SERVICE MANUAL

EXCAVATOR

JS210, JS230

EN - 9813/8000 - ISSUE 1 - 10/2016

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

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Foreword

The Operator's Manual

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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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Fault-Finding

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ATC system - Error Code 8 - Evaporator Temperature Sensor Fault. No cooling. Compressor disengages.	Table 28.	Page 12-15
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ATC system - PWM Failure (No Fault Code Displayed). There is no temperature change. Compressor disengages. Blower fixed at maximum or minimum speed.	Table 31.	Page 12-16

Table 20. Poor performance

Cause	Remedy
Condenser matrix air flow restricted	Remove debris from matrix using compressed air
HVAC (Heating Ventilation Air Conditioning) unit air intake filter blocked	Replace filter. Refer to (PIL 12-18)
Evaporator matrix air flow restricted	Remove restriction
Compressor drive belt too loose	Renew drive belt. Refer to (PIL 15-18)
Overcharging of refrigerant system	Discharge and recharge the system.
Low system refrigerant pressure	Discharge and recharge the system.
System high pressure side blockage - flow to the compressor is stopped or limited	Get a refrigerant specialist to check the check suction pressure is 0.35 bar or less. If the suction pressure is too high locate and remove the blockage
Blocked TXV (Thermal Expansion Valve) or condenser	Clear blocked component.
Compressor faulty - internal wear	With the engine having been turned off for 5 minutes, turn the compressor shaft by turning the armature plate by hand. Check for smooth rotation. Grinding or hanging during shaft rotation is caused by a broken component within the compressor, renew the compressor
	Get a refrigerant specialist to check the compressor performance. The compressor should capable of producing 24 bar or more.

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50 - Schematic Circuit

Introduction 33-5
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Introduction

A schematic wiring diagram is a simplified pictorial representation of the machines electrical circuit. It shows the components of the circuit as simplified electrical symbols, and the power and signal connections between the devices. The wiring diagram is used to troubleshoot problems and to make sure that all the connections have been made and that everything is present.

Detailed schematics for individual systems are given in the relevant PIL section. Use the schematics together with the correct electrical harness drawings to reference the connector pin details.

Understanding Electrical Schematics

This section contains sets of electrical schematics for different machine variants.

Use the applicable schematic set to trace wires and connections between electrical devices. In most cases it will be necessary to trace wires across more than one schematic sheet.

The example shows how to follow a typical set of wires from a power supply (+ ve) through to the path to earth (- ve).

Figure 1011.

