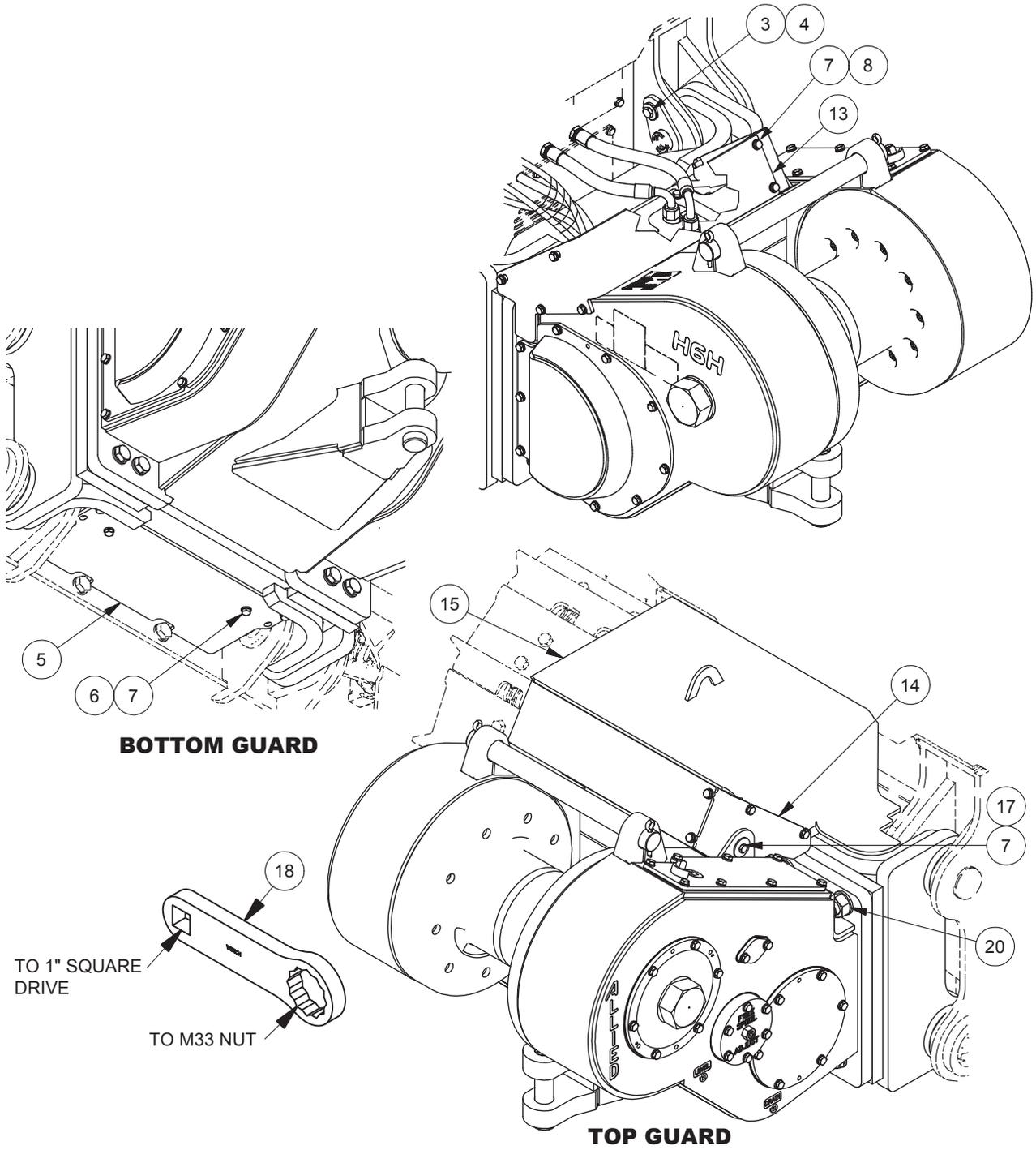
Liebherr PR736 (H6HT1B\*\*L42)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
3	2313598	4	Washer	24	2305715W	1	Washer
4	Y09C-M1620	4	Capscrew	25	2313682	1	Wrench - Torque
5	2313599	1	Guard - Bottom	27	318702W	1BTL	Thread Lock, Med. Strength
8	296422W	12	Hard Washer				
9	293646W	13	Capscrew				
20	2312842	1	Guard - LH				
21	2312840	1	Guard - RH				
22	2315938	1	Guard - Top				

### Mounting Parts

Liebherr PR734-4 (H6HT6B\*\*L44)



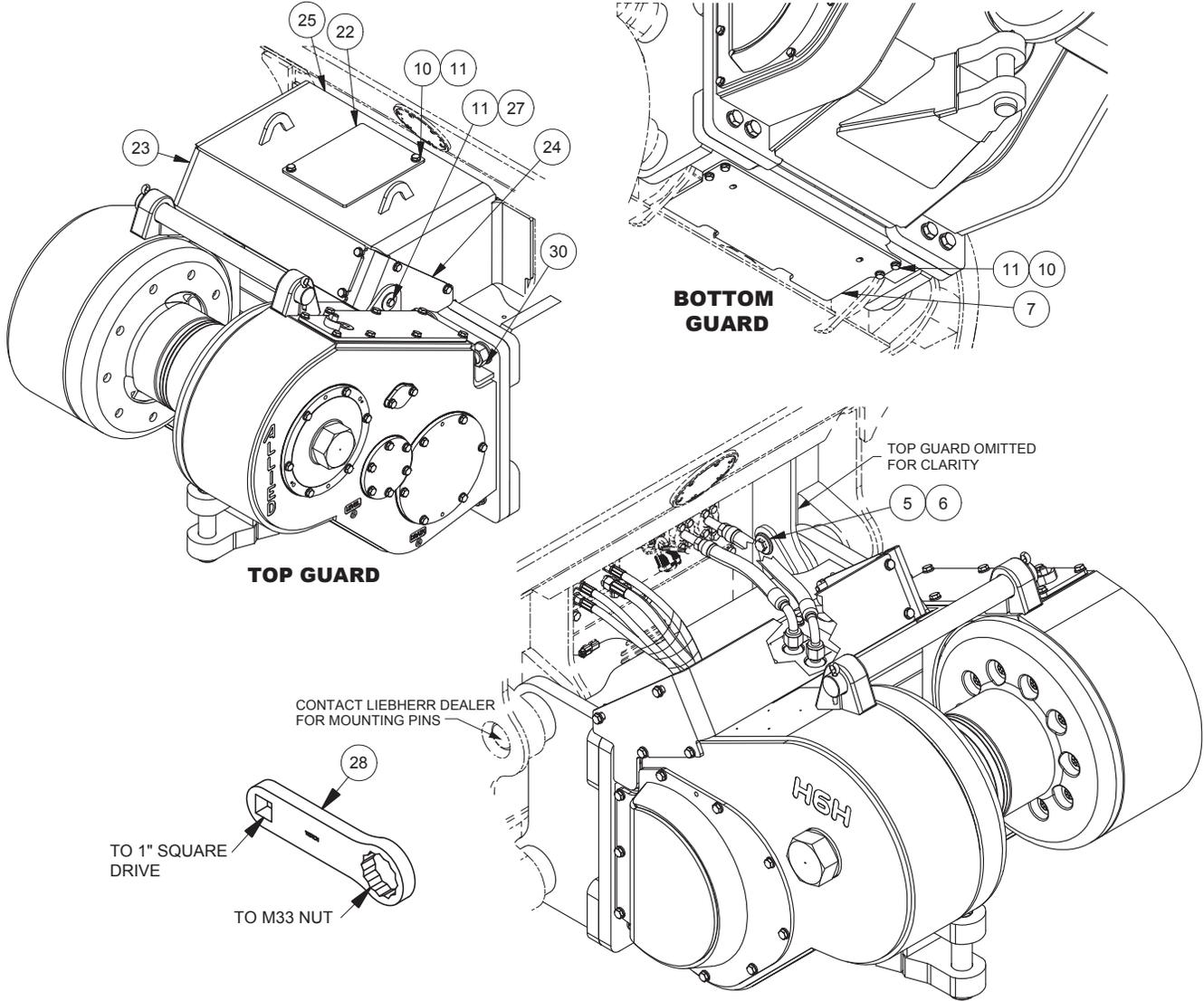
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
3	2313598	4	Washer	17	2305715W	1	Washer
4	Y09C-M1620	4	Capscrew	18	2313682	1	Wrench - Torque, Extension
5	2313599	1	Guard - Bottom	20	318702W	1BTL	Thread Lock, Med. Strength
6	296422W	12	Hard Washer				
7	293646W	13	Capscrew				
13	2312842	1	Guard - LH				
14	2312840	1	Guard - RH				
15	2315938	1	Guard - Top				

**Intentionally Blank**

### Mounting Parts

Liebherr PR726 (H6HT1B\*\*L410)

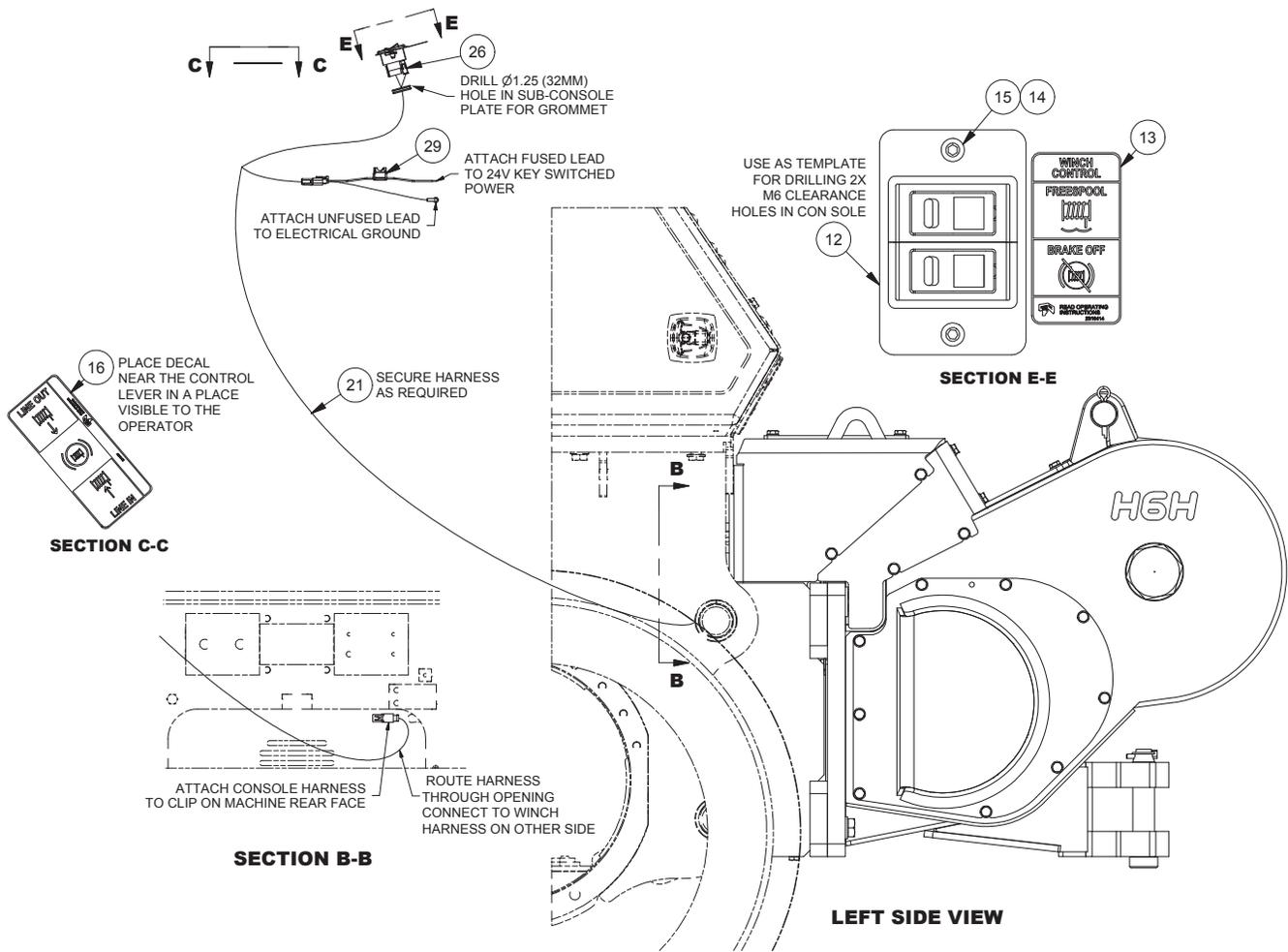
Page 1 of 2



# Mounting Parts

Liebherr PR726 (H6HT1B\*\*L410)

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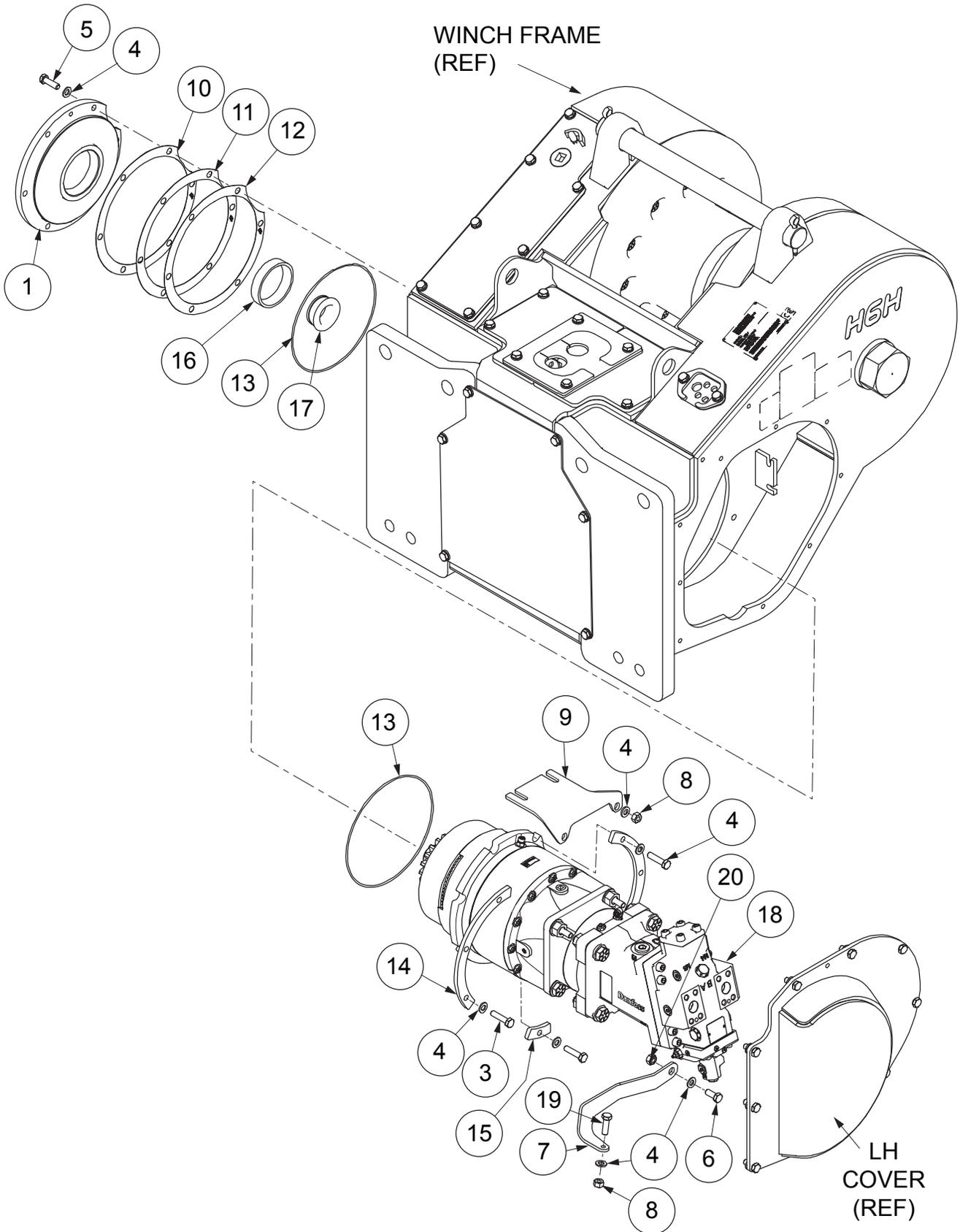
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2316448	1	Hose Assy	24	2312840	1	Guard - RH
2	2316449	1	Hose Assy	25	2316450	1	Guard - Top
5	2313598	4	Washer	26	2316002	1	Harness - Wire, Console
6	Y09C-M1620	4	Capscrew	27	2305715W	1	Washer
7	2313599	1	Guard - Bottom	28	2313682	1	Torque Wrench Extension
10	296422W	14	Washer	29	2313685	1	Wire Harness
11	293646W	15	Capscrew	30	318702W	1BTL	Threadlock
12	*a 2315986	1	Assy, Switch Panel				
13	2310414	1	Decal				
14	2313623	2	Nut, Clip				
15	296159W	2	Capscrew	*a	See page 69 for details		
16	2312177	1	Decal				
20	R14766	2'	Spirap				
21	129563W	10	Cable Tie				
22	2312917	1	Plate - Cover				
23	2312842	1	Guard - LH				

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**Section 2**  
**Gear/Shaft Train**

# Motor Shaft Group

Page 1 of 2



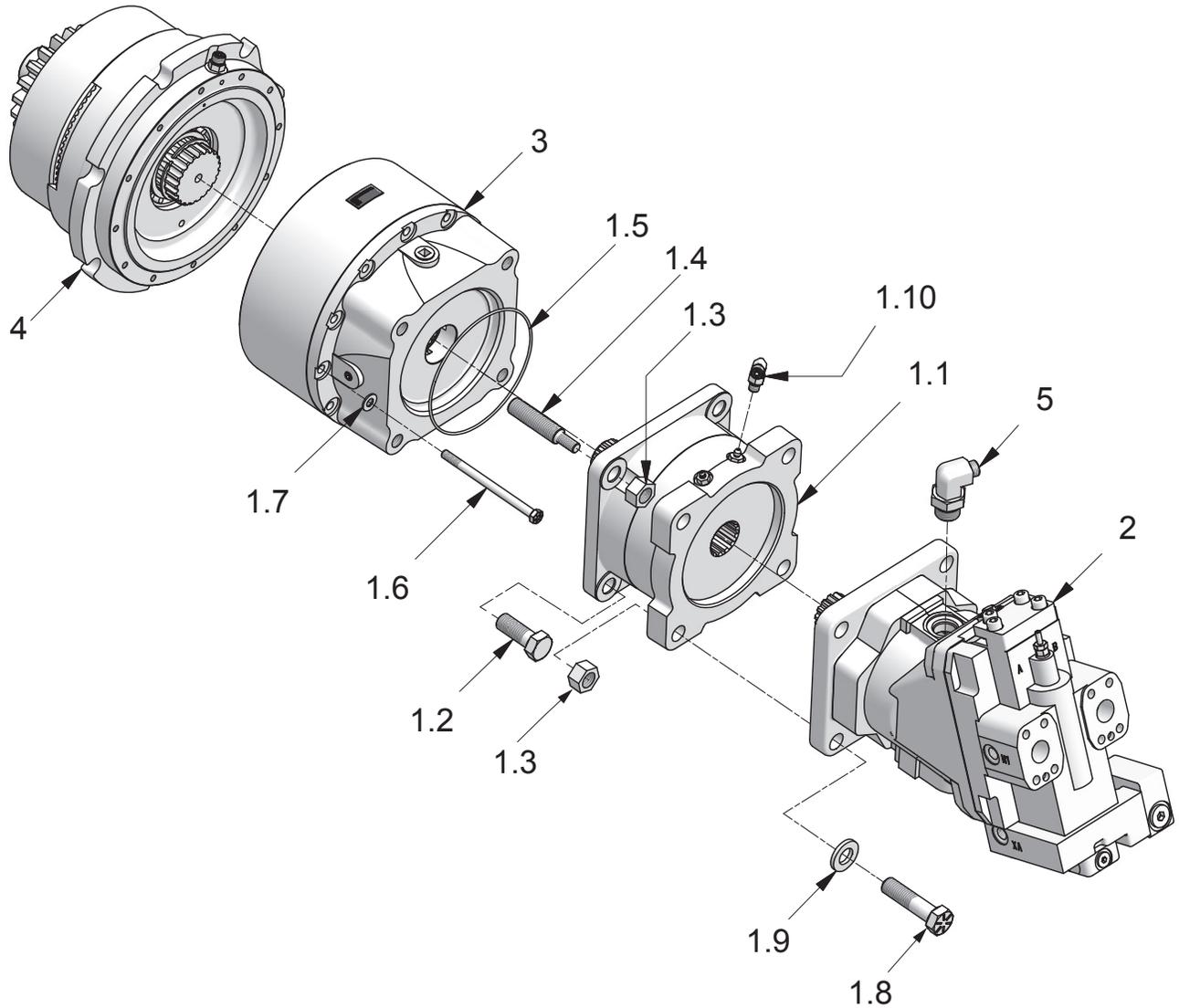
## Motor Shaft Group

Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311819		Motor Shaft Group				
1	2311857	1	. Cover, Bearing	17	*b 2300669W	1	. Cone, Bearing
3	2312488	7	. Capscrew	18	-----	1	. Assy, Motor Shaft
4	296422W	19	. Washer	19	293647W	1	. Capscrew
5	2312487	6	. Capscrew	20	2305130W	1	. Nut, Bracket Support
6	293645W	1	. Capscrew				
7	*c 2316491	1	. Bracket, Motor Support				
7	*d 2312036	1	. Bracket, Motor Support				
8	292656W	3	. Nut		*a		Included in Motor, Reducer & Brake Assy Rebuild Kit 2314659
9	2312018	1	. Plate, Manifold Bracket		*b		Included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660
10	2312061	AR	. Shim .020		*c		First Used S/N 1714
11	2312059	AR	. Shim .005		*d		Last Used S/N 1713
12	2312060	AR	. Shim .007				
13	*a 203564	2	. O-Ring				
14	2311917	2	. Plate, Clamp				
15	2311918	1	. Plate, Clamp				
16	*b 2300668W	1	. Cup, Bearing				

# Motor Shaft Assembly

Liebherr



# Motor Shaft Assembly

Liebherr PR716 (H6HT5B\*\*L39)

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316653</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	3	2312554	1	. Reducer, Planetary
1.2	Y17C-1232	2	. Capscrew	4	*c 2313026	1	. Assembly, Shaft
1.3	221716W	6	. Nut	5	*e -----	NA	. Fitting, Motor Case Drain
1.4	2312041	2	. Stud				
1.5	*b 237349	1	. O-Ring				
1.6	R13801826	12	. Capscrew				
1.7	221767W	12	. Washer				
1.8	177192W	4	. Capscrew				
1.9	221777W	4	. Washer				
1.10	R833251	1	. Fitting				
2	2316654	1	. Motor, Hydraulic				
	NS 2313890	1	. . O-Ring, Pilot Motor				
	NS 2316156	1	. . Kit, Shaft Seal				
					*a		See page 37 for details
					*b		Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659
					*c		See page 34 for details
					*e		See Hydraulic Section 3 for Fitting
					NS		Not Shown

**Motor Shaft Assembly**

Liebherr PR724 (H6HH5B\*\*L41) Last Used S/N 1713

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2313570</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	1.9	221777W	4	. Washer
1.2	Y17C-1232	2	. Capscrew	1.10	R833251	1	. Fitting
1.3	221716W	6	. Nut	2	*c 2313569	1	. Motor, Hydraulic
1.4	2312041	2	. Stud		NS 2313890	1	. . O-Ring, Pilot Motor
1.5	*b 237349	1	. O-Ring		NS 2313891	1	. . Kit, Shaft Seal
1.6	R13801826	12	. Capscrew	3	2312554	1	. Reducer, Planetary
1.7	221767W	12	. Washer	4	2313026	1	. Assembly, Shaft
1.8	177192W	4	. Capscrew	5	R833260	1	. Fitting, Motor Case Drain

**Motor Shaft Assembly**

Liebherr PR724 (H6HH5B\*\*L41) First Used S/N1714

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316149</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	1.9	221777W	4	. Washer
1.2	Y17C-1232	2	. Capscrew	1.10	R833251	1	. Fitting
1.3	221716W	6	. Nut	2	2316123	1	. Motor, Hydraulic
1.4	2312041	2	. Stud		NS 2313890	1	. . O-Ring, Pilot Motor
1.5	*b 237349	1	. O-Ring		NS 2316156	1	. . Kit, Shaft Seal
1.6	R13801826	12	. Capscrew	3	2312554	1	. Reducer, Planetary
1.7	221767W	12	. Washer	4	2313026	1	. Assembly, Shaft
1.8	177192W	4	. Capscrew	5	*d -----	NA	. Fitting, Motor Case Drain

**Motor Shaft Assembly**

Liebherr PR724 (H6HT6B\*\*L41) Last Used S/N 1713

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316151</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	1.9	221777W	4	. Washer
1.2	Y17C-1232	2	. Capscrew	1.10	R833251	1	. Fitting
1.3	221716W	6	. Nut	2	*c 2313780	1	. Motor, Hydraulic
1.4	2312041	2	. Stud		NS 2313890	1	. . O-Ring, Pilot Motor
1.5	*b 237349	1	. O-Ring		NS 2316156	1	. . Kit, Shaft Seal
1.6	R13801826	12	. Capscrew	3	2312554	1	. Reducer, Planetary
1.7	221767W	12	. Washer	4	2312928	1	. Assembly, Shaft
1.8	177192W	4	. Capscrew	5	2313039	1	. Fitting, Motor Case Drain

**Motor Shaft Assembly**

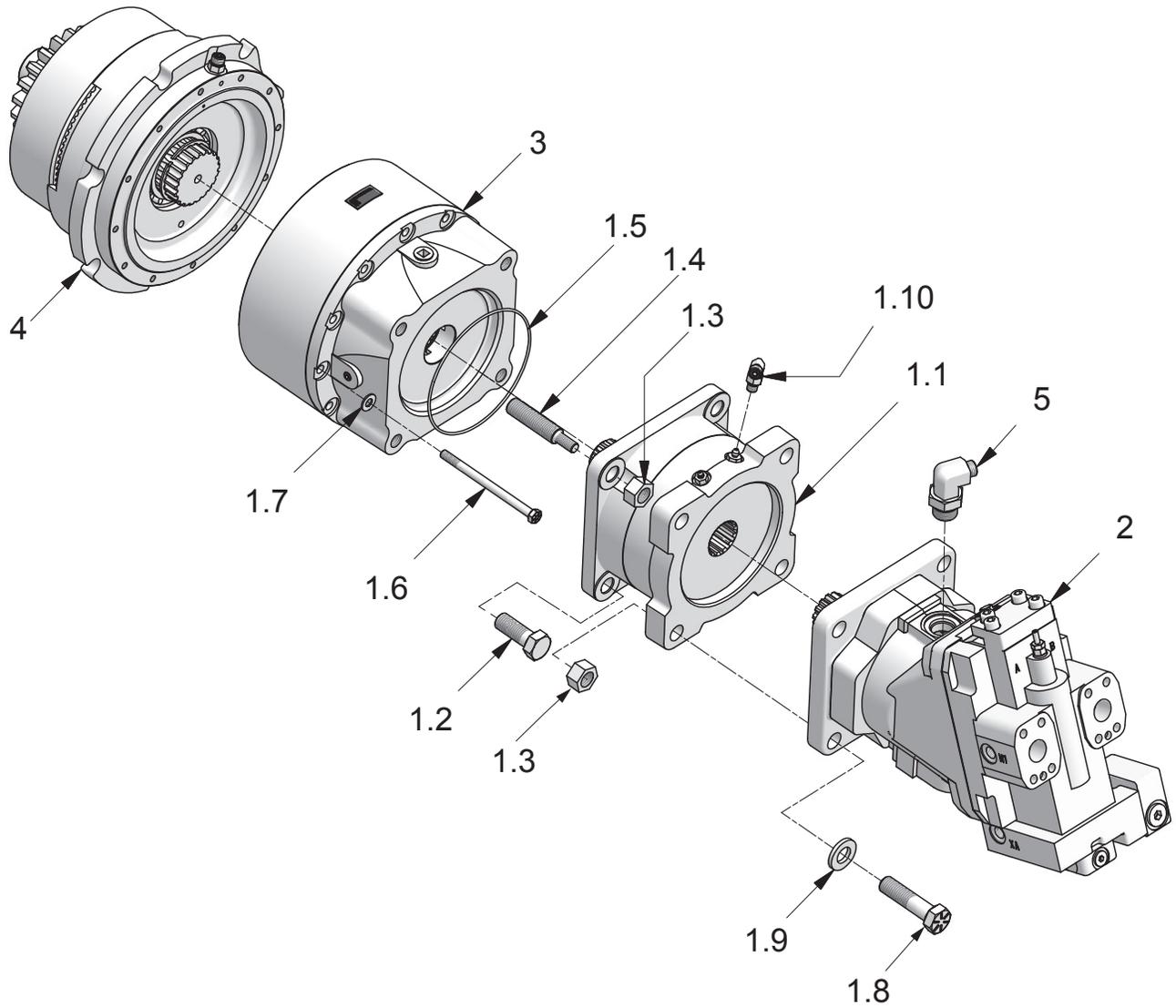
Liebherr PR724 (H6HT6B\*\*L41) First Used S/N 1714

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316151</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	2	2316125	1	. Motor, Hydraulic
1.2	Y17C-1232	2	. Capscrew		NS 2313890	1	. . O-Ring, Pilot Motor
1.3	221716W	6	. Nut		NS 2316156	1	. . Kit, Shaft Seal
1.4	2312041	2	. Stud	3	2312554	1	. Reducer, Planetary
1.5	*b 237349	1	. O-Ring	4	2312928	1	. Assembly, Shaft
1.6	R13801826	12	. Capscrew	5	*d -----	NA	. Fitting, Motor Case Drain
1.7	221767W	12	. Washer				
1.8	177192W	4	. Capscrew				
1.9	221777W	4	. Washer	*a	See page 37 for details		
1.10	R833251	1	. Fitting	*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

\*c See page 32 for details for Motor Replacement Kit  
\*d See Hydraulic Section 3 for Fitting  
NS Not Shown

## Motor Shaft Assembly

Liebherr



## Motor Shaft Assembly

Liebherr PR726 (H6HT1B\*\*L410)

