

Parts Manual



Allied H6H

Hydraulic Winch for Shantui Dozers

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CUSTOMER EDITION



Safety Precautions

Read, understand and observe the Safety Summary on pages 2 through 4 to prevent injury to personnel and damage to equipment.

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

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

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Safety Summary

General Safety Notices

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

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

DANGER

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

MARNING

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.

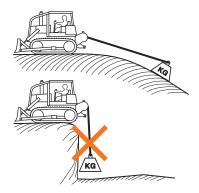
- Avoid winch operation near people or other machines.
- Never stand nor permit others to stand in the bight (loop) of a wire rope.
- Do not stand nor permit others to be near the winch or wire rope when there is tension on the wire rope.





- 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 dozer 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 dozer and winch. Manual override of high temperature shut-off will cause damage to dozer 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. Dozer 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 dozer 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.

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, page 8.
- 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.

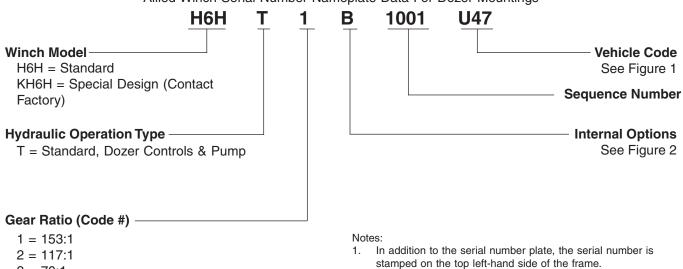
Infection and gangrene will result when hydraulic oil penetrates the skin. See a doctor immediately to prevent loss of limb or death.

Use a piece of cardboard to check for hydraulic leaks.



Unit Identification

Allied Winch Serial Number Nameplate Data For Dozer Mountings



3 = 70:1

4 = 81:1

5 = 143:1

O D E	U Shantui
47	DH17 ©

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

Circled numbers in Figure 1 indicate possible gear ratios.

	FREESPOOL	BRAKE-OFF	OVERWIND	2-SPEED CONTROL
В	Х	Х	Х	
D	Х	Х	Х	Х
E	Χ		Х	
U	Χ	Х		
BN		Χ	Х	
DN		Х	Х	Х
EN			Х	
DE	Χ		Х	Х
DU	X	X		Х

If your serial number begins with the letter "K", contact the

factory for parts and service information.

Figure 2 - Internal Winch Options

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

- 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.
- 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 6 for serial number information.

Abbreviations

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

Abbreviation	Full Name		
Р	Pressure		
Т	Tank		
ВО	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

To get the most suitable temperature-viscosity characteristics, choose one of the oils listed below.

Manufacturer	Winch Case (Gear Train)
Exxon-Mobil (standard)	Mobil Trans HD Series
Chevron (optional)	Drive Train Fluids HD
Caterpillar (optional)	TO-4

Figure 4 - Recommended Oil List

Factory fill is Exxon-Mobil Trans HD 30.

Note: This winch uses hydraulic fluid from the dozer. See Figure 4 for recommended gear train fluids. Contact the factory if alternate oils are required.

Use of a non-recommended oil may void the warranty.

Oil Capacity

Oil capacity for the H6H winch is 4 gallons (15 liters).

Viscosity Grade		<u>. </u>	erating ure Range	Typical Ambient Temperature Range		
ISO	SAE	°F	°C	°F	°C	
VG 22	10W	-5 to 140	-20 to 60	-5 to 40	-20 to 4	
VG 32	15W	10 to 160	-12 to 71	10 to 55	-20 to 13	
VG 46	20	20 to 180	-7 to 82	20 to 70	-7 to 21	
VG 68	20	30 to 200	-1 to 93	30 to 90	-1 to 32	
VG 100	30	40 to 220	4 to 104	40 to 110	4 to 43	

Figure 5 - Viscosity Chart

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:

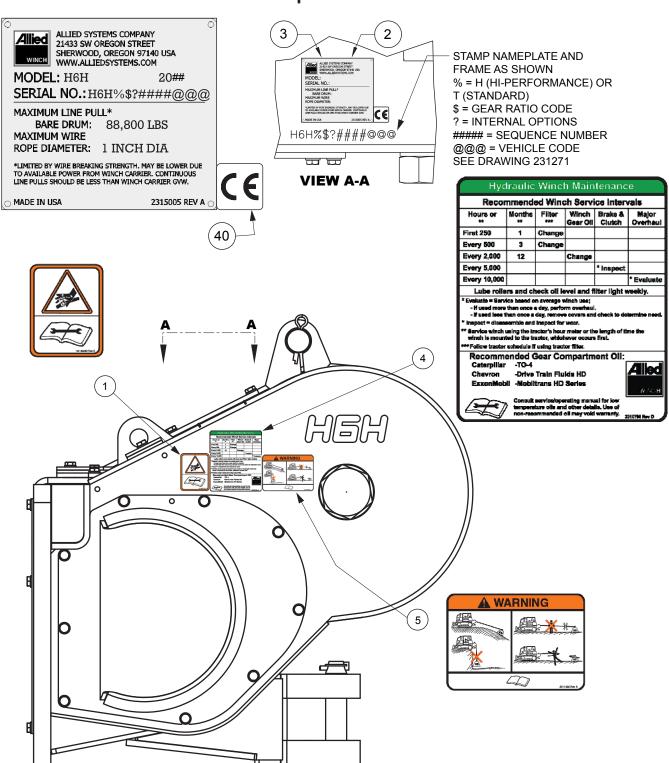
Allied Systems Company 21433 SW Oregon Street Sherwood, OR 97140 U.S.A.

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



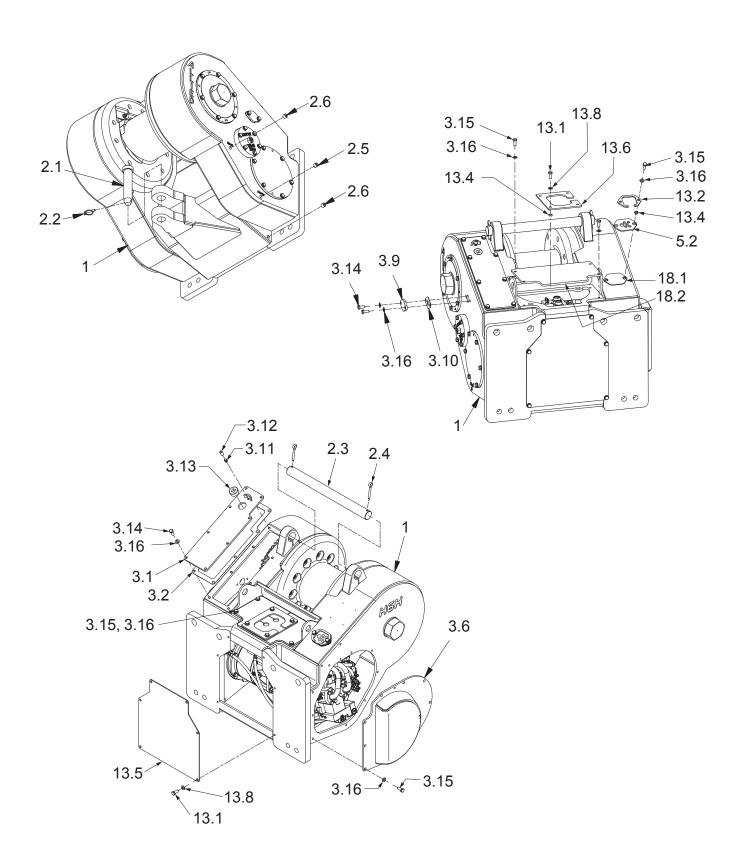
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	1321665W	2	Decal, Warning	4	2310796	1	Decal, Maintenance
2	2315005	1	Nameplate	5	2311330	1	Decal, Load & Wire Rope
3	16602W	4	Screw	40		AR	Label - CE Mark

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Section 1 Frames and Covers

Frame/Covers

Shantui DH17 (H6HT**U47) Page 1 of 2



Frame/Covers

Shantui DH17 (H6HT**U47) Page 2 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1		1	Frame, H6H	3.13	15319W	1	Fitting
2.1	95959W	1	Pin, Drawbar	3.14	2312486	10	Capscrew
2.2	2303221W	1	Pin, Retaining	3.15	293645W	15	Capscrew
2.3	2312580	1	Rod, Tie	3.16	296422W	25	Washer
2.4	15272W	2	Pin	5.2	2312208	1	Gasket, Hose Seal
2.5	15290W	1	Fitting	13.1	293645W	10	Capscrew
2.6	15315W	2	Fitting	13.2	2312117	1	Cover
3.1	2312048	1	Cover, Top RH	13.4	2312119	6	Spacer
3.2	2312045	1	Gasket, Top RH	13.5	2312046	1	Cover, Front
3.6	2316162	1	Cover, LH	13.6	2312006	1	Clamp, Top
3.9	151589W	1	Cover, Freespool	13.8	296422W	10	Washer
3.10	151646W	1	Gasket, Freespool	18.1	2312850	1	Cover, Top LH
3.11	21420W	1	Plug, Breather	18.2	2312849	1	Cover, Top
3.12	2300962W	1	Cap. Breather				•

