

Product: WHEEL DOZER

Model: 8A4K WHEEL DOZER T1Z

Configuration: 814K Wheel Dozer T1Z00001-UP (MACHINE) POWERED BY C7.1 Engine

Disassembly and Assembly 814K Wheel Dozer Power Train

Media Number -M0090625-00

Publication Date -01/04/2018

Date Updated -13/04/2018

i07342939

Torque Converter - Disassemble

SMCS - 3101-015

Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	439-3940	Link Bracket	2
B	1P-0510	Driver Gp	1
C	2P-8312	Retaining Ring Pliers	1

Start By:

- Separate the torque converter from the transmission and from the output transfer gears.

Note: Cleanliness is an important factor. Before the disassembly procedure, the exterior of the component should be thoroughly cleaned. This will help to prevent dirt from entering the internal mechanism.

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting, and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat[®] products.

Dispose of all fluids according to local regulations and mandates.



Illustration 1

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1. Use Tooling (A) and a suitable lifting device to position the torque converter assembly on suitable cribbing, as shown. The weight of the torque converter assembly is approximately 185 kg (408 lb).
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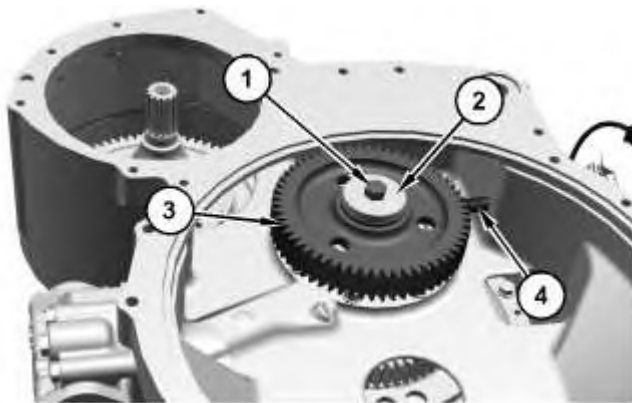


Illustration 2

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2. Remove torque converter speed sensor (4), the seal, and the washer.
 3. Remove bolt (1) and retainer (2). Remove gear (3) from the torque converter housing.
-

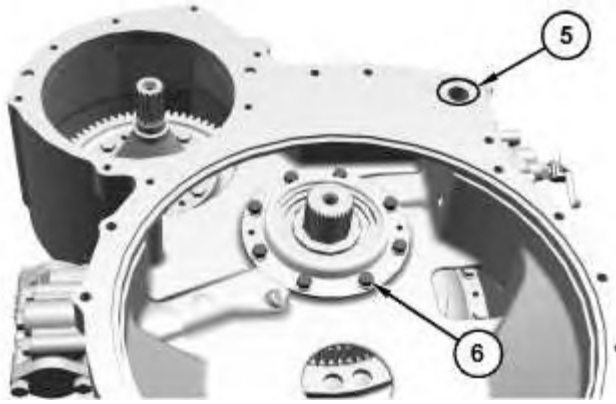


Illustration 3

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4. Remove bolts (6) and the washers that hold the torque converter to the torque converter housing.
5. Remove O-ring seal (5).



Illustration 4

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6. Remove bolts (7) and pump drive flange (8).

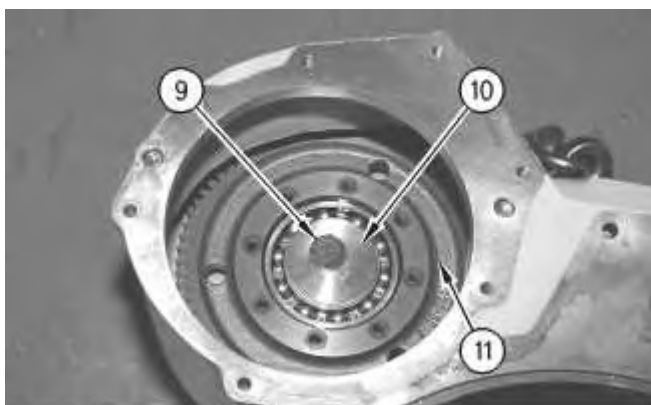


Illustration 5

g00456168

7. Remove bolt (9) and the washer that holds drive gear shaft (10) to the torque converter housing.
8. Remove pump drive gear (11) and drive gear shaft (10).
9. Remove drive gear shaft (10) from pump drive gear (11).



