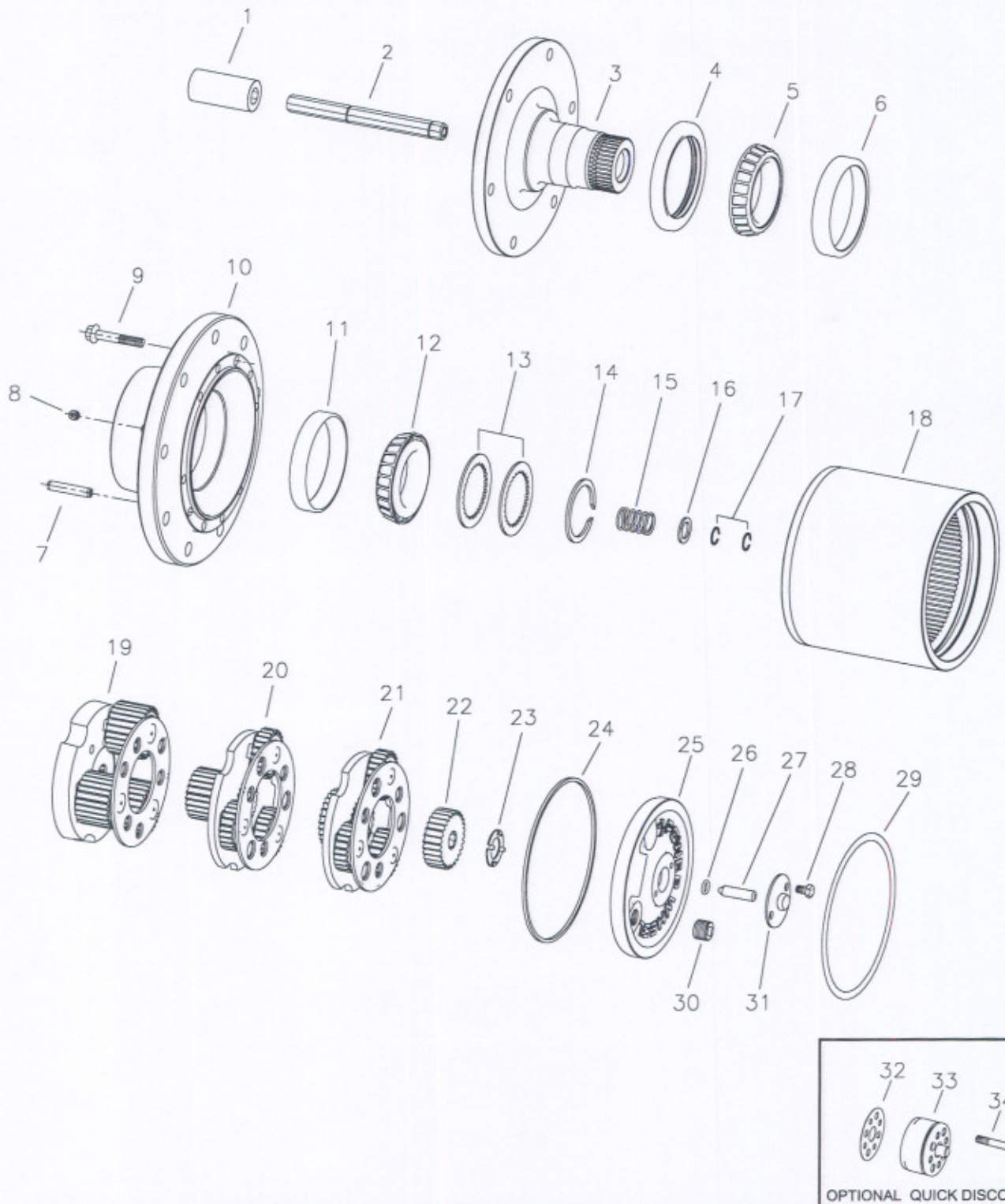


Power Wheel® Service Manual Model 60 Triple Reduction Wheel Drives



PHONE:(260) 925-3200

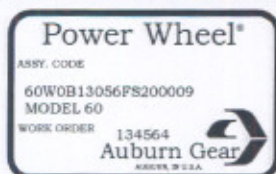
FAX:(260) 925-4725



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 a date code and work order, which appears on the cover or hub flange as shown.

Example: M7 17 SAT, 134564

When ordering parts, the information included on the label 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 input shaft (2).

STEP 2

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

STEP 3

Remove the disengage cover (31) if necessary.

STEP 4

Remove ring retaining (29) and the large cover (25) from the unit. The thrust washer (23) and the disengage plunger (27) usually remain attached to the large cover (25) when it is removed. Remove thrust washer (23), disengage plunger (27) and "O" ring (26) from the large cover (25).

STEP 5

Remove primary sun gear (22) from end of input shaft (2).

STEP 6

Remove the third carrier assembly (21).

STEP 7

Remove the primary carrier assembly (20).

STEP 8

Remove the secondary carrier assembly (19).

STEP 9

Remove the input shaft (2) washer (16), and disengage spring (15) from spindle (3). Remove the retaining rings (17) from input shaft (2) only if replacement is required.

STEP 10

Remove the retaining ring (14) remove splined spacers (13) and bearing cone (12) and lift hub (10) and ring gear (18) from spindle (3). **NOTE:** Use a retaining ring expander tool to remove retaining ring (14). Retaining ring should not be reused.

STEP 11

Remove the oil seal (4) and bearing cones (5 & 12) from hub (10). Inspect bearing cups (6 & 11) in position and remove only if replacement is required.

ASSEMBLY OF POWER WHEEL

STEP 1

Press new bearing cups (6 & 11) in each side of the hub (10). It is recommended that bearing cups (6 & 11) and cones (5 & 12) be replaced in sets.

