CATERPILLAR®

Service Repair Manual

Models

M318D MH WHEELED EXCAVATOR

Disassembly and Assembly
M318D Material Handler Machine Systems
Media Number -KENR6034-00 **Publication Date -01/09/2008** **Date Updated -19/09/2008**

i03484340

Swing Drive - Assemble

SMCS - 5459-016

Assembly Procedure

Table 1

Required Tools			
Tool	**Part Number**	**Part Description**	**Qty**
A	138-7575	Link Bracket	2
B	1P-0510	Driver Gp	1
C	1U-8759	Plier Tips	1
D	5P-4758	Retaining Ring Pliers	1
E	1P-1859	Retaining Ring Pliers	1
F	1P-1855	Retaining Ring Pliers	1
H	1P-1863	Retaining Ring Pliers	1
J	305-4538	Spanner Socket(1)	1
	240-8274	Insert(2)	1
	174-9465	Spanner Socket(3)	1
K	1P-0520	Driver Gp	1
L	2S-3230	Bearing Lubricant	1
M	8T-5096	Dial Indicator Gp	1
N	7H-1680	Lubrication Hand Pump	1

(1) Used on the part number **152-7372** Swing Drive Gp

(2) Used on the part number **152-7372** Swing Drive Gp

(3) Used on the part number **152-7375** Swing Drive Gp

Note: Replace all O-ring seals and all gaskets. Apply a light film of "10W" oil to all components before assembly.

Note: Cleanliness is an important factor. Before assembly, all parts should be thoroughly cleaned in cleaning fluid. Allow the parts to air dry. Wiping cloths or rags should not be used to dry parts. Lint may be deposited on the parts which may cause later trouble. Inspect all parts. If any parts are worn or damaged, use new parts for replacement.

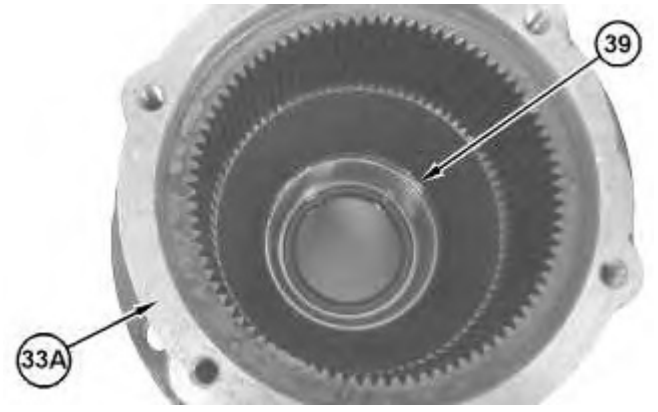

Illustration 1 g01027198

1. Lower the temperature of bearing cup (39). Use Tooling (K) to install bearing cup (39) in swing drive housing (33A).

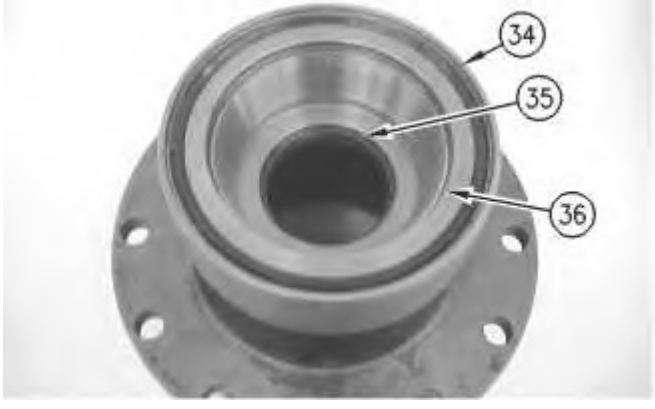

Illustration 2 g00906881

2. Lower the temperature of bearing cup (36). Use Tooling (K) to install bearing cup (36).
3. Use Tooling (B) to install lip seal (35). Install seal (34). Install tooling (L) to seal (34).

