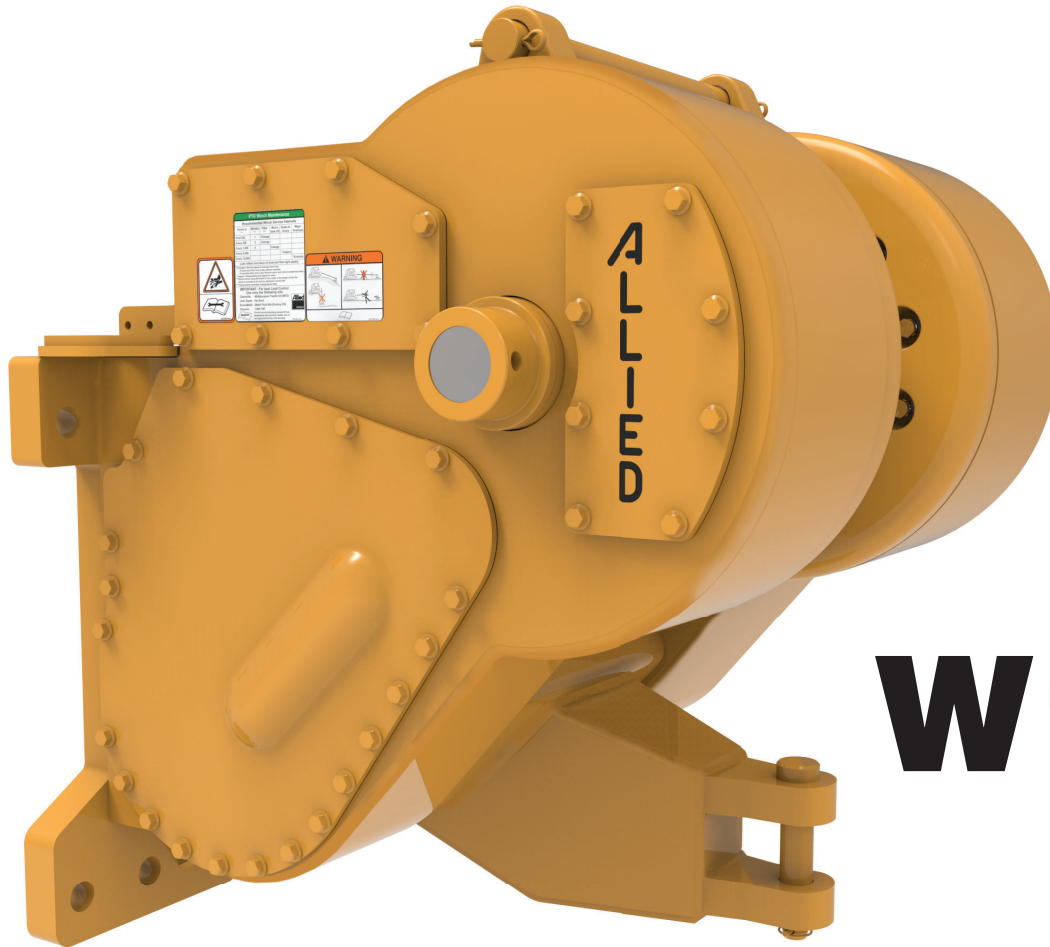


Parts Manual



W12E

Towing Winch for Caterpillar Dozers

A Product of
Allied Systems
COMPANY
Sherwood, OR USA

Applicable to winches with serial number AW12E**1749**** and later.

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

Safety Precautions

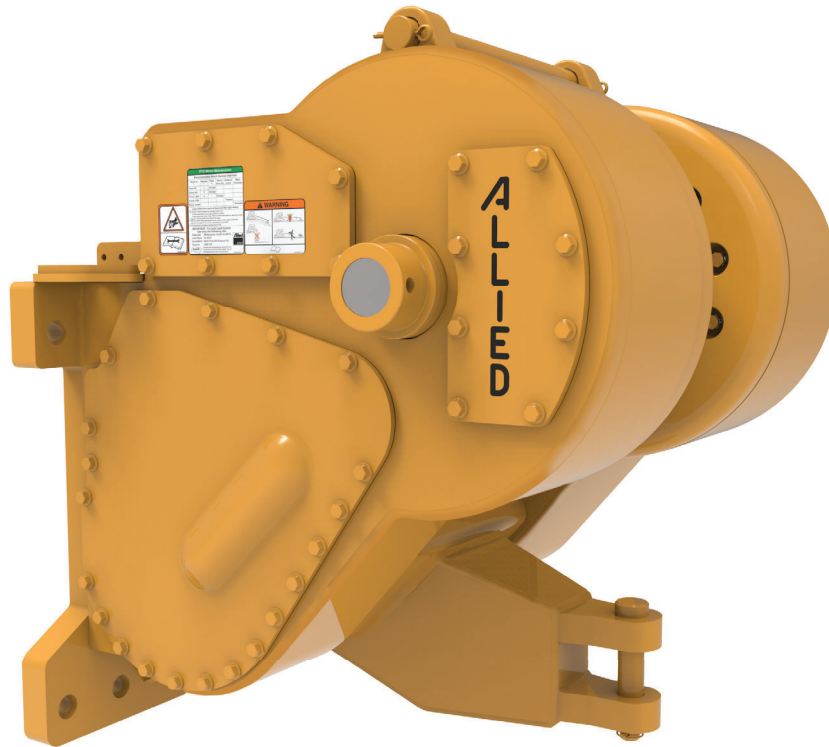
**Read, understand and observe the Safety Summary
on pages iii through v
to prevent injury to personnel and damage to equipment.**

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 - Illustrated



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Safety Summary

General Safety Notices

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

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



DANGER

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



WARNING

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



CAUTION

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

NOTICE

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

NOTE: ...

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

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

Safety Regulations

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

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

Operation, Inspection, and Maintenance Warnings

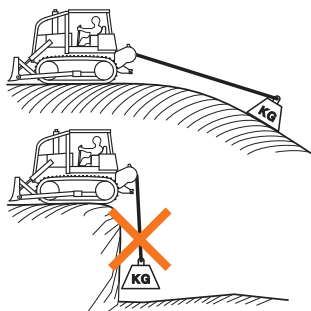
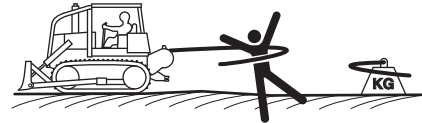


WARNING

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

- Do not operate the winch unless you are authorized and trained to do so.
- Do not operate the winch unless the vehicle is equipped with a screen to protect the operator if the wire rope breaks.
- Read, understand, and follow the operating, inspection, and maintenance instructions in this manual.
- Do not use the control levers for hand holds when entering or leaving the vehicle.
- Do not permit other people near the control area when you inspect or repair a machine.
- Never inspect, repair, or perform maintenance on a machine that is in motion.
- Inspect the winch before each use:
 - » Make sure that the controls and instruments operate correctly.
 - » Report the need for repairs immediately.
 - » Do not work with a damaged or worn wire rope.
 - » Do not use a winch that needs repairs.

- » If the wire rope and ferrule must be removed from the drum, make sure the end of the wire rope and ferrule are controlled when the ferrule is released. The end of the wire rope can suddenly move from the drum like a compressed spring when the ferrule is released, and cause an injury.
- Stay in the operator's seat when operating the winch.
- Do not stand on the vehicle when operating the winch.
- Avoid winch operation near people or other machines.
- Never stand nor permit others to stand in the bight (loop) of a wire rope.
- Do not stand nor permit others to be near the winch or wire rope when there is tension on the wire rope.
- Observe job site rules.
- Be in complete control at all times.
- Do not use the control levers as hangers for clothes, water bags, grease guns, lunch pails, etc.
- Do not leave the vehicle when the winch wire rope is under tension.
- Do not permit riders on the vehicle or load.
- Do not use the winch as an anchor for a double or two-part line.
- Do not pull the hook through the throat or over the drum, which will cause damage.
- When the winch is not in use, make sure the control lever is in **BRAKE-ON** position and the winch brake is applied.
- Do not use winch as a hoist. Tractor and skidder mounted winches are designed for towing.
- Always inspect wire rope, tail chain and other rigging components for wear, damage, broken strands or abuse before use.
- Never use wire rope, tail chain or other rigging that is worn-out, damaged or abused.
- Never overload wire rope, tail chain or rigging.
- Wire rope and tail chain will fail if worn-out, overloaded, misused, damaged, improperly maintained or abused. Wire rope or tail chain failure may cause serious injury or death!



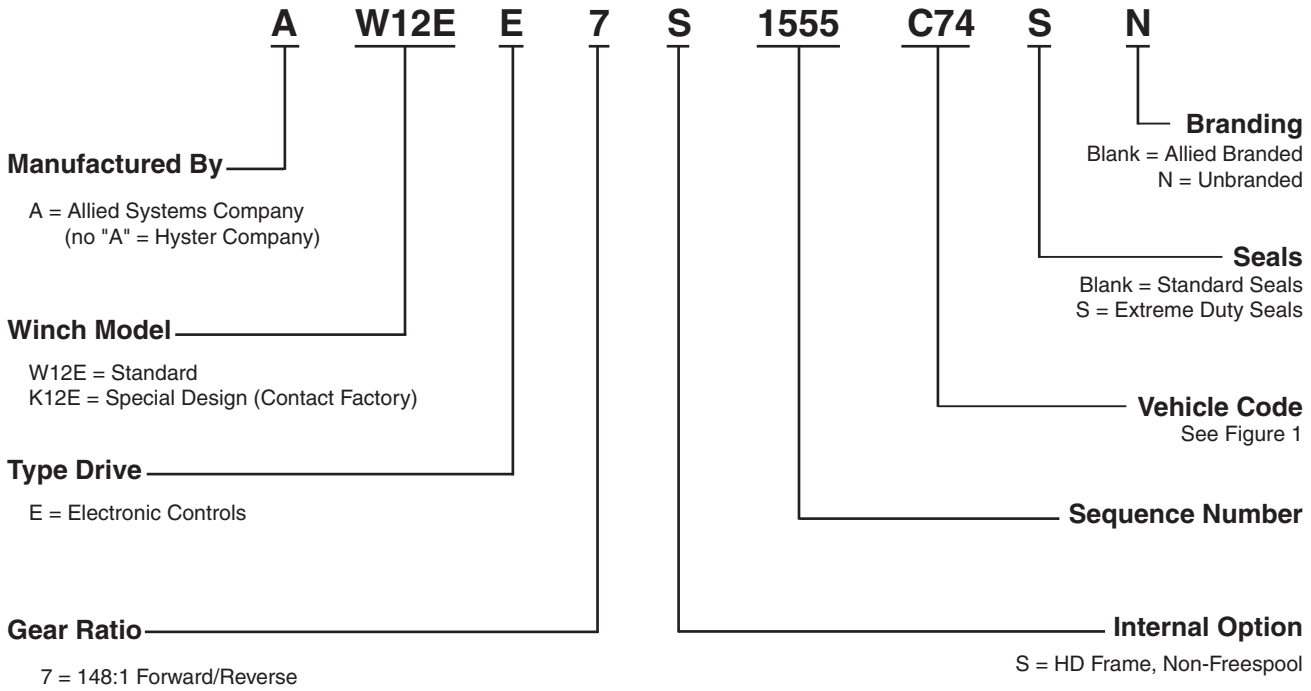
- Do not terminate wire rope to tail chain by the use of a knot.
- Do not handle wire rope if the hook end is not free. A load could break away, suddenly tensioning the wire rope, resulting in serious injury or death.
- Stay clear of wire rope entry areas (fairlead or arch rollers, winch drum etc).
- Make sure ground personnel are in plain view of the operator, and at a distance of at least 1½ times the working length of the wire rope.
- Make sure that any hand signals used by ground personnel are clearly defined and understood by everyone involved.
- Do not attempt to “jerk” or “shock” a load free. Doing so can cause loads in excess of the rated capacity of the wire rope, winch, or mounting hardware.
- Replace any parts only with genuine Allied Winch parts.
- Maintain a **minimum of three (3) complete wraps of wire rope** on the drum for normal operation. It may help to paint the last five wraps of wire rope a contrasting color, to serve as a visual indicator.

- Do not handle wire rope with bare hands. Wear leather gloves at all times.
- Align the tractor with the load to prevent side loading the winch, and to maintain even spooling of the wire rope.
- If applying tension to the wire rope manually during spooling:
 - » ensure that the operator is winching in slowly,
 - » keep your hands and clothing well clear of any rollers or the winch drum,
 - » do not maintain tension by letting the wire rope to slip through your hands,
 - » use a hand-over-hand technique to maintain tension.
- Be aware of the ground conditions, and make sure the ground and tractor are stable enough to pull the intended load.
- Do not attempt to pull loads in excess of the rated capacity of the winch.
- Keep yourself informed of any applicable codes, regulations and standards for the job.
- Your winch may have temperature shut-off system for protection of tractor and winch. Manual override of high temperature shut-off will cause damage to tractor and winch.
- This winch is neither intended, designed, nor rated for any application involved in the lifting or moving of personnel.
- Use only the lubricants listed in the Recommended Oil List. See page vii.
- Do not weld on any part of the winch. Contact Allied Systems if weld repairs are needed.
- The hydraulic system must be kept clean and free of contamination at all times.
- Be aware of the hazards of pressurized hydraulics:
 - » Wear personal protective equipment, such as gloves and safety glasses, whenever servicing or checking a hydraulic system.
 - » Assume that all hydraulic hoses and components are pressurized. Relieve all hydraulic pressure before disconnecting any hydraulic line.
 - » Never try to stop or check for a hydraulic leak with any part of your body; use a piece of cardboard to check for hydraulic leaks.
 - » Small hydraulic hose leaks are extremely dangerous, and can inject hydraulic oil under the skin, even through gloves.
 - » Infection and gangrene are possible when hydraulic oil penetrates the skin. See a doctor immediately to prevent loss of limb or death.



Identification - Unit

Allied Winch S/N Nameplate Data For Tractor Mountings



Note: In Addition to the serial number plate, the serial number is stamped on to the left hand side of the frame.

Vehicle Code	Caterpillar Model and Serial Number Prefix, Where Applicable
C74	D8T, PL83, PL87
C75	D9T
C76	D10T, D10R
C79	587T

Figure 1 - Caterpillar Vehicle Codes

Capacities and Specifications

Recommended Oil List

Recommended Oils* - General Conditions			
Manufacturer	Oil Type	Ambient Temperature Range	
		°F	°C
ExxonMobil	Mobil Fluid 424 (Factory fill)	-13 to 104	-25 to 40
John Deere	Hy-Gard™	-13 to 122	-25 to 50
Chevron	1000 THF	-13 to 104	-25 to 40
Caterpillar	Multipurpose Tractor Oil (MTO)	-13 to 104	-25 to 40
Case	Hy-Tran Ultra	-20 to 122	-29 to 50
Recommended Oils* - Low Temperature Conditions			
Manufacturer	Oil Type	Ambient Temperature Range	
		°F	°C
ExxonMobil	Mobil Fluid LT	-40 to 86	-40 to 30
John Deere	Low Viscosity Hy-Gard	-40 to 86	-40 to 30
Chevron	THF W	-40 to 86	-40 to 30

* Note: Use of non-recommended oils may void warranty.

Figure 2 Recommended Oil List

Note: Refer to Winch Maintenance decal on page 9 for more information.

Winch Oil Capacity

Winch Model	Oil Capacity
W12E	29 Gallons (110 L)

Note: The gear box uses 1.0 gallon oil, and is separate from the winch.

Figure 3 Winch Oil Capacity

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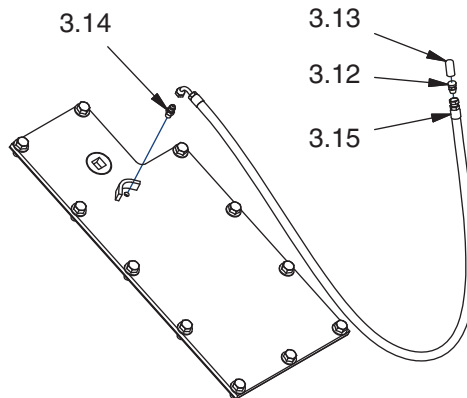
Section 1
Frame/Covers/Decals/Mounting Parts

Frame/Covers 2 thru 3
Mounting Parts..... 4 thru 7
Nameplate & Decals 8 thru 9

Frame & Covers

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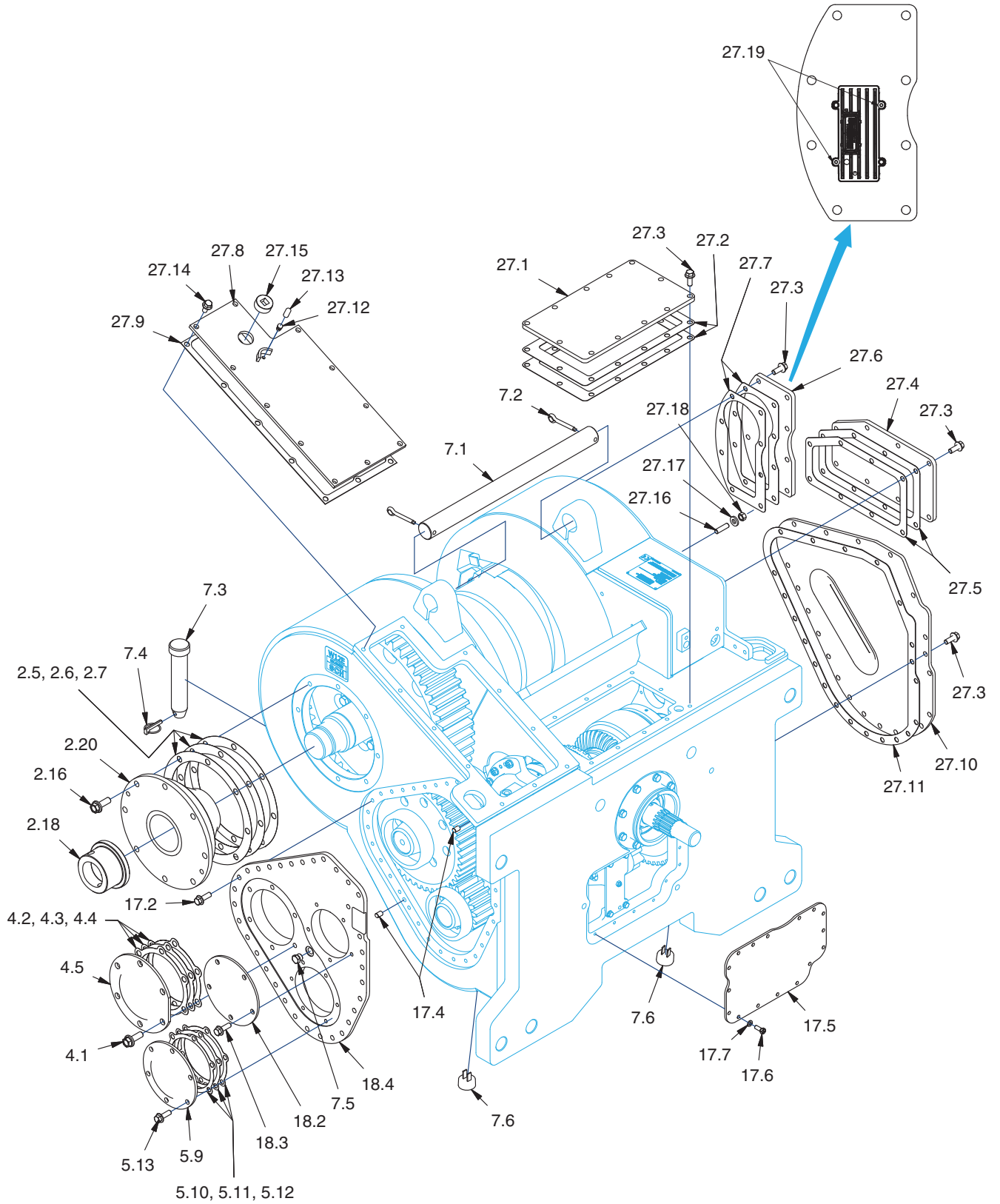
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.5	133274W	AR	Shim, 0.005"				
2.6	133275W	AR	Shim, 0.007"	17.5	2306624W	1	Cover - Front
2.7	133276W	AR	Shim, 0.020"	17.6	179443W	16	Capscrew
2.16	2303905W	8	Capscrew	17.7	R13812514	16	Washer
2.18	242833W	2	Nut, Drum Shaft	18.2	2310087	1	Cover, Clutch Shaft
2.20	2310950	1	Retainer - Drum Shaft	18.3	2303898W	5	Flange Screw
3.12	21420W	1	Breather	18.4	2307941W	1	Plate, Frame Insert
3.13	2300962W	1	Cap, Breather	27.1	261561W	1	Top Cover
3.14	14668W	1	Fitting	27.2	2314838	2	Gasket, Top Cover
3.15	2303969W	1	Hose Assembly	27.3	2303848W	47	Screw, Flange
4.1	2303905W	6	Capscrew	27.4	2304733W	1	Valve Cover
4.2	93284W	AR	Shim, 0.005"	27.5	2314839	2	Gasket, Valve Cover
4.3	93285W	AR	Shim, 0.007"	27.6	2317542	1	Cover, Filter (Allied Branded)
4.4	93286W	AR	Shim, 0.020"	27.6	2317541	1	Cover, Filter (Unbranded)
4.5	93287W	1	Retainer	27.7	2314840	2	Gasket - Cover, Filter
5.9	95490W	1	Retainer	27.8	195408W	1	Cover, RH Side Frame
5.10	95033W	AR	Shim, 0.005"	27.9	95455W	1	Gasket - Cover RH Side Frame
5.11	95166W	AR	Shim, 0.007"	27.10	286045W	1	Brake Cover
5.12	95034W	AR	Shim, 0.020"	27.11	286046W	1	Gasket, Brake Cover
5.13	2303898W	6	Flange Screw	27.12	21420W	1	Breather
7.1	92606W	1	Tie Rod	27.13	2300962W	1	Cap, Breather
7.2	15272W	2	Cotter Pin	27.14	2303902W	11	Screw, Flange
7.3	95959W	1	Pin, Drawbar	27.15	15319W	1	Fitting
7.4	2303221W	1	Pin, Retain	27.16	2317364	2	Stud
7.5	14595W	1	Fitting	27.17	221771W	2	Washer
7.6	222262W	2	Fitting	27.18	221711W	2	Hex Nut
17.2	2303898W	33	Flange Screw	27.19	Y25G-0416	2	Capscrew
17.4	176208W	2	Pin				



Remote Breather Detail
Used on Winches with Extreme Seals (W12E*****S)