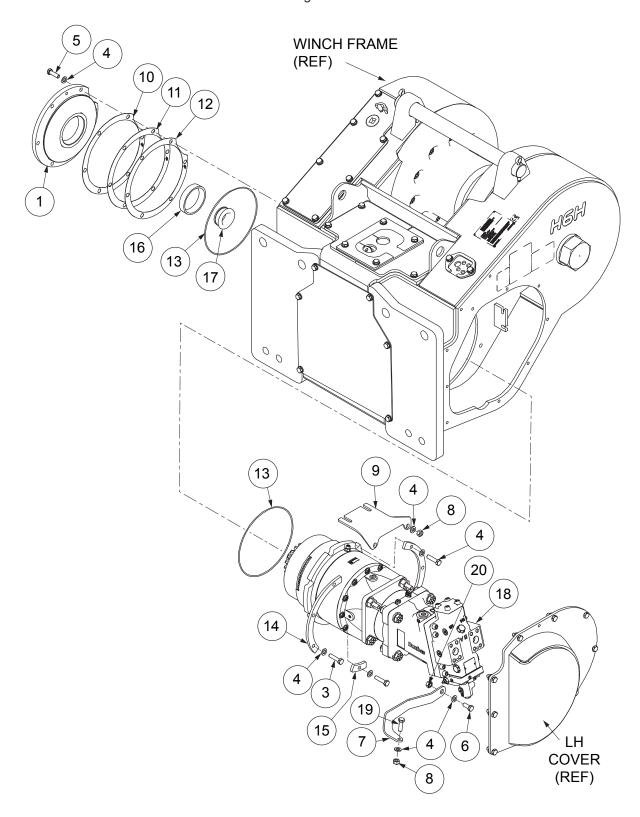
Mounting/Installation Parts Shantui DH17 (H6HT**U47)

Note:

Mounting/installation parts are customer-supplied for this model.

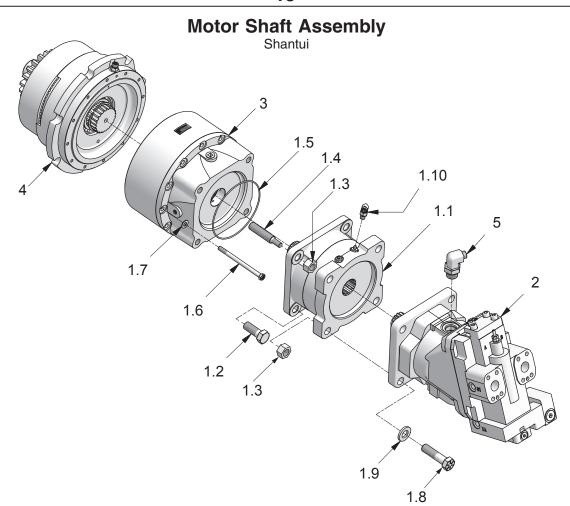
Section 2 Gear Shaft/Train

Motor Shaft Group Page 1 of 2



Motor Shaft Group Page 2 of 2

Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
		2311819		Motor Shaft Group					
1		2311857	1	. Cover, Bearing	14		2311917	2	. Plate, Clamp
3		2312488	7	. Capscrew	15		2311918	1	. Plate, Clamp
4		296422W	19	. Washer	16	*b	2300668W	1	. Cup, Bearing
5		2312487	6	. Capscrew	17	*b	2300669W	1	. Cone, Bearing
6		293645W	1	. Capscrew	18			1	. Assy, Motor Shaft
7	*c	2316491	1	. Bracket, Motor Support	19		293647W	1	. Capscrew
7	*d	2312036	1	. Bracket, Motor Support	20		2305130W	1	. Nut, Bracket Support
8		292656W	3	. Nut					
9		2312018	1	. Plate, Manifold Bracket					
10		2312061	AR	. Shim .020		*a	Included in M	lotor, Re	ducer & Brake Assembly
11		2312059	AR	. Shim .005			Rebuild Kit 2	314659	•
12		2312060	AR	. Shim .007		*b	Included in Ir	ntermedi	ate/Drum Shaft & Brake
13	*a	203564	2	. O-Ring			Assembly Re	build Kit	2314660
				ŭ		*c	First Used S	N 1714	
						*d	Last Used S/	N 1713	
						*e	See page 18	for detail	s.



Motor Shaft Assembly Shantui DH17 (H6HT6B**U47) Last Used S/N1713

Item	•	Part No.	Qty	Description	Item	•	Part No.	Qty	Description
		2316071		Assembly, Motor Shaft					
1.1	*a	2316071	1	. Brake, D Mount Dry Disk	1.9		221777W	4	. Washer
1.2		Y17C-1232	2	. Capscrew	1.10		R833251	1	. Fitting
1.3		221716W	6	. Nut	2	*c	2316072	1	. Motor, Hydraulic
1.4		2312041	2	. Stud		NS	2313890	1	O-Ring, Pilot Motor
1.5	*b	237349	1	. O-Ring		NS	2313891	1	Kit, Shaft Seal
1.6		R13801826	12	. Capscrew	3		2312554	1	. Reducer, Planetary
1.7		221767W	12	. Washer	4		2312928	1	. Assembly, Shaft
1.8		177192W	4	. Capscrew					

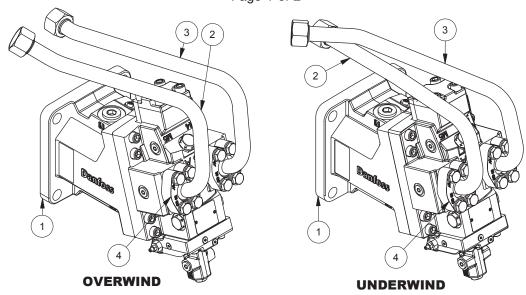
Motor Shaft Assembly Shantui DH17 (H6HT6B**U47) First Used S/N1714

Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
		2316468		Assembly, Motor Shaft					
1.1	*a	2316071	1	. Brake, D Mount Dry Disk	2		2316469	1	. Motor, Hydraulic
1.2		Y17C-1232	2	. Capscrew		NS	2313890	1	O-Ring, Pilot Motor
1.3		221716W	6	. Nut		NS	2313891	1	Kit, Shaft Seal
1.4		2312041	2	. Stud	3		2312554	1	. Reducer, Planetary
.5	*b	237349	1	. O-Ring	4		2312928	1	. Assembly, Shaft
.6		R13801826	12	. Capscrew					•
.7		221767W	12	. Washer		*a	See page 25	for detail	s
.8		177192W	4	. Capscrew		*b	Included in N	Notor, Rec	lucer & Brake Assembly
.9		221777W	4	. Washer			Rebuild Kit 2	2314659	•
.10		R833251	1	. Fitting		*c	See page 20	for Motor	Replacement Kit
				•		NS	Not Shown		•

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Motor Replacement Kit

Page 1 of 2



Item		Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*a		1	Motor - Hyd; Danfoss H1B				
2	*a		2	Tube Assy - Motor A				
3	*a		6	Tube Assy - Motor B				
4		592255	2	Kit, Split Flange				

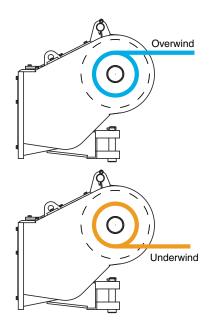
^{*}a Refer to the chart below to determine replacement parts for cancelled motors

WINCH MODEL	KIT PART NUMBER:	OVERWIND/ UNDERWIND		ITEM 1 (CURRENT MOTOR):	ITEM 2 (TUBE A):	ITEM 3 (TUBE B):
H6HT6B**U47	2316943	0	2316072	2316469	2316108	2316109
	2316944	U	2316072	2316469	2316714	2316715

Notes:

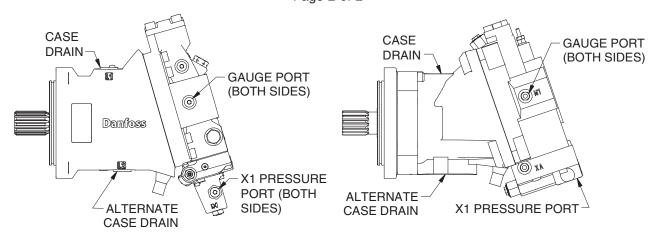
Use this chart to determine which H1B motor replaces the cancelled 51V motor.

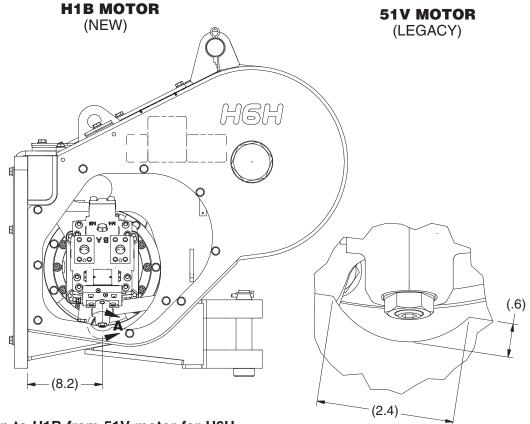
Be sure to note whether your motor is overwind or underwind to get the appropriate kit. Each kit contains all the components needed to convert your winch to the current motor.



