

Product: TRUCK

Model: 777F TRUCK JRP

Configuration: 777F Off-Highway Truck JRP00001-UP (MACHINE) POWERED BY C32 Engine

## Disassembly and Assembly 777F Off-Highway Truck Power Train

Media Number -REN8304-09

Publication Date -01/07/2015

Date Updated -05/04/2018

i06996310

# Transmission Planetary - Disassemble

SMCS - 3160-015

## Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7574	Link Bracket	2
B	1P-2420	Transmission Repair Stand	1
C	439-3940	Link Bracket	2
D	FT-947	Spring Compressor	2
E	2P-8312	Retaining Ring Pliers	1
F	1P-1855	Retaining Ring Pliers	1
G	138-7573	Link Bracket	2
H	1P-1864	Retaining Ring Pliers	1
L	1P-1863	Retaining Ring Pliers	1
M	138-7576	Link Bracket	1
N	8B-7548	Push-Puller Tool Group	1
	8B-7551	Bearing Puller	1
P	1P-0520	Driver Group	1

Start By:

- a. Separate the transmission from the transfer gears. Refer to Disassembly and Assembly, "Transmission and Transfer Gears - Separate".
- b. Remove the transmission hydraulic control. Refer to Disassembly and Assembly, "Transmission Hydraulic Control - Remove".

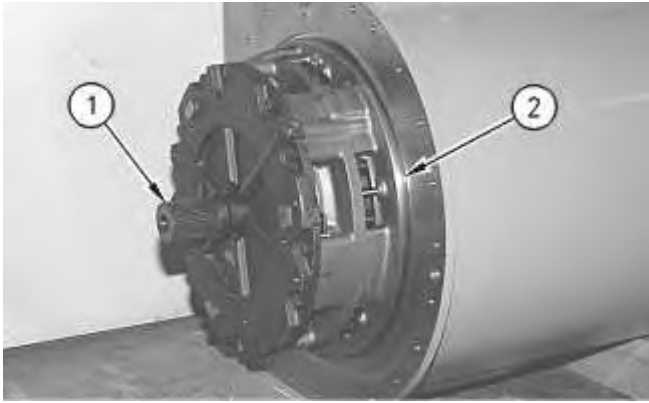


Illustration 1

g00646029

1. Remove input shaft (1). Remove O-ring seal (2).

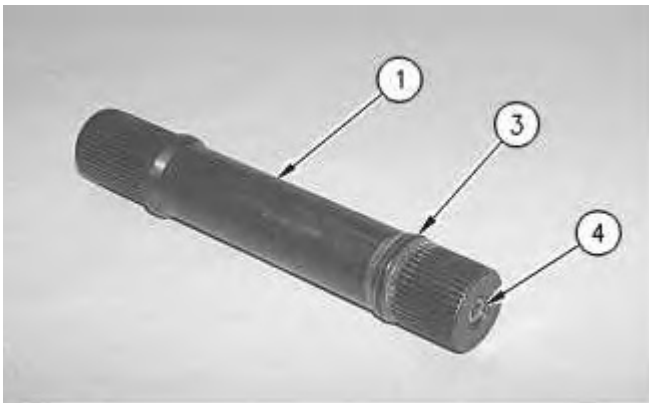


Illustration 2

g00646031

2. Remove O-ring seal (3) from input shaft (1).
  3. Remove sleeve bearing (4) from input shaft (1).
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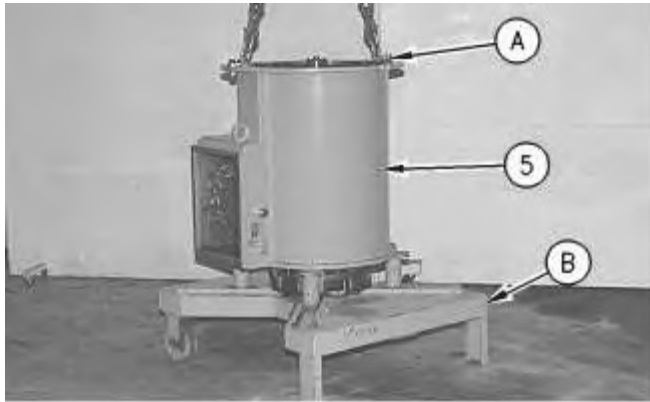


Illustration 3

g00646032

4. Attach Tooling (A) and a suitable lifting device to transmission case (5). Secure the suitable lifting device to a hoist. Position transmission case on Tooling (B). Attach transmission case (5) to Tooling (B).

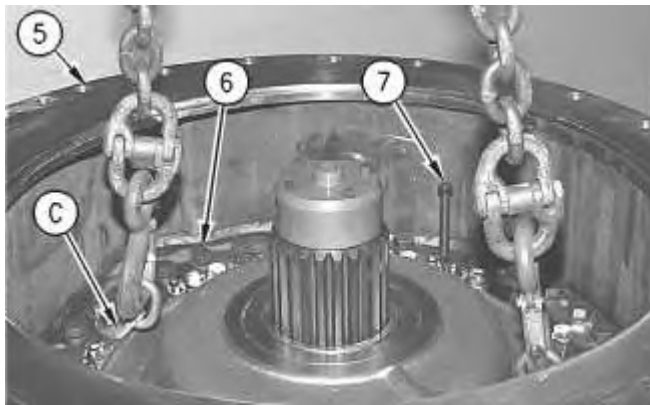
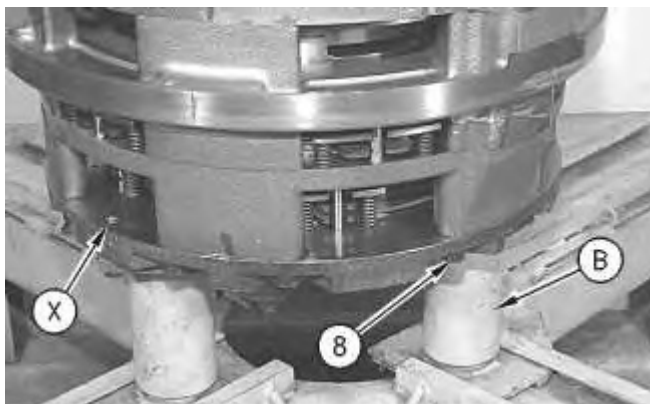


Illustration 4

g00646034

5. Attach Tooling (C) and a suitable lifting device to the clutch housing, as shown.
6. Remove bolts (6) and the washers.
7. Install two 1/2 in - 13 NC forcing screws (7) into the transmission, as shown. Remove the transmission planetary from transmission case (5). The weight of the transmission planetary is approximately 1000 kg (2200 lb). Remove transmission case (5) from Tooling (B).



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Illustration 5

g00646035

8. Position the transmission planetary on Tooling (B), as shown. Secure the transmission to Tooling (B) at location (X). Remove 10 of 12 bolts (8) and the washers.

