

CAUTION

Only a qualified technician following applicable safety procedures should perform the installation of this product. One must have knowledge in repair and modification of fuel systems and general vehicle modifications to install this product.

Gasoline and other fuels are flammable and can be explosive.

Only install in a well-ventilated location to minimize buildup of fuel vapors.

No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended. Proper eye and personal protection is required at all times during installation.

WARNING

The fuel system is under pressure! Do not loosen any connections until relieving the fuel system pressure.

Consult a service manual for instructions on relieving fuel pressure safely. This product is designed for off-highway and racing use only. Fuel system components may not be legal for sale or use on emissions controlled motor vehicles. Consult local, state, and federal laws.

1. It is recommended to drain the tank to reduce fuel spills for an easier and safer installation.

Open the trunk. Unclip and remove the trunk cover, carpet, and spare tire.

To uninstall the fuel tank access cover in the center of the trunk, remove the 6 perimeter nuts using a 10mm wrench.

Once removed, it is recommended to clean the top of the fuel pump housing and the surrounding area, as shown. This will prevent loose debris from falling into the gas tank.



2. To depressurize the fuel system, first squeeze the tab and unplug the gray wiring connector on top of the pump housing (shown).

Start the engine and allow it to stall. Remove the key from the ignition. Unscrew the gas tank filler cap temporarily to relieve any residual pressure.

Pop the hood and disconnect the battery's negative terminal with a 10mm socket wrench.

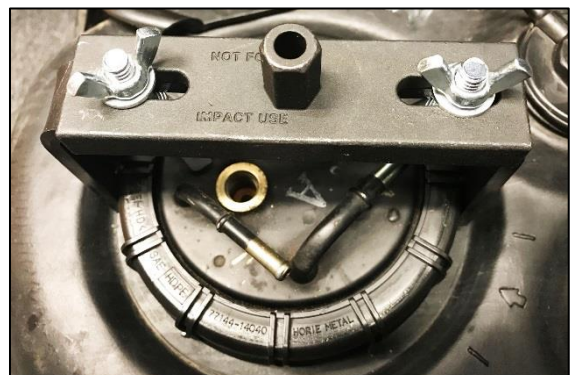
CAUTION: Disconnecting the battery may cancel fault memories of some control units.



3. Disconnect the OEM banjo bolt fitting using a 17mm wrench. Using pliers, dislodge the OEM spring clamps and pull off the fuel return and vent hoses. Use a rag to clean any spilled fuel.

Loosen and remove the large worm drive jubilee clamp using a 10mm socket wrench.

The black fuel tank hold-down ring will need to be spun counterclockwise. Many technicians will use a hammer and flat chisel. However, it is recommended to purchase a spanner tool to avoid breaking this plastic threaded ring. These are relatively inexpensive and can be found online from companies such as Lisle, OEMTools, Ryco, etc. For the MK4 (JZA80) Toyota Supra, Radium Engineering successfully uses Lisle P/N: 63000 (shown).



4. Before removing the OEM unit, place an empty bucket nearby as there will be residual fuel in the gas tank. Slowly lift the assembly straight up.

NOTE: If this Supra gas tank came from a Twin Turbo (2JZ-GTE) model, it should have a rubber hose on the return line. Squeeze the spring clamp and pull the hose off the barb, as shown.

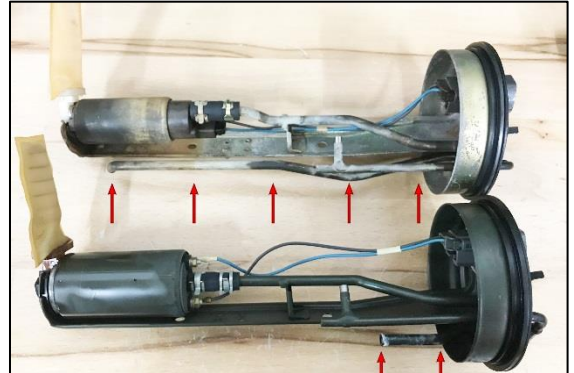
Next, gently squeeze the float arm inwards and tilt the assembly back and forth to clear the level sender and fuel pump sock filter. Pull the unit out and allow it to drain into the bucket. Clean the assembly and set it on a workbench.



5. As shown, there are 2 versions of the OEM Toyota Supra fuel pump assembly. The main difference is with the internal fuel return line.

The non turbo (2JZ-GE) Supra variation (top) uses a long hard pipe that routes to the bottom.

The Twin Turbo (2JZ-GTE) Supra (bottom) uses a short hard pipe. NOTE: This is the connection point where the internal rubber hose was disconnected in the previous step.



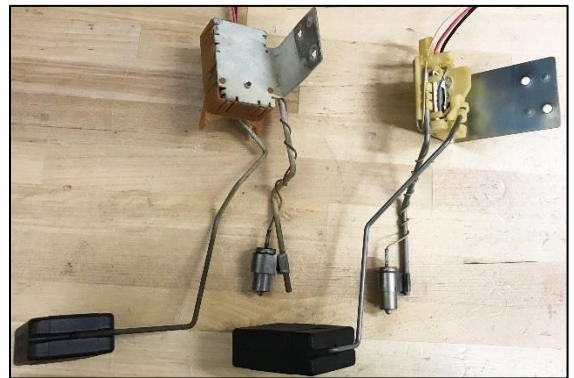
6. Only 2 parts will be reused from the OEM Toyota unit (gasket and sensors).

Pry and slide the large black gasket out and around the assembly.

As shown, there are 2 different types of fuel sensor assemblies. Both include a fuel level float and a fuel temperature sensor. Both versions have a similar bracket that is compatible with the Radium fuel hanger.

Depress the thumb lock to unplug the 3-pin connector. To remove the bracket assembly, use a Phillips head screwdriver for the 2 small screws. These OEM screws will not be reused.

If the fuel pump hanger came with fuel pump(s) installed, skip Steps 7-30.



