

Product: VIBRATORY COMPACTOR

Model: CS-433C VIBRATORY COMPACTOR 3TM

Configuration: CS-433C CP-433C Vibratory Compactor 3TM00001-UP (MACHINE) POWERED BY 3054 Engine

Disassembly and Assembly

CS-431C, CP-433C, CS-433C VIBRATORY COMPACTORS MACHINE SYSTE

Media Number -KENR2996-02

Publication Date -01/11/2004

Date Updated -07/06/2005

KENR29960017

Drum Gear Reducer (CS-433C & CP-433C L.H. Side)

SMCS - 5655-010; 5655-015; 5655-016

Remove & Install Drum Gear Reducer (CS-433C & CP-433C L.H. Side)

Tools Needed		A	B
6V-2082	Hook Assembly	1	
2D-1201	Lifting Eye Bolts		2

Start By:

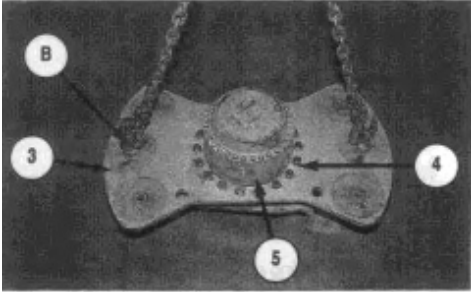
a. remove drum assembly

1. Position wooden blocks on both sides of the drum assembly.
2. Drain the oil from the drum gear reducer into a suitable container. The capacity of the drum gear reducer is 2.3 liters (0.60 U.S. gal).
3. Remove two bolts, and remove drum propel motor from the drum gear reducer.

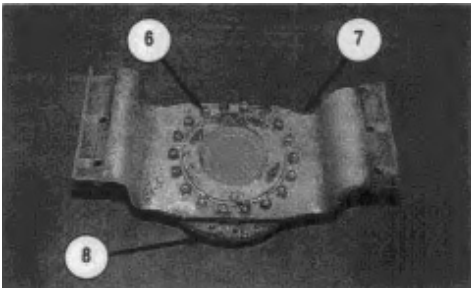


4. Attach lifting strap, Tool (A), and a suitable hoist to drum gear reducer assembly (1) as shown.

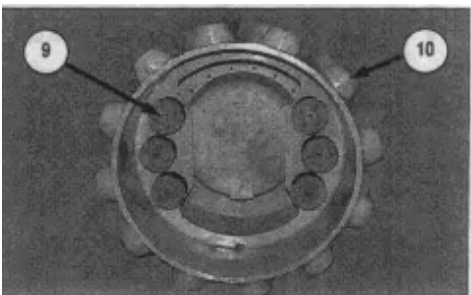
5. Remove six bolts (2) and remove the drum gear reducer assembly. The weight of the drum gear reducer assembly is 180 kg (396 lb).



6. Attach Tooling (B), lifting chains, and a suitable hoist to plate (3). Remove 18 bolts (4). Remove plate (3) from drum gear reducer (5). The weight of the plate is 52 kg (115 lb).



7. Position the drum gear reducer as shown. Remove 18 bolts (6). Use two persons to remove plate (7). The weight of the plate is 27 kg (60 lb).



8. Remove six bolts and six mounts (9) from drum (10).

NOTE: For installation of the drum gear reducer, reverse the removal steps.

NOTE: After the drum gear reducer has been installed, fill the drum gear reducer with oil to the correct level. See the Operation & Maintenance Manual Form No. KEBU6859, for the correct procedure.

End By:

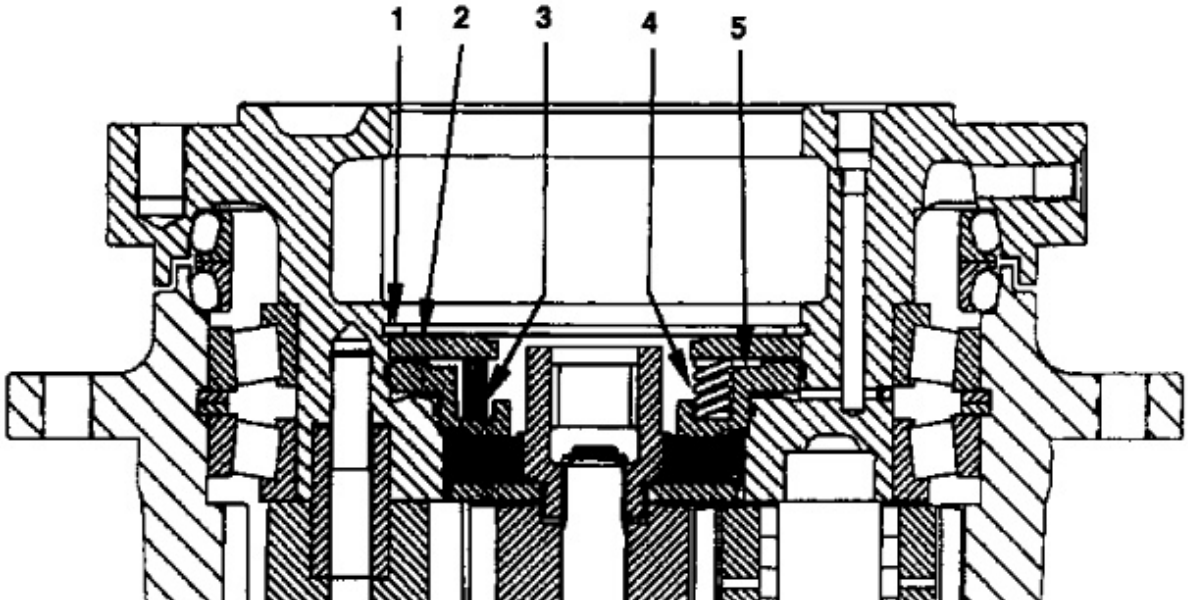
a. install drum assembly

Disassemble Drum Gear Reducer (CS-433C & CP-433C L.H. Side)

Tools Needed		A
184-7409	Spanner Socket	1
6V-6080	Torque Multiplier	1

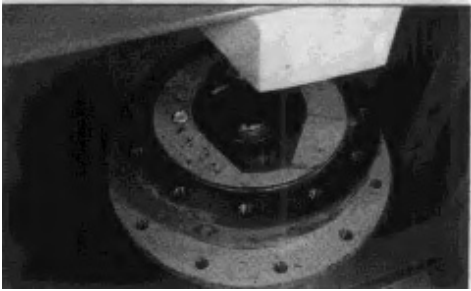
Start By:

a. remove drum gear reducer

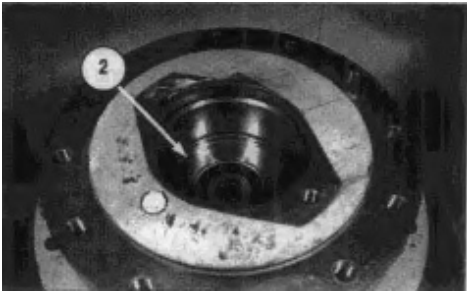


⚠ WARNING

Brake piston (5) is under spring pressure and could cause personal injury. Remove snap ring (1) carefully.

