

Product: VIBRATORY COMPACTOR

Model: CS-34 VIBRATORY COMPACTOR 514

Configuration: CP34, CS34 Vibratory Soil Compactor 51400001-UP (MACHINE) POWERED BY C3.4 Engine

## Disassembly and Assembly CP34 and CS34 Vibratory Soil Compactors Machine Systems

Media Number -UENR6552-05

Publication Date -01/08/2015

Date Updated -30/11/2017

i06891630

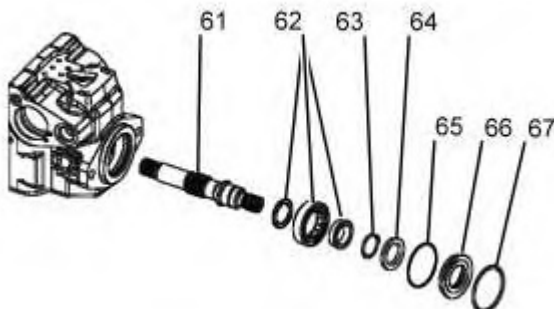
# Piston Pump (Axle Propel and Drum Propel) - Assemble

SMCS - 5070-016

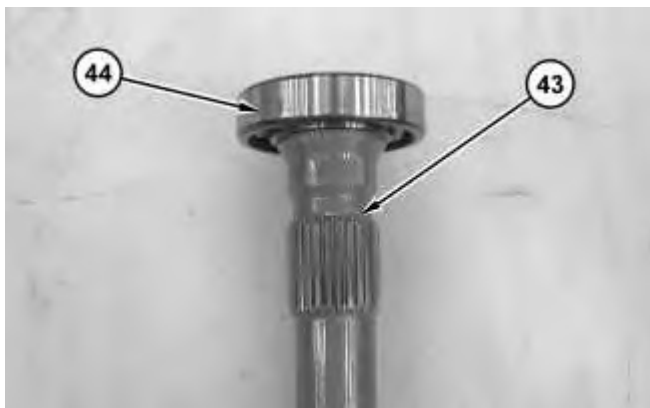
## Assembly Procedure

Table 1

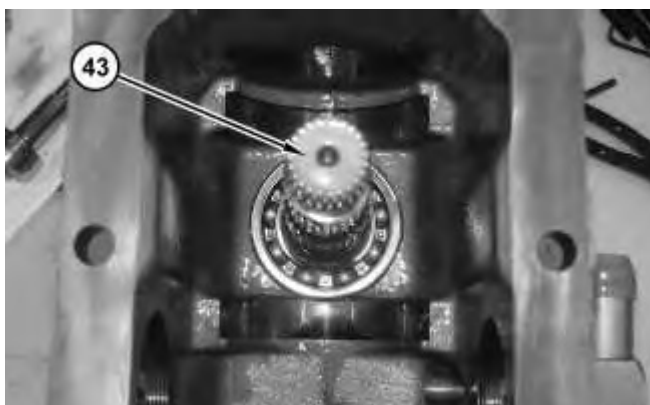
Required Tools			
Tool	Part Number	Part Description	Qty
A	437-3776	Fixture Assembly	1
	1U-9127	Adapter Plate	1
	1U-5750	Engine Stand	1
D	0S-1627	Bolt	1
	2J-3506	Full Nut	1
	8T-4122	Hard Washer	2
E	1P-1859	Retaining Ring Pliers	1



1. Raise the temperature of bearing (62).
2. Install bearing (62).
3. Use Tooling (E) to install retaining ring (63).
4. Install shaft assembly (61) and seal (64).
5. Install O-ring seal (65).
6. Install plate (66).
7. Install retaining ring (67).



