Service Manual

Side Engine Loadalls

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Specifications

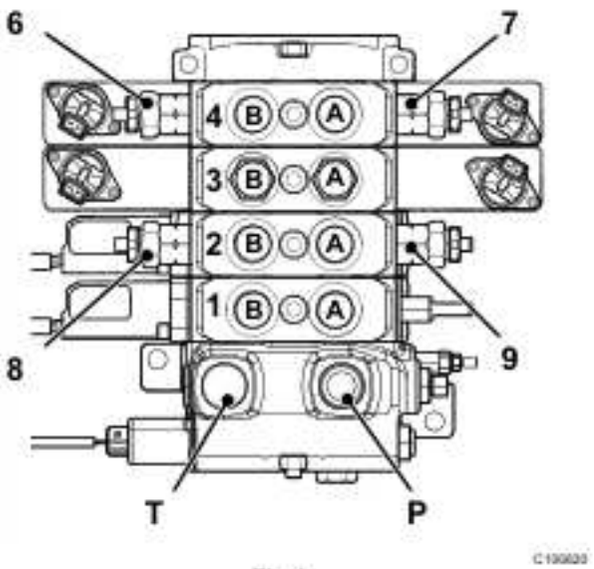
4 Spool Valve Block (S1)

IMPORTANT: These specifications are only applicable to some machine models. Refer to the table at the front of this topic for the applicable machine models. ⇨ *Table 1. Specification Variants (E2-2)*

4 Spool, parallel service, double acting spools		
Spool 1	Boom Raise & Lower Service	Manually operated
Spool 2	Carriage Tilt Service	Manually operated
Spool 3	Boom Extend & Retract Service	Solenoid, Servo pilot operated
Spool 4	Auxiliary Service	Solenoid, Servo pilot operated

Relief Valve Pressures: ⇨ *Fig 1. (E2-4)*			
	bar	**kgf/cm²**	**lbf/in²**
5 - Main Relief Valve (MRV)	240	245	3480
Auxiliary Relief Valves (ARV's)			
6 - Auxiliary Ram Rod Side	220	225	3190
7 - Auxiliary Ram Head Side	220	225	3190
8 - Carriage Tilt Ram Rod Side	276	281	4000
9- Carriage Tilt Ram Head Side	138	140	2000

Pilot Pressure Range: (machines with single lever controls)	**bar**	**kgf/cm²**	**lbf/in²**
All Machines	10 - 30	10.2 - 30.6	145 - 435



C139020

Fig 1.

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Electrical Operation and Schematics

The schematic diagrams show an overview of the system. For machine specific schematics refer to ***Section C - Schematics***. ⇨ *Related Topics (H3-2)*

Note: *This topic refers to electrical systems and devices. For details refer to* ***Section M-Applications***. ⇨ *Related Topics (H3-2)*

