



# Parts Manual

Allied  
H4A

Hydraulic  
Towing Winch



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[www.alliedsystems.com](http://www.alliedsystems.com)

CUSTOMER  
EDITION

A PRODUCT OF

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## **Safety Precautions**

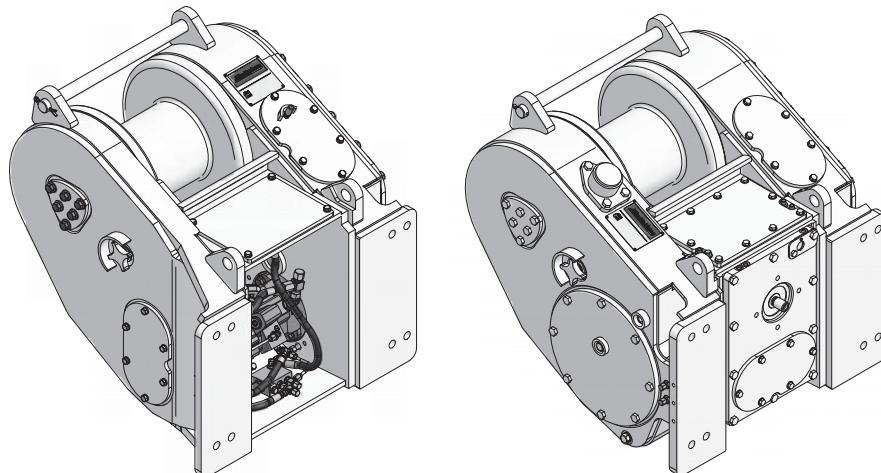
**Read, understand and observe the Safety Summary  
on pages 0-3 through 0-5  
to prevent injury to personnel and damage to equipment.**

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

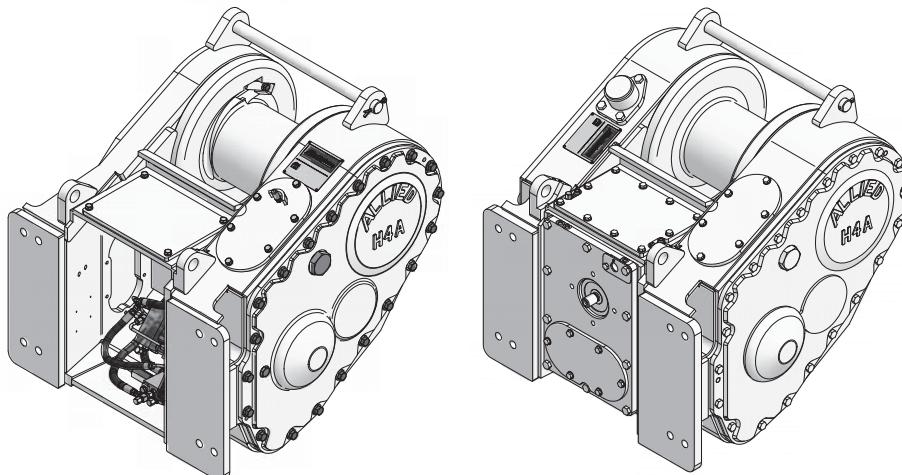
Date put into service \_\_\_\_\_

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Should there be differences in interpretations to the text,  
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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.

**NOTE: All possible safety hazards cannot be foreseen so as to be included in this manual. Therefore, you must always be alert to potential hazards that could endanger personnel and/or damage the equipment.**

### 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

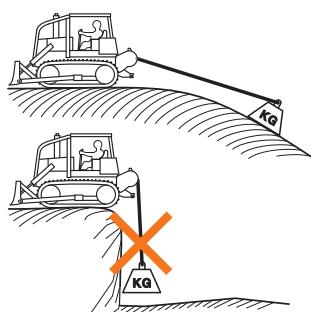


### WARNING

Obey the following cautions and warnings before using your winch to avoid equipment damage, personal injury or death.

- Do not operate the winch unless your are authorized and trained to do so.
- Do not operate the winch unless the vehicle is equipped with a screen to protect the operator if the wire rope breaks.
- Read, understand, and follow the operating, inspection, and maintenance instructions in this manual.
- Do not use the control levers for hand holds when entering or leaving the vehicle.
- 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.
- 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.
- Observe jobsite rules.
- 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.
- 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.



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

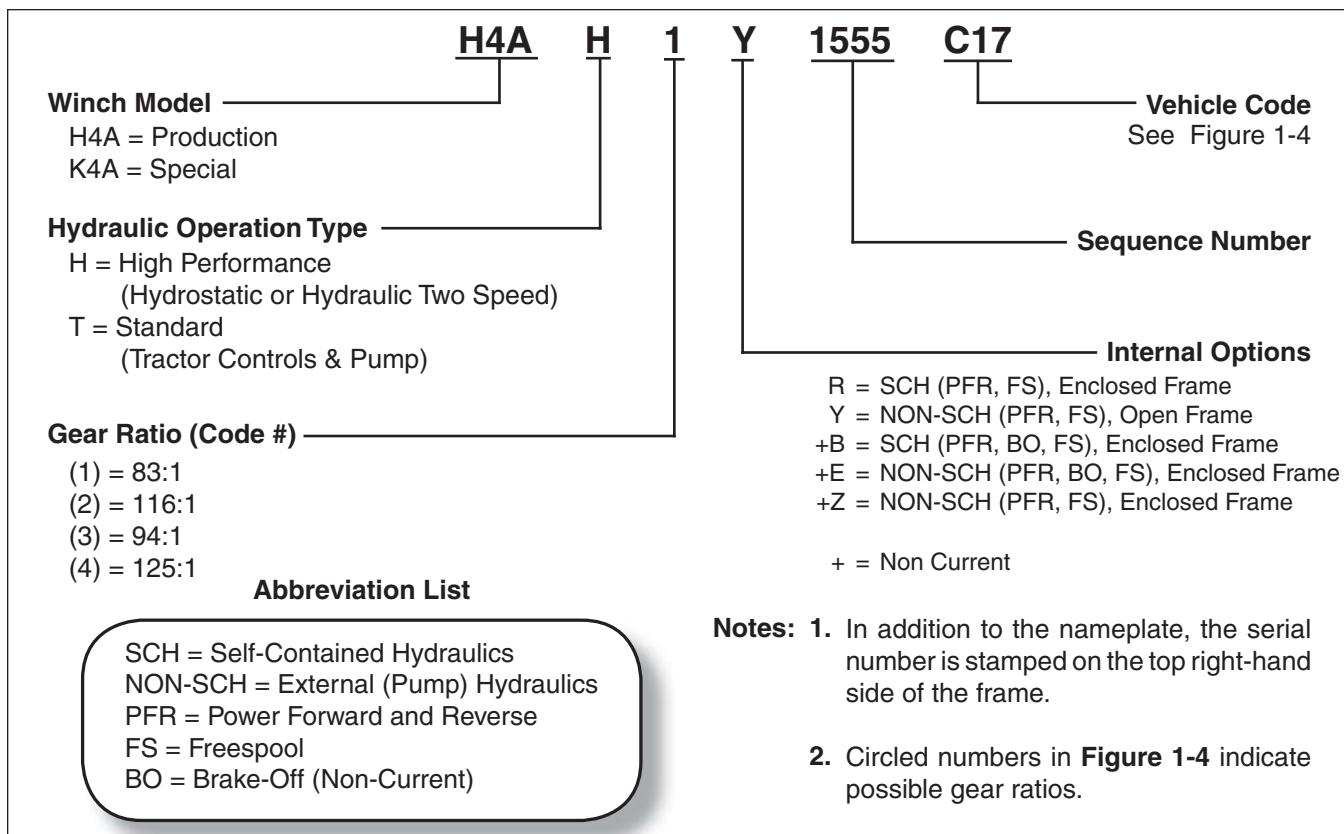


- Do not terminate wire rope to tail chain by the use of a knot.
- Do not handle wire rope if the hook end is not free. A load could break away, suddenly tensioning the wire rope, resulting in serious injury or death.
- Stay clear of wire rope entry areas (fairlead or arch rollers, winch drum etc).
- 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.
- 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.
- Replace any parts only with genuine Allied Winch parts.
- 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.
- 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.
- Keep yourself informed of any applicable codes, regulations and standards for the job.
- 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.
- Use only the lubricants listed in the Recommended Oil List. See page 0-11.
- Do not weld on any part of the winch. Contact Allied Systems if weld repairs are needed.
- The hydraulic system must be kept clean and free of contamination at all times.
- Be aware of the hazards of pressurized hydraulics:
  - » 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.
  - » Infection and gangrene are possible when hydraulic oil penetrates the skin. See a doctor immediately to prevent loss of limb or death.



## Serial Number Codes



**Figure 1** Serial Number Codes

## Serial Number

The winch serial number is stamped into the nameplate, mounted on the winch case. It is also stamped into the winch frame.

The serial number is described in Figure 1. This serial number is important; always have the serial number of your winch ready when discussing the winch with your dealer or when ordering parts.

## Nameplate

Each winch is shipped from the factory with a nameplate as shown in Figure 2. The nameplate is stamped with:

- winch model
- winch serial number
- maximum bare drum line pull
- maximum wire rope diameter

DO NOT operate the winch with larger diameter wire rope. If the nameplate is missing, DO NOT operate the winch until its capacity is known.

If the winch is equipped with an arch, the maximum cable size will be reduced. Refer to the nameplate for details.



**Figure 2** Nameplate Detail

## Tractor Codes

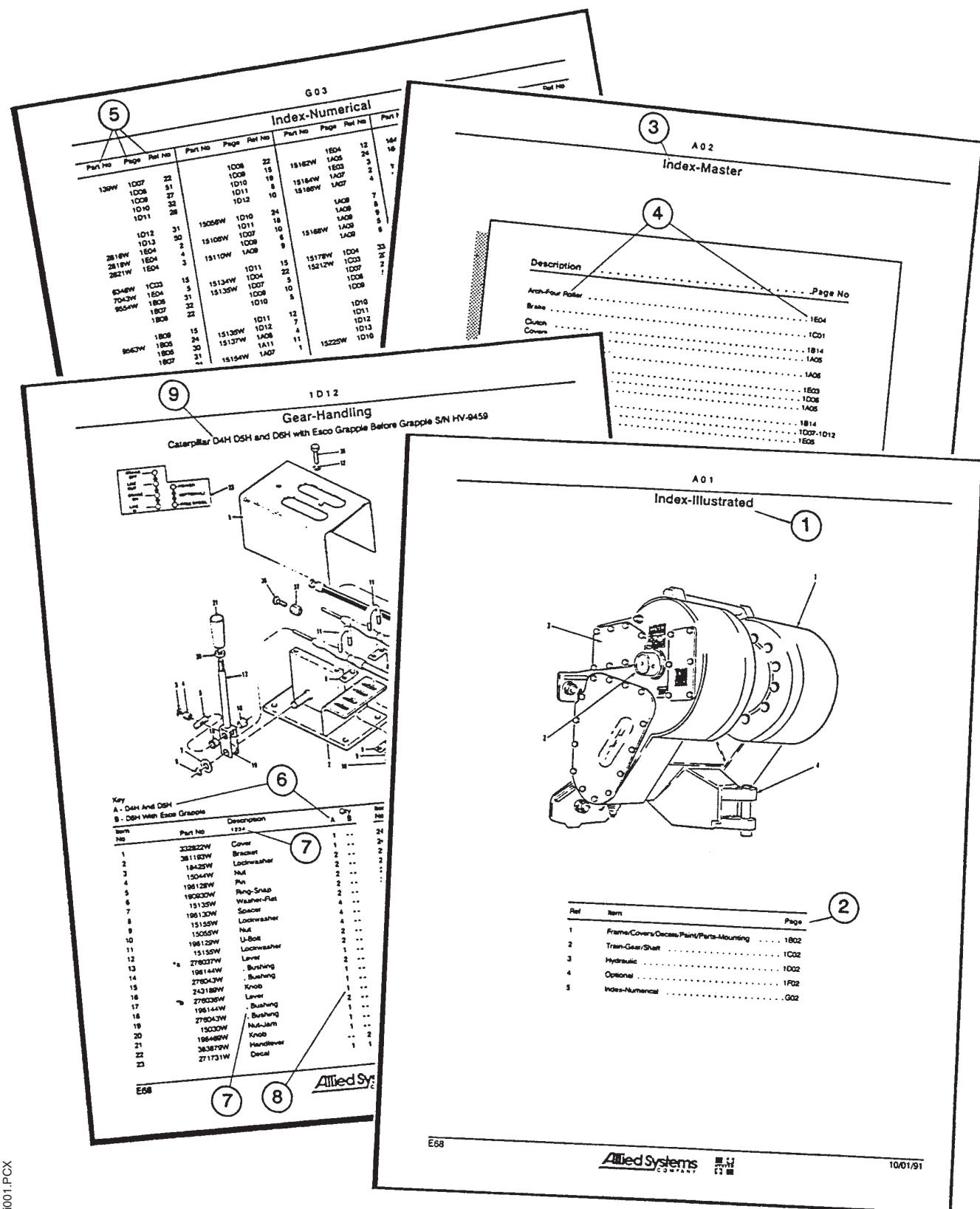
C O D E	A New Holland & Fiat	C Caterpillar	E John Deere	H Dresssta	K Komatsu	R Case	U Shantui
12					KOMSTAT D31/37/39X-21 & D31/37/39X-21A ②③		
13					KOMSTAT D31/37/39X-22 ①②③		SD10 ④
14					KOMSTAT D37/39X-23 D39X-24 ②		
15			450-650J ①②③	TD7S, TD8S ④		650/750/850K, 750/850L ①②③	
16		HYSTAT D3/4/5C ①②③	550-650K ①②③	TD9S ④		650L ①②③	
17		D3/4/5G *a ①②③				750/850M ①②③	
18		D4/5G *b ①②③					
19		D3/4/5K D3/4K2 T4i ①②③④					
191		D3/4/5K2 T4f *c ①②③④					
20		D5K & D5K2 T4i ①②③④					
201		D5K2 With Fireplow ①②③④					
39			700H/J ①②③				
391			700K ①②③				

\*a D3/4/5G with tractor s/n prefix CFC, CKA, CFF, CLB, CFN, FDC, FDH, CLF, FDW, CLW, JMH, ZDN, BYR, CXT  
 \*b D4/5G with tractor s/n prefix HYD, TLX, WGB, DKT, RKG, RSC  
 \*c With tractor s/n prefix D3K2: FT3, JPJ, KF2, KL2, LT3    D4K2: KM2, KR2, MT3, RT3    D5K2: KW2, KY2, RRE, WT3, YT3

**Figure 3 Tractor Identification and Winch Gear Ratios**

Tractor Make Model and Starting Tractor Serial Number Where Applicable

## How to use the Illustrated Parts manual



## How to use the Illustrated Parts manual

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

1. Determine the function and application of the part required. Turn to the index page immediately behind the front cover, and select the most appropriate area.
2. Use the index at the front of each section 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:**

3. Determine the assembly the required part is used on. Turn to the master index immediately following the index, Page 0-2.
4. 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:**

5. Use the numerical index (Section 5) to find the part number. Turn to the page(s) 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 0-3 for serial number information.

**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 USA

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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## Oil Capacity

The oil capacities for the H4A winch are as follows:

H4A (SCH model, S/N Code "R") .....	14 Gal. (53L)
H4A (External Pump, Closed Frame, S/N Code "B", "E", "Z").....	10 Gal. (38L)
H4A (Non-SCH, Open Frame Model, S/N Code "Y") .....	4 Gal. (15L)

## Recommended Oils

Winch Type	Winch Type	
H4A (with internal option R) PTO Driven (SCH), Hydrostatic	H4A (with Internal option code Y) Non SCH (tractor sump), Hydraulic/Hydrostatic	
Winch housing is oil reservoir for pump.	Motor circuit (Tractor Hydraulic tank is reservoir)	Winch gear cavity (not used as reservoir for pump/motor)
Recommended Oils	Recommended Oils	
Use Recommended Oils in Figure 5	Use Recommended Tractor Oil Only	Use Recommended Oils in Figure 5

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 Oils - 2

## **Frame/Covers/Mounting Parts/Nameplate & Decals**

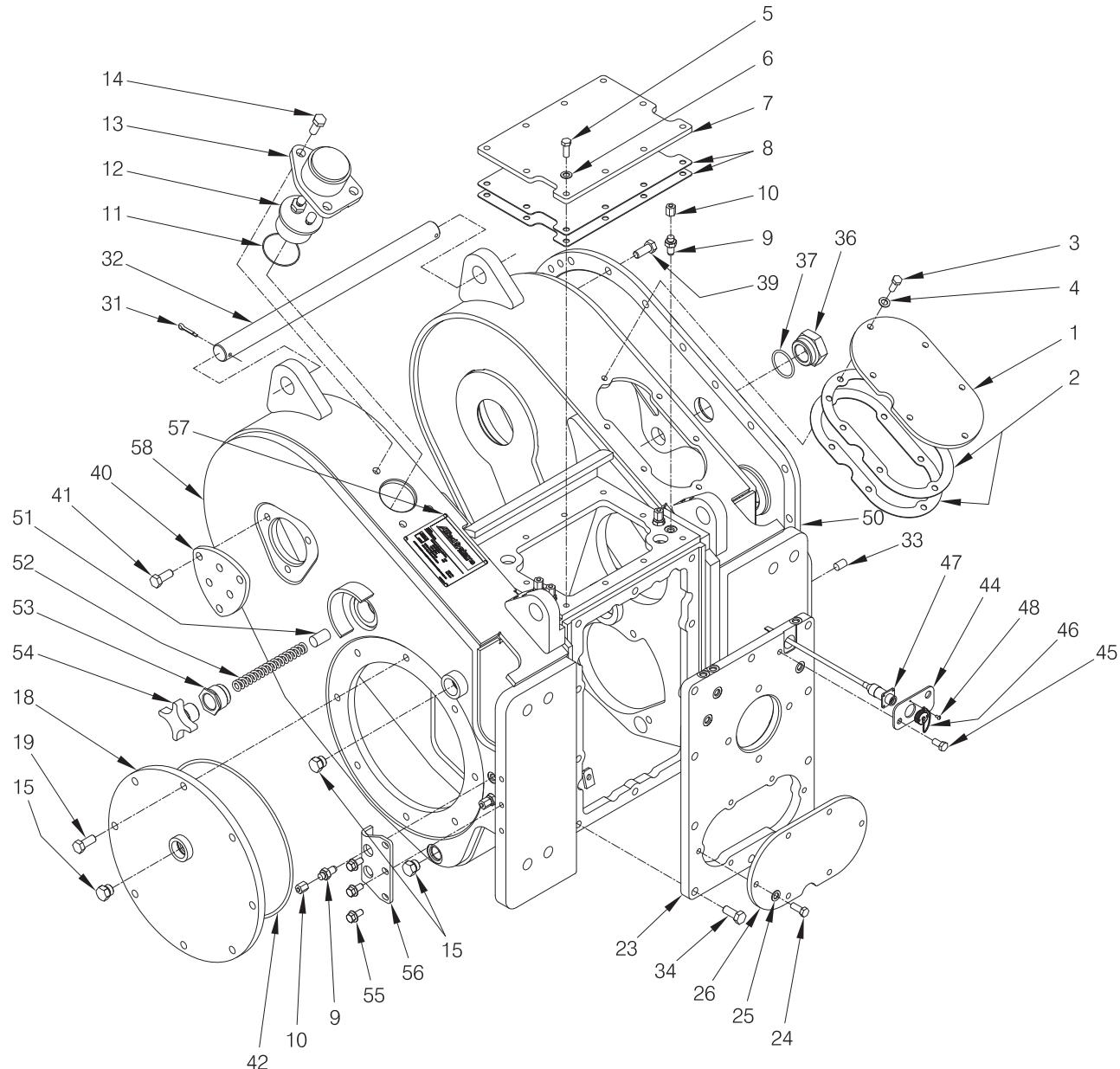
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Mounting Parts .....	1-8 thru 1-30
Nameplate & Decals .....	1-31 & 1-32

## Frame/Covers

John Deere 450-650J (H4AH\_R\_E15), 550-650K (H4AH\_R\_E16)

John Deere 700H/J (H4AH\_R\_E39), 700K (H4AH\_R\_E391)

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



**Frame/Covers**

John Deere 450-650J (H4AH\_R\_E15), 550-650K (H4AH\_R\_E16)

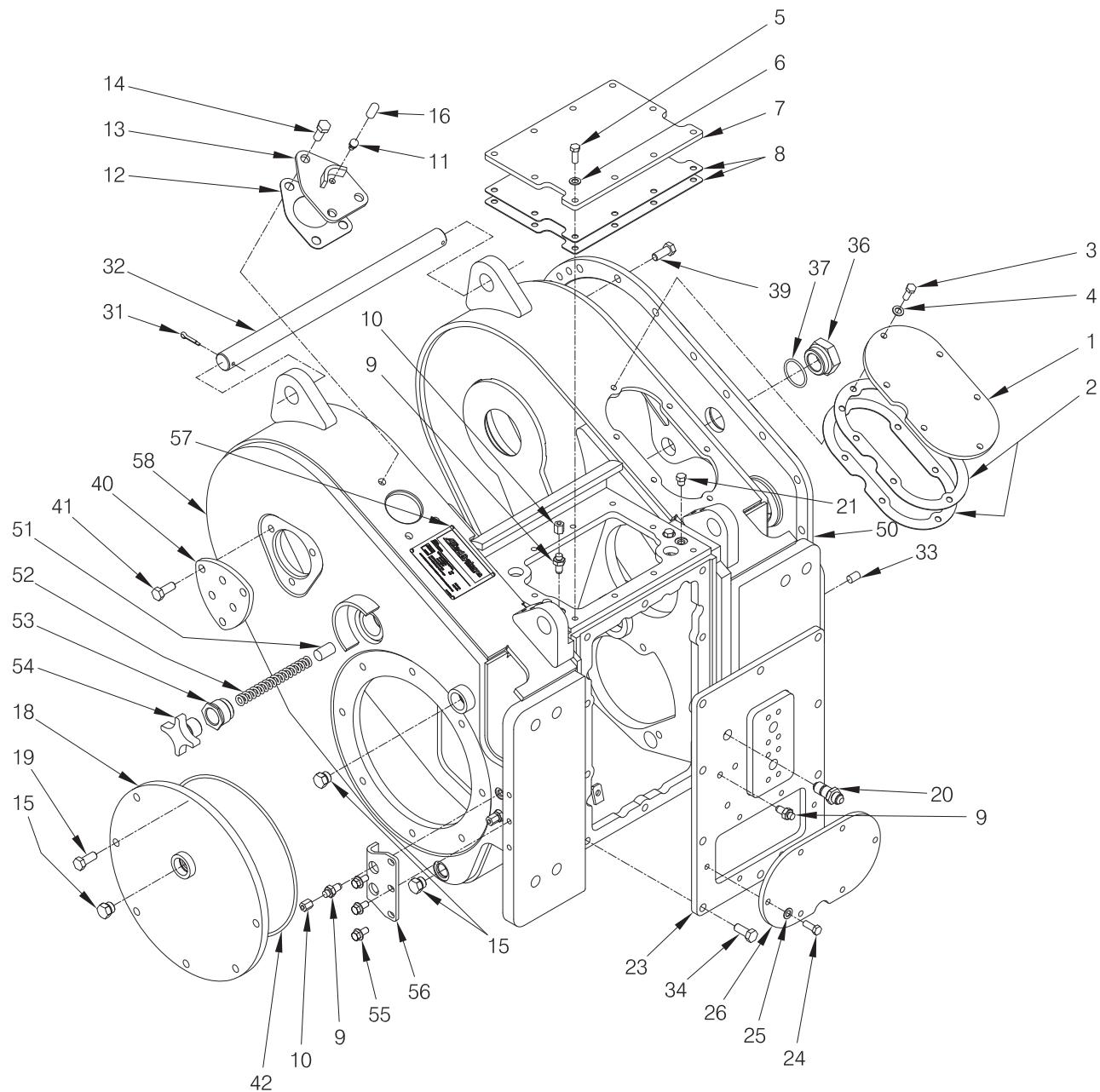
John Deere 700H/J (H4AH\_R\_E39), 700K (H4AH\_R\_E391)

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

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2304099W	Cover	1	36	2304174W	Plug	1
2	*d 2315377	Gasket	2	37	*d 16984W	O-Ring	1
3	179443W	Capscrew	6	39	2303848W	Capscrew	20
4	15156W	Washer	6	40	2304070W	Cover, Drum Shaft	1
5	179443W	Capscrew	10	41	2303848W	Capscrew	6
6	15156W	Washer	10	42	*d 232873	O-Ring	1
7	2304100W	Cover, Top	1	44	2305124W	Retainer, Filter Connector	1
8	*d 2314794	Gasket	2	45	162572W	Capscrew	1
9	16445W	Fitting	6	46	245959W	Cap, Dust	1
10	16923W	Fitting	6	47	*a 2305278W	Harness, Filter Wiring	1
11	*d 39365W	O-Ring	1	48	16602W	Screw	1
12	2305104W	Assembly, Breather	1	50	*a 2304092W	Cover, LH	1
13	2305103W	Cover, Breather	1	51	2300277W	Pad, Freespool Drag	1
14	2303848W	Capscrew	3	52	2304192W	Spring	1
15	*b 14603W	Fitting	3	53	2300174W	Insert	1
15	*c 14595W	Fitting	3	54	1314547W	Knob, Freespool Drag	1
18	2304098W	Cover, RH	1	55	134803W	Capscrew	3
19	2303848W	Capscrew	8	56	2305734W	Guard	1
23	*a 2304019W	Plate, Pump Mounting	1	57	16602W	Screw	4
24	179443W	Capscrew	6	58	2304281W	Frame	1
25	15156W	Washer	6	*a Use 313022W Adhesive			
26	*a 2304099W	Cover	1	*b Last used on S/N H4A-2545			
31	15256W	Pin, Cotter	2	*c First used on S/N H4A-2546			
32	2305020W	Bar, Tie	1	*d Included in Gasket Kit 2306544W			
33	176208W	Pin, Dowel	2				
34	2303848W	Capscrew	10				

## **Frame/Covers**

Caterpillar D3/4/5G, D4/5G  
(H4AH\_E & H4AH\_Z)

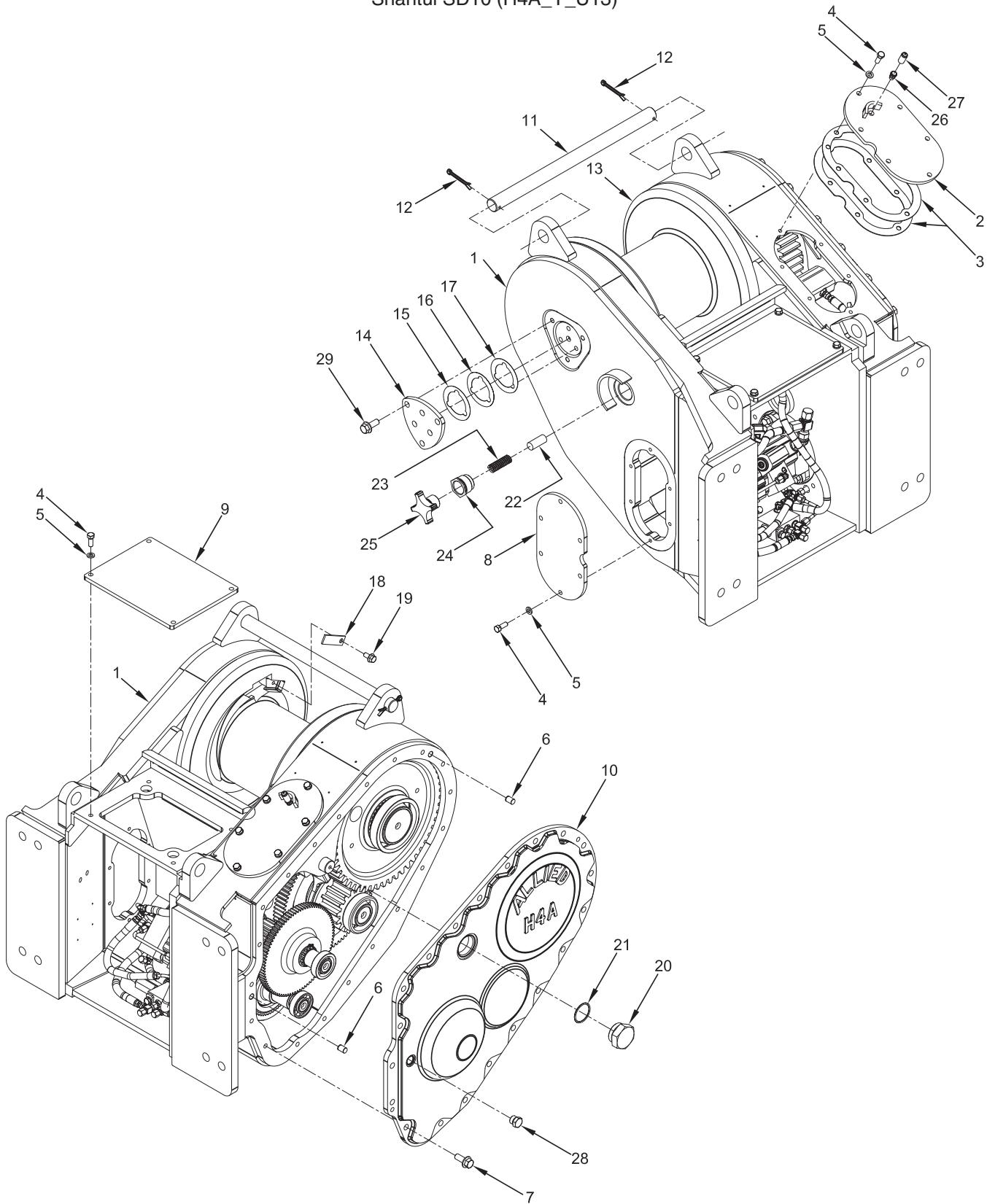


**Frame/Covers**  
 Caterpillar D3/4/5G, D4/5G  
 (H4AH\_E & H4AH\_Z)

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2304099W	Cover	1	32	2305020W	Bar, Tie	1
2	*d 2315377	Gasket	2	33	176208W	Pin, Dowel	2
3	179443W	Capscrew	6	34	2303848W	Capscrew	10
4	15156W	Washer	6	35	16925W	Fitting	1
5	179443W	Capscrew	10	36	2304174W	Plug	1
6	15156W	Washer	10	37	*d 16984W	O-Ring	1
7	2304100W	Cover, Top	1	39	2303848W	Capscrew	20
8	*d 2314794	Gasket	2	40	2304070W	Cover, Drum Shaft	1
9	*e 16445W	Fitting	6	41	2303848W	Capscrew	6
10	16923W	Fitting	6	42	*d 232873	O-Ring	1
11	21420W	Plug, Breather	1	50	*a 2304092W	Cover, LH	1
12	*d 2305600W	Gasket	1	51	2300277W	Pad, Freespool Drag	1
13	2305598W	Cover, Breather	1	52	2304192W	Spring	1
14	2303848W	Capscrew	3	53	2300174W	Insert	1
15	*b 14603W	Fitting	3	54	1314547W	Knob, Freespool Drag	1
15	*c 14595W	Fitting	3	55	134803W	Capscrew	3
16	2300962W	Cap, Breather	1	56	2305734W	Cover	1
18	2304098W	Cover, RH	1	57	16602W	Screw	4
19	2303848W	Capscrew	8	58	2304281W	Frame	1
20	*e 16448W	Fitting	1	*a      Use 313022W Adhesive			
21	14591W	Fitting	3	*b      Last used on S/N H4A-2545			
23	*a, *e 2304218W	Plate, Front Cover	1	*c      First used on S/N H4A-2546			
24	179443W	Capscrew	6	*d      Included in Gasket Kit 2306544W			
25	15156W	Washer	6	*e      Used on S/N H4A-1000 thru H4A-1015 Only			
26	*a 2304099W	Cover	1				
31	15256W	Pin, Cotter	2				

## Frame/Covers

Caterpillar D3/4/5G (H4A\_Y\_C17), D4/5G (H4A\_Y\_C18), D3/4K (H4A\_Y\_C19),  
 Caterpillar D3/4/5K2 T4f (H4A\_Y\_C191), D5K/K2 (H4A\_Y\_C20), D5K2 with fireplow (H4A\_Y\_C201)  
 Dresssta TD7/8S (H4A\_Y\_H15), TD9S (H4A\_Y\_H16)  
 Komatsu D31/37/39X-22 (H4A\_Y\_K13), D37/39X-23, D39X-24 (H4A\_Y\_K14)  
 Shantui SD10 (H4A\_Y\_U13)



## Frame/Covers

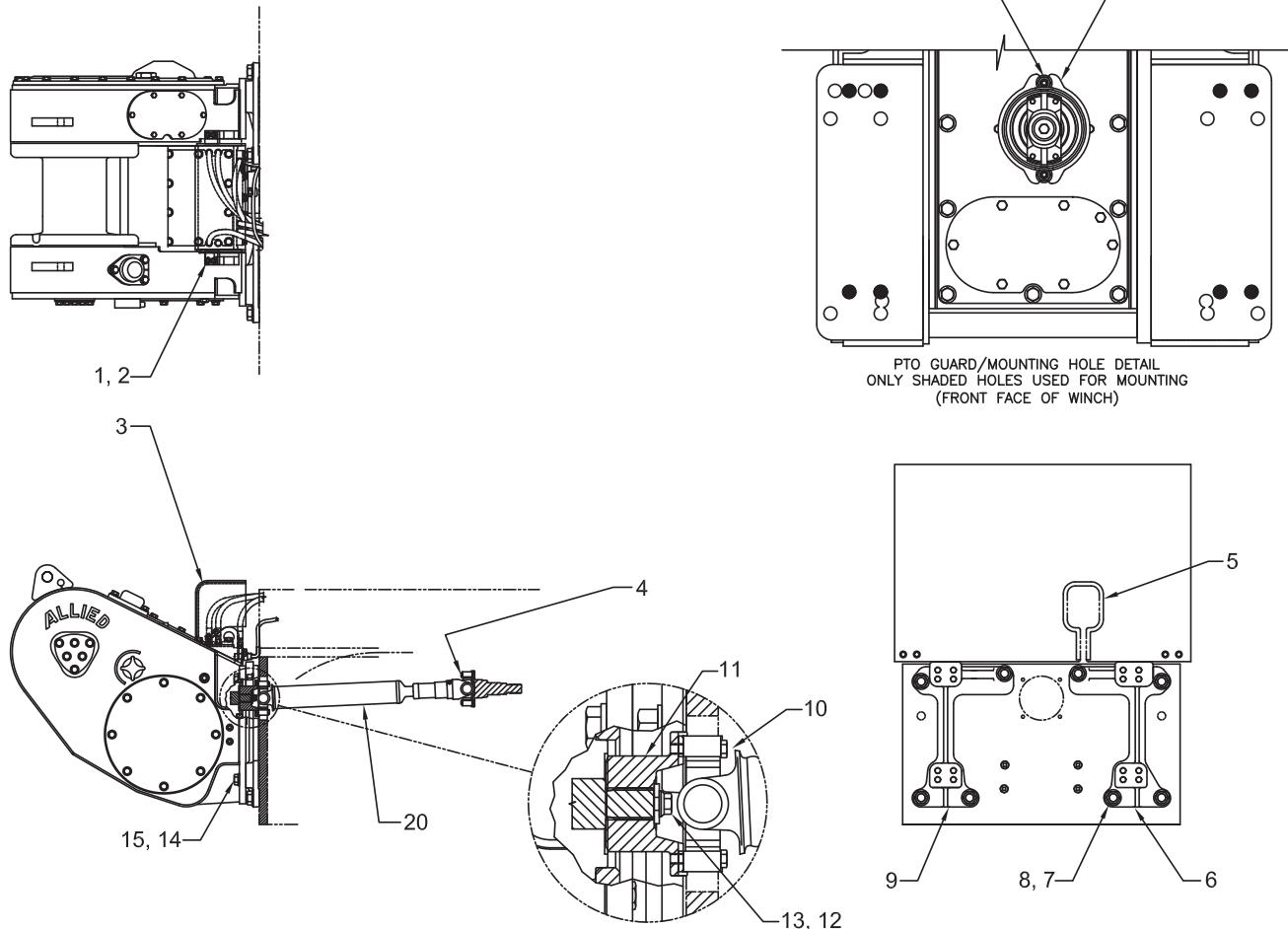
Caterpillar D3/4/5G (H4A\_Y\_C17), D4/5G (H4A\_Y\_C18), D3/4K (H4A\_Y\_C19),  
 Caterpillar D3/4/5K2 T4f (H4A\_Y\_C191), D5K/K2 (H4A\_Y\_C20), D5K2 with fireplow (H4A\_Y\_C201)  
 Dresssta TD7/8S (H4A\_Y\_H15), TD9S (H4A\_Y\_H16)  
 Komatsu D31/37/39X-22 (H4A\_Y\_K13), D37/39X-23, D39X-24 (H4A\_Y\_K14)  
 Shantui SD10 (H4A\_Y\_U13)

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305645W	Frame	1	17	2304124W	Shim, .020	AR
2	2305663W	Cover, Breather	1	18	1314503W	Keeper, Ferrule	1
3	2315377	Gasket, Breather	2	19	134803W	Screw, Flange	1
4	179443W	Capscrew	16	20	2304174W	Plug, Freespool Shaft	1
5	15156W	Washer	16	21	16984W	O-Ring	1
6	176208W	Pin	2	22	2311889	Pad, Freespool Drag	1
7	2303848W	Screw, Flanged	20	23	1314502W	Spring, Freespool Drag	1
8	*a 2304099W	Cover	1	24	2300174W	Insert	1
9	2305662W	Cover, Top	1	25	1314547W	Knob, Freespool Drag	1
10	*a 2304092W	Cover, LH	1	26	21420W	Plug, Breather	1
11	2305020W	Bar, Tie (Except w/ Arch)	1	27	2300962W	Cap, Breather	1
12	15256W	Pin (Except w/Arch)	2	28	14595W	Fitting, O-Ring	1
13	2304069W	Drum	1	29	2303848W	Screw, Flanged	16
14	2304070W	Cover, Drum Shaft	1				
15	2304122W	Shim, .005	AR				
16	2304123W	Shim, .007	AR				

\*a      Use 313022W Adhesive

## Mounting Parts

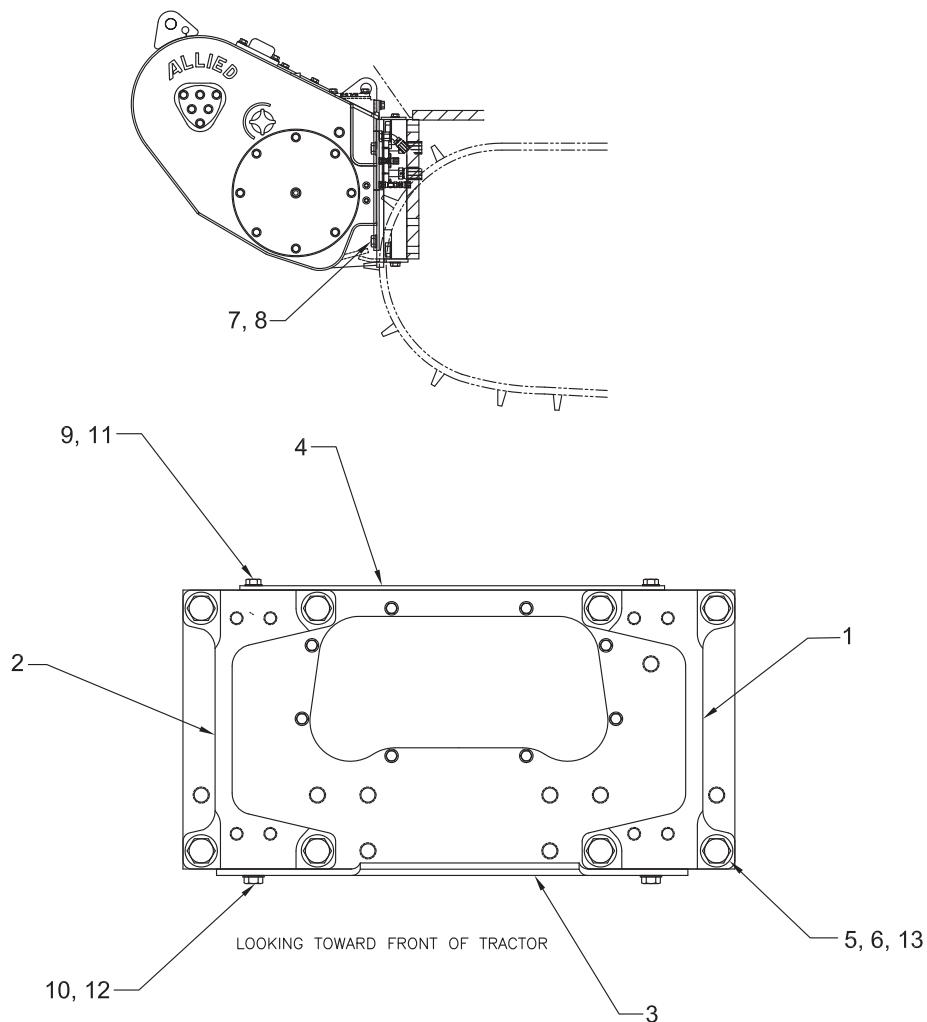
Caterpillar D3/4/5C (H4AH\_R\_C16)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	16828W	Capscrew	4	12	2304119W	Washer	1
2	15134W	Washer	4	13	*a 174413W	Capscrew	1
3	2304948W	Cover	1	14	221777W	Washer	8
4	293617W	Capscrew	4	15	*a 168054W	Capscrew	8
5	225871W	Trim	3'	16	2304116W	Guard, PTO	1
6	2303006W	Mounting Pad, RH	1	17	*a 16210W	Screw	2
7	221780W	Washer	8	18	15135W	Washer	2
8	*a 221686W	Capscrew	8	19	221711W	Nut	2
9	2303007W	Mounting Pad, LH	1	20	2304203W	Driveshaft	1
10	221466W	Capscrew	4		2300041W	.Assembly, Cross & Bearing	1
11	2304120W	Yoke	1	*a Use 318702W Thread Lock			
	2304129W	.Yoke	1				

## Mounting Parts

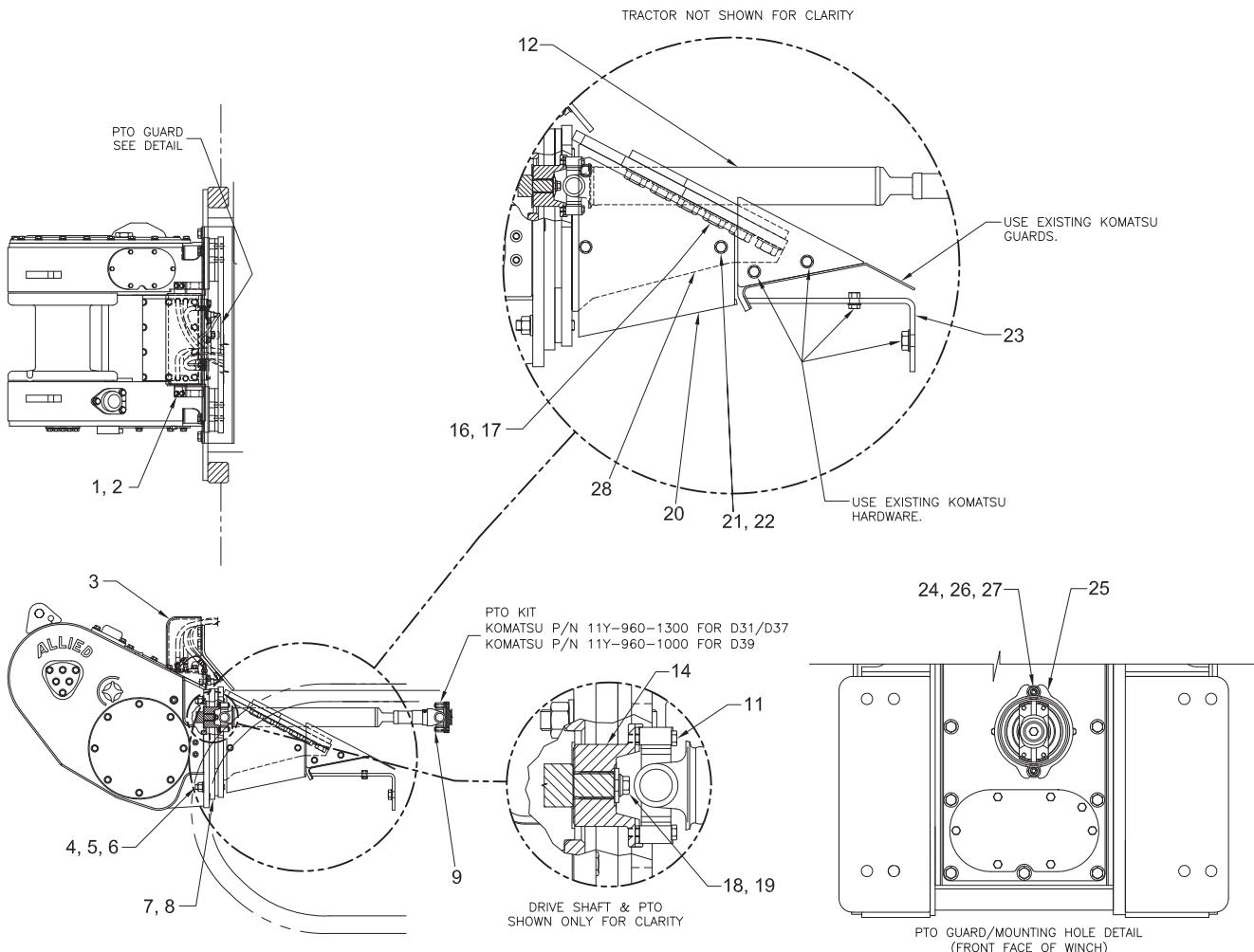
Caterpillar D3/4/5G (H4AH\_R\_C17)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2304208W	Mounting Bracket, RH	1	8	221777W	Washer	8
2	2304209W	Mounting Bracket, LH	1	9	221560W	Capscrew	2
3	2306422W	Guard, Bottom	1	10	221616W	Capscrew	2
4	2306575W	Guard, Top	1	11	221771W	Washer	2
5 *a	293729W	Capscrew	8	12	221775W	Washer	2
6	296434W	Washer	8	*a      Use 318702W Thread Lock			
7 *a	221657W	Capscrew	8				

## Mounting Parts

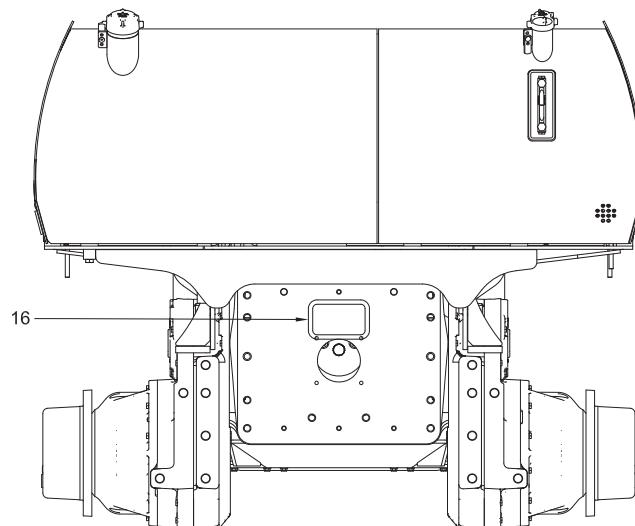
Komatsu D31/37/39 E-21 and E21-A (H4AH\_R\_K12)



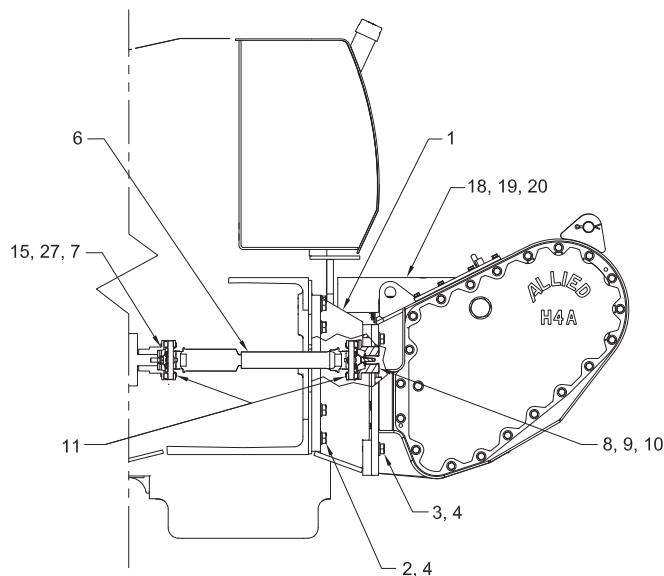
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	16828W	Capscrew	4	17	296434W	Washer	12
2	15134W	Washer	4	18	*a 174413W	Capscrew	1
3	2304948W	Cover	1	19	2304119W	Washer	1
4	221777W	Washer	8	20	2304937W	Guard, Skid Plate	1
5	221716W	Nut	8	21	293646W	Capscrew	6
6	*a 2304261W	Stud	8	22	296422W	Washer	6
7	2304263W	Spacer, LH	1	23	2304939W	Guard, Piping	1
8	2304264W	Spacer, RH	1	24	*a 16210W	Screw	2
9	*a 293617W	Capscrew	4	25	2304116W	Guard, PTO	1
11	221466W	Capscrew	4	26	15135W	Washer	2
12	2304260W	Driveshaft	1	27	221711W	Nut	2
	2300041W	. Assembly, Cross & Bearing	1	28	2304814W	Bracket, Mounting	1
14	2304120W	Yoke	1	*a Use 318702W Thread Lock			
16	*a 1308451W	Capscrew	12				

## Mounting Parts

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



TRACTOR REAR FACE PREPARATION



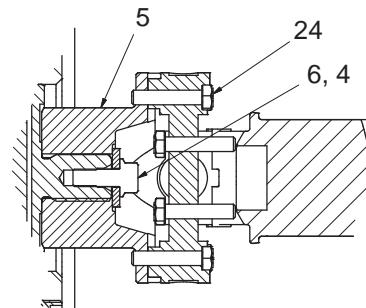
MOUNTING BRACKET, DRIVE SHAFT,  
WINCH, & GUARD INSTALLATION  
(LEFT-HAND SIDE VIEW)

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2311322	Bracket, Mounting	1	11	*a 221466W	Capscrew	8
2	*a 293710W	Capscrew	10	15	296422W	Washer	1
3	*a Y17C-1232	Capscrew	8	16	24257	Trim, Edge	1.5 FT
4	221777W	Washer	18	18	2311239	Guard	1
6	2313947	Driveshaft	1	19	252928W	Capscrew	3
	2300041W	. Assembly, Cross & Bearing	1	20	15134W	Washer	3
7	2312720	Yoke	1	27	*a 293645W	Capscrew	1
8	2304120W	Yoke	1			*a Use 318702W Thread Lock	
9	*a 174413W	Screw	1				
10	2304119W	Washer	1				

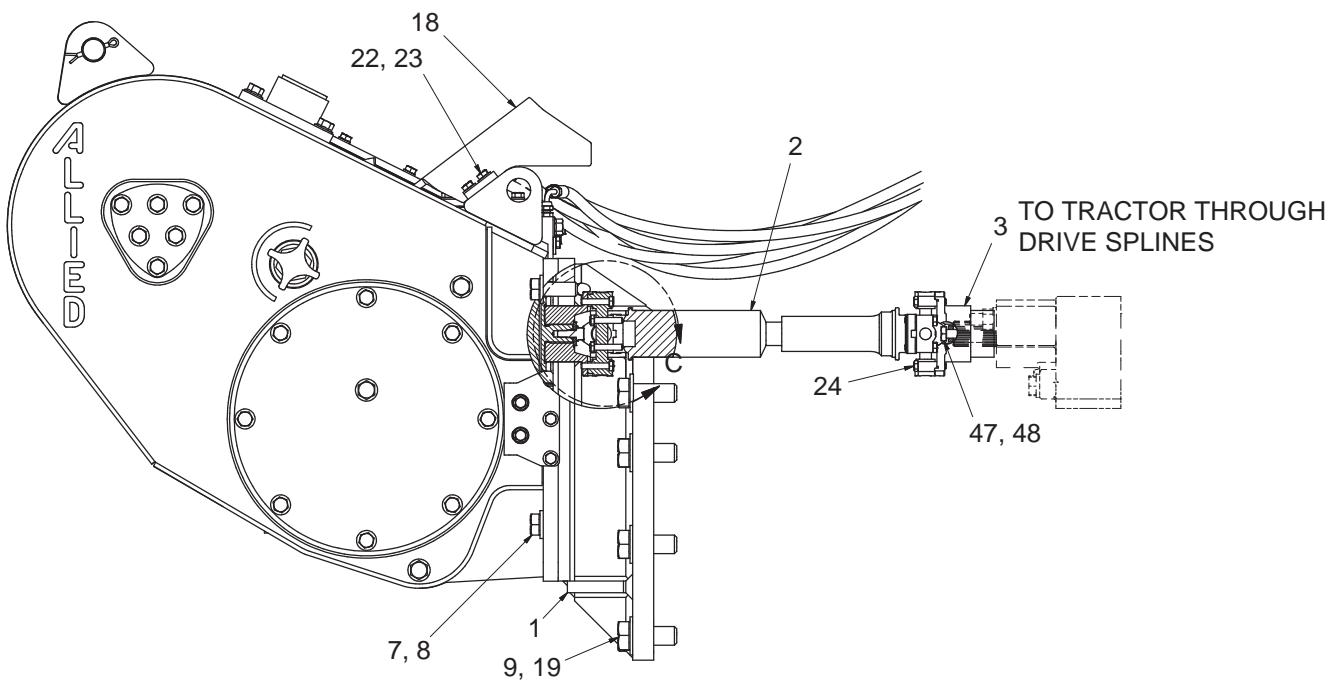
**Mounting Parts**

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

Page 1 of 2



**DETAIL C**  
WINCH YOKE & DRIVESHAFT



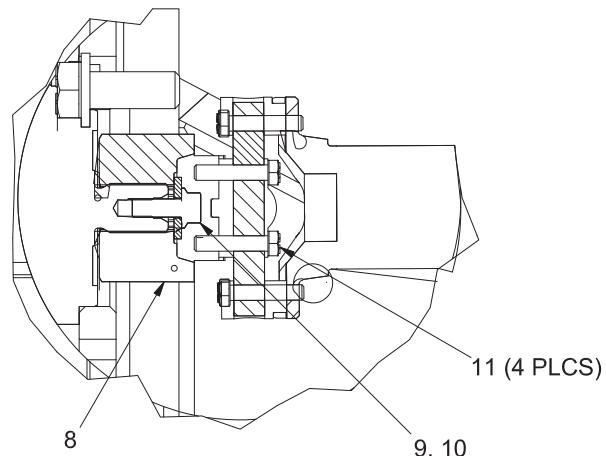
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2315652	Bracket, Mounting	1	9	221780W	Washer	12
2	2313863	Driveshaft	1	18	2312877	Guard, Hose	1
	2300041W	. Assembly, Cross & Bearing	1	19	*a 221690W	Capscrew	12
3	2312720	Yoke	1	22	221767W	Washer	4
4	2304119W	Washer	1	23	16828W	Capscrew	4
5	2304120W	Yoke	1	24	*a 221466W	Capscrew	8
6	*a 174413W	Screw	1	47	*a 293645W	Capscrew	1
7	Y27E-12	Washer	8	48	296422W	Washer	1
8	*a Y17C-1232	Capscrew	8	*a Use 318702W Thread Lock			

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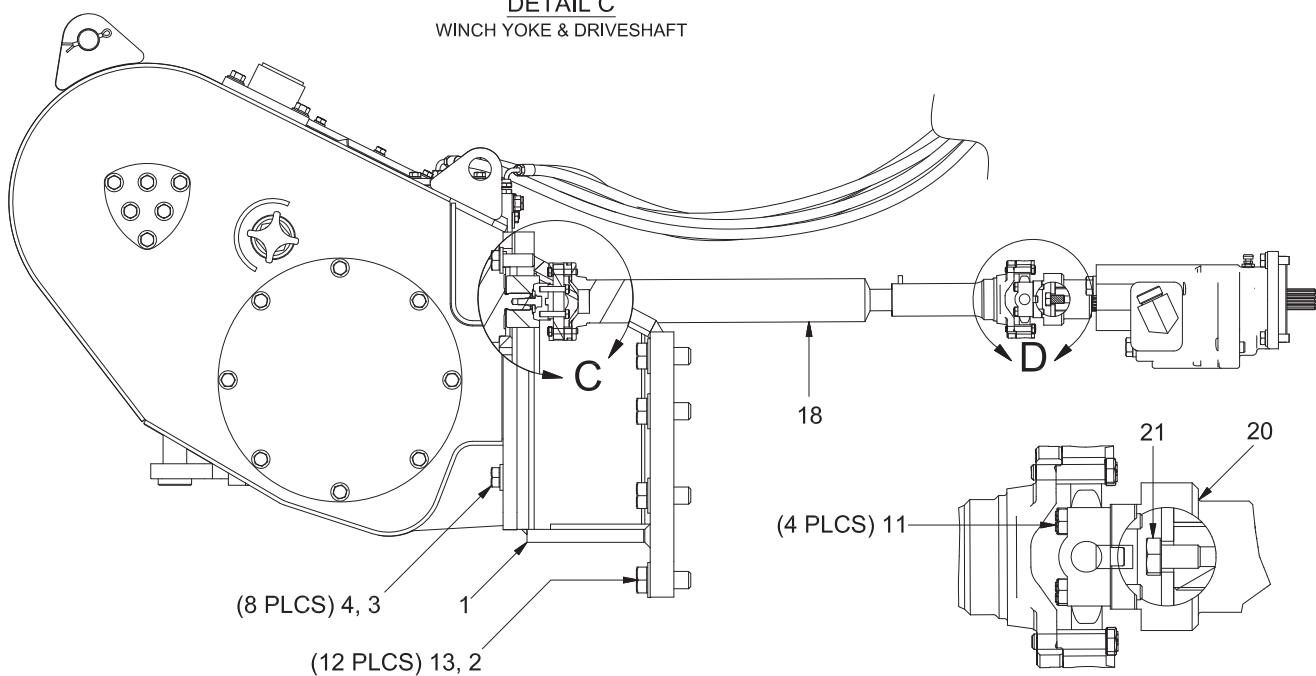
**Mounting Parts**

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

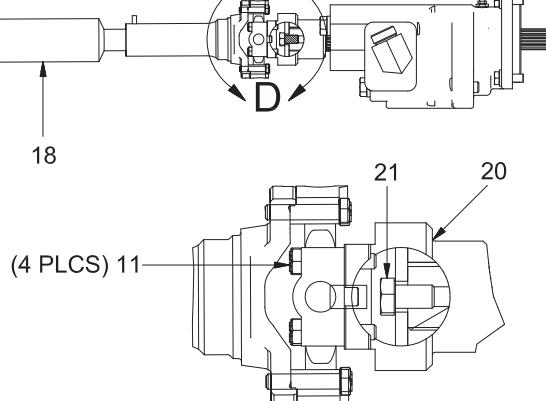
Page 1 of 2



**DETAIL C**  
WINCH YOKE & DRIVESHAFT



RIGHT-HAND SIDE VIEW

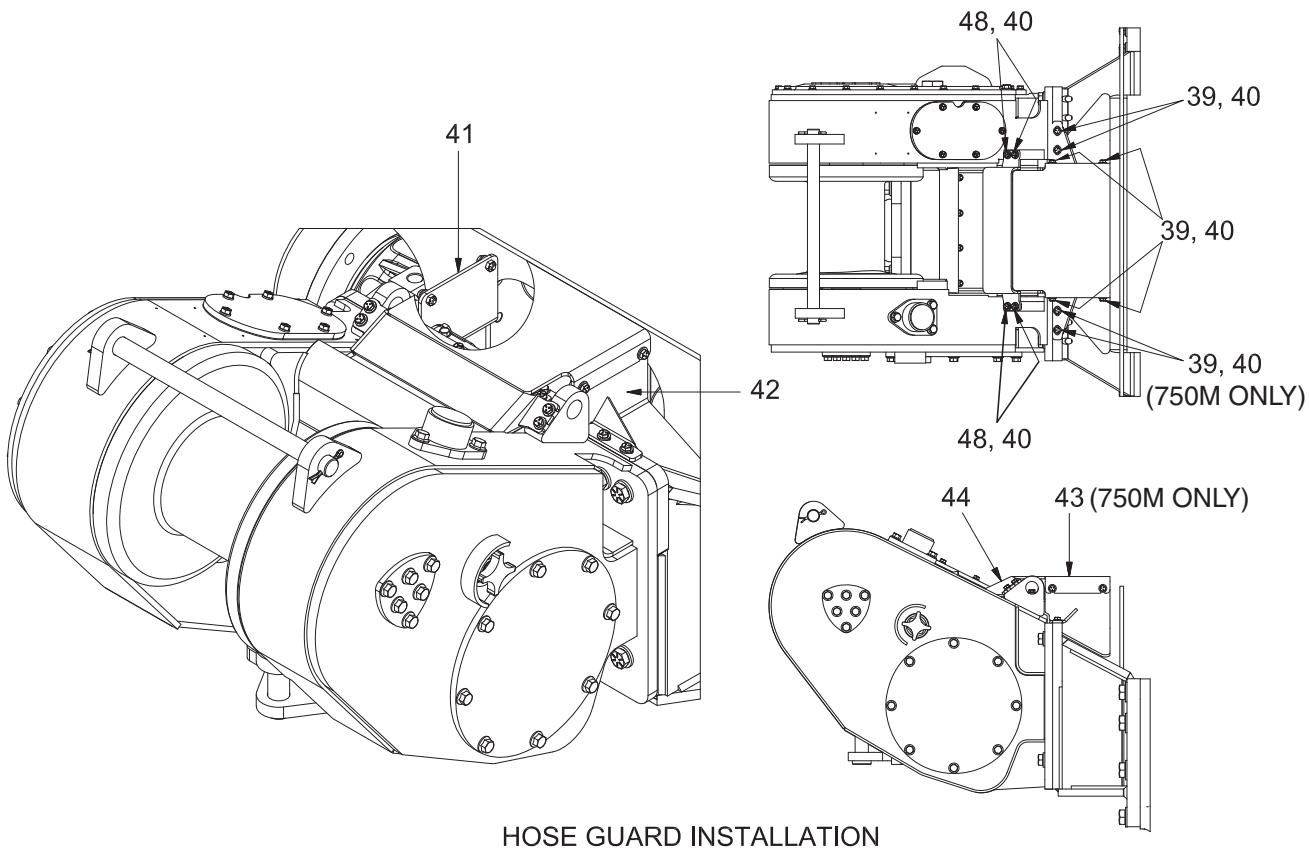


DETAIL D

**Mounting Parts**

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

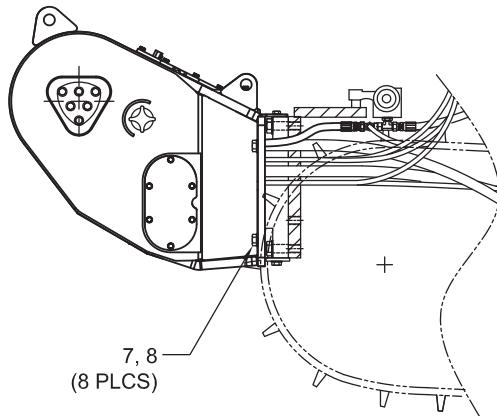
Page 2 of 2



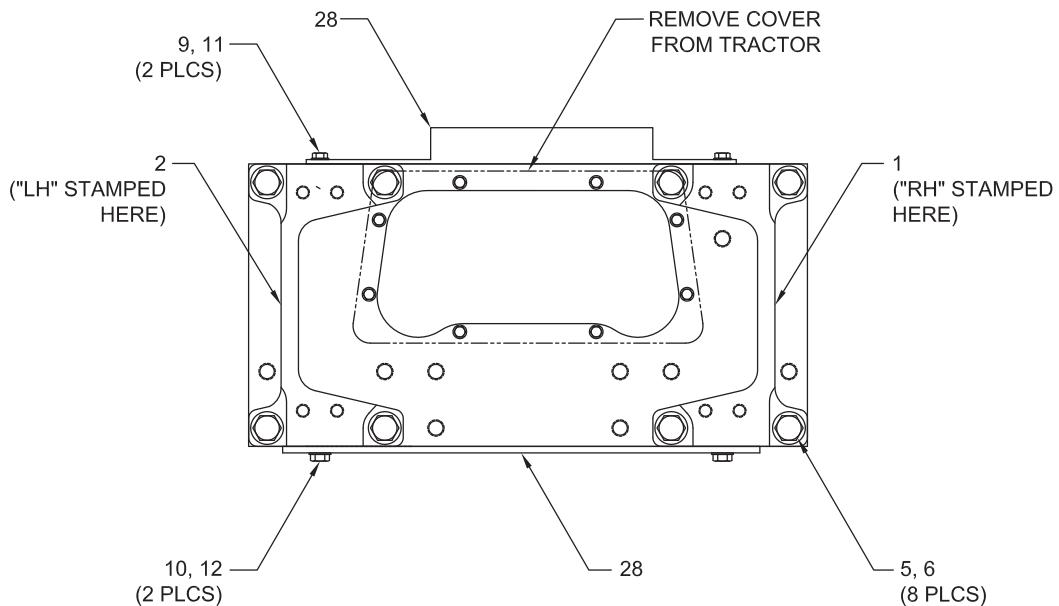
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2314762	Bracket, Mounting	1	20	2312360	Yoke	1
2	*a 221690W	Capscrew	12	21	*a 292526W	Capscrew	1
3	*a Y17C-1232	Capscrew	8	39	16805W	Capscrew	6
4	Y27E-12	Washer	8	40	Y27E-06	Washer	10
8	2304120W	Yoke	1	41	2314934	Guard, Hose - Left Side	1
9	*a 174413W	Screw	1	42	2314914	Guard, Hose - Right Side	1
10	2304119W	Washer	1	43	2314913	Guard, Hose - Top	1
11	*a 221466W	Capscrew	8	44	2314910	Guard, Hose - Center	1
13	221780W	Washer	12	48	16598W	Capscrew	4
18	2314416	Driveshaft	1	*a      Use 318702W Thread Lock			
	2300041W	. Assembly, Cross & Bearing	1				

## Mounting Parts

Caterpillar D3/4/5G (H4AH\_Y\_C17)  
 Caterpillar D4/5G (H4AH\_Y\_C18)  
 Last Used on S/N H4A-1161



RIGHT-HAND SIDE VIEW OF TRACTOR

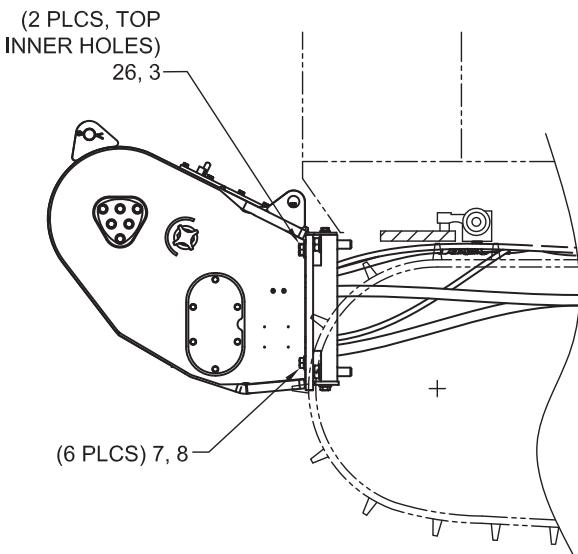
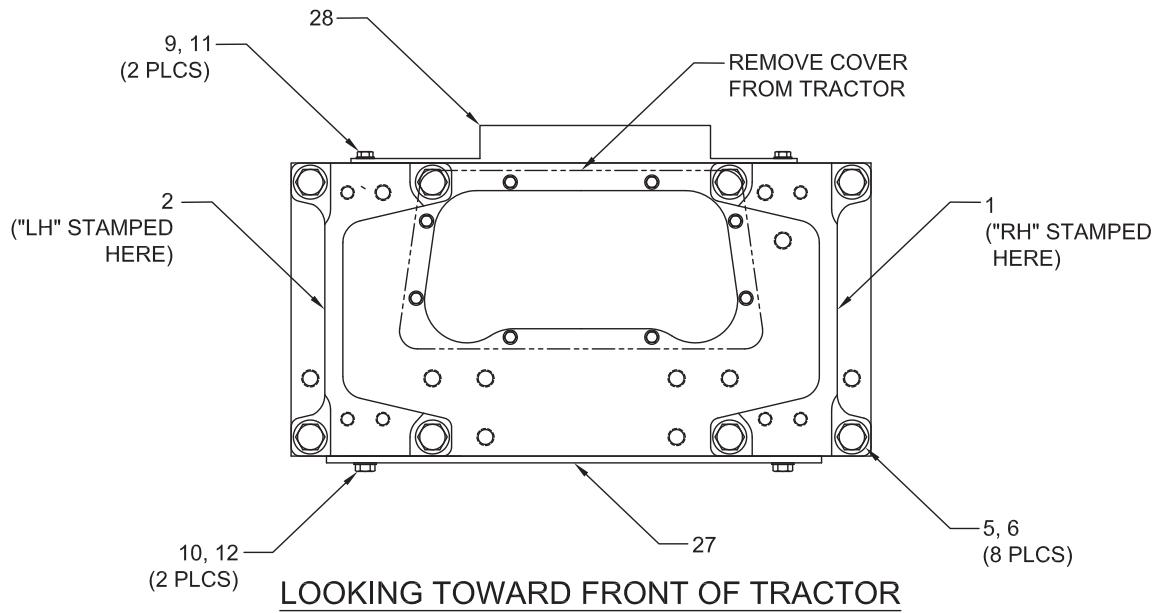


LOOKING TOWARD FRONT OF TRACTOR

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
1	2304208W	Bracket, Mounting - RH	1	10	221616W	Capscrew	2	
2	2304209W	Bracket, Mounting - LH	1	11	221771W	Washer	2	
5	*a	293729W	Capscrew	8	12	221775W	Washer	2
6		296434W	Washer	8	27	2306422W	Guard, Bottom	1
7	*a	221657W	Capscrew	8	28	2306575W	Guard, Top	1
8		221777W	Washer	8	*a		Use 318702W Thread Lock	
9		221560W	Capscrew	2				

## Mounting Parts

Caterpillar D3/4/5G (H4AH\_Y\_C17)  
 Caterpillar D4/5G (H4AH\_Y\_C18)  
 First Used on S/N H4A-1162

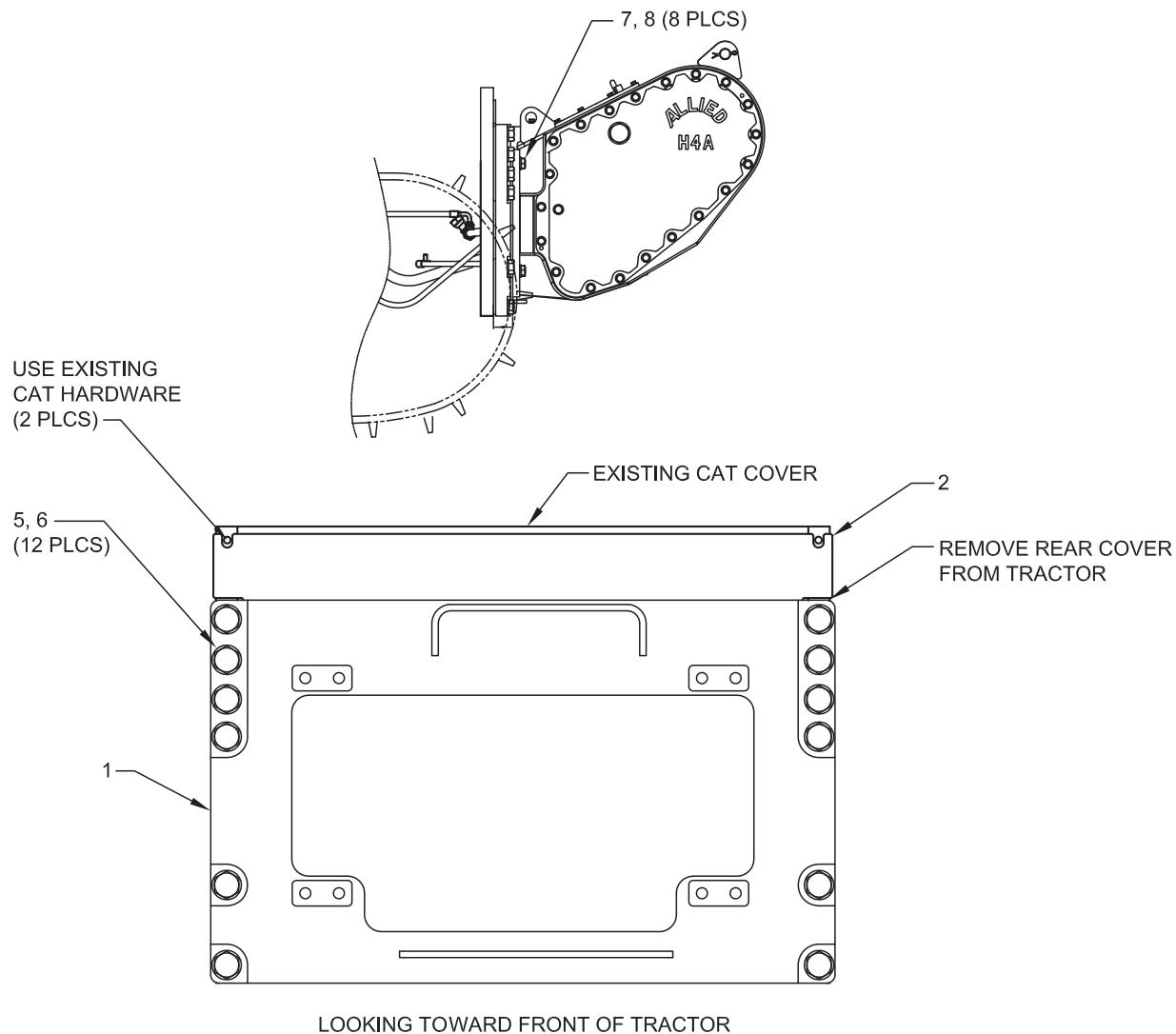


**RIGHT-HAND SIDE VIEW OF TRACTOR**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2311837	Bracket, Mounting - RH	1	10	221616W	Capscrew	2
2	2311838	Bracket, Mounting - LH	1	11	221771W	Washer	2
3	*a 218760	Capscrew	2	12	221775W	Washer	2
5	*a 293729W	Capscrew	8	26	Y27E-14	Washer	2
6	296434W	Washer	8	27	2306422W	Guard, Bottom	1
7	*a 221657W	Capscrew	6	28	2306575W	Guard, Top	1
8	221777W	Washer	6	*a		Use 318702W Thread Lock	
9	221560W	Capscrew	2				

## Mounting Parts

Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D3/4K (H4AT\_Y\_C19),  
 Caterpillar D5K (H4AT\_Y\_C20)  
 Last Used on S/N H4A-1161

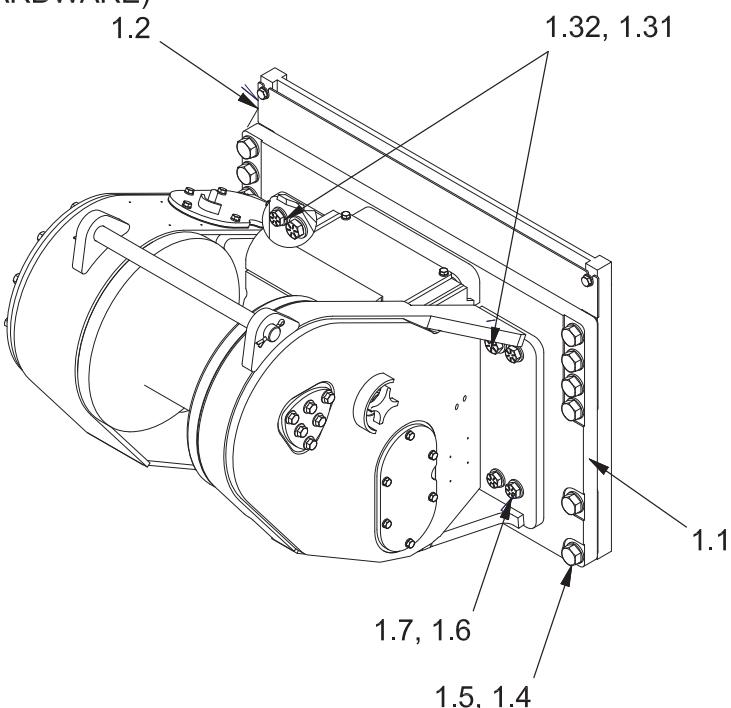


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2310868	Plate, Mounting	1	7	*a Y17C-1236W	Capscrew	8
2	2310888	Guard, Cover	1	8	221777W	Washer	8
5	*a 1308451W	Capscrew	12				
6	296434W	Washer	12				
						*a Use 318702W Thread Lock	

## Mounting Parts

Caterpillar D3/4K/K2 (H4AH\_Y\_C19), Caterpillar D3/4K/K2 (H4AT\_Y\_C19),  
 Caterpillar D5K/K2 (H4AH\_Y\_C20); Caterpillar D5K/K2 (H4AT\_Y\_C20);  
 Caterpillar D5K2 with fireplow (H4AH\_Y\_C201)  
 First Used on S/N H4A-1162

(INSTALL WITH EXISTING  
TRACTOR HARDWARE)



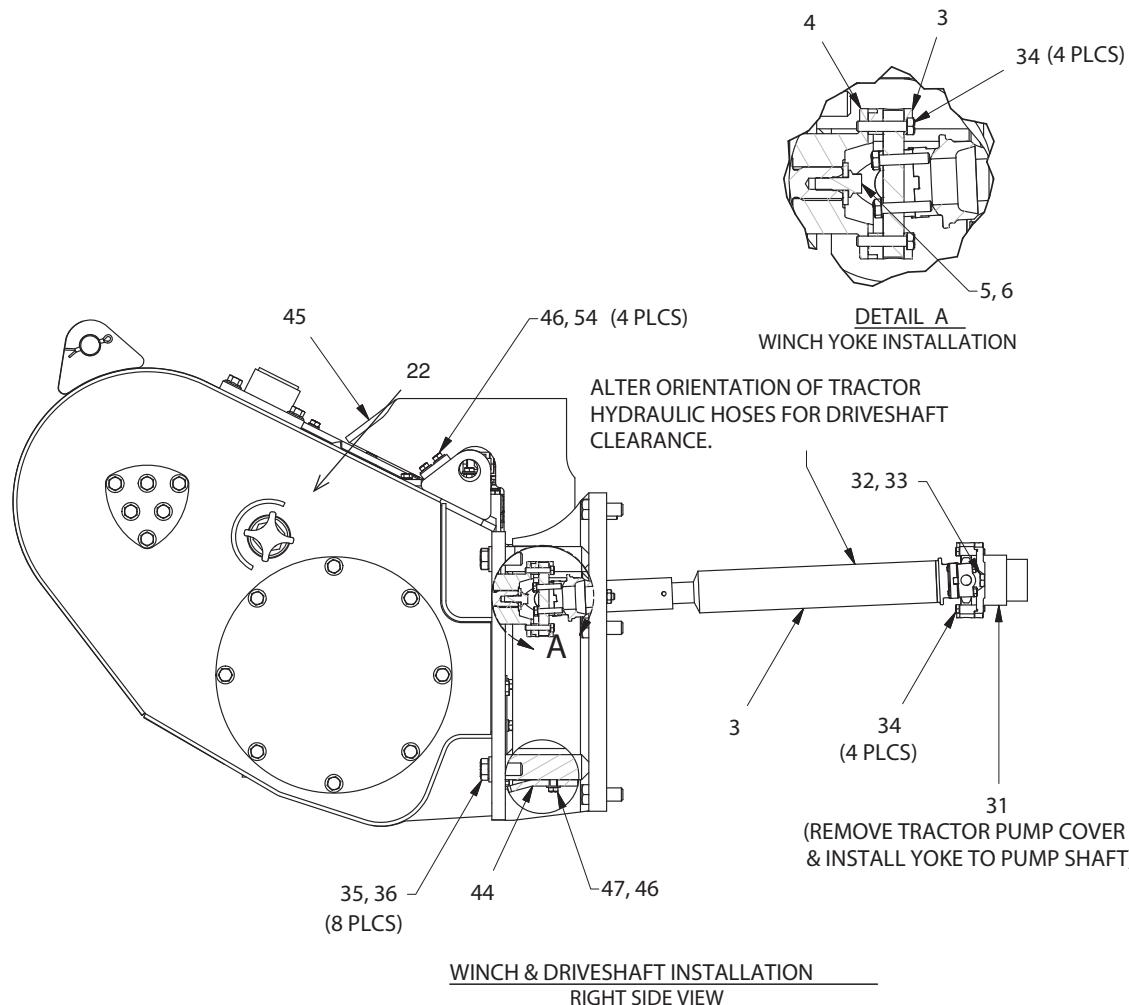
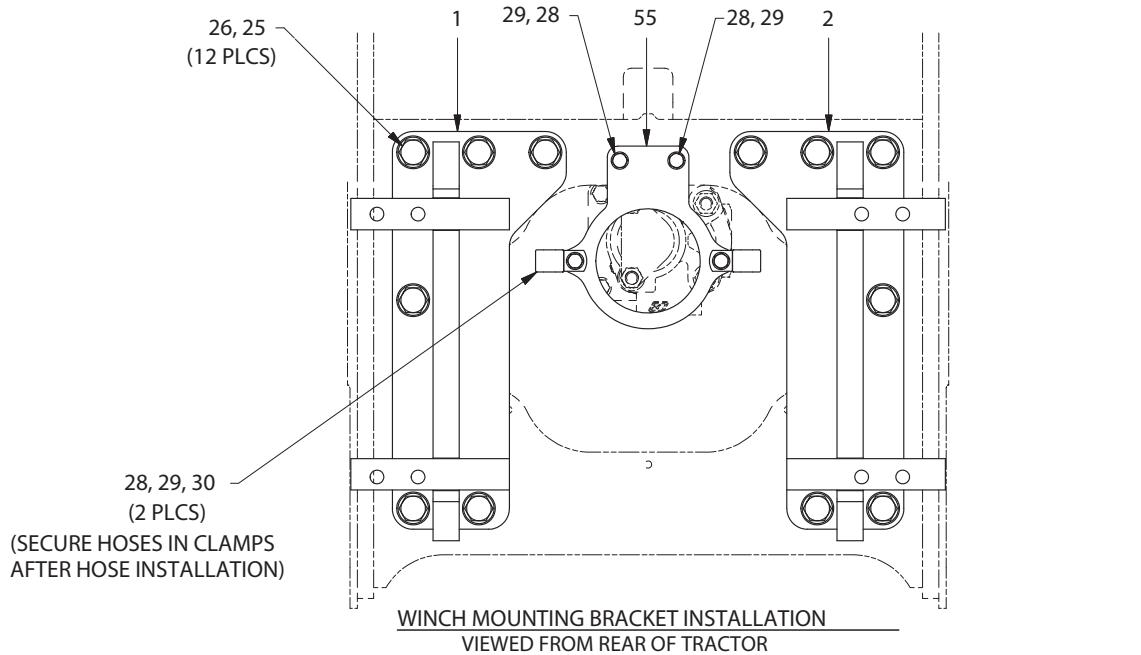
### MOUNTING BRACKET & GUARDING

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2311756	Bracket, Mounting	1	1.7	221777W	Washer	6
1.2	2310888	Guard, Cover	1	1.31	R13813326	Washer	2
1.4	*a 1308451W	Capscrew	12	1.32	221672W	Capscrew	2
1.5	296434W	Washer	12	*a Use 318702W Thread Lock			
1.6	*a Y17C-1236W	Capscrew	6				

## Mounting Parts

John Deere 450-650J (H4AH\_R\_E15) & 550-650K (H4AH\_R\_E16)

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**Mounting Parts**

John Deere 450-650J (H4AH\_R\_E15) &amp; 550-650K (H4AH\_R\_E16)

Page 2 of 2

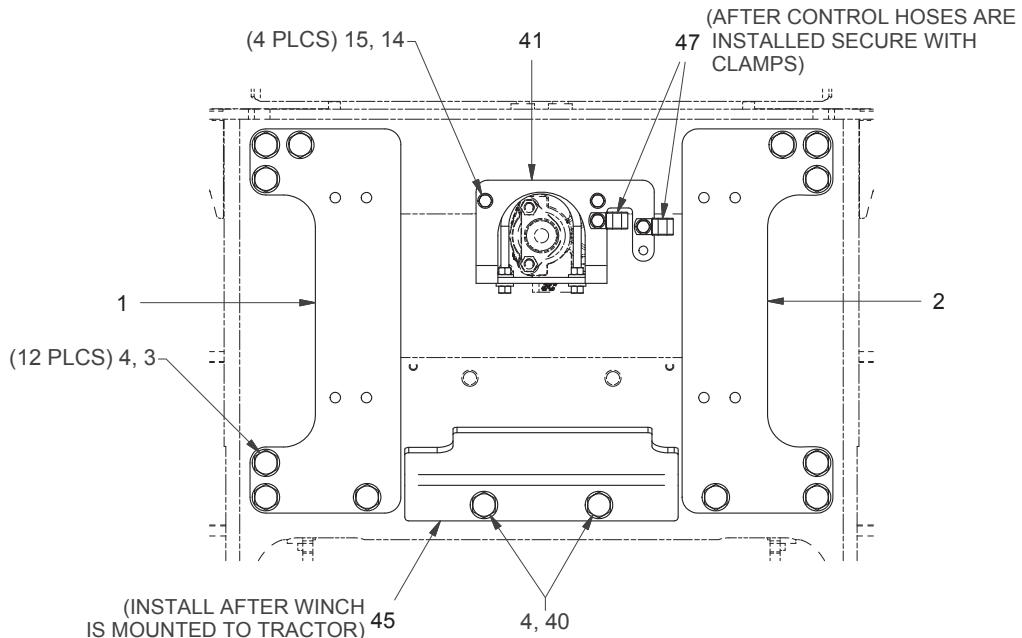
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2314146	Bracket, Mounting - LH	1	32	296422W	Washer	1
2	2314147	Bracket, Mounting - RH	1	33	*a 293645W	Capscrew	1
3	2314148	Driveshaft	1	34	*a 221466W	Capscrew	8
	2300041W	. Assembly, Cross & Bearing	1	35	221777W	Washer	8
4	2304120W	Yoke	1	36	*a Y17C-1232	Capscrew	8
5	2304119W	Washer	1	44	2314167	Guard, Bottom	1
6	*a 174413W	Screw	1	45	2314169	Guard, Upper Hose	1
22	2314454	Wrench, Torque Extension	1	46	221767W	Washer	8
25	*a 293708W	Capscrew	12	47	221499W	Capscrew	4
26	296430W	Washer	12	54	Y17C-0616	Capscrew	4
28	293628W	Capscrew	4	55	2314946	Guard, Driveshaft	1
29	296420W	Washer	4			*a Use 318702W Thread Lock	
30	2312628	Clamp, Insulation	2				
31	2312720	Yoke	1				

**Mounting Parts**

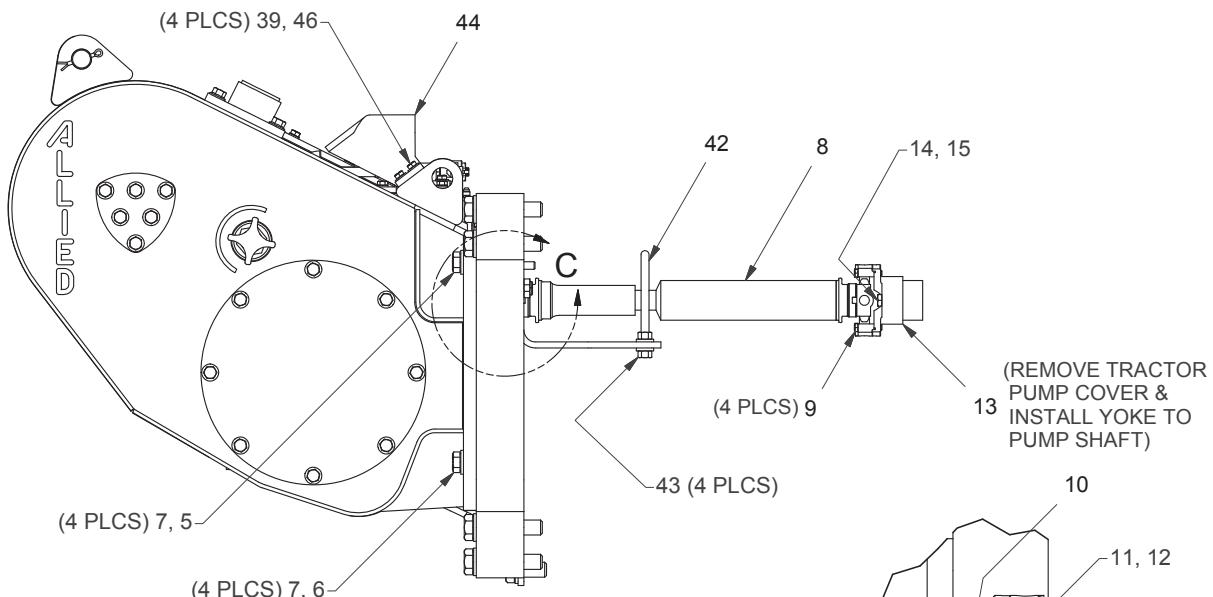
John Deere 700H/J

H4AH\_R\_E39

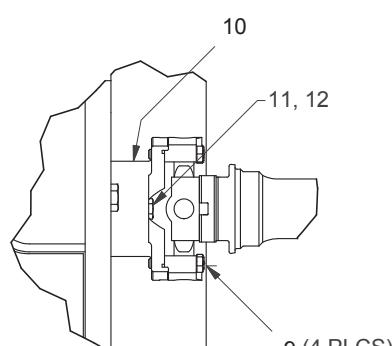
Page 1 of 2

**WINCH MOUNTING BRACKET INSTALLATION**

VIEWED FROM REAR OF TRACTOR

**WINCH & DRIVESHAFT INSTALLATION**

RIGHT SIDE VIEW

**DETAIL C**  
WINCH YOKE INSTALLATION

**Mounting Parts**

John Deere 700H/J

H4AH\_R\_E39

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
1	2314392	Bracket, Mounting - LH	1	14	*a	Capscrew	5	
2	2314393	Bracket, Mounting - RH	1	15	296422W	Washer	5	
3	*a	293731W	Capscrew	12	39	221767W	Washer	4
4		296434W	Washer	14	40	Y19C-M2450	Capscrew	2
5	*a	2314437	Capscrew	4	41	2314433	Guard, Bracket	1
6	*a	Y17C-1232	Capscrew	4	42	2304350W	Assembly, U-Bolt	1
7		221777W	Washer	8	43	221771W	Washer	4
8		2314416	Driveshaft	1	44	2315029	Guard, Hose	1
		2300041W	. Assembly, Cross & Bearing	1	45	2314407	Guard, Bottom	1
9	*a	221466W	Capscrew	8	46	Y17C-0616	Capscrew	4
10		2304120W	Yoke	1	47	2312628	Clamp, Insulation	2
11	*a	174413W	Screw	1				
12		2304119W	Washer	1				
13		2312720	Yoke	1				

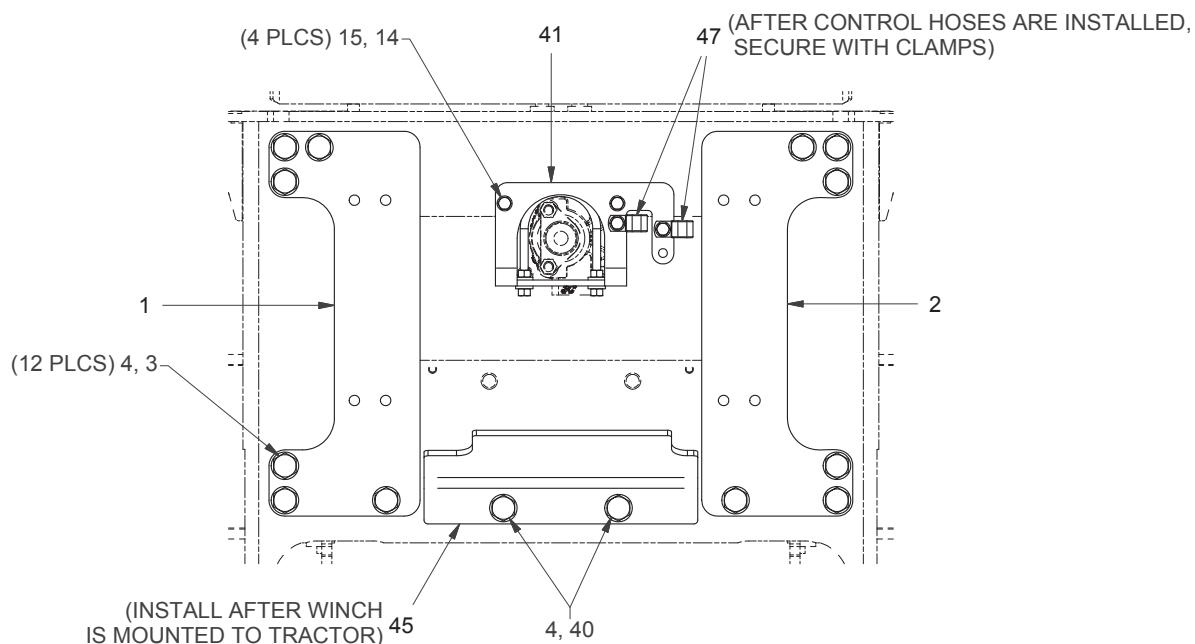
\*a Use 318702W Thread Lock

**Mounting Parts**

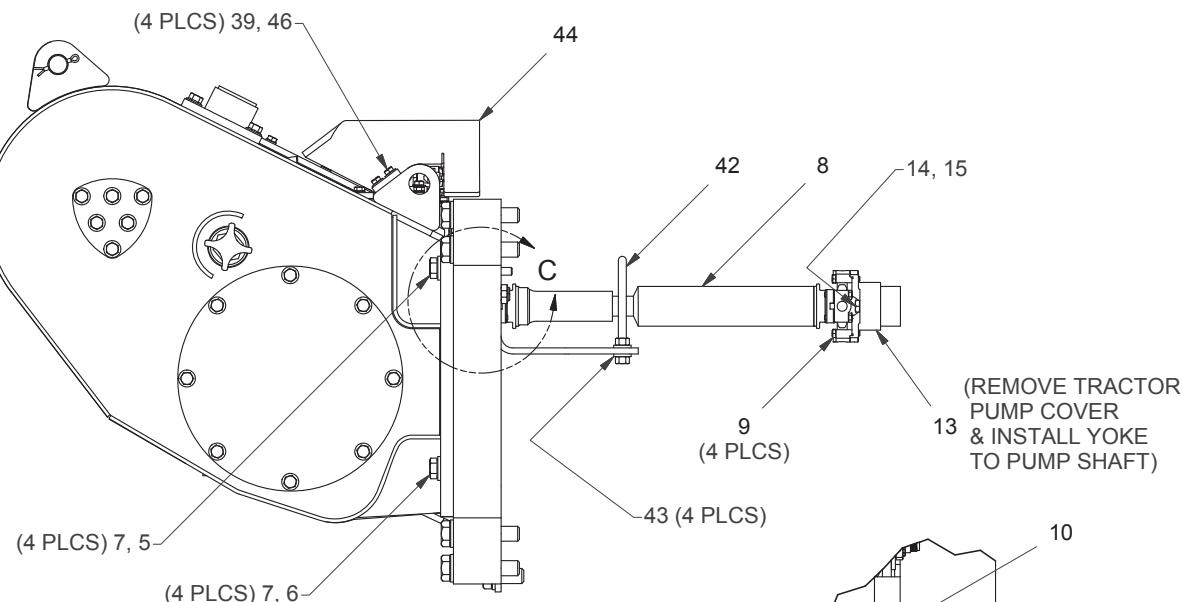
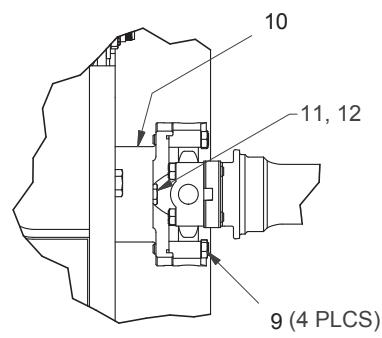
John Deere 700K

H4AH\_R\_E391

Page 1 of 2

**WINCH MOUNTING BRACKET INSTALLATION**

VIEWED FROM REAR OF TRACTOR

**WINCH & DRIVESHAFT INSTALLATION**  
RIGHT SIDE VIEW**DETAIL C**  
WINCH YOKE INSTALLATION

**Mounting Parts**

John Deere 700K

H4AH\_R\_E391

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty		
1	2314392	Bracket, Mounting - LH	1	14	*a	293645W	Capscrew	5	
2	2314393	Bracket, Mounting - RH	1	15		296422W	Washer	5	
3	*a	293731W	Capscrew	12	32	*d	2314454	Torque Wrench Extension	1
4		296434W	Washer	14	39		221767W	Washer	4
5	*a	2314437	Capscrew	4	40		Y19C-M2450	Capscrew	2
6	*a	Y17C-1232	Capscrew	4	41		2314433	Guard, Bracket	1
7		221777W	Washer	8	42		2304350W	Assembly, U-Bolt	1
8		2315557	Driveshaft	1	43		221771W	Washer	4
		2300041W	. Assembly, Cross & Bearing	1	44	*b	2314435	Guard, Hose	1
9	*a	221466W	Capscrew	8	44	*c	2316495	Guard, Hose	1
10		2304120W	Yoke	1	45		2314407	Guard, Bottom	1
11	*a	174413W	Screw	1	46		Y17C-0616	Capscrew	4
12		2304119W	Washer	1	47		2312628	Clamp, Insulation	2
13		2312720	Yoke	1					

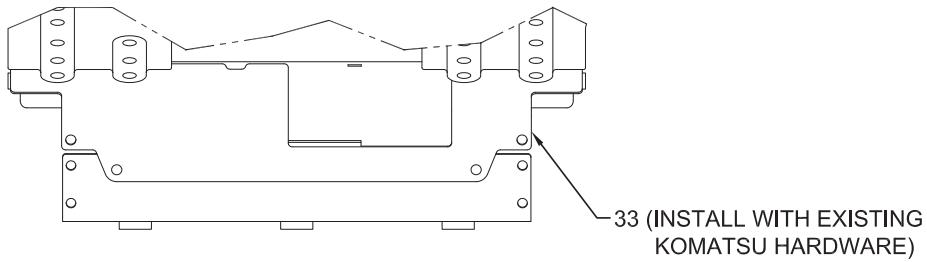
\*a Use 318702W Thread Lock  
 \*b Use on 700K T4i Machines  
 \*c Use on 700K T4f Machines  
 \*d Not Illustrated. See Installation Drawing.