8. Raise the temperature of bearing (44).
9. Install bearing (44) onto shaft (43).



10. Install shaft (43).
-

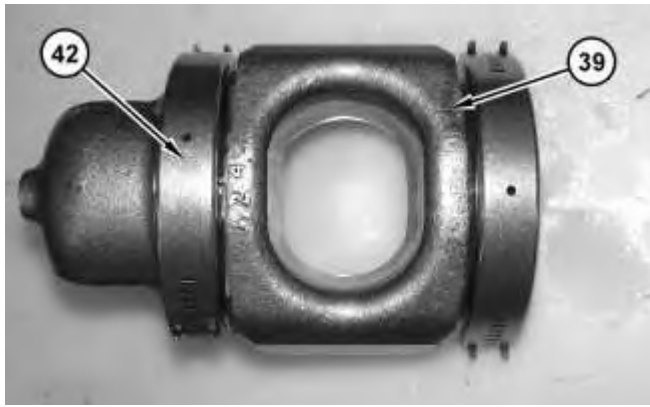


Illustration 4

g03871836

11. Install bearings (42) onto swashplate (39).

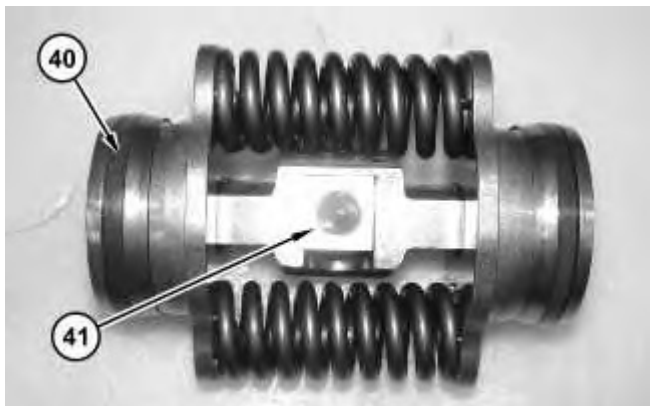


Illustration 5

g03871833

12. Install seals (40) and block (41).

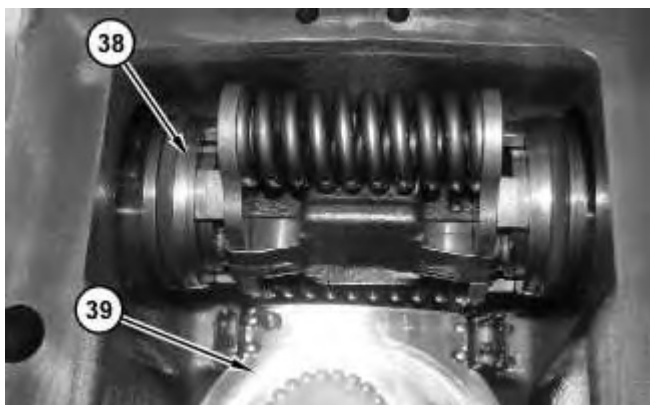


Illustration 6

g03871828

13. Install servo piston assembly (38) and swashplate (39).

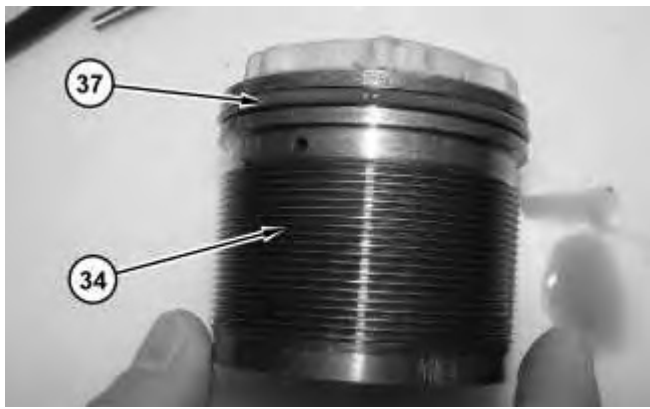


Illustration 7

g03871825

14. Install O-ring seal (37) onto servo cylinder (34).

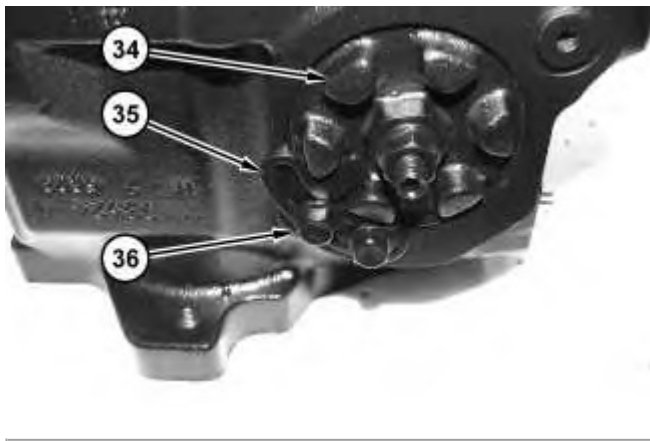
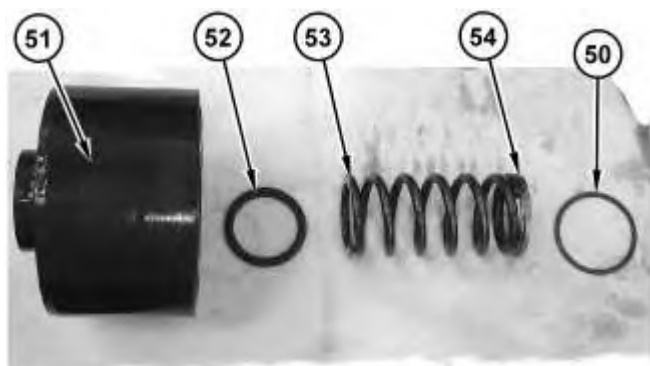
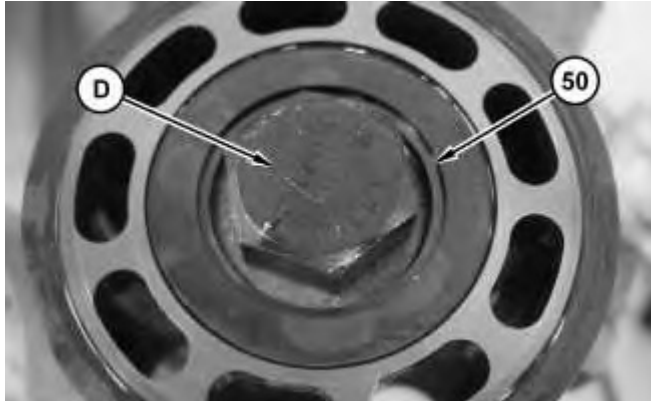


Illustration 8

g03871809

15. Install servo cylinder (34). Apply slight pressure to the piston assembly.
16. Repeat Step 15 for the opposite side.
17. Use a suitable measuring device to center the swashplate. Measure the distance that is from the machined face of the housing to both sides of the swashplate. Adjust servo cylinders (34) to achieve the same distance to the swashplate.
18. Install retainer (35), and bolts (36).





