

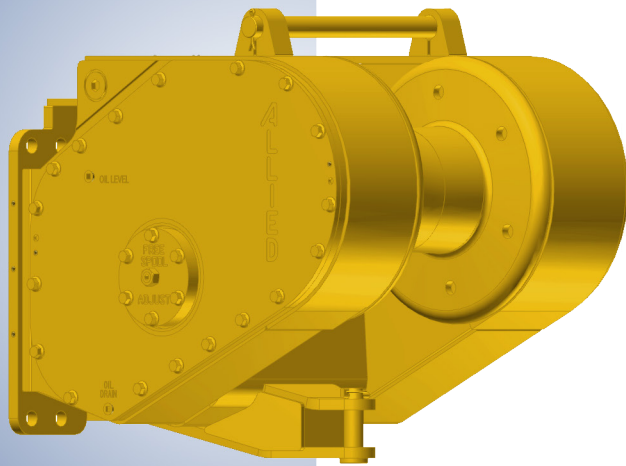


Parts Manual

Allied H5C

Hydraulic Winch

for Shantui Dozers



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

Customer Edition

Safety Precautions

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

Winch serial number _____

Date put into service _____

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

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H5C Winch Parts for Shantui Dozers

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Safety Summary

General Safety Notices

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

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

DANGER

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

WARNING

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

CAUTION

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

NOTICE

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

NOTE: ...

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

Safety Regulations

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

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

Operation, Inspection, and Maintenance Warnings

WARNING

Multiple hazards.

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

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

Training

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

Personnel Safety

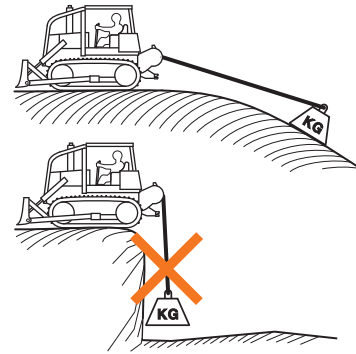
- Stay in the operator’s seat when operating the winch.
- Do not stand on the vehicle when operating the winch.
- Avoid winch operation near people or other machines.
- Never stand nor permit others to stand in the bight (loop) of a wire rope.

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



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

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



Wire Rope Safety

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



WARNING

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

Inspect rigging before use and obey all safety warnings.

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

Hydraulic Hazards

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

 **DANGER**

Injection hazard.

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

Use a piece of cardboard to check for hydraulic leaks.

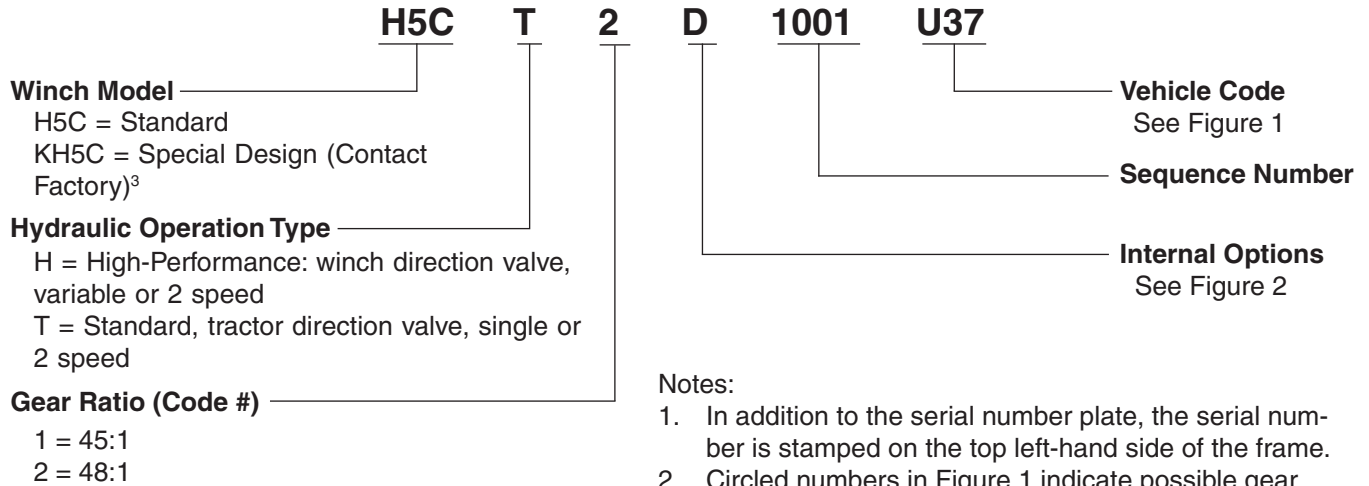
Maintenance Warnings

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

C O D E	U Shantui
37	SD13 ②

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

Circled numbers in Figure 1 indicate possible gear ratios.

	D	E	U
FREESPOOL	X	X	X
EXTERNAL PUMP	X	X	X
PFR	X	X	X
OVERWIND	X	X	
UNDERWIND			X
SINGLE SPEED		X	X
2 SPEED	X		
BRAKE-OFF (HI-P)		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)
Chevron	Use Tractor Fluid	Drive Train Fluids HD
Exxon-Mobil	Use Tractor Fluid	Mobil Trans HD Series

Figure 4, Recommended Oil List

Oil Capacity

The oil capacity for 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

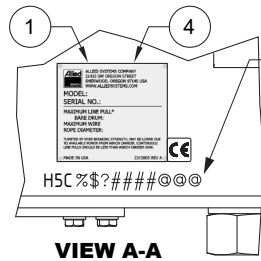
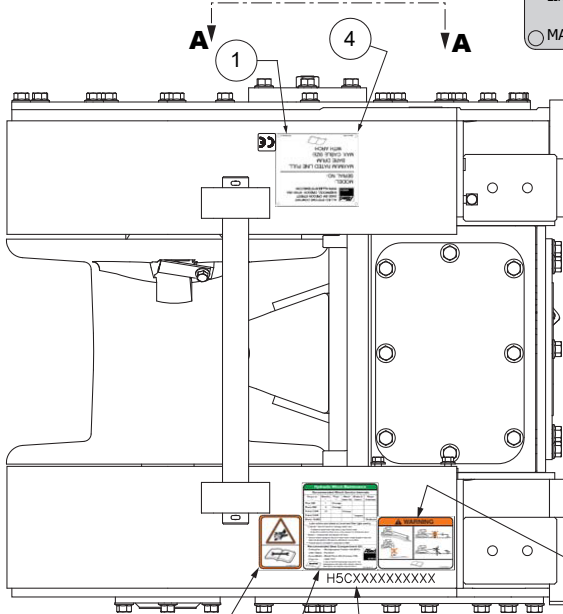
E-mail: parts@alliedsystems.com

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

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Nameplate & Decals

WINCH TOP VIEW



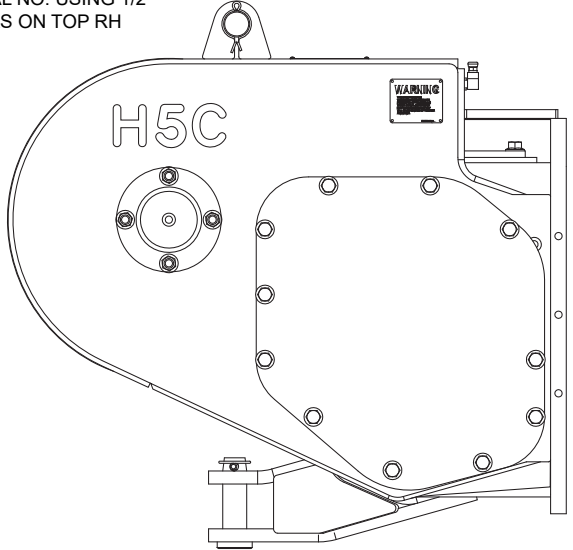
Hydraulic Winch Maintenance					
Recommended Winch Service Intervals					
Hours or mi	Months	Filter ***	Winch Gear Oil	Brake & Clutch	Major Overhaul
First 250	1	Change			
Every 500	3	Change			
Every 2,000	12	Change			
Every 5,000				* Inspect	
Every 10,000					* Evaluate

Lube rollers and check oil level and filter light weekly.

