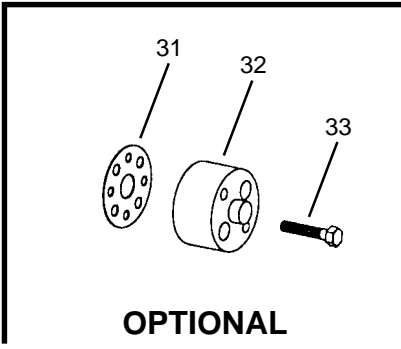
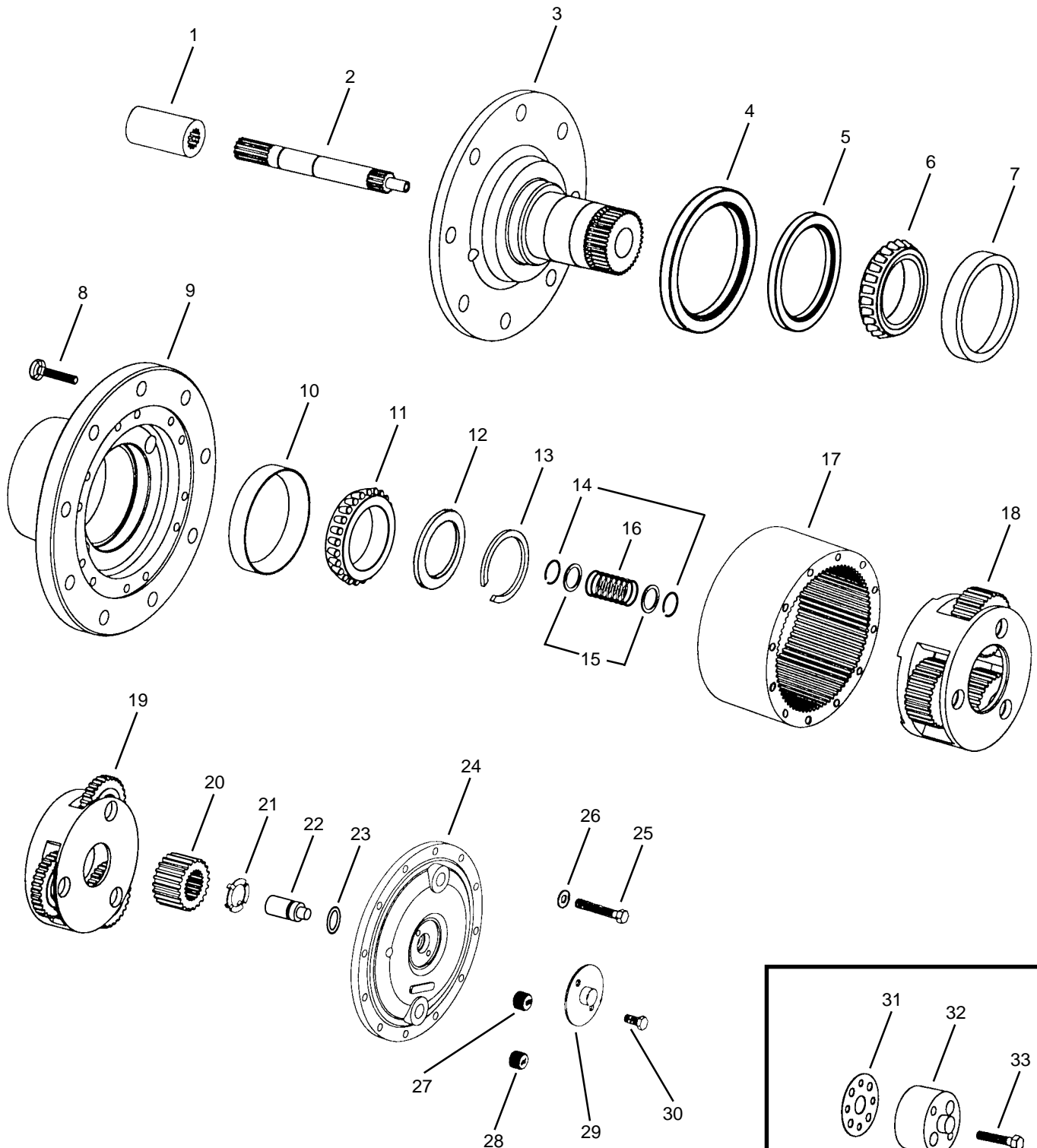


Power Wheel® Service Manual

Model 8 Double Reduction Wheel Drives



PHONE: (219) 925-3200
FAX: (219) 925-4725



IDENTIFICATION

IMPORTANT: All Power Wheel units and kits are shipped with a nameplate that includes the Auburn Gear part number and order code as shown.

Example:



In addition to the nameplate, Power Wheel drives are stamped with an identification number which appears on the cover or hub flange as shown.

Example: **6000236-A-4-9**

When ordering parts, the information included on the nameplate or the stamped identification number is necessary to accurately identify the drive and obtain the correct replacement parts. Once this information has been obtained, contact Auburn Gear for the appropriate parts list.

DISASSEMBLY OF POWER WHEEL

STEP 1

Slide the coupling (1) from splines on input shaft (2).

