

Component Procedures: Fuel Pump

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Component Procedures: Fuel Pump

Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Fuel Pump > In-Tank	13585453	Fuel Pump	211.14	
Fuel Pump > High Pressure	12641740	Fuel Pump	280.69	
Cam Follower	12590679	High Pressure Pump	63.03	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Fuel Supply > Fuel Pump, R&R > High Pressure	B	2.1	1.5
Remove & Replace	Fuel Supply > Fuel Pump, R&R > In Tank	B	4.6	3.3

Specifications Quick Reference (itype_439)

Quick Specifications

- item

Fuel Tank Fuel Pump Module Replacement - Right Side (Article 11441)

Special Tools

J 45722 - Fuel Sender Lock Ring Wrench

Removal Procedure

- Remove the fuel tank . Refer to Fuel Tank Replacement . Click for full-size image
 - Disconnect the fuel pump electrical connector (1) and the fuel feed line (2). Refer to Plastic Collar Quick Connect Fitting Service .
 - Use the J 45722 - wrench by turning counter clockwise and remove the lock ring (1). Click for full-size image
 - Partially remove the primary fuel tank module in order to disconnect the fuel transfer hose quick connect fitting (1). Refer to Plastic Collar Quick Connect Fitting Service . Click for full-size image
 - Remove the primary fuel tank module (1) and seal (2) from the fuel tank. Click for full-size image
- #### Installation Procedure
- Install a NEW seal (2) and partially install the primary fuel tank module (1). Click for full-size image
 - Connect the fuel transfer hose quick connect fitting (1). Refer to Plastic Collar Quick Connect Fitting Service . Click for full-size image
 - Use the J 45722 - wrench by turning clockwise and install the lock ring (1). Click for full-size image
 - Connect the fuel pump electrical connector (1) and the fuel feed line (2). Refer to Plastic Collar Quick Connect Fitting Service . Click for full-size image
 - Install the fuel tank. Refer to Fuel Tank Replacement .

Fuel Pump Replacement (Article 11437)

Special Tools

EN-48896 - High Pressure Fuel Pump Installation Alignment Gauge

Equivalent regional tools: Special Tools

Removal Procedure

- Relieve the fuel system pressure. Fuel Pressure Relief
- Remove the cross vehicle brace.
- Remove the fuel pipe shield. Fuel Pipe Shield Replacement
- Remove the intake manifold. Intake Manifold Replacement
- Remove the radiator surge tank outlet pipe.
- Remove and DISCARD the fuel feed pipe. Fuel Feed Pipe Replacement
- Remove and DISCARD the fuel feed intermediate pipe. Fuel Feed Intermediate Pipe Replacement
- Disconnect the electrical connector from the fuel pump .
- Remove and DISCARD the fuel pump bolts (4). Click for full-size image
- Remove the fuel pump (3).
- Remove and DISCARD the fuel pump bracket gasket (2).
- Remove and DISCARD the fuel pump housing seal.
- The valve lifter follower MAY remain in the cylinder head bore after removing the fuel pump.

- If the valve lifter follower does NOT pull out of the cylinder head bore with the fuel pump, then remove it afterwards.
- Remove the valve lifter follower.
- Installation Procedure
- Before continuing, lubricate the cylinder head bore with clean engine oil. Adhesives, Fluids, Lubricants, and Sealers
- The camshaft MUST be at the base circle position before the fuel pump is installed.
- At the base circle position, the EN-48896 - alignment gauge will sit flush with the cylinder head.
- Install the EN-48896 - alignment gauge and turn the crankshaft until the camshaft lobe is at the base circle position.
- Remove the EN-48896 - alignment gauge .
- Lubricate the NEW fuel pump housing seal with clean engine oil and install it on the fuel pump. Adhesives, Fluids, Lubricants, and Sealers
- ALWAYS make sure the fuel pump bolt retainers are present before installing the fuel pump bolts.
- If ANY fuel pump bolt retainers are missing or NOT suitable for reuse, replace the retainers as necessary.
- Install the NEW fuel pump bolts (4) and NEW fuel pump bracket gasket (2) to the fuel pump (3). Click for full-size image
- Lubricate the valve lifter follower with clean engine oil and install it into the cylinder head bore. Adhesives, Fluids, Lubricants, and Sealers
- Install the fuel pump assembly (3) into the cylinder head and start the NEW fuel pump bolts (4) by hand.
- Tighten the NEW fuel pump bolts (4) to 15 Nm (11 lb ft) .
- Connect the electrical connector to the fuel pump.
- Install a NEW fuel feed intermediate pipe. Fuel Feed Intermediate Pipe Replacement
- Install a NEW fuel feed pipe. Fuel Feed Pipe Replacement
- Inspect for leaks using the following procedure:
- Turn ON the ignition with the engine OFF for 2 seconds.
- Turn OFF the ignition for 10 seconds.
- Turn ON the ignition with the engine OFF.
- Inspect for fuel leaks.
- Install the radiator surge tank outlet pipe.
- Install the intake manifold. Intake Manifold Replacement
- Install the fuel pipe shield. Fuel Pipe Shield Replacement
- Install the cross vehicle brace.

All New Technical Service Bulletins (itype_432)

Tsbs

- Stalling - Hesitation - Lack Of Performance P018B And/Or P2635 Setting In High Ambient Temperatures (PIP5507B, 2017/07/18)

All Technical Service Bulletins (itype_100)

Tsbs

- Stalling - Hesitation - Lack Of Performance P018B And/Or P2635 Setting In High Ambient Temperatures (PIP5507B, 2017/07/18)
- Diagnostic Tips For I/M Flags Resetting After Ignition Cycled (PIP5627, 2019/02/15)

Out of specification (itype_158)

Tsbs

- Diagnostic Tips For I/M Flags Resetting After Ignition Cycled (PIP5627, 2019/02/15)