

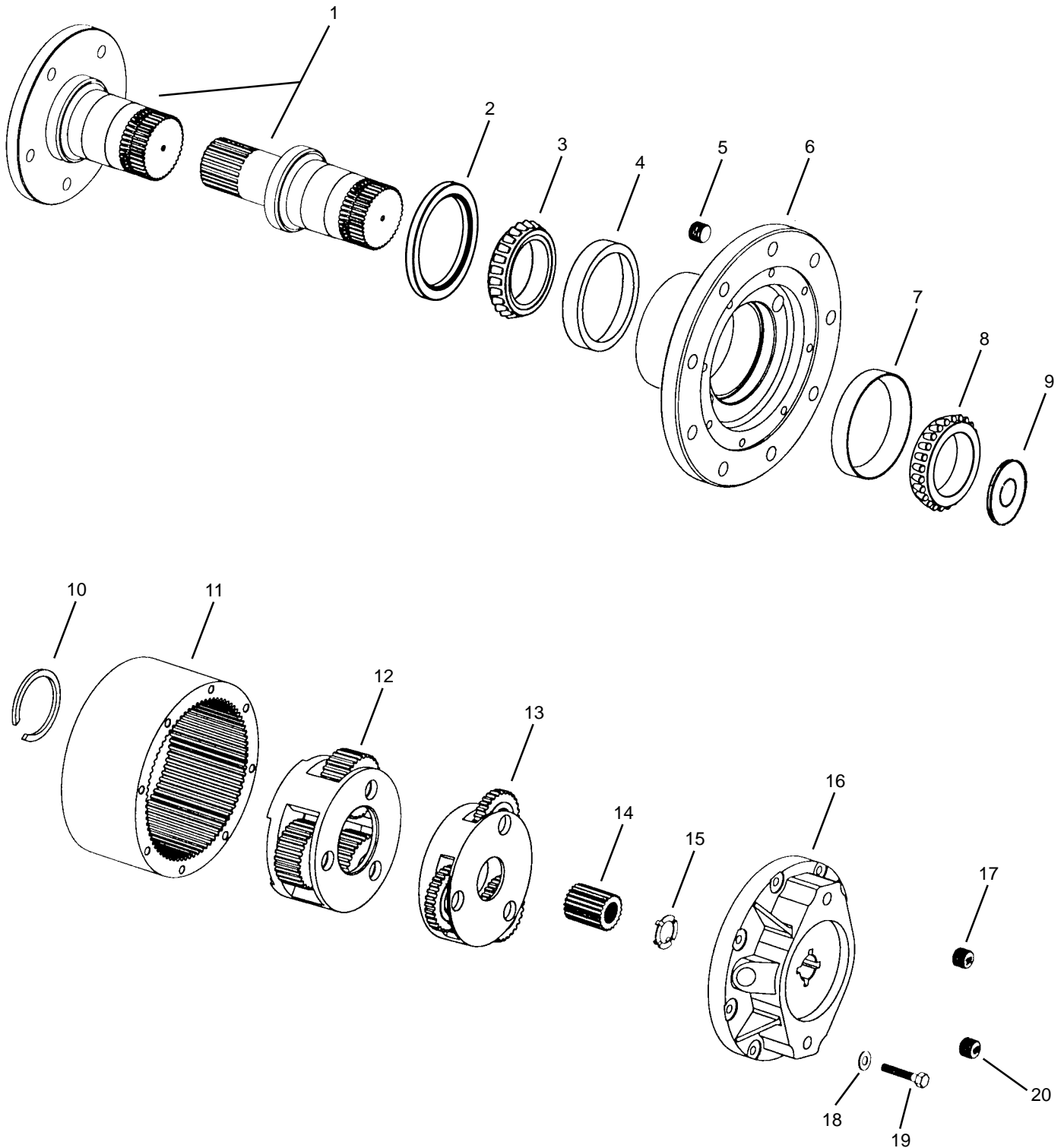
Power Wheel® Service Manual

Model 8 Double Reduction

Shaft and Spindle Output Drives



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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

Remove twelve hex head bolts (19) and washers (18) cover (16). Lift cover (16) from assembly. Thrust washer (15) usually remains with cover (16).

STEP 2

Lift primary sun gear (14) from primary carrier assembly (13).

STEP 3

Remove primary (13) and secondary (12) carrier assemblies from ring gear (11).

STEP 4

Pull ring gear (11) from remaining assembly. It may be necessary to strike ring gear (11) with rubber mallet to loosen from hub (6).

