

Product: WHEEL TRACTOR

Model: 631G WHEEL TRACTOR CLR

Configuration: 631G Wheel Tractor CLR00001-UP (MACHINE) POWERED BY 3408E Engine

Disassembly and Assembly 3408E and 3412E Engines for Caterpillar Built Machines

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i01105362

HEUI Fluid Manifold - Remove and Install

SMCS - 1126-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	2

Start By:

- Remove the injection actuation pressure sensor. Refer to Disassembly and Assembly, "Injection Actuation Pressure Sensor - Remove and Install".
- Remove the unit injector sleeves. Refer to Disassembly and Assembly, "Unit Injector Sleeve - Remove".
- Remove the rocker arm and shaft. Refer to Disassembly and Assembly, "Rocker Arm and Shaft - Remove".
- Remove the valve mechanism cover base. Refer to Disassembly and Assembly, "Valve Mechanism Cover Base - Remove and Install".
- Remove the aftercooler. Refer to Disassembly and Assembly, "Aftercooler - Remove".

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers

before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Caterpillar Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

NOTICE

The cylinder head must be removed and a new spacer plate gasket must be installed anytime the HEUI Fluid Manifold has been removed. Refer to Disassembly and Assembly, "Cylinder Head - Install" in this module.

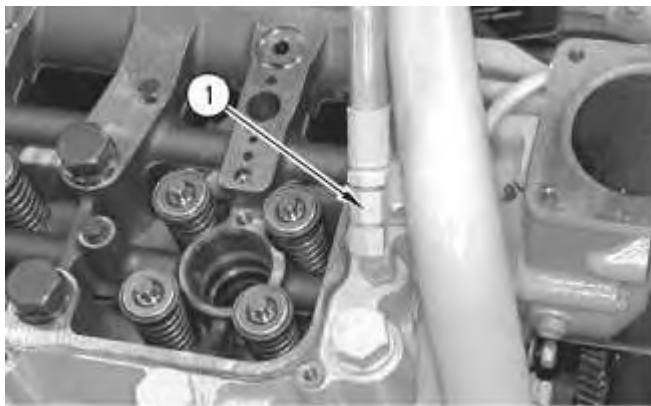


Illustration 1

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Typical example

1. Remove hose (1) from the front of the HEUI Fluid Manifold.
-

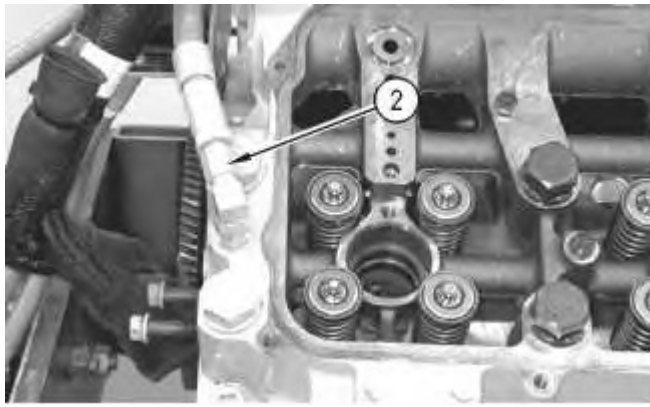


Illustration 2

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Typical example

2. Remove hose (2) from the rear of the HEUI Fluid Manifold.



Illustration 3

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Typical example

3. Remove tube assembly (3).

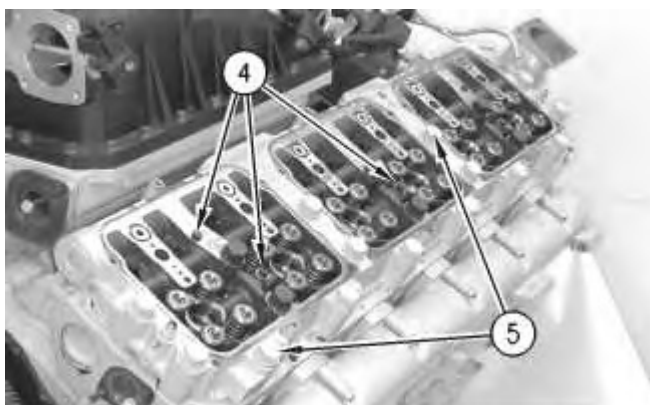


