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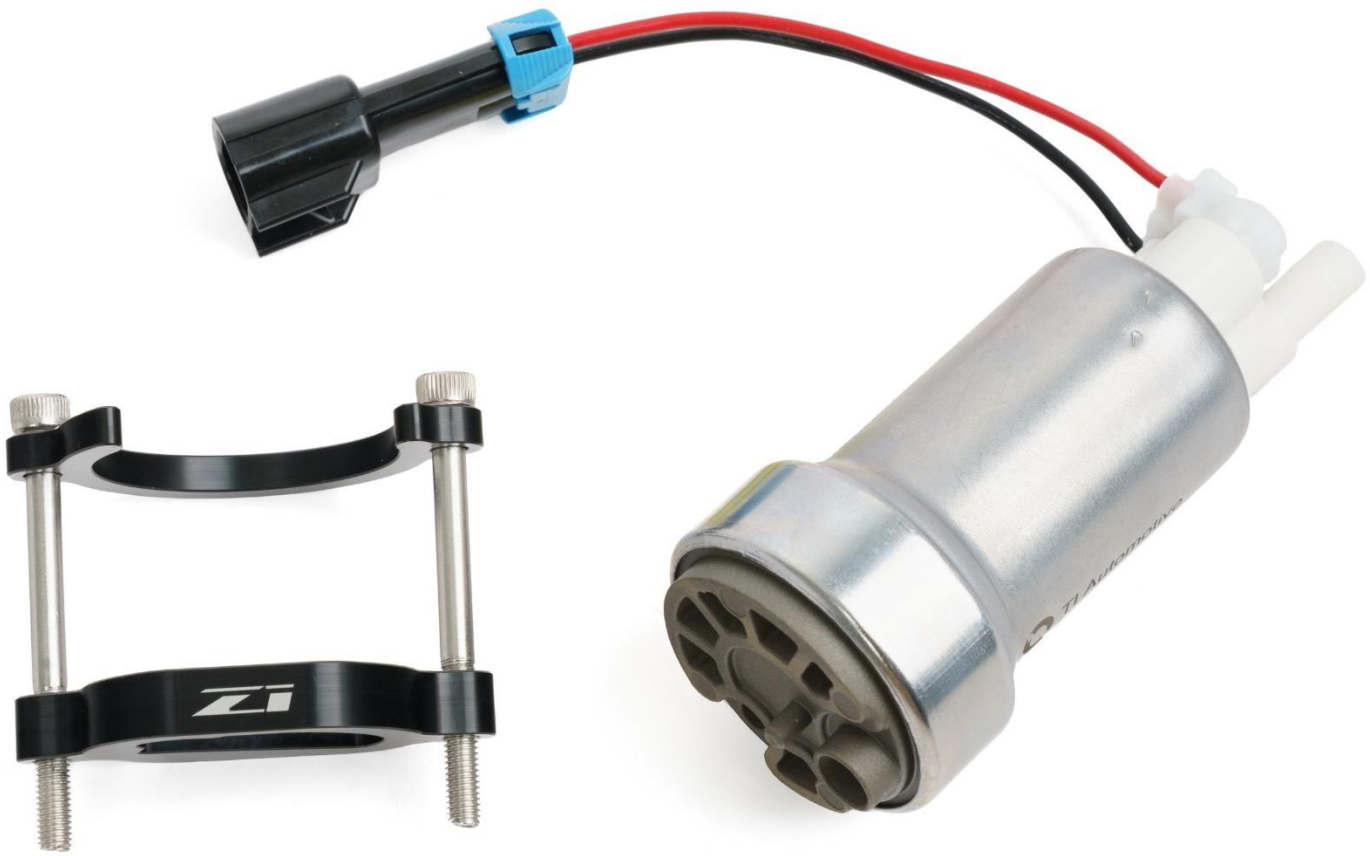
Z1 2023+ NISSAN Z
LOW PRESSURE FUEL PUMP UPGRADE
INSTALLATION MANUAL



This Installation Manual is intended for the following models:	
2023+	Nissan Z

PROLOGUE:
Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation. If unfamiliar with any of the concepts outlined in this instruction, we recommend the installation be completed by a qualified professional.

WARNING!
Extreme caution should be taken when performing maintenance or performance upgrades to your vehicle. Please observe and abide by any Warning or Caution labels placed on the various components and tools used when servicing your vehicle. If you have any questions regarding installation or the various components included with the Z1 Motorsports 2023+ Nissan Z Low Pressure Fuel Pump Upgrade, consult with a Professional Mechanic or contact Z1 Motorsports for more information.

PARTS INCLUDED:

Item	Quantity	Description
1	1	Walbro 525 Fuel Pump
2	1	Top Clamp Piece
3	1	Bottom Clamp Piece
4	2	M5 x 60mm Screw
5	1	Red Loctite
6	2	Butt Splice Terminals

TOOLS REQUIRED:

- Ratchet
- Ratchet Extension(s)
- 10mm Socket/Wrench
- 8mm Socket/Wrench
- 4mm Hex Key/Bit
- Pliers
- Small Pick
- Flathead Screwdriver
- Snips
- Terminal Crimp Tool
- Wire Strippers

SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Always use properly rated jack stands when working under your vehicle.
- Always keep limbs and parts away from moving drivetrain parts.
- Only operate drivetrain in safe space and well-ventilated areas.
- **NO FIRES, SPARKS, OR SMOKING.**
- **WORK IN A WELL VENTILATED AREA.**

BEFORE YOU BEGIN:

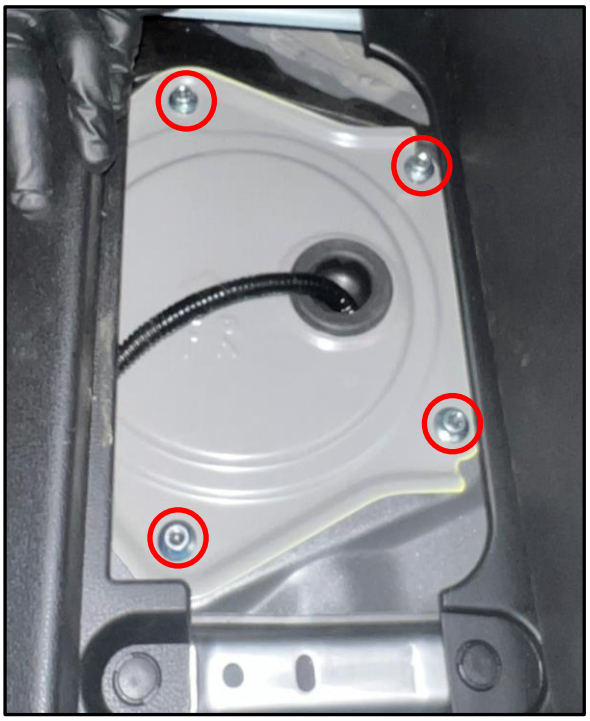
Remove contents from the Z1 Motorsports 2023+ Nissan Z Low Pressure Fuel Pump Upgrade and verify that ALL necessary hardware is present.

PROCEDURE:

1. Remove the carpeted shelf floor behind the passenger seat (shown at right).

2. Remove the sound deadening material and set aside.

3. Remove the (4) mounting nuts securing the inspection cover to the chassis (circled at right). Then move the cover to the side, to reveal the fuel pump electrical connector and fuel supply line.



4. It is now time to release the fuel system pressure. There are a couple ways to do this:

    a. If you have access to CONSULT:
        i. Turn ignition switch ON.
        ii. Perform “FUEL PRESSURE RELEASE” in “WORK SUPPORT” mode with CONSULT.
        iii. Start engine.
        iv. Wait for engine to run out of fuel and stall.
        v. Crank engine over two or three times to release remaining fuel pressure.
        vi. Turn ignition switch OFF.

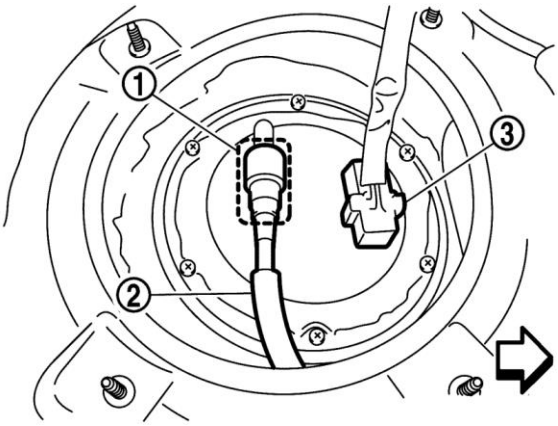
    b. If you do not have access to CONSULT:
        i. Disconnect the electrical connector on the top of the fuel tank.
        ii. Start engine.
        iii. Wait for engine to run out of fuel and stall.
        iv. Crank engine over two or three times to release remaining fuel pressure.
        v. Turn ignition switch OFF.

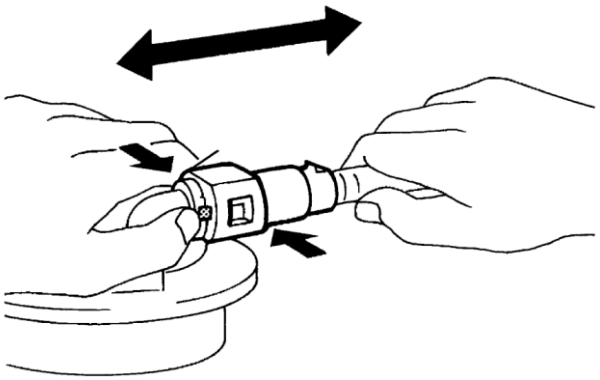
5. Remove the gas filler cap to release any pressure left in the tank.

6. Assure the ignition is in the OFF position and disconnect the NEGATIVE battery terminal.

7. It is recommended to clean the top of the OE fuel top hat and surrounding areas of the tank to prevent dirt or contaminants from falling in when you remove it.

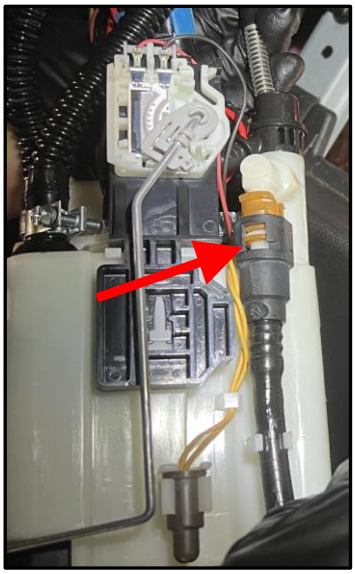
8. Place a rag around the OE fuel supply hose ② on the OE fuel top hat, and then disconnect the hose by pressing the sides of the retaining clip ① in and pulling the hose away. If the clip comes off with the hose that is fine, it can be put back on later.





9. Using an 8mm socket, remove the (6) M5 screws securing the OE fuel top hat collar to the fuel tank.

10. Carefully lift upwards to begin removing the fuel pump basket assembly. There is an internal siphon hose connected to the basket that needs to be removed. Once the basket is about halfway out, disconnect the siphon hose similar to how the fuel supply hose was disconnected in step #9 (shown at right).