Motor Replacement Kit

Page 2 of 2

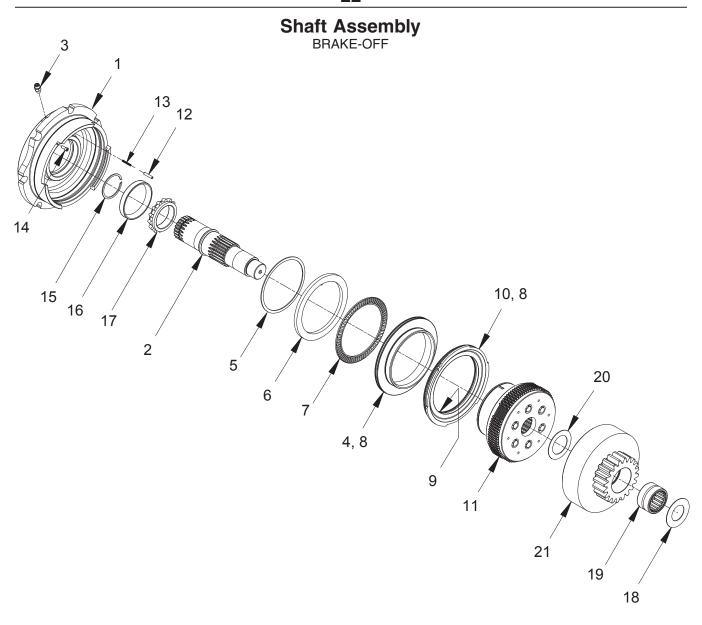




DETAIL A

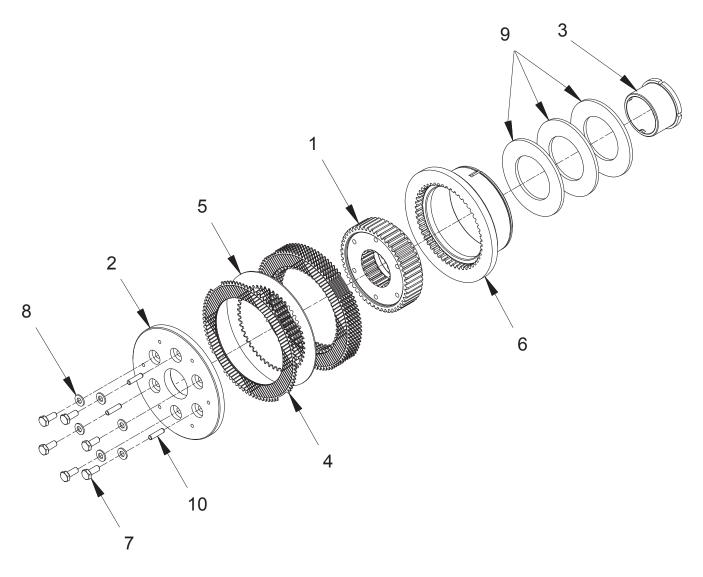
Conversion to H1B from 51V motor for H6H:

- Remove material from the winch frame as seen in Detail A to allow the new H1B motor to fit. More material may be removed if necessary for fit.
- 2. Material may be removed from the cover as necessary to allow the new motor to fit.



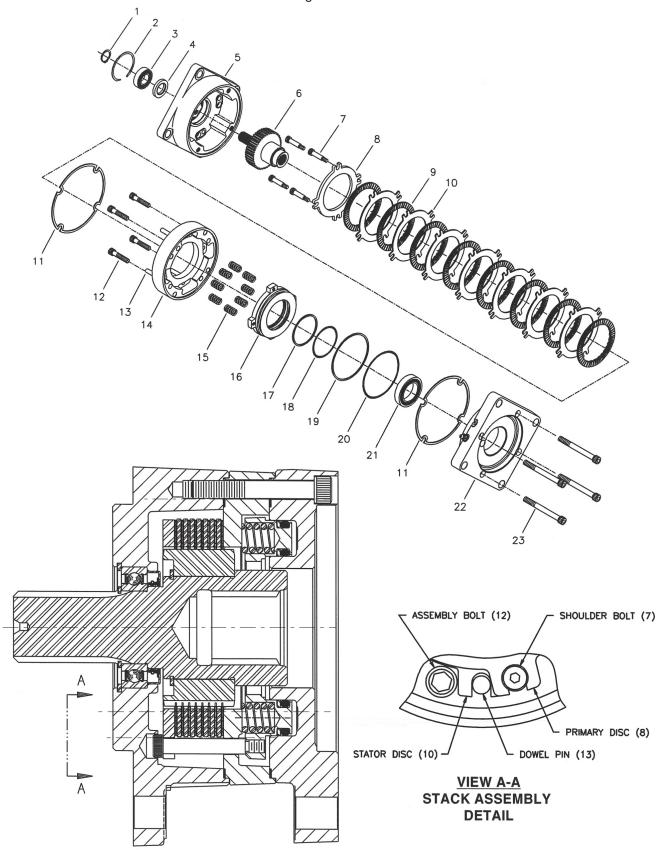
Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
		2313026		Assy, BRAKE-OFF Shaft					
1		2311855	1	. Housing, Clutch	15		2311684	1	. Ring, Snap
2		2311856	1	. Shaft, Clutch	16		137153W	1	. Cup, Roller Bearing
3		231439	1	. Fitting	17		137155W	1	. Cone, Roller Bearing
4		2312039	1	. Piston, Clutch	18		2311869	1	. Shim .062
5		2311683	1	. Ring, Snap	19		230407W	1	. Bearing
6		2312442	1	. Ring, Thrust	20		2311687	1	. Shim .062
7		2311655	1	. Brg, Thrust Needle Roller	21	*b	2312977	1	. Gear, Spider
8		86585W	2	. O-Ring	21	*C	2311905	1	. Gear, Spider
9		87287W	1	. O-Ring					•
10		2311880	1	. Ring, Seal					
11	*a	2311903	1	. Assy, Clutch		*a	See page 23	for details	
12		239147W	1	. Pin		*b	Gear ratios 2	& 5	
13		2303992W	1	. Spring		*c	Gear ratios 1	& 6	
14		R13811617	1	. Capscrew					

Clutch Assembly



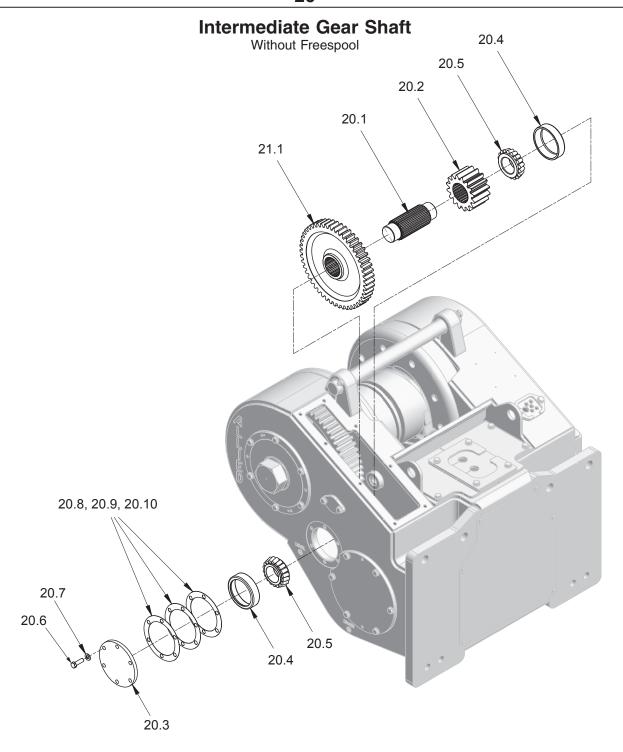
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311903		Assy, Clutch	6	2311906	1	. Plate, Pressure
1	2311904	1	. Hub, Clutch	7	296420W	6	. Washer
2	2311907	1	. Plate, Clutch	8	293628W	6	. Capscrew
3	2312029	1	. Retainer, Spring	9	2311251	3	. Spring, Belleville
4	328715W	7	. Disc, Friction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

Dry Disc Brake Page 1 of 2

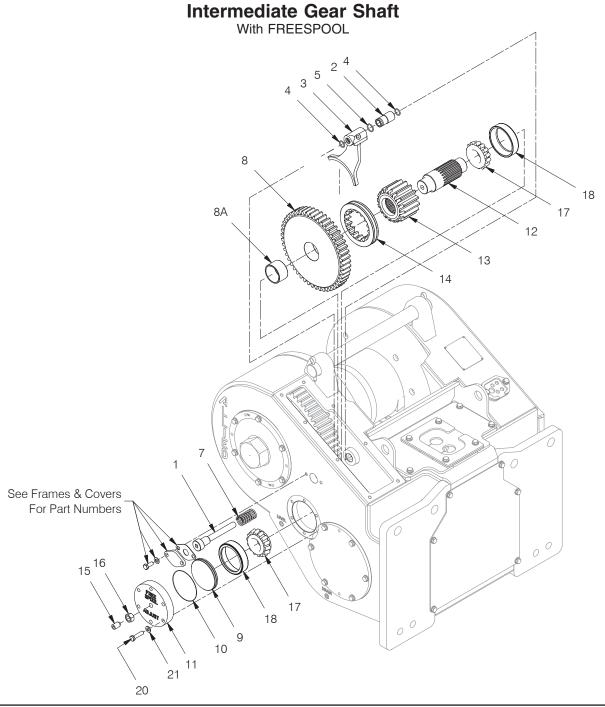


Dry Disc Brake Page 2 of 2

Item		Part No.	Qty	Description	Item	F	Part No.	Qty	Description
		2312155		Brake, D Mount Dry Disc					
1		NSS	1	. Retaining Ring	21	*b	NSS	1	. Bearing
2		NSS	1	. Retaining Ring	22		NSS	1	. Pressure Plate
3	*b	NSS	1	. Bearing	23		NSS	4	. Capscrew
4	*a,*b	NSS	1	. Oil Seal					·
5		NSS	1	. Cover Plate		*a	Included i	n O-Ring F	Repair Kit 2312302;
6		NSS	1	. Spline Shaft Assy			O-Ring Re	epair Kit 2	312302 is included in
7		NSS	4	. Bolt			Motor, Re	ducer & B	rake Assembly Rebuild Kit
8	*d	NSS	1	. Primary Disc			2314659		-
9	*d	NSS	8	. Rotor Disc		*b	Included in Bearing Repair Kit 2312303;		
10	*d	NSS	7	. Stator Disc			Bearing R	epair Kit 2	312303 is included in
11 *a	a,*b,*c,*d	NSS	2	. Case Gasket			Intermedia	ate/Drum S	Shaft & Brake Assembly
12		NSS	4	. Capscrew			Rebuild K	it 2314660)
13		NSS	4	. Dowel Pins		*c	Included i	n Spring F	Repair Kit 250850;
14		NSS	1	. Spring Plate			Spring Re	pair Kit 25	0850 is included in
15	*c	NSS	10	. Spring, Red			Intermedia	ate/Drum S	Shaft & Brake Assembly
16		NSS	1	. Piston			Rebuild K	it 2314660)
17	*a	NSS	1	. Backup Ring		*d	Included i	n Lining R	epair Kit 250847;
18	*a	NSS	1	. O-Ring					0847 is included in
19	*a	NSS	1	. Backup Ring			Intermedia	ate/Drum S	Shaft & Brake Assembly
20	*a	NSS	1	. O-Ring			Rebuild K	it 2314660)
						NSS	Not Sold S	Separately	

