SERVICE MANUAL

DUMPER
1THT

EN - 9813/5200 - ISSUE 2 - 07/2018

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.

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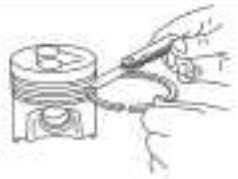
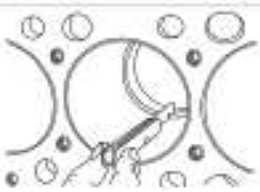
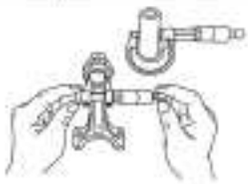
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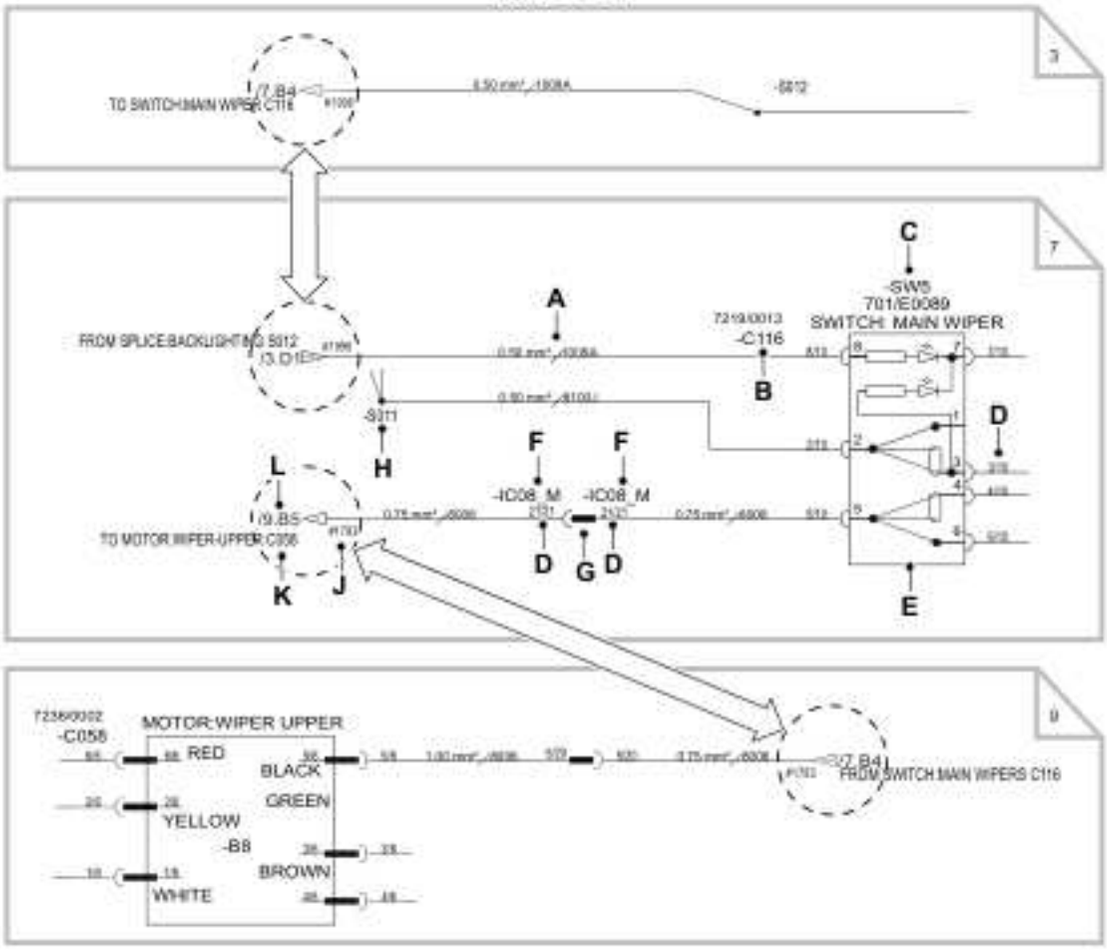
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Component		Calibration Data	
Illustration	Description	Factory Specification	Allowable limits
	Clearance between top piston ring groove and top piston ring	0.05 –0.09 mm	0.2 mm
	Clearance between second piston ring groove and second piston ring	0.093 –0.128 mm	0.2 mm
	Clearance between oil ring groove and oil ring	0.02 –0.06 mm	0.15 mm
	Top piston ring gap	0.25 –0.4 mm	1.25 mm
	Second piston ring gap	0.3 –0.45 mm	1.25 mm
	Oil ring gap	0.25 –0.45 mm	1.25 mm
Connecting rod			
	Connecting rod alignment	-	0.05 mm
Piston pin and small end bushing			
	Clearance between piston pin and small end bushing	0.014 –0.036 mm	0.15 mm
	Piston pin outside diameter	25.004 –25.011 mm	-
	Small end bushing inside diameter	25.025 –25.04 mm	-
Crankshaft			
	Crankshaft alignment	-	0.02 mm
Crankshaft journal and crankshaft bearing 1			
	Oil clearance between crankshaft journal and crankshaft bearing 1	0.04 –0.118 mm	0.2 mm
	Crankshaft journal outside diameter	59.921 –59.94 mm	-
	Crankshaft bearing 1 inside diameter	59.98 –60.039 mm	-
Crankshaft journal and crankshaft bearing 2			