STEP 2

Assemble bearing cone (5) into cup (6) at seal end of hub (10) and press a new seal (4) into hub (10).

STEP 3

Position spindle (3) upright on bench. Lubricate lips of seal (4) and lower hub (10) onto spindle (3). Hub (10) should be centered as it is lowered over spindle (3) to prevent seal damage. **NOTE: [On heavy duty seals there is to be no lubricate on seal (4), spindle (3), or hub (10)].**

STEP 4

Assemble bearing cone (12) over spindle (3) and into bearing cup (11). If bearings (5,6,11 & 12) hub (10) or spindle (3) is replaced, a new retaining ring (14) is required for proper bearing setting. Do not re-use snap ring after it has been installed and removed from unit. Install two splined thrust washers (13) then select the thickest retaining ring (14) that can be assembled into the ring groove of the splined end of spindle (3) above bearing cone (12) & splined thrust washers (13). Bearing should have from .000 - .006 inches (.00 - .15mm) of endplay when proper retaining ring (14) is installed.

STEP 5

Place retaining ring (17) on short end of input shaft (2). Assemble the long end of the input shaft (2) with spring (15) thrust washer (16) and retaining ring (17) in this order down into spindle (3).

STEP 6

Clean mating surfaces and apply a bead of silicone sealant to face of hub (10) that mates with ring gear (18). Note: be sure to place the sealant on the inside of the pin and boltholes in hub or unit will leak. See instructions on sealant package. Hub (10) is attached to ring gear (18) with 6 3/8-24 grade 8 hex head cap screws (9). Torque cap screws to 52 - 60 lb.-ft. (70 - 81 Nm). Press 4 pin coiled springs flush into hub (10).

STEP 7

Assemble the secondary carrier assembly (19) to spindle (3) at splines. It will be necessary to rotate carrier to align with splines on spindle.

STEP 8

Assemble the primary carrier assembly (20) into the ring gear (18). It will be necessary to rotate carrier to align secondary sun gear (part of primary carrier assembly (20)) with planet gear teeth in secondary carrier assembly (19).

STEP 9

Assemble the third carrier assembly (21) into the ring gear (18). It will be necessary to rotate carrier to align pri sun gear (part of third carrier assembly (21)) with planet gear teeth in primary carrier assembly (20). Assemble sun gear (22) over input shaft (2). Rotate sun gear (22) to align input shaft (2) to the octagon and gear teeth in third carrier assembly (21). **Note:** Gearing is not timed.

STEP 10

Lubricate "O" ring (26) and assemble in groove inside cover hole, push disengage plunger (27) into cover (25) with pointed end facing inside of unit.

STEP 11

Lubricate "O" ring (24) and assemble in groove inside gear ring (18).

STEP 12

Assemble the disengage cover (31) with dimpled center protruding out if wheel is to be used to drive the vehicle. Assemble and torque the two 5/16-18 x 1/2 inch bolts (28). Torque bolts to 10 - 20 lb.-ft. (13 - 27 Nm).

STEP 13

Assemble the thrust washer (23) with tangs engaged with cover (25). **Note:** A small amount of grease applied to the backside of thrust washer (23) will hold washer in place. Press cover (25) into gear ring (18). Assemble ring retainer (29) into groove of ring gear (18).

STEP 14

Invert the Power Wheel assembly and assemble the coupling (1), with counter bore out, to the input shaft (2). Rotate coupling by hand to make sure unit turns freely.

STEP 15

After motor is assembled to drive or drive is sealed at spindle, fill with lubricant to proper level and install pipe plug (30) torque to 11-25 lb.-ft.

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.

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 hub. 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 (31) with the dimpled center protruding inward. For units equipped with the optional quick disconnect, push in center plunger of disconnect.

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	60,000 lb. in. (6,780 Nm)
Maximum input speed	5,000 RPM
Oil capacity	35 / 40 oz (945 / 1180 cc)

ITEM NO.	DESCRIPTION*	NO. USED IN ASS'Y.	ITEM NO.	DESCRIPTION*	NO. USED IN ASS'Y.
1	Coupling	1	19	Secondary Carrier Assembly	1
2	Input Shaft	1	20	Primary Carrier Assembly	1
3	Spindle	1	21	Third Carrier Assembly	1
4	Oil Seal	1	22	Primary Sun Gear	1
5	Bearing Cone	1	23	Thrust Washer	1
6	Bearing Cup	1	24	"O" Ring 60114104	1
7	Pin Coiled Spring	4	25	Large Cover	1
8	Pipe Plug	1	26	"O" Ring	1
9	Bolt Hex Head (Grade 8)	6	27	Disengage Plunger	1
10	Hub	1	28	Hex Head Bolt	2
11	Bearing Cup	1	29	Retaining Ring	1
12	Bearing Cone	1	30	Magnetic Plug	1
13	Spacer Splined	2	31	Disengage Cover	1
14	Ring Retaining Kit # 60241002	1		OPTIONAL QUICK DISCONNECT	
15	Disengage Spring	1	32	Gasket 904501	1
16	Thrust Washer	1	33	Quick Disconnect 949001	1
17	Retaining Ring	2	34	Bolt Hex Head 618316	2
18	Ring Gear	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 60 Power Wheel® Service Kits

Part No.	Description	Included Items
60241002	Kit Retaining Rings	14 (9 Retaining Rings)
60241003**	Kit Seals & Retaining Rings	4, 14, 24, 26 and 29
60241004**	Kit Bearings, Seals and Retaining Rings	4, 5, 6, 11, 12, 14, 24, 26 and 29
60241005**	Kit Bearings, Heavy Duty Seals and Retaining Rings	4, 5, 6, 11, 12, 14, 24, 26 and 29

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

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