INSTALLATION INSTRUCTIONS
2016+ HONDA CIVIC (EXCL FL5)
FUEL PUMP HANGER

Document: 19-0362
Support: info@radiumauto.com

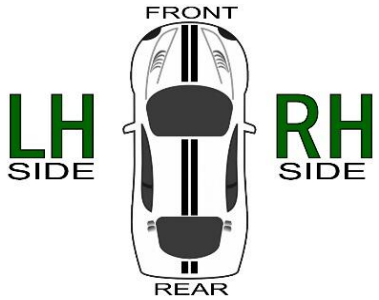
COLOR LEGEND FOR EACH STEP
20-1080 FUEL PUMP HANGER Follow ORANGE areas
20-1082 FUEL PUMP HANGER Follow GREEN areas
20-1085-0X FUEL PLUMBING KIT Follow YELLOW areas

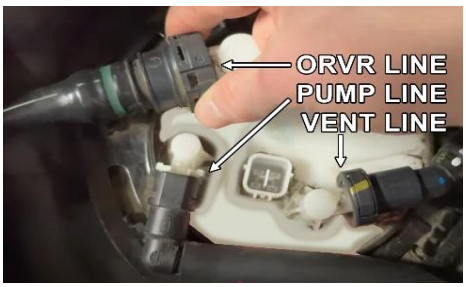
CAUTION

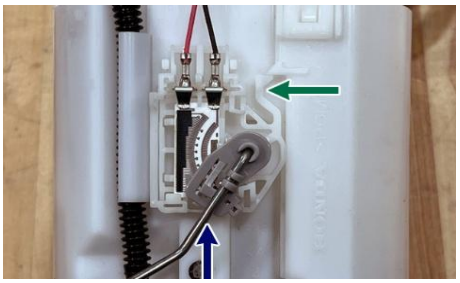
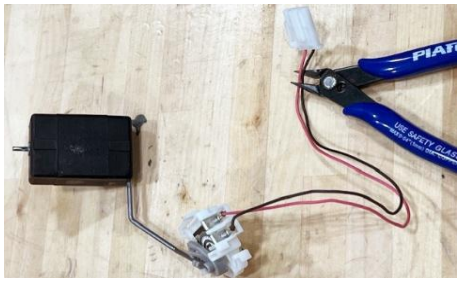
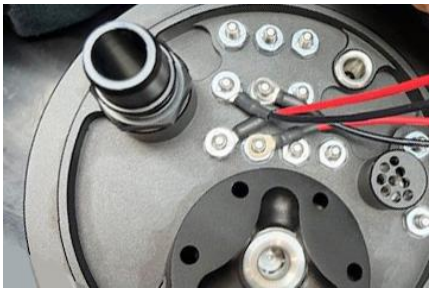
Only a qualified technician following applicable safety procedures should perform the installation of this product.
One must have knowledge in repair and modification of fuel systems and general vehicle modifications to install this product.
Gasoline and other fuels are flammable and can be explosive.
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.

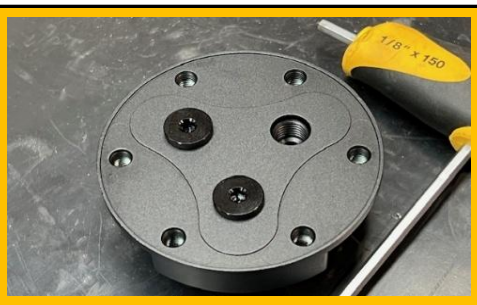
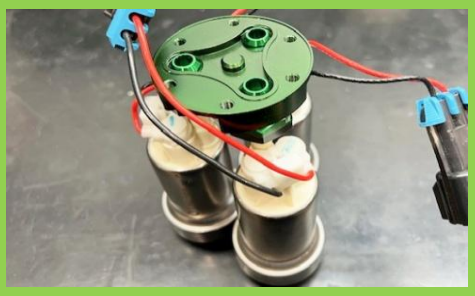
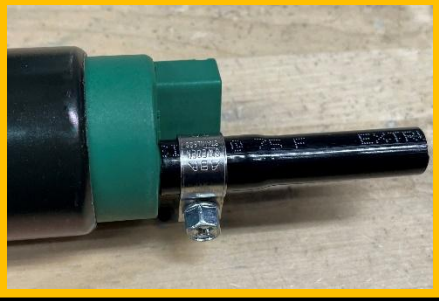
WARNING

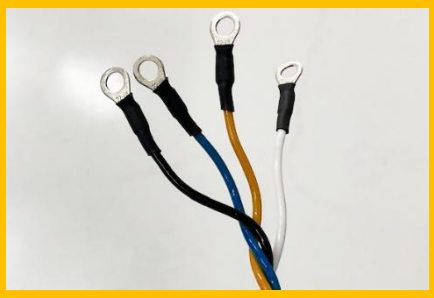
The fuel system is under pressure! Do not loosen any connections until relieving the fuel system pressure.
Consult a service manual for instructions on relieving fuel pressure safely. This product is designed for off-highway and racing use only.
Fuel system components may not be legal for sale or use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

