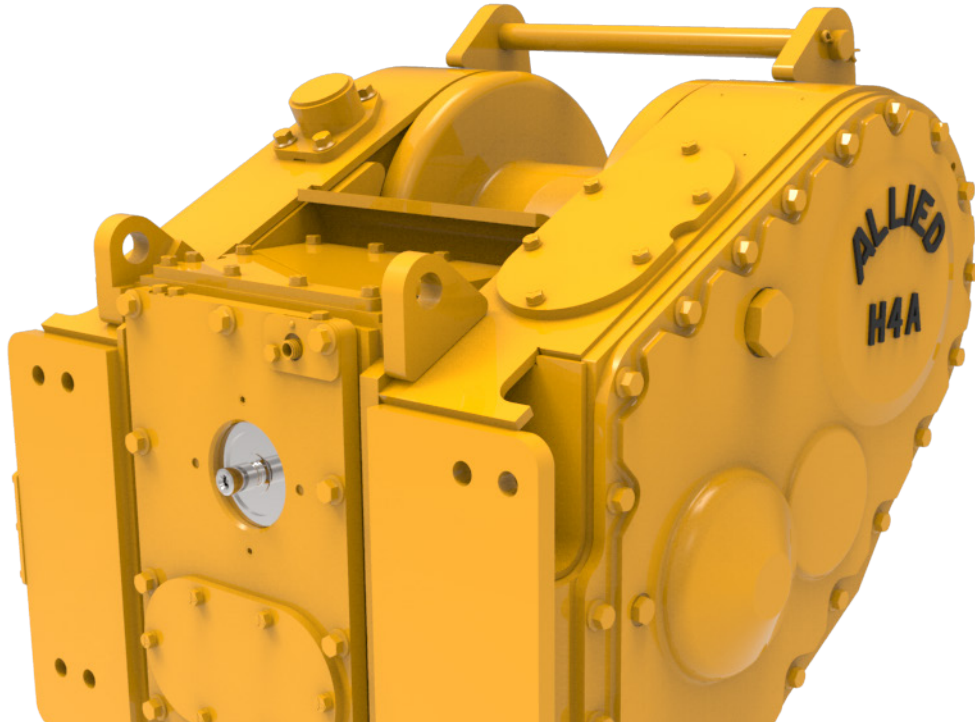




# Parts Manual



# H4A

## Hydraulic Winch for Case Dozers

A Product of

**Allied Systems**  
COMPANY

Sherwood, OR USA

Please check the Allied Systems website  
regularly for updates to this manual.  
[www.alliedsystems.com](http://www.alliedsystems.com)



## **Safety Precautions**

**Read, understand and observe the Safety Summary on pages 1 through 3 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 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

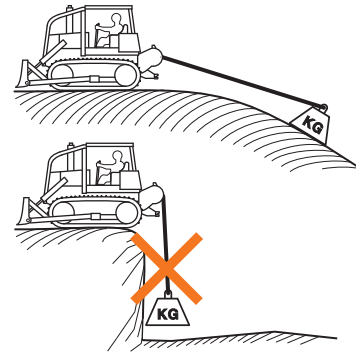
- Stay in the operator’s seat when operating the winch.
- Do not stand on the vehicle when operating the winch.
- Avoid winch operation near people or other machines.
- Never stand nor permit others to stand in the bight (loop) of a wire rope.

- 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 tractor 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 tractor and winch. Manual override of high temperature shut-off will cause damage to tractor 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. Tractor 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 tractor 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.
- 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.**

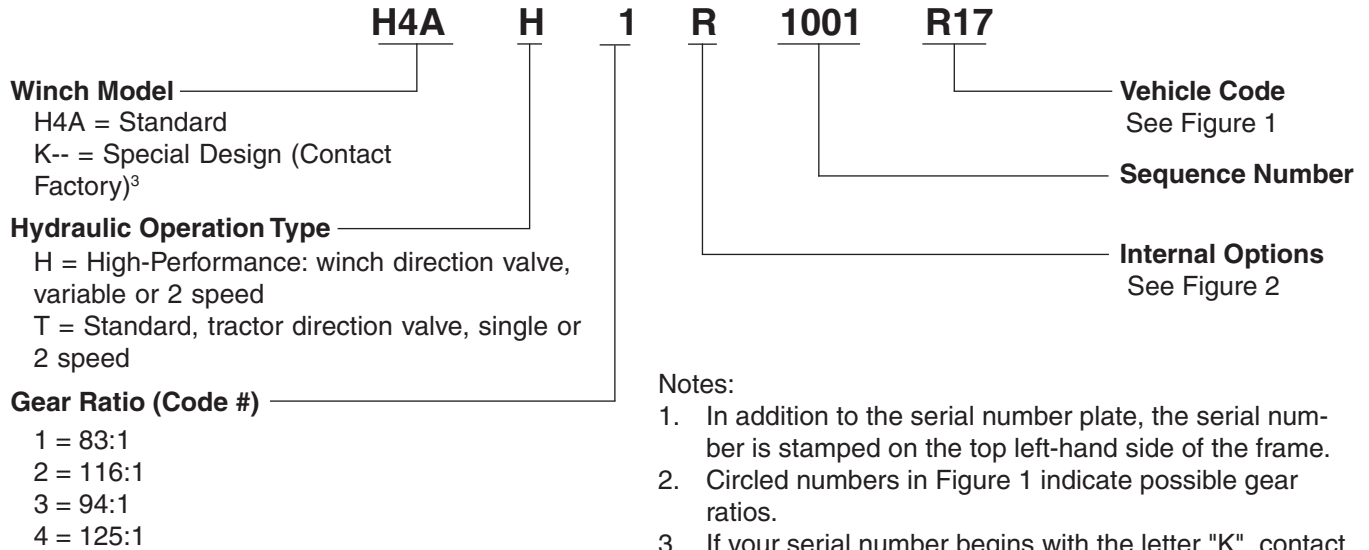


### Maintenance Warnings

- 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 8.

## 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 with the letter "M", contact the factory for parts and service information.

C O D E	<b>R</b> Case
<b>15</b>	650/750/850K, 750/850L ① ② ③ ④
<b>16</b>	650L/650M ① ② ③ ④
<b>17</b>	750/850M ① ② ③ ④

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

Circled numbers in Figure 1 indicate possible gear ratios.

	R	Y
<b>Freespool</b>	X	X
<b>Self-Contained Hydraulics (SCH)</b>	X	
<b>Power Forward &amp; Reverse (PFR)</b>	X	X

**Figure 2, Internal Options**

## Using this Manual

### 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 assembly. 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 4 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

Winch Type	Winch Oil Capacity	Winch Housing Oil	Hydraulic Circuit Oil
SCH Model (Internal Option Code R)	14 Gal (54L)	See Recommended Oils in Figure 5 (Winch housing is oil reservoir for pump)	
Non-SCH, Open Frame Model (Internal Option Code Y)	4 Gal (15L)	See Recommended Oils in Figure 5	Use Recommended Tractor Oil Only

Figure 4 - Recommended Oils - 1

Recommended Oils* - General Conditions			
Manufacturer	Oil Type	Ambient Temperature Range	
		°F	°C
ExxonMobil	Mobil Fluid 424 (Factory fill)	-13 to 104	-25 to 40
John Deere	Hy-Gard™	-13 to 122	-25 to 50
Chevron	1000 THF	-13 to 104	-25 to 40
Caterpillar	Multipurpose Tractor Oil (MTO)	-13 to 104	-25 to 40
Case	Hy-Tran Ultra	-20 to 122	-29 to 50
Recommended Oils* - Low Temperature Conditions			
Manufacturer	Oil Type	Ambient Temperature Range	
		°F	°C
ExxonMobil	Mobil Fluid LT	-40 to 86	-40 to 30
John Deere	Low Viscosity Hy-Gard	-40 to 86	-40 to 30
Chevron	THF W	-40 to 86	-40 to 30

\* Note: Use of a non-recommended oil may void warranty.

\*\* For winches using tractor-supplied hydraulics for winch operation, recommended oil is used only in the winch gear case.

Figure 5, Recommended Oil List

## 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

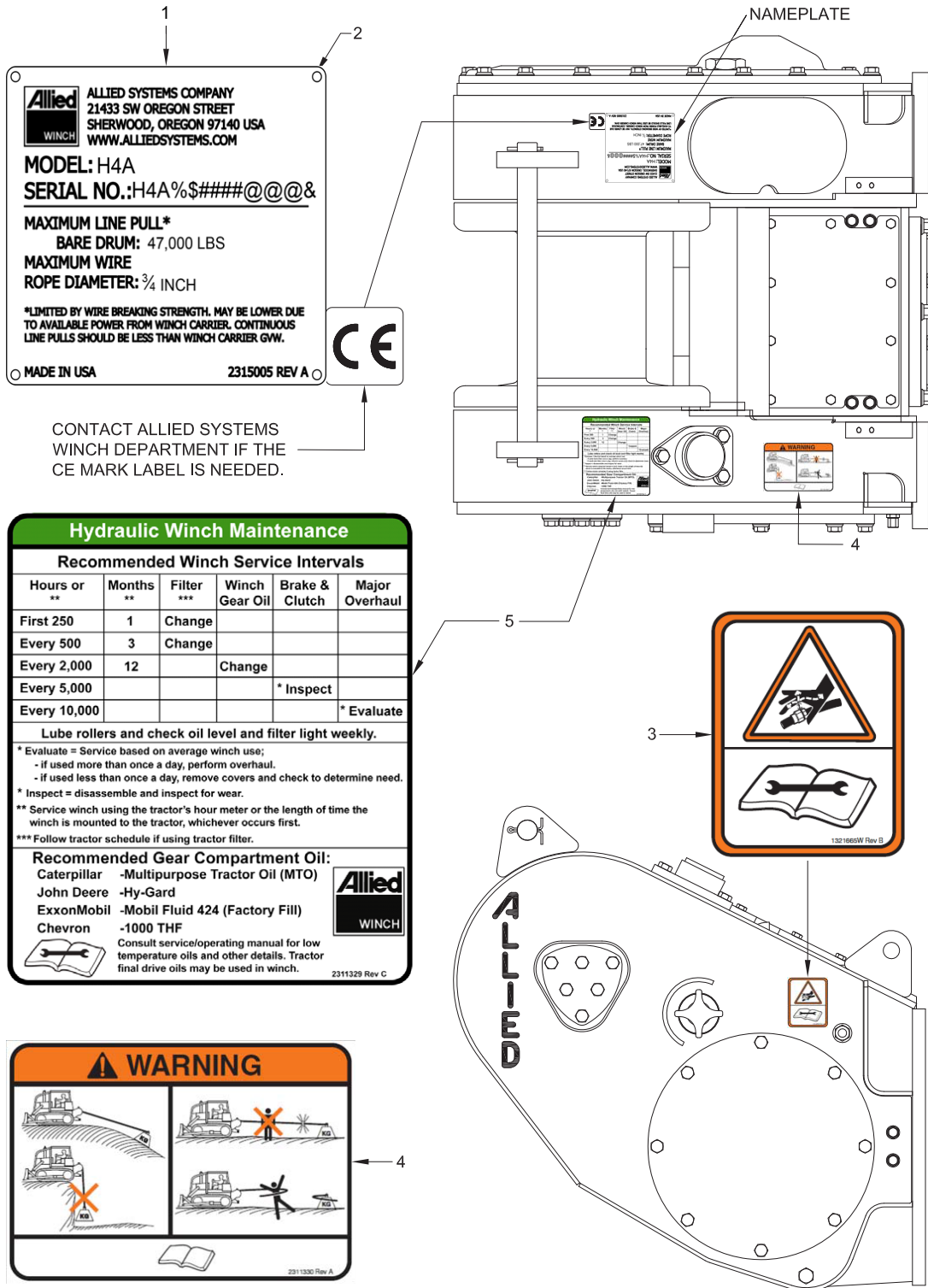
E-mail: [parts@alliedsystems.com](mailto:parts@alliedsystems.com)

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

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## Nameplate & Decals

Winches with Enclosed Frames - Internal Options Code "R"



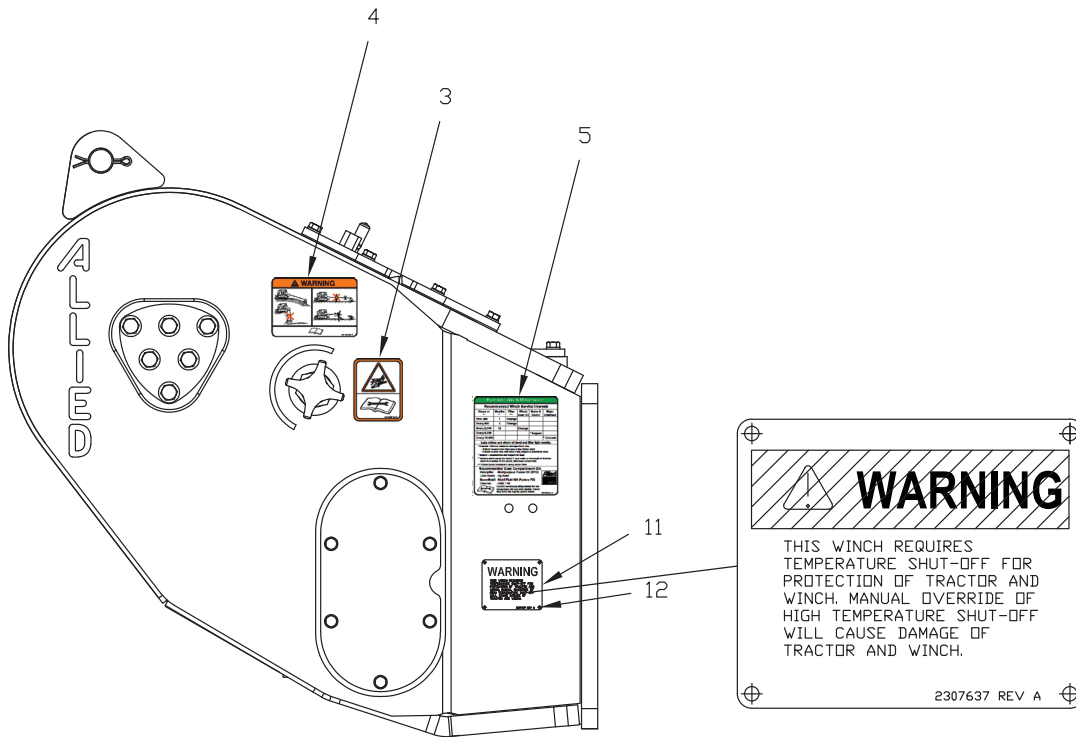
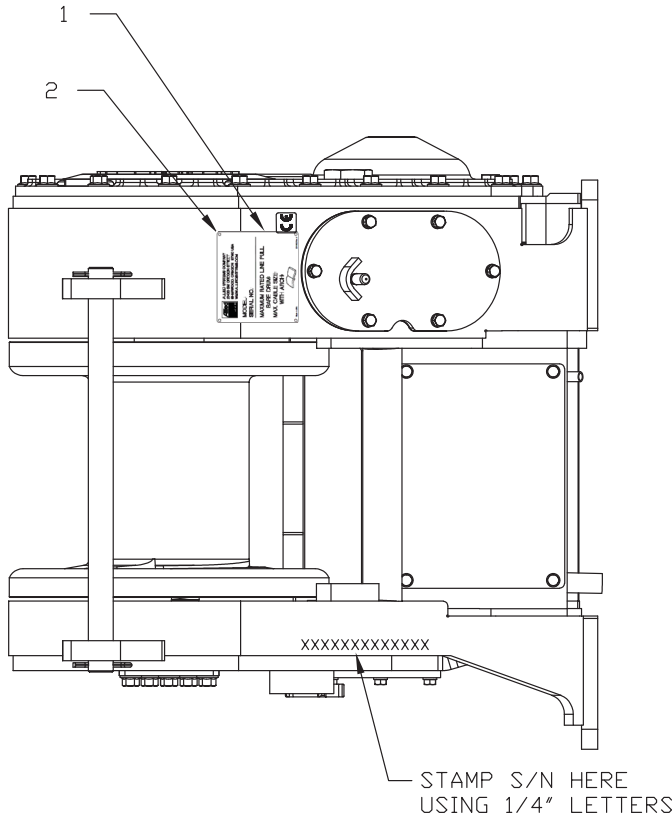
CONTACT ALLIED SYSTEMS WINCH DEPARTMENT IF THE CE MARK LABEL IS NEEDED.

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*	1	Nameplate	5	2311329	1	Decal, Maintenance
2	16602W	4	Screw				
3	1321665W	1	Decal, Warning				
4	2311330	1	Decal, Load & Wire Rope				

\*Contact Factory

## Nameplate & Decals

Winches with Enclosed Frames - Internal Options Code "Y"



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*	1	Nameplate	5	2311329	1	Decal, Maintenance
2	16602W	4	Screw	11	2307637W	1	Plate, Warning
3	1321665W	1	Decal, Warning	12	16602W	4	Screw
4	2311330	1	Decal, Load & Wire Rope				*Contact Factory

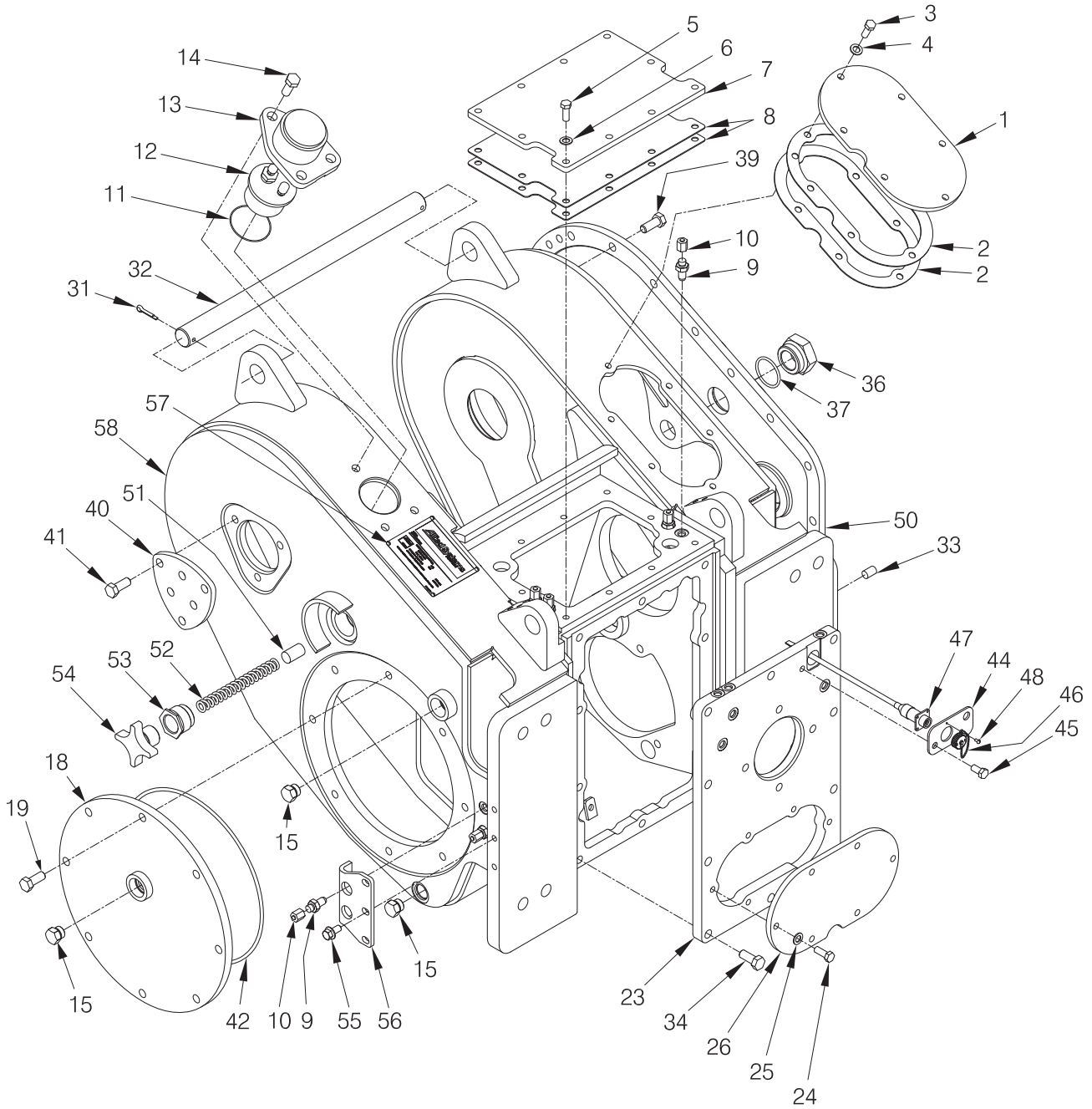
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**Section 1**  
**Frames/Covers/Mounting Parts**

**Frame and Covers**

Case 650/750/850K, 750/850L (H4AH\_R\_R15), 650L (H4AH\_R\_R16), 750/850M (H4AH\_R\_R17)

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## Frame and Covers

Case 650/750/850K, 750/850L (H4AH\_R\_\_R15), 650L (H4AH\_R\_\_R16), 750/850M (H4AH\_R\_\_R17)

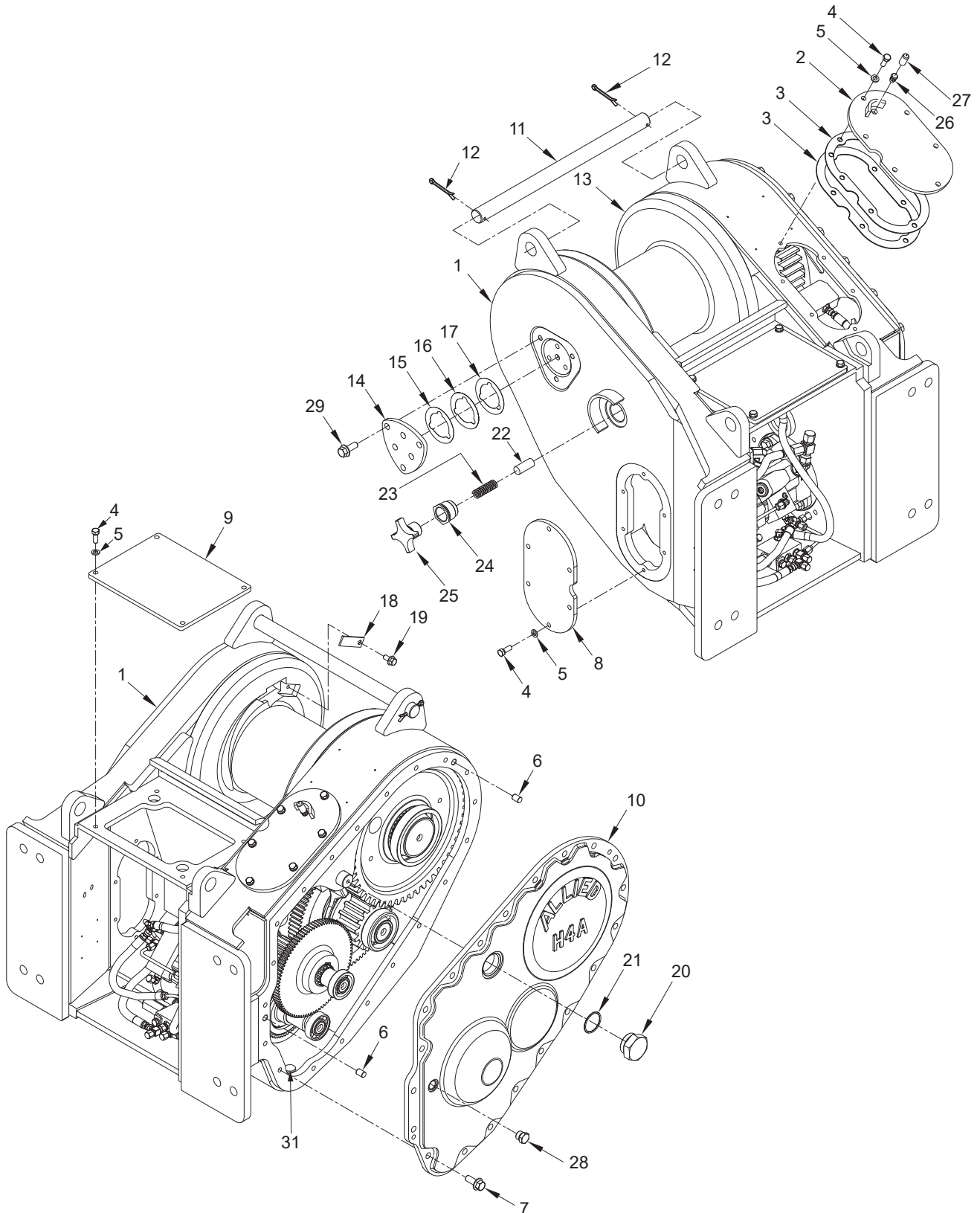
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2304099W	1	Cover	34	2303848W	10	Capscrew
2	*b 2315377	2	Gasket	36	2304174W	1	Plug
3	179443W	6	Capscrew	37	*b 16984W	1	O-Ring
4	15156W	6	Washer	39	2303848W	20	Capscrew
5	179443W	10	Capscrew	40	2304070W	1	Cover, Drum Shaft
6	15156W	10	Washer	41	2303848W	6	Capscrew
7	2304100W	1	Cover, Top	42	*b 232873	1	O-Ring
8	*b 2314794	2	Gasket	44	2305124W	1	Retainer, Filter Connector
9	16445W	6	Fitting	45	162572W	1	Capscrew
10	16923W	6	Fitting	46	245959	1	Cap, Dust
11	*b 39365W	1	O-Ring	47	*a 2305278W	1	Harness, Filter Wiring
12	2305104W	1	Assembly, Breather	48	16602W	1	Screw
13	2305103W	1	Cover, Breather	50	*a 2304092W	1	Cover, LH
14	2303848W	3	Capscrew	51	2300277W	1	Pad, Freespool Drag
15	14595W	3	Fitting	52	2304192W	1	Spring
18	2304098W	1	Cover, RH	53	2300174W	1	Insert
19	2303848W	8	Capscrew	54	1314547W	1	Knob, Freespool Drag
23	*a 2304019W	1	Plate, Pump Mounting	55	134803W	3	Capscrew
24	179443W	6	Capscrew	56	2305734W	1	Guard
25	15156W	6	Washer	57	16602W	4	Screw
26	*a 2304099W	1	Cover	58	2304281W	1	Frame
31	15256W	2	Pin, Cotter				
32	2305020W	1	Bar, Tie		*a		Use 313022W Adhesive
33	176208W	2	Pin, Dowel		*b		Included in Gasket Kit 2306544W

**Frame/Covers**

Case 750/850M (H4AT\_Y\_R17)

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**Frame/Covers**

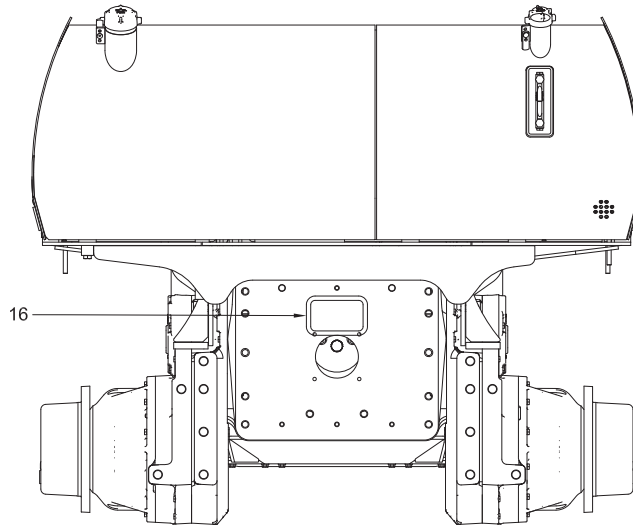
Case 750/850M (H4AT\_Y\_\_R17)

Page 2 of 2

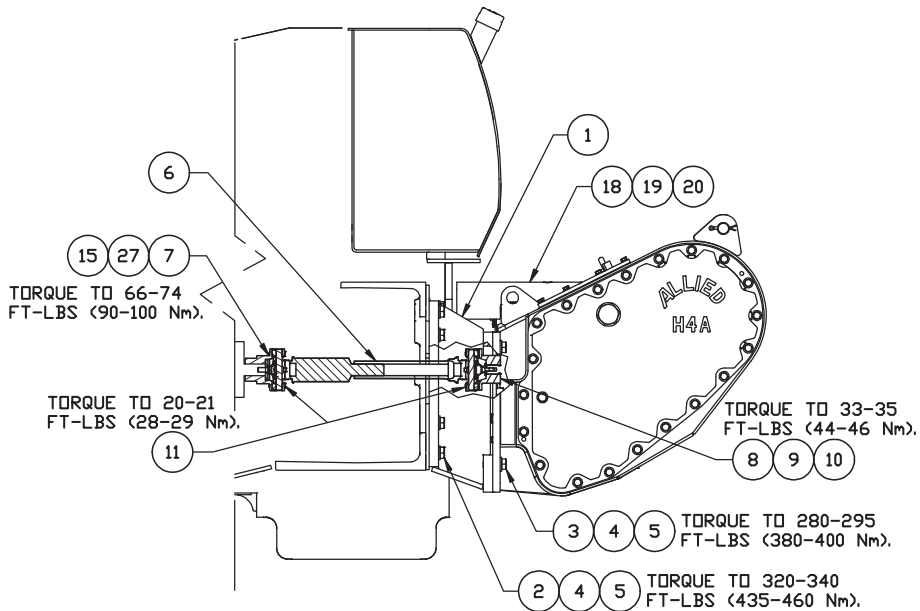
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2312989	1	Frame	17	2304124W	AR	Shim, .020
2	2305663W	1	Cover, Breather	18	1314503W	1	Keeper, Ferrule
3	2315377	2	Gasket, Breather	19	134803W	1	Screw, Flange
4	179443W	16	Capscrew	20	2304174W	1	Plug, Freespool Shaft
5	15156W	16	Washer	21	16984W	1	O-Ring
6	176208W	2	Pin	22	2311889	1	Pad, Freespool Drag
7	2303848W	20	Screw, Flanged	23	1314502W	1	Spring, Freespool Drag
8	*a 2304099W	1	Cover	24	2300174W	1	Insert
9	2305662W	1	Cover, Top	25	1314547W	1	Knob, Freespool Drag
10	*a 2304092W	1	Cover, LH	26	21420W	1	Plug, Breather
11	2305020W	1	Bar, Tie (Except w/ Arch)	27	2300962W	1	Cap, Breather
12	15256W	2	Pin (Except w/Arch)	28	14595W	1	Fitting, O-Ring
13	2304069W	1	Drum	29	2303848W	16	Screw, Flanged
14	2304070W	1	Cover, Drum Shaft				
15	2304122W	AR	Shim, .005	*a	Use 313022W Adhesive		
16	2304123W	AR	Shim, .007				

### Mounting Parts

Case 650/750/850L (H4AH1R\_\_R15, H4AH3R\_\_R15, H4AH4R\_\_R15)