STEP 2

Position the assembly upright on face of spindle (3).

STEP 3

Remove the disengage cover (29) if necessary.

STEP 4

Remove twelve bolts (25) and flat washers (26) and the large cover (24) from the unit. The thrust washer (21) and the disengage plunger (22) usually remains with large cover (24) when it is removed. Remove thrust washer (21), disengage plunger (22) and "O" ring (23) from the large cover (24).

STEP 5

Remove primary sun gear (20) from end of input shaft (2).

STEP 6

Remove the primary carrier assembly (19).

STEP 7

Remove the secondary carrier assembly (18). It may be necessary to remove the ring gear (17) first, if difficulty is encountered removing the carrier.

STEP 8

Remove the input shaft (2) from spindle (3). Remove the retaining rings (14), washers (15), and spring (16) from input shaft (2) only if replacement is required. NOTE: The retaining rings (14), washers (15) and disengage spring (16) are not included in units equipped with a cast iron disengage cover (29).

STEP 9

If not previously removed (see step 7) remove ring gear (17) from hub (9). It may be necessary to strike ring gear (17) with a rubber mallet to loosen from hub (9).

STEP 10

Remove the retaining ring (13) from groove in spindle (3). NOTE: Use a retaining ring expander tool to remove retaining ring (13).

STEP 11

Lift hub (9) from spindle (3). If bearings are not a loose fit, it may be necessary to press spindle (3) from hub (9).

STEP 12

Remove the oil seals (4) and (5) and bearing cones (6 & 11) from hub (9). Inspect bearing cups (7 & 10) in position and remove only if replacement is required.

ASSEMBLY OF POWER WHEEL

STEP 1

Press new bearing cups (7 & 10) in each side of the hub (9). It is recommended that bearing cups (7 & 10) and cones (6 & 11) be replaced in sets.

STEP 2

Assemble bearing cone (6) into cup (7) at seal end of hub (9) and press a new seal (5) into hub (9). Install boot seal (4) on hub (9) if unit is so equipped.

STEP 3

Position spindle (3) upright on bench. Lubricate lips of seals (4) and (5) and lower hub (9) onto spindle (3). Hub (9) should be centered as it is lowered over spindle (3) to prevent seal damage.

STEP 4

Assemble bearing cone (11) over spindle (3) and into bearing cup (10). Replace large thrust washer (12) over spindle end splines and on bearing cone (11).

STEP 5

Select the thickest retaining ring (13) that can be assembled into the ring groove of the splined end of spindle (3) above bearing. Bearing should have from .000 - .006 inches (.00 - .15mm) of end play when proper retaining ring (13) is installed.

STEP 6

For units equipped with the standard spring disconnect or optional quick disconnect, assemble a washer (15), spring (16), a second washer (15), and a retaining ring (14) in the middle grooves of input shaft (2). Install a second retaining ring (14) in groove near small end of input shaft.

STEP 7

Assemble the splined end of the input shaft (2) down into spindle (3).

STEP 8

Assemble the secondary carrier assembly (18) to spindle (3) at splines.

STEP 9

Clean mating surfaces and apply a bead of silicone sealant to face of hub (9) that mates with ring gear (17). (See instructions on sealant package) Assemble ring gear (17) to hub (9) being careful to align bolt holes.

STEP 10

Assemble the primary carrier assembly (19) into the ring gear (17). It will be necessary to rotate carrier to align secondary sun gear (part of primary carrier assembly (19) with planet gear teeth in secondary carrier assembly (18). Assemble primary sun gear (20) over input shaft (2). Rotate primary sun gear (20) to align input shaft (2) to gear splines and gear teeth in primary carrier assembly (19).

STEP 11

Lubricate "O" ring (23) and assemble in groove inside cover hole, push disengage plunger (22) into cover with pointed end facing inside of unit. NOTE: These parts (22 & 23) are not included in units produced with a cast iron disengage cover (29).

STEP 12

For units equipped with the standard spring disengage, assemble the thrust washer (21) with tangs engaged with cover (24). NOTE: A small amount of grease applied to the back side of thrust washer (21) will hold washer in place.

STEP 13

Assemble cover (24) aligning holes of cover and ring gear. Assemble the twelve 3/8-16 x 5 inch grade 8 hex head bolts (25) and flat washers (26). Torque bolts to 45 - 50 lb. ft. (61 - 67 Nm).

STEP 14

For units with the standard spring disconnect, assemble the disengage cover (29) with dimpled center protruding out if wheel is to be used to drive the vehicle. Assemble the torque the two 5/16-18 x 3/4 inch bolts (30). Torque bolts to 10 - 20 lb. ft. (13 - 27 Nm). For units equipped with a cast iron disengage cover, position a gasket on face of large cover (24). Assemble the thrust washer (21) to small cover with tangs engaged to grooves of the small

cover. NOTE: A small amount of grease applied to the back side of thrust washer (21) will hold it in place. Apply sealant to four 5/16-18 x 3/4 inch cover bolts (30) and assemble the small cover (29) to large cover (24). Torque these bolts to 15 - 20 lb. ft. (20 - 27 Nm).

