



FUEL INJECTOR / VAPOR SEPARATOR SEAL KIT, P/N 5007913 INSTALLATION INSTRUCTIONS

APPLICATION

This kit is designed for use on **2009 and newer Evinrude E-TEC 25 – 30 HP outboards**.
DO NOT install on any other models.

SAFETY INFORMATION

For safety reasons, this kit should be installed by an authorized *Evinrude®/Johnson®* dealer. This instruction sheet is not a substitute for work experience. Additional helpful information may be found in other service literature for your engine.

This instruction sheet uses the following signal words identifying important safety messages.



DANGER

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, **CAN** result in severe injury or death.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate personal injury or property damage. It also may be used to alert against unsafe practices.

IMPORTANT: Identifies information that will help prevent damage to machinery and appears next to information that controls correct assembly and operation of the product.

These safety alert signal words mean:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

Always follow common shop safety practices. If you have not had training related to common shop safety practices, you should do so to protect yourself, as well as the people around you.

It is understood that this instruction sheet may be translated into other languages. In the event of any discrepancy, the English version shall prevail.

DO NOT do any repairs until you have read the instructions and checked the pictures relating to the repairs.

Be careful, and never rush or guess a service procedure. Human error is caused by many factors: carelessness, fatigue, overload, preoccupation, unfamiliarity with the product, and drugs and alcohol use, to name a few. Damage to a boat and outboard can be fixed in a short period of time, but injury or death has a lasting effect.

When replacement parts are required, use *Evinrude/Johnson Genuine Parts* or parts with equivalent characteristics, including type, strength and material. Using substandard parts could result in injury or product malfunction.

Torque wrench tightening specifications must be strictly followed. Replace any locking fastener (locknut or patch screw) if its locking feature becomes weak. Definite resistance to turning must be felt when reusing a locking fastener. If replacement is specified or required because the locking fastener has become weak, use only authorized *Evinrude/Johnson Genuine Parts*.

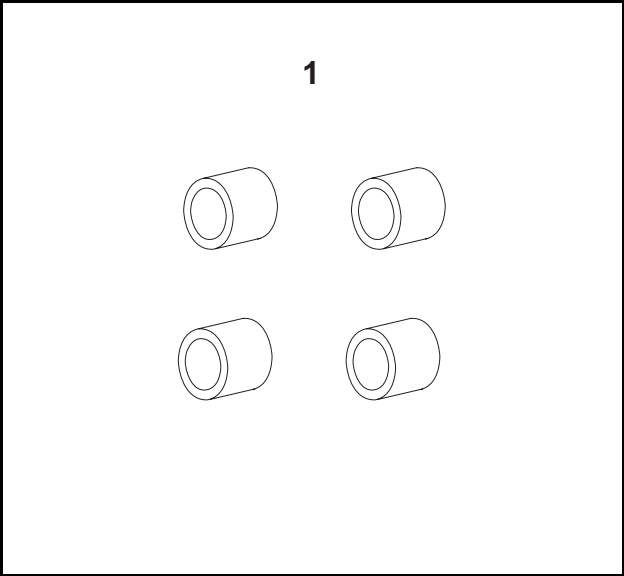
If you use procedures or service tools that are not recommended in this instruction sheet, **YOU ALONE** must decide if your actions might injure people or damage the outboard.

TO THE INSTALLER: Give this sheet to the owner. Advise the owner of any special operation or maintenance information contained in the instructions.

TO THE OWNER: Save these instructions in your owner's kit. This sheet contains information important to the future use and maintenance of your engine.




Kit Contents



Fuel Injector & Vapor Separator Seal Kit 007106

Ref	P/N	Name of Part	Qty
1	5007913	SEAL KIT	1

**WARNING**

Gasoline is extremely flammable and highly explosive under certain conditions. Use caution when working on any part of the fuel system.

Protect against hazardous fuel spray. Before starting any fuel system service, carefully relieve fuel system pressure.

Always disconnect the battery cables at the battery before servicing the fuel system unless instructed to do otherwise.

Always work in a well ventilated area and wipe off any fuel spillage.

DO NOT smoke and make certain no open flames or ignition sources exist.

After servicing the fuel system check for leaks. Failure to check for fuel leakage could allow a leak to go undetected, resulting in fire or explosion.

Procedure

Relieve fuel system pressure.