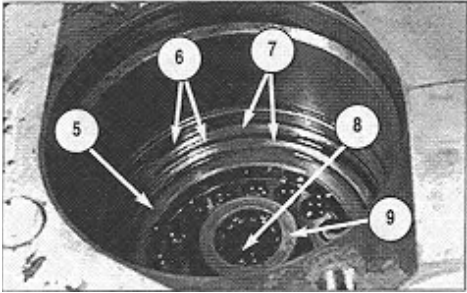


1. Place the drum gear reducer in a press. Compress the springs under retaining disc (2) enough to eliminate pressure on snap ring (1). Remove the snap ring.



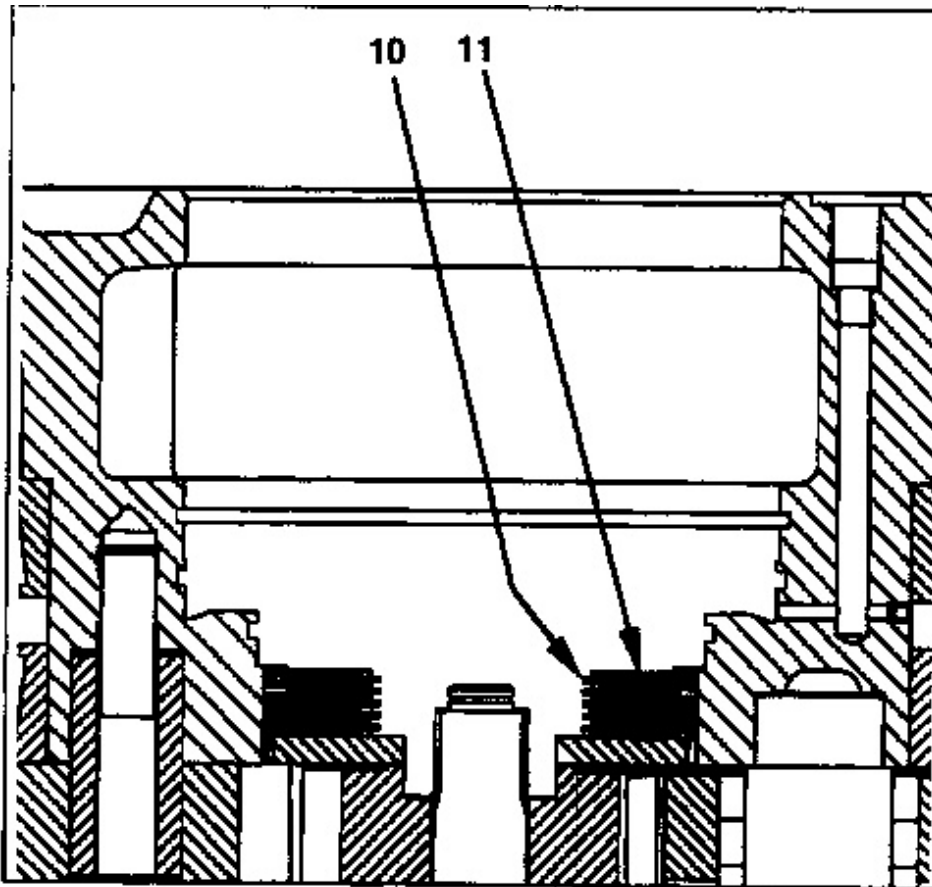
2. Remove retaining disc (2).

3. Remove 12 large springs (4) and four small springs (3) from brake piston (5).

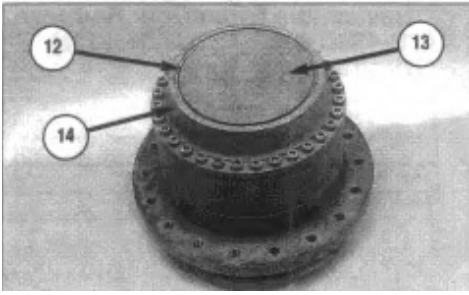


4. Remove brake piston (5), O-rings (6), and back-up rings (7).

5. Remove socket head screw (8) and input coupling (9).



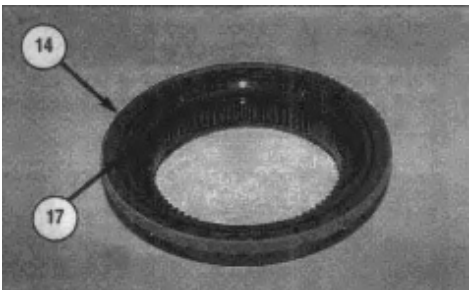
6. Remove four steel brake discs (10) and three friction brake discs (11).



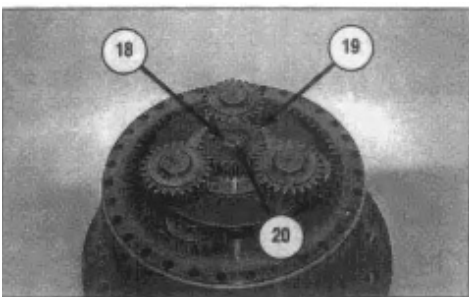
7. Remove snap ring (12) and cover (13) from input stage ring wheel (14).



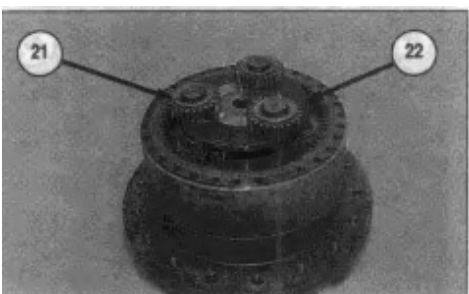
8. Remove 32 bolts (15) and input stage ring wheel (14) from ring wheel (16).



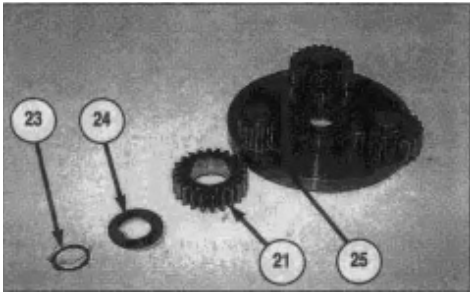
9. Remove two O-ring seals (17) from input stage ring wheel (14). Check the O-rings for wear or damage and replace if necessary.



