



Installation Instruction Number	Date
4907748	07-OCT-2008



Installation Instructions

Remote Mount Lift Pump Kit

General Information

The remote mount lift pump kit, Part Number 4955799, is for use on ISB CM850 engines. This kit relocates the fuel lift pump, located on the engine, behind the ECM cooling plate, to a remote location off the engine. Removing the lift pump and mounting it remotely reduces the amount of heat and vibration to which the lift pump is subjected.

This Installation Instruction describes the kit contents and contains general instructions for remote mounting the lift pump.

Selecting Mounting Location for Lift Pump:

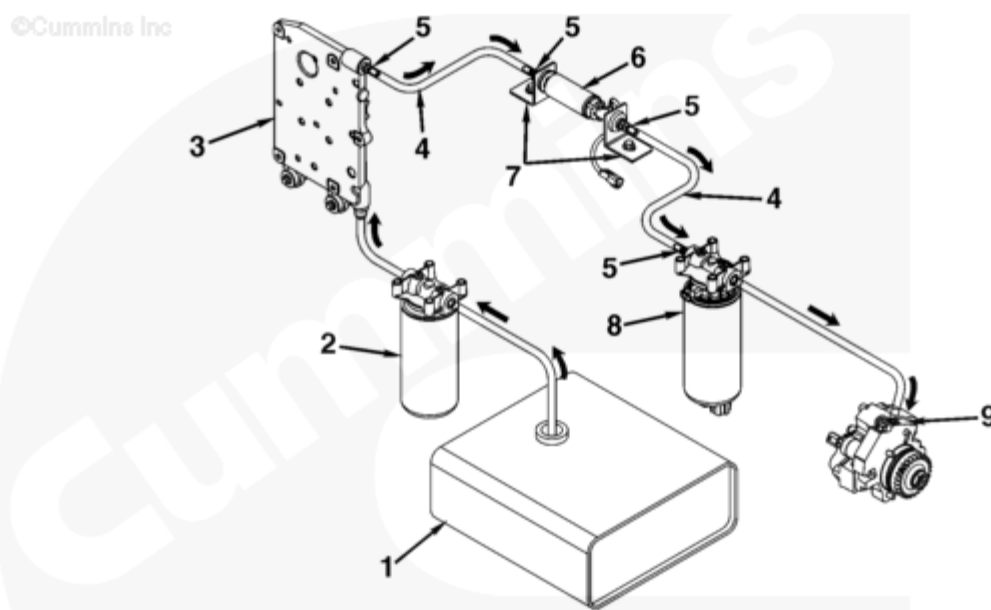
It is very important to find a suitable location to mount the lift pump: The following should be taken into consideration when selecting a suitable location.

1. The lift pump should be mounted on the body or chassis. It is **not** recommended to mount the pump to the vehicle frame. Most OEMs do **not** allow the vehicle frame to be modified in any way.
2. The lift pump should **not** be mounted inside a fender well or anywhere it could come in contact with water or road debris.
3. The lift pump should **not** be mounted near the vehicle batteries or other electrical components.
4. The lift pump should **not** be mounted in a location where fuel lines **must** be routed to the opposite side of the engine, or near hot or moving parts, such as exhaust or suspension components.

5. The lift pump should **not** be mounted any higher than the cylinder block deck, so the lift pump is **not** the highest point of the fuel system.
6. The lift pump should **not** be mounted any lower than the bottom of the frame rail, so the lift pump and fuel lines are **not** subjected to possible damage from road debris.
7. The lift pump should **not** be mounted more than 183 cm [6 ft] from the ECM cooling plate outlet and pressure side fuel filter inlet.
8. The lift pump should **not** be mounted in a location that is **not** rigid enough to sufficiently support the lift pump and brackets.
9. The lift pump should **not** be mounted in a location where the mounting brackets or hardware interfere with any other wiring or components.