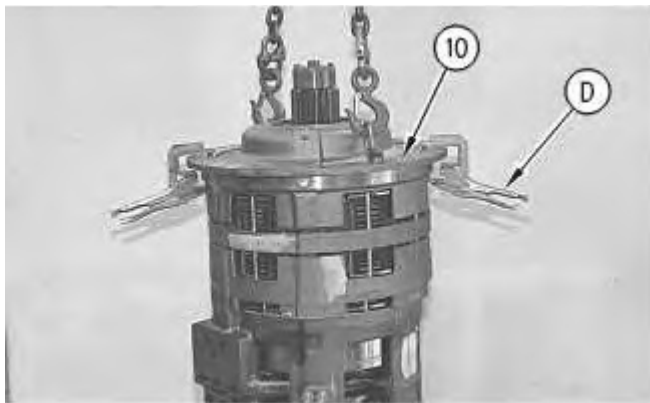


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Illustration 6

g00646038

9. Remove bolts (9) and the washers.



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Illustration 7

g00646040

10. Put an alignment mark on the side of the transmission planetary for assembly purposes. Use Tooling (D) to hold the clutch piston to clutch housing assembly (10).
  11. Remove clutch housing assembly (10) and the clutch piston as a unit. The weight of clutch housing assembly (10) and the clutch piston is approximately 100 kg (220 lb).
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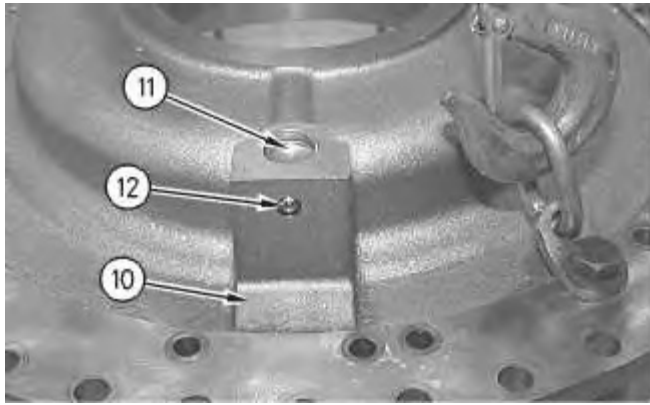


Illustration 8

g00646041

12. Remove cup plug (11) and ball (12) from clutch housing assembly (10).



Illustration 9

g00646042

13. Turn clutch housing assembly (10) by 180 degrees. Remove clutch piston (13) from clutch housing assembly (10).

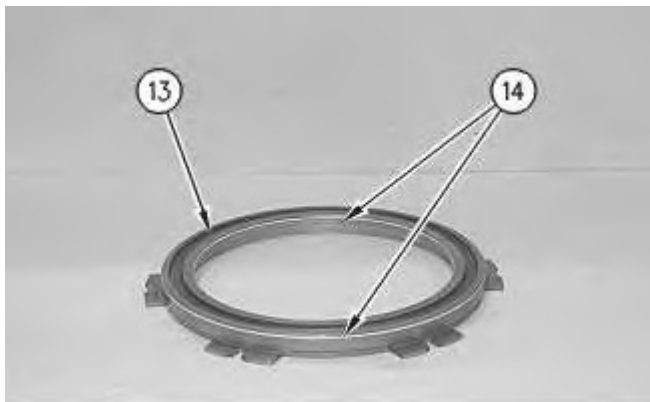
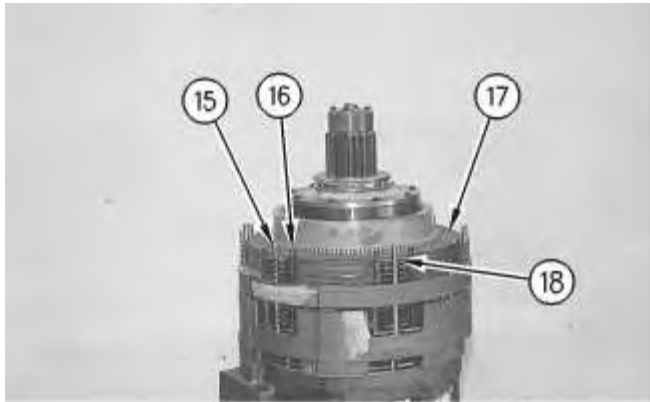