TRACTOR REAR FACE PREPARATION

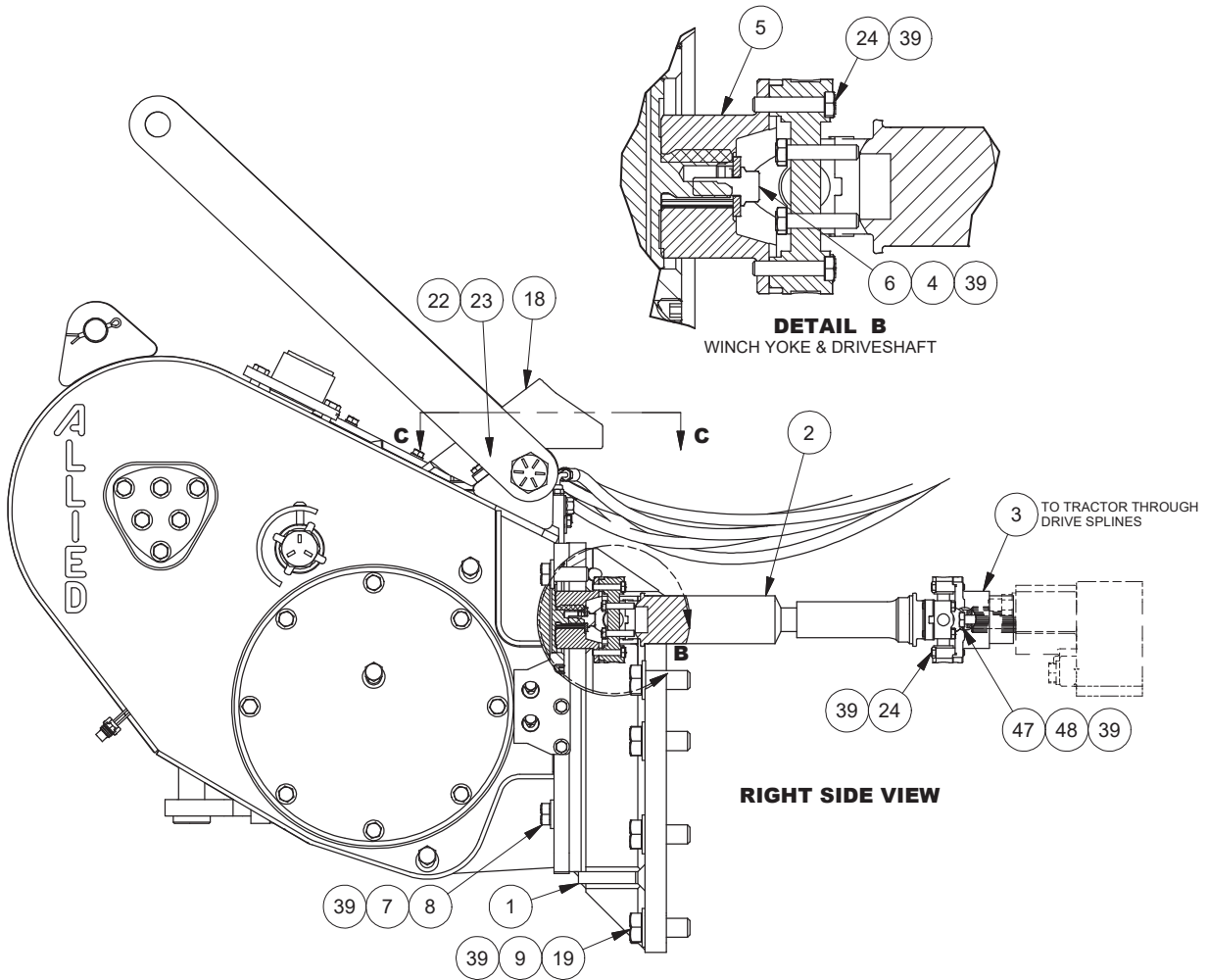


MOUNTING BRACKET, DRIVE SHAFT, WINCH, & GUARD INSTALLATION

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2311322	1	Bracket, Mounting	9	174413W	1	Screw, Ser Flg
2	293710W	10	Capscrew	10	2304119W	1	Washer
3	Y17C-1232	8	Capscrew	11	221466W	8	Capscrew
4	221777W	18	Washer	15	296422W	1	Washer
5	318702W	AR	Threadlock	16	24257	1.5 ft	Trim Edge
6	2313947	1	Driveshaft	18	2311239	1	Weldment, Guard
7	2312720	1	Yoke Weldment	19	252928W	3	Capscrew
8	2304120W	1	Yoke	20	15134W	3	Washer
				27	293645W	1	Capscrew

### Mounting Parts

Case 650L/650M (H4AH4R\_\_R16, H4AH3R\_\_R16, H4AH1R\_\_R16)

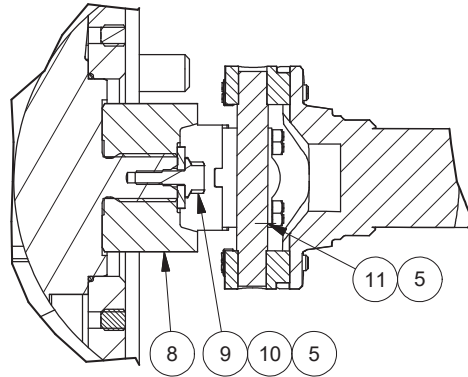


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2315652	1	Bracket, Mounting	19	221690W	12	Capscrew
2	2313863	1	Driveshaft	22	221767W	4	Washer
3	2312720	1	Yoke Weldment	23	16828W	4	Capscrew
4	2304119W	1	Washer	24	221466W	8	Capscrew
5	2304120W	1	Yoke	39	318702W	AR	Threadlock
6	174413W	1	Screw, Ser Flg	47	293645W	1	Capscrew
7	Y27E-12	8	Washer	48	296422W	1	Washer
8	Y17C-1232	8	Capscrew				
9	221780W	12	Washer				

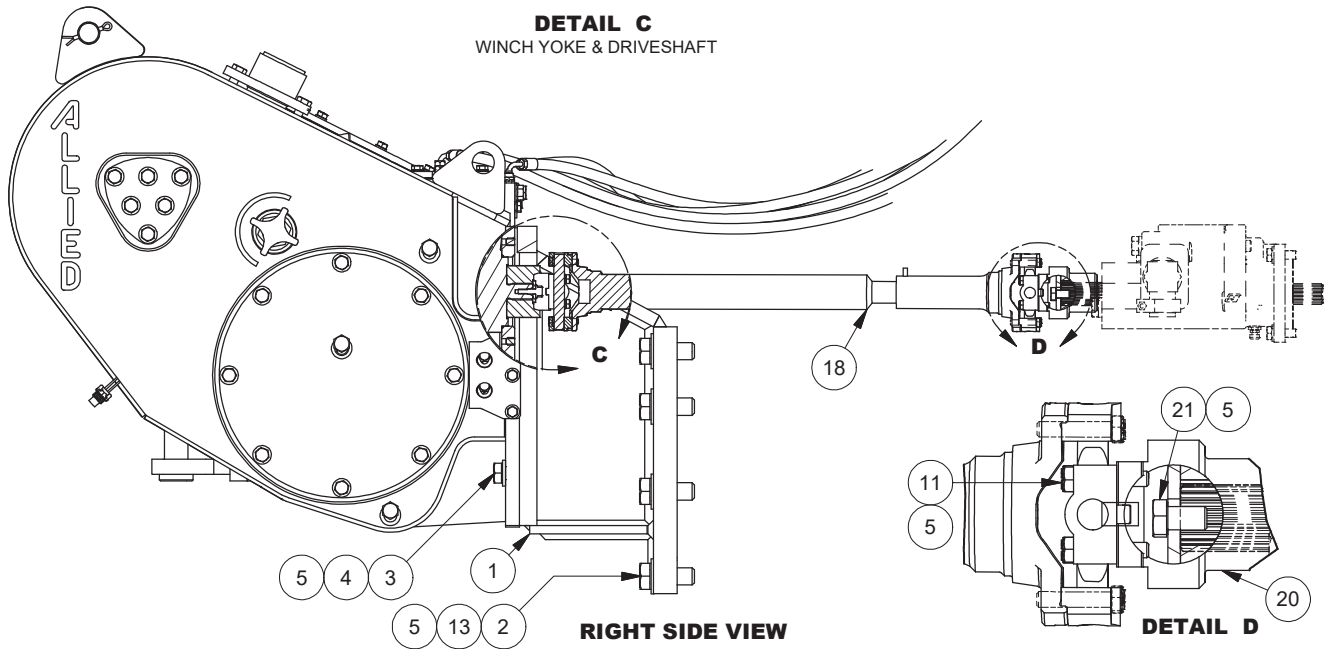
### Mounting Parts

Case 750/850M (H4AH3R\_\_R17, H4AH4R\_\_R17)

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**DETAIL C**  
WINCH YOKE & DRIVESHAFT



**RIGHT SIDE VIEW**

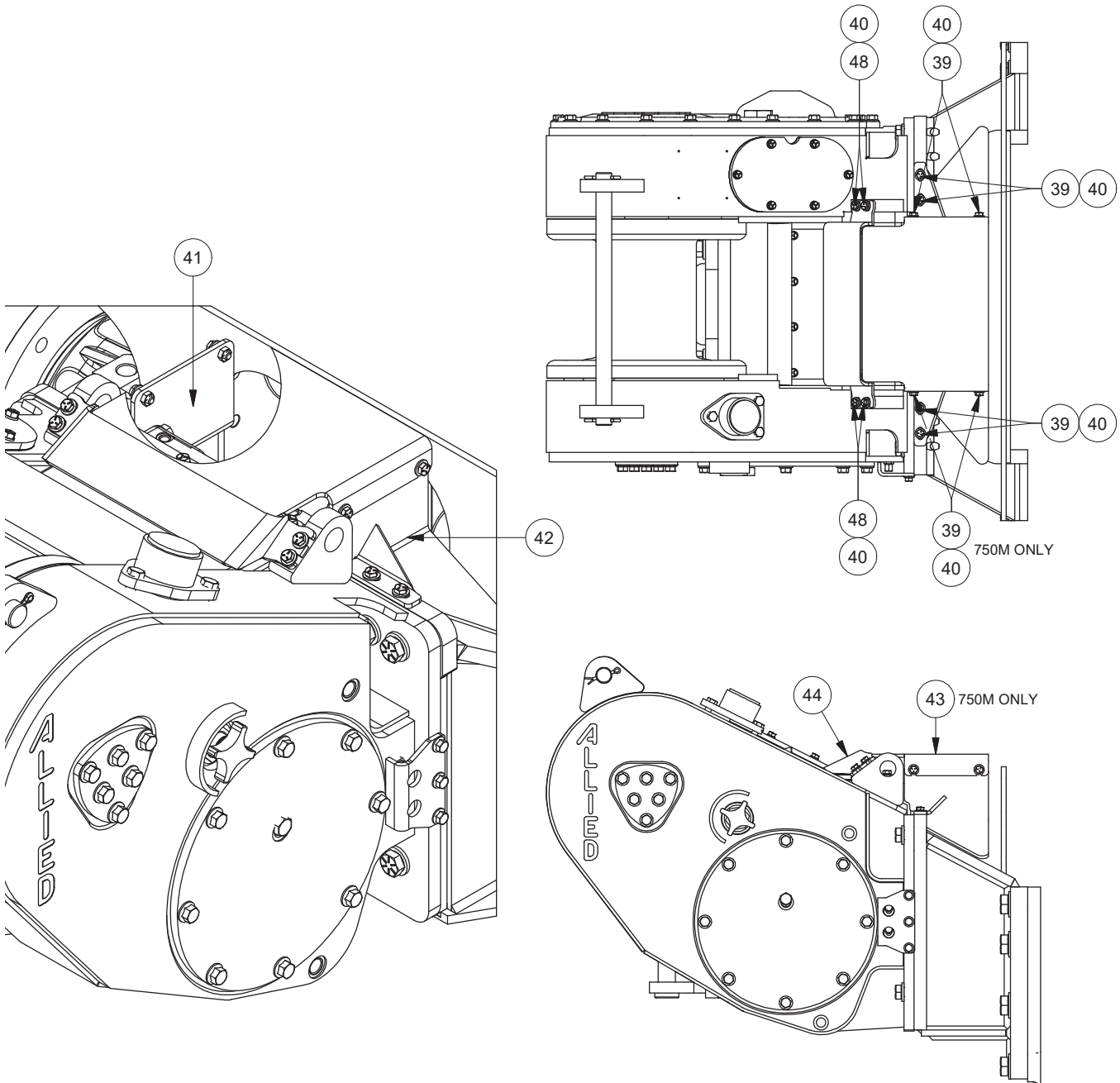
**DETAIL D**

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2314762	1	Bracket - Mounting	39	16805W	8	Capscrew
2	221690W	12	Capscrew	40	Y27E-06	12	Washer
3	Y17C-1232	8	Capscrew	41	2314934	1	Weldment - Guard
4	Y27E-12	8	Washer	42	2314914	1	Weldment - Guard
5	318702W	AR	Threadlock	43	2314913	1	Guard - Hose
8	2304120W	1	Yoke	44	2314910	1	Weldment - Guard, Hose
9	174413W	1	Screw, Ser Fig	48	16598W	4	Capscrew
10	2304119W	1	Washer				
11	221466W	8	Capscrew				
13	221780W	12	Washer				
18	2314416	1	Driveshaft				
20	2312360	1	Yoke Weldment				
21	292526W	1	Capscrew				

### Mounting Parts

Case 750/850M (H4AH3R\_\_R17, H4AH4R\_\_R17)

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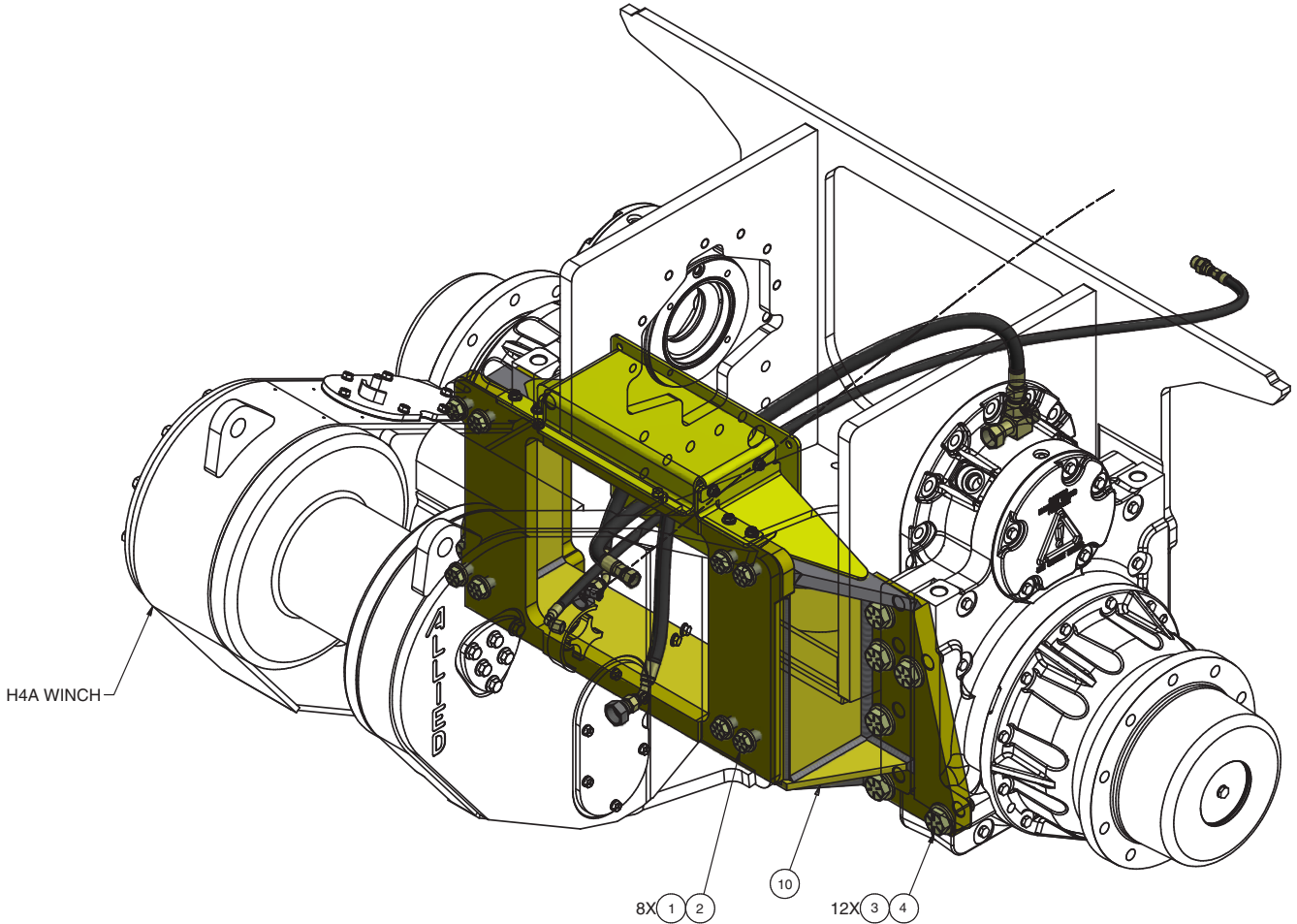


### HOSE GUARD INSTALLATION

## Mounting Parts

Case 750/850M (H4AT4Y\_\_R17)

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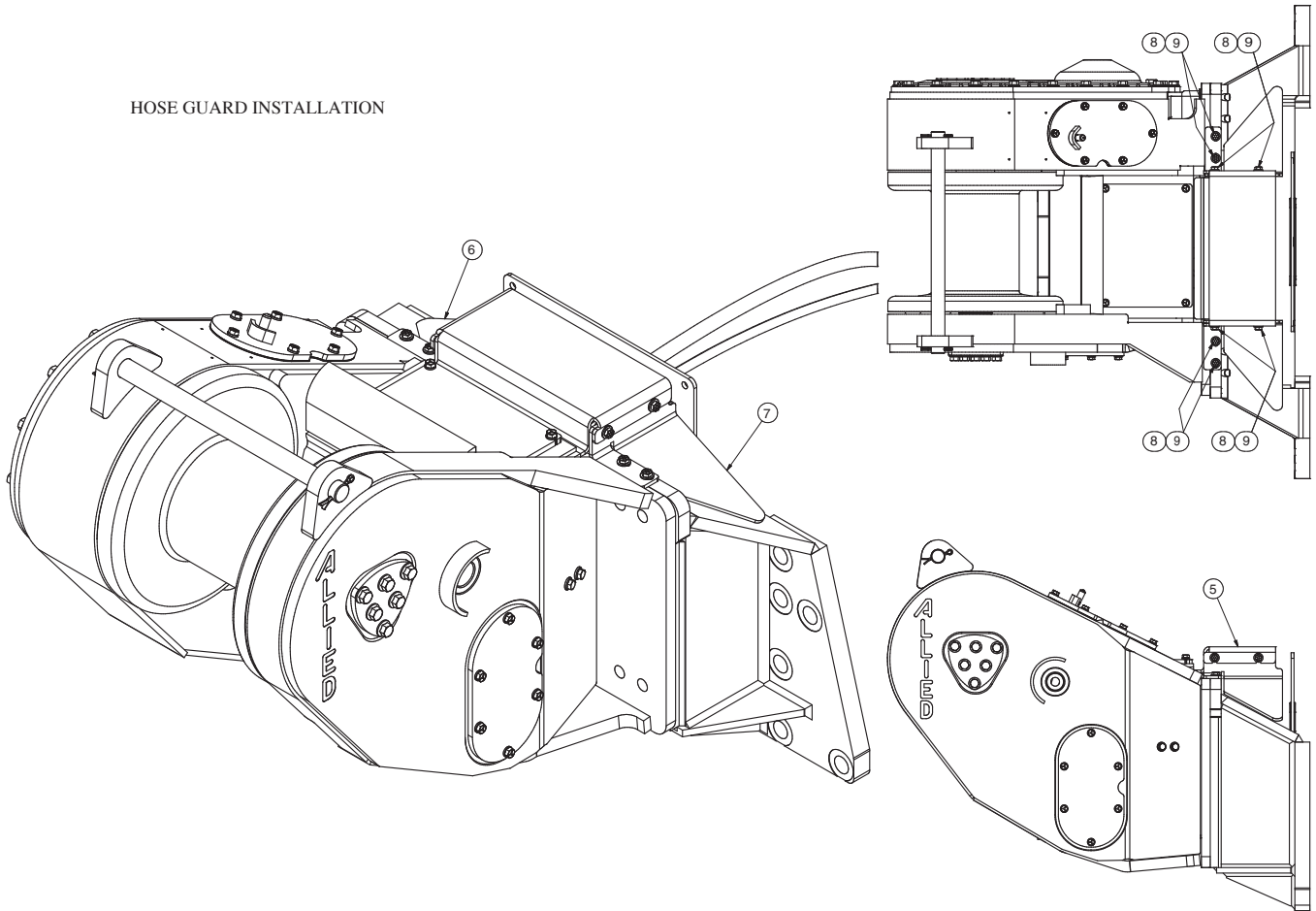
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	Y27E-12	8	Washer	7	2317637	1	Weldment Guard Hose; RH
2	Y17C-1232	8	Capscrew	8	221767W	8	Washer, Hard
3	221780W	12	Washer	9	Y17C-0616	8	Capscrew
4	221690W	12	Capscrew	10	2314762	1	Bracket - Mounting
5	2317632	1	Guard, Hose; Top				
6	2317636	1	Weldment Guard Hose; LH				

### Mounting Parts

Case 750/850M (H4AT4Y\_\_R17)

Page 2 of 2

HOSE GUARD INSTALLATION



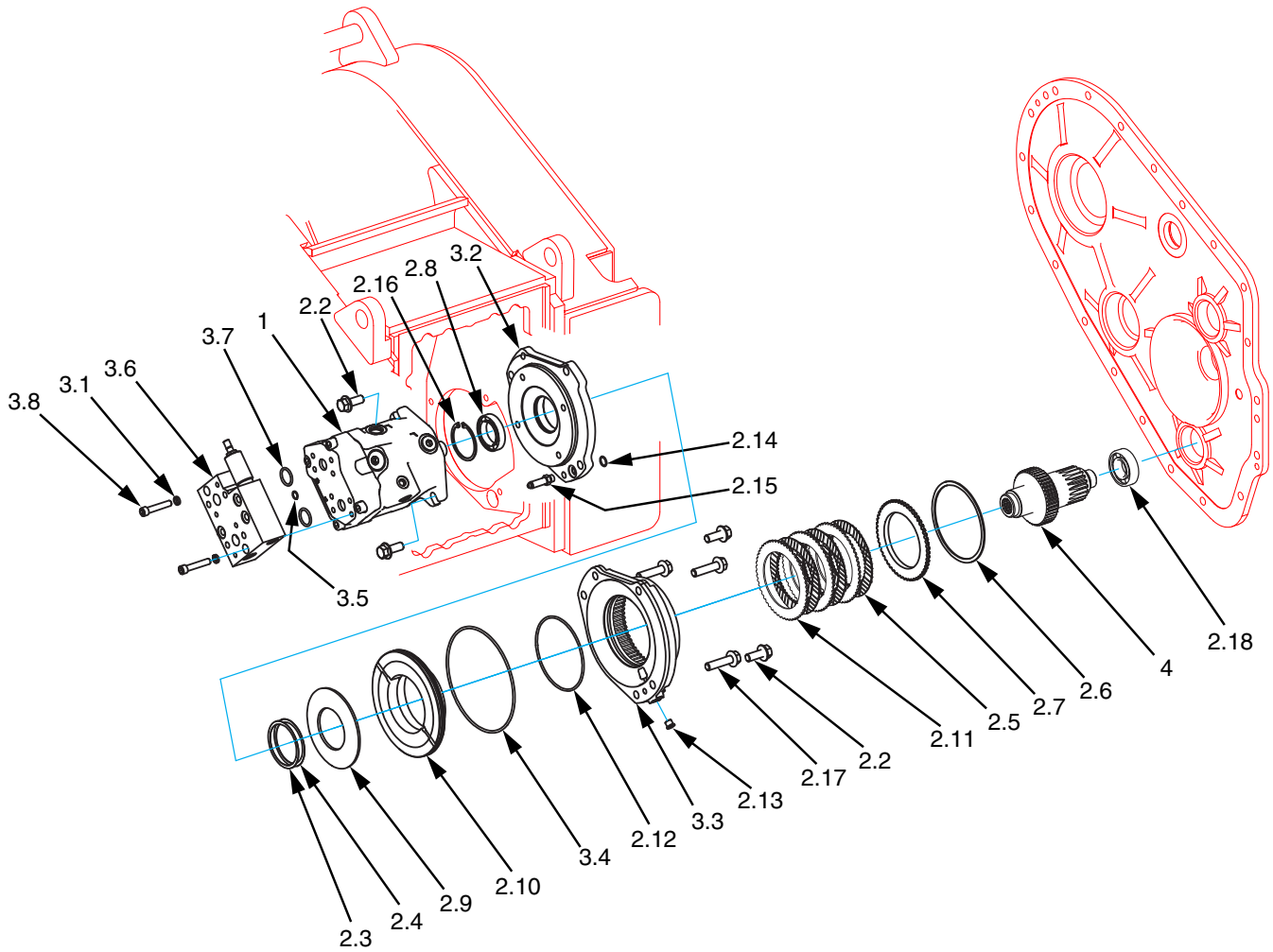
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**Section 2**  
**Gear/Shaft Train**

### Motor Shaft Assembly

Case 650/750/850K, 750/850L (H4AH\_R\_R15), 650L (H4AH\_R\_R16), 750/850M (H4AH\_R\_R17)

Page 1 of 2



## Motor Shaft Assembly

Case 650/750/850K, 750/850L (H4AH\_R\_\_R15), 650L (H4AH\_R\_\_R16), 750/850M (H4AH\_R\_\_R17)

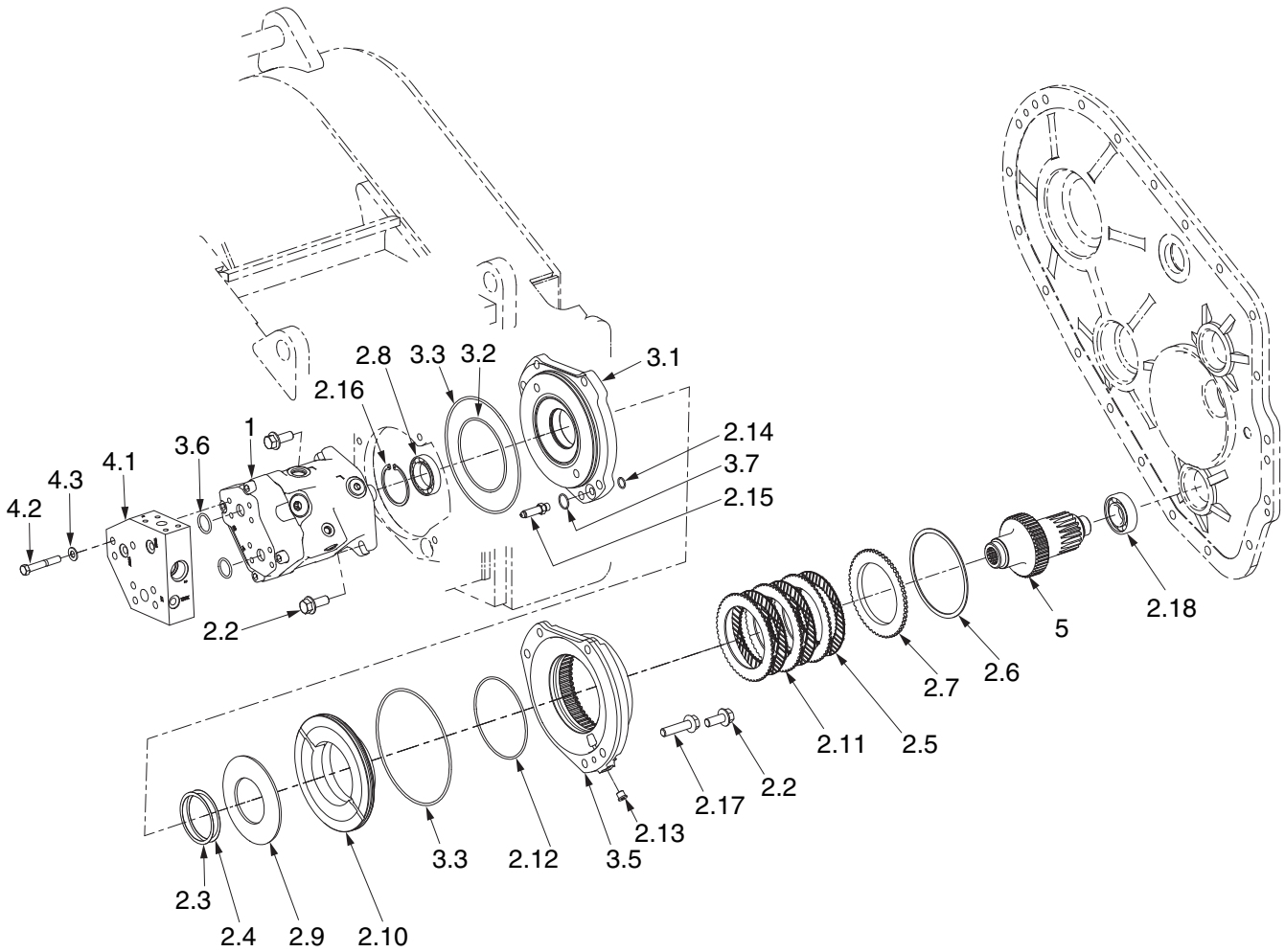
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2303788W	1	Motor, Hydraulic	2.17	918906W	3	Screw
2.2	2303848W	4	Screw, Flange	2.18	*a 41206W	1	Bearing - Ball
2.3	*a 2304711W	A/R	Shim, 0.005"	3.1	177947W	2	Washer
2.4	*a 2304712W	A/R	Shim, 0.007"	3.2	2304037W	1	Plate - Mounting, Motor
2.5	*a 2304873W	3	Disc, Friction	3.3	2316526	1	Housing - Brake
2.6	334475W	1	Ring - Snap, Int	3.4	*a*b 2316507	1	O-Ring
2.7	334442W	1	Plate, Pressure	3.5	*b 2304220W	1	O-Ring
2.8	*a 2300831W	1	Bearing - Ball	3.6	2306566W	1	Valve Assy - Motor (p. 59)
2.9	2303845W	1	Spring, Belleville	3.7	*b 2304110W	2	O-Ring
2.10	2316525	1	Piston - Brake	3.8	Y73G-0632	2	Capscrew
2.11	*a 2304874W	3	Plate, Separator	4	*c 2303835W	1	Motor Shaft, 21T (83:1)
2.12	*a*b 2316517	1	O-Ring	4	*d 2311303	1	Motor Shaft, 19T (94:1)
2.13	222442W	1	Fitting	4	*e 2303829W	1	Motor Shaft, 16T (116:1)
2.14	*b 26883	1	O-Ring	4	*f 2311305	1	Motor Shaft, 15T (125:1)
2.15	16547W	1	Fitting				
2.16	12921W	1	Snap Ring				
				*a	Included in Brake Kit 2306545W		
				*b	Included in Motor Shaft Rebuild Kit 2315287		
				*c	Used on 83:1 Gear Ratio Only		
				*d	Used on 94:1 Gear Ratio Only		
				*e	Used on 116:1 Gear Ratio Only		
				*f	Used on 125:1 Gear Ratio Only		

### Motor Shaft Assembly

Case 650/750/850K, 750/850L (H4AT\_R\_\_R15), 650L (H4AT\_R\_\_R16), 750/850M (H4AT\_R\_\_R17)

Page 1 of 2



## Motor Shaft Assembly

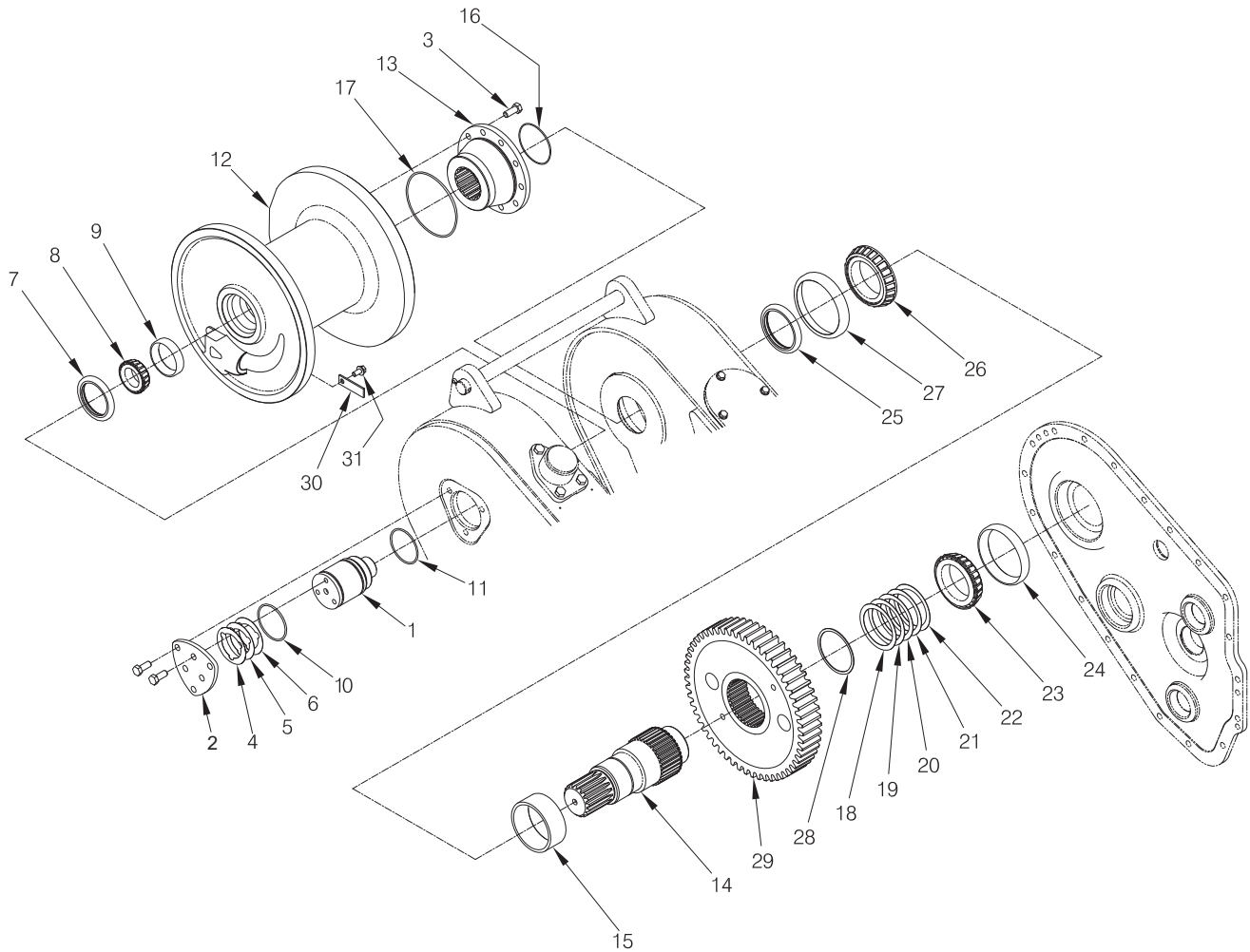
Case 650/750/850K, 750/850L (H4AT\_R\_\_R15), 650L (H4AT\_R\_\_R16), 750/850M (H4AT\_R\_\_R17)

Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2303788W	1	Motor, Hydraulic	2.17	918906W	3	Screw
2.2	2303848W	4	Screw, Flange	2.18	*a 41206W	1	Bearing, Ball
2.3	*a 2304711W	AR	Shim, 0.005"	3.1	2305651W	1	Plate, Mounting, Motor
2.4	*a 2304712W	AR	Shim, 0.007"	3.2	*b 15888W	1	O-Ring
2.5	*a 2304873W	3	Disc, Friction	3.3	*a*b 2316507	2	O-Ring
2.6	334475W	1	Ring, Snap, Int	3.5	2305652W	1	Housing, Brake
2.7	334442W	1	Plate, Pressure	3.6	*b 2304110W	2	O-Ring
2.8	*a 2300831W	1	Bearing, Ball	3.7	*b 17064	1	O-Ring
2.9	2303845W	1	Spring, Belleville	4.1	2307568W	1	Assy, Manifold (p. 51)
2.10	2316525	1	Piston, Brake	4.2	180959W	3	Capcrew
2.11	*a 2304874W	3	Plate, Separator	4.3	221767W	3	Hard Washer
2.12	*a*b 2316517	1	O-Ring	5	*c 2303835W	1	Motor Shaft, 21T (83:1)
2.13	222442W	1	Fitting	5	*d 2311303	1	Motor Shaft, 19T (94:1)
2.14	*b 26883	1	O-Ring	5	*e 2303829W	1	Motor Shaft, 16T (116:1)
2.15	16547W	1	Fitting	5	*f 2311305	1	Motor Shaft, 15T (125:1)
2.16	12921W	1	Snap Ring				

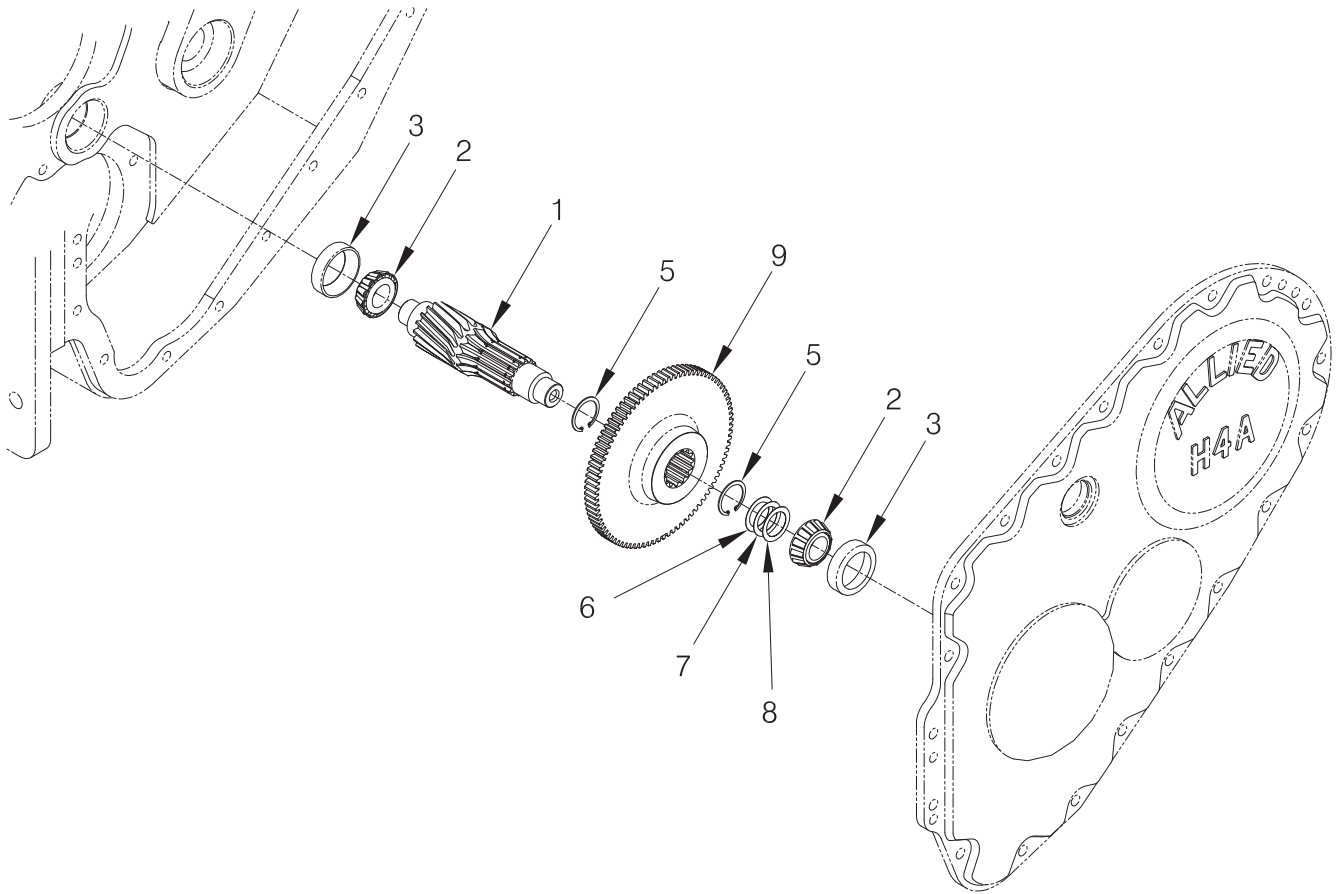
- \*a Included in Brake Kit 2306545W
- \*b Included in Motor Shaft Rebuild Kit 2315351
- \*c Used on 83:1 Gear Ratio Only
- \*d Used on 94:1 Gear Ratio Only
- \*e Used on 116:1 Gear Ratio Only
- \*f Used on 125:1 Gear Ratio Only

Drum Shaft



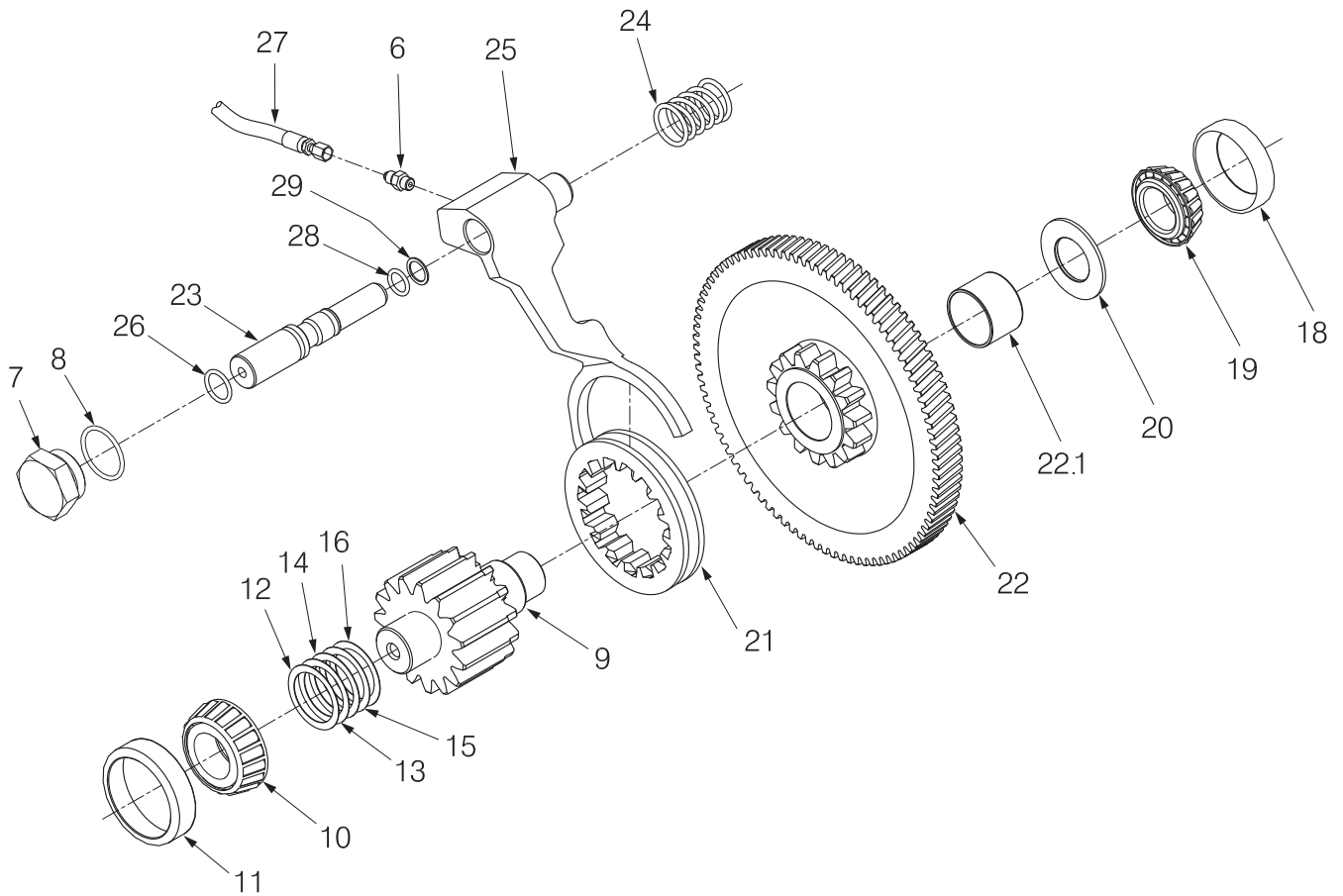
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2305653W	1	Shaft, Drum	16	46629W	1	O-Ring
2	2304070W	1	Cover, Drum Shaft	17	15895W	1	O-Ring
3	2303848W	16	Screw, Flange	18	1314470W	AR	Shim, .025
4	2304122W	AR	Shim, .005	19	1314485W	AR	Shim, .015
5	2304123W	AR	Shim, .007	20	1314486W	AR	Shim, .018
6	2304124W	AR	Shim, .020	21	1314487W	AR	Shim, .020
7	87355W	1	Seal, Oil	22	1314488W	AR	Shim, .022
8	2303853W	1	Cone, Bearing	23	1314483W	1	Cone, Bearing
9	2303854W	1	Cup, Bearing	24	30190W	1	Cup, Bearing
10	15881W	1	O-Ring	25	R2109170	1	Seal
11	203525	1	O-Ring	26	2304126W	1	Cone, Bearing
12	2304069W	1	Drum	27	2304127W	1	Cup, Bearing
13	2304060W	1	Adapter, Drum	28	2304128W	1	Snap Ring
14	2304058W	1	Shaft, Drum	29	2303827W	1	Gear, 55T
15	2304125W	1	Spacer	30	1314503W	1	Keeper, Ferrule
				31	134803W	1	Screw, Ser Flg

**Idler Shaft**



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2305564W	1	Shaft, Idler, 16T	*a	Used on 116:1 Gear Ratio Only		
2	2304179W	2	Cone, Bearing	*b	Used on 83:1 Gear Ratio Only		
3	2304180W	2	Cup, Bearing	*c	Used on 94:1 Gear Ratio Only		
5	12916W	2	Ring, Snap	*d	Used on 125:1 Gear Ratio Only		
6	*e 2304197W	AR	Shim, .010	*e	Consult Service Manual		
7	*e 2304198W	AR	Shim, .012				
8	*e 2304199W	AR	Shim, .015				
9	*a 2305566W	1	Gear, Idler, 88T				
	*b 2305565W	1	Gear, Idler, 83T				
	*c 2311304	1	Gear, Idler, 85T				
	*d 2311306	1	Gear, Idler, 89T				

## Intermediate Gear Shaft With Freespool



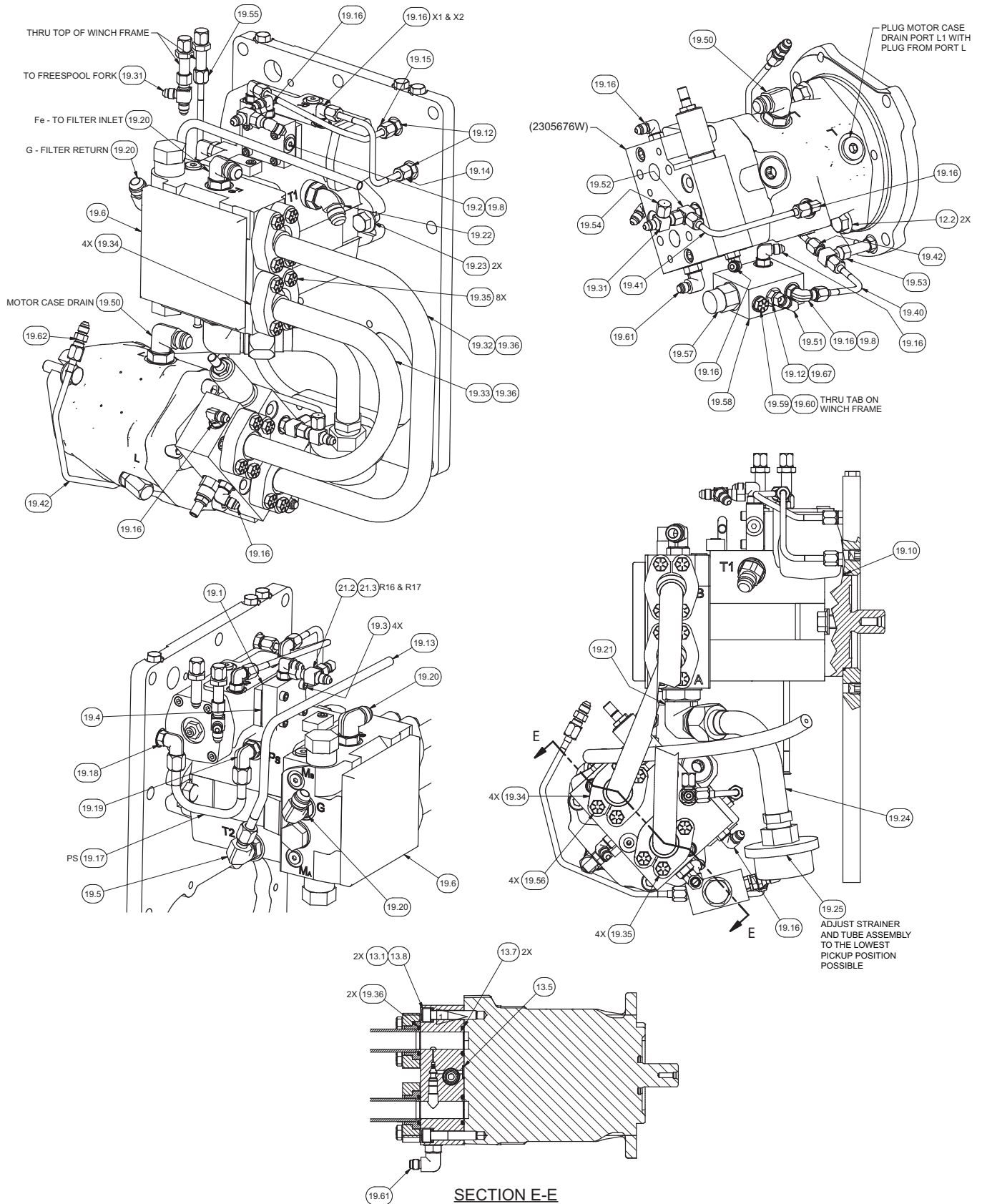
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
6	16538W	1	Fitting	21	2304171W	1	Collar, Freespool
7	2304174W	1	Plug, Freespool Shaft	22	2316504	1	Assy, Gear, Intermed, 92T
8	16984W	1	O-Ring	22.1	2304181W	1	. Bushing
9	2303825W	1	Shaft	23	2305563W	1	Shaft, Freespool
10	225262W	1	Cone, Bearing	24	2303906W	1	Spring, Freespool
11	230351W	1	Cup, Bearing	25	2305562W	1	Fork, Freespool Shifter
12	* 1314433W	AR	Shim, .020	26	61056W	1	O-Ring
13	* 1314434W	AR	Shim, .022	27	2305580W	1	Assy, Hose
14	* 1314435W	AR	Shim, .025	28	100153W	1	O-Ring
15	* 1314467W	AR	Shim, .015	29	238671	1	Ring, Backup
16	* 1314468W	AR	Shim, .018				
18	R1314774	1	Cup, Bearing				
19	R1314773	1	Cone, Bearing				
20	2304172W	1	Washer, Thrust				

\* Shim as required to achieve 0.002" to 0.005" bearing endplay.

**Section 3**  
**Hydraulics/Electrical/Controls**

# Hydraulic Group

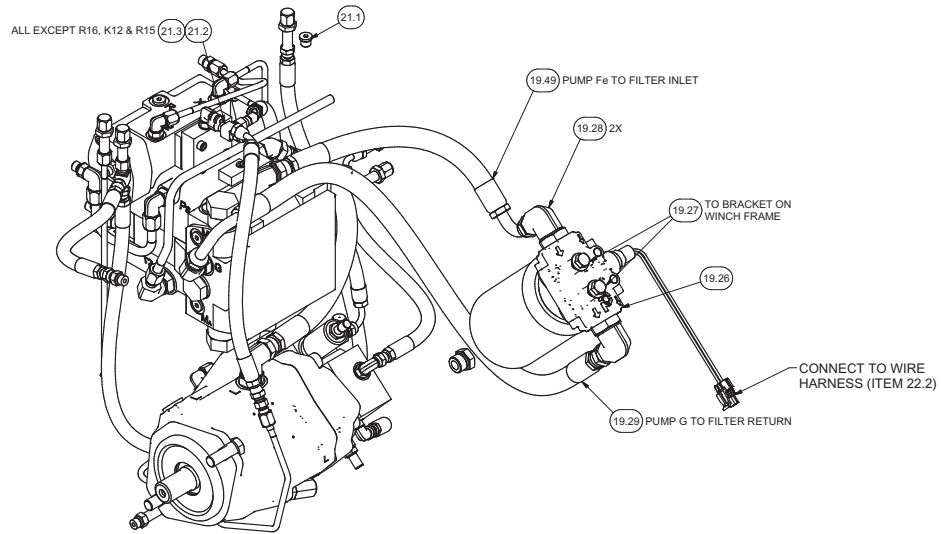
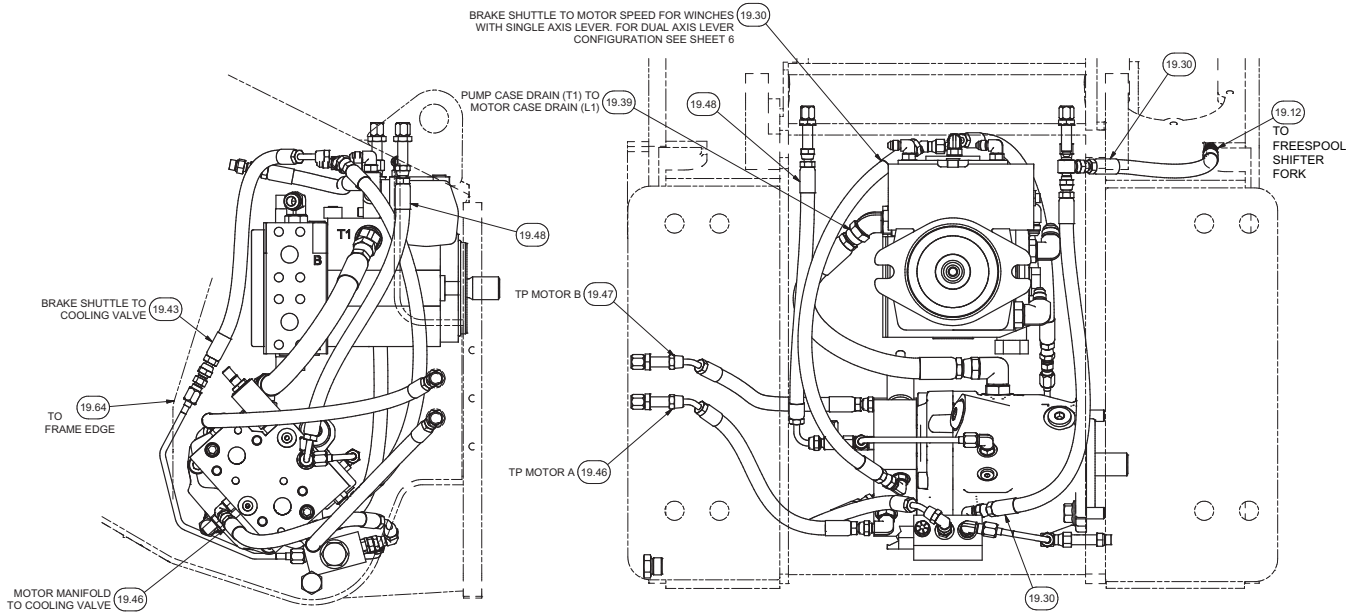
Case 650/750/850K, 750/850L (H4AH\_R\_R15), 650L (H4AH\_R\_R16), 750/850M (H4AH\_R\_R17)  
Page 1 of 4



# Hydraulic Group

Case 650/750/850K, 750/850L (H4AH\_R\_R15), 650L (H4AH\_R\_R16), 750/850M (H4AH\_R\_R17)

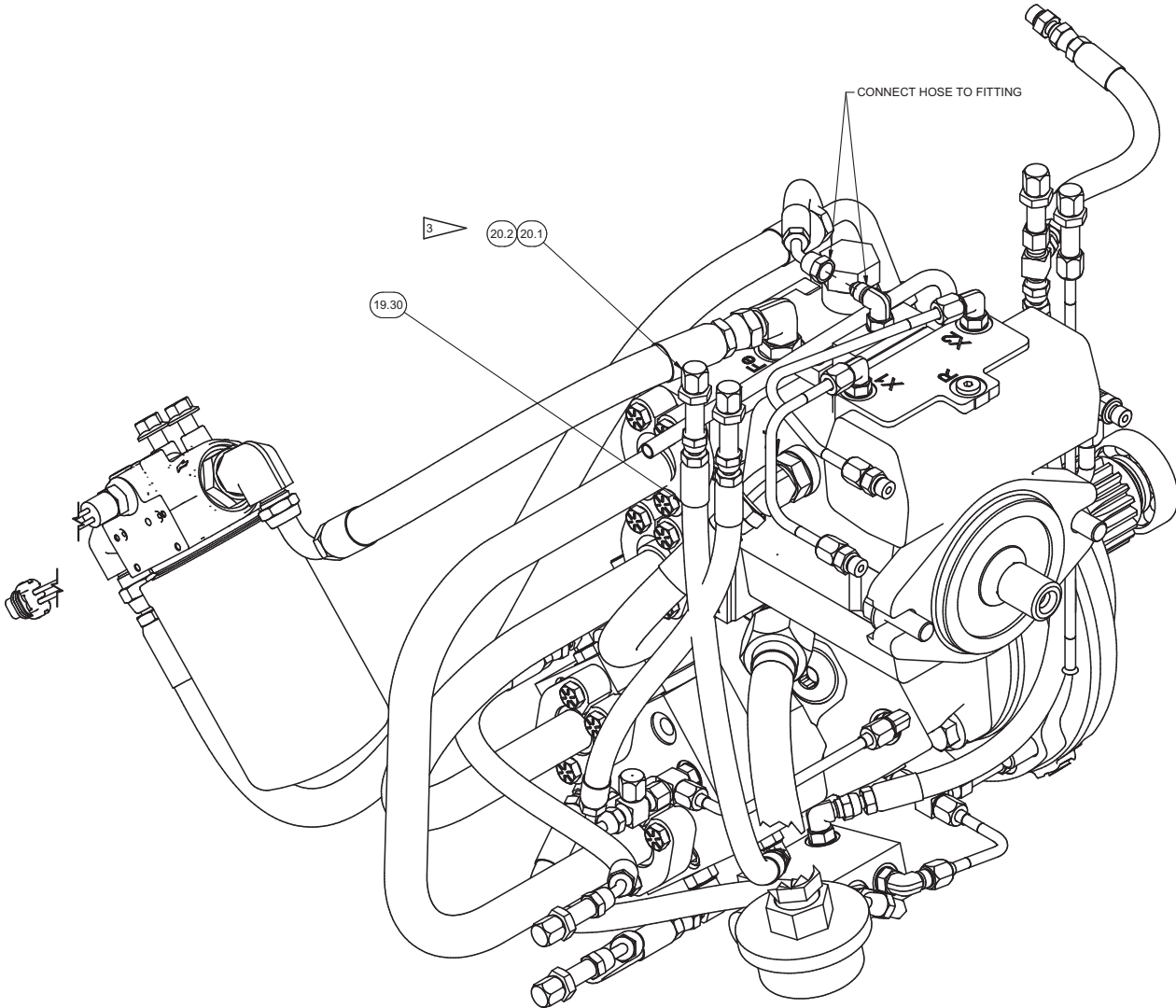
Page 2 of 4



**Hydraulic Group**

Case 650/750/850K, 750/850L (H4AH\_R\_R15), 650L (H4AH\_R\_R16), 750/850M (H4AH\_R\_R17)

Page 3 of 4



C16, K12 & R15 MOTOR SPEED HOSE CONNECTIONS

## Hydraulic Group

Case 650/750/850K, 750/850L (H4AH\_R\_\_R15), 650L (H4AH\_R\_\_R16), 750/850M (H4AH\_R\_\_R17)

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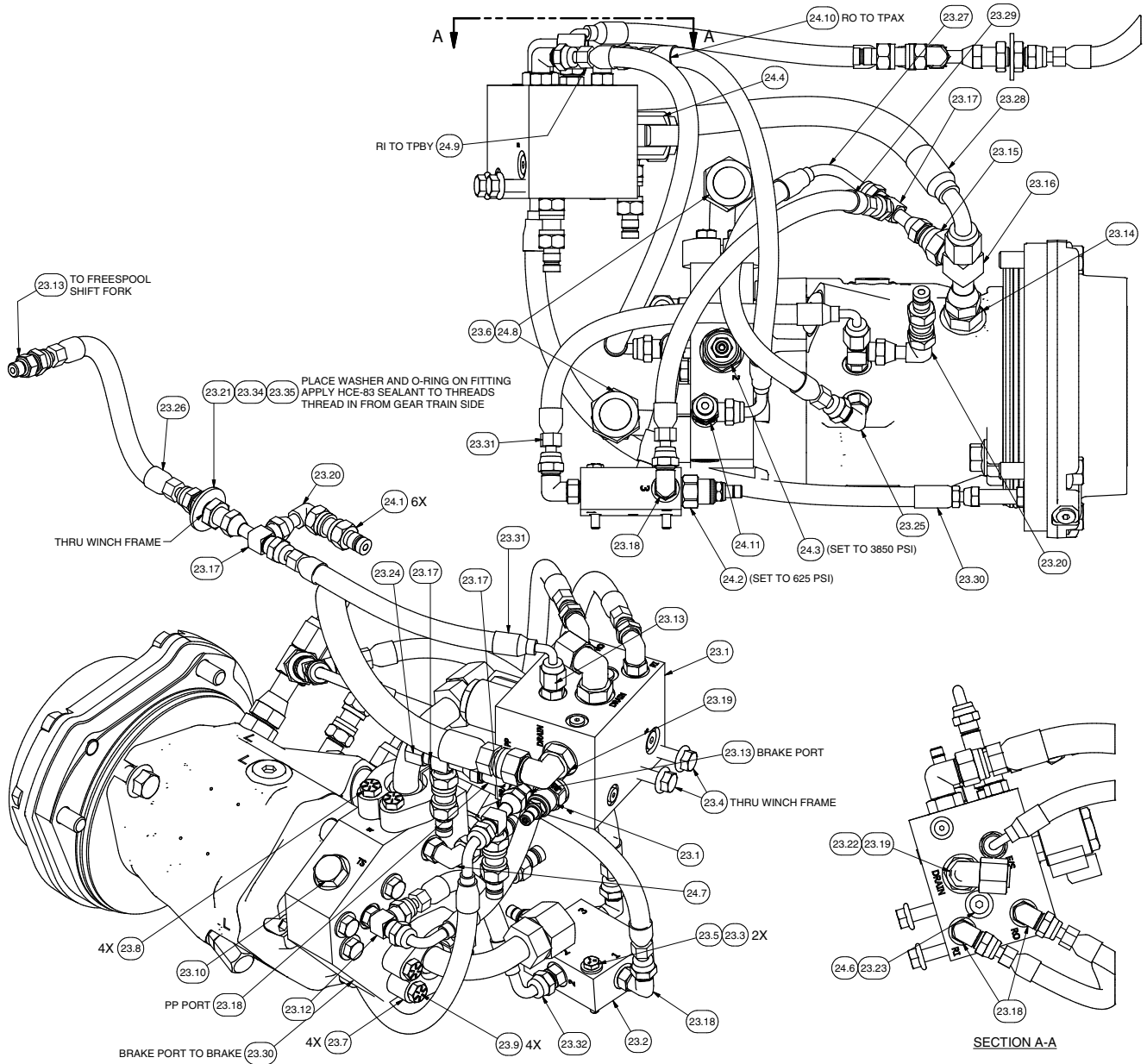
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
19.1	2304014W	1	Manifold	19.50	17224W	1	Fitting
19.2	222442W	1	Fitting	19.51	16987W	1	Fitting
19.3	293796W	4	Capscrew	19.52	16967W	1	Fitting
19.4	2304193W	1	Gasket	19.53	17047W	1	Fitting
19.5	222400W	1	Fitting	19.54	2310417	1	Orifice
19.6	2303789W	1	Pump	19.55	2304151W	1	Tube Assembly
19.7	2304019W	1	Plate - Mounting, Pump	19.56	221518W	4	Capscrew
19.8	2304195W	2	Valve, Shuttle	19.57	2307170W	1	Valve - Sequence
	2305073W	1	. Seal Kit		2307172W	1	. Seal Kit
19.9	14591W	3	Fitting	19.58	2317885	1	Manifold, Cooling Valve
19.10	39742W	1	O-Ring	19.59	162572W	1	Capscrew
19.11	2305987W	2	Setscrew	19.60	R13812514	1	Lockwasher
19.12	16538W	4	Fitting	19.61	201766W	1	Fitting
19.13	2305133W	1	Tube Assembly	19.62	209436	1	Fitting
19.14	2304149W	1	Tube Assembly	19.63	14595W	3	Fitting
19.15	2304150W	1	Tube Assembly	19.64	24257	4'	Trim, Edge
19.16	16556W	9	Fitting	19.65	39365W	1	O-Ring
19.17	2304152W	1	Tube Assembly	19.66	2305103W	1	Cover - Breather
19.18	239784W	1	Fitting	19.67	2312196	1	Plug, Orifice
19.19	16558W	1	Fitting	20.1	*a 16923W	1	Fitting
19.20	16559W	2	Fitting	20.2	*a 16445W	1	Fitting
19.21	16562W	1	Fitting	21.1	*b 235387	1	Fitting
19.22	201752W	1	Fitting	21.2	*b 17059W	1	Fitting
19.23	2303848W	12	Screw, Flange	21.3	*b 16997W	1	Fitting
19.24	2304115W	1	Tube Assembly				
19.25	2304114W	1	Strainer				
19.26	2304111W	1	Filter Assembly				
	2304112W	1	. Element, Filter				
	2304862W	1	. Pressure Switch				
	2305132W	1	. Filter, Head				
19.27	1300780W	2	Screw, Ser Flg				
19.28	138811W	2	Fitting				
19.29	2305003W	1	Hose Assembly				
19.30	2305012W	3	Hose Assembly				
19.31	17059W	2	Fitting				
19.32	2304057W	1	Tube Assembly				
19.33	2304104W	1	Tube Assembly				
19.34	222535W	8	Fitting				
19.35	Y17C-0624	12	Capscrew				
19.36	2304110W	4	O-Ring				
19.37	16923W	5	Fitting				
19.38	16445W	5	Fitting				
19.39	2305007W	1	Assembly - Hose, Pump To Motor				
19.40	2305008W	1	Tube Assembly				
19.41	2304999W	1	Tube Assembly - Motor Speed				
19.42	2310617	1	Tube Assembly				
19.43	2314096	1	Hose Assembly				
19.44	2305104W	1	Breather Assembly				
19.45	R525293	1	Magnet, Ceramic				
19.46	2305139W	2	Hose Assembly				
19.47	2305140W	1	Hose Assembly				
19.48	2305281W	1	Hose Assembly				
19.49	R400128	1	Hose Assembly				

