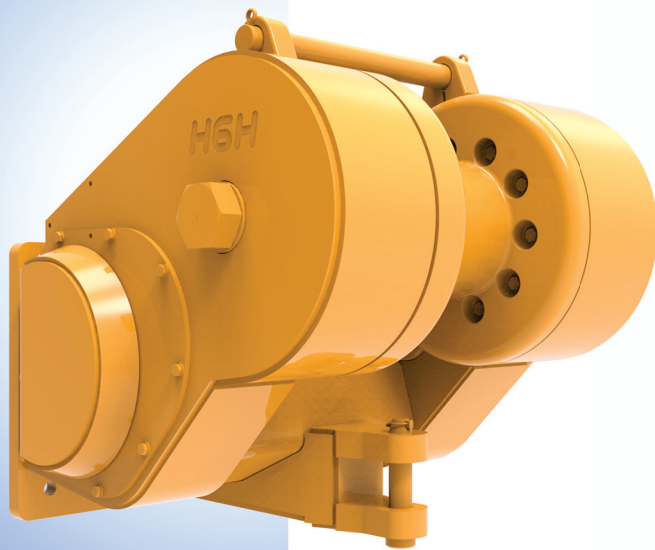




Parts Manual



Allied H6H Hydraulic Winch

Please check the Allied Systems website
regularly for updates to this manual.
www.alliedsystems.com

CUSTOMER EDITION

Safety Precautions

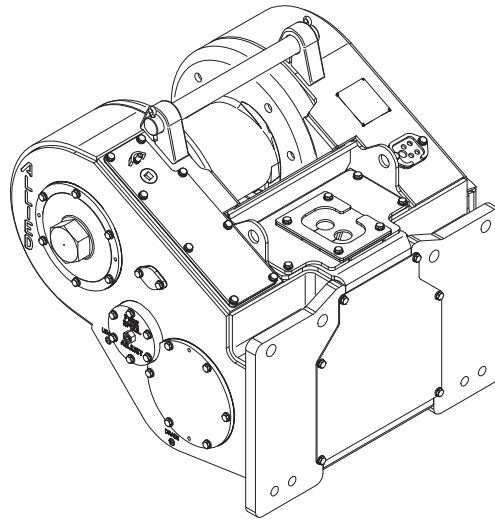
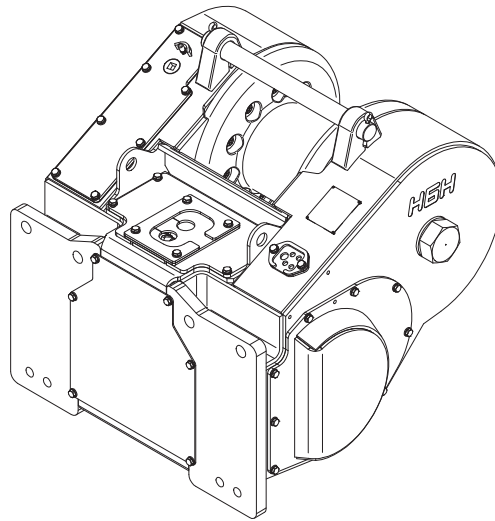
**Read, understand and observe the Safety Summary
on pages 0-3 through 0-5
to prevent injury to personnel and damage to equipment.**

Winch serial number _____

Date put into service _____

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

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Safety Summary

General Safety Notices

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

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



DANGER

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



WARNING

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



CAUTION

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

NOTICE

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

NOTE: ...

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

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

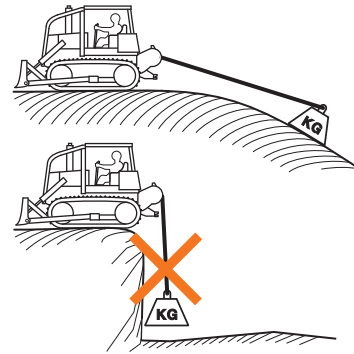
Obey the following cautions and warnings before using your winch to avoid equipment damage, personal injury or death.

- 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 0-9.
- 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.



Unit Identification

Allied Winch S/N Nameplate Data For Tractor Mountings

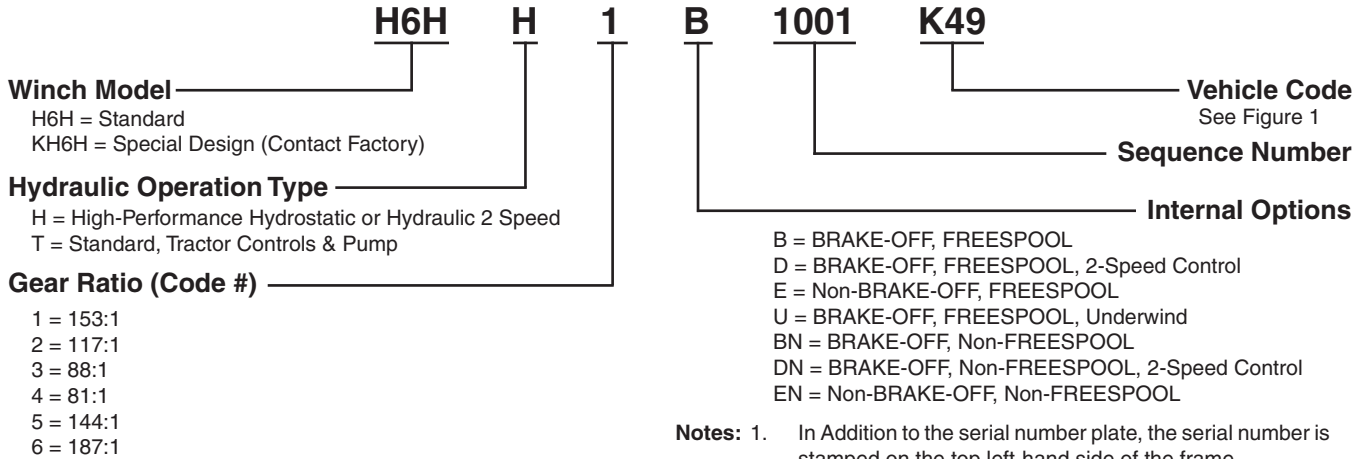


Figure 1 - Tractor or Skidder Identification Codes and Available Gear Ratios

C O D E	C	E	L	K	R	Y
	Caterpillar	John Deere	Liebherr	Komatsu	Case	Tigercat
40					1650L ①	
41			PR724 ⑤ ⑥			
42			PR734 ⑤		1650M/ 2050M ①	
44						635D ②
46				D65-15 ⑥		
47		850J ①				
48		750J ①				
49				D65-16 & D65-17 ①		
71	D6T ⑥					
81	D6N ①					
460		750/850J & 750/850K ①				
471				D61-23 ② ④		
811	D6N (1) ①					

(1). Serial Numbers With prefixes GHS, MLW & LJR: _____

How to use the Illustrated Parts manual

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Numerical Index

Part No.	Page	Item	Description	Part No.
108877W	2-8	23	O-Ring	1305093W
109453W	1-9	9	O-Ring	1306001W
109453W	2-2	10	O-Ring	1306002W
110322W	3-12	9	Clamp	1306003W
110322W	3-27	11	Shim, .005	1306003W
110931W	2-5	23	Shim, .007	1308400W
110932W	2-5	23	Shim, .020	1308401W
110933W	2-5	23	Clamp, Strap	1308402W
114312W	3-10	24	O-Ring	1308403W
118361W	3-7	13	O-Ring	1308406W
118361W	3-8	16	O-Ring	1308436W
118361W	3-9	21	O-Ring	1308437W
118365W	3-9	26	O-Ring	1308438W
119491W	2-6	17	Seal, Oil	1308439W
12327W	2-5	3	Cap screw	1308440W
12447W	2-11	9	Bearing	1308441W
125399W	2-2	8	Clamp	1308442W
127045W	3-3	4	Clamp	1308443W
127045W	3-5	14	Snap-Ring	1310110W
127045W	2-10	3	Snap-Ring	1310111W

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Index-Master

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Box-Gear	2-5 thru 2-7
Brake	2-10
	2-9
	2-9
	1-4
	4-3 & 4-4

2-2

Shaft-PTO

Last Used on S/N WBLP-2099 & AWBL-1000

Tractor Model	Shaft-PTO (Item 3)		Bearing Carrier (Item 4)	Pin (Item 5)	Lo Pin (Item 6)
	Gear Ratio	Part No.			
Caterpillar D7DD	49.8:1	132909W	98362W	19929W	96
Caterpillar D7FS	59.7:1	132909W	98362W	19929W	96
Caterpillar 572	59.7:1	132909W	98362W	19929W	96
Flat-Allis 16B	25.37:1		216222W	19929W	
Flat-Allis 20		132909W	216222W	9583W	
Dresser TD-20E	25.876:1		98362W	19929W	
Komatsu D65A-12E-16	21.903:1		98362W	213139W	
Deere D650C	25.895:1	253030W	98362W		
John Deere D700A					

0-1

Index-Illustrated

Ref	Item	Page
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3	Hydraulics/Controls	3-1
4	Optional	4-1
5	Numerical Index	5-1

A - 49.8:1 Gear Ratio
B - 71.6:1 Gear Ratio

Item	Part No.	Description	A	B	Item
1	134078W	Shim, .005	A/R	A/R	11
1	134079W	Shim, .007	A/R	A/R	11
2	79383W	Seal, Oil	1	1	12
3	"a	Shaft, PTO	1	1	13
4	"a	Bearing, Carrier	1	1	14
5	"a	Pin	1	1	15
6	"a	Ring, Lock	1	1	16
7	"a	Coupler	1	1	1
8	36573W	Ring, Snap	1	1	1
9	125399W	Bearing	1	1	1
10	109453W	O-Ring	1	1	1

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

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

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

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

When the part number is known:

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

General:

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

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

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

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

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

Abbreviations

Abbreviations are used both on the winch and in this manual. For example, a manifold may have a port stamped "FS". That port is related to the "freespool" circuit. This abbreviation is also used on pages in this manual that reference this port, or the ports connected to this port. Figure 2 lists the most common abbreviations used in this manual.

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

Figure 2 - Abbreviations

Oil Specifications

Oil Selection

The main consideration while selecting hydraulic fluid is the estimated oil temperature extremes that will be experienced during service so the most suitable temperature-viscosity characteristics are obtained.

VISCOSITY GRADE		OIL OPERATING TEMPERATURE RANGE		TYPICAL AMBIENT TEMPERATURE RANGE	
ISO	SAE	°F	°C	°F	°C
VG 22	10W	-5 to 140	-20 to 60	-5 to 40	-20 to 4
VG 32	15W	10 to 160	-12 to 71	10 to 55	-12 to 13
VG 46	20	20 to 180	-7 to 82	20 to 70	-7 to 21
VG 68	20	30 to 200	-1 to 93	30 to 90	-1 to 32
VG 100	30	40 to 220	4 to 104	40 to 110	4 to 43

Figure 3 - Oil Selection Chart

Factory fill is TO-4, which has an ISO Viscosity Grade 46 to 68.

Note: Some hydraulic system oils are not recommended for use inside the winch case.

The hydraulic circuit and winch gear housing have different fluids.

Recommended Oil List

	HYDRAULIC SYSTEM (PUMP)	WINCH CASE (GEAR TRAIN)
Caterpillar	Use Tractor Fluid	TO-4
Chevron	Use Tractor Fluid	Drive Train Fluids HD
Exxon-Mobil	Use Tractor Fluid	Mobil Trans HD Series

Figure 4 - Recommended Oil List

Oil Capacity

The oil capacity for H6H winch is 4 gallons (15 liters).

Ordering Parts:

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

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

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

Phone: 503-625-2560
Fax: 503-625-5132
E-Mail: parts@alliedsystems.com

Also see our website, www.alliedsystems.com, where the most current copy of this manual is always available.

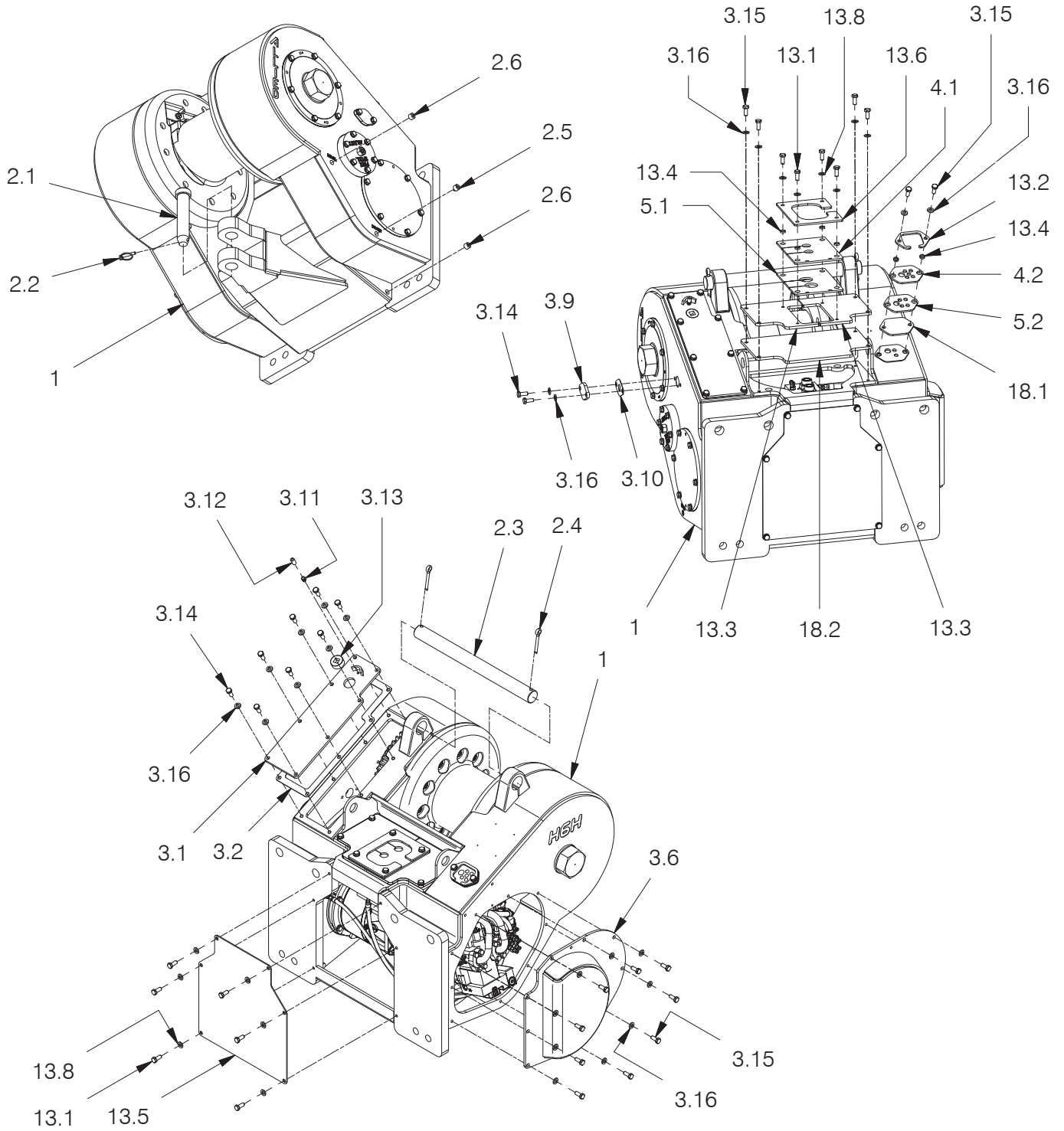
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Frame/Covers/Decals/Mounting Parts

Frame/Covers 1-2 thru 1-5
Mounting Parts 1-6 thru 1-27
Nameplate & Decals 1-28

Frame/Covers

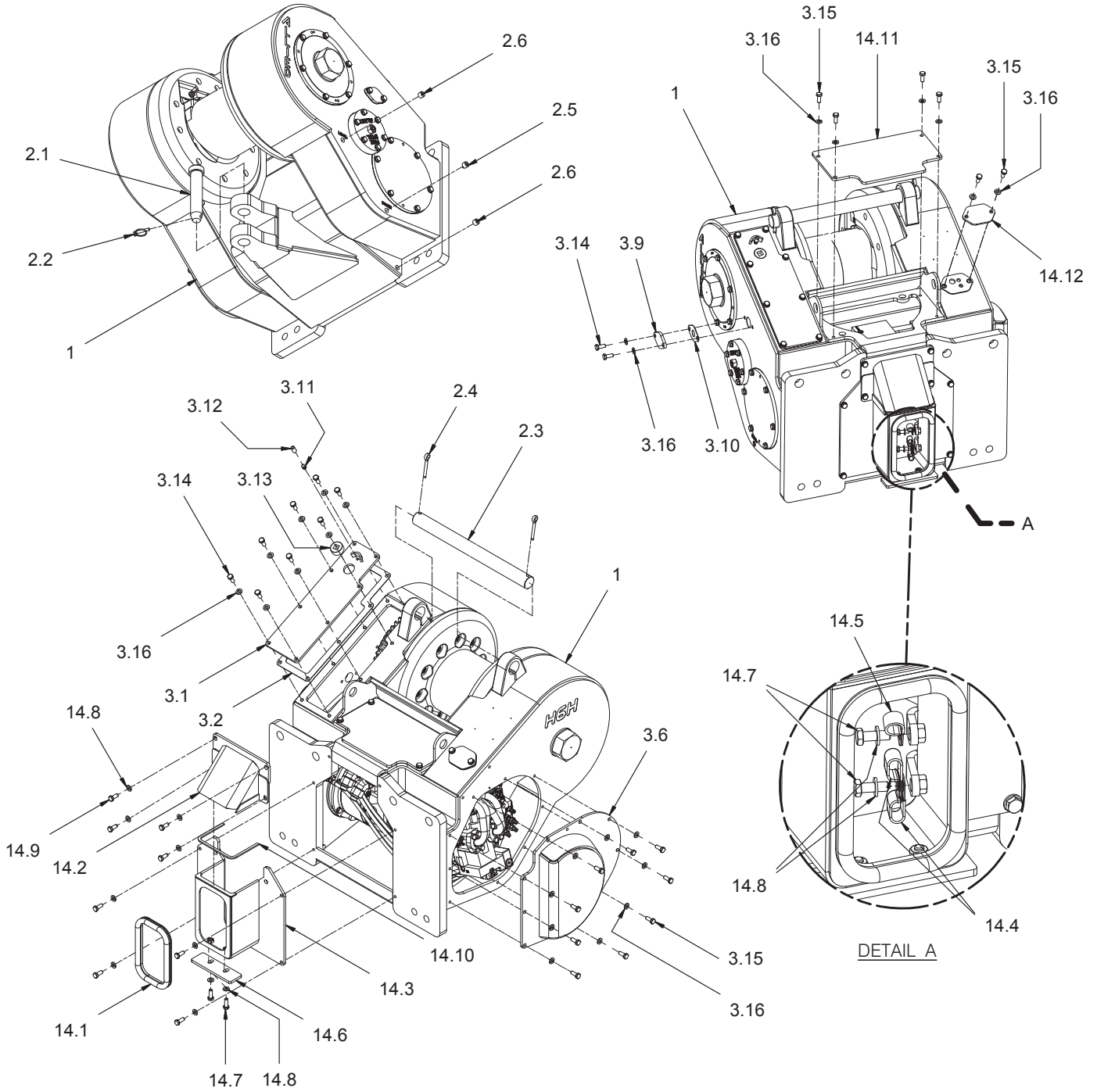


Frame/Covers

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	-----	Frame, H6H	1	5.1	*b 2312009	Seal, Top	1
2.1	95959W	Pin, Drawbar	1	5.2	*b 2313831	Gasket, Hose Seal	1
2.2	2303221W	Pin, Retaining	1	13.1	*c 293645W	Capscrew	10
2.3	2312580	Rod, Tie	1	13.2	*c 2312117	Clamp, Gasket	1
2.4	15272W	Pin	2	13.3	*c 2313380	Cover, Top	2
2.5	15290W	Fitting	1	13.4	*c 2312119	Spacer	6
2.6	15315W	Fitting	2	13.5	*c 2312046	Cover, Front	1
3.1	2312048	Cover, Top Right-Hand	1	13.6	*c 2312006	Clamp, Top	1
3.2	2312045	Gasket, Top Right-Hand	1	13.8	*c 296422W	Washer	10
3.6	2312013	Cover, Left-Hand	1	18.1	*d 2312850	Cover, Top Left-Hand	1
3.9	151589W	Cover, Freespool	1	18.2	*d 2312849	Cover, Top	1
3.10	151646W	Gasket, Freespool	1				
3.11	21420W	Plug, Breather	1		*a	For H6H High Performance Winches: John Deere 750/850J & 750/850K (E47/E48/E460)	
3.12	2300962W	Cap, Breather	1		*b	For H6H Standard Winches Except Komatsu D61-23 (K471)	
3.13	15319W	Fitting	1		*c	For H6H Winches: Caterpillar D6N (C81); Komatsu D65-16/D65-17 (K49); Liebherr PR724 (L41)	
3.14	2312486	Capscrew	10		*d	For H6H Standard Winch: Case 1650L (R40)	
3.15	293645W	Capscrew	15				
3.16	296422W	Washer	25				
4.1	*a 2312008	Seal, Top	1				
4.2	*a 2312118	Seal, Top Left-Hand	1				

Frame/Covers
 Komatsu D61-23 (K471)
 Page 1 of 2



Frame/Covers

Komatsu D61-23 (K471)
Page 2 of 2

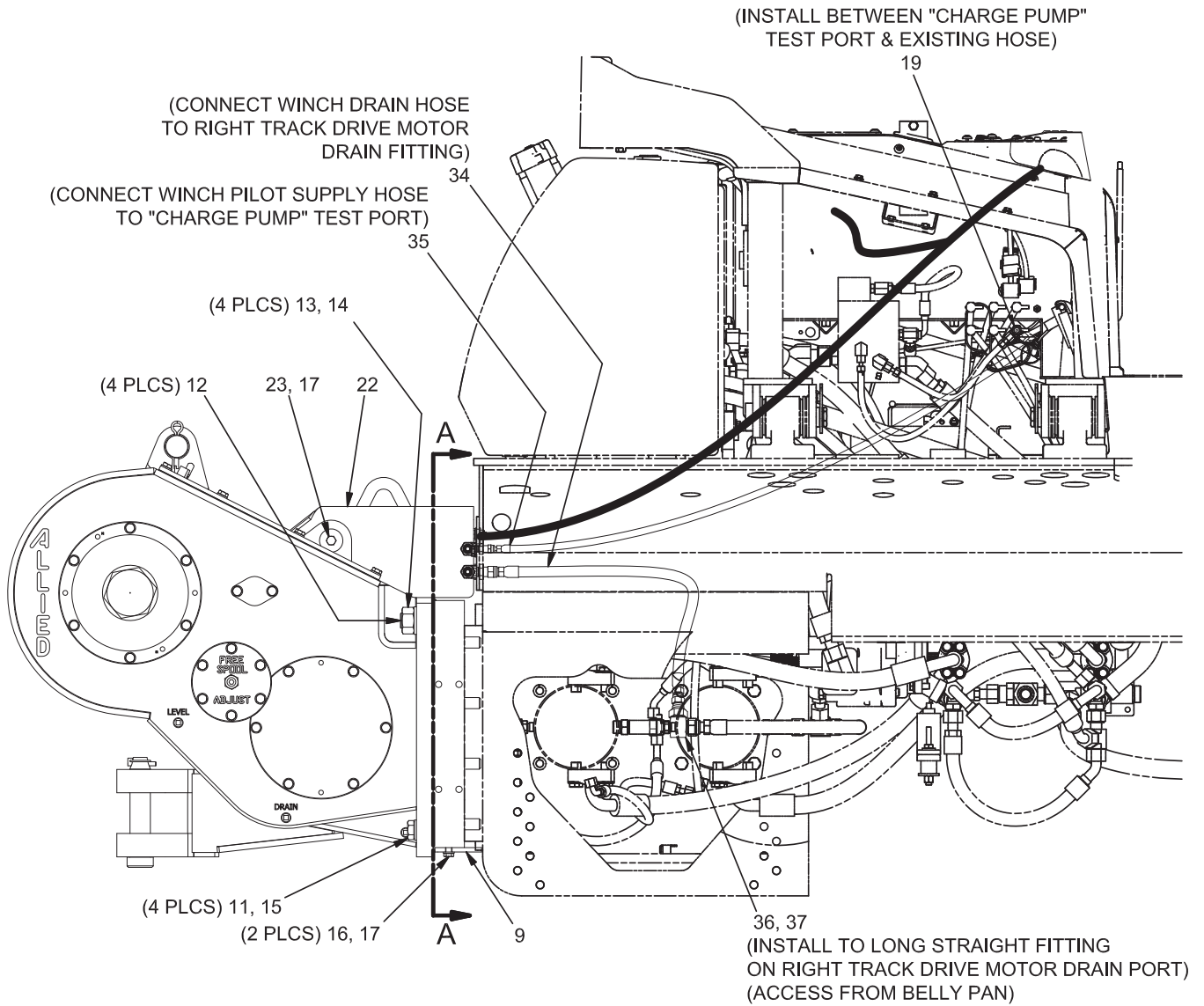
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	-----	Frame, H6H	1	3.14	2312486	Capscrew	10
2.1	95959W	Pin, Drawbar	1	3.15	293645W	Capscrew	15
2.2	2303221W	Pin, Retaining	1	3.16	296422W	Washer	25
2.3	2312580	Rod, Tie	1	14.1	237271	Trim, Edge	2.5 ft
2.4	15272W	Pin	2	14.2	2312953	Tunnel, Top	1
2.5	15290W	Fitting	1	14.3	2312954	Tunnel, Bottom	1
2.6	15315W	Fitting	2	14.4	2312628	Clamp, Insulation	2
3.1	2312048	Cover, Top Right-Hand	1	14.5	R13803049	Clip, Insulation	1
3.2	2312045	Gasket, Top Right-Hand	1	14.6	2312955	Guard, Jillpoke	1
3.6	2312013	Cover, Left-Hand	1	14.7	293646W	Capscrew	4
3.9	151589W	Cover, Freespool	1	14.8	296422W	Washer	13
3.10	151646W	Gasket, Freespool	1	14.9	293645W	Capscrew	8
3.11	21420W	Plug, Breather	1	14.10	2312032	Strip, Weather	2 ft
3.12	2300962W	Cap, Breather	1	14.11	2312849	Cover, Top	1
3.13	15319W	Fitting	1	14.12	2312850	Cover, Top Left-Hand	1

Mounting Parts

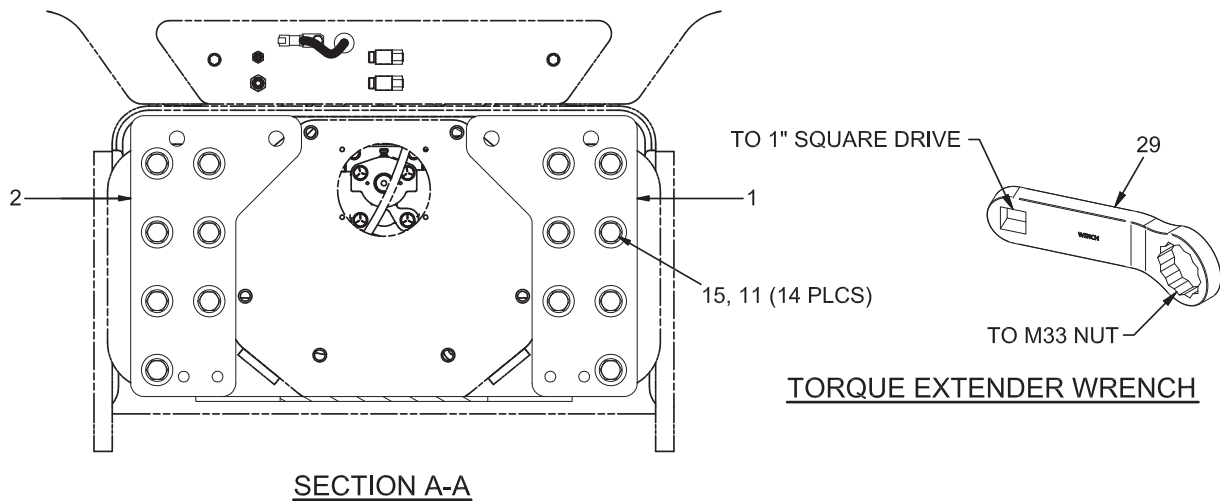
H6HT (Standard) Winch

Case 1650L (R40)

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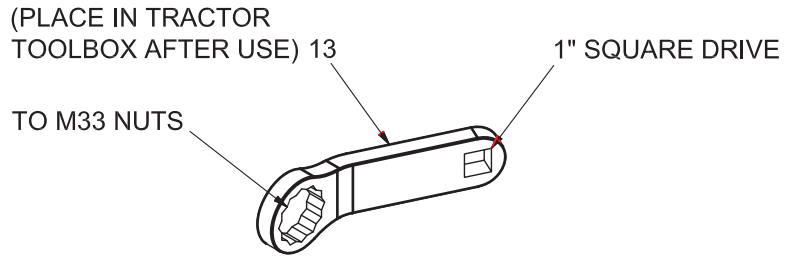
Mounting Parts
H6HT (Standard) Winch
Case 1650L (R40)
Page 2 of 2



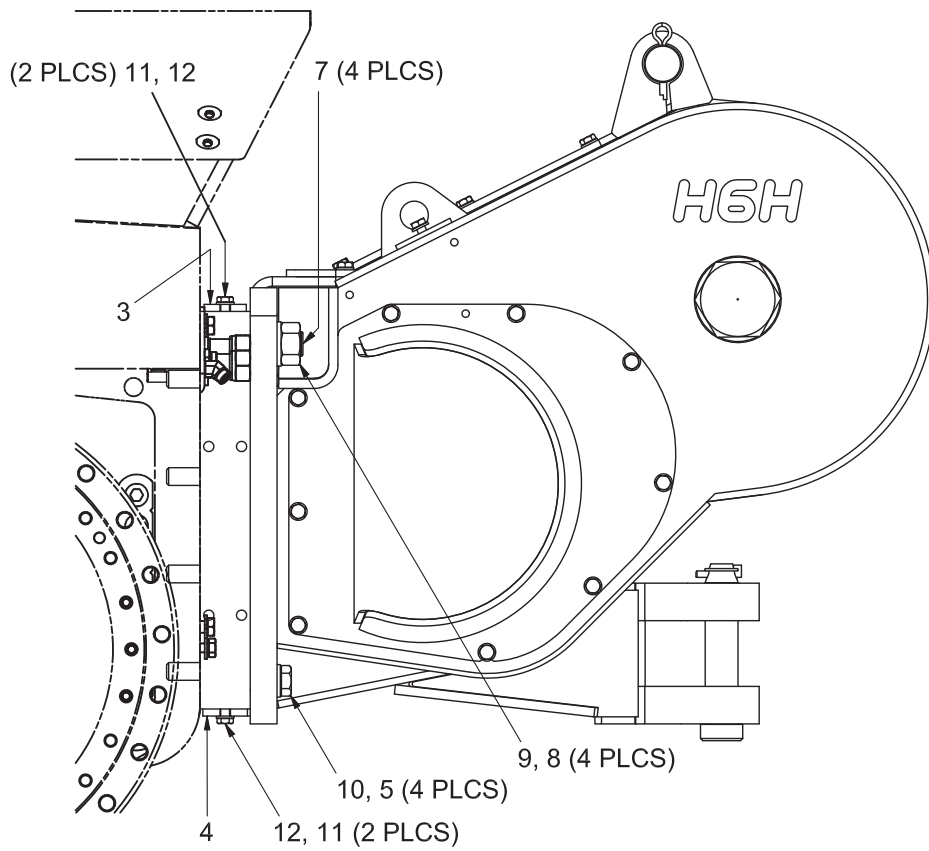
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2313214	Bracket, Mounting - RH	1	22	2314685	Guard, Hose	1
2	2313215	Bracket, Mounting - LH	1	23	2305715W	Washer, Fender	1
9	2314681	Guard, Bottom	1	29	2312331	Wrench, Extension Torque	1
11	296434W	Washer	18	34	235527	Assembly, Hose	1
12	*a 2312090	Stud	4	35	242254	Assembly, Hose	1
13	296440W	Washer	4	36	R834055	Fitting	1
14	*b 2312089	Nut	4	37	231809	Fitting	1
15	*a 274044W	Capscrew	18				
16	296422W	Washer	4	*a	Use 318702W Thread Lock		
17	293646W	Capscrew	5	*b	Use 230064W Locktite Kit. Apply to Threads that Go into Mounting Brackets.		
19	236855	Fitting	1				

Mounting Parts

H6HT (Standard) Winch
Case 1650/2050M (R42)
Page 1 of 2



TORQUE WRENCH



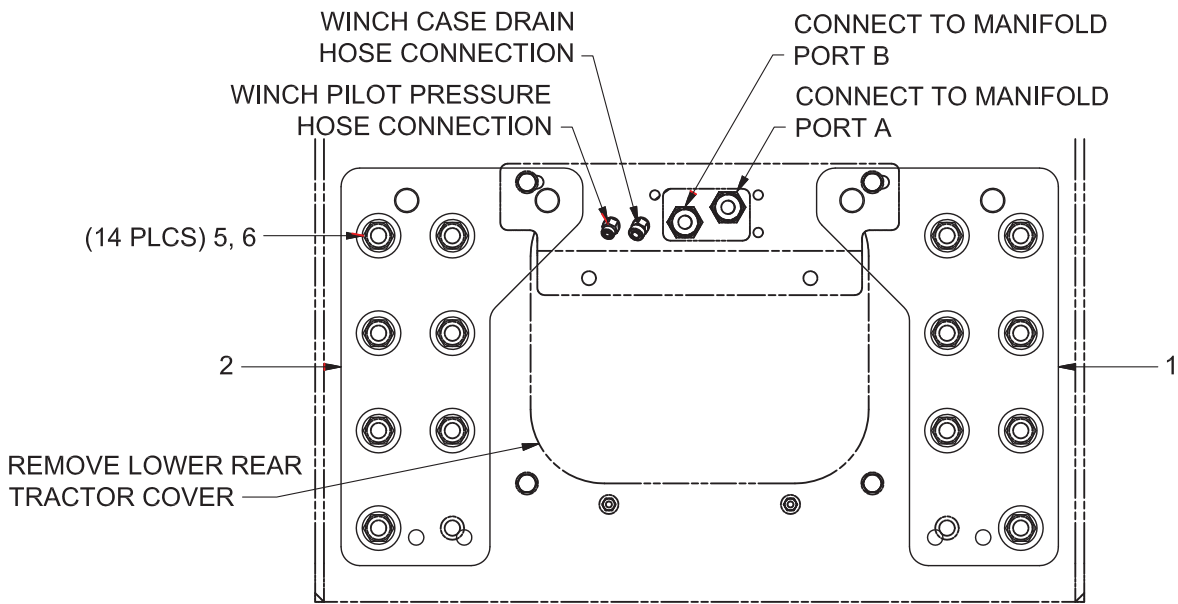
WINCH INSTALLATION
LEFT VIEW

Mounting Parts

H6HT (Standard) Winch

Case 1650/2050M (R42)

Page 2 of 2



**MOUNTING BRACKET INSTALLATION
REAR VIEW**

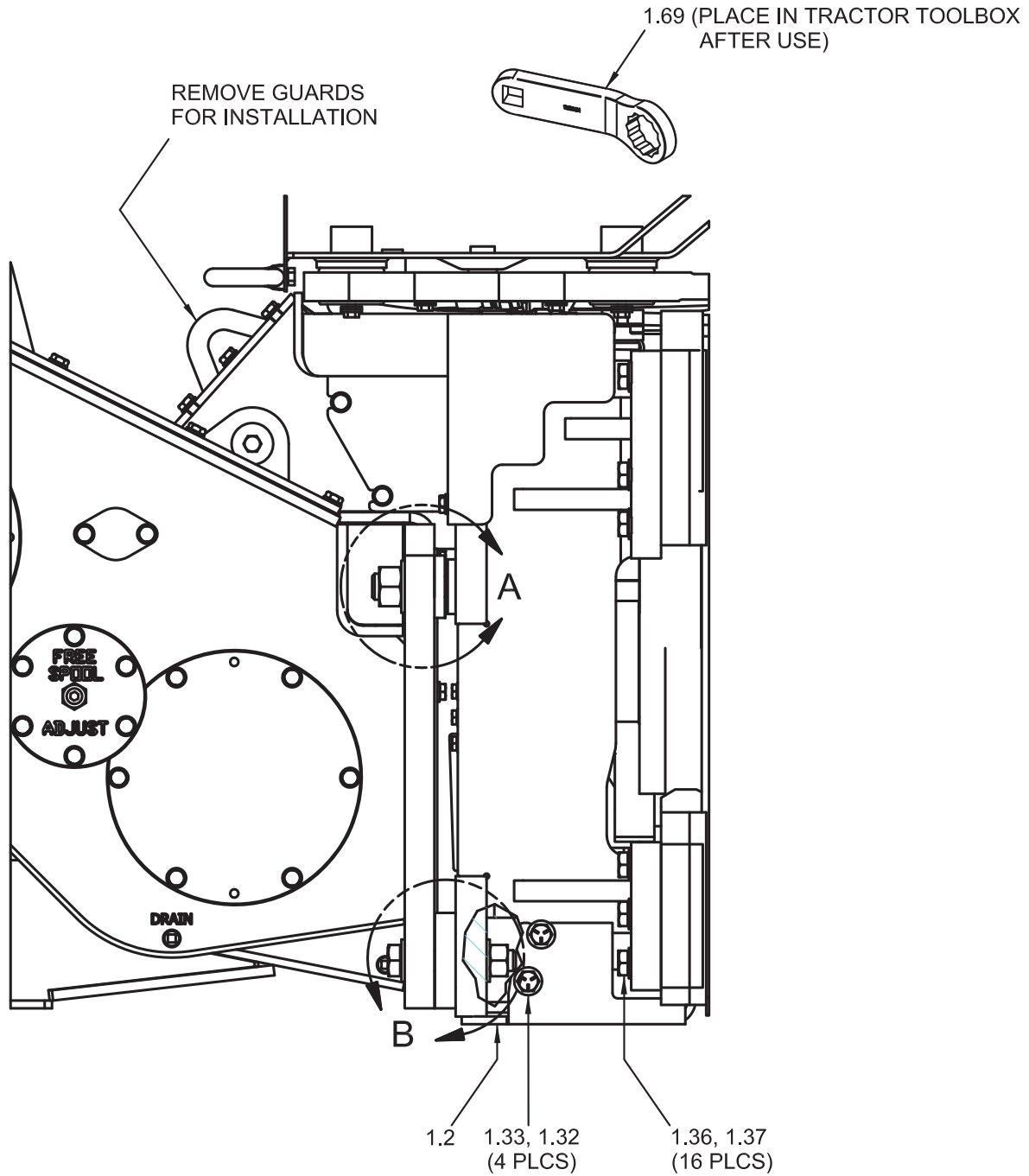
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2313214	Bracket, Mounting - RH	1	10	*b 274044W	Capscrew	4
2	2313215	Bracket, Mounting - LH	1	11	296422W	Washer	4
3	2313284	Guard, Bottom	1	12	293646W	Capscrew	4
4	2313285	Guard, Bottom	1	13	2312331	Wrench, Extension Torque	1
5	296434W	Washer	18				
6	*b 293729W	Capscrew	14		*a	Uses 230064W Locktite Kit. Apply to Threads that Go into Mounting Brackets.	
7	*a 2312090	Stud	4		*b	Uses 318702W Thread Lock	
8	296440W	Washer	4				
9	*b 2312089	Nut	4				

Mounting Parts

H6HT (Standard) Winch

Caterpillar D6N (C81)

Page 1 of 2

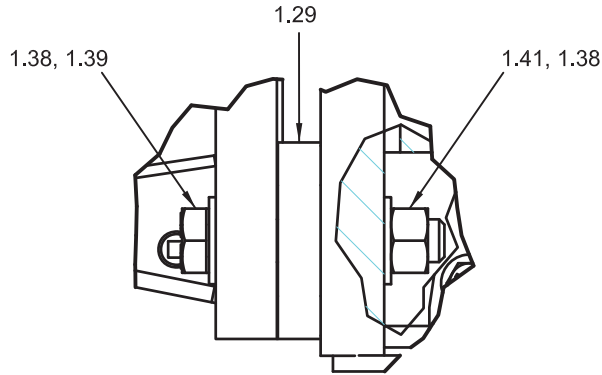


Mounting Parts

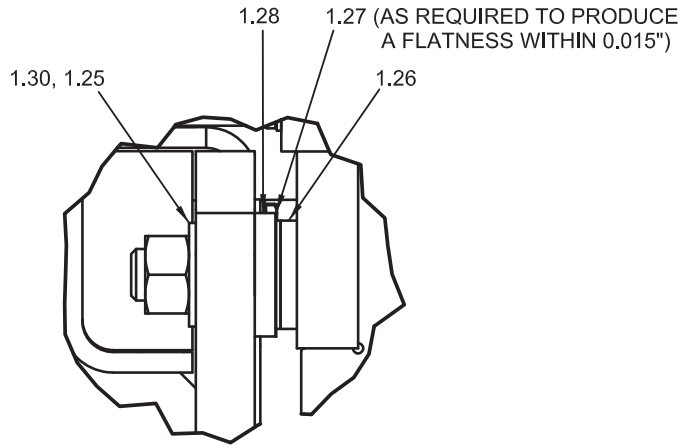
H6HT (Standard) Winch

Caterpillar D6N (C81)

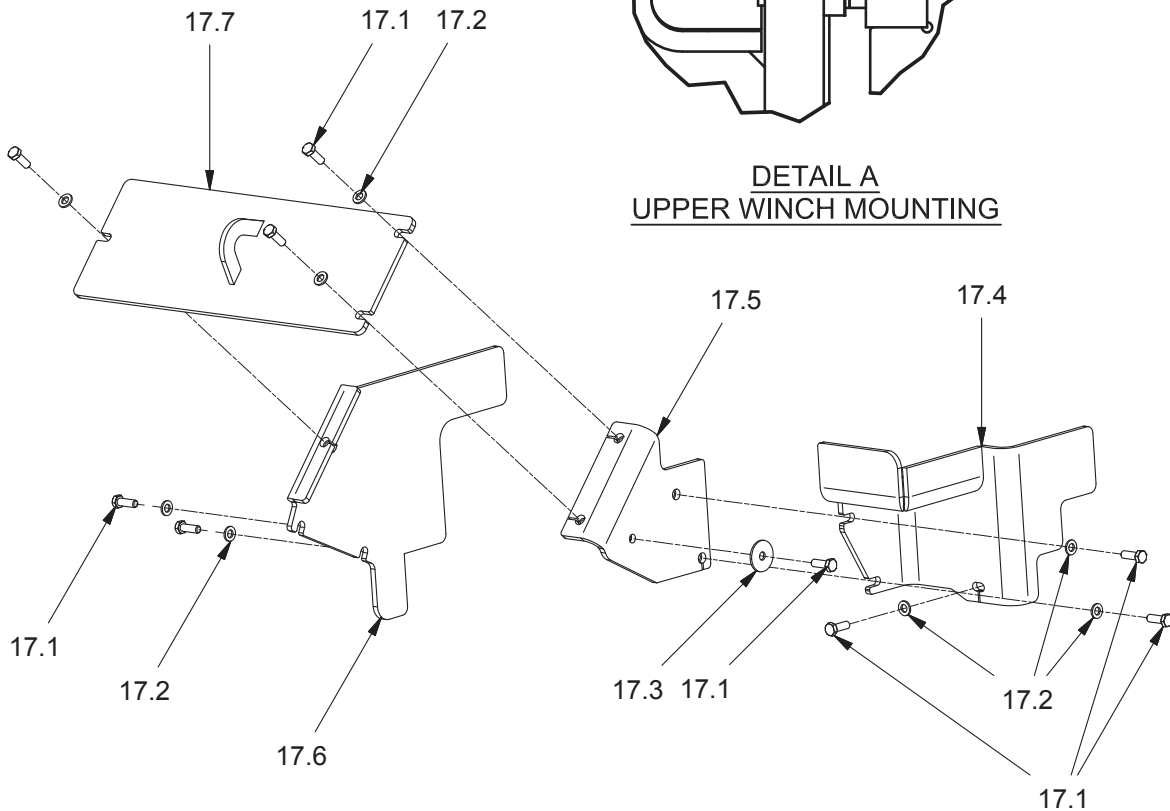
Page 2 of 2



**DETAIL B
LOWER WINCH MOUNTING**



**DETAIL A
UPPER WINCH MOUNTING**



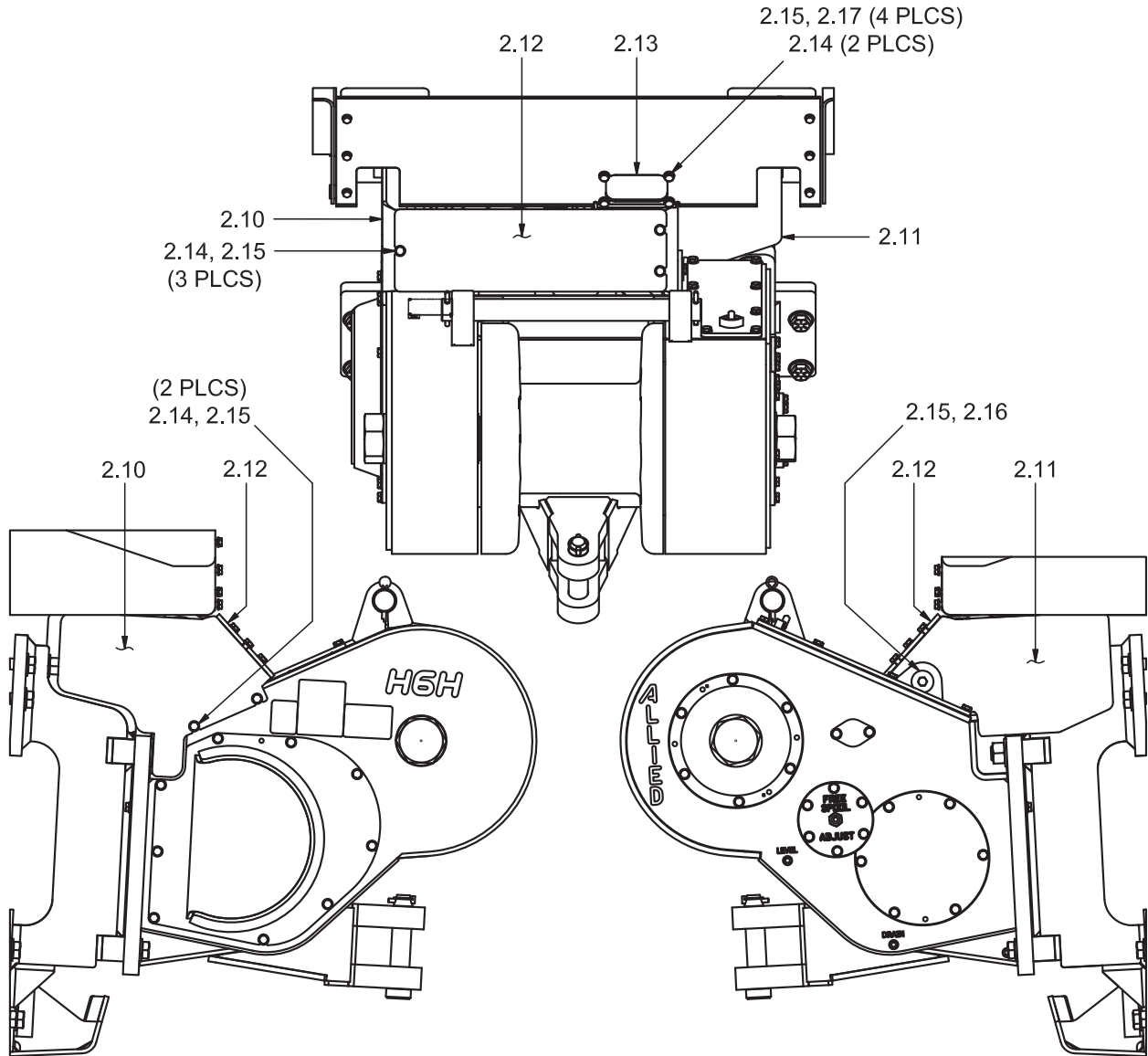
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.2	2305541W	Guard, Bottom	1	1.41	*a 221720W	Nut	4
1.25	15128W	Washer	4	1.69	2310958	Wrench, Extension Torque	1
1.26	2301529W	Washer, Spherical	4	17.1	293646W	Capscrew	9
1.27	223453W	Shim .029	4	17.2	296422W	Washer	8
1.28	2312846	Pad, Top Mounting	2	17.3	2305715W	Washer, Fender	1
1.29	2312847	Pad, Bottom Mounting	2	17.4	2313122	Hose Guard, Right-Hand	1
1.30	*a 221725W	Nut	4	17.5	2313120	Mount, Hose Guard	1
1.32	16644W	Capscrew	4	17.6	2313102	Hose Guard, Left-Hand	1
1.33	221775W	Washer	4	17.7	2313125	Center, Hose Guard	1
1.36	293710W	Capscrew	16				
1.37	296430W	Washer	16				
1.38	221780W	Washer	8				
1.39	R13801901	Capscrew	4				
				*a	Uses 318702W Thread Lock		

Mounting Parts

H6HT (Standard) Winch

Caterpillar D6T (C71)

Page 1 of 2

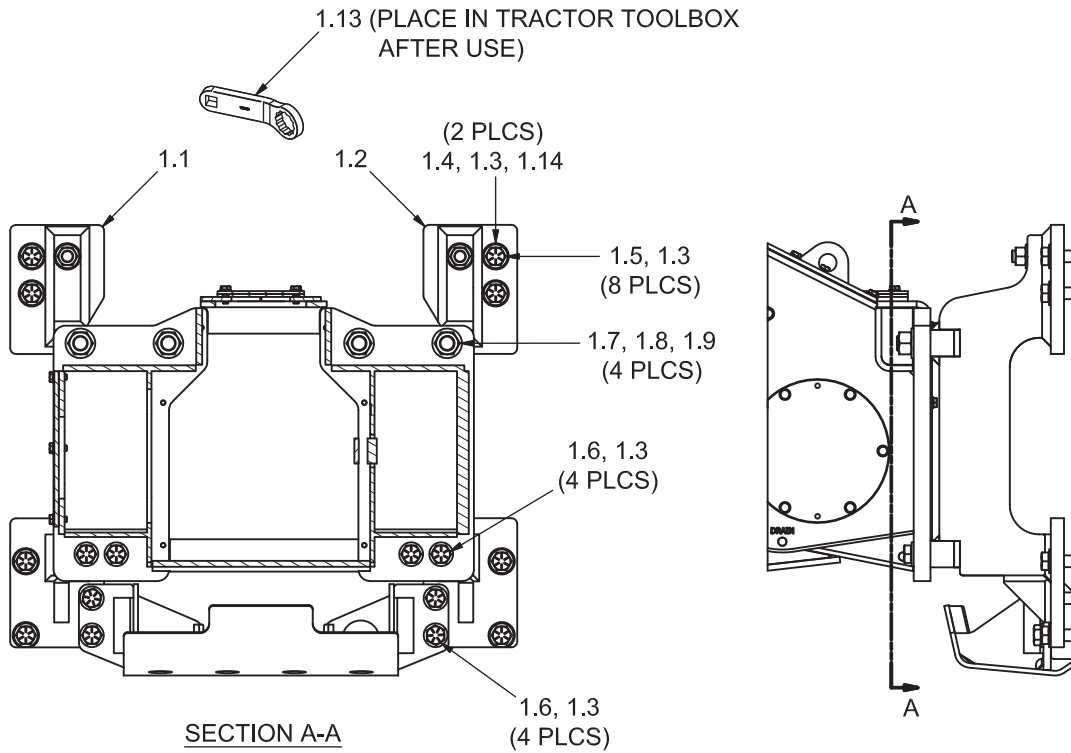


Mounting Parts

H6HT (Standard) Winch

Caterpillar D6T (C71)

Page 2 of 2



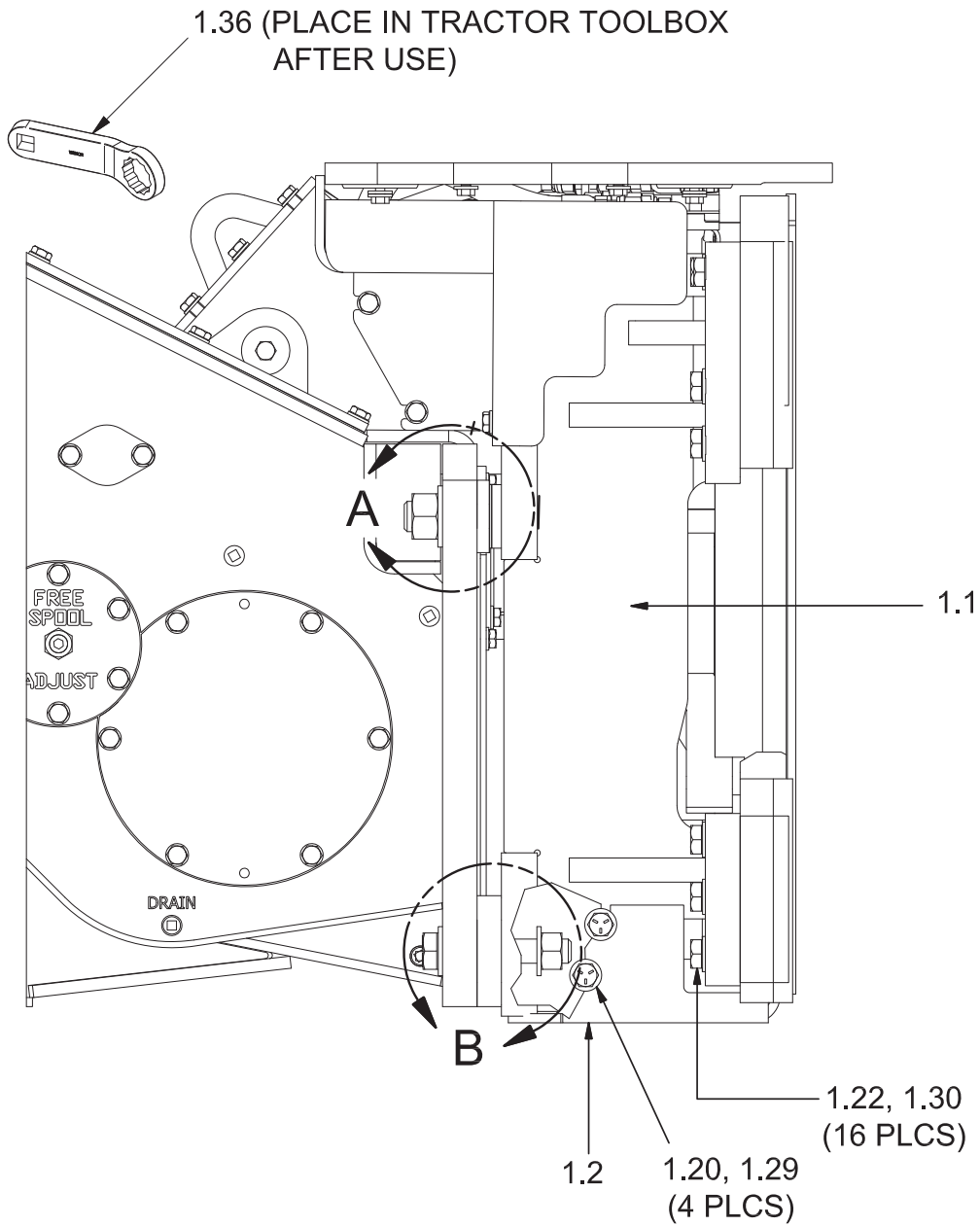
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2314553	Bracket, Left-Hand Mounting	1	2.10	2314633	Guard, Left-Hand	1
1.2	2314554	Bracket, Right-Hand Mounting	1	2.11	2314635	Guard, Right-Hand	1
1.3	221780W	Washer	18	2.12	2314636	Plate, Center Guard	1
1.4	259543W	Stud	2	2.13	2314637	Plate, Cover	1
1.5	221690W	Capscrew	8	2.14	296422W	Washer	13
1.6	R13806324	Capscrew	8	2.15	293646W	Capscrew	10
1.7	*a 2306421W	Stud	4	2.16	2305715W	Washer, Fender	1
1.8	225851	Washer	4	2.17	292656W	Nut	4
1.9	*b 221725W	Nut	4				
1.13	2310958	Wrench, Extension Torque	1				
1.14	221721W	Nut, Hex	2				
				*a	Uses 230064W Loctite Kit to Coarse Thread		
				*b	Uses 318702W Thread Lock to Fine Thread		

Mounting Parts

H6HT (Standard) Winch

Caterpillar D6N (C811)

Page 1 of 2

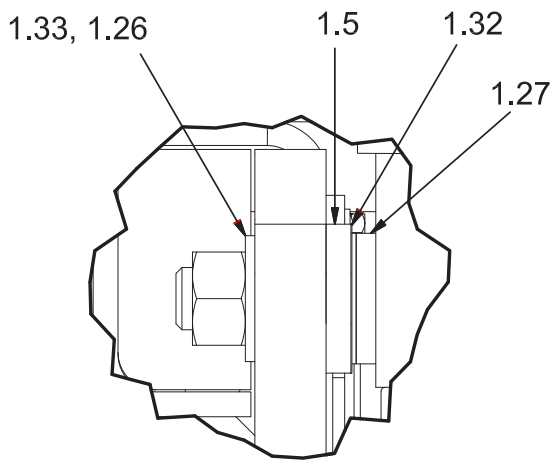


Mounting Parts

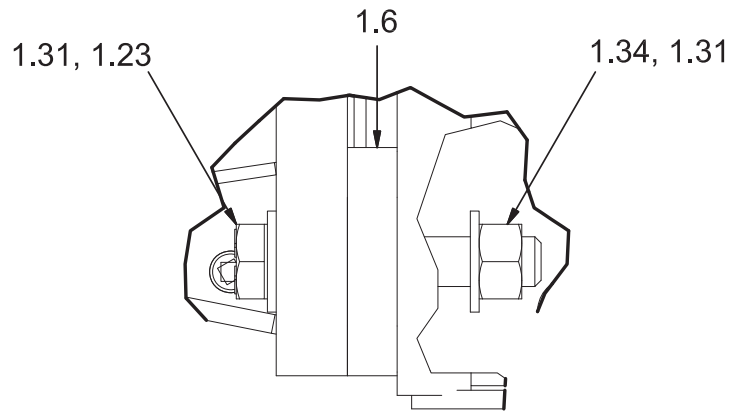
H6HT (Standard) Winch

Caterpillar D6N (C811)

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DETAIL A



DETAIL B

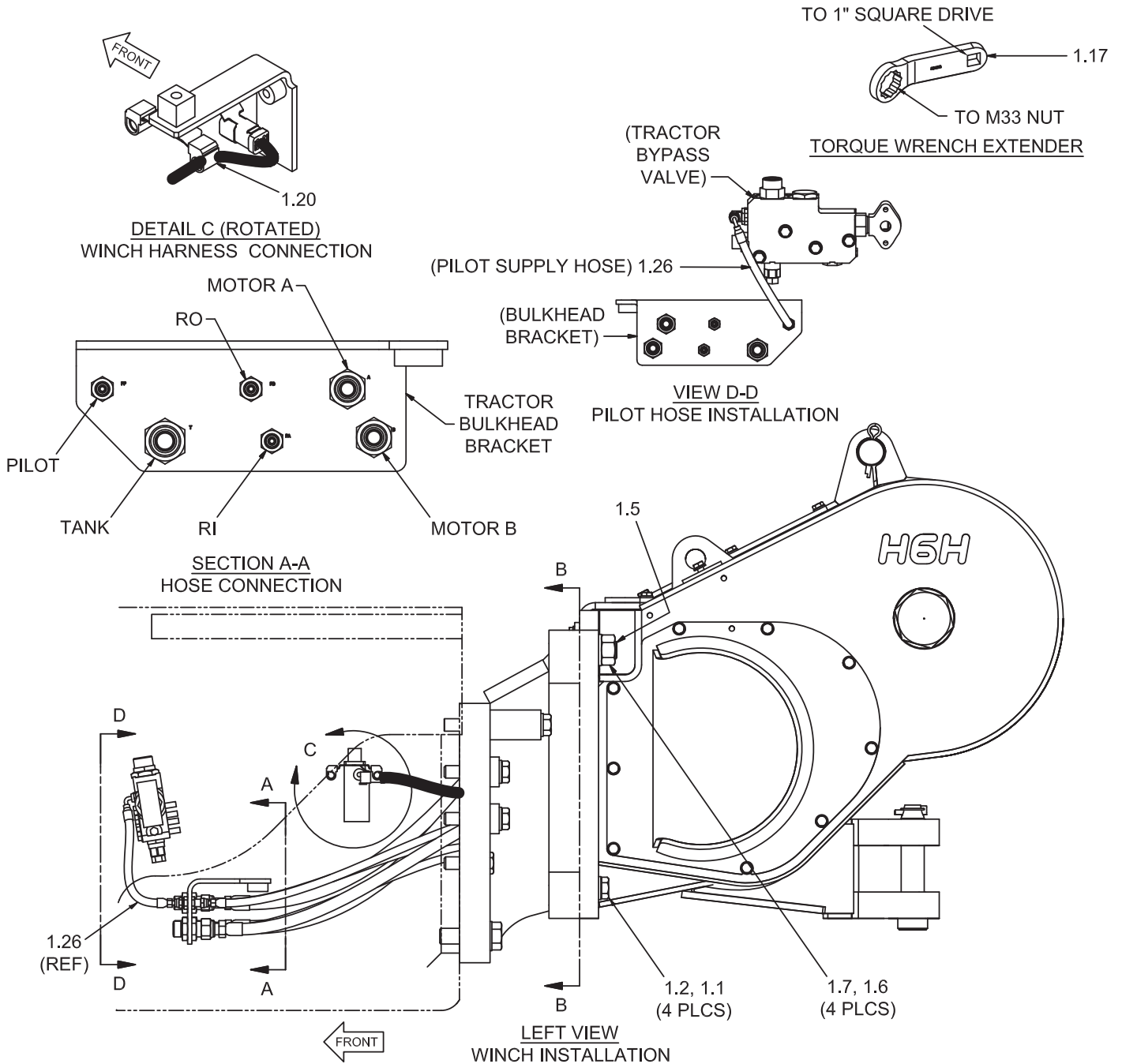
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2307702W	Bracket	1	1.29	221775W	Washer	4
1.2	2305541W	Guard, Bottom	1	1.30	296430W	Washer	16
1.5	2312846	Pad, Top Mounting	2	1.31	221780W	Washer	8
1.6	2312847	Pad, Bottom Mounting	2	1.32	223453W	Shim .020	4
1.20	16644W	Capscrew	4	1.33	*a 221725W	Nut	4
1.22	293710W	Capscrew	16	1.34	*a 221720W	Nut	4
1.23	*a R13801901	Capscrew	4	1.36	2310958	Wrench, Extension Torque	1
1.26	225851	Washer	4				
1.27	2301529W	Washer, Spherical	4		*a	Uses 318702W Thread Lock	

Mounting Parts

H6HT (Standard) Winch

Komatsu 61-23 (K471)

Page 1 of 2

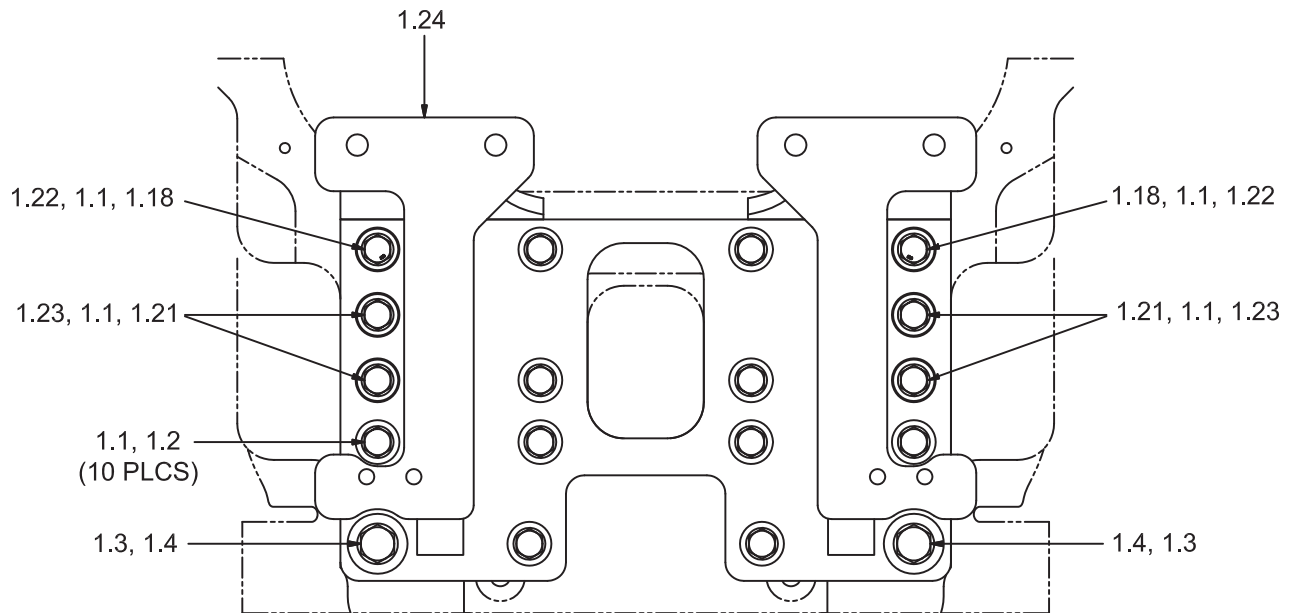


Mounting Parts

H6HT (Standard) Winch

Komatsu 61-23 (K471)

Page 2 of 2



SECTION B-B
MOUNTING BRACKET INSTALLATION

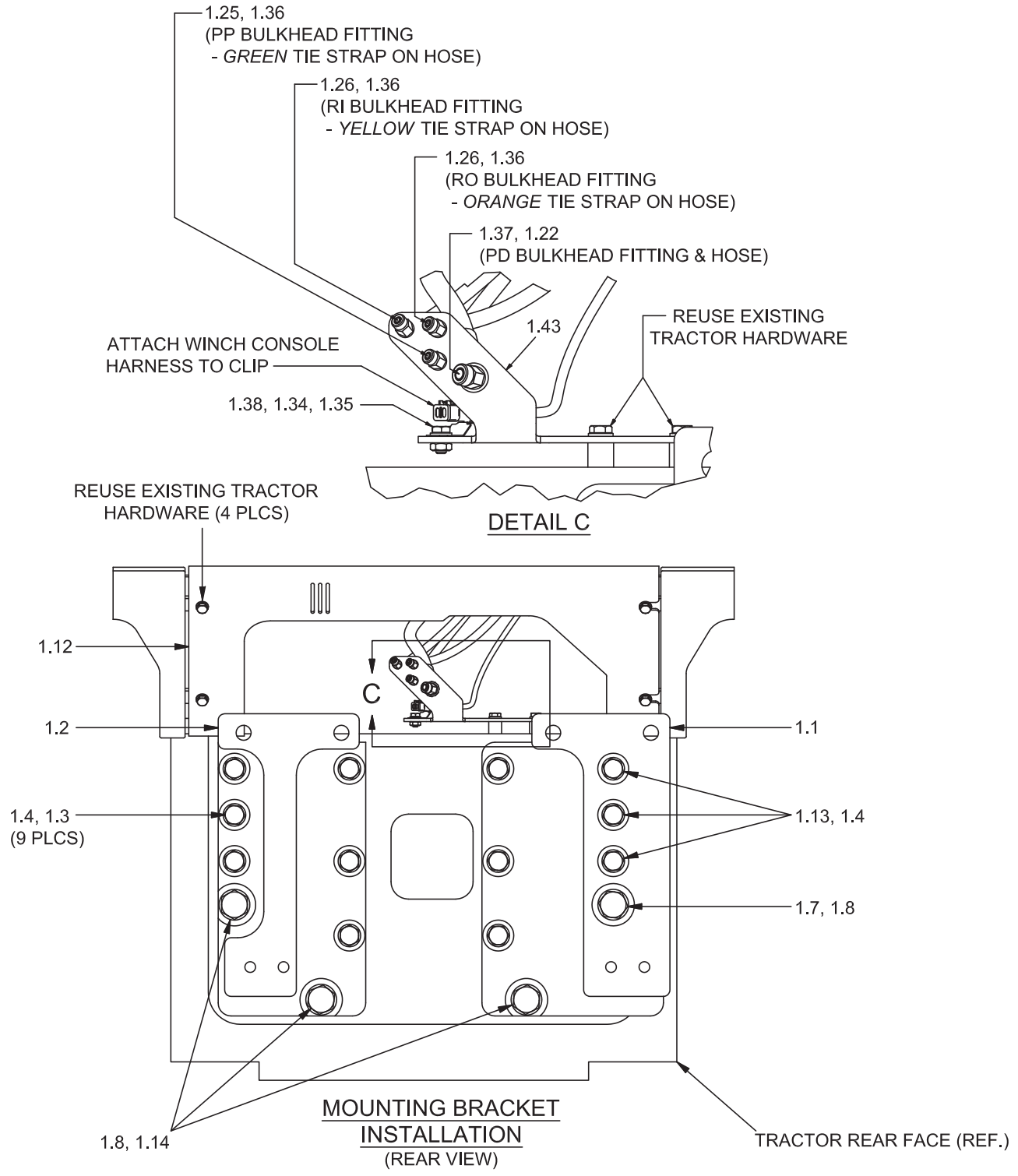
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	296434W	Washer	20	1.21	*a 293731W	Capscrew	4
1.2	*a 274044W	Capscrew	14	1.22	2314225	Spacer	2
1.3	296438W	Washer	2	1.23	2314224	Spacer	4
1.4	*a 2303694W	Capscrew	2	1.24	2314111	Bracket, Mounting	1
1.5	*b 2312090	Stud	4	1.26	236895	Assembly, Hose	1
1.6	296440W	Washer	4				
1.7	*a 2312089	Nut	4		*a	Uses 318702W Thread Lock	
1.17	2312331	Wrench, Extension Torque	1		*b	Uses 230064W Loctite Kit To Threads That Go Into Mounting Bracket	
1.18	*a 2314136	Capscrew	2				
1.20	2314072	Clip	1				

Mounting Parts

H6HT (Standard) Winch

Komatsu 65-16/17 (K49)

Page 1 of 2

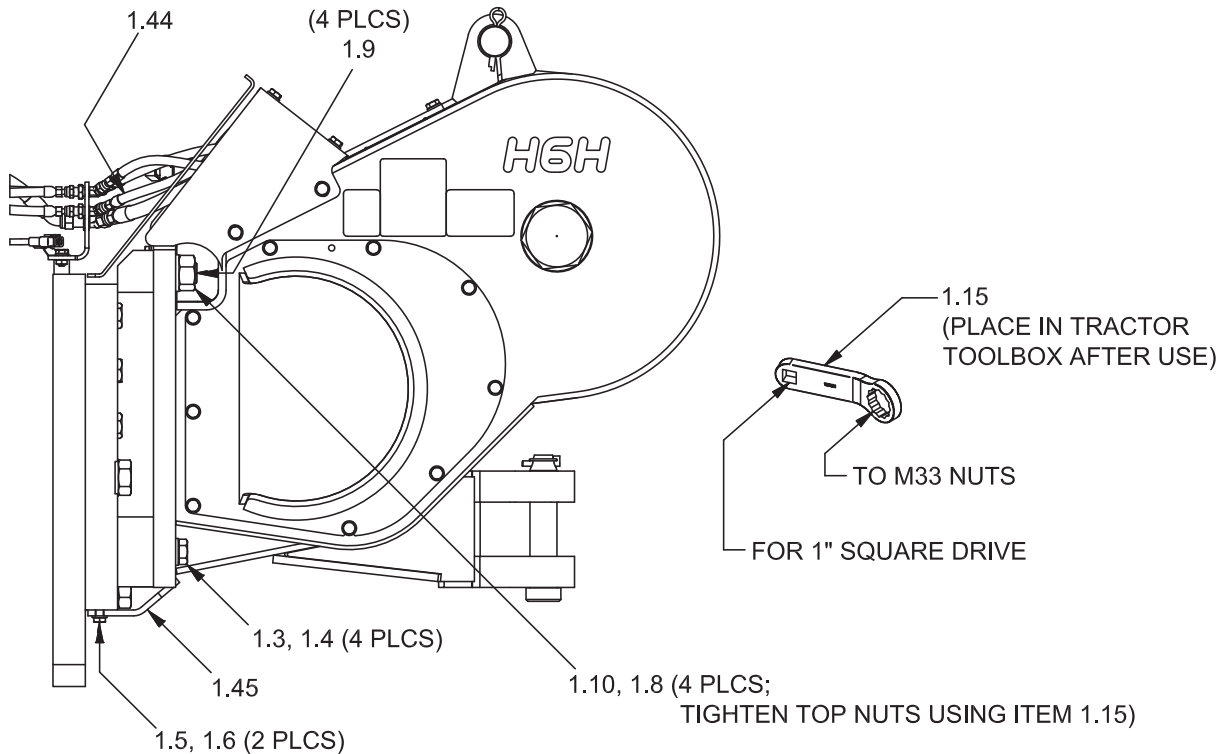


Mounting Parts

H6HT (Standard) Winch

Komatsu 65-16/17 (K49)

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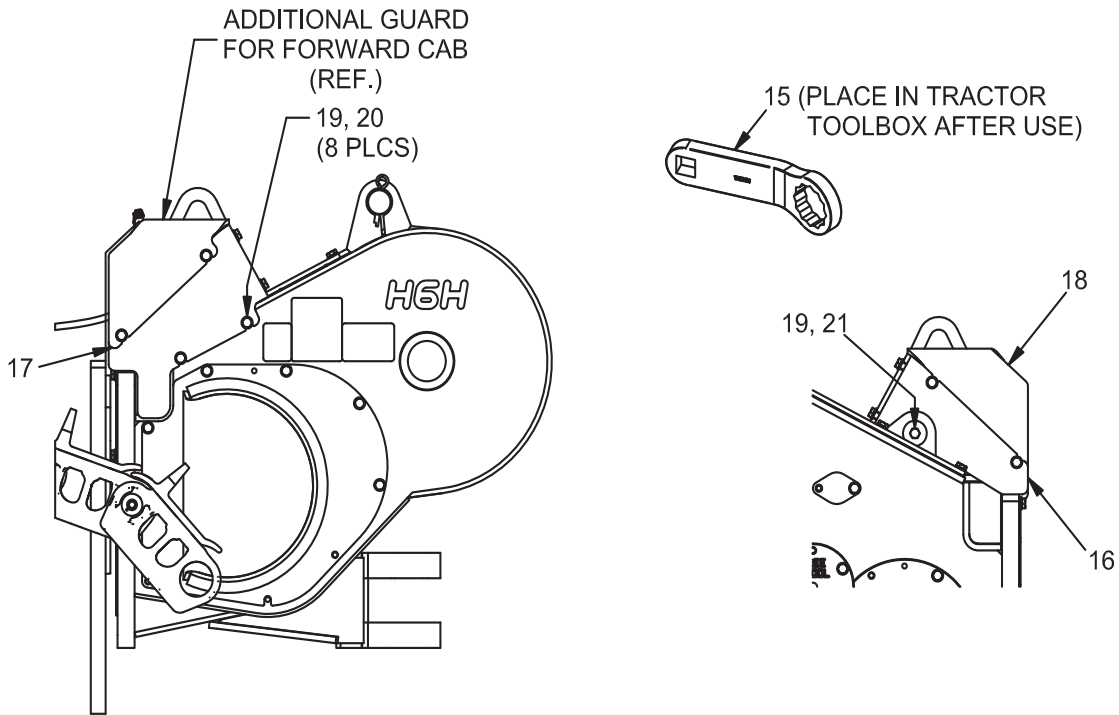
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2312081	Mounting Bracket, Right-Hand Side	1	1.25	2312328	Assembly, Hose	1
1.2	2312082	Mounting Bracket, Left-Hand Side	1	1.26	2311541	Assembly, Hose	2
1.3	*a 274044W	Capscrew	13	1.34	296420W	Washer	1
1.4	296434W	Washer	16	1.35	236805	Capscrew	1
1.5	293646W	Capscrew	2	1.36	272-0348	Fitting	3
1.6	296422W	Washer	3	1.37	272-0350	Fitting	1
1.7	*a 2312087	Capscrew	1	1.38	2311550	Clip, Harness Mounting	1
1.8	296440W	Washer	8	1.43	2312354	Bracket, Bulkhead	1
1.9	*b 2312090	Stud	4	1.44	R14766	Spirap	1
1.10	*a 2312089	Nut	4	1.45	2312675	Guard, Bottom	1
1.12	2312124	Cover, Cross Sheet	1				
1.13	*a Y19C-M24130	Capscrew	3				
1.14	*a 2312088	Capscrew	3	*a	Uses 318702W Thread Lock		
1.15	2312331	Wrench, Extension Torque	1	*b	Uses 230064W Locktite Kit To Threads That Go Into Mounting Bracket		
1.22	2312329	Assembly, Hose	1				

Mounting Parts

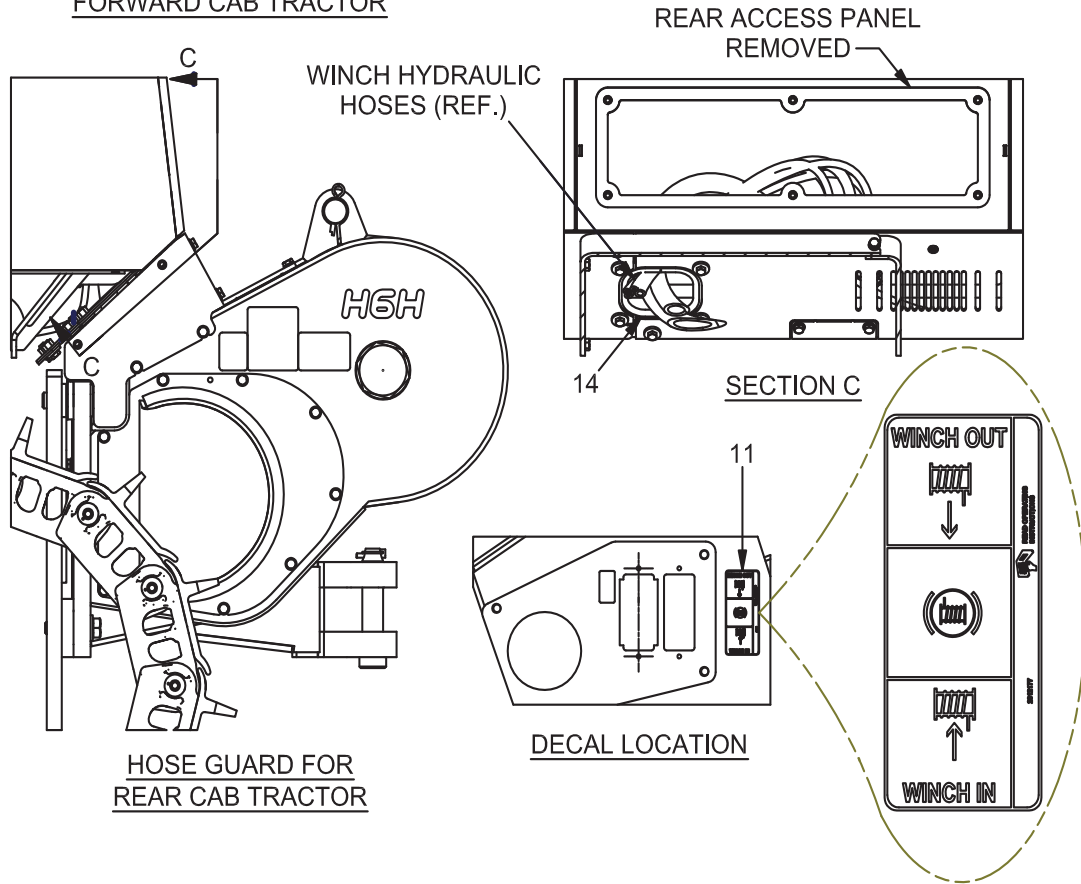
H6HH (High Performance) Winch

John Deere 850J (E47)

Page 1 of 2



HOSE GUARD FOR FORWARD CAB TRACTOR



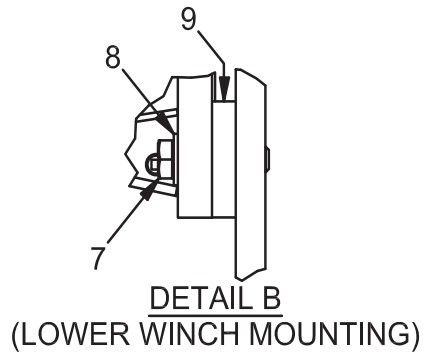
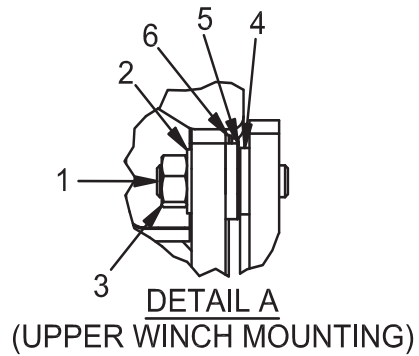
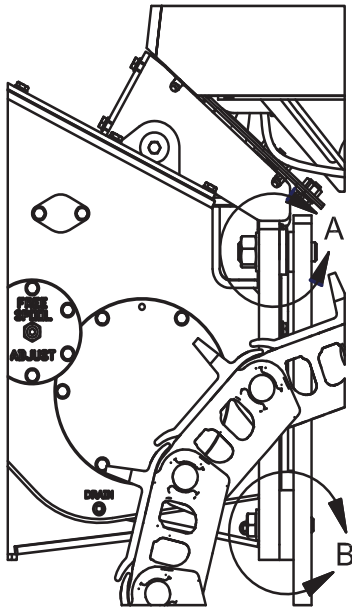
HOSE GUARD FOR REAR CAB TRACTOR

Mounting Parts

H6HH (High Performance) Winch

John Deere 850J (E47)

Page 2 of 2



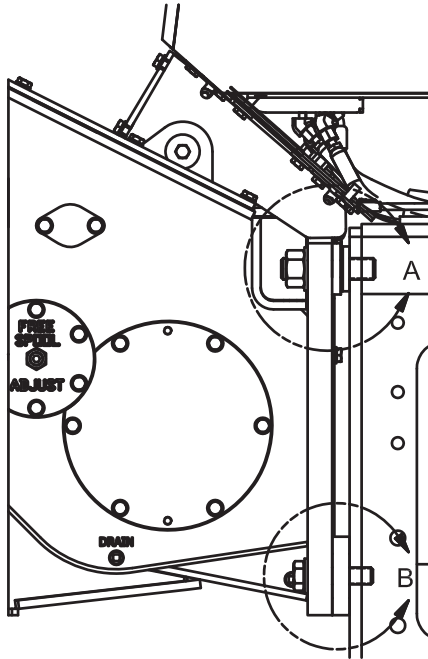
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 2300783W	Stud	4	15	2310958	Wrench, Extension Torque	1
2	15128W	Washer	4	16	2312840	Guard, Right-Hand	1
3	*b 221725W	Nut	4	17	2312842	Guard, Left-Hand	1
4	2301529W	Spherical Washer	4	18	2312844	Guard, Upper	1
5	223453W	Shim .020	4	19	293646W	Capscrew	9
6	2312846	Pad, Top Mounting	2	20	296422W	Washer	8
7	*b Y17C-1664	Capscrew	4	21	2305715W	Washer, Fender	1
8	221780W	Washer	4				
9	2312847	Pad, Bottom Mounting	2		*a	Uses 230064W Locktite Kit To Threads That Go Into Mounting Bracket	
10	129563W	Clamp, Strap (Not Shown)	4		*b	Uses 318702W Thread Lock	
11	2312177	Decal, Winch In, Winch Out	1				
14	225871	Trim, Edge	2 FT				

Mounting Parts

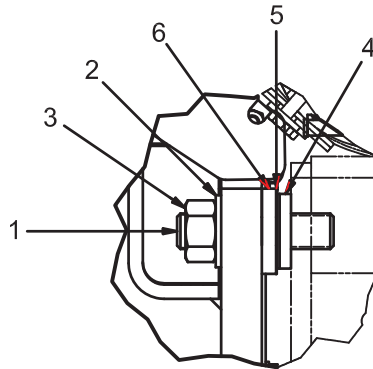
H6HH (High Performance) Winch

John Deere 750/850K (E460)

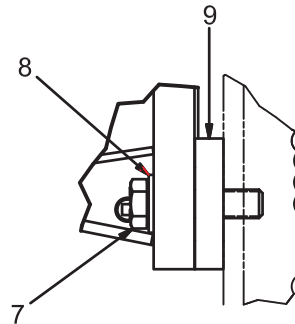
Page 1 of 2



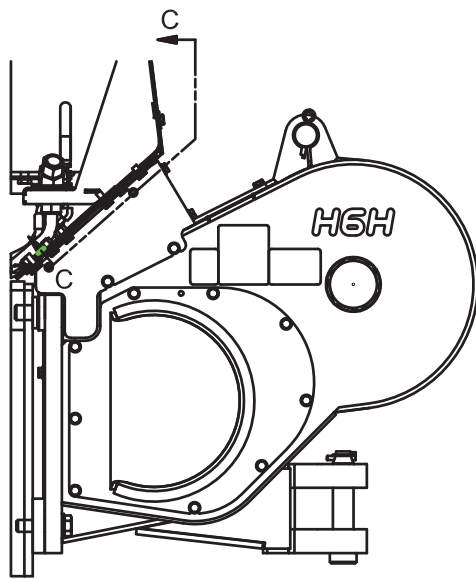
WINCH MOUNTING
RIGHT SIDE VIEW



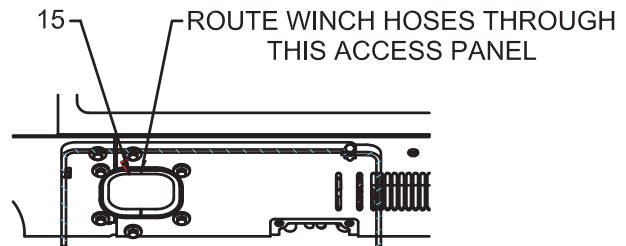
DETAIL A
UPPER WINCH MOUNTING



DETAIL B
LOWER WINCH MOUNTING



SHORT TRACTOR FRAME HOSE GUARD
LEFT SIDE VIEW



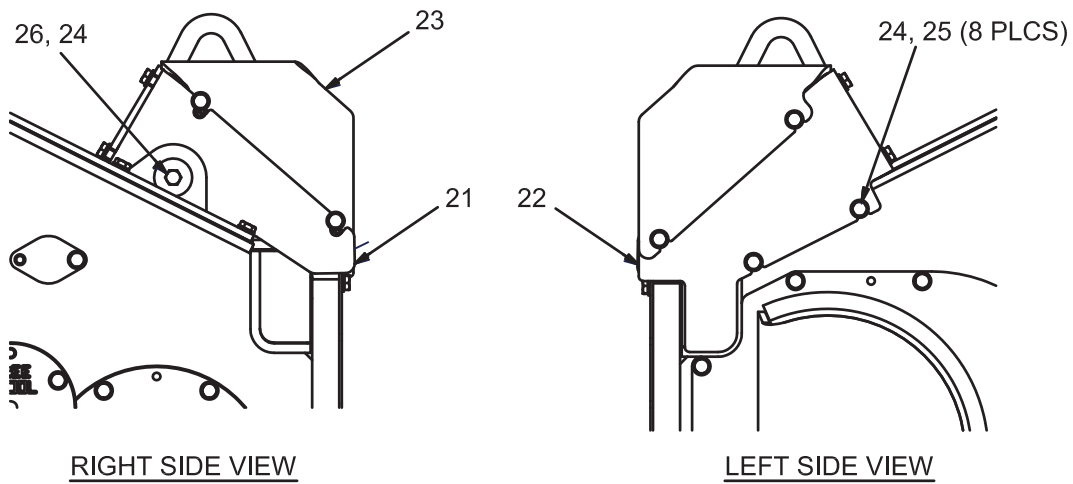
SECTION C-C
WINCH HOSE ROUTING

Mounting Parts

H6HH (High Performance) Winch

John Deere 750/850K (E460)