## Mounting Parts

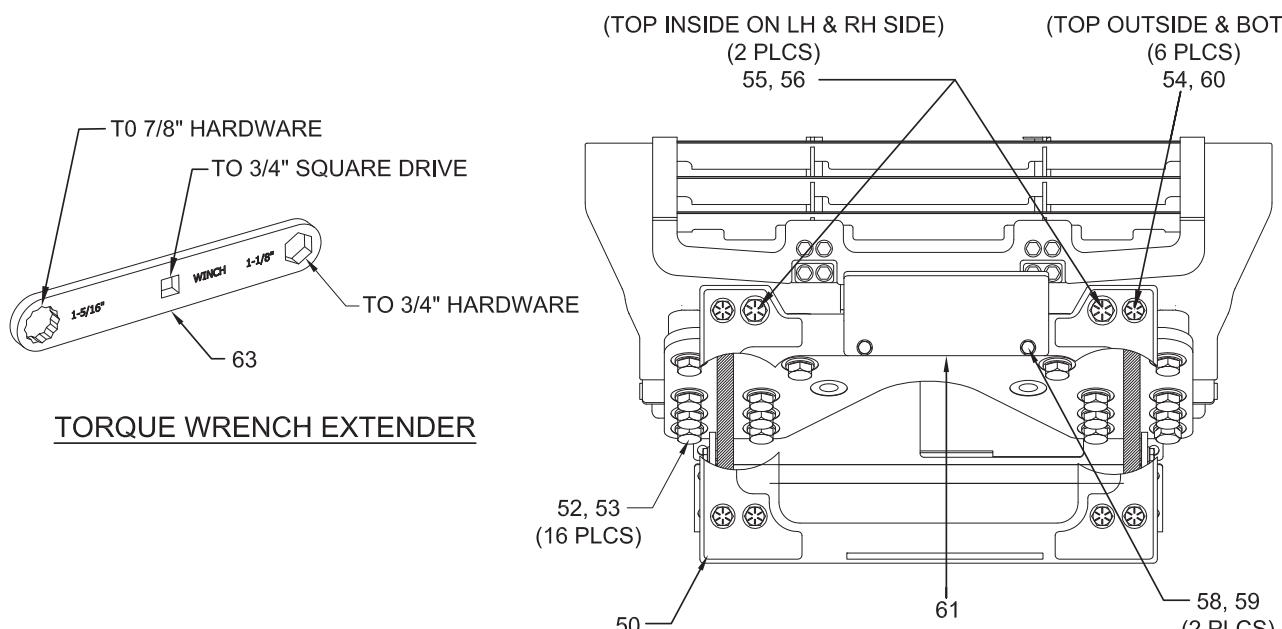
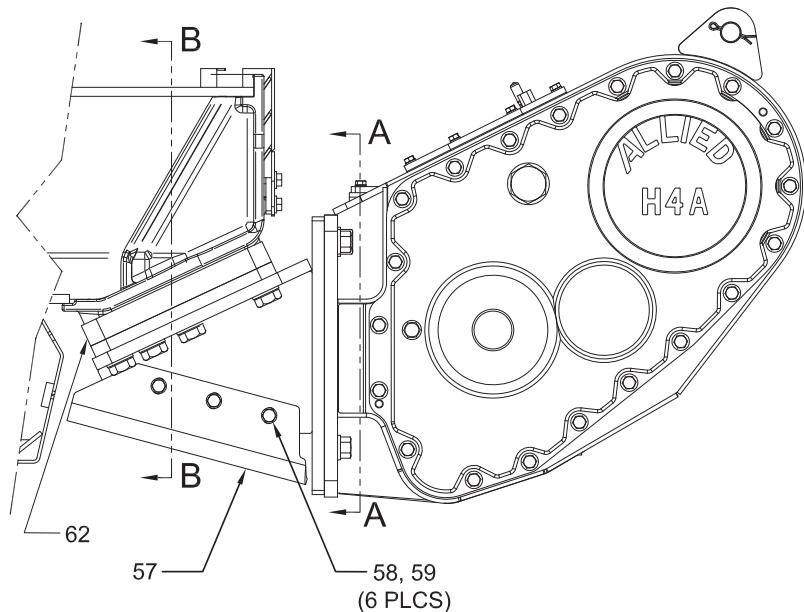
Komatsu D31/37/39X-22 (H4AH\_Y\_K13);

Komatsu D31/37/39X-22 (H4AT\_Y\_K13)

Page 1 of 2



VIEW B-B  
REAR GUARD INSTALLATION



VIEW A-A  
MOUNTING HARDWARE

**Mounting Parts**

Komatsu D31/37/39X-22 (H4AH\_Y\_K13);

Komatsu D31/37/39X-22 (H4AT\_Y\_K13)

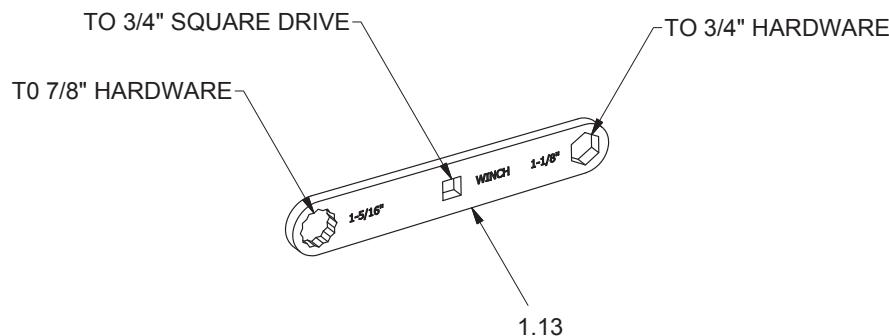
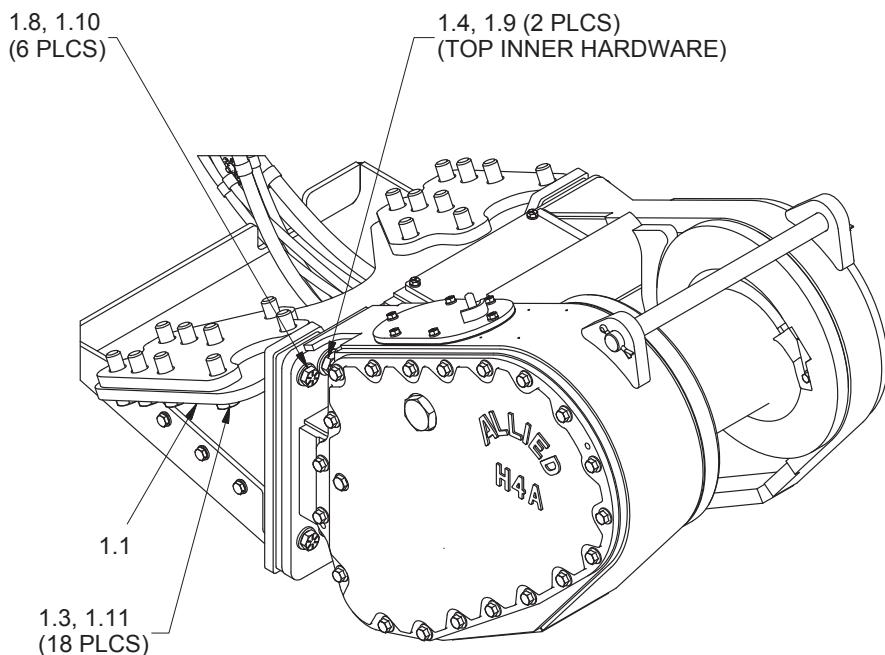
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
33	2311288	Guard, Tractor	1	58	293646W	Capscrew	8
50	2314539	Bracket, Mounting	1	59	296422W	Washer	8
52	*a 293731W	Capscrew	16	60	221777W	Washer	6
53	296434W	Washer	16	61	2314526	Guard, Top	1
54	*a 221657W	Capscrew	6	62	2313037	Plate, Tractor Pad	2
55	R13813326	Washer	2	63	2314543	Wrench, Torque Extension	1
56	*a 221672W	Capscrew	2	*a      Use 318702W Thread Lock			
57	2311421	Guard, Bottom	1				

**Mounting Parts**

Komatsu D37/39X-23, D39X-24 (H4AT\_Y\_K14)

Page 1 of 2

TORQUE WRENCH EXTENDERWINCH MOUNTING

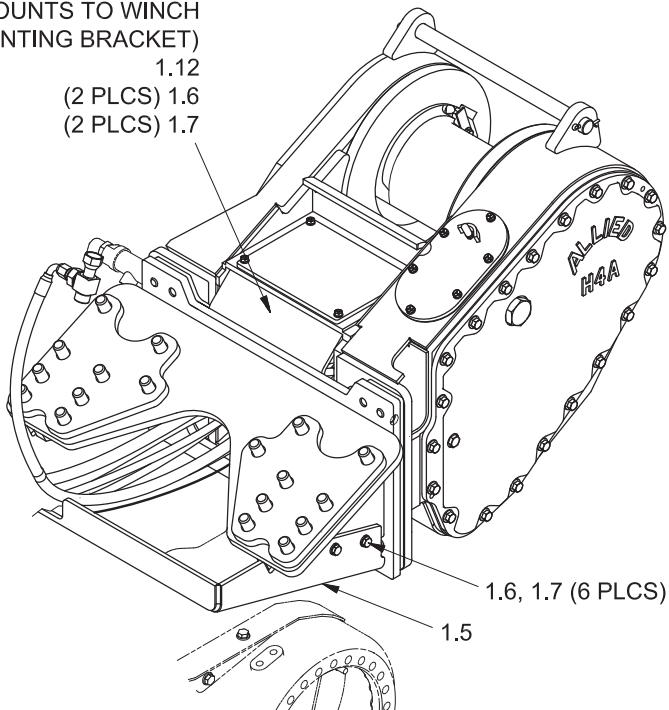
## Mounting Parts

Komatsu D37/39X-23, D39X-24 (H4AT\_Y\_K14)

Page 2 of 2

(MOUNTS TO WINCH  
MOUNTING BRACKET)

1.12  
(2 PLCS) 1.6  
(2 PLCS) 1.7



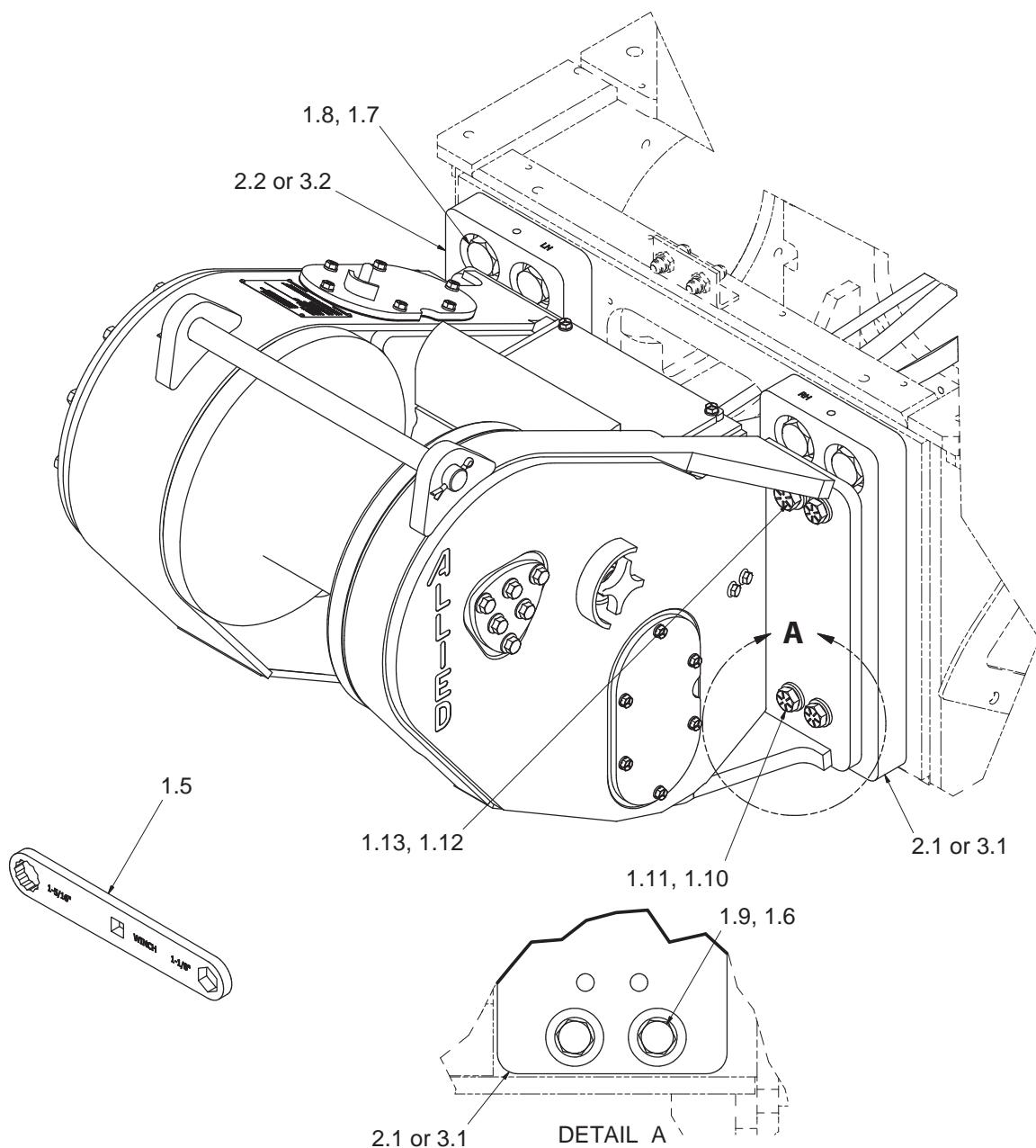
### WINCH MOUNTING

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2314539	Bracket, Mounting	1	1.9	*a 221672W	Capscrew	2
1.3	296434W	Washer	18	1.10	*a 221657W	Capscrew	6
1.4	R13813326	Washer	2	1.11	*a 1308451W	Capscrew	18
1.5	2314524	Guard, Bottom	1	1.12	2314526	Guard, Top	1
1.6	293646W	Capscrew	8	1.13	2314543	Wrench, Extension Torque	1
1.7	296422W	Washer	8	*a		Use 318702W Thread Lock	
1.8	221777W	Washer	6				

## Mounting Parts

Dresssta TD7/8S (H4AT\_Y\_H15)

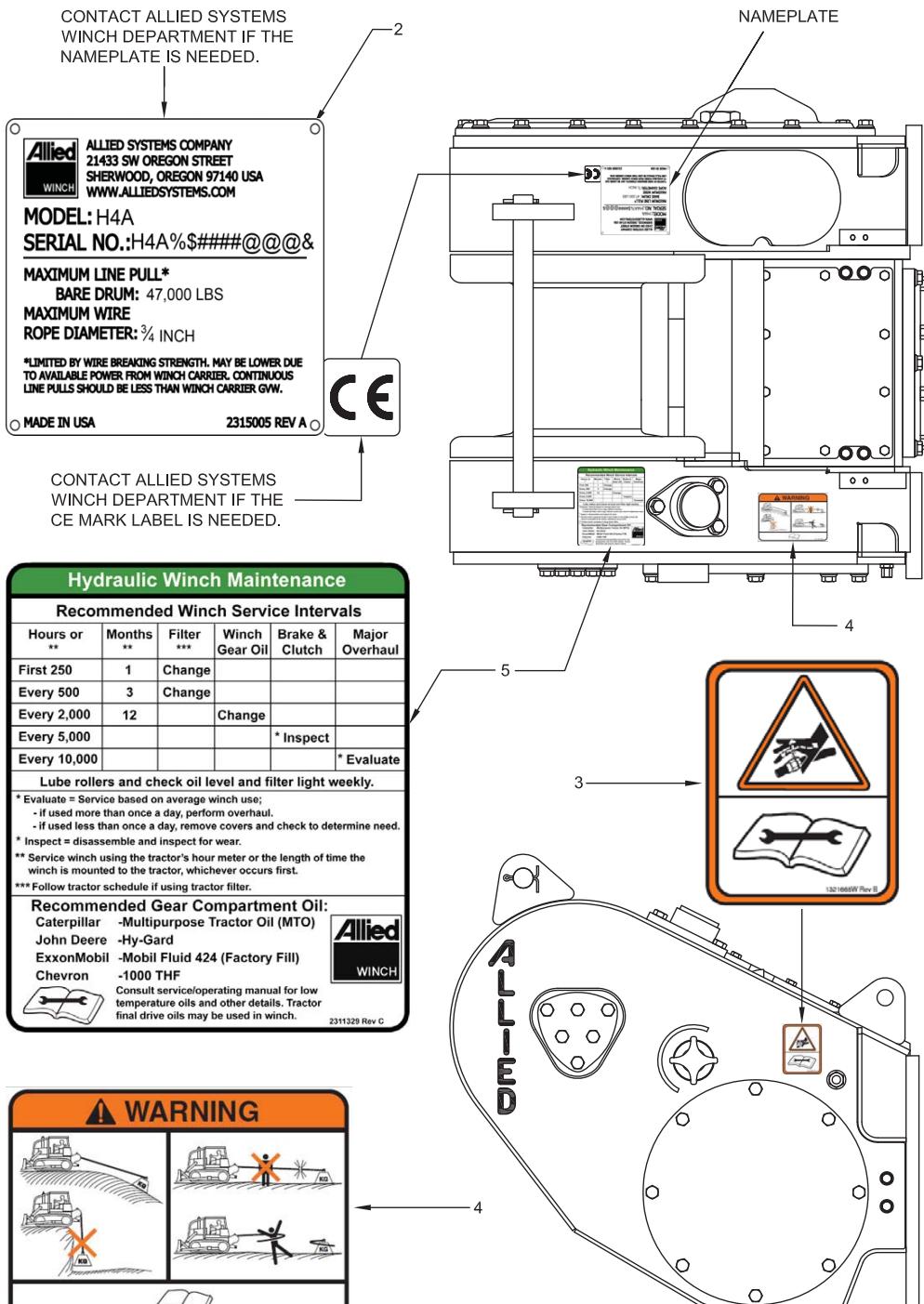
Dresssta TD9S (H4AT\_Y\_H16)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.5	2314543	Extension, Torque Wrench	1	2.1	*b	2316219	Mounting Bracket, RH
1.6	296430W	Hard Washer	4	2.2	*b	2316220	Mounting Bracket, LH
1.7	296438W	Hard Washer	4	3.1	*c	2316542	Mounting Bracket, RH
1.8	*a Y19C-M3080	Capscrew	4	3.2	*c	2316543	Mounting Bracket, LH
1.9	*a 293710W	Capscrew	4				
1.10	221777W	Hard Washer	6				
1.11	*a Y17C-1236	Capscrew	6				
1.12	*a 221672W	Capscrew	2				
1.13	R13813326	Hard Washer	2				

## Nameplate & Decals

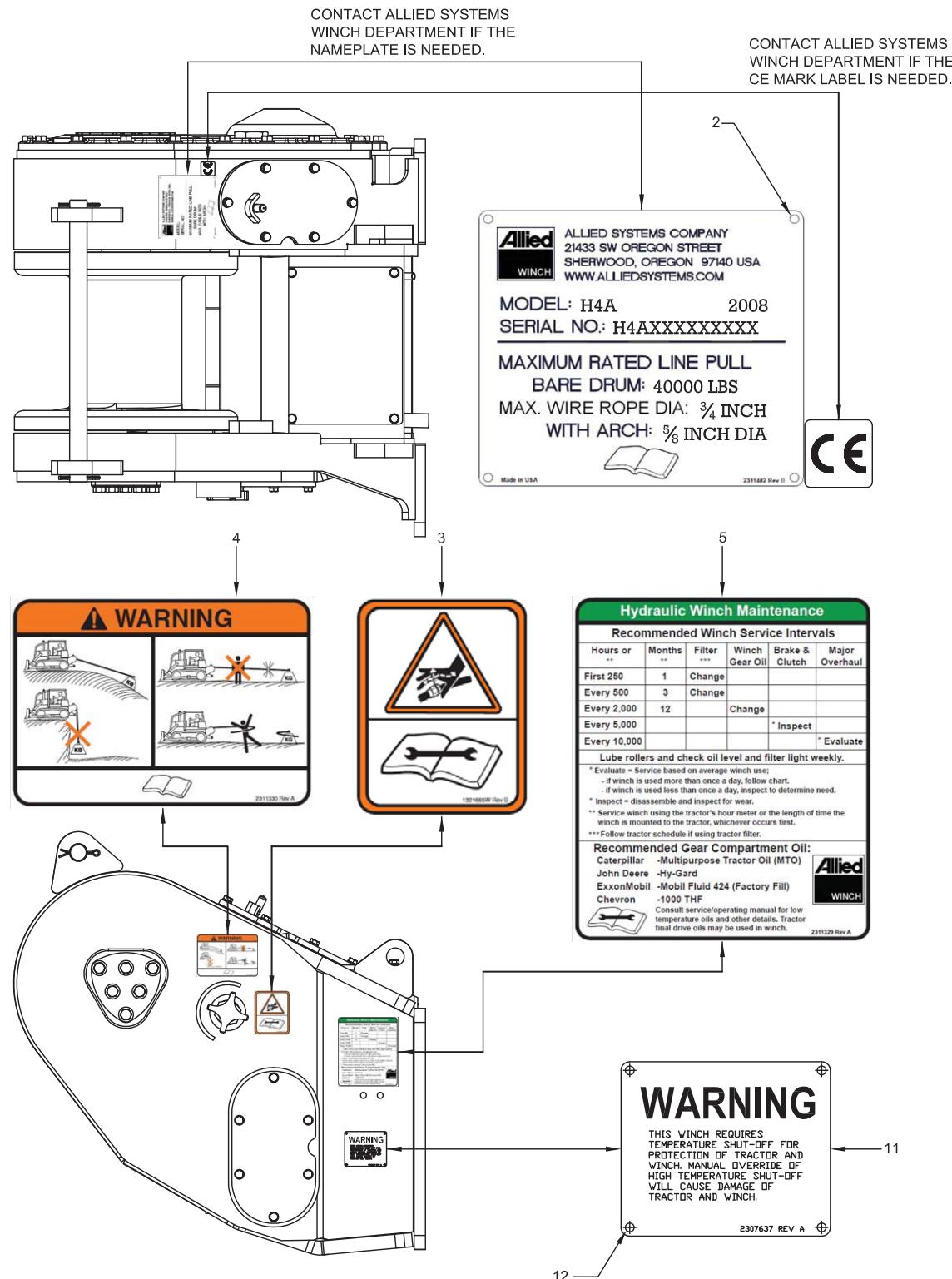
Winches with Enclosed Frames  
H4A-B, H4A-E, H4A-R, H4A-Z



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

## Nameplate & Decals

Winches with Open Frames (with or without HI-TEMP Shut-Off)  
H4A\_Y



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

\*Note: Only for winches with HI-TEMP Shut-Off

Item	Part No.	Description	Qty
11	2307637W	Plate, Warning*	1
12	16602W	Screw	4

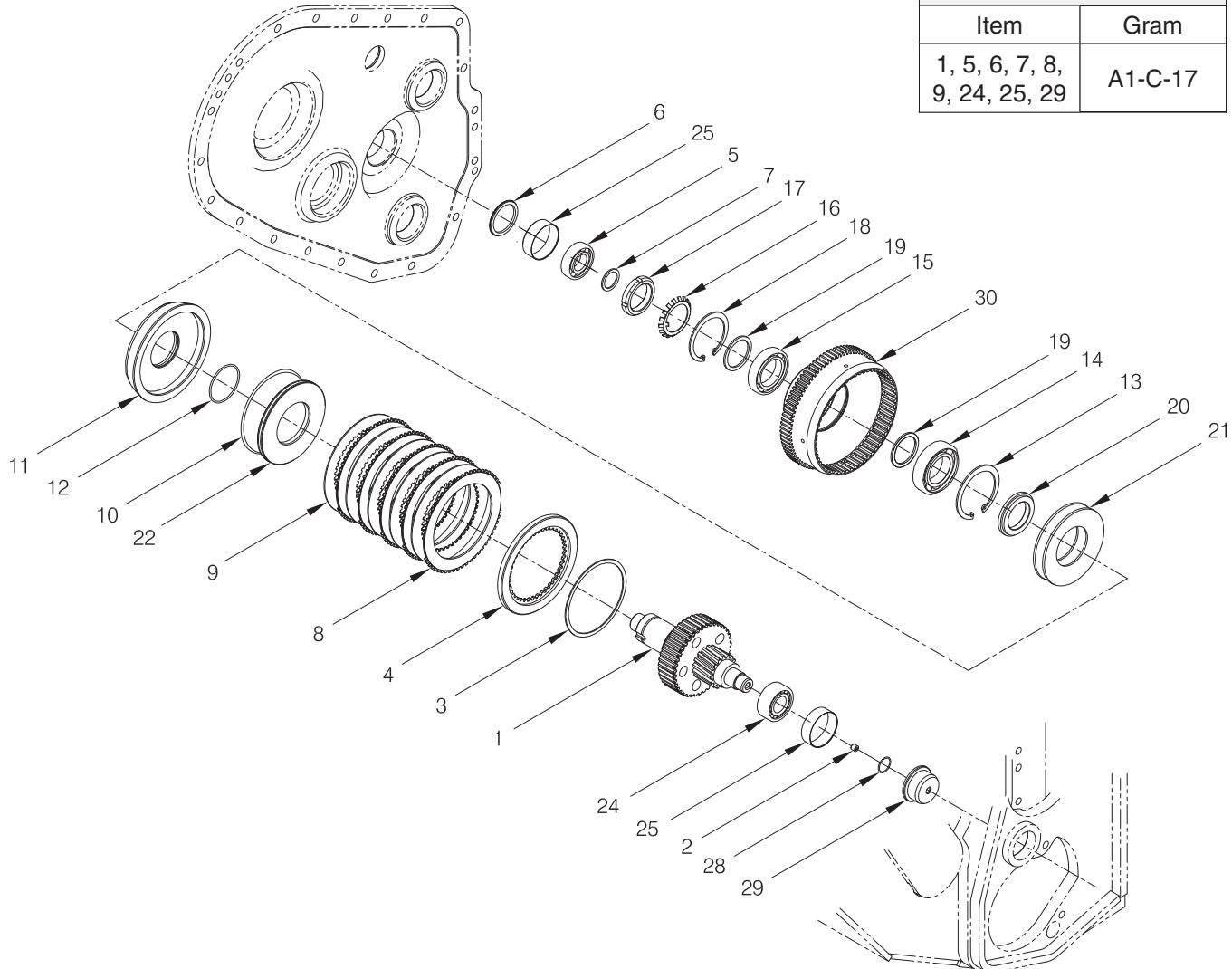
## **Gear Train/Shaft**

BRAKE-OFF Group.....	2-2
Drum Shaft Group .....	2-12
Idler Shaft Group .....	2-3
Intermediate Shaft & Freespool.....	2-4 thru 2-5
Motor & Brake Group.....	2-6 thru 2-11

**BRAKE-OFF Group**

Last Used on S/N H4A-1014

See Idler Shaft Group for S/N H4A-1015 and Up

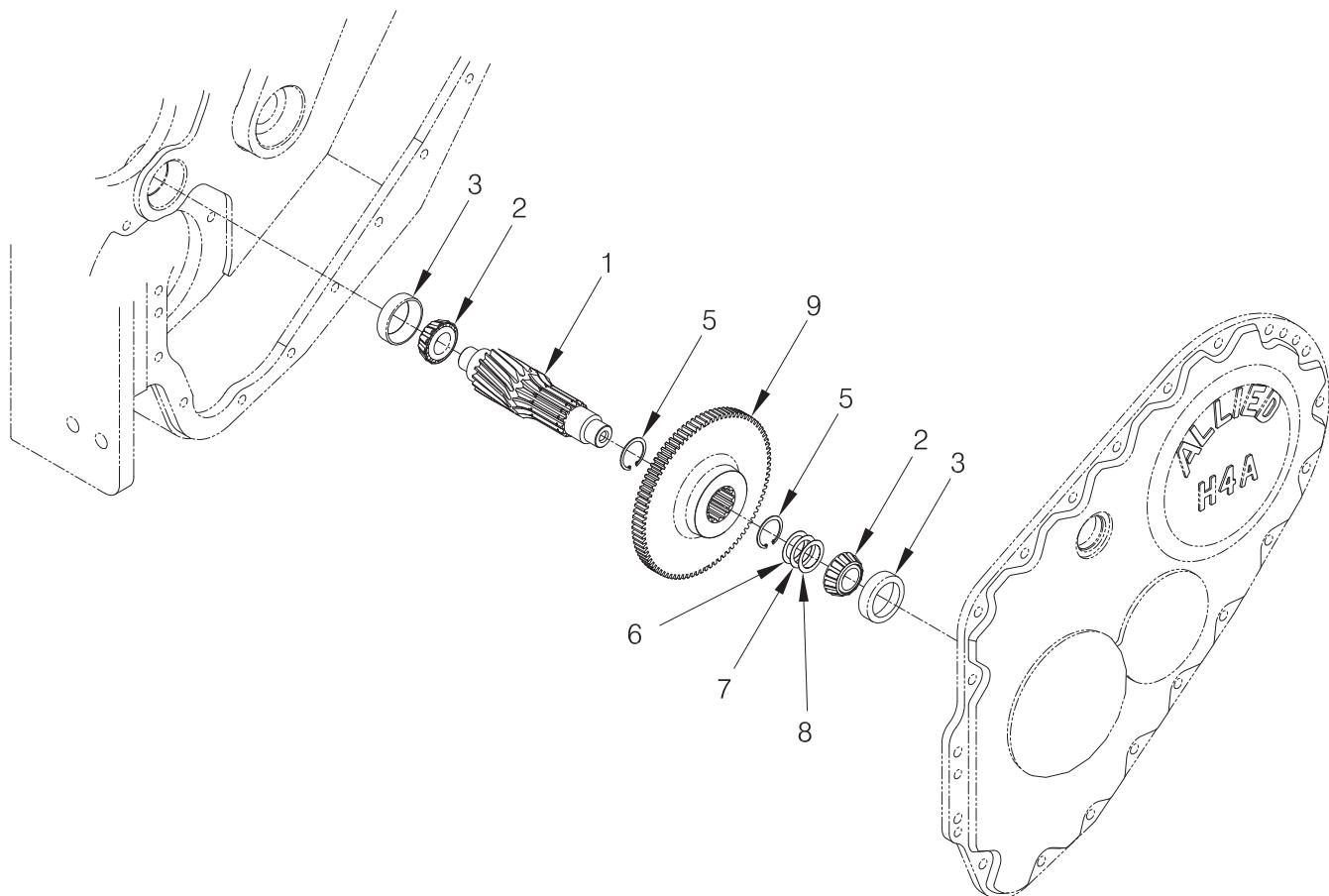


Parts Service Gram	
Item	Gram
1, 5, 6, 7, 8, 9, 24, 25, 29	A1-C-17

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305950W	Shaft	1	18	58911W	Ring, Snap - Inner	1
2	2305075W	Orifice, Plug	1	19	374805W	Spacer	2
3	219060W	Ring, Snap	1	20	2303877W	Retainer, Spring	1
4	282706W	Ring, Reaction	1	21	2303845W	Spring, Belleville	2
5	*d 41206W	Bearing, Ball	1	22	*a 2304176W	Hub, Piston	1
6	2305948W	Spacer, Cover	1	24	*d 2305946W	Bearing, Roller	1
7	2305947W	Spacer, Shaft	1	25	*d 2305945W	Sleeve	2
8	*d 328714W	Plate, Friction	5	28	*d 2304182W	O-Ring	1
9	*d 2305597W	Separator	5	29	*a 2305949W	Insert, Rotary Seal	1
10	*d 2303867W	O-Ring	1	30	*b 2303836W	Housing, Clutch	1
11	2304059W	Piston, Brake-Off	1	30	*c 2303837W	Housing, Clutch	1
12	*d 2303868W	O-Ring	1	*a Uses 318701W Adhesive			
13	67551W	Ring, Snap - Inner	1	*b Used on 83:1 Ratio Only			
14	*d 43210W	Bearing, Ball	1	*c Used on 116:1 Ratio Only			
15	*d 44310W	Bearing, Ball	1	*d Included in Brake-Off Kit 2306546W			
16	*d 6036W	Lockwasher, Bearing	1				
17	*d 6037W	Locknut, Bearing	1				

## Idler Shaft Group

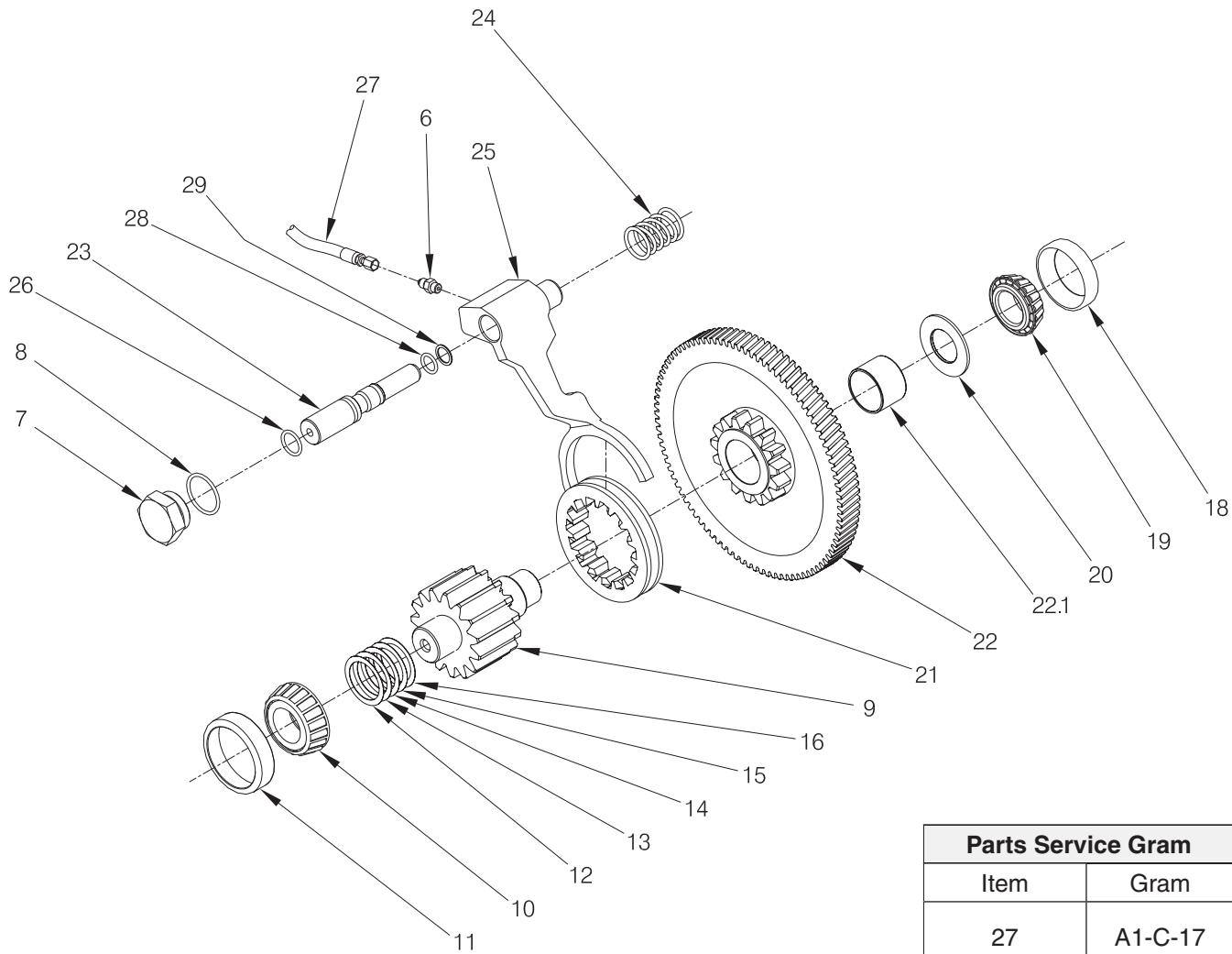
See Brake-Off Group for S/N H4A-1014 and below  
First used on S/N H4A-1015



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

## Intermediate Shaft & Freespool

SCH Winch, S/N Code "E", "Y", "Z"



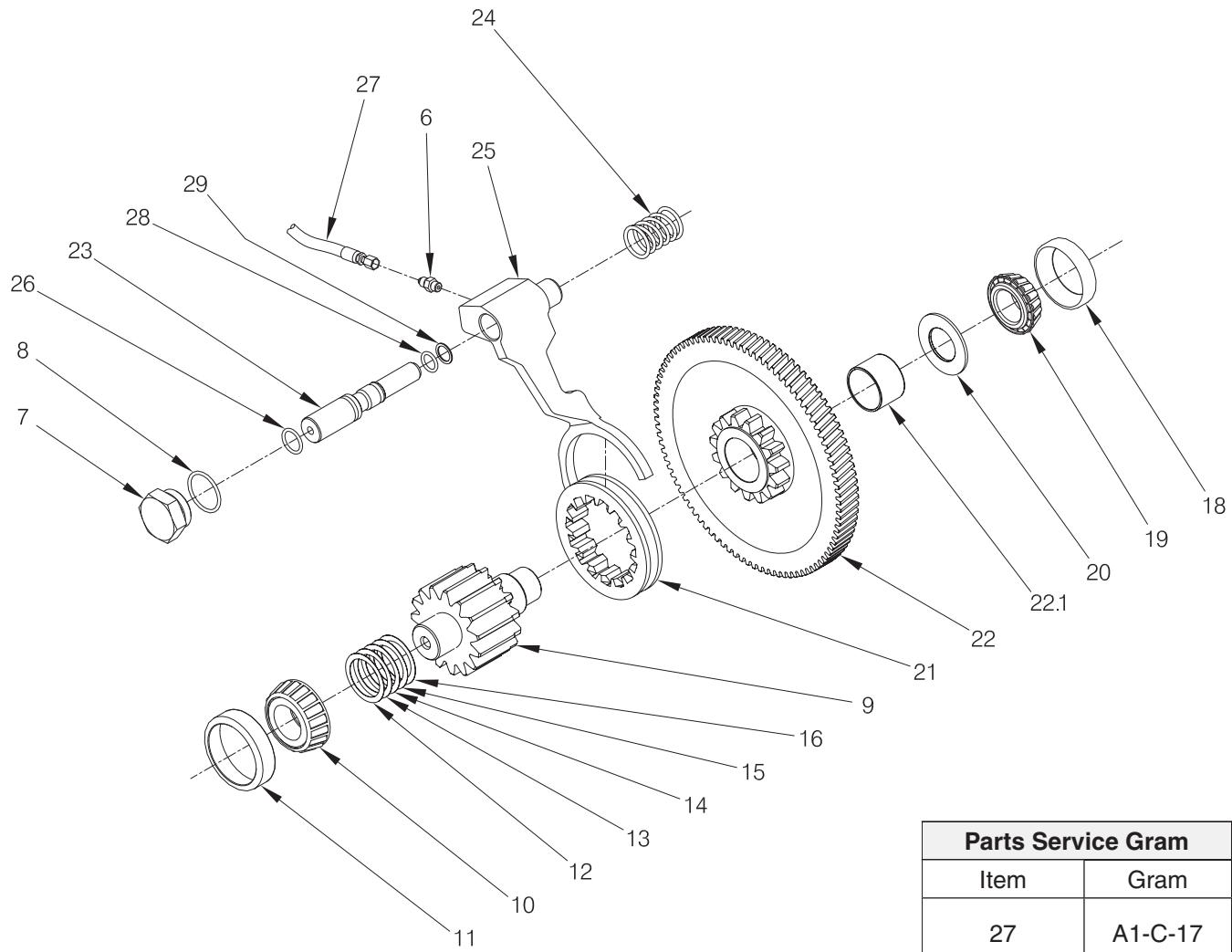
Item	Part No.	Description	Qty
6	16538W	Fitting	1
7	-----	Plug (See Frame & Covers)	1
8	-----	O-Ring (See Frame & Covers)	1
9	2303825W	Shaft	1
10	225262W	Cone, Bearing	1
11	230351W	Cup, Bearing	1
12	*c 1314433W	Shim, .020	AR
13	*c 1314434W	Shim, .022	AR
14	*c 1314435W	Shim, .025	AR
15	*c 1314467W	Shim, .015	AR
16	*c 1314468W	Shim, .018	AR
18	R1314774	Cup, Bearing	1
19	R1314773	Cone, Bearing	1
20	2304172W	Washer, Thrust	1

Item	Part No.	Description	Qty
21	2304171W	Collar, Freespool	1
22	2316504	Assy, Gear, Intermediate - 92T	1
22.1	2304181W	. Bushing	1
23	2305563W	Shaft, Freespool	1
24	2303906W	Spring, Freespool	1
25	2305562W	Fork, Freespool Shifter	1
26	61056W	O-Ring	1
27	*a 2305972W	Assembly, Hose - Freespool Shifter	1
27	*b 2305012W	Assembly, Hose - Freespool Shifter	1
28	100153W	O-Ring	1
29	238671	Ring, Backup	1

\*a Last used on S/N H4A-1014  
 \*b First used on S/N H4A-1015  
 \*c Consult Service Manual.

## Intermediate Shaft & Freespool

NON-SCH Winch, S/N Code "B" or "R"



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
6	16538W	Fitting	1	21	2304171W	Collar, Freespool	1
7	-----	Plug (See Frame & Covers)	1	22	2316504	Assy, Gear, Intermediate - 92T	1
8	-----	O-Ring (See Frame & Covers)	1	22.1	2304181W	. Bushing	1
9	2303825W	Shaft	1	23	2305563W	Shaft, Freespool	1
10	225262W	Cone, Bearing	1	24	2303906W	Spring, Freespool	1
11	230351W	Cup, Bearing	1	25	2305562W	Fork, Freespool Shifter	1
12	*c 1314433W	Shim, .020	AR	26	61056W	O-Ring	1
13	*c 1314434W	Shim, .022	AR	27	*a 2305141W	Assembly, Hose - Freespool Shifter	1
14	*c 1314435W	Shim, .025	AR	27	*b 2305580W	Assembly, Hose - Freespool Shifter	1
15	*c 1314467W	Shim, .015	AR	28	100153W	O-Ring	1
16	*c 1314468W	Shim, .018	AR	29	238671	Ring, Backup	1
18	R1314774	Cup, Bearing	1	*a Last used on S/N H4A-1014			
19	R1314773	Cone, Bearing	1	*b First used on S/N H4A-1015			
20	2304172W	Washer, Thrust	1	*c Shim as required to achieve 0.002" to 0.005" bearing endplay.			

**Motor & Brake Group**

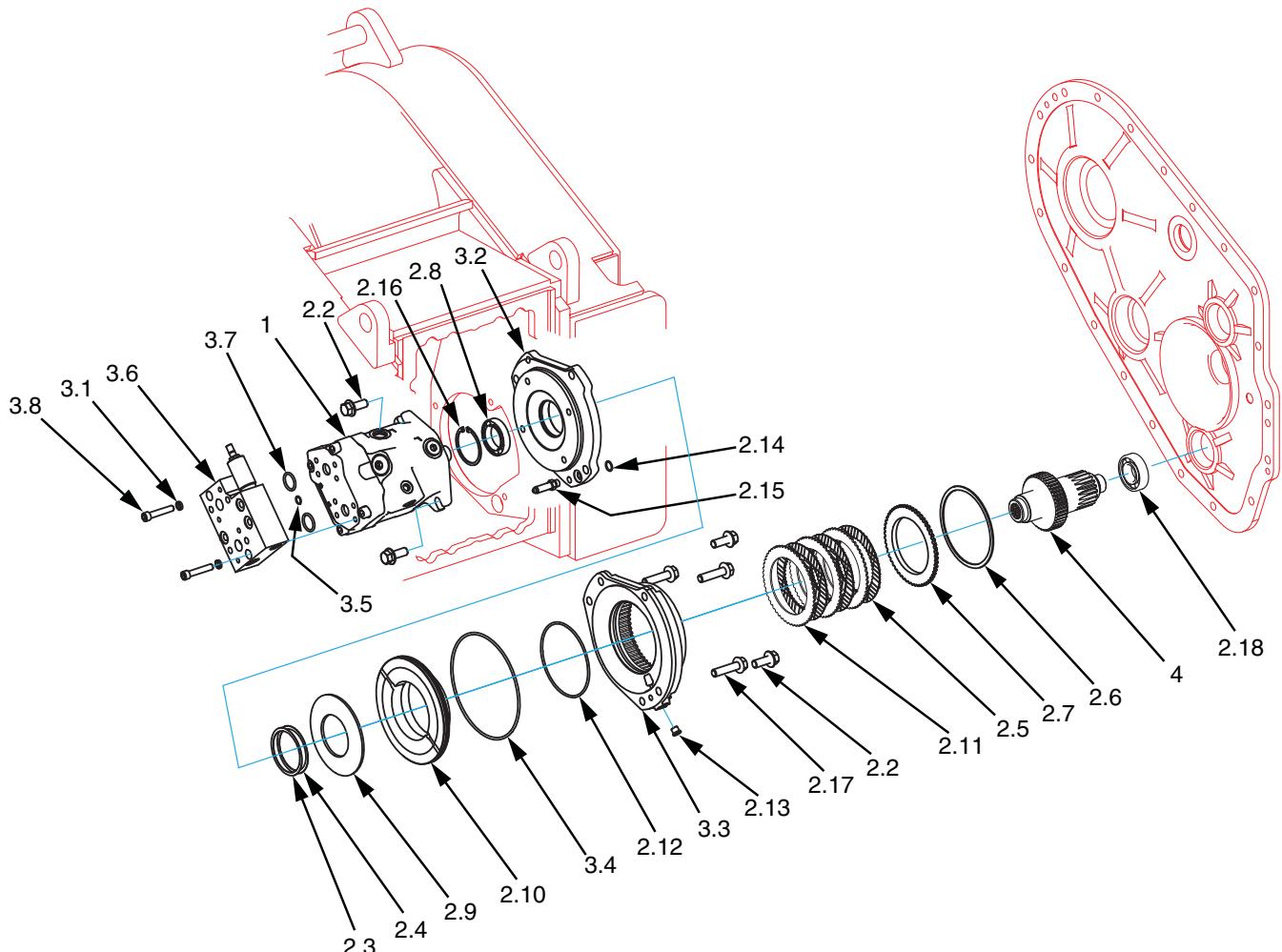
High Performance SCH Winch

John Deere 450-650J (H4AH\_R\_E15), 550-650K (H4AH\_R\_E16)

John Deere 700H/J (H4AH\_R\_E39), 700K (H4AH\_R\_E391)

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

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## Motor & Brake Group

High Performance SCH Winch

John Deere 450-650J (H4AH\_R\_E15), 550-650K (H4AH\_R\_E16)

John Deere 700H/J (H4AH\_R\_E39), 700K (H4AH\_R\_E391)

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

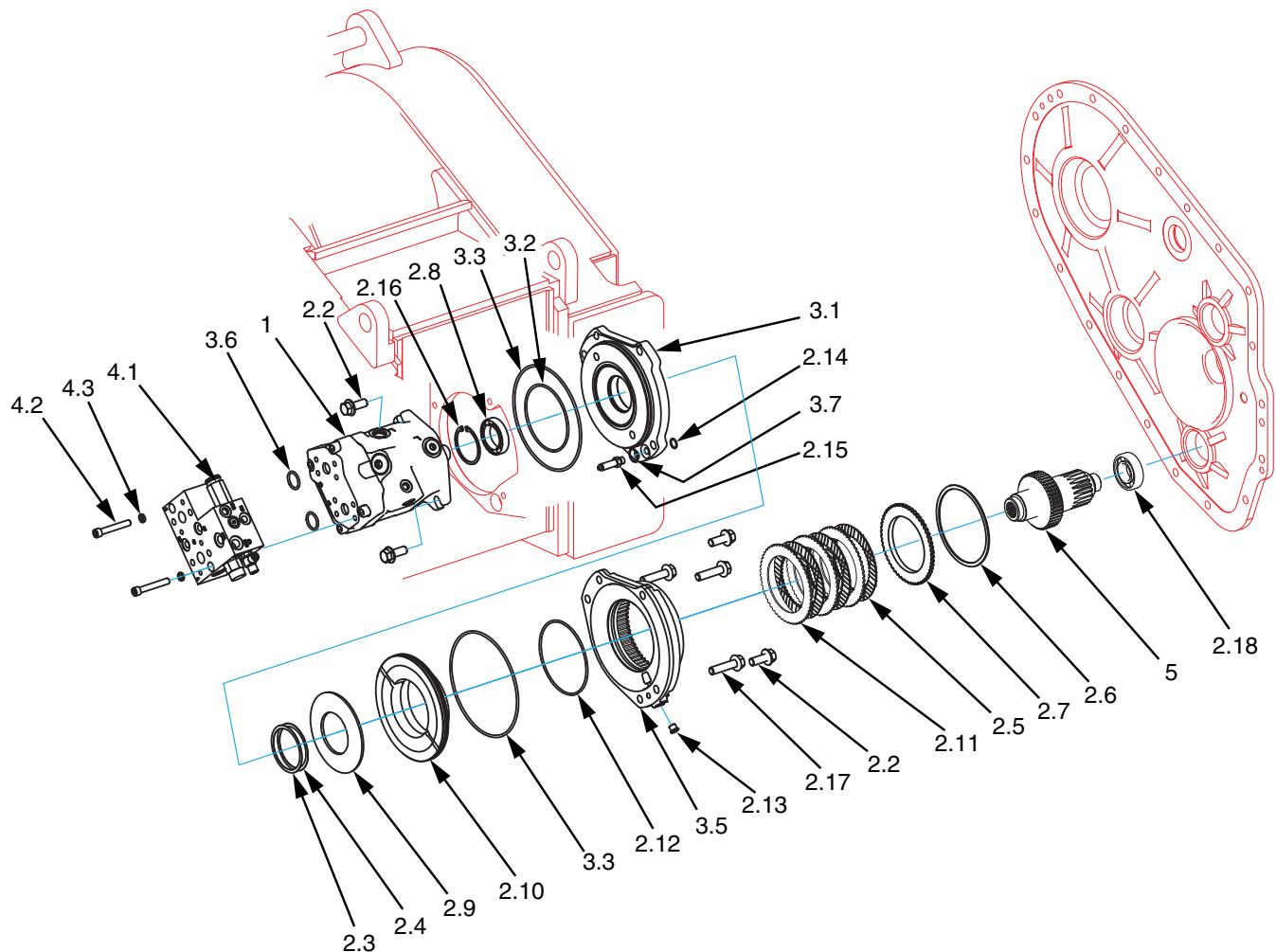
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
<b>1</b>	<b>2303788W</b>	<b>Motor, Hydraulic</b>	<b>1</b>	<b>3</b>	<b>2306562w</b>	<b>List - Motor Shaft, H4A**R, SCH</b>	
2.2	2303848W	. Screw, Flange	4	3.1	177947W	. Washer	2
2.3 *j	2304711W	. Shim, 0.005"	A/R	3.2	2304037W	. Plate - Mounting, Motor	1
2.4 *j	2304712W	. Shim, 0.007"	A/R	3.3 *a	2305679W	. Housing - Brake	1
2.5 *j	2304873W	. Disc, Friction	3	3.3 *b	2316526	. Housing - Brake	1
2.6	334475W	. Ring - Snap, Int	1	3.4 *j*k	2316507	. O-Ring	1
2.7	334442W	. Plate, Pressure	1	3.5 *k	2304220W	. O-Ring	1
2.8 *j	2300831W	. Bearing - Ball	1	3.6 *g	2305236W	. Valve Assy - Motor (see 3-111)	1
2.9	2303845W	. Spring, Belleville	1	3.6 *h	2306566W	. Valve Assy - Motor (see 3-110)	1
2.10	2316525	. Piston - Brake	1	3.7 *k	2304110W	. O-Ring	2
2.11 *j	2304874W	. Plate, Separator	3	3.8	Y73G-0632	. Capscrew	2
2.12 *j*k	2316517	. O-Ring	1	<b>4</b>	<b>*c 2303835W</b>	<b>Motor Shaft, 21T (83:1)</b>	<b>1</b>
2.13	222442W	. Fitting	1	<b>4</b>	<b>*d 2311303</b>	<b>Motor Shaft, 19T (94:1)</b>	<b>1</b>
2.14 *a	212456	. O-Ring	1	<b>4</b>	<b>*e 2303829W</b>	<b>Motor Shaft, 16T (116:1)</b>	<b>1</b>
2.14 *b*k	26883	. O-Ring	1	<b>4</b>	<b>*f 2311305</b>	<b>Motor Shaft, 15T (125:1)</b>	<b>1</b>
2.15	16547W	. Fitting	1	*a		Last used on H4A-1046	
2.16	12921W	. Snap Ring	1	*b		First used on H4A-1047	
2.17	918906W	. Screw	3	*c		Used on 83:1 Gear Ratio Only	
2.18 *j	41206W	. Bearing - Ball	1	*d		Used on 94:1 Gear Ratio Only	
				*e		Used on 116:1 Gear Ratio Only	
				*f		Used on 125:1 Gear Ratio Only	
				*g		Used on H4A-1001-1003 and H4A-1005-1037	
				*h		Used on H4A-1004, H4A-1038 and after	
				*j		Included in Brake Kit 2306545W	
				*k		Included in Motor Shaft Rebuild Kit 2315287	

**Motor & Brake Group**

High Performance non-SCH Winch

Caterpillar D3/4/5G (H4A\_Y\_C17), D4/5G (H4A\_Y\_C18), D3/4K (H4A\_Y\_C19),  
Caterpillar D3/4/5K2 T4f (H4A\_Y\_C191), D5K/K2 (H4A\_Y\_C20), D5K2 with fireplow (H4A\_Y\_C201)  
Page 1 of 2



## Motor & Brake Group

High Performance non-SCH Winch

Caterpillar D3/4/5G (H4A\_Y\_C17), D4/5G (H4A\_Y\_C18), D3/4K (H4A\_Y\_C19),  
 Caterpillar D3/4/5K2 T4f (H4A\_Y\_C191), D5K/K2 (H4A\_Y\_C20), D5K2 with fireplow (H4A\_Y\_C201)  
 Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2303788W	<b>Motor, Hydraulic</b>	1	3	2306563W	<b>List - Motor Shaft- H4A Cmpnts</b>	
1	*a 2314620	<b>Motor, Hydraulic</b>	1	3.1	2305651W	. Plate - Mounting, Motor	1
1	*b 2315765	<b>Motor, Hydraulic</b>	1	3.2	*n 15888W	. O-Ring	1
2	2306540W	<b>List - Motor Shaft, H4A Cmpnts</b>		3.3	*m*n 2316507	. O-Ring	2
2.2	2303848W	. Screw, Flange	4	3.5	*c 2305679W	. Housing - Brake	1
2.3	*m 2304711W	. Shim, 0.005"	A/R	3.5	*d 2316526	. Housing - Brake	1
2.4	*m 2304712W	. Shim, 0.007"	A/R	3.6	*n 2304110W	. O-Ring	2
2.5	*m 2304873W	. Disc, Friction	3	3.7	*n 17064	. O-Ring	1
2.6	334475W	. Ring - Snap, Int	1	4	2311747	<b>List - Motor Shaft, H4AHY Hi-P</b>	
2.7	334442W	. Plate, Pressure	1	4.1	*j 2306566W	. Valve Assy - Motor (see 3-110)	1
2.8	*m 2300831W	. Bearing - Ball	1	4.1	*k 2310966	. Valve Assy - Motor (see 3-112)	1
2.9	2303845W	. Spring, Belleville	1	4.2	Y73G-0640	. Capscrew	2
2.10	2316525	. Piston - Brake	1	4.3	177947W	. Washer	2
2.11	*m 2304874W	. Plate, Separator	3	5	*e 2303835W	<b>Motor Shaft, 21T (83:1)</b>	1
2.12	*m*n 2316517	. O-Ring	1	5	*f 2311303	<b>Motor Shaft, 19T (94:1)</b>	1
2.13	222442W	. Fitting	1	5	*g 2303829W	<b>Motor Shaft, 16T (116:1)</b>	1
2.14	*c 212456	. O-Ring	1	5	*h 2311305	<b>Motor Shaft, 15T (125:1)</b>	1
2.14	*d*n 26883	. O-Ring	1				
2.15	16547W	. Fitting	1	*a		Used on Tractor Code K14 only	
2.16	12921W	. Snap Ring	1	*b		Used on Tractor Code U13 only	
2.17	918906W	. Screw	3	*c		Last used on H4A-1046	
2.18	*m 41206W	. Bearing - Ball	1	*d		First used on H4A-1047	
				*e		Used on 83:1 Gear Ratio Only	
				*f		Used on 94:1 Gear Ratio Only	
				*g		Used on 116:1 Gear Ratio Only	
				*h		Used on 125:1 Gear Ratio Only	
				*j		Last used on H4A-1161	
				*k		First used on H4A-1162	
				*m		Included in Brake Kit 2306545W	
				*n		Included in Motor Shaft Rebuild Kit 2315351	

**Motor & Brake Group**

Standard non-SCH Winch

Caterpillar D3/4K (H4A\_Y\_C19), D3/4/5K2 T4f (H4A\_Y\_C191)

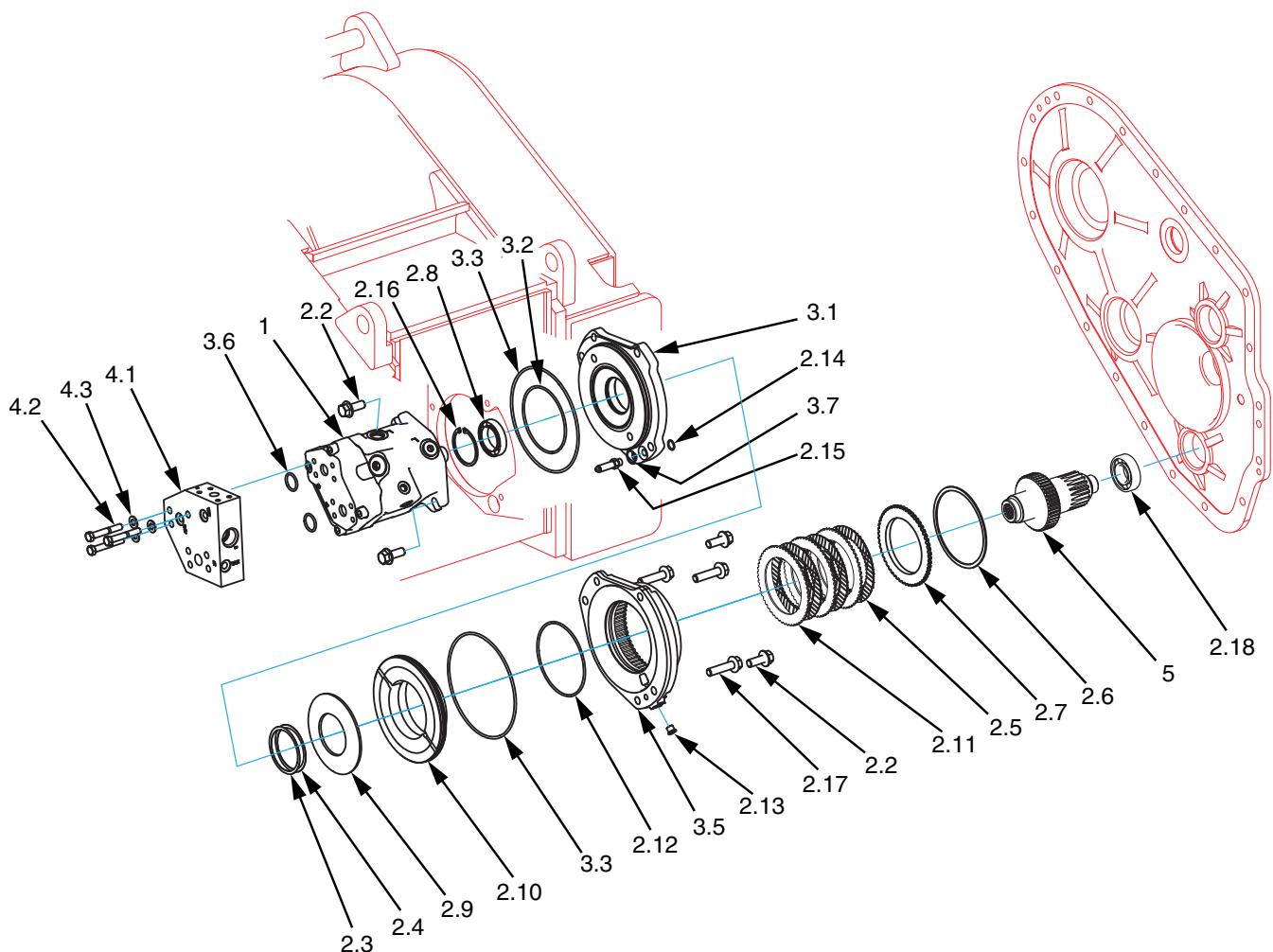
Caterpillar D5K/K2 (H4A\_Y\_C20), D5K2 with fireplow (H4A\_Y\_C201)

Dresssta TD7/8S (H4A\_Y\_H15), TD9S (H4A\_Y\_H16)

Komatsu D31/37/39X-22 (H4A\_Y\_K13), D37/39X-23, D39X-24 (H4A\_Y\_K14)

Shantui SD10 (H4A\_Y\_U13)

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**Motor & Brake Group**

Standard non-SCH Winch

Caterpillar D3/4K (H4A\_Y\_C19), D3/4/5K2 T4f (H4A\_Y\_C191)

Caterpillar D5K/K2 (H4A\_Y\_C20), D5K2 with fireplow (H4A\_Y\_C201)

Dresssta TD7/8S (H4A\_Y\_H15), TD9S (H4A\_Y\_H16)

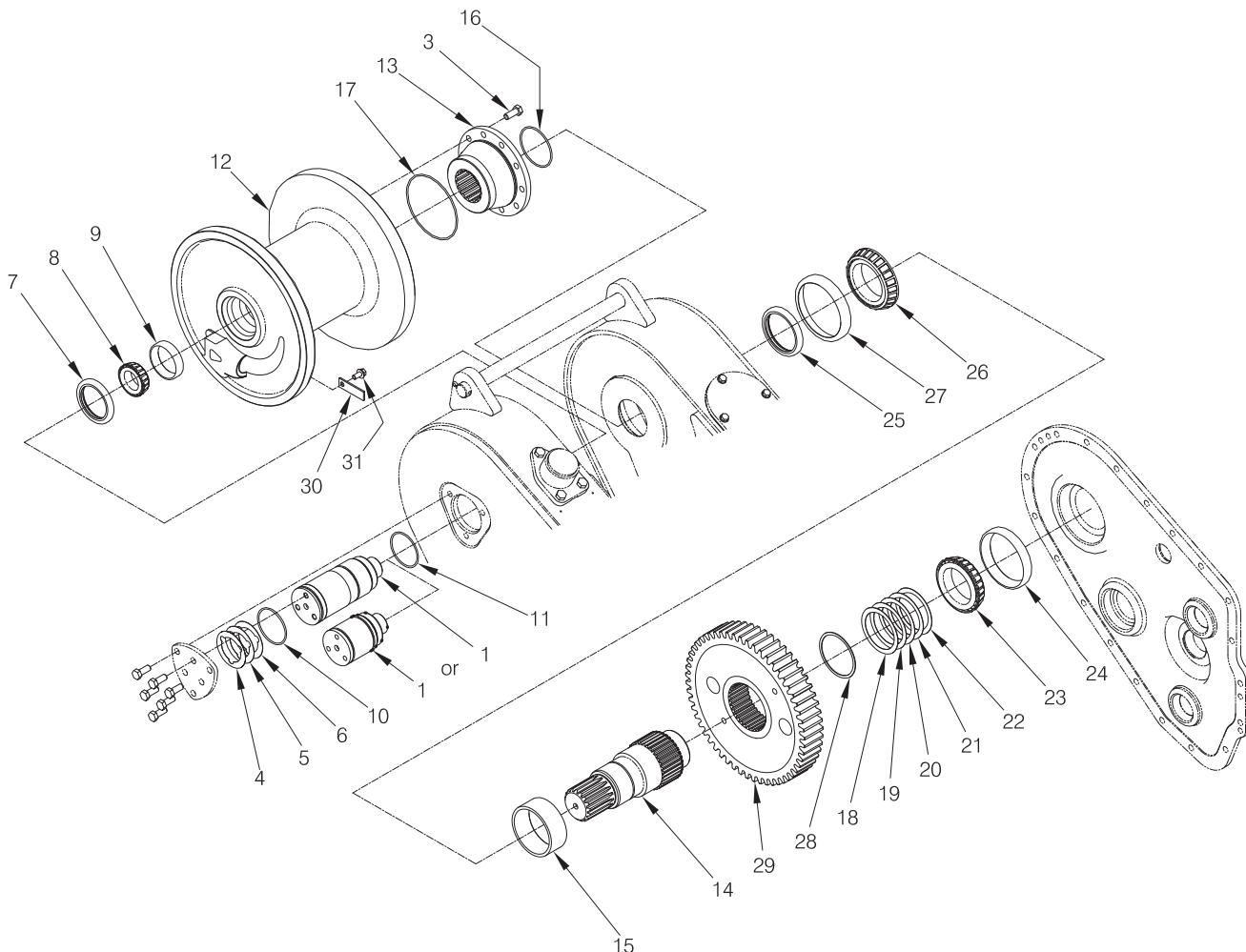
Komatsu D31/37/39X-22 (H4A\_Y\_K13), D37/39X-23, D39X-24 (H4A\_Y\_K14)

Shantui SD10 (H4A\_Y\_U13)

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2303788W	Motor, Hydraulic	1	3	2306563W	<b>List - Motor Shaft- H4A Cmpnts</b>	
1	*a 2314620	Motor, Hydraulic	1	3.1	2305651W	. Plate - Mounting, Motor	1
1	*b 2315765	Motor, Hydraulic	1	3.2	*k 15888W	. O-Ring	1
2	2306540W	<b>List - Motor Shaft, H4A Cmpnts</b>		3.3	*j*k 2316507	. O-Ring	2
2.2	2303848W	. Screw, Flange	4	3.5	*c 2305679W	. Housing - Brake	1
2.3	*j 2304711W	. Shim, 0.005"	A/R	3.5	*d 2316526	. Housing - Brake	1
2.4	*j 2304712W	. Shim, 0.007"	A/R	3.6	*k 2304110W	. O-Ring	2
2.5	*j 2304873W	. Disc, Friction	3	3.7	*k 17064	. O-Ring	1
2.6	334475W	. Ring - Snap, Int	1	4	2311127	<b>List - Motor Shaft - H4AT*Y Std</b>	
2.7	334442W	. Plate, Pressure	1	4.1	2307568W	. Assembly - Manifold (see 3-114)	1
2.8	*j 2300831W	. Bearing - Ball	1	4.2	180959W	. Capscrew	3
2.9	2303845W	. Spring, Belleville	1	4.3	221767W	. Hard Washer	3
2.10	2316525	. Piston - Brake	1	5	*e 2303835W	<b>Motor Shaft, 21T (83:1)</b>	1
2.11	*j 2304874W	. Plate, Separator	3	5	*f 2311303	<b>Motor Shaft, 19T (94:1)</b>	1
2.12	*j*k 2316517	. O-Ring	1	5	*g 2303829W	<b>Motor Shaft, 16T (116:1)</b>	1
2.13	222442W	. Fitting	1	5	*h 2311305	<b>Motor Shaft, 15T (125:1)</b>	1
2.14	*c 212456	. O-Ring	1				
2.14	*d*k 26883	. O-Ring	1	*a		Used on Tractor Code K14 only	
2.15	16547W	. Fitting	1	*b		Used on Tractor Code U13 only	
2.16	12921W	. Snap Ring	1	*c		Last used on H4A-1046	
2.17	918906W	. Screw	3	*d		First used on H4A-1047	
2.18	*j 41206W	. Bearing - Ball	1	*e		Used on 83:1 Gear Ratio Only	
				*f		Used on 94:1 Gear Ratio Only	
				*g		Used on 116:1 Gear Ratio Only	
				*h		Used on 125:1 Gear Ratio Only	
				*j		Included in Brake Kit 2306545W	
				*k		Included in Motor Shaft Rebuild Kit 2315351	

## Drum Shaft Group



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*b 2303830W	Shaft, Drum	1	18	1314470W	Shim, .025	AR
1	*a 2305653W	Shaft, Drum	1	19	1314485W	Shim, .015	AR
3	2303848W	Capscrew	10	20	1314486W	Shim, .018	AR
4	2304122W	Shim, .005	AR	21	1314487W	Shim, .020	AR
5	2304123W	Shim, .007	AR	22	1314488W	Shim, .022	AR
6	2304124W	Shim, .020	AR	23	1314483W	Cone, Bearing	1
7	87355W	Seal, Oil	1	24	30190W	Cup, Bearing	1
8	2303853W	Cone, Bearing	1	25	R2109170	Seal	1
9	2303854W	Cup, Bearing	1	26	2304126W	Cone, Bearing	1
10	15881W	O-Ring	1	27	2304127W	Cup, Bearing	1
11	203525	O-Ring	1	28	2304128W	Retaining Ring	1
12	2304069W	Drum	1	29	2303827W	Gear, 55T	1
13	2304060W	Adapter, Drum	1	30	1314503W	Keeper, Ferrule	1
14	2304058W	Shaft, Drum	1	31	134803W	Capscrew	1
15	2304125W	Spacer	1				
16	46629W	O-Ring	1				
17	15895W	O-Ring	1				

\*a Used on Non SCH Winches (S/N H4A\_Y)

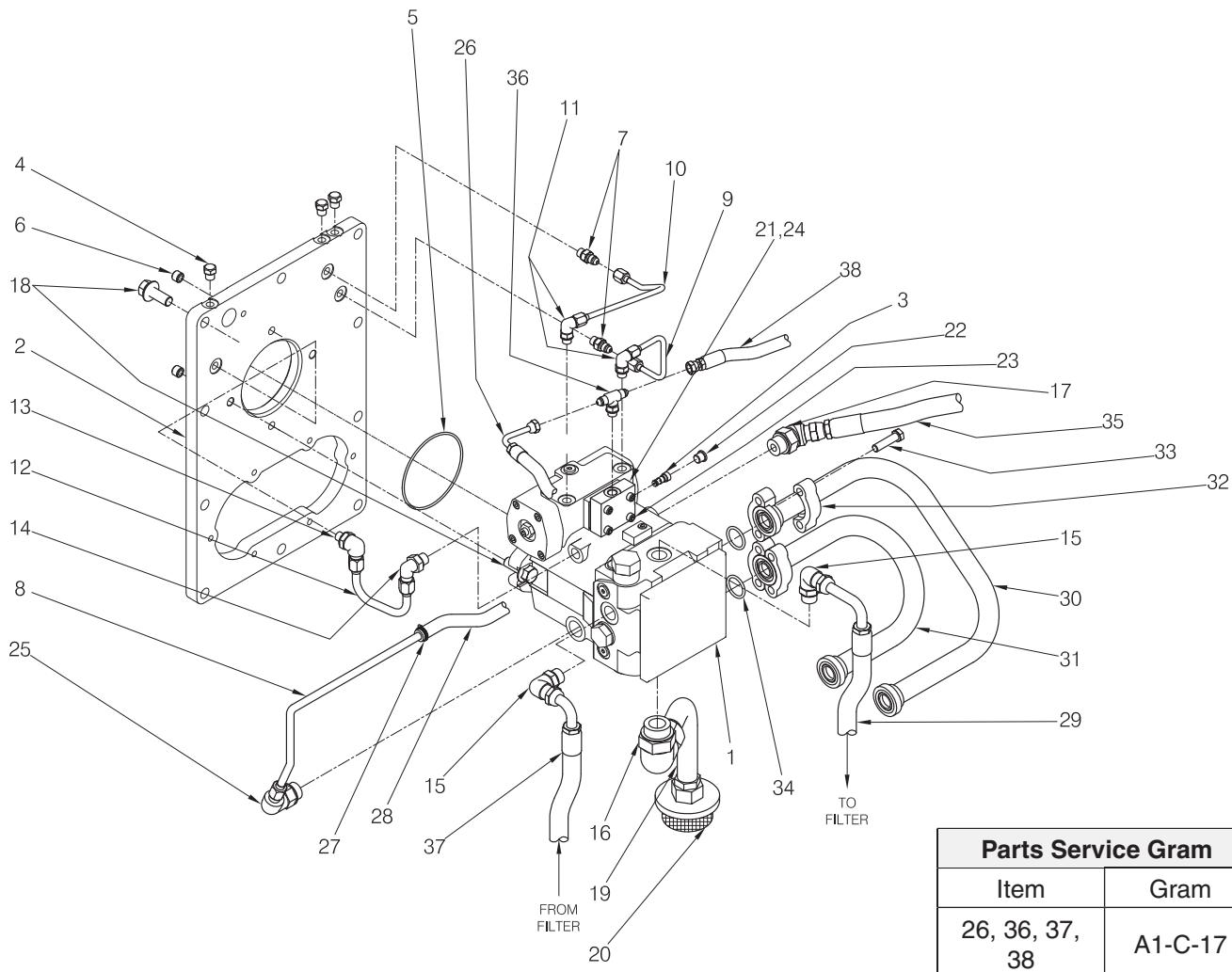
\*b Used on SCH Winches (S/N H4A\_R)

## Hydraulics/Controls

4 to 5 Spool Valve Conversion.....	3-121
Controller.....	3-162
Control Lever Assembly.....	3-150 thru 3-156
Control Lever Mounting .....	3-122 thru 3-148
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Filter Assembly .....	3-104 thru 3-107
Manifold Assembly.....	3-114
Manifold Assembly, Valve .....	3-115 thru 3-116
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Motor, Hydraulic 45CC 2 Speed .....	3-26 thru 3-28
Motor Low Temperature Seal Kit .....	3-29
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Pump, Hydrostatic 45CC.....	3-6 thru 3-15
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Wire Harness Installation .....	3-160 & 3-161

## Pump and Related Hydraulics

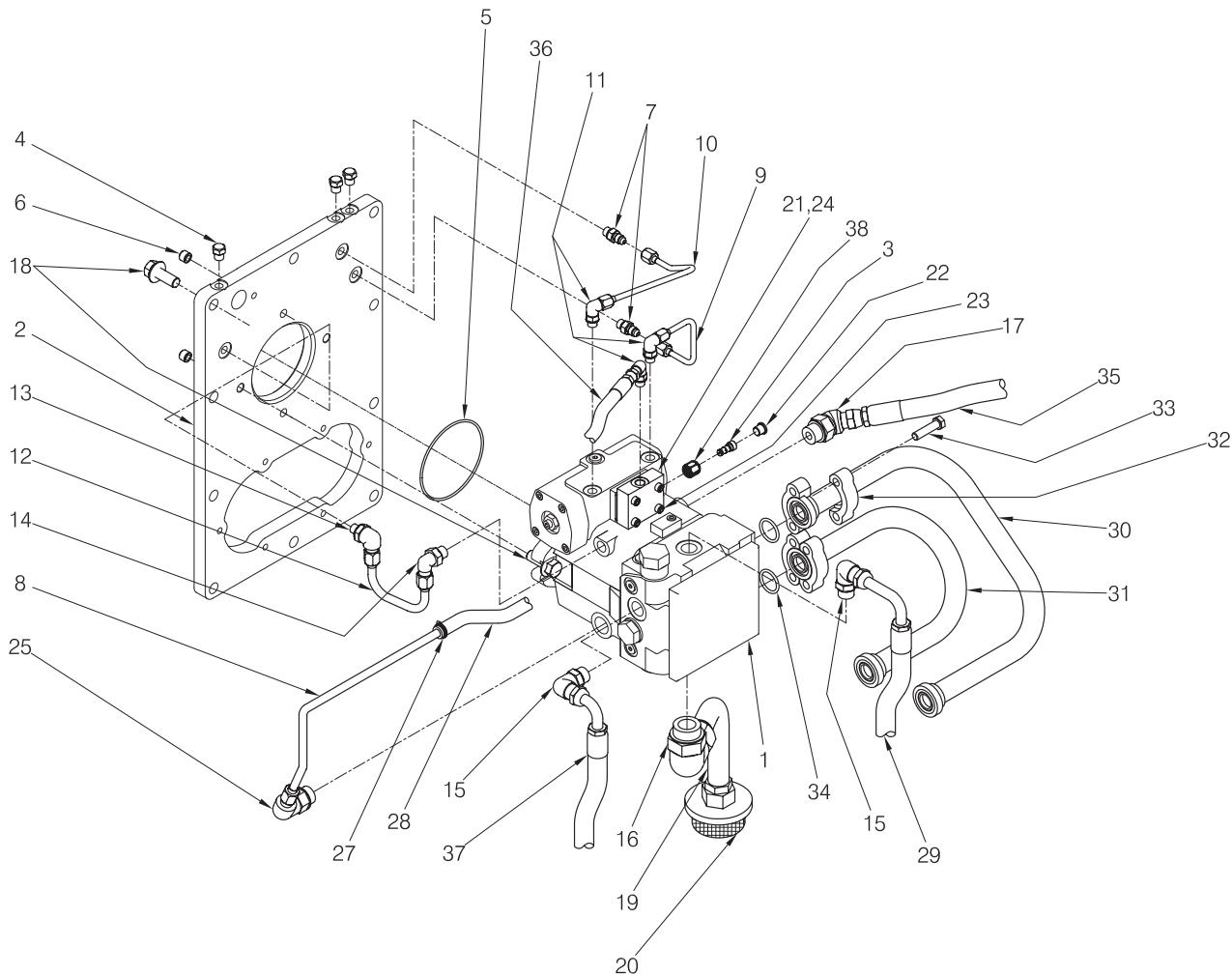
Last Used on S/N H4AH\_B1014



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2304231W	Assembly, Pump (See 3-6)	1	21	2304014W	Manifold, Pump	1
2	-----	Plate, (See Frames & Covers)	1	22	222442W	Fitting	1
3	2304195W	Valve, Shuttle	1	23	293796W	Capscrew	4
	2305073W	. Kit, Seal	1	24	2304193W	Gasket	1
4	14591W	Fitting	3	25	222400W	Fitting	1
5	39742W	O-Ring	1	26	2305013W	Assembly, Hose	1
6	*a 2305987W	Setscrew	2	27	R6515575	Clamp, Hose	1
7	16538W	Fitting	2	28	209843	Hose, Push-On	10"
8	2305133W	Assembly, Tube	1	29	2305003W	Assembly, Hose	1
9	2304149W	Assembly, Tube	1	30	2304057W	Assembly, Tube	1
10	2304150W	Assembly, Tube	1	31	2304104W	Assembly, Tube	1
11	16556W	Fitting	2	32	222535W	Flange, Half	4
12	2304152W	Assembly, Tube	1	33	*a 177461W	Capscrew	8
13	239784W	Fitting	1	34	2304110W	O-Ring	2
14	16558W	Fitting	1	35	2305007W	Assembly, Hose	1
15	16559W	Fitting	2	36	16574W	Fitting	1
16	16562W	Fitting	1	37	R400128	Assembly, Hose	1
17	201752W	Fitting	1	38	2305141W	Assembly, Hose	1
18	2303848W	Capscrew	12	*a Use 318702W Thread Lock			
19	2304115W	Assembly, Tube	1				
20	2304114W	Strainer	1				

## Pump and Related Hydraulics

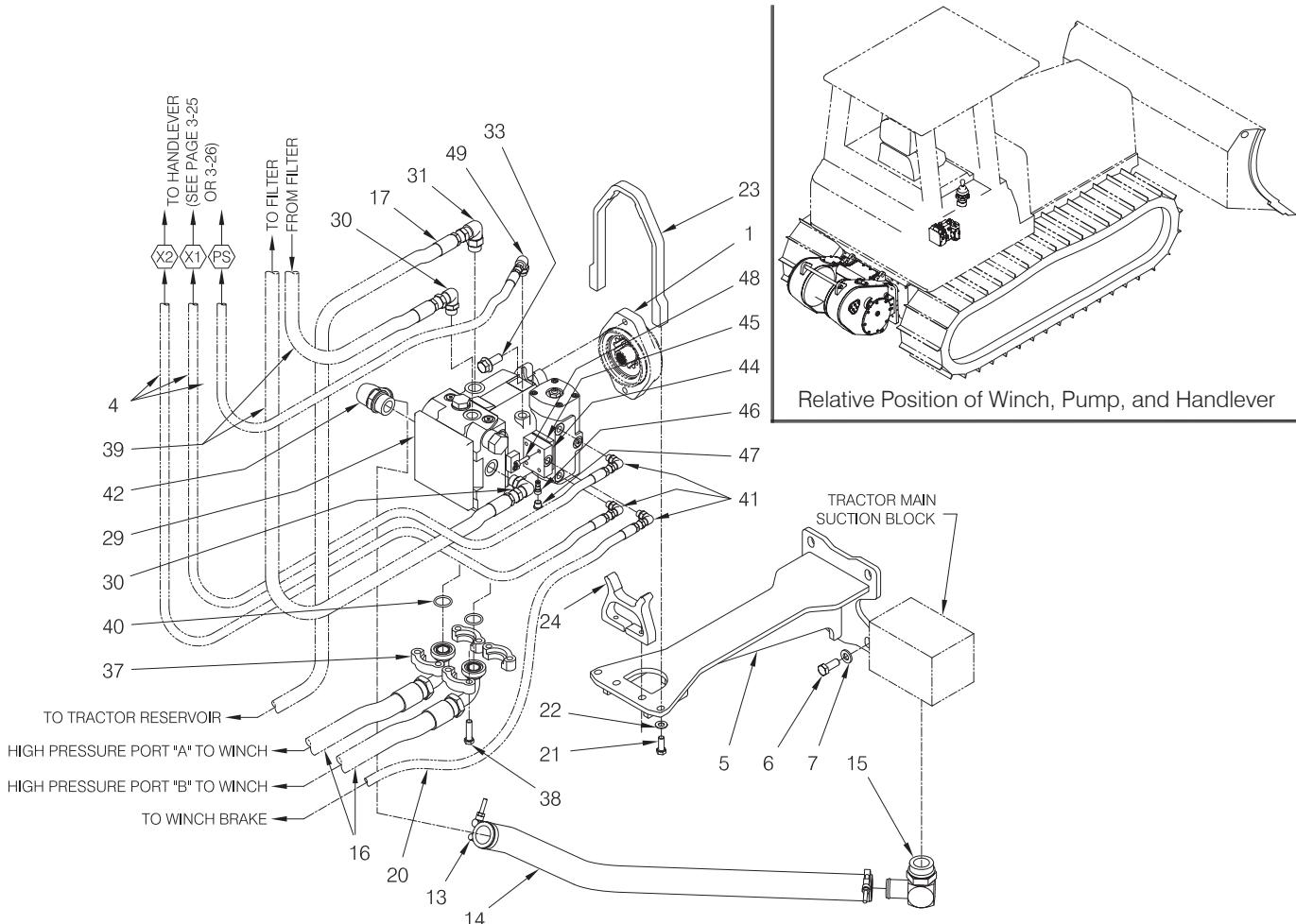
First Used on S/N H4AH\_R1015



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

## Pump and Related Hydraulics

Caterpillar D3/4/5G  
 (H4AH\_Y\_C17; H4AH\_Z\_C17)  
 Last Used on S/N H4A-1161



A - Used on Caterpillar C17 D3/4/5G Hydrostatic (See Page 0-3 for serial number prefixes)

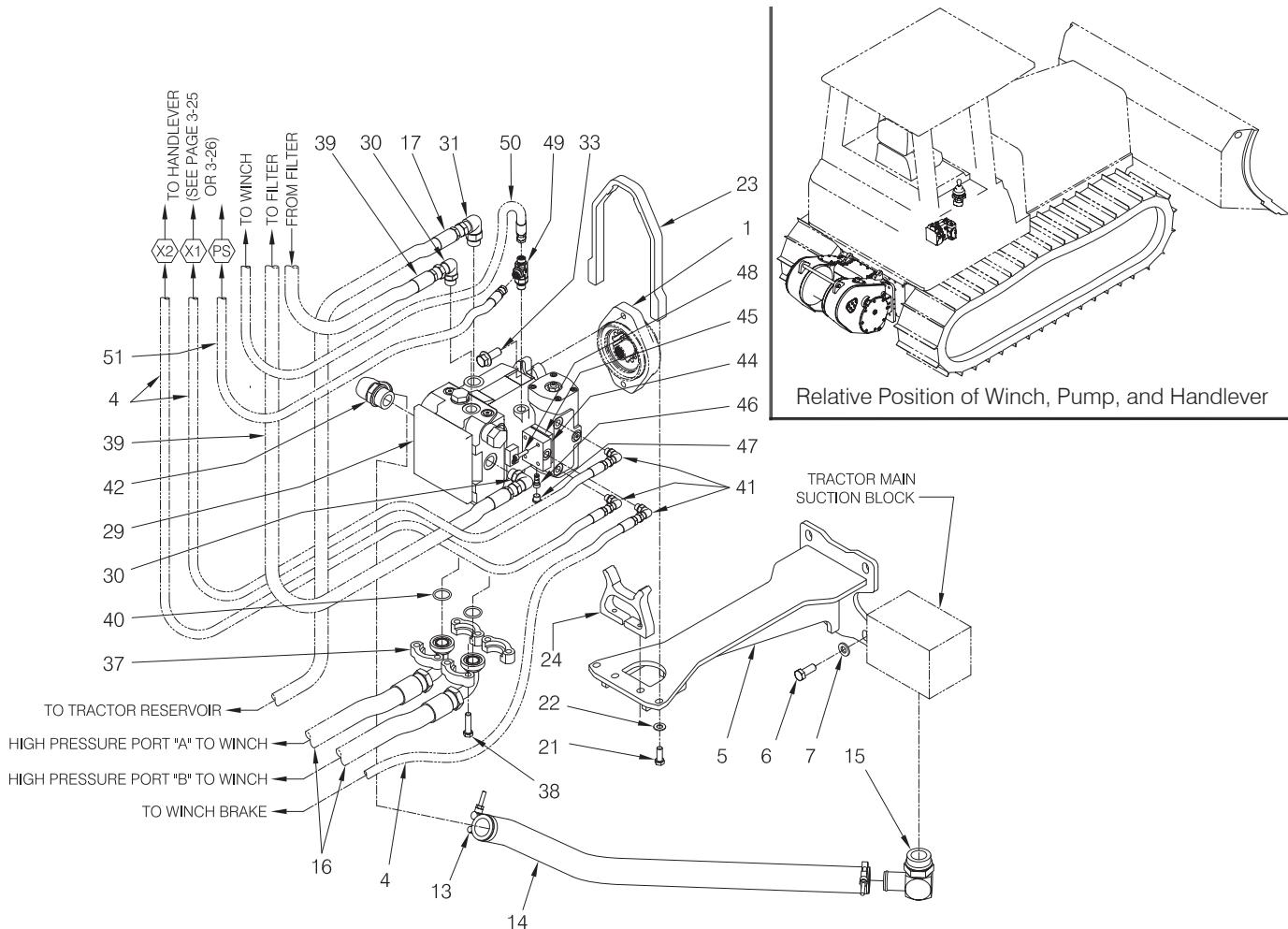
B - Used on Caterpillar C18 D4/5G Hydrostatic (See Page 0-3 for serial number prefixes)

Item	Part No.	Description	Qty A	Qty B	Item	Part No.	Description	Qty A	Qty B
1	2304212W	Kit, Thru Drive (See 3-118)	1	--	30	16559W	Fitting	2	2
	2306258W	Kit, Thru Drive (See 3-119)	--	1	31	17224W	Fitting	1	1
4	2304205W	Assembly, Hose	3	3	33	2303848W	Capscrew	2	2
5	2304225W	Support, Pump	1	--	37	222535W	Fitting	4	4
6	293645W	Capscrew	4	--	38	*a 177461W	Capscrew	8	8
7	296422W	Washer	4	--	39	2304237W	Assembly, Hose	2	2
13	R13805074	Clamp, T-Bolt	2	2	40	2304110W	O-Ring	2	2
14	2304259W	Hose, Suction	1	--	41	16556W	Fitting	3	3
	2306251W	Hose, Suction	--	1	42	2304233W	Fitting	1	1
15	213619W	Fitting	1	1	44	2304014W	Manifold, Pump	1	1
16	2304234W	Assembly, Hose	2	2	45	2304193W	Gasket	1	1
17	2304235W	Assembly, Hose	1	1	46	2304195W	Valve, Shuttle	1	1
20	2304205W	Assembly, Hose	1	1	47	222442W	.Kit, Seal	1	1
21	179443W	Capscrew	4	--	48	293796W	Fitting	1	1
22	221767W	Washer	4	--	49	201766W	Capscrew	4	4
23	2304245W	Clamp, Upper Pump Support	1	--				1	1
24	2304244W	Clamp, Lower Pump Support	1	--					
29	2304231W	Assembly, Pump (See 3-6)	1	1					

\*a Use 318702W Thread Lock

## Pump and Related Hydraulics

Caterpillar D3/4/5G  
 (H4AH\_Y\_C17; H4AH\_Z\_C17)  
 First Used on S/N H4A-1162



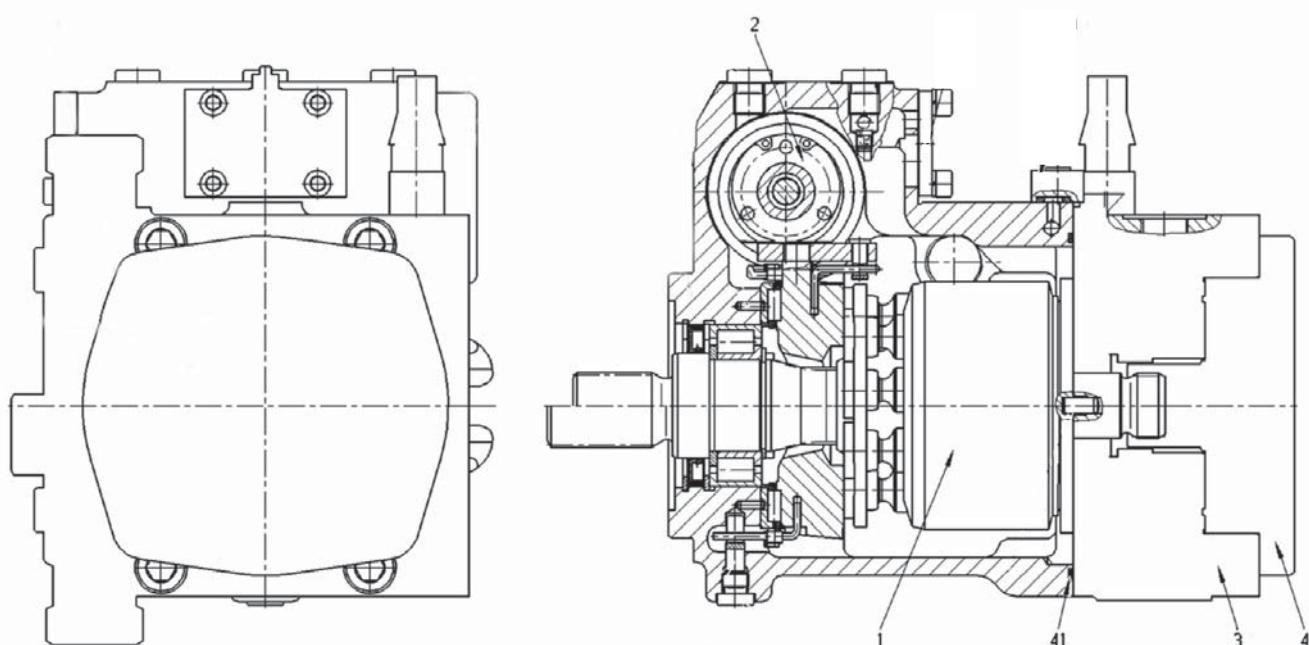
A - Used on Caterpillar C17 D3/4/5G Hydrostatic (See Page 0-3 for serial number prefixes)

B - Used on Caterpillar C18 D4/5G Hydrostatic (See Page 0-3 for serial number prefixes)

Item	Part No.	Description	Qty A	Qty B	Item	Part No.	Description	Qty A	Qty B
1	2304212W	Kit, Thru Drive (See 3-118)	1	--	33	2303848W	Capscrew	2	2
	2306258W	Kit, Thru Drive (See 3-119)	--	1	37	222535W	Fitting	4	4
4	2311492	Assembly, Hose	4	4	38	*a 177461W	Capscrew	8	8
5	2304225W	Support, Pump	1	--	39	2311019	Assembly, Hose	2	2
6	293645W	Capscrew	4	--	40	2304110W	O-Ring	2	2
7	296422W	Washer	4	--	41	16556W	Fitting	3	3
13	R13805074	Clamp, T-Bolt	2	2	42	2304233W	Fitting	1	1
14	2304259W	Hose, Suction	1	--	44	2304014W	Manifold, Pump	1	1
	2306251W	Hose, Suction	--	1	45	2304193W	Gasket	1	1
15	213619W	Fitting	1	1	46	2304195W	Valve, Shuttle	1	1
16	2311846	Assembly, Hose	2	2		2305073W	. Kit, Seal	1	1
17	2311845	Assembly, Hose	1	1	47	222442W	Fitting	1	1
21	179443W	Capscrew	4	--	48	293796W	Capscrew	4	4
22	221767W	Washer	4	--	49	2311842	Fitting	1	1
23	2304245W	Clamp, Upper Pump Support	1	--	50	2311847	Assembly, Hose	1	1
24	2304244W	Clamp, Lower Pump Support	1	--	51	2311198	Assembly, Hose	1	1
29	2311840	Assembly, Pump (See 3-13)	1	1	*a Use 318702W Thread Lock				
30	231452	Fitting	2	2					
31	237983	Fitting	1	1					

**Pump - Hydrostatic 45CC**

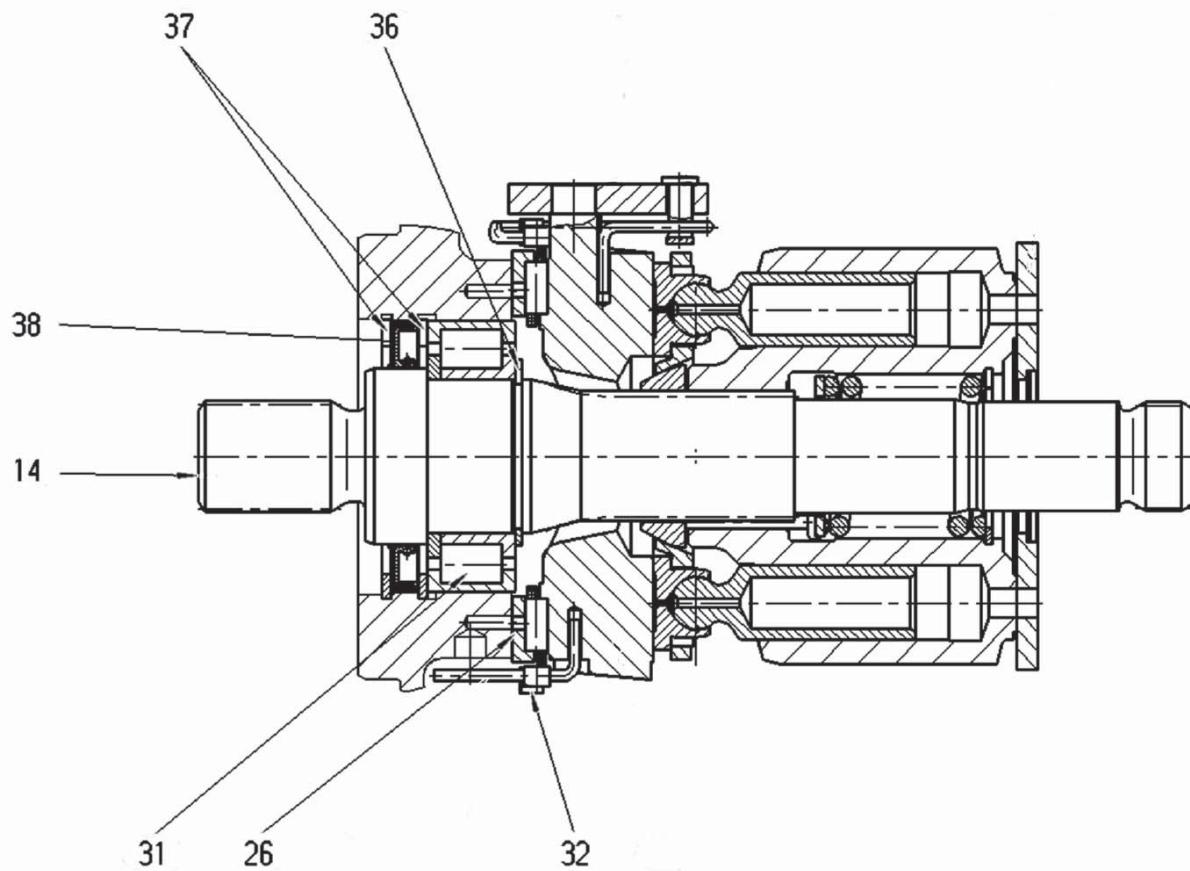
Caterpillar D3/4/5G (H4AH\_Y\_C17),  
 Caterpillar D4/5G (H4AH\_Y\_C18),  
 Caterpillar D3/4K (H4AH\_Y\_C19)



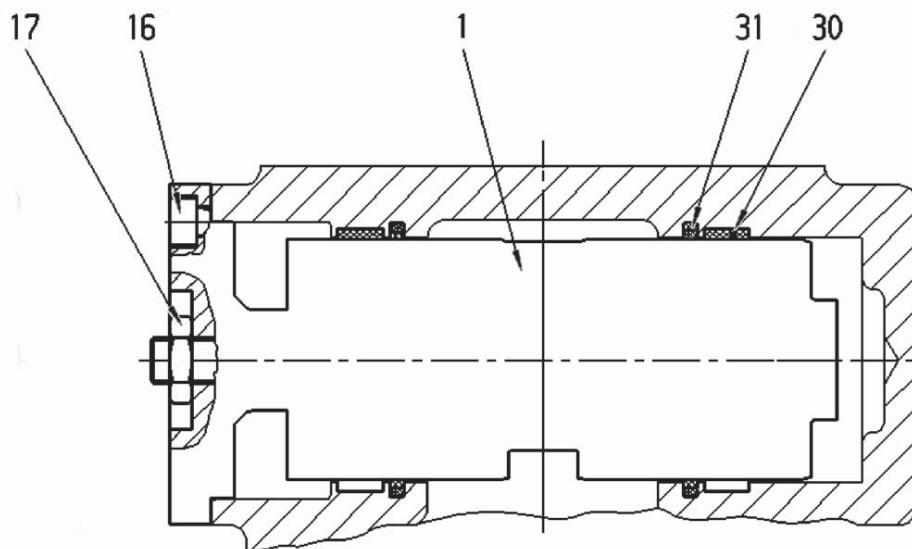
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2304231W</b>	<b>Pump - Hydrostatic 45CC</b>					
1	2305788W	. Rotary Group (See 3-7)	1	41	2305910W	. O-Ring	1
2	2305804W	. Hydraulic Control (See 3-8)	1				
3	2305833W	. Port Plate w/ Valves (See 3-9)	1				
4	2305876W	. Assembly, Internal Gear Pump (See 3-10)	1				

# **Pump - Hydrostatic 45CC**

Rotary Group



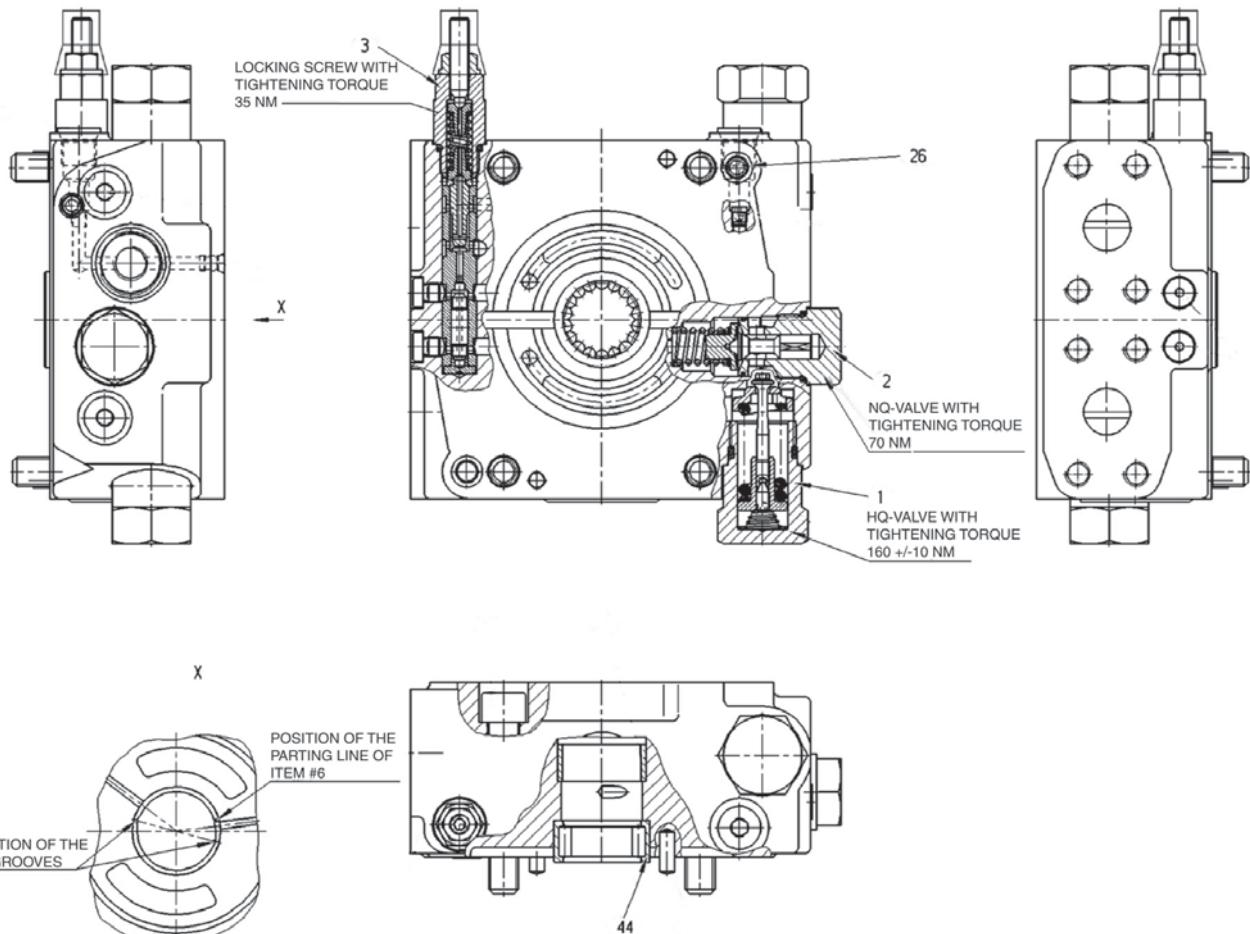
**Pump - Hydrostatic 45CC**  
Hydraulic Control



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

**Pump - Hydrostatic 45CC**

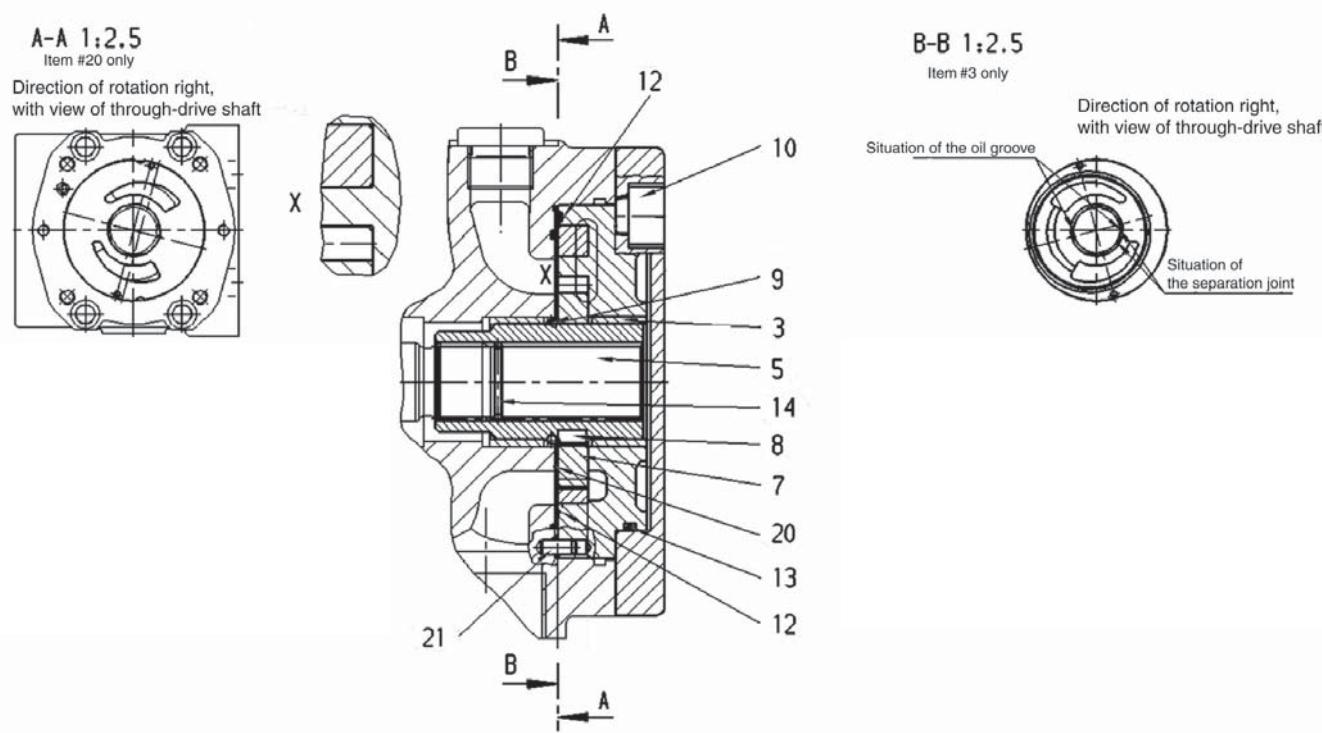
Port Plate with Valves



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2305833W</b>	<b>Plate, Port with Valves</b>					
1	2305834W	. Valve, Pressure Relief	2	44	2305875W	. Bearing, Plain Roller	1
2	2305844W	. Valve, Pressure Relief (See 3-11)	1				
3	2305854W	. Valve, Pressure Override	1	*a		Contained in 2307356W Seal Kit	
26	*a 2305873W	. O-Ring	2				

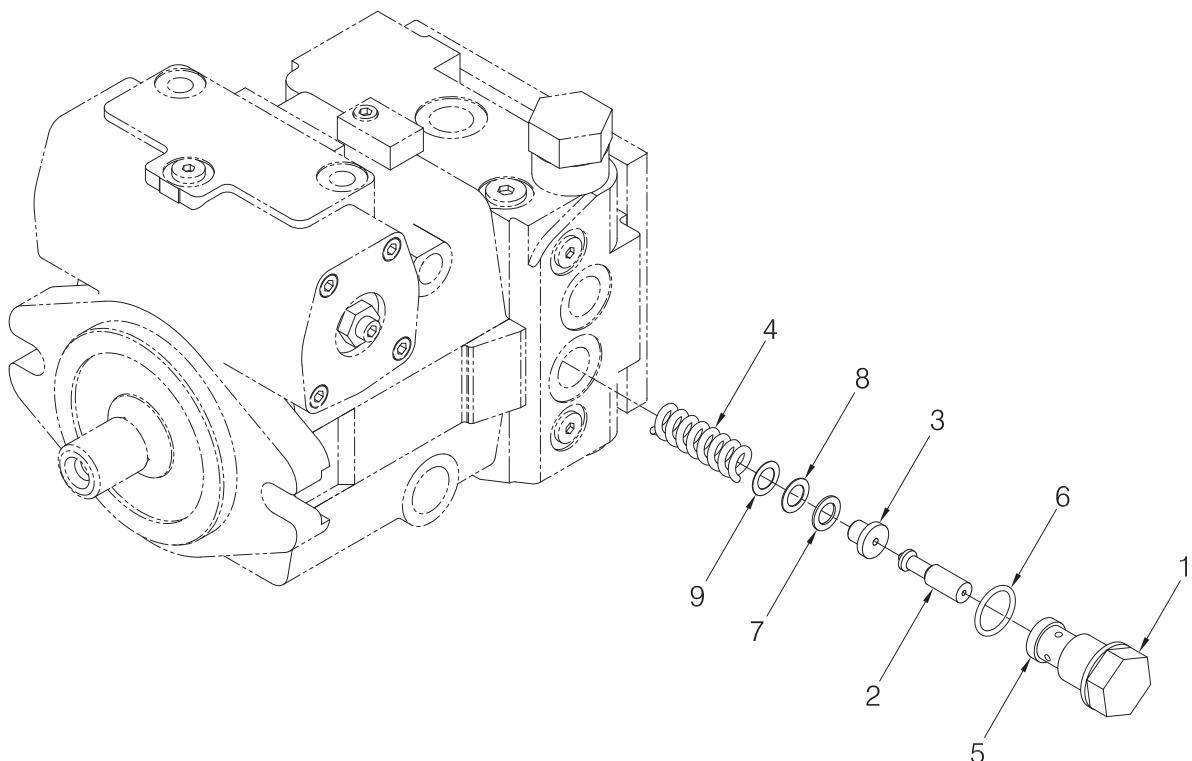
## Pump - Hydrostatic 45CC

Internal Gear Pump Assembly



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

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



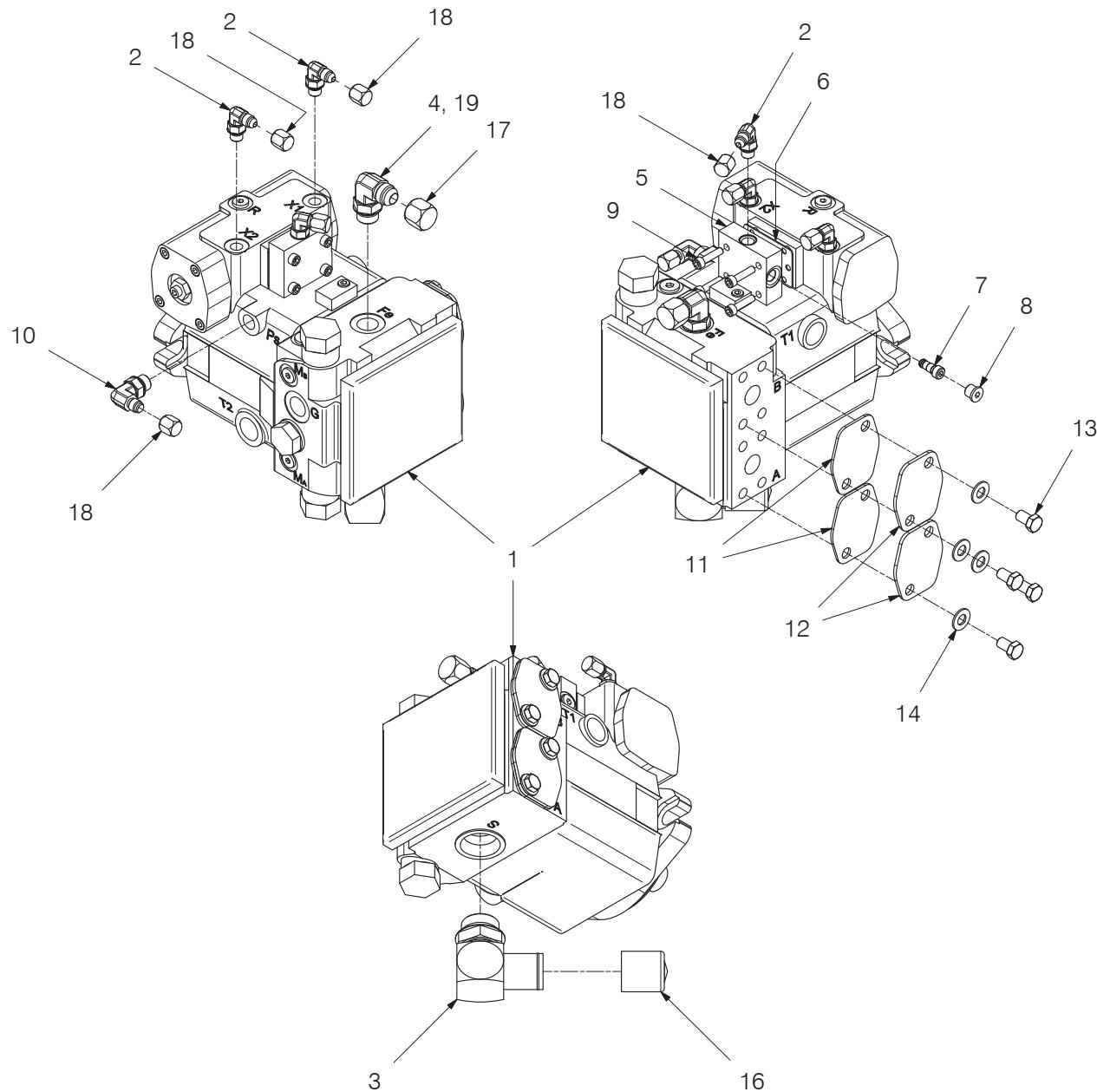
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 2305844W	<b>Valve, Pressure Relief</b>		7	2305851W	. Shim, 1.0 mm	A/R
2	2305845W	. Screw, Locking	1	8	2304276W	. Shim, 0.5 mm	A/R
3	2305846W	. Piston, Valve	1	9	2304275W	. Shim, 0.3 mm	A/R
4	2305847W	. Collar, Spring	1				
5	2305848W	.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

**Pump - Hydrostatic 45CC**

Caterpillar D3/4/5G (H4AH\_Y\_C17),

Caterpillar D4/5G (H4AH\_Y\_C18)

Last Used on S/N H4A-1161



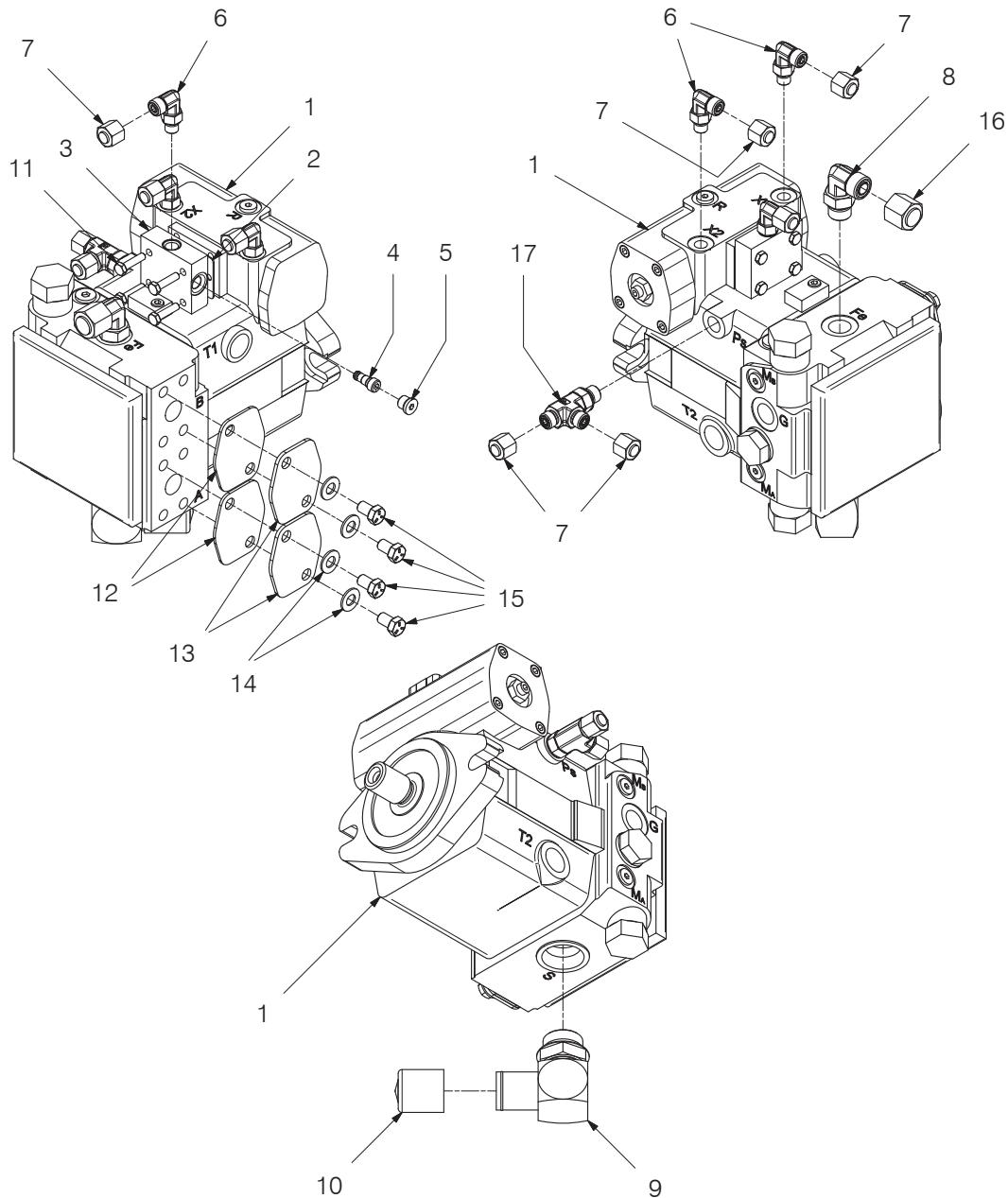
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2306024W</b>	<b>Assembly, Pump</b>	<b>1</b>				
1	2303789W	. Pump, Hydrostatic 45CC	1	10	201766W	. Fitting with O-Ring	1
2	16556W	. Fitting with O-Ring	3	11	2304257W	. Gasket	2
3	2304233W	. Fitting	1	12	2304258W	. Plate	2
4	16559W	. Fitting with O-Ring	1	13	18535W	. Capscrew	4
5	2304014W	. Manifold, Pump	1	14	15134W	. Washer	4
6	2304193W	. Gasket	1	16	2306026W	. Cap	1
7	2304195W	. Valve, Shuttle	1	17	16925W	. Fitting	1
8	222442W	. Fitting with O-Ring	1	18	16923W	. Fitting	4
9	293796W	. Capscrew	4	19	2306157W	. Label, White, "Fe" (Not Shown)	1