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316143</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	2	2316119	1	. Motor, Hydraulic
1.2	Y17C-1232	2	. Capscrew	NS	2313890	1	. . O-Ring, Pilot Motor
1.3	221716W	6	. Nut	NS	2316156	1	. . Kit, Shaft Seal
1.4	2312041	2	. Stud	3	2311883	1	. Reducer, Planetary
1.5	*b 237349	1	. O-Ring	4	2312928	1	. Assembly, Shaft
1.6	R13801826	12	. Capscrew	5	*c -----	NA	. Fitting, Motor Case Drain
1.7	221767W	12	. Washer				
1.8	177192W	4	. Capscrew				
1.9	221777W	4	. Washer				
1.10	R833251	1	. Fitting				
				*a	See page 37 for details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		
				*c	See Hydraulic Section 3 for Fitting		
				NS	Not Shown		

**Motor Shaft Assembly**

Liebherr PR736 (H6HT1B\*\*L42) Last Used S/N1713

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315963</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	1.9	221777W	4	. Washer
1.2	Y17C-1232	2	. Capscrew	1.10	R833251	1	. Fitting
1.3	221716W	6	. Nut	2	*c 2315961	1	. Motor, Hydraulic
1.4	2312041	2	. Stud		NS 2313890	1	. O-Ring, Pilot Motor
1.5	*b 237349	1	. O-Ring		NS 2316156	1	. Kit, Shaft Seal
1.6	R13801826	12	. Capscrew	3	2311883	1	. Reducer, Planetary
1.7	221767W	12	. Washer	4	2312928	1	. Assembly, Shaft
1.8	177192W	4	. Capscrew	5	R833260	NA	. Fitting, Motor Case Drain

**Motor Shaft Assembly**

Liebherr PR736 (H6HT1B\*\*L42) First Used S/N1714

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316154</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	1.9	221777W	4	. Washer
1.2	Y17C-1232	2	. Capscrew	1.10	R833251	1	. Fitting
1.3	221716W	6	. Nut	2	2316129	1	. Motor, Hydraulic
1.4	2312041	2	. Stud		NS 2313890	1	. O-Ring, Pilot Motor
1.5	*b 237349	1	. O-Ring		NS 2316156	1	. Kit, Shaft Seal
1.6	R13801826	12	. Capscrew	3	2311883	1	. Reducer, Planetary
1.7	221767W	12	. Washer	4	2312928	1	. Assembly, Shaft
1.8	177192W	4	. Capscrew	5	*d - - - - -	NA	. Fitting, Motor Case Drain

**Motor Shaft Assembly**

Liebherr PR734-4 (H6HT6B\*\*L44) Last Used S/N1713

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315974</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	1.9	221777W	4	. Washer
1.2	Y17C-1232	2	. Capscrew	1.10	R833251	1	. Fitting
1.3	221716W	6	. Nut	2	*c 2315975	1	. Motor, Hydraulic
1.4	2312041	2	. Stud		NS 2313890	1	. O-Ring, Pilot Motor
1.5	*b 237349	1	. O-Ring		NS 2313891	1	. Kit, Shaft Seal
1.6	R13801826	12	. Capscrew	3	2312554	1	. Reducer, Planetary
1.7	221767W	12	. Washer	4	2312928	1	. Assembly, Shaft
1.8	177192W	4	. Capscrew	5	R833260	1	. Fitting, Motor Case Drain

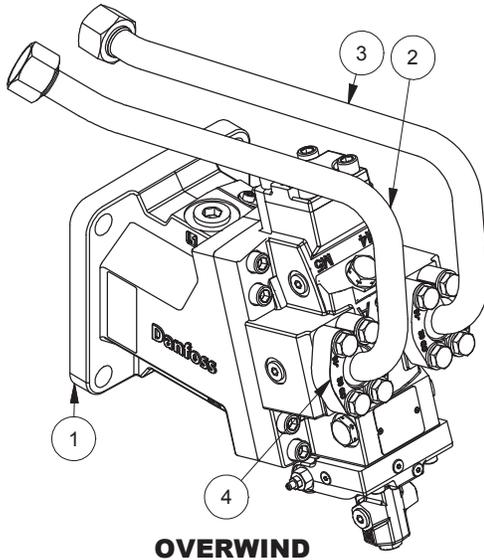
**Motor Shaft Assembly**

Liebherr PR734-4 (H6HT6B\*\*L44) First Used S/N1714

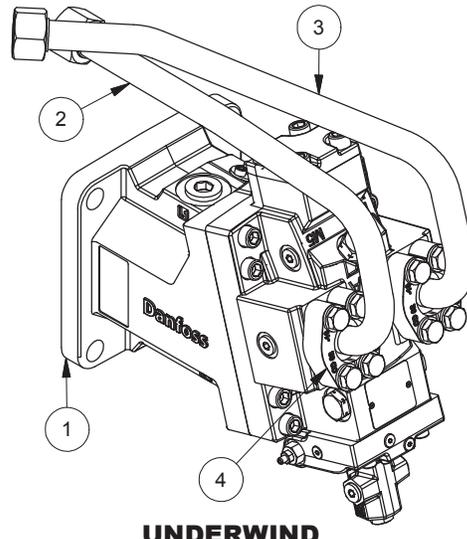
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2316155</b>		<b>Assembly, Motor Shaft</b>				
1.1	*a 2312155	1	. Brake, D Mount Dry Disk	2	2316133	1	. Motor, Hydraulic
1.2	Y17C-1232	2	. Capscrew		NS 2313890	1	. O-Ring, Pilot Motor
1.3	221716W	6	. Nut		NS 2313891	1	. Kit, Shaft Seal
1.4	2312041	2	. Stud	3	2312554	1	. Reducer, Planetary
1.5	*b 237349	1	. O-Ring	4	2312928	1	. Assembly, Shaft
1.6	R13801826	12	. Capscrew	5	*d - - - - -	1	. Fitting, Motor Case Drain
1.7	221767W	12	. Washer				
1.8	177192W	4	. Capscrew	*a	See page 37 for details		
1.9	221777W	4	. Washer	*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		
1.10	R833251	1	. Fitting	*c	See page 32 for details for Motor Replacement Kit		
				*d	See Hydraulic Section 3 for Fitting		
				NS	Not Shown		

# Motor Replacement Kit

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**OVERWIND**



**UNDERWIND**

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*a	-----	1	Motor - Hyd; Danfoss H1B			
2	*a	-----	2	Tube Assy - Motor A			
3	*a	-----	6	Tube Assy - Motor B			
4	592255	2	Kit, Split Flange				

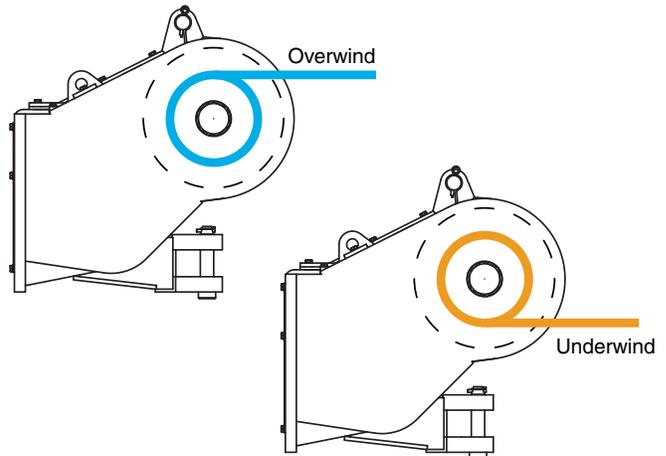
\*a Refer to the chart below to determine replacement parts for cancelled motors

WINCH MODEL	KIT PART NUMBER:	OVERWIND/ UNDERWIND	CANCELLED MOTOR:	ITEM 1 (CURRENT MOTOR):	ITEM 2 (TUBE A):	ITEM 3 (TUBE B):
H6HH5B**L41	2316870	O	2313569	2316123	2316108	2316109
	2316871	U	2313569	2316123	2316714	2316715
H6HT6B**L41	2316874	O	2313780	2316125	2316108	2316109
	2316875	U	2313780	2316125	2316714	2316715
H6HT1B**L42	2316882	O	2315961	2316129	2316108	2316109
	2316883	U	2315961	2316129	2316714	2316715
H6HT6B**L44	2316941	O	2315975	2316133	2316108	2316109
	2316942	U	2315975	2316133	2316714	2316715

**Notes:**

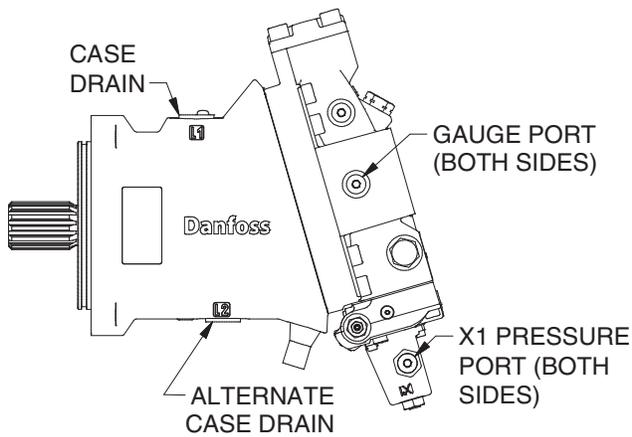
Use this chart to determine which H1B motor replaces the cancelled 51V motor.

Be sure to note whether your motor is overwind or underwind to get the appropriate kit. Each kit contains all the components needed to convert your winch to the current motor.

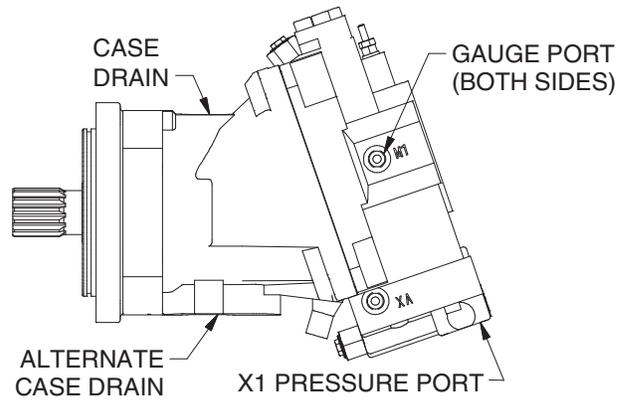


## Motor Replacement Kit

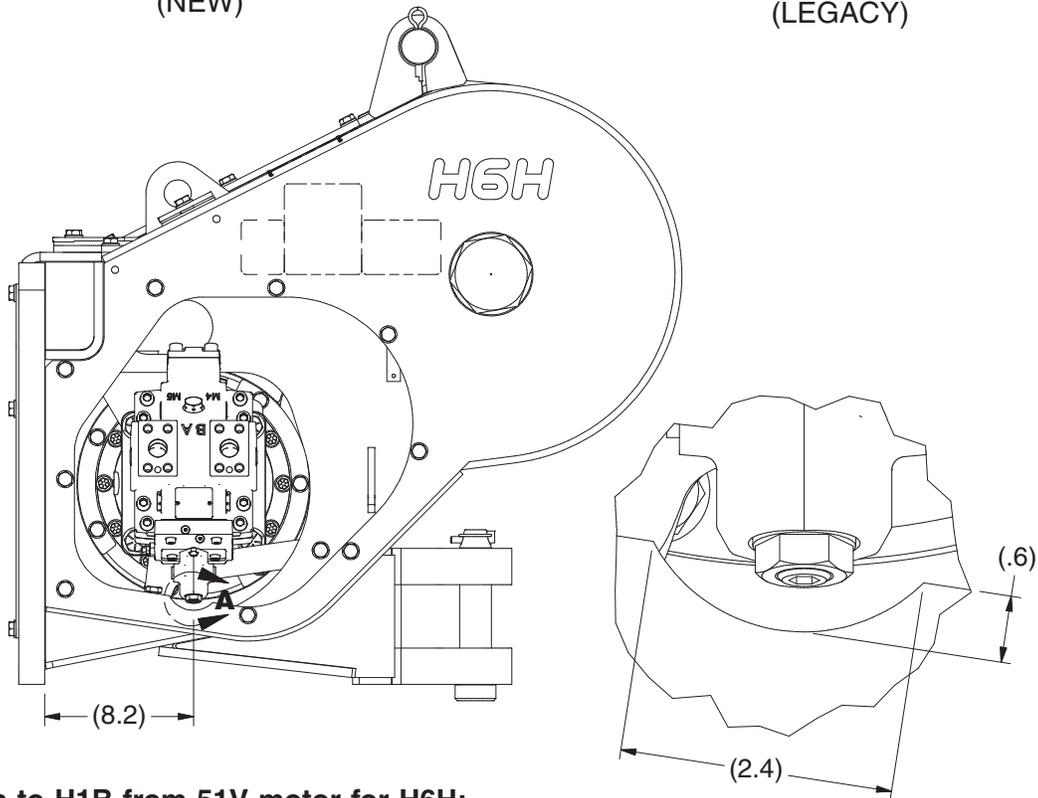
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**H1B MOTOR  
(NEW)**



**51V MOTOR  
(LEGACY)**

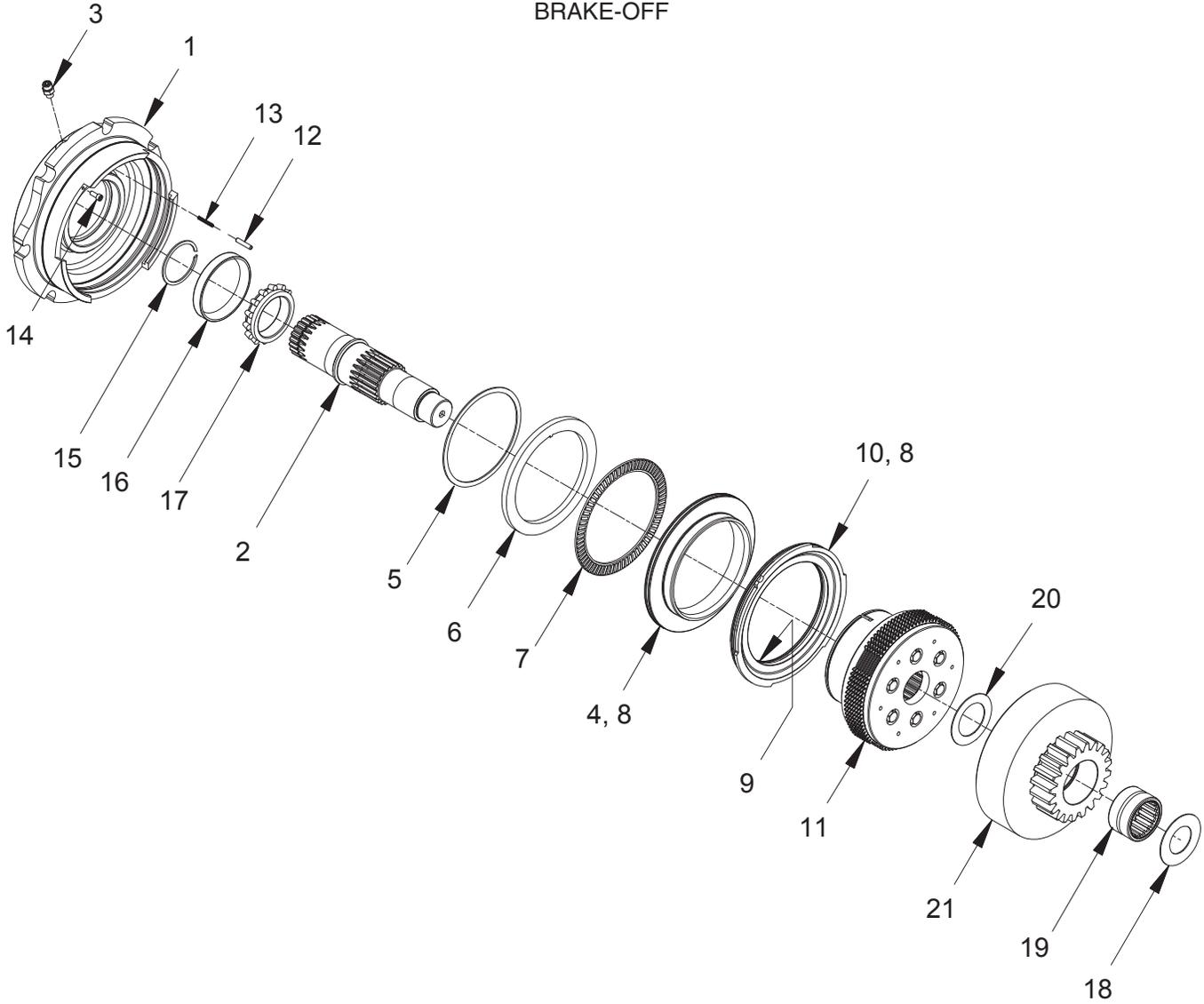


**DETAIL A**

### Conversion to H1B from 51V motor for H6H:

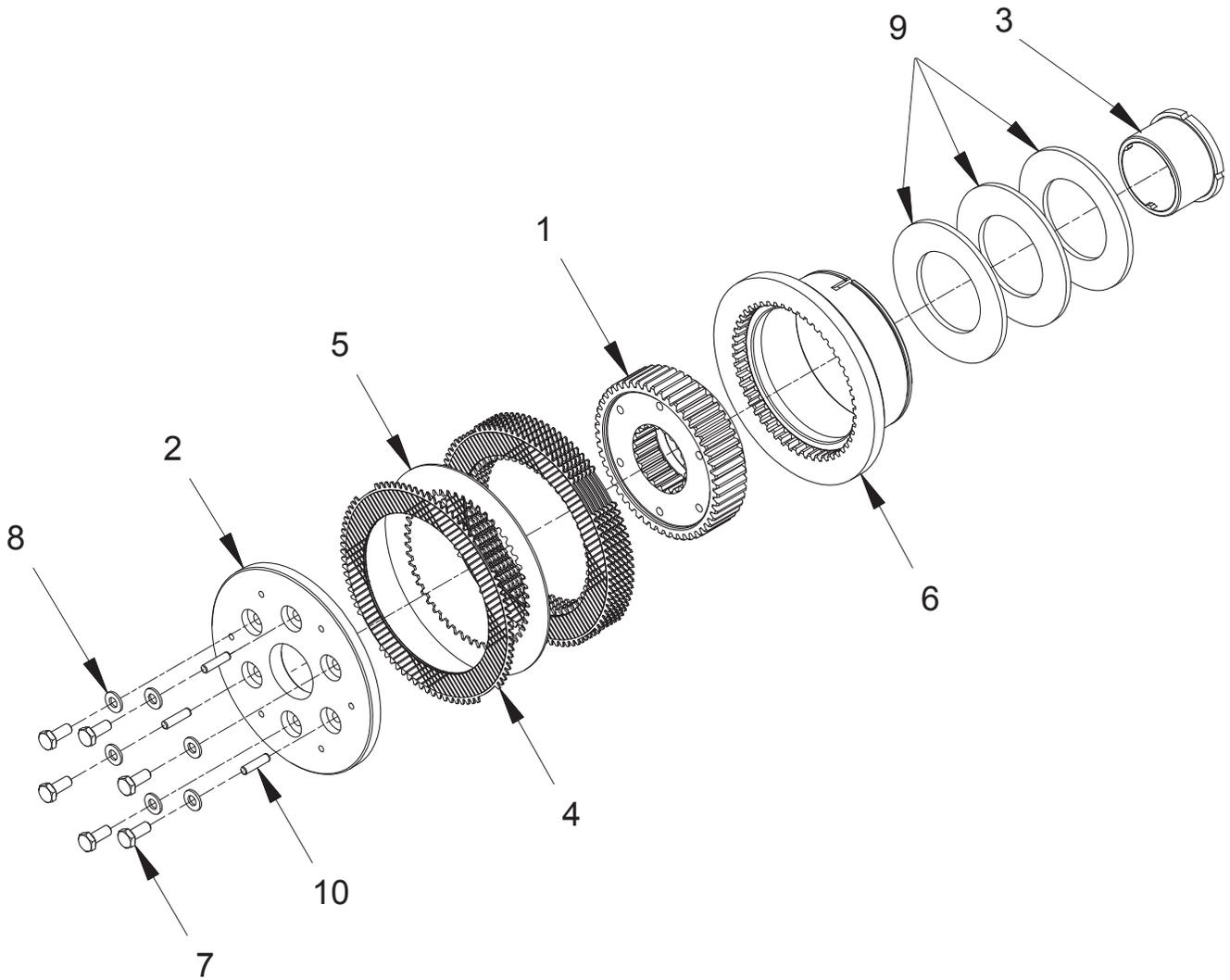
1. Remove material from the winch frame as seen in Detail A to allow the new H1B motor to fit. More material may be removed if necessary for fit.
2. Material may be removed from the cover as necessary to allow the new motor to fit.

**Shaft Assy**  
BRAKE-OFF



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
<b>Assy, BRAKE-OFF Shaft</b>							
1	2311855	1	. Housing, Clutch	15	2311684	1	. Ring, Snap
2	2311856	1	. Shaft, Clutch	16	137153W	1	. Cup, Roller Bearing
3	231439	1	. Fitting	17	137155W	1	. Cone, Roller Bearing
4	2312039	1	. Piston, Clutch	18	2311869	1	. Shim .062
5	2311683	1	. Ring, Snap	19	230407W	1	. Bearing
6	2312442	1	. Ring, Thrust	20	2311687	1	. Shim .062
7	2311655	1	. Brg, Thrust Needle Roller	21	*b 2312977	1	. Gear, Spider
8	86585W	2	. O-Ring	21	*c 2311905	1	. Gear, Spider
9	87287W	1	. O-Ring				
10	2311880	1	. Ring, Seal				
11	*a 2311903	1	. Assy, Clutch	*a	See page 32 for details		
12	239147W	1	. Pin	*b	Gear ratios 2 & 5		
13	2303992W	1	. Spring	*c	Gear ratios 1 & 6		
14	R13811617	1	. Capscrew				

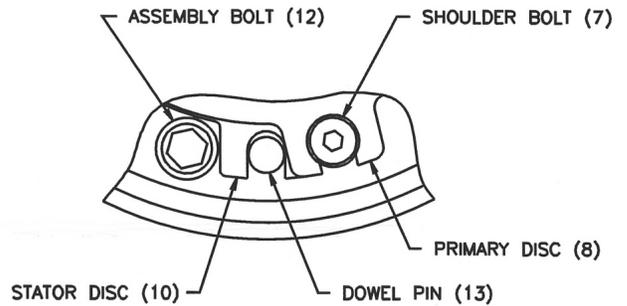
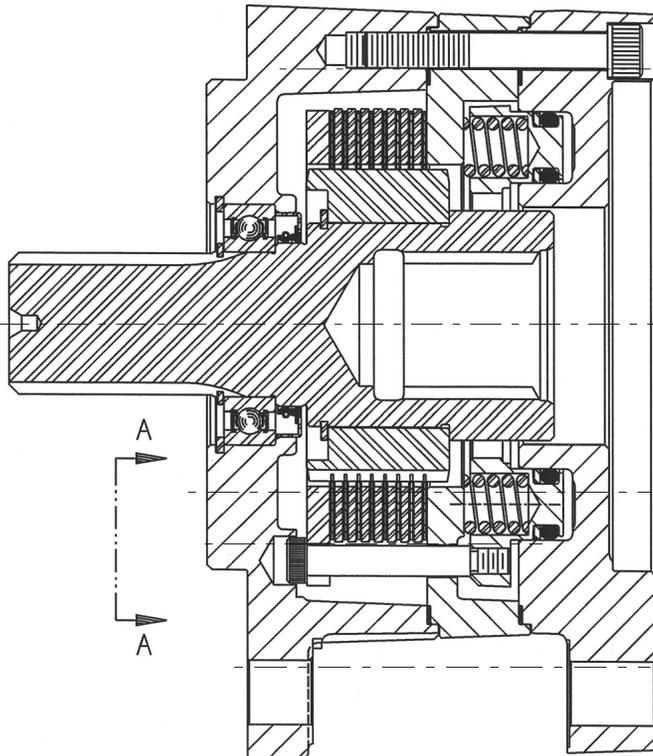
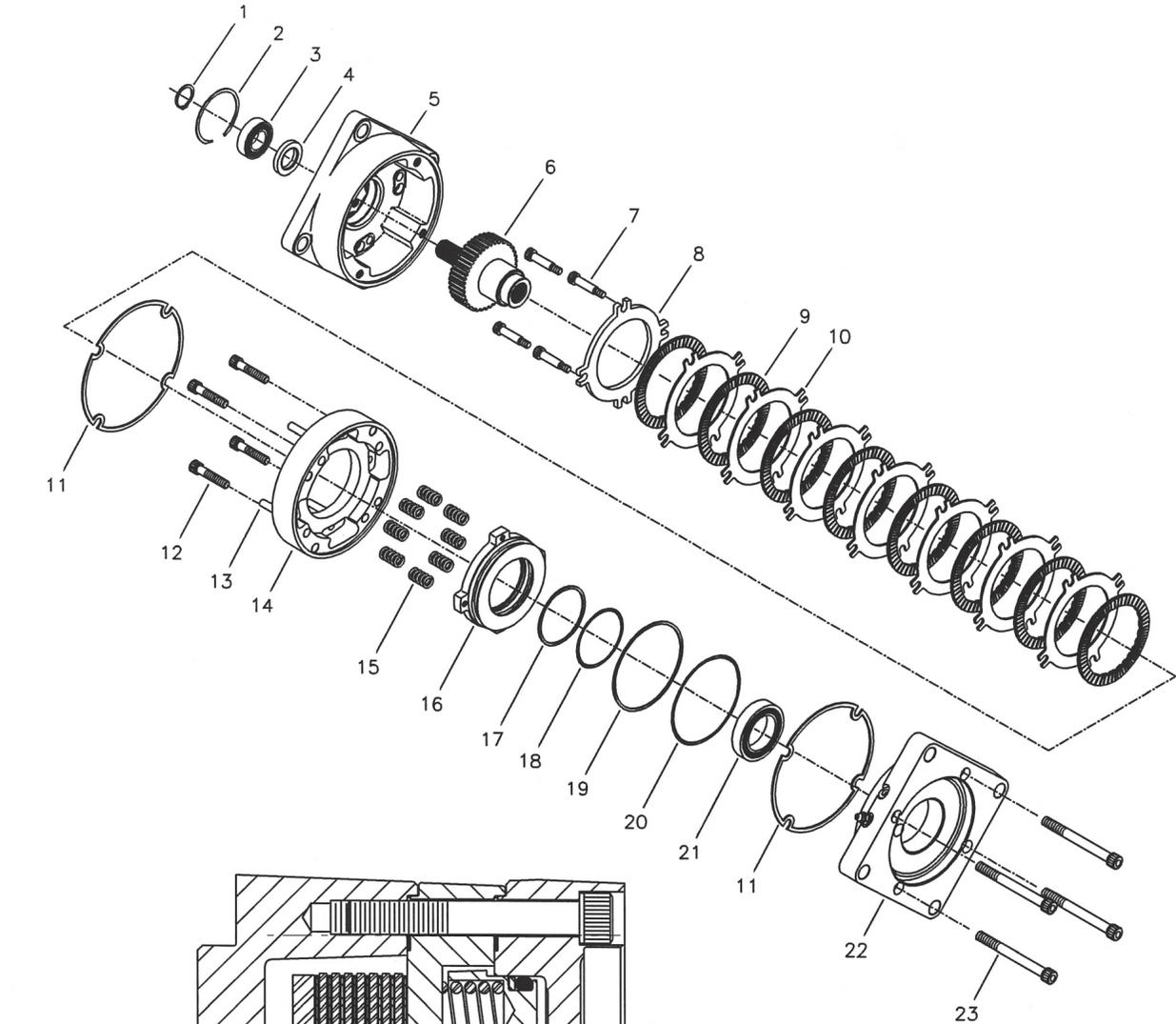
Clutch Assy



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311903</b>		<b>Assy, Clutch</b>	6	2311906	1	. Plate, Pressure
1	2311904	1	. Hub, Clutch	7	296420W	6	. Washer
2	2311907	1	. Plate, Clutch	8	293628W	6	. Capscrew
3	2312029	1	. Retainer, Spring	9	2311251	3	. Spring, Belleville
4	328715W	7	. Disc, Friction	10	222713W	3	. Pin
5	261542W	6	. Plate, Separator				

# Dry Disc Brake

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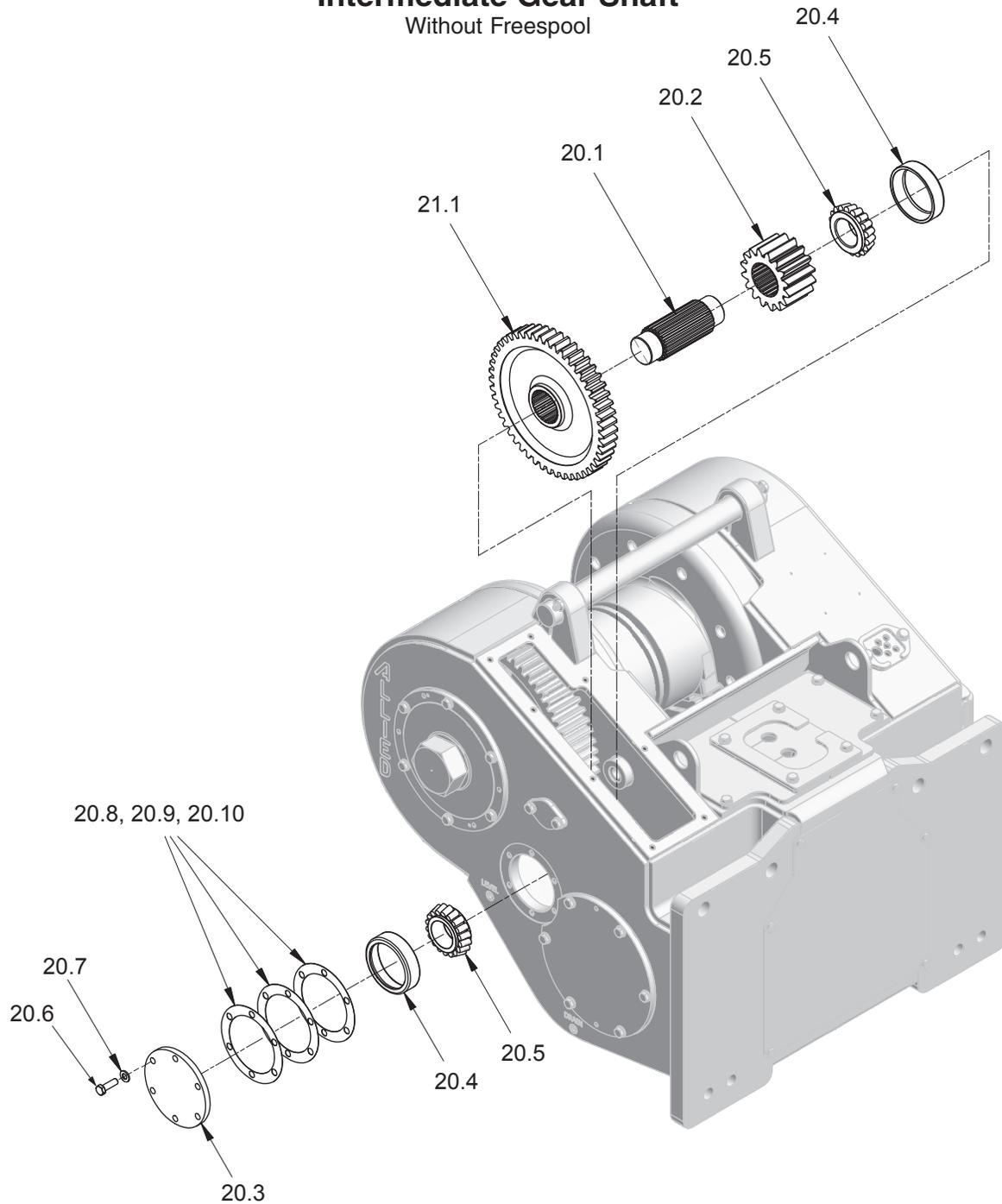
## Dry Disc Brake