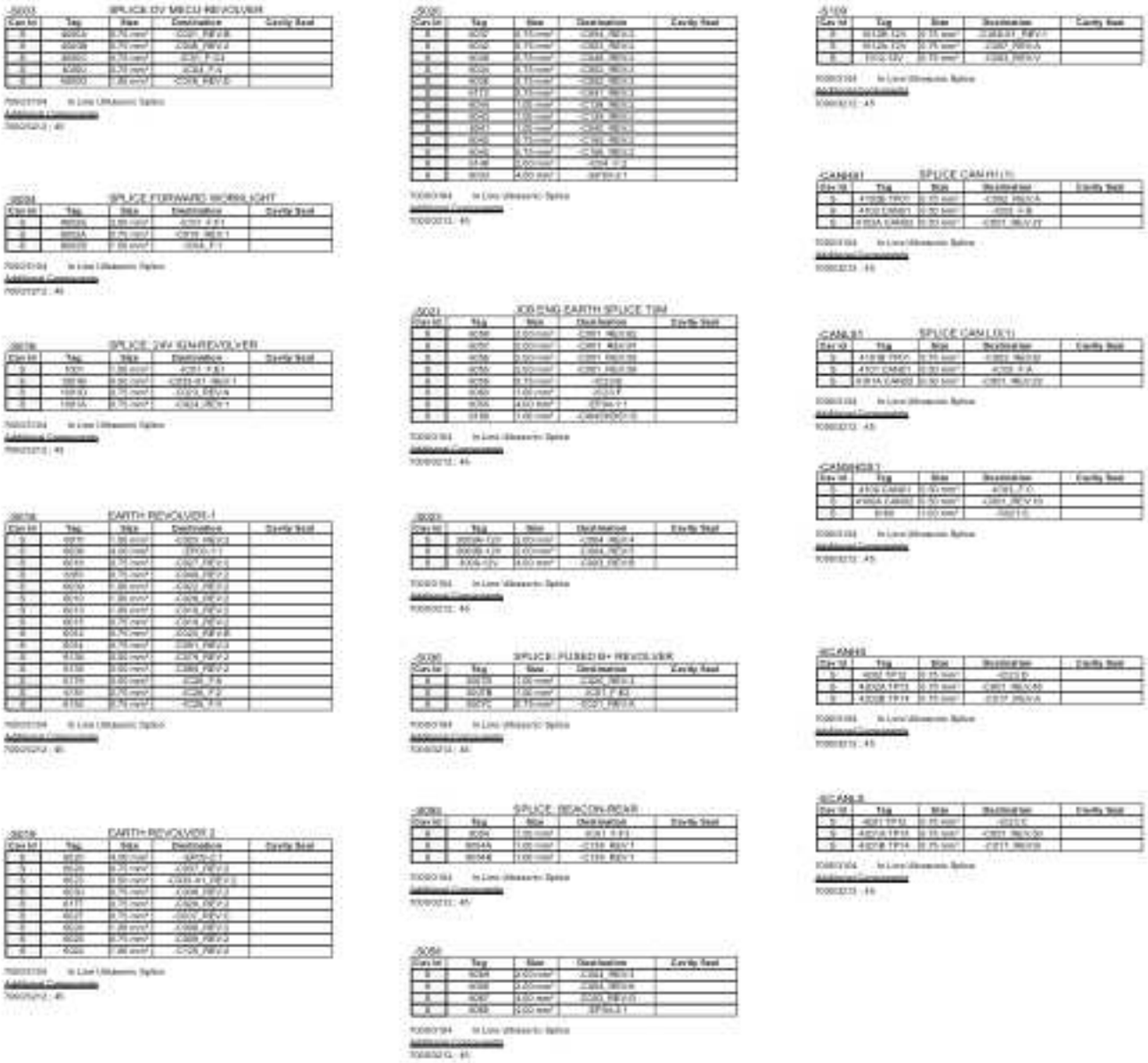


Table 288. Example- Horn Energised

Item[1]	Description	State	Pins[2]	Wire No	Sheet	Explanation
CP27	Fuse box B	+ ve supply	6	118	14	Power supply from 7.5 A fuse
CP18	Relay	closed	1-2		7	Completes circuit to horn
CP06 / MF01	Harness interconnection		30	871	7	
MF40A / RL15A	Harness interconnection		16		7	
MF33	Horn	energised	1-2		7	
SRL2	Splice[3]			600EL	7	
MF40A / RL15A	Harness interconnection		8	600ET	7	

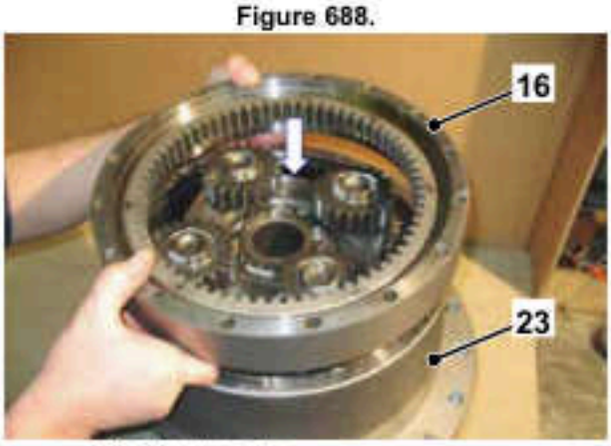
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Figure 1073. 332/B5107-1-Sheet 5



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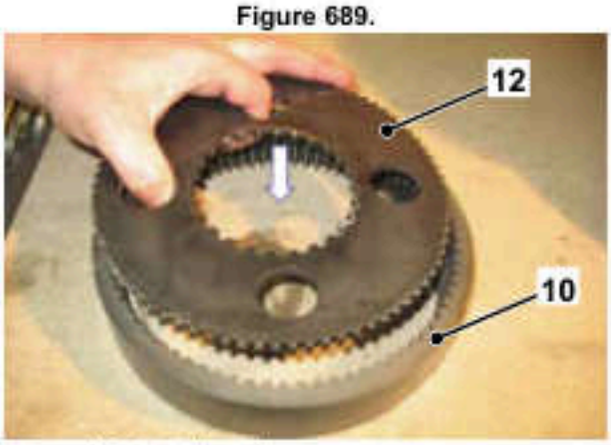
Figure 688.