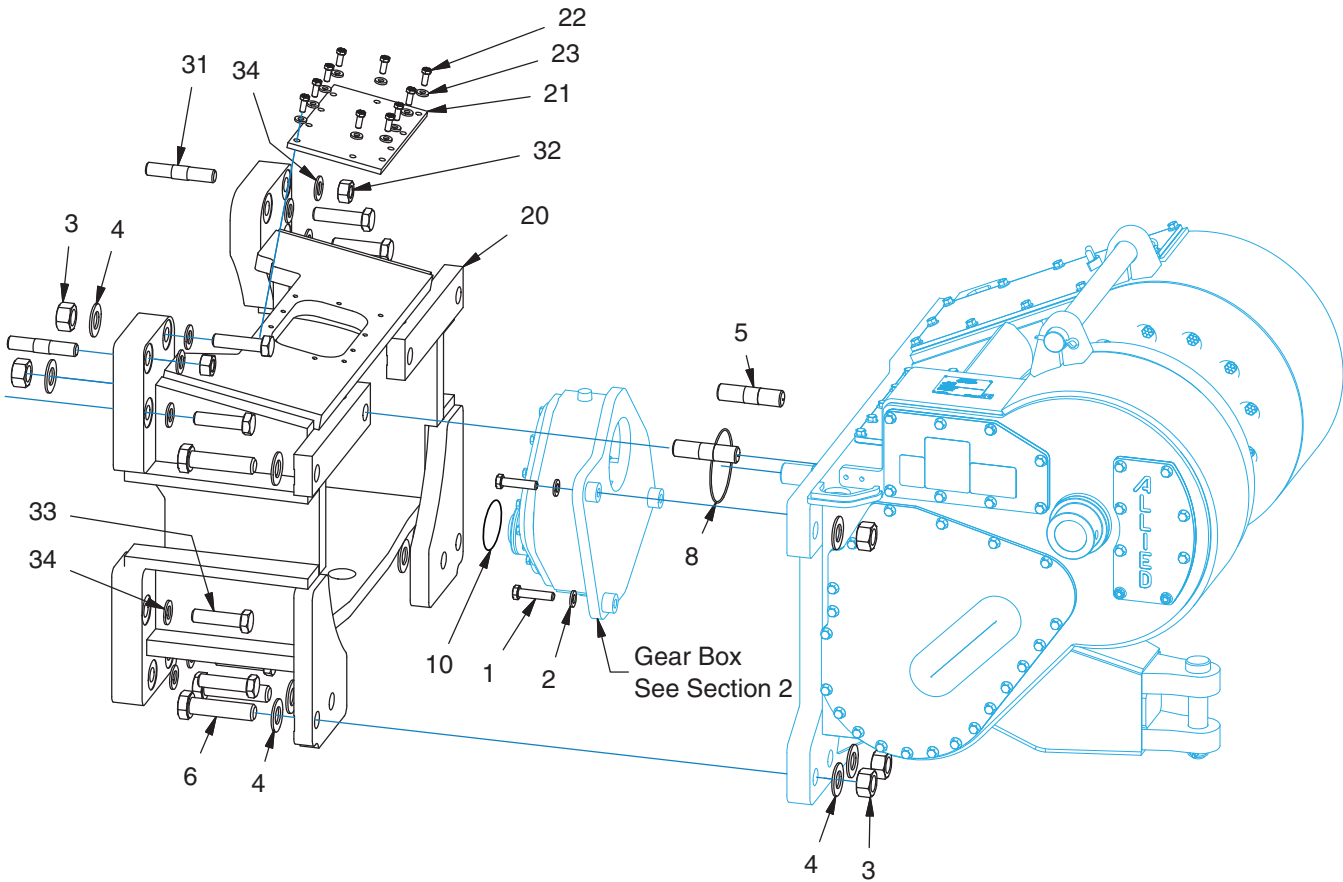
Frame & Covers

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Mounting Parts

AW12E*****C74* (CAT D8T, PL83, PL87)



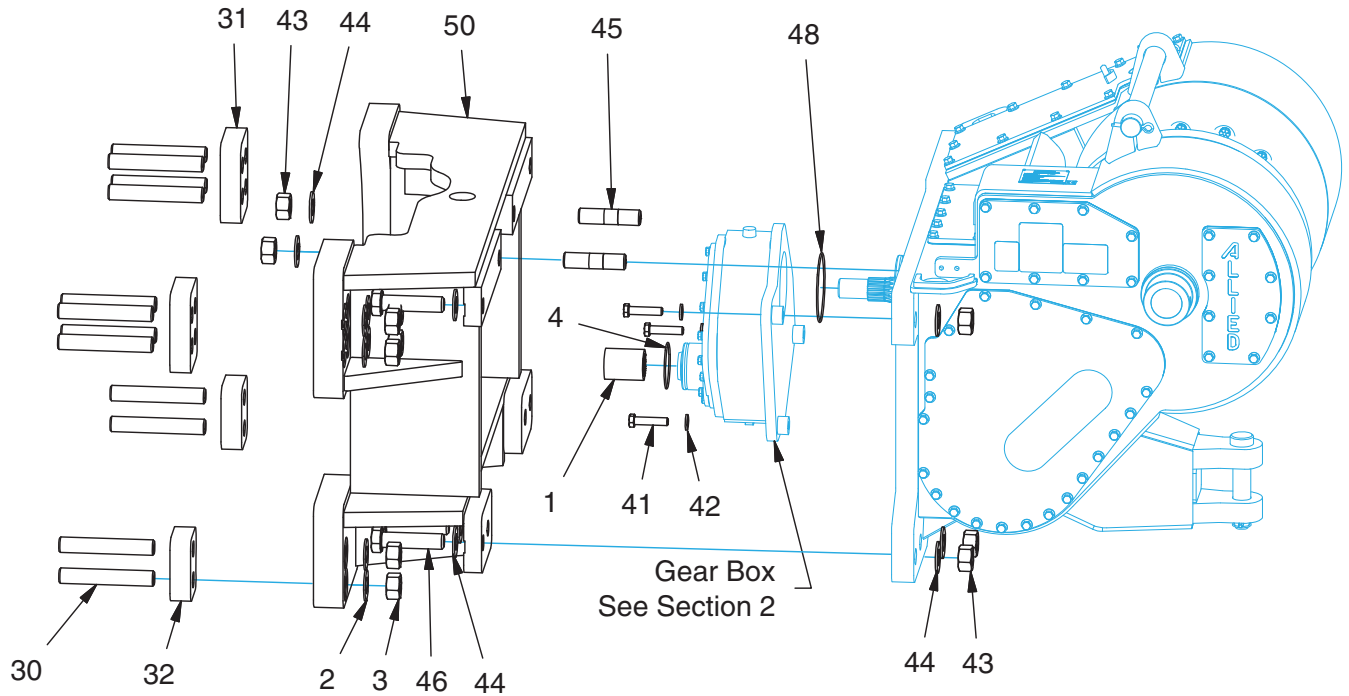
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*a 221662W	3	Capscrew	23	221771W	10	Washer
2	221777W	3	Washer	31	*b 2310880	2	Stud
3	221728W	8	Hex Nut	32	292661W	2	Nut
4	221786W	14	Washer	33	Y19C-M30120	10	Capscrew
5	*b 2303975W	2	Stud	34	296438W	12	Washer
6	*a 2307143W	6	Capscrew				
8	90937W	1	O-Ring				
10	15887W	1	O-Ring				
20	2304716W	1	Bracket, Mounting				
21	224798W	1	Cover Plate				
22	221563W	10	Capscrew				

*a Apply Med Strength Threadlock (318702W)

*b Apply High Strength Anaerobic Sealant (230064W) to inserted end, Med Strength Threadlock (318702W) to nut end

Mounting Parts

AW12E*****C75* (CAT D9T)



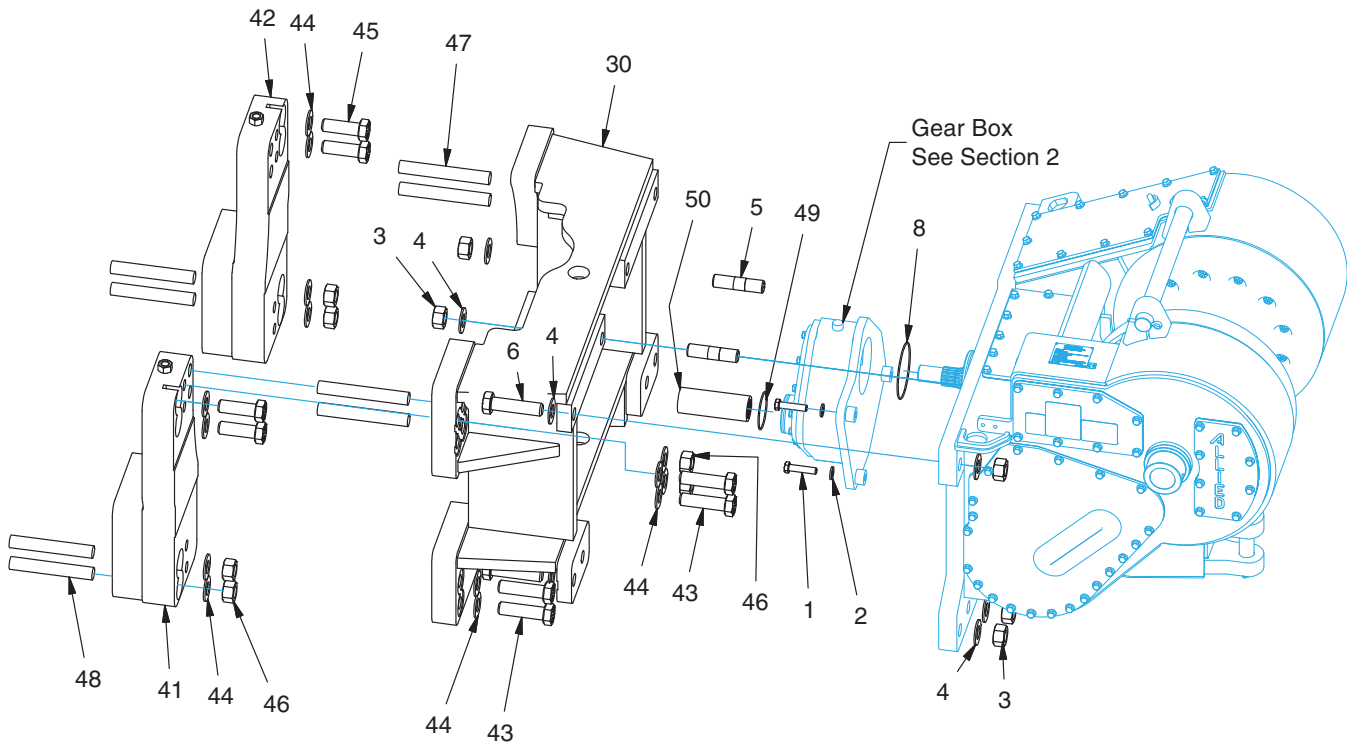
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2304752W	1	Coupling	45	*a 2303975W	2	Stud
2	221786W	12	Washer	46	*b 2307143W	6	Capscrew
3	221729W	12	Hex Nut	48	90937W	1	O-Ring
4	15887W	1	O-Ring	50	2304740W	1	Bracket - Mounting
30	*a 2304816W	12	Stud				
31	2304817W	2	Plate, Upper Spacer				
32	2304818W	2	Plate, Lower Spacer				
41	*b 221662W	3	Capscrew				
42	221777W	3	Washer				
43	221728W	8	Hex Nut				
44	221786W	14	Washer				

*a Apply High Strength Anaerobic Sealant (230064W) to inserted end, Med Strength Threadlock (318702W) to nut end

*b Apply Med Strength Threadlock (318702W)

Mounting Parts

AW12E*****C76* (CAT D10T, D10R)



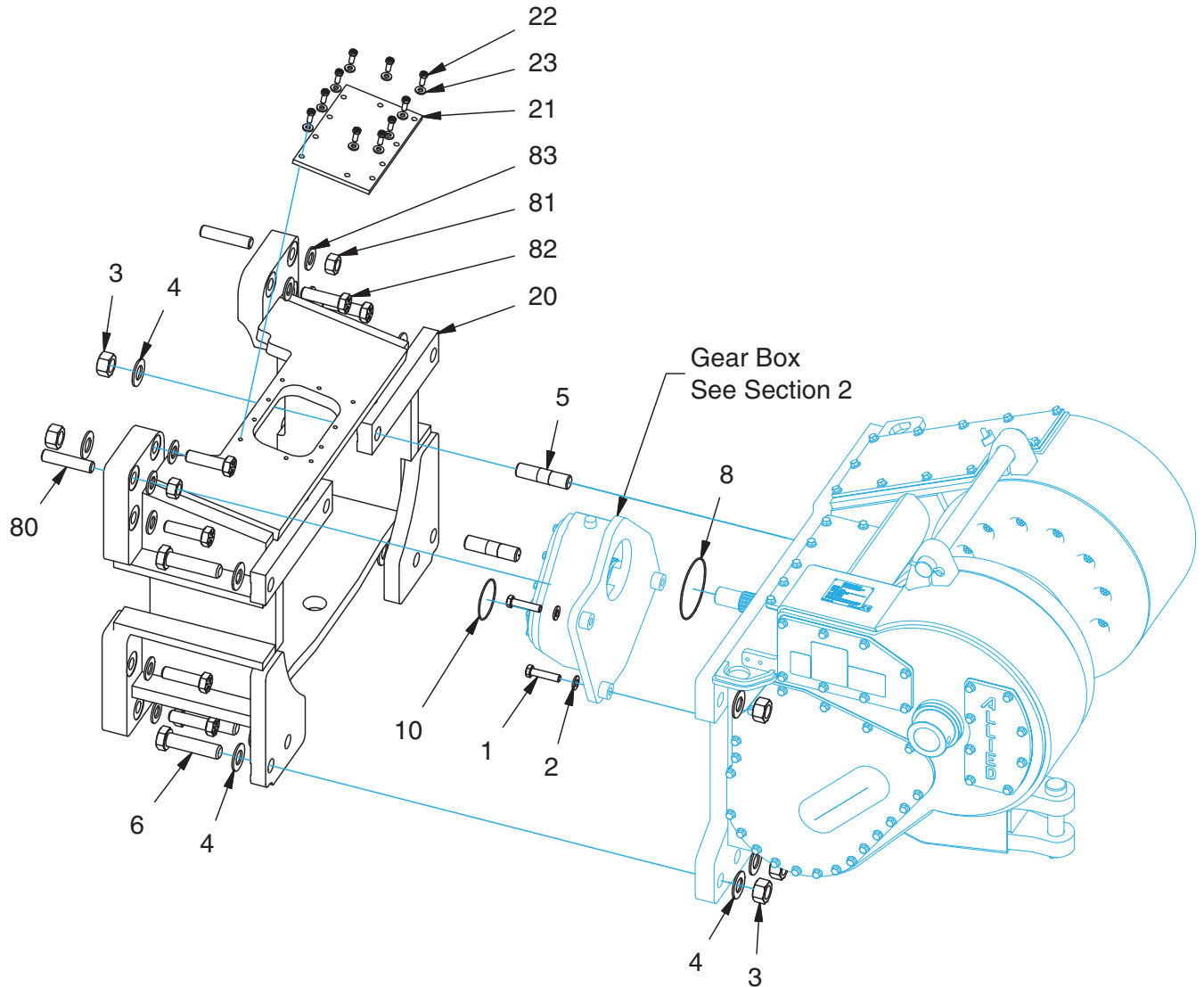
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*a 221662W	3	Capscrew	45	296868W	4	Capscrew
2	221777W	3	Washer	46	221729W	8	Hex Nut
3	221728W	8	Hex Nut	47	*b 2305216W	4	Stud
4	221786W	14	Washer	48	*b 2305217W	4	Stud
5	*b 2303975W	2	Stud	49	15887W	1	O-Ring
6	*a 2307143W	6	Capscrew	50	2305218W	1	Coupling
8	90937W	1	O-Ring				
30	2304740W	1	Bracket - Mounting				
41	2305211W	1	Bracket - Mounting, LH				
42	2305212W	1	Bracket - Mounting, RH				
43	2304826W	8	Capscrew				
44	221786W	20	Washer				

*a Apply Med Strength Threadlock (318702W)

*b Apply High Strength Anaerobic Sealant (230064W) to inserted end, Med Strength Threadlock (318702W) to nut end

Mounting Parts

AW12E*****C79* (CAT 587T)



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	*a 221662W	3	Capscrew	23	221771W	10	Washer
2	221777W	3	Washer	80	*b 2301140W	2	Stud
3	221728W	8	Hex Nut	81	221725W	2	Nut
4	221786W	14	Washer	82	1310819W	10	Capscrew
5	*b 2303975W	2	Stud	83	225851	12	Washer
6	*a 2307143W	2	Capscrew				
8	90937W	1	O-Ring				*a Apply Med Strength Threadlock (318702W)
10	15887W	1	O-Ring				*b Apply High Strength Anaerobic Sealant (230064W) to inserted end, Med Strength Threadlock (318702W) to nut end
20	2304716W	1	Bracket, Mounting				
21	224798W	1	Cover Plate				
22	221563W	10	Capscrew				

Nameplate & Decals

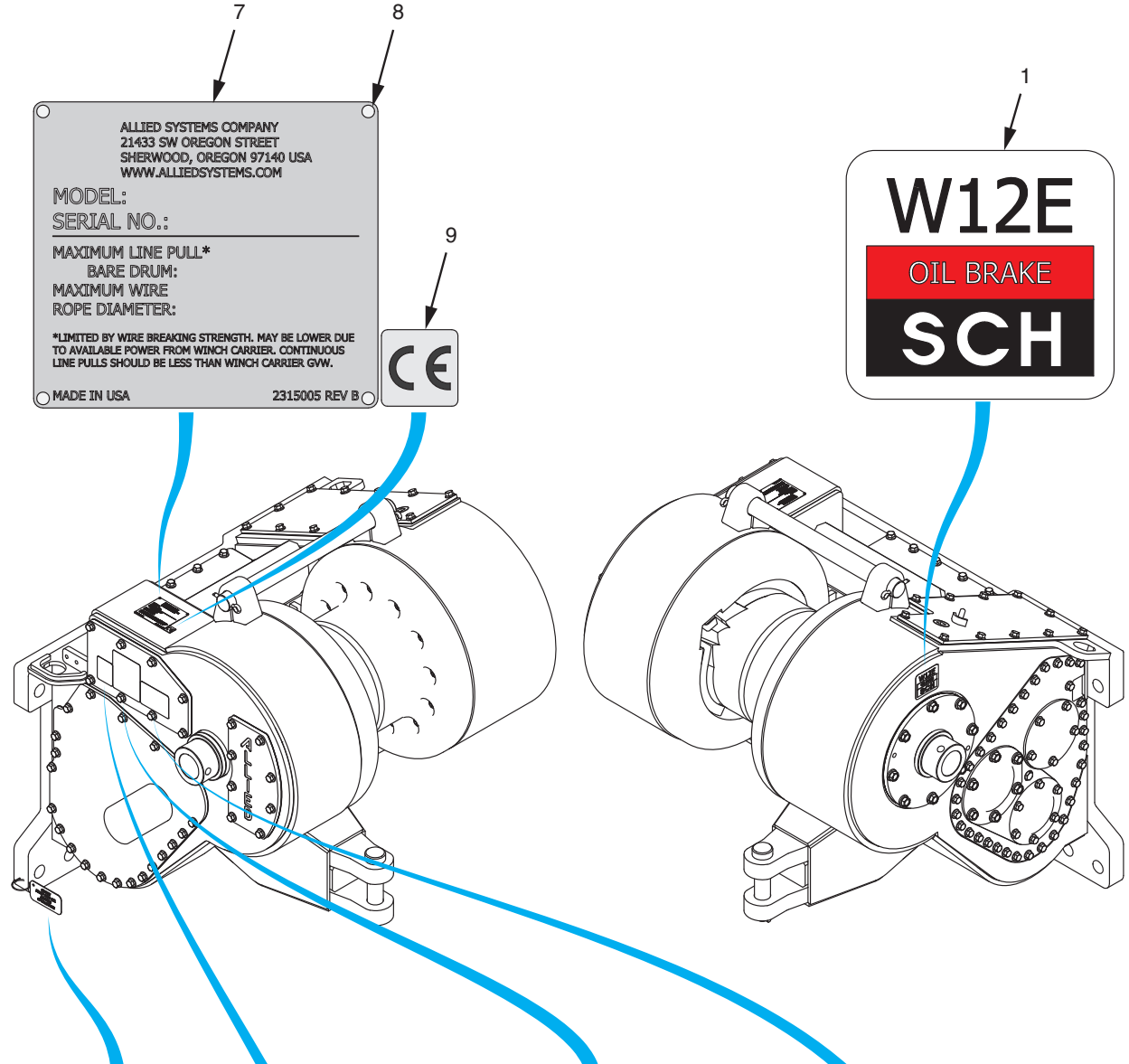
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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2300010W	1	Decal, RH, W12E	6	137852W	1	Cable Tie
2	1321665W	1	Decal, Warning	7	* - - - - -	1	Nameplate
3	2311481	1	Decal, Maintenance, PTO Winch	8	16602W	4	Screw
4	2311330	1	Decal, Load & Wire Rope Warning	9	* - - - - -	1	Label, CE Mark
5	2314343	1	Tag, Check Dropbox Oil				

* Contact Allied Systems Company

Nameplate & Decals

Page 2 of 2



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

MODEL:
SERIAL NO.:

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

CE

W12E

OIL BRAKE

SCH

CHECK DROP BOX OIL BEFORE OPERATION!

1321665W Rev B

PTO Winch Maintenance

Recommended Winch Service Intervals

Hours or Months **	Months ***	Filter ***	Winch Gear Oil	Brake & Clutch	Major Overhaul
First 250	1	Change			
Every 500	3	Change			
Every 1,000	6		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.