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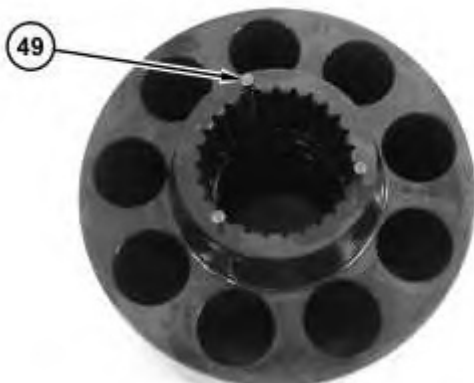
Illustration 10



**Improper assembly of parts that are spring loaded can cause bodily injury.**

**To prevent possible injury, follow the established assembly procedure and wear protective equipment.**

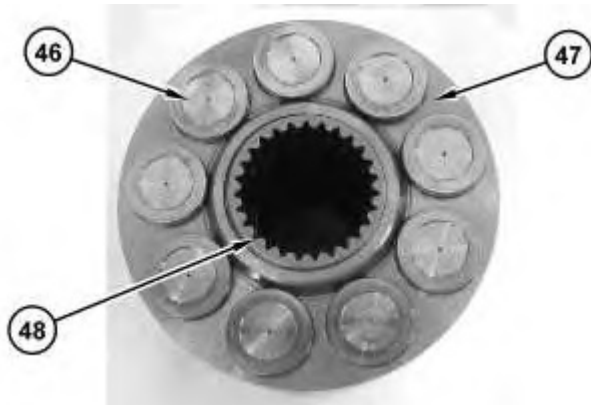
- 
19. Install washer (52), spring (53), and retainer (54) into barrel (51).
  20. Use Tooling (D) to install retaining ring (50).



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Illustration 11

21. Install pins (49).
-

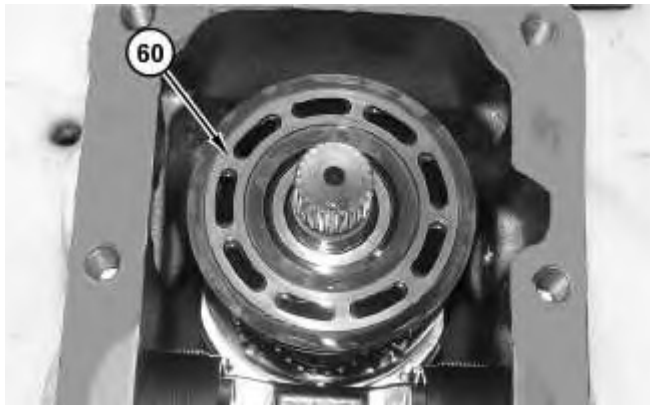


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Illustration 12

g03871843

22. Install bearing (48), retainer (47), and pistons (46).

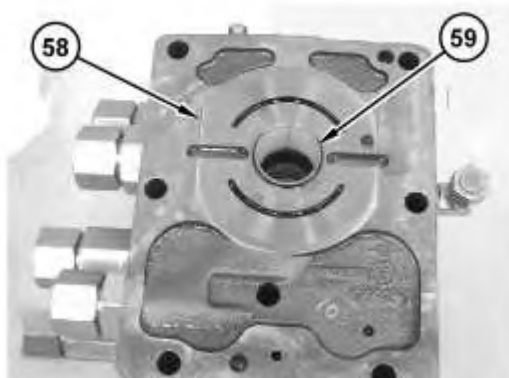


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Illustration 13

g03871856

23. Install barrel assembly (60).
24. Repeat Steps 19 through Steps 22 for barrel assembly (60).



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Illustration 14

g03871854

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Illustration 15

g03871853

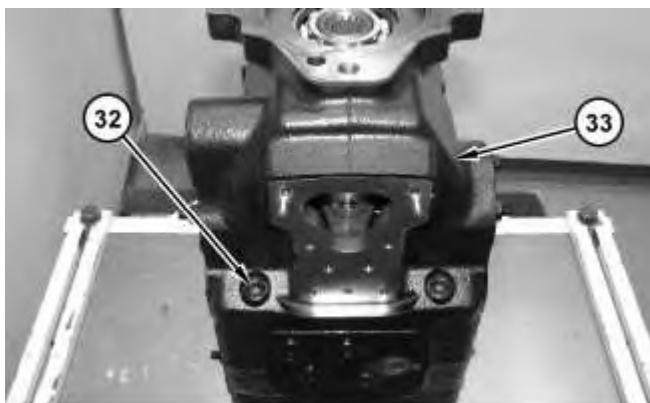
25. Install bearings (59).
26. Install port plate (56) and gasket (55).
27. Install head (58).
28. Install coupling (57).