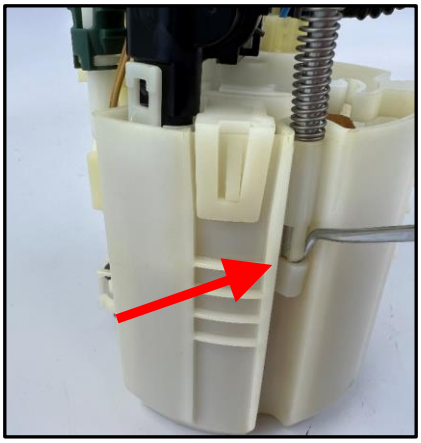
    Note: The image at right shows a modified 370Z basket assembly that is fully removed from the car to better show the siphon hose. The Q basket is very similar and shares the siphon hose connection. It is recommended to disconnect the siphon hose prior to fully removing the basket assembly.

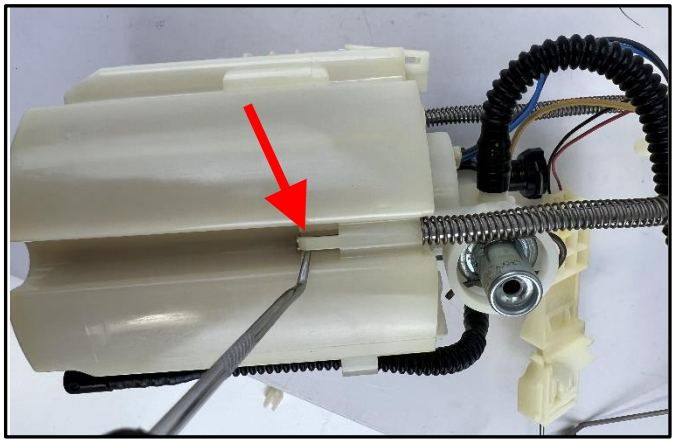
11. Once the siphon hose is disconnected, fully remove the fuel pump basket assembly. Be careful not to bend or damage the floater on its way out.

12. Depending on how much fuel was in your tank, the basket assembly will likely be full of fuel, drain any fuel into an appropriate container.

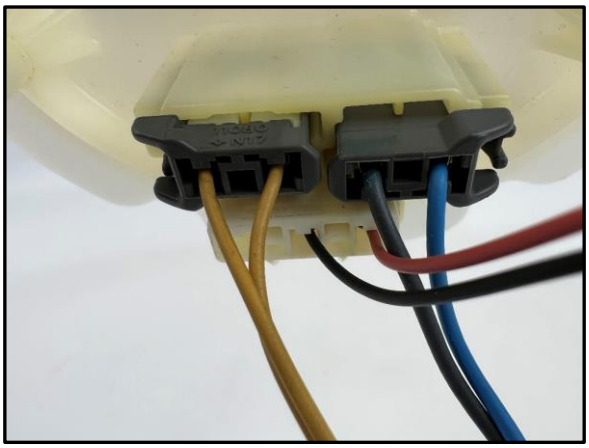
13. Move to a clean work table to begin disassembly of the OE fuel basket.

14. Using a pick, remove the small plastic collar that is on one of the mounting rods (shown below at left). Then release the locking tabs on both mounting rods to separate the top and bottom of the assembly (shown below at right). It may help to wiggle the top of the assembly while releasing the locking tabs. Be sure to retain the springs and locking collar.

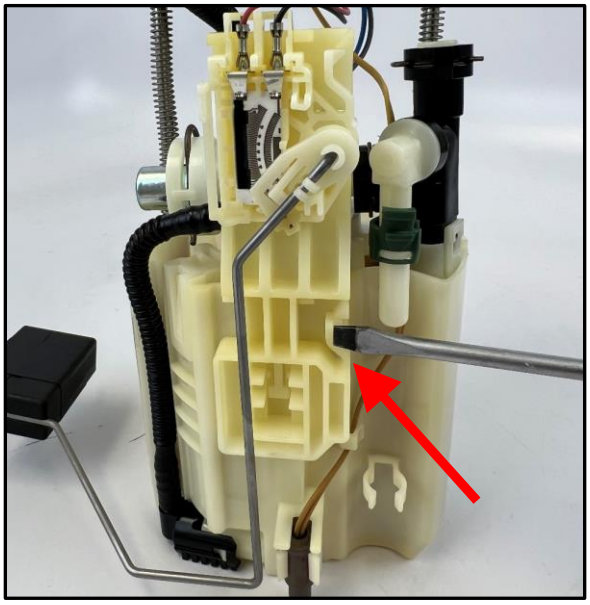




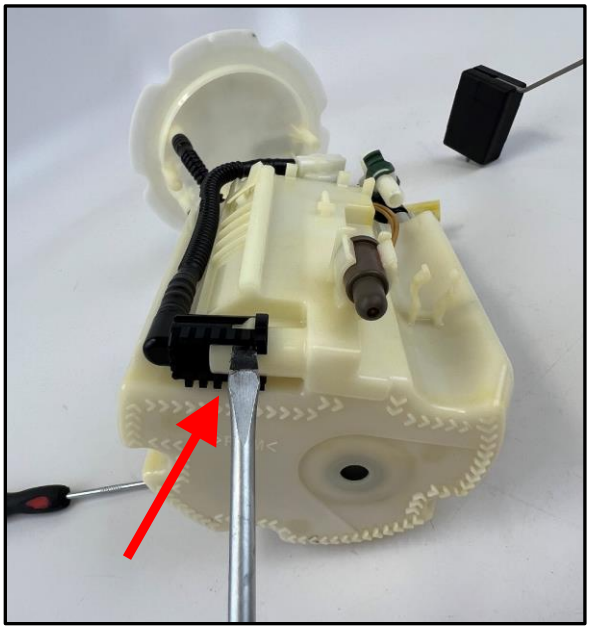
15. Once the top and bottom halves are separated, disconnect the (3) electrical connectors on the bottom side of the top hat. Take note or a picture of the two gray connectors as they can be incorrectly installed later.