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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2312155</b>		<b>Brake, D Mount Dry</b>				
<b>Disc</b>				18	*a NSS	1	. O-Ring
1	NSS	1	. Retaining Ring	19	*a NSS	1	. Backup Ring
2	NSS	1	. Retaining Ring	20	*a NSS	1	. O-Ring
3	*b NSS	1	. Bearing	21	*b NSS	1	. Bearing
4	*a,*b NSS	1	. Oil Seal	22	NSS	1	. Pressure Plate
5	NSS	1	. Cover Plate	23	NSS	4	. Capscrew
6	NSS	1	. Spline Shaft Assy				
7	NSS	4	. Bolt		*a		Included in O-Ring Repair Kit 2312302 O-Ring Repair Kit 2312302 is included in Motor, Reducer & Brake Assy Rebuild Kit 2314659
8	*d NSS	1	. Primary Disc				
9	*d NSS	8	. Rotor Disc		*b		Included in Bearing Repair Kit 2312303 Bearing Repair Kit 2312303 is included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660
10	*d NSS	7	. Stator Disc				
11	*a,*b,*c,*d NSS	2	. Case Gasket		*c		Included in Spring Repair Kit 250850 Spring Repair Kit 250850 is included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660
12	NSS	4	. Capscrew				
13	NSS	4	. Dowel Pins		*d		Included in Lining Repair Kit 250847 Lining Repair Kit 250847 is Included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660
14	NSS	1	. Spring Plate				
15	*c NSS	10	. Spring, Red				
16	NSS	1	. Piston				
17	*a NSS	1	. Backup Ring		NSS		Not Sold Separately

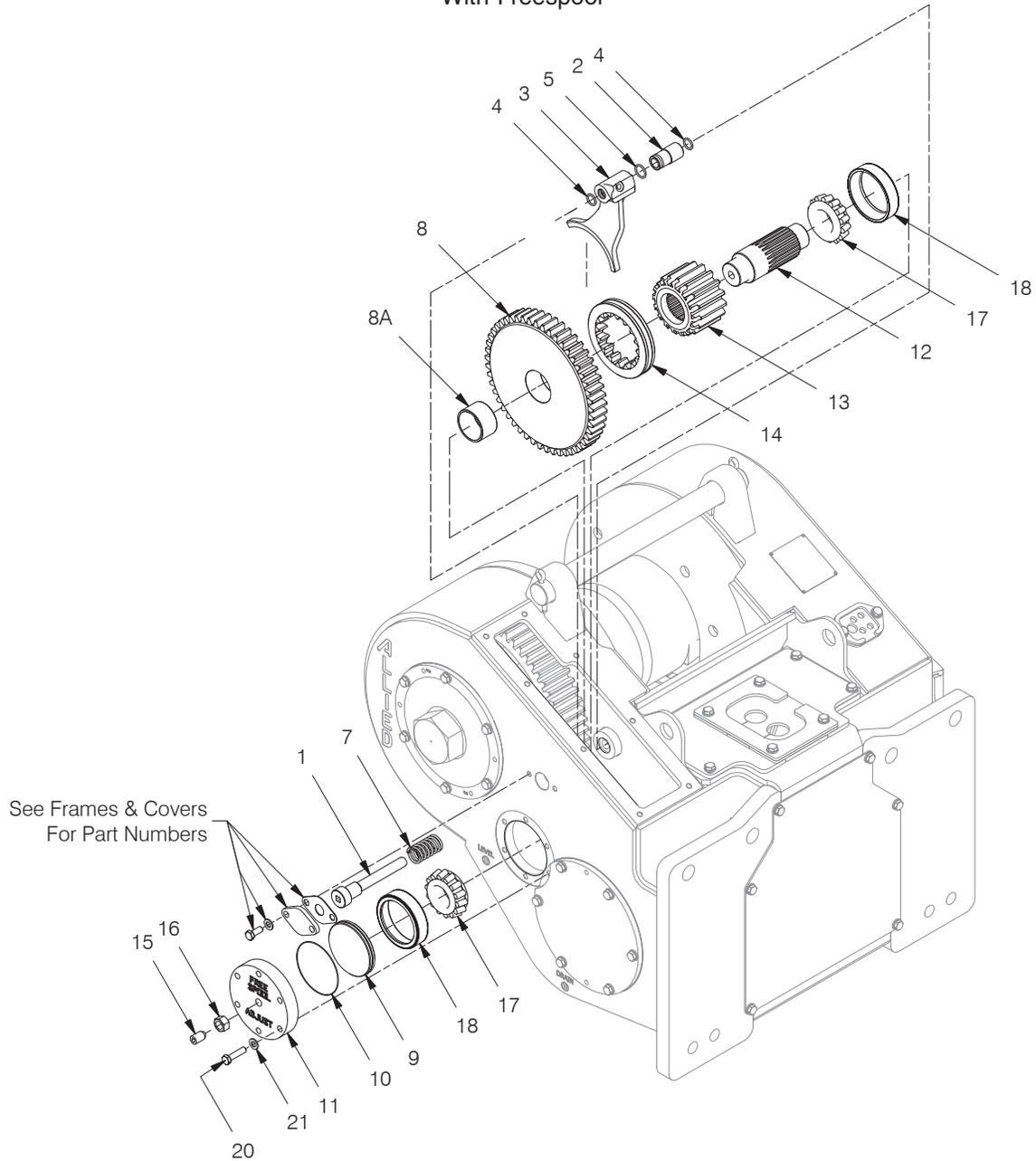
### Intermediate Gear Shaft

Without Freespool



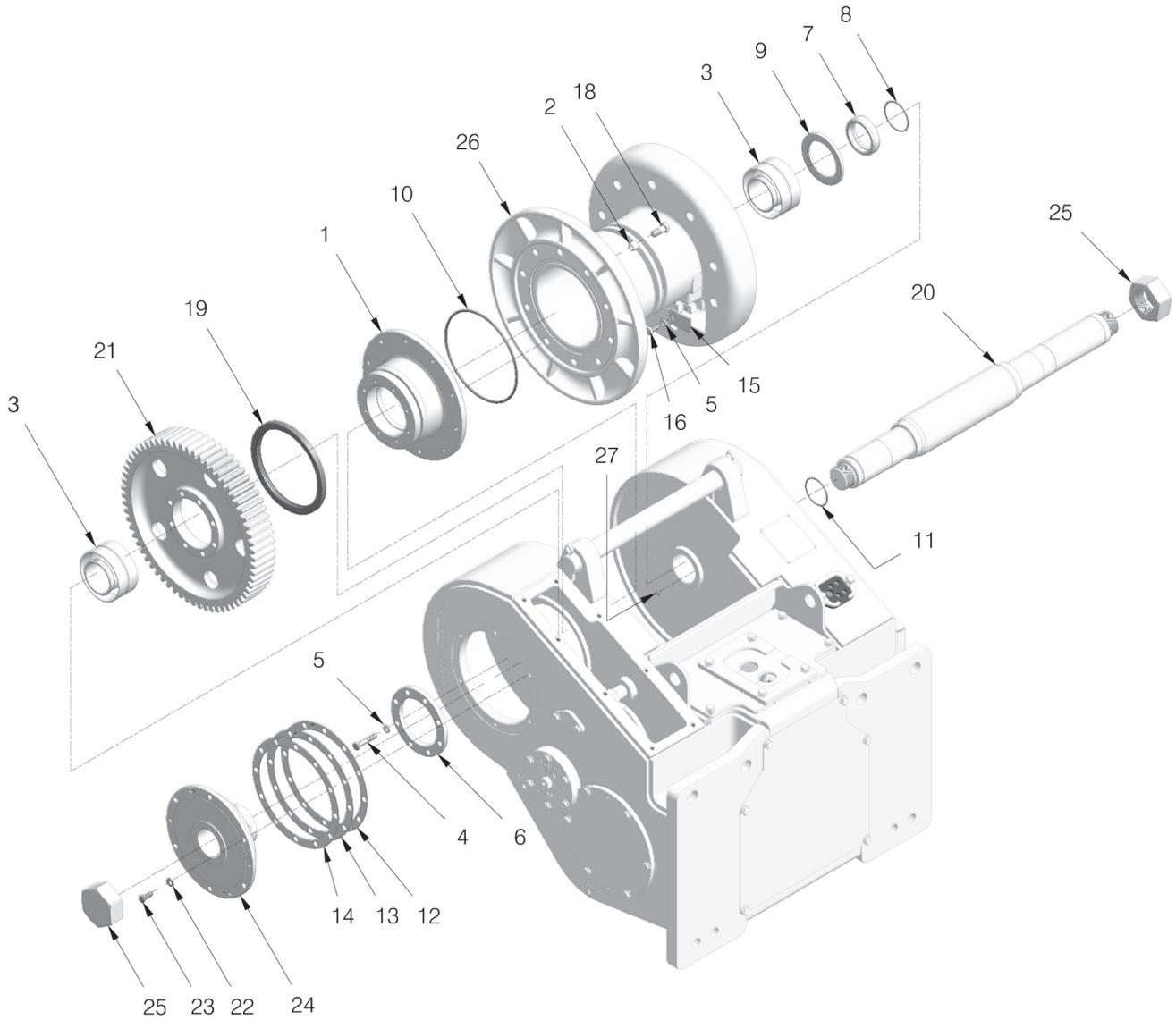
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
20.1	95972W	1	Shaft	20.10	149543W	AR	Shim .020
20.2	95973W	1	Gear	21.1	*b 96024W	1	Gear
20.3	280262W	1	Retainer, Bearing	21.1	*c 2314411	1	Gear
20.4	*a 30059W	2	Cup, Roller Bearing				
20.5	*a 30080W	2	Cone, Roller Bearing				
20.6	2312487	6	Capscrew				
20.7	296422W	6	Washer				
20.8	149541W	AR	Shim .005				
20.9	149542W	AR	Shim .007				
				*a	Included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660		
				*b	Gear ratios 1 & 6		
				*c	Gear ratios 2 & 5		
				AR	As Required. Refer to Service Manual 599040W for more information.		

## Intermediate Gear Shaft With Freespool



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*a 2311894	1	Shaft, Freespool	14	2312269	1	Clutch, Dental
2	2305097W	1	Piston, Freespool	15	2304803W	1	Screw
3	2305099W	1	Shifter Fork, Freespool	16	221717W	1	Nut, Hex
4	*b 15862W	2	O-Ring	17	*b 2302311W	2	Cone, Bearing
5	*b 212380	1	O-Ring	18	*b 30059W	2	Cup, Bearing
7	2305096W	1	Spring	20	2312488	6	Capscrew
8	*c 283434W	1	Assy, Intermediate Gear	21	296422W	6	Washer, Hard
8	*d 2303036	1	Assy, Intermediate Gear				
8A	283432W	1	. Bushing				*a Apply Threadlock 318702W to threads
9	2302624W	1	Piston, Freespool Adjust				*b Included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660
10	*b 159940W	1	O-Ring				*c Gear ratios 1 & 6
11	2302625W	1	Housing, Freespool Adjust				*d Gear ratios 2 & 5
12	2305956W	1	Shaft, Intermediate				
13	2312280	1	Gear, Pinion				

# Drum Shaft



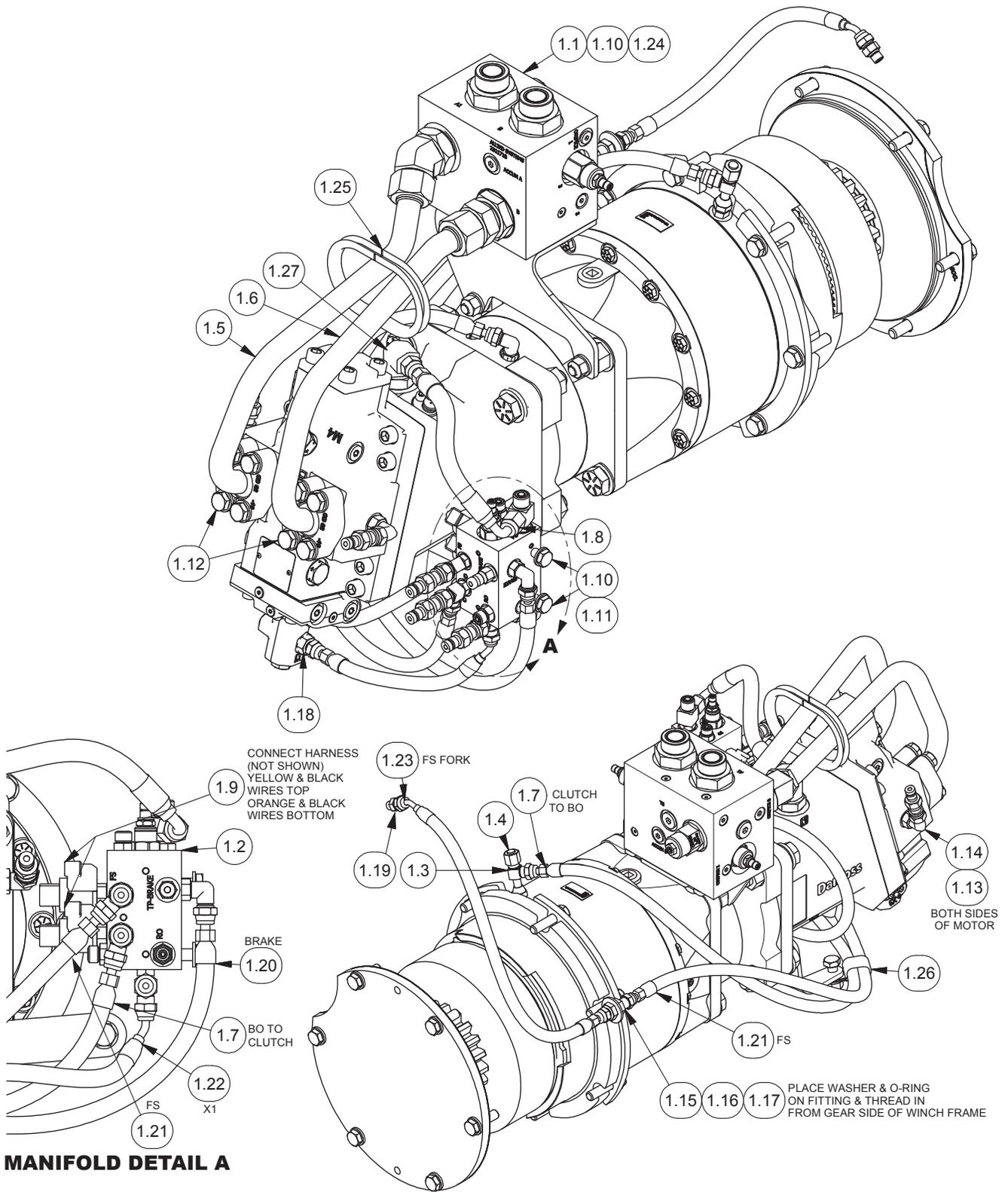
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	141674W	1	Adapter	17	221771W	8	Hard Washer
2	53559W	10	Thimble, Tapered	18	2310891	10	Capscrew
3	*b 2310093	2	Bearing, Roller	19	141671W	1	Seal, Oil
4	221577W	8	Capscrew	20	2312064	1	Shaft, Drum
5	*b 15158W	9	Washer	21	95977W	1	Gear, Drum
6	95978W	1	Retainer	22	296422W	6	Washer
7	*a 172808W	1	Spacer	23	2312486	6	Capscrew
8	15881W	1	O-Ring	24	172810W	1	Retainer
9	*b 44547W	1	Seal, Oil	25	*a 2312099	2	Nut
10	*b 133927W	1	Ring, Piston Seal	26	2313730	1	Drum, H6H
11	*b 90263W	1	O-Ring	27	Y433070.45	1	Fitting
12	175648W	AR	Shim, .020				
13	175647W	AR	Shim, .007				
14	175646W	AR	Shim, .005				
15	2301783W	1	Keeper, Ferrule	*a	Requires Sealant 358674W		
16	16829W	1	Capscrew	*b	Included in Intermediate/Drum Shaft & Brake Assy Rebuild Kit 2314660		

**Section 3**  
**Hydraulic/Electrical/Controls**

# Hydraulic Group

Liebherr PR716 (H6HT5B\*\*L39)

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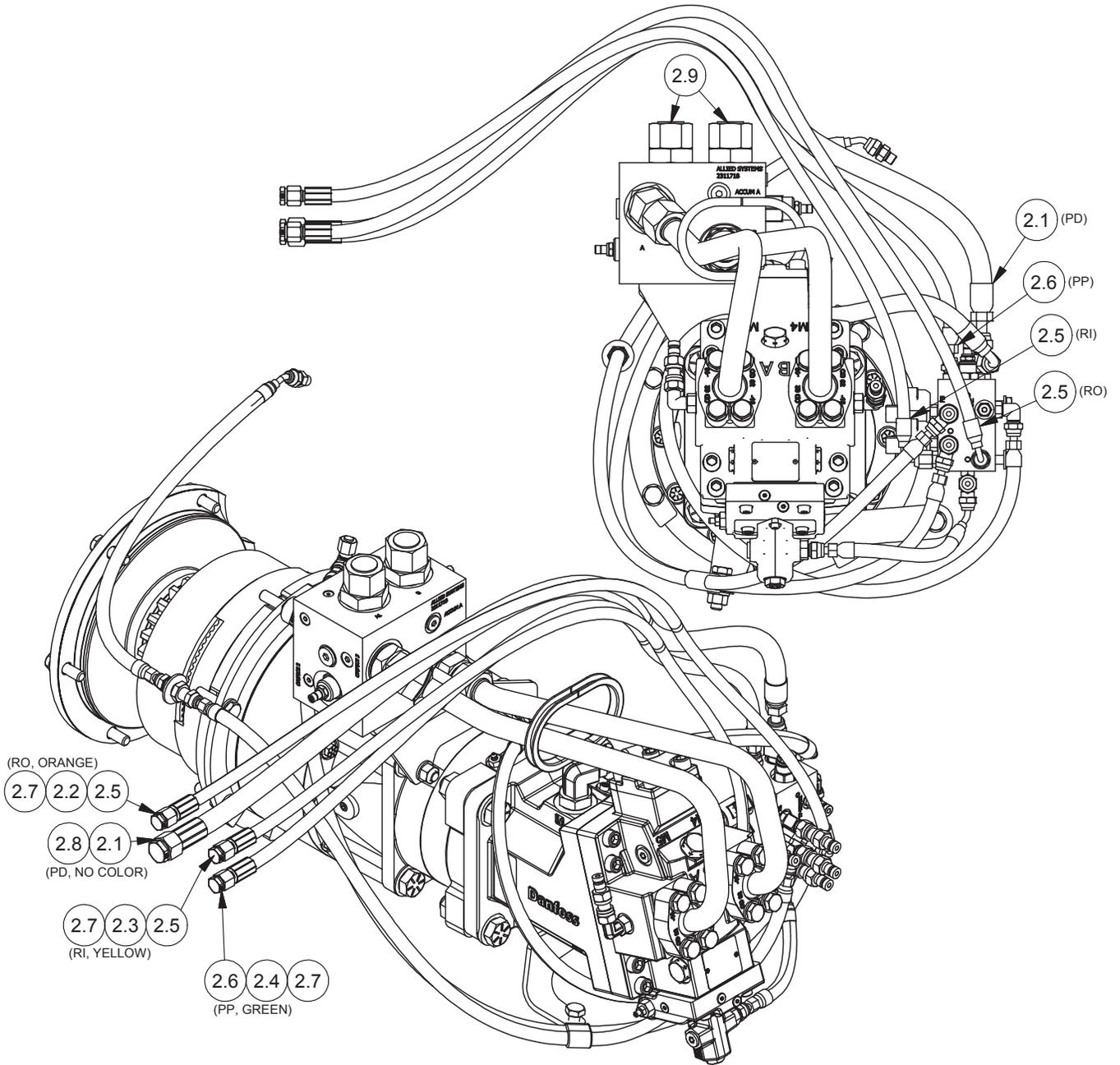
## Hydraulic Group

Liebherr PR716 (H6HT5B\*\*L39)  
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	*a 2314691	1	Manifold Assy, Counterbalance Relief	1.18	R833103	1	Fitting
1.2	*b 2313617	1	Control Manifold Assy	1.19	231439	1	Fitting
1.3	236855	1	Fitting	1.20	*c 2312353	1	Hose Assembly
1.4	232984	1	Fitting	1.21	*c 2312350	1	Hose Assembly
1.5	2316108	1	Tube Assembly A	1.22	2313639	1	Hose Assembly
1.6	2316109	1	Tube Assembly B	1.23	2312212	1	Hose Assembly
1.7	2312351	1	Hose Assembly	1.24	15176W	2	Washer
1.8	R12104	1	Hose Assembly	1.25	24257	1'	Trim, Edge
1.9	2313680	1	Harness - Wire, Winch	1.26	2312628	1	Clamp
1.10	Y09C-M1025	4	Capscrew	1.27	R833260	1	Fitting
1.11	296420W	2	Washer	*a	See page 67 for details		
1.12	592255	2	Kit, Split Flange	*b	See page 64 for details		
1.13	2307625W	2	Fitting	*c	Included in Hose Kit 2314775		
1.14	R833253	2	Fitting				
1.15	R834100	1	Fitting				
1.16	15178W	1	Washer				
1.17	211564	1	O-Ring				

## Attaching Hydraulics

Liebherr PR716 (H6HT5B\*\*L39)

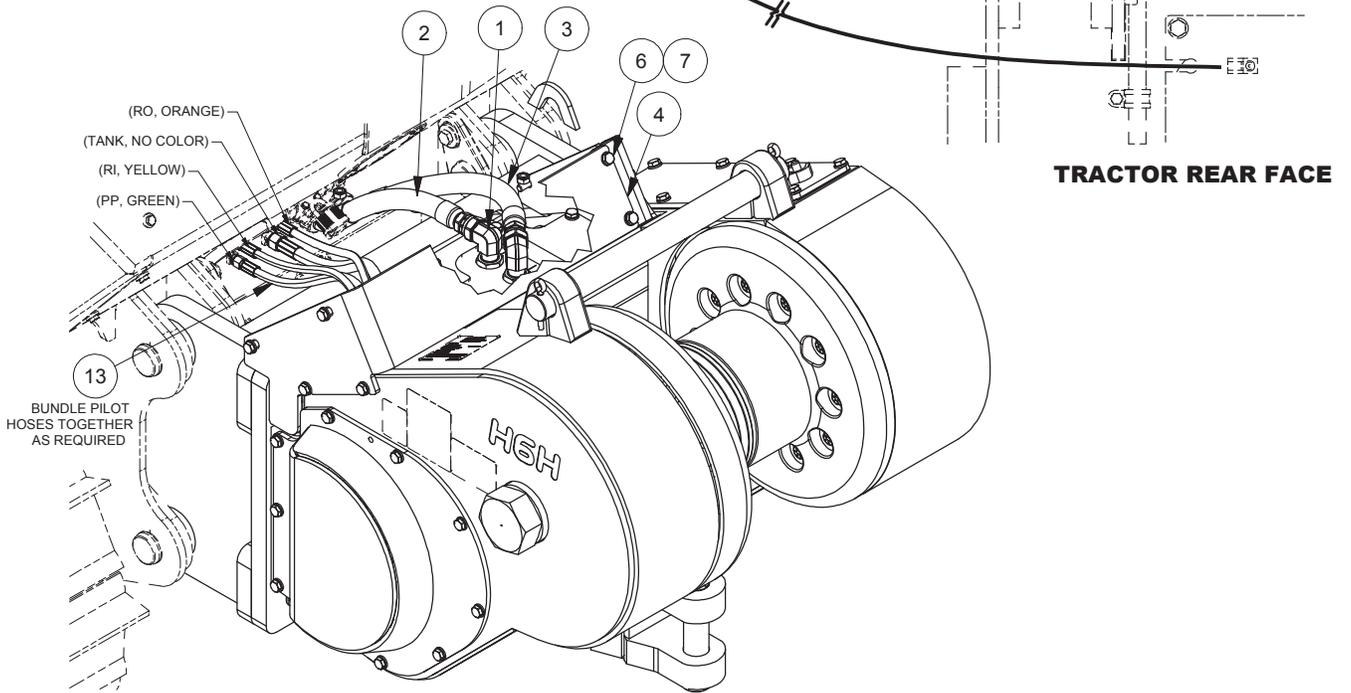
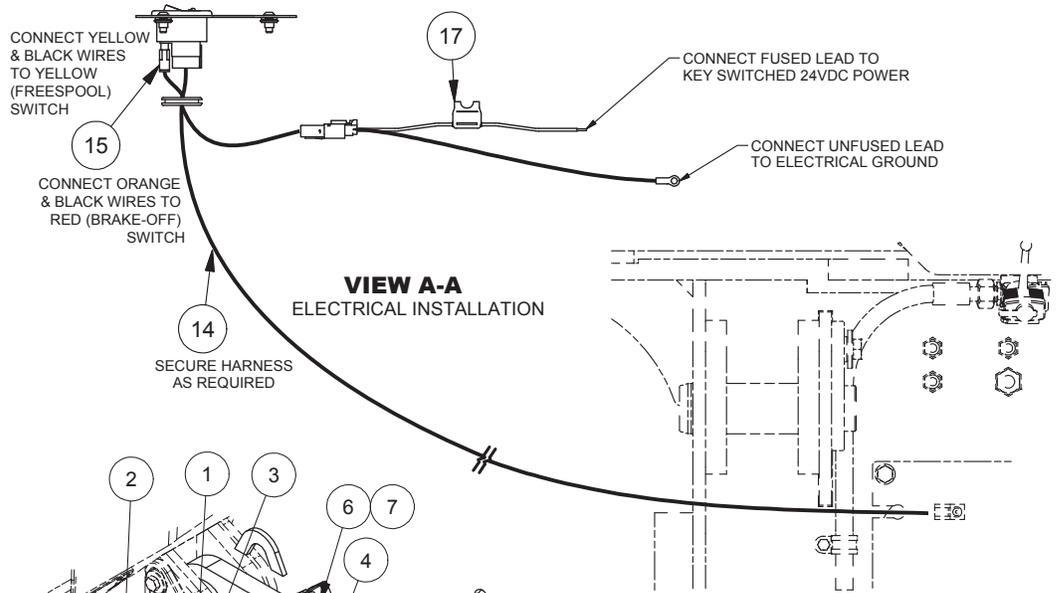
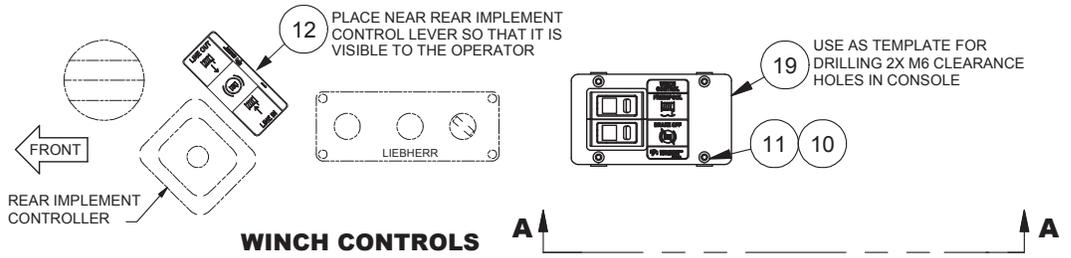


### ATTACHING HYDRAULICS

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.1	*a 2313626	1	Hose Assembly - PD	2.7	2315983	3	Plug
2.2	242596	1	Cable Tie	2.8	2313684	1	Plug
2.3	242597	1	Cable Tie	2.9	231820	2	Fitting
2.4	242598	1	Cable Tie		232383	1	O-Ring
2.5	2315979	2	Hose Assembly - RI/RO				
2.6	2315980	1	Hose Assembly - PS	*a	Included in Hose Kit 2314775		