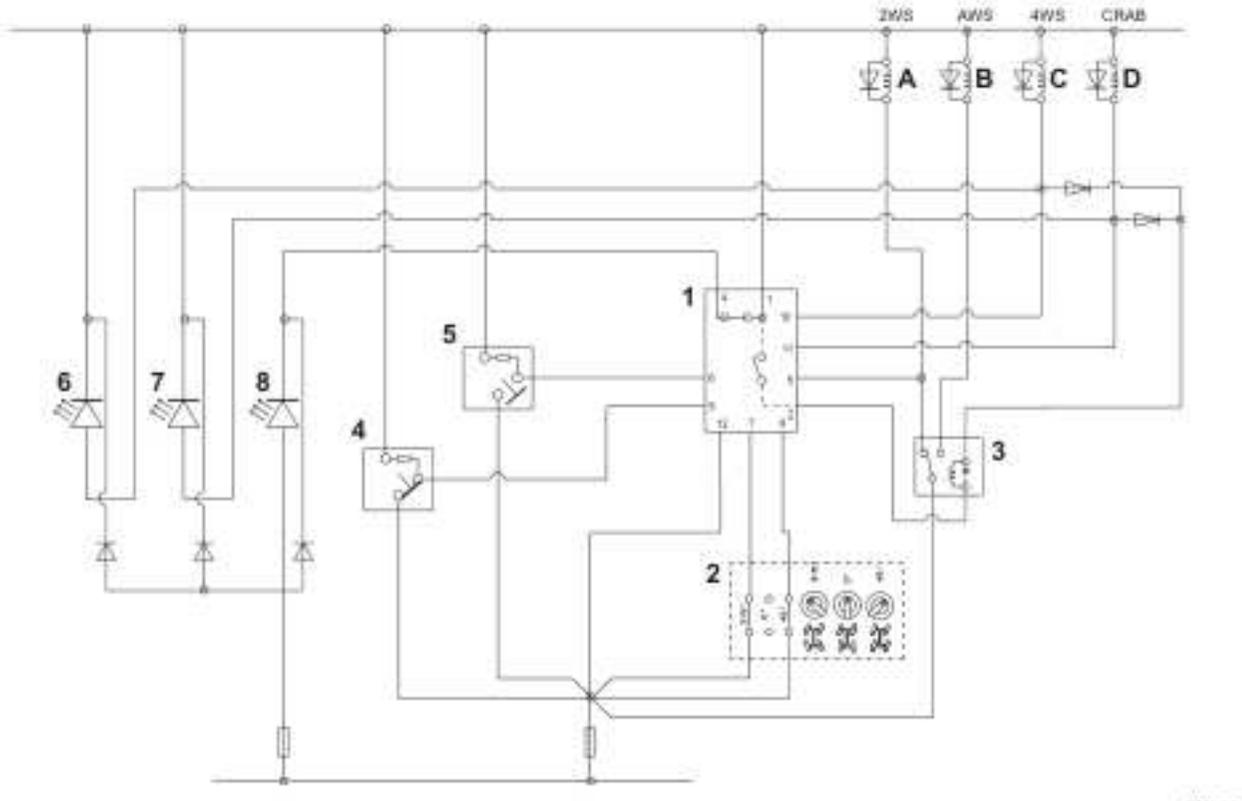


Fig 9. Schematic Circuit (Typical)

Central to the steer mode system is the electronic control unit (ECU) **1**. When the operator selects a steer mode using the cab mounted selector switch **2**, the ECU energises the relevant solenoids **C** or **D** on the steer mode valve. Solenoids **A** and **B** are energised via a changeover relay **3**, which in turn is also controlled by the ECU.

Indicator LED's **6**, **7** or **8** on the instrument panel illuminate to show the steer mode currently operative.

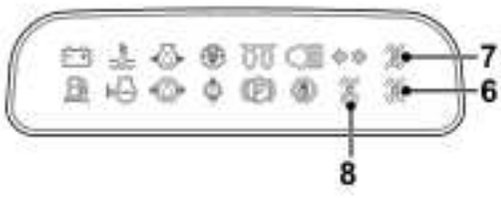


Fig 10. Instrument Panel

Note: *The steer mode valve spools have mechanical detents. Loss of electrical power to the valve solenoid coils will not cause the system to change steer mode suddenly.*

Faulty electrical connections to the solenoid coils (energising the coil) could cause the steer mode to change suddenly with no operator input.

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Powertrain 'P' Codes

Should faults occur related to the transmission 0711 ECU, IFM ECU, Engine ECU or the electrical devices connected to it the ECU generates fault codes and stores them in its memory. By using the JCB Servicemaster Diagnostics Tool these codes can be read using a laptop computer connected to the ECU. The system will also display 'real time' data for faults active with the engine running.