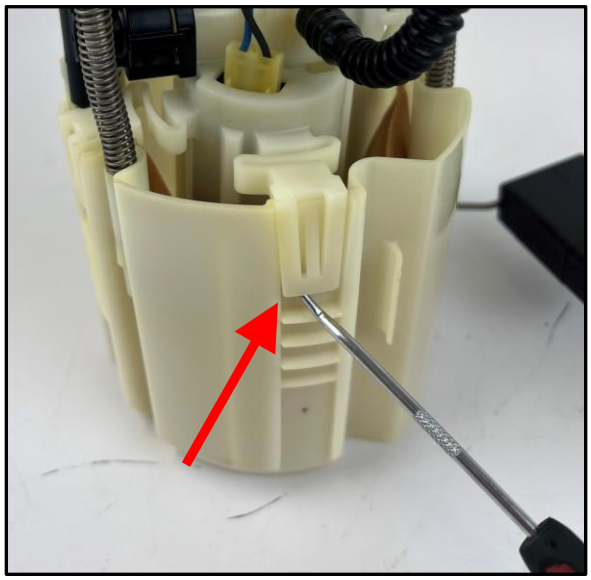
16. Release the tab and then lift up on the fuel level sending unit to remove it from the basket.



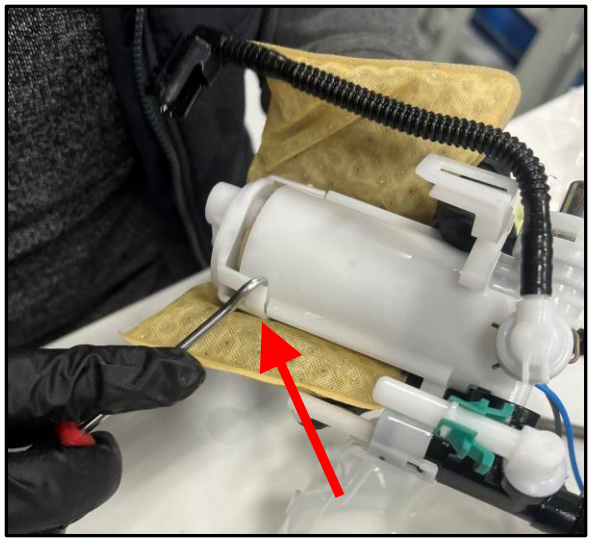
17. Release the locking tab on the hose at the bottom of the fuel basket (as shown below).



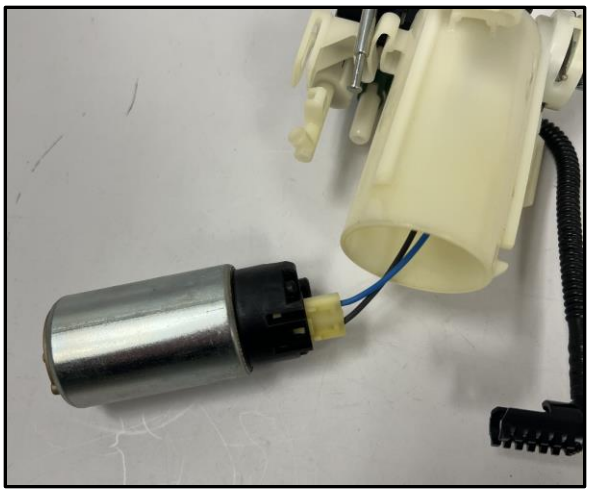
18. Release the (3) tabs securing the pump assembly housing to the lower basket (1 tab shown below). Then lift up to remove the pump assembly from the basket.

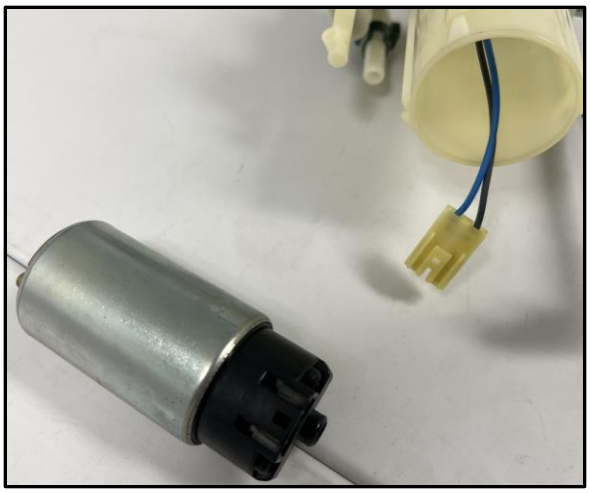


19. Release the (3) locking tabs securing the fuel pump strainer to the bottom of the fuel pump and then remove the strainer and set aside.