# Electrical Installation

## Liebherr PR716 (H6HT5B\*\*L39)



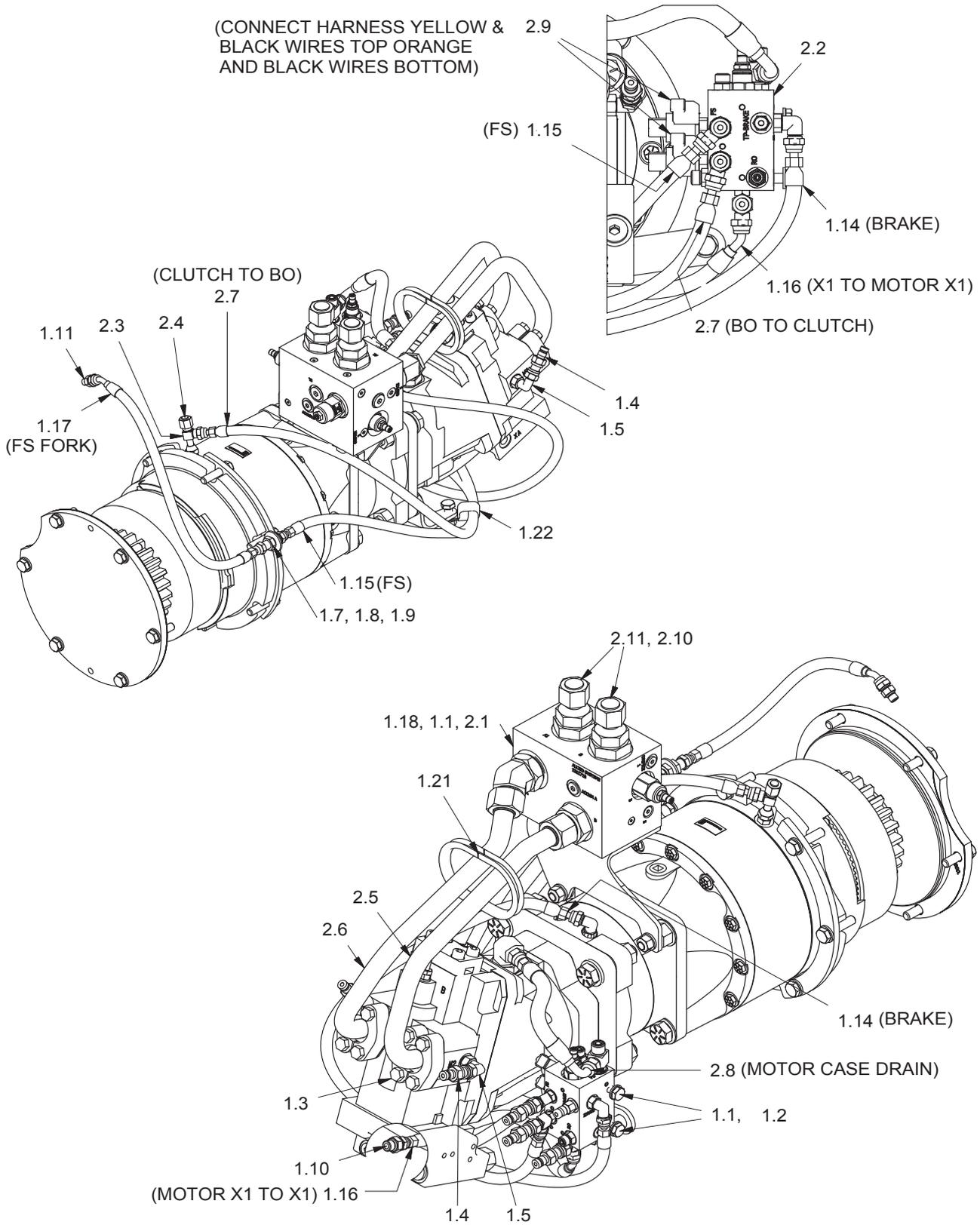
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	R833805	2	. Fitting	12	2312177	1	. Decal, Line In, Line Out
2	2316664	1	. Hose Assembly	13	R14766	2'	. Spirap
3	2316665	1	. Hose Assembly	14	129563W	12	. Cable Tie
4	2312842	1	. Guard - LH	15	2313681	1	. Wire Harness
6	293646W	15	. Capscrew	17	2313685	1	. Wire Harness
7	296422W	14	. Washer	19	*a 2313622	1	. Switch Panel Assy w/FS
10	2313623	4	. Nut, Clip				
11	296159W	4	. Capscrew		*a		See page 65 for details

### Hydraulic Group

Liebherr PR724 (H6HH5B\*\*L41) Last Used S/N 1713

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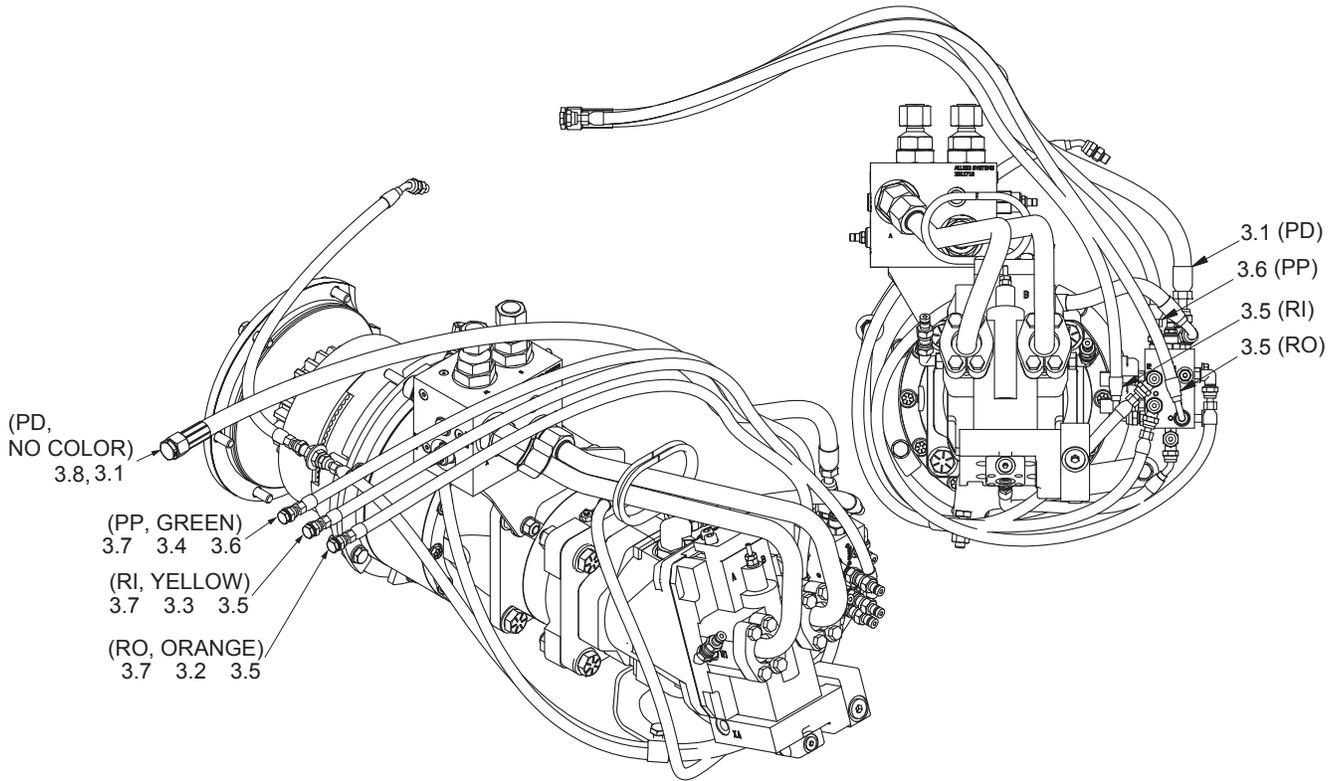
(CONNECT HARNESS YELLOW & BLACK WIRES TOP ORANGE AND BLACK WIRES BOTTOM)



## Attaching Hydraulics

Liebherr PR724 (H6HH5B\*\*L41) Last Used S/N 1713

Page 2 of 2

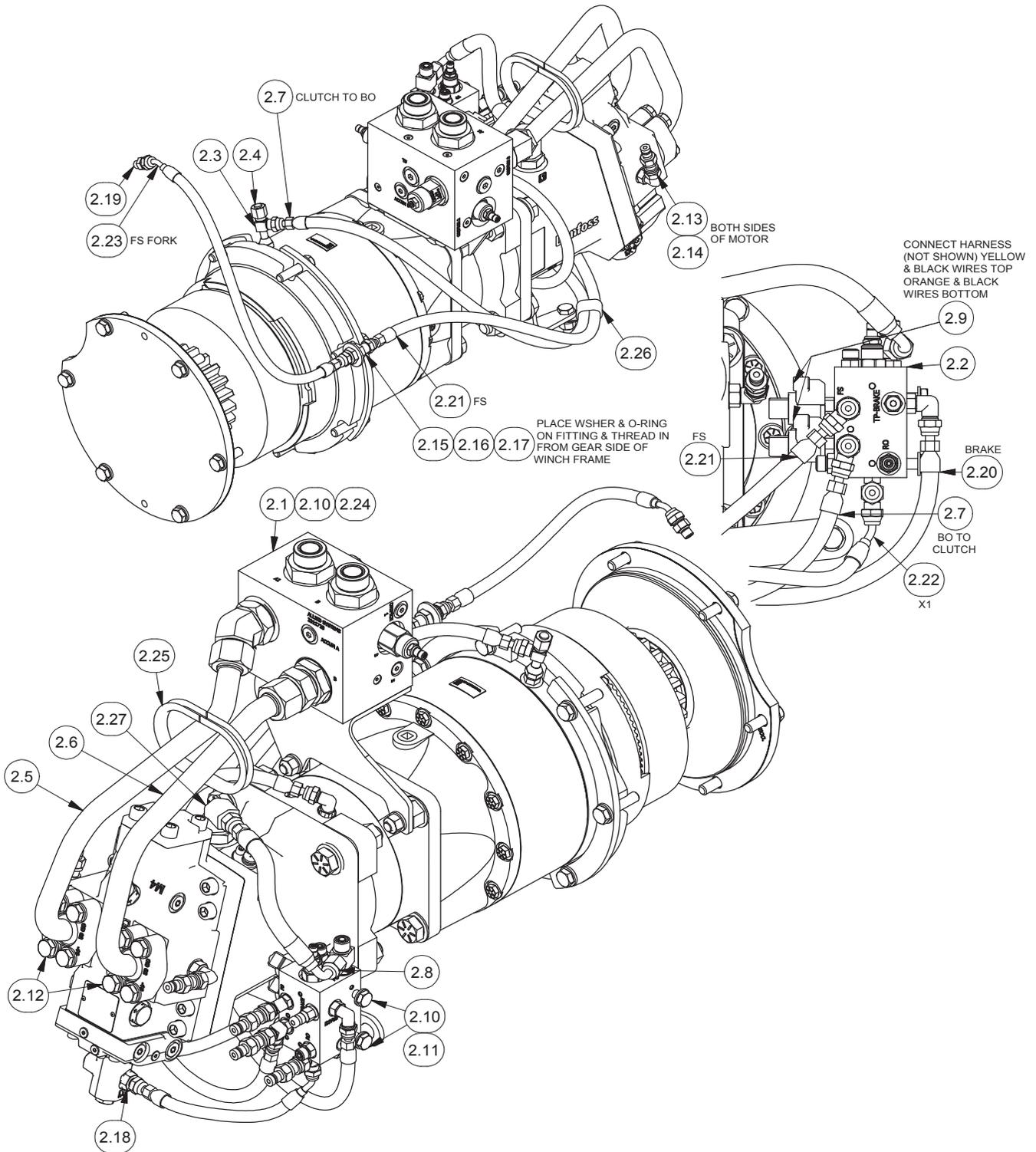


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	Y09C-M1025	4	Capscrew	2.5	*b 2312095	1	Assy, Tube - Motor B
1.2	296420W	2	Washer		*c 2314690	1	Assy, Tube - Motor B
1.3	229448	2	Kit, Split Flange	2.6	*b 2312069	1	Assy, Tube - Motor A
1.4	2307625W	2	Coupler, Quick Male		*c 2314162	1	Assy, Tube - Motor A
1.5	R833253	2	Fitting	2.7	*a 2312351	1	Assy, Hose
1.7	R834100	1	Fitting	2.8	*a R12104	1	Assy, Hose
1.8	15178W	1	Washer	2.9	2313680	1	Harness, Winch Wire
1.9	211564	1	O-Ring	2.10	234191	2	Fitting
1.10	R833103	1	Fitting	2.11	231821	2	Fitting
1.11	231439	1	Fitting	3.1	*a 2313626	1	Assy, Hose
1.14	*a 2312353	1	Assy, Hose	3.2	242596	1	Tie, Cable (Orange)
1.15	*a 2312350	1	Assy, Hose	3.3	242597	1	Tie, Cable (Yellow)
1.16	*a 2312878	1	Assy, Hose	3.4	242598	1	Tie, Cable (Green)
1.17	*a 2312212	1	Assy, Hose	3.5	*a R11612	2	Assy, Hose
1.18	221767W	2	Washer	3.6	*a 242264	1	Assy, Hose
1.21	24257	1	Trim, Edge	3.7	R834200	3	Fitting
1.22	2312628	1	Clamp, Insulation	3.8	2313684	1	Plug
2.1	*b*f 2313616	1	Assy, Manifold, Counterbalance Relief		*a		Included in Hose Kit 2314775
	*c*d 2314691	1	Assy, Manifold, Conterbalance Relief		*b		Last Used on S/N 1496
					*c		First Used on S/N 1497
2.2	*e 2313617	1	Assy, Control Manifold		*d		See page 67 for details
2.3	236855	1	Fitting		*e		See page 64 for details
2.4	232984	1	Fitting		*f		See page 63 for details

# Hydraulic Group

Liebherr PR724 (H6H\*\*B\*\*L41) First Used S/N1714

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## Hydraulic Group

Liebherr PR724 (H6H\*\*B\*\*L41) First Used S/N1714

Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.1	*a 2314691	1	Manifold Assy, Counterbalance Relief	2.13	2307625W	2	Fitting
2.2	*b 2313617	1	Control Manifold Assy	2.14	R833253	2	Fitting
2.3	236855	1	Fitting	2.15	R834100	1	Fitting
2.4	232984	1	Fitting	2.16	15178W	1	Flat Washer
2.5	2316108	1	Tube Assy A	2.17	211564	1	O-Ring
2.6	2316109	1	Tube Assy B	2.18	R833103	1	Fitting
2.7	*c 2312351	1	Hose Assy	2.19	231439	1	Fitting
2.8	*c R12104	1	Hose Assy	2.20	*c 2312353	1	Hose Assy
2.9	2313680	1	Harness - Wire, Winch	2.21	*c 2312350	1	Hose Assy
2.10	Y09C-M1025	4	Capscrew	2.22	2313639	1	Hose Assy
2.11	296420W	2	Hard Washer	2.23	*c 2312212	1	Hose Assy
2.12	592255	2	Kit, Split Flange	2.24	15176W	2	Flat Washer
				2.25	24257	1	Trim, Edge
				2.26	2312628	1	Clamp
				2.27	R833260	1	Fitting

\*a See page 67 for details

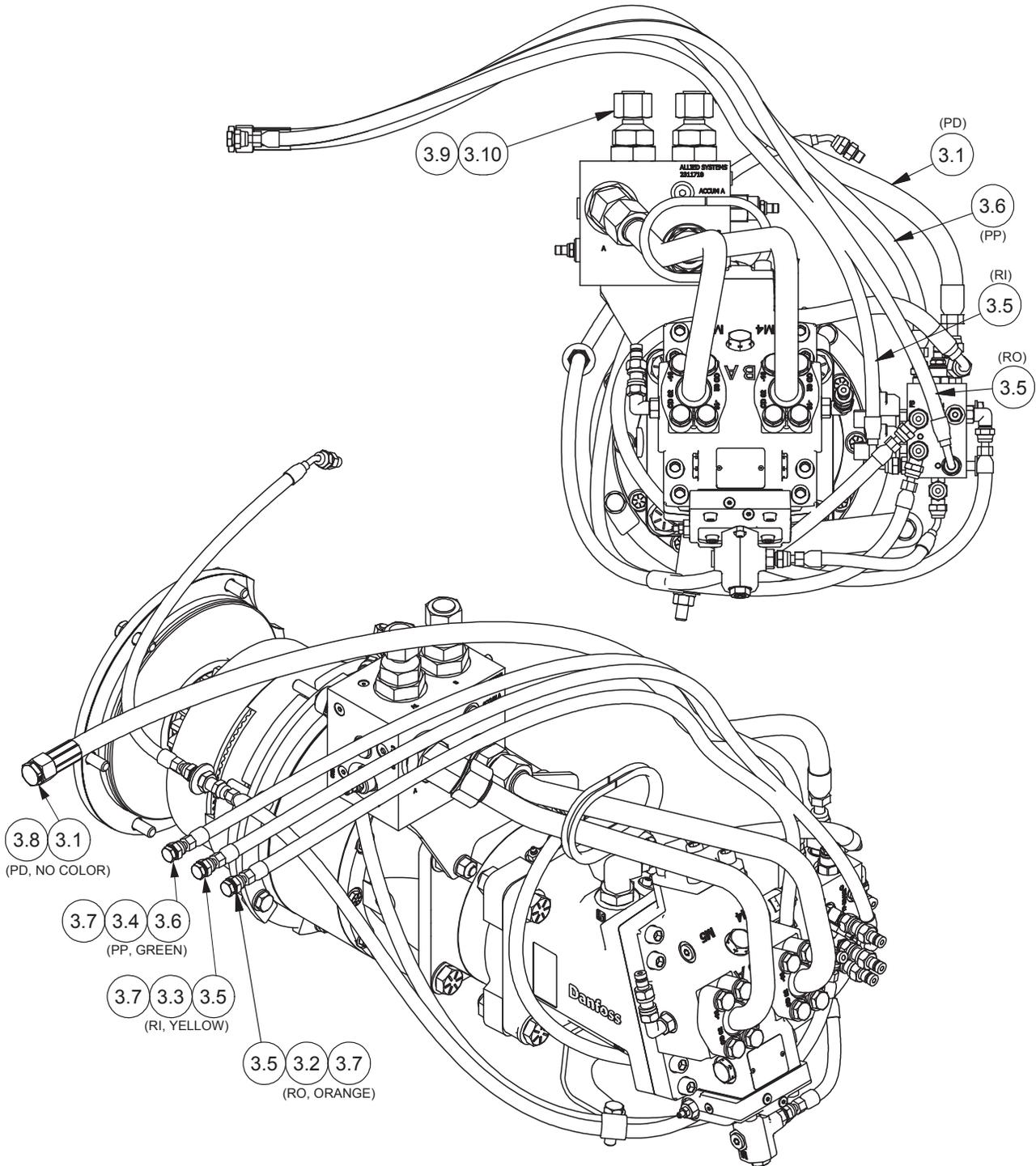
\*b See page 64 for details

\*c Included in Hose Kit 2314775

## Attaching Hydraulics

Liebherr PR724 (H6H\*\*B\*\*L41) First Used S/N1714

First Used S/N1714

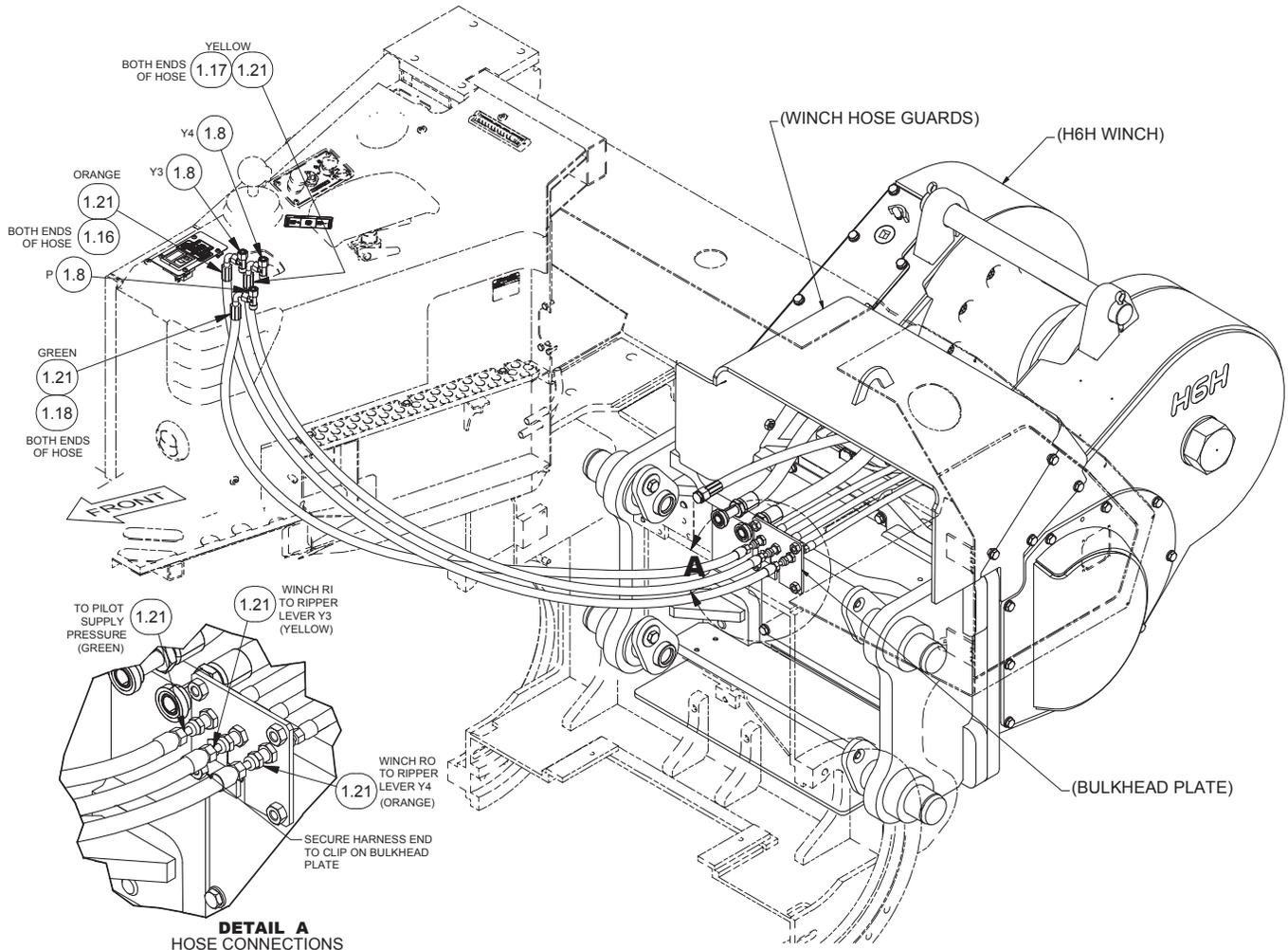


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
3.1	*a 2313626	1	. Hose Assy	3.7	R834200	3	. Fitting
3.2	242596	1	. Cable Tie	3.8	2313684	1	. Plug
3.3	242597	1	. Cable Tie	3.9	234191	2	. Fitting
3.4	242598	1	. Cable Tie	3.10	231821	2	. Fitting
3.5	*a R11612	2	. Hose Assy		232382	1	. . O-Ring
3.6	*a 242264	1	. Hose Assy				

\*a Included in Hose Kit 2314775

## Hydraulic Group

Liebherr PR724 (H6H\*\*B\*\*L41) First Used S/N1714

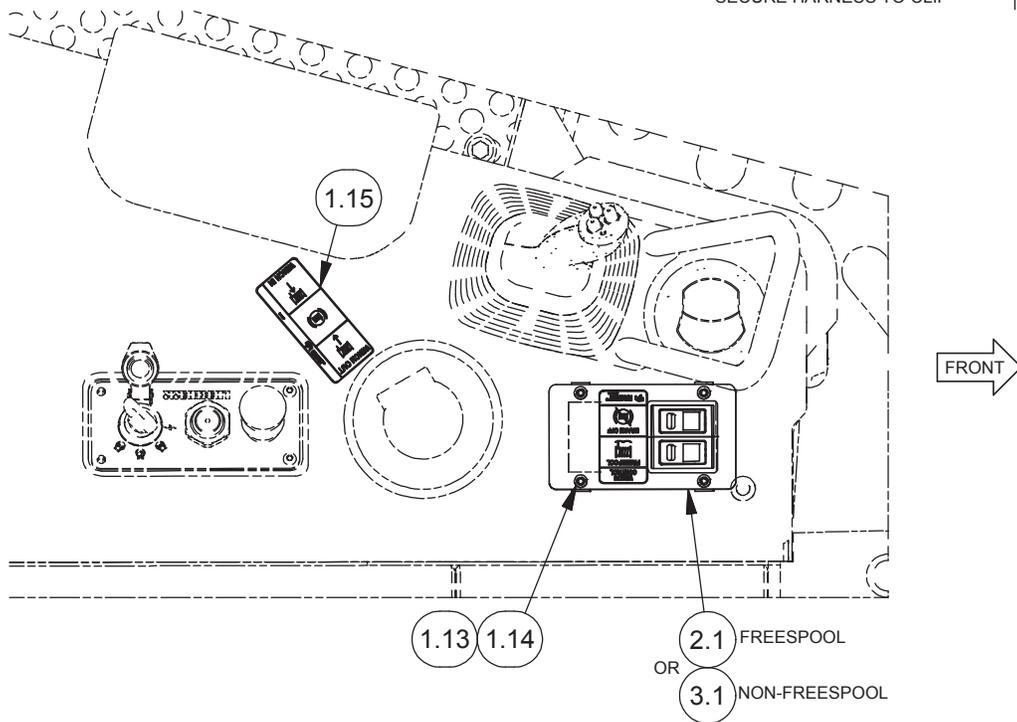
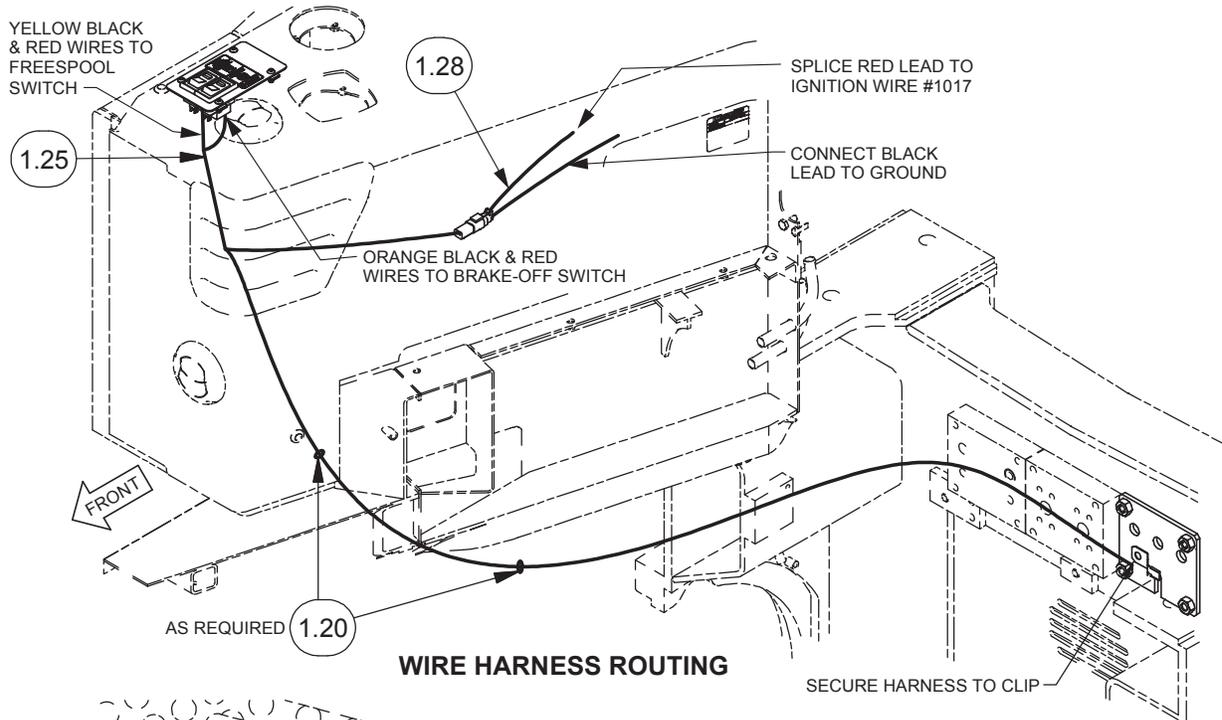


**CONTROL HOSE INSTALLATION - FREESPOOL OPTION SHOWN**

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description	
1.8	2313604	3	Fitting	1.18	242598	4	Tie, Cable (Green)	
1.16	242596	4	Tie, Cable (Orange)	1.21	*a	2313644	3	Assy, Hose
1.17	242597	4	Tie, Cable (Yellow)					
				*a	Included in Hose Kit 2314775			

## Wire Harness Routing & Switch Mounting

Liebherr PR724 (H6H\*\*B\*\*L41) First Used S/N1714



### SWITCH MOUNTING - FREESPOOL OPTION SHOWN

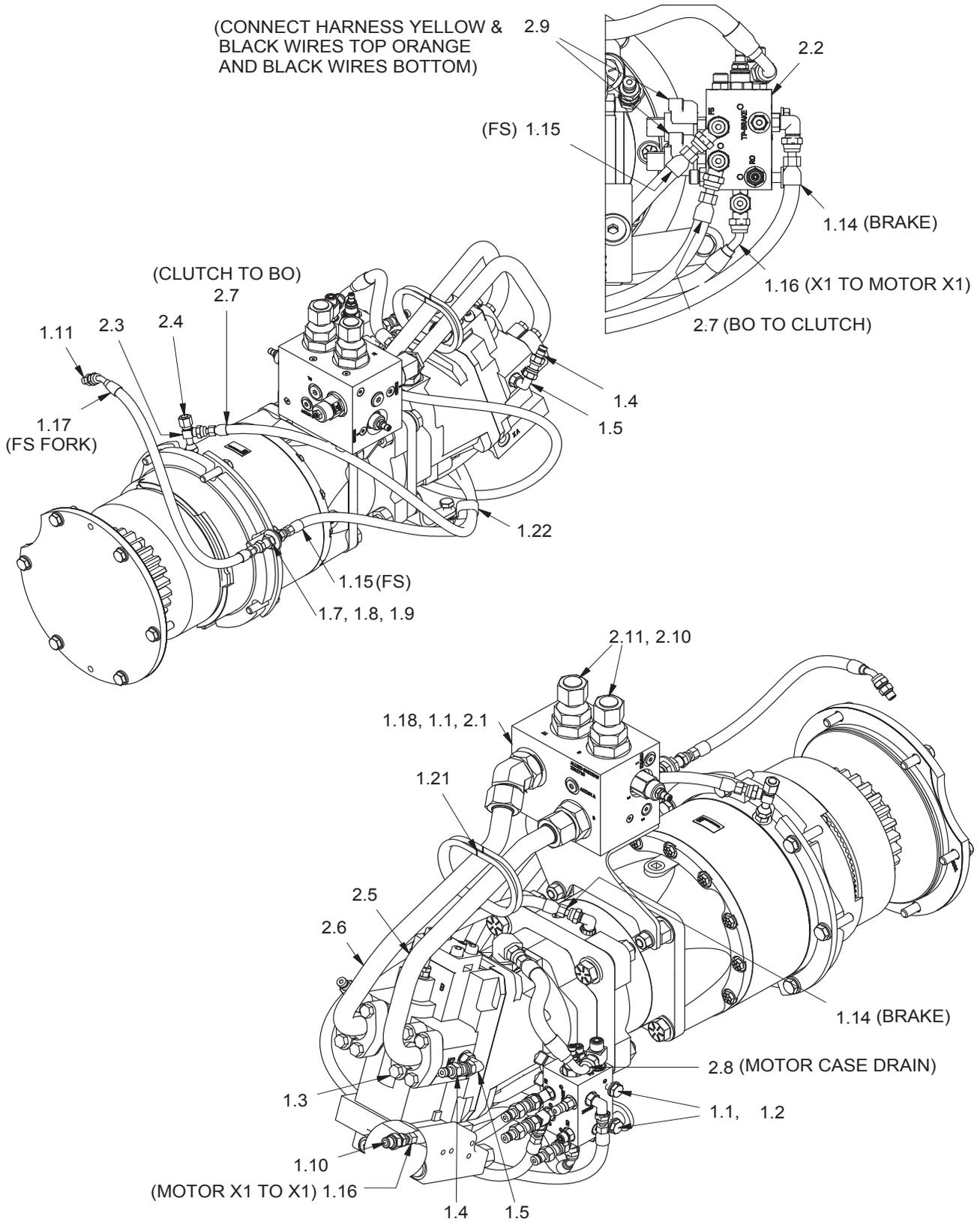
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description	
1.13	2313623	4	Nut, Clip-On	2.1	*a	2313622	1	Assy, Switch Panel w/FS
1.14	296159W	4	Capscrew	3.1	*b	2314920	1	Assy, Switch Panel w/o FS
1.15	2312177	1	Decal, Winch In, Winch Out					
1.20	129563W	10	Clamp, Strap	*a			See page 65 for details	
1.25	2313681	1	Harness, Console Wire	*b			See page 52 for details	
1.28	2313685	1	Harness, Jumper Wire					