Illustration 10

g00646044

14. Remove seal rings (14) from clutch piston (13). Check all seals for wear or damage.

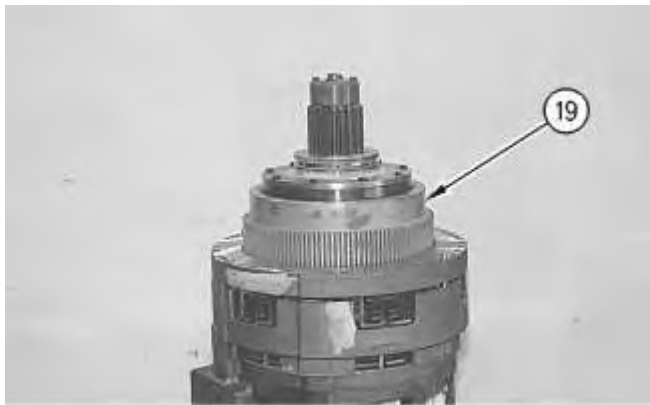


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Illustration 11

g00646045

15. Remove reaction dowels (15) and springs (16).
16. Remove friction discs (17) and clutch plates (18).

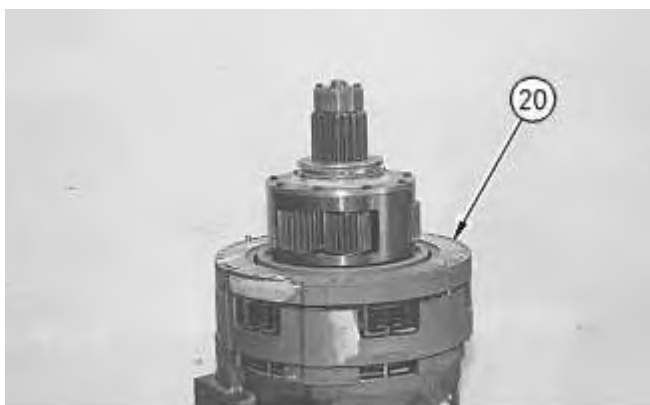


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Illustration 12

g00646046

17. Remove ring gear (19).



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Illustration 13

g00646047

18. Use two people to remove plate assembly (20). The weight of plate assembly (20) is approximately 30 kg (66 lb).
-

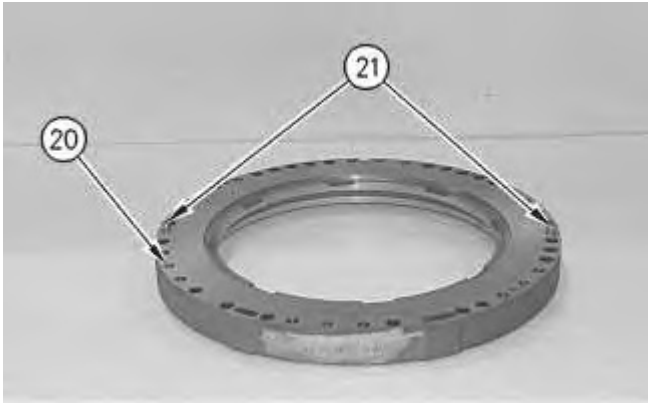


Illustration 14

g00646048

19. Remove dowels (21) from plate assembly (20).

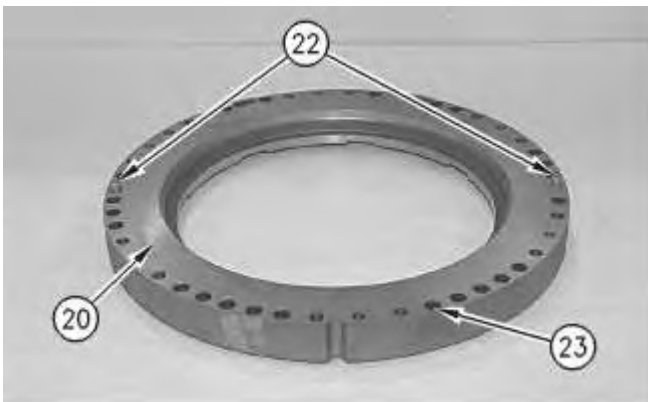


Illustration 15

g00646049

20. Turn over plate assembly (20). Remove dowels (22).
21. Remove bolt dampers (23) from plate assembly (20).

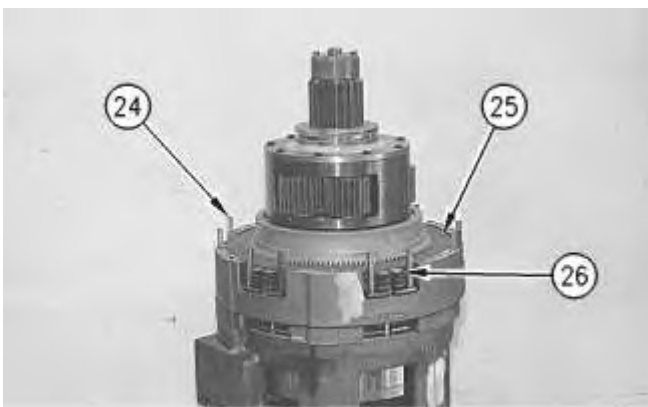


Illustration 16

g00646050

22. Remove springs (24).

23. Remove friction discs (25) and clutch plates (26).

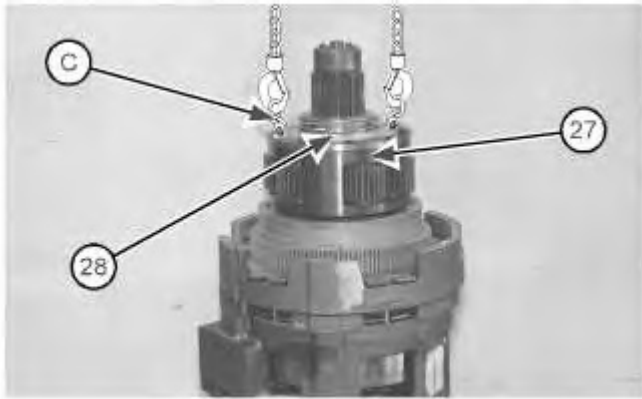


Illustration 17

g01021259

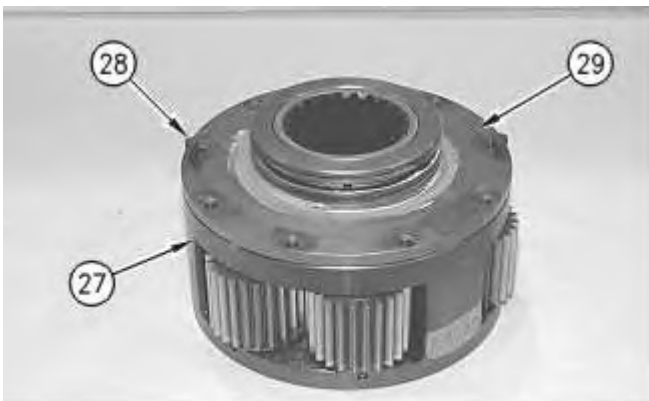
24. Remove two bolts (28) and the washers from planetary assembly (27). Attach Tooling (C) and a suitable lifting device to planetary assembly (27).
25. Remove planetary assembly (27). The weight of planetary assembly (27) is approximately 57 kg (125 lb).



Illustration 18

g00646054

26. Remove the remaining seven bolts (28) and the washers.





27. Use two bolts (28) as forcing screws. Remove manifold (29) from planetary assembly (27).

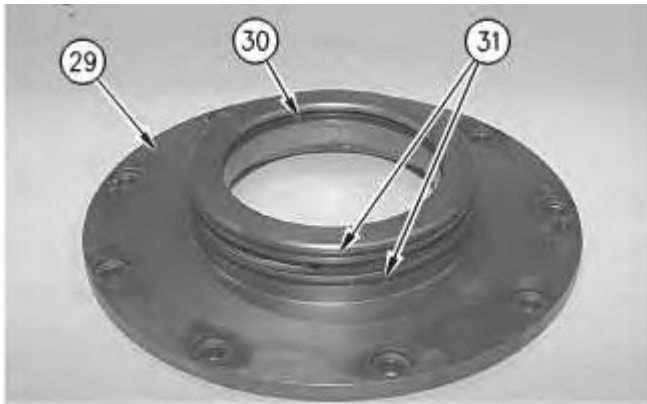


Illustration 20

28. Remove O-ring seal (30) and two metal seal rings (31) from manifold (29).

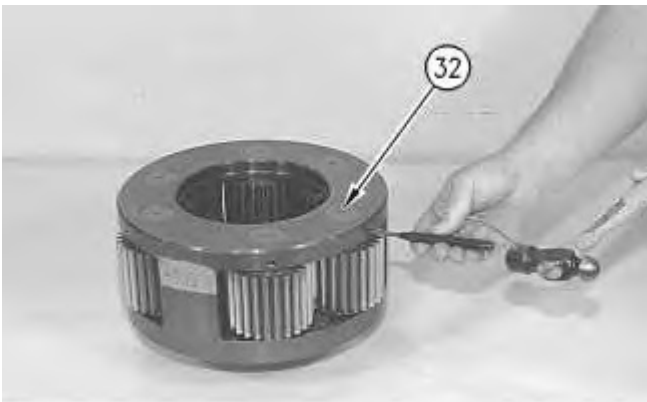


Illustration 21

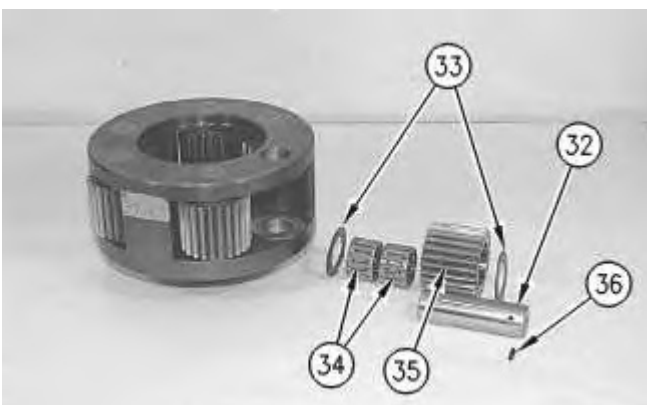


Illustration 22

29. Turn over the planetary carrier. Use a punch to drive spring pin (36) into planetary shaft (32). Remove planetary shaft (32) from the planetary carrier.

30. Remove spring pin (36) from planetary shaft (32).
31. Remove gear (35), bearings (34), and thrust discs (33) from the planetary carrier. Repeat steps 29 through 31 for the remaining shafts.