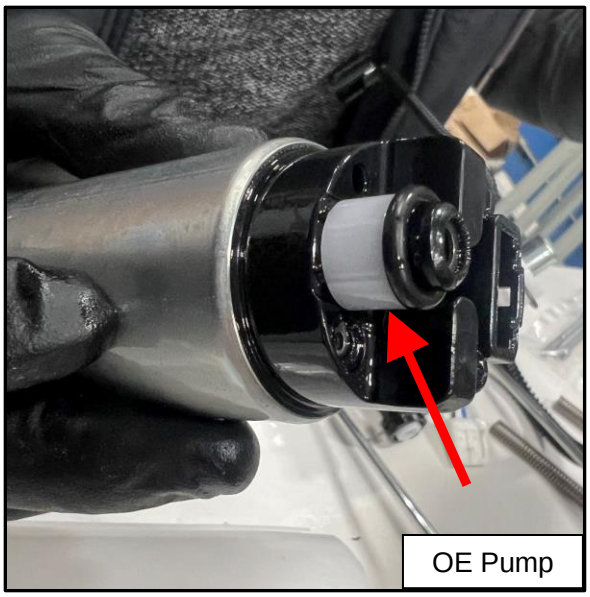
20. Remove the OE fuel pump from the pump assembly housing. Once removed disconnect the electrical connector at the top of the OE fuel pump.

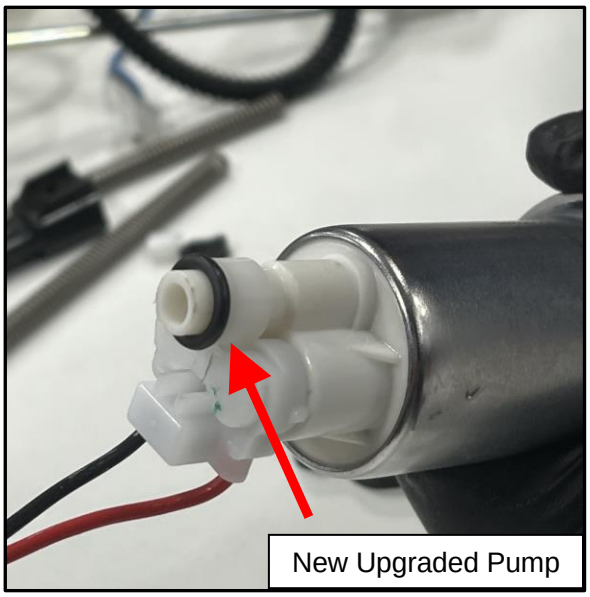




21. There is an o-ring and plastic collar that seals the pump outlet to the pump housing that will need to be reused. If the o-ring did not remain on the OE pump outlet when removed, it should be inside the pump assembly housing. Remove the o-ring from the OE pump or from inside the housing.

22. Locate the new Walbro 525 fuel pump. Install the o-ring and collar from the previous step onto the new pump outlet.


OE Pump

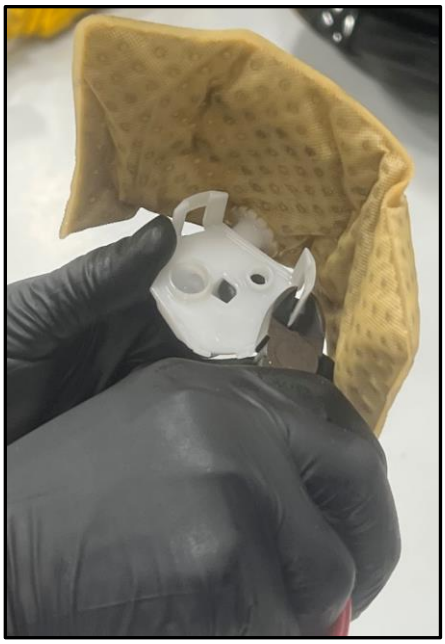

New Upgraded Pump

Note: The Walbro pump will come with a female connector attached to the top. If you have the experience and tools, you can disassemble the connector and de-pin the wires for an OEM like installation. However, instructions will not be provided. The instructions below include cutting off the connector and using the supplied butt connectors to connect the Walbro pump to the car's OE wiring.

23. Cut the connector off the new fuel pump as close to the end of the connector as possible.

24. Install the new fuel pump into the OE pump housing with the fuel pump wires going through the slot in the housing that the OE fuel pump connector was in.

25. Locate the fuel pump strainer from step #20. Using snips, cut the (3) locking tabs off of the plastic on the strainer (as shown).



26. Locate both pieces of the Z1 billet fuel pump clamp and (2) M5 x 60mm screws.

27. Align the larger bottom clamp onto the bottom of the fuel pump strainer. Then align the strainer onto the bottom of the new fuel pump (as shown).

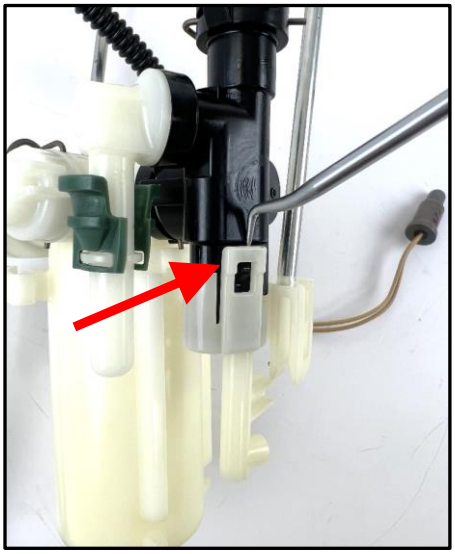


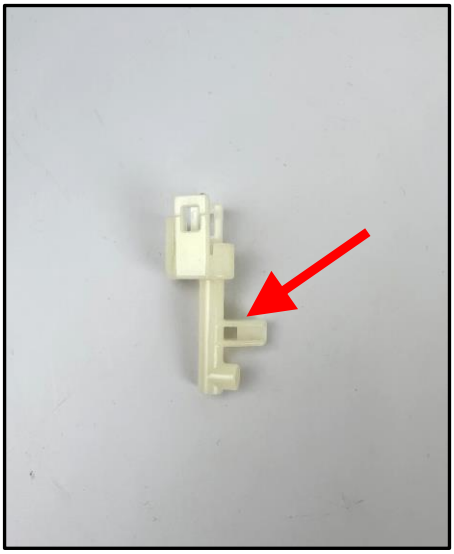
28. Then install the smaller piece into the slots on the pump assembly housing, making sure both ends of the clamp piece are in a slot (as shown below). Begin to thread the (2) M5 screws through both pieces to secure them together. Add a dab of red Loctite before final tightening.

