Service Manual

1CX

Service Manual - 1CX

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Coolant Mixtures

T3-009_4

Check the strength of the coolant mixture at least once a year, preferably at the start of the cold period.

Replace the coolant mixture according to the intervals shown in the machine's Service Schedule.

⚠ WARNING

Antifreeze can be harmful. Obey the manufacturer's instructions when handling full strength or diluted antifreeze.

7-3-4-4_1

You must dilute full strength antifreeze with clean water before use. Use clean water of no more than a moderate hardness (pH value 8.5). If this cannot be obtained, use de-ionized water. For further information advice on water hardness, contact your local water authority.

The correct concentration of antifreeze protects the engine against frost damage in winter and provides year round protection against corrosion.

As an example, the protection provided by JCB High Performance Antifreeze and Inhibitor is given below.

50% Concentration (Standard)

Protects against damage down to -40 °C (-39 °F)

60% Concentration (Extreme Conditions Only)

Protects against damage down to -56 °C (-68 °F)

Important: *Do not exceed a 60% concentration, as the freezing protection provided reduces beyond this point.*

If you use any other brand of antifreeze:

- Ensure that the antifreeze complies with International Specification ASTM D6210.
- Always read and understand the manufacturer's instructions.
- Ensure that a corrosion inhibitor is included. Serious damage to the cooling system can occur if corrosion inhibitors are not used.
- Ensure that the antifreeze is ethylene glycol based and does not use Organic Acid Technology (OAT).

Fluid Recommendations (Fuel Specification)

General Information

Note: *Every attempt is made to provide accurate, up to date information. By use of this document you agree that Perkins Engines Company Limited is not responsible for errors or omissions.*

Note: *These recommendations are subject to change without notice. Contact your local Perkins distributor for the most up to date recommendations.*

Diesel Fuel Requirements

Satisfactory engine performance is dependent on the use of a good quality fuel. The use of a good quality fuel will give the following results: long engine life and acceptable exhaust emissions levels. The fuel must meet the minimum requirements that are stated in the tables ⇨ *Table 2.* (🗋 15), ⇨ *Table 3.* (🗋 17), ⇨ *Table 4.* (🗋 17).

Note: *The footnotes are a key part of the Perkins Specification for Distillate Diesel Fuel Table . Read ALL of the footnotes.*

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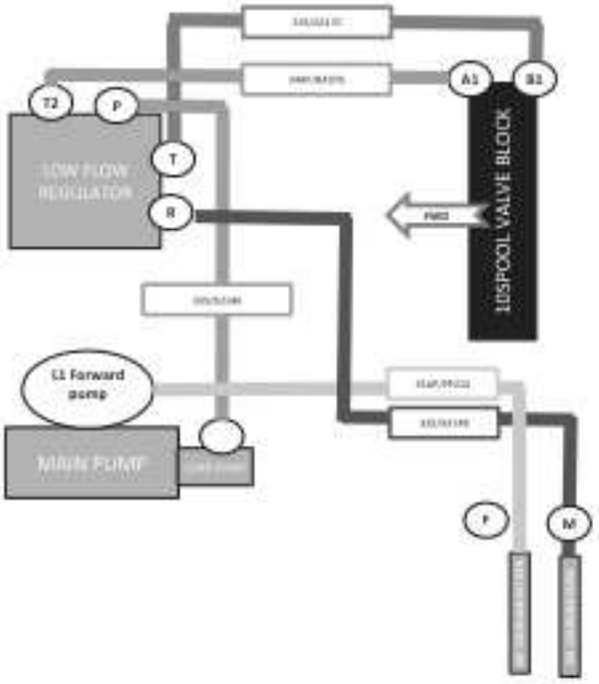


Fig 4.

5 Fit hoses to ports **T**, **T2** and **P**. Use loctite 243 and torque hoses, ⇨ *Table 1. Torque Figures (E-160)*.

Table 1. Torque Figures

T2	89 Nm
P	135 Nm
T	135 Nm

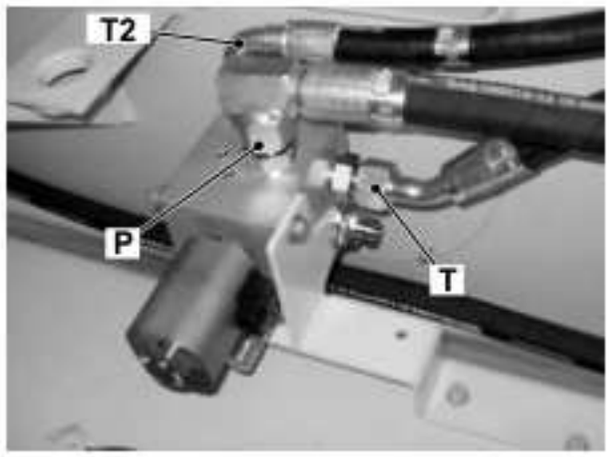


Fig 5.

6 Fit an elbow adaptor to port **A1** on the 10 spool valve block. Phase the elbow towards the front of the machine, use loctite 243 and torque to 89 Nm.