IMPORTANT - For best Load Control Use only the following oils:
Caterpillar - Multipurpose Tractor Oil (MTO)
John Deere - Hy-Gard
ExxonMobil - Mobil Fluid 424 (Factory Fill)
Chevron - 1000 THF

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

2311481 Rev C

WARNING

2311330 Rev A

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Section 2
Gear Train/Shaft

Gear Box.....12

PTO Shaft13

Bevel Gear Shaft..... 14 thru 15

Clutch.....16

Brake Shaft Assembly..... 18 thru 19

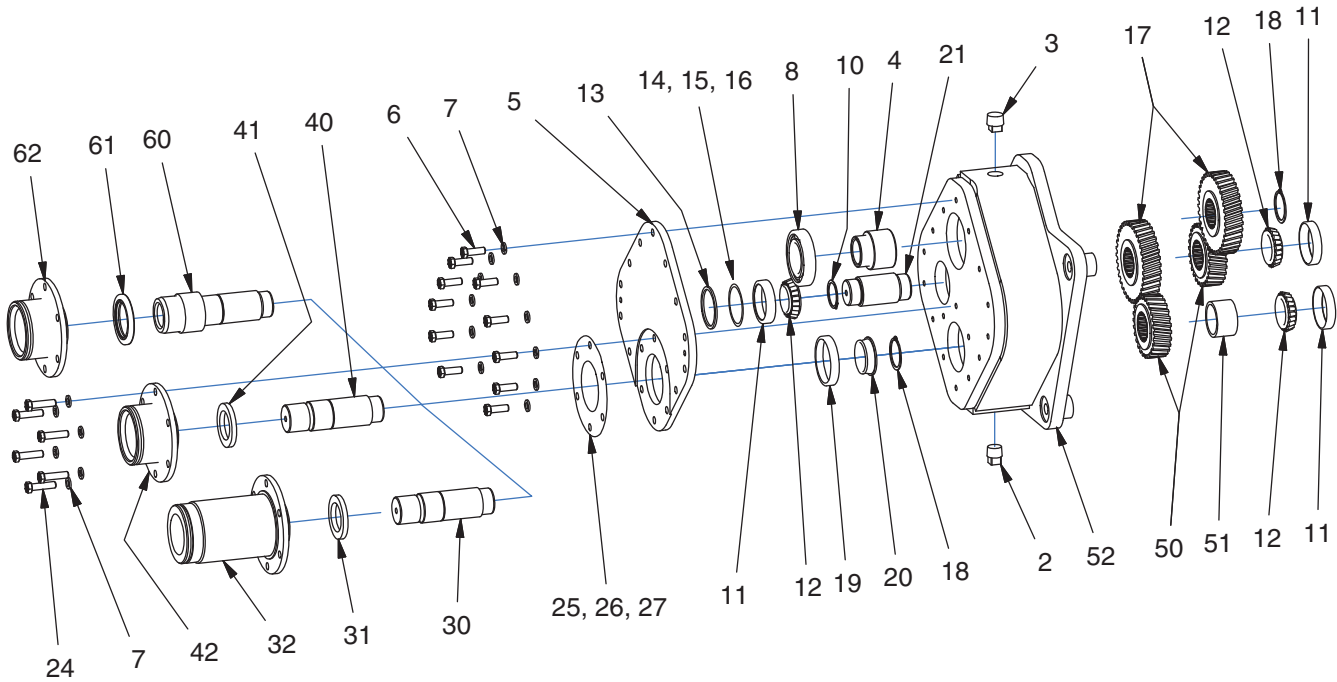
Brake Assembly20

Intermediate Shaft Assembly.....21

Drum Shaft Asssembly 22 thru 23

Drum Shaft Asssembly - Extreme Seals..... 24 thru 25

Gear Box



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2	35504W	1	Fitting	25	2304850W	AR	Shim, 0.005"
3	15305W	1	Fitting	26	2304851W	AR	Shim, 0.007"
4	2304933W	1	Spacer	27	2304852W	AR	Shim, 0.020"
5	*d 2304670W	1	Cover Plate	30	*a 2304753W	1	Shaft, Input
6	2304671W	11	Capscrew	31	*a 2304751W	1	Seal, Oil
7	15158W	17	Lockwasher	32	*a 2305219W	1	Pilot, PTO
8	41212W	1	Bearing - Ball	40	*b 2304753W	1	Shaft, Input
10	12944W	1	Snap Ring	41	*b 2304751W	1	Seal, Oil
11	374803W	3	Bearing Cup	42	*b 2304715W	1	Pilot, PTO Gearbox
12	374804W	3	Bearing Cone	50	2304700W	2	Gear
13	2304706W	1	Spacer, Bearing	51	2304707W	1	Spacer
14	2304711W	AR	Shim, 0.005"	52	2304731W	1	Housing - Gear Box
15	2304712W	AR	Shim, 0.007"	60	*c 2304703W	1	Shaft, Input
16	2304713W	AR	Shim, 0.020"	61	*c 123270W	1	Seal, Oil
17	2304660W	2	Gear	62	*c 2304715W	1	Pilot, PTO Gearbox
18	12963W	2	Snap Ring				
19	45733W	1	Bearing Cup				
20	29758W	1	Bearing Cone				
21	2304702W	1	Shaft, Idler				
24	2302694W	6	Capscrew				

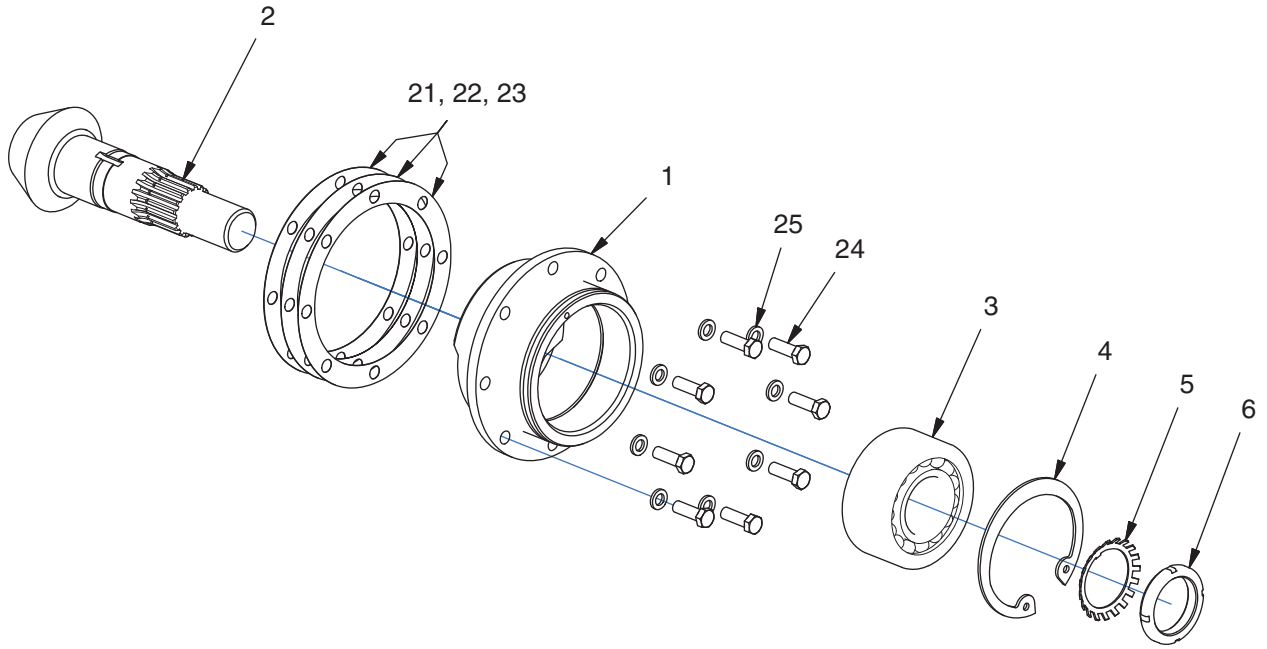
*a Used on AW12E*****C76*

*b Used on AW12E*****C75*

*c Used on AW12E*****C74*, AW12E*****C79*

*d Use Gasket Eliminator (313022W)

PTO Shaft



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	2306475W	1	Pilot - PTO	21	133256W	AR	Shim, 0.005"
2	2306473W	1	Shaft, PTO Stub	22	133257W	AR	Shim, 0.007"
3	125402W	1	Bearing, Ball	23	133258W	AR	Shim, 0.020"
4	12981W	1	Snap Ring	24	182209W	8	Capscrew
5	34055W	1	Lockwasher	25	15158W	8	Lockwasher
6	34056W	1	Nut				

Bevel Gear Shaft

Page 1 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	2310510	1	Gear, 108T				
3.2	32967W	1	Locknut	3.45	*c 2307956W	AR	Shim, 0.007"
3.3	30080W	1	Bearing Cone	3.46	*b 2310036	AR	Spacer, 0.540"
3.4	220190W	16	Capscrew	3.46	*b 2310037	AR	Spacer, 0.544"
3.5	2307949W	4	Bearing Cone	3.46	*b 2310038	AR	Spacer, 0.552"
3.6	2307950W	4	Bearing Cup	3.46	*b 2310039	AR	Spacer, 0.556"
3.7	2307952W	2	Hub, Clutch (Forward)	3.46	*b 2310040	AR	Spacer, 0.564"
3.8	211504W	2	Gear Assembly	3.46	*b 2310041	AR	Spacer, 0.568"
3.9	2307951W	1	Housing, Clutch (Reverse)	3.53	Y09G-0510	4	Capscrew
3.10	*a 2310578	1	Clutch Assembly, RH (See pg 16)	20.2	2306551W	1	Bearing, Retainer
3.11	39495W	2	O-Ring	20.3	2306552W	AR	Shim, 0.005"
3.12	2306435W	1	Gear	20.4	2306553W	AR	Shim, 0.007"
3.13	30069W	1	Bearing Cone	20.5	2306554W	AR	Shim, 0.020"
3.14	263457W	1	Snap Ring - Ext	20.6	263060W	1	Retainer, Bearing
3.15	95581W	4	Ring	20.7	263454W	AR	Shim, 0.005"
3.16	2310781	1	Washer	20.8	263455W	AR	Shim, 0.007"
3.17	39678W	2	O-Ring	20.9	263456W	AR	Shim, 0.020"
3.18	*a 2310577	1	Clutch Assembly, LH (See pg 16)	20.10	15158W	17	Lockwasher
3.29	2310511	1	Housing, Clutch (Forward)	20.11	16830W	5	Capscrew
3.30	2306441W	1	Shaft, Clutch	20.12	221569W	12	Capscrew
3.31	268492W	2	Fitting	20.13	30059W	2	Bearing Cup
3.35	175193W	1	Washer	20.15	1151722W	2	Pin
3.42	2307954W	2	Spacer	20.16	2306541W	1	Plate, Frame Insert
3.43	*c 2307957W	AR	Shim, 0.020"				
3.44	*c 2307955W	AR	Shim, 0.005"				

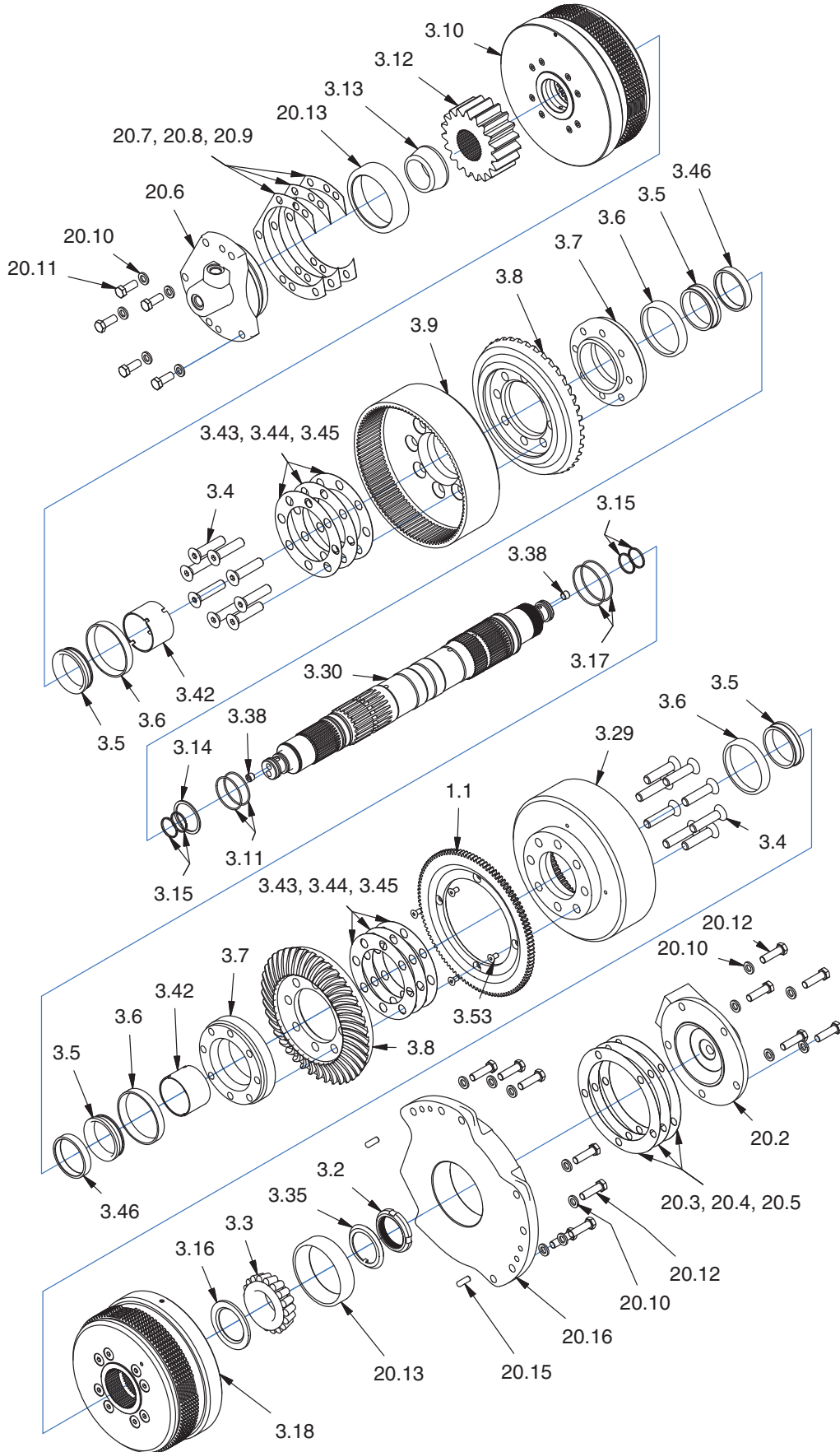
*a See Separate Coverage

*b Select two spacers to achieve a ring gear mounting distance as etched on item 3.8.

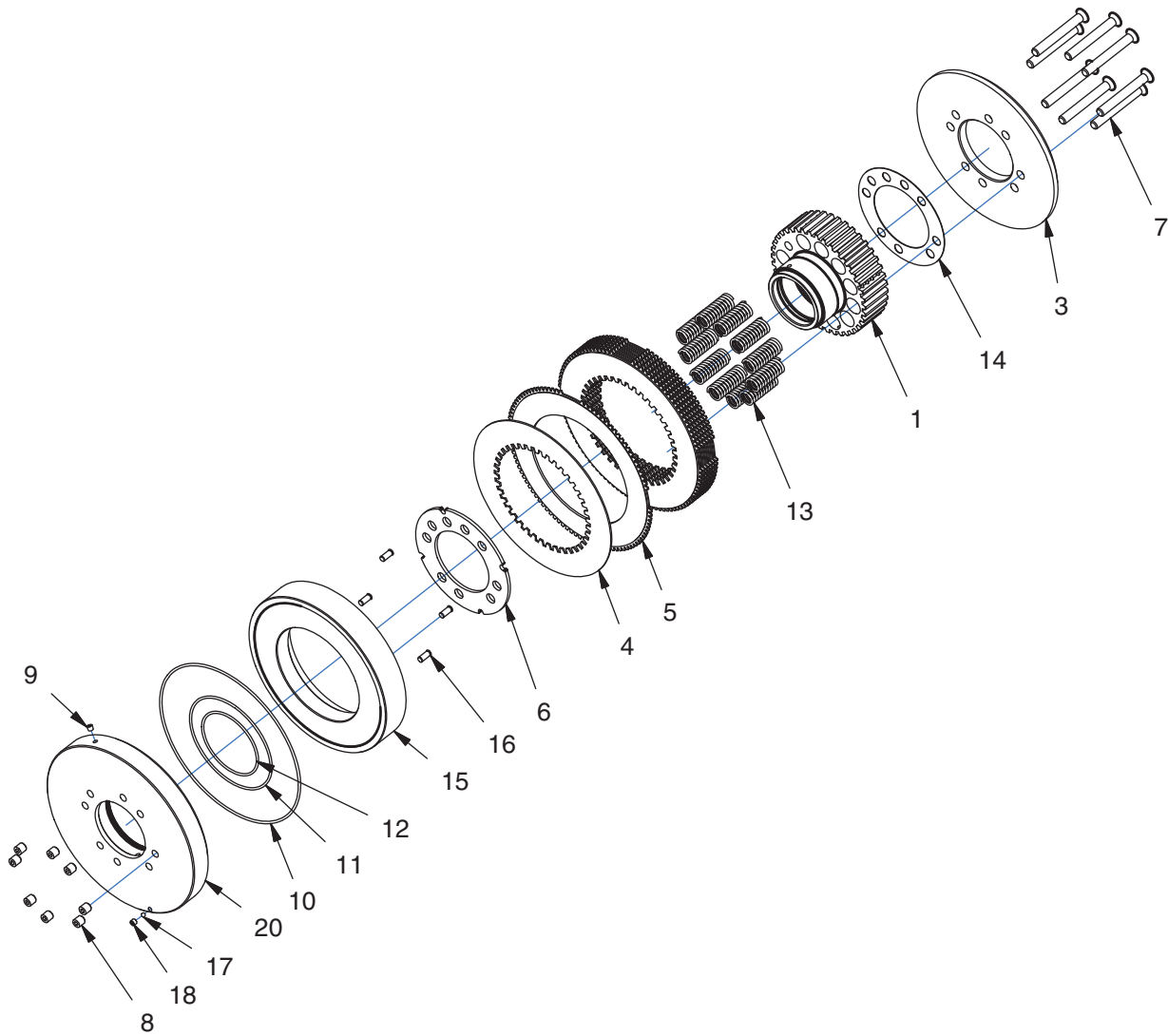
*c Use shims to set bearing from 0.003" endplay to 0.001" preload

Bevel Gear Shaft

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Clutch Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2310578		Clutch Assembly, RH				
	2310577		Clutch Assembly, LH				
1	*b 2306438W	1	. Hub, Clutch - RH	11	89776W	1	. O-Ring
1	*c 2306436W	1	. Hub, Clutch - LH	11	*a 15895W	2	. O-Ring
3	95473W	1	. Plate	12	79978W	1	. O-Ring
4	264062W	8	. Plate, Separator	12	*a R13802782	2	. O-Ring
5	328716W	8	. Disc, Friction	13	264192W	11	. Spring
6	2307971W	1	. Retainer	14	96735W	AR	. Shim .031
7	95474W	8	. Capscrew	15	2310356	1	. Clutch Assembly, Piston
8	17118W	8	. Setscrew	16	222711W	4	. Pin
9	141348W	1	. Plug, Pipe	17	68964W	1	. Ball, Steel
10	89775W	1	. O-Ring	18	2310528	1	. Plug, Orifice
10	*a 14718W	2	. O-Ring	20	2310533	1	. Housing, Piston

*a Included in Cold-Weather Seal Kit, P/N 2313084

*b Included in RH Clutch assembly 2310578

*c Included in LH Clutch assembly 2310577

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Brake Shaft Assembly

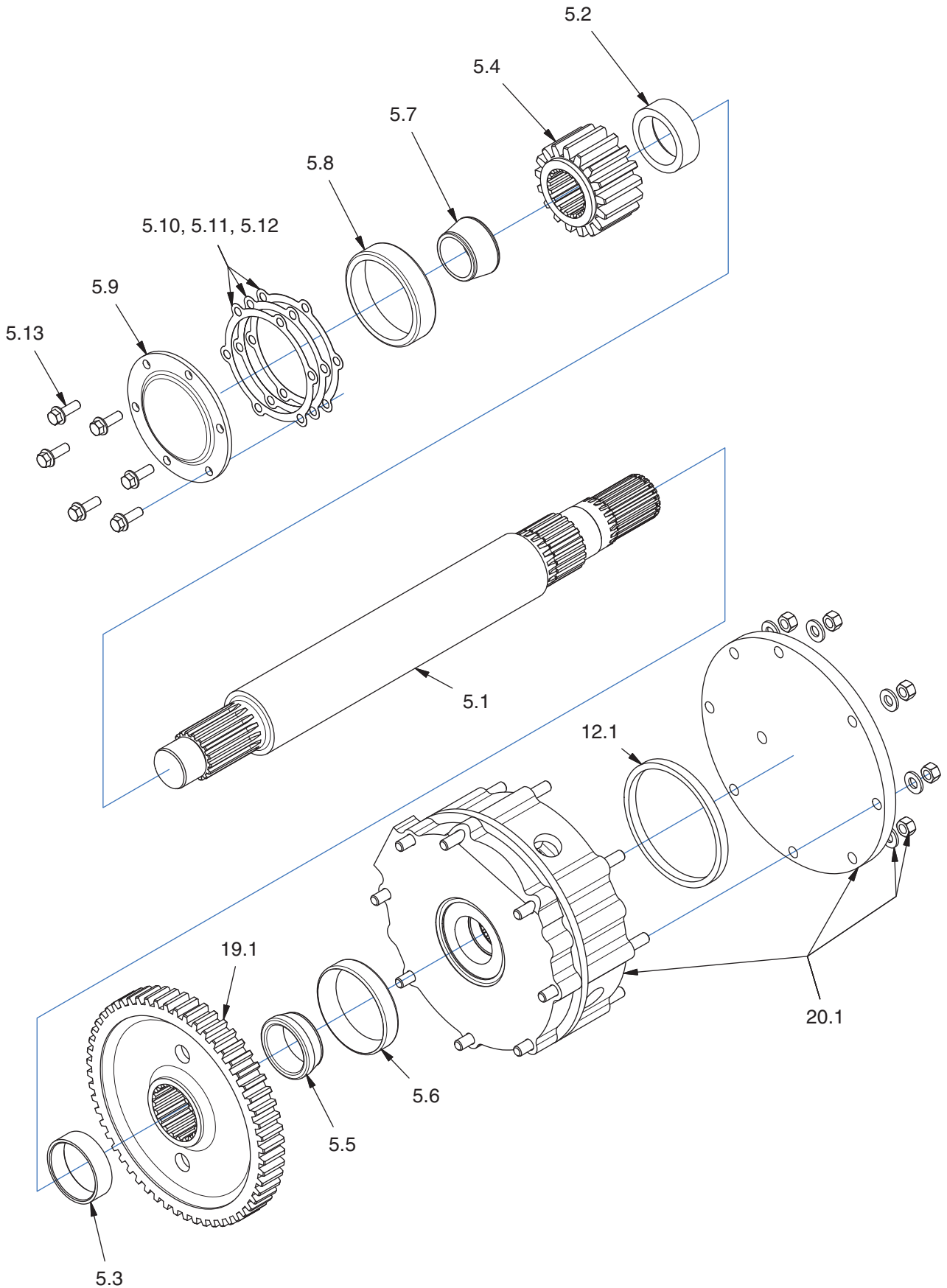
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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
5.1	308413W	1	Shaft, Brake	5.10	95033W	AR	Shim, 0.005"
5.2	94447W	1	Spacer	5.11	95166W	AR	Shim, 0.007"
5.3	95488W	1	Spacer	5.12	95034W	AR	Shim, 0.020"
5.4	95489W	1	Gear, 17T	5.13	2303898W	6	Flange Screw
5.5	30101W	1	Bearing Cone	12.1	2304973W	1	Stroke Limiter
5.6	30100W	1	Bearing Cup	19.1	95816W	1	Gear, 56T
5.7	230326W	1	Bearing Cone	20.1	* - - - - -	1	Brake Assembly (See pg 20)
5.8	30104W	1	Bearing Cup				
5.9	95490W	1	Retainer				