Illustration 4

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Typical example

4. Remove cylinder head bolts (5) and the washers. Remove HEUI Fluid Manifold bolts (4).

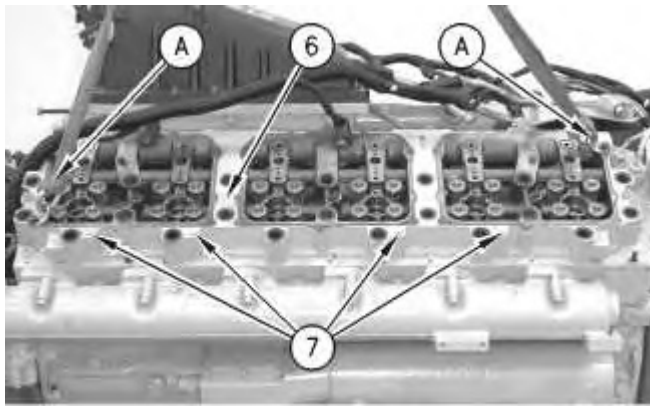


Illustration 5

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Typical example

5. Install Tool (A) and a hoist on the HEUI Fluid Manifold. Remove HEUI Fluid Manifold bolts (7). Remove HEUI Fluid Manifold (6).

The weight of the HEUI Fluid Manifold for the 3412E is 60 kg (131 lb).

The weight of the HEUI Fluid Manifold for the 3408E is 39 kg (86 lb).

Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	2

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

NOTICE

The cylinder head must be removed and a new spacer plate gasket must be installed anytime the HEUI Fluid Manifold has been removed. Refer to Disassembly and Assembly, "Cylinder Head - Install" in this module.

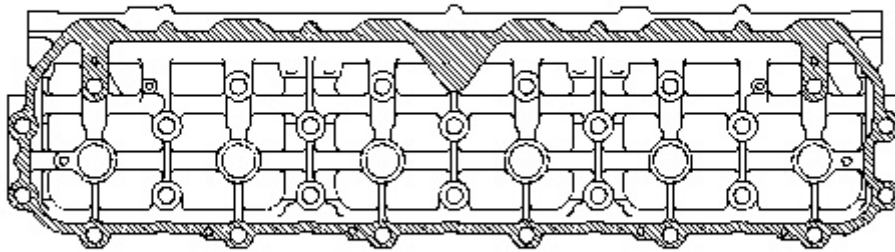


Illustration 6
HEUI fluid manifold for 3412E

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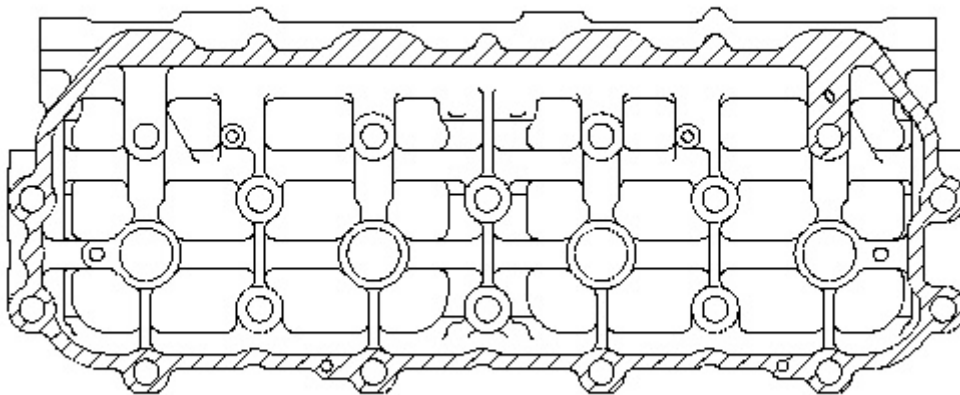


Illustration 7
HEUI fluid manifold for 3408E

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Note: The bottom face of the HEUI Fluid Manifold and the top face of the cylinder head must be free of any contaminants during assembly.

1. Apply **8C-8422** Sealant in the shaded area of the HEUI Fluid Manifold. The **8C-8422** Sealant is applied to the bottom portion of the HEUI Fluid Manifold. The **8C-8422** Sealant is permitted on the entire face of the HEUI Fluid Manifold.
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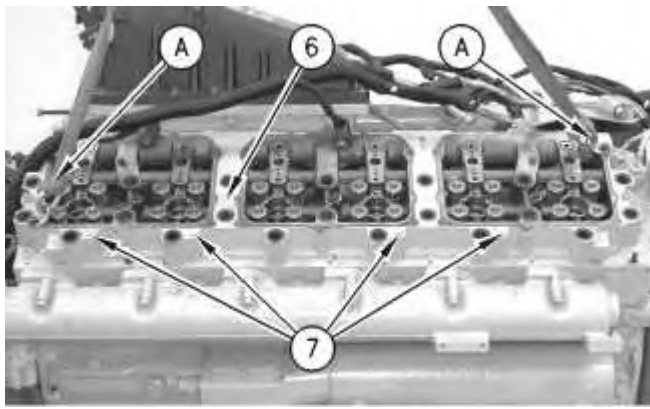


Illustration 8

g00582745

Typical example

2. Install Tool (A) and a hoist on the HEUI Fluid Manifold. Install HEUI Fluid Manifold (6).

The weight of the HEUI Fluid Manifold for the 3412E is 60 kg (131 lb).

