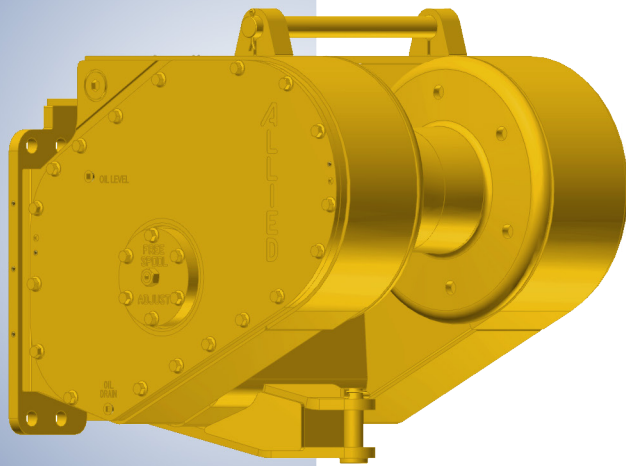




# Parts Manual



## Allied H5C

### Hydraulic Winch

for Komatsu Dozers

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

# Customer Edition



## **Safety Precautions**

**Read, understand and observe the Safety Summary on pages 1 through 3 to prevent injury to personnel and damage to equipment.**

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

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

**NOTE: This publication may be translated to different languages for sole purpose of easy reference in non-English speaking locations.**

**Should there be differences in interpretations to the text, please refer to the English language edition published by Allied Systems Company as the controlling document.**

## Index

### H5C Winch Parts for Komatsu Dozers

Safety Summary . . . . .	1
Unit Identification . . . . .	4
Using this Manual . . . . .	5
Oil Specifications . . . . .	6
Ordering Parts . . . . .	7
Nameplate & Decals . . . . .	8
Section 1 Frame/Covers/Mounting Parts . . . . .	9
Section 2 Gear/Shaft Train . . . . .	25
Section 3 Hydraulics/Electrical/Controls . . . . .	37
Section 4 Optional Equipment . . . . .	75
Section 5 Recommended Service Parts . . . . .	79
Numerical Index . . . . .	86

## Safety Summary

### General Safety Notices

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

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

### DANGER

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

### WARNING

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

### CAUTION

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

### NOTICE

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

NOTE: ...

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

### Safety Regulations

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

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

### Operation, Inspection, and Maintenance Warnings

### WARNING

Multiple hazards.

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

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

### Training

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

### Personnel Safety

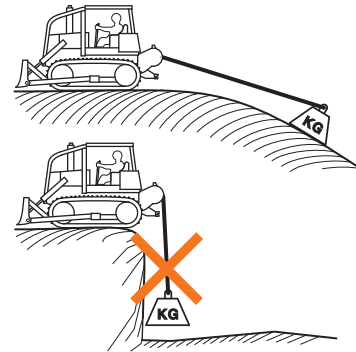
- Stay in the operator’s seat when operating the winch.
- Do not stand on the vehicle when operating the winch.
- Avoid winch operation near people or other machines.
- Never stand nor permit others to stand in the bight (loop) of a wire rope.

- Do not stand nor permit others to be near the winch or wire rope when there is tension on the wire rope.



- Make sure ground personnel are in plain view of the operator, and at a distance of at least 1½ times the working length of the wire rope.
- Observe jobsite rules.
- Do not use the control levers for hand holds when entering or leaving the vehicle.
- Be in complete control at all times.
- Do not use the control levers as hangers for clothes, water bags, grease guns, lunch pails, etc.
- Do not leave the vehicle when the winch wire rope is under tension.
- Do not permit riders on the vehicle or load.
- Operation Warnings
- Do not operate the winch unless the vehicle is equipped with a screen to protect the operator if the wire rope breaks.
- Be aware of the ground conditions, and make sure the ground and tractor are stable enough to pull the intended load.
- Do not attempt to pull loads in excess of the rated capacity of the winch.
- Make sure that any hand signals used by ground personnel are clearly defined and understood by everyone involved.
- Do not attempt to “jerk” or “shock” a load free. Doing so can cause loads in excess of the rated capacity of the wire rope, winch, or mounting hardware.

- Your winch may have temperature shut-off system for protection of tractor and winch. Manual override of high temperature shut-off will cause damage to tractor and winch.
- This winch is neither intended, designed, nor rated for any application involved in the lifting or moving of personnel.
- Do not use the winch as an anchor for a double or two-part line.
- Do not pull the hook through the throat or over the drum, which will cause damage.
- When the winch is not in use, make sure the control lever is in **BRAKE-ON** position and the winch brake is applied.
- Do not use winch as a hoist. Tractor and skidder mounted winches are designed for towing.



### Wire Rope Safety

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

## **WARNING**

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

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

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

### Hydraulic Hazards

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



**DANGER**

#### Injection hazard.

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

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

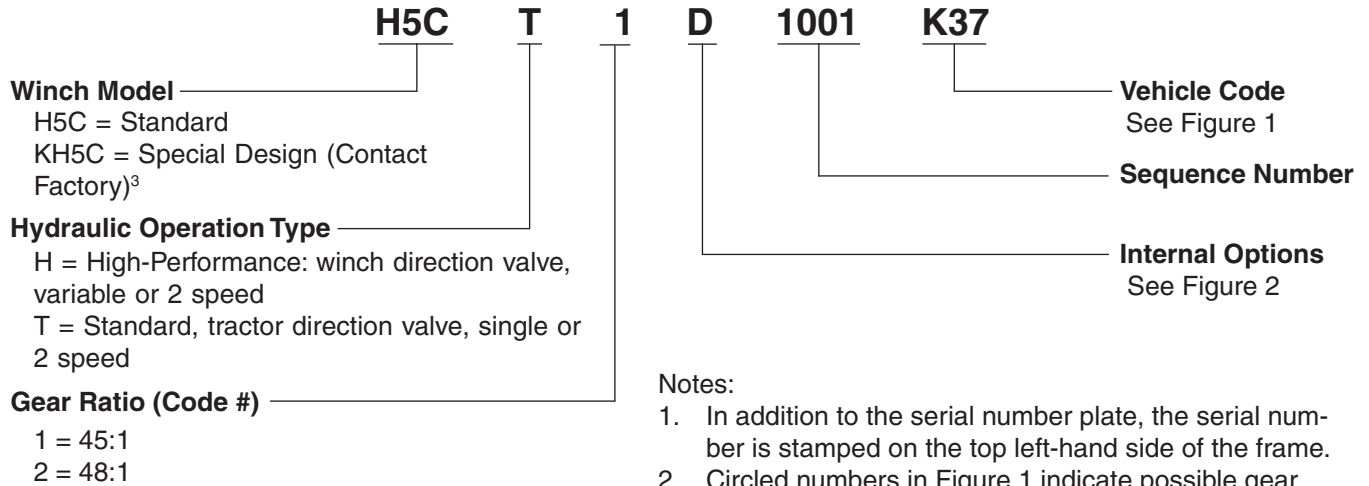
### Maintenance Warnings

- Do not permit other people near the control area when you inspect or repair a machine.
- Never inspect, repair, or perform maintenance on a machine that is in motion.
- Inspect the winch before each use:
  - ... Make sure that the controls and instruments operate correctly.
  - ... Report the need for repairs immediately.
  - ... Do not work with a damaged or worn wire rope.
  - ... Do not use a winch that needs repairs.
  - ... If the wire rope and ferrule must be removed from the drum, make sure the end of the wire rope and ferrule are controlled when the ferrule is released. The end of the wire rope can suddenly move from the drum like a compressed spring when the ferrule is released, and cause an injury.
- Replace any parts only with genuine Allied Winch parts.
- Use only the lubricants listed in the Recommended Oil List. See page 6.



## Unit Identification

Allied Winch Serial Number Nameplate Data For Dozer Mountings



**Notes:**

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

<b>C O D E</b>	<b>K</b> Komatsu
<b>37</b>	D51-22 ① ②
<b>371</b>	D51-24 ②

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

Circled numbers in Figure 1 indicate possible gear ratios.

	<b>D</b>	<b>E</b>	<b>U</b>
<b>Freespool</b>	X	X	X
<b>External Pump</b>	X	X	X
<b>Power Forward &amp; Reverse (PFR)</b>	X	X	X
<b>Overwind</b>	X	X	
<b>Underwind</b>			X
<b>Single Speed</b>		X	X
<b>2 Speed</b>	X		
<b>Brake-Off (Hi-P)</b>		X	X

**Figure 2, Internal Options**



## Using this Manual

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

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

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

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

### When the part number is known:

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

### General:

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

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

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

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

Serial numbers are shown to allow for the most current parts information to be incorporated into the parts manual. See page 4 for serial number information.

### Abbreviations

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

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

Figure 3, Abbreviations

---

## Oil Specifications

### Oil Selection

For winches using tractor-supplied hydraulics for winch operation, use the dozer manufacturer's specified fluids. For gear oil, use the oils specified listed here. The winch gear housing factory fill is Mobil 424, which has an ISO Viscosity Grade 46 to 68.

The hydraulic circuit and winch gear housing have different fluids.

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

	Hydraulic System (Pump)	Winch Case (Gear Train)
<b>Chevron</b>	Use Tractor Fluid	Drive Train Fluids HD
<b>Exxon-Mobil</b>	Use Tractor Fluid	Mobil Trans HD Series

Figure 5, Recommended Oil List

### Oil Capacity

The oil capacity for H5C winch case (gear train) is 17 quarts (16 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](mailto:parts@alliedsystems.com)

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

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

# Nameplate & Decals

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

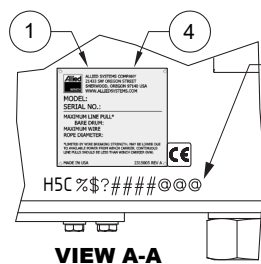
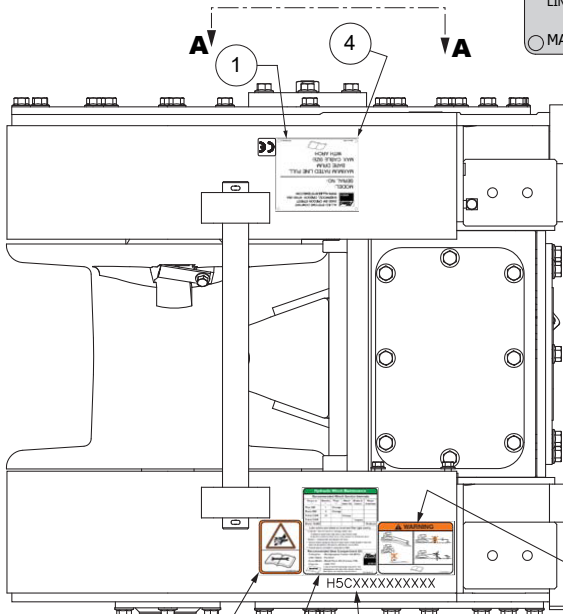
**MODEL: H5C      20##**  
**SERIAL NO.: H5C%\$?####@@@**

MAXIMUM LINE PULL\*  
BARE DRUM:  
MAXIMUM WIRE  
ROPE DIAMETER:

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

MADE IN USA 2315005 REV B

## WINCH TOP VIEW



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



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

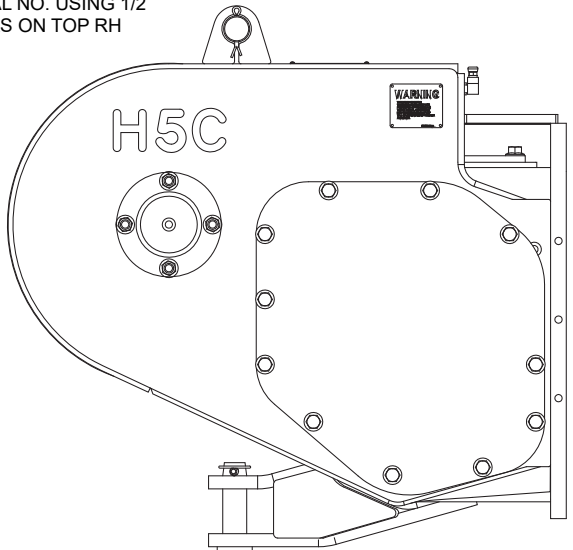
Lube rollers and check oil level and filter light weekly.

\* Evaluate = Service based on average winch size;  
\*\* 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. 231796 Rev D

STAMP SERIAL NO. USING 1/2 INCH LETTERS ON TOP RH FRAME



## WINCH SIDE VIEW

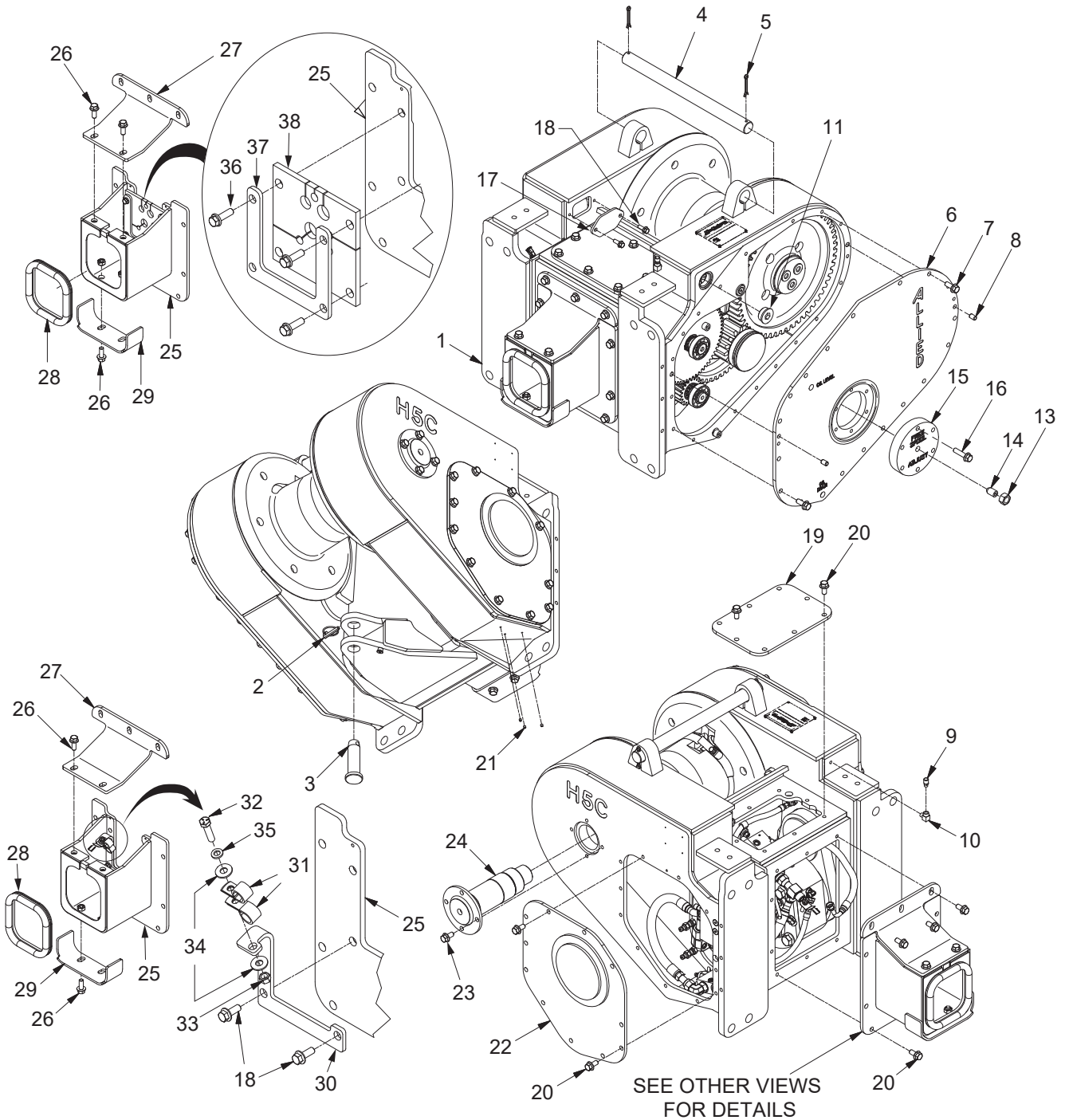
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*	-----	1 Nameplate	5	2311330	1	Decal, Load & Wire Rope
2	1321665W	2	Decal, Warning	40	2311557	AR	Label, CE Mark
3	2311329	1	Decal, Maintenance				
4	16602W	4	Screw	*			Contact Factory

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

### Frame and Covers

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

Page 1 of 2



## Frame and Covers

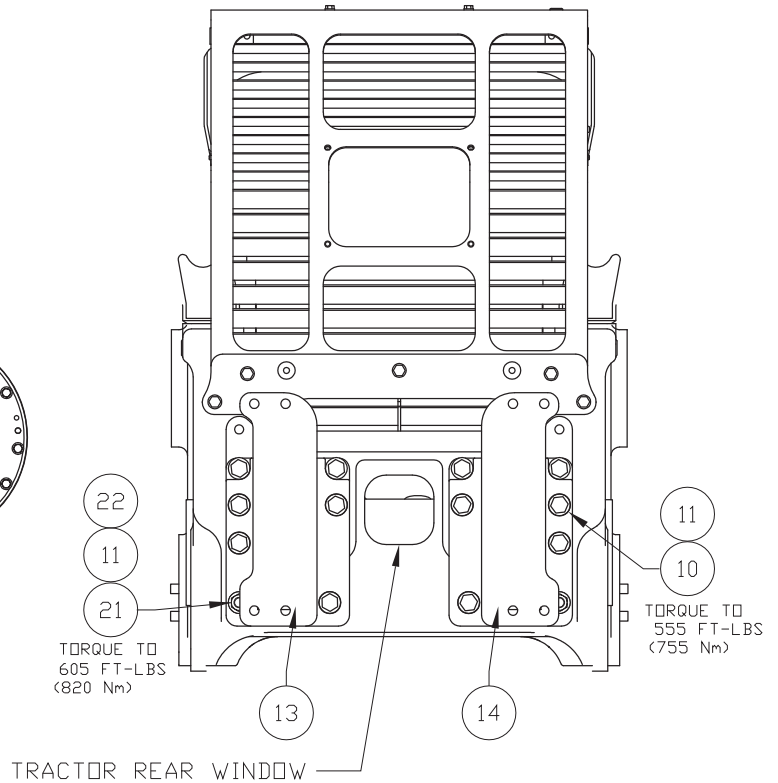
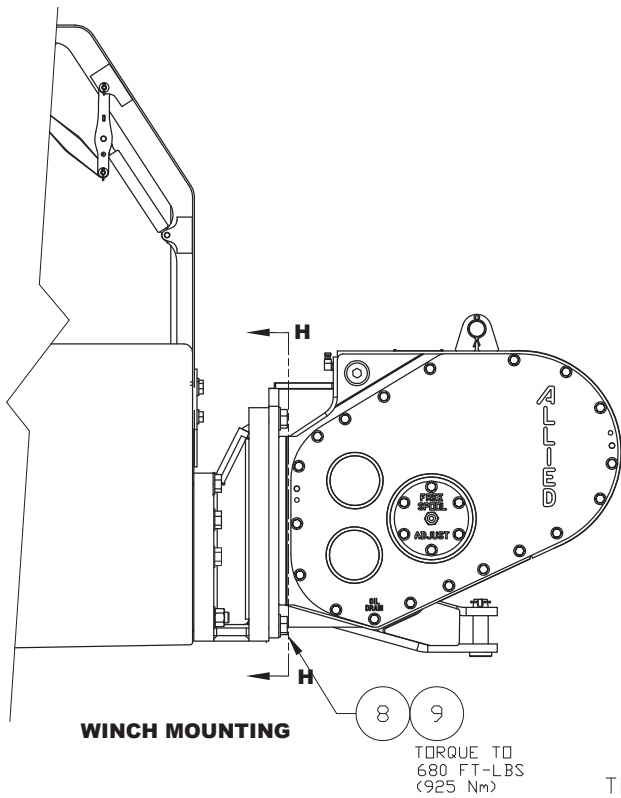
Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2306189W	1	Frame	23	2303902W	4	Screw, Flange
2	2303221W	1	Pin, Retaining	24	2302379W	1	Shaft, Drum
3	1314656W	1	Pin, Drawbar	25	2310025	1	Front Plate, Lower Tunnel
4	93927W	1	Rod	26	396820W	4	Screw, Flange
5	15256W	2	Pin	27	2310045	1	Top Plate, Tunnel
6	*c 2306570W	1	Cover, LH	28	237271W	2 FT	Trim, Edge
7	2303848W	19	Screw, Flange	29	2310213	1	Guard, Cover
8	176208W	2	Pin	30	2310915	1	Bracket, Hose
9	2304101W	1	Breather, Red	31	209695	2	Clamp
10	*b 16151W	1	Fitting	32	16828W	1	Capscrew
11	188210W	1	Fitting, O-Ring	33	15056W	1	Nut
12	*b 222443W	1	Fitting, O-Ring	34	15176W	2	Washer
13	221717W	1	Nut	35	15156W	1	Washer
14	2304803W	1	Screw	36	398599W	4	Screw, Flange
15	*a 2302625W	1	Housing, Freespool Adjust	37	2310032	1	Plate, Isolation Clamp
16	2305415W	6	Screw, Flange	38	2313698	1	Isolator
17	2307342W	1	Cover, RH Inner				
18	398567W	4	Screw	*a	Apply 264159W Adhesive Between Item 15, FS		
19	2302513W	1	Cover, Top		Adjust Housing, and Item 6, LH Cover		
20	393317W	29	Screw, Flange	*b	Use 246108W Pipe Thread Sealant		
21	*d 16243W	3	Screw	*c	Use 264159W Adhesive		
22	2306509W	1	Cover, RH	*d	Use 251099W Adhesive Sealant		

### Mounting Parts

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)



**VIEW H-H MOUNTING BRACKET INSTALLATION**

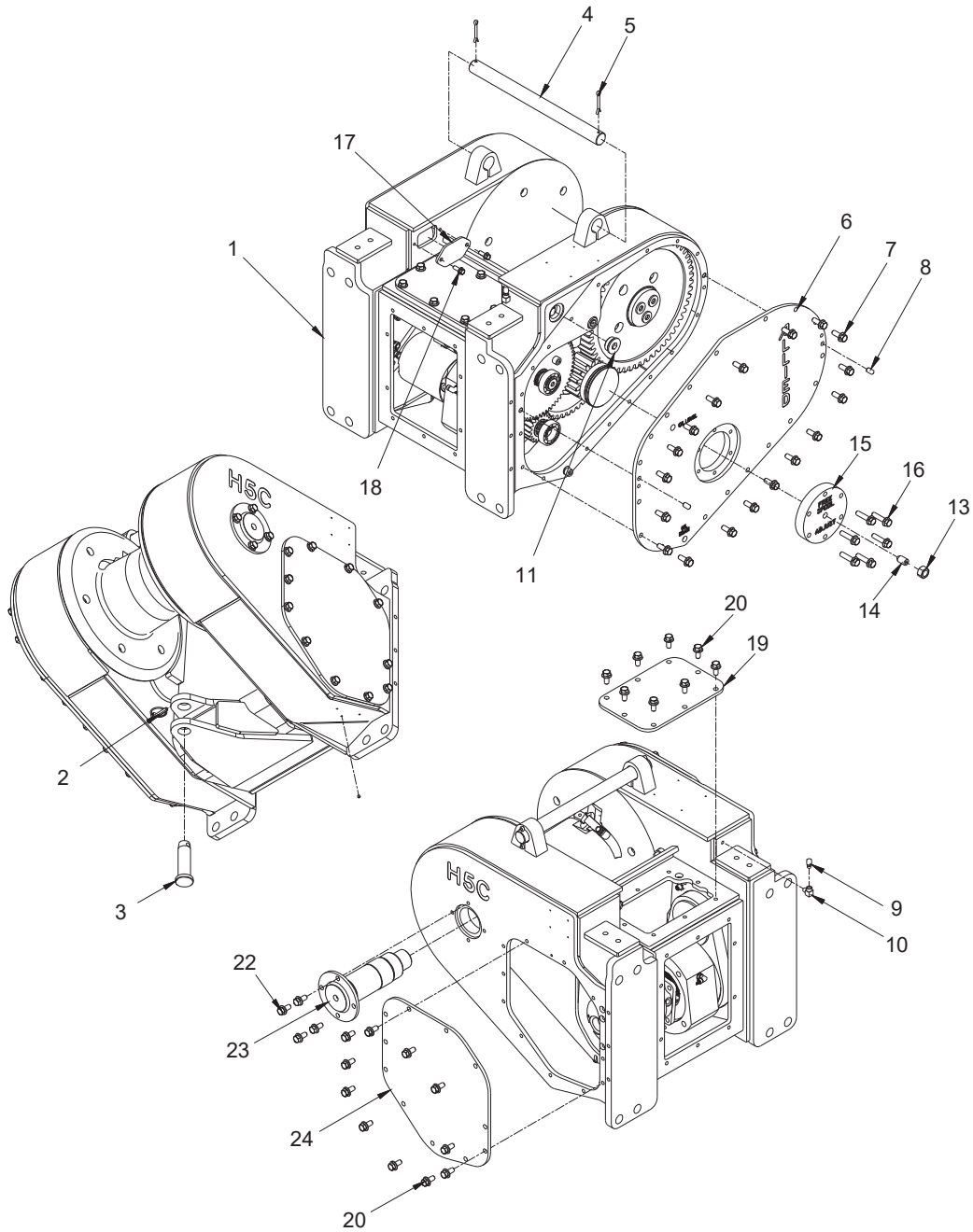
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
8	*a 221690W	8	Capscrew	14	2306974W	1	Mount Bracket, RH
9	221780W	8	Washer	21	2310104	2	Stud
10	*a 274044W	12	Capscrew	22	*a 303114W	2	Nut
11	296434W	14	Washer				
13	2306973W	1	Mount Bracket, LH		*a		Use 318702W Threadlock



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### Frame and Covers

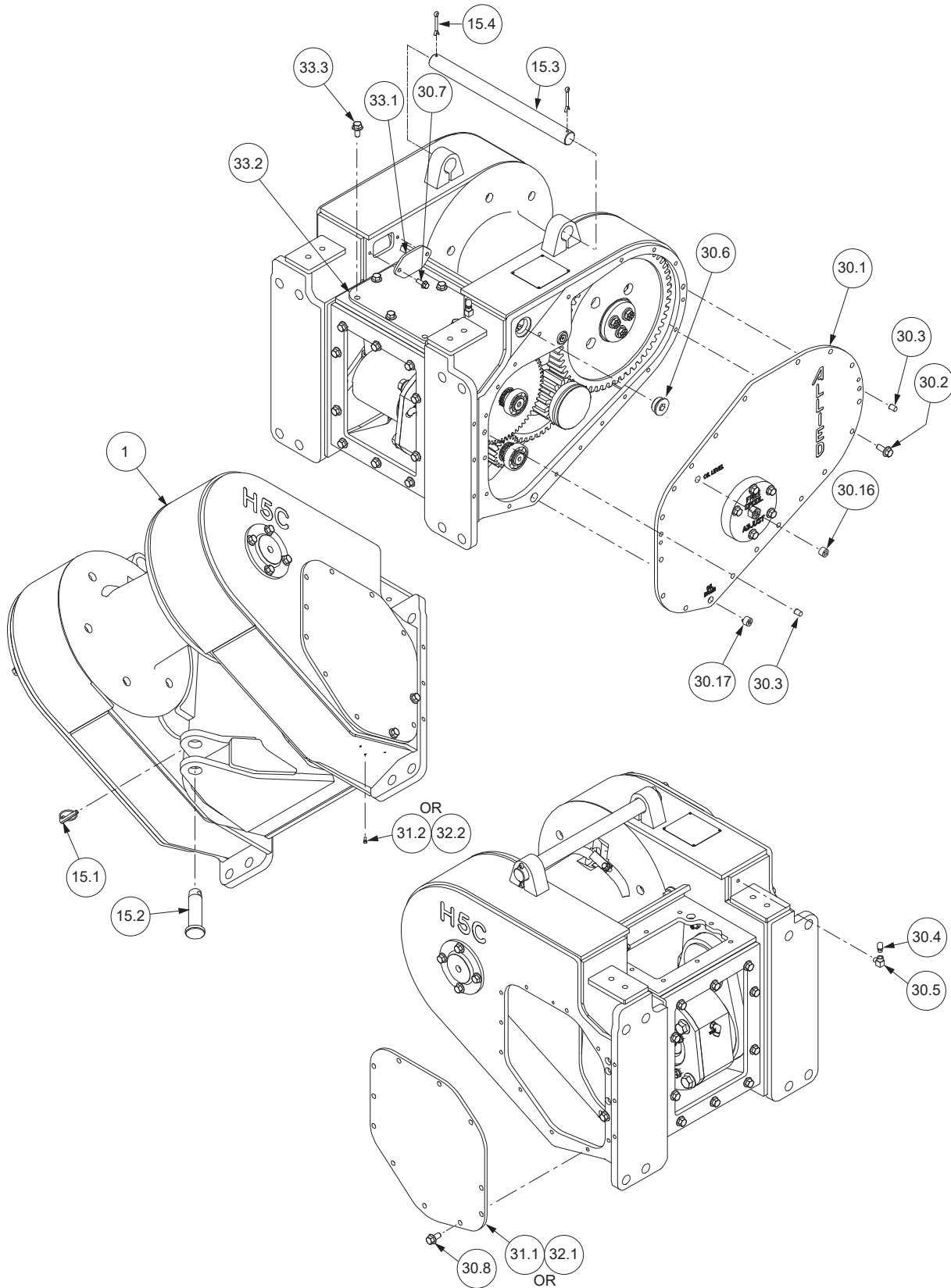
Komatsu (H5CH2E\*\*K37D)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
5	2306189W	1	Frame	30.9	264159W	1	Adhesive
15.1	2303221W	1	Pin, Retaining	30.12	16243W	1	Screw
15.2	1314656W	1	Pin, Drawbar	30.16	15315W	1	Fitting
15.3	93927W	1	Rod, Tie	30.17	15290W	1	Fitting
15.4	15256W	2	Cotter Pin	31.1	2307097W	1	Cover, RH
30.1	2306570W	1	Cover, LH	31.2	16243W	1	Screw
30.2	2303848W	18	Screw, Flange	32.1	2306509W	1	Cover, RH
30.3	176208W	2	Pin	32.2	16243W	3	Screw
30.4	2304101W	1	Breather	33.1	2307342W	1	Cover, Inner, RH
30.5	16151W	1	Fitting	33.2	2302513W	1	Cover, Top
30.6	188210W	1	Fitting	33.3	398817W	4	Screw, Flange
30.7	398567W	2	Screw, Flange	33.4	16243W	1	Screw
30.8	398817W	15	Screw, Flange				

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**Frame and Covers**  
Komatsu D51-22 (H5CH2E\*\*K37)  
Page 1 of 2



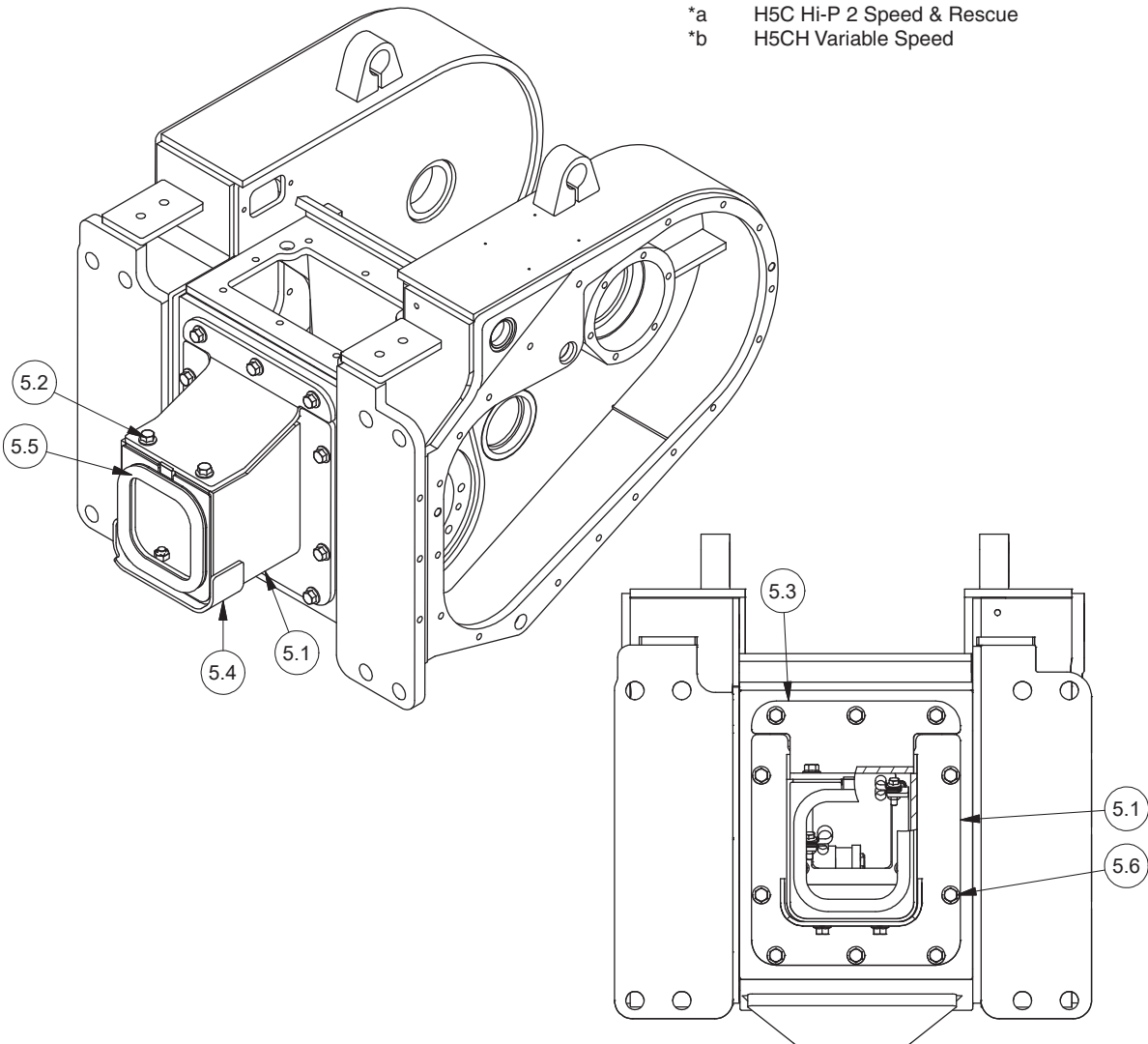
### Frame and Covers

Komatsu D51-22 (H5CH2E\*\*K37)