STEP 15

Invert the Power Wheel assembly and assemble the coupling (1) with counterbore out to the input shaft (2).

NOTE: When installing a hydraulic motor to the Power Wheel drive it is necessary to place an "O ring or gasket (not supplied by Auburn Gear) between the motor and the planetary drive. "O" ring sizes: SAE A 2-042, SAE B 2-155, SAE C 2-159.

CARRIER ASSEMBLIES

It is recommended that the primary and secondary carrier assemblies (18 & 19) be serviced in their entirety to protect the integrity of the Power Wheel drive.

LUBRICATION RECOMMENDATIONS

IMPORTANT: POWER WHEEL PLANETARY DRIVES ARE SHIPPED WITHOUT LUBRICANT AND MUST BE FILLED TO THE PROPER LEVEL PRIOR TO START UP.

Observe lubrication recommendations given by the original equipment manufacturer. When specific recommendations are not available, use mild extreme pressure lubricant API-GL-5, No. 80 or 90 when filling the Power Wheel under normal temperature ranges between 0 - 120°F (-18 to 49°C). Power Wheel is to be half full of oil when unit is mounted level and horizontal. Use drain and fill plugs located in cover and ring gear. Oil is to be changed after first 50 hours of operation with subsequent changes every 1000 hours or yearly, which ever comes first. If unit is to be operated vertically, if ambient conditions are outside the specified range, or if the oil temperature exceeds 200°F (93°C) contact Auburn Gear for oil and level recommendations.

TOWING VEHICLE

CAUTION: The Power Wheel will not normally be damaged by towing; however, the hydraulic drive components may be damaged unless the Power Wheel is disengaged from the drive motor. Road speeds in excess of 25 MPH should be avoided unless clearly specified to be permissible by the equipment manufacturer.

TO DISENGAGE POWER WHEEL

CAUTION: For units equipped with the standard spring disconnect, assemble the disengage cover (29) with the dimpled center protruding in ward. For units equipped with the optional quick disconnect, push in center plunger of disconnect. For units equipped with a cast iron disengage cover. Remove the four capscrews (30), small cover (29) and sun gear (20). It may be necessary to rock the vehicle to release the load on the sun gear. Turning the sun gear end for end will disengage it from the planetary gears. Replace the cover. Some oil will be lost but need not be replaced until sun gear is replaced in the driving position.

STORAGE

A protective film is applied to the Power Wheel at the factory to prevent rust during shipment. Additional protection may be required if the Power Wheel is to be stored for an extended period of time.

SEALING COMPOUND

Silastic RTV732 sealer and General Electric Silimate RTV No. 1473 or RTV No. 1503 are currently recommended for sealing gasket surfaces. Sealant should be applied in a continuous bead, which should be centered on the surface to be sealed but should move to the inside of the hole at each bolt hole location. For service requirements order Auburn Gear part number 604101.

SPECIFICATIONS

Maximum intermittent output torque	100,000 lb. in. (11,300 Nm)
Maximum input speed	5,000 RPM
Oil capacity	47 oz (1390 ml)

ITEM NO.	DESCRIPTION*	NO. USED IN ASS'Y.	ITEM NO.	DESCRIPTION*	NO. USED IN ASS'Y.
1	Coupling	1	18	Secondary Carrier Assembly	1
2	Input Shaft	1	19	Primary Carrier Assembly	1
3	Spindle	1	20	Primary Sun Gear	1
4	Boot Seal 604405	1	21	Thrust Washer	1
5	Oil Seal 14-00-044-011	1	22	Disengage Plunger 610801	1
6	Bearing Cone 14-00-133-007	1	23	"O" Ring 614101	1
7	Bearing Cup 14-00-133-006	1	24	Large Cover	1
8	Wheel Bolt	8-10	25	Hex Head Bolt (Grade 8)	12
9	Hub	1	26	Flat Washer	12
10	Bearing Cup 14-00-133-008	1	27	Magnetic Plug 14-00-052-002	1
11	Bearing Cone 14-00-133-009	1	28	Pipe Plug	1
12	Thrust Washer	1	29	Disengage Cover	1
13	Retaining Ring Kit 14-05-410-001	1		Standard Spring Type 14-02-039-005 Cast Iron 95-04-109-11	
14	Retaining Ring	2	30	Hex Head Bolt	2-4
15	Washer	2	31	Quick Disconnect Gasket	1
16	Disengage Spring	1	32	Quick Disconnect Assembly	1
17	Ring Gear	1	33	Hex Head Bolt	2
				Disengage Cover Gasket	1
				95-04-121-01 (used with Cast Iron Disengage Cover - not shown in front drawing)	

* Contact Auburn Gear with part number and order code of drive to obtain the appropriate parts list. Refer to parts list for the specific part numbers and quantities.

Model 8 Power Wheel® Service Kits

Part No.	Description	Included Items
14-05-410-001	Retaining Ring Kit	13 (6 Retaining Rings)
641011**	Bearing and Seal Kit	5, 6, 7, 10, 11, and 13
641018**	Seal Kit	5 and 13

** Indicates kit also includes a tube of sealant, part number 604101.