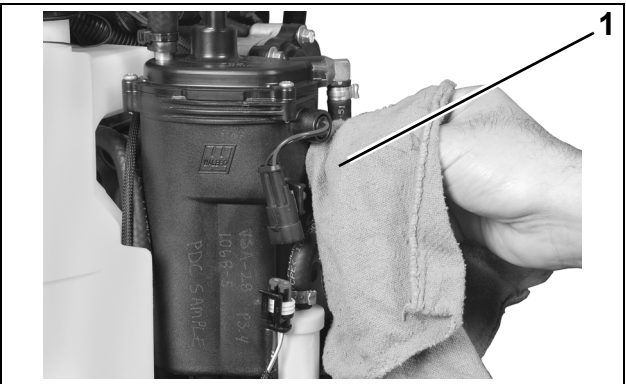
Disconnect fuel hose connector from outboard. Remove propeller.

IMPORTANT: Minimize fuel system pressure before disassembly.

Disconnect fuel circulation pump electrical connector. If outboard runs, start and run at IDLE for 5 seconds and STOP outboard. If outboard does NOT run, crank for 10 seconds.

Disconnect the battery cables at the battery.

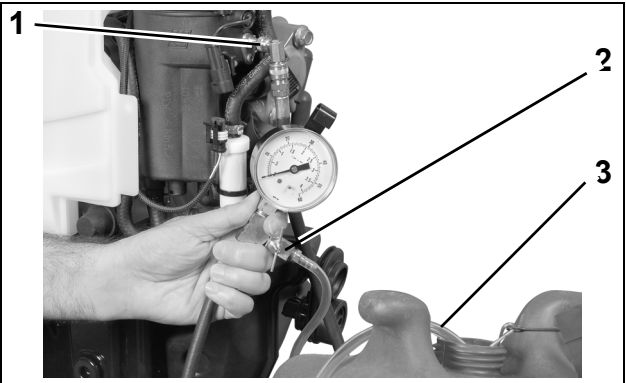
Wrap a shop towel completely around the pressure test fitting while connecting fitting from Fuel Pressure Gauge, P/N 5007100, to pressure test fitting of fuel pump/vapor separator assembly.



1. Shop towel 007096

Insert venting hose of gauge into a suitable container.

Slowly open gauge’s venting valve. Clean up any spilled fuel with shop towels.



1. Pressure test fitting
2. Venting valve
3. Venting hose 007097

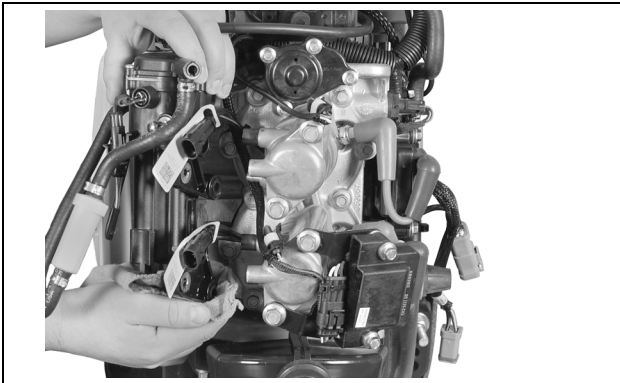
Remove the oil tank.

Disconnect the fuel injector electrical connectors. Make note of fuel injector wiring, vapor separator wiring and electrical connector locations for reinstallation.

Remove the fuel supply hose and cooling water hoses from the vapor separator.

Loosen all four injector bolts.

Remove three vapor separator retaining screws.
Remove vapor separator.



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If servicing an injector, remove screws from injector that is being replaced and remove injector.

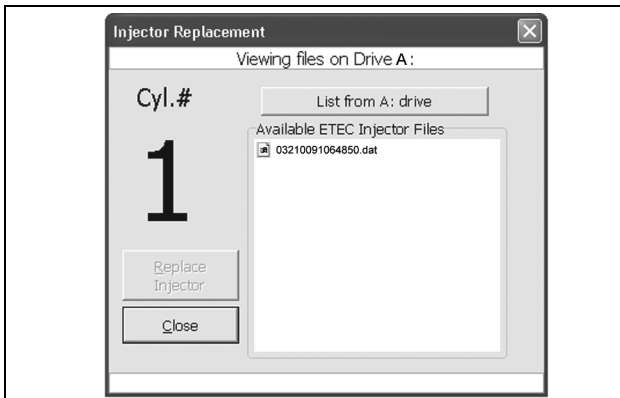
If servicing vapor separator only, go to "Vapor Separator" on page 4.