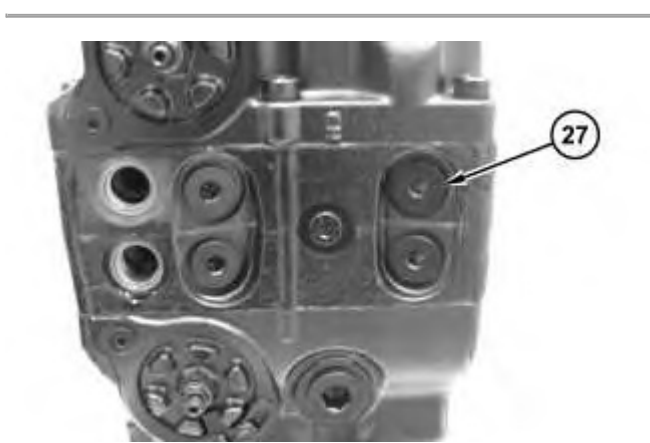
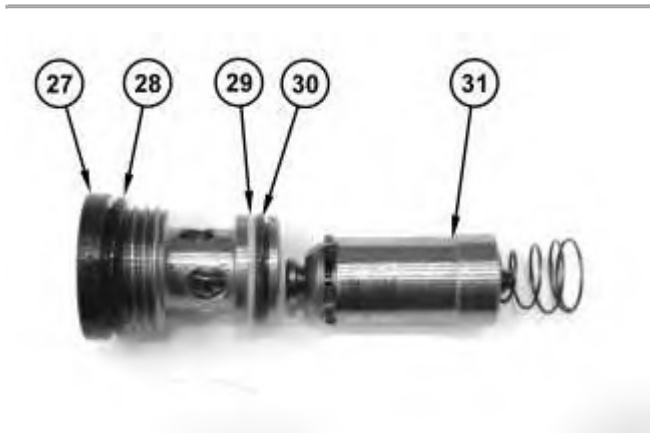
Illustration 16

g03871842

29. Repeat Steps 16 through Steps 22 for barrel assembly (45).
30. Install barrel assembly (45).



31. Install housing (33) and bolts (32). Tighten bolts (32) to a torque of  $110 \pm 10$  N·m ( $81 \pm 7$  lb ft).

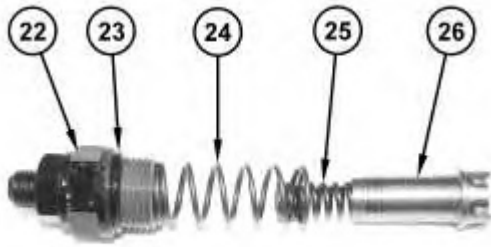


**Improper assembly of parts that are spring loaded can cause bodily injury.**

**To prevent possible injury, follow the established assembly procedure and wear protective equipment.**

- 
32. Install crossover relief valves (31), back up rings (29), O-ring seals (30), O-ring seals (28), and plugs (27) into the head. Tighten plugs (27) to torque of  $80 \pm 10$  N·m ( $60 \pm 7$  lb ft).
-

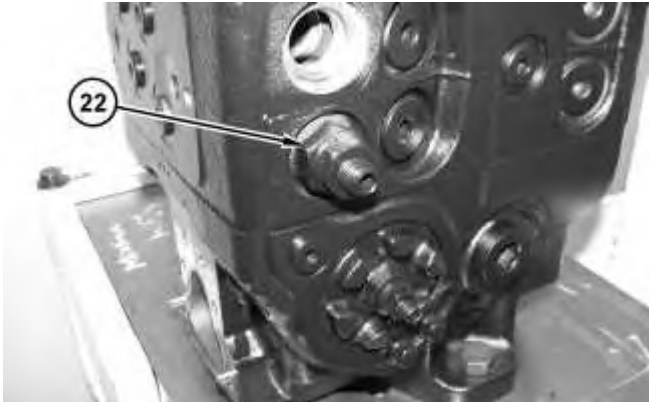




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Illustration 20

g03871746



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Illustration 21

g03871742

 **WARNING**

**Improper assembly of parts that are spring loaded can cause bodily injury.**

**To prevent possible injury, follow the established assembly procedure and wear protective equipment.**

- 
33. Install poppet (26), spring (25), spring (24), O-ring seal (23), and adjustment screw (22).
-

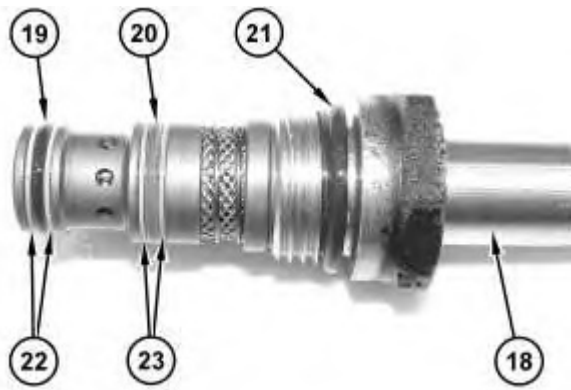


Illustration 22

g03871729

34. Install O-ring seal (19), back up rings (22), O-ring seal (20), back up rings (23), and O-ring seal (21) onto cartridge (18).