Page 2 of 2

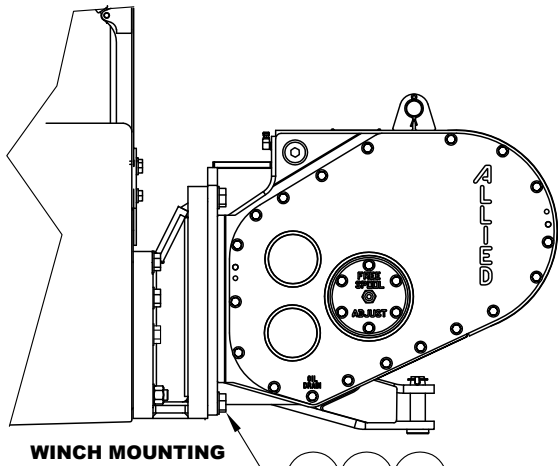
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2306189W	1	Frame	30.3	176208W	2	Pin
5.1	2310025	1	Tunnel, Lower	30.4	2304101W	1	Breather
5.2	398820W	4	Screw	30.5	16151W	1	Fitting
5.3	2310045	1	Tunnel, Top Plate	30.6	188210W	1	Fitting
5.4	237271	2'	Trim, Edge	30.7	398567W	2	Screw, Flange
5.5	2310213	1	Guard, Cover	30.8	398817W	15	Screw, Flange
5.6	398817W	10	Screw, Flange	30.9	264159W	1	Adhesive
15.1	2303221W	1	Pin, Retaining	30.12	16243W	1	Screw
15.2	1314656W	1	Pin, Drawbar	30.16	15315W	1	Fitting
15.3	93927W	1	Rod, Tie	30.17	15290W	1	Fitting
15.4	15256W	2	Cotter Pin	31.1	*a 2307097W	1	Cover, RH
30.1	2306570W	1	Cover, LH	31.2	*a 16243W	1	Screw
30.2	2303848W	18	Screw, Flange	32.1	*b 2306509W	1	Cover, RH
				32.2	*b 16243W	3	Screw
				33.1	2307342W	1	Cover, Inner, RH
				33.2	2302513W	1	Cover, Top
				33.3	398817W	4	Screw, Flange
				33.4	16243W	1	Screw

\*a H5C Hi-P 2 Speed & Rescue  
 \*b H5CH Variable Speed



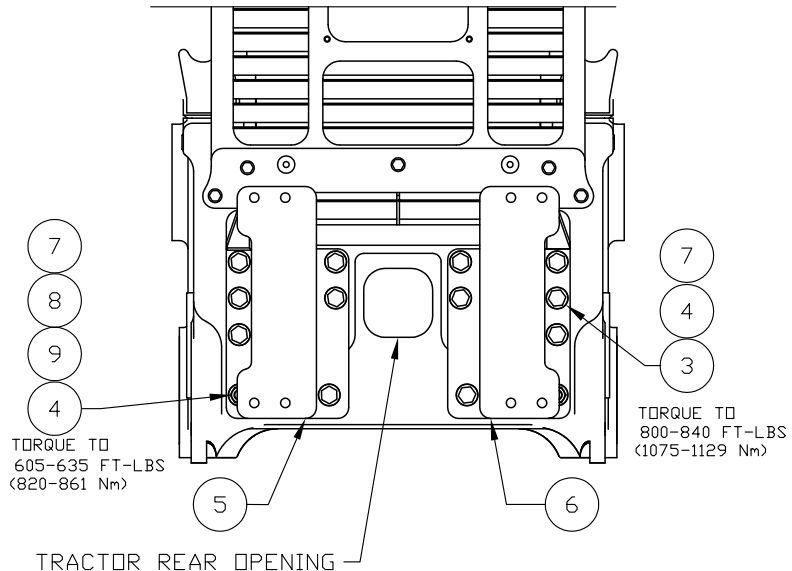
## Mounting Parts

Komatsu D51-22 (H5CH2E\*\*K37, H5CH2E\*\*K37D)



**WINCH MOUNTING**

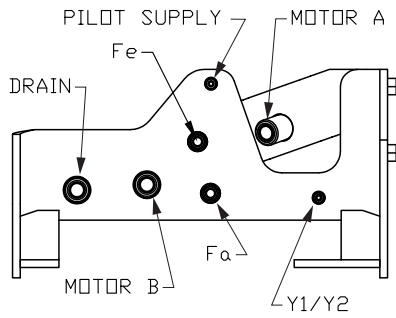
1 2 7  
 TORQUE TO  
 680-714 FT-LBS  
 (925-971 Nm)



**MOUNTING BRACKET INSTALLATION**

4  
 TORQUE TO  
 605-635 FT-LBS  
 (820-861 Nm)

7 4 3  
 TORQUE TO  
 800-840 FT-LBS  
 (1075-1129 Nm)



**TRACTOR HOSE CONNECTIONS**  
 VIEWED FROM THE REAR OF THE TRACTOR

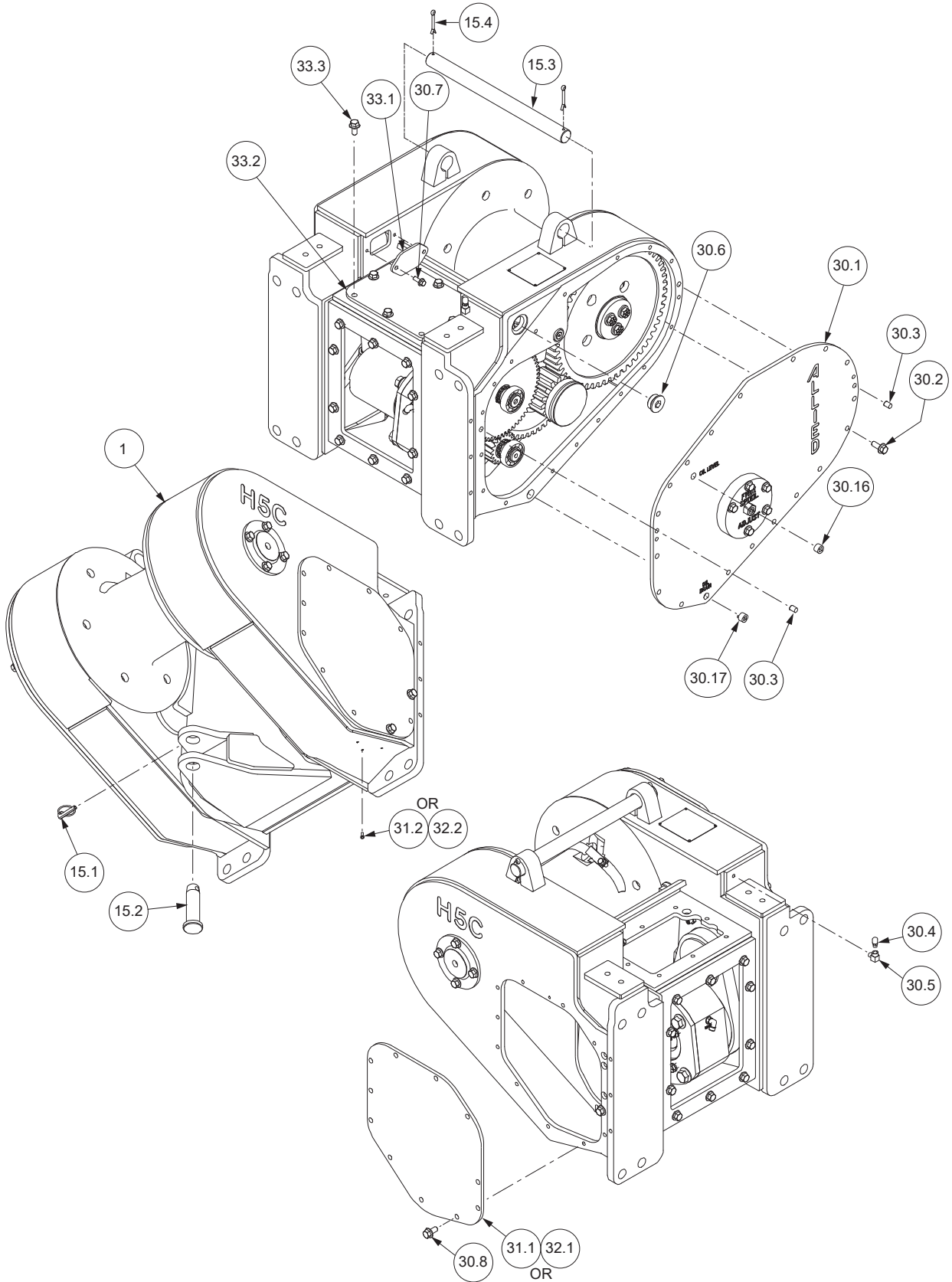
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	221690W	8	Capscrew	6	2306974W	1	Mounting Bracket, RH
2	221780W	8	Washer	7	318702W	1BTL	Threadlock
3	2311901	12	Capscrew	8	2310104	2	Stud
4	2518353	14	Washer	9	303114W	2	Nut
5	2306973W	1	Mounting Bracket, LH				

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### Frame and Covers

Komatsu D51-24 (H5CT1D\*\*K37, H5CT2D\*\*K371)

Page 1 of 2



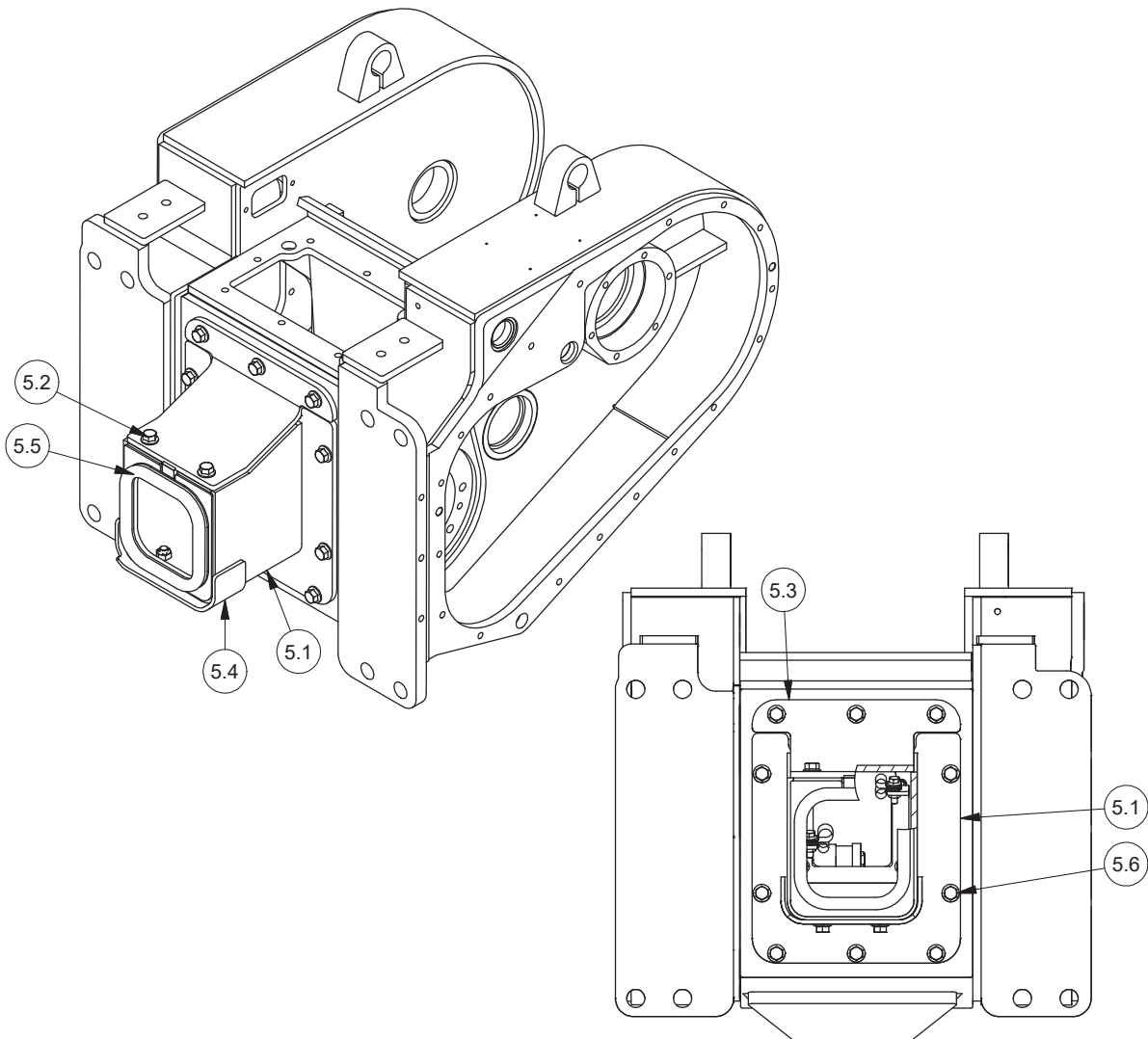


### Frame and Covers

Komatsu D51-24 (H5CT1D\*\*K37, H5CT2D\*\*K371)

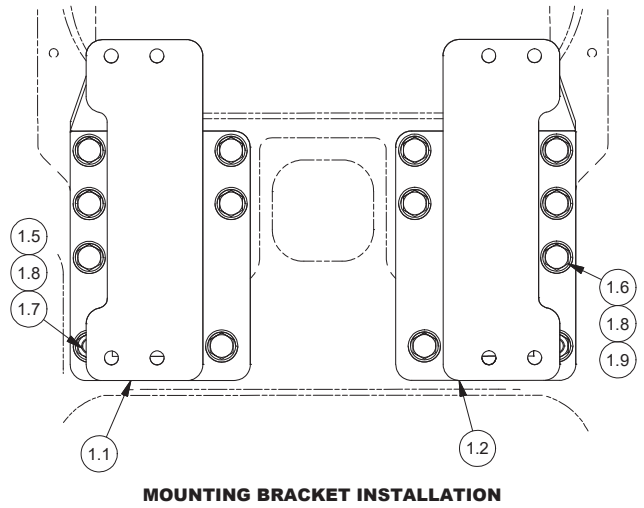
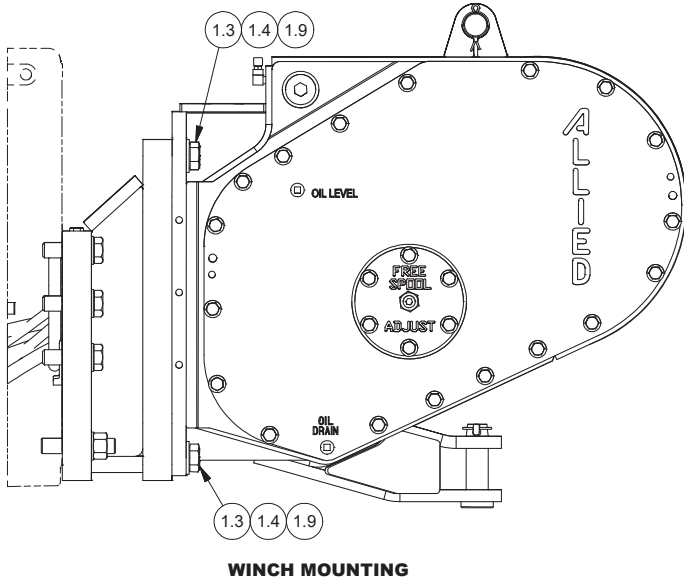
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2306189W	1	Frame	30.5	16151W	1	Fitting
5.1	2310025	1	Tunnel, Lower	30.6	188210W	1	Fitting
5.2	398820W	4	Screw	30.7	398567W	2	Screw, Flange
5.3	2310045	1	Tunnel, Top Plate	30.8	398817W	15	Screw, Flange
5.4	237271	2'	Trim, Edge	30.9	264159W	1	Adhesive
5.5	2310213	1	Guard, Cover	30.12	16243W	1	Screw
5.6	398817W	10	Screw, Flange	30.16	15315W	1	Fitting
15.1	2303221W	1	Pin, Retaining	30.17	15290W	1	Fitting
15.2	1314656W	1	Pin, Drawbar	31.1	2307097W	1	Cover, RH
15.3	93927W	1	Rod, Tie	31.2	16243W	1	Screw
15.4	15256W	2	Cotter Pin	33.1	2307342W	1	Cover, Inner, RH
30.1	2306570W	1	Cover, LH	33.2	2302513W	1	Cover, Top
30.2	2303848W	18	Screw, Flange	33.3	398817W	4	Screw, Flange
30.3	176208W	2	Pin	33.4	16243W	1	Screw
30.4	2304101W	1	Breather				



## Mounting Parts

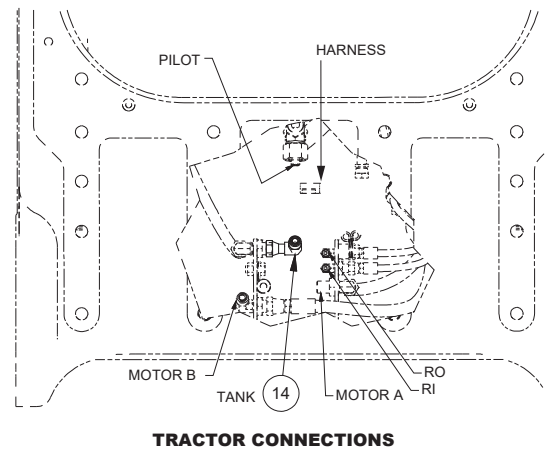
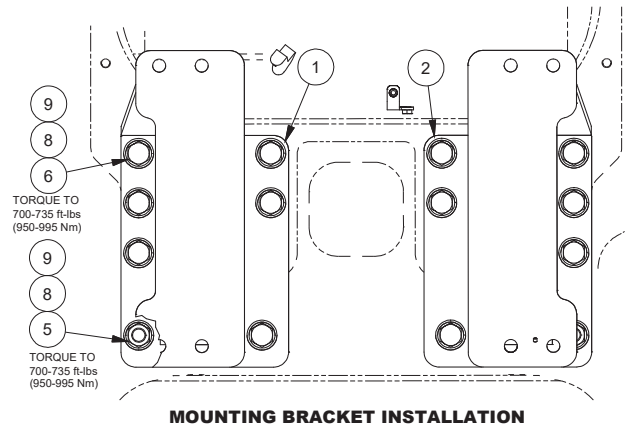
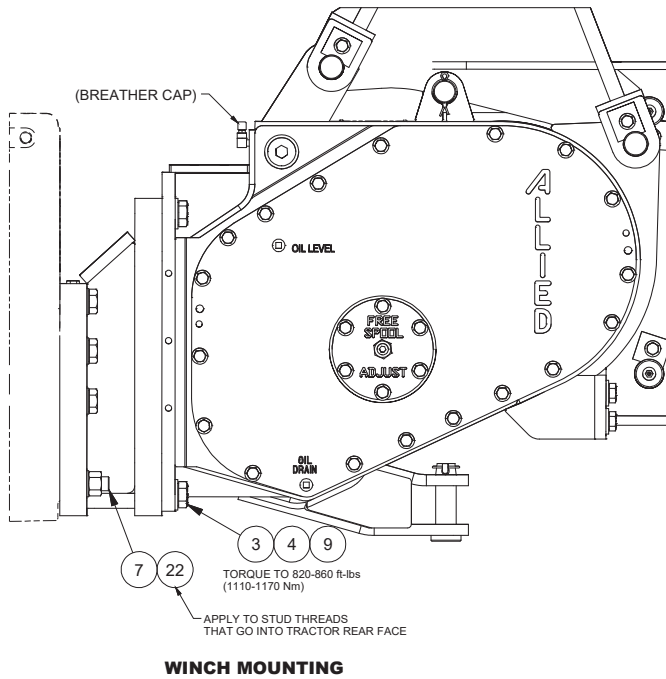
Komatsu D51-22 (H5CT1D\*\*K37)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2306973W	1	Mounting Bracket, LH	1.6	274044W	12	Capscrew
1.2	2306974W	1	Mounting Bracket, RH	1.7	2310104	2	Stud
1.3	221690W	8	Capscrew	1.8	296434W	14	Washer
1.4	221780W	8	Washer	1.9	318702W	1BTL	Threadlock
1.5	303114W	2	Nut				

## Mounting Parts

Komatsu D51-22 (H5CT2D\*\*K371)



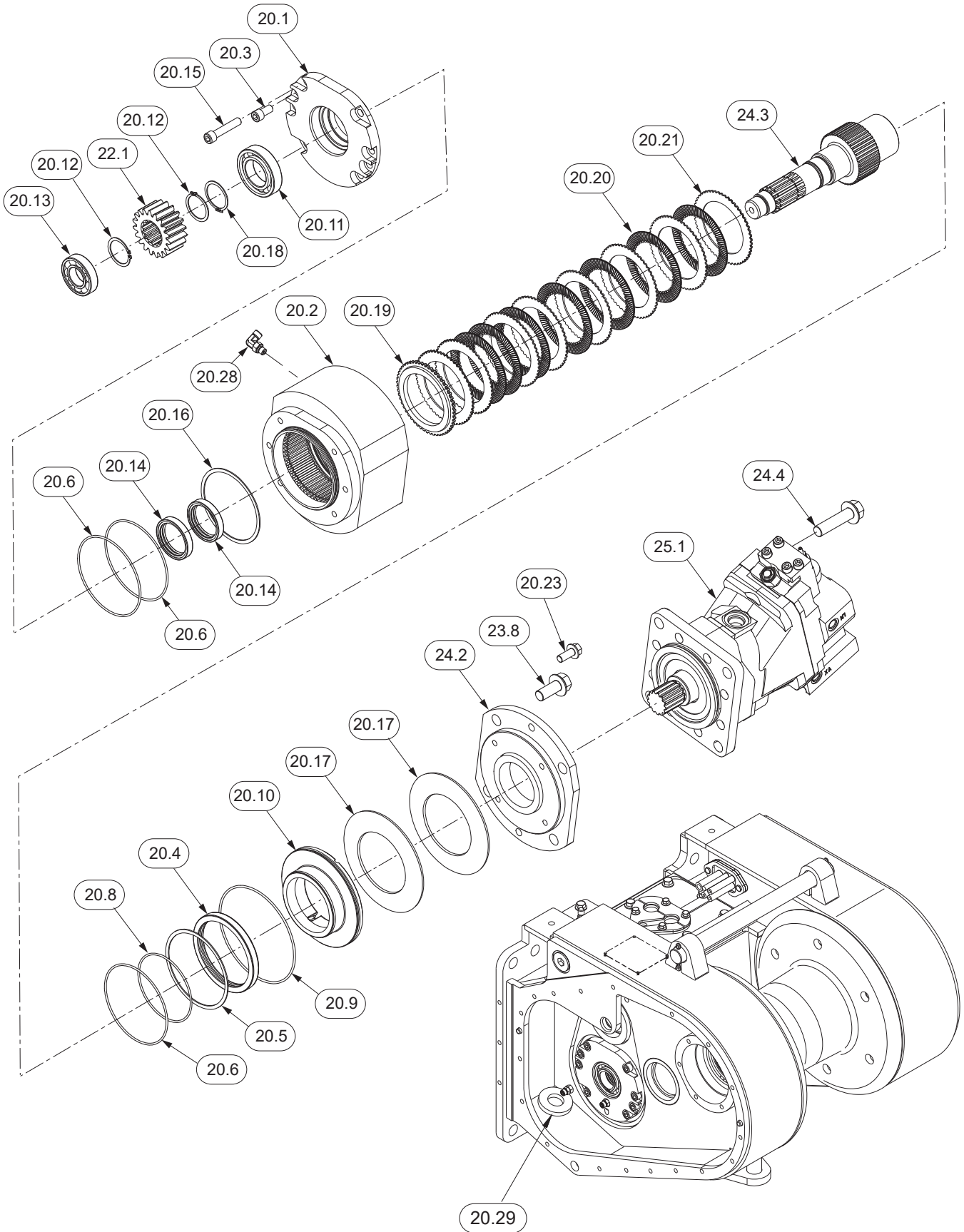
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2306973W	1	Mounting Bracket, LH	7	2310104	2	Stud
2	2306974W	1	Mounting Bracket, RH	8	296434W	14	Washer
3	221690W	8	Capscrew	9	318702W	1BTL	Threadlock
4	221780W	8	Washer	14	R833802	1	Fitting
5	303114W	2	Nut	22	230064W	1	Kit, Primer
6	274044W	12	Capscrew				

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

### Motor Shaft Assembly

Komatsu D51-22 (H5CH2E\*\*K37, H5CH2E\*\*K37D)



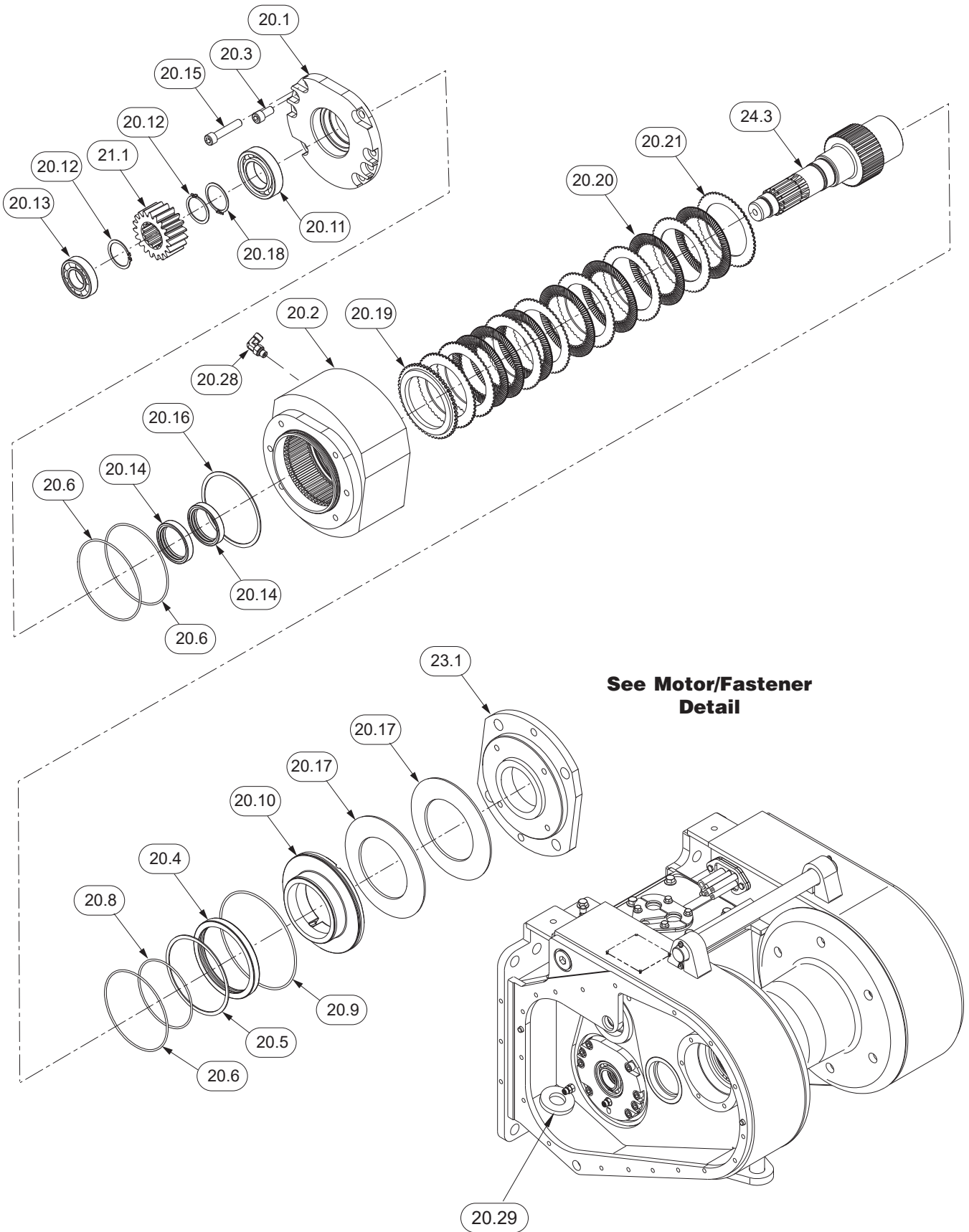
## Motor Shaft Assembly

Komatsu D51-22 (H5CH2E\*\*K37, H5CH2E\*\*K37D)

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
20.1	2314062	1	Plate, Mounting, Brake	20.18	12944W	1	Snap Ring
20.2	2306078W	1	Housing, Brake	20.19	334442W	1	Plate, Pressure
20.3	Y73G-0816	2	Capscrew	20.20	2306198W	7	Disc, Friction
20.4	2306599W	1	Sleeve	20.21	2304874W	8	Plate, Separator
20.5	2306604W	1	Snap Ring	20.23	398820W	2	Screw, Flange
20.6	89776W	3	O-Ring	20.25	NS 313022W	1	Adhesive
20.8	86596W	1	O-Ring	20.28	R833251	1	Fitting
20.9	87287W	1	O-Ring	20.29	R525293	1	Magnet, Ceramic
20.10	2306077W	1	Piston, Brake	22.1	2311411	1	Gear, 24T
20.11	41210W	1	Bearing, Ball	23.8	399939W	2	Screw, Flg
20.12	12916W	2	Snap Ring	24.2	2306076W	1	Plate, Mounting, Motor
20.13	41207W	1	Bearing, Ball	24.3	2306079W	1	Shaft, Motor
20.14	2306073W	2	Seal	24.4	398829W	2	Screw, Flg
20.15	Y73G-0840	6	Capscrew	25.1	2306413W	1	Motor
20.16	334475W	1	Ring, Snap, Int				
20.17	219084W	2	Spring				

# Motor Shaft Assembly

Komatsu D51-24 (H5CT2D\*\*K371)



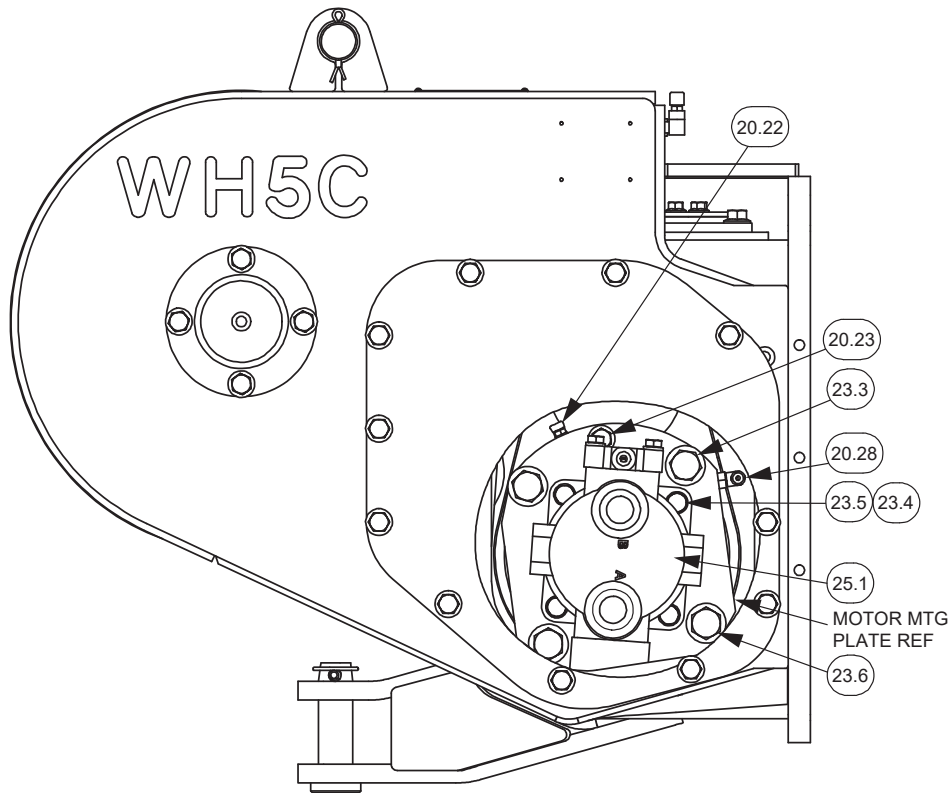
**See Motor/Fastener  
Detail**



## Motor Shaft Assembly

Komatsu D51-24 (H5CT2D\*\*K371)

