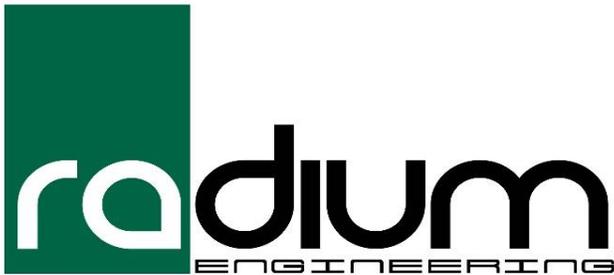


# INSTALLATION INSTRUCTIONS

## EARLY MODEL NISSAN FUEL HANGER S13/R32 (EXCLUDING GT-R)



Document: 19-0247

Support: info@radiumauto.com

### COLOR LEGEND FOR EACH STEP

20-073X-XX FUEL HANGER, EARLY NISSAN

Follow **YELLOW** areas

20-0703-03/20-0703-05 PLUMBING KIT

Follow **GREEN** areas

### 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.

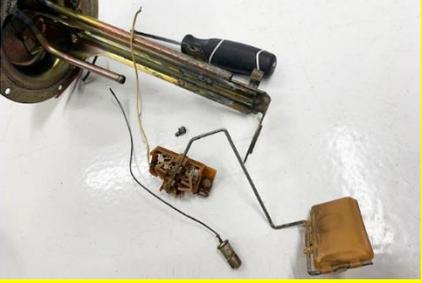
No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended. Proper eye and personal protection is required at all times during installation.

### 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.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		<b>20-073X-XX INSTALLATION</b>	
		<p><b>NOTES:</b></p> <p>1. It is recommended to run the fuel tank dry or drain the tank to reduce fuel spills for an easier and safer installation.</p> <p>2. These instructions will work solely from the rear of the vehicle.</p> <p>First, open the trunk. From the RH side, flip the carpet over to expose the fuel pump access cover (shown).</p>	
2	Phillips Screwdriver	Just to the RH side, there is a small metal plate that protects electrical wires. Unscrew the 2 bolts and remove.	
		An electrical connector will now be visible. To unplug, press the thumb tab and gently pull to release.	
3		To depressurize the fuel system, start the engine and allow it to stall.	
		Remove the key from the ignition.	
4		Unscrew the gas tank filler cap temporarily to relieve any residual pressure.	
	10mm Socket Wrench	Open the hood and disconnect the battery's negative terminal.	
		CAUTION: Disconnecting the battery may cancel fault memories of some control units. Consequently, before disconnecting the battery, always cross examine any fault memories.	

5	10mm Socket Wrench	To release the fuel tank access cover, remove the 4 screws.	
		Push the rubber grommet through the fuel tank access cover. The fuel tank access cover is now free and can be moved out of the way.	
		NOTE: It is recommended to clean the plastic module and surrounding area. This will prevent loose dirt from accidentally falling into the tank.	
6	8mm Socket Wrench	Remove the 6 perimeter hex bolts. These M5x0.8mm bolts will NOT be reused.	
	Phillips Screwdriver		
7	Phillips Screwdriver	<p>NOTE: The LH port at the front is the fuel return hose. The RH port at the front is the fuel feed hose.</p> <p>Slide the OEM fuel hat back towards the rear for better access to the hose clamp connections. Loosen each clamp and pull off each rubber hose. Have a rag handy as fuel will spill out.</p>	
	Pliers		
	Rag		
8		Carefully pull the OEM fuel pump module up. Once it reaches an interference point, it will need to be rocked back and forth to allow the fuel level float to clear the gas tank opening.	
9	Container	Carefully pull the pump bracket assembly out of the fuel tank. To reduce potential spills, immediately place the fuel pump assembly into a fuel safe container such as a bucket.	
10		<p>Remove and inspect the fuel tank gasket. If still in good condition, it can be reused.</p> <p>Replacement Gasket: Nissan P/N: 17342-01A00</p> <p>Next, temporarily place an object over the gas tank opening to prevent foreign debris from entering the fuel system.</p>	