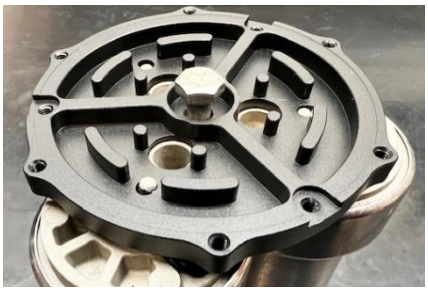
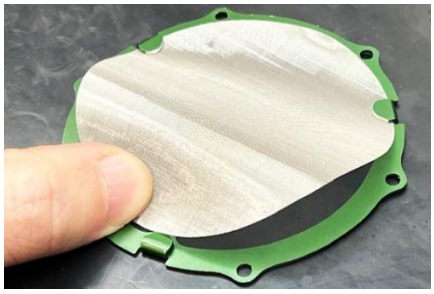
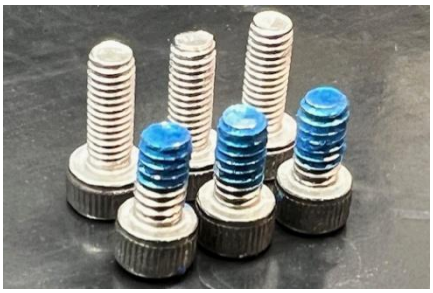
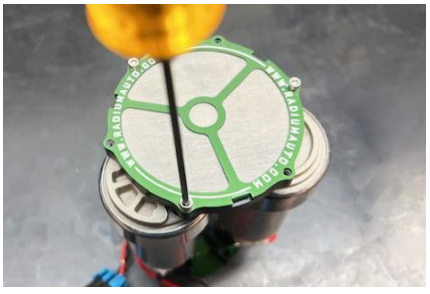
STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		Prior to beginning, be sure not to work on a full fuel tank. The terms "driver-side" and "passenger-side" will NOT be referenced. As depicted, these instructions will always reference "LH" and "RH" areas of the vehicle.	
2	10mm Socket Wrench Socket Extension	For increased workspace, tilt and move the front seats all the way forward. Between the lower rear bench and the upper rear back seats is a hex bolt (shown). This is not exactly centered. It is slight to the LH side of the car. Unscrew this bolt and remove the bench seat from the vehicle.	
3		There are 2 clips (shown) under the rear bench seat. Using your fingers (or pliers), pull each clip forward and simultaneously yank the bench seat upwards to release.	
4	12mm Socket Wrench	Fold the upper rear seats down and fold the carpet back near the hinges to expose the mounting hardware. The RH upper seat must be removed first. Unscrew the inner and outer hinge hex bolts. For the LH upper seat, unscrew the center hex bolt (shown) and the outer hex bolt(s). NOTE: If the carpet is still attached to the back of the seats, simply rotate the seats into the trunk area.	

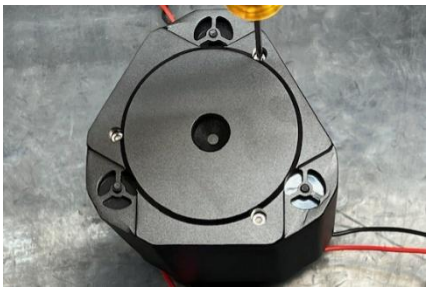
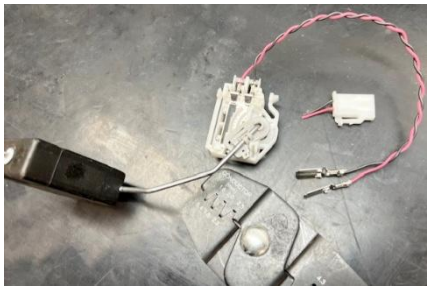
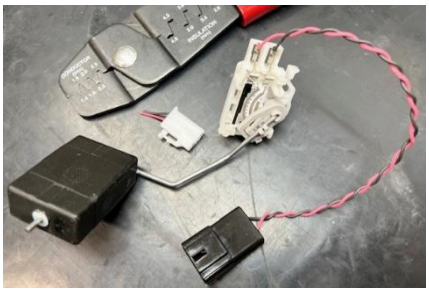
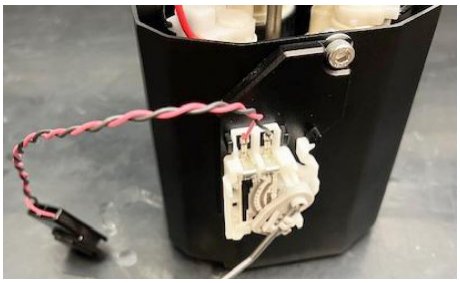
5	Phillips Screwdriver	To release the fuel pump access cover, spin each of the 4 fasteners (depicted) a quarter turn. This will allow the fastener heads to fit through the panel.	
6		Lift up the pump access cover just enough to unplug the electrical connector. Set the access cover aside, as shown. It is a good idea to clean this area now as it will be dirty. Start the vehicle and allow the engine to stall. Continue to crank the engine over for a few more seconds to release all of the pressure from the fuel lines.	
7	10mm Wrench	Remove the negative battery terminal. CAUTION: Disconnecting the battery may cancel fault memories of some control units. Consequently, always cross examine any faults prior to disconnecting.	
8	Rag	Most vehicles have 3 connectors. However, outside of North America, some vehicles do NOT use a VENT or ORVR port. First, pry up to remove the plastic "pump outlet port" cover. For the PUMP and ORVR (Onboard Refueling Vapor Recovery) lines, first push the connectors further onto the male mating connector, then simultaneously squeeze the side locks inwards and pull to release. CAUTION: fuel will spill from the pump outlet connection.	
9	Rag	For the VENT line (shown), first push the connector further onto the male mating connector, then simultaneously press the top lock downwards (with your thumb as shown) and pull to release.	
10	Pick	Carefully pry the SAE lock from the fuel pump outlet on the OEM fuel hat. Now insert the SAE lock into the OEM SAE quick connector on the feed line, as shown.	