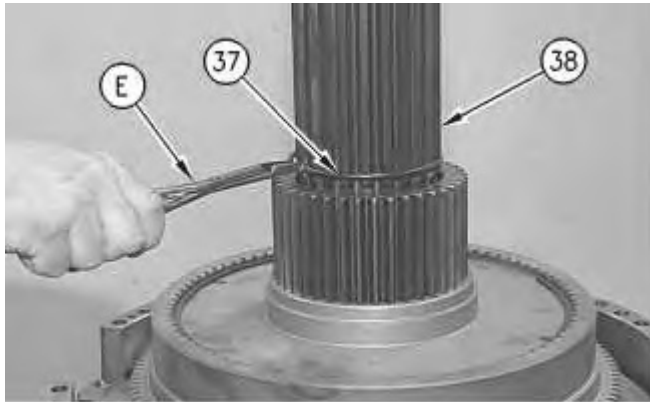


Illustration 23

g00646213

32. Use Tool (E) to remove ring (37) from planetary carrier (38).

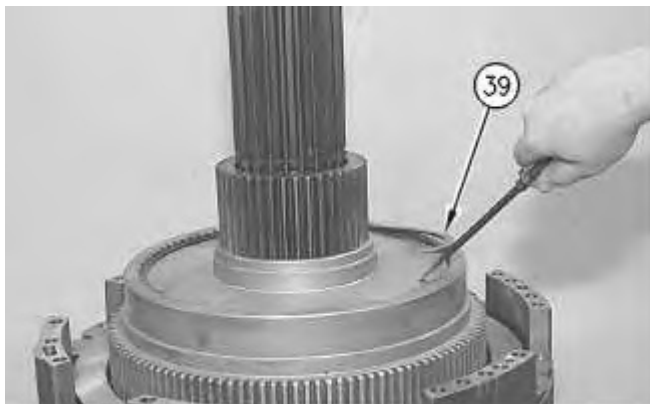


Illustration 24

g00646214

33. Use a screwdriver to remove retaining ring (39).

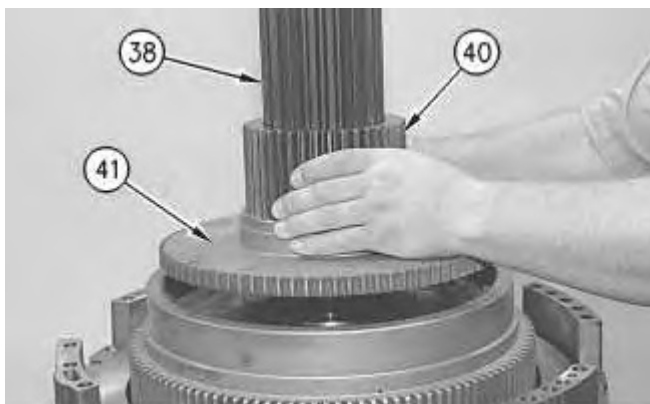


Illustration 25

g00646217

34. Remove sun gear (40) and coupler (41) as a unit from planetary carrier (38).

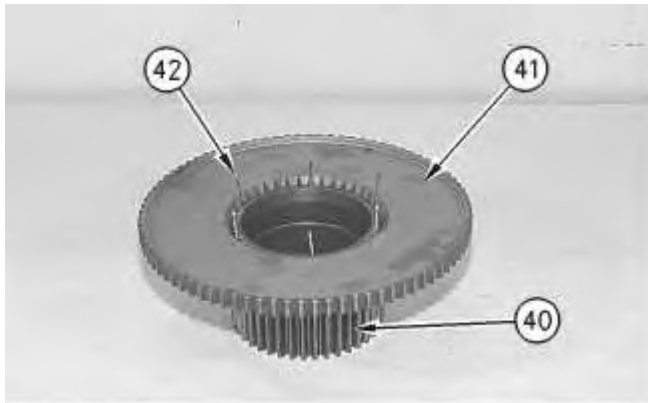


Illustration 26

g00646218

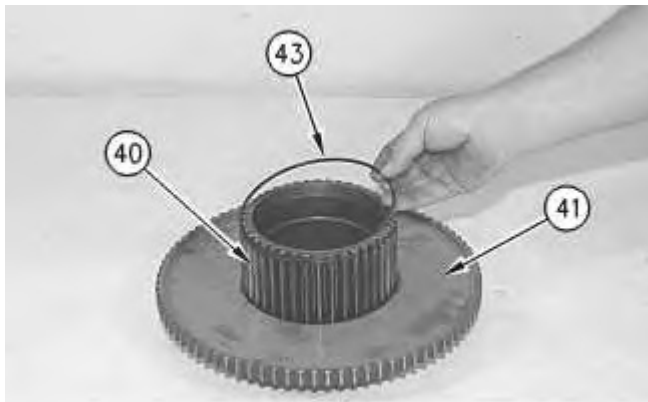


Illustration 27

g00646219

35. Use six 1/8 in x 1 in pins (42) to compress lockring (43). Separate coupler (41) from sun gear (40).

36. Remove lockring (43) from sun gear (40).

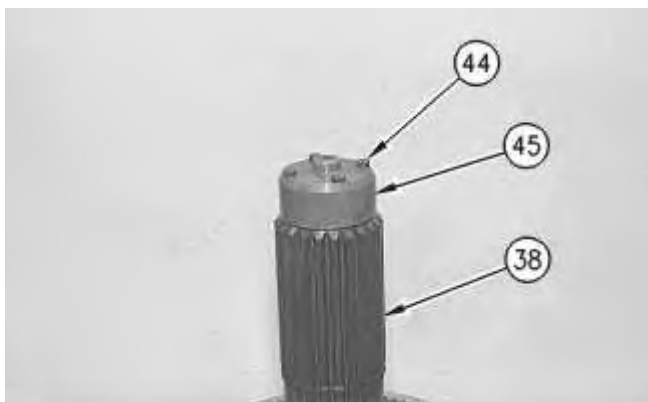


Illustration 28

g00646220

37. Remove bolts (44). Remove drive adapter (45) from planetary carrier (38).



Illustration 29

g00646222

(47) Center shaft

38. Use Tool (F) to remove retaining ring (46).

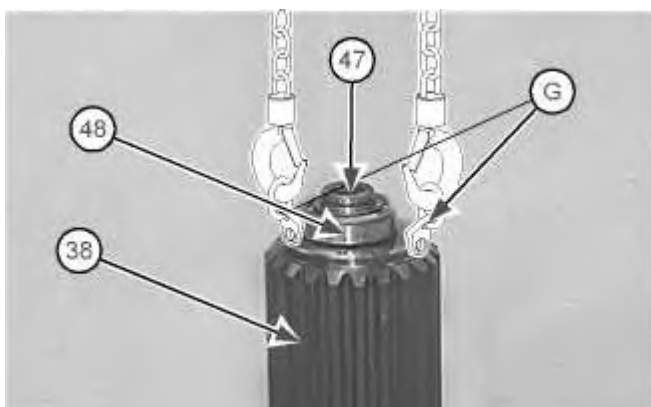


Illustration 30

g01021264

39. Note the position of bearing (48) for installation purposes. The words on bearing (48) are toward the planetary carrier. Attach Tooling (G) to planetary carrier (38). Position Tooling (G) and a suitable lifting device to planetary carrier (38). Lift planetary carrier (38) in order to remove bearing (48) from center shaft (47).

