SERVICE MANUAL

LOADALL (ROUGH TERRAIN VARIABLE REACH TRUCK)
506-36, 507-42, 509-42, 512-56, 514-56

EN - 9823/1650 - ISSUE 1 - 06/2018

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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Cause	Remedy
ECM connection fault	Disconnect the harness from engine ECU (Electronic Control Unit) and inspect. Check seals are in place, check for signs of corrosion or contamination.
	If ECM pins are damaged, replace ECM and re-flash appropriate calibration (see Re-flashing an ECM).
	If harness is damaged, repair or replace as necessary.
	If no fault is found proceed to 'Rail pressure sensor and rail fault'.
Rail pressure sensor and rail fault	Replace the rail pressure sensor and rail.
	If the problem still not solved, raise Techweb Helpdesk call.

Table 136. IMV

Cause	Remedy
IMV (Inlet Metering Valve) connection fault	Check the connection to IMV
	If the IMV connection is faulty, replace the high Pressure fuel injection pump.
	If no fault is found proceed to 'ECM connection fault'.
ECMconnection fault	Disconnect the harness from engine ECM and inspect. Check seals are in place, check for signs of corrosion or contamination.
	If ECM pins are damaged, replace ECMand re-flash appropriate calibration (see Re-flashing an ECM).
	If harness is damaged, repair or replace as necessary.
	If no fault is found proceed to 'Wiring fault'.
Wiring fault	Check the harness continuity and electrical insulation, repair/replace as necessary.
	If no fault is found proceed to 'Electrical resistance fault'.
Electrical resistance fault	Measure the IMV electrical resistance around 5.3 ohms at 20 degrees C.
	replace the high Pressure fuel injection pump if the resistance fault occurs.
	If no fault is found proceed to IMV buzz fault'.
IMV buzz fault	Perform the IMV buzz test. If the IMV is not buzzing replace the high Pressure fuel injection pump.
	If the IMV buzzes, raise Techweb Helpdesk call.

Table 137. HPV

Cause	Remedy
HPV (High Pressure Fuel Valve) connection fault	Check the connection of HPV
	If the HPV connection is faulty, repair or replace as necessary.
	If no fault is found proceed to ECMconnection fault'.
ECM connection fault	Disconnect the harness from engineECM and inspect. Check seals are in place, check for signs of corrosion or contamination.
	IfECM pins are damaged, replace ECM and re-flash appropriate calibration (see Re-flashing an ECM).
	If harness is damaged, repair or replace as necessary.
	If no fault is found proceed to 'Wiring fault'.

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64 - Rear Axle Stabilization (RAS)

Diagram

(For: 507-42 [T4i], 509-42 [T4i], 512-56 [T4i], 514-56 [T4i])

Figure 968. RAS Panel Harness 332/D8490- Issue 1 (sheet 1 of 2)..... Page 33-389
Figure 970. RAS Chassis Harness 332/D8489- Issue 1 (sheet 1 of 1)..... Page 33-393