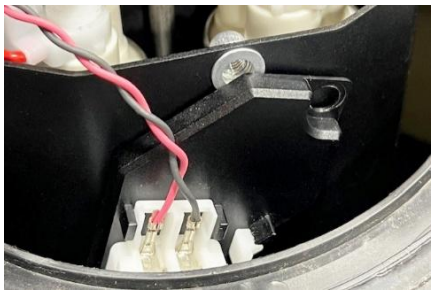
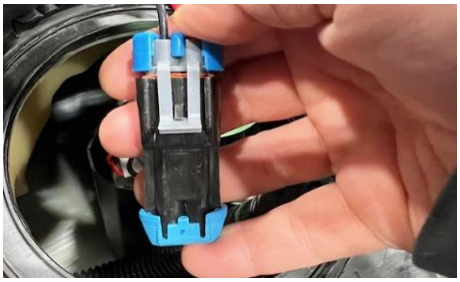
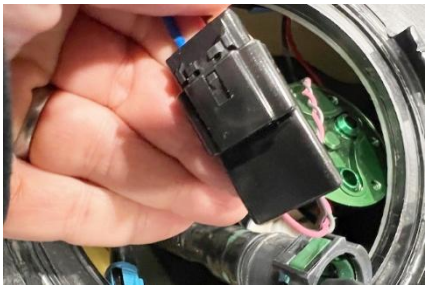
11	Lock Ring Tool	To release the OEM hold-down ring, it is recommended to use a special fuel tank lock ring tool, such as OEM Tools P/N: 24398 (shown). To disengage, carefully push downwards and rotate the lock counterclockwise. This is best to perform with a second person. NOTE: Because the OEM pump unit is spring-loaded, it will pop up when released. Remove the OEM fuel tank lock ring. This will be reused.	
12	Rag	Carefully list up just enough to expose the large internal ORVR quick connector (if applicable). Push the connector further onto the male mating connector, then simultaneously squeeze the side locks inwards and pull to release. Next, pivot the assembly back and forth to get the fuel level float out of the tank. Transport the assembly to a workbench.	
13		The only parts that will be reused is the fuel level sensor and (potentially) the large fuel tank gasket. Inspect the fuel tank gasket. Replace if necessary. Honda P/N: 17574-TLA-A01. Place back into the tank opening. To remove the fuel level sensor, first free the 2 wires from the stays. Next, unplug the 2 position connector from underneath the fuel hat, as shown.	
14		To disengage the fuel level sensor from the OEM bucket, squeeze the outer lock (shown green) and simultaneously push the sensor up (shown blue) to release.	
15	Cutters	Cut the 2 fuel level sensor wires leaving as much slack as possible with the level sensor itself.	
16		Each product is preassembled with wiring for 1 fuel pump. NOTES: 1. Add the appropriate amount of the (provided) wiring connectors to the bottom of the fuel hat. Be sure to reference the terminal labeling on the top side. 2. If installing Deatschwerks DW440 pump(s), the preassembled wiring must be removed. Wiring for these pumps will be performed in a later step.	

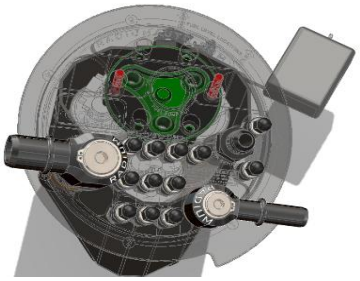
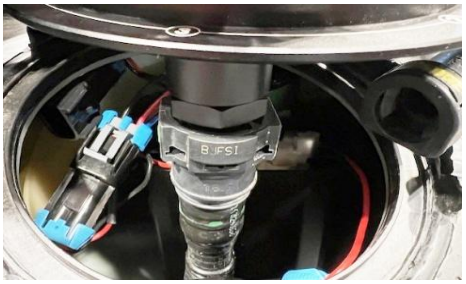
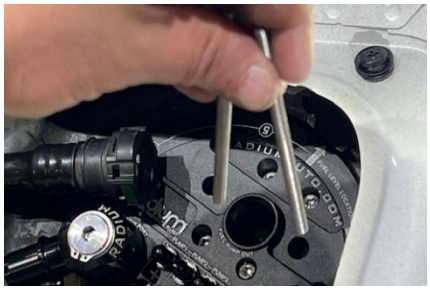
17	Oil Lubrication 1/8" Allen Wrench	**20-1080 FUEL PUMP HANGER ONLY** Find the triple pump collector and the 2AN ORB plugs in the kit. Reference the list below to determine how many plugs should be installed. Be sure to lubricate the O-ring(s). Single pump applications: Use 2 plugs (shown) Dual pump applications: Use 1 plug Triple pump applications: Use 0 plugs	
18	Oil Lubrication 1/4" Allen Wrench	**20-1082 FUEL PUMP HANGER ONLY** Find the triple pump collector and the 6AN ORB plugs in the kit. Follow the list below to determine how many plugs will need to be installed. Be sure to lubricate the O-ring(s). Single pump applications: Use 2 plugs (shown) Dual pump applications: Use 1 plug Triple pump applications: Use 0 plugs	
19		**20-1082 FUEL PUMP HANGER ONLY** To install the Walbro F900002XX pump(s), first inspect the outlet hose barb. If deformed, modified or damaged, the Radium pump adapter will not install correctly and the pump cannot be used. Slide the black collar over the pump outlet with the flat surface upward. Slip the stainless steel retainers between the 2 large hose barbs. When assembled, they will get lodged under the hose barb ridge closest to the end of the pump outlet. Place the included O-ring on the pump outlet, as shown.	
20	Oil lubrication Thread Locker 2.5mm Allen Wrench	**20-1082 FUEL PUMP HANGER ONLY** To permit the fitting to swivel when assembled, lubricate the O-ring. Apply a high strength thread locking compound to the 3 included bolt threads. Slide the black collar upward and line up the green fitting holes to the black fitting threads. Secure and tighten all bolts evenly, as shown.	
21	Oil Lubrication 15mm Wrench	**20-1082 FUEL PUMP HANGER ONLY** Lubricate the O-ring(s) on the green 6AN pump outlet fitting(s). Tighten the pump outlet fitting(s) to each triple pump collector port. Swivel the pump(s) around so the connector wires are facing outwards, as shown.	
22	Oil Lubrication Heat Gun Phillips Screwdriver	**20-1080 FUEL PUMP HANGER ONLY** If installing AEM 50-1220 compact fuel pump(s), use the plastic submersible tubing provided in the kit (not the rubber submersible hose). Lubricate the pump barb and the inner walls of the tube. Apply a small amount of heat and quickly insert. Secure the tubing to the pump(s) using the provided EFI clamp(s).	