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

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

Consult service/operating manual for low temperature oils and other details. Use of non-recommended oil may void warranty. 2315005 Rev D

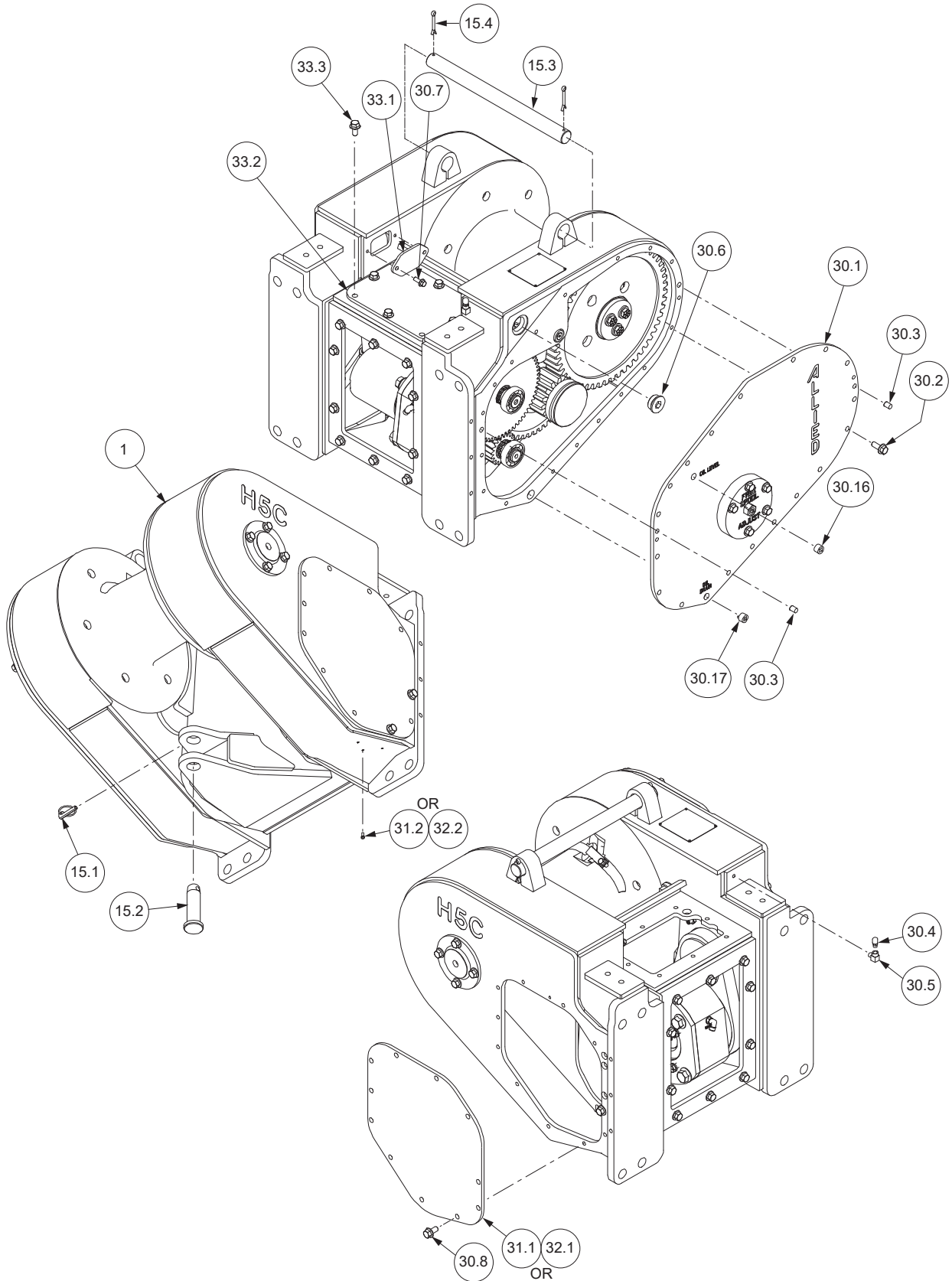


WINCH SIDE VIEW

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
 Shantui SD13 (H5CT2D**U37)
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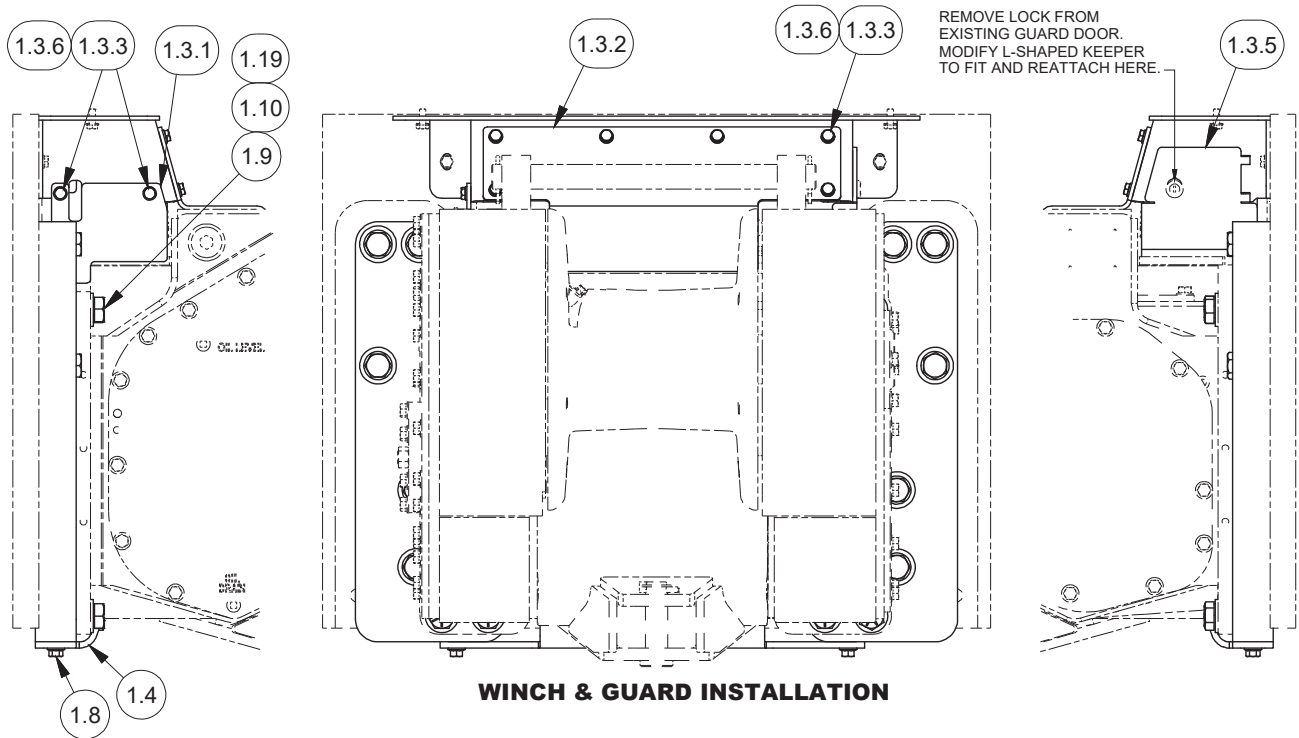
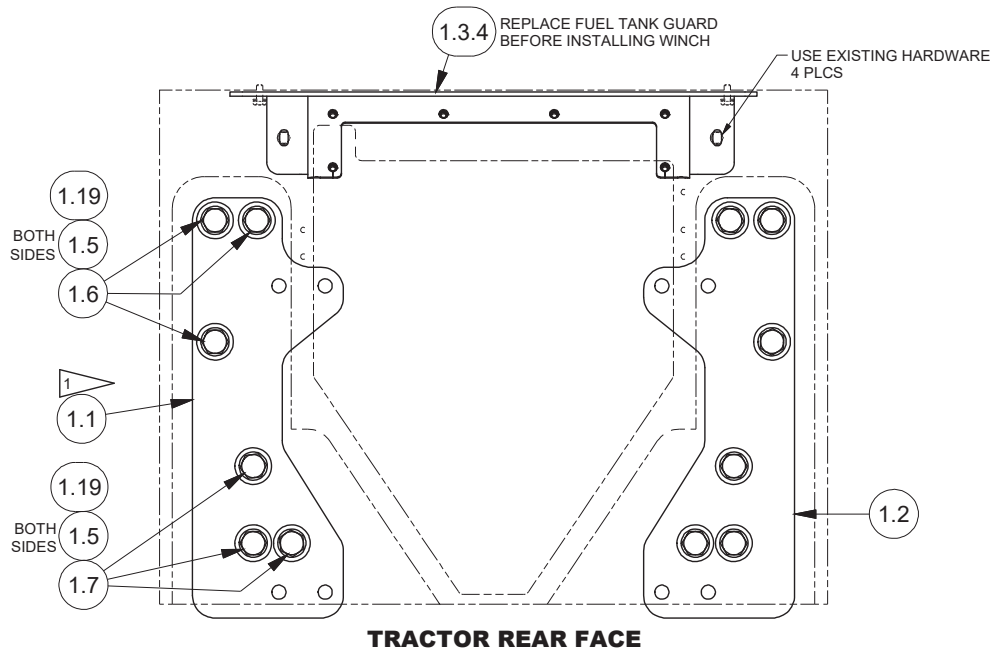
Frame and Covers

Shantui SD13 (H5CT2D**U37)
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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	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	32.2	16243W	3	Screw
30.3	176208W	2	Pin	33.1	2307342W	1	Cover, Inner, RH
30.4	2304101W	1	Breather	33.2	2302513W	1	Cover, Top
30.5	16151W	1	Fitting	33.3	398817W	4	Screw, Flange
30.6	188210W	1	Fitting	33.4	16243W	1	Screw
30.7	398567W	2	Screw, Flange				
30.8	398817W	15	Screw, Flange				

Mounting Parts

Shantui SD13 (H5CT2D**U37)

