Service Manual

527-58

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Removal and Replacement

⚠ WARNING

Lifting Equipment

You can be injured if you use incorrect or faulty lifting equipment. You must identify the weight of the item to be lifted then choose lifting equipment that is strong enough and suitable for the job. Make sure that lifting equipment is in good condition and complies with all local regulations.

INT-1-3-7_2

⚠ WARNING

Hydraulic Pressure

Hydraulic fluid at system pressure can injure you. Before connecting or removing any hydraulic hose, residual hydraulic pressure trapped in the service hose line must be vented. Make sure the hose service line has been vented before connecting or removing hoses. Make sure the engine cannot be started while the hoses are open.

INT-3-1-11_2

⚠ WARNING

Raised Machine

NEVER position yourself or any part of your body under a raised machine which is not properly supported. If the machine moves unexpectedly you could become trapped and suffer serious injury or be killed.

INT-3-3-7_1

⚠ WARNING

Metal Splinters

You can be injured by flying metal splinters when driving metal pins in or out. Use a soft faced hammer or copper pin to remove and fit metal pins. Always wear safety glasses.

INT-3-1-3_2

Note: *The boom does not need to be removed to replace the auxiliary and tilt hoses.* *⇨ Auxiliary and Tilt Hoses (□ B-194)*

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Electrical Operation and Schematics

Electrical Schematics

⇨ Fig 4. (F-155), ⇨ Fig 5. (F-156), ⇨ Fig 6. (F-157)	
C014	Joystick/control lever connector 2
C016	Joystick/control lever connector 4
C047	Transmission ECU Connector J2
C050	Controller Earth Point
P01/C001	Panel Harness connector to Chassis Harness connector 1
P3	Fusebox B
P16	Column switch LH

Note: *For ECU power supply and earths refer to* ***Section F - Hydrostatic Transmission SYSTEM*** *topic.* ⇨ *Related Topics (F-151)*

⇨ *Fig 4. (F-155)*

When the column F/N/R switch **P16** is in neutral it sends an input to pin 31 of the ECU **C047**. When the ECU receives this input it allows a power supply to the joystick F/N/R switch **C014** to allow the drive direction to be selected.

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1	Blink						
2 second delay							
2	Blink	Blink					
2 second delay							
7	Blink	Blink	Blink	Blink	Blink	Blink	Blink

The light will be ON for approximately 1 second and OFF for approximately 0.5 seconds. There is an OFF time of approximately 2 seconds between error code digits.

When a blink code is displayed the MIL light can also come on. ⇨ *Malfunction Indicator Light (MIL) (M-57)*

Refer to the applicable system topic for details about the related blink codes.

CANbus Connected Computer

Error codes logged can be accessed via a suitable laptop computer running the applicable diagnostics software. The computer must be connected to the machine CANbus socket using a data link adapter (DLA). Once connected all recorded codes can be displayed, for example **E127**. The engineer also has a facility to erase the fault code log.

Fault Code Log

The monitoring system electronic control unit (ECU) incorporates a `data logging' feature for recording fault codes.

The log enters the fault code together with the current time and date.

The fault code log can be read on the LCD. Alternatively use the JCB diagnostics tool.

Reading the Fault Code Log on the LCD

The machine graphical user interface (GUI) is one of two types:

- When centre LCD panel is present it is used to display the fault code log. *** 'Centre Panel (CANbus Enabled)' on page 58 ***
- When centre LCD panel is not present the fault code log is displayed on LMS LCD panel. *** 'Monitoring System Display Panel' on page 58 ***

1 Operate the info button **4** with quick presses (less than 2 seconds) until the `time until next service' is displayed.

2 Operate the info button **4** with a long press (20 seconds or more). The `Service' menu is selected.

3 Press the UP **3** or Down **2** buttons adjacent to the applicable LCD until `Fault List' is displayed.

4 Operate the info button with a quick press (less than 2 seconds) to display the fault list. Press the UP **3** or Down **2** buttons to scroll through the fault list on the applicable LCD.

The faults are listed in the order they were logged.The duration of the fault and time are logged too. The list contains a maximum of 30 fault logs.