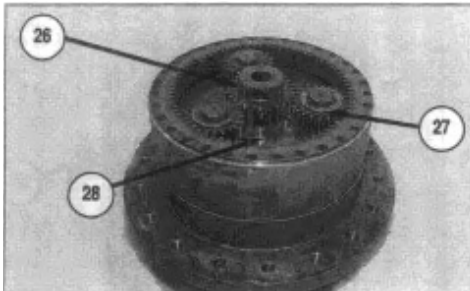
10. Remove snap ring (18), input stage sun gear (19) and input shaft (20).



11. Remove three input stage planet gears (21) and input planet carrier (22) as a unit.

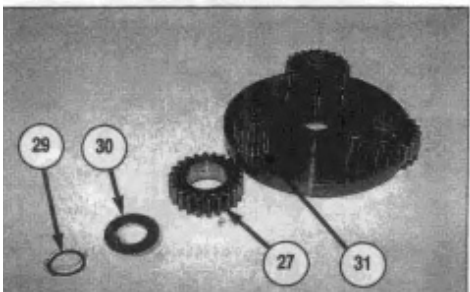


12. Remove three snap rings (23), three retaining washers (24), three input stage planet gears (21), and 54 needle bearings (25).

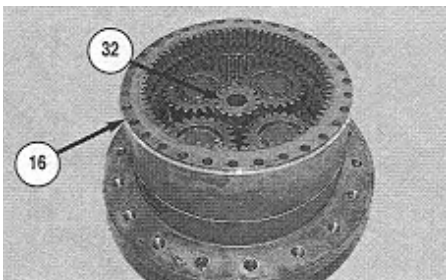


13. Remove middle stage sun gear (26).

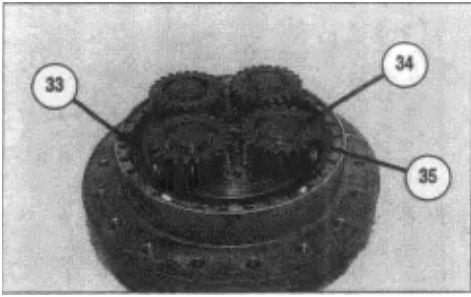
14. Remove three middle stage planet gears (27) and middle stage planet carrier (28) as a unit.



15. Remove three snap rings (29), three retaining washers (30), three middle stage planet gears (27), and 108 needle bearings (31).

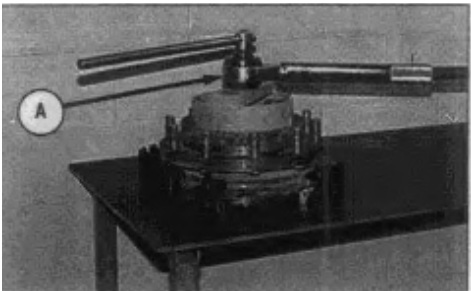
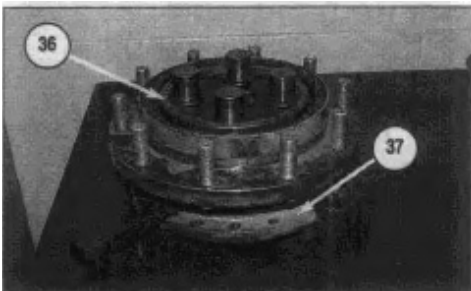


16. Remove output stage sun pinion (32) and ring wheel (16).



17. Remove O-ring seal (33). Check the O-ring seal for wear or damage and replace if necessary.

18. Remove four snap rings (34). Use a suitable puller and remove four output stage planet gears (35).

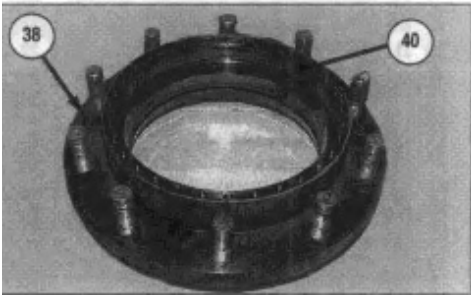


19. Secure hub (37) to a suitable table as shown.

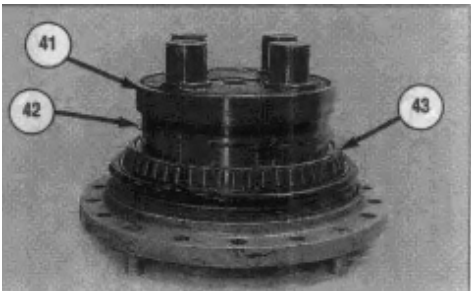
20. Use Tooling (A) and remove ring nut (36). NOTE: It may be necessary to apply heat to ring nut (36) in order to remove the ring nut.



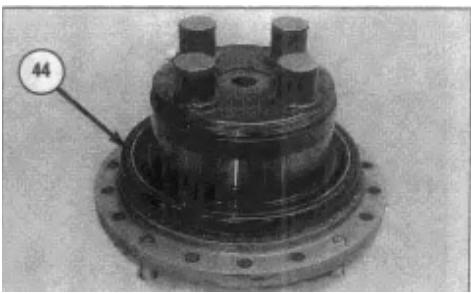
21. Remove rotating housing (38) and bearing (39).



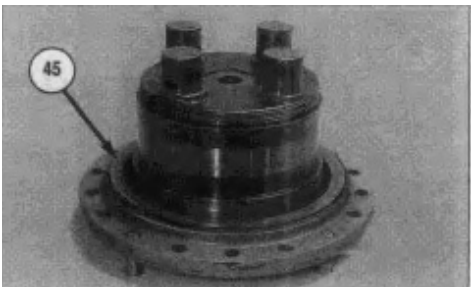
22. If necessary, remove two bearing races (40) from rotating housing (38).



23. Remove spacer (41), shims (42), and bearing (43).



23. Remove first half of duo-cone seal (44).

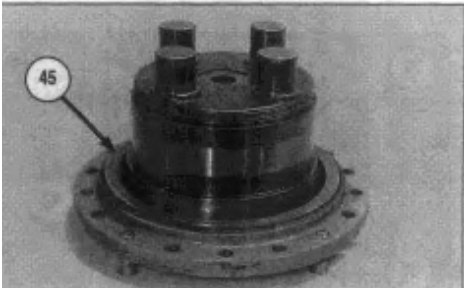


24. Remove second half of duo-cone seal (45).

Assemble Drum Gear Reducer (CS-433C & CP-433C L.H. Side)

Tools Needed		A	B
1U-6438	Duo-Cone Seal Installer	1	
184-7409	Spanner Socket		1
6V-6080	Torque Multiplier		1

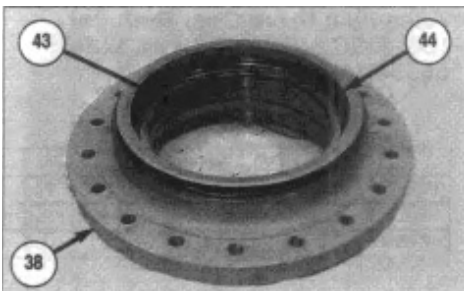
NOTE: Before the drum gear reducer is assembled, make sure all of the parts are clean and free of all dirt and foreign material. Check all parts for damage or wear. Lubricate all moving parts with clean hydraulic system oil at the time of assembly.



