SERVICE MANUAL

EXCAVATOR
210X, 220X

EN - 9813/9600 - ISSUE 2 - 02/2018

This manual contains original instructions, verified by the manufacturer (or their authorized representative).

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Foreword

The Operator's Manual

⚠

You and others can be killed or seriously injured if you operate or maintain the machine without first studying the Operator's Manual. You must understand and follow the instructions in the Operator's Manual. If you do not understand anything, ask your employer or JCB dealer to explain it.

Do not operate the machine without an Operator's Manual, or if there is anything on the machine you do not understand.

Treat the Operator's Manual as part of the machine. Keep it clean and in good condition. Replace the Operator's Manual immediately if it is lost, damaged or becomes unreadable.

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03 - Safety

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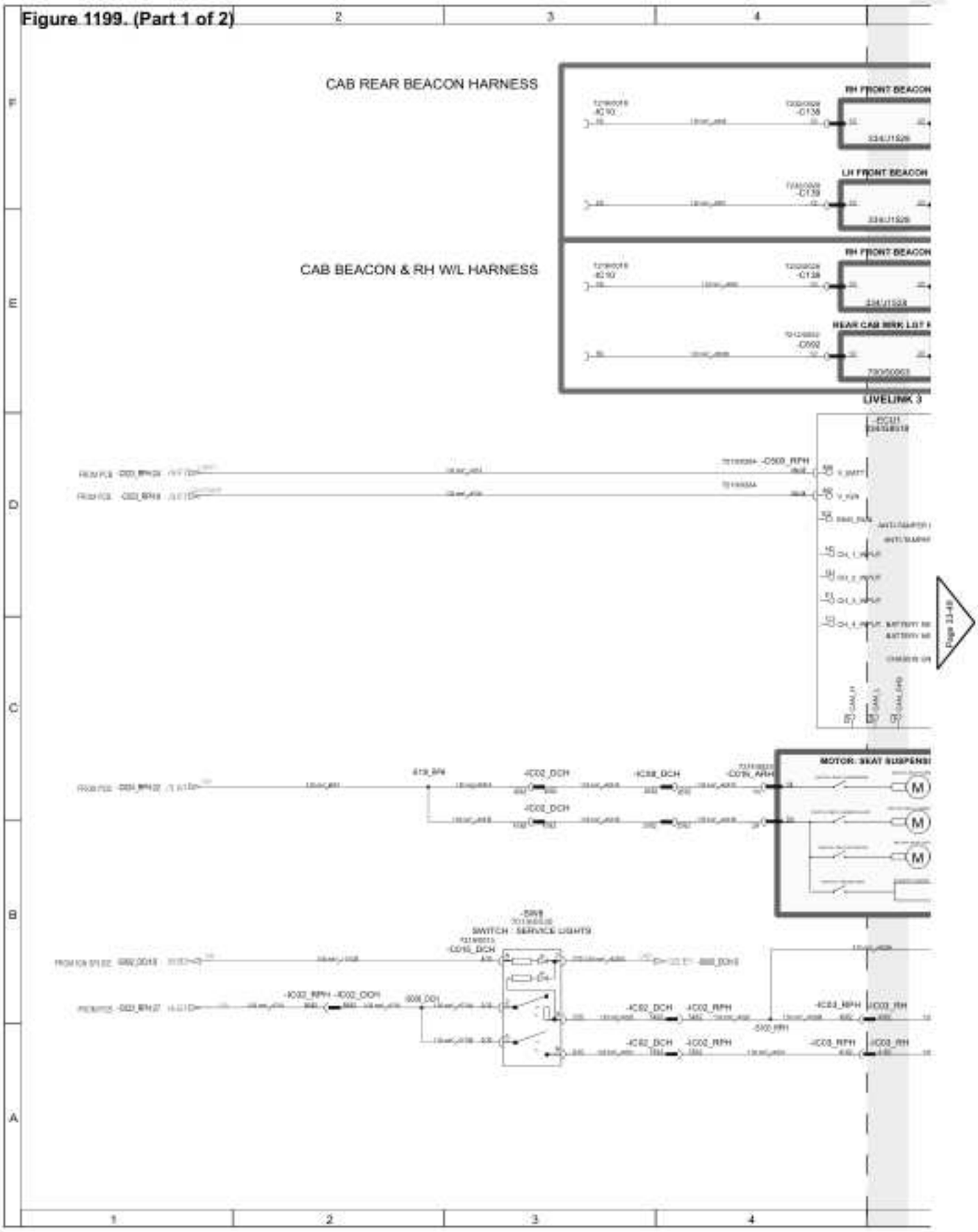
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Figure 1199. (Part 1 of 2)



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Possible fault codes are listed for all machine variants. Some codes will not be applicable for some machines.

