SERVICE MANUAL

BACKHOE LOADER
3CX, 4CX, 5CX

EN - 9813/7000 - ISSUE 2 - 01/2018

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.

Contents

01 - Machine

03 - Attachments, Couplings and Load Handling

06 - Body and Framework

09 - Operator Station

12 - Heating, Ventilating and Air-Conditioning (HVAC)

15 - Engine

18 - Fuel and Exhaust System

21 - Cooling System

24 - Brake System

25 - Steering System

27 - Driveline

30 - Hydraulic System

33 - Electrical System

72 - Fasteners and Fixings

75 - Consumable Products

78 - After Sales

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01 - Machine

Contents **Page No.**

Acronyms Glossary 01-2

01-03 Safety
- 01-03-03 Safety - Yours and Others 01-3
- 01-03-06 Safety Warnings 01-4
- 01-03-09 General Safety 01-5
- 01-03-12 Maintenance Safety 01-6
- 01-03-18 Operating Safety 01-8
- 01-03-21 Worksite Safety 01-10
- 01-03-24 Risk Assessment 01-11
- 01-03-27 Maintenance Positions 01-12

01-06 About this Manual
- 01-06-00 General 01-15
- 01-06-03 Model and Serial Number 01-16
- 01-06-06 Using the Manual 01-17

01-09 Description
- 01-09-12 Main Component Locations 01-19
- 01-09-15 Service Point Locations 01-22

01-33 Cleaning
- 01-33-00 General 01-25

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03 - Safety

Contents **Page No.**

01-03-03 Safety - Yours and Others 01-3
01-03-06 Safety Warnings 01-4
01-03-09 General Safety 01-5
01-03-12 Maintenance Safety 01-6
01-03-18 Operating Safety 01-8
01-03-21 Worksite Safety 01-10
01-03-24 Risk Assessment 01-11
01-03-27 Maintenance Positions 01-12

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03 - Attachments, Couplings and Load Handling

Contents **Page No.**

Acronyms Glossary 03-2

03-00 Attachments
- 03-00-00 General 03-3

03-09 Lift Arm Quickhitch
- 03-09-00 General 03-9

03-10 Excavator End Quickhitch
- 03-10-00 General 03-13
- 03-10-06 Hydraulic Quickhitch 03-25

03-24 Auxiliary Circuit
- 03-24-06 Handheld Hydraulic Tool 03-41
- 03-24-09 Bi-directional 03-73

03-27 Bucket
- 03-27-00 General 03-123
- 03-27-90 Teeth 03-126

03-30 Shovel
- 03-30-00 General 03-129

03-33 Fork
- 03-33-00 General 03-135

03-39 Hydraulic Thumb
- 03-39-00 General 03-139

03-48 Rockbreaker
- 03-48-00 General 03-147
- 03-48-03 Return Filter 03-164

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Table 91. Engine - Starts Then Stops

Cause	Remedy
No fuel in supply tank.	Check the level in the fuel tank, use sight gauge or dipstick. Replenish as required.
Engine starting under load.	Check for added loading from malfunctioning accessories or driven units, brakes dragging and other changes in vehicle loading. Disengage the hydraulic controls.
Air intake or exhaust system blocked.	Visually check the air intake and exhaust system for blockage or obstruction - remove as required. Check the air filter elements for signs of blocking - replace as required.
Fuel is aerated.	Check the fuel system for loose connections and possible air ingress points. Rectify and bleed the fuel system.
Fuel lift pump not operating correctly (fuel supply inadequate).	Check that the lift pump is operating and delivering fuel to the injection pump.
Fuel is waxing due to extremely cold weather.	Verify by inspecting the fuel filter. Clean the system and use acclimatised fuel.
Fuel is contaminated or incorrect grade diesel fuel used.	Stop the engine. Replace the fuel filters. Operate the engine with a temporary supply of the correct grade of clean fuel. Monitor the engine performance. Dirty fuel will cause damage to the high pressure fuel pump and injectors.
Fuel filter(s) blocked, fuel supply restricted.	Check/replace the fuel filter(s). Check fuel lines for restriction.
Fuel drain return line blocked, not connected properly.	Verify that the fuel return lines are not obstructed and connected to the top of the fuel tank.
Electrical sensor fault.	Check the electrical connections at the sensors.