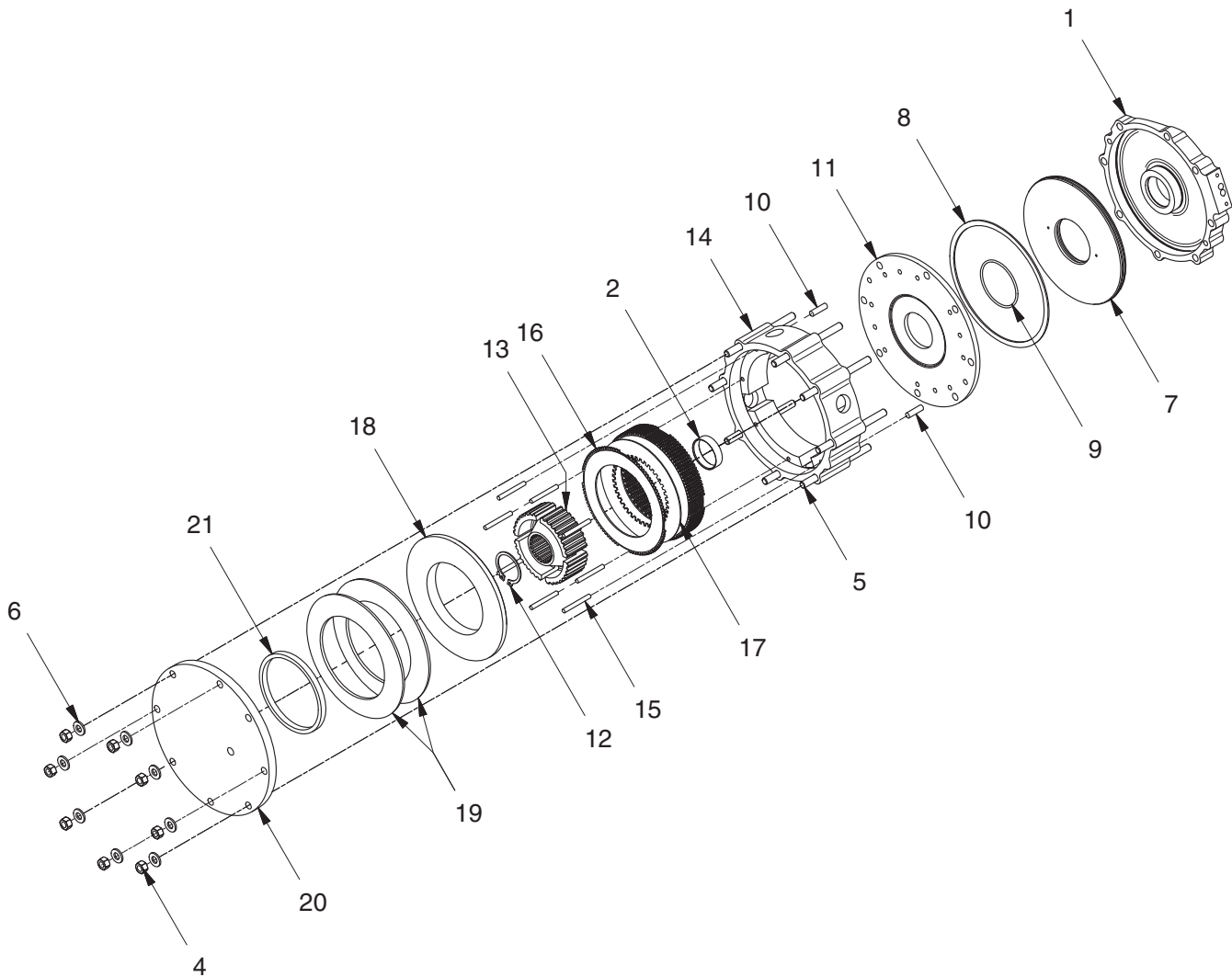
* See Separate Coverage

Brake Shaft Assembly

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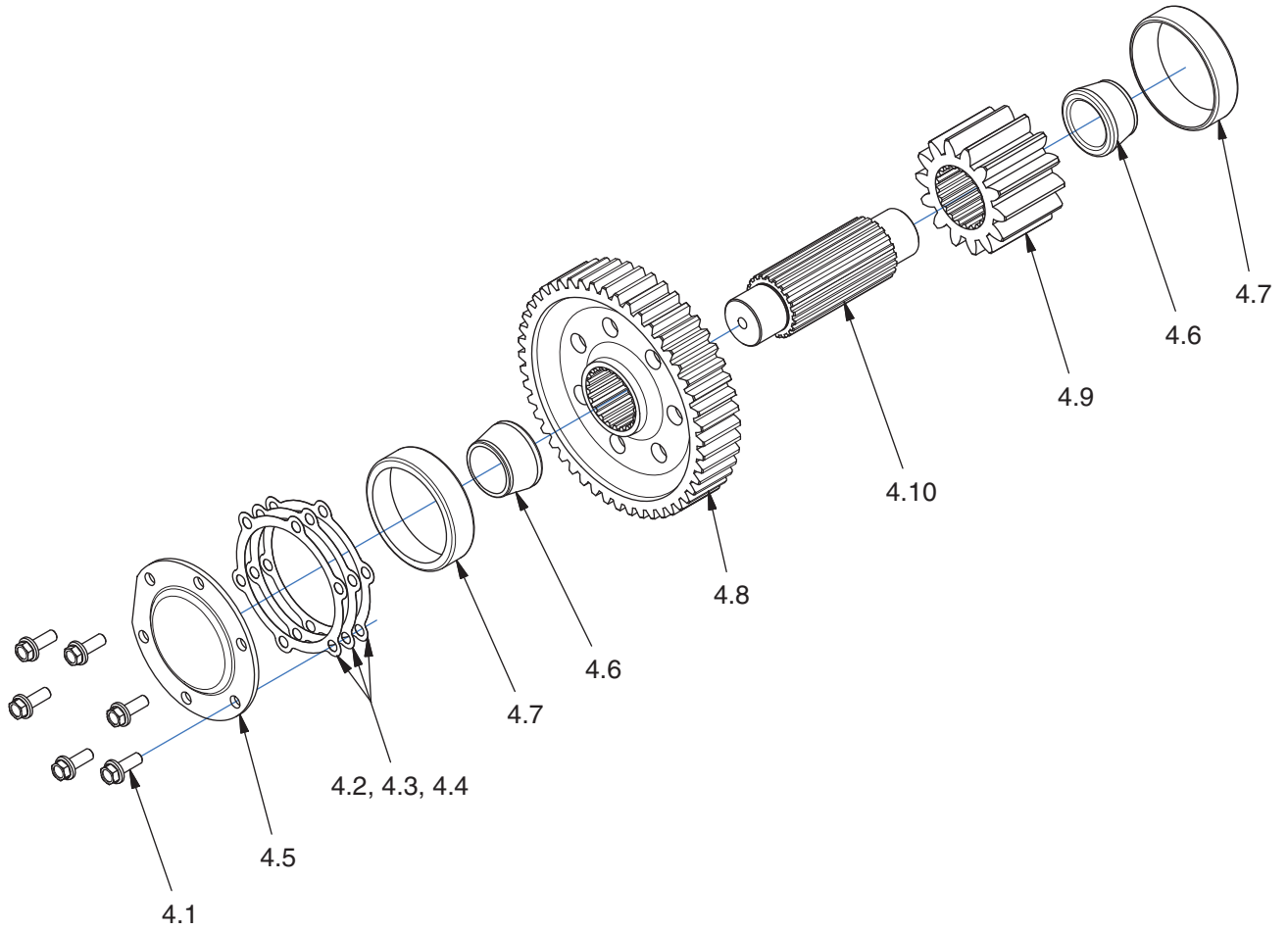
Brake Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	278791W	1	Housing, Piston	11	140447W	1	Plate, Pressure
2	193604W	1	Spacer	12	58905W	1	Ring, Snap
4	199594W	8	Nut	13	131985W	1	Hub
5	138908W	8	Stud	14	265400W	1	Cage
6	221775W	8	Washer	15	267521W	8	Pin, Thrust
7	140401W	1	Piston	16	328716W	10	Disc, Friction
8	131982W	1	Seal, Brake Piston	17	264062W	9	Plate, Separator
8	*a 2313082	1	Seal, Brake Piston	18	287930W	1	Ring
9	131983W	1	O-Ring	19	131990W	2	Spring
9	*a 15878W	1	O-Ring	20	182198W	1	Cover
10	92867W	2	Pin, Dowel	21	*b 2304973W	1	Limiter, Stroke

*a Included in Cold-Weather Seal Kit, P/N 2313084

Intermediate Shaft Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
4.1	2303905W	6	Capscrew	4.6	231011W	2	Bearing Cone
4.2	93284W	6	Shim	4.7	230327W	2	Cup - Roller Bearing
4.3	93285W	7	Shim	4.8	95494W	1	Gear, Intermediate
4.4	93286W	2	Shim	4.9	95493W	1	Pinion, Drum
4.5	93287W	1	Retainer	4.10	95492W	1	Shaft

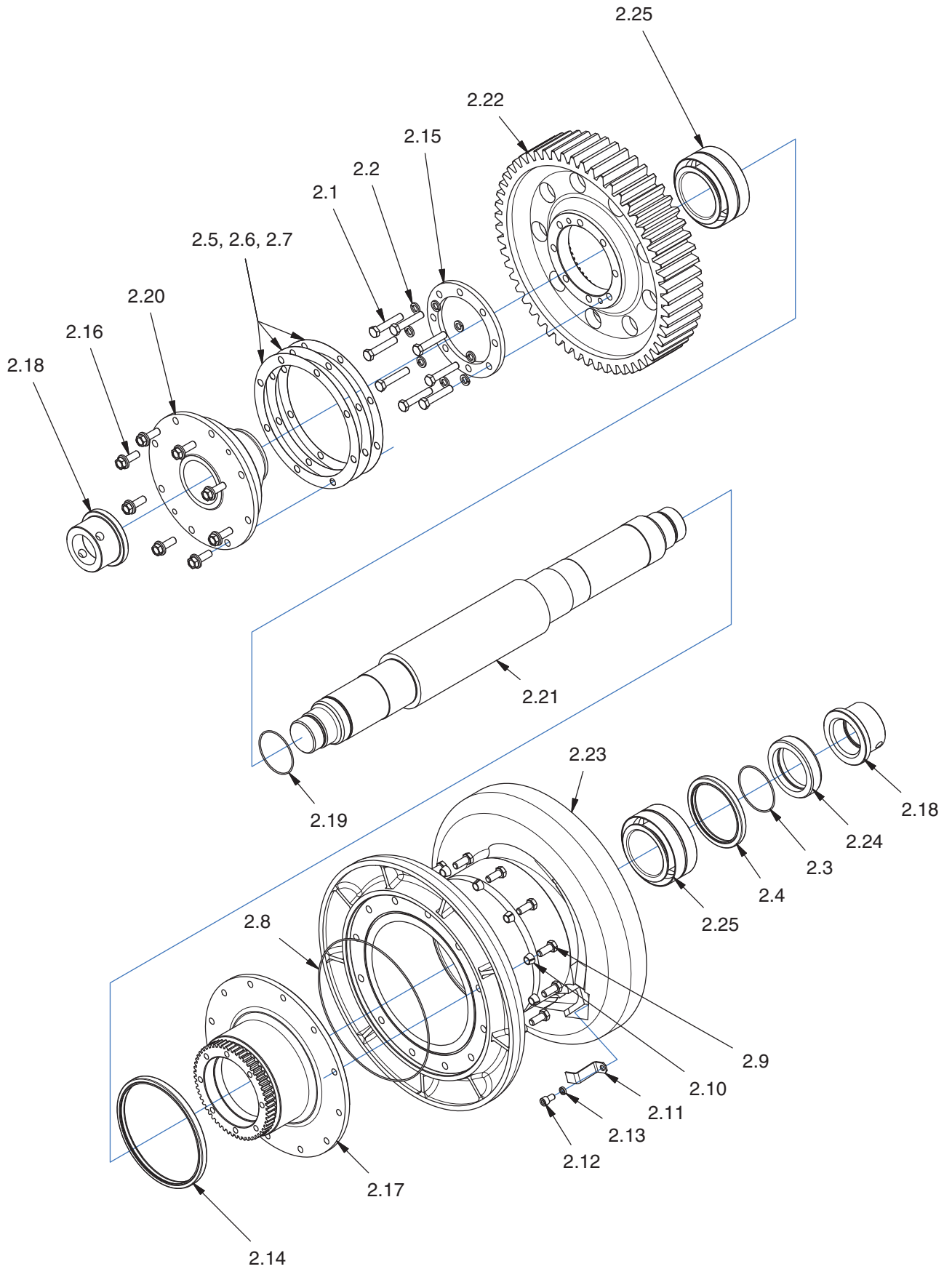
Drum Shaft Assembly

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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2.1	221637W	8	Capscrew	2.14	141149W	1	Seal, Oil
2.2	15160W	8	Lockwasher	2.15	95497W	1	Retainer
2.3	15888W	1	O-Ring	2.16	2303905W	8	Capscrew
2.4	44570W	1	Seal - Oil	2.17	182178W	1	Adapter
2.5	133274W	AR	Shim, 0.005"	2.18	242833W	2	Nut, Drum Shaft
2.6	133275W	AR	Shim, 0.007"	2.19	15886W	1	O-Ring
2.7	133276W	AR	Shim, 0.020"	2.20	2310950	1	Retainer - Drum Shaft
2.8	39764W	1	O-Ring	2.21	2310949	1	Shaft, Drum
2.9	2310891	12	Capscrew	2.22	2310951	1	Gear, Drum
2.10	53559W	12	Thimble, Tapered	2.23	182179W	1	Drum
2.11	274908W	1	Keeper	2.24	172800W	1	Spacer
2.12	16321W	1	Capscrew	2.25	230329W	2	Bearing Assembly
2.13	177949W	1	Washer				

Drum Shaft Assembly

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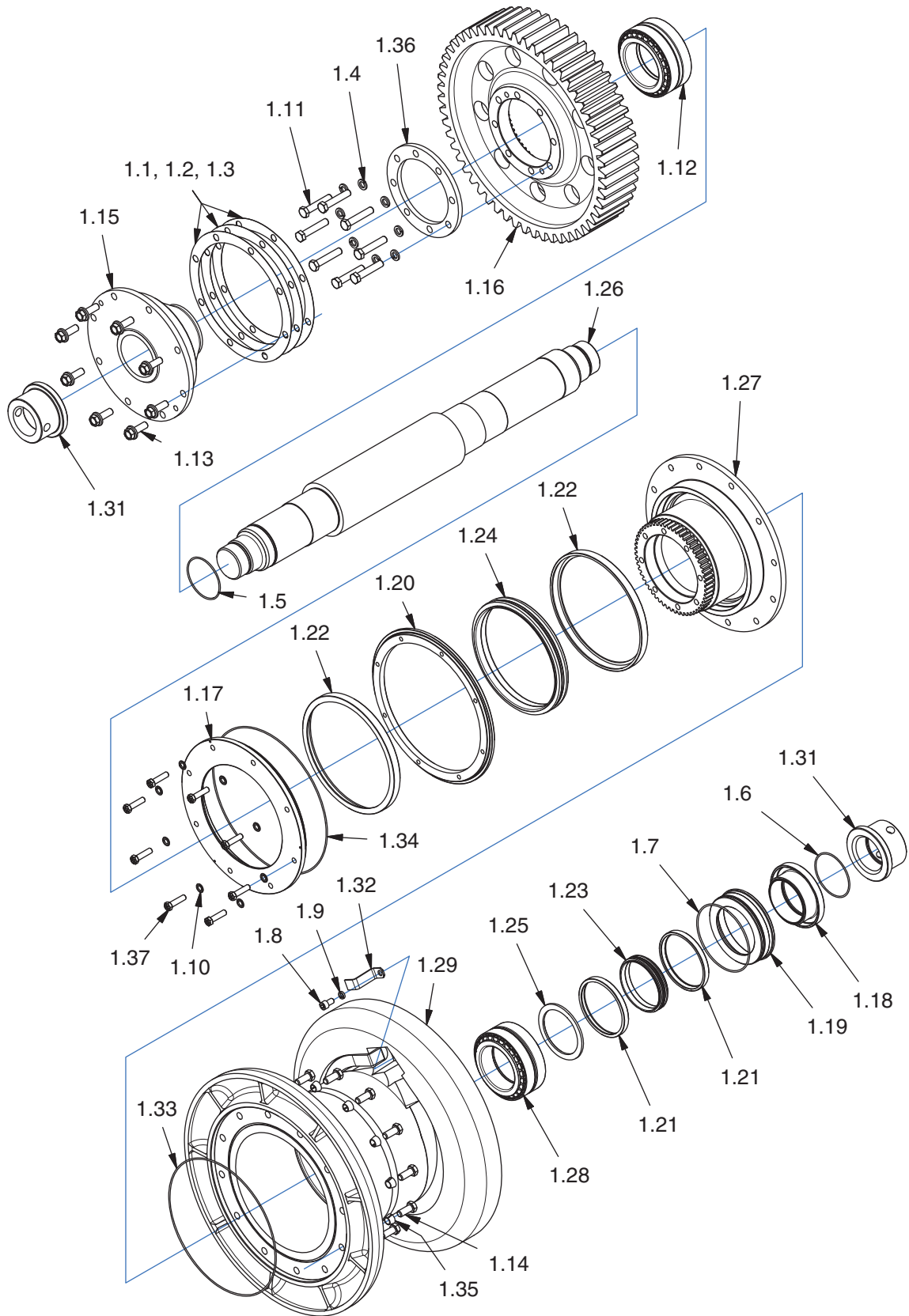
Drum Shaft Assembly - Extreme Seals

Page 1 of 2

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	133274W	AR	Shim, 0.005"	1.19	2315073	1	Insert - Retainer, W12E
1.2	133275W	AR	Shim, 0.007"	1.20	2315080	1	Ring, Backing
1.3	133276W	AR	Shim, 0.020"	1.21	2315081	2	Adapter, Ring
1.4	15160W	8	Lockwasher	1.22	2315082	2	Adapter, Ring
1.5	15886W	1	O-Ring	1.23	2315083	1	Seal, Duo Cone
1.6	15888W	1	O-Ring	1.24	2315084	1	Seal, Duo Cone
1.7	15898W	1	O-Ring	1.25	2315261	1	Washer - Thrust, W12E
1.8	16321W	1	Capscrew	1.26	2315268	1	Shaft - Drum, W12E
1.9	177949W	1	Washer	1.27	2315346	1	Adapter - W12E
1.10	207563	8	Seal	1.28	2315348	1	Bearing - Roller, W12E
1.11	221637W	8	Capscrew	1.29	2315354	1	Drum - 14 Dia Barrel
1.12	230329W	1	Bearing Assembly	1.31	242833W	2	Nut, Drum Shaft
1.13	2303905W	8	Capscrew	1.32	274908W	1	Keeper
1.14	2310891	12	Capscrew	1.33	39764W	1	O-Ring
1.15	2310950	1	Retainer - Drum Shaft	1.34	39765W	1	O-Ring
1.16	2310951	1	Gear, Drum	1.35	53559W	12	Thimble, Tapered
1.17	2315067	1	Retainer - RH Outer	1.36	95497W	1	Retainer
1.18	2315071	1	Spacer - Retainer, W12E	1.37	R13811077	8	Capscrew

Drum Shaft Assembly - Extreme Seals

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Section 3 **Hydraulics/Controls**

Hydraulic Group 28 thru 30

Valve Manifold Assembly31

Pump Mounting.....32

Hydraulic Pump Assembly33

Joystick Installation 34 thru 35

Hydraulic Group

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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	219172W	1	Strainer	52	234149	2	Hose Assembly
	156689W	1	. O-Ring	53	131460W	2	Fitting
2	2300936W	1	Cover	60	16602W	1	Screw
3	2300935W	1	Gasket	61	*c 2311807	1	Retainer, Connector
4	*d 16805W	4	Capscrew	63	*b 16830W	2	Capscrew
5	R13812514	6	Lockwasher	64	15158W	2	Lockwasher
6	276090W	2	Fitting	65	2304366W	1	Plate - Cover
7	2307935W	1	Hose Assembly	66	303946W	1	Gasket
8	209639W	2	Clamp	67	2317615	1	Wire Harness, Internal
9	2315910	1	Tube Assembly, Brake	68	2312259	1	Plug, Counter
11	83857W	1	Fitting	76	16561W	1	Fitting
12	*a 2315717	1	Assembly, Manifold (See pg 31)	77	211560	1	Fitting
13	17063W	1	Fitting	79	215515	1	Fitting
14	222402W	1	Fitting	80	129563W	1	Cable Tie
15	*b 1300780W	4	Screw, Serrated Flange	81	209155	1	Fitting
17	16559W	1	Fitting	82	16569W	1	Fitting
18	226904	1	Fitting	83	2317616	1	Wire Harness, Adapter
19	2315762	1	Hose Assembly	84	2317628	1	Module, Programmed W12EE
20	2315761	1	Hose Assembly	120	16987W	1	Fitting
21	247723	1	Hose Assembly	121	*b 225094W	1	Fitting
22	208686	1	Hose Assembly	122	137852W	1	Cable Tie
24	2315760	1	Hose Assembly	123	2307938W	1	Hose Assembly
25	*b 2305987W	3	Setscrew	124	228048	1	Fitting
26	2310016	1	Hose Assembly	201	2317441	1	Assembly, Filter
27	16541W	1	Fitting		2305132W	1	. Filter Head
28	*b 18526W	2	Capscrew		2304112W	1	. Element, Filter
29	18515W	2	Washer		2317619	1	. Switch, Pressure
30	2315822	1	Plate, Splash Guard	202	2307740W	1	Fitting
31	*d 133469W	2	Capscrew	203	2304699W	1	Bracket - Mounting, Filter
35	137852W	2	Cable Tie	204	*d 1300780W	2	Screw, Serrated Flange
42	17300W	1	Fitting	205	246970	1	Hose Assembly
43	196022W	1	Gasket	206	16559W	2	Fitting
44	279392W	1	Block	207	R16271	2	Accumulator
45	*d 16828W	2	Capscrew	208	2306738W	1	Tube Assembly
46	15134W	2	Washer	209	2302109W	2	Clamp
47	17062W	2	Fitting	210	591242	1	Hose Assembly
48	16989W	4	Fitting	211	2310015	1	Check Valve
49	225233W	2	Connector - Special	212	2304698W	1	Plate, Accumulator Mounting
50	14761W	2	Nut	213	16543W	1	O-Ring
51	177951W	2	Lockwasher	300	2317456	1	Bluetooth Transmitter (Optional)