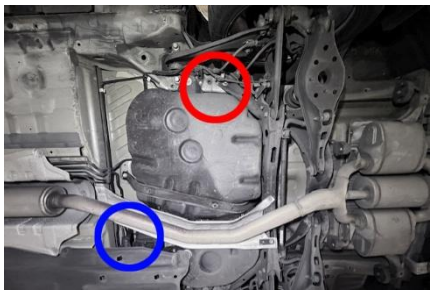
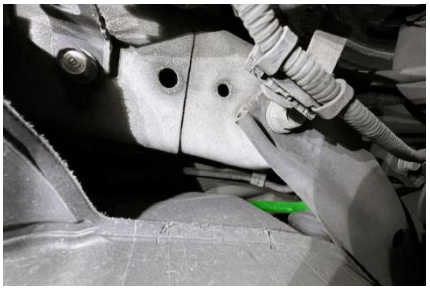
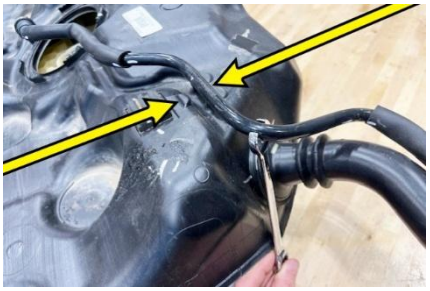
23	Screwdriver	**20-1080 FUEL PUMP HANGER ONLY** If installing Deatschwerks DW440 fuel pump(s), use the submersible rubber hose provided in the kit (not the plastic submersible tubing). Cut the hose to 52mm for each fuel pump. Secure the hose to the pump(s) using the provided EFI clamp(s).	
24	Screwdriver	**20-1080 FUEL PUMP HANGER ONLY** Insert the provided EFI clamp(s) over the hose then install the pump(s) to the collector. Secure the hose to the pump(s) using the EFI clamp(s). Triple Deatschwerks DW440 fuel pumps shown, but the same procedure is required for AEM 50-1220 pumps.	
25	Cutter	**20-1080 FUEL PUMP HANGER ONLY** If installing a Deatschwerks DW440 fuel pump, a wire harness (not included) is required. This is typically provided by the pump manufacturer. Plug in the connector to the pump. Cut off the connector on the opposing end leaving as much wire as possible with the pump.	
24	Wire Stripper	**20-1080 FUEL PUMP HANGER ONLY** If installing a Deatschwerks DW440 fuel pump, strip the insulation off the end of the wires. Place small diameter heat shrink over the wires, as shown.	
25	Wire Crimper Heat Gun	**20-1080 FUEL PUMP HANGER ONLY** If installing a Deatschwerks DW440 fuel pump, install the included ring terminals and heat shrink as shown. DW440 Pump: White Wire = "BRUSHLESS-W" Blue Wire = "BRUSHLESS-B" Orange Wire = "BRUSHLESS-O" Black Wire = "GND-ALL" (<-this is shared with pump 1,2,3)	
26	3/8" Socket Wrench	**20-1080 FUEL PUMP HANGER ONLY** If installing Deatschwerks DW440 pumps, the ring terminals must be installed later (during fuel tank installation). If installing AEM 50-1220 pumps, find the extension harness (shown). Plug this into the pump(s) now.	

27		Flip the fuel pump assembly over. Press the black fuel filter mount onto the pump inlet(s), as shown.	
28		Insert the long M6x1mm hex bolt through the fuel filter mount center hole, as shown.	
29	Torque Wrench 10mm Socket	Loosely secure the hex bolt. Do NOT overtighten! Torque Spec: 1 Nm (9 lb-in)	
30		Insert the filter strainer into the lower green filter mounting tabs, as shown,	
31		There are six #5-40 screws included in the kit. Three screws are short (1/4" thread length) and the other three screws are long (5/16" thread length), as shown.	
32	3/32" Allen Wrench	Install the three short #5-40 screws in every other hole in the exact pattern depicted. Notice how the screws are installed to the right side of each fuel pump. NOTE: The three long #5-40 screws will be installed next.	