\*a Applies to R15 Winches

\*b Applies to R16 & R17 Winches

# Hydraulic Group

Case 750/850M (H4AT\_Y\_R17)  
Page 1 of 2



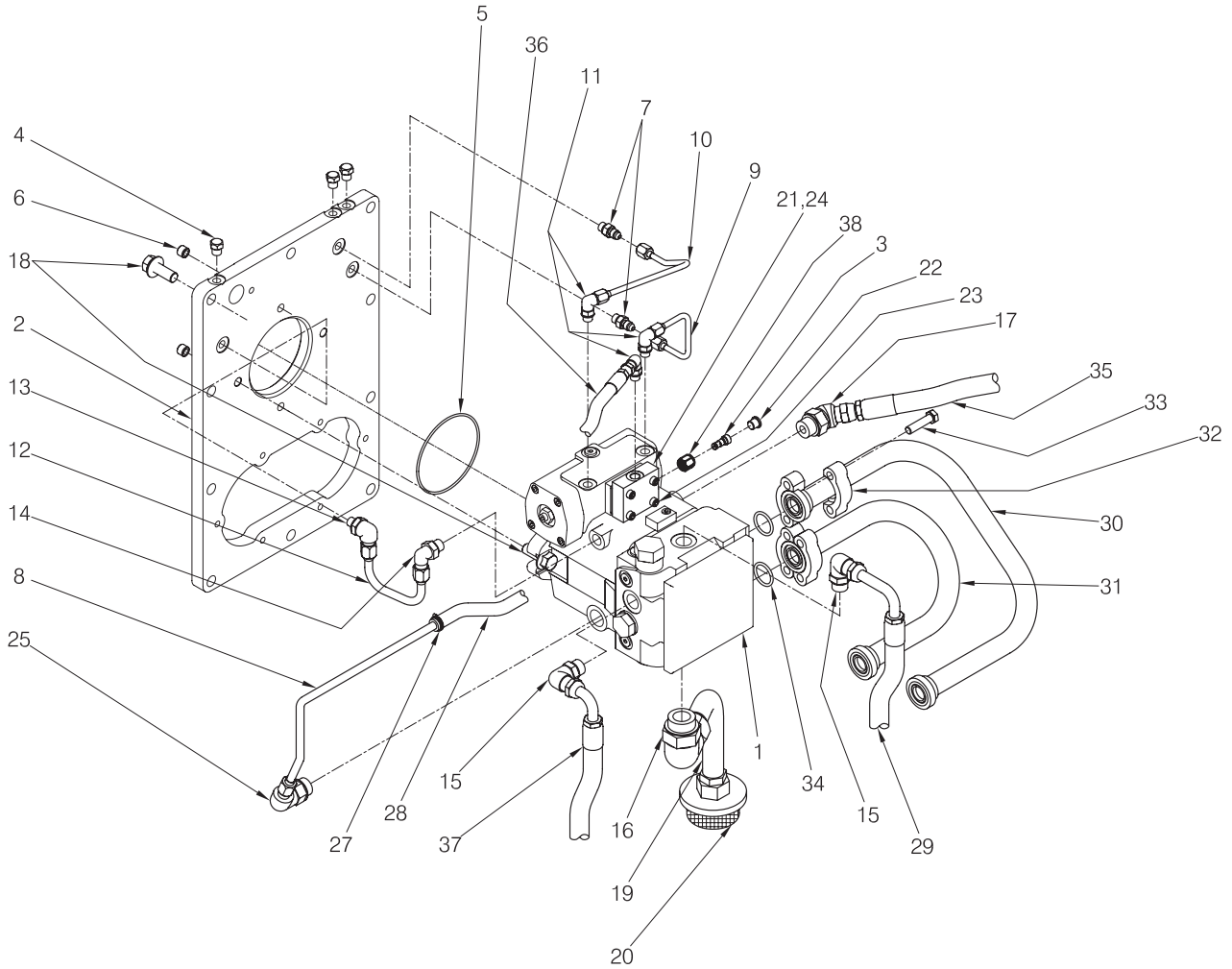
## Hydraulic Group

Case 750/850M (H4AT\_Y\_\_R17)

Page 2 of 2

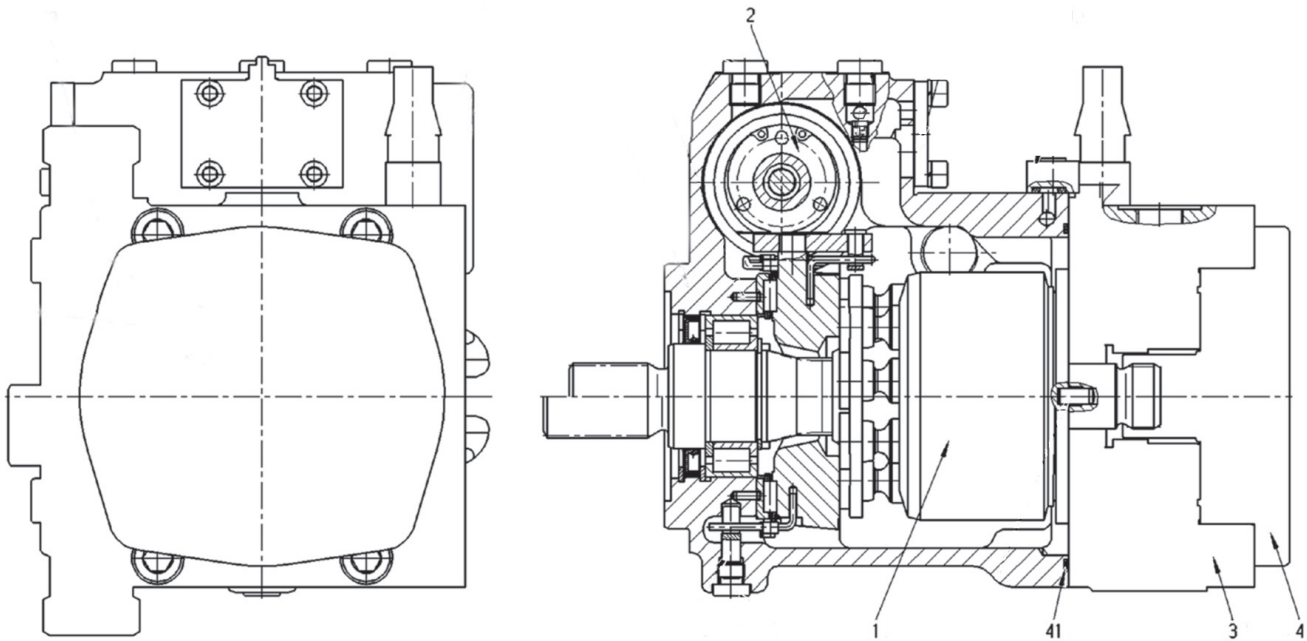
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
23.1	2311591	1	Assembly - Manifold, Rescue Control (See p. 47)	23.29	2311353	1	Hose Assembly
23.2	248918	1	Valve Body	23.30	2311233	1	Hose Assembly
23.3	221763W	2	Washer	23.31	2311744	2	Hose Assembly
23.4	398599W	2	Capscrew	23.32	2311234	1	Hose Assembly
23.5	Y01C-0428	2	Capscrew	23.34	15178W	1	Washer
23.6	2311360	2	Assembly - Fitting W/ O-Rings	23.35	211564	1	O-Ring
23.7	222535W	4	Fitting	24.1	2307625W	6	Fitting
23.8	Y17C-0624	4	Capscrew	24.2	2311220	1	Cartridge - Pressure Red.
23.9	221518W	4	Capscrew		234655	1	. Seal Kit
23.10	210709	1	Fitting	24.3	2311221	1	Valve Cartridge
23.12	R833400	2	Fitting		2501643	1	. Seal Kit
23.13	231439	4	Fitting	24.4	2311212	1	Valve - Cart., 3 Way Spool
23.14	R833114	1	Fitting		2310009	1	. Coil, Solenoid
23.15	R833700	1	Fitting		252134	1	. Valve, Cartridge
23.16	R834052	1	Fitting		R15668	1	. Seal Kit
23.17	236855	4	Fitting	24.6	2310181	1	Plug
23.18	R833251	5	Fitting	24.7	R833251	1	Fitting
23.19	231452	2	Fitting	24.8	231821	2	Fitting
23.20	R833800	2	Fitting	24.9	2311228	1	Hose Assembly
23.21	R834100	1	Fitting	24.10	2311229	1	Hose Assembly
23.22	R834253	1	Fitting	24.11	R833400	1	Fitting
23.23	222442W	1	Fitting				
23.24	232984	1	Fitting				
23.25	2311500	1	Fitting Assembly				
23.26	2311356	1	Hose Assembly				
23.27	2311235	1	Hose Assembly				
23.28	242111	1	Hose Assembly				

Pump and Related Hydraulics



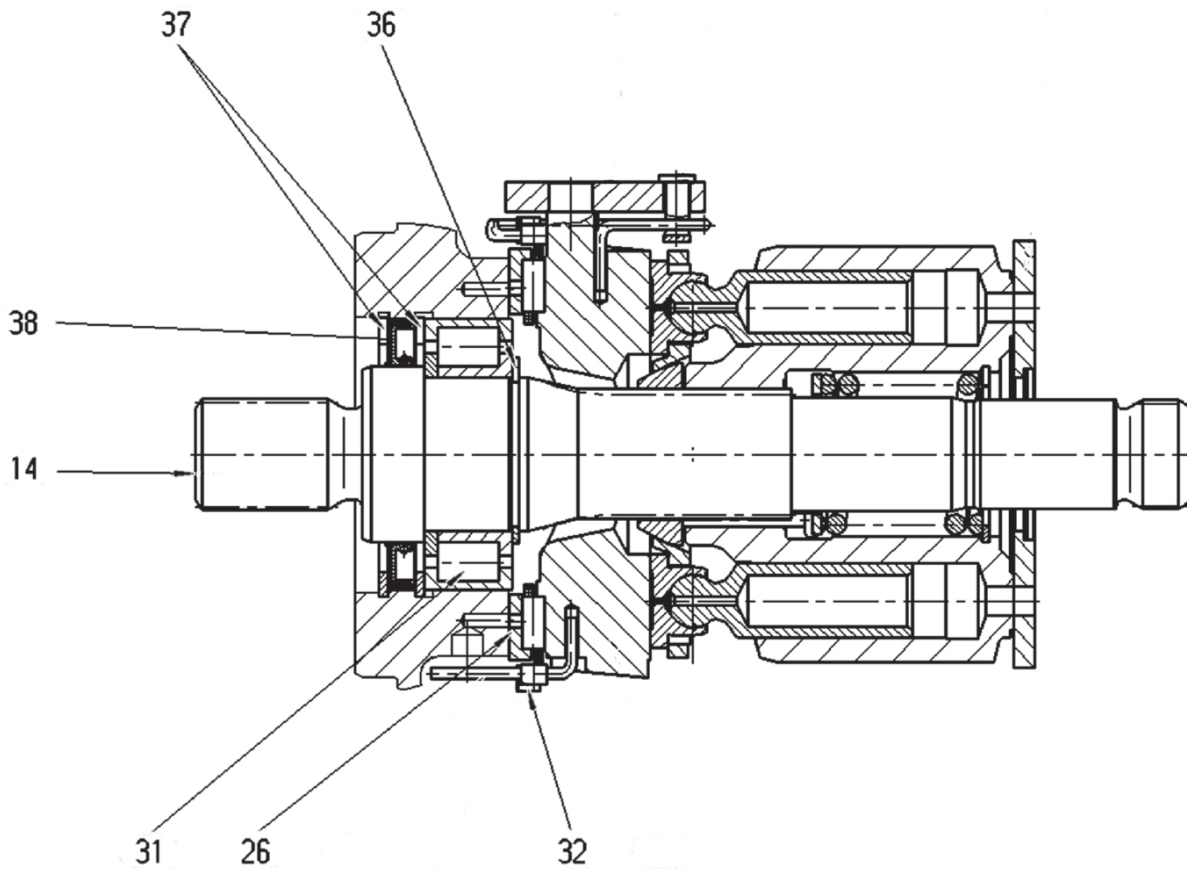
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2304231W	1	Assembly, Pump (p. 39)	22	222442W	1	Fitting
2	-----	1	Plate,(See Frames & Covers)	23	293796W	4	Capscrew
3	2304195W	1	Valve, Shuttle	24	2304193W	1	Gasket
	2305073W	1	. Kit, Seal	25	222400W	1	Fitting
4	14591W	3	Fitting	27	R6515575	1	Clamp, Hose
5	39742W	1	O-Ring	28	209843	10"	Hose, Push-On
6	*a 2305987W	2	Setscrew	29	2305003W	1	Assembly, Hose
7	16538W	2	Fitting	30	2304057W	1	Assembly, Tube
8	2305133W	1	Assembly, Tube	31	2304104W	1	Assembly, Tube
9	2304149W	1	Assembly, Tube	32	222535W	4	Flange, Half
10	2304150W	1	Assembly, Tube	33	*a 177461W	8	Capscrew
11	16556W	1	Fitting	34	2304110W	2	O-Ring
12	2304152W	1	Assembly, Tube	35	2305007W	1	Assembly, Hose
13	239784W	1	Fitting	36	2305013W	1	Assembly, Hose
14	16558W	1	Fitting	37	R400128	1	Assembly, Hose
15	16559W	1	Fitting	38	*b, *c 2307522W	1	Cap, Orifice
16	16562W	1	Fitting	38	*d 2310417	1	Cap, Orifice
17	201752W	1	Fitting				
18	2303848W	12	Capscrew	*a	Use 318702W Thread Lock		
19	2304115W	1	Assembly, Tube	*b	First Used on S/N H4A-1053		
20	2304114W	1	Strainer	*c	Last Used on S/N H4A-1093		
21	2304014W	1	Manifold, Pump	*d	First Used on S/N H4A-1099		

Pump - Hydrostatic 45CC



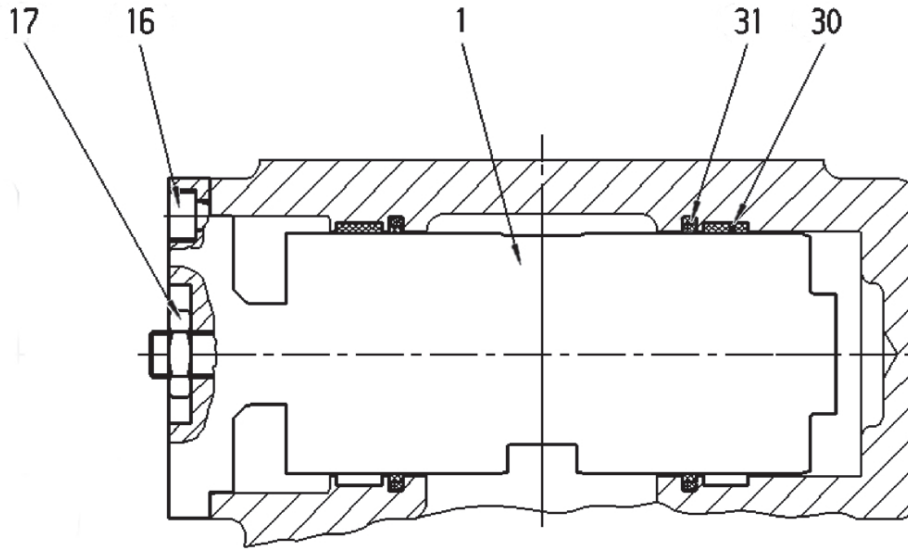
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2304231W</b>		<b>Pump Assembly</b>				
	2303789W		. Pump - Hydrostatic 45CC	41	2305910W	1	. O-Ring
1	2305788W	1	.. Rotary Group (p. 40)				
2	2305804W	1	.. Hydraulic Control (p. 41)				
3	2305833W	1	.. Port Plate w/Valves (p. 42)				
4	2305876W	1	.. Assembly, Internal Gear Pump (p. 43)				

**Pump - Hydrostatic 45CC**  
Rotary Group



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305788W</b>		<b>Rotary Group</b>				
14	2305794W	1	. Shaft, Drive	37	*a 2305802W	2	. Seeger, V-Ring
26	2305798W	1	. Liner, Bearing (Pair)	38	*a 2305803W	1	. Ring, Shaft Seal
31	2305799W	1	. Bearing, Plain Roller		*a		Contained in 2307356W Seal Kit
32	2305800W	1	. Assembly, Cradle Bearing (Set)				
36	*a 2305801W	1	. Ring, Retaining				

**Pump - Hydrostatic 45CC**  
Hydraulic Control



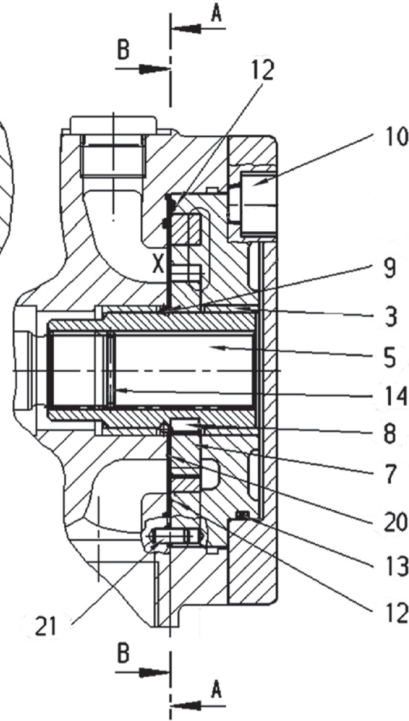
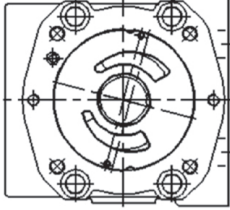
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305804W</b>		<b>Control, Hydraulic</b>				
1	2305805W	1	. Piston, Comp. Positioning	31	*a 2305832W	2	. Turcon, Glyd-Ring
16	2305829W	4	. Screw, Socket-Head				
17	2305830W	1	. Nut, Hexagon		*a		Contained in 2307356W Seal Kit
30	*a 2305831W	2	. Ring, Guide				

# Pump - Hydrostatic 45CC

## Internal Gear Pump Assembly

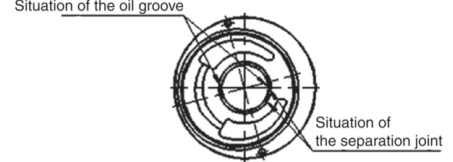
**A-A 1:2.5**  
Item #20 only

Direction of rotation right,  
with view of through-drive shaft



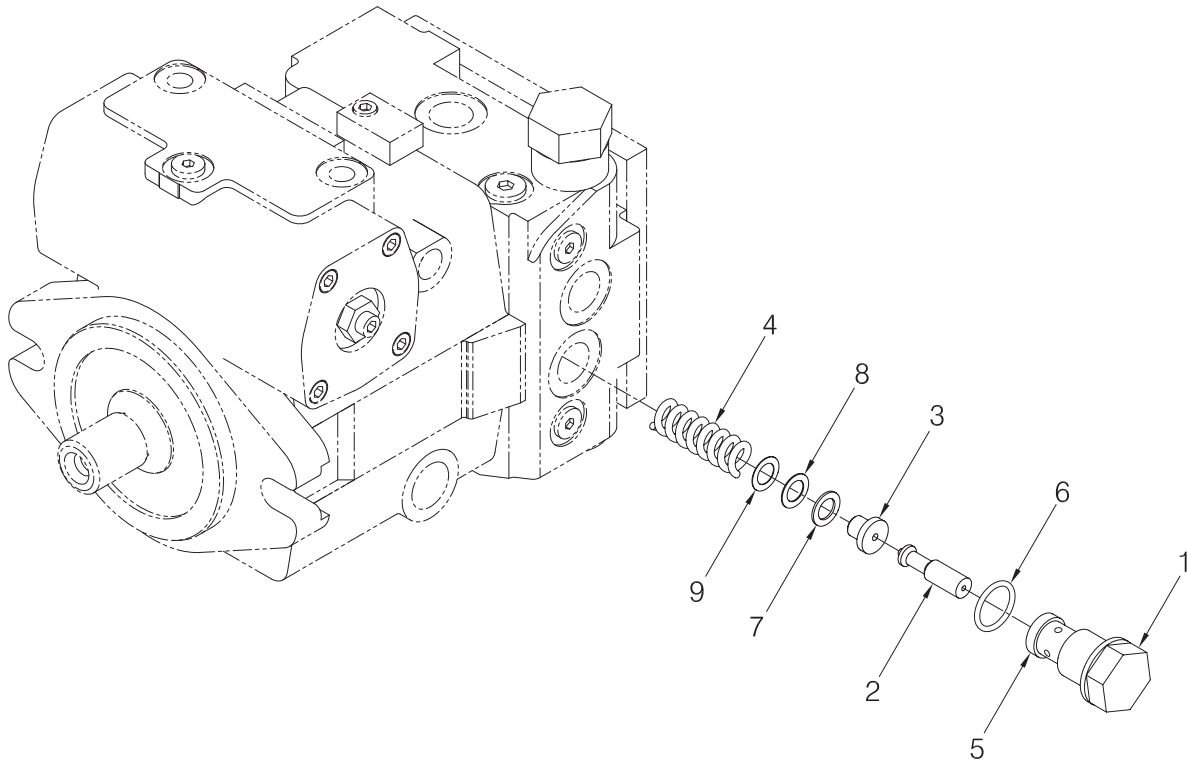
**B-B 1:2.5**  
Item #3 only

Direction of rotation right,  
with view of through-drive shaft



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305876W</b>		<b>Assembly, Int. Gear Pump</b>				
3	2305867W	1	. Bushing, Bearing	12	*a 2305885W	2	. Kantseal, RG.
	2305879W	1	. Bushing, Bearing	13	*a 2305886W	1	. O-Ring
5	2305880W	1	. Shaft, Through-Drive	14	*a 2305887W	1	. Ring, Snap
7	2305881W	1	. Set, Wheel	20	2305888W	1	. Plate, Wear
8	*a 2305882W	1	. Key, Shaft	21	2305889W	1	. Pin, Cylinder
9	*a 2305883W	1	. Ring, Snap				
10	2305884W	4	. Screw, Socket-Head		*a		Contained in 2307356W Seal Kit

**Pump - Hydrostatic 45CC**  
Pressure Relief Valve

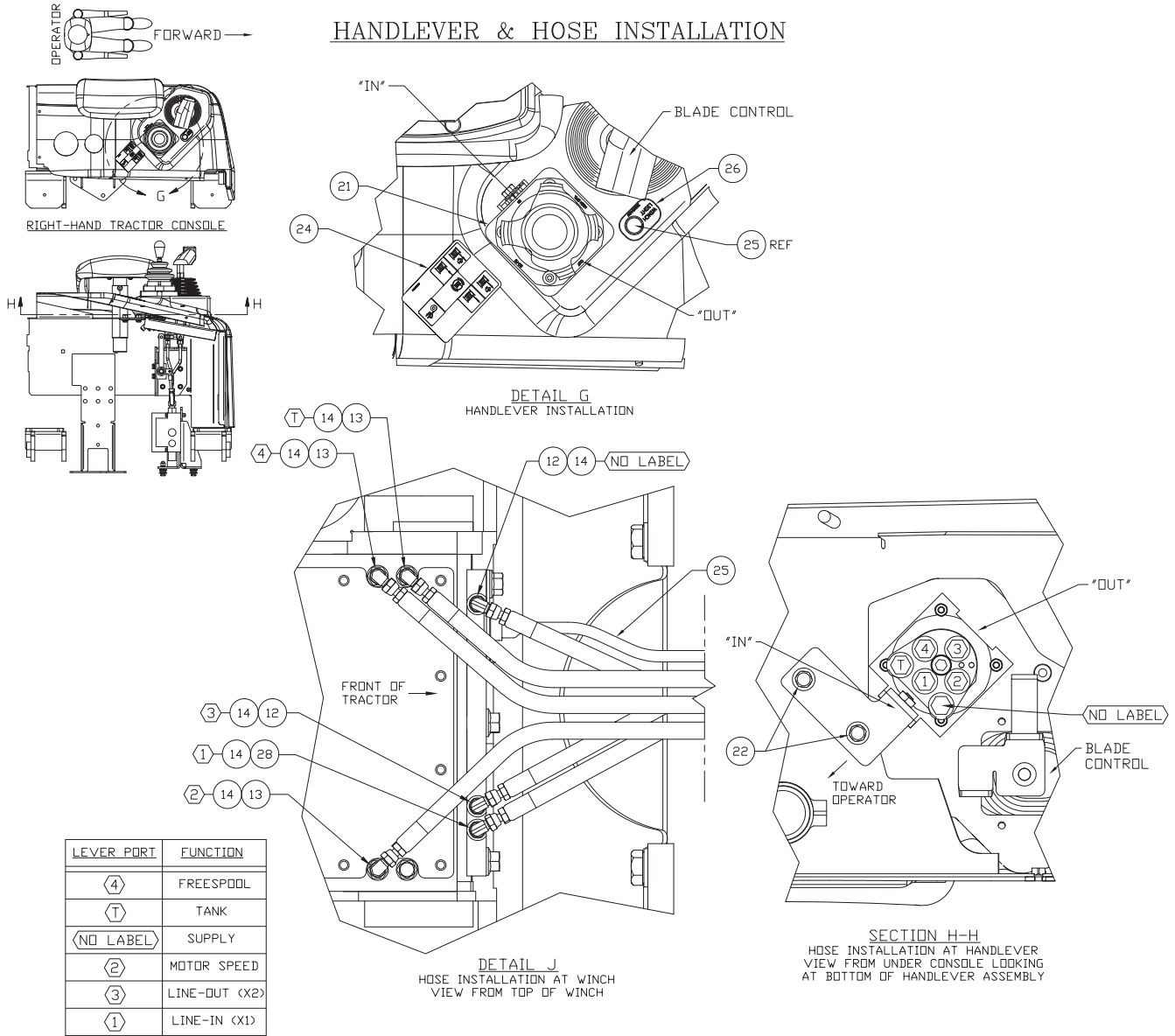


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305844W</b>		<b>Valve, Pressure Relief</b>				
1	*a 2305845W	1	. Screw, Locking	7	2305851W	A/R	. Shim, 1.0 mm
2	2305846W	1	. Piston, Valve	8	2304276W	A/R	. Shim, 0.5 mm
3	2305847W	1	. Collar, Spring	9	2304275W	A/R	. Shim, 0.3 mm
4	2305848W	1	. Spring				
5	*a 2305849W	1	. Ring, Steel Sealing	*a	Contained in Contained in 2307356W Seal Kit		
6	*a 2305850W	1	. O-Ring				

# Attaching Hydraulics & Controls

Case 650/750/850K, 750/850L

(H4AH\_R\_R15)



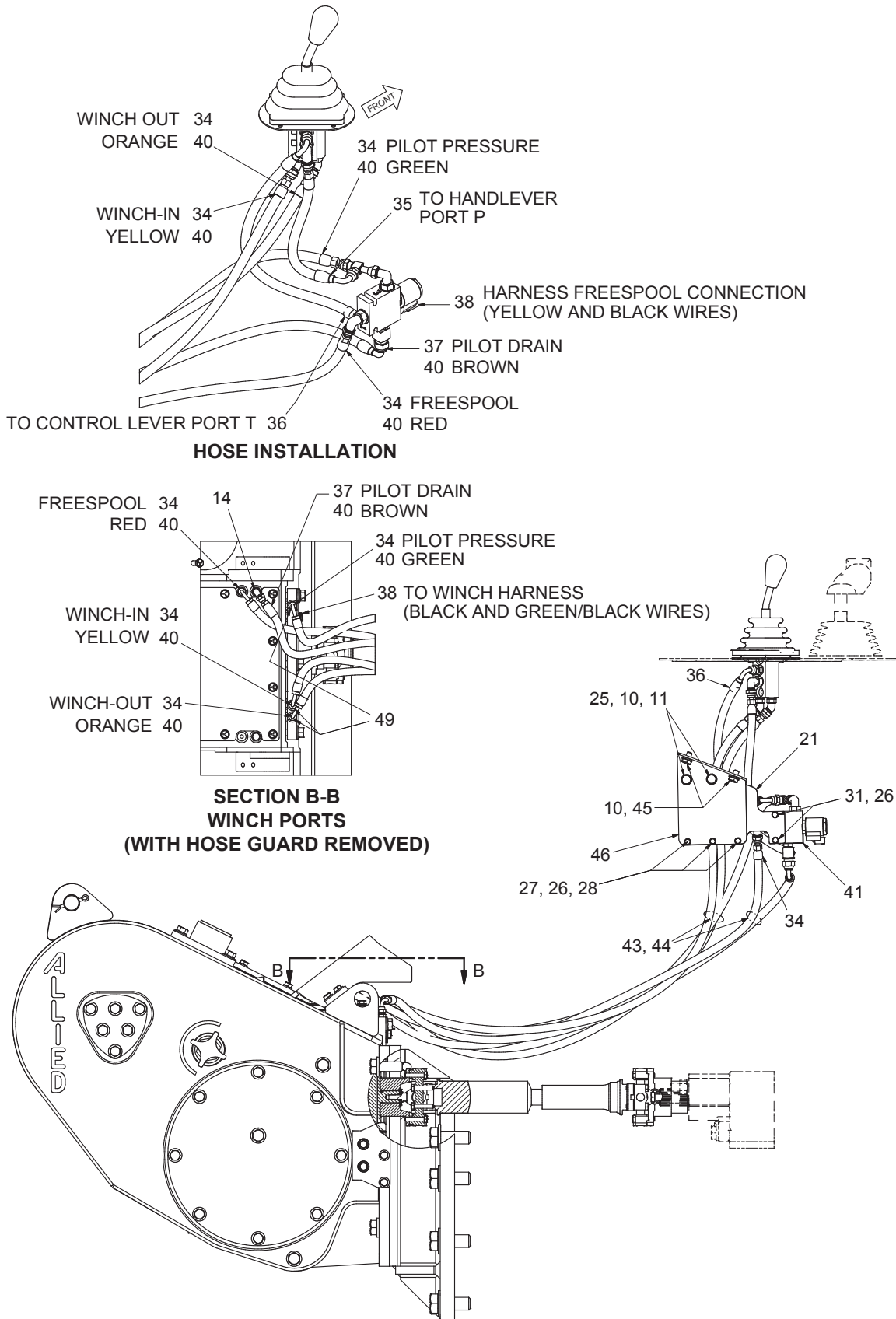
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
12	209486	2	Fitting	25	2311315	1	Assembly, Wire
13	212718	3	Fitting	28	2314508	1	Fitting, Tall
14	*a 2314379	6	Assembly, Hose				

\*a Included in 2315315 Hose Kit

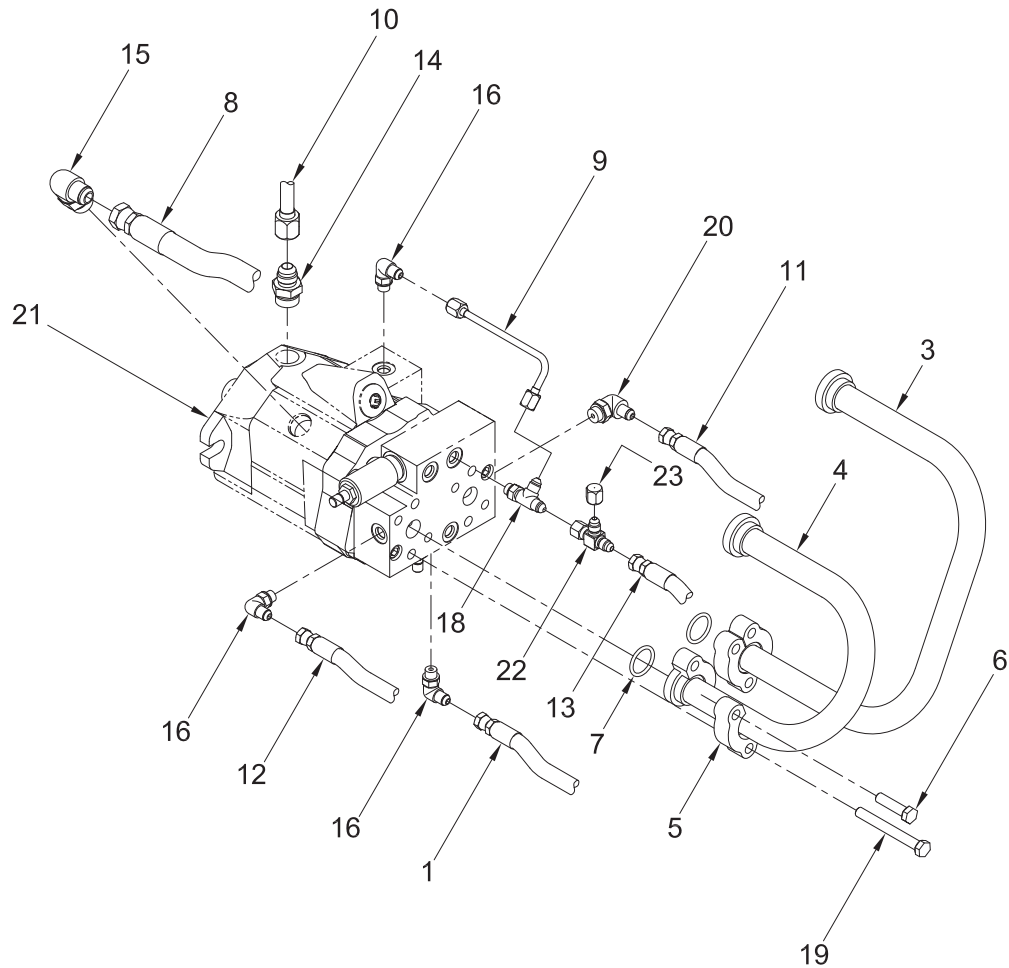
# Attaching Hydraulics & Controls

Case 650L/650M (H4AH\_R\_R16)