Depending on the machine installation fault codes may be displayed using one or more display systems. ⇨ *Operation Overview (M3-6).*

The 'P' fault code will display a 5 digit code followed by a suffix of 2 digits:

'**P1234-56**'

The third digit of the code (in the above example = **2**) refers to which system is affected. ⇨ *Table 6. P Code Definitions (M3-38)*

Table 6. P Code Definitions

Third Digit	System	Powertrain Component Affected
1	Fuel and Air Metering	Engine
2	Fuel and Air Metering (Injector Circuit Malfunction Only)	Engine
3	Ignition System or Misfire	Engine
4	Auxiliary Emission Control System	Engine
5	Vehicle Speed Control and Idle Control System	Engine/Transmission
6	Computer Output Circuit	Engine/Transmission
7	Transmission	Transmission
8	Transmission	Transmission

For details of 'P' fault codes refer to the applicable service manual:

- ***9806/4300* T4i Engine Service Manual.** ⇨ *Related Topics (M3-5)*
- **9803/8610 Transmissions Service Manual.** ⇨ *Related Topics (M3-5)*

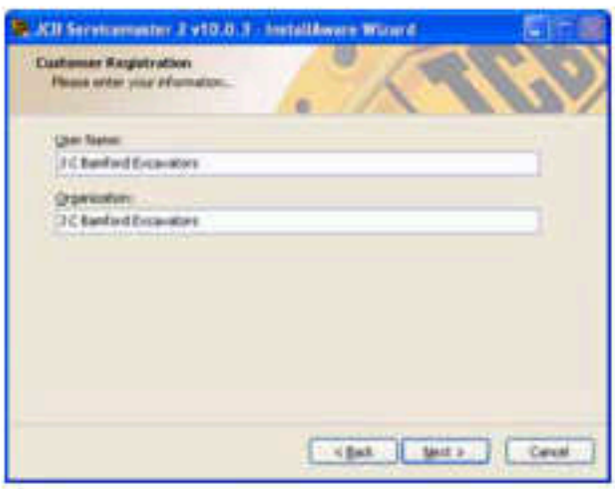
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Fig 7.

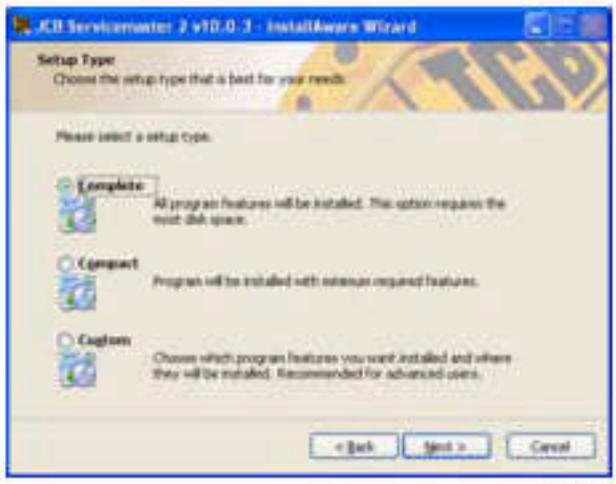
6 The next screen requires you to put in your username and organization. Once inserted, click next.



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Fig 8.

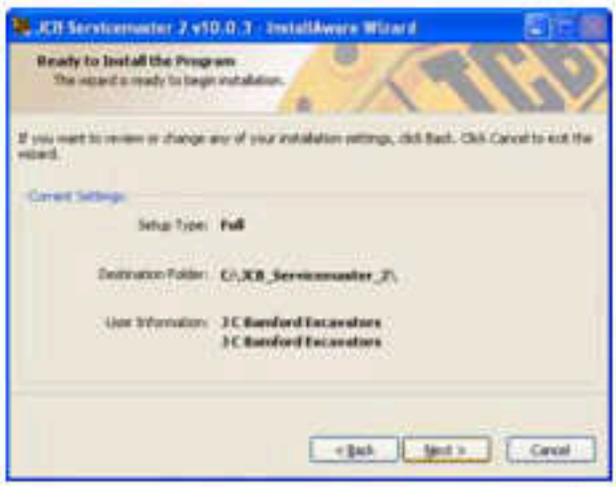
7 On the next screen, please choose "Complete" to do the full install to your laptop.



T040310-7

Fig 9.

8 The next screen shows you where ServiceMaster will be installed to on your computer. Click next to begin the install.



T040310-7

Fig 10.

9 During the install you may get a number of errors indicating language files for TransLink haven't been found. Please click Ignore, these files will be installed later via WebUpdate.