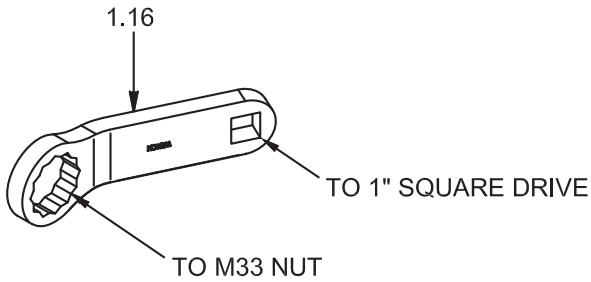
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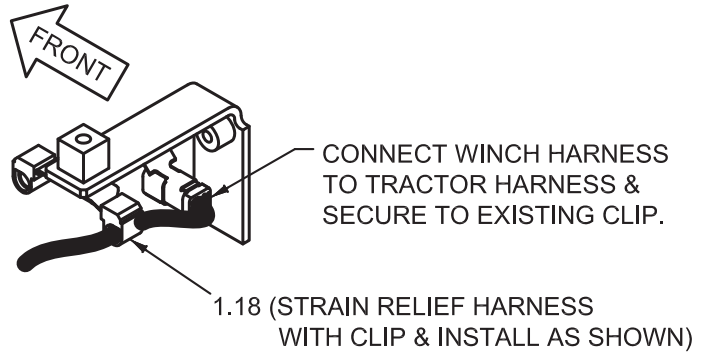
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 2300783W	Stud	4	21	2312840	Guard, Right-Hand	1
2	15128W	Washer	4	22	2312842	Guard, Left-Hand	1
3	*b 221725W	Nut	4	23	2312844	Guard, Upper	1
4	2301529W	Spherical Washer	4	24	293646W	Capscrew	9
5	223453W	Shim .020	4	25	296422W	Washer	8
6	2312846	Pad, Top Mounting	2	26	2305715W	Washer	1
7	*b Y17C-1664	Capscrew	4				
8	221780W	Washer	4		*a	Uses 230064W Locktite Kit To Threads That Go Into Mounting Bracket	
9	2312847	Pad, Bottom Mounting	2		*b	Uses 318702W Thread Lock	
15	225871	Trim, Edge	2 FT				
20	2310958	Wrench, Extension Torque	1				

Mounting Parts

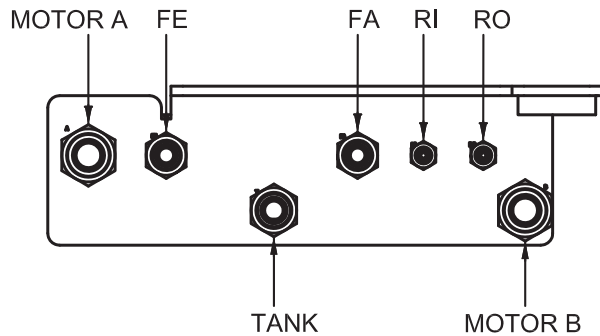
H6HH (Hi-Performance) Winch
Komatsu 61-23 (K471)
Page 1 of 2



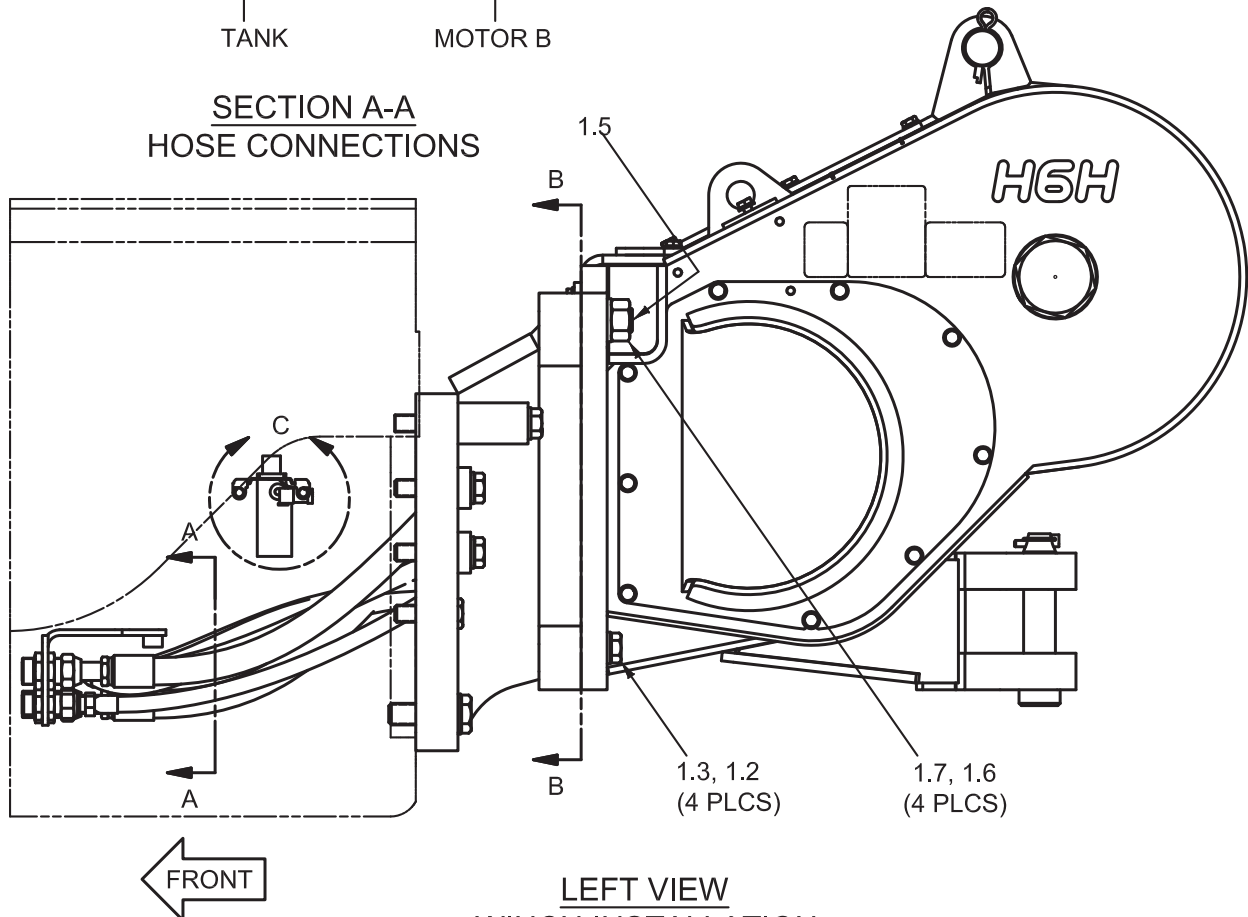
TORQUE WRENCH EXTENDER



DETAIL C (ROTATED)
WINCH HARNESS CONNECTION



SECTION A-A
HOSE CONNECTIONS

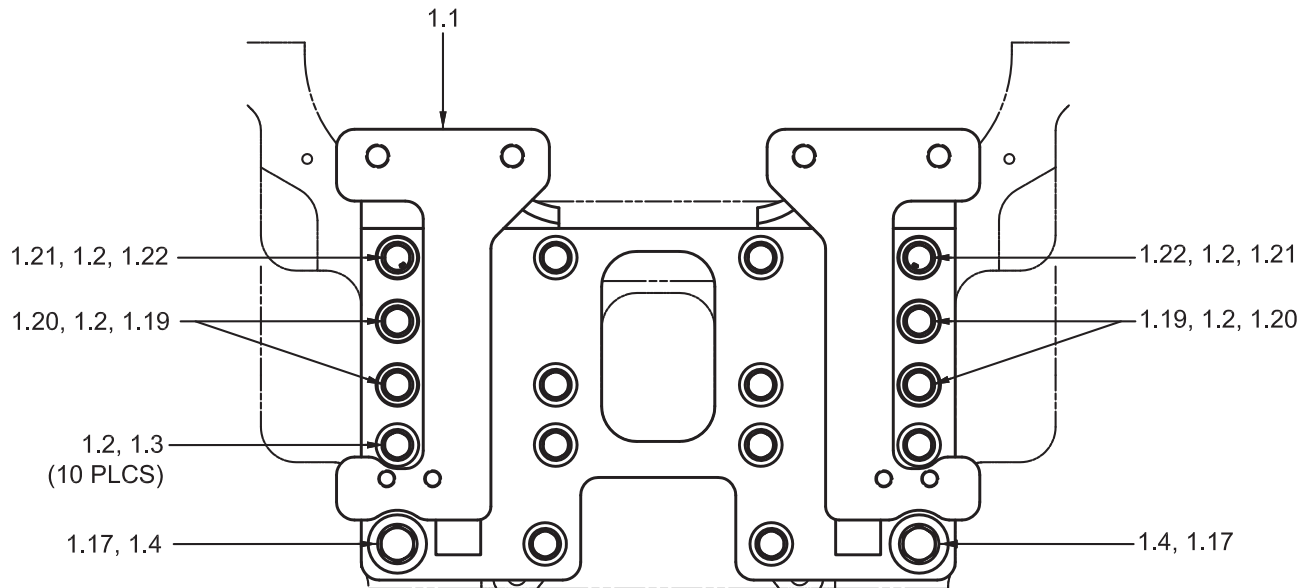


Mounting Parts

H6HH (Hi-Performance) Winch

Komatsu 61-23 (K471)

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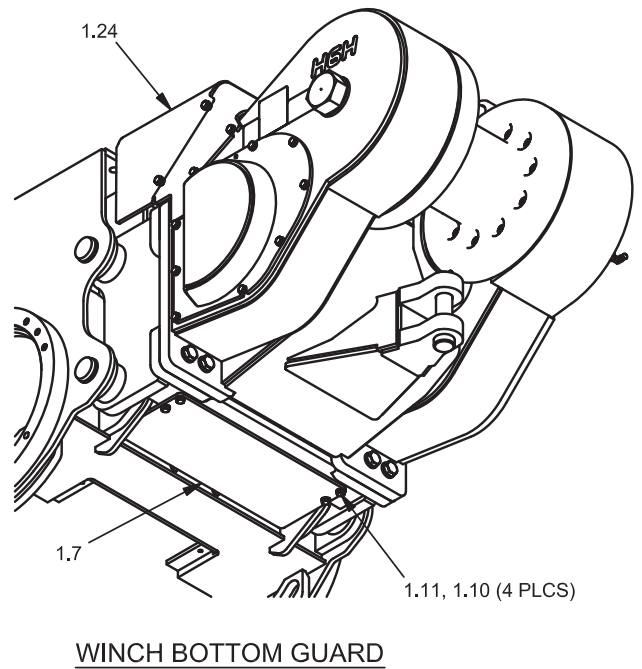
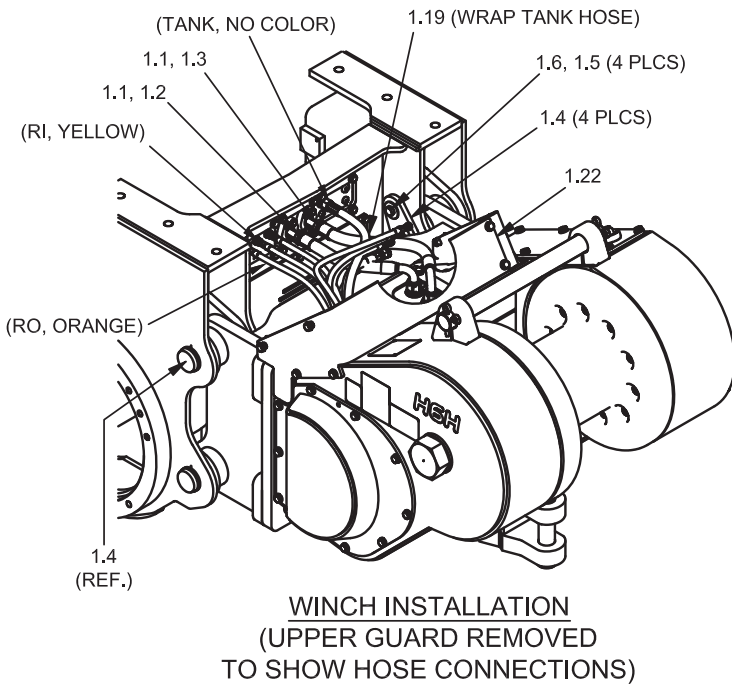
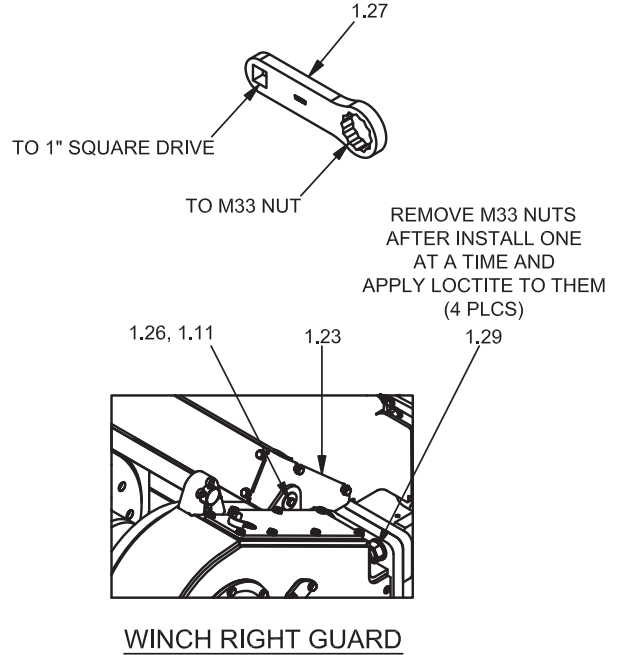
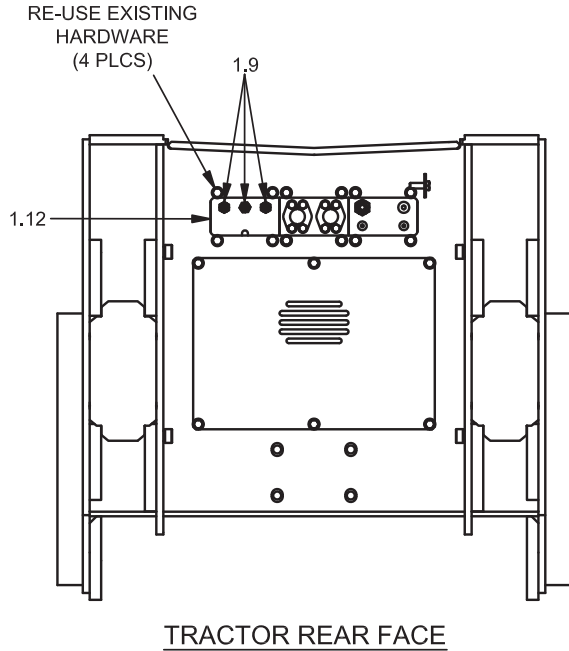
SECTION B-B
MOUNTING BRACKET INSTALLATION

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	2314111	Bracket, Mounting	1	1.18	2314072	Clip	1
1.2	296434W	Washer	20	1.19	293731W	Capscrew	4
1.3	*a 274044W	Capscrew	14	1.20	2314224	Spacer	4
1.4	2303694W	Capscrew	2	1.21	2314225	Spacer	2
1.5	*b 2312090	Stud	4	1.22	*a 2314136	Capscrew	2
1.6	296440W	Washer	4				
1.7	*a 2312089	Nut	4	*a	Uses 318702W Thread Lock		
1.16	2312331	Wrench, Extension Torque	1	*b	Uses 230064W Loctite Kit To Threads That Go Into Mounting Bracket		
1.17	296438W	Washer	2				

Mounting Parts

Liebherr PR724 (L41)

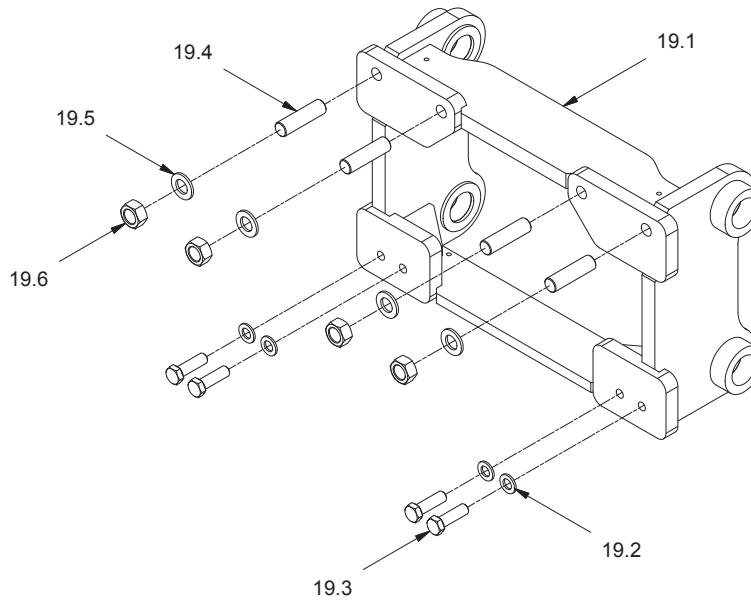
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Mounting Parts

Liebherr PR724 (L41)

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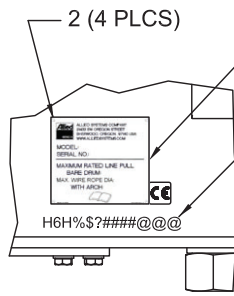


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	212380	O-Ring	2	1.26	2305715W	Washer	1
1.2	2313612	Assembly, Hose	1	1.27	2313682	Wrench, Extension Torque	1
1.3	2313613	Assembly, Hose	1	1.29	318702W	Thread Lock	1
1.4	2313597	Pin, Mounting	4	19.1	2313464	Bracket, Mounting	1
1.5	2313598	Washer	4	19.2	296434W	Washer	4
1.6	Y09C-M1620	Capscrew	4	19.3	*a 274044W	Capscrew	4
1.7	2313599	Guard, Bottom	1	19.4	*b 2312090	Stud	4
1.9	R834100	Fitting	3	19.5	296440W	Washer	4
1.10	296422W	Washer	12	19.6	*a 2312089	Nut	4
1.11	293646W	Capscrew	13				
1.12	2313614	Place, Bulkhead	1	*a	Uses 318702W Thread Lock		
1.19	R14766	Spirap	2 ft	*b	Uses 230064W Locktite Kit To Threads That Go Into Mounting Bracket		
1.22	2312842	Guard, Left-Hand	1				
1.23	2312840	Guard, Right-Hand	1				
1.24	2313600	Guard, Upper	1				

Nameplate & Decals



CONTACT ALLIED SYSTEMS WINCH DEPARTMENT IF CE CONFORMITY STAMP IS REQUIRED. THE CE STAMP WILL BE SPECIFIED ON THE SALES ORDER TO INCLUDE THIS DECAL (P/N 2311557) AND STAMP YEAR IN NAMEPLATE.



CONTACT ALLIED SYSTEMS WINCH DEPARTMENT IF THE NAMEPLATE IS BROKEN.
 STAMP NAMEPLATE AND FRAME AS SHOWN
 % = H (HI-PERFORMANCE) OR T (RESCUE)
 \$ = GEAR RATIO CODE
 ? = INTERNAL OPTIONS
 ##### = SEQUENCE NUMBER
 @@@ = VEHICLE CODE
 SEE DRAWING 2312171

VIEW A-A

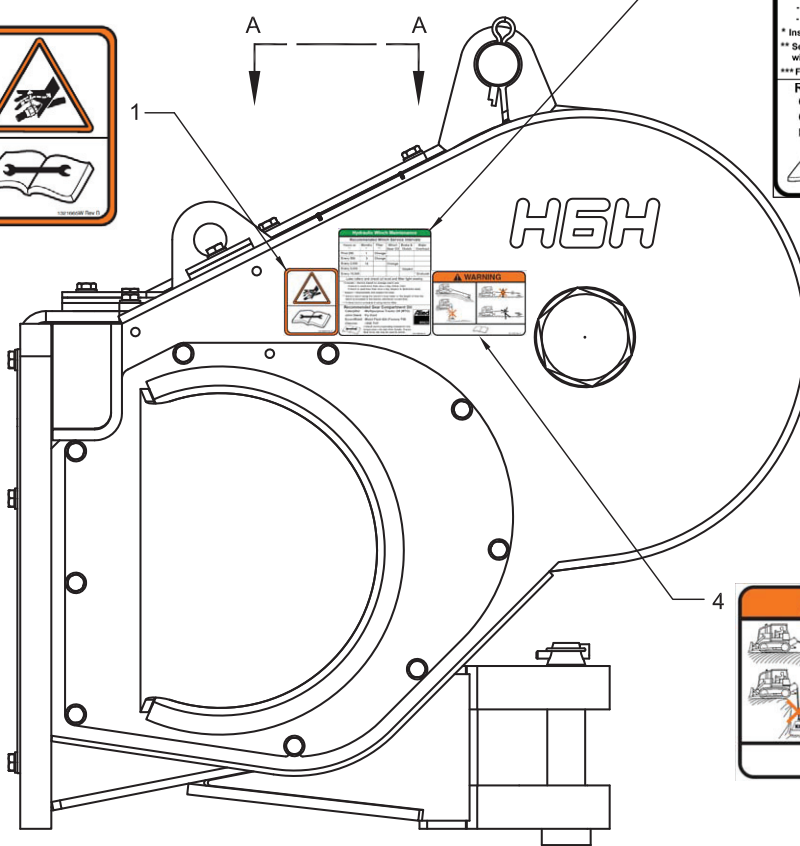
Hydraulic Winch Maintenance					
Recommended Winch Service Intervals					
Hours or	Months	Filter	Winch	Brake &	Major
**	***	***	Gear Oil	Clutch	Overhaul
First 250	1	Change			
Every 500	3	Change			
Every 2,000	12		Change		
Every 5,000				* Inspect	
Every 10,000					* Evaluate

Lube rollers and check oil level and filter light weekly.

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

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

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

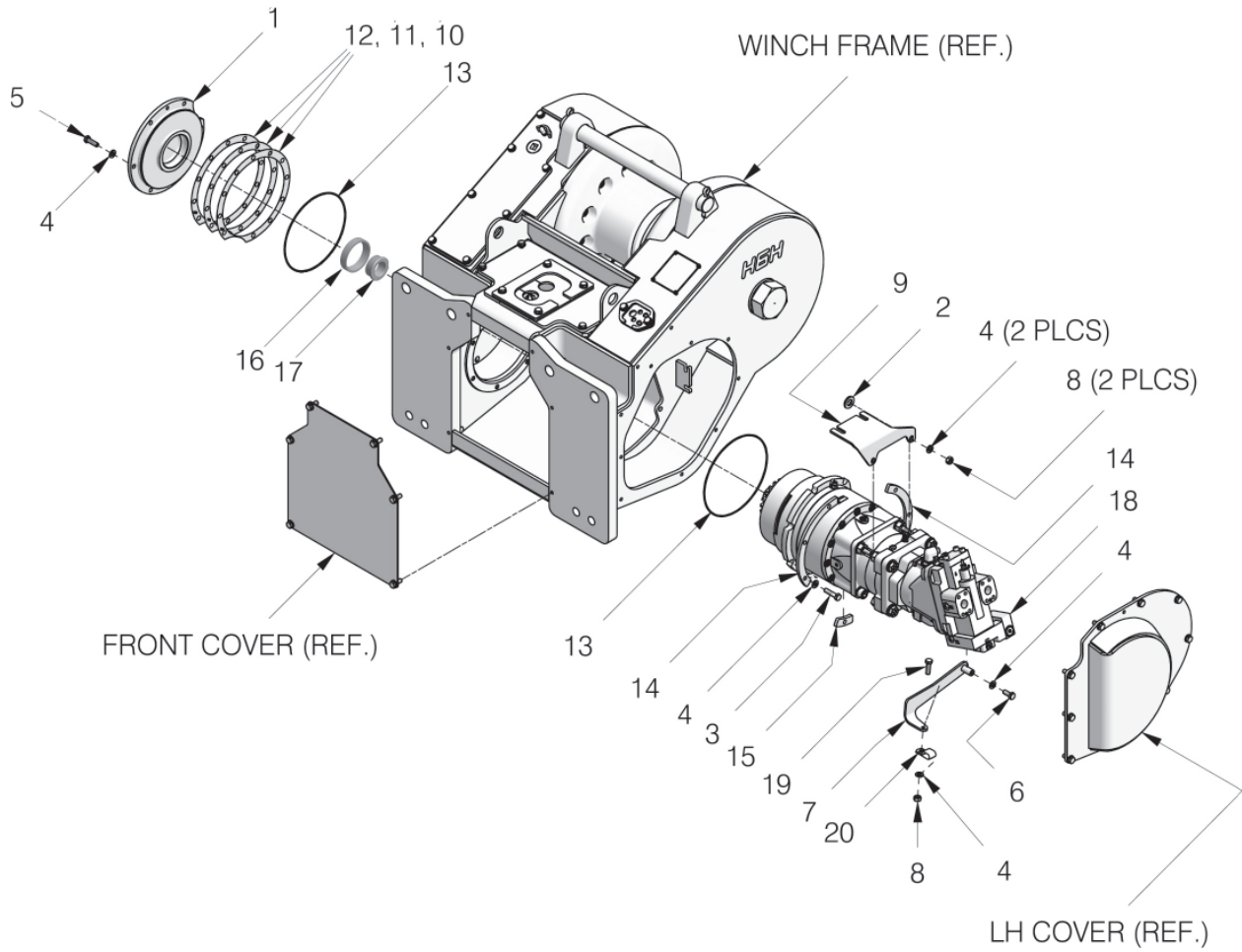


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	1321665W	Decal, Warning	1	3	2310796	Decal, Maintenance	1
2	16602W	Screw	4	4	2311330	Decal, Load & Wire Rope Safety	1

Gear/Shaft Train

Clutch Assembly	2-19
Dry Disc Brake	2-20 & 2-21
Drum Shaft	2-24
Intermediate Gear Shaft	2-22 & 2-23
Motor Shaft Assembly	2-4 thru 2-13
Motor Shaft Group	2-2 & 2-3
Shaft Assembly	2-14 thru 2-18

Motor Shaft Group

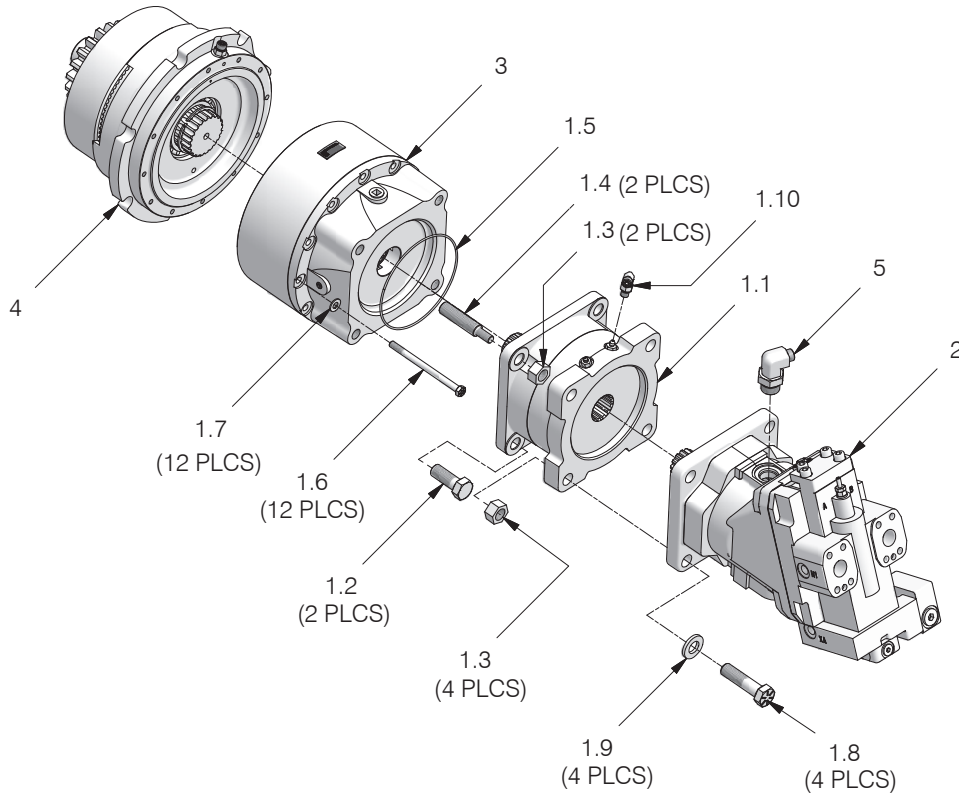


Motor Shaft Group

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2311819	Motor Shaft Group					
1	2311857	. Cover, Bearing	1	14	2311917	. Plate, Clamp	2
2	221777W	. Washer	2	15	2311918	. Plate, Clamp	1
3	2312488	. Capscrew	7	16	*b 2300668W	. Cup, Bearing	1
4	296422W	. Washer	17	17	*b 2300669W	. Cone, Bearing	1
5	2312487	. Capscrew	6	18	- - - -	. Assembly, Motor Shaft (2-4/-13)	1
6	293645W	. Capscrew	1	19	293647W	. Capscrew	1
7	2312036	. Bracket, Motor Support	1	20	2312628	. Clamp, Insulation	1
8	292656W	. Nut	3				
9	2312018	. Plate, Manifold Bracket	1		*a	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659	
10	2312061	. Shim .020	AR		*b	Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660	
11	2312059	. Shim .005	AR				
12	2312060	. Shim .007	AR				
13	*a 203564	. O-Ring	2				

Motor Shaft Assembly

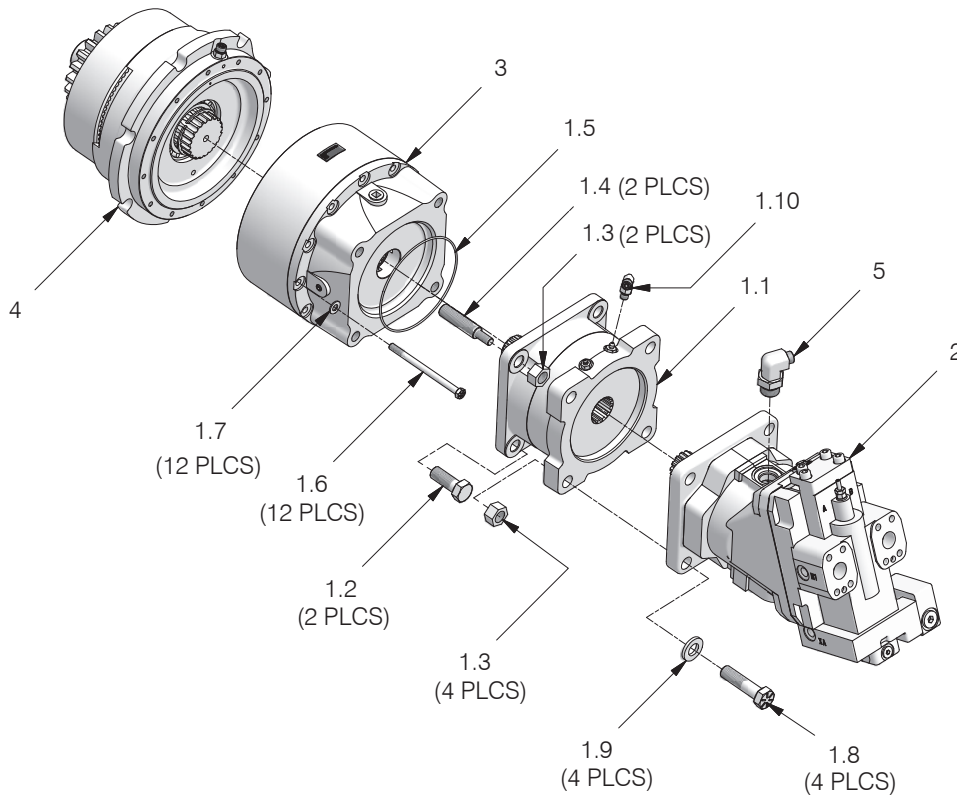
Caterpillar D6N (H6HT1B**C81/C811)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313143	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2313144	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2311883	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2312928	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

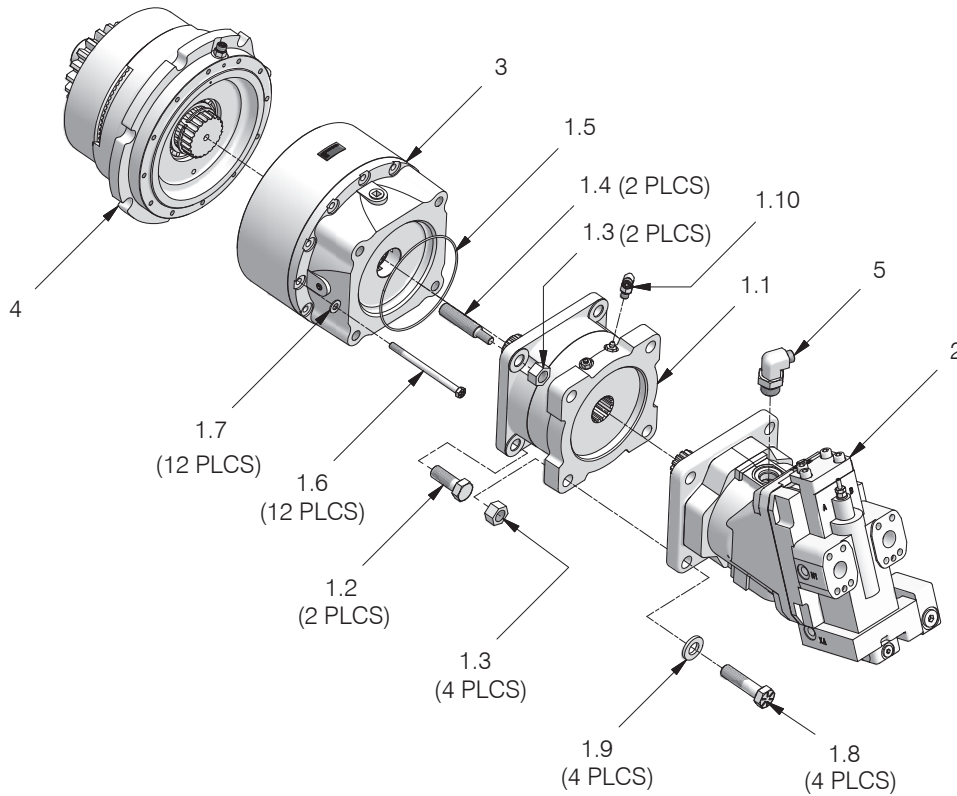
John Deere 750/850J & 750/850K (H6HH1B**E47/E48/E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312836	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2312839	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2311883	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2312928	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

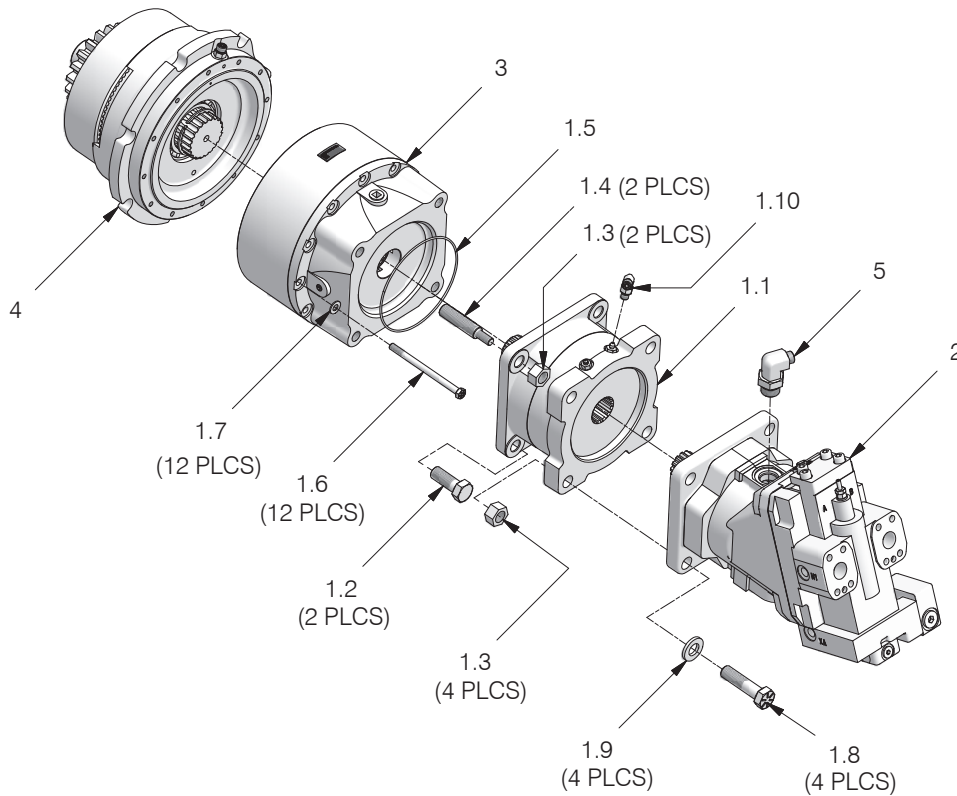
John Deere 750/850J & 750/850K (H6HH1E**E47/E48/E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312912	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2312839	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2311883	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2312929	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

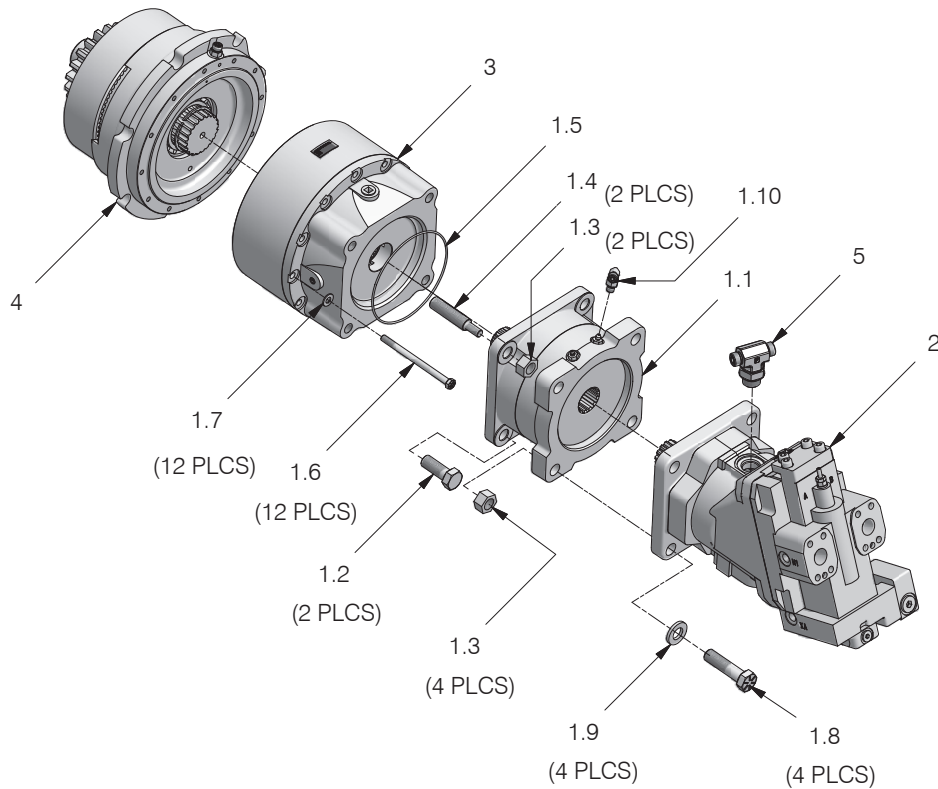
John Deere 750/850J & 750/850K (H6HH3B**E47/E48/E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312967	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2312839	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2312965	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2312966	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

Komatsu D61-23 (H6HH4B**K471)

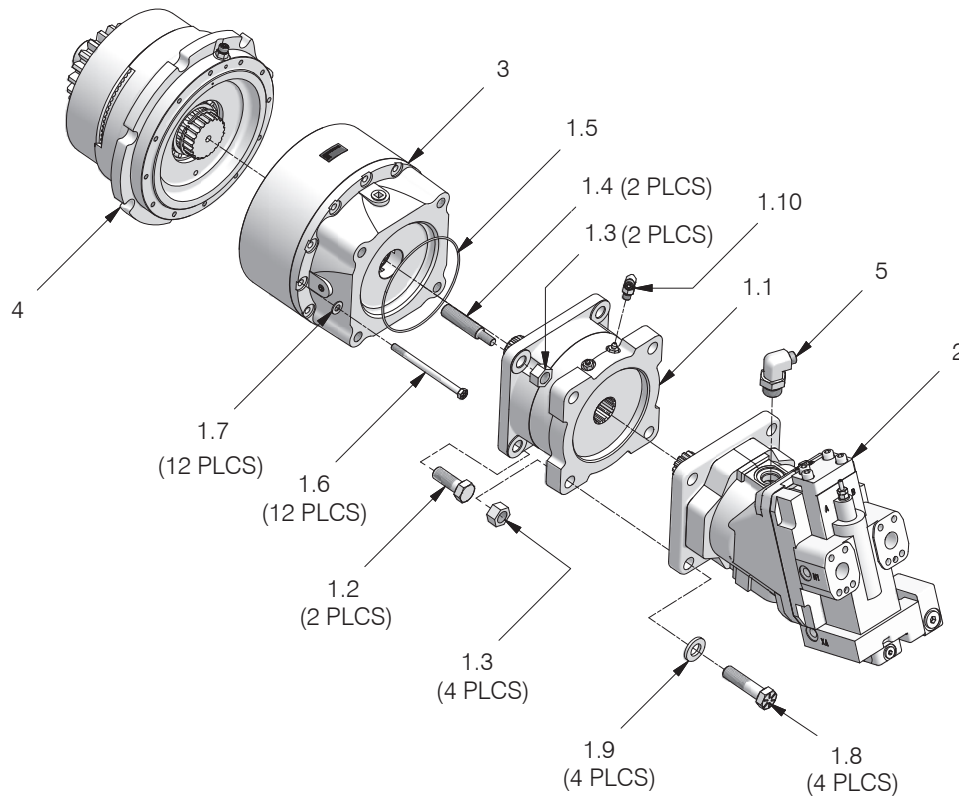


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313174	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2313170	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2312965	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2313171	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	2313039	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				

*a See page 2-20 for Details
 *b Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659

Motor Shaft Assembly

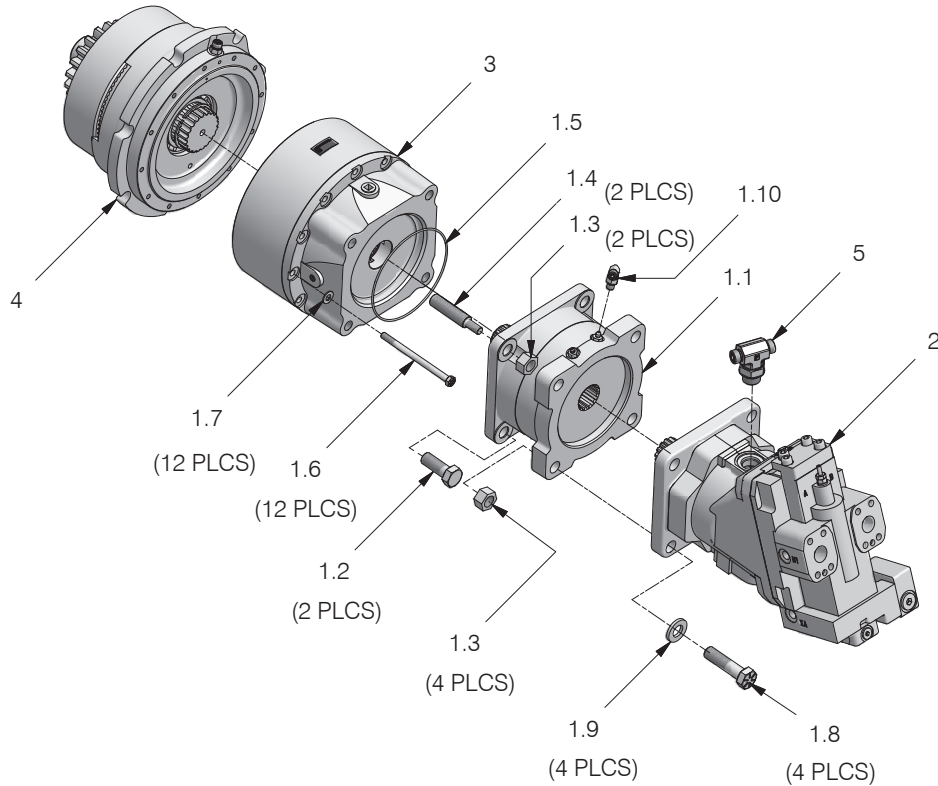
Komatsu D65-16 & D65-17 (H6HT1B**K49)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312359	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2311815	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2311883	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2312928	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				

*a See page 2-20 for Details
 *b Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659

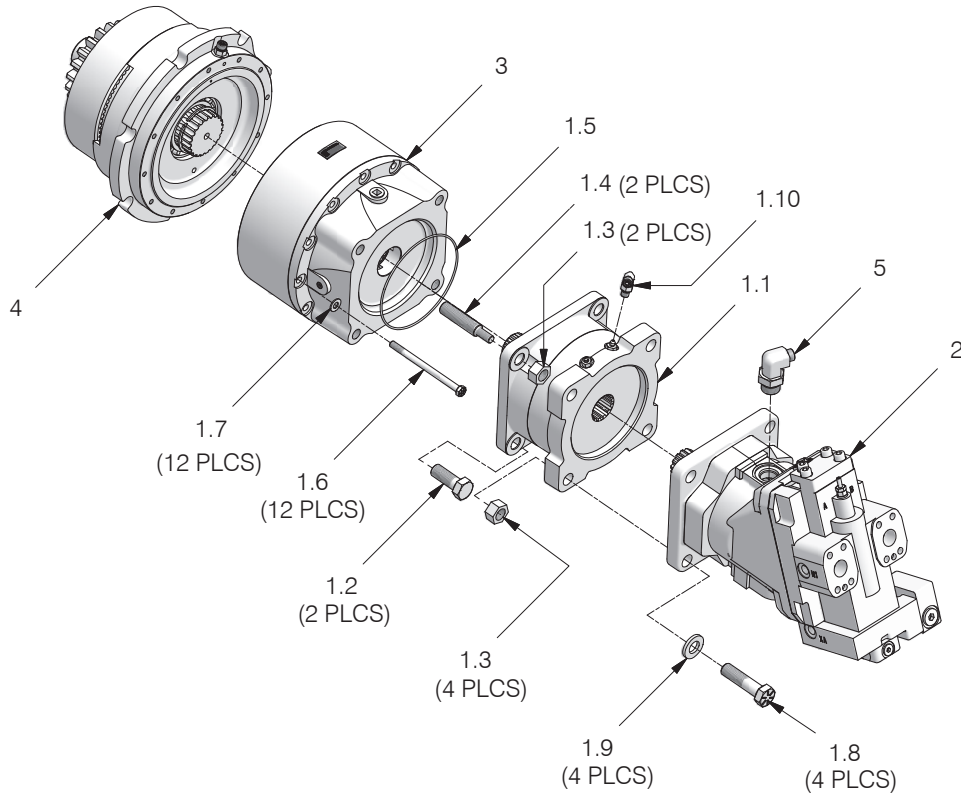
Motor Shaft Assembly Komatsu D61-23 (H6HT2B**K471)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313027	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2313028	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2311883	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2313026	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	2313039	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

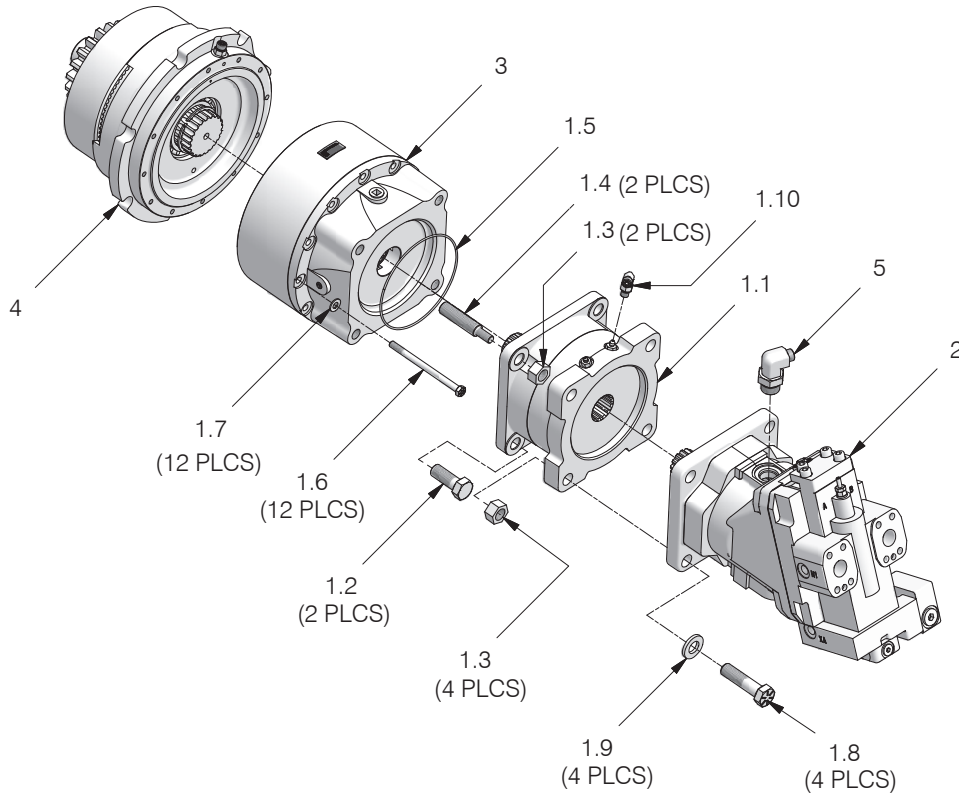
Liebherr PR724 (H6HH5B**L41)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313570	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2313569	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2312554	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2313026	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

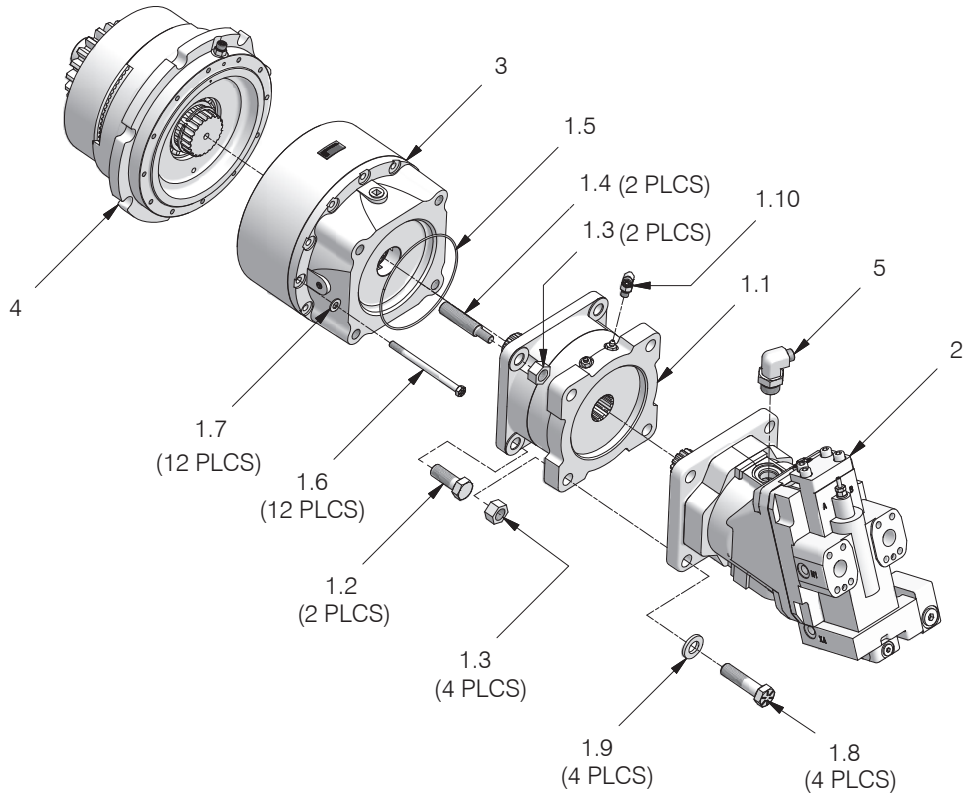
Liebherr PR724 (H6HT6B**L41)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313781	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2313780	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2312554	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2312928	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Motor Shaft Assembly

Tigercat 635D (H6HT2B**Y44)

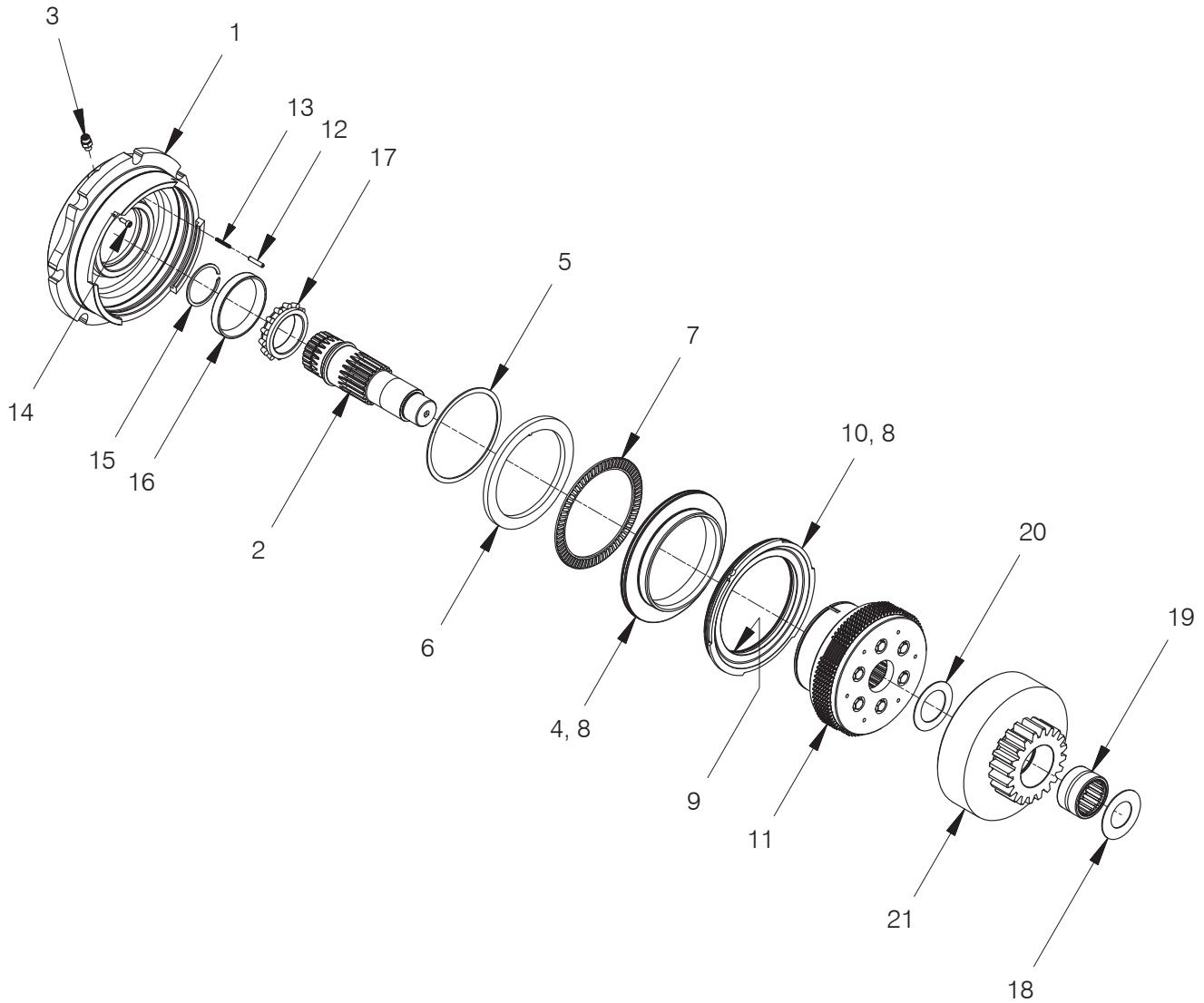


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313728	Assembly, Motor Shaft	1				
1.1	*a 2312155	.. Brake, D Mount Dry Disk	1	2	2313727	.. Motor, Hydraulic	1
1.2	Y17C-1232	.. Capscrew	2		2313890	.. O-Ring, Pilot Motor (Not Shown)	1
1.3	221716W	.. Nut	6		2313891	.. Kit, Shaft Seal (Not Shown)	1
1.4	2312041	.. Stud	2	3	2311883	.. Reducer, Planetary	1
1.5	*b 237349	.. O-Ring	1	4	2313026	.. Assembly, Shaft	1
1.6	R13801826	.. Capscrew	12	5	R833260	.. Fitting, Motor Case Drain	1
1.7	221767W	.. Washer	12				
1.8	177192W	.. Capscrew	4				
1.9	221777W	.. Washer	4				
1.10	R833251	.. Fitting	1				
				*a	See page 2-20 for Details		
				*b	Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659		

Shaft Assembly

BRAKE-OFF

Caterpillar D6N (H6HT1B**C81/C811)
 John Deere 750/850J & 750/850K (H6HH1B**E47/E48/E460)
 Komatsu D65-16 & D65-17 (H6HT1B**K49)
 Liebherr PR724 (H6HT6B**L41)

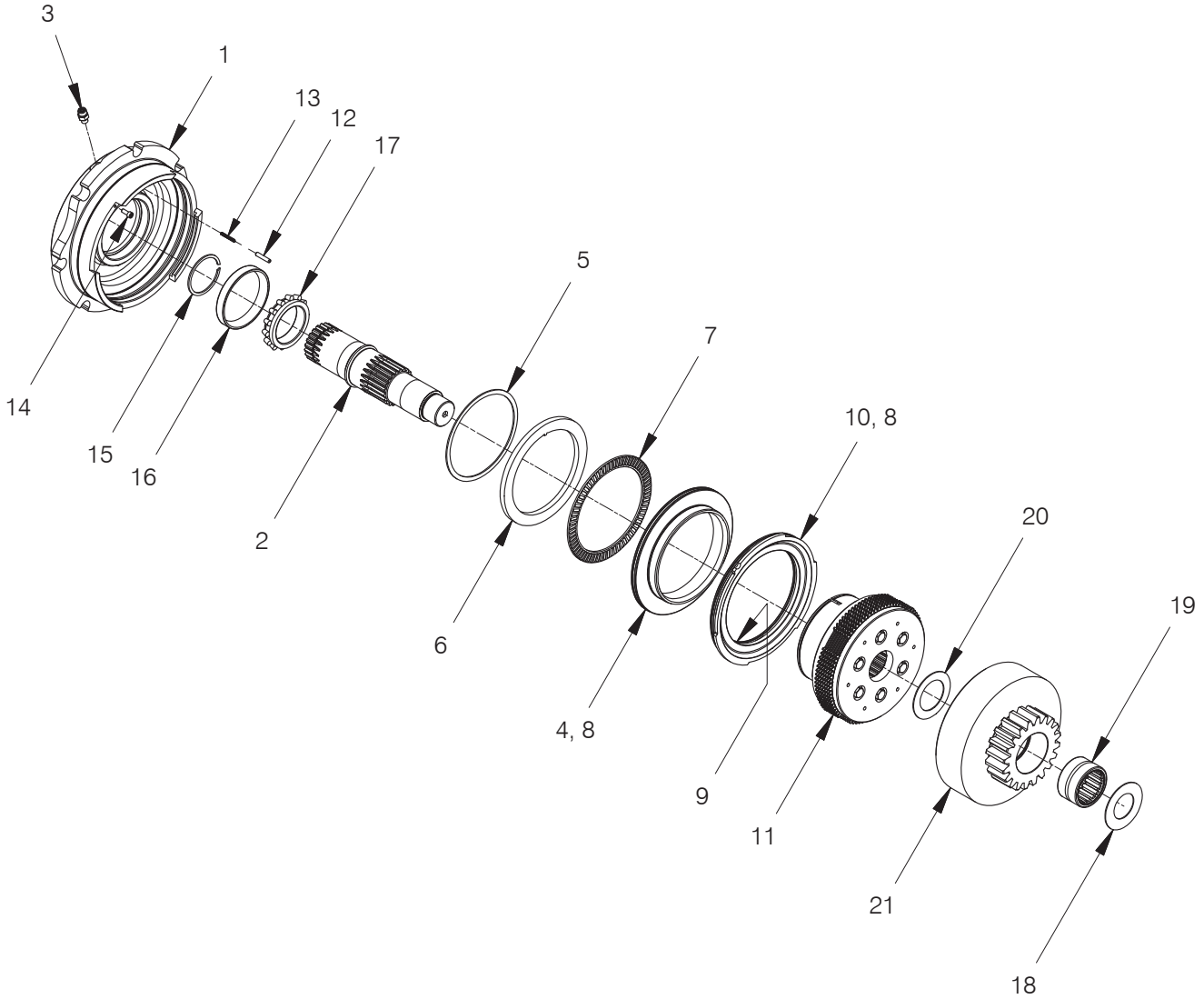


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312928	Assembly, BRAKE-OFF Shaft	1				
1	2311855	. Housing, Clutch	1	12	239147W	. Pin	1
2	2311856	. Shaft, Clutch	1	13	2303992W	. Spring	1
3	231439	. Fitting	1	14	R13811617	. Capscrew	1
4	2312039	. Piston, Clutch	1	15	2311684	. Ring, Snap	1
5	2311683	. Ring, Snap	1	16	137153W	. Cup, Roller Bearing	1
6	2312442	. Ring, Thrust	1	17	137155W	. Cone, Roller Bearing	1
7	2311655	. Bearing, Thrust Needle Roller	1	18	2311869	. Shim .062	1
8	86585W	. O-Ring	2	19	230407W	. Bearing	1
9	87287W	. O-Ring	1	20	2311687	. Shim .062	1
10	2311880	. Ring, Seal	1	21	2311905	. Gear, Spider 20T	1
11	2311903	. Assembly, Clutch (See 2-19)	1				

Shaft Assembly

BRAKE-OFF

John Deere 750/850J & 750/850K (H6HH3B**E47/E48/E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312966	Assembly, BRAKE-OFF Shaft	1				
1	2311855	. Housing, Clutch	1	12	239147W	. Pin	1
2	2312963	. Shaft, Clutch	1	13	2303992W	. Spring	1
3	231439	. Fitting	1	14	R13811617	. Capscrew	1
4	2312039	. Piston, Clutch	1	15	2311684	. Ring, Snap	1
5	2311683	. Ring, Snap	1	16	137153W	. Cup, Roller Bearing	1
6	2312442	. Ring, Thrust	1	17	137155W	. Cone, Roller Bearing	1
7	2311655	. Bearing, Thrust Needle Roller	1	18	2311869	. Shim .062	1
8	86585W	. O-Ring	2	19	230407W	. Bearing	1
9	87287W	. O-Ring	1	20	2311687	. Shim .062	1
10	2311880	. Ring, Seal	1	21	2311905	. Gear, Spider 20T	1
11	2311903	. Assembly, Clutch (See 2-19)	1				

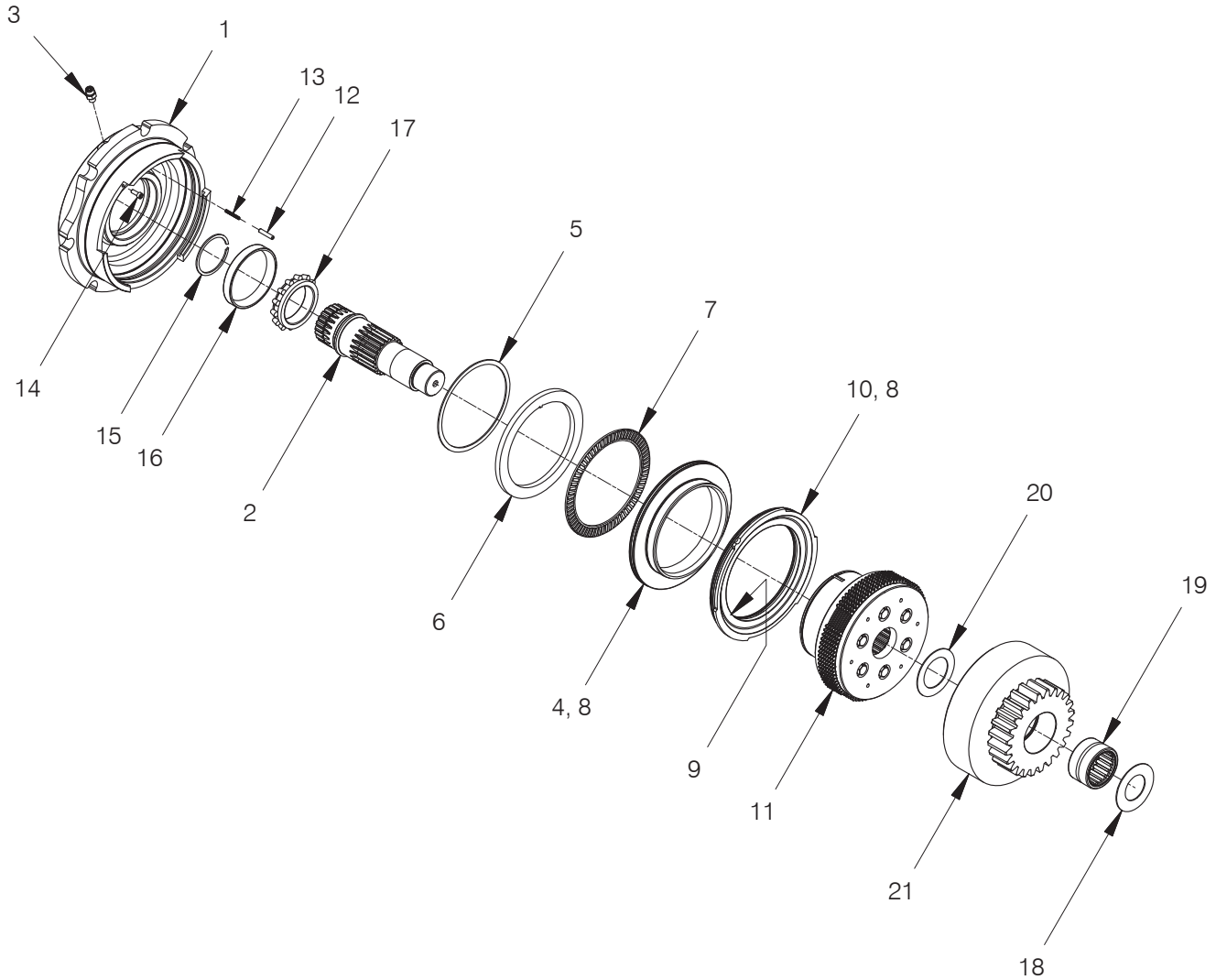
Shaft Assembly

BRAKE-OFF

Komatsu D61-23 (H6HT2B**K471)

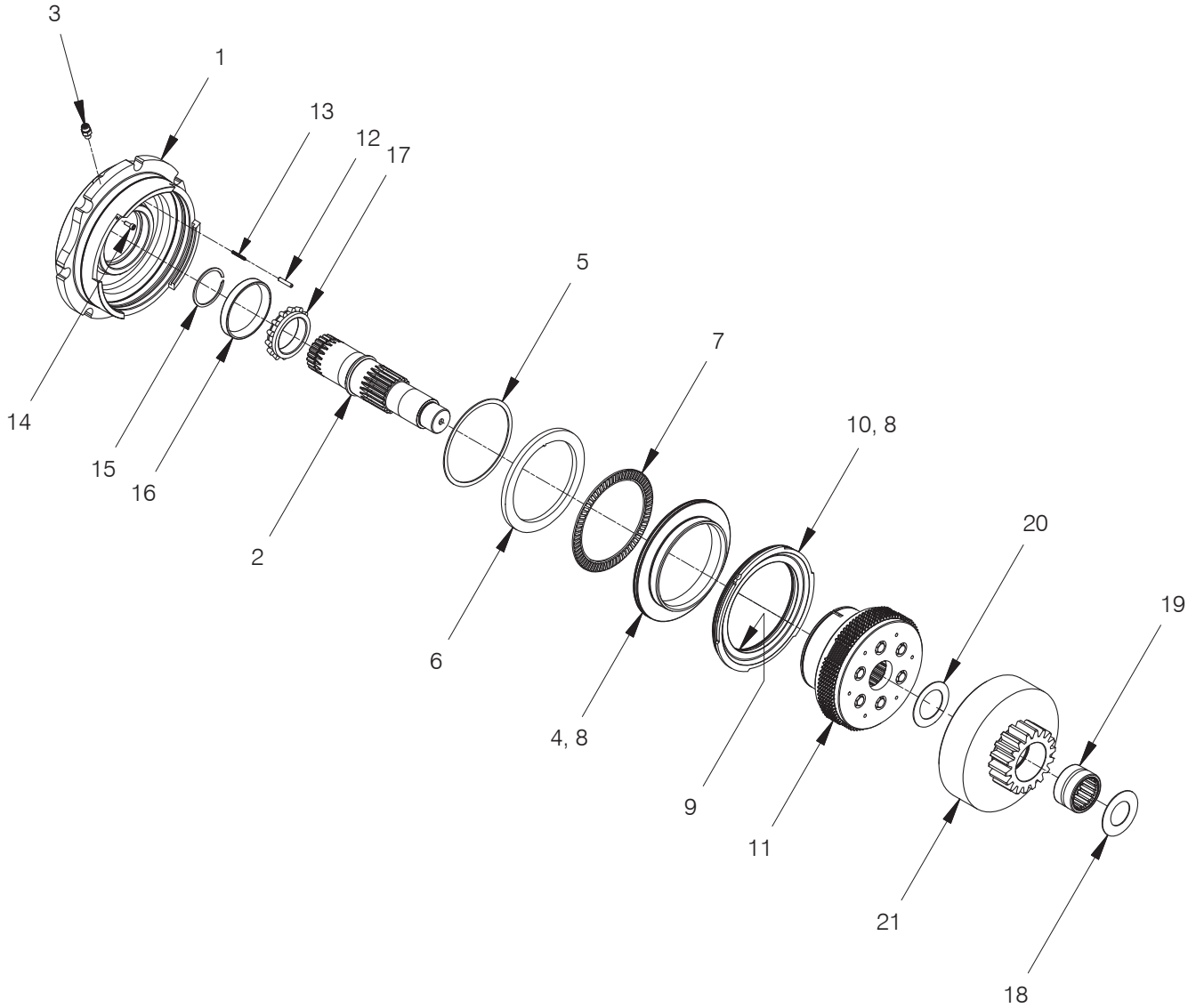
Liebherr PR724 (H6HH5B**L41)

Tigercat 635D (H6HT2B**Y44)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313026	Assembly, BRAKE-OFF Shaft	1				
1	2311855	. Housing, Clutch	1	12	239147W	. Pin	1
2	2311856	. Shaft, Clutch	1	13	2303992W	. Spring	1
3	231439	. Fitting	1	14	R13811617	. Capscrew	1
4	2312039	. Piston, Clutch	1	15	2311684	. Ring, Snap	1
5	2311683	. Ring, Snap	1	16	137153W	. Cup, Roller Bearing	1
6	2312442	. Ring, Thrust	1	17	137155W	. Cone, Roller Bearing	1
7	2311655	. Bearing, Thrust Needle Roller	1	18	2311869	. Shim .062	1
8	86585W	. O-Ring	2	19	230407W	. Bearing	1
9	87287W	. O-Ring	1	20	2311687	. Shim .062	1
10	2311880	. Ring, Seal	1	21	2312977	. Gear, Spider 24T	1
11	2311903	. Assembly, Clutch (See 2-19)	1				

Shaft Assembly
BRAKE-OFF
Komatsu D61-23 (H6HH4B**K471)

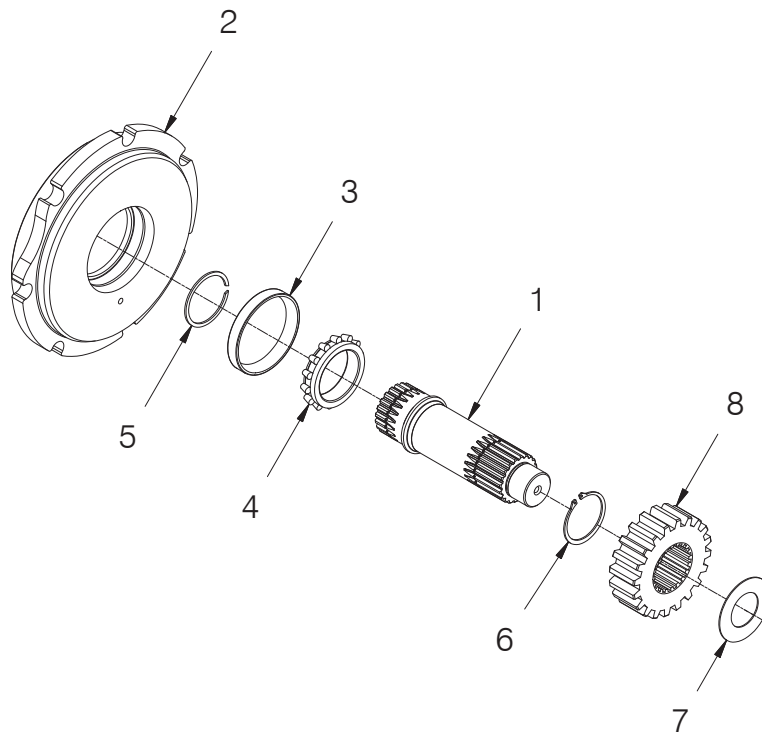


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313171	Assembly, BRAKE-OFF Shaft	1				
1	2311855	. Housing, Clutch	1	12	239147W	. Pin	1
2	2312963	. Shaft, Clutch	1	13	2303992W	. Spring	1
3	231439	. Fitting	1	14	R13811617	. Cap screw	1
4	2312039	. Piston, Clutch	1	15	2311684	. Ring, Snap	1
5	2311683	. Ring, Snap	1	16	137153W	. Cup, Roller Bearing	1
6	2312442	. Ring, Thrust	1	17	137155W	. Cone, Roller Bearing	1
7	2311655	. Bearing, Thrust Needle Roller	1	18	2311869	. Shim .062	1
8	86585W	. O-Ring	2	19	230407W	. Bearing	1
9	87287W	. O-Ring	1	20	2311687	. Shim .062	1
10	2311880	. Ring, Seal	1	21	2312935	. Gear, Spider 18T	1
11	2311903	. Assembly, Clutch (See 2-19)	1				

Shaft Assembly

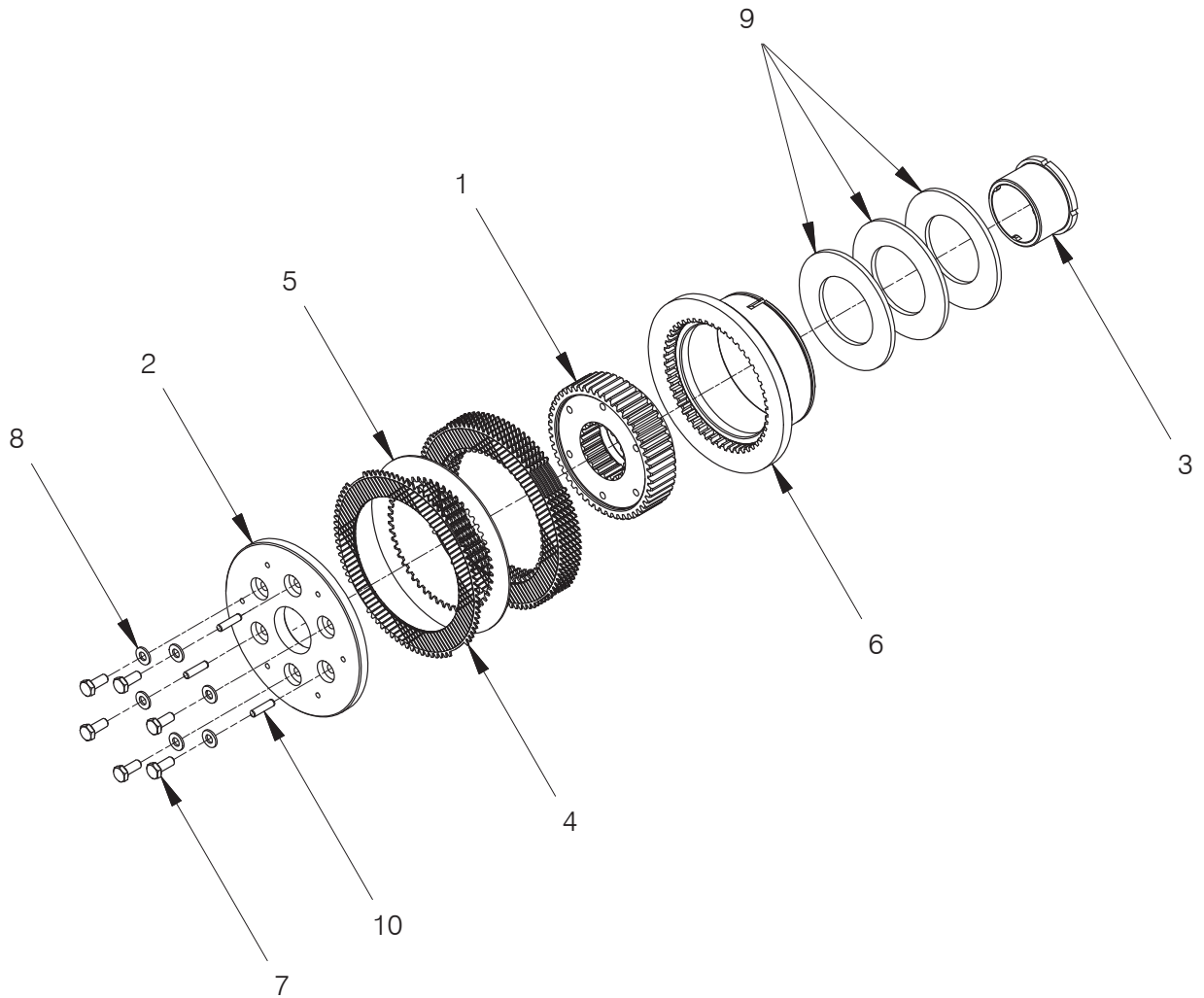
Without BRAKE-OFF

John Deere 750/850J & 750/850K (H6HH1E**E47/E48/E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312929	Assembly, Without BRAKE-OFF Shaft	1				
1	2312891	. Shaft, Clutch	1	5	2311684	. Ring, Snap	1
2	2312892	. Housing, Clutch	1	6	192241W	. Ring, Snap	1
3	137153W	. Cup, Roller Bearing	1	7	2311869	. Shim .062	1
4	137155W	. Cone, Roller Bearing	1	8	2307434W	. Gear, 20T	1

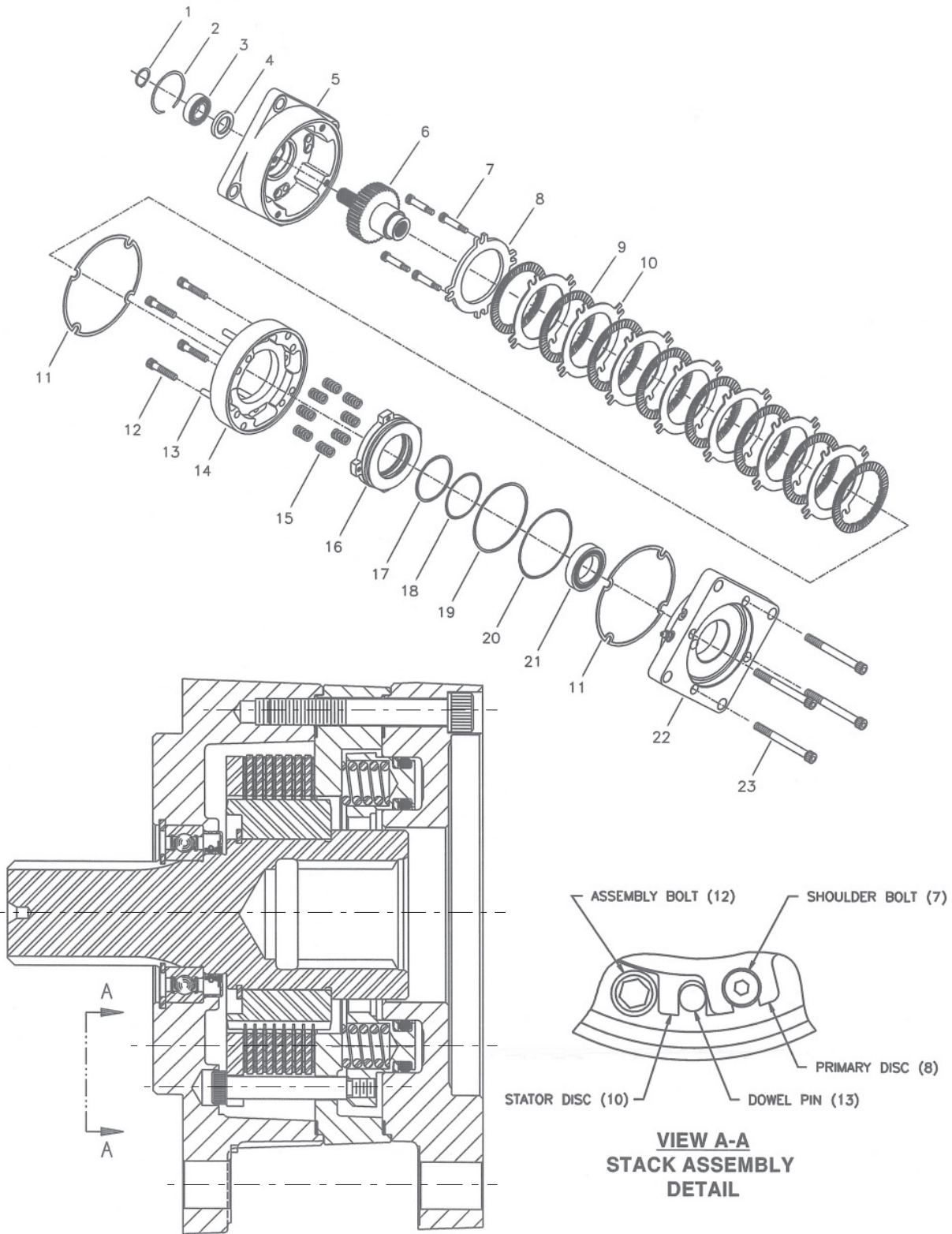
Clutch Assembly



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

Dry Disc Brake

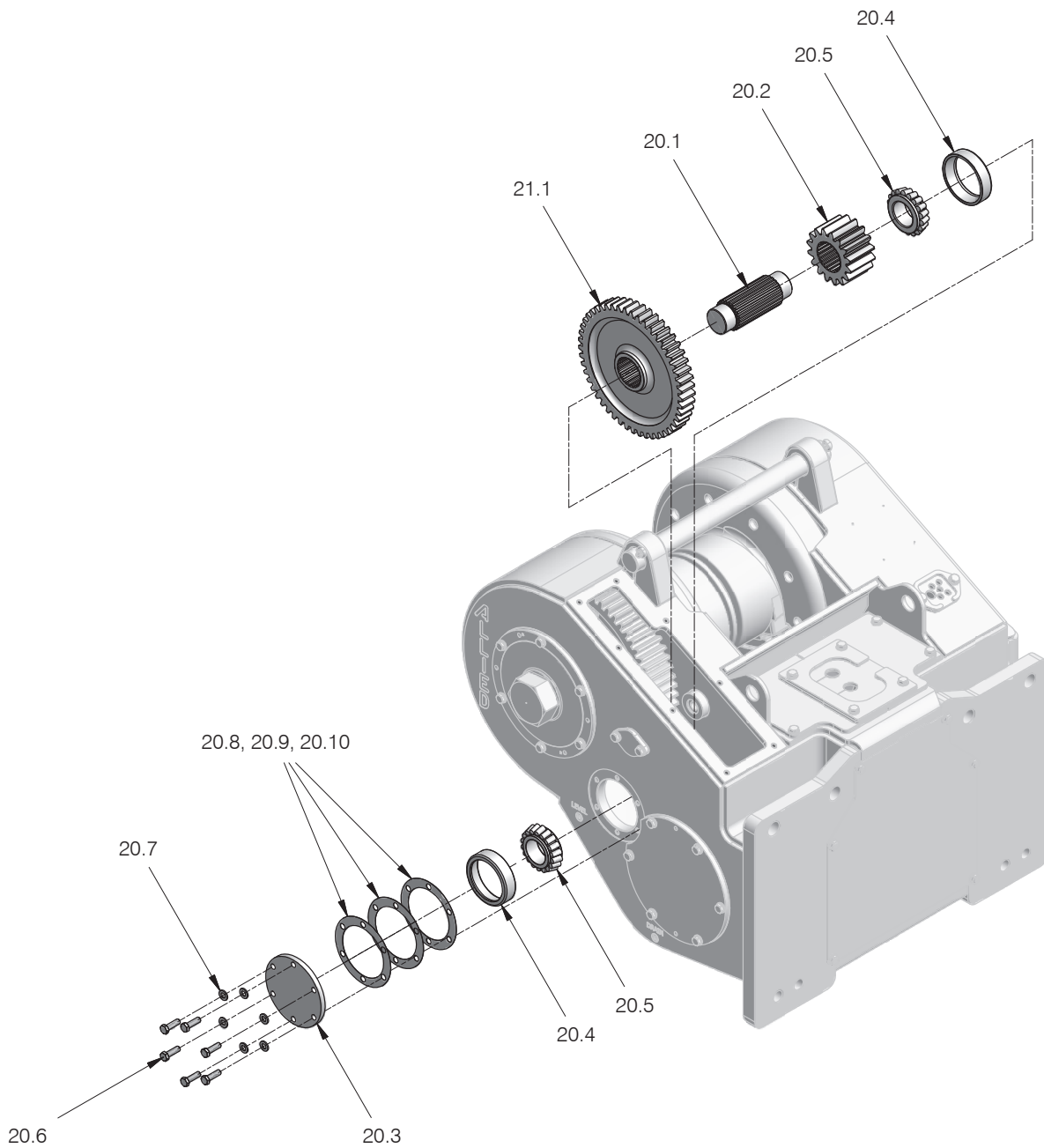
Page 1 of 2



Dry Disc Brake

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312155	Brake, D Mount Dry Disc					
1	NSS	. Retaining Ring	1	21	*b NSS	. Bearing	1
2	NSS	. Retaining Ring	1	22	NSS	. Pressure Plate	1
3	*b NSS	. Bearing	1	23	NSS	. Capscrew	4
4	*a,*b NSS	. Oil Seal	1				
5	NSS	. Cover Plate	1		*a	Included in O-Ring Repair Kit 2312302**	
6	NSS	. Spline Shaft Assembly	1		*b	Included in Bearing Repair Kit 2312303***	
7	NSS	. Bolt	4		*c	Included in Spring Repair Kit 250850****	
8	*d NSS	. Primary Disc	1		*d	Included in Lining Repair Kit 250847*****	
9	*d NSS	. Rotor Disc	8		**	O-Ring Repair Kit 2312302 is Included in Motor, Reducer & Brake Assembly Rebuild Kit 2314659	
10	*d NSS	. Stator Disc	7		***	Bearing Repair Kit 2312303 is Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660	
11	*a,*11,*c,*d NSS	. Case Gasket	2		****	Spring Repair Kit 250850 is Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660	
12	NSS	. Capscrew	4		*****	Lining Repair Kit 250847 is Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660	
13	NSS	. Dowel Pins	4				
14	NSS	. Spring Plate	1				
15	*c NSS	. Spring, Red	10				
16	NSS	. Piston	1				
17	*a NSS	. Backup Ring	1				
18	NSS	. O-Ring	1				
19	*a NSS	. Backup Ring	1				
20	NSS	. O-Ring	1				