Installation

Injector

IMPORTANT: All injectors must be installed in the correct cylinder by serial number. Improper injector installation can result in powerhead failure.

Installation of replacement injectors requires the use of diagnostics software and fuel flow data supplied with all replacement injectors on 3.5 in. floppy disk.



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CAUTION

All injector components must be clean to ensure correct torque specifications. To prevent fuel leakage, carefully follow these installation instructions.

The following items and their mating surfaces must be cleaned before reassembly:

- Injector
- Cylinder head
- Vapor separator fuel fittings
- Screws
- Threaded areas

Lubricate mounting screw threads and under the head of the screw with a light coat of *Triple-Guard* grease. Install washers (one per screw) on injector retaining screws.



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For cylinder #2 only, install screws through lower coil mounting bracket.

Install screws and washers through mounting flange of injector.

Install injector and insulator in place on cylinder-head.

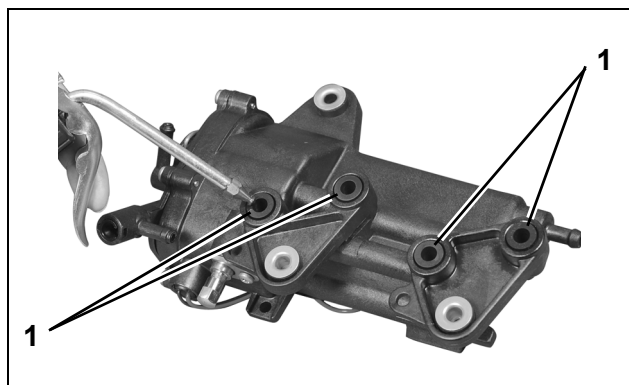
IMPORTANT: Be careful not to pinch any wiring during assembly.

Finger-tighten injector mounting screws.

IMPORTANT: Fuel injectors must be able to rotate slightly during installation of vapor separator.

Vapor Separator

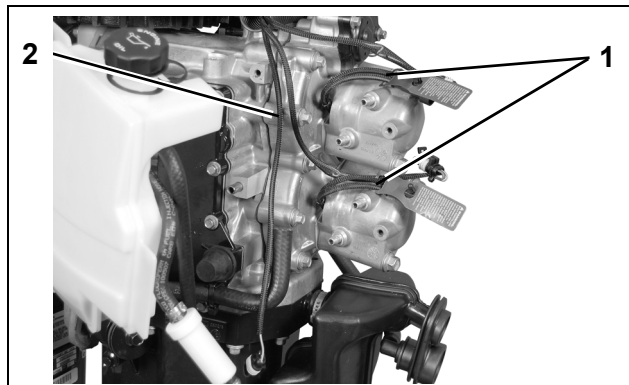
Install new injector seals in vapor separator. Lightly lubricate seals with a drop of outboard lubricant.



1. Injector seals

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Position fuel injector wiring, vapor separator wiring and electrical connectors.

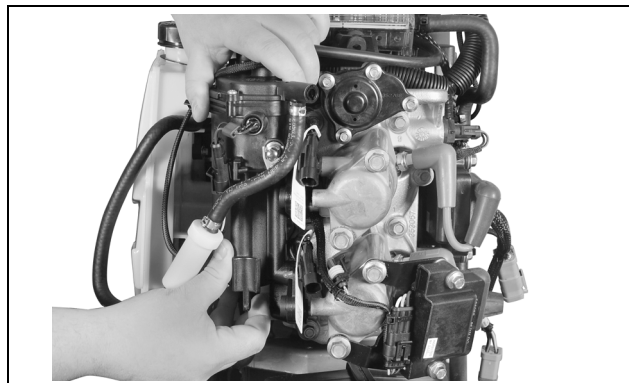


1. Fuel injector wiring

2. Vapor separator wiring

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Install vapor separator assembly to the fuel injector fittings.



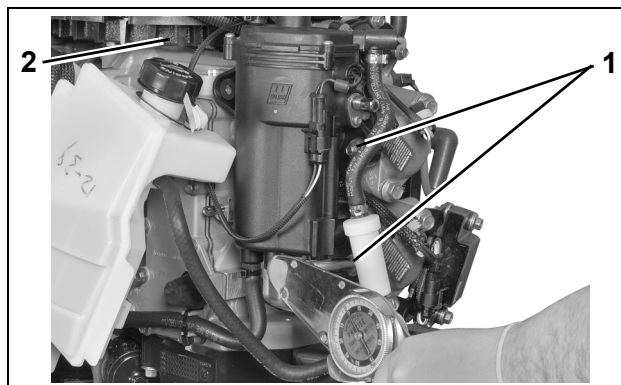
1.