16 Toothed ring
23 Gearbox housing

29. Assemble the discs in the toothed ring.

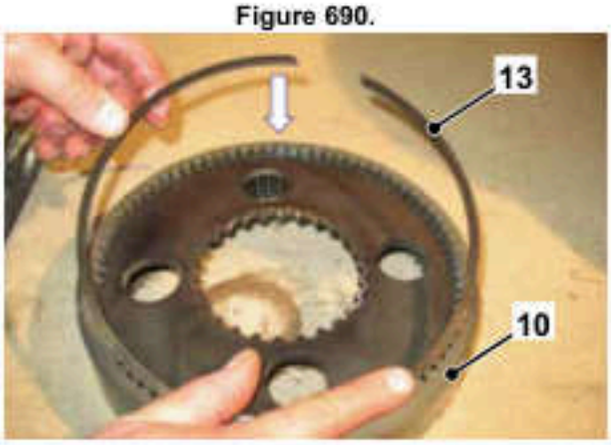
Figure 689.



10 Toothed ring
12 Discs

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

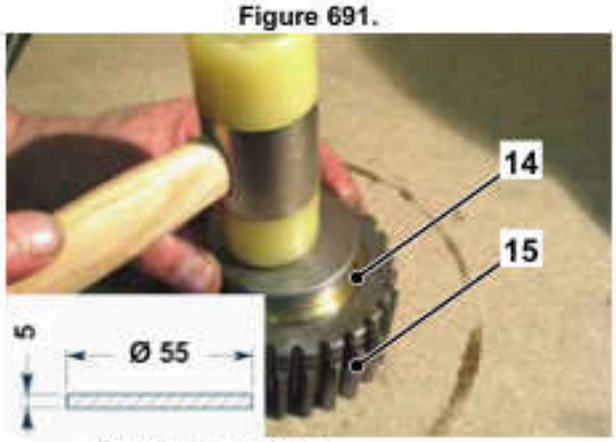
Figure 690.



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.

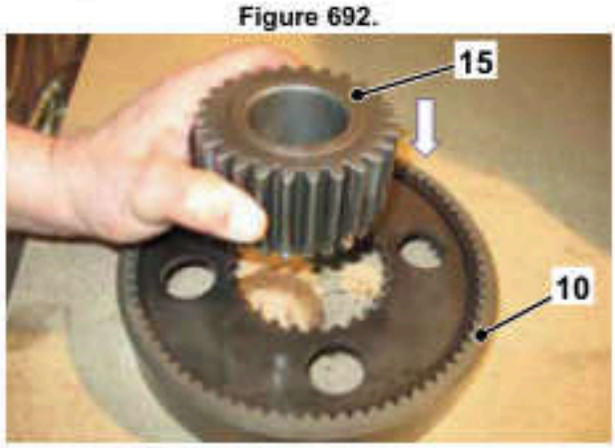
Figure 691.



14 Centering ring
15 Sun gear

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

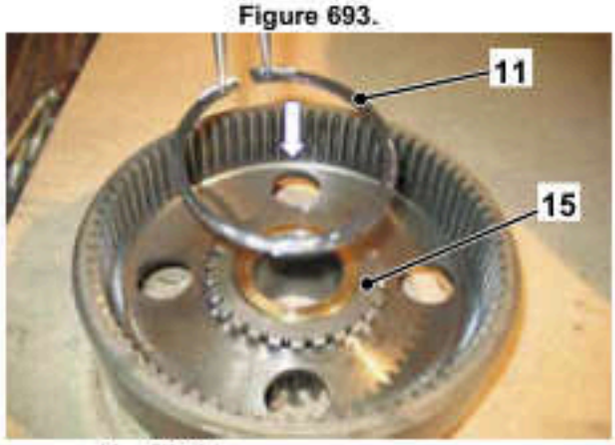
Figure 692.