Intermediate Gear Shaft Without Freespool

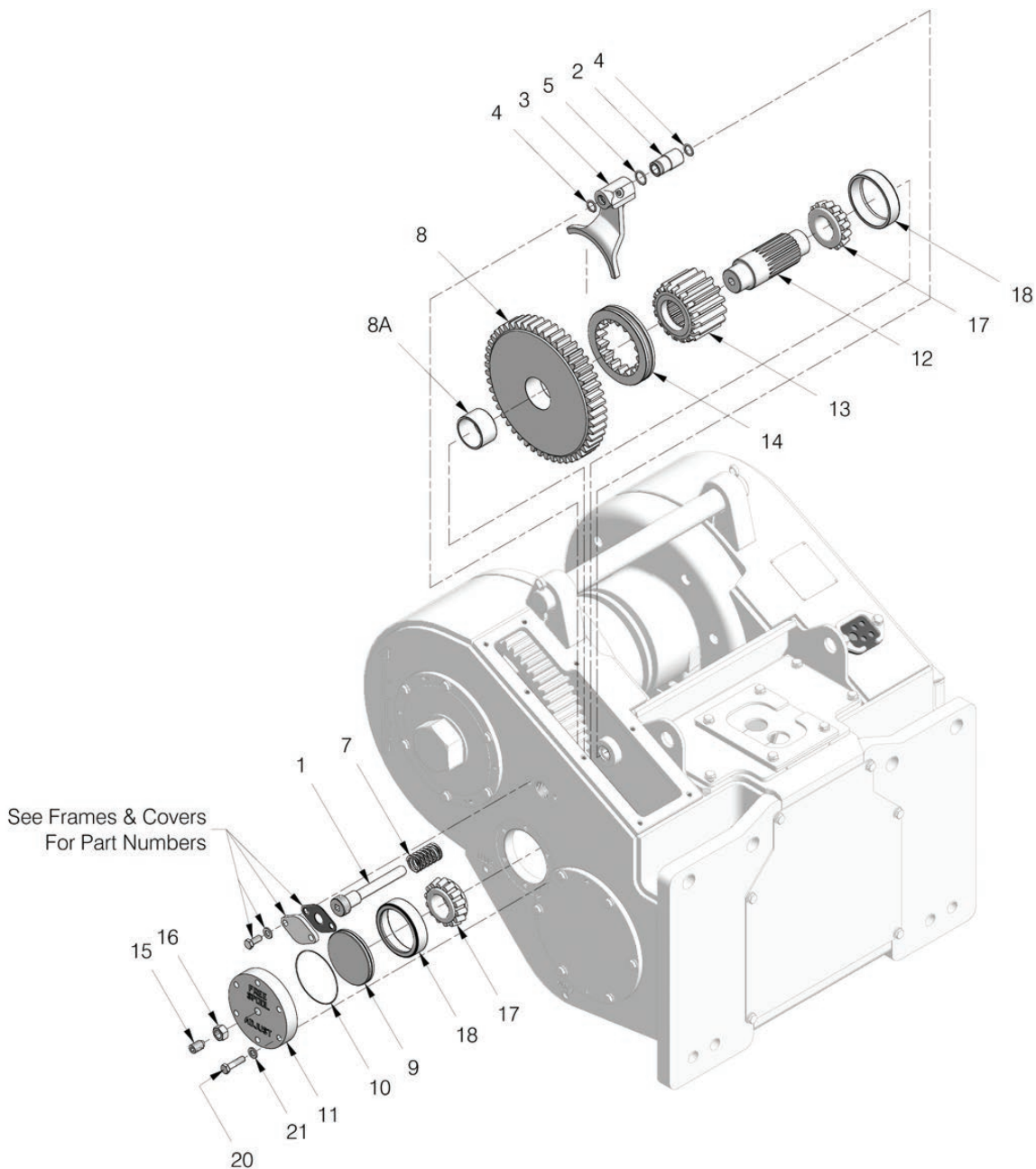


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
20.1	95972W	Shaft	1	20.9	149542W	Shim .007	AR
20.2	95973W	Gear	1	20.10	149543W	Shim .020	AR
20.3	280262W	Retainer, Bearing	1				
20.4	*a 30059W	Cup, Roller Bearing	2	21.1	96024W	Gear, 49T	1
20.5	*a 30080W	Cone, Roller Bearing	2				
20.6	2312487	Capscrew	6				
20.7	296422W	Washer	6				
20.8	149541W	Shim .005	AR				

*a Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660

Intermediate Gear Shaft

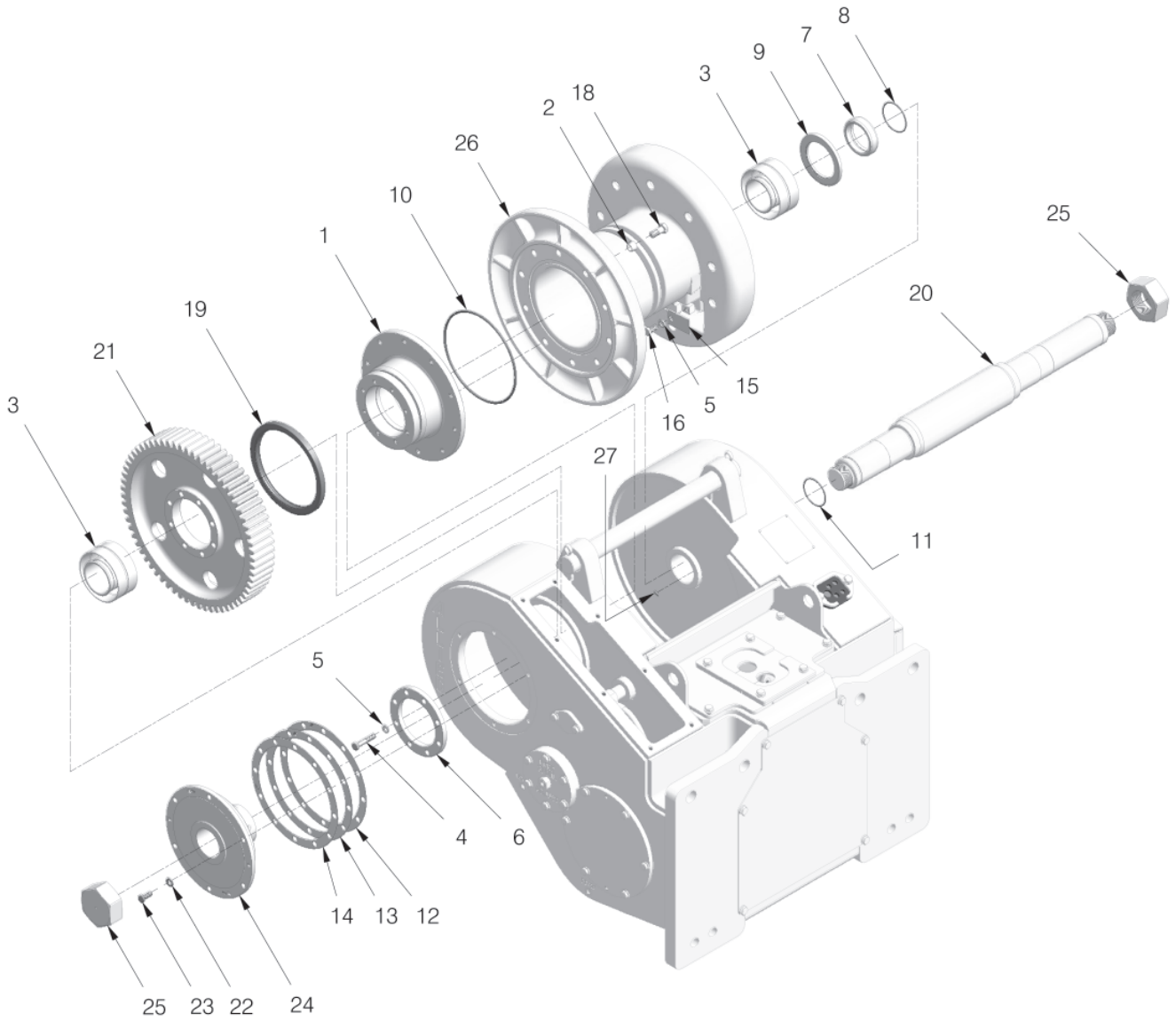
With Freespool



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	*a 2311894	Shaft, Freespool	1	13	2312280	Gear, Pinion	1
2	2305097W	Piston, Freespool	1	14	2312269	Clutch, Dental	1
3	2305099W	Shifter Fork, Freespool	1	15	2304803W	Screw	1
4	*b 15862W	O-Ring	2	16	221717W	Nut, Hex	1
5	*b 212380	O-Ring	1	17	*b 2302311W	Cone, Bearing	2
7	2305096W	Spring	1	18	*b 30059W	Cup, Bearing	2
8	283434W	Assembly, Intermediate Gear	1	20	2312488	Capscrew	6
8A	283432W	Bushing	1	21	296422W	Washer, Hard	6
9	2302624W	Piston, Freespool Adjust	1				
10	*b 159940W	O-Ring	1				
11	2302625W	Housing, Freespool Adjust	1				
12	2305956W	Shaft, Intermediate	1				

*a Apply Threadlock 318702W to Threads
 *b Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660

Drum Shaft



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	141674W	Adapter	1	18	2310891	Capscrew	10
2	53559W	Thimble, Tapered	10	19	141671W	Seal, Oil	1
3	*b 230406W	Bearing, Roller	2	20	2312064	Shaft, Drum	1
4	221577W	Capscrew	8	21	95977W	Gear, Drum	1
5	*b 15158W	Washer	9	22	296422W	Washer	6
6	95978W	Retainer	1	23	2312486	Capscrew	6
7	*a 172808W	Spacer	1	24	172810W	Retainer	1
8	15881W	O-Ring	1	25	*a 2312099	Nut	2
9	*b 44547W	Seal, Oil	1	26	2312100	Drum, H6H	1
10	*b 133927W	Ring, Piston Seal	1	27	Y433070.45	Fitting	1
11	*b 90263W	O-Ring	1				
12	175648W	Shim, .020	AR				
13	175647W	Shim, .007	AR	*a	Requires Sealant 358674W		
14	175646W	Shim, .005	AR	*b	Included in Intermediate/Drum Shaft & Brake Assembly Rebuild Kit 2314660		
15	2301783W	Keeper, Ferrule	1				
16	16829W	Capscrew	1				

Hydraulics/Controls

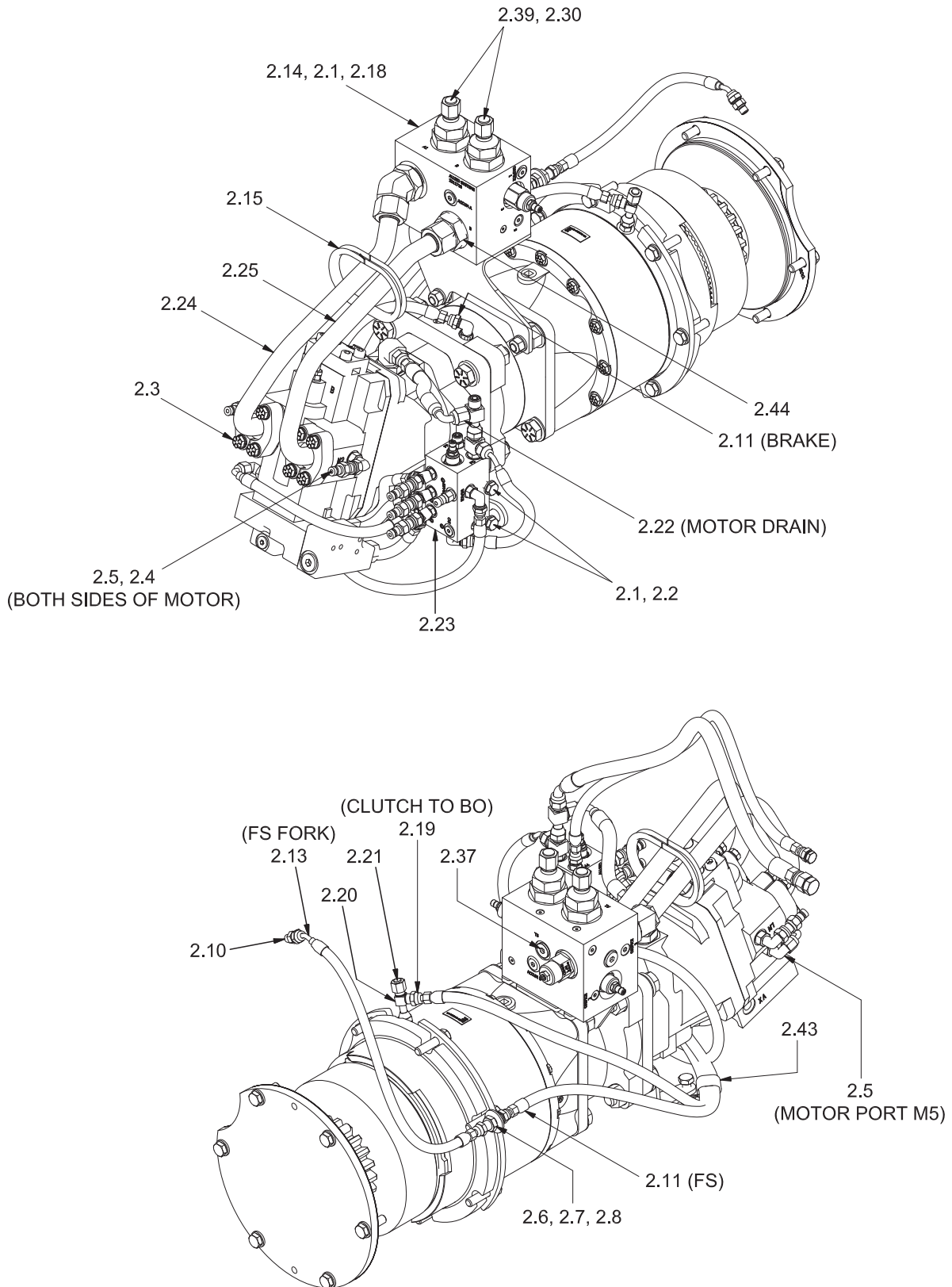
Console Hydraulics	3-70 & 3-71
Console/Rear Plate Alteration & Controls Installation	3-76 & 3-77
Controls & Control Lever Installation	3-78 thru 3-83
Conversion Kit	3-61 thru 3-63
Electrical Installation	3-64 thru 3-67
Fuel/Water Separator Relocation	3-60
Hydraulic Installation	3-72 thru 3-74
Hydraulic Cooler Installation	3-75
Hydraulic Filter Relocation	3-58 & 3-59
Hydraulic Group - External	3-48 thru 3-57
Hydraulic Group - Internal	3-2 thru 3-47
H6HT (Standard) Winch	3-2 thru 3-35
H6HH (Hi-Performance) Winch	3-36 thru 3-47
Manifold Assembly	3-106 thru 3-109
Manifold Assembly, Counter Balance Relief	3-95 thru 3-102
Manifold Assembly, Control	3-85 thru 3-94
Manifold Assembly, Directional	3-103 & 3-105
Manifold Assembly, Line Body	3-111
Manifold Assembly, Valve	3-110
Switch Panel Assembly	3-112 thru 3-122
Winch Controls	3-84
Wire Harness Routing & Switch Mounting	3-68 & 3-69

Internal Hydraulic Group

H6HT (Standard) Winch

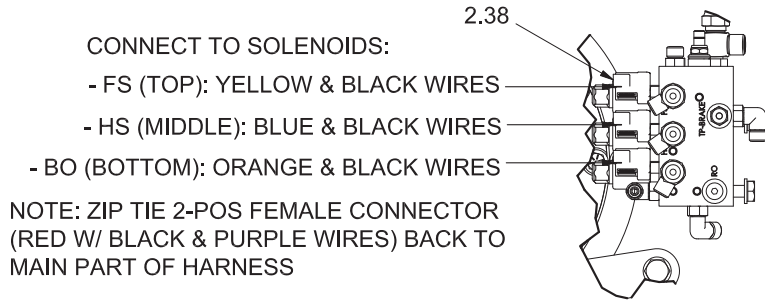
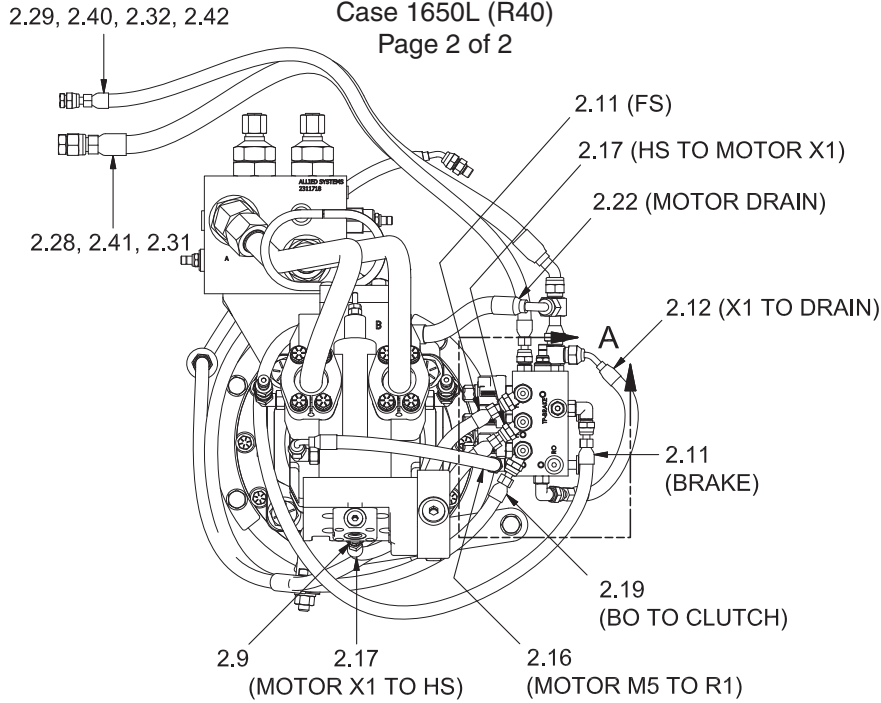
Case 1650L (R40)

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Internal Hydraulic Group

H6HT (Standard) Winch
Case 1650L (R40)
Page 2 of 2



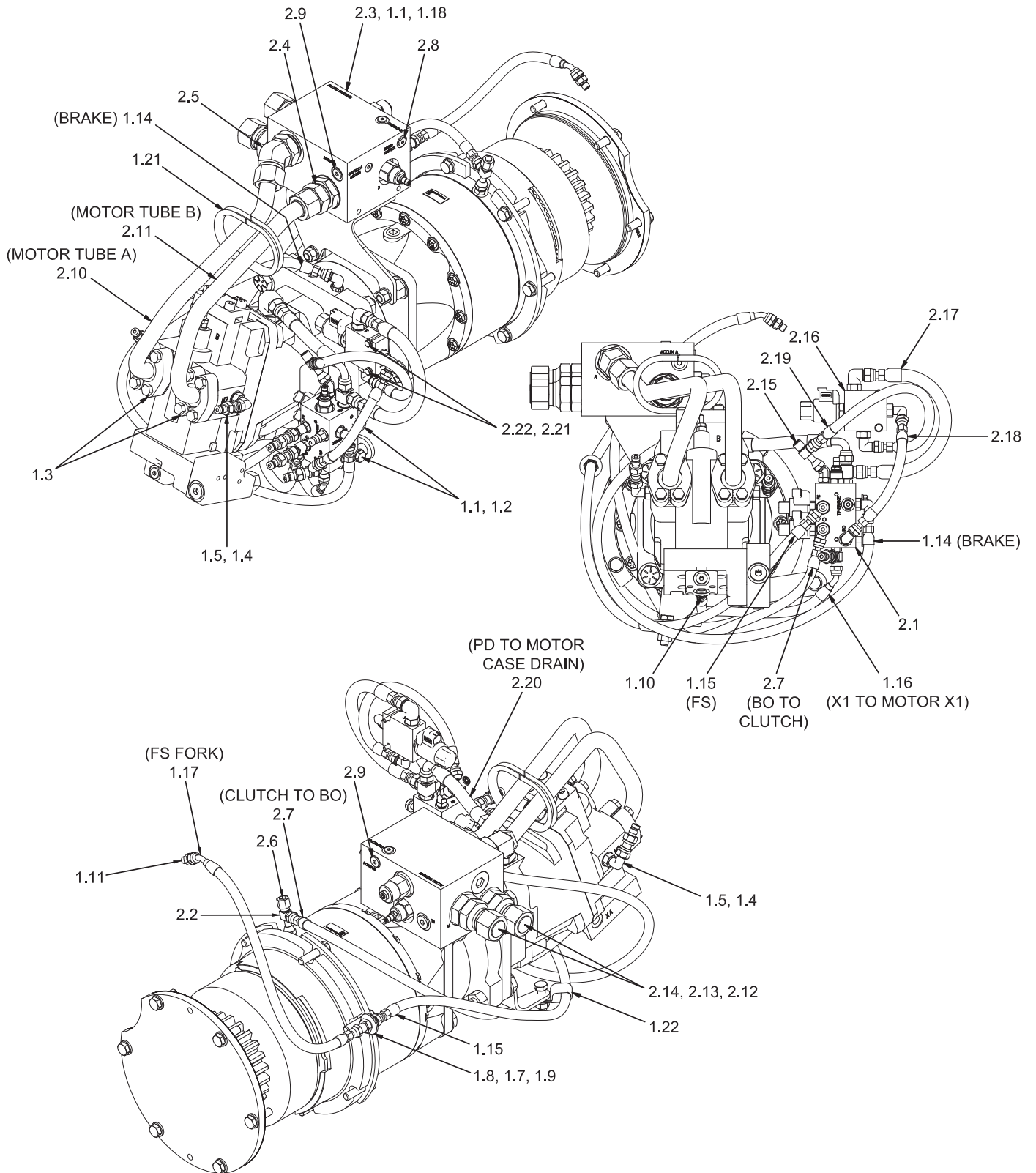
DETAIL A

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	Y09C-M1025	Capscrew	4	2.22	*a 2312358	Assembly, Hose	1
2.2	296420W	Washer	2	2.23	2313960	Assembly, Control Manifold (3-92)	1
2.3	229448	Kit, Split Flange	2	2.24	*b 2312069	Assembly, Tube - Motor A	1
2.4	2307625W	Coupler, Quick Male	2	*c 2314162	Assembly, Tube - Motor A	1	
2.5	R833253	Fitting	2	2.25	*b 2312095	Assembly, Tube - Motor B	1
2.6	R834100	Fitting	1	*c 2314690	Assembly, Tube - Motor B	1	
2.7	15178W	Washer	1	2.28	*a 2314688	Assembly, Hose	1
2.8	211564	O-Ring	1	2.29	*a 2314689	Assembly, Hose	1
2.9	R833103	Fitting	1	2.30	R833707	Fitting	2
2.10	231439	Fitting	1	2.31	2306151W	Label - T	1
2.11	*a 2312353	Assembly, Hose	2	2.32	2307241W	Label - Pilot	1
2.12	*a 2313844	Assembly, Hose	1	2.37	229345	Fitting	1
2.13	*a 2312212	Assembly, Hose	1	2.38	2313137	Harness, Winch Harness (Not Shown)	1
2.14	221767W	Washer	2	2.39	R834253	Fitting	2
2.15	24257	Trim, Edge	1.08 ft	2.40	R834200	Fitting	1
2.16	*a 2312843	Assembly, Hose	1	2.41	232960	Fitting	1
2.17	*a 239847	Assembly, Hose	1	2.42	242598	Tie, Cable - A (Green)	1
2.18	*b 2313959	Assembly, Counterbalance Relief (CBR) Manifold (3-99)	1	2.43	2312628	Clamp, Insulation	1
	*c 2314727	Assembly, Counterbalance Relief (CBR) Manifold (3-101)	1	2.44	*c 2313948	Fitting	1
2.19	*a 2312351	Assembly, Hose	1		*a	Included in Hose Kit 2315049	
2.20	236855	Fitting	1		*b	Last Used on S/N H6H-1496	
2.21	232984	Fitting	1		*c	First Used on S/N H6H-1497	

Internal Hydraulic Group

H6HT (Standard) Winch
Case 1650/2050M (R42)

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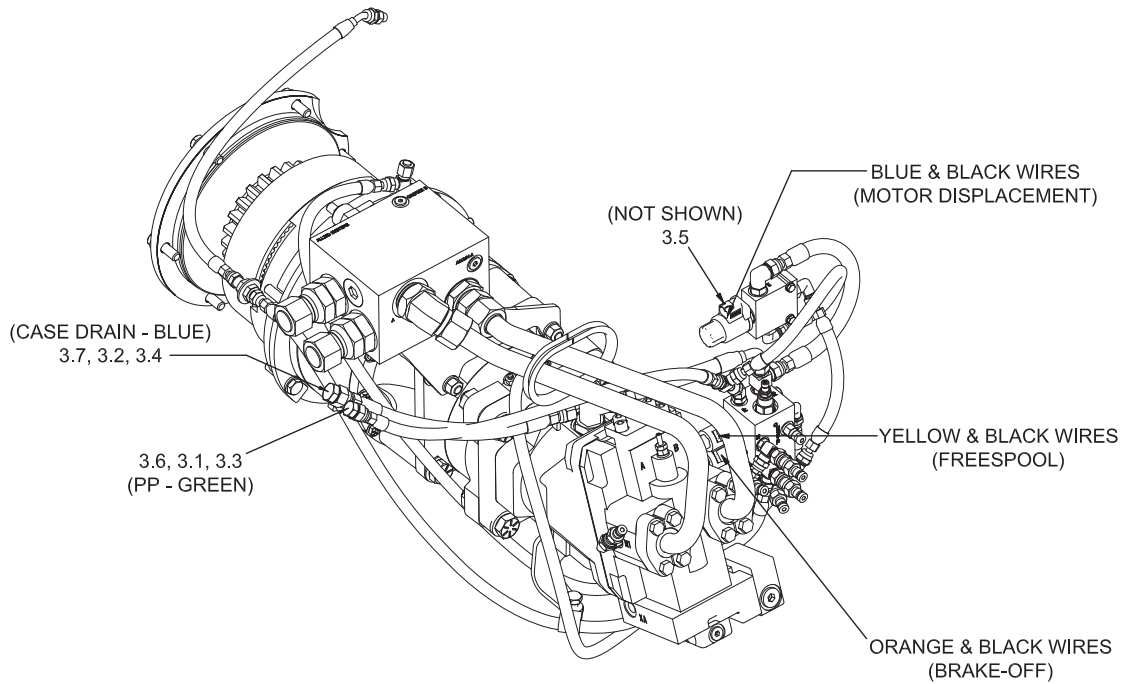


Internal Hydraulic Group

H6HT (Standard) Winch

Case 1650/2050M (R42)

Page 2 of 2



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	2.10	*b 2312069	Assembly, Tube - Motor A	1
1.2	296420W	Washer	2		*c 2314162	Assembly, Tube - Motor A	1
1.3	229448	Kit, Split Flange	2	2.11	*b 2312095	Assembly, Tube - Motor B	1
1.4	2307625W	Coupler, Quick Male	2		*c 2314690	Assembly, Tube - Motor B	1
1.5	R833253	Fitting	2	2.12	232359	Fitting	2
1.7	R834100	Fitting	1	2.13	244959	Fitting	2
1.8	15178W	Washer	1	2.14	231820	Fitting	2
1.9	211564	O-Ring	1	2.15	236855	Fitting	1
1.10	R833103	Fitting	1	2.16	2313492	Assembly, Line Body (3-111)	1
1.11	231439	Fitting	1	2.17	*a 2313314	Assembly, Hose	1
1.14	*a 2312353	Assembly, Hose	1	2.18	*a 2313388	Assembly, Hose	1
1.15	*a 2312350	Assembly, Hose	1	2.19	*a 239847	Assembly, Hose	1
1.16	*a 2312878	Assembly, Hose	1	2.20	*a 2313493	Assembly, Hose	1
1.17	*a 2312212	Assembly, Hose	1	2.21	296417W	Washer	2
1.18	15176W	Washer	2	2.22	Y09C-M0640	Capscrew	2
1.21	24257	Trim, Edge	1.08 ft.				
1.22	2312628	Clamp, Insulation	1	3.1	*a 2313389	Assembly, Hose	1
2.1	2313318	Assembly, Control Manifold (3-88)	1	3.2	*a 2313390	Assembly, Hose	1
2.2	236855	Fitting	1	3.3	R834201	Fitting	1
2.3	2312941	Assembly, Manifold (3-106)	1	3.4	232960	Fitting	1
2.4	*b R833133	Fitting	1	3.5	2313496	Harness, Winch Wire	1
	*c 2313948	Fitting	1	3.6	242598	Tie, Cable - Green	1
2.5	R833218	Fitting	1	3.7	242599	Tie, Cable - Blue	1
2.6	232984	Fitting	1				
2.7	*a 2312351	Assembly, Hose	1		*a	Included in Hose Kit 2315050	
2.8	235387	Fitting	1		*b	Last Used on S/N H6H-1496	
2.9	229383	Fitting	2		*c	First Used on S/N H6H-1497	

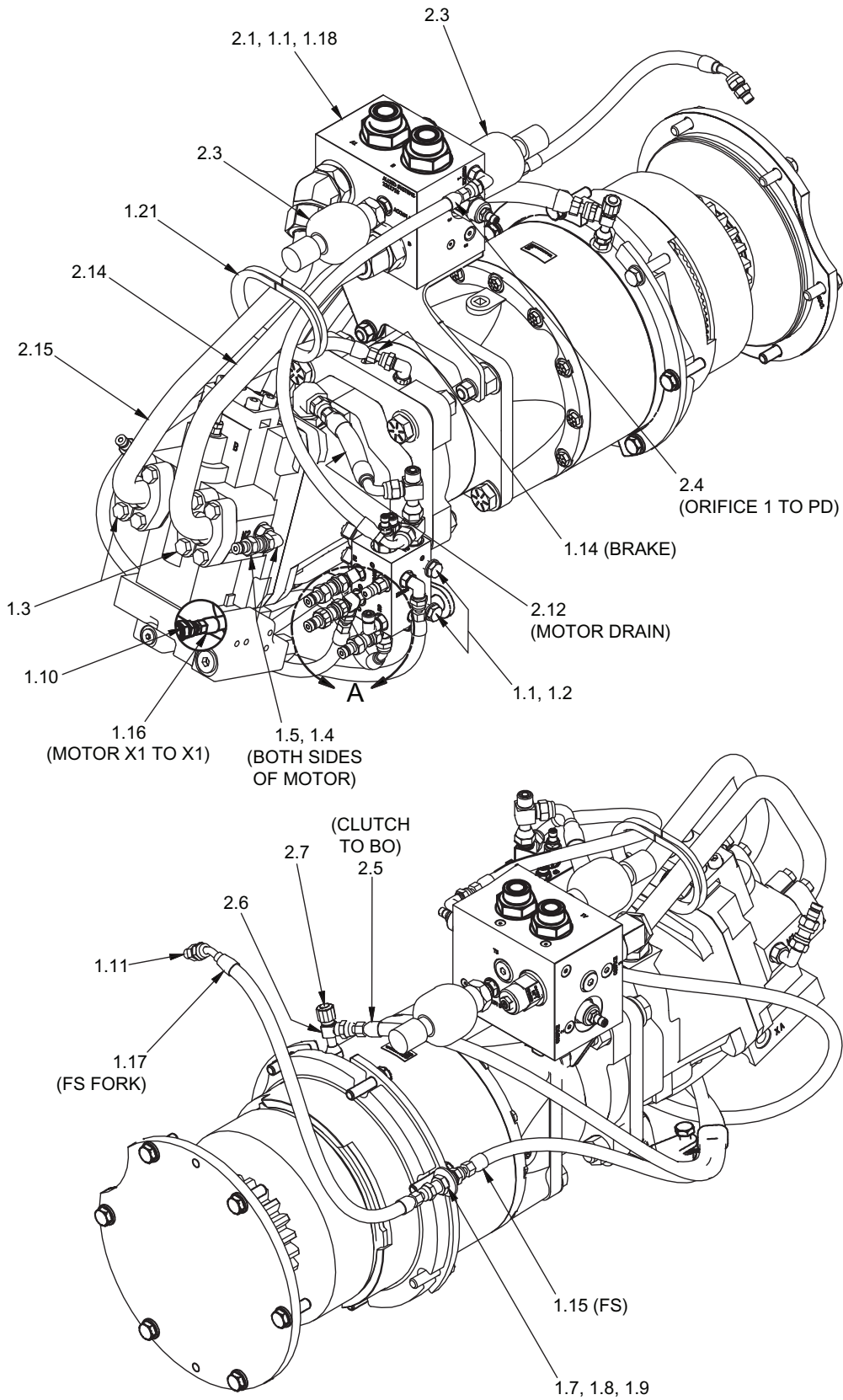
Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

Last Used on S/N H6H-1496

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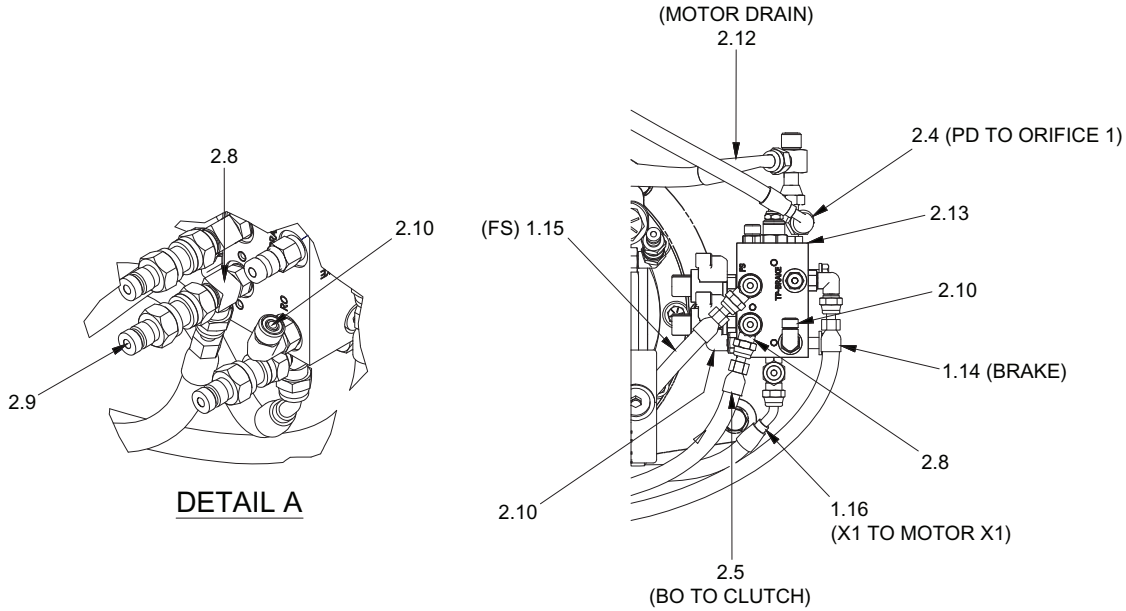
Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

Last Used on S/N H6H-1496

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	2.1	2312816	Assembly, Counterbalance Relief (CBR) Manifold (3-96)	1
1.2	296420W	Washer	2	2.3	2312268	Accumulator	2
1.3	229448	Kit, Split Flange	2	2.4	*a 2312357	Assembly, Hose	1
1.4	2307625W	Coupler, Quick Male	2	2.5	*a 2312351	Assembly, Hose	1
1.5	R833253	Fitting	2	2.6	236855	Fitting	1
1.7	R834100	Fitting	1	2.7	232984	Fitting	1
1.8	15178W	Washer	1	2.8	R833400	Fitting	1
1.9	211564	O-Ring	1	2.9	2307625W	Coupler, Quick Male	1
1.10	R833103	Fitting	1	2.10	R833251	Fitting	2
1.11	231439	Fitting	1	2.12	2312358	Assembly, Hose	1
1.14	*a 2312353	Assembly, Hose	1	2.13	2312908	Assembly, Control Manifold	1
1.15	*a 2312350	Assembly, Hose	1	2.14	2312095	Assembly, Tube - Motor B	1
1.16	*a 2312878	Assembly, Hose	1	2.15	2312069	Assembly, Tube - Motor A	1
1.17	*a 2312212	Assembly, Hose	1				
1.18	15176W	Washer	2				
1.19	2312628	Clamp, Insulation	1				
1.21	24257	Trim, Edge	13 in.				
				*a	Included in Hose Kit 2314767		

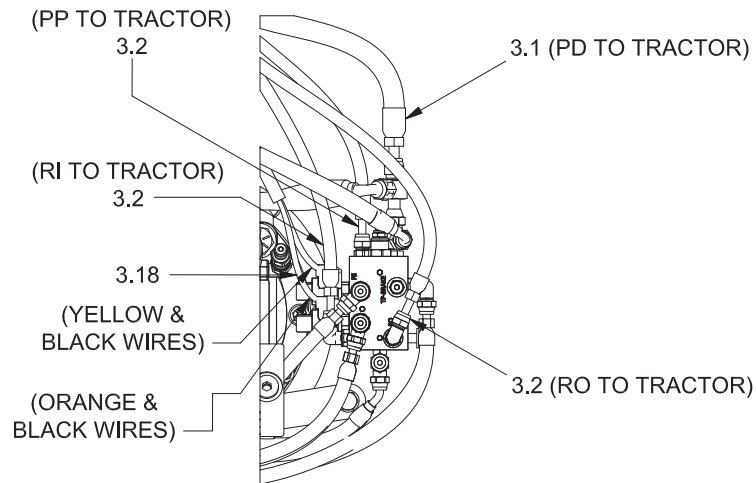
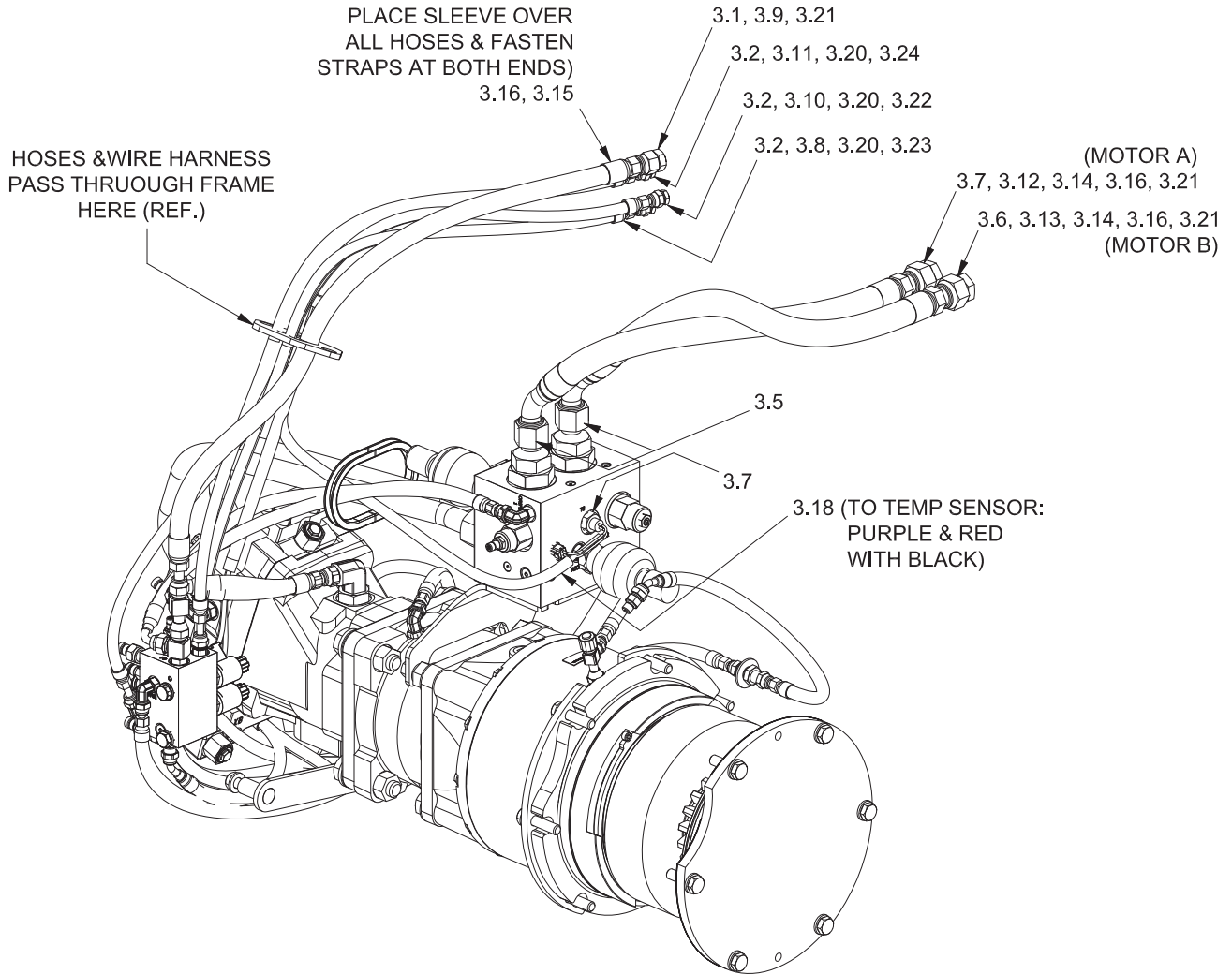
Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

Last Used on S/N H6H-1496

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CONTROL VALVE DETAIL

Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

Last Used on S/N H6H-1496

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	*a 235527	Assembly, Hose	1	3.15	R12577882	Sleeve, Cordura	1
3.2	*a 2311572	Assembly, Hose	3	3.16	129563W	Clamp, Strap	1
3.5	234191	Fitting	2	3.17	2307904W	Switch, Temperature	1
3.6	*a 2314423	Assembly, Hose	1	3.18	2313137	Harness, Winch Wire	1
3.7	*a 2314422	Assembly, Hose	1	3.20	R834200	Fitting	3
3.8	2307239W	Label, RI	1	3.21	232960	Fitting	3
3.9	2306151W	Label, T	2	3.22	242596	Tie, Cable (Orange)	1
3.10	2307238W	Label, RO	1	3.23	242597	Tie, Cable (Yellow)	1
3.11	2307241W	Label, Pilot	2	3.24	242598	Tie, Cable (Green)	1
3.12	2310919	Label, Motor A	1				
3.13	2310920	Label, Motor B	1				
3.14	R12577880	Sleeve, Cordura	1		*a	Included in Hose Kit 2314767	

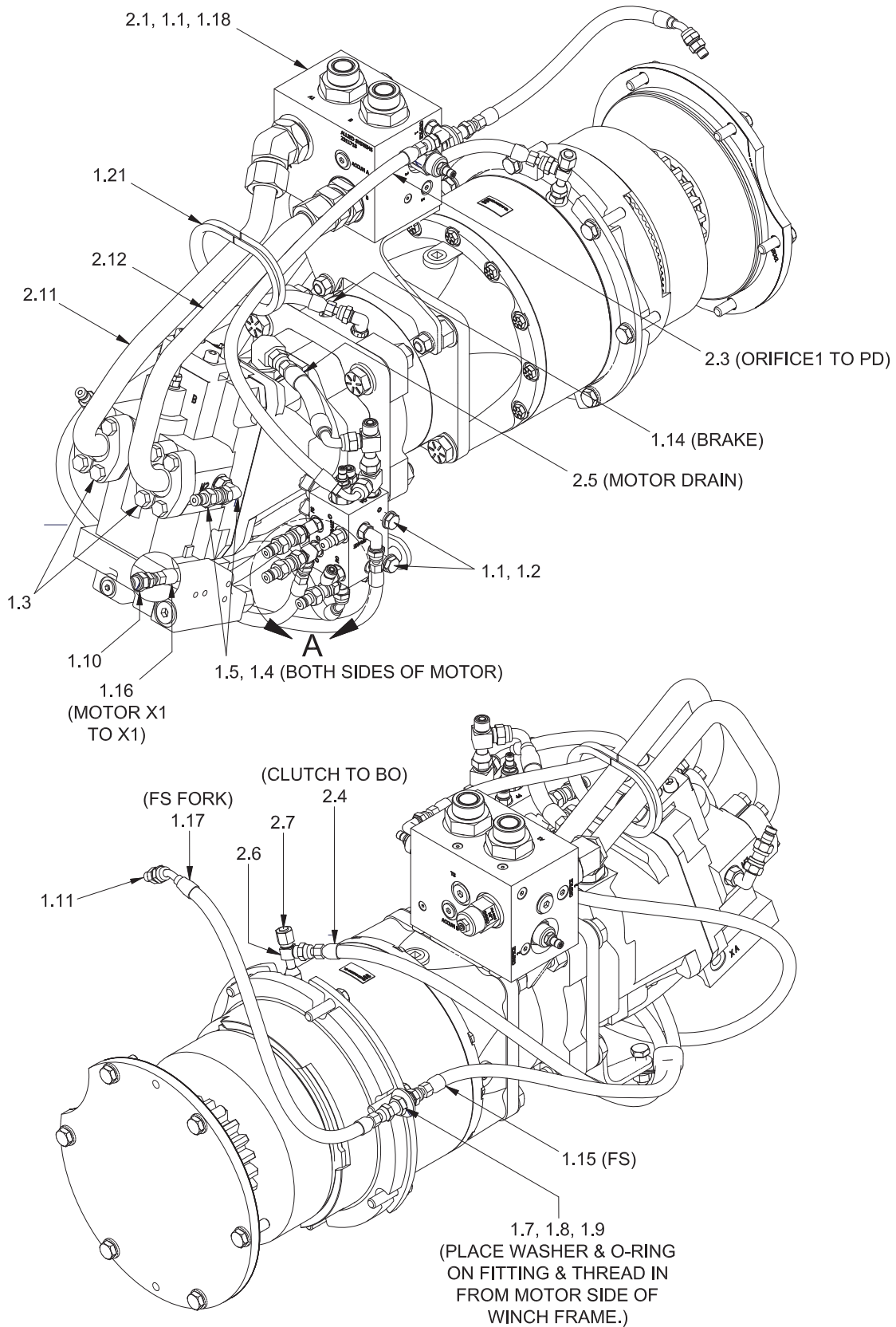
Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

First Used on S/N H6H-1497

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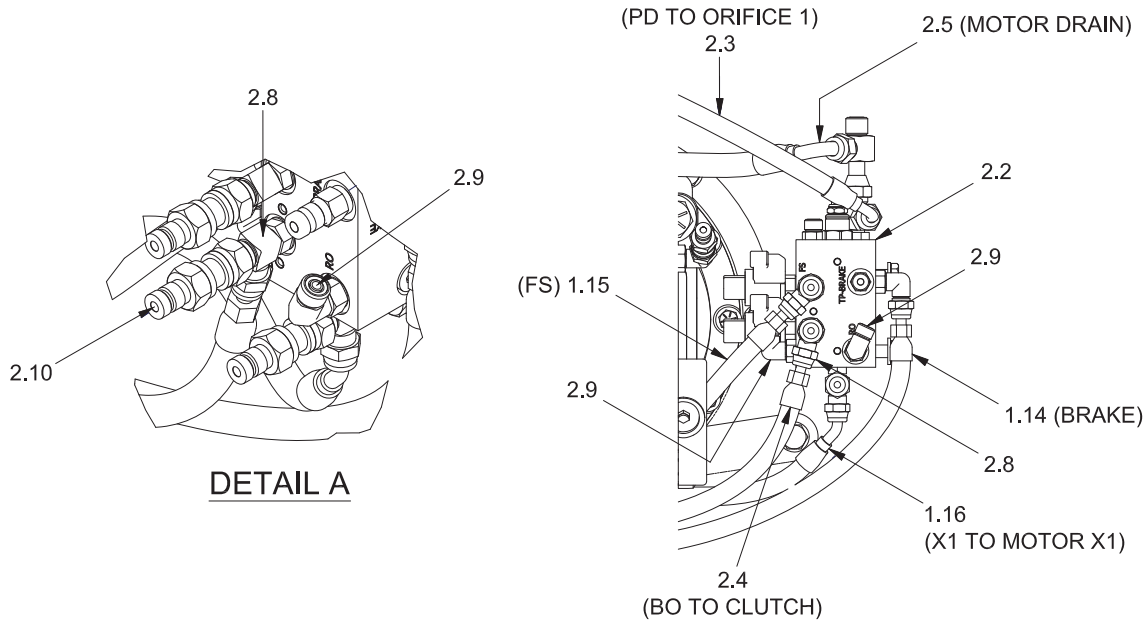
Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

First Used on S/N H6H-1497

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	1.22	2312628	Clamp, Insulation	1
1.2	296420W	Washer	2	2.1	*c 2314965	Assembly, Counterbalance Relief (CBR) Manifold (3-102)	1
1.3	229448	Kit, Split Flange	2	2.2	2312908	Assembly, Control Manifold (3-86)	1
1.4	2307625W	Coupler, Quick Male	2	2.3	*a 2312357	Assembly, Hose	1
1.5	R833253	Fitting	2	2.4	*a 2312351	Assembly, Hose	1
1.7	R834100	Fitting	1	2.5	*a 2312358	Assembly, Hose	1
1.8	15178W	Washer	1	2.6	236855	Fitting	1
1.9	211564	O-Ring	1	2.7	232984	Fitting	1
1.10	R833103	Fitting	1	2.8	R833400	Fitting	1
1.11	231439	Fitting	1	2.9	R833251	Fitting	2
1.14	*a 2312353	Assembly, Hose	1	2.10	2307625W	Coupler, Quick Male	1
1.15	*a 2312350	Assembly, Hose	1	2.11	2314162	Assembly, Tube - Motor A	1
1.16	*a 2312878	Assembly, Hose	1	2.12	2314690	Assembly, Tube - Motor B	1
1.17	*a 2312212	Assembly, Hose	1				
1.18	15176W	Washer	2				
1.21	24257	Trim, Edge	13 in.		*a	Included in Hose Kit 2314767	

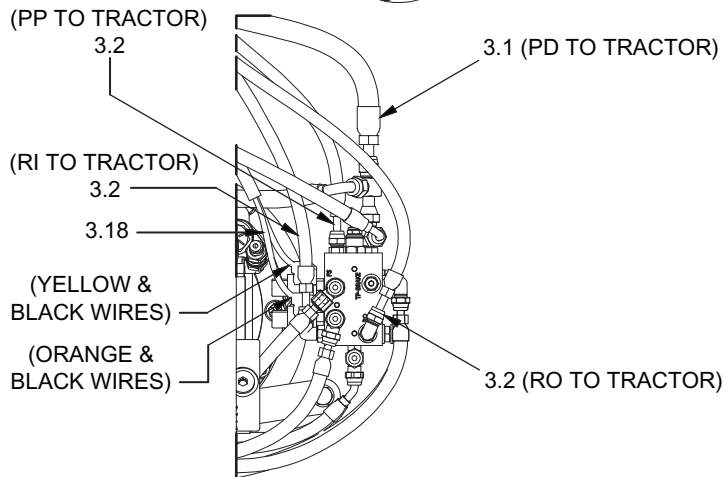
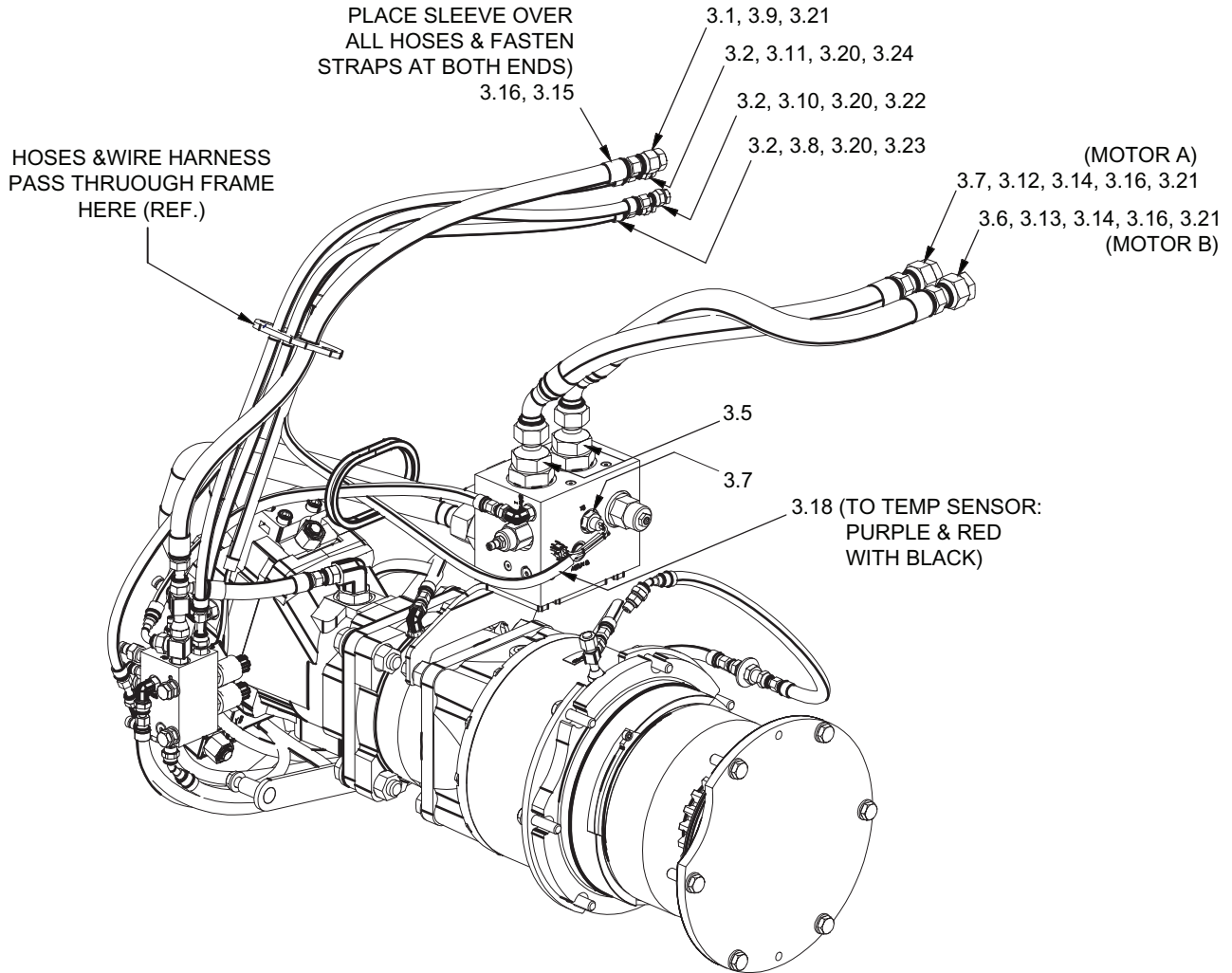
Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6N (C81)

First Used on S/N H6H-1497

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Internal Hydraulic Group

H6HT (Standard) Winch

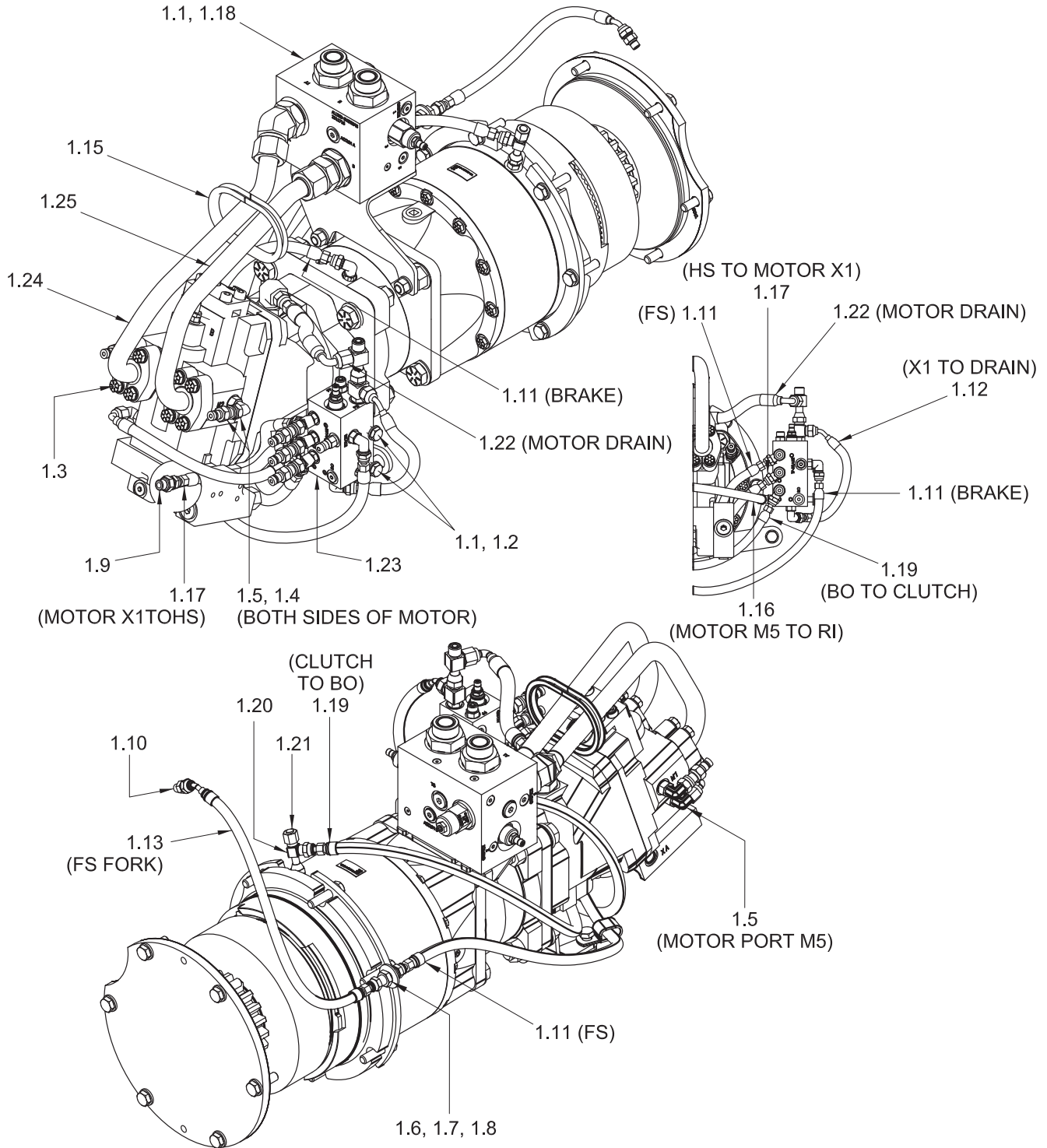
Caterpillar D6N (C81)

First Used on S/N H6H-1497

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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	*a 235527	Assembly, Hose	1	3.15	R12577882	Sleeve, Cordura	1
3.2	*a 2311572	Assembly, Hose	3	3.16	129563W	Clamp, Strap	1
3.5	234191	Fitting	2	3.17	2307904W	Switch, Temperature	1
3.6	*a 2314423	Assembly, Hose	1	3.18	2313137	Harness, Winch Wire	1
3.7	*a 2314422	Assembly, Hose	1	3.20	R834200	Fitting	3
3.8	2307239W	Label, RI	1	3.21	232960	Fitting	1
3.9	2306151W	Label, T	2	3.22	242596	Tie, Cable (Orange)	1
3.10	2307238W	Label, RO	1	3.23	242597	Tie, Cable (Yellow)	1
3.11	2307241W	Label, Pilot	2	3.24	242598	Tie, Cable (Green)	1
3.12	2310919	Label, Motor A	1				
3.13	2310920	Label, Motor B	1				
3.14	R12577880	Sleeve, Cordura	1		*a	Included in Hose Kit 2314767	

Internal Hydraulic Group
 H6HT (Standard) Winch with Freespool
 Caterpillar D6N (C811)
 H6HT**DC811
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INTERNAL HOSES
H6HT**DC811

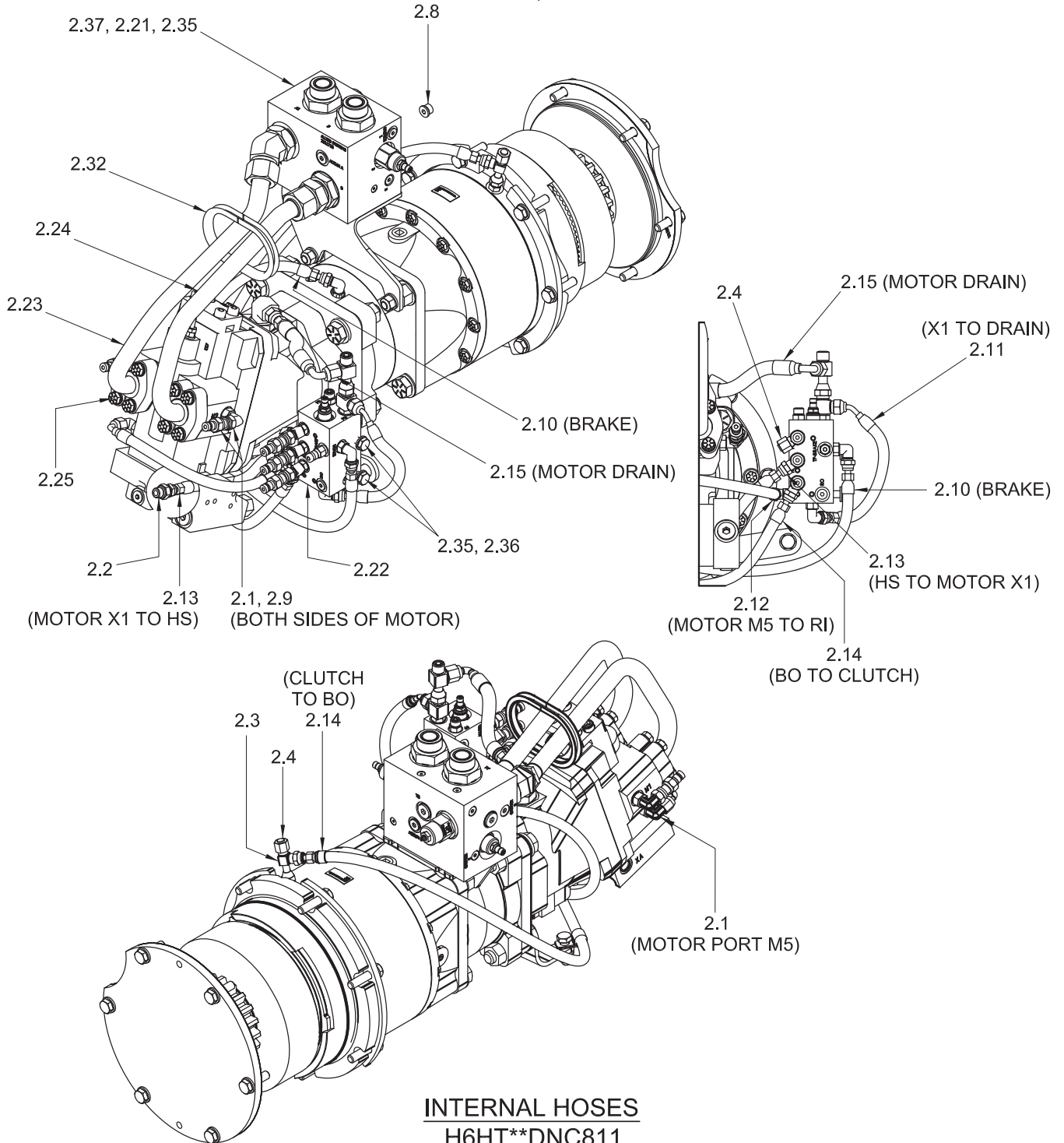
Internal Hydraulic Group
H6HT (Standard) Winch with Freespool
Caterpillar D6N (C811)
H6HT**DC811
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	1.18	*b 2313959	Assembly, Counterbalance Relief (CBR) Manifold (3-99)	1
1.2	296420W	Washer	2		*c 2314727	Assembly, Counterbalance Relief (CBR) Manifold (3-101)	1
1.3	229448	Kit, Split Flange	2	1.19	*a 2312351	Assembly, Hose	1
1.4	2307625W	Coupler, Quick Male	2	1.20	236855	Fitting	1
1.5	R833253	Fitting	3	1.21	232984	Fitting	1
1.6	R834100	Fitting	1	1.22	*a 2312358	Assembly, Hose	1
1.7	15178W	Washer	1	1.23	2313960	Assembly, Control Manifold (3-92)	1
1.8	211564	O-Ring	1	1.24	*b 2312069	Assembly, Tube - Motor A	1
1.9	R833103	Fitting	1		*c 2314162	Assembly, Tube - Motor A	1
1.10	231439	Fitting	1	1.25	*b 2312095	Assembly, Tube - Motor B	1
1.11	*a 2312350	Assembly, Hose	2		*c 2314690	Assembly, Tube - Motor B	1
1.12	*a 2313844	Assembly, Hose	1		*a	Included in Hose Kit 2314768	
1.13	*a 2312212	Assembly, Hose	1		*b	Last Used on S/N H6H-1496	
1.14	221767W	Washer	2		*c	First Used on S/N H6H-1497	
1.15	24257	Trim, Edge	1.08 ft.				
1.16	*a 2313843	Assembly, Hose	1				
1.17	*a 239847	Assembly, Hose	1				

Internal Hydraulic Group

H6HT (Standard) Winch without Freespool
 Caterpillar D6N (C811)
 H6HT**DNC811
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(INSTALL TO -6 SIZE O-RING
 PORT ON INNER -RIGHT
 PLATE OF WINCH FRAME)



Internal Hydraulic Group
H6HT (Standard) Winch without Freespool
Caterpillar D6N (C811)
H6HT**DNC811
Page 2 of 2

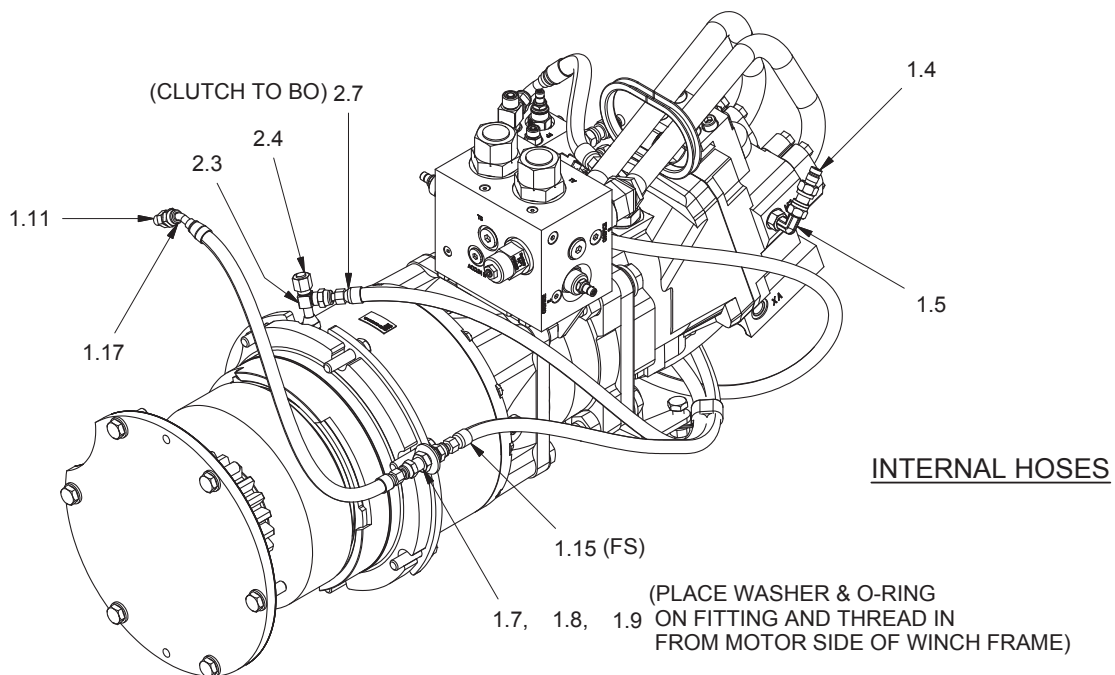
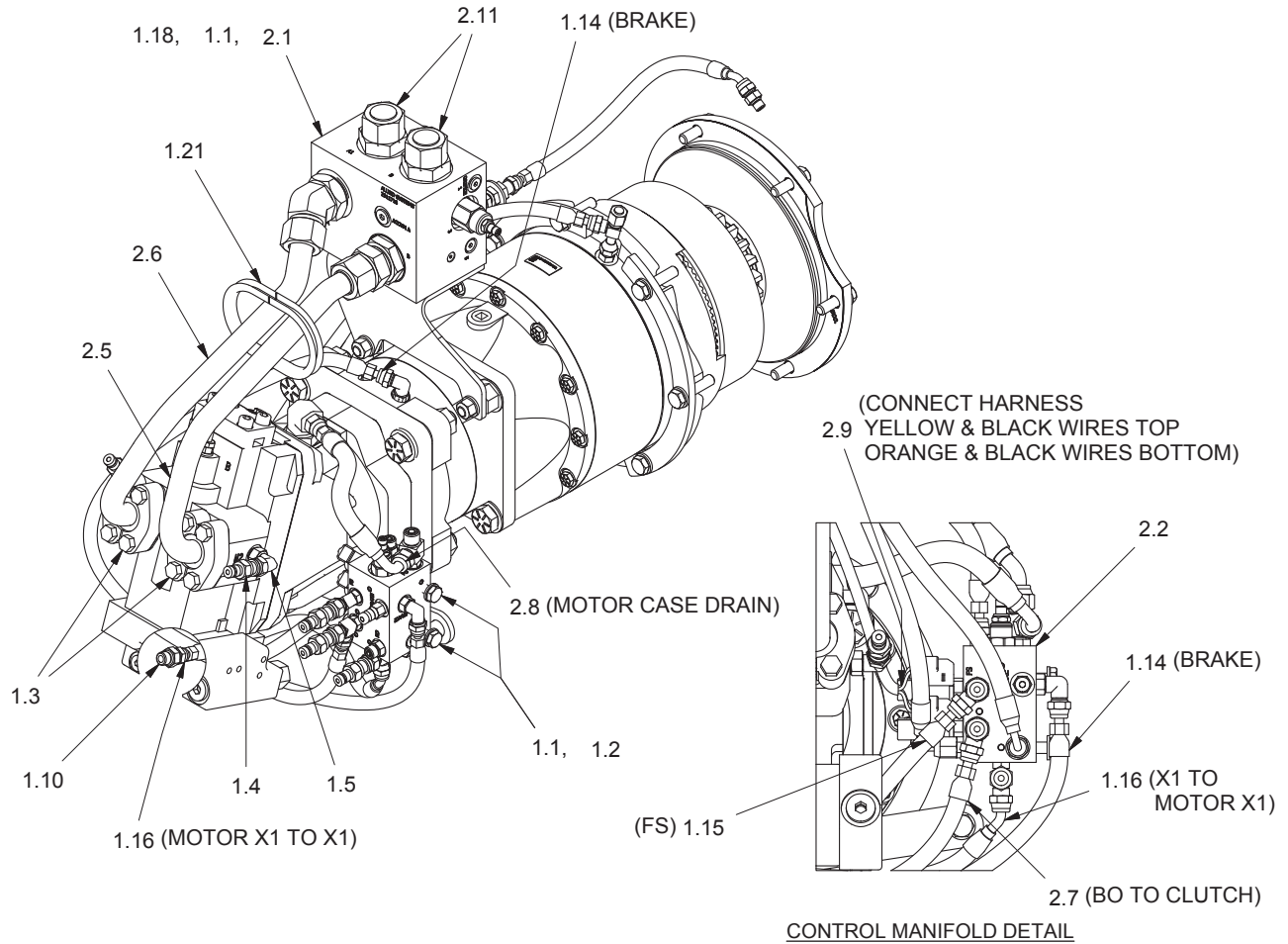
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	R833253	Fitting	3	2.22	2313960	Assembly, Control Manifold (3-92)	1
2.2	R833103	Fitting	1	2.23	*b 2312069	Assembly, Tube - Motor A	1
2.3	236855	Fitting	1		*c 2314162	Assembly, Tube - Motor A	1
2.8	229383	Fitting	1	2.24	*b 2312095	Assembly, Tube - Motor B	1
2.9	2307625W	Coupler, Quick Male	2		*c 2314690	Assembly, Tube - Motor B	1
2.10	*a 2312350	Assembly, Hose	2	2.25	229448	Kit, Split Flange	2
2.11	*a 2313844	Assembly, Hose	1	2.32	24257	Trim, Edge	1.08 ft.
2.12	*a 2313843	Assembly, Hose	1	2.35	Y09C-M1025	Capscrew	4
2.13	*a 239847	Assembly, Hose	1	2.36	296420W	Washer	2
2.14	*a 2312351	Assembly, Hose	1	2.37	221767W	Washer	2
2.14	*a 2312358	Assembly, Hose	1				
2.21	*b 2313959	Assembly, Counterbalance Relief (CBR) Manifold (3-99)	1		*a	Included in Hose Kit 2315051	
	*c 2314727	Assembly, Counterbalance Relief (CBR) Manifold (3-101)	1		*b	Last Used on S/N H6H-1496	
					*c	First Used on S/N H6H-1497	

Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6T (C71)

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Internal Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6T (C71)

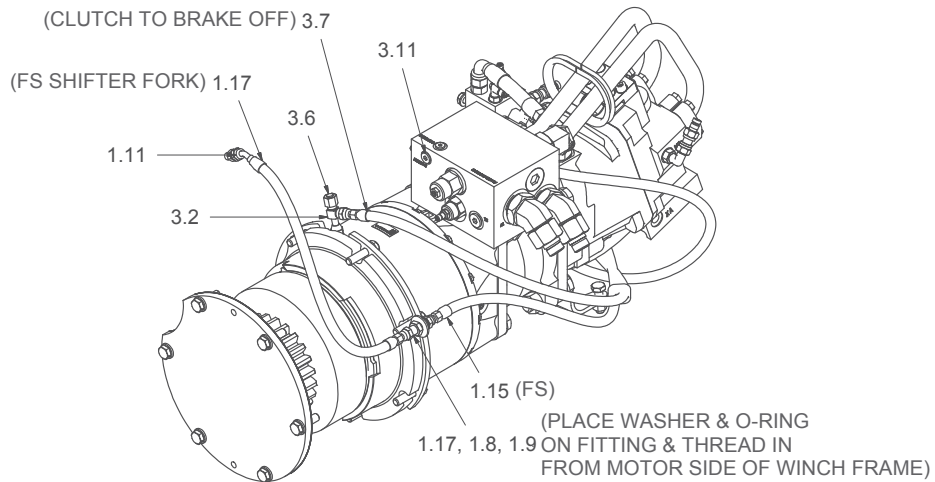
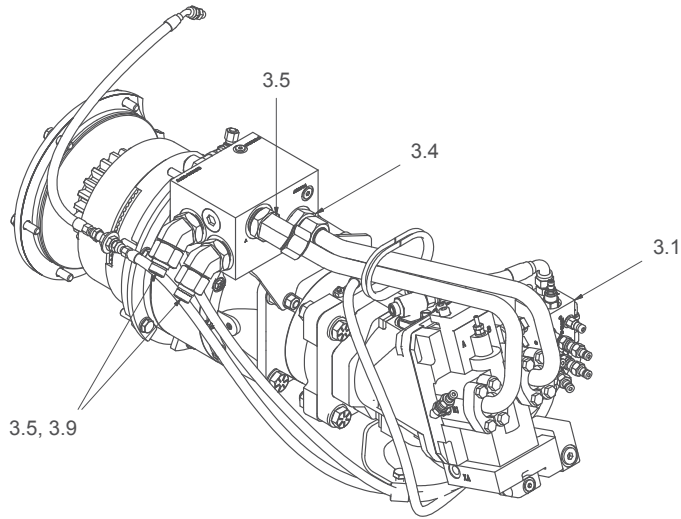
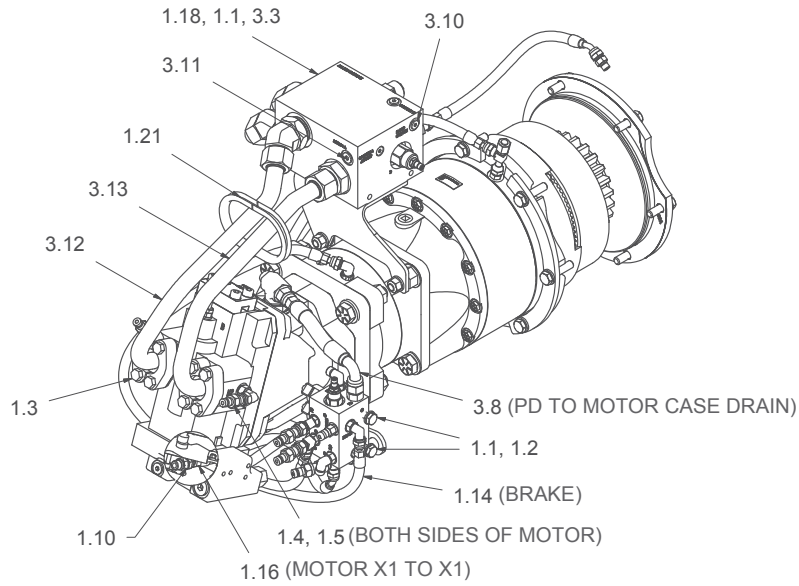
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	1.21	24257	Trim, Edge	1.08 ft
1.2	296420W	Washer	2	1.22	2312628	Clamp, Insulation	1
1.3	229448	Kit, Split Flange	2				
1.4	2307625W	Coupler, Quick Male	2	2.1	2314691	Assembly, Manifold (3-109)	1
1.5	R833253	Fitting	2	2.2	2313617	Assembly, Control Manifold (3-89)	1
1.7	R834100	Fitting	1	2.3	236855	Fitting	1
1.8	15178W	Washer	1	2.4	232984	Fitting	1
1.9	211564	O-Ring	1	2.5	2314690	Tube Assembly, Motor B	1
1.10	R833103	Fitting	1	2.6	2314162	Tube Assembly, Motor A	1
1.11	231439	Fitting	1	2.7	*a 2312351	Assembly, Hose	1
1.14	*a 2312353	Assembly, Hose	1	2.8	*a R12104	Assembly, Hose	1
1.15	*a 2312350	Assembly, Hose	1	2.9	2314664	Wire Harness, Winch	1
1.16	*a 2312878	Assembly, Hose	1	2.11	231820	Fitting	2
1.17	*a 2312212	Assembly, Hose	1				
1.18	15176W	Washer	2		*a	Included in Hose Kit 2314769	

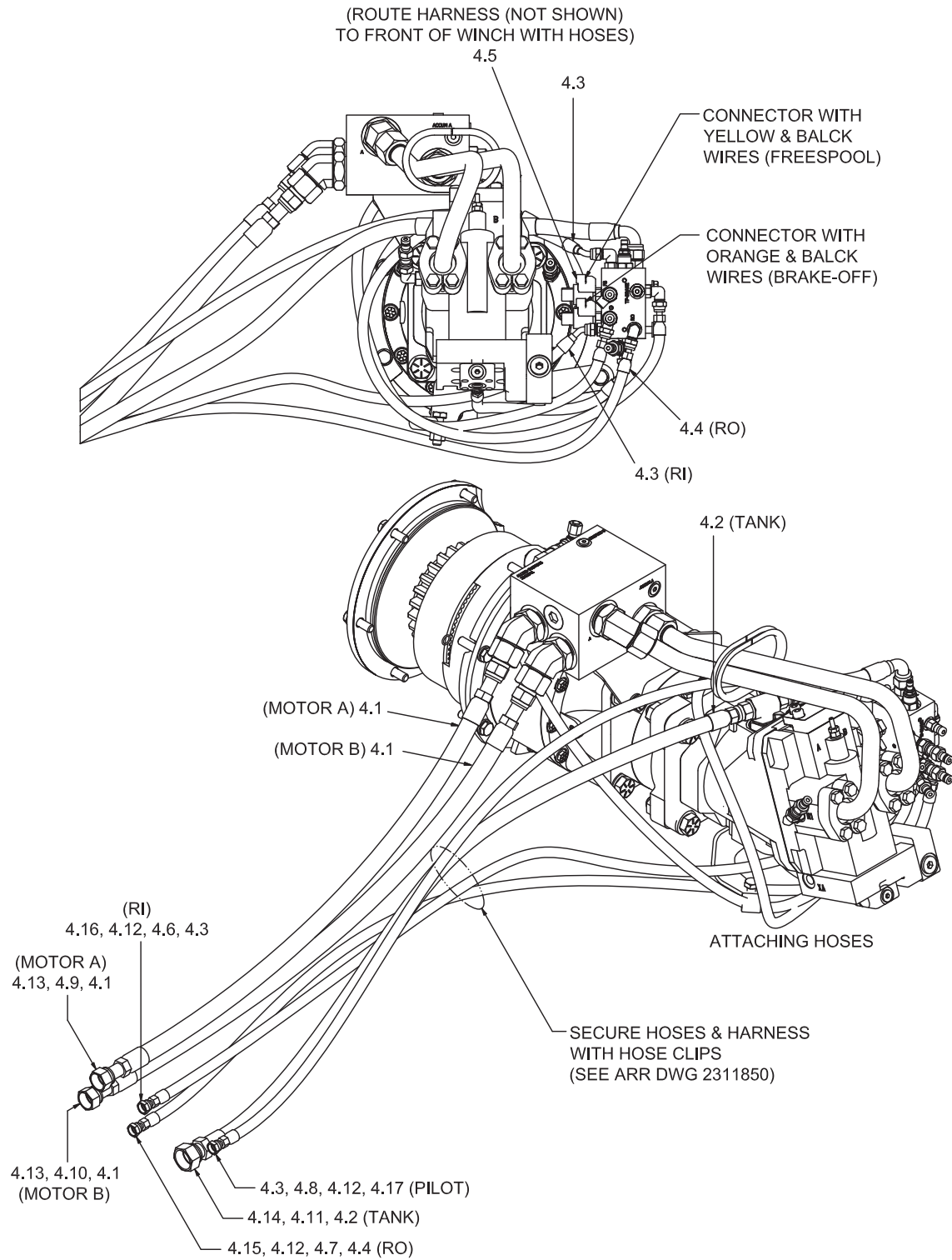
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Internal Hydraulic Group

H6HT (Standard) Winch
 Komatsu D61-23 (K471) with Freespool
 Page 1 of 3



Internal Hydraulic Group
 H6HT (Standard) Winch
 Komatsu D61-23 (K471) with Freespool
 Page 2 of 3