Illustration 23

g03871723

35. Install cartridge (18). Tighten cartridge (18) to a torque of 45 N·m (33 lb ft).

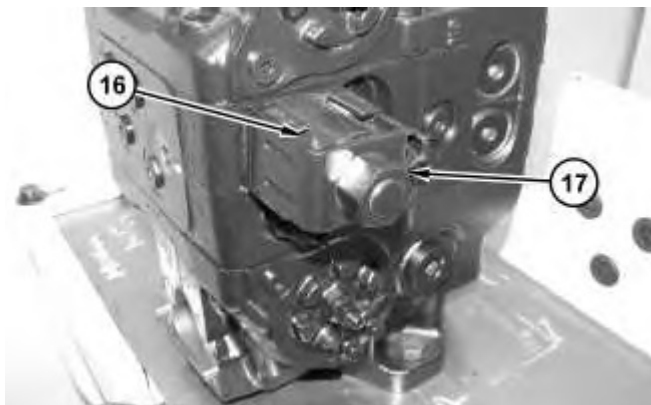


Illustration 24

g03871717

36. Install coil (16) and nut (17). Tighten nut (17) to a torque of 9 N·m (80 lb in).



Illustration 25

g03870718

37. Install feedback link (15) and gasket (14). Tighten feedback link (15) to a torque of 25 N·m (220 lb in).



Illustration 26

g03870711

38. Install feedback link (13) and gasket (12). Tighten feedback link (13) to a torque of 25 N·m (220 lb in).

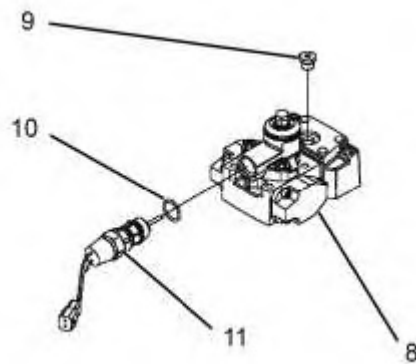


Illustration 27

g03870666

39. Install plug assembly (9), neutral safety switch (11), and o-ring seal (10) onto servo valve (8).

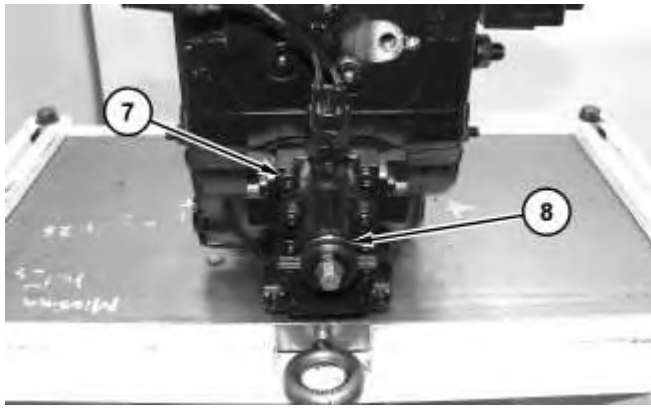


Illustration 28

g03870659

40. Install servo valve (8) and bolts (7). Tighten bolts (7) to a torque of  $13 \pm 1$  N·m ( $115 \pm 9$  lb in).

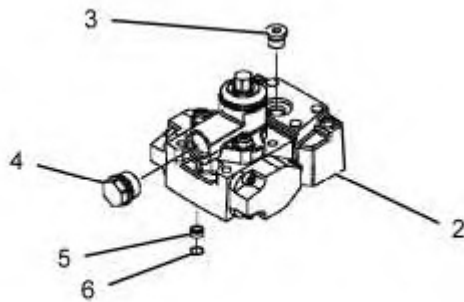


Illustration 29

g03869001

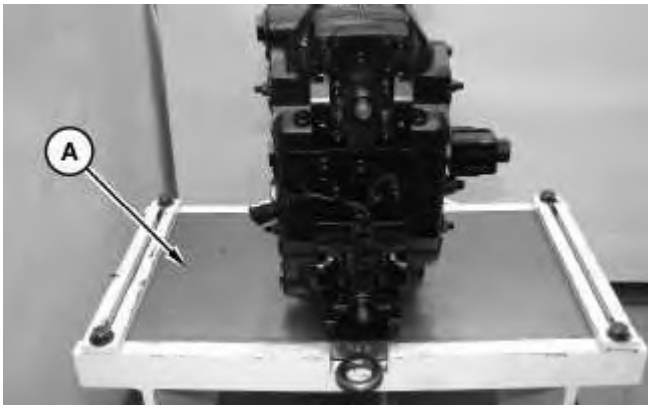
41. Install screen (5) and retaining ring (6) into servo valve (2).



Illustration 30

g03868952

42. Install servo valve (2) and bolts (1). Tighten bolts (1) to a torque of  $13 \pm 1$  N·m ( $115 \pm 9$  lb in).



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Illustration 31

g03868903

43. Remove piston pump from Tooling (A) or a suitable workbench.
44. Bench test the pump before installation into the machine.

**End By:**

- a. Install the piston pump.
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Product: VIBRATORY COMPACTOR

Model: CS-34 VIBRATORY COMPACTOR 514

Configuration: CP34, CS34 Vibratory Soil Compactor 51400001-UP (MACHINE) POWERED BY C3.4 Engine

## Disassembly and Assembly CP34 and CS34 Vibratory Soil Compactors Machine Systems

Media Number -UENR6552-05

Publication Date -01/08/2015

Date Updated -30/11/2017

i06735388

## Piston Pump (Vibratory) - Disassemble

SMCS - 5070-015; 5652-015

### Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1P-0510	Driver Gp	1
B	8H-0663	Bearing Puller Gp	1
C	1P-0074	Slide Hammer Puller Gp	1
D	147-3497	Spring Compressor	1

#### Start By:

- a. Remove the piston pump.

**Note:** Cleanliness is an important factor. Before you begin the disassembly procedure, the exterior of the components should be thoroughly cleaned. Perform disassembly procedures on a clean work surface. Keep components covered and protected always.