Table 380. B codes

B0304-01	6 Button Keypad Fault	(6 KP) Button 1 Failure
B0305-7E	6 Button Keypad Fault	(6 KP) Button 1 Stuck
B0306-01	6 Button Keypad Fault	(6 KP) Button 1 LED Failure
B0307-01	6 Button Keypad Fault	(6 KP) Button 2 Failure
B0308-7E	6 Button Keypad Fault	(6 KP) Button 2 Stuck
B0309-01	6 Button Keypad Fault	(6 KP) Button 2 LED Failure
B030A-01	6 Button Keypad Fault	(6 KP) Button 3 Failure
B030B-7E	6 Button Keypad Fault	(6 KP) Button 3 Stuck
B030C-01	6 Button Keypad Fault	(6 KP) Button 3 LED Failure
B030D-01	6 Button Keypad Fault	(6 KP) Button 4 Failure
B030E-7E	6 Button Keypad Fault	(6 KP) Button 4 Stuck
B030F-01	6 Button Keypad Fault	(6 KP) Button 4 LED Failure
B0310-01	6 Button Keypad Fault	(6 KP) Button 5 Failure
B0311-7E	6 Button Keypad Fault	(6 KP) Button 5 Stuck
B0312-01	6 Button Keypad Fault	(6 KP) Button 5 LED Failure
B0313-01	6 Button Keypad Fault	(6 KP) Button 6 Failure
B0314-7E	6 Button Keypad Fault	(6 KP) Button 6 Stuck
B0315-01	6 Button Keypad Fault	(6 KP) Button 6 LED Failure
B0316-16	6 Button Keypad Fault	(6 KP) PS Voltage Low
B0317-17	6 Button Keypad Fault	(6 KP) PS Voltage High
B0318-18	6 Button Keypad Fault	(6 KP) PS Current Low
B0319-19	6 Button Keypad Fault	(6 KP) PS Current High
B031A-44	6 Button Keypad Fault	(6 KP) EEPROM Corruption
B031B-49	6 Button Keypad Fault	Crystal Oscillator Failure
B031C-47	6 Button Keypad Fault	(6 KP) Watchdog Timer Error
B031D-49	6 Button Keypad Fault	(6 KP) Fault
B031E-01	6 Button Keypad Fault	(6 KP) Button 1 Failure
B031F-7E	6 Button Keypad Fault	(6 KP) Button 1 Stuck
B0320-01	6 Button Keypad Fault	(6 KP) Button 1 LED Failure
B0321-01	6 Button Keypad Fault	(6 KP) Button 2 Failure
B0322-7E	6 Button Keypad Fault	(6 KP) Button 2 Stuck
B0323-01	6 Button Keypad Fault	(6 KP) Button 2 LED Failure
B0324-01	6 Button Keypad Fault	(6 KP) Button 3 Failure
B0325-7E	6 Button Keypad Fault	(6 KP) Button 3 Stuck
B0326-01	6 Button Keypad Fault	(6 KP) Button 3 LED Failure
B0327-10	6 Button Keypad Fault	(6 KP) Button 4 Failure
B0328-7E	6 Button Keypad Fault	(6 KP) Button 4 Stuck
B0329-01	6 Button Keypad Fault	(6 KP) Button 4 LED Failure
B032A-01	6 Button Keypad Fault	(6 KP) Button 5 Failure
B032B-7E	6 Button Keypad Fault	(6 KP) Button 5 Stuck
B032C-01	6 Button Keypad Fault	(6 KP) Button 5 LED Failure
B032D-01	6 Button Keypad Fault	(6 KP) Button 6 Failure
B032E-7E	6 Button Keypad Fault	(6 KP) Button 6 Stuck
B032F-01	6 Button Keypad Fault	(6 KP) Button 6 LED Failure
B0330-16	6 Button Keypad Fault	(6 KP) PS Voltage Low
B0331-17	6 Button Keypad Fault	(6 KP) PS Voltage High
B0332-18	6 Button Keypad Fault	(6 KP) PS Current Low
B0333-19	6 Button Keypad Fault	(6 KP) PS Current High
B0334-44	6 Button Keypad Fault	(6 KP) EEPROM Corruption
B0335-49	6 Button Keypad Fault	Crystal Oscillator Failure
B0336-17	6 Button Keypad Fault	(6 KP) Watchdog Timer Error
B0337-49	6 Button Keypad Fault	(6 KP) Fault