7. Note the part number label on the product box.

Follow Steps 8-11 and 28-30 if installing any of the following into Radium 20-1512-00

-Walbro F90000267, F90000274, F90000285 Fuel Pump

Follow Steps 8-9 and 12-13 if installing any of the following into Radium 20-1510-00

-Walbro GSS342 255LPH Fuel Pump

-AEM 50-1200 E85 Fuel Pump

Follow Steps 14-30 if installing the following into Radium 20-1511-00

-Ti Automotive E5LM Fuel Pump



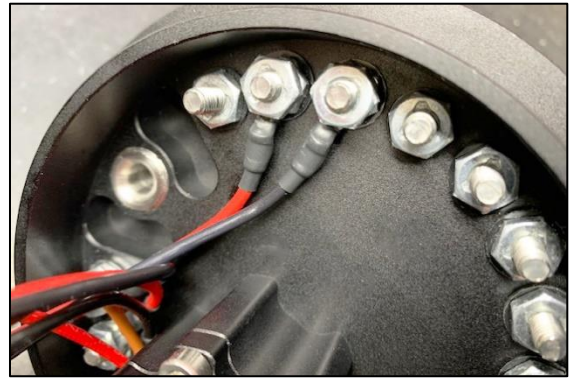
8. Unscrew the 3 filter screen bolts (shown) using a 3/32" Allen wrench.

Skip this step for the 20-1511-00 Ti Automotive E5LM kit.



9. As shown, attach the corresponding number of fuel pump connectors to the wiring studs underneath the top hat using 3/8" wrenches and the included lock nuts. The red wires are positive (+) and black wires are negative (-). The kit includes extra hardware which can be used as spares.

Skip this step for the 20-1511-00 Ti Automotive ESLM kit.

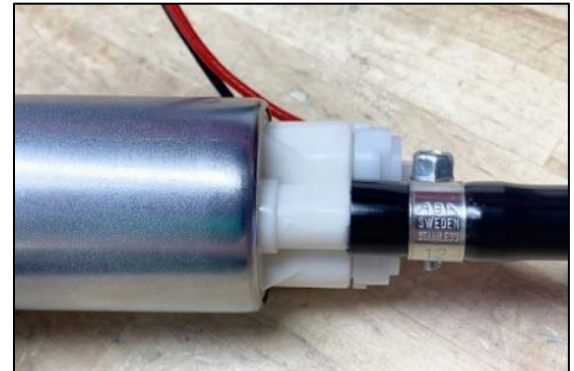


10. Radium 20-1512-00 Walbro F90000267/274/285 Fuel Pump Installation

The provided tubing will be installed between the pump and triple pump collector.

First, apply oil lubrication to the pump outlet barbs and to the inside of the tubing. Care must be taken not to kink the tubing. If too much force is applied, replace the tube. Secure using an EFI hose clamp and a 9/32" nut driver.

NOTE: Spare tubing is provided in case there is a mistake.



11. Determine how many fuel pumps will be installed. For single or dual fuel pump applications, block-off the unused ports on the underside of the triple pump block using the included 6AN ORB plug fittings and an 1/4" Allen wrench.

- If installing 1 fuel pump, use 2 plugs.
- If installing 2 fuel pumps, use 1 plug (shown).
- If installing 3 fuel pumps, do NOT install any plugs.

Install a barbed fitting for each pump using a 3/4" (19mm) wrench. NOTE: Lubricate all O-rings with light oil before installing any ORB fittings.



12. Radium 20-1510-00 Walbro GSS342 or AEM 50-1200 E85 Fuel Pump Installation

The provided tubing will be installed between the pump and triple pump collector. First, apply oil lubrication to the pump outlet barbs and to the inside of the tubing. Care must be taken not to kink the tubing. If too much force is applied, replace the tube. Secure using an EFI hose clamp and a 9/32" nut driver. Spare tubing is provided in case there is a mistake.

NOTES:

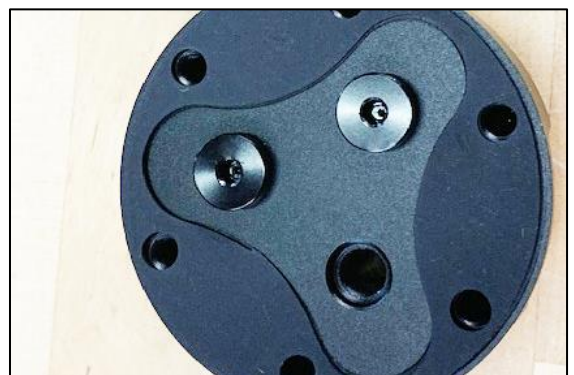
1. For Walbro GS342 255LPH fuel pumps, the included long tubing is required.
2. For AEM fuel pumps, the provided short tubing is required.
3. For many 300/320/340LPH pumps (shown), low heat is required to soften the tubing. In this case, be careful not to over-heat and melt the tubing. If the tubing becomes too soft and deformed, replace it with a new piece.



13. If installing less than 3 pumps, the triple pump block will have to be disassembled. Remove the venturi jet pump, 6 perimeter bolts, triple pump block, etc. Using lubrication and a 1/8" Allen wrench, install the included plug(s) to any of the 3 threaded holes.

- If installing 1 fuel pump, use 2 plugs (shown).
- If installing 2 fuel pumps, use 1 plug.
- If installing 3 fuel pumps, do NOT install any plugs.

Make sure the gasket is properly seated and reinstall all pieces. NOTE: The 6-bolt flange cannot be improperly orientated as the bolt spacing is not symmetrical.

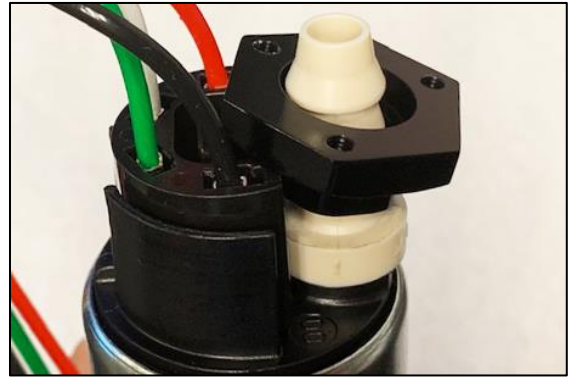


14. Radium 20-1511-00 Ti Automotive E5LM Fuel Pump Installation

Inspect the fuel pump outlet hose barb. If deformed or damaged, the Radium check valve pump adapter will NOT attach properly.

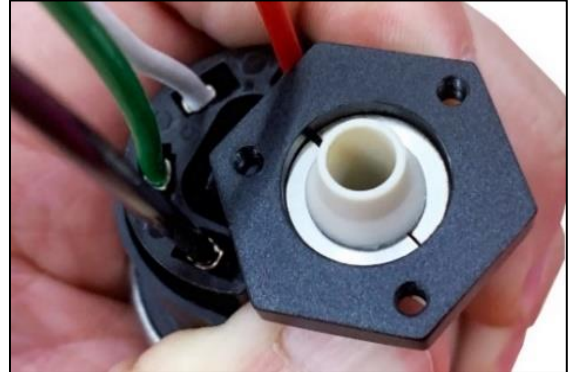
The Ti Automotive E5LM 4-pin wiring connector MUST first be installed to the electrical terminals.

