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1998 FORD Windstar OEM Service and Repair Workshop Manual

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- a check valve which maintains system pressure after the pump is shut off.
- a pressure relief for overpressure protection in the event of restricted fluid flow.
- a lifetime fuel filter providing filtration to protect the fuel injectors from foreign material.

Fuel Pump Shut-off Feature

In the event of a moderate to severe collision, the vehicle is equipped with a Fuel Pump and Sender Shut-off Feature that is initiated by the event notification signal.

The event notification feature provides other vehicle subsystems with information pertaining to restraint system deployment or fuel cutoff status. When an impact occurs which exceeds a predetermined threshold, the RCM (restraints control module) sends a signal on a dedicated circuit to the BCM (body control module). The BCM (body control module) then sends a signal on a second hard-wired circuit to the PCM (powertrain control module), which initiates fuel cut-off and disables the fuel system.

Should the vehicle shut off after a collision due to this feature, the vehicle may be restarted by first turning the ignition to the OFF position and then turn the ignition to the ON position. In some instances the vehicle may not start the first time and may take one additional ignition cycle.

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Normal Operation and Fault Conditions

Under normal operation, fuel should flow at a steady rate through the fuel tank filler pipe into the fuel tank. As fuel enters the fuel tank air is vented through the filler pipe or the ORVR system. REFER to: [Fuel System - Overview](#)(310-00A Fuel System - General Information - 2.7L EcoBoost (238kW/324PS), Description and Operation).

Possible Sources

- Fuel tank filler pipe
- Fuel tank filler pipe vent tube, if equipped
- Evaporative emission system
- Fuel tank inlet check valve (part of the fuel tank)
- Fuel level vent valve (part of the fuel tank)

A1 CHECK COMPONENTS FOR SIGNS OF DAMAGE

- Visually inspect the following components for signs of damage:
 - Fuel tank filler pipe
 - Fuel tank filler pipe vent tube, if equipped
 - EVAP (evaporative emission) system
 - Fuel tank inlet check valve (part of the fuel tank)
 - Fuel level vent valve (part of the fuel tank)

Was the cause of the concern found?

Yes	REPAIR or INSTALL new components to correct the concern.
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No	GO to A2
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A2 CHECK THE SYSTEM FOR ANY EVAP (EVAPORATIVE EMISSION) DTC'S

- Connect the scan tool.
- Check the system for any EVAP (evaporative emission) DTC's.

Are any DTC's present?

Yes	REFER to: Fuel Tank and Lines (310-01A Fuel Tank and Lines - 2.7L EcoBoost (238kW/324PS), Diagnosis and Testing).
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Is the fuel tank filler pipe or fuel tank filler pipe vent tube (if equipped) blocked or restricted?

