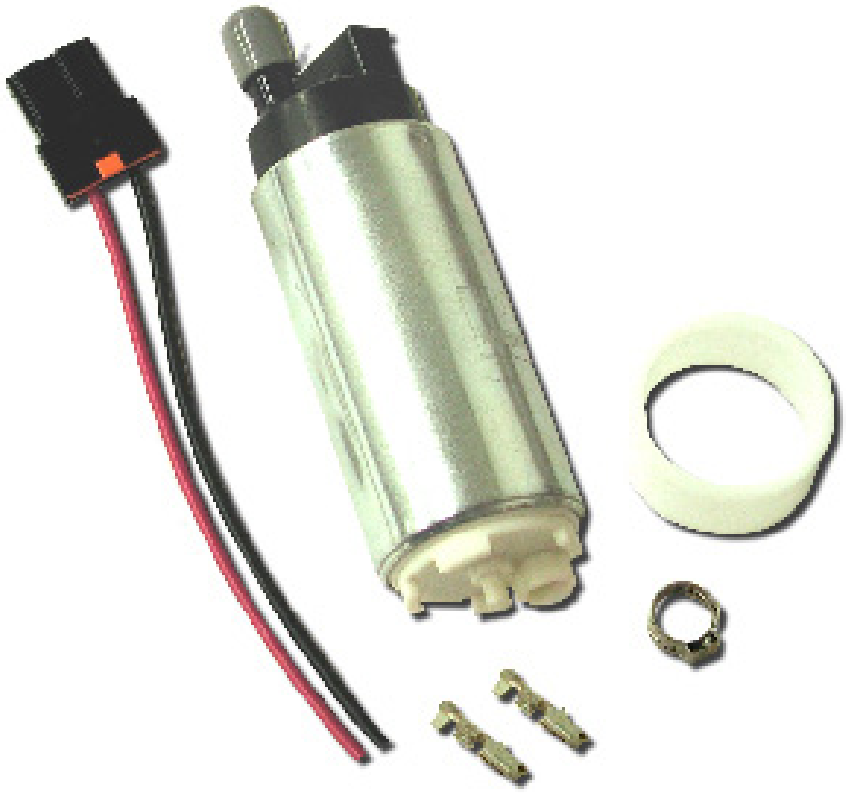
LINGENFELTER
PERFORMANCE ENGINEERING

Installation Instructions for
LS2 equipped SSR & Trailblazer SS
Lingenfelter High Flow Fuel Pump Upgrade Kit



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Parts List

#	Part number	Description
1	TI-GSS341	TI/Walbro fuel pump
1	TI-94-615	GM fuel pump adapter wire harness
2	12077411	Metri-Pak terminals
1	LN0067-001	LPE fuel pump spacer ring, TBSS & SSR
1	52545 K45	Oetiker clamp
1	22682111	fuel sender O-ring seal
1	L920010000	LPE decal
1		installation instructions

Optional Items

- Kenne Bell Boost-A-Pump *(20 amp model listed, 40 amp model can also be used)*
  - PN KB-89066 for naturally aspirated applications (vacuum trigger switch)
  - PN KB-89067 for boosted applications (pressure trigger switch)
- new fuel pump module with fuel filter and inlet sock (TI-TU454-1)

Tools Needed

- small pocket screwdriver
- sharp knife or razor blade
- wire cutters
- hook tool (can also use small screwdriver)
- wire stripping tool
- wire crimping tool
- Oetiker clamp crimping tool or diagonal cutter
- terminal pin tool

Fits The Following Vehicles

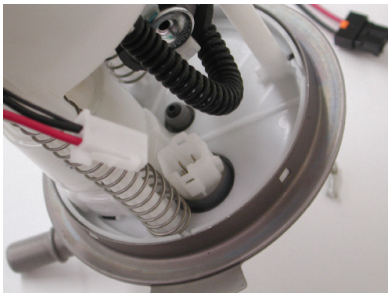
- 2005-2006 Chevrolet SSR (6.0L LS2 engine)
- 2006-2007 Chevrolet Trailblazer SS (6.0L LS2 engine)
- 2006-2007 Buick Rainier, Chevrolet Trailblazer, GMC Envoy, Isuzu Ascender, Saab 9-7X with 4.2L L6 and 5.3L V8 engines
- May also fit some other 2005-2007 ST155, ST157 and ST158 GM trucks
- Fits GM part # 19153374 fuel pump module & AC Delco fuel pump module M10087
- **DOES NOT FIT** 2003-2004 Chevrolet SSR (5.3L engine) or other 2003-2004 ST trucks

Installation note for high mileage vehicles:
If you have a high mileage vehicle, we recommend changing the fuel filters inside the module. The primary fuel filter and the inlet filter sock are not currently available as service parts from GM so changing these filters requires purchasing an all new fuel pump module. Complete fuel pump modules are available from LPE (see part number listed above).