**Pump - Hydrostatic 45CC**

Caterpillar D3/4/5G (H4AH\_Y\_C17),

Caterpillar D4/5G (H4AH\_Y\_C18)

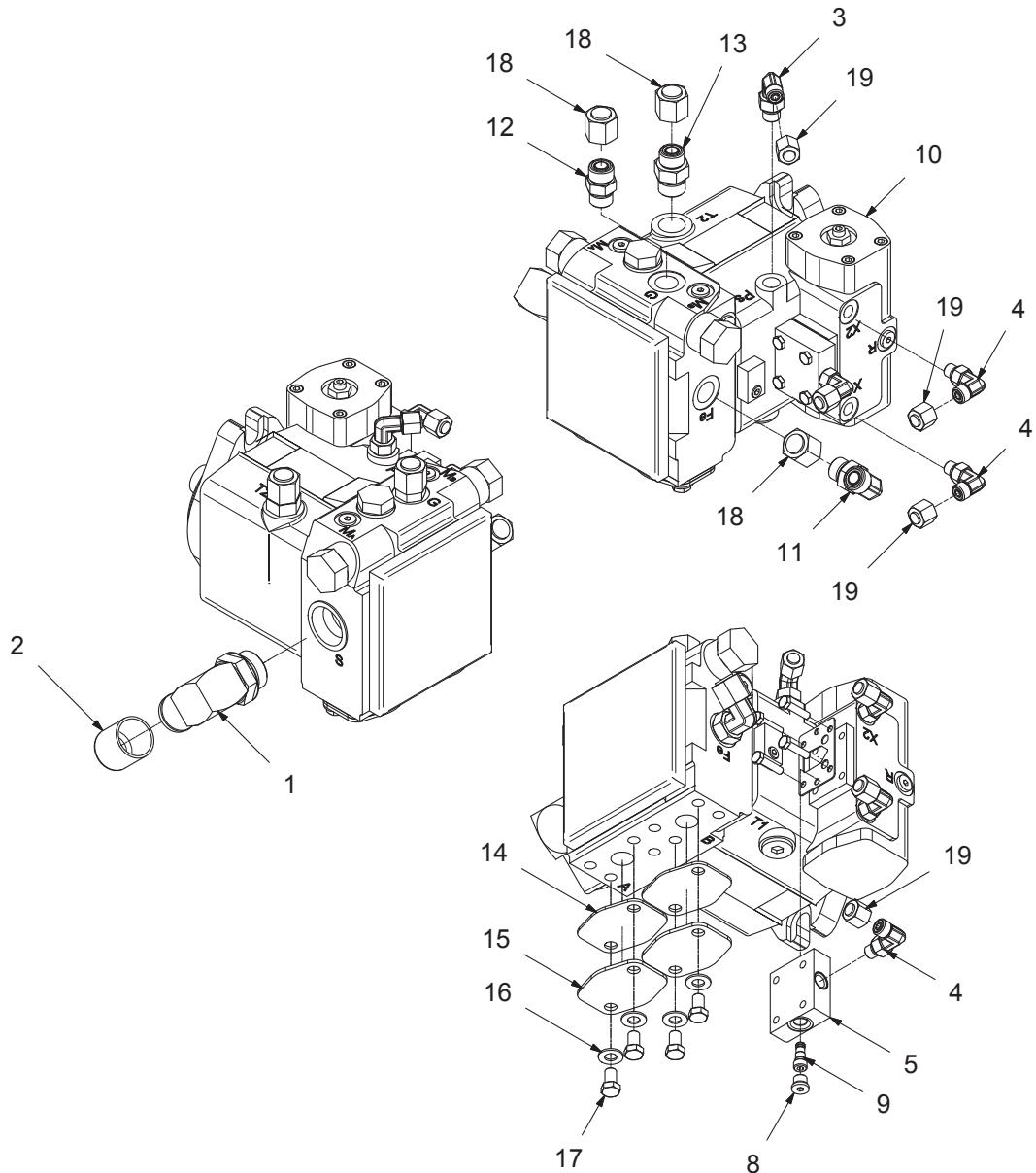
First Used on S/N H4A-1162



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311840</b>	<b>Assembly, Pump</b>	<b>1</b>				
1	2303789W	. Pump, Hydrostatic 45CC	1	10	2306026W	. Cap	1
2	2304193W	. Gasket	1	11	287816W	. Capscrew	4
3	2304014W	. Manifold, Pump	1	12	2304257W	. Gasket	2
4	2304195W	. Valve, Shuttle	1	13	2304258W	. Plate	2
5	235387	. Fitting	1	14	15134W	. Washer	4
6	R833251	. Fitting	3	15	18535W	. Capscrew	4
7	232984	. Fitting	5	16	R834253	. Fitting	1
8	231452	. Fitting	1	17	2311842	. Fitting	1
9	2304233W	. Fitting	1				

**Pump - Hydrostatic 45CC**

Caterpillar D3/4K (H4AH\_Y\_C19)  
Used on S/N H4A-1121 thru H4A-1161

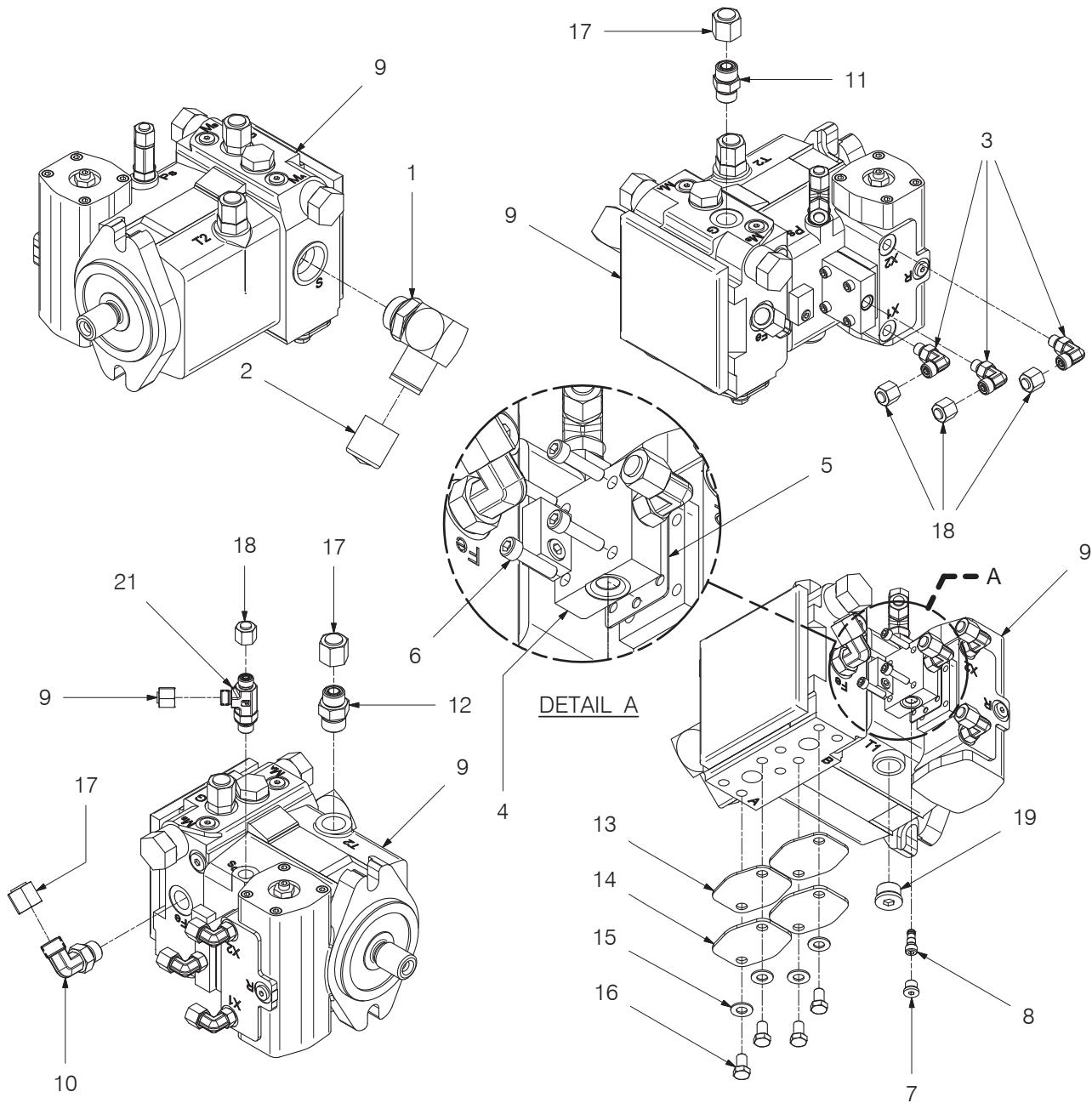


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311470</b>	<b>Assembly, Pump</b>					
1	2304233W	. Fitting	1	11	231452	. Fitting	1
2	2306026W	. Cap	1	12	231441	. Fitting	1
3	R833253	. Fitting	1	13	R833114	. Fitting	1
4	R833251	. Fitting	3	14	2304257W	. Gasket	2
5	2304014W	. Manifold, Pump	1	15	2304258W	. Plate	2
6	2304193W	. Gasket	1	16	15134W	. Washer	4
7	293796W	. Capscrew	4	17	18535W	. Capscrew	4
8	235387W	. Fitting	1	18	R834253	. Fitting	3
9	2304195W	. Valve, Shuttle	1	19	232984	. Fitting	4
10	2303789W	. Pump, Hydrostatic	1				

**Pump - Hydrostatic 45CC**

Caterpillar D3/4K (H4AH\_Y\_C19)

First Used on S/N H4A-1162

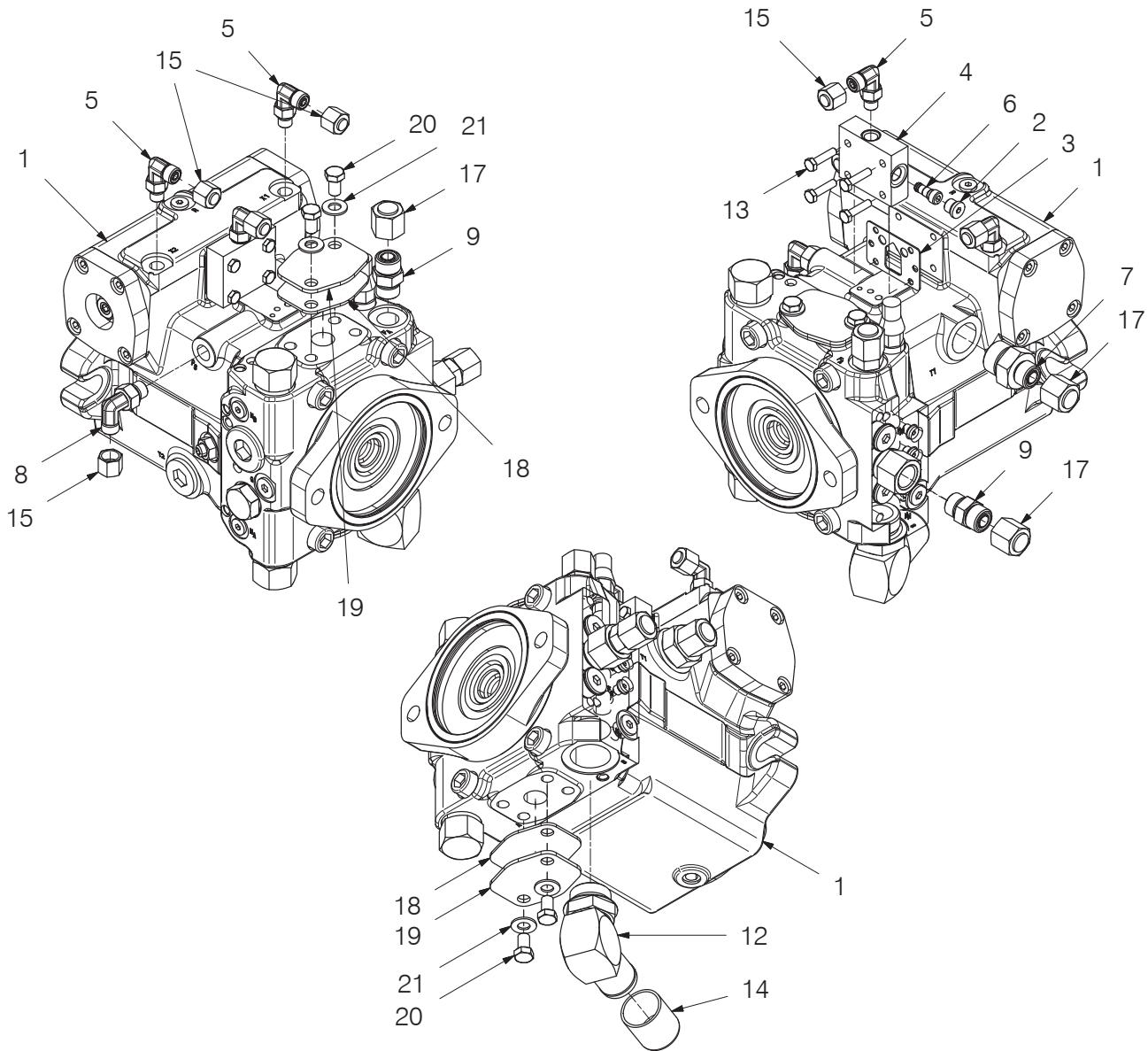


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311773</b>	<b>Assembly, Pump</b>					
1	2304233W	. Fitting	1	12	R833114	. Fitting	1
2	2306026W	. Cap	1	13	2304257W	. Gasket	2
3	R833251	. Fitting	3	14	2304258W	. Plate	2
4	2304014W	. Manifold, Pump	1	15	15134W	. Washer	4
5	2304193W	. Gasket	1	16	18535W	. Capscrew	4
6	293796W	. Capscrew	4	17	R834253	. Fitting	3
7	235387W	. Fitting	1	18	232984	. Fitting	5
8	2304195W	. Valve, Shuttle	1	19	228773	. Fitting	1
9	2303789W	. Pump, Hydrostatic	1	20	244400	. Inhibitor, Corrosion	1
10	231452	. Fitting	1	21	2311842	. Fitting	1
11	231441	. Fitting	1				

**Pump - Hydrostatic 56CC**

Caterpillar D5K (H4AH\_Y\_C20)

Last Used on S/N H4A-1161

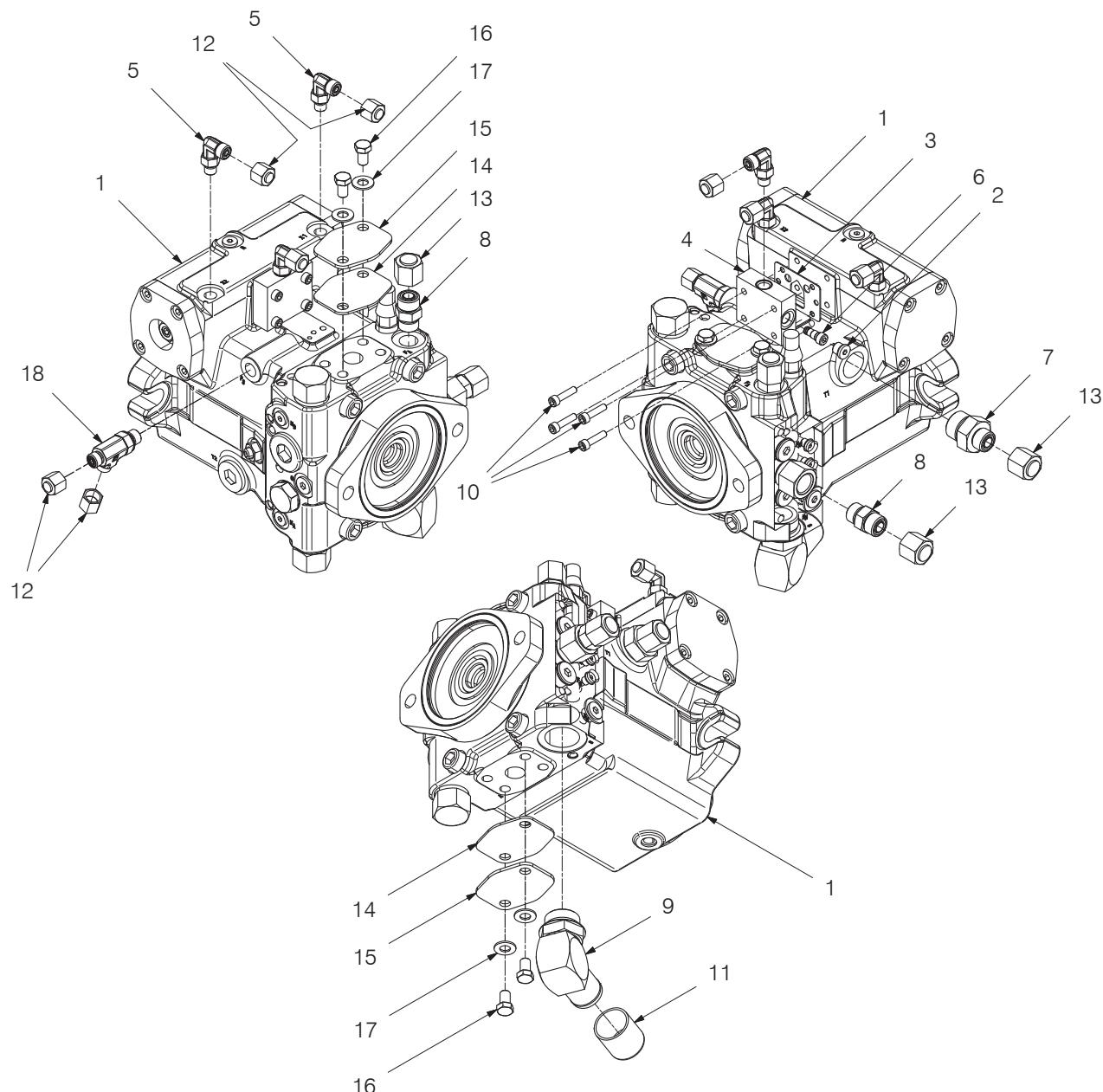


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2310961</b>	<b>Assembly, Pump</b>					
1	2310890	. Pump, Hydrostatic 56CC	1	12	2304233W	. Fitting	1
2	235387	. Fitting	1	13	293796W	. Capscrew	4
3	2304193W	. Gasket	1	14	2306026W	. Cap	1
4	2304014W	. Manifold, Pump	1	15	232984	. Fitting	4
5	R833251	. Fitting	3	17	R834253	. Fitting	3
6	2304195W	. Valve, Shuttle	1	18	2304257W	. Gasket	2
7	R833115	. Fitting	1	19	2304258W	. Plate	2
8	R833253	. Fitting	1	20	18535W	. Capscrew	4
9	231441	. Fitting	2	21	15134W	. Washer	4

**Pump - Hydrostatic 56CC**

Caterpillar D5K (H4AH\_Y\_C20)

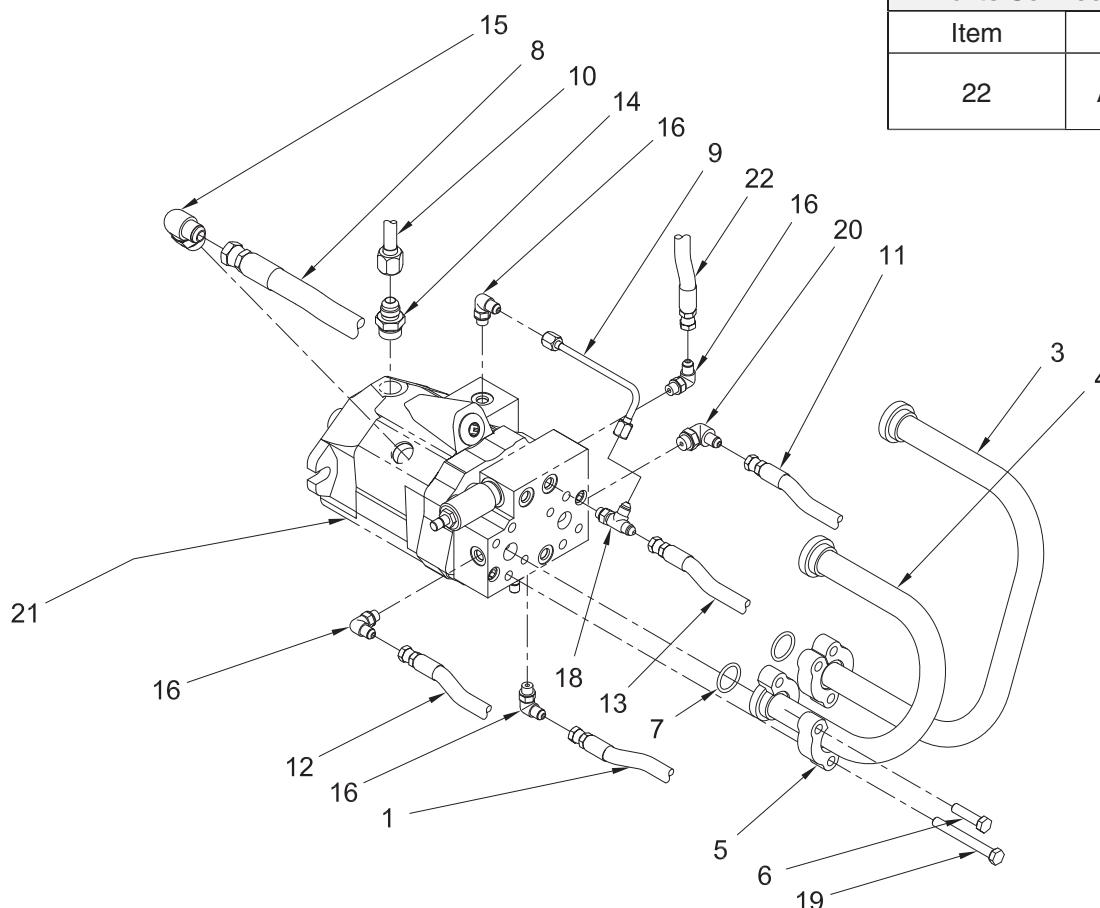
First Used on S/N H4A-1162



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311753</b>	<b>Assembly, Pump</b>					
1	2310890	. Pump, Hydrostatic 56CC	1	10	293796W	. Capscrew	4
2	235387	. Fitting	1	11	2306026W	. Cap	1
3	2304193W	. Gasket	1	12	232984	. Fitting	5
4	2304014W	. Manifold, Pump	1	13	R834253	. Fitting	3
5	R833251	. Fitting	3	14	2304257W	. Gasket	2
6	2304195W	. Valve, Shuttle	1	15	2304258W	. Plate	2
7	R833115	. Fitting	1	16	18535W	. Capscrew	4
8	231441	. Fitting	2	17	15134W	. Washer	4
9	2304233W	. Fitting	1	18	2311842	. Fitting	1

**Motor and Related Hydraulics**

Last Used on S/N H4AH\_B1014

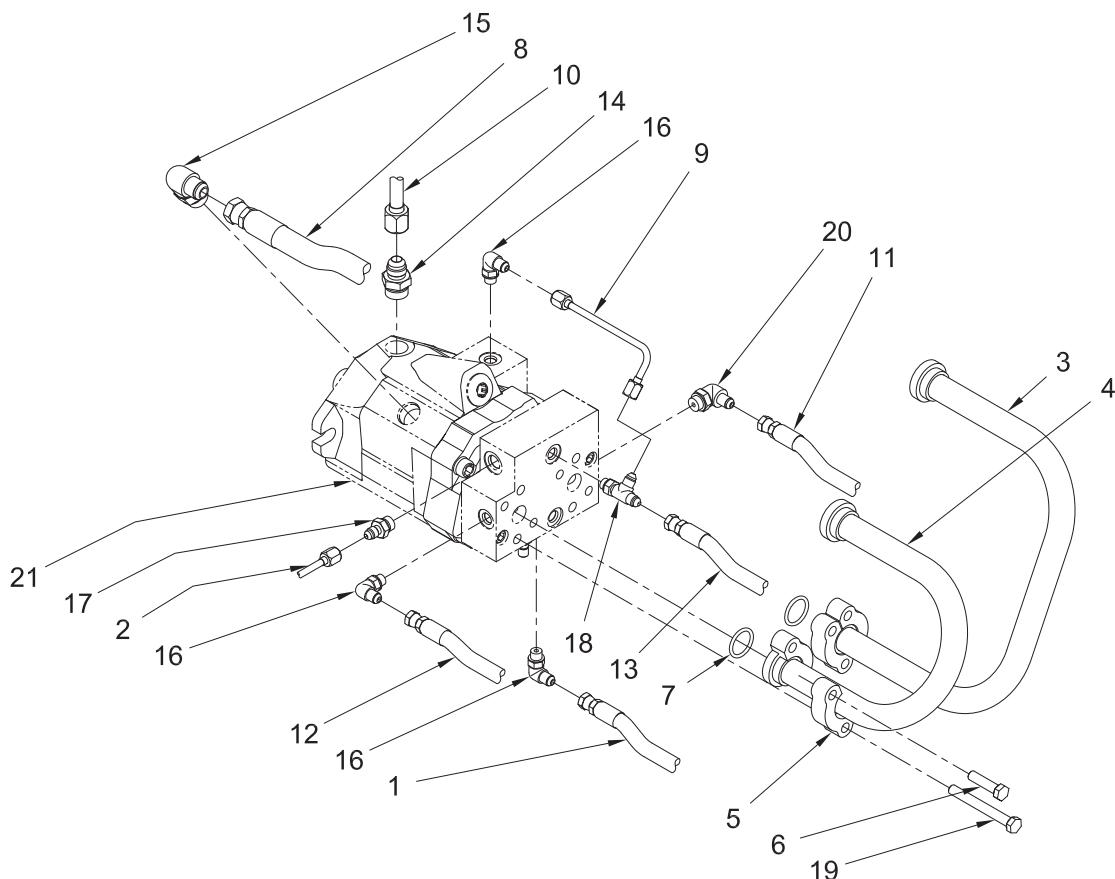


Parts Service Gram	
Item	Gram
22	A1-C-17

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2307009W	Assembly, Hose	1	13	2305141W	Assembly, Hose	1
3	2304057W	Assembly, Tube	1	14	16909W	Fitting	1
4	2304104W	Assembly, Tube	1	15	17224W	Fitting	1
5	222535W	Flange, Half	4	16	16556W	Fitting	4
6	*a 177461W	Capscrew	4	18	16967W	Fitting	1
7	2304110W	O-Ring	2	19	*a 221518W	Capscrew	4
8	2305007W	Assembly, Hose	1	20	201766W	Fitting	1
9	2304999W	Assembly, Tube	1	21	2303788W	Motor, Hydraulic (See 3-26)	1
10	2305014W	Assembly, Tube	1	22	2305141W	Assembly, Hose	1
11	2305139W	Assembly, Hose	1	*a Use 318702W Thread Lock			
12	2305140W	Assembly, Hose	1				

**Motor and Related Hydraulics**

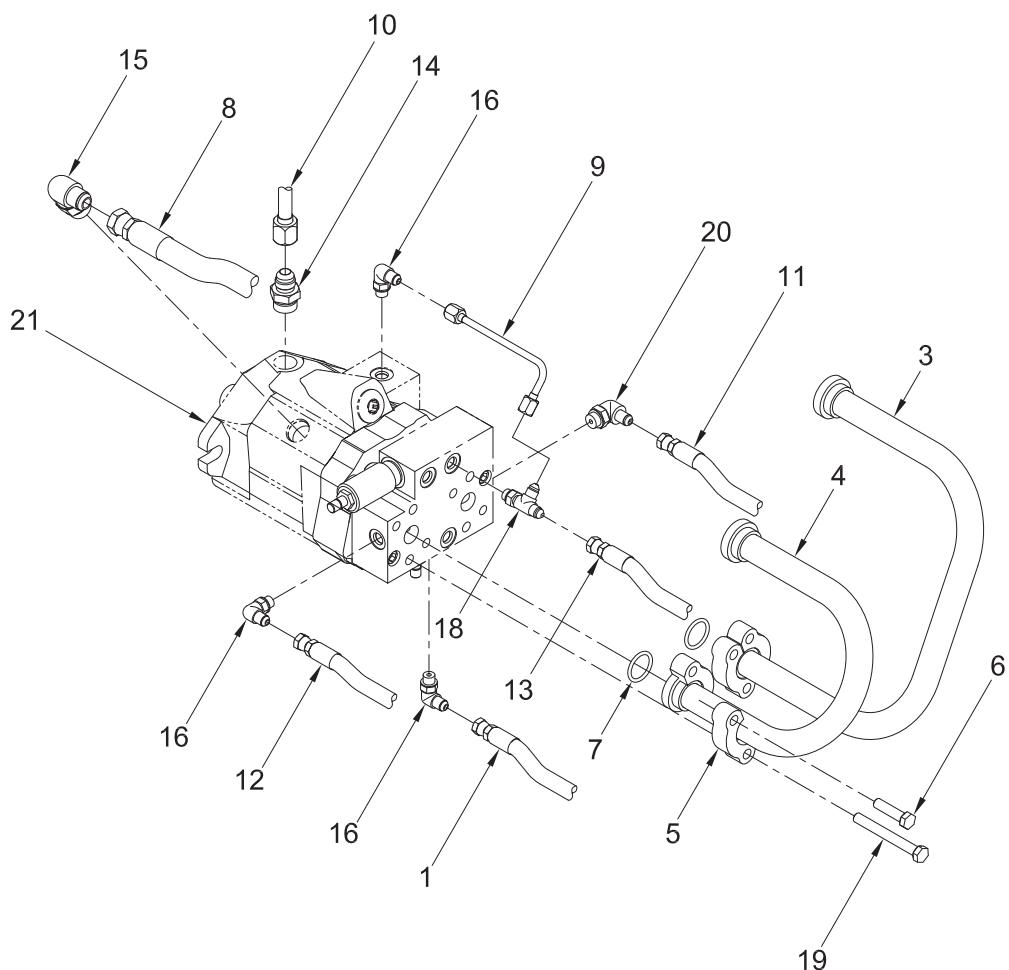
Used on S/N H4AH\_R1015 thru H4AH\_R1037



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2307009W	Assembly, Hose	1	13	2305141W	Assembly, Hose	1
2	2305017W	Assembly, Tube	1	14	16909W	Fitting	1
3	2304057W	Assembly, Tube	1	15	17224W	Fitting	1
4	2304104W	Assembly, Tube	1	16	16556W	Fitting	3
5	222535W	Flange, Half	4	17	17753W	Fitting	1
6	*a 177461W	Capscrew	4	18	16967W	Fitting	1
7	2304110W	O-Ring	2	19	*a 221518W	Capscrew	4
8	2305007W	Assembly, Hose	1	20	201766W	Fitting	1
9	2304999W	Assembly, Tube	1	21	2303788W	Motor, Hydraulic (See 3-26)	1
10	2305014W	Assembly, Tube	1	*a Use 318702W Thread Lock			
11	2305139W	Assembly, Hose	1				
12	2305140W	Assembly, Hose	1				

## Motor and Related Hydraulics

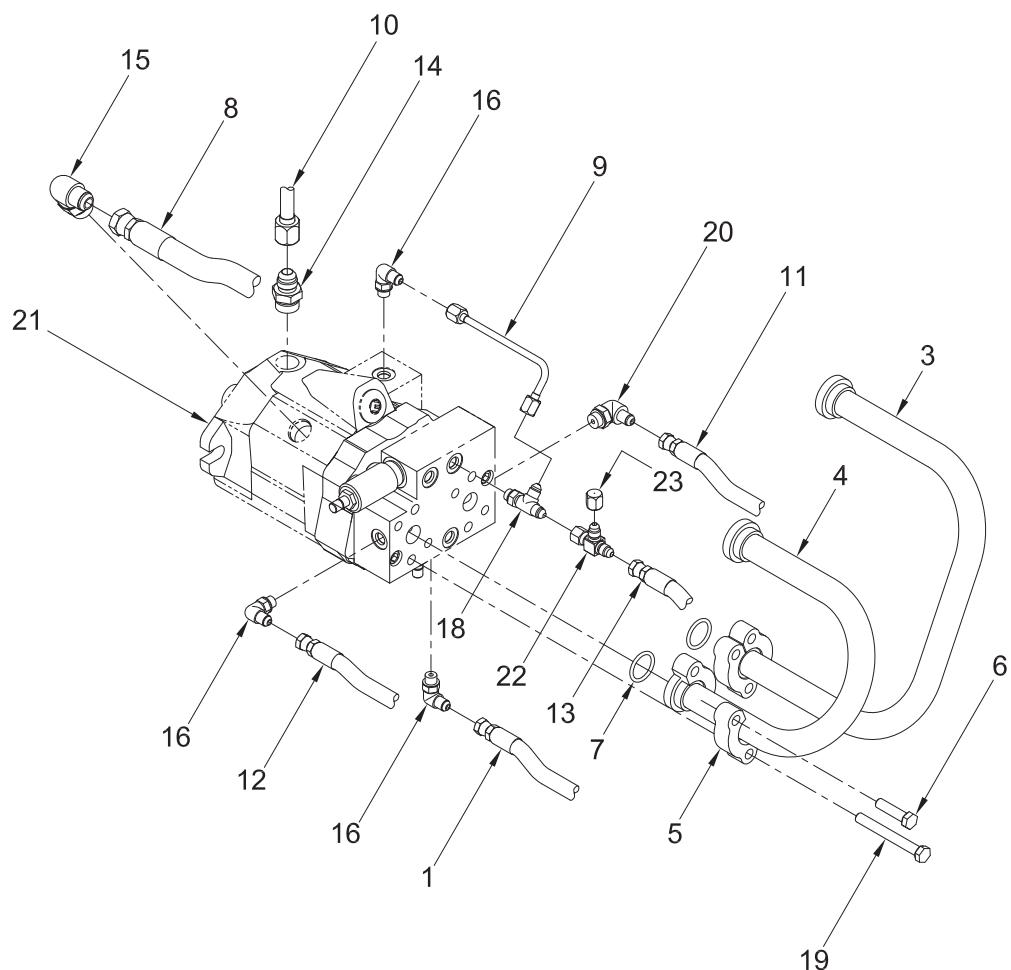
Used on S/N H4AH\_R1038 thru H4AH\_R1052



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2307009W	Assembly, Hose	1	13	2305141W	Assembly, Hose	1
3	2304057W	Assembly, Tube	1	14	16909W	Fitting	1
4	2304104W	Assembly, Tube	1	15	17224W	Fitting	1
5	222535W	Flange, Half	4	16	16556W	Fitting	3
6	*a 177461W	Capscrew	4	18	16967W	Fitting	1
7	2304110W	O-Ring	2	19	*a 221518W	Capscrew	4
8	2305007W	Assembly, Hose	1	20	201766W	Fitting	1
9	2304999W	Assembly, Tube	1	21	2303788W	Motor, Hydraulic (See 3-26)	1
10	2305014W	Assembly, Tube	1	*a Use 318702W Thread Lock			
11	2305139W	Assembly, Hose	1				
12	2305140W	Assembly, Hose	1				

**Motor and Related Hydraulics**

First Used on S/N H4AH\_R1053



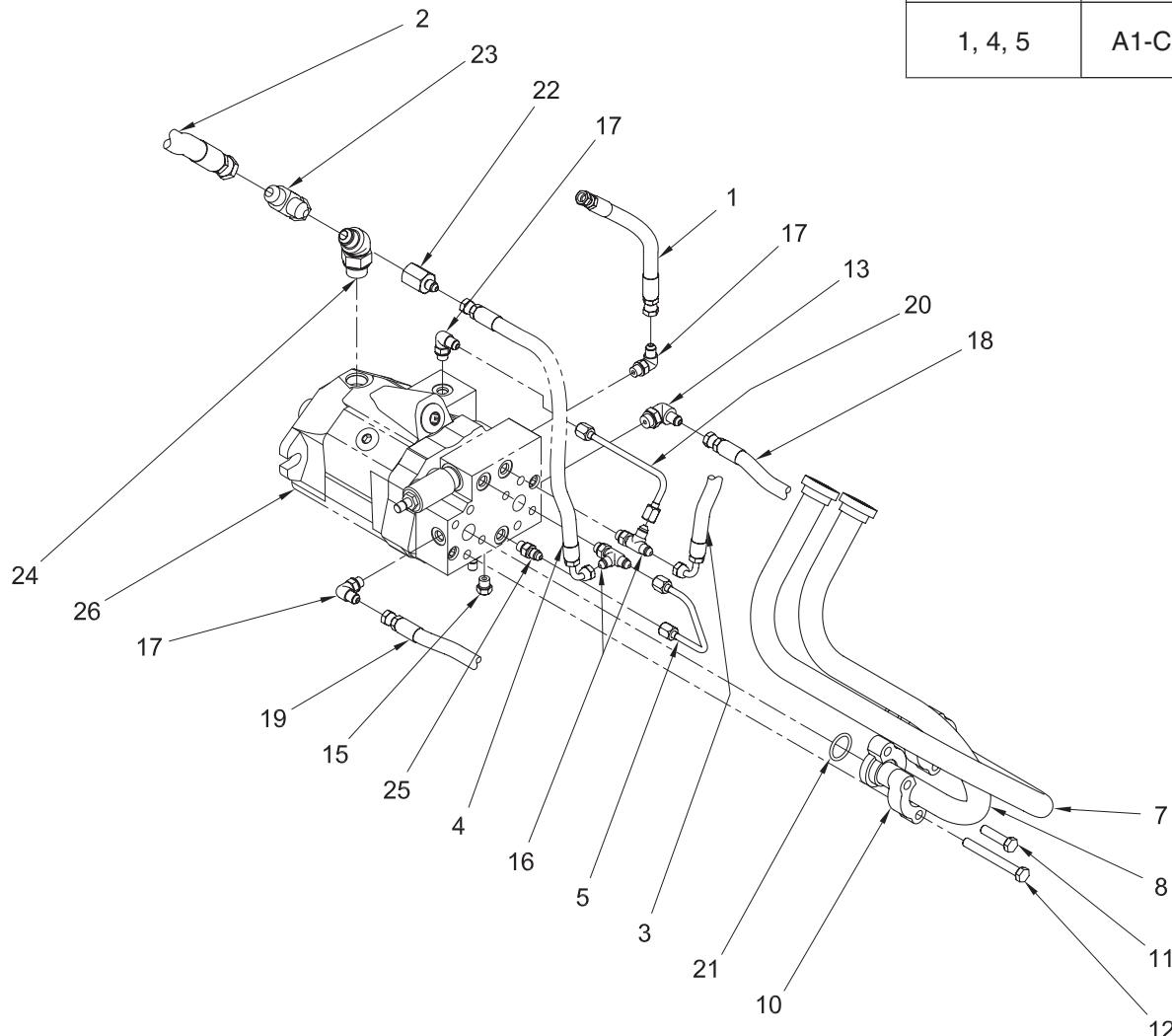
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2307009W	Assembly, Hose	1	14	16909W	Fitting	1
3	2304057W	Assembly, Tube	1	15	17224W	Fitting	1
4	2304104W	Assembly, Tube	1	16	16556W	Fitting	3
5	222535W	Flange, Half	4	18	16967W	Fitting	1
6	*a 177461W	Capscrew	4	19	*a 221518W	Capscrew	4
7	2304110W	O-Ring	2	20	201766W	Fitting	1
8	2305007W	Assembly, Hose	1	21	2303788W	Motor, Hydraulic (See 3-26)	1
9	2304999W	Assembly, Tube	1	22	17059W	Fitting	1
10	2305014W	Assembly, Tube	1	23	2307522W	Cap, Orifice	1
11	2305139W	Assembly, Hose	1	*a Use 318702W Thread Lock			
12	2305140W	Assembly, Hose	1				
13	2305141W	Assembly, Hose	1				

**Motor and Related Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)

Last Used on S/N H4A-1014

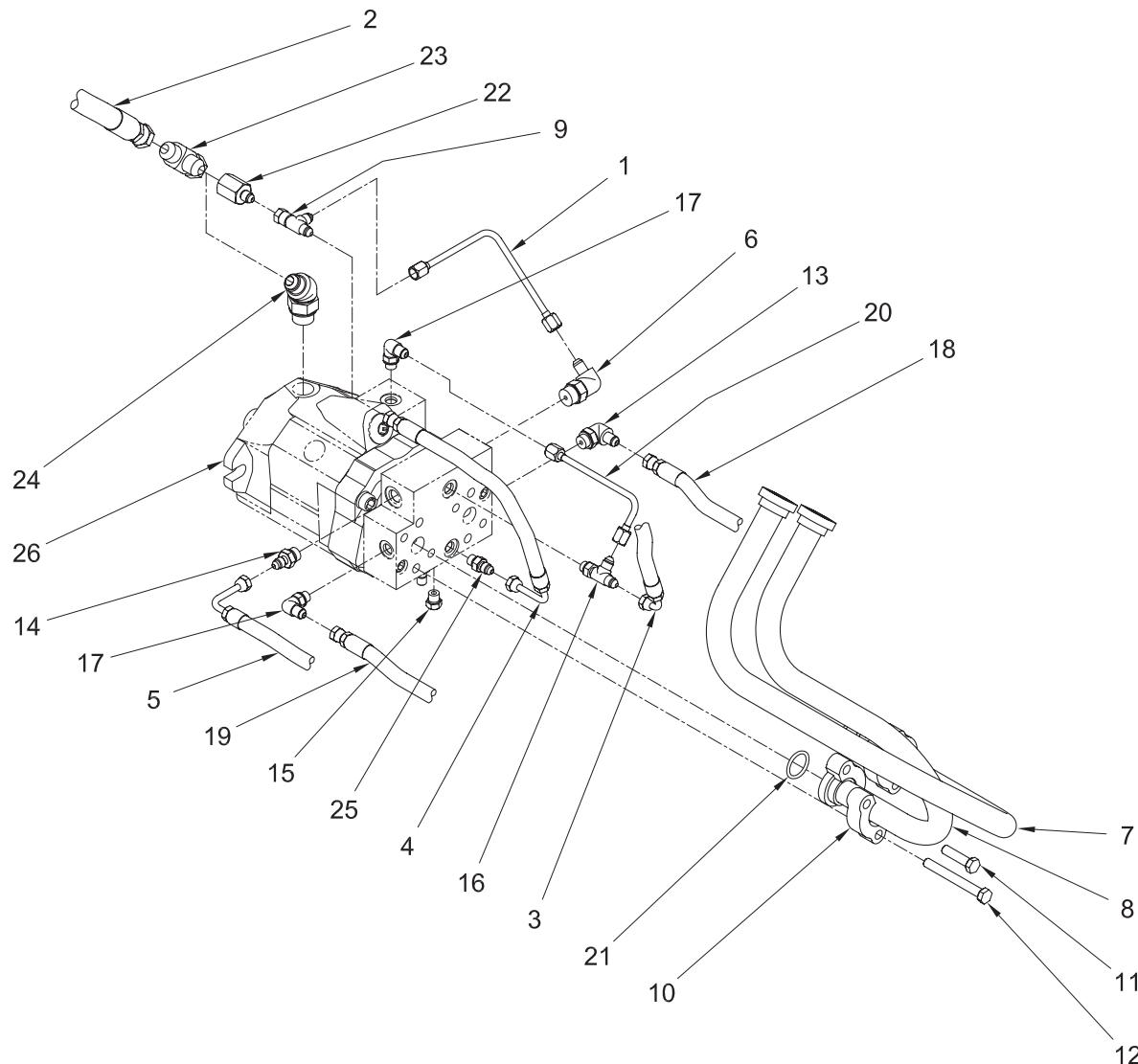
Parts Service Gram	
Item	Gram
1, 4, 5	A1-C-17



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	280256W	Assembly, Hose	1	16	16967W	Fitting	2
2	276087W	Assembly, Hose	1	17	16556W	Fitting	3
3	2305281W	Assembly, Hose	1	18	2305139W	Assembly, Hose	1
4	2305966W	Assembly, Hose	1	19	2305140W	Assembly, Hose	1
5	2305951W	Assembly, Tube	1	20	2304999W	Assembly, Tube	1
7	2304213W	Assembly, Tube	1	21	2304110W	O-Ring	2
8	2304214W	Assembly, Tube	1	22	17777W	Fitting	1
9	17059W	Fitting	1	23	17062W	Fitting	1
10	222535W	Fitting	4	24	201752W	Fitting	1
11	*a 177461W	Capscrew	4	25	16538W	Fitting	1
12	*a 221518W	Capscrew	4	26	2303788W	Motor, Hydraulic (See 3-26)	1
13	201766W	Fitting	1	*a Use 318702W Thread Lock			
14	17753W	Fitting	1				
15	14591W	Fitting	1				

**Motor and Related Hydraulics**

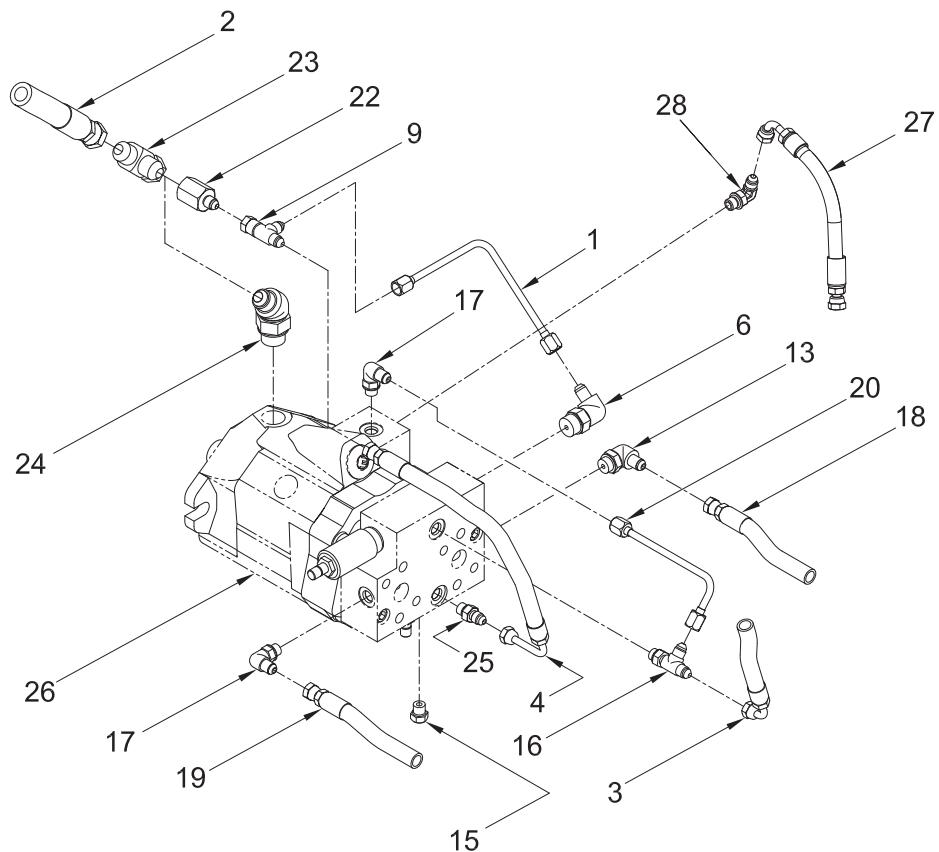
Caterpillar D3/4/5G (H4AH\_Z\_C17)  
Used on S/N H4A-1015 thru H4A-1037



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305280W	Assembly, Tube	1	15	14591W	Fitting	1
2	276087W	Assembly, Hose	1	16	16967W	Fitting	1
3	2305281W	Assembly, Hose	1	17	16556W	Fitting	2
4	2305282W	Assembly, Hose	1	18	2305139W	Assembly, Hose	1
5	2305284W	Assembly, Hose	1	19	2305140W	Assembly, Hose	1
6	162155W	Fitting	1	20	2304999W	Assembly, Tube	1
7	2304213W	Assembly, Tube	1	21	2304110W	O-Ring	2
8	2304214W	Assembly, Tube	1	22	17777W	Fitting	1
9	17059W	Fitting	1	23	17062W	Fitting	1
10	222535W	Fitting	4	24	201752W	Fitting	1
11	*a 177461W	Capscrew	4	25	16538W	Fitting	1
12	*a 221518W	Capscrew	4	26	2303788W	Motor, Hydraulic (See 3-26)	1
13	201766W	Fitting	1	*a Use 318702W Thread Lock			
14	17753W	Fitting	1				

**Motor and Related Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)  
Used on S/N H4A-1038 thru H4A-1053

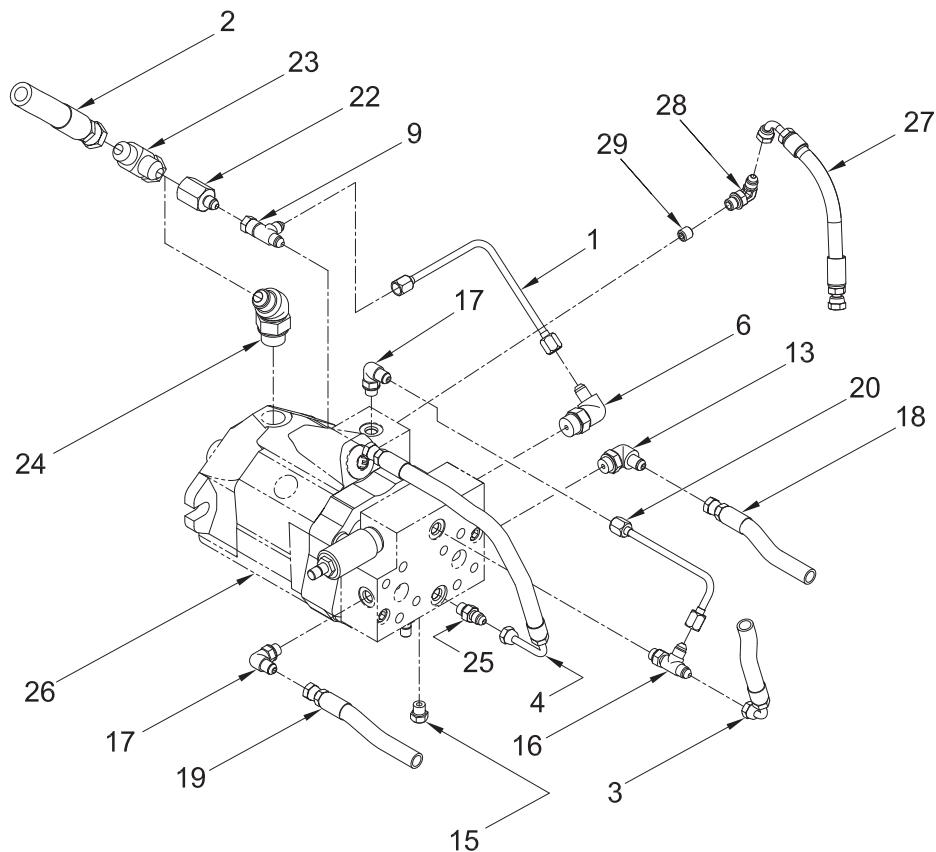


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305280W	Assembly, Tube	1	18	2305139W	Assembly, Hose	1
2	276087W	Assembly, Hose	1	19	2305140W	Assembly, Hose	1
3	2305281W	Assembly, Hose	1	20	2304999W	Assembly, Tube	1
4	2305282W	Assembly, Hose	1	22	17777W	Fitting	1
6	162155W	Fitting	1	23	17062W	Fitting	1
9	17059W	Fitting	4	24	201752W	Fitting	1
13	201766W	Fitting	1	25	16538W	Fitting	1
15	14591W	Fitting	1	26	2303788W	Motor, Hydraulic (See 3-26)	1
16	16967W	Fitting	1	27	2305966W	Assembly, Hose	1
17	16556W	Fitting	2	28	2307520W	Fitting	1

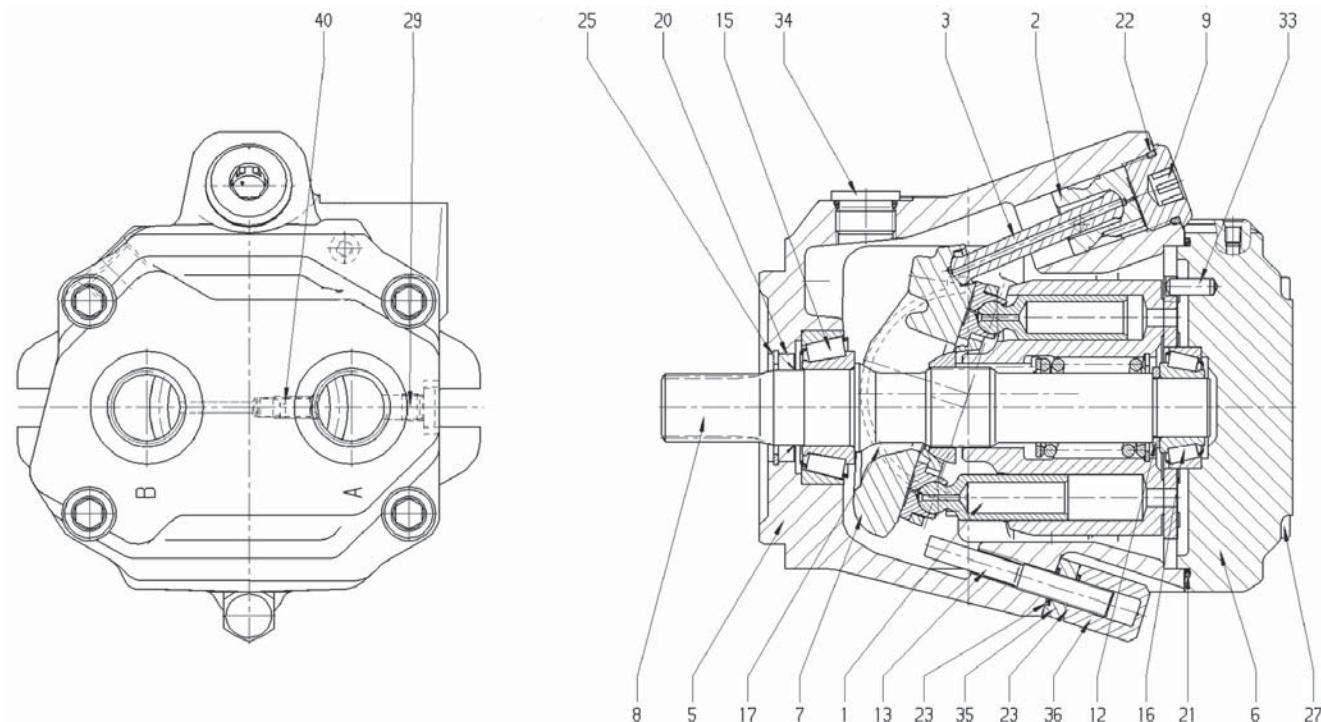
**Motor and Related Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)

First Used on S/N H4A-1054



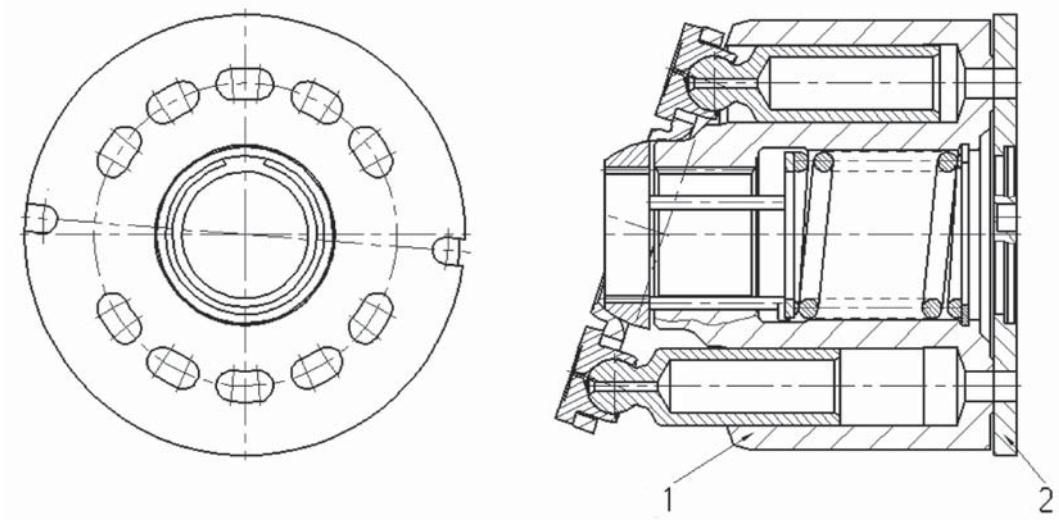
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305280W	Assembly, Tube	1	19	2305140W	Assembly, Hose	1
2	276087W	Assembly, Hose	1	20	2304999W	Assembly, Tube	1
3	2305281W	Assembly, Hose	1	22	17777W	Fitting	1
4	2305282W	Assembly, Hose	1	23	17062W	Fitting	1
6	162155W	Fitting	1	24	201752W	Fitting	1
9	17059W	Fitting	4	25	16538W	Fitting	1
13	201766W	Fitting	1	26	2303788W	Motor, Hydraulic (See 3-26)	1
15	14591W	Fitting	1	27	2305966W	Assembly, Hose	1
16	16967W	Fitting	1	28	2307520W	Fitting	1
17	16556W	Fitting	2	29	2310181	Plug, Orifice	1
18	2305139W	Assembly, Hose	1				

**Hydraulic 45CC 2 Speed Motor**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2303788W</b>	<b>Motor, Hydraulic 45CC 2 Speed</b>					
*a	<b>2314620</b>	<b>Motor, Hydraulic 45CC 2 Speed</b>		17	2305759W	. Shell, Cradle	2
*b	<b>2315765</b>	<b>Motor, Hydraulic 45CC 2 Speed</b>		20	2305760W	. Seal, Shaft	1
1	2305737W	. Group, Rotary (See 3-27)	1	21	2305761W	. O-Ring	1
2	2305748W	. Piston, Control	1	22	2305762W	. O-Ring	1
3	2305749W	. Rod, Piston	1	23	2305763W	. O-Ring	2
5	2305750W	. Housing, Motor	1	25	2305764W	. Ring, Retaining	1
6	2305751W	. Plate, Part	1	27	2305765W	. Screw, Socket	4
7	2305752W	. Plate, Swash	1	29	2305770W	. Plug	1
8	2305753W	. Shaft, Drive	1	33	2305766W	. Pin, Dowel	1
9	2305754W	. Plug, Screw	1	34	2305767W	. Plug	1
12	2305755W	. Shim, Adjustment	1	35	2305768W	. Nut	1
13	2305756W	. Screw, Top	1	36	2305769W	. Nut, Cap	1
15	2305757W	. Bearing, Tapered-Roller	1	40	2305771W	. Orifice	1
16	2305758W	. Bearing, Tapered-Roller	1	*a Used on Tractor Code K14 only			
				*b Used on Tractor Code U13 only			

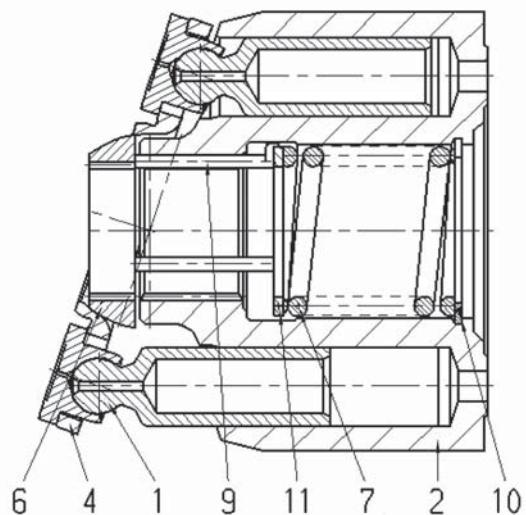
## Hydraulic 45CC 2 Speed Motor

Rotary Group



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305737W 2305738W	<b>Group, Rotary</b> . Group, Rotary (See 3-28)	1	2	2305747W	. Control Plate	1

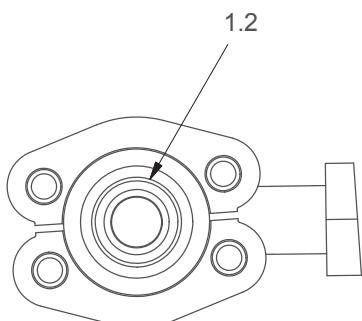
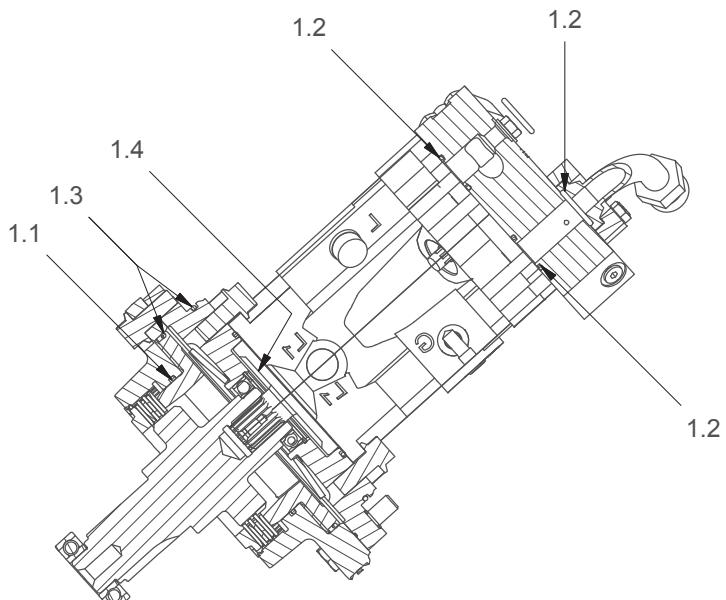
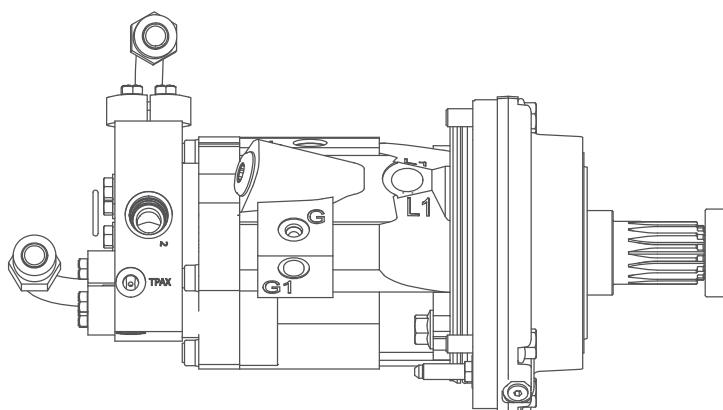
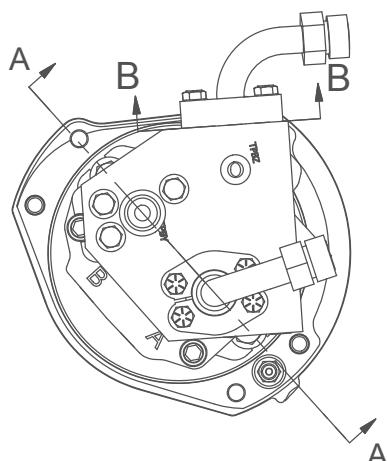
**Hydraulic 45CC 2 Speed Motor**  
Rotary Group



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

## Motor Low Temperature Seal Kit

Standard Winch

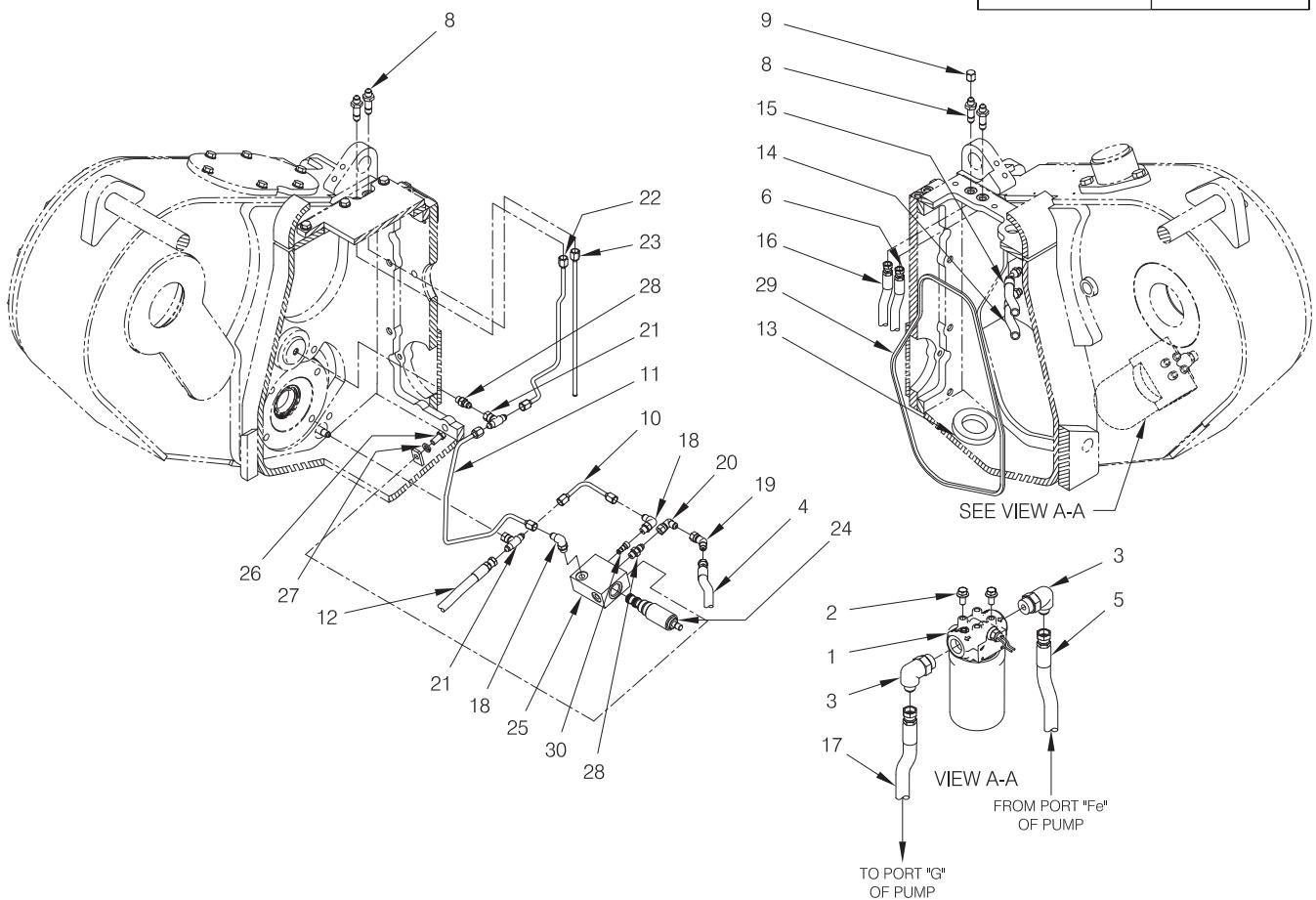
SECTION B-BSECTION A-AH4AT MOTOR ASSEMBLY  
RESCUE WINCH

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

## Winch Internal Hydraulics

Last Used on S/N H4AH-B1014

Parts Service Gram	
Item	Gram
6, 11, 22	A1-C-17

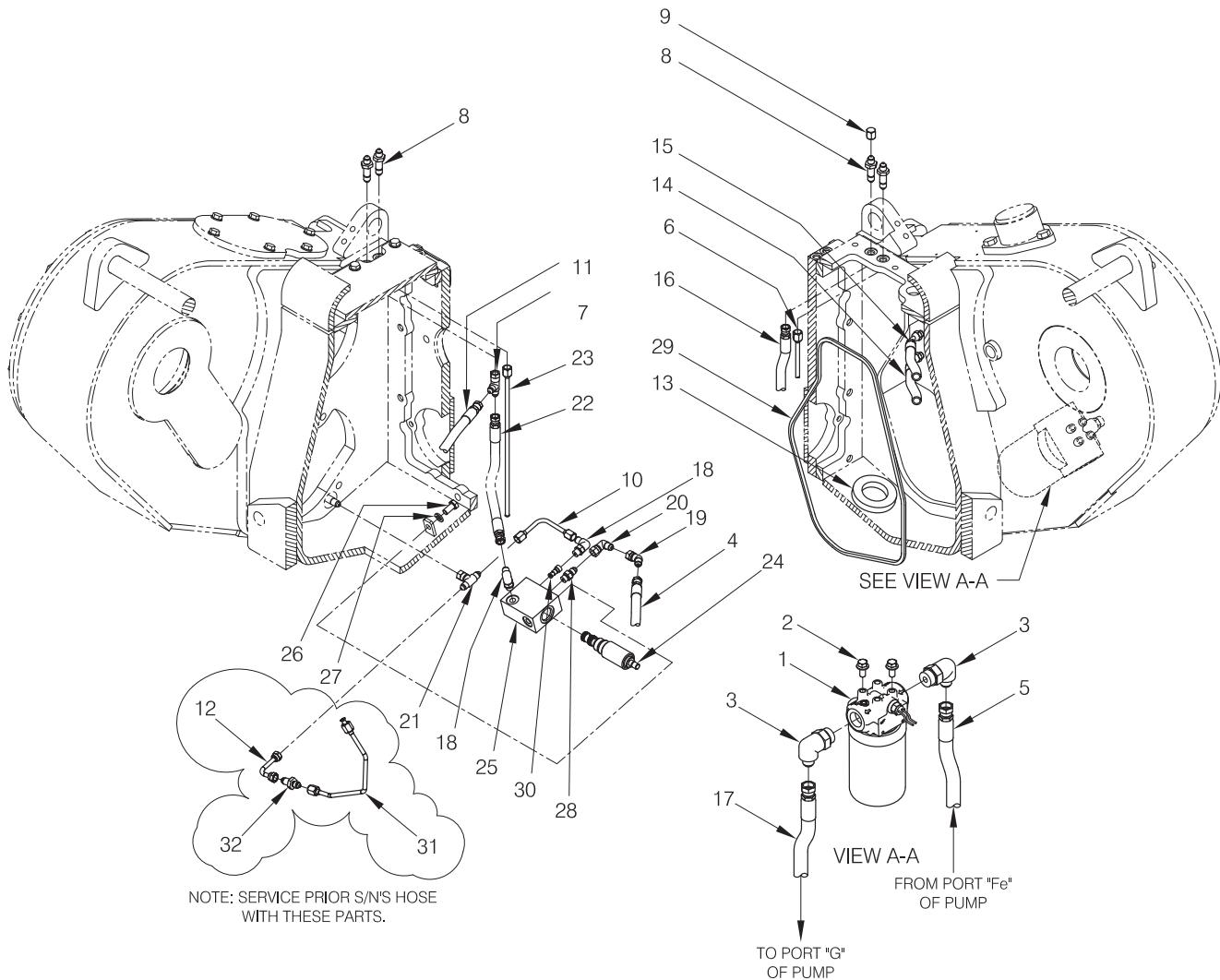


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2304111W	Assembly, Filter	1	16	*a 2305141W	Assembly, Hose	1
	2304112W	. Element, Filter	1	17	*a R400128	Assembly, Hose	1
	2304862W	. Switch, Pressure	1	18	16556W	Fitting	4
	2305132W	. Head, Filter	1	19	16997W	Fitting	1
2	134803W	Capscrew	2	20	16987W	Fitting	1
3	138811W	Fitting	2	21	17047W	Fitting	2
4	*a 2307009W	Assembly, Hose	1	22	2305971W	Assembly, Tube	1
5	*a 2305003W	Assembly, Hose	1	23	2304151W	Assembly, Tube	1
6	*a 2305972W	Assembly, Hose	1	24	2304194W	Valve, Sequence	1
8	-----	Fitting (See Frame & Covers)	4	25	2304196W	Manifold, Cooling	1
9	-----	Fitting (See Frame & Covers)	1	26	162572W	Capscrew	1
10	2305008W	Assembly, Tube	1	27	15156W	Washer	1
11	2305004W	Assembly, Tube	1	28	16538W	Fitting	2
12	*a 2305013W	Assembly, Hose	1	29	24257	Trim, Edge	4'
13	R525293	Magnet	1	30	2304195W	Valve, Shuttle	1
14	*a 2305139W	Assembly, Hose	1		2305073W	. Kit, Seal	1
15	*a 2305140W	Assembly, Hose	1				

\*a Included in 2315305 Hose Kit

## Winch Internal Hydraulics

First Used on S/N H4AH-R1048

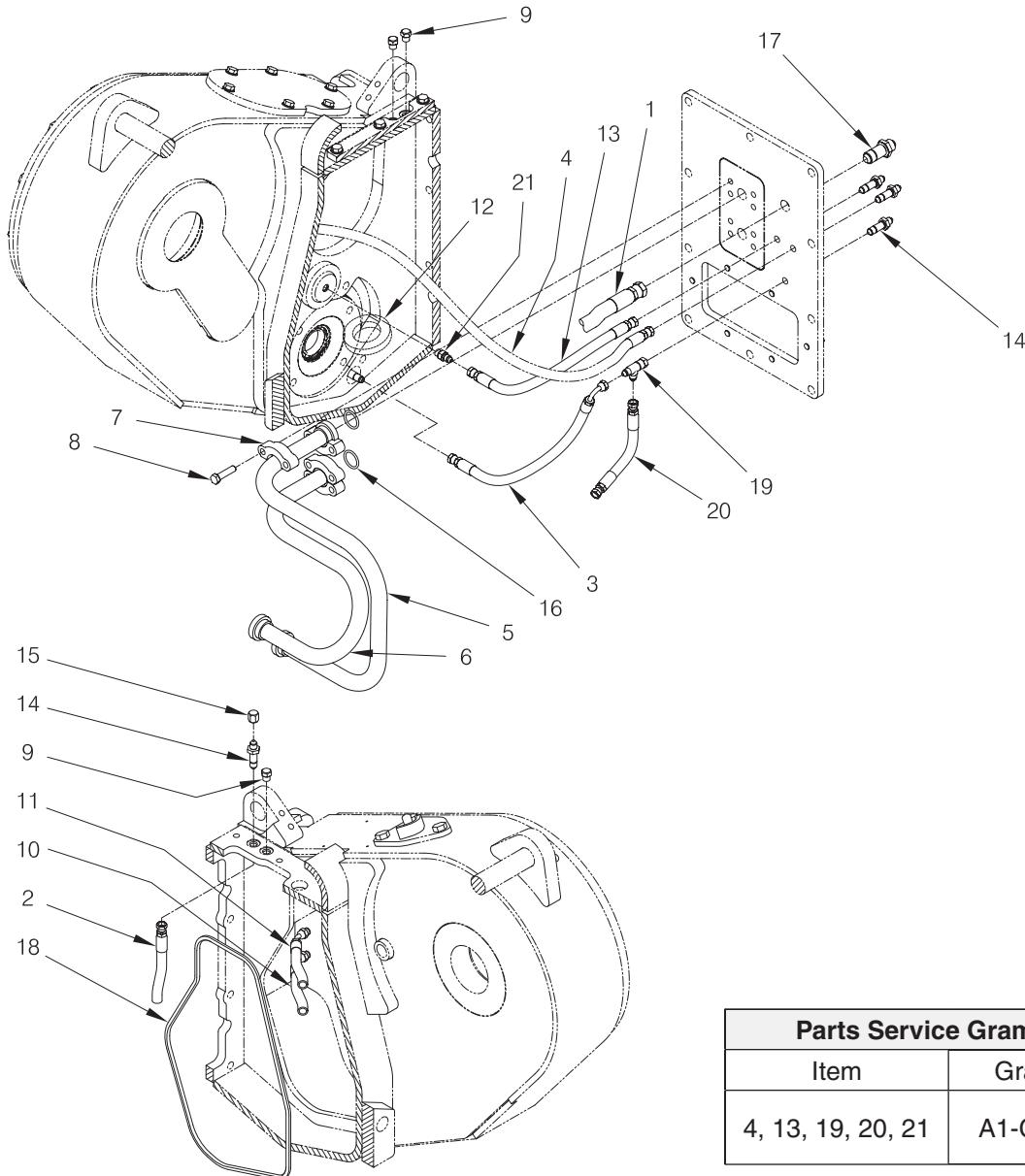


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2304111W	Assembly, Filter	1	17	*a R400128	Assembly, Hose	1
	2304112W	. Element, Filter	1	18	16556W	Fitting	4
	2304862W	. Switch, Pressure	1	19	16997W	Fitting	1
	2305132W	. Head, Filter	1	20	16987W	Fitting	1
2	1300780W	Capscrew	2	21	17047W	Fitting	2
3	138811W	Fitting	2	22	*a 2305580W	Assembly, Hose	1
4	*a 2307009W	Assembly, Hose	1	23	2304151W	Assembly, Tube	1
5	*a 2305003W	Assembly, Hose	1	24	2304194W	Valve, Sequence	1
6	2305017W	Assembly, Tube	1	25	2304196W	Manifold, Cooling	1
7	17059W	Fitting	1	26	162572W	Capscrew	1
8	-----	Fitting (See Frame & Covers)	4	27	15156W	Washer	1
9	-----	Fitting (See Frame & Covers)	1	28	16538W	Fitting	1
10	2305008W	Assembly, Tube	1	29	24257	Trim, Edge	4'
11	*a 2305012W	Assembly, Hose	4	30	2304195W	Valve, Shuttle	1
12	*a 2305284W	Assembly, Hose	1		2305073W	. Kit, Seal	1
13	R525293	Magnet	1	31	2310617	Assembly, Tube	1
14	*a 2305139W	Assembly, Hose	1	32	209436	Fitting	1
15	*a 2305140W	Assembly, Hose	1		*a Included in 2315306 Hose Kit		
16	*a 2305281W	Assembly, Hose	1				

**Winch Internal Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)

Last Used on S/N H4A-1014

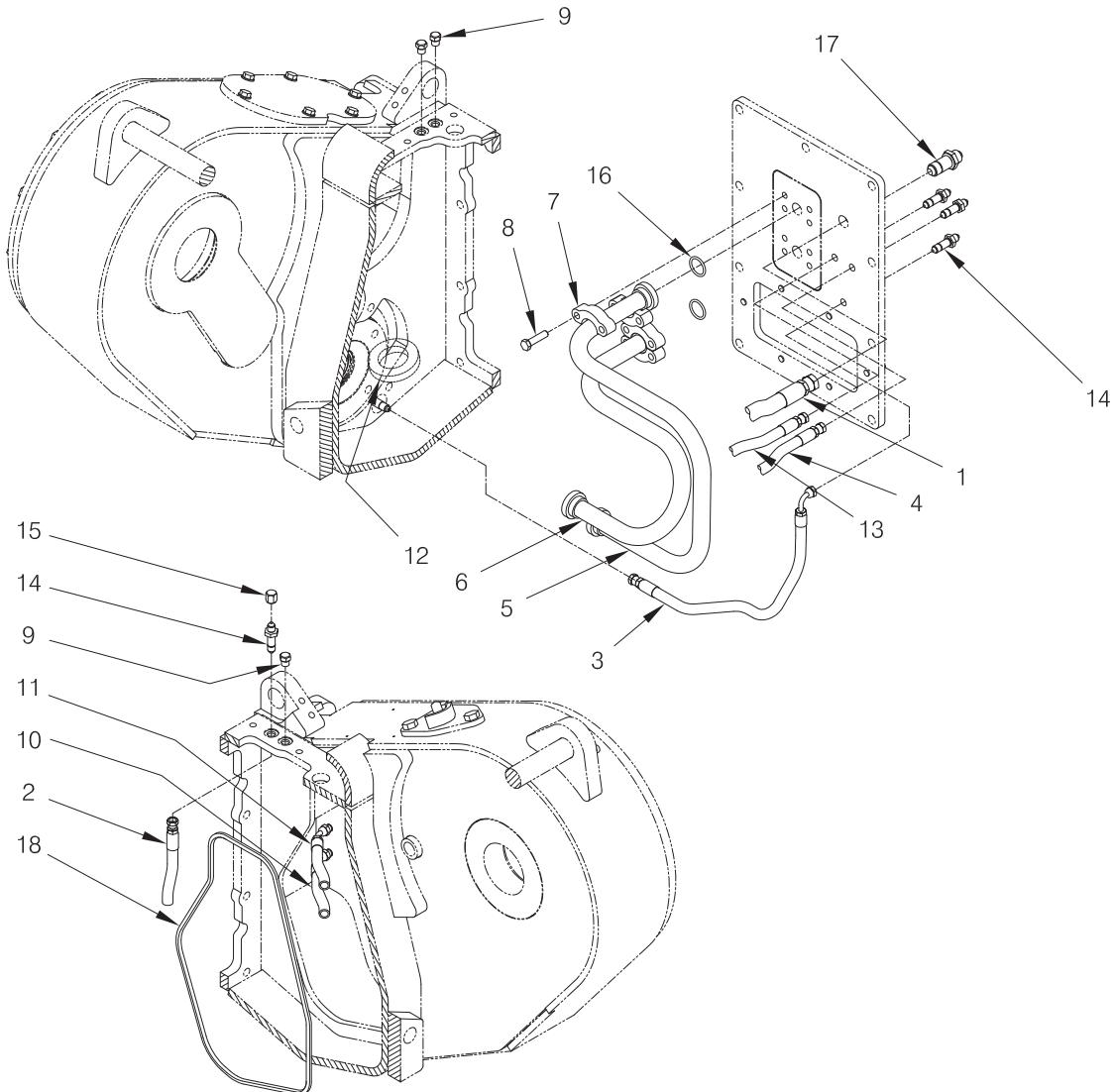


Parts Service Gram	
Item	Gram
4, 13, 19, 20, 21	A1-C-17

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 276087W	Assembly, Hose	1	13	*a 2305285W	Assembly, Hose	1
2	*a 2305281W	Assembly, Hose	1	14	16445W	Fitting	6
3	*a 2305283W	Assembly, Hose	1	15	16923W	Fitting	1
4	*a 2305141W	Assembly, Hose	1	16	2304110W	O-Ring	2
5	2304213W	Assembly, Tube	1	17	16448W	Fitting	1
6	2304214W	Assembly, Tube	1	18	24257	Trim, Edge	4'
7	222535W	Fitting	4	19	17059W	Fitting	1
8	177461W	Capscrew	8	20	*a 280256W	Assembly, Hose	1
9	14591W	Fitting	3	21	16538W	Fitting	1
10	*a 2305139W	Assembly, Hose	1	*a Included in 2315307 Hose Kit			
11	*a 2305140W	Assembly, Hose	1				
12	R525293	Magnet	1				

**Winch Internal Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)  
Used on S/N H4A-1015 thru H4A-1031



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 276087W	Assembly, Hose	1	11	*a 2305140W	Assembly, Hose	1
2	*a 2305281W	Assembly, Hose	1	12	R525293	Magnet	1
3	*a 2305283W	Assembly, Hose	1	13	*a 2305580W	Assembly, Hose	1
4	*a 2305284W	Assembly, Hose	1	14	16445W	Fitting	6
5	2304213W	Assembly, Tube	1	15	16923W	Fitting	1
6	2304214W	Assembly, Tube	1	16	2304110W	O-Ring	2
7	222535W	Fitting	4	17	16448W	Fitting	1
8	177461W	Capscrew	8	18	24257	Trim, Edge	4'
9	14591W	Fitting	3	*a Included in 2315308 Hose Kit			
10	*a 2305139W	Assembly, Hose	1				

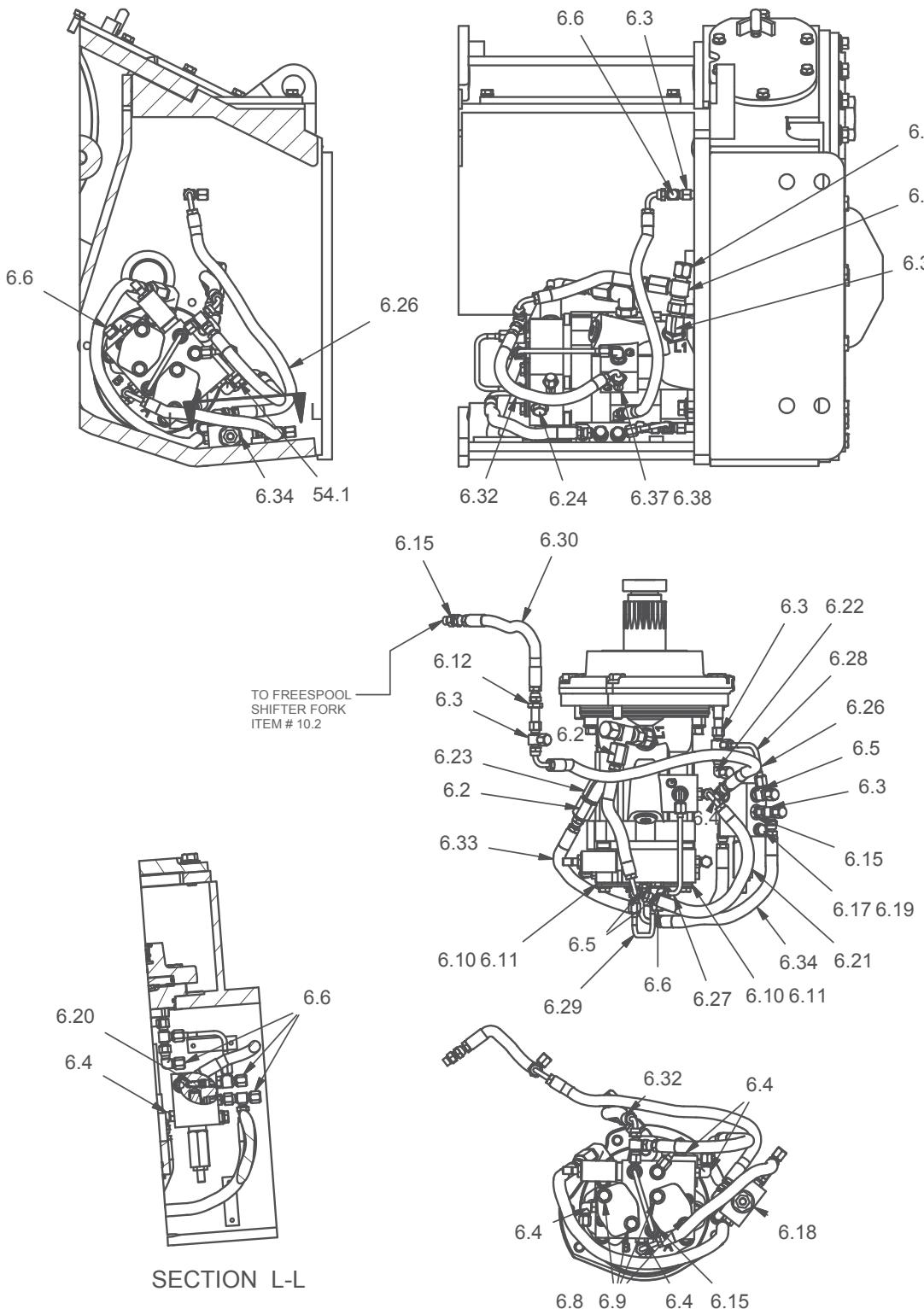
## Winch Internal Hydraulics

Caterpillar D3/4/5G (H4AH\_Y\_C17), Caterpillar D4/5G (H4AH\_Y\_C18),

Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D5K (H4AH\_Y\_C20)

Last Used on S/N H4AH-1161

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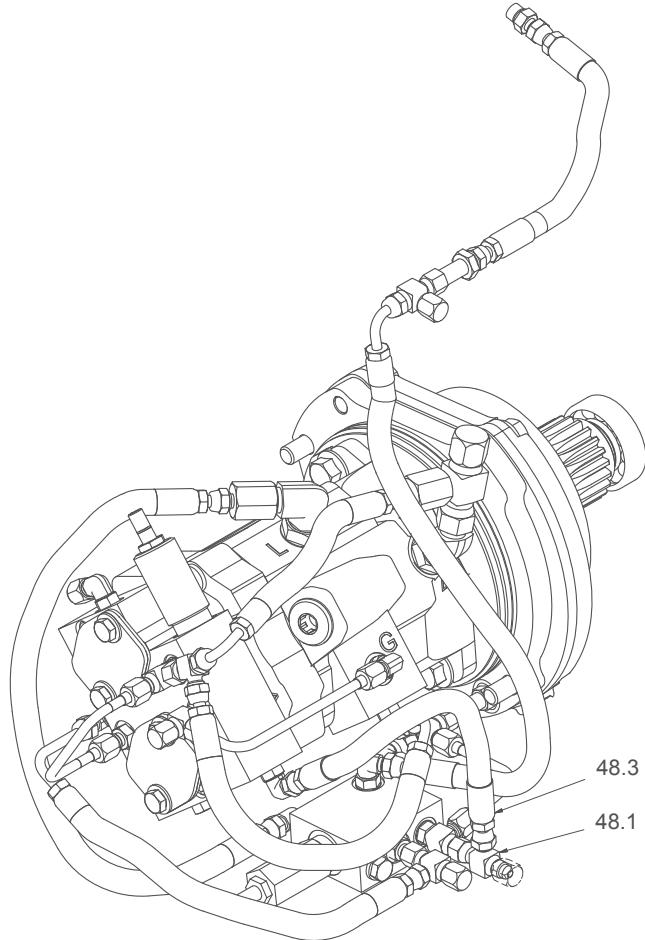


HYDRAULIC ARRANGEMENT - H4AH\*Y  
HI-P NON-SCH

## Winch Internal Hydraulics

Caterpillar D3/4/5G (H4AH\_Y\_C17), Caterpillar D4/5G (H4AH\_Y\_C18),  
 Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D5K (H4AH\_Y\_C20)  
 Last Used on S/N H4AH-1161

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HYDRAULIC ARRANGEMENT - H4AH\*Y  
 HI-P NON-SCH, CAT D3/4/5K (C19-20)

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
6.1	17062W	Fitting	1	6.22	19687W	Fitting	1
6.2	17777W	Fitting	2	6.23	17224W	Fitting	1
6.3	17059W	Fitting	4	6.24	14594W	Fitting, O-Ring	1
6.4	16556W	Fitting, O-Ring	6	6.26	*a 2305283W	Assembly, Hose	1
6.5	16967W	Fitting, O-Ring	3	6.27	2304999W	Assembly, Tube	1
6.6	16923W	Fitting	6	6.28	2305008W	Assembly, Tube	1
6.7	16925W	Fitting	1	6.29	2305951W	Assembly, Tube	1
6.8	18535W	Capscrew	4	6.30	*a 2305962W	Assembly, Hose	1
6.9	15134W	Washer	4	6.31	201752W	Fitting	1
6.10	2304257W	Gasket	2	6.32	*a 2305966W	Assembly, Hose	2
6.11	2304258W	Plate	2	6.33	*a 2305012W	Assembly, Hose	1
6.12	16445W	Fitting	1	6.34	*a 2307009W	Assembly, Hose	1
6.15	16538W	Fitting, O-Ring	3	6.37	2307520W	Fitting with Orifice	1
6.17	15156W	Washer	1	6.38	2310181	Plug with Orifice	1
6.18	2304196W	Manifold, Cooling	1	48.1	213883	Fitting	1
6.19	162572W	Capscrew	1	48.3	*a 2311049	Assembly, Hose - 2 Speed	1
6.20	2304195W	Valve, Shuttle	1	54.1	16923W	Fitting	1
6.21	2304194W	Valve, Sequence	1	*a Included in 2315309 Hose Kit			

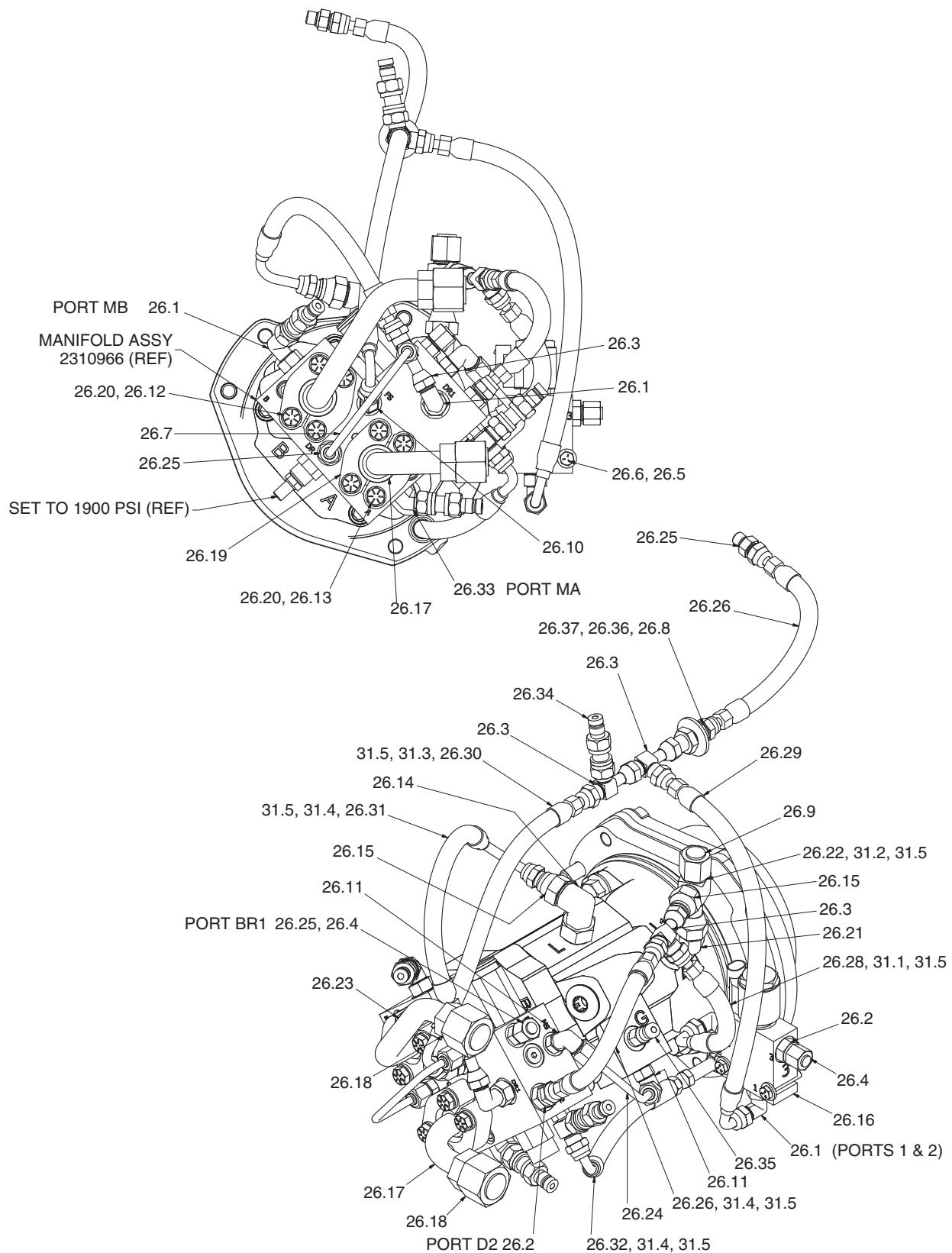
## Winch Internal Hydraulics

Caterpillar D3/4/5G (H4AH\_Y\_C17), Caterpillar D4/5G (H4AH\_Y\_C18),  
 Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D5K/D5K2 (H4AH\_Y\_C20)

First Used on S/N H4AH-1162

Caterpillar D5K2 With Fireflow (H4AH\_Y\_C201)

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**Winch Internal Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17), Caterpillar D4/5G (H4AH\_Y\_C18),  
 Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D5K/D5K2 (H4AH\_Y\_C20)

First Used on S/N H4AH-1162

Caterpillar D5K2 With Fireflow (H4AH\_Y\_C201)

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
26.1	R833253	Fitting	4	26.22	R834052	Fitting	1	
26.2	R833103	Fitting	2	26.23	2311899	Assembly, Tube with O-Rings	1	
26.3	236855	Fitting	4	26.24	2311737	Assembly, Tube	1	
26.4	232984	Fitting	2	26.25	231439	Fitting	3	
26.5	221763W	Washer	2	26.26	*c	2311356	Assembly, Hose	2
26.6	18468W	Capscrew	2	26.28	*c	2311234	Assembly, Hose	1
26.7	2310854	Assembly, Tube	1	26.29	*c	249537	Assembly, Hose	1
26.8	*a	R834100	Fitting	26.30	*c	2311744	Assembly, Hose	1
26.9	R834253	Fitting	1	26.31	*c	2311235	Assembly, Hose	1
26.10	2311739	Assembly, Fitting with Orifice	1	26.32	*c	2311748	Assembly, Hose	1
26.11	R833251	Fitting	2	26.33	R833201	Fitting	1	
26.12	R13811046	Capscrew	4	26.34	2307625W	Fitting	4	
26.13	Y17C-0624	Capscrew	4	26.35	R14040	Coupler, Male	1	
26.14	237983	Fitting	1	26.36	*a	15178W	Washer	1
26.15	R833700	Fitting	2	26.37	*a	211564	O-Ring	1
26.16	2310011	Assembly, Valve Manifold (3-115)	1	31.1	*b	2314880	Firesleeve	1
26.17	2311360	Assembly, Fitting with O-Rings	1	31.2	*b	2314881	Firesleeve	1
26.18	231821	Fitting	2	31.3	*b	2314882	Firesleeve	1
26.19	222535W	Fitting	4	31.4	*b	2314883	Firesleeve	3
26.20	15156W	Washer	8	31.5	*b	589423	Clamp, Firesleeve	12
26.21	R833208	Fitting	1					

\*a Place washer (26.36) and O-ring (26.37) on fitting (26.8). Apply anaerobic thread sealant (Allied P#: 273338W) to threads. Install from geartrain side.

\*b Used on H4AH\_Y\_C201. Optional on H4AH\_Y\_C17.

\*c Included in 2315310 Hose Kit

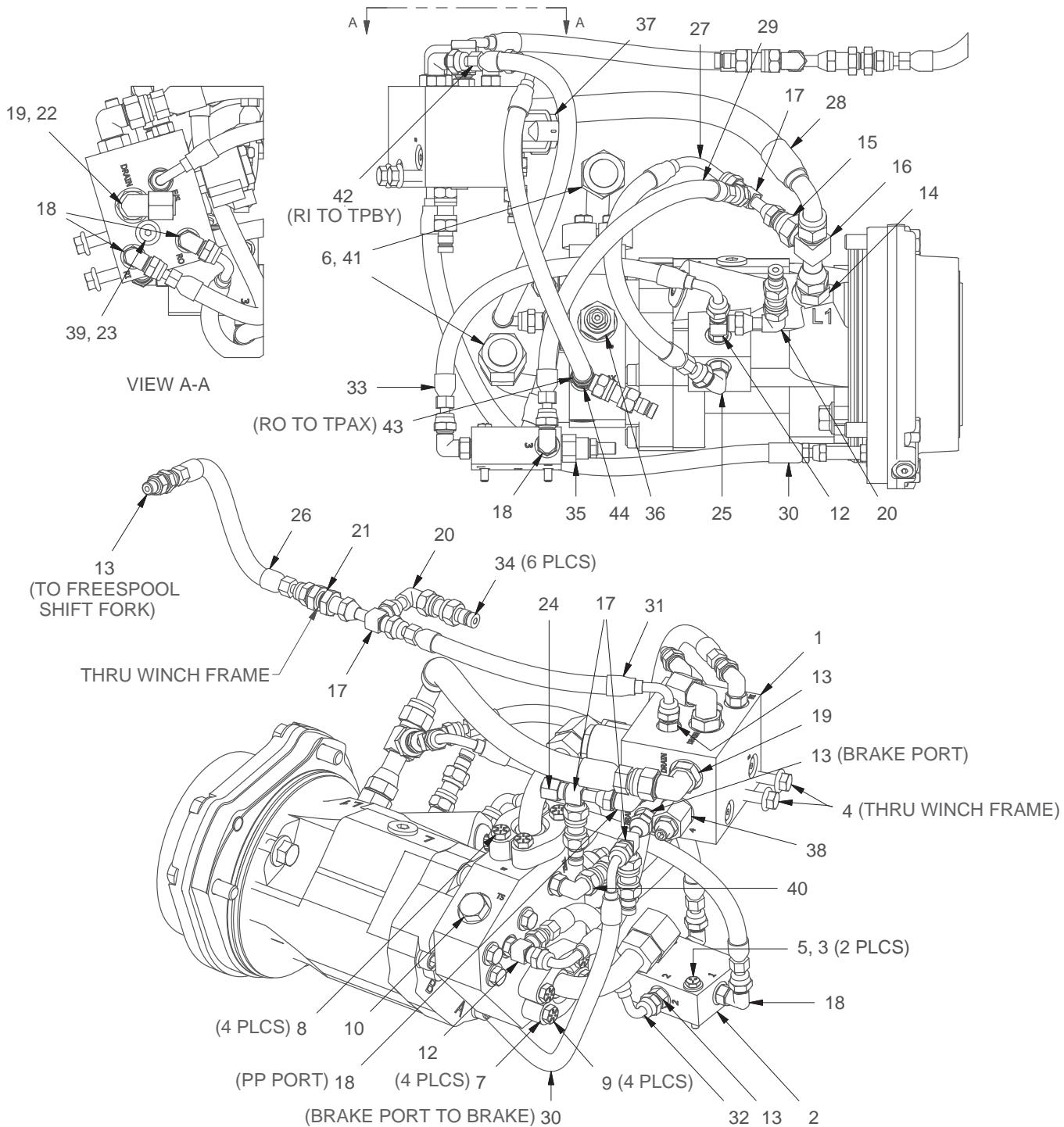
**Winch Internal Hydraulics**

Caterpillar D3/4K (H4AT\_Y\_C19),

Caterpillar D5K (H4AT\_Y\_C20)

Last Used on S/N H4A-1243

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**Winch Internal Hydraulics**

Caterpillar D3/4K (H4AT\_Y\_C19),

Caterpillar D5K (H4AT\_Y\_C20)

Last Used on S/N H4A-1243

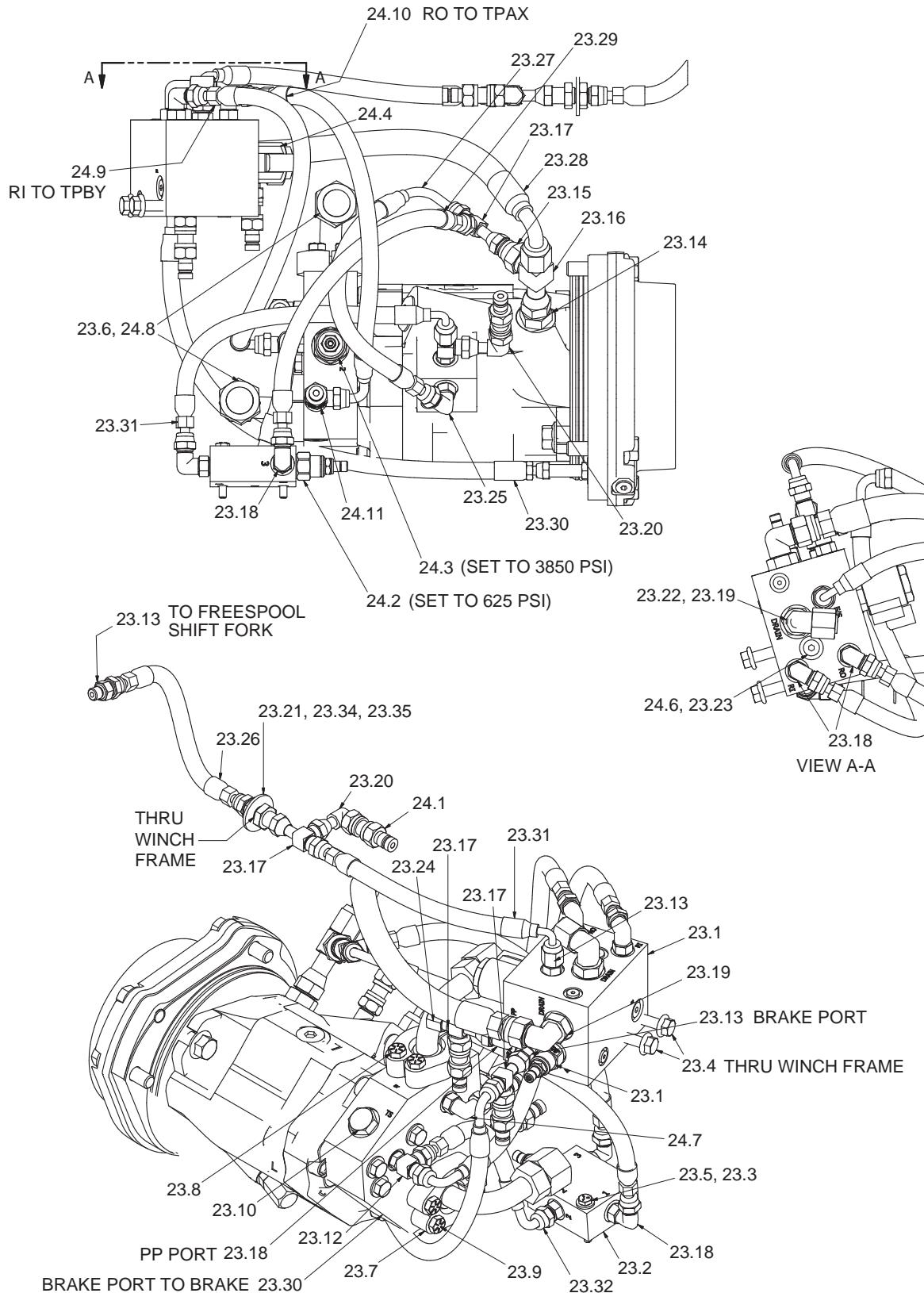
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
1	2307551W	Manifold, Control	1	28	*b	242111	Assembly, Hose	1
2	248918	Body, Valve	1	29	*b	2311353	Assembly, Hose	1
3	221763W	Washer	2	30	*b	2311233	Assembly, Hose	1
4	398599W	Capscrew, Flanged	2	31	*b	2311744	Assembly, Hose	1
5	Y01C-0428	Capscrew	2	32	*b	2311234	Assembly, Hose	1
6	2311360	Assembly, Fitting with O-Rings	2	33	*b	2311230	Assembly, Hose	1
7	222535W	Fitting	4	34	2307625W	Coupler, Quick	6	
8	Y17C-0624	Capscrew	4	35	2311220	Cartridge, Pressure Reducing	1	
9	221518W	Capscrew	4	36	2311221	Valve, Counterbalance Cartridge	1	
10	210709	Fitting	1		2501643	.Kit, Seal	1	
12	R833400	Fitting	2	37	2311212	Valve, Solenoid Spool	1	
13	231439	Fitting	4		2310009	.Coil	1	
14	R833114	Fitting	1		252134	.Valve	1	
15	R833700	Fitting	1		R15668	.Kit, Seal	1	
16	R834052	Fitting	1	38	2311608	Assembly, Directional Valve	1	
17	236855	Fitting	4		2311607	.Valve, Directional Valve	1	
18	R833251	Fitting	5		15027W	.Nut	1	
19	231452	Fitting	2		2311604	.Setscrew, Drain	1	
20	R833800	Fitting	2	39	2310181	Plug, Orifice	1	
21	*a R834100	Fitting	1	40	R833251	Fitting	1	
22	R834253	Fitting	1	41	231821	Fitting	2	
23	222442W	Fitting, O-Ring	1	42	*b 2311228	Assembly, Hose	1	
24	232984	Fitting	1	43	*b 2311229	Assembly, Hose	1	
25	2311500	Assembly, Fitting with Orifice	1	44	R833400	Fitting	1	
26	*b 2311356	Assembly, Hose	1		*a	Apply 273338W Sealant to Threads		
27	*b 2311235	Assembly, Hose	1		*b	Included in 2315311 Hose Kit		

**Winch Internal Hydraulics**

Caterpillar D3/4K (H4AT\_Y\_C19), Caterpillar D5K (H4AT\_Y\_C20)  
 Dresssta TD7/8S (H4AT\_Y\_H15), Dresssta TD9S (H4AT\_Y\_H16)  
 Shantui SD10 (H4AT\_Y\_U13)  
 First Used on S/N H4A-1244

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**Winch Internal Hydraulics**

Caterpillar D3/4K (H4AT\_Y\_C19), Caterpillar D5K (H4AT\_Y\_C20)  
 Dresssta TD7/8S (H4AT\_Y\_H15), Dresssta TD9S (H4AT\_Y\_H16)  
 Shantui SD10 (H4AT\_Y\_U13)  
 First Used on S/N H4A-1244

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty		
23.1	2311591	Manifold, Control (See 3-117)	1	23.26	*b	2311356	Assembly, Hose		
23.2	248918	Body, Valve	1	23.27	*b	2311235	Assembly, Hose		
23.3	221763W	Washer	2	23.28	*b	242111	Assembly, Hose		
23.4	398599W	Flangescrew	2	23.29	*b	2311353	Assembly, Hose		
23.5	Y01C-0428	Capscrew	2	23.30	*b	2311233	Assembly, Hose		
23.6	2311360	Fitting with O-Rings	2	23.31	*b	2311744	Assembly, Hose		
23.7	222535W	Fitting	4	23.32	*b	2311234	Assembly, Hose		
23.8	Y17C-0624	Capscrew	4	23.34	*a	15178W	Washer		
23.9	221518W	Capscrew	4	23.35	*a	211564	O-Ring		
23.10	210709	Fitting	1	24.1	2307625W	Coupler, Quick	6		
23.12	R833400	Fitting	2	24.2	2311220	Cartridge, Pressure Reducing	1		
23.13	231439	Fitting	4		234655	.Kit, Seal	1		
23.14	R833114	Fitting	1	24.3	2311221	Valve, Counterbalance Cartridge	1		
23.15	R833700	Fitting	1		2501643	.Kit, Seal	1		
23.16	R834052	Fitting	1	24.4	2311212	Valve, Solenoid	1		
23.17	236855	Fitting	4		2310009	.Coil	1		
23.18	R833251	Fitting	5		252134	.Valve	1		
23.19	231452	Fitting	2		R15668	.Kit, Seal	1		
23.20	R833800	Fitting	2	24.6	2310181	Plug, Orifice	1		
23.21	*a	R834100	Fitting	1	24.7	R833251	Fitting	1	
23.22		R834253	Fitting	1	24.8	231821	Fitting	2	
23.23		222442W	Fitting	1	24.9	*b	2311228	Assembly, Hose	1
23.24		232984	Fitting	1	24.10	*b	2311229	Assembly, Hose	1
23.25		2311500	Fitting with Orifice	1	24.11	R833400	Fitting	1	

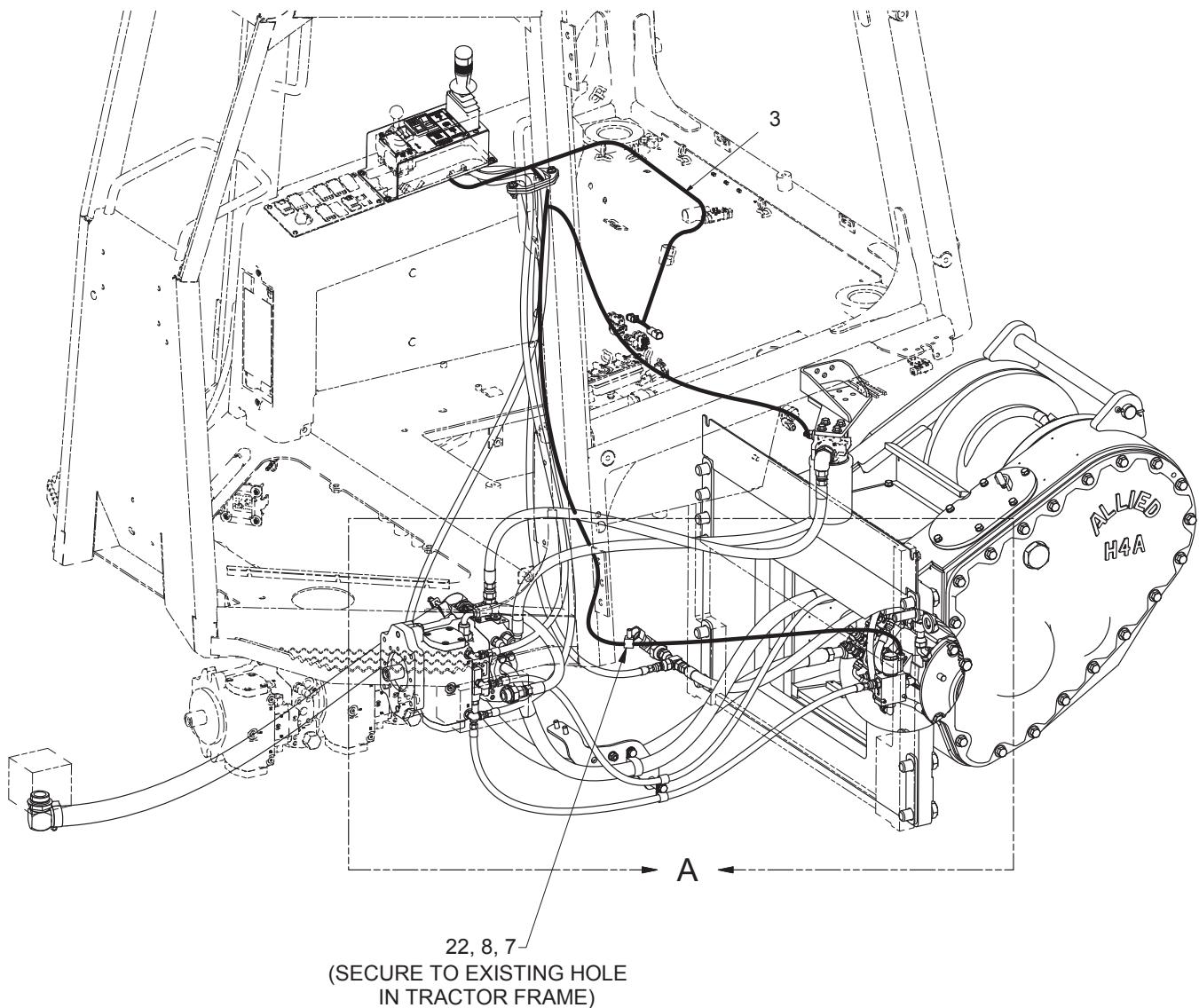
\*a Place washer (23.34) and O-ring (23.35) on fitting (23.21). Apply anaerobic thread sealant (Allied P#: 273338W) to threads. Install from geartrain side.