Table 92. Engine - Poor Running

Cause	Remedy
Condition only occurs at idle.	For possible poor running at idle faults. See Also: Table 93. Engine - Poor Running at Idle
Engine is cold, coolant temperature sensor fault.	Check the electrical connection at the coolant sensor. Check the correct electrical wires for open or short circuits.
Fuel injection lines leaking.	Replace defective fuel lines. Do not repair defective fuel lines. If there is a fuel leak remove and discard the necessary components and install new ones.
Fuel is aerated.	Check the fuel system for loose connections and possible air ingress points. Rectify and bleed the fuel system
Fuel lift pump not operating correctly (fuel supply inadequate).	Check that the lift pump operates and delivers fuel to the high pressure fuel pump. Check the correct electrical wires for open or short circuits. Check fuses.
Fuel filter(s) blocked, fuel supply restricted.	Check/replace the fuel filter(s). Check fuel lines for restriction.
Fuel is contaminated or incorrect grade diesel fuel used.	Stop the engine. Replace the fuel filters. Operate the engine with a temporary supply of the correct grade of clean fuel. Monitor the engine performance. Dirty fuel will cause damage to the high pressure fuel pump and injectors.
Engine is cold - Thermostat fault.	Drain Coolant, Remove and replace Thermostat.

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12.6. Open or short circuited power (stator) windings.

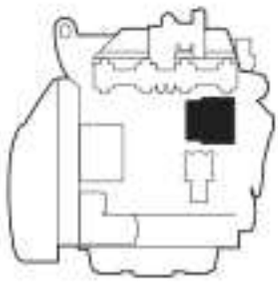
13. To check for a fault, disconnect the capacitor and repeat the charging test. Renew the capacitor if necessary.

14. To check for faults with the slip rings, bushes or regulator, remove the regulator and brush box assembly. Check the condition of the brushes and, if necessary, clean the slip rings using extra-fine glass paper. The regulator may only be renewed.

15. Faults with the rectifier, rotor and stator may be checked only by removing and dismantling the alternator for further testing.

Remove and Install

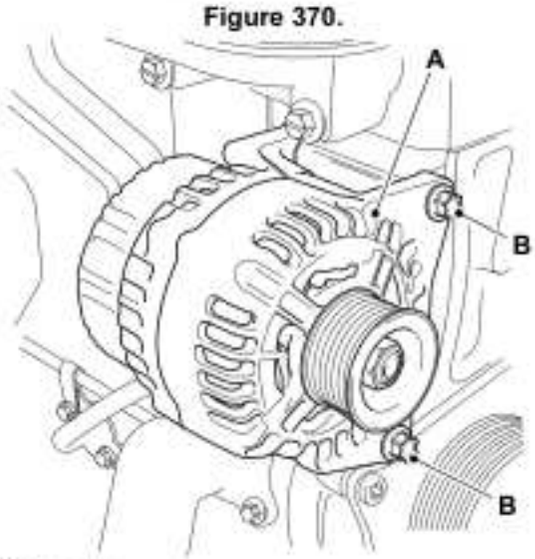
Figure 369. Alternator location



Remove

1. Disconnect the negative (-) lead followed by the positive (+) lead from the battery terminals.
2. Remove the alternator (accessory) drive belt.
3. Disconnect the electrical leads from the alternator terminals. Label the leads to make sure that they are installed in the correct positions on assembly.
4. Undo the alternator securing bolts and lift the alternator away from the cylinder block mounting.

Figure 370.