Page 1 of 2

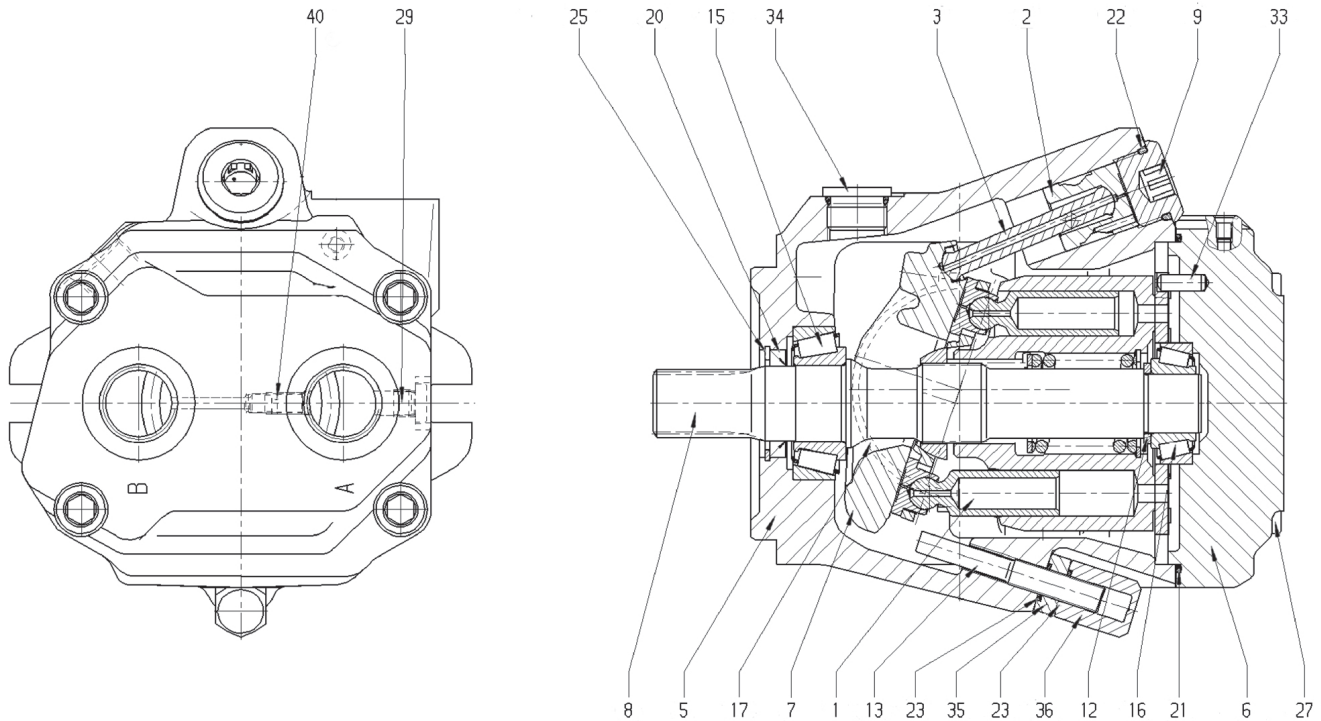


Motor and Related Hydraulics



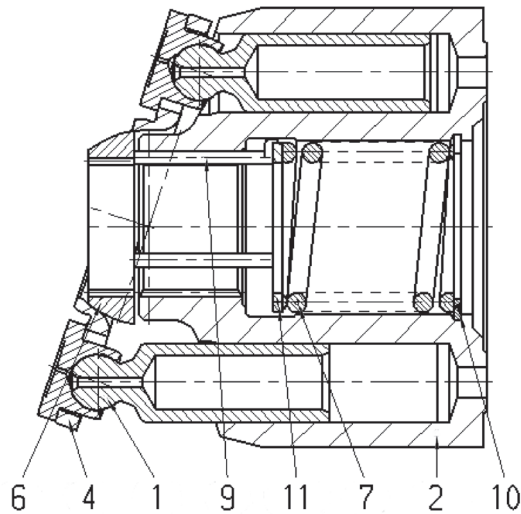
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2307009W	1	Assembly, Hose	14	16909W	1	Fitting
3	2304057W	1	Assembly, Tube	15	17224W	1	Fitting
4	2304104W	1	Assembly, Tube	16	16556W	3	Fitting
5	222535W	4	Flange, Half	18	16967W	1	Fitting
6	*a 177461W	4	Capscrew	19	*a 221518W	4	Capscrew
7	2304110W	2	O-Ring	20	201766W	1	Fitting
8	2305007W	1	Assembly, Hose	21	2303788W	1	Motor, Hydraulic (p. 47)
9	2304999W	1	Assembly, Tube	22	17059W	1	Fitting
10	2305014W	1	Assembly, Tube	23	2307522W	1	Cap, Orifice
11	2305139W	1	Assembly, Hose				
12	2305140W	1	Assembly, Hose				
13	2305141W	1	Assembly, Hose				
				*a	Use 318702W Thread Lock		

## Hydraulic 45CC 2 Speed Motor



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2303788W</b>		<b>Motor, Hydraulic 45CC 2 Speed</b>				
1	2305737W	1	. Group, Rotary (p. 48)	17	2305759W	2	. Shell, Cradle
2	2305748W	1	. Piston, Control	20	2305760W	1	. Seal, Shaft
3	2305749W	1	. Rod, Piston	21	2305761W	1	. O-Ring
5	2305750W	1	. Housing, Motor	22	2305762W	1	. O-Ring
6	2305751W	1	. Plate, Part	23	2305763W	2	. O-Ring
7	2305752W	1	. Plate, Swash	25	2305764W	1	. Ring, Retaining
8	2305753W	1	. Shaft, Drive	27	2305765W	4	. Screw, Socket
9	2305754W	1	. Plug, Screw	29	2305770W	1	. Plug
12	2305755W	1	. Shim, Adjustment	33	2305766W	1	. Pin, Dowel
13	2305756W	1	. Screw, Top	34	2305767W	1	. Plug
15	2305757W	1	. Bearing, Tapered-Roller	35	2305768W	1	. Nut
16	2305758W	1	. Bearing, Tapered-Roller	36	2305769W	1	. Nut, Cap
				40	2305771W	1	. Orifice

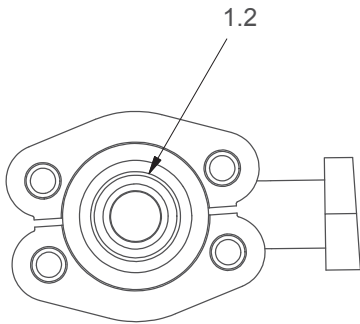
**Hydraulic 45CC 2 Speed Motor**  
Rotary Group



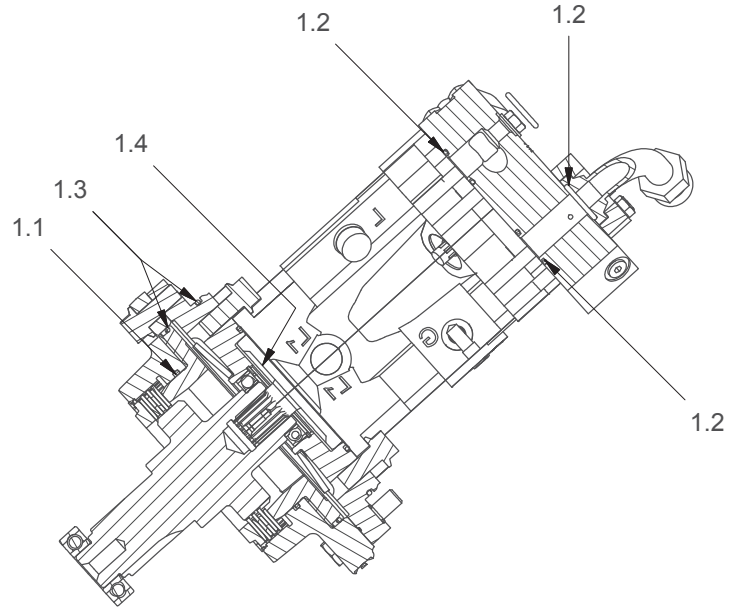
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305738W</b>		<b>Group, Rotary</b>				
1	2305739W	9	. Piston	7	2305743W	1	. Spring
2	2305740W	1	. Cylinder	9	2305744W	3	. Pin, Pressure
4	2305741W	1	. Plate, Retaining	10	2305745W	1	. Seeger, V-Ring
6	2305742W	1	. Ball, Retaining	11	2305746W	1	. Plate, Back-Up

# Motor Low Temperature Seal Kit

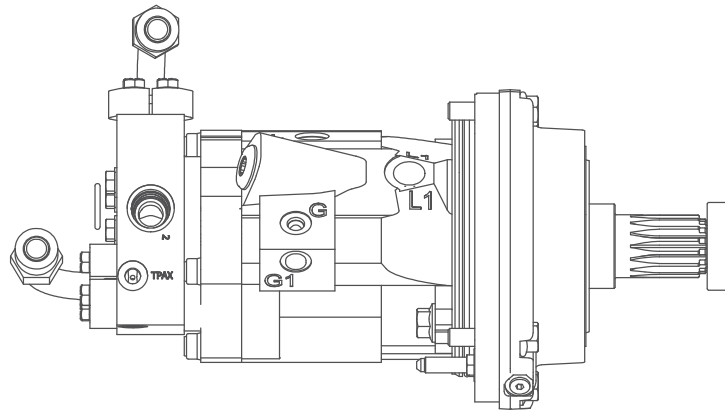
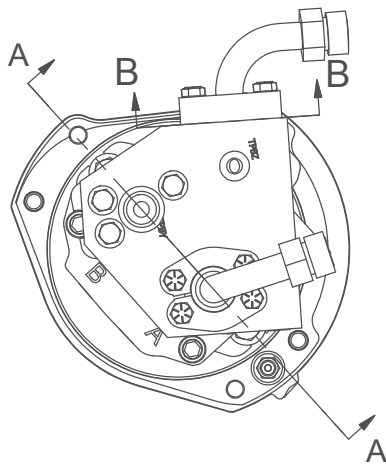
Standard Winch



SECTION B-B



SECTION A-A



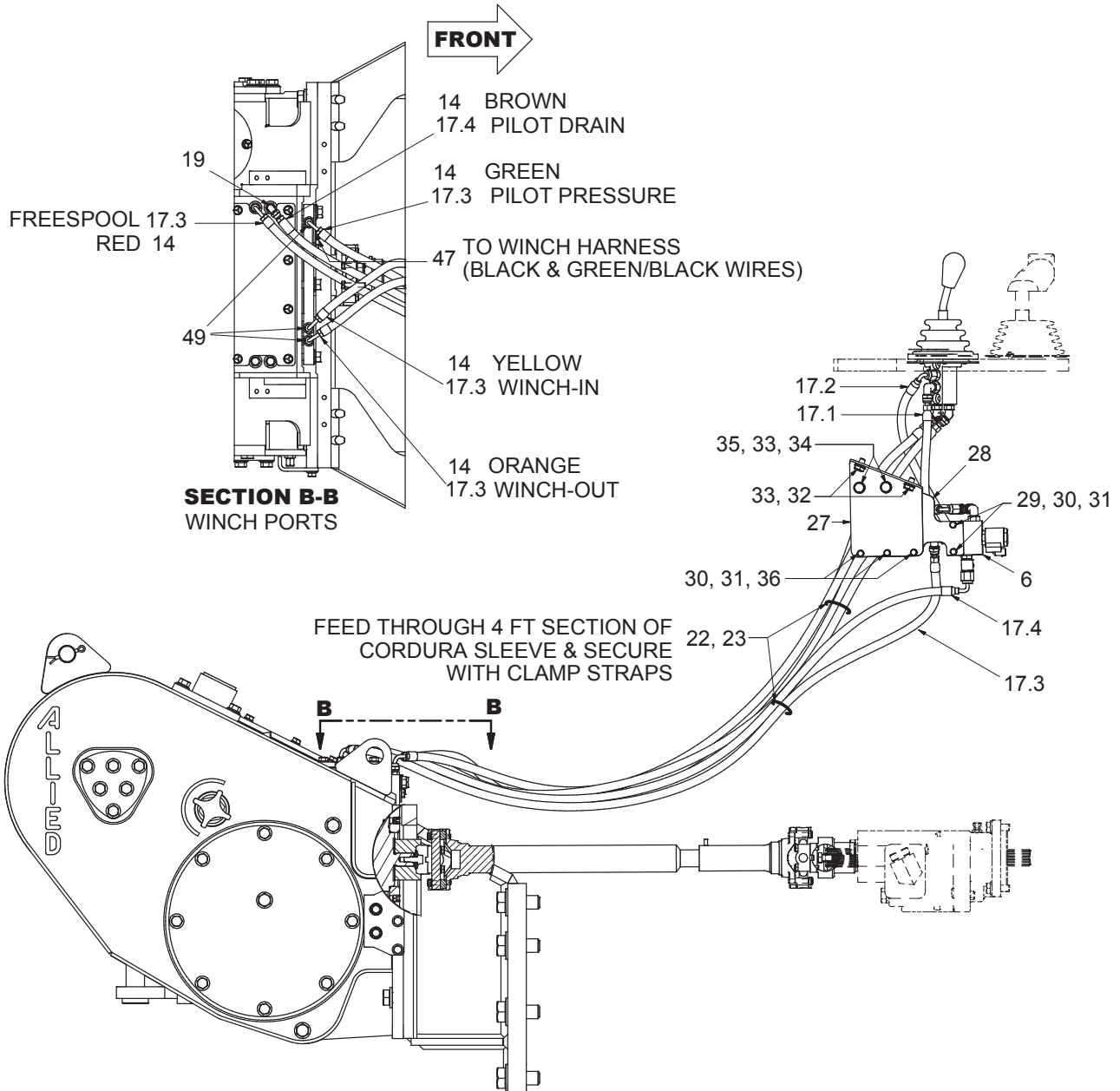
H4AT MOTOR ASSEMBLY  
RESCUE WINCH

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2312969</b>		<b>Kit, H4A Low Temperature Seal</b>				
1.1	203540	1	. O-Ring	1.3	15899W	2	. O-Ring
1.2	212380	4	. O-Ring	1.4	258729	1	. Seal, Shaft

# Attaching Hydraulics & Controls

Case 750/850M (H4AH\_R\_R17)

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## Attaching Hydraulics & Controls

Case 650L/650M (H4AH\_R\_\_R16)

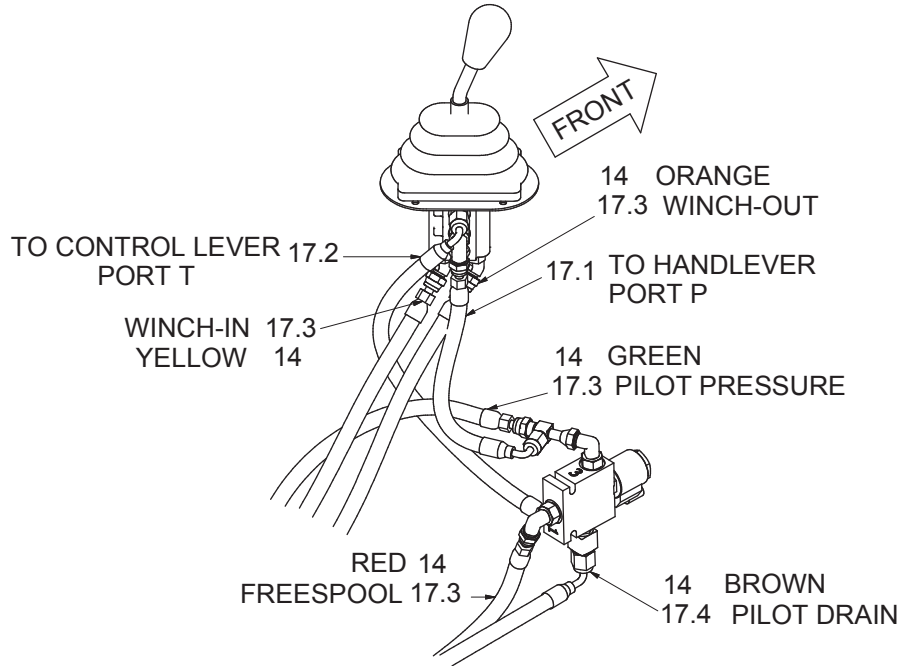
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
10	296420W	6	Washer	38	2312888	1	Harness, Wire
11	293628W	2	Capscrew	40	2304988W	1	Kit, Color Tie Strap
14	212718	1	Fitting	41	2312889	1	Assy, F/S Valve (p. 48 )
21	2314326	1	Bracket, Valve	43	137852W	10	Clamp, Strap
25	292655W	2	Nut	44	R13846	8 ft	Sleeve, Cordura
26	296417W	14	Washer	45	Y19C-M1016	2	Capscrew
27	292653W	7	Nut	46	2313001	1	Plate, Formed
28	292501W	5	Capscrew	49	209083	3	Fitting
31	Y09C-M0650	2	Capscrew				
34	*a 2314375	4	Assembly, Hose	*a	Included in 2315317 Hose Kit		
35	*a 2312885	1	Assembly, Hose				
36	*a 2312886	1	Assembly, Hose				
37	*a 2314376	1	Assembly, Hose				

## Attaching Hydraulics & Controls

Case 750/850M (H4AH\_R\_\_R17)

Page 2 of 2

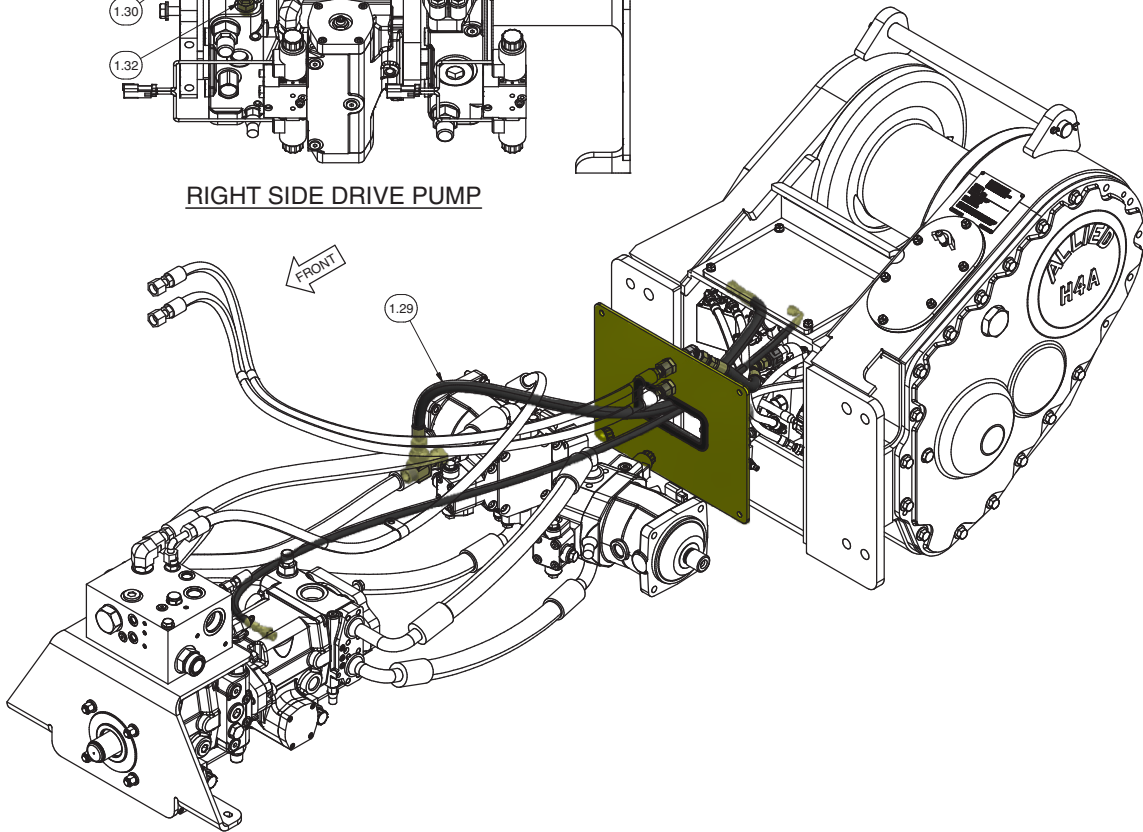
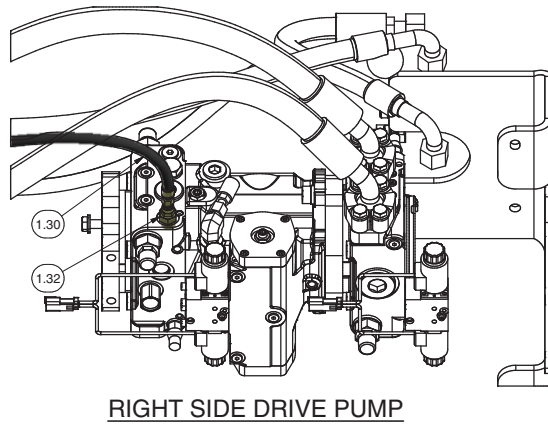
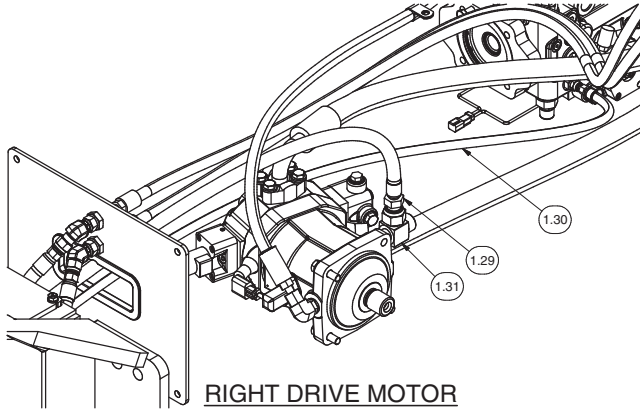


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
6	2315110	1	Assy, Valve - 24V Freespool (p. 49)	28	2314326	1	Bracket, Valve
14	2304988W	1	Kit, Various Color Tie Strap	29	Y09C-M0650	2	Capcrew
17	2314932	1	Kit, Hose	30	296417W	10	Washer
17.1	2312885	1	. Assembly, Hose	31	292653W	5	Nut
17.2	2312886	1	. Assembly, Hose	32	Y19C-M1016	2	Capcrew
17.3	2315195	4	. Assembly, Hose	33	296420W	6	Washer
17.4	2315196	1	. Assembly, Hose	34	293628W	2	Capcrew
19	212718	1	Fitting	35	292655W	2	Nut
22	R13846	8 ft	Sleve, Cordura	36	292501W	2	Capcrew
23	137852W	10	Clamp, Strap	47	2312122	1	Harness, Wire - 24V
27	2313001	1	Plate, Formed	49	209083	3	Fitting

# Attaching Hydraulics & Controls

Case 750/850M (H4AT\_Y\_R17)

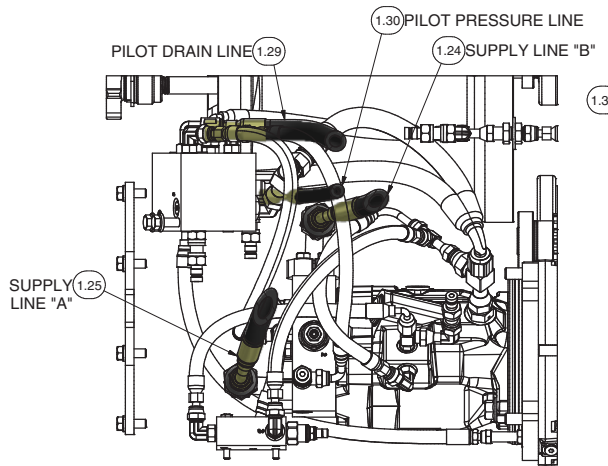
Page 1 of 2



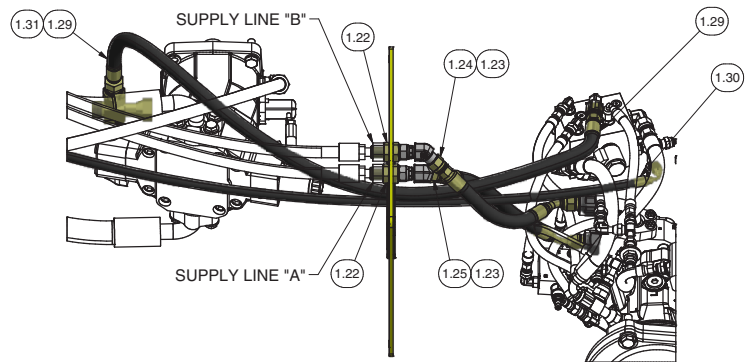
## Attaching Hydraulics & Controls

Case 750/850M (H4AT\_Y\_\_R17)

Page 2 of 2



PILOT, DRAIN, & SUPPLY HOSE CONNECTIONS  
FRAME REMOVED

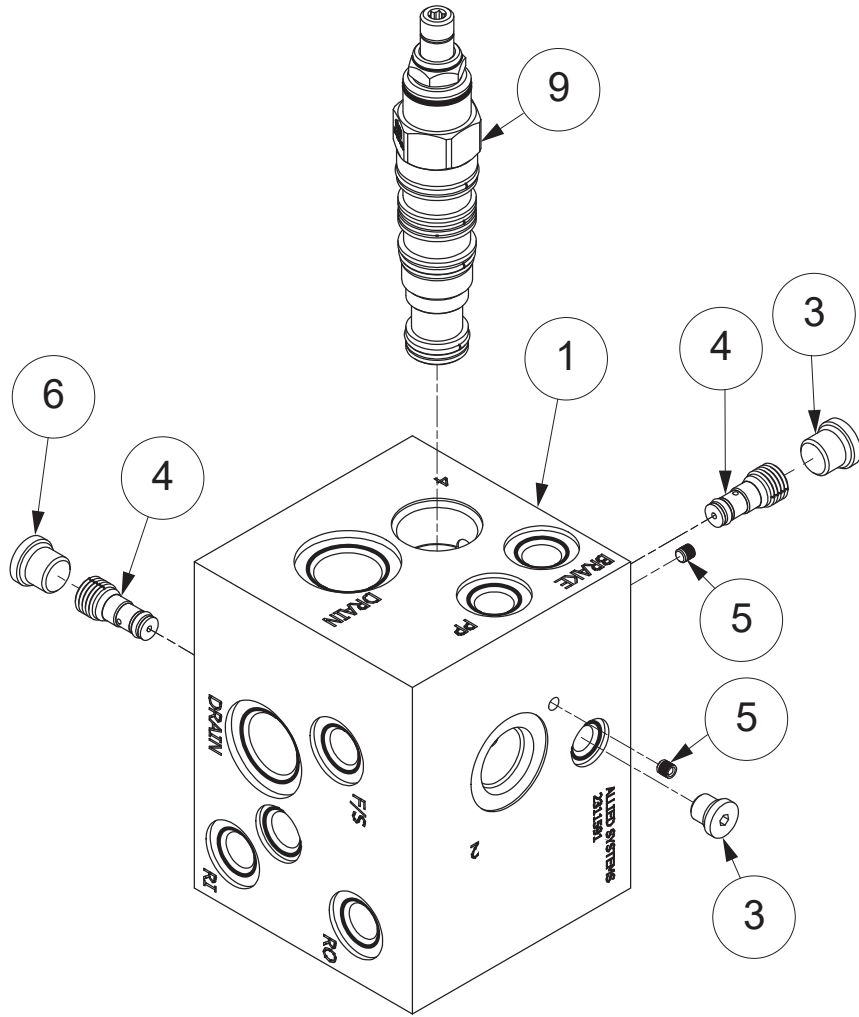


BULKHEAD HOSES CONNECTIONS

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.22	R834103	2	Fitting	1.29	2313046	1	Hose Assembly
1.23	2315121	2	Fitting	1.30	2317090	1	Hose Assembly
1.24	2317638	1	Hose Assembly	1.31	R834055	1	Fitting
1.25	2317639	1	Hose Assembly	1.32	R833104	1	Fitting

# Manifold Assembly, Rescue Control

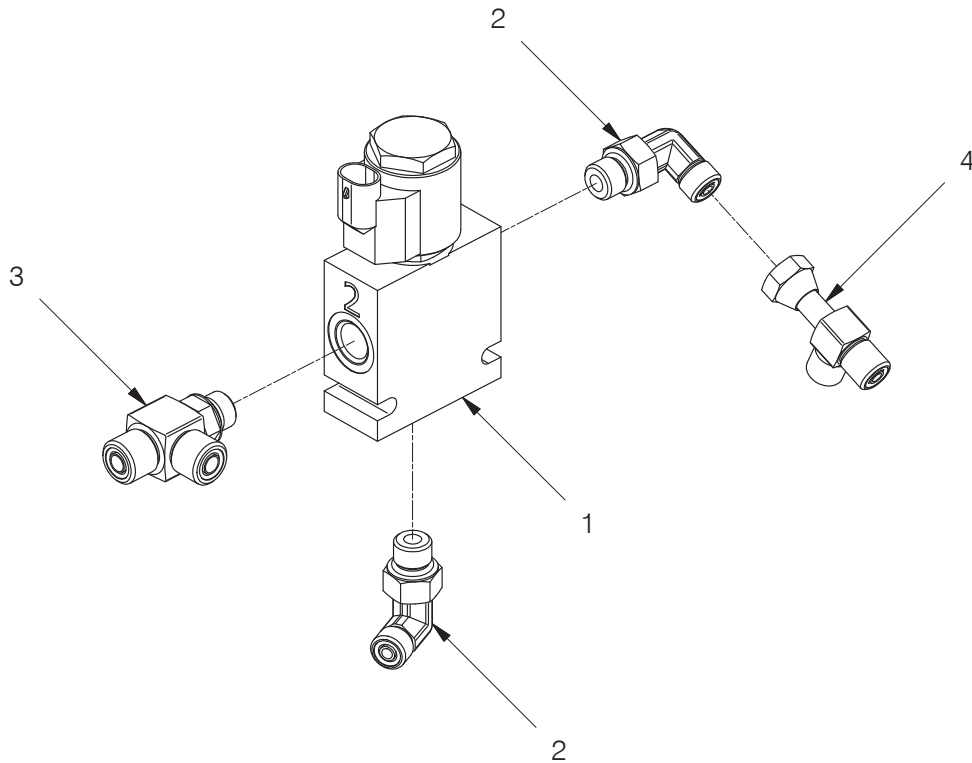
Case 750/850M (H4AT\_Y\_\_R17)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311591</b>		<b>Manifold Assy, Rescue Control</b>				
1	2311590	1	. Manifold, Control	5	2307480W	2	. Plug, Expansion
3	242230	4	. Fitting	6	235387	2	. Fitting
4	2307227W	2	. Valve, Shuttle	9	2311592	1	. Valve, Directional
	2307231W	1	.. Seal Kit		252566	1	.. Seal Kit

# FREESPOOL Valve Assembly

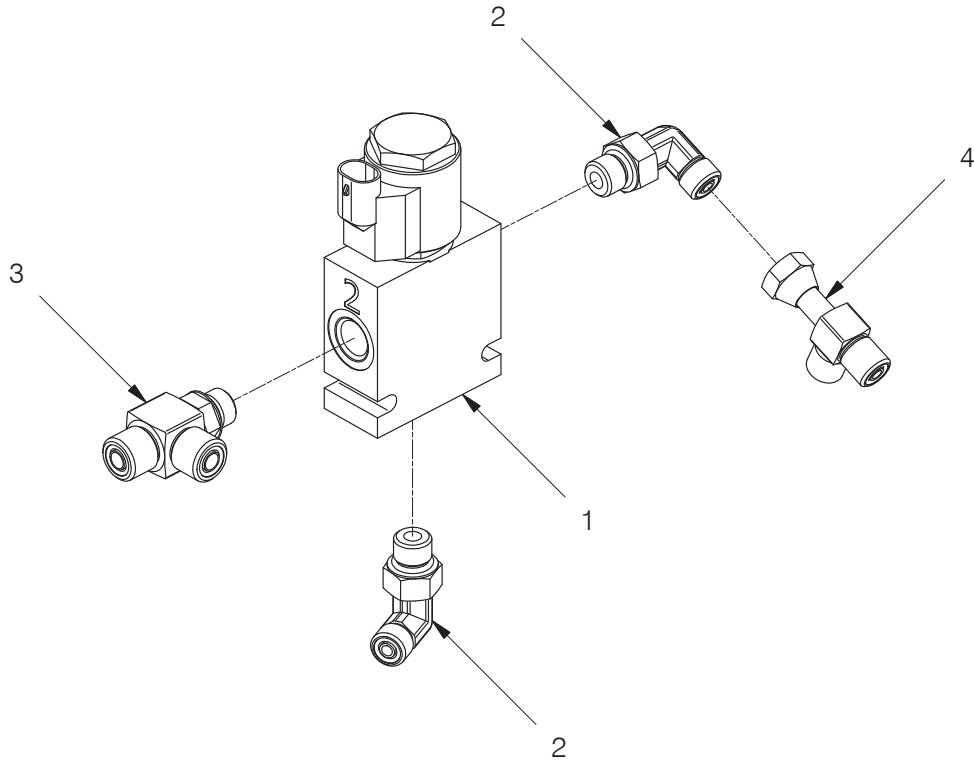
Case 650L/650M (H4AH\_R\_R16)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2312889</b>		<b>Assembly, FREESPOOL Valve</b>				
1	2310011	1	. Assy, Valve Manifold (p. 55)	3	231465	1	. Fitting
2	R833253	2	. Fitting	4	236855	1	. Fitting