Illustration 6

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10. Use Tooling (A) and a suitable lifting device to remove torque converter housing (12). The weight of torque converter housing (12) is approximately 95 kg (209 lb). Remove torque converter housing (12).



Illustration 7

g06289340

11. Use Tooling (B) to remove bearing (13). Remove bearing (13) from pump drive gear (11).
-



Illustration 8

g06289315

12. Remove bolts (14) and the washers. Use two people to remove impeller (15) from rotating housing (16). The weight of impeller (15) is approximately 36 kg (80 lb). Remove impeller (15).



Illustration 9

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13. Turn impeller (15) onto the opposite side.
14. Use Tooling (C) to remove retaining ring (17). Remove retaining ring (17) and stator (18).

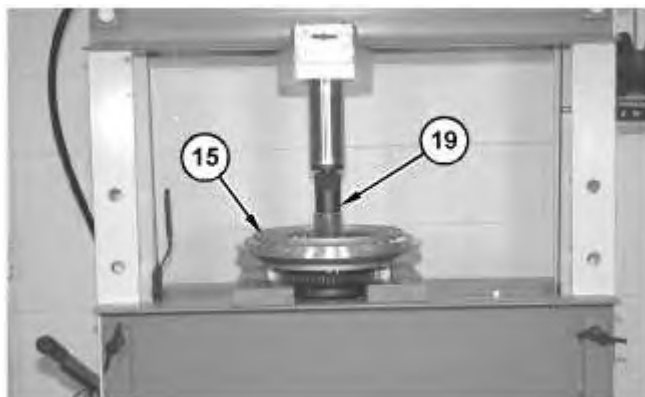


Illustration 10

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15. Use a suitable press to remove carrier shaft (19) from impeller (15). Remove carrier shaft (19).

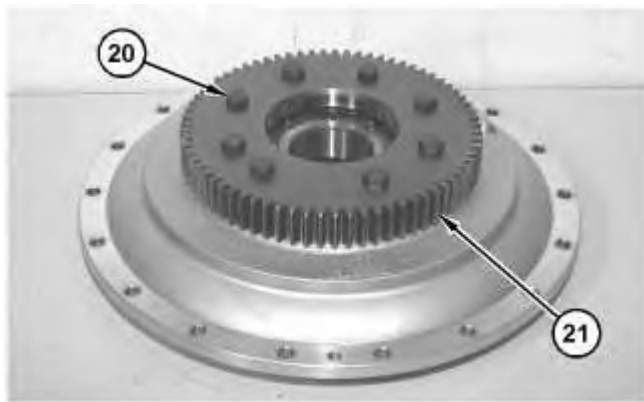


Illustration 11

g06289374

16. Remove bolts (20) and drive gear (21).

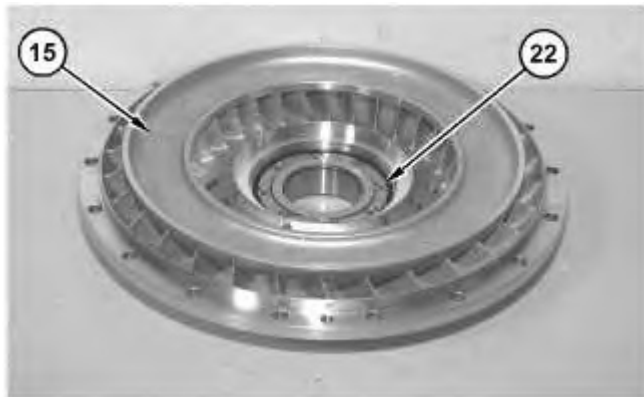


Illustration 12

g06289376

17. Remove bearing (22) from impeller (15).



Illustration 13

g06289379

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g06289384

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g06289389

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- A black and white photograph of a multi-ported manifold assembly. The assembly consists of a central vertical pipe with a flange at the top. A circular plate is mounted on the flange, featuring a central opening and a ring of smaller ports around the perimeter. Four numbered callouts with arrows point to specific components: 28 points to the central vertical pipe, 29 points to the circular plate, 30 points to the central opening in the plate, and 31 points to one of the smaller ports in the ring.

22. Remove bolts (29) and the washers. Separate turbine (28) from turbine hub assembly (31).
23. If necessary, remove locating dowel (30).