1. Use Tooling (A) and install second half of duo-cone seal (45). Refer to "Assembly & Installation of Duo-Cone Seals" in this manual for the correct procedure.

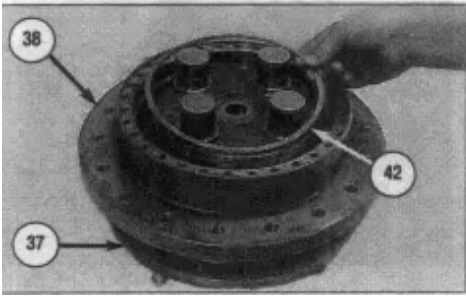


2. Install two bearing races (40) in rotating housing (38).



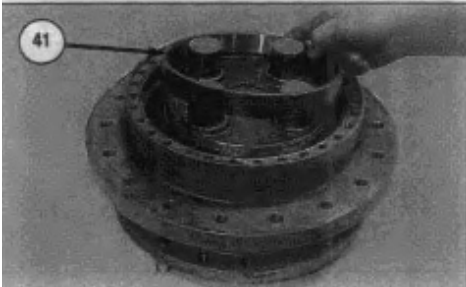
3. Install bearing (43) in rotating housing (38).

4. Use Tooling (A) and install first half of duo-cone seal (44) in rotating housing (38). Refer to "Assembly & Installation of Duo-Cone Seals" in this manual for the correct procedure.

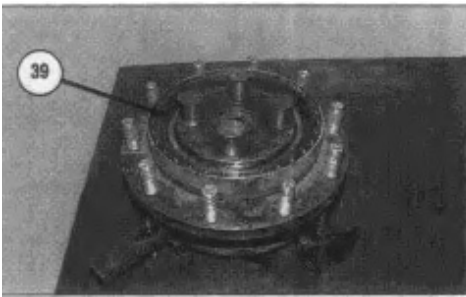


5. Install rotating housing (38) on hub (37).

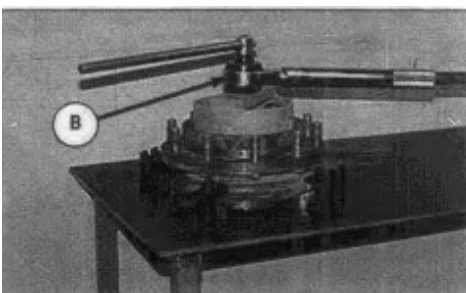
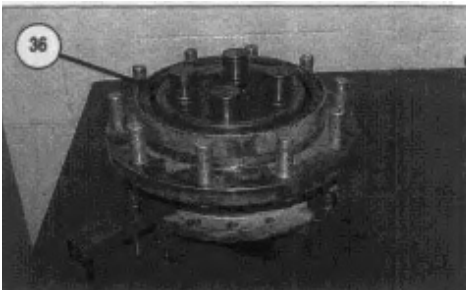
6. Install shims (42).



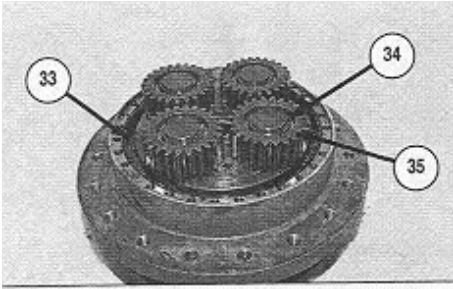
7. Install spacer (41).



8. Install bearing (39).

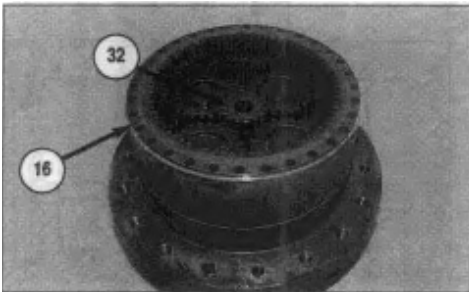


9. Apply **7M-7456 Bearing Mount** to ring nut (36). Use Tooling (B) and torque ring nut (36) to a torque of 1635 N·m (1200 lb ft).

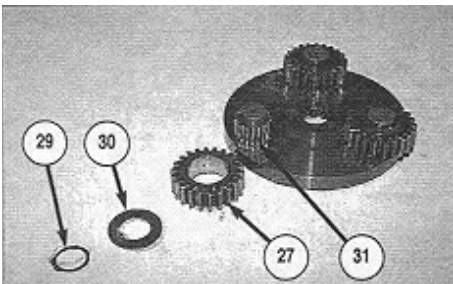


10. Install four output stage planet gears (35) and four snap rings (34).

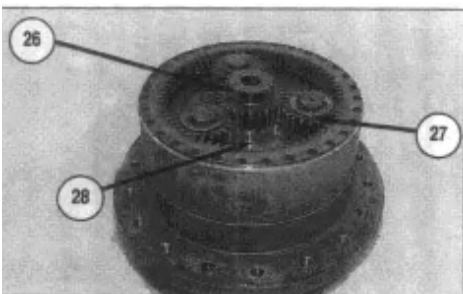
11. Install O-ring seal (33).



12. Install ring wheel (16) and output stage sun pinion (32).

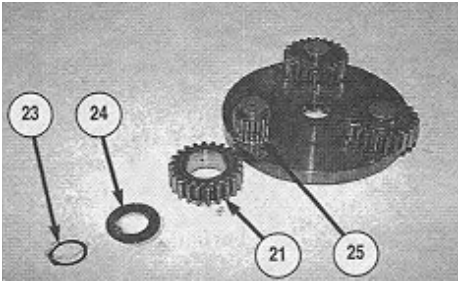


13. Install 108 needle bearings (31), three middle stage planet gears (27), three retaining washers (30), and three snap rings (29).

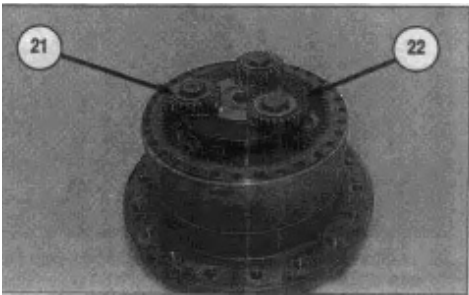


14. Install three middle stage planet gears (27) and middle stage planet carrier (28) as a unit.

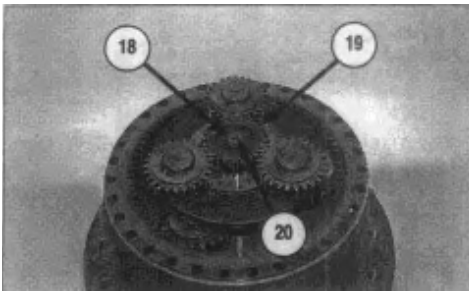
15. Install middle stage sun gear (26).