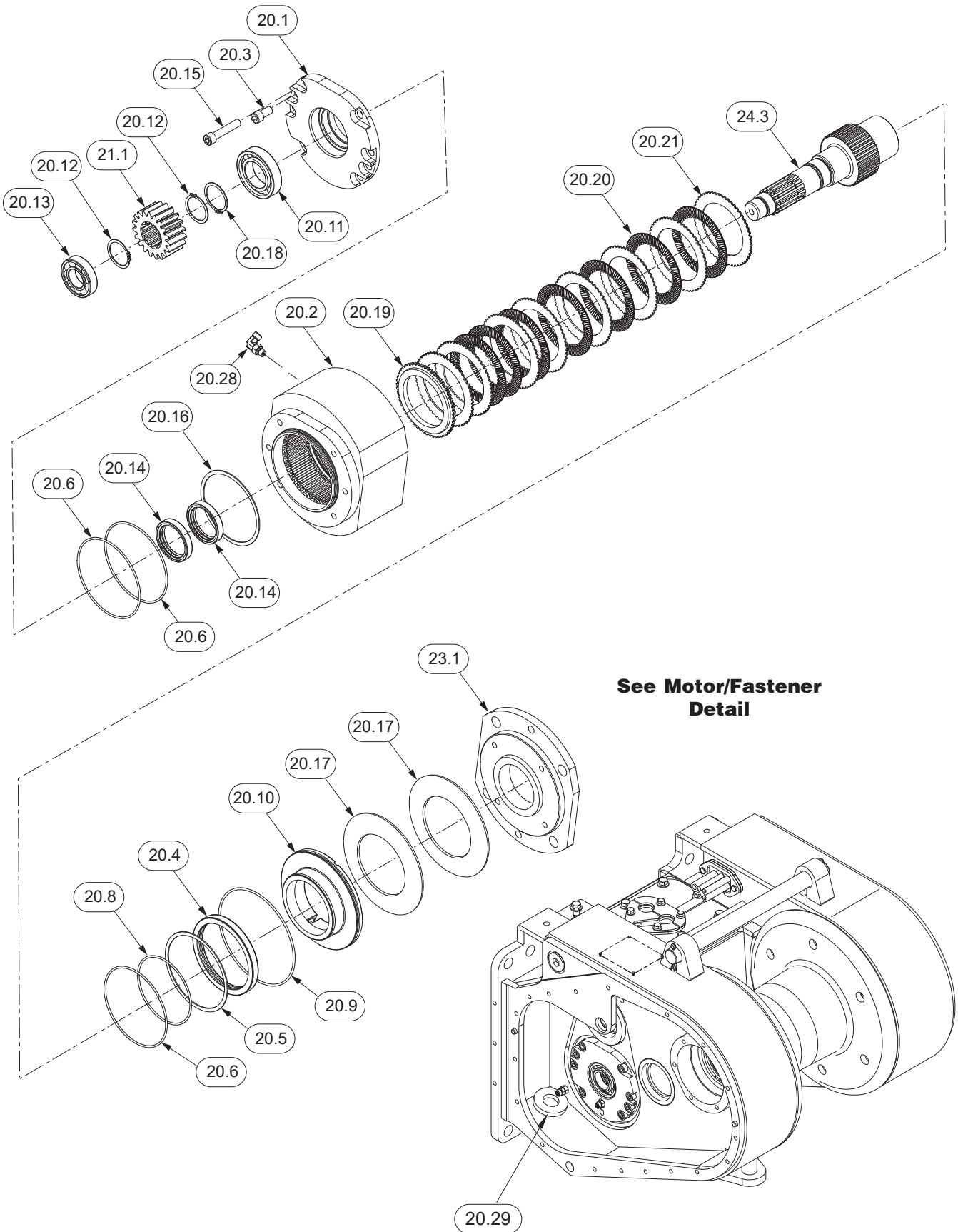


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2315094	1	Bracket, Mounting, LH	1.5	296434W	12	Washer
1.2	2315095	1	Bracket, Mounting, RH	1.6	293729W	6	Capscrew
1.3.1	2311271	1	Cover LH	1.7	274044W	6	Capscrew
1.3.2	2311273	1	Cover, Top	1.8	398817W	2	Screw, Flange
1.3.3	293628W	8	Capscrew	1.9	221690W	8	Capscrew
1.3.4	2311268	1	Guard	1.10	221780W	8	Washer
1.3.5	2311270	1	Cover, RH	1.19	318702W	AR	Threadlock
1.3.6	296420W	8	Washer				
1.4	2310103	1	Guard, Hose, Lower				

Section 2
Gear/Shaft Train

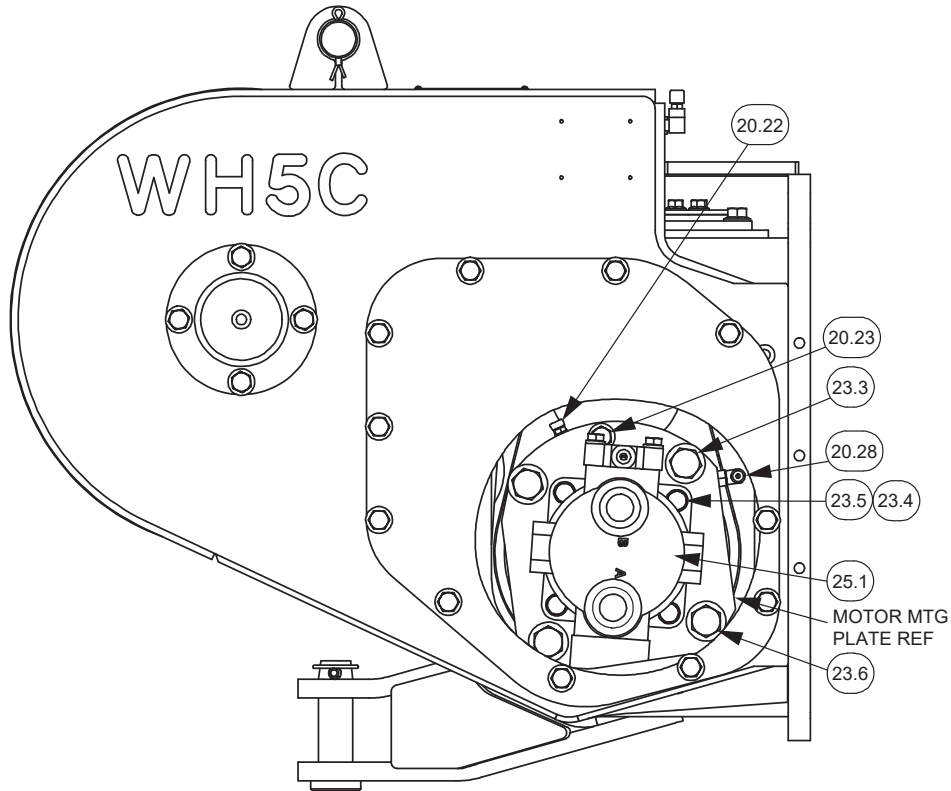
Motor Shaft Assembly

Shantui SD13 (H5CT2D**U37)



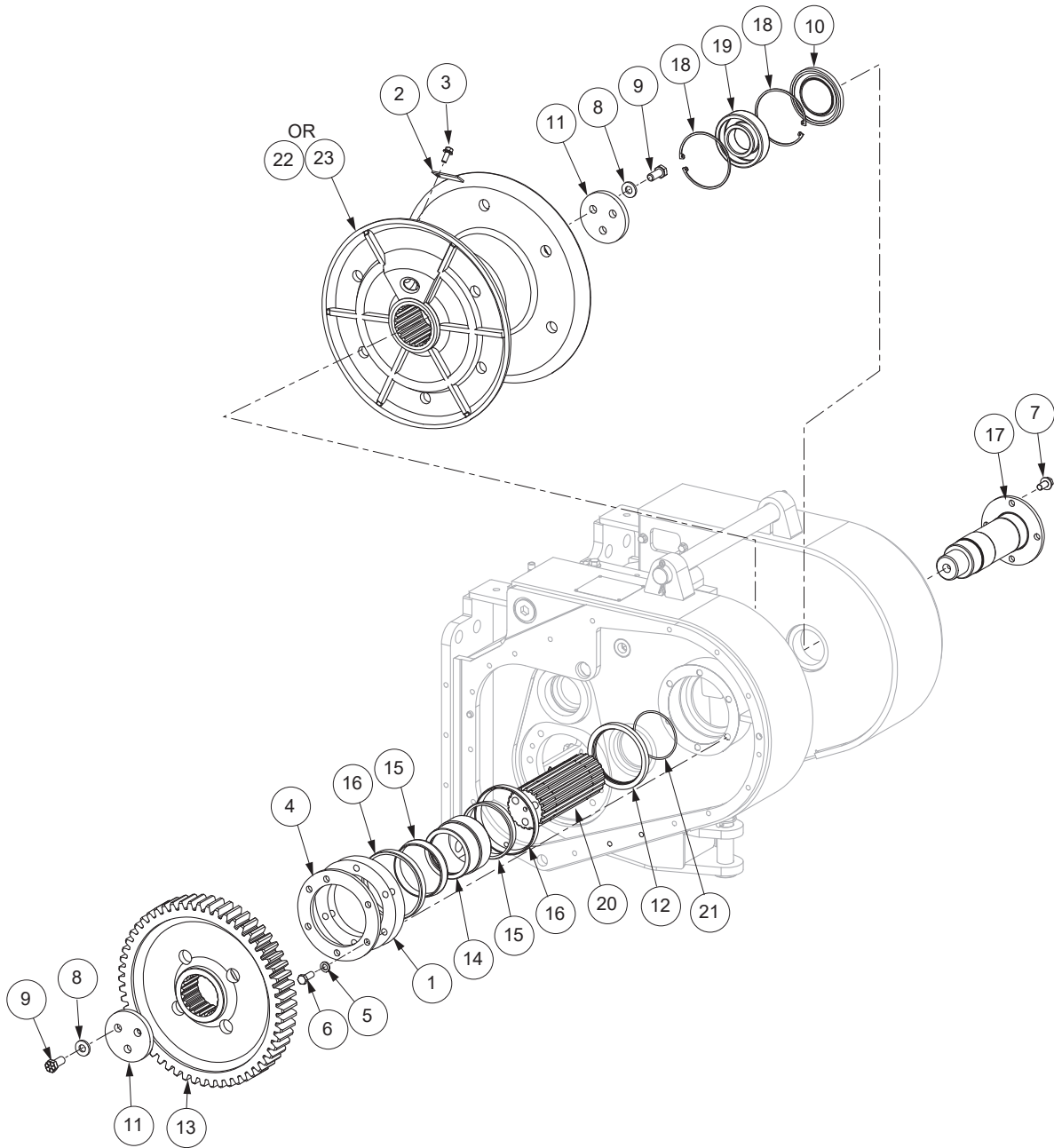
Motor Shaft Assembly
Shantui SD13 (H5CT2D**U37)

