SERVICE MANUAL

VM117, VM137

EN - 9813/4900 - ISSUE 1 - 09/2015

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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Cause	Remedy
Engine is cold - Thermostat fault.	Drain Coolant, Remove and replace Thermostat.
Low Power (particularly at high speed)	Exhaust back pressure high, Catalyst problem, Check Servicemaster Diagnostics.
Inlet and exhaust valve clearances set incorrectly.	Set the valve clearances to the recommended clearances.
Engine compression low in one or more cylinders.	Check the engine compression.
ECM or electrical sensor fault.	Check the electronic fault codes. Check the electrical connections at theECM and sensors.
Worn or malfunctioning high pressure fuel pump.	Check the electronic fault codes. Do all the necessary fault finding checks before removal of the high pressure fuel pump.
Camshaft damaged.	Inspect camshaft.
Tappets damaged.	Inspect tappets.

Table 15. Engine - Poor Running at Idle

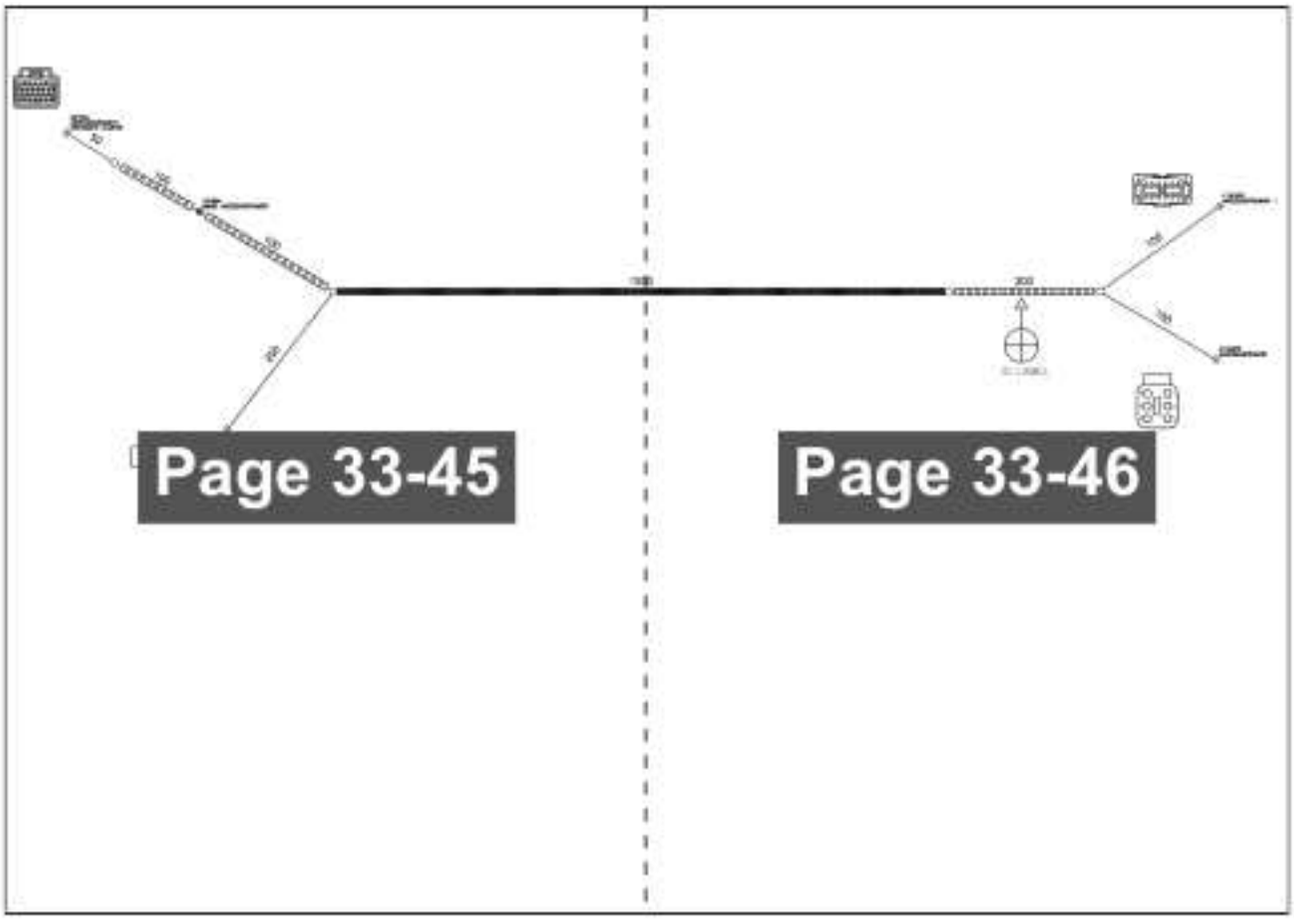
Cause	Remedy
Coolant temperature sensor fault.	Check the electrical connection at the coolant sensor. Check the correct electrical wires for open or short circuits.
Engine mounts over-tightened, damaged or loose.	Check/replace engine mounts.
Fuel injection lines leaking.	Replace defective high pressure 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 is operating and delivering fuel to the injection pump.
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.
Inlet and exhaust valve clearances set incorrectly.	Set the valve clearances to the recommended clearances.
Engine compression low in one or more cylinders.	Check the engine compression.
One or more fuel injectors worn or malfunctioning.	Check the electronic fault codes. Check the electrical connections at the injectors.
ECM or electrical sensor fault.	Check the electronic fault codes. Check the electrical connections at theECM and sensors.
Worn or malfunctioning high pressure fuel pump.	Check the electronic fault codes. Do all the necessary fault finding checks before removal of the high pressure fuel pump.