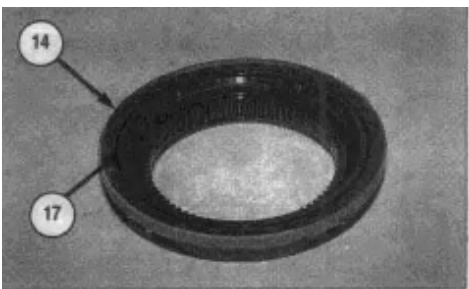
16. Install 54 needle bearings (25), three input stage planet gears (21), three retaining washers (24), and three snap rings (23).



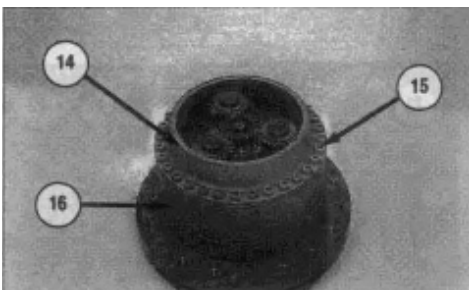
17. Install three input stage planet gears (21) and input planet carrier (22) as a unit.



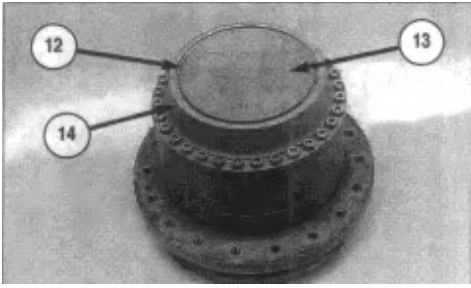
18. Install input shaft (20), input stage sun gear (19), and snap ring (18).



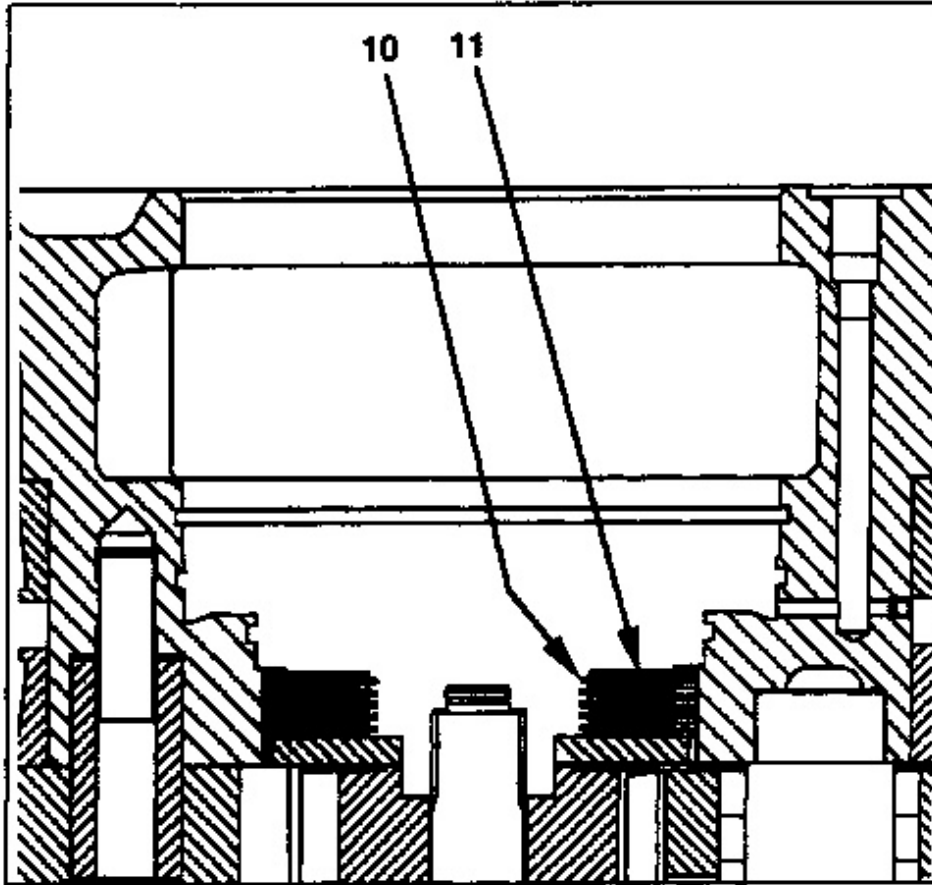
19. Install two O-rings (17) on input stage ring wheel (14).



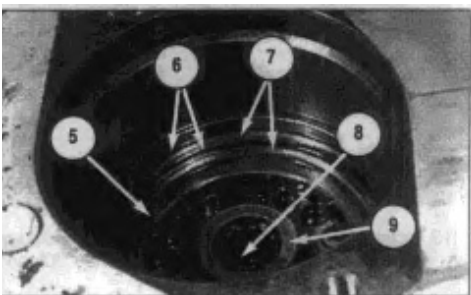
20. Install input stage ring wheel (14) on ring wheel (16) and 32 bolts (15).