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
20.1	2314062	1	Brake Mounting	20.19	334442W	1	Plate, Pressure
20.2	2306078W	1	Housing, Brake	20.20	2306198W	7	Disc, Friction
20.3	Y73G-0816	2	Capscrew	20.21	2304874W	8	Plate, Separator
20.4	2306599W	1	Sleeve	20.22	NA	NA	Fitting
20.5	2306604W	1	Snap Ring	20.23	398820W	2	Screw
20.6	89776W	3	O-Ring	20.25	264159W	1	Adhesive (Use with 20.23)
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	23.1	2306214W	1	Plate, Mounting, Motor
20.12	12916W	2	Snap Ring	23.3	398828W	2	Screw, Flange
20.13	41207W	1	Bearing, Ball	23.4	15158W	4	Lockwasher
20.14	2306073W	2	Seal	23.5	18588W	4	Capscrew
20.15	Y73G-0840	6	Capscrew	23.6	917373W	2	Capscrew
20.16	334475W	1	Snap Ring, Internal	24.3	2306494W	1	Shaft
20.17	219084W	2	Spring	25.1	2306938W	1	Motor, Hydraulic 2 speed (See p. 25)
20.18	12944W	1	Snap Ring				



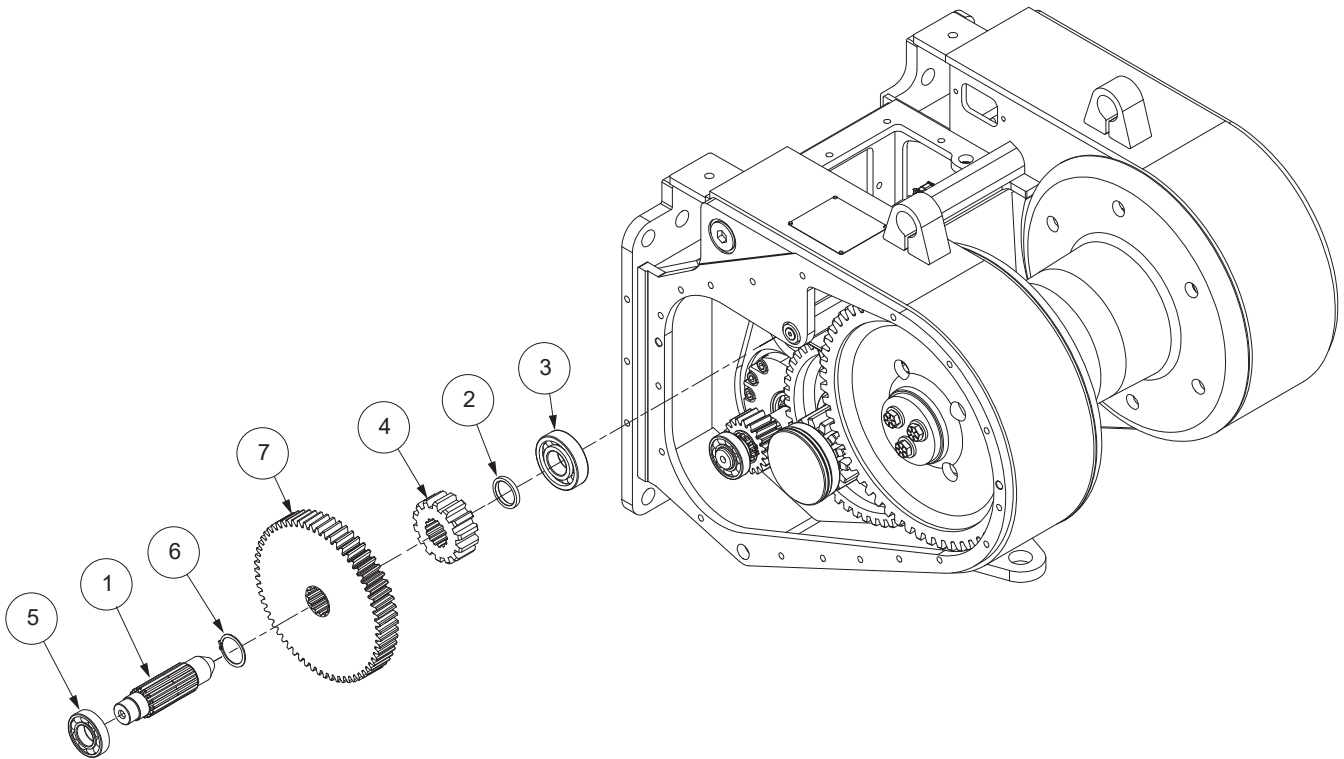
Motor/Fastener Detail

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	Washes	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 313022W Adhesive		
12	339681W	1	Seal, Oil				
13	2302333W	1	Gear, Drum				

Shaft, Idler



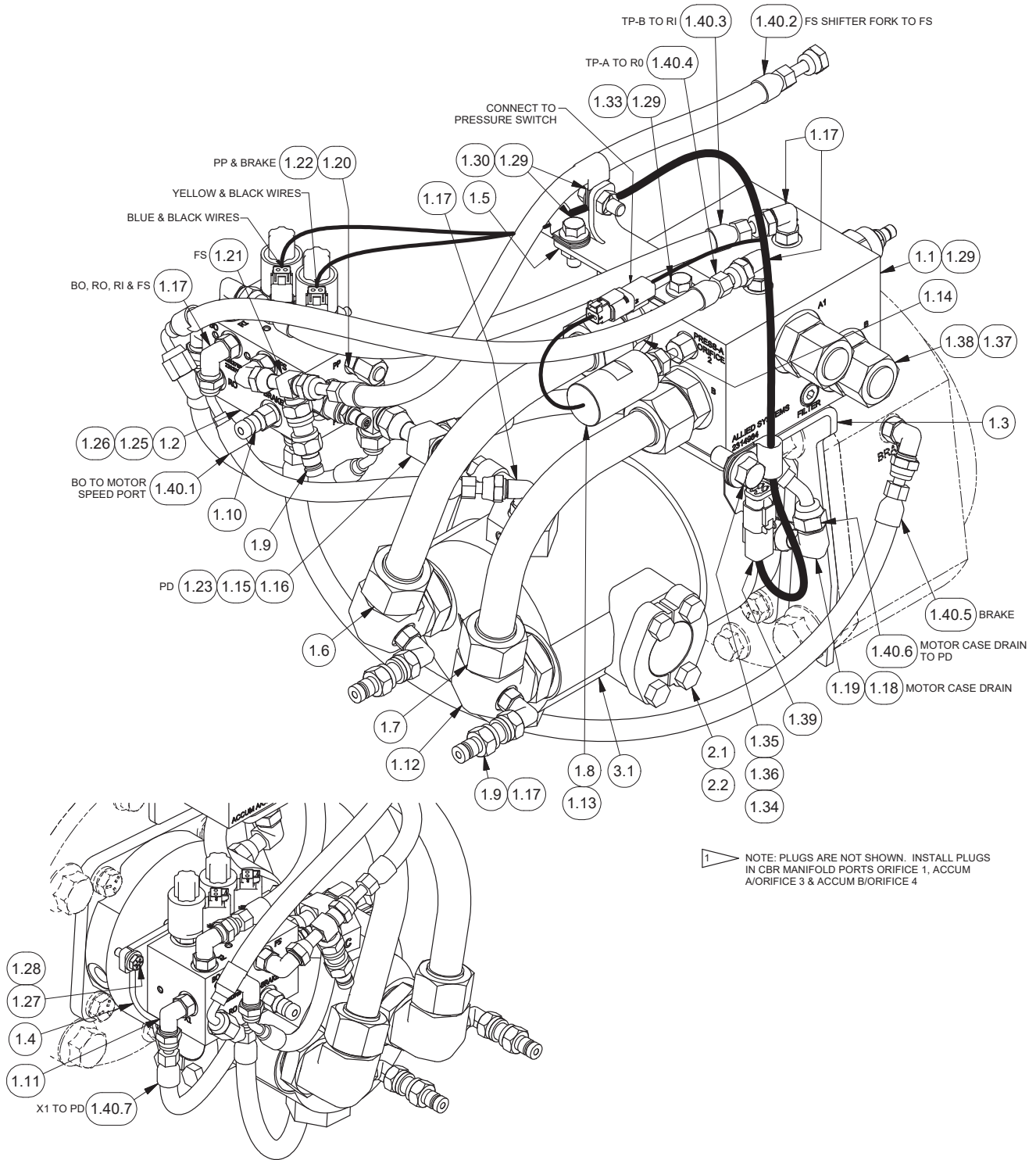
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2307282W	1	Shaft, Idler	6	12916W	1	Ring, Snap
2	2300842W	1	Spacer	7	2306229W	1	Gear, 62T (Ratio #1 Only)
3	2304580W	1	Bearing, Cylinder Roller	*a	2311412	1	Gear, 84T (Ratio #2 Only)
4	219066W	1	Gear, Pinion				
5	41207W	1	Bearing, Ball	*a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