To install the check valve, first slide the black collar over the pump outlet with the flat surface upward, as shown.



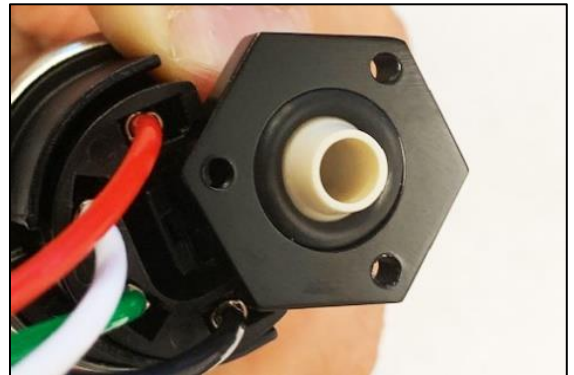
15. Next, slip the stainless steel retainers under the hose barb ridge closest to the end of the pump outlet opening. Be patient as this will take a little bit of work.

Pull the collar up to confirm the retainers lock into place as depicted.



16. Place the included O-ring on the fuel pump outlet. Apply a petroleum-based lubricant to the O-ring.

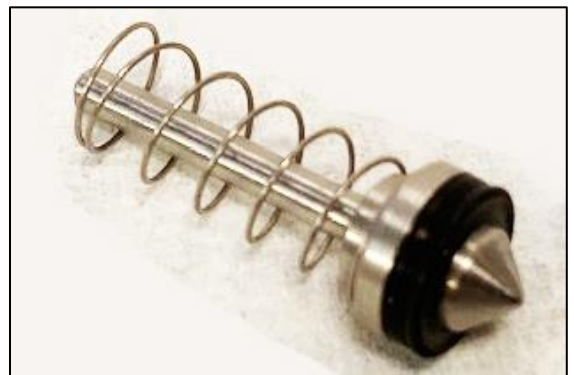
Slide the black collar upward and tuck the O-ring into the groove, as shown.



17. Place the O-ring onto the check valve plunger groove, as shown.



18. Place the provided spring around the plunger rod, as shown.



19. Insert the plunger rod through the internal center hole of the green adapter fitting, as shown.



20. Apply a high-strength thread locking compound to the threads on the 3 included bolts. Line up the green fitting holes to the black fitting threads. Use a 2.5mm Allen wrench.

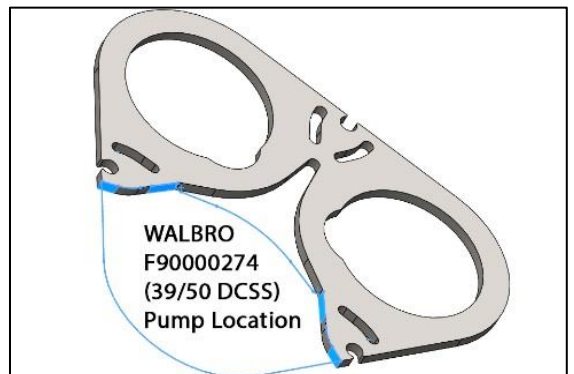


21. After tightening all bolts evenly, inspect the internal side of the green fitting. When installed properly, the plunger should be slightly sticking out of the center hole at rest, as shown.



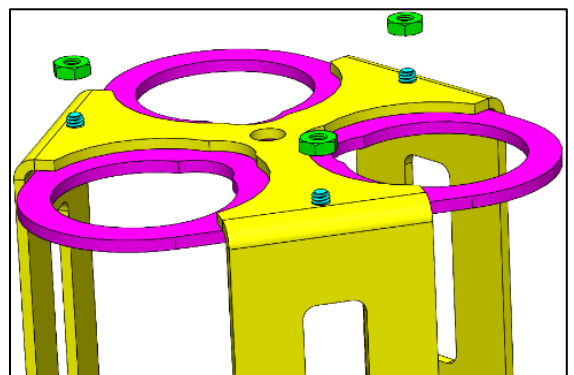
22. For those wanting a hybrid setup with standard brushed pump(s), parts will be needed. Reference the product page for more information. For Walbro GSS342 and AEM 50-1200 style fuel pumps, no modification is required for the brushless pump adapter bracket.

NOTE: If installing a Walbro F900002XX fuel pump (or any 39/50 DCSS pump), the brushless pump adapter bracket will need to be modified (as shown). But because the pump retention is removed, the fuel pump will be free and not secured. The installer must figure out a way to attach this fuel pump to the assembly as there are no provisions for these larger pumps.



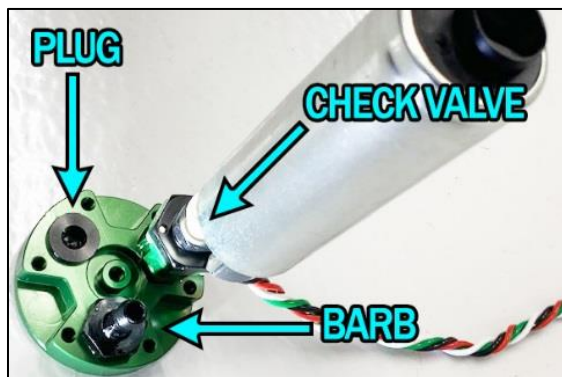
23. Install the brushless pump adapter bracket (pink) to the main pump bracket (yellow).

Secure using the 5-40 threaded bolts (blue) and 5-40 threaded nuts (green) using a 1/4" socket wrench and a 5/64" Allen wrench. Hint: the button heads can typically be held in place with your finger while tightening the nut with a wrench.



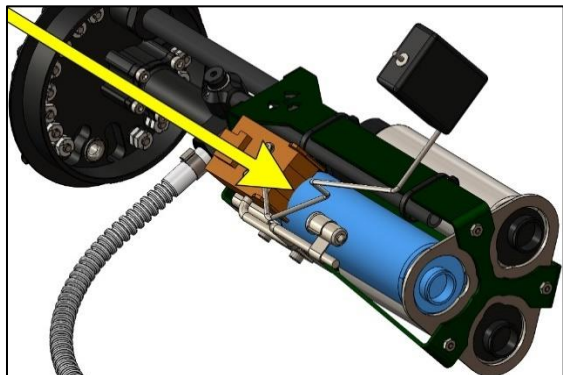
24. If not using a fuel pump slot, install the included plug(s) into the triple pump block. For the Ti Automotive E5LM brushless pump(s), install the check valve adapter(s) into the triple pump block.