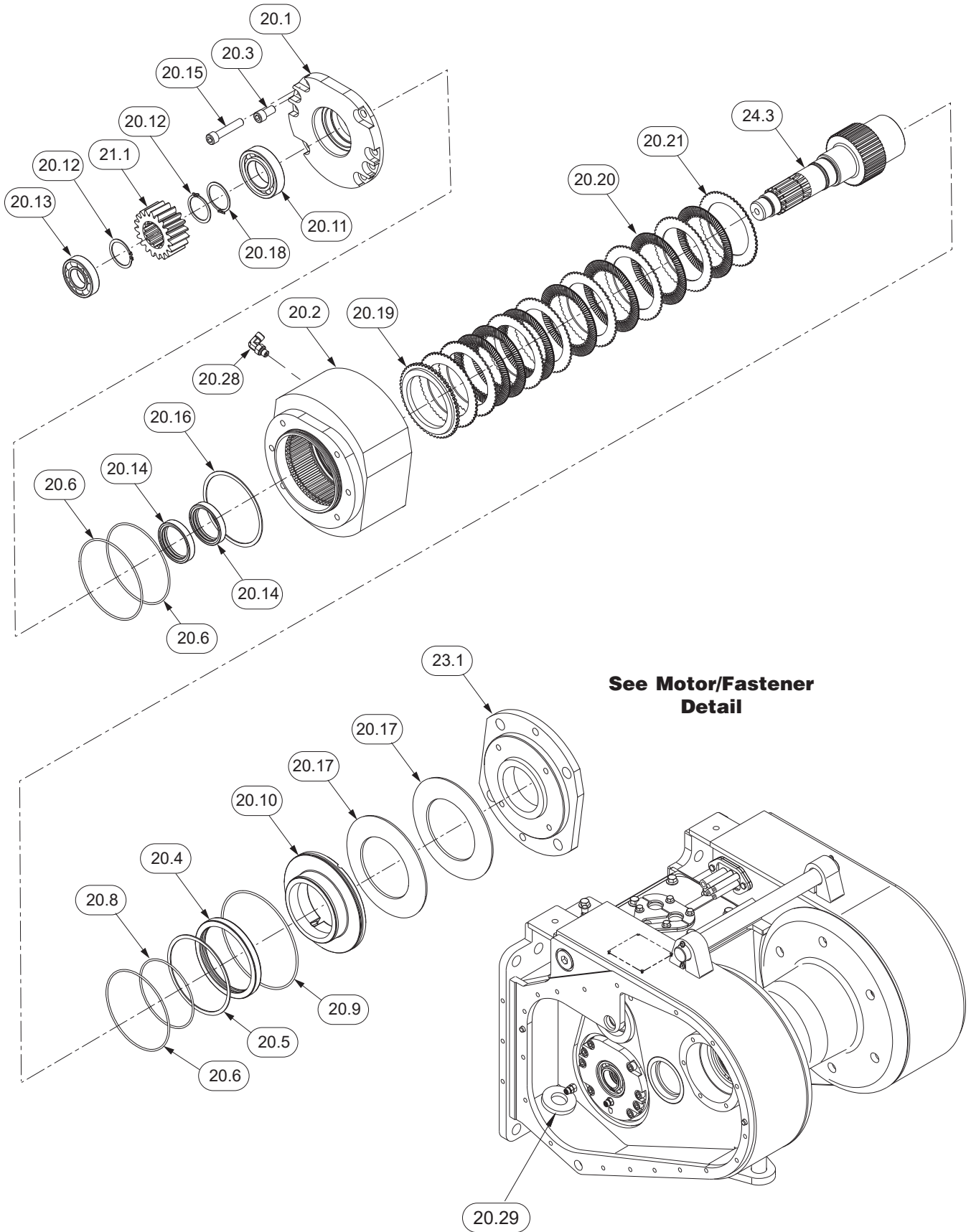
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
20.1	2314062	1	Plate, Mounting, Brake	20.20	2306198W	7	Disc, Friction
20.2	2306078W	1	Housing, Brake	20.21	2304874W	8	Plate, Separator
20.3	Y73G-0816	2	Capscrew	20.22	NA	NA	Fitting
20.4	2306599W	1	Sleeve	20.23	398820W	2	Screw
20.5	2306604W	1	Snap Ring	20.25	NS 264159W	1	Adhesive (for 20.23)
20.6	89776W	3	O-Ring	20.28	R833251	1	Fitting
20.8	86596W	1	O-Ring	20.29	R525293	1	Magnet, Ceramic
20.9	87287W	1	O-Ring	21.1	2311411	1	Gear, 24T
20.10	2306077W	1	Piston, Brake	23.1	2306214W	1	Plate, Mounting, Motor
20.11	41210W	1	Bearing, Ball	23.3	398828W	2	Screw
20.12	12916W	2	Snap Ring	23.4	15158W	4	Lockwasher
20.13	41207W	1	Bearing, Ball	23.5	18588W	4	Capscrew
20.14	2306073W	2	Seal	23.6	917373W	2	Capscrew
20.15	Y73G-0840	6	Capscrew	24.3	2306494W	1	Shaft, Motor
20.16	334475W	1	Ring, Snap, Int	25.1	2306938W	1	Motor, Hydraulic 2 Speed (See p. 62)
20.17	219084W	2	Spring				
20.18	12944W	1	Snap Ring				
20.19	334442W	1	Plate, Pressure				



**Motor/Fastener Detail**

# Motor Shaft Assembly

Komatsu D51-22 (H5CT1D\*\*K37)  
Page 1 of 2



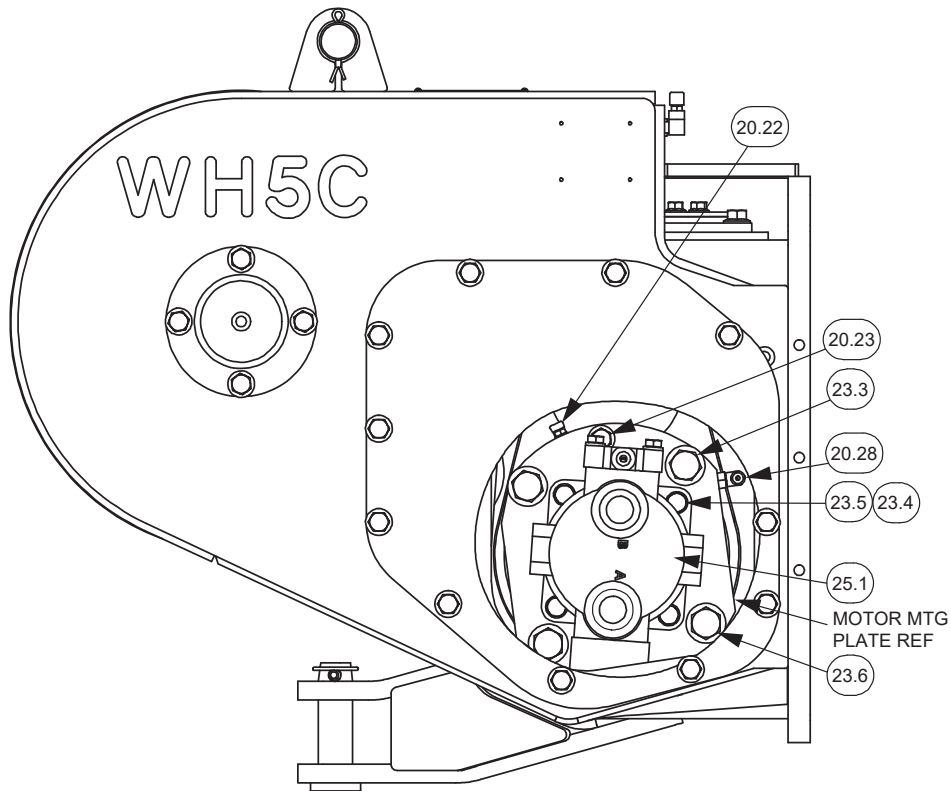
**See Motor/Fastener  
Detail**

### Motor Shaft Assembly

Komatsu D51-22 (H5CT1D\*\*K37)

Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
20.1	2314062	1	Plate, Mounting, Brake	20.20	2306198W	7	Disc, Friction
20.2	2306078W	1	Housing, Brake	20.21	2304874W	8	Plate, Separator
20.3	Y73G-0816	2	Capscrew	20.22	NA	NA	Fitting
20.4	2306599W	1	Sleeve	20.23	398820W	2	Screw
20.5	2306604W	1	Snap Ring	20.25	313022W	1	Adhesive
20.6	89776W	3	O-Ring	20.28	R833251	1	Fitting
20.8	86596W	1	O-Ring	20.29	R525293	1	Magnet, Ceramic
20.9	87287W	1	O-Ring	21.1	2306228W	1	Gear, 19T
20.10	2306077W	1	Piston, Brake	23.1	2306214W	1	Plate, Mounting, Motor
20.11	41210W	1	Bearing, Ball	23.3	398828W	2	Screw
20.12	12916W	2	Snap Ring	23.4	15158W	4	Lockwasher
20.13	41207W	1	Bearing, Ball	23.5	18588W	4	Capscrew
20.14	2306073W	2	Seal	23.6	917373W	2	Capscrew
20.15	Y73G-0840	6	Capscrew	24.3	2306494W	1	Shaft
20.16	334475W	1	Ring, Snap, Int	25.1	2306938W	1	Motor, Hydraulic, 2 Speed (See p. 62)
20.17	219084W	2	Spring				
20.18	12944W	1	Snap Ring				
20.19	334442W	1	Plate, Pressure				

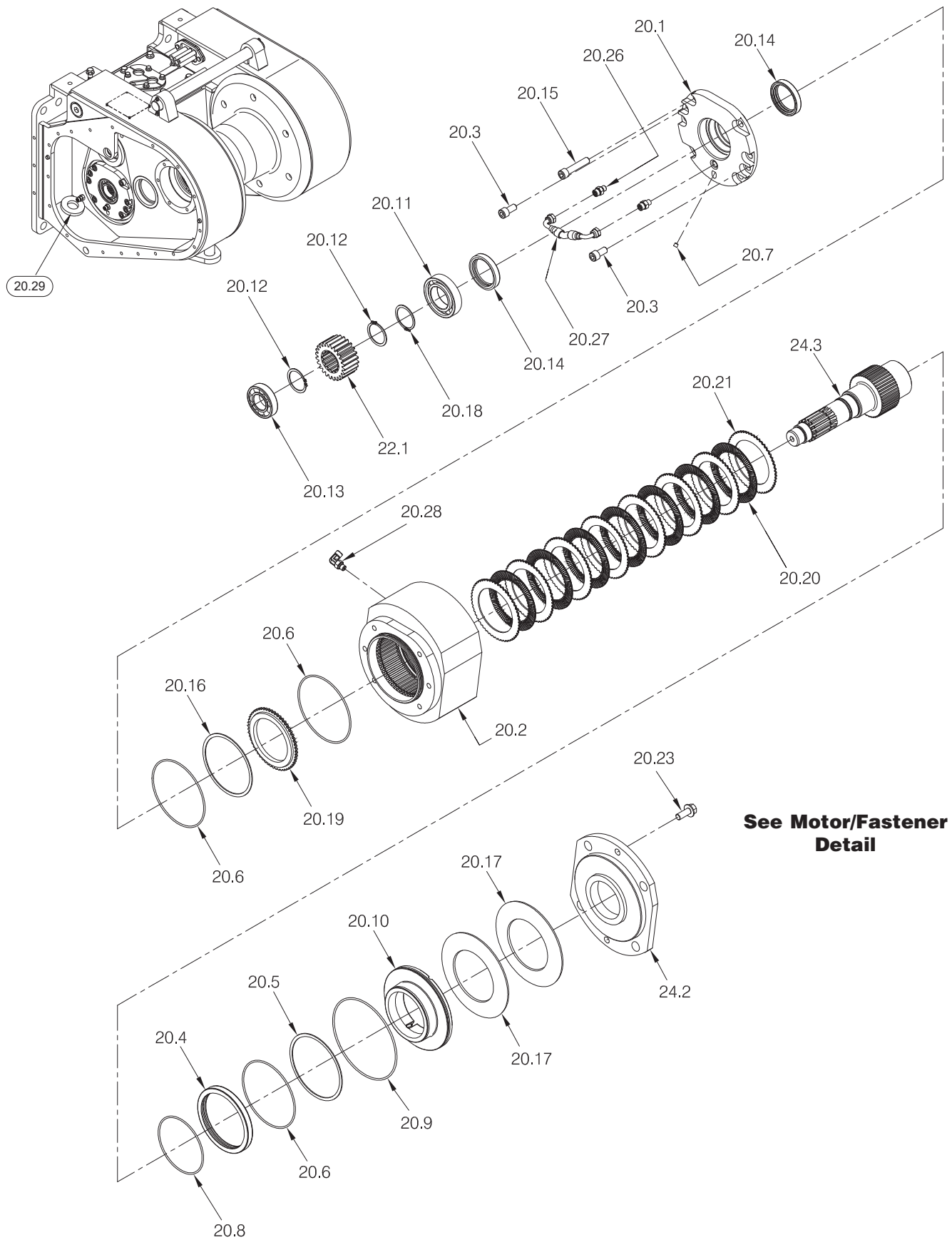


**Motor/Fastener Detail**

### Motor Shaft Group

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

Page 1 of 2

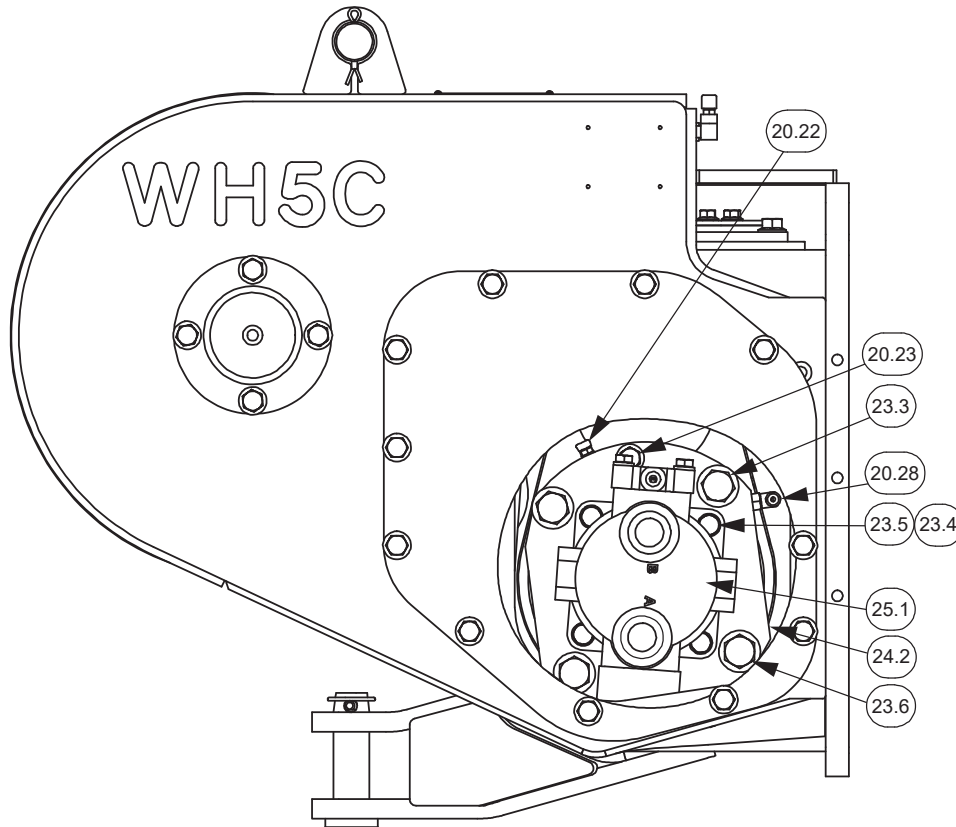


### Motor Shaft Assembly

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

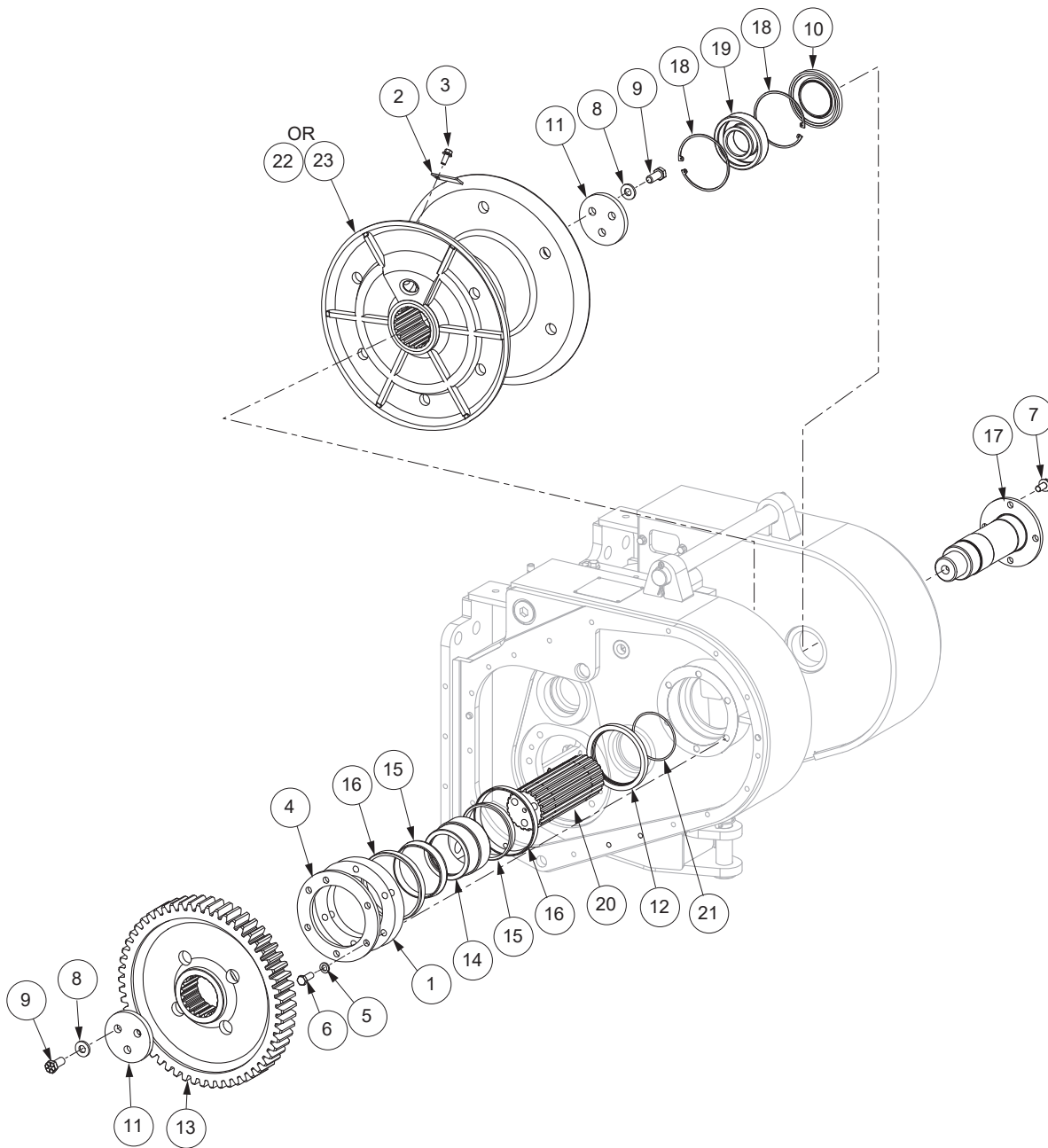
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
20.1	2314062	1	Mounting Plate, Brake	20.23	398820W	2	Screw
20.2	2306078W	1	Housing, Brake	20.25	NS 264159W	1	Adhesive
20.3	Y73G-0816	2	Capscrew	20.26	*a 231439	2	Fitting
20.4	2306599W	1	Sleeve	20.27	2306646W	1	Hose, Seal Drain
20.5	2306604W	1	Snap Ring	20.28	R833251	1	Fitting
20.6	89776W	3	O-Ring	20.29	R525293	1	Magnet, Ceramic
20.7	*a 141348W	1	Plug, Pipe	22.1	2306228W	1	Gear, 19T
20.8	86596W	1	O-Ring	23.3	398828W	2	Screw
20.9	87287W	1	O-Ring	23.4	15158W	4	Lockwasher
20.10	2306077W	1	Piston, Brake	23.5	18588W	4	Capscrew
20.11	41210W	1	Bearing, Ball	23.6	917373W	2	Capscrew
20.12	12916W	2	Snap Ring	24.2	2306214W	1	Plate, Mounting, Motor
20.13	41207W	1	Bearing, Ball	24.3	2306494W	1	Shaft
20.14	2306073W	2	Seal	25.1	2307694W	1	Motor, 1 Speed (See p. 63)
20.15	Y73G-0840	6	Capscrew				
20.16	334475W	1	Ring, Snap, Internal				
20.17	219084W	2	Spring				
20.18	12944W	1	Snap Ring				
20.19	334442W	1	Plate, Pressure				
20.20	2306198W	7	Disc, Friction				
20.21	2304874W	8	Plate, Separator				

\*a Use 246108W Pipe Thread Sealant



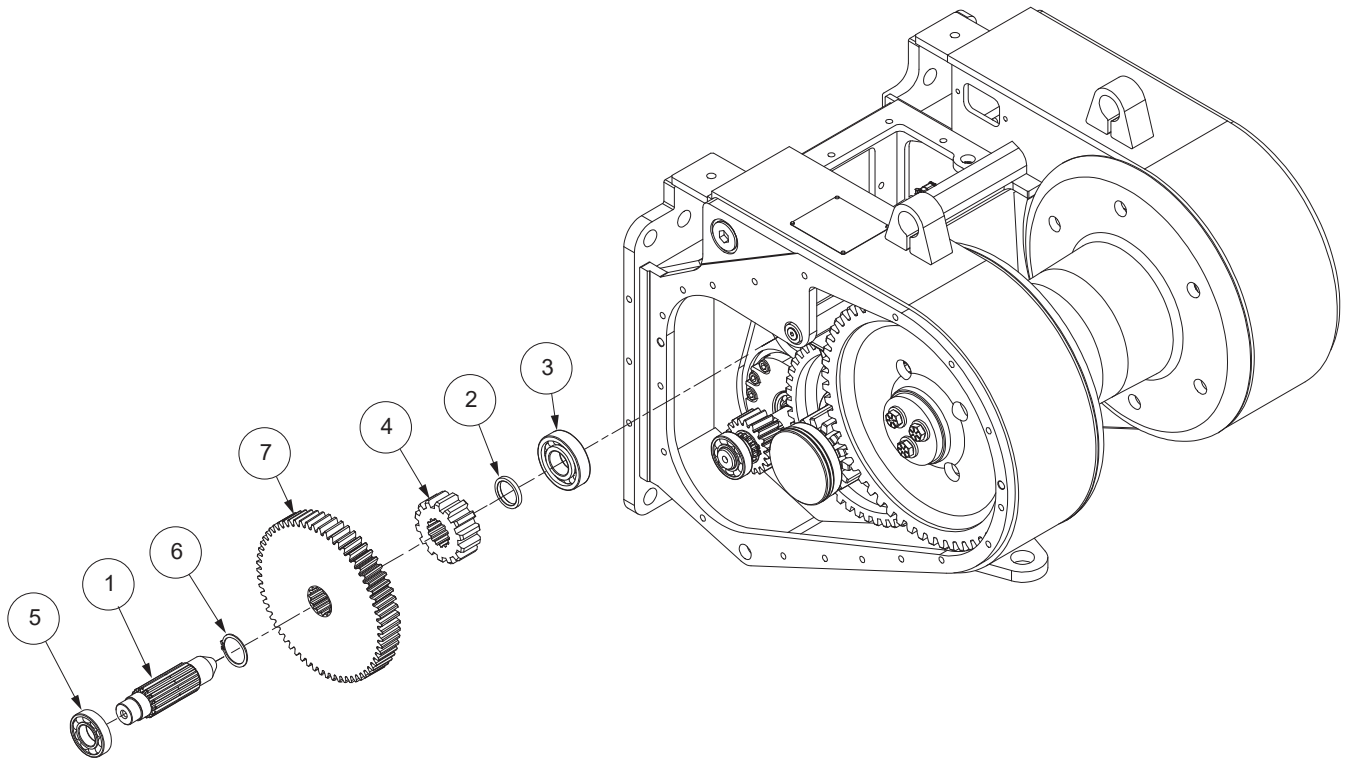
**Motor/Fastener Detail**

Drum Shaft



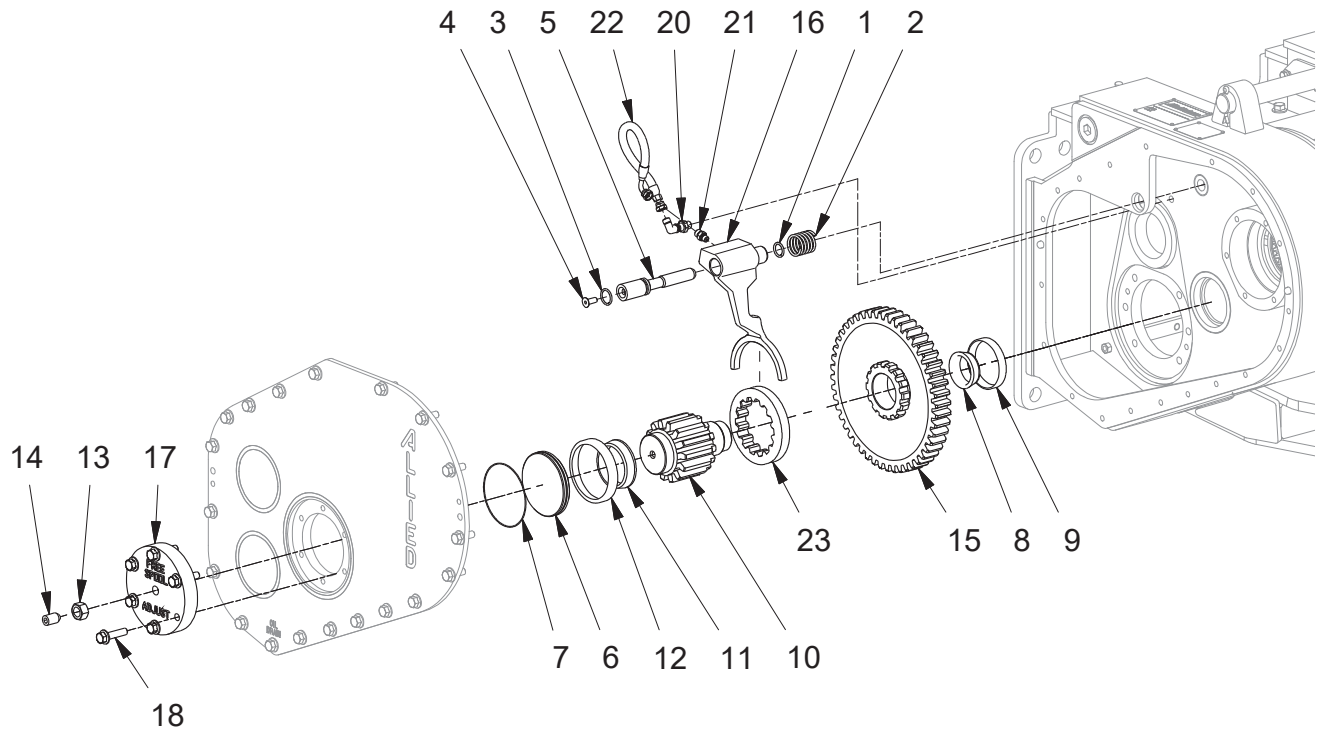
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2303257W	AR	Shim, .005	14	2302335W	1	Spacer
2	1314503W	1	Keeper, Ferrule	15	219093W	2	Cone, Roller Bearing
3	1300780W	1	Screw, Flange	16	219094W	2	Cup, Roller Bearing
4	2303256W	1	Retainer	17	2302379W	1	Shaft, Drum
5	15158W	6	Washer	18	12956W	2	Ring, Snap
6	16830W	6	Capscrew	19	219095W	1	Bearing, Roller
7	2303902W	4	Screw, Flange	20	2302334W	1	Shaft, Drum
8	221775W	6	Washer	21	203533	1	O-Ring
9	Y17C-1024	6	Capscrew	22	2302338W	1	Drum, Overwind
10	133523W	1	Seal, Oil				
11	*a 2302336W	2	Retainer	*a	Use 246159W Adhesive (HCE-98)		
12	339681W	1	Seal, Oil				
13	2302333W	1	Gear, Drum				

Shaft, Idler



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2307282W	1	Shaft, Idler	6	12916W	1	Ring, Snap
2	2300842W	1	Spacer	7	2306229W	1	Gear, 62T (Ratio #1 Only)
3	2304580W	1	Bearing, Cylinder Roller	*a	2311412	1	Gear, 84T (Ratio #2 Only)
4	219066W	1	Gear, Pinion				
5	41207W	1	Bearing, Ball	*a	First Used on S/N H5C*****1024		

## Intermediate Gear Shaft With Freespool



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	218214	1	O-Ring	14	2304803W	1	Screw
2	2303906W	1	Spring, Freespool	15	225050W	1	Assy, Intermediate Gear
3	212380	1	O-Ring	16	2303908W	1	Fork, Freespool Shifter
4	Y09G-0616	1	Capscrew	17	2302625W	1	Housing, Freespool Adjust
5	2303907W	1	Shaft, Freespool	18	2305415W	6	Screw, Flange
6	2302624W	1	Piston, Freespool Adjust	20	2307081W	1	Fitting
7	159940W	1	O-Ring	21	231439	1	Fitting
8	2305923W	1	Cone, Roller Bearing	22	*a 2307037W	1	Assy, Hose
9	45733W	1	Cup, Roller Bearing	23	224108W	1	Clutch, Dental
10	2305915W	1	Shaft, Pinion				
11	219114W	1	Cone, Roller Bearing				
12	2302515W	1	Cup, Roller Bearing				
13	221717W	1	Nut				

\*a Use 264159W Pipe Thread Sealant (HCE-83)

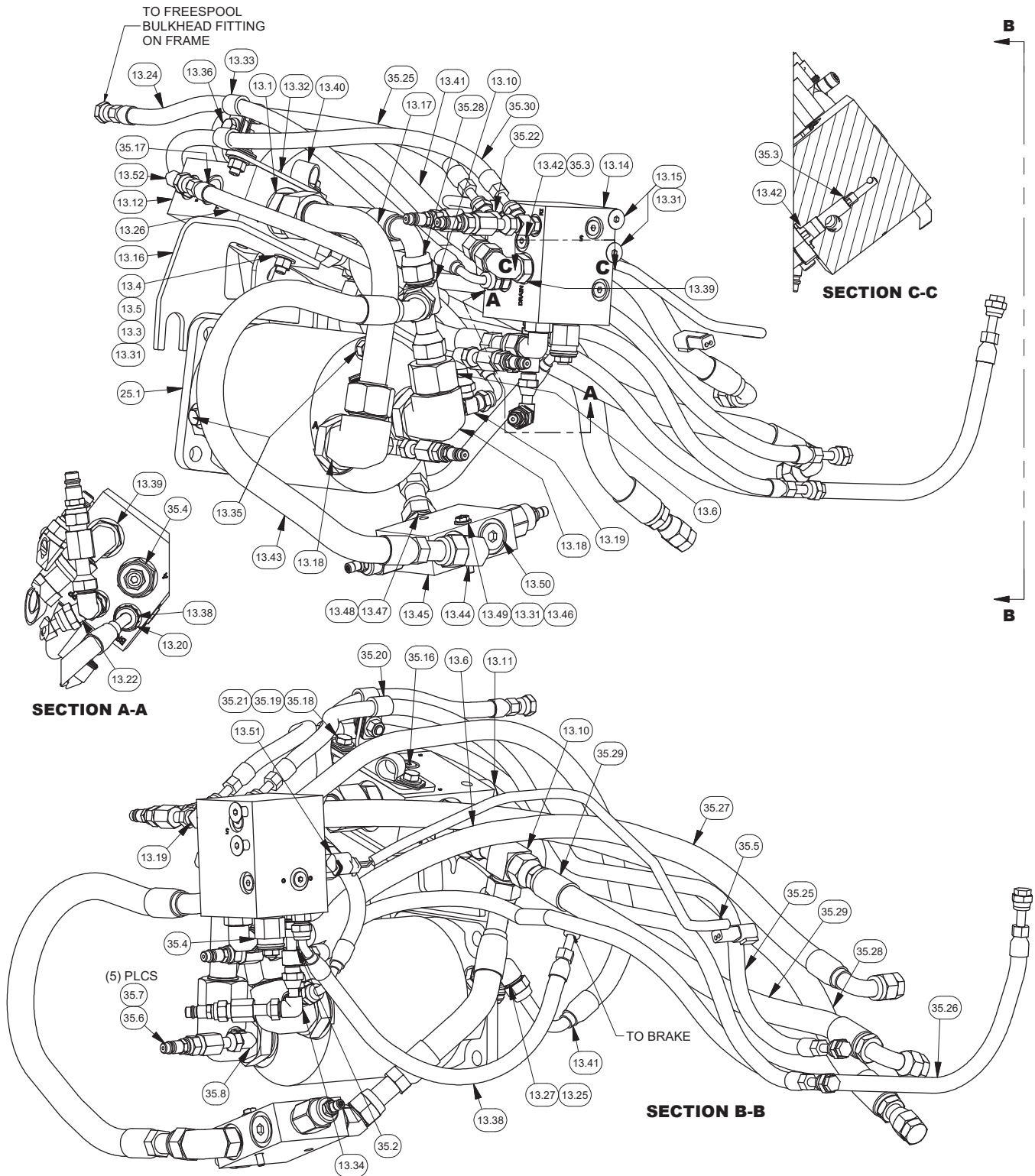


**Section 3**  
**Hydraulics/Electrical/Controls**

# Hydraulic Group

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

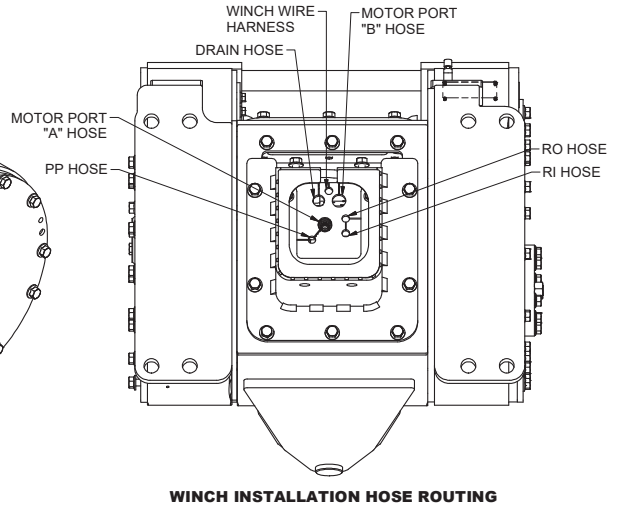
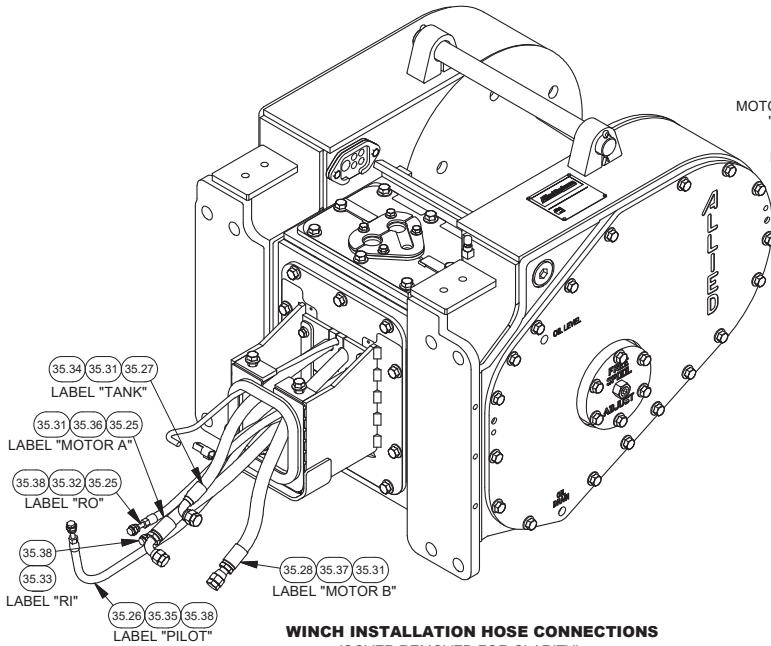
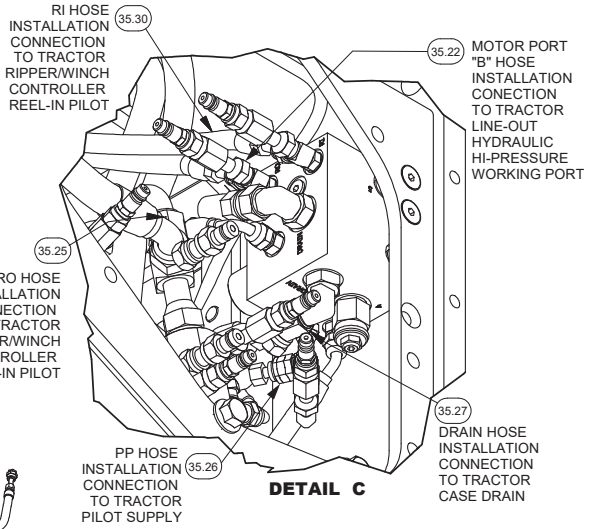
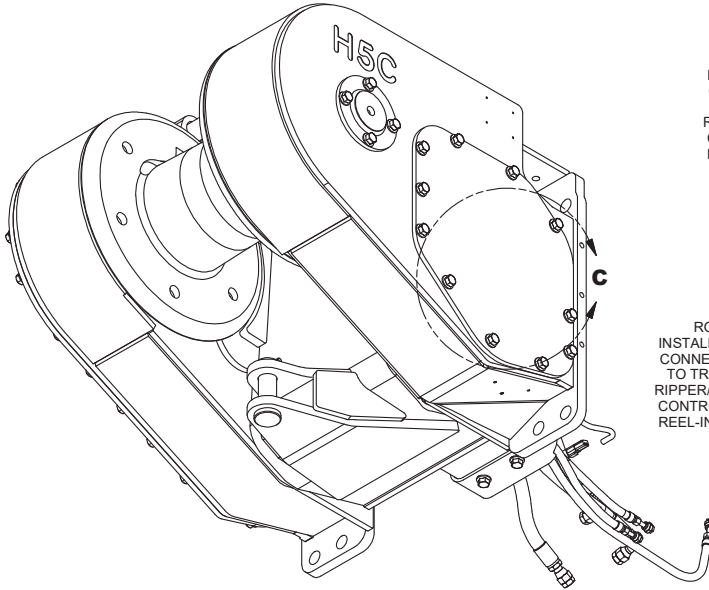
Page 1 of 3