Section 3
Hydraulics/Electrical/Controls

Hydraulic Group

Shantui SD13 (H5CT2D**U37)

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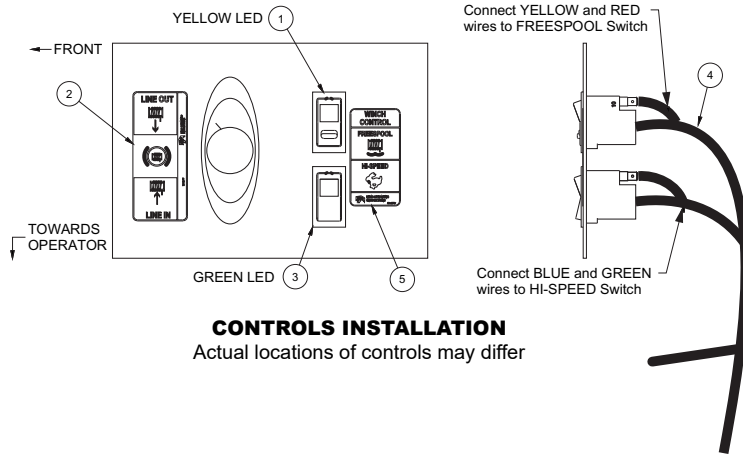
Hydraulic Group

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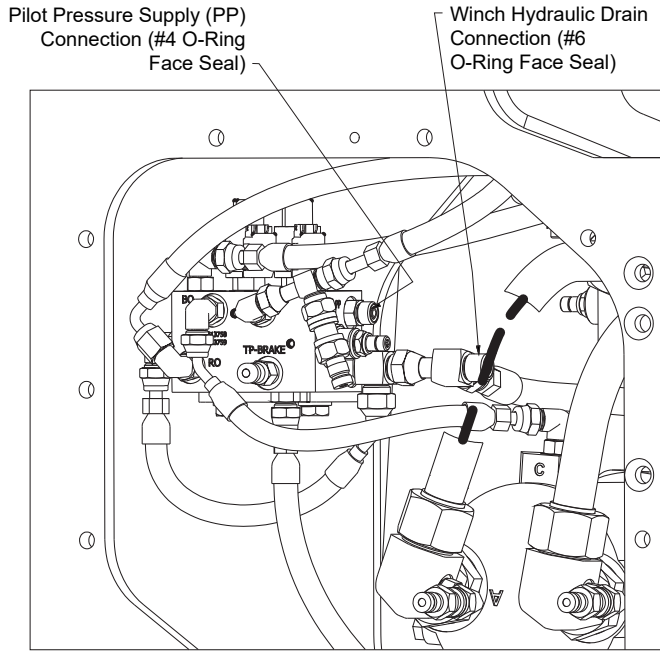
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2314984	1	Counterbalance Manifold Assy (See p. 24)	1.25	293628W	2	Capscrew
				1.26	296420W	2	Washer
1.2	2313758	1	Control Manifold Assy (See p. 23)	1.27	224120W	2	Capscrew
				1.28	221763W	2	Washer
1.3	2314983	1	Bracket, Manifold	1.29	398567W	5	Screw, Flange
1.4	2313443	1	Bracket, Manifold	1.30	209579	2	Clip, Insul
1.5	2316646	1	Bracket, Support, Hose	1.33	2311550	1	Clip, Harness Mounting
1.6	2312197	1	Tube Assembly, Motor A	1.34	2313663	1	Clip, Harness Mounting
1.7	2314986	1	Tube Assembly, Motor B	1.35	398817W	1	Screw, Flange
1.8	2307291W	1	Switch	1.36	R13807642	1	Clip, Insul
1.9	2307625W	3	Fitting	1.37	R833127	2	Fitting
1.10	R14040	1	Coupler, Male	1.38	231821	2	Fitting
1.11	2311500	1	Fitting Assembly		232382	1	. O-Ring
1.12	2307123W	2	Fitting	1.39	2315003	1	Harness, Wire, Winch
1.13	2304147W	1	Fitting	1.40	2315012	1	Kit, Hose
1.14	231444	2	Fitting	1.40.1	2313639	1	. Hose Assembly
1.15	231465	1	Fitting	1.40.2	257331	1	. Hose Assembly
1.16	231955	1	Fitting	1.40.3	2315374	1	. Hose Assembly
1.17	R833251	9	Fitting	1.40.4	2315375	1	. Hose Assembly
1.18	231440	1	Fitting	1.40.5	243178	1	. Hose Assembly
1.19	R833801	1	Fitting	1.40.6	2312695	1	. Hose Assembly
1.20	231439	2	Fitting	1.40.7	2314993	1	. Hose Assembly
1.21	236855	1	Fitting	2.1	11740	2	Kit, Split Flange
1.22	232984	1	Fitting	2.2	24531	2	Fitting
1.23	231822	1	Fitting	3. 1	2306938W	1	Motor (See p. 25)
1.24	229383	3	Fitting				

Hydraulic/Electrical Installation

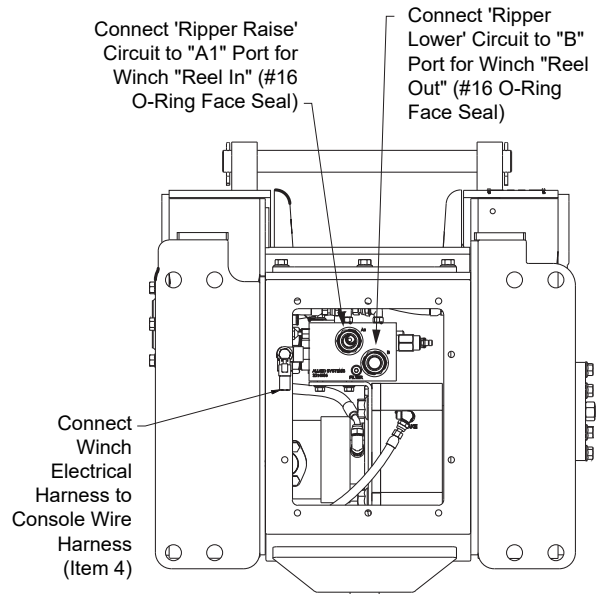
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CONTROLS INSTALLATION
Actual locations of controls may differ