A Alternator
B Securing bolts

Inspect

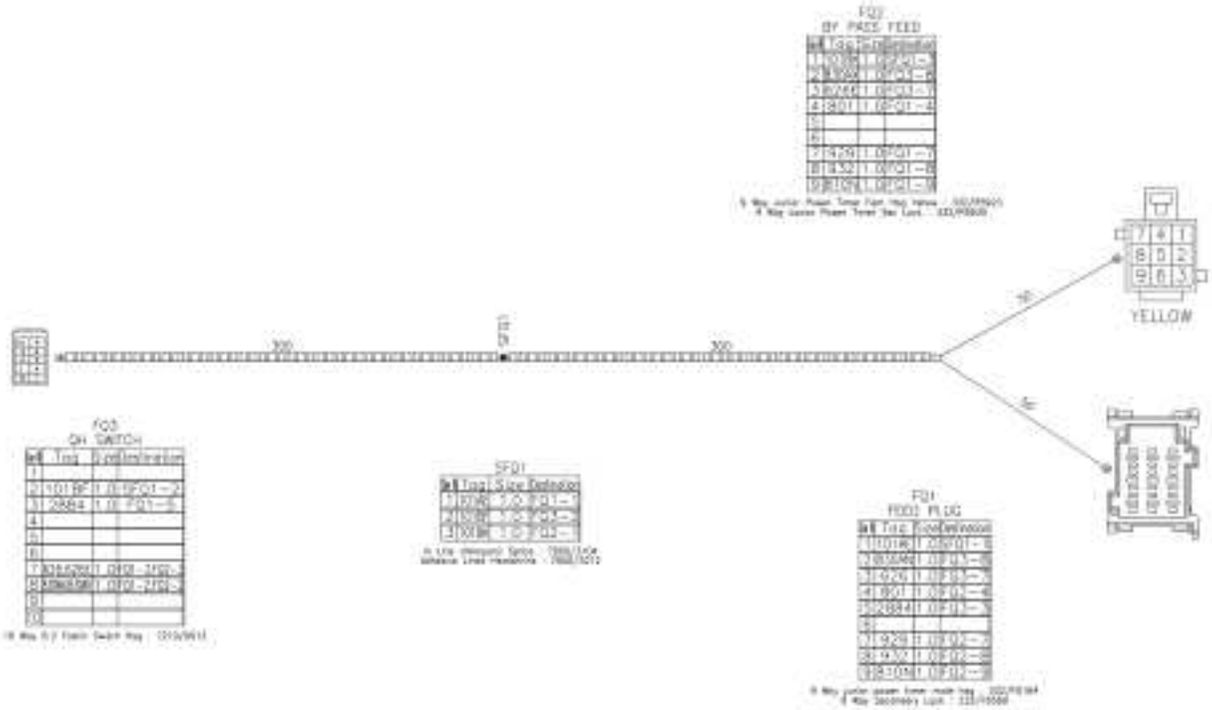
1. Check the brushes for wear. Renew the brushes if the length is less than

   Length/Dimension/Distance: 8mm

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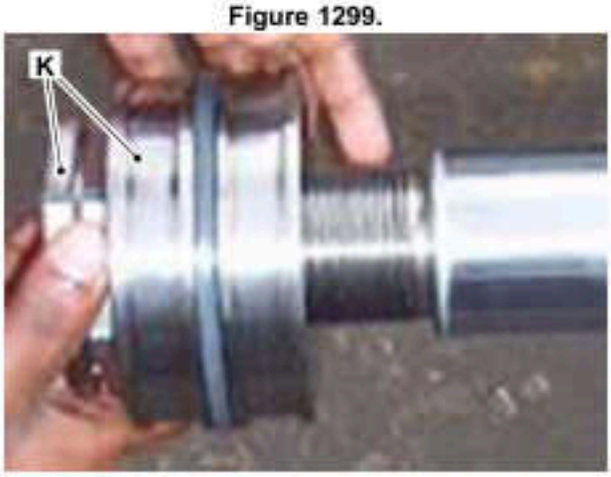
Lift arm quickhitch - Changeover switch harness

Figure 1808. 721/G4379 Issue 1 (Sheet 1)



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Figure 1299.