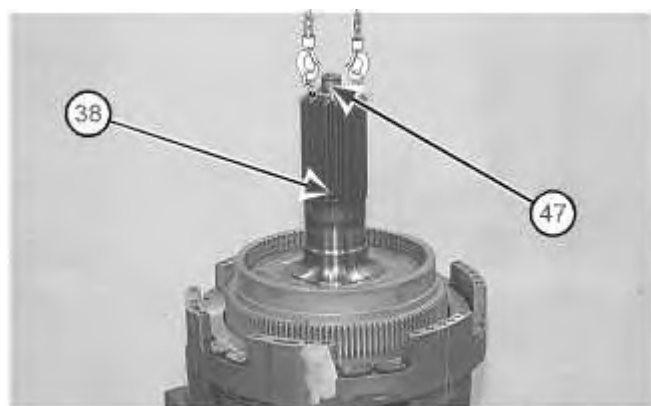


Illustration 31

g01021266

40. Remove planetary carrier (38) from center shaft (47). The weight of planetary carrier (38) is approximately 55 kg (120 lb).



Illustration 32

g00646228

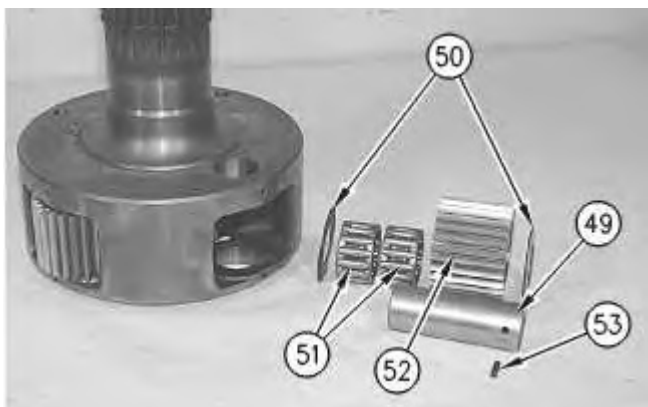


Illustration 33

g00646229

41. Use a punch to drive spring pin (53) into shaft assembly (49). Remove shaft assembly (49) from the planetary carrier.

 **WARNING**

**Personal injury can result from being struck by parts propelled by a released spring force.**

**Make sure to wear all necessary protective equipment.**

**Follow the recommended procedure and use all recommended tooling to release the spring force.**

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42. Remove spring pin (53) from shaft assembly (49).

43. Remove gear (52), bearings (51), and thrust discs (50) from the planetary carrier. Repeat steps 41 through 43 for the remaining three shafts.

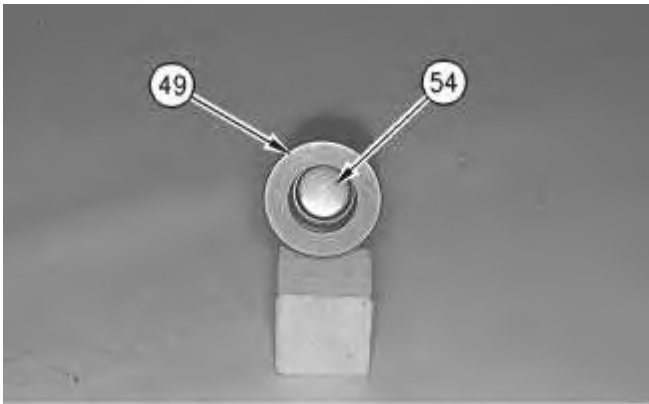


Illustration 34

g00646230

44. Remove cup plug (54) from each shaft assembly (49).

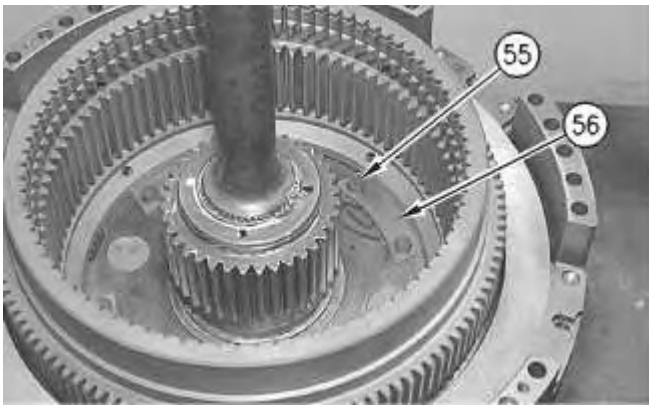


Illustration 35

g00646231

45. Remove bolts (55) and locking plates (56).

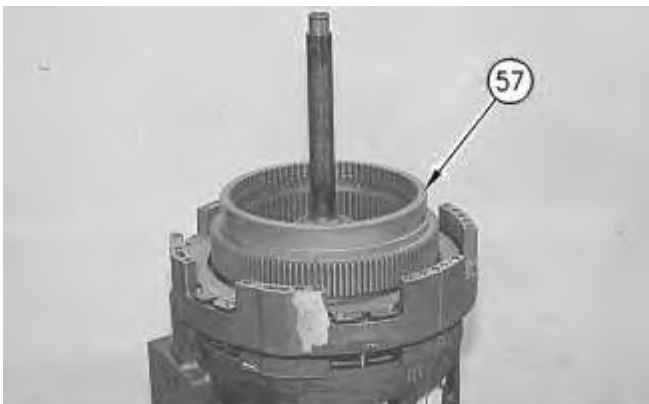


Illustration 36

g00646232

46. Use two people to remove ring gear assembly (57). The weight of ring gear assembly (57) is approximately 35 kg (77 lb).

