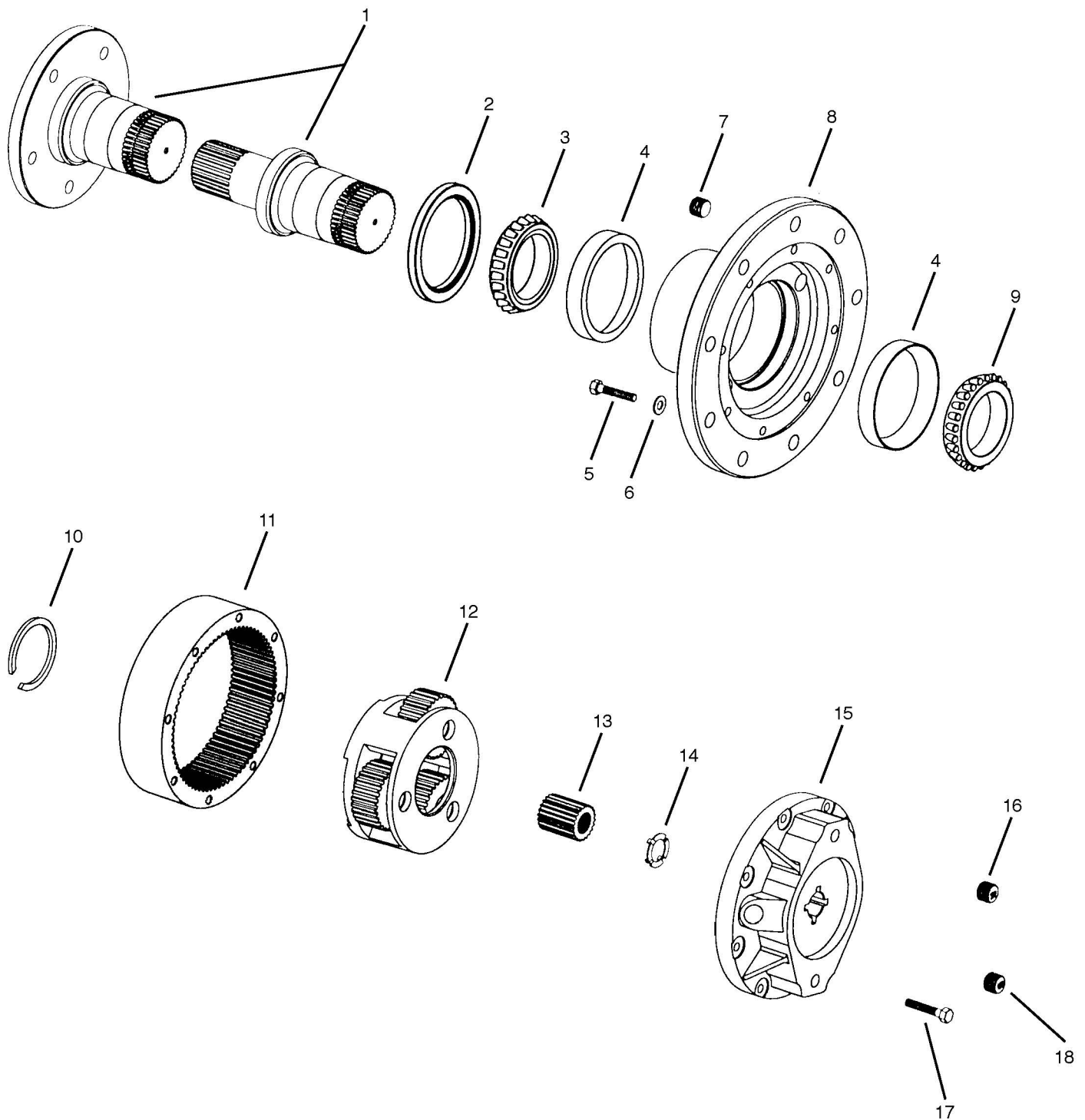


Power Wheel® Service Manual
Model 6 Single Reduction
Shaft and Spindle Output Drives
Styles F, R, and T



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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 bolts (17) from cover (15). Lift cover (15) from assembly. Thrust washer (14) usually remains with cover (15).

STEP 2

Lift sun gear (13) from carrier assembly (12).

STEP 3

Remove carrier assembly (12).

STEP 4

For Style R and Style T drives remove six hex head bolts (5) and washers (6) from hub (8). Pull ring gear (11) from remaining assembly. **NOTE:** It may be necessary to strike ring gear (11) with a rubber mallet to loosen from hub (8).