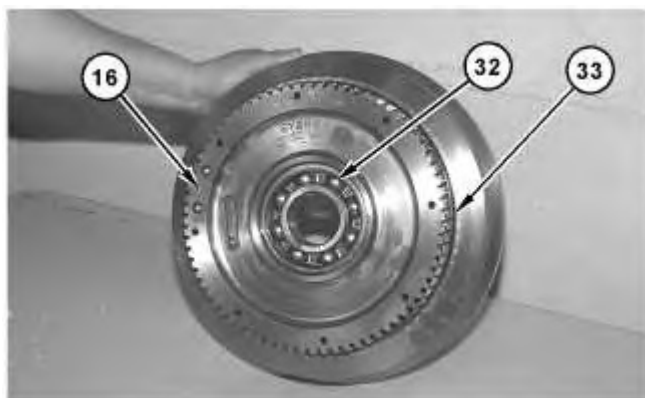


Illustration 17

24. Remove bearing (32) and ring (33) from rotating housing (16).

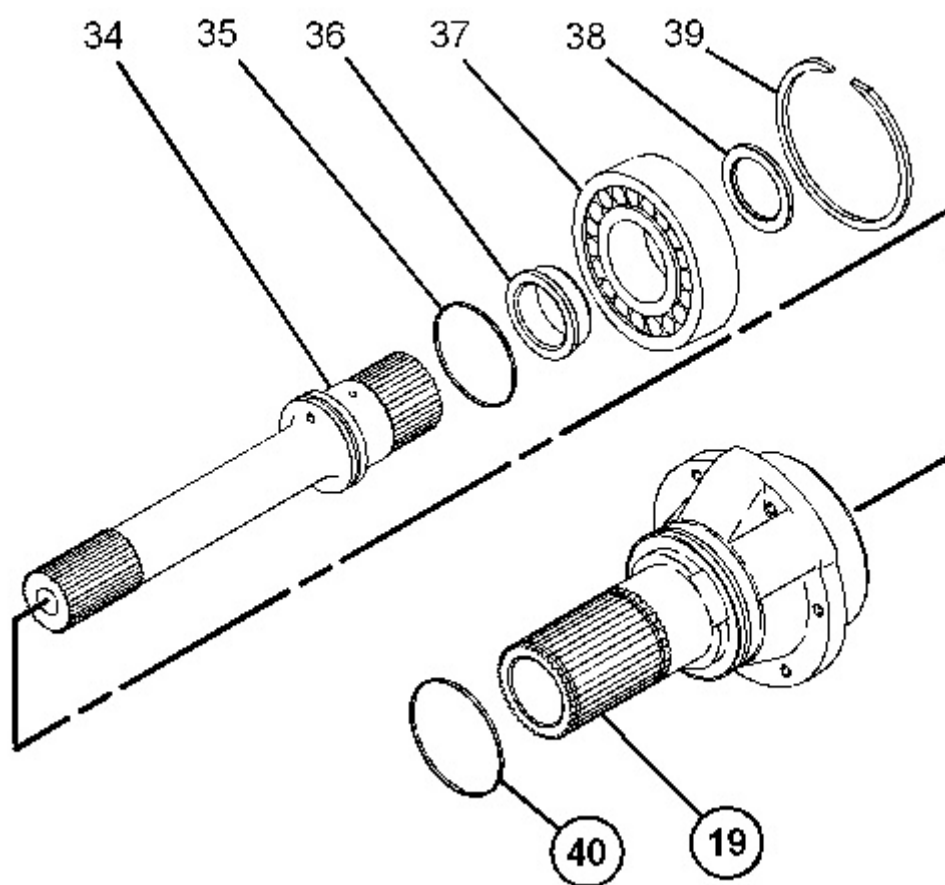


Illustration 18

25. Remove retaining ring (39). Remove plate (38).

26. Use a suitable soft faced hammer to remove shaft assembly (34) from carrier shaft (19).
 27. Remove outer bearing (37).
 28. Use a suitable press to remove inner race (36) from shaft assembly (34).
 29. Remove seal ring (35) from shaft assembly (34).
 30. Remove seal ring (40) from carrier shaft (19).
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Disassembly and Assembly 814K Wheel Dozer Power Train