For those wanting a hybrid setup with standard brushed pump(s), install the barbed adapter (shown, not included).



25. Because of the Ti Automotive E5LM brushless fuel pump height, only two of these pumps can be used. If the E5LM pump is installed in the location shown, it will NOT work. There will be an interference with the OEM fuel sensor bracket assembly, as shown.

However, any of the other compatible (shorter) fuel pumps can be installed in this location.



26. Install the recommended filter socks below for the respective pumps.

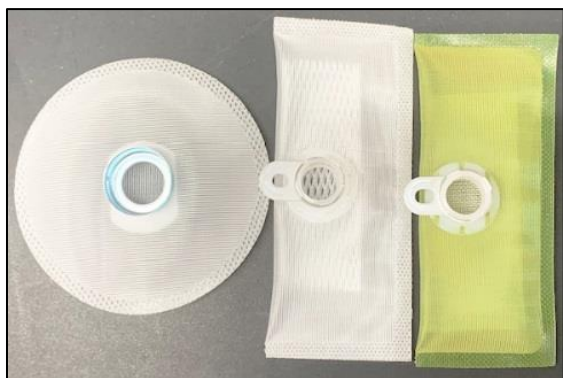
BRUSHLESS E5LM PUMPS

-Radium P/N: 14-0543 (shown left)

BRUSHED PUMPS

-Radium P/N: 14-0143 (shown center)

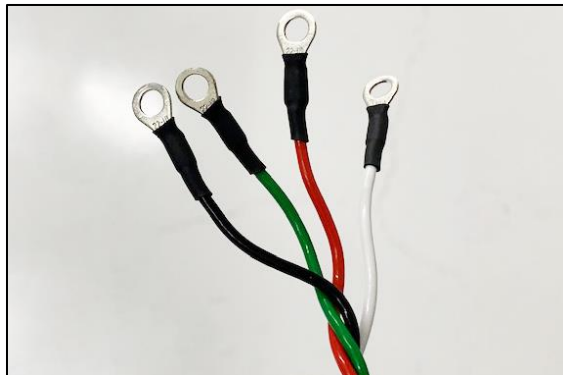
-Filter sock included with AEM 50-1200 (shown right)



27. Crimp the provided ring terminals to the end of each wire. Slide the heat shrink over the crimped area. Apply heat to the shrink the insulation.

Connect each ring terminal to the corresponding wire color terminal depicted on the top of the fuel hat. R = Red, G = Green, W = White, B = Black. Attach the corresponding number of pump connectors to the wiring studs underneath the top hat using 3/8" wrenches and the included lock nuts.

NOTE: The kit includes extra hardware which can be used as spares.



28. Excluding Ti Automotive E5LM brushless pump(s), slide a second hose clamp onto the tubing attached to the fuel pump. Use lubrication as previously mentioned and push the tube over the barb until it is fully seated. NOTE: Do NOT apply heat on this side of the tubing connection. It is NOT required.

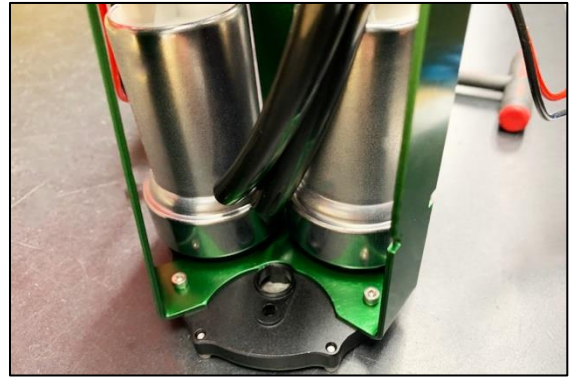
Rotate each pump so the wire connectors are facing outwards. Secure the clamp(s) using a 9/32" nut driver. Plug in the fuel pump connectors.

NOTE: If using less than 3 fuel pumps, ensure a fuel pump is not accidentally installed into a blocked off port.

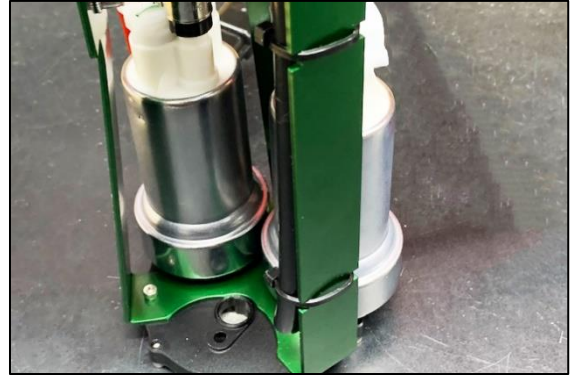


29. Using a 3/32" Allen wrench, resecure the lower filter screen, as shown. NOTE: The lower filter screen is NOT compatible with Ti Automotive ES LM brushless pumps.

NOTE: Each fuel pump has its own dedicated filter chamber. There are 3 individual compartments. Contaminants can NOT get into the pump inlets from the unused spot (shown).



30. Using the provided cable zip ties, secure the two fuel return tubes to the slots in the mounting bracket, as shown.



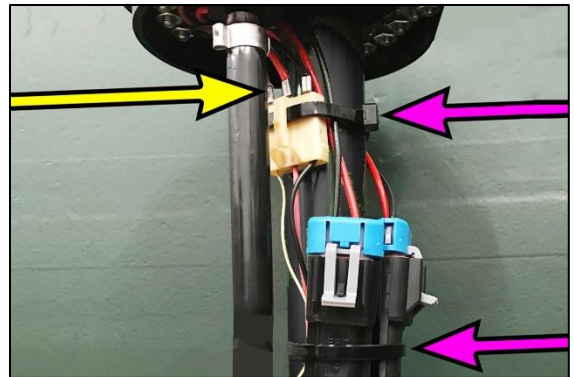
31. Using a 3mm Allen wrench, install the OEM fuel sensor bracket assembly to the rivet nuts using the provided stainless steel bolts.



