Model: CP-563E VIBRATORY COMPACTOR BWE

Configuration: CS-563E CP-563E Vibratory Compactor BWE00001-UP (MACHINE) POWERED BY 3056E Engine

#### **Disassembly and Assembly**

# CP-563E, CP-573E, CS-563E, CS-573E and CS-583E Paving Compactors Machine Systems

Media Number -KENR3604-04

Publication Date -01/09/2008

Date Updated -22/09/2008

i01905305

# Piston Pump (Vibratory) - Disassemble - Variable Frequency Pump

**SMCS -** 5070-015; 5652-015

## **Disassembly Procedure**

Table 1

Required Tools				
Tool	Part Number	Part Description	Qty	
A	147-3497	Spring Compressor	1	

#### **Start By:**

A. Remove the vibratory pump. Refer to Disassembly and Assembly, "Piston Pump (Vibratory) - Remove".

**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.

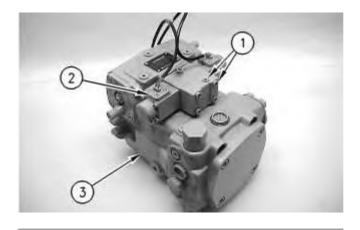


Illustration 1 g00992114

1. Remove bolts (1). Remove the cover, valve assembly (2), and the seals from housing (3).

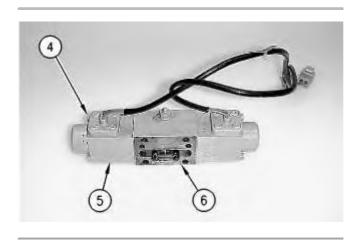


Illustration 2 g00992115

- 2. Use the following procedure and disassemble valve assembly (2) .
  - a. Remove bolts (4) and coil (5) from both sides of valve body (6).

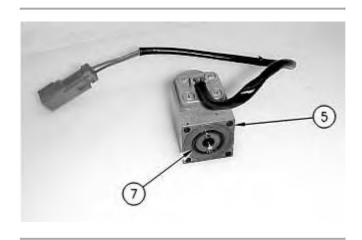


Illustration 3 g00992116

b. Remove O-ring seal (7) from coils (5).