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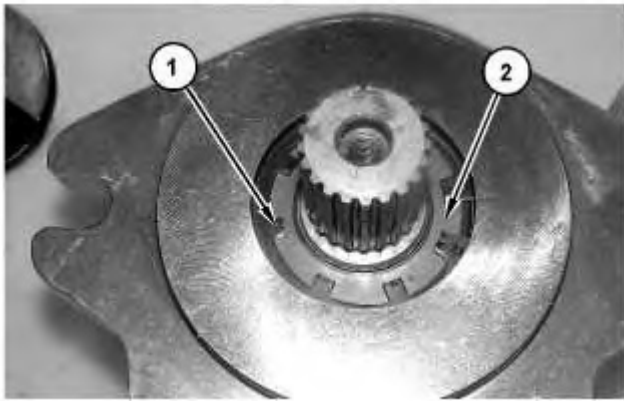


Illustration 1

g06097326

1. Remove retaining ring (1).
2. Remove lip seal (2).

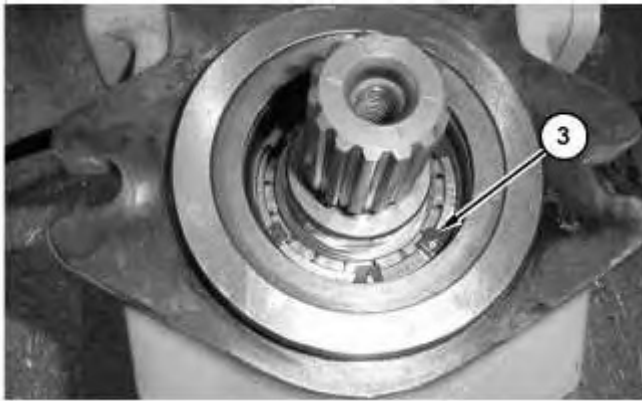


Illustration 2

g06097402

3. Remove retaining ring (3).

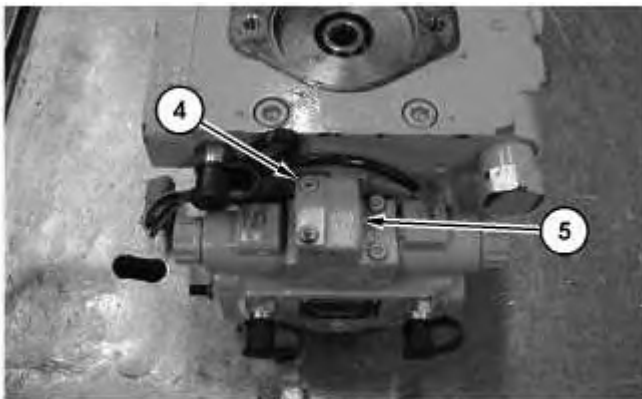


Illustration 3

g06097418

4. Remove bolts (4), valve group (5), and the gasket.

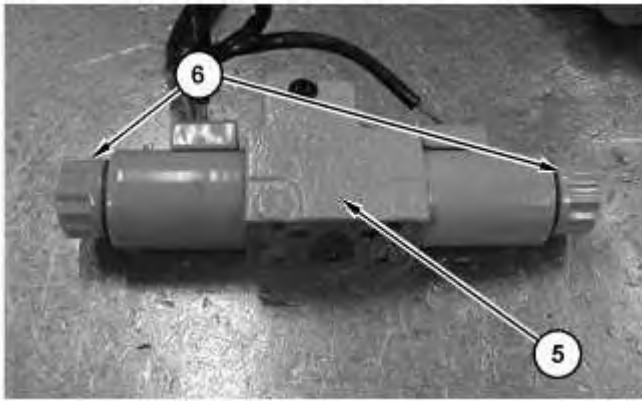


Illustration 4

g06097453

5. Remove nuts (6) and the O-ring seals from valve assembly (5).

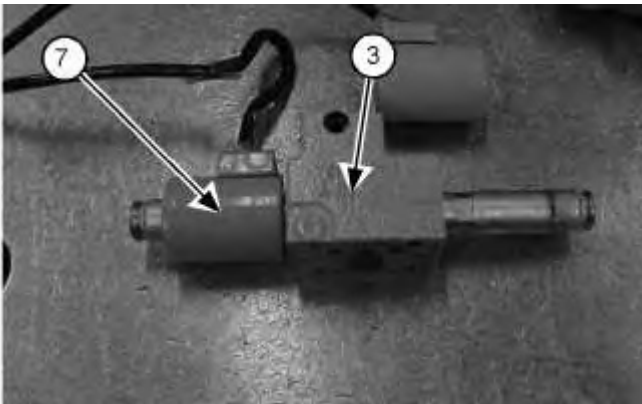


Illustration 5

g01018811

6. Remove coils (7) from valve assembly (3).

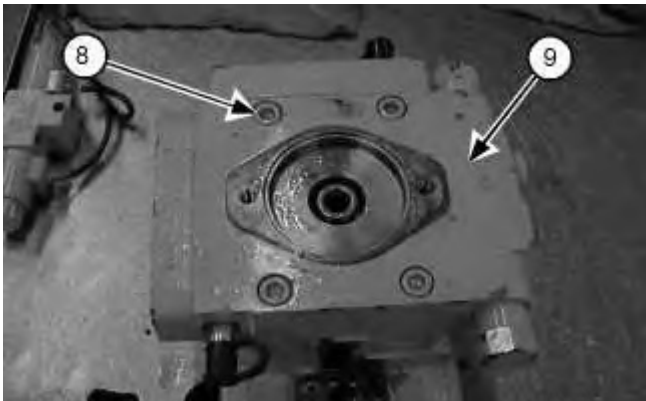


Illustration 6

g01018812

 **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.**

---