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Technical Data

Table 417. Specifications

Thread Diameter	Outside Diameter	Material Thickness	Total Rivet Length	Drill Hole Diameter
mm	mm (inch)	mm (inch)	mm (inch)	mm (inch)
M5	7	0.25–3	14	7.1
M5	7	3–5.5	17	7.1
M6	9	0.5–3	16	9.1
M6	9	3–5.5	19	9.1
M8	11	0.5–3	18	11.1
M8	11	3–5.5	21	11.1
M10	13	1–3.5	23	13.1
M10	13	3.5–6	26	13.1

Remove and Install

Consumables

Description	Part No.	Size
Threaded Insert (M10 x 23mm)	826/01104	-
Threaded Insert (M10 x 26mm)	826/01105A	-
Threaded Insert (M6 x 16mm)	826/01099	-
Threaded Insert (M6 x 19mm)	826/01101	-
Threaded Insert (M8 x 18mm)	826/01102	-
Threaded Insert (M8 x 21mm)	826/01103	-

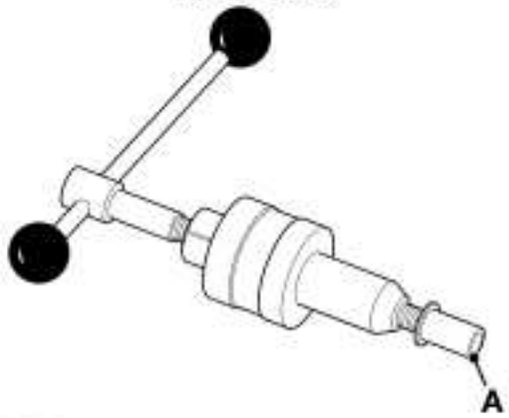
The threaded insert installation tool is available from Bolhoff Fastenings Ltd. www.bolhoff.com.

Install

1. Drill a hole in the machine body/framework where the threaded insert is to be installed, refer to technical data for the correct size.
2. De-burr the hole edges.
3. Screw the threaded insert on to the mandrel of the installation tool. The bottom of the mandrel should be in line with the bottom of the threaded insert.

   Consumable: Threaded Insert (M6 x 16mm)
   Consumable: Threaded Insert (M6 x 19mm)
   Consumable: Threaded Insert (M8 x 18mm)
   Consumable: Threaded Insert (M8 x 21mm)
   Consumable: Threaded Insert (M10 x 23mm)
   Consumable: Threaded Insert (M10 x 26mm)

Figure 1573.

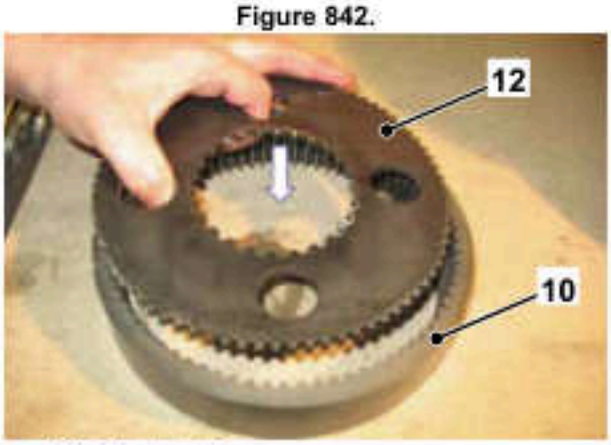


A Threaded insert

4. Wind the body of the installation tool down the threaded mandrel until it touches the head of the threaded insert.

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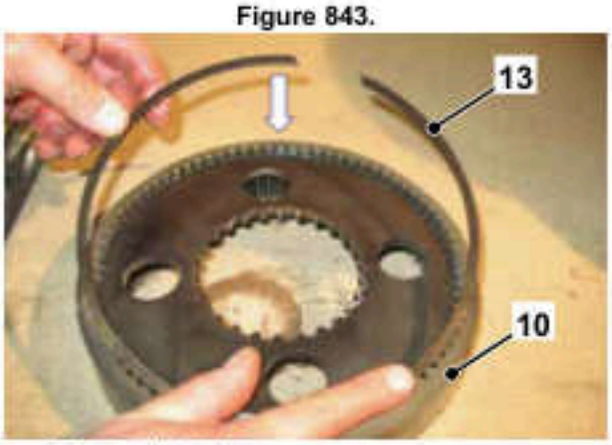
Figure 842.