The weight of the HEUI Fluid Manifold for the 3408E is 39 kg (86 lb).

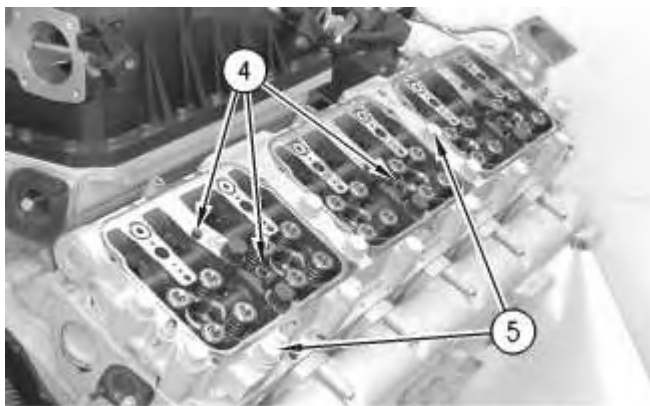


Illustration 9

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Typical example

3. Install HEUI Fluid Manifold bolts (4) and (7).
4. Put clean engine oil on bolts (5) for the cylinder head. Install cylinder head bolts (5).

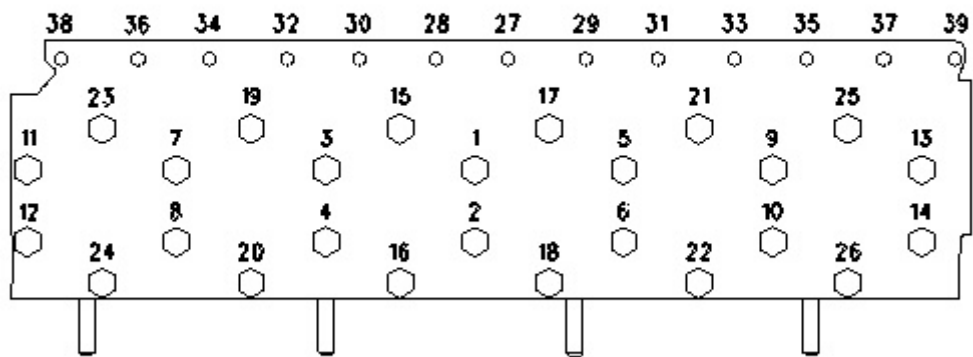


Illustration 10

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Tightening sequence for 3412E

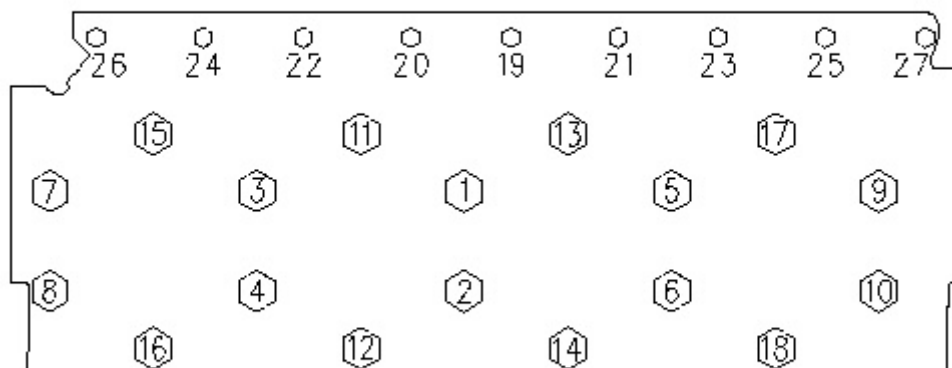


Illustration 11

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Tightening sequence for 3408E

5. Tighten bolts (5) in the following step sequence:

In a numerical sequence, tighten the bolts 1 through 26 for the 3412E.

In a numerical sequence, tighten the bolts 1 through 18 for the 3408E.

- a. In a numerical sequence, tighten the bolts to a torque of 270 ± 15 N·m (200 ± 11 lb ft).

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