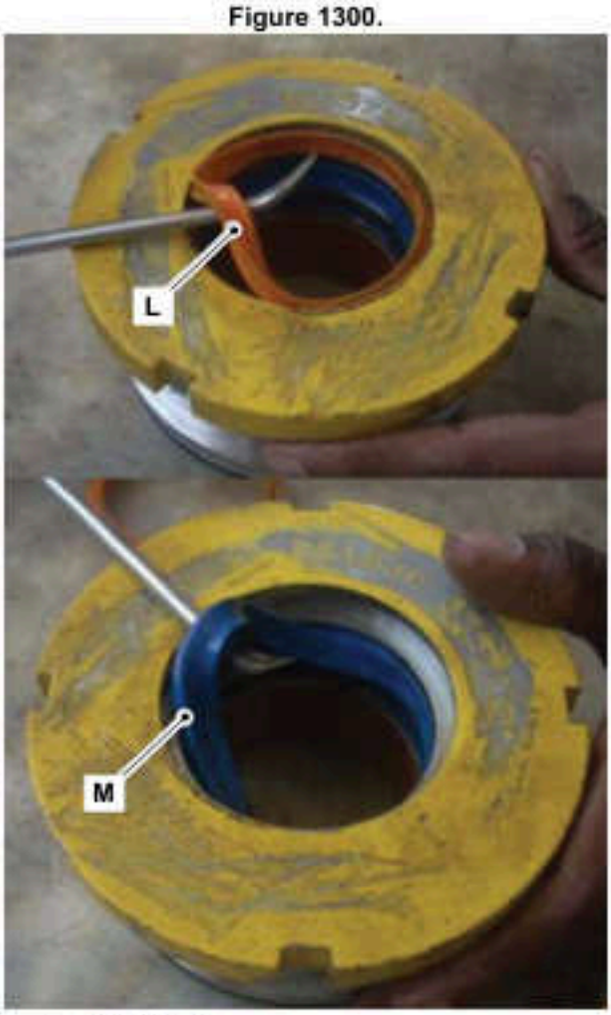


K Piston

14. Remove the head end cover. Refer to Figure 1300.

15. Use a bent screwdriver to remove the wiper seal and the secondary rod seal. Refer to Figure 1300.

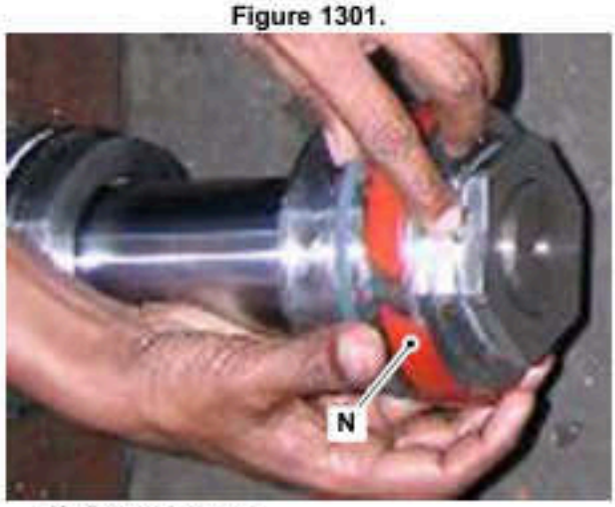
Figure 1300.



L Wiper seal
M Secondary rod seal

16. Remove the piston bearing. Refer to Figure 1301.

Figure 1301.



N Piston bearing

17. Use a bent screwdriver to remove the piston seal. Refer to Figure 1302.

Figure 1302.



