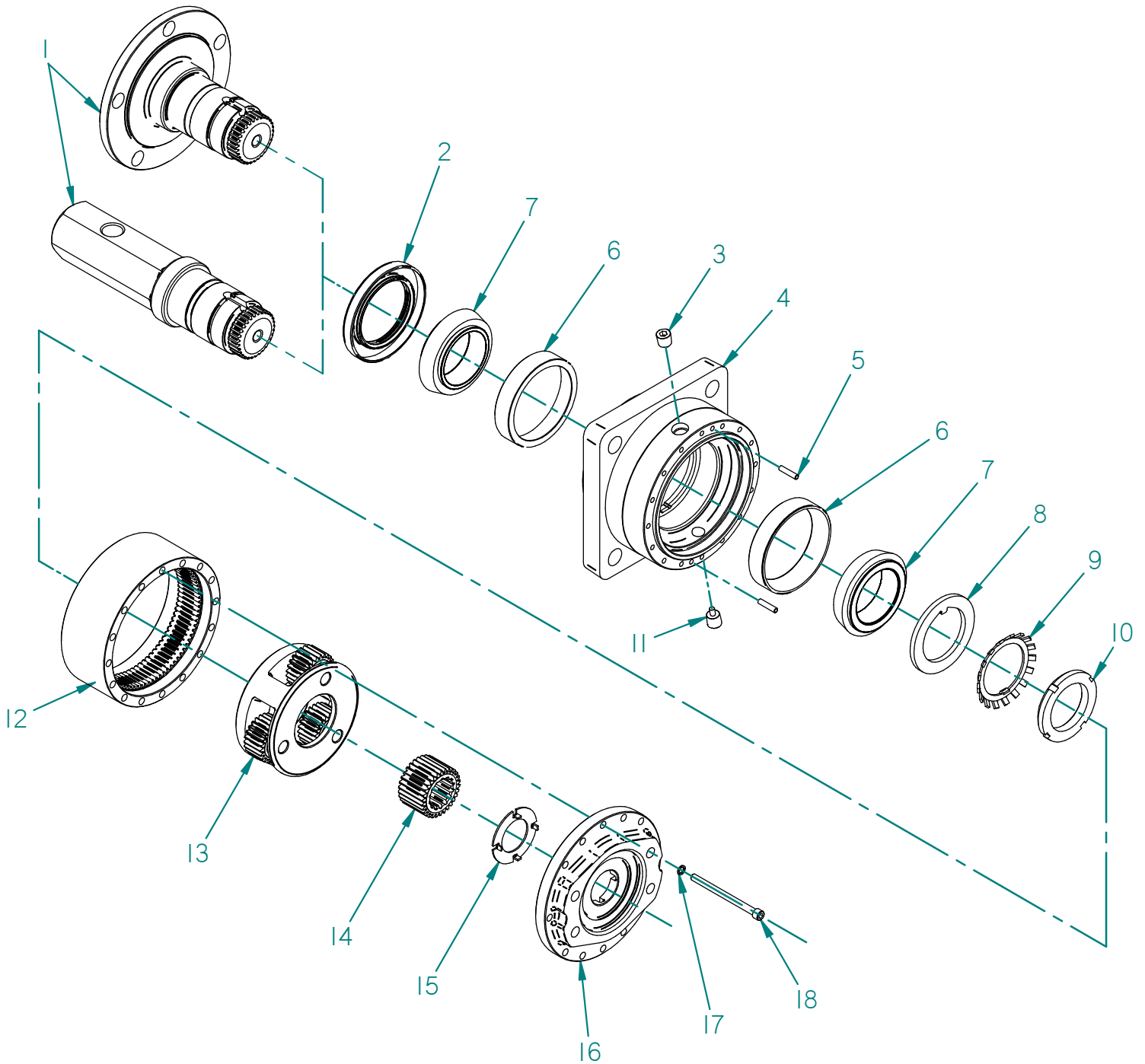


Power Wheel® Service Manual  
Model 3 Series B  
Single Reduction  
Output Shaft & Spindle Drives



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# IDENTIFICATION

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

Example:



In addition to the label, Power Wheel drives are stamped with the last four digits of the part number and the date code, which appears on the cover or hub flange as shown.

Example: 2976 11240

When ordering parts, the information included on the label 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 socket head cap screws (18) from cover (16). Lift cover (16) from assembly. Thrust washer (15) usually remains with cover (16).

### STEP 2

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

### STEP 3

Remove secondary carrier assembly (13) from ring gear (12).