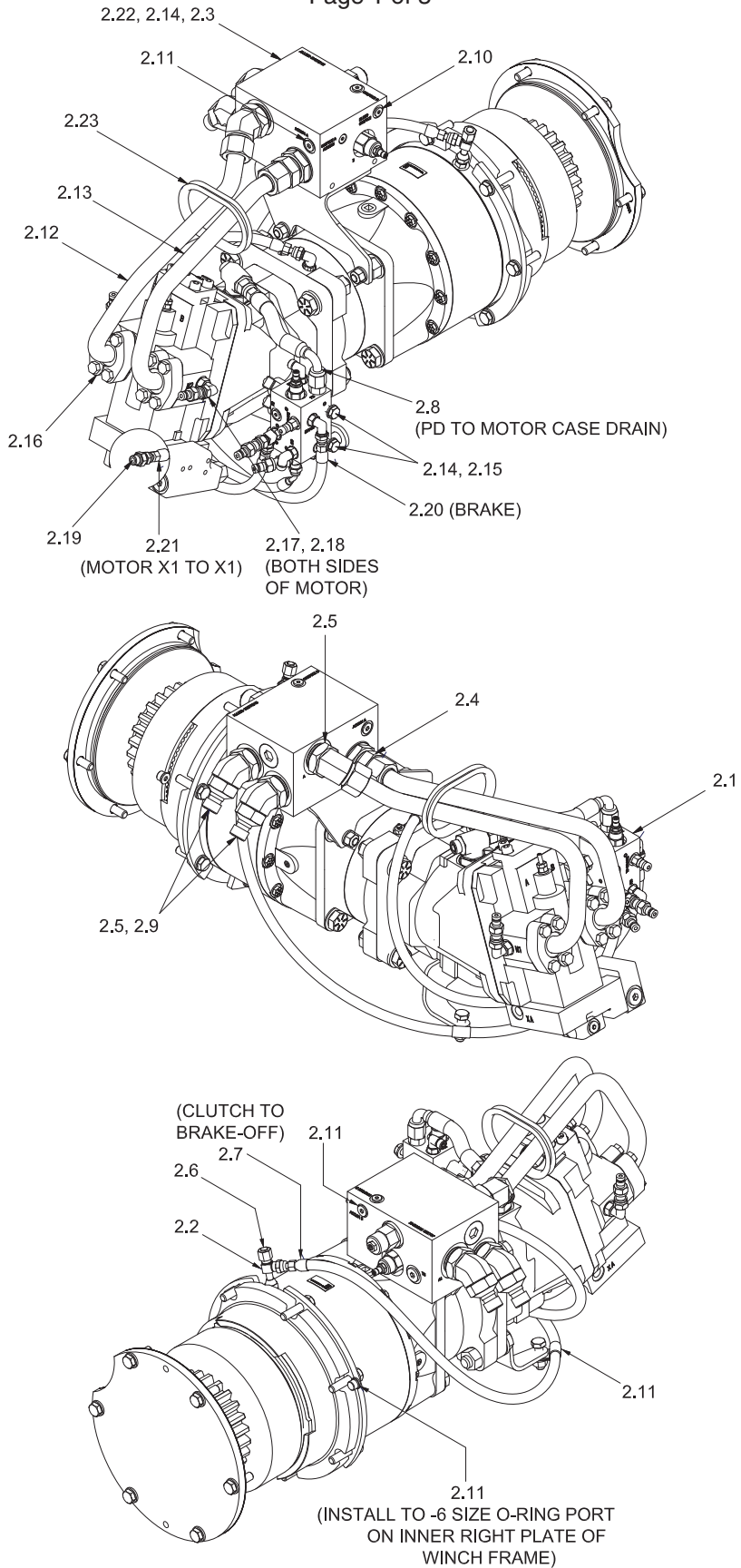


Internal Hydraulic Group
H6HT (Standard) Winch
Komatsu D61-23 (K471) with Freespool
Page 3 of 3

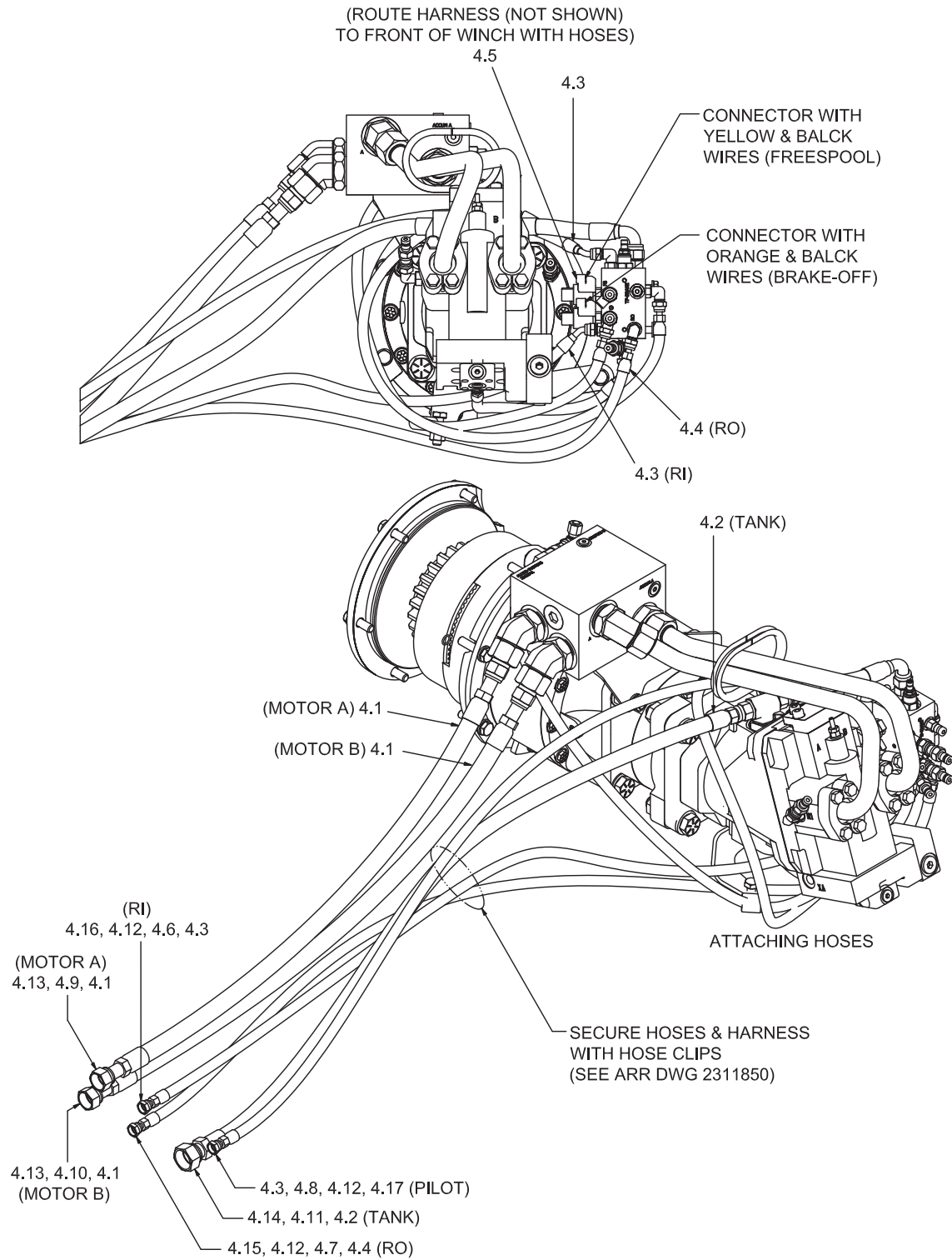
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	3.11	229383	Fitting	2
1.2	296420W	Washer	4	3.12	*b 2312069	Assembly, Tube - Motor A	1
1.3	229448	Kit, Split Flange	2		*c 2314162	Assembly, Tube - Motor A	1
1.4	2307625W	Coupler, Quick Male	2	3.13	*b 2312095	Assembly, Tube - Motor B	1
1.5	R833253	Fitting	2		*c 2314690	Assembly, Tube - Motor B	1
1.7	R834100	Fitting	1				
1.8	15178W	Washer	1	4.1	*a 2313047	Assembly, Hose	2
1.9	211564	O-Ring	1	4.2	*a 2313046	Assembly, Hose	1
1.10	R833103	Fitting	1	4.3	*a R12024	Assembly, Hose	2
1.11	231439	Fitting	1	4.4	*a 2311493	Assembly, Hose	1
1.14	*a 2311353	Assembly, Hose	1	4.5	2313029	Harness, Winch Wire (Not Shown)	1
1.15	*a 2312350	Assembly, Hose	1	4.6	2307238W	Label, RO	1
1.16	*a 2312878	Assembly, Hose	1	4.7	2307239W	Label, RI	1
1.17	*a 2312212	Assembly, Hose	1	4.8	2307241W	Label, Pilot	1
1.18	15176W	Washer	2	4.9	2310919	Label, Motor A	1
1.21	24257	Trim, Edge	1.08 ft	4.10	2310920	Label, Motor B	1
				4.11	2307242W	Label, Tank	1
3.1	2313043	Assembly, Control Manifold (3-87)	1	4.12	R834200	Fitting	3
3.2	236855	Fitting	1	4.13	R834203	Fitting	2
3.3	2314242	Assembly, Manifold (3-108)	1	4.14	R834204	Fitting	1
3.4	*b R833133	Fitting	1	4.15	242596	Tie, Cable (Orange)	1
	*c 2313948	Fitting	1	4.16	242597	Tie, Cable (Yellow)	1
3.5	R833218	Fitting	3	4.17	242598	Tie, Cable Green)	1
3.6	232984	Fitting	1				
3.7	*a 2312351	Assembly, Hose	1		*a	Included in Hose Kit 2314771	
3.8	*a 2313045	Assembly, Hose	1		*b	Last Used on S/N H6H-1496	
3.9	2307104W	Fitting	2		*c	First Used on S/N H6H-1497	
3.10	235387	Fitting	1				

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Internal Hydraulic Group
 H6HT (Standard) Winch
 Komatsu D61-23 (K471) without Freespool
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Internal Hydraulic Group
 H6HT (Standard) Winch
 Komatsu D61-23 (K471) without Freespool
 Page 2 of 3



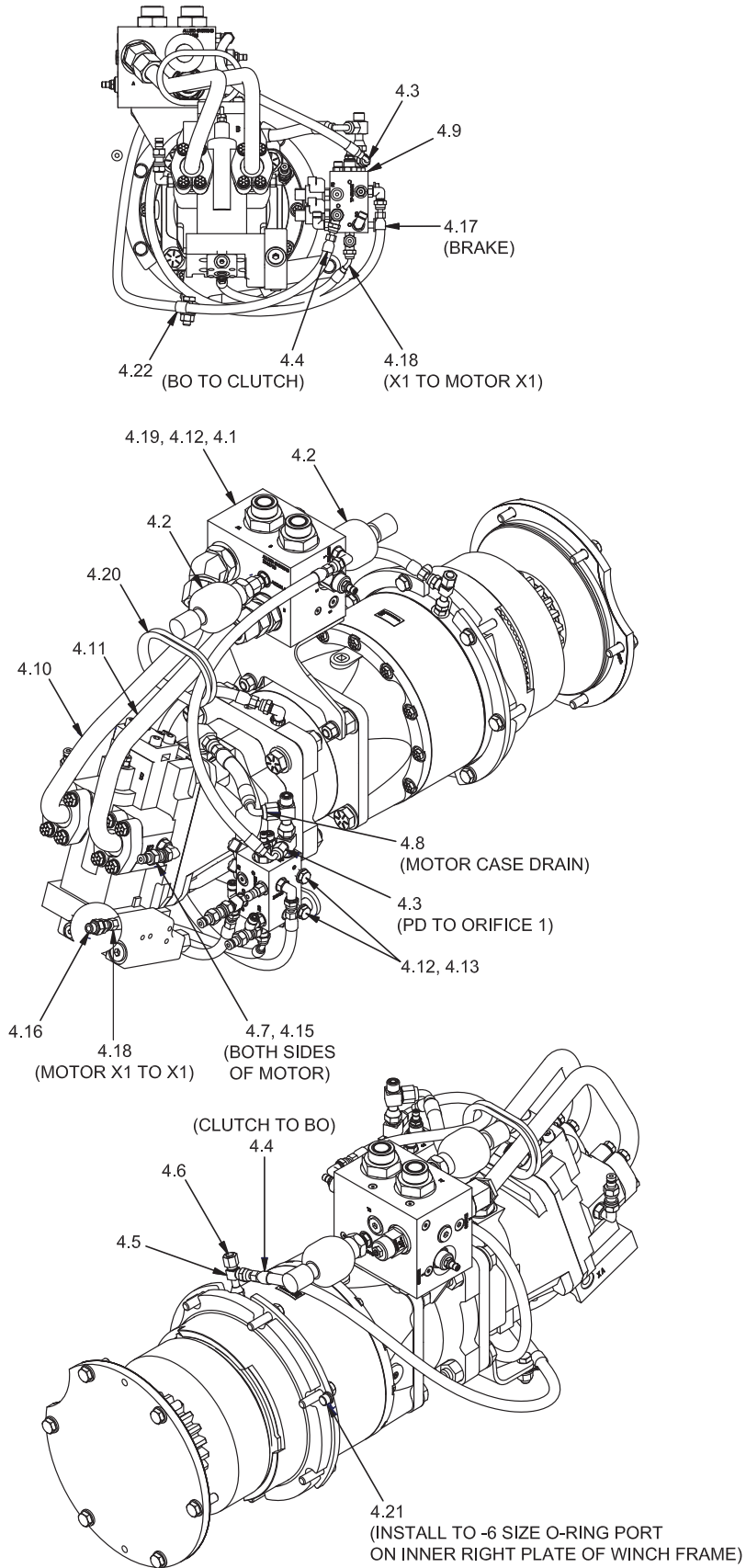
Internal Hydraulic Group
H6HT (Standard) Winch
Komatsu D61-23 (K471) without Freespool
Page 3 of 3

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	2314507	Assembly, Control Manifold (3-94)	1	4.1	*a 2313047	Assembly, Hose	2
2.2	236855	Fitting	1	4.2	*a 2313046	Assembly, Hose	1
2.3	2314242	Assembly, Manifold (3-108)	1	4.3	*a R12024	Assembly, Hose	2
2.4	2313948	Fitting	1	4.4	*a 2311493	Assembly, Hose	1
2.5	R833218	Fitting	3	4.5	2313029	Harness, Winch Wire (Not Shown)	1
2.6	232984	Fitting	1	4.6	2307238W	Label, RO	1
2.7	*a 2312351	Assembly, Hose	1	4.7	2307239W	Label, RI	1
2.8	*a 2313045	Assembly, Hose	1	4.8	2307241W	Label, Pilot	1
2.9	2307104W	Fitting	2	4.9	2310919	Label, Motor A	1
2.10	235387	Fitting	1	4.10	2310920	Label, Motor B	1
2.11	229383	Fitting	2	4.11	2307242W	Label, Tank	1
2.12	2314162	Assembly, Tube - Motor A	1	4.12	R834200	Fitting	3
2.13	2314690	Assembly, Tube - Motor B	1	4.13	R834203	Fitting	2
2.14	Y09C-M1025	Capscrew	4	4.14	R834204	Fitting	1
2.15	296420W	Washer	4	4.15	242596	Tie, Cable (Orange)	1
2.16	229448	Kit, Split Flange	2	4.16	242597	Tie, Cable (Yellow)	1
2.17	2307625W	Coupler, Quick Male	2	4.17	242598	Tie, Cable Green)	1
2.18	R833253	Fitting	2				
2.19	R833103	Fitting	1		*a	Included in Hose Kit 2315052	
2.20	*a 2312353	Assembly, Hose	1				
2.21	*a 2312878	Assembly, Hose	1				
2.22	15176W	Washer	2				
2.23	24257	Trim, Edge	1.08 ft				
2.24	R13807642	Clip, Insulation	1				

Internal Hydraulic Group

H6HT (Standard) Winch, Standard Hydraulics
Komatsu D65-16/17 (K49)

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Internal Hydraulic Group

H6HT (Standard) Winch

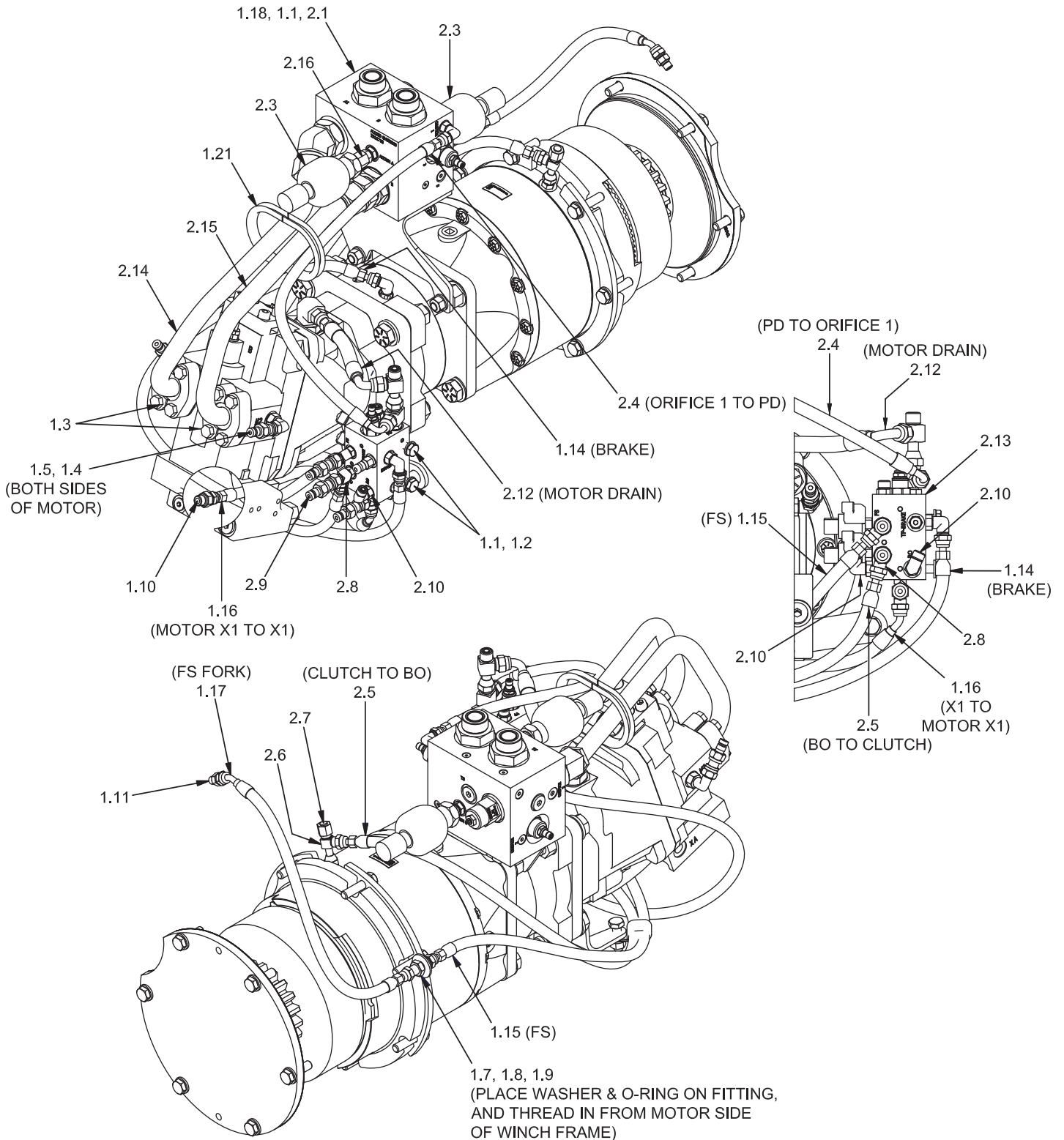
Komatsu D61-23 (K471)

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
4.1	*b 2312816	Assembly, Counterbalance Relief (CBR) Manifold (3-96)	1	4.12	Y09C-M1025	Capscrew	4
	*c 2314692	Assembly, Counterbalance Relief (CBR) Manifold (3-100)	1	4.13	296420W	Washer	2
4.2	2312268	Accumulator	2	4.14	229448	Kit, Split Flange	2
4.3	*a 2312357	Assembly, Hose	1	4.15	R833253	Fitting	2
4.4	*a 2312351	Assembly, Hose	1	4.16	R833103	Fitting	1
4.5	236855	Fitting	1	4.17	*a 2312353	Assembly, Hose	1
4.6	232984	Fitting	1	4.18	*a 2342878	Assembly, Hose	1
4.7	2307625W	Coupler, Quick Male	2	4.19	221767W	Washer	2
4.8	*a 2312358	Assembly, Hose	1	4.20	24257	Trim, Edge	1.08 ft
4.9	2314490	Assembly, Control Manifold (3-93)	1	4.21	229383	Fitting	1
4.10	*b 2312069	Assembly, Tube - Motor A	1	4.22	R13807642	Clip, Insulation	1
	*c 2314162	Assembly, Tube - Motor A	1	4.23	*c 2314959	Fitting	1
4.11	*b 2312095	Assembly, Tube - Motor B	1		*a	Included in Hose Kit 2314774	
	*c 2314690	Assembly, Tube - Motor B	1		*b	Last Used on S/N H6H-1496	
					*c	First Used on S/N H6H-1497	

Internal Hydraulic Group

H6HT (Standard) Winch, FREESPOOL Hydraulics
Komatsu D65-16/17 (K49)



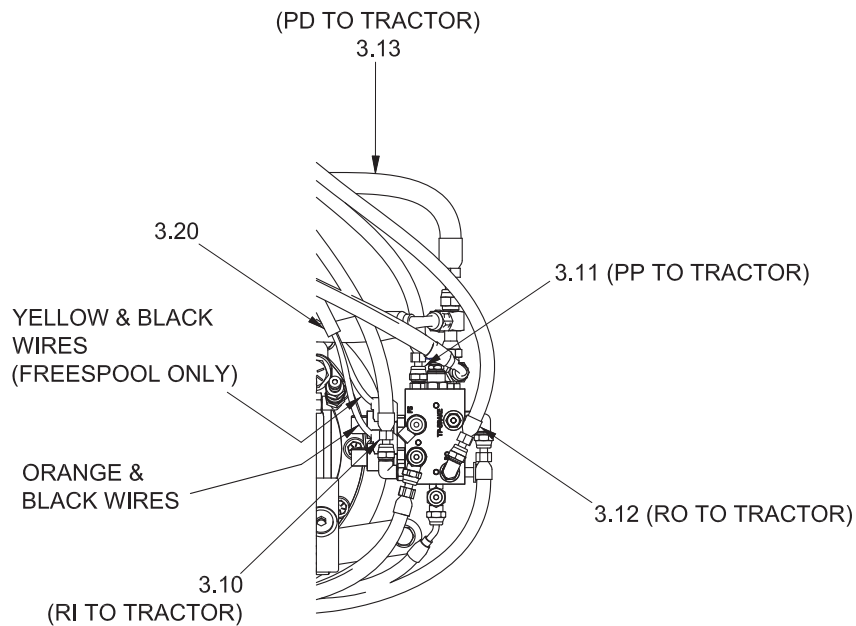
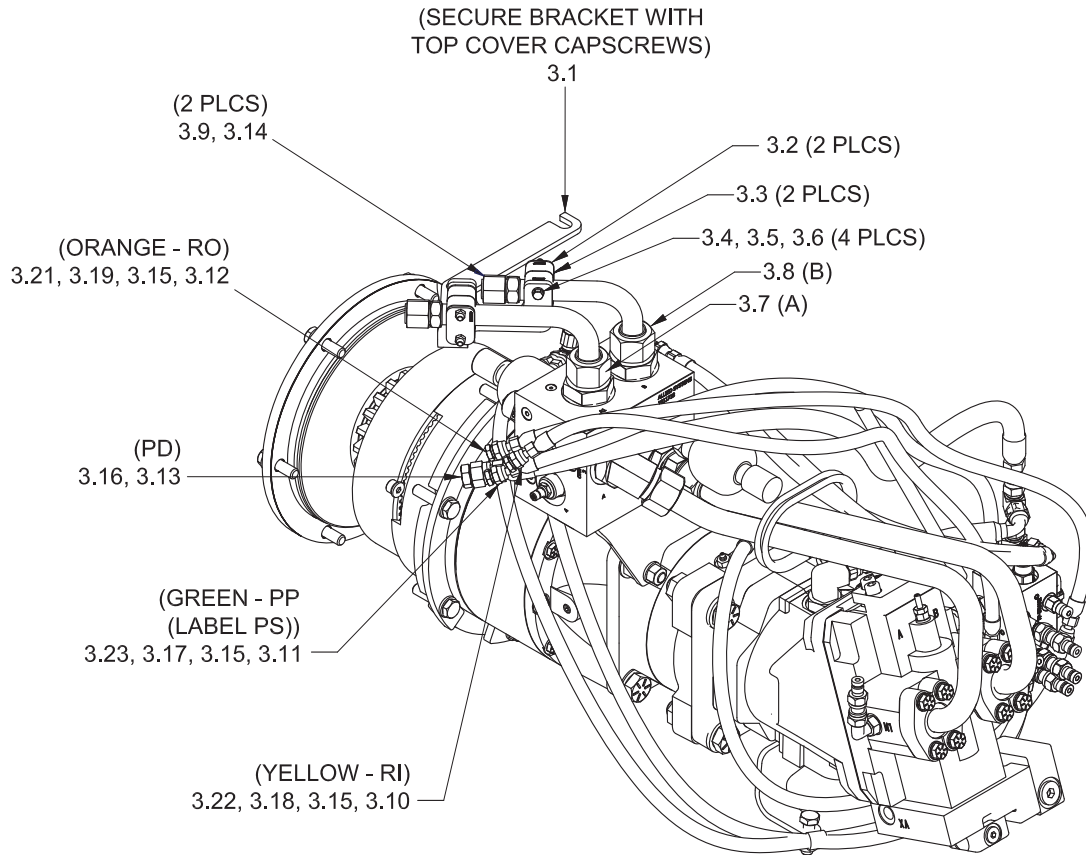
Internal Hydraulic Group
H6HT (Standard) Winch, FREESPOOL Hydraulics
Komatsu D65-16/17 (K49)
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	2.1	*b 2312816	Assembly, Counterbalance Relief (CBR) Manifold (3-96)	1
1.2	296420W	Washer	2				
1.3	229448	Kit, Split Flange	2		*c 2314692	Assembly, Counterbalance Relief (CBR) Manifold (3-100)	1
1.4	2307625W	Coupler, Quick Male	2	2.3	2312268	Accumulator	2
1.5	R833253	Fitting	2	2.4	*a 2312357	Assembly, Hose	1
1.7	R834100	Fitting	1	2.5	*a 2312351	Assembly, Hose	1
1.8	15178W	Washer	1	2.6	236855	Fitting	1
1.9	211564	O-Ring	1	2.7	232984	Fitting	1
1.10	R833103	Fitting	1	2.8	R833400	Fitting	1
1.11	231439	Fitting	1	2.9	2307625W	Coupler, Quick Male	1
1.14	*a 2312353	Assembly, Hose	1	2.10	R833251	Fitting	2
1.15	*a 2312350	Assembly, Hose	1	2.12	*a 2312358	Assembly, Hose	1
1.16	*a 2312878	Assembly, Hose	1	2.13	2312908	Assembly, Control Manifold; (3-86)	1
1.17	*a 2312212	Assembly, Hose	1	2.14	*b 2312069	Assembly, Tube - Motor B	1
1.18	221767W	Washer	2		*c 2314162	Assembly, Tube - Motor B	1
1.21	24257	Trim, Edge	13 in.	2.15	*b 2312095	Assembly, Tube - Motor A	1
1.22	2312628	Clamp, Insulation (Not Shown)	1		*c 2314690	Assembly, Tube - Motor A	1
				2.16	*c 2314959	Fitting	1
					*a	Included in Hose Kit 2314774	
					*b	Last Used on S/N H6H-1496	
					*c	First Used on S/N H6H-1497	

Internal Hydraulic Group

H6HT (Standard) Winch, Attaching Hydraulics
Komatsu D65-16/17 (K49)

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CONTROL VALVE DETAIL

Internal Hydraulic Group

H6HT (Standard) Winch, Attaching Hydraulics

Komatsu D65-16/17 (K49)

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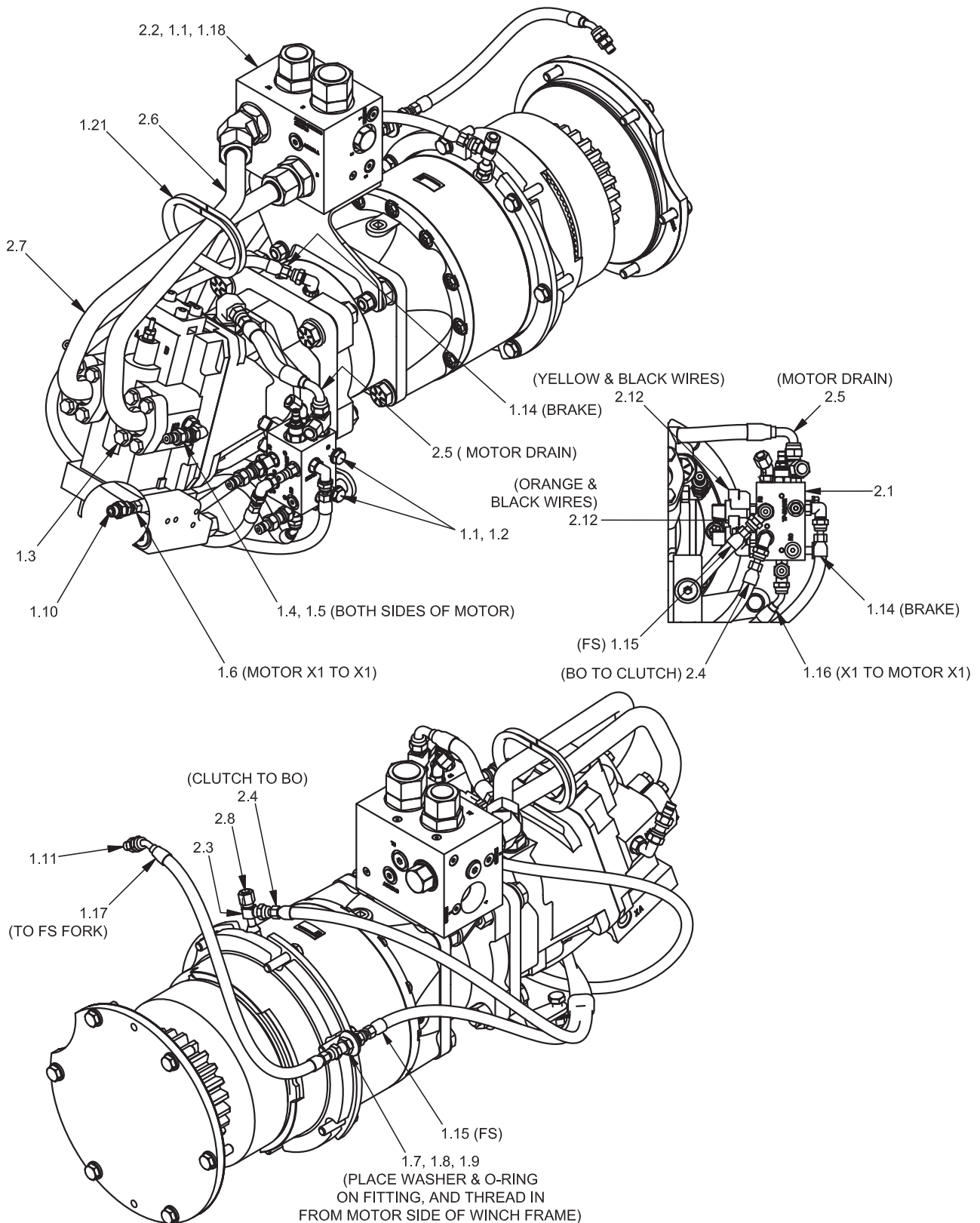
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1	2312485	Bracket, Tube Support	1	3.14	R834254	Fitting	2
3.2	2312323	Plate, Cover	4	3.15	R834200	Fitting	3
3.3	2312319	Clamp Body, Tube	2	3.16	232960	Fitting	1
3.4	2312324	Capscrew	4	3.17	2306152W	Label, PS	1
3.5	302399W	Nut	4	3.18	2307239W	Label, RI	1
3.6	296417W	Washer	4	3.19	2307238W	Label, RO	1
3.7	2312318	Tube, Manifold-A To Tractor	1	3.20	2312339	Harness, Winch Wire	1
3.8	2312317	Tube, Manifold-B To Tractor	1	3.21	242596	Tie, Cable (Orange)	1
3.9	118389W	O-Ring	2	3.22	242597	Tie, Cable (Yellow)	1
3.10	*a 2312353	Assembly, Hose	1	3.23	242598	Tie, Cable (Green)	1
3.11	*a 2312355	Assembly, Hose	1				
3.12	*a 2312350	Assembly, Hose	1				
3.13	*a 2312356	Assembly, Hose	1				
				*a	Included in Hose Kit 2314774		

Internal Hydraulic Group

H6HT (Standard) Winch

Tigercat 635D (Y44)

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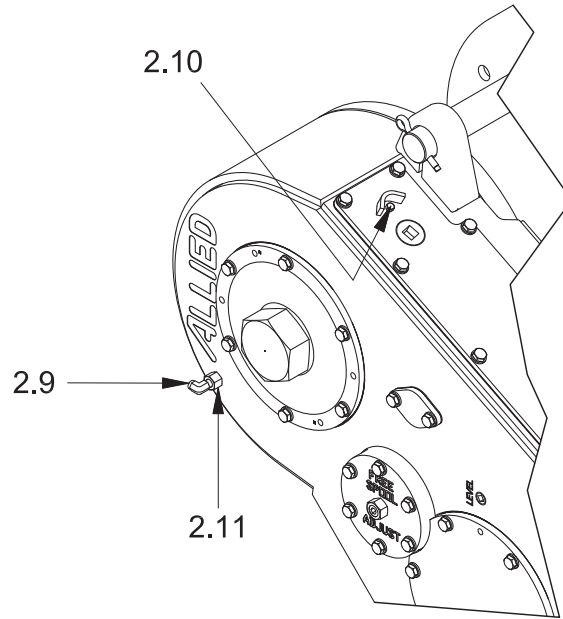


Internal Hydraulic Group

H6HT (Standard) Winch

Tigercat 635D (Y44)

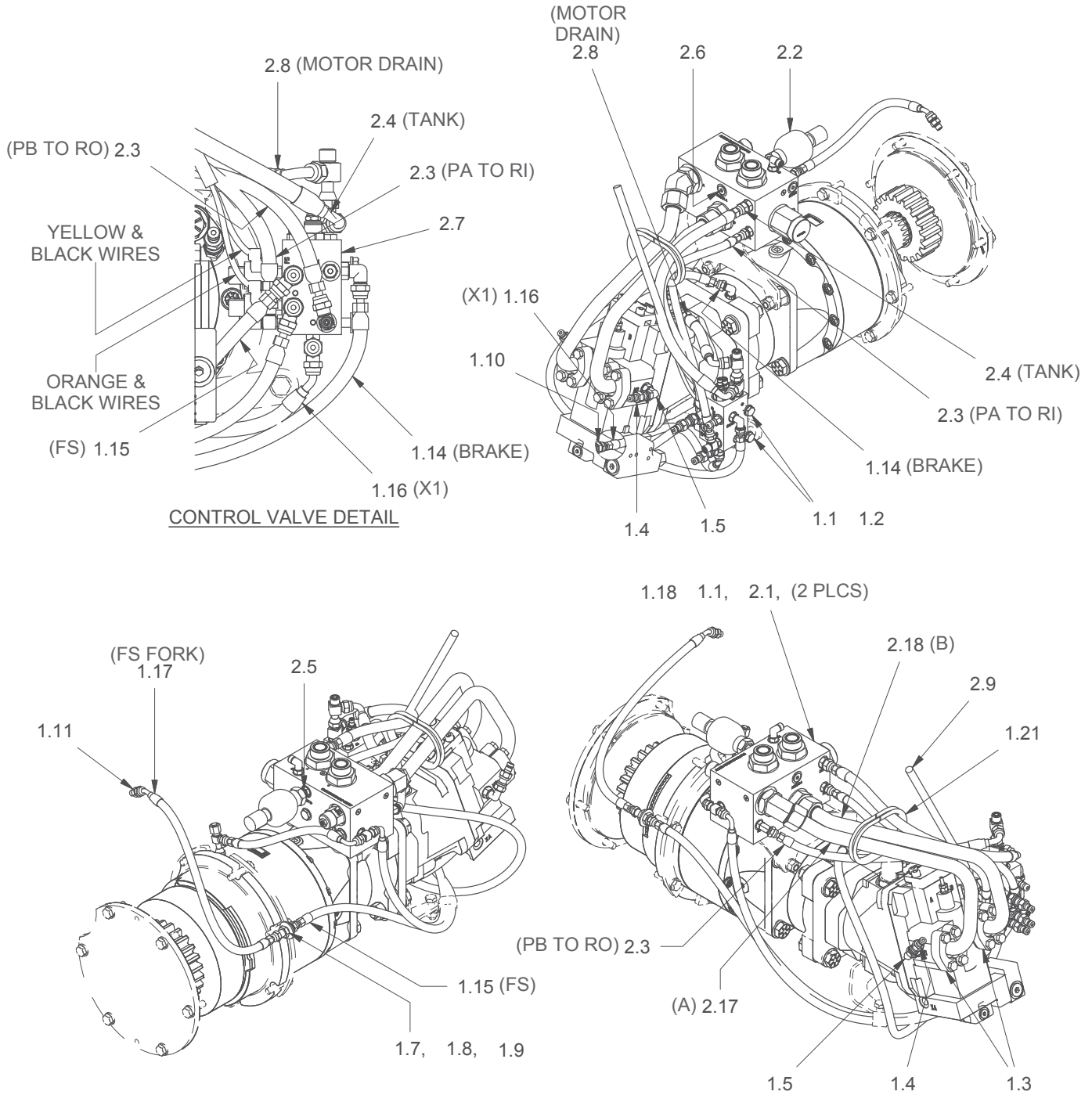
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Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	2.1	2313735	Assembly, Control Manifold (3-90)	1
1.2	296420W	Washer	2	2.2	2313737	Assembly, Counterbalance Relief (CBR) Manifold (3-98)	1
1.3	229448	Kit, Split Flange	2	2.3	236855	Fitting	1
1.4	2307625W	Coupler, Quick Male	2	2.4	*a 2312351	Assembly, Hose	1
1.5	R833253	Fitting	2	2.5	*a 2313738	Assembly, Hose	1
1.7	R834100	Fitting	1	2.6	2313720	Assembly, Tube - Motor B	1
1.8	15178W	Washer	1	2.7	2313719	Assembly, Tube - Motor A	1
1.9	211564	O-Ring	1	2.8	232984	Fitting	1
1.10	R833103	Fitting	1	2.9	2313742	Fitting	1
1.11	231439	Fitting	1	2.10	209511	Fitting	1
1.14	*a 2312353	Assembly, Hose	1	2.11	209502	Fitting	1
1.15	*a 2312350	Assembly, Hose	1	2.12	2313812	Harness, Winch Wire	1
1.16	*a 2312878	Assembly, Hose	1				
1.17	*a 2312212	Assembly, Hose	1				
1.18	15176W	Washer	2				
1.21	24257	Trim, Edge	1				
				*a	Included in Hose Kit 2314776		

Internal Hydraulic Group

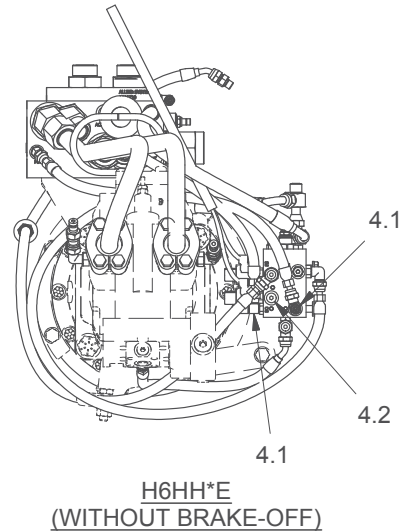
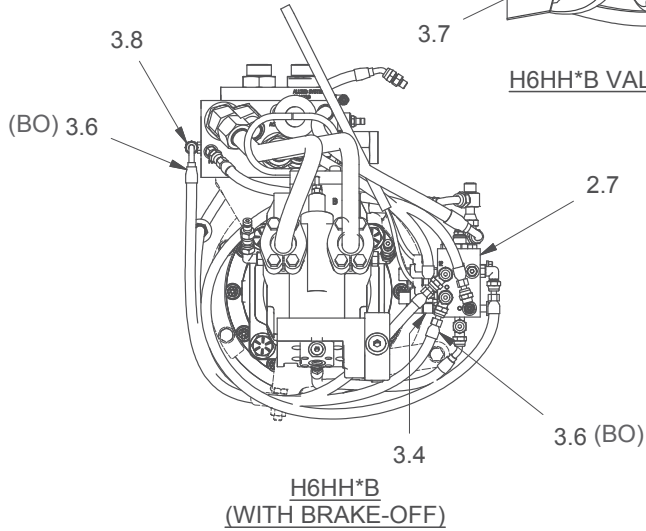
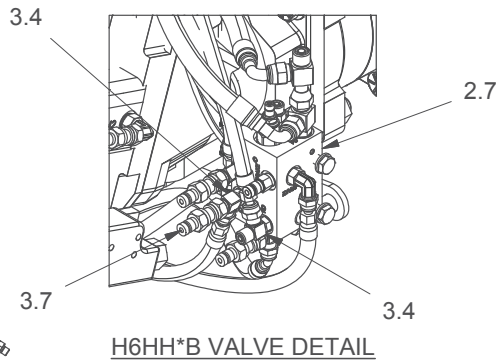
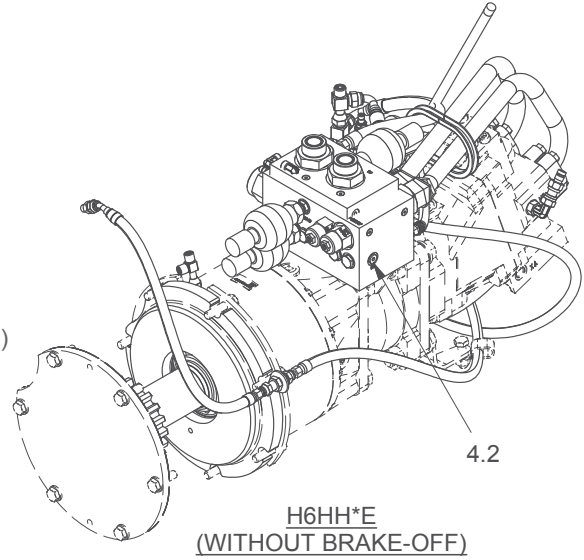
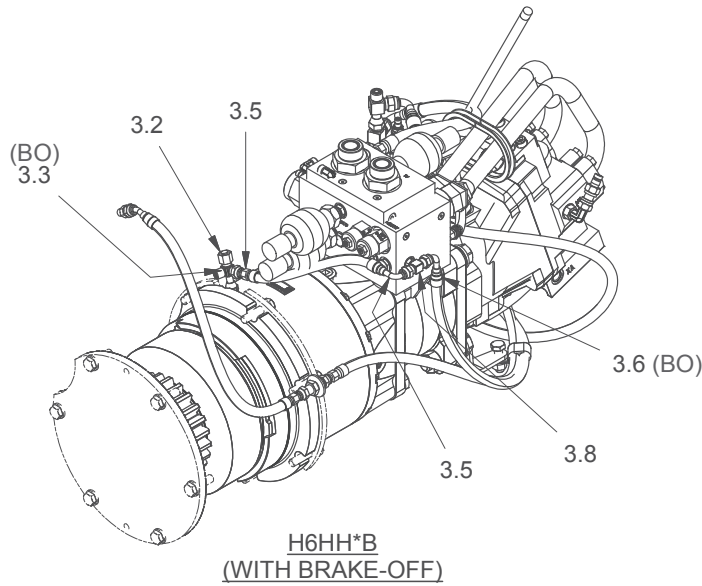
H6HH (High Performance) Winch
 John Deere 750J (E48)/850J (E47)
 John Deere 750J/850J, and 750K/850K (E460)
 Page 1 of 4



H6HH*BNE460 WITHOUT FREESPOOL

Internal Hydraulic Group

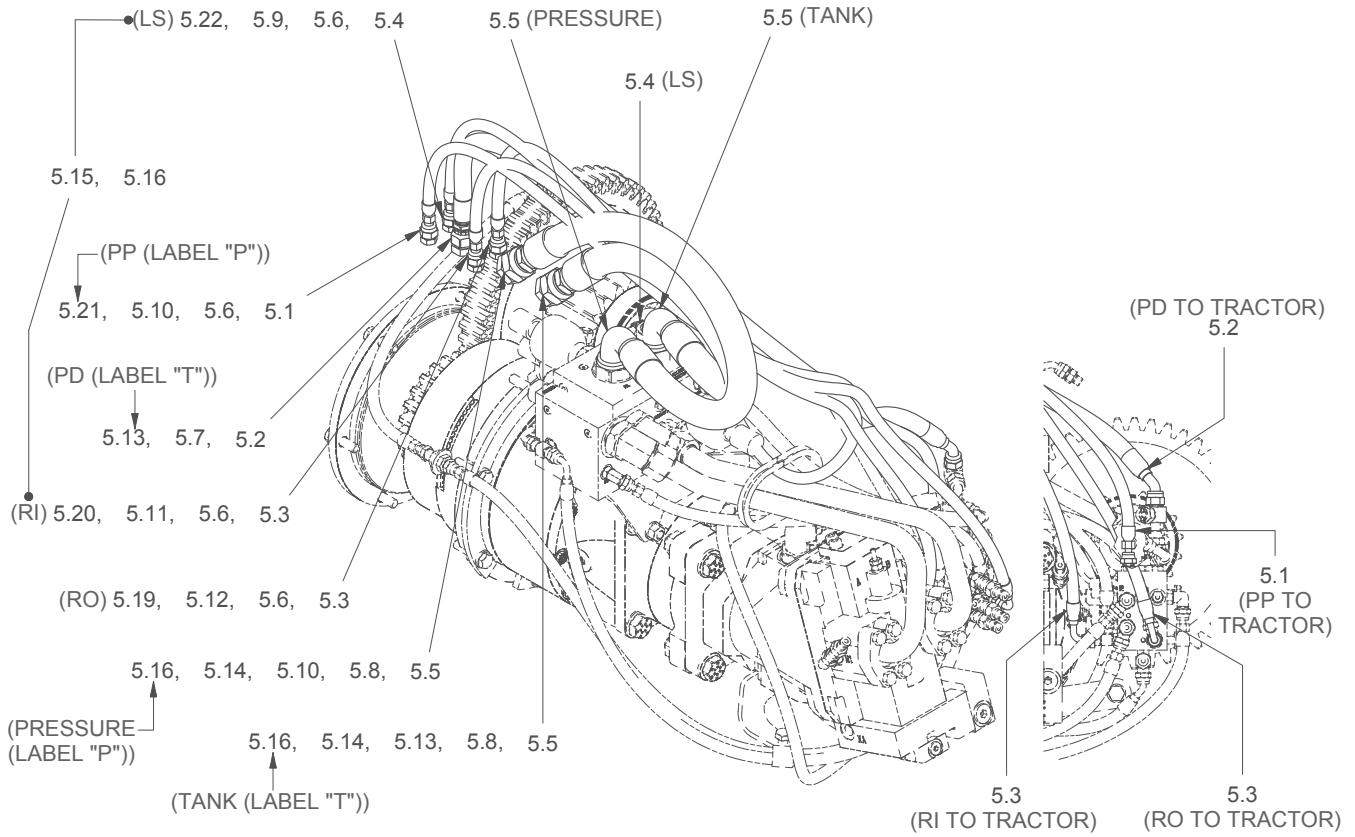
H6HH (High Performance) Winch
John Deere 750J (E48)/850J (E47)
John Deere 750J/850J, and 750K/850K (E460)
Page 2 of 4



H6HH**E460 WITH FREESPOOL

Internal Hydraulic Group

H6HH (High Performance) Winch
 John Deere 750J (E47)/850J (E48)
 John Deere 750J/850J, and 750K/850K (E460)
 Page 3 of 4



E460 INSTALLATION HOSES

H6HH**E460 WITH FREESPOOL

Internal Hydraulic Group

H6HH (High Performance) Winch
 John Deere 750J (E47)/850J (E48)
 John Deere 750J/850J, and 750K/850K (E460)
 Page 4 of 4

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	3.2	232984	Fitting	1
1.2	296420W	Washer	2	3.3	236855	Fitting	1
1.3	229448	Kit, Split Flange	2	3.4	R833400	Fitting	3
1.4	2307625W	Coupler, Quick Male	2	3.5	*a 236895	Assembly, Hose	1
1.5	R833253	Fitting	2	3.6	*a 2312352	Assembly, Hose	4
1.7	R834100	Fitting	1	3.7	2307625W	Coupler, Quick Male	1
1.8	15178W	Washer	1	3.8	R833351	Fitting	1
1.9	211564	O-Ring	1				
1.10	R833103	Fitting	1	4.1	R833400	Fitting	2
1.11	231439	Fitting	1	4.2	235387	Fitting	2
1.14	*a 2311353	Assembly, Hose	1				
1.15	*a 2312350	Assembly, Hose	1	5.1	*a 2312820	Assembly, Hose	1
1.16	*a 2312878	Assembly, Hose	1	5.2	*a 2312819	Assembly, Hose	1
1.17	*a 2312212	Assembly, Hose	1	5.3	*a 2311540	Assembly, Hose	2
1.18	15176W	Washer	2	5.4	*a R11601	Assembly, Hose	1
1.21	24257	Trim, Edge	13"	5.5	*a 2307041W	Assembly, Hose	2
				5.6	R834201	Fitting	4
2.1	*b 2312760	Assembly, Directional Manifold (3-104)	1	5.7	R834203	Fitting	1
	*c 2314687	Assembly, Directional Manifold (3-105)	1	5.8	R834205	Fitting	2
2.2	2312268	Accumulator	1	5.9	2307240W	Label, LS	1
2.3	*a 242374	Assembly, Hose	2	5.10	2311225	Label, P	2
2.4	*a 242144	Assembly, Hose	1	5.11	2307239W	Label, RI	1
2.5	229347	Fitting	1	5.12	2307238W	Label, RO	1
2.6	229383	Fitting	1	5.13	2306151W	Label, T	2
2.7	2312908	Assembly, Control Manifold (3-86)	1	5.14	R12577880	Sleeve	6'
2.8	*a 2312358	Assembly, Hose	1	5.15	R12577882	Sleeve	4'
2.9	2312339	Harness, Winch Wire	1	5.16	129563W	Clamp, Strap	6
2.17	*b 2312069	Assembly, Tube - Motor A	1	5.19	242596	Tie, Cable (Orange)	1
	*c 2314162	Assembly, Tube - Motor A	1	5.20	242597	Tie, Cable (Yellow)	1
2.18	*b 2312095	Assembly, Tube - Motor B	1	5.21	242598	Tie, Cable (Green)	1
	*c 2314690	Assembly, Tube - Motor B	1	5.22	242599	Tie, Cable (Blue)	1
				*a	Included in Hose Kit 2314770		
				*b	Last Used on S/N H6H-1496		
				*c	First Used on S/N H6H-1497		

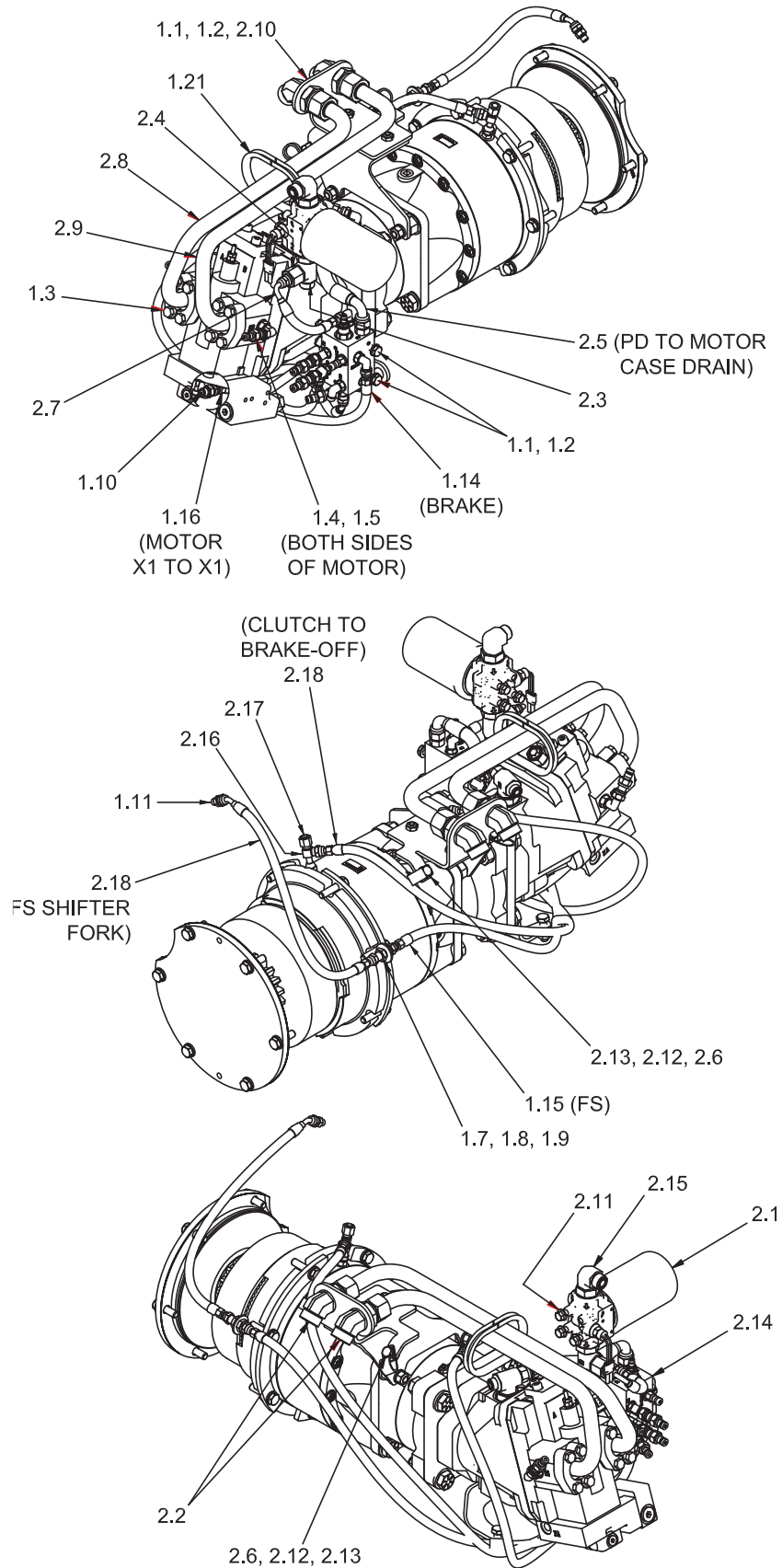
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Internal Hydraulic Group

H6HH (Hi-Performance) Winch

Komatsu D61-23 (K471)

Page 1 of 3

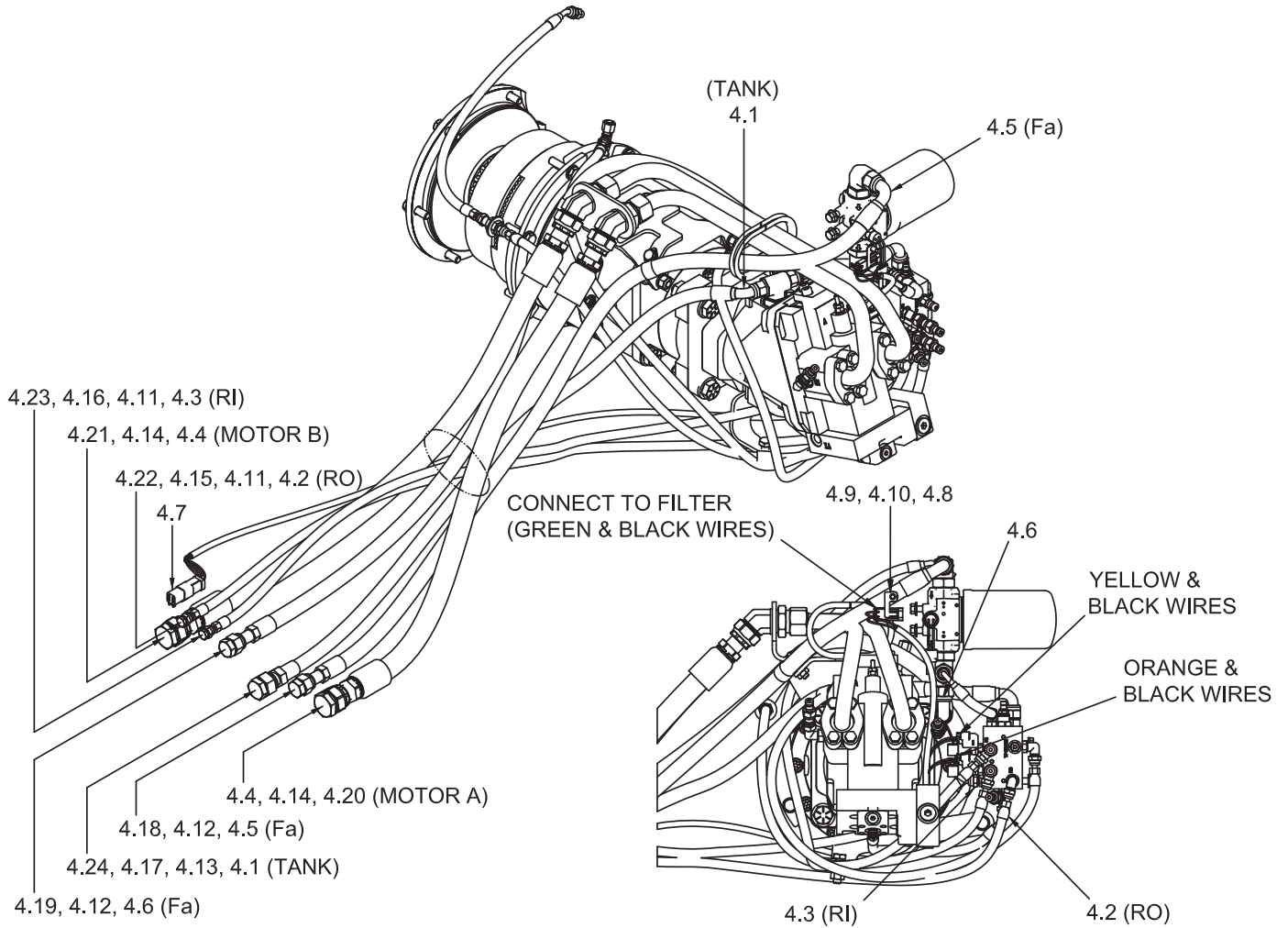


Internal Hydraulic Group

H6HH (Hi-Performance) Winch

Komatsu D61-23 (K471)

Page 2 of 3



Internal Hydraulic Group

H6HH (Hi-Performance) Winch

Komatsu D61-23 (K471)

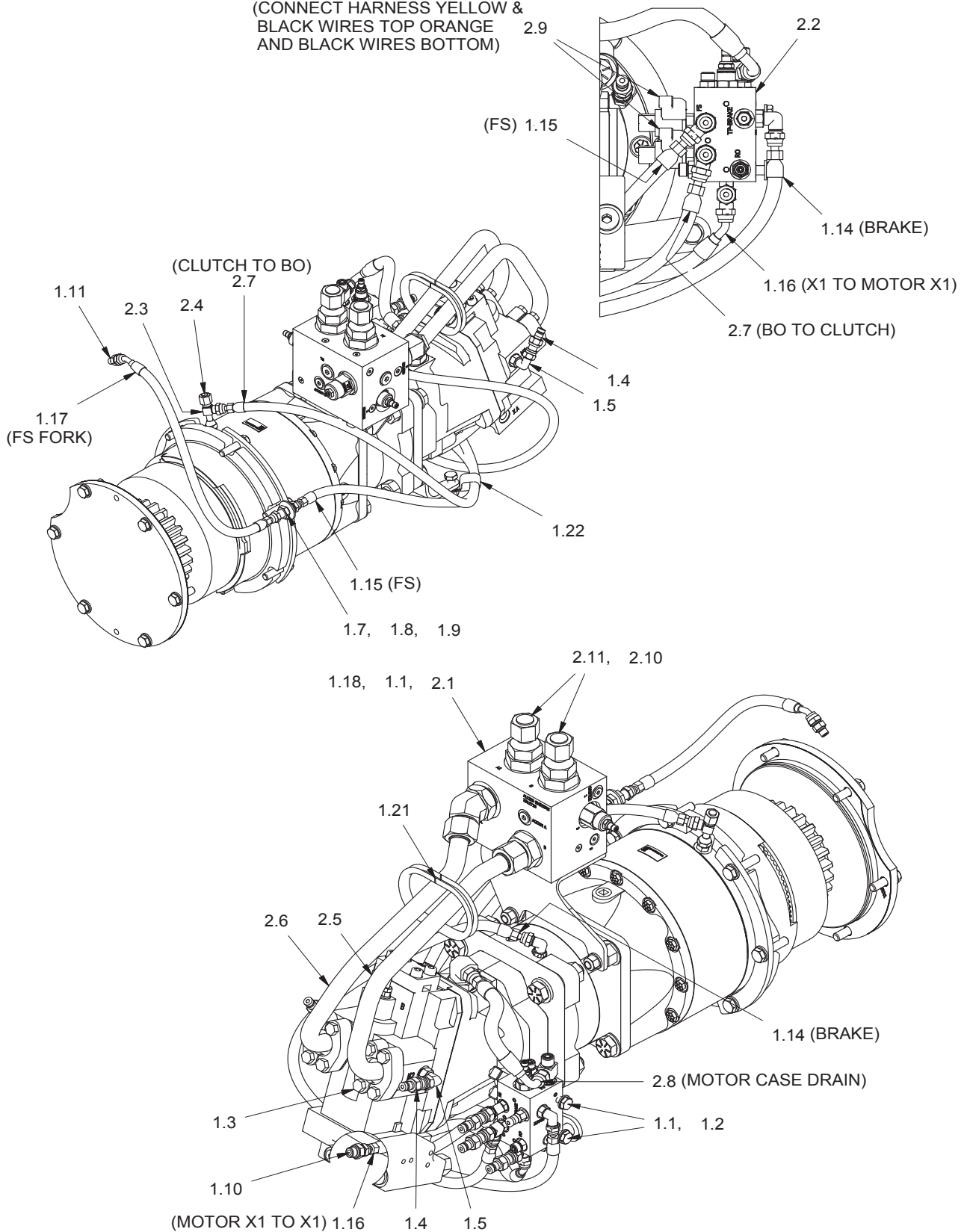
Page 3 of 3

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	2.14	2313043	Assembly, Control Manifold (3-87)	1
1.2	296420W	Washer	2	2.15	231459	Fitting	1
1.3	229448	Kit, Split Flange	2	2.16	236855	Fitting	1
1.4	2307625W	Coupler, Quick Male	2	2.17	232984	Fitting	1
1.5	R833253	Fitting	2	2.18	*a 2312351	Assembly, Hose	1
1.7	R834100	Fitting	1	4.1	*a 2312157	Assembly, Hose	1
1.8	15178W	Washer	1	4.2	*a 2310596	Assembly, Hose	1
1.9	211564	O-Ring	1	4.3	*a 2311541	Assembly, Hose	1
1.10	R833103	Fitting	1	4.4	*a 2314332	Assembly, Hose	2
1.11	231439	Fitting	1	4.5	*a 2313159	Assembly, Hose	1
1.14	*a 2312353	Assembly, Hose	1	4.6	*a 2313160	Assembly, Hose	1
1.15	*a 2312350	Assembly, Hose	1	4.7	2313115	Harness, Winch Wire	1
1.16	*a 2312878	Assembly, Hose	1	4.8	2311549	Clip, Harness Mounting	1
1.17	*a 2312212	Assembly, Hose	1	4.9	296418W	Washer	1
1.21	24257	Trim, Edge	1	4.10	296164W	Capscrew	1
2.1	2304111W	Assembly, Filter	1	4.11	R834200	Fitting	2
	2304112W	. Element, Filter	1	4.12	R834203	Fitting	2
	2304862W	. Switch, Pressure	1	4.13	R334204	Fitting	1
	2305132W	. Head, Filter	1	4.14	R834205	Fitting	2
2.2	272-0353	Fitting	2	4.15	2307238W	Label, RO	1
2.3	2313111	Fitting	1	4.16	2307239W	Label, RI	1
2.4	2313112	Fitting	1	4.17	2307242W	Label, Tank	1
2.5	*a 2313045	Assembly, Hose	1	4.18	2306157W	Label, Fe	1
2.6	R13808099	Clip, Insulation	2	4.19	2310918	Label, Fa	1
2.7	*a 2313161	Assembly, Hose	1	4.20	2310919	Label, Motor A	1
2.8	2313140	Assembly, Tube - Motor A	1	4.21	2310920	Label, Motor B	1
2.9	2313141	Assembly, Tube - Motor B	1	4.22	242596	Tie, Cable (Orange)	1
2.10	2313155	Bracket, Bulkhead	1	4.23	242597	Tie, Cable (Yellow)	1
2.11	134803W	Screw	3	4.24	242599	Tie, Cable (Blue)	1
2.12	296420W	Washer	2				
2.13	293628W	Capscrew	2		*a	Included in Hose Kit 2314772	

Internal Hydraulic Group

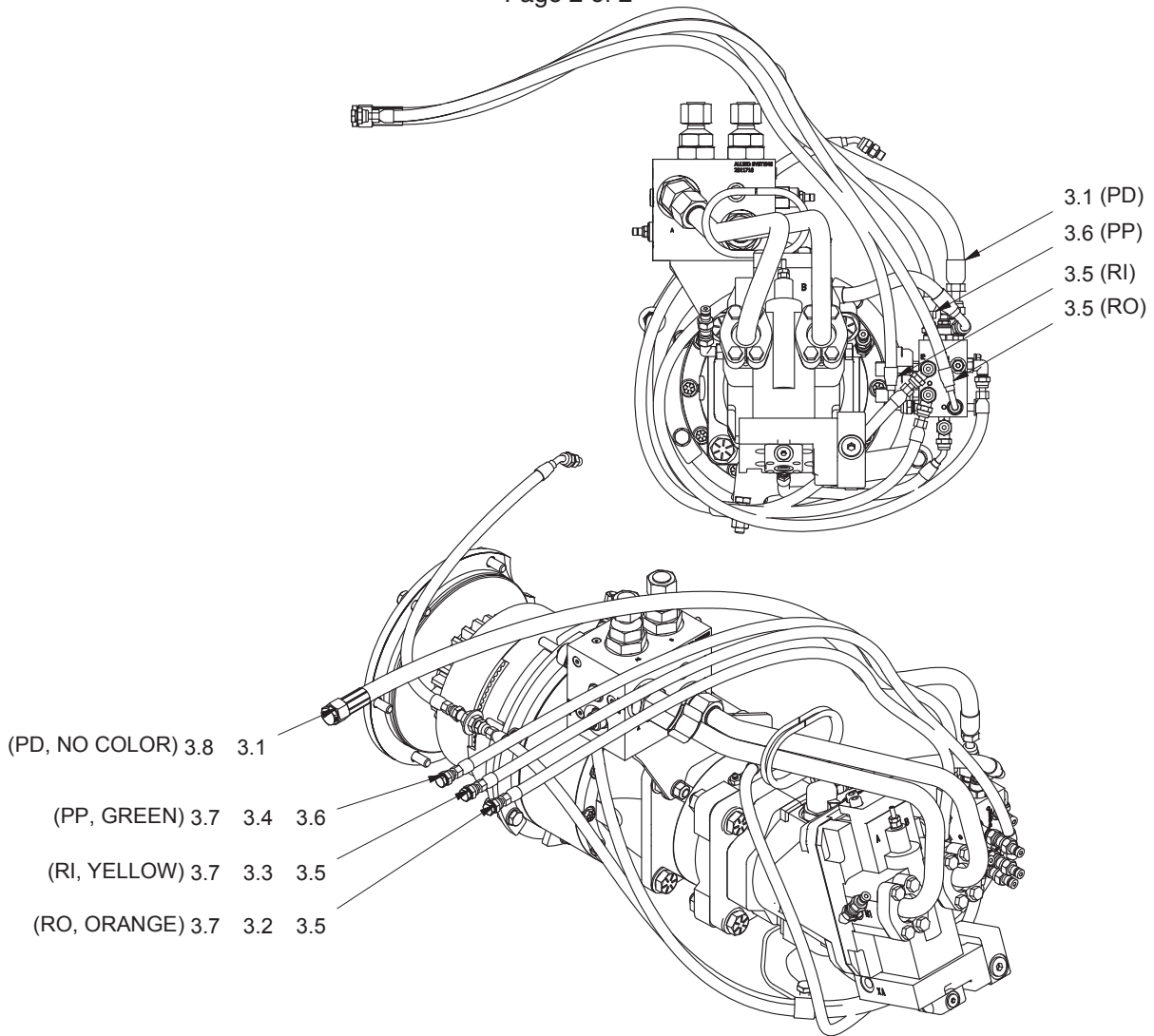
Liebherr PR724 (L41)
 H6H**BL41 With Freespool
 Page 1 of 2

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



Internal Hydraulic Group

Liebherr PR724 (L41)
H6H**BL41 With Freespool
Page 2 of 2



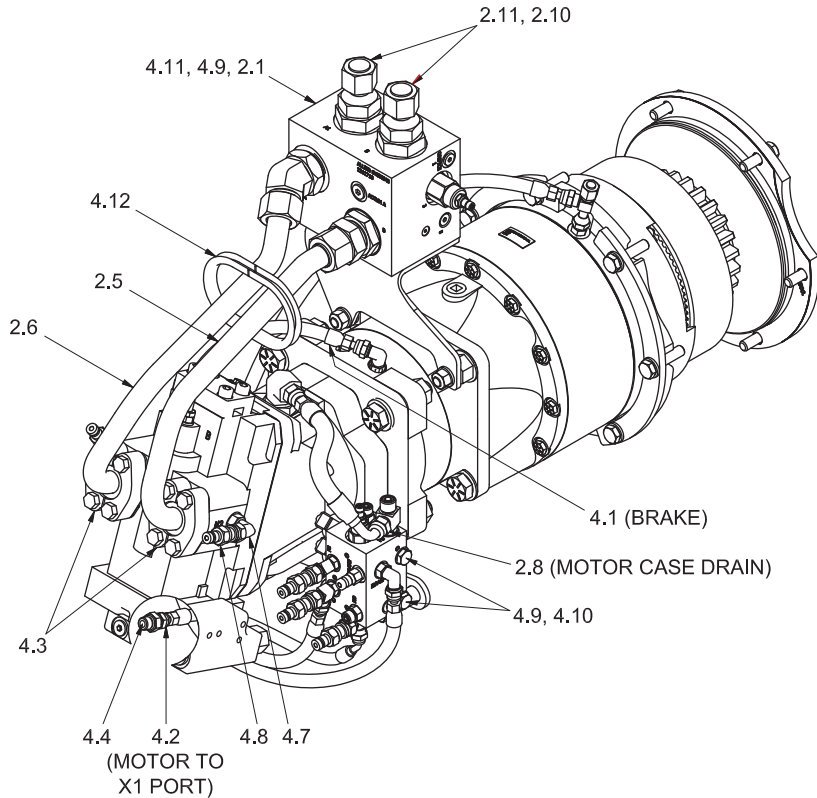
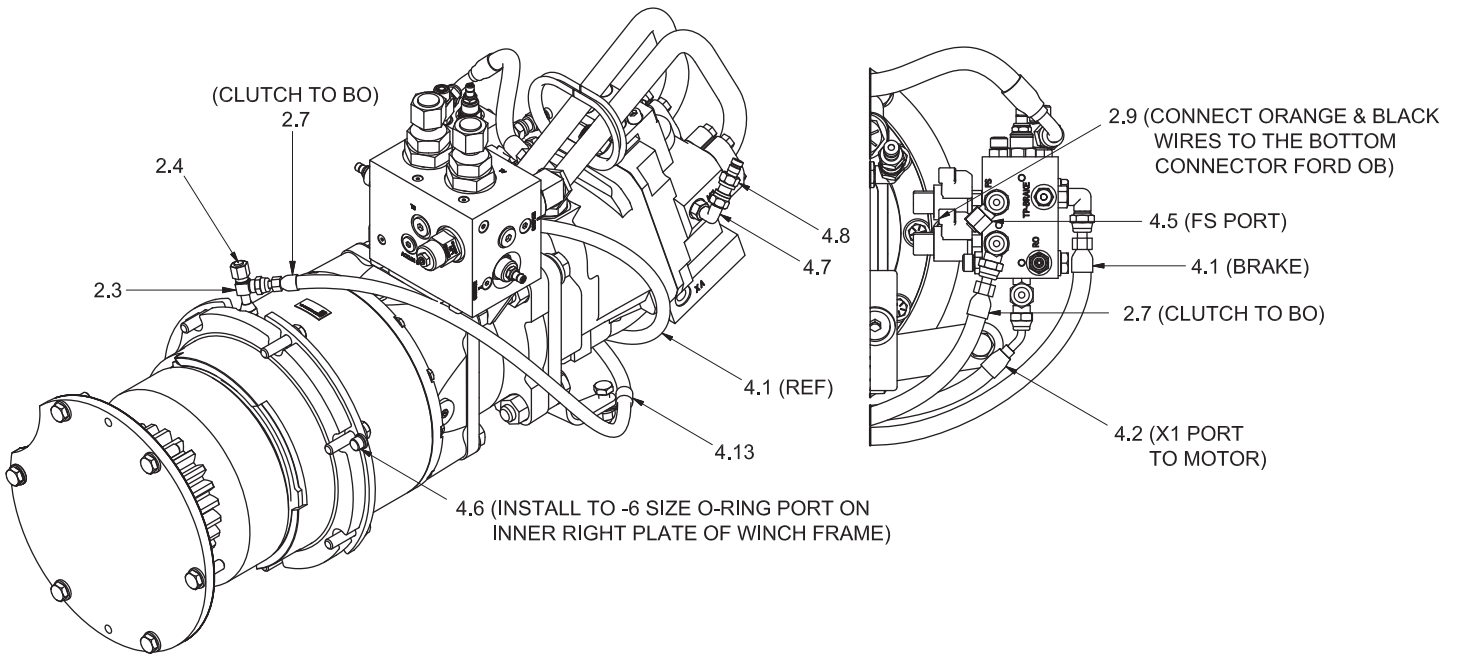
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.1	Y09C-M1025	Capscrew	4	2.5	*b 2312095	Assembly, Tube - Motor B	1
1.2	296420W	Washer	2		*c 2314690	Assembly, Tube - Motor B	1
1.3	229448	Kit, Split Flange	2	2.6	*b 2312069	Assembly, Tube - Motor A	1
1.4	2307625W	Coupler, Quick Male	2		*c 2314162	Assembly, Tube - Motor A	1
1.5	R833253	Fitting	2	2.7	*a 2312351	Assembly, Hose	1
1.7	R834100	Fitting	1	2.8	*a R12104	Assembly, Hose	1
1.8	15178W	Washer	1	2.9	2313680	Harness, Winch Wire	1
1.9	211564	O-Ring	1	2.10	234191	Fitting	2
1.10	R833103	Fitting	1	2.11	231821	Fitting	2
1.11	231439	Fitting	1	3.1	*a 2313626	Assembly, Hose	1
1.14	*a 2312353	Assembly, Hose	1	3.2	242596	Tie, Cable (Orange)	1
1.15	*a 2312350	Assembly, Hose	1	3.3	242597	Tie, Cable (Yellow)	1
1.16	*a 2312878	Assembly, Hose	1	3.4	242598	Tie, Cable (Green)	1
1.17	*a 2312212	Assembly, Hose	1	3.5	*a R11612	Assembly, Hose	2
1.18	221767W	Washer	2	3.6	*a 242264	Assembly, Hose	1
1.21	24257	Trim, Edge	1	3.7	R834200	Fitting	3
1.22	2312628	Clamp, Insulation	1	3.8	2313684	Plug	1
2.1	*b 2313616	Assembly, Manifold (3-107)	1		*a	Included in Hose Kit 2314775	
	*c 2314691	Assembly, Manifold (3-109)	1		*b	Last Used on S/N H6H-1496	
2.2	2313617	Assembly, Control Manifold (3-89)	1		*c	First Used on S/N H6H-1497	
2.3	236855	Fitting	1				
2.4	232984	Fitting	1				

Internal Hydraulic Group

Liebherr PR724 (L41)

H6H**BNL41 without Freespool

Page 1 of 2



Internal Hydraulic Group

Liebherr PR724 (L41)

H6H**BNL41 without Freespool

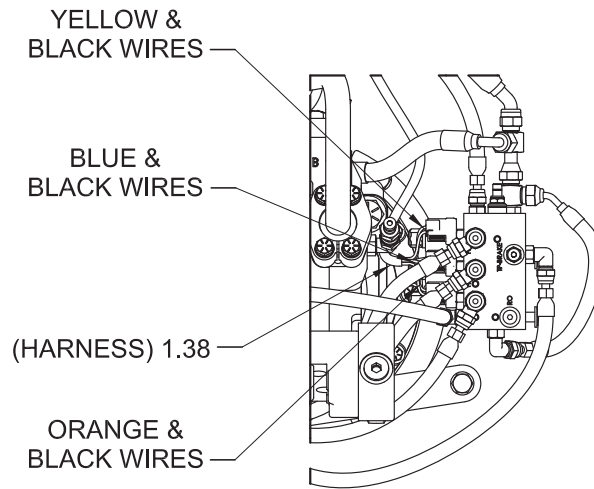
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	2314691	Assembly, Manifold (3-109)	1	4.1	*a 2312350	Assembly, Hose	1
2.2	2313617	Assembly, Control Manifold (3-89)	1	4.2	*a 2312878	Assembly, Hose	1
2.3	236855	Fitting	1	4.3	229448	Kit, Split Flange	2
2.4	232984	Fitting	1	4.4	R833103	Fitting	1
2.5	2314690	Assembly, Tube - Motor B	1	4.5	232984	Fitting	1
2.6	2314162	Assembly, Tube - Motor A	1	4.6	229383	Fitting	1
2.7	*a 2312351	Assembly, Hose	1	4.7	R833253	Fitting	2
2.8	*a R12104	Assembly, Hose	1	4.8	2307625W	Fitting	2
2.9	2313680	Harness, Winch Wire	1	4.9	Y09C-M1025	Capscrew	4
2.10	234191	Fitting	2	4.10	296420W	Washer	2
2.11	231821	Fitting	2	4.11	221767W	Washer	2
				4.12	24257	Trim, Edge	1.08 ft
				4.13	R13807642	Clip, Insulation	1

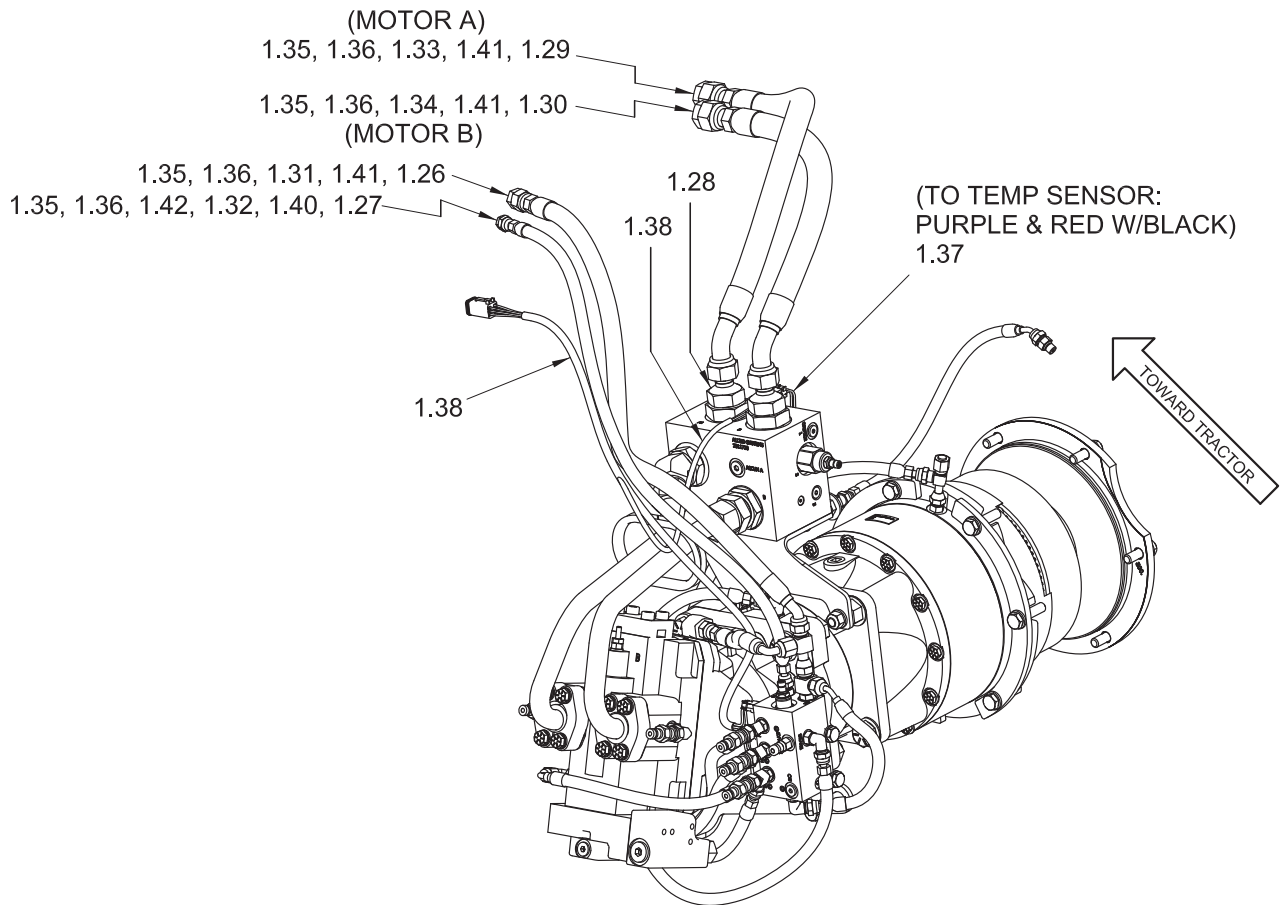
*a Included in Hose Kit 2315053

External Hydraulic Group

H6HT (Standard) Winch with Freespool
Caterpillar D6N (C811)
H6HT**DC811
Page 1 of 2



CONTROL MANIFOLD DETAIL



EXTERNAL HOSES

H6HT**DC811

External Hydraulic Group

H6HT (Standard) Winch with Freespool

Caterpillar D6N (C811)

H6HT**DC811

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.26	*a 2314231	Assembly, Hose	1	1.35	R12577880	Sleeve, Cordura	6 ft
1.27	*a 2311572	Assembly, Hose	1	1.36	129563	Clamp, Strap	6
1.28	234191	Fitting	2	1.37	2307904W	Switch, Temperature	1
1.29	*a 2314423	Assembly, Hose	1	1.38	2313137	Harness, Winch Wire	1
1.30	*a 2314422	Assembly, Hose	1	1.40	R834200	Fitting	1
1.31	2306151W	Label, T	2	1.41	232960	Fitting	3
1.32	2307241W	Label, Pilot	1	1.42	242598	Tie, Cable (Green)	1
1.33	2310919	Label, Motor A	1				
1.34	2310920	Label, Motor B	1	*a	Included in Hose Kit 2314768		

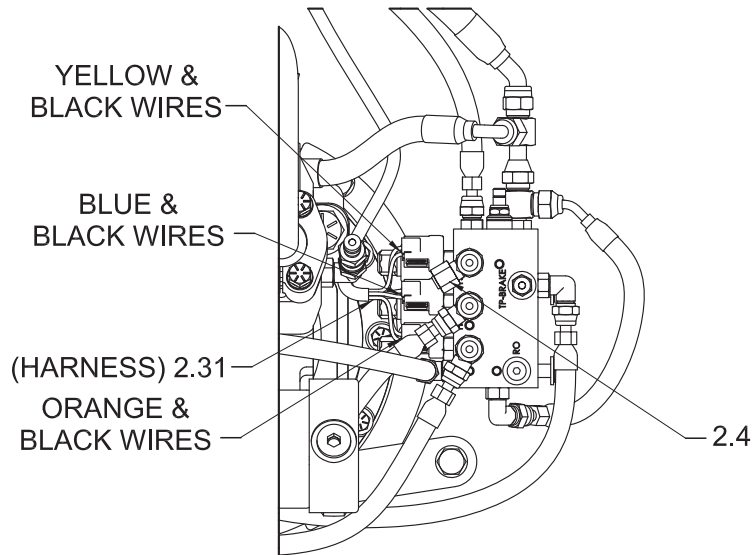
External Hydraulic Group

H6HT (Standard) Winch without Freespool

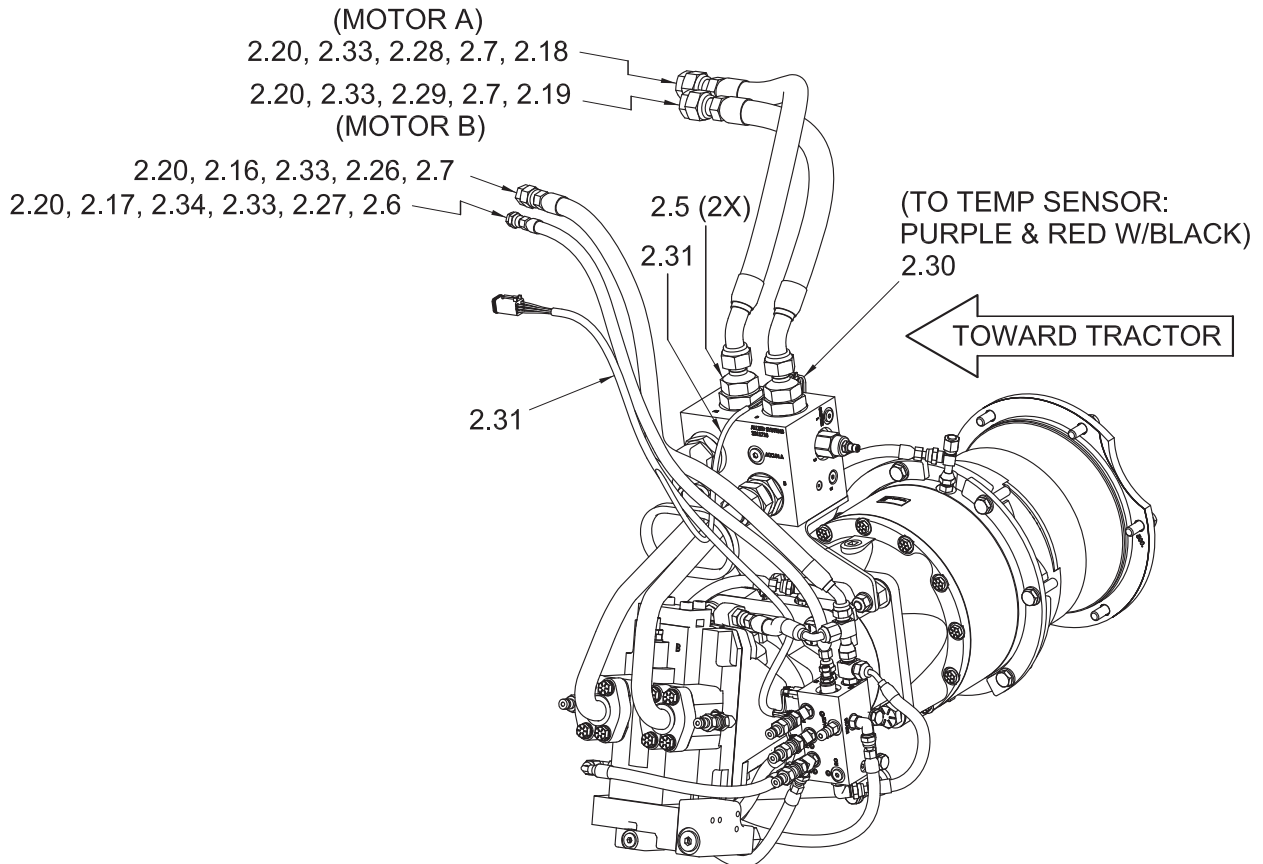
Caterpillar D6N (C811)