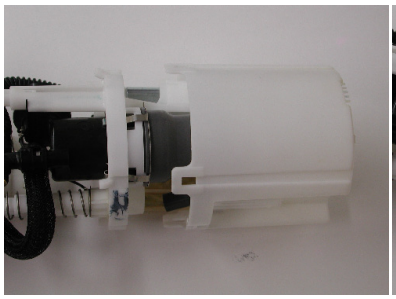
Installation Instructions:

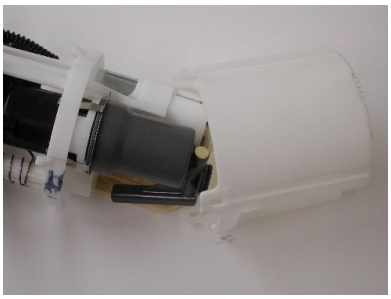
1) Follow the GM service instructions for removing the fuel pump module from your vehicle. Service manuals are available from Helm Inc. (http://www.helminc.com).

2) Unplug all the wires from the bulkhead connector at the top of the module.

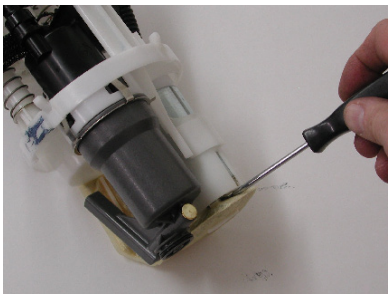


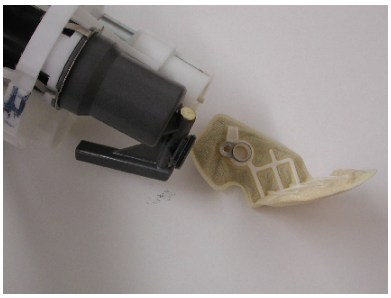
3) Carefully remove the outer “bucket” from the fuel pump module assembly.



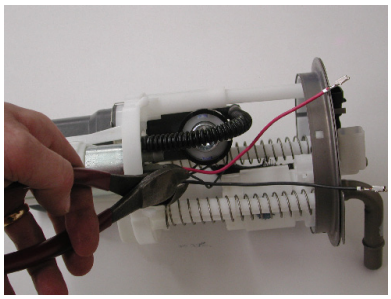


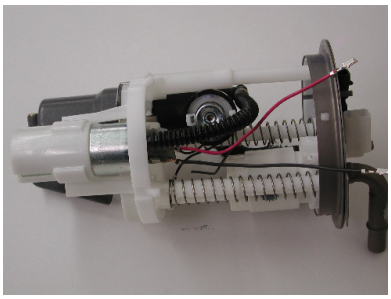
4) Using a small pocket screwdriver, carefully pry the fuel sock (fuel pump inlet filter) from the center pin on the bottom of the fuel pump. Save the fuel sock. You will be reusing the fuel sock when you reassemble the module.



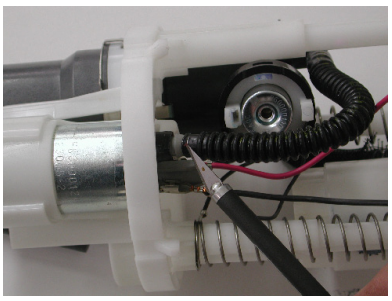


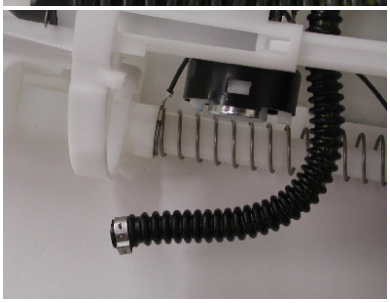
5) Using wire cutters, clip the small ground wire as close to the fuel pump terminal as possible.





6) Using a sharp knife or razor blade, cut the fuel line one (1) barb down from the end of the fuel pump. Using a small screwdriver, or hook tool, remove the fuel line from the last barb. Square off the end of the fuel line with the sharp knife or razor, leaving enough room for the Oetiker clamp.

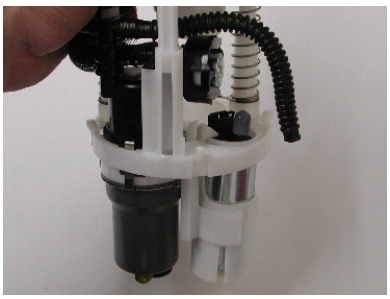




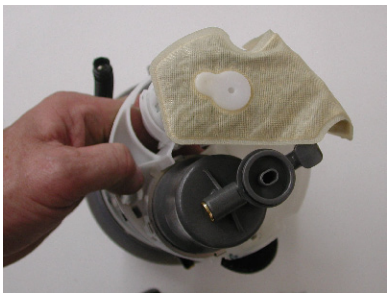
7) Remove the pump from the inner portion of the fuel pump module by pushing the retaining latch out of the way while pushing the pump up towards the top of the module.

8) Place the supplied spacer ring over the terminal end of the supplied high flow fuel pump.