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Figure 309.



A Wire size (area) and number
B Device harness connector code
C Device description
D Connector pin number (wire location / total)
E Device internal schematic
F Harness inter-connector codes
G Harness inter-connector symbol
H Splice code and symbol
J Destination reference number
K Destination (harness connector code)
L Destination (diagram sheet and grid)

To help locate a wire destination from other diagram sheets use the grid reference. This identifies the applicable location zone on the sheet in a similar way to a map reference.

Due to space limitations, the grid is sometimes omitted.

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Table 8. Engine - Will Not Start or Difficult to Start (No Exhaust Smoke)

Cause	Remedy
No fuel in supply tank.	Check the level in the fuel tank, use sight gauge or dipstick. Replenish as required.
Starter switch or starter electrical system failure.	Check the operation of the starter switch. Check the correct electrical wires for open or short circuits.
Improper starting procedure.	Verify proper starting procedure.
Fuel Filter blocked with water or other contamination.	Drain fuel/water separator or replace fuel filter.
Defective fuel lift pump (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 is aerated.	Check the fuel system for loose connections and possible air ingress points. Rectify and bleed the fuel system.
Fuel inlet restriction.	Maximum inlet restriction to fuel lift pump must not exceed 100mm Hg.
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 drain return line blocked, not connected properly.	Verify that the fuel return line is not obstructed and connected to the top of the fuel tank.
One or more fuel injectors worn or malfunctioning.	Check the electrical connections at the injectors.
Worn or malfunctioning high pressure fuel pump.	Do all the necessary fault finding checks before removal of the high pressure fuel pump.
Injectors Contaminated.	Check the injectors. Replace as required.

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Introduction

Batteries used in normal temperate climate applications should not need topping up. However, in certain conditions (such as prolonged operation in high ambient temperatures or if the alternator overcharges) the electrolyte level should be checked frequently and topped up as necessary.

The electrolyte level should be checked in accordance with the routine maintenance schedule. Shorter maintenance intervals are required if the machine is operating at high ambient temperatures or continuously for long periods.

Later Machines may have the new type batteries installed which include a sight glass to check the condition of the battery. New batteries should be used as replacements if replacing the battery on earlier machines.

Figure 314.



A Maintenance free battery

Maintenance

To make sure that the battery provides optimum performance the following steps should be observed:

- Make sure that the electrical connections are clean and tight. Smear petroleum jelly on connectors to prevent corrosion.
- When applicable - never allow the electrolyte level to fall below the recommended level of 6 mm above the plates. Use only distilled water for topping up.
- Keep the battery at least three quarters charged, otherwise the plates may become sulphated (hardened) - this condition makes recharging the battery very difficult.

Extra precautions must be taken when bench charging maintenance free batteries, they are more prone to damage by overcharging than the standard type of battery:

- Never boost charge a maintenance free battery (if installed).

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