32. Find the 3 sensor wires hanging from the fuel hat. Match each wire color and push each terminal into the OEM 3-pin connector (see yellow arrow pictured).

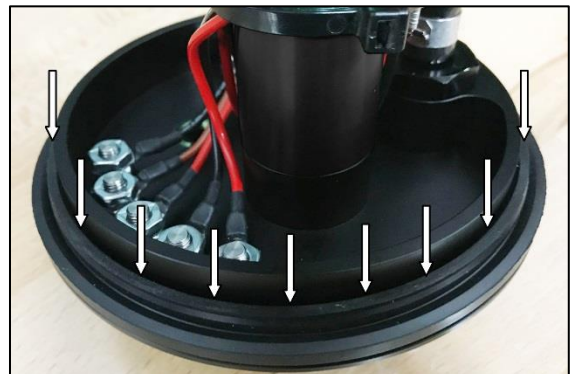
RED WIRE Fuel Level Signal
BLACK WIRE Sensor Ground
BROWN WIRE Fuel Temperature Signal

Using the 2 cable zip-ties provided in the kit, neatly secure the fuel sensor and fuel pump wires to the long pipe (see purple arrows pictured). As shown, a zip-tie can secure around the OEM fuel sensor connector and, if used, the Walbro F900002XX (DCSS 39/50) fuel pump connector(s).



33. Find the OEM rubber gasket that was previously removed. Inspect to be sure there are no rips, tears, cuts, imperfections, etc. TOYOTA P/N: 77169-14030

Fully seat the gasket on the underside of the fuel hat, as shown.



34. To install into the gas tank, the fuel level float must enter the tank first.

Carefully tip the fuel hanger assembly to angle in the fuel level float, as shown.



35. Next, insert the end of the loose convoluted tubing into the rear opening of the gas tank, as shown.



36. Next, temporarily loosen the 2-bolt fuel sensor mount that attaches to the bracket. This will allow the fuel sensors to flex. Next, simultaneously squeeze the fuel temperature sensor inwards while pushing the fuel hanger assembly downwards into the tank, as depicted. Be careful not to damage the fuel sensors. Once the fuel temperature sensor enters the tank, allow the sensor assembly to deflect back into position. Retighten the 2 Allen head screws.

Before lowering all the way, first point the convoluted tubing downwards at the outside rear of the OEM sub-tank. This will keep the jet pump suction at the bottom of the OEM tank for optimal starvation protection.



37. Readjust vertically and slowly lower the fuel hanger assembly downwards.

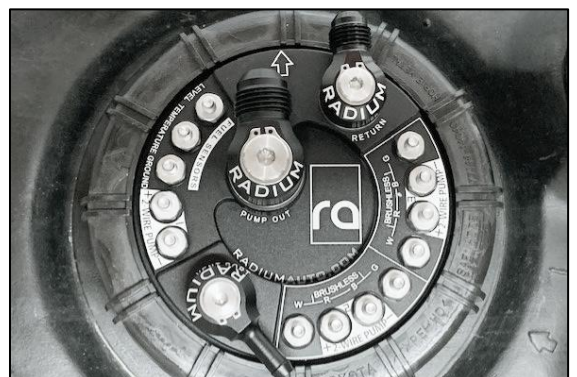
Assuming the fuel hat arrow is orientated towards the front of the vehicle, the assembly will auto-rotate into position once the fuel pump(s) reach the OEM sub tank.

Pictured is the fuel hanger assembly inside the gas tank when correctly installed.



38. To reinstall the OEM black hold-down ring, rotate clockwise and tighten. NOTE: The top 3 fittings can freely swivel for additional space.

Reinstall the large worm drive jubilee clamp to lock the hold-down ring in place.



39. For plumbing and electrical access, the gas tank will need to be dropped down slightly.

First, safely raise the vehicle.

Carefully remove the 4 Phillips head screws on the bottom rear of the bumper cover. NOTE: because these are plastic, do not use a power tool as they can easily strip. Instead, use a manual screwdriver and refrain from applying unnecessary force upwards while spinning counterclockwise.

After all 4 screws are removed, the black bar (shown) will pop down and out.



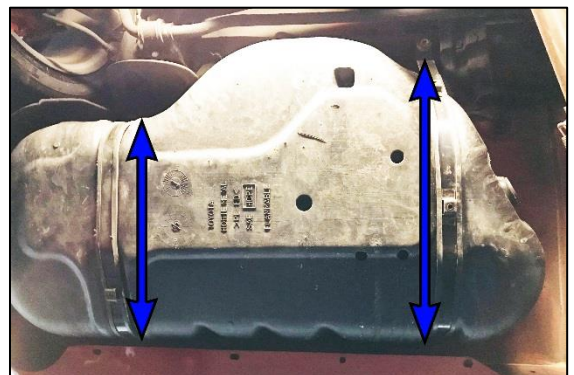
40. Using 10mm wrenches, remove the gas tank shield. This piece is held in by 6 bolts.



41. Using 10mm wrenches, remove the exhaust muffler shield. This piece is held in by 3 bolts.



42. Using a 14mm wrench, loosen the 4 bolts (shown) that secure the 2 gas tank mounting straps. Be careful to not remove the bolts as they only have 25mm of thread length. Allow the gas tank to drop down slightly.



43. Find the gas tank wiring harness loom entering from the trunk floor grommet. Follow it towards the top of the fuel hanger.

Reach up to the front LH side of the gas tank and unlatch the wiring harness loom clip from the gas tank hole (shown). The wiring loom will still reside in the gas tank's sleeve holder. However, this will permit the 5 fuel hanger wires to move an extra inch or so for easier modifications in following steps.



44. From above, dislodge the connector tabs and flip up. Cut all wires as close to the connector as possible. Remove some of the electrical tape and strip the wire insulation back ¼", as shown.

- | | |
|--------------------------------------|--------------------------------|
| BROWN small gauge wire | Sensor Ground |
| YELLOW/GREEN small gauge wire | Fuel Temperature Signal |
| YELLOW/BLACK small gauge wire | Fuel Level Signal |
| BLUE large gauge wire | Fuel Pump Positive (+) |
| WHITE/BLACK large gauge wire | Fuel Pump Negative (-) |

Cut three ½" pieces of the small diameter shrink tube. Insert onto each sensor wire (3 small gauge wires). Next, crimp on a small gauge (AWG) ring terminal to each wire. Slide the shrink tube over the crimped section of the ring terminal and shrink into place with a heat gun.