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### Hydraulic Group

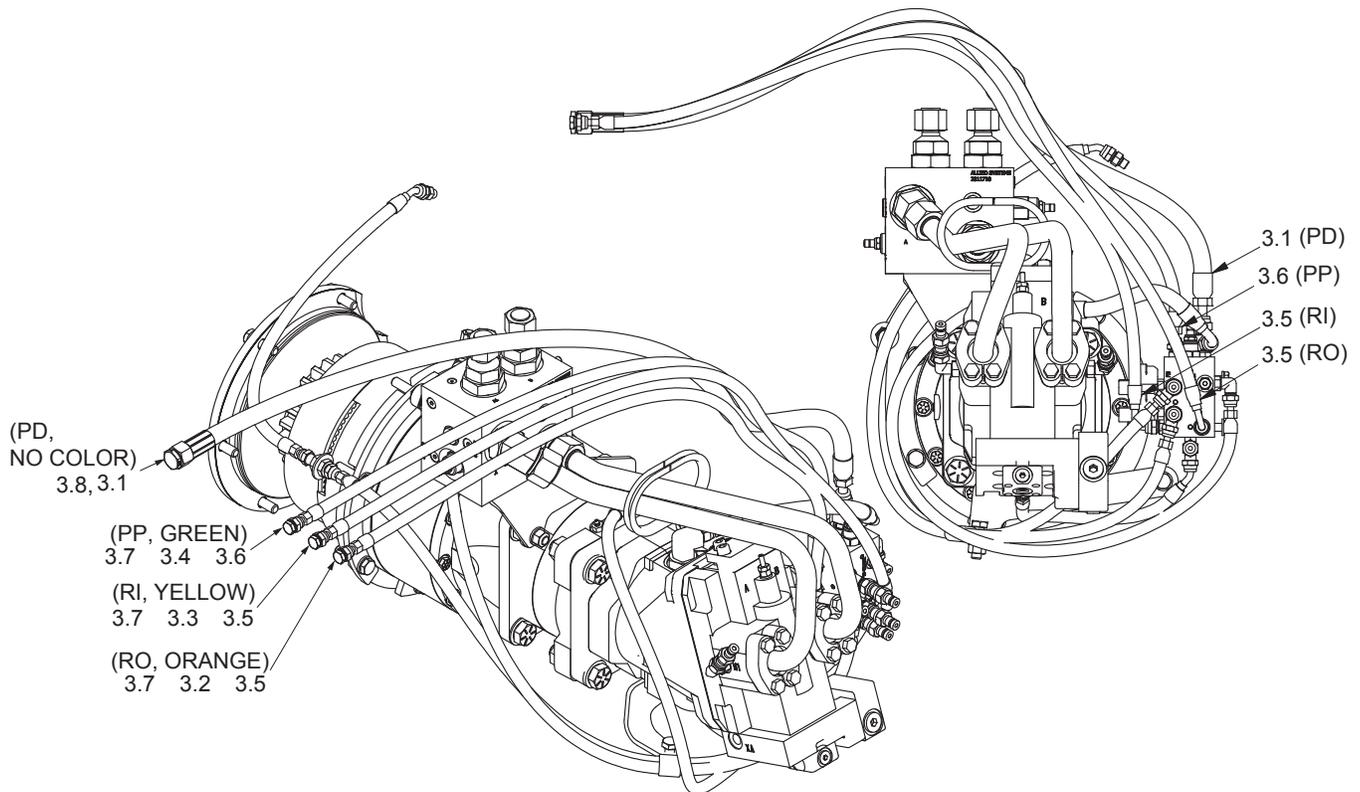
Liebherr PR736 (H6HT\*\*L42), PR734 (H6HT6B\*\*L44) Last Used S/N 1713

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### Hydraulic Group

Liebherr PR736 (H6HT\*\*L42), PR734 (H6HT6B\*\*L44) Last Used S/N 1713  
Page 2 of 2

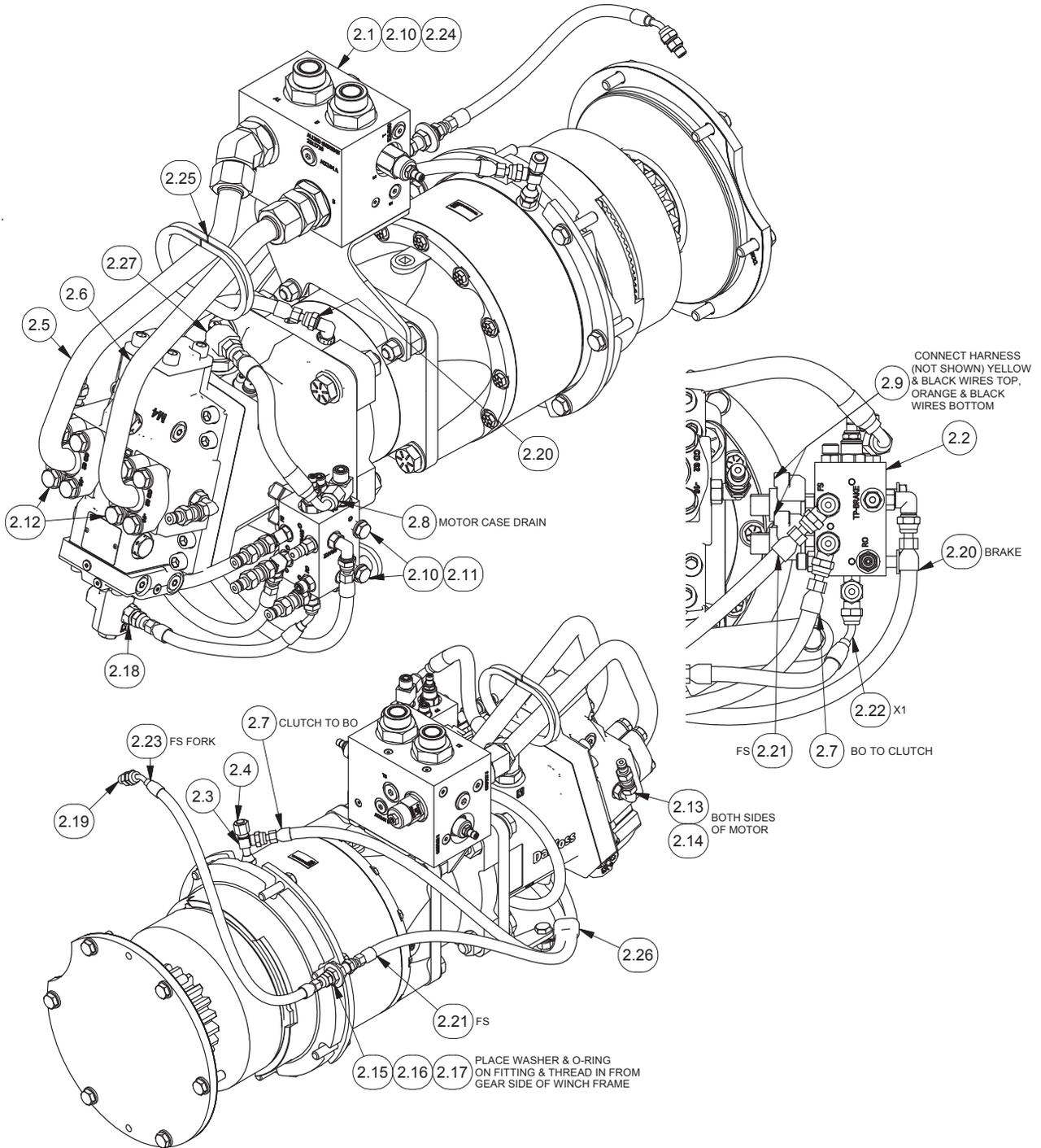


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	Y09C-M1025	4	Capscrew	2.5	*b 2312095	1	Assy, Tube - Motor B
1.2	296420W	2	Washer		*c 2314690	1	Assy, Tube - Motor B
1.3	229448	2	Kit, Split Flange	2.6	*b 2312069	1	Assy, Tube - Motor A
1.4	2307625W	2	Coupler, Quick Male		*c 2314162	1	Assy, Tube - Motor A
1.5	R833253	2	Fitting	2.7	*a 2312351	1	Assy, Hose
1.7	R834100	1	Fitting	2.8	*a R12104	1	Assy, Hose
1.8	15178W	1	Washer	2.9	2313680	1	Harness, Winch Wire
1.9	211564	1	O-Ring	2.10	234191	2	Fitting
1.10	R833103	1	Fitting	2.11	231821	2	Fitting
1.11	231439	1	Fitting	3.1	*a 2313626	1	Assy, Hose
1.14	*a 2312353	1	Assy, Hose	3.2	242596	1	Tie, Cable (Orange)
1.15	*a 2312350	1	Assy, Hose	3.3	242597	1	Tie, Cable (Yellow)
1.16	*a 2312878	1	Assy, Hose	3.4	242598	1	Tie, Cable (Green)
1.17	*a 2312212	1	Assy, Hose	3.5	*a R11612	2	Assy, Hose
1.18	221767W	2	Washer	3.6	*a 242264	1	Assy, Hose
1.21	24257	1	Trim, Edge	3.7	R834200	3	Fitting
1.22	2312628	1	Clamp, Insulation	3.8	2313684	1	Plug
2.1	*b*f 2313616	1	Assy, Manifold, Counterbalance Relief		*a	Included in Hose Kit 2314775	
	*c*d 2314691	1	Assy, Manifold, Counterbalance Relief		*b	Last Used on S/N 1496	
2.2	*e 2313617	1	Assy, Control Manifold		*c	First Used on S/N 1497	
2.3	236855	1	Fitting		*d	See page 67 for details	
2.4	232984	1	Fitting		*e	See page 64 for details	
					*f	See page 63 for details	

### Hydraulic Group

Liebherr PR734 (H6HT6B\*\*L44), PR736 (H6H\*\*BL42) First Used S/N 1714

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## Hydraulic Group

Liebherr PR734 (H6HT6B\*\*L44), PR736 (H6H\*\*BL42) First Used S/N 1714

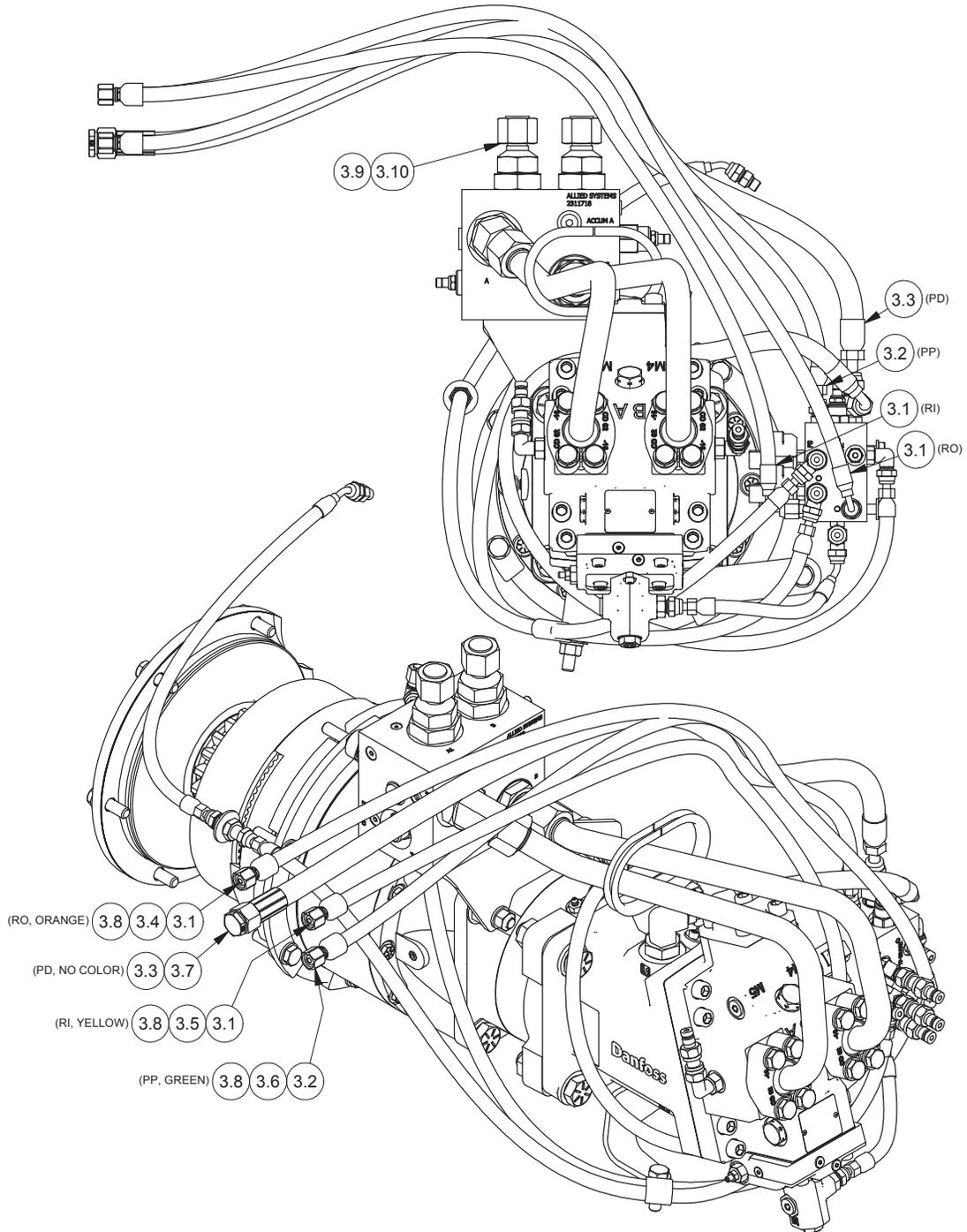
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.1	*b 2314691	1	Assy, Manifold, Counterbalance Relief	2.16	15178W	1	Flat Washer
2.2	*c 2313617	1	Assy, Control Manifold	2.17	211564	1	O-Ring
2.3	236855	1	Fitting	2.18	R833103	1	Fitting
2.4	232984	1	Fitting	2.19	231439	1	Fitting
2.5	2316109	1	Assy, Tube - Motor B	2.20	*a 2312353	1	Hose Assy
2.6	2316108	1	Assy, Tube - Motor A	2.21	*a 2312350	1	Hose Assy
2.7	*a 2312351	1	Assy, Hose	2.22	2313639	1	Hose Assy
2.8	*a R12104	1	Assy, Hose	2.23	*a 2312212	1	Hose Assy
2.9	2313680	1	Harness - Wire, Winch	2.24	15176W	2	Flat Washer
2.10	Y09C-M1025	4	Capscrew	2.25	24257	1'	Trim, Edge
2.11	296420W	2	Hard Washer	2.26	2312628	1	Clamp
2.12	592255	2	Kit, Split Flange	2.27	R833260	1	Fitting
2.13	2307625W	2	Fitting		*a		Included in Hose Kit 2314775
2.14	R833253	2	Fitting		*b		See page 67 for details
2.15	R834100	1	Fitting		*c		See page 64 for details

# Attaching Hydraulic Group

Liebherr PR734 (H6HT6B\*\*L44)

PR736 (H6HT1B\*\*L42 with Freespool) First Used S/N 1714

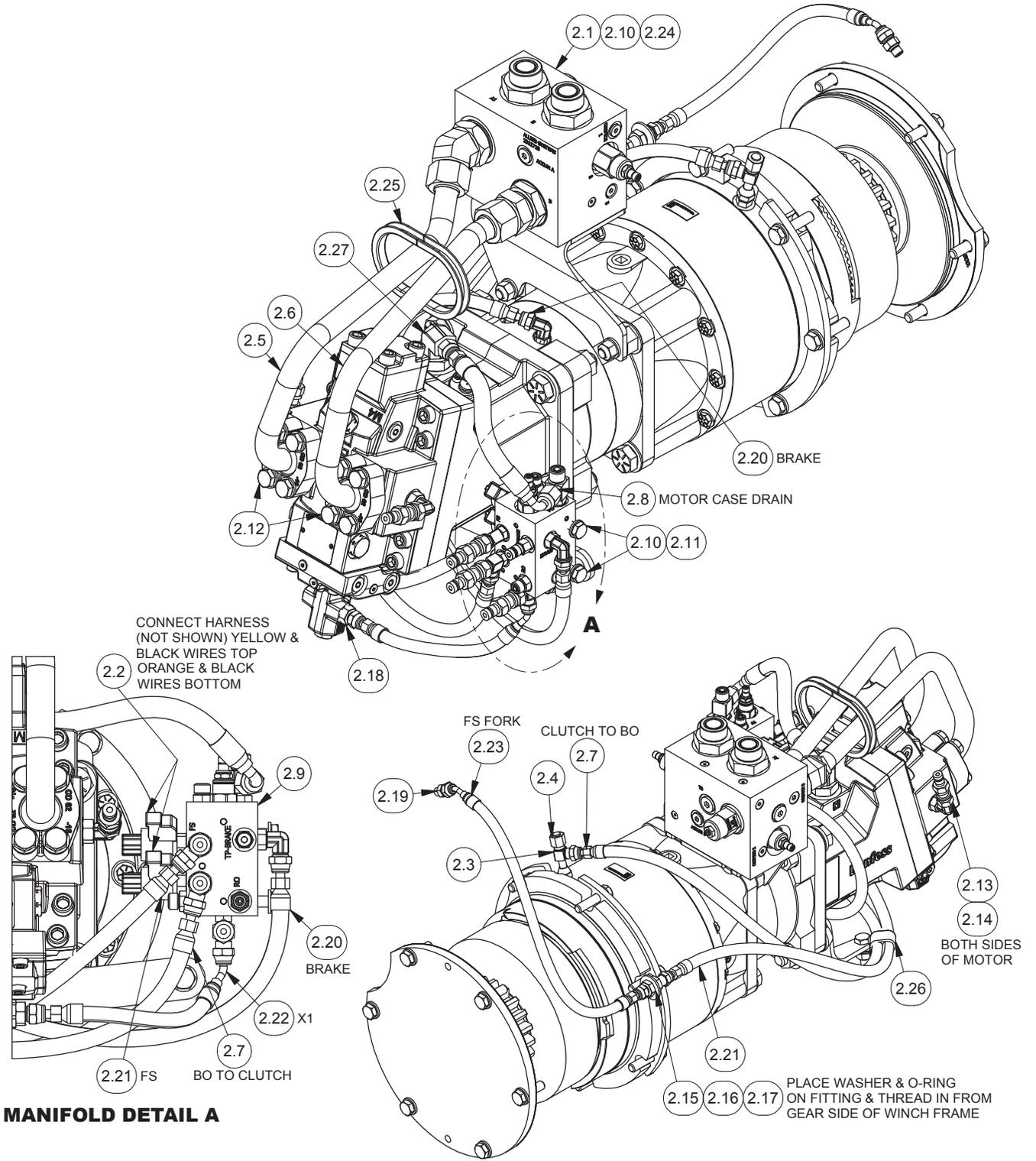


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
3.1	*a 2313626	1	Assy, Hose	3.6	*a 242264	1	Assy, Hose
3.2	242596	1	Tie, Cable (Orange)	3.7	R834200	3	Fitting
3.3	242597	1	Tie, Cable (Yellow)	3.8	2313684	1	Plug
3.4	242598	1	Tie, Cable (Green)				
3.5	*a R11612	2	Assy, Hose	*a	Included in Hose Kit 2314775		

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# Hydraulic Group

Liebherr PR726 (H6HT1B\*\*L410)  
Page 1 of 2



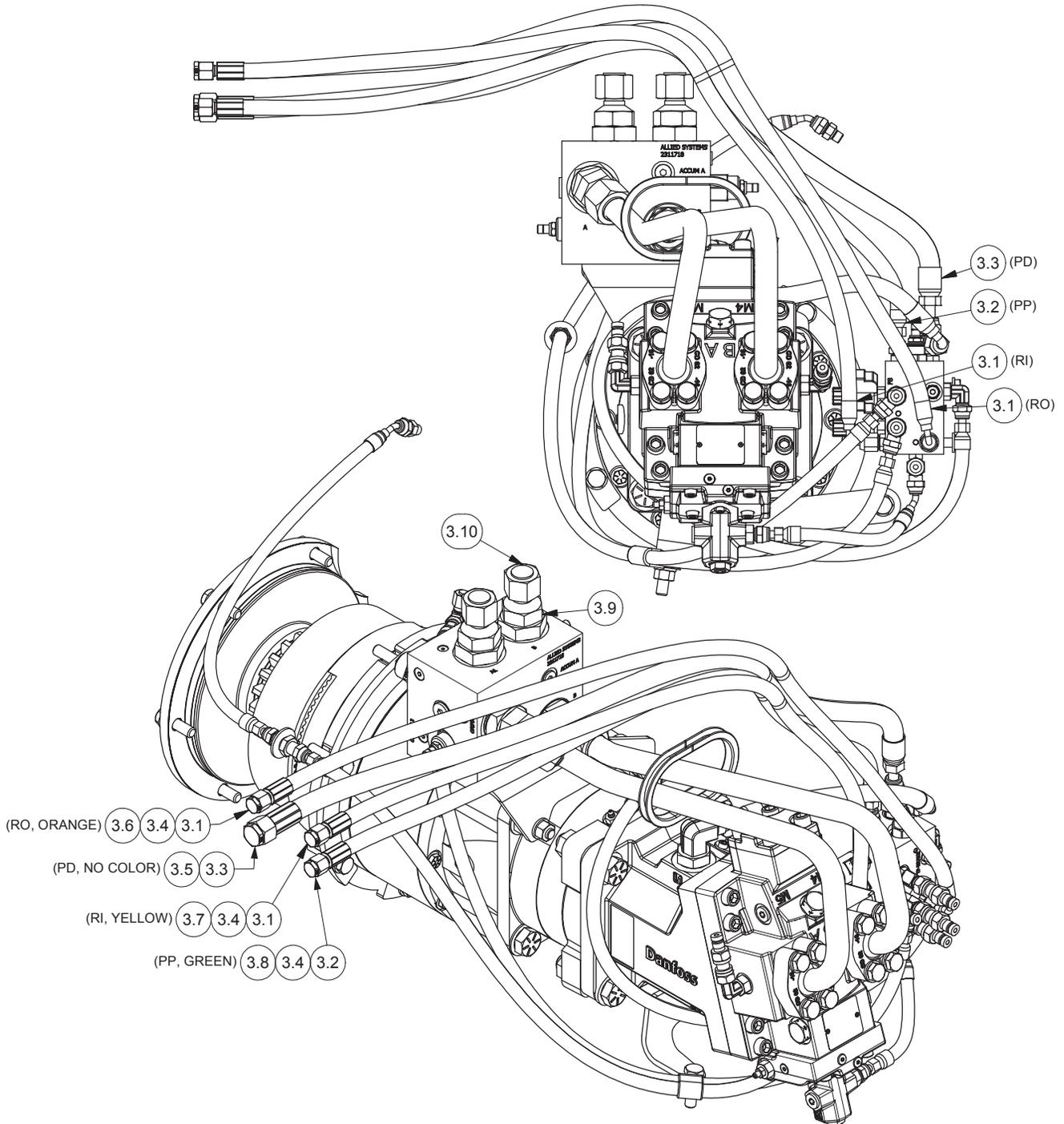
## Hydraulic Group

Liebherr PR726 (H6HT1B\*\*L410)  
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.1	*a 2314691	1	Manifold Assy, Counterbalance Relief	2.16	15178W	1	Flat Washer
				2.17	211564	1	O-Ring
2.2	*b 2313617	1	Control Manifold Assy	2.18	R833103	1	Fitting
2.3	236855	1	Fitting	2.19	231439	1	Fitting
2.4	232984	1	Fitting	2.20	*c 2312353	1	Hose Assy
2.5	2316108	1	Tube Assy	2.21	*c 2312350	1	Hose Assy
2.6	2316109	1	Tube Assy	2.22	2313639	1	Hose Assy
2.7	*c 2312351	1	Hose Assy	2.23	*c 2312212	1	Hose Assy
2.8	*c R12104	1	Hose Assy	2.24	15176W	2	Flat Washer
2.9	2313680	1	Harness - Wire, Winch	2.25	24257	1'	Trim, Edge
2.10	Y09C-M1025	4	Capscrew	2.26	2312628	1	Clamp
2.11	296420W	2	Hard Washer	2.27	R833260	1	Fitting
2.12	592255	2	Kit, Split Flange				
2.13	2307625W	2	Fitting	*a	See page 67 for details		
2.14	R833253	2	Fitting	*b	See page 64 for details		
2.15	R834100	1	Fitting	*c	Included in Hose Kit 2314775		

## Attaching Hydraulic Group

Liebherr PR726 (H6HT1B\*\*L410)

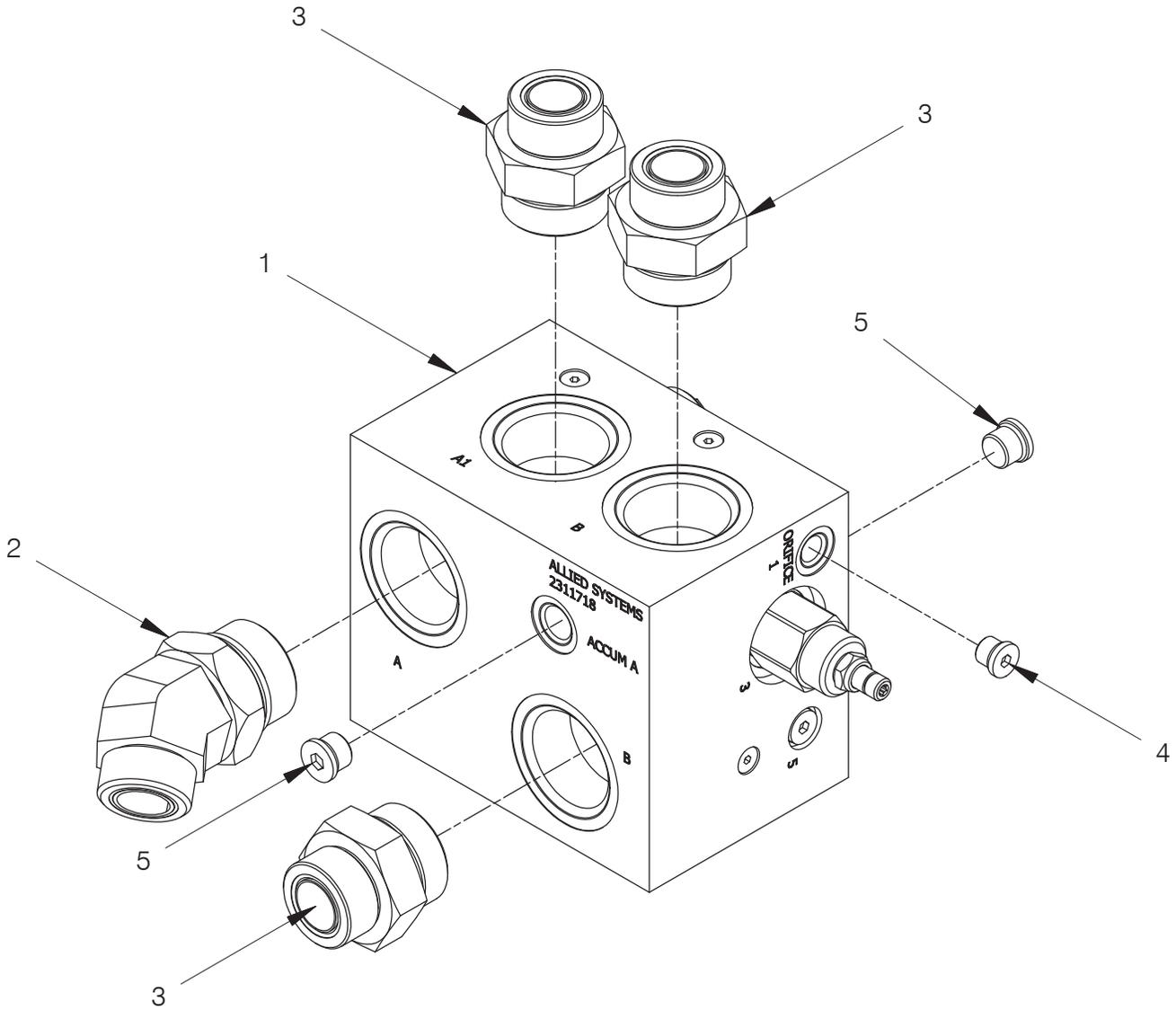


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
3.1	2316452	2	Hose Assy	3.6	242596	1	Cable Tie
3.2	2316454	1	Hose Assy	3.7	242597	1	Cable Tie
3.3	2316455	1	Hose Assy	3.8	242598	1	Cable Tie
3.4	2314217	3	Fitting, RO	3.9	234191	2	Fitting
3.5	2313684	1	Plug	3.10	231821	2	Fitting
					232382	1	O-Ring

### Counterbalance Relief Manifold Assy

Liebherr PR724 (H6H\*\*L41)