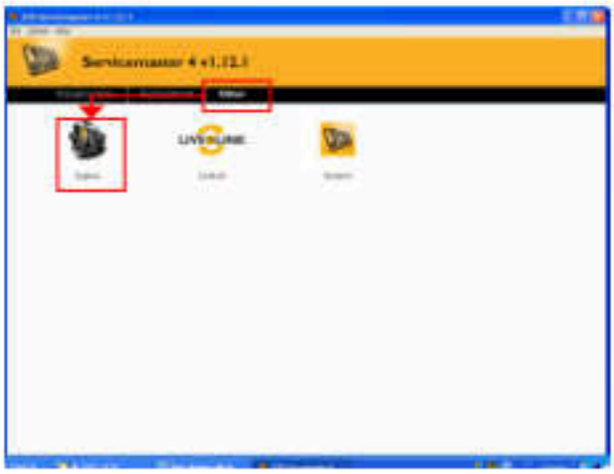
RAS Harness

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Subsection	Commercial name	Product Number	Colour	Shelf life	Technical data	Comments
Direct glazing	Terostat 8900 LV	4103/4200	Black	365 d in cartridges 180 d in sausage pack. 180 d in hobbocks and drums	80 bar (1,159.4 psi) tensile strength	One component, pumpable adhesive/sealant based on polyurethane, which cures by reaction with moisture to an elastic rubber. The skin formation and curing time are dependent on humidity, temperature and depth of joint. High temperature and high moisture reduces curing time. Sag resistant, temperature range of - 40 °C (103.9 °F) to 90 °C (193.9 °F) short exposure (up to 1 h) of 130 °C (265.8 °F).
Direct glazing	Sika 295 UV	4103/4300	Black, white	365 d	-	Direct glazing adhesive for plastic glazing panels. One component polyurethane adhesive of paste like consistency. 60 min tack free time, 1 d cure time (4 mm at 23 °C (73.4 °F)). Good UV, fresh water and seawater resistance. Do not apply below temperatures of 10 °C (50.0 °F) or above 35 °C (95.0 °F).

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Figure 1034.



3. Make sure that the correct DLA is selected in the chooser. Click on Utilities, DLA Setup. The DLA Chooser window opens. Check the button to match to the Current Device. Click Apply.

4. Select the required machine range.

Figure 1035.



5. The Flashloader tool will then open.

Figure 1036.



Using Flashloader

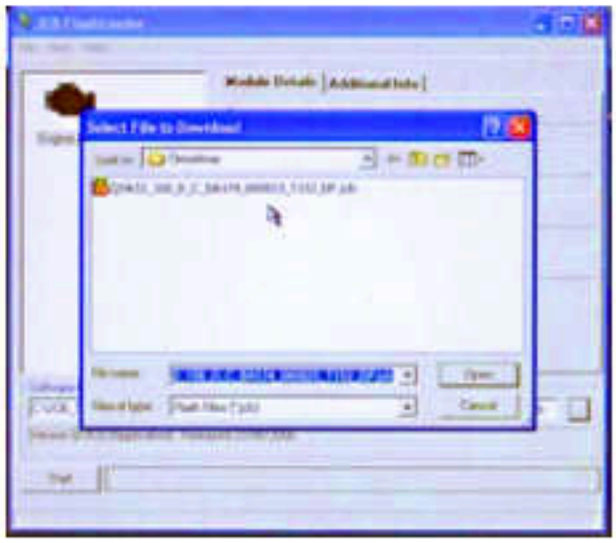
Important: Do not turn off the ignition or isolate the system by accidentally engaging the operators seat isolation switch when using the flashloader. This will interrupt the flash signal to the ECM and will irreparably damage the ECM.

1. Make sure that the machine ignition switch is set to ON but do not start the engine.

2. Click on the ECM icon.

3. Click on the Browse button and select the correct data file. Click Open.

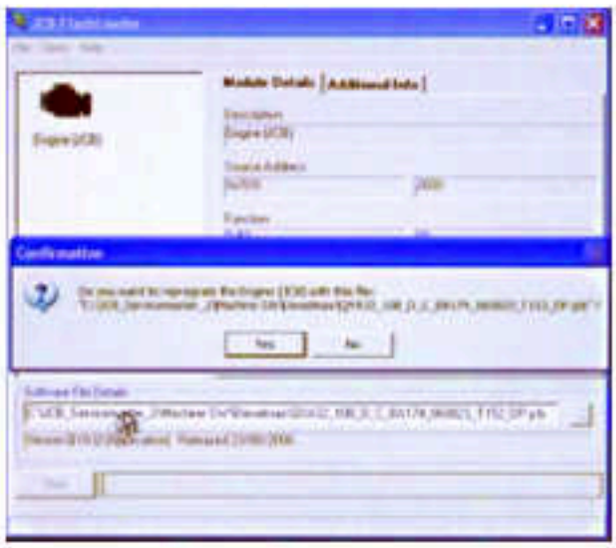
Figure 1037.



4. Click on the Start button. A confirmation window will appear. Click on the Yes to start the reprogramming of the ECM. The progress bar is displayed.

5. When the programming is complete switch the machine ignition to the OFF position. Important: Re-flashing the ECM changes the base programme. Re-flashing the ECM does not configure the machine settings such as fuel injector calibration codes, and other machine specific options.