\*b Included in 2315311 Hose Kit

**Winch Internal & External Hydraulics**

Caterpillar D5K2 with Fireflow (H4AH\_Y\_C201)

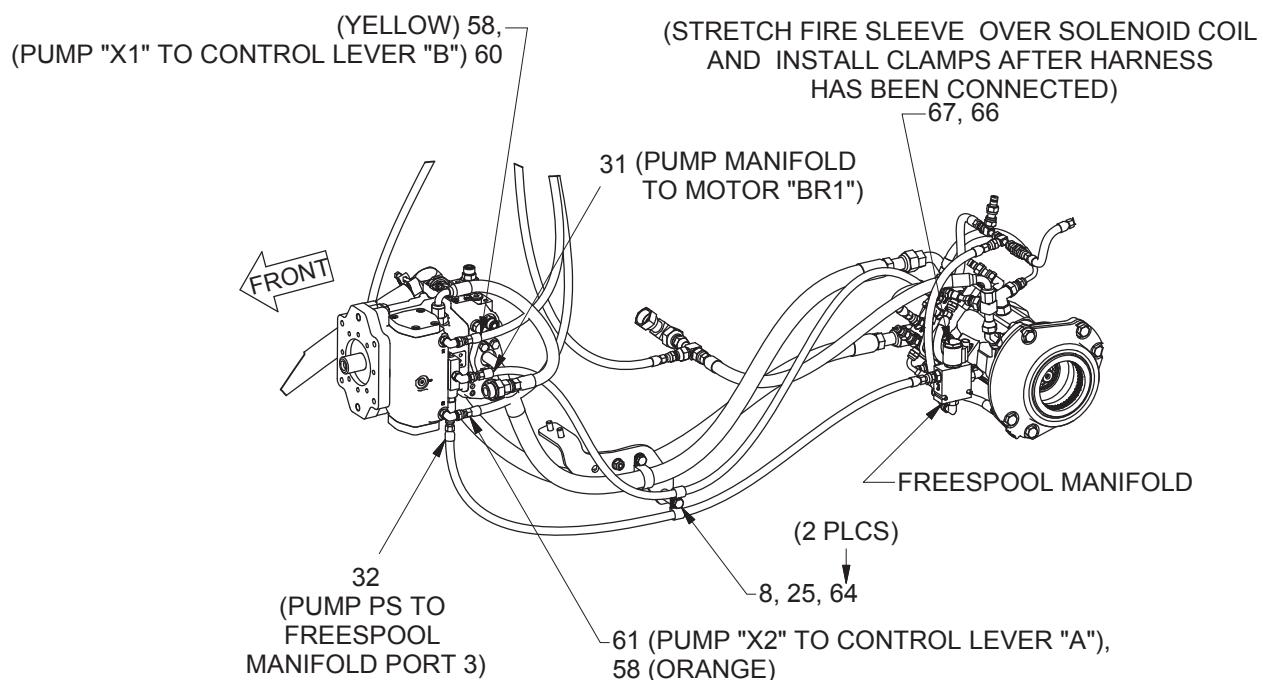
Page 1 of 4



**Winch Internal & External Hydraulics**

Caterpillar D5K2 with Fireflow (H4AH\_Y\_C201)

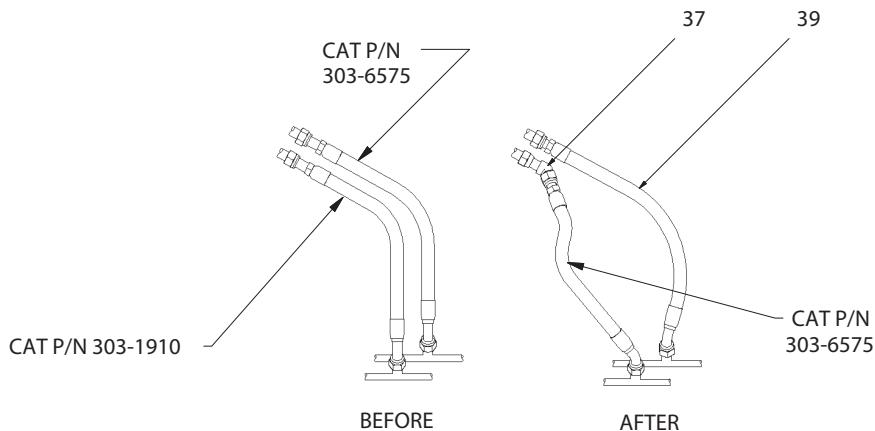
Page 2 of 4

DETAIL A

## Winch Internal & External Hydraulics

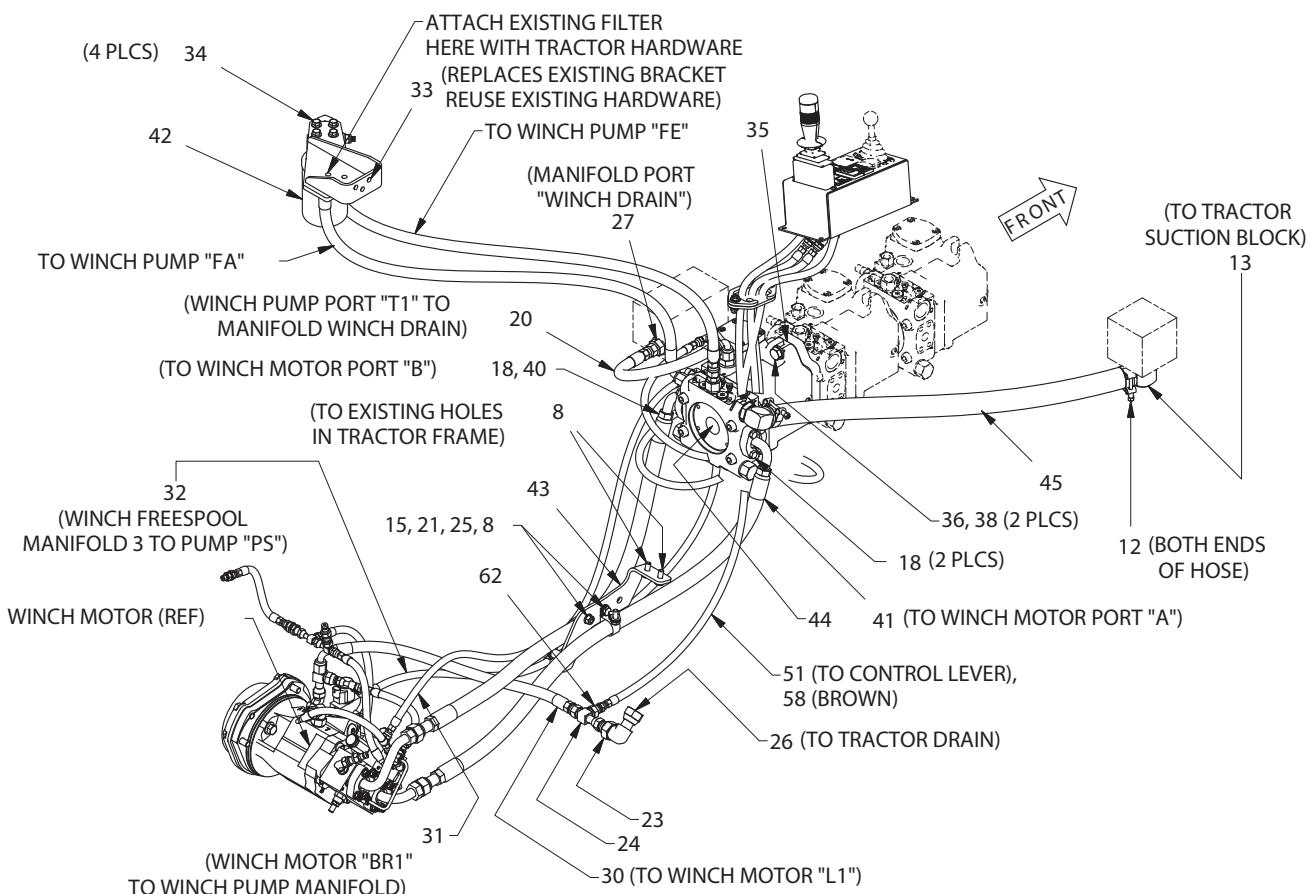
Caterpillar D5K2 with Fireflow (H4AH\_Y\_C201)

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### BLADE HOSE INSTALLATION

VIEWED LOOKING TOWARD REAR OF TRACTOR  
(LOCATED DIRECTLY IN FRONT OF THE FUEL TANK)



### HYDRAULICS INSTALLATION

**Winch Internal & External Hydraulics**

Caterpillar D5K2 with Fireflow (H4AH\_Y\_C201)

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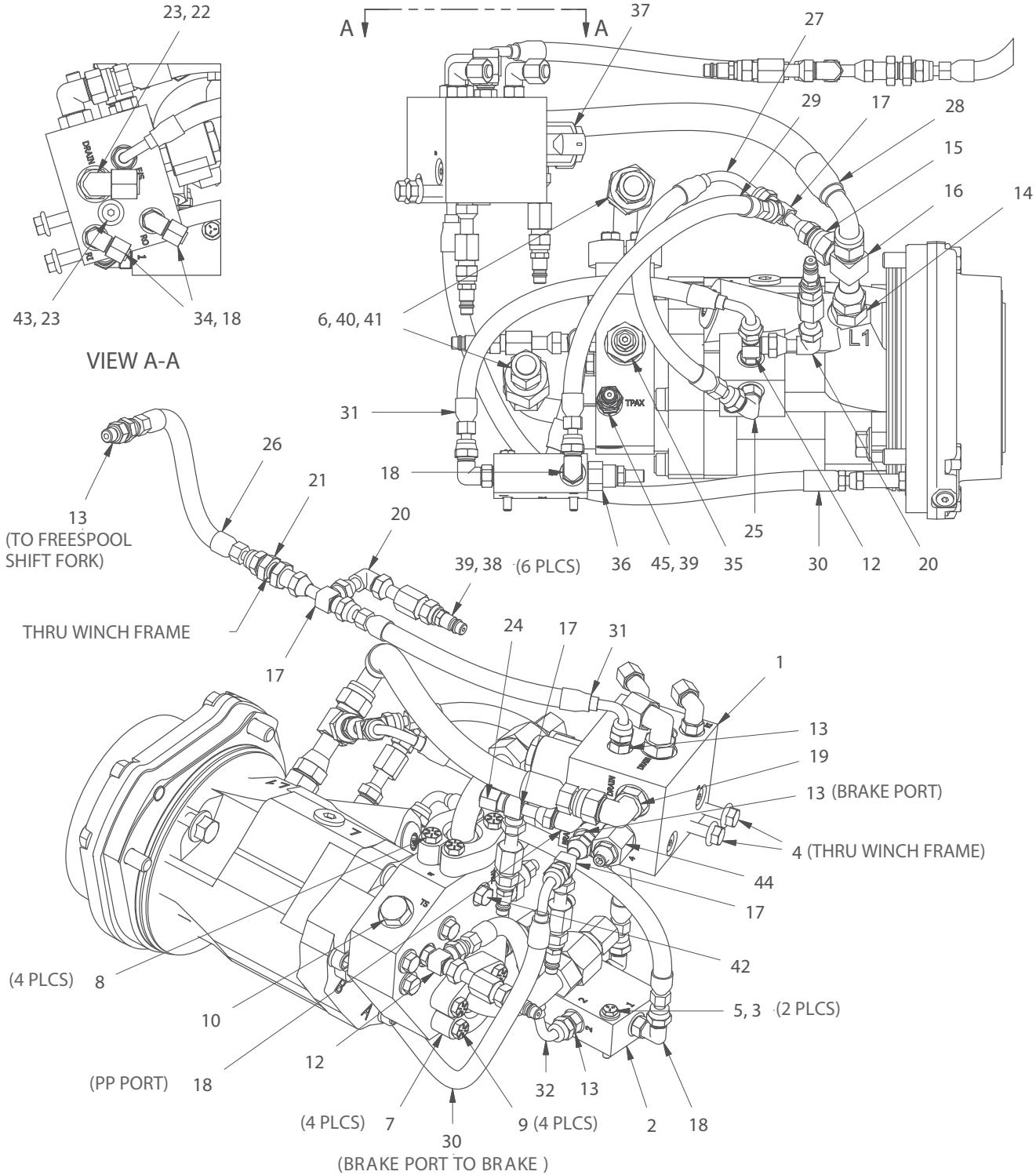
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
7	221777W	Washer	6	35	2310872	Kit, Through Drive (See 3-120)	1
8	293628W	Capscrew	6	36	*a Y19C-M1650	Capscrew	2
12	R13809935	Clamp, T-Bolt	2	37	2310943	Fitting	1
13	213619W	Fitting, Hose	1	38	296426W	Washer	2
15	292655W	Nut	2	39	*b 2314897	Assembly, Hose	1
18	229447	Kit, Split Flange	2	40	*b 2314887	Assembly, Hose	1
	236972	. Clamp, Half	2	41	*b 2314886	Assembly, Hose	1
	203438	. O-Ring	1	42	2314892	Assembly, Filter	1
	201634	. Capscrew	4	43	2310954	Bracket, Hose	1
	201567	. Washer	4	44	2311753	Assembly, Pump	1
20	*b 2314890	Assembly, Hose	1	45	*b 2314899	Assembly, Hose	1
21	R13805003	Clip, Insulation	2	51	Consult Factory	Assembly, Hose	1
22	R13803039	Clip, Insulation	1	58	2304988W	Kit, Various Color Tie Strap	1
23	231809	Fitting	1	59	Consult Factory	Assembly, Hose (Not Shown)	1
24	R834052	Fitting	1	60	Consult Factory	Assembly, Hose	1
25	296420W	Washer	8	61	Consult Factory	Assembly, Hose	1
26	R833804	Fitting	1	62	R833700	Fitting	1
27	R833115	Fitting	1	64	R13803044	Clip, Insulation	2
30	*b 2314895	Assembly, Hose	1	66	249538	Sleeve, Fire	0.5 ft
31	*b 2314889	Assembly, Hose	1	67	589423	Clamp, Firesleeve	2
32	*b 2314888	Assembly, Hose	1			*a Apply 273338W Sealant to Threads	
33	2314310	Bracket, Filter	1			*b Included in 2315312 Hose Kit	
34	134803W	Screw	4				

**Winch Internal Hydraulics**

Komatsu D31/37/39X-22 and 22-A (H4AT\_Y\_K13)

Last Used on S/N H4A-1243

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**Winch Internal Hydraulics**

Komatsu D31/37/39X-22 and 22-A (H4AT\_Y\_K13)

Last Used on S/N H4A-1243

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
1	2307551W	Manifold, Control	1	28	*b	242111	Assembly, Hose	1
2	248918	Body, Valve	1	29	*b	2311353	Assembly, Hose	1
3	221763W	Washer	2	30	*b	2311233	Assembly, Hose	1
4	398599W	Capscrew, Flanged	2	31	*b	2311744	Assembly, Hose	1
5	Y01C-0428	Capscrew	2	32	*b	2311234	Assembly, Hose	1
6	2311360	Assembly, Fitting with O-Rings	2	33	*b	2311230	Assembly, Hose	1
7	222535W	Fitting	4	34		232984	Fitting	2
8	Y17C-0624	Capscrew	4	35		2310976	Valve, Counterbalance Cartridge	1
9	221518W	Capscrew	4			2501643	. Seal Kit	1
10	210709	Fitting	1	36		2311130	Cartridge, Pressure Reducing	1
12	R833400	Fitting	2			234655	. Seal Kit	1
13	231439	Fitting	4	37		250365	Valve, Solenoid	1
14	R833114	Fitting	1	38		254002	Fitting	6
15	R833700	Fitting	1	39		2310634	Nipple	6
16	R834052	Fitting	1	40		2307958W	Fitting	2
17	236855	Fitting	4	41		R834253	Fitting	2
18	R833251	Fitting	5	42		209423	Fitting	1
19	231452	Fitting	2	43		15961W	Fitting	1
20	R833800	Fitting	2	44		2311594	Assembly, Directional Valve	1
21	*a R834100	Fitting	1			2311449	. Valve, Directional Cartridge	1
22	R834253	Fitting	1			15027W	. Nut	1
23	222442W	Fitting, O-Ring	1			2311604	. Setscrew, Drain	1
24	232984	Fitting	1	45		231439	Fitting	1
25	2311500	Assembly, Fitting with Orifice	1				*a Apply 273338W Sealant to Threads	
26	*b 2311356	Assembly, Hose	1				*b Included in 2315313 Hose Kit	
27	*b 2311235	Assembly, Hose	1					

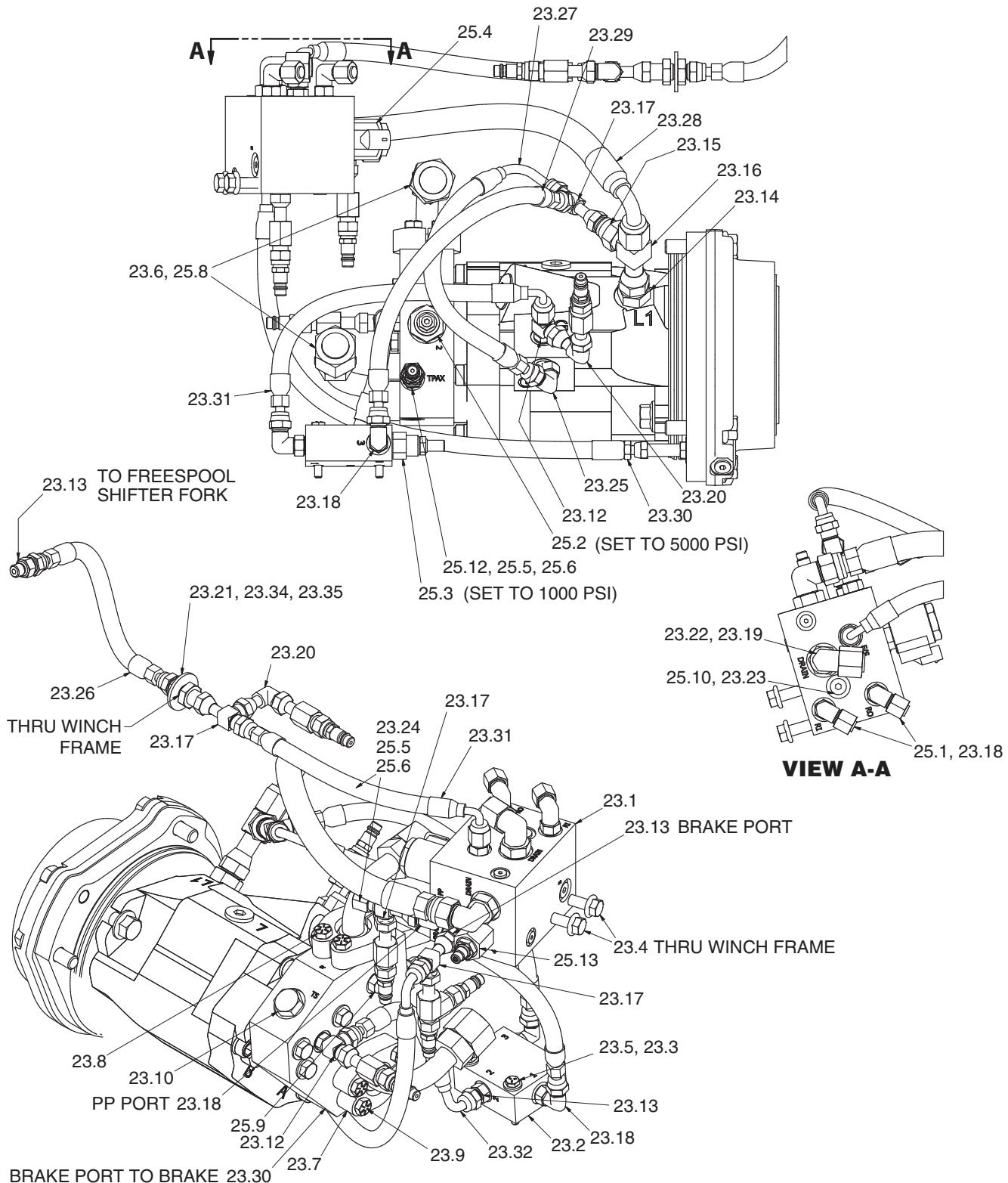
**Winch Internal Hydraulics**

Komatsu D31/37/39X-22 (H4AT\_Y\_K13)

Komatsu D37/39X-23, D39X-24 (H4AT\_Y\_K14)

First Used on S/N H4A-1244

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**Winch Internal Hydraulics**

Komatsu D31/37/39 E-22 (H4AT\_Y\_K13)

Komatsu D37/39X-23, D39X-24 (H4AT\_Y\_K14)

First Used on S/N H4A-1244

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
23.1	2311591	Manifold, Control (See 3-117)	1	23.25	*b	2311500	Assembly, Fitting with Orifice
23.2	248918	Body, Valve	1	23.26	*b	2311356	Assembly, Hose
23.3	221763W	Washer	2	23.27	*b	2311235	Assembly, Hose
23.4	398599W	Capscrew, Flanged	2	23.28	*b	242111	Assembly, Hose
23.5	Y01C-0428	Capscrew	2	23.29	*b	2311353	Assembly, Hose
23.6	2311360	Assembly, Fitting with O-Rings	2	23.30	*b	2311233	Assembly, Hose
23.7	222535W	Fitting	4	23.31	*b	2311744	Assembly, Hose
23.8	Y17C-0624	Capscrew	4	23.32	*b	2311234	Assembly, Hose
23.9	221518W	Capscrew	4	23.34	*a	15178W	Washer
23.10	210709	Fitting	1	23.35	*a	211564	O-Ring
23.12	R833400	Fitting	2	25.1		232984	Fitting
23.13	231439	Fitting	4	25.2		2310976	Valve, Counterbalance Cartridge
23.14	R833114	Fitting	1			2501643	.Kit, Seal
23.15	R833700	Fitting	1	25.3		2311130	Cartridge, Pressure Reducing
23.16	R834052	Fitting	1			234655	.Kit, Seal
23.17	236855	Fitting	4	25.4		250365	Valve, Solenoid
23.18	R833251	Fitting	5	25.5		254002	Fitting
23.19	231452	Fitting	2	25.6		2310634	Nipple
23.20	R833800	Fitting	2	25.8		231821	Fitting
23.21	*a R834100	Fitting	1	25.9		209423	Fitting
23.22	R834253	Fitting	1	25.10		15961W	Fitting
23.23	222442W	Fitting	1	25.12		231439	Fitting
23.24	232984	Fitting	1				

\*a Place washer (23.34) and O-ring (23.35) on fitting (23.21). Apply anaerobic thread sealant (Allied P#: 273338W) to threads. Install from geartrain side.

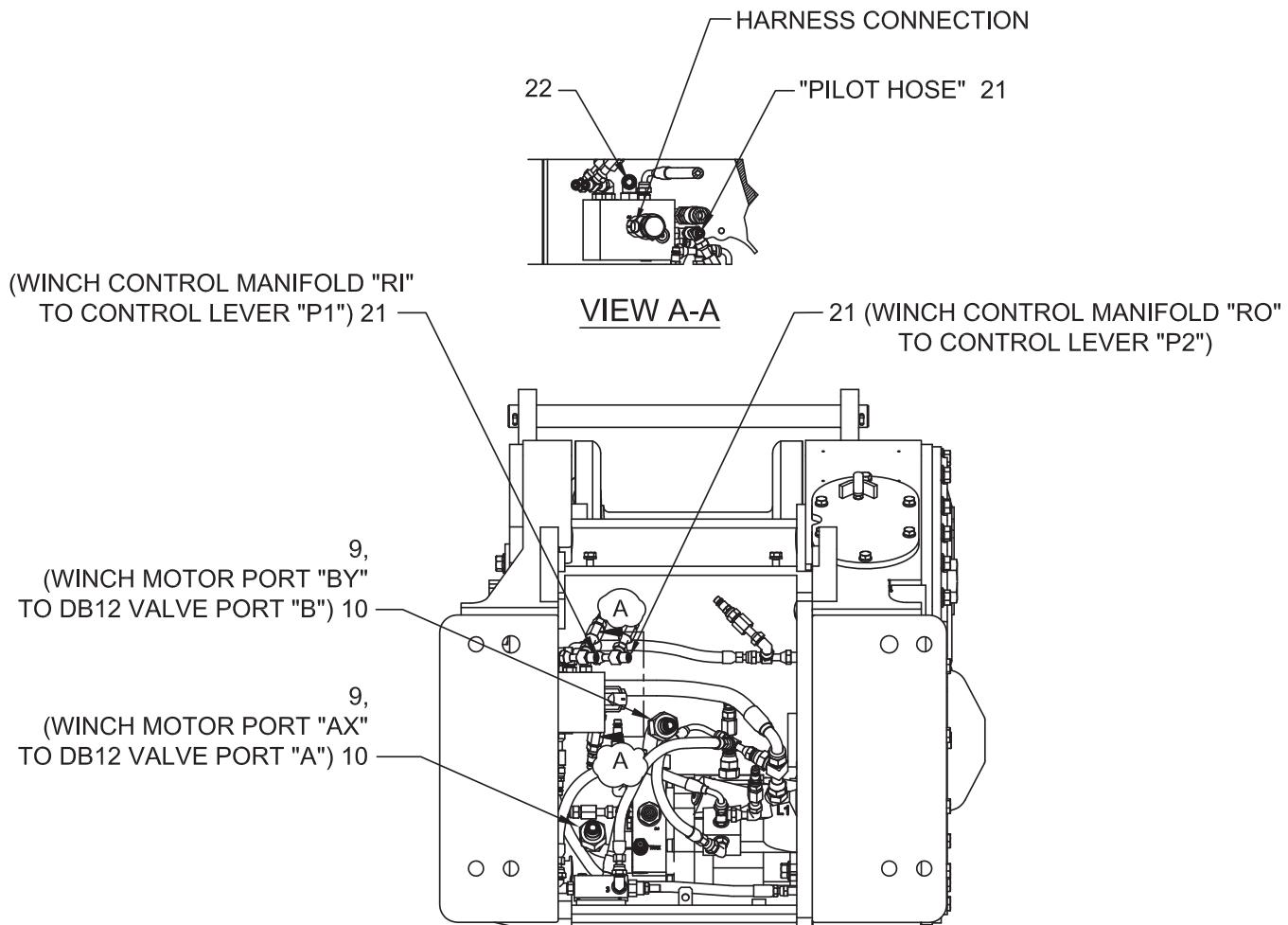
\*b Included in 2315313 Hose Kit

**Winch Internal Hydraulics**

Hydraulics/Controller Installation

Komatsu D31/37/39X-22 and 22-A (H4AT\_Y\_K13)

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**Winch Internal Hydraulics**

Hydraulics/Controller Installation

Komatsu D31/37/39X-22 and 22-A (H4AT\_Y\_K13)

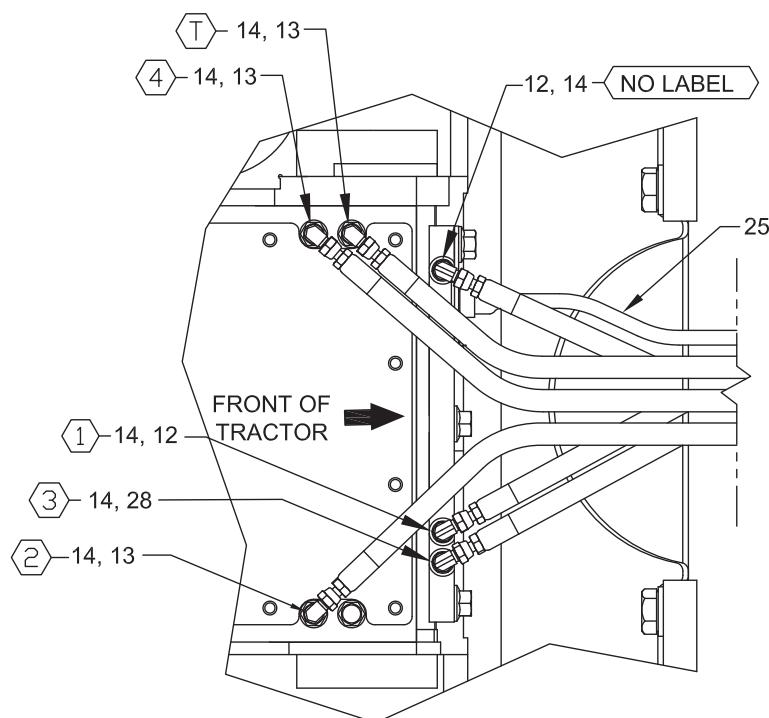
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
9	2307958W	Fitting	2	21	2311290	Assembly, Hose	3
10	*a 2311300	Assembly, Hose	2	22	*a 2311289	Assembly, Hose	1
						*a Included in 2315314 Hose Kit	

**Winch External Hydraulics**

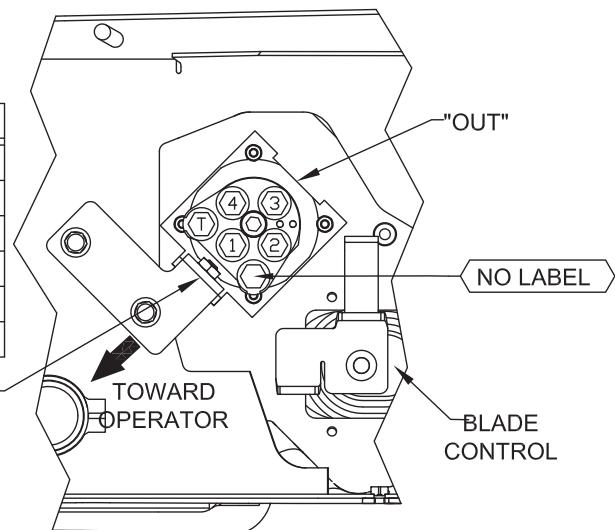
Case 650/750/850K, 750/850L

(H4AH\_R\_R15)

**HOSE INSTALLATION**

(VIEW FROM TOP OF WINCH)

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

**HOSE INSTALLATION AT HANDLEVER**(VIEW FROM UNDER CONSOLE LOOKING  
AT BOTTOM OF HANDLEVER ASSEMBLY)

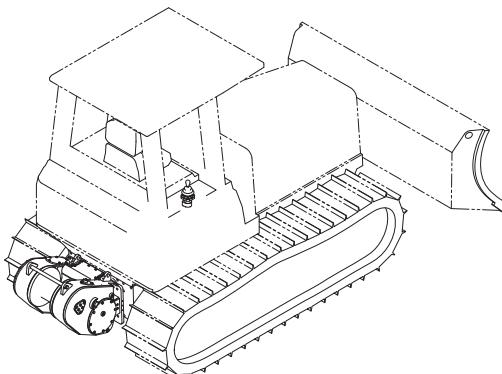
Item	Part No.	Description	Qty
12	209486	Fitting	2
13	212718	Fitting	3
14	*a	Assembly, Hose	6

Item	Part No.	Description	Qty
25	2311315	Assembly, Wire	1
28	2314508	Fitting, Tall	1

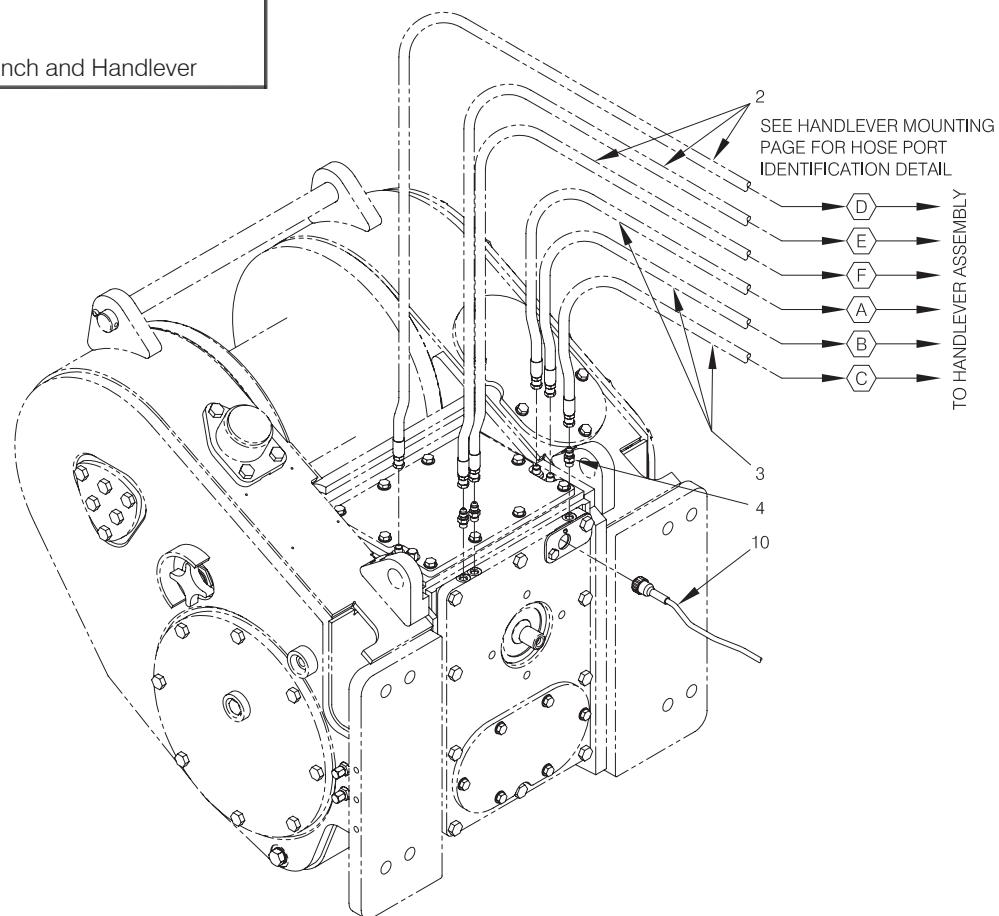
\*a Included in 2315315 Hose Kit

**Winch External Hydraulics**

Caterpillar D3/4/5C  
 (H4AH\_B\_C16 and H4AH\_R\_C16)



Relative Position of Winch and Handlever

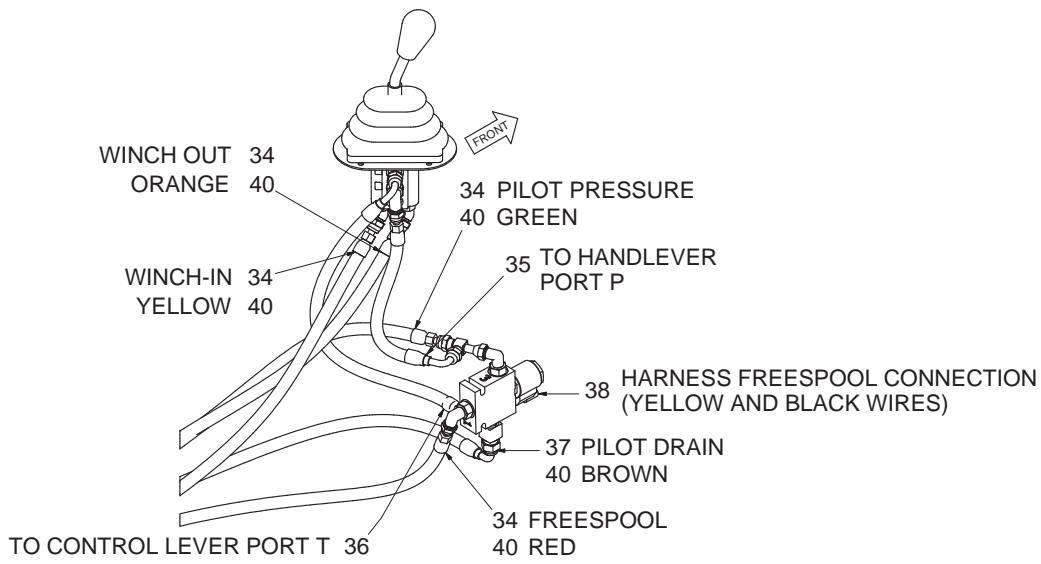
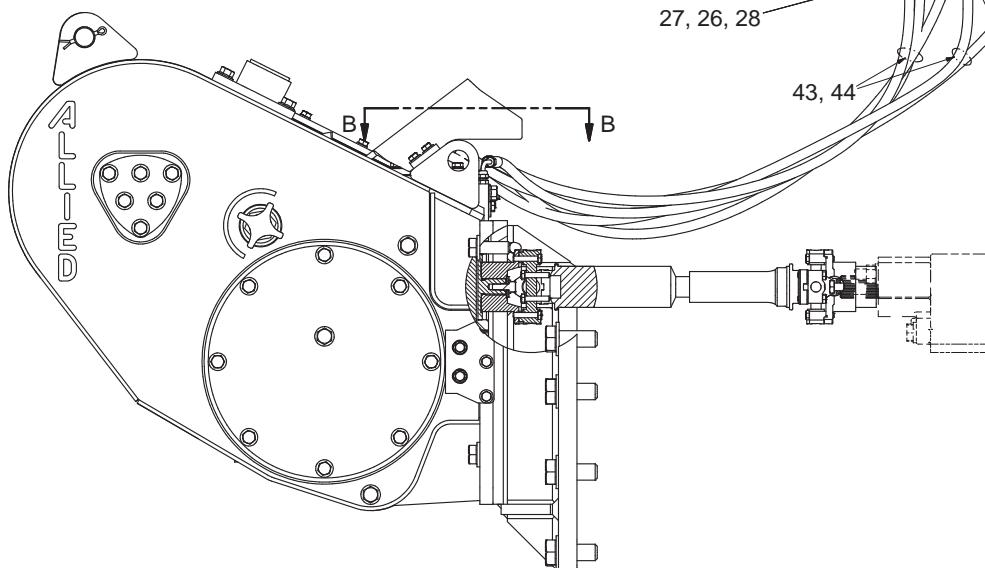
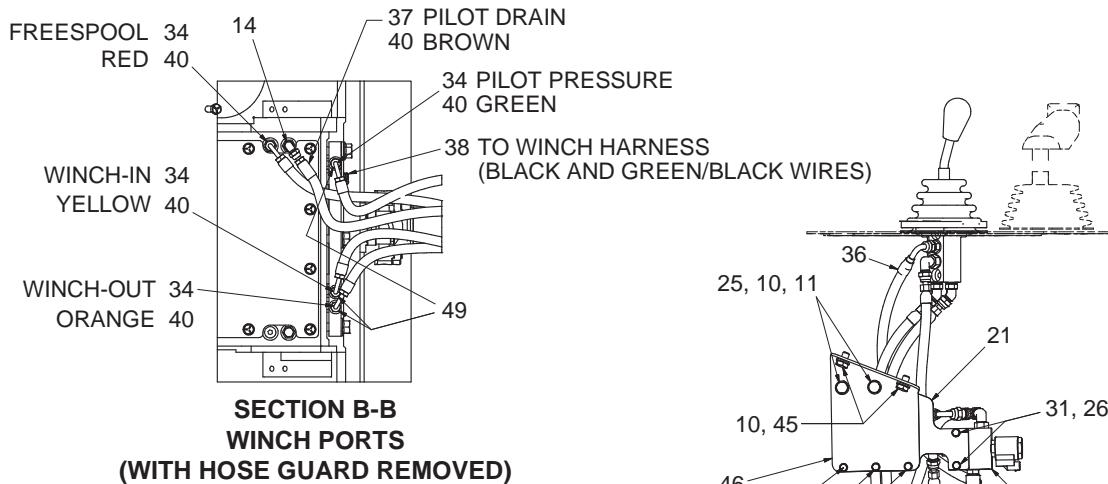


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty			
2	*a 2304205W	Assembly, Hose	3	5	2304988W	Kit, Various Color Tie Strap (Not Shown)	1			
3	*a 2304989W	Assembly, Hose	3	10	2304204W	Harness, Wiring	1			
4	16538W	Fitting	3	*a      Included in 2315316 Hose Kit						

**Winch External Hydraulics**

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

Page 1 of 2

**HOSE INSTALLATION**

**Winch External Hydraulics**

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

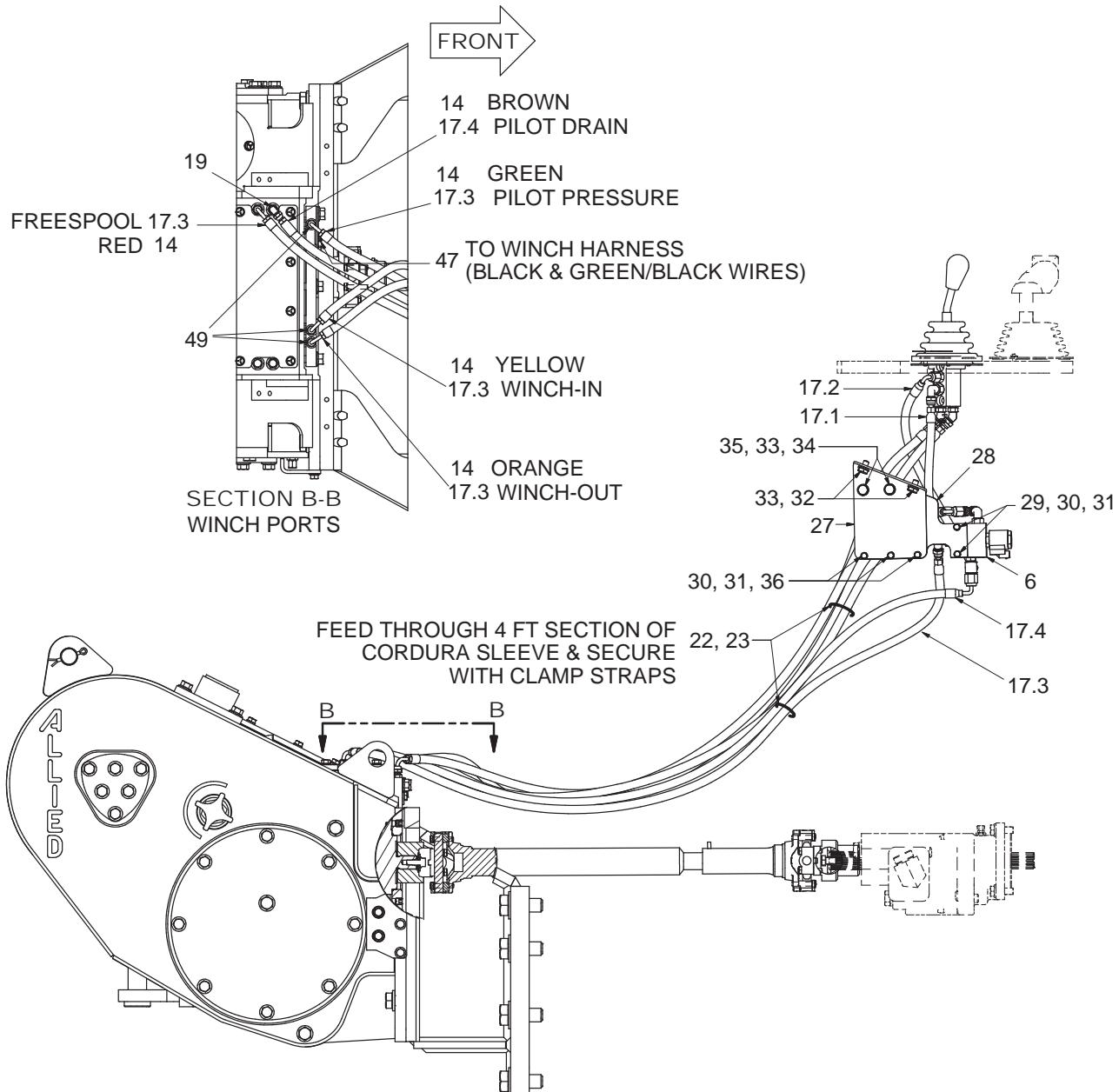
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
10	296420W	Washer	6	37	*c	2314376	Assembly, Hose
11	293628W	Capscrew	2	38		2312888	Harness, Wire
14	212718	Fitting	1	40		2304988W	Kit, Various Color Tie Strap
21	*a 2312875	Bracket, Valve	1	41		2312889	Assembly, Freespool Valve (3-108)
	*b 2314326	Bracket, Valve	1	43		137852W	Clamp, Strap
25	292655W	Nut	2	44		R13846	Sleeve, Cordura
26	296417W	Washer	14	45		Y19C-M1016	Capscrew
27	292653W	Nut	7	46		2313001	Plate, Formed
28	292501W	Capscrew	5	49		209083	Fitting
31	Y09C-M0650	Capscrew	2				
34	*c 2314375	Assembly, Hose	4				*a Last Used on S/N H4A-1226
35	*c 2312885	Assembly, Hose	1				*b First Used on S/N H4A-1227
36	*c 2312886	Assembly, Hose	1				*c Included in 2315317 Hose Kit

**Winch External Hydraulics**

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

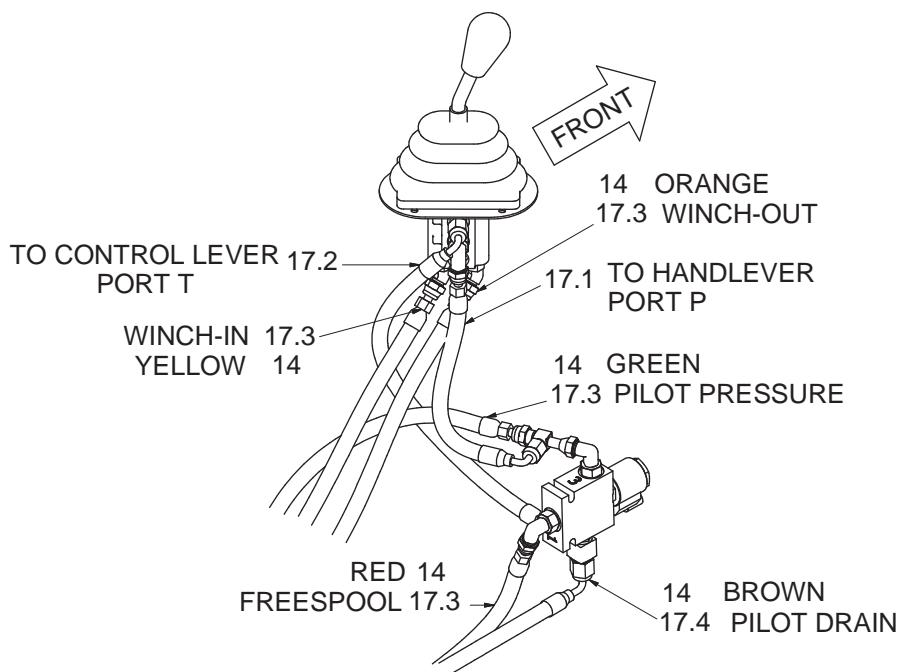
Page 1 of 2



**Winch External Hydraulics**

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

Page 2 of 2

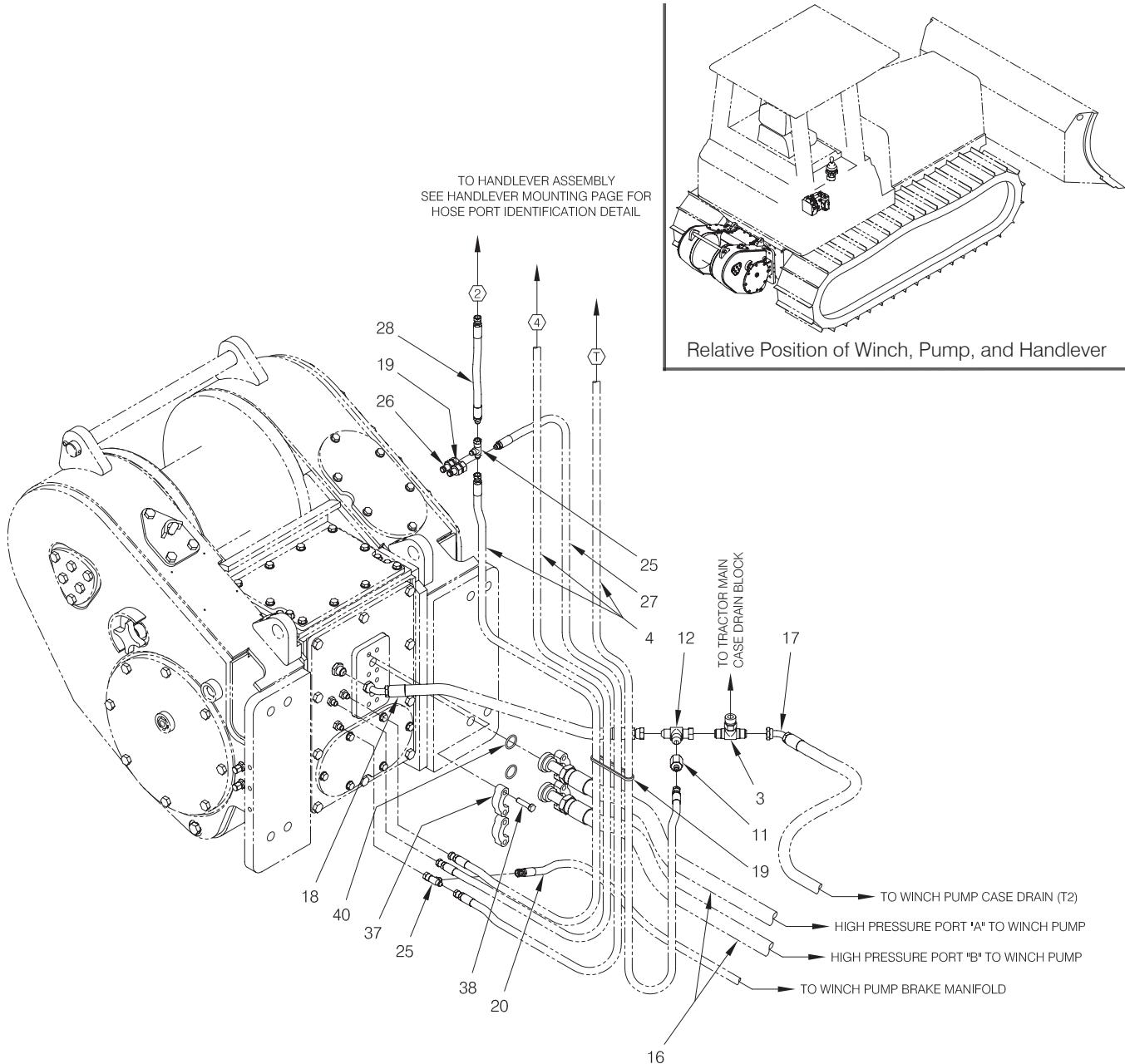


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
6	2315110	Assembly, Valve - 24V Freespool (3-109)	1	28	2314326	Bracket, Valve	1
14	2304988W	Kit, Various Color Tie Strap	1	29	Y09C-M0650	Capscrew	2
17	2314932	Kit, Hose	1	30	296417W	Washer	10
17.1	2312885	. Assembly, Hose	1	31	292653W	Nut	5
17.2	2312886	. Assembly, Hose	1	32	Y19C-M1016	Capscrew	2
17.3	2315195	. Assembly, Hose	4	33	296420W	Washer	6
17.4	2315196	. Assembly, Hose	1	34	293628W	Capscrew	2
19	212718	Fitting	1	35	292655W	Nut	2
22	R13846	Sleeve, Cordura	8 ft	36	292501W	Capscrew	3
23	137852W	Clamp, Strap	10	47	2312122	Harness, Wire - 24V	1
27	2313001	Plate, Formed	1	49	209083	Fitting	3

**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)

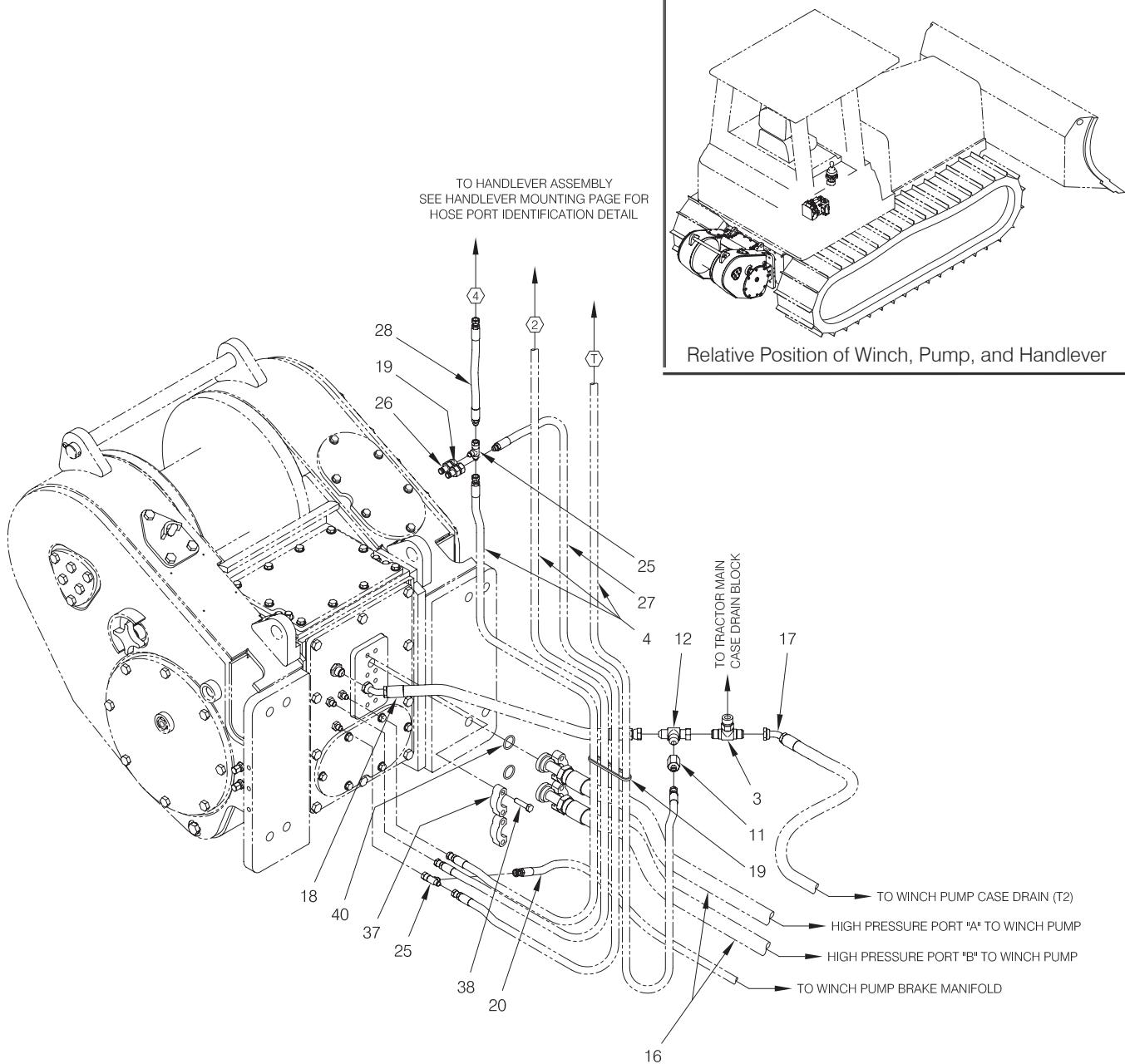
Last Used on S/N H4A-1014



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	2304232W	Fitting	1	26	R330325	Coupler, Male	2
4	*b 2304205W	Assembly, Hose	3	27	*b 2304246W	Assembly, Hose	1
11	17777W	Fitting	1	28	*b 2304247W	Assembly, Hose	1
12	17062W	Fitting	1	37	222535W	Fitting	4
16	*b 2304234W	Assembly, Hose	2	38	*a 177461W	Capscrew	8
17	*b 2304235W	Assembly, Hose	1	40	2304110W	O-Ring	2
18	*b 2304236W	Assembly, Hose	1			*a Use 318702W Thread Lock	
19	137852W	Clamp, Strap	A/R			*b Included in 2315319 Hose Kit	
20	*b 2304238W	Assembly, Hose	1				
25	17059W	Fitting	2				

**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Z\_C17)  
Used on S/N H4AH-1015 thru H4A-1031



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	2304232W	Fitting	1	26	R330325	Coupler, Male	2
4	*b 2304205W	Assembly, Hose	3	27	*b 2306492W	Assembly, Hose	1
11	17777W	Fitting	1	28	*b 2304247W	Assembly, Hose	1
12	17062W	Fitting	1	37	222535W	Fitting	4
16	*b 2306489W	Assembly, Hose	2	38	*a 177461W	Capscrew	8
17	*b 2304235W	Assembly, Hose	1	40	2304110W	O-Ring	2
18	*b 2306490W	Assembly, Hose	1			*a Use 318702W Thread Lock	
19	137852W	Clamp, Strap	AR			*b Included in 2315320 Hose Kit	
20	*b 2304238W	Assembly, Hose	1				
25	17059W	Fitting	2				

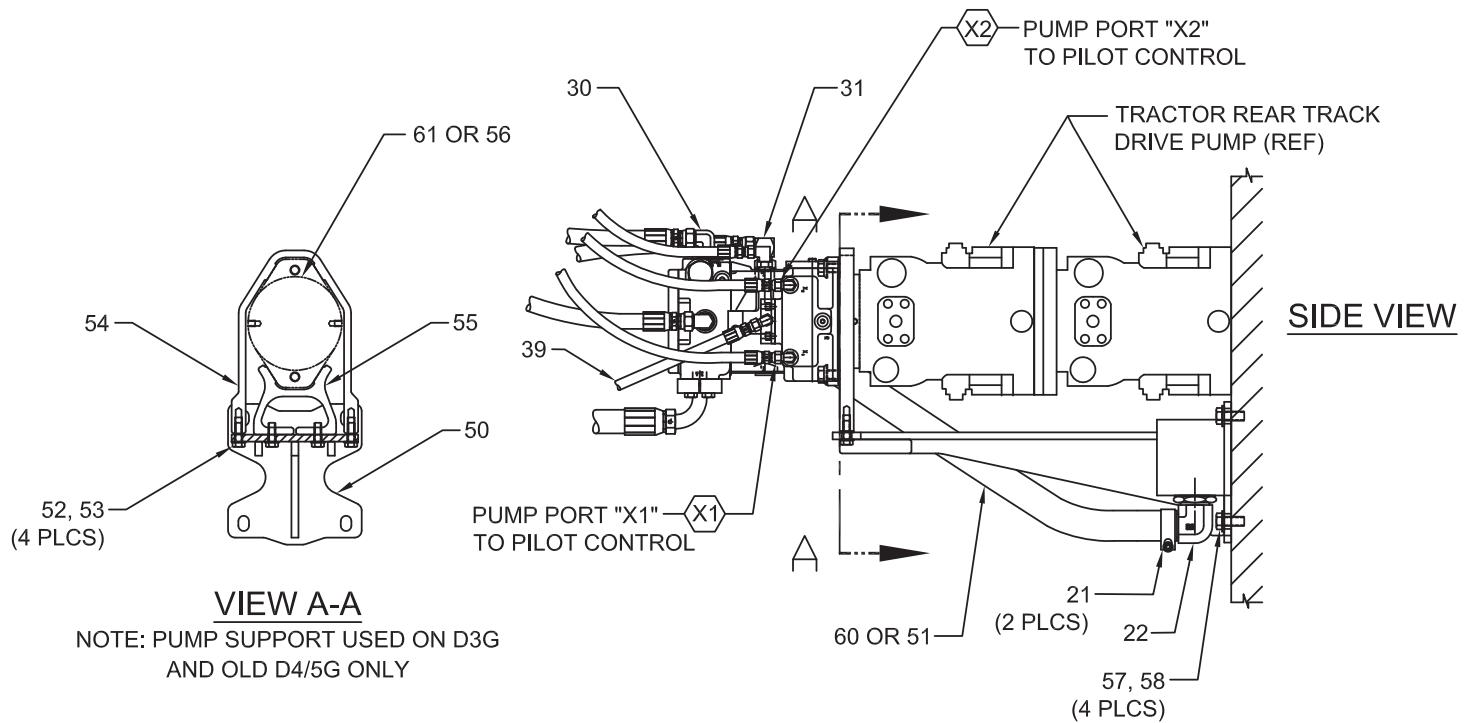
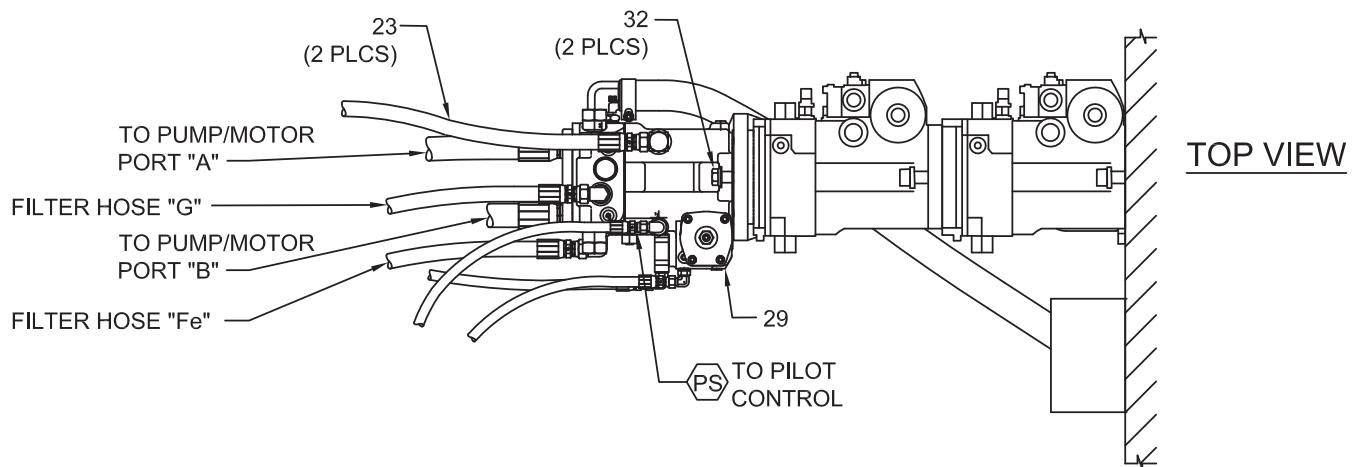
**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

Last Used on S/N H4A-1161

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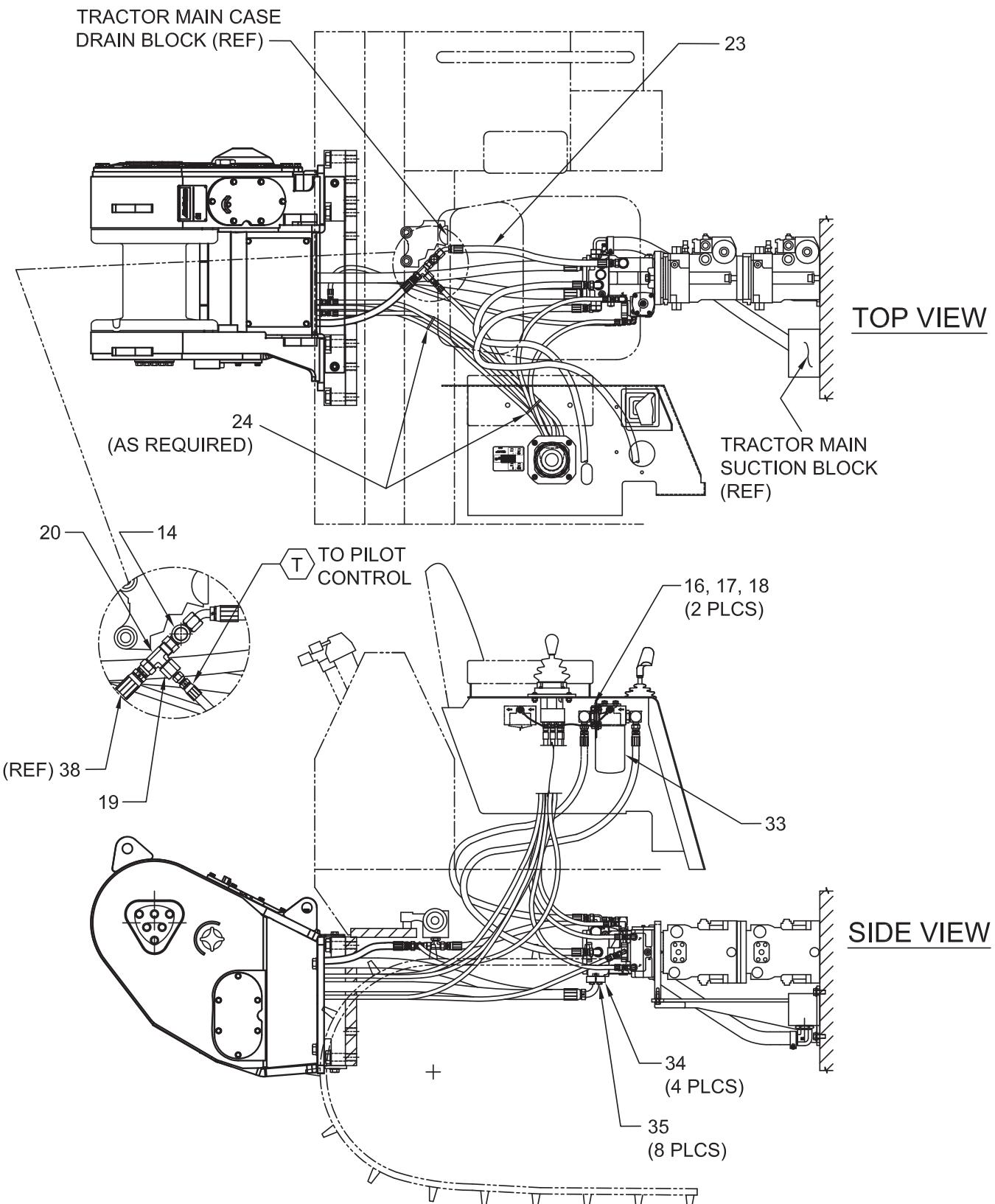
**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

Last Used on S/N H4A-1161

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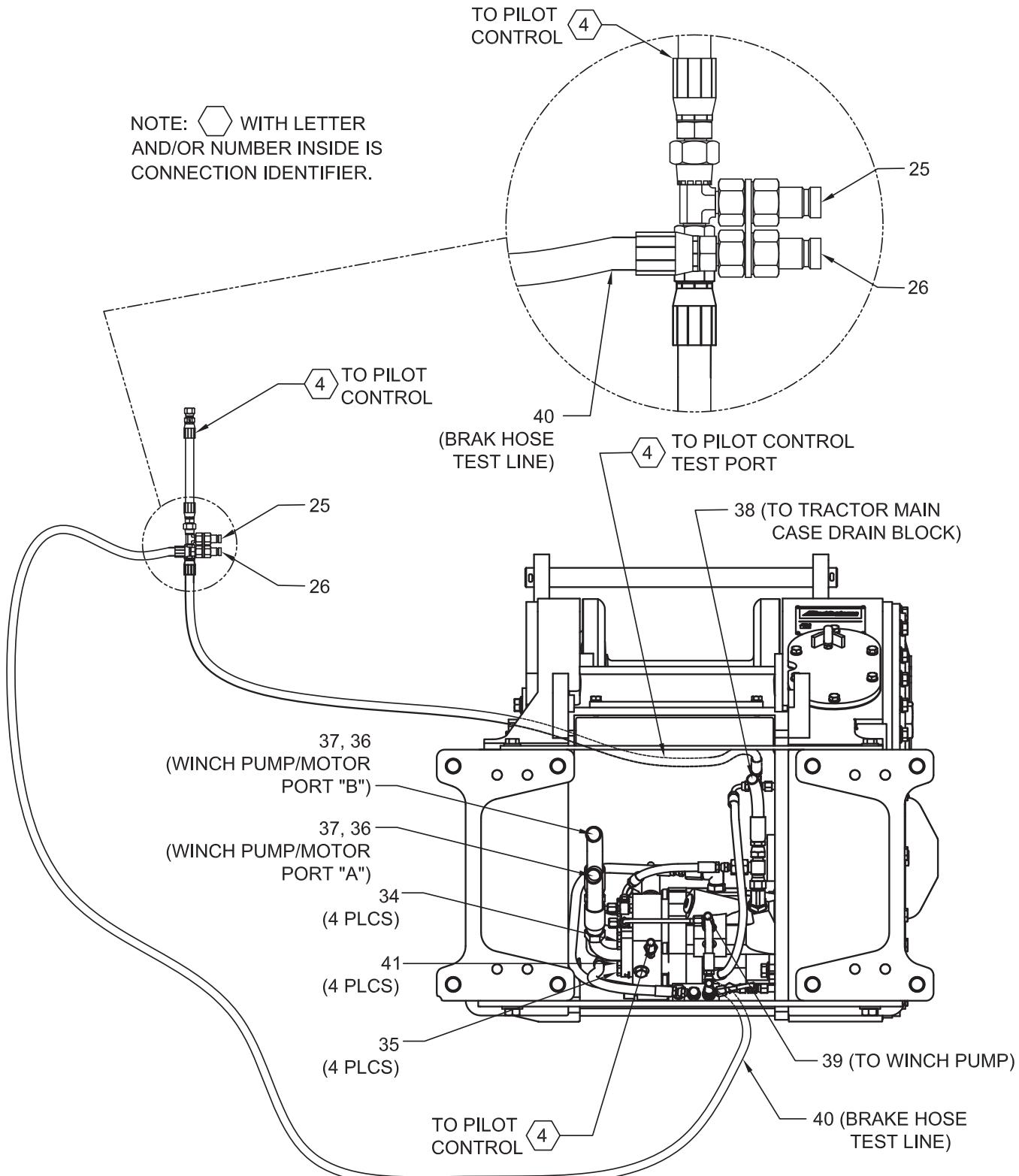
**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

Last Used on S/N H4A-1161

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## Winch External Hydraulics

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

Last Used on S/N H4A-1161

Page 4 of 4

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty		
14	2304232W	Fitting	1	38	*d	2306490W	Assembly, Hose	1	
16	16829W	Capscrew	2	39	*d	2304205W	Assembly, Hose	1	
17	15135W	Washer	2	40	*d	2306492W	Assembly, Hose	1	
18	221711W	Nut	2	41	*a	221518W	Capscrew	4	
19	17777W	Fitting	1	50	*b	2304225W	Support, Pump	1	
20	17062W	Fitting	1	51	*b	2304259W	Suction, Hose	1	
21	R13809935	Clamp, T-Bolt	2	52	*b	179443W	Capscrew	4	
22	213619W	Fitting	1	53	*b	221767W	Washer	4	
23	*d	2304235W	Assembly, Hose	1	54	*b	2304245W	Clamp, Upper Pump Support	1
24	137852W	Clamp, Strap	AR	55	*b	2304244W	Clamp, Lower Pump Support	1	
25	17059W	Fitting	1	56	*b	2304212W	Kit, Through Drive (See 3-118)	1	
26	R330325	Coupler, Male	1	57	*b	293645W	Capscrew	4	
29	2306024W	Assembly, Pump	1	58	*b	296422W	Washer	4	
30	16559W	Fitting	1	60	*c	2306251W	Hose, Suction	1	
31	17224W	Fitting	1	61	*c	2306258W	Kit, Through Drive (See 3-119)	1	
32	2303848W	Capscrew	2						
33	2306023W	Assembly, Filter (See 3-104)	1						
34	222535W	Fitting	8						
				*a		Use 318702W Thread Lock			
35	*a	177461W	Capsrew	16	*b		Used for C17 Only		
36		2304110W	O-Ring	4	*c		Used for C18 Only		
37	*d	2306489W	Assembly, Hose	2	*d		Included in 2315321 Hose Kit		

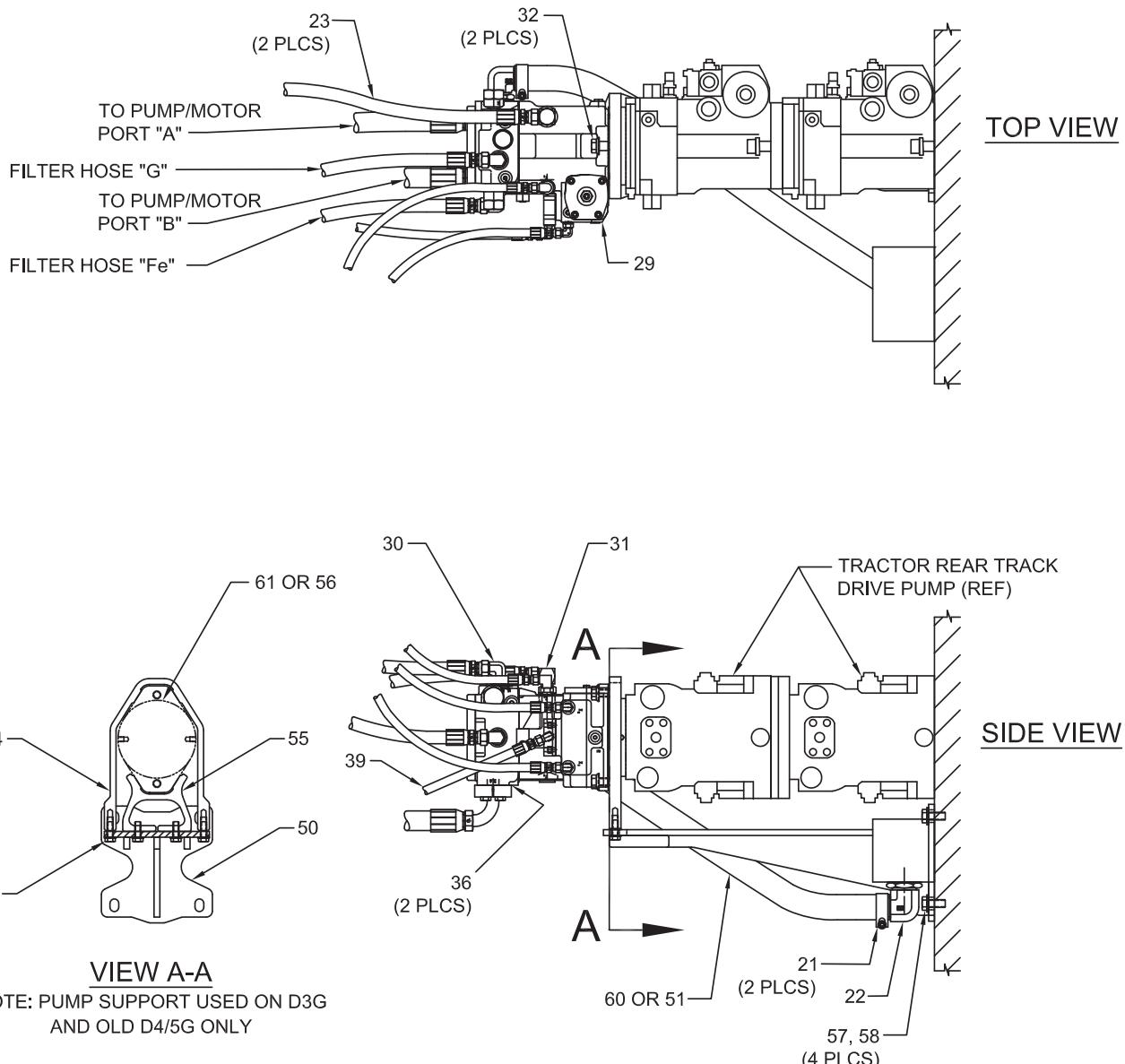
**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

First Used on S/N H4A-1162

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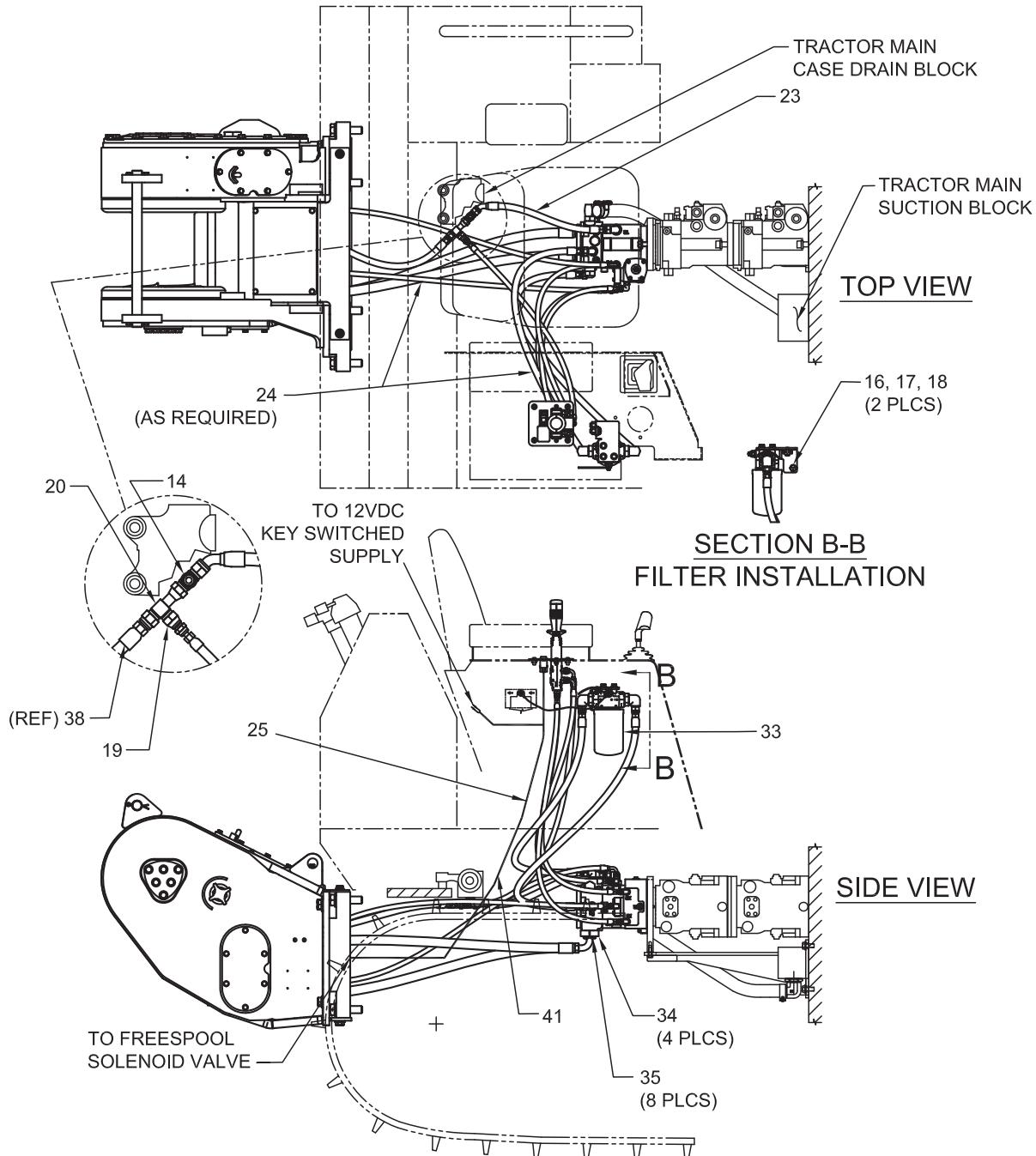
**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

First Used on S/N H4A-1162

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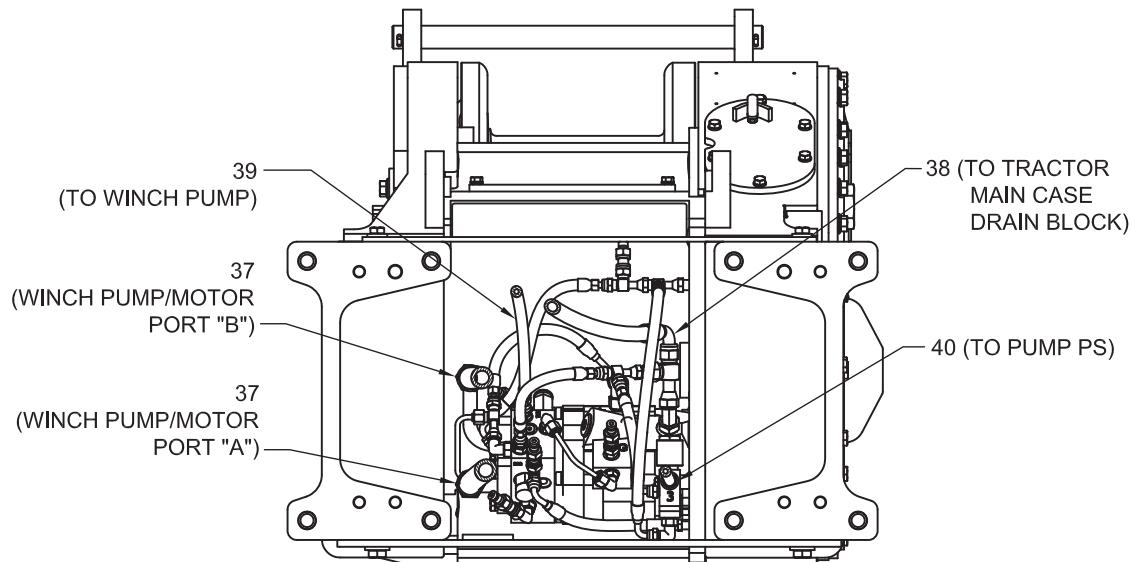
**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

First Used on S/N H4A-1162

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**Winch External Hydraulics**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Caterpillar D4/5G (H4AH\_Y\_C18)

First Used on S/N H4A-1162

Page 4 of 4

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
14	2311841	Fitting	1	38	*d	2311569	Assembly, Hose
16	16829W	Capscrew	2	39	*d	2311492	Assembly, Hose
17	15135W	Washer	2	40	*d	2311847	Assembly, Hose
18	221711W	Nut	2	41		2307927W	Harness
19	R833700	Fitting	1	50	*b	2304225W	Support, Pump
20	R834052	Fitting	1	51	*b	2304259W	Hose, Suction
21	R13809935	Clamp, T-Bolt	2	52	*b	179443W	Capscrew
22	R834052	Fitting	1	53	*b	221767W	Washer
23	*d	2311845	Assembly, Hose	54	*b	2304245W	Clamp, Upper Pump Support
24	137852W	Clamp, Strap	AR	55	*b	2304244W	Clamp, Lower Pump Support
25	2307927W	Harness	1	56	*b	2304212W	Kit, Through Drive (See 3-118)
29	2311840	Assembly, Pump (See 3-13)	1	57	*b	293645W	Capscrew
30	231452	Fitting	1	58	*b	296422W	Washer
31	237983	Fitting	1	60	*c	2306251W	Suction, Hose
32	2303848W	Capscrew	2	61	*c	2306258W	Kit, Through Drive (See 3-119)
33	2311843	Assembly, Filter (See 3-106)	1				
34	222535W	Fitting	4	*a		Use 318702W Thread Lock	
35	*a	177461W	Capscrew	*b		Used for C17 Only	
36	2304110W	O-Ring	2	*c		Used for C18 Only	
37	*d	2311846	Assembly, Hose	2	*d		Included in 2315322 Hose Kit

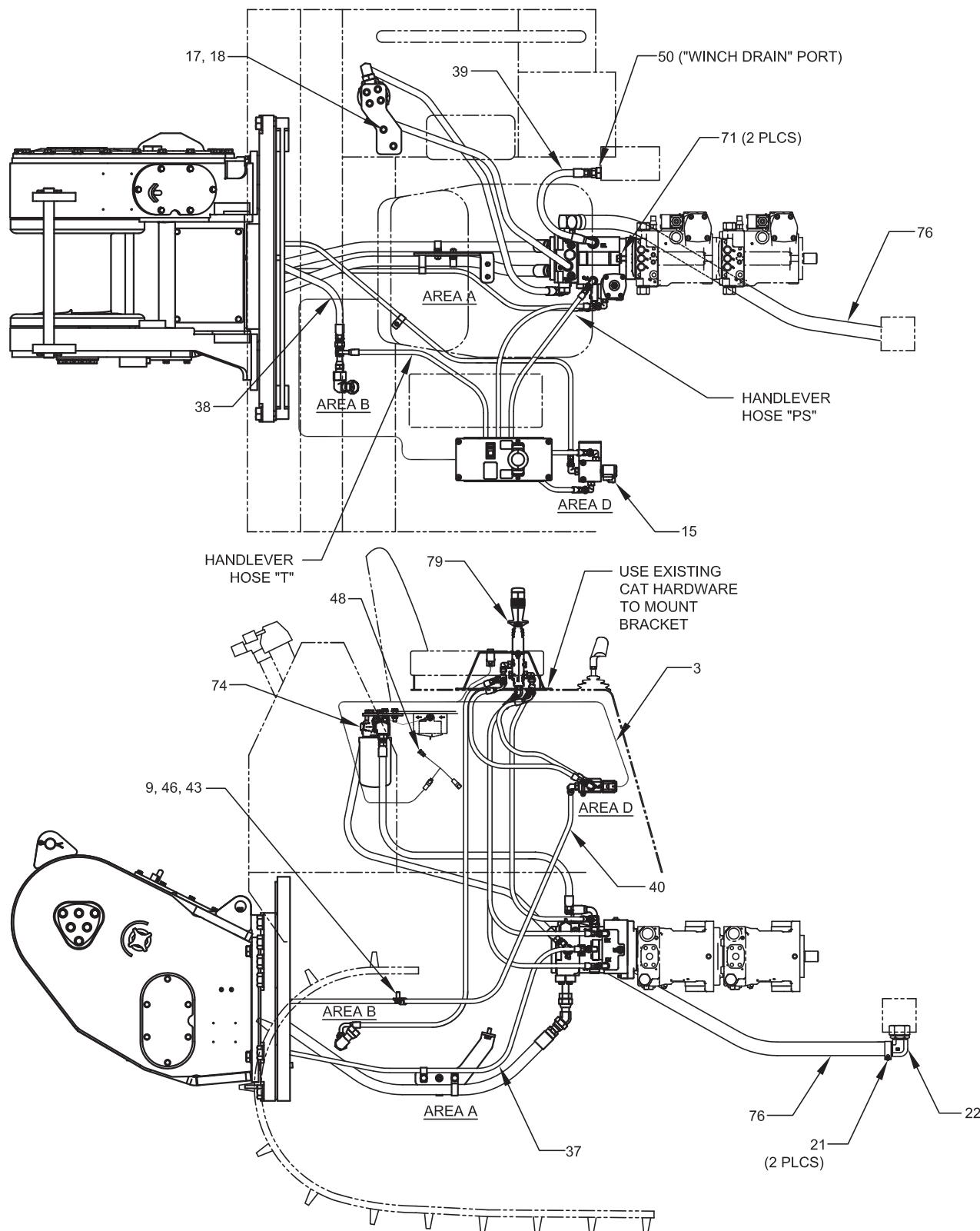
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**Winch External Hydraulics**

Caterpillar D3/4K (H4AH\_Y\_C19)

Last Used on S/N H4A-1161

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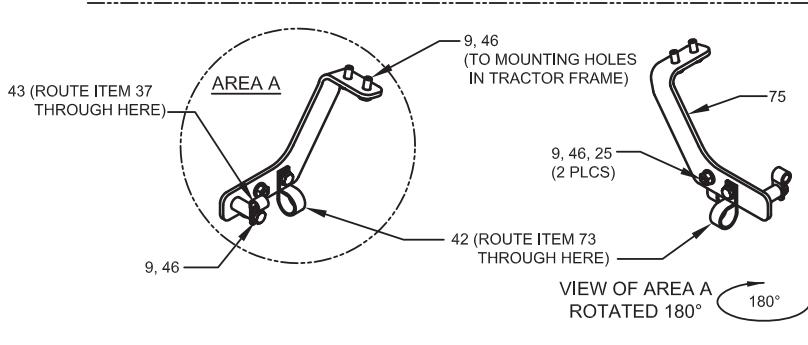
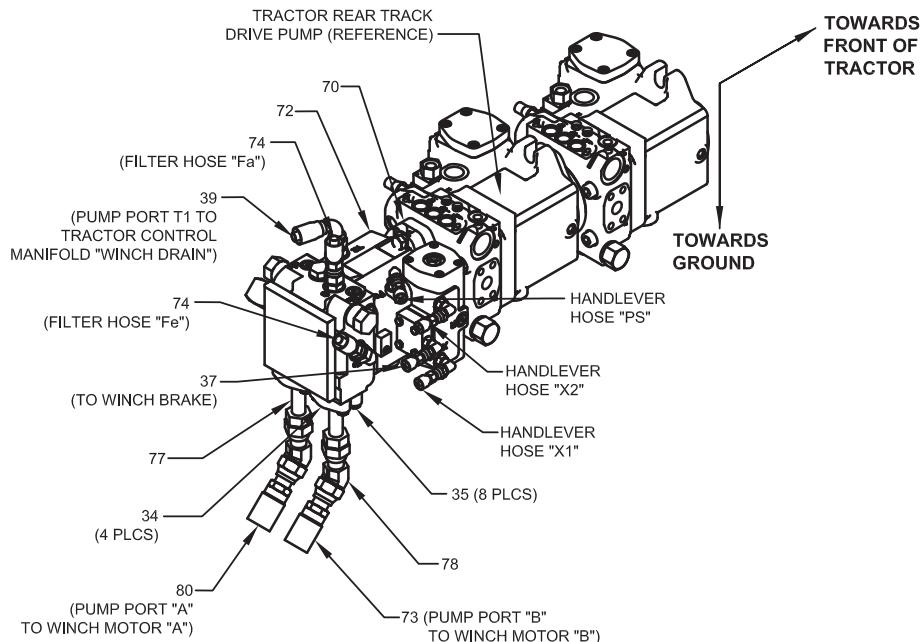
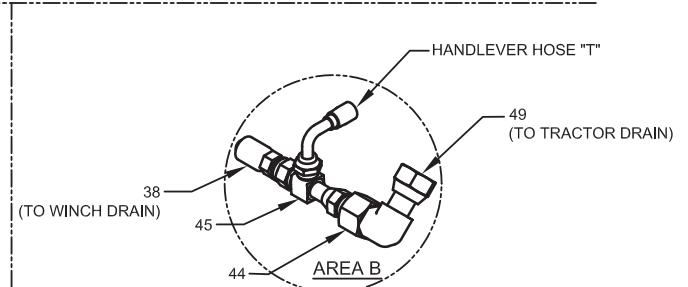
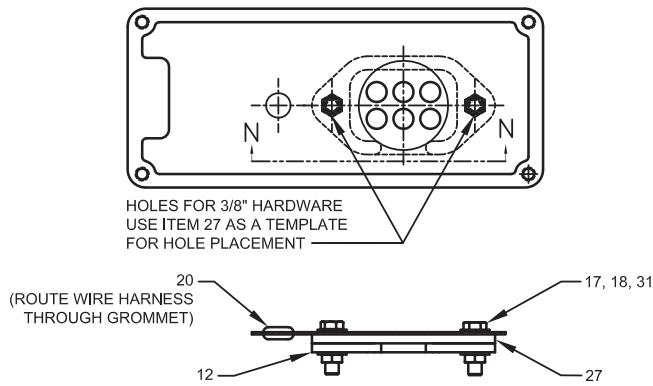
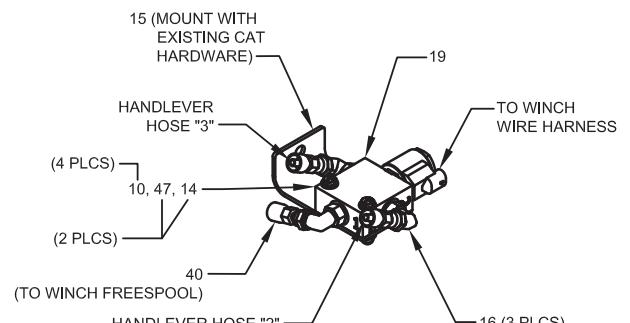


**Winch External Hydraulics**

Caterpillar D3/4K (H4AH\_Y\_C19)

Last Used on S/N H4A-1161

Page 2 of 3

HOSE SUPPORTTRACTOR TANK CONNECTIONSRIGHT HAND CONSOLE DETAILAREAS D  
FREESPOOL CONTROL VALVE

**Winch External Hydraulics**

Caterpillar D3/4K (H4AH\_Y\_C19)

Last Used on S/N H4A-1161

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	2311053	Harness, Wire	1	42	R2528352	Clip	2
9	293628W	Capscrew	6	43	R13803039	Clip	2
10	15127W	Washer	4	44	2307958W	Fitting	1
12	2307226W	Cover	1	45	R834052	Fitting	1
14	Y01C-0428	Capscrew	2	46	296420W	Washer	8
15	2307897W	Plate, Mounting	1	47	15113W	Nut	2
16	R833253	Fitting	3	48	2310968	Harness	1
17	16828W	Capscrew	4	49	R833804	Fitting	1
18	15134W	Washer	6	50	R833115	Fitting	1
19	2310011	Assembly, Manifold Valve (3-115)	1	70	2310889	Kit, Through Drive	1
20	227025	Grommet	1	71	*a 2303848W	Flangescrew	2
21	R13809935	Clamp	2	72	2311470	Assembly, Pump, 45CC (See 3-14)	1
22	213619W	Fitting	1	73	*b 2311478	Assembly, Hose - Motor B	2
25	292655W	Nut	2	74	2311479	Assembly, Filter (See 3-107)	1
27	2311120	Gasket	1	75	2311483	Bracket, Hose	1
31	15086W	Nut	2	76	248165	Hose, Bulk	4.5 Ft.
34	222535W	Fitting	8	77	2311488	Assembly, Fitting w/ O-Ring	2
35	*a Y17C-0624	Capscrew	12	78	2311485	Fitting	2
37	*b 2311050	Assembly, Hose - Brake Release	1	79	2311490	Assembly, Control Lever (See 3-131)	1
38	*b 2311051	Assembly, Hose - Winch Drain	1	80	*b 2311495	Assembly, Hose - Motor A	1
39	*b 2311021	Assembly, Hose - Pump Drain	1				
40	*b 2311052	Assembly, Hose - Freespool	1				
						*a      Use 318702W Thread Lock	
						*b      Included in 2315323 Hose Kit	

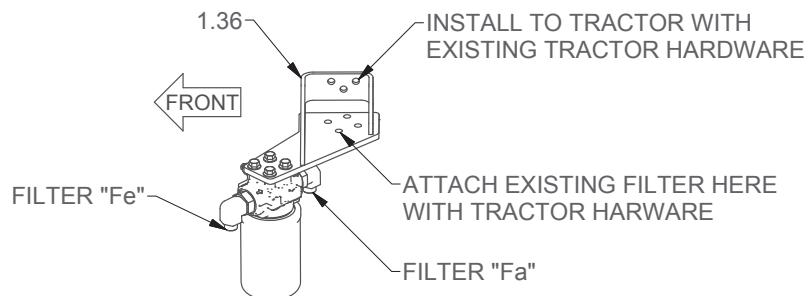
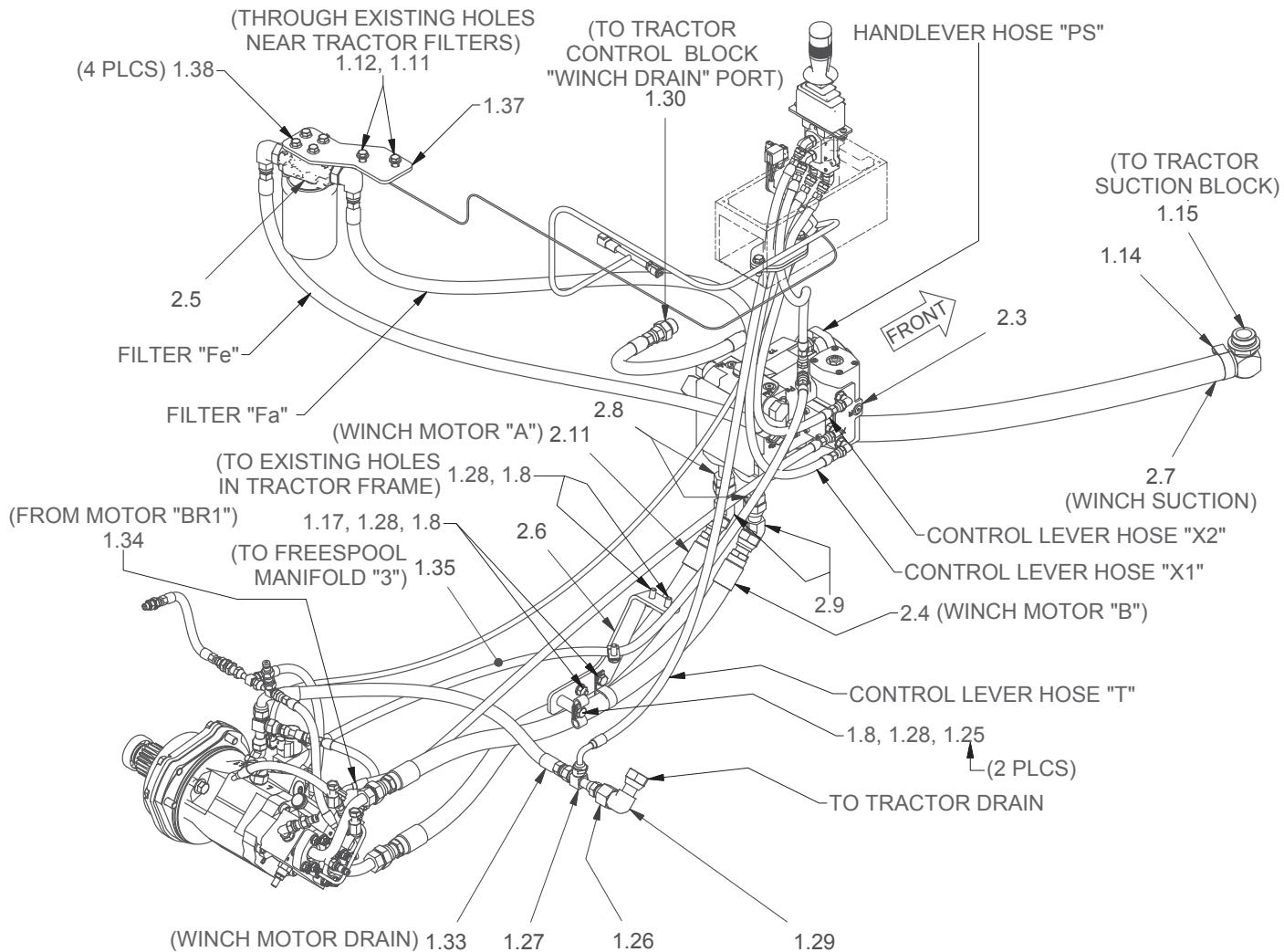
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**Winch External Hydraulics**

Caterpillar D3/4K/K2 (H4AH\_Y\_C19)