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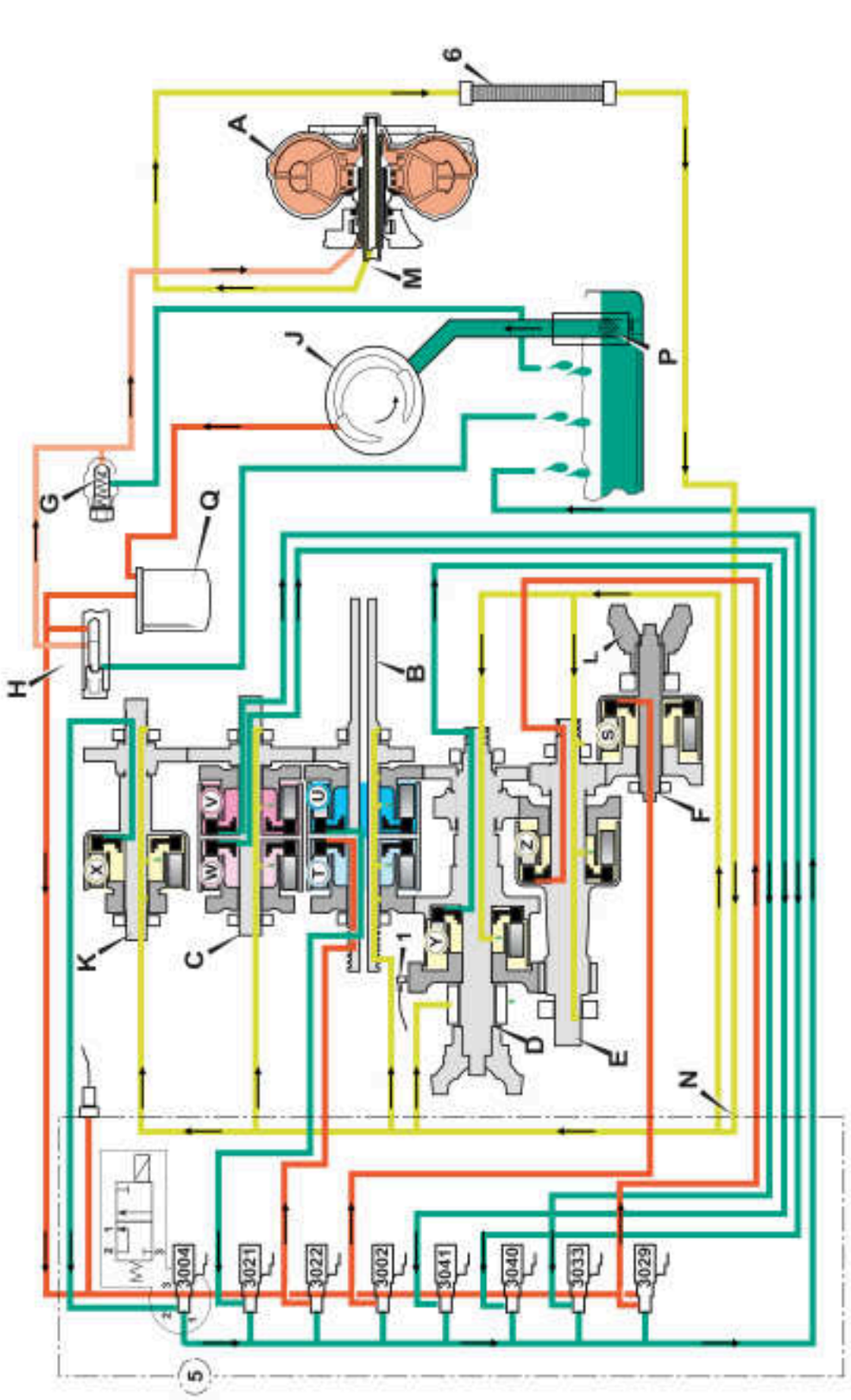


Fig 2. Hydraulic Operation

⇨ Table 2. Hydraulic Operation - Key (F8-7)

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