STEP 5

Remove retaining ring (10) from groove in output shaft (1). Pull output shaft (1) from hub (8). **NOTE:** To remove retaining ring, use retaining ring expander tool.

STEP 6

Remove oil seal (2) and bearing cones (3 & 9) from hub (8). Inspect bearing cups (4) in hub (8) and remove only if replacement is required.

ASSEMBLY OF POWER WHEEL

STEP 1

Press new bearing cups (4) into each side of hub (8). It is recommended that bearing cups (4) and cones (3 & 9) be replaced in sets.

STEP 2

Assemble bearing cone (3) into cup (4) at seal end of hub (8) and press a new seal (2) in hub (8).

STEP 3

Lubricate lips of oil seal (2) and lower hub (8) onto output shaft (1). Keep hub (8) centered to prevent damage to oil seal (2).

STEP 4

Assemble bearing cone (9) over output shaft (1) and into bearing cup (4). If bearings (3, 4, & 9), hub (8) or output shaft (1) is replaced, a new retaining ring (10) is required for proper bearing setting. Do not re-use snap ring after it has been installed and removed from unit. Select the thickest retaining ring (10) that can be assembled into the ring groove of the splined end of output shaft (1) above bearing cone (9). Bearing should have from .000 – .006 inches (.00 – .15mm) of end play when proper retaining ring (10) is installed.

STEP 5

Apply a bead of silicone sealant to face of hub (8) that mates with ring gear (11). See instructions on sealant package.

STEP 6

Assemble ring gear (11) to hub (8) being careful to align all bolt holes.

STEP 7

For Style R and Style T drives install six hex head bolts (5) and washers (6). Torque bolts to 52 – 60 lb. ft. (70 – 81 Nm).

STEP 8

Place carrier assembly (12) into ring gear (11) aligning the gear teeth. Carrier splines mesh with splines on output shaft (1). Place sun gear (13) into carrier assembly (12). Sun gear (13) should turn freely by hand.

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 planetary drive. “O” ring sizes: SAE A 2-042, SAE B 2-155, SAE C 2-159. Apply sealant to motor mounting bolt threads when holes in cover are thru holes.

STEP 9

Apply a bead of silicone sealant to cover face of ring gear (11). Secure thrust washer (14) with tangs engaged in cover (15). **NOTE:** Washer (14) can be secured to cover (15) with a small amount of grease or silicone sealant. Assemble cover (15) to ring gear (11). Align cover (15) with hub (8) such that pipe plug holes on cover (15) align with mounting holes in hub (8).

STEP 10

For all styles install eight hex head bolts (17) and torque to 20 – 25 lb. ft. (27 – 34 Nm) with dry threads. Lubed threads torque to 16 – 21 lb. ft. (22 – 28 Nm).

STEP 11

Position filler opening horizontally and fill unit to oil level hole in hub (8). Install pipe plugs (7), (16) and (18).

CARRIER ASSEMBLIES

It is recommended that the carrier assembly (12) be serviced in its 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. 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 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 | 30,000 lb. in. (3,390 Nm) |
| Maximum input speed | 3,500 RPM |
| Oil capacity | 17 oz (500 ml) |

| ITEM NO. | DESCRIPTION* | NO. USED IN ASS'Y. | ITEM NO. | DESCRIPTION* | NO. USED IN ASS'Y. |
|----------|---------------------------|--------------------|----------|----------------------------------|--------------------|
| 1 | Output Shaft or Spindle | 1 | 10 | Retaining Ring Kit 14-02-410-003 | 1 |
| 2 | Oil Seal 14-00-044-010 | 1 | 11 | Ring Gear | 1 |
| 3 | Bearing Cone 04-01-101-35 | 1 | 12 | Carrier Assembly | 1 |
| 4 | Bearing Cup 04-01-102-12 | 2 | 13 | Sun Gear | 1 |
| 5 | Hex Head Bolt (Grade 8) | 6 | 14 | Thrust Washer | 1 |
| 6 | Flat Washer | 6 | 15 | Cover | 1 |
| 7 | Pipe Plug 03-04-101-09 | 1-2 | 16 | Magnetic Plug 14-00-052-002 | 1 |
| 8 | Hub | 1 | 17 | Hex Head Bolt | 8 |
| 9 | Bearing Cone 04-01-101-17 | 1 | 18 | 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 6 Power Wheel® Service Kits

| Part No. | Description | Included Items |
|---------------|----------------------|------------------------|
| 14-02-410-003 | Retaining Ring Kit | 10 (7 Retaining Rings) |
| 641008** | Bearing and Seal Kit | 2, 3, 4, 9, and 10 |
| 641017** | Seal Kit | 2, and 10 |

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