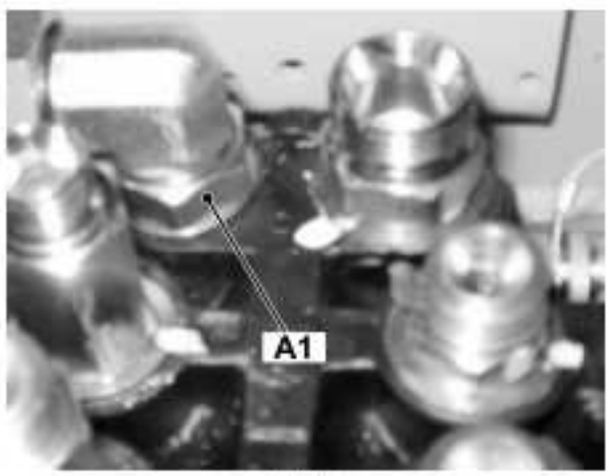


Fig 6.

7 Fit hoses to ports **A1** and **B1**. Use loctite 243 and torque hoses, ⇨ *Table 2. Torque Figures (E-160)*.

Table 2. Torque Figures

A1	89 Nm
B1	135 Nm

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12 Fit bracket **A** to the rear frame using a clamp plate to secure. The clamp plate fits on the inside of the rear frame leg. Fit as shown at **B**.

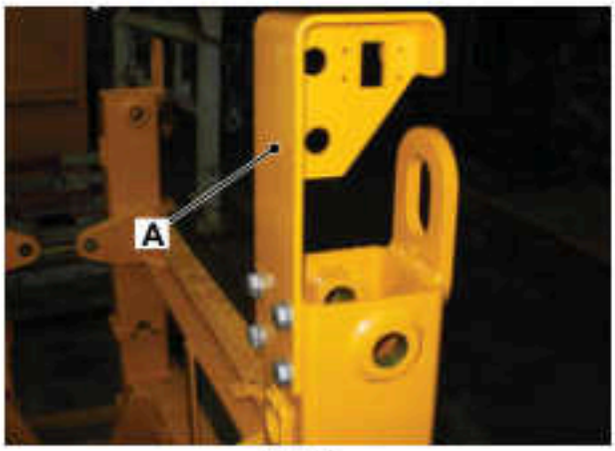


Fig 13.

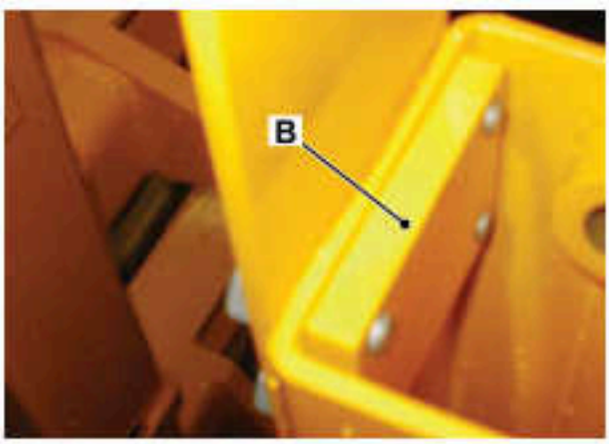


Fig 14.

13 Fit two bulkhead fittings **C** to the loader change over bracket. Fit with running nut and star washer on the inside. Fit a male **D** and female **E** quick fit adapter to the bulkhead fittings. Use loctite 243 and torque to 81 Nm.

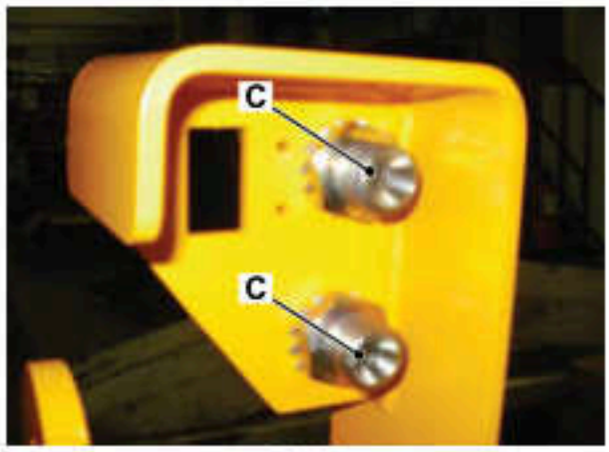


Fig 15.

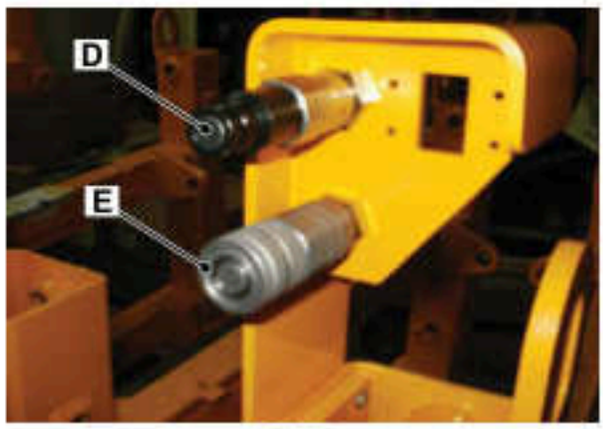


Fig 16.