H6HT**DNC811

Page 1 of 2



CONTROL MANIFOLD DETAIL



EXTERNAL HOSES

H6HT**DNC811

External Hydraulic Group

H6HT (Standard) Winch without Freespool

Caterpillar D6N (C811)

H6HT**DNC811

Page 2 of 2

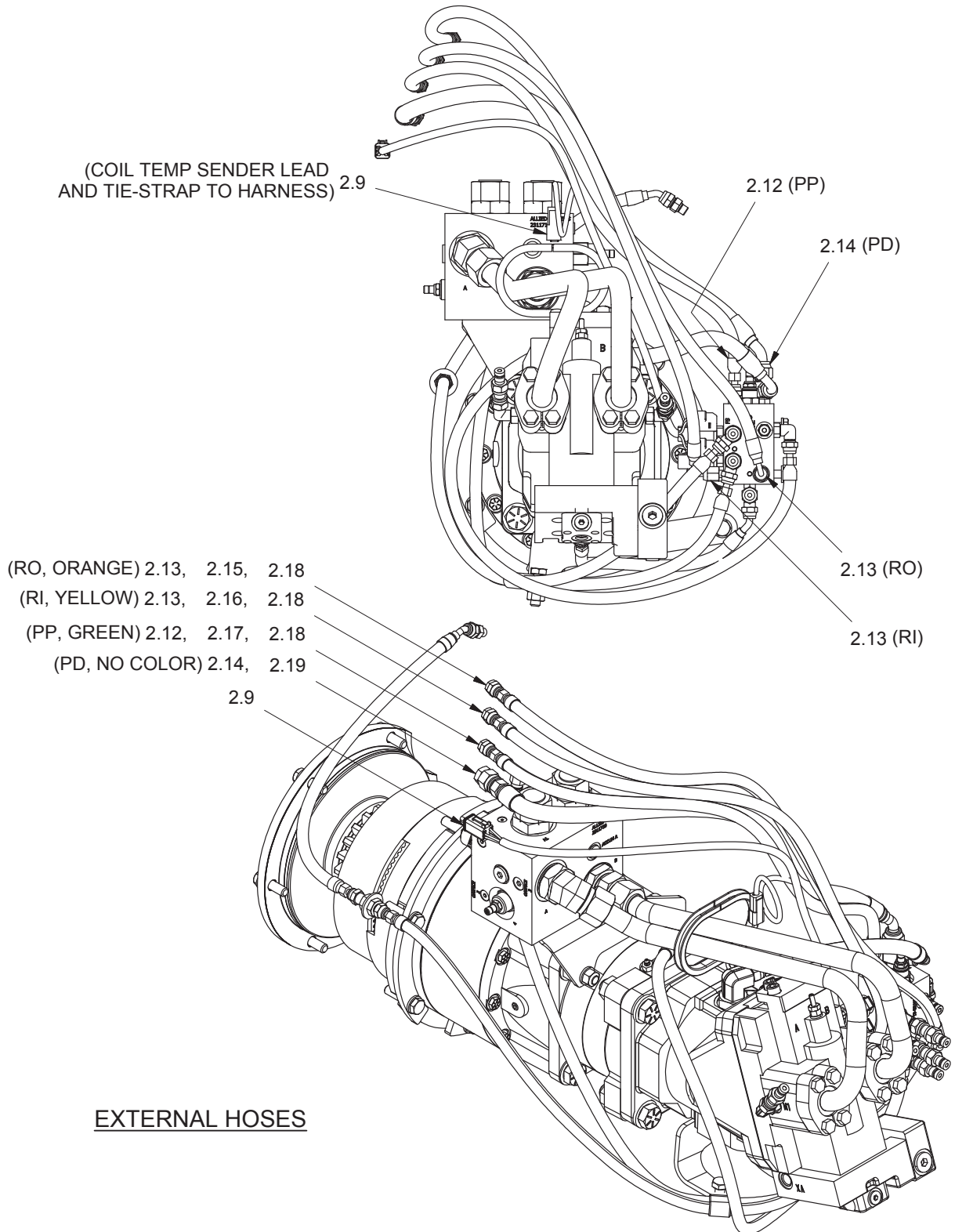
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.4	232984	Fitting	2	2.27	2307241W	Label, Pilot	1
2.5	234191	Fitting	2	2.28	2310919	Label, Motor A	1
2.6	R834200	Fitting	1	2.29	2310920	Label, Motor B	1
2.7	232960	Fitting	3	2.30	2307904W	Switch, Temperature	1
2.16	*a 2314231	Assembly, Hose	1	2.31	2313137	Harness, Winch Wire	1
2.17	*a 2311572	Assembly, Hose	1	2.33	129563	Clamp, Strap	6
2.18	*a 2314423	Assembly, Hose	1	2.34	242598	Tie, Cable (Green)	1
2.19	*a 2314422	Assembly, Hose	1				
2.20	R12577880	Sleeve, Cordura	6 ft	*a	Included in Hose Kit 2315054		
2.26	2306151W	Label, T	2				

External Hydraulic Group

H6HT (Standard) Winch

Caterpillar D6T (C71)

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External Hydraulic Group

H6HT (Standard) Winch

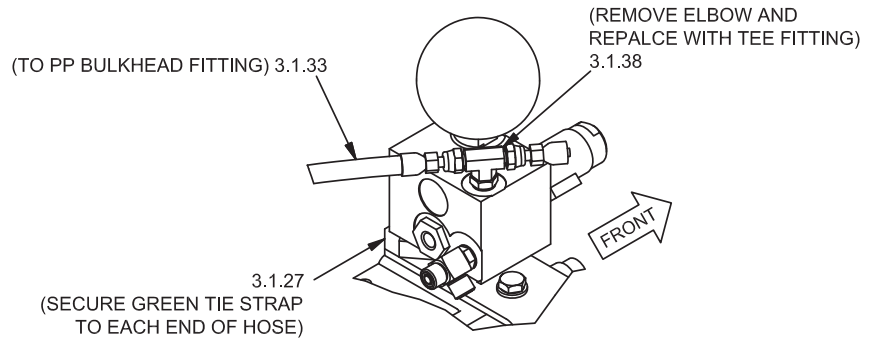
Caterpillar D6T (C71)

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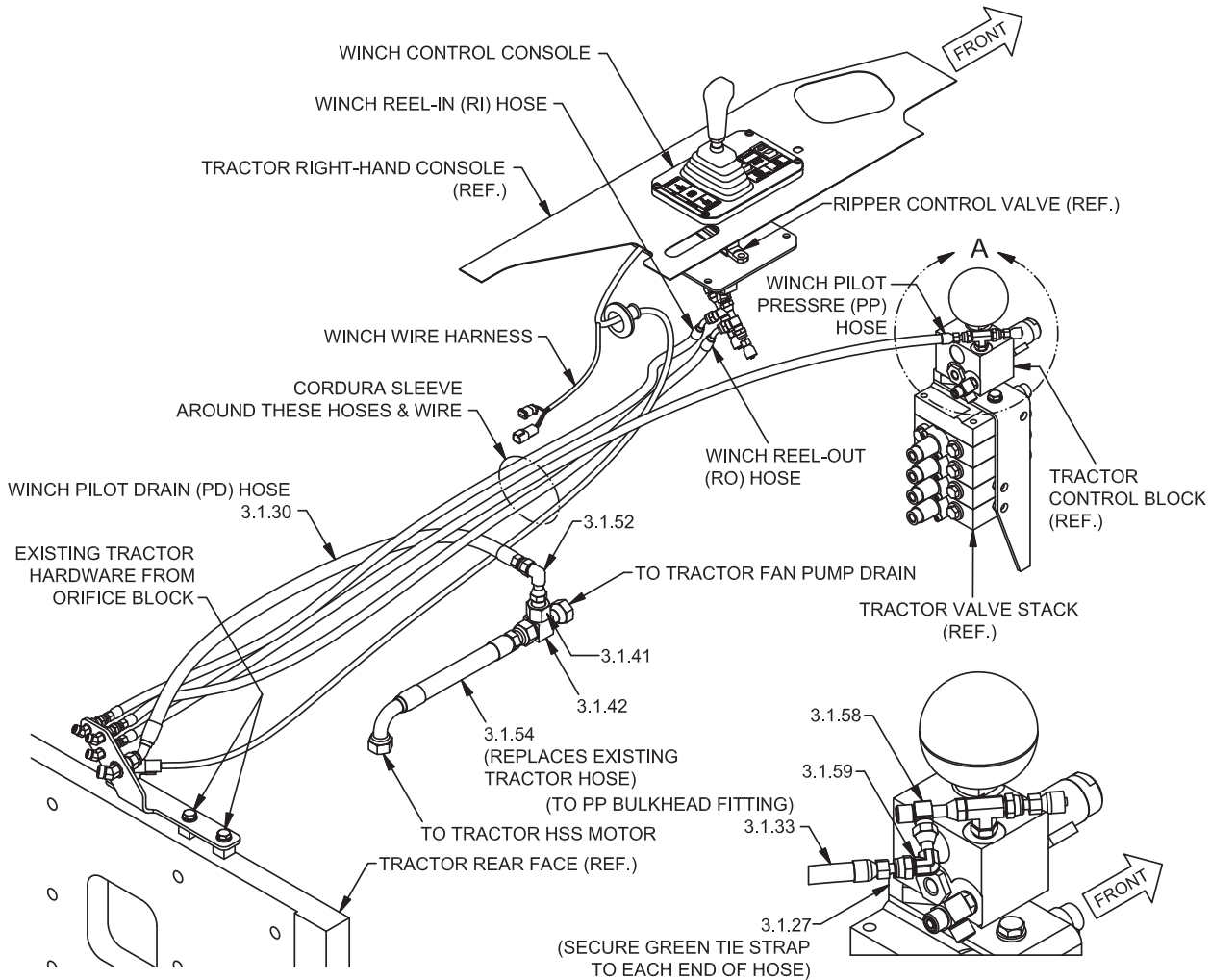
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.9	2314664	Wire Harness, Winch	1	2.17	242598	Tie, Cable (Green)	1
2.12	*a 2312353	Assembly, Hose	1	2.18	R834200	Fitting	3
2.13	*a 2314739	Assembly, Hose	2	2.19	232960	Fitting	1
2.14	*a 2314743	Assembly, Hose	1				
2.15	242596	Tie, Cable (Orange)	1	*a	Included in Hose Kit 2314769		
2.16	242597	Tie, Cable (Yellow)	1				

External Hydraulic Group

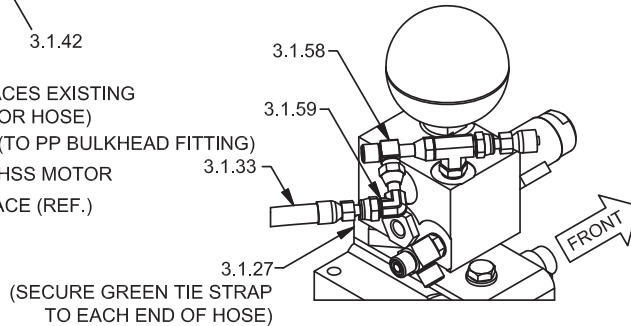
H6HT (Standard) Winch
 Komatsu D65-16/17 (K49)
 Page 1 of 2



DETAIL A-1
 (LOCATED IN FRONT OF HYDRAULIC TANK)
NO SATELLITE GRADE CONTROL



GENERAL TRACTOR HYDRAULICS
 (LAYOUT VIEW)



DETAIL A-2
 (LOCATED IN FRONT OF HYDRAULIC TANK)
WITH SATELLITE GRADE CONTROL

External Hydraulic Group

H6HT (Standard) Winch
 Komatsu D65-16/17 (K49)
 Page 2 of 2

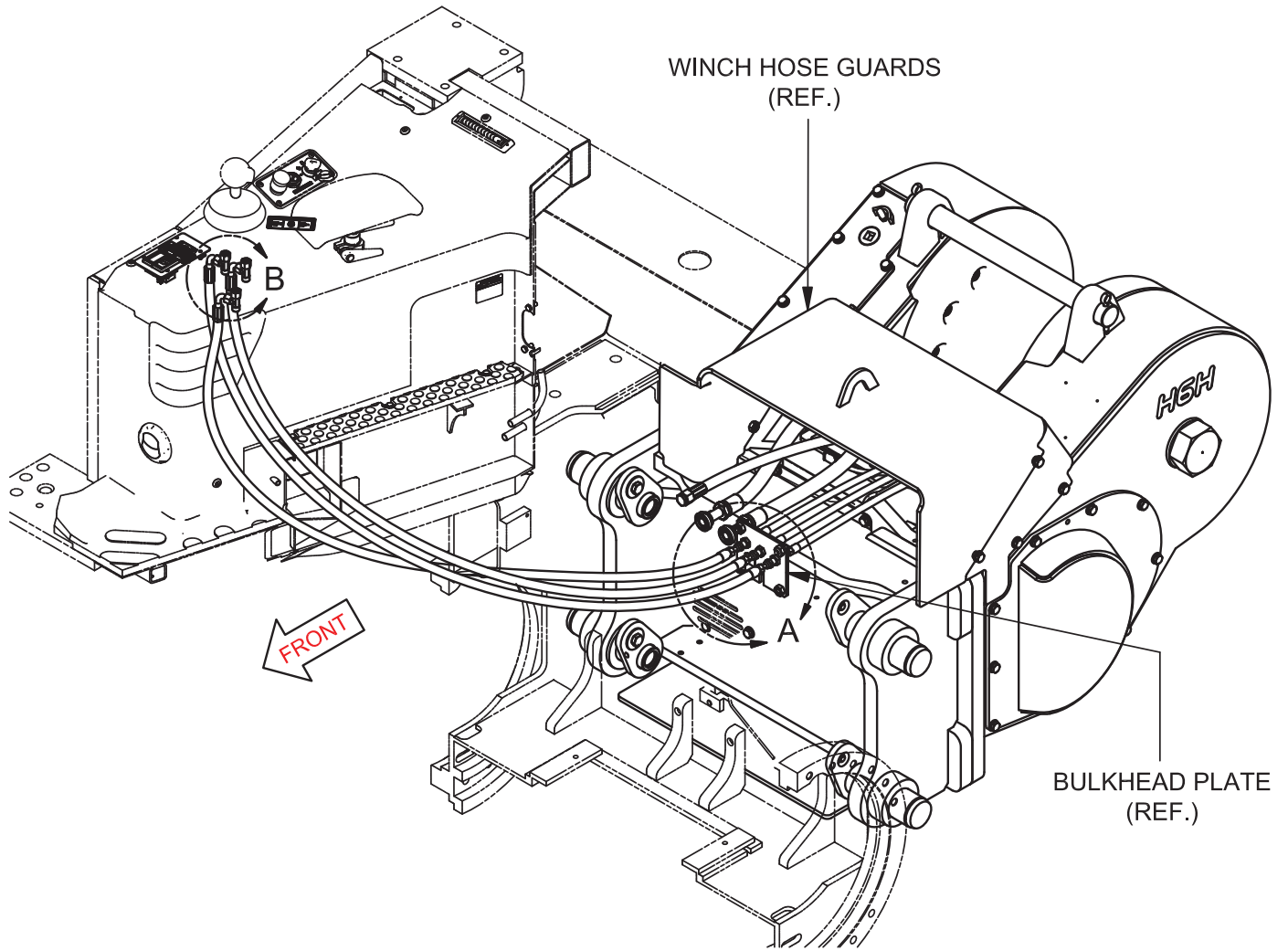
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3.1.27	242598	Tie, Cable (Green)	2	3.1.52	R833802	Fitting	1
3.1.30	*a 2312329	Assembly, Hose	1	3.1.54	*a 2312330	Assembly, Hose	1
3.1.33	*a 2312328	Assembly, Hose	1	3.1.58	236855	Fitting	1
3.1.38	2312144	Fitting	1	3.1.59	R833800	Fitting	1
3.1.41	2307958W	Fitting	1				
3.1.42	R834055	Fitting	1		*a	Included in Hose Kit 2314774	

External Hydraulic Group

H6HT (Standard) Winch

Liebherr PR724 (L41)

Page 1 of 2



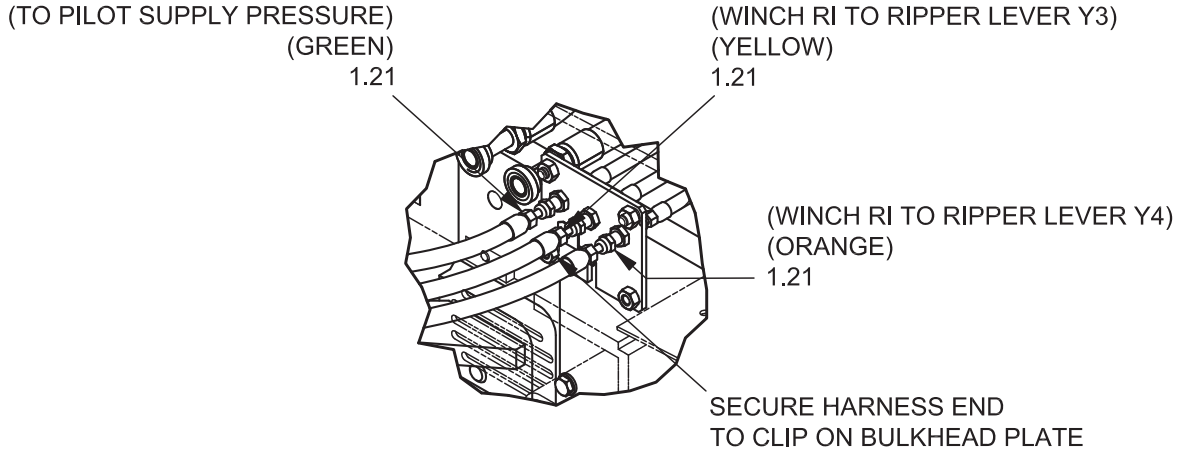
CONTROL HOSE INSTALLATION
(FREESPOOL OPTION SHOWN)

External Hydraulic Group

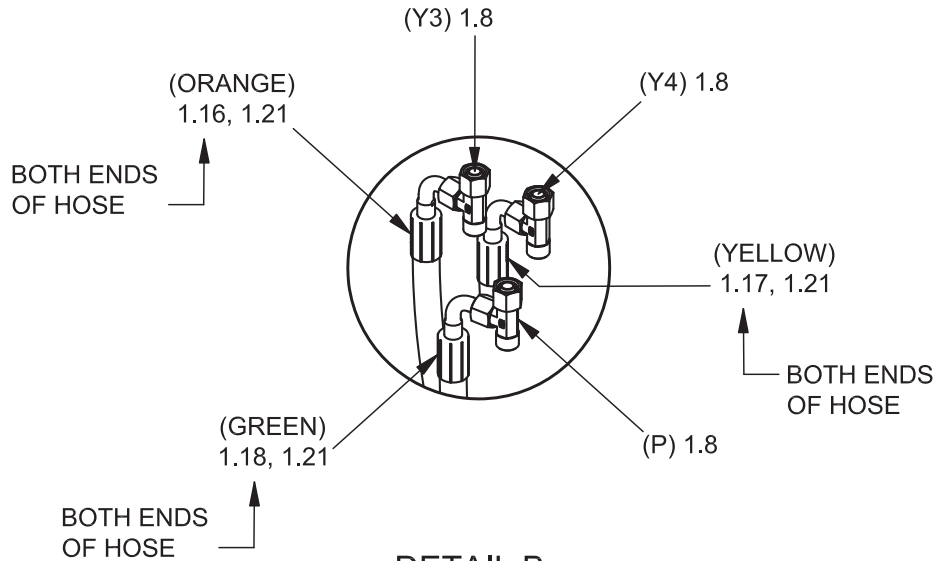
H6HT (Standard) Winch

Liebherr PR724 (L41)

Page 2 of 2



**DETAIL A
HOSE CONNECTIONS**

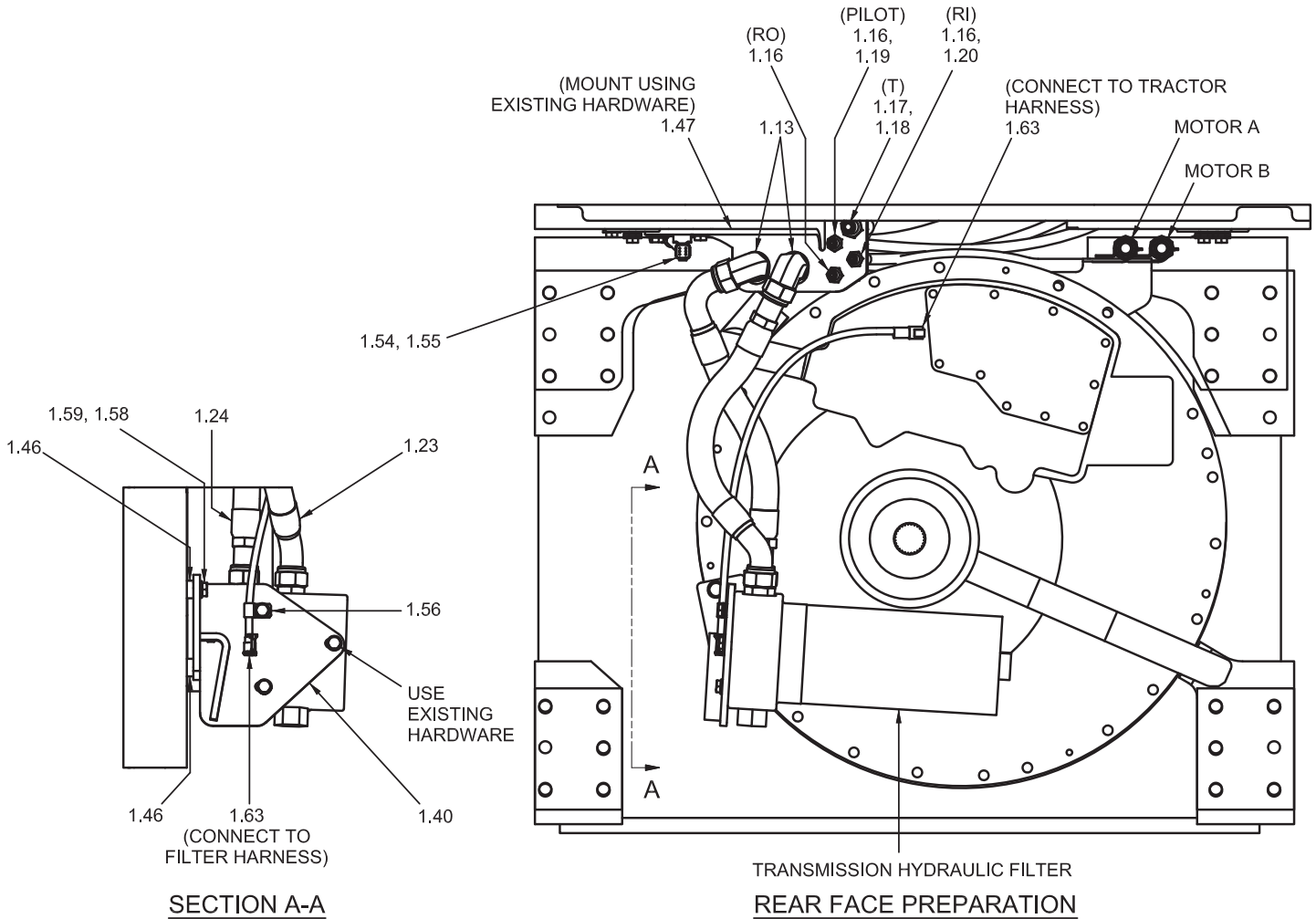


**DETAIL B
HOSE CONNECTIONS**

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

Hydraulic Filter Relocation

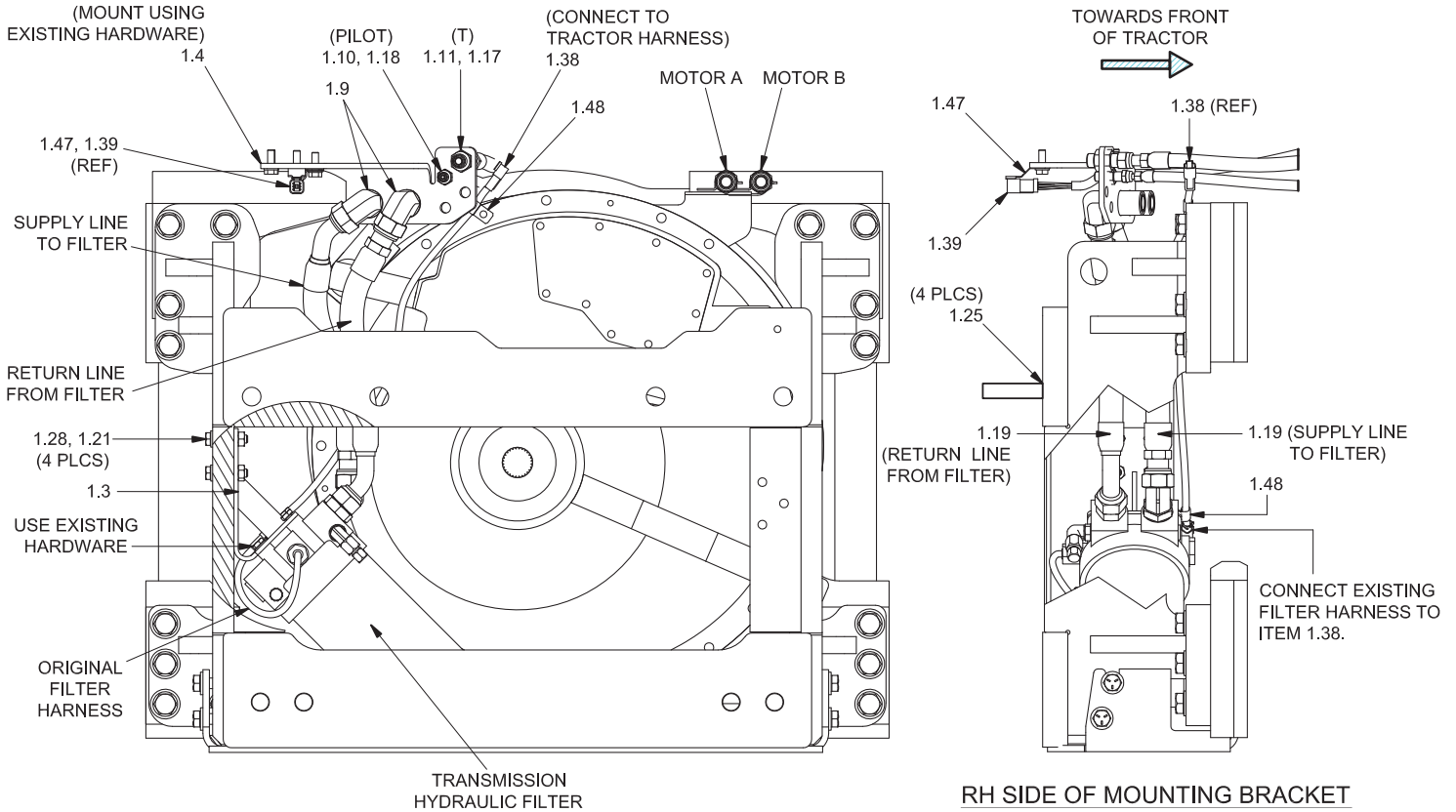
H6HT (Standard) Winch
Caterpillar D6N (C81)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.16	R834100	Fitting	3	1.47	2313133	Plate, D6N Bulkhead	1
1.17	R834103	Fitting	1	1.54	2311550	Clip, Harness Mounting	1
1.18	*a 254680	Assembly, Hose	1	1.55	2313138	Wire Harness, Console	1
1.19	*a 249465	Assembly, Hose	1	1.56	243057	Clip, Insulation	1
1.20	*a 242358	Assembly, Hose	2	1.58	293647W	Capscrew	2
1.23	*a 2307896W	Assembly, Hose	1	1.59	296422W	Washer	2
1.24	*a 2307895W	Assembly, Hose	1	1.63	2305617W	Harness, External Filter	2
1.40	2307890W	Bracket, Filter	1				
1.46	2307893W	Spacer	2				
				*a	Included in Hose Kit 2314767		

Hydraulic Filter Relocation

H6HT (Standard) Winch
Caterpillar D6N (C811)

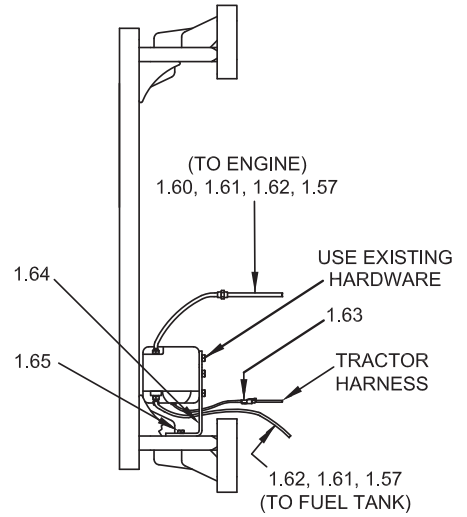


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.3	2314735	Bracket, Filter Assembly Mounting	1	1.28	296422W	Washer	4
1.4	2313133	Plate, D6N Bulkhead	1	1.38	2305617W	Harness, Filter External	1
1.9	2305620W	Fitting	2	1.39	2313961	Harness, Console Wire	1
1.10	R834100	Fitting	1	1.47	2311550	Clip, Harness Mounting	1
1.11	R834103	Fitting	1	1.48	243057	Clamp	2
1.17	*a 254680	Assembly, Hose	1				
1.18	*a 249465	Assembly, Hose	1				
1.19	*a 2314742	Assembly, Hose	2				
1.21	Y09C-M1255	Capscrew	4				
1.25	*b 2300783W	Stud	4				

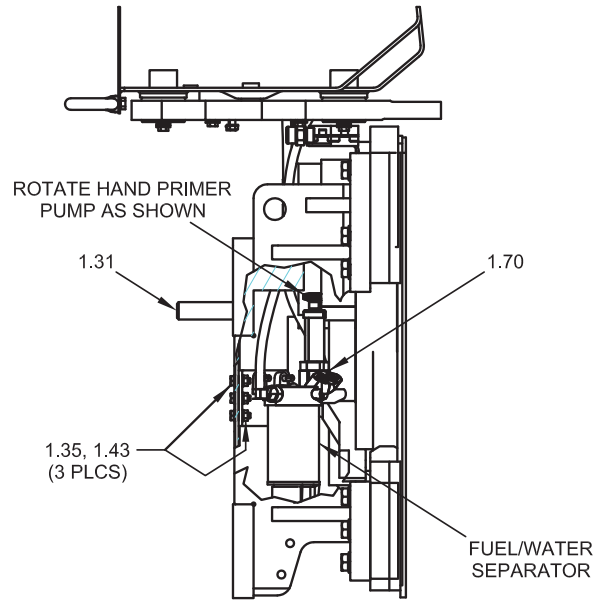
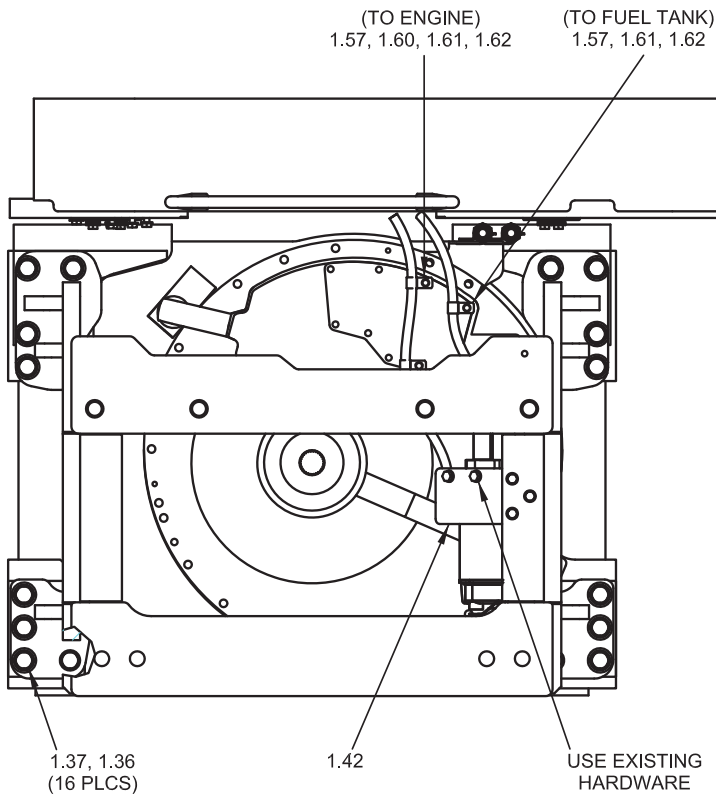
*a Included in Hose Kit 2314768
*b Use Loctite Kit, 230064W, Only to the End of the Studs Inside the Mounting Bracket. Do Not Apply to Nuts.

Fuel/Water Separator Relocation

H6HT (Standard) Winch
 Hand Primer Pump and Electric Primer Pump
 Caterpillar D6N (C81)



**ELECTRIC PRIMER PUMP
 RELOCATION DETAIL
 (TOP VIEW)**



**FUEL/WATER SEPARATOR
 RELOCATION**

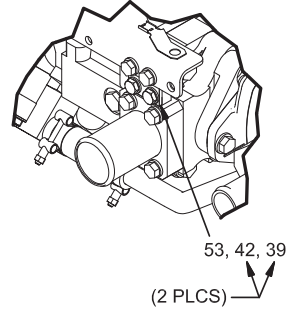
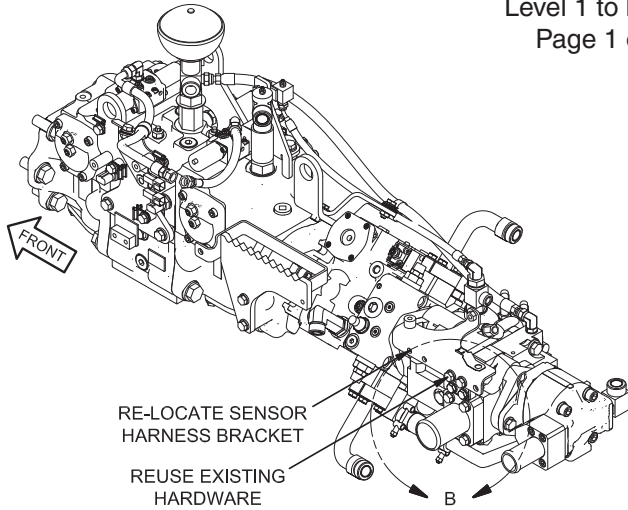
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.31	*a 2300783W	Stud	4	1.61	166857W	Clamp	1
1.34	Y09C-M1030	Capscrew	3	1.62	2306857W	Hose, Fuel	2
1.35	296420W	Washer	6	1.63	2305617W	Harness, External Filter	2
1.36	293710W	Capscrew	16	1.64	2306836W	Bracket, Fuel/Water Separator	1
1.37	296430W	Washer	16			Mounting	1
1.42	2307894W	Plate, Mounting	1	1.65	18738W	Capscrew	2
1.43	292655W	Nut	3	1.70	2307911W	Gasket, Fuel Primer	1
1.57	387316W	Clamp, Insulation	3				
1.60	2306858W	Fitting, Hose Mender	1	*a	Apply 230064W Locktite Kit		

Conversion Kit

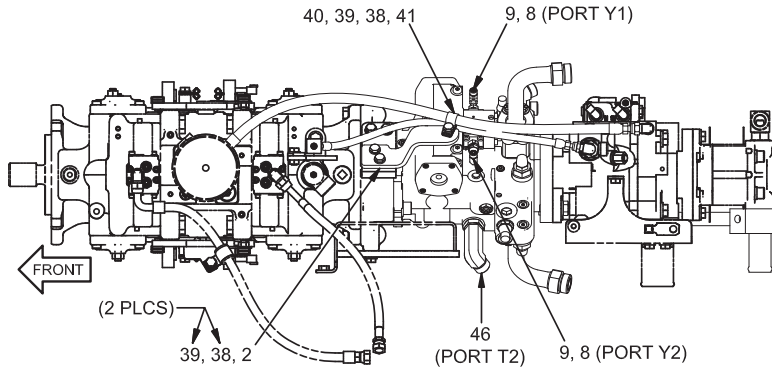
Komatsu D61-23 (K471)

Level 1 to level 2

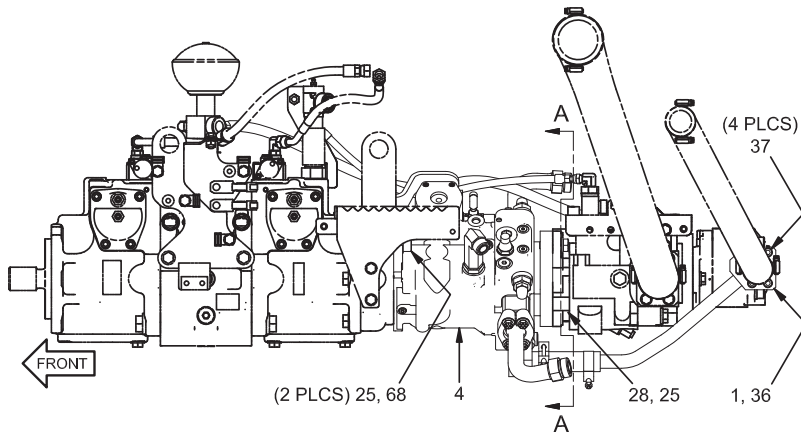
Page 1 of 3



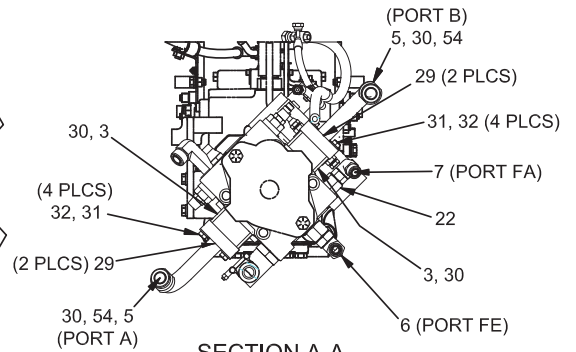
DETAIL B



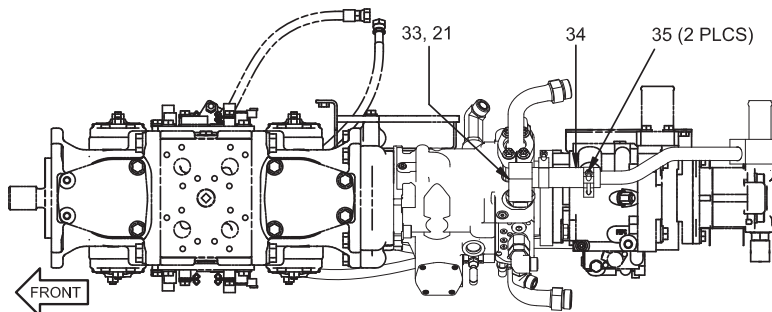
TOP VIEW



LEFT VIEW



SECTION A-A



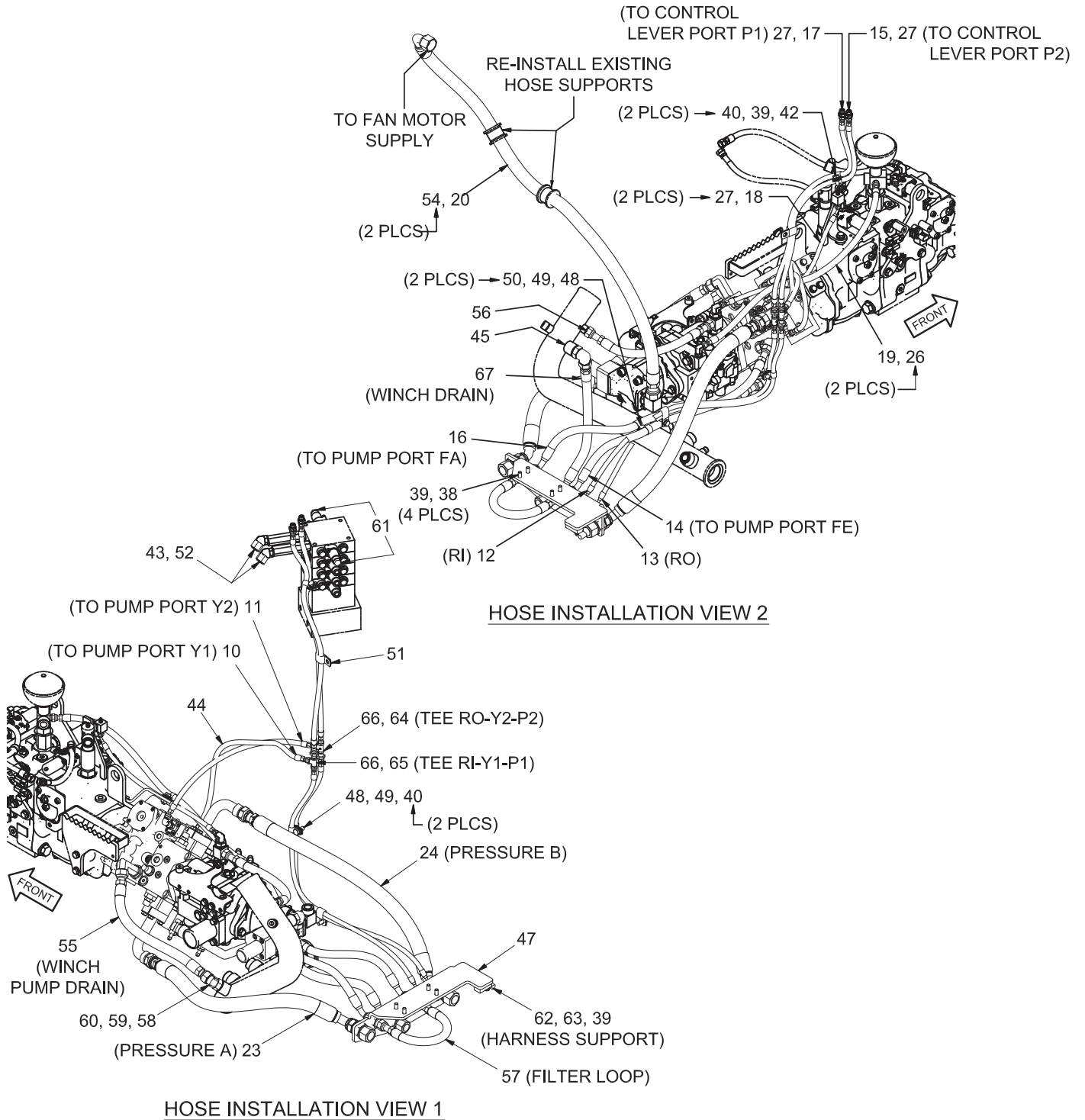
BOTTOM VIEW

Conversion Kit

Komatsu D61-23 (K471)

Level 1 to level 2

Page 2 of 3



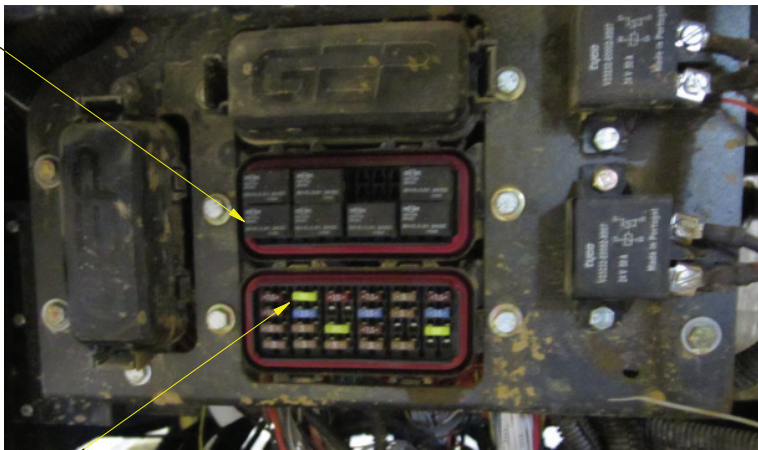
Conversion Kit
Komatsu D61-23 (K471)
Level 1 to level 2
Page 3 of 3

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314277	Kit, Conversion - Komatsu D61-23					
		Level 1 to Level 2	1				
1	2314255	. Manifold, Suction	1	36	Y098629-223	. O-Ring	1
2	2314272	. Bracket	1	37	296030W	. Capscrew	4
3	2314268	. Manifold	2	38	293629W	. Capscrew	7
4	2313180	. Pump, Hydrostatic 71CC	1	39	296420W	. Washer	12
5	2314248	. Fitting	2	40	R13807642	. Clip, Insulation	5
6	231459	. Fitting	1	41	R13803044	. Clip, Insulation	1
7	R833266	. Fitting	1	42	293628W	. Capscrew	4
8	R833103	. Fitting	2	43	232381	. O-Ring	5
9	R833800	. Fitting	2	44	R14766	. Spirap	0.25 ft
10	*a 2314282	. Assembly, Hose	1	45	R833270	. Fitting	1
11	*a 2314284	. Assembly, Hose	1	46	R833304	. Fitting	1
12	*a 2314286	. Assembly, Hose	1	47	2314322	. Assembly, Bulkhead	1
13	*a 2314288	. Assembly, Hose	1	48	293644W	. Capscrew	2
14	*a 2314290	. Assembly, Hose	1	49	296422W	. Washer	2
15	*a 2314292	. Assembly, Hose	1	50	R13803052	. Clip, Insulation	2
16	*a 2314294	. Assembly, Hose	1	51	2312628	. Clamp, Insulation	2
17	*a 2314295	. Assembly, Hose	1	52	R834254	. Fitting	2
18	*a 2314297	. Assembly, Hose	1	53	2314323	. Bracket, Support	1
19	*a 2314298	. Assembly, Hose	1	54	232383	. O-Ring	5
20	*a 2314301	. Assembly, Hose	1	55	*a 2314328	. Assembly, Hose	1
21	2314267	. Fitting	1	56	*a 2314329	. Assembly, Hose	1
22	28537	. Fitting	1	57	*a 2314337	. Assembly, Hose	1
23	*a 2314263	. Assembly, Hose	1	58	2314339	. Fitting	1
24	*a 2314269	. Assembly, Hose	1	59	209745	. O-Ring	1
25	296426W	. Washer	4	60	232382	. O-Ring	1
26	Y098629-012	. O-Ring	3	61	248786	. Plug	2
27	Y098629-011	. O-Ring	4	62	2314338	. Clip, Insulation	1
28	Y17C-1028	. Capscrew	2	63	Y19C-M1016	. Capscrew	1
29	236973	. Clamp, Half	4	64	242597	. Tie, Cable (Yellow)	1
30	Y098629-219	. O-Ring	4	65	242598	. Tie, Cable (Green)	1
31	R13811063	. Capscrew	8	66	2314264	. Fitting	2
32	R13811432	. Washer	8	67	*a R14230	. Assembly, Hose	1
33	R13804061	. O-Ring	1	68	296074W	. Capscrew	2
34	2314230	. Tube, Suction	1				
35	R13809931	. Clamp, T-Bolt	2		*a Included in Hose Kit 2314773		

Electrical Installation

H6HT (Standard) Winch
Case 1650/2050M (R42)

(BOTTOM ROW,
LEFT-MOST COLUMN)
19



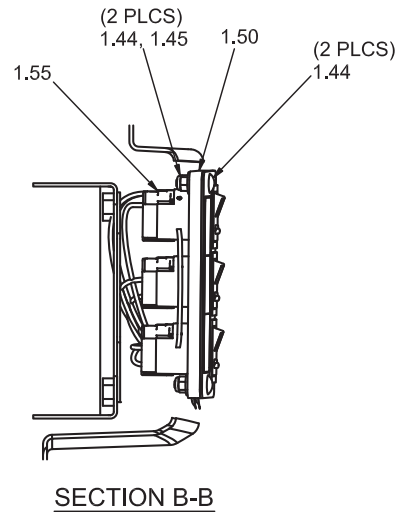
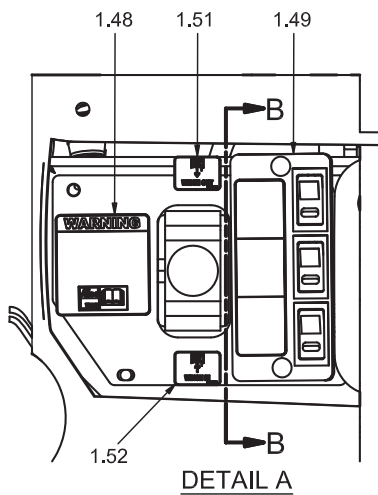
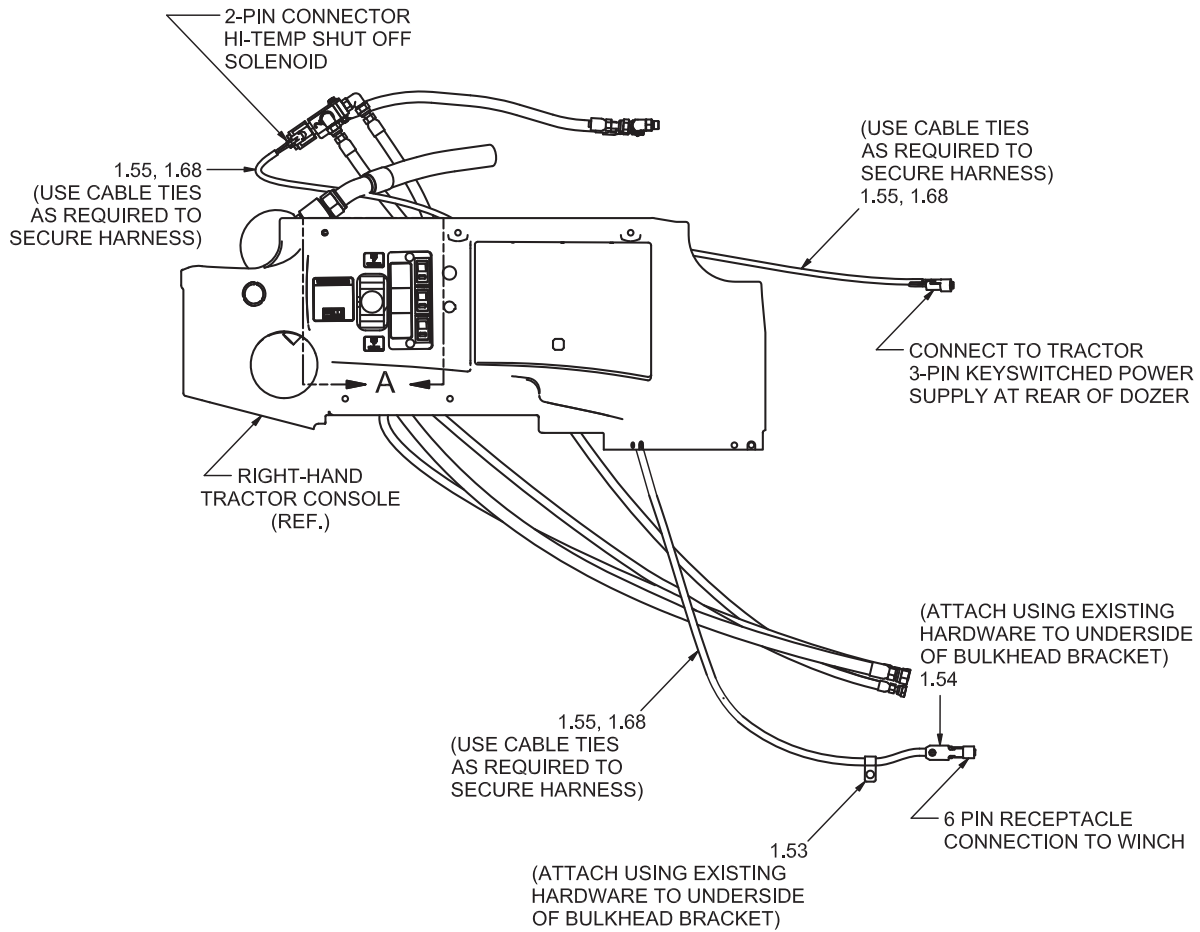
18
(TOP ROW,
SECOND COLUMN
FROM THE LEFT)

ELECTRICAL PANEL
LEFT SIDE ACCESS PANEL

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
18	2313417	Fuse, Auto	1	19	2313418	Relay	1

Electrical Installation

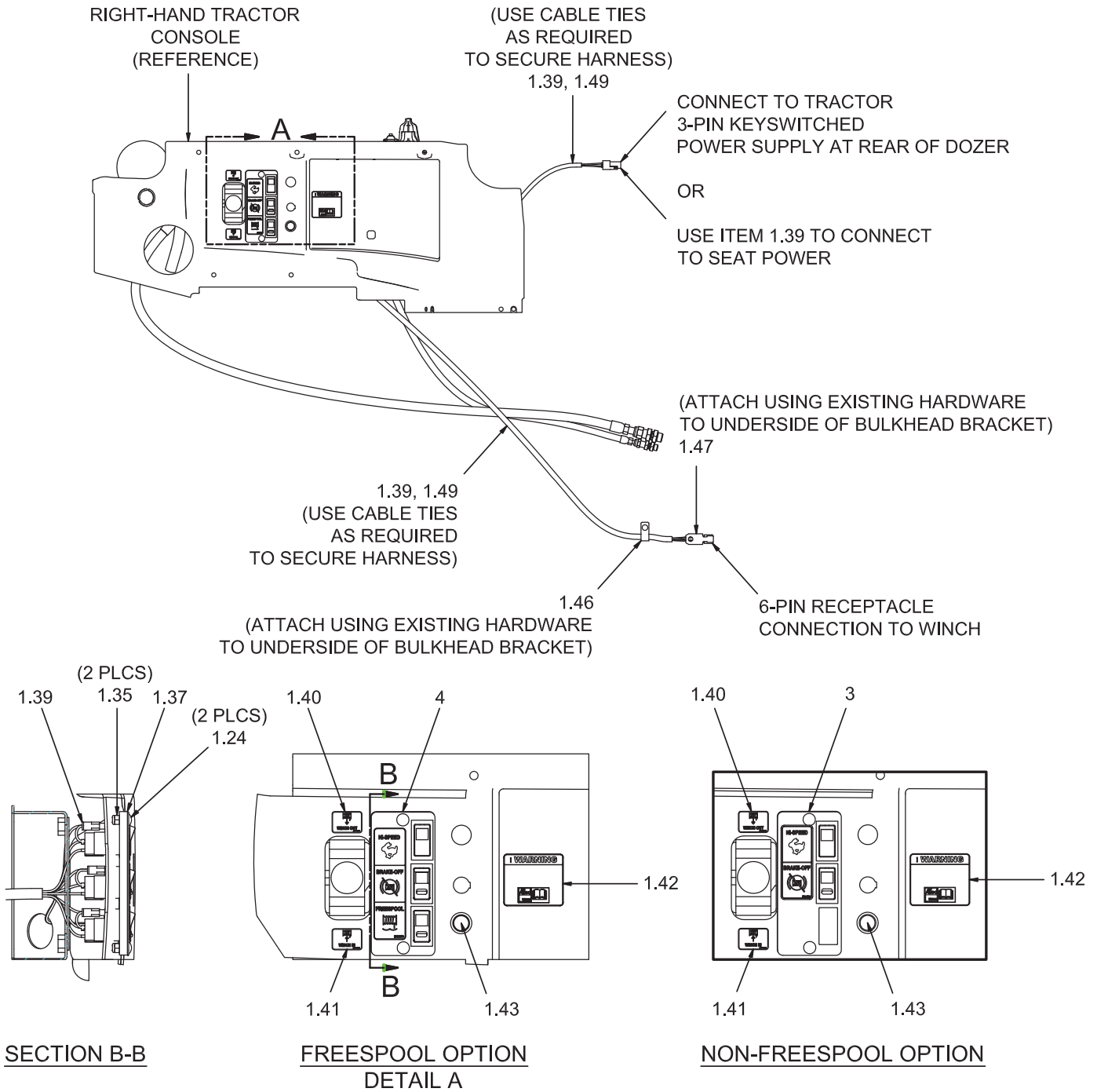
H6HT (Standard) Winch
Caterpillar D6N (C81)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.44	220000W	Bolt	2	1.52	2307121W	Decal, Winch In	1
1.45	R13811189	Nut, Lock	2	1.53	R13807642	Clip, Insulation	1
1.48	2313135	Decal, Hi-Temp Override	1	1.54	2311550	Clip, Harness Mounting	1
1.49	2313113	Assembly, Switch Panel (3-115)	1	1.55	2313138	Wire Harness, Console	1
1.50	2313200	Plate, Switch Assembly Spacer	1	1.68	129563W	Clamp, Strap	20
1.51	2307122W	Decal, Winch Out	1				

Electrical Installation

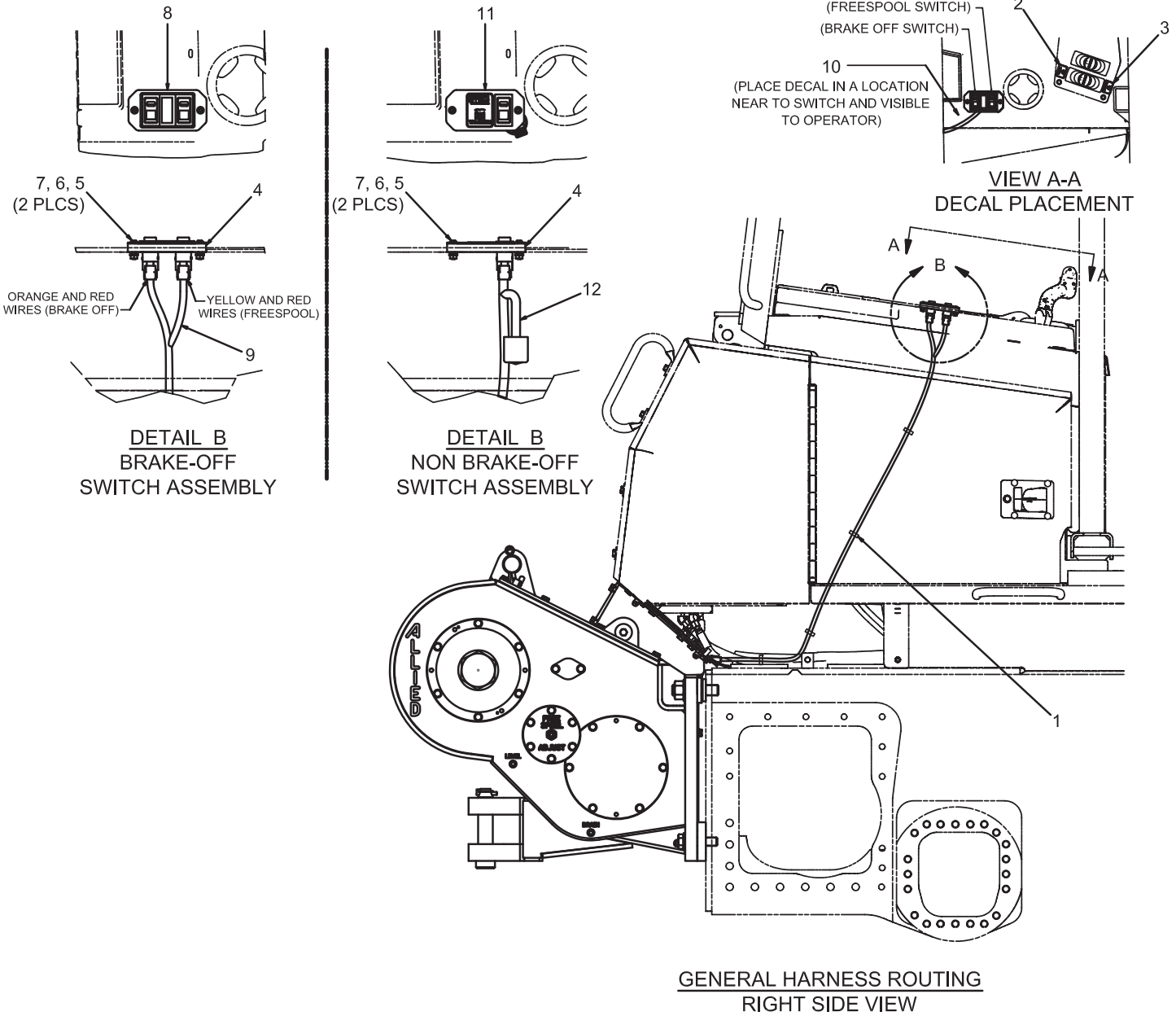
H6HT (Standard) Winch
Caterpillar D6N (C811)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.24	220000W	Bolt	2	1.46	R13807642	Clip, Insulation	1
1.35	R13811189	Nut, Lock	2	1.47	2311550	Clip, Harness Mounting	1
1.37	2313200	Plate, Switch Assembly Spacer	1	1.49	129563W	Clamp, Strap	10
1.39	2313961	Harness, Console Wire	1	3	2314787	Assembly, Switch Panel - BRAKE-OFF & HI-SPEED (3-121)	1
1.40	2307122W	Decal, Winch Out	1	4	2313978	Assembly, Switch Panel - F/S BRAKE-OFF & HI-SPEED (3-119)	1
1.41	2307121W	Decal, Winch In	1				
1.42	2314051	Decal, Hi-Temp Override	1				
1.43	2303912W	Assembly, LED	1				

Electrical Installation

John Deere 750/850K (E460)



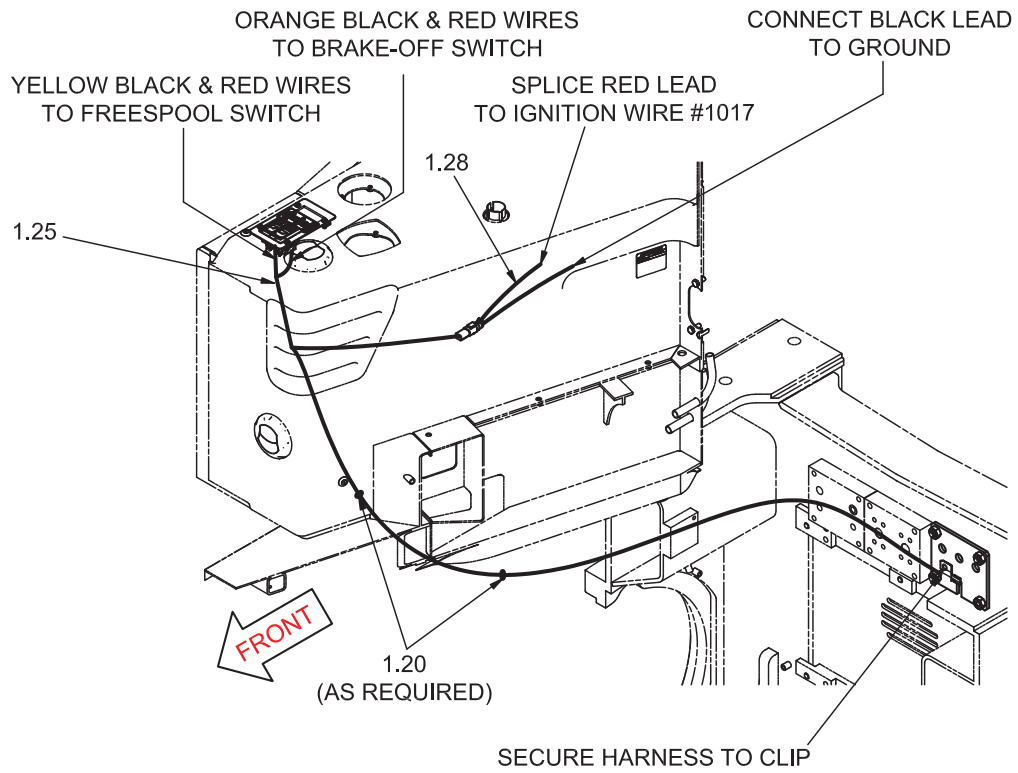
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	129563W	Clamp, Strap	4	9	*a 2312856	Wire Harness, Console	1
2	2307121W	Decal, Winch In	1	10	2307254W	Decal, Switch Panel, FS & Brake Off	1
3	2307122W	Decal, Winch Out	1	11	2313527	Assembly, Switch Panel (3-117)	1
4	2311530	Plate, Switch Mounting	1	12	*b 2312927	Wire Harness, Console	1
5	296161W	Capscrew	2		*a	BRAKE-OFF	
6	292653W	Nut	2		*b	Non BRAKE -OFF	
7	296417W	Washer	2				
8	2313525	Assembly, Switch Panel	4				

Wire Harness Routing & Switch Mounting

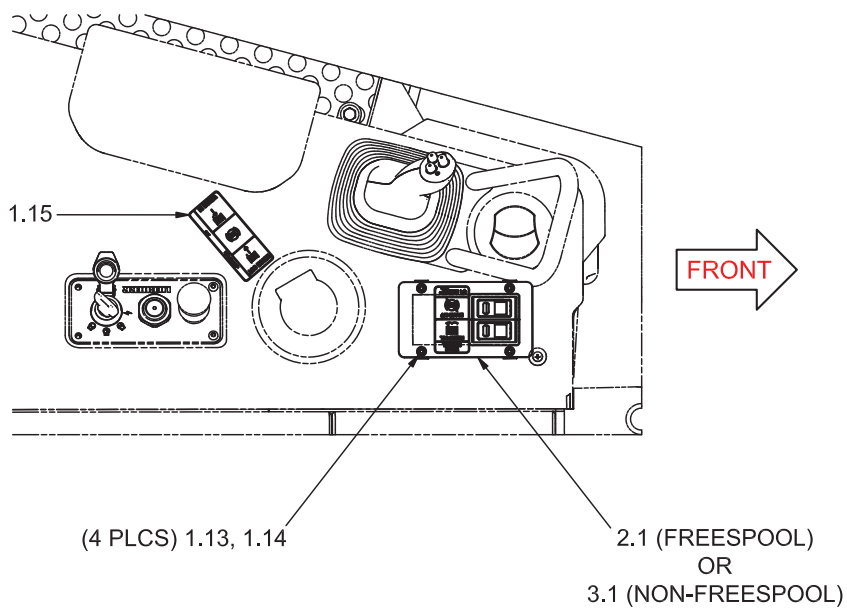
H6HT (Standard) Winch

Liebherr PR724L (L41)

Page 1 of 2



WIRE HARNESS ROUTING



SWITCH MOUNTING FREESPOOL OPTION SHOWN

Wire Harness Routing & Switch Mounting

H6HT (Standard) Winch

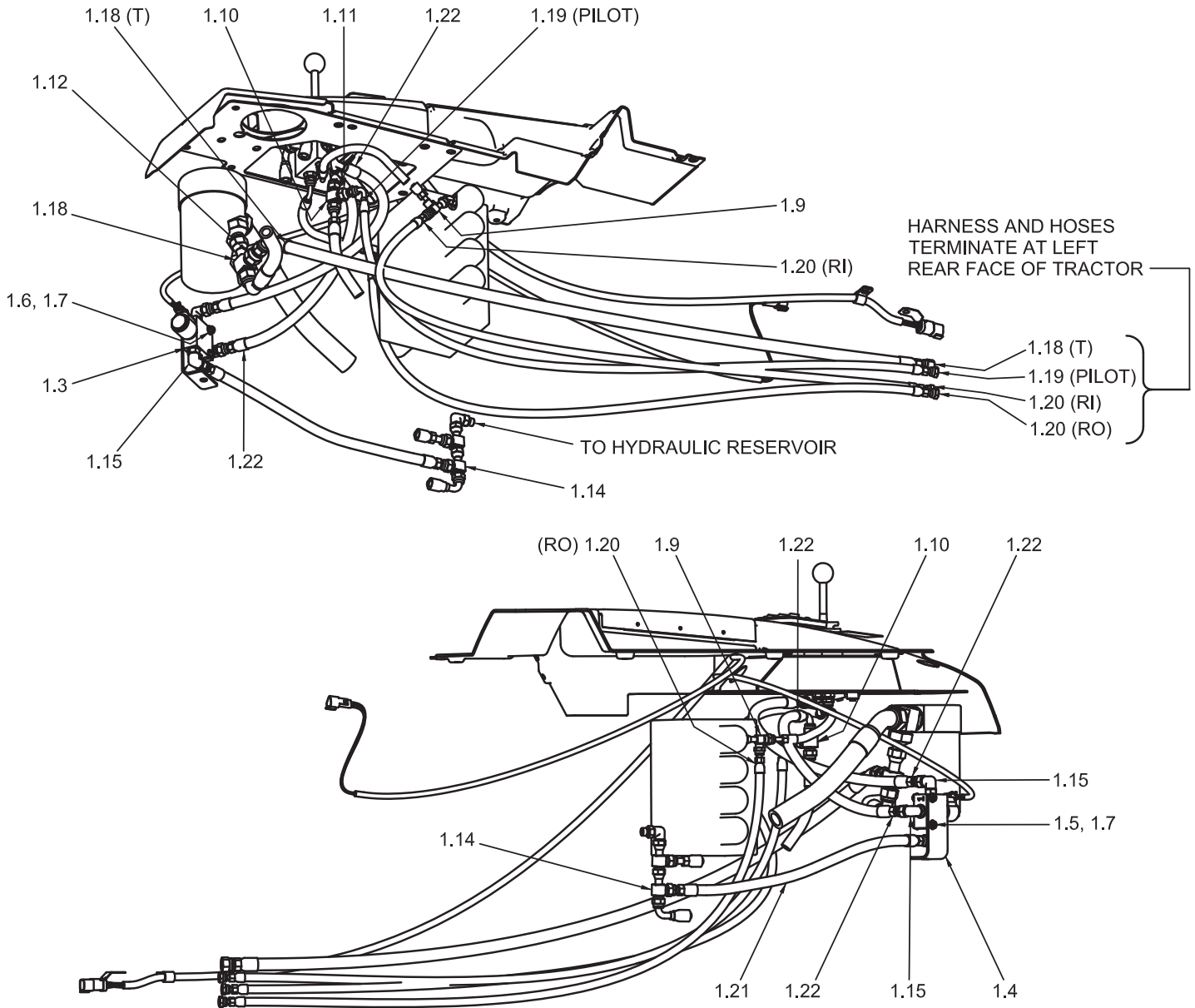
Liebherr PR724L (L41)

Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.13	2313623	Nut, Clip-On	4	2.1	2313622	Assembly, Switch Panel - W/FS (3-118)	1
1.14	296159W	Capscrew	4				
1.15	2312177	Decal, Winch In, Winch Out	1				
1.20	129563W	Clamp, Strap	10	3.1	2314920	Assembly, Switch Panel - W/O FS (3-122)	1
1.25	2313681	Harness, Console Wire	1				
1.28	2313685	Harness, Jumper Wire	1				

Console Hydraulics

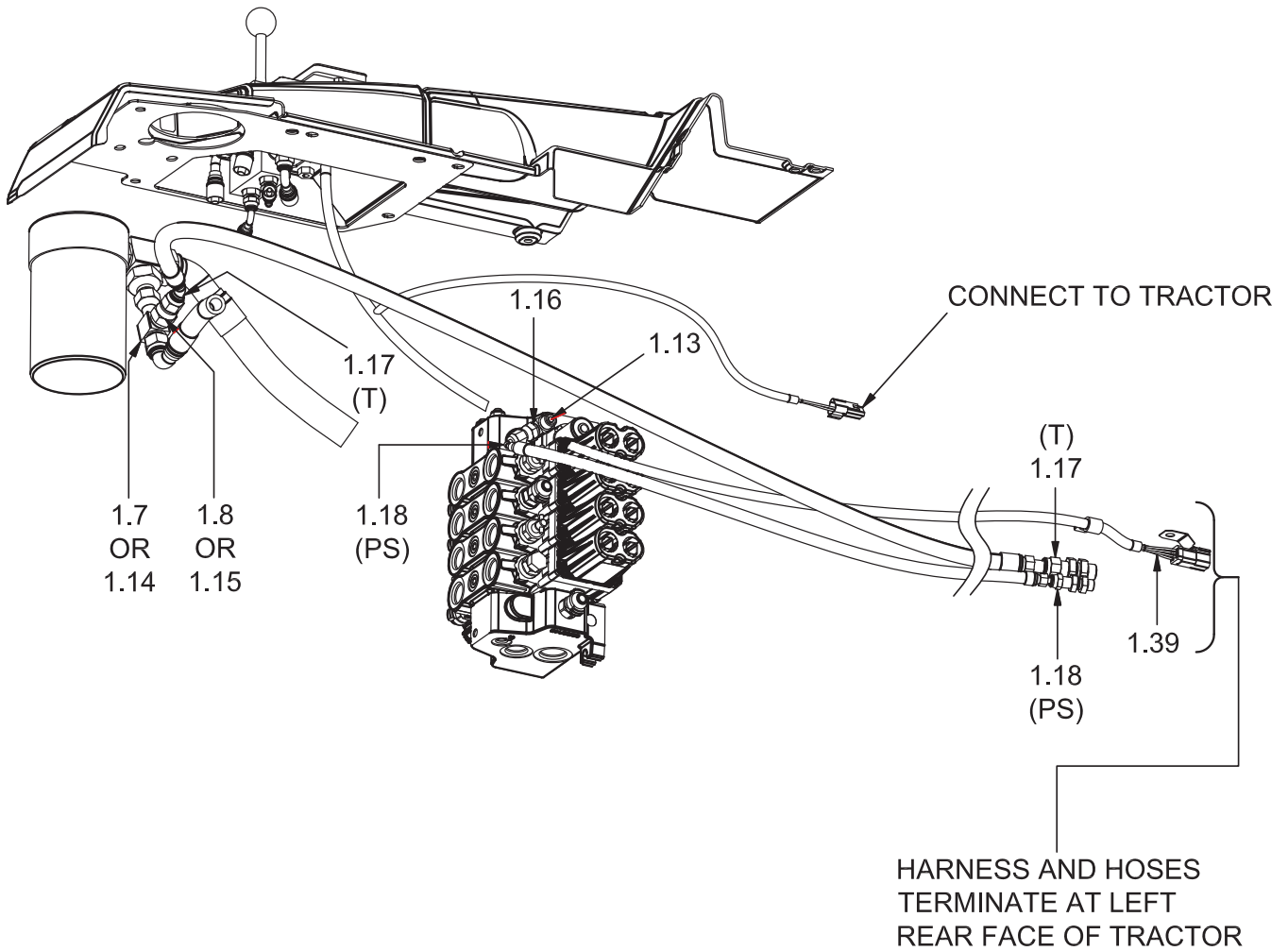
H6HT (Standard) Winch
Caterpillar D6N (C81)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.3	2307833W	Assembly, Valve Manifold (3-110)	1	1.10	231470	Fitting	1
	2307834W	. Valve, Solenoid Cartridge	1	1.11	242629	Fitting	1
	2307835W	.. Valve, Cartridge	1	1.12	252605	Fitting	1
	250589	.. Coil, Solenoid	1	1.14	231955	Fitting	1
	R15668	.. Kit, Seal	1	1.15	R833257	Fitting	3
	R12973129	. Body, Valve	1	1.18	*a 254680	Assembly, Hose	1
1.4	2307897W	Plate, Mounting	1	1.19	*a 249465	Assembly, Hose	1
1.5	Y01C-0428	Capscrew	2	1.20	*a 242358	Assembly, Hose	2
1.6	221703W	Nut	2	1.21	*a 2307906W	Assembly, Hose	1
1.7	221763W	Washer	6	1.22	*a 2307905W	Assembly, Hose	2
1.8	R834053	Fitting	1				
1.9	236855	Fitting	2		*a	Included in Hose Kit 2314767	

Console Hydraulics

H6HT (Standard) Winch
Caterpillar D6N (C811)



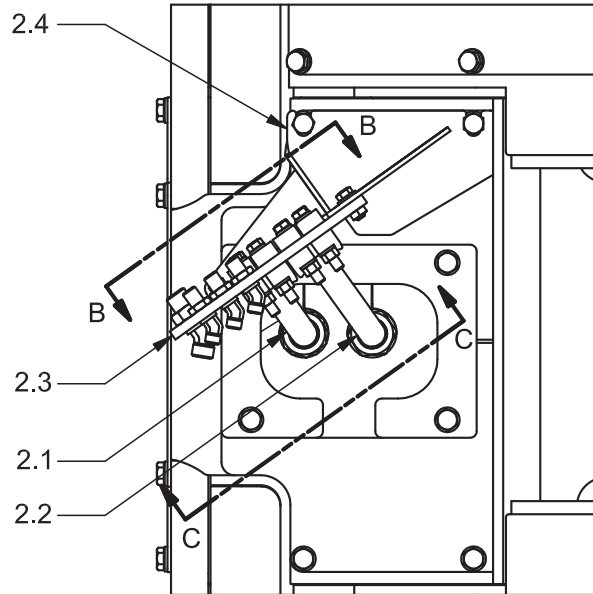
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.13	231955	Fitting	1	1.18	249465	Assembly, Hose	1
1.14	R834055	Fitting	1	1.39	2313961	Wire Harness, Console	1
1.15	2307958W	Fitting	1				
1.16	242629	Fitting	1				
1.17	*a 254680	Assembly, Hose	1				
				*a	Included in Hose Kit 2314768		

Hydraulic Installation

H6HT (Standard) Winch

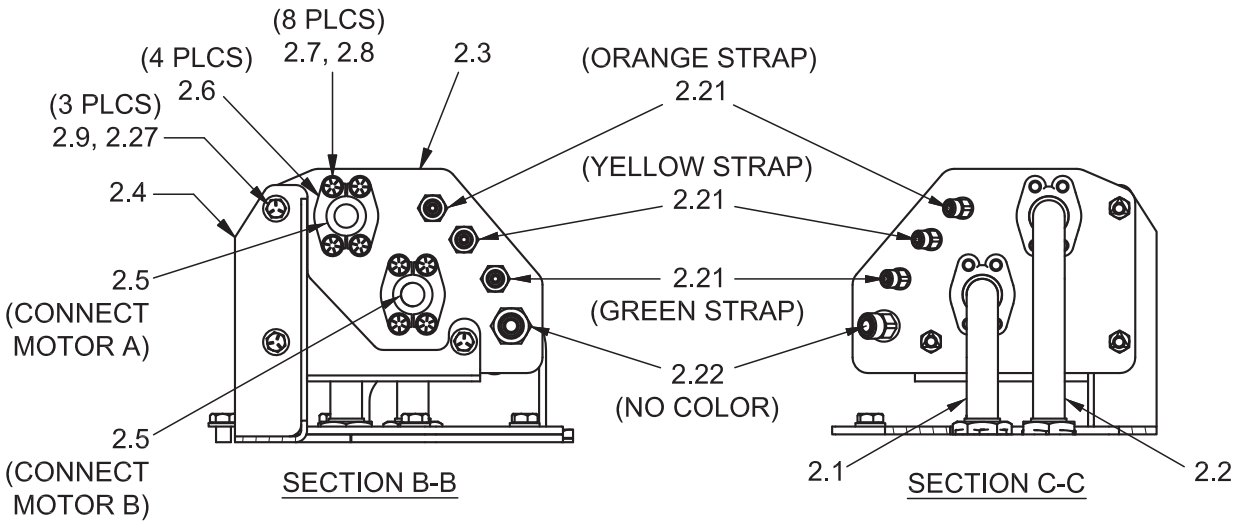
Caterpillar D6T (C71)

Page 1 of 2



WINCH CONNECTIONS - TOP VIEW

HOSES NOT SHOWN FOR CLARITY



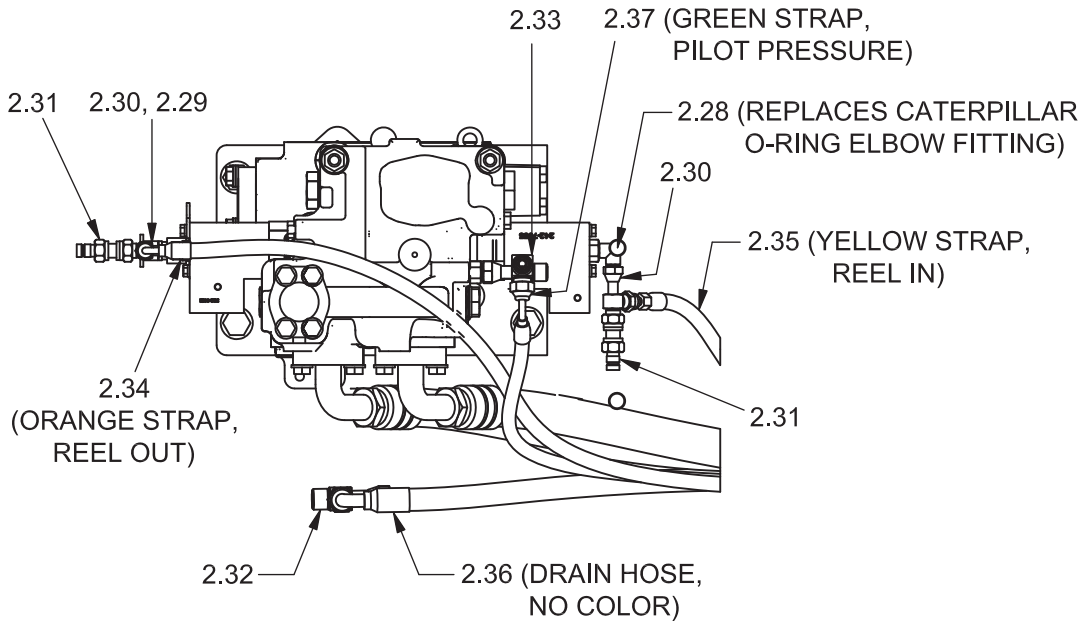
CONNECT HOSES AS SHOWN

Hydraulic Installation

H6HT (Standard) Winch

Caterpillar D6T (C71)

Page 2 of 2

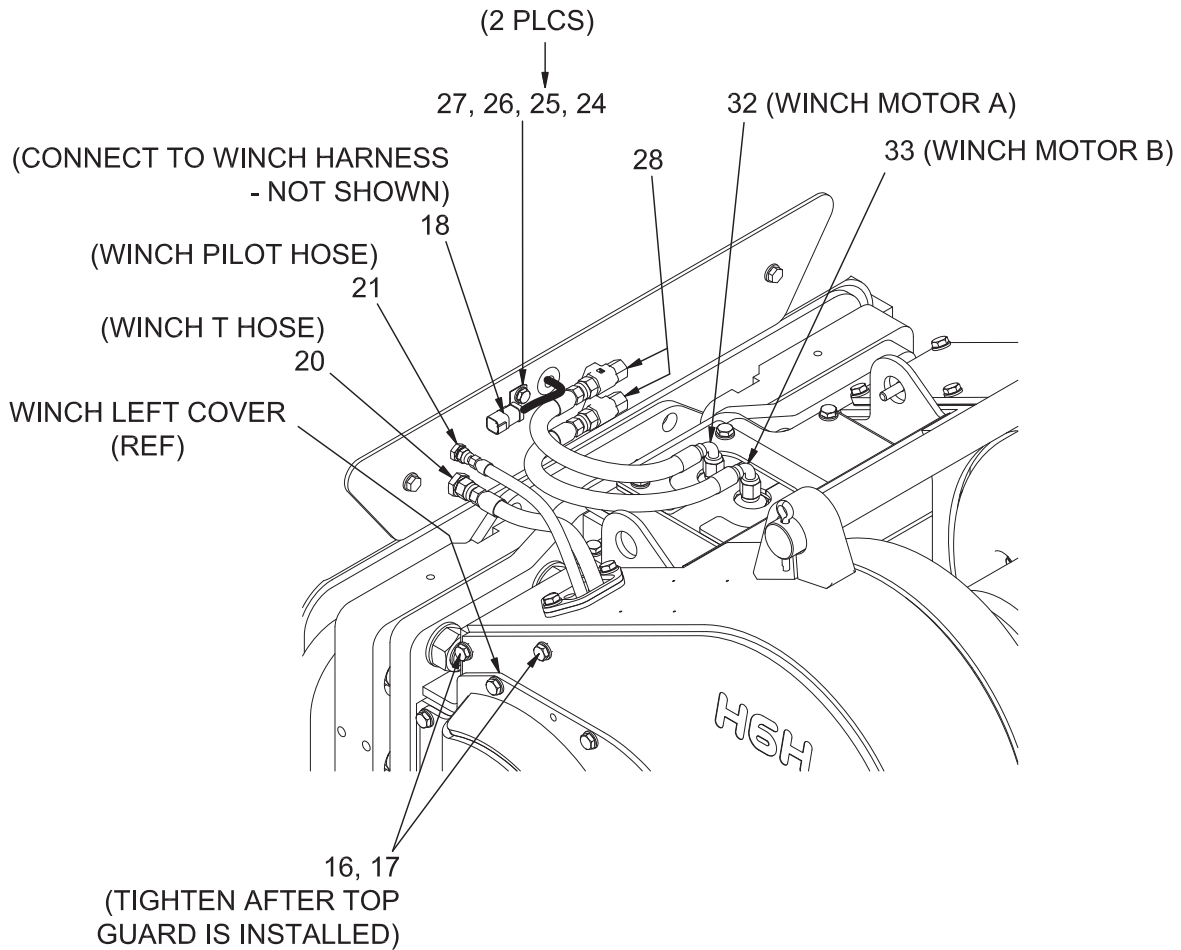


TRACTOR VALVE - TOP VIEW

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty	
2.1	*a	2314579	Tube Assembly, Reel In	1	2.28	R833253	Fitting	
	*b	2314753	Tube Assembly, Reel In	1	2.29	R833103	Fitting	
2.2	*a	2314580	Tube Assembly, Reel Out	1	2.30	236855	Fitting	
	*b	2314754	Tube Assembly, Reel Out	1	2.31	2307625W	Coupler, Quick Male	
2.3		2314628	Plate, Tube Retainer	1	2.32	R834052	Fitting	
2.4		2314627	Bracket, Tube	1	2.33	231955	Fitting	
2.5	Y098629-214		O-Ring	4	2.34	*c	249072	Assembly, Hose (Orange Tie Strap)
2.6		215064	Clamp, Half	4	2.35	*c	2312350	Assembly, Hose (Yellow Tie Strap)
2.7		15156W	Washer	8	2.36	*c	235536	Assembly, Hose (No Color Tie Strap)
2.8		R13801813	Capscrew	8	2.37	*c	2314696	Assembly, Hose (Green Tie Strap)
2.9		221767W	Washer	3				
2.21		272-0348	Fitting	3		*a	Last Used on S/N H6HT-1432	
2.22		272-0350	Fitting	1		*b	First Used on S/N H6HT-1433	
2.27		16805W	Capscrew	3		*c	Included in Hose Kit 2314769	