Used on S/N H4A-1162 - H4A-1435

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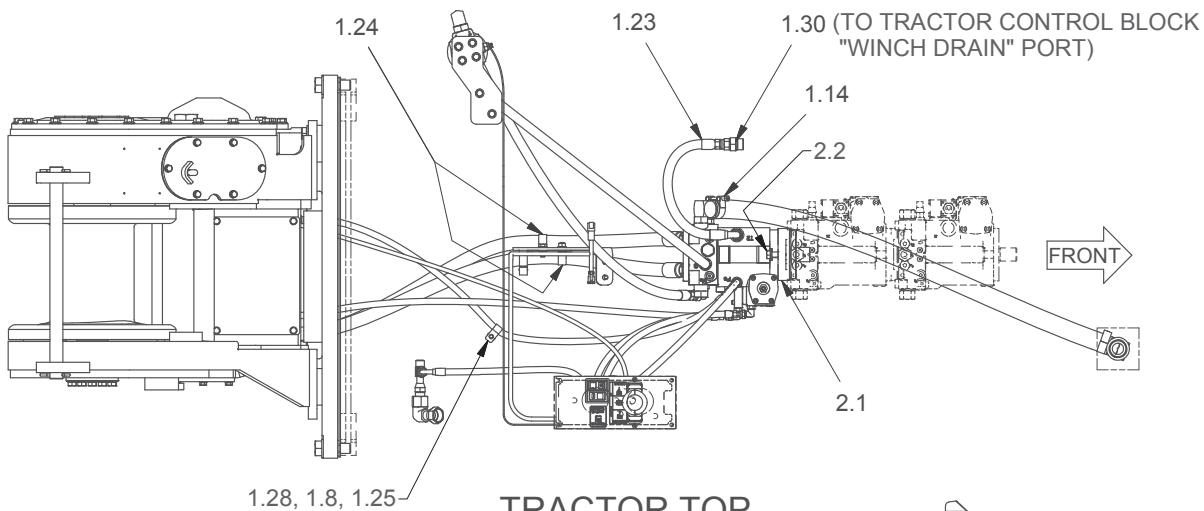
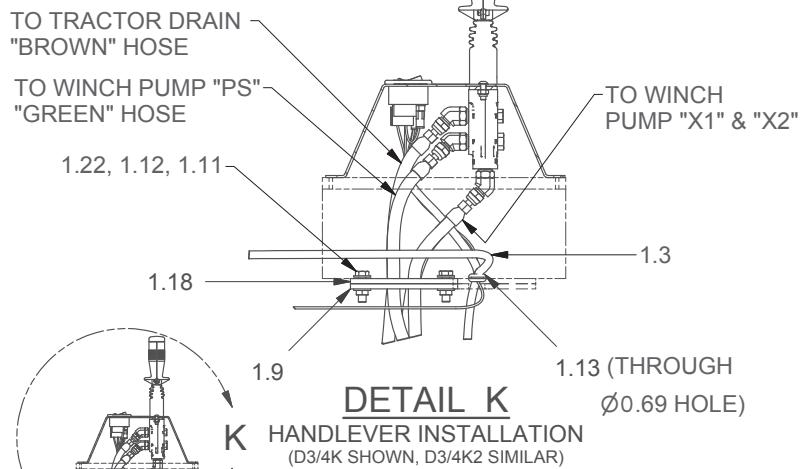
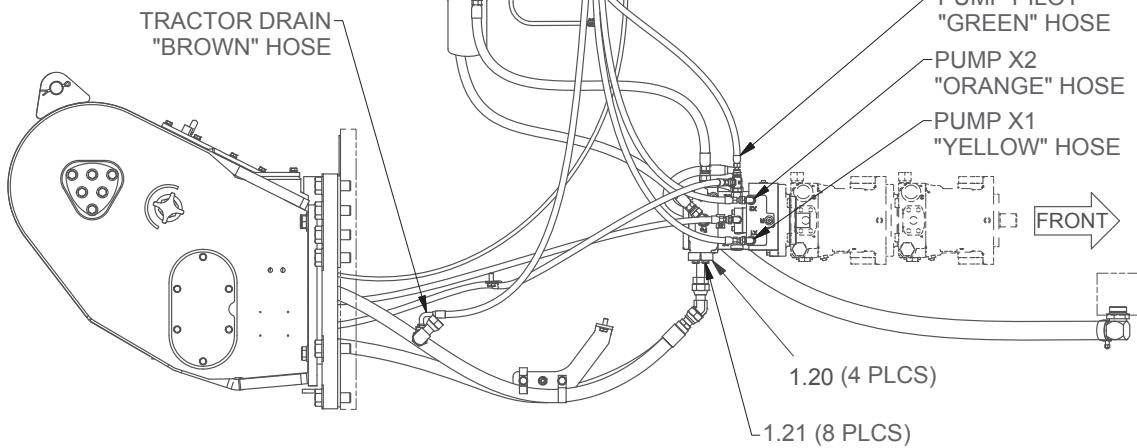
**D3/4K2 ALTERNATE  
FILTER BRACKET****HYDRAULIC INSTALLATION  
ISOMETRIC VIEW**

**Winch External Hydraulics**

Caterpillar D3/4K/K2 (H4AH\_Y\_C19)

Used on S/N H4A-1162 - H4A-1435

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**TRACTOR TOP****DETAIL K**  
HANDLEVER INSTALLATION  
(D3/4K SHOWN, D3/4K2 SIMILAR)**TRACTOR RIGHT SIDE**

**Winch External Hydraulics**

Caterpillar D3/4K/K2 (H4AH\_Y\_\_C19)

Used on S/N H4A-1162 - H4A-1435

Page 3 of 3

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.3	2314312	Harness, Wire	1	1.29	R833804	Fitting	1
1.8	293628W	Capscrew	6	1.30	R833115	Fitting	1
1.9	2307226W	Cover	1	1.33	*b	242120	Assembly, Hose
1.11	16828W	Capscrew	4	1.34	*b	2311701	Assembly, Hose
1.12	15134W	Washer	6	1.35	*b	2311699	Assembly, Hose
1.13	227025	Grommet	1	1.36	2314310	Bracket, Filter - D3-D5K2	1
1.14	R13809935	Clamp	2	1.37	2310814	Bracket, Filter - D3-D5K	1
1.15	213619W	Fitting	1	1.38	134803W	Screw	4
1.16	137852W	Clamp, Strap (Not Shown)	25	2.1	2310889	Kit, Through Drive	1
1.17	292655W	Nut	2	2.2	*a	2303848W	Capscrew, Flanged
1.18	2311310	Gasket, Hose Seal	1	2.3	2311773	Assembly, Pump (3-15)	1
1.19	HSP0000006	Protector, Hose	1	2.4	*b	2311698	Assembly, Hose - Motor B
1.20	222535W	Fitting	4	2.5	2311479	Assembly, Filter (3-107)	1
1.21	*a Y17C-0624	Capscrew	8	2.6	2311483	Bracket, Hose	1
1.22	15086W	Nut	2	2.7	248165	Hose, Bulk	4.5 Ft.
1.23	*b 2311021	Assembly, Hose - Pump Drain	1	2.8	2311488	Assembly, Fitting w/ O-Ring	2
1.24	R2528352	Clip	2	2.9	2311485	Fitting	2
1.25	R13803039	Clip	3	2.11	*b	2311697	Assembly, Hose - Motor A
1.26	2307958W	Fitting	1	*a *b		Use 318702W Thread Lock Included in 2315324 Hose Kit	
1.27	R834052	Fitting	1				
1.28	296420W	Washer	8				

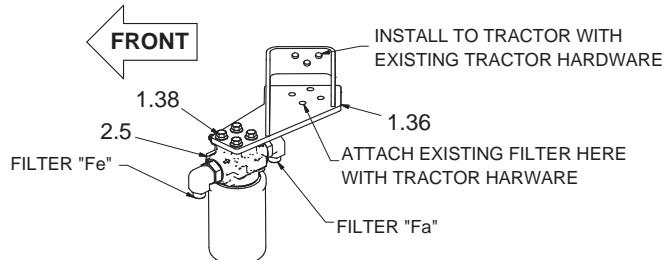
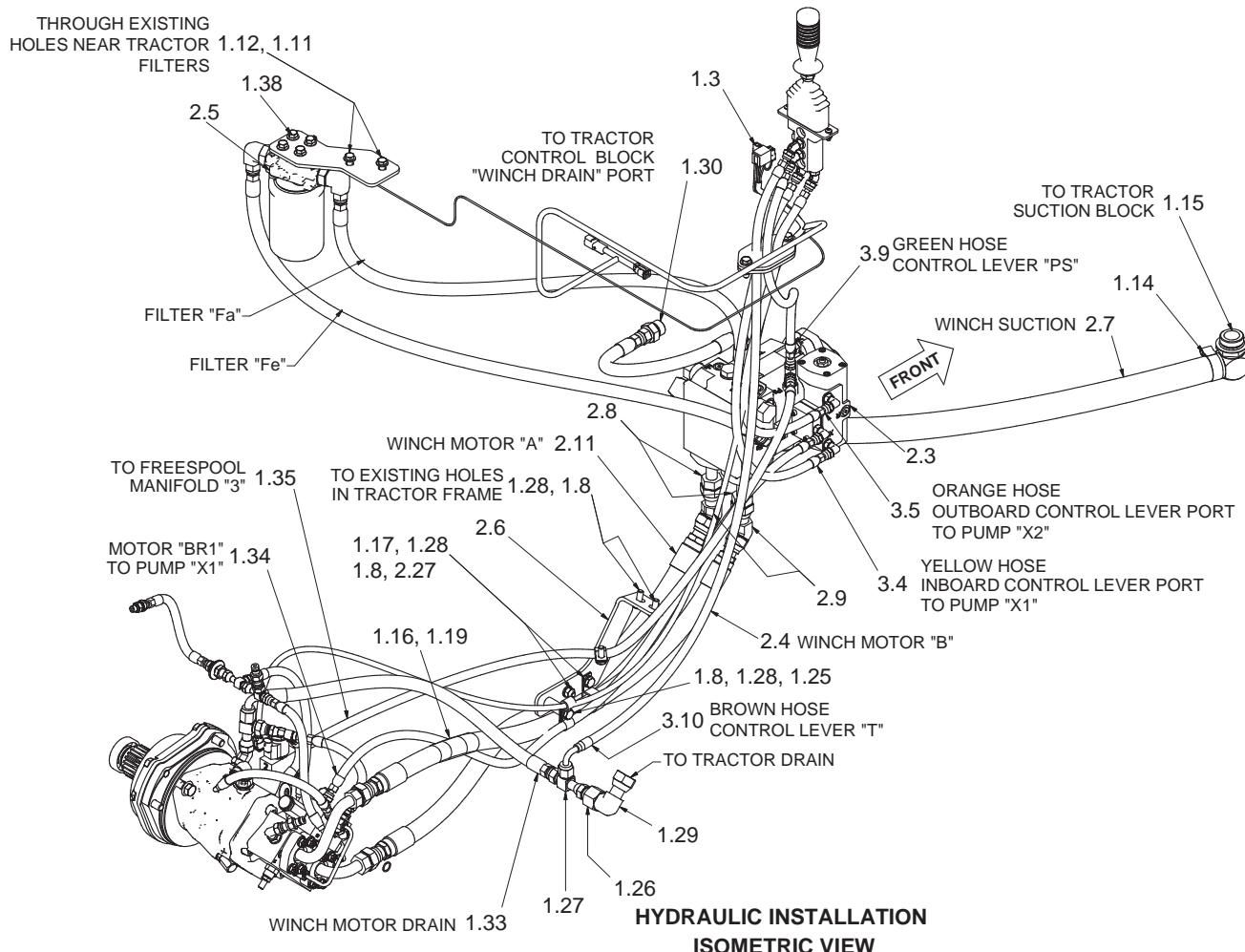
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**Winch External Hydraulics**

Caterpillar D3/4K/K2 (H4AH\_Y\_C19)

First Used on S/N H4A-1436

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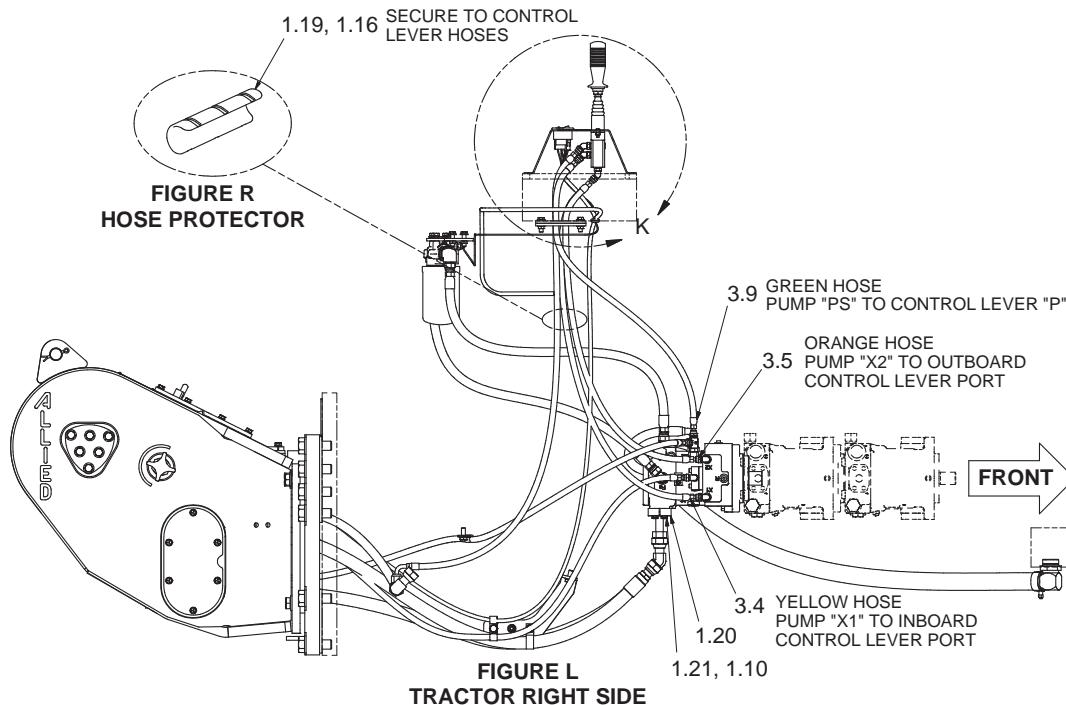
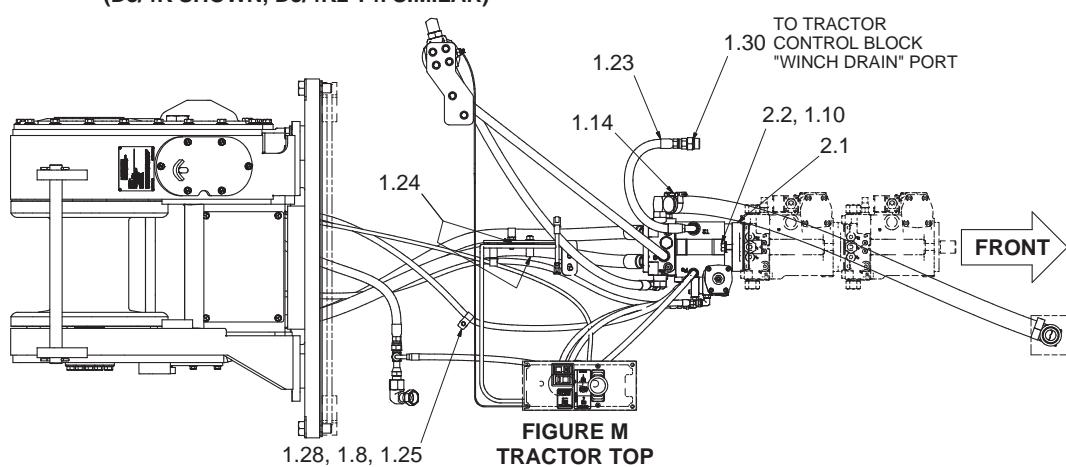
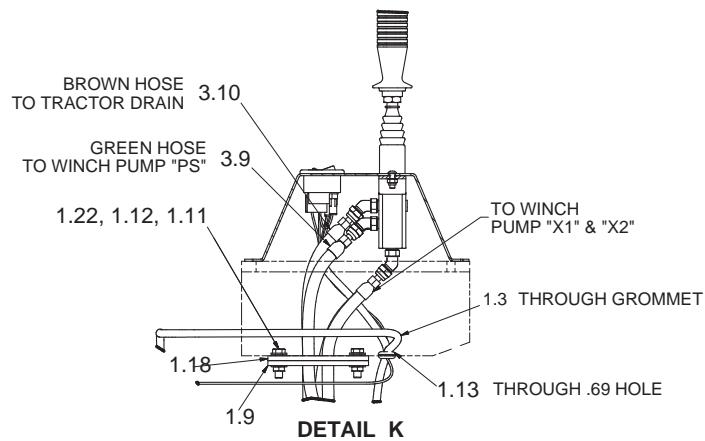
**D3/4K2 T4i ALTERNATE FILTER BRACKET**

**Winch External Hydraulics**

Caterpillar D3/4K/K2 (H4AH\_Y\_C19)

First Used on S/N H4A-1436

Page 2 of 3



**Winch External Hydraulics**

Caterpillar D3/4K/K2 (H4AH\_Y\_\_C19)

First Used on S/N H4A-1436

Page 3 of 3

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.3	2314312	Harness, Wire	1	1.29	R833804	Fitting	1
1.8	293628W	Capscrew	6	1.30	R833115	Fitting	1
1.9	2307226W	Cover	1	1.33	*d	242120	Assembly, Hose
1.11	16828W	Capscrew	4	1.34	*d	2311701	Assembly, Hose
1.12	15134W	Washer	6	1.35	*d	2311699	Assembly, Hose
1.13	227025	Grommet	1	1.36	*b	2314310	Bracket, Filter
1.14	R13809935	Clamp	2	1.37	*c	2310814	Bracket, Filter
1.15	213619W	Fitting	1	1.38	134803W	Screw	4
1.16	137852W	Clamp, Strap (Not Shown)	25	2.1	2310889	Kit, Through Drive	1
1.17	292655W	Nut	2	2.2	*a	2303848W	Capscrew, Flanged
1.18	2311310	Gasket, Hose Seal	1	2.3	2311773	Assembly, Pump (3-15)	1
1.19	HSP0000006	Protector, Hose	2	2.4	*d	2311698	Assembly, Hose - Motor B
1.20	222535W	Fitting	4	2.5	2311479	Assembly, Filter (3-107)	1
1.21	*a Y17C-0624	Capscrew	8	2.6	2311483	Bracket, Hose	1
1.22	15086W	Nut	2	2.7	248165	Hose, Bulk	4.5 Ft.
1.23	*d 2311021	Assembly, Hose - Pump Drain	1	2.8	2311488	Assembly, Fitting w/ O-Ring	2
1.24	R2528352	Clip	2	2.9	2311485	Fitting	2
1.25	R13803039	Clip	3	2.11	*d	2311697	Assembly, Hose - Motor A
1.26	2307958W	Fitting	1	*a		Use 318702W Thread Lock	
1.27	R834052	Fitting	1	*b		Used on D3-D5K2	
1.28	296420W	Washer	8	*c		Used on D3-D5K	
				*d		Included in 2315324 Hose Kit	

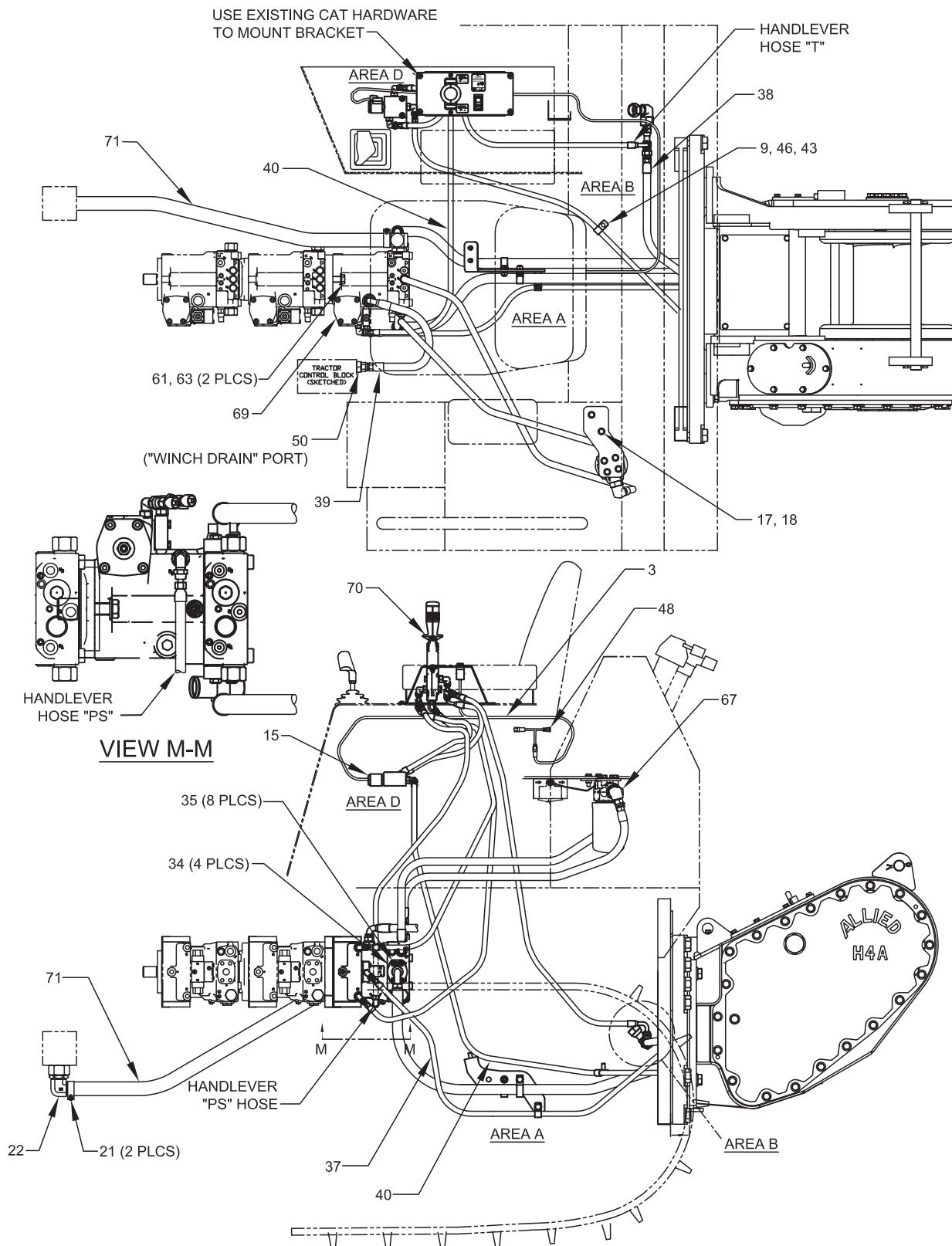
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**Winch External Hydraulics**

Caterpillar D5K (H4AH\_Y\_C20)

Last Used on S/N H4A-1161

Page 1 of 3

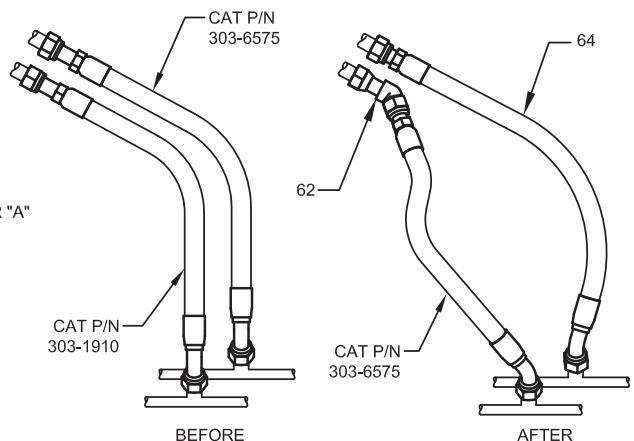
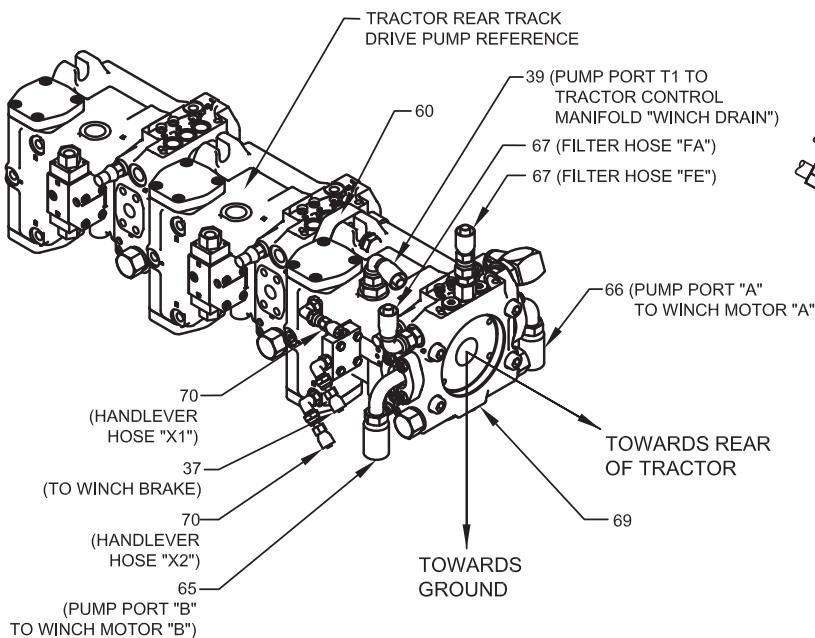
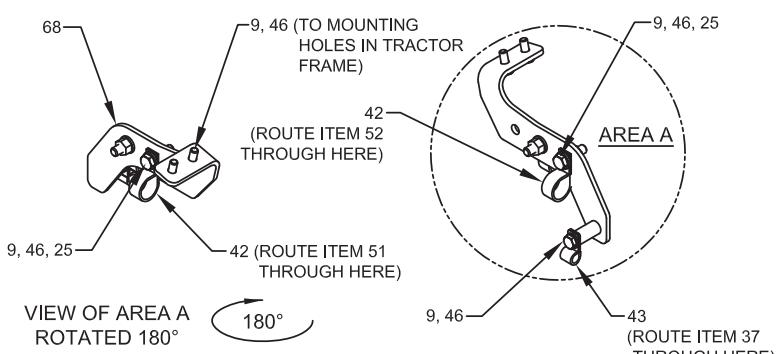
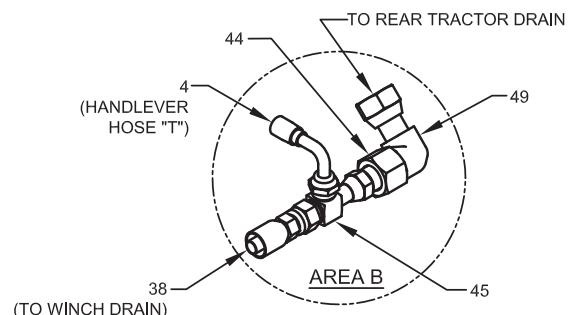
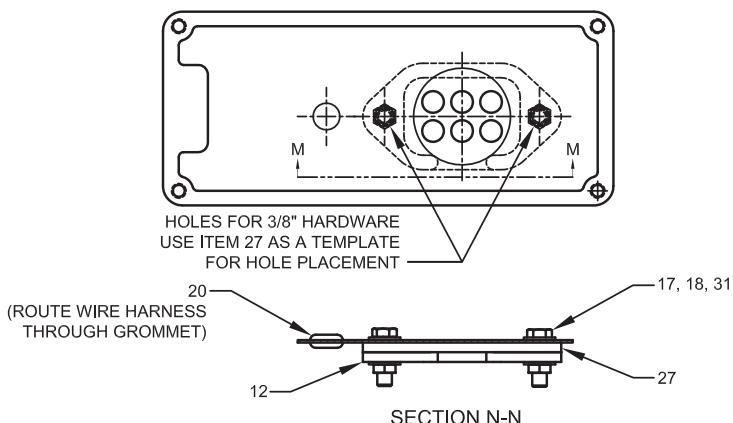
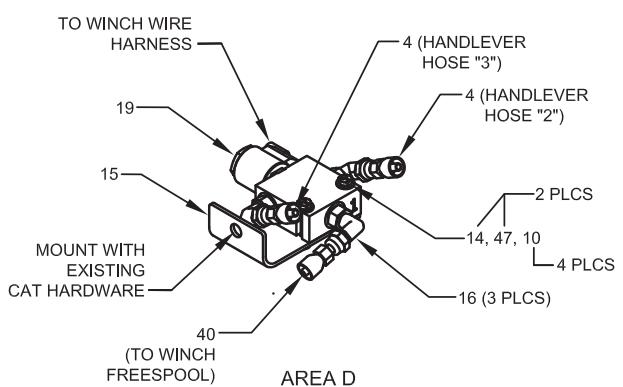


**Winch External Hydraulics**

Caterpillar D5K (H4AH\_Y\_C20)

Last Used on S/N H4A-1161

Page 2 of 3

**D5K HOSE REPLACEMENT**(LOCATED BEHIND TRACTOR TRANSMISSION PUMP)  
VIEWED LOOKING TOWARD REAR OF TRACTOR**HOSE SUPPORT****TRACTOR DRAIN CONNECTIONS****RIGHT HAND CONSOLE DETAIL****FREESPOOL CONTROL MANIFOLD**

**Winch External Hydraulics**

Caterpillar D5K (H4AH\_Y\_\_C20)

Last Used on S/N H4A-1161

Page 3 of 3

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	2311053	Harness, Wire	1	43	R13803039	Clip	2
9	293628W	Capscrew	6	44	2307958W	Fitting	1
10	15127W	Washer	4	45	R834052	Fitting	1
12	2307226W	Cover	1	46	296420W	Washer	8
14	Y01C-0428	Capscrew	2	47	15113W	Nut	2
15	2307897W	Plate, Mounting	1	48	2310968	Harness	1
16	R833253	Fitting	3	49	R833804	Fitting	1
17	16828W	Capscrew	4	50	R833115	Fitting	1
18	15134W	Washer	6	60	2310872	Kit, Through Drive (See 3-120)	1
19	2310011	Assembly, Manifold Valve (3-115)	1	61	*a Y19C-M1650	Capscrew	2
20	227025	Grommet	1	62	2310943	Fitting	1
21	R13809935	Clamp	2	63	296426W	Washer	2
22	213619W	Fitting	1	64	*b 2311028	Assembly, Hose	1
25	292655W	Nut	2	65	*b 2311032	Assembly, Hose	1
27	2311120	Gasket	1	66	*b 2311033	Assembly, Hose	1
31	15086W	Nut	2	67	2310844	Assembly, Filter (See 3-105)	1
34	222535W	Fitting	8	68	2310954	Bracket, Hose	1
35	*a Y17C-0624	Capscrew	12	69	2310961	Assembly, Pump (See 3-16)	1
37	*b 2311050	Assembly, Hose - Brake Release	1	70	2311396	Assembly, Control Lever (See 3-134)	1
38	*b 2311051	Assembly, Hose - Winch Drain	1	71	*a 248165	Hose, Bulk	2.83 Ft.
39	*b 2311021	Assembly, Hose - Pump Drain	1		*a	Use 318702W Thread Lock	
40	*b 2311052	Assembly, Hose - Freespool	1		*b	Included in 2315325 Hose Kit	
42	R2528352	Clip	2				

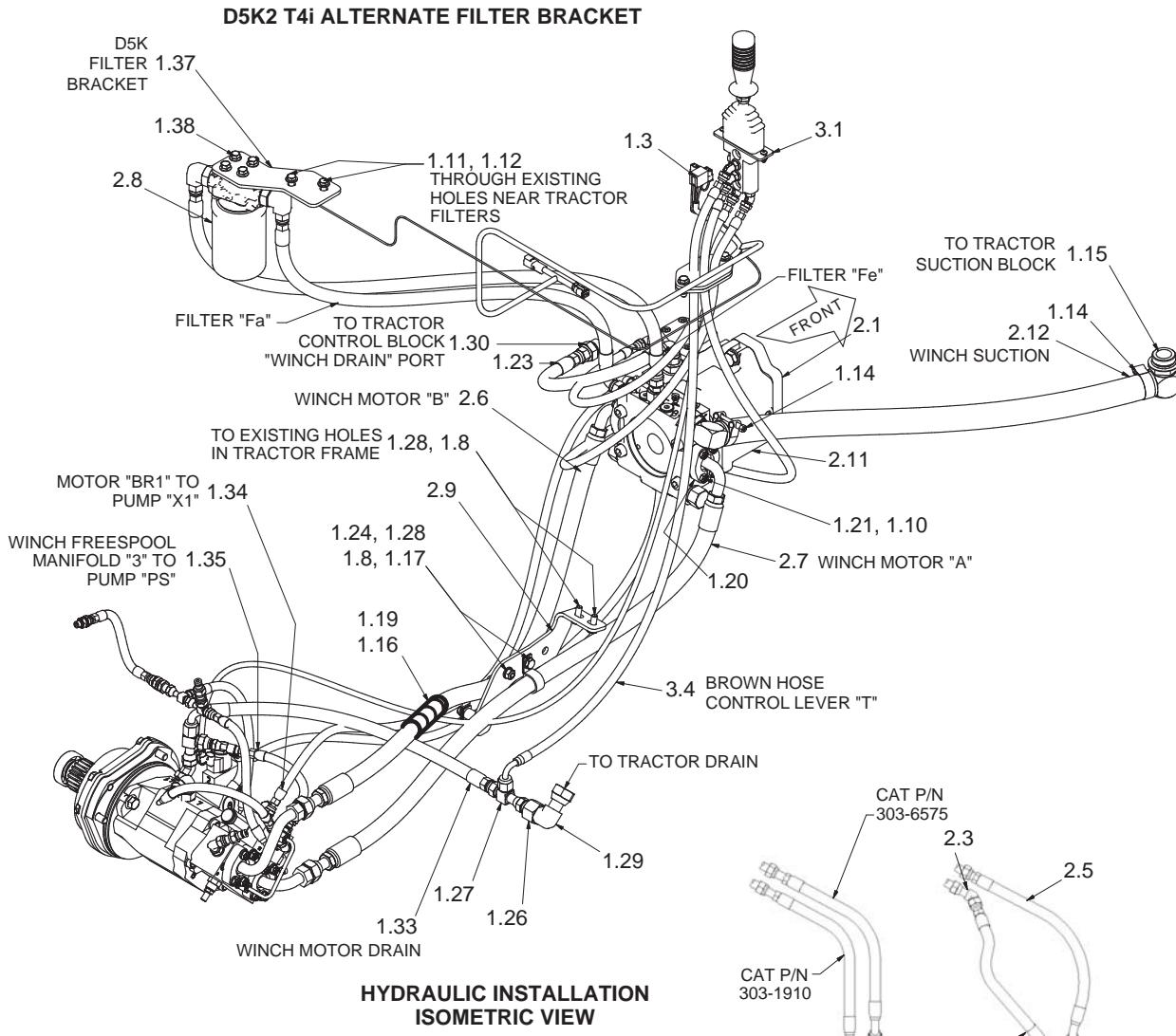
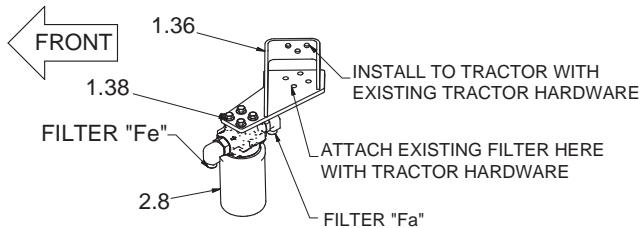
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**Winch External Hydraulics**

Caterpillar D5K/K2 (H4AH\_Y\_C20)

First Used on S/N H4A-1162

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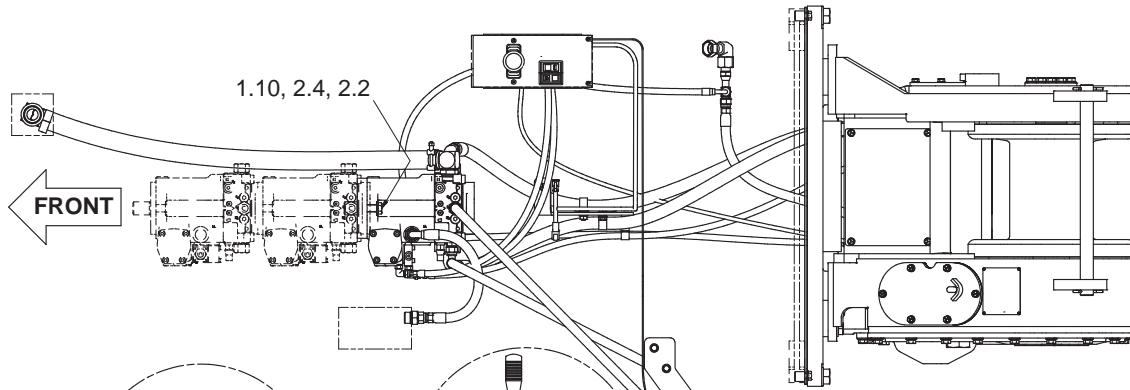
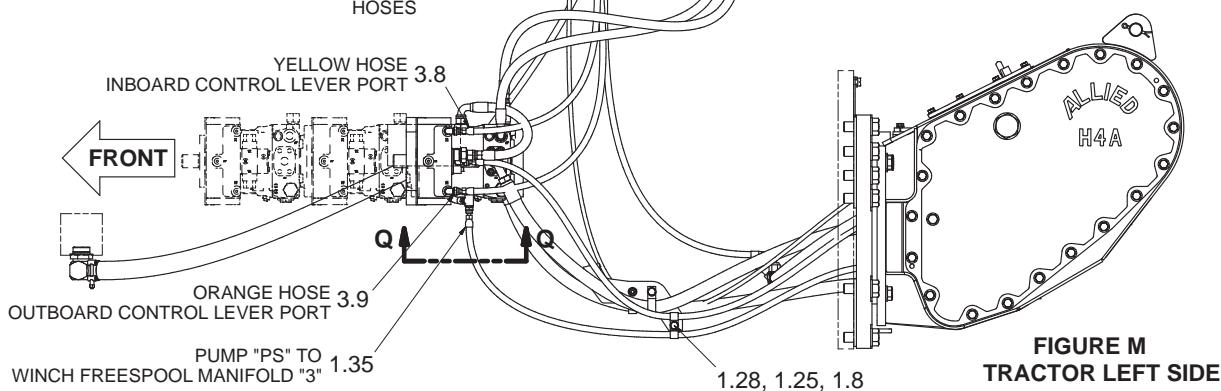
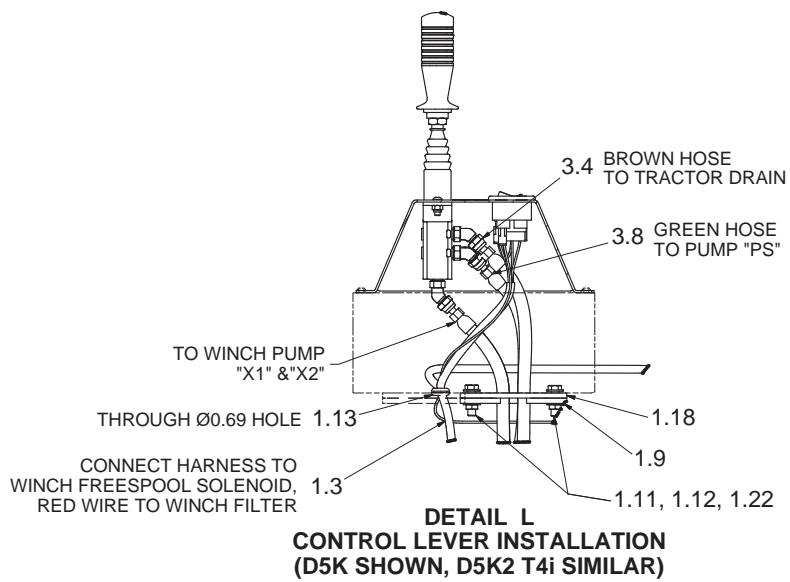
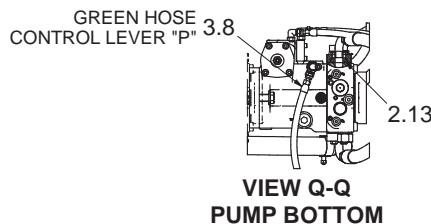
**BLADE HOSE INSTALLATION**  
VIEWED LOOKING TOWARD REAR OF TRACTOR  
(LOCATED DIRECTLY IN FRONT OF THE FUEL TANK)

**Winch External Hydraulics**

Caterpillar D5K/K2 (H4AH\_Y\_C20)

First Used on S/N H4A-1162

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**FIGURE R  
HOSE PROTECTOR****FIGURE N  
TRACTOR TOP****FIGURE M  
TRACTOR LEFT SIDE**

**Winch External Hydraulics**

Caterpillar D5K/K2 (H4AH\_Y\_\_C20)

First Used on S/N H4A-1162

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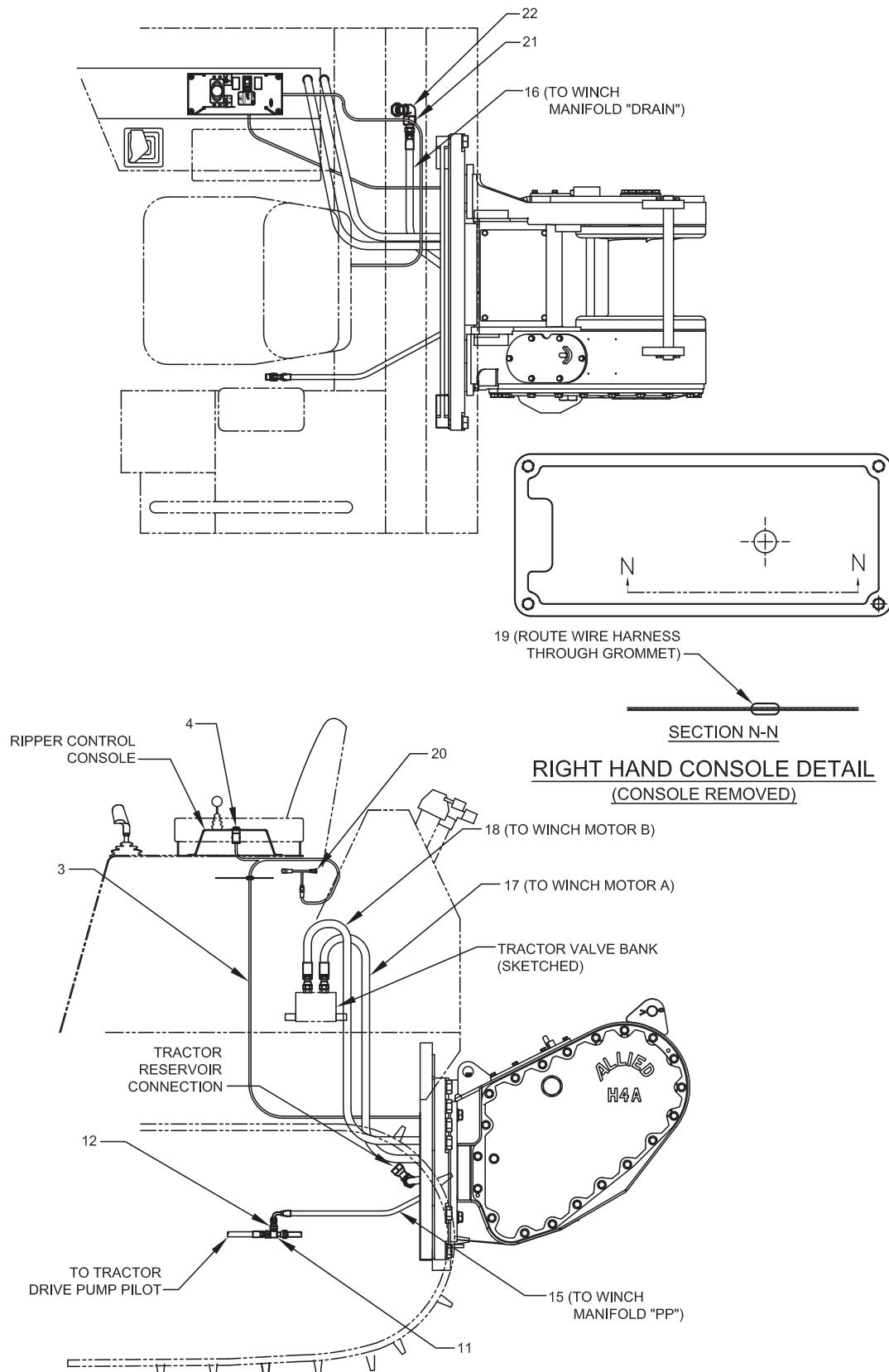
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.3	2314312	Harness, Wire	1	1.30	R833115	Fitting	1
1.8	293628W	Capscrew	6	1.33	*d	242120	Assembly, Hose
1.9	2307226W	Cover	1	1.34	*d	2311701	Assembly, Hose - Brake
1.11	16828W	Capscrew	4	1.35	*d	2311699	Assembly, Hose - Freespool
1.12	15134W	Washer	6	1.36	*b	2314310	Bracket, Filter
1.13	227025	Grommet	1	1.37	*c	2310814	Bracket, Filter
1.14	R13809935	Clamp, T-Bolt	2	1.38		134803W	Screw
1.15	213619W	Fitting	1	2.1		2310872	Kit, Through Drive (See 3-120)
1.16	137852W	Clamp, Strap	25	2.2	*a	232387	Capscrew
1.17	292655W	Nut	2	2.3		2310943	Fitting
1.18	2311310	Gasket	1	2.4		296426W	Washer
1.19	HSP0000006	Protector, Hose	2	2.5	*d	2311028	Assembly, Hose - Blade
1.20	222535W	Fitting	4	2.6	*d	2311758	Assembly, Hose - Motor B
1.21	*a Y17C-0624	Capscrew	8	2.7	*d	2311759	Assembly, Hose - Motor A
1.22	15086W	Nut	2	2.8		2310844	Assembly, Filter (See 3-105)
1.23	*d 2311021	Assembly, Hose - Pump Drain	1	2.9		2310954	Bracket, Hose
1.24	R2528352	Clip	2	2.11		2311753	Assembly, Pump (See 3-17)
1.25	R13803039	Clip	3	2.12		248165	Hose, Bulk
1.26	2307958W	Fitting	1	2.13		2304110W	O-Ring
1.27	R834052	Fitting	1		*a		Use 318702W Thread Lock
1.28	296420W	Washer	8		*b		Used on D5K2
1.29	R833804	Fitting	1		*c		Used on D5K
					*d		Included in 2315326 Hose Kit

## Winch External Hydraulics

Caterpillar D3/4K (H4AT\_Y\_C19)

Caterpillar D5K (H4AT\_Y\_C20)

Page 1 of 2



**Winch External Hydraulics**

Caterpillar D3/4K (H4AT\_Y\_C19)

Caterpillar D5K (H4AT\_Y\_C20)

Page 2 of 2

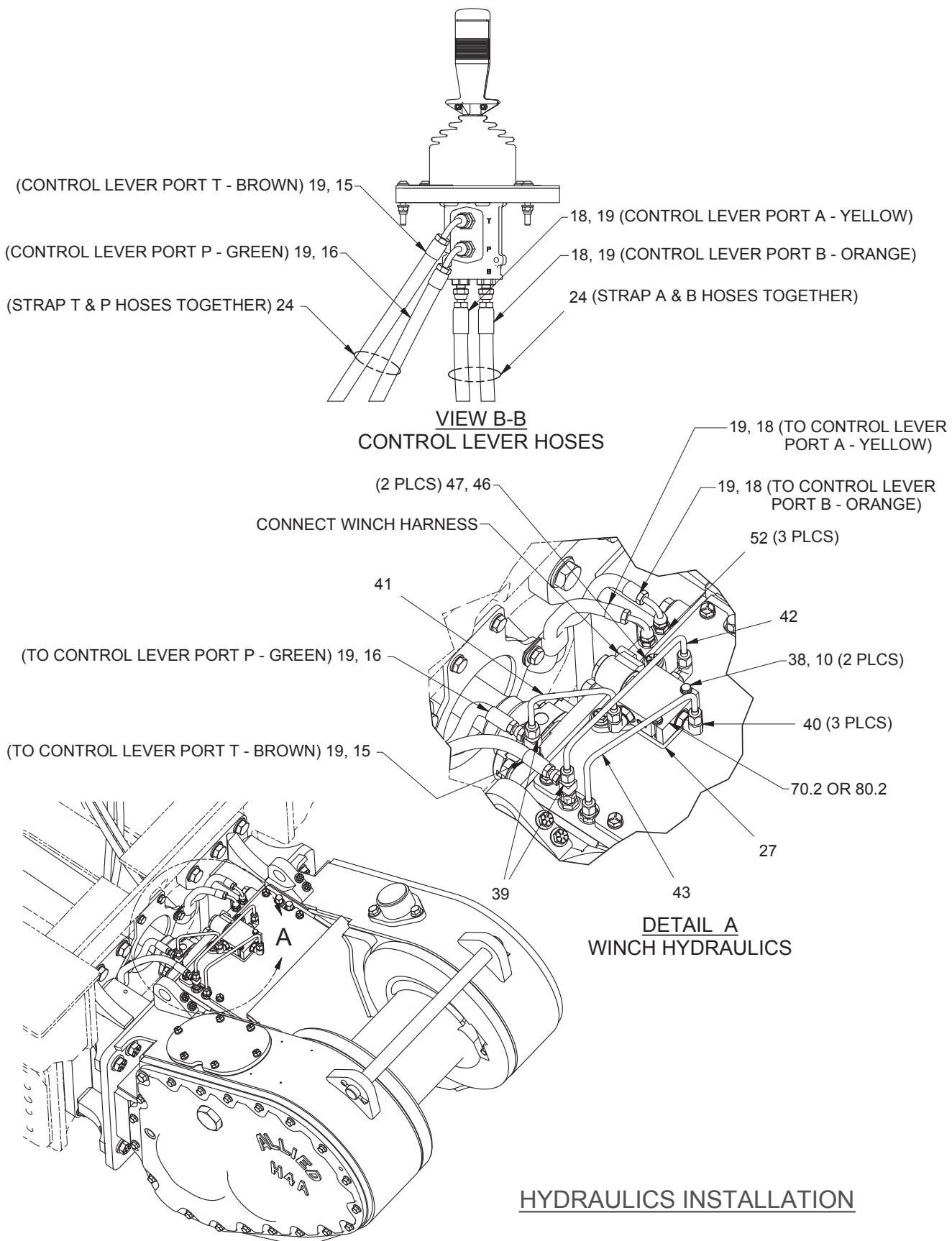
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty		
3	2311202	Harness, Wire	1	17	*a	2311200	Assembly, Hose - Motor A	1	
4	2310017	Assembly, Switch - 12V (See 3-159)	1	18	*a	2311201	Assembly, Hose - Motor B	1	
11	231955	Fitting	1	19		227025	Grommet	1	
12	242629	Fitting	1	20		2310968	Harness	1	
15	*a	2311198	Assembly, Hose - Pilot Supply	1	21		2307958W	Fitting	1
16	*a	2311199	Assembly, Hose - Drain	1	22		R833804	Fitting	1

\*a      Included in 2315327 Hose Kit

**Winch External Hydraulics**

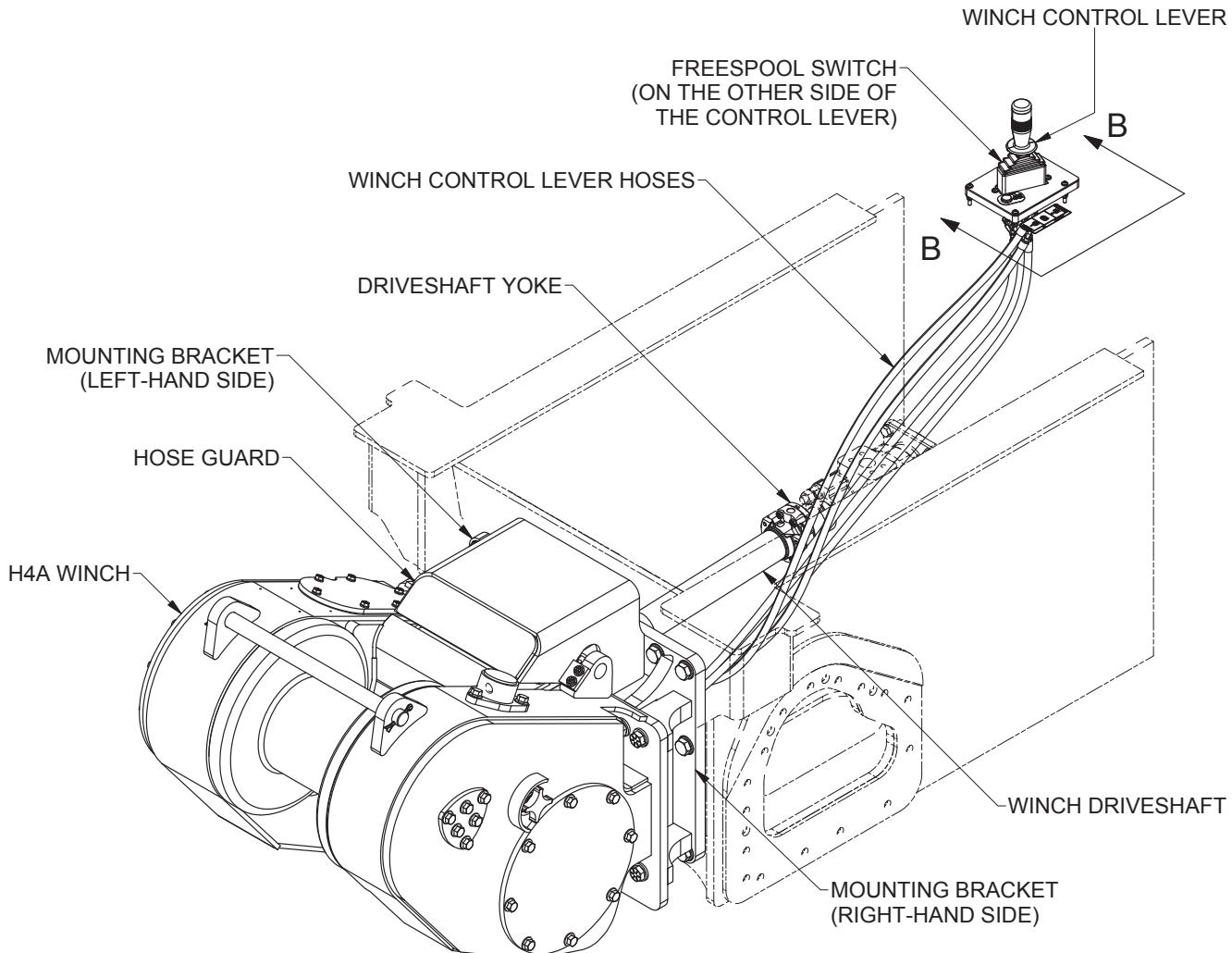
John Deere 450-650J (E15) &amp; 550-650K (H4AH\_R\_E16)

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**Winch External Hydraulics**

John Deere 450-650J (E15) & 550-650K (H4AH\_R\_E16)  
Page 2 of 2

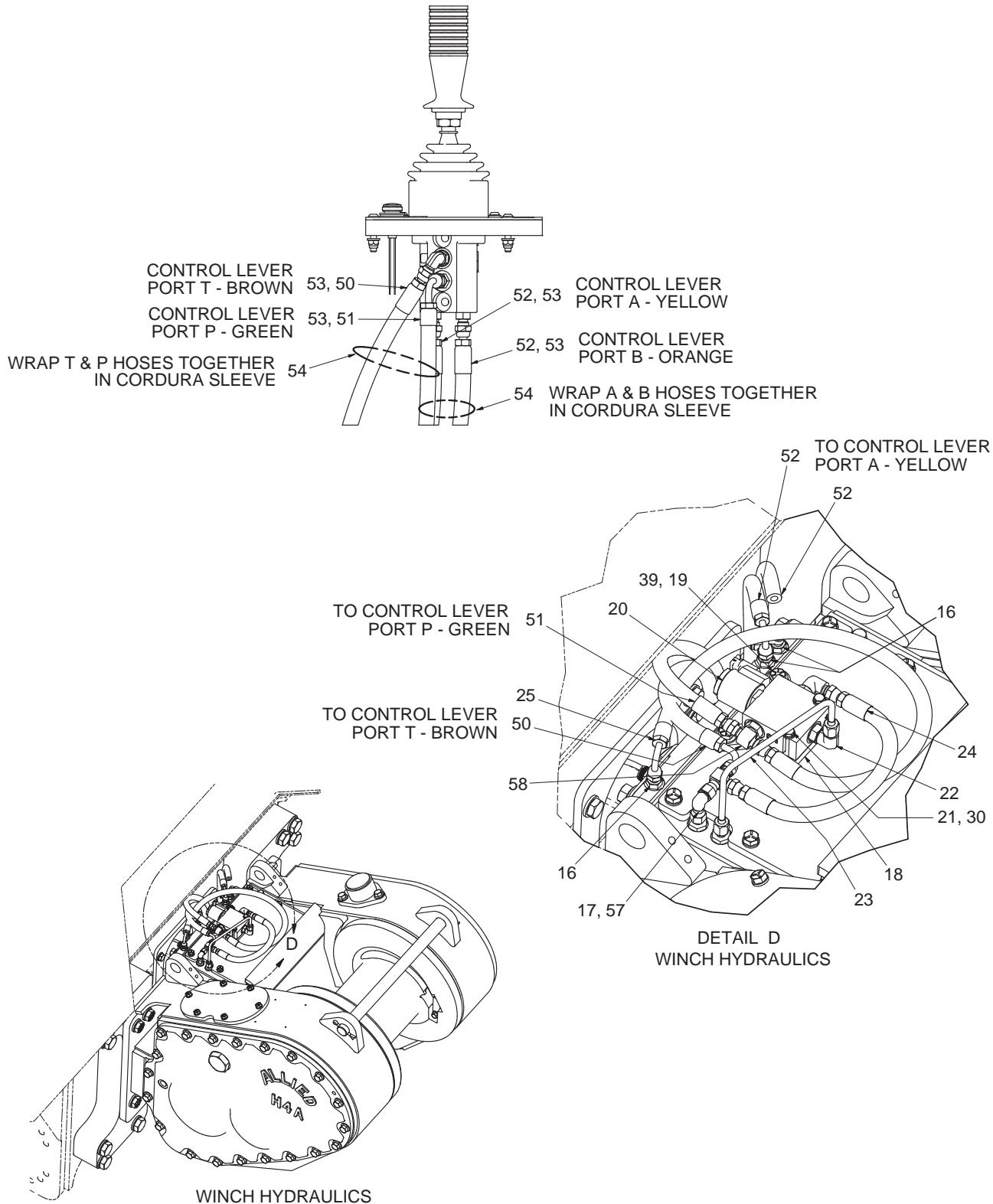
GENERAL INSTALLATION LAYOUT

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
10	296417W	Washer	2	42	2314409	Assembly, Tube - PD	1
15	*a 232687	Assembly, Hose	1	43	2314408	Assembly, Tube - FS	1
16	*a 049-2373	Assembly, Hose	1	46	221767W	Washer	2
18	*a 238173	Assembly, Hose	2	47	221499W	Capscrew	2
19	2304988W	Kit, Various Color Tie Strap	1	52	209083	Fitting	3
24	137852W	Tie, Cable	20	70.2	2310011	Assembly, Valve Manifold (For E15)	
27	2314396	Plate, Valve Mounting	1			(3-115)	1
38	Y09C-M0640	Capscrew	2	80.2	2307833W	Assembly, Valve Manifold (For E16)	
39	17059W	Fitting	2			(3-116)	1
40	223784	Fitting	3	*a      Included in 2315328 Hose Kit			
41	2314410	Assembly, Tube - PS	1				

**Winch External Hydraulics**

John Deere 700H/J (H4AH\_R\_E39)

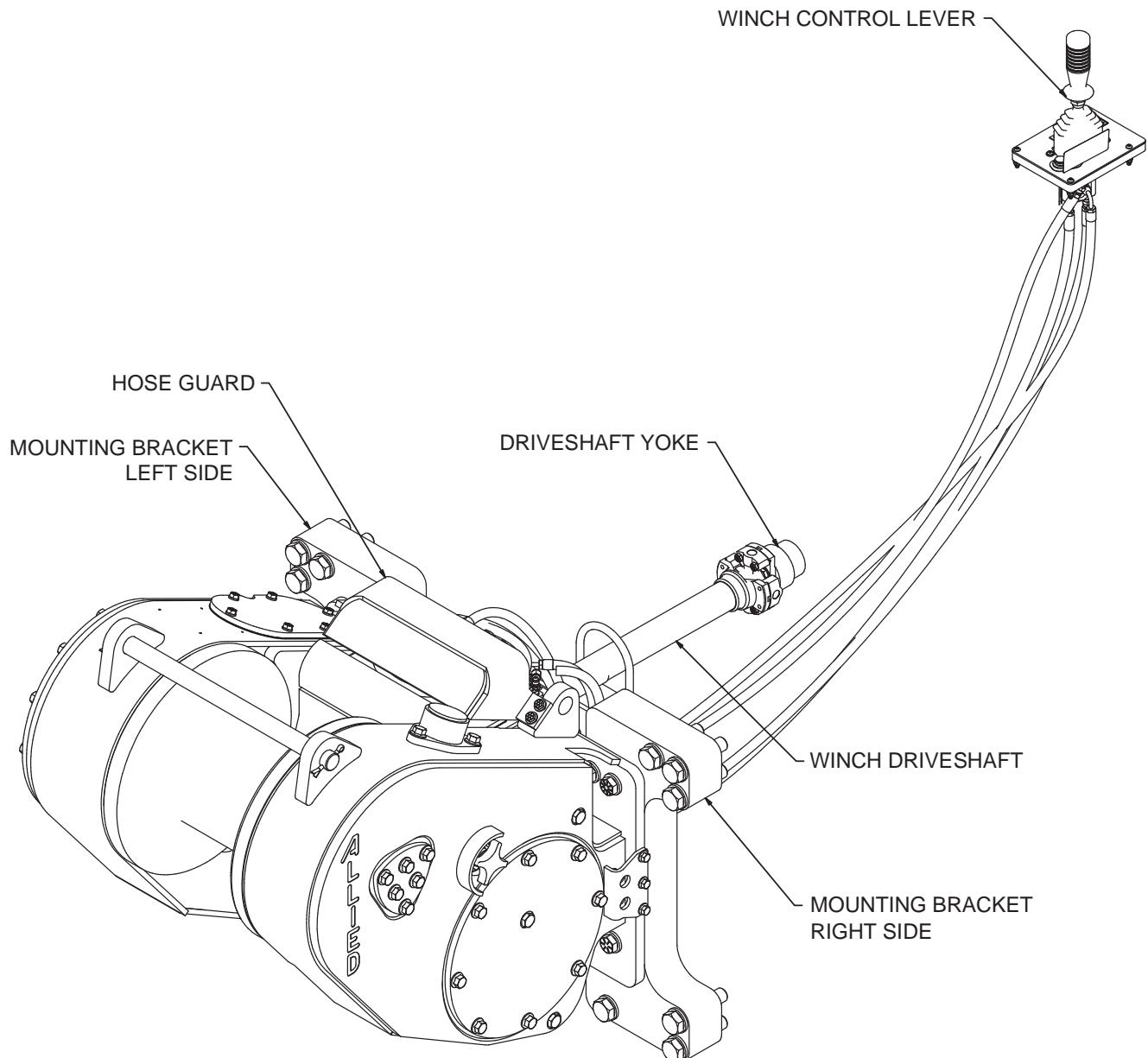
Page 1 of 2



**Winch External Hydraulics**

John Deere 700H/J (H4AH\_R\_E39)

Page 2 of 2

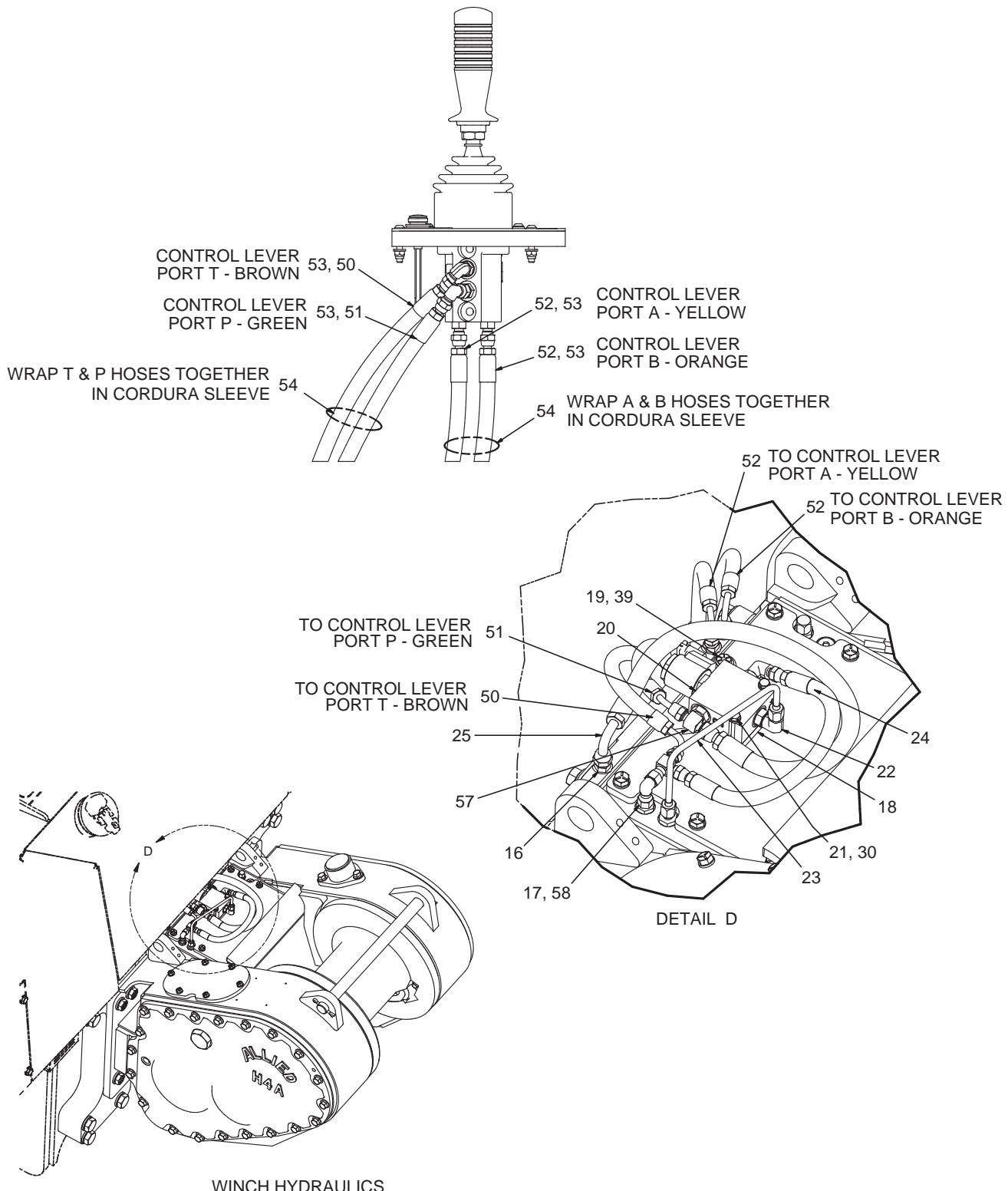


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
16	209083	Fitting	6	39	221767W	Washer	2	
17	17059W	Fitting	1	50	*a	232687	Assembly, Hose	1
18	2314396	Plate, Valve Mounting	1	51	*a	049-2373	Assembly, Hose	1
19	Y17C-0624	Capscrew	2	52	*a	238173	Assembly, Hose	2
20	2307833W	Assembly, Valve Manifold (3-116)	1	53	2304988W	Kit, Various Color Tie Strap	1	
21	Y09C-M0640	Capscrew	2	54	R13846	Sleeve, Cordura	15 ft	
22	223784	Fitting	2	57	212718	Fitting	1	
23	*a	2314408	Assembly, Hose	1	58	R11537	Fitting	1
24	228663	Assembly, Tube - PD	1	*a		Included in 2315329 Hose Kit		
25	*a	251487	Assembly, Hose	1				
30	296417W	Washer	2					

**Winch External Hydraulics**

John Deere 700K (H4AH\_R\_E391)

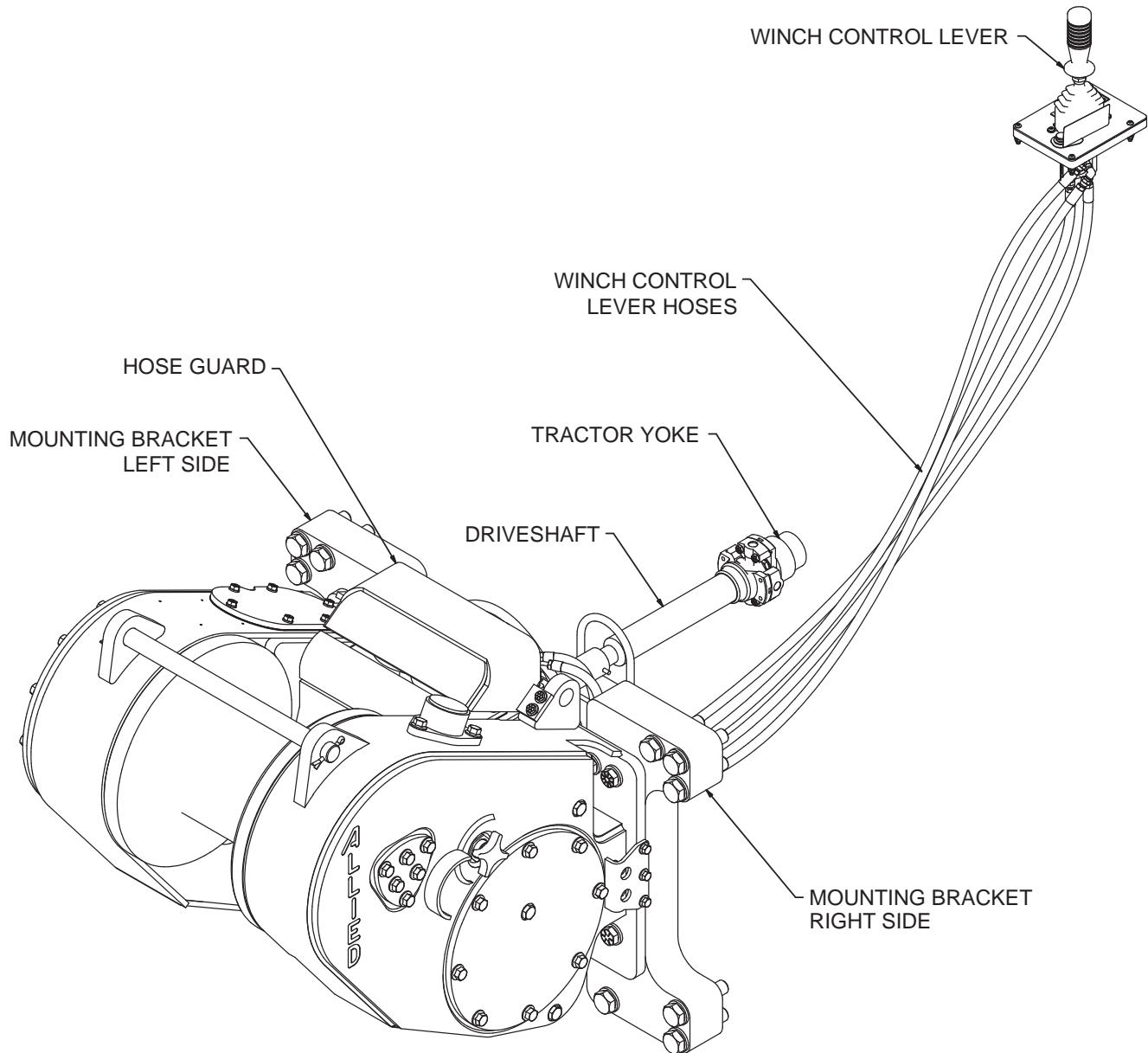
Page 1 of 2



**Winch External Hydraulics**

John Deere 700K (H4AH\_R\_E391)

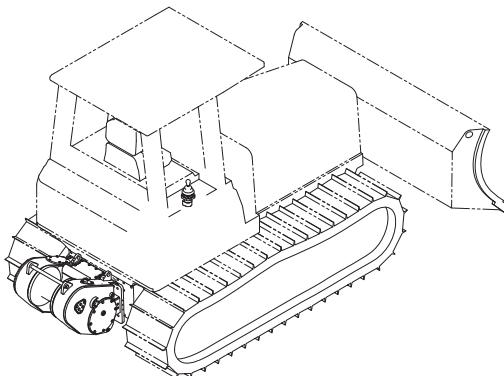
Page 2 of 2



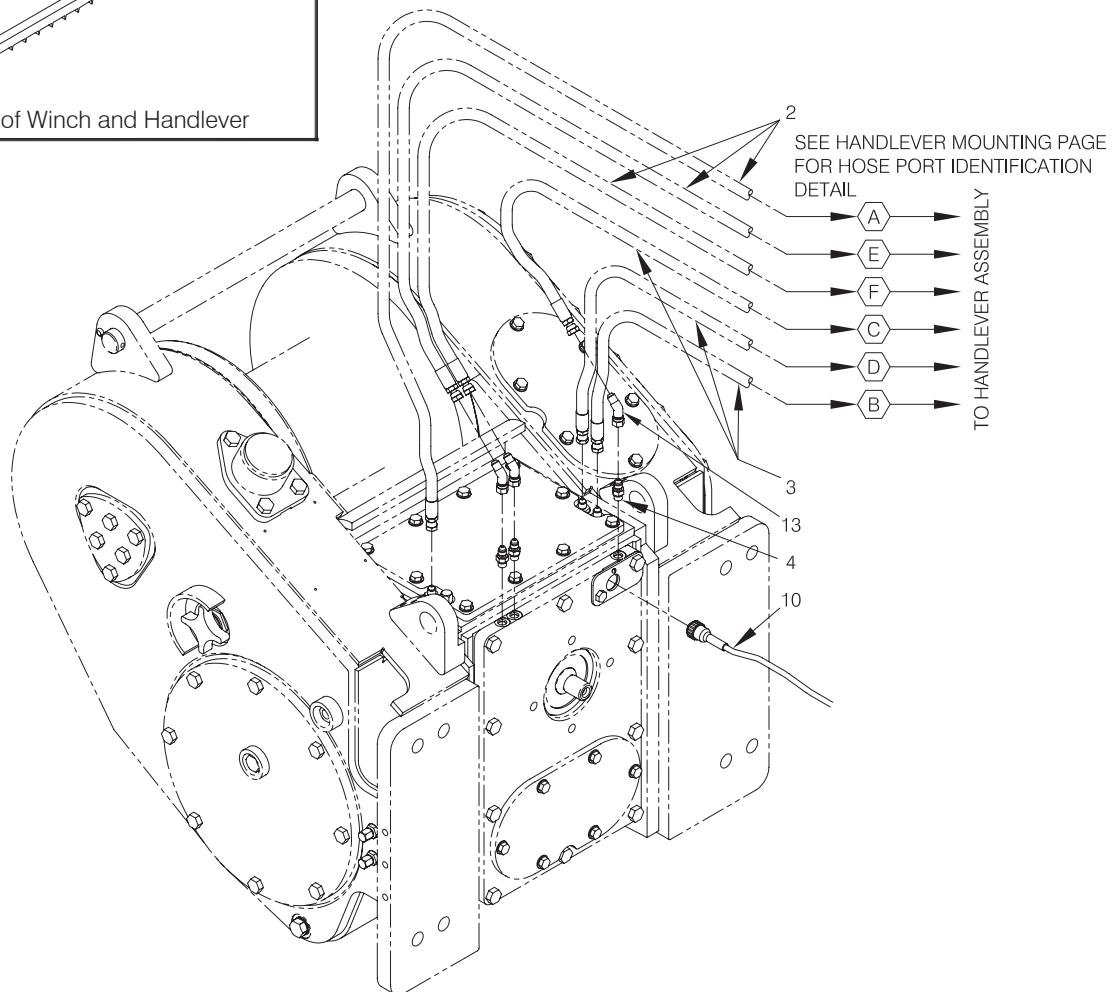
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
16	209083	Fitting	6	39	221767W	Washer	2
17	17059W	Fitting	1	50	*a	232687 Assembly, Hose	1
18	2314396	Plate, Valve Mounting	1	51	*a	239838 Assembly, Hose	1
19	Y17C-0624	Capscrew	2	52	*a	238173 Assembly, Hose	2
20	2307833W	Assembly, Valve Manifold (3-116)	1	53	2304988W	Kit, Various Color Tie Strap	1
21	Y09C-M0640	Capscrew	2	54	R13846	Sleeve, Cordura	15 ft
22	223784	Fitting	2	57	R11537	Fitting	1
23	2314408	Assembly, Tube - FS	1	58	212718	Fitting	2
24	*a	228663 Assembly, Hose	1	*a      Included in 2315330 Hose Kit			
25	*a	251487 Assembly, Hose	1				
30	296417W	Washer	2				

**Winch External Hydraulics**

Komatsu D31/37/39 E-21 & E21-A (H4AH\_B\_K12)  
Last Used on S/N H4A-1014



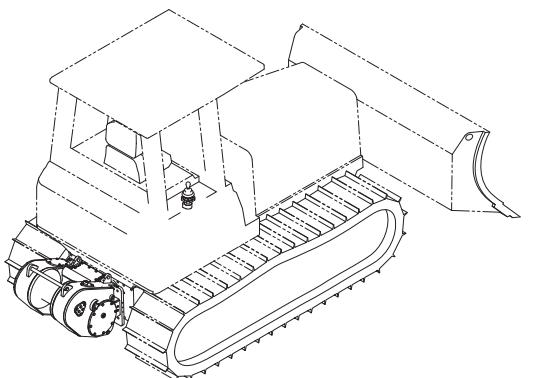
Relative Position of Winch and Handlever



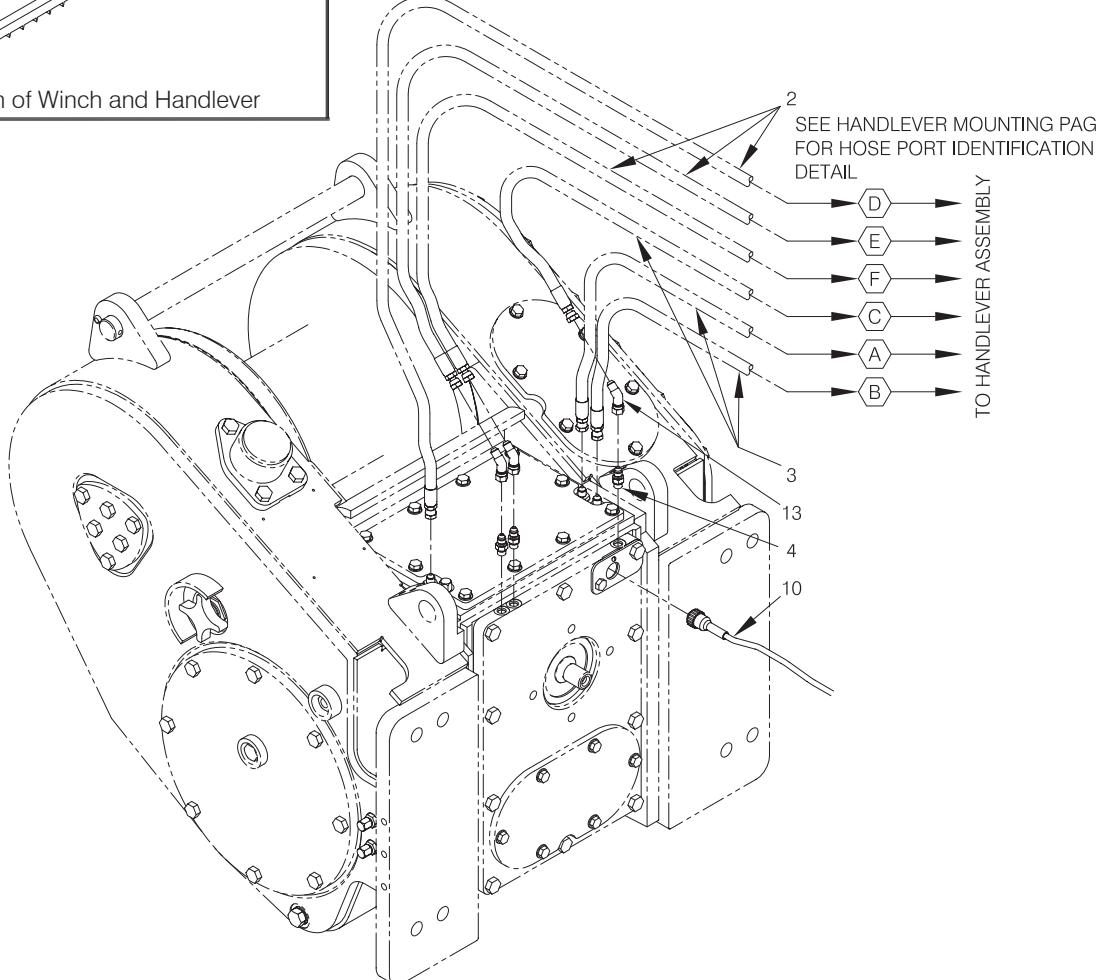
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2	*a 2304205W	Assembly, Hose	3	10	2304204W	Harness, Wiring	1
3	*a 2304989W	Assembly, Hose	3	13	16997W	Fitting	3
4	16538W	Fitting	3	*a Included in 2315331 Hose Kit			
5	2304988W	Kit, Various Color Tie Strap (Not Shown)	1				

**Winch External Hydraulics**

Komatsu D31/37/39 E-21 & E21-A (H4AH\_B\_K12)  
First Used on S/N H4A-1015



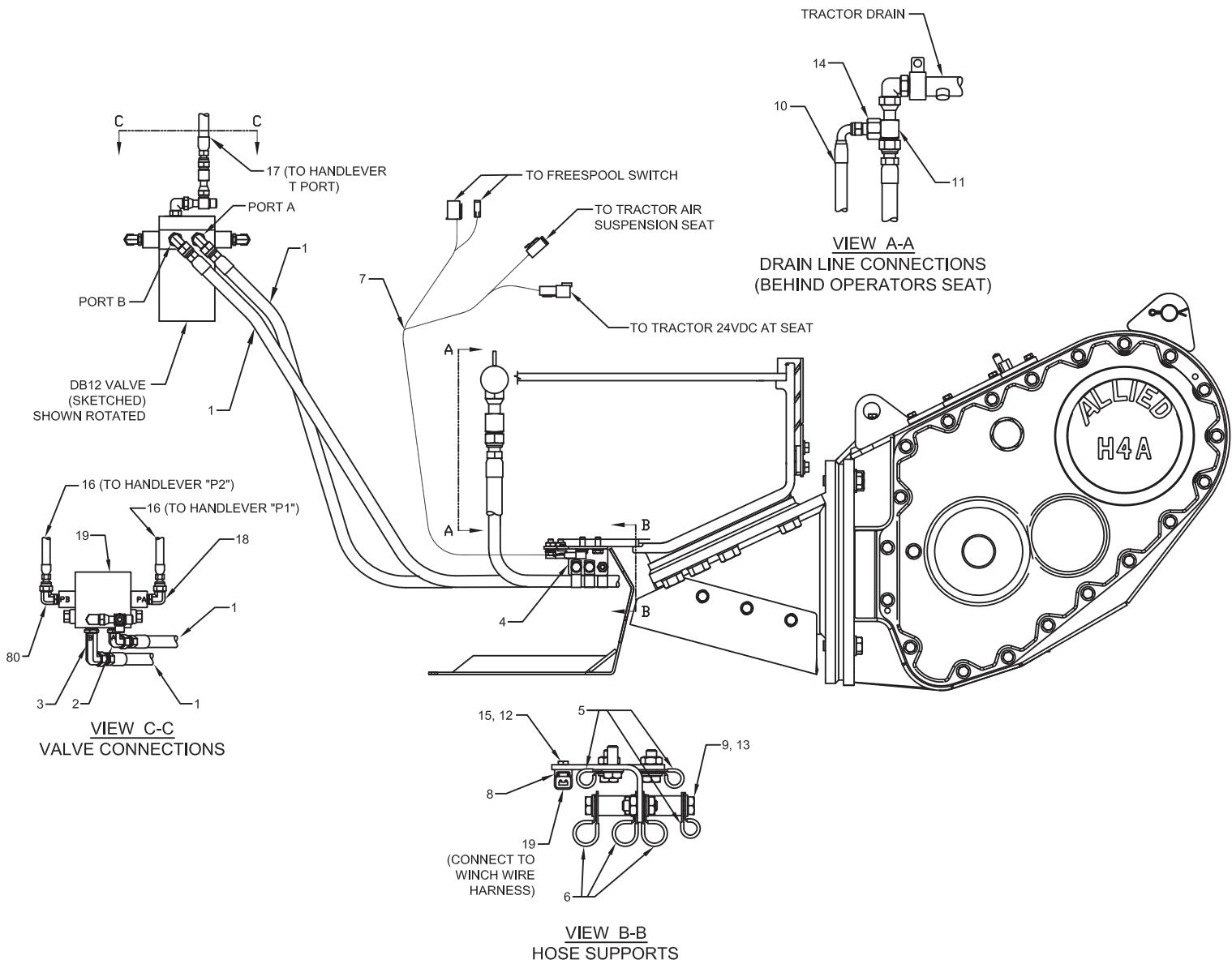
Relative Position of Winch and Handlever



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2	*a 2304205W	Assembly, Hose	3	10	2304204W	Harness, Wiring	1
3	*a 2304989W	Assembly, Hose	3	13	16997W	Fitting	3
4	16538W	Fitting	3	*a      Included in 2315331 Hose Kit			
5	2304988W	Kit, Various Color Tie Strap (Not Shown)	1				

**Winch External Hydraulics**

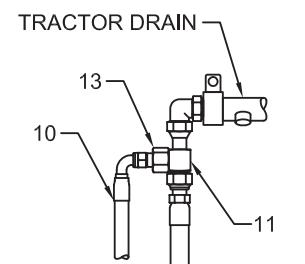
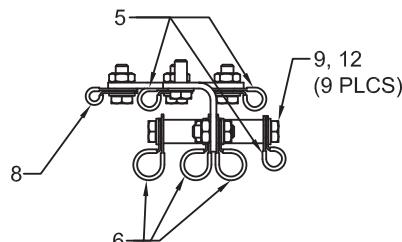
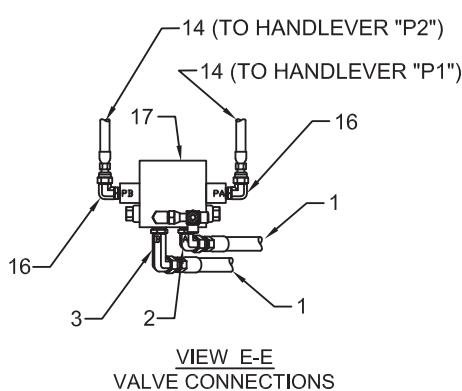
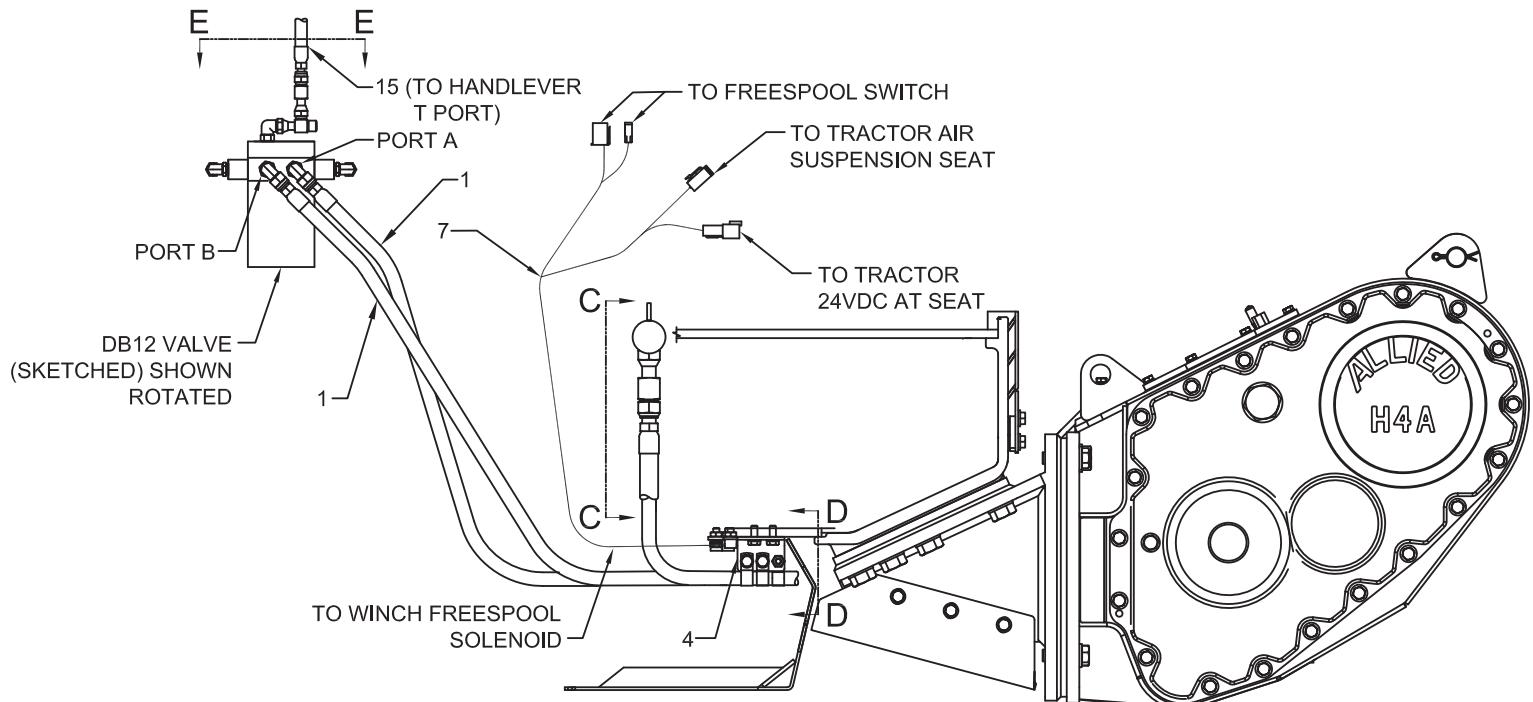
Komatsu D31/37/39X-22 and 22-A (H4AT\_Y\_K13)  
Last Used on S/N H4A-1148



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 2311300	Assembly, Hose	2	12	15052W	Nut	1
2	2311440	Fitting	1	13	296420W	Washer	8
3	2311441	Fitting	1	14	2307958W	Fitting	1
4	2311445	Bracket	1	15	Y25G-1024	Capscrew	1
5	R13803039	Clip	3	16	*a 2311295	Assembly, Hose	2
6	209695	Clamp	3	17	*a 2311298	Assembly, Hose	1
7	237965W	Hassnes, Wire	1	18	2311285	Fitting	2
8	249151	Clip, Strap	1	19	2311036	Assembly, Valve	1
9	293628W	Capscrew	8	*a Included in 2315332 Hose Kit			
10	*a 2311289	Assembly, Hose	1				
11	R834055	Fitting	1				

**Winch External Hydraulics**

Komatsu D31/37/39X-22 and 22-A (H4AT\_Y\_K13)  
First Used on S/N H4A-1149



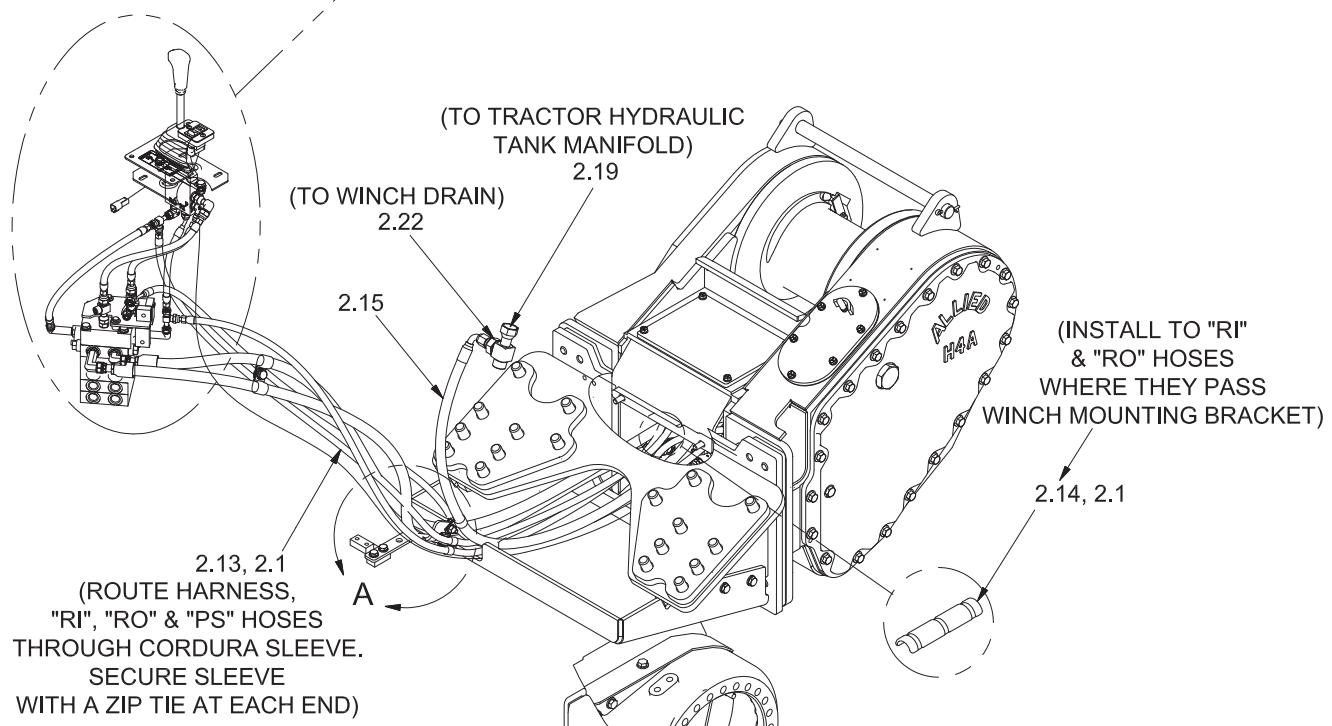
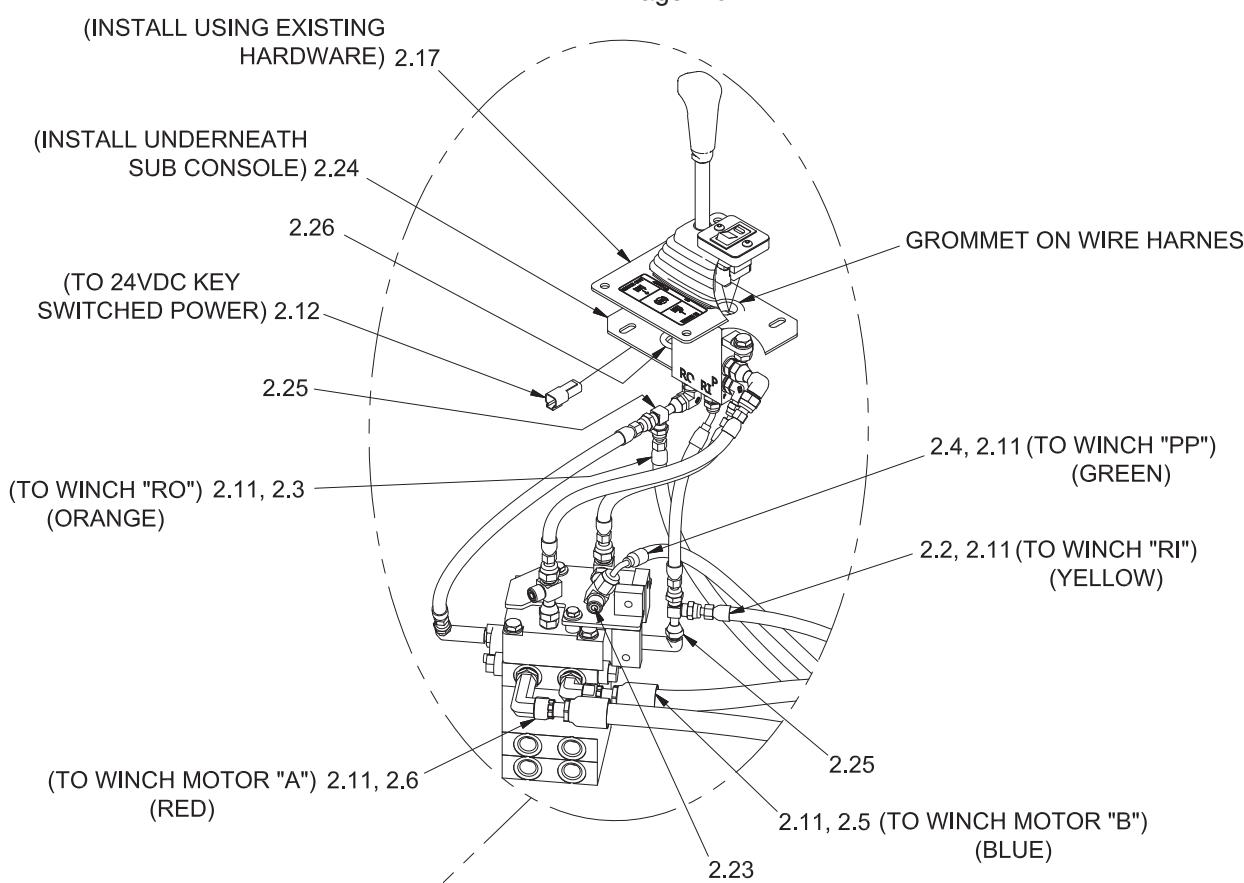
VIEW C-C  
DRAIN LINE CONNECTIONS  
(BEHIND OPERATORS SEAT)

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 2311300	Hose Assembly	2	11	R834055	Fitting	1
2	2311440	Fitting	1	12	296420W	Hard Washer	9
3	2311441	Fitting	1	13	2307958W	Fitting	1
4	2312503	Bracket	1	14	*a 2311295	Hose Assembly	2
5	R13803039	Clip	3	15	*a 2311298	Hose Assembly	1
6	209695	Clamp	3	16	2311285	Fitting	2
7	2312501	Wire Harness	1	17	2311036	Assembly, Valve	1
8	R13801359	Clip, Insul	1	*a Included in 2315332 Hose Kit			
9	293628W	Capscrew	9				
10	*a 2311289	Hose Assembly	1				

**Winch External Hydraulics**

Komatsu D37/39X-23 D39X-24 (H4AT\_Y\_K14)

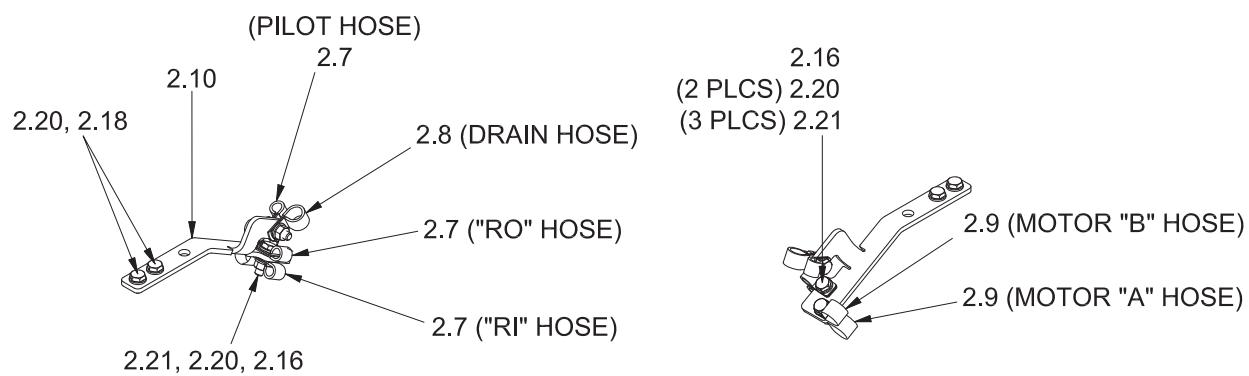
Page 1 of 2

**TRACTOR HYDRAULICS**

**Winch External Hydraulics**

Komatsu D37/39X-23 D39X-24 (H4AT\_Y\_K14)

Page 2 of 2

**DETAIL A**  
HOSE SUPPORT VIEW**DETAIL A**  
HOSE SUPPORT VIEW (ROTATED 180°)

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	137852W	Clamp, Strap	10	2.14	HSP0000004	Protector, Hose	1
2.2	*a 2314545	Assembly, Hose	1	2.15	*a 2311289	Assembly, Hose	1
2.3	*a 2314546	Assembly, Hose	1	2.16	R13811210	Capscrew	3
2.4	*a 2314547	Assembly, Hose	1	2.17	2311409	Switch Panel Assembly (3-149)	1
2.5	*a 2314548	Assembly, Hose	1	2.18	236805	Capscrew	2
2.6	*a 2314549	Assembly, Hose	1	2.19	R834055	Fitting	1
2.7	R13803039	Clip, Insulation	3	2.20	296420W	Washer	8
2.8	209695	Clamp	1	2.21	292655W	Nut	3
2.9	209696	Clamp	2	2.22	231809	Fitting	1
2.10	2314527	Plate, Hose Support	1	2.23	231955	Fitting	1
2.11	2304988W	Kit, Various Color Tie Strap	1	2.24	2314583	Mounting, Control Lever	1
2.12	2314589	Harness, Wire	1	2.25	236855	Fitting	1
2.13	R13846	Sleeve, Cordura	2 ft.	2.26	R1933988	Plug, Button	1

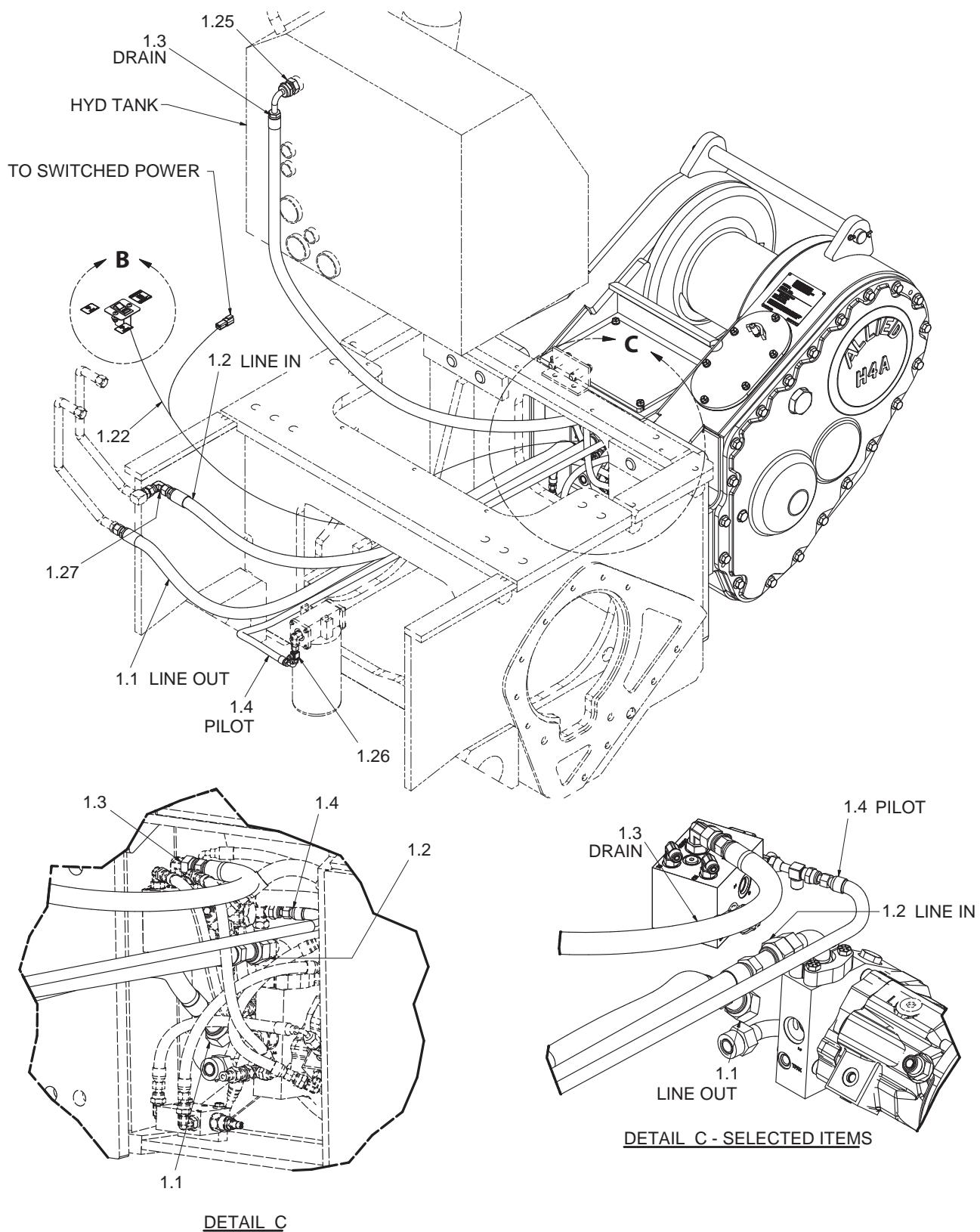
\*a      Included in 2315333 Hose Kit

**Winch External Hydraulics**

Dresssta TD7/8S (H4AT\_Y\_H15)

Dresssta TD9S (H4AT\_Y\_H16)

Page 1 of 2

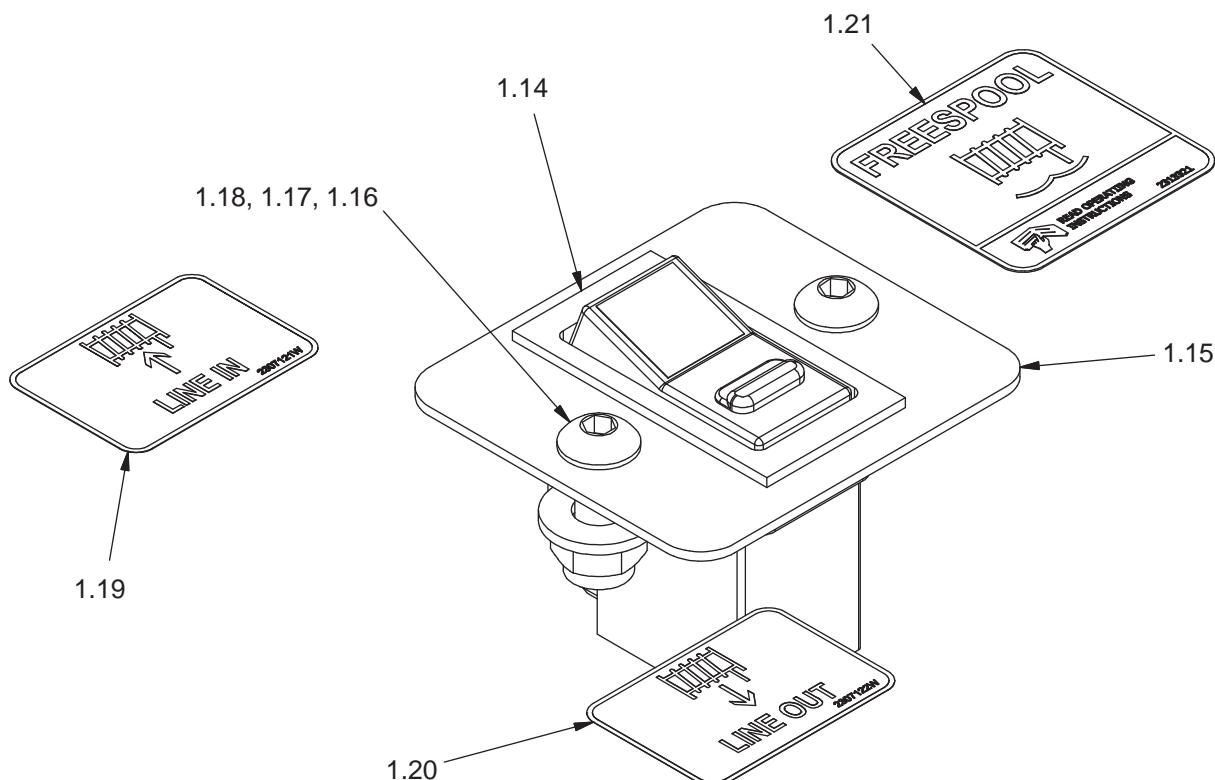


**Winch External Hydraulics**

Dresssta TD7/8S (H4AT\_Y\_H15)

Dresssta TD9S (H4AT\_Y\_H16)