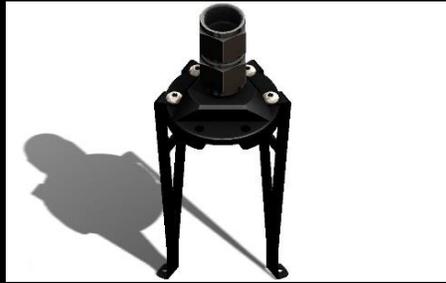
11	Fuel Jug	<p>If there is still residual fuel in the tank, it is a good idea to remove it completely. However, this is not an absolutely necessary step.</p> <p>Pictured is an inexpensive battery-operated liquid transfer pump.</p> <p><b>WARNING: Fuel is highly flammable and should be stored in an approved fuel can. Keep away from direct sunlight, high moisture areas, and extreme temperatures.</b></p>	
12	Solder Iron	<p>Place the OEM assembly onto a workbench.</p> <p>Heat the metal solder that connects the 2 sensor wires to the underside of the OEM fuel hat. To release, wait for the solder to soften then pull the wires away from the fuel hat.</p> <p>NOTE: the 2 fuel pump wires do NOT need to be desoldered.</p>	
13	Solder Iron	<p>The low fuel level switch secures to the lower area. Depending on the vehicle, it will be either clamped or soldered to the OEM metal bracket.</p> <p>If the low fuel level switch is clamped, simply pry to release.</p> <p>If the low fuel level switch is soldered, carefully heat the metal bracket to soften the solder and pull to release.</p>	
14	Phillips Screwdriver	<p>Unscrew the fuel level sender from the metal bracket. Slide off to release.</p>	
15		<p>Along with the gasket, the fuel level sender and low fuel level switch are the only parts that will be reused from the OEM fuel pump module.</p>	
16	2.5mm Allen Wrench	<p>Find the stainless steel bracket in the kit.</p>	
	Diagonal Cutter	<p>NOTES:</p> <ol style="list-style-type: none"> <li>1. For "pumps not included" kits, this bracket will be loose (as shown).</li> <li>2. For "pumps included" kit, this bracket is preassembled to the unit.</li> <li>3. This is used as a brace as well as an electrical grounding path.</li> </ol>	
		<p>Slide the OEM fuel sender down the stainless steel bracket and secure using the provided M4 bolt as shown.</p>	
		<p>Using 2 of the included cable zip ties, secure the low fuel level switch to the bracket in the area depicted.</p>	

17	3/32" Allen Wrench	Reference the part number description on the product box.  1. If a "pumps included" kit was purchased, skip steps 18-34. 2. Follow Steps 18-22, 26-52 if installing any of the following: -Walbro F90000274 Fuel Pump -Walbro F90000285 Fuel Pump -Walbro F90000267 Fuel Pump 3. Follow Steps 18-25, 29-52 if installing any of the following: -Walbro GSS342 255LPH Fuel Pump -AEM 50-1200 E85 Fuel Pump	
	3/32" Allen Wrench	Find the upper round aluminum portion of the fuel filter top. Using one of the provided 5-40 threaded bolts, secure the stainless steel bracket in the area shown. NOTE: Any of the 3 potential threaded areas is OK to use.	
	3/8" Wrench	First, determine how many fuel pumps will be installed. Attach the corresponding number of pump connectors to the wiring studs underneath the top hat using the included lock nuts. The red wires are positive (+) and black wires are negative (-).  The kit may include extra hardware which can be used as spares.	
	20	As shown, extra submersible fuel tubing is provided in case of damage during assembly. The tubing is pre-cut to an exact length to match the specific pump noted in the kit.  NOTES: 1. For proper fitment, the tube must be pushed as far down the pump outlet as possible. 2. Care must be taken not to kink the tubing. If too much force is applied, replace the tube.	
	21	1" Wrench	Unscrew the 10AN to 10AN coupler from the fuel hat fitting, as shown.
Adjustable Wrench		NOTE: Aluminum wrenches are recommended to prevent surface finish marring.	
22		Metric Allen Wrench	Next, remove the 6 triple pump collector bolts.  NOTE: When plumbing the fuel pump outlets, any of the 3 internal ports can be used as they share the same external outlet. As shown, the merging collector permits smooth laminar flow and limits fuel pressure drops.