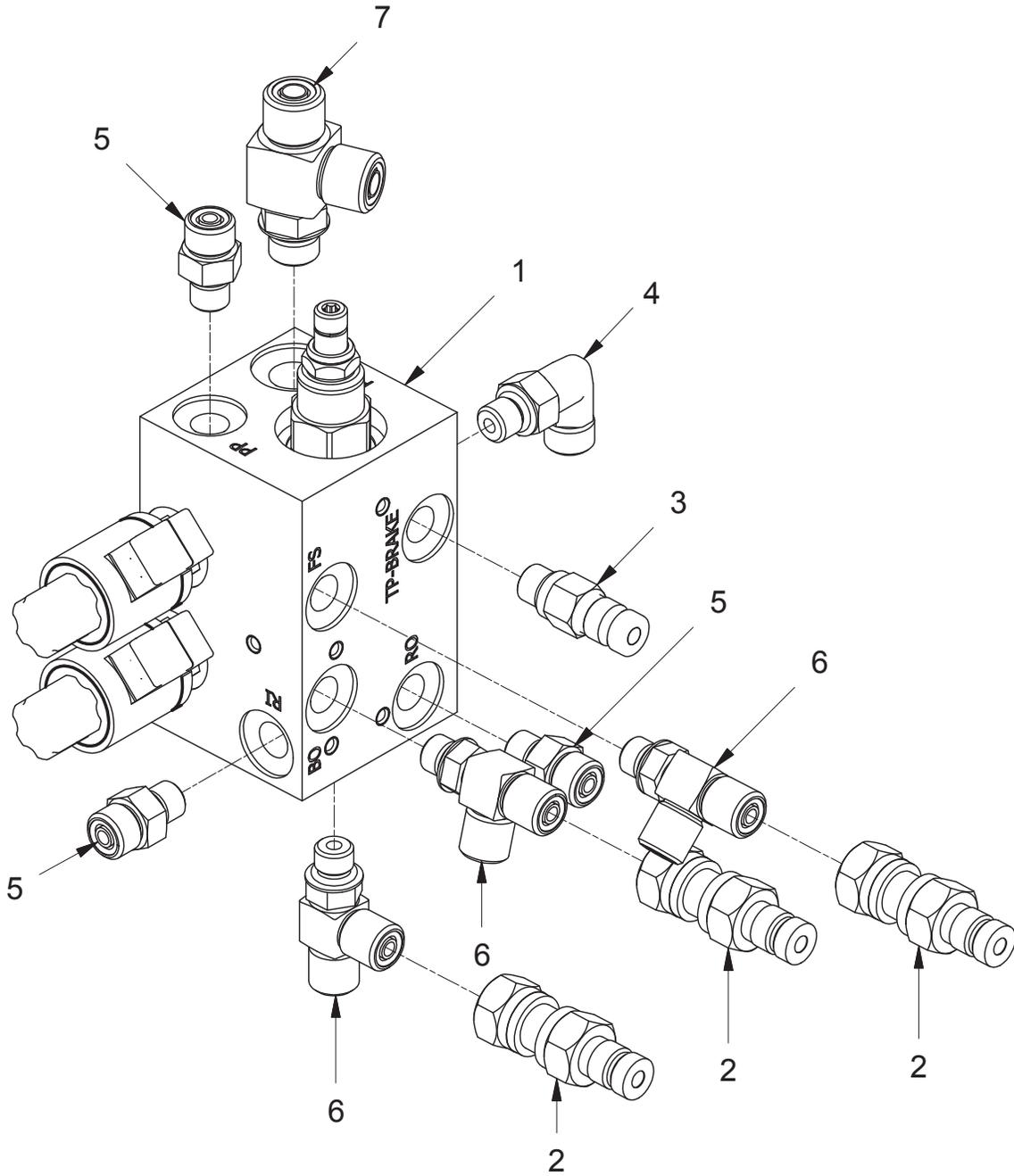
Last Used on S/N 1496



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2313616</b>	<b>1</b>	<b>Assy, Manifold</b>				
1	*a 2311718	1	. Assy, Counterbalance Relief Manifold	4	235387	1	. Fitting
2	R833218	1	. Fitting	5	229383	2	. Fitting
3	R833133	3	. Fitting				
				*a	See page 68 for details		

### Control Manifold Assy

Liebherr PR724 (H6H\*\*L41)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2313617</b>	<b>1</b>	<b>Assy, Control Manifold</b>				
1	*a 2311770	1	. Assy, Control Manifold	5	231439	3	. Fitting
2	2307625W	3	. Coupler, Quick Male	6	R833400	3	. Fitting
3	R14040	1	. Coupler, Quick Male	7	231465	1	. Fitting
4	R833251	1	. Fitting				

\*a See page 66 for details

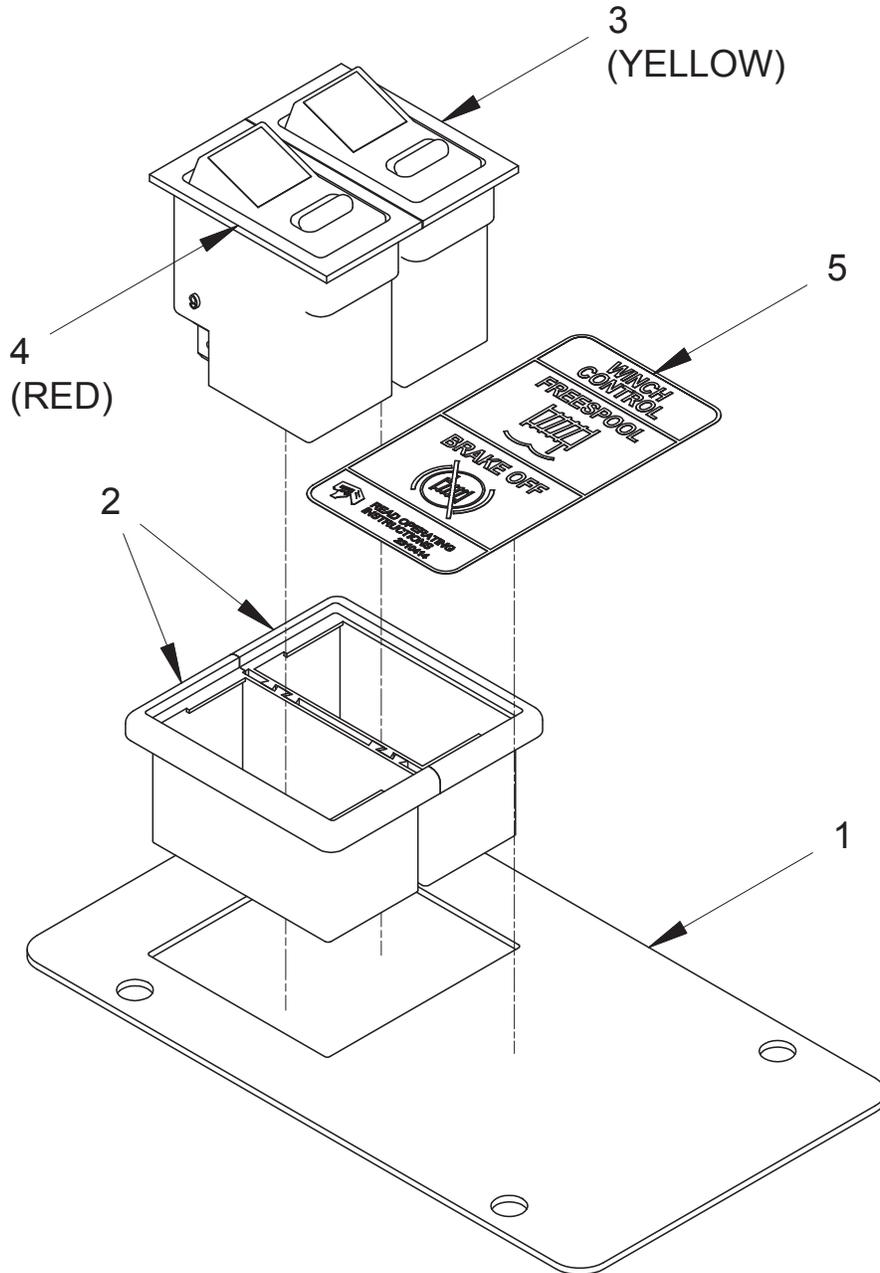
### Switch Panel Assy

with FREESPOOL

Liebherr PR716 (H6HT5B\*\*L39)

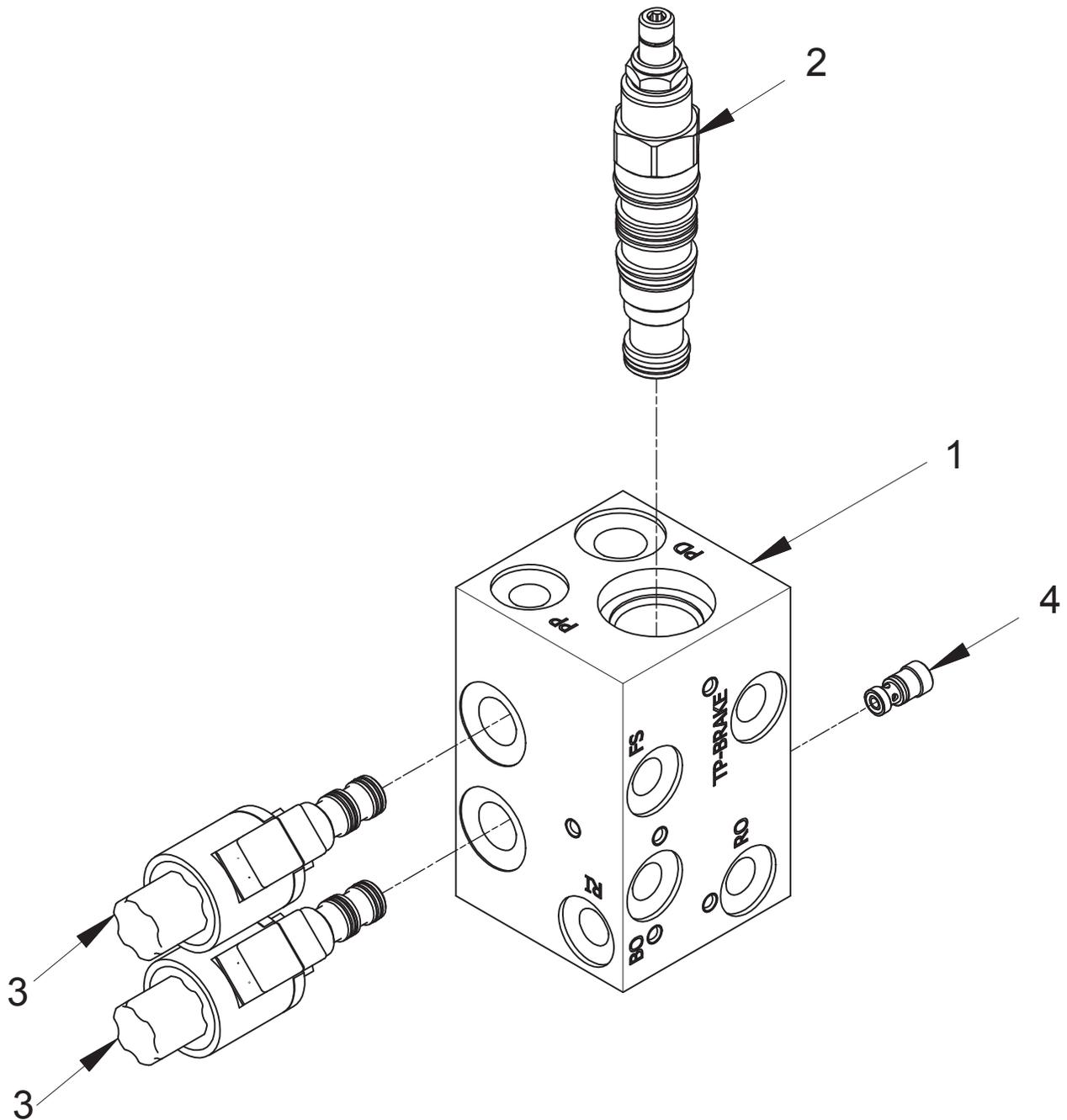
Liebherr PR724 (H6HH5B\*\*L41, H6HT6B\*\*L41)

Liebherr PR734-4 (H6HT6B\*\*L44)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2313622</b>	<b>1</b>	<b>Assy, Switch Panel w/FS</b>				
1	2313621	1	. Plate, Switch Mounting	4	2310504	1	. Assy, Switch; 24V, Red LED
2	234505	2	. Frame, Mounting	5	2310414	1	. Decal, Switch Panel
3	2310013	1	. Assy, Switch; 24V, Yellow LED				

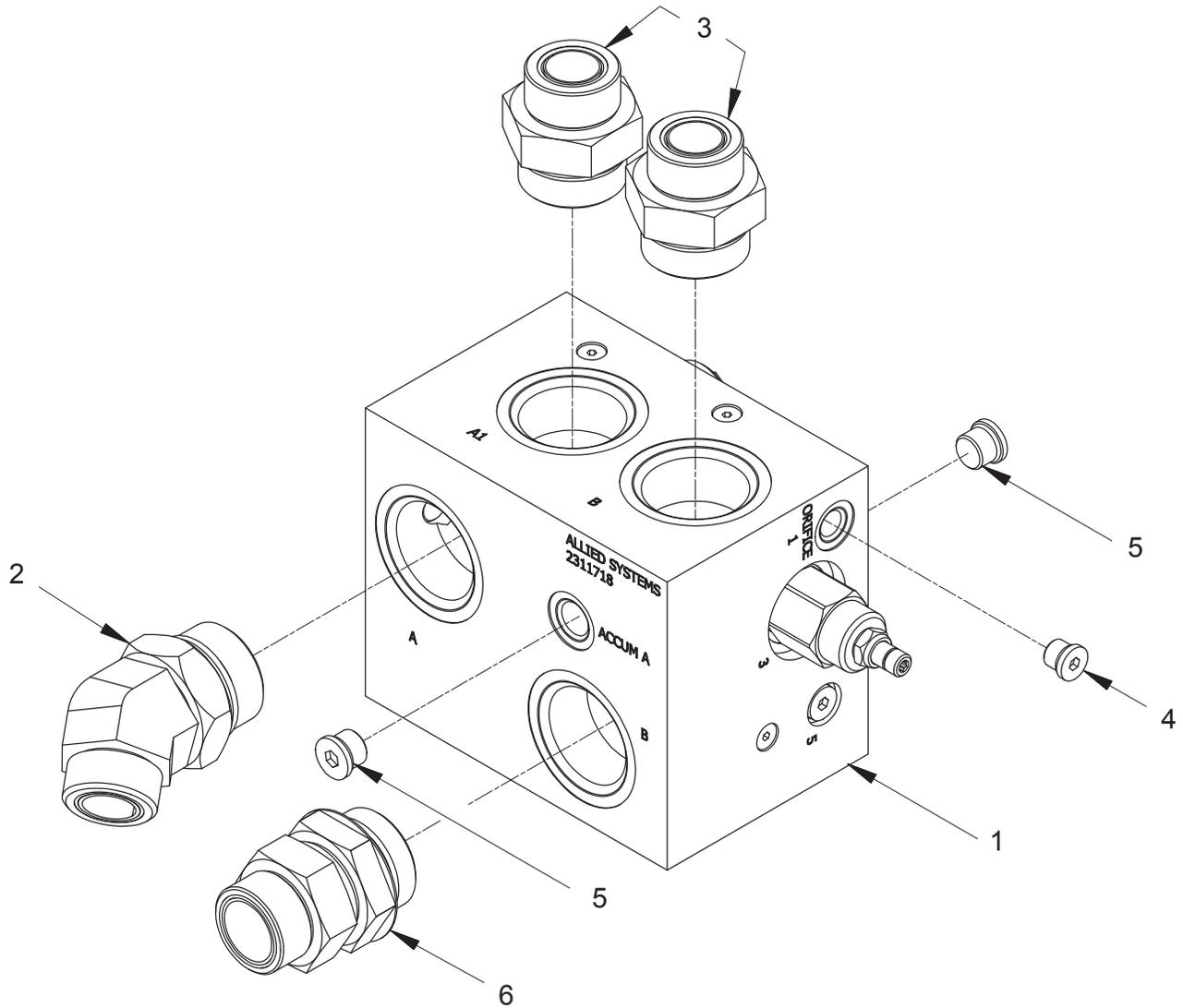
### Control Manifold Assy



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311770</b>	<b>1</b>	<b>Assy, Control Manifold</b>				
1	2311771	1	. Body, Control Manifold	4	2312074	1	. Valve, Shuttle
2	2311592	1	. Valve, Directional		2312112	1	.. Seals, O-Ring
	252566	1	.. Kit, Seal				
3	2312073	2	. Valve, Cartridge				
	2314106	1	.. Base, Valve Cartridge				
	2313984	1	.. Coil				
	2312111	1	.. Kit, Seal				

# Counterbalance Relief Manifold Assy

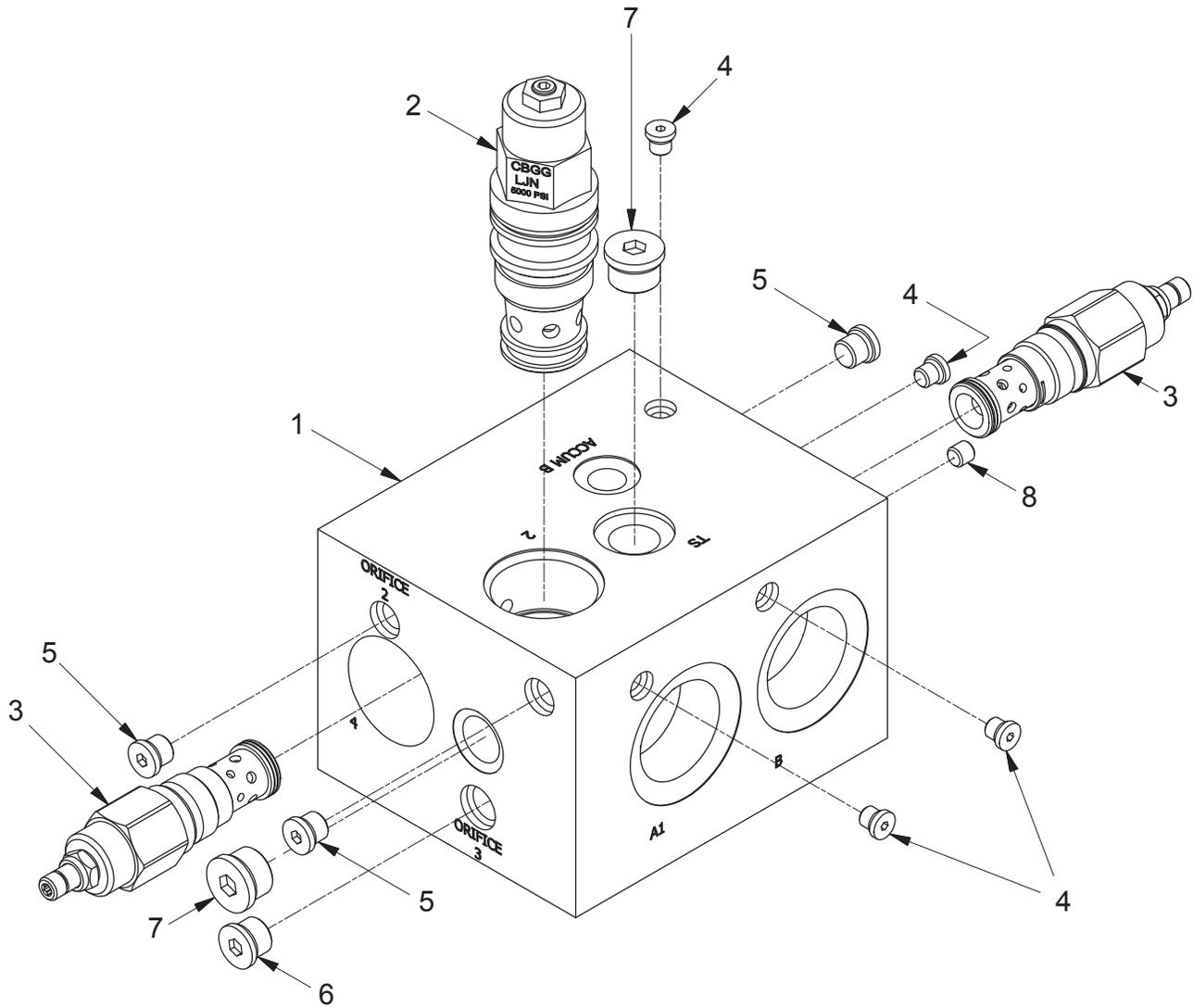
First Used on S/N H6H-1497



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2314691</b>	<b>1</b>	<b>Assy, Manifold</b>				
1	*a 2311718	1	. Assy, Counterbalance Relief Manifold	3	R833133	2	. Fitting
2	R833218	1	. Fitting	4	235387	1	. Fitting
				5	229383	2	. Fitting
				6	2313948	1	. Fitting

\*a See page for 68 details

## Counterbalance Relief Manifold Assy



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311718</b>	<b>1</b>	<b>Assy, Counterbalance Relief Manifold</b>				
1	2311719	1	. Body, Manifold	5	235387	3	. Fitting
2	2312068	1	. Valve, Counter Balance	6	229383	1	. Fitting
	243815	1	. . Seal Kit (Not Shown)	7	229345	2	. Fitting
3	2307438W	2	. Valve, Relief	8	2310181	1	. Plug, Orifice
	259258	1	. . Kit, Seal				
4	242230	4	. Fitting				

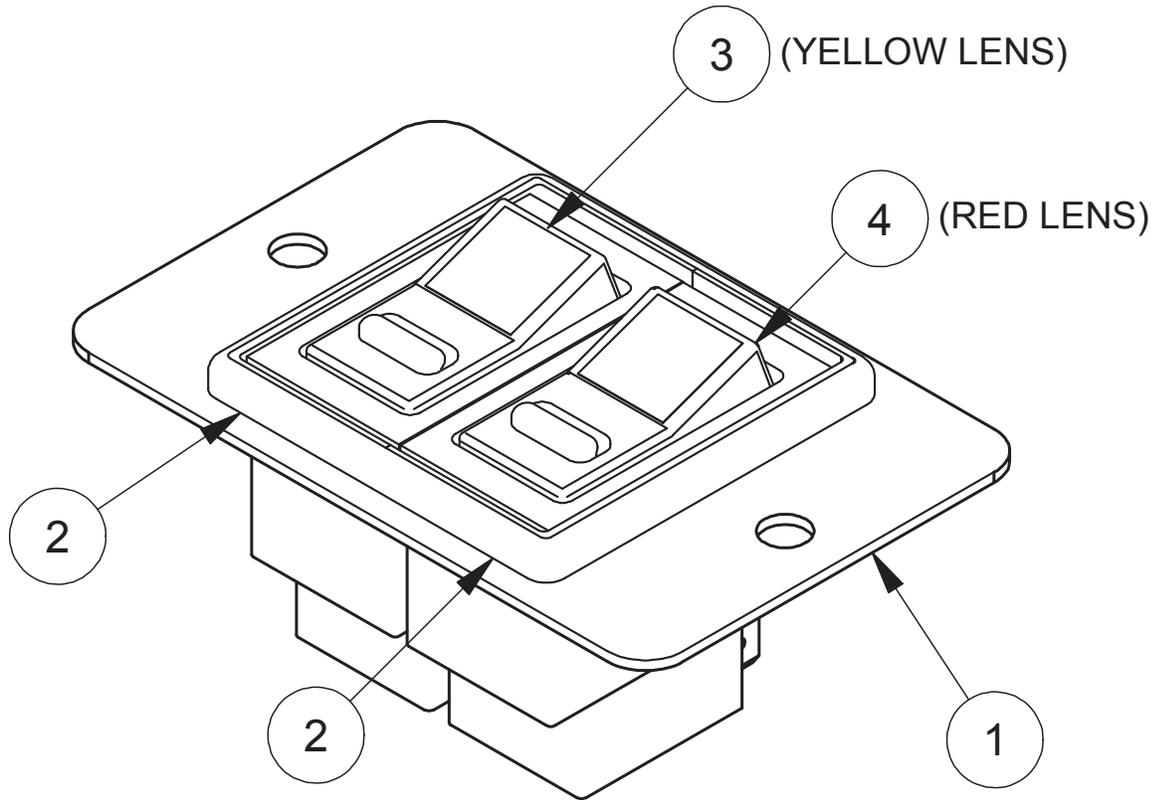
## Switch Panel Assy

with FREESPOOL

Liebherr PR736 (H6HT1B\*\*L42)

Liebherr PR726 (H6HT1B\*\*L410)

Liebherr PR736 (H6HT1B\*\*L421)

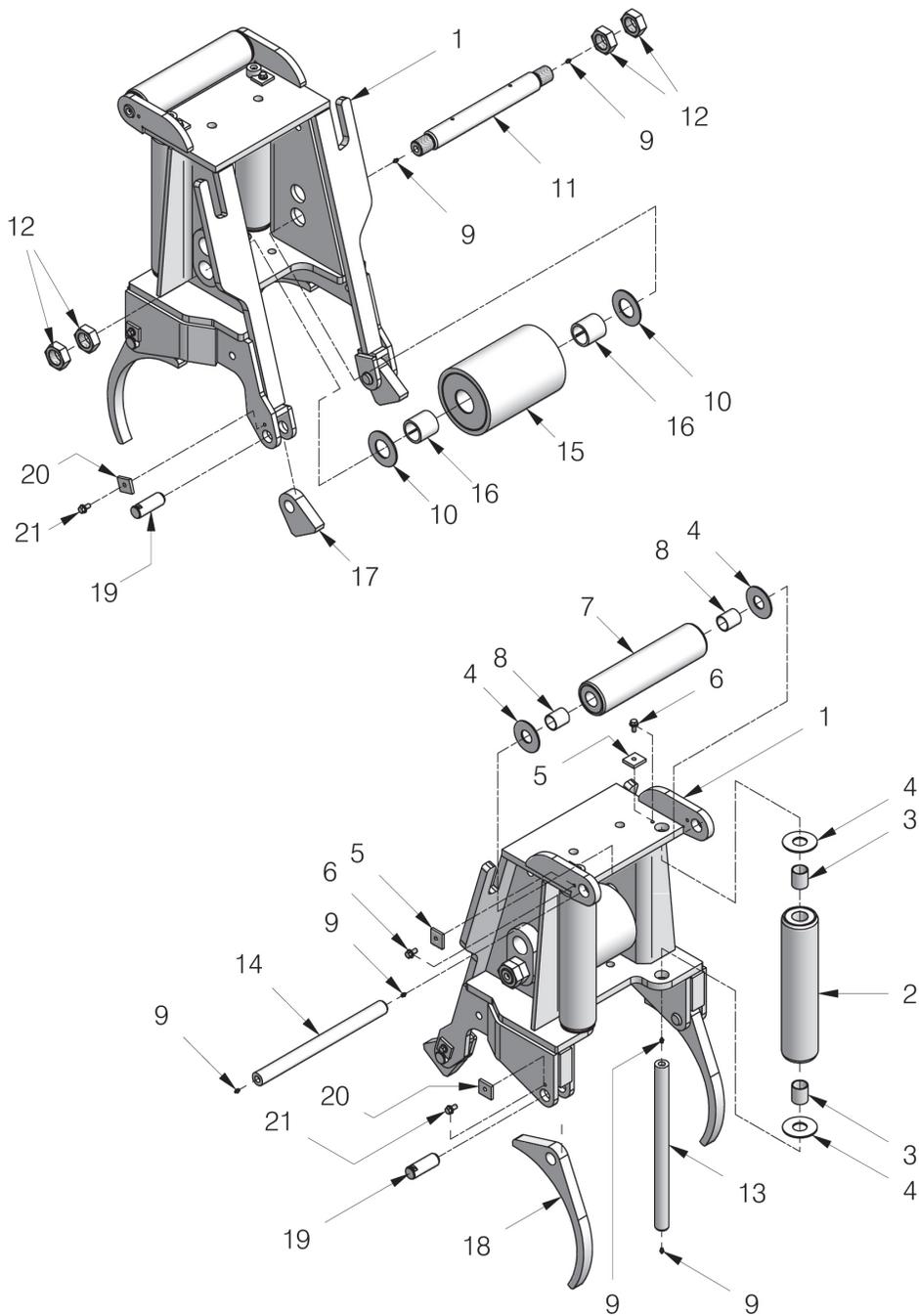


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315986</b>		<b>Assy, Switch Panel</b>				
1	2315985	1	. Plate, Switch Mounting				
2	234505	2	. Frame				
3	2310013	1	. Switch Assy				
4	2310504	1	. Switch Assy (Reducer)				

**Intentionally Blank**

**Section 4**  
**Optional Equipment**

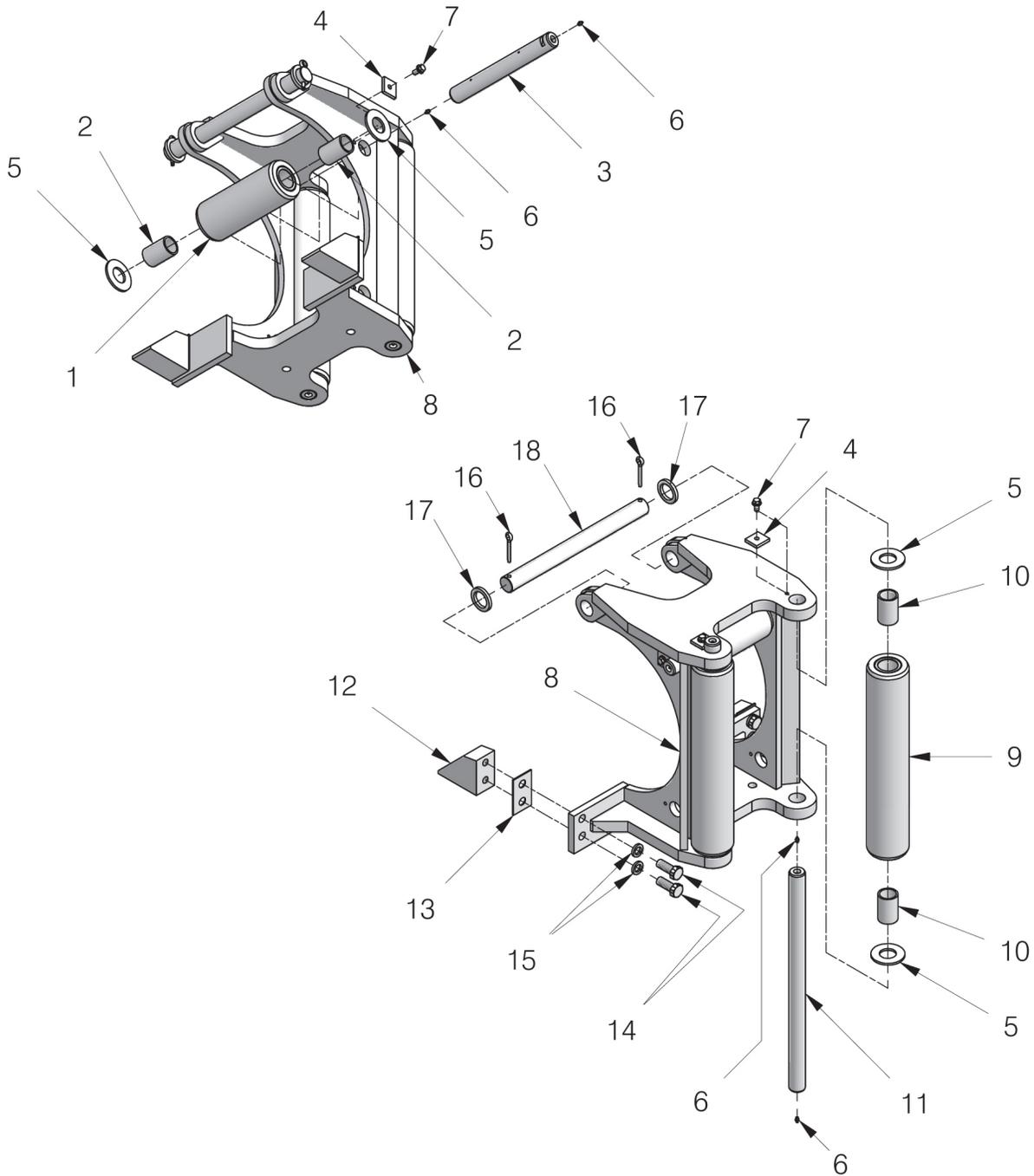
Arch



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2301748W</b>	<b>1</b>	<b>Arch Assy</b>				
1	2301749W	1	. Arch	12	221336W	4	. Nut
2	2301907W	2	. Roller	13	2301920W	2	. Shaft
3	35135W	2	. . Bushing	14	2301919W	1	. Shaft
4	331767W	6	. Washer	15	2301925W	1	. Roller
5	2301706W	3	. Keeper	16	2817W	2	. . Bushing
6	398817W	3	. Flange, Screw	17	2310726	2	Ear, Arch
7	2301910W	1	. Roller	18	2312168	2	Lug, Wrapped
8	35135W	2	. . Bushing	19	2301924W	4	Pin
9	16001W	8	. Fitting, Grease	20	2301706W	4	Keeper
10	2821W	2	. Washer	21	398817W	4	Flange Screw
11	2302120W	1	. Shaft				