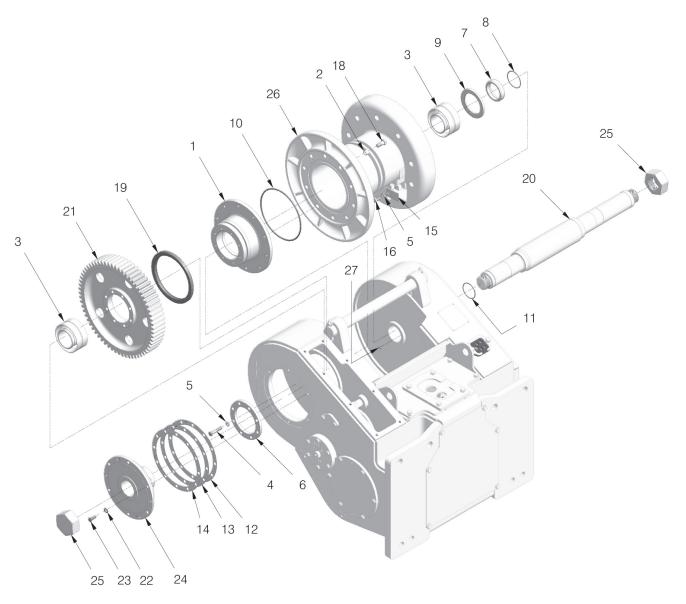


Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
20.1		95972W	1	Shaft	20.10		149543W	AR	Shim .020
20.2		95973W	1	Gear	21.1	*b	96024W	1	Gear
20.3		280262W	1	Retainer, Bearing	21.1	*c	2314411	1	Gear
20.4	*a	30059W	2	Cup, Roller Bearing					
20.5	*a	30080W	2	Cone, Roller Bearing		*a	Included in Ir	ntermedia	te/Drum Shaft & Brake
20.6		2312487	6	Capscrew			Assembly Re	build Kit 2	2314660
20.7		296422W	6	Washer		*b	Gear ratios 1	& 6	
20.8		149541W	AR	Shim .005		*c	Gear ratios 2	& 5	
20.9		149542W	AR	Shim .007		AR	As Required. more informa		Service Manual 599040W for



Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
1	*a	2311894	1	Shaft, Freespool	14		2312269	1	Clutch, Dental
2		2305097W	1	Piston, Freespool	15		2304803W	1	Screw
3		2305099W	1	Shifter Fork, Freespool	16		221717W	1	Nut, Hex
4	*b	15862W	2	O-Ring	17	*b	2302311W	2	Cone, Bearing
5	*b	212380	1	O-Ring	18	*b	30059W	2	Cup, Bearing
7		2305096W	1	Spring	20		2312488	6	Capscrew
8	*c	283434W	1	Assy, Intermediate Gear	21		296422W	6	Washer, Hard
8	*d	2303036	1	Assy, Intermediate Gear					
8A		283432W	1	. Bushina		*a	Apply Thread	llock 318	702W to threads
9		2302624W	1	Piston, Freespool Adjust		*b	Included in In	itermedia	te/Drum Shaft & Brake
10	*b	159940W	1	O-Ring			Assembly Re	build Kit	2314660
11		2302625W	1	Housing, Freespool Adjust		*c	Gear ratios 1	& 6	
12		2305956W	1	Shaft. Intermediate		*d	Gear ratios 2	& 5	
13		2312280	1	Gear. Pinion					

Drum Shaft

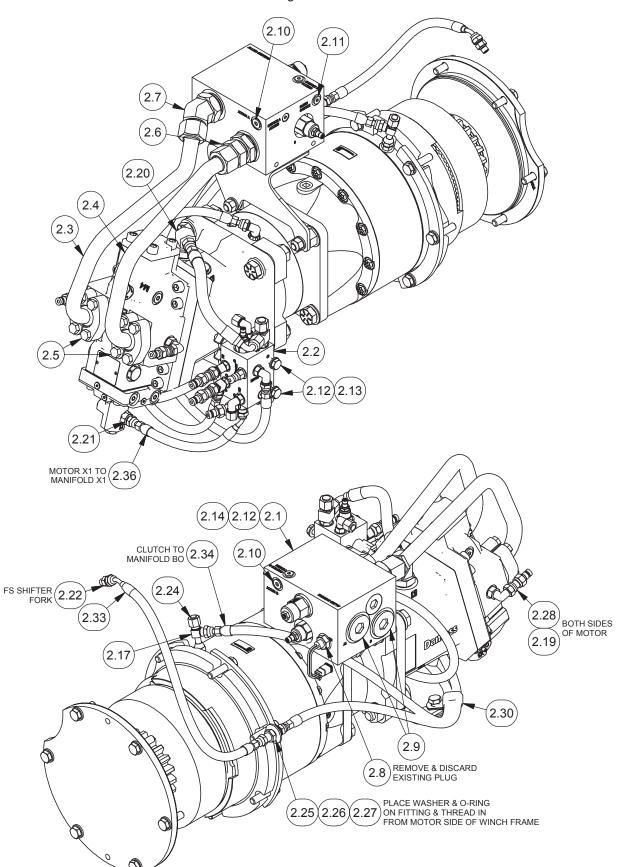


Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
1		141674W	1	Adapter					
2		53559W	10	Thimble, Tapered	17		221771W	8	Hard Washer
3	*b	2310093	2	Bearing, Roller	18		2310891	10	Capscrew
1		221577W	8	Capscrew	19		141671W	1	Seal, Oil
5	*b	15158W	9	Washer	20		2312064	1	Shaft, Drum
6		95978W	1	Retainer	21		95977W	1	Gear, Drum
7	*a	172808W	1	Spacer	22		296422W	6	Washer
3		15881W	1	O-Ring	23		2312486	6	Capscrew
9	*b	44547W	1	Seal, Oil	24		172810W	1	Retainer
10	*b	133927W	1	Ring, Piston Seal	25	*a	2312099	2	Nut
11	*b	90263W	1	O-Ring	26		2313730	1	Drum, H6H
12		175648W	AR	Shim, .020	27		Y433070.45	1	Fitting
13		175647W	AR	Shim, .007					_
14		175646W	AR	Shim, .005					
15		2301783W	1	Keeper, Ferrule		*a	Requires Sea	lant 3586	674W
16		16829W	1	Capscrew		*b	Included in Int Assembly Rel		te/Drum Shaft & Brake 2314660

Section 3 Hydraulic/Electrical Components

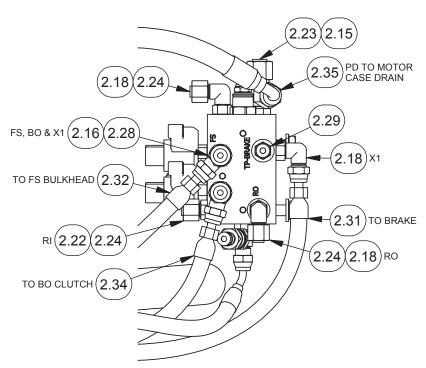
Hydraulic Group Shantui DH17 (H6HT**U47)

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Hydraulic Group Shantui DH17 (H6HT**U47)

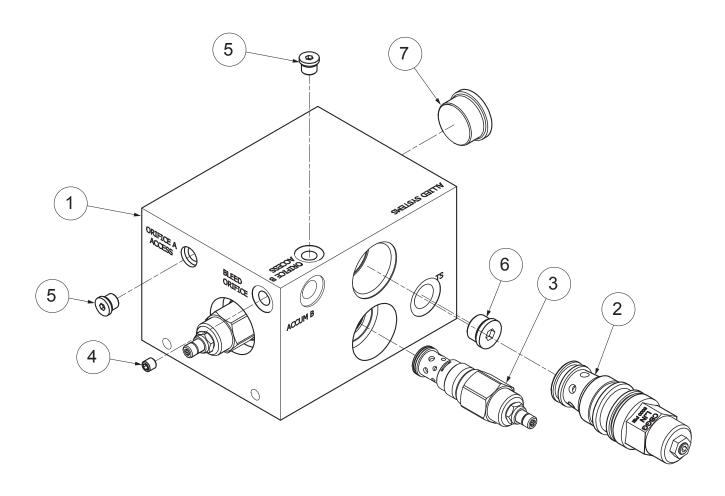
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CONTROL MANIFOLD DETAIL