23	Oil Lubrication	<b>Walbro GSS342 255LPH and AEM 50-1200 Fuel Pump Assembly Only</b>  If using less than 3 pumps, screw the included plug(s) into any of the 3 threaded holes as follows:  -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.
	1/8" Allen Wrench	



24	Metric Allen Wrench	<b>Walbro GSS342 255LPH and AEM 50-1200 Fuel Pump Assembly Only</b>  When reassembling the triple pump collector, install the 2 aluminum brackets underneath the bolt heads, as shown. Prior to tightening, make sure the gasket is properly seated.  NOTES: 1. Do not install the stainless steel bracket with the fuel sensors at this time. 2. Leave 2 of the threaded holes open on the triple pump collector. 3. The 6-bolt flange can NOT be improperly orientated as the bolt spacing is intentionally not symmetrical.



25	Oil Lubrication	<b>Walbro GSS342 255LPH and AEM 50-1200 Fuel Pump Assembly Only</b> Walbro GS342 255LPH fuel pumps require the included long tubing. AEM pumps require the provided short tubing. First, apply oil lubrication to all associated barbs and to both inner ends of the tubing. Gently apply force to push it onto the fuel pump outlet barb. As shown, secure using one of the EFI hose clamps. If applicable, repeat this process for the second pump.  NOTES: 1. Fuel pump hose barbs can fracture if not treated with extra care. 2. For many 300/320/340LPH pumps, 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.
	9/32" Nut Driver	



26	Oil Lubrication	<b>Walbro F90000267/274/285 Fuel Pump Assembly Only</b>  For single or dual fuel pump applications, block-off the unused ports on the underside of the triple pump block using the included 2AN ORB plugs.  -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.  NOTE: Lubricate all O-rings with light oil before installing any ORB fittings.
	1/8" Allen Wrench	

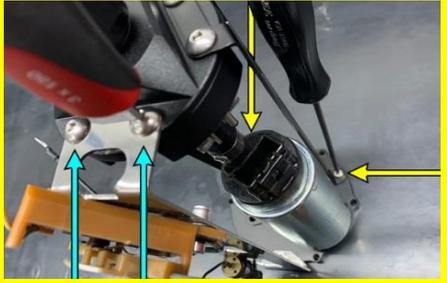


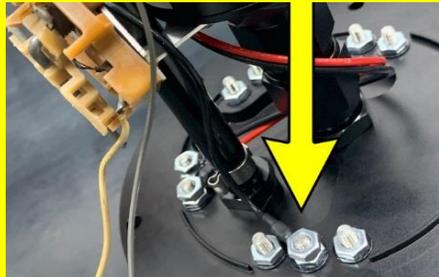
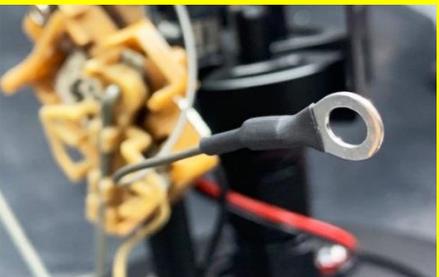
27	Metric Allen Wrench	<b>Walbro F90000267/274/285 Fuel Pump Assembly Only</b>  Install the 2 aluminum brackets underneath the bolt heads, as shown. Prior to tightening, make sure the gasket is properly seated.  NOTES: 1. Do not install the stainless steel bracket with the fuel sensors at this time. 2. Leave 2 of the threaded holes open on the triple pump collector. 3. The 6-bolt flange can NOT be improperly orientated as the bolt spacing is intentionally not symmetrical.