33	3/32" Allen Wrench	Insert the fuel pump assembly into the collector box. Now flip the collector box upside down. If the screws (from the previous step) were properly located, there should be 3 open threaded holes. Use the three long #5-40 screws to secure the collector box to the fuel pump filter mount assembly.	
34	Wire Stripper Crimper	Strip 3/16" of insulation off the fuel level sensor wires. Not critical, but it is recommended to twist the wires together for added flexibility. Crimp the 2 included terminals to each wire using a tool such as Molex 63811-1000 hand crimper (shown).	
35		Properly orient the terminals and slide them into the 2 position plastic connector until a “click” is felt. There is no polarity (it cannot be wired backwards).	
36		Lineup the OEM fuel level sensor to the mount on the side of the collector box. Push the sensor down until it snaps in place.	
37		Find the six M5x0.8mm socket head screws and the six O-rings in the kit. Insert the O-rings over the threads and against the bolt heads, as shown. NOTE: these 6 screws have the same thread pitch as the 2 fuel level sensor mount screws. However, they are different lengths. Be sure not to accidently get them mixed up.	
38	4mm Allen Wrench 5mm Allen Wrench 1" Wrench 1/4" Allen Wrench 3/8" Allen Wrench	If the vehicle did not come with a VENT line, remove the preinstalled fitting. Next, install the provided 14-0149 6AN ORB plug (shown yellow). If the vehicle did not come with a ORVR line, remove the preinstalled fittings (top and bottom of fuel hat). Next, install the included 14-0351 10AN ORB plug (shown red). Next, temporarily remove the FUEL PUMP OUT fitting.	

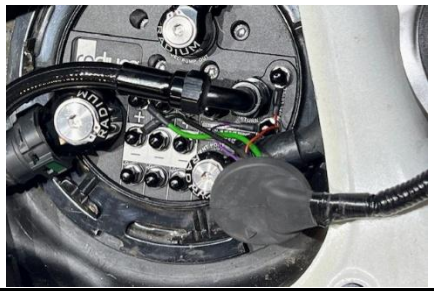
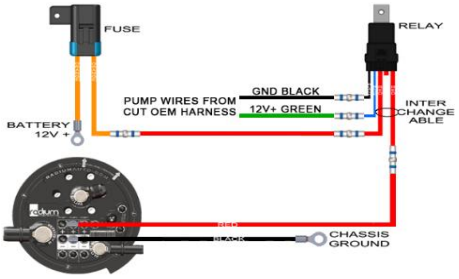
39	4mm Allen Wrench	The fuel pump hanger will be installed in 2 different sections (upper half and lower half). First, temporarily remove the upper screw of the fuel level sensor mount. Drop in the lower fuel pump section into the tank and allow the fuel level mount to rotate, as shown. NOTE: This process will take a little bit of work.	
40	4mm Allen Wrench	Once the fuel level sensor gets past the fuel tank opening, rotate the fuel level sensor mount back into position. When resecuring the fuel level sensor mount, be careful not to drop the stainless steel screw into the fuel tank.	
41		If applicable, reach into the fuel tank and pull out the large internal female "ORVR" SAE quick connector. NOTE: there is not much slack as the tubing is rather short.	
42		Grab the upper fuel hat assembly and hold it above the lower fuel pump assembly. If installing Walbro F900002XX or AEM 50-1220 fuel pumps, secure the male and female 2-pin fuel pump connectors together. Walbro F900002XX fuel pump connector shown.	
43	3/8" Socket Wrench	**<u>20-1080 FUEL PUMP HANGER ONLY</u>** If installing Deatschwerks DW440 fuel pumps, install the 4 fuel pump ring terminals to the appropriate studs under the fuel hat while referencing the labeling on the fuel hat top. White Wire = "1A or 2A or 3A" Blue Wire = "1B or 2B or 3B" Orange Wire = "1C or 2C or 3C" Black Wire = "G" (<-this is shared with pump 1,2,3)	
44		As shown, plug in the 2-pin fuel level sensor connector.	

45		For correctly orienting the lower fuel pump assembly, reference the top of the fuel hat. On the perimeter, there is engraving (shown) that locates where the fuel level sensor and float will be when fully installed. There are also numbers around the perimeter of the fuel hat (1-2-3-4-5-7). When properly installed, these numbers will lineup with the numbers embossed onto the plastic fuel tank.	
46		Loosely hand tighten the 2 provided all-thread studs (shown red) in the exact locations shown. NOTES: 1. As depicted, verify the fuel level sensor/float is at the rear. 2. See the following step for an actual orientation reference. 3. The all-thread studs will be removed in a later step.	
47		Next, lineup and seat the provided gasket to the merge collector, as shown. The merge collector should be off- center within the fuel tank opening, exactly as depicted. At this time, make sure the OEM fuel tank gasket is installed into the fuel tank opening.	
48		If applicable, insert the OEM ORVR connector on the large male ORVR connector on the underside of the fuel hat. Fully push until the connector locks in place. Slowly lower the upper section making sure the wires are clear of the merge collector. This needs to be verified as it is possible to mistakenly sandwich the wires in the merge collector. This will create an internal fuel pressure leak.	
49	4mm Allen Wrench	Lineup and allow the 2 all-thread studs to penetrate the exact holes shown in the fuel top hat. Again, be certain none of the electrical wires are in the way. Now, install the M5x0.8 screws into the 4 open counter bores, as shown. Do not torque.	
50	4mm Allen Wrench	Now replace the all-thread studs (shown) with the 2 remaining M5x0.8mm screws. Do not torque yet. NOTE: If the fuel pump(s) ever need to be serviced, the O-rings under the 6 screw heads will likely stay in the counterbores when removed. Be sure to retrieve the O-rings and reinstall them to the 6 screw heads.	

