



# Specifications

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## **3408C, 3412C and 3412D High Performance Marine Engines**

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REA1-Up (Engine)  
8RG1-Up (Engine)  
3JK1-Up (Engine)  
7BL1-Up (Engine)

The crankshaft rotation is viewed from the flywheel end of the engine. Direction of rotation ..... counterclockwise

The rotation of the fuel pump camshaft is viewed from the pump drive end of the fuel injection pump. Direction of rotation ..... counterclockwise

Number one cylinder is the front cylinder on the left side of the cylinder block.

Number two cylinder is the front cylinder on the right side of the cylinder block.

**Note:** The front of the engine is opposite of the flywheel end of the engine. The left side of the engine and the right side of the engine are viewed from the flywheel end of the engine.

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## Fuel Injection Lines

SMCS Code: 1252

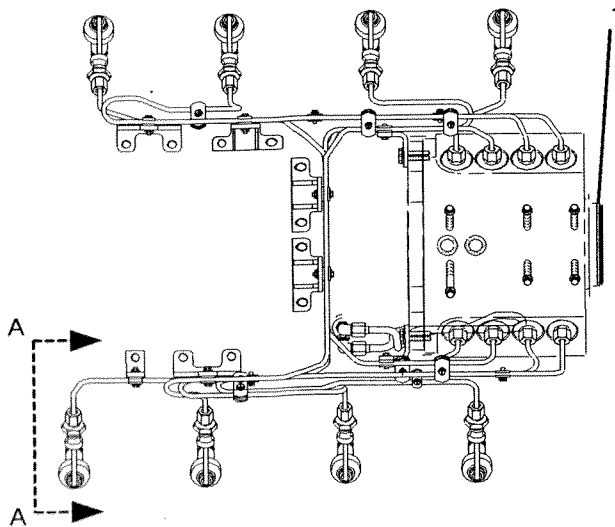


Illustration 3  
3408 fuel lines  
Typical example

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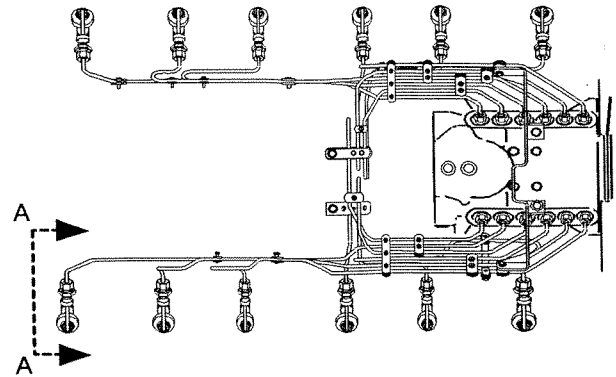


Illustration 4  
3412 fuel lines  
Typical example

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(1) Lubricate the bore lightly with clean engine oil.

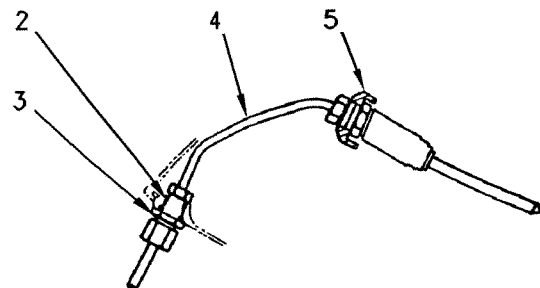


Illustration 5  
View A-A

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- (2) Lubricate the bore lightly with clean diesel fuel.
- (3) Tighten the nut to the following torque. ....  $30 \pm 7 \text{ N}\cdot\text{m}$  ( $22 \pm 5 \text{ lb ft}$ )
- (4) Tighten the fuel lines to the following torque. ....  $40 \pm 7 \text{ N}\cdot\text{m}$  ( $30 \pm 5 \text{ lb ft}$ )
- (5) Tighten the retainers to the following torque. ....  $48 \pm 7 \text{ N}\cdot\text{m}$  ( $35 \pm 5 \text{ lb ft}$ )

**WARNING**

Be sure the fuel injection line clamps are installed in the correct location. Incorrectly installed clamps may allow the fuel injection lines to vibrate and become damaged. The damaged lines may leak and cause a fire.

Tighten the fuel line clamps to the following torque. .... 2.3 N·m (20 lb in)

Note: The 6V-4980 Torque Screwdriver Tool Group is available for applying the correct torque for the fuel line clamps.

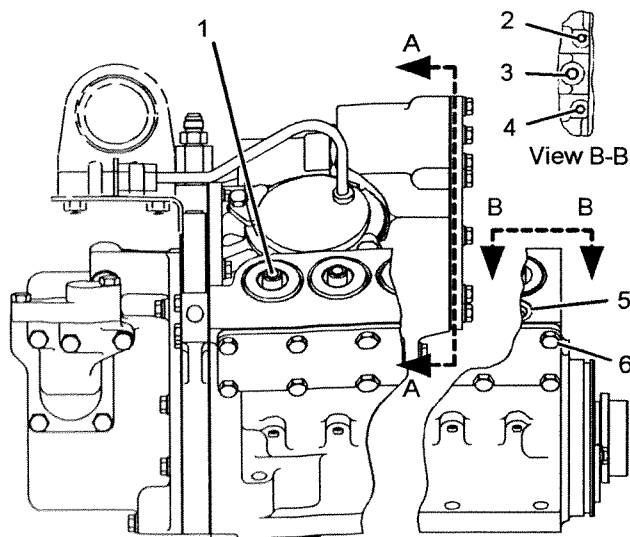
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## Fuel Injection Pump

SMCS Code: 1251; 1290

### Type 1

### Fuel Injection Pump and Governor



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Illustration 6  
Right side view  
Typical example

- (1) Tighten the bushing to the following torque. .... 270 ± 13 N·m (200 ± 10 lb ft)
- (2) Pin hole for zero rack (LH)
- (3) Hole for timing pin
- (4) Pin hole for zero rack (RH)

- (5) Fuel Inlet from secondary filter
- (6) Tighten the bolts to the following torque. .... 14 ± 4 N·m (10 ± 3 lb ft)

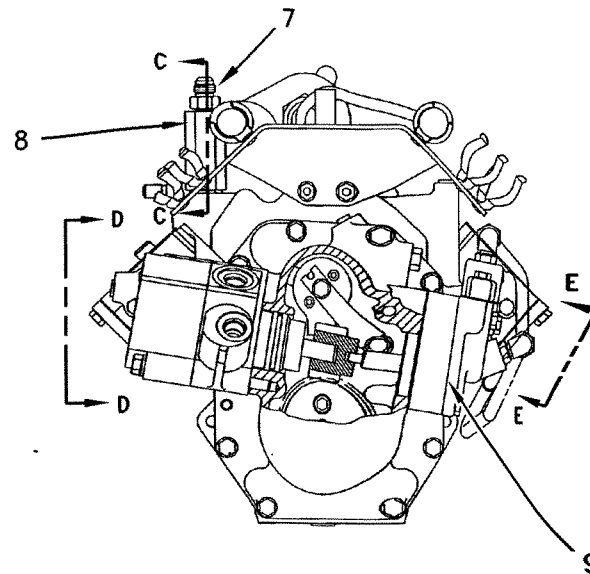


Illustration 7

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- (7) Fuel return to tank (automatic purge)
- (8) Fuel bypass valve
- (9) Rotary servo assembly