Yes	If possible, REPAIR the blockage or restriction. If the blockage or restriction cannot be repaired, INSTALL a new fuel tank filler pipe or fuel tank filler pipe vent tube. REFER to: Fuel Tank Filler Pipe (310-01A Fuel Tank and Lines - 2.7L EcoBoost (238kW/324PS), Removal and Installation).
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No	GO to A6
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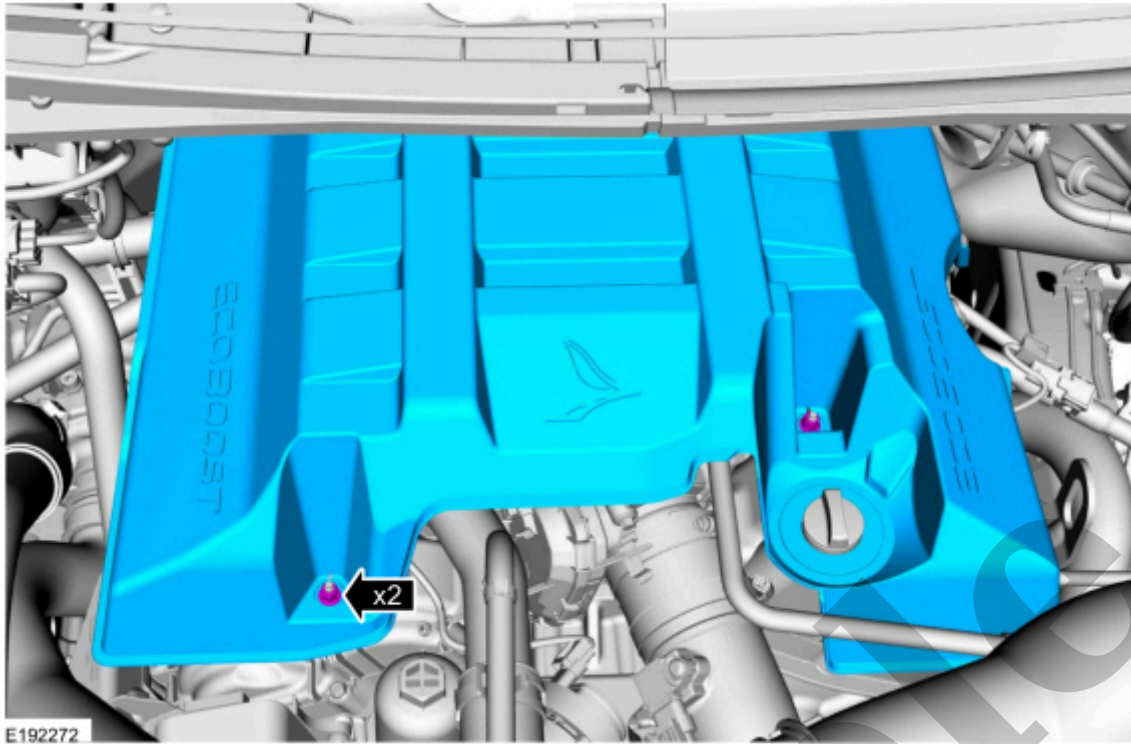
A6 CHECK THE FUEL TANK INLET CHECK VALVE

- Inspect the fuel tank inlet check valve for restriction or sticking.

Is the fuel tank inlet check valve restricted or sticking?

Yes	If possible, REPAIR the restriction. If the restriction cannot be repaired, INSTALL a new fuel tank. REFER to: Fuel Tank (310-01A Fuel Tank and Lines - 2.7L EcoBoost (238kW/324PS), Removal and Installation).
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No	INSTALL a new fuel tank. REFER to: Fuel Tank (310-01A Fuel Tank and Lines - 2.7L EcoBoost (238kW/324PS), Removal and Installation).
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[Click here to learn about symbols, color coding, and icons used in this manual.](#)

4. NOTE

Some residual fuel may remain in the fuel lines after releasing the fuel system pressure. When disconnecting or removing any fuel lines, carefully drain any residual fuel into a suitable container.

Disconnect the fuel supply line-to-high pressure pump quick release coupling.

Refer to: [Quick Release Coupling](#)(310-00A Fuel System - General Information - 2.7L EcoBoost (238kW/324PS), General Procedures).

6. **NOTE**

The Fuel Pump (FP) control module electrical connector was previously disconnected to release the fuel system pressure and must be reconnected to test the fuel system pressure.

Reconnect the Fuel Pump (FP) control module electrical connector.

7. Reconnect the battery ground cable.

Refer to: [Battery Cables - 2.7L EcoBoost \(238kW/324PS\)](#)(414-01 Battery, Mounting and Cables, Removal and Installation).

