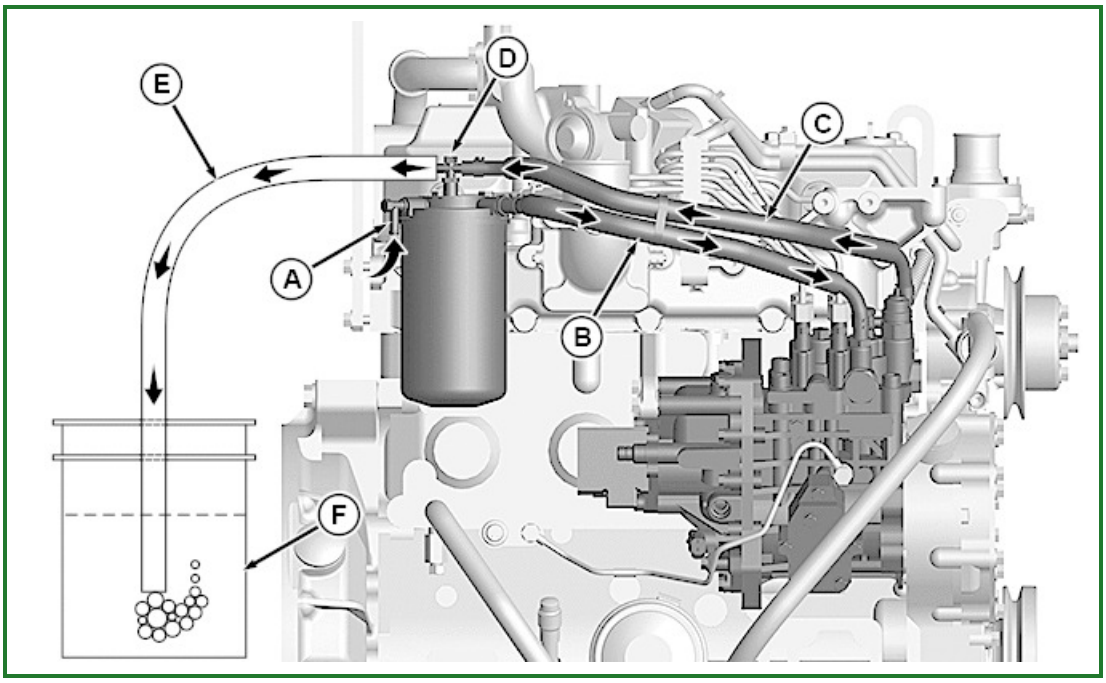
To check for air in the fuel system, follow the procedure below.

1. Preliminary checks:
    - Check for loose fittings between fuel tank and fuel supply pump.
    - Check for loose fittings on the fuel cooler, if applicable.
    - Make sure primary fuel filter element is on tight and gasket is intact.
    - Check for damaged fuel pick-up tube in tank.
    - Check for low fuel level in tank.
    - Air may enter system when engine is turned off. Verify that the fuel injector fuel return line, the fuel injection pump fuel supply line, and the fuel injection pump fuel return line are properly sealed at both ends.
2. Check for air in fuel system:



RG23863-UN: Test for Air in Fuel

LEGEND:

A - Fuel Supply Inlet

B - Fuel Injection Pump Fuel Supply Line

C - Fuel Return Line

D - Fuel Bleed Screw

E - Clear Plastic Hose

F - Container of Clean Fuel

    1. Disconnect the return-to-tank line from the secondary fuel filter assembly.
    2. Install a clear plastic hose (E) onto the fuel return-to-tank port located on the secondary fuel filter assembly.
    3. Submerge the other end of the clear hose into a container of clean fuel as shown.
    4. Start engine. Run engine for 1 minute at 1500 rpm. Observe the hose and the container for bubbles. Stop engine.
    5. If bubbles were present in the return fuel, go to the next step to determine source of the air. Reconnect fuel lines.
3. Check for air in fuel tank supply line:
    1. Disconnect the fuel supply line at the low-pressure fuel transfer pump fuel inlet and the primary fuel filter fuel outlet.
    2. Install a clear plastic hose with proper fittings and clamps between the primary fuel filter fuel outlet and the low-pressure fuel pump fuel inlet.
    3. Operate engine and check for air bubbles in hose. If bubbles are present, check for loose or damaged fuel pickup tube, primary fuel filter, and fuel supply lines or hoses.
    4. If no problem was found, go to the next step. Reconnect fuel lines.

4. Check for air in the fuel injection pump fuel supply line:
    1. Disconnect the line between the secondary filter fuel outlet and the fuel injection pump fuel inlet.
    2. Install a clear plastic hose in place of the fuel pump supply line (B) with proper fittings and clamps between the secondary filter fuel outlet and the fuel injection pump.
    3. Bleed air from the fuel system. See Fuel System Bleeding in Section 02, Group 155.
    4. Operate engine and check for air bubbles in hose. If bubbles are present, check for loose or damaged secondary fuel filter gasket and check for a loose or damaged secondary fuel filter.

Go to Section_04:Group_155

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