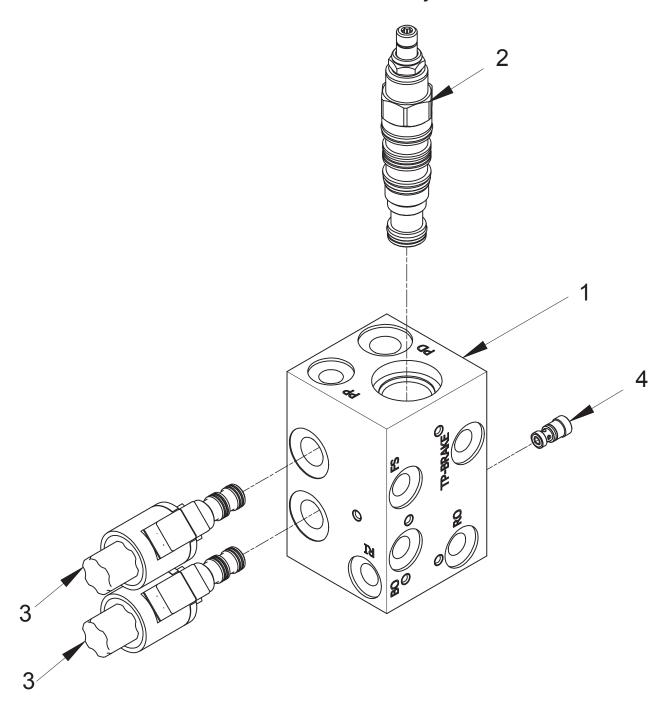
Item		Part No.	Qty	Description	Item		Part No.	Qty	Description
2.1	*a	2312941	1	Counterbalance Relief					
				Manifold Assy	2.20		R833260	1	Fitting
2.2	*b	2311770	1	Manifold Assy	2.21		R833103	1	Fitting
2.3		2316108	1	Tube Assy - Motor A	2.22		231439	2	Fitting
2.4		2316109	1	Tube Assy - Motor B	2.23		231822	1	Fitting
2.5		592255	2	Kit, Split Flange	2.24		232984	4	Fitting
2.6		2313948	1	Fitting	2.25		R834100	1	Fitting
2.7		R833218	1	Fitting	2.26		15178W	1	Flat Washer
2.8		2307904W	1	Switch - Temperature	2.27		211564	1	O-Ring
2.9		229389	2	Fitting	2.28		2307625W	5	Fitting
2.10		229383	2	Fitting	2.29		R14040	1	Coupler, Male
2.11		235387	1	Fitting	2.30		2312628	1	Clamp
2.12		Y09C-M1025	4	Capscrew	2.31		2312353	1	Hose Assy
2.13		296420W	2	Hard Washer	2.32		2312350	1	Hose Assy
2.14		15176W	2	Flat Washer	2.33		2312212	1	Hose Assy
2.15		231465	1	Fitting	2.34		2312351	1	Hose Assy
2.16		R833400	3	Fitting	2.35		R12104	1	Hose Assy
2.17		236855	1	Fitting	2.36		2313639	1	Hose Assy
2.18		R833251	3	Fitting					
2.19		R833253	2	Fitting		*a	See page 32	for details	
				•		*b	See page 33	for details	

Counterbalance Relief Manifold Assy



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2312941		Assembly - Manifold, Counterbalance Relief				
1	2312940	1	. Manifold - Body,	4	2310181	1	. Plug
			Counterbalance Relief	5	235387	3	. Fitting
2	2312068	1	. Valve, Counterbalance	6	229345	1	. Fitting
	243815	1	Seal Kit	7	227949	1	. Fitting
3	2307438W	2	. Relief Valve				3
	259258	1	Seal Kit				

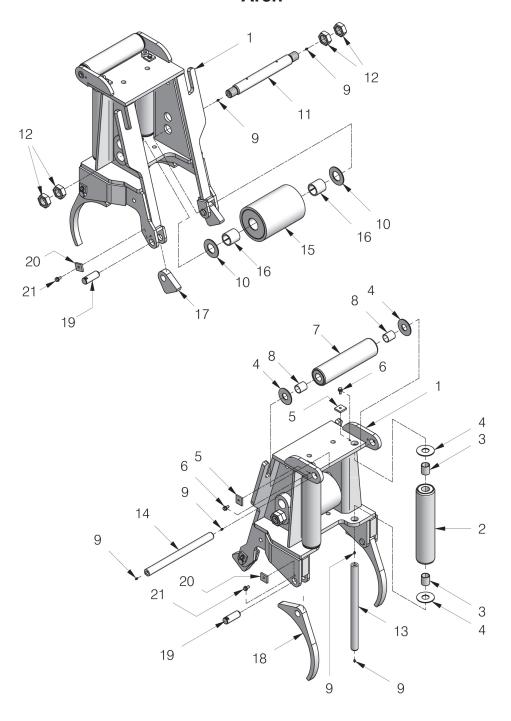
Control Manifold Assy



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311770	1	Assy, Control Manifold				
1	2311771	1	. Body, Control Manifold	4	2312074	1	. Valve, Shuttle
2	2311592	1	. Valve, Directional	7	2312112	1	Seals, O-Ring
_	252566	1	Kit, Seal		2012112		
3	2312073	2	. Valve, Cartridge				
	2314106	1	Base, Valve Cartridge				
	2313984	1	Coil				
	2312111	1	Kit, Seal				

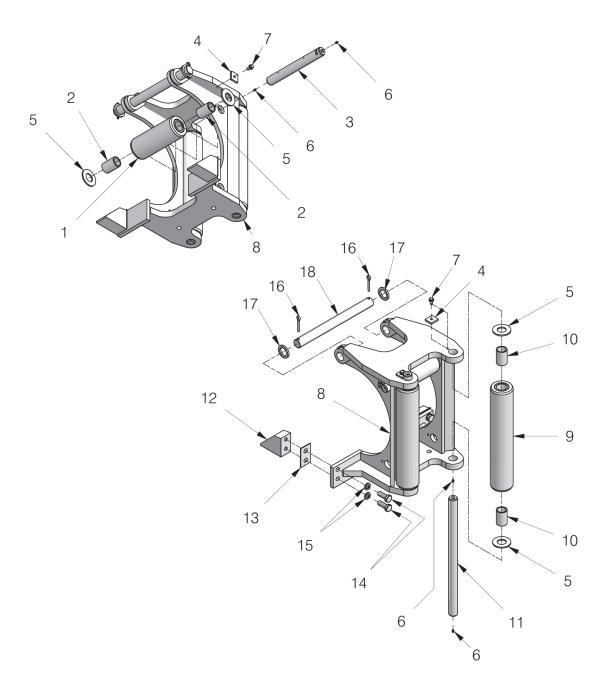
Section 4 Optional Equipment

Arch



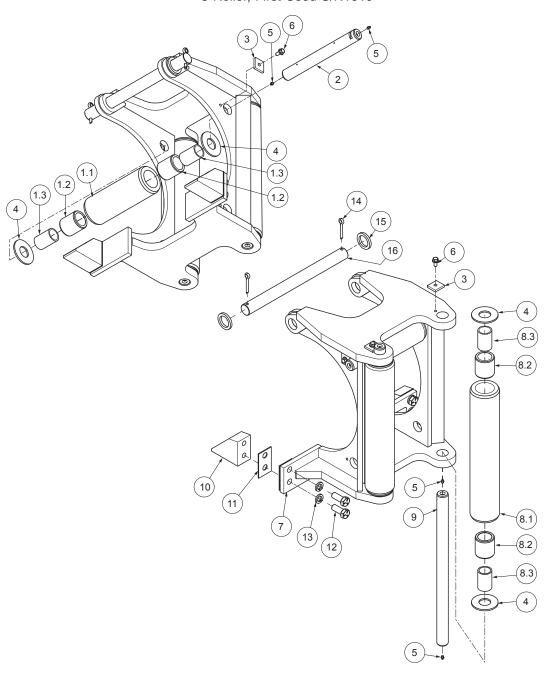
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2301748W	1	Arch Assembly				
1	2301749W	1	. Arch	12	221336W	4	. Nut
2	2301907W	2	. Roller	13	2301920W	2	. Shaft
3	35135W	2	Bushing	14	2301919W	1	. Shaft
4	331767W	6	. Washer	15	2301925W	1	. Roller
5	2301706W	3	. Keeper	16	2817W	2	Bushing
6	398817W	3	. Flange, Screw	17	2310726	2	Ear, Arch
7	2301910W	1	. Roller	18	2312168	2	Lug, Wrapped
8	35135W	2	Bushing	19	2301924W	4	Pin
9	16001W	8	. Fitting, Grease	20	2301706W	4	Keeper
10	2821W	2	. Washer	21	398817W	4	Flange Screw
11	2302120W	1	. Shaft				ŭ