Media Number -M0090625-00

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i07346277

Torque Converter - Assemble

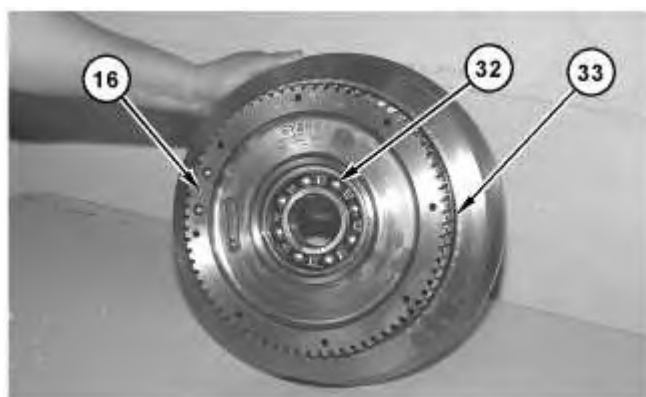
SMCS - 3101-016

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	439-3940	Link Bracket	2
B	1P-0510	Driver Gp	1
C	2P-8312	Retaining Ring Pliers	1
D	7F-6068	Sleeve	1

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.



1. Lower the temperature of bearing (32).
2. Install bearing (32) and ring (33) on rotating housing (16).

Note: The notch in bearing (32) must face toward the turbine.

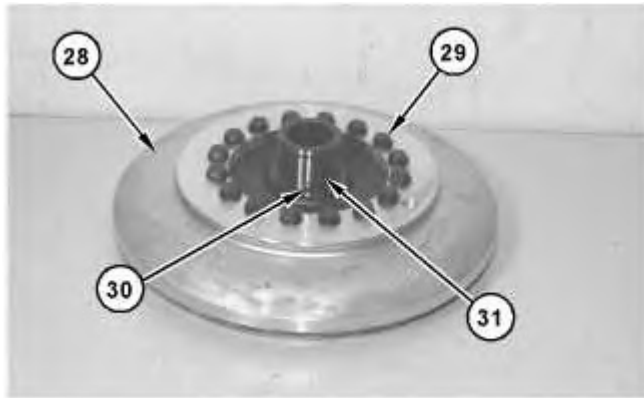


Illustration 2

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1. Install locating dowel (30) in turbine hub assembly (31), if necessary.
2. Install turbine hub assembly (31) to turbine (28). Install the washers and bolts (29). Tighten bolts (29) to a torque of 60 ± 7 N·m (44 ± 5 lb ft).



Illustration 3

g06289389

3. Turn rotating housing (16) onto opposite side. Install turbine (28).



Illustration 4

g06289384

4. Use Tooling (C) to install retaining ring (26). Install bearing spacer (27) and retaining ring (26).
5. Install O-ring seal (25).



Illustration 5

g06289379

6. Use Tooling (C) to install retaining ring (23). Install end cover (24) and retaining ring (23) in rotating housing (16).



Illustration 6

g06289376

7. Lower the temperature of bearing (22).

8. Install bearing (22) to impeller (15).

Note: The notch in bearing (22) must face downward.

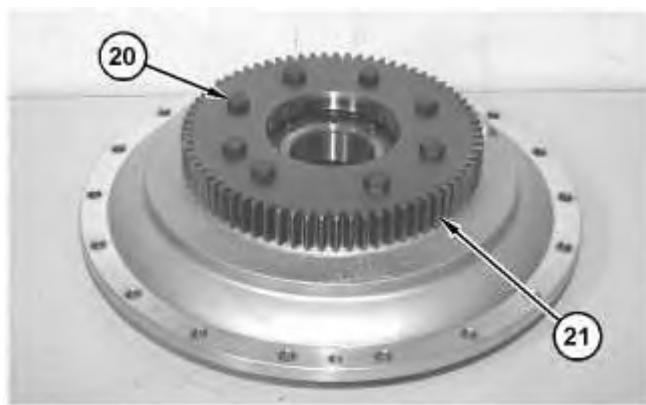


Illustration 7

g06289374

9. Install drive gear (21) and bolts (20). Tighten bolts (20) to a torque of $105 \pm 15 \text{ N}\cdot\text{m}$ ($75 \pm 11 \text{ lb ft}$).