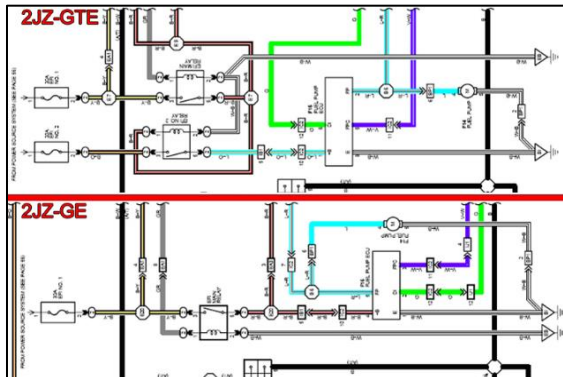


45. **Single Pump Applications ONLY**

To reuse the OEM fuel pump power wiring, use the large diameter shrink tube and large gauge (AWG) ring terminals to connect the fuel pump wires.

NOTES:

1. In its OEM configuration, the Twin Turbo (2JZ-GTE) Supra uses 2 modes of fuel pump operation (high speed and low speed). Not discussed in this manual but this limitation can be bypassed to allow 12V to the fuel pump in all load conditions.
2. As shown, the Twin Turbo (2JZ-GTE) and Non-Turbo (2JZ-GE) Supras use the same Fuel Pump ECU and a 30A Fuse. However, the Twin Turbo (2JZ-GTE) Supra uses 2 EFI relays and the Non-Turbo (2JZ-GE) uses 1 EFI relay.

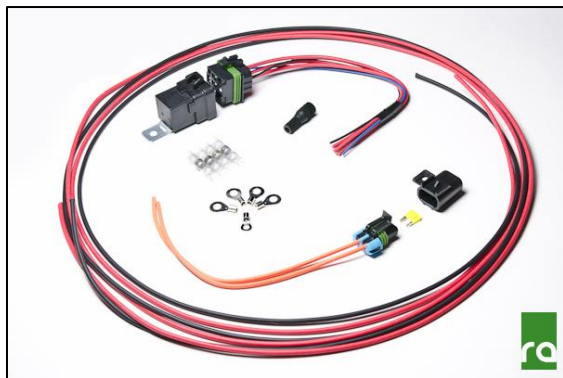


46. **Multi-Pump Applications**

WARNING: The OEM fuel pump wiring cannot supply power directly to multiple fuel pumps.

Consider using Radium Engineering P/N: 17-0031 DIY Wiring Kit (shown) for each fuel pump. This includes a dedicated fuse, relay, 10AWG wire, etc. It is recommended to use the OEM fuel pump wiring to trigger this fused relay power source for each fuel pump.

If using large diameter wire to power the pumps, use the included large AWG ring terminals and corresponding large heat shrink tubing. Extra electrical parts are included in the kit to use as spares.



47. Secure all ring terminal connections to the electrical studs using the insulating acorn nuts. Do not overtighten.

If extra nuts are found in the kit, they can be used as spares.



48. If the OEM return hose will be reused, install the 2-piece barbed hose end, as shown. Push the OEM return hose onto the barb and secure with the OEM spring clamp. Connect the OEM vent hose to the provided barb fitting and secure with the OEM spring clamp.

This kit requires aftermarket fuel feed hose for the provided low profile 8AN male feed fitting.

NOTE: the provided top hat fittings can be changed, if necessary. See port threads below.

- RADIUM Feed Port Threads 10AN ORB (7/8"-14)
- RADIUM Return Port Threads 8AN ORB (3/4"-16)
- RADIUM Vent Port Threads 6AN ORB (9/16"-18)

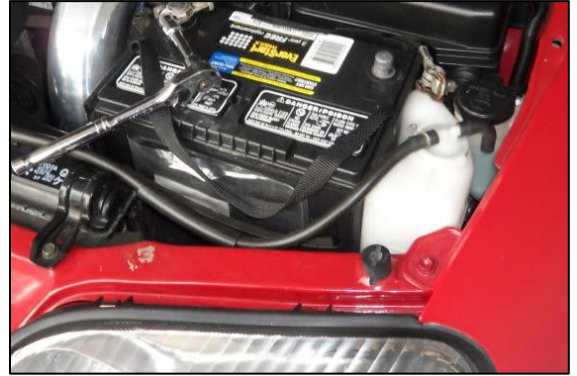


49. Reattach all fuel tank mounting related components in reverse order. Reconnect the battery using a 10mm wrench.

Turn the ignition key to the ON position to pressurize the fuel system. Confirm the new fuel pump(s) are properly operating. Check for leaks. If no leaks are found, start the vehicle.

NOTE: The engine may run rough for a few seconds until all air is bled from the fuel system.

Recheck for leaks.



50. Before reinstalling the fuel tank access cover, new replacement foam is included to permit additional clearance for the upgraded fuel hose plumbing.

Remove the old original foam stuck to the bottom of the fuel tank access cover and clean it.



51. Find the adhesive foam included in the kit. Peel the backing off and apply on the flat areas around the cover on the inside of the 6 mounting holes (shown in blue). Cut to length.

Reinstall all components in reverse order.

FUEL HANGER INSTALLATION COMPLETE



52. Optional 20-0415-0X Fuel Hanger Plumbing Kits

Pop out the 10mm hex fastener that secures the hard line to soft line mount for the EVAP and return lines. Remove the plastic tubing carrier (shown) from the vehicle as it will not be reused.
NOTE: The fuel return line is closest towards the rear of the vehicle.

Unfasten the OEM spring clamp and pull the short rubber return line off the hard line, as shown. This will prevent a siphoning effect in later steps when fuel lines will be disconnected.



53. Safely lift and secure the vehicle. Find the fuel filter just left of the transmission.

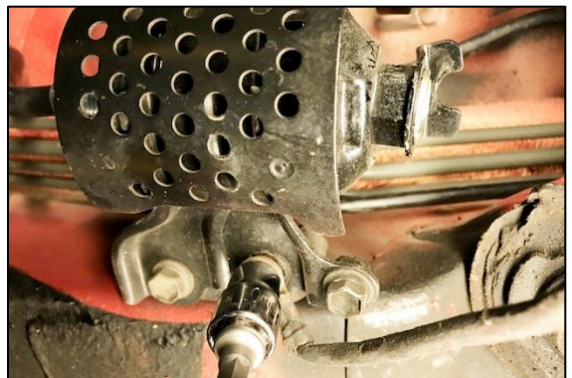
When loosening the ends of the OEM fuel filter fittings, be prepared with a rag as fuel will leak out of these connections.