# FREESPOOL Valve Assembly

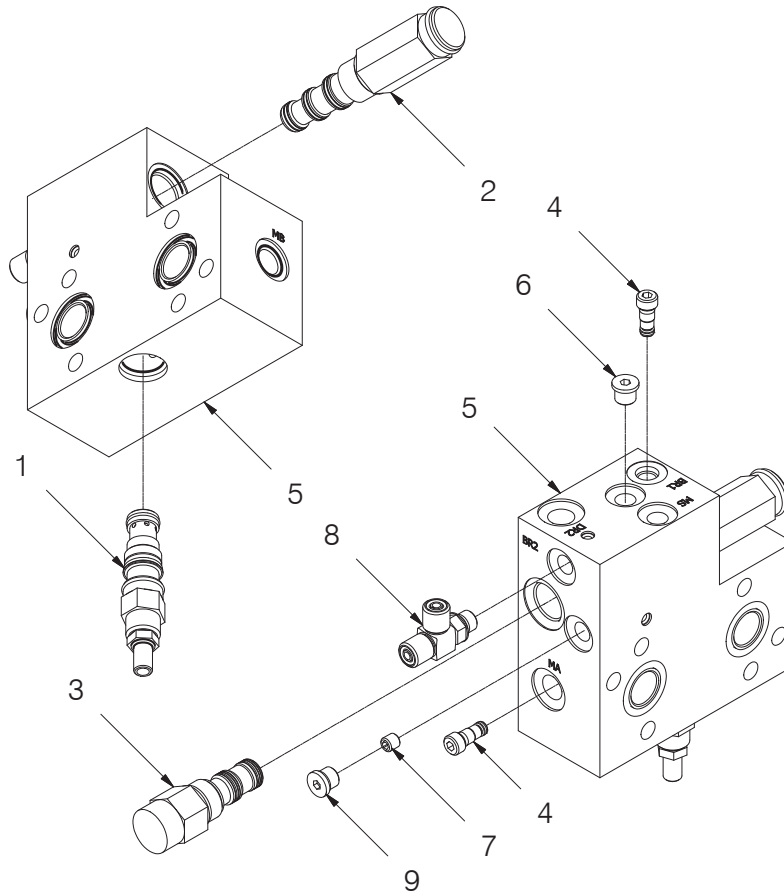
Case 750/850M (H4AH\_R\_R17)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315110</b>		<b>Assembly, FREESPOOL Valve</b>	3	231465	1	Fitting
1	2307833W	1	Assy, Valve Manifold (p. 56 )	4	236855	1	Fitting
2	R833253	2	Fitting				

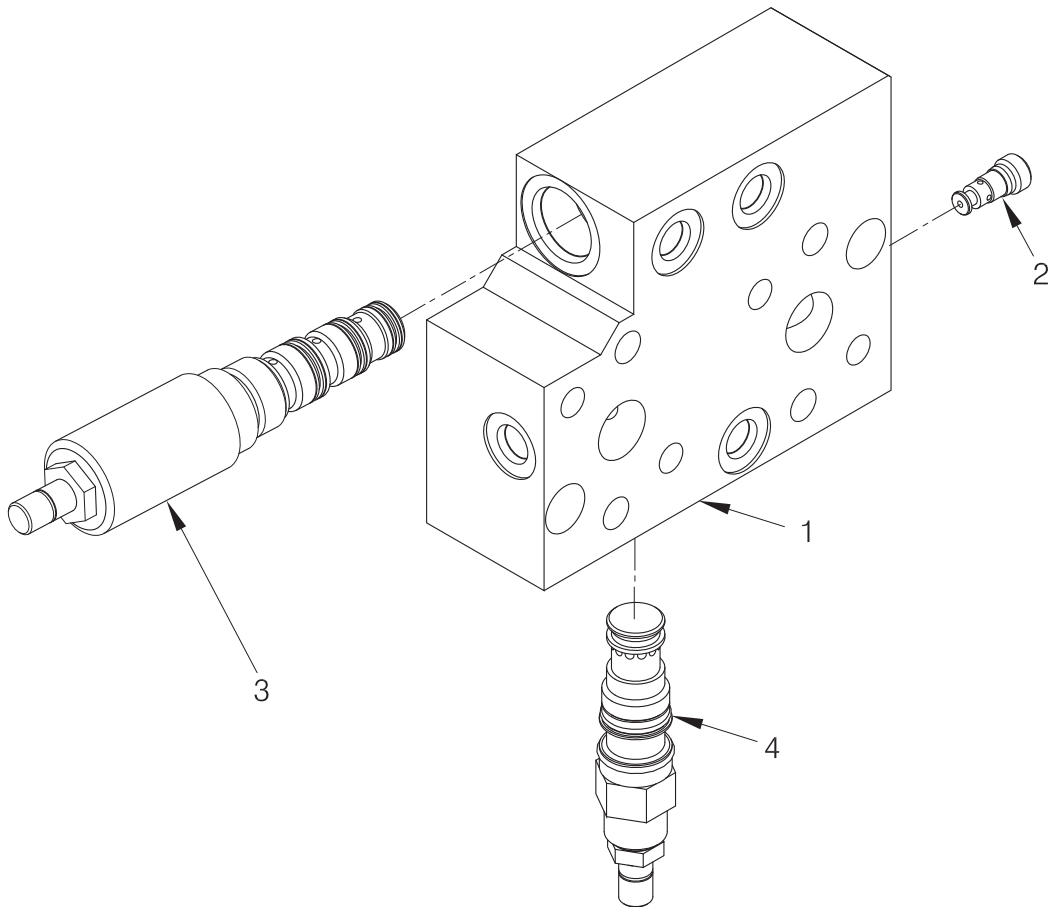
# Motor Valve Assembly

H4AH\*Y



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2310966</b>		<b>Assembly, Manifold</b>	5	2310190	1	. Assembly, Valve
1	2311172	1	. Cartridge, Pressure Red.	6	222442W	1	. Fitting
2	2310192	1	. Valve, Directnl. Cartridge	7	2312196	1	. Plug, Orifice
	252563	1	.. Kit, Seal	8	R833400	1	. Fitting
	2307221W	1	.. Seal, Vent Cap	9	235387	1	. Fitting
3	2307170W	1	. Valve, Sequence				
	2307172W	1	.. Kit, Seal				
4	2307169W	2	. Valve, Shuttle				
	2307171W	1	.. Kit, Seal				

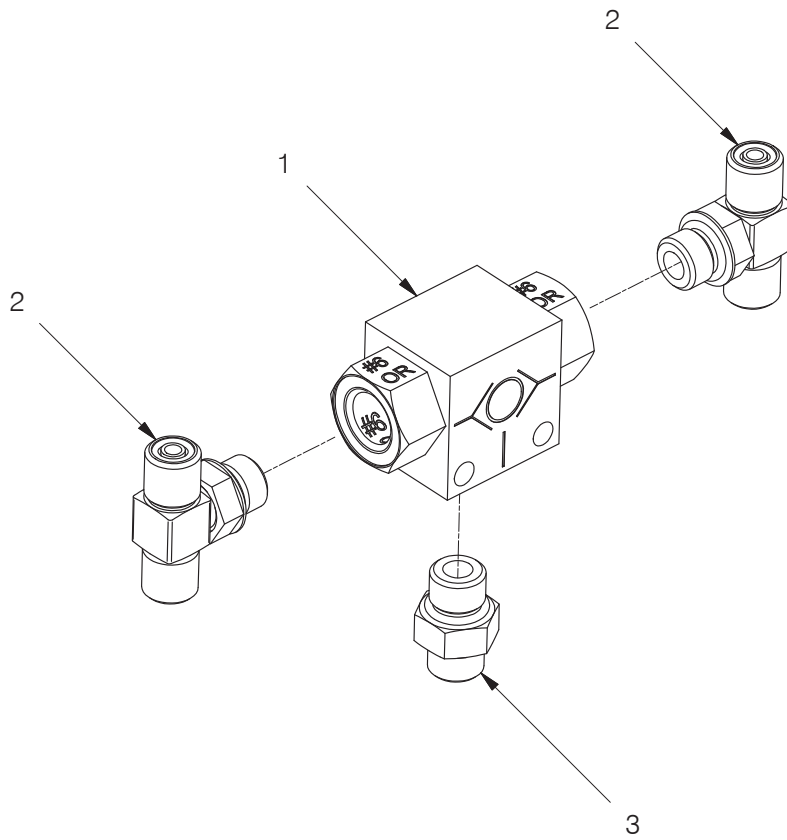
**Motor Valve Assembly**  
H4AH\*R/Y



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2306566W</b>		<b>Assembly, Motor Valve</b>				
1	2305676W	1	. Manifold, Motor Speed	4	2304004W	1	. Cartridge, Pressure Red.
2	2304195W	1	. Valve, Shuttle		242101	1	. . Kit, Seal
	2305073W	1	. . Seal Kit				
3	2307162W	1	. Valve, Sequence				
	2305736W	1	. . Kit, Seal				

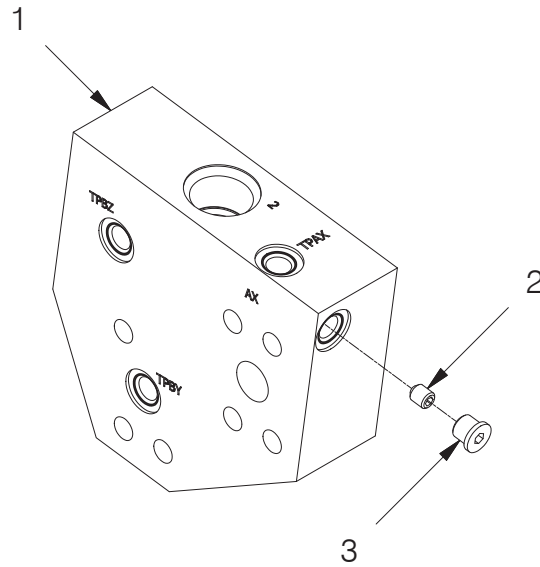
# Shuttle Valve Assembly

Case 650L/650M (H4AH\_R\_R16)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2312890</b>		<b>Assembly, Shuttle Valve</b>	3	R833103	1	. Fitting
1	247426	1	. Valve, Shuttle				
2	2311707	2	. Fitting				

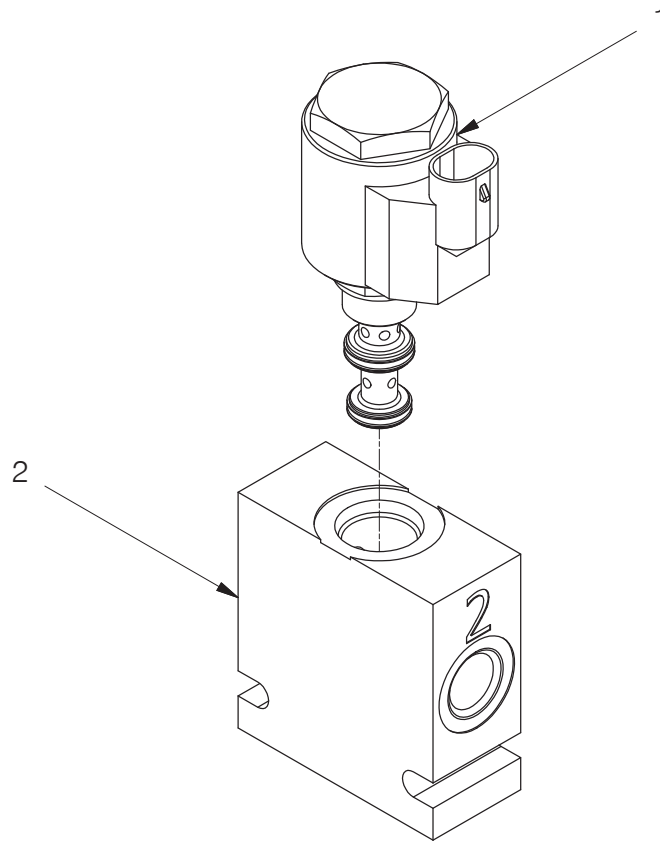
**Manifold Assembly**  
Standard Winch, S/N Code "T"



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	<b>2307568W</b>		<b>Assembly, Manifold</b>	3	222442W	1	. Fitting, O-Ring
	2307567W	1	. Manifold				
2	2310978	1	. Orifice - 0.015				

# Valve Manifold Assembly

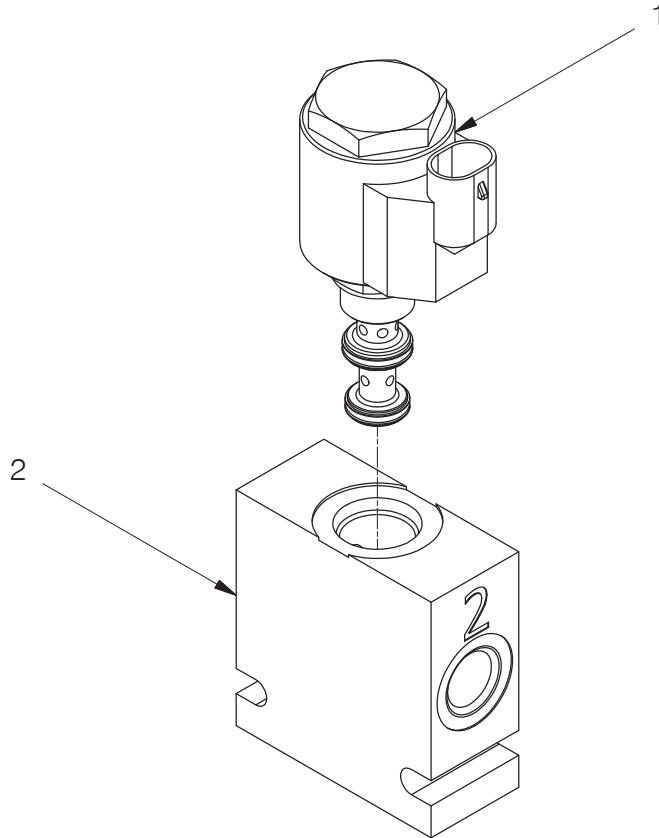
Case 650L/650M (H4AH\_R\_R16)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	<b>2310011</b>		<b>Assembly, Valve Manifold</b>	2	R12973129	1	. Body, Valve
	2310010	1	. Valve, Solenoid Cartridge				
	2307835W	1	.. Valve, Cartridge				
	2310009	1	.. Coil, Solenoid 12VDC				
	R15668	1	.. Kit, Seal				

# Valve Manifold Assembly

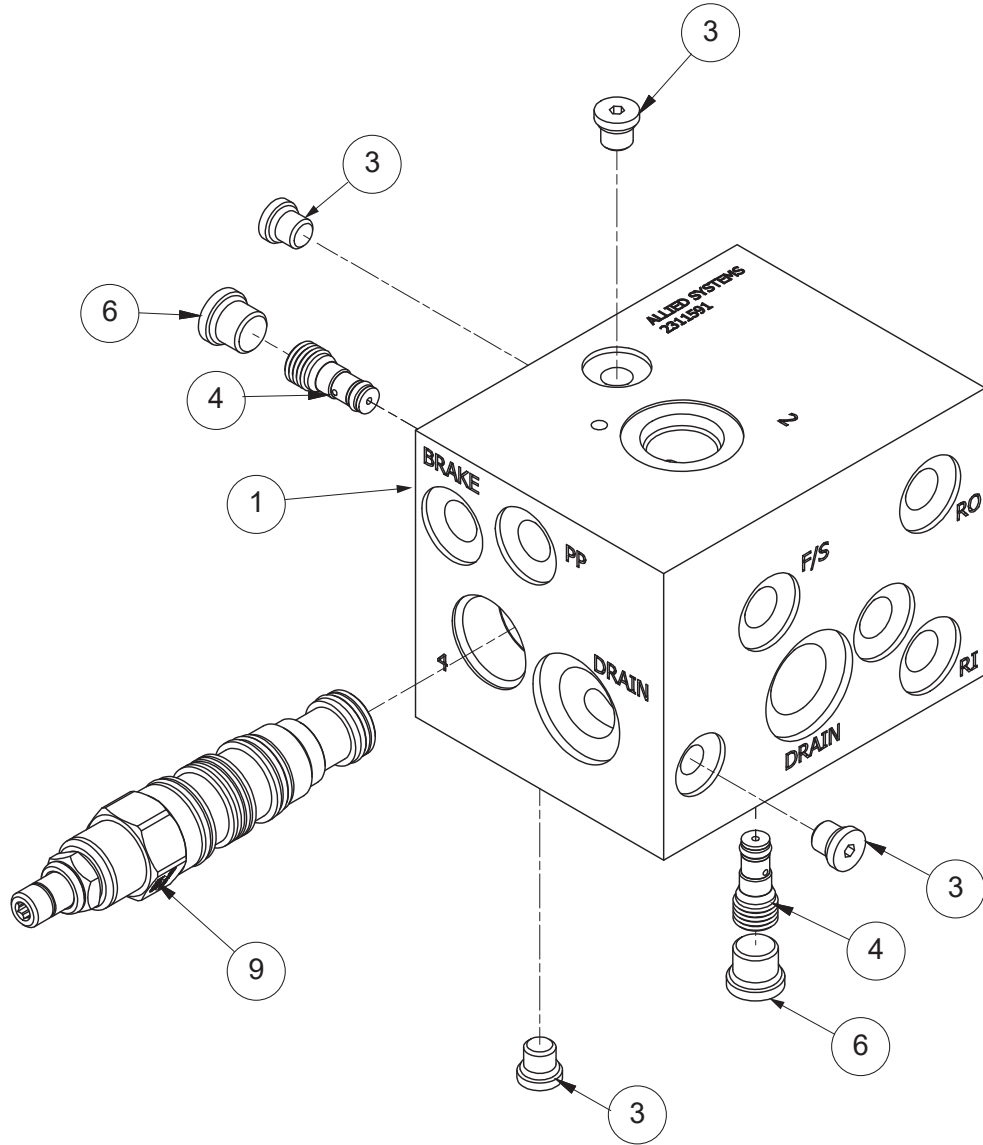
Case 750/850M (H4AH\_R\_R17)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	<b>2307833W</b>		<b>Assembly, Valve Manifold</b>	1			
	2307834W		. Valve, Cartridge	1	2	1	. Valve Body
	2307835W		.. Valve - Cartridge	1			
	250589		.. Coil, Solenoid 24VDC	1			
	R15668		.. Kit, Seal	1			

# Control Manifold Assembly

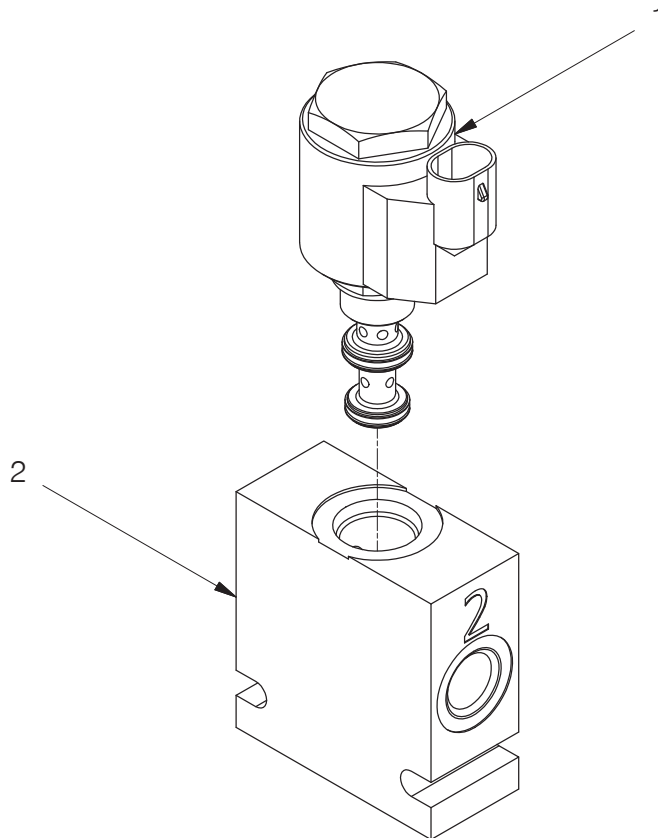
Case 750/850M (H4AT\_Y\_\_R17)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311591</b>		<b>Control Manifold Assembly</b>	3	242230	4	. Fitting
1	2311590	1	. Manifold - Control	4	2307227W	2	. Valve, Shuttle
2	2311592	1	. Valve, Brake		2307231W	1	. Seal Kit
	252566	1	. Seal Kit	6	235387	2	. Fitting

# Valve Manifold Assembly

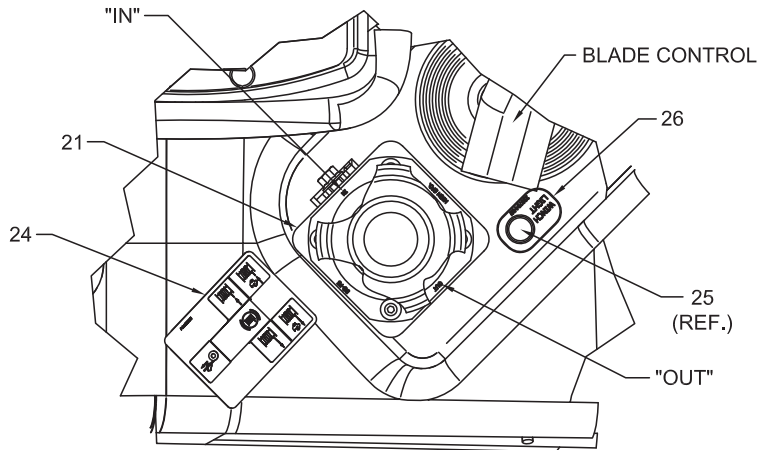
Case 750/850M (H4AH\_R\_R17)



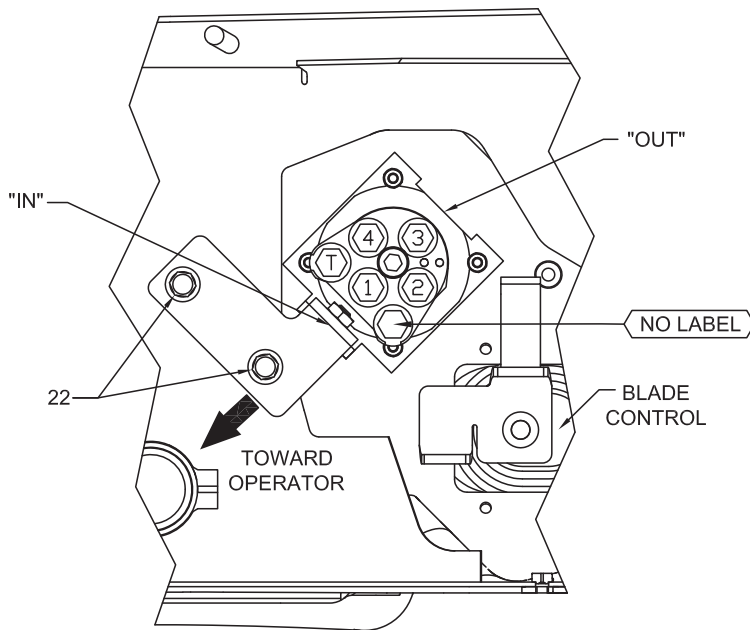
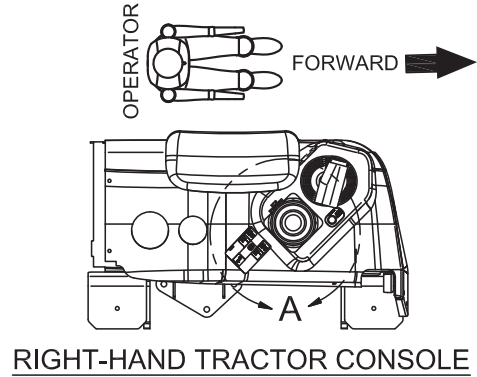
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2307833W</b>		<b>Assembly, Valve Manifold</b>				
1	2307834W	1	. Valve, Cartridge	2	R12973129	1	. Valve Body
	2307835W	1	. . Valve - Cartridge				
	250589	1	. . Coil, Solenoid 24VDC				
	R15668	1	. . Kit, Seal				

### Control Lever Mounting

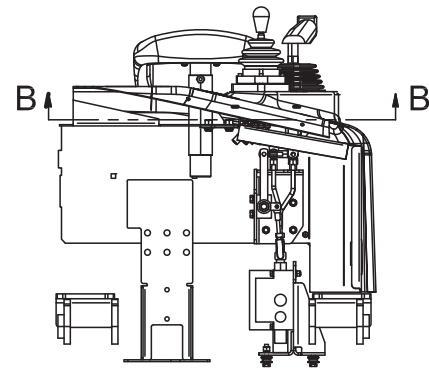
Case 650/750/850K, 750/850L (H4AH\_R\_R15)



**DETAIL A**  
CONTROL LEVER INSTALLATION



**SECTION B-B**  
HOSE INSTALLATION AT HANDLEVER  
VIEW FROM UNDER CONSOLE LOOKING  
AT BOTTOM OF HANDLEVER ASSEMBLY

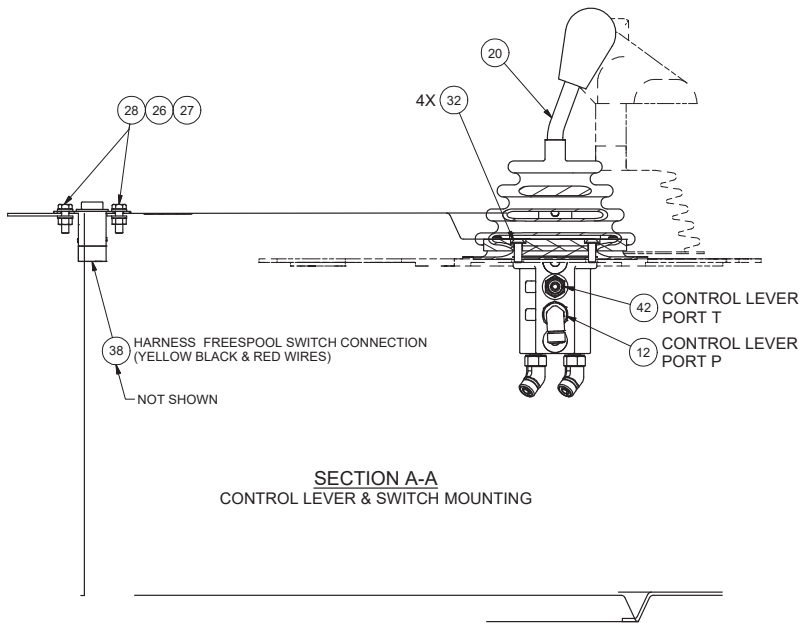
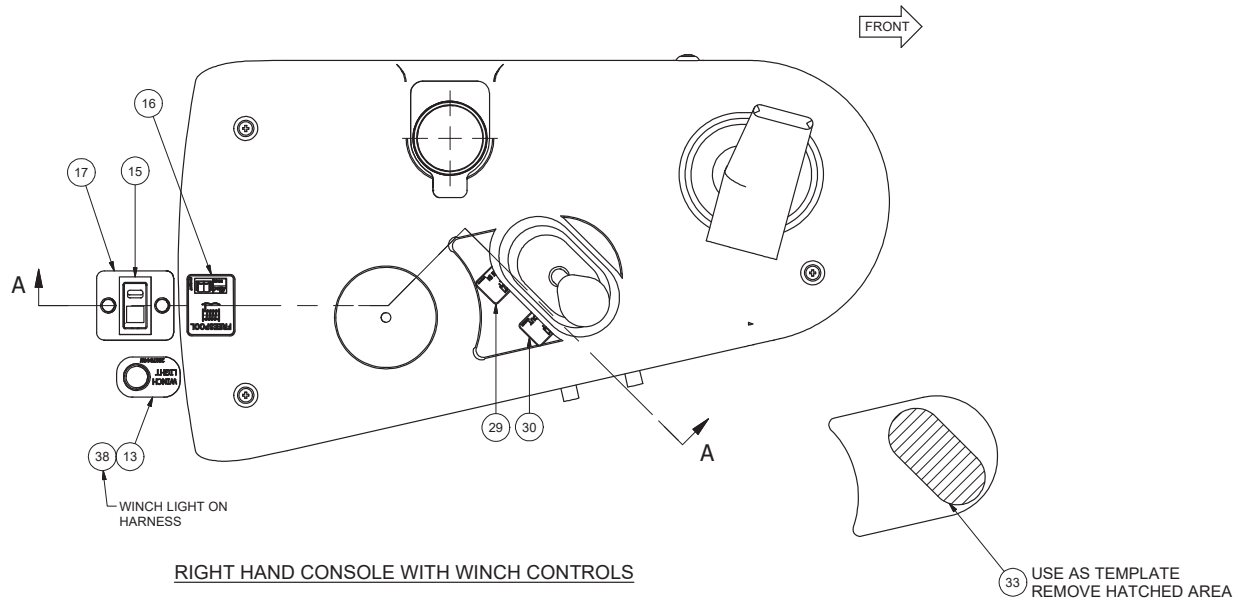


LEVER PORT	FUNCTION
④	FREESPOOL
Ⓣ	TANK
NO LABEL	SUPPLY
②	MOTOR SPEED
③	LINE-OUT <X1>
①	LINE-IN <X2>

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
21	2311203	1	Assembly, Control Lever (See p. 61)	24	2305579W	1	Decal, Winch Control
22	2303609W	2	Screw	25	2311315	1	Assembly, Wiring
				26	2307944W	1	Decal, Winch Light

# Control Lever Mounting

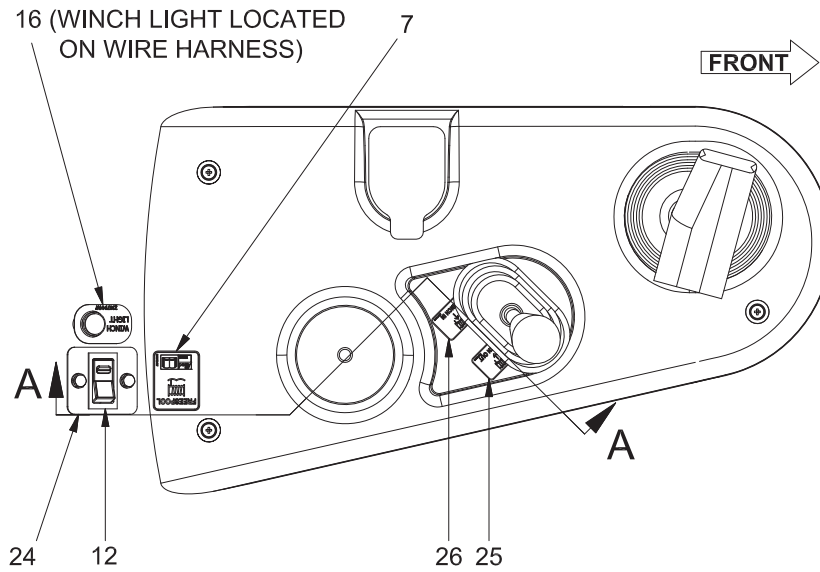
Case 650L/650M (H4AH\_R\_R16)



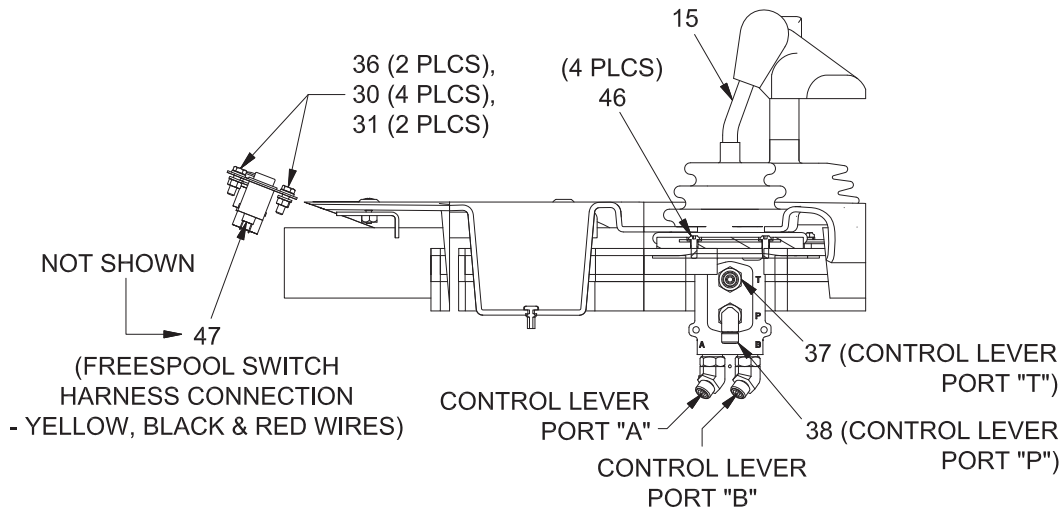
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
12	R833253	1	Fitting	28	292501W	2	Capscrew
13	2307944W	1	Decal, Winch Light	29	2307121W	1	Decal, Winch In
15	2310017	1	Assembly, 12V Switch (p. 63)	30	2307122W	1	Decal, Winch Out
16	2307924W	1	Decal, Switch Panel	32	296159W	4	Capscrew
17	2307643W	1	Plate, Switch Mounting	38	2312888	1	Harness, Wire
20	2315738	1	Control Lever Assembly (p. 61)	42	231439	1	Fitting
26	296417W	2	Washer				
27	292653W	2	Nut				