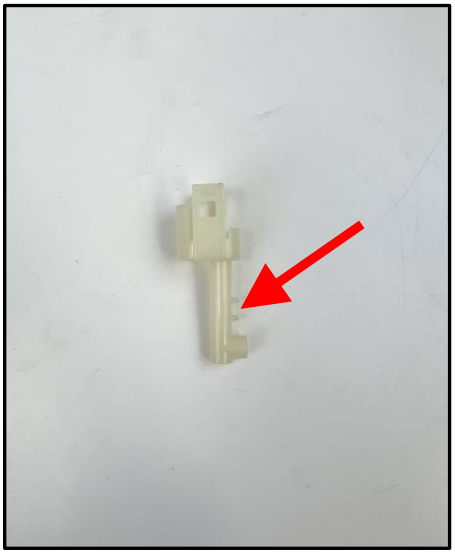


29. Release the locking tabs on both sides and remove the plastic clip attached to the venturi system components on top of the fuel pump housing (shown below).

30. Using snips cut the protruding section in the middle off (shown below). Then reattach it to the venturi system components on top of the fuel pump housing.

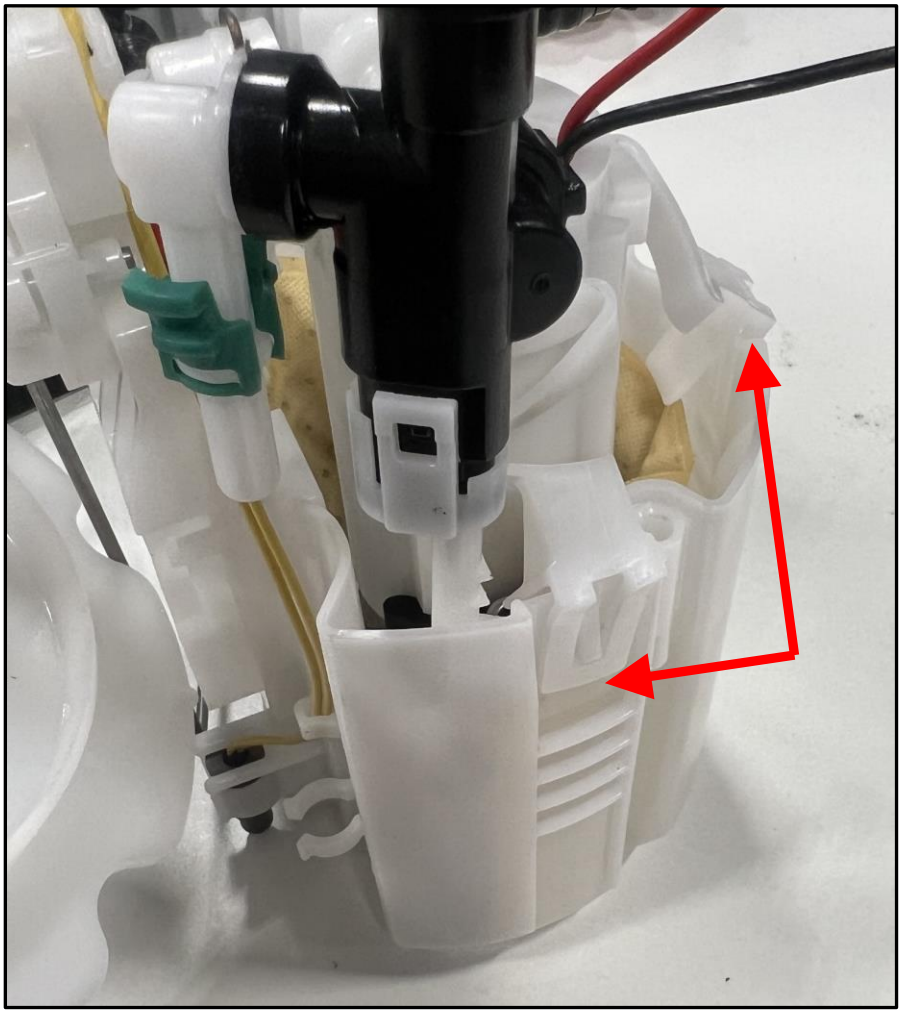






31. Reinstall the fuel pump assembly into the OE lower fuel basket.

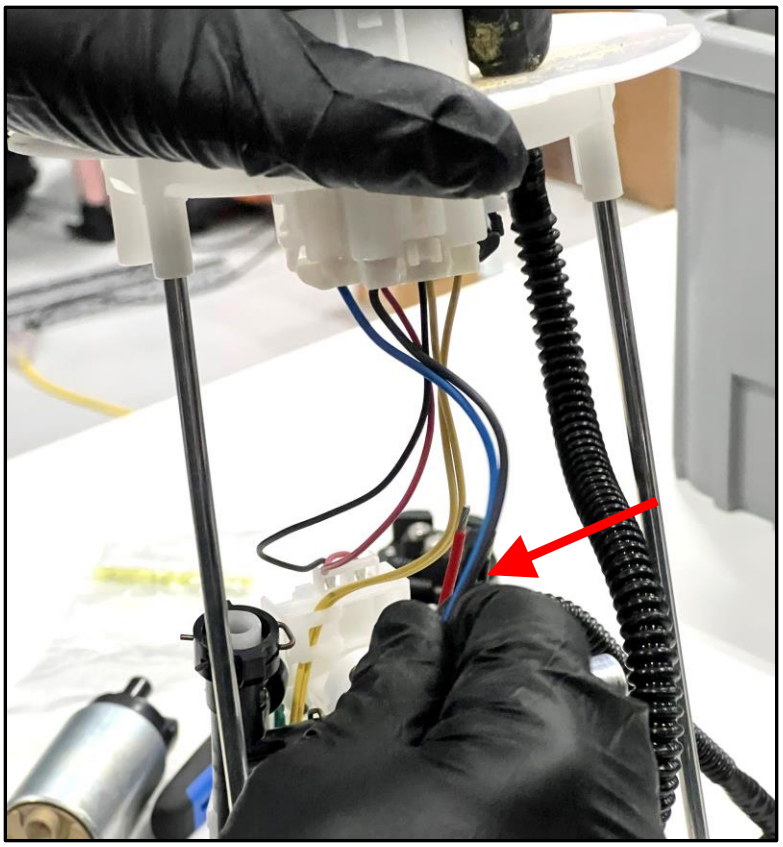
32. The larger pump will make the fuel pump assembly sit taller than the OE one. This will require you to pull the (3) locking tabs down tight to get them to seat.