Hydraulic Installation

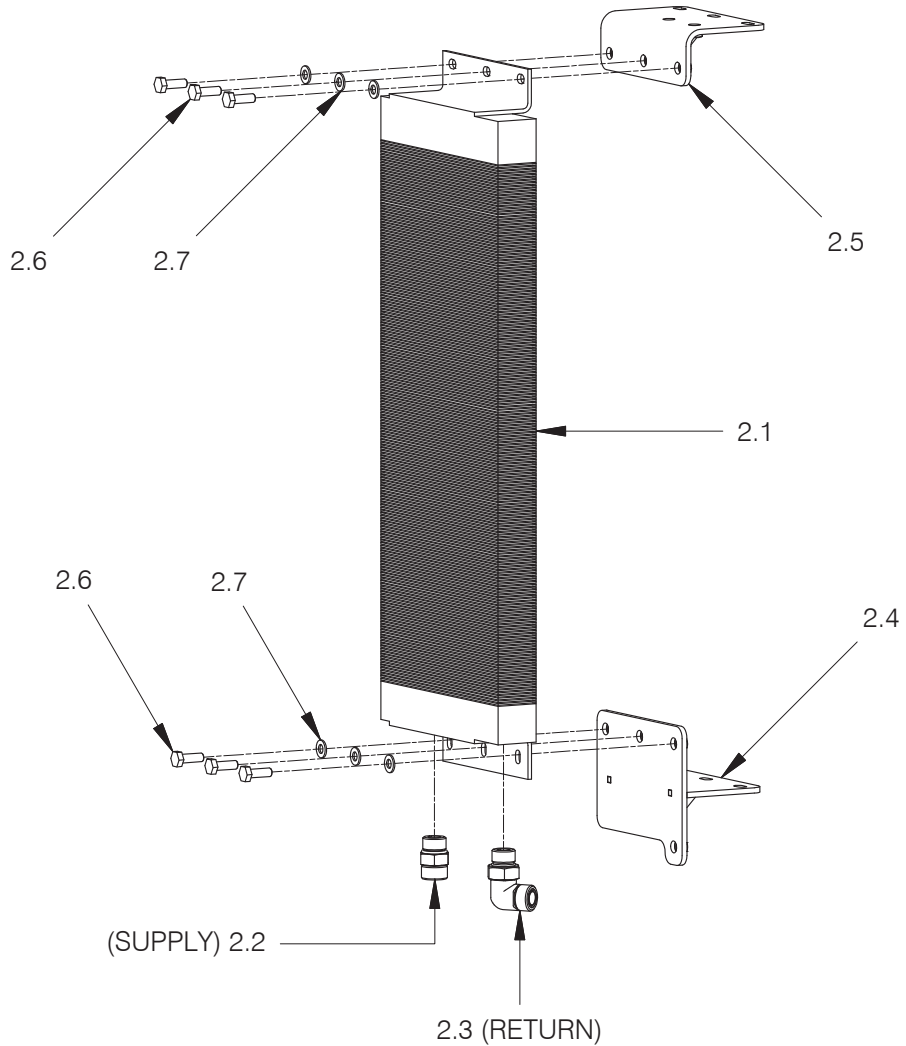
H6HT (Standard) Winch
Case 1650L (R40)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
16	296422W	Washer	4	26	293628W	Capscrew	1
17	293646W	Capscrew	5	27	292655W	Nut	1
18	2314728	Harness, Console Wire	1	28	R384253	Fitting	2
20	R834103	Fitting	1	32	*a 235533	Assembly, Hose	1
21	R834100	Fitting	1	33	*a 237954	Assembly, Hose	1
24	2311550	Clip, Harness Mounting	1				
25	296420W	Washer	2		*a	Included in Hose Kit 2315055	

Hydraulic Cooler Installation

Optional
Caterpillar D6N (C81), (C811)



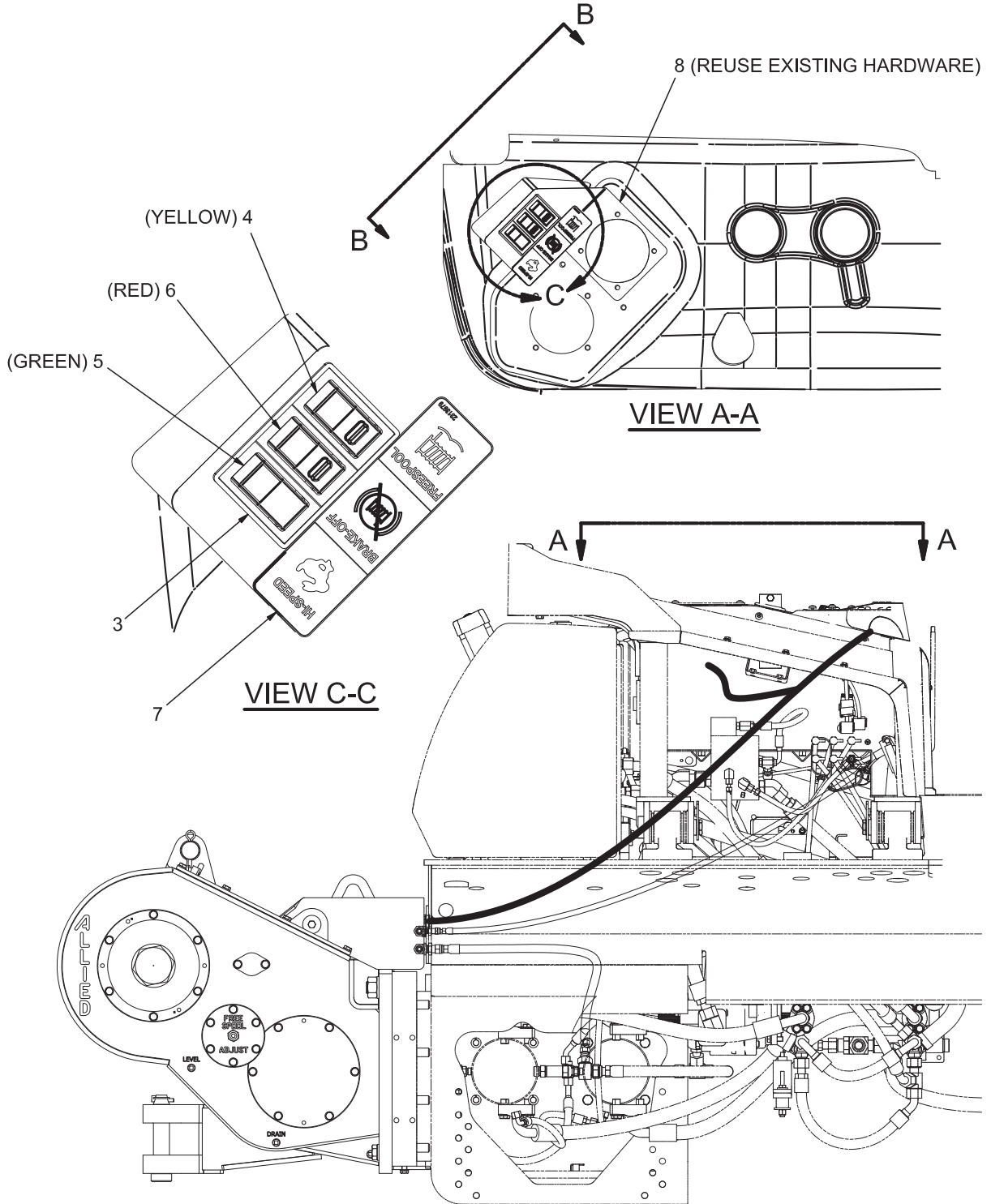
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.1	2307695W	Cooler, Oil	1	2.5	2307696W	Bracket, Upper	1
2.2	231443	Fitting	1	2.6	136985W	Cap screw	6
2.3	R833270	Fitting	1	2.7	296420W	Washer	6
2.4	2307898W	Assembly, Lower Bracket	1				

Console/Rear Plate Alteration & Controls Installation

H6HT (Standard) Winch

Case 1650L (R40)

Page 1 of 2

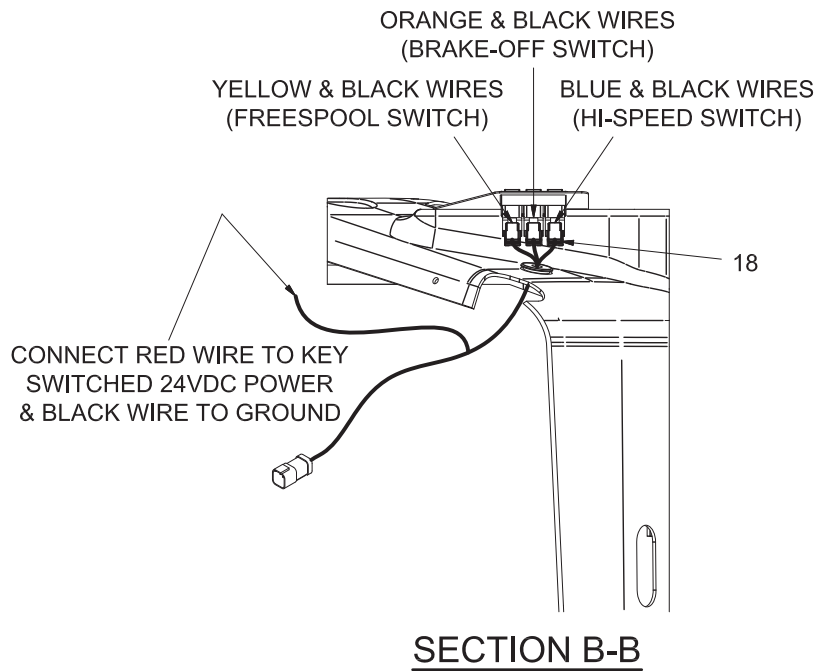


Console/Rear Plate Alteration & Controls Installation

H6HT (Standard) Winch

Case 1650L (R40)

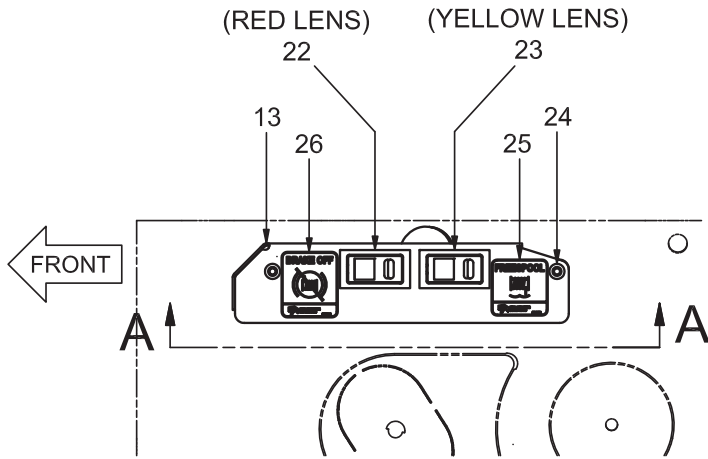
Page 2 of 2



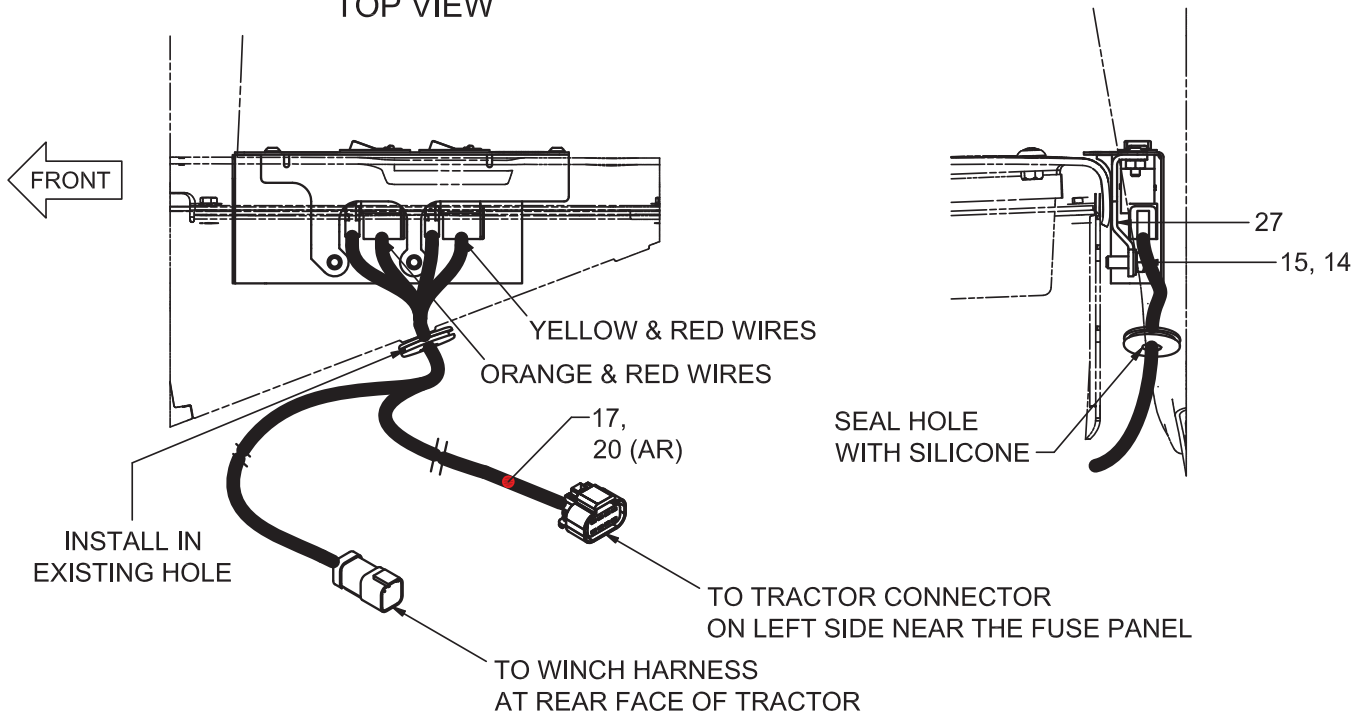
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
3	234740	Frame, Mounting	1	7	2313979	Decal, Switch Panel	1
4	2310013	Assembly, Switch - Yellow LED	1	8	2314651	Mounting, Switch	1
5	2311072	Assembly, Switch - Green LED	1	18	2314728	Harness, Console Wire	1
6	2310504	Assembly, Switch - Red LED	1				

Controls Installation

H6HT (Standard) Winch
Case 1650/2050M (R42)



**CONTROLS INSTALLATION
TOP VIEW**



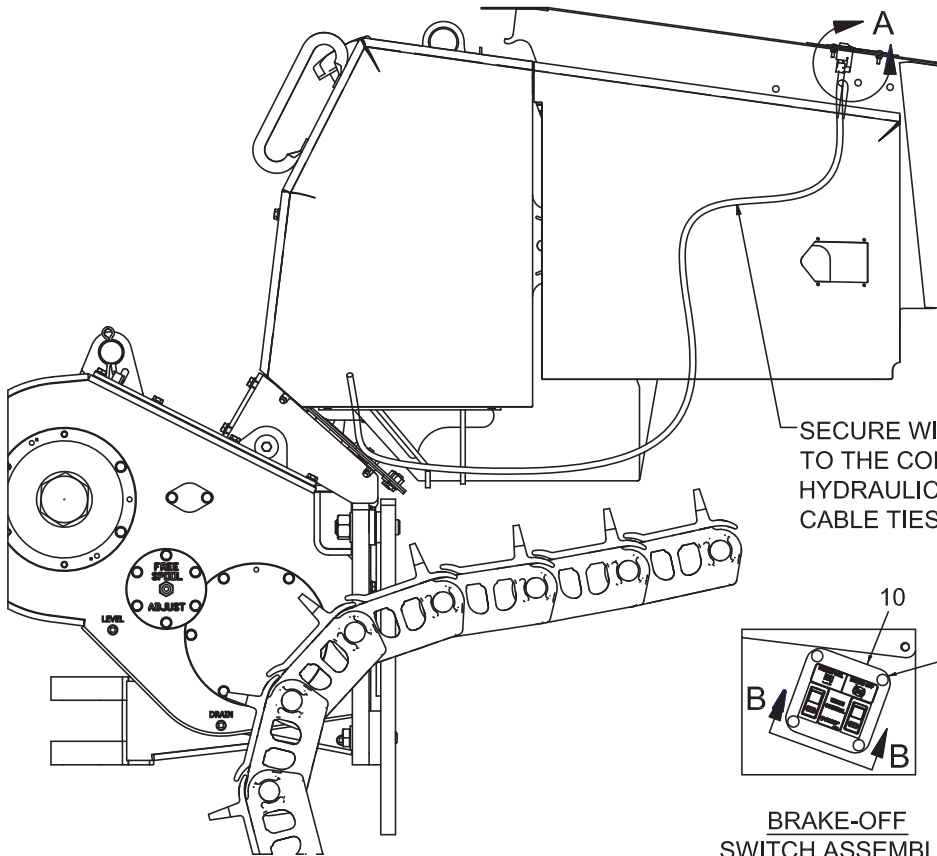
VIEW A-A

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
13	2313993	Plate, Switch Mounint	1	23	2310013	Assembly, Switch (Yellow LED)	1
14	296418W	Washer	2	24	296159W	Capcrew	2
15	Y09C-M0820	Capcrew	2	25	2313992	Decal, Switch Panel-F/S	1
17	2313400	Harness, Wire	1	26	2313991	Decal, Switch Panel-BRAKE OFF	1
20	137852W	Clamp, Strap	10	27	2314082	Bracket, Switch	1
22	2310504	Assembly, Switch (Red LED)	1				

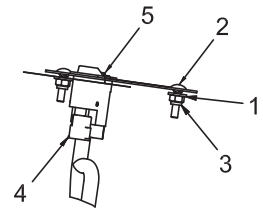
Control Lever Installation*

John Deere 850J (E47)

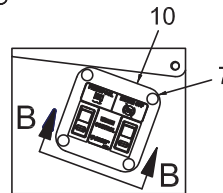
* Note: Control lever is not shown due to the fact that it is supplied by the tractor manufacturer.



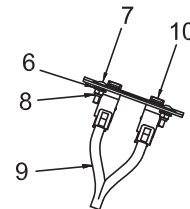
SECURE WINCH HARNESS TO THE CONTROL LEVER HYDRAULIC LINES USING CABLE TIES.



**DETAIL A
NON BRAKE OFF
SWITCH ASSEMBLY**



**BRAKE-OFF
SWITCH ASSEMBLY
DETAIL**

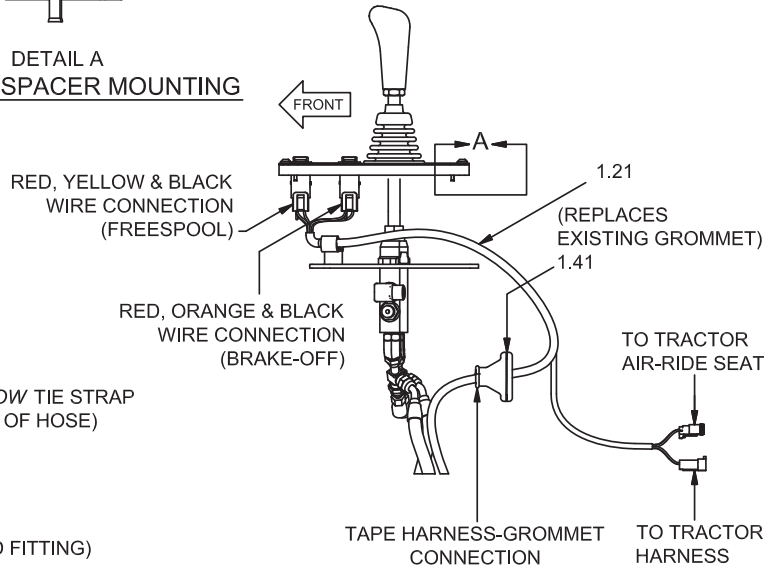
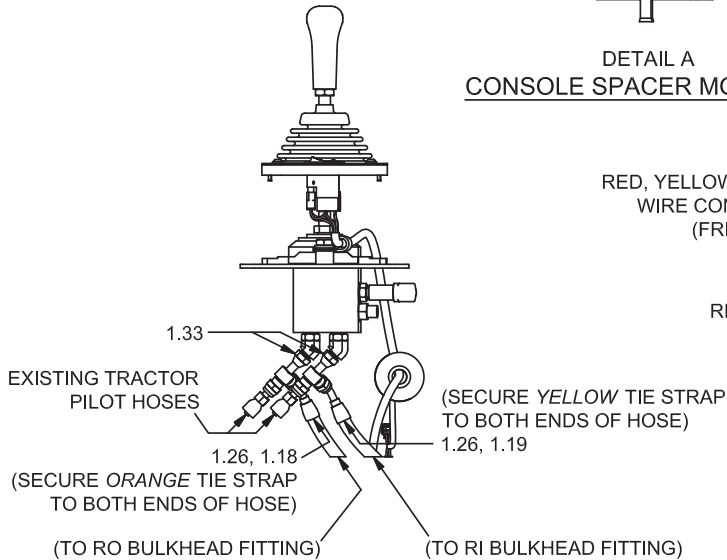
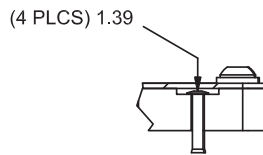
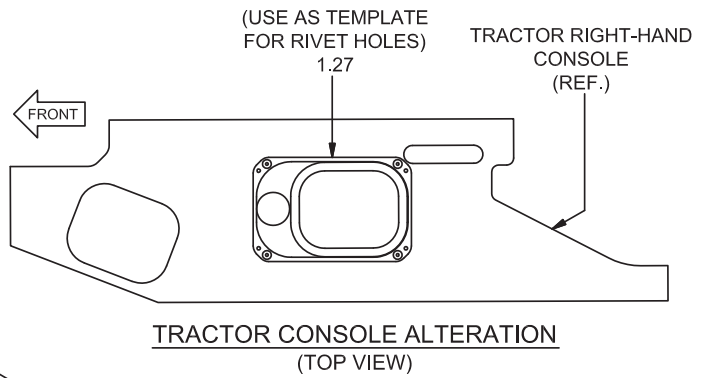
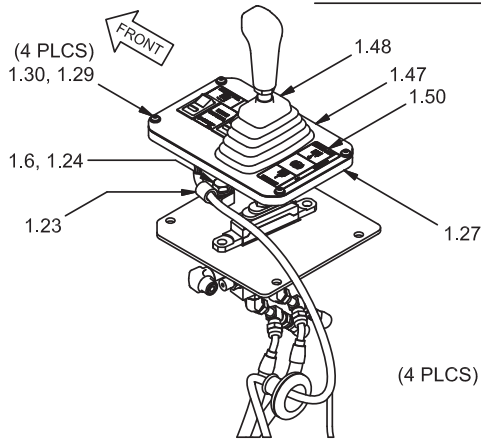
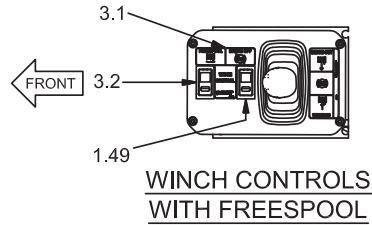
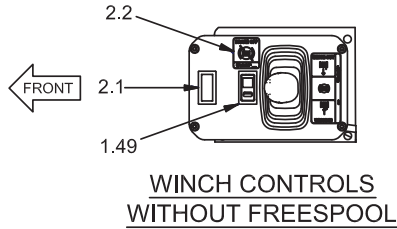


SECTION B-B

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	15127W	Washer	2	6	15127	Washer	4
2	220000W	Bolt	2	7	220000W	Bolt	4
3	15113W	Nut	2	8	15113W	Nut	4
4	2312927	Wire Harness	1	9	2312856	Wire Harness	1
5	2312895	Assembly, Switch F/S (3-113)	1	10	2312855	Assembly, Switch Panel (3-112)	1

Control Lever Installation

H6HT (Standard) Winch
 Komatsu D65-16/17 (K49)
 Page 1 of 2



WINCH CONTROLS INSTALLATION

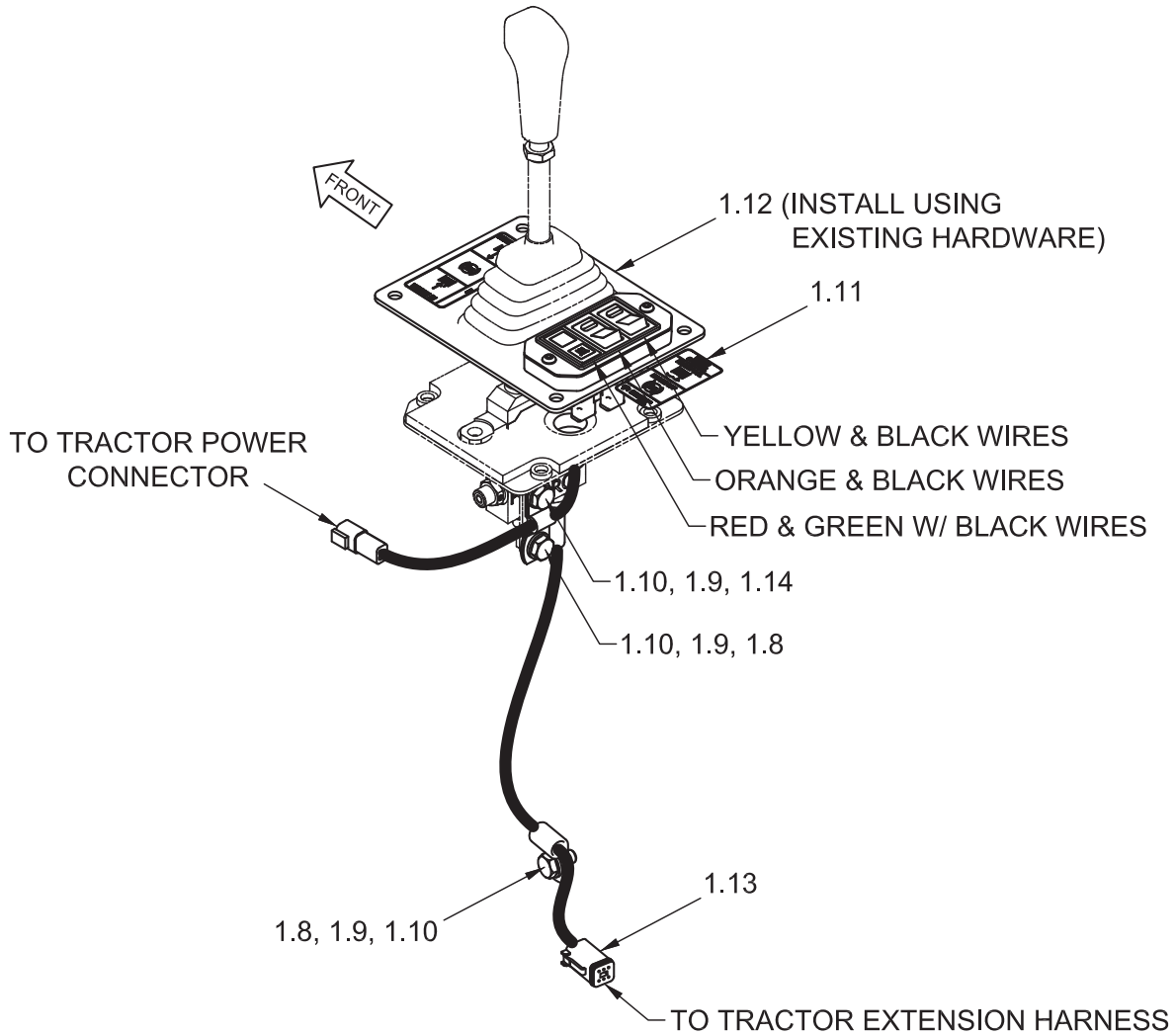
Control Lever Installation

H6HT (Standard) Winch
Komatsu D65-16/17 (K49)
Page 2 of 2

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.6	296422W	Washer	3	1.49	2310504	Assembly, Switch with Lock	1
1.18	242596	Tie, Cable (Yellow)	2		2307582W	.. Switch, Rocker with Lock	1
1.19	242597	Tie, Cable (Orange)	2		251345	.. Lamp, Red LED	1
1.21	2312338	Harness, Console Wire	1		236503	.. Lens, Red	1
1.23	R13807642	Clip, Insulation	1	1.50	2312177	Decal, Winch In, Winch Out	1
1.24	R13811225	Capscrew	1				
1.26	2311541	Assembly, Hose	2	2.1	234509	Cover, Blank	1
1.27	2312175	Spacer, Switch Mounting	1	2.2	2313991	Decal, Switch Panel; Brake-Off	1
1.29	296158W	Capscrew	4				
1.30	296417W	Washer	4	3.1	2312176	Decal, Winch Control; FS & Brake-Off	1
1.33	236855	Fitting	3	3.2	2310013	Assembly, Switch; 24V	1
1.39	2312205	Rivet, POP	4		2307582W	.. Switch, Rocker w/Lock	1
1.41	2312235	Grommet, Extended Neck	1		251107	.. Lamp, Yellow LED	1
1.47	2312174	Plate, Switch Mounting	1		237346	.. Lens, Yellow	1
1.48	2311042	Boot	1				

Control Lever Installation

H6HH (Hi-Performance) Winch
Komatsu D61-23 (K471)

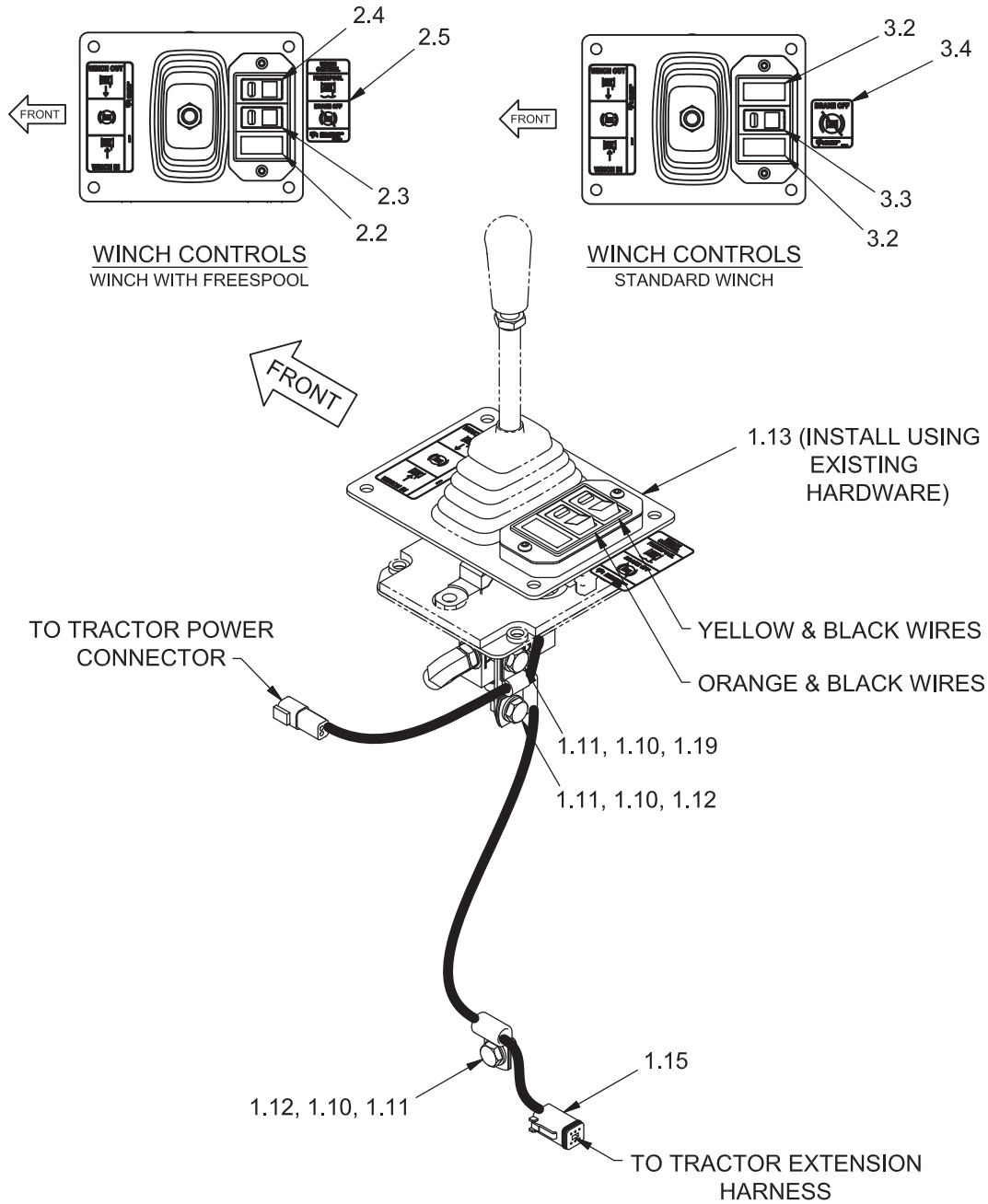


CONTROL LEVER INSTALLATION
RIGHT TRACTOR CONSOLE

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.8	R13807640	Clip, Insulated	2	1.12	2313116	Assembly, Switch Panel (3-116)	1
1.9	296420W	Washer	3	1.13	2313117	Harness, Winch Wire	1
1.10	236805	Capscrew	3	1.14	R13801359	Clip, Insulation	1
1.11	2310414	Decal, Switch Panel	1				

Control Lever Installation

H6HT (Standard) Winch
Komatsu D61-23 (K471)

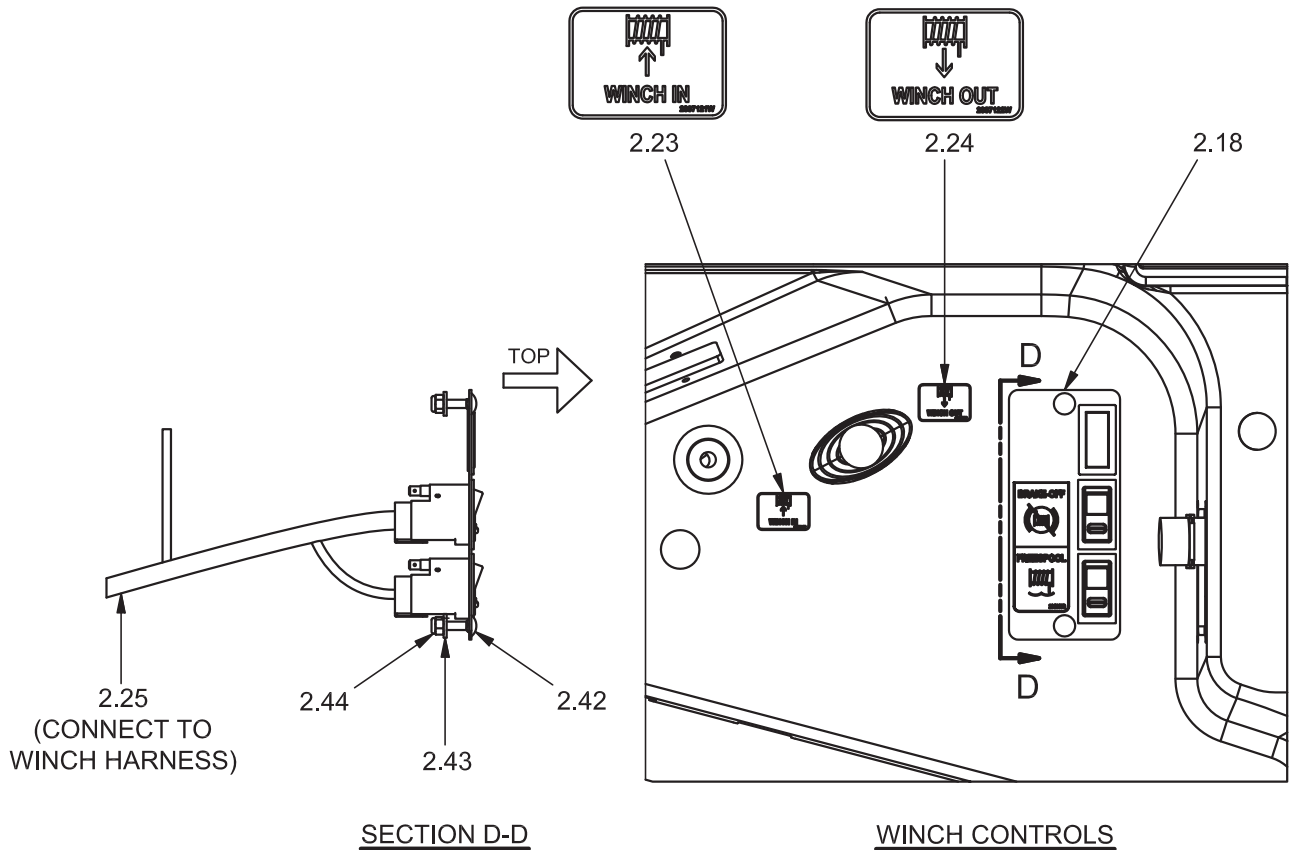


CONTROL LEVER INSTALLATION
RIGHT-HAND-SIDE TRACTOR CONSOLE

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1.10	296420W	Washer	3		236503	.. Lens, Red	1
1.11	236805	Capscrew	3	2.4	2310013	Assembly, Switch; Yellow LED	1
1.12	R13807640	Clip, Insulation	2		2307582W	.. Switch, Rocker w/Lock	1
1.13	2312979	Assembly, Switch Panel (3-114)	1		251107	.. Lamp, Yellow LED	1
1.15	2312978	Harness, Console Wire	1		237346	.. Lens, Yellow	1
1.19	R13801359	Clip, Insulation	1	2.5	2310414	Decal, Switch Panel	1
2.2	234509	Cover, Blank	1	3.2	234509	Cover, Blank	2
2.3	2310504	Assembly, Switch; Red LED	1	3.3	2310504	Assembly, Switch; Red LED	1
	2307582W	.. Switch, Rocker w/Lock	1	3.4	2313991	Decal, Switch Panel; BRAKE-OFF	1
	251345	.. Lamp, Red LED	1				

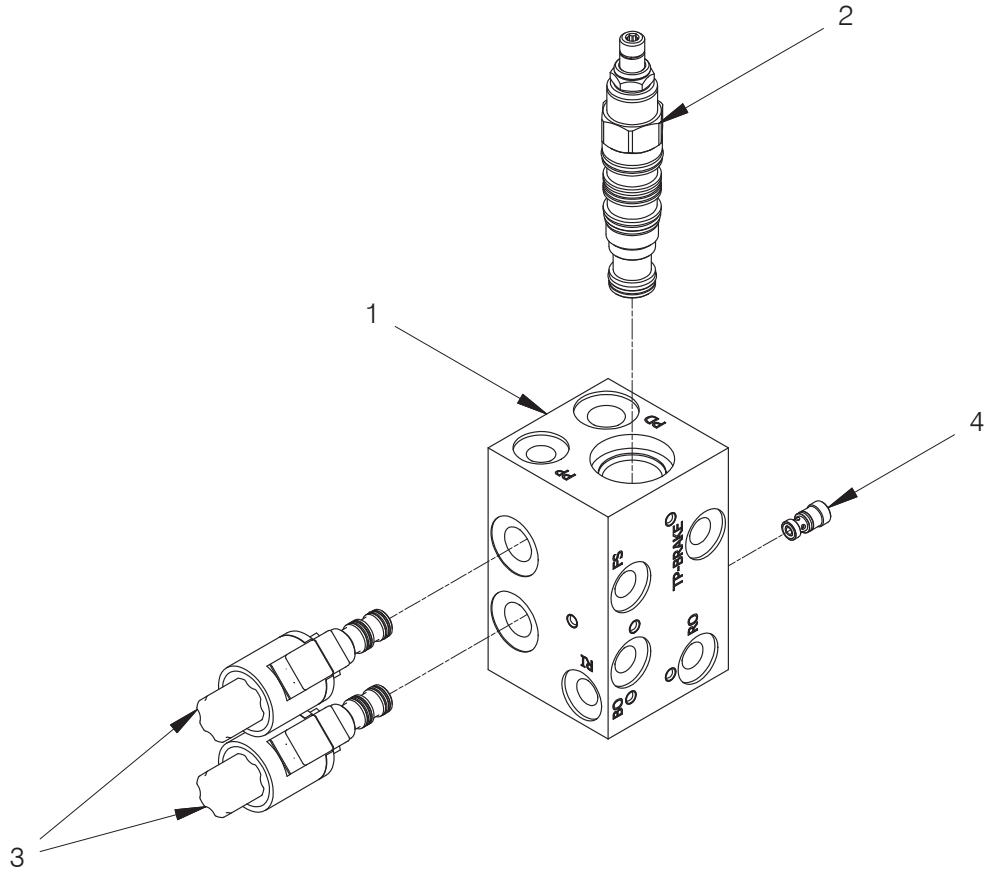
Winch Controls

H6HT (Standard) Winch
Caterpillar D6T (C71)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
2.18	2314655	Assembly, Switch Panel (3-120)	1	2.42	220000W	Bolt	2
2.23	2307121W	Decal, Winch In	1	2.43	221763W	Washer	2
2.24	2307122W	Decal, Winch Out	1	2.44	R13811189	Nut, Lock	2
2.25	2314654	Wire Harness, Console	1				

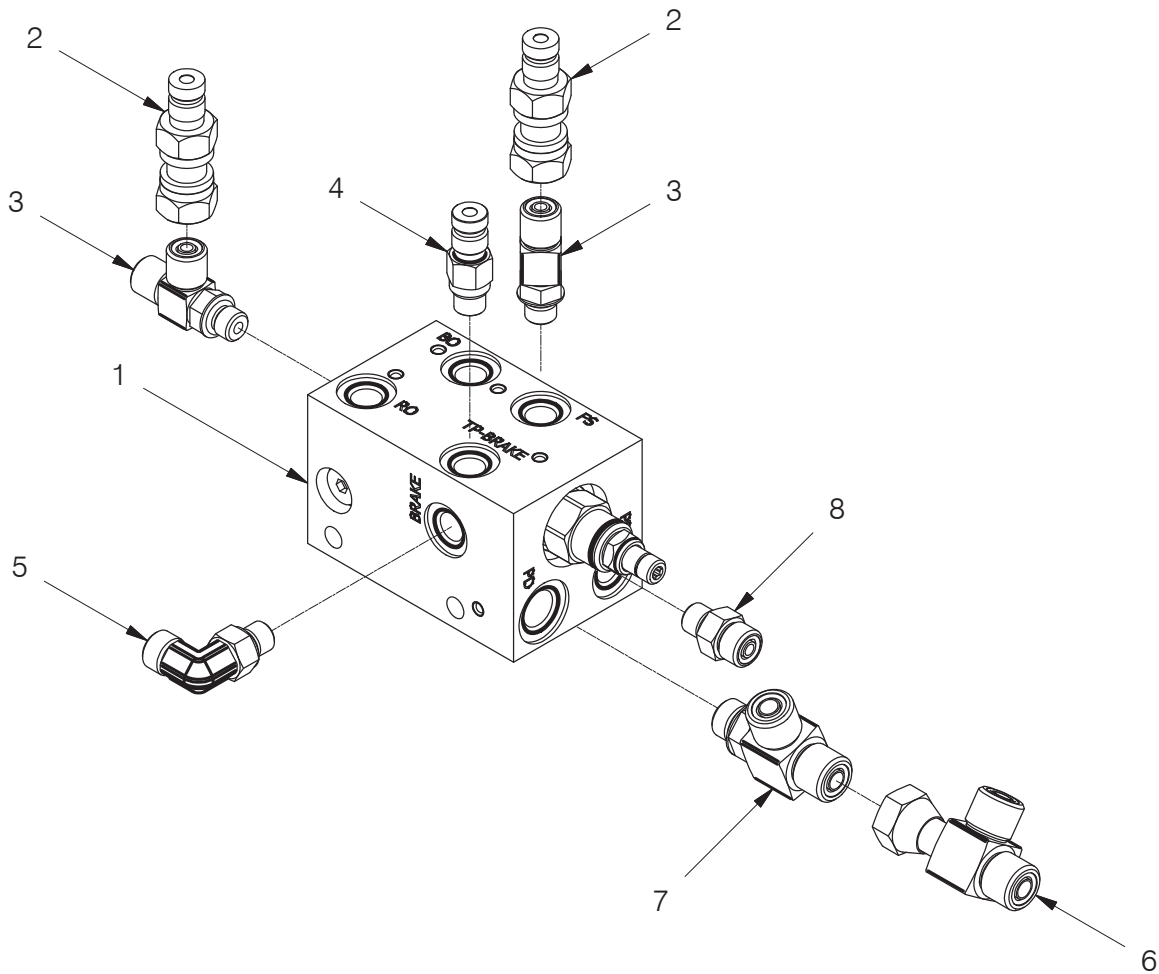
Control Manifold Assembly



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

Control Manifold Assembly

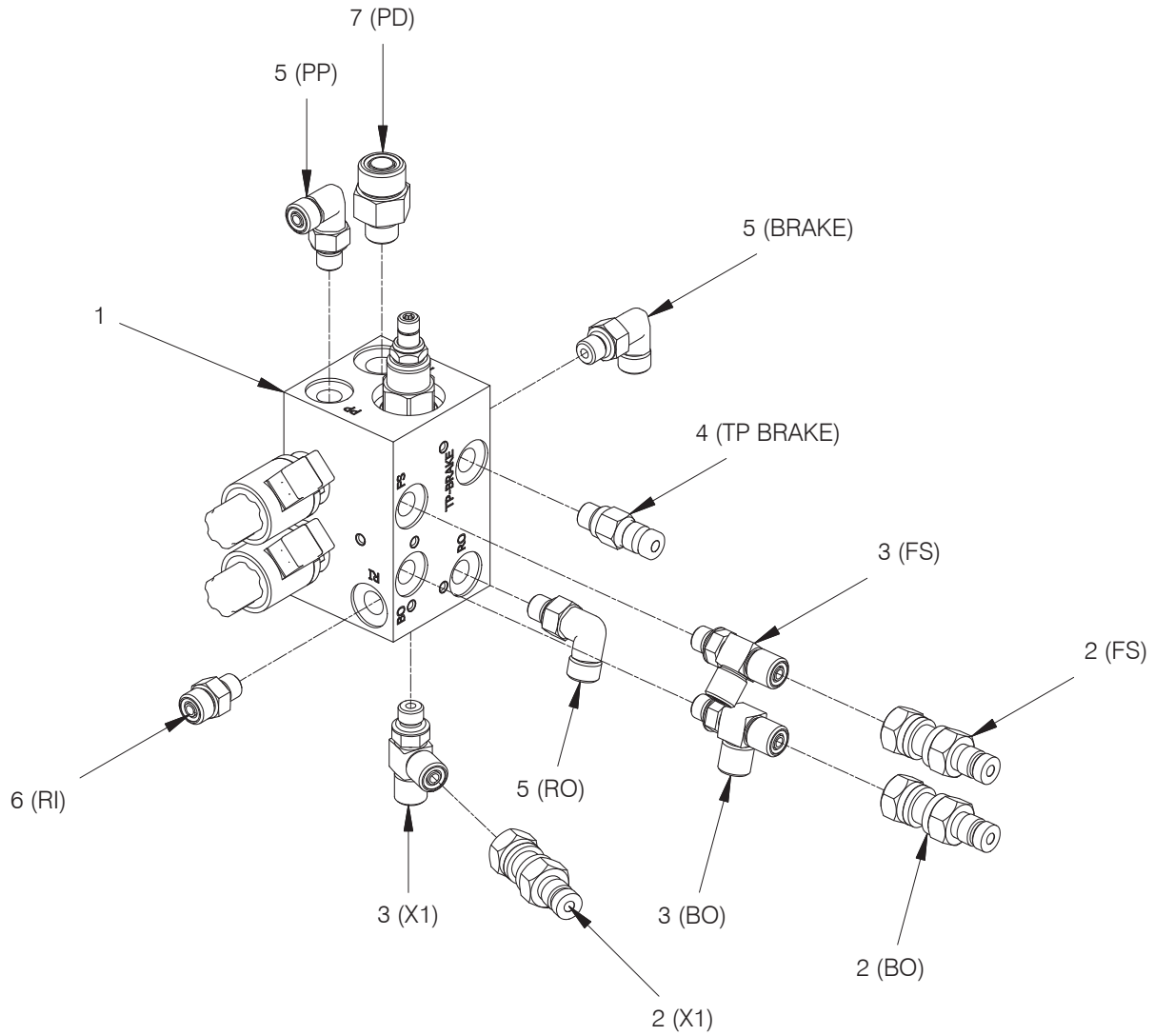
H6HT (Standard) Winch
 Caterpillar D6N (C81); Komatsu D65-16/17 (K49)
 H6HH (High Performance) Winch
 John Deere 750J (E47)/850J (E48)
 John Deere 750J/850J, and 750K/850K (E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312908	Assembly, Control Manifold	1				
1	2311770	. Assembly, Control Manifold (3-86)	1	5	R833251	. Fitting	1
2	2307625W	. Coupler	2	6	231955	. Fitting	1
3	R833400	. Fitting	2	7	231465	. Fitting	1
4	R14040	. Coupler	1	8	231439	. Fitting	1

Control Manifold Assembly

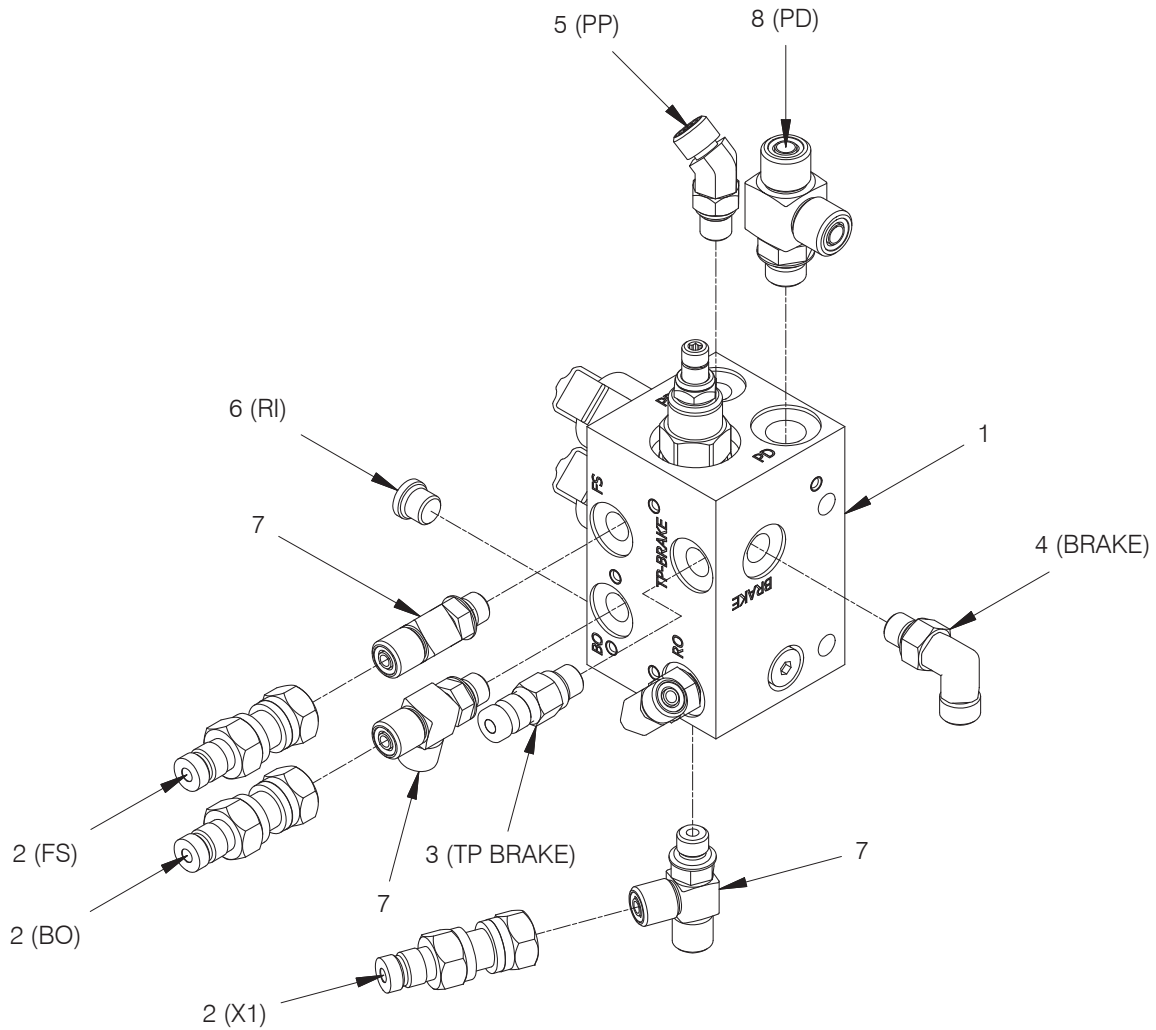
Komatsu D61-23 (K471)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313043	Assembly, Control Manifold	1				
1	2311770	. Assembly, Control Manifold (3-85)	1	5	R833251	. Fitting	3
2	2307625W	. Coupler	3	6	231439	. Fitting	1
3	R833400	. Fitting	3	7	R833112	. Fitting	1
4	R14040	. Coupler	1				

Control Manifold Assembly

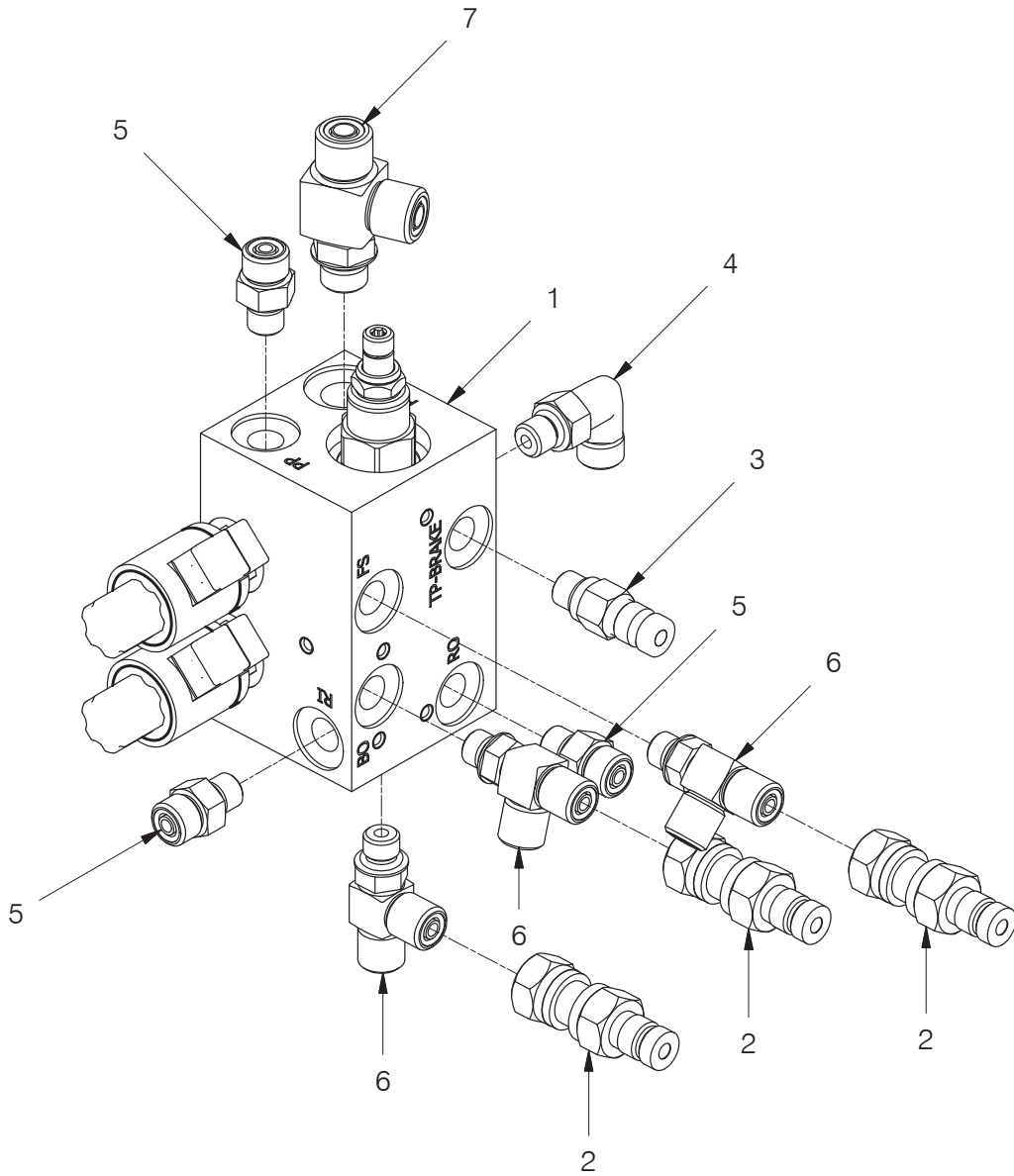
Case 1650/2050M (R42)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313318	Assembly, Control Manifold	1				
1	2311770	. Assembly, Control Manifold (3-85)	1	5	R833200	. Fitting	1
2	2307625W	. Coupler	3	6	235387	. Fitting	1
3	R14040	. Coupler	1	7	R833400	. Fitting	3
4	R833251	. Fitting	2	8	231465	. Fitting	1

Control Manifold Assembly

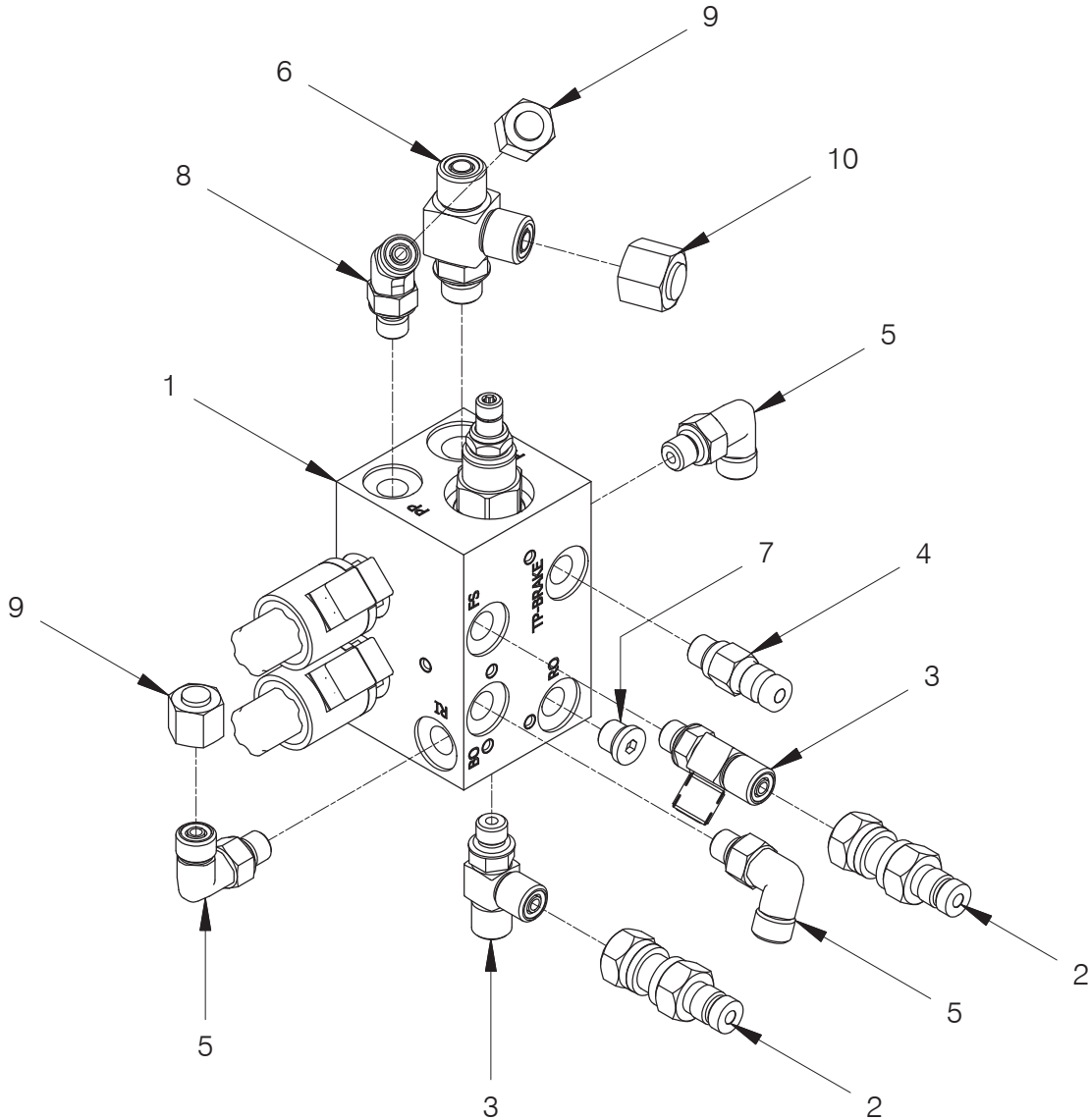
Liebherr PR724 (L41)
 H6HT (Standard) Winch
 Caterpillar D6T (C71)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313617	Assembly, Control Manifold	1				
1	2311770	. Assembly, Control Manifold (3-85)	1	5	231439	. Fitting	3
2	2307625W	. Coupler, Quick Male	3	6	R833400	Fitting	3
3	R14040	. Coupler, Quick Male	1	7	231465	Fitting	1
4	R833251	. Fitting	1				

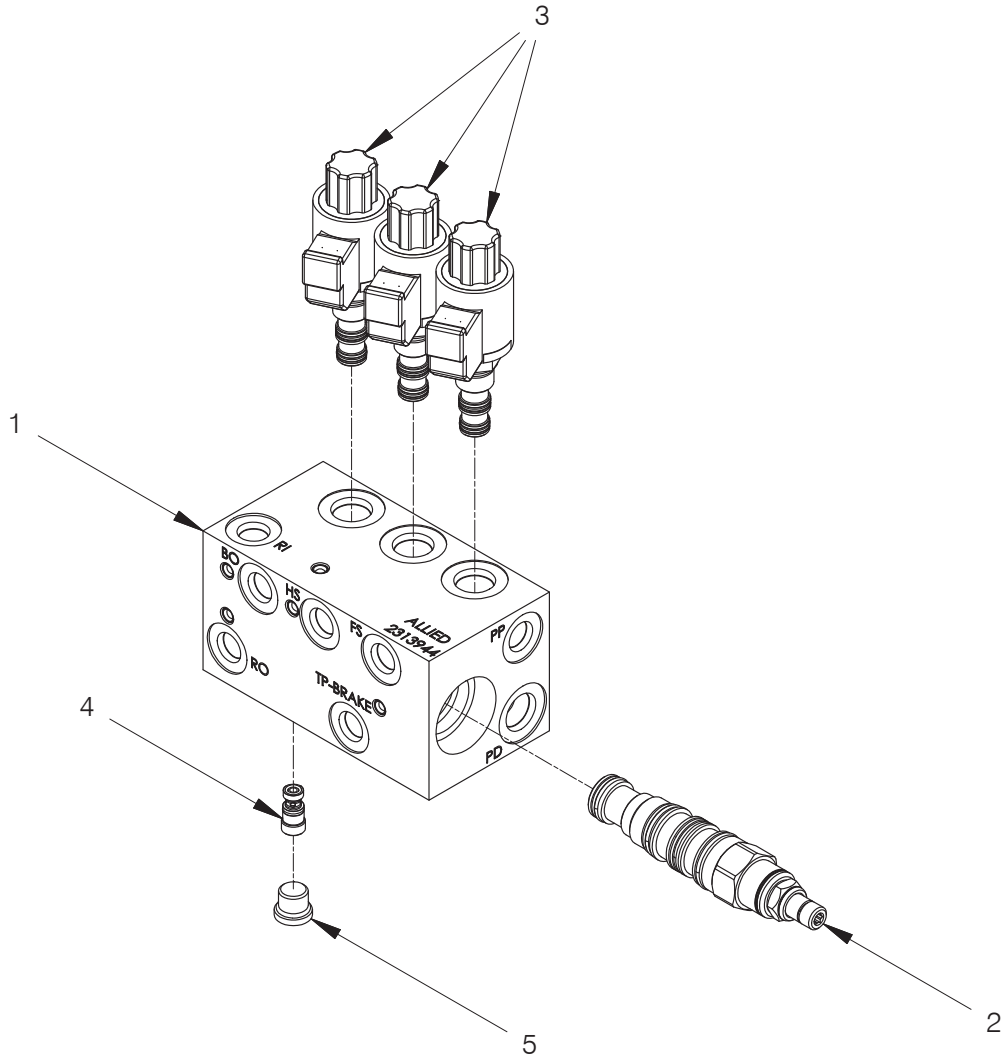
Control Manifold Assembly

H6HT (Standard) Winch
Tigercat 635D (Y44)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313735	Assembly, Control Manifold	1				
1	2311770	. Assembly, Control Manifold (3-85)	1	6	231465	. Fitting	1
2	2307625W	. Coupler, Quick Male	2	7	235387	. Fitting	1
3	R833400	. Fitting	2	8	R833200	. Fitting	1
4	R14040	. Coupler, Quick Male	1	9	232984	. Fitting	2
5	R833251	. Fitting	3	10	231822	. Fitting	1

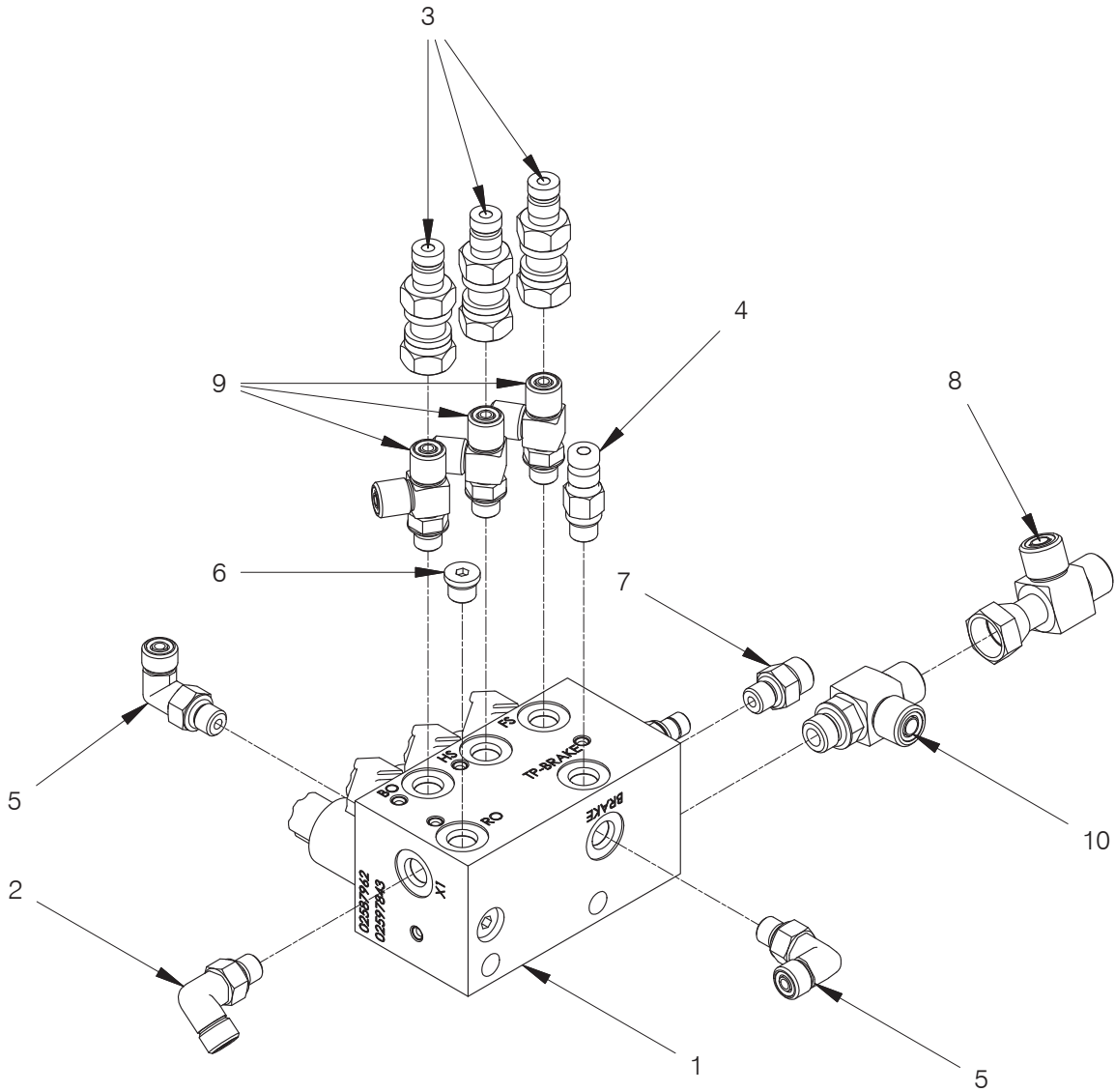
Control Manifold Assembly



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313944	Assembly, Control Manifold	1				
1	2313943	. Body, Control Manifold	1				
2	2311592	. Valve, Directional	1	4	2312074	. Valve, Shuttle	1
	252566	.. Kit, Seal	1		2312112	.. Seals, O-Ring	1
3	2312073	. Valve, Cartridge	3	5	235387	. Fitting	1
	2312111	.. Kit, Seal	1				

Control Manifold Assembly

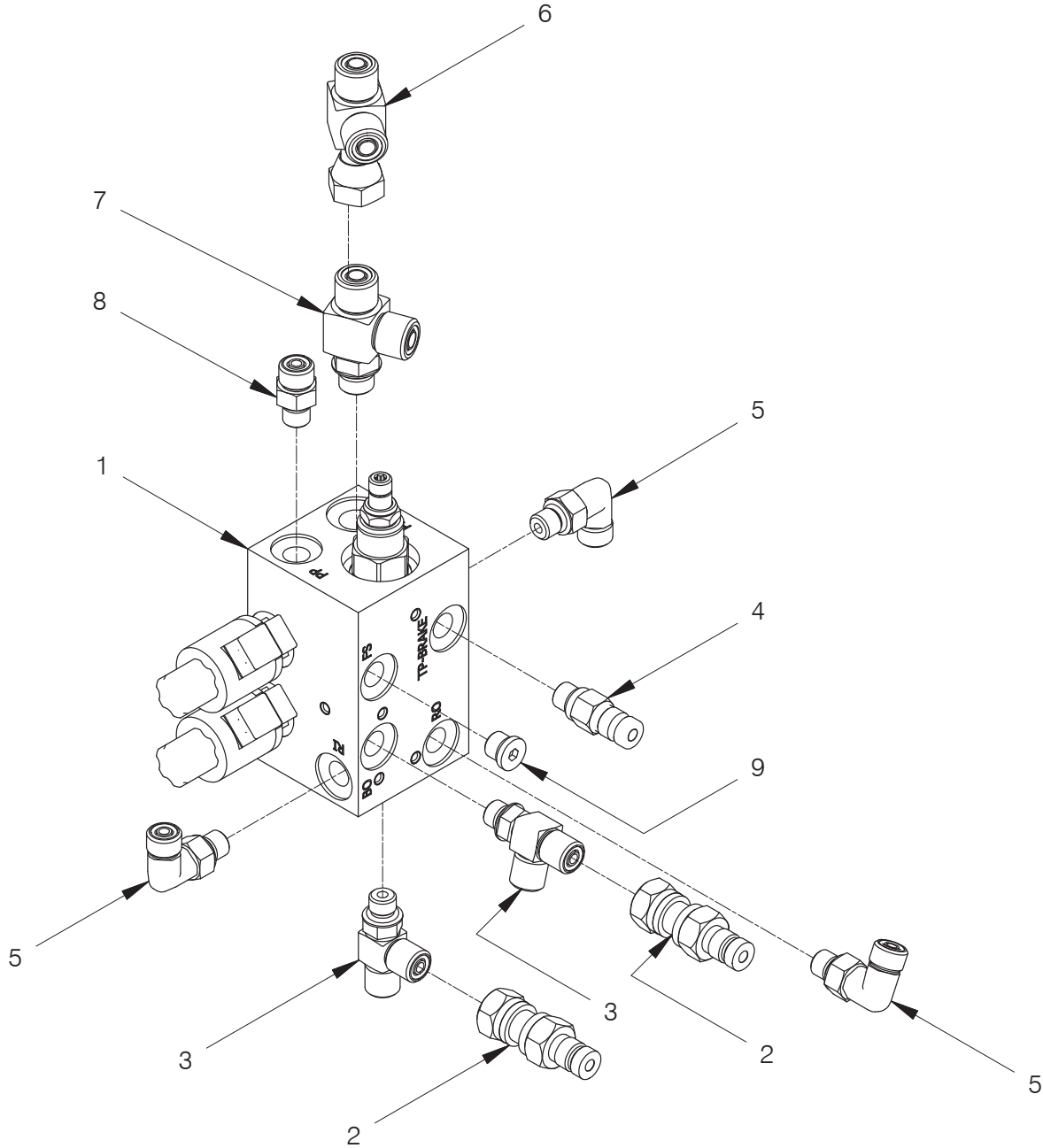
H6HT (Standard) Winch
 Case 1650L (R40)
 Caterpillar D6N (C811)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313960	Assembly, Control Manifold	1				
1	2313944	. Assembly, Control Manifold (3-91)	1	6	235387	. Fitting	1
2	2311500	. Assembly, Fitting	1	7	231439	. Fitting	1
3	2307625W	. Coupler, Quick Male	3	8	231955	. Fitting	1
4	R14040	. Coupler, Quick Male	1	9	R833400	. Fitting	3
5	R833251	. Fitting	2	10	231465	. Fitting	1

Control Manifold Assembly

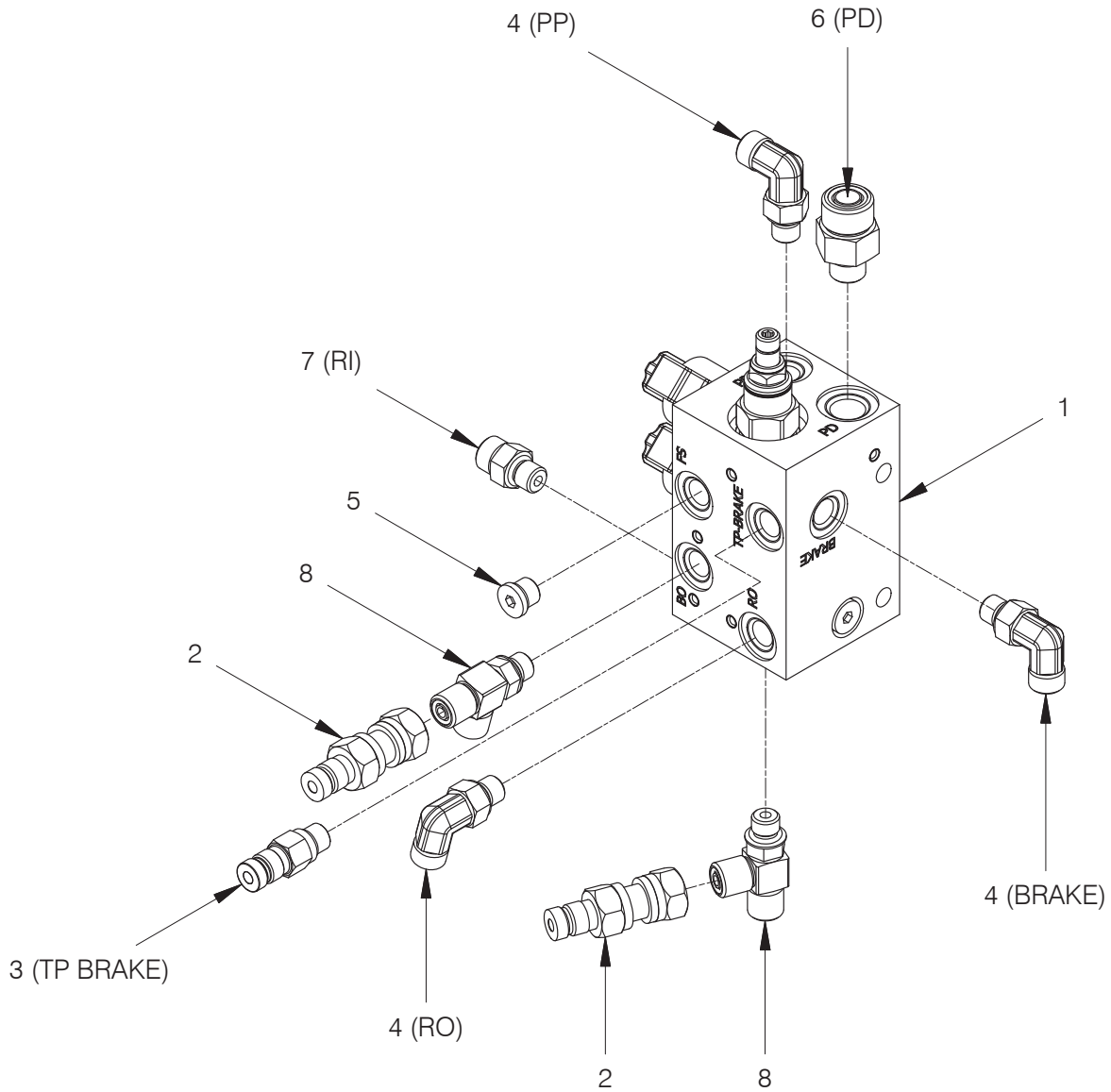
Komatsu D65-16/17 (K49)
Standard Hydraulics



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2314490	Assembly, Control Manifold	1	6	231955	. Fitting	1
	2311770	. Assembly, Control Manifold (3-85)	1	7	231465	. Fitting	1
2	2307625W	. Coupler, Quick Male	2	8	231439	. Fitting	1
3	R833400	. Fitting	2	9	235387	. Fitting	1
4	R14040	. Coupler, Quick Male	1				
5	R833251	. Fitting	3				

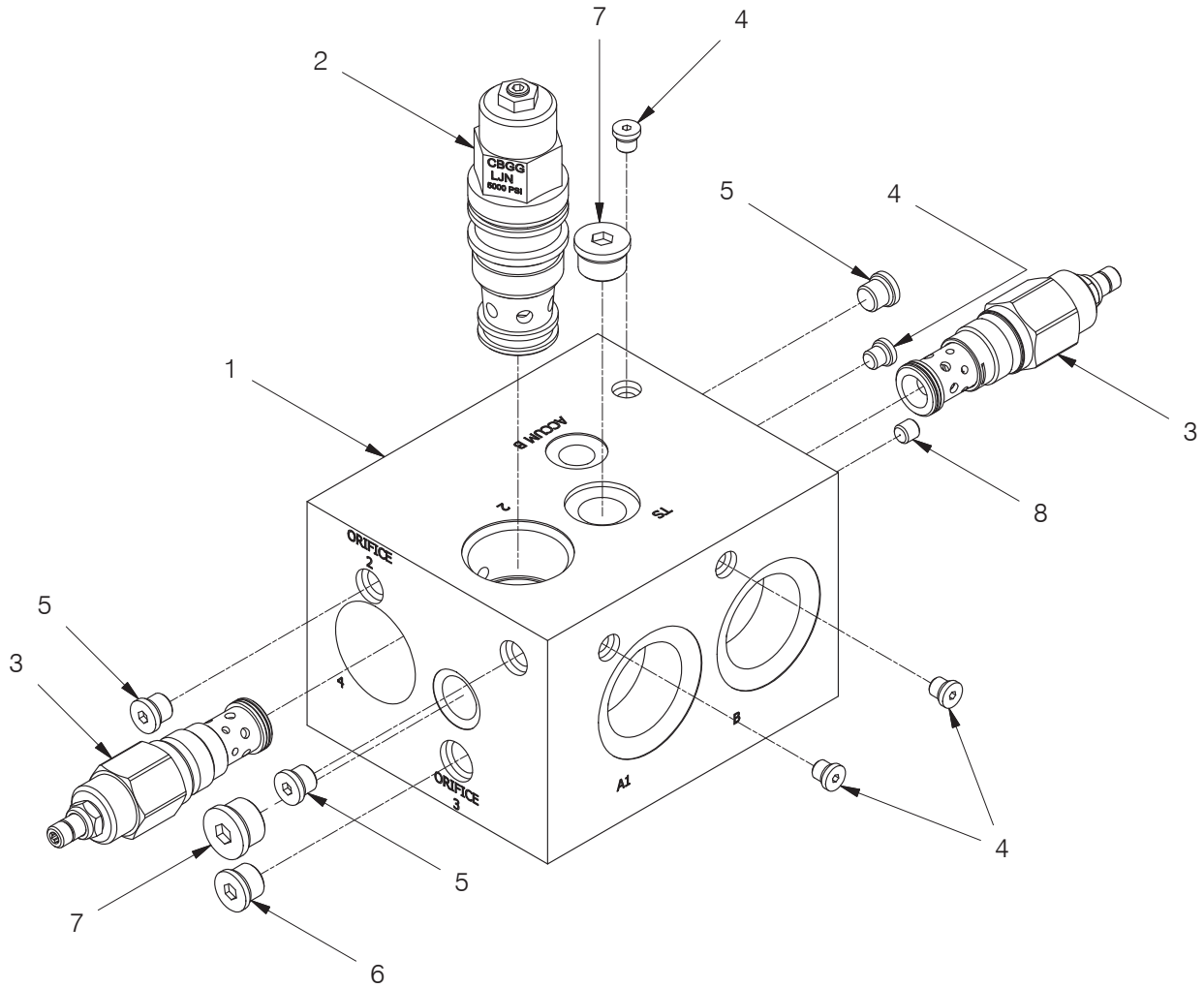
Control Manifold Assembly

H6HT (Standard) Winch
Komatsu D61-23 (K471)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314507	Assembly, Control Manifold	1				
1	2311770	. Assembly, Control Manifold (3-85)	1	5	235387	. Fitting	1
2	2307625W	. Coupler	2	6	R833112	. Fitting	1
3	R14040	. Coupler	1	7	231439	. Fitting	1
4	R833251	. Fitting	3	8	R833400	. Fitting	2

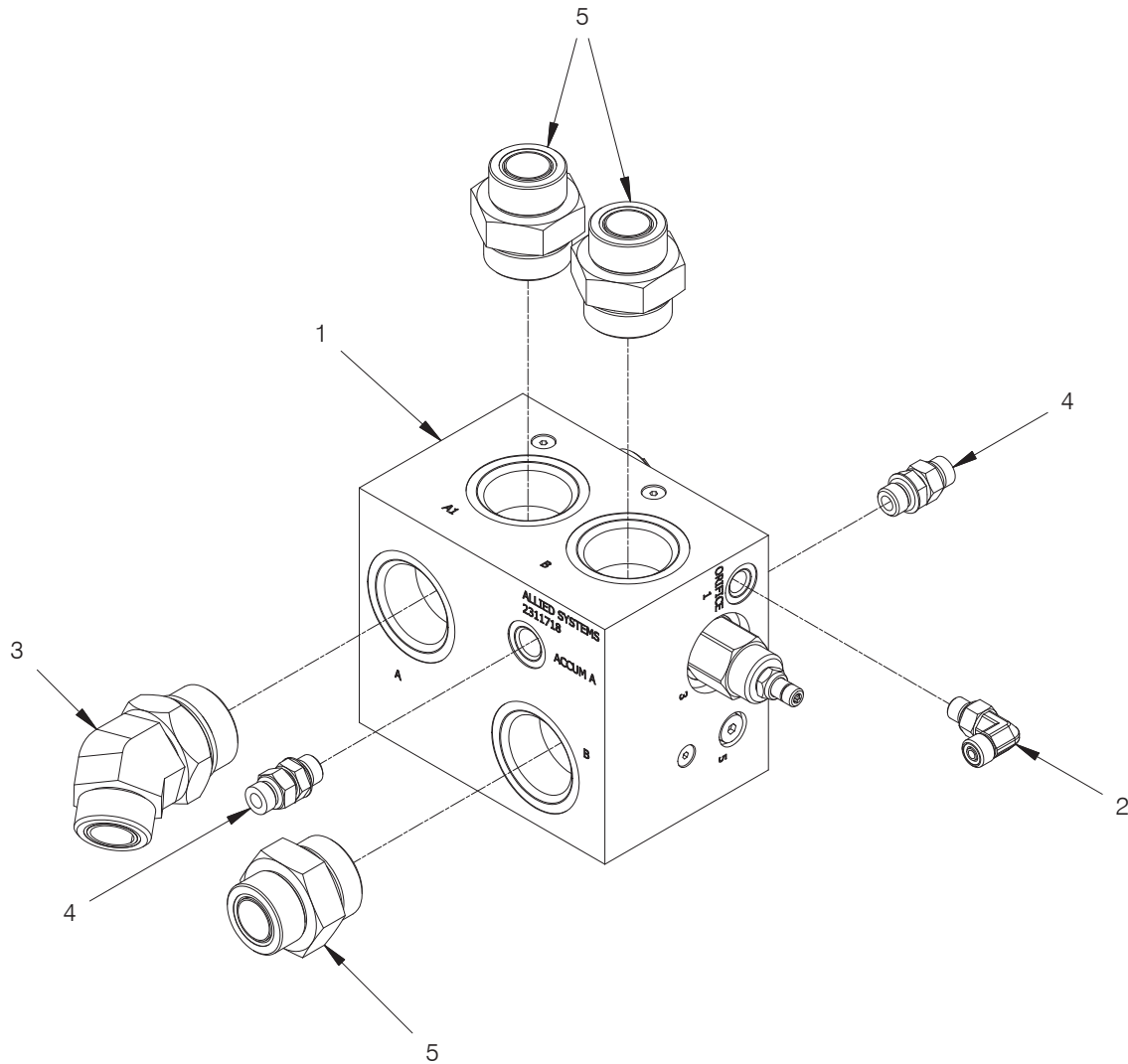
Counterbalance Relief Manifold Assembly



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2311718	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311719	. Body, Manifold	1	4	242230	. Fitting	4
2	2312068	. Valve, Counter Balance	1	5	235387	. Fitting	3
	243815	.. Seal Kit (Not Shown)	1	6	229383	. Fitting	1
3	2307438W	. Valve, Relief	2	7	229345	. Fitting	2
	255601	.. Kit, Seal	1	8	2310181	. Plug, Orifice	1
	259258	.. Kit, Seal	1				