7. Remove bolts (8) and head (9).

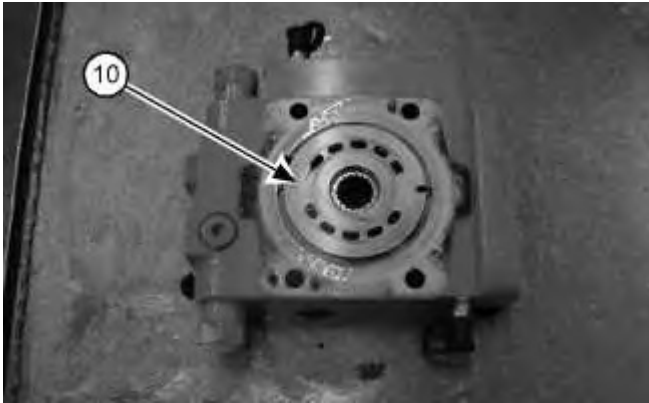


Illustration 7

g01018813

8. Remove plate (10).

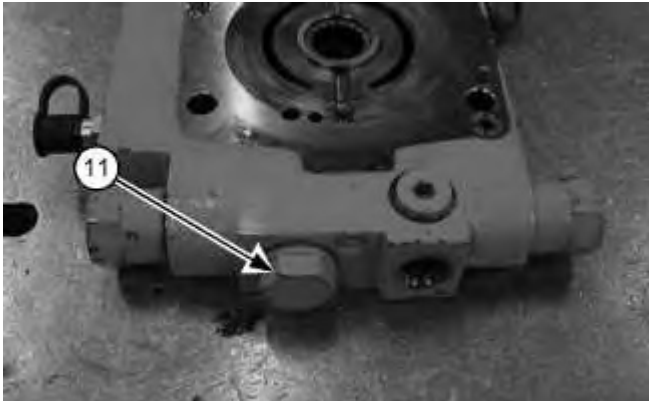


Illustration 8

g01018814

9. Remove plug (11).
-

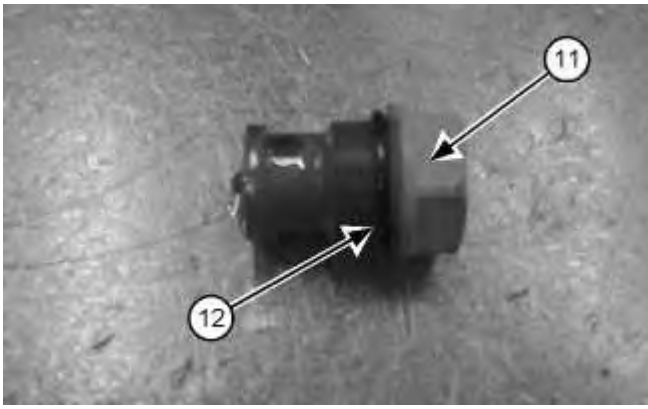


Illustration 9

g01018815

10. Remove O-ring seal (12) from plug (11).

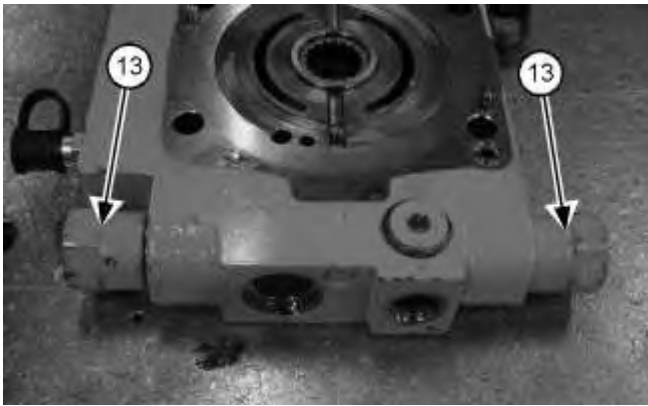


Illustration 10

g01018816

**! 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.**

11. Remove plugs (13).

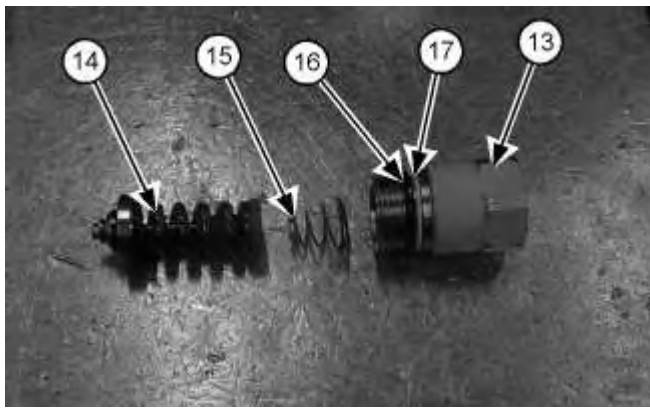


Illustration 11

g01018817

12. Remove backup ring (17), O-ring seal (16), spring (15), and spring (14) from plug (13).

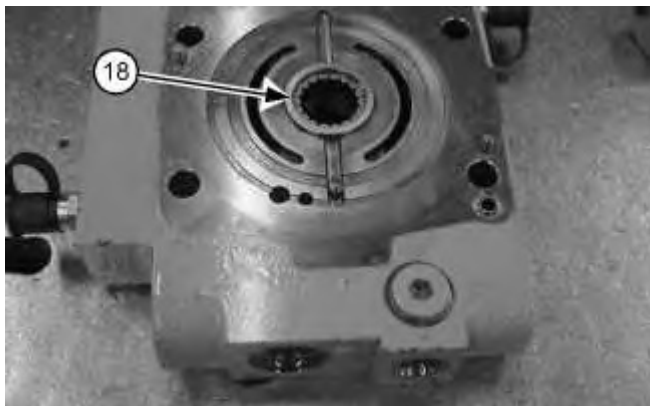


Illustration 12

g01018818

13. Use Tooling (C) to remove bearing (18).

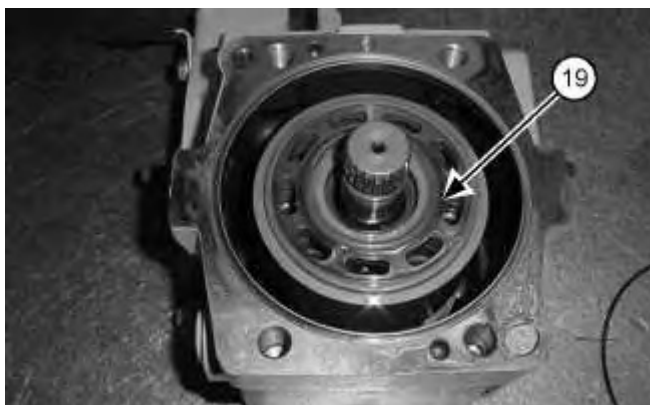