Fairlead 3-Roller, Last Used S/N1609



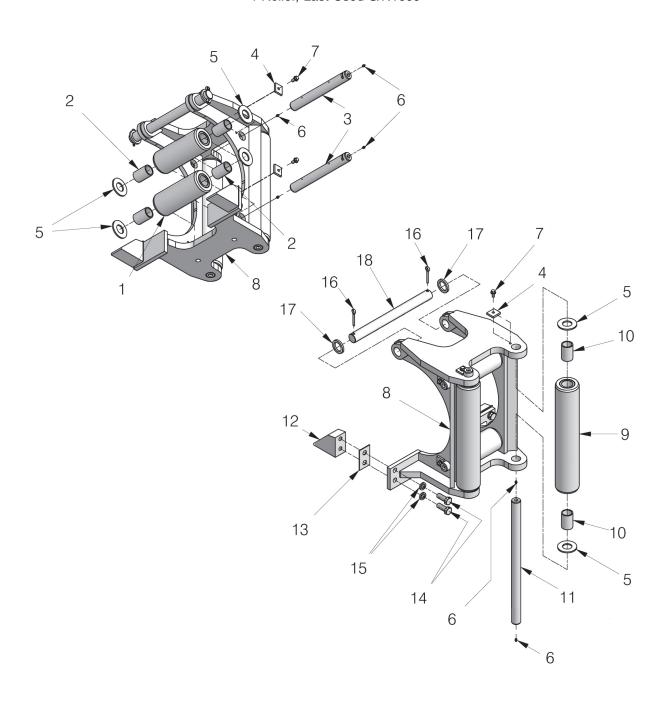
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2301731W		Fairlead Assembly, 3-Roller				
1	2301727W	1	. Roller	10	2570W	4	Bushing
2	2570W	2	Bushing	11	2301721W	2	. Shaft
3	2301722W	1	. Shaft	12	226374W	2	Bracket
4	2301706W	3	. Keeper	13	93878W	AR	Shim
5	33394W	6	. Washer	14	18669W	4	Capscrew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

Fairlead 3-Roller, First Used S/N1610



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2315548		Fairlead Assy, 3-Roller				
1	2315545	1	Roller Assy	8.1	2301724W	1	. Tube
1.1	2315544	1	. Tube	8.2	2301961W	2	. Spacer
1.2	2301961W	2	. Spacer	8.3	2570W	2	. Bushing
1.3	2570W	2	. Bushing	9	2301721W	2	Shaft, Vertical
2	2315546	1	Shaft	10	226374W	2	Bracket - Fairlead
3	2301706W	3	Keeper	11	93878W	8	Shim
4	2314097	6	Washer	12	18668W	4	Capscrew
5	16001W	6	Fitting, Lube	13	15166W	4	Washer
6	398817W	3	Screw, Flange	14	15272W	2	Cotter Pin
7	2315555	1	Frame, Fairlead	15	173607W	2	Spacer
8	2301726W	2	Roller Assy	16	2312580	1	Rod - Tie

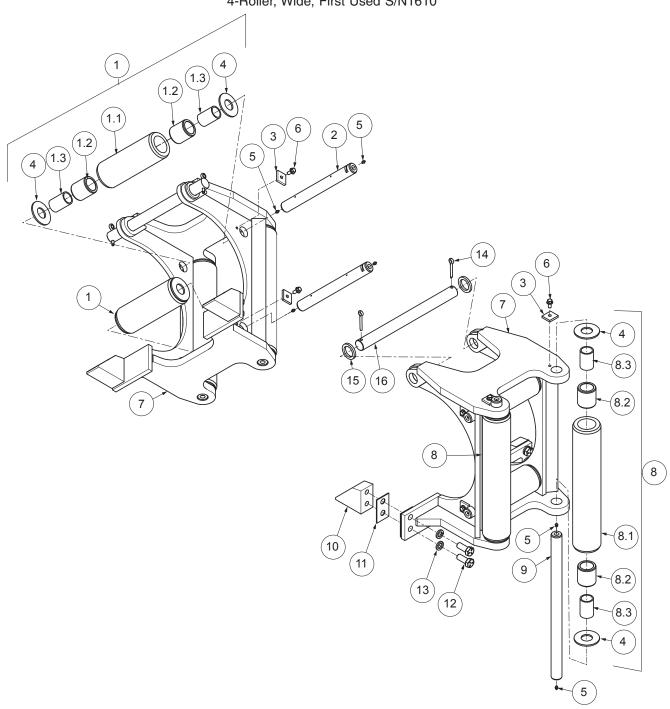
Fairlead 4-Roller, Last Used S/N1609



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2301732W		Fairlead Assy, 4-Roller				
1	2301727W	2	. Roller	10	2570W	4	Bushing
2	2570W	4	Bushing	11	2301721W	2	. Shaft
3	2301722W	2	. Shaft	12	226374W	2	Bracket
4	2301706W	4	. Keeper	13	93878W	AR	Shim
5	33394W	8	. Washer	14	18668W	4	Capscrew
6	16001W	8	. Fitting, Grease	15	15166W	4	Washer
7	398817W	4	. Screw, Flange	16	15272W	2	Pin, Cotter
8	2301718W	1	. Fairlead	17	2312437	2	Spacer
9	2301726W	2	. Roller	18	2312580	1	Bar, Tie

Fairlead

4-Roller, Wide, First Used S/N1610



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2315549		Fairlead Assy, 4-Roller				
1	2315545	2	Assy, Roller	8.1	2315544	1	. Tube
1.1	2315544	1	. Tube	8.2	2301961W	2	. Spacer
1.2	2301961W	2	. Spacer	8.3	2570W	2	. Bushing
1.3	2570W	2	. Bushing	9	2301721W	2	Shaft, Vertical
2	2315546	2	Shaft	10	226374W	2	Bracket, Fairlead
3	2301706W	4	Keeper	11	93878W	8	Shim
4	2314097	8	Washer	12	18668W	4	Capscrew
5	16001W	8	Fitting, Lube	13	15166W	4	Washer
6	398817W	4	Screw, Flange	14	15272W	2	Cotter Pin
7	2315555	1	Frame, Fairlead	15	173607W	2	Spacer
8	2301726W	2	Assy, Roller	16	2312580	1	Bar, Tie

Wire Rope Assemblies

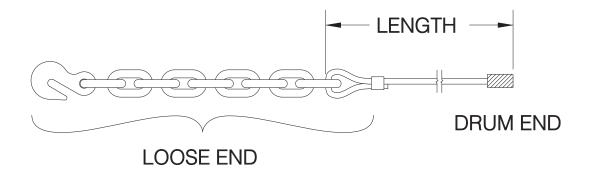


Figure A

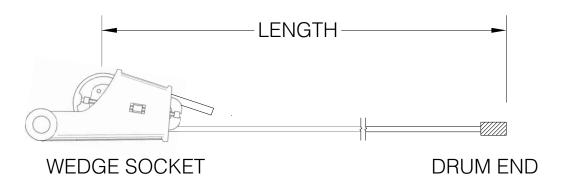


Figure B

Part No.		Wire Diameter	Length Ft (M)	Part No.		Wire Diameter	Length Ft (M)
WR6-275L	*a	3/4"	275 (84) *c	WR8-154L	*a	1"	154 (47) *c
WR6-413L	*a	3/4"	413 (126) *d	WR8-230L	*a	1"	230 (70) *d
YS6-275LWS	*b	3/4"	275 (84) *c	YS8-154LWS	*b	1"	154 (47) *c
YS6-413LWS	*b	3/4"	413 (126)*d	YS8-230LWS	*b	1"	230 (70) *d
WR7-198L	*a	7/8"	198 (60) *c				, ,
WR7-297L	*a	7/8"	297 (91) *d		*a	WR Series Wire Rope (Illustrated in Figure A)
YS7-198LWS	*b	7/8"	198 (60) *c		*b	YS Series Wire Rope (II	llustrated in Figure B)
YS7-297LWS	*b	7/8"	297 (91) *d		*c	Length to fill drum to 2/3	capacity (recommended)
			, ,		*d	Length to fill drum to ful	I capacity

Section 5 Service Kits

Recommended Winch Service Intervals and Kits

Following the service schedule recommended here to help keep dozer 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.

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

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

^{***} Follow dozer schedule if using dozer filter.

Recommended Gear Compartment Oil								
Chevron	Drive Train Fluids HD	Consult service/operating manual for low						
ExxonMobil	Mobiltrans HD Series	temperature oils and other details. Use of non-recommended oil may void the warranty.						

Table 1 Recommended Winch Service Intervals

Service Kits for H6H Winches									
Service Description	Kit Description	Winch Serial Number	Kit Part# for Hi- Performance (H) Winches	Kit Part# for Standard (T) Winches					
Filter change	Filter kit	All	Refer to dozer operator and service manuals						
Complete oil change (every 1,000 hours)	N/A	All	Check our website for current operator's and service manuals fo appropriate oils						
Clutch and brake overhaul (every 5,000 hours)	Motor, reducer & brake assembly rebuild kit	All	231	4659					
Major overhaul (every 10,000 hours)	Intermediate/drum shaft & brake assembly rebuild kit	All	231	4660					

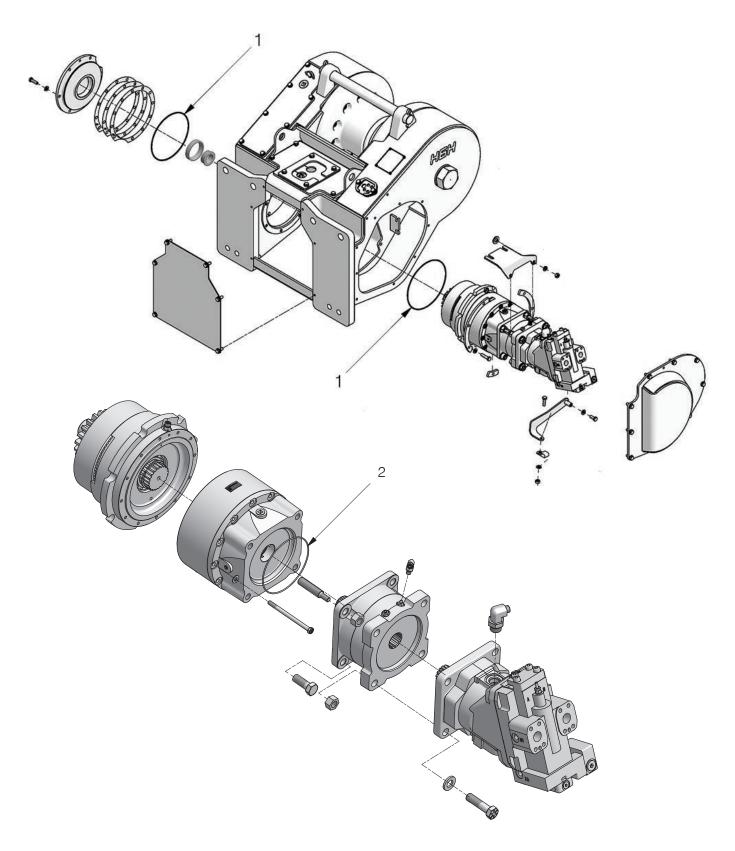
Table 2 Routine Maintenance Kits

^{*} Evaluate = Service based on average winch use;