8. **NOTE**

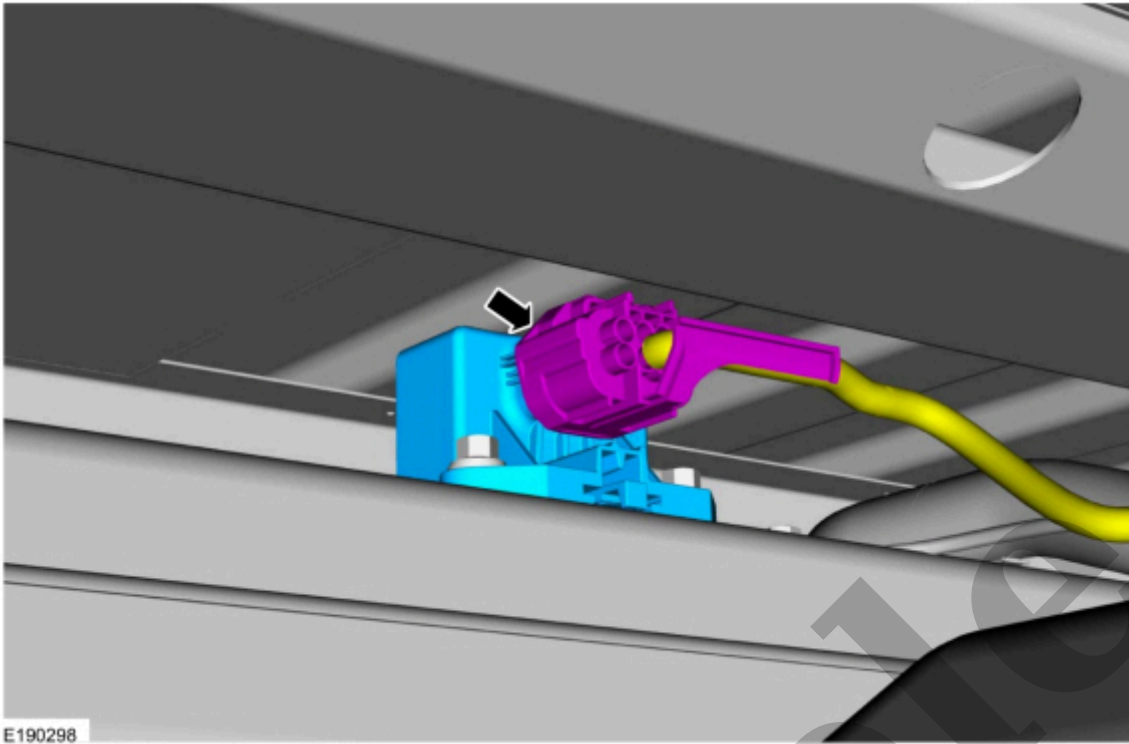
Carry out a Key ON Engine OFF (KOEO) visual inspection for fuel leaks prior to completing the fuel system pressure test.

Test the fuel system pressure to make sure it is within the specified range. For additional information, refer to Specifications in this section.

9. After completion of the fuel system pressure test, disconnect the battery ground cable, open the drain valve on the Fuel Pressure Test Kit and release any residual fluid into an appropriate container.

Refer to: [Battery Cables - 2.7L EcoBoost \(238kW/324PS\)](#)(414-01 Battery, Mounting and Cables, Removal and Installation).

10. Remove the Fuel Pressure Test Kit by reversing the installation steps.



[Click here to learn about symbols, color coding, and icons used in this manual.](#)

3. Start the engine and allow it to idle until it stalls.
4. After the engine stalls, crank the engine for approximately 5 seconds to make sure the fuel rail pressure has been released.
5. Turn the ignition switch to the OFF position.
6. When the fuel system service is complete, reconnect the fuel pump driver module electrical connector.



Quick Release Coupling

310-00A Fuel System - General Information - 2.7L EcoBoost (238kW/324PS)	2022 F-150
General Procedures	Procedure revision date: 03/18/2022

Quick Release Coupling

Disconnect

NOTICE

When reusing liquid or vapor tube connections, make sure to use compressed air to remove any foreign material from the connector retaining clip area before separating from the tube or damage to the tube or connector retaining clip may occur.