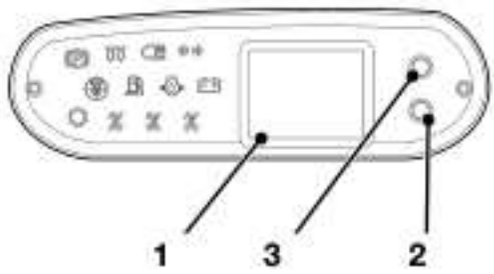


Fig 1. Centre Panel (CANbus Enabled)

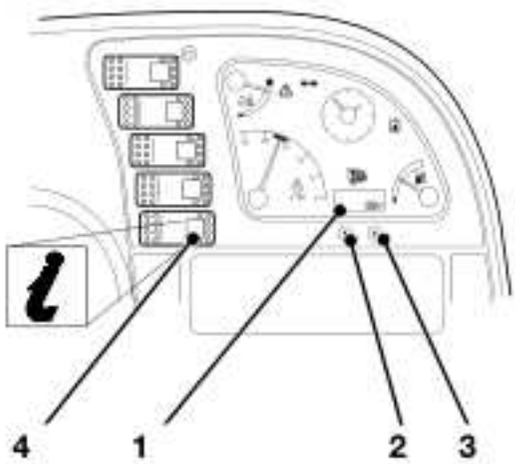


Fig 2. Monitoring System Display Panel

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Menu Bar - Help Menu

⇨ *Fig 11. (M-186)*

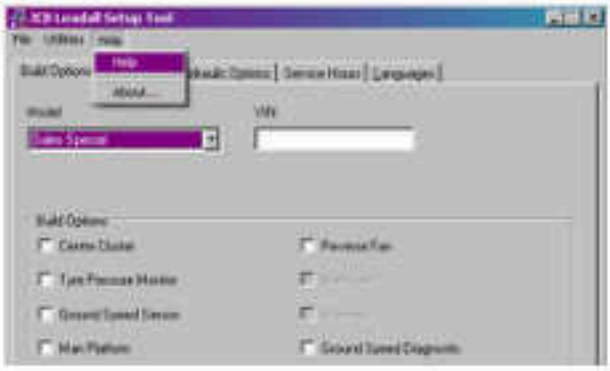


Fig 11.

- **Help:** opens the help program. ⇨ *Fig 12. (M-186)*
- **About**: Opens a window showing the version number of the installed copy of the software. ⇨ *Fig 13. (M-186)*



Fig 12.



Fig 13.

Build Options

⇨ *Fig 14. (M-186)*

This screen is used to configure the instrument cluster ECU machine build options. The options available will vary depending on machine model selected.



Fig 14.

Configure Electronic Instrument Cluster Build Options

1 Click "Connect" to begin communication with the ECU.

2 Using the "Model" Drop down menu select the machine model.

Note: *Agri Machines built before October 2010 will have the suffix `EH' (Electro Hydraulic)*

3 Enter the machine VIN number into the VIN box.

4 The available build options will be represented with white check boxes next to the text.

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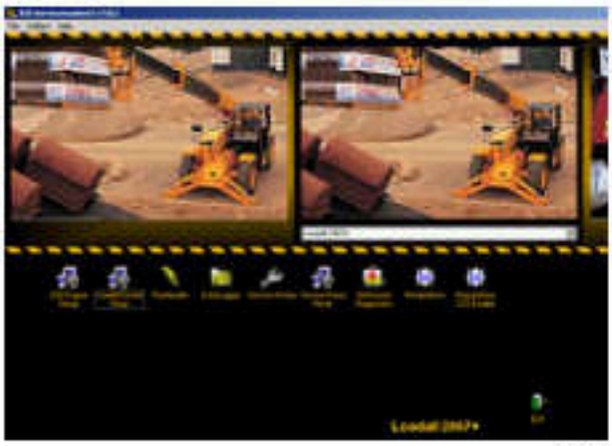


Fig 6.

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' ⇨ *Fig 7. (M-25)*



Fig 7.

4 Select 'Loadall 2007+' from the drop down list ⇨ *Fig 6. (M-25)* and then start the setup tool running by clicking on the **Service Hours Reset** icon. ⇨ *Fig 8. (M-25)*



Fig 8.

5 The **Service Hours Reset** tool will then open up. ⇨ *Fig 9. (M-25)*



Fig 9.

6 Open the utilities menu and click on "Select Language". ⇨ *Fig 10. (M-25)*

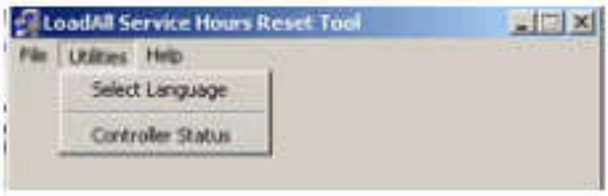


Fig 10.

7 Select the language for the operation of the "Service Hours Reset" tool. ⇨ *Fig 11. (M-26)*

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