Remote Mounted Lift Pump Kit, Part Number 4955799 - Parts List		
Part Number	Quantity	Description
3968188	1	12-volt Lift Pump
4937911	2	183 cm [6 ft] Fuel Line (Quick Disconnect)
3972105	2	Lift Pump Mounting Bracket
4937840	4	Quick Disconnect Fitting
3963990	4	Sealing Washer
4995590	1	183 cm [6 ft] Extension Harness

Additional Parts Needed for Mounting Lift Pump Brackets - not Included in Kit	
Quantity	Description
2	5/16" x 1" Bolt
2	5/16" Lock Nut
4	5/16" Flat Washer
OR	
2	5/16" x 3/4" Self Tapping Screw



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Remote Mounted Lift Pump Fuel Flow Diagram

1. Fuel tank
2. Prefilter
3. ECM cooling plate
4. Fuel lines, Part Number 4937911
5. Quick disconnect fitting, Part Number 4937840, and sealing washer, Part Number 3963990
6. Remote mounted lift pump
7. Mounting brackets, Part Number 3972105
8. Pressure side fuel filter
9. High pressure pump.

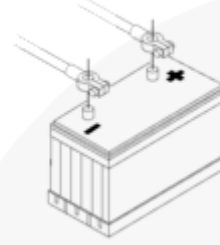
**WARNING**

Batteries can emit explosive gases. To reduce the possibility of personal injury, always ventilate the compartment before servicing the batteries. To reduce the possibility of arcing, remove the negative (-) battery cable first and attach the negative (-) battery cable last.

Disconnect the batteries.



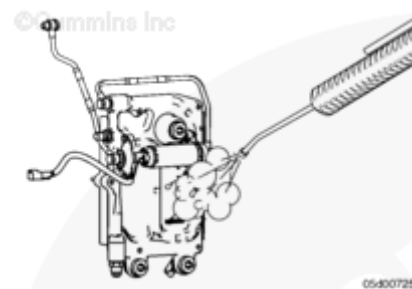
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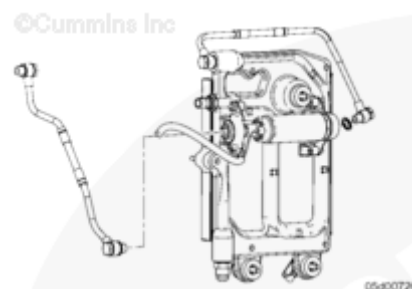
Thoroughly clean the fittings and components before removal.

Debris, water, steam, and cleaning solution **must not** enter the fuel system.



Remove the fuel lift pump inlet and outlet fuel lines.

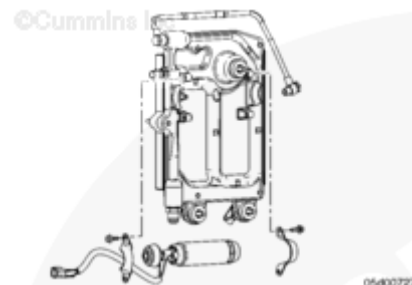
Disconnect the fuel lift pump wiring harness connector.



Remove the fasteners holding the lift pump to the back of the ECM cooler plate.

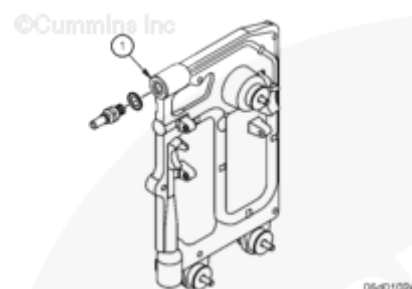
Remove the fuel lift pump.

NOTE: For most automotive applications, the lift pump can be removed without removing the ECM and ECM mounting plate.



Install the quick disconnect fittings, Part Number 4937840, into the ECM cooling plate outlet (1) and into the pressure side fuel filter inlet. Use sealing washers, Part Number 3963990.

Torque Value: 24 n.m [212 in-lb]

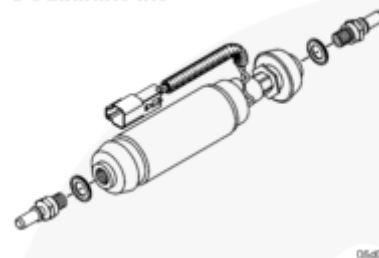


Install the quick disconnect fittings, Part Number 4937840, into the lift pump inlet and outlet. Use sealing washers, Part Number 3963990.

Torque Value: 24 n.m [212 in-lb]



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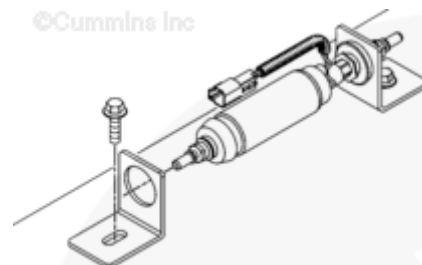
Install one of the mounting brackets in the predetermined location. Use a 5/16-inch self-tapping screws or 5/16-inch bolt, locknut, and washers. Tighten the screw or bolt.