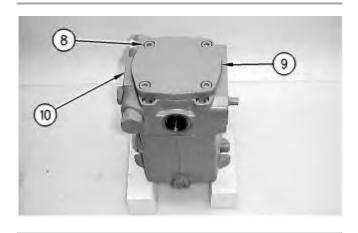


Illustration 4 g00992065

3. Remove bolts (8). Remove cover (9) from head assembly (10) .

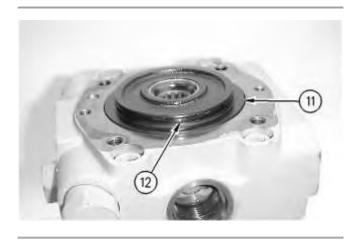


Illustration 5 g00992096

4. Remove O-ring seal (12) from flange (11).

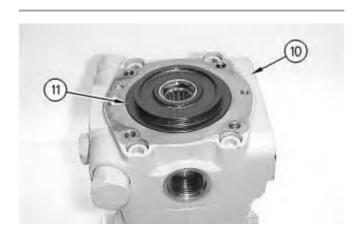


Illustration 6 g00992108

5. Remove flange (11) from head assembly (10).



Illustration 7 g00992099

6. Remove seal (13) from flange (11).

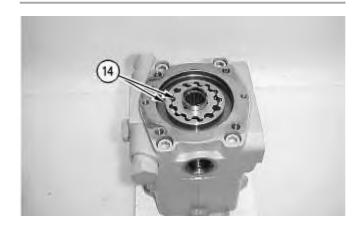


Illustration 8 g00992075

**Note:** Mark the orientation of charge pump (14) for assembly purposes.

7. Remove charge pump (14).

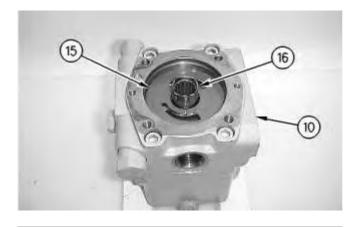


Illustration 9 g00992086

**Note:** Mark the orientation of plate (15) for assembly purposes.

8. Remove plate (15) and shaft (16) from head assembly (10).

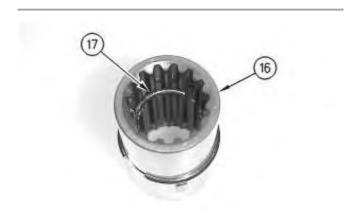


Illustration 10 g00992104

9. Remove retaining ring (17) from shaft (16).

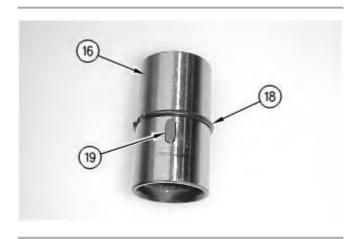


Illustration 11 g00992077

10. Remove retaining ring (18) and woodruff key (19) from shaft (16) .

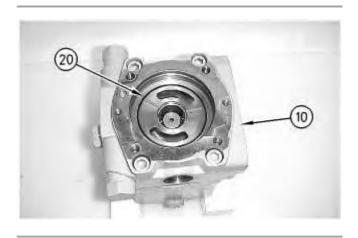


Illustration 12 g00992087

11. Remove seal (20) from head assembly (10).

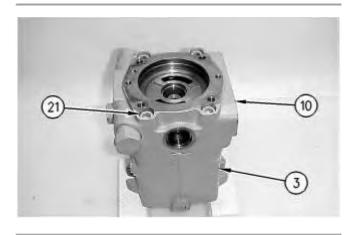


Illustration 13 g00992105

12. Remove bolts (21). Remove head assembly (10) from housing (3).



Illustration 14 g00992097

**Note:** Mark the orientation of port plate (22) for assembly purposes.

13. Remove port plate (22) from head assembly (10).



Illustration 15

g00992066

14. Remove O-ring seal (23) and pin (24) from head assembly (10).

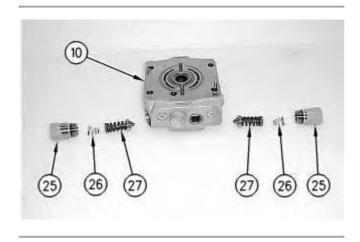


Illustration 16

g00992090



Sudden release of spring force can cause injury.

To prevent the possibility of injury, follow the procedure to relieve the spring pressure.

15. Remove plugs (25), springs (26) and relief valves (27) from head assembly (10).

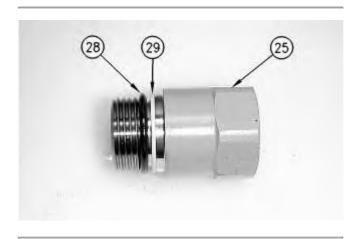


Illustration 17 g00992069

16. Remove O-ring seal (28) and backup ring (29) from plugs (25).

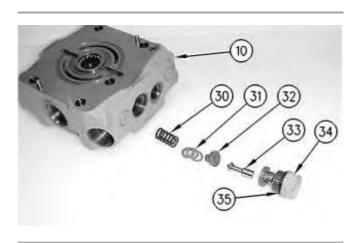


Illustration 18 g00992083

- 17. Remove screw (34), poppet valve (33), spring retainer (32), shims (31), and spring (30) from head assembly (10).
- 18. Remove O-ring seal (35) from screw (34).

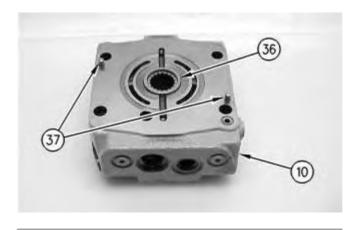


Illustration 19 g00992093

- 19. Remove bearing (36) from head assembly (10).
- 20. Remove pins (37) from head assembly (10).

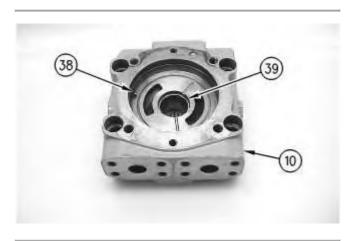


Illustration 20 g00992106

21. Remove dowel (38) and bushing (39) from head assembly (10).

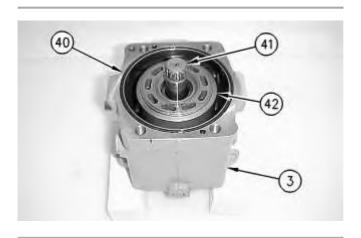


Illustration 21 g00992081

- 22. Remove O-ring seal (40) from housing (3).
- 23. Remove barrel assembly (42) from shaft (41) and housing (3).