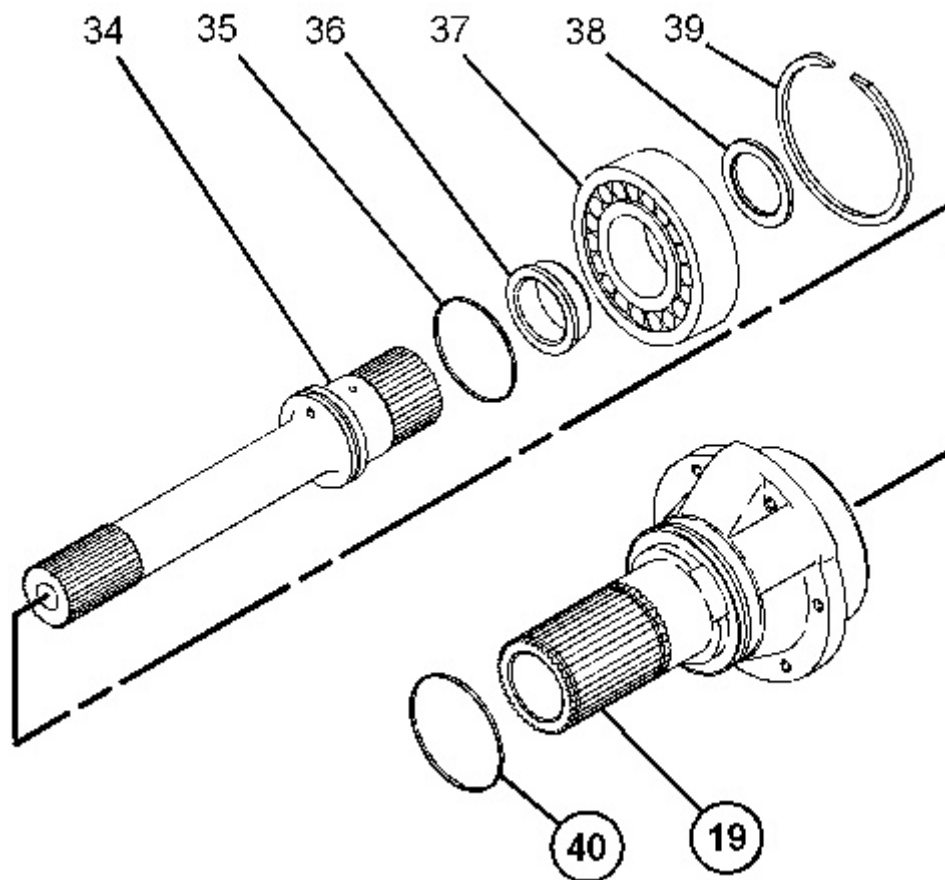


Illustration 8

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10. Install seal ring (40) onto carrier shaft (19).
11. Install seal ring (35) onto shaft (34).
12. Raise the temperature of inner race (36). Install inner race (36) onto shaft (34).
13. Install outer bearing (37).
14. Use Tooling (B), Tooling (D), and a suitable press to install shaft (34) and outer bearing (37) into carrier shaft (19).
15. Install plate (38) and retaining ring (39).

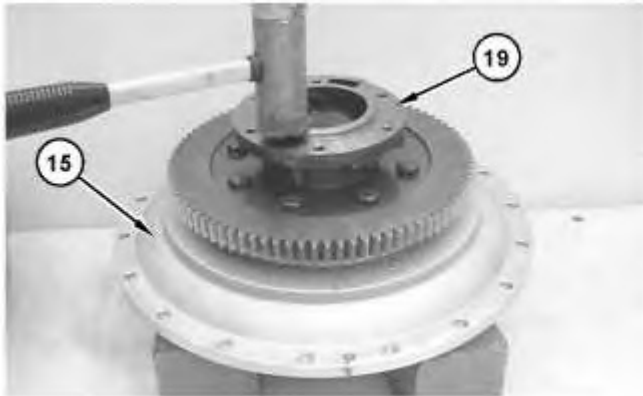


Illustration 9

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16. Use a suitable soft faced hammer to install carrier shaft (19) into impeller (15).



Illustration 10

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17. Turn impeller (15) onto the opposite side.
 18. Use Tooling (C) to install retaining ring (17). Install stator (18) and retaining ring (17).
-



Illustration 11

g06289315

19. Use a suitable lifting device to install impeller (15) on rotating housing (16). The weight of impeller (15) is approximately 36 kg (80 lb).
20. Install impeller (15) and bolts (14). Tighten bolts (14) to a torque of $60 \pm 7 \text{ N}\cdot\text{m}$ ($44 \pm 5 \text{ lb ft}$).