51		Lineup the OEM lock ring slots to the fuel tank opening. To set the lock ring, spin the tool counterclockwise.	
52	Torque Wrench 4mm Allen Wrench	Torque the six M5x0.8mm screws to 3.4 Nm (30 lb-in). NOTE: When using a torque wrench, the FUEL PUMP OUT fitting will likely need to be removed to gain access to the 6 screws.	
53		Follow this step for vehicles with VENT and ORVR lines. To reinstall the rigid factory VENT and ORVR SAE quick connections, access to the underside of the vehicle is first required to loosen the lines. Safely lift the car. The two areas (shown red and blue) are necessary to access in the next few steps.	
54		Follow this step for vehicles with VENT and ORVR lines. In the blue circle (from above), find the large "ORVR" line that comes down from the top center of the fuel tank and connects nearby to the EVAP charcoal canister. Squeeze the 2 green SAE locks and pull to release. NOTE: a pry bar (shown) can be used against the chassis to add the necessary force for removal.	
55		Follow this step for vehicles with VENT and ORVR lines. In the red circle (from above), find the "VENT" line (shown green) that comes from the top of the fuel tank and connects upwards to the fuel filler (on the LH side of the car).	
56	12mm Wrench	Follow this step for vehicles with VENT and ORVR lines. Surround the tubing (nearest the fuel tank) using a 12mm open end wrench. Push upwards to release the tubing from the fuel tank. There is a snap-in groove (shown with fuel tank out of car).	

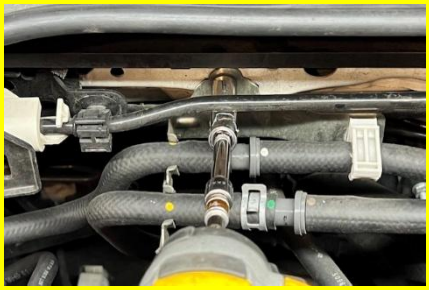
57		Follow this step for vehicles with VENT and ORVR lines. As shown, insert the OEM SAE quick connector onto the "VENT" fitting until it "clicks" in place.	
58		Follow this step for vehicles with VENT and ORVR lines. As shown, insert the OEM SAE quick connector onto the "ORVR" fitting until it "clicks" in place.	
59		Follow this step for vehicles with VENT and ORVR lines. Reinstall the "ORVR" SAE quick connect back to the EVAP charcoal canister under the car. Push the fitting on until it "clicks" in place.	
60	11/16" Wrench Vice	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** The entire OEM feed line will be repurposed as a return line. First, find the green 6AN male to 3/8" SAE male adapter fitting and the short preassembled 6AN PTFE hose with straight and 90 degree hose ends. As shown, secure the SAE adapter to the straight hose end.	
61	Oil Lubrication	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Hand thread the 90 degree 6AN hose end to the 6AN male "FPR RETURN" on the fuel hat. Bend the PTFE hose around towards the OEM feed line connector. Lightly lubricate the male portion of the green SAE quick connect and insert it into the OEM female SAE quick connector until it locks in place.	
62	11/16" Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** For the fuel pump access panel to clear, tuck the SAE connection under the sheet metal. Orient the PTFE hose as shown and tighten.	

63	Pick	Unlatch the OEM electrical connector. This will permit the wires to be cut at the proper length.	
64	Cutter	Cut the OEM connector off leaving just enough wire if the connector ever needs to be reattached.	
65	Wire Stripper	As shown, strip 3/16" (5mm) of insulation off each wire.	
66	Wire Crimper Heat Gun Cutter	Use the small heat shrink and small ring terminals for the small gauge fuel level sensor wires. **SINGLE PUMP APPLICATIONS ONLY** Use the small heat shrink and small ring terminals for a single 2-wire (brushed) fuel pump.	
67		The electrical terminal adjacent to the VENT port fitting will be tight. As shown, apply a tiny section of tape to one of the provided acorn nuts.	
68	8mm Nut Driver	Insert the acorn nut into a nut driver. It will be a tight fit preventing it from falling out.	

69	8mm Nut Driver	Secure the ring terminals with the acorn nuts. PUMP1 + (Green Wire) ----------> P1+ PUMP1 - (Black Wire) ----------> P1- FUEL LEVEL (Purple and Red Wires) -----> *No Polarity **These 2 wires cannot be wired backwards**	
70		**AFTERMARKET FUEL PUMP WIRING** An independent relay and fuse MUST be used for each pump. This schematic is using RADIUM P/N: 17-0031 on PUMP 1. It may apply unless the second pump will be staged by an adjustable pressure switch (Radium P/N: 20-0236) or an ECU trigger. Neither scenarios are detailed here. NOTE: For brushless fuel pump controllers, use the manufacturer's suggested wiring diagram.	
71	Flat Blade	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Safely lift the car. The plastic lower panel located at the LH rear of the vehicle will need to be uninstalled. To remove the 8 plastic clips, carefully pry and pull.	
72	17mm Socket	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Remove the 3 large plastic nuts.	
73	10mm Socket	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Remove the four M6x1mm screws.	
74		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Shown is all the hardware laid on top of the removed plastic lower panel.	

75	7/8" Wrench Adjustable Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find the short 8AN PTFE hose in the kit. The hose will be routed around the backside of the fuel tank and down to the LH side of the fuel tank. First, secure the straight hose end to the "FUEL PUMP OUT" port on the fuel hanger, as shown.	
76	12mm Socket	Support the LH portion of the fuel tank. Remove the OEM M8x1.25mm mounting hex bolt that secures the outer LH side of the fuel tank.	
77	5mm Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Using the provided countersunk M8x1.25mm socket head screw, install the upper portion of the fuel filter mount exactly as shown. NOTE: The other (empty) countersink hole in the fuel filter mount is only used for the FL5 Civic Type-R fuel tank.	
78	Oil Lubrication Adjustable Wrench 1" Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Lubricate the O-rings on the provided 10AN ORB to 8AN male fittings. Secure the fittings to the fuel filter ports.	
79	Thread Locker 4mm Allen Wrench 7/8" Wrench Adjustable Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Apply a medium-strength thread locker to the two fuel filter M5x0.8mm socket head screws. Orient the fuel filter so the green outlet is pointing towards the front of the vehicle. Secure using the M5x0.8mm socket head screws. Secure the 45 degree hose end (from the fuel pump hanger) to the fuel filter inlet port, as shown.	
80		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** There are 3 plastic fuel/brake line retainers underneath the center portion of the car. These will be replaced. First, gently pull the heat shield down to expose the lines. Next, spread the locks away from the threaded studs.	