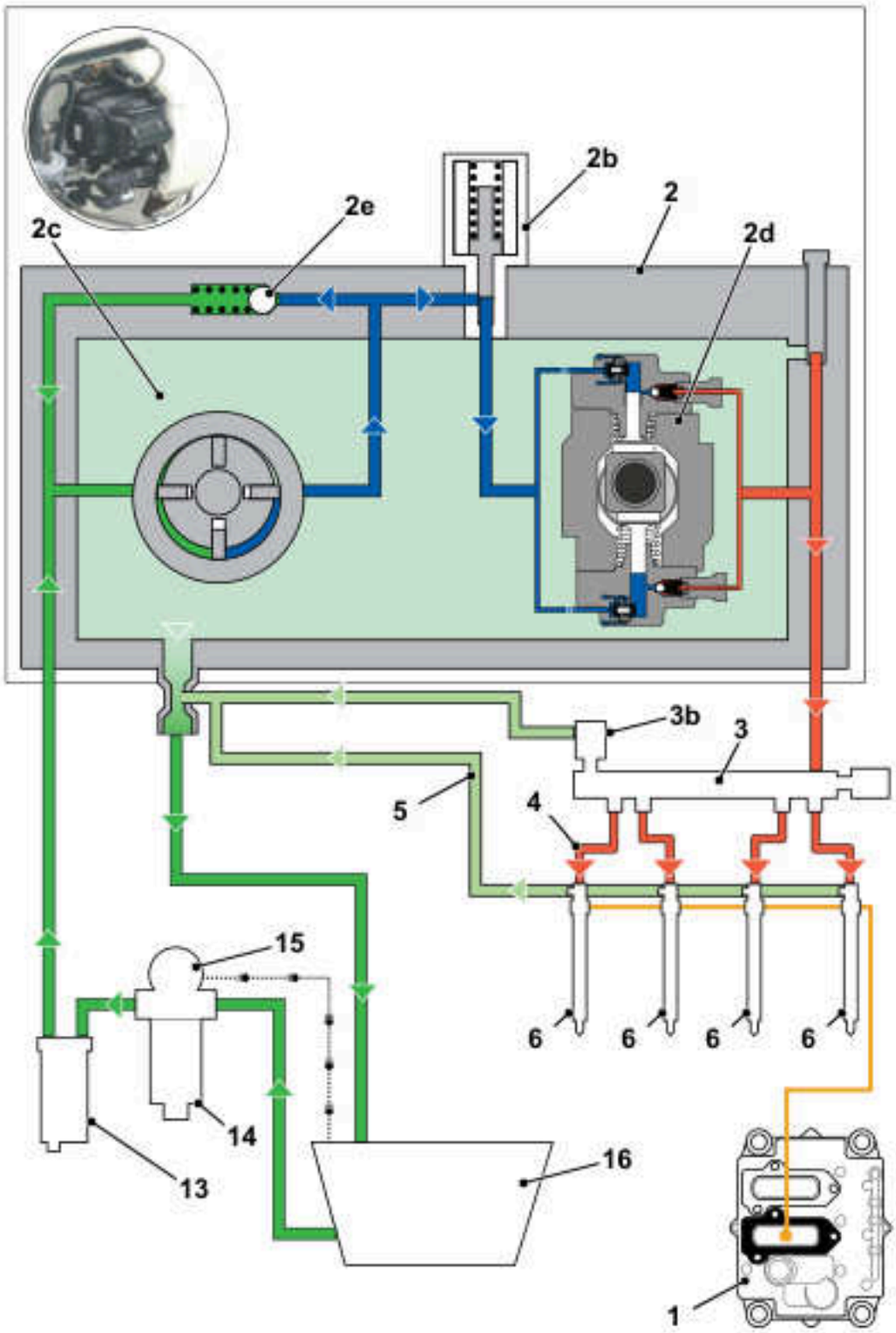
Figure 1038.



6. Before starting the engine make sure that the machine setup data is correct. You must check that all other relevant machine settings are correctly configured. Use the setup software tool.

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Figure 258.



1 ECM
2b IMV
2 Fuel high pressure pump
2c Fuel high pressure pump (transfer section)

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