Illustration 12

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21. Use Tooling (B) to install bearing (13). Install bearing (13) to pump drive gear (11).



Illustration 13

g06289336

22. Use Tooling (A) and a suitable lifting device to install torque converter housing (12) over the torque converter. The weight of torque converter housing (12) is approximately 95 kg (209 lb). Install torque converter housing (12).

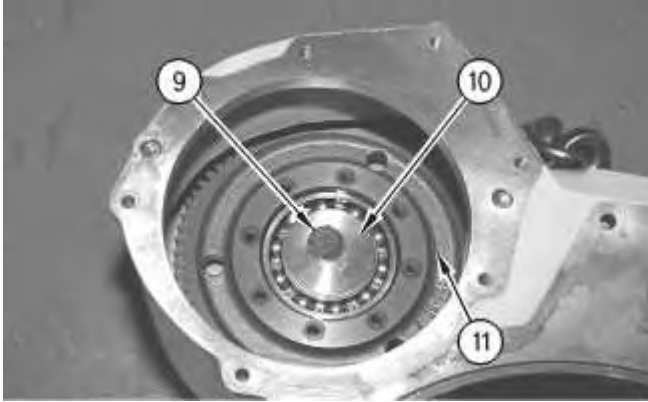


Illustration 14

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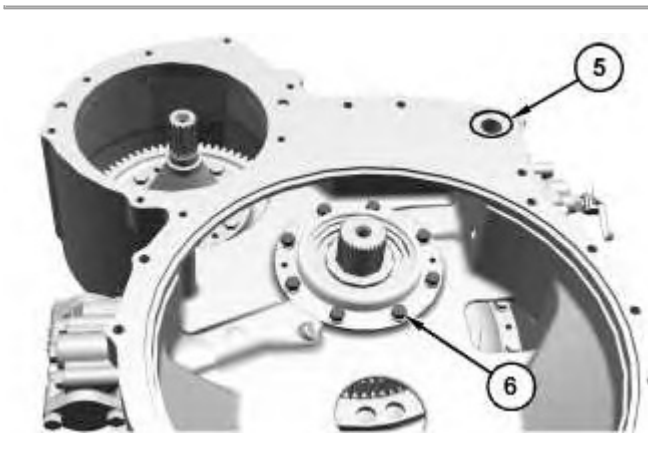
23. Install pump drive gear (11) and drive gear shaft (10).
24. Install the washer and bolt (9). Tighten bolt (9) to a torque of $240 \pm 40 \text{ N}\cdot\text{m}$ ($180 \pm 30 \text{ lb ft}$).



Illustration 15

g06289318

25. Install pump drive flange (8) and bolts (7). Tighten bolts (7) to a torque of $60 \pm 12 \text{ N}\cdot\text{m}$ ($44 \pm 9 \text{ lb ft}$).



26. Install the washer and bolts (6). Tighten bolts (6) to a torque of 55 ± 10 N·m (41 ± 7 lb ft).
27. Install O-ring seal (5).

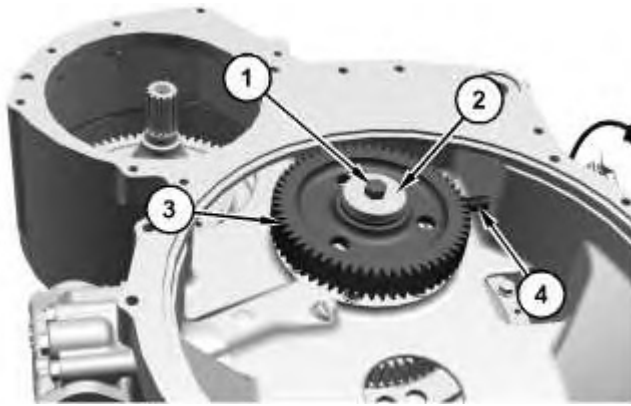


Illustration 17

28. Install gear (3), retainer (2), and bolt (1). Tighten bolt (1) to a torque of 120 ± 20 N·m (90 ± 15 lb ft).
29. Install the washer, the seal, and torque converter speed sensor (4). Adjust torque converter speed sensor (4) to maintain an air gap of 0.78 ± 0.18 mm (0.031 ± 0.007 inch). Tighten torque converter speed sensor (4) to a torque of 25 ± 5 N·m (18 ± 4 lb ft).

End By:

- a. Connect the torque converter to the transmission and to the output transfer gears.
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