21. Install cover (13) on input stage ring wheel (14) and snap ring (12).

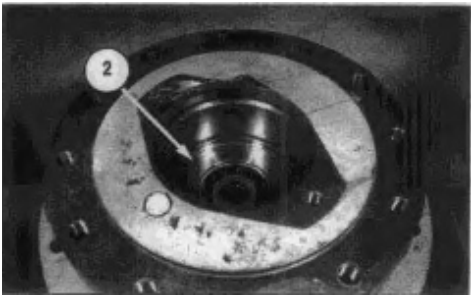
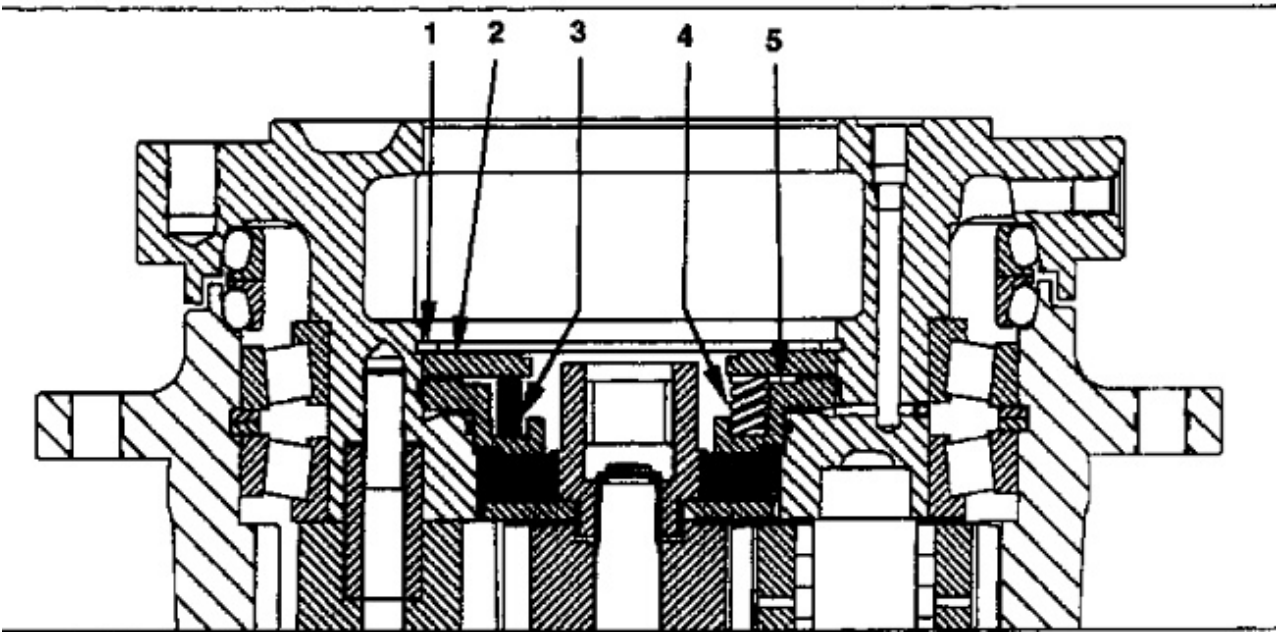


22. Install four steel brake discs (10) and three friction brake discs (11).



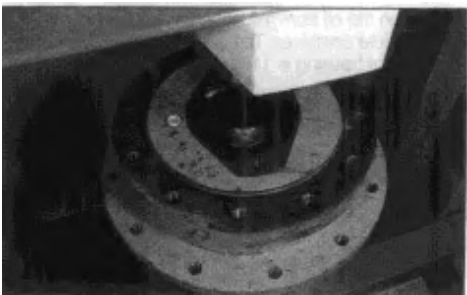
23. Install input coupling (9) and socket head screw (8).

24. Install O-rings (6), back-up rings (7), and brake piston (5).



25. Install 12 large springs (4) and four small springs (3) in brake piston (5).

26. Install retaining disc (2).



27. Place the drum gear reducer in a press. Put slight compression on retaining disc (2) with the press. Install snap ring (1) and slowly release the spring compression.

End By:

a. install drum gear reducer

Product: VIBRATORY COMPACTOR

Model: CS-433C VIBRATORY COMPACTOR 3TM

Configuration: CS-433C CP-433C Vibratory Compactor 3TM00001-UP (MACHINE) POWERED BY 3054 Engine

Disassembly and Assembly

CS-431C, CP-433C, CS-433C VIBRATORY COMPACTORS MACHINE SYSTEM

Media Number -KENR2996-02

Publication Date -01/11/2004

Date Updated -07/06/2005

KENR29960018

Eccentric Weight Housing

SMCS - 6606-016; 6606-010; 6606-015

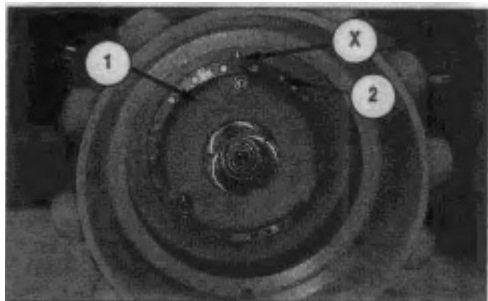
Remove & Install Eccentric Weight Housing

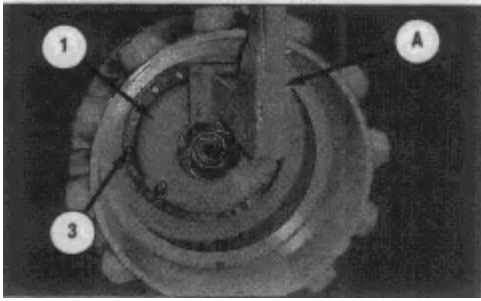
Tools Needed		A
150-3978	Handling Bracket Assembly	1
151-7537	Adapter Bracket Assembly	1

Start By:

a. remove drum support housing (right side)

1. Drain the oil from the eccentric weight housing into a suitable container. The capacity of the eccentric weight housing is 11.83 liters (3.12 U. S. gal).





2. Position the drum with the locating mark on the drum down and the notch (X) on eccentric weight housing (1) is at the top.
3. Remove six bolts (2) and attach Tooling (A) as shown.
4. Remove 16 remaining bolts (2). During installation of the eccentric weight housing, apply **4C-9507 Thread Lock** on 18 bolts (2).
5. During installation, install guide bolts (3) 180° from each other.
6. Remove the eccentric weight housing from the drum assembly. The weight of the eccentric weight housing is 330 kg (726 lb).

NOTE: For installation of the eccentric weight housing, reverse the removal steps.

NOTE: After installing the eccentric weight housing, perform the flushing procedure described in Special Instruction Form No. SEHS9880-01.

NOTE: After the eccentric weight housing has been installed, fill it with oil to the correct level. See the Operation & Maintenance Manual Form No. KEBU6859, for the correct procedure.

End By:

- a. install drum support housing (right side)

Disassemble Eccentric Weight Housing

Tools Needed		A	B	C
148-2700	Lifting Bracket	1		
8B-7551	Bearing Puller Attach		1	
5P-4170	Step Plate		1	
8B-7548	Push-Puller		1	
1H-3112	Bearing Puller Assembly			1
5F-7366	Forcing Screw			1

Start By:

a. remove eccentric weight housing

1. Make sure the outside of the eccentric weight housing is clean and free of dirt and debris.
2. Put alignment marks on the housing and cover to aid in reassembly steps.
3. Install the eccentric weight housing on a suitable stand or move to a clean flat area for disassembly. The weight of the eccentric weight housing is 330 kg (726 lb).