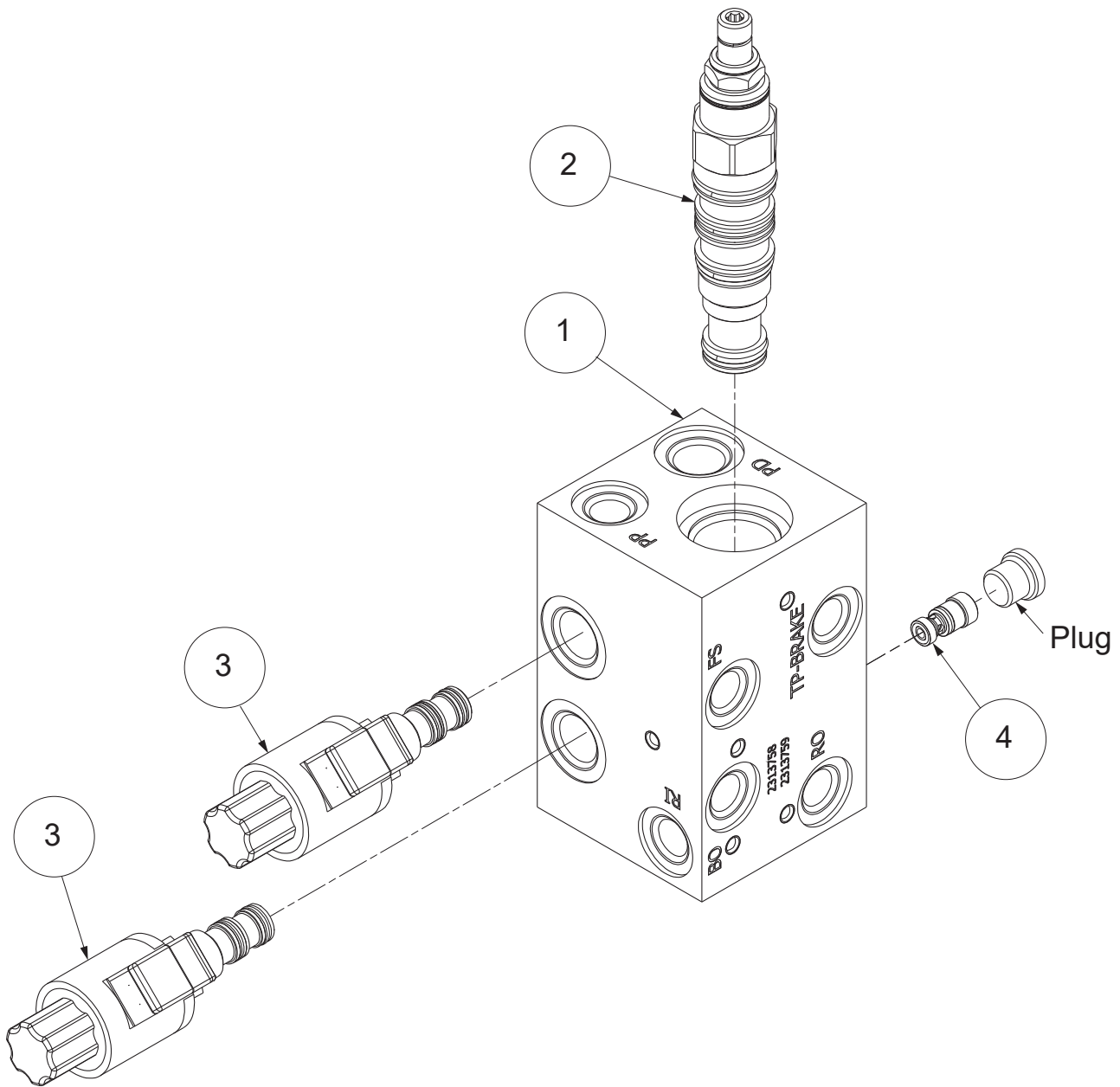
RIGHT-SIDE HYDRAULIC CONNECTIONS
REMOVE RIGHT-SIDE COVER TO ACCESS



FRONT HYDRAULIC CONNECTIONS

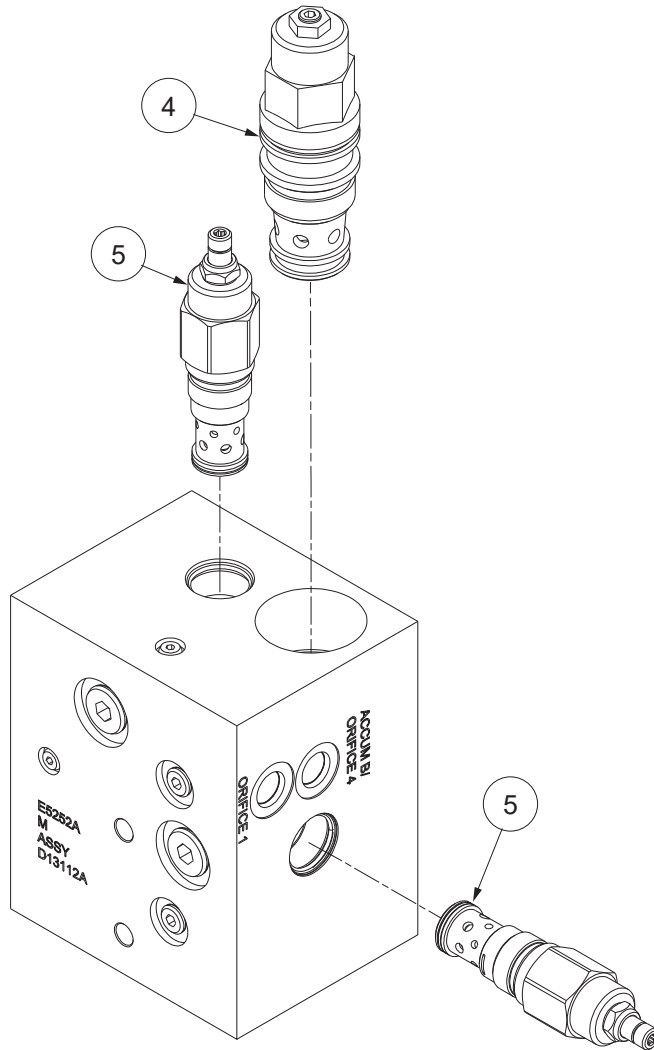
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2310013	1	Switch Assy (Yellow)	4	2313643	1	Wire Harness
2	2312177	1	Decal, Line In, Line Out	5	2313676	1	Decal, FS and Hi-Speed
3	2310502	1	Switch Assy (Green)	6	242587	5	Cable Tie

Control Manifold Assembly



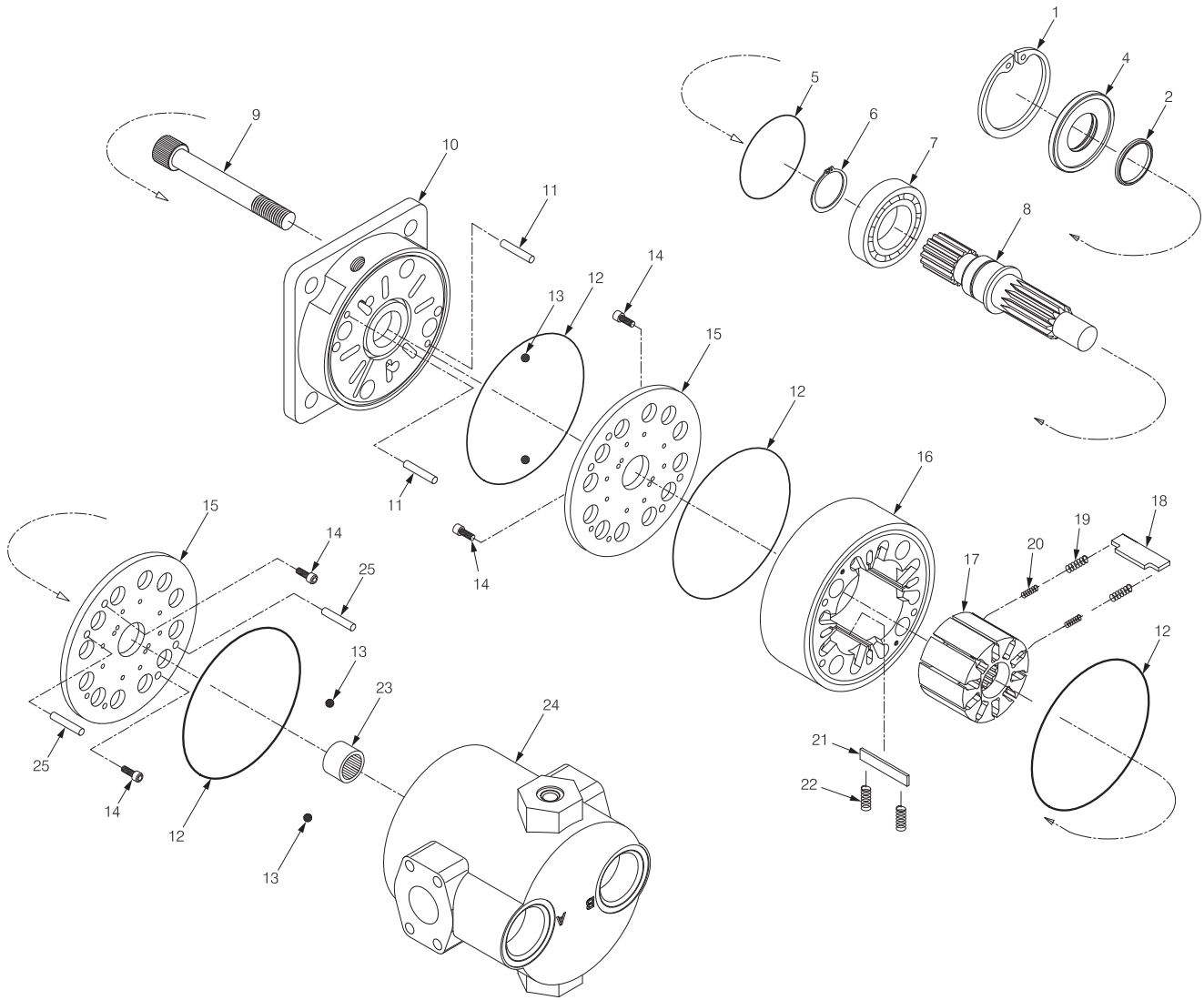
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2313758		Control Manifold Assy				
1	2313759	1	. Manifold, Body, Control	3	2312073	2	. Valve, Solenoid
2	2311592	1	. Valve, Brake		2312111	1	.. Seal Kit
	252566	1	.. Seal Kit	4	2312074	1	. Valve, Shuttle
					2312112	1	.. Seal Kit