Counterbalance Relief Manifold Assembly

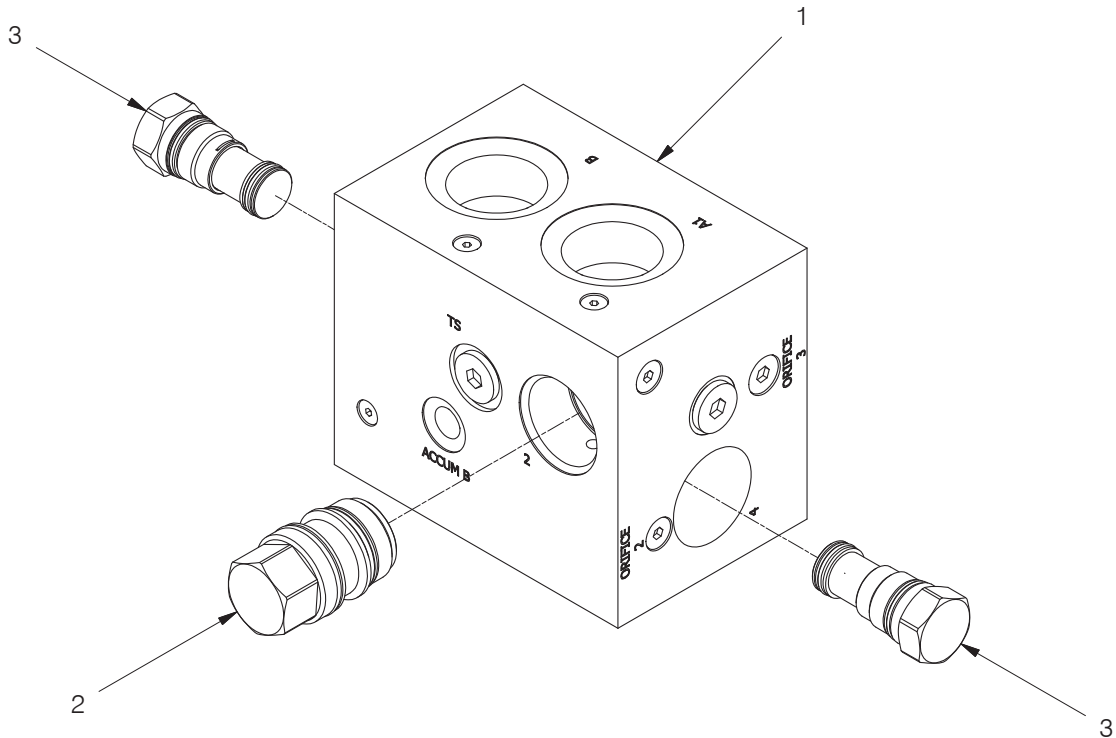
H6HT (Standard) Winch
 Caterpillar D6N (C81) and (C811)
 Komatsu D65-16/17 (K49), Komatsu D61-23 (K471)
 Last Used on S/N H6H-1496



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312816	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	3	R833218	. Fitting	1
2	R833251	. Fitting	1	4	229347	. Fitting	2
				5	R833133	. Fitting	3

Counterbalance Relief Manifold Assembly

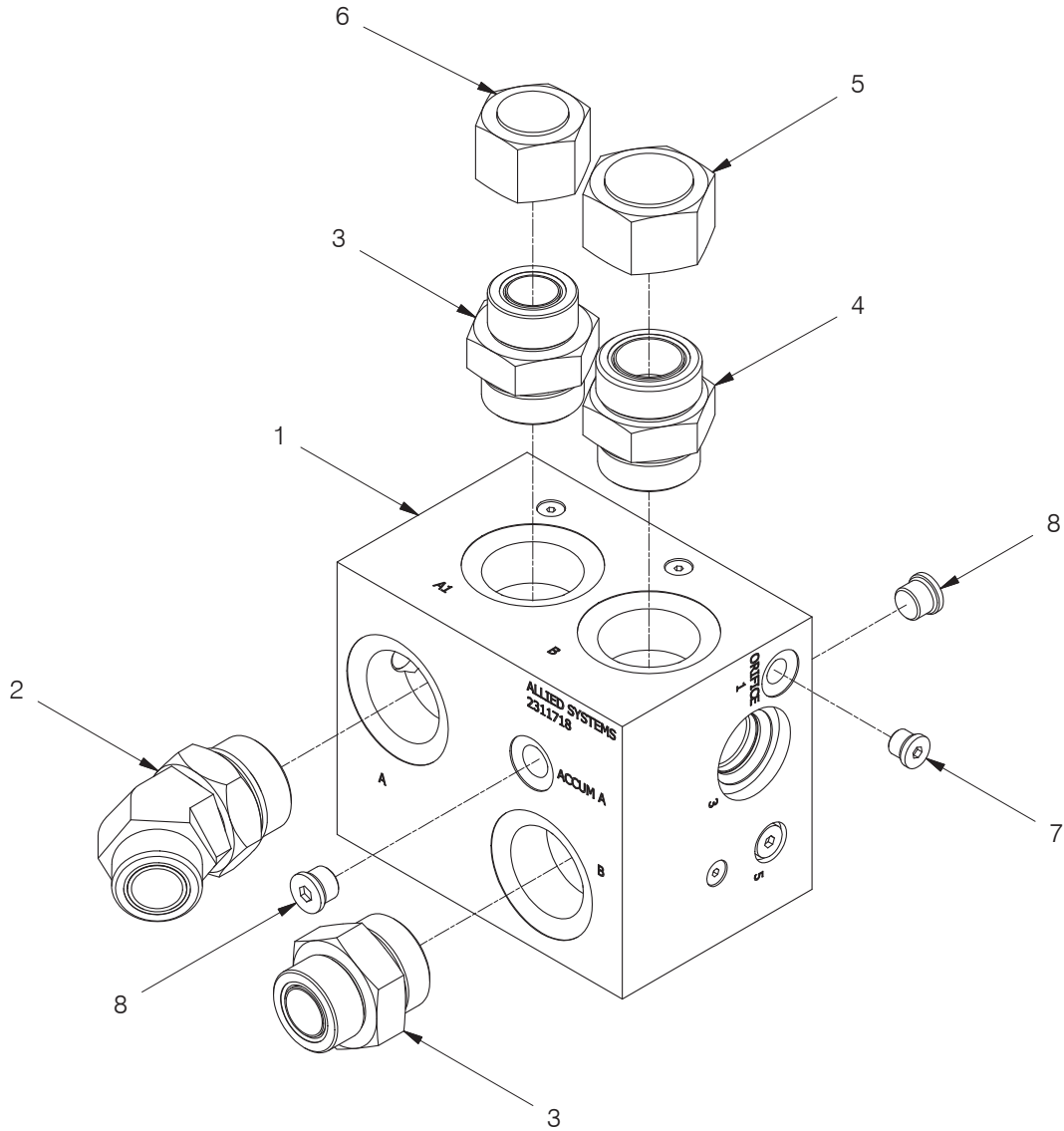
H6HT (Standard) Winch
Tigercat 635D (Y44)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313736	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	3	256462	. Plug, Cavity; T-3A	2
2	258473	. Plug, Cavity; T-17A	1		251170	. . Kit, Seal	1
	236133	. . Kit, Seal	1				
	243815	. . Kit, Seal	1				

Counterbalance Relief Manifold Assembly

H6HT (Standard) Winch
Tigercat 635D (Y44)



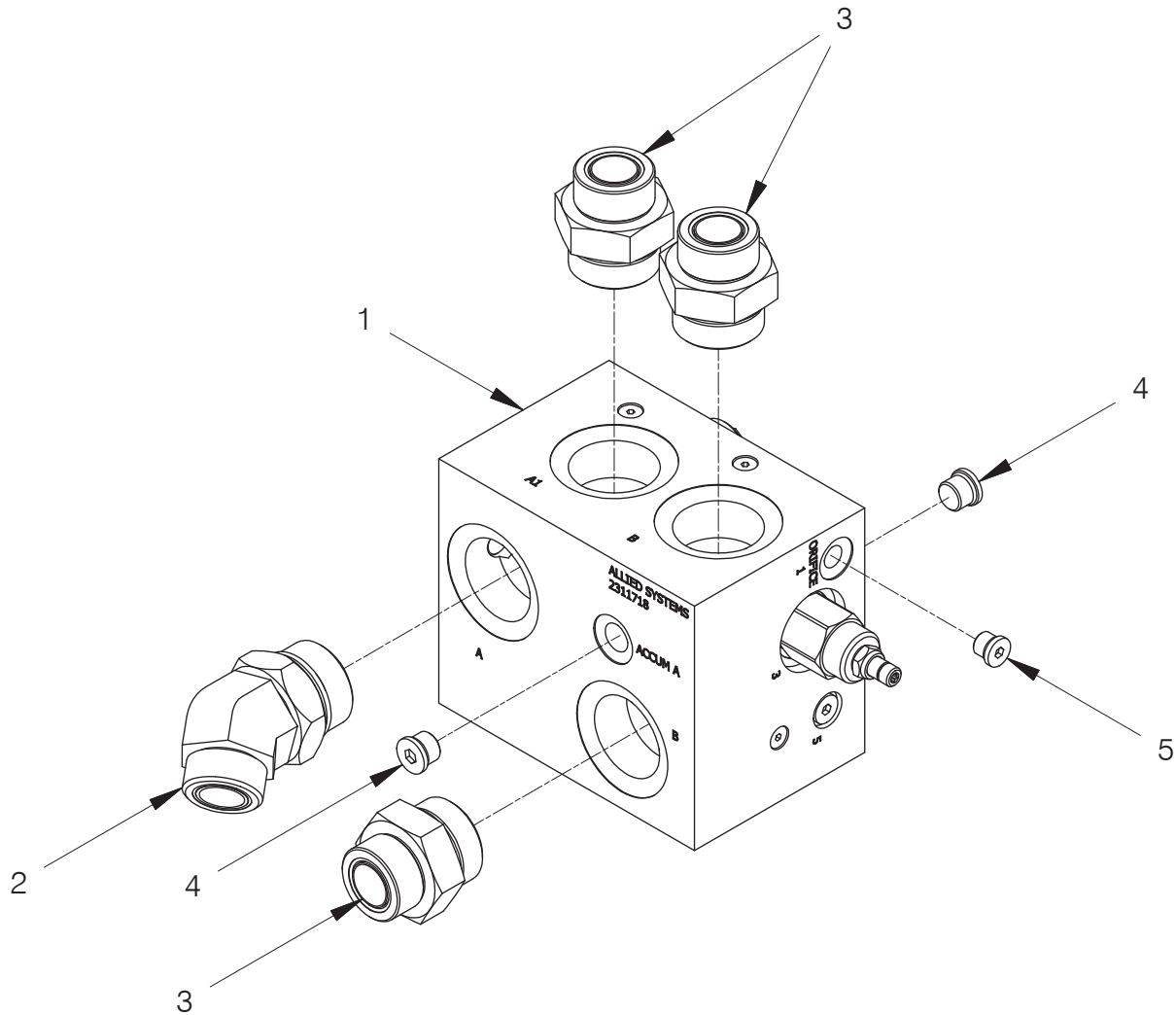
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313737	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2313736	. Assembly, Counterbalance Relief (CBR) Manifold (3-98)	1	5	R834257	. Fitting	1
2	R833218	. Fitting	1	6	231820	. Fitting	1
3	R833133	. Fitting	2	7	235387	. Fitting	1
4	232359	. Fitting	1	8	229383	. Fitting	2

Counterbalance Relief Manifold Assembly

H6HT (Standard) Winch

Case 1650L (R40)

Caterpillar D6N (C811)

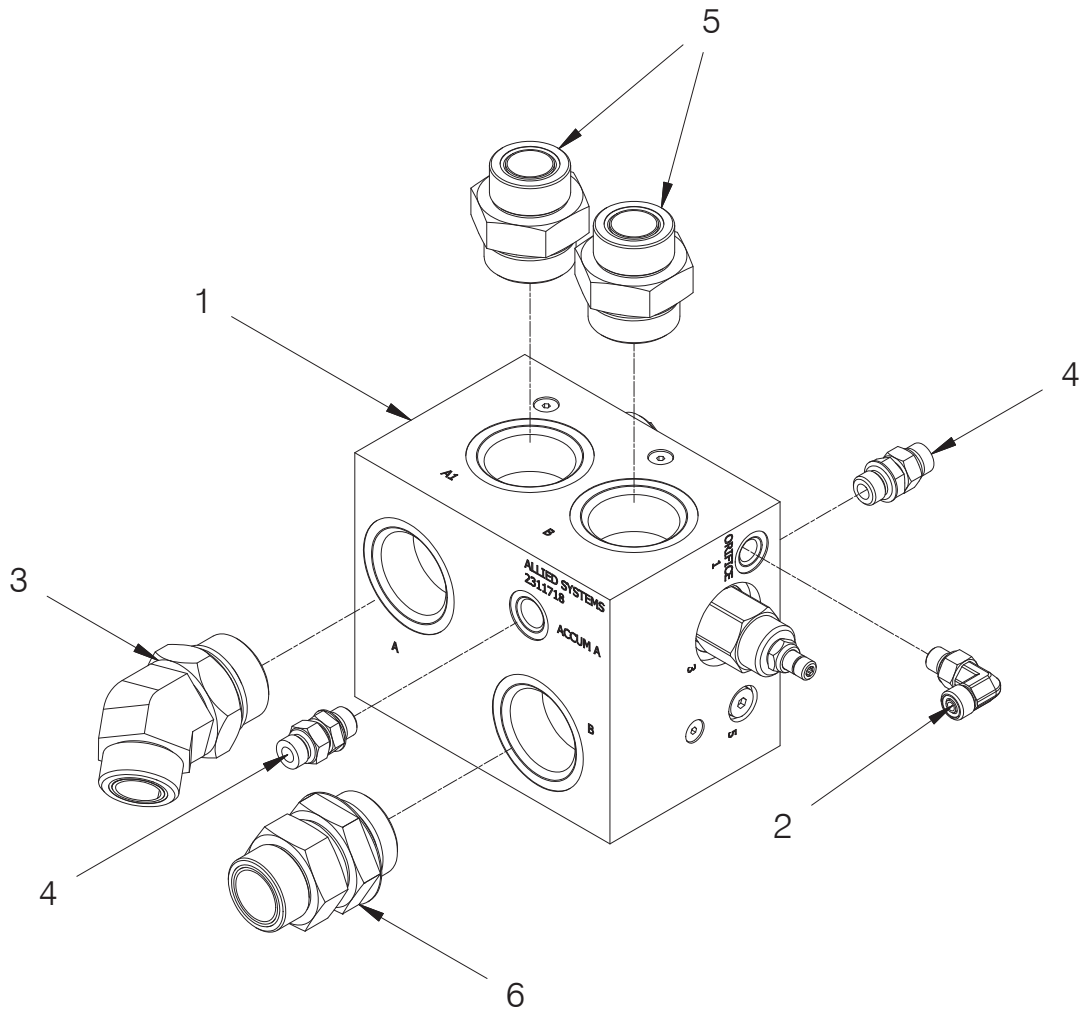


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313959	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	3	R833133	. Fitting	3
2	R833218	. Fitting	1	4	229383	. Fitting	2
				5	235387	. Fitting	1

3-100

Counterbalance Relief Manifold Assembly

H6HT (Standard) Winch
 Komatsu D65-16/17 (K49)
 First Used on S/N H6H-1497

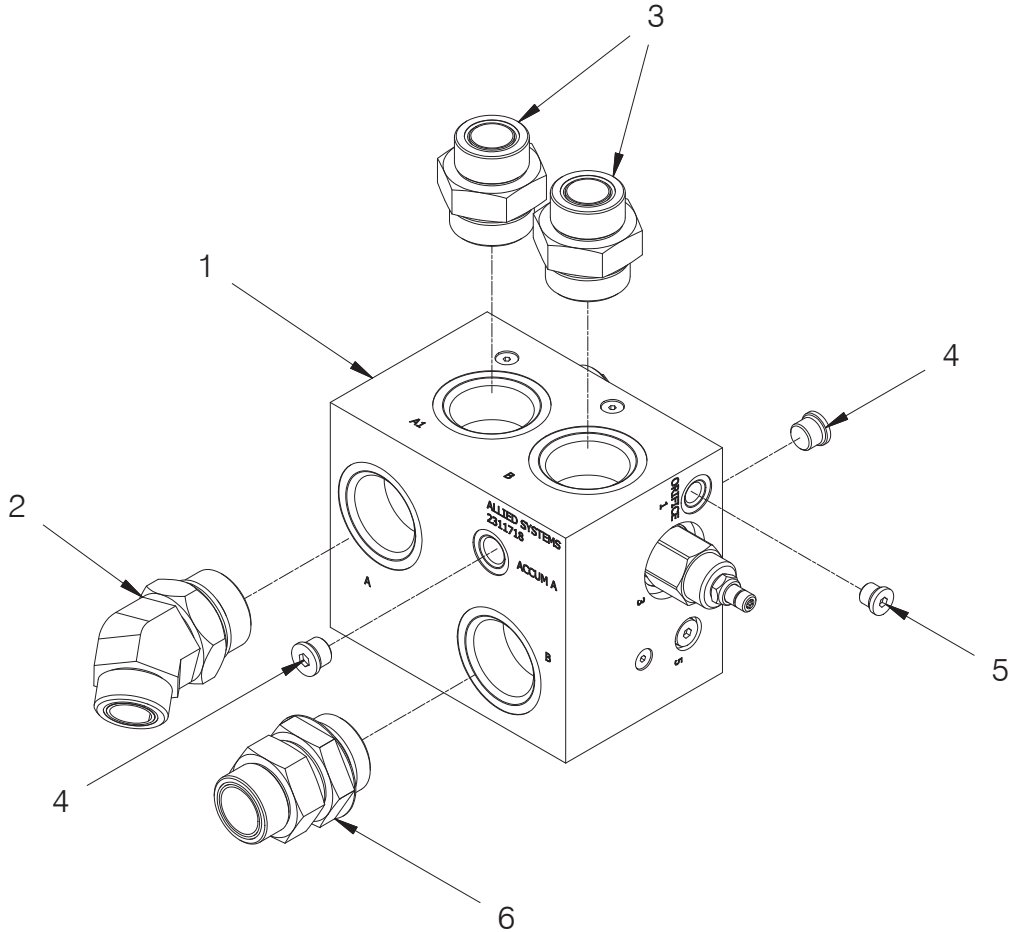


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314692	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	4	229347	. Fitting	2
2	R833251	. Fitting	1	5	R833133	. Fitting	2
3	R833218	. Fitting	1	6	2313948	. Fitting	1

3-101

Counterbalance Relief Manifold Assembly

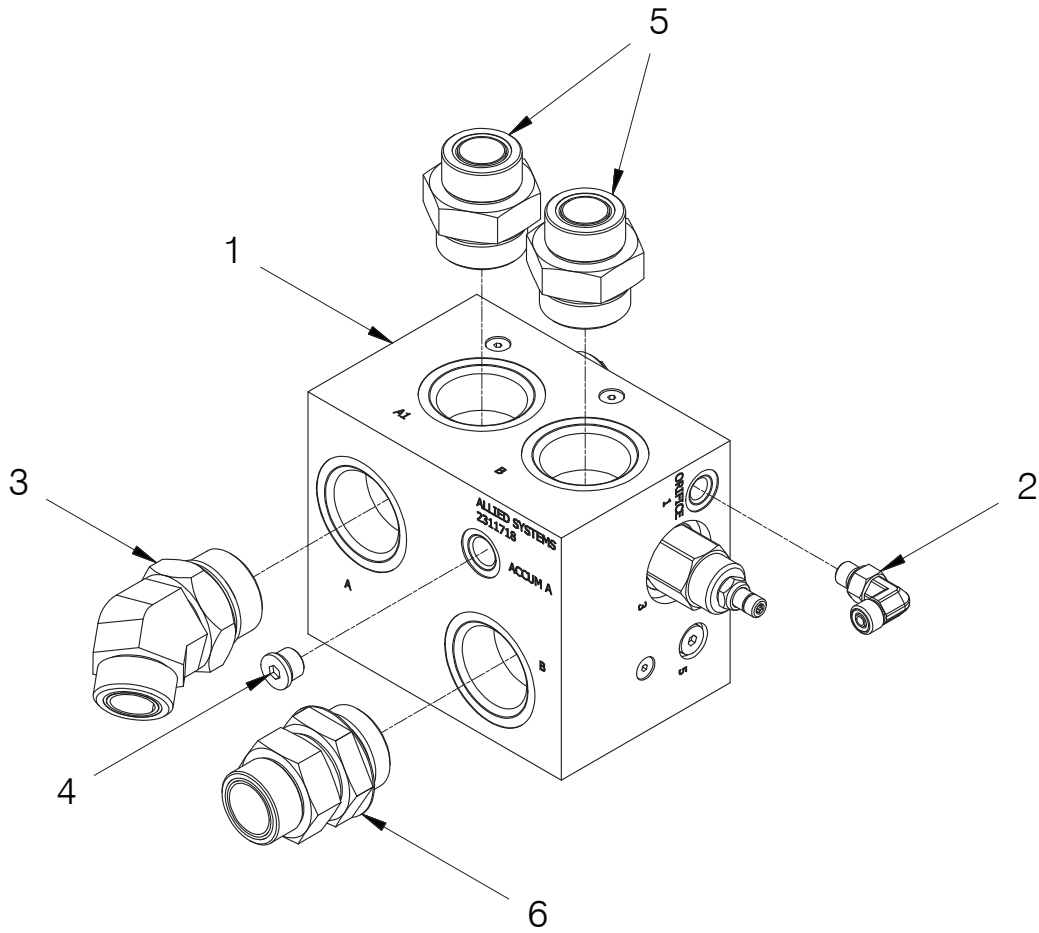
H6HT (Standard) Winch
 Case 1650L (R40)
 Caterpillar D6N (C811)
 First Used on S/N H6H-1497



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314727	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	4	229383	. Fitting	2
2	R833218	. Fitting	1	5	235387	. Fitting	1
3	R833133	. Fitting	2	6	2313948	. Fitting	1

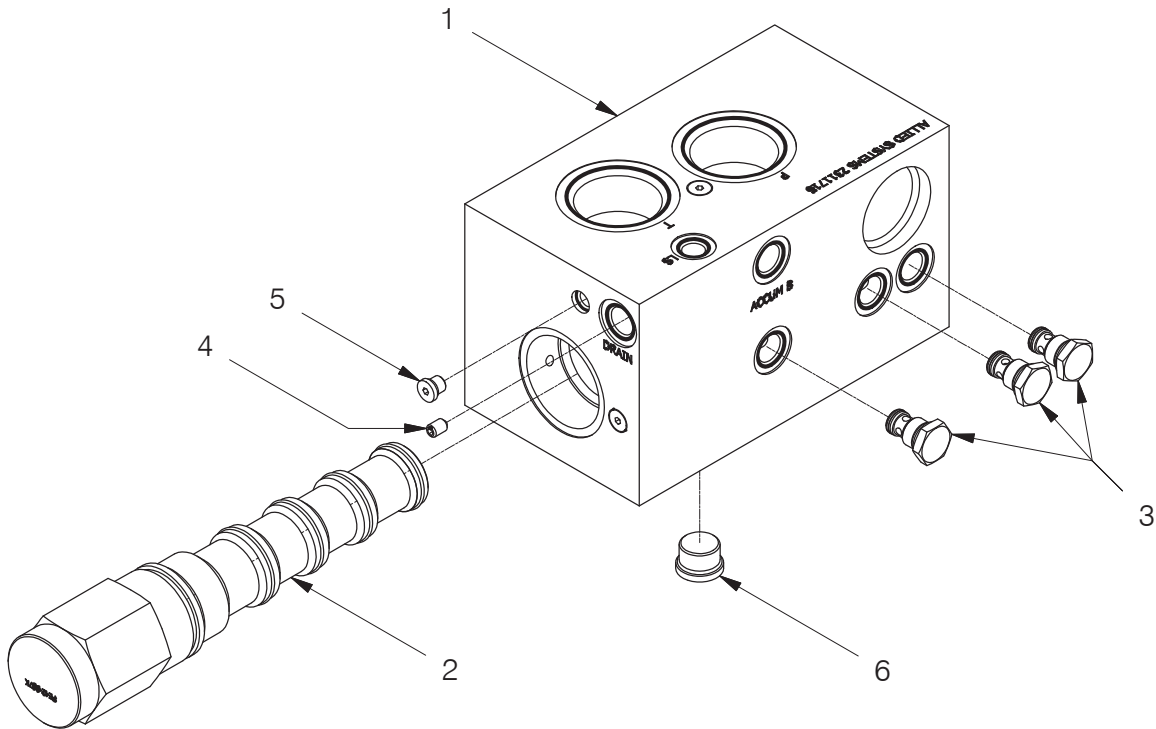
Counterbalance Relief Manifold Assembly

H6H Winch
 Caterpillar D6N (C81)
 First Used on S/N H6H-1497



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314965	Assembly, Counterbalance Relief (CBR) Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	4	229383	. Fitting	2
2	R833251	. Fitting	1	5	R833133	. Fitting	2
3	R833218	. Fitting	1	6	2313948	. Fitting	1

Directional Manifold Assembly

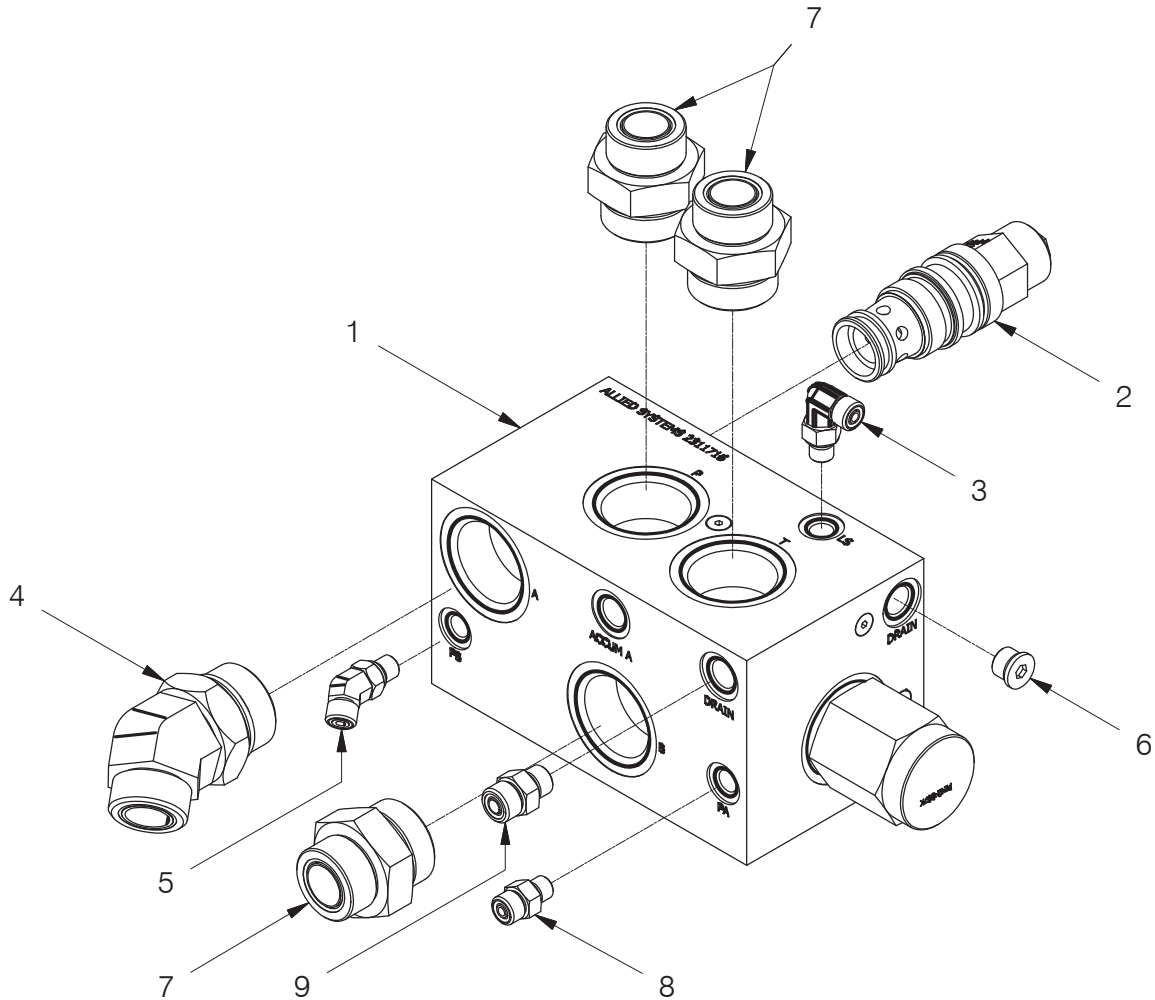


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2311716	Assembly, Hi-P Directional Manifold					
1	2311717	. Body, Directional Manifold	1		2312114	. . Kit, Seal (Not Shown)	3
2	2307024W	. Valve, Proportional Spool Cartridge	1	4	2312959	. Orifice	1
	2307235W	. . Kit, Seal (Not Shown)	1		257557	. . Set Screw (Not Shown)	1
3	2312103	. Valve, Check	3	5	257557	. Set Screw	1
				6	2313072	. Screen	1

3-104

Directional Manifold Assembly

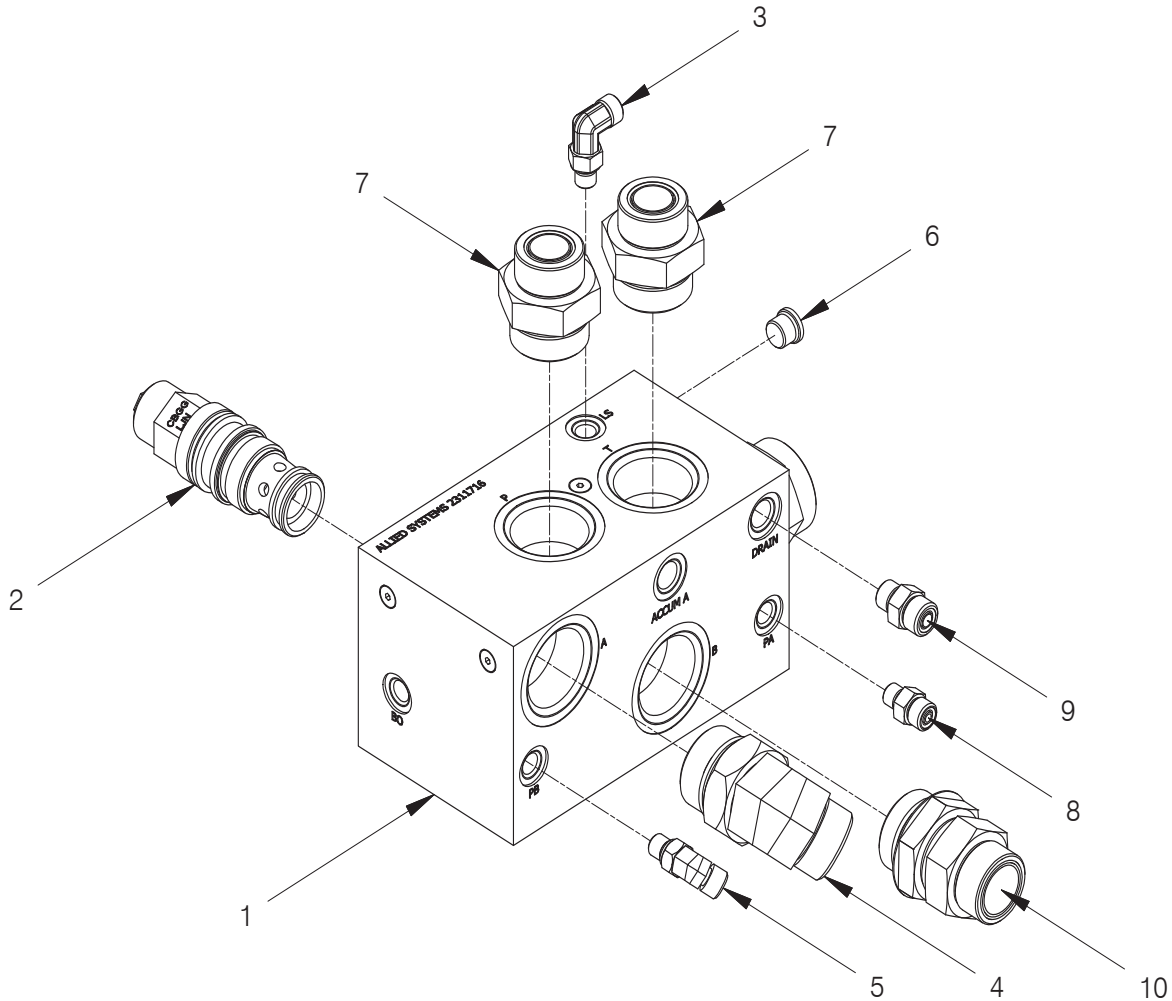
H6HH (High Performance) Winch
 John Deere 750J (E48)/850J (E47)
 John Deere 750J/850J, and 750K/850K (E460)
 Last Used on S/N H6H-1496



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2312760	Assembly, Directional Manifold	1	5	R833200	. Fitting	1
	2311716	. Assembly, Directional Manifold (3-104)	1	6	229383	. Fitting	1
2	2307265W	. Valve, Counter Balance	1	7	R833133	. Fitting	3
	243815	. . Kit, Seal (Not Shown)	1	8	231439	. Fitting	1
3	R833251	. Fitting	1	9	231440	. Fitting	1
4	R833218	. Fitting	1				

Directional Manifold Assembly

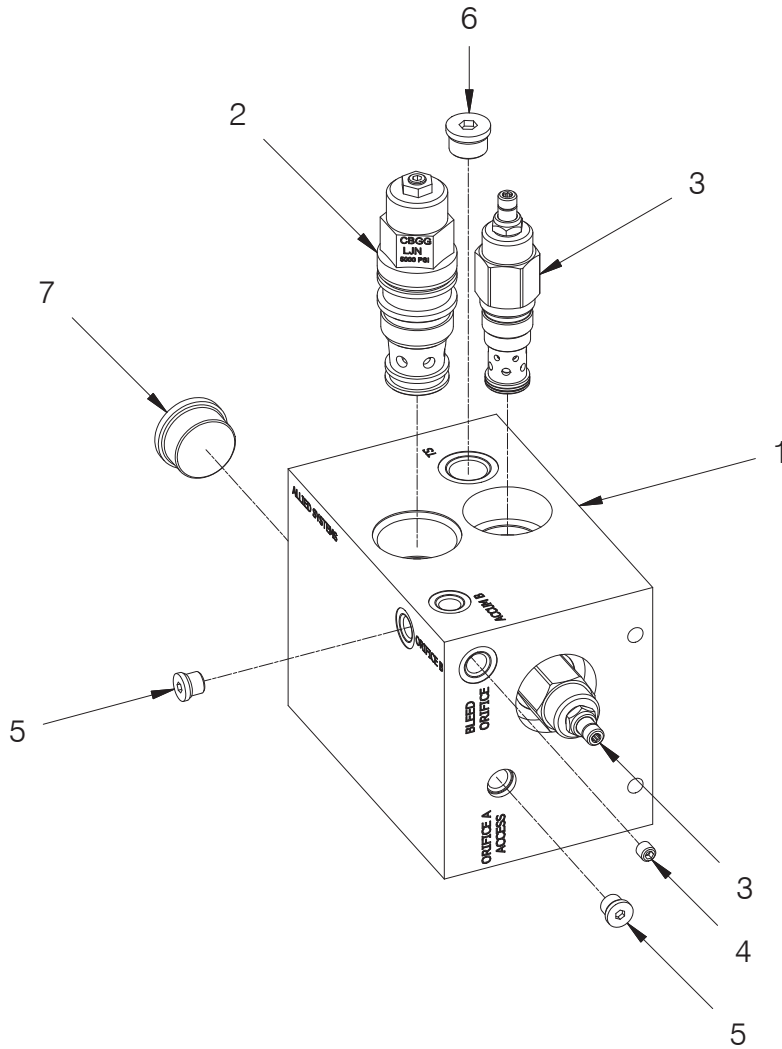
H6HH (High Performance) Winch
 John Deere 750J (E48)/850J (E47)
 John Deere 750J/850J, and 750K/850K (E460)
 First Used on S/N H6H-1497



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2314687	Assembly, Directional Manifold	1	5	R833200	. Fitting	1
	2311716	. Assembly, Directional Manifold (3-99)	1	6	229383	. Fitting	1
2	2307265W	. Valve, Counterbalance	1	7	R833133	. Fitting	2
	243815	. . Kit, Seal (Not Shown)	1	8	231439	. Fitting	1
3	R833251	. Fitting	1	9	231440	. Fitting	1
4	R833218	. Fitting	1	10	2313948	. Fitting	1

Manifold Assembly

Case 1650/2050M (R42)

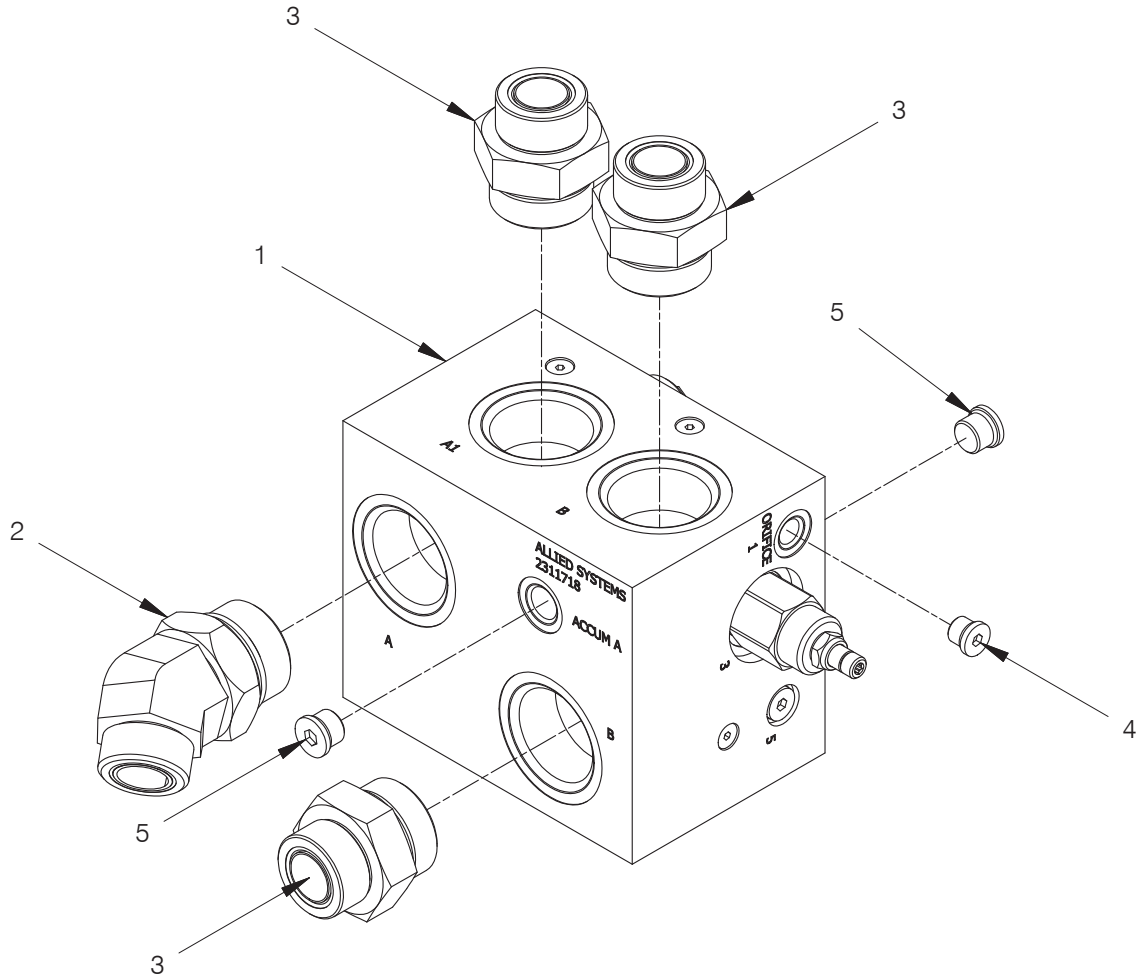


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312941	Assembly, Control Manifold	1				
1	2312940	. Body, Control Manifold	1	4	2310181	. Plug, Orifice	1
2	2312068	. Valve, Counter Balance	1	5	235387	. Fitting	3
	243815	.. Kit, Seal	1	6	229345	. Fitting	1
3	2307438W	. Valve, Relief	2	7	227949	. Fitting	1
	259258	.. Kit, Seal	1				
	255601	.. Kit, Seal (Hi-Temperature Option)	1				

Manifold Assembly

Liebherr PR724 (L41)

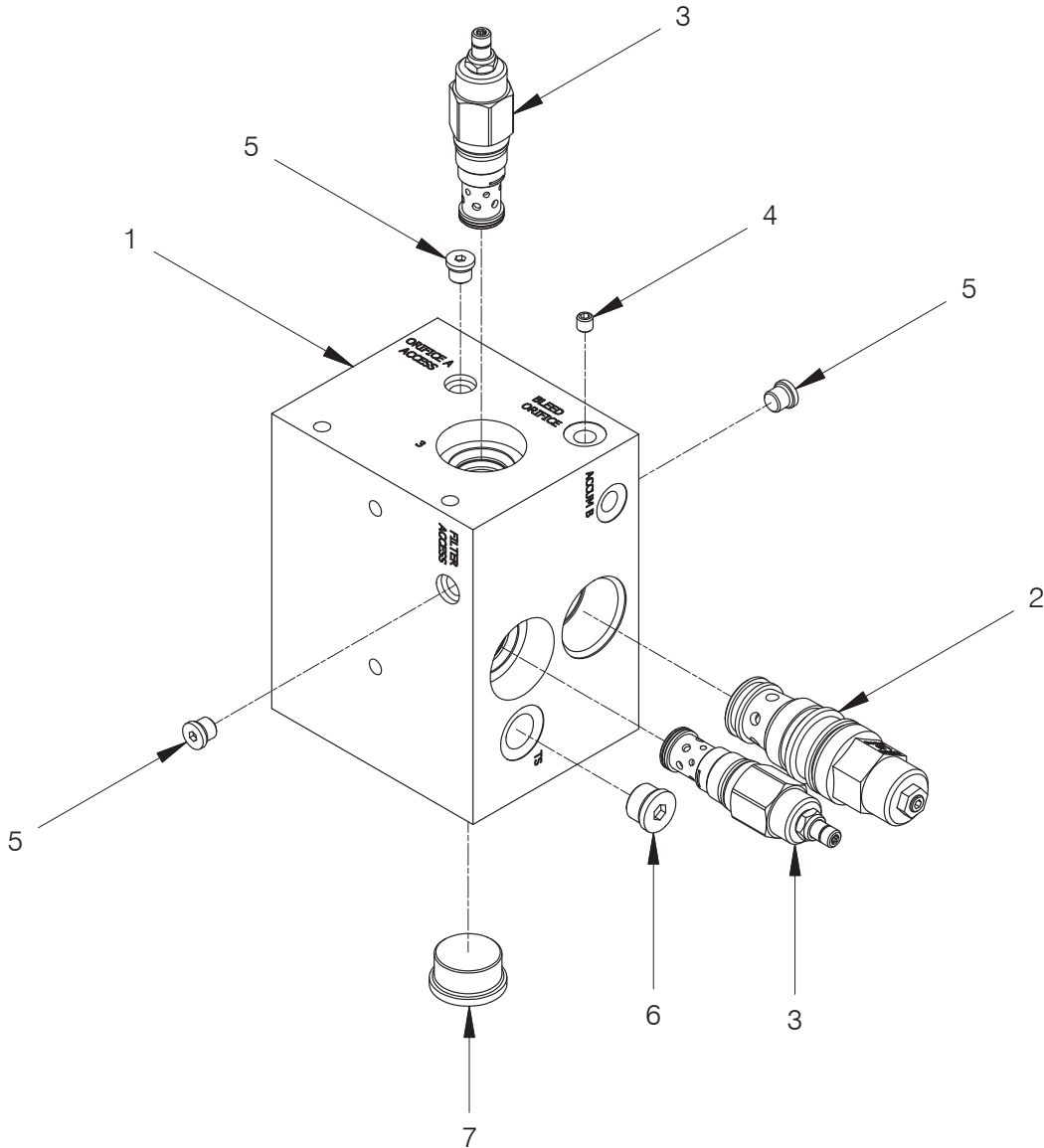
Last Used on S/N H6H-1496



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313616	Assembly, Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-95)	1	3	R833133	. Fitting	3
2	R833218	. Fitting	1	4	235387	. Fitting	1
				5	229383	. Fitting	2

Manifold Assembly

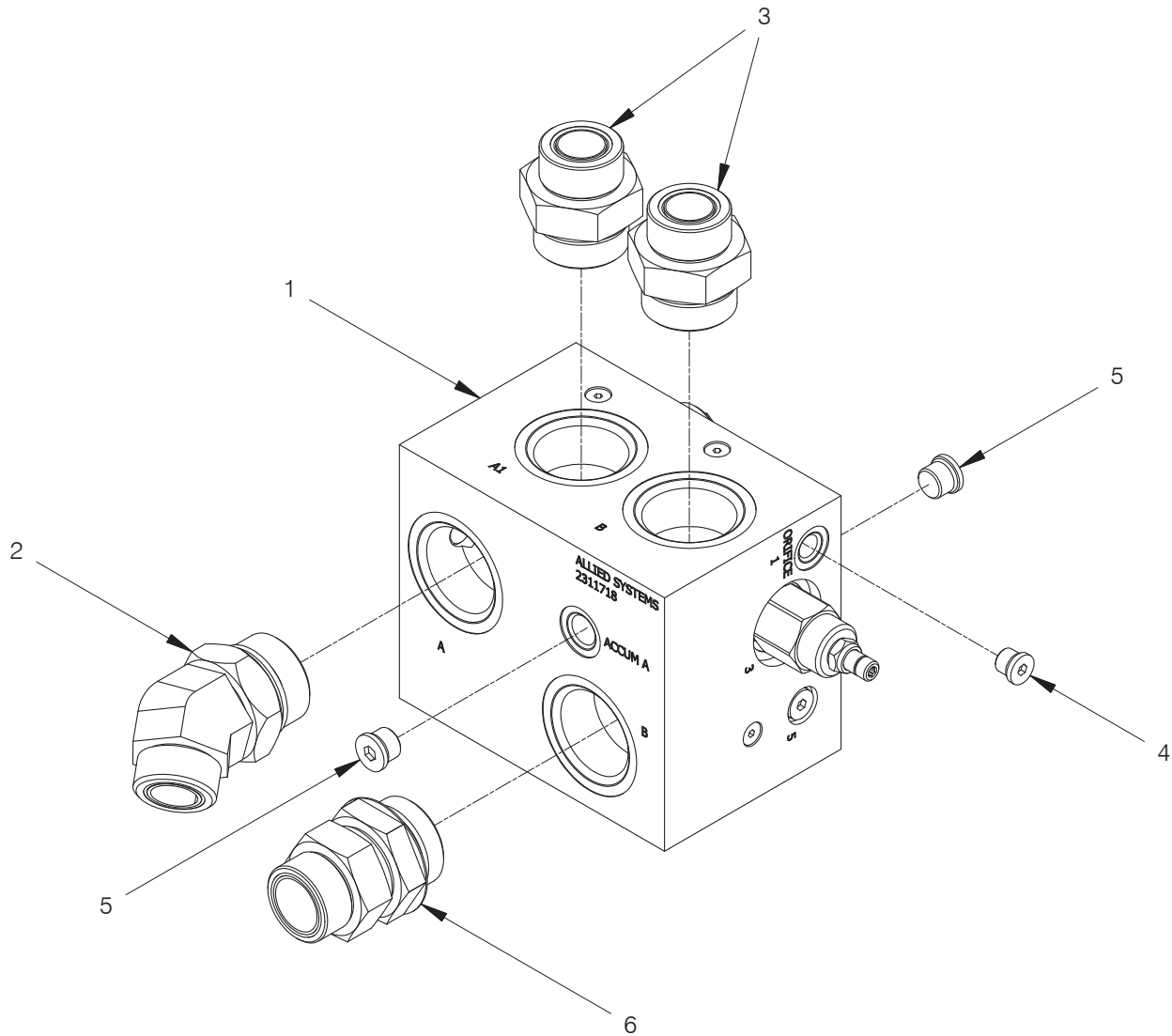
H6HT (Standard) Winch
Komatsu D61-23 (K471)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314242	Assembly, Manifold	1				
1	2312940	. Body, Manifold	1	4	2310181	. Plug, Orifice	1
2	2312068	. Valve, Counter Balance	1	5	235387	. Fitting	3
	243815	. . Kit, Seal	1	6	229345	. Fitting	1
3	2307438W	. Valve, Relief	2	7	227949	. Fitting	1
	259258	. . Kit, Seal	1				

Manifold Assembly

Liebherr PR724 (L41)
 H6HT (Standard) Winch
 Caterpillar D6T (C71)
 Komatsu D61-23 (K471)
 First Used on S/N H6H-1497

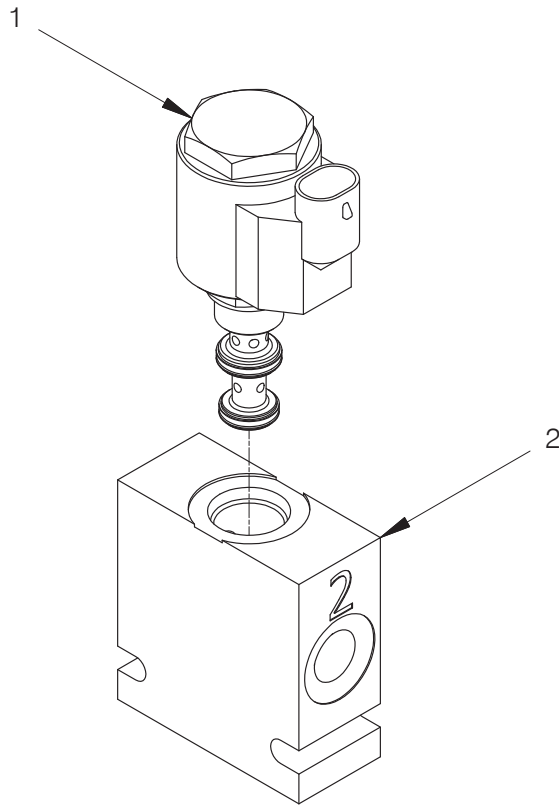


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314691	Assembly, Manifold	1				
1	2311718	. Assembly, Counterbalance Relief (CBR) Manifold (3-91)	1	4	235387	. Fitting	1
2	R833218	. Fitting	1	5	229383	. Fitting	2
3	R833133	. Fitting	2	6	2313948	. Fitting	1

3-110

Valve Manifold Assembly

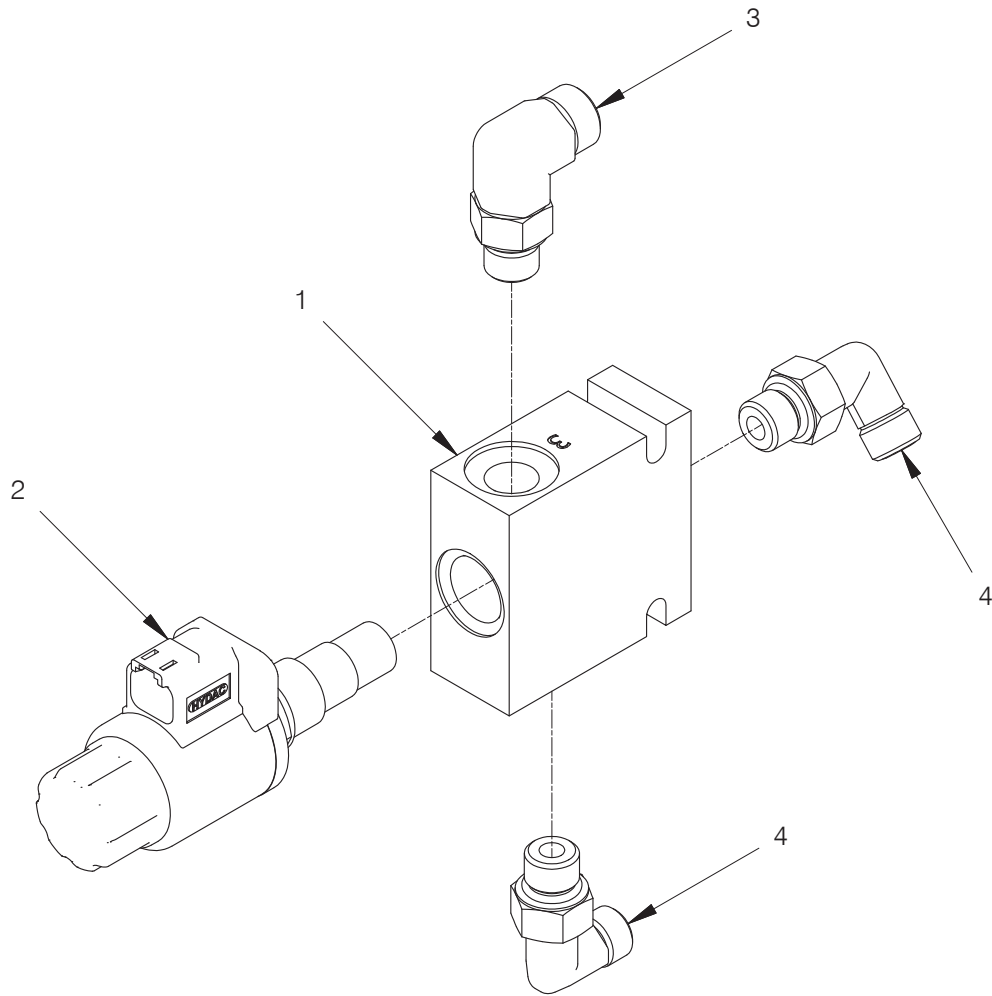
H6HT (Standard) Winch
Caterpillar D6N (C81)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2307833W	Assembly, Valve Manifold	1	2	R12973129	. Body, Valve	1
	2307834W	. Valve, Solenoid Cartridge	1				
	2307835W	.. Valve, No Solenoid Cartridge	1				
	250589	.. Coil, Solenoid	1				
	R15668	.. Kit, Seal	1				

Line Body Assembly

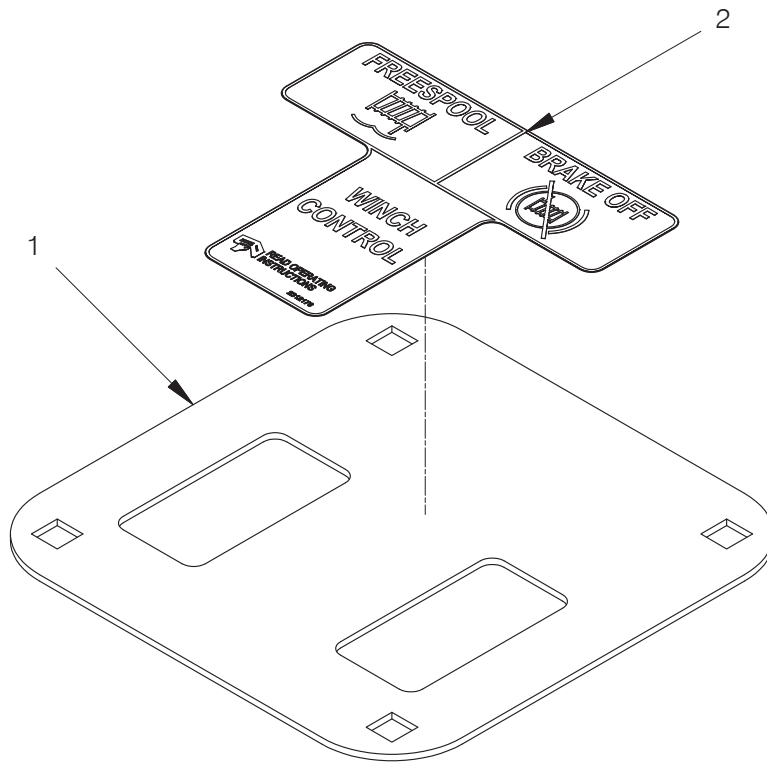
H6HT (Standard) Winch
Case 1650/2050M (R42)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313492	Assembly, Line Body	1				
1	2313489	. Body, Line	1	3	R833257	. Fitting	1
2	2312803	. Valve, Pressure; Reduce	1	4	R833253	. Fitting	2
	2504253	.. Kit, Seal	1				
	2314104	.. Coil, 24VDC	1				
	2314107	.. Base, Valve Cartridge	1				

Switch Panel Assembly

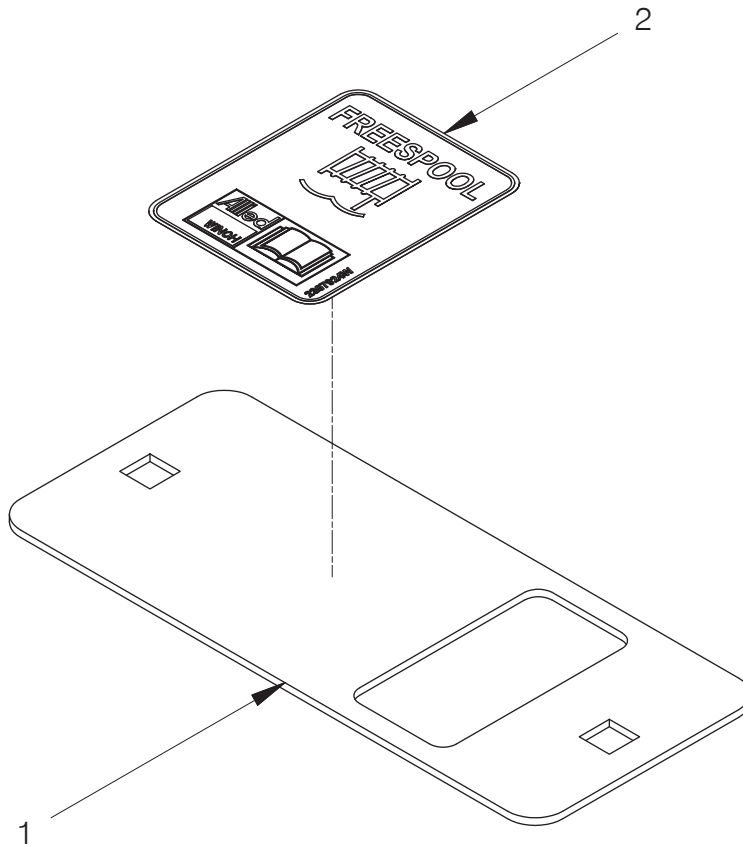
John Deere 850J (E47)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312855	Assembly, Switch Panel	1				
1	2312854	.Plate, Switch Mounting	1	2	2312176	.Decal, Winch Control; FREESPOOL & BRAKE-OFF	1

Switch Panel Assembly

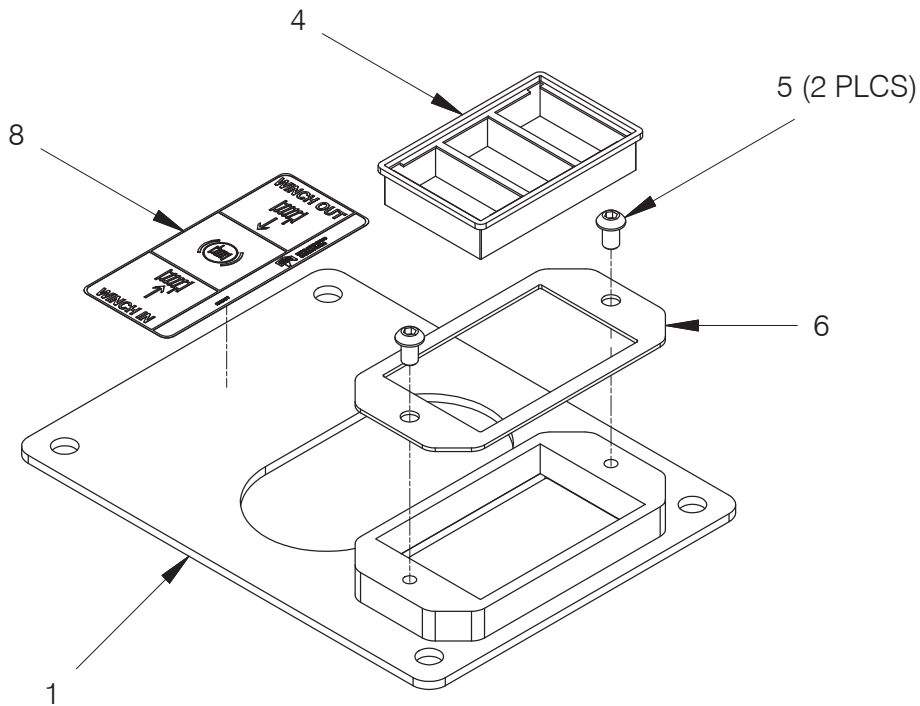
John Deere 850J (E47)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312895	Assembly, Switch Panel	1				
1	2312896	.Plate, Switch Mounting	1	2	2307924W	.Decal, Switch Panel	1

Switch Panel Assembly

H6HT (Standard) Winch
Komatsu D61-23 (K471)

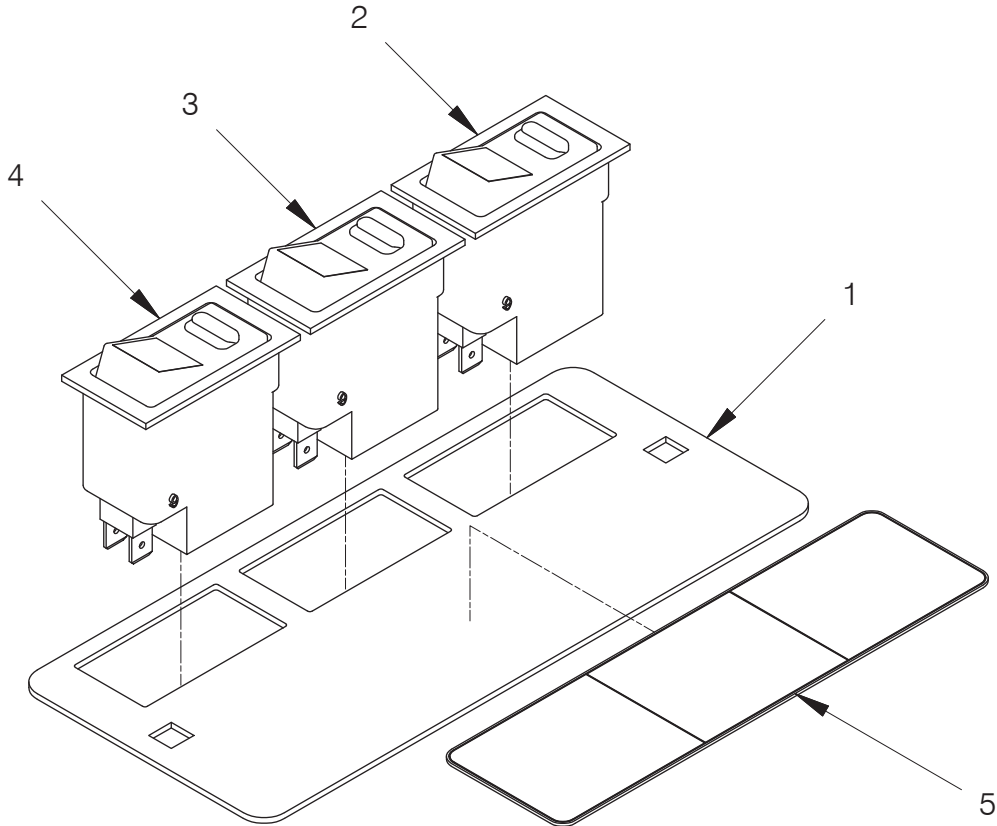


Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2312979	Assembly, Switch Panel	1				
1	2312216	. Bracket, Control Lever	1	6	2311863	. Plate, Switch Mounting	1
4	234740	. Frame, Mounting	1	8	2312177	. Decal, Winch In, Winch Out	1
5	296157W	. Capscrew	2				

3-115

Switch Panel Assembly

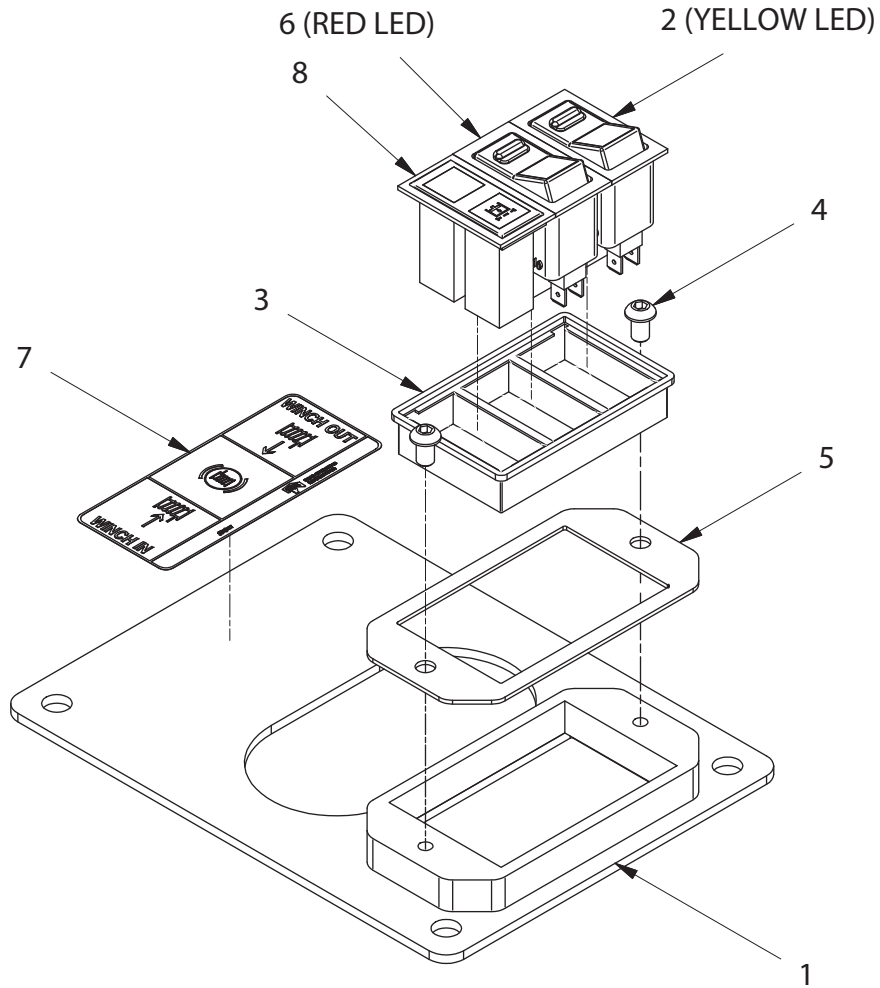
FREESPOOL, BRAKE-OFF & HI-TEMP
H6HT (Standard) Winch
Caterpillar D6N (C81)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313113	Assembly, Switch Panel; FREESPOOL, BRAKE-OFF & HI-TEMP	1				
1	2313136	. Plate, Switch Mounting	1	4	2310506	. Assembly, Switch; Momentary 24V w/ Red LED	1
2	2310013	. Assembly, Switch; 24V, Yellow LED	1		2307641W	. Switch, Momentary; Safety Lock	1
	2307582W	. Switch, Rocker w/Lock	1		251345	. Lamp, Red LED (28V)	1
	251107	. Lamp, Yellow LED	1		236503	. Lens, Red	1
	237346	. Lens, Yellow	1	5	2313114	. Decal, Switch Panel; FREESPOOL, BRAKE-OFF & HI-TEMP	1
3	2310504	. Assembly, Switch; 24V, Red LED	1				
	2307582W	. Switch, Rocker w/Lock	1				
	251345	. Lamp, Red LED	1				
	236503	. Lens, Red	1				

Switch Panel Assembly

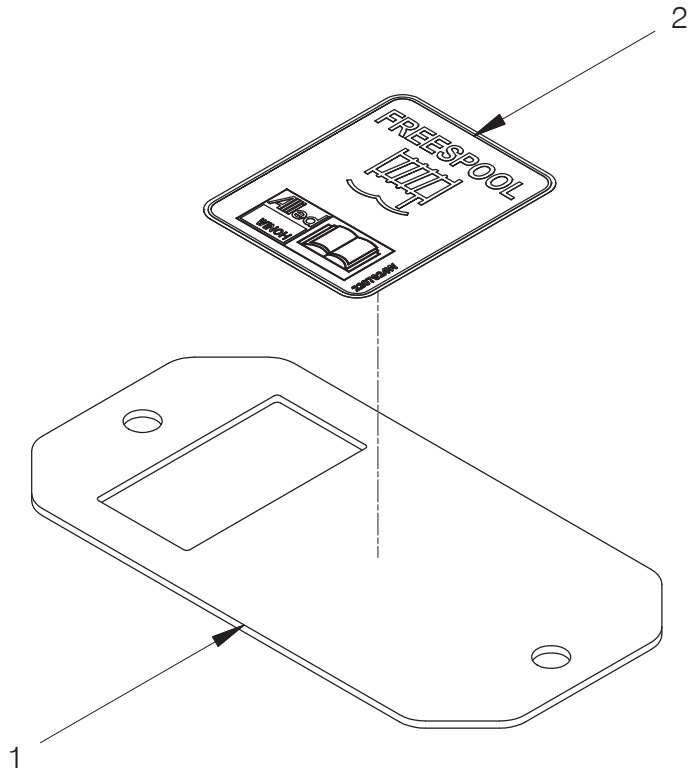
H6HH (Hi-Performance) Winch
Komatsu D61-23 (K471)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313116	Assembly, Switch Panel FREESPOOL BRAKE-OFF & Filter Light	1				
1	2312216	. Bracket, Control Lever	1	5	2311863	. Plate, Switch Mounting	1
2	2310013	. Assembly, Switch; 24V, Yellow LED	1	6	2310504	. Assembly, Switch; 24V, Red LED	1
	2307582W	. . Switch, Rocker w/Lock	1		2307582W	. . Switch, Rocker w/Lock	1
	251107	. . Lamp, Yellow LED	1		251345	. . Lamp, Red LED	1
	237346	. . Lens, Yellow	1		236503	. . Lens, Red	1
3	234740	. Frame, Mounting	1	7	2312177	. Decal, Winch In, Winch Out	1
4	296157W	. Capscrew	2	8	2311352	. Assembly, oil Filter Indicator	1

Switch Panel Assembly

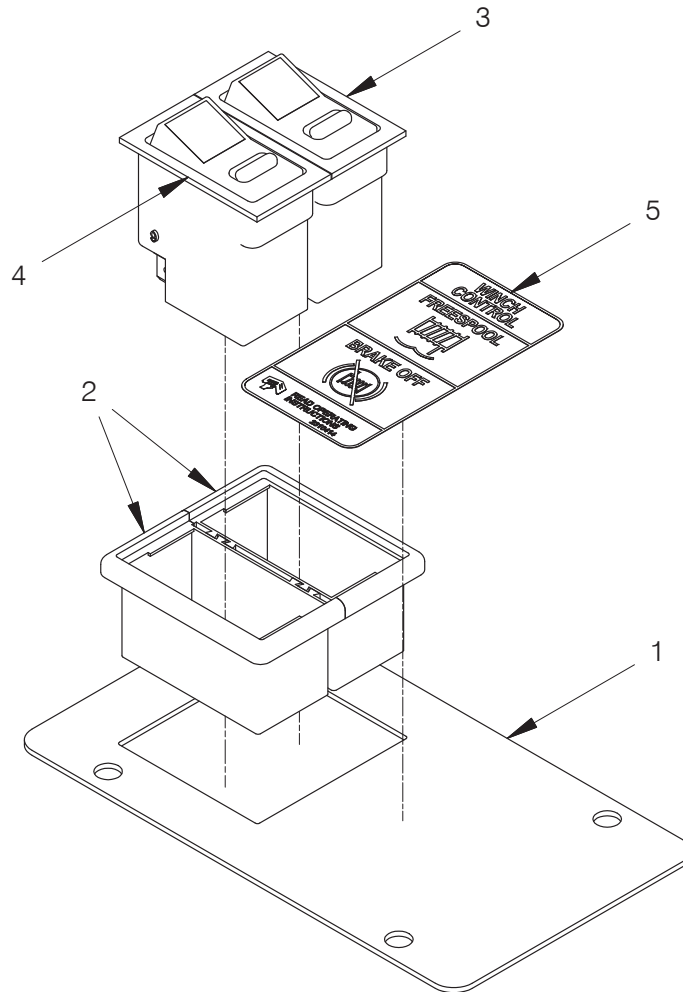
John Deere 750/850K (E460)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	2313527	Assembly, Switch Panel	1	2	2307924W	. Decal, Switch Panel	1
	2313526	. Plate, Switch Mounting	1				

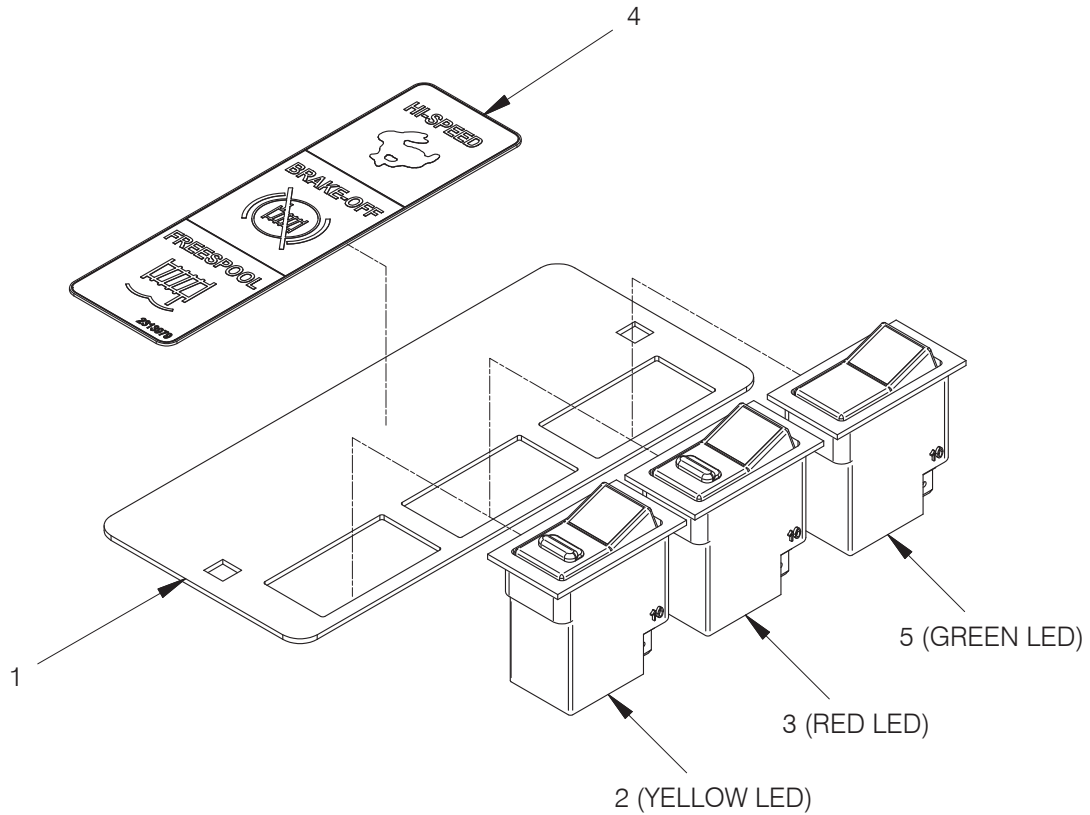
Switch Panel Assembly

H6HT (Standard) Winch
Liebherr PR724L (L41)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313622	Assembly, Switch Panel	1				
1	2313621	. Plate, Switch Mounting	1	4	2310504	. Assembly, Switch; 24V, Red LED	1
2	234505	. Frame, Mounting	2		2307582W	. . Switch, Rocker w/Lock	1
3	2310013	. Assembly, Switch; 24V, Yellow LED	1		251345	. . Lamp, Red LED	1
	2307582W	. . Switch, Rocker w/Lock	1		236503	. . Lens, Red	1
	251107	. . Lamp, Yellow LED	1	5	2310414	. Decal, Switch Panel	1
	237346	. . Lens, Yellow	1				

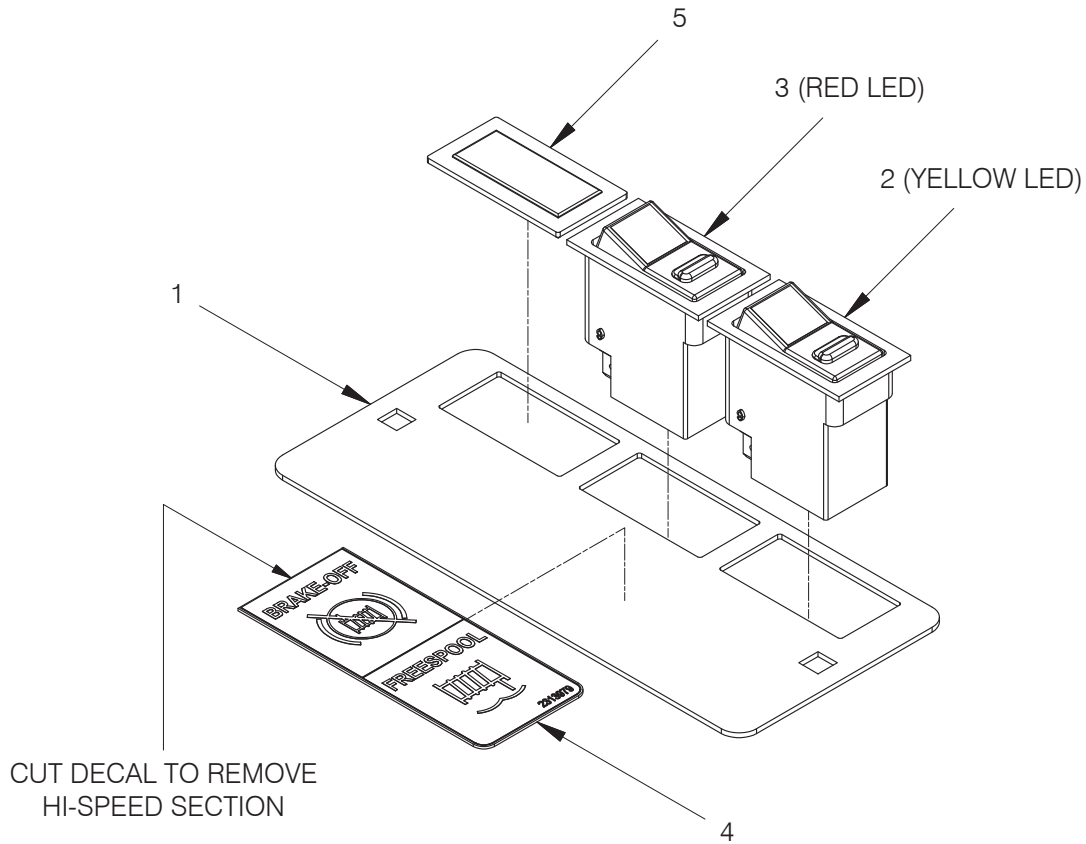
Switch Panel Assembly
 FREESPOOL, BRAKE-OFF & HI-SPEED



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2313978	Assembly, Switch Panel; FREE-SPOOL, BRAKE-OFF & HI-SPEED	1				
1	2313136	. Plate, Switch Mounting	1	4	2313979	. Decal, Switch Panel; FREESPOOL, BRAKE-OFF & HI-SPEED	1
2	2310013	. Assembly, Switch; 24V, Yellow LED	1	5	2311072	. Assembly, Switch; 12/24V, Green LED	1
	2307582W	. Switch, Rocker w/Lock	1		2310300	. Switch Rocker	1
	251107	. Lamp, Yellow LED	1		236504	. Lens, Green	1
	237346	. Lens, Yellow	1		251106	. Lamp, Green LED	1
3	2310504	. Assembly, Switch; 24V, Red LED	1				
	2307582W	. Switch, Rocker w/Lock	1				
	251345	. Lamp, Red LED	1				
	236503	. Lens, Red	1				

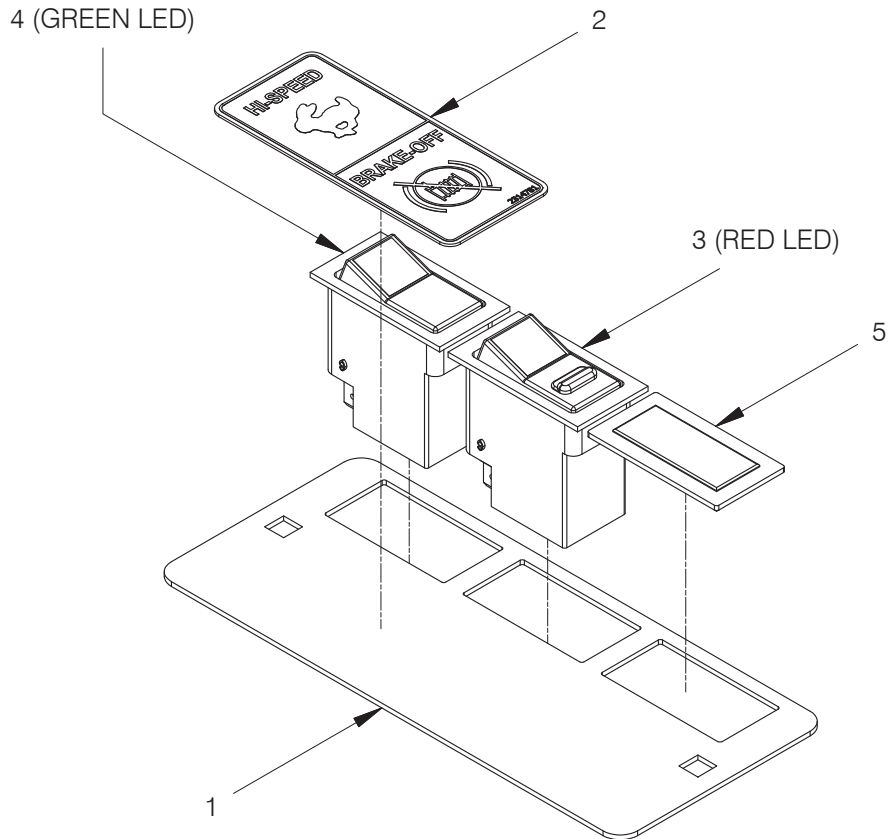
Switch Panel Assembly

FREESPOOL & BRAKE-OFF
 H6HT (Standard) Winch
 Caterpillar D6T (C71)



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314655	Assembly, Switch Panel; FREESPOOL & BRAKE-OFF	1				
1	2313136	. Plate, Switch Mounting	1	4	2313979	. Decal, Switch Panel; FREESPOOL, BRAKE-OFF & HI-SPEED	1
2	2310013	. Assembly, Switch; 24V, Yellow LED	1	5	234509	. Cover, Blank	1
	2307582W	. Switch, Rocker w/Lock	1				
	251107	. Lamp, Yellow LED	1				
	237346	. Lens, Yellow	1				
3	2310504	. Assembly, Switch; 24V, Red LED	1				
	2307582W	. Switch, Rocker w/Lock	1				
	251345	. Lamp, Red LED	1				
	236503	. Lens, Red	1				

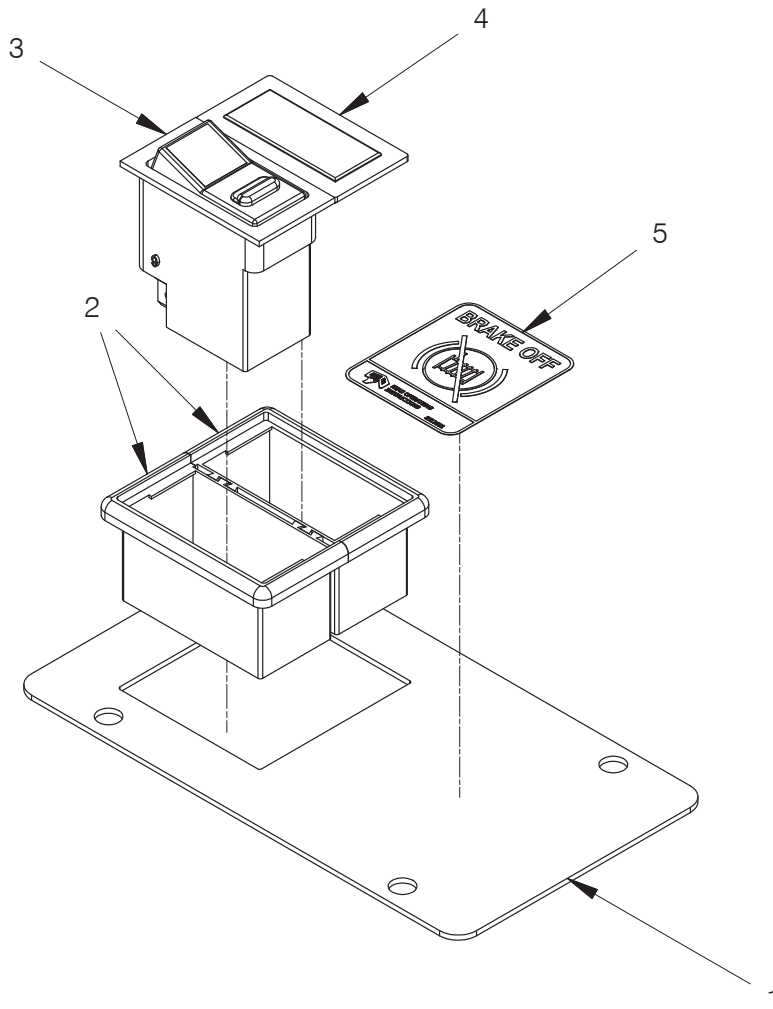
Switch Panel Assembly
 FREESPOOL, BRAKE-OFF & HI-SPEED