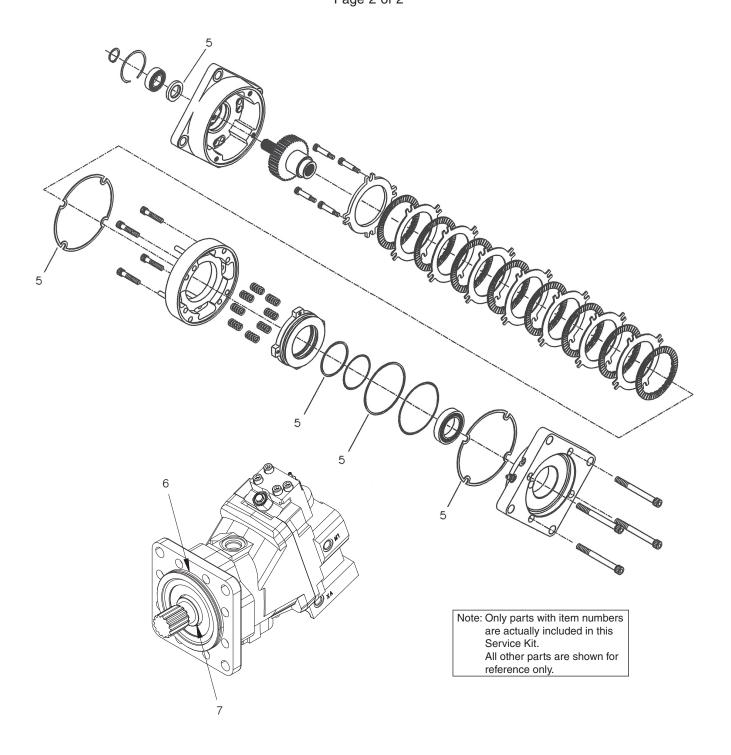
^{*} Inspect = Disassemble and inspect for wear.

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

Motor, Reducer & Brake Assembly Rebuild Kit: 2314659 Page 1 of 2

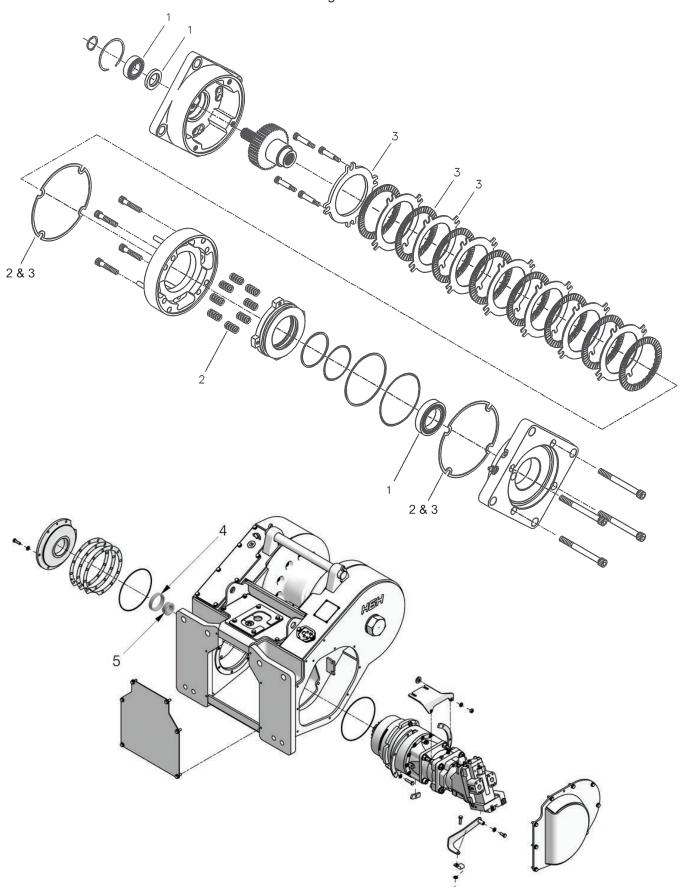


Motor, Reducer & Brake Assembly Rebuild Kit: 2314659 Page 2 of 2

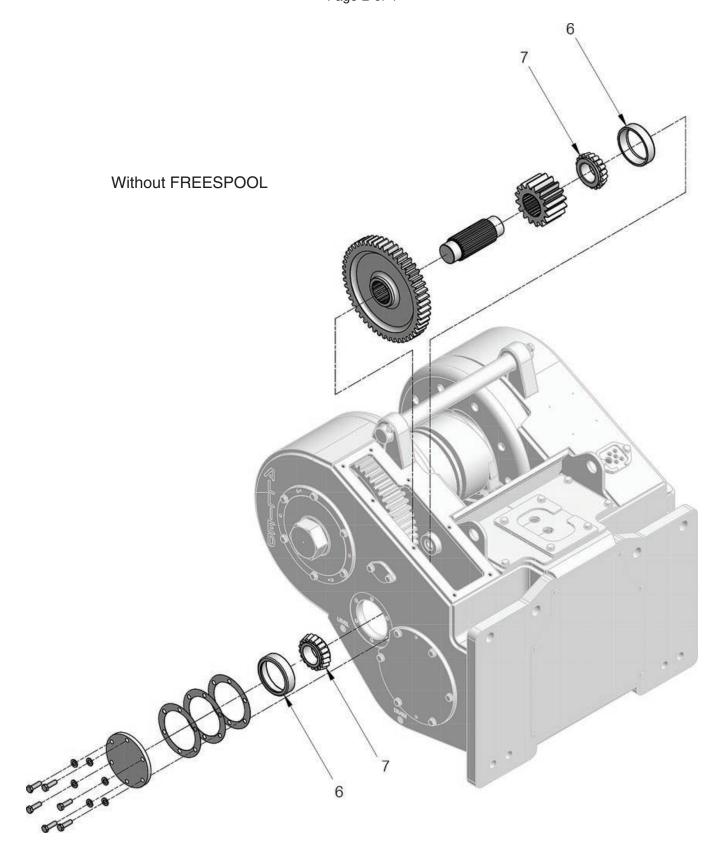


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2314659		Rebuild Kit, Motor, Reducer& Brake Assy	4	230064W	1	. Adhesive (Not Shown)
1 2 3	203564 237349 313022W	2 1 1	. O-Ring . O-Ring . Adhesive (Not Shown)	5 6 7	2312302 2313890 2313891	1 1 1	. Kit, O-Ring . O-Ring . Kit, Shaft Seal

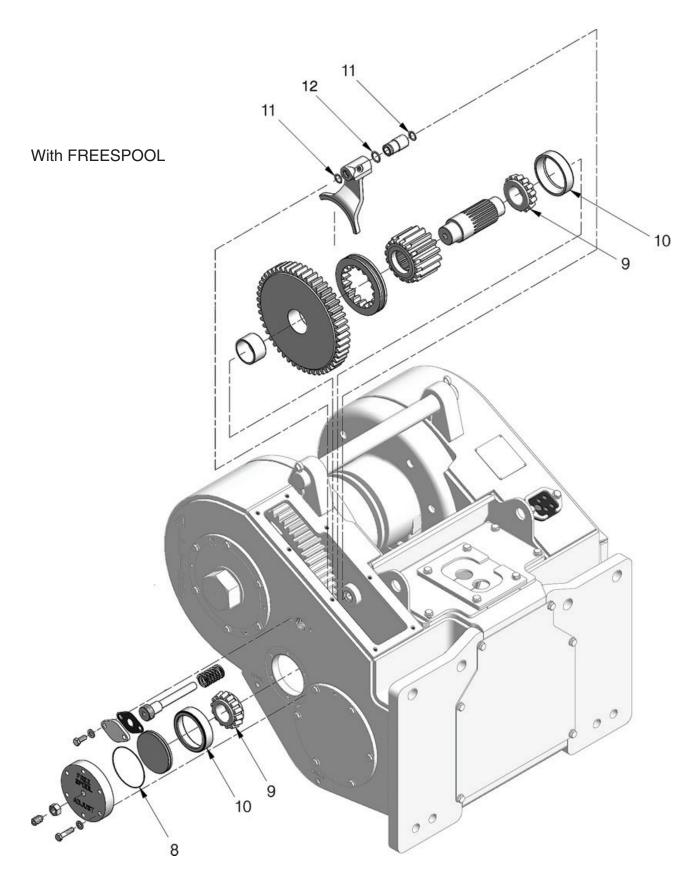
Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660 Page 1 of 4