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84 - Instrument Panel

Diagram

Figure 380. KB Harness Instrument Cluster (Sheet 1 of 2)



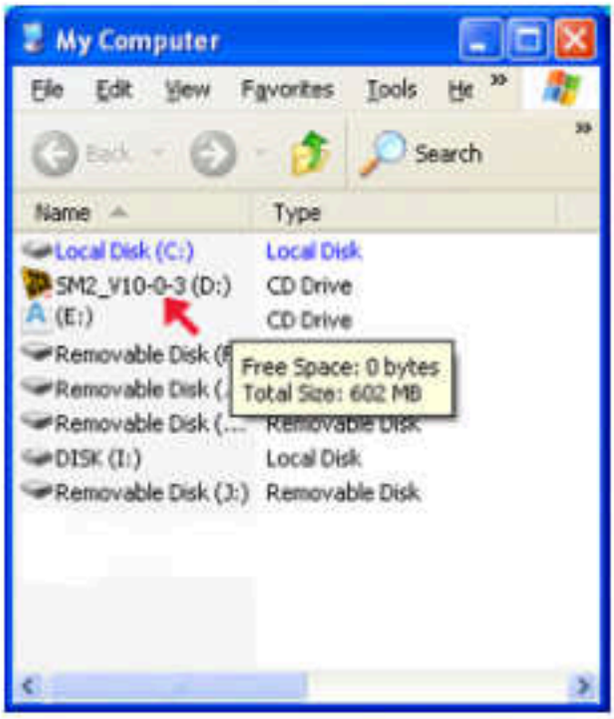
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Item	Capacity	Fluid/Lubricant	International Specification	JCB Part No.	Container Size[1]
Drum Drive Gearbox	1.3L	JCB Optimum Performance Gear Oil	CLP 220 DIN 51517	4000/3701	5L
Hydraulic Tank[3]	55L	JCB Hydraulic Fluid HP46, JCB Hydraulic Fluid HP68	HLP 46 DIN 51524, HLP 68 DIN 51524	4002/0803 4002/0701	200L
Vibration System	12L	JCB Optimum Performance Gear Oil	CLP 100 DIN 51517	4004/6305	20L

(1) For information about the different container sizes that are available (and their part numbers), contact your JCB dealer.
(2) Inclusive of hubs.
(3) This is nominal tank capacity. The total hydraulic system capacity depends on the equipment being used. Fill with all cylinders closed. Watch level sight glass when filling.

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Figure 452.



4. Select and open the "Setup.exe" application.
5. A new window "JCB Servicemaster Setup" will appear on the screen.
   5.1. Click the "Install V10.0.3" option to start the setup application. Refer to Figure 453.

Figure 453.



6. A new window "Select Setup Language" will appear on the screen. Refer to Figure 454.
   6.1. Use the drop down option to select the suitable language.
   6.2. Click the "OK" option to confirm selected language.

Figure 454.



7. A warning message window will appear on the screen. Refer to Figure 455.
   7.1. Click the "OK" option.

Figure 455.



8. A new window "JCB Servicemaster Installation Wizard" will appear on the screen. Refer to Figure 456.
   8.1. Click the "Next" option to proceed.

Figure 456.