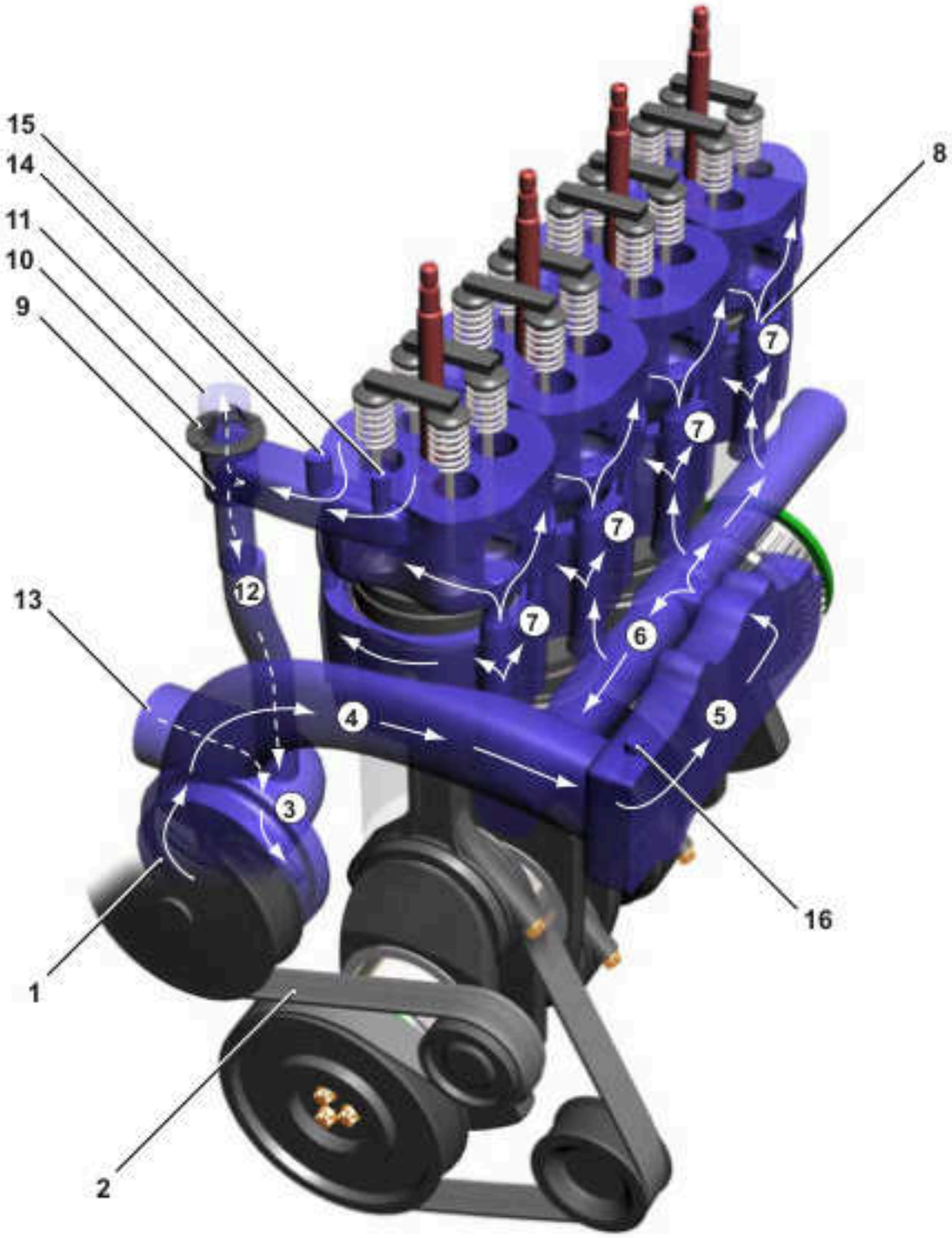
P Piston seal

18. Remove the piston O-ring and the piston backup ring. Refer to Figure 1303.

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Component Identification

Figure 446.



1	Coolant pump	2	Drive belt

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