Illustration 13

g01018819

14. Remove barrel (19).

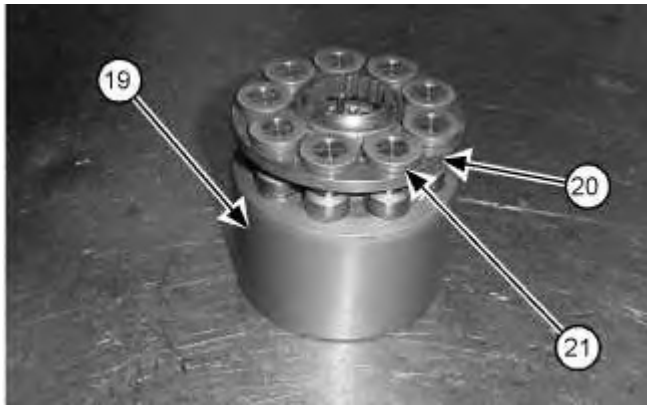


Illustration 14

g01018820

15. Remove pistons (21) and plate (29) from barrel (19).

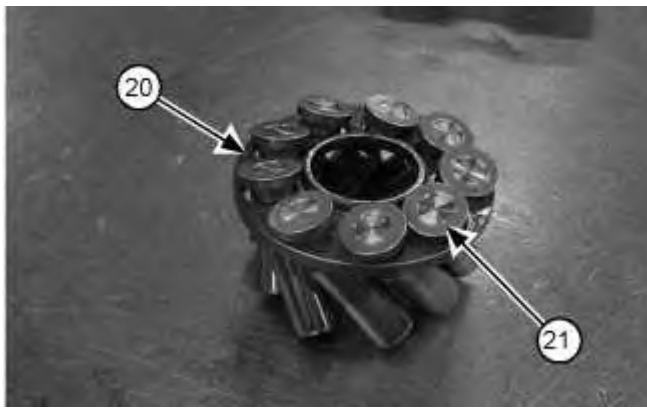


Illustration 15

g01018821

16. Remove piston assemblies (21) from plate (20).

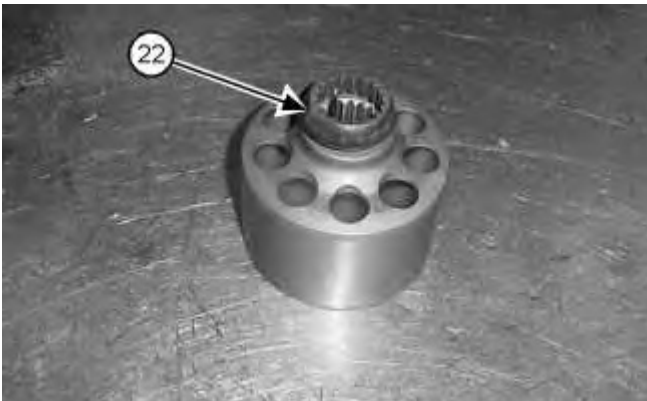


Illustration 16

g01018823

17. Remove retainer (22).



Illustration 17

g01018824

**! 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.**

18. Use Tooling (A) and a suitable press to remove retaining ring (23).

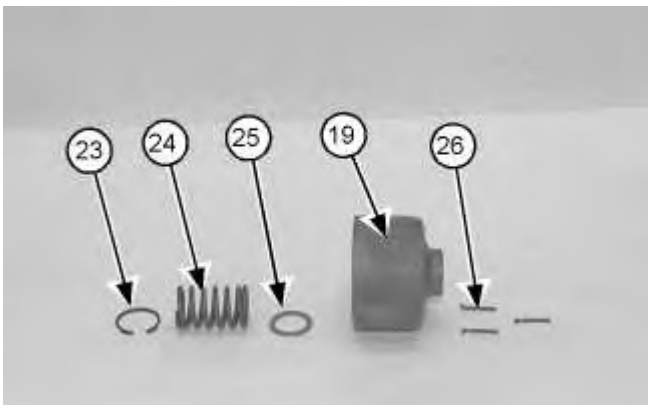


Illustration 18

g01018825

19. Remove retaining ring (23), spring (24), washer (25), and pins (26) from barrel (19).

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