### Control Lever Mounting

Case 750/850M (H4AH\_R\_R17)



RIGHT CONSOLE WITH WINCH CONTROLS

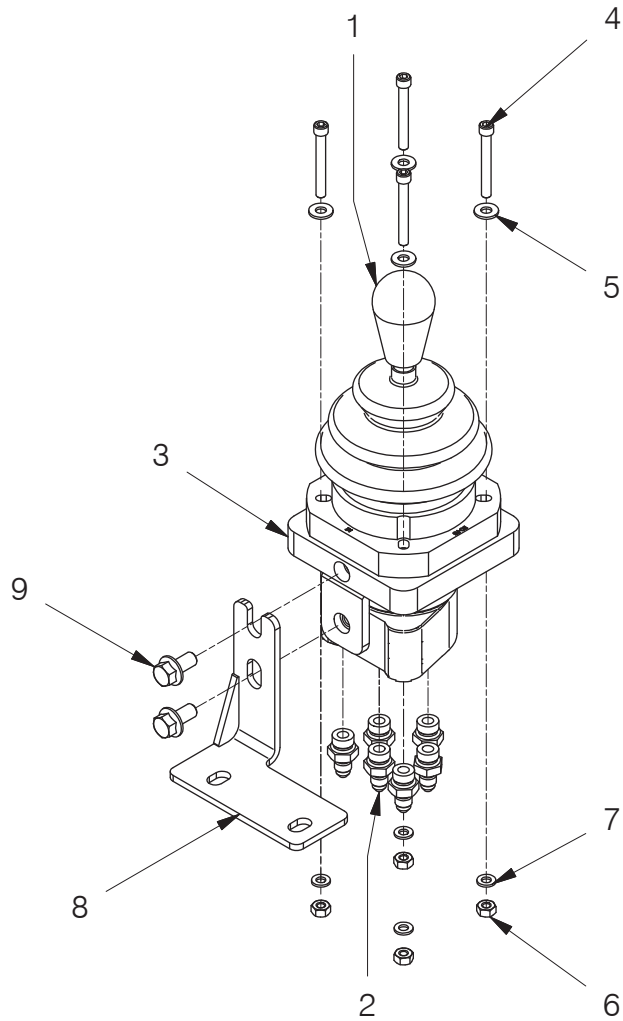


SECTION A-A  
CONTROL LEVER & SWITCH MOUNTING

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
7	2307924W	1	Decal, Switch Panel	31	292653W	2	Nut
12	2310013	1	Assembly, Switch - 24V (p. 64)	36	292501W	2	Capcrew
15	2315738	1	Assembly, Control Lever (p. 61)	37	231439	1	Fitting
16	2307944W	1	Decal, Winch Light	38	R833253	1	Fitting
24	2307643W	1	Plate, Switch Mounting	46	296159W	4	Capcrew
25	2307122W	1	Decal, Winch Out	47	2315122	1	Harness, Wire
26	2307121W	1	Decal, Winch In				
30	296417W	4	Washer				

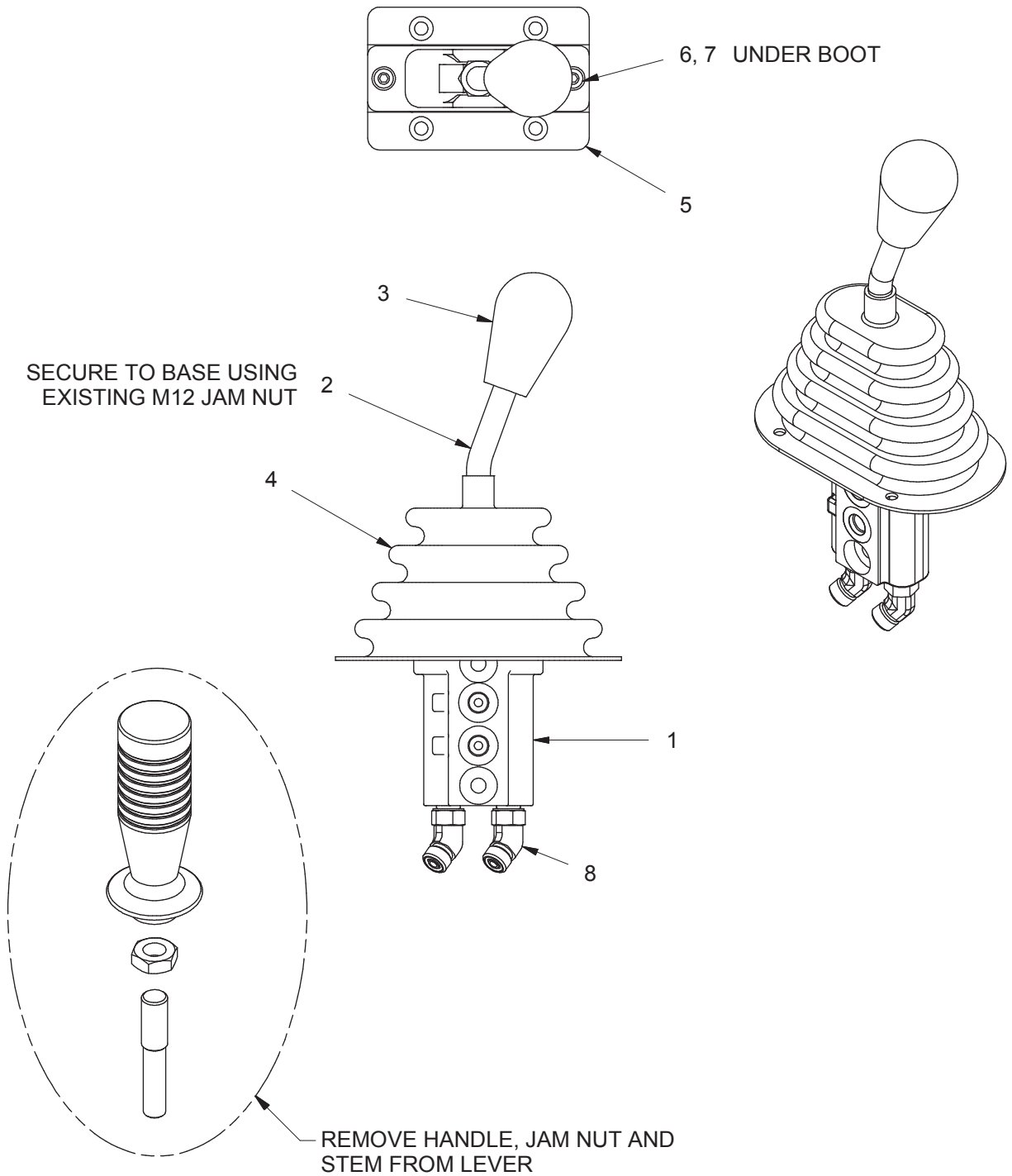
# Control Lever Assembly

Dual Axis



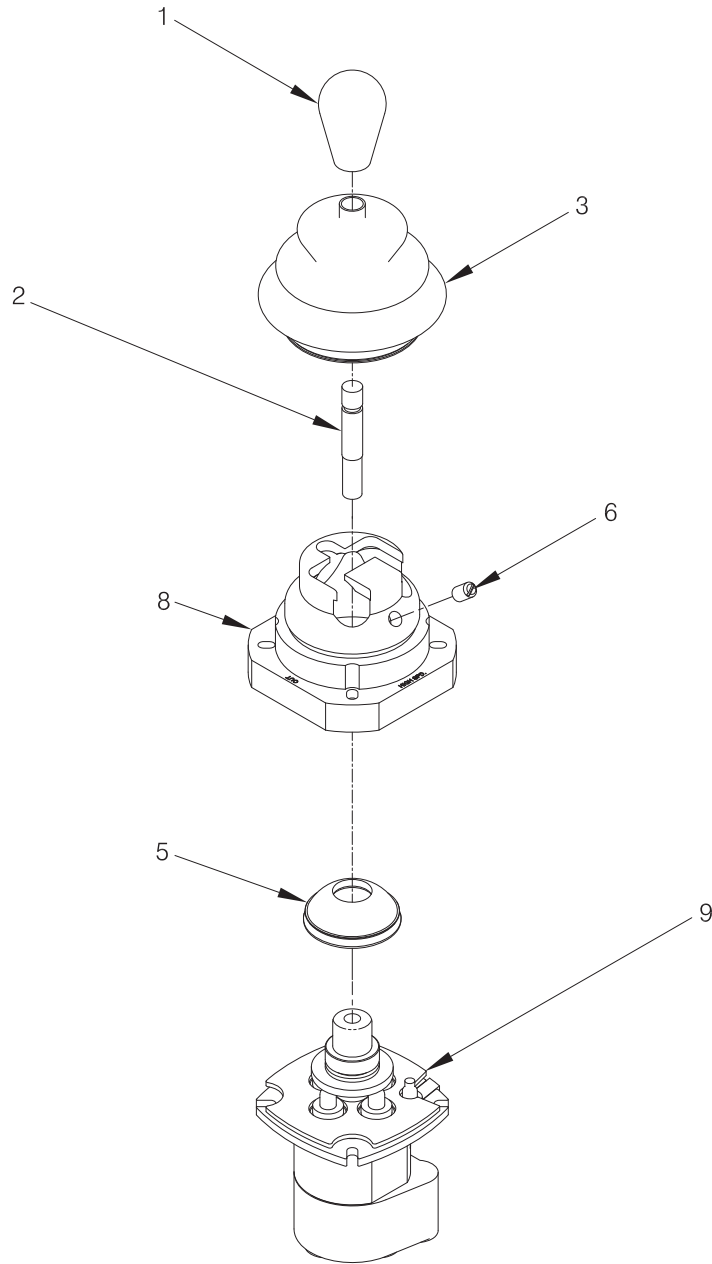
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311203</b>		<b>Assembly, Control Lever</b>				
1	2305577W	1	. Assy, Control Lever (p. 62 )	6	15054W	4	. Nut
2	223929	6	. Fitting	7	15154W	4	. Washer
3	2311183	1	. Bracket	8	2311179	1	. Bracket
4	18127W	4	. Capscrew	9	134803W	2	. Screw
5	15127W	4	. Washer				

# Control Lever Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315738</b>		<b>Assembly, Control Lever</b>				
1	2315561	1	. Lever, Control	5	2315740	1	. Plate, Adapter
2	2315739	1	. Lever, Handle	6	296157W	2	. Capscrew
3	2304339W	1	. Knob	7	296417W	2	. Hard Washer
4	2305933W	1	. Boot	8	R833200	2	. Fitting

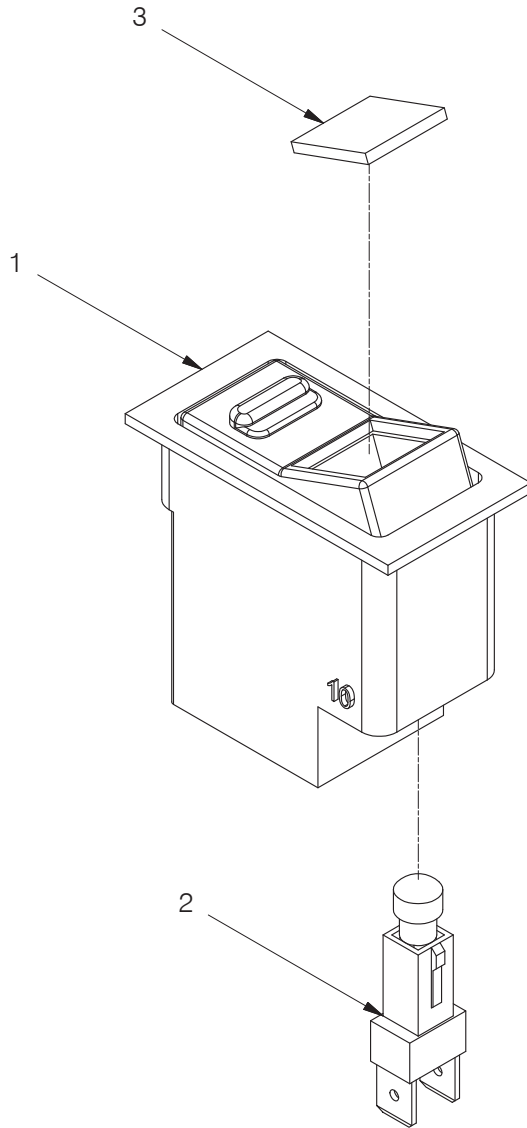
**Control Lever Assembly**  
Dual Axis



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305577W</b>		<b>Assembly, Control Lever</b>				
1	2304339W	1	. Knob				
2	2305063W	1	. Shaft	8	2305062W	1	. Housing, Gated
3	228131	1	. Boot	9	2304990W	1	. Controller (p. 65)
5	2305578W	1	. Ring, Detent				
6	*a 2304050W	1	. Plunger, Ball				*a Stake Threads

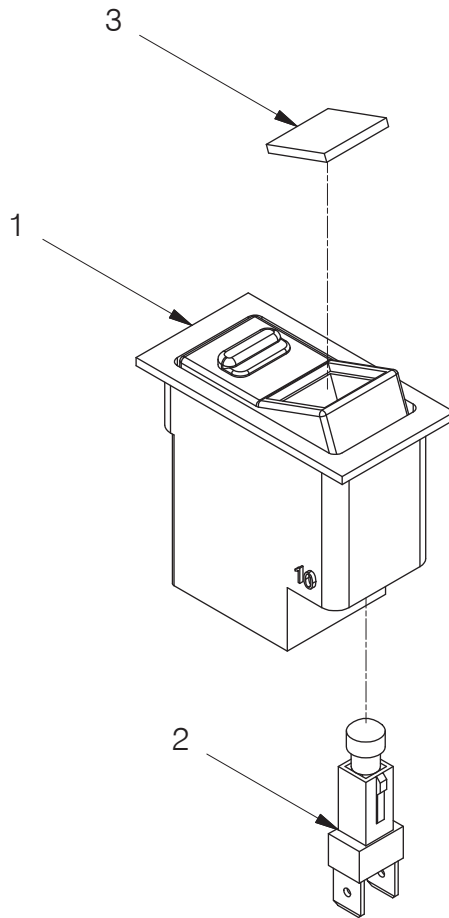
# 12V Switch Assembly

Case 650L (H4AH\_R\_R16)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2310017</b>		<b>Assembly, Switch - 12V</b>				
1	2307582W	1	. Switch, Rocker - w/Lock	3	237346	1	. Lens, Yellow
2	2310018	1	. Lamp, Yellow LED				

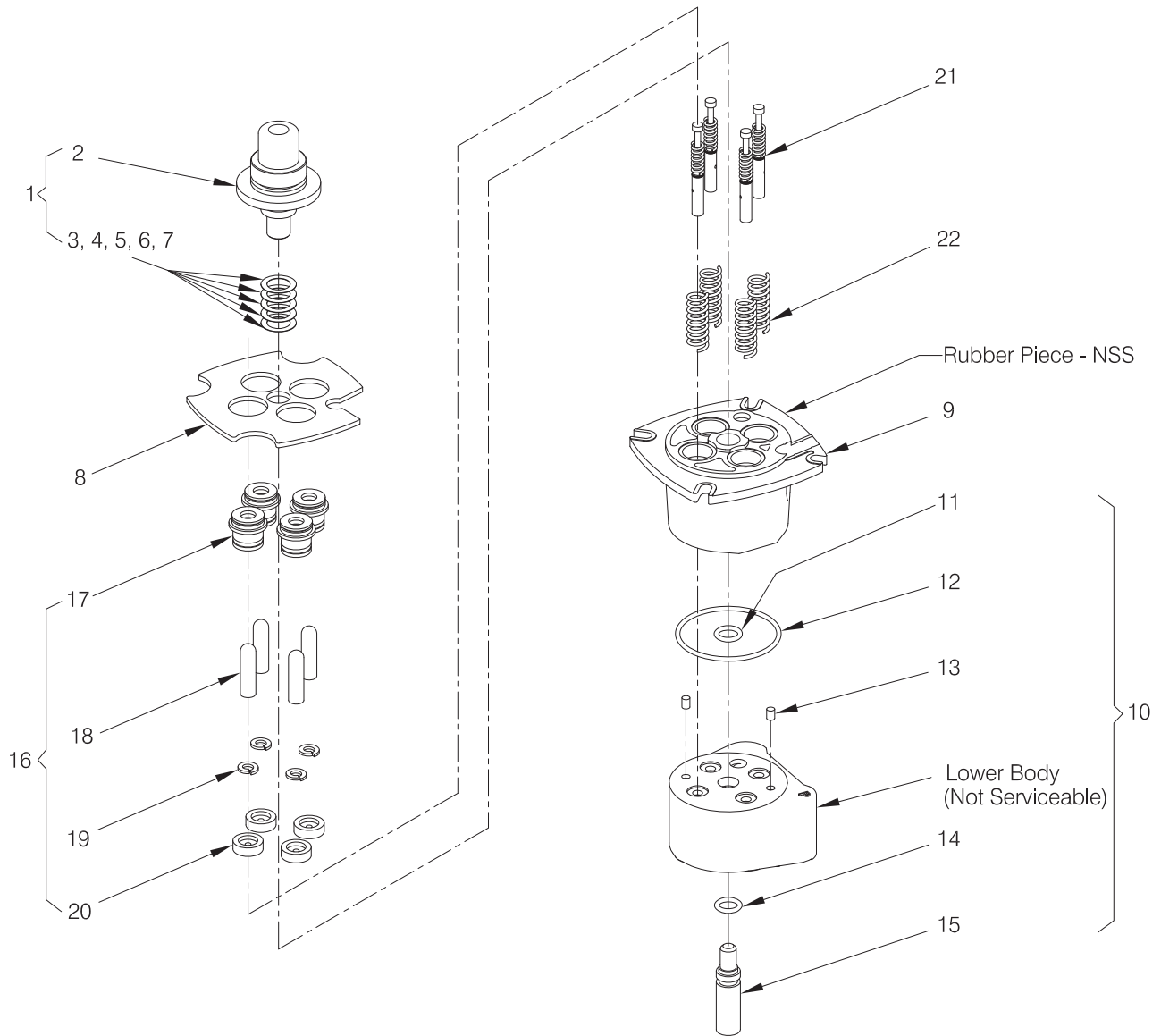
**24V Switch Assembly**  
Case 750/850M (H4AH\_R\_R17),



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2310013</b>		<b>Assembly, Switch - 24V</b>				
1	2307582W	1	. Switch, Rocker - w/Lock	3	237346	1	. Lens, Yellow
2	251107	1	. Lamp, Yellow LED				

# Controller

Service Kits

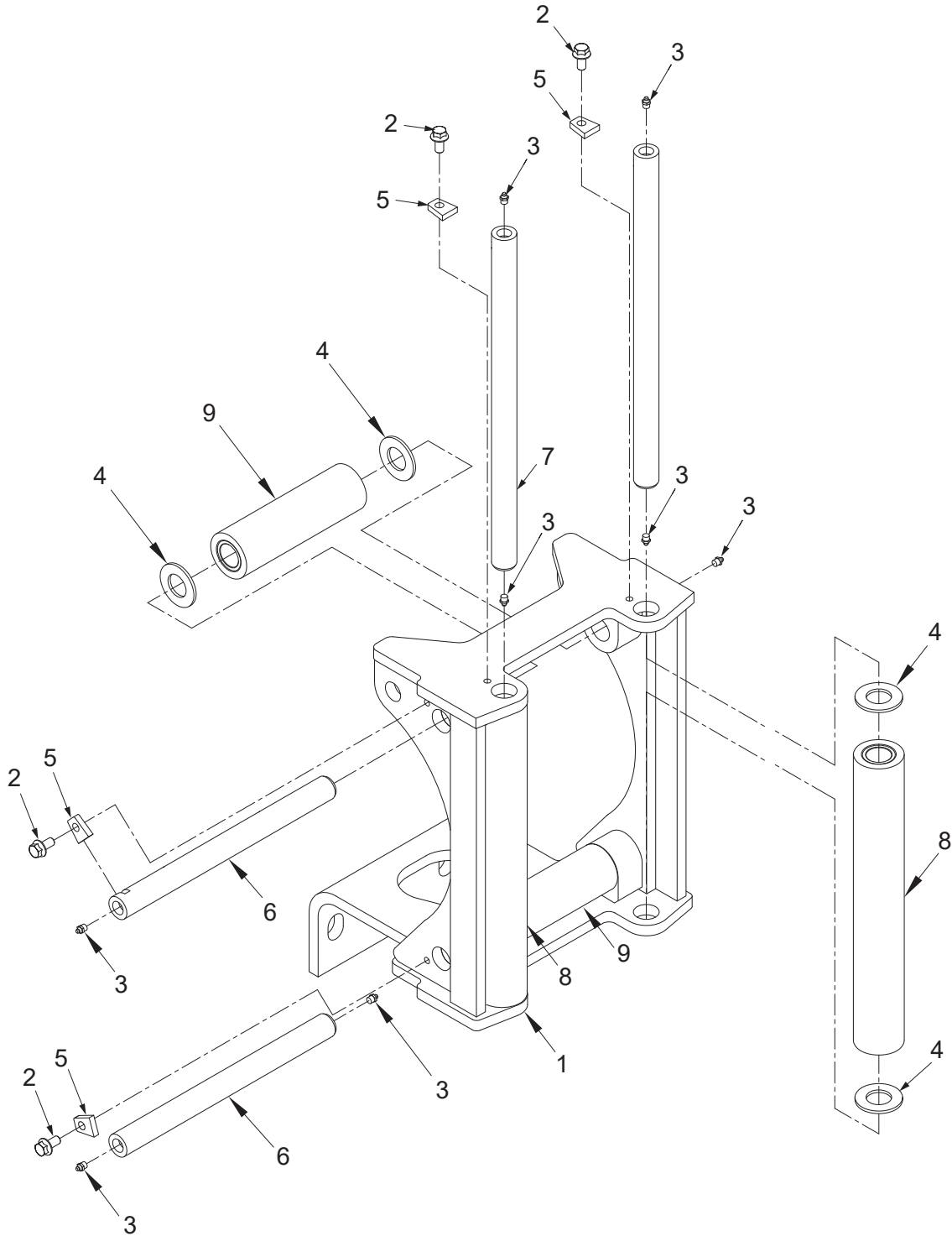


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2304990W</b>		<b>Controller</b>				
1	2305578W	1	. Kit, Cardan	14	-----	1	.. O-Ring
2	-----	1	.. Cardan	15	-----	1	.. Assembly, Screw
3	-----	1	.. Shim, 0.1 mm	16	2305782W	2	.. Kit, Plunger (Pack of two)
4	-----	1	.. Shim, 0.2 mm	17	-----	2	.. Guide, Plunger
5	-----	1	.. Shim, 0.5 mm	18	-----	2	.. Plunger, Solid
6	-----	1	.. Shim, 1.0 mm	19	-----	2	.. Washer
7	-----	1	.. Shim, 0.15 mm	20	-----	2	.. Platen
8	2305779W	1	. Plate, Retaining	21	2305783W	4	. Kit, Regulating Unit
9	2305780W	1	. Body, Upper	22	2305784W	1	. Spring, Heavy Return (Pack of four)
10	2305781W	1	. Kit, Seal				
11	-----	1	.. O-Ring				
12	-----	1	.. O-Ring				
13	-----	2	.. Pin, Dowel				

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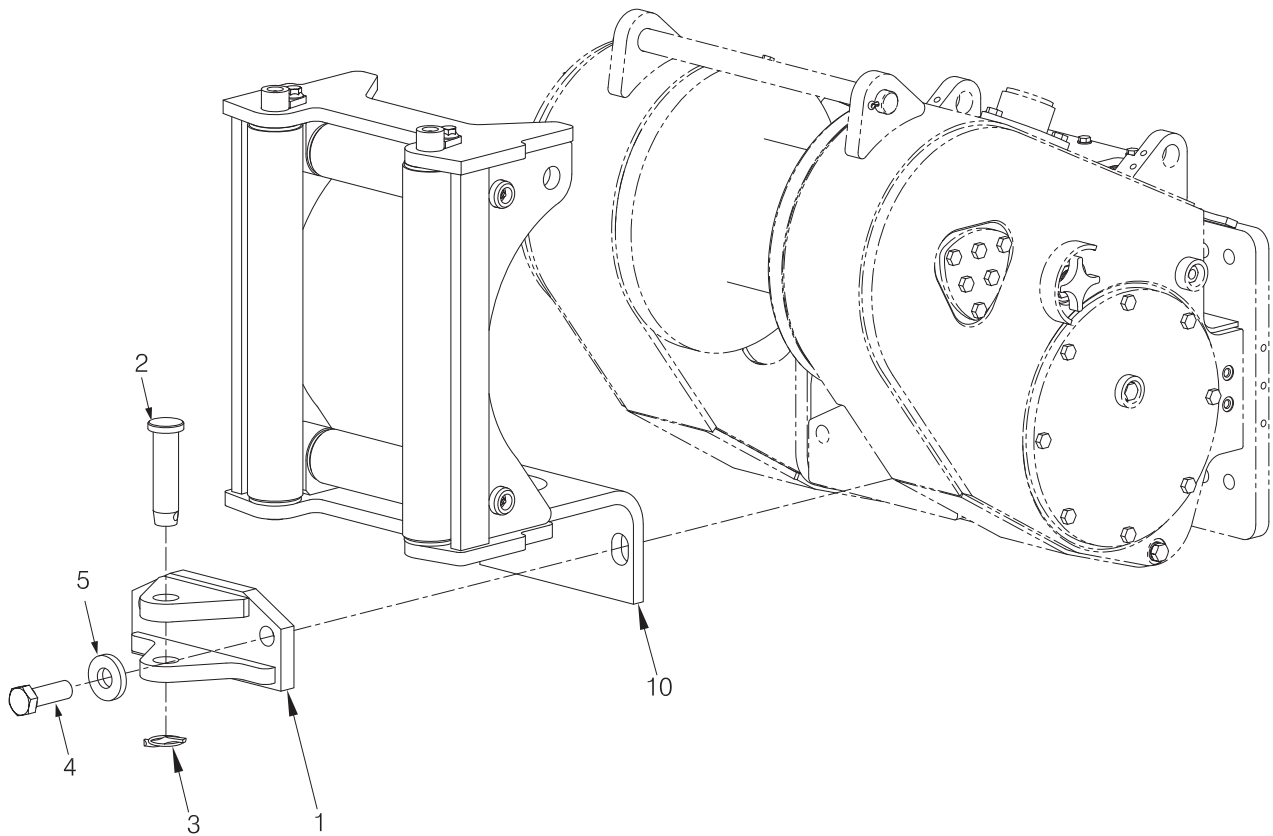
**Section 4**  
**Optional Equipment**

# Fairlead Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305252W</b>		<b>Assembly, Fairlead</b>				
1	2305251W	1	. Frame	7	2303754W	2	. Shaft
2	398817W	4	. Flangescrew	8	2303755W	2	. Assembly, Roller
3	16001W	8	. Fitting, Lube		59419W	2	. Bushing
4	344825W	8	. Washer	9	2301708W	2	. Assembly, Roller
5	2303815W	4	. Keeper		59419W	2	. Bushing
6	2305249W	2	. Shaft				

## Fairlead/Drawbar Installation

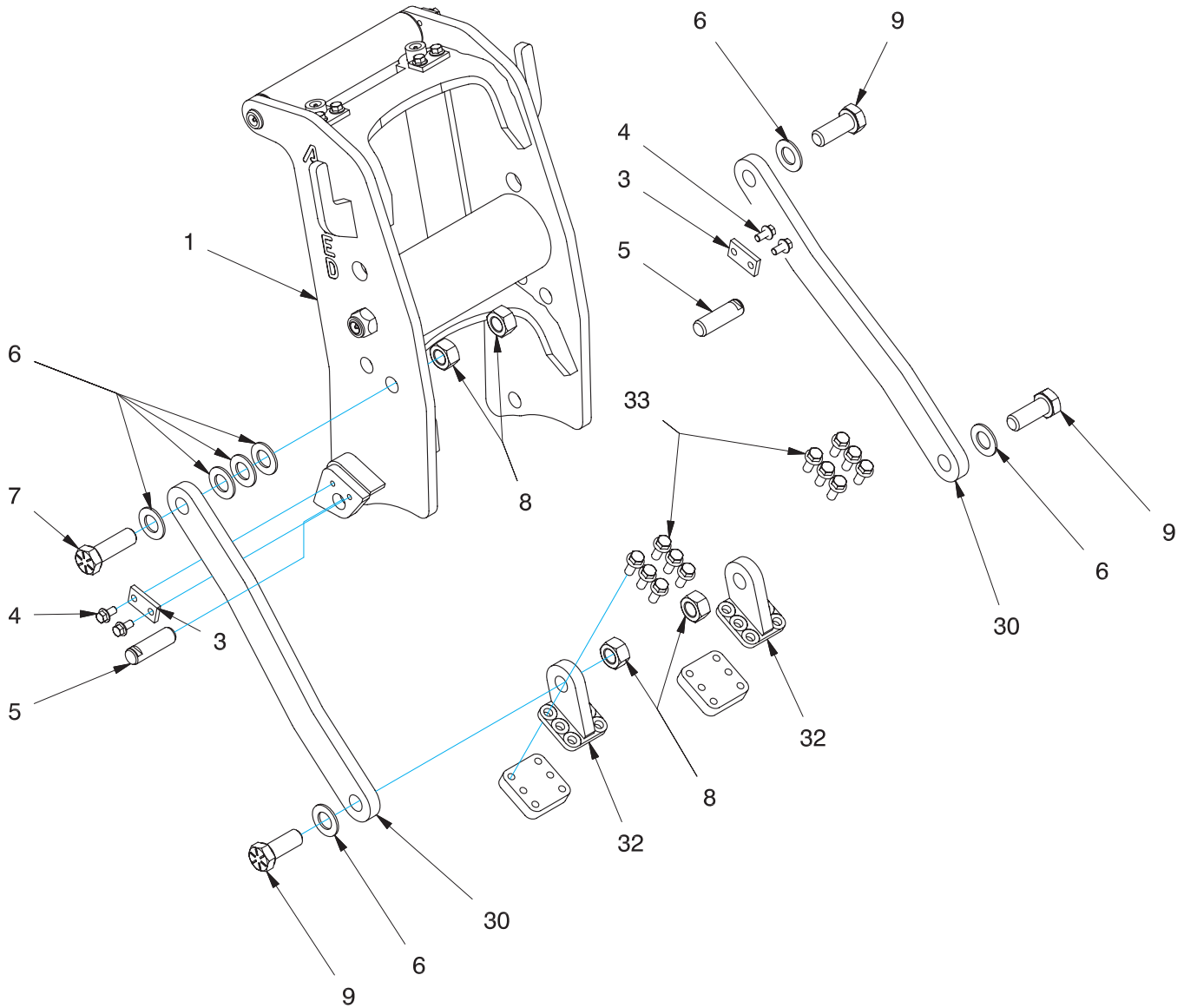


- A. Fairlead Installation with Drawbar
- B. Fairlead Installation ONLY
- C. Drawbar Installation ONLY

Item	Part No.	Qty	A B C	Description	Item	Part No.	Qty	A B C	Description
1	2304155W	1	-- 1	Drawbar		221694W	2	-- --	Capscrew
2	2304161W	1	-- 1	Pin, Drawbar	5	2305256W	2	2 --	Washer
3	2303221W	1	-- 1	Pin, Retaining		221780W	--	-- 2	Washer
4	221686W	--	2 2	Capscrew	10	2305252W	1	1 --	Assy Fairlead (p. 66)

### Arch Installation

S/N Code "Y"  
(Open Frame Winches)