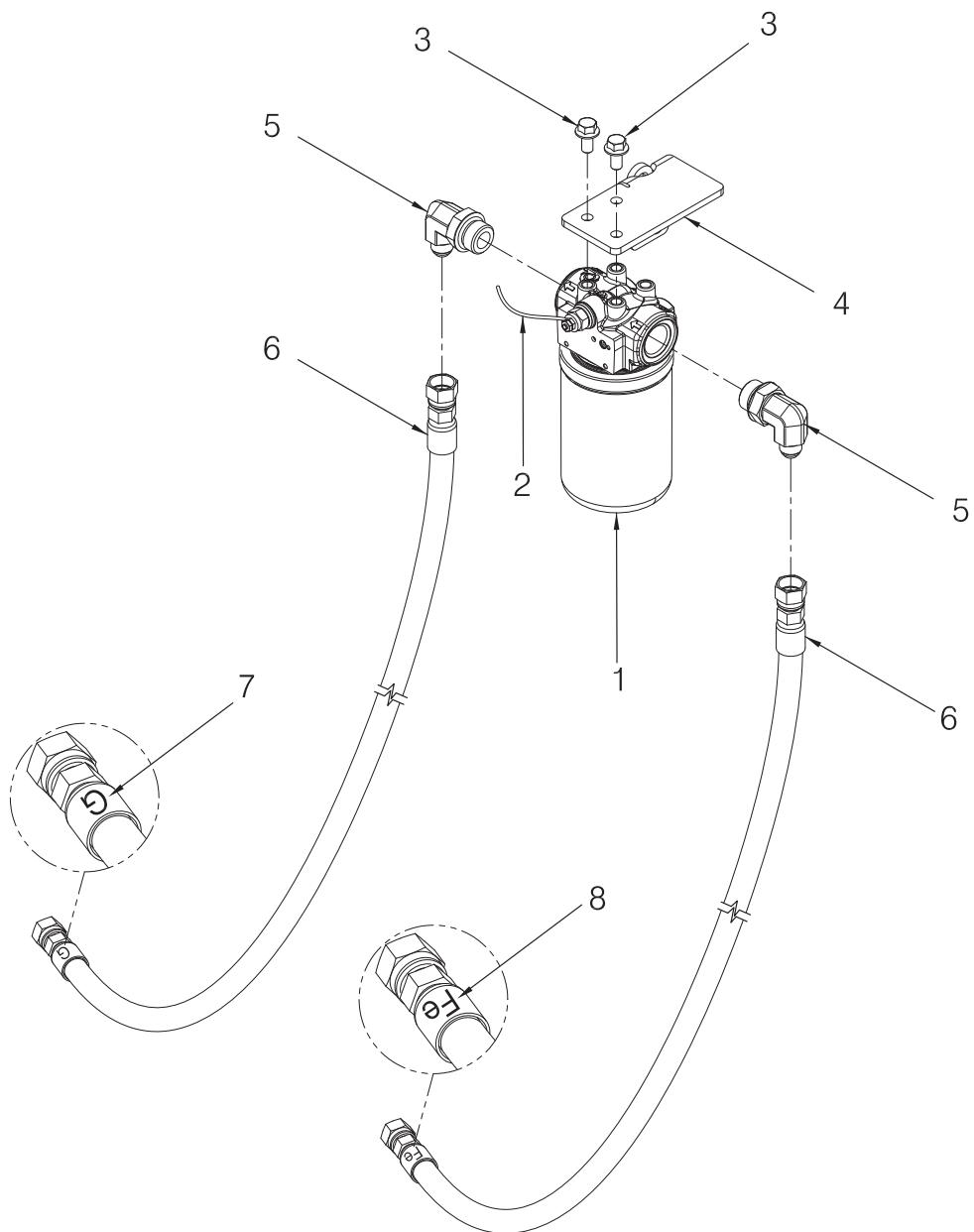
Page 2 of 2



DETAIL B

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	*b 2316544	. Hose Assembly	1	1.19	2307121W	. Decal, Line In	1
1.2	*b 2316545	. Hose Assembly	1	1.20	2307122W	. Decal, Line Out	1
1.3	*b 2316546	. Hose Assembly	1	1.21	2313992	. Decal, Freespool	1
1.4	*b 2316547	. Hose Assembly	1	1.22	2311202	. Harness - Wire	1
1.14	2310017	. Switch Assembly (3-159)	1	1.23	*a 137852W	. Cable Tie	12
1.15	2307643W	. Plate	1	1.25	209215	. Fitting	1
1.16	18720W	. Capscrew	2	1.26	17059W	. Fitting	1
1.17	15127W	. Washer	2	1.27	210769	. Fitting	1
1.18	15113W	. Locknut	2	*a Not Illustrated			
				*b Included in 2315318 Hose Kit			

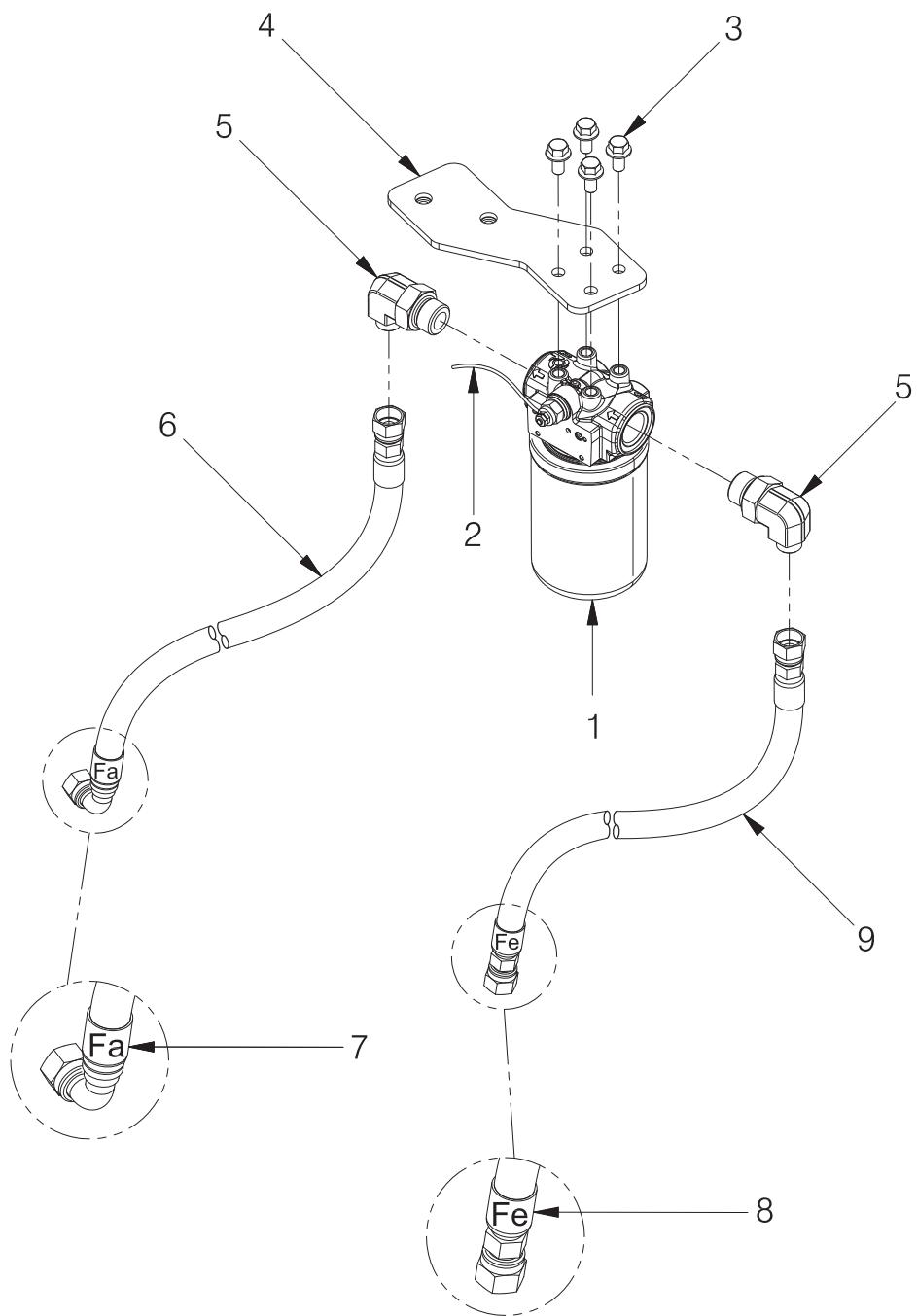
\*a Not Illustrated  
 \*b Included in 2315318 Hose Kit

**Filter Assembly**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2306023W	<b>Assembly, Filter</b>	1	4	2304223W	. Bracket, Filter	1
	2305713W	. Assembly, Filter	1		138811W	. Fitting	2
	2305132W	. . Filter Head	1		2304237W	. Assembly, Hose	2
	2304112W	. . Filter Element	1		2306156W	. Label, G	1
	2305712W	. . Pressure Switch	1		2306157W	. Label, Fe	1
2	2305714W	Wire, Filter	1				
3	134803W	Capscrew, Flange	2				

**Filter Assembly**

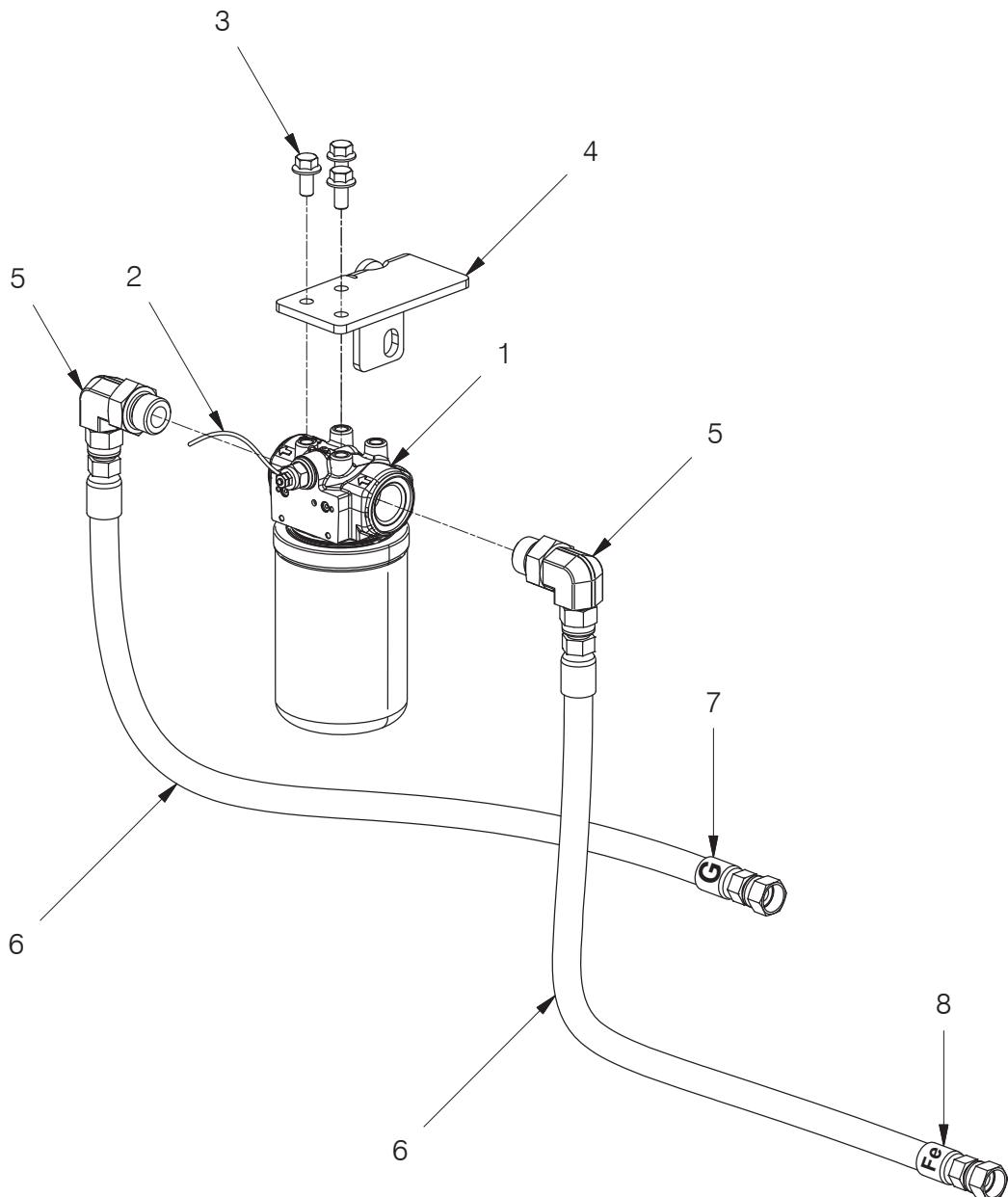
Caterpillar D5K (H4AH\_Y\_C20)  
Caterpillar D5K/K2 (H4AH\_Y\_C20)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2310844 2305713W 2305132W 2304112W 2305712W	<b>Assembly, Filter</b> . Assembly, Filter . Filter Head . Filter Element . Pressure Switch	1 1 1 1 1	4	2310814	. Bracket, Filter	1
2	2305714W	. Wire, Filter	1	5	235314	. Fitting	2
3	134803W	. Capscrew, Flange	4	6	2311020	. Assembly, Hose	1
				7	2310918	. Label, Fa	1
				8	2306157W	. Label, Fe	1
				9	2311019	. Assembly, Hose	1

**Filter Assembly**

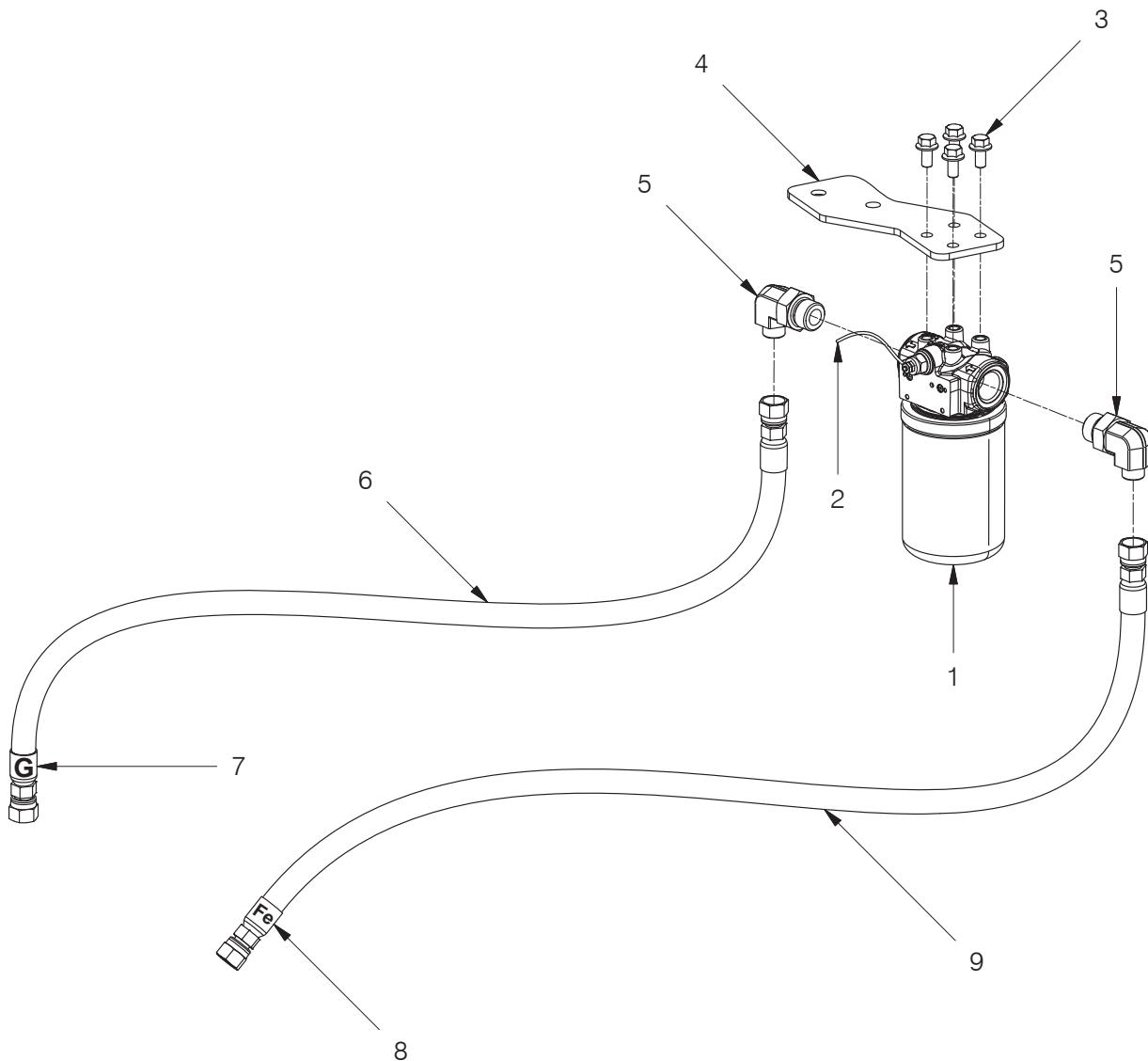
Caterpillar D3/4/5G (H4AH\_Y\_C17)  
Caterpillar D4/5G (H4AH\_Y\_C18)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	<b>2311843</b>	<b>Assembly, Filter</b>	1	4	2304223W	. Bracket, Filter	1
	2305713W	. Assembly, Filter	1		235314	. Fitting	2
	2305132W	. . Filter Head	1		2311019	. Assembly, Hose	1
	2304112W	. . Filter Element	1		2306156W	. Label, G	1
	2305712W	. . Pressure Switch	1		2306157W	. Label, Fe	1
2	2305714W	. Wire, Filter	1				
3	134803W	. Capscrew, Flange	3				

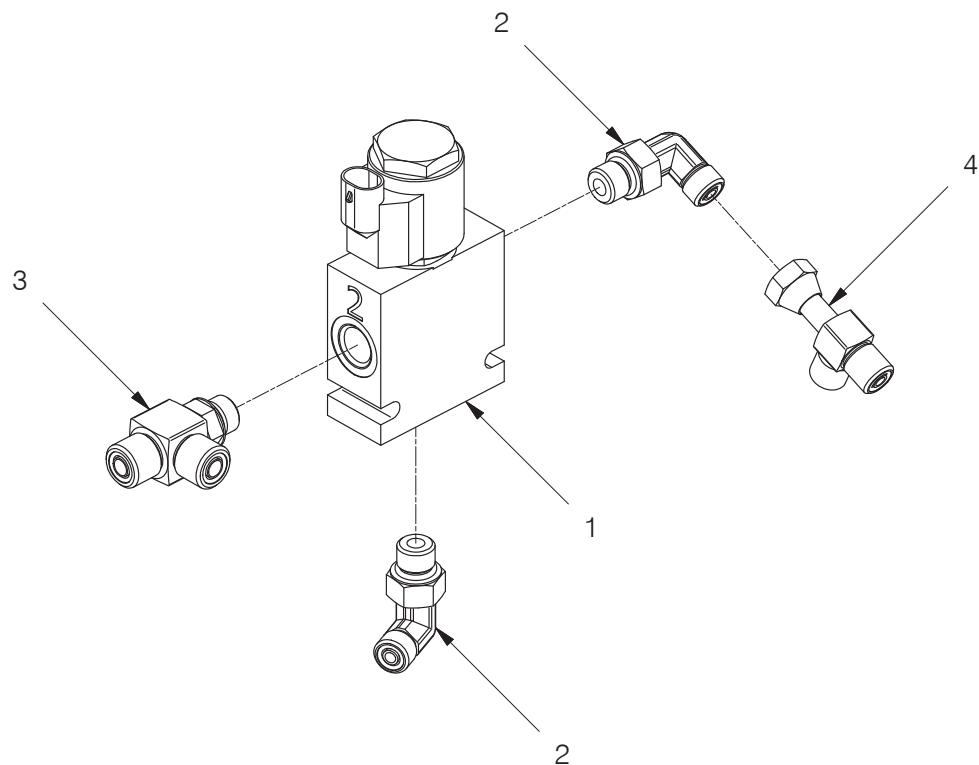
**Filter Assembly**

Caterpillar D3/4K (H4AH\_Y\_C19)  
Caterpillar D3/4K/K2 (H4AH\_Y\_C19)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2311479 2305713W 2305132W 2304112W 2305712W	<b>Assembly, Filter</b> . Assembly, Filter . Filter Head . Filter Element . Pressure Switch	1 1 1 1 1	4	2310814	. Bracket, Filter	1
2	2305714W	. Wire, Filter	1	5	235314	. Fitting	2
3	134803W	. Capscrew, Flange	4	6	2311019	. Assembly, Hose	1
				7	2306156W	. Label, G	1
				8	2306157W	. Label, Fe	1
				9	2311489	. Assembly, Hose	1

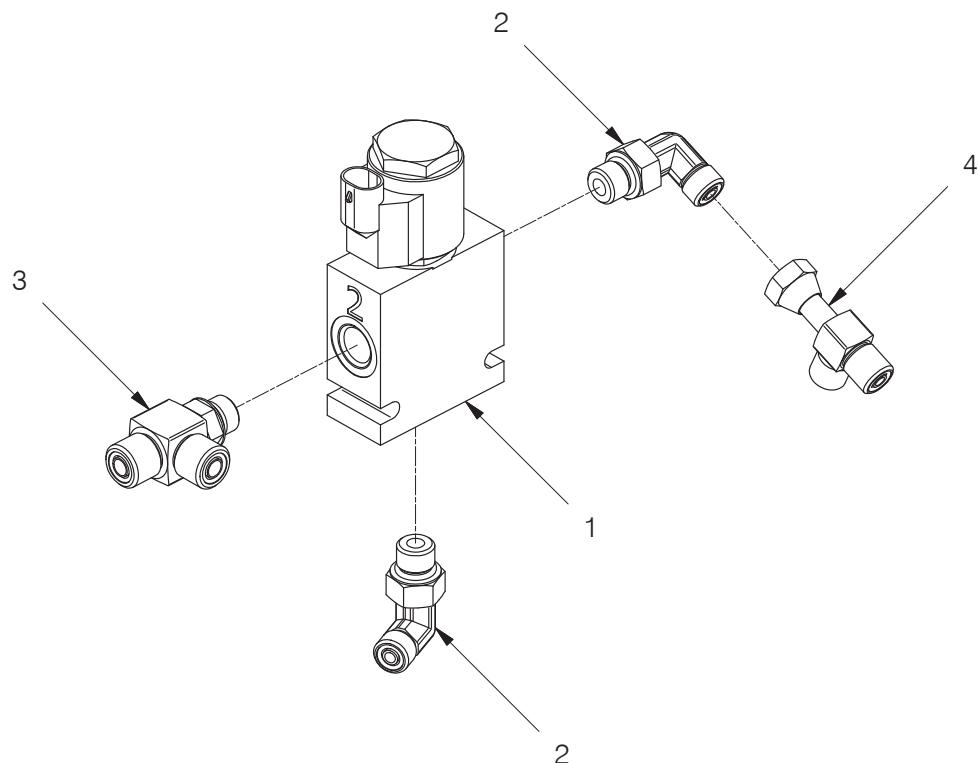
**FREESPOOL Valve Assembly**  
Case 650L (H4AH\_R\_R16)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2312889 2310011 R833253	Assembly, FREESPOOL Valve . Assembly, Valve Manifold (3-115) . Fitting	1 1 2	3	231465 236855	. Fitting . Fitting	1 1

**FREESPOOL Valve Assembly**

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

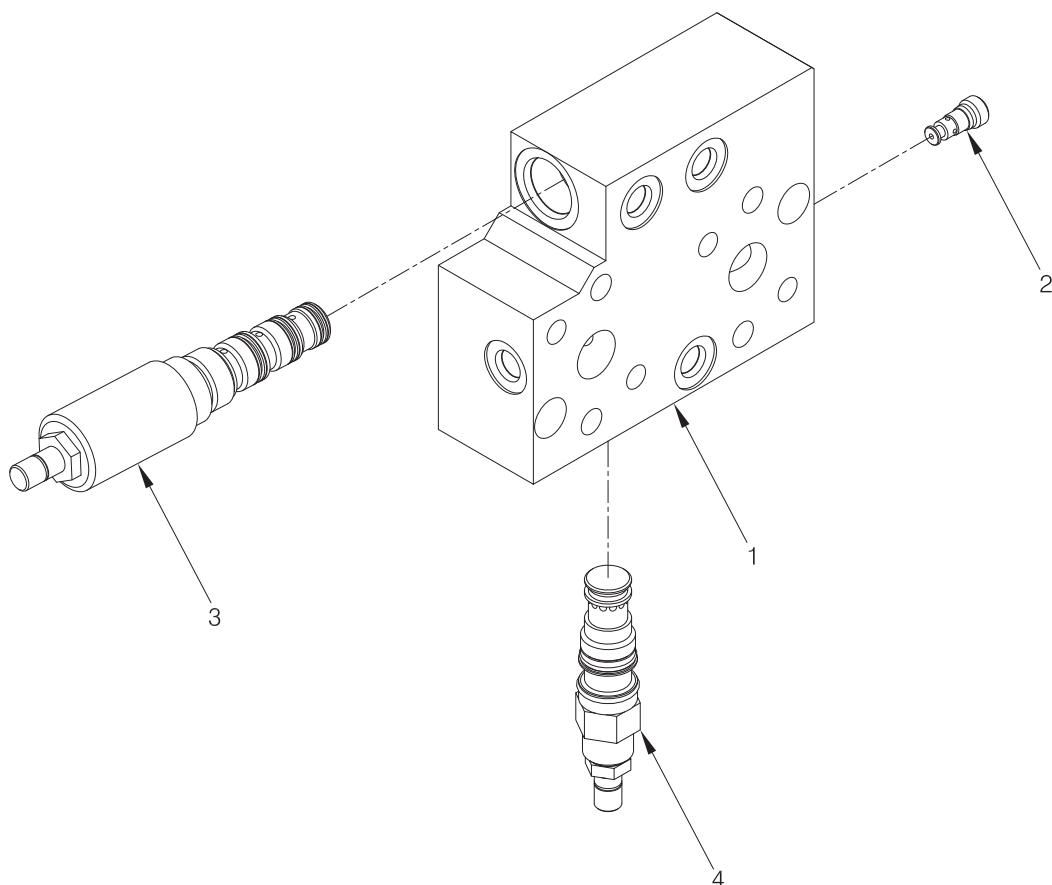


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2315110 2307833W R833253	<b>Assembly, FREESPOOL Valve</b> . Assembly, Valve Manifold (3-116)	1	3	231465	. Fitting	1
2		. Fitting	2	4	236855	. Fitting	1

**Motor Valve Assembly**

H4AH\*R/Y

Used on S/N H4A-1004 and on H4A-1038 thru H4A-1161

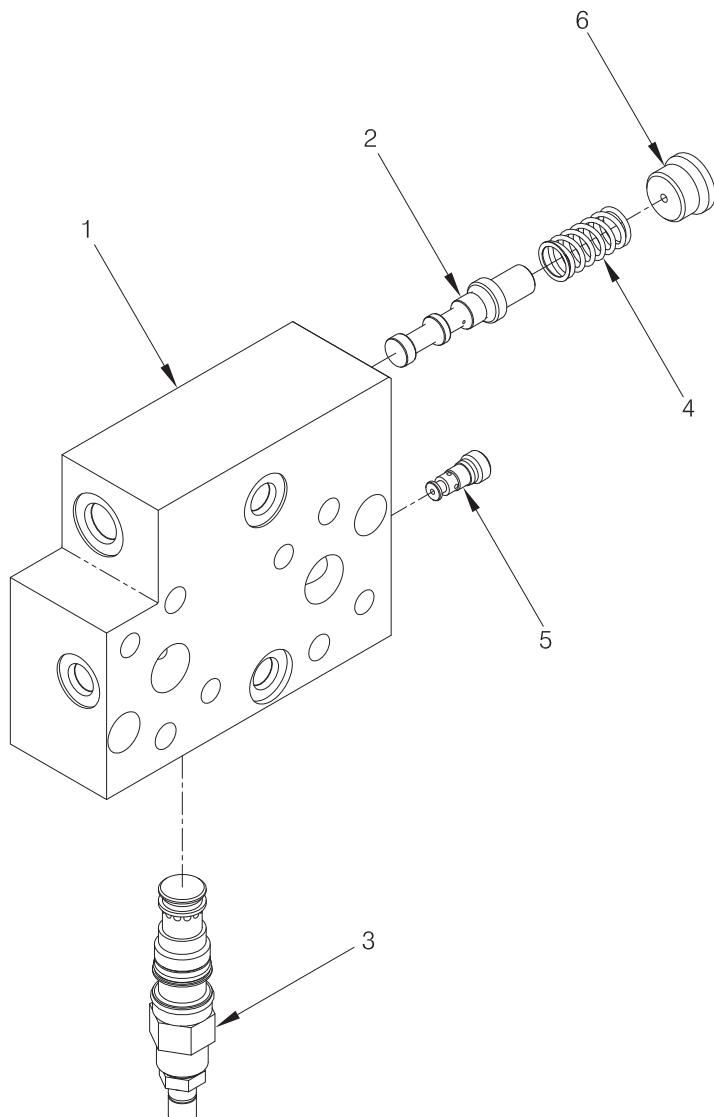


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2306566W</b>	<b>Assembly, Motor Valve</b>	1				
1	2305676W	. Manifold, Motor Speed	1				
2	2304195W	. Valve, Shuttle	1				
	2305073W	. . Seal Kit	1				
3	2307162W	. Valve, Sequence	1				
	2305736W	. . Kit, Seal	1	4	2304004W	. Cartridge,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

**Motor Valve Assembly**

H4AH

Used on S/N H4A-1000 thru H4A-1003 and on H4A-1005 thru H4A-1037

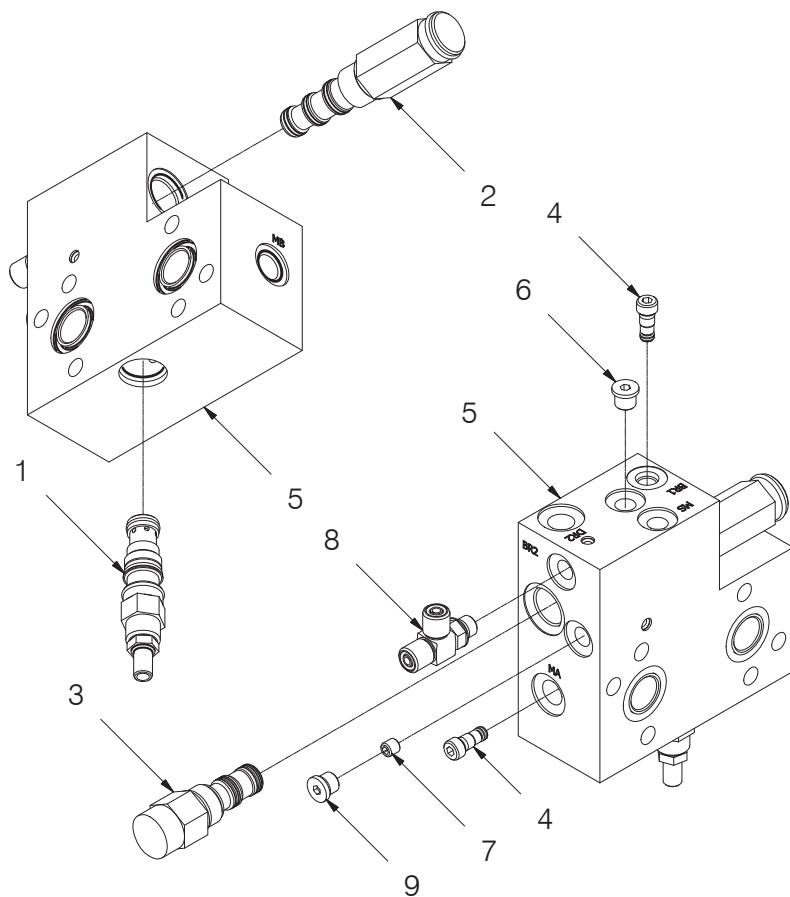


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305236W	<b>Assembly, Motor Valve</b>		4	2304006W	. Spring	1
2	2305126W	. Manifold, Motor Speed	1	5	2304195W	. Valve, Shuttle	1
3	2304003W	. Spool, Motor Valve	1	6	2305073W	.. Kit, Seal	1
	2304004W	. Cartridge, Pressure Reducing	1		2305135W	. Fitting	1
	242101	.. Seal Kit	1				

**Motor Valve Assembly**

H4AH\*Y

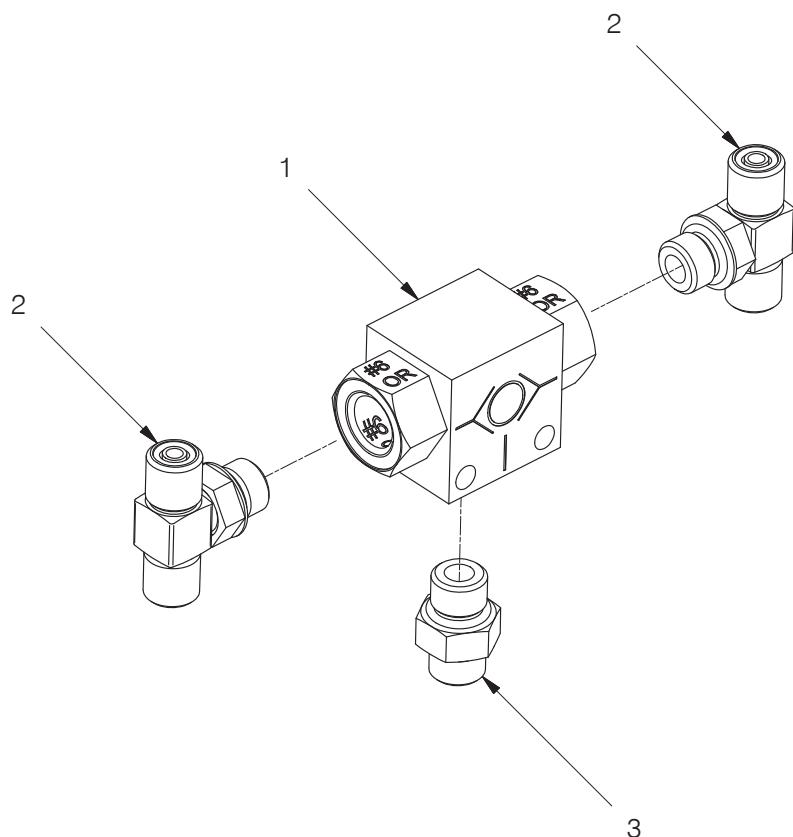
First Used on S/N H4A-1162



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

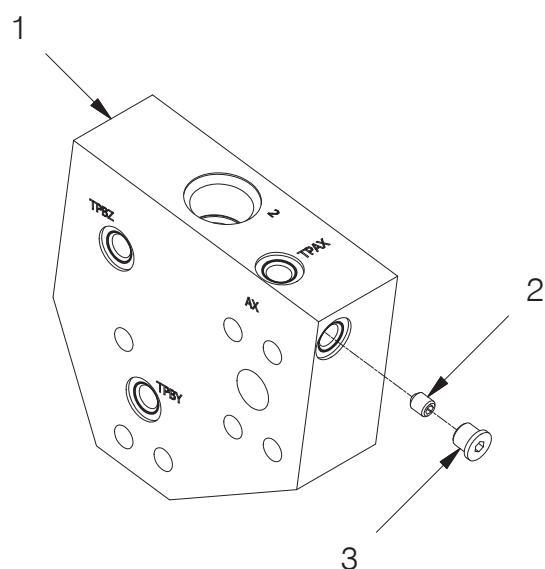
**Shuttle Valve Assembly**

Case 650L (H4AH\_R\_R16)



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

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

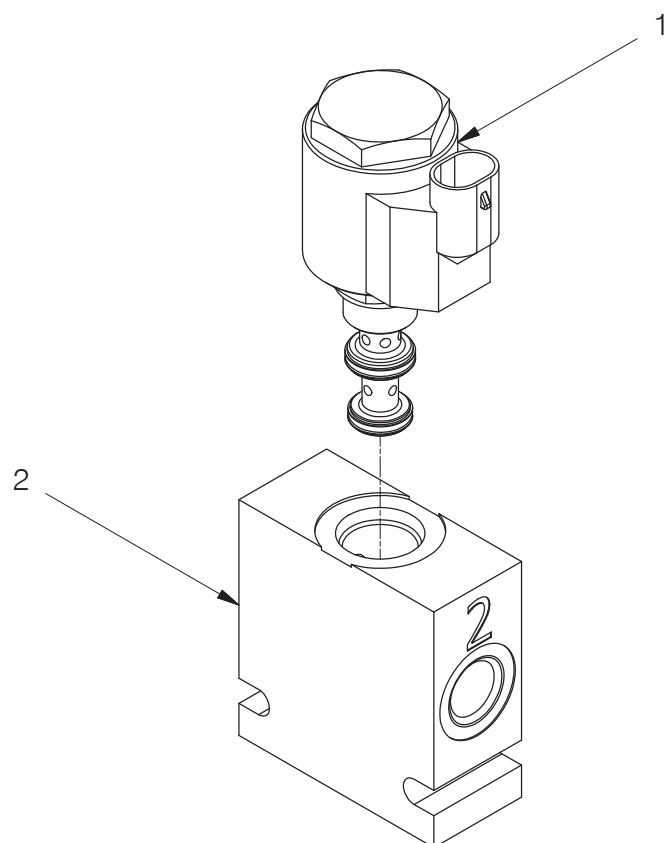


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2307568W	<b>Assembly, Manifold</b>	1				
1	2307567W	. Manifold	1	3	222442W	. Fitting, O-Ring	1
2	2310978	. Orifice - 0.015	1				

**Valve Manifold Assembly**

Case 650L (H4AH\_R\_R16)

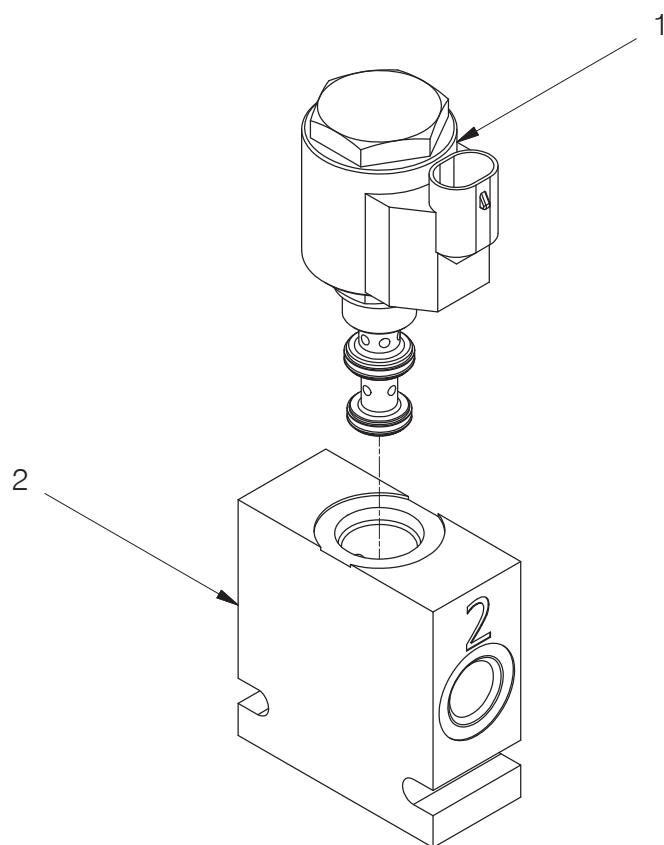
Caterpillar D3/4/5G (H4AH\_Y\_C17), Caterpillar D4/5G (H4AH\_Y\_C18),  
 Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D5K/D5K2 (H4AH\_Y\_C20),  
 Caterpillar D5K2 With Fireplow (H4AH\_Y\_C201),  
 John Deere 450-650J (E15)



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

**Valve Manifold Assembly**

John Deere 550-650K (H4AH\_R\_E16)  
 John Deere 700H/J (H4AH\_R\_E39)  
 John Deere 700K (H4AH\_R\_E391)  
 Case 750/850M (H4AH\_R\_R17)



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

## Control Manifold Assembly

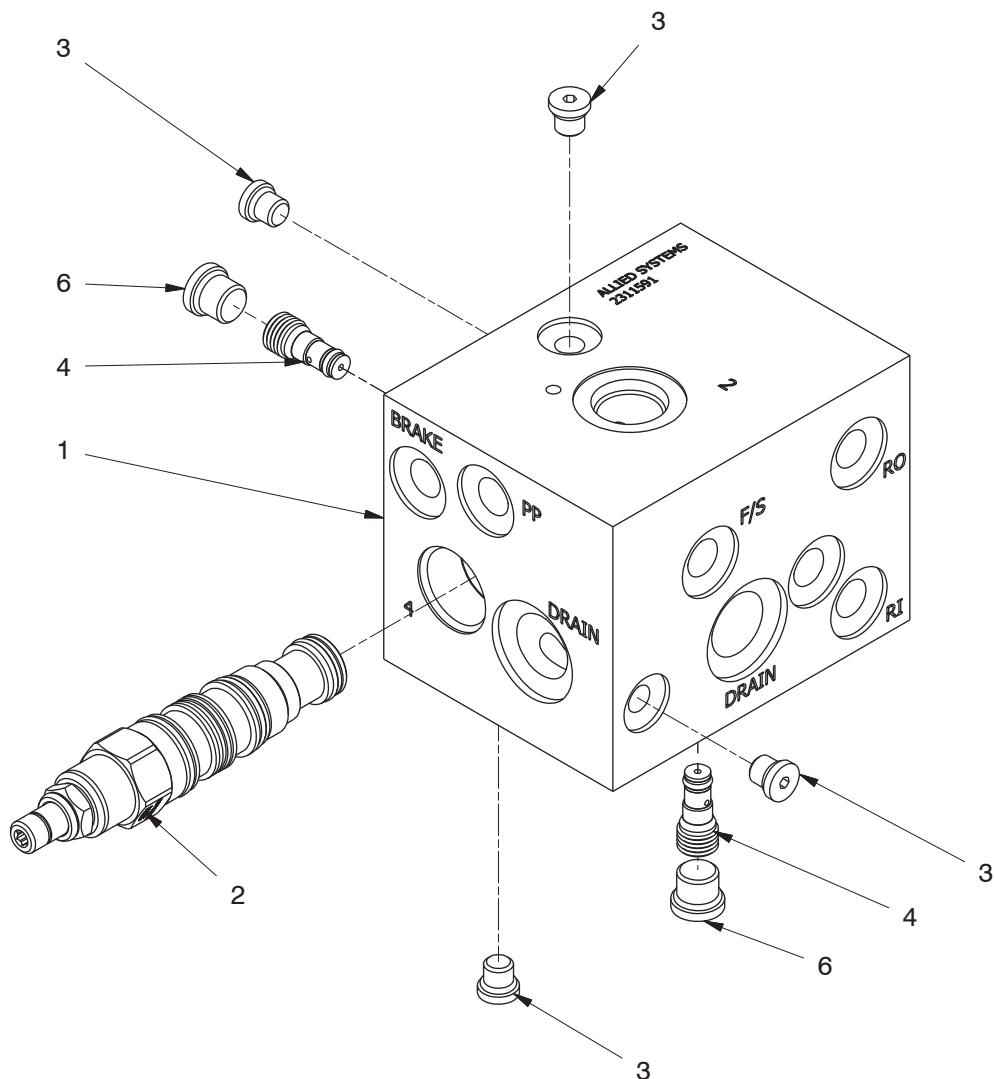
Caterpillar D3/4K (H4AT\_Y\_C19), Caterpillar D5K (H4AT\_Y\_C20)

Dresssta TD7/8S (H4AT\_Y\_H15), Dresssta TD9S (H4AT\_Y\_H16)

Shantui SD10 (H4AT\_Y\_U13)

Komatsu D31/37/39X-22 (H4AT\_Y\_K13) Komatsu D37/39X-23, D39X-24 (H4AT\_Y\_K14)

First Used on S/N H4A-1244



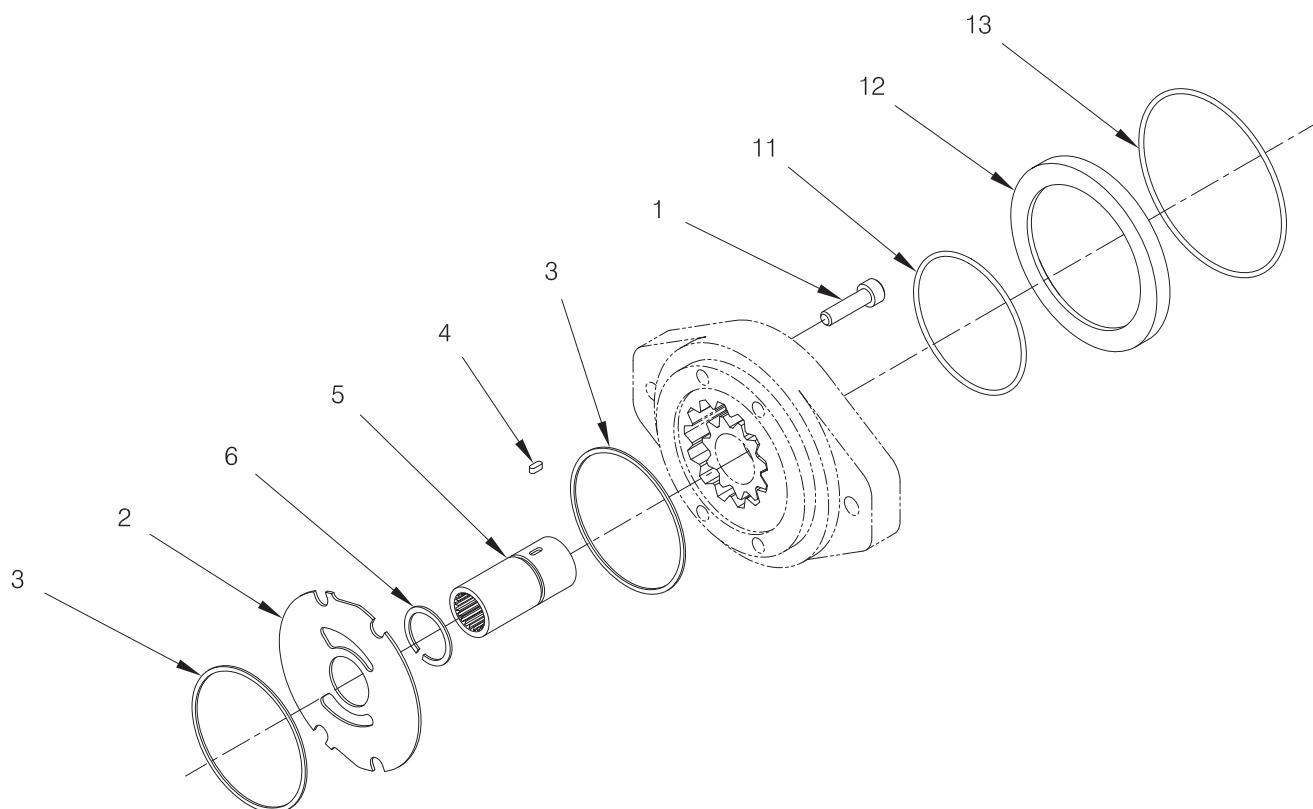
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2311591	<b>Control Manifold Assembly</b>	1	3	242230	. Fitting	4
2	2311590	. Manifold - Control	1	4	2307227W	. Valve, Shuttle	2
	2311592	. Valve, Brake	1	6	235387	. Fitting	2
	252566	.. Seal Kit	1				

**Through Drive Charge Pump**

Caterpillar D3/4/5G (H4AH\_Y\_C17); H4AH\_Z\_C17

(See Page 0-3 for serial number prefixes)

Caterpillar D4/5G (H4AH\_Y\_C18)

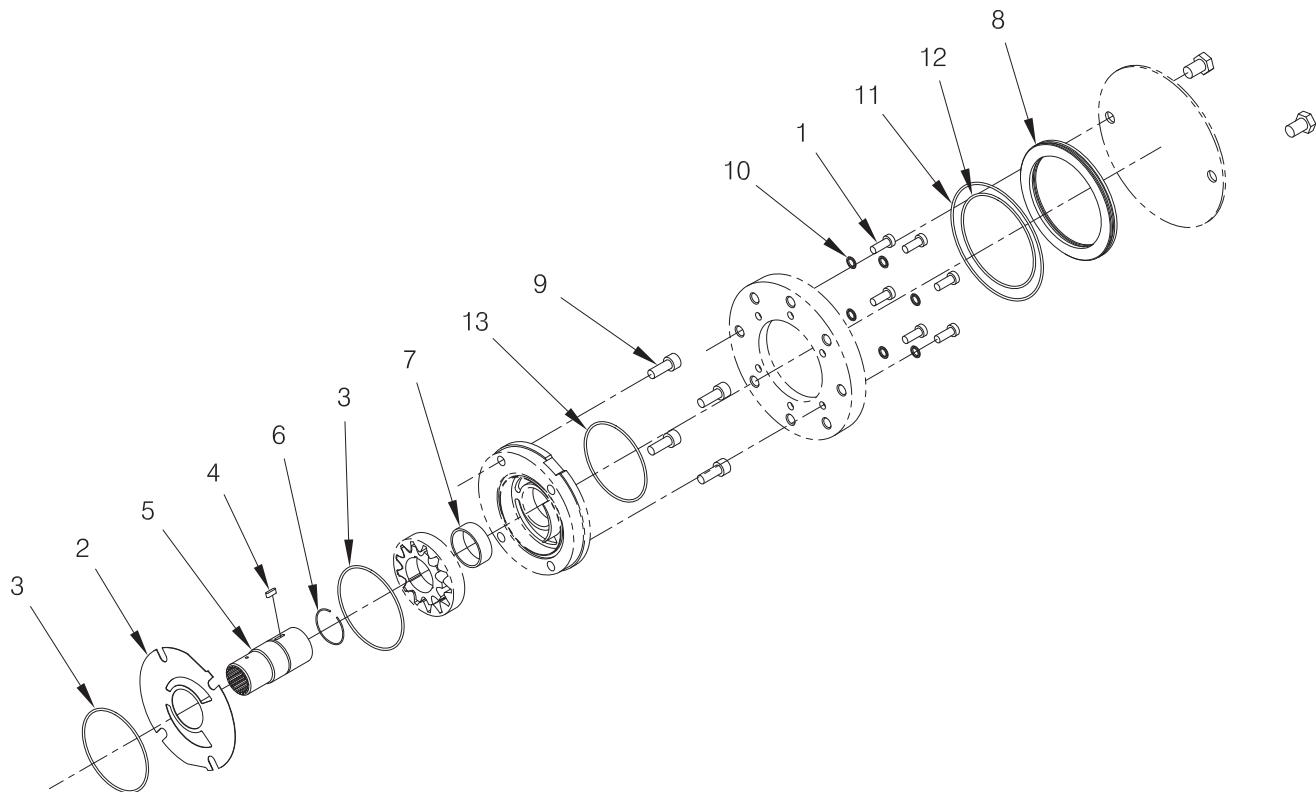


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2304212W</b>	<b>Pump, Through Drive Charge</b>	<b>1</b>				
1	2304248W	. Capscrew	4	6	2304253W	. Ring, Retaining	1
2	2304249W	. Plate, Wear	1	11	118358W	. O-Ring	1
3	2304250W	. Ring, Quad	2	12	2304255W	. Ring, Centering	1
4	2304251W	. Key	1	13	39742W	. O-Ring	1
5	2304252W	. Coupling, Through Drive	1				

**Through Drive Charge Pump**

Caterpillar D4/5G (H4AH\_Y\_C18)

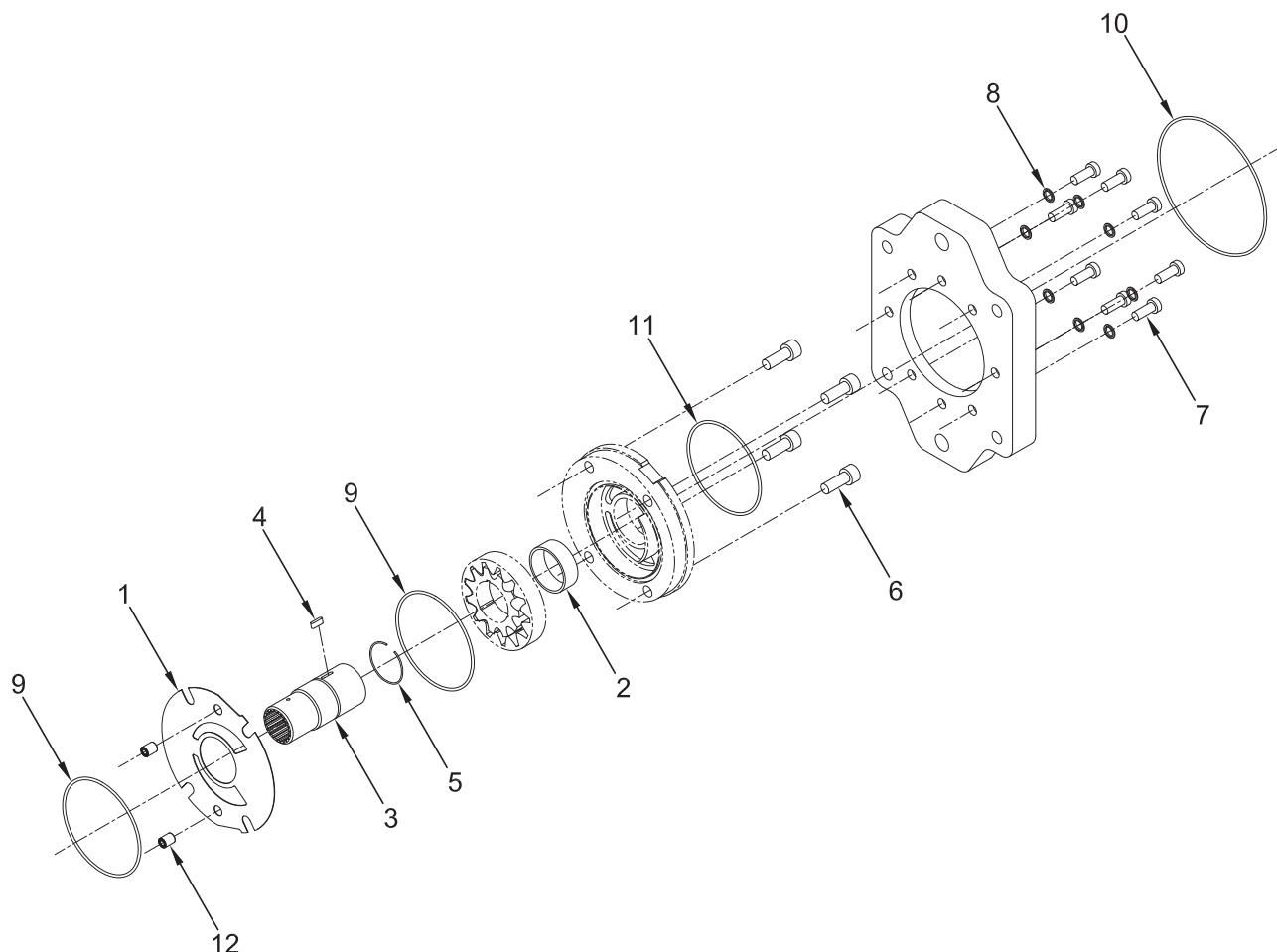
(See Page 0-3 for serial number prefixes)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2306258W</b>	<b>Pump, Through Drive Charge</b>	<b>1</b>				
1	2306268W	. Capscrew	6	8	2306275W	. Ring, Centering	1
2	2306269W	. Plate, Wear	1	9	2306276W	. Capscrew	4
3	2306270W	. O-Ring	2	10	2306277W	. Ring, Seal	6
4	2306271W	. Key, Shaft	1	11	2306278W	. O-Ring	1
5	2306272W	. Shaft	1	12	2306279W	. O-Ring	1
6	2306273W	. Ring, Snap	1	13	2306280W	. O-Ring	1
7	2306274W	. Bushing, Bearing	1				

**Through Drive Charge Pump**

Caterpillar D5K (H4AH\_Y\_C20),  
 Caterpillar D5K/K2 (H4AH\_Y\_C20),  
 Caterpillar D5K2 with Fireflow (H4AH\_Y\_C201)



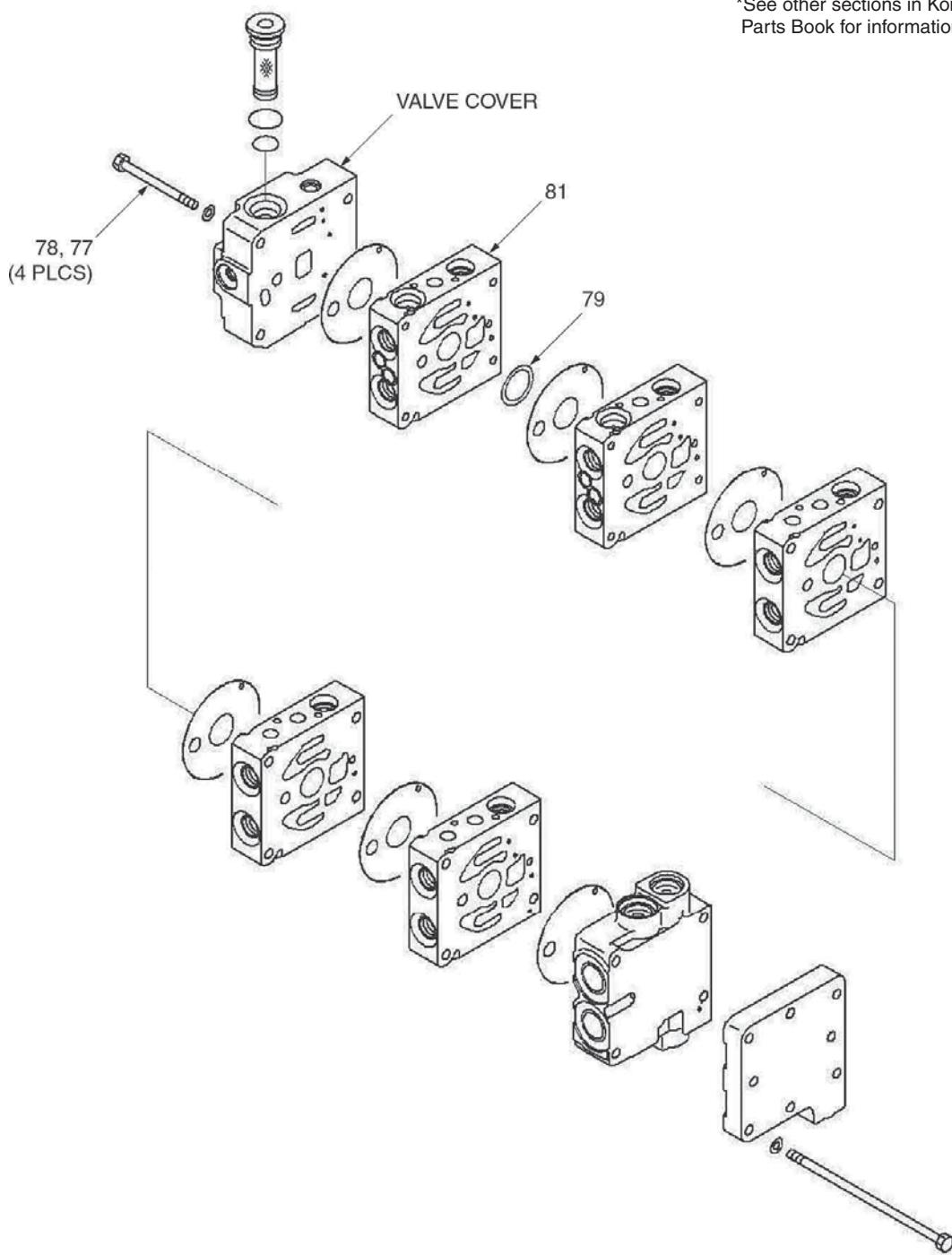
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2310872	Pump, Through Drive Charge	1	7	2311192	. Bolt, Socket Head	8
2	2311186	. Plate, Wear	1	8	2311193	. Seal, Bonded	8
3	2311187	. Bushing, Coupling	1	9	2311194	. O-Ring	2
4	2311188	. Coupling	1	10	2311195	. O-Ring	1
5	2311189	. Key, Shaft	1	11	2311196	. O-Ring	1
6	2311190	. Ring	1	12	2311197	. Plug, Locating	2
	2311191	. Bolt, Socket Head	4				

**4 to 5 Spool Valve Conversion**

Non Ripper Equipped Models Only\*

Komatsu D31/37/39X-22 (H4AT\_Y\_K13)

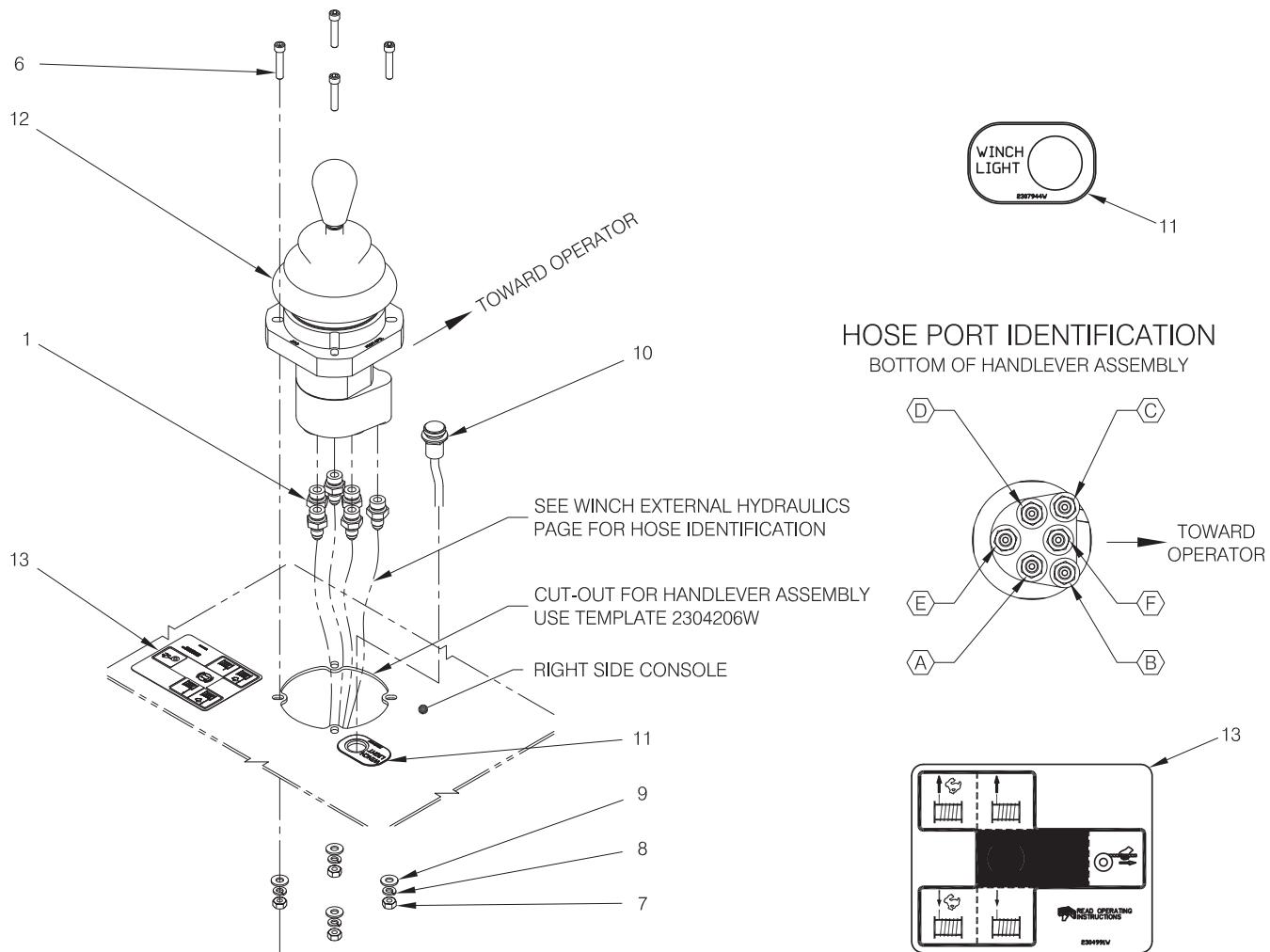
\*See other sections in Komatsu  
Parts Book for information.



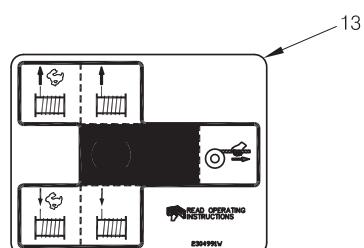
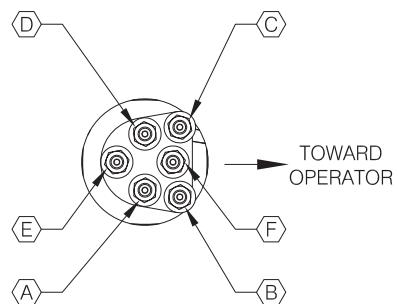
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
77	R13813295	Capscrew	4	79	2311041	Ring	4
78	296418W	Washer	4	81	2311036	Assembly, Valve	1

## Control Lever Mounting

Caterpillar D3/4/5C (H4AH\_R\_C16)



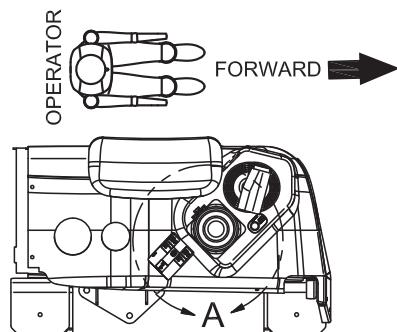
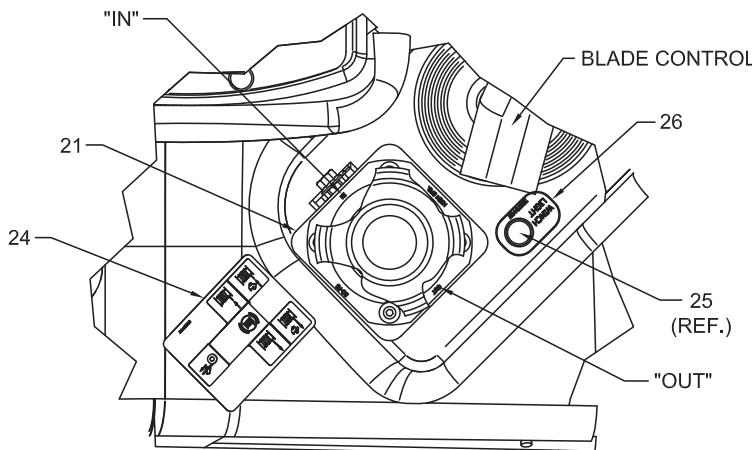
**HOSE PORT IDENTIFICATION**  
BOTTOM OF HANDLEVER ASSEMBLY



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	17753W	Fitting	6	9	15127W	Washer	4
5	2304988W	Kit, Various Color Tie Strap (Not Shown)	1	10	2304204W	Harness, Wiring	1
6	16338W	Capscrew	4	11	2307944W	Decal, Winch Light	1
7	15054W	Nut	4	12	2305577W	Control Lever Assembly (See 3-150)	1
8	15154W	Lockwasher	4	13	2305579W	Decal, Control Lever	1

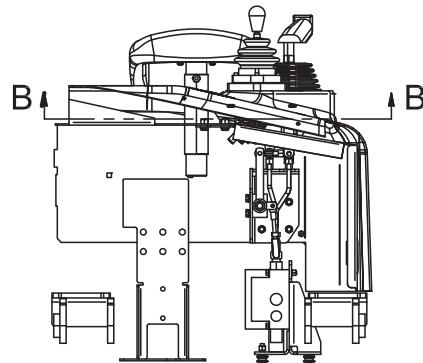
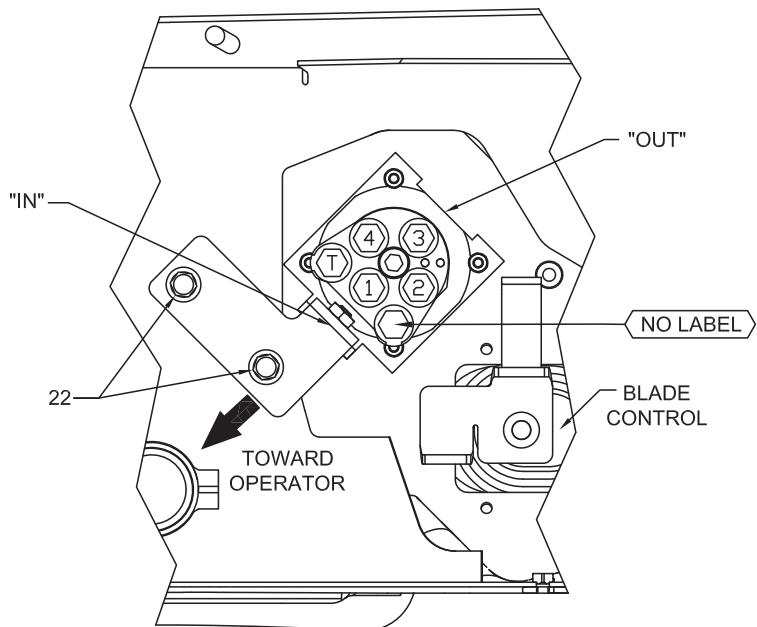
## Control Lever Mounting

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



RIGHT-HAND TRACTOR CONSOLE

**DETAIL A**  
CONTROL LEVER INSTALLATION



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

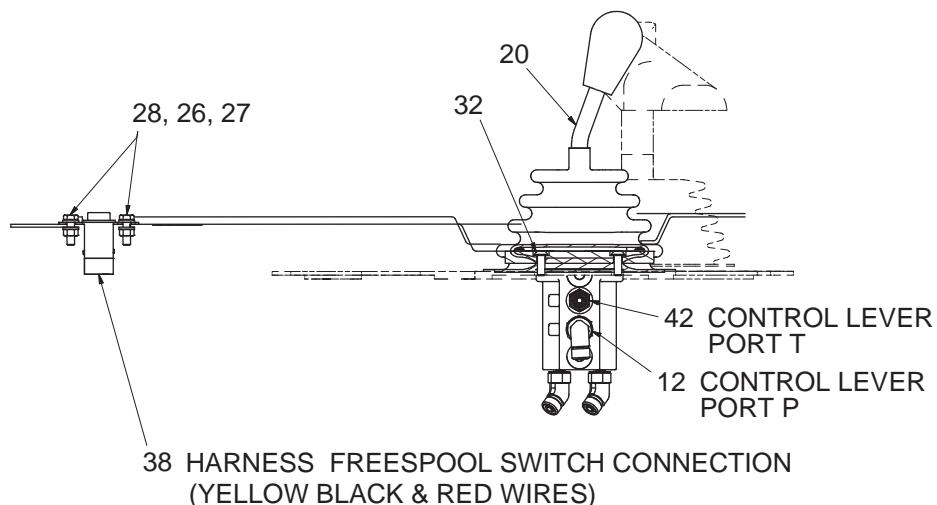
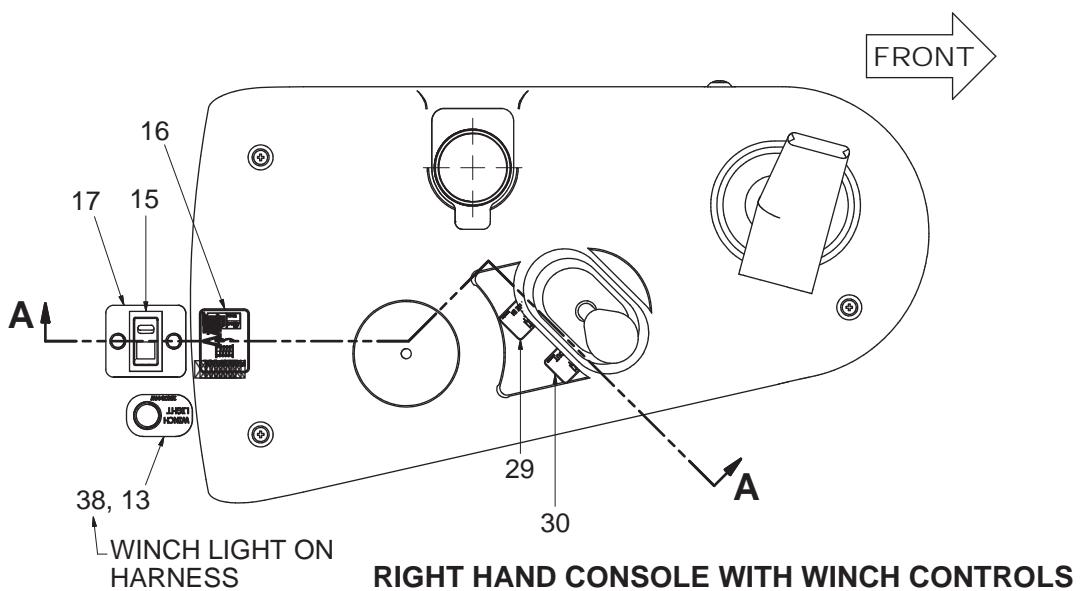
LEVER PORT	FUNCTION
④	FREESPOOL
⑤	TANK
NO LABEL	SUPPLY
②	MOTOR SPEED
③	LINE-OUT (X1)
①	LINE-IN (X2)

Item	Part No.	Description	Qty
21	2311203	Assembly, Control Lever (See 3-151)	1
22	2303609W	Screw	2
24	2305579W	Decal, Winch Control	1

Item	Part No.	Description	Qty
25	2311315	Assembly, Wiring	1
26	2307944W	Decal, Winch Light	1

## Control Lever Mounting

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

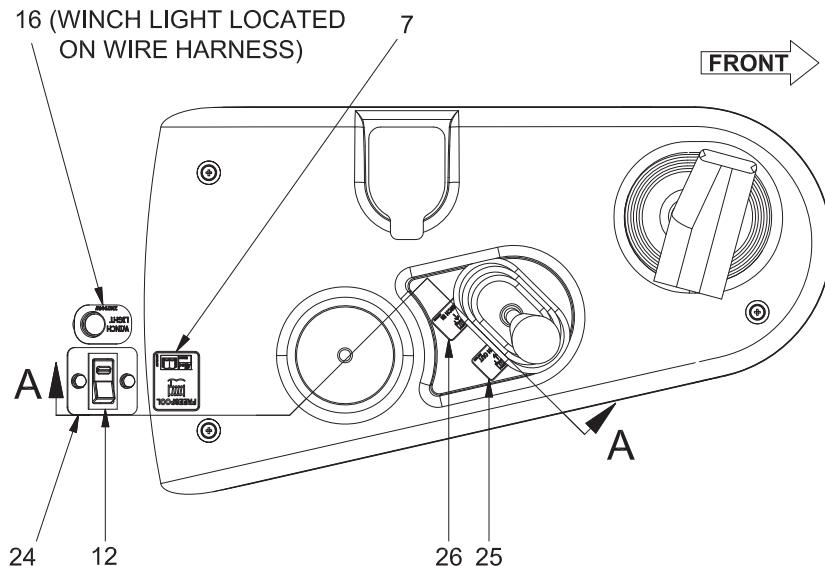


### SECTION A-A CONTROL LEVER & SWITCH MOUNTING

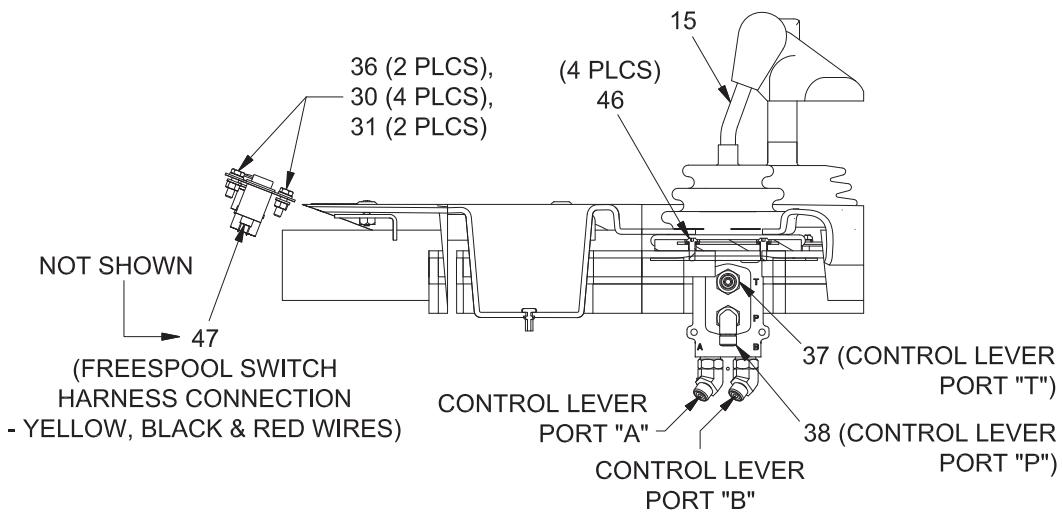
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
12	R833253	Fitting	1	28	292501W	Capscrew	2
13	2307944W	Decal, Winch Light	1	29	2307121W	Decal, Winch In	1
15	2310017	Assembly, 12V Switch (See 3-159)	1	30	2307122W	Decal, Winch Out	1
16	2307924W	Decal, Switch Panel	1	32	296159W	Capscrew	4
17	2307643W	Plate, Switch Mounting	1	38	2312888	Harness, Wire	1
20 *a	2312879	Control Lever Assembly (3-153)	1	42 *a	R833103	Fitting	1
20 *b	2315738	Control Lever Assembly (3-156)	1	42 *b	231439	Fitting	1
26	296417W	Washer	2	*a Last used on H4A-1420			
27	292653W	Nut	2	*b First used on H4A-1421			

## Control Lever Mounting

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



RIGHT CONSOLE WITH WINCH CONTROLS

SECTION A-A  
CONTROL LEVER & SWITCH MOUNTING

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
7	2307924W	Decal, Switch Panel	1	31	292653W	Nut	2
12	2310013	Assembly, Switch - 24V (3-158)	1	36	292501W	Capscrew	2
15 *a	2312879	Assembly, Control Lever (3-153)	1	37 *a	R833103	Fitting	1
15 *b	2315738	Assembly, Control Lever (3-156)	1	37 *b	231439	Fitting	1
16	2307944W	Decal, Winch Light	1	38	R833253	Fitting	1
24	2307643W	Plate, Switch Mounting	1	46	296159W	Capscrew	4
25	2307122W	Decal, Winch Out	1	47	2315122	Harness, Wire	1
26	2307121W	Decal, Winch In	1	*a Last used on H4A-1420			
30	296417W	Washer	4	*b First used on H4A-1421			

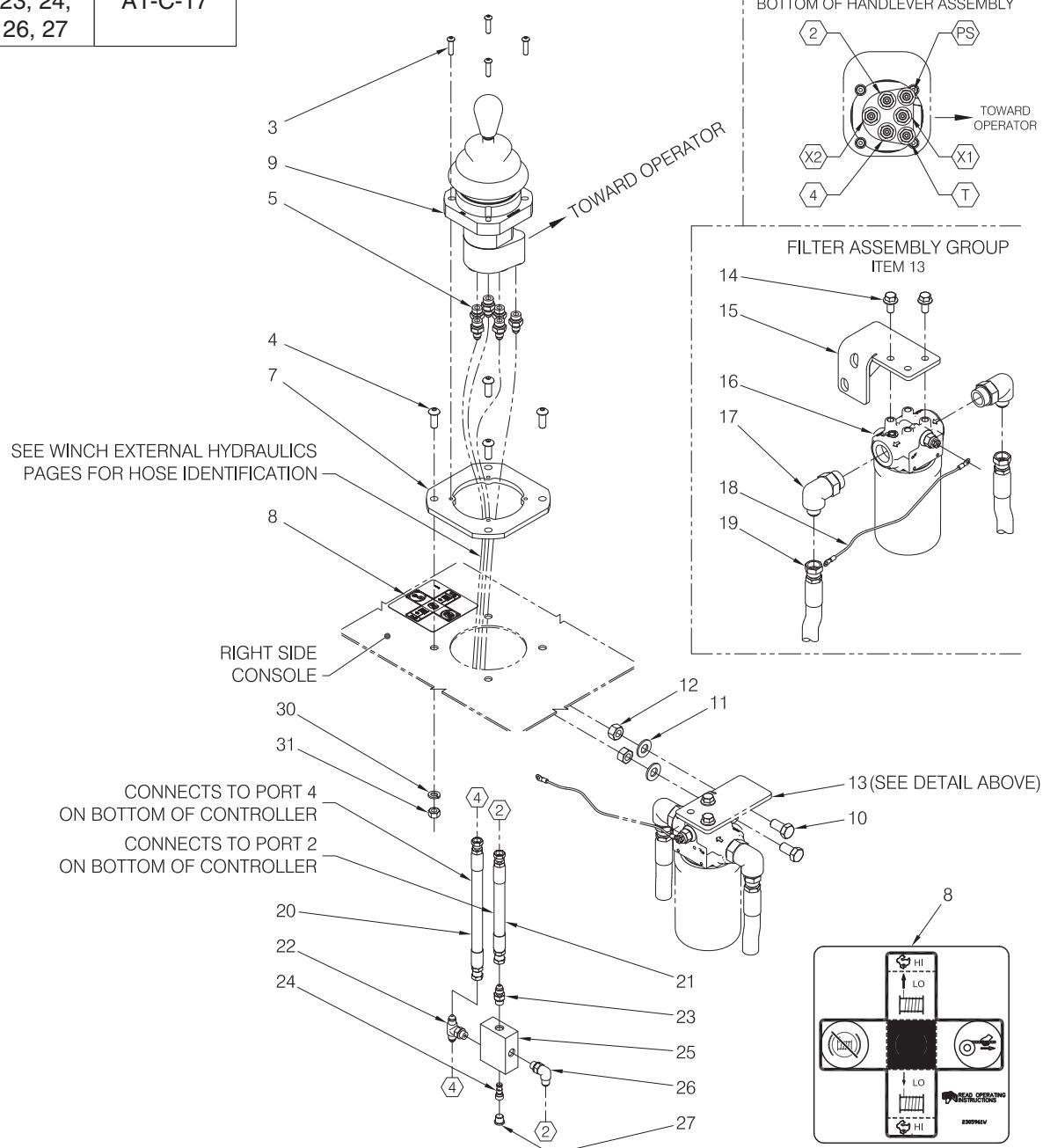
**Control Lever Mounting**

Caterpillar D3/4/5G (H4AH\_Y\_C17)

Last Used on S/N H4A-1014

Page 1 of 2

Parts Service Gram	
Item	Gram
8, 9, 20, 21, 22, 23, 24, 25, 26, 27	A1-C-17



**Control Lever Mounting**  
Caterpillar D3/4/5G (H4AH\_Y\_C17)  
Last Used on S/N H4A-1014  
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	18723W	Capscrew	4		2305132W	.. Head, Filter	1
4	18738W	Capscrew	4		2304112W	.. Element, Filter	1
5	17753W	Fitting	6		2304862W	.. Switch, Pressure	1
6a	*a 2306150W	Label	1	17	138811W	. Fitting	2
6b	*a 2306151W	Label	1	18	2305714W	. Wire, Filter	1
6c	*a 2306152W	Label	1	19	2304237W	. Assembly, Hose	2
6d	*a 2306153W	Label	1	20	2305962W	Assembly, Hose	1
6e	*a 2306154W	Label	1	21	280256W	Assembly, Hose	1
6f	*a 2306155W	Label	1	22	16574W	Fitting	1
7	2304207W	Plate, Control Adapter	1	23	16538W	Fitting	1
8	2305961W	Decal	1	24	2304195W	Valve, Shuttle	1
9	2305074W	Assembly, Control Lever	1		2305073W	. Kit, Seal	1
10	16829W	Capscrew	2	25	2305960W	Manifold	1
11	15135W	Washer	2	26	16556W	Fitting	1
12	221711W	Nut	2	27	222442W	Fitting	1
13	2306023W	Assembly, Filter Bracket	1	30	15156W	Washer	4
14	134803W	. Capscrew	2	31	221707W	Nut	4
15	2304223W	. Bracket	1				
16	2304111W	. Assembly, Filter	1				

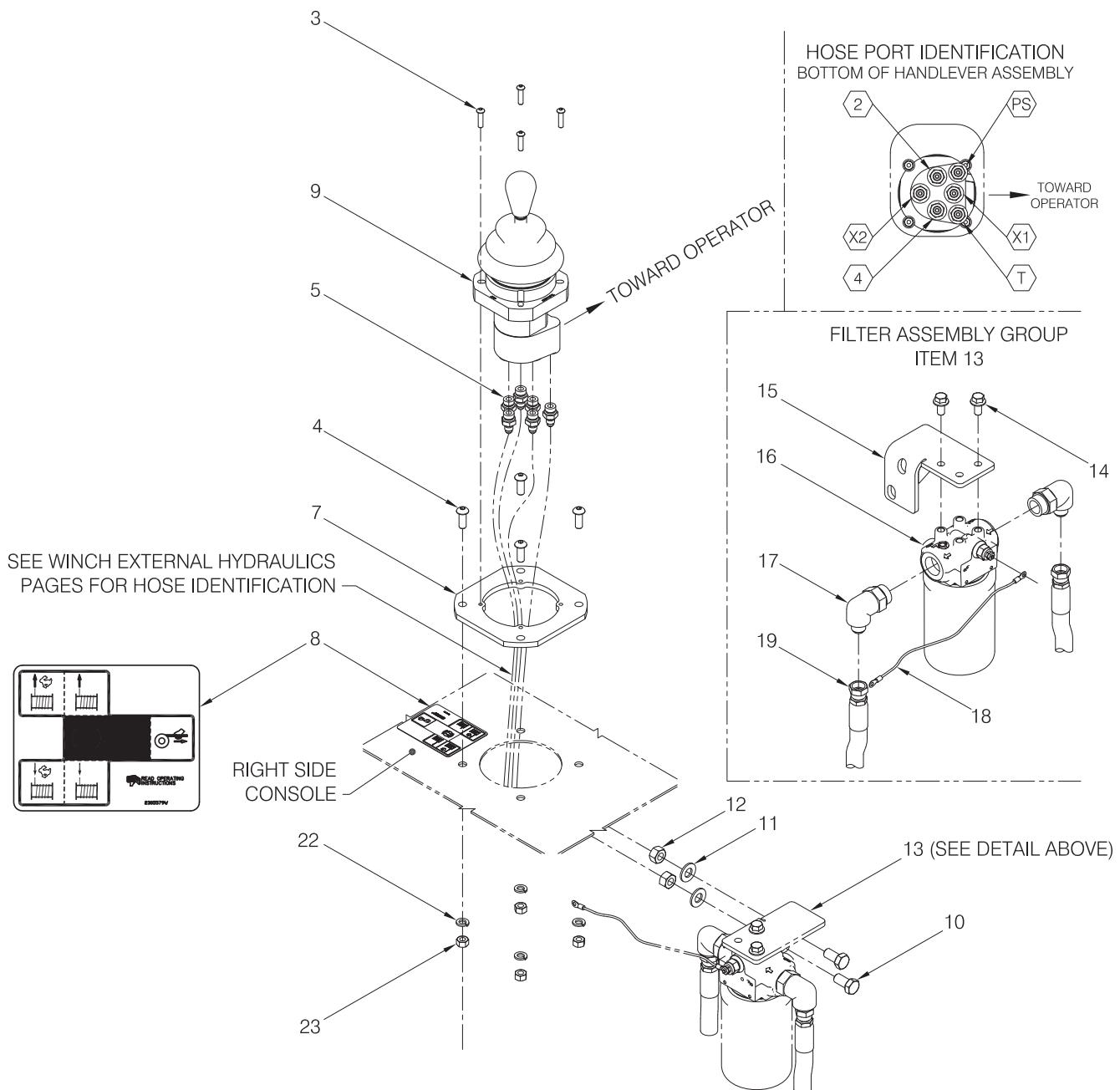
\*a Used for hose end identification, not illustrated

## Control Lever Mounting

Caterpillar D3/4/5G (H4AH\_Y\_C17), D4/5G (H4AH\_Y\_C18)

Used on S/N H4A-1015 through H4A-1161

Page 1 of 2



**Control Lever Mounting**

Caterpillar D3/4/5G (H4AH\_Y\_C17), D4/5G (H4AH\_Y\_C18)

Used on S/N H4A-1015 through H4A-1161

Page 2 of 2

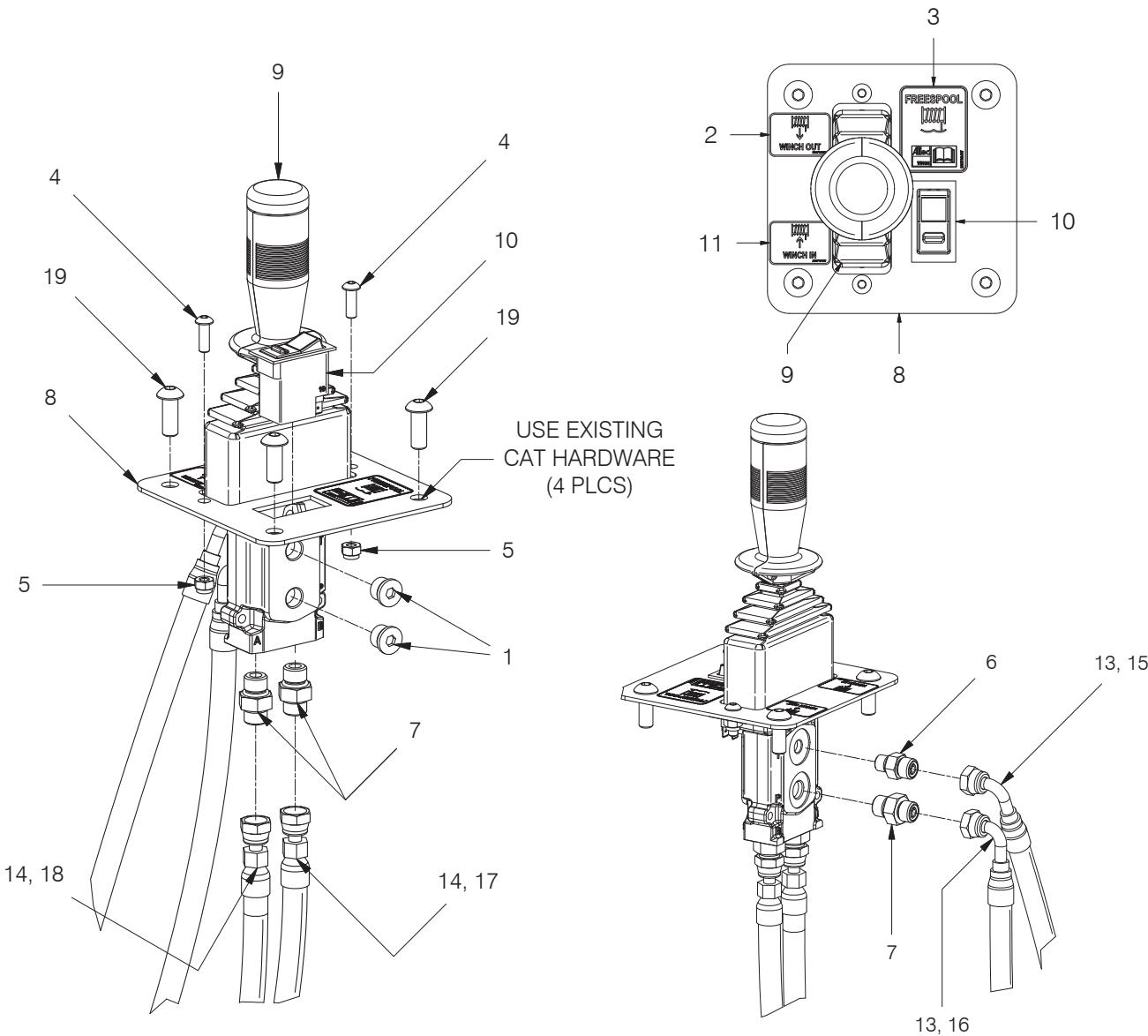
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	18723W	Capscrew	4	13	2306023W	Assembly, Filter	1
4	18738W	Capscrew	4	14	134803W	. Capscrew	2
5	17753W	Fitting	6	15	2304223W	. Bracket	1
6a	*a 2306150W	Label	1	16	2305713W	. Assembly, Filter	1
6b	*a 2306151W	Label	1		2305132W	.. Head, Filter	1
6c	*a 2306152W	Label	1		2304112W	.. Element, Filter	1
6d	*a 2306153W	Label	1		2305712W	.. Switch, Pressure	1
6e	*a 2306154W	Label	1	17	138811W	. Fitting	2
6f	*a 2306155W	Label	1	18	2305714W	. Wire, Filter	1
7	2304207W	Plate, Control Adapter	1	19	2304237W	. Assembly, Hose	2
8	2305579W	Decal	1	22	15156W	Washer	4
9	2306025W	Assembly, Control Lever	1	23	221707W	Nut	4
10	16829W	Capscrew	2				
11	15135W	Washer	2				
12	221711W	Nut	2				

\*a Used for hose end identification, not illustrated

**Control Lever Mounting**

Caterpillar D3/4/5G (H4AH\_Y\_C17), D4/5G (H4AH\_Y\_C18)

First Used on S/N H4A-1162

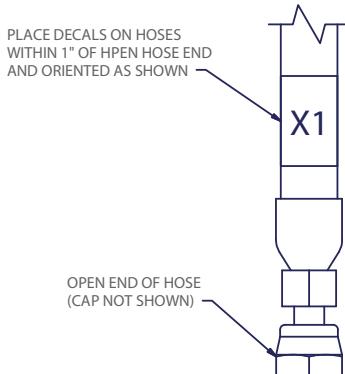
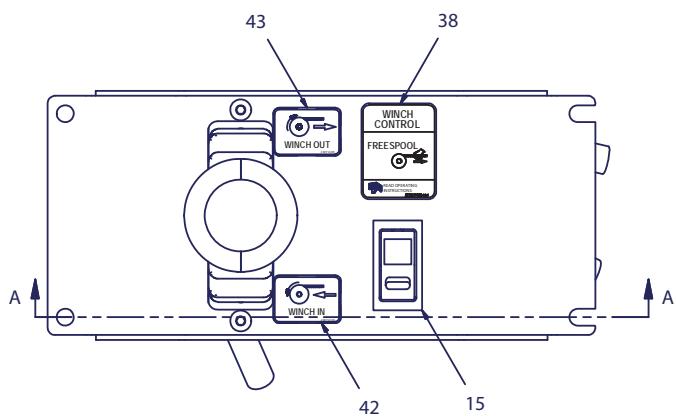


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311752</b>	<b>Assembly, Handlever</b>	<b>1</b>				
1	229383W	. Fitting	2	10	2310017	. Assembly, Switch (See 3-159)	1
2	2307122W	. Decal, Winch Out	1	11	2307121W	. Decal, Winch In	1
3	2307924W	. Decal, Switch Panel	1	13	2311198	. Assembly, Hose	2
4	18720W	. Capscrew	2	14	2311492	. Assembly, Hose	2
5	15113W	. Nut	2	15	2306151W	. Label - T	1
6	231439	. Fitting	1	16	2306152W	. Label - PS	1
7	R833103	. Fitting	3	17	2306154W	. Label - X2	1
8	2311751	. Plate, Handlever Mounting	1	18	2306155W	. Label - X1	1
9	2310929	. Control Lever (See 3-152)	1	19	18738W	Capscrew	4

**Control Lever Mounting**

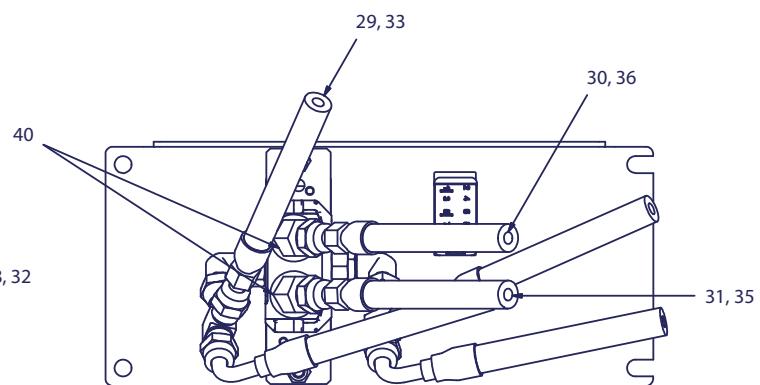
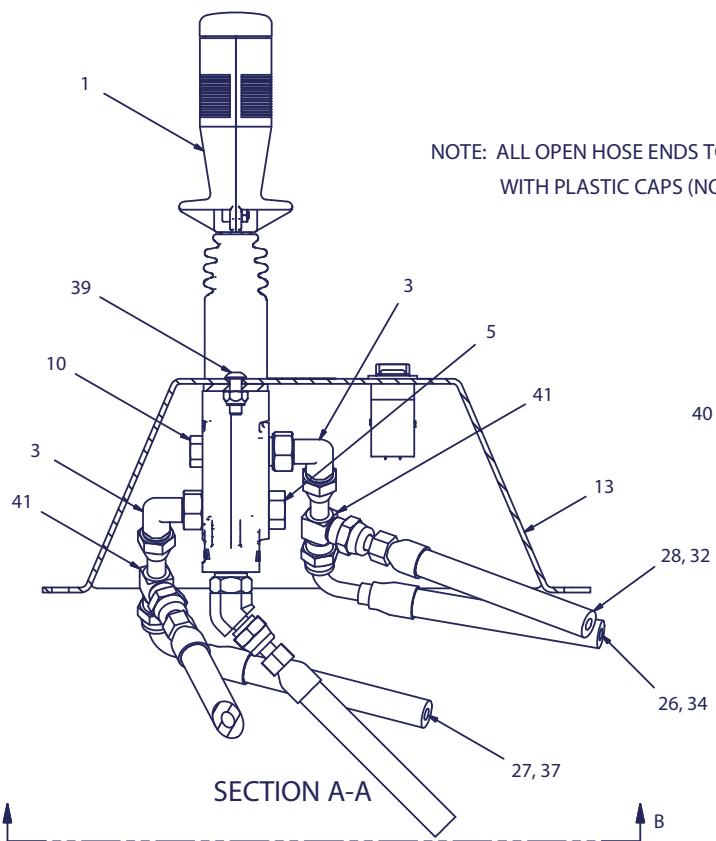
Caterpillar D3/4K (H4AH\_Y\_C19)

Last Used on S/N H4A-1161



HOSE DECAL PLACEMENT

NOTE: ALL OPEN HOSE ENDS TO BE PLUGGED  
WITH PLASTIC CAPS (NOT SHOWN)

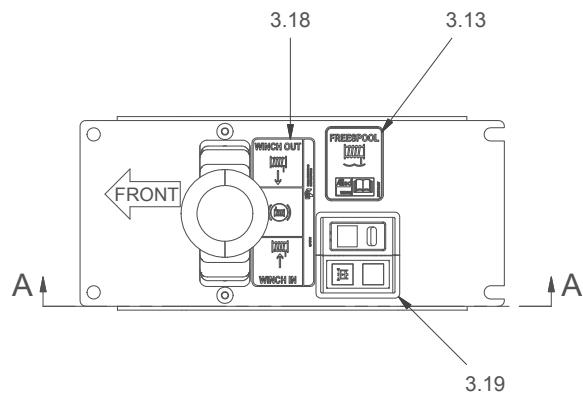
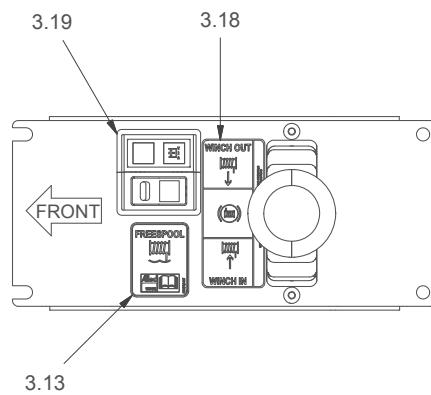
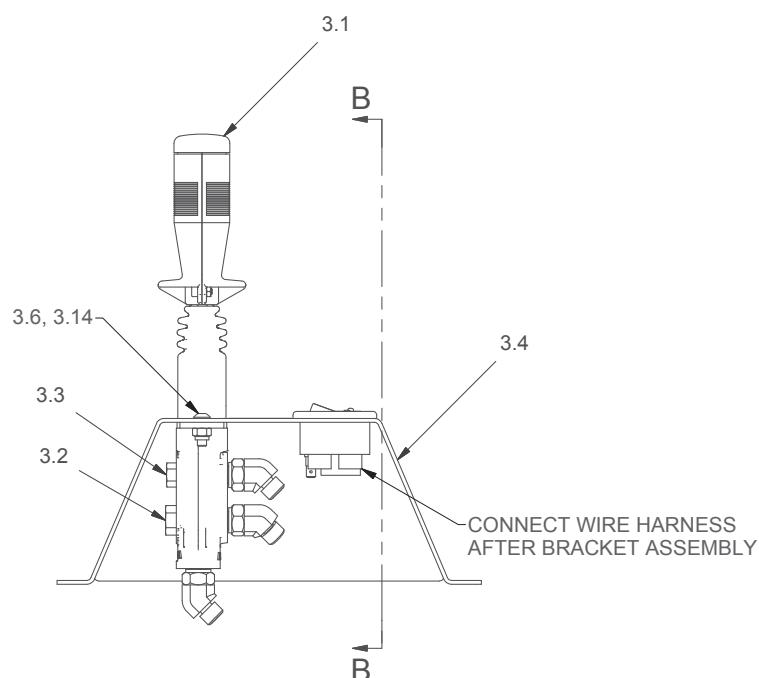


VIEW B-B

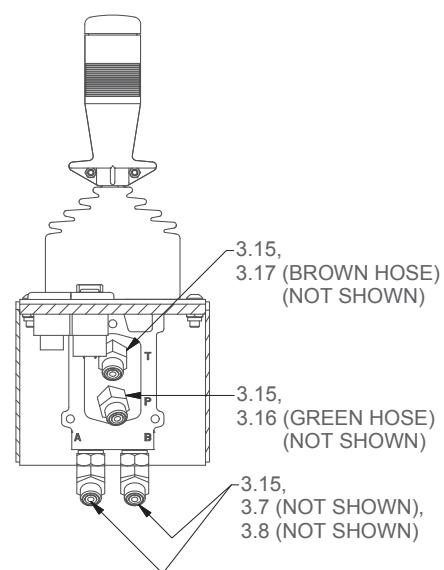
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311490</b>	<b>Assembly, Handlever</b>	<b>1</b>				
1	2310929	. Handlever, Pilot Controller (3-152)	1	32	2306151W	. Label - T	1
3	R833253	. Fitting	2	33	2306152W	. Label - PS	1
5	212762	. Fitting	1	34	2306153W	. Label - 2	1
10	209423	. Fitting	1	35	2306154W	. Label - X2	1
13	2310970	. Bracket, Handlever	1	36	2306155W	. Label - X1	1
15	2310017	. Assembly, Switch (See 3-159)	1	37	2311034	. Label - 3	1
16	15113W	. Nut	2	38	2307924W	. Decal, Switch Panel	1
26	2311022	. Assembly, Hose - Pilot Drain	1	39	18720W	. Capscrew	2
27	2311023	. Assembly, Hose - Freespool Pilot	1	40	R833201	. Fitting	2
28	2311024	. Assembly, Hose - Pilot Drain	1	41	236855	. Fitting	2
29	2311493	. Assembly, Hose - Pilot Supply	1	42	2307121W	. Decal, Winch In	1
30	2311492	. Assembly, Hose, X1	1	43	2307122W	. Decal, Winch Out	1
31	2311491	. Assembly, Hose, X2	1				

## Control Lever Mounting

Caterpillar D3/4K/K2 (H4AH\_Y\_C19)  
Used on S/N H4A-1162 - H4A-1435

D3/4K CONTROL LEVER CONSOLED3/4K2 CONTROL LEVER CONSOLE

SECTION A-A  
CONTROL LEVER COMPONENTS

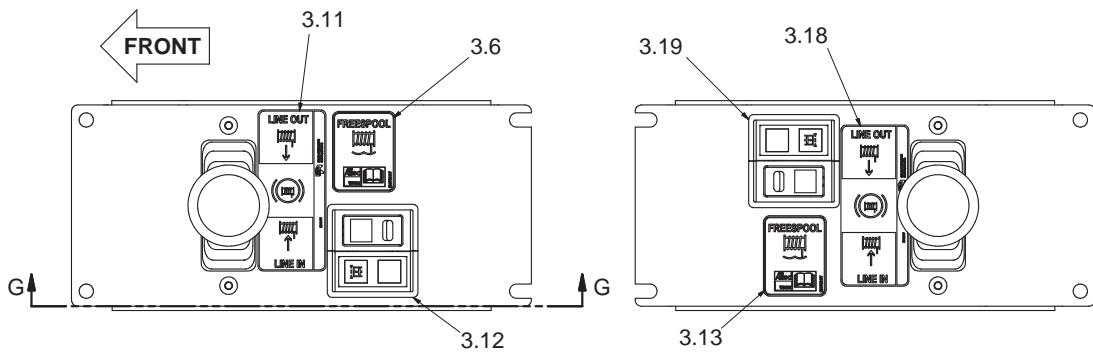


SECTION B-B  
CONTROL LEVER HOSE CONNECTIONS

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	2310929	Control Lever (See 3-152)	1	3.14	18720W	Capscrew	2
3.2	212762	Fitting	1	3.15	R833201	Fitting	4
3.3	209423	Fitting	1	3.16	2311493	Hose Assembly - Pilot Supply	1
3.4	2310970	Bracket	1	3.17	2311024	Hose Assembly - Drain	1
3.6	15113W	Nut	2	3.18	2312177	Decal, Winch In, Winch Out	1
3.7	2311492	Hose Assembly - X1	1	3.19	2314321	Assembly, Filter Light Switch (3-160)	1
3.8	2311491	Hose Assembly - X2	1	3.20	2304988W	Kit, Various Color Tie Strap	1
3.13	2307924W	Decal, Switch Panel	1				