10 Toothed ring
15 Sun gear

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

Figure 693.

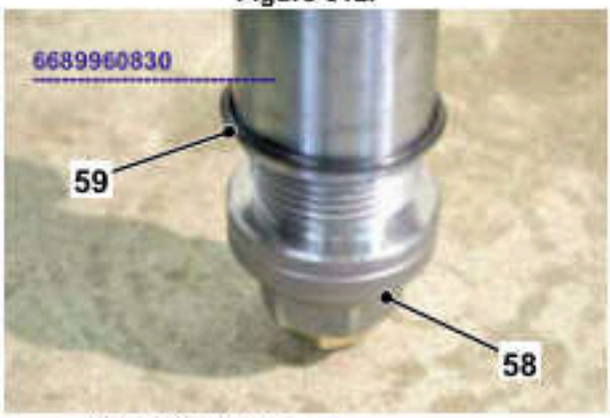


11 Circlip
15 Sun gear

34. Insert the toothed ring assembly.

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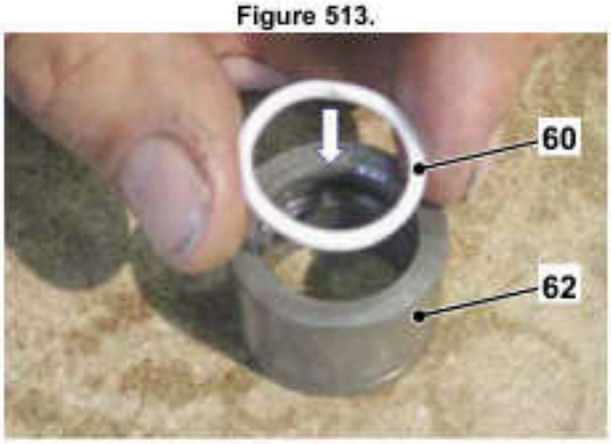
Figure 512.



58 Relief valve
59 O-ring

2. Assemble the first backup-ring into its seat in the free piston.

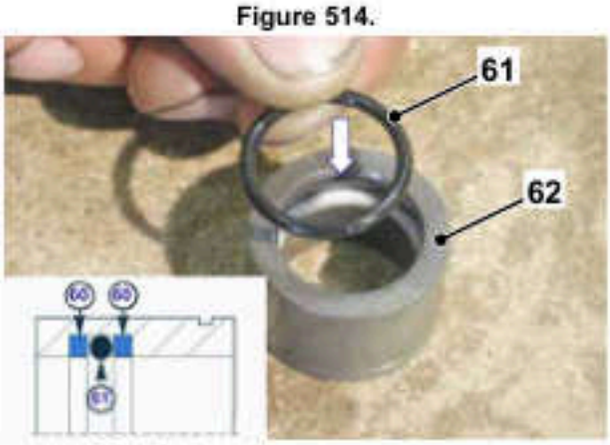
Figure 513.



60 Back-up rings
62 Free piston

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 514.



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.

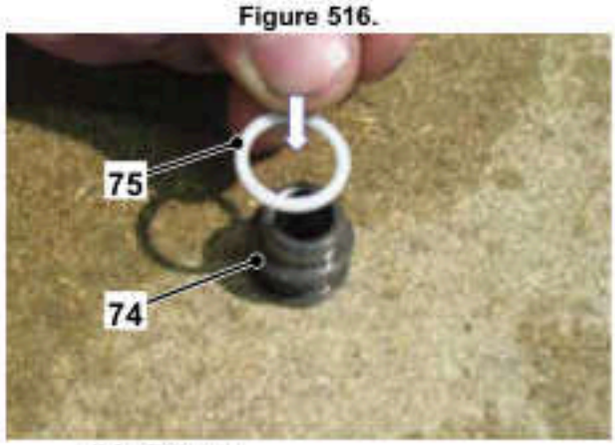
Figure 515.



58 Relief valve
62 Free piston

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

Figure 516.



74 Poppet
75 Back-up rings

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

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