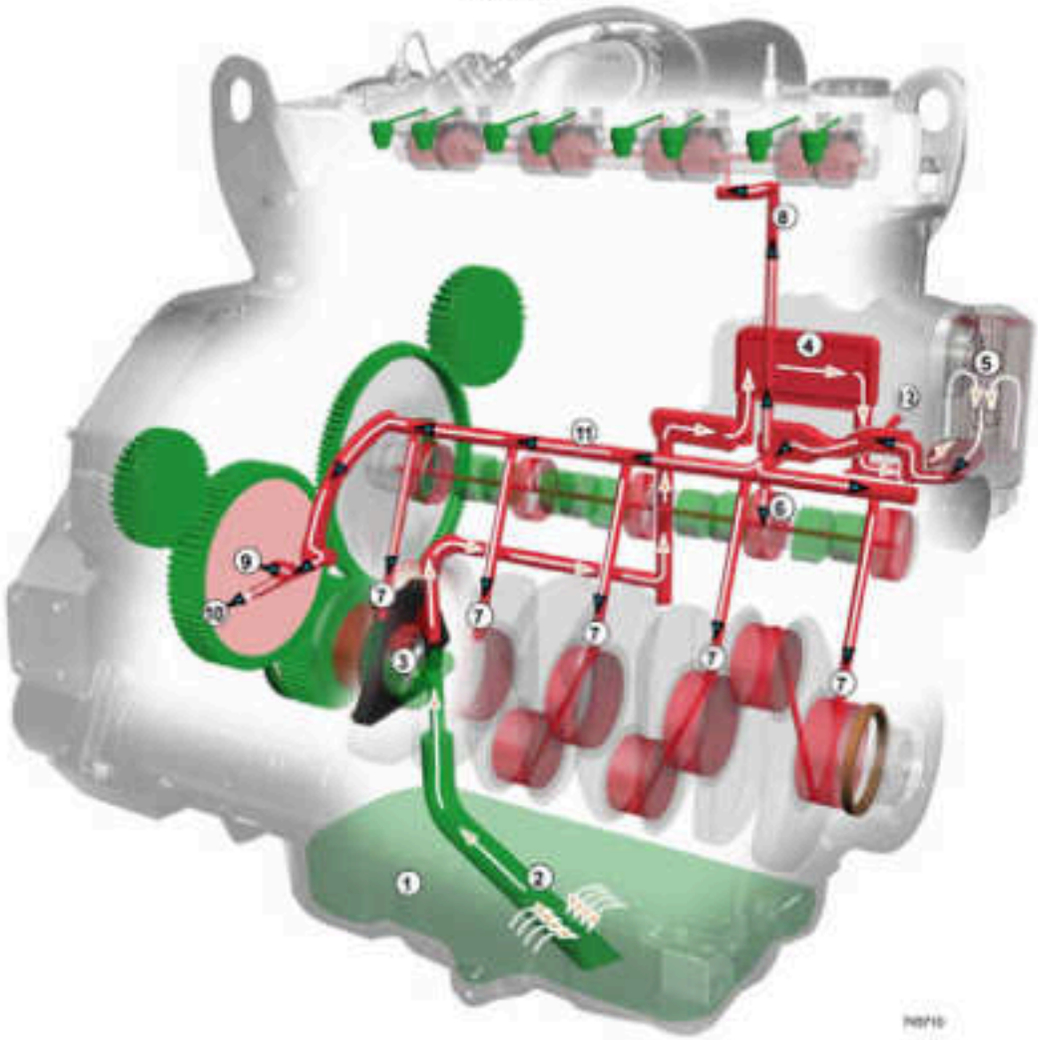


9. Put "User Name" and "Organization" details into the "Customer Registration" screen. Refer to Figure 457.
   9.1. Click the "Next" option when you inserted details.

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Component Identification

Figure 130.



1	Oil sump
2	Suction strainer
3	Oil pump
4	Oil cooler
5	Filter
6	Camshaft - high pressure oil feed
7	Crankshaft main bearings - high pressure oil feed
8	Rocker assembly - high pressure oil feed
9	PTO (Power Take-Off) idler gear bearing/ timing case - high pressure oil feed
10	External high pressure oil feed connection (crankcase) - Turbocharger (if installed)
11	Main high pressure oil feed gallery (crankcase)
12	Oil pressure switch Green- Oil at sump pressure Red- Oil at high pressure Pink- Oil at lower pressure but higher than sump pressure

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