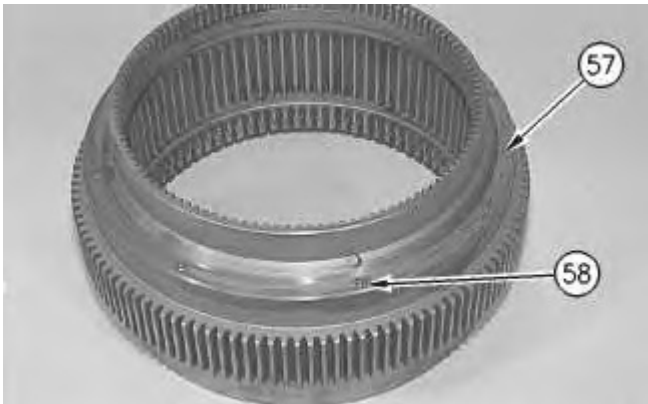


Illustration 37

g00646233

47. Remove cup plugs (58) from ring gear assembly (57).

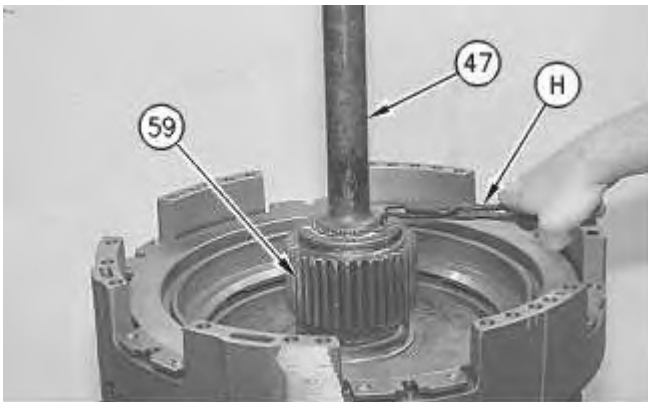


Illustration 38

g00646235

48. Use Tooling (H) to remove the retaining ring from center shaft (47). Remove sun gear (59).

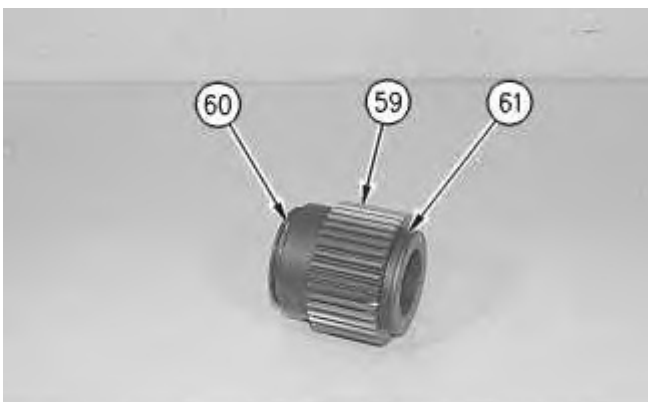


Illustration 39

g00646236

49. Remove O-ring seal (60) and metal seal ring (61) from sun gear (59).

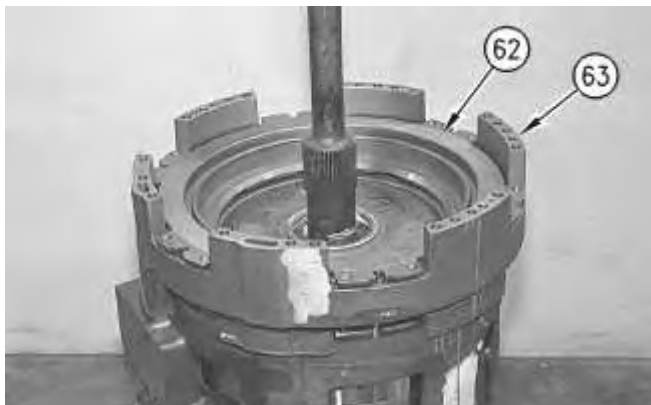


Illustration 40

g00646237

50. Remove clutch piston (62) from clutch housing (63).

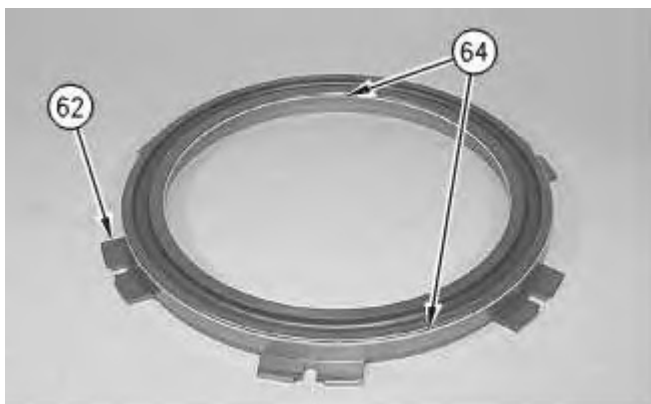


Illustration 41

g00646238

51. Remove seal rings (64) from clutch piston (62).

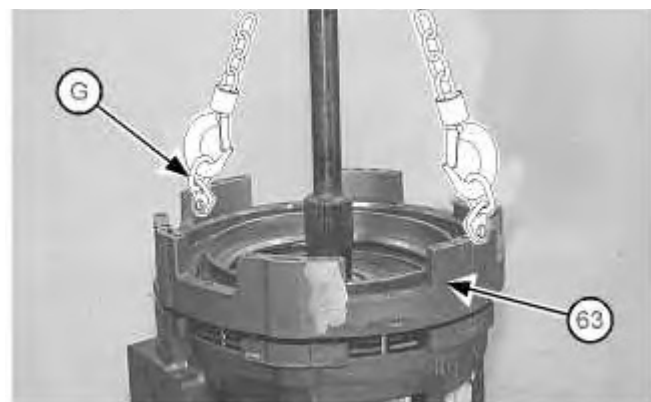


Illustration 42

g01021267

52. Attach Tooling (G) to clutch housing (63). Attach Tooling (G) and a suitable lifting device to clutch housing (63) and remove clutch housing (63). The weight of clutch housing (63) is approximately 39 kg (85 lb).
-