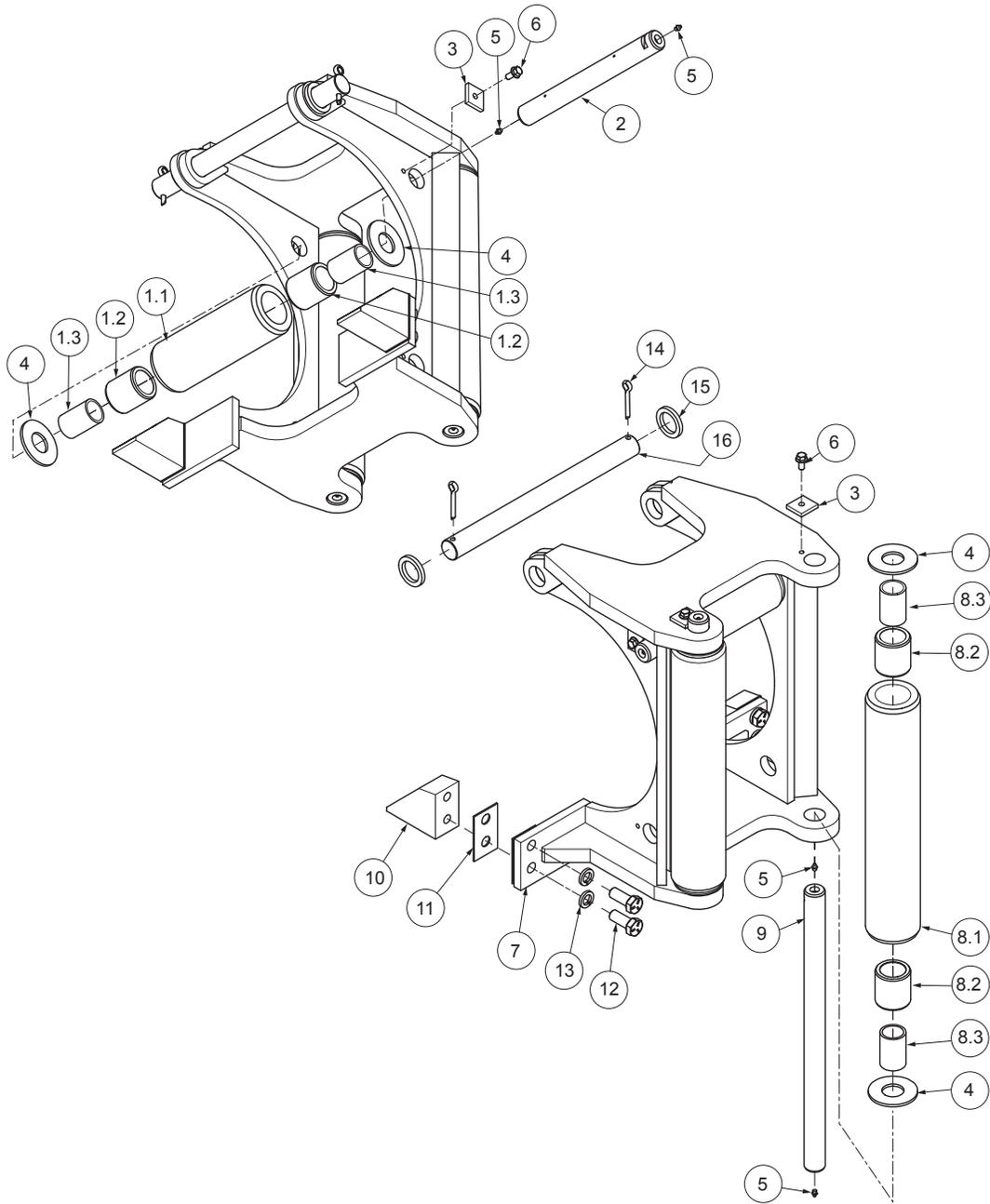
### Fairlead

3-Roller, Last Used S/N1609



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2301731W</b>		<b>Fairlead Assy, 3-Roller</b>				
1	2301727W	1	. Roller	10	2570W	4	.. Bushing
2	2570W	2	.. Bushing	11	2301721W	2	.. Shaft
3	2301722W	1	.. Shaft	12	226374W	2	Bracket
4	2301706W	3	.. Keeper	13	93878W	AR	Shim
5	33394W	6	.. Washer	14	18669W	4	Capscrew
6	16001W	6	.. Fitting, Grease	15	15166W	4	Washer
7	398817W	3	.. Screw, Flange	16	15272W	2	Pin, Cotter
8	2301718W	1	.. Fairlead	17	2312437	2	Spacer
9	2301726W	2	.. Roller	18	2312580	1	Bar, Tie

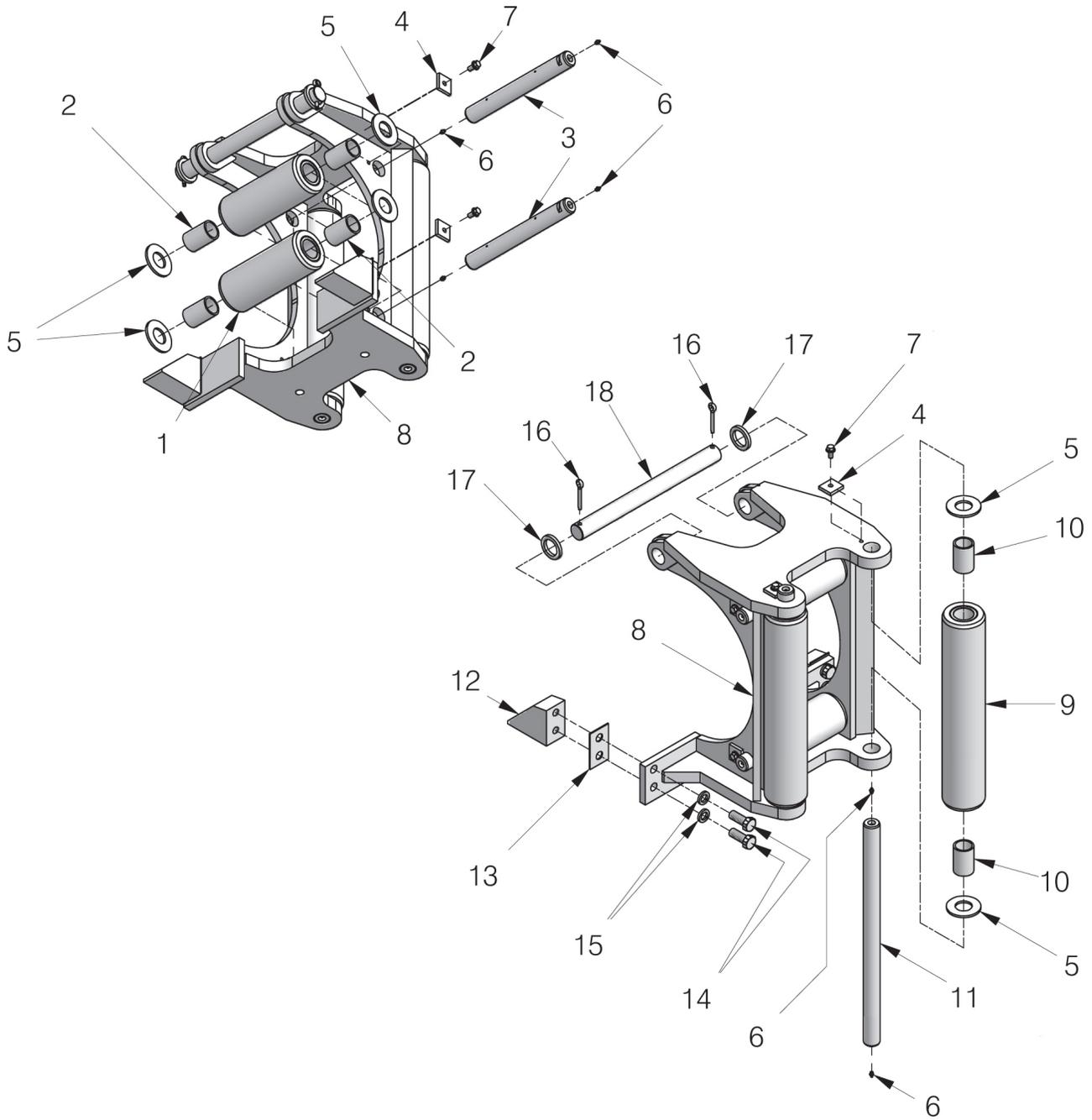
**Fairlead**  
3-Roller, First Used S/N1610



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315548</b>		<b>Fairlead Assy, 3-Roller</b>				
1	2315545	1	Roller Assy	8.1	2301724W	1	. Tube
1.1	2315544	1	. Tube	8.2	2301961W	2	. Spacer
1.2	2301961W	2	. Spacer	8.3	2570W	2	. Bushing
1.3	2570W	2	. Bushing	9	2301721W	2	Shaft, Vertical
2	2315546	1	Shaft	10	226374W	2	Bracket - Fairlead
3	2301706W	3	Keeper	11	93878W	8	Shim
4	2314097	6	Washer	12	18668W	4	CapscREW
5	16001W	6	Fitting, Lube	13	15166W	4	Washer
6	398817W	3	Screw, Flange	14	15272W	2	Cotter Pin
7	2315555	1	Frame, Fairlead	15	173607W	2	Spacer
8	2301726W	2	Roller Assy	16	2312580	1	Rod - Tie

### Fairlead

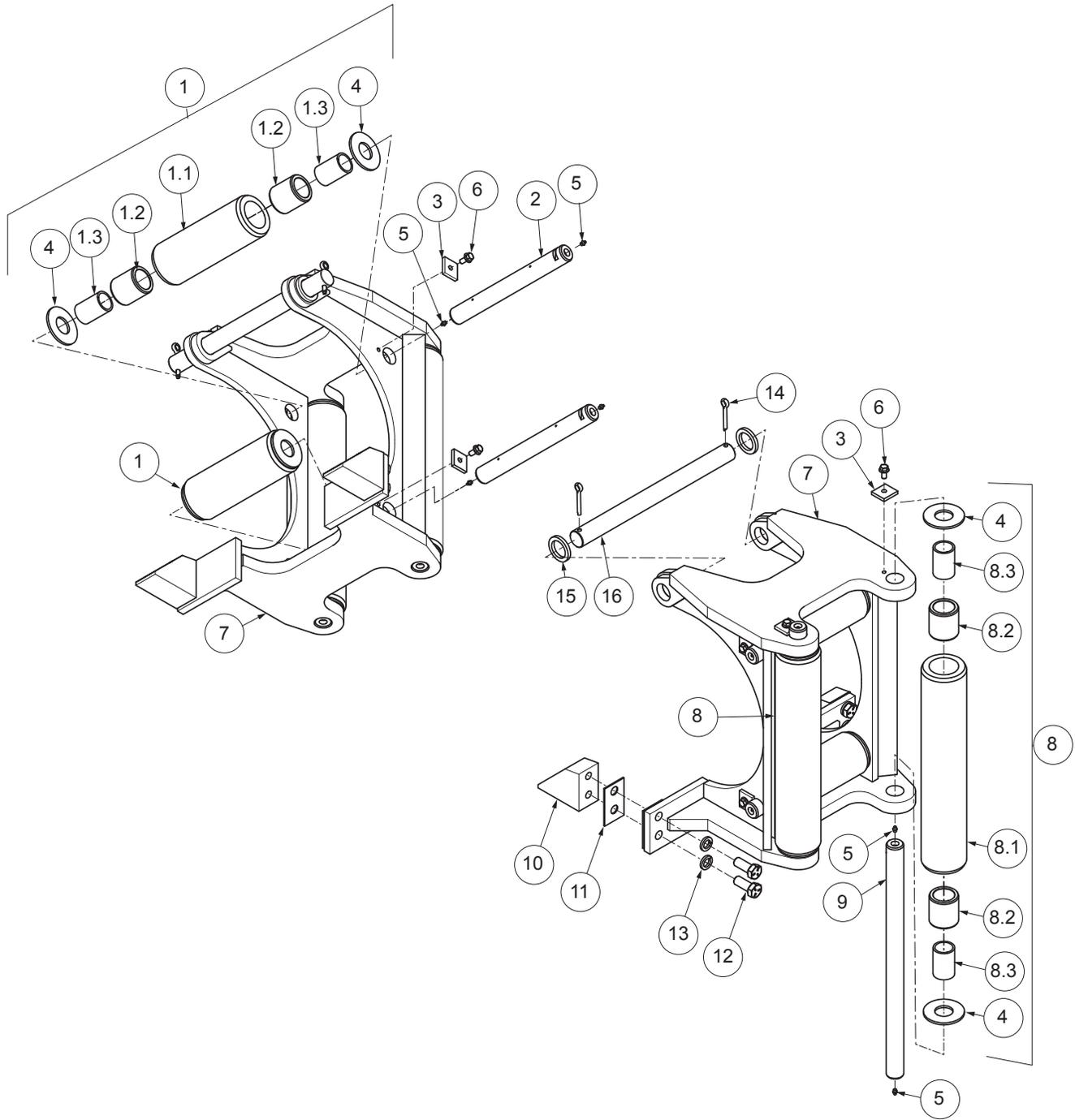
4-Roller, Last Used S/N1609



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
<b>2301732W Fairlead Ass'y, 4-Roller</b>							
1	2301727W	2	. Roller	10	2570W	4	.. Bushing
2	2570W	4	.. Bushing	11	2301721W	2	. Shaft
3	2301722W	2	. Shaft	12	226374W	2	Bracket
4	2301706W	4	. Keeper	13	93878W	AR	Shim
5	33394W	8	. Washer	14	18668W	4	Capscrew
6	16001W	8	. Fitting, Grease	15	15166W	4	Washer
7	398817W	4	. Screw, Flange	16	15272W	2	Pin, Cotter
8	2301718W	1	. Fairlead	17	2312437	2	Spacer
9	2301726W	2	. Roller	18	2312580	1	Bar, Tie

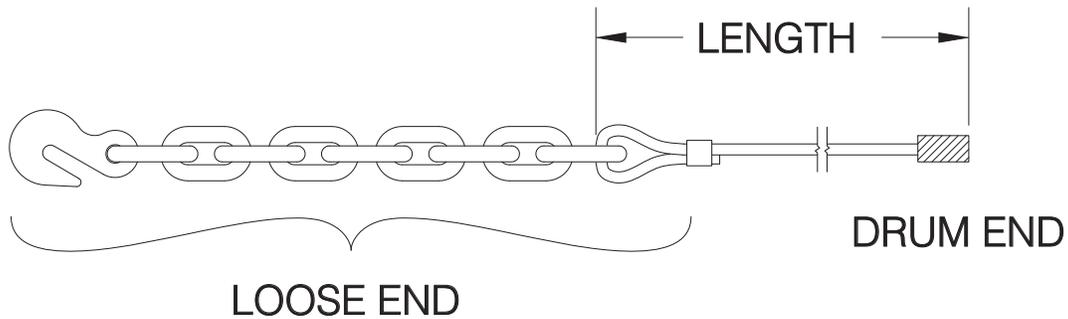
### Fairlead

4-Roller, Wide, First Used S/N1610

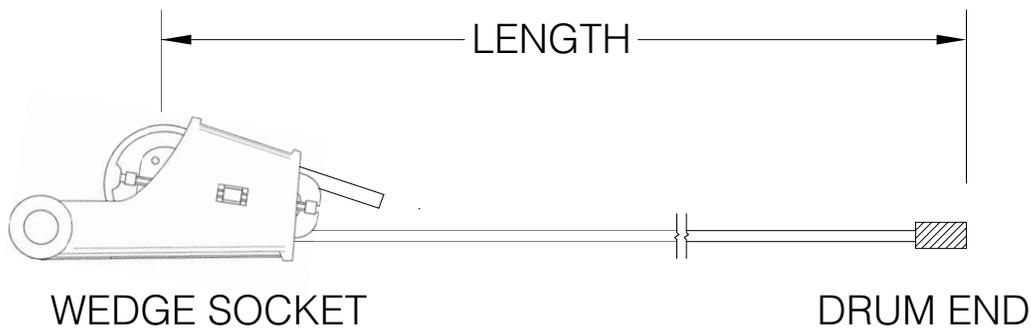


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315549</b>		<b>Fairlead Assy, 4-Roller</b>				
1	2315545	2	Assy, Roller	8.1	2315544	1	. Tube
1.1	2315544	1	. Tube	8.2	2301961W	2	. Spacer
1.2	2301961W	2	. Spacer	8.3	2570W	2	. Bushing
1.3	2570W	2	. Bushing	9	2301721W	2	Shaft, Vertical
2	2315546	2	Shaft	10	226374W	2	Bracket, Fairlead
3	2301706W	4	Keeper	11	93878W	8	Shim
4	2314097	8	Washer	12	18668W	4	Capscrew
5	16001W	8	Fitting, Lube	13	15166W	4	Washer
6	398817W	4	Screw, Flange	14	15272W	2	Cotter Pin
7	2315555	1	Frame, Fairlead	15	173607W	2	Spacer
8	2301726W	2	Assy, Roller	16	2312580	1	Bar, Tie

## Wire Rope Assemblies



**Figure A**



**Figure B**

Part No.	Wire Diameter	Length Ft (M)	Part No.	Wire Diameter	Length Ft (M)
WR6-275L *a	3/4"	275 (84) *c	WR8-154L *a	1"	154 (47) *c
WR6-413L *a	3/4"	413 (126) *d	WR8-230L *a	1"	230 (70) *d
YS6-275LWS *b	3/4"	275 (84) *c	YS8-154LWS *b	1"	154 (47) *c
YS6-413LWS *b	3/4"	413 (126) *d	YS8-230LWS *b	1"	230 (70) *d
WR7-198L *a	7/8"	198 (60) *c			
WR7-297L *a	7/8"	297 (91) *d			
YS7-198LWS *b	7/8"	198 (60) *c			
YS7-297LWS *b	7/8"	297 (91) *d			

\*a WR Series Wire Rope (Illustrated in Figure A)  
 \*b YS Series Wire Rope (Illustrated in Figure B)  
 \*c Length to fill drum to 2/3 capacity (recommended)  
 \*d Length to fill drum to full capacity

**Section 5**  
**Recommended Winch Service Intervals and Kits**

## Recommended Winch Service Intervals and Kits

Follow the service schedule recommended here to help keep dozer winch downtime to a minimum, optimize winch operation, and extend the life of your investment.

See Table 1 for recommended service intervals, and Table 2 for recommended service kits.

Hydraulic Winch Maintenance					
Recommended Winch Service Intervals					
Hours or **	Months **	Filter ***	Winch Gear Oil	Brake & Clutch	Major Overhaul
First 250	1	Change			
Every 500	3	Change			
Every 2,000	12		Change		
Every 5,000				*Inspect	
Every 10,000					*Evaluate
Lube rollers and check oil level and filter light every week.					
<p>* Evaluate = Service based on average winch use;            If used more than once a day, perform an overhaul.            If used less than once a day, remove covers and check to determine need.</p> <p>* Inspect = Disassemble and inspect for wear.</p> <p>** Service winch using the dozer's hour meter or the length of time the winch is mounted to the dozer, whichever occurs first.</p> <p>*** Follow dozer schedule if using dozer filter.</p>					
Recommended Gear Compartment Oil					
Chevron	Drive Train Fluids HD	<b>Consult service/operating manual for low temperature oils and other details. Use of non-recommended oil may void the warranty.</b>			
ExxonMobil	Mobiltrans HD Series				

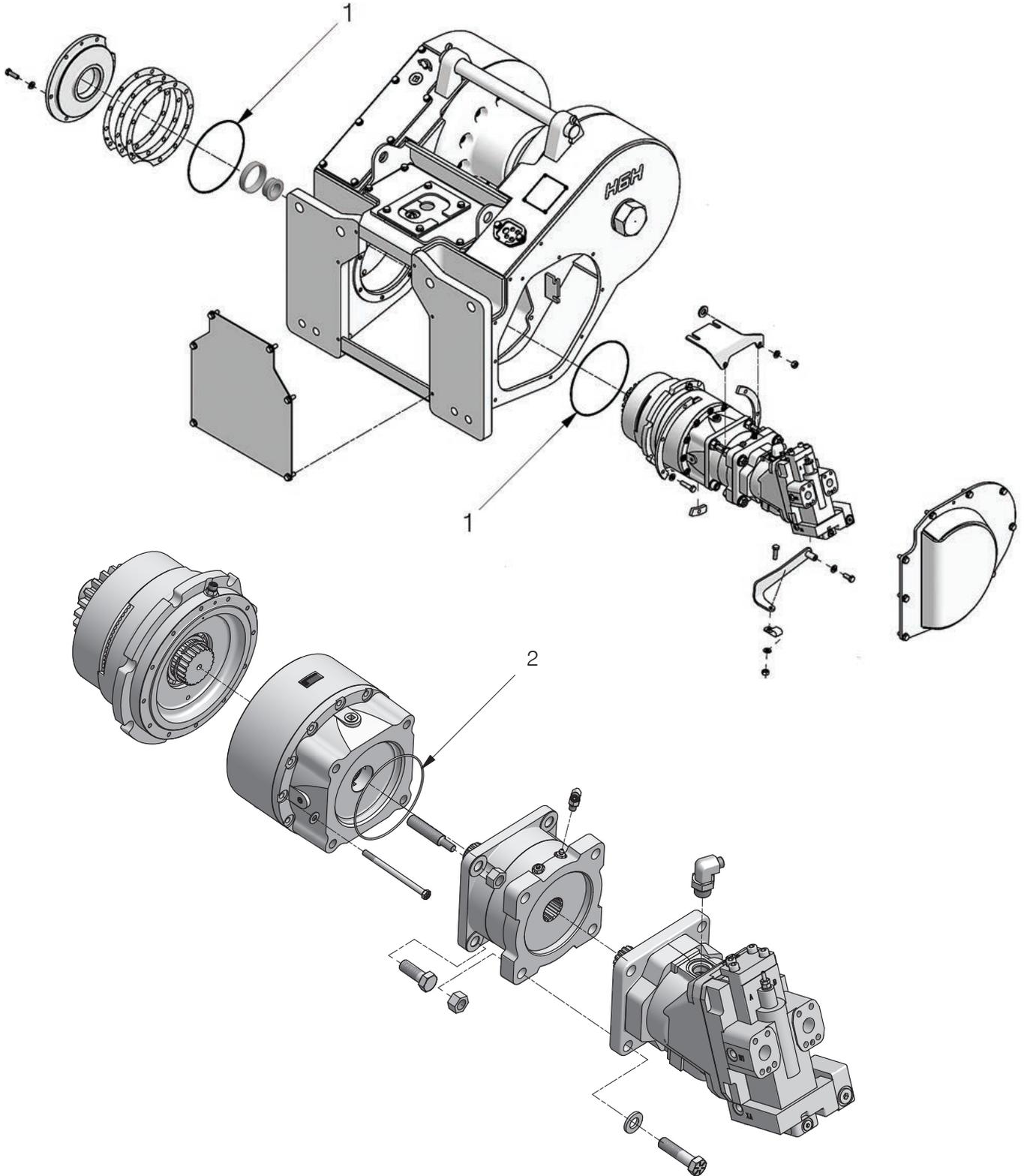
Table 1 Recommended Winch Service Intervals

Service Kits for H6H Winches				
Service Description	Kit Description	Winch Serial Number	Kit Part # for Hi-Performance (H) Winches	Kit Part # for Standard (T) Winches
Filter change	Filter kit	All	Refer to dozer operator and service manuals	
Complete oil change (every 1,000 hours)	N/A	All	Check our website for current operator's and service manuals for appropriate oils	
Clutch and brake overhaul (every 5,000 hours)	Motor, reducer & brake Assy rebuild kit	All	2314659	
Major overhaul (every 10,000 hours)	Intermediate/drum shaft & brake Assy rebuild kit	All	2314660	

Table 2 Routine Maintenance Kits

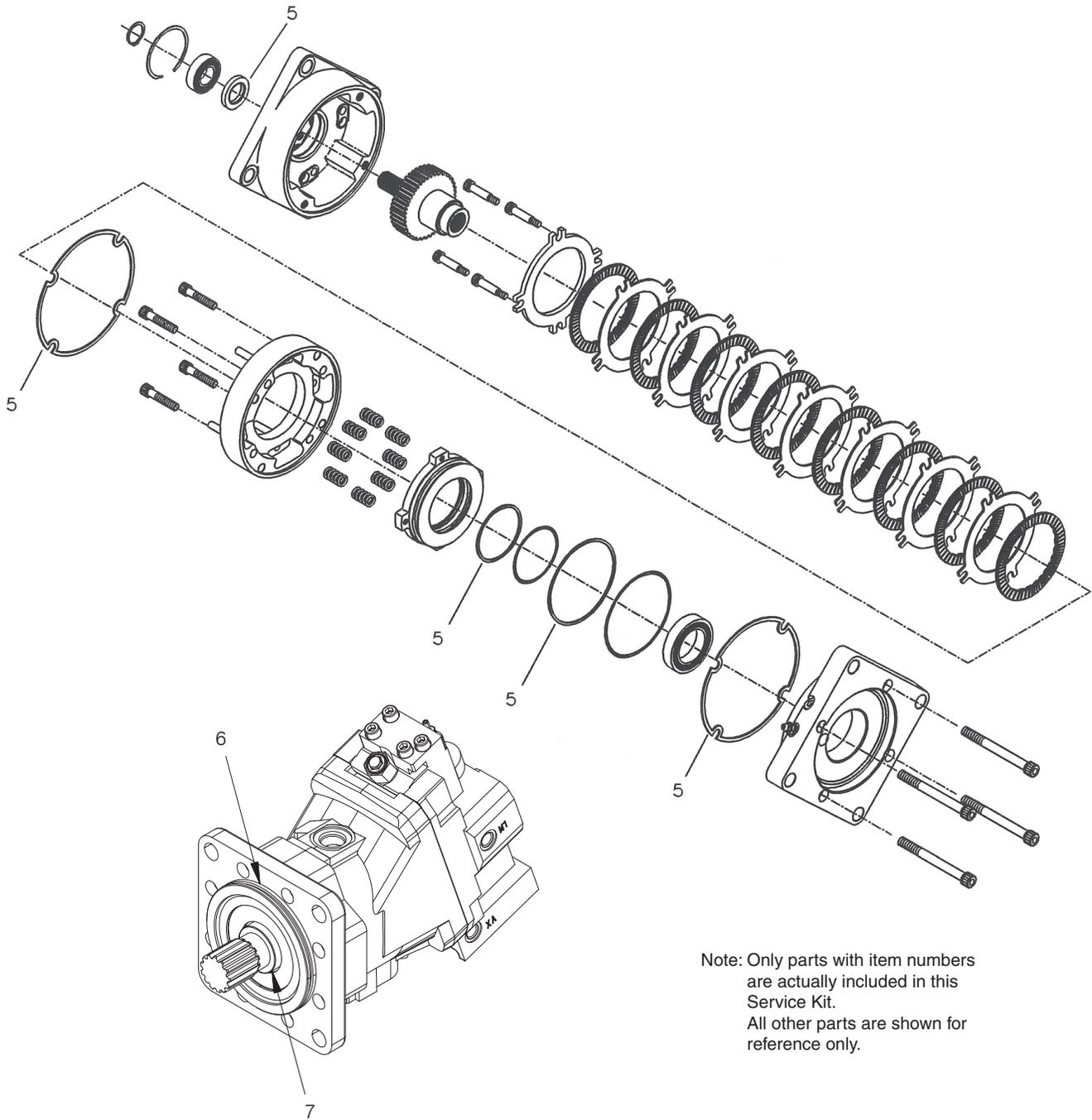
Motor, Reducer & Brake Assy Rebuild Kit: 2314659

Page 1 of 2



**Motor, Reducer & Brake Assy Rebuild Kit: 2314659**

Page 2 of 2

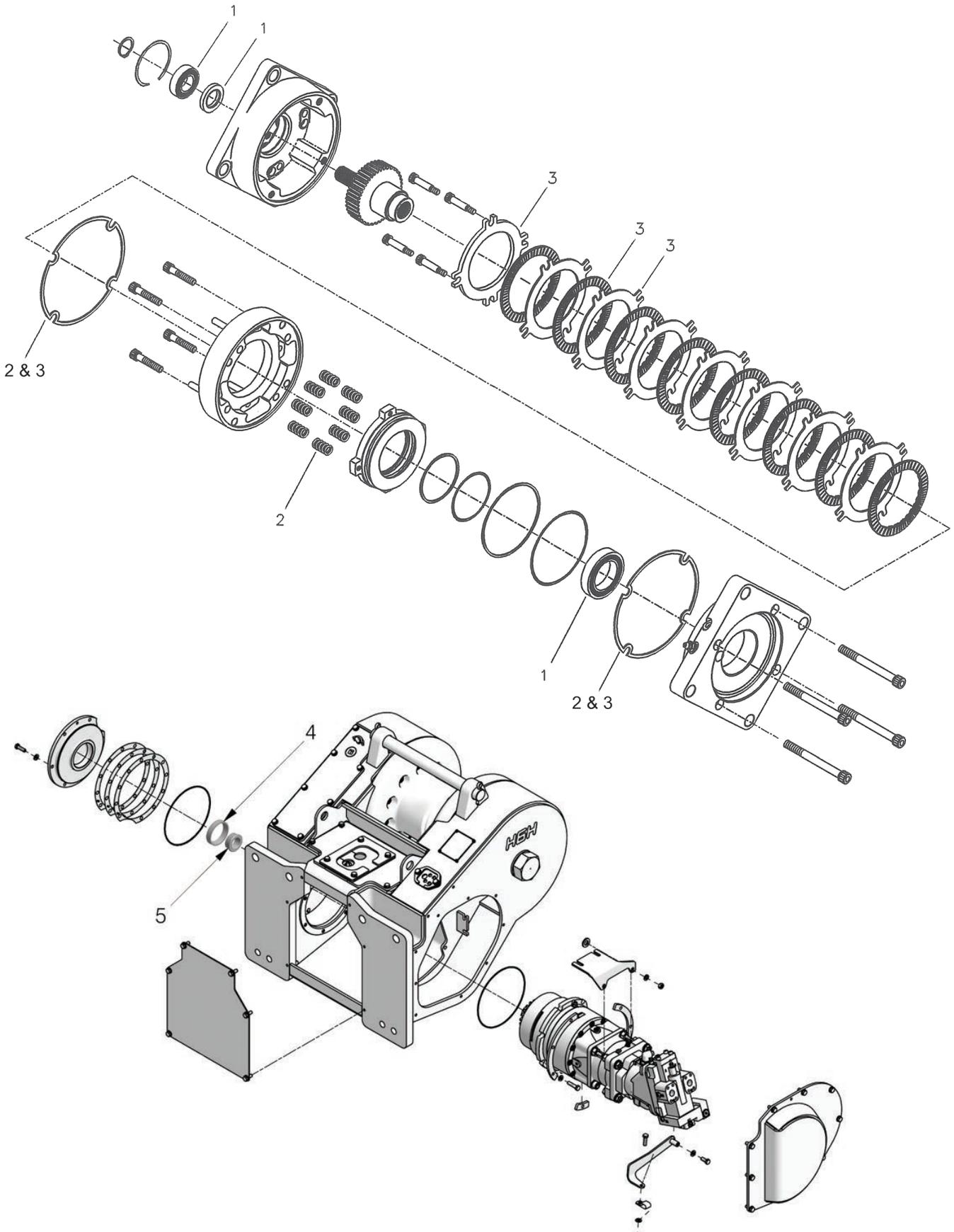


Note: Only parts with item numbers are actually included in this Service Kit.  
All other parts are shown for reference only.