33. Reconnect the OE fuel pump harness connector to the OE sending unit top hat. In our case, it was the connector with the blue and black wires that was removed in step # 16.

34. Hold the top hat of the OE sending unit roughly in place or where it will sit once reassembled.

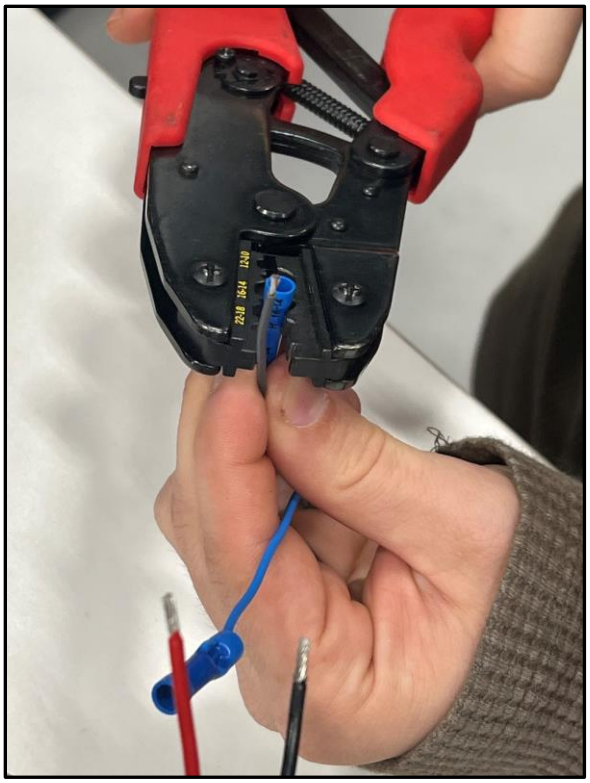
35. Align the wires coming off the new fuel pump with the OE fuel pump harness and cut the OE fuel pump harness at the appropriate length (roughly 1-2 inches from the fuel pump end).

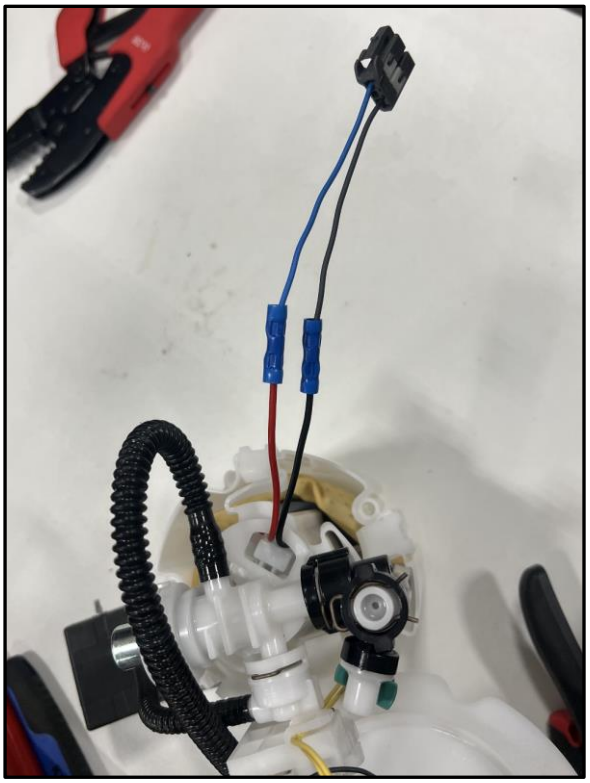


36. Locate (2) supplied butt connectors, wire strippers, and some crimping pliers.

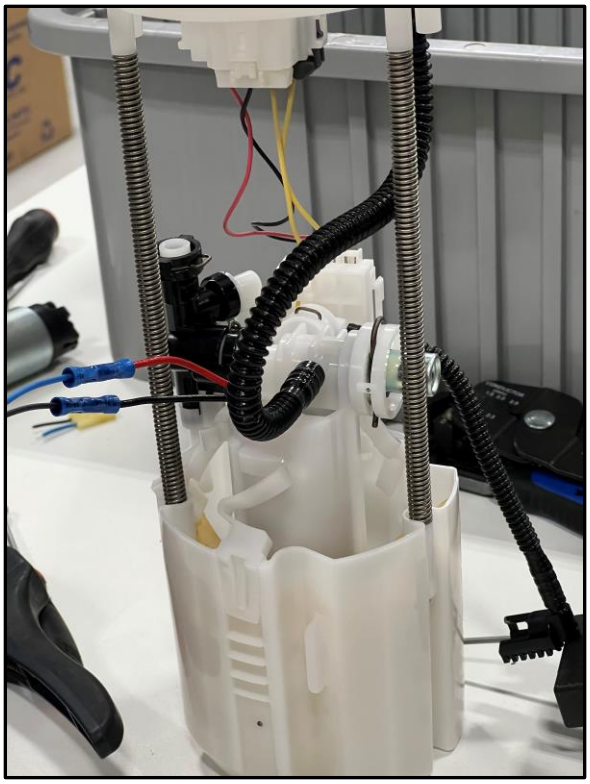
37. Strip the ends of the (2) wires off the new fuel pump and the OE fuel pump wiring harness.