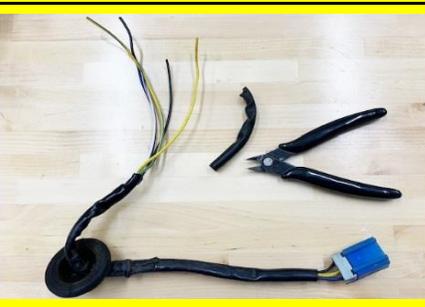


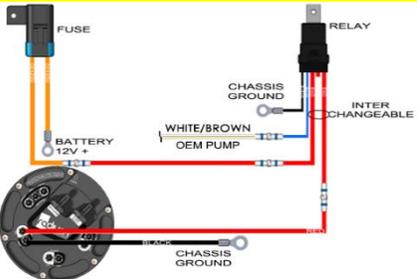
28	Oil Lubrication	<b>Walbro F90000267/274/285 Fuel Pump Assembly Only</b> The fuel tubing will need to be installed between the pump and triple pump block. First, apply oil lubrication to all associated barbs and to both inner ends of the tubing. Gently apply force to push it onto the fuel pump outlet barb. As shown, secure using one of the EFI hose clamps. If applicable, repeat this process for the second pump.
	Phillips Screwdriver	

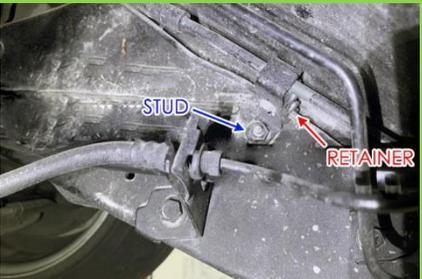


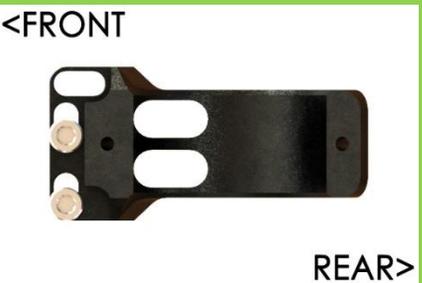
29	Phillips Screwdriver	Slide the provided screw-driven EFI clamps over each fuel pump submersible hose. One by one, install each fuel pump to the triple pump block barbs. <b>Be certain the fuel pump(s) are installed in none plugged ports.</b>	
	Oil Lubrication		
30	Metric Allen Wrench	This step involves mating the fuel sensor assembly to the fuel pump assembly.	
	3/32" Allen Wrench	First, line up and drop the fuel pump inlet(s) into the corresponding pump holes on the fuel filter top.	
		Next, line up the upper holes from the stainless steel fuel sensor bracket to the triple pump collector threads. Secure using the included M5x0.8mm bolts. See blue arrows.	
		Finally line up the hanging bracket lower holes to the threads in the fuel filter top. Secure using the included M4x0.7mm bolts. See yellow arrows.	
31	3/32" Allen Wrench	If the mesh screen is not preinstalled to the lower filter mount (green piece), there are 3 tabs that the mesh screen simply slips into. Place the lower filter mount onto the top filter mount. Rotate so the 3 tabs lock in. Using the 6 provided screws secure, as shown. First, apply a medium-strength thread locker to each screw.	
32	1" Wrench	When lowering the fuel hat down onto the fuel pump assembly, insert and push the return tube into the stainless steel bracket hole (shown red).	
	Adjustable Wrench		
33	Diagonal Cutter	There are 2 slots in the stainless steel bracket near the low fuel level switch. As shown, secure the return tube to the stainless steel bracket using the provided cable zip tie.	
34		Plug in the fuel pump(s).	