Counterbalance Manifold Assembly



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

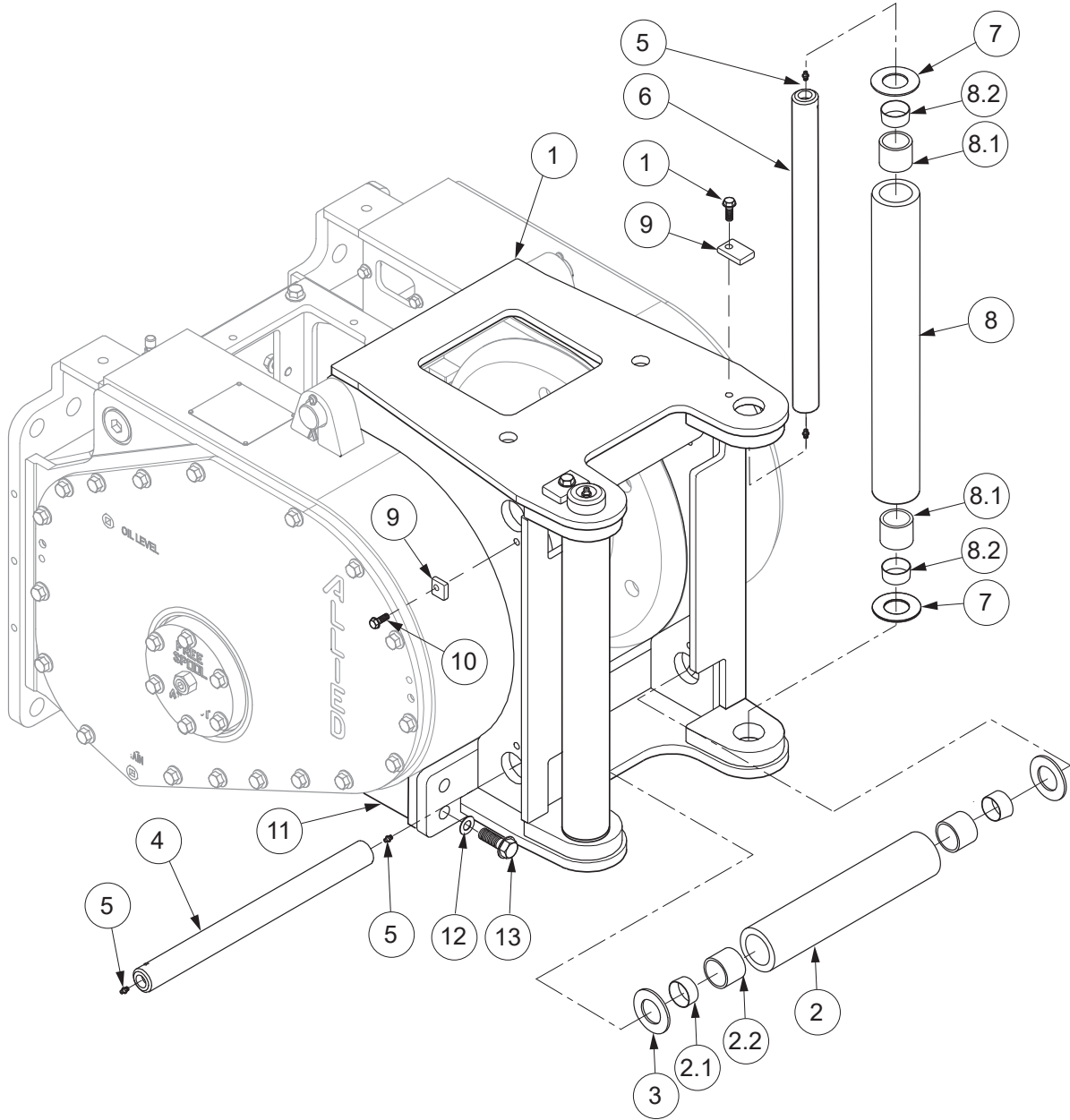
Hydraulic Motor, 2-Speed



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2306938W Hydraulic Motor, 2-Speed							
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		

Section 4
Optional Equipment

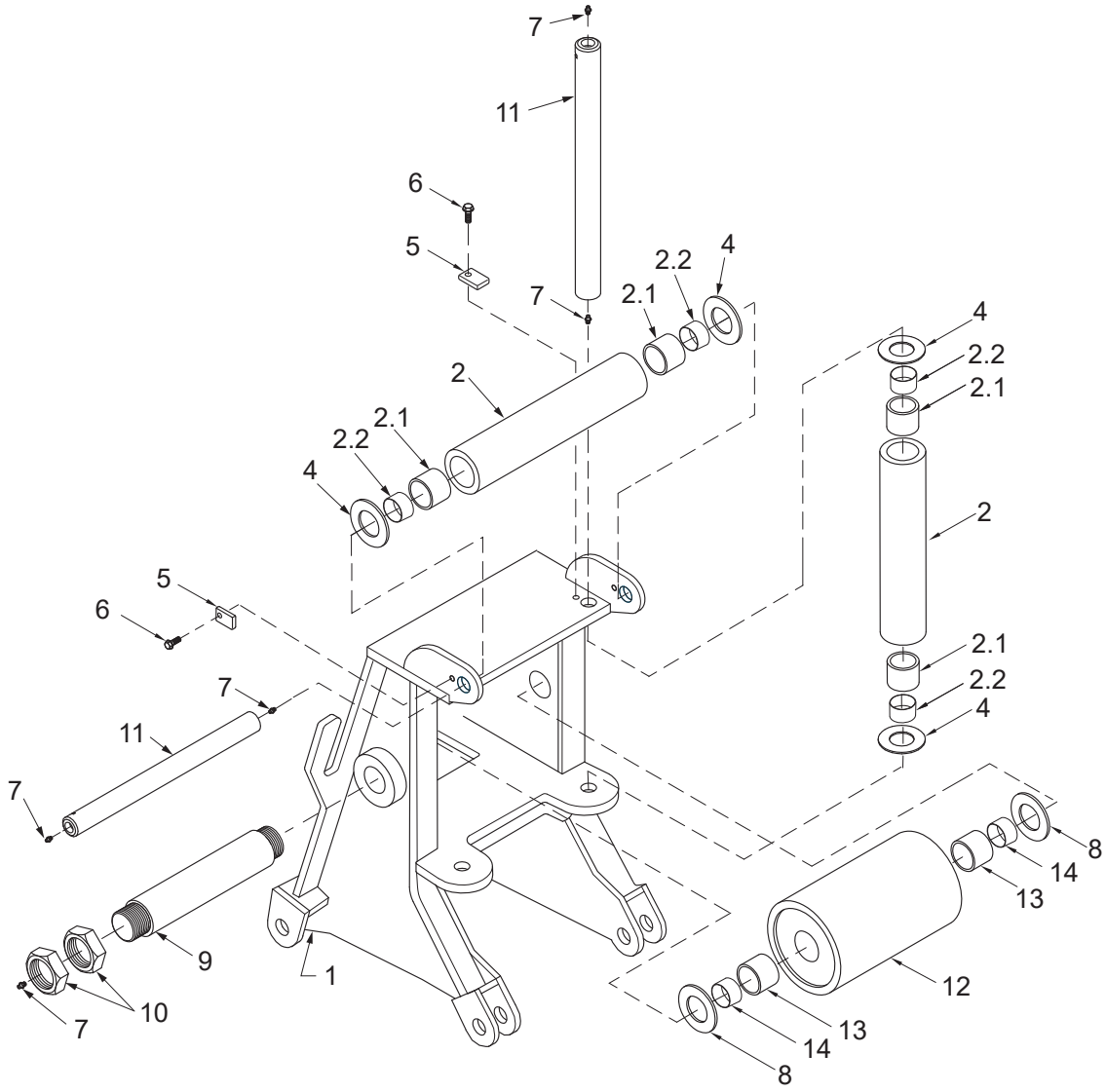
Fairlead



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

Item	Part No.	Qty A/B	Description	Item	Part No.	Qty A/B	Description
	2307784W	1--	Fairlead, 3-Roller	7	331767W	4/4	. Washer
	2306335W	--1	Fairlead, 4-Roller	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
	2301923W		Assy Arch				
1	2301922W	1	. Arch	7	16001W	8	. Fitting, Lube
2	2301910W	3	. Ass'y 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

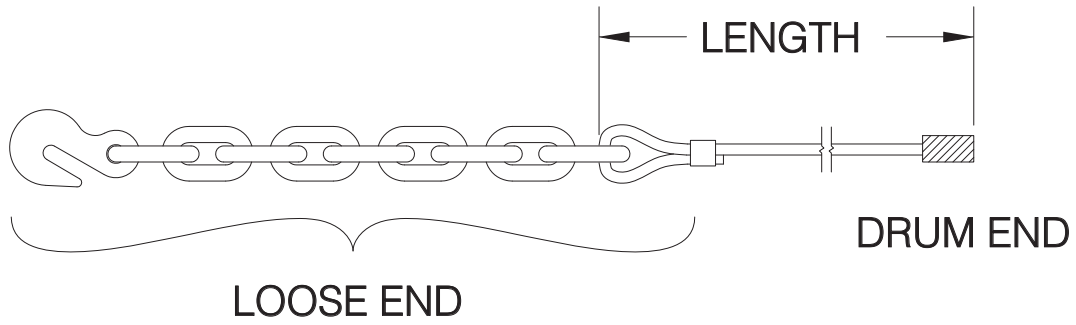


Figure A

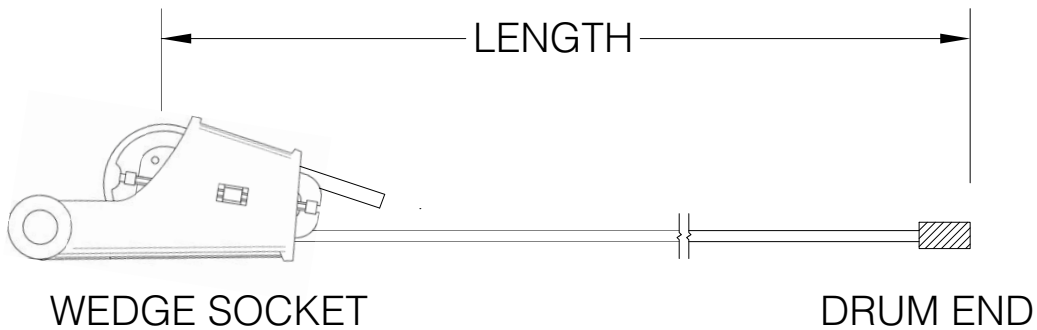


Figure B

	Wire Rope	Tail Chain & Hook
Wire Rope Diameter Dia (in)	Breaking Strength New (lbs)	Working Load Limit (lbs) 3.5:1 Design Factor
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 & Kits

Recommended Winch Service Intervals and Kits

Following 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 tractor 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 33 includes lists of gaskets and seals, hose kits, control installation components and wire rope assemblies. Keep these parts in stock at all times for regular maintenance. Order parts from the table.