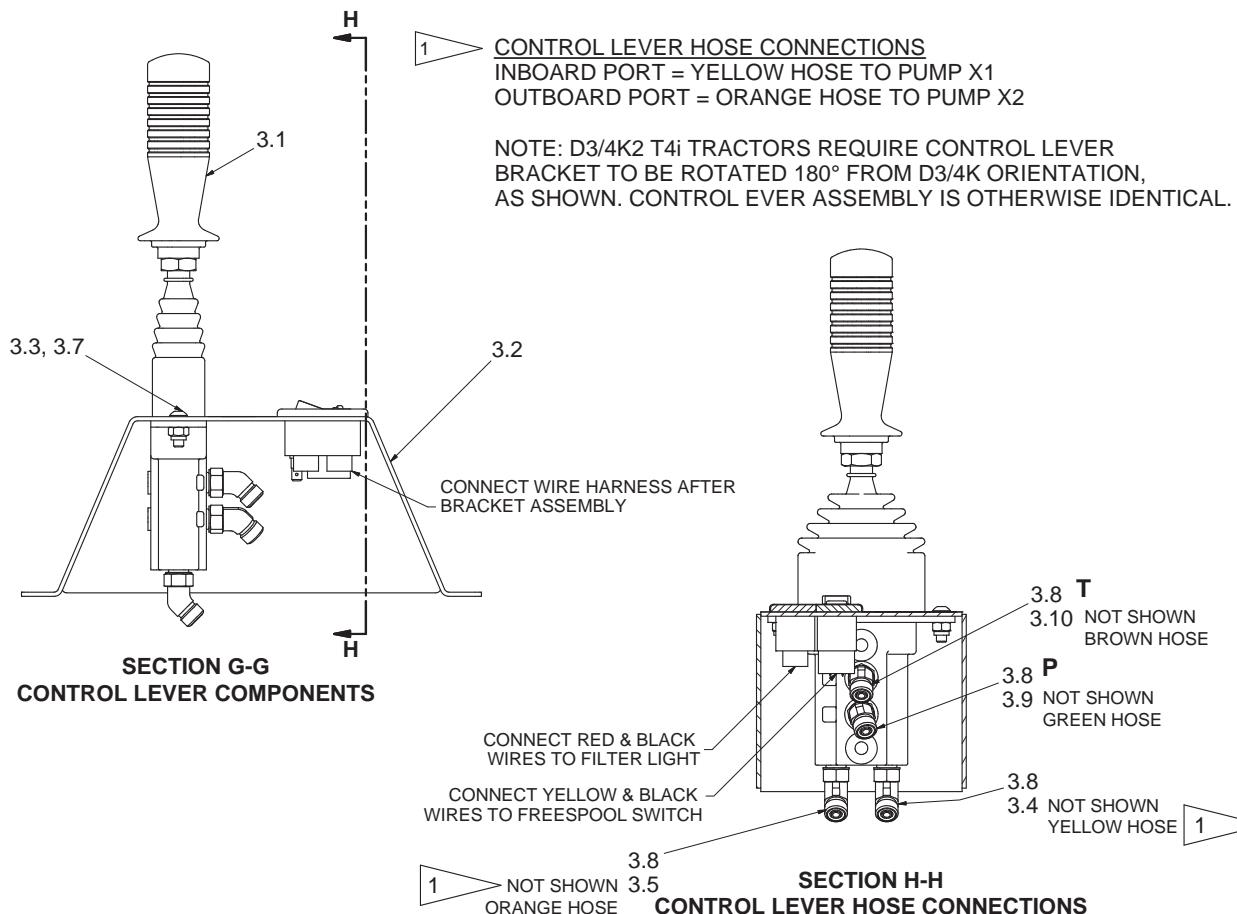
## Control Lever Mounting

Caterpillar D3/4K/K2 (H4AH\_Y\_C19)  
First Used on S/N H4A-1436



D3/4K CONTROL LEVER CONSOLE

D3/4K2 T4i CONTROL LEVER CONSOLE

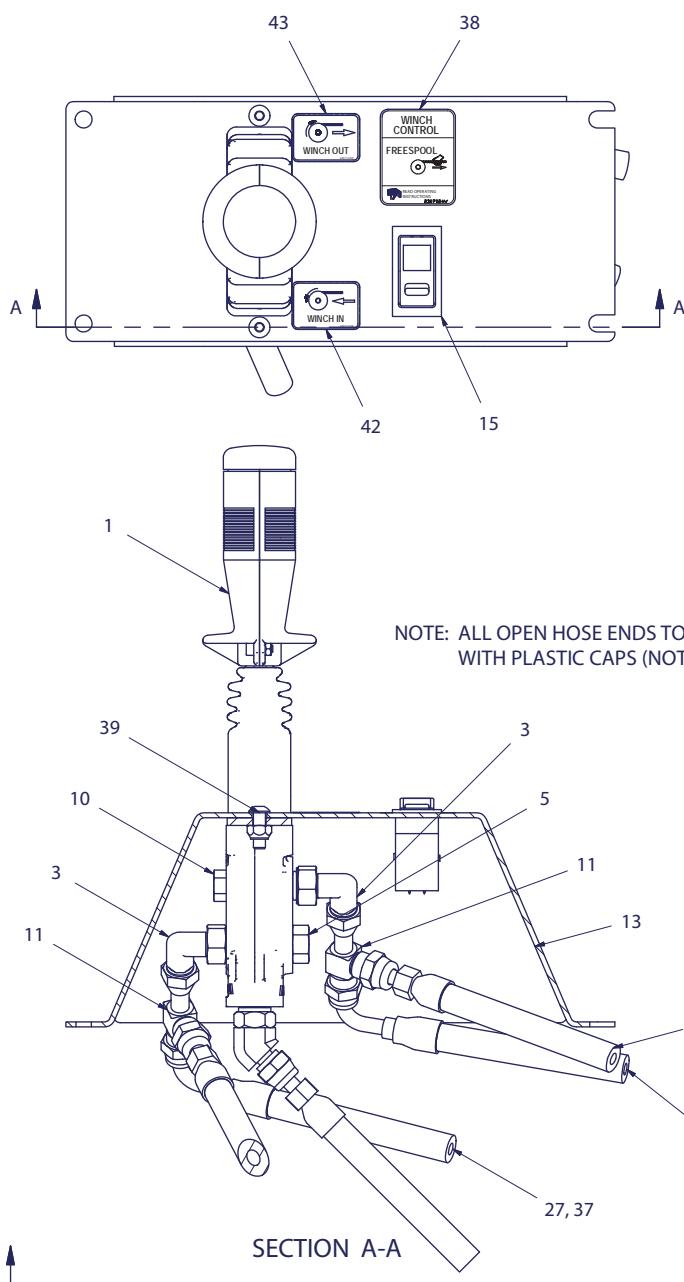


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	2315561	Control Lever	1	3.8	R833200	Fitting	4
3.2	2315755	Bracket	1	3.9	2311493	Hose Assembly - Pilot Supply	1
3.3	15113W	Locknut	2	3.10	2311024	Hose Assembly - Drain	1
3.4	2311492	Hose Assembly - X1	1	3.11	2312177	Decal, Winch In, Winch Out	1
3.5	2311491	Hose Assembly - X2	1	3.12	2314321	Assembly, Filter Light Switch (3-160)	1
3.6	2307924W	Decal, Switch Panel	1	3.13	2304988W	Kit, Various Color Tie Strap	1
3.7	18720W	Capscrew	2				

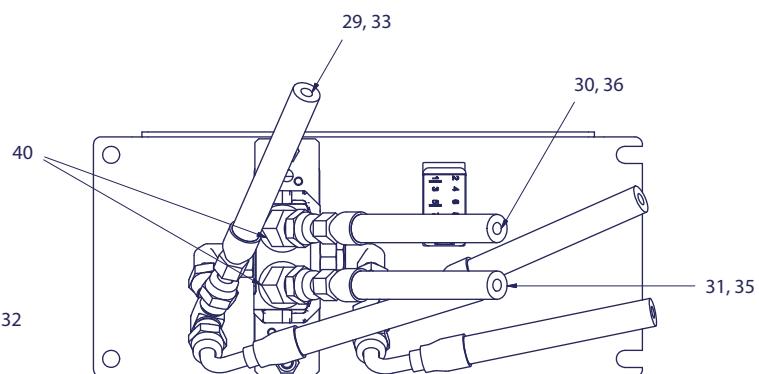
**Control Lever Mounting**

Caterpillar D5K (H4AH\_Y\_C20)

Last Used on S/N H4A-1161

PLACE DECALS ON HOSES  
WITHIN 1" OF OPEN HOSE END  
AND ORIENTED AS SHOWNOPEN END OF HOSE  
(CAP NOT SHOWN)

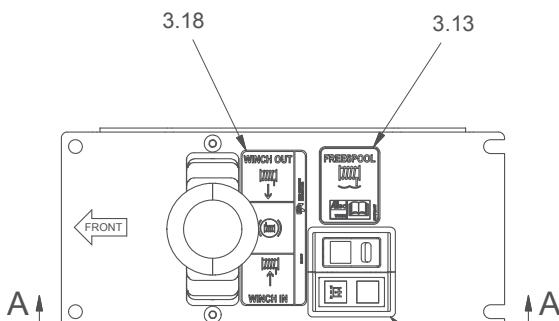
HOSE DECAL PLACEMENT



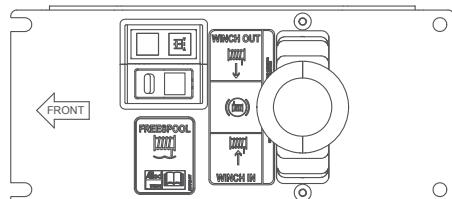
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2311396</b>	<b>Assembly, Control Lever</b>	<b>1</b>				
1	2310929	. Control Lever (See 3-152)	1	32	2306151W	. Label - T	1
3	R833253	. Fitting	2	33	2306152W	. Label - PS	1
5	212762	. Fitting	1	34	2306153W	. Label - 2	1
10	209423	. Fitting	1	35	2306154W	. Label - X2	1
11	236855	. Fitting	2	36	2306155W	. Label - X1	1
13	2310970	. Bracket, Control Lever	1	37	2311034	. Label - 3	1
15	2310017	. Assembly, Switch (See 3-159)	1	38	2307924W	. Decal, Switch Panel	1
16	15113W	. Nut	2	39	18720W	. Capscrew	2
26	2311022	. Assembly, Hose - Pilot Drain	1	40	R833201	. Fitting	2
27	2311023	. Assembly, Hose - Freespool Pilot	1	42	2307121W	. Decal, Winch In	1
28	2311024	. Assembly, Hose - Pilot Drain	1	43	2307122W	. Decal, Winch Out	1
29	*a 2311395	. Assembly, Hose - Pilot Supply	1	*a First Used on S/N H4A-1116			
30	2311026	. Assembly, Hose, X1	1				
31	2311027	. Assembly, Hose, X2	1				

**Control Lever Mounting**

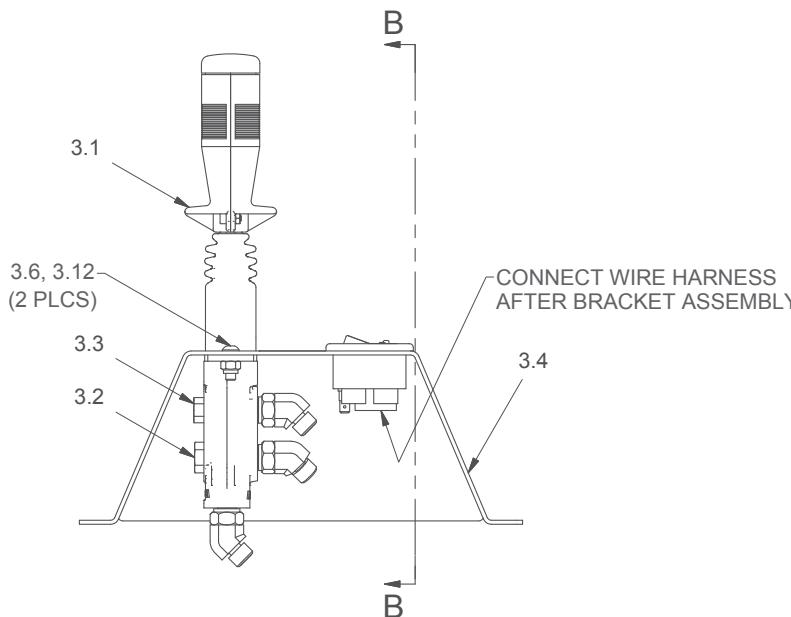
Caterpillar D5K/K2 (H4AH\_Y\_C20)  
Used on S/N H4A-1162 - H4A-1483



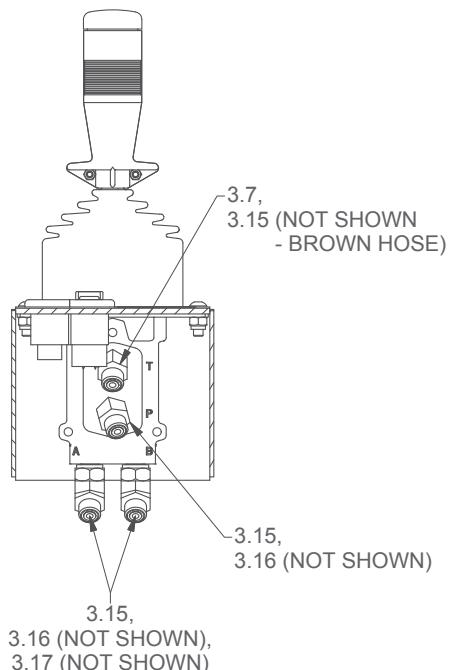
D5K  
CONTROL LEVER CONSOLE



D5K2  
CONTROL LEVER CONSOLE



SECTION A-A  
HANDLEVER COMPONENTS



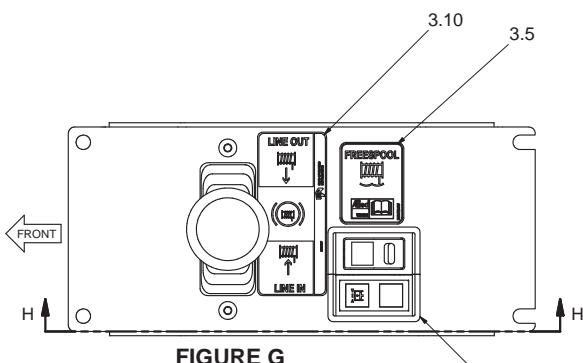
SECTION B-B  
HANDLEVER HOSE CONNECTIONS

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	2310929	Control Lever (See 3-152)	1	3.15	R833201	Fitting	4
3.2	212762	Fitting	1	3.16	2312328	Assembly, Hose	2
3.3	209423	Fitting	1	3.17	2311027	Assembly, Hose	1
3.4	2310970	Bracket, Control Lever	1	3.18	2312177	Decal, Winch In/Winch Out	1
3.6	15113W	Nut	2	3.19	2314321	Assembly, Filter Light Switch(3-160)	1
3.7	2311024	Assembly, Hose - Drain	1	3.20	*a 2304988W	Kit, Various Color Tie Strap	1
3.12	18720W	Capscrew	2	*a Not Illustrated			
3.13	2307924W	Decal, Switch Panel	1				

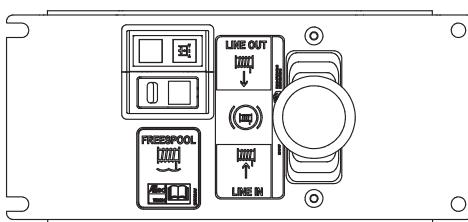
## Control Lever Mounting

Caterpillar D5K/K2 (H4AH\_Y\_C20)

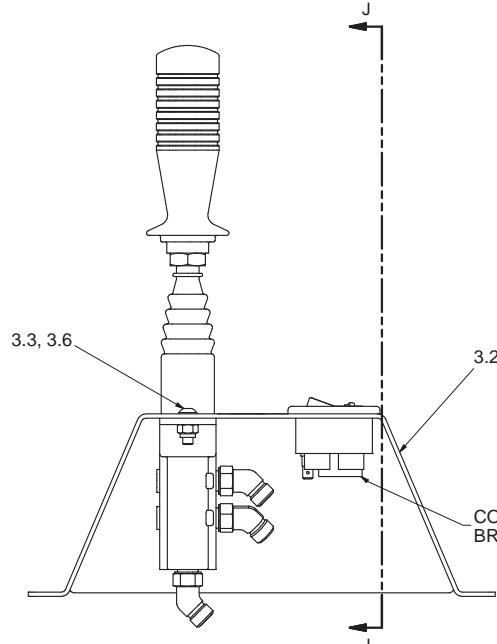
First Used on S/N H4A-1484



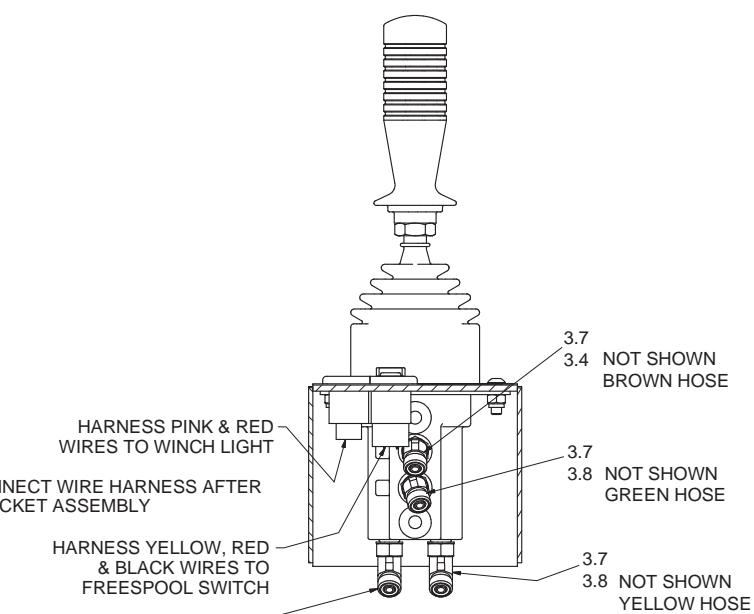
**FIGURE G**  
**D5K CONTROL LEVER CONSOLE**



**FIGURE K**  
**D5K2 T4i CONTROL LEVER CONSOLE**



**SECTION H-H**  
**CONTROL LEVER COMPONENTS**



**SECTION J-J**  
**CONTROL LEVER HOSE CONNECTIONS**

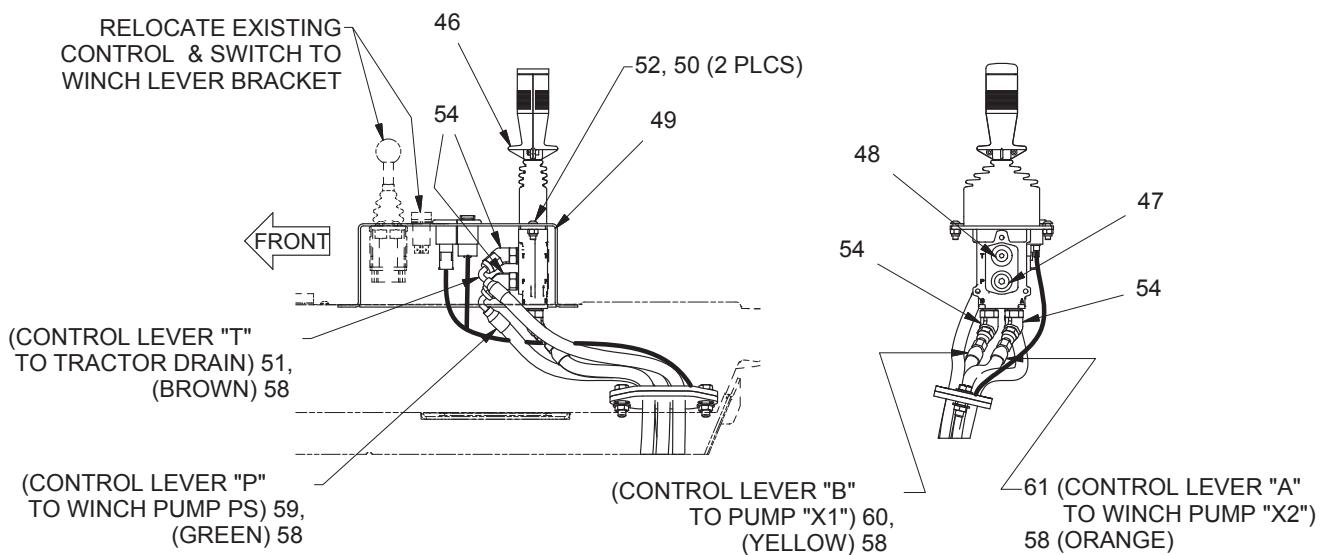
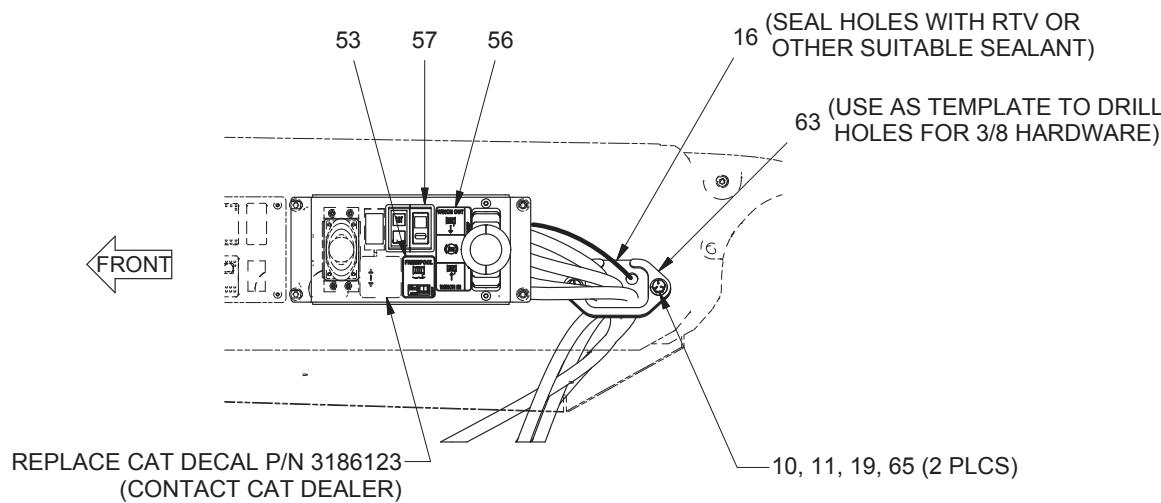
**CONTROL LEVER HOSE CONNECTIONS**  
INBOARD PORT = YELLOW HOSE TO PUMP X1  
OUTBOARD PORT = ORANGE HOSE TO PUMP X2

NOTE: D5K2 T4i TRACTORS REQUIRE CONTROL LEVER BRACKET TO BE ROTATED 180° FROM D5K ORIENTATION, AS SHOWN. CONTROL LEVER ASSEMBLY IS OTHERWISE IDENTICAL.

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	2315561	Control Lever	1	3.9	2311027	Hose Assembly	1
3.2	2315755	Bracket	1	3.10	2312177	Decal, Winch In/Winch Out	1
3.3	15113W	Locknut	2	3.11	2314321	Assembly, Filter Light Switch (3-160)	1
3.4	2311024	Hose Assembly	1	3.12	*a 2304988W	Kit, Various Color Tie Strap	1
3.5	2307924W	Decal, Switch Panel	1	*a Not Illustrated			
3.6	18720W	Capscrew	2				
3.7	R833200	Fitting	4				
3.8	2312328	Hose Assembly	2				

## Control Lever Mounting

Caterpillar D5K2 With Fireflow (H4AH\_Y\_C201)



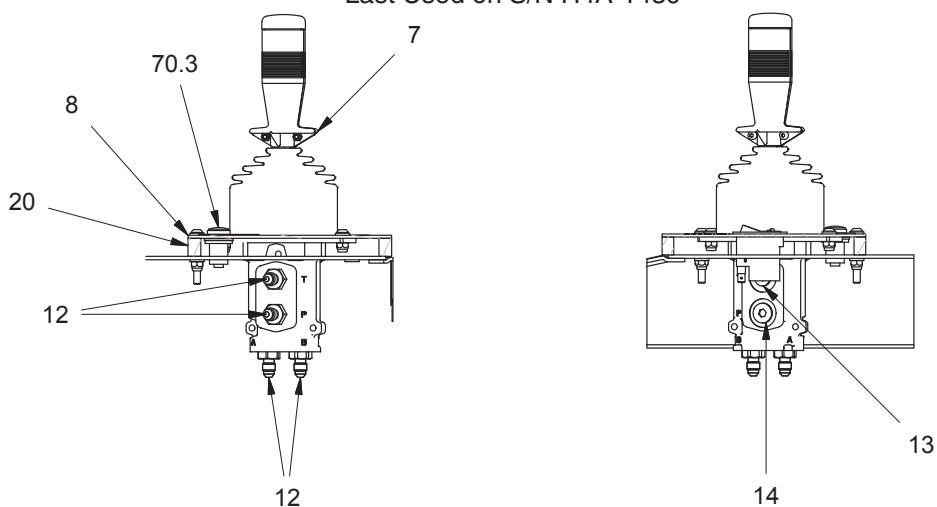
### WINCH CONTROLS INSTALLATION

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
10	16828W	Capscrew	2	54	R833201	Fitting	4
11	15134W	Washer	4	56	2312177	Decal, Winch In/Winch Out	1
16	2314873	Seal, Top - Left Hand Side	1	57	2314321	Assembly, Filter Light Switch (3-160)	1
19	15086W	Nut	2	58	2304988W	Kit, Various Color Tie Strap (Not Shown)	1
46	2310929	Control Lever (See 3-152)	1	59	*a	Assembly, Hose	1
47	229383	Fitting	1	60	*a	Assembly, Hose	1
48	235387	Fitting	1	61	*a	Assembly, Hose	1
49	2314856	Bracket, Control Lever	1	63	2307226W	Cover	1
50	15113W	Nut	2	65	2312119	Spacer	2
51	2314904	Assembly, Hose	1	*a Consult the Factory			
52	18720W	Capscrew	2				
53	2307924W	Decal, Switch Panel	1				

**Control Lever Mounting**

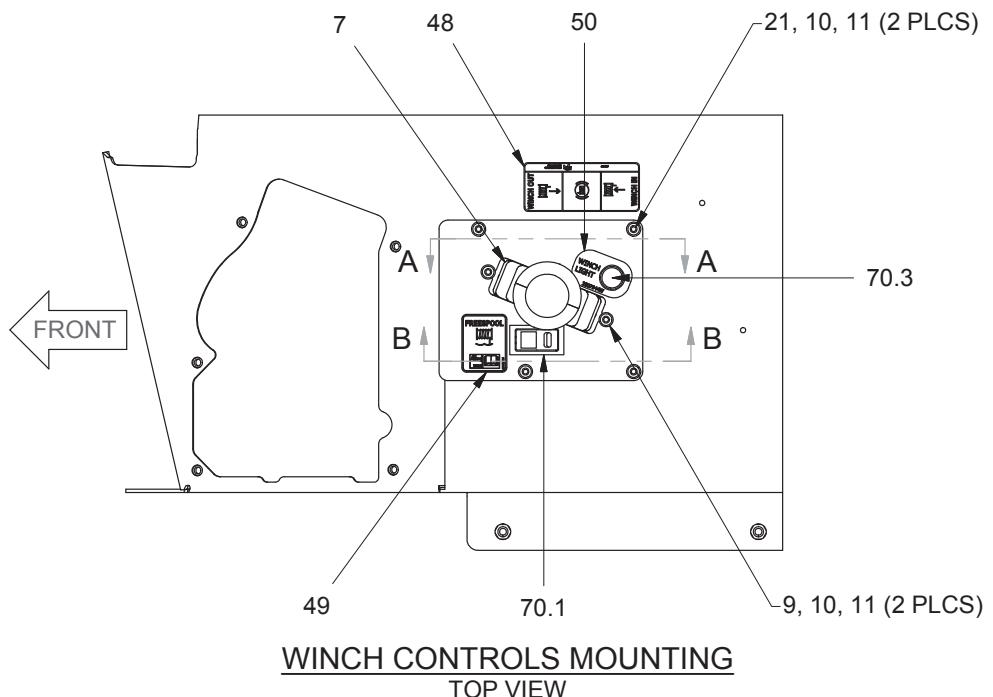
John Deere 450-650J (H4AH\_R\_E15)

Last Used on S/N H4A-1439



**SECTION A-A**  
CONTROL LEVER AND SWITCH MOUNTING

**SECTION B-B**  
CONTROL LEVER PORT PLUGS

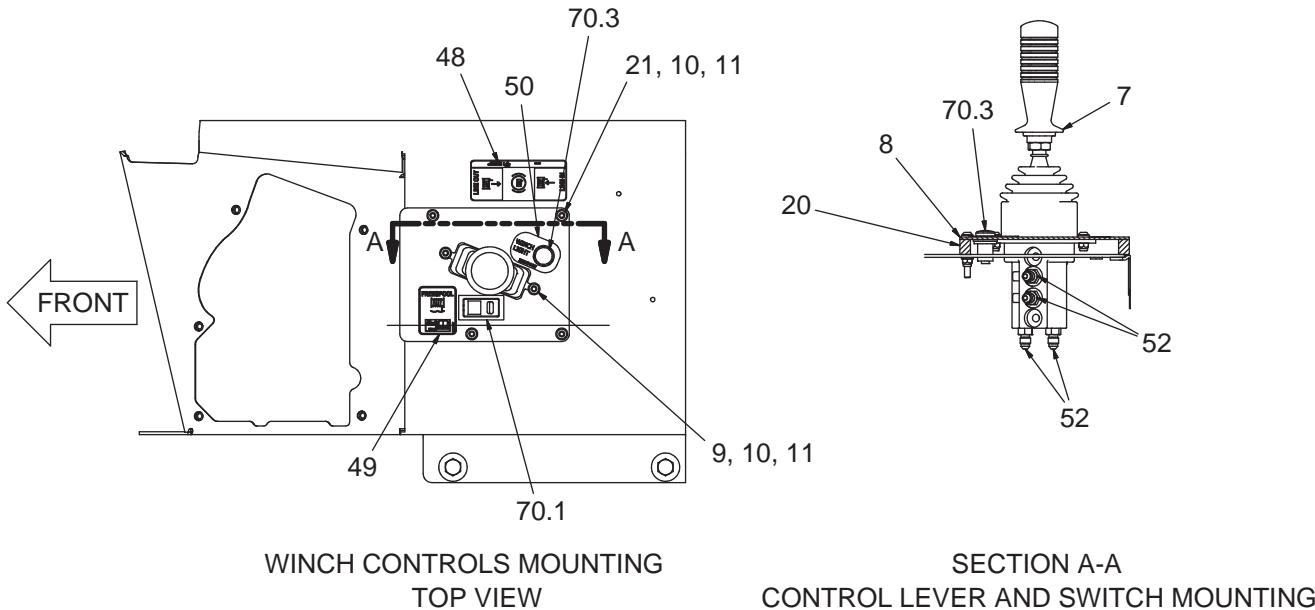


**CONSOLE ALTERATION & CONTROL LEVER INSTALLATION**  
**450-650J (E15)**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
7	2310929	Lever, Control (See 3-152)	1	20	2314426	Spacer, Control Mounting	1
8	2314424	Plate, Control Mounting	1	21	2305199W	Capscrew	4
9	296159W	Capsscrew	2	48	2312177	Decal, Winch In, Winch Out	1
10	296417W	Washer	4	49	2307924W	Decal, Switch Panel	1
11	302399W	Nut	6	50	2307944W	Decal, Winch Light	1
12	223929	Fitting	4	70.1	2310017	Assembly, Switch (See 3-159)	1
13	235387	Fitting	1	70.3	2311314	Assembly, Bypass LED	1
14	229383	Fitting	1				

**Control Lever Mounting**

John Deere 450-650J (H4AH\_R\_E15)  
First Used on S/N H4A-1440

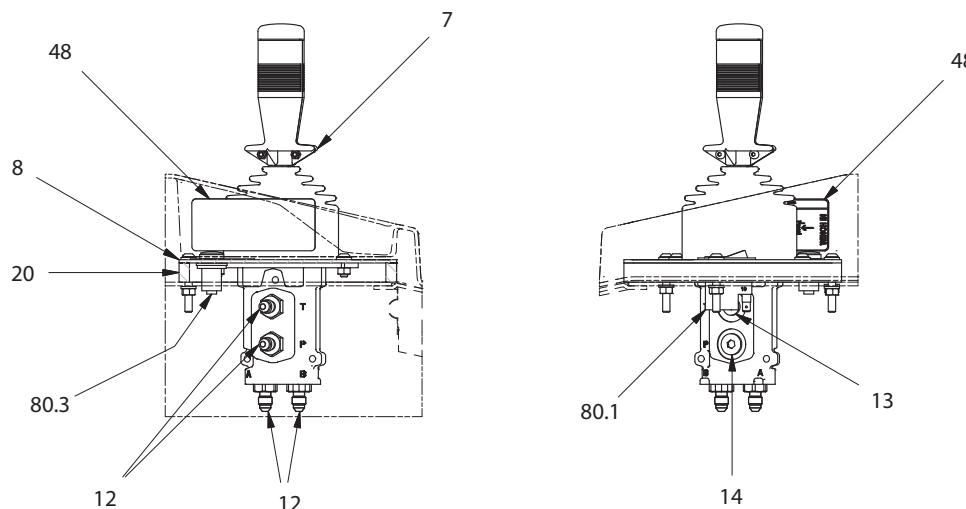


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
7	2315561	Lever, Control	1	48	2312177	Decal, Winch In, Winch Out	1
8	2515770	Plate, Control Mounting	1	49	2307924W	Decal, Switch Panel	1
9	296159W	Capscrew	2	50	2307944W	Decal, Winch Light	1
10	296417W	Washer	4	52	209083	Fitting	4
11	302399W	Nut	6	70.1	2310017	Assembly, Switch (See 3-159)	1
20	2314426	Spacer, Control Mounting	1	70.3	2311314	Assembly, Bypass LED	1
21	2305199W	Capscrew	4				

**Control Lever Mounting**

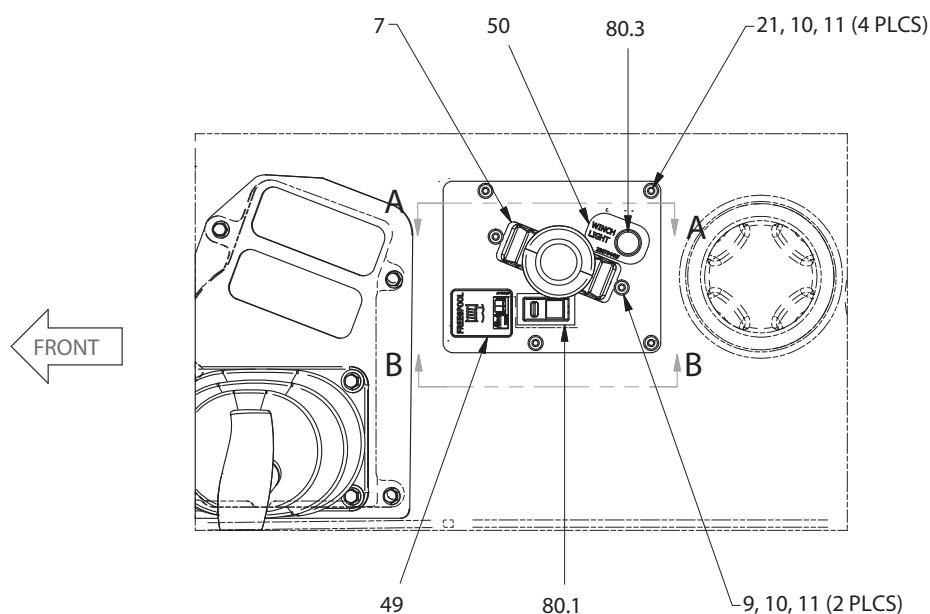
John Deere 550-650K (H4AH\_R\_E16)

Last Used on S/N H4A-1439



SECTION A-A  
CONTROL LEVER AND SWITCH MOUNTING

SECTION B-B  
CONTROL LEVER PORT PLUGS



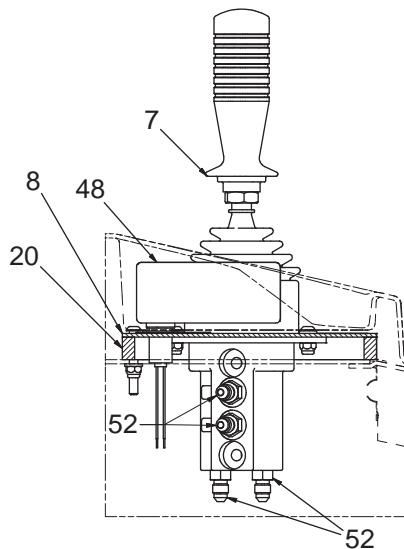
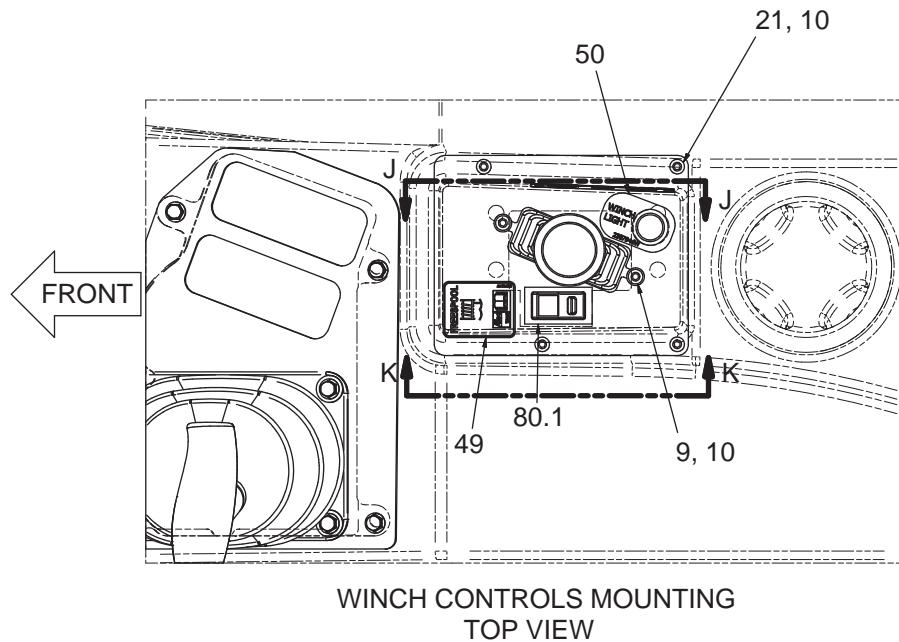
WINCH CONTROLS MOUNTING  
TOP VIEW

CONSOLE ALTERATION & CONTROL LEVER INSTALLATION  
550-650K (E16)

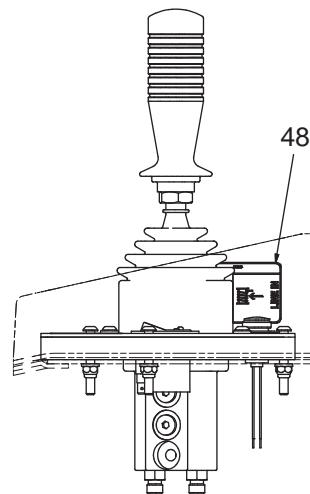
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
7	2310929	Lever, Control (See 3-152)	1	20	2314426	Spacer, Control Mounting	1
8	2314424	Plate, Control Mounting	1	21	2305199W	Capscrew	4
9	296159W	Capscrew	2	48	2312177	Decal, Winch In, Winch Out	1
10	296417W	Washer	6	49	2307924W	Decal, Switch Panel	1
11	302399W	Nut	6	50	2307944W	Decal, Winch Light	1
12	223929	Fitting	4	80.1	2310013	Assembly, Switch (See 3-158)	1
13	235387	Fitting	1	80.3	2303912W	Assembly, Bypass LED	1
14	229383	Fitting	1				

**Control Lever Mounting**

John Deere 550-650K (H4AH\_R\_E16)  
First Used on S/N H4A-1440



**SECTION J-J**  
**CONTROL LEVER AND SWITCH MOUNTING**



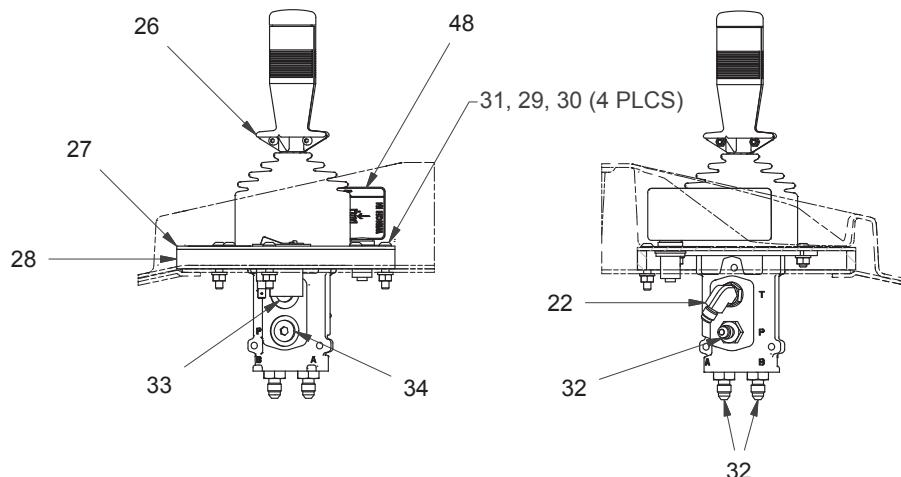
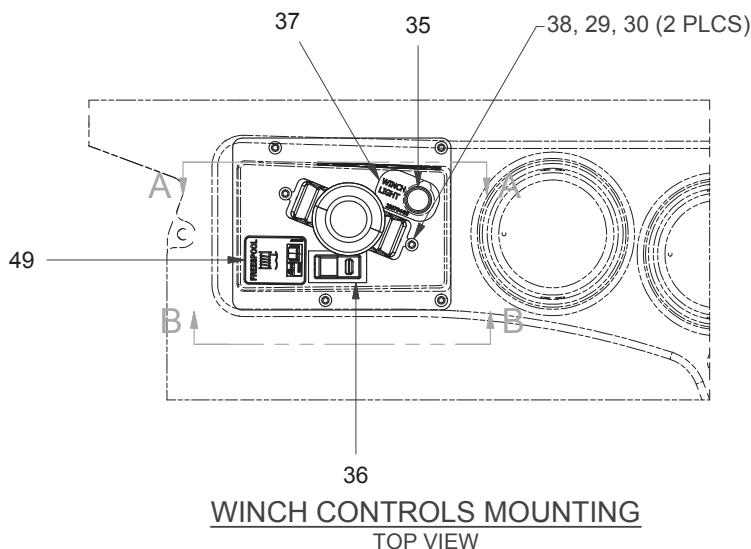
**SECTION K-K**  
**CONTROL LEVER PORT PLUGS**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
7	2315561	Lever, Control	1	48	2312177	Decal, Winch In, Winch Out	1
8	2515770	Plate, Control Mounting	1	49	2307924W	Decal, Switch Panel	1
9	296159W	Capscrew	2	50	2307944W	Decal, Winch Light	1
10	296417W	Washer	4	52	209083	Fitting	4
11	302399W	Nut	6	80.1	2310013	Assembly, Switch (See 3-158)	1
20	2314426	Spacer, Control Mounting	1	80.3	2303912W	Assembly, Bypass LED	1
21	2305199W	Capscrew	4				

**Control Lever Mounting**

John Deere 700H/J (H4AH\_R\_E39)

Last Used on S/N H4A-1439



**SECTION B-B**  
CONTROL LEVER & SWITCH MOUNTING

**SECTION A-A**  
CONTROL LEVER PORT FITTINGS

CONSOLE ALTERATION & CONTROL LEVER INSTALLATION

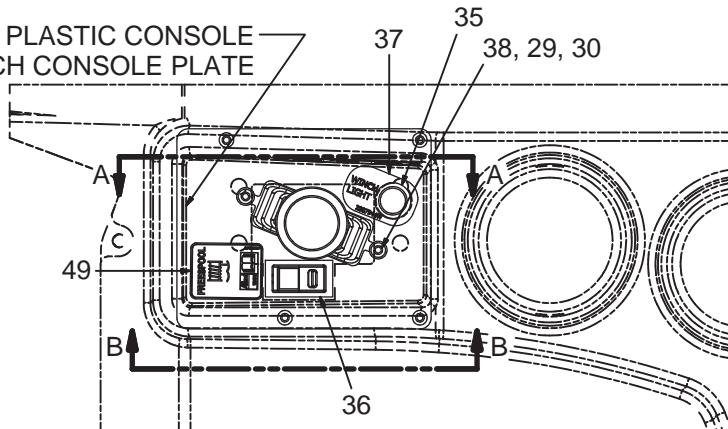
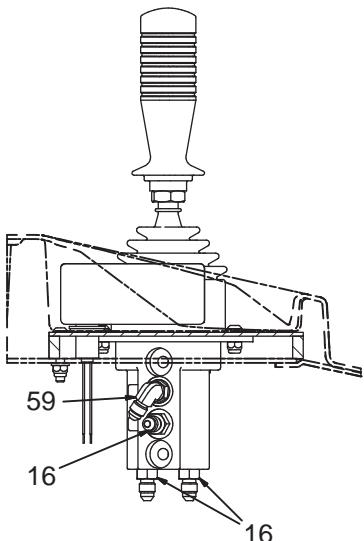
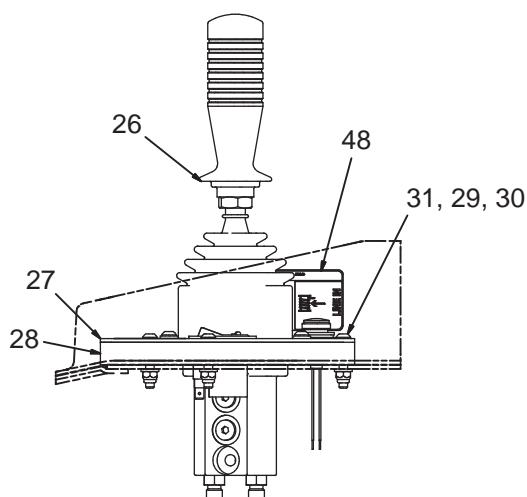
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
22	223784	Fitting	1	33	235387	Fitting	1
26	2310929	Control Lever (See 3-152)	1	34	229383	Fitting	1
27	2314424	Plate, Control Mounting	1	35	2303912W	Assembly, Bypass LED	1
28	2314426	Spacer, Control Mounting	1	36	2310013	Assembly, Switch (See 3-158)	1
29	292653W	Nut	6	37	2307944W	Decal, Winch Light	1
30	296417W	Washer	6	38	296159W	Capscrew	24
31	2315030	Capscrew	4	48	2312177	Decal, Winch In, Winch Out	1
32	223929	Fitting	3	49	2307924W	Decal, Switch Panel	1

**Control Lever Mounting**

John Deere 700H/J (H4AH\_R\_E39)

First Used on S/N H4A-1440

CUT OUT BOTTOM OF PLASTIC CONSOLE  
TO EXPOSE THE WINCH CONSOLE PLATE

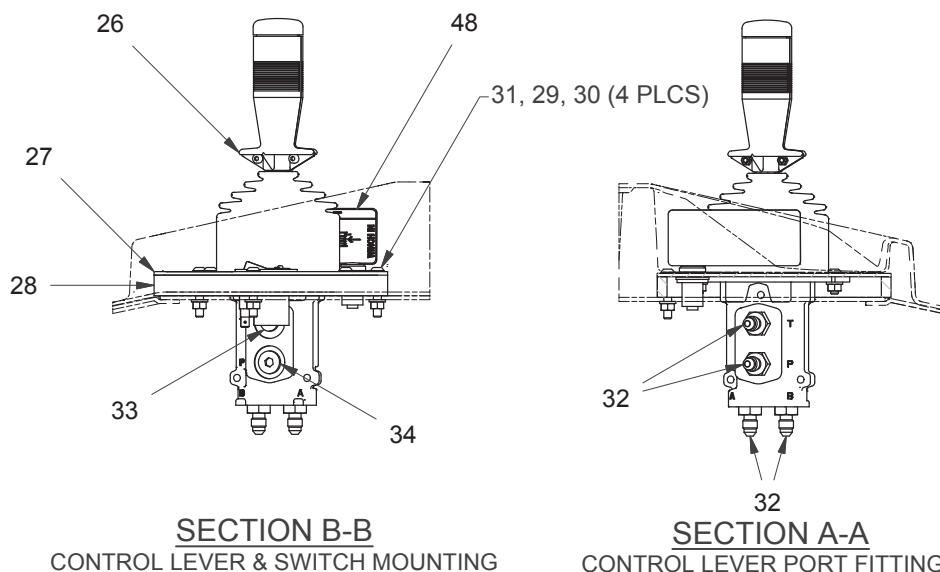
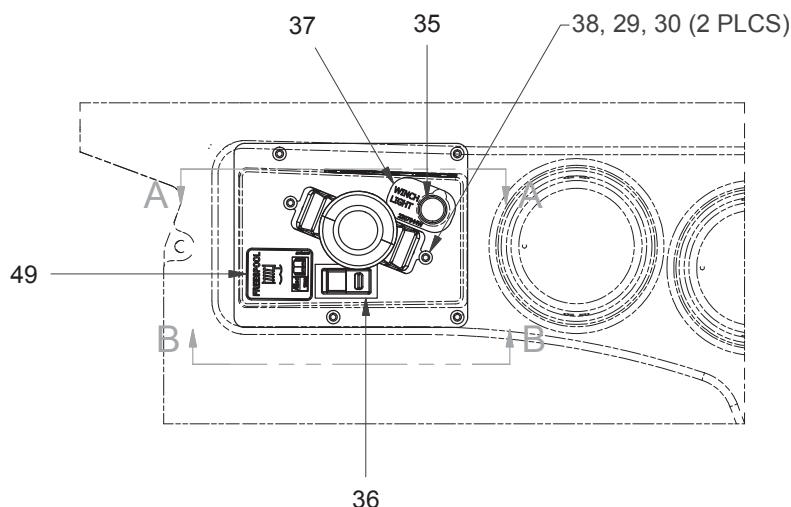
WINCH CONTROLS MOUNTING  
TOP VIEWSECTION A-A  
CONTROL LEVER PORT FITTINGSSECTION B-B  
CONTROL LEVER & SWITCH MOUNTING

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
16	209083	Fitting	6	35	2303912W	Assembly, Bypass LED	1
26	2315561	Control Lever	1	36	2310013	Assembly, Switch (See 3-158)	1
27	2315770	Plate, Control Mounting	1	37	2307944W	Decal, Winch Light	1
28	2314426	Spacer, Control Mounting	1	38	296159W	Capscrew	24
29	302399W	Nut	6	48	2312177	Decal, Winch In, Winch Out	1
30	296417W	Washer	6	49	2307924W	Decal, Switch Panel	1
31	2315030	Capscrew	4	59	209486	Fitting	1

**Control Lever Mounting**

John Deere 700K (H4AH\_R\_E391)

Last Used on S/N H4A-1439

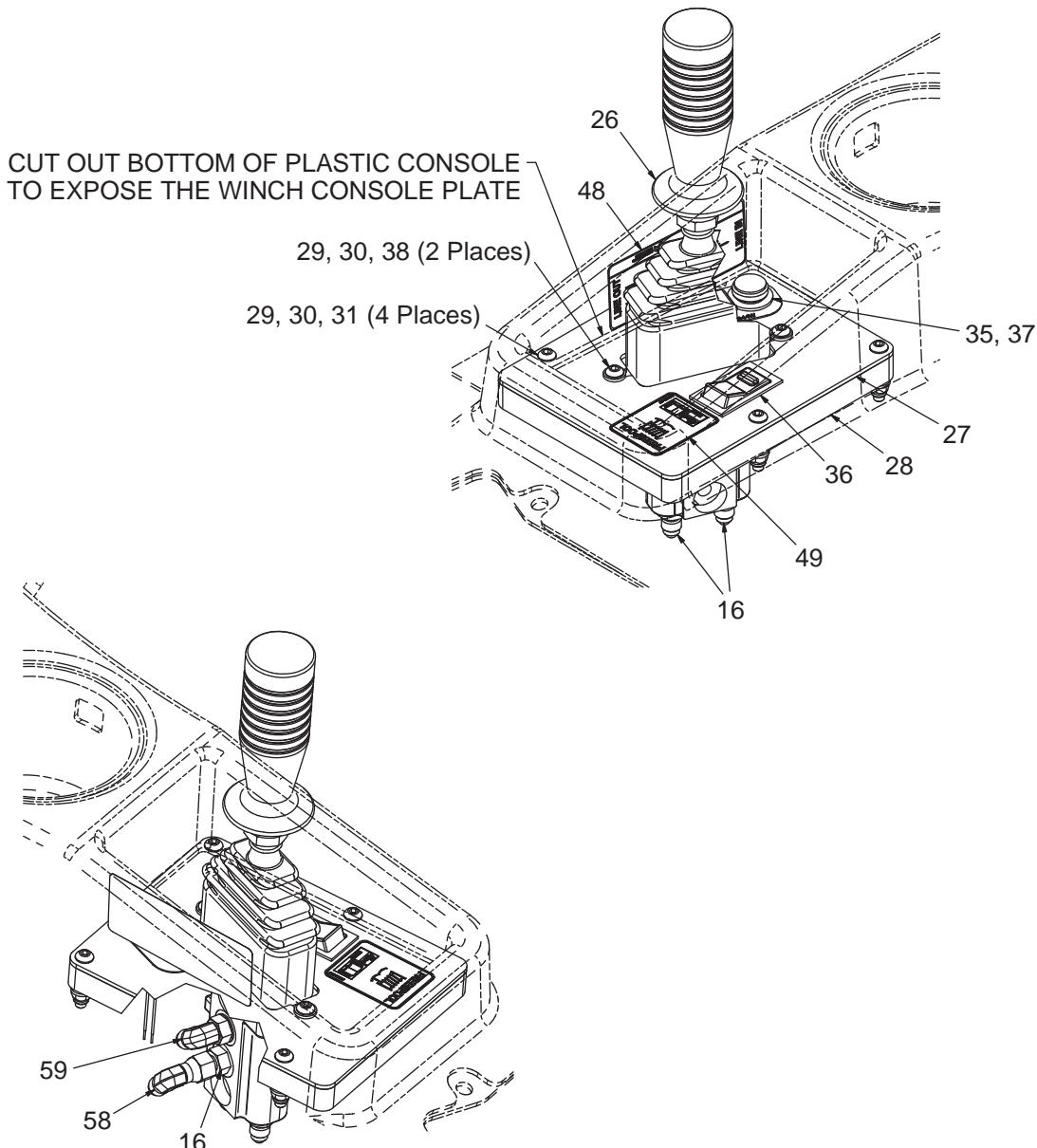
CONSOLE ALTERATION & CONTROL LEVER INSTALLATION

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
26	2310929	Control Lever (See 3-152)	1	34	229383	Fitting	1
27	2314424	Plate, Control Mounting	1	35	2311314	Assembly, Bypass LED	1
28	2314426	Spacer, Control Mounting	1	36	2310013	Assembly, Switch - 24V (3-158)	1
29	292653W	Nut	6	37	2307944W	Decal, Winch Light	1
30	296417W	Washer	6	38	296159W	Capscrew	24
31	2315030	Capscrew	4	48	2312177	Decal, Winch In, Winch Out	1
32	223929	Fitting	4	49	2307924W	Decal, Switch Panel	1
33	235387	Fitting	1				

**Control Lever Mounting**

John Deere 700K (H4AH\_R\_E391)

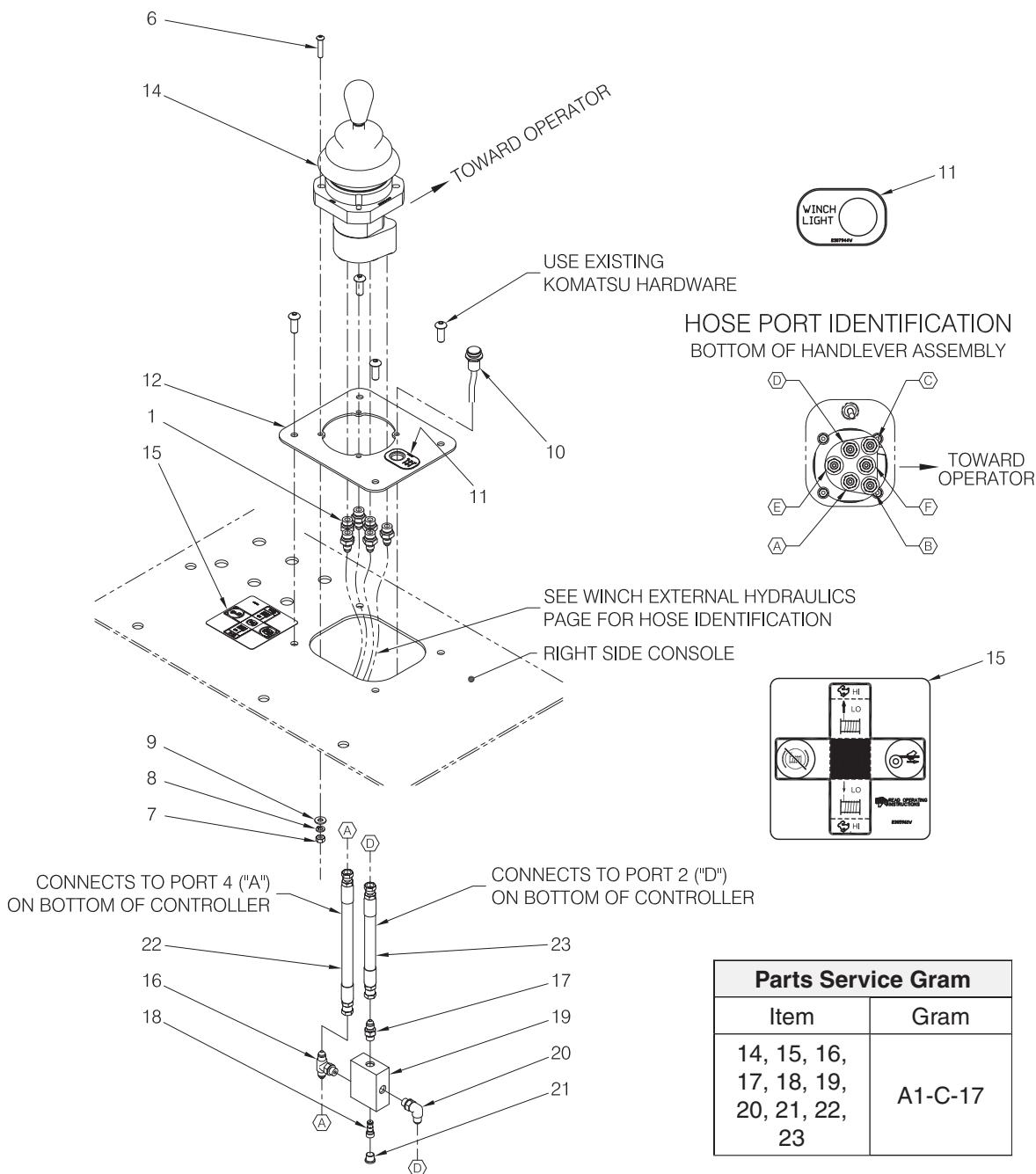
First Used on S/N H4A-1440



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
16	209083	Fitting	3	36	2310013	Assembly, Switch - 24V (3-158)	1
26	2315561	Control Lever	1	37	2307944W	Decal, Winch Light	1
27	2315770	Plate, Control Mounting	1	38	296159W	Capscrew	2
28	2314426	Spacer, Control Mounting	1	48	2312177	Decal, Winch In, Winch Out	1
29	302399W	Nut	6	49	2307924W	Decal, Switch Panel	1
30	296417W	Washer	6	58	212718	Fitting	2
31	2315030	Capscrew	4	59	209486	Fitting	1
35	2303912W	Assembly, Bypass LED	1				

**Control Lever Mounting**

Komatsu D31/37/39 E-21 & E21-A (H4AH\_R\_K12)  
Last Used on S/N H4A-1014

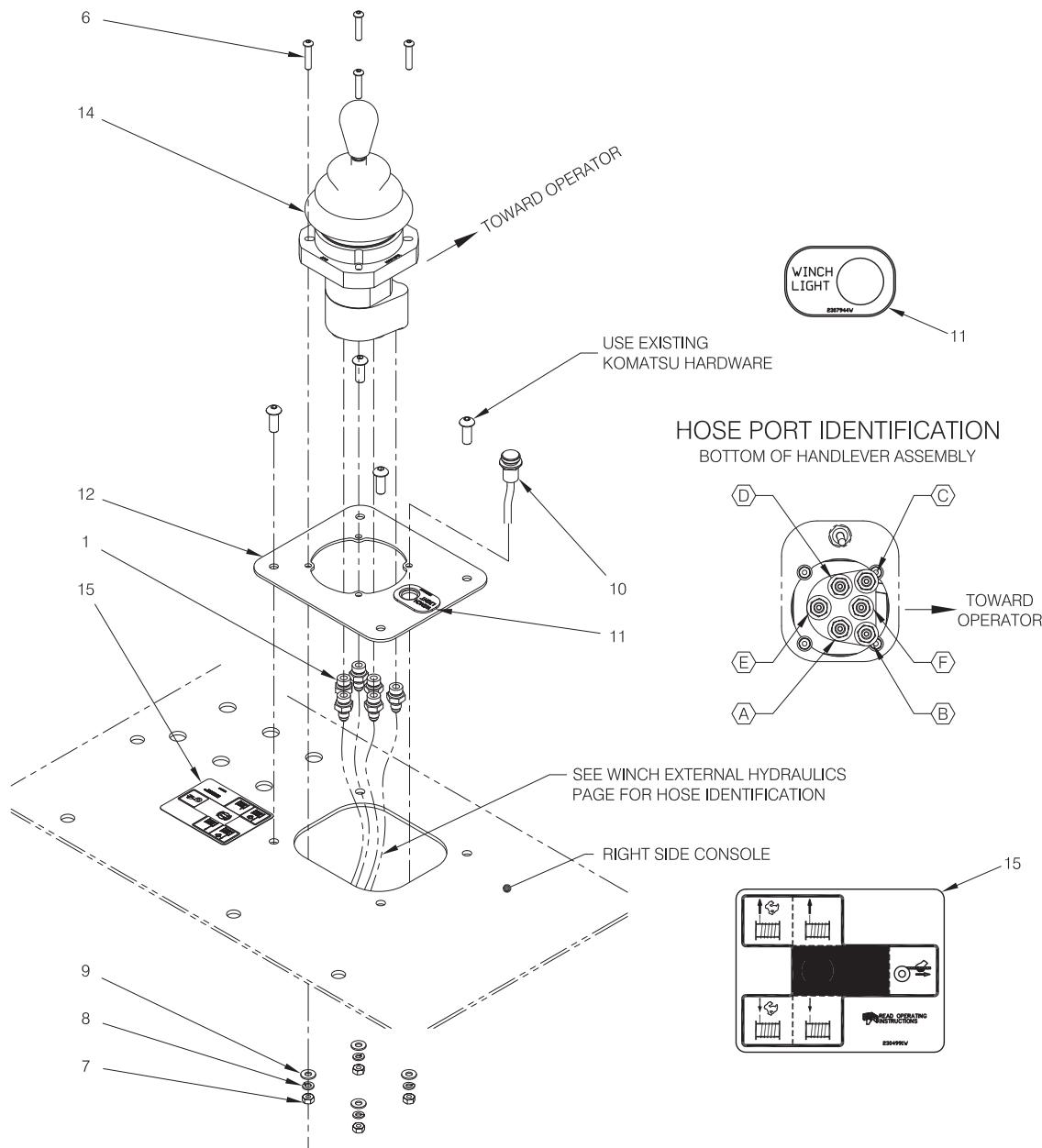


Parts Service Gram	
Item	Gram
14, 15, 16, 17, 18, 19, 20, 21, 22, 23	A1-C-17

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
1	17753W	Fitting	6	16	16574W	Fitting	1	
5	*a 2304988W	Kit, Various Color Tie Strap	1	17	16538W	Fitting	1	
6	2304267W	Capscrew	4	18	2304195W	Valve, Shuttle	1	
7	15054W	Nut	4	19	2305073W	.Kit, Seal	1	
8	15154W	Lockwasher	4	20	2305960W	Manifold	1	
9	15127W	Washer	4	21	16556W	Fitting	1	
10	2304204W	Harness, Wiring	1	22	222442W	Fitting	1	
11	2307944W	Decal, Filter LED	1	23	2305962W	Assembly, Hose	1	
12	2304262W	Plate, Adapter	1		280256W	Assembly, Hose	1	
14	2306648W	Assy, Control Lever (See 3-150)	1	*a Used for hose end identification, not illustrated				
15	2305961W	Decal, Control Lever	1					

**Control Lever Mounting**

Komatsu D31/37/39 E-21 & E21-A (H4AH\_R\_K12)  
First Used on S/N H4A-1015

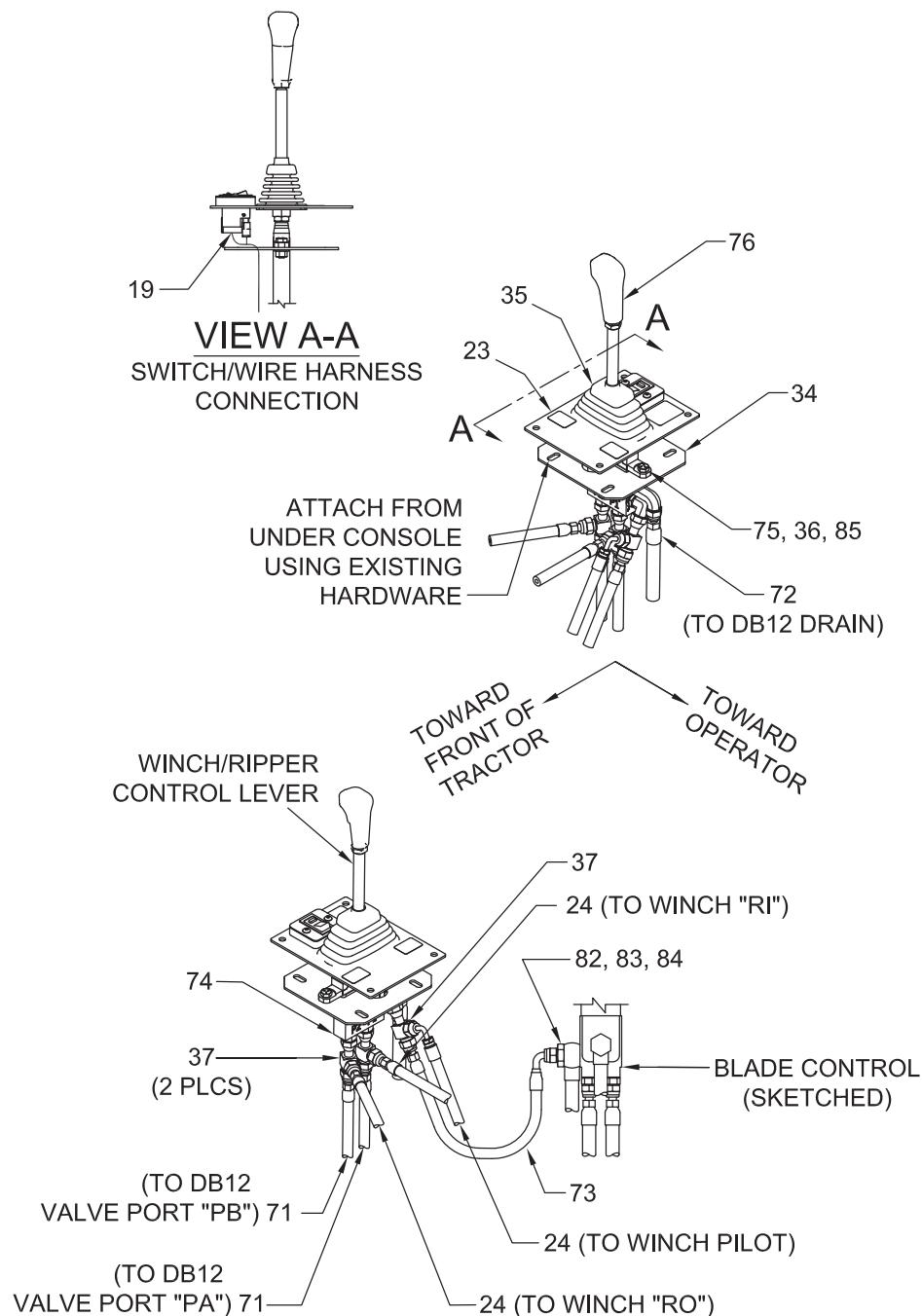


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	17753W	Fitting	6	11	2307944W	Decal, Filter LED	1
5	*a 2304988W	Kit, Various Color Tie Strap	1	12	2304262W	Plate, Adapter	1
6	2304267W	Capscrew	4	14	2305577W	Assy, Control Lever (See 3-150)	1
7	15054W	Nut	4	15	2305579W	Decal, Control Lever	1
8	15154W	Lockwasher	4				
9	15127W	Washer	4				
10	2304204W	Harness, Wiring	1				

\*a Used for hose end identification, not illustrated

## Control Lever Mounting

Komatsu D31/37/39-22 (H4AT\_Y\_K13)

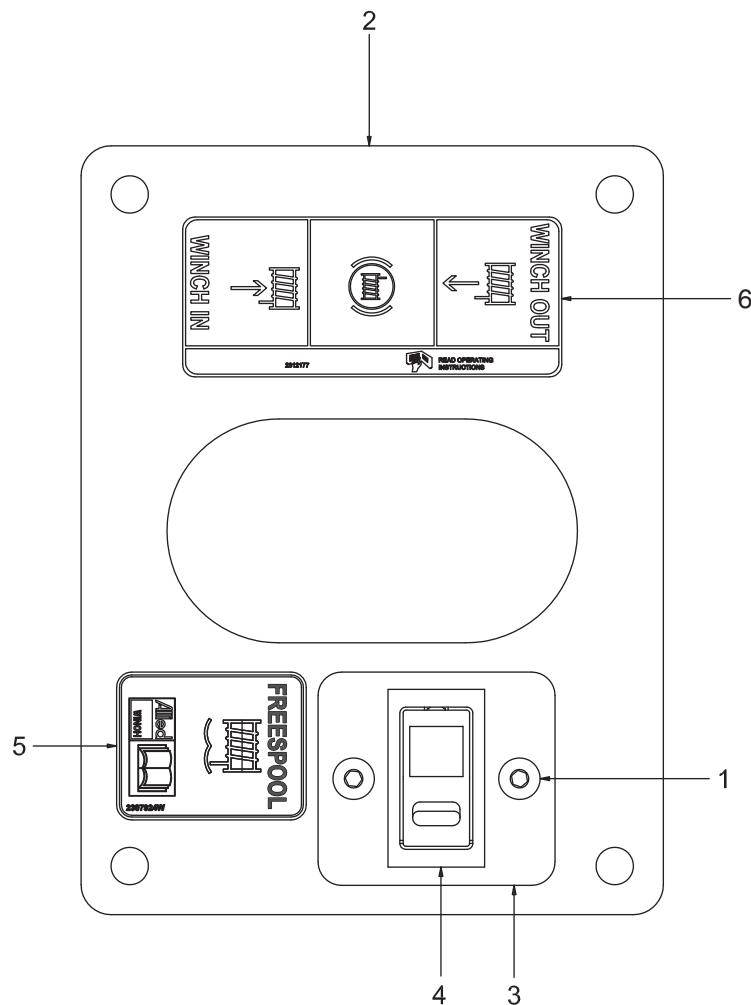


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
19	2312501	Harness, Wire	1	73	2313147	Assembly, Hose	1
23	2311409	Switch Panel Assembly (3-149)	1	74	2313146	Assembly, Control Lever (See 3-155)	1
24	2311290	Assembly, Hose	3	75	Y27E-06	Washer	2
34	2311281	Plate	1	76	2311043	Knob, Control Lever	1
35	2311042	Boot, Control Lever	1	82	2311047	Plug	1
36	221707W	Nut	2	83	2311045	O-Ring	2
37	236855	Fitting	3	84	Y098629-012	O-Ring	1
71	2311295	Assembly, Hose	2	85	16598W	Capscrew	2
72	2311298	Assembly, Hose	1				

**Switch Panel Assembly**

Komatsu D31/37/39X-22 (H4AT\_Y\_K13)

Komatsu D37/39X-23, D39X-24 (H4AT\_Y\_K14)

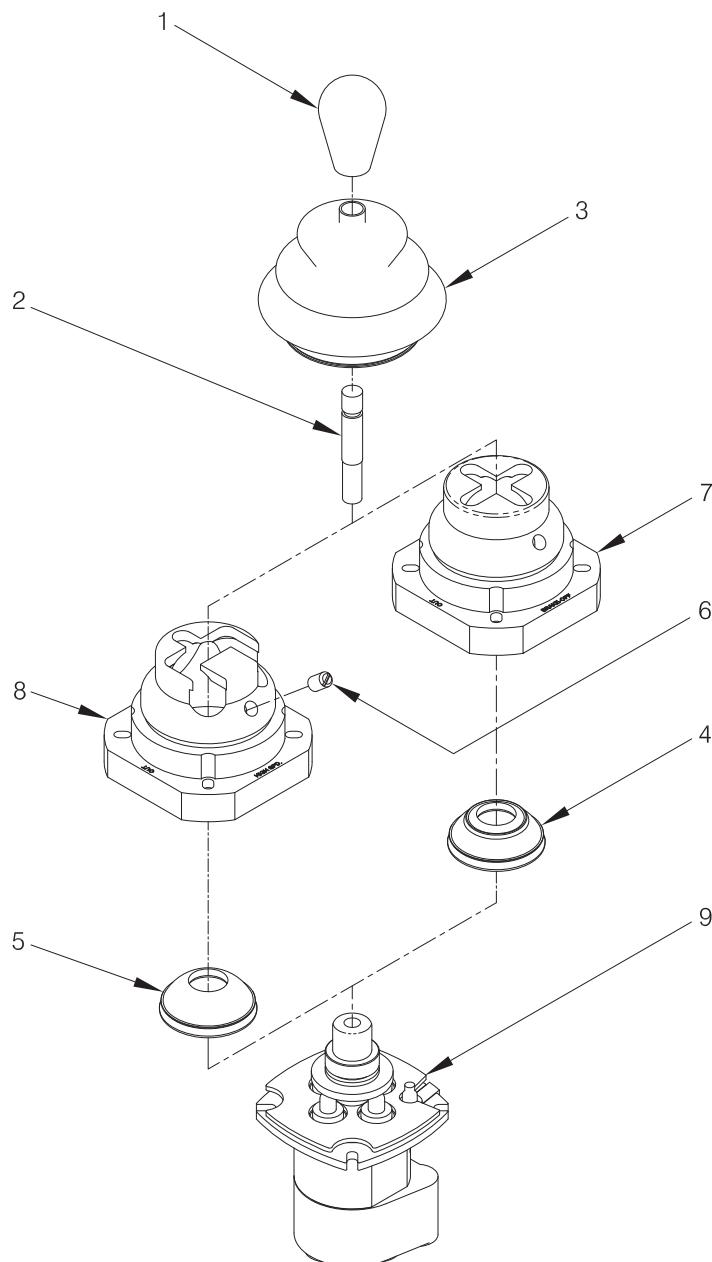


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2311409 Y25G-0408	<b>Switch Panel Assembly</b> . Capscrew	2	4	2310017	. Switch (See 3-159)	1
2	2311406	. Control Lever Mounting Plate	1	5	2307924W	. Decal, Freespool	1
3	2307643W	. Plate	1	6	2312177	. Decal, Winch In/Out	1

**Control Lever Assembly**

Dual Axis

Komatsu D31/37/39 E-21 &amp; E21-A (H4AH\_R\_K12)



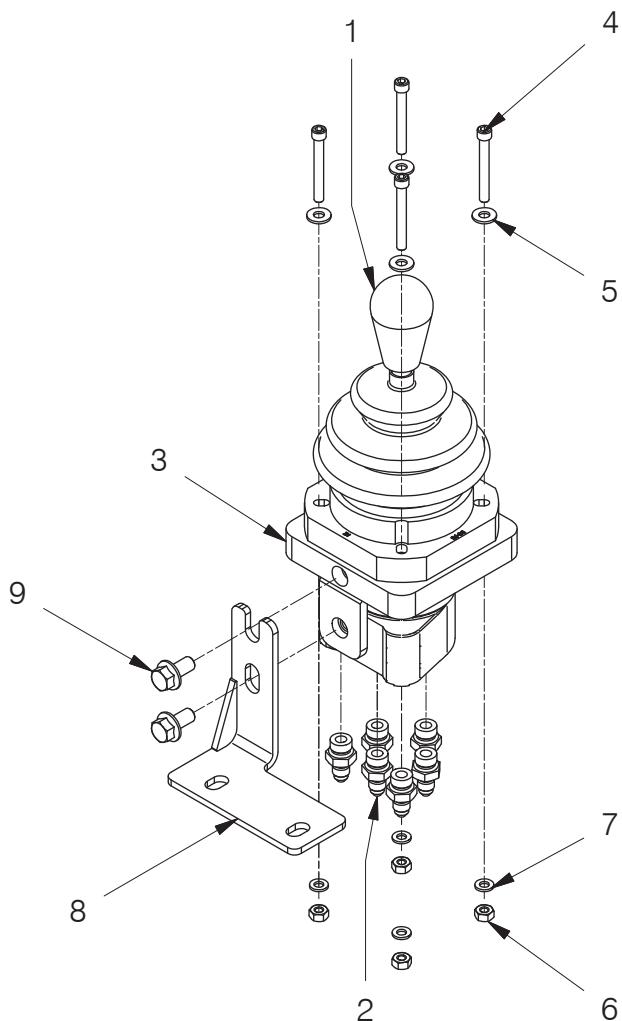
A - Last used on S/N H4A-1014 on Caterpillar winches with Brake-Off, C17 (D3/4/5G) &amp; Komatsu K12 (D31/37/39) with Brake-Off

B - First used on S/N H4A-1015 on Caterpillar winches without Brake-Off, C16 (D3/4/5C), C17 (D3/4/5G), C18 (D4/5G) &amp; K12 (D31/37/39-21)

Item	Part No.	Description	Qty A	Qty B	Item	Part No.	Description	Qty A	Qty B
	2306648W	Assembly, Control Lever	1	--					
	2305577W	Assembly, Control Lever	--	1					
1	2304339W	. Knob	1	1	7	2305674W	. Housing, Gated	1	--
2	2305063W	. Shaft	1	1	8	2305062W	. Housing, Gated	--	1
3	228131	. Boot	1	1	9	2304990W	. Controller (See 3-163)	1	1
4	2305675W	. Ring, Detent	1	--					
5	2305578W	. Ring, Detent	--	1					
6	*a 2304050W	. Plunger, Ball	1	1					
							*a Stake Threads		

## Control Lever Assembly

Dual Axis



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2311203 2305577W	<b>Assembly, Control Lever</b> . Assembly, Control Lever (3-150)	1	6	15054W	. Nut	4
2	223929	. Fitting	6	7	15154W	. Washer	4
3	2311183	. Bracket	1	8	2311179	. Bracket	1
4	18127W	. Capscrew	4	9	134803W	. Screw	2
5	15127W	. Washer	4				

## Control Lever Assembly

Caterpillar D3/4/5G (H4AH\_Y\_C17), D4/5G (H4AH\_Y\_C18),

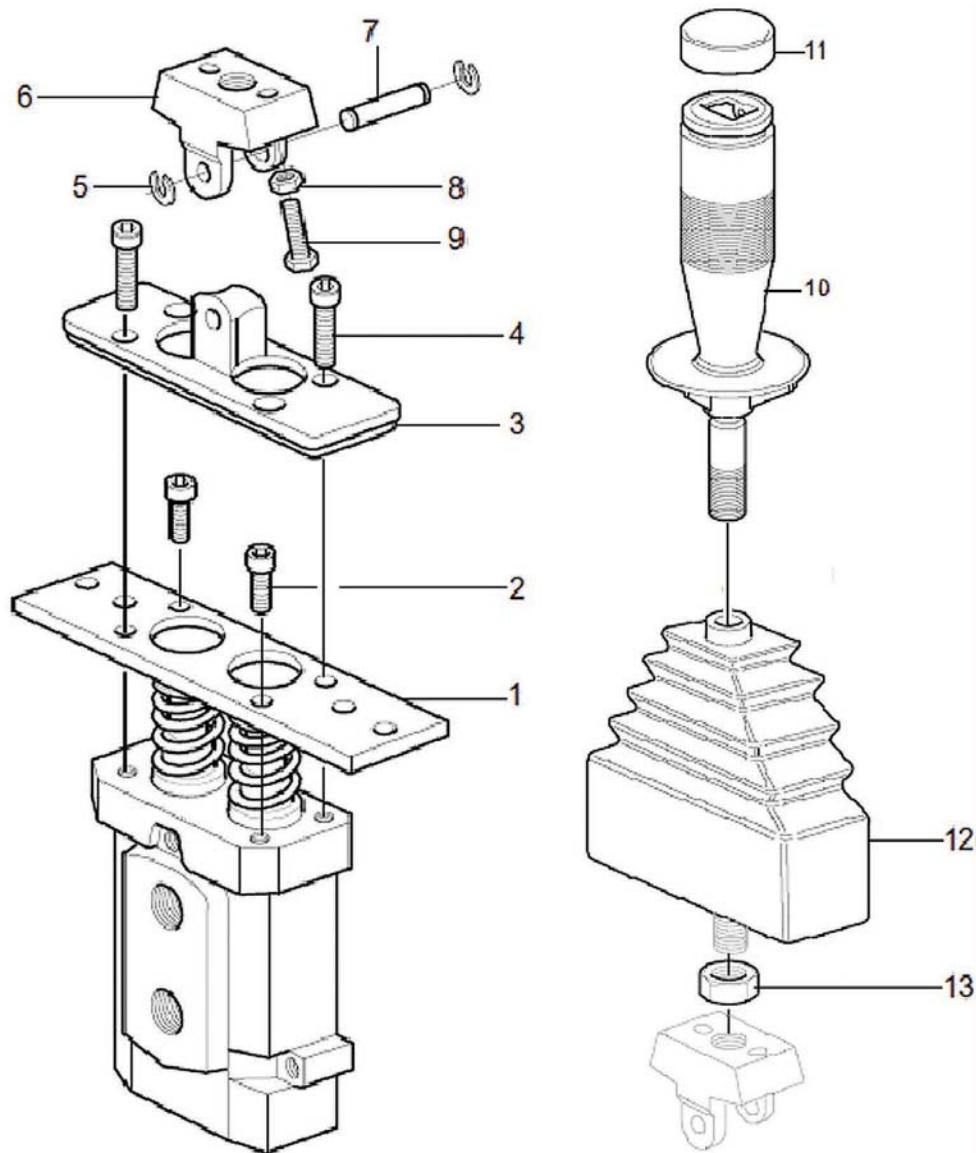
Caterpillar D3/4K/K2 (H4AH\_Y\_C19),

Caterpillar D5K/K2 (H4AH\_Y\_C20),

Caterpillar D5K2 With Fireflow (H4AH\_Y\_C201),

John Deere 450-650J (H4AH\_R\_E15), John Deere 550-650K (H4AH\_R\_E16),

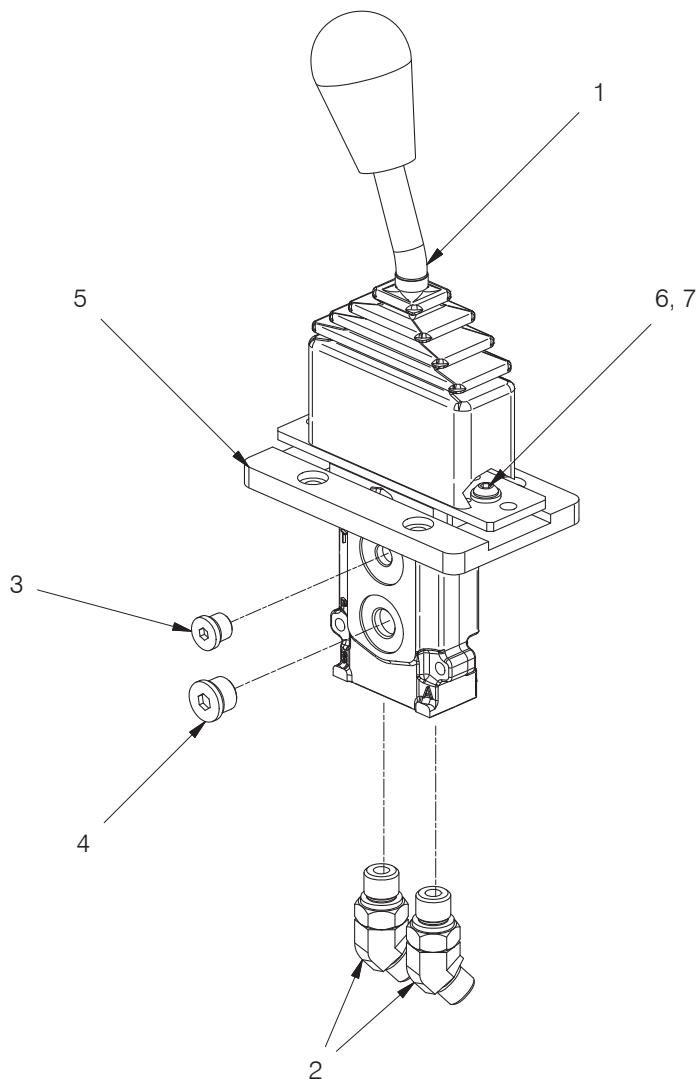
John Deere 700H/J (H4AH\_R\_E39), John Deere 700K (H4AH\_R\_E391)



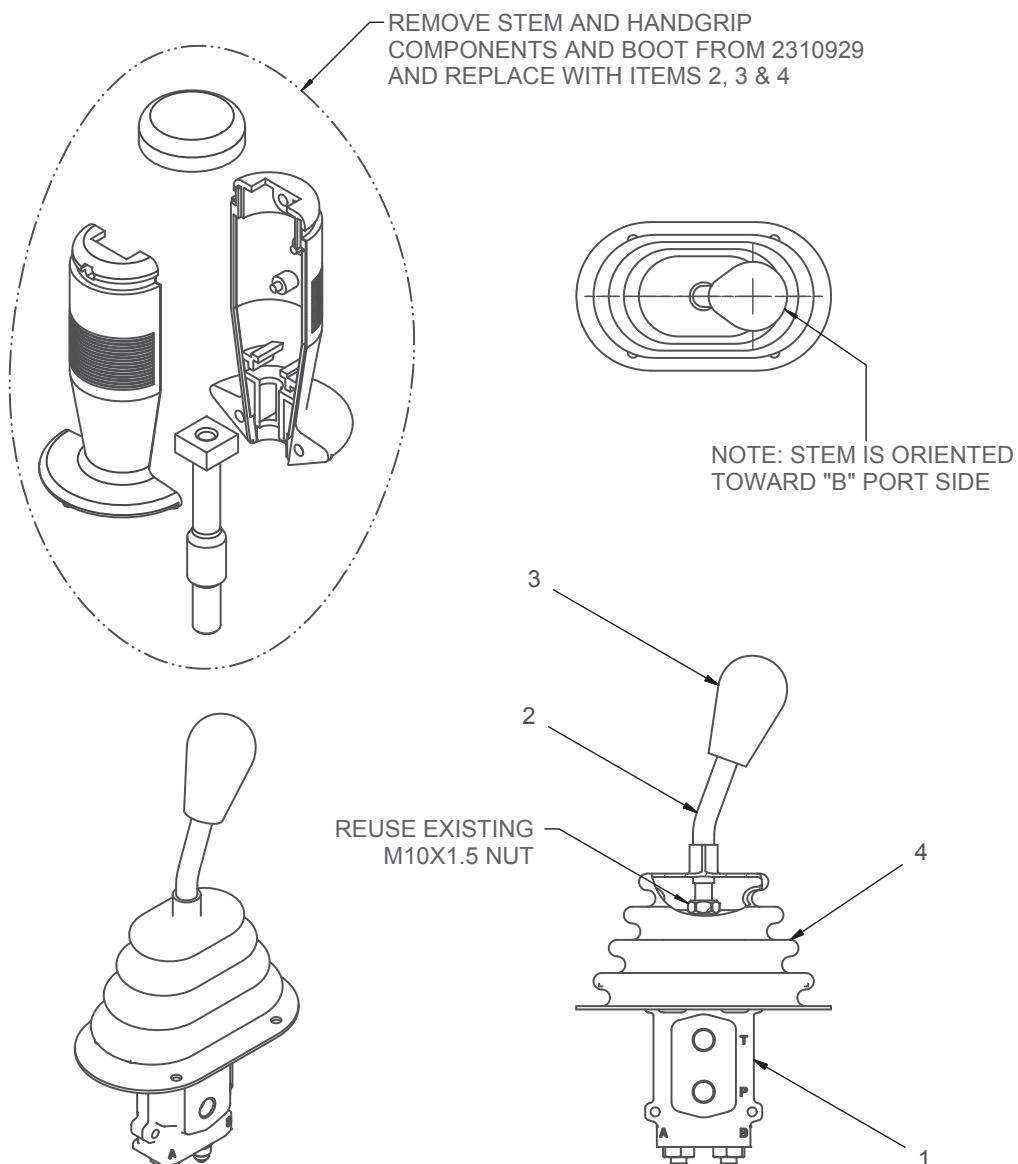
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2310929	<b>Assembly, Control Lever</b>	1	8	NSS	. Nut	2
2	2312611	. Plate, Mounting	1	9	NSS	. Capscrew	2
3	2312612	. Screw	2	10	2312609	. Lever, Hand	1
4	2312613	. Link, Lever	1	11	2312610	. Cap	1
5	2312614	. Screw	1	12	2312608	. Bellows	1
6	2312615	. Washer, Lock	2	13	2312606	. Nut	1
7	NSS	. Level, Link	1				
	NSS	. Pin, Shaft	1				

**Control Lever Assembly**

Case 650L (H4AH\_R\_\_R16)  
 Case 750/850M (H4AH\_R\_\_R17)  
 Last used on H4A-1420



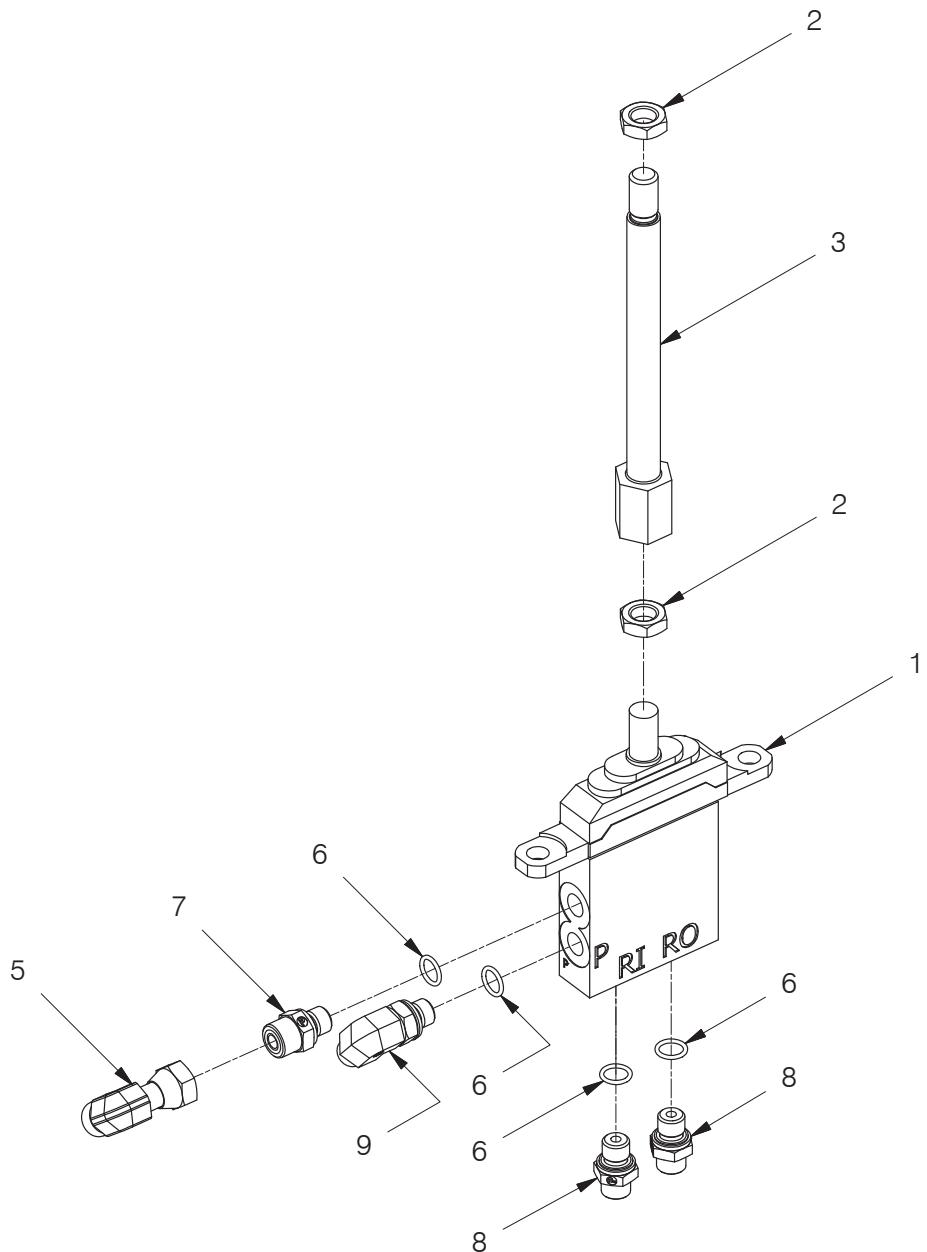
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2312879	<b>Assembly, Control Lever</b>	1	5	2312883	. Plate, Adaptor	1
2	2313004	. Assembly, Control Lever (3-154)	1	6	296160W	. Capscrew	2
3	R833201	. Fitting	2	7	296417W	. Washer	2
4	235387	. Fitting	1				
	229383	. Fitting	1				

**Control Lever Assembly**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2313004 2310929	<b>Assembly, Control Lever</b> . Control Lever, Pilot Controller (See 3-152)	1	3	2304339W	. Knob	1
2	2313005	. Lever, Handle	1	4	2305933W	. Boot	1

# **Control Lever Assembly**

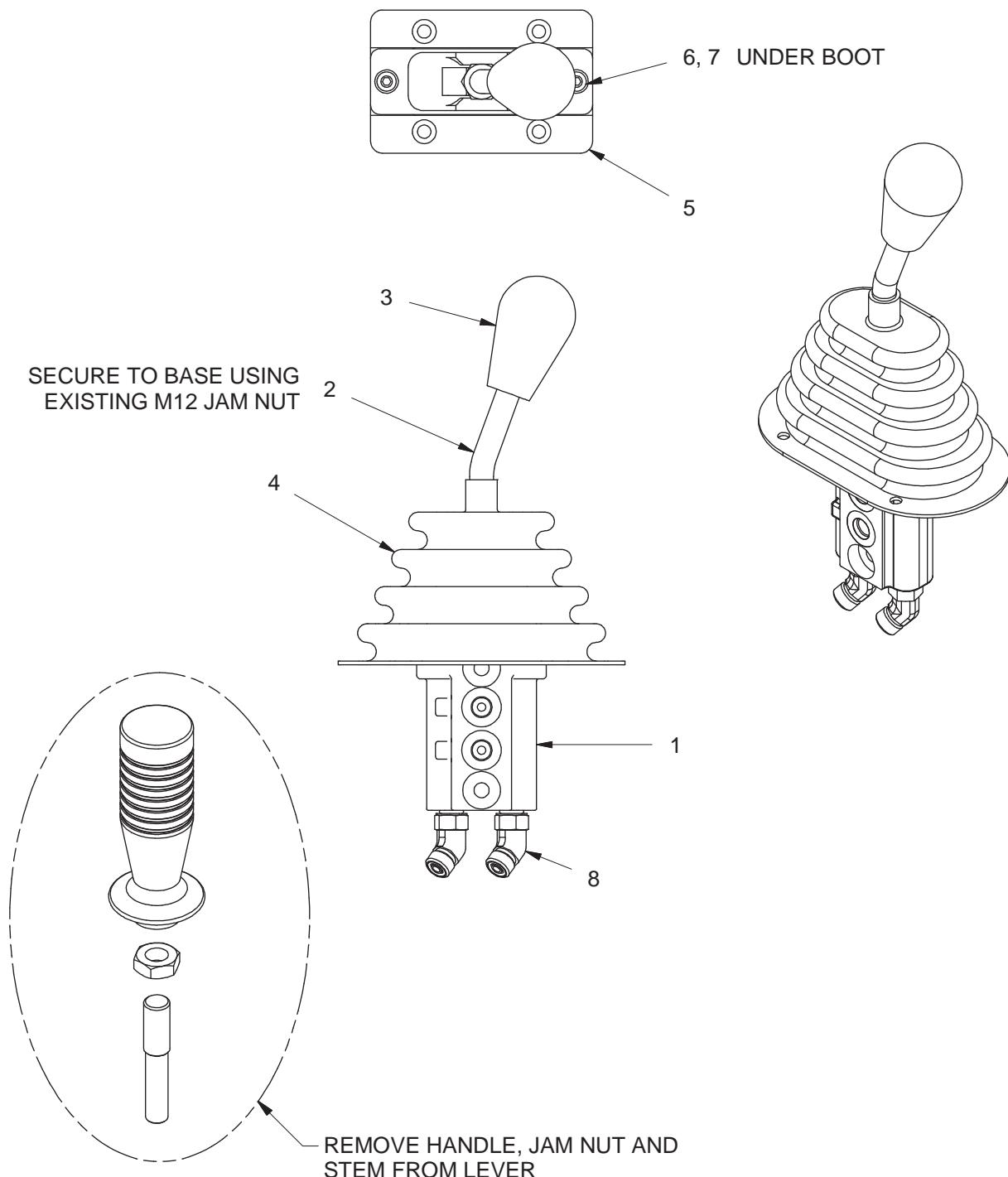
Komatsu D31/37/39-22 (H4AT\_Y\_K13)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2313146</b>	<b>Assembly, Control Lever</b>	<b>1</b>				
1	2311044	. Valve, Pilot	1	7	*a	249005	. Fitting
2	296133W	. Nut, Jam	2	8	*a	248854	. Fitting
3	2311280	. Rod, Lever	1	9	*a	2313145	. Fitting
5	R833801	. Fitting	1				
6	211564	. O-Ring	4		*a	Use 383789W Adhesive Sealant	

**Control Lever Assembly**

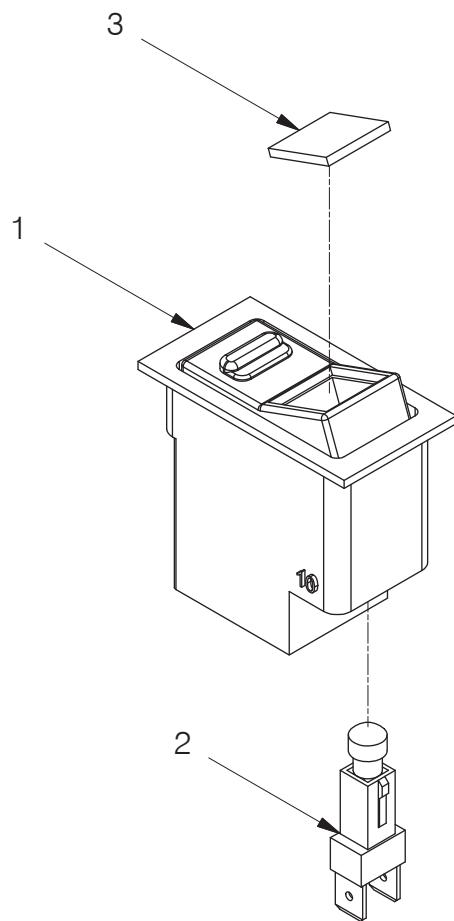
First used on H4A-1421



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

**24V Switch Assembly**

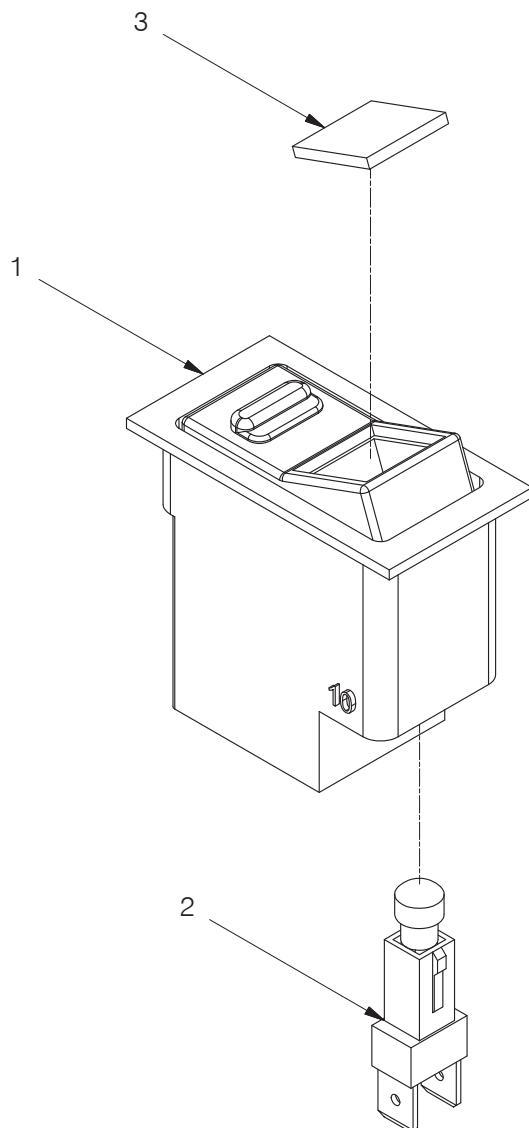
Case 750/850M (H4AH\_R\_\_R17),  
 John Deere 550-650K (H4AH\_R\_\_E16),  
 John Deere 700H/J (H4AH\_R\_\_E39),  
 John Deere 700K (H4AH\_R\_\_E391)



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

**12V Switch Assembly**

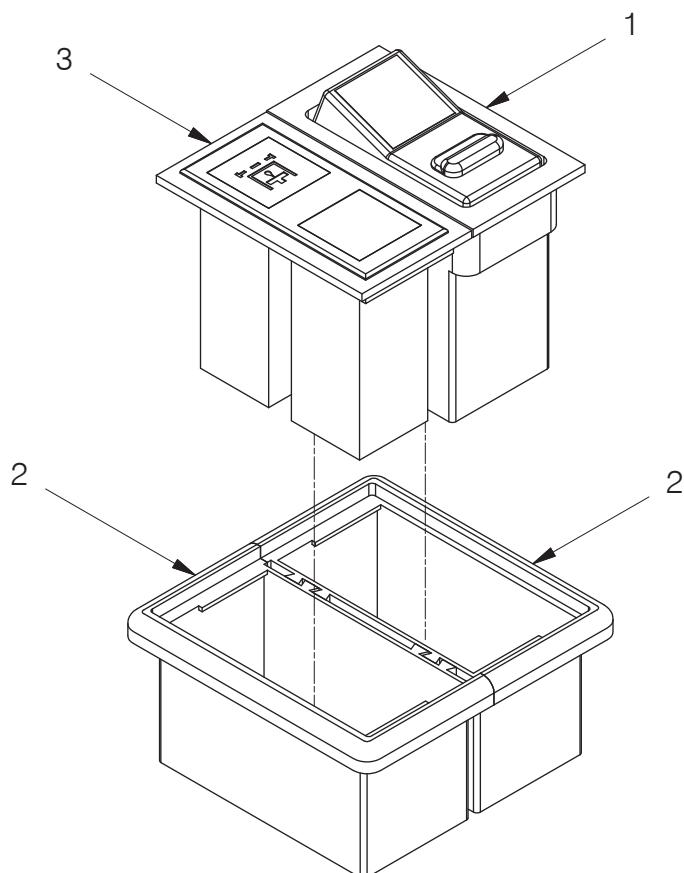
Case 650L (H4AH\_R\_\_R16);  
 Caterpillar D3/4/5G (H4AH\_Y\_C17), D4/5G (H4AH\_Y\_C18),  
 Caterpillar D3/4K (H4AH\_Y\_C19), Caterpillar D5K (H4AH\_Y\_C20),  
 Caterpillar D3/4K (H4AT\_Y\_C19), Caterpillar D5K (H4AT\_Y\_C20);  
 John Deere 450-650J (H4AH\_R\_E15)  
 Dresssta TD7/8S (H4AT\_Y\_H15), Dresssta TD9S (H4AT\_Y\_H16)



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

**Filter Light Switch Assembly**

Caterpillar D3/4K/K2 (H4AH\_Y\_C19),  
 Caterpillar D5K/K2 (H4AH\_Y\_C20),  
 Caterpillar D5K2 With Fireflow (H4AH\_Y\_C201)

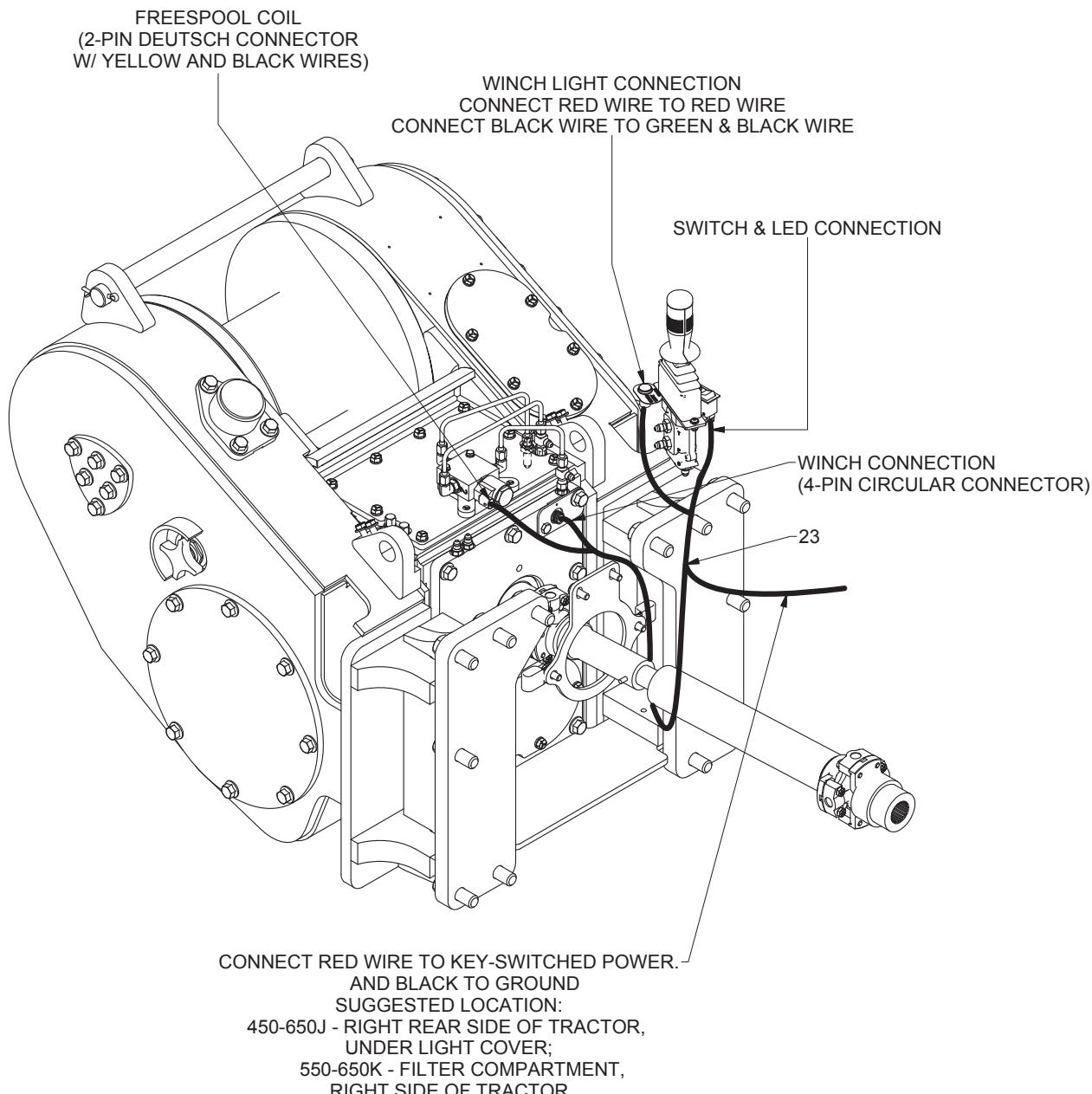


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2314321 2310017	Assembly, Switch - Filter Light . Assembly, Switch - w/Yellow LED (See 3-159)	1	2	234505 2311352	. Frame, Mounting . Assembly, Oil Filter Indicator	2 1

**Wire Harness Installation**

John Deere 450-650J (H4AH\_R\_E15)