35	3/8" Wrench	From the top of the fuel hat, find the sensor stud labeled "GND" (ground). Next, flip the assembly over and grab the sensor ground wire attached to the stainless steel bracket. Place the ring terminal around the stud underneath. Secure using one of the provided lock nuts.	
		NOTE: It is possible that a second wrench will need to be used on the opposing side to prevent the stud from rotating.	
36	Diagonal Cutter	Lineup and cut the OEM fuel level and low fuel switch wires to length. Strip the insulation off the end of each wire. Cut 2 sections of the small diameter heat shrink to length and slide over each wire.	
	Wire Stripper		
37	Wire Crimper	Crimp a small ring terminal to each wire.	
	Heat Gun	Slide the heat shrink over the crimped area and apply heat to shrink, as shown.	
38	3/8" Wrench	From the top of the fuel hat, find the sensor studs labeled "LEVEL" (fuel level sender) and "LFUEL" (low fuel switch). Place the ring terminals around the corresponding studs underneath. Secure using the provided lock nuts.	
		NOTES:	
		1. It is possible that a second wrench will need to be used on the opposing side to prevent the stud from rotating.	
		2. To get the wire nice and tidy, the low fuel level switch wire can be inserted through the slot in the stainless steel bracket.	
39		NOTE: If using only 1 or 2 pumps, there will be holes (shown) where pump(s) would reside. A common misconception is that large debris will get into the pump inlet through these areas. This is not the case. These areas do NOT need to be plugged. Each fuel pump has its own dedicated chamber for filtration. This can be seen by inspecting the filtration are.	
40		When reinserting into the gas tank, note the orientation arrow engraved on top of the fuel hat.	
		First, rotate the fuel pump assembly to allow the float to get inside the gas tank first.	

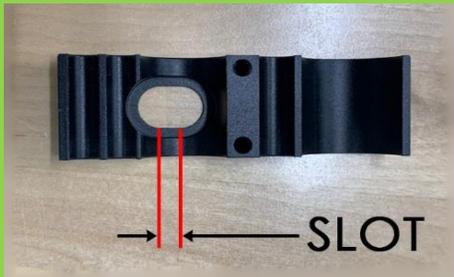
41		<p>Rotate the fuel pump assembly back upright. Drop the assembly down while preventing excessive side load on the fuel level assembly.</p>	
42		<p>Next, rotate the fuel level sender arm upwards into the "full" position. Cautiously, squeeze the fuel level sender inwards to clear the gas tank opening.</p> <p>Be sure the O-ring gasket is properly seated into the groove.</p>	
43	4mm Allen Wrench	<p>Gently lower the fuel pump assembly.</p> <p>NOTE: The fuel pump(s) will naturally find their way into the factory collector box. However, make sure the fuel level float is oriented outside the factory collector box, as shown.</p> <p>To secure the fuel hat, use the 6 provided M5x0.8mm bolts. Tighten in a crisscross pattern.</p>	
44	Phillips Screwdriver Pliers	<p>Connect the OEM fuel hoses and secure using the OEM hose clamps.</p>	
45	Diagonal Cutter	<p>Cut the 5 wires from the top side of the OEM fuel hat.</p>	
46	Diagonal Cutter	<p>Remove half of the OEM plastic wire loom, as shown.</p> <p>Trim all the wires to the exact length of the shortest wire.</p>	