*a See Separate Coverage

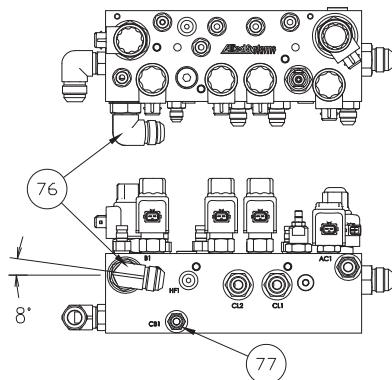
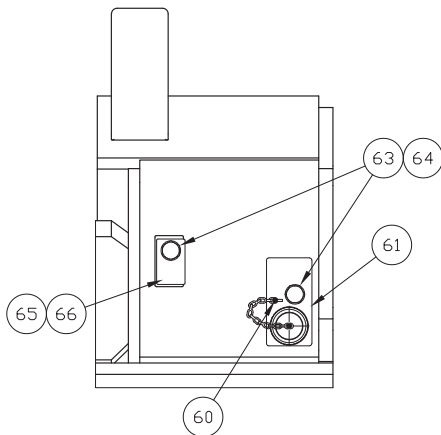
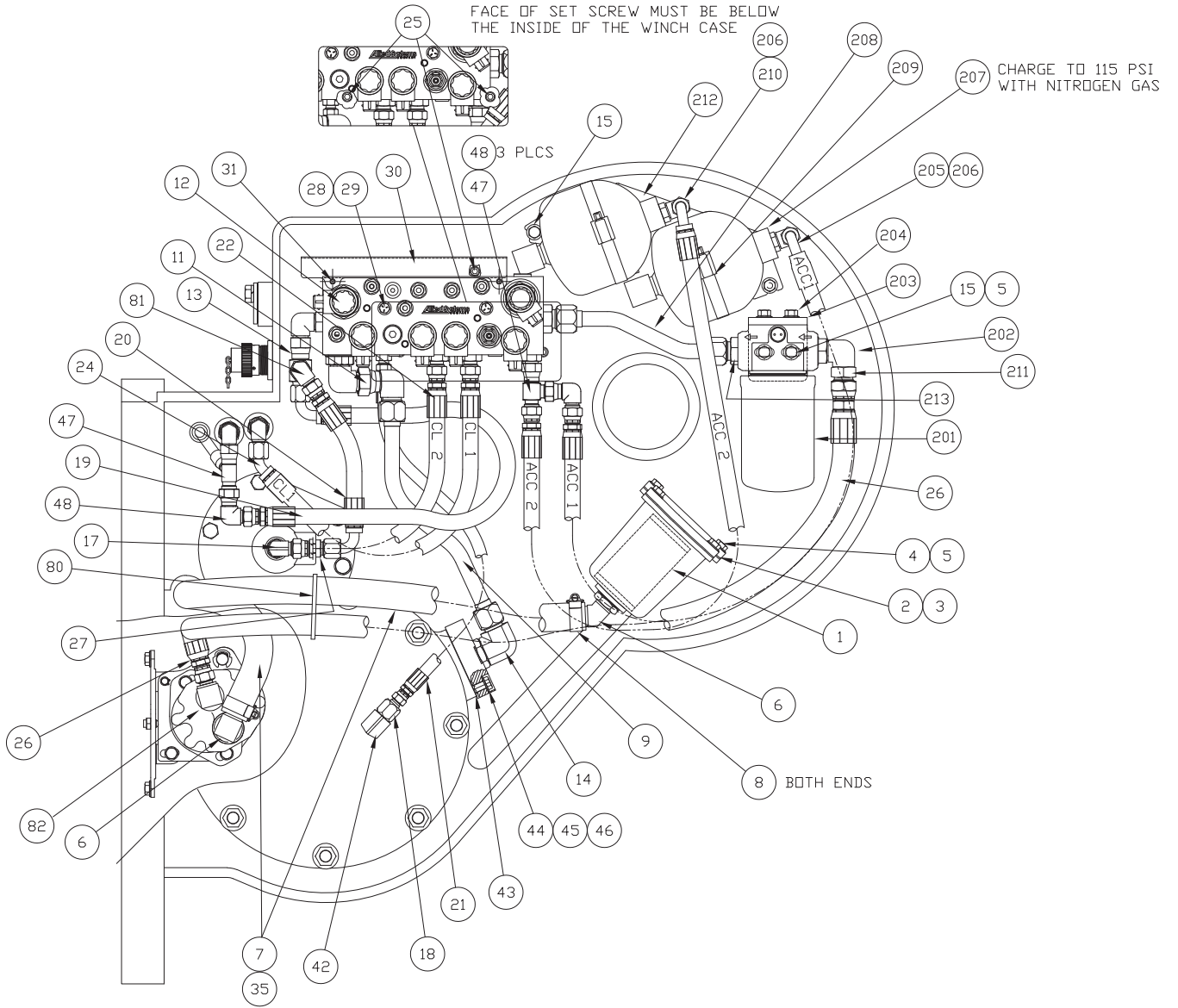
*b Use 273338W Pipe Thread Sealant

*c Use 1324880W RTV Sealant Prior to Assembly

*d Use 318702W Thread Locker at Assembly

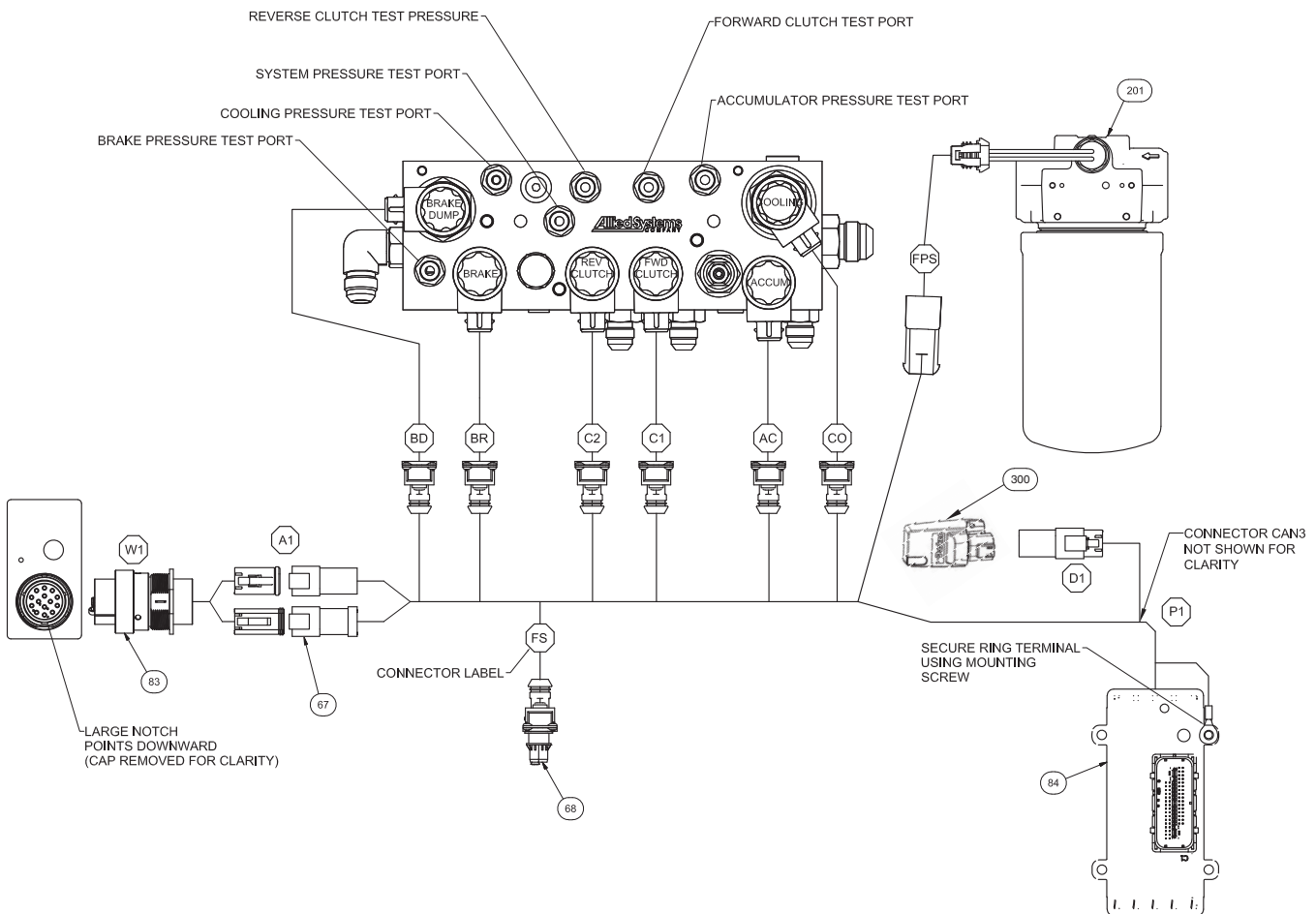
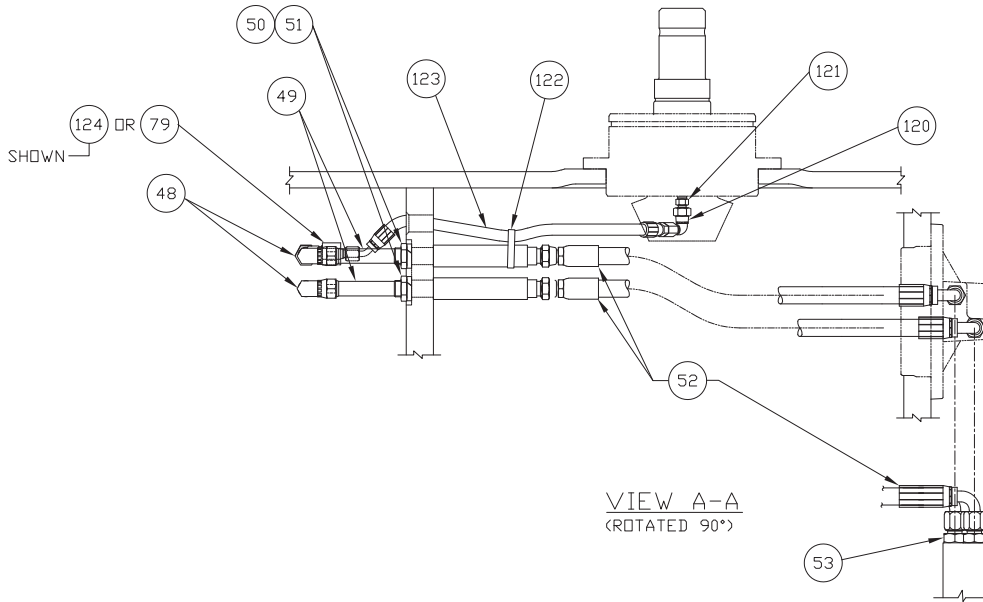
Hydraulic Group

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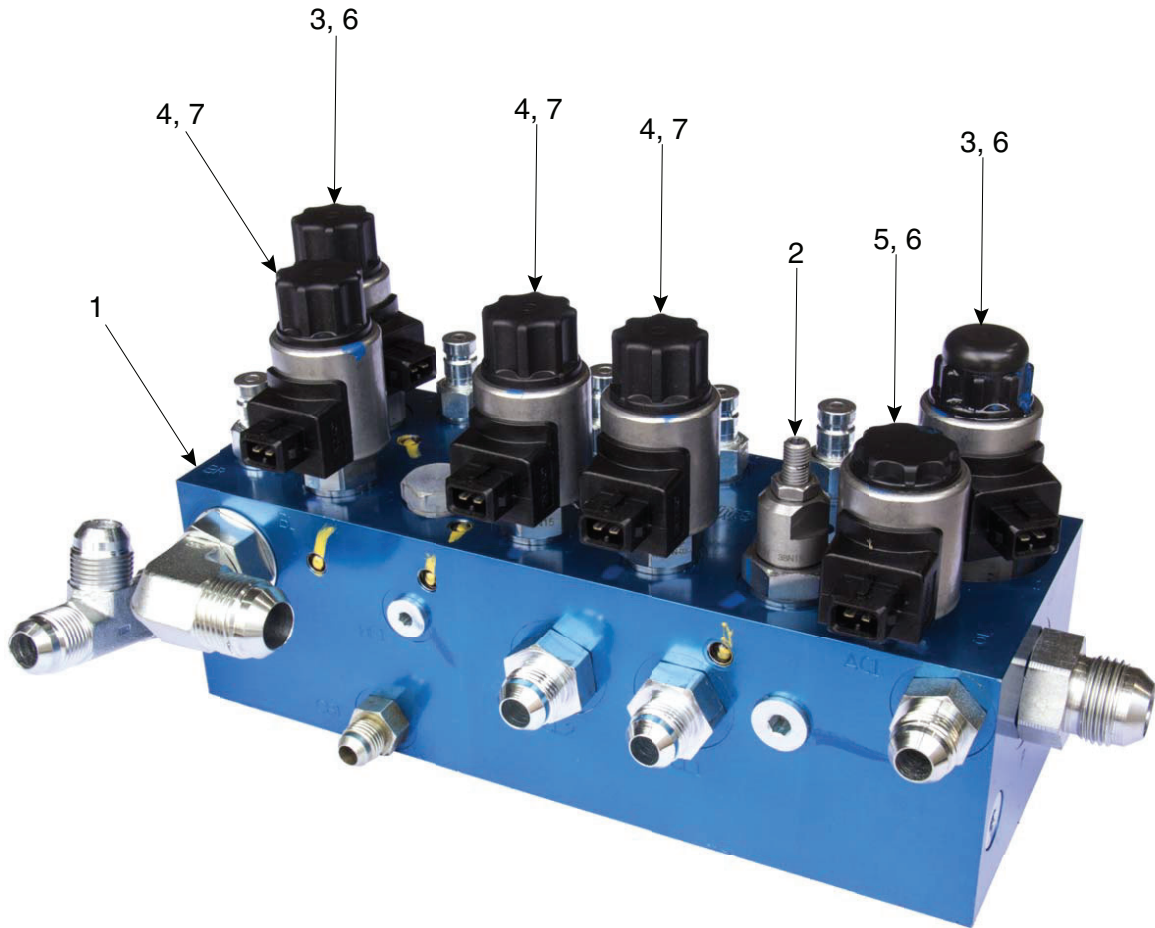


Hydraulic Group

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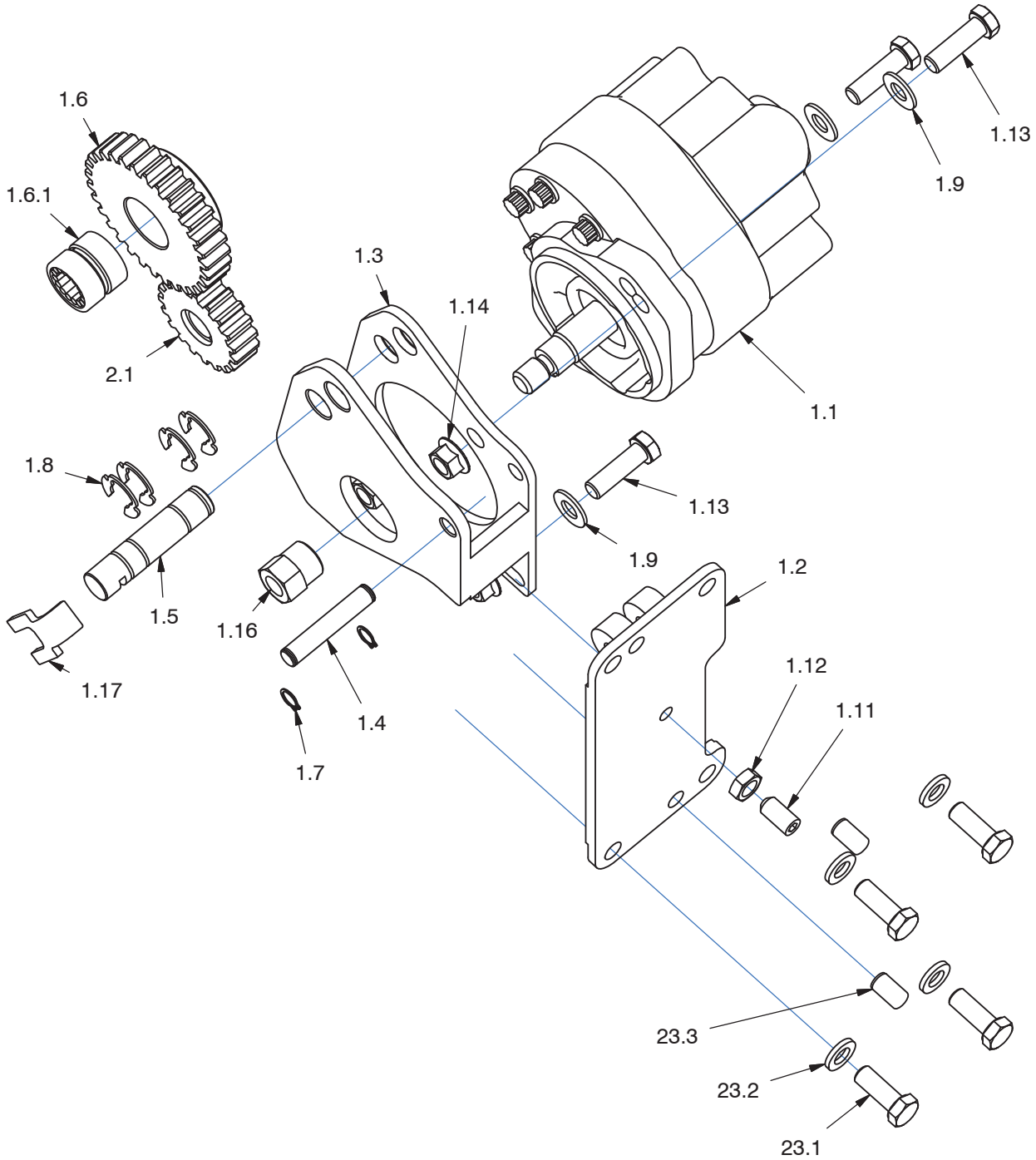


Valve Manifold Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2315717		Assembly, Valve Manifold				
1	NSS	1	. Block (Blue Color)	5	2310253	1	. Valve, Cartridge
2	2315807	1	. Valve, Relief		254400	1	. . Kit, Seal
	2310260	1	. . Kit, Seal	6	2311558	3	. Coil, 24 VDC Valve
3	2310252	2	. Valve, Cartridge	7	2315811	3	. Coil, 24 VDC Prop. Valve
	2310258	1	. . Kit, Seal				
4	2315808	3	. Valve, Proportional				
	254396	1	. . Kit, Seal				

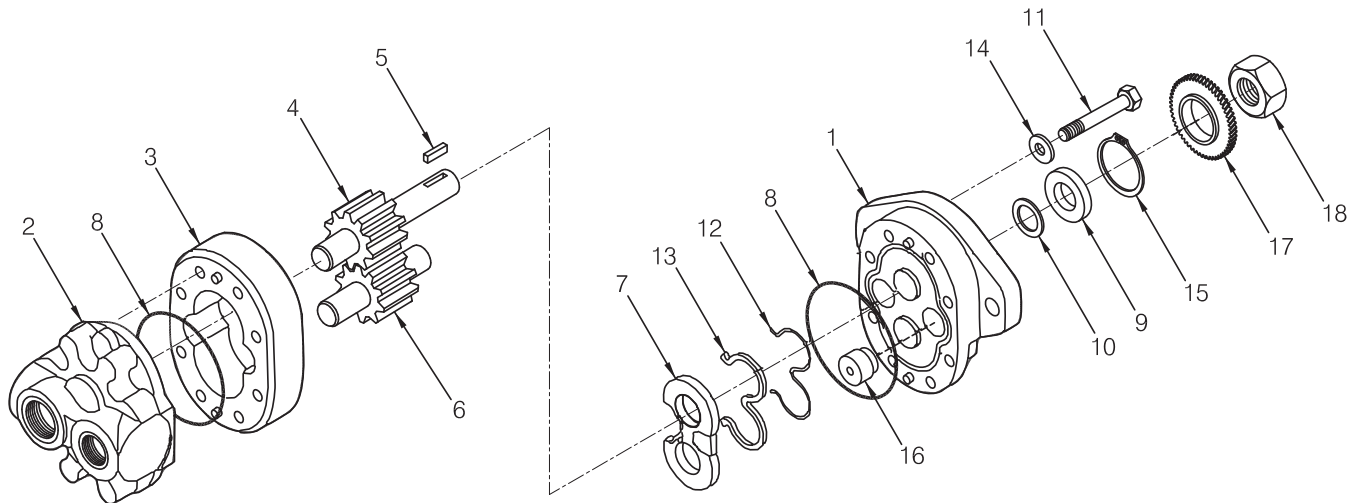
Pump Mounting



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1.1	* 2302989W	1	Pump (See page 33)	1.12	15086W	1	Jam Nut
1.2	2306629W	1	Plate, Pump Mounting	1.13	16828W	3	Capscrew
1.3	2306635W	1	Pump Mounting	1.14	156133W	3	Locknut
1.4	2306639W	1	Shaft, Pump Pivot	1.16	2304736W	1	Nut
1.5	2311031	1	Shaft, Gear Pump Idler	1.17	2310490	1	Clip
1.6	2311029	1	Gear	2.1	2306637W	1	Gear
1.6.1	2310973	1	Bearing, Needle	23.1	16805W	4	Capscrew
1.7	12897W	2	Snap Ring	23.2	R13812514	4	Lockwasher
1.8	2306640W	4	Ring, Retaining	23.3	222720W	2	Pin
1.9	15134W	3	Washer				
1.11	16205W	1	Set Screw				

* See Separate Coverage

Hydraulic Pump Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
2302989W Pump, Hydraulic							
1	NSS	1	. Plate, Front	11	NSS	4	. Capscrew
2	NSS	1	. Plate, Back	12	*a NSS	1	. Gasket
3	NSS	1	. Body	13	*a NSS	1	. Seal
4	NSS	1	. Gear, Drive	14	NSS	4	. Washer
5	316823W	1	. Key	15	NSS	1	. Ring, Retaining
6	NSS	1	. Gear, Idler	16	NSS	1	. Plug
7	*a NSS	1	. Plate, Wear	17	2303541W	1	Pinion, Pump
8	*a NSS	1	. O-Ring	18	138750W	1	Nut
9	*a NSS	1	. Seal				
10	*a NSS	1	. Washer				