# Hydraulic Group

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

Page 2 of 3



## Hydraulic Group

Komatsu D51-22 (H5CT1E\*\*K37, H5CT1E\*\*K37C)

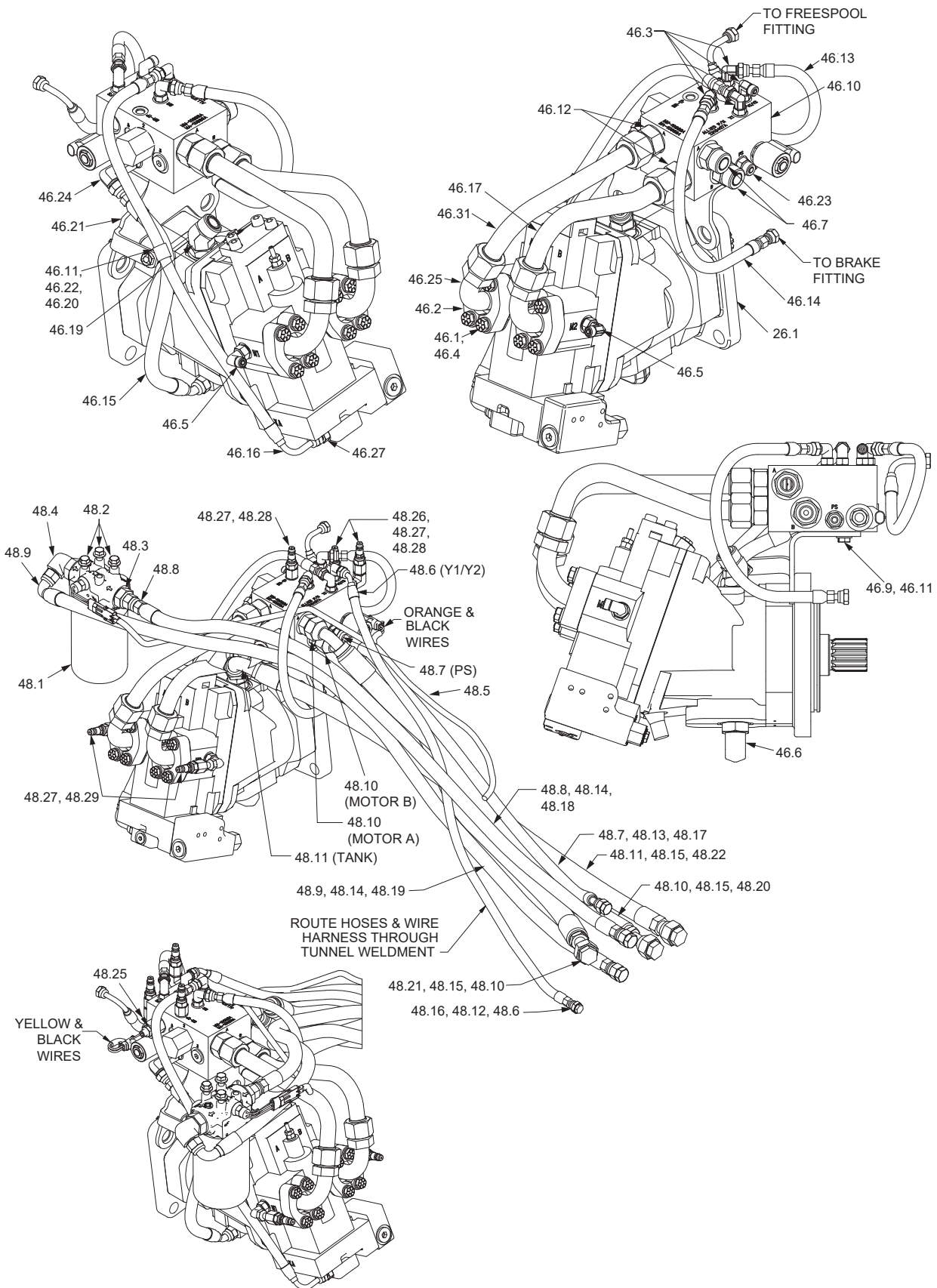
Page 3 of 3

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
13.1	231444	2	Fitting	13.50	233693W	2	Fitting, O-Ring
13.3	*a 18542W	1	Capscrew	13.51	2310430	1	Valve, Cartridge
13.4	15134W	4	Washer		R15668	1	. Kit, Seal
13.5	15056W	2	Nut		252134	1	. Valve, Cartridge
13.6	2307104W	2	Fitting		2313921	1	. Coil, Valve
13.10	R834053	2	Fitting	13.52	2311339	1	Assembly, Fitting
13.11	2307265W	1	Valve, Counterbalance		2310698	1	. Fitting, Modified
	243815	1	. Kit, Seal		2310181	1	. Plug, Orifice
13.12	2307632W	1	Manifold, T17A Modified	25.1	2307694W	1	Motor, Single Speed Vane, (See p. 63)
13.14	2307551W	1	Valve, Control Assy (See p. 65)	35.2	R833800	1	Fitting
13.15	*a Y09G-0616	2	Capscrew	35.3	15961W	1	Fitting
13.16	2307403W	1	Bracket, Manifold Mounting	35.4	2307680W	1	Assembly, Valve
13.17	2307767W	1	Assembly, Motor Tube	35.5	2307926W	1	Harness, Winch Wire
13.18	2307123W	2	Fitting	35.6	2310634	5	Nipple
13.19	R833400	2	Fitting	35.7	254002	5	Fitting
13.20	231439	3	Fitting	35.8	R833251	1	Fitting
13.22	236855	1	Fitting	35.16	235387	1	Fitting
13.24	2310637	1	Assembly, Hose	35.17	229345	1	Fitting
13.25	231440	1	Fitting	35.18	16805W	1	Capscrew
13.26	2307773W	1	Assembly, Hose	35.19	15134W	2	Washer
13.27	R833801	1	Fitting	35.20	R13803039	2	Clip, Insulation
13.32	2310168	1	Plate	35.21	15056W	1	Nut
13.33	R13803039	1	Clip, Insulation	35.22	R833400	1	Fitting
13.34	R833800	1	Fitting	35.25	2310006	1	Assembly, Hose, RO
13.35	209423	2	Fitting	35.26	2310001	1	Assembly, Hose, PP
13.36	16805W	1	Capscrew	35.27	2310002	1	Assembly, Hose, Drain
13.38	2307208W	1	Assembly, Hose	35.28	2310003	1	Assembly, Hose, Motor B
13.39	231452	2	Fitting	35.29	2310004	1	Assembly, Hose, Motor A
13.40	209589	1	Clamp	35.30	2310005	1	Assembly, Hose, RI
13.41	2307774W	1	Assembly, Hose	35.31	232960	3	Fitting
13.42	222442W	1	Fitting, O-Ring	35.32	2307238W	1	Label, RO
13.43	2307775W	1	Assembly, Hose	35.33	2307239W	1	Label, RI
13.44	R833266	1	Fitting	35.34	2307242W	1	Label, Tank
13.45	2307440W	1	Assembly, Cross Port Relief (See p. 66)	35.35	2307241W	1	Label, Pilot
				35.36	2310919	1	Label, Motor A
13.46	15127W	1	Washer	35.37	2310920	1	Label, Motor B
13.47	R833211	1	Fitting	35.38	R834200	3	Fitting
13.48	2307772W	1	Assembly, Hose				
13.49	*a Y01C-0432	1	Capscrew	*a	Use 383789W Adhesive Sealant		

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# Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37D)  
Page 1 of 2



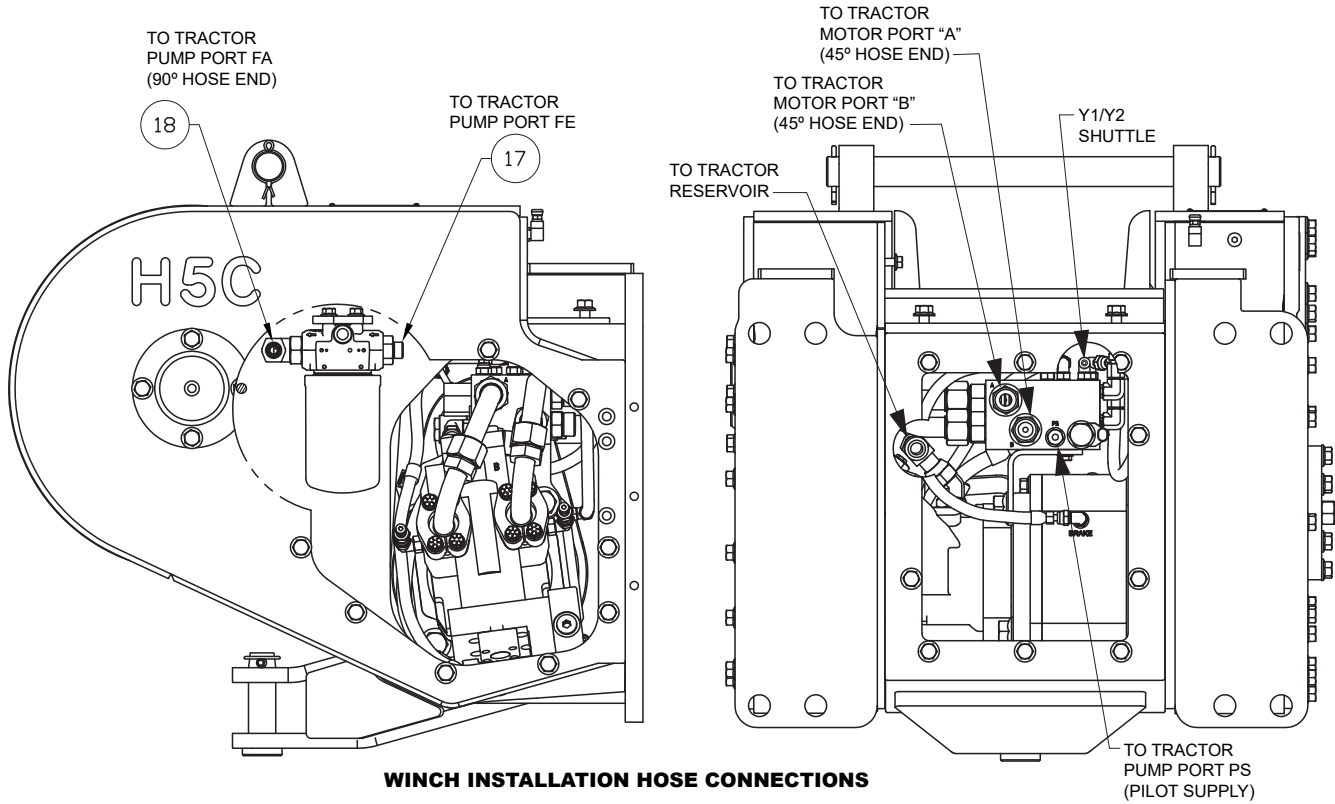
## Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37D)  
Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
26.1	2306413W	1	Motor, Hydraulic VAR DISP	48.2	134803W	3	Screw, Flange
46.1	15157W	8	Washer	48.3	R833115	1	Fitting
46.2	236973	4	Clamp, Half	48.4	235314	1	Fitting
46.3	R833251	4	Fitting	48.5	2310922	1	Harness, Winch Wire
46.4	R13801834	8	Capscrew	48.6	2310754	1	Assy, Hose, Y1/Y2
46.5	R833253	2	Fitting	48.7	2310564	1	Assy, Hose, PS
46.6	R833260	1	Fitting	48.8	2310565	1	Assy, Hose, FE
46.7	231443	2	Fitting	48.9	2310566	1	Assy, Hose, FA
46.9	16805W	2	Capscrew	48.10	2310832	2	Assy, Hose
46.10	2311613	1	Manifold, Control (See p. 52)	48.11	2310563	1	Assy, Hose, Drain
46.11	15134W	3	Washer	48.12	R834200	1	Fitting
46.12	231450	2	Fitting	48.13	R834201	1	Fitting
46.13	2310339	1	Assy, Hose, FREESPOOL	48.14	232960	2	Fitting
46.14	2310543	1	Assy, Hose	48.15	R834204	3	Fitting
46.15	2310340	1	Assy, Hose	48.16	2310917	1	Label, Y1/Y2
46.16	2307036W	1	Assy, Hose	48.17	2306152W	1	Label, PS
46.17	2310536	1	Assy, Tube, Motor Port B	48.18	2306157W	1	Label, FE
46.19	231463	1	Fitting	48.19	2310918	1	Label, FA
46.20	R13803039	1	Cup, Insulation	48.20	2310919	1	Label, Motor A
46.21	2310554	1	Bracket, Manifold	48.21	2310920	1	Label, Motor B
46.22	16597W	1	Capscrew	48.22	2307242W	1	Label, Tank
46.23	231440	1	Fitting	48.25	2311594	1	Assy, Directional Valve
46.24	R833301	1	Fitting	48.26	254261	2	Fitting
46.25	2310603	2	Assy, Fitting with O-Rings	48.27	2310634	5	Nipple
46.27	R833103	1	Fitting	48.28	2310365	3	Fitting
46.31	2310535	1	Assy, Tube, Motor Port A	48.29	254002	2	Fitting
48.1	2304111W	1	Assy, Filter				
	2304112W	1	. Filter Element				
	2304862W	1	. Pressure Switch				
	2305132W	1	. Filter Head				

## Hydraulic/Electrical Installation

Komatsu D51-22 (H5CH2E\*\*K37D, H5CH2E\*\*K37)

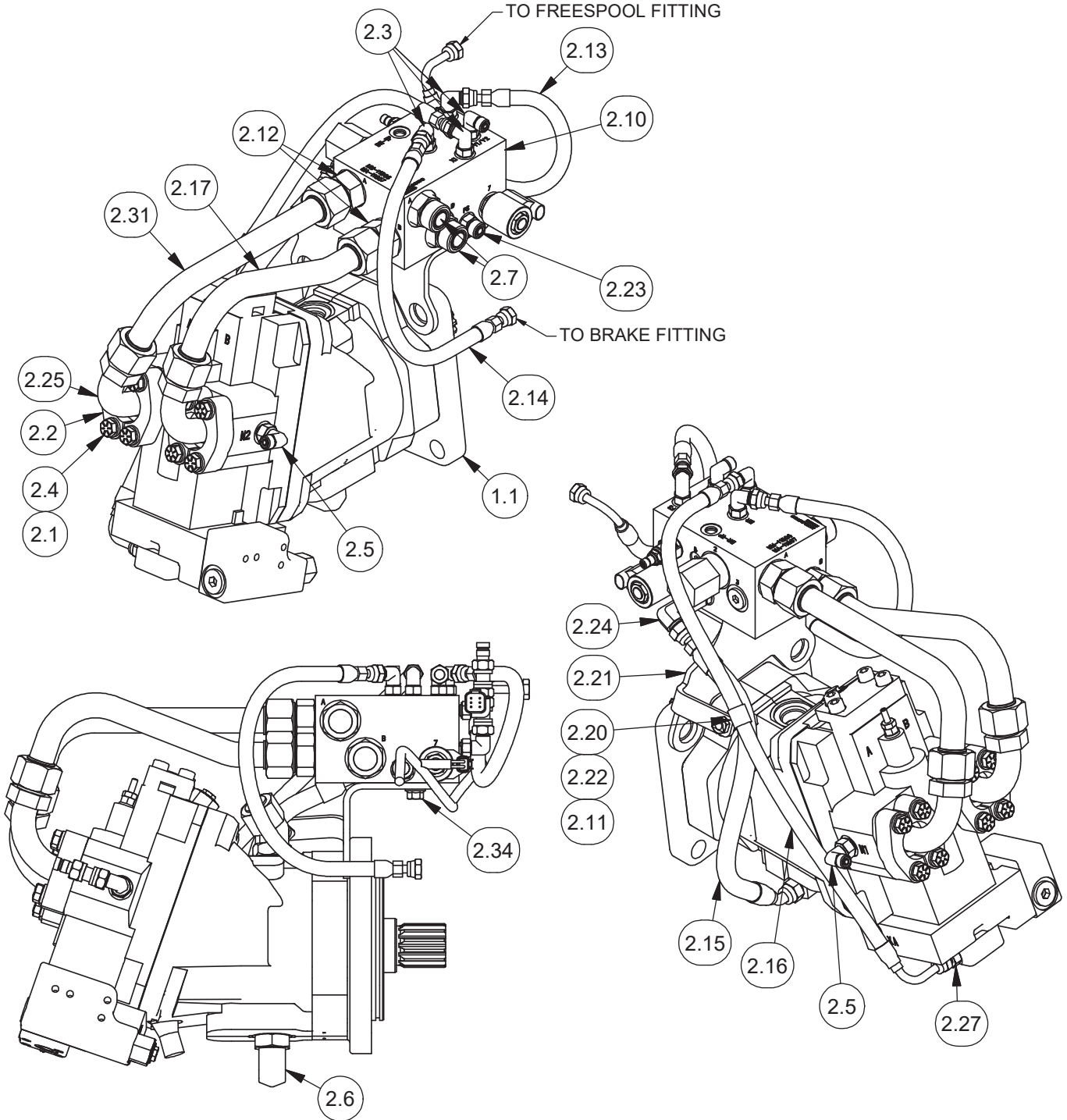


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
17	R833115	1	Fitting				
18	235314	1	Fitting				



**Intentionally Blank**

**Hydraulic Group**  
Komatsu D51-22 (H5CH2E\*\*K37)  
Page 1 of 2

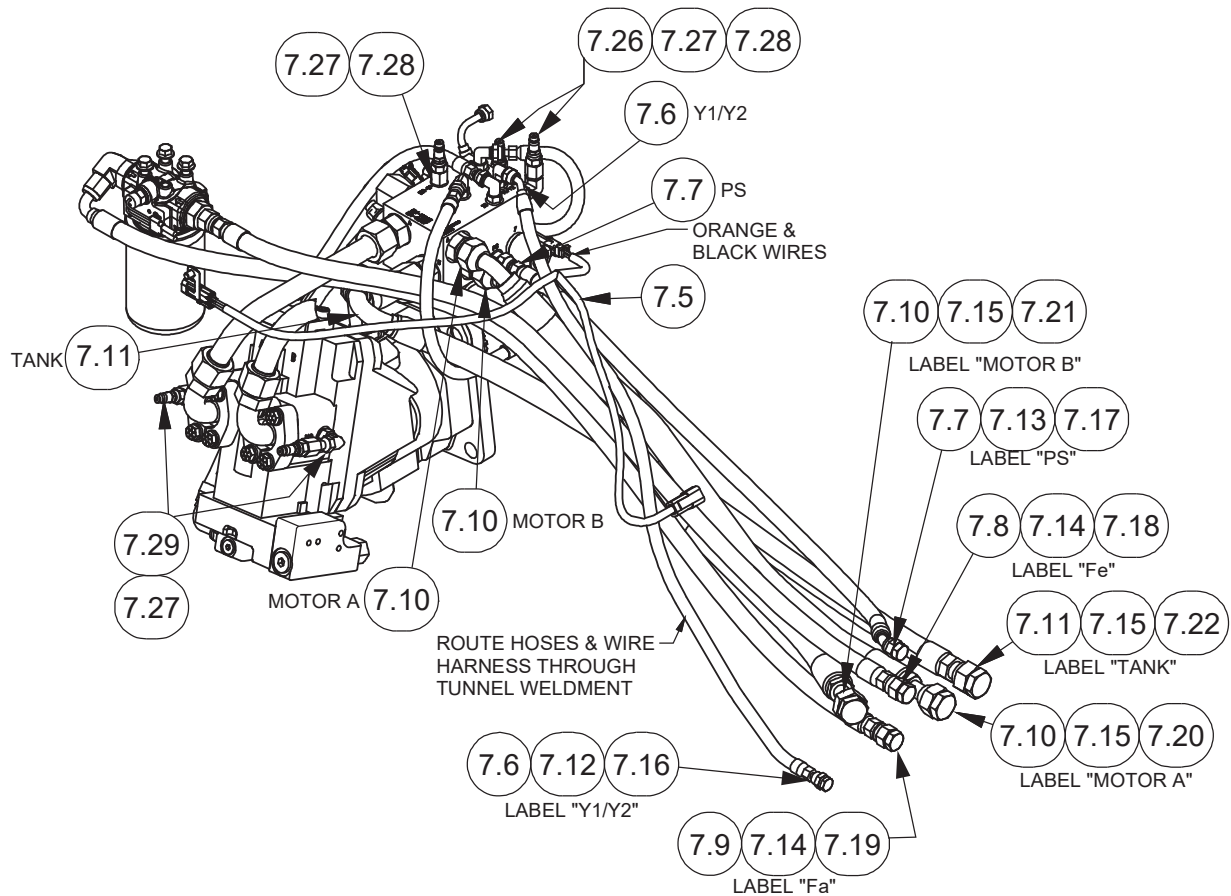


## Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37)

Page 2 of 2

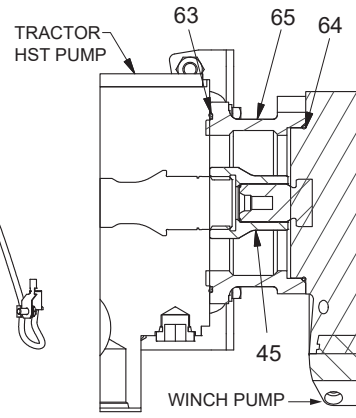
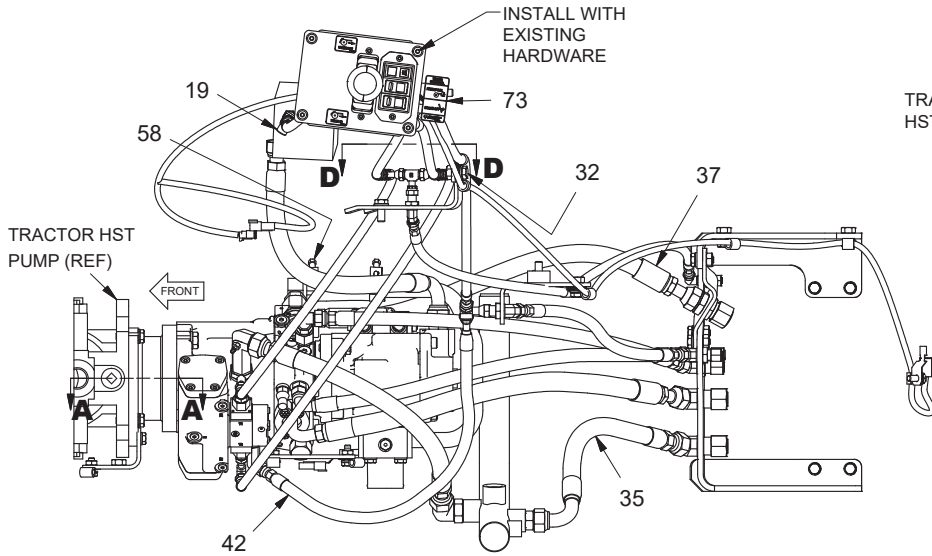
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2306413W	1	Motor	7.4	235314	1	Fitting
2.1	15157W	8	Lockwasher	7.5	2310922	1	Wire Harness
2.2	236973	4	Clamp Half	7.6	2310754	1	Hose Assembly
2.3	R833251	4	Fitting	7.7	2310564	1	Hose Assembly
2.4	R13801834	8	Capscrew	7.8	2310565	1	Hose Assembly
2.5	R833253	2	Fitting	7.9	2310566	1	Hose Assembly
2.6	R833260	1	Fitting	7.10	2310832	2	Hose Assembly
2.7	231443	2	Fitting	7.11	2310563	1	Hose Assembly
2.10	2311613	1	Manifold, Control (See p. 64)	7.12	R834200	1	Fitting
2.11	15134W	1	Washer	7.13	R834201	1	Fitting
2.12	231450	2	Fitting	7.14	232960	2	Fitting
2.13	2310339	1	Hose Assembly, FS	7.15	R834204	3	Fitting
2.14	2310543	1	Hose Assembly	7.16	2310917	1	Label, Y1/Y2
2.15	2310340	1	Hose Assembly, Drain	7.17	2306152W	1	Label, PS
2.16	2314384	1	Hose Assembly	7.18	2306157W	1	Label, FE
2.17	2310536	1	Tube Assembly, Motor B	7.19	2310918	1	Label, FA
2.20	209579	1	Clip, Insul	7.20	2310919	1	Label, Motor "A"
2.21	2310554	1	Bracket, Manifold	7.21	2310920	1	Label, Motor "B"
2.22	16597W	1	Capscrew	7.22	2307242W	1	Label, Tank
2.23	231440	1	Fitting	7.26	254261	2	Fitting
2.24	R833301	1	Fitting	7.27	2310634	5	Nipple
2.25	2310603	2	Assembly, Fitting	7.28	2310365	3	Fitting
2.27	R833103	1	Fitting	7.29	254002	2	Fitting
2.31	2310535	1	Tube Assembly, Motor A	7.31	2311549	1	Clip, Harness, Mounting
2.34	399784W	2	Screw, Flg	7.32	296418W	1	Washer
7.1	2304111W	1	Filter Assembly	7.33	296164W	1	Capscrew
7.2	134803W	3	Screw, Ser Flg	7.34	R833304	1	Fitting
7.3	R833115	1	Fitting				



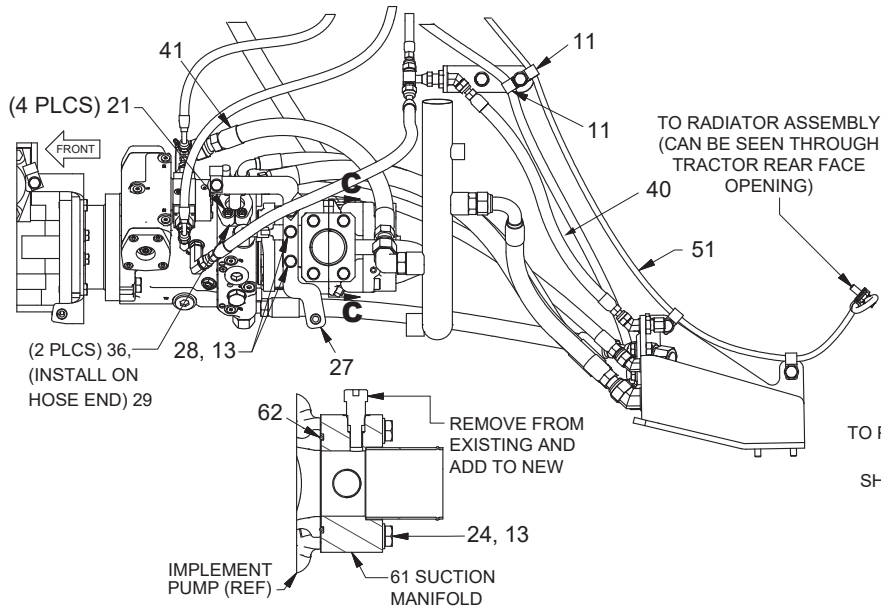
# Hydraulic Group, Kit

Komatsu D51-22 (H5CH\*\*\*\*K37D)

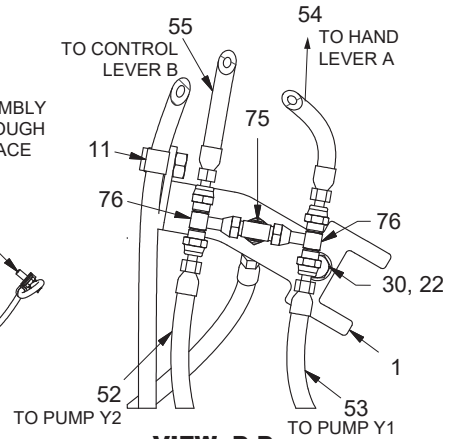
Page 1 of 4



**SECTION A-A**  
PUMP ADAPTOR AND  
COUPLING DETAIL



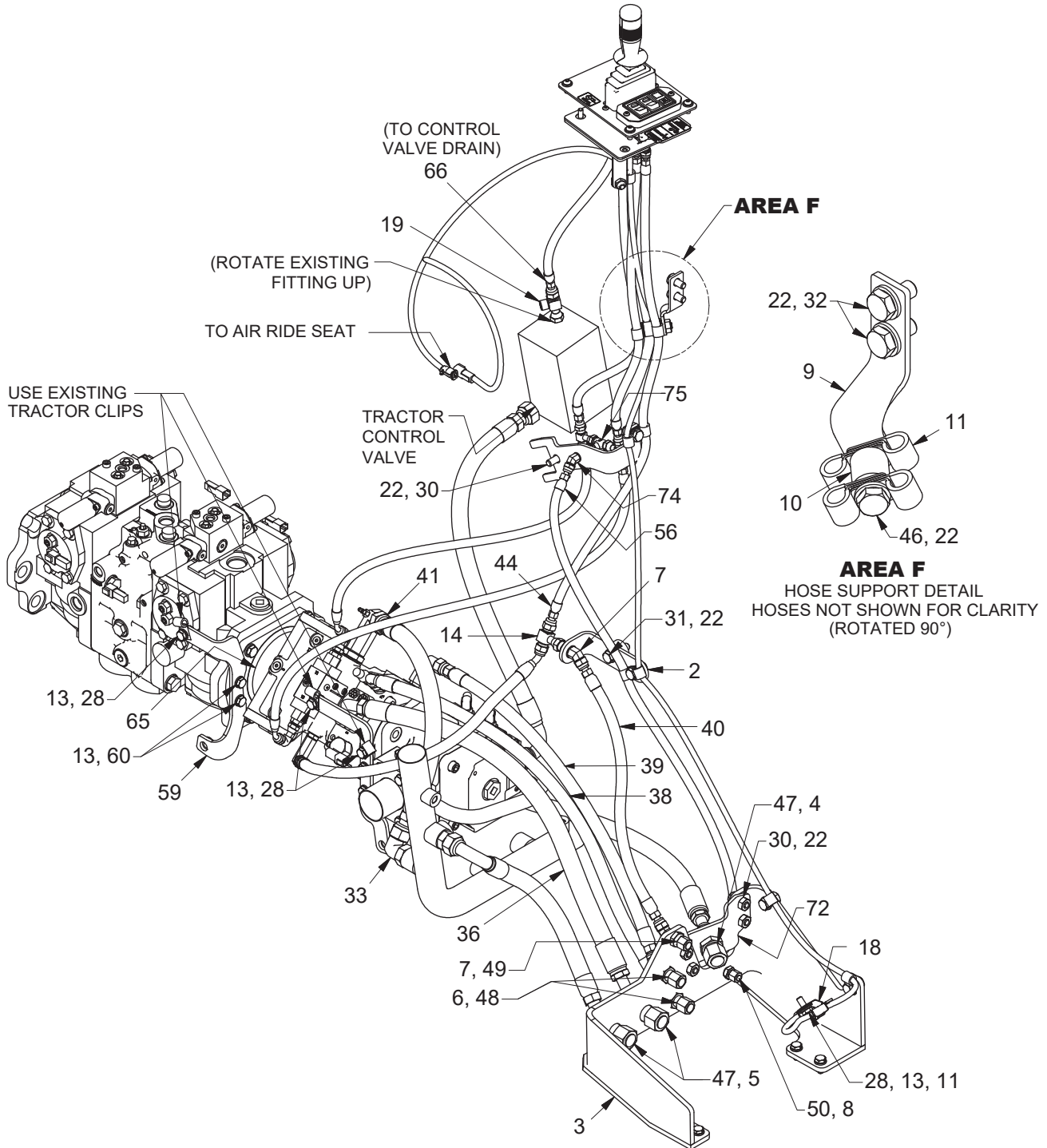
**SECTION C-C**  
SUCTION MANIFOLD DETAIL