47		For the upcoming electrical assembly, note the OEM wire colors for the fuel pump and fuel sensors.	<h3 style="text-align: center;">WIRE COLOR LEGEND</h3> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">FUNCTION</th> <th style="text-align: left;">INTERNAL</th> <th style="text-align: left;">EXTERNAL</th> </tr> </thead> <tbody> <tr> <td>Sensor Ground</td> <td>---</td> <td>Black</td> </tr> <tr> <td>Pump Power</td> <td>Red</td> <td>White/Brown</td> </tr> <tr> <td>Level Sensor</td> <td>Yellow</td> <td>Yellow</td> </tr> <tr> <td>Pump Ground</td> <td>Black</td> <td>Blue/Red</td> </tr> <tr> <td>Low Fuel Switch</td> <td>Brown</td> <td>Yellow/Blue</td> </tr> </tbody> </table>	FUNCTION	INTERNAL	EXTERNAL	Sensor Ground	---	Black	Pump Power	Red	White/Brown	Level Sensor	Yellow	Yellow	Pump Ground	Black	Blue/Red	Low Fuel Switch	Brown	Yellow/Blue
	FUNCTION	INTERNAL		EXTERNAL																	
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	Level Sensor	Yellow		Yellow																	
Pump Ground	Black	Blue/Red																			
Low Fuel Switch	Brown	Yellow/Blue																			
48		Due to the relatively low current electrical design from Nissan, only a single Walbro GSS342 (255LPH) fuel pump can reliably use the OEM fuel pump wiring.																			
	49	<p><b>Upgraded Wiring:</b></p> <ul style="list-style-type: none"> <li>- A fuel pump relay kit, such as Radium P/N: 17-0031, is required for high current fuel pump applications.</li> <li>- A fuel pump relay kit <b>MUST</b> be used for each additional pump installed.</li> <li>- The picture is a wiring schematic for installing Radium P/N: 17-0031 DIY Fuel Pump Wiring Kit for a single pump.</li> <li>- If using multiple pumps, the pictured wiring schematic may apply for the additional pumps unless the pumps will be staged by an adjustable pressure switch (Radium P/N: 20-0236) or an ECU. Neither scenarios are detailed in this instruction manual.</li> </ul>																			
		Wire Stripper			Cut the included heat shrink to length and place over each wire.																
		Wire Crimper			For all OEM wires (shown), crimp the small ring terminals onto the end of each wire.																
		Heat Gun			For relay kits, crimp the large ring terminals onto the pump wires.																
50		Slide the heat shrink up and cover the crimped areas. Apply heat to shrink, as shown.																			
	8mm Socket Wrench	Before making the following electrical connections to the fuel hat, be sure to first reinstall the OEM rubber grommet to the OEM cover plate.																			
	51			Secure each assembled ring terminal wire to the appropriate electrical stud on the fuel hat using the provided insulating acorn nuts.																	
		52		10mm Wrench	Reconnect the battery. Turn the ignition switch ON. Start the engine and check for leaks.																
					Reinstall the access panel. For protection, wrap any exposed wire. Reinstall all OEM components in reverse order.																
			<b>20-073X-XX INSTALLATION COMPLETE</b>																		
																					
																					

53	10mm Socket Wrench	<b>20-0703-03/05 FUEL HANGER PLUMBING KIT INSTALLATION</b>  As described in the instructions above, disconnect the battery and depressurize the fuel system.  The filter is located near the front RH strut tower. Disconnect the inlet and outlet soft fuel lines. Have a rag nearby to catch fuel spills.  Slide the fuel filter out from the OEM mounting bracket and remove from the vehicle.	
	Screwdriver		
54	10mm Socket Wrench	Unbolt the OEM fuel filter mounting bracket (shown) from the unibody and remove from the vehicle. Nothing will be reused.	
55	10mm Socket Wrench	Safely raise the vehicle.  Starting from the front, locate the retainer underneath the fuel filter. This holds the fuel feed and fuel return hard lines. Unscrew the M6x1mm hex bolt and pry the hard lines from the retainer.	
56	10mm Socket Wrench	Moving towards the rear, find the next retainer. On most vehicles, there is a stud that protrudes through the retainer and a nut secures it to the unibody, as shown. If this is the case, this retainer will be reused. However, the 2 fuel lines will still need to be removed from the holders and the other lines should remain attached.  NOTE: If the vehicle still uses the long OEM clutch damper hard line, lowering it out of the way can help the following process. Remove the 2 mounting bracket bolts then pull the lines from the unibody.	
57	Flat Blade	Following the hard lines towards the rear of the vehicle, unsnap the next 6-7 retainers.  The simple retainer type pictured secures the lines together. Many times it does not interface with the unibody. Note where these are specifically located for when the new replacements will be installed.  NOTE: there is another OEM retainer that looks identical to this one. However, it is pressed into the unibody. Simply pry to unclip it from the floor board.	
58	10mm Socket Wrench	The retainer type shown is secured with a M6x1.0mm bolt.	