38. Using the supplied butt connectors, connect the black wires together and the red and blue wires together (as shown).





39. Slide the (2) springs back onto the mounting rods if they fell off earlier, and then reattach the sending unit top hat to the fuel basket.

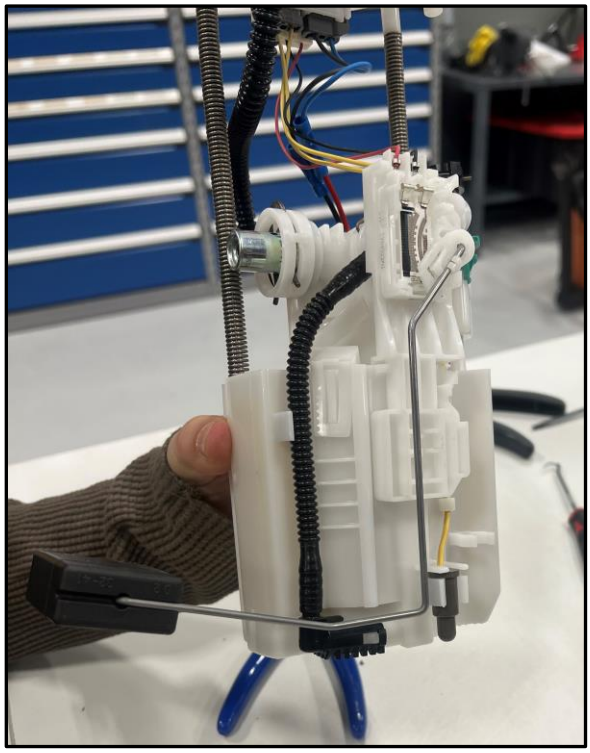


40. Reattach the plastic locking collar that was removed in step #15 to one of the mounting rods.

41. Reattach the hose to the fuel basket that was removed in step # 18.

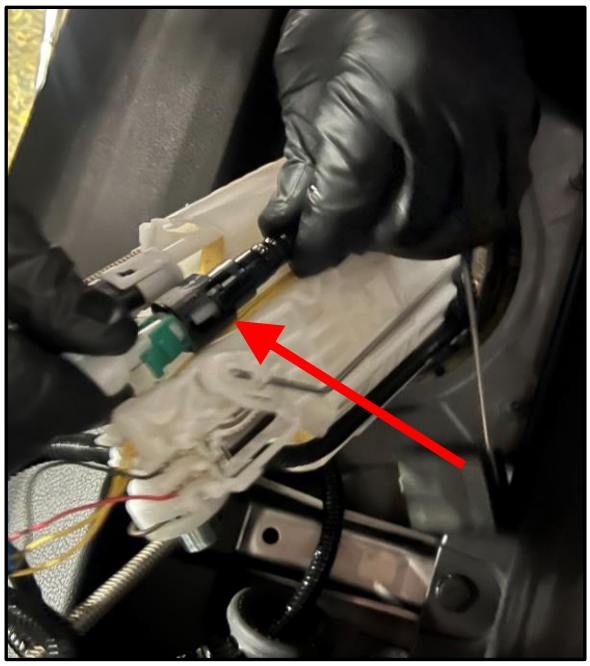
42. Reattach the fuel level sending unit to the basket that was removed in step # 17.

43. Reattach the fuel level sending unit and fuel temperature sensor electrical connectors to the fuel sending unit top hat that were removed in step # 16.



44. Once the fuel sending unit is put back together with the new Z1 pump upgrade installed, it is time to reinstall it into the fuel tank. Reinstallation will follow steps # 1 – 12 in reverse order.

45. Reconnect the internal siphon hose that was disconnected in step # 11.



46. Carefully place the sending unit back into the fuel tank, making sure to not bend or damage the fuel level sensor or plastic fuel basket. If the unit does not go in easy, do not force it. It will likely get caught up on the corrugated fuel tube or other components. If the sending unit does not fully seat properly, check to make sure the internal siphon hose is NOT routed underneath the unit.

47. Once the sending unit is fully seated, reattach the sending unit collar and reinstall the (6) screws removed in step # 10.

48. Reconnect the fuel feed line and electrical connector.

49. Reconnect negative battery terminal.

50. Switch the ignition to the “ON” position but do not start the vehicle. You should hear the fuel pump prime for a few seconds. Repeat this process 3-4 times.

51. Once the fuel system is primed, check for leaks around the top of the fuel sending unit.

52. Check the vehicle for loose tools/items.

53. Reinstall the inspection cover and sound deadening that was removed in steps # 3 & 4.

54. Reinstall the rear seat cushion that was removed in step # 1 & 2. Push down to lock the cushion in place.

55. Perform a final test drive of vehicle.

END

Additional Technical Support:
Contact Z1 Motorsports at info@z1motorsports.com
Or call 770-838-7777 between 9am and 6pm ET