### STEP 4

Remove ring gear (12) from hub (4).

### STEP 5

One tab of lock washer (9) will be engaged in slot of bearing nut (10); bend back to release. Remove the bearing nut (10), lock washer (9) and thrust washer (8). Note: A special locknut wrench (P/N: AG18740) is required for the removal of the bearing locknut. Contact Auburn Gear for procurement of wrench and other service tools.

### STEP 6

Care should be taken to avoid damaging splines and threads on shaft. Note: Bearing cup (7) has been designed with a slip fit with respect to shaft (1).

### STEP 7

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

## ASSEMBLY OF POWER WHEEL

### STEP 1

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

### STEP 2

Assemble bearing cone (7) into cup (6) at seal end of hub (4) and press a new seal (2) into hub (4).

### STEP 3

Lubricate shaft oil seal (2) and lower hub (4) onto output shaft (1). Keep hub (4) centered to prevent damage to oil seal. NOTE: [On heavy duty seals there is to be no lubricate on seal (2), output shaft (1), or hub (4)].

### STEP 4

Assemble bearing cone (7) over output shaft (1). Place bearing cone (7) over output shaft bearing journal. Press bearing cone (7) down until rollers just touch cup (6). Take care to avoid pressing cone (7) too far.

### STEP 5

Install thrust washer (8) with tab in keyway of output shaft and lock washer (9). Install lock nut (10) and tighten to 30 ft-lbs. Rotate hub clockwise twenty turns then counter-clockwise twenty turns. Tighten lock nut (10) to 50 ft-lbs. Repeat rotation process and tighten to 70 ft-lbs.

### STEP 7

Secure lock nut by bending lock washer tab (9) into one of the 4 slots of lock nut (10). If no tab from lock washer (9) aligns with slot of lock nut (10), lock nut (10) may be tightened until one of the slots aligns with lock washer tab (9).

### STEP 7

Clean mating surface and apply a bead of silicone sealant to face of hub (4) that mates with ring gear (12). See instructions on sealant package. Hub (4) is aligned to ring gear (12) with two roller pins (5).

**STEP 8**

Assemble the secondary carrier assembly (13) into ring gear (12) aligning the gear teeth. Carrier splines mesh with splines on output shaft (1).

**STEP 9**

Install sun gear (14) into secondary carrier assembly (13). Sun gear (14) should turn freely by hand when assembled.

**STEP 10**

Apply a bead of silicone sealant to cover face of ring gear (12). 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 (16).

**STEP 11**

Install eight socket head cap screws (18) and torque to 11-15 ft-lb (15-20 Nm).

**STEP 12**

Position filler opening vertically and fill with lubricant to proper level.

**CARRIER ASSEMBLIES**

It is recommended that the secondary carrier assembly (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). See specifications below for oil fill requirements for various Power Wheel mounting orientations. Use drain and fill plugs located in hub. Oil is to be changed after first 50 hours of operation with subsequent changes every 1000 hours or yearly, whichever comes first. 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 bolthole location. For service requirements order Auburn Gear part number 604101.

**SPECIFICATIONS**

Maximum intermittent output torque .....	20,000 lb. in. (2,260 Nm)
Maximum input speed .....	3,500 RPM
Oil capacity (vertical, shaft down).....	14 oz (415 CC)
Oil Capacity (vertical, shaft up).....	17 oz (500 CC)
Oil capacity (horizontal).....	10 oz (300 CC)

ITEM NO.	DESCRIPTION*	NO. USED IN ASS'Y.
1	Output Shaft or Spindle	1
2	Oil Seal	1
3	Pipe Plug	1
4	Hub	1
5	Needle Roller Bearing	2
6	Bearing Cup	2
7	Bearing Cone	2
8	Thrust Washer	1
9	Lock Washer	1
10	Lock Nut	1
11	Magnetic Plug	1
12	Ring Gear	1
13	Secondary Carrier Assembly	1
14	Sun Gear	1
15	Thrust Washer	1
16	Cover	1
17	Lock Washer	12
18	Screw, Socket Head Cap	12

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

## Model 3 Series B Power Wheel® Service Kits

Part No.	Description	Included Items
641089	SEAL KIT	Not Shown
641090	SEAL & BEARING KIT	Not Shown
613A	BEARING LOCKNUT TOOL	Not Shown
613B	SEAL DRIVER	Not Shown
613C	BEARING CUP DRIVER	Not Shown
613D	BEARING CONE DRIVER	Not Shown
613E	TAB BENDER	Not Shown