59	10mm Socket Wrench	The retainer type shown is not common with all compatible vehicles. Note the metal bracket mount positioning.	
		NOTE: If the vehicle does not have the OEM retainer shown, only 7 of the 8 Radium Engineering retainers will be used. One of the retainers will NOT be used.	
60		Depending on the chassis, a couple of OEM retainers near the fuel tank will be reused. These are either too difficult to reach with the fuel tank installed or they are in a location not suitable for the large replacement fuel hoses to reside.	
		Pictured are all 8 potential OEM retainers that will be replaced.	
61	Screwdriver	Disconnect and remove the OEM fuel feed and fuel return rubber hoses from the hard lines just in front of the gas tank.	
62	10mm Socket Wrench	Unbolt the last rear retainer. As shown, thread the OEM bolt back into the unibody to secure the adjacent bracket for the EVAP system.	
		After removing the feed and return hard lines entirely from the vehicle, be sure to reinstall the brake and EVAP hard lines into the OEM retainer holders that will be reused.	
63	5mm Allen Wrench	The vehicles listed below require the unique fuel filter position shown.  Nissan (S13) 200SX, 240SX, Silvia  NOTES: 1. The provided M6x1x14mm Allen bolts will use the lower mount's slotted hole positions shown. 2. The provided M6x1x25mm Allen bolts and spacers will NOT be used. 3. When securing to the unibody, note the proper lower mount orientation with respect to the front and rear of the vehicle.	<p>&lt;FRONT</p>  <p>REAR&gt;</p>
64	5mm Allen Wrench	This vehicle requires the unique fuel filter position shown.  Nissan (R32) Skyline  NOTES: 1. To get a collinear alignment between the OEM hard tube and filter inlet barb, the long M6x1x25mm bolts and spacers must be used. 2. The short M6x1x14mm Allen bolts will NOT be used. 3. When securing to the unibody, note the proper filter mount orientation with respect to the front and rear of the vehicle (as depicted).	<p>&lt;FRONT</p>  <p>REAR&gt;</p>

65		<p>Depicted are the mounting spacers required for the R32 chassis only.</p>	
66	<p>Oil Lubrication 5mm Allen Wrench 1" Wrench Adjustable Wrench</p>	<p>Lubricate the O-rings on the provided 10AN ORB to 8AN male fittings. Secure this straight adapter fitting (shown on bottom) to the fuel filter inlet port. Secure the swivel banjo fitting (shown on top) to the fuel filter green outlet port.</p>	
67	<p>4mm Allen Wrench</p>	<p>Insert the fuel filter into the lower mount so the green outlet is positioned at the top. Slide the filter within the mount for optimal fitment. This specific position will vary depending on the application. For RHD vehicles, be sure to keep clear of the master cylinder.</p> <p>Loosely tighten the filter using the upper clamp and the two M5x0.8mm Allen bolts.</p>	
68	<p>1" Wrench 3/4" Wrench</p>	<p>Install the provided 8AN and 6AN adapter fittings to the fuel hat "pump out" and "return" ports, respectively.</p>	
69		<p>The provided 1/2" (8AN) and 3/8" (6AN) hoses will be inserted from the trunk. Each hose will start from their respective fuel hat port fittings and run towards the front of the vehicle.</p> <p>First, route the hoses on top of the gas tank towards the front of the vehicle.</p>	
70		<p>Be sure the vehicle is safely on a proper lift as the following steps would be difficult laying on the ground.</p> <p>From underneath, pull the hoses downwards.</p>	

