

## Fuel Rail

### Material

Item	Specification
Motorcraft® SAE 5W-50 Full Synthetic Motor Oil XO-5W50-QGT or equivalent	WSS-M2C931-B

### Removal and Installation



**WARNING:** Do not smoke, carry lighted tobacco or have an open flame of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.



**WARNING:** Do not carry personal electronic devices such as cell phones, pagers or audio equipment of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.



**WARNING:** Before working on or disconnecting any of the fuel tubes or fuel system components, relieve the fuel system pressure to prevent accidental spraying of fuel. Fuel in the fuel system remains under high pressure, even when the engine is not running. Failure to follow this instruction may result in serious personal injury.



**WARNING:** Clean all fuel residue from the engine compartment. If not removed, fuel residue may ignite when the engine is returned to operation. Failure to follow this instruction may result in serious personal injury.



**WARNING:** Always disconnect the battery ground cable at the battery when working on an evaporative emission (EVAP) system or fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.

1. Release the fuel system pressure. For additional information, refer to [Section 310-00](#).
2. Disconnect the battery ground cable. For additional information, refer to [Section 414-01](#).
3. Remove the Air Cleaner (ACL) outlet pipe. For additional information, refer to [Section 303-12](#).
4. Disconnect the Evaporative Emission (EVAP) canister purge valve vapor tube-to-Throttle Body (TB) spacer quick connect coupling. For additional information, refer to [Section 310-00](#).
5. Disconnect the brake booster-to- **TB** spacer quick connect coupling. For additional information, refer to [Section 310-00](#).
6. Disconnect the electronic throttle control electrical connector.
7. Disconnect the Throttle Position (TP) sensor electrical connector.
8. Remove the 4 bolts and the **TB** spacer assembly.
  - Discard the gasket.
  - To install, tighten to 10 Nm (89 lb-in).

9. Disconnect the Intake Air Temperature 2 (IAT2) sensor electrical connector.
10. Disconnect the fuel supply tube-to-fuel rail quick connect coupling. For additional information, refer to [Section 310-00](#).
11. Disconnect the PCV valve-to-Supercharger (SC) tube quick connect coupling and position aside. For additional information, refer to [Section 310-00](#).
12. Disconnect the fuel rail pressure and temperature sensor electrical and vacuum connectors.
13. Disconnect the 8 fuel injector electrical connectors.
14. Remove the 4 fuel rail bolts.
  - To install, tighten to 10 Nm (89 lb-in).
15. Remove the fuel rail and the 8 fuel injectors.
16. **NOTE:** The fuel injector clip can be reused if it is not damaged during removal.

Remove the fuel injector clips and the fuel injectors.

17. Inspect the fuel injector O-ring seals for damage.
  18. To install, reverse the removal procedure.
    - Lubricate the upper and lower fuel injector O-ring seals with clean engine oil prior to installation.
    - Install a new [TB](#) spacer-to- [SC](#) gasket.
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