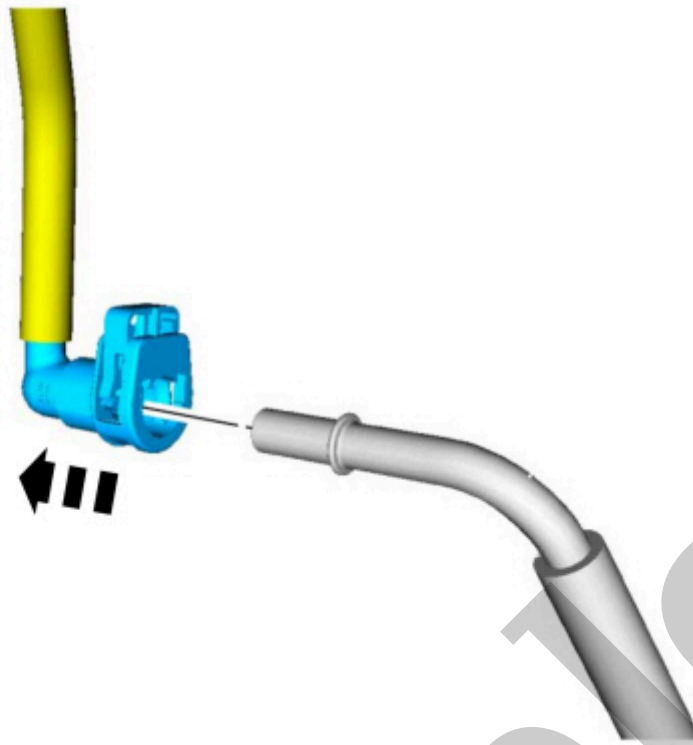
NOTICE

Fuel injection equipment is manufactured to very precise tolerances and fine clearances. It is essential that absolute cleanliness is observed when working with these components or component damage may occur. Always install blanking plugs to any open orifices or tubes.

NOTICE

Do not use any tools. The use of tools may cause a deformity in the clip components which may cause fuel leaks.

NOTE

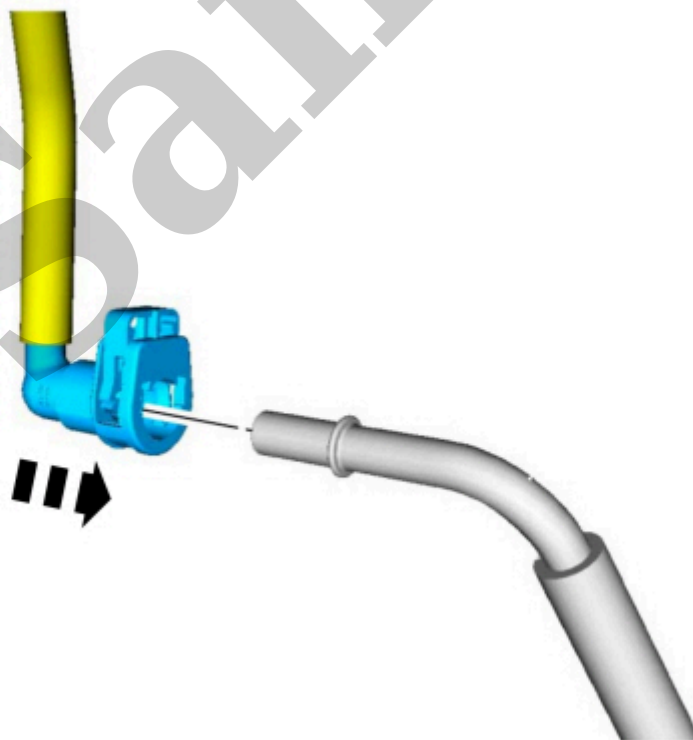


E151702

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Connect

1. Push the quick release coupling onto the tube.



E151703

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NOTICE

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NOTICE

Do not use any tools. The use of tools may cause a deformity in the clip components which may cause fuel leaks.

NOTE

Type 2

1. If servicing a liquid fuel tube quick release coupling, release the fuel system pressure.

Refer to: [Fuel System Pressure Release](#)(310-00B Fuel System - General Information - 3.3L Duratec-V6, General Procedures).

2. Disconnect the battery ground cable.

Refer to: [Battery Disconnect and Connect](#)(414-01 Battery, Mounting and Cables, General Procedures).

- 3.