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314787	Assembly, Switch Panel; BRAKE-OFF & HI-SPEED	1				
1	2313136	. Plate, Switch Mounting	1	4	2311072	. Assembly, Switch; 12/24V, Green LED	1
2	2314781	. Decal, Switch Panel; Brake-Off & Hi-Speed	1		2310300	. . Switch Rocker	1
3	2310504	. Assembly, Switch; 24V, Red LED	1		236504	. . Lens, Green	1
	2307582W	. . Switch, Rocker w/Lock	1		251106	. . Lamp, Green LED	1
	251345	. . Lamp, Red LED	1	5	234509	. Cover, Bland	1
	236503	. . Lens, Red	1				

Switch Panel Assembly

Without FREESPOOL
 H6HT (Standard) Winch
 Liebherr PR724L (L41)



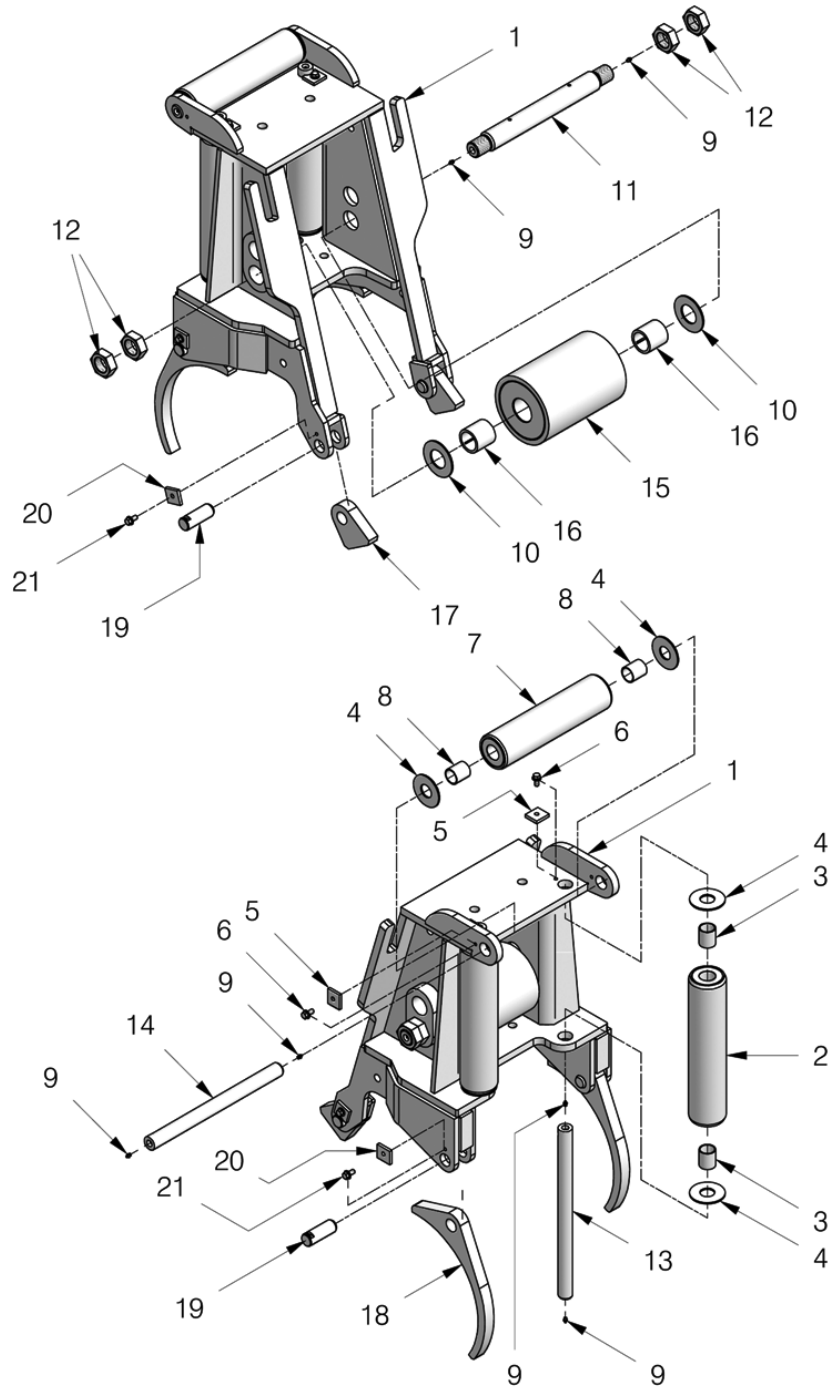
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2314920	Assembly, Switch Panel; w/o FREESPOOL	1				
1	2313621	. Plate, Switch Mounting	1	4	234509	. Cover, Blank	1
2	234505	. Frame, Mounting	2	5	2313991	. Decal, Switch Panel: Brake Off	1
3	2310504	. Assembly, Switch; 24V, Red LED	1				
	2307582W	.. Switch, Rocker w/Lock	1				
	251345	.. Lamp, Red LED	1				
	236503	.. Lens, Red	1				

Optional Equipment

Arch	4-2
Fairlead	4-3 & 4-4
Wire Rope Assemblies.....	4-5

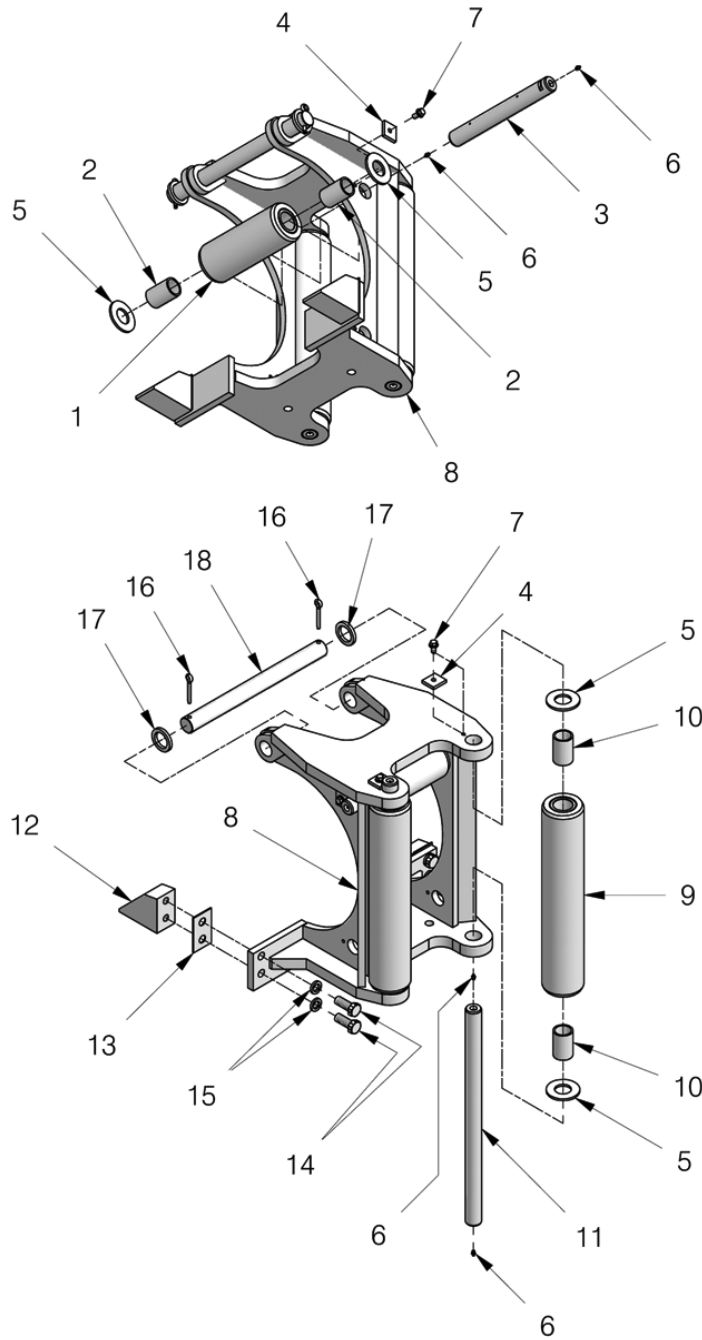


Arch



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

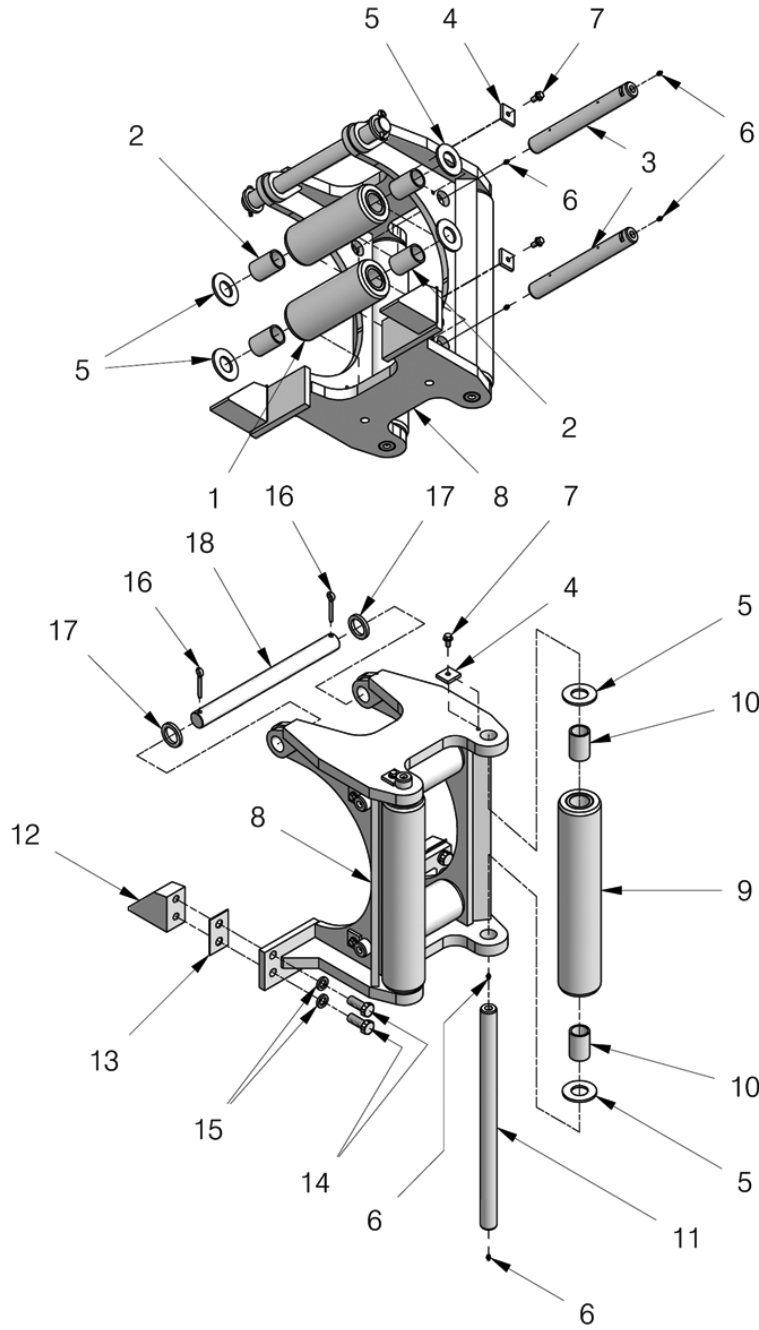
Fairlead 3-Roller



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

Fairlead

4-Roller



Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
	2301732W	Fairlead Assembly, 4-Roller					
1	2301727W	. Roller	2	10	2570W	. . Bushing	4
2	2570W	. . Bushing	4	11	2301721W	. Shaft	2
3	2301722W	. Shaft	2	12	226374W	Bracket	2
4	2301706W	. Keeper	4	13	93878W	Shim	AR
5	33394W	. Washer	8	14	18669W	Capscrew	4
6	16001W	. Fitting, Grease	8	15	15166W	Washer	4
7	398817W	. Screw, Flange	4	16	15272W	Pin, Cotter	2
8	2301718W	. Fairlead	1	17	2312437	Spacer	2
9	2301726W	. Roller	2	18	2312580	Bar, Tie	1

Wire Rope Assemblies

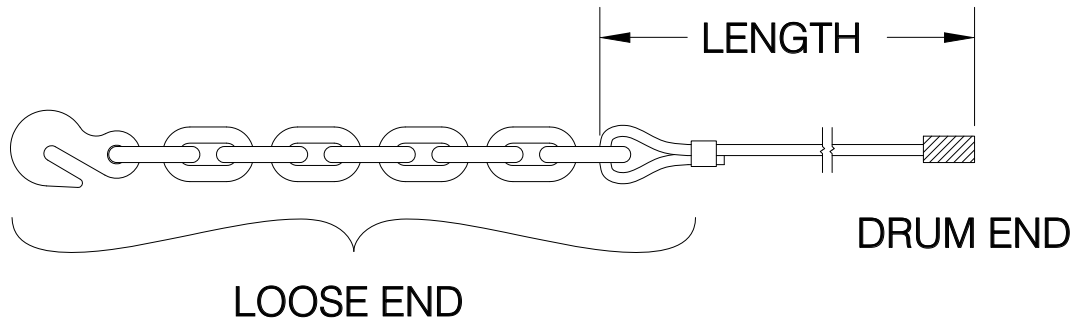


Figure A

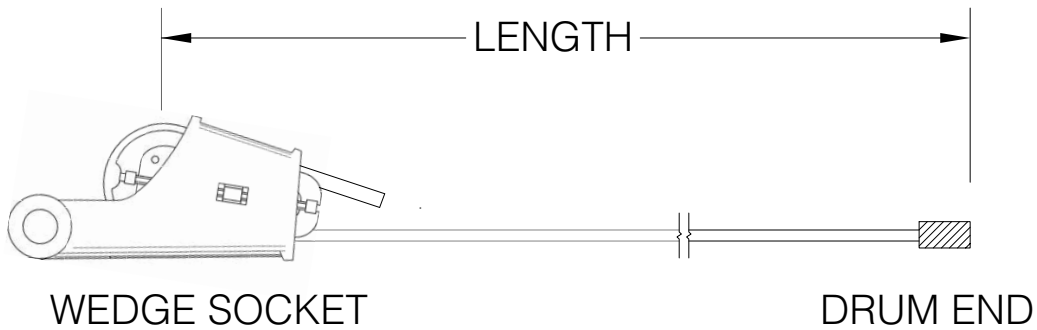


Figure B

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

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

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Recommended Service Kits

Recommended Winch Service Intervals	5-2
Recommended Service Kits	5-3
• Motor, Reducer & Brake Assembly	
Rebuild Kit - 2314659	5-4
• Intermediate/Drum Shaft & Brake Assembly	
Rebuild Kit - 2314660	5-6

Recommended Winch Service Intervals

Allied Systems Company is pleased to announce an additional tool to keep your customer's 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
First 250	1	Change			
Every 500	3	Change			
Every 2,000	12		Change		
Every 5,000				* Inspect	
Every 10,000					* Evaluate

Lube rollers and check oil level and filter light weekly.

* Evaluate = Service based on average winch use;
 - if used more than once a day, perform overhaul.
 - if used less than once a day, remove covers and check to determine need.

* Inspect = disassemble and inspect for wear.

** Service winch using the tractor's hour meter or the length of time the winch is mounted to the tractor, whichever occurs first.

*** Follow tractor schedule if using tractor filter.

Recommended Gear Compartment Oil:

Caterpillar -TO-4

Chevron -Drive Train Fluids HD

ExxonMobil -Mobiltrans HD Series





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

2310796 Rev D

Table 1 Recommended Winch Service Intervals

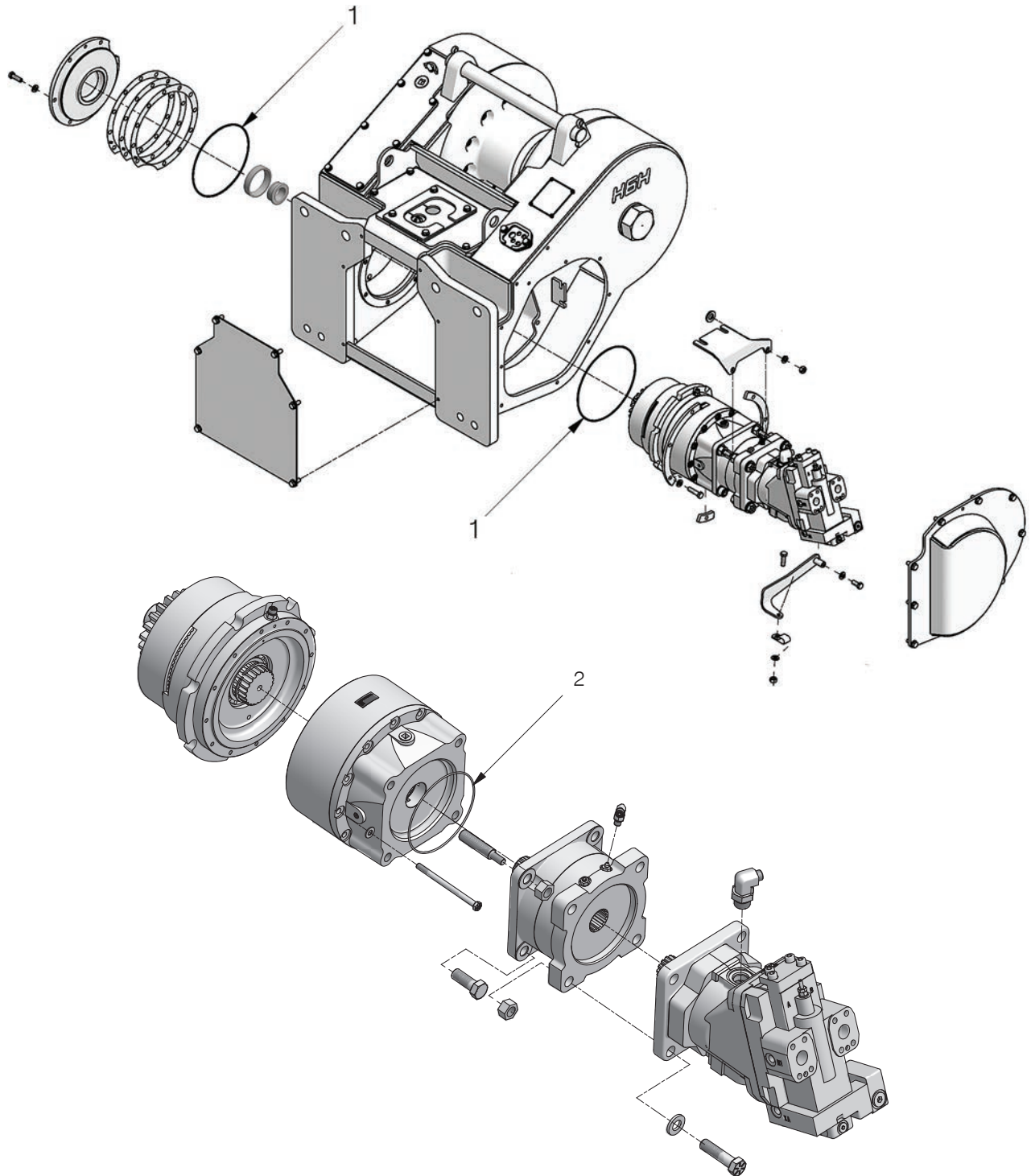
Recommended Service Kits

SERVICE KITS FOR H6H 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, Reducer & Brake Assembly Rebuild Kit	ALL	2314659	
Major Overhaul (Every 10,000 hours)	Intermediate/Drum Shaft, & Brake Assembly Rebuild Kit	ALL	2314660	

Table 2 Routine Maintenance Kits

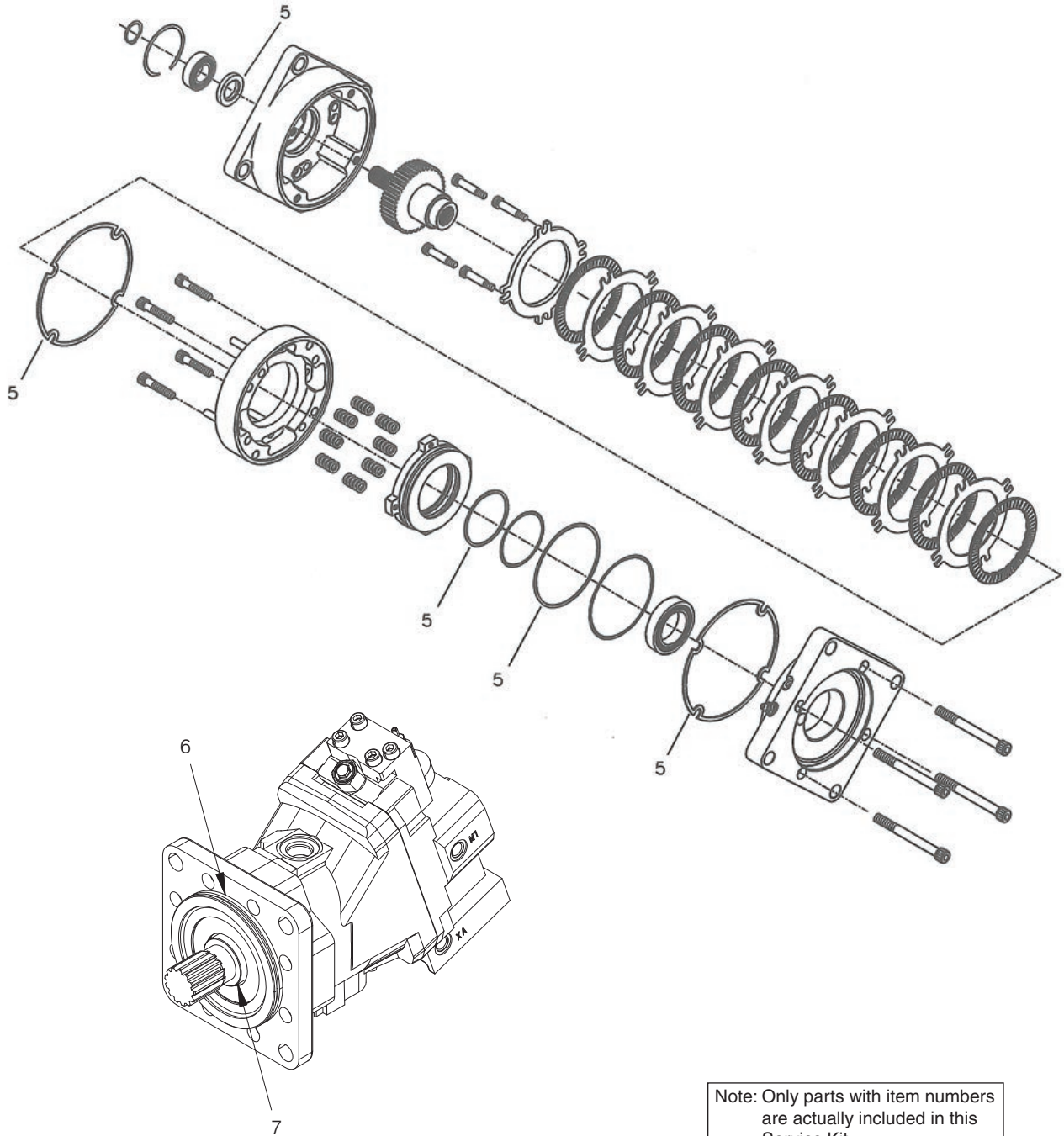
Motor, Reducer & Brake Assembly Rebuild Kit: 2314659

Page 1 of 2



Motor, Reducer & Brake Assembly Rebuild Kit: 2314659

Page 2 of 2

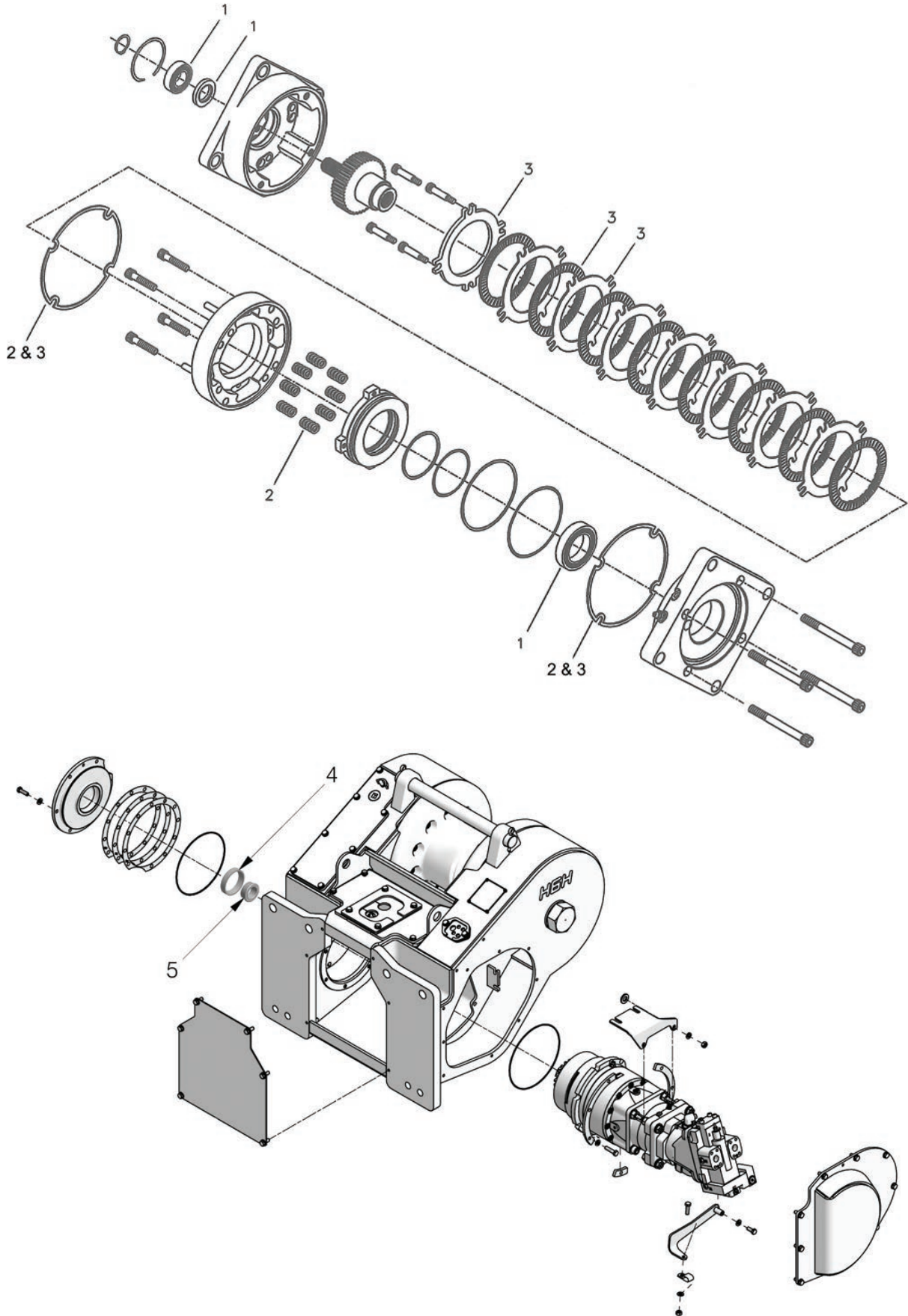


Note: Only parts with item numbers are actually included in this Service Kit. All other parts are shown for reference only.

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

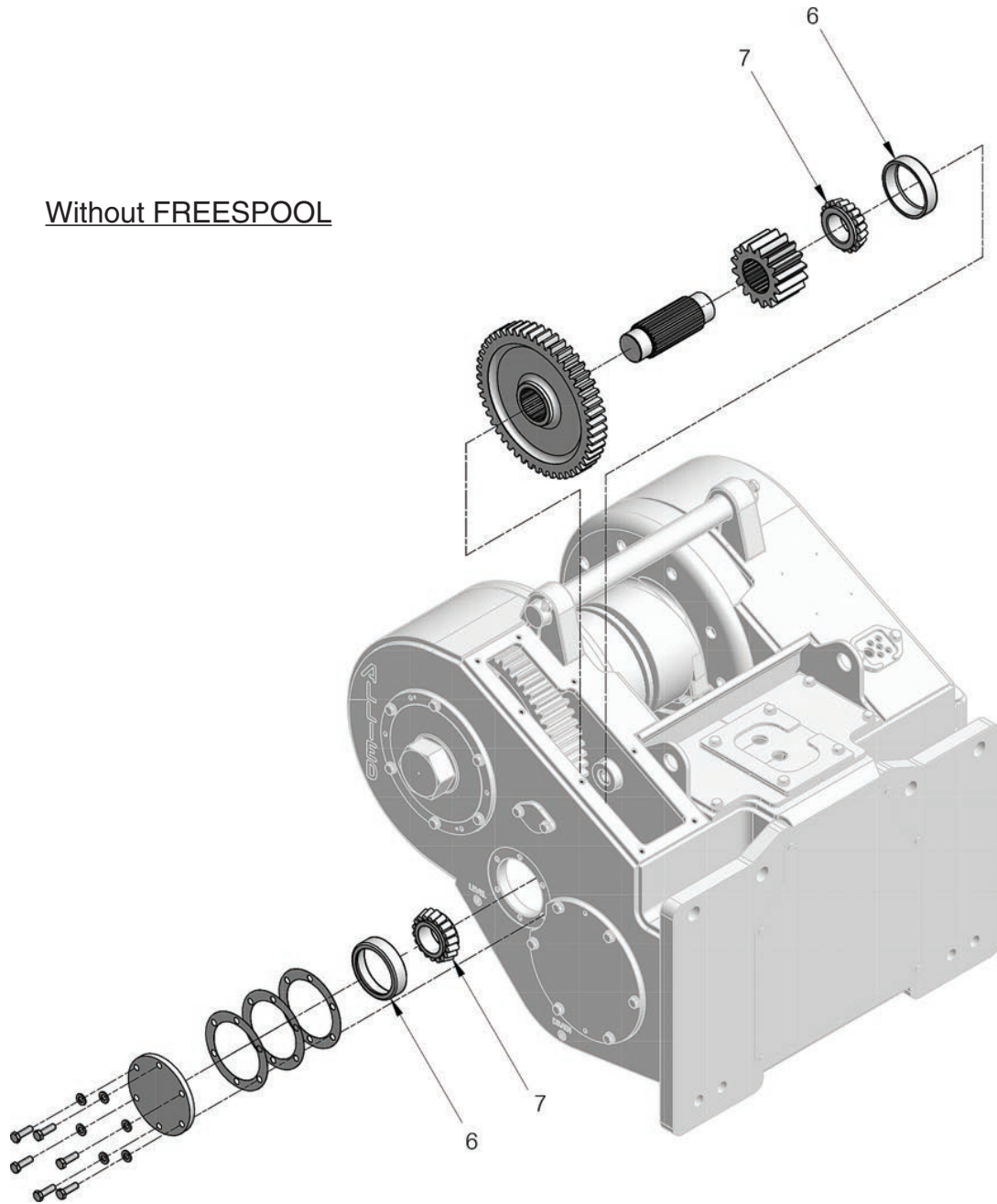
Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660

Page 1 of 4

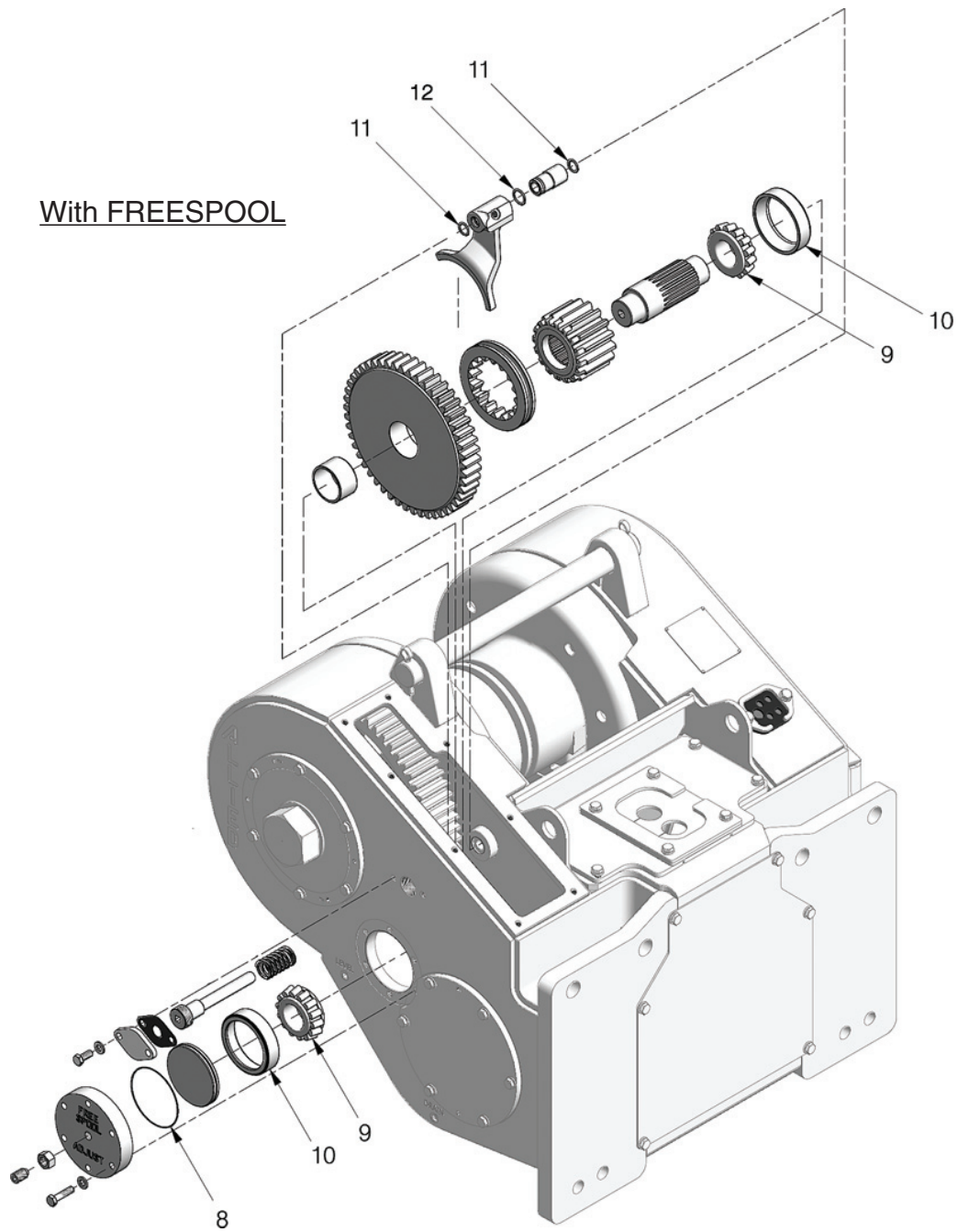


Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660

Without FREESPOOL

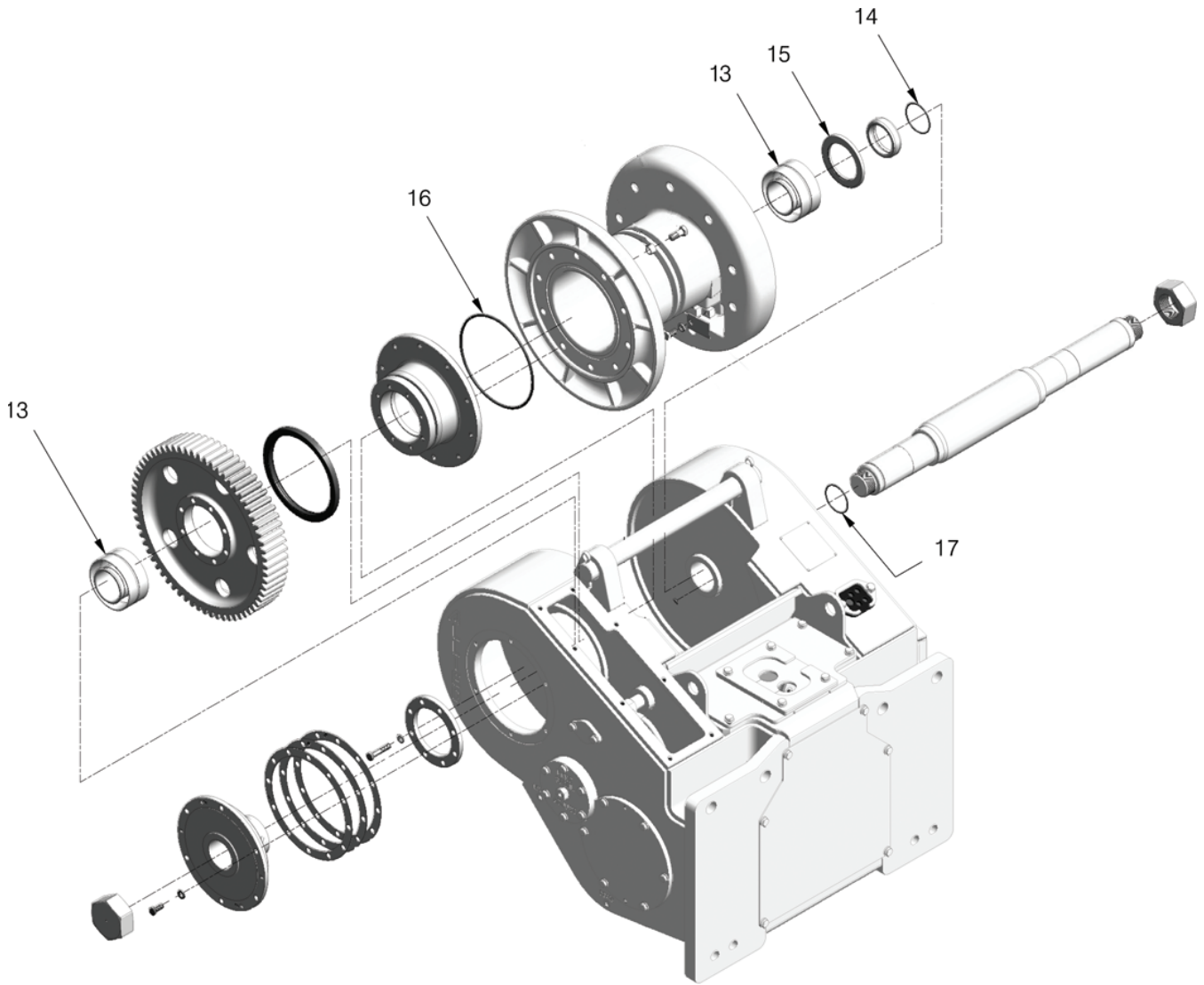


Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660



Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660

Page 4 of 4



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

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

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Suggested Spares Guide

Recommended Service Parts	6-2
• Gaskets & Seals (Used on H6H Standard Winch)	
Case 1650L (R40) & 1650-1850M (R42)	6-2
Caterpillar D6T (C71), D6N (C81) & D6N (C811)	6-3
Komatsu D65-15 (K46), D65-16/17 (K49) & D61-23 (K471)	6-4
Liebherr PR724 (L41)	6-4
Tigarcat 635D (Y44)	6-5
• Gaskets & Seals (Used on H6H High Performance Winch)	
John Deere 750/850J & 750/850K (E47/E48/E460)	6-5
• Motor, Reducer & Brake Assembly Rebuild Kit - 2314659	6-5
• Intermediate/Drum Shaft & Brake Assembly Rebuild Kit	
- 2314660	6-6
• Wire Rope Assemblies	6-6
• Spare Parts	6-7
• Operator Controls Components	6-8
• Hose Kits	6-8
• Tool Kits	6-9
• Diagnostic Tools	6-9



Suggested Spares Guide

H6H Hydraulic Winch

Recommended Service Parts

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

Pages 6-2 through 6-5 include lists of gaskets and seals. Keep these parts in stock at all times for regular maintenance. Order parts from the table based on your winch.

Page 6-5 and page 6-6 contain kits for 5,000 hour and 10,000 hour scheduled maintenance. Order these kits in preparation for these intervals. Each kit includes all parts listed in the table. Order parts from the table based on your winch.

Page 6-6 also contains a list of wire rope assemblies. Order parts as required and as relevant for your installation.

Page 6-7 contains a list of spare parts. Order parts or kits as required and as relevant for your installation.

Page 6-8 contains lists of operator controls components, and hose kits. Order parts or kits as required and as relevant for your installation.

Page 6-9 contains lists of tool kits and diagnostic tools, which are useful when you install, maintain and service your winches.

Gaskets & Seals				Order as Required
Applies to: H6H Standard Winch Mounted on Case 1650L (R40)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2313831	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	1	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
Applies to: H6H Standard Winch Mounted on Case 1650M/2050M (R42)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	1	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	Control Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
2504253	Seal Kit, Pressure Reduce Valve (2312803)	1	Line Body Assembly	



Suggested Spares Guide

Gaskets & Seals				Order as Required
Applies to: H6H Standard Winch Mounted on Caterpillar D6T (C71)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
Applies to: H6H Standard Winch Mounted on Caterpillar D6N (C81)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
R15668	Seal Kit, Solenoid Cartridge Valve	1	Valve Manifold Assembly	
Applies to: H6H Standard Winch Mounted on Caterpillar D6N (C811)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	



Suggested Spares Guide

Gaskets & Seals				Order as Required
Applies to: H6H Standard Winch Mounted on Komatsu D65-15 (K46) and D65-16/17 (K49)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
Applies to: H6H Standard Winch Mounted on Komatsu D61-23 (K471)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
252566	Seal Kit, Directional Valve	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2307265W)	1	Directional Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	

Gaskets & Seals				Order as Required
Applies to: H6H Standard Winch Mounted on Liebherr PR724 (L41)				
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
255601	Seal Kit (Viton), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	



Suggested Spares Guide

Gaskets & Seals

Order as Required

Applies to: H6H Standard Winch Mounted on Tigarcats 635D (Y44)

Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assembly	
236133	Seal Kit, Cavity Plug (P/N 258473)	1	CBR Manifold Assembly	
243815	Seal Kit, Cavity Plug (P/N 258473)	1	CBR Manifold Assembly	
251170	Seal Kit, Cavity Plug (P/N 256462)	2	CBR Manifold Assembly	

Gaskets & Seals

Order as Required

Applies to: H6H High Performance Winch Mounted on John Deere 750J (E48), 850J (E47);
750/850J & 750/850K (E460)

Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312008	Seal, Top	1	Frames/Covers	
2312118	Gasket, Top Left-Hand Cover	1	Frames/Covers	
252566	Seal Kit, Directional Valve	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve	2	Control Manifold Assembly	
2312112	Seal Kit, Shuttle Valve	1	Control Manifold Assembly	
2307235W	Seal Kit, Proportional Spool Cartridge Valve	1	Directional Manifold Assembly	
2312114	Seal Kit, Check Valve	3	Directional Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2307265W)	1	Directional Manifold Assembly	

Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2314659

Applies to: All

Service Interval: Every 5,000 Hours

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



Suggested Spares Guide

Intermediate/Drum Shaft, and Brake Assembly Rebuild Kit, P/N: 2314660

Applies to: All

Service Interval: Every 10,000 Hours

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

Wire Rope Assemblies

Order as Required

Applies to: All

Allied P/N	Description	Length	Will Fill Drum To:	Order Quantity
WR6-275L	Wire Rope Assembly, 3/4"	275 FT (84 M)	2/3 Capacity (recommended)	
WR6-413L	Wire Rope Assembly, 3/4"	413 FT (126 M)	Full Capacity	
WR7-198L	Wire Rope Assembly, 7/8"	198 FT (60 M)	2/3 Capacity (recommended)	
WR7-297L	Wire Rope Assembly, 7/8"	297 FT (91 M)	Full Capacity	
WR8-154L	Wire Rope Assembly, 1"	154 FT (47 M)	2/3 Capacity (recommended)	
WR8-230L	Wire Rope Assembly, 1"	230 FT (70 M)	Full Capacity	
YS8-230LWS	Wire Rope Assembly, 1"	230 FT (70 M)	Full Capacity	



Suggested Spares Guide

Spare Parts				Order as Required	
Applies to: See "Relevant for Installation" Column					
Allied P/N	Description	Quantity on Winch	Relevant for Installation	See Parts Manual Page	Order Quantity
2312839	Motor, Hydraulic	1	John Deere 750/850J & 750/850K (H6HH1B/E/3B**E47/E48/E460)	Motor Shaft Group	
2311815	Motor, Hydraulic	1	Komatsu D65-16/-17 (H6HT1B**K49)	Motor Shaft Group	
2313028	Motor, Hydraulic	1	Komatsu D61-23 (H6HT2B**K471)	Motor Shaft Group	
2313144	Motor, Hydraulic	1	Caterpillar D6N (H6HT1B**C81/C811)	Motor Shaft Group	
2313174	Motor, Hydraulic	1	Komatsu D61-23 (H6HH4B**K471)	Motor Shaft Group	
2313569	Motor, Hydraulic	1	Liebherr PR724 (H6HH5B**L41)	Motor Shaft Group	
2313727	Motor, Hydraulic	1	Tigercat 635D (H6HT2B**Y44)	Motor Shaft Group	
2313781	Motor, Hydraulic	1	Liebherr PR724 (H6HT6B**L41)	Motor Shaft Group	
2311883	Assembly, Reducer	1	John Deere 750/850J & 750/850K (H6HH1B/E**E47/E48/E460); Komatsu D65-16/-17 (H6HT1B**K49); Komatsu D61-23 (H6HT2B**K471); Caterpillar D6N (H6HT1B**C81/C811); Tigercat 635D (H6HT2B**Y44).	Motor Shaft Assembly	
2312965	Assembly, Reducer	1	John Deere 750/850J & 750/850K (H6HH3B**E47/E48/E460); Komatsu D61-23 (H6HH4B**K471).	Motor Shaft Assembly	
2312554	Assembly, Reducer	1	Liebherr PR724 (H6HH5B**L41); Liebherr PR724 (H6HT6B**L41).	Motor Shaft Assembly	
2312155	Assembly, Brake	1	All	Motor Shaft Assembly	
21420W	Plug, Breather	1	All	Frame/Covers	
2300962W	Cap, Breather	1	All	Frame/Covers	
95959W	Pin, Drawbar	1	All	Frame/Covers	
2303221W	Pin, Retaining	1	All	Frame/Covers	
2312099	Nut, Blind	2	All	Shaft, Drum	
2301783W	Keeper, Ferrule	1	All	Shaft, Drum	
328715W	Disc, Friction	7	All	Clutch Assembly	
283434W	Assembly, Gear	1	All	Shaft, Intermediate Gear	
2570W	Bushing	6	All	Fairlead, 3-Roller	
2570W	Bushing	8	All	Fairlead, 4-Roller	



Suggested Spares Guide

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

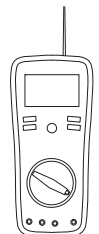
Hose Kits				Order as Required
Applies to: See "Relevant for Installation" Column				
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Quantity
2314767	Hose Kit, Winch Hydraulics	1	Caterpillar D6N (C81)	
2314768	Hose Kit, Winch Hydraulics	1	Caterpillar D6N (C811)	
2314769	Hose Kit, Winch Hydraulics	1	Caterpillar D6T (C71)	
2314770	Hose Kit, Winch Hydraulics	1	John Deere 750J (E47)/850J (E48), & 750K/850K (E460)	
2314771	Hose Kit, Winch Hydraulics	1	Komatsu D61-23 (K471), Standard	
2314772	Hose Kit, Winch Hydraulics	1	Komatsu D61-23 (K471), Hi-Performance Winch Hoses Only	
2314773	Hose Kit, Winch Hydraulics	1	Komatsu D61-23 (K471), Hi-Performance Dozer Hoses Only	
2314774	Hose Kit, Winch Hydraulics	1	Komatsu D65-16/17 (K49), Standard	
2314775	Hose Kit, Winch Hydraulics	1	Liebherr PR724 (L41)	
2314776	Hose Kit, Winch Hydraulics	1	Tigercat 635D (Y44)	
2315049	Hose Kit, Winch Hydraulics	1	Case 1650L (R40), Standard	
2315050	Hose Kit, Winch Hydraulics	1	Case 1650-1850M (R42), Standard	
2315051	Hose Kit, Winch Hydraulics	1	Caterpillar D6N (H6HT**DNC811), Standard	
2315052	Hose Kit, Winch Hydraulics	1	Komatsu D61-23 (K471) Non-FS, Standard	
2315053	Hose Kit, Winch Hydraulics	1	Liebherr PR724 (L41) Non-FS	
2315054	Hose Kit, Winch Hydraulics	1	Caterpillar D6N (H6HT**DNC811), Standard	
2315055	Hose Kit, Winch Hydraulics	1	Case 1650L (R40), Standard	



Suggested Spares Guide

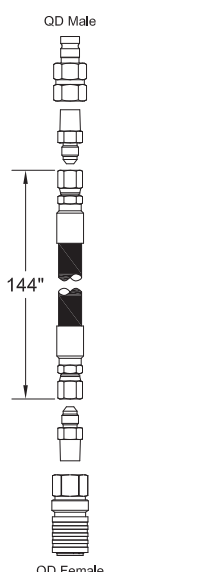
Tool Kits		
Order these Tool Kits as required for installation, maintenance and service of your winch(es).		
Allied P/N	Description	Order Quantity
588466	Socket Set, 3/8DR 3/8" to 7/8" STD/Deep, 22 PC	
588467	Socket Set, 1/2DR 3/8" to 1-1/4" STD/Deep, 30 PC	
588468	Socket Set, 3/4DR 7/8" to 2-3/8" STD, 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	



69778
Multi-Meter, 12 Function

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

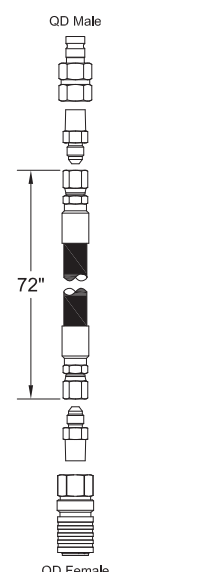


QD Male

144"

QD Female

70381
Kit, Hose Assembly, W/QD Both Ends

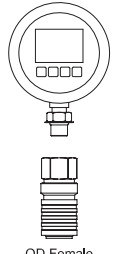


QD Male

72"

QD Female

69782
Kit, Hose Assembly, W/QD Both Ends



QD Female

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

Intentionally Blank

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229345	3-3	2.37	231443	3-75	2.2	234509	3-120	5	236855	3-73	2.30
229345	3-95	7	231459	3-43	2.15	234509	3-121	5	236855	3-81	1.33
229345	3-106	6	231459	3-63	6	234509	3-122	4	236895	1-17	1.26
229345	3-108	6	231465	3-86	7	234740	3-77	3	236895	3-39	3.5
229347	3-39	2.5	231465	3-88	8	234740	3-114	4	236973	3-63	29
229347	3-96	4	231465	3-89	7	234740	33-116	3	237271	1-5	14.1
229347	3-100	4	231465	3-90	6	235387	3-5	2.8	237346	3-81	3.2
229383	3-5	2.9	231465	3-92	10	235387	3-23	3.10	237346	3-83	2.4
229383	3-17	2.8	231465	3-93	7	235387	3-27	2.10	237346	3-115	2
229383	3-23	3.11	231470	3-70	1.10	235387	3-39	4.2	237346	33-116	2
229383	3-27	2.11	231809	1-7	37	235387	3-88	6	237346	3-118	3
229383	3-29	4.21	231820	3-5	2.14	235387	3-90	7	237346	3-119	2
229383	3-39	2.6	231820	3-19	2.11	235387	3-91	5	237346	3-120	2
229383	3-47	4.6	231820	3-98	6	235387	3-92	6	237349	2-4	1.5
229383	3-95	6	231821	3-45	2.11	235387	3-93	9	237349	2-5	1.5
229383	3-98	8	231821	3-47	2.11	235387	3-94	5	237349	2-6	1.5
229383	3-99	4	231822	3-90	10	235387	3-95	5	237349	2-7	1.5
229383	3-101	4	231955	3-70	1.14	235387	3-98	7	237349	2-8	1.5

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237349	2-9	1.5	243815	3-104	2	2310414	3-82	1.11	2311572	3-9	3.2
237349	2-10	1.5	243815	3-105	2	2310414	3-83	2.5	2311572	3-13	3.2
237349	2-11	1.5	243815	3-106	2	2310414	3-118	5	2311572	3-49	1.27
237349	2-12	1.5	243815	3-108	2	2310504	3-77	6	2311572	3-51	2.17
237349	2-13	1.5	244959	3-5	2.13	2310504	3-78	22	2311592	3-85	2
237349	5-5	2	248786	3-63	61	2310504	3-81	1.49	2311592	3-91	2
237954	3-74	33	249072	3-73	2.34	2310504	3-83	2.3	2311655	2-14	7
239847	3-3	2.17	249465	3-58	1.19	2310504	3-83	3.3	2311655	2-15	7
239847	3-5	2.19	249465	3-59	1.18	2310504	3-115	3	2311655	2-16	7
239847	3-15	1.17	249465	3-70	1.19	2310504	33-116	6	2311655	2-17	7
239847	3-17	2.13	249465	3-71	1.18	2310504	3-118	4	2311683	2-14	5
242144	3-39	2.4	250589	3-70	1.3	2310504	3-119	3	2311683	2-15	5
242230	3-95	4	250589	3-110	1	2310504	3-120	3	2311683	2-16	5
242254	1-7	35	250847	5-9	3	2310504	3-121	3	2311683	2-17	5
242264	3-45	3.6	250850	5-9	2	2310504	3-122	3	2311684	2-14	15
242358	3-58	1.20	251106	3-119	5	2310506	3-115	4	2311684	2-15	15
242358	3-70	1.20	251106	3-121	4	2310596	3-43	4.2	2311684	2-16	15
242374	3-39	2.3	251107	3-81	3.2	2310726	4-2	17	2311684	2-17	15
242596	3-9	3.22	251107	3-83	2.4	2310796	1-28	3	2311684	2-18	5
242596	3-13	3.22	251107	3-115	2	2310891	2-24	18	2311687	2-14	20
242596	3-23	4.15	251107	33-116	2	2310918	3-43	4.19	2311687	2-15	20
242596	3-27	4.15	251107	3-118	3	2310919	3-9	3.12	2311687	2-16	20
242596	3-33	3.21	251107	3-119	2	2310919	3-13	3.12	2311687	2-17	20
242596	3-39	5.19	251107	3-120	2	2310919	3-23	4.9	2311716	3-103	
242596	3-43	4.22	251170	3-97	3	2310919	3-27	4.9	2311716	3-104	1
242596	3-45	3.2	251345	3-81	1.49	2310919	3-43	4.20	2311716	3-105	1
242596	3-53	2.15	251345	3-83	2.3	2310919	3-49	1.33	2311717	3-103	1
242596	3-57	1.16	251345	3-115	3	2310919	3-51	2.28	2311718	3-95	
242596	3-81	1.18	251345	3-115	4	2310920	3-9	3.13	2311718	3-96	1
242597	3-9	3.23	251345	33-116	6	2310920	3-13	3.13	2311718	3-97	1
242597	3-13	3.23	251345	3-118	4	2310920	3-23	4.10	2311718	3-99	1
242597	3-23	4.16	251345	3-119	3	2310920	3-27	4.10	2311718	3-100	1
242597	3-27	4.16	251345	3-120	3	2310920	3-43	4.21	2311718	3-101	1
242597	3-33	3.22	251345	3-121	3	2310920	3-49	1.34	2311718	3-102	1
242597	3-39	5.20	251345	3-122	3	2310920	3-51	2.29	2311718	3-107	1
242597	3-43	4.23	252566	3-85	2	2310958	1-11	1.69	2311718	3-109	1
242597	3-45	3.3	252566	3-91	2	2310958	1-13	1.13	2311719	3-95	1
242597	3-53	2.16	252605	3-70	1.12	2310958	1-15	1.36	2311770	3-86	1
242597	3-57	1.17	254680	3-58	1.18	2310958	1-21	15	2311770	3-87	1
242597	3-63	64	254680	3-59	1.17	2310958	1-23	20	2311770	3-88	1
242597	3-81	1.19	254680	3-70	1.18	2311042	3-81	1.48	2311770	3-89	1
242598	3-3	2.42	254680	3-71	1.17	2311072	3-77	5	2311770	3-90	1
242598	3-5	3.6	255601	3-95	3	2311072	3-119	5	2311770	3-93	1
242598	3-9	3.24	255601	3-106	3	2311072	3-121	4	2311770	3-94	1
242598	3-13	3.24	256462	3-97	3	2311225	3-39	5.10	2311771	3-85	1
242598	3-23	4.17	257557	3-103	4	2311251	2-19	9	2311815	2-9	2
242598	3-27	4.17	257557	3-103	5	2311330	1-28	4	2311819	2-3	
242598	3-33	3.23	258473	3-97	2	2311352	33-116	8	2311855	2-14	1
242598	3-39	5.21	259258	3-95	3	2311353	3-23	1.14	2311855	2-15	1
242598	3-45	3.4	259258	3-106	3	2311353	3-39	1.14	2311855	2-16	1
242598	3-49	1.42	259258	3-108	3	2311493	3-23	4.4	2311855	2-17	1
242598	3-51	2.34	2310013	3-77	4	2311493	3-27	4.4	2311856	2-14	2
242598	3-53	2.17	2310013	3-78	23	2311500	3-92	2	2311856	2-16	2
242598	3-55	3.1.27	2310013	3-81	3.2	2311530	3-67	4	2311857	2-3	1
242598	3-57	1.18	2310013	3-83	2.4	2311540	3-39	5.3	2311863	3-114	6
242598	3-63	65	2310013	3-115	2	2311541	1-19	1.26	2311863	33-116	5
242599	3-5	3.7	2310013	33-116	2	2311541	3-43	4.3	2311869	2-14	18
242599	3-39	5.22	2310013	3-118	3	2311541	3-81	1.26	2311869	2-15	18
242599	3-43	4.24	2310013	3-119	2	2311549	3-43	4.8	2311869	2-16	18
242629	3-70	1.11	2310013	3-120	2	2311550	1-19	1.38	2311869	2-17	18
242629	3-71	1.16	2310181	3-95	8	2311550	3-58	1.54	2311869	2-18	7
243057	3-58	1.56	2310181	3-106	4	2311550	3-59	1.47	2311880	2-14	10
243057	3-59	1.48	2310181	3-108	4	2311550	3-65	1.54	2311880	2-15	10
243815	3-95	2	2310300	3-119	5	2311550	3-66	1.47	2311880	2-16	10
243815	3-97	2	2310300	3-121	4	2311550	3-74	24	2311880	2-17	10

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2311883	2-5	3	2312074	3-85	4	2312212	3-5	1.17	2312351	3-31	2.5
2311883	2-6	3	2312074	3-91	4	2312212	3-7	1.17	2312351	3-35	2.4
2311883	2-9	3	2312081	1-19	1.1	2312212	3-11	1.17	2312351	3-43	2.18
2311883	2-10	3	2312082	1-19	1.2	2312212	3-15	1.13	2312351	3-45	2.7
2311883	2-13	3	2312087	1-19	1.7	2312212	3-19	1.17	2312351	3-47	2.7
2311894	2-23	1	2312088	1-19	1.14	2312212	3-23	1.17	2312352	3-39	3.6
2311903	2-14	11	2312089	1-7	14	2312212	3-31	1.17	2312353	3-3	2.11
2311903	2-15	11	2312089	1-9	9	2312212	3-35	1.17	2312353	3-5	1.14
2311903	2-16	11	2312089	1-17	1.7	2312212	3-39	1.17	2312353	3-7	1.14
2311903	2-17	11	2312089	1-19	1.10	2312212	3-43	1.17	2312353	3-11	1.14
2311903	2-19		2312089	1-25	1.7	2312212	3-45	1.17	2312353	3-19	1.14
2311904	2-19	1	2312089	1-27	19.6	2312216	3-114	1	2312353	3-27	2.20
2311905	2-14	21	2312090	1-7	12	2312216	33-116	1	2312353	3-29	4.17
2311905	2-15	21	2312090	1-9	7	2312235	3-81	1.41	2312353	3-31	1.14
2311906	2-19	6	2312090	1-17	1.5	2312268	3-7	2.3	2312353	3-33	3.10
2311907	2-19	2	2312090	1-19	1.9	2312268	3-29	4.2	2312353	3-35	1.14
2311917	2-3	14	2312090	1-25	1.5	2312268	3-31	2.3	2312353	3-43	1.14
2311918	2-3	15	2312090	1-27	19.4	2312268	3-39	2.2	2312353	3-45	1.14
2312006	1-3	13.6	2312095	3-3	2.25	2312269	2-23	14	2312353	3-53	2.12
2312008	1-3	4.1	2312095	3-5	2.11	2312280	2-23	13	2312354	1-19	1.43
2312009	1-3	5.1	2312095	3-7	2.14	2312302	5-5	5	2312355	3-33	3.11
2312013	1-3	3.6	2312095	3-15	1.25	2312303	5-9	1	2312356	3-33	3.13
2312013	1-5	3.6	2312095	3-17	2.24	2312317	3-33	3.8	2312357	3-7	2.4
2312018	2-3	9	2312095	3-23	3.13	2312318	3-33	3.7	2312357	3-11	2.3
2312029	2-19	3	2312095	3-29	4.11	2312319	3-33	3.3	2312357	3-29	4.3
2312032	1-5	14.1	2312095	3-31	2.15	2312323	3-33	3.2	2312357	3-31	2.4
2312036	2-3	7	2312095	3-39	2.18	2312324	3-33	3.4	2312358	3-3	2.22
2312039	2-14	4	2312095	3-45	2.5	2312328	1-19	1.25	2312358	3-7	2.12
2312039	2-15	4	2312099	2-24	25	2312328	3-55	3.1.33	2312358	3-11	2.5
2312039	2-16	4	2312100	2-24	26	2312329	1-19	1.22	2312358	3-15	1.22
2312039	2-17	4	2312103	3-103	3	2312329	3-55	3.1.30	2312358	3-17	2.14
2312041	2-4	1.4	2312111	3-85	3	2312330	3-55	3.1.54	2312358	3-29	4.8
2312041	2-5	1.4	2312111	3-91	3	2312331	1-7	29	2312358	3-31	2.12
2312041	2-6	1.4	2312112	3-85	4	2312331	1-9	13	2312358	3-39	2.8
2312041	2-7	1.4	2312112	3-91	4	2312331	1-17	1.17	2312359	2-9	
2312041	2-8	1.4	2312114	3-103	3	2312331	1-19	1.15	2312437	4-3	17
2312041	2-9	1.4	2312117	1-3	13.2	2312331	1-25	1.16	2312437	4-4	17
2312041	2-10	1.4	2312118	1-3	4.2	2312338	3-81	1.21	2312442	2-14	6
2312041	2-11	1.4	2312119	1-3	13.4	2312339	3-33	3.20	2312442	2-15	6
2312041	2-12	1.4	2312124	1-19	1.12	2312339	3-39	2.9	2312442	2-16	6
2312041	2-13	1.4	2312144	3-55	3.1.38	2312350	3-5	1.15	2312442	2-17	6
2312045	1-3	3.2	2312155	2-4	1.1	2312350	3-7	1.15	2312485	3-33	3.1
2312045	1-5	3.2	2312155	2-5	1.1	2312350	3-11	1.15	2312486	1-3	3.14
2312046	1-3	13.5	2312155	2-6	1.1	2312350	3-15	1.11	2312486	1-5	3.14
2312048	1-3	3.1	2312155	2-7	1.1	2312350	3-17	2.10	2312486	2-24	23
2312048	1-5	3.1	2312155	2-8	1.1	2312350	3-19	1.15	2312487	2-3	5
2312059	2-3	11	2312155	2-9	1.1	2312350	3-23	1.15	2312487	2-22	20.6
2312060	2-3	12	2312155	2-10	1.1	2312350	3-31	1.15	2312488	2-3	3
2312061	2-3	10	2312155	2-11	1.1	2312350	3-33	3.12	2312488	2-23	20
2312064	2-24	20	2312155	2-12	1.1	2312350	3-35	1.15	2312554	2-11	3
2312068	3-95	2	2312155	2-13	1.1	2312350	3-39	1.15	2312554	2-12	3
2312068	3-106	2	2312155	2-21		2312350	3-43	1.15	2312580	1-3	2.3
2312068	3-108	2	2312157	3-43	4.1	2312350	3-45	1.15	2312580	1-5	2.3
2312069	3-3	2.24	2312168	4-2	18	2312350	3-47	4.1	2312580	4-3	18
2312069	3-5	2.10	2312174	3-81	1.47	2312350	3-73	2.35	2312580	4-4	18
2312069	3-7	2.15	2312175	3-81	1.27	2312351	3-3	2.19	2312628	1-5	14.4
2312069	3-15	1.24	2312176	3-81	3.1	2312351	3-5	2.7	2312628	2-3	20
2312069	3-17	2.23	2312176	3-112	2	2312351	3-7	2.5	2312628	3-3	2.43
2312069	3-23	3.12	2312177	1-21	11	2312351	3-11	2.4	2312628	3-5	1.22
2312069	3-29	4.10	2312177	3-69	1.15	2312351	3-15	1.19	2312628	3-7	1.19
2312069	3-31	2.14	2312177	3-81	1.50	2312351	3-17	2.14	2312628	3-11	1.22
2312069	3-39	2.17	2312177	3-114	8	2312351	3-19	2.7	2312628	3-19	1.22
2312069	3-45	2.6	2312177	33-116	7	2312351	3-23	3.7	2312628	3-31	1.22
2312073	3-85	3	2312205	3-81	1.39	2312351	3-27	2.7	2312628	3-45	1.22

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2312675	1-19	1.45	2312928	2-4	4	2313136	3-119	1	2313617	3-47	2.2
2312760	3-39	2.1	2312928	2-5	4	2313136	3-120	1	2313617	3-89	
2312760	3-104		2312928	2-9	4	2313136	3-121	1	2313621	3-118	1
2312803	3-111	2	2312928	2-12	4	2313137	3-3	2.38	2313621	3-122	1
2312816	3-7	2.1	2312928	2-14		2313137	3-9	3.18	2313622	3-69	2.1
2312816	3-29	4.1	2312929	2-6	4	2313137	3-13	3.18	2313622	3-118	
2312816	3-31	2.1	2312929	2-18		2313137	3-49	1.38	2313623	3-69	1.13
2312816	3-96		2312935	2-17	21	2313137	3-51	2.31	2313626	3-45	3.1
2312819	3-39	5.2	2312940	3-106	1	2313138	3-58	1.55	2313644	3-57	1.21
2312820	3-39	5.1	2312940	3-108	1	2313138	3-65	1.55	2313680	3-45	2.9
2312836	2-5		2312941	3-5	2.3	2313140	3-43	2.8	2313680	3-47	2.9
2312839	2-5	2	2312941	3-106		2313141	3-43	2.9	2313681	3-69	1.25
2312839	2-6	2	2312953	1-5	14.2	2313143	2-4		2313682	1-27	1.27
2312839	2-7	2	2312954	1-5	14.3	2313144	2-4	2	2313684	3-45	3.8
2312840	1-21	16	2312955	1-5	14.6	2313155	3-43	2.10	2313685	3-69	1.28
2312840	1-23	21	2312959	3-103	4	2313159	3-43	4.5	2313719	3-35	2.7
2312840	1-27	1.23	2312963	2-15	2	2313160	3-43	4.6	2313720	3-35	2.6
2312842	1-21	17	2312963	2-17	2	2313161	3-43	2.7	2313727	2-13	2
2312842	1-23	22	2312965	2-7	3	2313170	2-8	2	2313728	2-13	
2312842	1-27	1.22	2312965	2-8	3	2313171	2-8	4	2313735	3-35	2.1
2312843	3-3	2.16	2312966	2-7	4	2313171	2-17		2313735	3-90	
2312844	1-21	18	2312966	2-15		2313174	2-8		2313736	3-97	
2312844	1-23	23	2312967	2-7		2313180	3-63	4	2313736	3-98	1
2312846	1-11	1.28	2312977	2-16	21	2313200	3-65	1.50	2313737	3-35	2.2
2312846	1-15	1.5	2312978	3-83	1.15	2313200	3-66	1.37	2313737	3-98	
2312846	1-21	6	2312979	3-83	1.13	2313214	1-7	1	2313738	3-35	2.5
2312846	1-23	6	2312979	3-114		2313214	1-9	1	2313742	3-35	2.9
2312847	1-11	1.29	2313026	2-10	4	2313215	1-7	2	2313780	2-12	2
2312847	1-15	1.6	2313026	2-11	4	2313215	1-9	2	2313781	2-12	
2312847	1-21	9	2313026	2-13	4	2313284	1-9	3	2313812	3-35	2.12
2312847	1-23	9	2313026	2-16		2313285	1-9	4	2313831	1-3	5.2
2312849	1-3	18.2	2313027	2-10		2313314	3-5	2.17	2313843	3-15	1.16
2312849	1-5	14.11	2313028	2-10	2	2313318	3-5	2.1	2313843	3-17	2.12
2312850	1-3	18.1	2313029	3-23	4.5	2313318	3-88		2313844	3-3	2.12
2312850	1-5	14.12	2313029	3-27	4.5	2313380	1-3	13.3	2313844	3-15	1.12
2312854	3-112	1	2313039	2-8	5	2313388	3-5	2.18	2313844	3-17	2.11
2312855	3-79	10	2313039	2-10	5	2313389	3-5	3.1	2313890	2-4	2
2312855	3-112		2313043	3-23	3.1	2313390	3-5	3.2	2313890	2-5	2
2312856	3-67	9	2313043	3-43	2.14	2313400	3-78	17	2313890	2-6	2
2312856	3-79	9	2313043	3-87		2313417	3-64	18	2313890	2-7	2
2312878	3-5	1.16	2313045	3-23	3.8	2313418	3-64	19	2313890	2-8	2
2312878	3-7	1.16	2313045	3-27	2.8	2313464	1-27	19.1	2313890	2-9	2
2312878	3-11	1.16	2313045	3-43	2.5	2313489	3-111	1	2313890	2-10	2
2312878	3-19	1.16	2313046	3-23	4.2	2313492	3-5	2.16	2313890	2-11	2
2312878	3-23	1.16	2313046	3-27	4.2	2313492	3-111		2313890	2-12	2
2312878	3-27	2.21	2313047	3-23	4.1	2313493	3-5	2.20	2313890	2-13	2
2312878	3-31	1.16	2313047	3-27	4.1	2313496	3-5	3.5	2313890	5-5	6
2312878	3-35	1.16	2313072	3-103	6	2313525	3-67	8	2313891	2-4	2
2312878	3-39	1.16	2313102	1-11	17.6	2313526	3-117	1	2313891	2-5	2
2312878	3-43	1.16	2313111	3-43	2.3	2313527	3-67	11	2313891	2-6	2
2312878	3-45	1.16	2313112	3-43	2.4	2313527	3-117		2313891	2-7	2
2312878	3-47	4.2	2313113	3-65	1.49	2313569	2-11	2	2313891	2-8	2
2312891	2-18	1	2313113	3-115		2313570	2-11		2313891	2-9	2
2312892	2-18	2	2313114	3-115	5	2313597	1-27	1.4	2313891	2-10	2
2312895	3-79	5	2313115	3-43	4.7	2313598	1-27	1.5	2313891	2-11	2
2312895	3-113		2313116	3-82	1.12	2313599	1-27	1.7	2313891	2-12	2
2312896	3-113	1	2313116	33-116		2313600	1-27	1.24	2313891	2-13	2
2312908	3-7	2.13	2313117	3-82	1.13	2313604	3-57	1.8	2313891	5-5	7
2312908	3-11	2.2	2313120	1-11	17.5	2313612	1-27	1.2	2313943	3-91	1
2312908	3-31	2.13	2313122	1-11	17.4	2313613	1-27	1.3	2313944	3-91	
2312908	3-39	2.7	2313125	1-11	17.7	2313614	1-27	1.12	2313944	3-92	1
2312908	3-86		2313133	3-58	1.47	2313616	3-45	2.1	2313948	3-3	2.44
2312912	2-6		2313133	3-59	1.4	2313616	3-107		2313948	3-5	2.4
2312927	3-67	12	2313135	3-65	1.48	2313617	3-19	2.2	2313948	3-23	3.4

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2313948	3-101	6	2314267	3-63	21	2314690	3-19	2.5	141671W	2-24	19
2313948	3-102	6	2314268	3-63	3	2314690	3-23	3.13	141674W	2-24	1
2313948	3-105	10	2314269	3-63	24	2314690	3-27	2.13	149541W	2-22	20.8
2313948	3-109	6	2314272	3-63	2	2314690	3-29	4.11	149542W	2-22	20.9
2313959	3-3	2.18	2314277	3-63		2314690	3-31	2.15	149543W	2-22	20.10
2313959	3-15	1.18	2314282	3-63	10	2314690	3-39	2.18	15113W	3-79	3
2313959	3-17	2.21	2314284	3-63	11	2314690	3-45	2.5	15113W	3-79	8
2313959	3-99		2314286	3-63	12	2314690	3-47	2.5	15127W	3-79	1
2313960	3-3	2.23	2314288	3-63	13	2314691	3-19	2.1	15128W	1-11	1.25
2313960	3-15	1.23	2314290	3-63	14	2314691	3-45	2.1	15128W	1-21	2
2313960	3-17	2.22	2314292	3-63	15	2314691	3-47	2.1	15128W	1-23	2
2313960	3-92		2314294	3-63	16	2314691	3-109		15156W	3-73	2.7
2313961	3-59	1.39	2314295	3-63	17	2314692	3-29	4.1	151589W	1-3	3.9
2313961	3-66	1.39	2314297	3-63	18	2314692	3-31	2.1	151589W	1-5	3.9
2313961	3-71	1.39	2314298	3-63	19	2314692	3-100		15158W	2-24	5
2313978	3-66	4	2314301	3-63	20	2314696	3-73	2.37	151646W	1-3	3.1
2313978	3-119		2314322	3-63	47	2314727	3-3	2.18	151646W	1-5	3.1
2313979	3-77	7	2314323	3-63	53	2314727	3-15	1.18	151646W	6-2	
2313979	3-119	4	2314328	3-63	55	2314727	3-17	2.21	151646W	6-2	
2313979	3-120	4	2314329	3-63	56	2314727	3-101		151646W	6-3	
2313984	3-85	3	2314332	3-43	4.4	2314728	3-74	18	151646W	6-3	
2313991	3-78	26	2314337	3-63	57	2314728	3-77	18	151646W	6-3	
2313991	3-81	2.2	2314338	3-63	62	2314735	3-59	1.3	151646W	6-4	
2313991	3-83	3.4	2314339	3-63	58	2314739	3-53	2.13	151646W	6-4	
2313991	3-122	5	2314422	3-9	3.7	2314742	3-59	1.19	151646W	6-4	
2313992	3-78	25	2314422	3-13	3.7	2314743	3-53	2.14	151646W	6-5	
2313993	3-78	13	2314422	3-49	1.30	2314753	3-73	2.1	151646W	6-5	
2314051	3-66	1.42	2314422	3-51	2.19	2314754	3-73	2.2	15166W	4-3	15
2314072	1-17	1.20	2314423	3-9	3.6	2314781	3-121	2	15166W	4-4	15
2314072	1-25	1.18	2314423	3-13	3.6	2314787	3-66	3	15176W	3-5	1.18
2314082	3-78	27	2314423	3-49	1.29	2314787	3-121		15176W	3-7	1.18
2314104	3-111	2	2314423	3-51	2.18	2314920	3-69	3.1	15176W	3-11	1.18
2314106	3-85	3	2314490	3-29	4.9	2314920	3-122		15176W	3-19	1.18
2314107	3-111	2	2314490	3-93		2314959	3-29	4.23	15176W	3-23	1.18
2314111	1-17	1.24	2314507	3-27	2.1	2314959	3-31	2.16	15176W	3-27	2.22
2314111	1-25	1.1	2314507	3-94		2314965	3-11	2.1	15176W	3-35	1.18
2314136	1-17	1.18	2314553	1-13	1.1	2314965	3-102		15176W	3-39	1.18
2314136	1-25	1.22	2314554	1-13	1.2	2342878	3-29	4.18	15178W	3-3	2.7
2314162	3-3	2.24	2314579	3-73	2.1	2504253	3-111	2	15178W	3-5	1.8
2314162	3-5	2.10	2314580	3-73	2.2	118389W	3-33	3.9	15178W	3-7	1.8
2314162	3-11	2.11	2314627	3-73	2.4	129563W	1-21	10	15178W	3-11	1.8
2314162	3-15	1.24	2314628	3-73	2.3	129563W	3-9	3.16	15178W	3-15	1.7
2314162	3-17	2.23	2314633	1-13	2.1	129563W	3-13	3.16	15178W	3-19	1.8
2314162	3-19	2.6	2314635	1-13	2.11	129563W	3-39	5.16	15178W	3-23	1.8
2314162	3-23	3.12	2314636	1-13	2.12	129563W	3-65	1.68	15178W	3-31	1.8
2314162	3-27	2.12	2314637	1-13	2.13	129563W	3-66	1.49	15178W	3-35	1.8
2314162	3-29	4.10	2314651	3-77	8	129563W	3-67	1	15178W	3-39	1.8
2314162	3-31	2.14	2314654	3-84	2.25	129563W	3-69	1.20	15178W	3-43	1.8
2314162	3-39	2.17	2314655	3-84	2.18	1321665W	1-28	1	15178W	3-45	1.8
2314162	3-45	2.6	2314655	3-120		133927W	2-24	10	15272W	1-3	2.4
2314162	3-47	2.6	2314659	5-5		133927W	5-9	16	15272W	1-5	2.4
2314224	1-17	1.23	2314660	5-9		133927W	6-6		15272W	4-3	16
2314224	1-25	1.20	2314664	3-19	2.9	134803W	3-43	2.11	15272W	4-4	16
2314225	1-17	1.22	2314664	3-53	2.9	136985W	3-75	2.6	15290W	1-3	2.5
2314225	1-25	1.21	2314681	1-7	9	137153W	2-14	16	15290W	1-5	2.5
2314230	3-63	34	2314685	1-7	22	137153W	2-15	16	15315W	1-3	2.6
2314231	3-49	1.26	2314687	3-39	2.1	137153W	2-16	16	15315W	1-5	2.6
2314231	3-51	2.16	2314687	3-105		137153W	2-17	16	15319W	1-3	3.13
2314242	3-23	3.3	2314688	3-3	2.28	137153W	2-18	3	15319W	1-5	3.13
2314242	3-27	2.3	2314689	3-3	2.29	137155W	2-14	17	15862W	2-23	4
2314242	3-108		2314690	3-3	2.25	137155W	2-15	17	15862W	5-9	11
2314248	3-63	5	2314690	3-5	2.11	137155W	2-16	17	15862W	6-6	
2314255	3-63	1	2314690	3-11	2.12	137155W	2-17	17	15881W	2-24	8

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159940W	2-23	10	221763W	3-84	2.43	2301706W	4-3	4	2305715W	1-23	26
159940W	5-9	8	221767W	2-4	1.7	2301706W	4-4	4	2305715W	1-27	1.26
159940W	6-6		221767W	2-5	1.7	2301718W	4-3	8	2305956W	2-23	12
16001W	4-2	9	221767W	2-6	1.7	2301718W	4-4	8	2306151W	3-3	2.31
16001W	4-3	6	221767W	2-7	1.7	2301721W	4-3	11	2306151W	3-9	3.9
16001W	4-4	6	221767W	2-8	1.7	2301721W	4-4	11	2306151W	3-13	3.9
16602W	1-28	2	221767W	2-9	1.7	2301722W	4-3	3	2306151W	3-49	1.31
16644W	1-11	1.32	221767W	2-10	1.7	2301722W	4-4	3	2306151W	3-51	2.26
16644W	1-15	1.20	221767W	2-11	1.7	2301726W	4-3	9	2306151W	3-39	5.13
166857W	3-60	1.61	221767W	2-12	1.7	2301726W	4-4	9	2306152W	3-33	3.17
16805W	3-73	2.27	221767W	2-13	1.7	2301727W	4-3	1	2306157W	3-43	4.18
16829W	2-24	16	221767W	3-3	2.14	2301727W	4-4	1	2306421W	1-13	1.7
172808W	2-24	7	221767W	3-15	1.14	2301731W	4-3		2306836W	3-60	1.64
172810W	2-24	24	221767W	3-17	2.37	2301732W	4-4		2306857W	3-60	1.62
175646W	2-24	14	221767W	3-29	4.19	2301748W	4-2		2306858W	3-60	1.60
175647W	2-24	13	221767W	3-31	1.18	2301749W	4-2	1	2307024W	3-103	2
175648W	2-24	12	221767W	3-45	1.18	2301783W	2-24	15	2307041W	3-39	5.5
177192W	2-4	1.8	221767W	3-47	4.11	2301783W	6-7		2307104W	3-23	3.9
177192W	2-5	1.8	221767W	3-73	2.9	2301907W	4-2	2	2307104W	3-27	2.9
177192W	2-6	1.8	221775W	1-11	1.33	2301910W	4-2	7	2307121W	3-65	1.52
177192W	2-7	1.8	221775W	1-15	1.29	2301919W	4-2	14	2307121W	3-66	1.41
177192W	2-8	1.8	221777W	2-3	2	2301920W	4-2	13	2307121W	3-67	2
177192W	2-9	1.8	221777W	2-4	1.9	2301924W	4-2	19	2307121W	3-84	2.23
177192W	2-10	1.8	221777W	2-5	1.9	2301925W	4-2	15	2307122W	3-65	1.51
177192W	2-11	1.8	221777W	2-6	1.9	2302120W	4-2	11	2307122W	3-66	1.40
177192W	2-12	1.8	221777W	2-7	1.9	2302311	6-6		2307122W	3-67	3
177192W	2-13	1.8	221777W	2-8	1.9	2302311W	2-23	17	2307122W	3-84	2.24
18669W	4-3	14	221777W	2-9	1.9	2302311W	5-9	9	2307235W	3-103	2
18669W	4-4	14	221777W	2-10	1.9	2302624W	2-23	9	2307235W	6-5	
18738W	3-60	1.65	221777W	2-11	1.9	2302625W	2-23	11	2307238W	3-9	3.10
192241W	2-18	6	221777W	2-12	1.9	2303221W	1-3	2.2	2307238W	3-13	3.10
203564	6-5		221777W	2-13	1.9	2303221W	1-5	2.2	2307238W	3-23	4.6
212380	6-6		221780W	1-11	1.38	2303221W	6-7		2307238W	3-27	4.6
21420W	1-3	3.11	221780W	1-13	1.3	2303694W	1-17	1.4	2307238W	3-33	3.19
21420W	1-5	3.11	221780W	1-15	1.31	2303694W	1-25	1.4	2307238W	3-39	5.12
21420W	6-7		221780W	1-21	8	2303912W	3-66	1.43	2307238W	3-43	4.15
220000W	3-65	1.44	221780W	1-23	8	2303992W	2-14	13	2307239W	3-9	3.8
220000W	3-66	1.24	222713W	2-19	10	2303992W	2-15	13	2307239W	3-13	3.8
220000W	3-79	2	223453W	1-11	1.27	2303992W	2-16	13	2307239W	3-23	4.7
220000W	3-79	7	223453W	1-15	1.32	2303992W	2-17	13	2307239W	3-27	4.7
220000W	3-84	2.42	223453W	1-21	5	230406W	2-24	3	2307239W	3-33	3.18
221336W	4-2	12	223453W	1-23	5	230406W	5-9	13	2307239W	3-39	5.11
221577W	2-24	4	226374W	4-3	12	230406W	6-6		2307239W	3-43	4.16
221690W	1-13	1.5	226374W	4-4	12	230407W	2-14	19	2307240W	3-39	5.9
221703W	3-70	1.6	230064W	5-5	4	230407W	2-15	19	2307241W	3-3	2.32
221716W	2-4	1.3	230064W	6-5		230407W	2-16	19	2307241W	3-9	3.11
221716W	2-5	1.3	2300668W	2-3	16	230407W	2-17	19	2307241W	3-13	3.11
221716W	2-6	1.3	2300668W	5-9	4	2304111W	3-43	2.1	2307241W	3-23	4.8
221716W	2-7	1.3	2300668W	6-6		2304112W	3-43	2.1	2307241W	3-27	4.8
221716W	2-8	1.3	2300669W	2-3	17	2304803W	2-23	15	2307241W	3-49	1.32
221716W	2-9	1.3	2300669W	5-9	5	2304862W	3-43	2.1	2307241W	3-51	2.27
221716W	2-10	1.3	2300669W	6-6		2305096W	2-23	7	2307242W	3-23	4.11
221716W	2-11	1.3	2300783W	1-21	1	2305097W	2-23	2	2307242W	3-27	4.11
221716W	2-12	1.3	2300783W	1-23	1	2305099W	2-23	3	2307242W	3-43	4.17
221716W	2-13	1.3	2300783W	3-59	1.25	2305132W	3-43	2.1	2307254W	3-67	10
221717W	2-23	16	2300783W	3-60	1.31	2305541W	1-11	1.2	2307265W	3-104	2
221720W	1-11	1.41	2300962W	1-3	3.12	2305541W	1-15	1.2	2307265W	3-105	2
221720W	1-15	1.34	2300962W	1-5	3.12	2305617W	3-58	1.63	2307434W	2-18	8
221721W	1-13	1.14	2300962W	6-7		2305617W	3-59	1.38	2307438W	3-95	3
221725W	1-11	1.3	2301529W	1-11	1.26	2305617W	3-60	1.63	2307438W	3-106	3
221725W	1-13	1.9	2301529W	1-15	1.27	2305620W	3-59	1.9	2307438W	3-108	3
221725W	1-15	1.33	2301529W	1-21	4	2305715W	1-7	23	2307582W	3-81	1.49
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2307582W	3-115	2	2307924W	3-113	2	2313144	6-7		255601	6-4	
2307582W	3-115	3	2307924W	3-117	2	2313174	6-7		2570W	4-3	2
2307582W	33-116	2	2307958W	3-55	3.1.41	2313569	6-7		2570W	4-3	10
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Fax: (503) 625-7269 , or
Email: marketing@alliedsystems.com, or
Visit our website: <http://www.alliedsystems.com>

The logo for Allied Systems Company, featuring the words "Allied Systems" in a bold, italicized font above the word "COMPANY" in a smaller, bold, sans-serif font, all contained within a black rectangular border.

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