*a Included in 2302937W Repair Kit

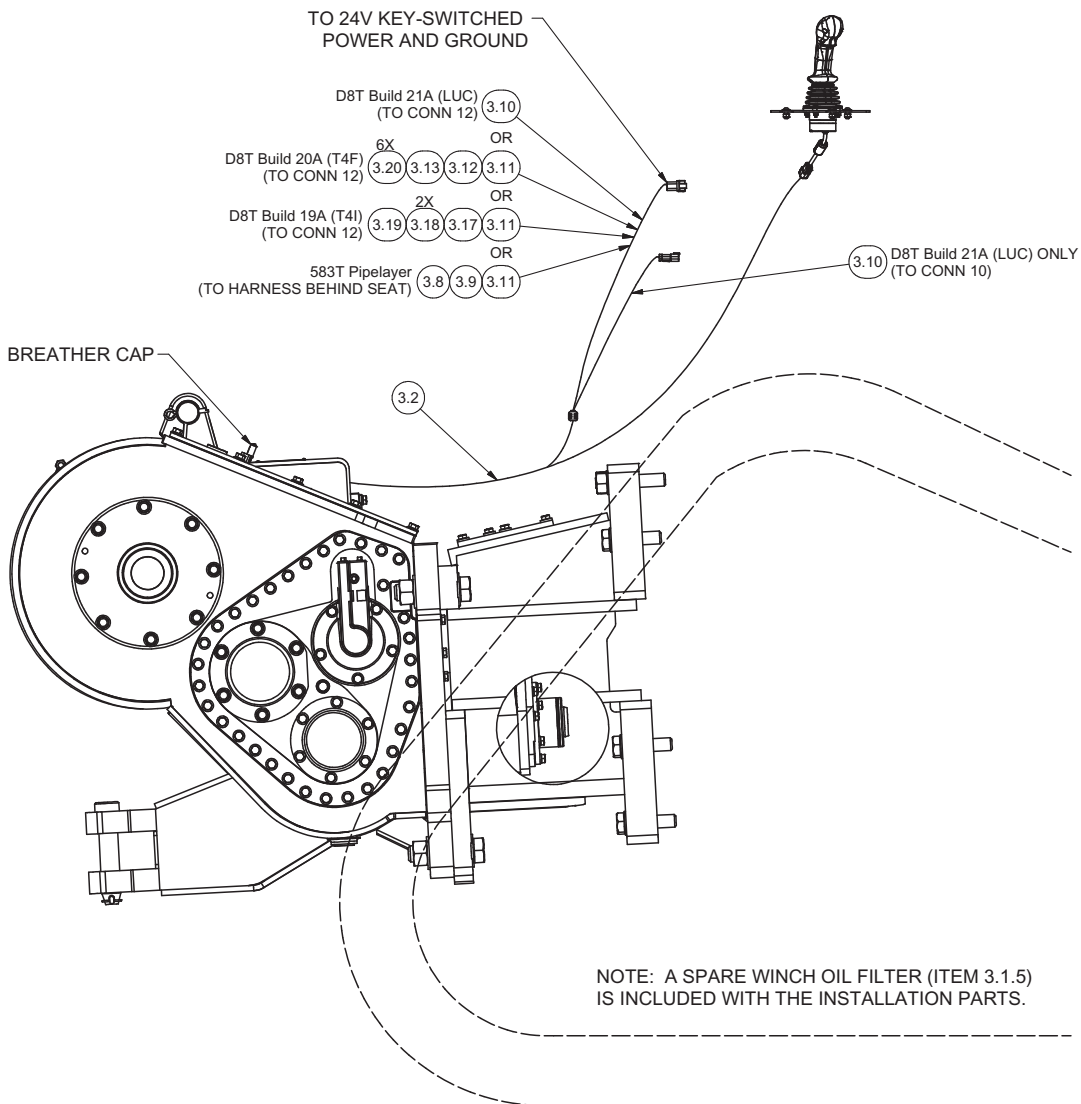
Joystick Installation

AW12E*****C74* (CAT D8T, PL83, PL87)

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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
3.1	2317568	1	E-Control Components				
3.1.1	137852W	10	. Cable Tie	3.18	243236	2	Socket
3.1.2	Y25G-(1024)16	4	. Capscrew	3.19	243506	1	Plug, Wedgelock
3.1.3	Y35E-#10	4	. Washer	3.20	219288	6	Plug, Seal
3.1.4	224191	4	. Nut, Esna		2317597		Joystick & Decal, Allied Branded
3.1.5	2304112W	1	. Element, Filter	4.1	2317565	1	. Assembly, Joystick
3.2	2317617	1	Wire Harness, External		2317612	1	.. Decal, Faceplate Top
3.3	*b 2317570	1	Plate, Joystick Mount		2317613	1	.. Decal, Faceplate Bottom
3.4	*c 2317569	1	Plate, Joystick Mount		2317117	1	.. Ferrite
3.5	296166W	4	Capscrew	4.2	2317564	1	. Decal, Console
3.6	R13812662	4	Washer		2317599		Joystick & Decal, No Branding
3.7	259241	4	Nut, Esna	5.1	2317591	1	. Assembly, Joystick
3.8	243503	1	Receptacle		2317614	1	.. Decal, Faceplate Top
3.9	243505	1	Lock, Secondary		2317613	1	.. Decal, Faceplate Bottom
3.10	2317601	1	Harness, Adapter		2317117	1	.. Ferrite
3.11	2317605	1	Harness, Adapter	5.2	2317590	1	. Decal, Console
3.12	906122	1	Receptacle				
3.13	246806	1	Receptacle				
3.14	2307919W	1	Guard, Cable				
3.15	*a 398817W	2	Screw, Flange				
3.17	243502	1	Plug, 2 Conductor				

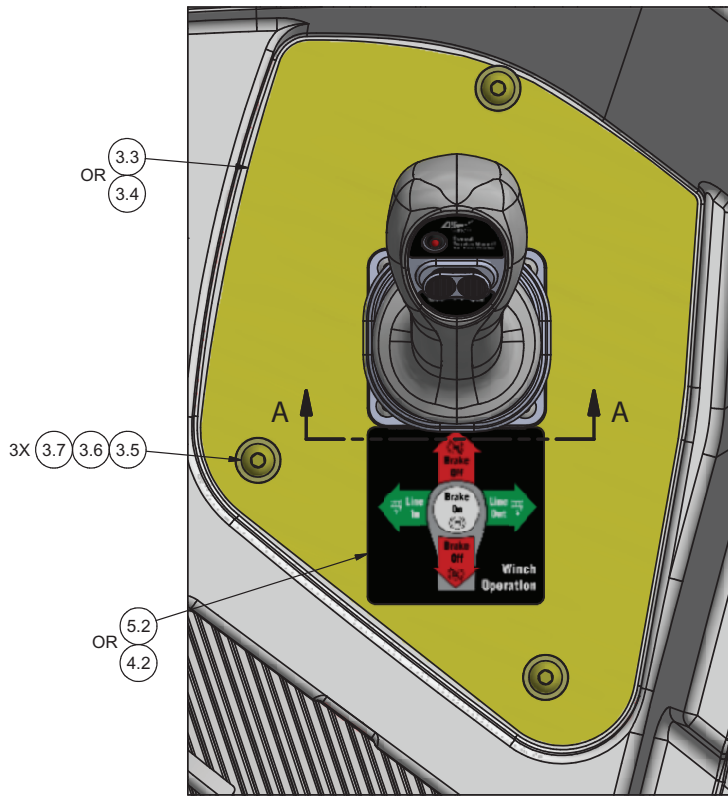
*a Apply Med Strength Threadlock (318702W)
 *b Used on Tier 4i dozers and later
 *c Used before Tier 4i dozers



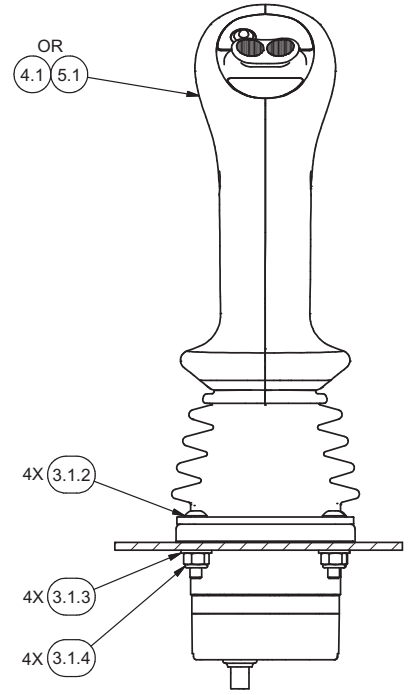
Joystick Installation

AW12E*****C74* (CAT D8T, PL83, PL87)

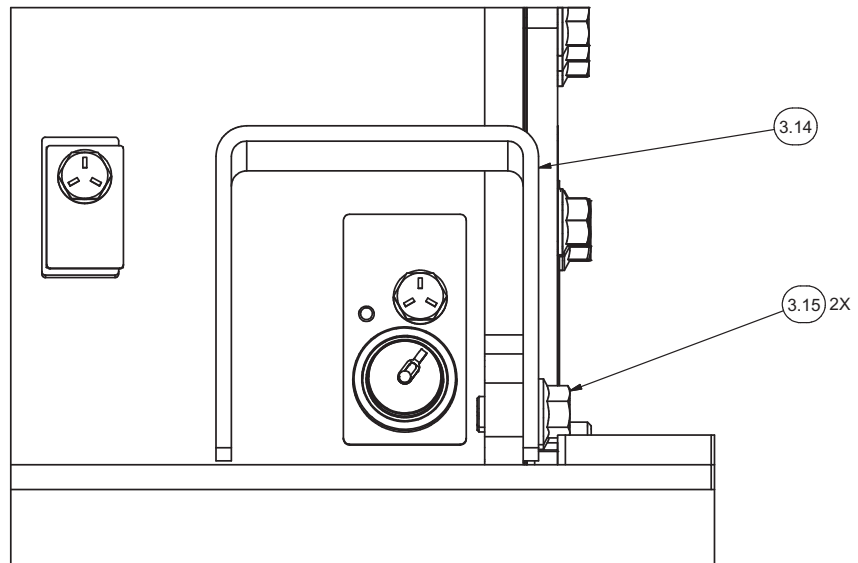
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JOYSTICK INSTALLATION



SECTION A-A



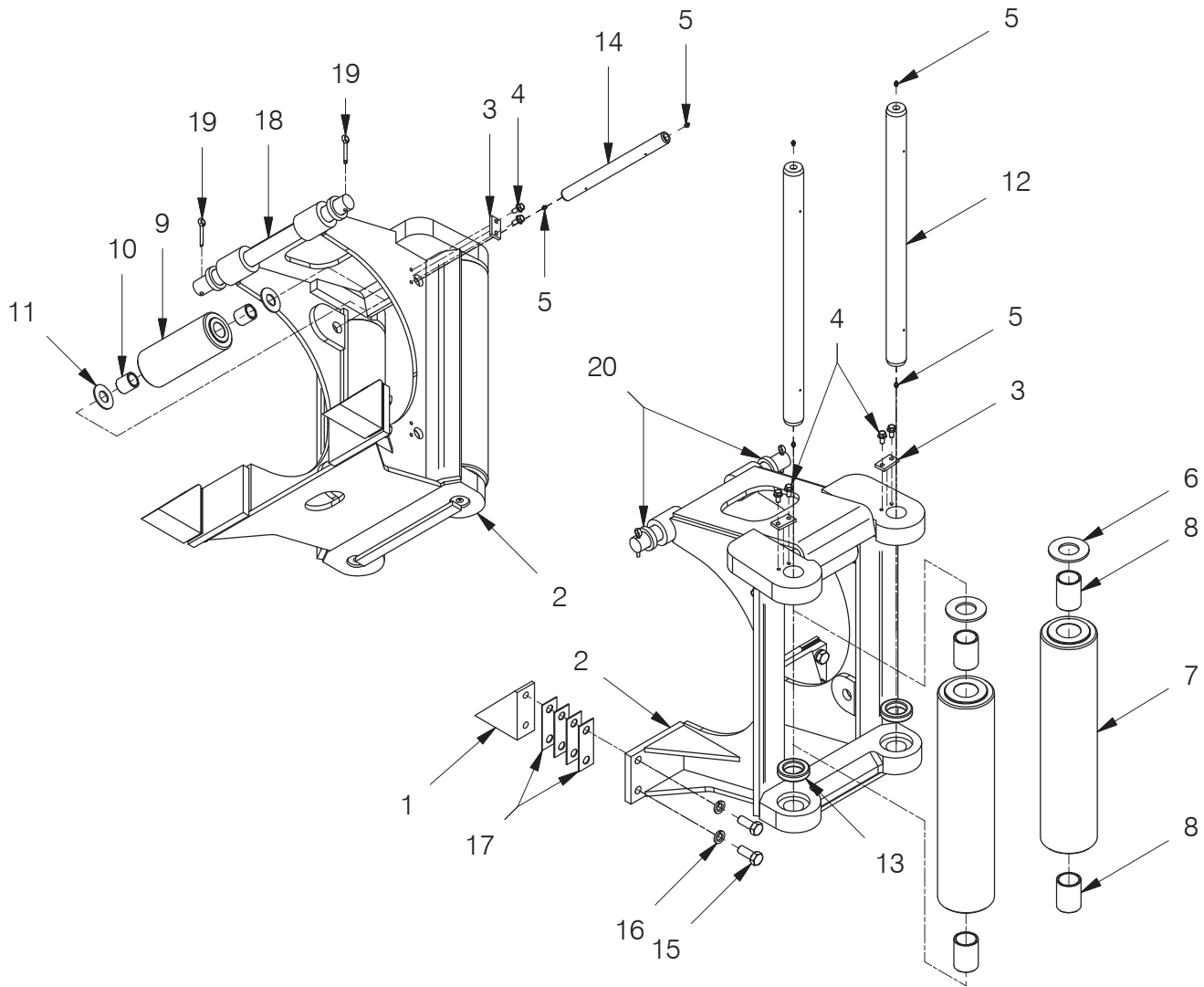
CABLE GUARD INSTALLATION

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Section 4 Optional Equipment

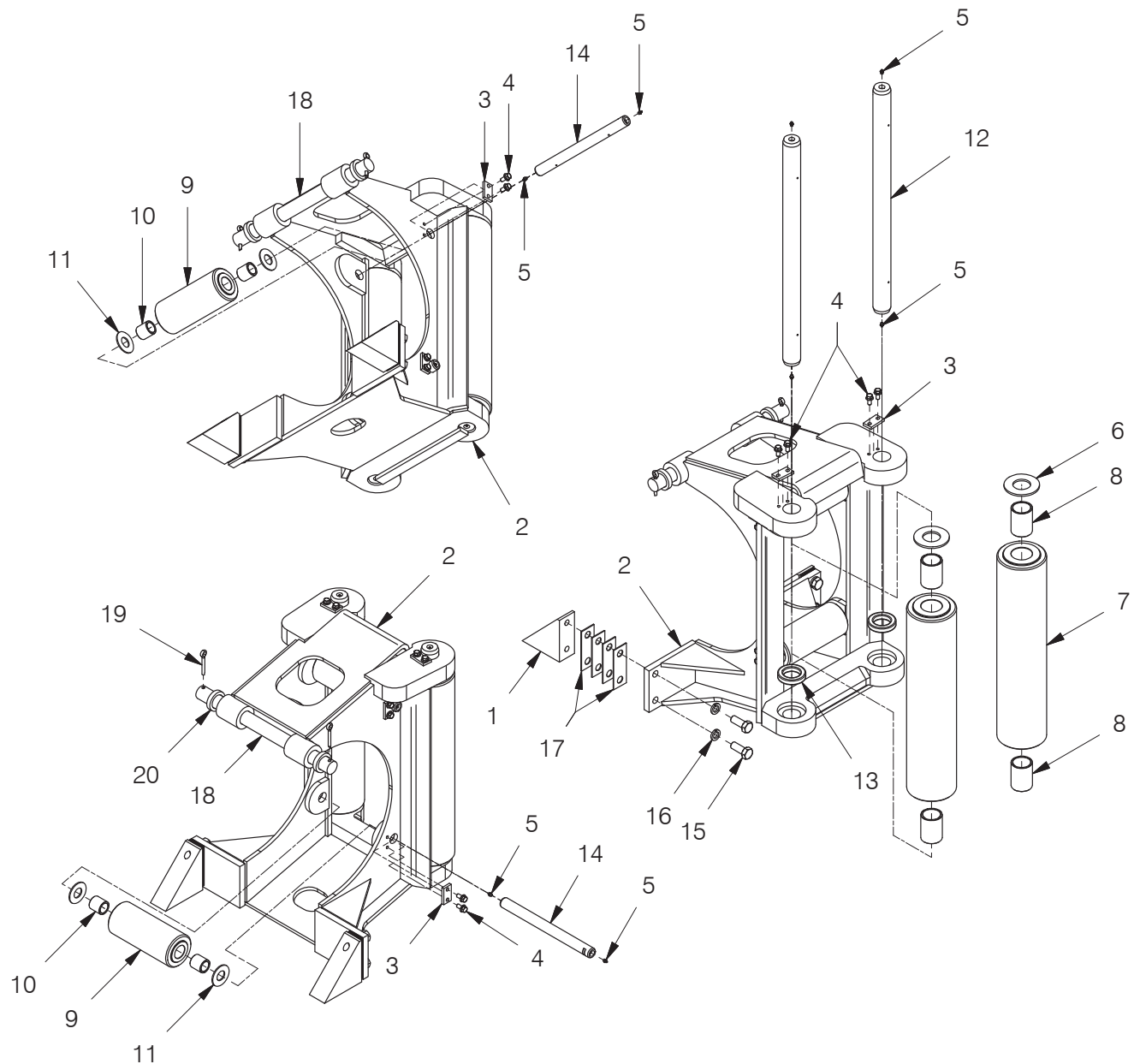
Fairlead.....	38 thru 39
Wire Rope Assemblies.....	40

Fairlead, 3-Roller



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	182733W	2	Plate, Bracket	12	93981W	2	Shaft
2	95801W	1	Frame	13	230353W	2	Bearing, Thrust
3	93166W	3	Keeper	14	93658W	1	Shaft
4	398817W	6	Screw, Flanged	15	18670W	4	Capscrew
5	16001W	6	Fitting, Grease	16	15166W	4	Lockwasher
6	38672W	2	Washer	17	96504W	AR	Shim .135
7	93980W	2	Roller	18	92606W	1	Rod, Tie
8	93979W	2	. Bushing	19	15272W	2	Pin, Cotter
9	92212W	1	Roller	20	173608W	2	Spacer
10	59419W	2	. Bushing				
11	92720W	2	Washer				

Fairlead, 4-Roller



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
1	182733W	2	Plate, Bracket	12	93981W	2	Shaft
2	95801W	1	Frame	13	230353W	2	Bearing, Thrust
3	93166W	4	Keeper	14	93658W	2	Shaft
4	398817W	8	Screw, Flanged	15	18670W	4	Capscrew
5	16001W	8	Fitting, Grease	16	15166W	4	Lockwasher
6	38672W	2	Washer	17	96504W	AR	Shim .135
7	93980W	2	Roller	18	92606W	1	Rod, Tie
8	93979W	2	. Bushing	19	15272W	2	Pin, Cotter
9	92212W	2	Roller	20	173608W	2	Spacer
10	59419W	4	. Bushing				
11	92720W	4	Washer				

Wire Rope Assemblies

Wire Rope Drum End



Junior Ferrule

Wire Rope Loose End Options



Tail Chain & Hook (TC)



Wedge Socket (WS)



Open Spelter Socket (OS)

Part Number	Wire Rope Diameter	Wire Rope Type	Loose End Type	Loose End Rating (lbs)	Length (ft)	Weight (lbs)	Drum Fill	Wire Rope Breaking Strength (lbs)
WR8-188J	1"	EIPS	TC	47,700	188	371	2/3	103,400
WR8-286J					286	552	Full	
YS8-188JWS		EEIPS	WS	91,040	188	372	2/3	113,800
YS8-286JWS					286	553	Full	
WR9-150J	1-1/8"	EIPS	TC	47,700	150	375	2/3	130,000
WR9-229J					229	559	Full	
YS9-150JWS		EEIPS	WS	114,400	150	376	2/3	143,000
YS9-229JWS					229	560	Full	
WR10-119J	1-1/4"	EIPS	TC	72,300	119	417	2/3	159,800
WR10-182J					182	598	Full	
YS10-119JWS		EEIPS	WS	140,640	119	418	2/3	175,800
YS10-182JWS					182	594	Full	
YS10-119JOS			OS	175,800	119	419	2/3	
YS10-182JOS					182	594	Full	

Section 5 **Recommended Service Kits**

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Recommended Winch Service Intervals

Allied Systems Company is pleased to announce an additional tool to keep your customer's winch serviced and functioning properly. Following this recommended service schedule will help keep tractor winch downtime to a minimum, optimize winch operation, and extend the life of your investment. See Table 1 on this page for recommended service intervals, and Table 2 on the next page for recommended service kits.

PTO 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 1,000	6		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.