71	Oil Lubrication	Once the end of the hoses at the rear get close to the fuel pump hat ports, install the provided 6AN and 8AN straight hose ends.	
		First, apply oil lubrication to the barbs. Then, fully insert each hose onto the respective hose ends. NOTE: PushLok hose ends do NOT require clamps.	
72	11/16" Wrench	Install the hose ends to their respective port fittings. Do NOT over tighten -AN fittings.	
	7/8" Wrench		
		NOTE: Aluminum wrenches will prevent surface marring.	
73	Cutters	Route the fuel hoses in the same manner as the OEM hard lines.	
		To secure the hoses away from the exhaust and moving parts of the suspension use one of the provided cable zip-ties.	
74	2.5mm Allen Wrench	Starting from the rear moving forward, install the retainer mounts that secure to the unibody first.	
	5mm Allen Wrench		
		NOTE:	
		1. Some retainers just secure the lines together. Those can be installed last.	
		2. Shown is the first replacement retainer that will be used moving forward.	
75		Find the one black retainer in the kit that has a machined slot as depicted.	
76		Find the rubber push-in plug in the kit shown.	

77	Drill	Find the hole in the unibody where the one OEM retainer pressed into the floor board. Without fully inserting, test to see if the rubber plug will fit snug in the hole.	
		If too tight, this hole might need to be slightly enlarged. WARNING: Do not use a drill larger than 21/64" (or 8.25mm).	
78		Lineup the slotted retainer to the hole as shown.	
79		Press the rubber plug into the hole, as shown.	
80	4mm Allen Wrench	There is one 2-way retainer that uses a M6x1mm countersink bolt. This will be installed closest to the front of the vehicle (under the fuel filter).	
81	2.5mm Allen Wrench Cutter	Find the locations where the OEM retainers did not secure to the unibody. Secure the lines with a retainer in these areas.  Lastly, to prevent the hoses from sagging near the front, use one of the provided cable zip-ties.	
82	10mm Socket Wrench	If the OEM clutch damper hard line (shown) was dropped down, the mount can now be reinstalled and secured.	

83	Hose Cutter	Temporarily install 1 of the provided hose ends to the fuel filter inlet fitting, as follows:	
		Nissan R32 chassis: Use the 45 degree PushLok hose end Nissan S13 chassis: Use the straight PushLok hose end	
		Mock up the 1/2" feed hose to the hose end barbs and cut to length.	
84	Oil Lubrication	For added space and ease of installation, it might be easier to temporarily remove the fuel filter from the mount.	
		Install and fully seat the PushLok hose end into the 1/2" feed hose. Use a liberal amount of lubrication. NOTE: PushLok hose ends do NOT require clamps.	
85	7/8" Wrench	As shown, install the hose end to the fuel filter inlet port. Nissan S13 chassis shown.	
86	4mm Allen Wrench	Reinsert the fuel filter into the mount and loosely install the billet filter clamp.	
87	4mm Allen Wrench	Slide the filter into position for best fitment and secure.	
88	Oil Lubrication	Lubricate, then fully insert the other included 8AN hose end into the remaining section of 1/2" hose, as follows:	
	7/8" Wrench	Nissan R32 chassis: Use the straight PushLok hose end Nissan S13 chassis: Use the 45 degree PushLok hose end	
		Secure to the fuel filter outlet fitting. Nissan S13 chassis shown.	

89	Hose Cutter	<p>Terminating the feed hose to the aftermarket fuel rail will be dependent on the vehicle application.</p> <p>An extra 8AN 90 degree PushLok hose end is included specifically for connecting to a 8AN male fuel rail fitting.</p>	
	7/8" Wrench		
90	Hose Cutter	<p>Terminating the return hose to the FPR (fuel pressure regulator) will be dependent on the vehicle application.</p> <p>NOTES:</p> <ol style="list-style-type: none"> <li>1. For aftermarket FPRs, an extra 6AN 90 degree PushLok hose end is included.</li> <li>2. For OEM Nissan FPRs, an extra EFI clamp (shown) is provided. Be sure to cinch the clamp until it bottoms out.</li> </ol>	
	11/16" Wrench		
	9/32" Nut Driver		
91	10mm Socket Wrench	<p>Reconnect the battery. Switch the ignition to the ON position to pressurize the fuel system. 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.</p> <p>Carefully reinstall the fuel pump access panel. Reinstall all OEM components in reverse order.</p> <p><b>INSTALLATION COMPLETE</b></p>	