14 When the rear frame is fitted to the machine connect the hoses to the quick release couplings. Fit hose marked F to the bottom fitting and the hose marked M to the top fitting. Use loctite 243 and torque to 69 Nm.

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Power Management System (PMS)

Update PMS Settings

1 Fit reflective tape **A** onto the pulley on the front of the engine.

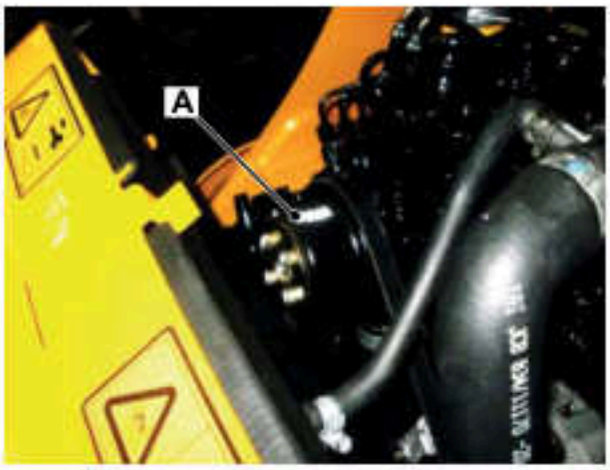


Fig 3.

2 Fit T piece and test point **B** to the excavator pressure valve. Once installed fit a pressure guage to the test point.

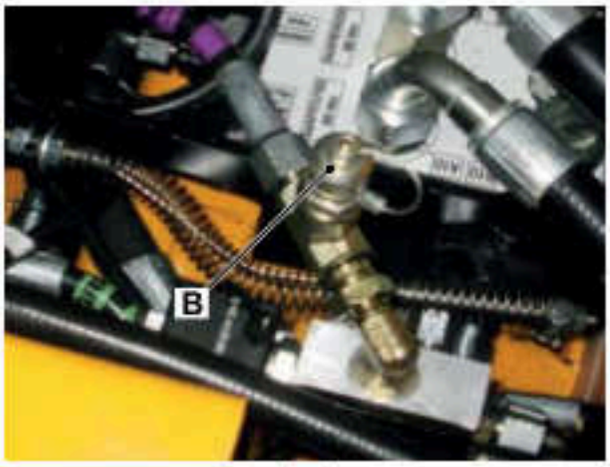


Fig 4.

3 Where the fuses are fitted find the plug **C** with 2 wires No. 508/144C.

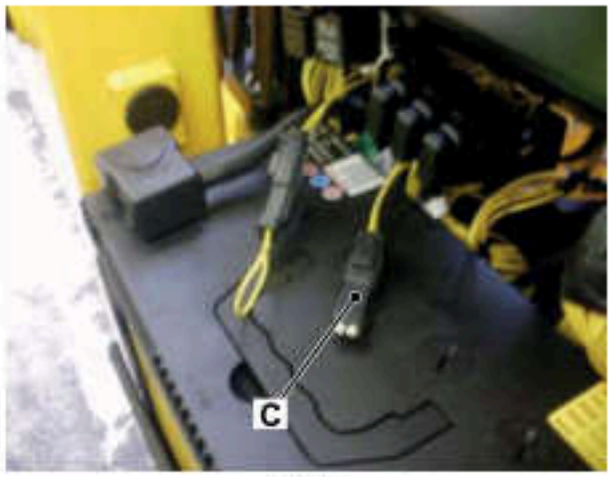


Fig 5.

4 Remove blanking plug **C** and fit a horn button **D** to the connector.

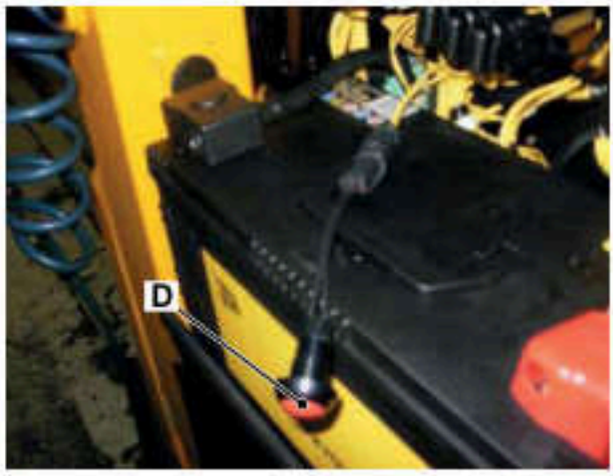


Fig 6.

5 Rotate the PMS switch fully clockwise.

6 Hold down the red horn button **D**, turn on the ignition until the red light **E** on the instrument panel flashes, then release the button.

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