For the fuel filter inlet, use a 19mm wrench on the fuel filter hex and a 14mm flare nut wrench on the inverted flare fitting hex, as shown.

For the fuel filter outlet, use a 17mm socket breaker bar on the banjo bolt and a 19mm wrench on the fuel filter inlet hex.



54. Using a 10mm socket wrench, remove the ground wire ring terminal bolt. NOTE: This could be found on any one of the 3 bolts shown.

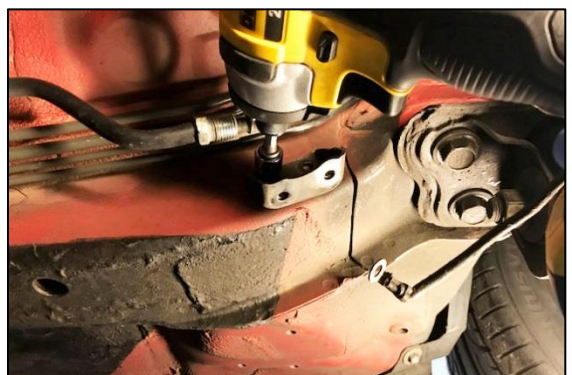


55. Using a 10mm socket wrench, remove the 2 bolts that secure the fuel filter to the fuel filter mount.



56. Using a 10mm socket wrench, remove the 2 bolts that secure the fuel filter mount to the chassis.

The fuel filter, fuel filter fittings, fuel filter mount, and mounting bolts will NOT be reused.



57. From the engine bay, remove the fuel rail feed line banjo bolt.

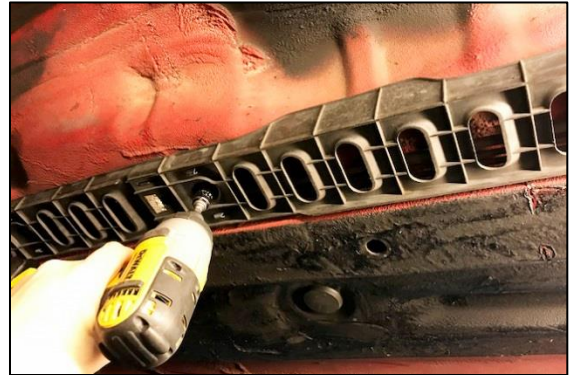
Using a 10mm wrench, remove the M6 bolt that secures the fuel feed line to the intake manifold.

Using a 12mm wrench, remove the 2 bolts that secure the fuel pulsation damper housing to the engine block.

In one piece, pull the fuel feed line out of the vehicle. This will include everything from the fuel filter outlet banjo to the fuel rail inlet, as shown.



58. Remove the 6 fasteners that hold the plastic hard line covers.



59. Pry the locking tabs to release the plastic hard line covers.



60. One by one, lower the plastic hard line covers.



61. Using a 10mm socket wrench, remove the last plastic cover that is located to the left rear of the differential near the muffler.

The 3 plastic covers are shown. These will not be reused.



62. Carefully pry and pop off all the hard line retainers, as shown.



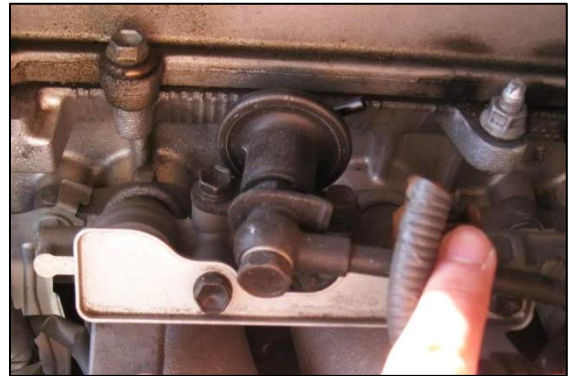
63. In one piece, pull the fuel feed line out of the vehicle. This will include everything from the fuel pump hanger banjo soft line to the fuel filter inlet inverted flare hard line, as shown.

NOTE: This can be reinstalled if the vehicle ever needs to be put back to factory specifications.



64. From the engine bay, unscrew the fuel rail return line banjo bolt (shown) from the fuel pressure regulator.

Using a 10mm wrench, remove the M6 bolt that secures the return line to the intake manifold.



65. **NOTE: The long OEM return hard line does not HAVE TO be removed from the vehicle.**

This step is optional for those that have no plans to reuse the OEM return line. The OEM return line can be reinstalled if necessary.

This step is easiest with two people. First, safely drop the gas tank down slightly to pull the return hard line out of the fuel hanger trunk space area. Pull the fuel return line forward and around the suspension, half shafts, etc. (if installed).

In one piece, pull the fuel return line out of the vehicle. This will include everything from the fuel pressure regulator banjo to the fuel hanger return hard line, as shown.



66. Using a 5mm Allen hex wrench, install the lower half of the Radium fuel filter mount to the unibody in the former location of the OEM fuel filter using the provided M6 socket head bolts, as shown.



67. The filter has markings identifying the "INLET" and the "OUTLET". Using a 1" wrench, install the 10AN ORB to 8AN male fitting to the fuel filter inlet and the 10AN ORB to 10AN male fitting to the fuel filter outlet.

NOTES:

1. Oil lubrication must first be applied to the O-rings to prevent damage.
2. Aluminum wrenches can help prevent marring of the anodized hex finish.



68. Place the fuel filter on the lower half mount with the outlet facing the engine bay and the inlet facing the rear of the vehicle.

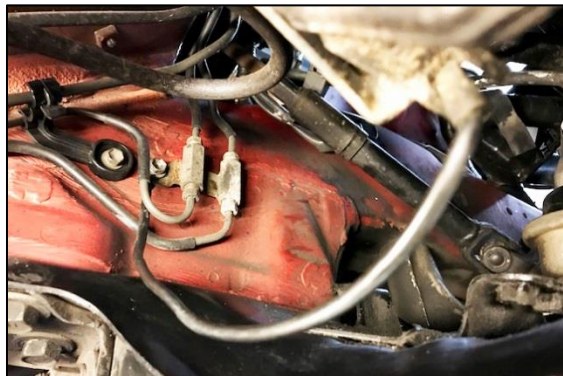
Using a 4mm Allen hex wrench, install the upper half of the fuel filter mount using the provided M5 socket head bolts, as shown. Do not fully torque these bolts yet as the filter will be repositioned later.