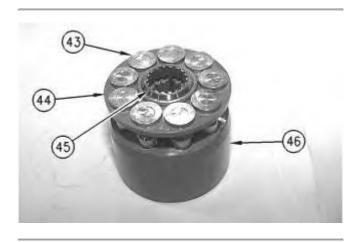


Illustration 22 g00992079

24. Use the following procedure and disassemble barrel assembly (42).

**Note:** Mark the orientation of pistons (43) and barrel (46) for assembly purposes.

- a. Remove pistons (43) and retainer plate (44) from barrel (46).
- b. Remove rotating ball (45) from barrel (46).

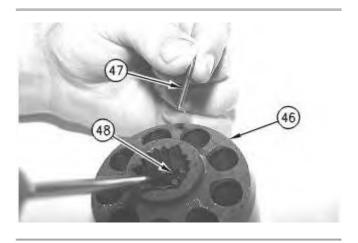


Illustration 23 g00992107

c. Use a screwdriver in order to push on spacer (48). Compress the spring and remove three pins (47) from the grooves in barrel (46).

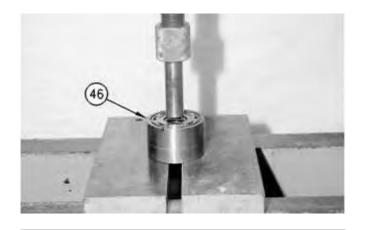


Illustration 24 g00992076

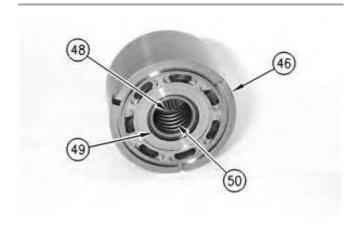


Illustration 25 g00992101

# **WARNING**

Sudden release of spring force can cause injury.

To prevent the possibility of injury, follow the procedure to relieve the spring pressure.

- d. Position barrel (46) in a press. Install a suitable piece of square steel stock against spring (50). Use the press and apply slight compression on spring (50). Remove retaining ring (49) and slowly release the spring compression.
- e. Remove spring (50) and spacer (48) from barrel (46).

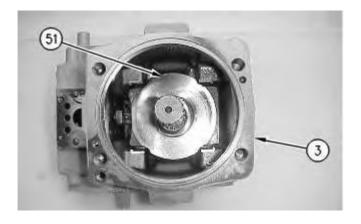


Illustration 26 g00992067

25. Remove body assembly (51) from housing (3).

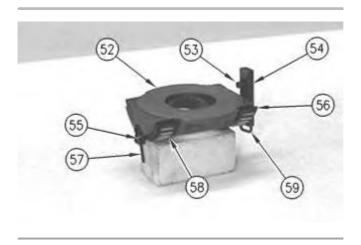


Illustration 27 g00992064

- 26. Use the following procedure and disassemble body assembly (51).
  - a. Remove wire (57) and cage (58) from body (52).
  - b. Remove pin (53), roller (54), cage (56) and wire (59) from body (52).
  - c. Remove roller (55) from both of the cages.