10 Toothed ring
12 Discs

30. Insert the circlip into its seat in the toothed ring.

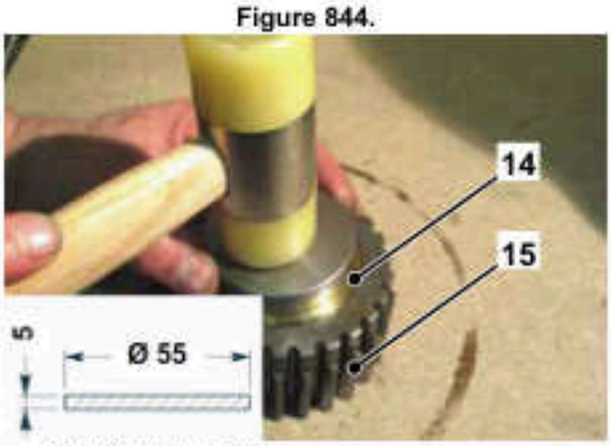
Figure 843.



10 Toothed ring
13 Circlip

31. By using a rubber hammer and a spacer assemble the centering ring into its seat in the sun gear.

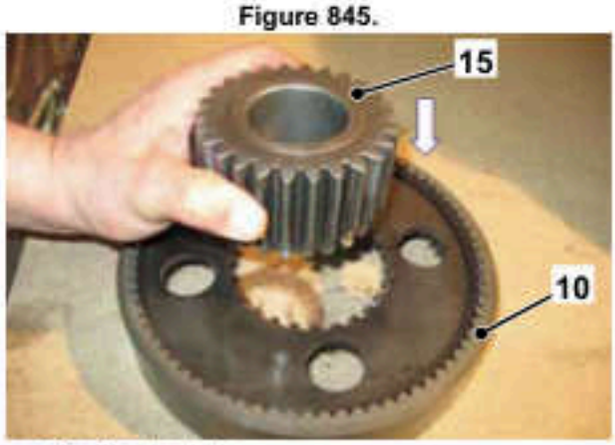
Figure 844.



14 Centering ring
15 Sun gear

32. Insert the 2nd reduction sun gear into the toothed ring.

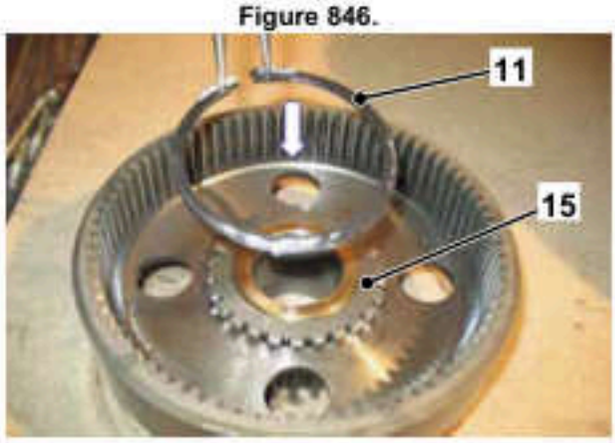
Figure 845.



10 Toothed ring
15 Sun gear

33. By using circlip pliers, assemble the circlip into its seat in the 2nd reduction sun gear.

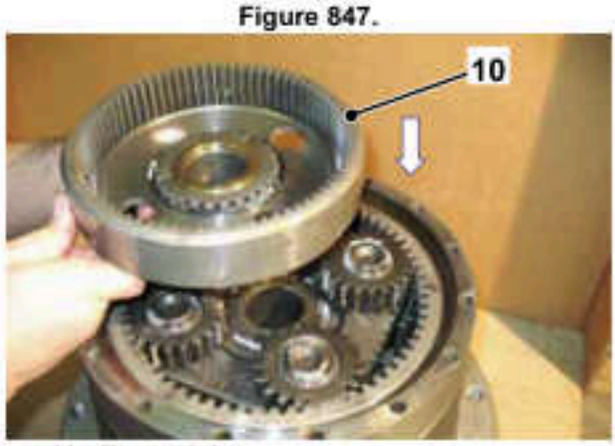
Figure 846.



11 Circlip
15 Sun gear

34. Insert the toothed ring assembly.

Figure 847.



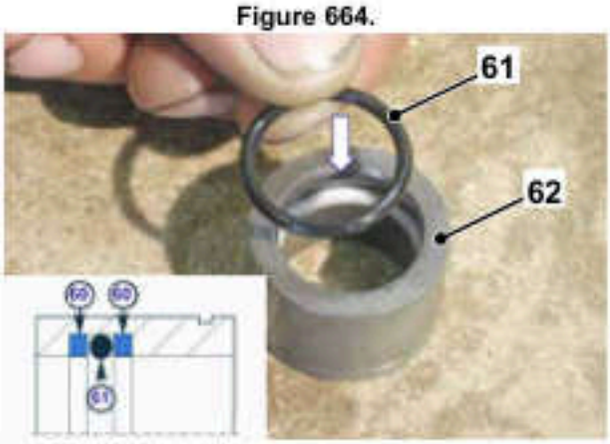
10 Toothed ring

35. Insert the 1st reduction sun gear.

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3. Assemble the O-ring seal into its seat in the free piston. Install the second back-up ring as shown on the sketch.