**VIEW D-D**  
SHUTTLE VALVE & HOSE SUPPORT DETAIL



**Hydraulic Group, Kit**  
 Komatsu D51-22 (H5CH\*\*\*\*K37D)  
 Page 3 of 4



## Hydraulic Group, Kit

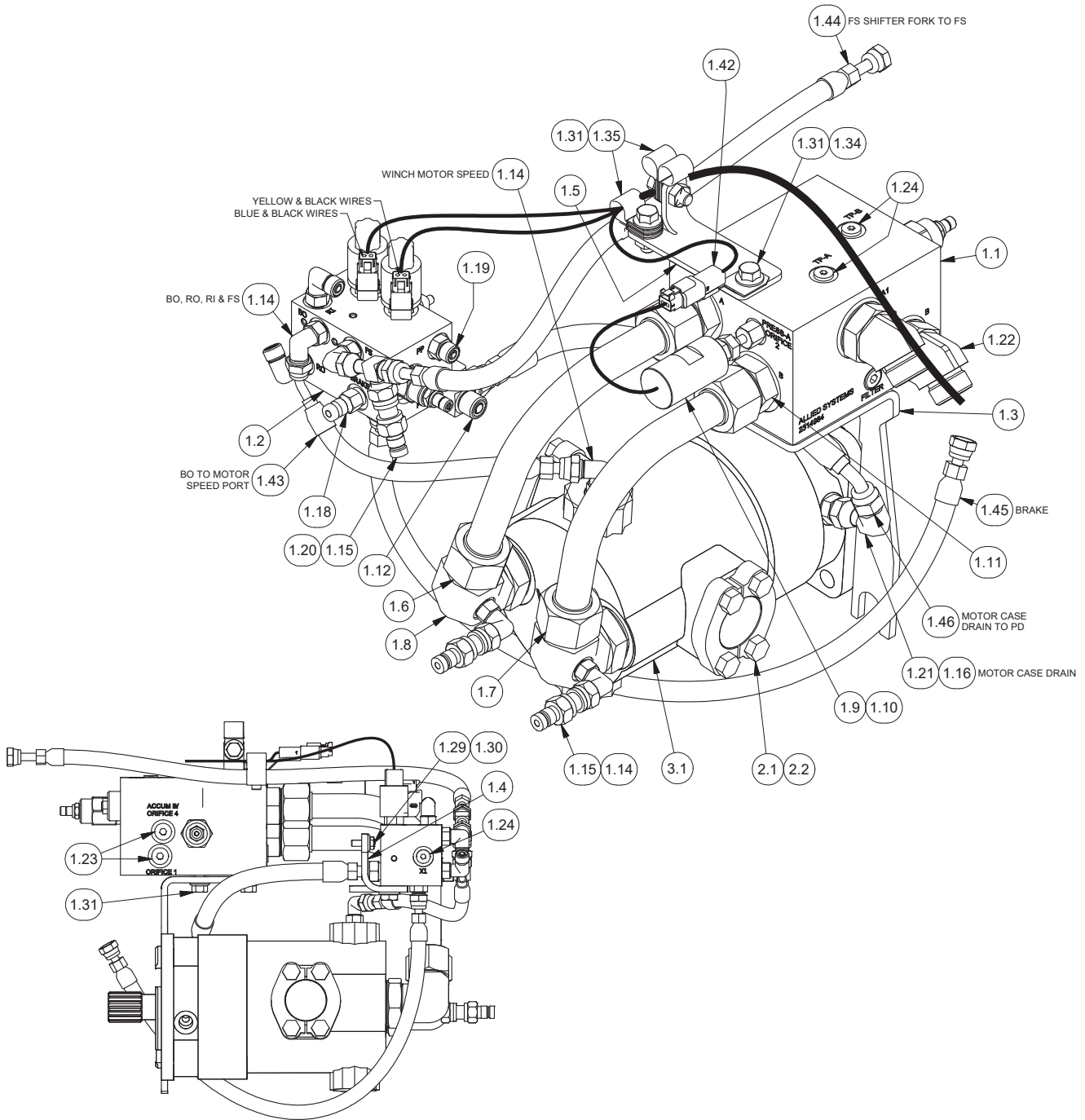
Komatsu D51-22 (H5CH\*\*\*\*K37D)  
Page 4 of 4

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2311513	1	Support, Hose	42	2311566	1	Assembly, Hose
2	2311507	1	Support, Hose	43	2311579	1	Assembly, Hose
3	2311505	1	Bracket, Bulkhead	44	2311578	1	Assembly, Hose
4	R834106	1	Fitting	45	2311587	1	Coupling
5	272-0352	2	Fitting	46	293651W	1	Capscrew
6	272-0350	2	Fitting	47	231821	3	Fitting
7	232356	2	Fitting	48	R834253	2	Fitting
8	2307081W	1	Fitting	49	231822	1	Fitting
9	2311527	1	Support, Hose	50	232984	1	Fitting
10	2311528	1	Spacer	51	2311605	1	Harness, Wire
11	R13807642	12	Clip, Insulation	52	2311565	1	Assembly, Hose
12	2311532	1	Assy, Control Lever Console (See p. 70)	53	23115671	1	Assembly, Hose
13	296420W	17	Washer	54	2311575	1	Assembly, Hose
14	232053	1	Fitting	55	2311576	1	Assembly, Hose
15	2311535	1	Assy, Pump (See p. 67)	56	2311572	1	Assembly, Hose
16	296426W	2	Washer	57	2311931	1	Hose, Suction
17	*a Y19C-M1650	2	Capscrew	58	R13809931	2	Clamp, T-Bolt
18	2311550	1	Clip, Harness Mounting	59	2311788	1	Bracket, Hose Support
19	231955	1	Fitting	60	236805	2	Capscrew
20	222535W	4	Fitting	61	2311523	1	Manifold, Suction
21	*a Y17C-0624	8	Capscrew	62	2311779	1	O-Ring, Komatsu
22	296422W	17	Washer	63	2305732W	1	O-Ring, Komatsu
23	*a 293647W	4	Capscrew	64	2311781	1	O-Ring, Komatsu
24	293637W	4	Capscrew	65	2311539	1	Adaptor, Pump
25	221771W	2	Washer	66	2311577	1	Assembly, Hose
26	*a 221569W	2	Capscrew	68	2311865	1	Seal, Control Lever
27	2311553	1	Bracket	69	2311866	2	Plate, Clamp
28	293628W	11	Capscrew	70	296418W	8	Washer
29	2304110W	2	O-Ring	71	R13809366	3	Capscrew
30	293645W	5	Capscrew	72	2311877	1	Bracket, Hose
31	248986	1	Capscrew	73	2310414	1	Decal, Switch Panel
32	293644W	6	Caprscew	74	272-0348	1	Fitting
33	2311989	1	Assy, Fitting w/O-Rings	75	2311932	1	Assembly, Shuttle Valve
34	2311982	8	Assy, Fitting w/O-Rings		23118861	1	. Valve, Shuttle
35	2311574	1	Assembly, Hose		Y098629-011	2	. O-Ring
36	2311570	1	Assembly, Hose	76	R834000	2	Fitting
37	2311571	1	Assembly, Hose	77	2311991	1	Harness Mounting
38	2311569	1	Assembly, Hose	78	251199	1	Capscrew
39	2311568	1	Assembly, Hose				
40	2311573	1	Assembly, Hose	*a	Use 318702W Thread Lock		
41	2311563	1	Assembly, Hose				

# Hydraulic Group

Komatsu (H5CT1D\*\*K37, H5CT2D\*\*K371)

Page 1 of 2





## Hydraulic Group

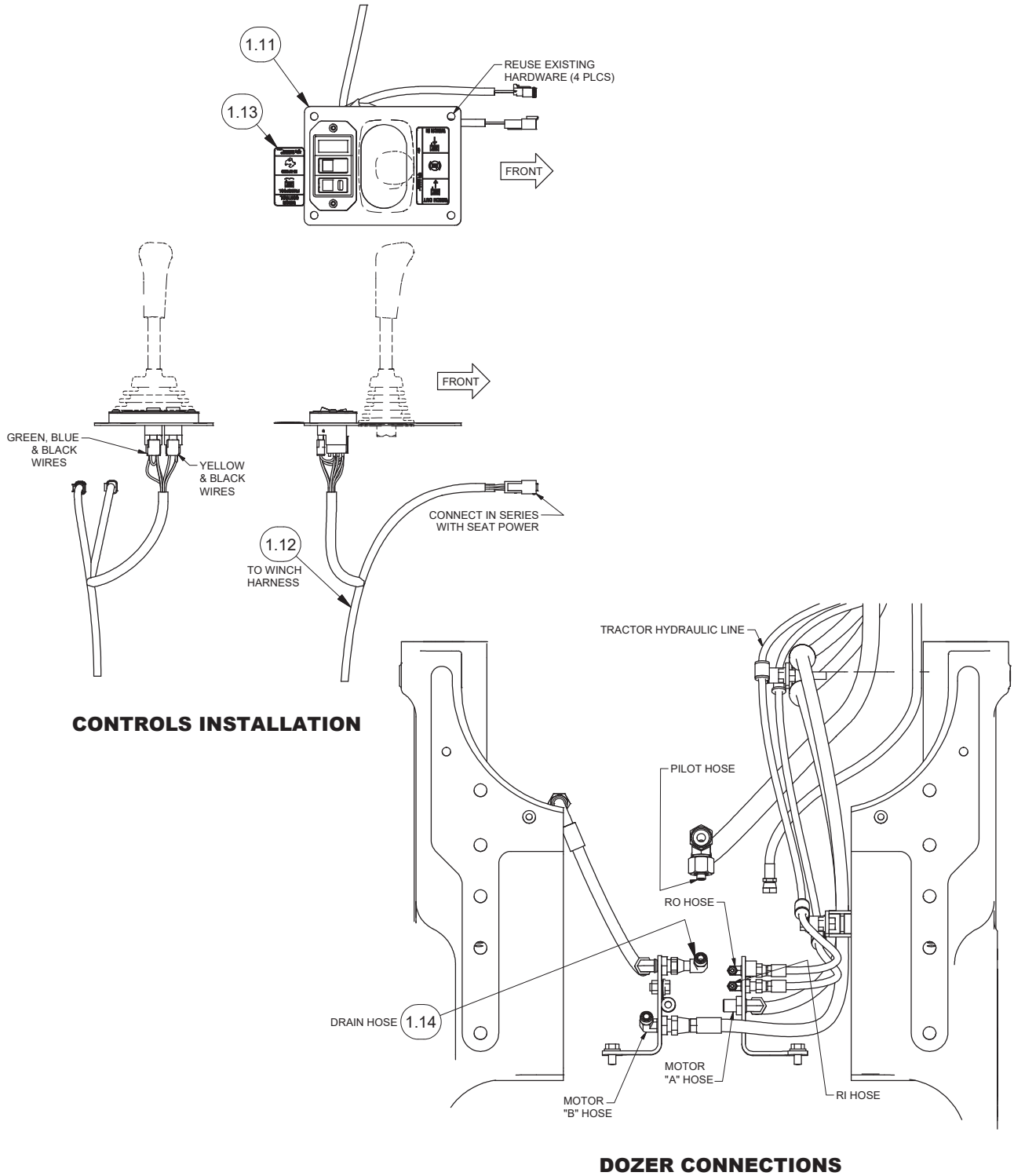
Komatsu (H5CT1D\*\*K37, H5CT2D\*\*K371)

Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2314984	1	Assy, Counterbalance Manifold (See p. 72)	1.26	232960	3	Fitting
1.2	2311770	1	Manifold Assembly, Logic (See p. 73)	1.27	293628W	2	Capscrew
1.3	2314983	1	Bracket, Manifold	1.28	296420W	2	Washer
1.4	2313443	1	Bracket, Manifold	1.29	224120W	2	Capscrew
1.5	2316646	1	Bracket, Support, Hose	1.30	221763W	2	Washer
1.6	2312197	1	Tube Assy, Motor A	1.31	398567W	5	Screw, Flange
1.7	2314986	1	Tube Assy, Motor B	1.34	2311550	1	Clip, Harness Mounting
1.8	2307123W	2	Fitting	1.35	209579	4	Clip, Insul
1.9	2307291W	1	Switch	1.36	2307238W	1	Label, RO
1.10	2304147W	1	Fitting	1.37	2307239W	1	Label, RI
1.11	231444	2	Fitting	1.38	2307241W	1	Label, Pilot
1.12	231465	1	Fitting	1.39	2307242W	1	Label, Tank
1.14	R833251	7	Fitting	1.40	2310919	1	Label, Motor "A"
1.15	2307625W	3	Fitting	1.41	2310920	1	Label, Motor "B"
1.16	231440	1	Fitting	1.42	2312218	1	Wire Harness, Winch
1.18	R14040	1	Coupler, Male	1.43	2313639	1	Hose Assembly
1.19	231439	2	Fitting	1.44	257331	1	Hose Assembly
1.20	236855	1	Fitting	1.45	243178	1	Hose Assembly
1.21	R833801	1	Fitting	1.46	R12113	1	Hose Assembly
1.22	231847	2	Fitting	2.1	11740	2	Kit, Split Flange
1.23	235387	3	Fitting	2.2	24531	2	Fitting
1.24	229383	3	Fitting	3.1	2306938W	1	Hydraulic Motor 2-Speed (See p. 62)
1.25	R834200	3	Fitting				

## Hydraulic/Electrical Installation

Komatsu D51-22 (H5CT1D\*\*K37, H5CT2D\*\*K371)



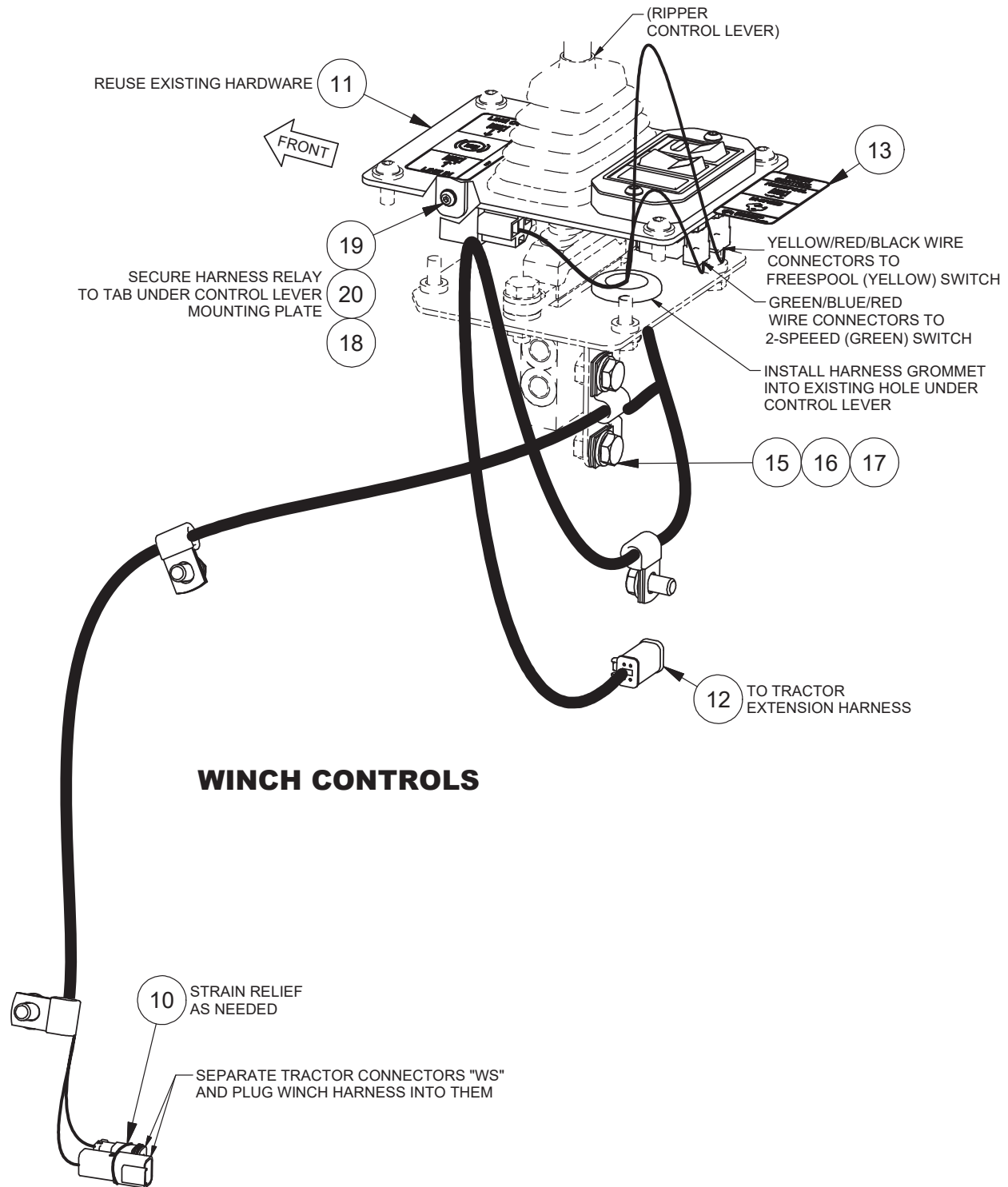
**CONTROLS INSTALLATION**

**DOZER CONNECTIONS**

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.11	2313796	1	Bracket, Handlever				
1.12	2312217	1	Wire Harness, Console				
1.13	2313676	1	Decal, FS & Hi-Speed				
1.14	R833802	1	Fitting				

# Hydraulic/Electrical Installation

Komatsu D51-24 (H5CT2D\*\*K371)



## WINCH CONTROLS

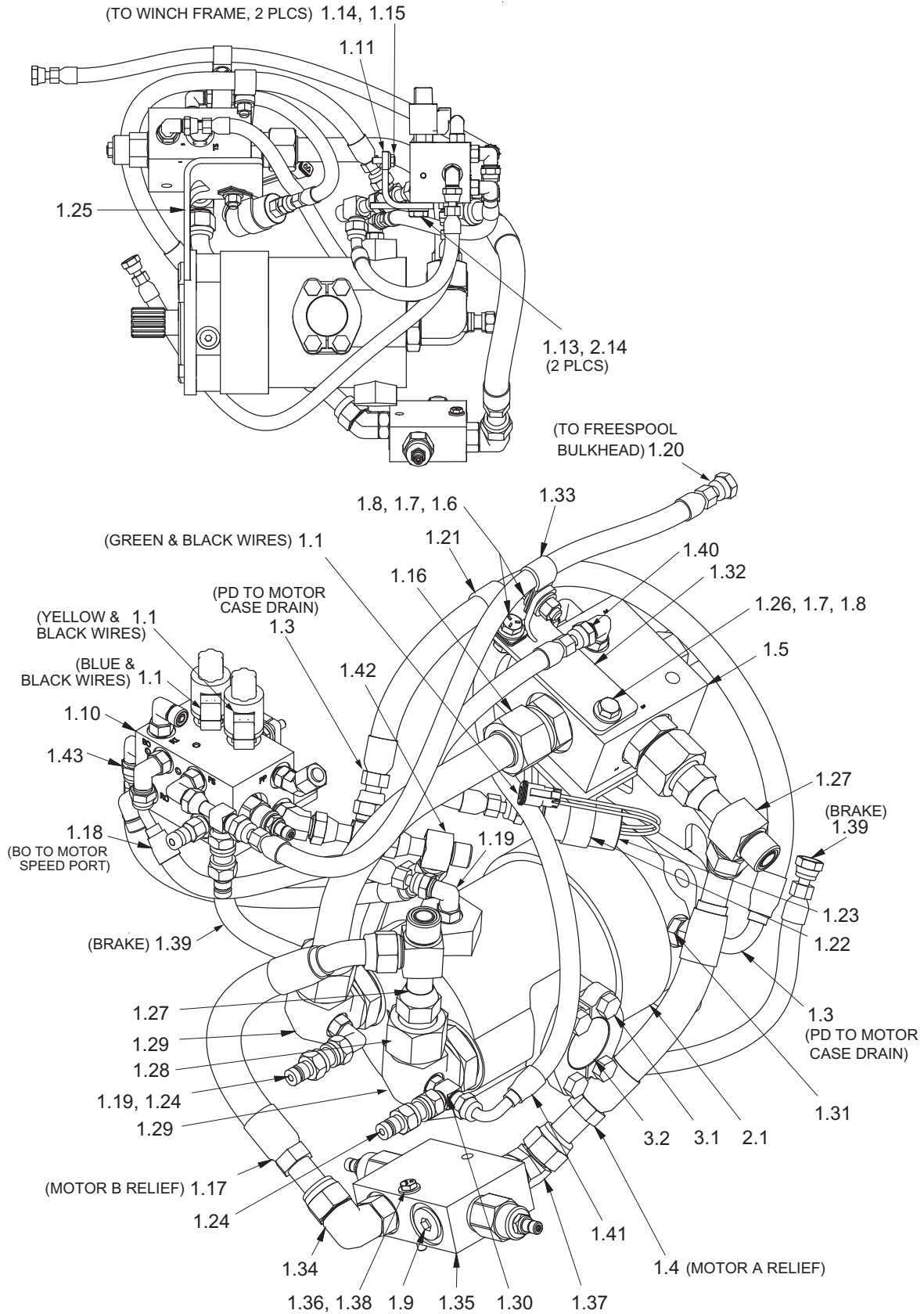
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
10	129563W	10	Cable Tie	16	296420W	5	Washer
11	2313796	1	Bracket, Handlever	17	2314338	5	Clip, Insul
12	2316073	1	Wire Harness, Console	18	302398W	1	Locknut
13	2313676	1	Decal, FS & Hi-Speed	19	296153W	1	Capscrew
14	R833802	1	Fitting	20	296416W	2	Washer
15	236805	5	Capscrew				

# Hydraulic Group

Komatsu D51-22 (K37)

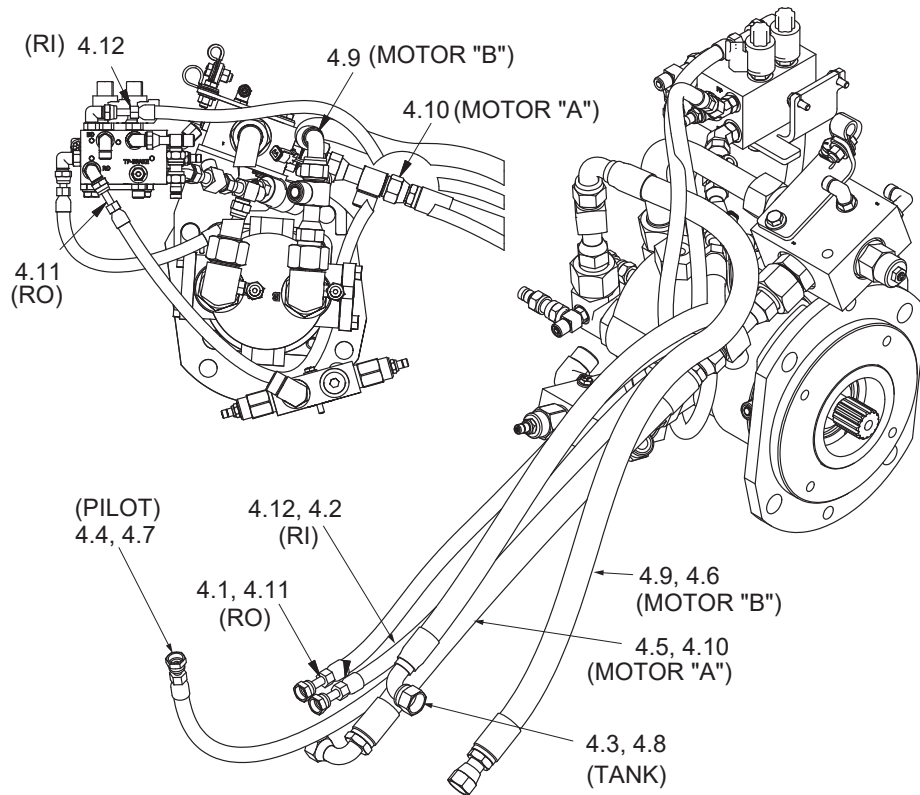
First Used on S/N H5C-1092

Page 1 of 2



## Hydraulic Group

Komatsu D51-22 (K37)  
First Used on S/N H5C-1092  
Page 2 of 2

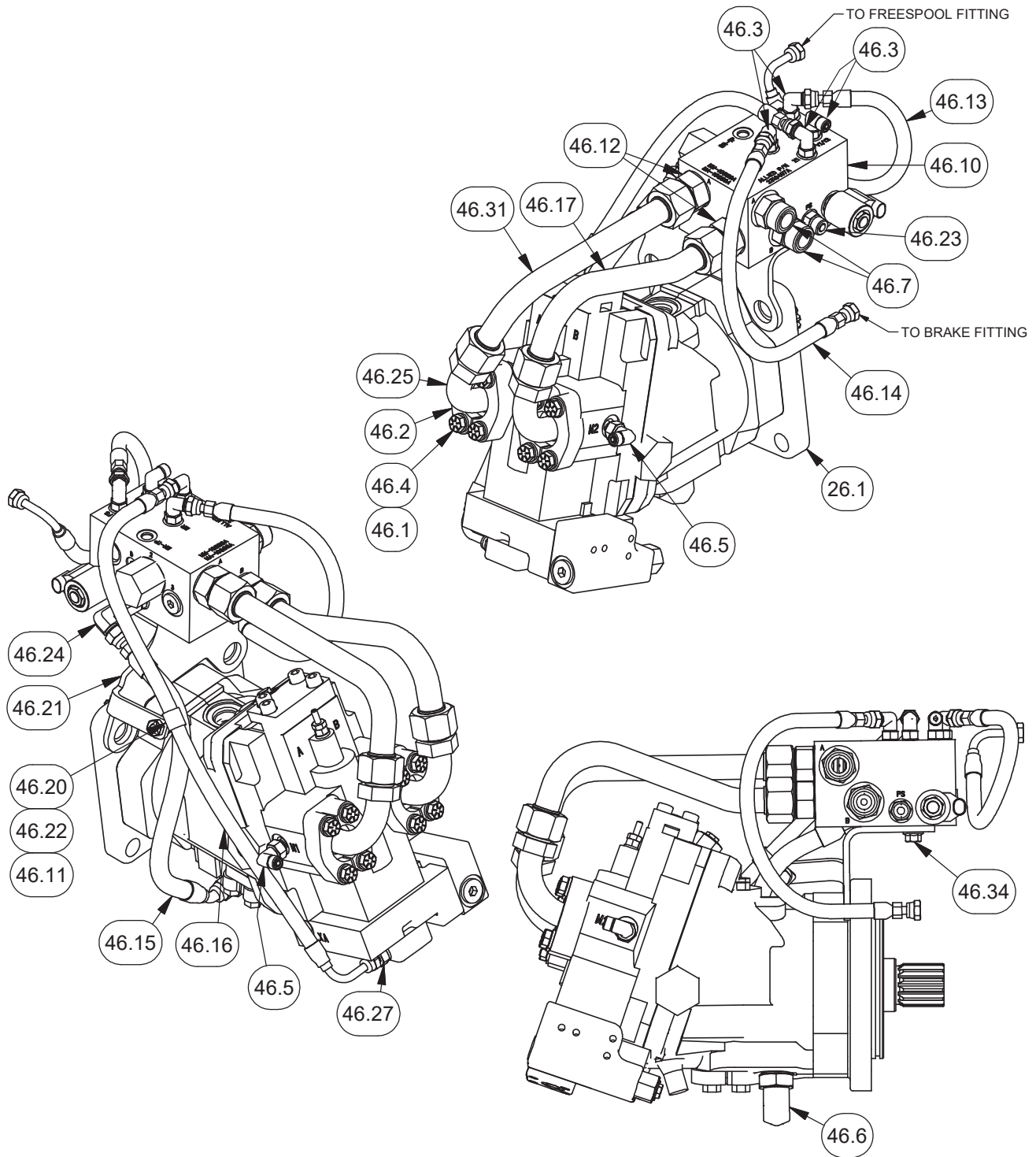


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2312218	1	Harness, Winch Wire	1.30	R833400	1	Fitting
1.2	229383	1	Fitting	1.31	231440	1	Fitting
1.3	2313641	1	Assembly, Hose	1.32	2310168	1	Plate
1.4	2307772W	1	Assembly, Hose	1.33	R13803039	1	Clip, Insulate
1.5	2313705	1	Assembly, Manifold, Counterbalance (See p. 68)	1.34	R833266	1	Fitting
1.6	16805W	2	Capscrew	1.35	2307440W	1	Assembly, Cross Port Relief (See p. 66)
1.7	221767W	6	Washer	1.36	15127W	1	Washer
1.8	221707W	3	Nut	1.37	R833211	1	Fitting
1.9	233693W	2	Fitting, O-Ring	1.38	Y01C-0432	1	Capscrew
1.10	2313635	1	Assy, Control Manifold (See p. 74)	1.39	243178	1	Assembly, Hose
1.11	2313443	1	Bracket, Manifold	1.40	2313715	1	Assembly, Hose
1.12	296420W	2	Washer	1.41	2313638	1	Assembly, Hose
1.13	Y09C-M1025	2	Capscrew	1.42	231955	1	Fitting
1.14	224120W	2	Capscrew	1.43	2313765	1	Assembly, Hose
1.15	221763W	2	Washer	2.1	2306938W	1	Motor, Hydraulic 2 Speed Vane, (See p. 62)
1.16	2312197	1	Tube Assy, 2 Speed Rescue	3.1	11740	2	Kit, Split Flange
1.17	2313640	1	Assembly, Hose	3.2	24531	2	Fitting
1.18	2313639	1	Assembly, Hose	4.1	2307238W	1	Label, RO
1.19	R833251	2	Fitting	4.2	2307239W	1	Label, RI
1.20	257331	1	Assembly, Hose	4.3	2307242W	1	Label, Tank
1.21	209589	1	Clamp	4.4	2307241W	1	Label, Pilot
1.22	R2528352	1	Clip, Insulate	4.5	2310919	1	Label, Motor "A"
1.23	2307291W	1	Switch, Pressure	4.6	2310920	1	Label, Motor "B"
1.24	2307625W	2	Coupler, Quick Male	4.7	2311701	1	Assembly, Hose
1.25	2307403W	1	Bracket, Manifold Mounting	4.8	2313910	1	Assembly, Hose
1.26	18542W	1	Capscrew	4.9	2310003	1	Assembly, Hose
1.27	R834053	2	Fitting	4.10	2310004	1	Assembly, Hose
1.28	2307104W	1	Fitting	4.11	2313710	1	Assembly, Hose
1.29	2307123W	2	Fitting	4.12	2311572	1	Assembly, Hose

### Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37D) Before 2010

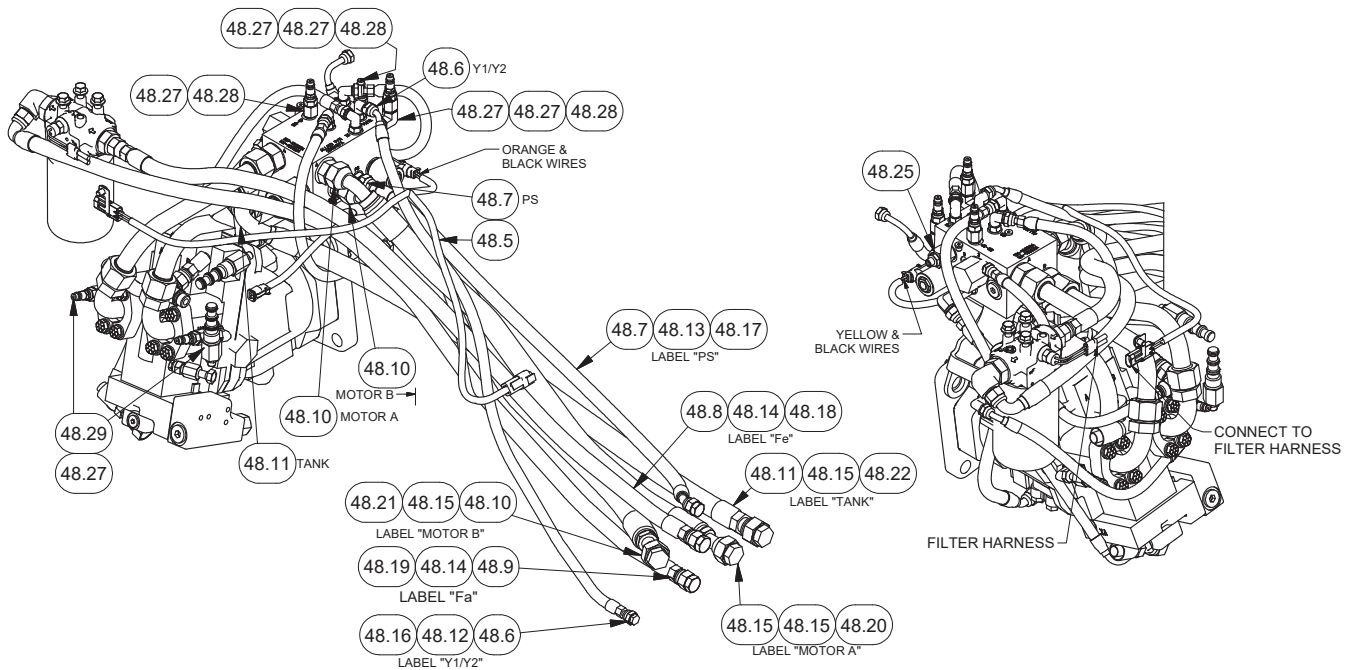
Page 1 of 2



## Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37D) Before 2010

Page 2 of 2

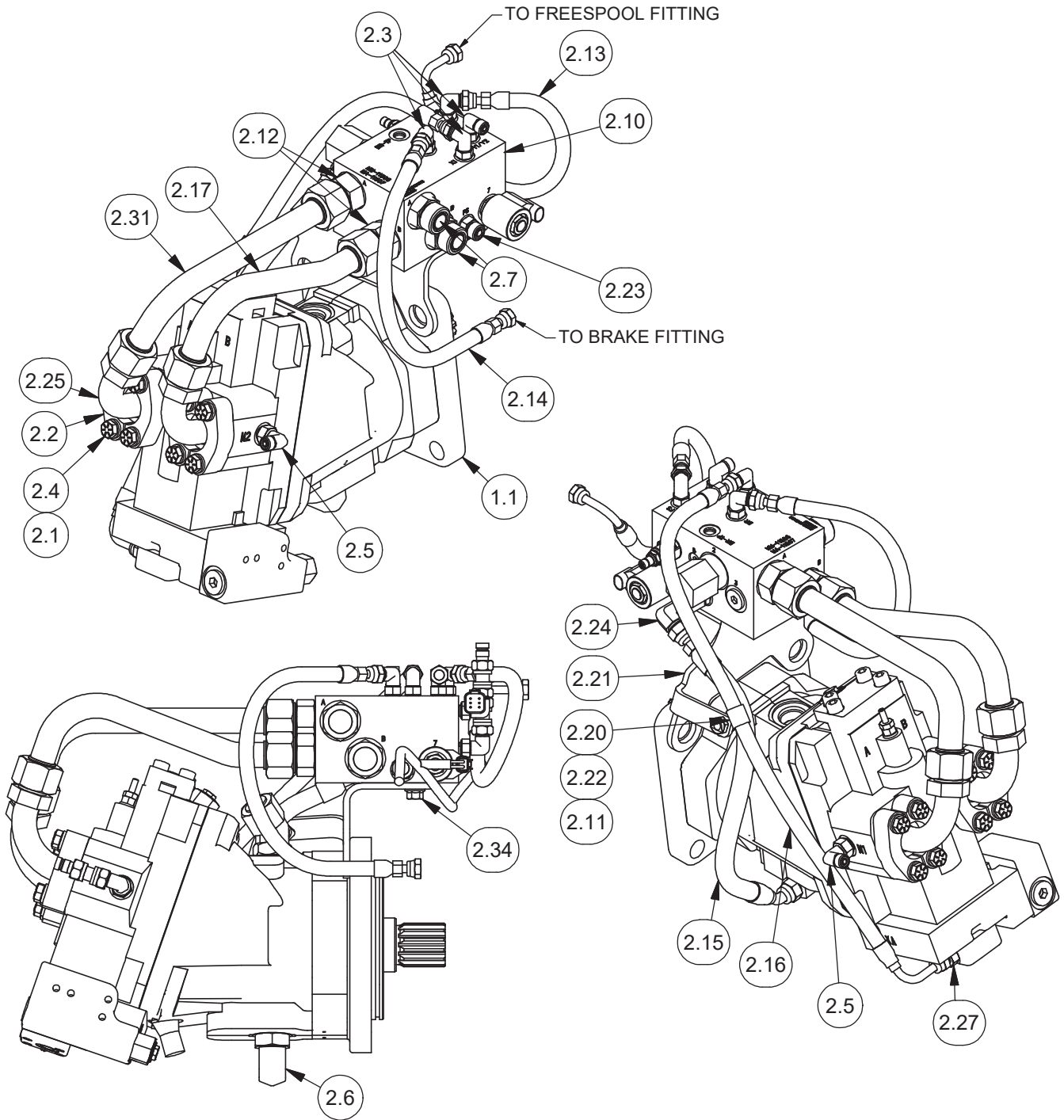


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
46.1	15157W	8	Lockwasher	48.4	235314	1	Fitting
46.2	236973	4	Clamp Half	48.5	2310922	1	Wire Harness
46.3	R833251	4	Fitting	48.6	2310754	1	Hose Assembly
46.4	R13801834	8	Capscrew	48.7	2310564	1	Hose Assembly
46.5	R833253	2	Fitting	48.8	2310565	1	Hose Assembly
46.6	R833260	1	Fitting	48.9	2310566	1	Hose Assembly
46.7	231443	2	Fitting	48.10	2310832	2	Hose Assembly
46.10	2311613	1	Manifold, Control (See p. 64)	48.11	2310563	1	Hose Assembly
46.11	15134W	1	Washer	48.12	R834200	1	Fitting
46.12	231450	2	Fitting	48.13	R834201	1	Fitting
46.13	2310339	1	Hose Assembly - FS	48.14	232960	2	Fitting
46.14	2310543	1	Hose Assembly	48.15	R834204	3	Fitting
46.15	2310340	1	Hose Assembly - Drain	48.16	2310917	1	Label - Y1/Y2
46.16	2307036W	1	Hose Assembly	48.17	2306152W	1	Label - PS
46.17	2310536	1	Assembly, Tube	48.18	2306157W	1	Label - FE
46.20	209579	1	Clip, Insul	48.19	2310918	1	Label - FA
46.21	2310554	1	Bracket, Manifold	48.20	2310919	1	Label - Motor "A"
46.22	16597W	1	Capscrew	48.21	2310920	1	Label - Motor "B"
46.23	231440	1	Fitting	48.22	2307242W	1	Label - Tank
46.24	R833301	1	Fitting	48.25	2311594	1	Assy, Directional Valve
46.25	2310603	2	Assy, Fitting w/ O-Rings	48.26	254261	2	Fitting
46.27	R833103	1	Fitting	48.27	2310634	5	Nipple
46.31	2310535	1	Assembly, Tube	48.28	2310365	3	Fitting
46.34	399784W	2	Screw, Flg	48.29	254002	2	Fitting
48.1	2304111W	1	Filter Assembly	48.31	2311549	1	Clip - Harness, Mounting
48.2	134803W	3	Screw, Ser Flg	48.32	296418W	1	Washer
48.3	R833115	1	Fitting	48.33	296164W	1	Capscrew
				48.34	R833304	1	Fitting

### Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37D) After 2010

Page 1 of 2

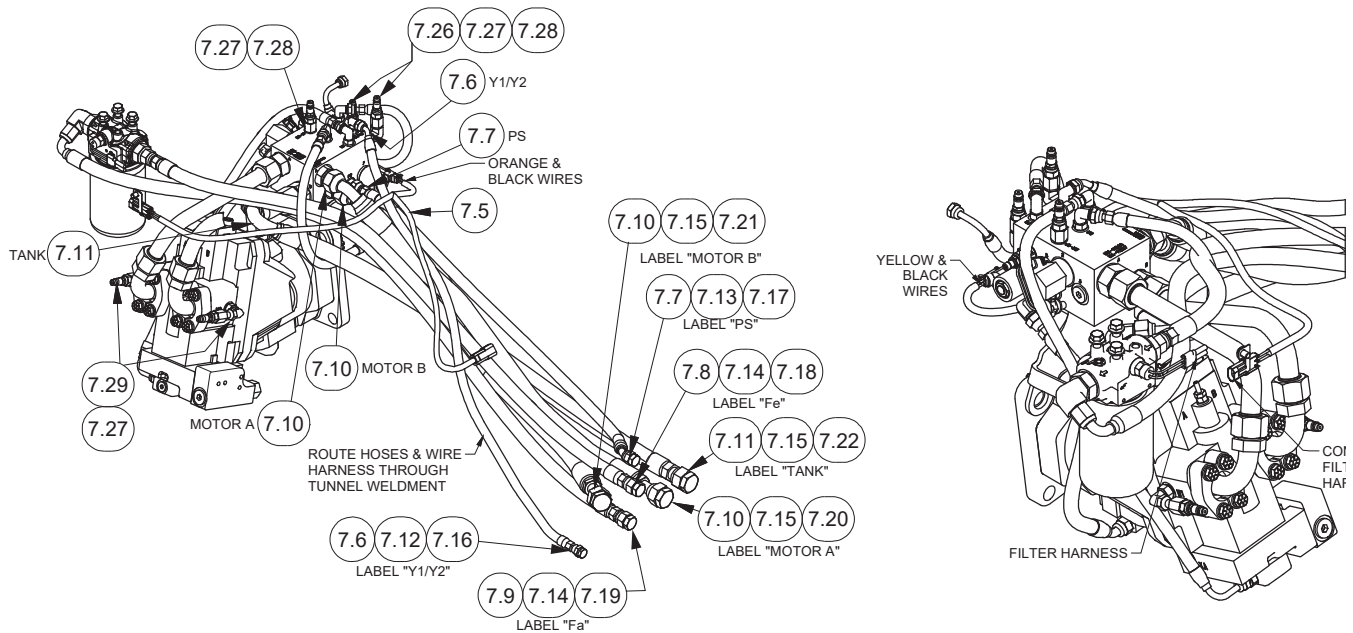




## Hydraulic Group

Komatsu D51-22 (H5CH2E\*\*K37D) After 2010

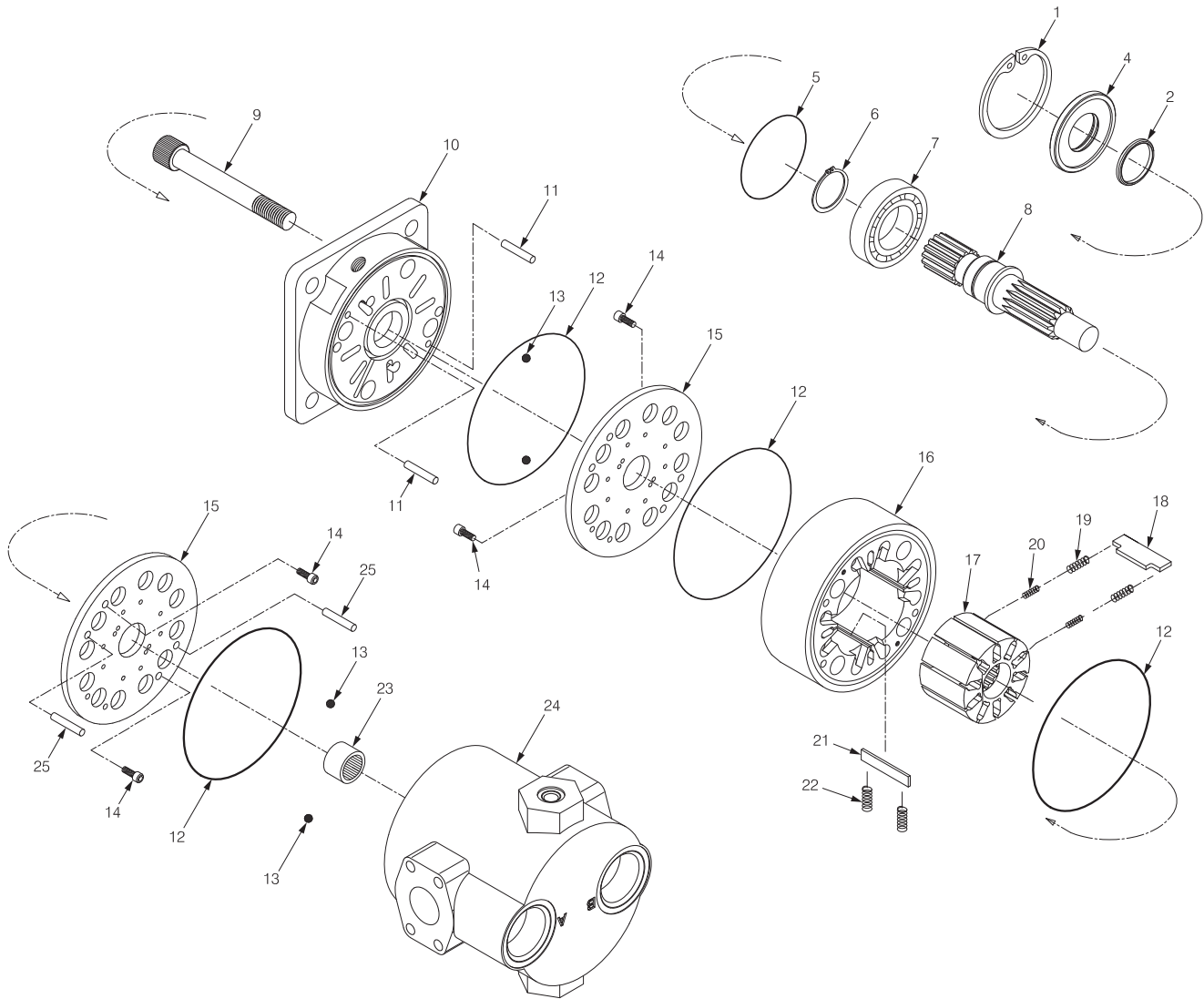
Page 2 of 2



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.1	15157W	8	Lockwasher	7.4	235314	1	Fitting
2.2	236973	4	Clamp Half	7.5	2310922	1	Wire Harness
2.3	R833251	4	Fitting	7.6	2310754	1	Hose Assembly
2.4	R13801834	8	Capscrew	7.7	2310564	1	Hose Assembly
2.5	R833253	2	Fitting	7.8	2310565	1	Hose Assembly
2.6	R833260	1	Fitting	7.9	2310566	1	Hose Assembly
2.7	231443	2	Fitting	7.10	2310832	2	Hose Assembly
2.10	2311613	1	Manifold, Control (See p. 64)	7.11	2310563	1	Hose Assembly
2.11	15134W	1	Washer	7.12	R834200	1	Fitting
2.12	231450	2	Fitting	7.13	R834201	1	Fitting
2.13	2310339	1	Hose Assembly - FS	7.14	232960	2	Fitting
2.14	2310543	1	Hose Assembly	7.15	R834204	3	Fitting
2.15	2310340	1	Hose Assembly - Drain	7.16	2310917	1	Label - Y1/Y2
2.16	2314384	1	Hose Assembly	7.17	2306152W	1	Label - PS
2.17	2310536	1	Assembly, Tube	7.18	2306157W	1	Label - FE
2.20	209579	1	Clip, Insul	7.19	2310918	1	Label - FA
2.21	2310554	1	Bracket, Manifold	7.20	2310919	1	Label - Motor "A"
2.22	16597W	1	Capscrew	7.21	2310920	1	Label - Motor "B"
2.23	231440	1	Fitting	7.22	2307242W	1	Label - Tank
2.24	R833301	1	Fitting	7.26	254261	2	Fitting
2.25	2310603	2	Assy, Fitting w/ O-Rings	7.27	2310634	5	Nipple
2.27	R833103	1	Fitting	7.28	2310365	3	Fitting
2.31	2310535	1	Assembly, Tube	7.29	254002	2	Fitting
2.34	399784W	2	Screw, Flg	7.31	2311549	1	Clip - Harness, Mounting
7.1	2304111W	1	Filter Assembly	7.32	296418W	1	Washer
7.2	134803W	3	Screw, Ser Flg	7.33	296164W	1	Capscrew
7.3	R833115	1	Fitting	7.34	R833304	1	Fitting

# Hydraulic Motor, 2-Speed

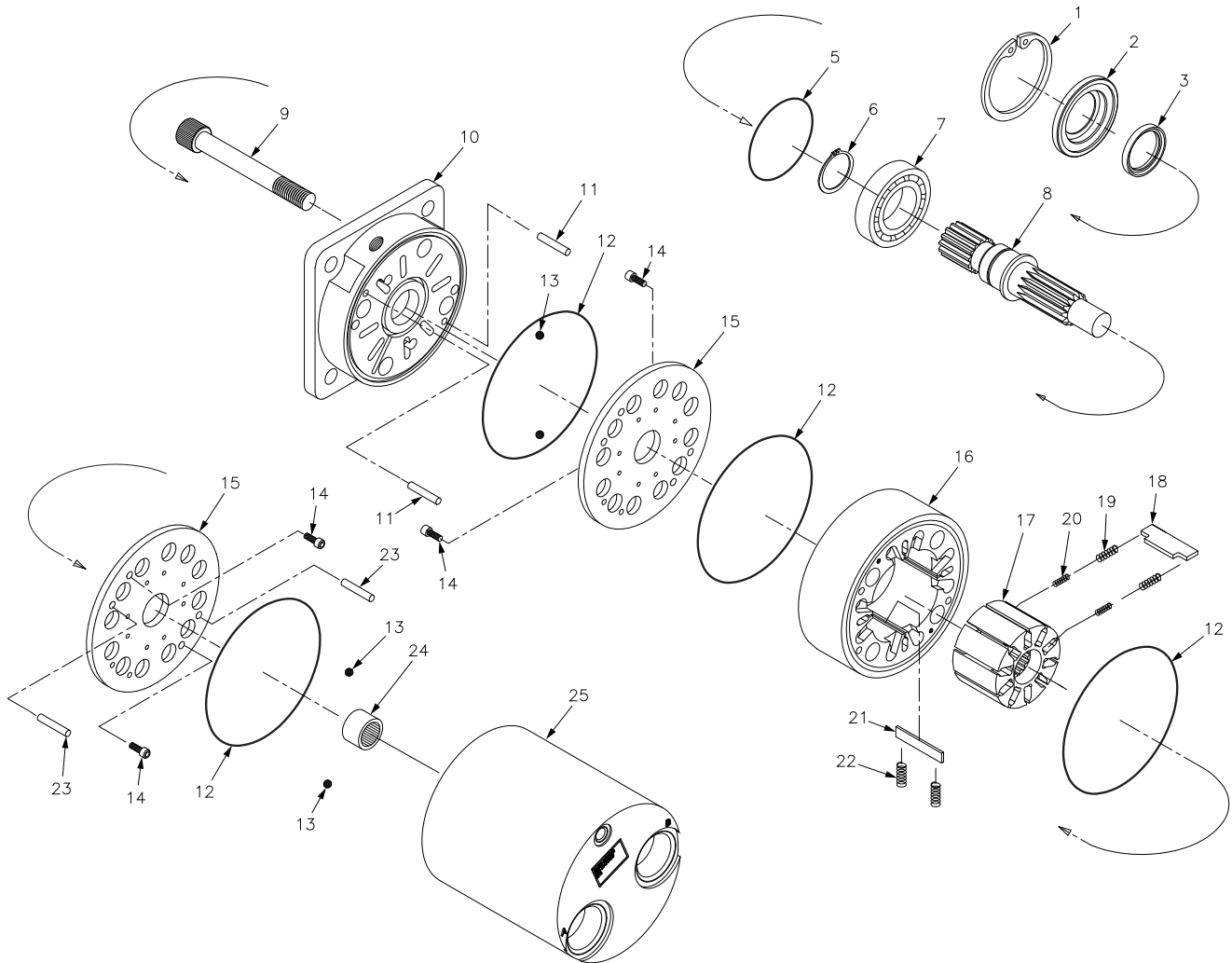
Komatsu



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2306938W</b>		<b>Hydraulic Motor, 2-Speed</b>				
1	*a 238060	1	. Ring, Snap	15	2307962W	2	. Plate, Timing
2	*a 238056	1	. Seal	16	238070	1	. Stator
4	*a 238061	1	. Seal Plate	17	238073	1	. Rotor
5	*a 238058	1	. O-Ring	18	*b 238074	10	. Vane, Rotor
6	238062	1	. Ring, Snap	19	*b 238075	20	. Spring, Outer
7	238063	1	. Bearing	20	*b 238076	20	. Spring, Inner
8	238064	1	. Shaft	21	*b 238072	4	. Vane, Stator
9	238065	4	. Bolt	22	*b 238071	8	. Spring, Vane
10	NSS	1	. Housing	23	238078	1	. Bearing, Needle
11	238067	2	. Pin, Front Dowel	24	NSS	1	. Rear Housing
12	*a 238059	4	. O-Ring	25	238080	2	. Pin, Rear Dowel
13	238077	4	. Check, Ball				
14	238068	4	. Screw				
				*a	Included in Seal Kit 2307244W		
				*b	Included in Vane & Spring Kit 246726		

# Hydraulic Motor, Single Speed

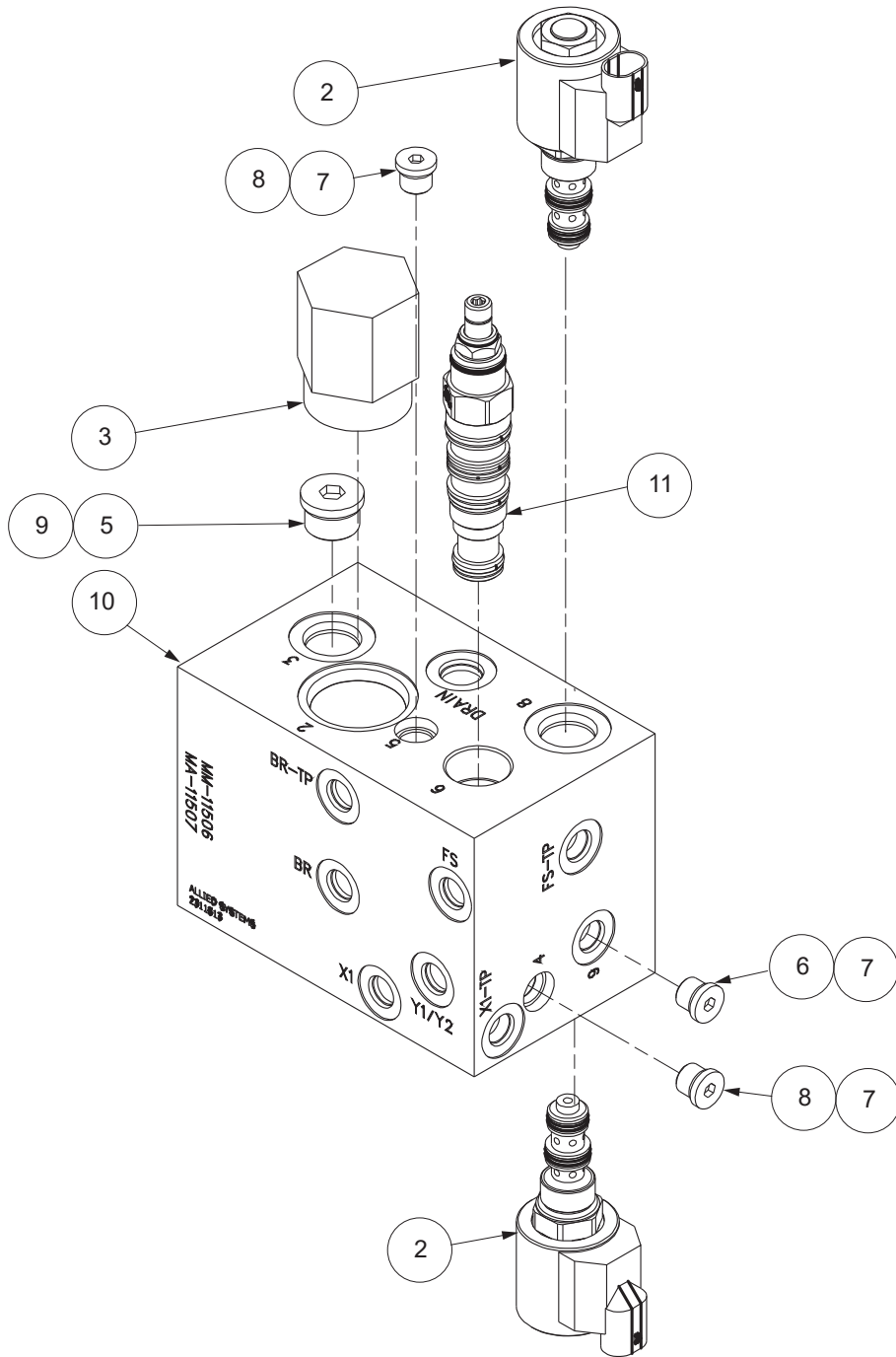
Komatsu D51-22 (K37)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
<b>2307694W Hydraulic Motor, Single Speed</b>							
	2307289W	1	.. Motor, Single Speed Vane	15	2307962W	2	.. Timing Plate
1	*a 238060	1	.. Ring, Snap	16	238070	1	.. Stator
2	*a 238061	1	.. Plate, Seal	17	238073	1	.. Rotor
3	*a 238056	1	.. Seal	18	*b 238074	10	.. Vane, Rotor
5	*a 238058	1	.. O-Ring	19	*b 238075	20	.. Spring, Outer
6	238062	1	.. Ring, Snap	20	*b 238076	20	.. Spring, Inner
7	238063	1	.. Bearing	21	*b 238072	4	.. Vane, Stator
8	238064	1	.. Shaft	22	*b 238071	8	.. Spring, Vane
9	238065	4	.. Bolt	23	238080	2	.. Pin, Rear Dowel
10	NSS	1	.. Housing	24	238078	1	.. Bearing, Needle
11	238067	2	.. Pin, Front Dowel	25	NSS	1	.. Housing, Rear
12	*a 238059	4	.. O-Ring				
13	238077	4	.. Check, Ball				
14	238068	4	.. Screw				
				*a	Included in Seal Kit 2307244W		
				*b	Included in Vane & Spring Kit 246726		

## Control Manifold

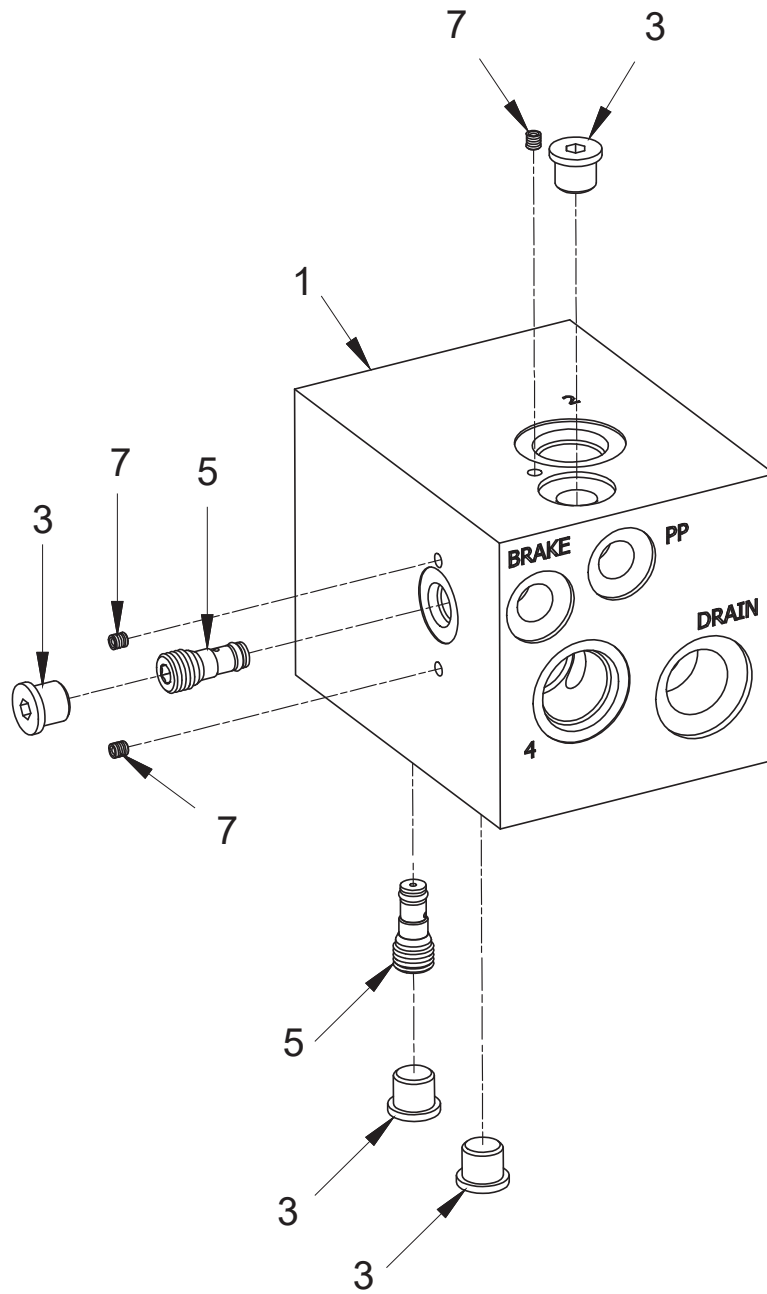
Komatsu D51-22 (H5CH2E\*\*K37)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311613</b>		<b>Manifold, Control</b>	7	235387	3	. Fitting
2	2310430	2	. Valve, Cartridge	8	2307227W	2	. Valve, Shuttle
	R15668	1	.. Seal Kit		2307231W	1	.. Seal Kit
3	2307461W	1	. Valve, Directional	9	2310368	1	. Plug, Orifice
5	229345	1	. Fitting	10	Ref.		. Manifold
6	2310369	1	. Plug, Orifice	11	2311592	1	. Valve, Brake
					252566	1	.. Seal Kit

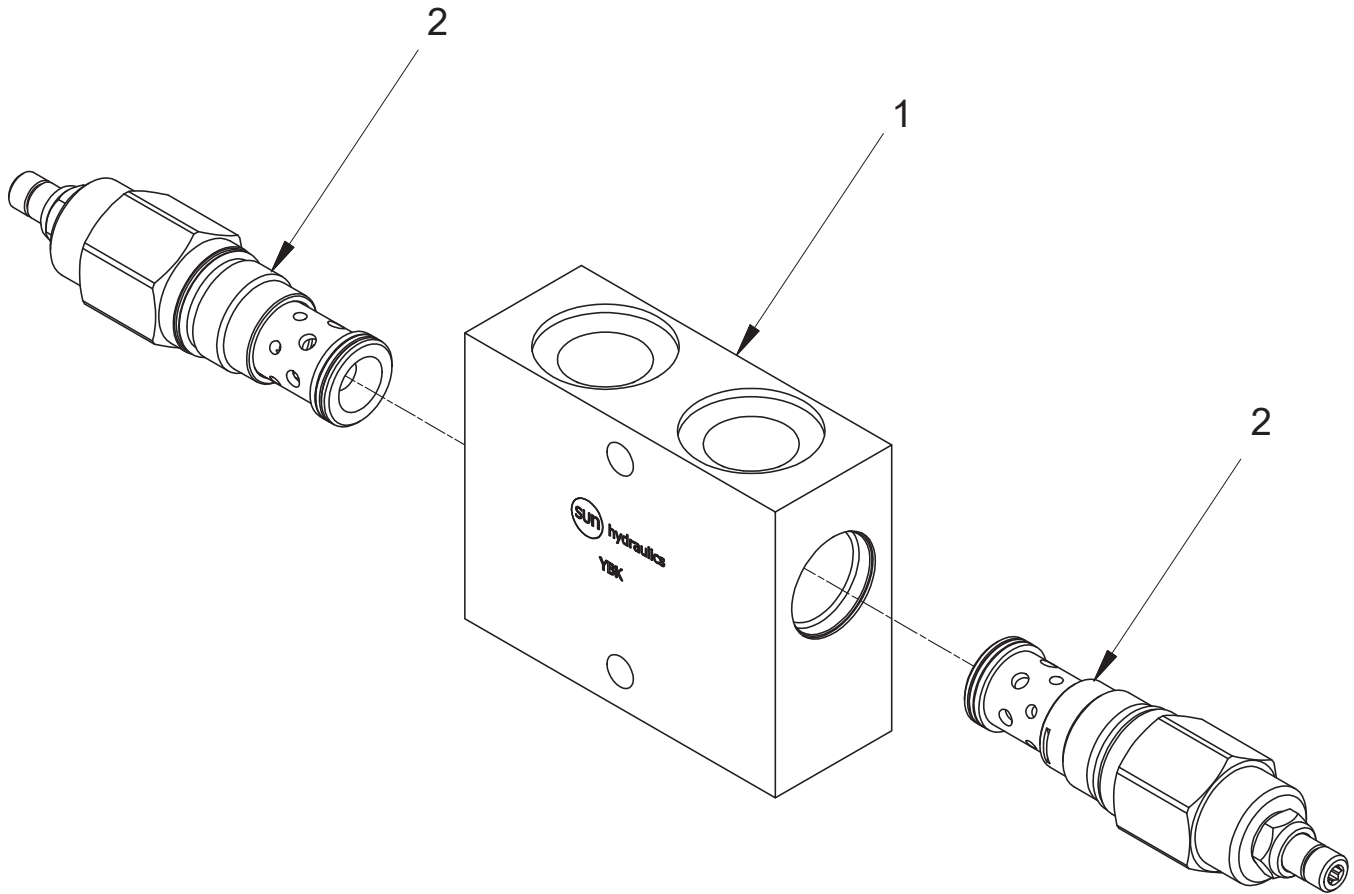
# Control Manifold Assembly

Komatsu



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2307551W</b>		<b>Control Manifold Assy</b>				
1	2307550W	1	. Control Manifold				
3	222442W	4	. Fitting				
5	2307227W	2	. Valve, Shuttle				
	2307231W	1	. . Seal Kit				
7	2307480W	3	. Plug, Expansion				

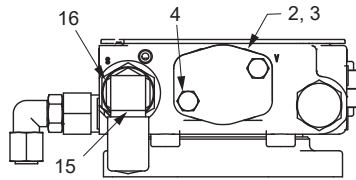
**Cross Port Relief Assembly**



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2307440W</b>		<b>Assy, Cross Port Relief</b>				
1	2307439W	1	. Manifold				
2	2307438W	2	. Relief Valve				
	259258	1	.. Kit, Seal				

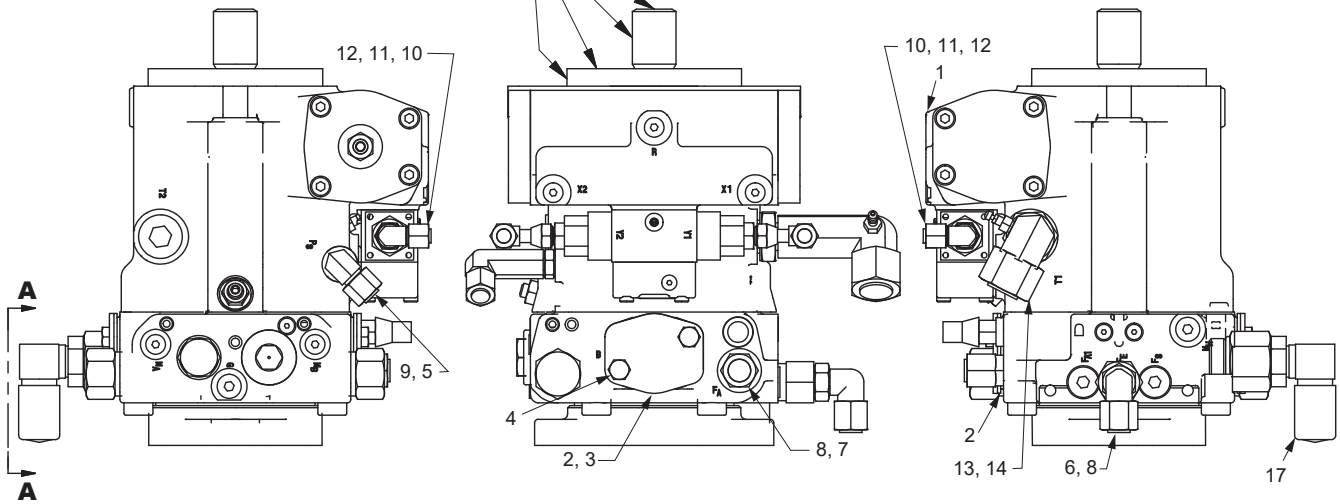
# Pump Assembly

Komatsu D51-22 (K37)