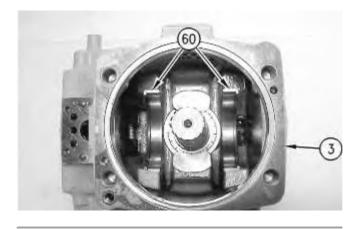


Illustration 28 g00992068

### 27. Remove bearings (60) from housing (3).

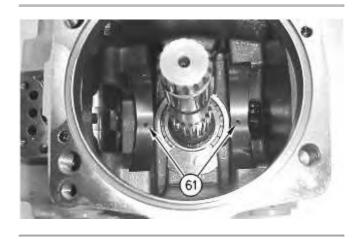


Illustration 29 g00992110

#### 28. Remove pins (61), if necessary.

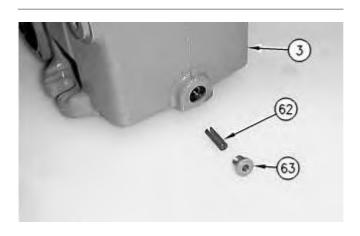


Illustration 30 g00992078

29. Remove plug (63) and pin (62) from housing (3).

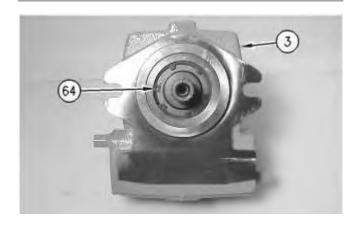


Illustration 31 g00992095

30. Remove retaining ring (64) from housing (3).

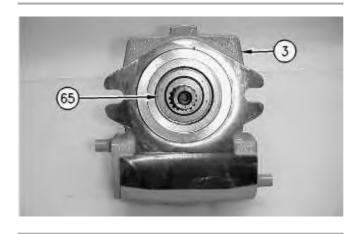


Illustration 32 g00992073

31. Remove seal (65) from housing (3).

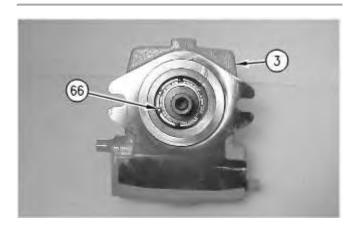


Illustration 33 g00992084

#### 32. Remove retaining ring (66) from housing (3).

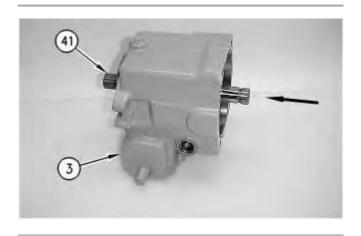


Illustration 34 g00992103

#### 33. Remove shaft (41) from housing (3).

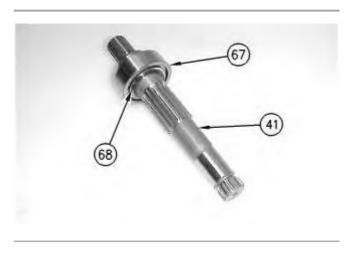


Illustration 35 g00992082

34. Remove retaining ring (68) and bearing (67) from shaft (41) .

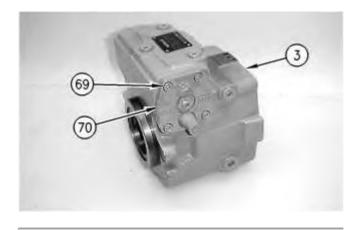


Illustration 36 g00992071

35. Remove bolts (69). Remove cover (70) and the piston assembly from housing (3).

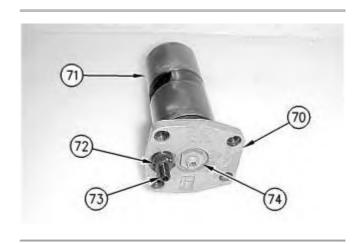


Illustration 37 g00992102

**Note:** Measure the distance and record the distance from the end of limiting screw (73) to nut (72) for assembly purposes.

36. Loosen nut (72). Remove limiting screw (73) from cover (70).

**Note:** Measure the distance and record the distance from the end of piston assembly (71) to nut (74) for assembly purposes.

37. Remove nut (74). Remove piston assembly (71) from cover (70).

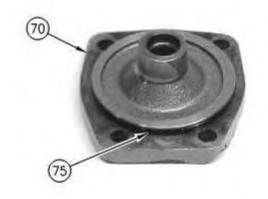


Illustration 38 g00992074

38. Remove O-ring seal (75) from cover (70).

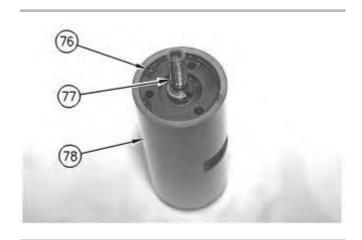


Illustration 39 g00992100

- 39. Use the following procedure and disassemble piston assembly (71).
  - a. Remove retaining ring (76). Remove rod (77) and the spring from piston (78).