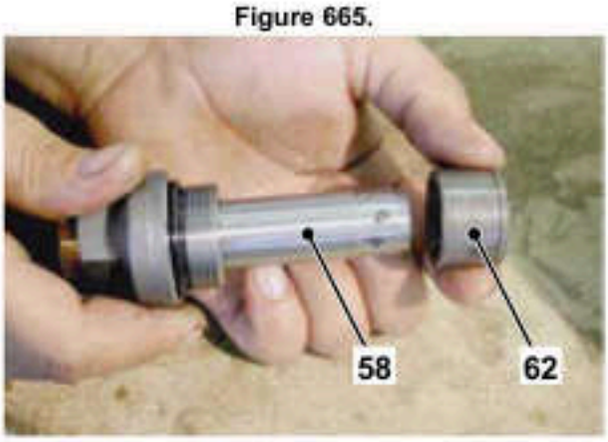
Figure 664.



60 Back-up rings
61 O-ring
62 Free piston

4. Insert the free piston in the relief valve checking that the groove side is turned toward the inside of the motor.

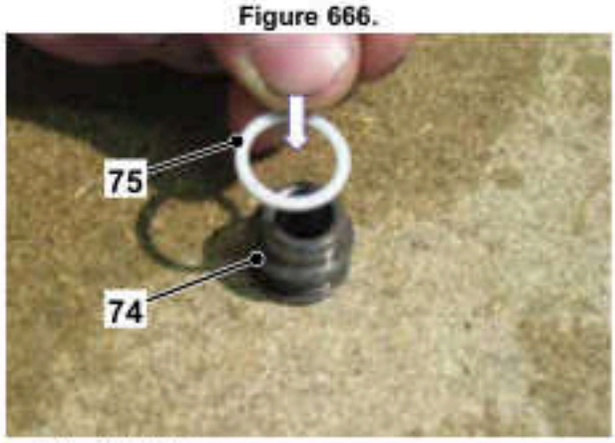
Figure 665.



58 Relief valve
62 Free piston

5. Assemble the first back-up ring into its seat in the poppet.

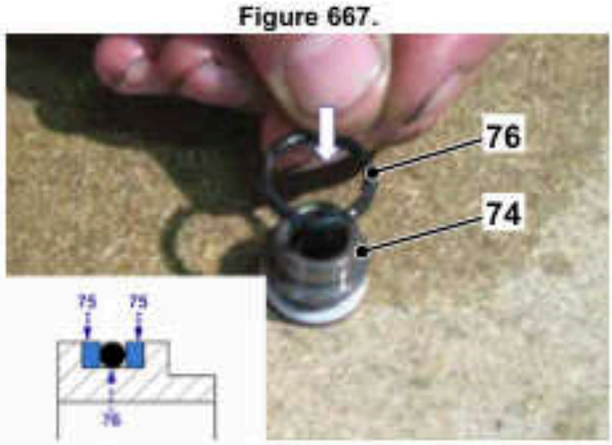
Figure 666.



74 Poppet
75 Back-up rings

6. Assemble the O-ring seal and the second back-up ring into its seat in the poppet.

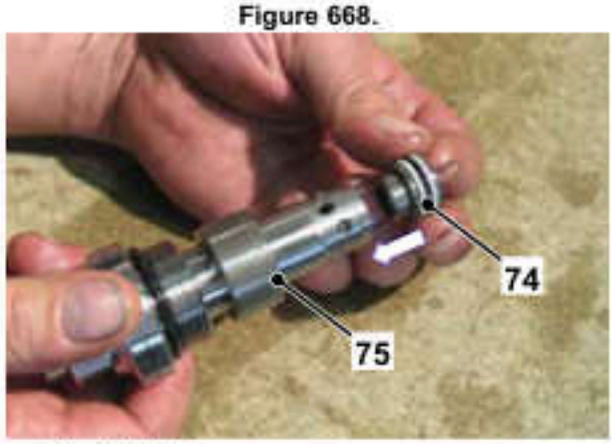
Figure 667.



74 Poppet
75 Back-up rings
76 O-ring

7. Insert the poppet into its seat in the relief valve.

Figure 668.



74 Poppet
75 Back-up rings

8. Insert the first relief valve inside the base plate.

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