9) Install the high flow fuel pump and spacer ring assembly into the inner part of the fuel pump module assembly, making sure the pump inlet aligns with the cutout in the module.
10) Make sure the pump is fully seated in the module and the retaining latch snaps over the top of the spacer ring.



11) Install the fuel sock that was removed in Step 4.

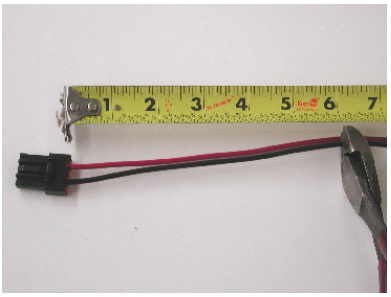


12) Install the “bucket”, making sure it is fully seated and all of the retaining tabs are latched.

13) Slip the Oetiker clamp over the end of the fuel line and push the fuel line onto the outlet of the fuel pump. Make sure the barb on the fuel pump outlet reaches the 2nd rib on the fuel line. This will insure that you have enough room to clamp the fuel line below the barb.

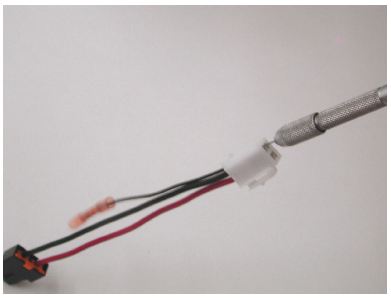
14) Using an Oetiker clamp crimping tool, or a diagonal cutter, secure the clamp around the fuel line.

15) Using wire cutters, cut the supplied GM fuel pump adapter wiring harness (part # 94-615) 6” (15 cm) from the connector (as shown).
16) Using a wire stripping tool, strip roughly 1/4” (6 mm) of insulation off of the ends of the two wires.
17) Using a wire stripping tool, strip roughly 1/4” (6 mm) of insulation off of the end of the small ground wire that was cut from the old fuel pump in Step 5. Join the stripped end of the small ground wire with the black wire from the adapter harness that you stripped of insulation in Step 16.

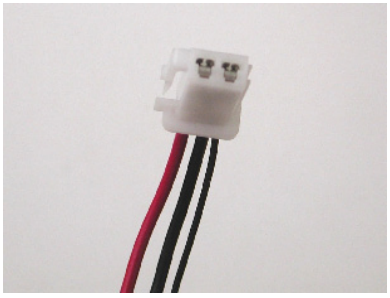


18) Using a terminal crimping tool, crimp the supplied Metri-Pak terminals on the end of the wires. As shown, crimp the small ground wire that you stripped of insulation in Step 18 with the thicker adapter harness black wire that you stripped of insulation in Step 16.

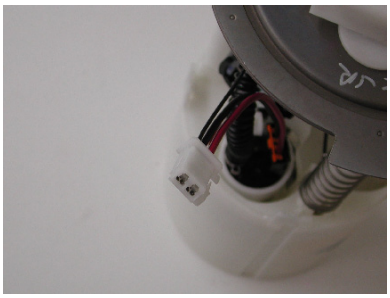
19) Using a pin tool, remove the original wires from the white connector that attaches to the bulkhead connector on the top of the module. Note which wire is in which cavity (red should be closest to the latch).



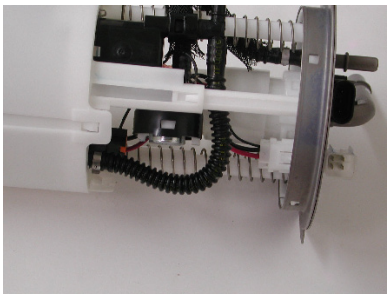
20) Snap the new wires with the crimped on terminals into the factory white bulkhead connector, making sure they are fully seated.
21) Insert the black plastic end of the fuel pump adapter harness into the fuel pump.



22) Reconnect the white bulkhead connector to the mating connector on the top of the fuel pump module.



23) Follow the GM service instructions to reinstall the fuel pump module, using the supplied replacement fuel sender module O-ring (GM part # 22682111).



Congratulations, you have completed the installation.

This pump flows roughly 50 gph at 60 psi at 12 Vdc, 60 gph at 13.5 Vdc and 75 gph at 16 Vdc. Some of this flow is used to run the jet pump (venturi pump) that fills the fuel pump "bucket" or canister. Without voltage boosting, this should be enough fuel flow to support roughly 650 to 700 hp naturally aspirated and 550 to 650 hp in turbocharged/supercharged applications. For boosted applications above 650 hp and naturally aspirated applications above 700 hp, we recommend voltage boosting the pump to 16 or 17 volts with a Boost-A-Pump. At high fuel flow rates it may be possible to empty the module ("bucket") faster than the jet pump can fill the module so make sure you do not run low fuel levels when running at high power levels.

Many other products are available from LPE for your Trailblazer SS or SSR, including low temperature thermostats, camshafts, supercharger kits, CNC ported cylinder heads, engine packages, ported throttle bodies, and port matched intake manifolds. Contact LPE, visit our web site, or contact your LPE distributor for information about our many other products.

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