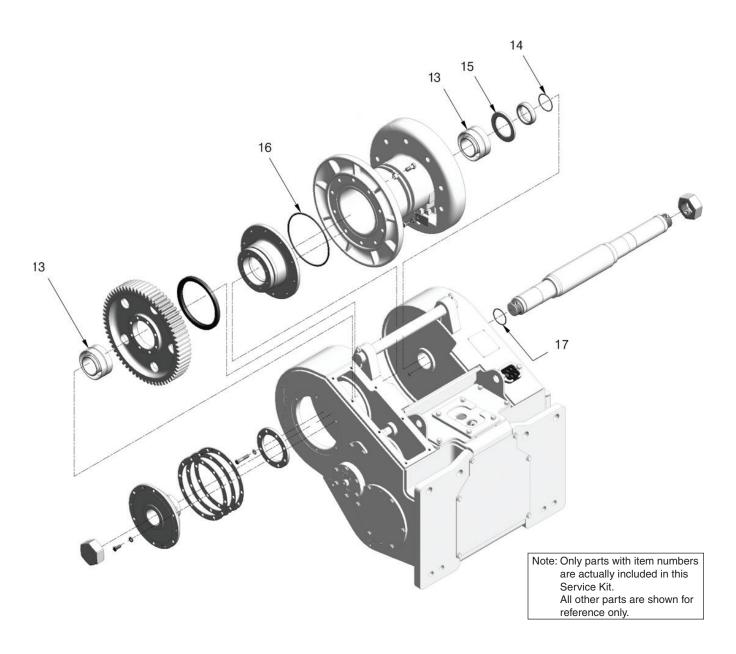
Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660 Page 2 of 4



Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660 Page 3 of 4



Intermediate/Drum Shaft & Brake Assembly Rebuild Kit: 2314660 Page 4 of 4



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2314660		Rebuild Kit, Intermediate/				
			Drum Shaft & Brake Assy	10	30059W	2	. Cup, Bearing
1	2312303	1	. Repair Kit, Bearing	11	15862W	2	. O-Ring
2	250850	1	. Repair Kit, Spring	12	212380	1	. O-Ring
3	250847	1	. Repair Kit, Lining	13	230406W	2	. Bearing, Roller
1	2300668W	1	. Cup, Bearing	14	15881W	1	. O-Ring
5	2300669W	1	. Cone, Bearing	15	44547W	1	. Seal, Oil
5	30059W	2	. Cup, Bearing	16	133927W	1	. Ring, Piston Seal
7	30080W	2	. Cone, Bearing	17	90263W	1	. O-Ring
3	159940W	1	. O-Ring	.,	0020011	•	. O Timig
9	2302311W	2	. Cone, Bearing				

Section 6 Recommended Service Parts

H6H Hydraulic Winch Recommended Service Parts

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

Page 51 lists gaskets and seals. Keep these parts in stock at all times for regular maintenance.

Page 51 and page 52 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 52 is a list of wire rope assemblies. Order parts as required and as relevant for your installation.

Page 53 contains a list of spare parts. Order parts or kits as required and as relevant for your installation.

Page 53 contains lists of operator controls components. Order parts or kits as required and as relevant for your installation.

Page 54 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 & S	Seals		Order as Re	quired
Applies to:	H6H Standard Winch mounted on Shantu	ii DH17 (l	J47)	
Allied P/N	Description	See Parts Manual Page	Order Qty	
2312045	Gasket, Top Right-Hand	1	Frames/Covers	
151646W	Gasket, Freespool	1	Frames/Covers	
2312009	Seal, Top	1	Frames/Covers	
2312208	Gasket, Hose Seal	1	Frames/Covers	
252566	Seal Kit, Directional Valve (P/N 2311592)	1	Control Manifold 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, Cavity Plug (P/N 258473)	1	CBR Manifold Assy	
251170	Seal Kit, Cavity Plug (P/N 256462)	2	CBR Manifold Assy	

Motor, Reducer & Brake Assembly Rebuild Kit, P/N: 2314659							
Applies to: Service Inter	All val: Every 5,000 Hours						
Allied P/N	Description	Qty in Kit	See Parts Manual Page	Order Qty			
2314659	Rebuild Kit, Motor, Reducer & Brake Assy						
203564	. O-Ring	2	Motor Shaft Group				
237349	. O-Ring	1	Motor Shaft Assembly				
313022W	. Adhesive	1	Motor Shaft Assembly				
230064W	. Adhesive	1	Motor Shaft Assembly				
2312302	. Kit, O-Ring	1	Brake, Dry Disc				
2313890	. O-Ring	1	Hydraulic Motor				
2313891	. Kit, Shaft Seal	1	Hydraulic Motor				

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

Applies to: All

Service Interval: Every 10,000 hours

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

Wire Rope Assemblies Order as Required Applies to: AII Order Allied P/N Will Fill Drum To: **Description** Length Qty WR6-275L Wire Rope Assy, 3/4" 275 FT (84 M) 2/3 Capacity (Recommended) WR6-413L Wire Rope Assy, 3/4" 413 FT (126 M) **Full Capacity** WR7-198L Wire Rope Assy, 7/8" 198 FT (60 M) 2/3 Capacity (Recommended) WR7-297L Wire Rope Assy, 7/8" 297 FT (91 M) **Full Capacity** WR8-154L Wire Rope Assy, 1" 154 FT (47 M) 2/3 Capacity (Recommended) Wire Rope Assy, 1" **Full Capacity** WR8-230L 230 FT (70 M) YS6-275LWS Wire Rope Assy, 3/4" 2/3 Capacity (Recommended) 275 FT (84 M) YS6-413LWS Wire Rope Assy, 3/4" 413 FT (126 M) **Full Capacity** YS7-198LWS Wire Rope Assy, 7/8" 198 FT (60 M) 2/3 Capacity (Recommended) YS7-297LWS Wire Rope Assy, 7/8" 297 FT (91 M) **Full Capacity** Wire Rope Assy, 1" 2/3 Capacity (Recommended) YS8-154LWS 154 FT (47 M) YS8-230LWS Wire Rope Assy, 1" 230 FT (70 M) **Full Capacity**

Spare Parts				Order as R	equired
Applies to:	Shantui DH17 (Н6НТ6В*	*U47)		
Allied P/N	Description	Qty on Winch	Relevant for Installation	See Parts Manual Page	Order Qty
2316469 *a 2316072 *b	Motor, Hydraulic	1	Shantui DH17 (H6HT6B**U47)	Motor Shaft Group	
2312155	Assembly, Brake	1	All	Motor Shaft Assembly	
21420W	Plug, Breather	1	All	Frame/Covers	
2300962W	Cap, Breather	1	All	Frame/Covers	
95959W	Pin, Drawbar	1	All	Frame/Covers	
2303221W	Pin, Retaining	1	All	Frame/Covers	
2312099	Nut, Blind	2	All	Shaft, Drum	
2301783W	Keeper, Ferrule	1	All	Shaft, Drum	
328715W	Disc, Friction	7	All	Clutch Assembly	
283434W	Assembly, Gear	1	All	Shaft, Intermediate Gear	
2570W	Bushing	6	All	Fairlead, 3-Roller	
2570W	Bushing	8	All	Fairlead, 4-Roller	

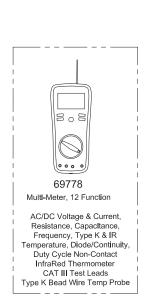
^{*}a First used with S/N1714

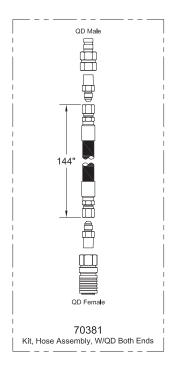
^{*}b Last used with S/N1713

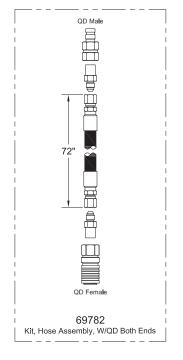
Operator Cont Applies to: All	rols Components	Order as	Required
Allied P/N	Description	Qty on Winch	Order Qty
2310013	Assembly, Switch (Yellow LED)	1	
2310504	Assembly, Switch (Red LED)	1	
2310506	Assembly, Switch (Red LED), Momentary	1	
2311072	Assembly, Switch (Green LED)	1	

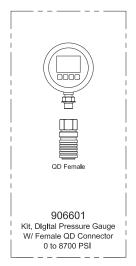
Tool Kits Order these tool kits as required for installation, maintenance and service of your winch.						
Allied P/N	Description	Order Qty				
588466	Socket Set, 3/8DR 3/8" to 7/8" STD/Deep, 22 PC					
588467	Socket Set, 1/2DR 3/8" to 1-1/4" STD/Deep, 30 PC					
588468	Socket Set, 3/4DR 7/8" to 2-3/8" 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 Tool	Order as Required				
Order these tools as required for maintenance and service of your winch.					
Allied P/N	Description	Order Qty			
906601	0 to 8700 PSI Digital Pressure Gauge W/Female QD Connector				
69782	72" Hose Assembly W/QD Connectors Both Ends				
70381	144" Hose Assembly W/QD Connectors Both Ends				
69778	Multi-Meter, 12 Function				







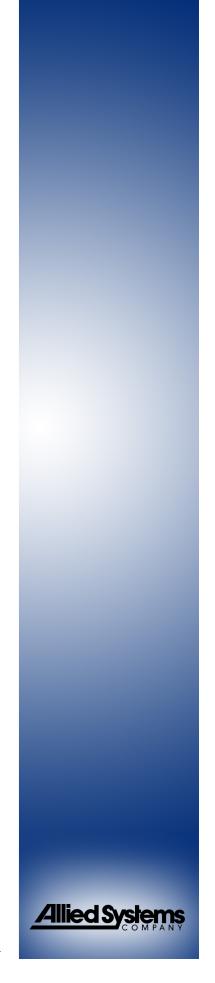


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