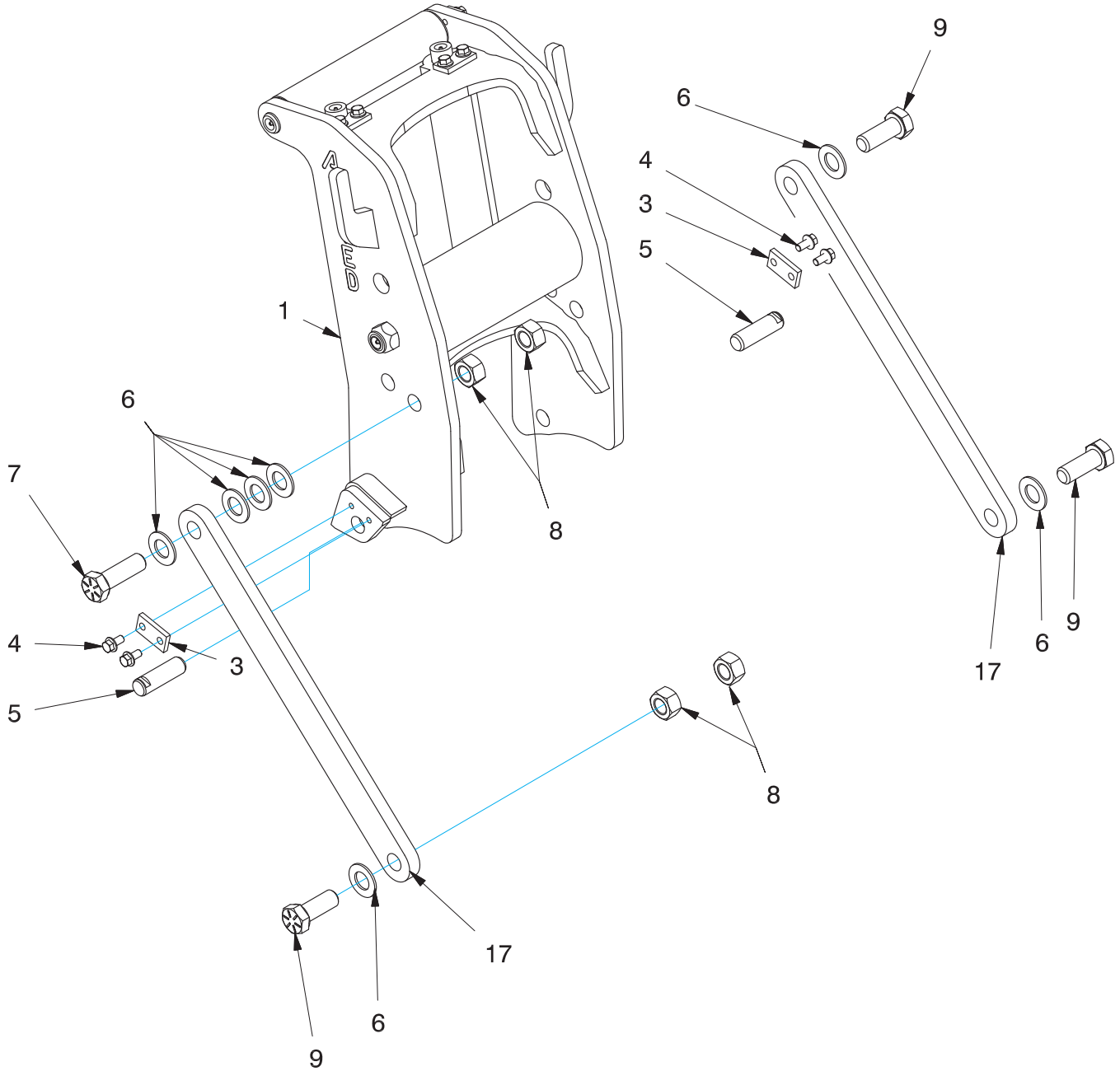


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2305145W	1	Arch Assembly (p.71)	8	*a 221372W	4	Locknut
3	93166W	2	Keeper	9	2305268W	3	Capscrew
4	398817W	4	Screw, Flange	30	2312995	2	Bar - Support, Arch
5	1314629W	2	Pin	32	2312997	2	Ear, Arch
6	225851	7	Hard Washer	33	918085W	12	Screw, Flange
7	2300478W	1	Capscrew				

\*a Use 318702W Thread Lock

### Arch Installation

S/N Code "B", "E", "Z", "R" Except R17  
(Enclosed Frame Winches)

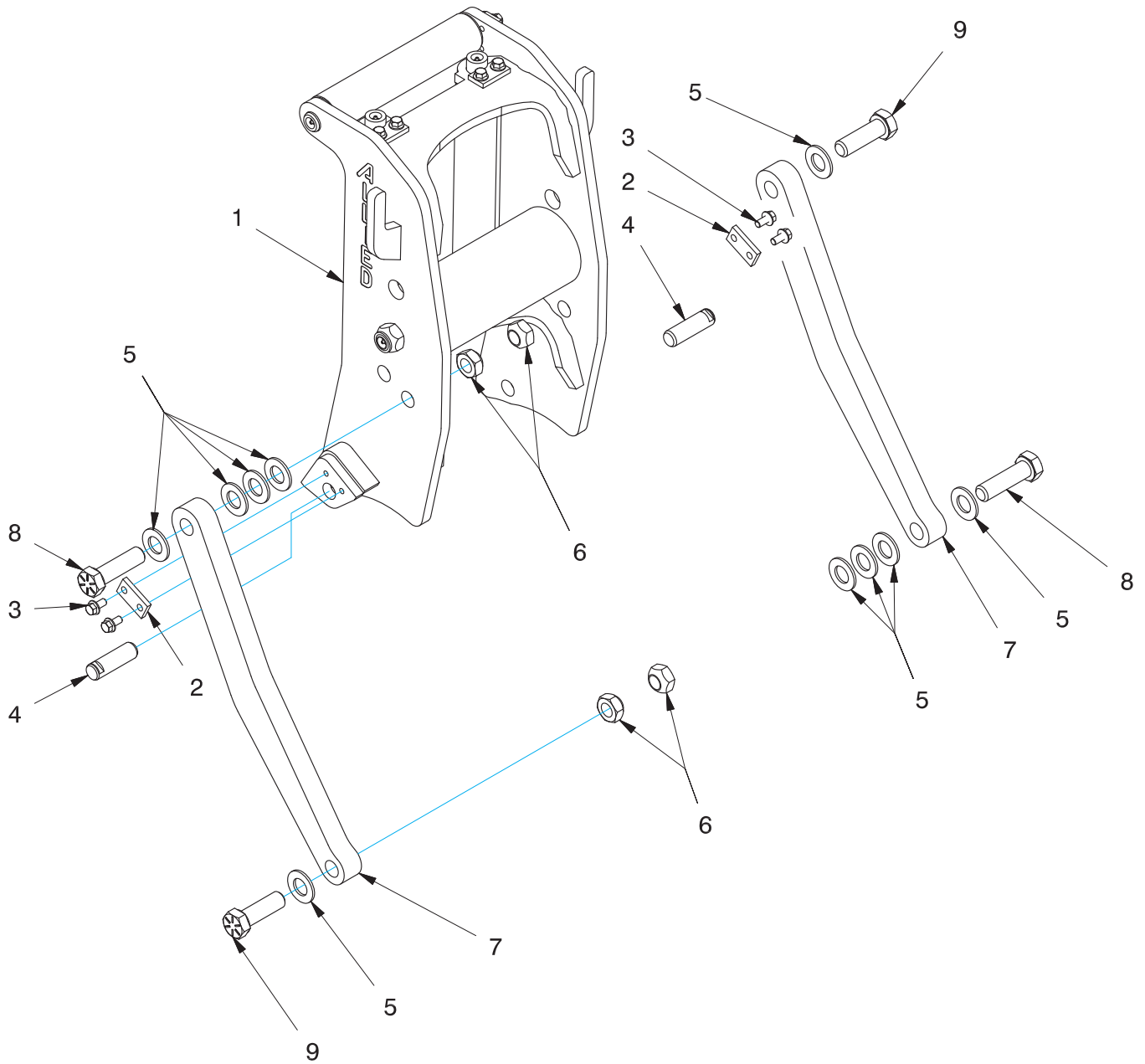


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2305145W	1	Arch Assembly (p.71)	7	2300478W	1	Capscrew
3	93166W	2	Keeper	8	*a 221372W	4	Locknut
4	398817W	4	Screw, Flange	9	2305268W	3	Capscrew
5	1314629W	2	Pin	17	2305158W	2	Bar - Support, Arch
6	225851	7	Hard Washer				

\*a Use 318702W Thread Lock

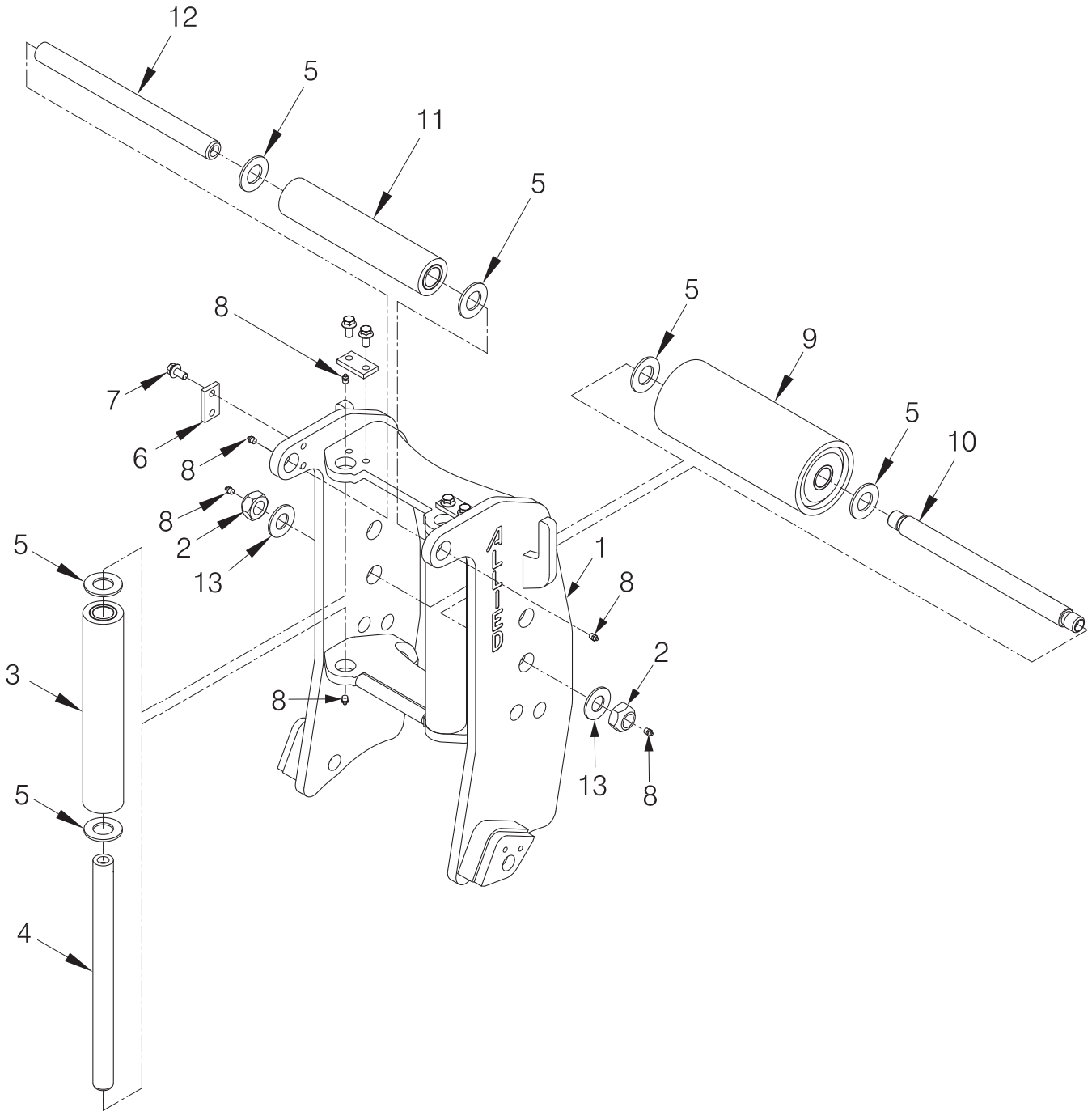
# Arch Installation

Case 850M (R17)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2305145W	2	Arch Assembly (p.71)	7	2315531	2	Support Bar - Arch
2	93166W	2	Keeper	8	1310819W	2	Capscrew
3	398817W	4	Screw, Flange	9	2300478W	2	Capscrew
4	1314629W	2	Pin				
5	225851	10	Hard Washer				
6	*a 221372W	4	Locknut				
				*a	Use 318702W Thread Lock		

# Arch Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2305145W</b>		<b>Assembly, Arch</b>				
1	2305142W	1	. Frame, 4 Roller	10	2300948W	1	. Shaft
2	221724W	2	. Hex Nut	11	344826W	1	. Roller Assembly
3	342448W	2	. Roller Assembly	12	344835W	1	. Shaft
4	342447W	2	. Shaft	13	225851	1	. Washer
5	344825W	8	. Washer				
6	93166W	3	. Keeper				
7	398817W	6	. Screw, Flange				*a Use 318702W Thread Lock
8	16001W	8	. Fitting, Lube				*b Use only if required to protect threads.
9	2300125W	1	. Roller				

## Wire Rope Assemblies

### Wire Rope Drum End



Junior Ferrule

### Wire Rope Loose End Options



Tail Chain &amp; Hook (TC)



Wedge Socket (WS)



Open Spelter Socket (OS)

### ⚠ CAUTION

Do not use larger than 5/8" diameter wire rope if winch is equipped with arch assembly.

Part Number	Wire Rope Diameter	Wire Rope Type	Loose End Type	Loose End Rating (lbs)	Length (ft)	Weight (lbs)	Drum Fill	Wire Rope Breaking Strength (lbs)
WR4-279M	1/2"	EIPS	TC	13,000	279	133	2/3	26,600
WR-422M					422	199	Full	
WR5-183B	5/8"	EIPS	TC	13,000	183	137	2/3	41,200
WR5-277B					277	205	Full	
WR6-129B	3/4"	EIPS	TC	34,200	129	153	2/3	58,800
WR6-195B					195	222	Full	
WR6-129BLP					129	140	2/3	
WR6-195BLP					195	205	Full	
YS6-129BWS					EEIPS	WS	51,840	
YS6-195BWS		195	222	Full				

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**Section 5**  
**Recommended Service Parts, Intervals and Kits**

## Recommended Winch Service Intervals and Kits

Follow the service schedule recommended here to help keep tractor 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.					

\* 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.

\* 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 dozer filter.

**Table 1 Recommended Winch Service Intervals**

Service Kits for -- 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 tractor 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 assembly rebuild kit	All	2315287	2315351
Major overhaul (every 10,000 hours)	Intermediate/drum shaft & brake assembly rebuild kit	All	2315288	

**Table 2 Routine Maintenance Kits**

---

## -- Hydraulic Winch Recommended Service Parts

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

Page 82 lists gaskets and seals. Keep these parts in stock at all times for regular maintenance. Order parts from the table based on your winch.

Page 82 and page 83 contain 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 83 also contains a list of operator controls components. Order parts or kits as required and as relevant for your installation.

Page 84 contains a list of wire rope assemblies. Order parts as required and as relevant for your installation.

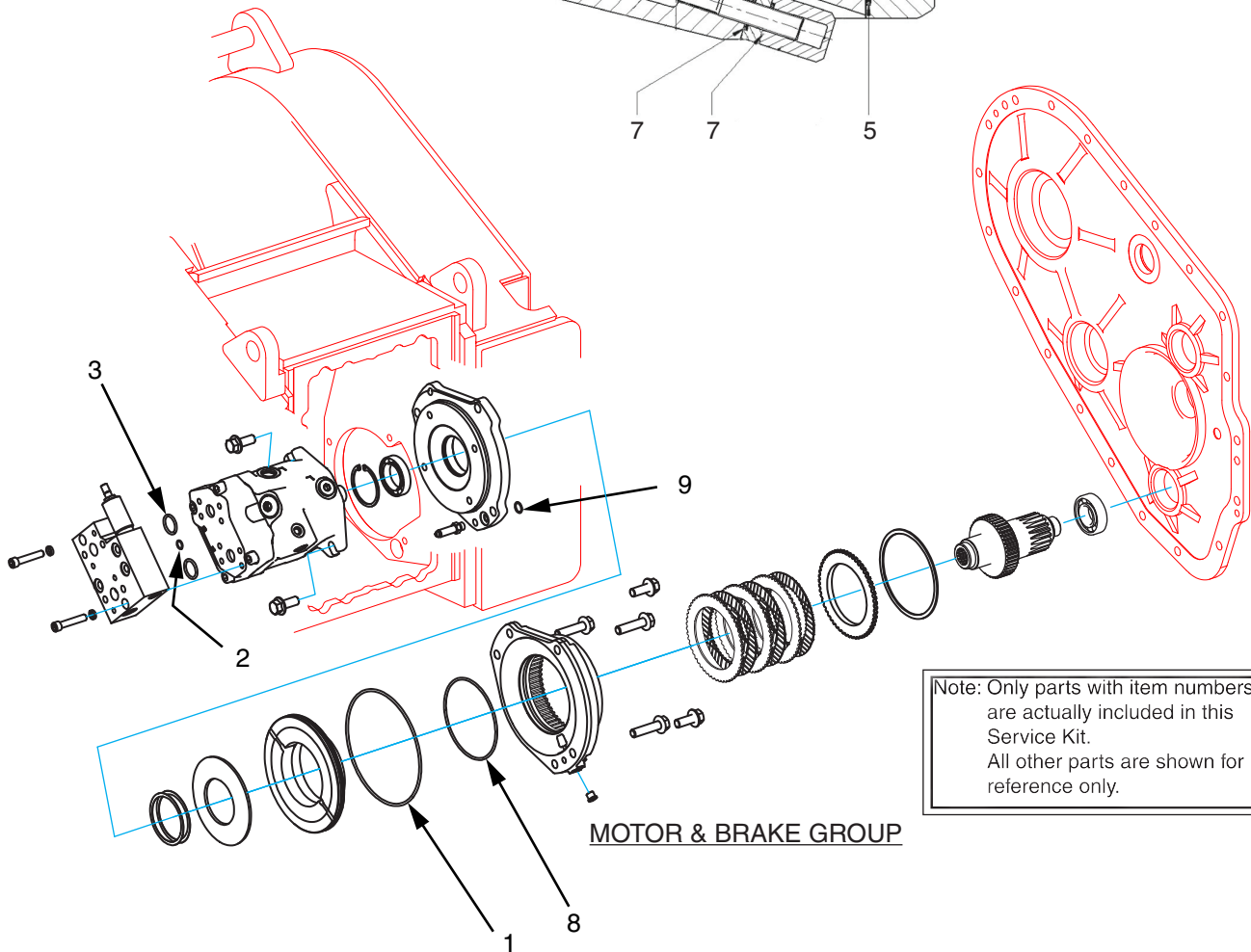
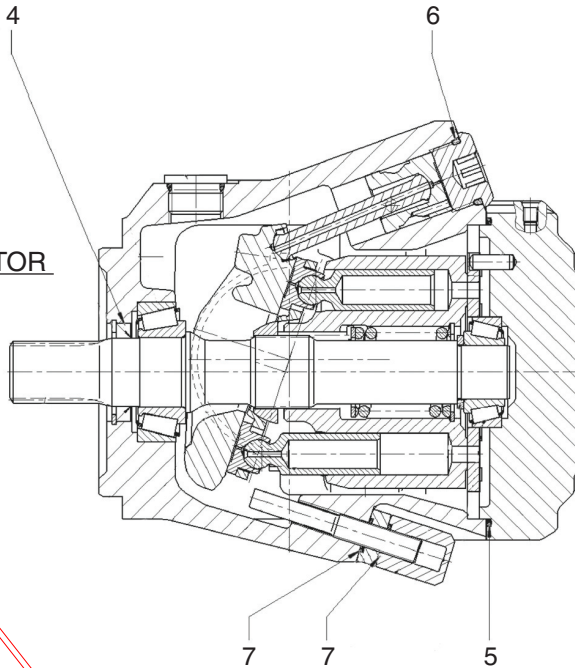
Page 85 contains lists of tool kits and diagnostic tools, which are useful when you install, maintain and service your winches.

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

### Motor Shaft Rebuild Kit: 2315287

High Performance Winches with Self-Contained Hydraulics (SCH)

HYDRAULIC 45CC 2 SPEED MOTOR



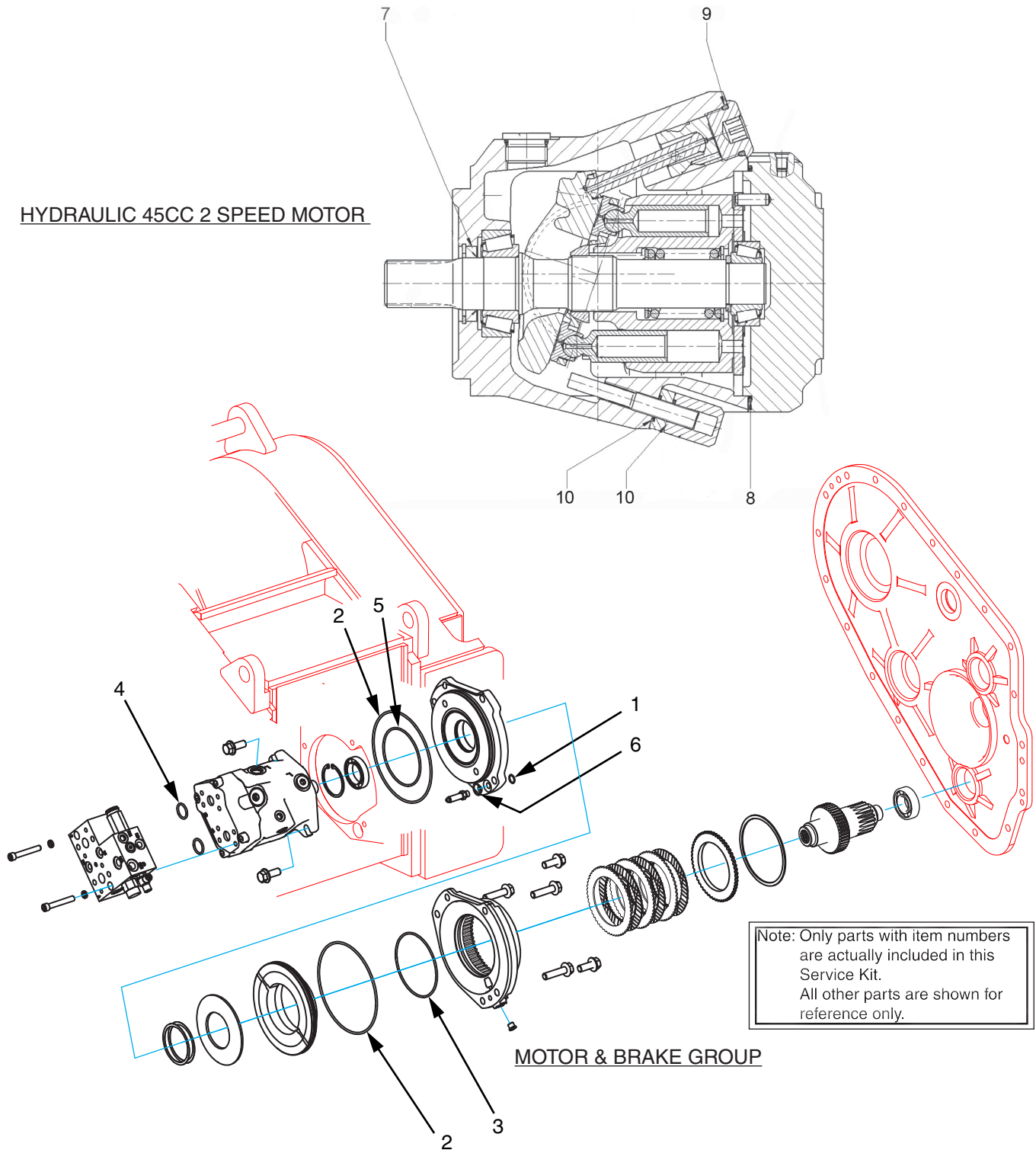
Note: Only parts with item numbers are actually included in this Service Kit. All other parts are shown for reference only.

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315287</b>		<b>Rebuild Kit, Motor Shaft</b>				
1	2316507	1	. O-Ring	6	2305762W	1	. O-Ring
2	2304220W	1	. O-Ring	7	2305763W	2	. O-Ring
3	2304110W	2	. O-Ring	8	2316517	1	. O-Ring
4	2305760W	1	. Seal, Shaft	9	26883	1	. O-Ring
5	2305761W	1	. O-Ring				

### Motor Shaft Rebuild Kit: 2315351

Standard Winches without Self-Contained Hydraulics (Non-SCH)

HYDRAULIC 45CC 2 SPEED MOTOR



MOTOR & BRAKE GROUP

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2315351</b>		<b>Rebuild Kit, Motor Shaft</b>				
1	26883	1	. O-Ring	6	17064	1	. O-Ring
2	2316507	2	. O-Ring	7	2305760W	1	. Seal, Shaft
3	2316517	1	. O-Ring	8	2305761W	1	. O-Ring
4	2304110W	2	. O-Ring	9	2305762W	1	. O-Ring
5	15888W	1	. O-Ring	10	2305763W	2	. O-Ring

Gaskets & Seals		Order as Required		
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2307172W	Seal Kit, Sequence Valve (2307170W)	2	Hydraulic Group/Motor Valve Assembly	
2501643	Seal Kit, Cartridge Valve (2311221)	1	Hydraulic Group	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
R15668	Seal Kit, Solenoid Cartridge Valve (P/N 2311212)	1	Hydraulic Group	
2307231W	Seal Kit, Shuttle Valve (P/N 2307227W)	1	Control Manifold Assembly	
2306544W	Gasket Kit, Covers	1	Frame and Covers	
252563	Seal Kit, Directional Cartridge (2310192)	1	Motor Valve Assembly	
2307171W	Seal Kit, Shuttle Valve (2307169W)	1	Motor Valve Assembly	
R15668	Seal Kit, Solenoid Cartridge Valve (P/N 2310010)	1	Valve Manifold Assembly	
R15668	Seal Kit, Cartridge Valve (P/N 2307835W)	1	Valve Manifold Assembly	
2307231W	Seal Kit, Shuttle Valve (2307227W)	2	Control Manifold Assembly	
2307356W	Seal Kit, Pump Assembly	1	Pump Assembly	

### Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2315287

Applies to: Hi-Performance (H) Winches

Service Interval: Every 5,000 Hours

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
<b>2315287</b>	<b>Kit, Motor, Reducer &amp; Brake Assy Rebuild</b>	<b>1</b>		
2316507	. O-Ring	1	Motor Shaft	
2304220W	. O-Ring	1	Motor Shaft	
2304110W	. O-Ring	2	Hydraulic Group	
2305760W	. Seal, Shaft	1	Hydraulic Group	
2305761W	. O-Ring	1	Hydraulic Group	
2305762W	. O-Ring	1	Motor Shaft	
2305763W	. O-Ring	2	Motor Shaft	
2316517	. O-Ring	1	Motor Shaft	
26883	. O-Ring	1	Hydraulic Motor	

**Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2315351****Applies to: Standard (T) Winches****Service Interval: Every 5,000 Hours**

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
<b>2315351</b>	<b>Kit, Motor, Reducer &amp; Brake Assy Rebuild</b>			
26883	. O-Ring	1	Motor Shaft	
2316507	. O-Ring	2	Motor Shaft	
2316517	. O-Ring	1	Hydraulic Group	
2304110W	. O-Ring	2	Hydraulic Group	
15888W	. O-Ring	1	Hydraulic Group	
17064	. O-Ring	1	Motor Shaft	
2305760W	. Seal, Shaft	1	Motor Shaft	
2305761W	. O-Ring	1	Motor Shaft	
2305762W	. O-Ring	1	Hydraulic Motor	
2305763W	. O-Ring	2	Hydraulic Motor	

**Spare Parts****Applies to: All**

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
2303788W	Motor, Hydraulic	1	Motor Shaft Assembly	
2304873W	Plate, Friction	3		
2305104W	Assembly, Breather (H4AH_R)	1	Frame/Covers Hydraulic Group	
2305103W	Cover, Breather (H4AH_R)	1		
21420W	Plug, Breather (H4A_Y)	1	Frame/Covers	
2304161W	Pin, Drawbar	1	Fairlead/Drawbar Installation	
2303221W	Pin, Retaining	1		
59419W	Bushing	8		

**Intermediate/Drum/Idler Shaft, Motor and Brake Assembly Rebuild Kit, P/N: 2315288**  
**Service Interval: Every 10,000 hours**

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
<b>2315288</b>	<b>Kit, Intermediate, Idler, Drum Shaft, Motor &amp; Brake Assembly Rebuild</b>	<b>1</b>		
87355W	. Seal, Oil	1	Drum Shaft	
2303853W	. Bearing Cone	1	Drum Shaft	
2303854W	. Bearing Cup	1	Drum Shaft	
15895W	. O-Ring	1	Drum Shaft	
46629W	. O-Ring	1	Drum Shaft	
R2109170	. Seal	1	Drum Shaft	
2304126W	. Bearing Cone	1	Drum Shaft	
2304127W	. Bearing, Cup	1	Drum Shaft	
1314483W	. Bearing Cone	1	Drum Shaft	
30190W	. Bearing Cup	1	Drum Shaft	
12916W	. Snap Ring	2	Drum Shaft	
2304179W	. Cone - Roller Bearing	2	Idler Shaft	
2304180W	. Cup - Roller Bearing	2	Idler Shaft	
334475W	. Ring - Snap, Int	1	Motor Shaft	
2300831W	. Bearing - Ball	1	Motor Shaft	
12921W	. Snap Ring	1	Idler Shaft	
41206W	. Bearing - Ball	1	Motor Shaft	
R1314774	. Bearing Cup	1	Intermediate Gear Shaft	
R1314773	. Bearing Cone	1	Intermediate Gear Shaft	
225262W	. Bearing Cone	1	Intermediate Gear Shaft	
230351W	. Bearing Cup	1	Intermediate Gear Shaft	
15881W	. O-Ring	1	Drum Shaft	
203525	. O-Ring	1	Drum Shaft	

Operator Control Components		Order as Required		
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Quantity
2310017	Assembly, 12V Switch	1	Case 650L/650M (H4AH_R__R16)	
2310013	Switch Assy w/Lock, 24V w/Yellow LED	1	Case 750/850M (H4AH_R__R17)	

Wire Rope Assemblies		Order as Required		
Allied P/N	Description	Length	Will Fill Drum To:	Order Quantity
WR5-279L	Wire Rope Assy 5/8" TC	279' (85 M)	2/3 Capacity (Recommended)	
WR5-423L	Wire Rope Assy 5/8" TC	423' (129 M)	Full Capacity	
YS5-279LWS	Wire Rope Assy 5/8" WS	279' (85 M)	2/3 Capacity (Recommended)	
YS5-423LWS	Wire Rope Assy 5/8" WS	423' (129 M)	Full Capacity	
WR6-197L	Wire Rope Assy 3/4" TC	197' (60 M)	2/3 Capacity (Recommended)	
WR6-298L	Wire Rope Assy 3/4" TC	298' (91 M)	Full Capacity	
YS6-197LWS	Wire Rope Assy 3/4" WS	197' (60 M)	2/3 Capacity (Recommended)	
YS6-298LWS	Wire Rope Assy 3/4" WS	298' (91 M)	Full Capacity	
WR8-142L	Wire Rope Assy 7/8" TC	142' (43 M)	2/3 Capacity (Recommended)	
WR7-215L	Wire Rope Assy 7/8" WS	215' (66 M)	Full Capacity	
YS7-142LWS	Wire Rope Assy 7/8" TC	142' (43 M)	2/3 Capacity (Recommended)	
YS7-215LWS	Wire Rope Assy 7/8" WS	215' (66 M)	Full Capacity	

TC = Tail chain and hook  
 WS = Wedge socket

**Tool Kits**

**Order these Tool Kits as required for installation, maintenance and service of your winch(es).**

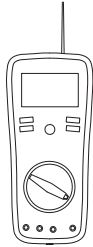
Allied P/N	Description	Order Quantity
588466	Socket Set, 3/8DR 3/8" to 7/8" STD/Deep, 22 PC	
588467	Socket Set, 1/2DR 3/8" to 1-1/4" STD/Deep, 30 PC	
588468	Socket Set, 3/4DR 7/8" to 2-3/8" STD, 29 PC	
588469	Wrench Set, 5/16" to 2-1/2", 31 PC	
588527	Hex Key Sets, .025" to 5/8", 18 PC	
588530	Socket 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**

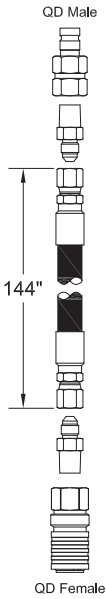
**Order these Tools as required for maintenance and service of your winch(es).**

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



**69778**  
Multi-Meter, 12 Function

AC/DC Voltage & Current,  
Resistance, Capacitance,  
Frequency, Type K & IR  
Temperature, Diode/Continuity,  
Duty Cycle Non-Contact  
InfraRed Thermometer  
CAT III Test Leads  
Type K Bead Wire Temp Probe

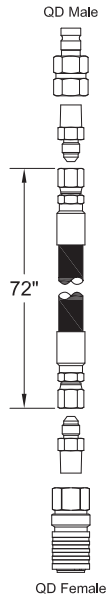


QD Male

144"

QD Female

**70381**  
Kit, Hose Assembly, W/QD Both Ends

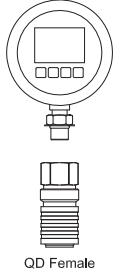


QD Male

72"

QD Female

**69782**  
Kit, Hose Assembly, W/QD Both Ends



**906601**  
Kit, Digital Pressure Gauge  
W/ Female QD Connector  
0 to 8700 PSI

**Intentionally Blank**

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2305881W	42	7	2307625W	37	24.1	296420W	51	10
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2305883W	42	9	2307643W	67	17	296422W	16	15
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2305910W	39	41	2307835W	62		334442W	25	2.7
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2305987W	35	19.11	2307835W	65		334475W	25	2.6
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2306566W	25	3.6	2307944W	66	26	342447W	82	4
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