IMPORTANT - For best Load Control
Use only the following oils:

Caterpillar	-Multipurpose Tractor Oil (MTO)
John Deere	-Hy-Gard
ExxonMobil	-Mobil Fluid 424 (Factory Fill)
Chevron	-1000 THF



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



2311481 Rev C

Table 1 Recommended Winch Service Intervals

Recommended Service Kits

SERVICE KITS FOR W12E WINCHES		
Service Description	Kit Description	Kit Part No.
Filter Change (First 250, then every 500 Hours)	Filter Kit	2311376
Complete Oil Change (Every 1,000 hours)	-N/A-	Check our Website for Current Operator's and Service Manuals for Appropriate Oils
Clutch and Brake Overhaul (Every 5,000 hours)	Gasket Kit	281939W
	Clutch Shaft Kit*	2311370
	Brake Assembly Kit	2311368
	Pump Assembly	2302989W
Major Overhaul (Every 10,000 hours)	Brake Shaft Bearing Kit	2311371
	Clutch Shaft Bearing Kit	2311373
	Drum & Intermediate Shaft Bearing and Seal Kit	2311374

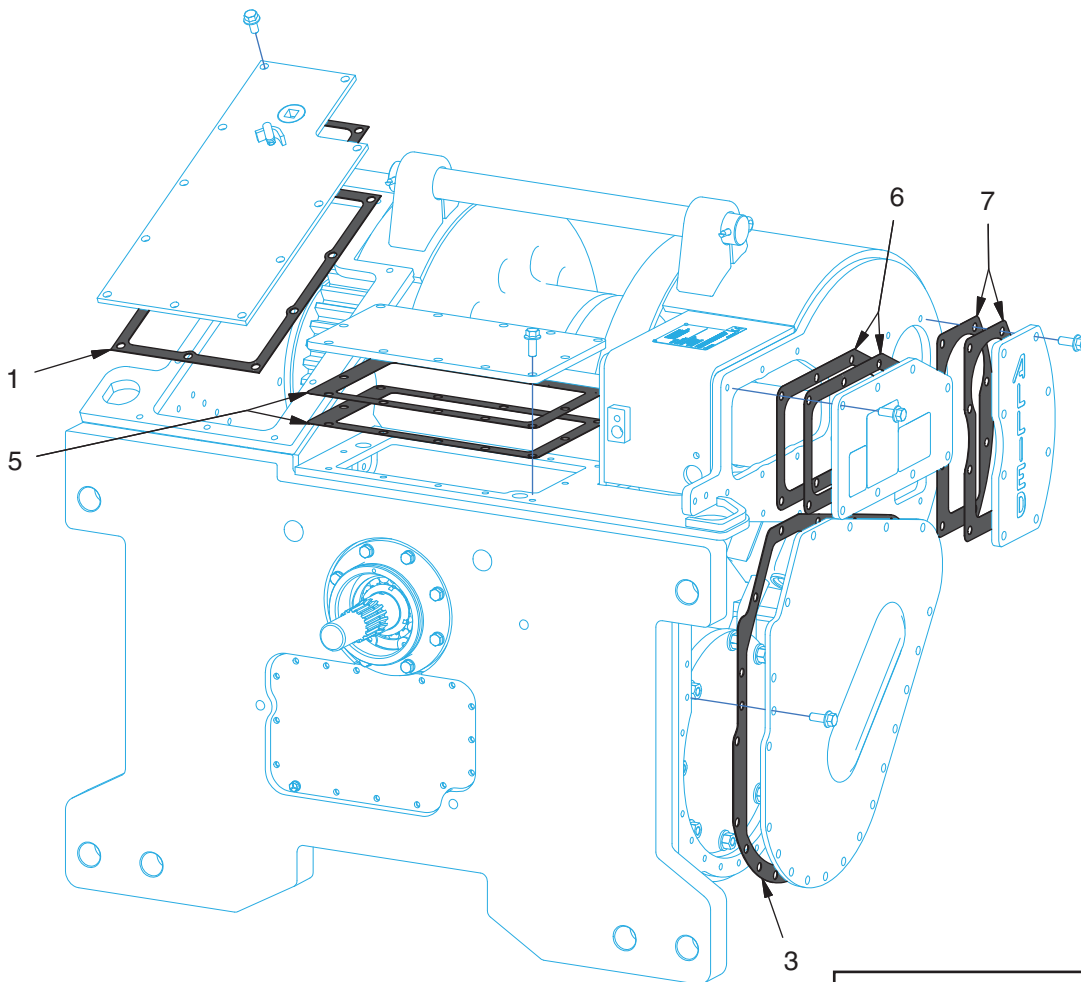
* Services both clutches. Includes all parts necessary on the clutch shaft; dropbox and PTO bearings and seals must be ordered separately.

Table 2 Routine Maintenance Kits

Gasket Kit: 281939W

Page 1 of 2

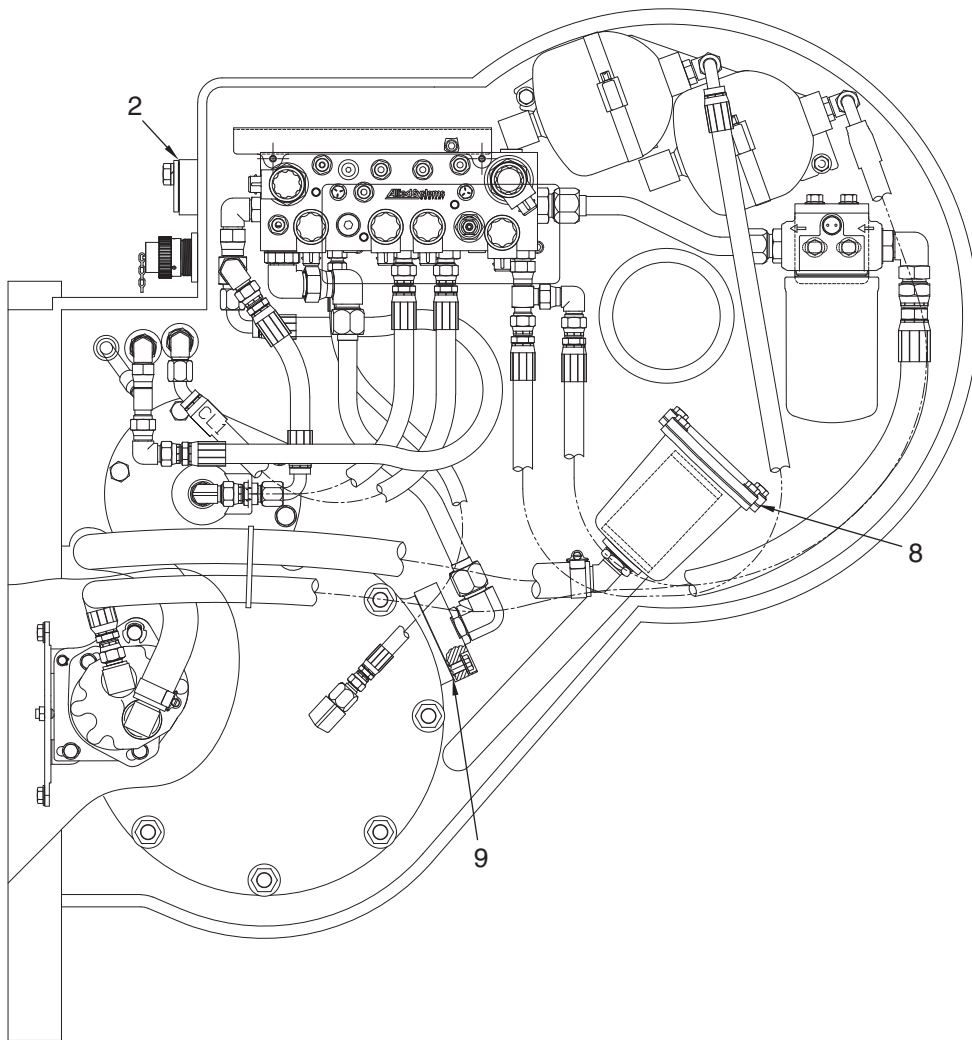
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	281939W		Kit, Gasket				
1	95455W	1	. Gasket, RH Side Frame	8	2300935W	1	. Gasket
2	303946W	1	. Gasket	9	196022W	1	. Gasket
3	286046W	1	. Gasket, Brake Cover	10	* 186460W	1	. Gasket
4	* 265332W	1	. Gasket	11	* 164708W	1	. Gasket
5	2314838	2	. Gasket, Top Cover	12	* 15895W	1	. O-Ring
6	2314839	2	. Gasket, Valve Cover				
7	2314840	2	. Gasket, Filter Cover				* Not used



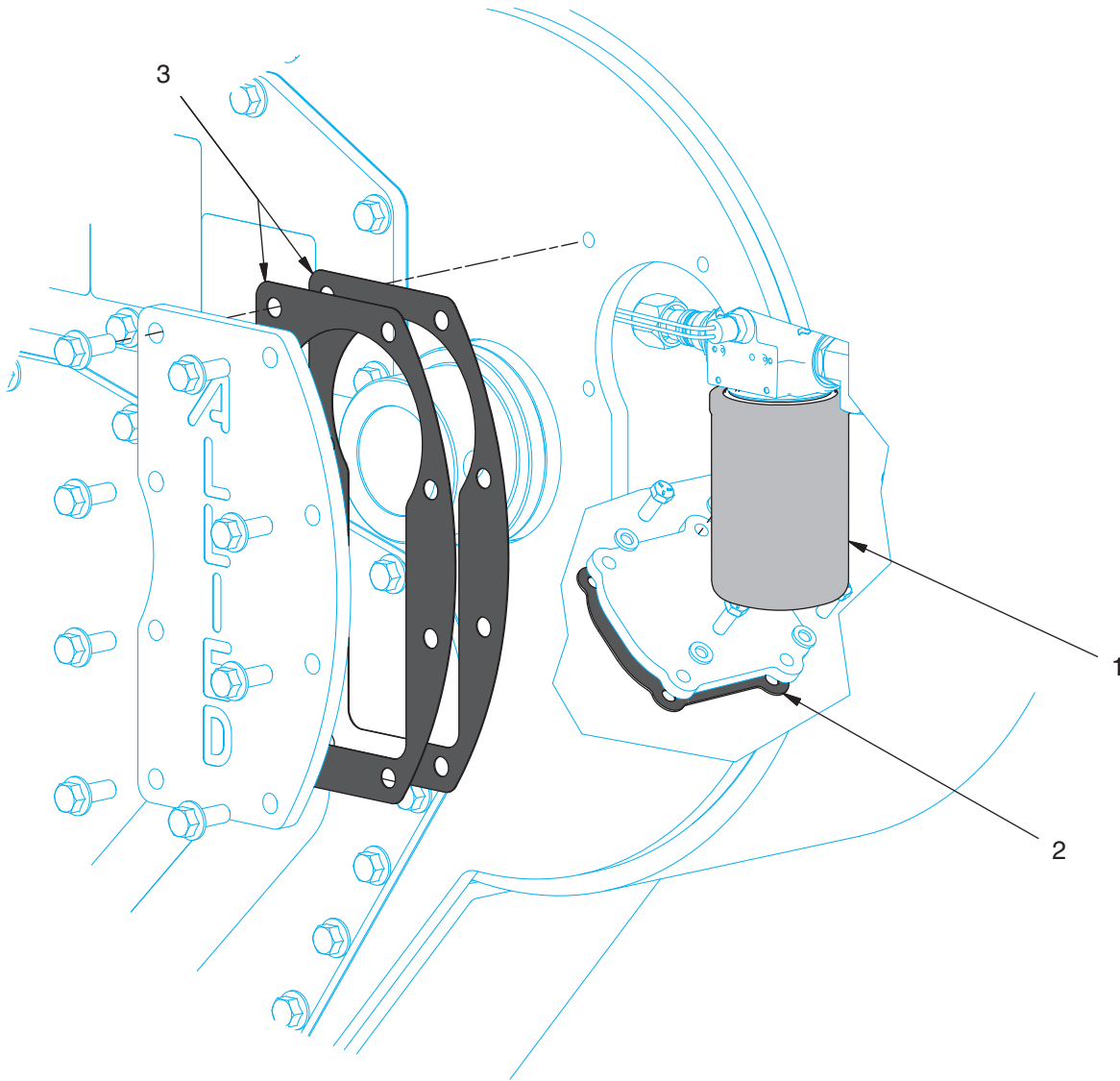
Note: Only parts with item numbers are actually included in this Service Kit. All other parts are shown for reference only.

Gasket Kit: 281939W

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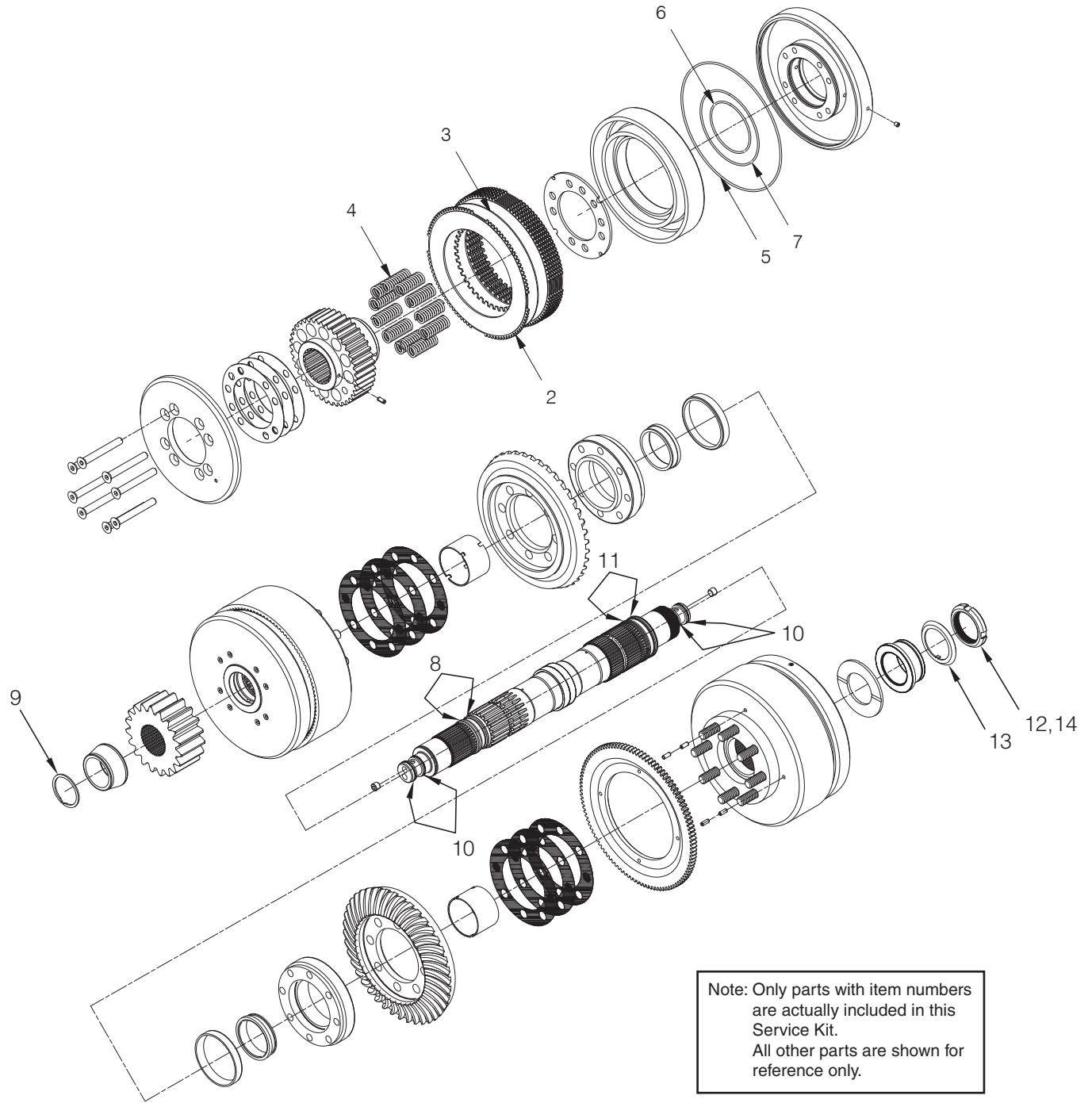
Filter Kit: 2311376



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

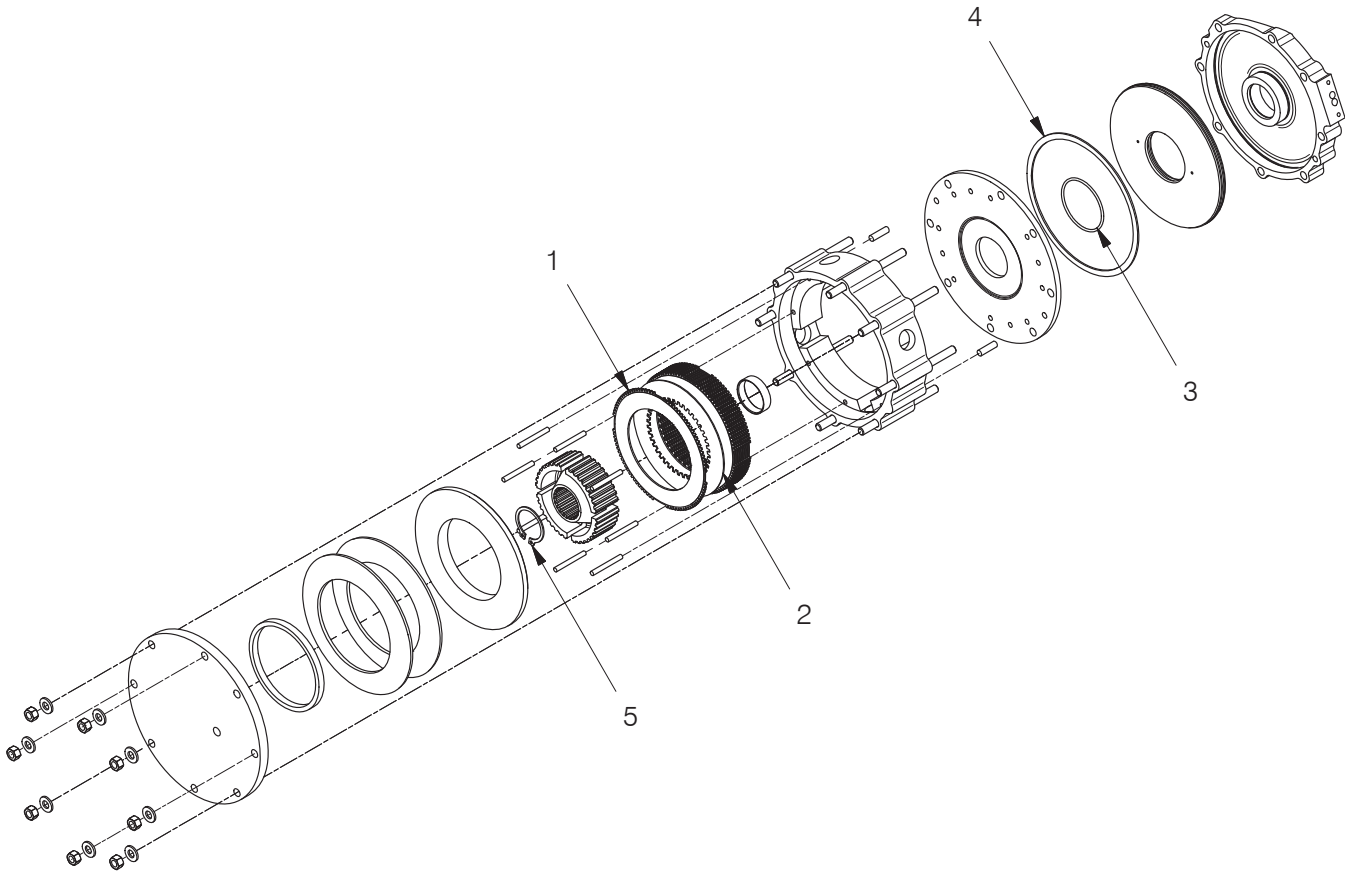
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311376		Kit, Filter				
1	2304112W	1	. Element, Filter	3	2314840	2	. Gasket - Cover, Filter
2	2300935W	1	. Gasket				

Clutch Shaft Kit: 2311370



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311370		Kit, Clutch Rebuild				
1	2310569	2	. Kit, Clutch Service	8	39495W	2	. O-Ring
2	328716W	8	. Disc - Friction	9	263457W	1	. Snap Ring - Ext
3	264062W	8	. Plate, Separator	10	95581W	4	. Ring
4	264192W	11	. Spring	11	39678W	2	. O-Ring
5	89775W	1	. O-Ring	12	318701W	1	. Loctite
6	79978W	1	. O-Ring	13	175193W	1	. Washer
7	89776W	1	. O-Ring	14	32967W	1	. Locknut

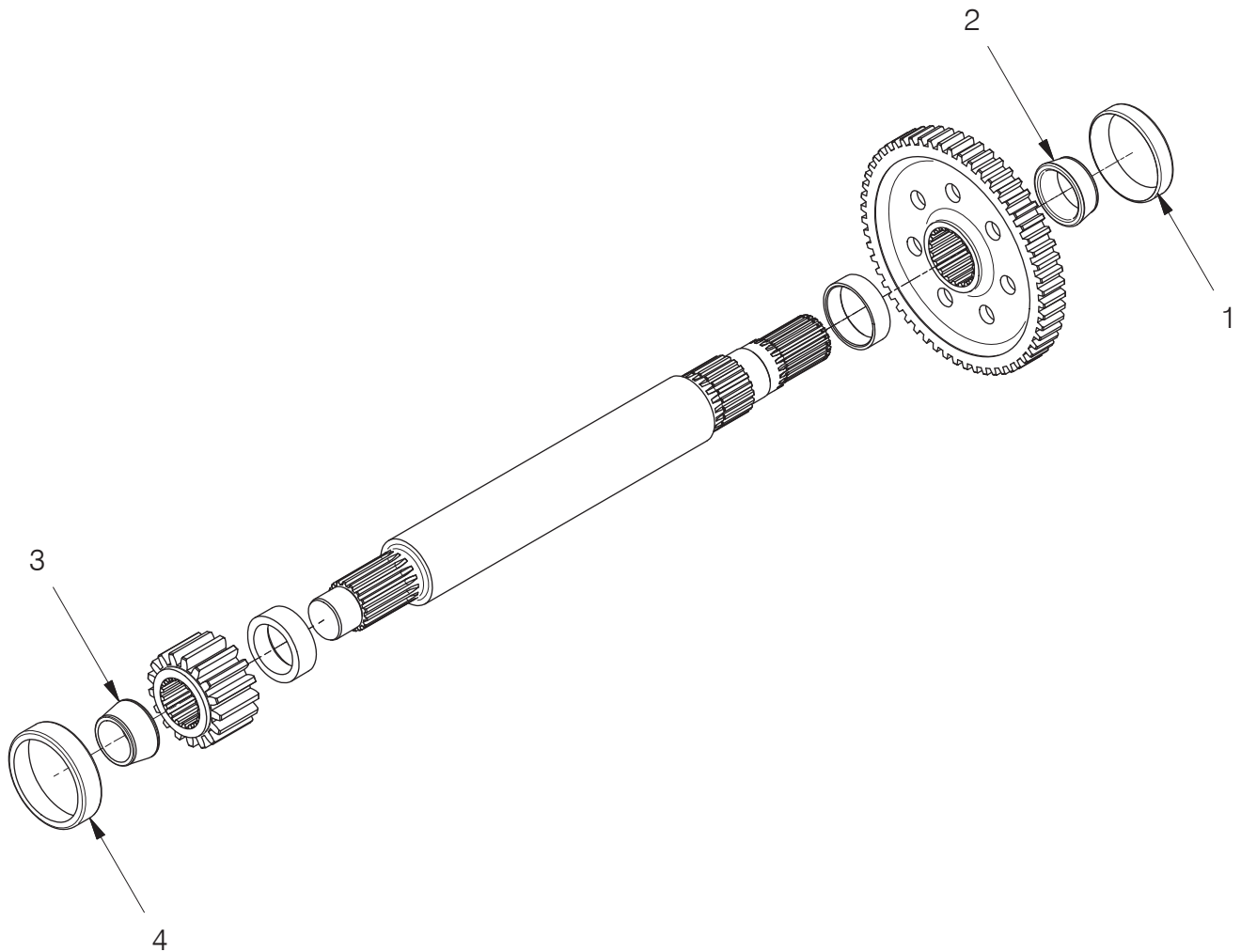
Brake Assembly Kit: 2311368



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

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311368		Kit, Brake Assembly				
1	328716W	10	. Disc - Friction	4	131982W	1	. Ring
2	264062W	9	. Plate, Separator	5	58905W	1	. Snap Ring
3	131983W	1	. O-Ring				