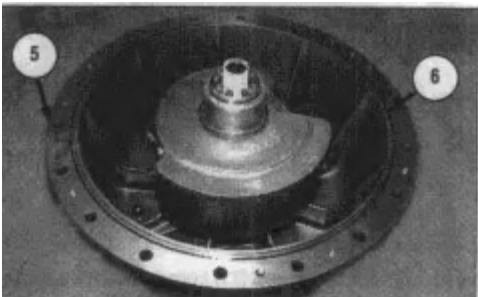


4. Remove two drain plugs (1) from the cover (2).

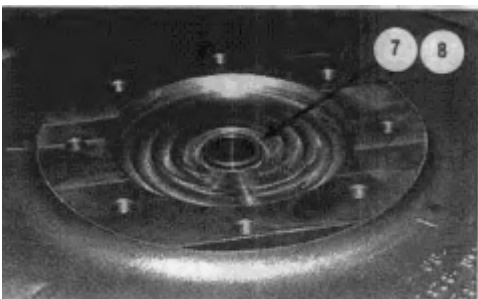


5. Remove six bolts (3) and six washers (4).

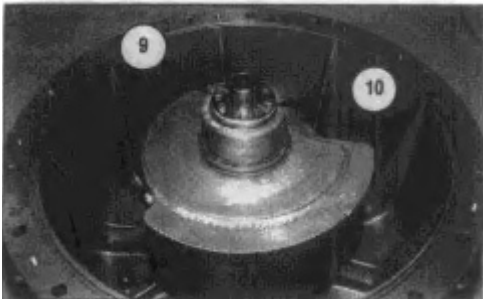
6. Separate cover (2) from housing (5).



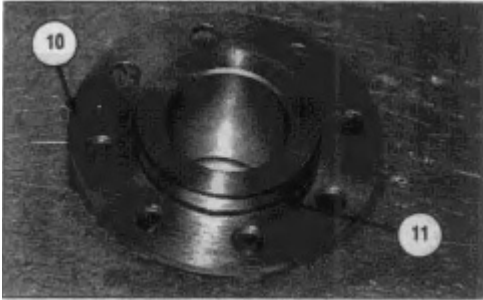
7. Remove O-ring seal (6) from housing (5). Check O-ring seal for wear or damage and replace if necessary.



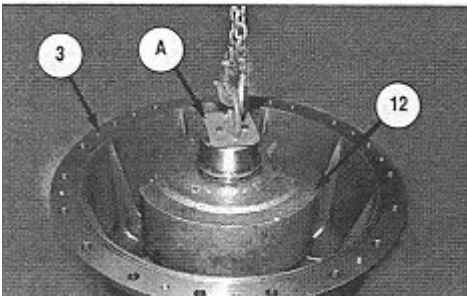
8. Remove lip-type seals (7) and (8) from the cover.



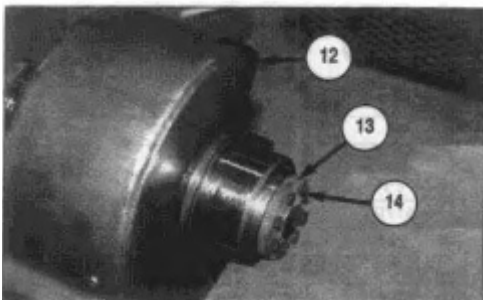
9. Remove eight bolts (9) and flange (10).



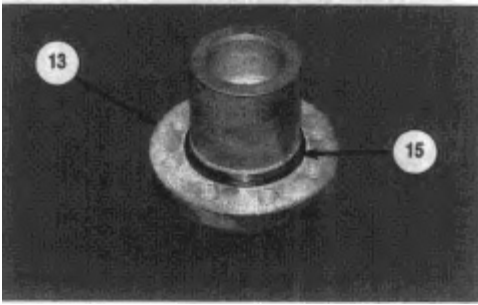
10. Remove O-ring seal (11) from flange (10). Check O-ring seal for wear or damage and replace if necessary.



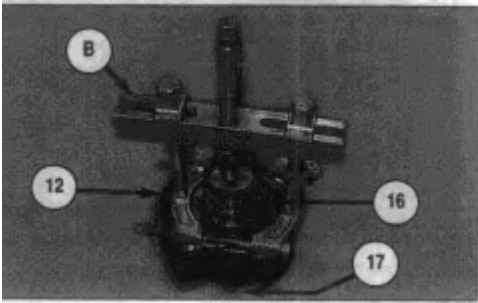
11. Use Tool (A) to remove weight (12) from housing (5). The weight of the weight is 60 kg (132 lb).



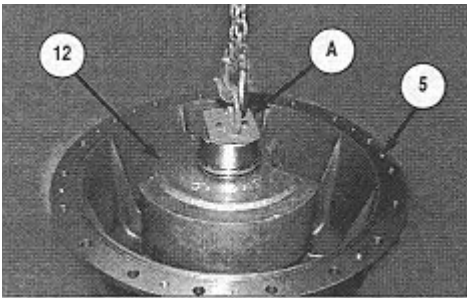
12. Remove eight bolts (14) and shaft (13) from weight (12).



13. Remove O-ring seal (15) from shaft (13).



14. Use Tooling (B) to remove inner races (16) and (17) from weight (12).

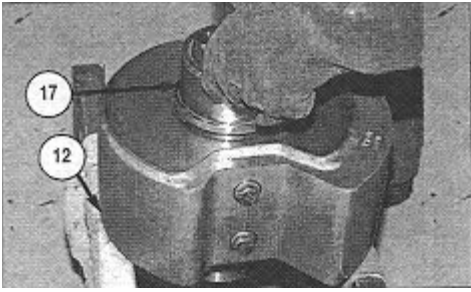


15. Use Tooling (C) to remove bearing (18) from housing (5).

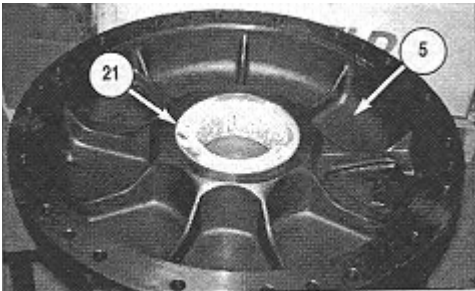
NOTE: Repeat step 15 to remove the bearing from the cover.

Assemble Eccentric Weight Housing

Needed	Tools	A	D	E	F
148-2700	Lifting Bracket	1			
158-0511	Seal Guide		1		
8T-5096	Indicator Group			1	
8B-7554	Bearing Cup Puller			1	
157-2378	Seal Installer				1



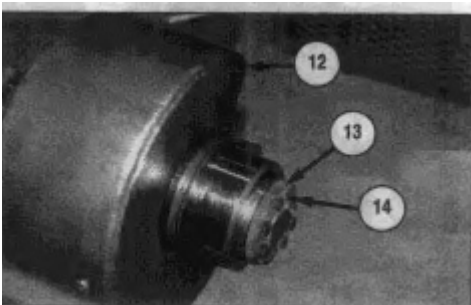
1. Heat inner bearing race (17) to 121° C (250° F) and twist bearing race (17) onto shaft of weight (12) until bearing race no longer turns on shaft (If equipped with shims, replace shims).
2. Repeat step 1 for opposite side of weight (12).