Page 34 and page 35 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.

Page 36 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 Qty
252566	Seal Kit, Brake Valve (P/N 2311592)	1	Control Manifold Assy	
2312111	Seal Kit, Cartridge Valve (P/N 2312073)	2	Control Manifold Assy	
2312112	Seal Kit, Shuttle Valve (P/N 2312074)	1	Control Manifold Assy	
243815	Seal Kit, Counterbalance Valve (P/N 2312068)	1	Counterbalance Manifold Assy	
259258	Seal Kit, Relief Valve (P/N 2307438W)	1	Counterbalance Manifold Assy	

Hose Kits		Order as Required		
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Quantity
2315012	Hose Kit, Winch Hydraulics	1		

Control Installation Components		Order as Required		
Allied P/N	Description	Quantity on Winch	Relevant for Installation	Order Qty
2310502	Switch Assy w/Green LED	1		
2310013	Switch Assy w/Yellow LED	1		

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

Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2312857**Service Interval: Every 5,000 Hours**

Allied P/N	Description	Quantity in Kit	See Parts Manual Page	Order Quantity
2312857	Kit, Motor, Reducer & Brake Assy Rebuild	1		
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
2311896	Kit, Intermediate, Idler, Drum Shaft, Motor & Brake Assembly Rebuild	1		
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	

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

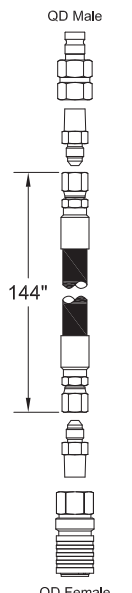
Order these Tools as required for maintenance and service of your winch(es).

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

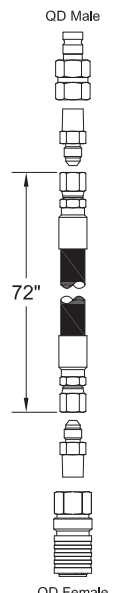


QD Male

144"

QD Female

70381
Kit, Hose Assembly, W/QD Both Ends

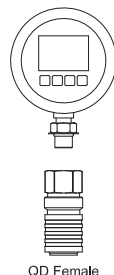


QD Male

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

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209579	21	1.3	2310502	22	3	12916W	15	20.12
229383	21	1.24	2311268	12	1.3.4	12916W	17	6
231439	18	21	2311270	12	1.3.5	12944W	15	20.18
231439	21	1.2	2311271	12	1.3.1	12956W	16	18
231440	21	1.18	2311273	12	1.3.2	1300780W	16	3
231444	21	1.14	2311329	8	3	1314503W	16	2
231465	21	1.15	2311330	8	5	1314656W	11	15.2
231821	21	1.38	2311411	15	22.1	1321665W	8	2
231822	21	1.23	2311412	17		133523W	16	10
231955	21	1.16	2311500	21	1.11	15158W	15	23.4
232382	21		2311550	21	1.33	15158W	16	5
232984	21	1.22	2311557	8	40	15256W	11	15.4
236855	21	1.21	2311592	23	2	15290W	11	30.17
238056	25	2	2312068	24	4	15315W	11	30.16
238058	25	5	2312073	23	3	159940W	18	7
238059	25	12	2312074	23	4	16001W	27	5
238060	25	1	2312111	23		16001W	28	7
238061	25	4	2312112	23		16151W	11	30.5
238062	25	6	2312177	22	2	16243W	11	30.12
238063	25	7	2312197	21	1.6	16243W	11	31.2
238064	25	8	2312695	21	1.40.6	16243W	11	32.2
238065	25	9	2313443	21	1.4	16243W	11	33.4
238067	25	11	2313639	21	1.40.1	16602W	8	4
238068	25	14	2313643	22	4	16830W	16	6
238070	25	16	2313663	21	1.34	176208W	11	30.3
238071	25	22	2313676	22	5	18588W	15	23.5
238072	25	21	2313758	21	1.2	188210W	11	30.6
238073	25	17	2313758	23		219066W	17	4
238074	25	18	2313759	23	1	219084W	15	20.17
238075	25	19	2314062	15	20.1	219093W	16	15
238076	25	20	2314983	21	1.3	219094W	16	16
238077	25	13	2314984	21	1.1	219095W	16	19
238078	25	23	2314984	24		219114W	18	11
238080	25	25	2314986	21	1.7	221336W	28	10
242587	22	6	2314993	21	1.40.7	221657W	27	13
243178	21	1.40.5	2315003	21	1.39	221690W	12	1.9
243815	24		2315012	21	1.4	221717W	18	13
252566	23		2315094	12	1.1	221763W	21	1.28
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224108W	18	23	2305415W	18	18	296420W	21	1.26
224120W	21	1.27	2305915W	18	10	296434W	12	1.5
225050W	18	15	2305923W	18	8	318702W	12	1.19
2300842W	17	2	2306073W	15	20.14	331767W	27	7
2301706W	27	9	2306077W	15	20.1	331767W	28	4
2301706W	28	5	2306078W	15	20.2	33394W	27	3
2301722W	27	4	2306189W	11	1	334442W	15	20.19
2301727W	27	2	2306198W	15	20.2	334475W	15	20.16
2301742W	27	8.1	2306214W	15	23.1	339681W	16	12
2301742W	28	2.1	2306229W	17	7	35135W	27	8.2
2301907W	27	8	2306330W	27	11	35135W	28	2.2
2301910W	28	2	2306333W	27	1	398567W	11	30.7
2301919W	28	11	2306335W	27		398567W	21	1.29
2301922W	28	1	2306494W	15	24.3	398817W	11	30.8
2301923W	28		2306570W	11	30.1	398817W	11	33.3
2301925W	28	12	2306572W	27	6	398817W	12	1.8
2301927W	28	13	2306599W	15	20.4	398817W	21	1.35
2301961W	27	2.2	2306604W	15	20.5	398817W	27	10
2302120W	28	9	2306938W	15	25.1	398817W	28	6
2302333W	16	13	2306938W	21	3.1	398820W	15	20.23
2302334W	16	20	2306938W			398828W	15	23.3
2302335W	16	14	2307037W	18	22	41207W	15	20.13
2302336W	16	11	2307081W	18	20	41207W	17	5
2302338W	16	22	2307097W	11	31.1	41210W	15	20.11
2302379W	16	17	2307123W	21	1.12	45733W	18	9
2302513W	11	33.2	2307282W	17	1	61056W	18	3
2302515W	18	12	2307291W	21	1.8	61142W	18	1
2302624W	18	6	2307342W	11	33.1	86596W	15	20.8
2302625W	18	17	2307438W	24	5	87287W	15	20.9
2303221W	11	15.1	2307625W	21	1.9	89776W	15	20.6
2303256W	16	4	2307784W	27		917373W	15	23.6
2303257W	16	1	2307962W	25	15	93927W	11	15.3
2303848W	11	30.2	2570W	27	2.1	R13807642	21	1.36
2303902W	16	7	264159W	11	30.9	R14040	21	1.1
2303906W	18	2	264159W	15	20.25	R525293	15	20.29
2303907W	18	5	274044W	12	1.7	R833127	21	1.37
2303908W	18	16	2817W	28	14	R833251	15	20.28
2304101W	11	30.4	2821W	28	8	R833251	21	1.17
2304147W	21	1.13	293628W	12	1.3.3	R833801	21	1.19
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Y09G-0616	18	4	WR6-197L	31				
Y17C-1024	16	9	WR6-298L	31				
Y73G-0816	15	20.3	WR7-142L	31				
Y73G-0840	15	20.15	WR7-215L	31				
YS7-215LWS	29		Y09G-0616	18	4			
WR5-423L	31		Y17C-1024	16	9			
WR6-197L	31		Y73G-0816	15	20.3			
WR6-298L	31		Y73G-0840	15	20.15			
WR7-142L	31		YS7-215LWS	31				
WR7-215L	31							



To find a dealer in your area,
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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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