VIEW A-A

NO PAINT ON THESE SURFACES, COAT WITH PROCYON RUST UNHIBITOR

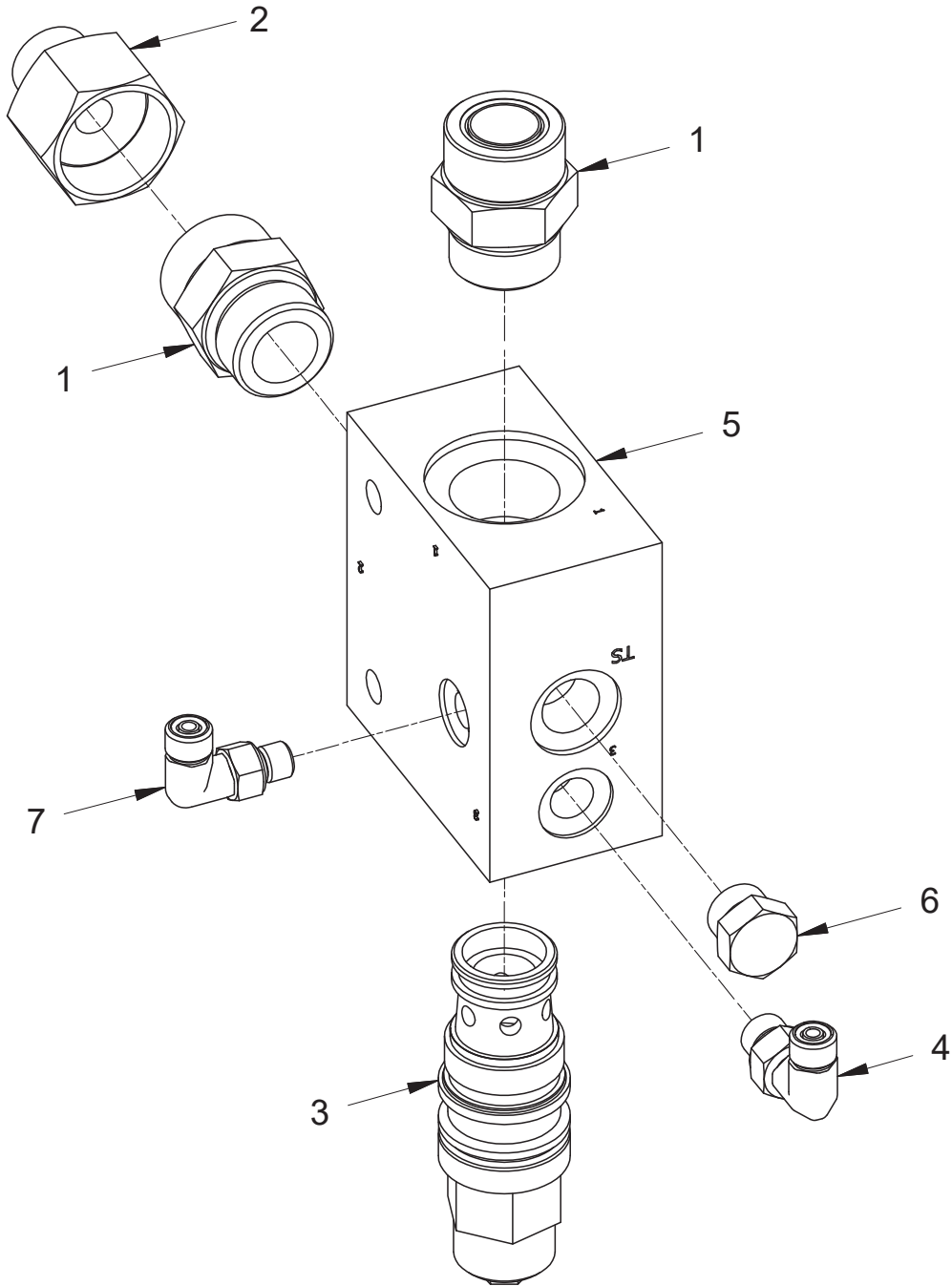


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311535</b>		<b>Pump Assembly</b>				
1	2306424W	1	. Pump, Hydrostatic	10	R833103	2	. Fitting
2	2304257W	2	. Gasket	11	R833800	2	. Fitting
3	2304258W	2	. Plate	12	232984	2	. Fitting
4	18535W	4	. Capscrew	13	2311868	1	. Assy, Bleeder Fitting
5	R833301	1	. Fitting	14	231821	1	. Fitting
6	231452	1	. Fitting	15	127574W	1	. Fitting
7	231441	1	. Fitting	16	218181	1	. Fitting
8	R834253	2	. Fitting	17	2311828	1	. Cap
9	231822	1	. Fitting				

## Counterbalance Manifold Assembly

Level 1, Rescue Winch, 2-Speed (H5CT-D)

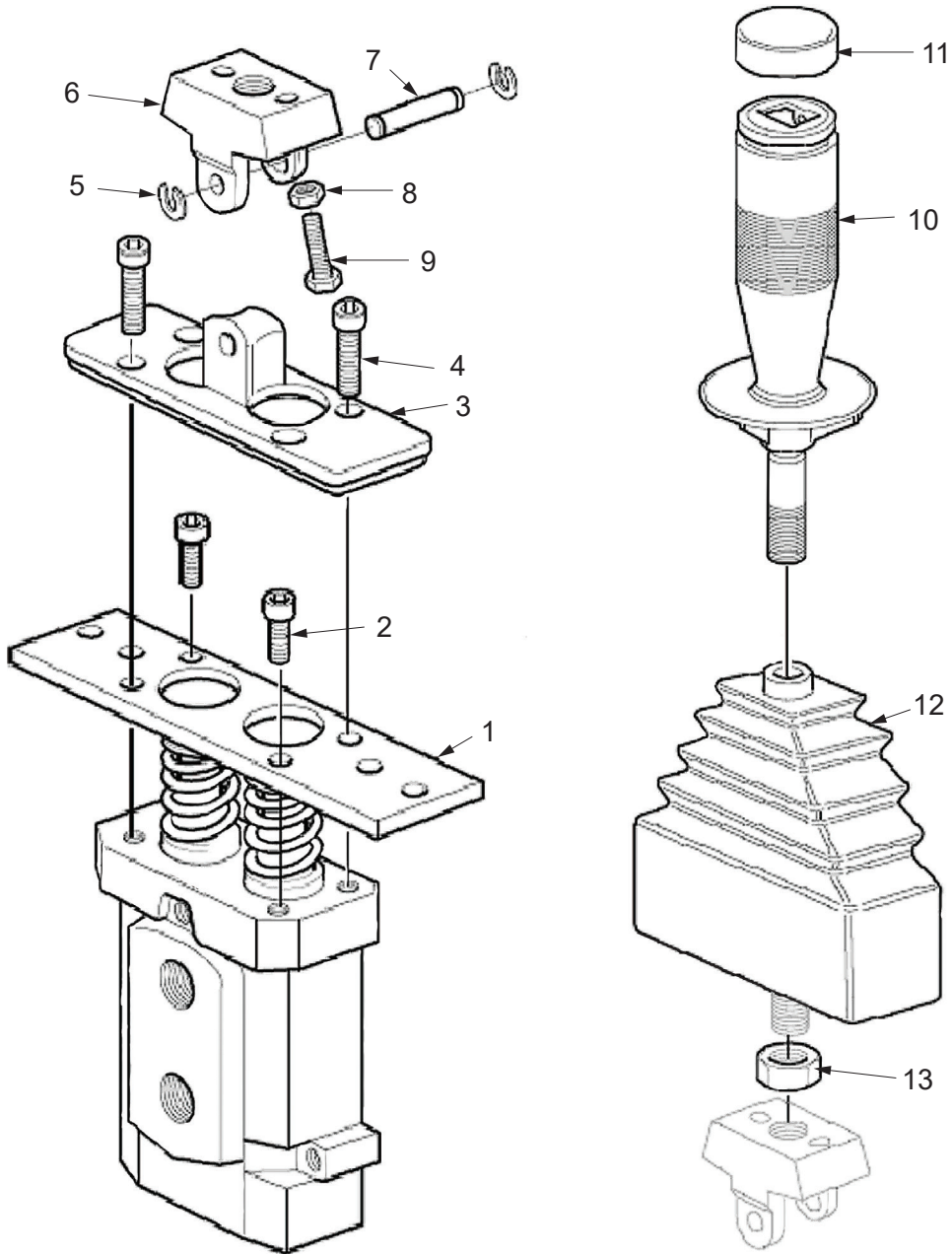
Komatsu D51-22 (K37)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2313705</b>		<b>Assembly, Counterbalance Manifold</b>				
1	231444	2	. Fitting	5	2307632W	1	. Manifold, T17A, Modified
2	2307104W	1	. Fitting	6	210709	1	. Fitting
3	2307265W	1	. Valve, Counterbalance	7	2311500	1	. Assy, Orifice Fitting
	243815	1	.. Kit, Seal		2311499	1	.. Fitting, Modified
4	2311339	1	. Orifice Fitting Assy		2310181	1	.. Plug, Orifice
	2310698	1	.. Fitting, Modified				
	2310181	1	.. Plug, Orifice				



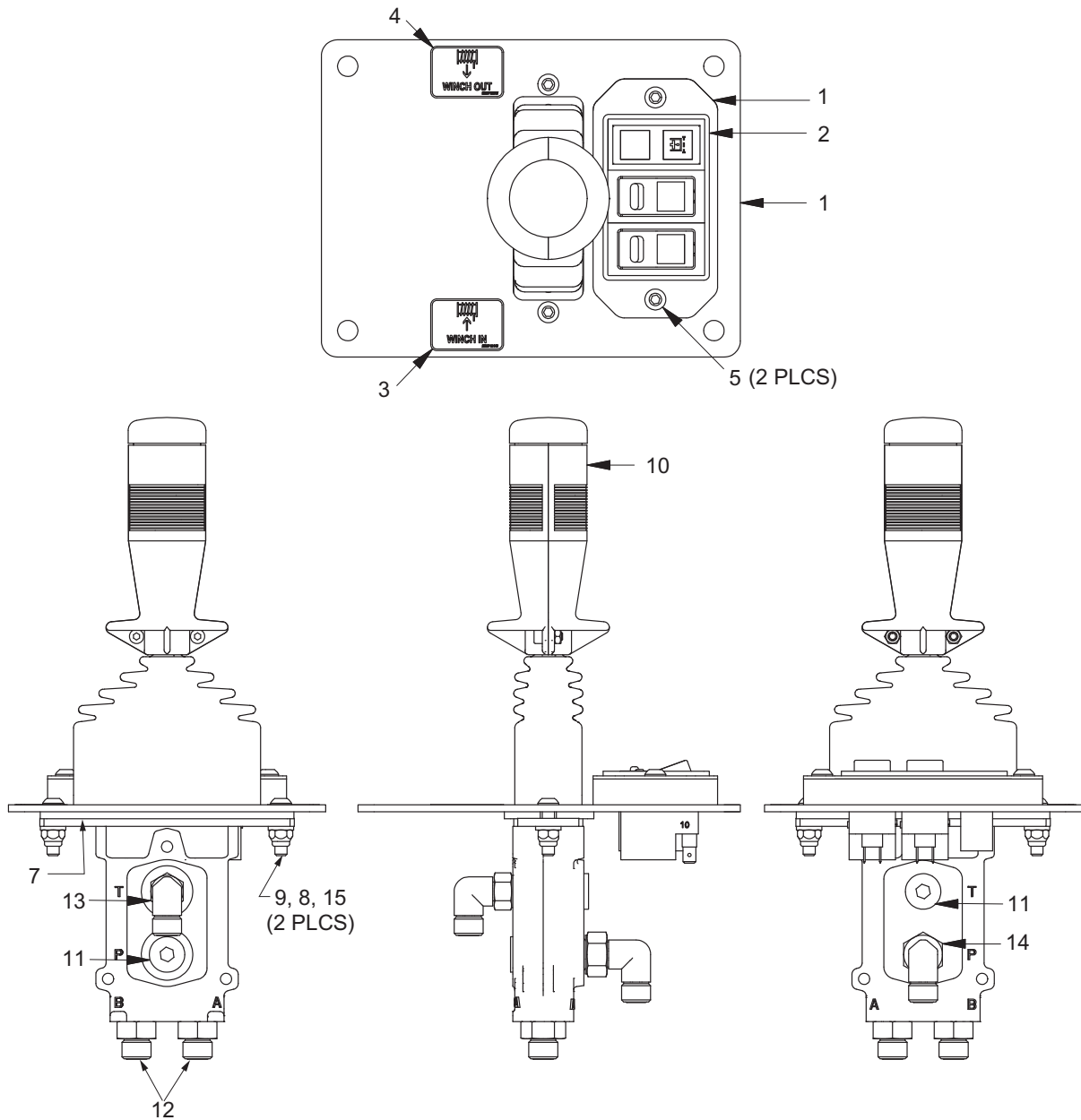
## Handlever Assembly



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

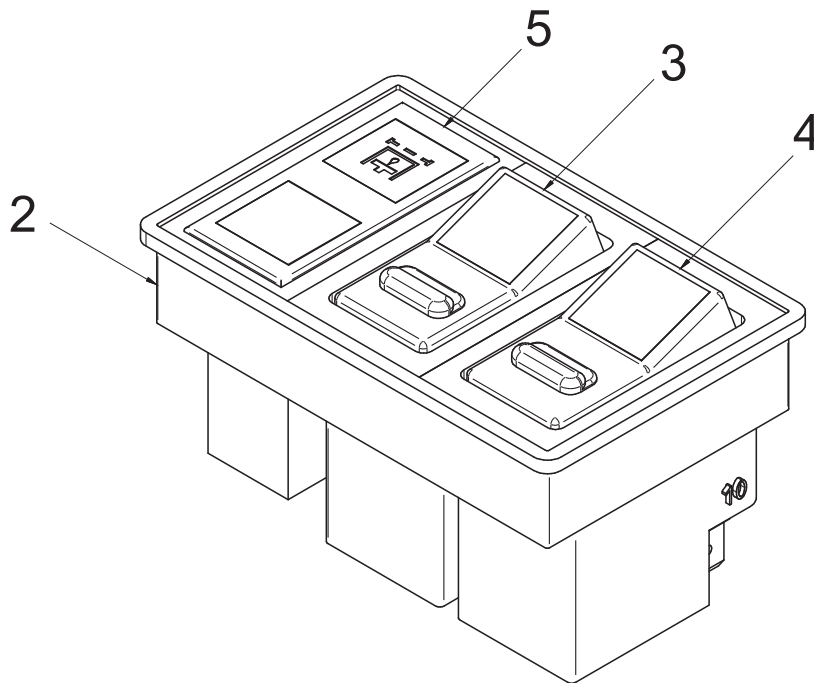
### Control Lever Assembly

Komatsu D51-22 (K37)



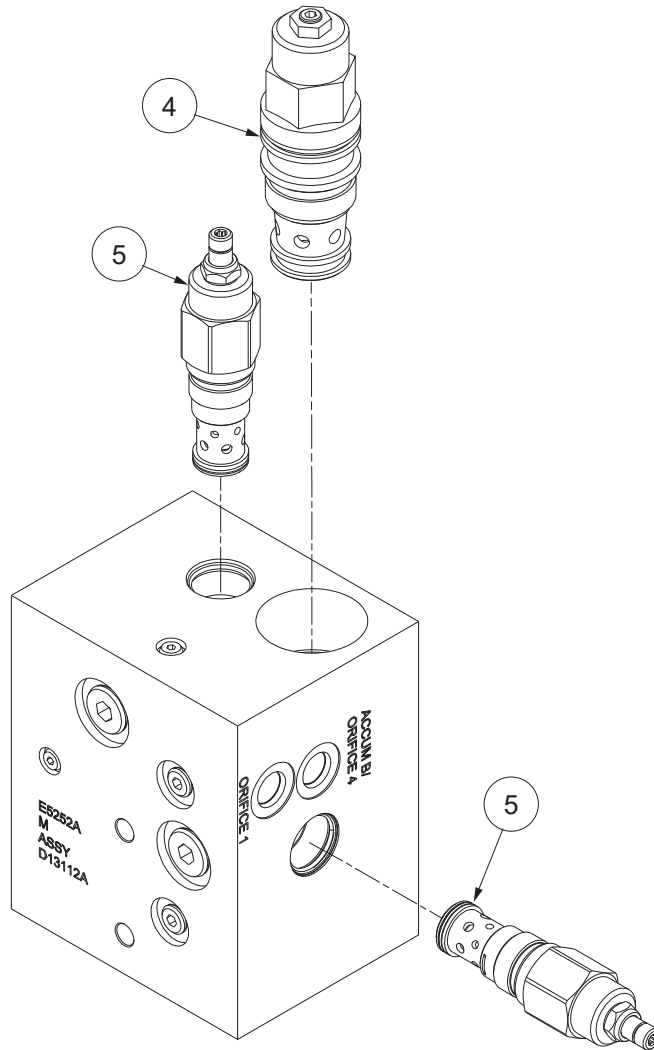
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311532</b>		<b>Assembly, Control Lever</b>				
1	2311531	1	. Control Lever Bracket	9	R13808536	2	. Capscrew
2	2311350	1	. Switch Assembly (See p. 71)	10	2310929	1	. Control Lever, Pilot (See p. 69)
3	2307121W	1	. Decal, Winch In	11	229383	2	. Fitting
4	2307122W	1	. Decal, Winch Out	12	R833103	2	. Fitting
5	296157W	2	. Capscrew	13	R833251	1	. Fitting
6	2311863	1	. Plate, Switch Mounting	14	R833253	1	. Fitting
7	2311992	1	. Control Lever Spacer	15	296417W	2	. Washer
8	302399W	2	. Nut				

**Switch Assembly**  
Komatsu



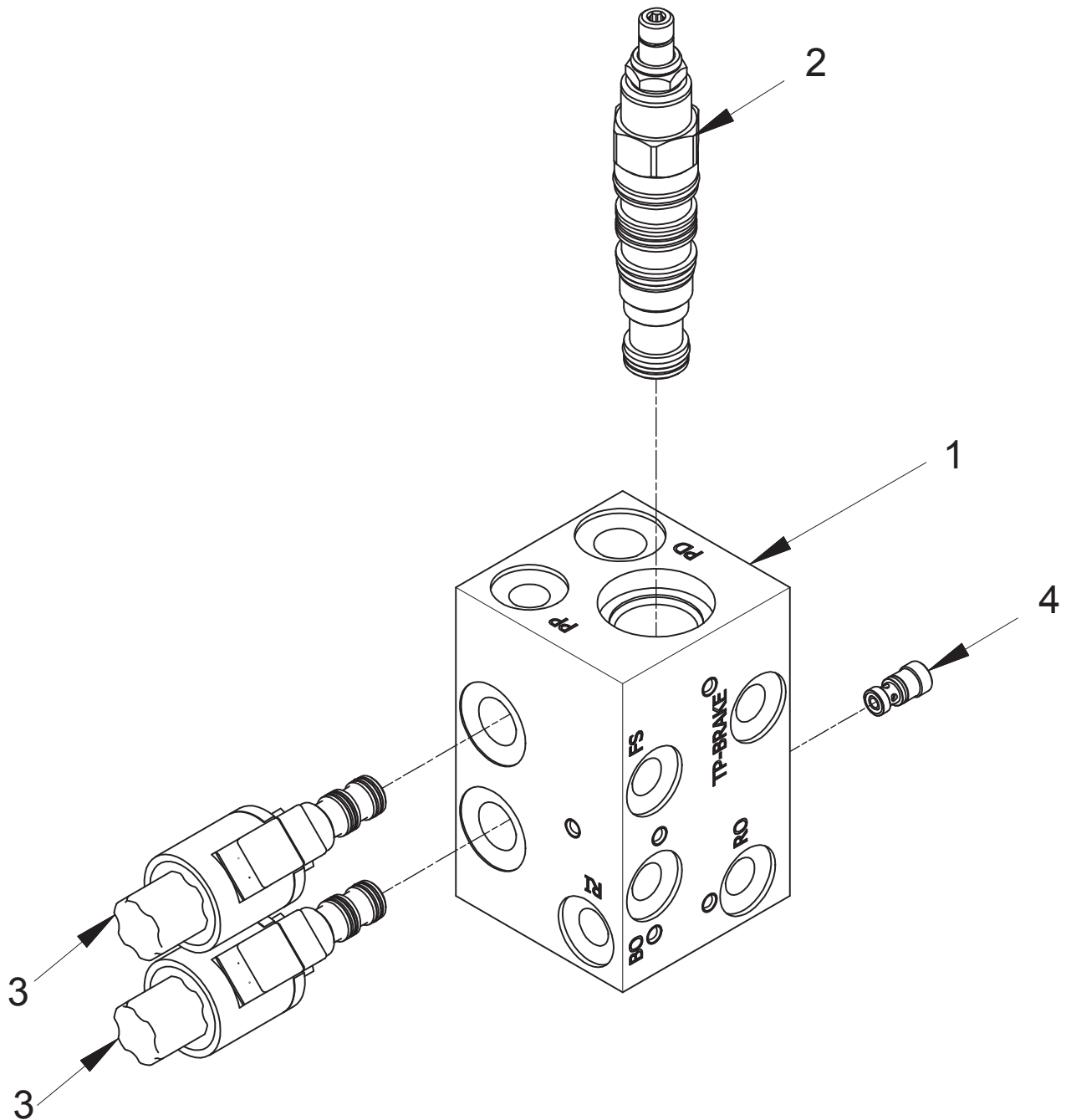
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2311350</b>	<b>1</b>	<b>Switch Assembly</b>				
2	234340	1	. Frame, Mounting	4	2310504	1	. Assy, w/Lock, 24V Red LED
3	2310013	1	. Assy, Switch, 24V Yellow LED	5	2311352	1	. Assy, Oil Filter Indicator

## Counterbalance Manifold Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2314984</b>		<b>Counterbalance Manifold Assembly</b>				
4	2312068	1	. Counterbalance Valve				
	243815		. . Kit, Seal				
5	2307438W	2	. Relief Valve				
	259258	1	. . Seal Kit				

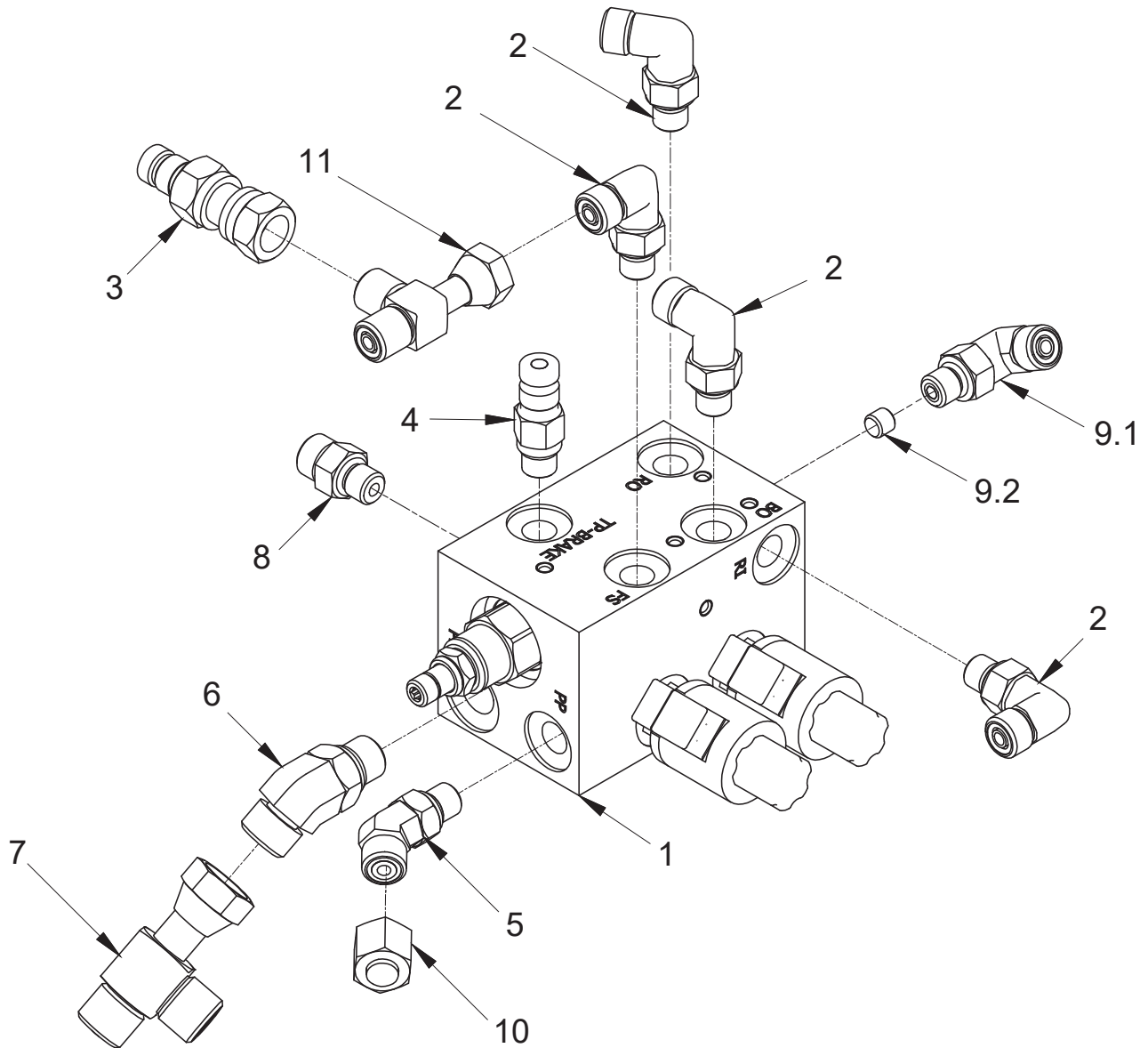
### Control Manifold Assembly



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

# Control Manifold Assembly

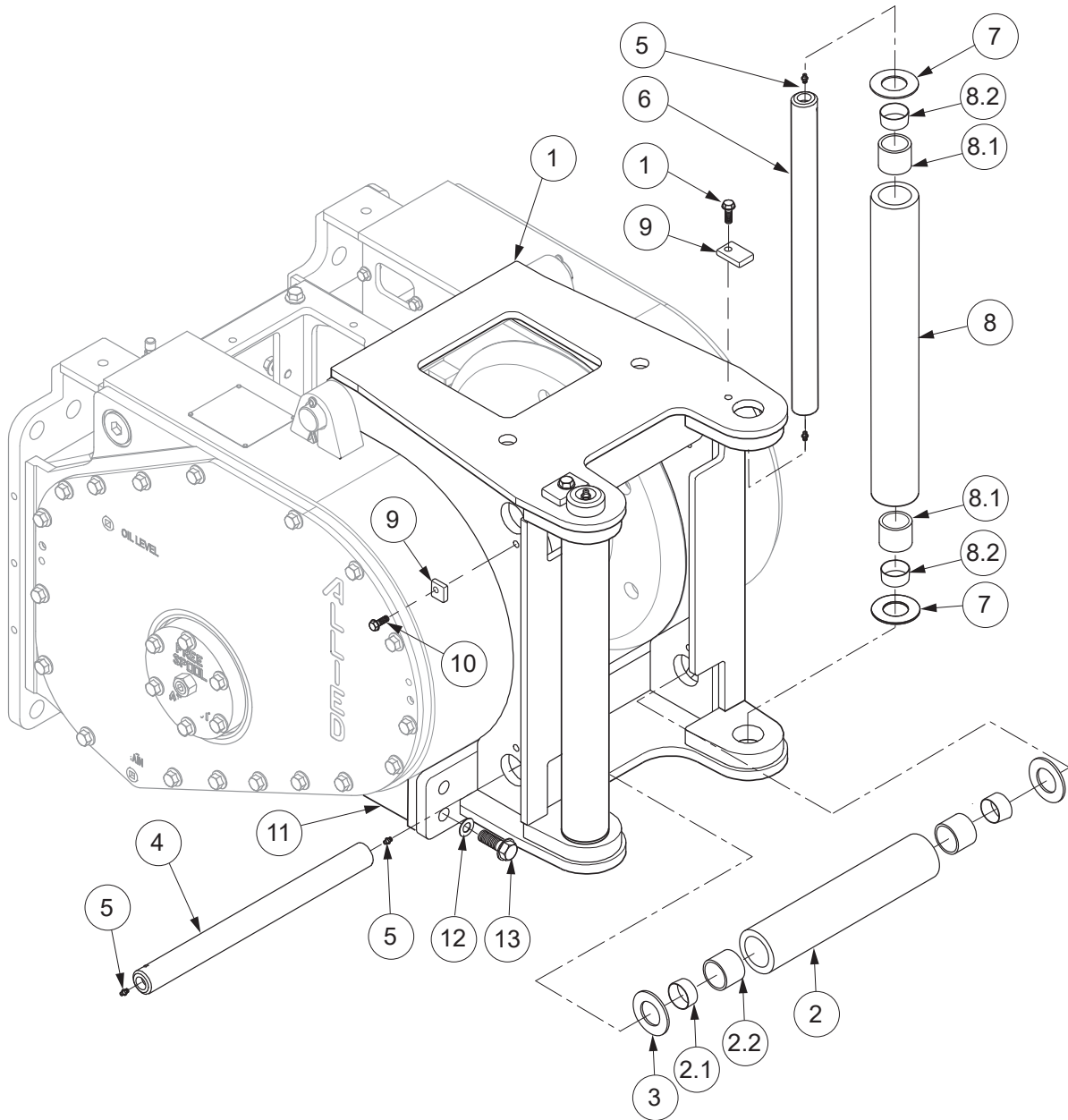
Komatsu



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2313635</b>		<b>Assy, Control Manifold</b>				
1	2311770	1	. Assy, Control Manifold (See p. 73)	7	231955	1	. Fitting
2	R833251	4	. Fitting	8	231439	1	. Fitting
3	2307625W	1	. Coupler, Quick Male	9	2311500	1	. Assy, Orifice Fitting
4	R14040	1	. Coupler, Q.D. Male	9.1	2311499	1	. . Fitting, Modified
5	R833200	1	. Fitting	9.2	2310181	1	. . Plug, Orifice
6	R833204	1	. Fitting	10	232984	1	. Fitting
				11	236855	1	. Fitting

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

Fairlead

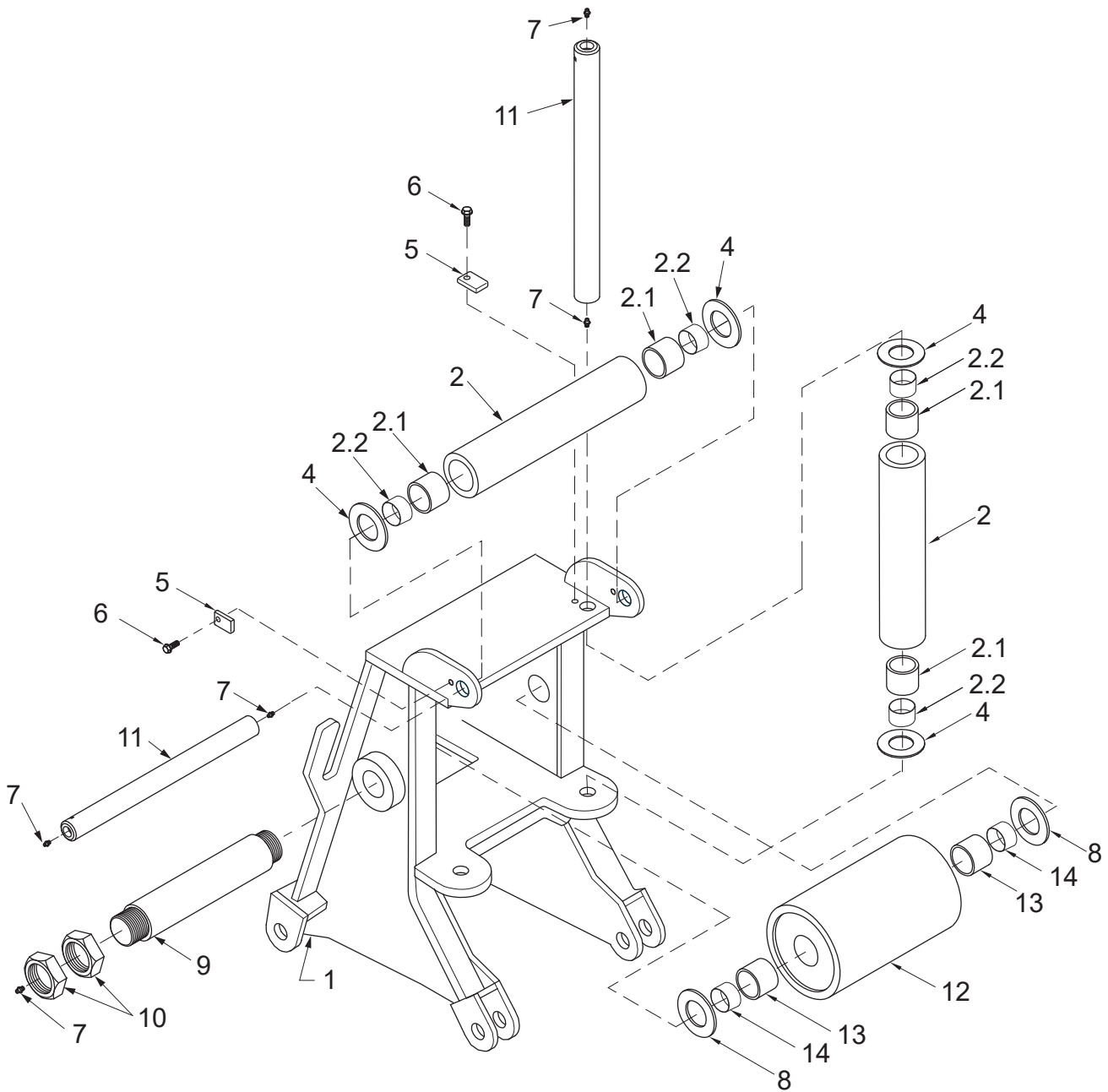


A = 3-Roller Fairlead  
 B = 4-Roller Fairlead

Item	Part No.	Qty A/B	Description	Item	Part No.	Qty A/B	Description
	<b>2307784W</b>	<b>1--</b>	<b>Fairlead, 3-Roller</b>	7	331767W	4/4	. Washer
	<b>2306335W</b>	<b>--1</b>	<b>Fairlead, 4-Roller</b>	8	2301907W	2/2	. Assy Roller
1	2306333W	1/1	. Frame	8.1	2301742W	2/2	. . Spacer
2	2301727W	1/2	. Assy Roller	8.2	35135W	2/2	. . Bushing
2.1	2570W	2/4	. . Bushing	9	2301706W	3/4	. Keeper
2.2	2301961W	2/4	. . Spacer	10	398817W	3/4	. Screw, Flange
3	33394W	2/2	. Washer	11	2306330W	2/2	Block, Mounting
4	2301722W	1/2	. Shaft	12	221777W	4/4	Washer
5	16001W	8/8	. Fitting, Lube	13	221657W	4/4	Capscrew
6	2306572W	2/2	. Shaft				

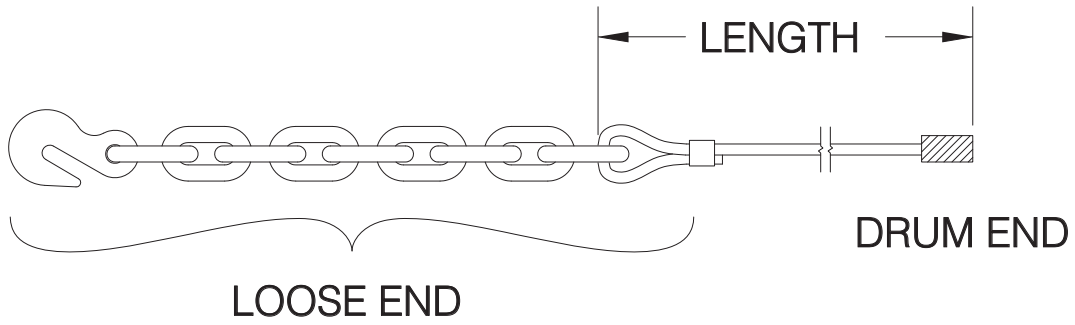


# Arch Assembly

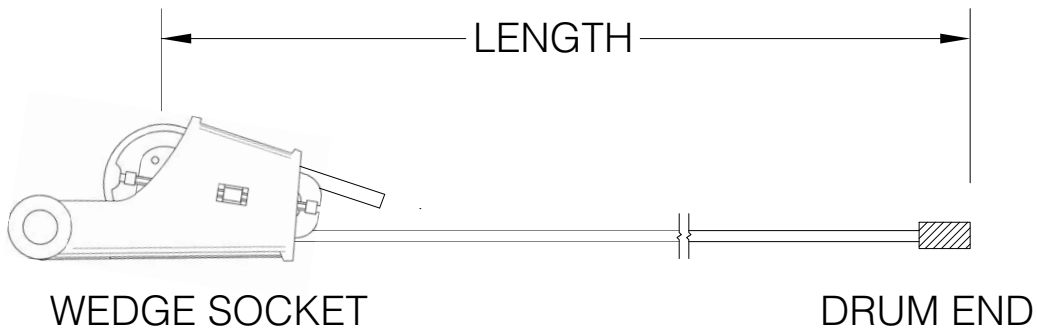


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	<b>2301923W</b>		<b>Assy Arch</b>				
1	2301922W	1	. Arch	7	16001W	8	. Fitting, Lube
2	2301910W	3	. Assy Roller	8	2821W	2	. Washer
2.1	2301742W	2	.. Spacer	9	2302120W	1	. Shaft
2.2	35135W	2	.. Bushing	10	221336W	4	. Nut
4	331767W	6	. Washer	11	2301919W	3	. Shaft
5	2301706W	3	. Keeper	12	2301925W	1	. Roller
6	398817W	3	. Capscrew	13	2301927W	2	.. Spacer
				14	2817W	2	.. Bushing

**Wire Rope Assemblies**



**Figure A**



**Figure B**

	<b>Wire Rope</b>	<b>Tail Chain &amp; Hook</b>
<b>Wire Rope Diameter Dia (in)</b>	<b>Breaking Strength New (lbs)</b>	<b>Working Load Limit (lbs) 3.5:1 Design Factor</b>
5/8	41,200	13,000
3/4	58,800	34,200
7/8	79,600	34,200

**⚠ CAUTION**

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

Part No.	Wire Diameter	Length FT (M)	Part No.	Wire Diameter	Length FT (M)
WR5-279L	5/8"	279 (85) *c			
WR5-423L	5/8"	423 (129) *a			
WR6-197L	3/4"	197 (60) *c			
WR6-298L	3/4"	298 (91) *a			
WR7-142L	7/8"	142 (43) *c			
WR7-215L	7/8"	215 (66) *a			
YS7-215LWS	7/8"	215 (66) *b			

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

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

## Recommended Winch Service Intervals and Kits

Follow the service schedule recommended here to help keep tractor winch downtime to a minimum, optimize winch operation, and extend the life of your investment. See Table 1 for recommended service intervals, and Table 2 for recommended service kits.