STEP 5

Remove retaining ring (10) from groove in output shaft (1). NOTE: To remove retaining ring, use retaining ring expander tool. Remove thrustwasher (9). Pull output shaft (1) from hub (6).

STEP 6

Remove oil seal (2) and bearing cones (3 & 8) from hub (6). Inspect bearing cups (4 & 7) in hub (6) and remove only if replacement is required.

ASSEMBLY OF POWER WHEEL

STEP 1

Press new bearing cups (4 & 7) into each side of hub (6). It is recommended that bearing cups (4 & 7) and cones (3 & 8) be replaced in sets.

STEP 2

Assemble bearing cone (3) into cup (4) at seal end of hub (6) and press a new seal (2) into hub (6).

STEP 3

Lubricate lips of oil seal (2) and lower hub (6) onto output shaft (1). Keep hub (6) centered to prevent damage to oil seal (2).

STEP 4

Assemble bearing cone (8) over output shaft (1) and into bearing cup (7). Add thrustwasher (9). Select the thickest retaining ring (10) that can be assembled in ring groove on output shaft (1) above bearing. Bearing should have from .000 – .006 inch (.00 – .15 mm) end play when proper retaining ring (10) is installed.

STEP 5

Clean mating surfaces and apply a bead of silicone sealant to face of hub (6) that mates with ring gear (11). See instructions on sealant package.

STEP 6

Assemble ring gear (11) to hub (6) being careful to align all the bolt holes.

STEP 7

Place secondary carrier assembly (12) into ring gear (11) aligning the gear teeth. Carrier splines mesh with splines on output shaft (1).

STEP 8

Lower primary carrier assembly (13) into assembly. Align sun gear teeth with secondary carrier planetary gears and primary planet gears with ring gear (11).

STEP 9

Install primary sun gear (14) into primary carrier assembly. Primary sun gear (14) should turn freely by hand when assembled.

STEP 10

Apply a bead of silicone sealant to cover face of ring gear (11). Secure thrust washer (15) with tangs engaged in cover (16). **NOTE:** Washer (15) can be secured to cover (16) with a small amount of grease or silicone sealant. Assemble cover (16) to ring gear (11). Align cover (16) with hub (6) such that pipe plug holes on cover (16) align with mounting holes in hub (6).

STEP 11

Install twelve washers (18) and grade 8 hex head bolts (19) and torque to 40 – 45 lb.-ft. (54 – 61 Nm) with dry threads. Lubed threads torque to 20 – 25 lb.-ft. (27 – 34 Nm).

STEP 12

Position filler opening horizontally and fill unit to oil level hole in hub (6). Install pipe plugs (5), (17) and (20).

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, SAE D 2-163. Apply sealant to motor mounting bolt threads when holes in cover are thru holes.

CARRIER ASSEMBLIES

It is recommended that the carrier assemblies (12 & 13) 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.

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. (11,300Nm) |
| Maximum input speed | 5,000 RPM |
| Oil capacity | 42 oz (1,242 ml) |

| ITEM NO. | DESCRIPTION* | NO. USED IN ASS'Y. | ITEM NO. | DESCRIPTION* | NO. USED IN ASS'Y. |
|----------|----------------------------------|--------------------|----------|-----------------------------|--------------------|
| 1 | Output Shaft or Spindle | 1 | 11 | Ring Gear | 1 |
| 2 | Oil Seal 14-00-044-011 | 1 | 12 | Secondary Carrier Assembly | 1 |
| 3 | Bearing Cone 14-00-133-007 | 1 | 13 | Primary Carrier Assembly | 1 |
| 4 | Bearing Cup 14-00-133-006 | 1 | 14 | Primary Sun Gear | 1 |
| 5 | Pipe Plug 03-04-101-09 | 1-2 | 15 | Thrust Washer | 1 |
| 6 | Hub | 1 | 16 | Cover | 1 |
| 7 | Bearing Cup 14-00-133-008 | 1 | 17 | Magnetic Plug 14-00-052-002 | 1 |
| 8 | Bearing Cone 14-00-133-009 | 1 | 18 | Flat Washer | 12 |
| 9 | Thrust Washer 14-05-193-003 | 1 | 19 | Hex Head Bolt (Grade 8) | 12 |
| 10 | Retaining Ring Kit 14-05-410-001 | 1 | 20 | Pipe Plug 03-04-101-01 | 1 |

* 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 | 10 (6 Retaining Rings) |
| 641011** | Bearing and Seal Kit | 2, 3, 4, 7, 8 and 10 |
| 641018** | Seal Kit | 2 and 10 |

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