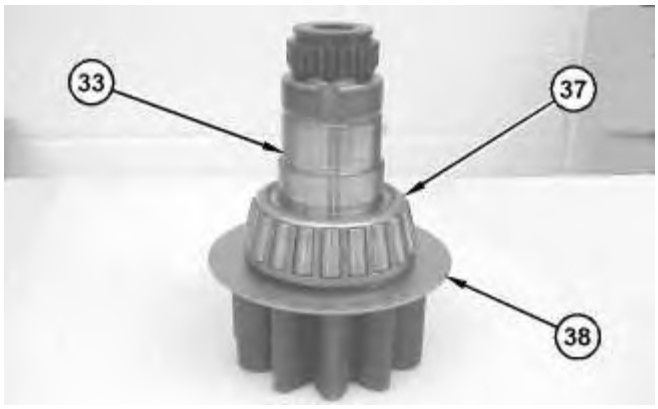

Illustration 3 g01026650

4. Raise the temperature of bearing cone (37). Install washer (38) and bearing cone (37) on pinion (33).

Illustration 4 g01027078

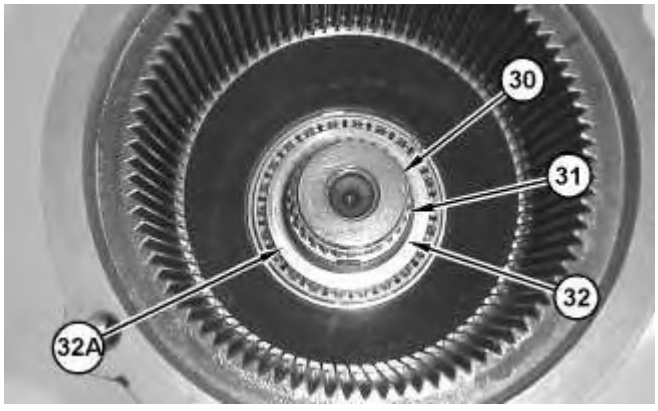

Illustration 5 g01026558

5. The following steps should be used on machines that are equipped with the part number **152 -7372** Swing Drive Gp.

    a. Apply 80 grams of Tooling (L) to the bearing cone on pinion (33). Install pinion (33) in swing drive housing (33A).

b. Raise the temperature of bearing cone (32A). Install bearing cone (32A).

c. Install nut (32). Use Tooling (J) in order to tighten nut (32) until a slight increase in rolling torque is obtained. Loosen nut (32) by approximately 60 degrees. Strike pinion (33) with a soft hammer in order to release the bearing preload.

d. Determine the initial rolling torque of pinion (33). The specified rolling torque is 8 N·m (71 lb in) to 15 N·m (133 lb in). Record this value as Rolling Torque (Y).

e. As you tighten nut (32) rotate swing drive housing (33A) in order to ensure that the bearings are seated properly. Use Tooling (J) in order to tighten nut (32) to a torque of 300 N·m (221 lb ft). Loosen nut (32) by 30 degrees to 60 degrees.

f. Install ring (31).

g. Install nut (30). Use Tooling (J) in order to tighten nut (30) to a torque of 1000 ± 100 N·m (738 ± 74 lb ft).

h. Determine the rolling torque of pinion (33). The specified rolling torque is Rolling Torque (Y) plus 3 N·m (27 lb in) to 9 N·m (80 lb in).

6. The following steps should be used on machines that are equipped with the part number **152 -7375** Swing Drive Gp.

a. Apply 80 grams of Tooling (L) to the bearing cone on pinion (33). Install pinion (33) in swing drive housing (33A).

b. Raise the temperature of bearing cone (32A). Install bearing cone (32A).

c. Install nut (32). Use Tooling (J) in order to tighten nut (32) until a slight increase in rolling torque is obtained. Loosen nut (32) by approximately 60 degrees. Strike pinion (33) with a soft hammer in order to release the bearing preload.

d. Determine the initial rolling torque of pinion (33). The specified rolling torque is 6 N·m (53 lb in) to 8 N·m (71 lb in). Record this value as Rolling Torque (Y).

e. As you tighten nut (32) rotate swing drive housing (33A) in order to ensure that the bearings are seated properly. Use Tooling (J) in order to tighten nut (32) to a torque of 250 ± 50 N·m (184 ± 37 lb ft). Loosen nut (32) by 15 degrees to 30 degrees.

f. Install ring (31).

g. Install nut (30). Use Tooling (J) in order to tighten nut (30) to a torque of 700 ± 50 N·m (516 ± 37 lb ft).

h. Determine the rolling torque of pinion (33). The specified rolling torque is Rolling Torque (Y) plus 2 N·m (18 lb in) to 5 N·m (44 lb in).

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