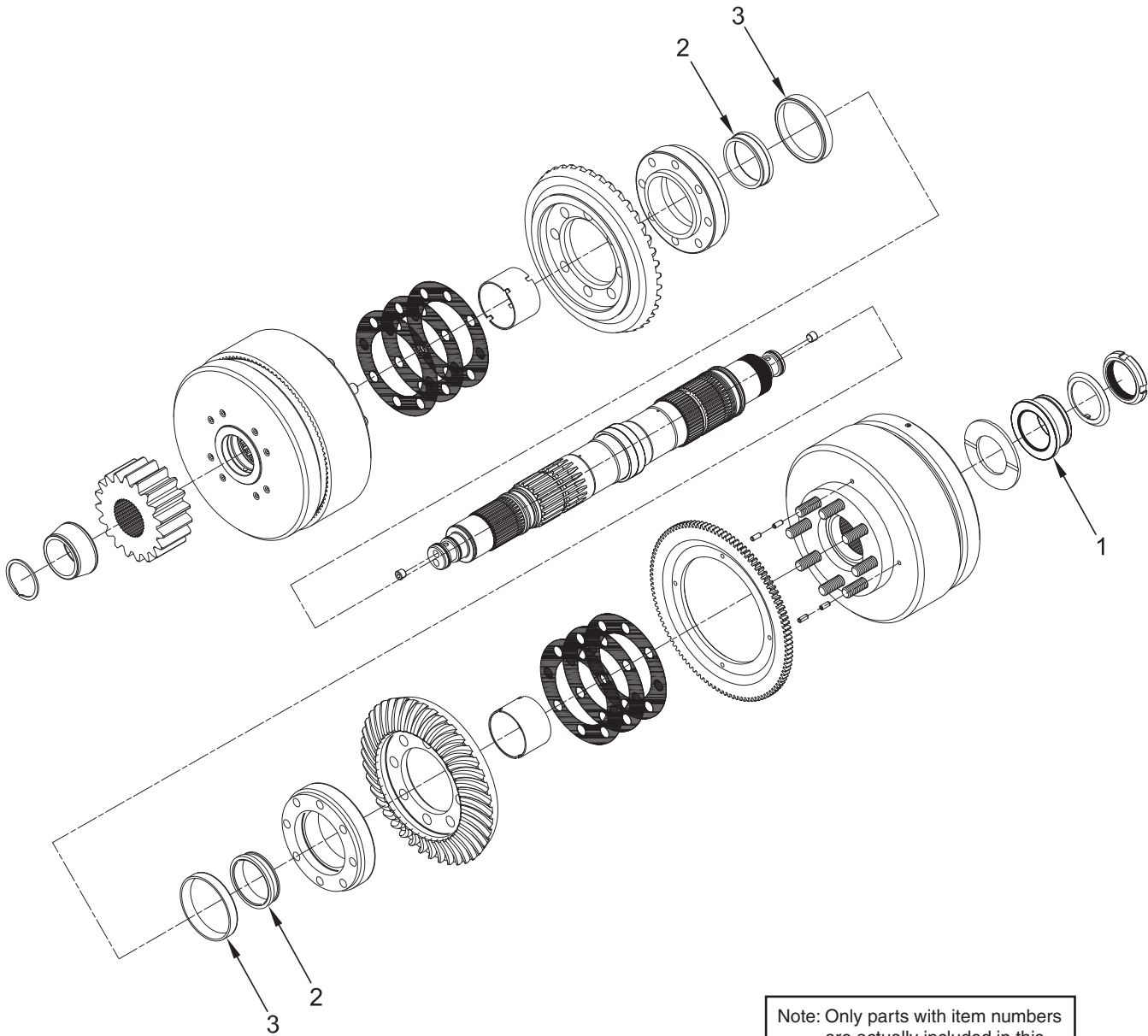
Brake Shaft Bearing Kit: 2311371



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

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311371		Kit, Brake Shaft Bearing				
1	30101W	1	. Bearing Cone	3	230326W	1	. Bearing Cone
2	30100W	1	. Bearing Cup	4	30104W	1	. Bearing Cup

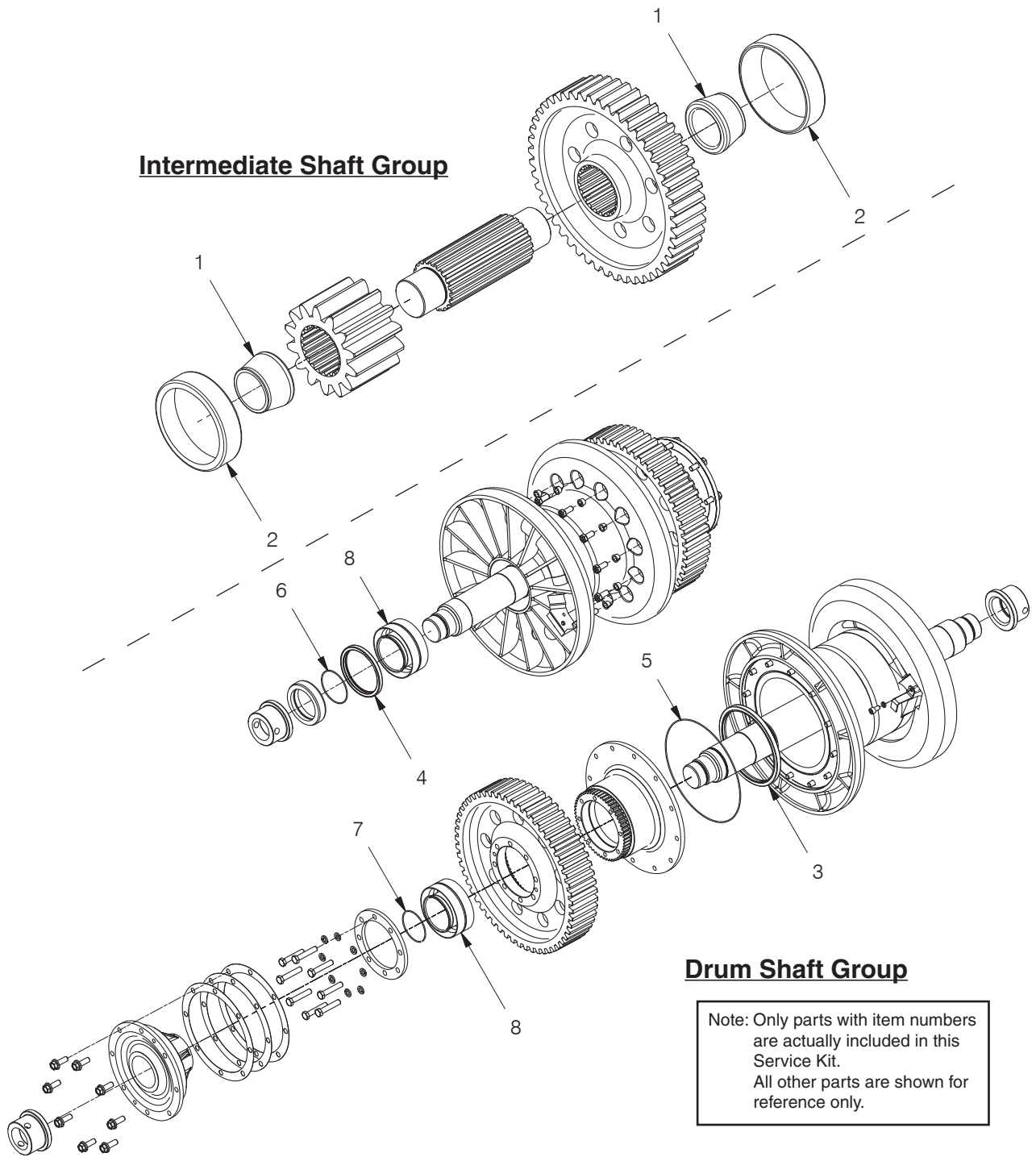
Clutch Shaft Bearing Kit: 2311373



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

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311373		Kit, Clutch Shaft Bearing				
1	30080W	1	. Bearing Cone	3	2307950W	4	. Bearing Cup
2	2307949W	4	. Bearing Cone				

Drum & Intermediate Shaft Bearing & Seal Kit: 2311374



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	2311374		Kit, Bearing & Seal				
1	231011W	2	. Bearing Cone	5	39764W	1	. O-Ring
2	230327W	2	. Cup - Roller Bearing	6	15888W	1	. O-Ring
3	141149W	1	. Seal, Oil	7	15886W	1	. O-Ring
4	44570W	1	. Seal - Oil	8	230329W	2	. Bearing Assembly

Miscellaneous Parts

In addition to the kits listed on the previous pages, Allied Systems Company recommends that you stock the following items.

Allied P/N	Description	Quantity	Order Quantity
2302989W	Assembly, Gear Pump	1	
2315807	Valve, Relief	1	
2310260	. Kit, Seal	1	
2310252	Valve, Cartridge	2	
2310258	. Kit, Seal	1	
2315808	Valve, Proportional	3	
254396	. Kit, Seal	1	
2310253	Valve, Cartridge	1	
254400	. Kit, Seal	1	
2311558	Coil, Valve - 24VDC	3	
2310259	. Kit, Seal	1	
2315811	Coil, Proportional - 24VDC	3	
95959W	Pin, Drawbar	1	
2303221W	Pin, Retaining	1	

Wire Rope Assemblies

In addition to the kits listed on the previous pages, Allied Systems Company recommends that you stock wire rope. Select from the following.

Allied P/N	Description	Length	Will Fill Drum To:	Order Quantity
WR8-188J	Wire Rope Assembly, 1", EIPS	188 ft	2/3 Capacity (Recommended)	
WR8-286J	Wire Rope Assembly, 1", EIPS	286 ft	Full Capacity	
YS8-188JWS	Wire Rope Assembly, 1", EEIPS	188 ft	2/3 Capacity (Recommended)	
YS8-286JWS	Wire Rope Assembly, 1", EEIPS	286 ft	Full Capacity	
WR9-150J	Wire Rope Assembly, 1-1/8", EIPS	150 ft	2/3 Capacity (Recommended)	
WR9-229J	Wire Rope Assembly, 1-1/8", EIPS	229 ft	Full Capacity	
YS9-150JWS	Wire Rope Assembly, 1-1/8", EEIPS	150 ft	2/3 Capacity (Recommended)	
YS9-229JWS	Wire Rope Assembly, 1-1/8", EEIPS	229 ft	Full Capacity	
WR10-119J	Wire Rope Assembly, 1-1/4", EIPS	119 ft	2/3 Capacity (Recommended)	
WR10-182J	Wire Rope Assembly, 1-1/4", EIPS	182 ft	Full Capacity	
YS10-119JWS	Wire Rope Assembly, 1-1/4", EEIPS	119 ft	2/3 Capacity (Recommended)	
YS10-182JWS	Wire Rope Assembly, 1-1/4", EEIPS	182 ft	Full Capacity	
YS10-119JOS	Wire Rope Assembly, 1-1/4", EEIPS	119 ft	2/3 Capacity (Recommended)	
YS10-182JOS	Wire Rope Assembly, 1-1/4", EEIPS	182 ft	Full Capacity	

Section 6
Numerical Index

1151722W - 2305219W54
2305987W - 92606W55
92606W - YS9-229JWS56

Part No.	Page No.	Item	Part No.	Page No.	Item	Part No.	Page No.	Item	Part No.	Page No.	Item
1151722W	14	20.15	15887W	4	10	21420W	2	27.12	230329W	24	1.12
123270W	12	61	15887W	5	4	215515	28	79	230329W	51	8
125402W	13	3	15887W	6	49	219172W	28	1	230353W	38	13
12897W	32	1.7	15887W	7	10	219288	34	3.20	230353W	39	13
12944W	12	10	15888W	22	2.3	220190W	14	3.4	2303541W	33	17
129563W	28	80	15888W	24	1.6	221563W	4	22	2303848W	2	27.3
12963W	12	18	15888W	51	6	221563W	7	22	2303898W	2	5.13
12981W	13	4	15895W	16	11	221569W	14	20.12	2303898W	2	17.2
1300780W	28	15	15895W	44	12	221637W	22	2.1	2303898W	2	18.3
1300780W	28	204	15898W	24	1.7	221637W	24	1.11	2303898W	18	5.13
1310819W	7	82	16001W	38	5	221662W	4	1	2303902W	2	27.14
131460W	28	53	16001W	39	5	221662W	5	41	2303905W	2	2.16
131982W	20	8	16205W	32	1.11	221662W	6	1	2303905W	2	4.1
131982W	48	4	16321W	22	2.12	221662W	7	1	2303905W	21	4.1
131983W	20	9	16321W	24	1.8	221711W	2	27.18	2303905W	22	2.16
131983W	48	3	164708W	44	11	221725W	7	81	2303905W	24	1.13
131985W	20	13	16541W	28	27	221728W	4	3	2303969W	2	3.15
131990W	20	19	16543W	28	213	221728W	5	43	2303975W	4	5
1321665W	8	2	16559W	28	17	221728W	6	3	2303975W	5	45
133256W	13	21	16559W	28	206	221728W	7	3	2303975W	6	5
133257W	13	22	16561W	28	76	221729W	5	3	2303975W	7	5
133258W	13	23	16569W	28	82	221729W	6	46	2304112W	28	
133274W	2	2.5	16602W	8	8	221771W	2	27.17	2304112W	34	3.1.5
133274W	22	2.5	16602W	28	60	221771W	4	23	2304112W	46	1
133274W	24	1.1	16805W	28	4	221771W	7	23	2304366W	28	65
133275W	2	2.6	16805W	32	23.1	221775W	20	6	2304660W	12	17
133275W	22	2.6	16828W	28	45	221777W	4	2	2304670W	12	5
133275W	24	1.2	16828W	32	1.13	221777W	5	42	2304671W	12	6
133276W	2	2.7	16830W	14	20.11	221777W	6	2	2304698W	28	212
133276W	22	2.7	16830W	28	63	221777W	7	2	2304699W	28	203
133276W	24	1.3	16987W	28	120	221786W	4	4	2304700W	12	50
133469W	28	31	16989W	28	48	221786W	5	2	2304702W	12	21
137852W	8	6	17062W	28	47	221786W	5	44	2304703W	12	60
137852W	28	35	17063W	28	13	221786W	6	4	2304706W	12	13
137852W	28	122	17118W	16	8	221786W	6	44	2304707W	12	51
137852W	34	3.1.1	172800W	22	2.24	221786W	7	4	2304711W	12	14
138750W	33	18	17300W	28	42	222262W	2	7.6	2304712W	12	15
138908W	20	5	173608W	38	20	222402W	28	14	2304713W	12	16
140401W	20	7	173608W	39	20	222711W	16	16	2304715W	12	42
140447W	20	11	175193W	14	3.35	222720W	32	23.3	2304715W	12	62
141149W	22	2.14	175193W	47	13	224191	34	3.1.4	2304716W	4	20
141149W	51	3	176208W	2	17.4	224798W	4	21	2304716W	7	20
141348W	16	9	177949W	22	2.13	224798W	7	21	2304731W	12	52
14595W	2	7.5	177949W	24	1.9	225094W	28	121	2304733W	2	27.4
14668W	2	3.14	177951W	28	51	225233W	28	49	2304736W	32	1.16
14718W	16	10	179443W	2	17.6	225851	7	83	2304740W	5	50
14761W	28	50	182178W	22	2.17	226904	28	18	2304740W	6	30
15086W	32	1.12	182179W	22	2.23	228048	28	124	2304751W	12	31
15134W	28	46	182198W	20	20	2300010W	8	1	2304751W	12	41
15134W	32	1.9	182209W	13	24	2300935W	28	3	2304752W	5	1
15158W	12	7	182733W	38	1	2300935W	44	8	2304753W	12	30
15158W	13	25	182733W	39	1	2300935W	46	2	2304753W	12	40
15158W	14	20.10	18515W	28	29	2300936W	28	2	2304816W	5	30
15158W	28	64	18526W	28	28	2300962W	2	3.13	2304817W	5	31
15160W	22	2.2	186460W	44	10	2300962W	2	27.13	2304818W	5	32
15160W	24	1.4	18670W	38	15	2301140W	7	80	2304826W	6	43
15166W	38	16	18670W	39	15	2302109W	28	209	2304850W	12	25
15166W	39	16	193604W	20	2	2302694W	12	24	2304851W	12	26
15272W	2	7.2	195408W	2	27.8	2302937W	33		2304852W	12	27
15272W	38	19	196022W	28	43	2302989W	32	1.1	2304933W	12	4
15272W	39	19	196022W	44	9	2302989W	33		2304973W	18	12.1
15305W	12	3	199594W	20	4	2302989W	52		2304973W	20	21
15319W	2	27.15	207563	24	1.10	2303221W	2	7.4	2305132W	28	
156133W	32	1.14	208686	28	22	2303221W	52		2305211W	6	41
156689W	28		209155	28	81	230326W	18	5.7	2305212W	6	42
15878W	20	9	209639W	28	8	230326W	49	3	2305216W	6	47
15886W	22	2.19	211504W	14	3.8	230327W	21	4.7	2305217W	6	48
15886W	24	1.5	211560	28	77	230327W	51	2	2305218W	6	50
15886W	51	7	21420W	2	3.12	230329W	22	2.25	2305219W	12	32

Part No.	Page No.	Item	Part No.	Page No.	Item	Part No.	Page No.	Item	Part No.	Page No.	Item
2305987W	28	25	2310578	14	3.10	2317456	28	300	296438W	4	34
2306435W	14	3.12	2310578	16		2317541	2	27.6	296868W	6	45
2306436W	16	1	2310578	16		2317542	2	27.6	29758W	12	20
2306438W	16	1	2310781	14	3.16	2317564	34	4.2	30059W	14	20.13
2306441W	14	3.30	2310880	4	31	2317565	34	4.1	30069W	14	3.13
2306473W	13	2	2310891	22	2.9	2317568	34	3.1	30080W	14	3.3
2306475W	13	1	2310891	24	1.14	2317569	34	3.4	30080W	50	1
2306541W	14	20.16	2310949	22	2.21	2317570	34	3.3	30100W	18	5.6
2306551W	14	20.2	2310950	2	2.20	2317590	34	5.2	30100W	49	2
2306552W	14	20.3	2310950	22	2.20	2317591	34	5.1	30101W	18	5.5
2306553W	14	20.4	2310950	24	1.15	2317597	34		30101W	49	1
2306554W	14	20.5	2310951	22	2.22	2317599	34		30104W	18	5.8
2306624W	2	17.5	2310951	24	1.16	2317601	34	3.10	30104W	49	4
2306629W	32	1.2	2310973	32	1.6.1	2317605	34	3.11	303946W	28	66
2306635W	32	1.3	2311029	32	1.6	2317612	34		303946W	44	2
2306637W	32	2.1	2311031	32	1.5	2317613	34		308413W	18	5.1
2306639W	32	1.4	2311330	8	4	2317613	34		316823W	33	5
2306640W	32	1.8	2311368	48		2317614	34		318701W	47	12
2306738W	28	208	2311370	47		2317615	28	67	328716W	16	5
2307143W	4	6	2311371	49		2317616	28	83	328716W	20	16
2307143W	5	46	2311373	50		2317617	34	3.2	328716W	47	2
2307143W	6	6	2311374	51		2317619	28		328716W	48	1
2307143W	7	6	2311376	46		2317628	28	84	32967W	14	3.2
2307740W	28	202	2311481	8	3	234149	28	52	32967W	47	14
2307919W	34	3.14	2311558	31	6	242833W	2	2.18	34055W	13	5
2307935W	28	7	2311558	52		242833W	22	2.18	34056W	13	6
2307938W	28	123	2311807	28	61	242833W	24	1.31	35504W	12	2
2307941W	2	18.4	2312259	28	68	243236	34	3.18	374803W	12	11
2307949W	14	3.5	2313082	20	8	243502	34	3.17	374804W	12	12
2307949W	50	2	2313084	16		243503	34	3.8	38672W	38	6
2307950W	14	3.6	2313084	20		243505	34	3.9	38672W	39	6
2307950W	50	3	2314343	8	5	243506	34	3.19	39495W	14	3.11
2307951W	14	3.9	2314838	2	27.2	246806	34	3.13	39495W	47	8
2307952W	14	3.7	2314838	44	5	246970	28	205	39678W	14	3.17
2307954W	14	3.42	2314839	2	27.5	247723	28	21	39678W	47	11
2307955W	14	3.44	2314839	44	6	254396	31		39764W	22	2.8
2307956W	14	3.45	2314840	2	27.7	254396	52		39764W	24	1.33
2307957W	14	3.43	2314840	44	7	254400	31		39764W	51	5
2307971W	16	6	2314840	46	3	254400	52		39765W	24	1.34
2310015	28	211	2315067	24	1.17	259241	34	3.7	398817W	34	3.15
2310016	28	26	2315071	24	1.18	261561W	2	27.1	398817W	38	4
2310036	14	3.46	2315073	24	1.19	263060W	14	20.6	398817W	39	4
2310037	14	3.46	2315080	24	1.20	263454W	14	20.7	41212W	12	8
2310038	14	3.46	2315081	24	1.21	263455W	14	20.8	44570W	22	2.4
2310039	14	3.46	2315082	24	1.22	263456W	14	20.9	44570W	51	4
2310040	14	3.46	2315083	24	1.23	263457W	14	3.14	45733W	12	19
2310041	14	3.46	2315084	24	1.24	263457W	47	9	53559W	22	2.10
2310087	2	18.2	2315261	24	1.25	264062W	16	4	53559W	24	1.35
231011W	21	4.6	2315268	24	1.26	264062W	20	17	58905W	20	12
231011W	51	1	2315346	24	1.27	264062W	47	3	58905W	48	5
2310252	31	3	2315348	24	1.28	264062W	48	2	591242	28	210
2310252	52		2315354	24	1.29	264192W	16	13	59419W	38	10
2310253	31	5	2315717	28	12	264192W	47	4	59419W	39	10
2310253	52		2315717	31		265332W	44	4	68964W	16	17
2310258	31		2315760	28	24	265400W	20	14	79978W	16	12
2310258	52		2315761	28	20	267521W	20	15	79978W	47	6
2310259	52		2315762	28	19	268492W	14	3.31	83857W	28	11
2310260	31		2315807	31	2	274908W	22	2.11	89775W	16	10
2310260	52		2315807	52		274908W	24	1.32	89775W	47	5
2310356	16	15	2315808	31	4	276090W	28	6	89776W	16	11
2310490	32	1.17	2315808	52		278791W	20	1	89776W	47	7
2310510	14	1.1	2315811	31	7	279392W	28	44	906122	34	3.12
2310511	14	3.29	2315811	52		281939W	44		90937W	4	8
2310528	16	18	2315822	28	30	286045W	2	27.10	90937W	5	48
2310533	16	20	2315910	28	9	286046W	2	27.11	90937W	6	8
2310569	47	1	2317117	34		286046W	44	3	90937W	7	8
2310577	14	3.18	2317117	34		287930W	20	18	92212W	38	9
2310577	16		2317364	2	27.16	292661W	4	32	92212W	39	9
2310577	16		2317441	28	201	296166W	34	3.5	92606W	2	7.1

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