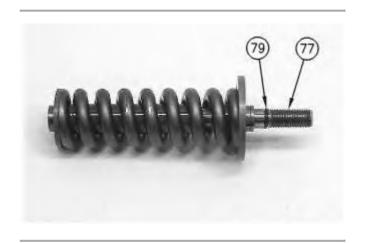


Illustration 40 g00992091

b. Remove O-ring seal (79) from rod (77).

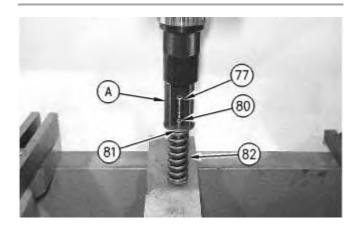


Illustration 41 g00992070

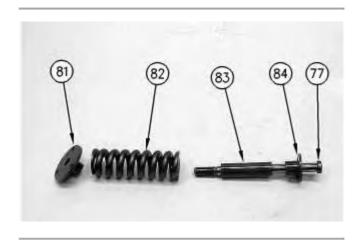


Illustration 42 g00992088

# **WARNING**

Sudden release of spring force can cause injury.

To prevent the possibility of injury, follow the procedure to relieve the spring pressure.

- c. Position Tooling (A), rod (83), and spring (82) in a press, as shown. Put slight tension on spring collar (81). Remove spring retainers (80) and slowly release the spring tension.
- d. Remove spring collar (81), spring (82), spacer (83), and spring collar (84) from rod (77).

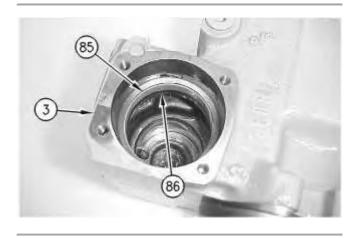


Illustration 43 g00992089

40. Remove two guide rings (85) and two seal rings (86) from housing (3).

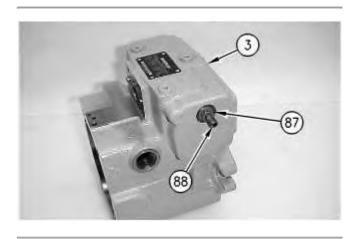


Illustration 44 g00992072

**Note:** Measure the distance and record the distance from the end of limiting screw (88) to nut (87) for assembly purposes.

41. Loosen nut (87). Remove limiting screw (88) from housing (3).

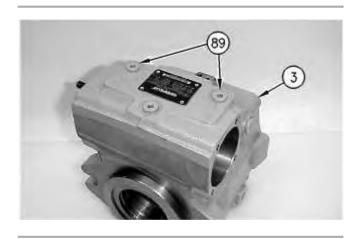


Illustration 45 g00992092

### 42. Remove plugs (89) from housing (3).

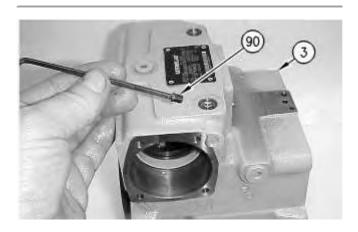


Illustration 46 g00992094

43. Use an allen wrench and remove two orifices (90) from housing (3).

Model: CP-563E VIBRATORY COMPACTOR BWE

Configuration: CS-563E CP-563E Vibratory Compactor BWE00001-UP (MACHINE) POWERED BY 3056E Engine

#### **Disassembly and Assembly**

# CP-563E, CP-573E, CS-563E, CS-573E and CS-583E Paving Compactors Machine Systems

Media Number -KENR3604-04

Publication Date -01/09/2008

Date Updated -22/09/2008

i01848540

# Piston Pump (Vibratory) - Assemble - Fixed Frequency Pump

**SMCS -** 5070-016; 5652-016

## **Assembly Procedure**

Table 1

Required Tools				
Tool	Part Number	Part Description	Qty	
A	147-3497	Spring Compressor	1	
В	9U-5719	Shrink Tubing	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.