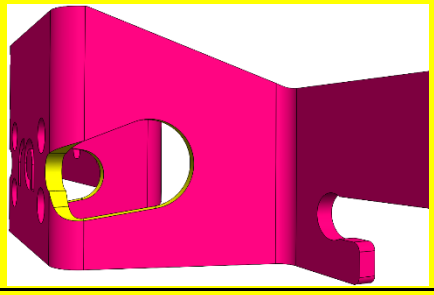
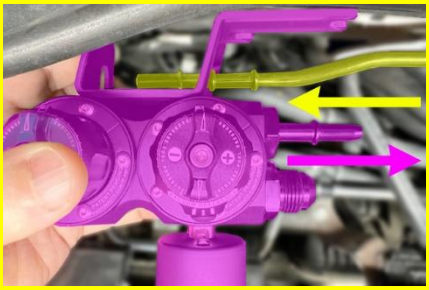
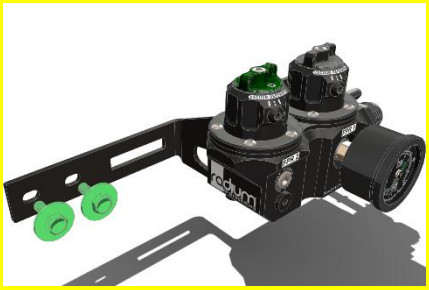
81		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Next, pry the plastic fuel/brake line retainers downward away from the chassis.	
82		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** One of the plastic fuel/brake line retainers is shown.	
83	11mm Socket	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** The replacement retainers are 2 piece. As shown, install the black upper portions using the included plastic flanged nuts.	
84	2.5mm Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find the long 8AN PTFE hose, the 3 lower (green) retainers, and the 6 small M3x0.5mm screws in the kit. Starting from the center retainer, secure the long 8AN PTFE hose, as shown.	
85	2.5mm Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Now secure the long 8AN PTFE hose using the front and rear retainers, as shown.	
86	Cutter	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Attempt to thread-on the 45 degree hose end (from the long 8AN PTFE hose) to the fuel filter outlet fitting. Slide the hose through the 3 retainers for optimal fitment. Hand tighten the 45 degree hose end. Using a cable zip tie, secure the long 8AN PTFE hose to the hard line in the area shown in red.	

87	7/8" Wrench Adjustable Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Secure the 45 degree hose end to the fuel filter outlet.	
88	Cutter	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Run the long 8AN PTFE hose up to the engine bay. Using a cable zip tie secure the long 8AN PTFE hose to the hard line in the area shown in red.	
89	10mm Socket Extension	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Unscrew the vacuum line mounting bracket screw. NOTE: The OEM M6x1mm screw will be reused.	
90		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Unlatch the vacuum lines and remove the bracket from the engine bay.	
91		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Temporarily disconnect the "Y" vacuum fitting.	
92		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** To permit more space for the fuel pressure regulator, reroute and reconnect the vacuum lines underneath everything, as shown.	

93	10mm Socket	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Unscrew the two exposed M6x1mm hex bolts that secure the metal cover to the fuel line bracket on the firewall. Remove the metal fuel line cover from the vehicle. It will NOT be reused. NOTE: FK8 Civic Type-R shown.	
94	Flathead Screwdriver	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** To release the fuel line from the bracket on a FK8 Civic Type-R, push the plastic mounting tab lock downwards. When disengaged, the plastic tab will rotate forward and down, as shown.	
95	Flathead Screwdriver	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** To release the fuel line from the bracket on a FL5 Civic Type-R, push the plastic mounting tab lock from the backside. When disengaged, the plastic tab will rotate up and forward, as shown.	
96		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** As shown, pry up to remove the plastic SAE quick connect cover from the OEM fuel line on the firewall.	
97		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** To dislodge the OEM fuel line, pull it away from the firewall. This will expose the two M6 bolts that secure the fuel line bracket to the firewall.	
98	Rag	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** To disconnect the OEM fuel line, first push the SAE quick connect fitting further onto the hard line. Next, squeeze the outer locks inward and simultaneously pull the connection apart, as shown. Be prepared as fuel will leak from the area. Remove the SAE quick connect lock from the hard line.	

99	10mm Socket	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Unscrew the two M6x1mm bolts that hold the fuel line bracket to the firewall. Remove the bracket (shown). NOTES: 1. The OEM M6x1mm screw will be reused. 2. The OEM mounting bracket will NOT be reused.	
100		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** As shown, pry up to remove the plastic SAE quick connect cover from the OEM fuel line at the HPFP (high pressure fuel pump).	
101	Rag	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** To disconnect the OEM fuel line, first push the SAE quick connect fitting further onto the HPFP. Next, squeeze the outer locks inward and simultaneously pull the connection apart, as shown. Be prepared as fuel will leak from the area.	
102	Pick	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Release the fuel line from the plastic stay.	
103		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Remove the soft line from the vehicle. It will NOT be reused.	
104	Pick	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** As shown, remove the SAE quick connect lock from the HPFP. NOTE: both SAE locks can be reinserted into each end of the OEM soft line for storage.	