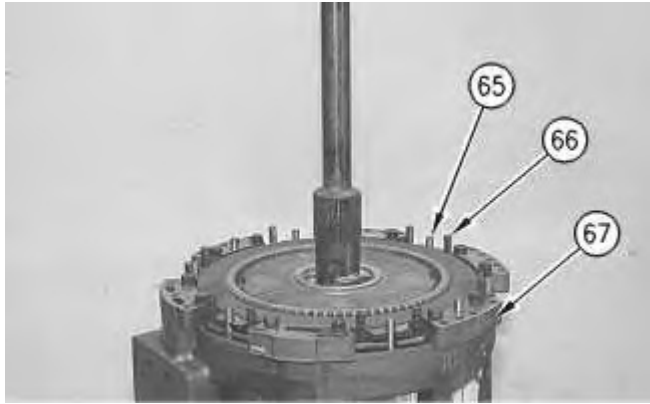


Illustration 43

g00646241

53. Remove dowels (65) and springs (66) from clutch housing assembly (67).

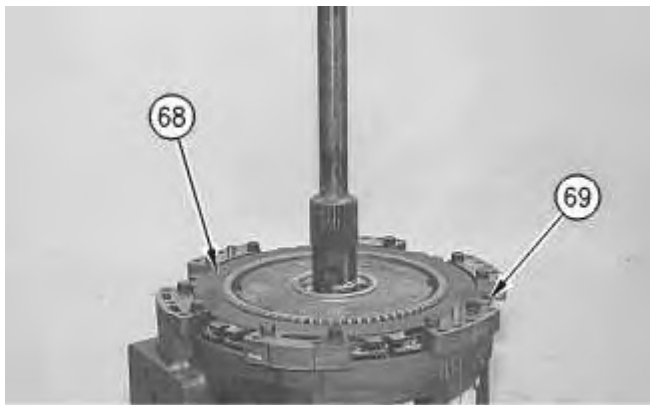


Illustration 44

g00646242

54. Remove friction discs (68) and clutch plate (69).

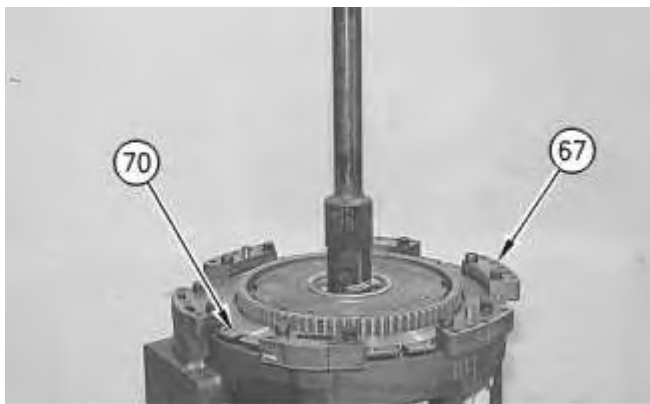


Illustration 45

g00646243

55. Remove clutch piston (70) from clutch housing assembly (67).

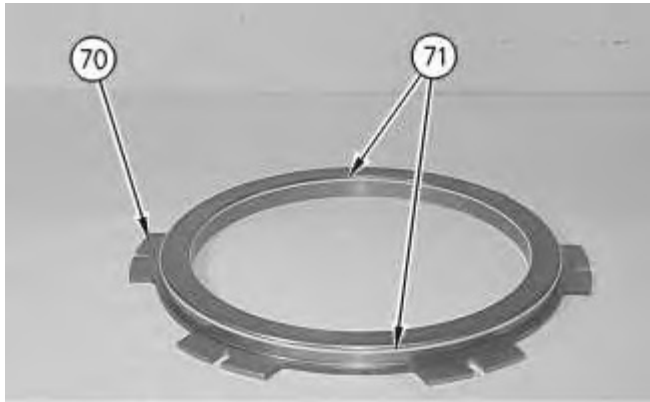


Illustration 46

g00646244

56. Remove seal rings (71) from clutch piston (70).

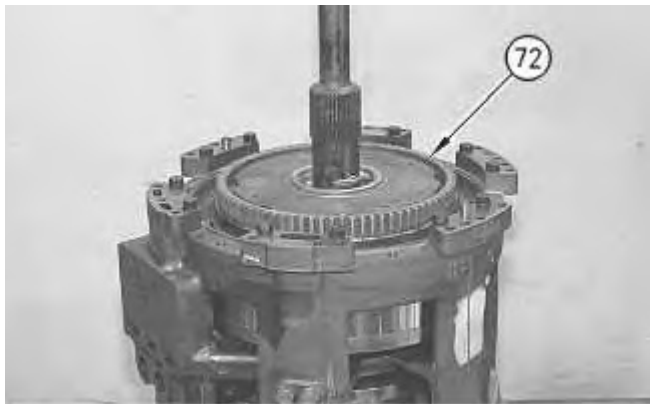


Illustration 47

g00646245

57. Remove ring gear (72).

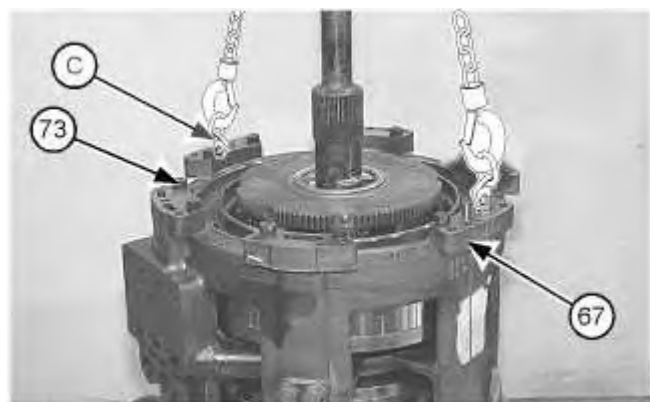


Illustration 48

g01021271

58. Attach Tooling (C) and a suitable lifting device to clutch housing assembly (67).
59. Remove bolts (73) and the washers. Remove clutch housing assembly (67). The weight of clutch housing assembly (67) is approximately 30 kg (66 lb).



Illustration 49

g00646247

60. Remove dowels (74) from clutch housing assembly (67).

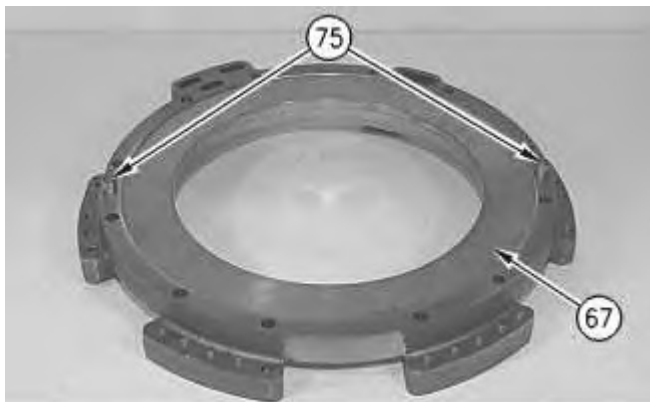


Illustration 50

g00646248

61. Turn over clutch housing assembly (67). Remove two dowels (75).

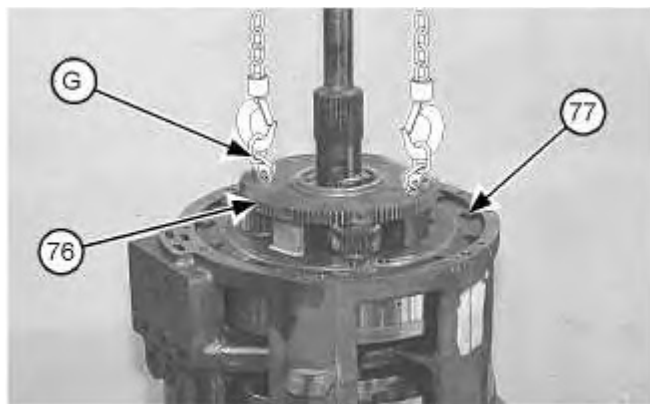


Illustration 51

g01021275

62. Attach Tooling (G) to planetary carrier (76). Position a suitable lifting device to Tooling (G). Secure the suitable lifting device to a hoist.

63. Remove bolts (77) and the washers. Remove planetary carrier (76). The weight of planetary carrier (76) is approximately 23 kg (50 lb).

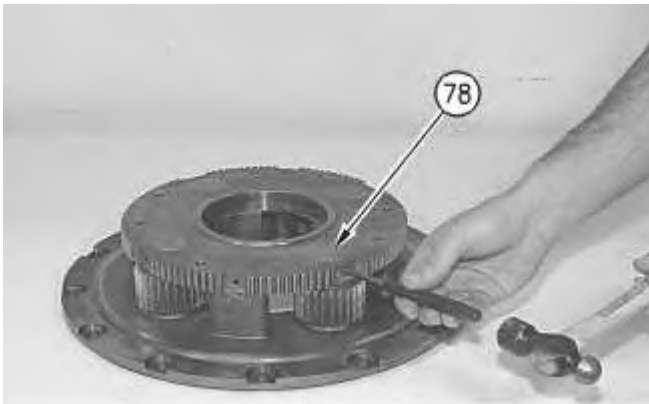


Illustration 52

g00646252

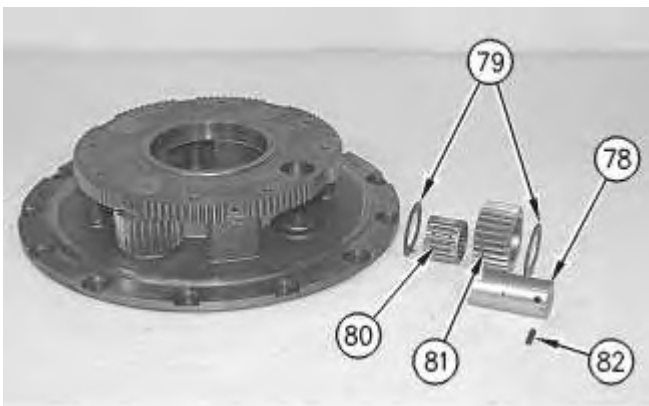
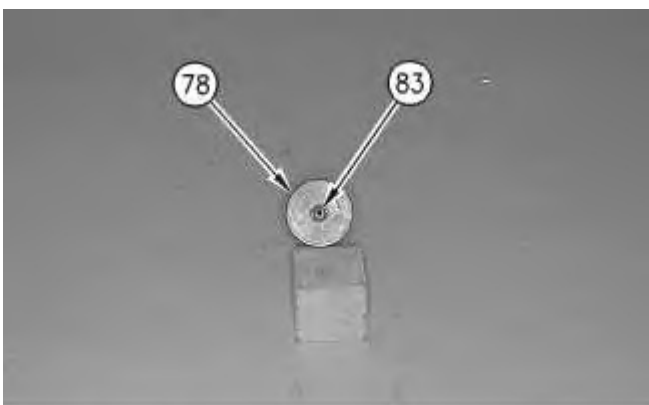