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2314659</b>		<b>Rebuild Kit, Motor, Reducer &amp; Brake Assy</b>				
1	203564	2	. O-Ring	4	230064W	1	. Adhesive (Not Shown)
2	237349	1	. O-Ring	5	2312302	1	. Kit, O-Ring
3	313022W	1	. Adhesive (Not Shown)	6	2313890	1	. O-Ring
				7	2313891	1	. Kit, Shaft Seal

# Intermediate/Drum Shaft & Brake Assy Rebuild Kit: 2314660

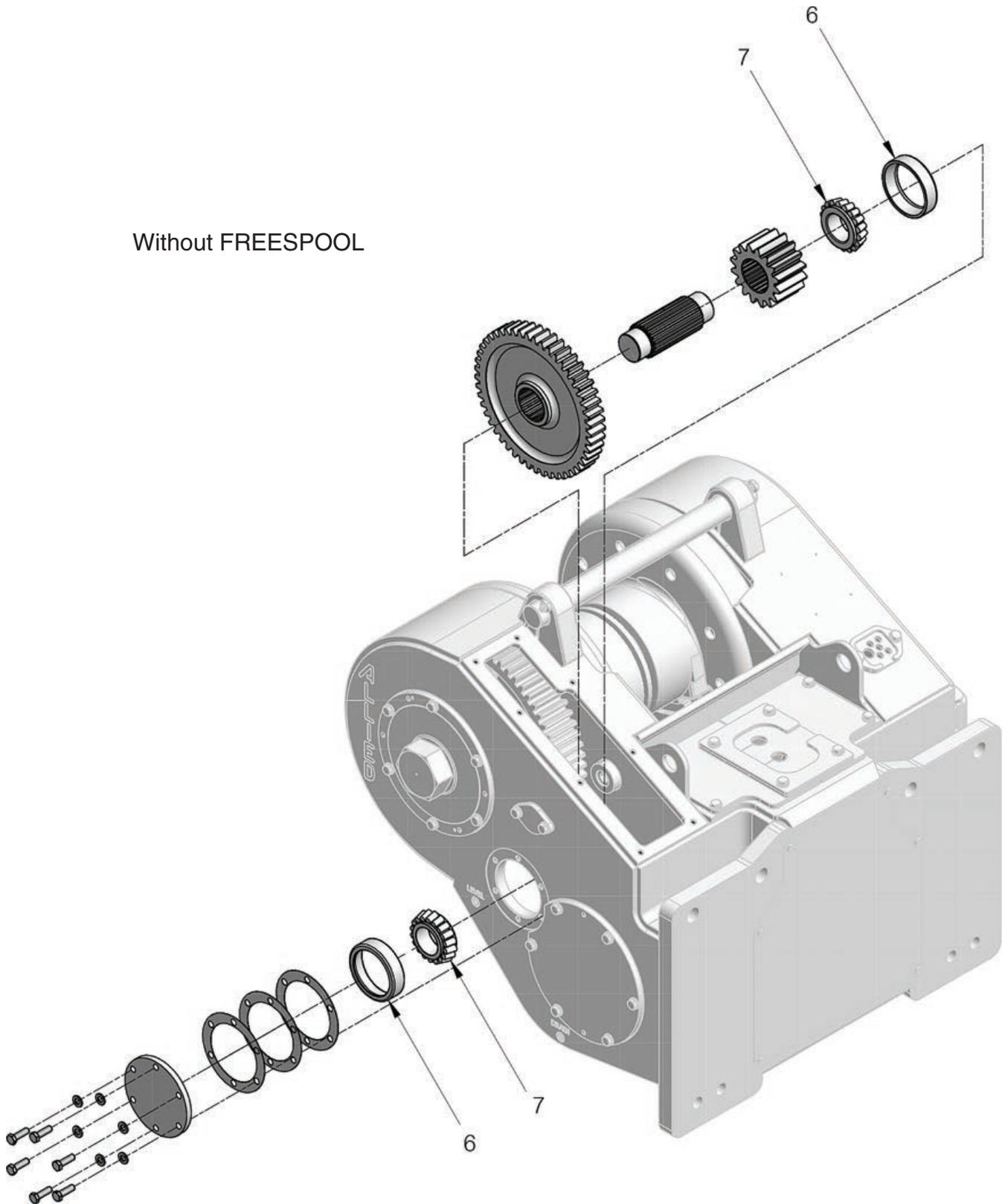
Page 1 of 4



# Intermediate/Drum Shaft & Brake Assy Rebuild Kit: 2314660

Page 2 of 4

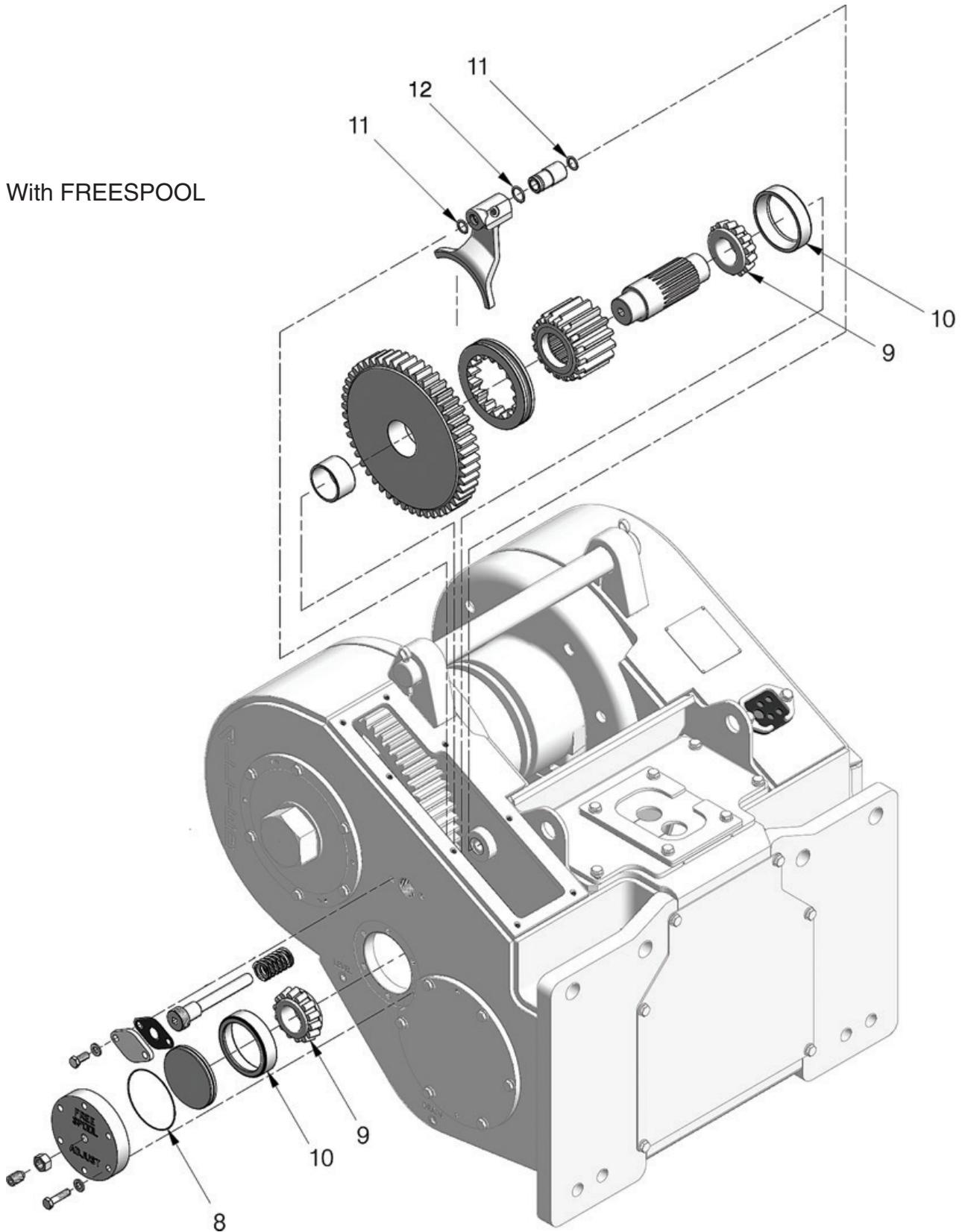
Without FREESPOOL



Intermediate/Drum Shaft & Brake Assy Rebuild Kit: 2314660

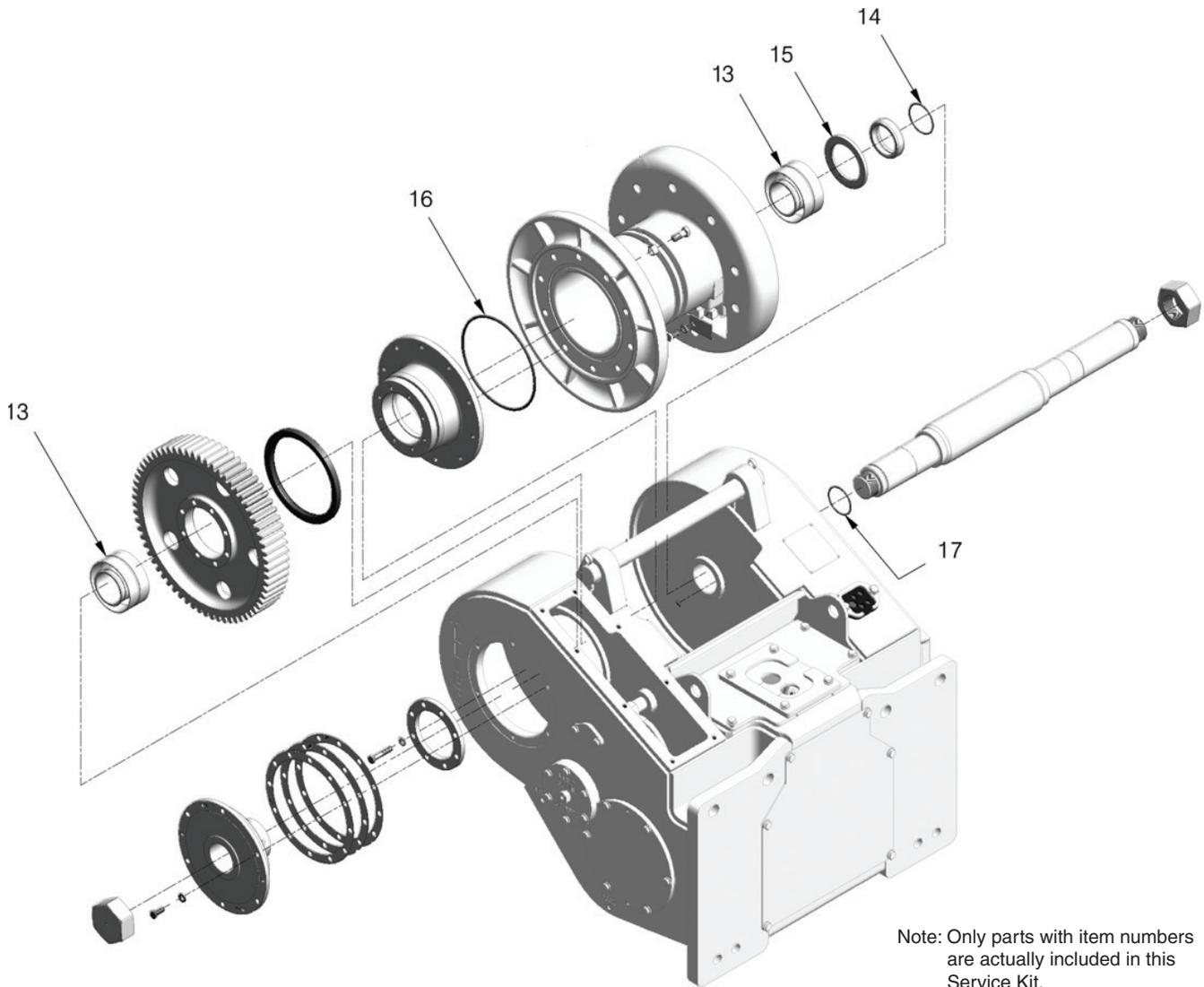
Page 3 of 4

With FREESPOOL



**Intermediate/Drum Shaft & Brake Assy Rebuild Kit: 2314660**

Page 4 of 4



Note: Only parts with item numbers are actually included in this Service Kit. All other parts are shown for reference only.

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2314660</b>		<b>Rebuild Kit, Intermediate/ Drum Shaft &amp; Brake Assy</b>				
1	2312303	1	. Repair Kit, Bearing	10	30059W	2	. Cup, Bearing
2	250850	1	. Repair Kit, Spring	11	15862W	2	. O-Ring
3	250847	1	. Repair Kit, Lining	12	212380	1	. O-Ring
4	2300668W	1	. Cup, Bearing	13	230406W	2	. Bearing, Roller
5	2300669W	1	. Cone, Bearing	14	15881W	1	. O-Ring
6	30059W	2	. Cup, Bearing	15	44547W	1	. Seal, Oil
7	30080W	2	. Cone, Bearing	16	133927W	1	. Ring, Piston Seal
8	159940W	1	. O-Ring	17	90263W	1	. O-Ring
9	2302311W	2	. Cone, Bearing				

**Section 6**  
**Recommended Service Parts**

## Recommended Service Parts

The following pages list some of the service parts and kits that are available for your Allied H6H Winch.

Page 88 includes lists of gaskets and seals. Keep these parts in stock at all times for regular maintenance. Order parts from the table based on your winch.

Page 88 also contains a list of wire rope assemblies. Order parts as required and as relevant for your installation.

Page 89 contains kits for 5,000 hour and 10,000 hour scheduled maintenance. Order these kits in preparation for these intervals. Each kit includes all parts listed in the table. Order parts from the table based on your winch.

Page 90 contains a list of spare parts. Order parts or kits as required and as relevant for your installation.

Page 91 contains lists of operator controls components, and hose kits. Order parts or kits as required and as relevant for your installation.

Page 92 contains lists of tool kits and diagnostic tools, which are useful when you install, maintain and service your winches.

**Note: Allied Winch Parts Manuals are available for no charge download at  
<http://www.alliedsystems.com/pubs/pubs.htm>.**

<b>Gaskets &amp; Seals</b>				<b>Order as Required</b>
<b>Applies to: All</b>				
<b>Allied P/N</b>	<b>Description</b>	<b>Qty on Winch</b>	<b>See Parts Manual Page</b>	<b>Order Qty</b>
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	

<b>Wire Rope Assemblies</b>				<b>Order as Required</b>
<b>Applies to: All</b>				
<b>Allied P/N</b>	<b>Description</b>	<b>Length</b>	<b>Will Fill Drum To:</b>	<b>Order Qty</b>
WR6-275L	Wire Rope Assy, 3/4"	275 FT (84 M)	2/3 Capacity (Recommended)	
WR6-413L	Wire Rope Assy, 3/4"	413 FT (126 M)	Full Capacity	
WR7-198L	Wire Rope Assy, 7/8"	198 FT (60 M)	2/3 Capacity (Recommended)	
WR7-297L	Wire Rope Assy, 7/8"	297 FT (91 M)	Full Capacity	
WR8-154L	Wire Rope Assy, 1"	154 FT (47 M)	2/3 Capacity (Recommended)	
WR8-230L	Wire Rope Assy, 1"	230 FT (70 M)	Full Capacity	
YS6-275LWS	Wire Rope Assy, 3/4"	275 FT (84 M)	2/3 Capacity (Recommended)	
YS6-413LWS	Wire Rope Assy, 3/4"	413 FT (126 M)	Full Capacity	
YS7-198LWS	Wire Rope Assy, 7/8"	198 FT (60 M)	2/3 Capacity (Recommended)	
YS7-297LWS	Wire Rope Assy, 7/8"	297 FT (91 M)	Full Capacity	
YS8-154LWS	Wire Rope Assy, 1"	154 FT (47 M)	2/3 Capacity (Recommended)	
YS8-230LWS	Wire Rope Assy, 1"	230 FT (70 M)	Full Capacity	

**Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2314659****Applies to: All****Service Interval: Every 5,000 Hours**

Allied P/N	Description	Qty in Kit	See Parts Manual Page	Order Qty
<b>2314659</b>	<b>Rebuild Kit, Motor, Reducer &amp; Brake Assy</b>			
203564	. O-Ring	2	Motor Shaft Group	
237349	. O-Ring	1	Motor Shaft Assembly	
313022W	. Adhesive	1	Motor Shaft Assembly	
230064W	. Adhesive	1	Motor Shaft Assembly	
2312302	. Kit, O-Ring	1	Brake, Dry Disc	
2313890	. O-Ring	1	Hydraulic Motor	
2313891	. Kit, Shaft Seal	1	Hydraulic Motor	

**Intermediate/Drum Shaft, and Brake Assembly Rebuild Kit, P/N: 2314660****Applies to: All****Service Interval: Every 10,000 hours**

Allied P/N	Description	Qty in Kit	See Parts Manual Page	Order Qty
<b>2314660</b>	<b>Rebuild Kit, Intermed./Drum Shaft, &amp; Brake Assy</b>			
2312303	. Repair Kit, Bearing	1	Brake, Dry Disc	
250850	. Repair Kit, Spring	1	Brake, Dry Disc	
250847	. Repair Kit, Lining	1	Brake, Dry Disc	
2300668W	. Cup, Bearing	1	Motor Shaft Group	
2300669W	. Cone, Bearing	1	Motor Shaft Group	
30059W	. Cup, Bearing	1	Shaft, Intermediate Gear	
30080W	. Cone, Bearing	1	Shaft, Intermediate Gear	
159940W	. O-Ring	1	Shaft, Intermediate Gear	
2302311	. Cone, Bearing	2	Shaft, Intermediate Gear	
30059W	. Cup, Bearing	2	Shaft, Intermediate Gear	
15862W	. O-Ring	2	Shaft, Intermediate Gear	
212380	. O-Ring	1	Shaft, Intermediate Gear	
230406W	. Bearing, Roller	2	Shaft, Drum	
15881W	. O-Ring	1	Shaft, Drum	
44547W	. Seal, Oil	1	Shaft, Drum	
133927W	. Ring, Piston Seal	1	Shaft, Drum	
90263W	. O-Ring	1	Shaft, Drum	

Spare Parts				Order as Required	
Applies to:		See "Relevant for Installation" Column			
Allied P/N	Description	Qty on Winch	Relevant for Installation	See Parts Manual Page	Order Qty
2316654	Motor, Hydraulic	1	Liebherr PR716 (H6HT5B**L39)	Motor Shaft Group	
2316123 *a 2313569 *b	Motor, Hydraulic	1	Liebherr PR724 (H6HH5B**L41)	Motor Shaft Group	
2316125 *a 2313780 *b	Motor, Hydraulic	1	Liebherr PR724 (H6HT6B**L41)	Motor Shaft Group	
2316129 *a 2315961 *b	Motor, Hydraulic	1	Liebherr PR736 (H6HT1B**L42/L421)	Motor Shaft Group	
2316133 *a 2315975 *b	Motor, Hydraulic	1	Liebherr PR734-4 (H6HT6B**L44)	Motor Shaft Group	
2311883	Assembly, Reducer	1	Liebherr PR736 (H6HT1B**L42/L421)	Motor Shaft Assembly	
2312554	Assembly, Reducer	1	Liebherr PR724 (H6HH5B**L41); Liebherr PR724 (H6HT6B**L41); Liebherr PR734-4 (H6HT6B**L44) (H6HT6B**L44)	Motor Shaft Assembly	
2312155	Assembly, Brake	1	All	Motor Shaft Assembly	
21420W	Plug, Breather	1	All	Frame/Covers	
2300962W	Cap, Breather	1	All	Frame/Covers	
95959W	Pin, Drawbar	1	All	Frame/Covers	
2303221W	Pin, Retaining	1	All	Frame/Covers	
2312099	Nut, Blind	2	All	Shaft, Drum	
2301783W	Keeper, Ferrule	1	All	Shaft, Drum	
328715W	Disc, Friction	7	All	Clutch Assembly	
283434W	Assembly, Gear	1	All	Shaft, Intermediate Gear	
2570W	Bushing	6	All	Fairlead, 3-Roller	
2570W	Bushing	8	All	Fairlead, 4-Roller	

\*a First used with S/N 1714

\*b Last used with S/N 1713

<b>Operator Controls Components</b>			<b>Order as Required</b>
<b>Applies to: All</b>			
<b>Allied P/N</b>	<b>Description</b>	<b>Qty on Winch</b>	<b>Order Qty</b>
2310013	Assembly, Switch (Yellow LED)	1	
2310504	Assembly, Switch (Red LED)	1	
2310506	Assembly, Switch (Red LED), Momentary	1	
2311072	Assembly, Switch (Green LED)	1	

<b>Hose Kits</b>			<b>Order as Required</b>	
<b>Applies to: See "Relevant for Installation" Column</b>				
<b>Allied P/N</b>	<b>Description</b>	<b>Qty on Winch</b>	<b>Relevant for Installation</b>	<b>Order Qty</b>
2314775	Hose Kit, Winch Hydraulics	1	Liebherr PR724 (L41)	
2315053	Hose Kit, Winch Hydraulics	1	Liebherr PR724 (L41) Non-FS	

**Tool Kits**

Order these tool kits as required for installation, maintenance and service of your winch(es).

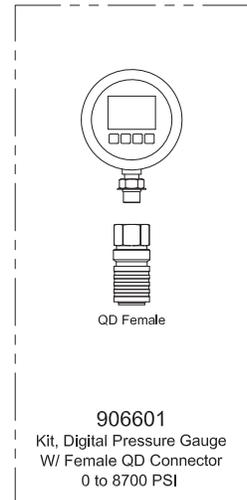
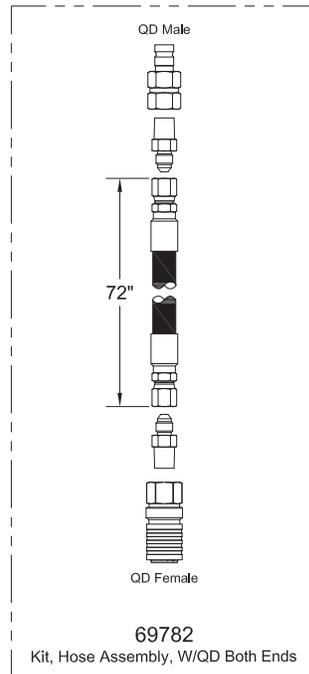
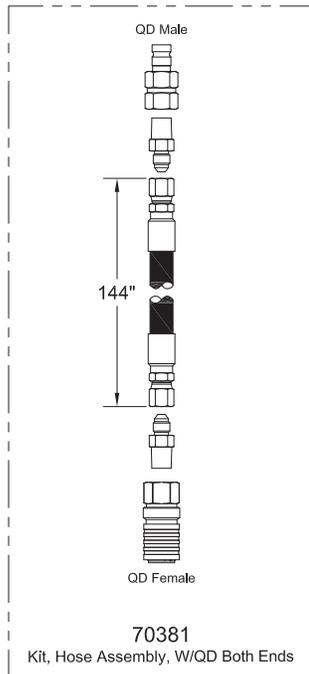
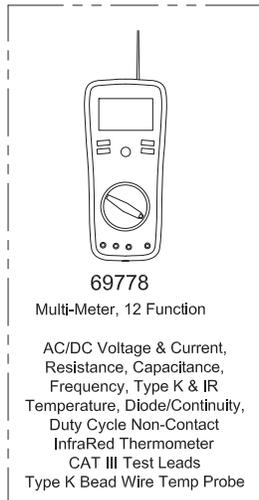
Allied P/N	Description	Order Quantity
588466	Socket Set, 3/8DR 3/8" to 7/8" STD/Deep, 22 PC	
588467	Socket Set, 1/2DR 3/8" to 1-1/4" STD/Deep, 30 PC	
588468	Socket Set, 3/4DR 7/8" to 2-3/8" STD, 29 PC	
588469	Wrench Set, 5/16" to 2-1/2", 31 PC	
588527	Hex Key Sets, .025" to 5/8", 18 PC	
588530	Socket Sets, 3/8DR 6mm-19mm 12 Point	
588529	Socket Sets, 1/2DR 10mm-26mm 12 Point	
588528	Wrench Sets, 7mm-24mm, 18 PC	
588526	Hex Key Sets, .07mm-17mm, 15 PC	

**Diagnostic Tools**

Order as Required

Order these tools as required for maintenance and service of your winch(es).

Allied P/N	Description	Order Quantity
906601	0 to 8700 PSI Digital Pressure Gauge W/Female QD Connector	
69782	72" Hose Assy W/QD Connectors Both Ends	
70381	144" Hose Assy W/QD Connectors Both Ends	
69778	Multi-Meter, 12 Function	



**Section 7**  
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231439	61	2.19	242596	51	1.16	2311718	67	1
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231465	64	7	242596	58	3.2	2311719	68	1
231820	44	2.9	242596	62	3.6	2311770	64	1
231821	47	2.11	242597	44	2.3	2311770	66	
231821	50	3.1	242597	47	3.3	2311771	66	1
231821	55	2.11	242597	50	3.3	2311819	27	
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232382	50		242597	55	3.3	2311856	34	2
232382	62		242597	58	3.3	2311857	27	1
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232984	43	1.4	242598	44	2.4	2311880	34	10
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2312089	14	25.6	2312353	55	1.14	2312928	31	4
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2312090	14	25.2	2312353	61	2.2	2313026	28	4
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2312095	47	2.5	2312437	73	17	2313039	29	5
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15176W	49	2.24	21420W	13	3.11	2301726W	72	8
15176W	57	2.24	221336W	70	12	2301726W	73	9
15176W	61	2.24	221577W	40	4	2301726W	74	8
15178W	43	1.16	221716W	28	1.3	2301727W	71	1
15178W	47	1.8	221716W	29	1.3	2301727W	73	1
15178W	49	2.16	221716W	30	1.3	2301731W	71	
15178W	55	1.8	221716W	31	1.3	2301732W	73	
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230407W	34	19	293646W	18	11	318702W	23	30
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2305099W	39	3	293646W	45	6	33394W	73	5
2305130W	27	20	293647W	27	19	35135W	70	3
2305715W	15	8	296159W	23	15	35135W	70	8
2305715W	17	1.26	296159W	45	11	398817W	70	6
2305715W	18	27	296159W	52	1.14	398817W	70	21
2305715W	19	24	296420W	35	7	398817W	71	7
2305715W	20	17	296420W	43	1.11	398817W	72	6
2305715W	23	27	296420W	47	1.2	398817W	73	7
2305956W	39	12	296420W	49	2.11	398817W	74	6
2307438W	68	3	296420W	55	1.2	44547W	40	9
2307625W	43	1.13	296420W	57	2.11	44547W	83	15
2307625W	47	1.4	296420W	61	2.11	53559W	40	2
2307625W	49	2.13	296422W	13	3.16	86585W	34	8
2307625W	55	1.4	296422W	13	13.8	87287W	34	9
2307625W	57	2.13	296422W	15	7	90263W	40	11
2307625W	61	2.13	296422W	17	1.1	90263W	83	17
2307625W	64	2	296422W	18	10	93878W	71	13
239147W	34	12	296422W	19	8	93878W	72	11
2570W	71	2	296422W	20	6	93878W	73	13
2570W	71	10	296422W	23	10	93878W	74	11
2570W	72	1.3	296422W	27	4	95959W	13	2.1
2570W	72	8.3	296422W	38	20.7	95972W	38	20.1
2570W	73	2	296422W	39	21	95973W	38	20.2
2570W	73	10	296422W	40	22	95977W	40	21
2570W	74	1.3	296422W	45	7	95978W	40	6

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R12104	47	2.8	R834100	55	1.7			
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