105		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** NOTES: 1. Radium Engineering makes an optional port injection kit (shown) for the Honda K20C1 engine. 2. The provided DFPR (dual fuel pressure regulator) has the ability to run an isolated independent fuel pressure for port injection via the FPR2 OUT port. 3. FPR1=Direct Injection, FPR2=Port Injection 4. Port injection will NOT be further discussed in this manual.	
106	Threadlocker 1/8" Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Use a wicking threadlocker, such as green Loctite, when installing the vacuum port fittings on the DFPR. To mimic the factory "constant" pressure for the direct injection system, screw the plug (shown pink) into the FPR1 vacuum port. If using port injection, there are optional fittings for a 1:1 fuel pressure ratio. Otherwise, plug the FPR2 vacuum port (shown pink).	
107	Oil Lubrication 7/8" Wrench 4mm Allen Wrench 5/16" Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Lubricate the O-rings and install the fittings, as shown. PUMP IN: 8AN ORB to 8AN Male FPR1 OUT: 8AN ORB to SAE Quick Connect Straight RETURN: 8AN ORB to SAE Quick Connect 90deg Banjo FPR2 OUT: 8AN ORB Plug (unless port injection will be used).	
108	PTFE Paste 3/16" Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** If port injection is being used, a sensor or gauge (not provided) can be installed into the FPR2 auxiliary port. Otherwise, apply plumber's paste to the threads of the provided 1/8" NPT plug. Hand tighten the plug, then add an additional 1.5 to 3 turns with a wrench.	
109	PTFE Paste 11mm Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Apply plumber's paste to the threads of the provided fuel pressure gauge. Hand tighten the gauge to the FPR1 auxiliary port, then add an additional 1.5 to 3 turns with a wrench.	
110	5mm Allen Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find the two M6x1mm bolts (shown orange) and the DFPR mounting bracket (shown yellow). Install the assembled DFPR to the mounting bracket.	

111		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** When installing the DFPR assembly in place, the OEM fuel line on the firewall will need to be sent through the 2 holes (depicted in yellow) of the DFPR mounting bracket.	
112		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** As shown, the DFPR assembly (depicted in purple) is slid over the OEM fuel line (depicted in yellow).	
113	10mm Socket	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** When mounting the DFPR assembly, the FK8 Civic will use the hole location shown in red. The FL5 Civic will use the hole location shown in blue. Install the LH side of the assembly to the firewall using the OEM M6x1mm screw. TIP: loosely thread the screw into the firewall then slide the bracket underneath the flanged hex head.	
114		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Using the 2 OEM M6x1mm screws (shown green), secure the RH side of the DFPR assembly to the firewall.	
115		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Two EFI hoses will be assembled and plumbed to the engine as illustrated. Reference this picture for the next few steps.	
116	Hose Cutter	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Cut the provided 3/8" (6AN) EFI hose in half.	

117	Oil Lubrication 9/32" Nut Driver	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find the 90 degree SAE quick connect fitting and one of the EFI hose clamps in the kit. Lubricate the barbs and insert the SAE quick connect into one of the hoses. Secure the hose with an EFI clamp, as shown. Temporarily install this fitting to the DFPR "RETURN" port.	
118	Marker Hose Cutter Oil Lubrication 9/32" Nut Driver	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find one of the straight SAE quick connectors in the kit. Temporarily install it to the OEM fuel line on the firewall. Make a cut line mark on the hose, remove it, and put it on a workbench. Cut the hose. It will be around 14" (356mm) long. Lubricate the barbs and insert the straight SAE quick connect. Secure the hose with an EFI clamp, as shown.	
119		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** The finalized return line will look as pictured. Install in the vehicle.	
120	Oil Lubrication 9/32" Nut Driver	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find the 45 degree SAE quick connect fitting and one of the EFI hose clamps in the kit. Lubricate the barbs and insert the SAE quick connect into the other hose. Secure the hose with an EFI clamp, as shown. Temporarily install this fitting to the "FPR1 OUT" port.	
121	Marker Hose Cutter Oil Lubrication 9/32" Nut Driver	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Find the other straight SAE quick connectors in the kit. Temporarily install it to the HPFP. Make a cut line mark on the hose, remove it, and put it on a workbench. Cut the hose. It will be around 13.5" (343mm) long. Lubricate the barbs and insert the straight SAE quick connect. Secure the hose with an EFI clamp, as shown.	
122		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** The finalized feed line to HPFP line will look as pictured. Install in the vehicle.	

123	7/8" Wrench	**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Install the long 8AN PTFE feed line (from underneath the car) to the DFPR "PUMP IN" port, as shown.	
124	10mm Socket	Reinstall the battery. Switch the ignition to the ON position. While observing the dashboard, add fuel to the tank and verify the fuel level gauge is working properly. Start the engine and check for leaks.	
125		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** NOTE: From Honda, the fuel pressure upstream of the HPFP is regulated around 4.8bar (70psi). The exact pressure varies depending on the engine's operating status and speed. Discuss with your tuner what should be an ideal target fuel pressure for your specific application.	
126		**20-1085-03/05 FUEL HANGER PLUMBING KIT ONLY** Turn the FPR1 fuel pressure regulator knob clockwise to increase pressure and counterclockwise to decrease pressure. If not using port injection, turn the FPR2 knob fully counterclockwise. If using port injection (FPR2), note the following: 1. FPR2 pressure will always be equal to or less than FPR1 pressure. It cannot physically be higher. 2. If FPR2 is 1:1 boost referenced, FPR1 pressure will increase accordingly to match FPR2.	
127		Reinstall all components in reverse order. **INSTALLATION COMPLETE**