Hydraulic Winch Maintenance					
Recommended Winch Service Intervals					
Hours or **	Months **	Filter ***	Winch Gear Oil	Brake & Clutch	Major Overhaul
First 250	1	Change			
Every 500	3	Change			
Every 2,000	12		Change		
Every 5,000				*Inspect	
Every 10,000					*Evaluate
Lube rollers and check oil level and filter light every week.					

\* Evaluate = Service based on average winch use;

If used more than once a day, perform an overhaul.

If used less than once a day, remove covers and check to determine need.

\* Inspect = Disassemble and inspect for wear.

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

\*\*\* Follow tractor schedule if using dozer filter.

**Table 1 Recommended Winch Service Intervals**

Service Kits for H5C Winches			
Service Description	Kit Description	Winch Serial Number	Kit Part#
Filter change	Filter kit	All	Refer to tractor operator and service manuals
Complete oil change (every 1,000 hours)	N/A	All	Check our website for current operator's and service manuals for appropriate oils
Clutch and brake overhaul (every 5,000 hours)	Motor, reducer & brake assembly rebuild kit	All	2312857
Major overhaul (every 10,000 hours)	Intermediate/drum shaft & brake assembly rebuild kit	All	2311896

**Table 2 Routine Maintenance Kits**

## H5C Hydraulic Winch Recommended Service Parts

The following pages list some of the service parts and kits that are available for your Allied H5C Winch.

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

Page 82 and page 83 contain kits for 5,000 hour and 10,000 hour scheduled maintenance. Order these kits in preparation for these intervals. Each kit includes all parts listed in the table. Order parts from the table based on your winch.

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

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

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

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

Gaskets & Seals		Order as Required		
Allied P/N	Description	Quantity on Winch	See Parts Manual Page	Order Quantity
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
259258	Seal Kit, Relief Valve (P/N 2307440W)	2	Cross Port Relief Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	CBR Manifold Assembly	
259258	Seal Kit (Buna), Relief Valve (P/N 2307438W)	2	CBR Manifold Assembly	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold Assembly	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assembly	
2307231W	Seal Kit, Shuttle Valve (P/N 2307551W)	1	Control Manifold Assembly	
243815	Seal Kit, Counterbalance Valve (P/N 2307265W)	1	CBR Manifold Assembly	
R15668	Seal Kit, Solenoid Cartridge Valve (P/N 2310430)	1	Valve Manifold Assembly	
2307231W	Seal Kit, Shuttle Valve (P/N 2307227W)	1	Control Manifold Assembly	
2313495	Seal Kit, Directional Valve (P/N 2307461W)	1	Control Manifold Assembly	
2304257W	Gasket, Pump Assembly (P/N 2311535)	1	Pump Assembly	

### Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2312857

Applies to: All

Service Interval: Every 5,000 Hours

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
<b>2312857</b>	<b>Kit, Motor, Reducer &amp; Brake Assy Rebuild</b>	<b>1</b>		
12916W	. Ring, Snap	2	Motor Shaft	
12944W	. Ring, Snap	1	Motor Shaft	
2306073W	. Seal, Rotary	2	Hydraulic Group	
89776W	. O-Ring	3	Hydraulic Group	
86596W	. O-Ring	1	Hydraulic Group	
87287W	. O-Ring	1	Motor Shaft	
334475W	. Ring, Snap	1	Motor Shaft	
12944W	. Ring, Snap	1	Motor Shaft	
246722	. Kit, Seal	1	Hydraulic Motor	

**Intermediate/Drum/Idler Shaft, Motor and Brake Assembly Rebuild Kit, P/N: 2311896**  
**Service Interval: Every 10,000 hours**

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
<b>2311896</b>	<b>Kit, Intermediate, Idler, Drum Shaft, Motor &amp; Brake Assembly Rebuild</b>	<b>1</b>		
41207W	. Bearing, Ball	1	Motor Shaft	
41210W	. Bearing, Ball	1	Motor Shaft	
2306198W	. Disc, Friction	7	Motor Shaft	
2304874W	. Plate, Separator	8	Motor Shaft	
218214	. O-Ring	1	Intermediate Gear Shaft	
212380	. O-Ring	1	Intermediate Gear Shaft	
159940W	. O-Ring	1	Intermediate Gear Shaft	
2305923W	. Cone, Roller Bearing	1	Intermediate Gear Shaft	
45733W	. Cup, Roller Bearing	1	Intermediate Gear Shaft	
219114W	. Cone, Roller Bearing	1	Intermediate Gear Shaft	
2302515W	. Cup, Roller Bearing	1	Intermediate Gear Shaft	
133523W	. Seal, Oil	1	Drum Shaft	
339681W	. Seal, Oil	1	Drum Shaft	
219093W	. Cone, Roller Bearing	1	Drum Shaft	
219094W	. Cup, Roller Bearing	1	Drum Shaft	
12956W	. Ring, Snap	2	Drum Shaft	
219095W	. Bearing, Roller	1	Drum Shaft	
203533	. O-Ring	1	Drum Shaft	
2304580W	. Bearing, Cylinder Roller	1	Idler Shaft	
41207W	. Bearing, Ball	1	Idler Shaft	
12916W	. Ring, Snap	1	Idler Shaft	

Operator Control Components		Order as Required		
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Quantity
2310504	Switch Assy w/Lock, 24V w/Red LED	1		
2310013	Switch Assy w/Lock, 24V w/Yellow LED	varies		

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

TC = Tail chain and hook  
 WS = Wedge socket



**Tool Kits**

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

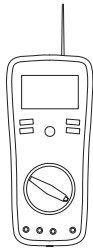
Allied P/N	Description	Order Quantity
588466	Socket Set, 3/8DR 3/8" to 7/8" STD/Deep, 22 PC	
588467	Socket Set, 1/2DR 3/8" to 1-1/4" STD/Deep, 30 PC	
588468	Socket Set, 3/4DR 7/8" to 2-3/8" STD, 29 PC	
588469	Wrench Set, 5/16" to 2-1/2", 31 PC	
588527	Hex Key Sets, .025" to 5/8", 18 PC	
588530	Socket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

**Diagnostic Tools**

**Order as Required**

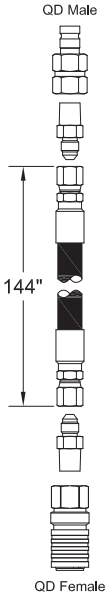
**Order these Tools as required for maintenance and service of your winch(es).**

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



**69778**  
Multi-Meter, 12 Function

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

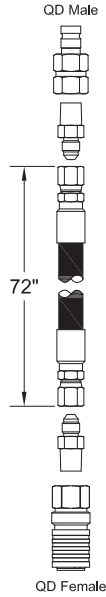


QD Male

144"

QD Female

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

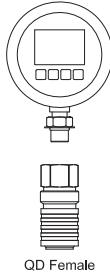


QD Male

72"

QD Female

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



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

## Numerical Index

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
11740	53	2.1	231452	67	6	238060	63	1
11740	57	3.1	231463	43	46.19	238061	62	4
24531	53	2.2	231465	53	1.12	238061	63	2
24531	57	3.2	231821	51	47	238062	62	6
203533	34	21	231821	67	14	238062	63	6
209423	40	13.35	231822	51	49	238063	62	7
209579	47	2.2	231822	67	9	238063	63	7
209579	53	1.35	231847	53	1.22	238064	62	8
209579	59	46.2	231955	51	19	238064	63	8
209579	61	2.2	231955	57	1.42	238065	62	9
209589	40	13.4	232053	51	14	238065	63	9
209589	57	1.21	232356	51	7	238067	62	11
209695	11	31	232960	40	35.31	238067	63	11
210709	68	6	232960	43	48.14	238068	62	14
212380	36	3	232960	47	7.14	238068	63	14
218181	67	16	232960	53	1.26	238070	62	16
218214	36	1	232960	59	48.14	238070	63	16
229345	40	35.17	232960	61	7.14	238071	62	22
229345	64	5	232984	51	50	238071	63	22
229383	53	1.24	232984	67	12	238072	62	21
229383	57	1.2	234340	71	2	238072	63	21
229383	70	11	235314	43	48.4	238073	62	17
231439	33	20.26	235314	44	18	238073	63	17
231439	36	21	235314	47	7.4	238074	62	18
231439	40	13.2	235314	59	48.4	238074	63	18
231439	53	1.19	235314	61	7.4	238075	62	19
231440	40	13.25	235387	40	35.16	238075	63	19
231440	43	46.23	235387	53	1.23	238076	62	20
231440	47	2.23	235387	64	7	238076	63	20
231440	53	1.16	236805	51	60	238077	62	13
231440	57	1.31	236805	55	15	238077	63	13
231440	59	46.23	236855	40	13.22	238078	62	23
231440	61	2.23	236855	53	1.2	238078	63	24
231441	67	7	236973	43	46.2	238080	62	25
231443	43	46.7	236973	47	2.2	238080	63	23
231443	47	2.7	236973	59	46.2	243178	53	1.45
231443	59	46.7	236973	61	2.2	243178	57	1.39
231443	61	2.7	237271	17	5.4	243815	40	
231444	40	13.1	237271	21	5.4	243815	68	
231444	53	1.11	238056	62	2	243815	72	
231444	68	1	238056	63	3	248986	51	31
231450	43	46.12	238058	62	5	251199	51	78
231450	47	2.12	238058	63	5	252134	40	
231450	59	46.12	238059	62	12	252566	64	
231450	61	2.12	238059	63	12	252566	73	
231452	40	13.39	238060	62	1	254002	40	35.7

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
254002	43	48.29	2310340	47	2.15	2310603	47	2. 25
254002	47	7.29	2310340	59	46.15	2310603	59	46.25
254002	59	48.29	2310340	61	2.15	2310603	61	2.25
254002	61	7.29	2310365	43	48.28	2310634	40	35.6
254261	43	48.26	2310365	47	7.28	2310634	43	48.27
254261	47	7.26	2310365	59	48.28	2310634	47	7.27
254261	59	48.26	2310365	61	7.28	2310634	59	48.27
254261	61	7.26	2310368	64	9	2310634	61	7.27
257331	53	1.44	2310369	64	6	2310637	40	13.24
257331	57	1.2	2310414	51	73	2310698	40	
259258	66		2310430	40	13.51	2310698	68	
259258	72		2310430	64	2	2310754	43	48.6
2310001	40	35.26	2310504	71	4	2310754	47	7.6
2310002	40	35.27	2310535	43	46.31	2310754	59	48.6
2310003	40	35.28	2310535	47	2. 31	2310754	61	7.6
2310003	57	4.9	2310535	59	46.31	2310832	43	48.1
2310004	40	35.29	2310535	61	2.31	2310832	59	48.1
2310004	57	4.1	2310536	43	46.17	2310832	61	7.1
2310005	40	35.3	2310536	47	2.17	2310915	11	30
2310006	40	35.25	2310536	59	46.17	2310917	43	48.16
2310013	71	3	2310536	61	2.17	2310917	47	7.16
2310025	11	25	2310543	43	46.14	2310917	59	48.16
2310025	17	5.1	2310543	47	2.14	2310917	61	7.16
2310025	21	5.1	2310543	59	46.14	2310918	43	48.19
2310032	11	37	2310543	61	2.14	2310918	47	7.19
2310045	11	27	2310554	43	46.21	2310918	59	48.19
2310045	17	5.3	2310554	47	2.21	2310918	61	7.19
2310045	21	5.3	2310554	59	46.21	2310919	40	35.36
2310104	12	21	2310554	61	2.21	2310919	43	48.2
2310104	18	8	2310563	43	48.11	2310919	47	7.2
2310104	22	1.7	2310563	47	7.11	2310919	53	1.4
2310104	23	7	2310563	59	48.11	2310919	57	4.5
2310168	40	13.32	2310563	61	7.11	2310919	59	48.2
2310168	57	1.32	2310564	43	48.7	2310919	61	7.2
2310181	40		2310564	47	7.7	2310920	40	35.37
2310181	68		2310564	59	48.7	2310920	43	48.21
2310181	68		2310564	61	7.7	2310920	47	7.21
2310181	74	9.2	2310565	43	48.8	2310920	53	1.41
2310213	11	29	2310565	47	7.8	2310920	57	4.6
2310213	17	5.5	2310565	59	48.8	2310920	59	48.21
2310213	21	5.5	2310565	61	7.8	2310920	61	7.21
2310339	43	46.13	2310566	43	48.9	2310922	43	48.5
2310339	47	2.13	2310566	47	7.9	2310922	47	7.5
2310339	59	46.13	2310566	59	48.9	2310922	59	48.5
2310339	61	2.13	2310566	61	7.9	2310922	61	7.5
2310340	43	46.15	2310603	43	46.25	2310929	69	

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
2310929	70	10	2311577	51	66	2312609	69	10
2311329	8	3	2311578	51	44	2312610	69	11
2311330	8	5	2311579	51	43	2313443	53	1.4
2311339	40	13.52	2311587	51	45	2313443	57	1.11
2311339	68	4	2311592	64	11	2313635	57	1.1
2311350	70	2	2311592	73	2	2313638	57	1.41
2311350	71		2311594	43	48.25	2313639	53	1.43
2311352	71	5	2311594	59	48.25	2313639	57	1.18
2311411	27	22.1	2311605	51	51	2313640	57	1.17
2311411	29	21.1	2311613	43	46.1	2313641	57	1.3
2311412	35		2311613	47	2.1	2313676	54	1.13
2311499	68		2311613	59	46.1	2313676	55	13
2311499	74	9.1	2311613	61	2.1	2313698	11	38
2311500	68	7	2311613	64		2313705	57	1.5
2311505	51	3	2311701	57	4.7	2313705	68	
2311507	51	2	2311770	53	1.2	2313710	57	4.11
2311513	51	1	2311770	73		2313715	57	1.4
2311523	51	61	2311771	73	1	2313765	57	1.43
2311527	51	9	2311779	51	62	2313796	54	1.11
2311528	51	10	2311781	51	64	2313796	55	11
2311531	70	1	2311788	51	59	2313910	57	4.8
2311532	51	12	2311828	67	17	2313921	40	
2311532	70		2311863	70	6	2313984	73	
2311535	51	15	2311865	51	68	2314062	27	20.1
2311535	67		2311866	51	69	2314062	29	20.1
2311539	51	65	2311868	67	13	2314062	31	20.1
2311549	47	7.31	2311877	51	72	2314062	33	20.1
2311549	59	48.31	2311901	18	3	2314106	73	
2311549	61	7.31	2311931	51	57	2314338	55	17
2311550	51	18	2311932	51	75	2314384	47	2.16
2311550	53	1.34	2311982	51	34	2314384	61	2.16
2311553	51	27	2311989	51	33	2314983	53	1.3
2311557	8	40	2311991	51	77	2314984	53	1.1
2311563	51	41	2311992	70	7	2314984	72	
2311565	51	52	2312068	72	4	2314986	53	1.7
2311566	51	42	2312073	73	3	2315005	8	1
2311568	51	39	2312074	73	4	2316073	55	12
2311569	51	38	2312111	73		2316646	53	1.5
2311570	51	36	2312112	73		2518353	18	4
2311571	51	37	2312197	53	1.6	23115671	51	53
2311572	51	56	2312197	57	1.16	23118861	51	
2311572	57	4.12	2312217	54	1.12	127574W	67	15
2311573	51	40	2312218	53	1.42	12916W	27	20.12
2311574	51	35	2312218	57	1.1	12916W	29	20.12
2311575	51	54	2312606	69	13	12916W	31	20.12
2311576	51	55	2312608	69	12	12916W	33	20.12

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
12916W	35	6	15290W	17	30.17	188210W	11	11
12944W	27	20.18	15290W	21	30.17	188210W	14	30.6
12944W	29	20.18	15315W	14	30.16	188210W	17	30.6
12944W	31	20.18	15315W	17	30.16	188210W	21	30.6
12944W	33	20.18	15315W	21	30.16	219066W	35	4
129563W	55	10	15961W	40	35.3	219084W	27	20.17
12956W	34	18	159940W	36	7	219084W	29	20.17
1300780W	34	3	16001W	76	5	219084W	31	20.17
1314503W	34	2	16001W	77	7	219084W	33	20.17
1314656W	11	3	16151W	11	10	219093W	34	15
1314656W	14	15.2	16151W	14	30.5	219094W	34	16
1314656W	17	15.2	16151W	17	30.5	219095W	34	19
1314656W	21	15.2	16151W	21	30.5	219114W	36	11
1321665W	8	2	16243W	11	21	221336W	77	10
133523W	34	10	16243W	14	30.12	221569W	51	26
134803W	43	48.2	16243W	14	31.2	221657W	76	13
134803W	47	7.2	16243W	14	32.2	221690W	12	8
134803W	59	48.2	16243W	14	33.4	221690W	18	1
134803W	61	7.2	16243W	17	30.12	221690W	22	1.3
141348W	33	20.7	16243W	17	31.2	221690W	23	3
15056W	11	33	16243W	17	32.2	221707W	57	1.8
15056W	40	13.5	16243W	17	33.4	221717W	11	13
15056W	40	35.21	16243W	21	30.12	221717W	36	13
15127W	40	13.46	16243W	21	31.2	221763W	53	1.3
15127W	57	1.36	16243W	21	33.4	221763W	57	1.15
15134W	40	13.4	16597W	43	46.22	221767W	57	1.7
15134W	40	35.19	16597W	47	2.22	221771W	51	25
15134W	43	46.11	16597W	59	46.22	221775W	34	8
15134W	47	2.11	16597W	61	2.22	221777W	76	12
15134W	59	46.11	16602W	8	4	221780W	12	9
15134W	61	2.11	16805W	40	13.36	221780W	18	2
15156W	11	35	16805W	40	35.18	221780W	22	1.4
15157W	43	46.1	16805W	43	46.9	221780W	23	4
15157W	47	2.1	16805W	57	1.6	222442W	40	13.42
15157W	59	46.1	16828W	11	32	222442W	65	3
15157W	61	2.1	16830W	34	6	222443W	11	12
15158W	29	23.4	176208W	11	8	222535W	51	20
15158W	31	23.4	176208W	14	30.3	224108W	36	23
15158W	33	23.4	176208W	17	30.3	224120W	53	1.29
15158W	34	5	176208W	21	30.3	224120W	57	1.14
15176W	11	34	18535W	67	4	225050W	36	15
15256W	11	5	18542W	40	13.3	230064W	23	22
15256W	14	15.4	18542W	57	1.26	2300842W	35	2
15256W	17	15.4	18588W	29	23.5	2301706W	76	9
15256W	21	15.4	18588W	31	23.5	2301706W	77	5
15290W	14	30.17	18588W	33	23.5	2301722W	76	4

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
2301727W	76	2	2304110W	51	29	2306189W	14	5
2301742W	76	8.1	2304111W	43	48.1	2306189W	17	1
2301742W	77	2.1	2304111W	47	7.1	2306189W	21	1
2301907W	76	8	2304111W	59	48.1	2306198W	27	20.2
2301910W	77	2	2304111W	61	7.1	2306198W	29	20.2
2301919W	77	11	2304112W	43		2306198W	31	20.2
2301922W	77	1	2304147W	53	1.1	2306198W	33	20.2
2301923W			2304257W	67	2	2306214W	29	23.1
2301925W	77	12	2304258W	67	3	2306214W	31	23.1
2301927W	77	13	2304580W	35	3	2306214W	33	24.2
2301961W	76	2.2	2304803W	11	14	2306228W	31	21.1
2302120W	77	9	2304803W	36	14	2306228W	33	22.1
2302333W	34	13	2304862W	43		2306229W	35	7
2302334W	34	20	2304874W	27	20.21	2306330W	76	11
2302335W	34	14	2304874W	29	20.21	2306333W	76	1
2302336W	34	11	2304874W	31	20.21	2306335W	76	
2302338W	34	22	2304874W	33	20.21	2306413W	27	25.1
2302379W	11	24	2305132W	43		2306413W	43	26.1
2302379W	34	17	2305415W	11	16	2306413W	47	1.1
2302513W	11	19	2305415W	36	18	2306424W	67	1
2302513W	14	33.2	2305732W	51	63	2306494W	29	24.3
2302513W	17	33.2	2305915W	36	10	2306494W	31	24.3
2302513W	21	33.2	2305923W	36	8	2306494W	33	24.3
2302515W	36	12	2306073W	27	20.14	2306509W	11	22
2302624W	36	6	2306073W	29	20.14	2306509W	14	32.1
2302625W	11	15	2306073W	31	20.14	2306509W	17	32.1
2302625W	36	17	2306073W	33	20.14	2306570W	11	6
2303221W	11	2	2306076W	27	24.2	2306570W	14	30.1
2303221W	14	15.1	2306077W	27	20.1	2306570W	17	30.1
2303221W	17	15.1	2306077W	29	20.1	2306570W	21	30.1
2303221W	21	15.1	2306077W	31	20.1	2306572W	76	6
2303256W	34	4	2306077W	33	20.1	2306599W	27	20.4
2303257W	34	1	2306078W	27	20.2	2306599W	29	20.4
2303848W	11	7	2306078W	29	20.2	2306599W	31	20.4
2303848W	14	30.2	2306078W	31	20.2	2306599W	33	20.4
2303848W	17	30.2	2306078W	33	20.2	2306604W	27	20.5
2303848W	21	30.2	2306079W	27	24.3	2306604W	29	20.5
2303902W	11	23	2306152W	43	48.17	2306604W	31	20.5
2303902W	34	7	2306152W	47	7.17	2306604W	33	20.5
2303906W	36	2	2306152W	59	48.17	2306646W	33	20.27
2303907W	36	5	2306152W	61	7.17	2306938W	29	25.1
2303908W	36	16	2306157W	43	48.18	2306938W	31	25.1
2304101W	11	9	2306157W	47	7.18	2306938W	53	3.1
2304101W	14	30.4	2306157W	59	48.18	2306938W	57	2.1
2304101W	17	30.4	2306157W	61	7.18	2306938W	62	
2304101W	21	30.4	2306189W	11	1	2306973W	12	13

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
2306973W	18	5	2307282W	35	1	264159W	29	20.25
2306973W	22	1.1	2307289W	63		264159W	33	20.25
2306973W	23	1	2307291W	53	1.9	272-0348	51	74
2306974W	12	14	2307291W	57	1.23	272-0350	51	6
2306974W	18	6	2307342W	11	17	272-0352	51	5
2306974W	22	1.2	2307342W	14	33.1	274044W	12	10
2306974W	23	2	2307342W	17	33.1	274044W	22	1.6
2307036W	43	46.16	2307342W	21	33.1	274044W	23	6
2307036W	59	46.16	2307403W	40	13.16	2817W	77	14
2307037W	36	22	2307403W	57	1.25	2821W	77	8
2307081W	36	20	2307438W	66	2	293628W	51	28
2307081W	51	8	2307438W	72	5	293628W	53	1.27
2307097W	14	31.1	2307439W	66	1	293637W	51	24
2307097W	17	31.1	2307440W	40	13.45	293644W	51	32
2307097W	21	31.1	2307440W	57	1.35	293645W	51	30
2307104W	40	13.6	2307440W	66		293647W	51	23
2307104W	57	1.28	2307461W	64	3	293651W	51	46
2307104W	68	2	2307480W	65	7	296153W	55	19
2307121W	70	3	2307550W	65	1	296157W	70	5
2307122W	70	4	2307551W	40	13.14	296164W	47	7.33
2307123W	40	13.18	2307551W	65		296164W	59	48.33
2307123W	53	1.8	2307625W	53	1.15	296164W	61	7.33
2307123W	57	1.29	2307625W	57	1.24	296416W	55	20
2307208W	40	13.38	2307632W	40	13.12	296417W	70	15
2307227W	64	8	2307632W	68	5	296418W	47	7.32
2307227W	65	5	2307680W	40	35.4	296418W	51	70
2307231W	64		2307694W	33	25.1	296418W	59	48.32
2307231W	65		2307694W	40	25.1	296418W	61	7.32
2307238W	40	35.32	2307694W	63		296420W	51	13
2307238W	53	1.36	2307767W	40	13.17	296420W	53	1.28
2307238W	57	4.1	2307772W	40	13.48	296420W	55	16
2307239W	40	35.33	2307772W	57	1.4	296420W	57	1.12
2307239W	53	1.37	2307773W	40	13.26	296422W	51	22
2307239W	57	4.2	2307774W	40	13.41	296426W	51	16
2307241W	40	35.35	2307775W	40	13.43	296434W	12	11
2307241W	53	1.38	2307784W	76		296434W	22	1.8
2307241W	57	4.4	2307926W	40	35.5	296434W	23	8
2307242W	40	35.34	2307962W	62	15	302398W	55	18
2307242W	43	48.22	2307962W	63	15	302399W	70	8
2307242W	47	7.22	233693W	40	13.5	303114W	12	22
2307242W	53	1.39	233693W	57	1.9	303114W	18	9
2307242W	57	4.3	237271W	11	28	303114W	22	1.5
2307242W	59	48.22	2570W	76	2.1	303114W	23	5
2307242W	61	7.22	264159W	14	30.9	313022W	27	20.25
2307265W	40	13.11	264159W	17	30.9	313022W	31	20.25
2307265W	68	3	264159W	21	30.9	318702W	18	7



Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
318702W	22	1.9	399784W	61	2.34	R13801834	43	46.4
318702W	23	9	399939W	27	23.8	R13801834	47	2.4
331767W	76	7	41207W	27	20.13	R13801834	59	46.4
331767W	77	4	41207W	29	20.13	R13801834	61	2.4
33394W	76	3	41207W	31	20.13	R13803039	40	13.33
334442W	27	20.19	41207W	33	20.13	R13803039	40	35.2
334442W	29	20.19	41207W	35	5	R13803039	43	46.2
334442W	31	20.19	41210W	27	20.11	R13803039	57	1.33
334442W	33	20.19	41210W	29	20.11	R13807642	51	11
334475W	27	20.16	41210W	31	20.11	R13808536	70	9
334475W	29	20.16	41210W	33	20.11	R13809366	51	71
334475W	31	20.16	45733W	36	9	R13809931	51	58
334475W	33	20.16	86596W	27	20.8	R14040	53	1.18
339681W	34	12	86596W	29	20.8	R15668	40	
35135W	76	8.2	86596W	31	20.8	R15668	64	
35135W	77	2.2	86596W	33	20.8	R2528352	57	1.22
393317W	11	20	87287W	27	20.9	R525293	27	20.29
396820W	11	26	87287W	29	20.9	R525293	29	20.29
398567W	11	18	87287W	31	20.9	R525293	31	20.29
398567W	14	30.7	87287W	33	20.9	R525293	33	20.29
398567W	17	30.7	89776W	27	20.6	R833103	43	46.27
398567W	21	30.7	89776W	29	20.6	R833103	47	2. 27
398567W	53	1.31	89776W	31	20.6	R833103	59	46.27
398599W	11	36	89776W	33	20.6	R833103	61	2.27
398817W	14	30.8	917373W	29	23.6	R833103	67	10
398817W	14	33. 3	917373W	31	23.6	R833103	70	12
398817W	17	5.6	917373W	33	23.6	R833115	43	48.3
398817W	17	30.8	93927W	11	4	R833115	44	17
398817W	17	33. 3	93927W	14	15.3	R833115	47	7.3
398817W	21	5.6	93927W	17	15.3	R833115	59	48.3
398817W	21	30.8	93927W	21	15.3	R833115	61	7.3
398817W	21	33. 3	NA	29	20.22	R833211	40	13.47
398817W	76	10	NA	31	20.22	R833211	57	1.37
398817W	77	6	NSS	62	10	R833251	27	20.28
398820W	17	5.2	NSS	62	24	R833251	29	20.28
398820W	21	5.2	NSS	63	10	R833251	31	20.28
398820W	27	20.23	NSS	69	1	R833251	33	20.28
398820W	29	20.23	NSS	69	2	R833251	40	35.8
398820W	31	20.23	NSS	69	3	R833251	43	46.3
398820W	33	20.23	NSS	69	4	R833251	47	2.3
398828W	29	23.3	NSS	69	5	R833251	53	1.14
398828W	31	23.3	NSS	69	6	R833251	57	1.19
398828W	33	23.3	NSS	69	7	R833251	59	46.3
398829W	27	24.4	NSS	69	8	R833251	61	2.3
399784W	47	2.34	NSS	69	9	R833251	70	13
399784W	59	46.34	R12113	53	1.46	R833253	43	46.5

Part No.	Page	Item No.	Part No.	Page	Item No.	Part No.	Page	Item No.
R833253	47	2.5	R834200	59	48.12			
R833253	59	46.5	R834200	61	7.12			
R833253	61	2.5	R834201	43	48.13			
R833253	70	14	R834201	47	7.13			
R833260	43	46.6	R834201	59	48.13			
R833260	47	2.6	R834201	61	7.13			
R833260	59	46.6	R834204	43	48.15			
R833260	61	2.6	R834204	47	7.15			
R833266	40	13.44	R834204	59	48.15			
R833266	57	1.34	R834204	61	7.15			
R833301	43	46.24	R834253	51	48			
R833301	47	2.24	R834253	67	8			
R833301	59	46.24	WR5-279L	78				
R833301	61	2.24	WR5-423L	78				
R833301	67	5	WR6-197L	78				
R833304	47	7.34	WR6-298L	78				
R833304	59	48.34	WR7-142L	78				
R833304	61	7.34	WR7-215L	78				
R833400	40	13.19	Y01C-0432	40	13.49			
R833400	40	35.22	Y01C-0432	57	1.38			
R833400	57	1.3	Y098629-011	51				
R833800	40	13.34	Y09C-M1025	57	1.13			
R833800	40	35.2	Y09G-0616	36	4			
R833800	67	11	Y09G-0616	40	13.15			
R833801	40	13.27	Y17C-0624	51	21			
R833801	53	1.21	Y17C-1024	34	9			
R833802	23	14	Y19C-M1650	51	17			
R833802	54	1.14	Y73G-0816	27	20.3			
R833802	55	14	Y73G-0816	29	20.3			
R834000	51	76	Y73G-0816	31	20.3			
R834053	40	13.1	Y73G-0816	33	20.3			
R834053	57	1.27	Y73G-0840	27	20.15			
R834106	51	4	Y73G-0840	29	20.15			
R834200	40	35.38	Y73G-0840	31	20.15			
R834200	43	48.12	Y73G-0840	33	20.15			
R834200	47	7.12	YS7-215LWS	78				
R834200	53	1.25						

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The logo for Allied Systems Company. It features the words "Allied Systems" in a bold, italicized sans-serif font, with "COMPANY" in a smaller, all-caps, sans-serif font directly below it. A horizontal line is positioned between "Allied Systems" and "COMPANY".

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