Insert one end of the lift pump into the mounted bracket. Slide the second bracket over the rubber isolator on the other end of the lift pump. Tighten the second bracket.

Both lift pump rubber isolators **must** fit snugly into the brackets.



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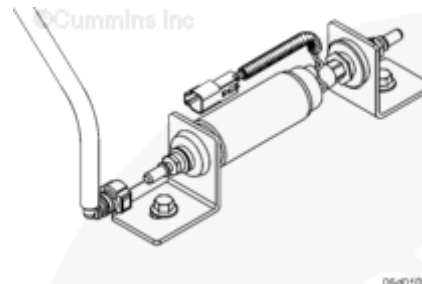
Route one of the fuel lines, Part Number 4937911, from the ECM cooling plate outlet to the remote mounted lift pump inlet.

The quick disconnect fuel lines have a straight end and a 90 degree end. Attach the straight end to the quick connect fitting at the ECM cooling plate outlet. Attach the 90 degree end to the quick connect fitting at the remote mounted lift pump inlet. The lift pump inlet is the end opposite the end with the pigtail harness.

The fuel line **must** be routed so it does **not** rub against any other components. Use zip



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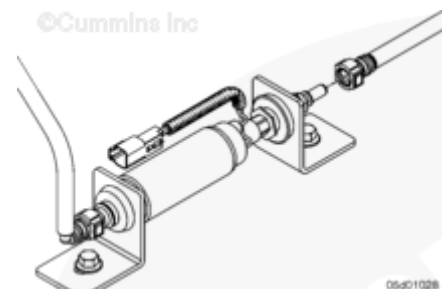
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ties, if required, to avoid interference with other components.

Route the other fuel line from the remote mounted lift pump outlet to the pressure side fuel filter inlet.

Attach the straight end of the line to the quick connect fitting at the remote mounted lift pump outlet. Attach the 90 degree end to the quick connect fitting at the pressure side fuel filter inlet. The lift pump outlet is the gold end which has the pigtail harness.

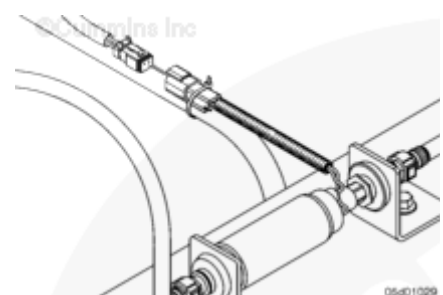
The fuel line **must** be routed so it does **not** rub against any other components. Use zip ties, if required, to avoid interference with other components.



Route the 183 cm [6 ft] wiring harness extension, Part Number 4995590, from the original lift pump connector of the engine harness to the remote mounted pump.

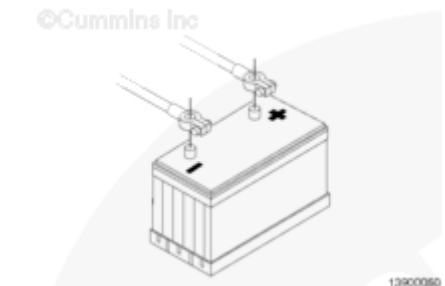
Plug the extension harness into the engine harness and remote mounted pump.

The harness **must** be routed so it does **not** rub against any other components. Use zip ties, if required, to avoid interference with other components.



WARNING

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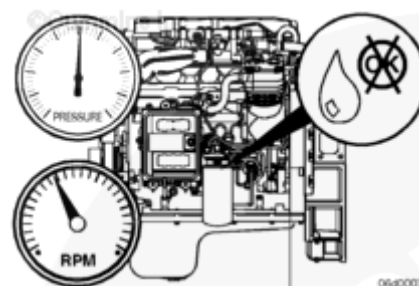
(-) battery cable first and attach the negative (-) battery cable last.

Connect the batteries.

It is **not** necessary to vent air from the high-pressure fuel system before starting the engine. Cranking the engine will prime the fuel system.

Allow the lift pump to run by turning the keyswitch ON and waiting 30 seconds before starting.

Operate the engine and check for leaks.



Last Modified: 02-Dec-2010

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