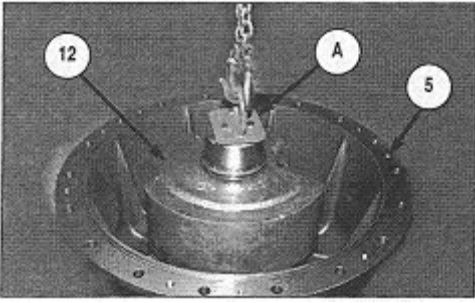
3. Lower the temperature of bearing (21) and, rotating bearing until the bearing seats. Install bearing (21) in cover (2).
4. Repeat step 3 to install bearing (22) in housing (3).



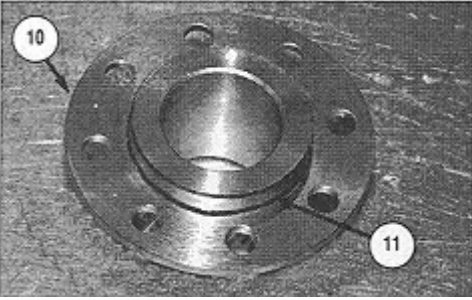
5. Install O-ring seal (15) on shaft (13).



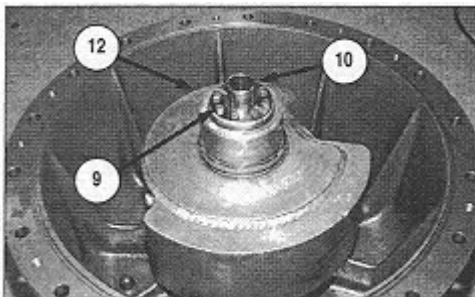
6. Apply **9S-3263 Thread Lock** to eight bolts (14) and attach shaft (13), with "T" on top (heavy portion of weight bottom), to weight (12) using eight bolts (14) and apply **6V-4876 Molykyte Lubricant** to splines on shaft. Apply **6V-4876 Molykyte Lubricant** on shaft (13).



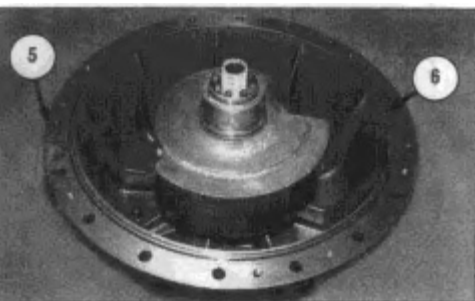
7. Use Tool (A) to install weight (12) in housing (3), twisting weight as it is installed to the seat housing.



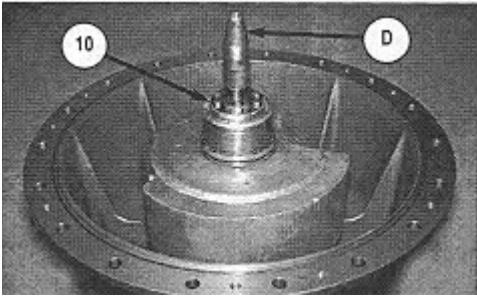
8. Install O-ring seal (11) on flange (10).



9. Apply **9S-3263 Thread Lock** to eight bolts (9). Install flange (10) to weight (12) with eight bolts (9).



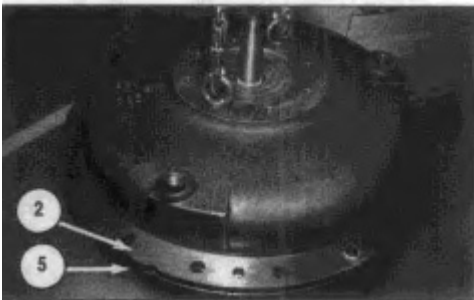
10. Install O-ring seal (6) on housing (5).



11. Install Tool (D) on flange (10).



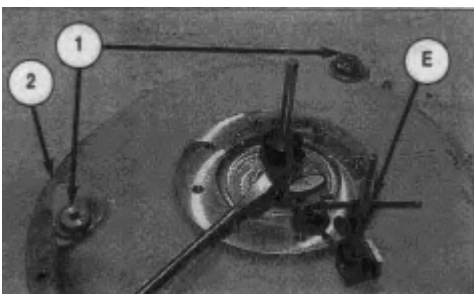
12. Install cover (2) on housing (5). Spin the cover to seat the bearing while lowering the cover.



13. Align the notch on cover (2) with the notch on housing (3).

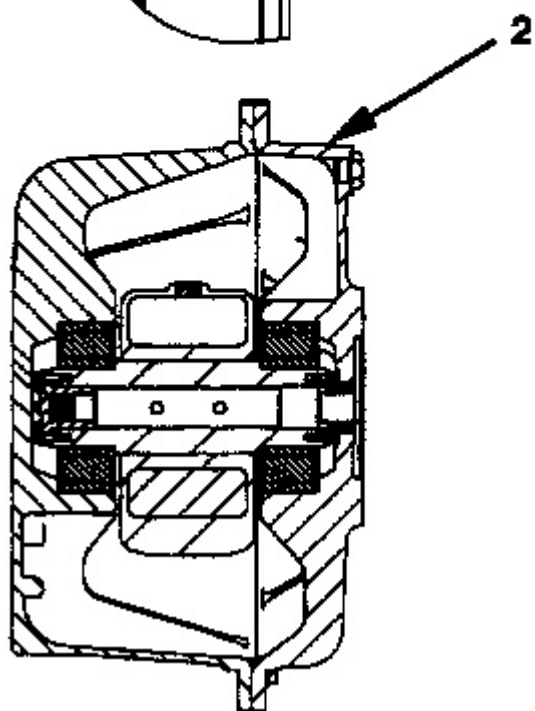
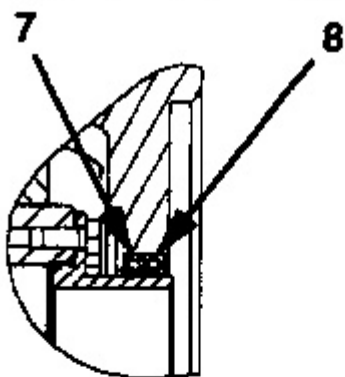
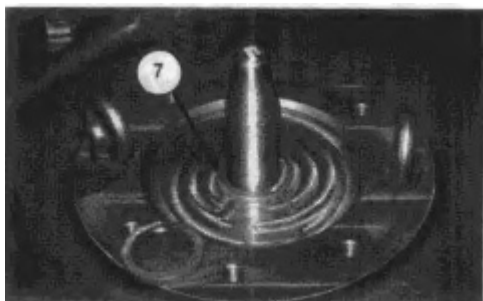


14. Apply **9S-3263 Thread Lock** to six bolts (3). Install six bolts (3) and washers (4).



15. Install drain plugs (1) in cover (2).

16. Use a suitable pry bar and Tooling (E) to check endplay. Total endplay should not exceed 0.50 - 1.35 mm (0.20 - 0.50 in).



17. Use Tool (F) to install seal (7) and seal (8) back-to-back in cover (2).

End By:

a. install eccentric weight housing

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