69. Using a 10mm socket wrench, remove the M6 bolt that secures the brake line adapter junction point shown.

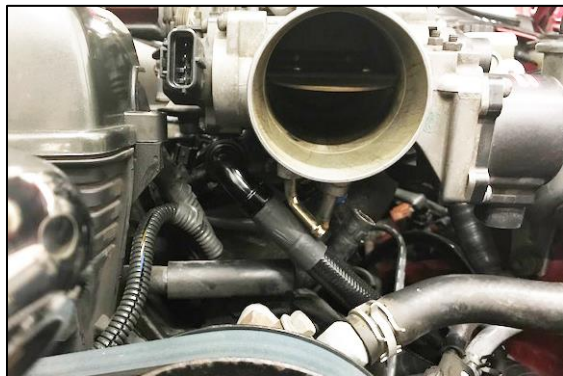


70. Relocate and secure the electrical ground wire ring terminal to the mounting boss, as shown.



71. NOTE: for this plumbing kit to connect properly, the fuel rail (not included) must have an 8AN ORB threaded front port. Radium Engineering recommends, 2JZ-GTE Fuel Rail P/N: 20-0215. Install the included 8AN ORB to 10AN male fitting to the front port of the fuel rail.

Connect the -10AN hose to the front port of the fuel rail and route the hose back and down to the fuel filter outlet. **Stay clear of the steering shaft.** Loosely install these two hose end fitting connections.

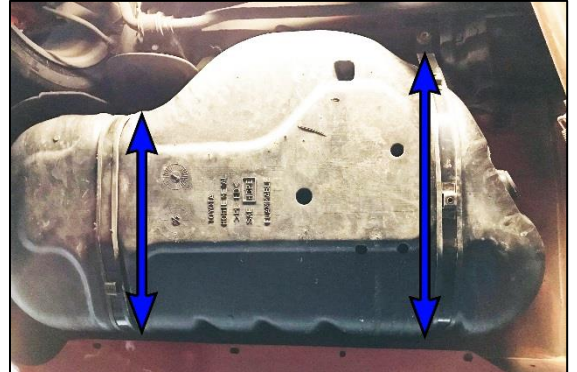


72. Notice there are a few different types of hard line retainers in the MK4 Toyota Supra. Some are shorter than others. For instance, the JZA80 chassis has raised M6 nuts in some locations.

Reinstall all OEM hard line retainers excluding the 4 at the middle of the car at the straight section.



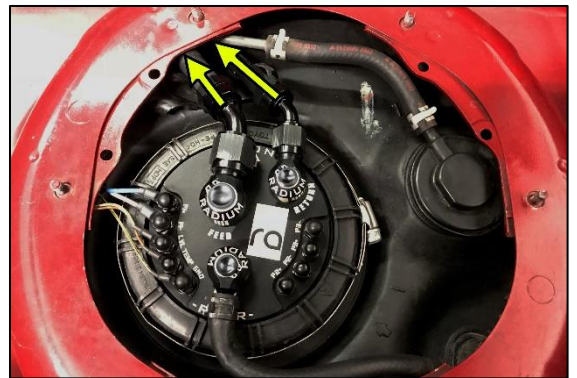
73. Safely, loosen the gas tank straps to lower the tank down slightly as outlined in earlier steps.



74. The new fuel lines will be routed in the same manner as the OEM fuel lines. From the trunk, first slide the long 8AN feed line down the front LH side opening.

Next, apply a petroleum-based lubricant to the provided 45 degree 6AN PushLok hose end. With force, fully seat the hose end into one end of the provided 3/8" rubber fuel hose. Now insert the opposing end of the hose down along the RH side of the 8AN feed line. Route this 6AN return line to the RH side of the 8AN feed line during the entire run, as depicted.

Loosely install the 8AN feed line onto the fuel filter inlet and fuel pump hanger outlet fitting. Do not secure this fuel line to the unibody yet.



75. For this plumbing kit, the fuel pressure regulator (not included) must have a 6AN male return port. Radium Engineering recommends, DMR P/N: 20-0623-0X which can connect directly to the rear port of the Radium fuel rail. Line up the long return hose to the FPR and cut to length.

Next, apply a petroleum-based lubricant to the provided 90 degree 6AN PushLok hose end. With force, fully seat the hose end into the 3/8" rubber fuel return hose.

Next, loosely install the return hose fittings to the connections at the fuel pressure regulator and fuel hanger.



76. Secure the return line near the fuel filter using one of the provided cable zip ties, as shown.



77. Using the OEM hardware and a 10mm socket wrench, install the 4 Radium retainers.

If the OEM return line was removed, this slot will be empty, as shown. Alternatively, this slot can be used to run the fuel pump relay power wire(s) up to the battery, if necessary.



78. Just in front of the LH half shaft, the OEM hard lines make tight bends. For optimal fuel flow, the replacement fuel lines will bypass this potential restriction.

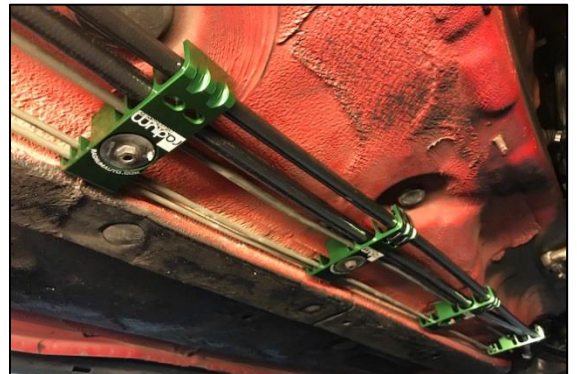
Find the OEM stud shown. Using the provided M6x1mm nut and 2 cushioned P-clamps, secure the feed and return lines to the stud with a 10mm socket wrench.



79. Using the provided cable zip ties, secure the return line to the retainers, as shown.



80. NOTE: the rearmost retainer will not require zip ties as the retainer touches the floorboard.



81. After tightening all related fittings, secure the fuel filter clamp using a 4mm Allen hex wrench. Notice how the filter is slide upwards inside the clamp to add ground clearance.



82. Reinstall all components in reverse order.

Make sure the fuel lines near the gas tank have adequate clearance and is not chaffing on any nearby parts.

FUEL PLUMBING KIT INSTALLATION COMPLETE