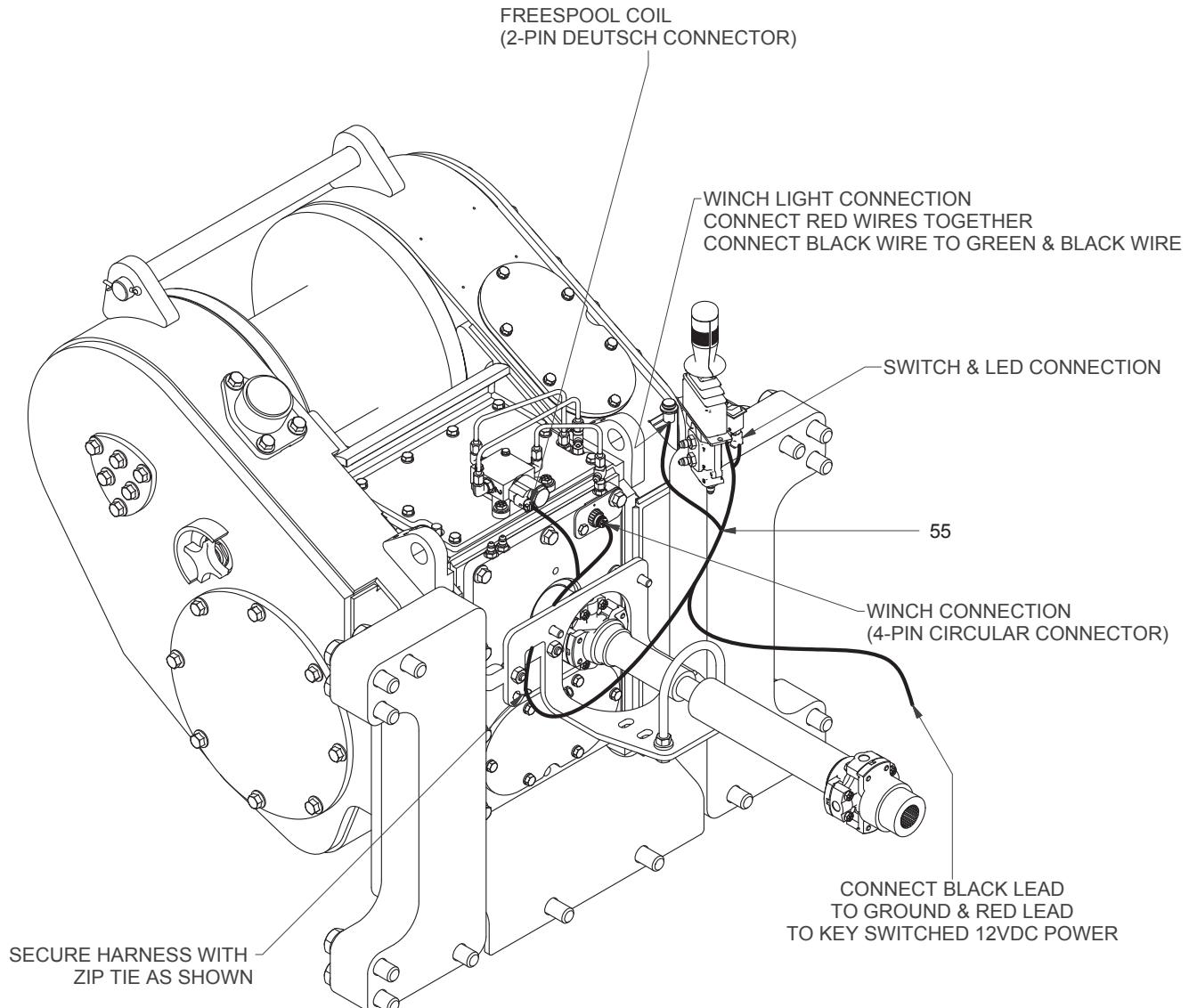
John Deere 550-650K (H4AH\_R\_E16)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
23	2314113	Wire, Harness	1				

**Wire Harness Installation**

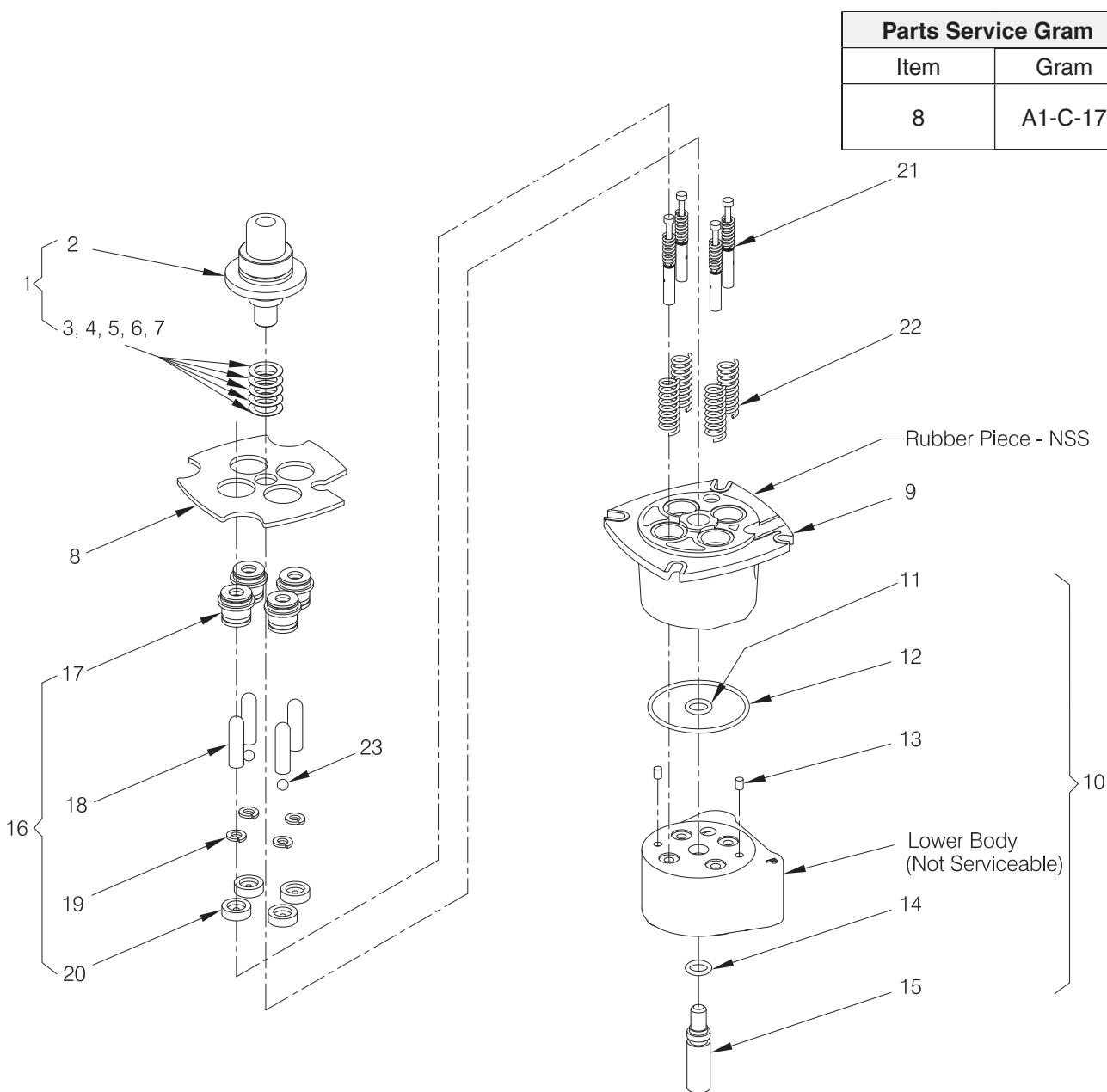
John Deere 700H/J (H4AH\_R\_E39)  
 John Deere 700K (H4AH\_R\_E391)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
55	2314113	Wire, Harness	1				

# Controller

Service Kits



Parts Service Gram	
Item	Gram
8	A1-C-17

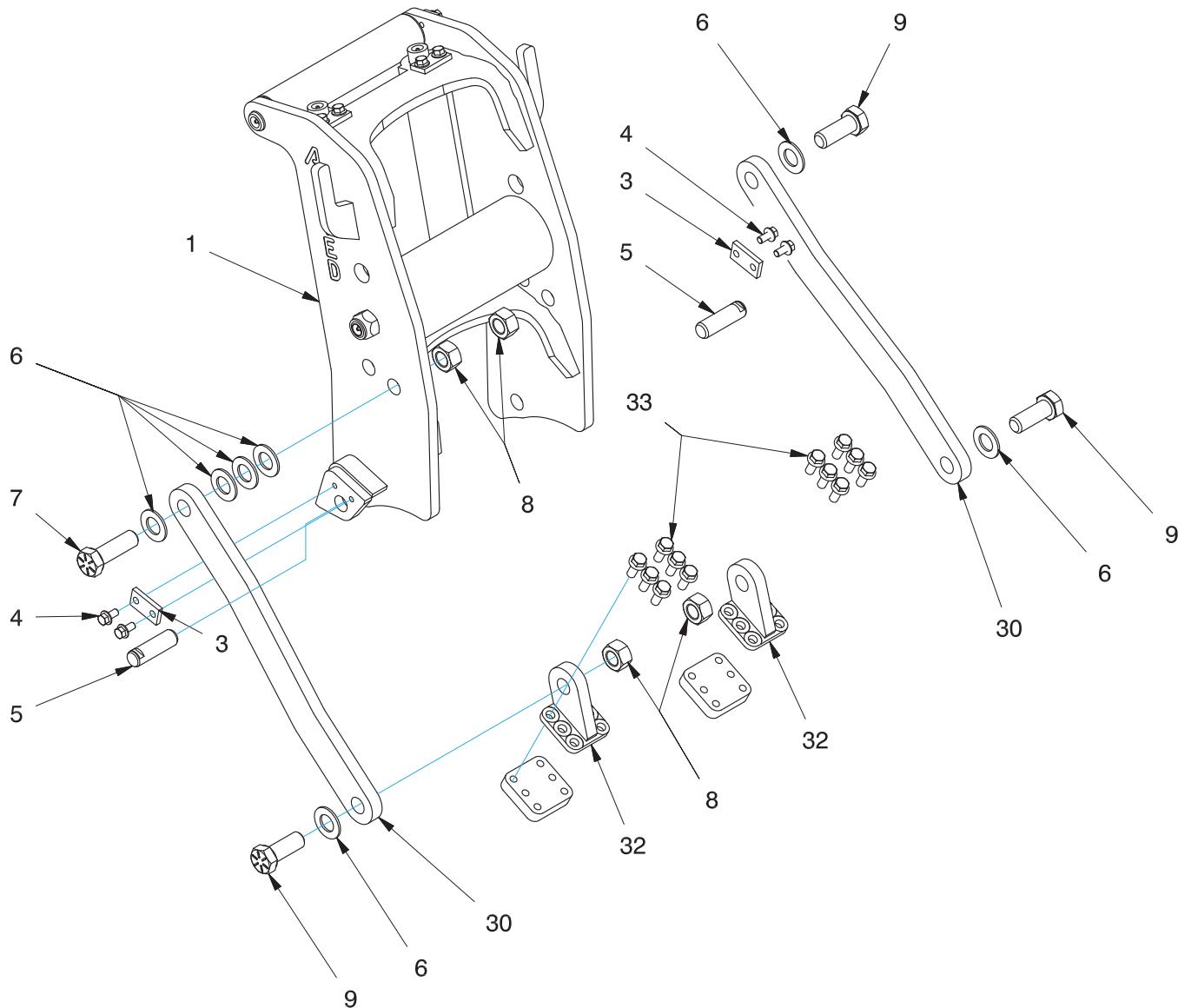
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2304990W</b>	<b>Controller</b>					
1	2305578W	. Kit, Cardan	1	14	-----	. O-Ring	1
2	-----	. Cardan	1	15	-----	. Assembly, Screw	1
3	-----	. Shim, 0.1 mm	1	16	2305782W	. Kit, Plunger (Pack of two)	2
4	-----	. Shim, 0.2 mm	1	17	-----	. Guide, Plunger	2
5	-----	. Shim, 0.5 mm	1	18	-----	. Plunger, Solid	2
6	-----	. Shim, 1.0 mm	1	19	-----	. Washer	2
7	-----	. Shim, 0.15 mm	1	20	-----	. Platen	2
8	2305779W	. Plate, Retaining	1	21	2305783W	. Kit, Regulating Unit	4
9	2305780W	. Body, Upper	1	22	2305784W	. Spring, Heavy Return (Pack of four)	1
10	2305781W	. Kit, Seal	1	23	*a 2305954W	. Ball	2
11	-----	. O-Ring	1	*a Last Used on S/N H4A-1014			
12	-----	. O-Ring	1				
13	-----	. Pin, Dowel	2				

## **Optional Equipment**

Arch Assembly .....	4-5
Arch Installation .....	4-2 thru 4-4
Drawbar Installation (Heavy Duty Extended Drawbar).....	4-9
Fairlead Assembly.....	4-6
Fairlead/Drawbar Installation .....	4-7
Fairlead/Drawbar Installation (Heavy Duty Extended Drawbar).....	4-8
Firesleeve Kit .....	4-10 thru 4-11
Wire Rope Assemblies.....	4-12

**Arch Installation**

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

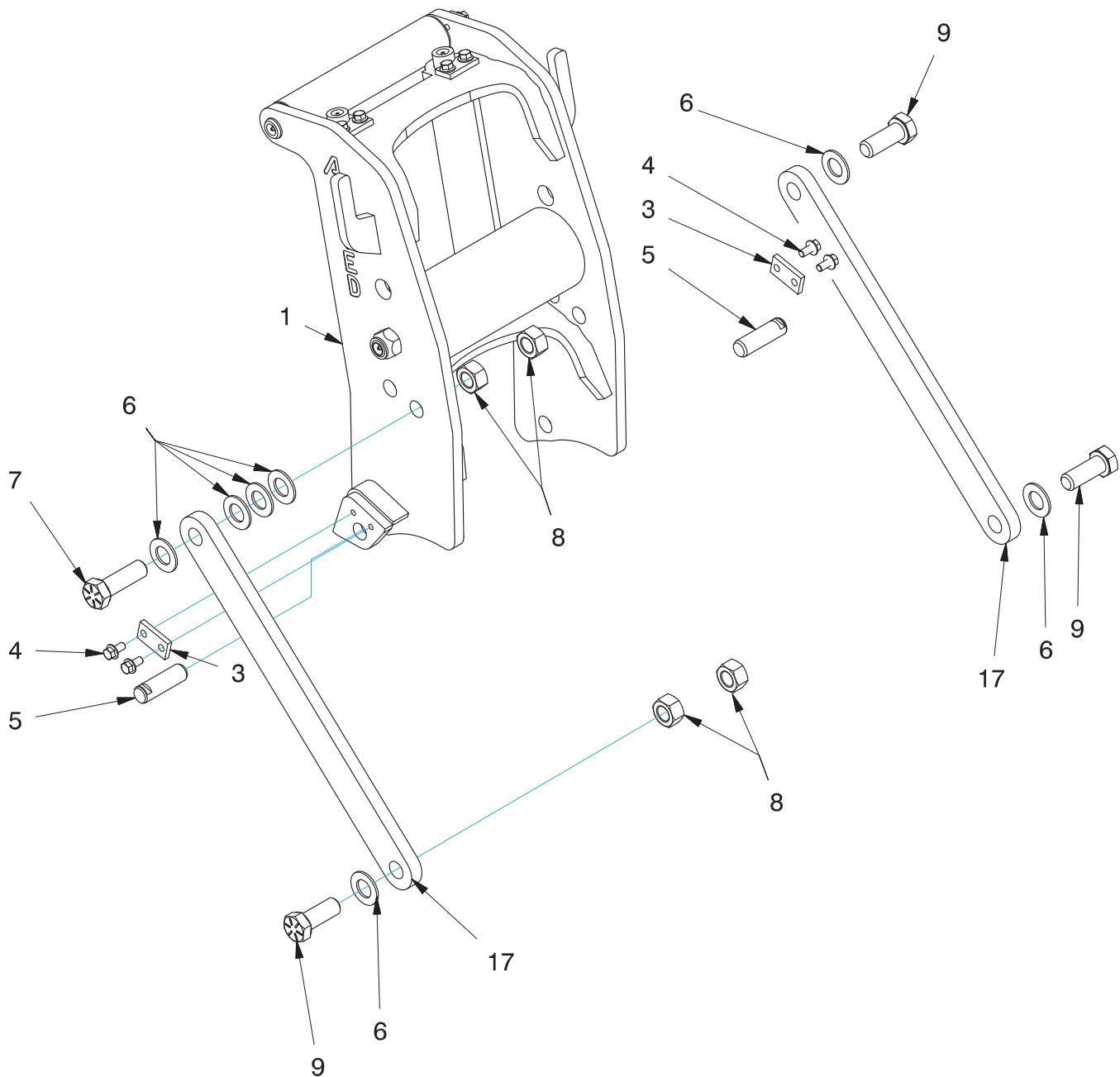


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
1	2305145W	Arch Assembly (See 4-5)	1	8	*a	221372W	Locknut	4
3	93166W	Keeper	2	9	2305268W	Capscrew	3	
4	398817W	Screw, Flange	4	30	2312995	Bar - Support, Arch	2	
5	1314629W	Pin	2	32	2312997	Ear, Arch	2	
6	225851	Hard Washer	7	33	918085W	Screw,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

\*a Use 318702W Thread Lock

**Arch Installation**

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



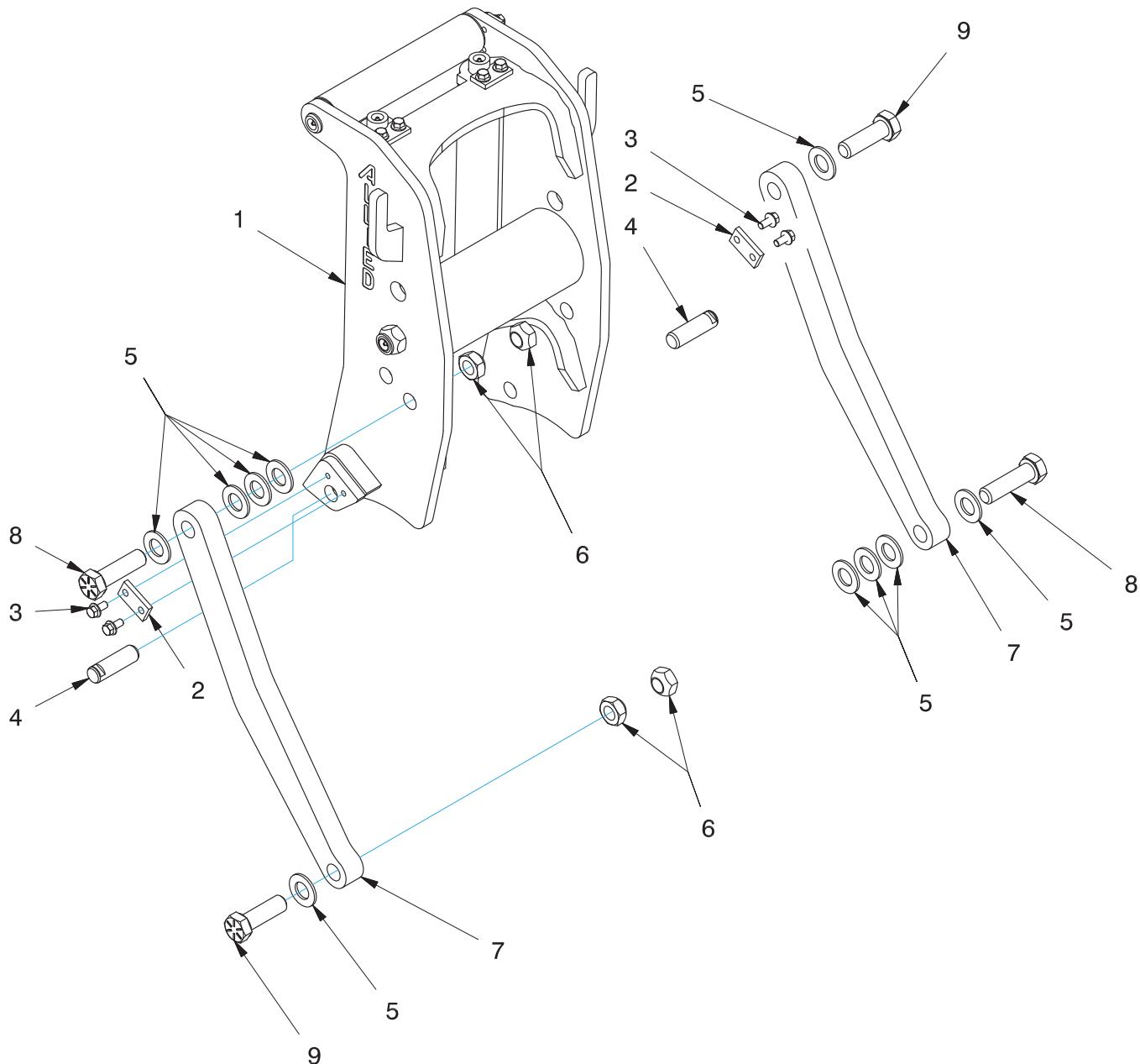
Item	Part No.	Description	Qty
1	2305145W	Arch Assembly (See 4-5)	1
3	93166W	Keeper	2
4	398817W	Screw, Flange	4
5	1314629W	Pin	2
6	225851	Hard Washer	7

Item	Part No.	Description	Qty
7	2300478W	Capscrew	1
8	*a 221372W	Locknut	4
9	2305268W	Capscrew	3
17	2305158W	Bar - Support, Arch	2

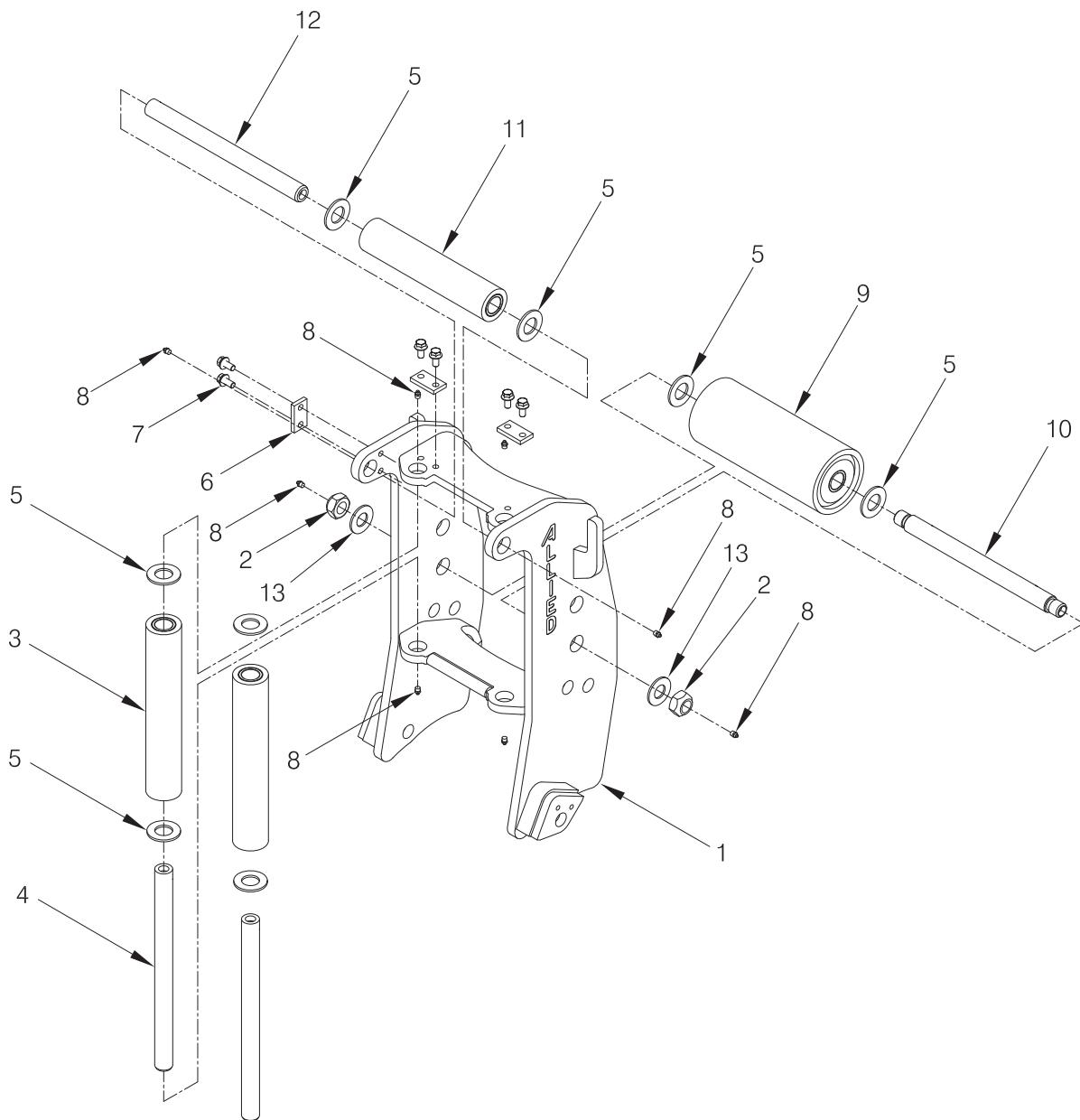
\*a Use 318702W Thread Lock

**Arch Installation**

Case 850M (R17)

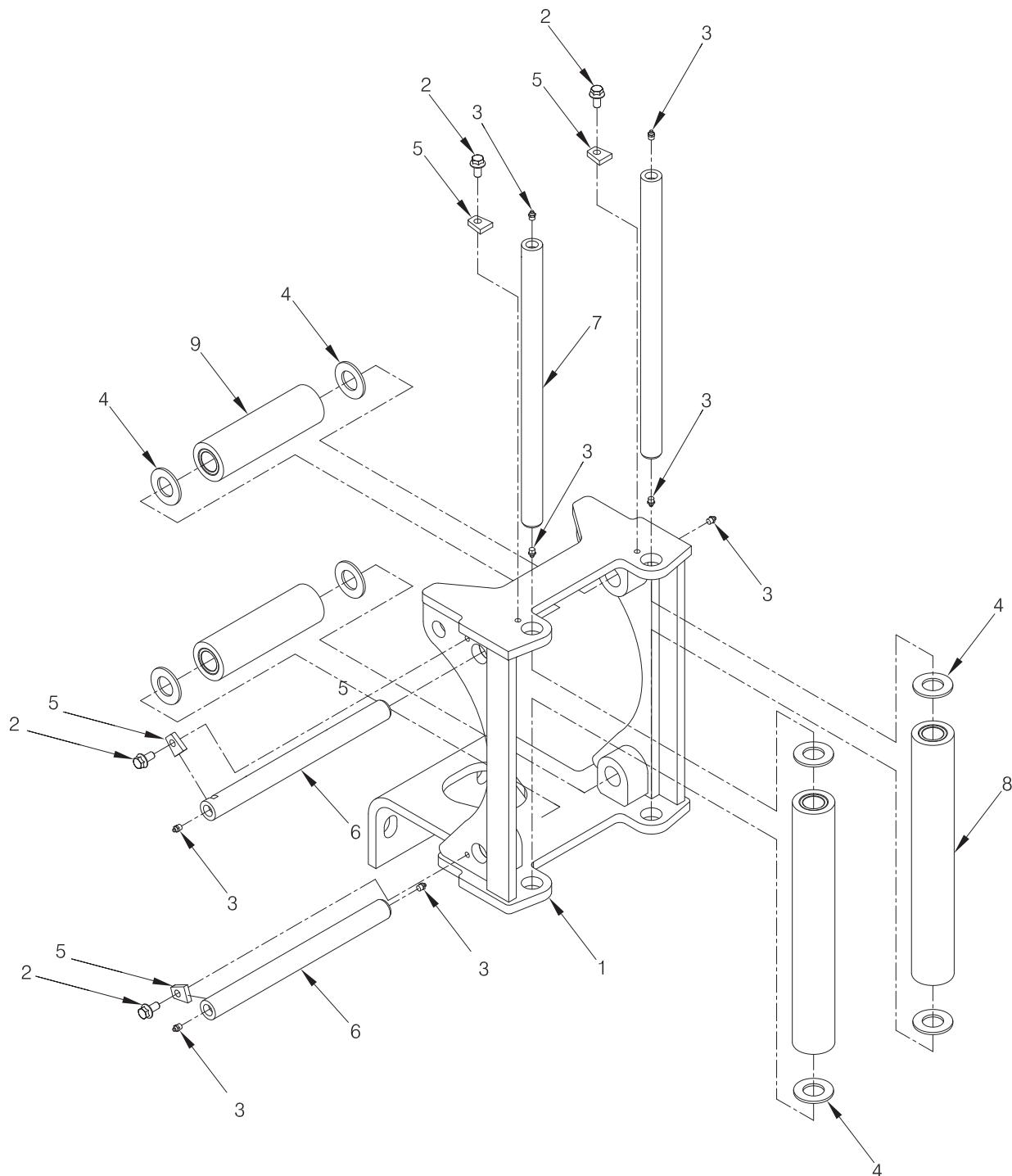


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2305145W	Arch Assembly (See 4-5)	1	7	2315531	Support Bar - Arch	2
2	93166W	Keeper	2	8	1310819W	Capscrew	2
3	398817W	Screw, Flange	4	9	2300478W	Capscrew	2
4	1314629W	Pin	2	*a Use 318702W Thread Lock			
5	225851	Hard Washer	10				
6	*a 221372W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

**Arch Assembly**

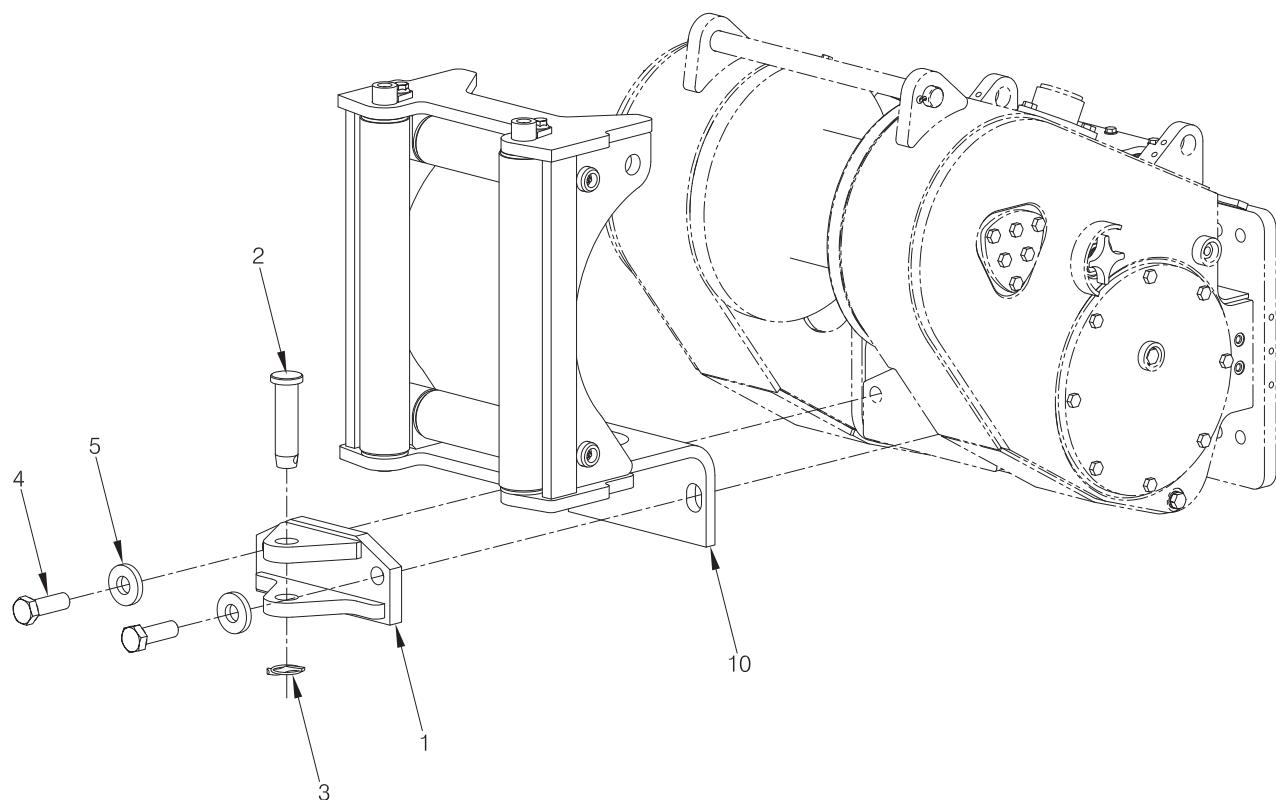
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2305145W</b>	<b>Arch Assembly</b>					
1	2305142W	. Arch Weldment	1	9	2300125W	. Roller	1
2	*a 221724W	. Nut	2	10	2300948W	. Shaft	1
3	342448W	. Roller Assembly	2	11	344826W	. Roller Assembly	1
	59419W	. . Bushing	2		59419W	. . Bushing	2
4	342447W	. Shaft	2	12	344835W	. Shaft	1
5	344825W	. Washer	8	13	*b 225851	. Washer	A/R
6	93166W	. Keeper	3				
7	398817W	. Flangescrew	6				
8	16001W	. Fitting, Lube	8				

\*a Use 318702W Thread Lock  
\*b Use only if required to protect threads.

**Fairlead Assembly**

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

## Fairlead/Drawbar Installation



A - Fairlead Installation with Drawbar

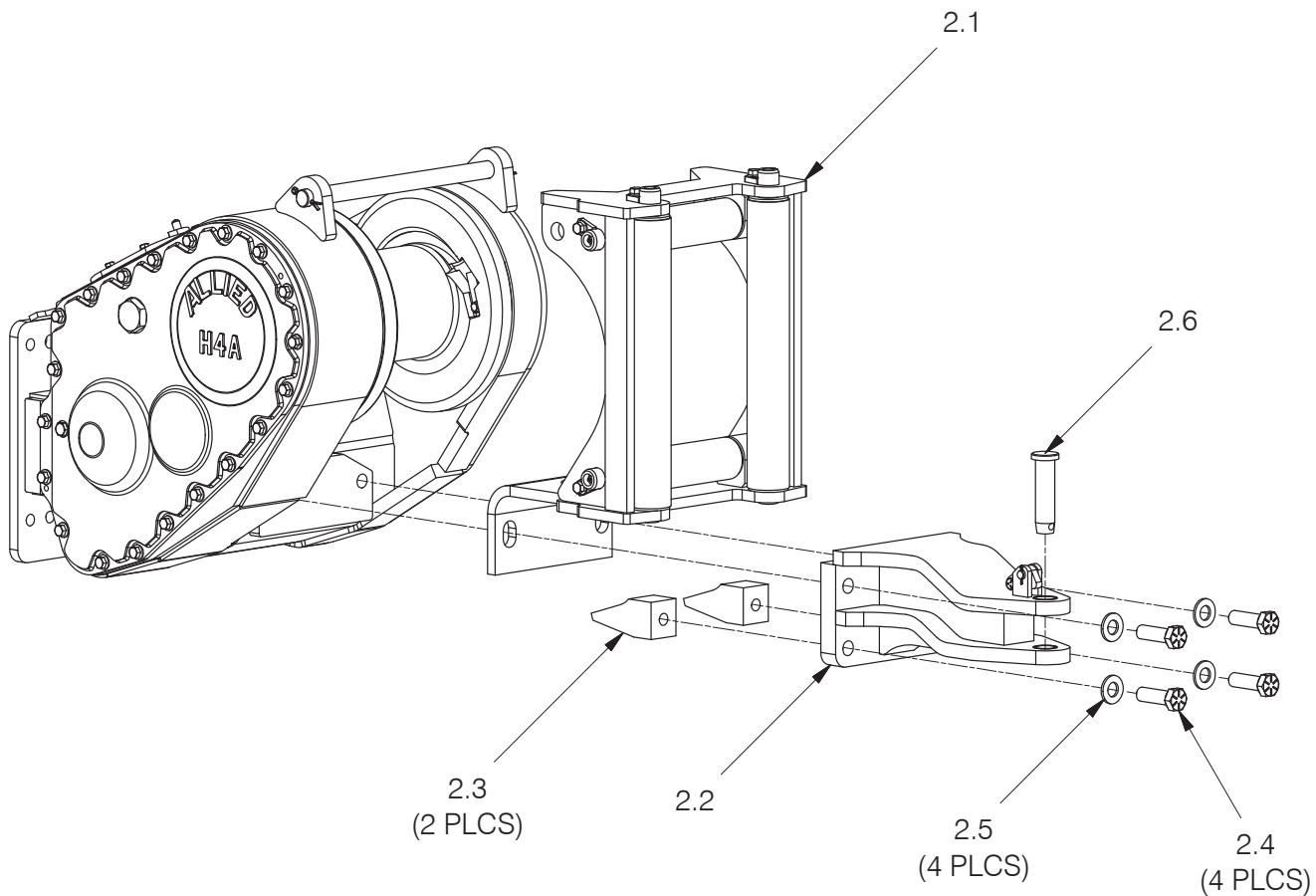
B - Fairlead Installation ONLY

C - Drawbar Installation ONLY

Item	Part No.	Description	Qty			Item	Part No.	Description	Qty		
			A	B	C				A	B	C
1	2304155W	Drawbar	1	--	1		221694W	Capscrew	2	--	--
2	2304161W	Pin, Drawbar	1	--	1	5	2305256W	Washer	2	2	--
3	2303221W	Pin, Retaining	1	--	1		221780W	Washer	--	--	2
4	221686W	Capscrew	--	2	2	10	2305252W	Assy Fairlead (See 4-6)	1	1	--

## Fairlead/Drawbar Installation

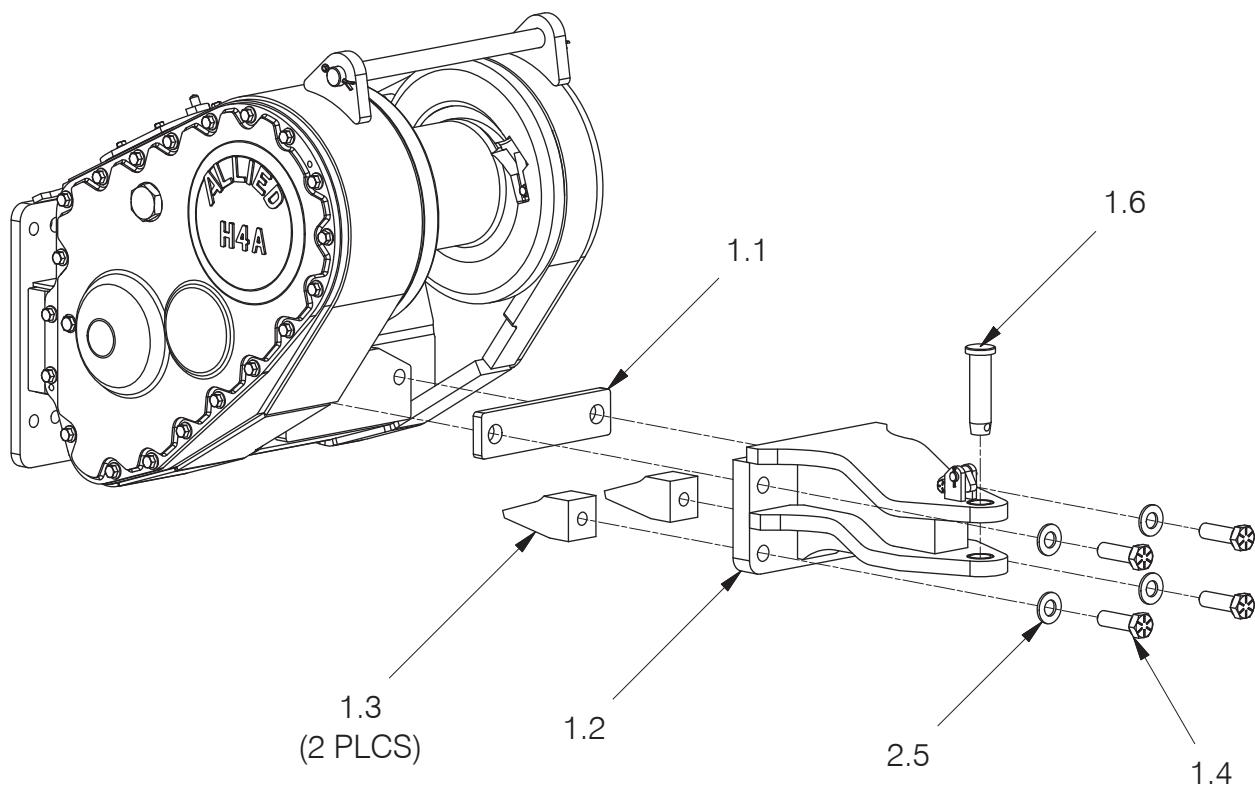
### Heavy Duty Extended Drawbar



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	2305252W	Assembly, Fairlead (See 4-6)	1		16829W	. Capscrew	1
2.2	2314802	Assembly, Drawbar	1		15058W	. Nut	1
	2314800	. Drawbar, Heavy Duty Extended	1	2.3	2314807	Bracket	2
2304692W	2304692W	. Bushing	2	2.4	R13806324	Capscrew	4
145499W	145499W	. Latch, Drawbar Pin	1	2.5	221780W	Washer	4
159W	159W	. Pin, Rod End	1	2.6	2304161W	Pin, Drawbar	1
15223W	15223W	. Pin	1				

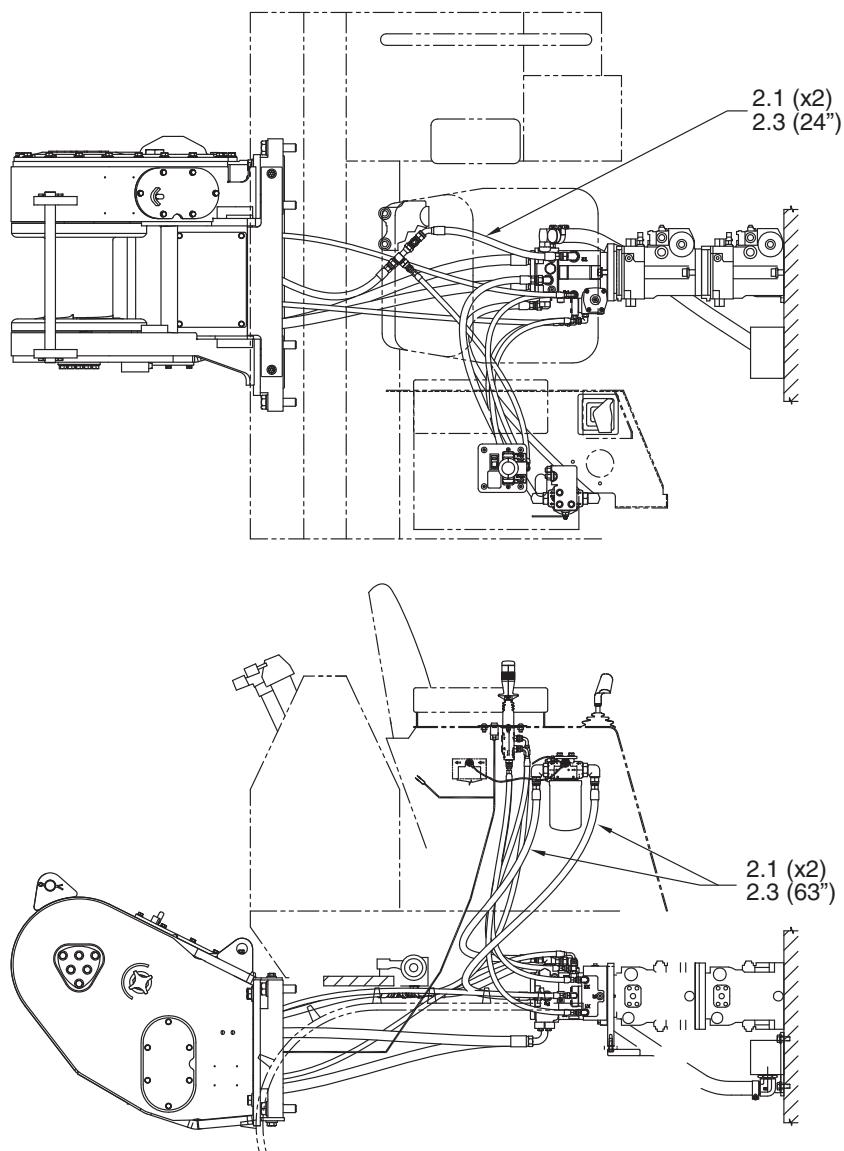
## Drawbar Installation

Heavy Duty Extended Drawbar

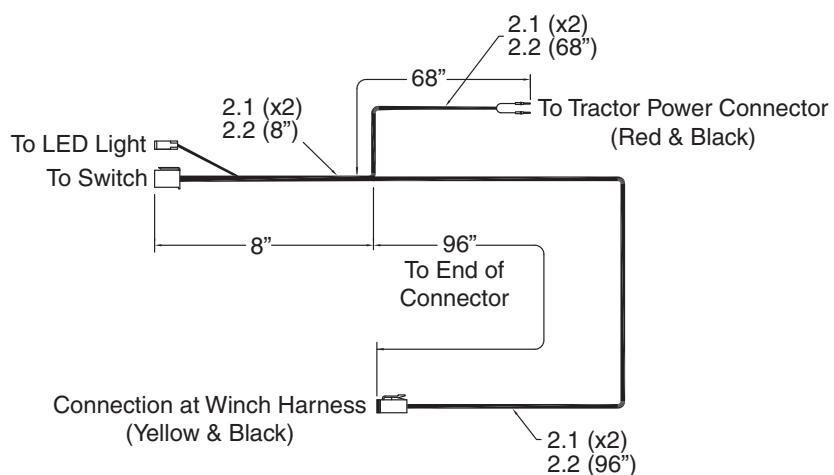


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2314796	Plate, Spacer	1		16829W	. Capscrew	1
1.2	2314802	Assembly, Drawbar	1		15058W	. Nut	1
	2314800	. Drawbar, Heavy Duty Extended	1	1.3	2314807	Bracket	2
2304692W	2304692W	. Bushing	2	1.4	R13806324	Capscrew	4
145499W	145499W	. Latch, Drawbar Pin	1	1.5	221780W	Washer	4
159W	159W	. Pin, Rod End	1	1.6	2304161W	Pin, Drawbar	1
15223W	15223W	. Pin	1				

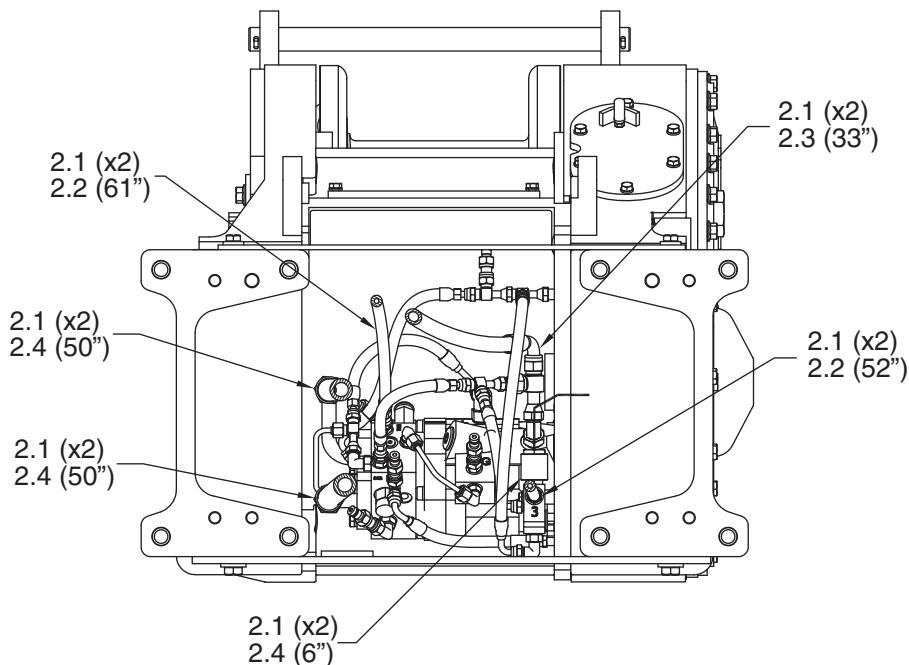
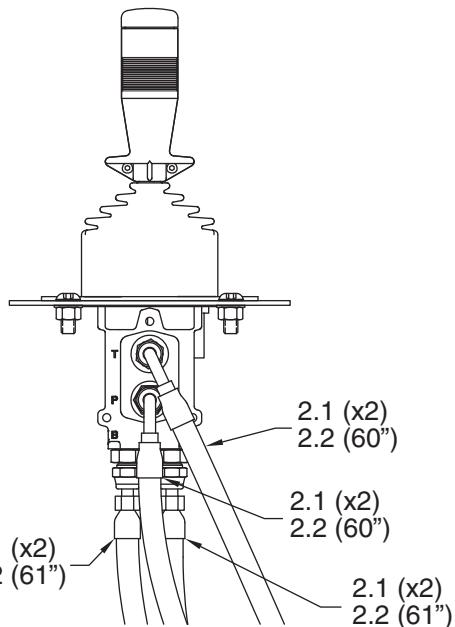
**Fire Sleeve Kit**  
**Caterpillar D3/4/5G (C17)**  
 Page 1 of 2



**Console Wire Harness Detail**



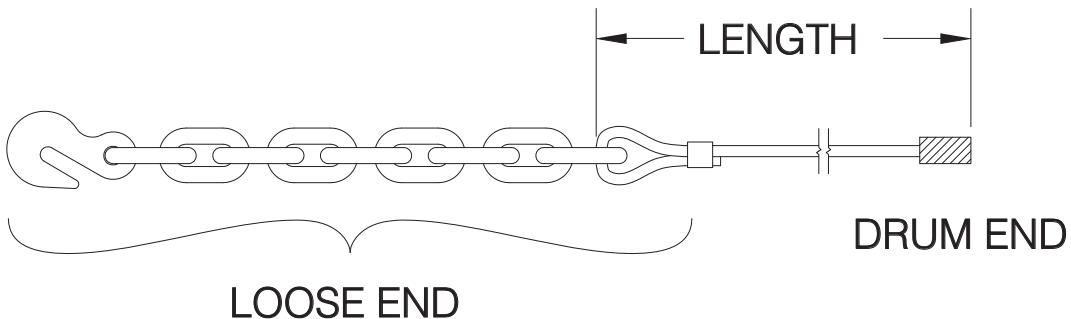
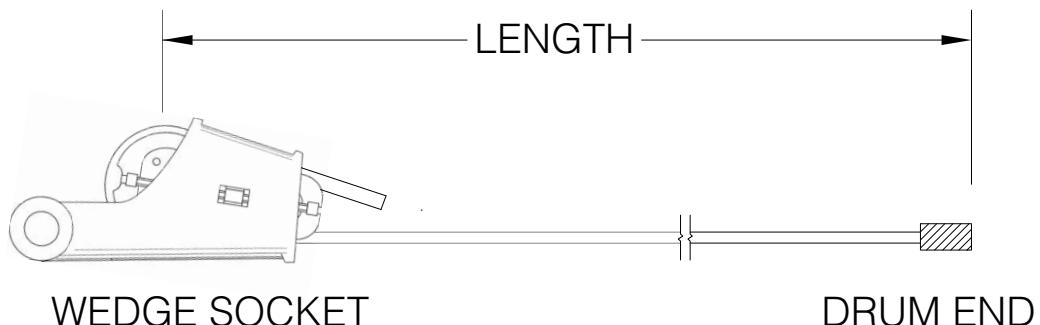
**Fire Sleeve Kit**  
**Caterpillar D3/4/5G (C17)**  
 Page 2 of 2



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2315967</b>	<b>Kit - Fire Sleeve</b>					
1	*a 2314877	. Fire Sleeve Components (Internal)	1	2	2315969	. Fire Sleeve Components (External)	1
1.1	*a 2314880	.. Fire Sleeve	1	2.1	589423	.. Clamp	32
1.2	*a 2314881	.. Fire Sleeve	1	2.2	245926	.. Sleeve, Fire	44'
1.3	*a 2314882	.. Fire Sleeve	1	2.3	254775	.. Sleeve, Fire	16'
1.4	*a 2314883	.. Fire Sleeve	3	2.4	249538	.. Sleeve, Fire	9'
1.5	*a 589423	.. Clamp	12				

\*a Not Illustrated. See Page 3-37.

## Wire Rope Assemblies

**Figure A****Figure B**

Part No.	Wire Diameter	Length Ft (M)	Part No.	Wire Diameter	Length Ft (M)
WR4-279B	*b	1/2"	279 (85)	*	Length to fill drum up to 2/3 capacity (recommended)
WR4-422B	*b	1/2"	422 (129)	**	Length to fill drum to full capacity
WR5-183B	*b	5/8"	183 (56)	*	
WR5-277B	*b	5/8"	277 (84)	**	
WR6-129B	*b	3/4"	129 (39)	*	*a Does not include tail chain and hook
WR6-129BLP	*a	3/4"	129 (39)	*	*b WR Series Wire Rope (Illustrated in Figure A)
WR6-195B	*b	3/4"	195 (59)	**	*c YS Series Wire Rope (Illustrated in Figure B)
WR6-195BLP	*a	3/4"	195 (59)	**	
YS6-195BWS	*c	3/4"	195 (59)	**	<b>Caution: Do not use larger than 5/8" diameter wire rope if winch is equipped with arch assembly.</b>

## **Recommended Service Kits**

Recommended Winch Service Intervals .....	5-2
Recommended Service Kits .....	5-3
• Motor Shaft Rebuild Kit, P/N 2315287 .....	5-4
• Motor Shaft Rebuild Kit, P/N 2315351 .....	5-5
• Motor, Idler, Intermediate & Drum Shaft Rebuild Kit, P/N 2315288.....	
.....	5-6 thru 5-8

## Recommended Winch Service Intervals

Allied Systems Company is pleased to announce an additional tool to keep your winch serviced and functioning properly. Following this recommended service schedule will help keep tractor winch downtime to a minimum,

optimize winch operation, and extend the life of your investment. See Table 1 on this page for recommended service intervals, and Table 2 on the next page for recommended service kits.

### Hydraulic Winch Maintenance

#### Recommended Winch Service Intervals

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

**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

Table 1 Recommended Winch Service Intervals

## Recommended Service Kits

SERVICE KITS FOR H4A WINCHES				
Service Description	Kit Description	Winch Serial Number	Kit Part No. for Hi-Performance (H) Winches	Kit Part No. for Standard (T) Winches
Filter Change	Filter Kit	ALL	Refer to Dozer Operator & 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 Shaft Rebuild Kit	ALL	2315287*	2315351**
Major Overhaul (Every 10,000 hours)	Motor, Idler, Intermediate & Drum Shaft Rebuild Kit	ALL	2315288	

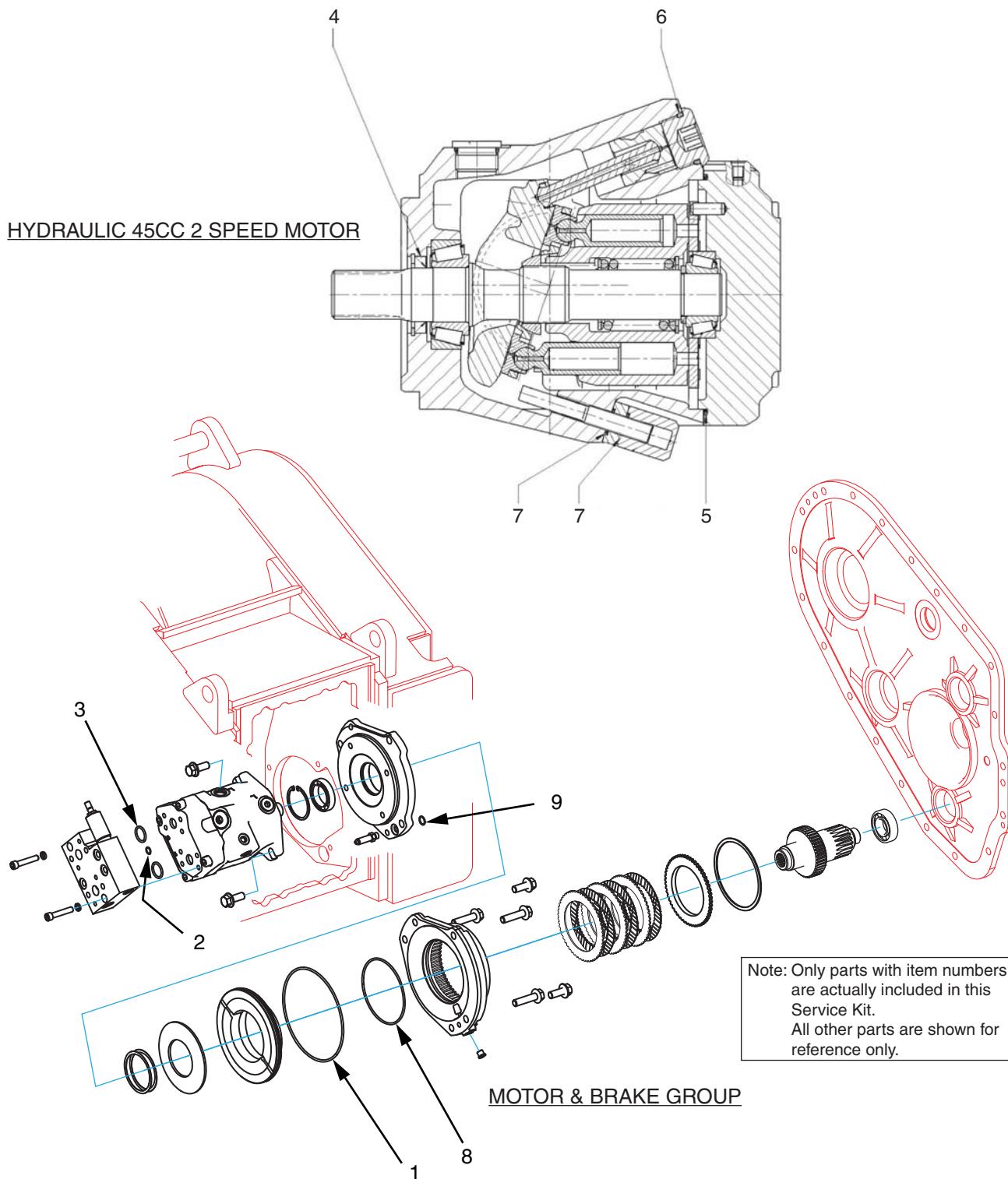
Note: \* High Performance winches with Self-Contained Hydraulics (SCH).

\*\* Standard winches without Self-Contained Hydraulics (Non-SCH).

**Table 2 Routine Maintenance Kits**

**Motor Shaft Rebuild Kit: 2315287**

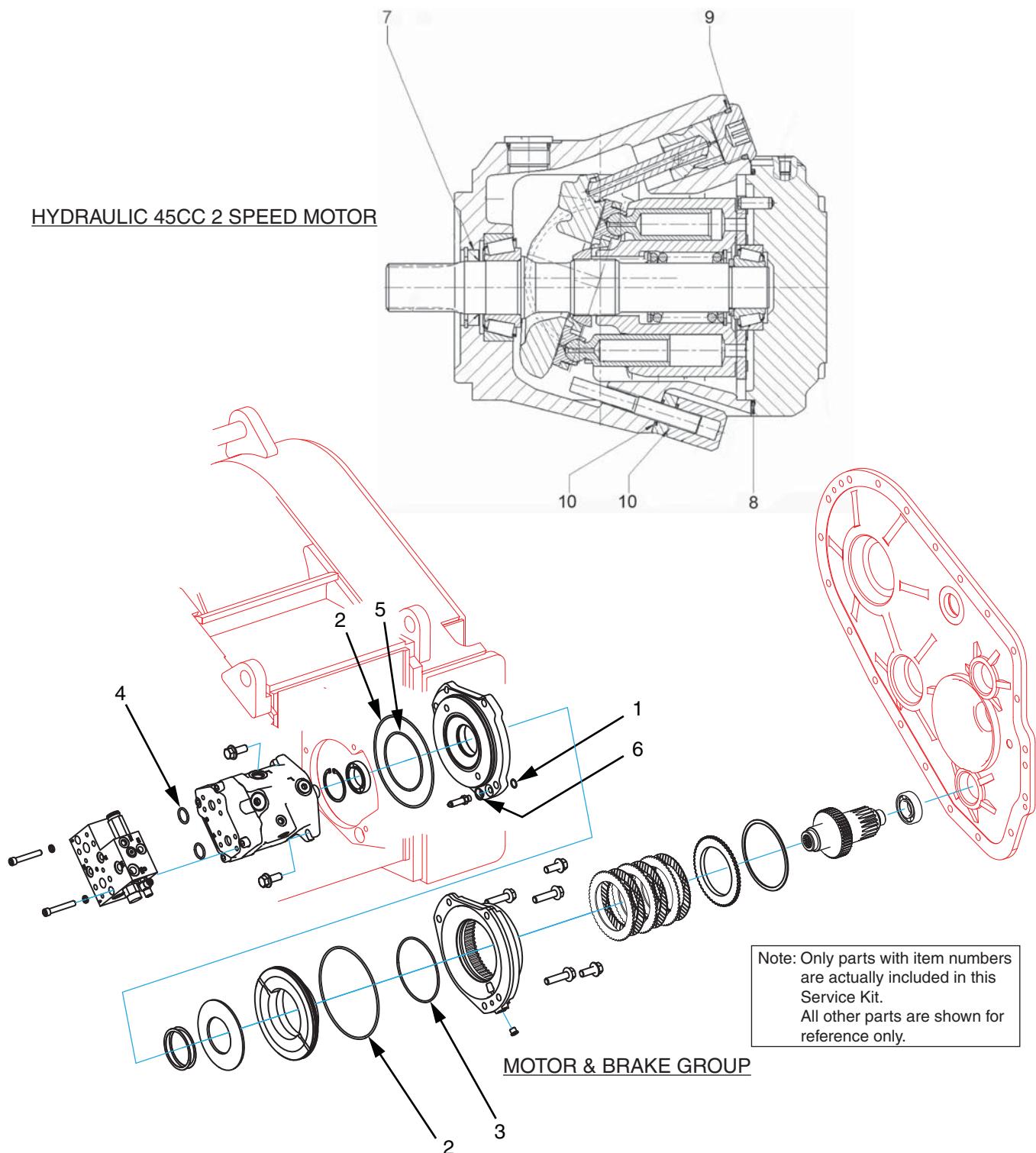
High Performance Winches with Self-Contained Hydraulics (SCH)



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

**Motor Shaft Rebuild Kit: 2315351**

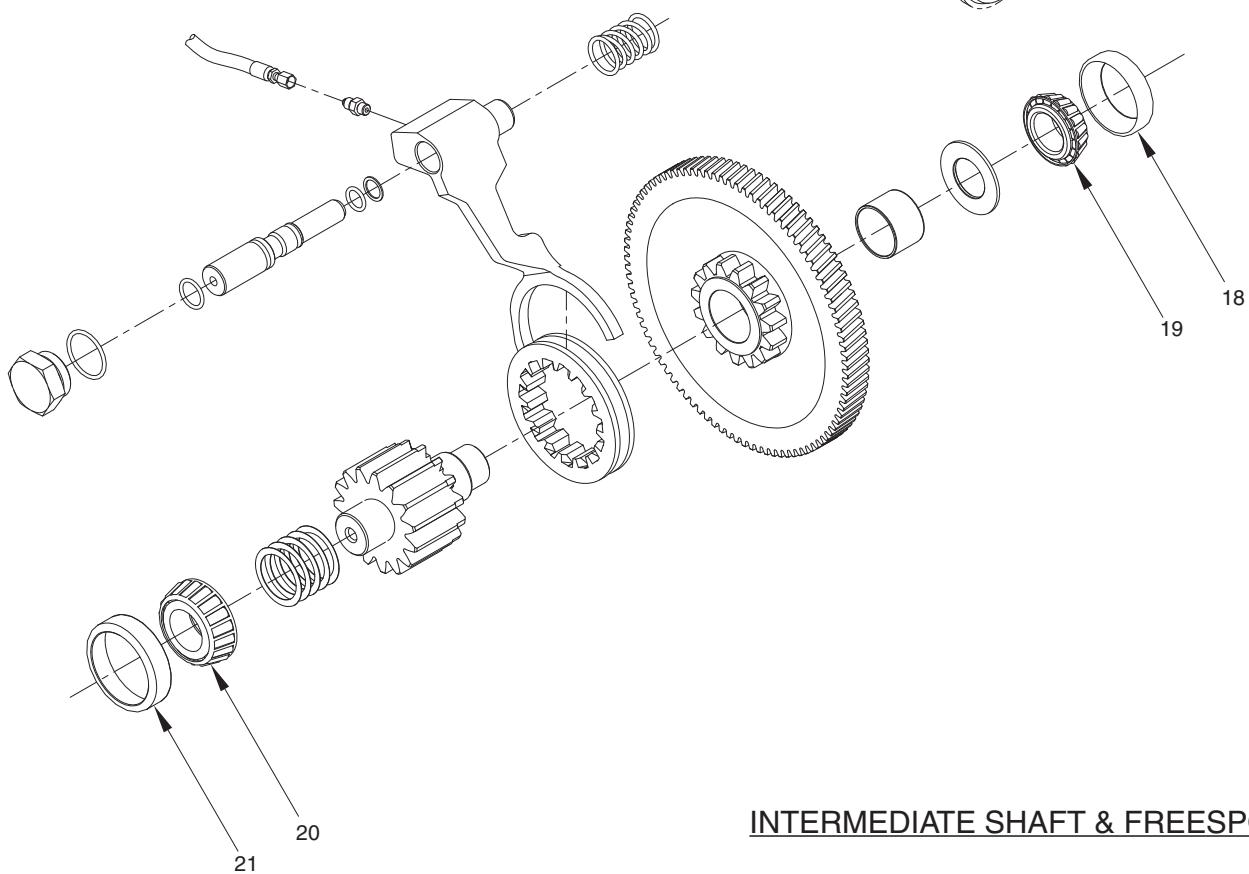
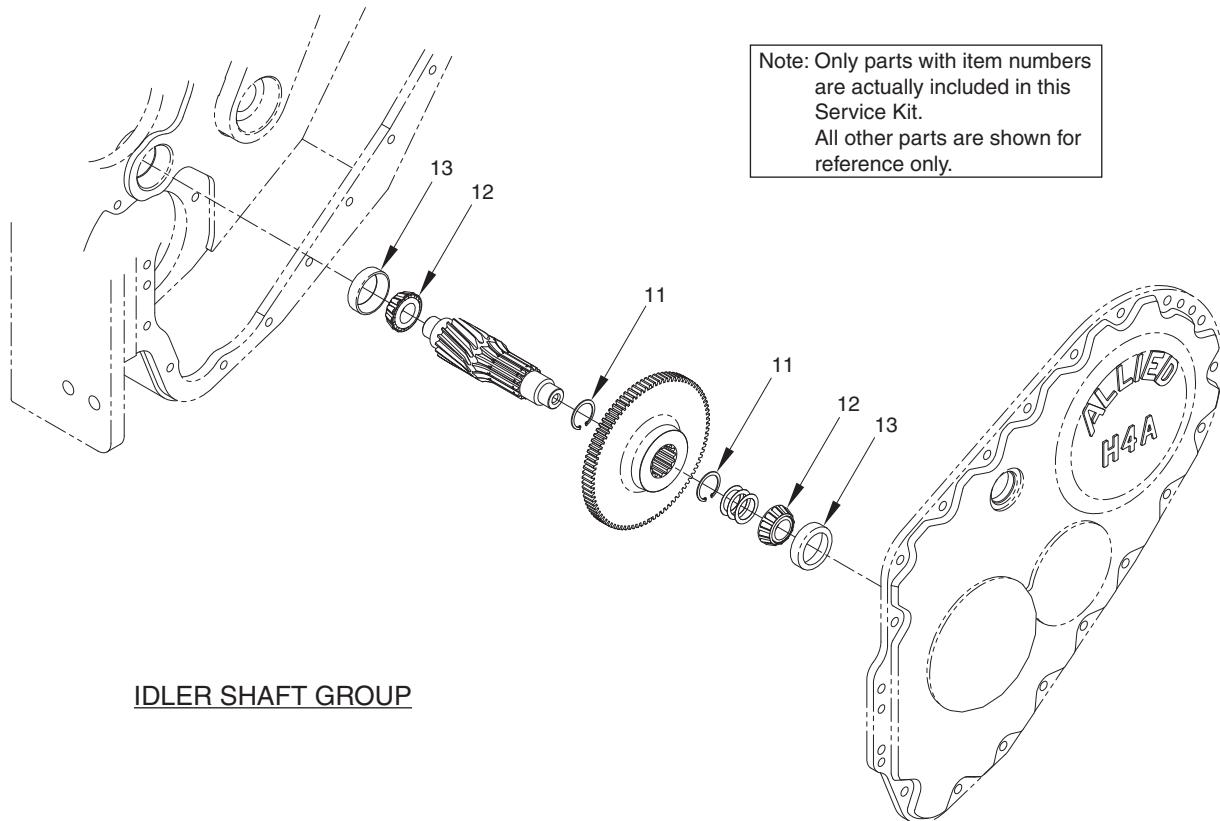
Standard Winches without Self-Contained Hydraulics (Non-SCH)



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

**Motor, Idler, Intermediate & Drum Shaft Rebuild Kit: 2315288**

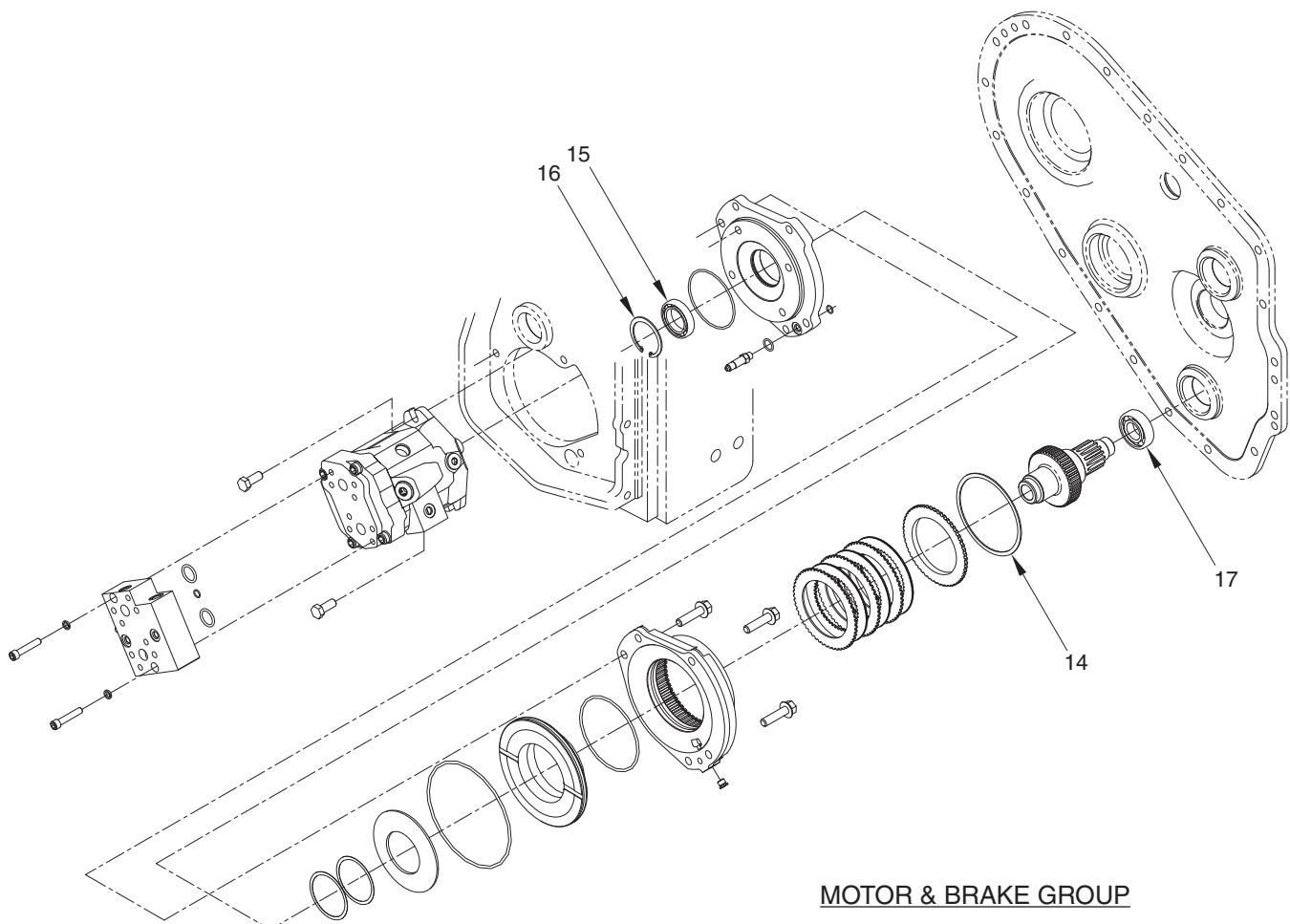
Page 1 of 3



**Motor, Idler, Intermediate & Drum Shaft Rebuild Kit: 2315288**

Page 2 of 3

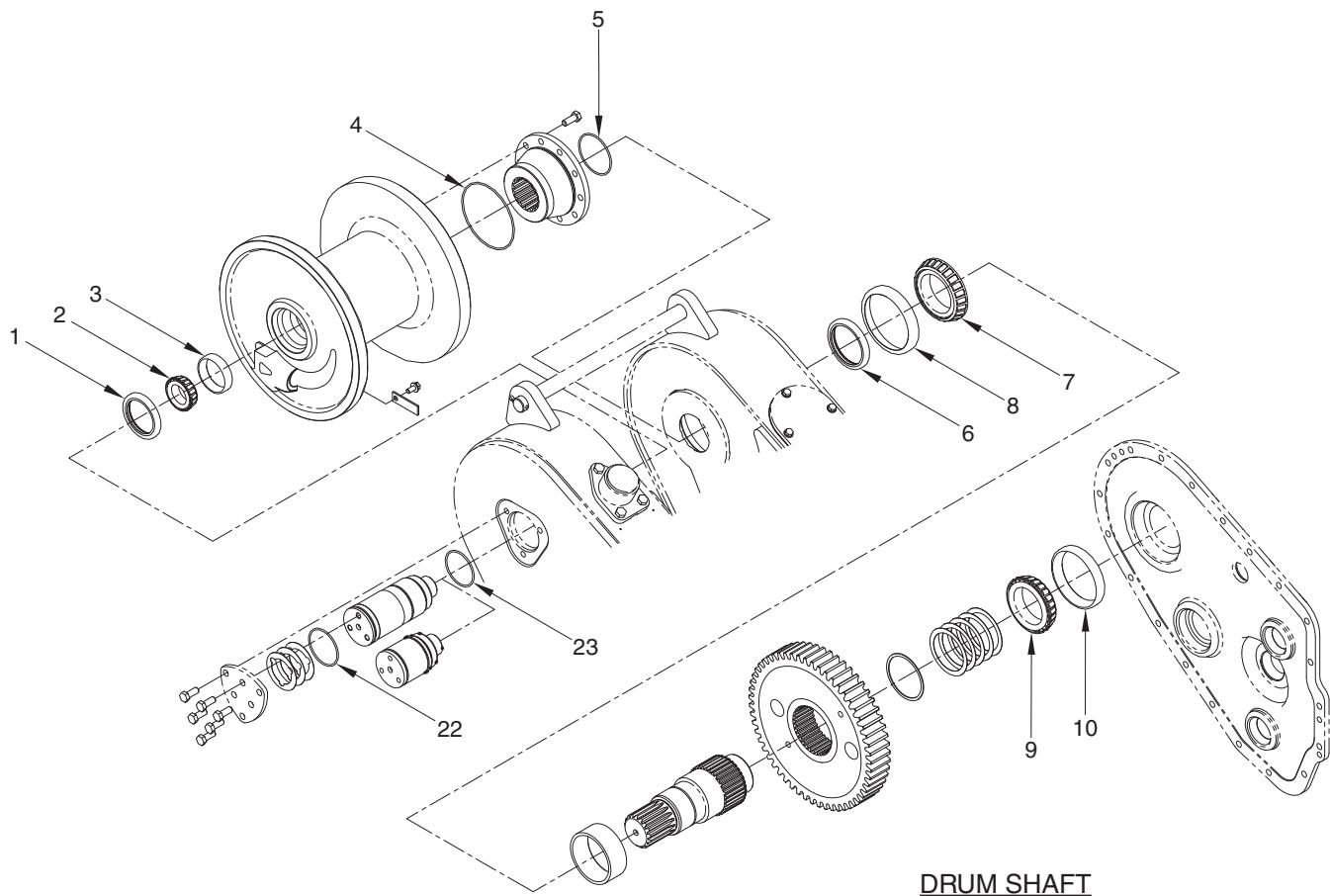
Note: Only parts with item numbers  
are actually included in this  
Service Kit.  
All other parts are shown for  
reference only.



**Motor, Idler, Intermediate & Drum Shaft Rebuild Kit: 2315288**

Page 3 of 3

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



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	<b>2315288</b>	<b>Rebuild Kit, Motor, Idler, Intermediate &amp; Drum Shaft</b>	<b>1</b>				
1	87355W	. Seal, Oil	1	13	2304180W	. Cup, Bearing	2
2	2303853W	. Cone, Bearing	1	14	334475W	. Ring, Snap	1
3	2303854W	. Cup, Bearing	1	15	2300831W	. Bearing, Ball	1
4	15895W	. O-Ring	1	16	12921W	. Ring, Snap	1
5	46629W	. O-Ring	1	17	41206W	. Bearing, Ball	1
6	R2109170	. Seal, Oil	1	18	R1314774	. Cup, Bearing	1
7	2304126W	. Cone, Bearing	1	19	R1314773	. Cone, Bearing	1
8	2304127W	. Cup, Bearing	1	20	225262W	. Cone, Bearing	1
9	1314483W	. Cone, Bearing	1	21	230351W	. Cup, Bearing	1
10	30190W	. Cup, Bearing	1	22	15881W	. O-Ring	1
11	12916W	. Ring, Snap	2	23	203525	. O-Ring	1
12	2304179W	. Cone, Bearing	2				

## **Suggested Spares Guide**

Recommended Service Kits .....	6-2
• Gaskets & Seals .....	6-2 thru 6-3
• Motor Shaft Rebuild Kit, P/N 2315287 .....	6-4
• Motor Shaft Rebuild Kit, P/N 2315351 .....	6-4
• Motor, Idler, Intermediate & Drum Shaft Rebuild Kit, P/N 2315288.....	6-5
• Spare Parts.....	6-6
• Wire Rope Assemblies.....	6-6
• Operator Controls Components.....	6-7
• Hose Kits .....	6-8 & 6-9
• Tool Kits .....	6-10
• Diagnostic Tools .....	6-10



## Suggested Spares Guide

### H4A Hydraulic Winch

#### Recommended Service Kits

The following pages list some of the service parts and kits that are available for your Allied H4A Winch.

Pages 6-2 through 6-3 include gaskets and seals. Keep these parts in stock at all times for regular maintenance. Order parts from the table based on your winch.

Pages 6-4 and 6-5 contain rebuild 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 6-6 contains lists of spare parts, wire rope assemblies, and operator controls components. Order parts as required and as relevant for your installation.

Page 6-7 contains operator controls components. Order parts as required and as relevant for your installation.

Pages 6-8 and 6-9 contain a list of hose kits. Order parts or kits as required and as relevant for your installation.

Page 6-10 contains a list of tool kits and a list of diagnostic tools. Order kits as required and as relevant for the installation, maintenance and service of your winch(es).

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

<b>Gaskets &amp; Seals</b>		<b>Order as Required</b>		
<b>Applies to:</b> Frame Seals, Enclosed-Frame (SCH) Winches (H4AH_R, H4AH_E, H4AH_Z)				
<b>Allied P/N</b>	<b>Description</b>	<b>Quantity on Winch</b>	<b>See Parts Manual Page</b>	<b>Order Quantity</b>
2314794	Gasket, Top Cover	2	Frames/Covers	
39365W	O-Ring, Breather Cover (H4A_R)	1		
2305600W	Gasket, Breather Cover (H4A_E, H4A_Z)	1		
232873	O-Ring, RH Cover	1		
2315377	Gasket, LH Top Cover	2		
209744	O-Ring, Plug	4		
16984W	O-Ring, Plug	1		

<b>Gaskets &amp; Seals</b>		<b>Order as Required</b>		
<b>Applies to:</b> Frame Seals, Open-Frame (Non-SCH) Winches (H4AH_Y)				
<b>Allied P/N</b>	<b>Description</b>	<b>Quantity on Winch</b>	<b>See Parts Manual Page</b>	<b>Order Quantity</b>
2315377	Gasket, Breather Cover	1	Frames/Covers	
209744	O-Ring, Plug	1		
16984W	O-Ring, Plug	1		



## Suggested Spares Guide

Gaskets & Seals			Order as Required	
Applies to: Motor Valve Assemblies				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
242101	Seal Kit, Pressure Reducing Cartridge	1	Motor Valve Assembly <b>H4AH</b>	
2305073W	Seal Kit, Shuttle Valve	1	S/N H4A-1000 thru H4A-1003 and H4A-1005 thru H4A-1037	
2305073W	Seal Kit, Shuttle Valve	1	Motor Valve Assembly <b>H4AH*RY</b> S/N H4A-1004 and H4A-1038 thru H4A-1161	
2305736W	Seal Kit, Sequence Valve	1		
242101	Seal Kit, Pressure Reducing Cartridge	1		
252563	Seal Kit, Directional Cartridge Valve	1	Motor Valve Assembly <b>H4AH*Y</b> First Used on S/N H4A-1162	
2307221W	Vent Cap Seal, Directional Cartridge Valve	1		
2307172W	Seal Kit, Sequence Valve	1		
2307171W	Seal Kit, Shuttle Valve	2		

Gaskets & Seals			Order as Required	
Applies to: Komatsu D31/37/39X-22 (K13), D37/39X-23, D39X-24 (K14) (Non Ripper Equipped Models Only)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2311041	Ring	4	4 to 5 Spool Valve Conversion	

Gaskets & Seals			Order as Required	
Applies to: Through Drive Charge Pumps Caterpillar D3G (C17), D4/5G (C18), D3/4/5K (C19), D5K/D5K2 (C20), D5K2 with Fireflow (C201)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
118358W	O-Ring (C17)	1	Through Drive Charge Pump (High Performance Winches Only)	
39742W	O-Ring (C17)	1		
2306270W	O-Ring (C18)	2		
2306277W	Seal Ring (C18)	6		
2306278W	O-Ring (C18)	1		
2306279W	O-Ring (C18)	1		
2306280W	O-Ring (C18)	1		
2311194	O-Ring (C20, C201)	2		
2311195	O-Ring (C20, C201)	1		
2311196	O-Ring (C20, C201)	1		



## Suggested Spares Guide

### **Motor Shaft Rebuild Kit, P/N: 2315287**

**Applies to:** High Performance Winches with Self-Contained Hydraulics (SCH)

**Service Interval:** Every 5,000 Hours

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
2315287	Rebuild Kit, Motor Shaft			
2316507	. O-Ring	1	Motor & Brake Group (SCH)	
2304220W	. O-Ring	1		
2304110W	. O-Ring	2		
2316517	. O-Ring	1		
26883	. O-Ring	1		
2305760W	. Seal, Shaft	1	Hydraulic 45CC 2 Speed Motor	
2305761W	. O-Ring	1		
2305762W	. O-Ring	1		
2305763W	. O-Ring	2		

### **Motor Shaft Rebuild Kit, P/N: 2315351**

**Applies to:** Standard Winches without Self-Contained Hydraulics (Non-SCH)

**Service Interval:** Every 5,000 Hours

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
2315351	Rebuild Kit, Motor Shaft			
26883	. O-Ring	1	Motor & Brake Group (Non-SCH)	
2316507	. O-Ring	2		
2316517	. O-Ring	1		
2304110W	. O-Ring	2		
15888W	. O-Ring	1		
17064	. O-ring	1		
2305760W	. Seal, Shaft	1		
2305761W	. O-Ring	1	Hydraulic 45CC 2 Speed Motor	
2305762W	. O-Ring	1		
2305763W	. O-Ring	2		



## Suggested Spares Guide

**Motor, Idler, Intermediate and Drum Shaft Rebuild Kit, P/N: 2315288**

**Applies to:** All

**Service Interval:** Every 10,000 Hours

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



## Suggested Spares Guide

Spare Parts		Order as Required		
Applies to: All				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2303788W	Motor, Hydraulic	1	Motor & Brake Group	
2314620	Motor, Hydraulic (K14 Only)	1		
2315765	Motor, Hydraulic (U13 Only)	1		
2304873W	Plate, Friction	3	Frame/Covers	
2305104W	Assembly, Breather (H4AH_R)	1		
2305103W	Cover, Breather (H4AH_R)	1		
21420W	Plug, Breather (H4A_E, H4A_Z, H4A_Y)	1		
2304161W	Pin, Drawbar	1	Fairlead/Drawbar Installation	
2303221W	Pin, Retaining	1		
59419W	Bushing	8		
134803W	Capscrew	1	Drum Shaft Group	
1314503W	Keeper, Ferrule	1		

Wire Rope Assemblies		Order as Required		
Applies to: All				
Allied P/N	Description	Length	Will Fill Drum To:	Order Quantity
WR4-279B	Wire Rope Assembly, 1/2"	279 (85)	2/3 Capacity (Recommended)	
WR4-422B	Wire Rope Assembly, 1/2"	422 (129)	Full Capacity	
WR5-183B	Wire Rope Assembly, 5/8"	183 (56)	2/3 Capacity (Recommended)	
WR5-277B	Wire Rope Assembly, 5/8"	277 (84)	Full Capacity	
WR6-129B	Wire Rope Assembly, 3/4"	129 (39)	2/3 Capacity (Recommended)	
WR6-129BLP	Wire Rope Assembly w/Loop, 3/4"	129 (39)	2/3 Capacity (Recommended)	
WR6-195B	Wire Rope Assembly, 3/4"	195 (59)	Full Capacity	
WR6-195BLP	Wire Rope Assembly w/Loop, 3/4"	195 (59)	Full Capacity	
YS6-195BWS	Wire Rope Assembly, 3/4"	195 (59)	Full Capacity	



## Suggested Spares Guide

Operator Controls Components			Order as Required
Applies to: See Right-Hand Side Column			
Allied P/N	Description	Quantity on Winch	Relevant for Installation
2310013	Assembly, 24V Switch	1	Case 750/850M (H4AH_R_R17), John Deere 550-650K (H4AH_R_E16), John Deere 700H/J (H4AH_R_E39) John Deere 700K (H4AH_R_E391)
2310017	Assembly, 12V Switch	1	Case 650L (H4AH_R_R16) Caterpillar D3/4/5G (H4AH_Y_C17), D4/5G (H4AH_Y_C18), D3/4K (H4AH_Y_C19), D5K (H4AH_Y_C20), D3/4K (H4AT_Y_C19), D5K (H4AT_Y_C20); John Deere 450-650J (H4AH_R_E15) Dresssta TD7/8S (H4AT_Y_H15), TD9S (H4AT_Y_H16)
2311352	Assembly, Oil Filter Indicator	1	Caterpillar D3/4K/K2 (H4AH_Y_C19), D5K/K2 (H4AH_Y_C20), D5K2 With Fireplow (H4AH_Y_C201)



## Suggested Spares Guide

Hose Kits				Order as Required
Applies to: See "Relevant for Installation" Column				
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Quantity
2315305	Hose Kit, Winch Hydraulics	1	Last Used on S/N H4AH-B1014	
2315306	Hose Kit, Winch Hydraulics	1	First Used on S/N H4AH-R1048	
2315315	Hose Kit, Winch Hydraulics	1	Case 650/750/850K, 750/850L (H4AH_R__R15)	
2315317	Hose Kit, Winch Hydraulics	1	Case 650L (H4AH_R__R16)	
2314932	Hose Kit, Winch Hydraulics	1	Case 650L (H4AH_R__R16), Case 750/850M (H4AH_R__R17)	
2315316	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5C (H4AH_B_C16 and H4AH_R_C16)	
2315322	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Y_C17), Caterpillar D4/5G (H4AH_Y_C18), First Used on S/N H4A-1162	
2315321	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Y_C17), Caterpillar D4/5G (H4AH_Y_C18), Last Used on S/N H4A-1161	
2315309	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Y_C17), Caterpillar D4/5G (H4AH_Y_C18), Caterpillar D3/4K (H4AH_Y_C19), Caterpillar D5K (H4AH_Y_C20), Last Used on S/N H4AH-1161	
2315310	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Y_C17), Caterpillar D4/5G (H4AH_Y_C18), Caterpillar D3/4K (H4AH_Y_C19), Caterpillar D5K/D5K2 (H4AH_Y_C20), Caterpillar D5K2 With Fireplow (H4AH_Y_C201), First Used on S/N H4AH-1162	
2315307	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Z_C17), Last Used on S/N H4A-1014	
2315319	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Z_C17), Last Used on S/N H4A-1014	
2315308	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Z_C17), Used on S/N H4A-1015 thru H4A-1031	
2315320	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4/5G (H4AH_Z_C17), Used on S/N H4A-1015 thru H4A-1031	



## Suggested Spares Guide

Hose Kits				Order as Required
Applies to: See "Relevant for Installation" Column				
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Quantity
2315323	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4K (H4AH_Y_C19), Last Used on S/N H4A-1161	
2315327	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4K (H4AT_Y_C19), Caterpillar D5K (H4AT_Y_C20)	
2315311	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4K (H4AT_Y_C19), Caterpillar D5K (H4AT_Y_C20) Dresssta TD7/8S (H4AT_Y_H15), Dresssta TD9S (H4AT_Y_H16) Shantui SD10 (H4AT_Y_U13)	
2315324	Hose Kit, Winch Hydraulics	1	Caterpillar D3/4K/K2 (H4AH_Y_C19), First Used on S/N H4A-1162	
2315325	Hose Kit, Winch Hydraulics	1	Caterpillar D5K (H4AH_Y_C20), Last Used on S/N H4A-1161	
2315326	Hose Kit, Winch Hydraulics	1	Caterpillar D5K/K2 (H4AH_Y_C20), First Used on S/N H4A-1162	
2315312	Hose Kit, Winch Hydraulics	1	Caterpillar D5K2 with Fireplow (H4AH_Y_C201)	
2315318	Hose Kit, Winch Hydraulics	1	Dresssta TD7/8S (H4AT_Y_H15) Dresssta TD9S (H4AT_Y_H16)	
2315328	Hose Kit, Winch Hydraulics	1	John Deere 450-650J (H4AH_R_E15), John Deere 550-650K (H4AH_R_E16)	
2315329	Hose Kit, Winch Hydraulics	1	John Deere 700H/J (H4AH_R_E39)	
2315330	Hose Kit, Winch Hydraulics	1	John Deere 700K (H4AH_R_E391)	
2315331	Hose Kit, Winch Hydraulics	1	Komatsu D31/37/39 E-21 & E21-A (H4AH_B_K12)	
2315313	Hose Kit, Winch Hydraulics	1	Komatsu D31/37/39 E-22 (H4AT_Y_K13) Komatsu D37/39 E-23 (H4AT_Y_K14)	
2315332	Hose Kit, Winch Hydraulics	1	Komatsu D31/37/39X-22 and 22-A (H4AT_Y_K13)	
2315314	Hose Kit, Winch Hydraulics	1	Komatsu D31/37/39X-22 and 22-A (H4AT_Y_K13)	
2315333	Hose Kit, Winch Hydraulics	1	Komatsu D37/39X-23, D39X-24 (H4AT_Y_K14)	



## Suggested Spares Guide

### Tool Kits

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

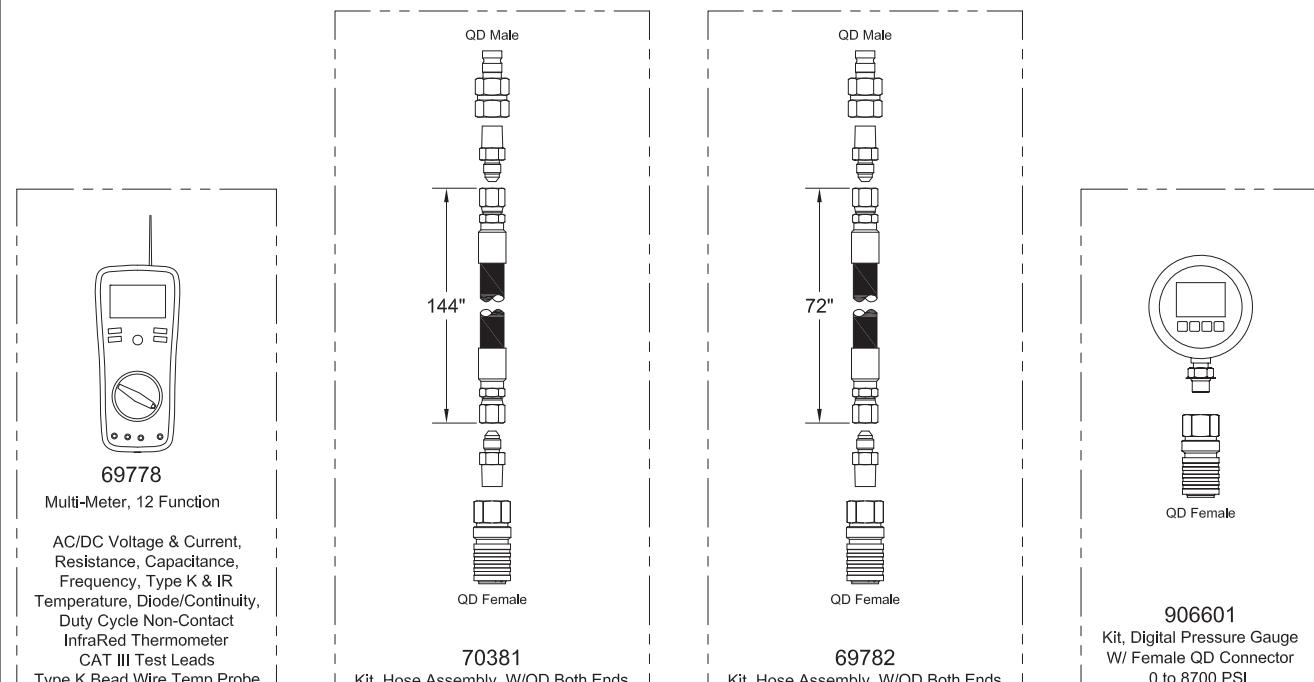
Allied P/N	Description	Order Quantity
588466	Socket Set, 3/8DR 3/8" to 7/8" STD/Deep, 22 PC	
588467	Socket Set, 1/2DR 3/8" to 1-1/4" STD/Deep, 30 PC	
588468	Socket Set, 3/4DR 7/8" to 2-3/8" STD, 29 PC	
588469	Wrench Set, 5/16" to 2-1/2", 31 PC	
588527	Hex Key Sets, .025" to 5/8", 18 PC	
588530	Socket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



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2315329	6-9		2316542	1-30	3.1	134803W	3-105	3	15113W	3-132	3.6
2315330	3-95		2316543	1-30	3.2	134803W	3-106	3	15127W	3-103	1.17
2315330	6-9		2316544	3-103	1.1	134803W	3-107	3	15127W	3-151	5
2315331	3-96		2316545	3-103	1.2	134803W	3-151	9	15127W	3-122	9
2315331	3-97		2316546	3-103	1.3	134803W	3-127	14	15127W	3-146	9
2315331	6-9		2316547	3-103	1.4	134803W	3-129	14	15127W	3-147	9
2315332	3-98		2501643	3-39		134803W	2-12	31	15127W	3-71	10
2315332	3-99		2501643	3-41		134803W	3-45	34	15127W	3-83	10
2315332	6-9		2501643	3-47		134803W	1-3	55	15134W	3-75	1.12
2315333	6-9		2501643	3-49		134803W	1-5	55	15134W	3-79	1.12
2315333	3-101		2515770	3-139	8	134803W	6-6		15134W	3-87	1.12
2315351	2-9		2515770	3-141	8	137852W	3-75	1.16	15134W	1-8	2
2315351	2-11		-----	3-30	8	137852W	3-79	1.16	15134W	1-10	2
2315351	5-5		-----	3-30	9	137852W	3-87	1.16	15134W	3-35	6.9
2315351	6-4		049-2373	3-91	16	137852W	3-103	1.23	15134W	3-137	11
2315377	1-3	2	049-2373	3-93	51	137852W	3-101	2.1	15134W	3-12	14
2315377	1-5	2	100153W	2-4	28	137852W	3-58	19	15134W	3-13	14

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15134W	3-17	17	16448W	1-5	20	16829W	3-127	10	17224W	3-63	31
15134W	3-71	18	16538W	3-53	4	16829W	3-129	10	17224W	3-4	31
15134W	3-83	18	16538W	3-96	4	16829W	3-63	16	174413W	1-12	6
15134W	1-11	20	16538W	3-97	4	16829W	3-67	16	174413W	1-21	6
15134W	3-16	21	16538W	2-4	6	16829W	4-8		174413W	1-11	9
15135W	3-127	11	16538W	2-5	6	16829W	4-9		174413W	1-15	9
15135W	3-129	11	16538W	3-35	6.15	16909W	3-18	14	174413W	1-23	11
15135W	3-63	17	16538W	3-2	7	16909W	3-19	14	174413W	1-25	11
15135W	3-67	17	16538W	3-3	7	16909W	3-20	14	174413W	1-8	13
15135W	1-8	18	16538W	3-146	17	16909W	3-21	14	174413W	1-10	18
15135W	1-10	26	16538W	3-32	21	16923W	3-35	6.6	176208W	1-7	6
15154W	3-151	7	16538W	3-127	23	16923W	1-3	10	176208W	1-3	33
15154W	3-122	8	16538W	3-22	25	16923W	1-5	10	176208W	1-5	33
15154W	3-146	8	16538W	3-23	25	16923W	3-32	15	177461W	3-18	6
15154W	3-147	8	16538W	3-24	25	16923W	3-33	15	177461W	3-19	6
15156W	1-3	4	16538W	3-25	25	16923W	3-12	18	177461W	3-20	6
15156W	1-5	4	16538W	3-30	28	16923W	3-35	54.1	177461W	3-21	6
15156W	1-7	5	16538W	3-31	28	16925W	3-35	6.7	177461W	3-32	8
15156W	1-3	6	16547W	2-7	2.15	16925W	3-12	17	177461W	3-33	8
15156W	1-5	6	16547W	2-9	2.15	16925W	1-5	35	177461W	3-22	11
15156W	3-35	6.17	16547W	2-11	2.15	16967W	3-35	6.5	177461W	3-23	11
15156W	3-129	22	16556W	3-12	2	16967W	3-22	16	177461W	3-2	33
15156W	1-3	25	16556W	3-35	6.4	16967W	3-23	16	177461W	3-3	33
15156W	1-5	25	16556W	3-2	11	16967W	3-24	16	177461W	3-63	35
15156W	3-37	26.20	16556W	3-3	11	16967W	3-25	16	177461W	3-67	35
15156W	3-30	27	16556W	3-18	16	16967W	3-18	18	177461W	3-58	38
15156W	3-31	27	16556W	3-19	16	16967W	3-19	18	177461W	3-59	38
15156W	3-127	30	16556W	3-20	16	16967W	3-20	18	177461W	3-4	38
15178W	3-41	23.34	16556W	3-21	16	16967W	3-21	18	177461W	3-5	38
15178W	3-49	23.34	16556W	3-22	17	16984W	1-7	21	17753W	3-122	1
15178W	3-37	26.36	16556W	3-23	17	16984W	1-3	37	17753W	3-146	1
15223W	4-8		16556W	3-24	17	16984W	1-5	37	17753W	3-147	1
15223W	4-9		16556W	3-25	17	16984W	6-2		17753W	3-127	5
15256W	1-7	12	16556W	3-30	18	16984W	6-2		17753W	3-129	5
15256W	1-3	31	16556W	3-31	18	16987W	3-30	20	17753W	3-22	14
15256W	1-5	31	16556W	3-146	20	16987W	3-31	20	17753W	3-23	14
15881W	2-12	10	16556W	3-127	26	16997W	3-96	13	17753W	3-19	17
15881W	5-8	22	16556W	3-4	41	16997W	3-97	13	17777W	3-35	6.2
15881W	6-5		16556W	3-5	41	16997W	3-30	19	17777W	3-58	11
15888W	2-9	3.2	16558W	3-2	14	16997W	3-31	19	17777W	3-59	11
15888W	2-11	3.2	16558W	3-3	14	17047W	3-30	21	17777W	3-63	19
15888W	5-5	5	16559W	3-12	4	17047W	3-31	21	17777W	3-22	22
15888W	6-4		16559W	3-2	15	17059W	3-103	1.26	17777W	3-23	22
15895W	5-8	4	16559W	3-3	15	17059W	3-35	6.3	17777W	3-24	22
15895W	2-12	17	16559W	3-63	30	17059W	3-31	7	17777W	3-25	22
15895W	6-5		16559W	3-4	30	17059W	3-22	9	177947W	2-7	3.1
15899W	3-29	1.3	16562W	3-2	16	17059W	3-23	9	177947W	2-9	4.3
15961W	3-49	25.10	16562W	3-3	16	17059W	3-24	9	179443W	1-3	3
15961W	3-47	43	16574W	3-146	16	17059W	3-25	9	179443W	1-5	3
159W	4-8		16574W	3-127	22	17059W	3-93	17	179443W	1-7	4
159W	4-9		16574W	3-2	36	17059W	3-95	17	179443W	1-3	5
16001W	4-6	3	16598W	1-15	48	17059W	3-32	19	179443W	1-5	5
16001W	4-5	8	16598W	3-148	85	17059W	3-21	22	179443W	3-4	21
16210W	1-8	17	16602W	1-32	2	17059W	3-58	25	179443W	3-5	21
16210W	1-10	24	16602W	1-31	2	17059W	3-59	25	179443W	1-3	24
162155W	3-23	6	16602W	1-32	12	17059W	3-63	25	179443W	1-5	24
162155W	3-24	6	16602W	1-3	48	17059W	3-91	39	179443W	3-63	52
162155W	3-25	6	16602W	1-3	57	17062W	3-35	6.1	179443W	3-67	52
162572W	3-35	6.19	16602W	1-5	57	17062W	3-58	12	180959W	2-11	4.2
162572W	3-30	26	168054W	1-8	15	17062W	3-59	12	18127W	3-151	4
162572W	3-31	26	16805W	1-15	39	17062W	3-63	20	18468W	3-37	26.6
162572W	1-3	45	16828W	1-8	1	17062W	3-22	23	18535W	3-35	6.8
16338W	3-122	6	16828W	1-10	1	17062W	3-23	23	18535W	3-12	13
16445W	3-35	6.12	16828W	3-75	1.11	17062W	3-24	23	18535W	3-13	15
16445W	1-3	9	16828W	3-79	1.11	17062W	3-25	23	18535W	3-15	16
16445W	1-5	9	16828W	3-87	1.11	17224W	3-35	6.23	18535W	3-17	16
16445W	3-32	14	16828W	3-137	10	17224W	3-18	15	18535W	3-14	17
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18720W	3-133	3.7	221616W	1-16	10	221780W	1-12	9	2300831W	5-8	15
18720W	3-130	4	221616W	1-17	10	221780W	1-15	13	2300831W	2-7	2.8
18720W	3-131	39	221657W	1-29	1.10	221780W	4-7		2300831W	2-9	2.8
18720W	3-134	39	221657W	1-9	7	222400W	3-2	25	2300831W	2-11	2.8
18720W	3-137	52	221657W	1-16	7	222400W	3-3	25	2300831W	6-5	
18720W	3-132	3.14	221657W	1-17	7	222442W	2-7	2.13	2300948W	4-5	10
18723W	3-127	3	221657W	1-27	54	222442W	2-9	2.13	2300962W	1-5	16
18723W	3-129	3	221672W	1-30	1.12	222442W	2-11	2.13	2300962W	1-7	27
18738W	3-127	4	221672W	1-19	1.32	222442W	3-114	3	2301708W	4-6	9
18738W	3-129	4	221672W	1-29	1.9	222442W	3-112	6	2303006W	1-8	6
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201752W	3-3	17	221690W	1-12	19	222442W	3-39	23	230351W	2-5	11
201752W	3-22	24	221694W	4-7		222442W	3-47	23	230351W	5-8	21
201752W	3-23	24	221707W	3-129	23	222442W	3-41	23.23	230351W	6-5	
201752W	3-24	24	221707W	3-127	31	222442W	3-49	23.23	2303609W	3-123	22
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201766W	3-12	10	221711W	3-127	12	222442W	3-4	47	2303755W	4-6	8
201766W	3-22	13	221711W	3-129	12	222442W	3-5	47	2303788W	2-7	1
201766W	3-23	13	221711W	3-63	18	222535W	3-75	1.20	2303788W	2-9	1
201766W	3-24	13	221711W	3-67	18	222535W	3-79	1.20	2303788W	2-11	1
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201766W	3-20	20	221724W	4-5	2	222535W	3-20	5	2303788W	3-21	21
201766W	3-21	20	221763W	3-39	3	222535W	3-21	5	2303788W	3-22	26
201766W	3-4	49	221763W	3-47	3	222535W	3-32	7	2303788W	3-23	26
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213619W	3-63	22	221767W	3-5	22	222535W	3-49	23.7	2303789W	3-15	9
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21420W	1-7	26	221767W	1-25	39	222535W	3-63	34	2303825W	2-5	9
21420W	6-6		221767W	3-91	46	222535W	3-67	34	2303827W	2-12	29
219060W	2-2	3	221767W	1-21	46	222535W	3-71	34	2303829W	2-7	4
221372W	4-4	6	221767W	3-63	53	222535W	3-83	34	2303829W	2-9	5
221372W	4-2	8	221767W	3-67	53	222535W	3-58	37	2303829W	2-11	5
221372W	4-3	8	221771W	1-9	11	222535W	3-59	37	2303830W	2-12	1
221466W	1-23	9	221771W	1-16	11	222535W	3-4	37	2303835W	2-7	4
221466W	1-25	9	221771W	1-17	11	222535W	3-5	37	2303835W	2-9	5
221466W	1-8	10	221771W	1-23	43	222562W	2-4	10	2303835W	2-11	5
221466W	1-10	11	221771W	1-25	43	222562W	2-5	10	2303836W	2-2	30
221466W	1-11	11	221775W	1-9	12	222562W	5-8	20	2303837W	2-2	30
221466W	1-15	11	221775W	1-16	12	222562W	6-5		2303845W	2-2	21
221466W	1-12	24	221775W	1-17	12	225871W	1-8	5	2303845W	2-7	2.9
221466W	1-21	34	221777W	1-30	1.10	229383W	3-130	1	2303845W	2-9	2.9
221499W	3-91	47	221777W	1-19	1.7	2300041W	1-8		2303845W	2-11	2.9
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221518W	3-47	9	221777W	1-11	4	2300041W	1-12		2303848W	2-12	3
221518W	3-22	12	221777W	3-45	7	2300041W	1-15		2303848W	1-7	7
221518W	3-23	12	221777W	1-23	7	2300041W	1-21		2303848W	1-3	14
221518W	3-18	19	221777W	1-25	7	2300041W	1-23		2303848W	1-5	14
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221518W	3-20	19	221777W	1-16	8	2300125W	4-5	9	2303848W	3-3	18
221518W	3-21	19	221777W	1-17	8	2300174W	1-7	24	2303848W	1-3	19
221518W	3-41	23.9	221777W	1-18	8	2300174W	1-3	53	2303848W	1-5	19
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2303848W	1-5	34	2304104W	3-20	4	2304126W	6-5		2304196W	3-31	25
2303848W	1-3	39	2304104W	3-21	4	2304127W	5-8	8	2304197W	2-3	6
2303848W	1-5	39	2304104W	3-2	31	2304127W	2-12	27	2304198W	2-3	7
2303848W	1-3	41	2304104W	3-3	31	2304127W	6-5		2304199W	2-3	8
2303848W	1-5	41	2304110W	3-87	2.13	2304128W	2-12	28	2304203W	1-8	20
2303848W	3-71	71	2304110W	5-4	3	2304129W	1-8		2304204W	3-53	10
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2303853W	5-8	2	2304110W	5-5	4	2304150W	3-3	10	2304204W	3-146	10
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