Illustration 53

g00646253

64. Use a punch in order to drive spring pin (82) into shaft assembly (78). Remove shaft assembly (78) from the planetary carrier.
65. Remove spring pin (82) from shaft assembly (78).
66. Remove gear (81), bearing (80), and thrust discs (79). Repeat steps 64 through 66 for the remaining three shaft assemblies.



67. Remove orifice (83) from each shaft (78).

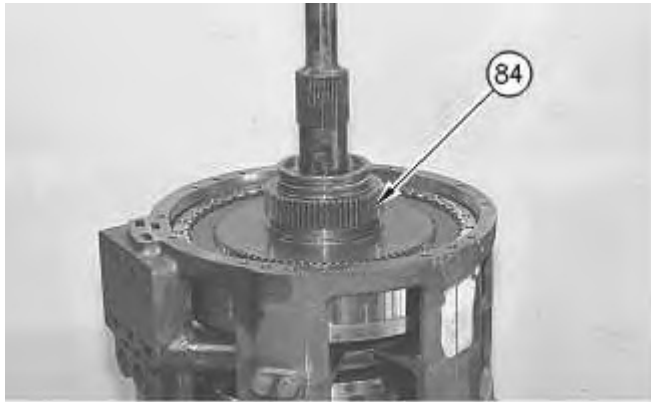


Illustration 55

68. Remove sun gear (84).

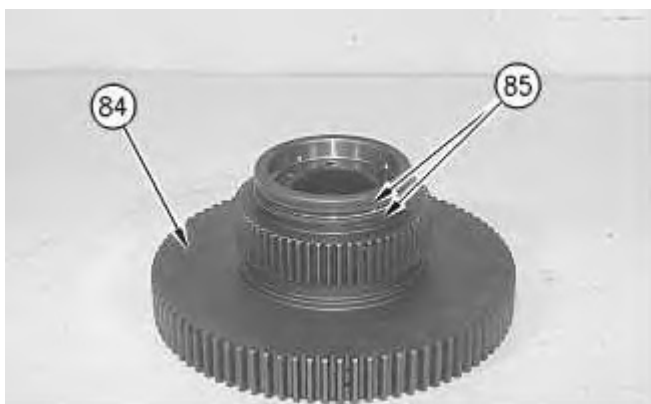


Illustration 56

69. Remove metal ring seals (85) from sun gear (84).

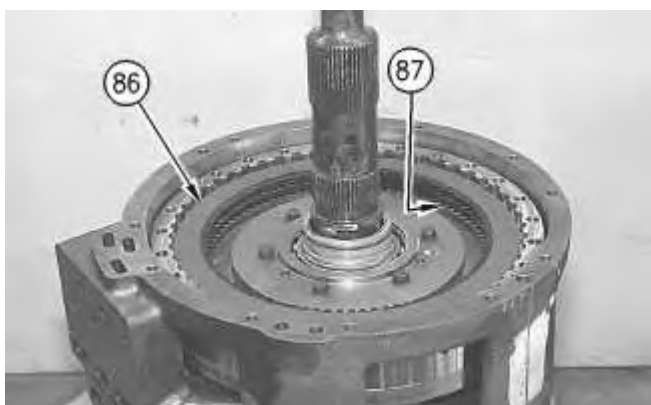


Illustration 57

70. Remove friction discs (86) and clutch plates (87).

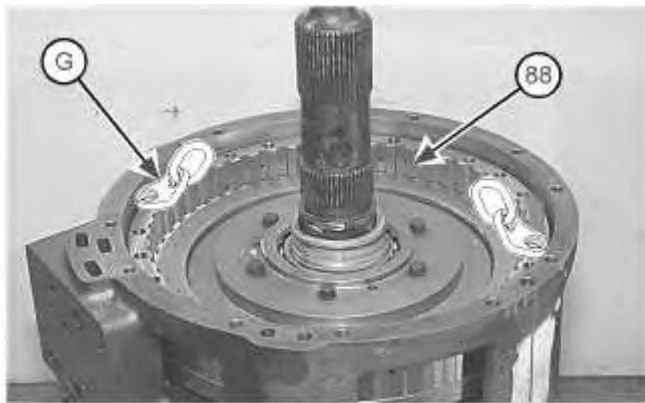


Illustration 58

g01021280

71. Attach Tooling (G) to housing (88). Use Tooling (G) to lift housing (88) by hand.

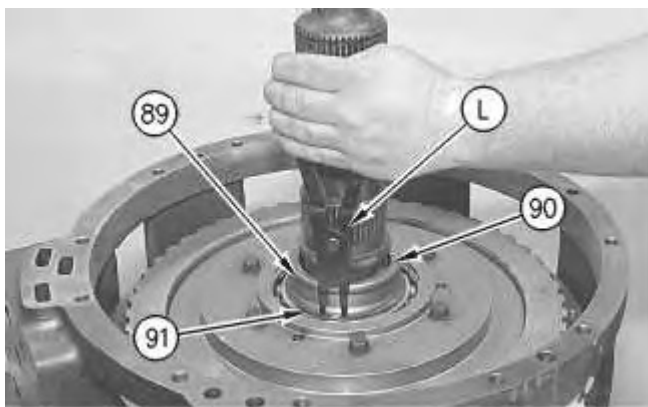


Illustration 59

g00646261

72. Remove seal ring (89) from ring carrier assembly (90).

73. Use Tool (L) to remove retaining ring (91) from ring carrier assembly (90).

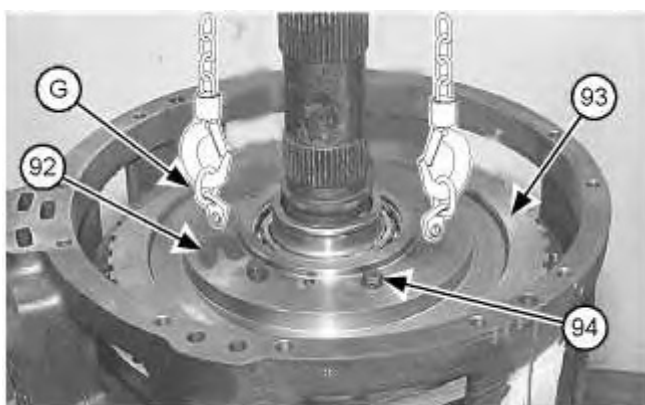


Illustration 60

g01021282

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