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Install three vapor separator retaining screws.

IMPORTANT: Vapor separator to powerhead retaining screw must remain loose.

Tighten two vapor separator to fuel injector mounting screws to a torque of 29 to 48 in. lbs. (3.3 to 5.5 N·m).



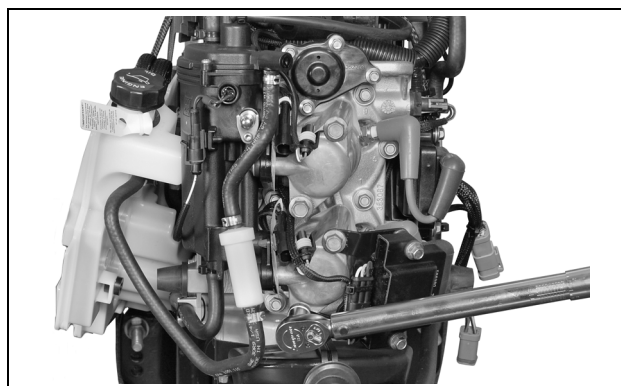
1. Vapor separator to fuel injector mounting screws

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2. Vapor separator to powerhead mounting screw - leave LOOSE at this time

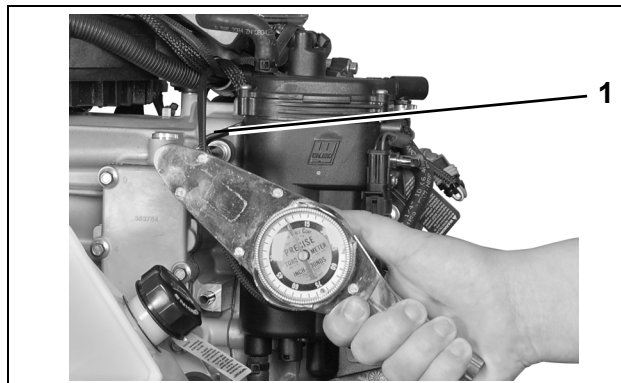
Tighten four fuel injector screws in stages, starting with the lower screw:

- First torque is 4.5 ft. lbs. (6 N·m)
- Second torque is 9 ft. lbs. (12.2 N·m)
- Third torque is 14 ft. lbs. (19 N·m)
- Final torque is 22 to 23.5 ft. lbs. (30 to 32 N·m)



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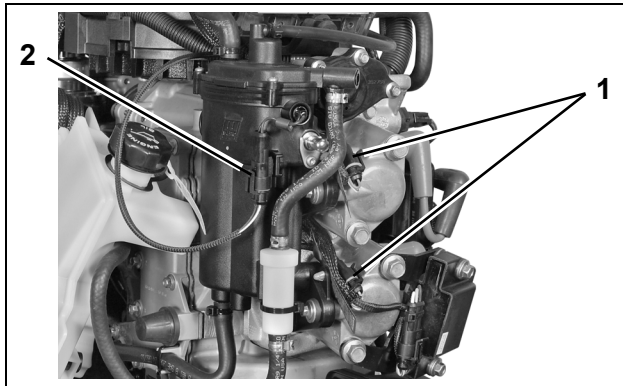
Tighten vapor separator to powerhead mounting screw to 29 to 48 in. lbs (3.3 to 5.5 N·m).



1. Vapor separator to powerhead mounting screw

007104

Reconnect fuel injector electrical connectors. Reconnect the vapor separator electrical connector.



1. Fuel injector electrical connectors
2. Vapor Separator electrical connectors

007105

IMPORTANT: Install injector service data (3.5 in. floppy disk) by using the Injector Replacement Utility of *Evinrude Diagnostics* software. Check the *Injector Coefficients* screen to make sure that all injectors are positioned properly.

Squeeze primer bulb to prime fuel system. Hold pressure on bulb and observe for fuel leaks.

Use static test screen of *Evinrude Diagnostics* software to run fuel pump. Observe for fuel leaks.

Run outboard and check for fuel leaks.

Repair any leaks before returning outboard to service.

Reinstall the oil tank. Tighten oil tank retaining screw to a torque of 29 to 48 in. lbs. (3.3 to 5.5 N·m).

Install fuel supply hose and cooling water hoses to vapor separator.

Reconnect the battery cables at the battery.

Reconnect fuel hose connector to outboard.