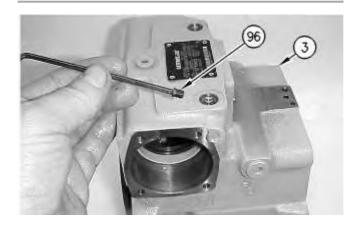


Illustration 1 g00975383

1. Install two nozzles (96) in housing (3).

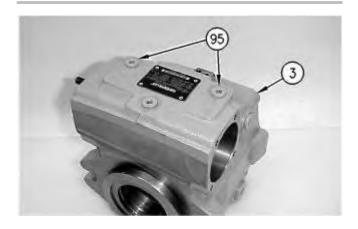


Illustration 2 g00975382

2. Install plugs (95) in housing (3).

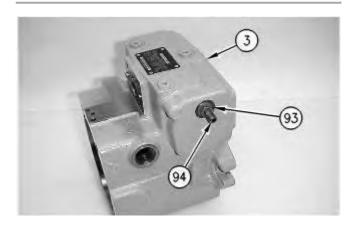


Illustration 3 g00975371

**Note:** Limiting screw (94) must be installed to the original depth. Refer to Disassembly and Assembly, "Piston Pump (Vibratory) - Disassemble".

3. Install limiting screw (94) in housing (3). Tighten nut (93).

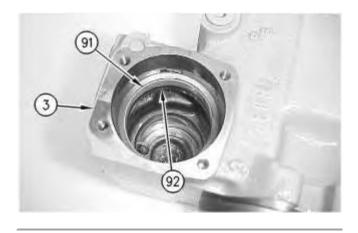


Illustration 4 g00975369

4. Install two seal rings (92) and two guide rings (91) in housing (3).

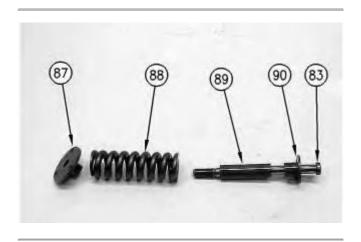


Illustration 5 g00975345



Sudden release of spring force can cause injury.

To prevent the possibility of injury, follow the procedure to relieve the spring pressure.

- 5. Use the following procedure and assemble piston assembly (77).
  - a. Install spring collar (90), spacer (89), spring (88), and spring collar (87) on rod (83).

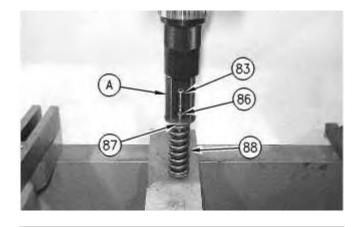


Illustration 6 g00975344

b. Position rod (83) and spring (88) in a press, as shown. Use Tooling (A) and put slight tension on spring collar (87). Install spring retainers (86) and slowly release the spring tension.

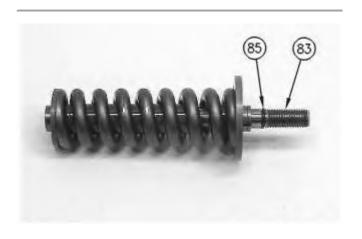


Illustration 7 g00975343

c. Install O-ring seal (85) on rod (83).

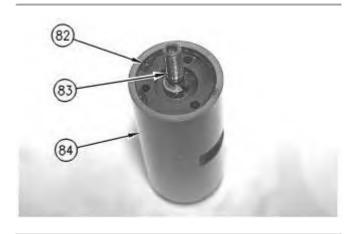


Illustration 8 g00975342

d. Install rod (83) and the spring in piston (84). Install retaining ring (82).



Illustration 9 g00975340

6. Install O-ring seal (81) on cover (76).

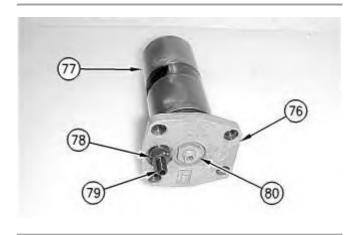


Illustration 10

**Note:** Piston assembly (77) must be installed to the original depth. Refer to Disassembly and Assembly, "Piston Pump (Vibratory) - Disassemble".

g00975324

7. Install piston assembly (77) in cover (76). Install nut (80).

**Note:** Limiting screw (79) must be installed to the original depth. Refer to Disassembly and Assembly, "Piston Pump (Vibratory) - Disassemble".

8. Install limiting screw (79) in cover (76). Tighten nut (78).

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