



# CNG CONVERSION SYSTEM INSTALLATION MANUAL

2011-2013 FORD TRANSIT CONNECT 2.0L DEDICATED / BI-FUEL



## TABLE OF CONTENTS

**NOTE: Disconnect the vehicle battery before install. This includes partial install, servicing, and or maintenance.**

- All owner information supplied by ford must remain with the unit. The incomplete vehicle manual is not owner information and is excluded from this requirement.
- Compressed natural gas is a combustible fuel, flammable and highly explosive.
- CNG is stored under high pressure (maximum of 3,600psi) at 70°F (21°C).
- Tampering with or improperly maintaining the high pressure fuel system can result in fatality or serious injury.
- Never attempt to modify the fuel system and always have the fuel system maintenance performed at an authorized dealership by qualified technicians.
- Exercise extreme caution and follow all related safety guidelines.
- Always leave 1/4 tank of gasoline in the tank as not to damage the OEM fuel pump.

### INDEX:

1. Wiring harness (Dedicated and Bi-Fuel)
2. Installing the Fuel Tank
3. Install the Fuel Fill
4. Coolant Hose, Low Pressure Hose and Rear Wire Harness Routing
5. Connecting Coolant Hoses to Engine
6. Installing the Bi-Fuel Selector, CNG Fuel Gauge, and related harness.
7. Under hood Wiring Harness, Installing Pig Tail (CAN bus harness)
8. Installing the Dedicated System Components onto Engine
9. Installing the Bi-Fuel System Components onto Engine
10. Fuel Rail (Dedicated and Bi-Fuel)
11. Decals
12. Leak Check the System
13. Parts List
14. Notes

**!! WARNING !!** Follow instructions as directed in the installation manual and do not attempt shortcuts. Follow proper safety procedures. Failure to do so can lead to bodily harm or fatality. Tampering with or improperly maintaining the high pressure fuel system can also result in bodily harm or fatality.

**!! WARNING !!** Batteries normally produce explosive gas. Therefore, do not allow flames, sparks or lighted substances to come near the battery. When charging or working near a battery, always shield your face and protect your eyes. Always provide ventilation. Failure to follow these instructions may result in personal injury.

**!! CAUTION !!** Be aware that this installation requires the use of High Pressure, Flammable, and Highly Explosive compressed natural gas. CNG is stored under at maximum of 3,600psi and at 70°F (21°C).

**!! CAUTION !!** Failure to complete the pre-installation checklist may result in severe engine damage after installation is complete.

**!! CAUTION !!** This installation is intended for unmodified vehicles. If the vehicle has been modified, consult Altech-Eco before the beginning install.

### DISCLAIMER

Altech-Eco assumes no responsibility for damages occurring from accident, misuse, abuse, improper installation, improper operation, and lack of reasonable care or all previously stated reasons resulting in incompatibility with other manufacturer's products.

### Chemicals and Lubricants

1. Silicone lubricant spray is required on all o-rings on fittings.
2. Epoxy primer or equivalent to rust proof any exposed metal.
3. Ford approved coolant liquid to top off the reservoir.

On Bi-Fuel systems gasoline shall not remain uncirculated for extended periods of time (over 60 days).

## Check list:

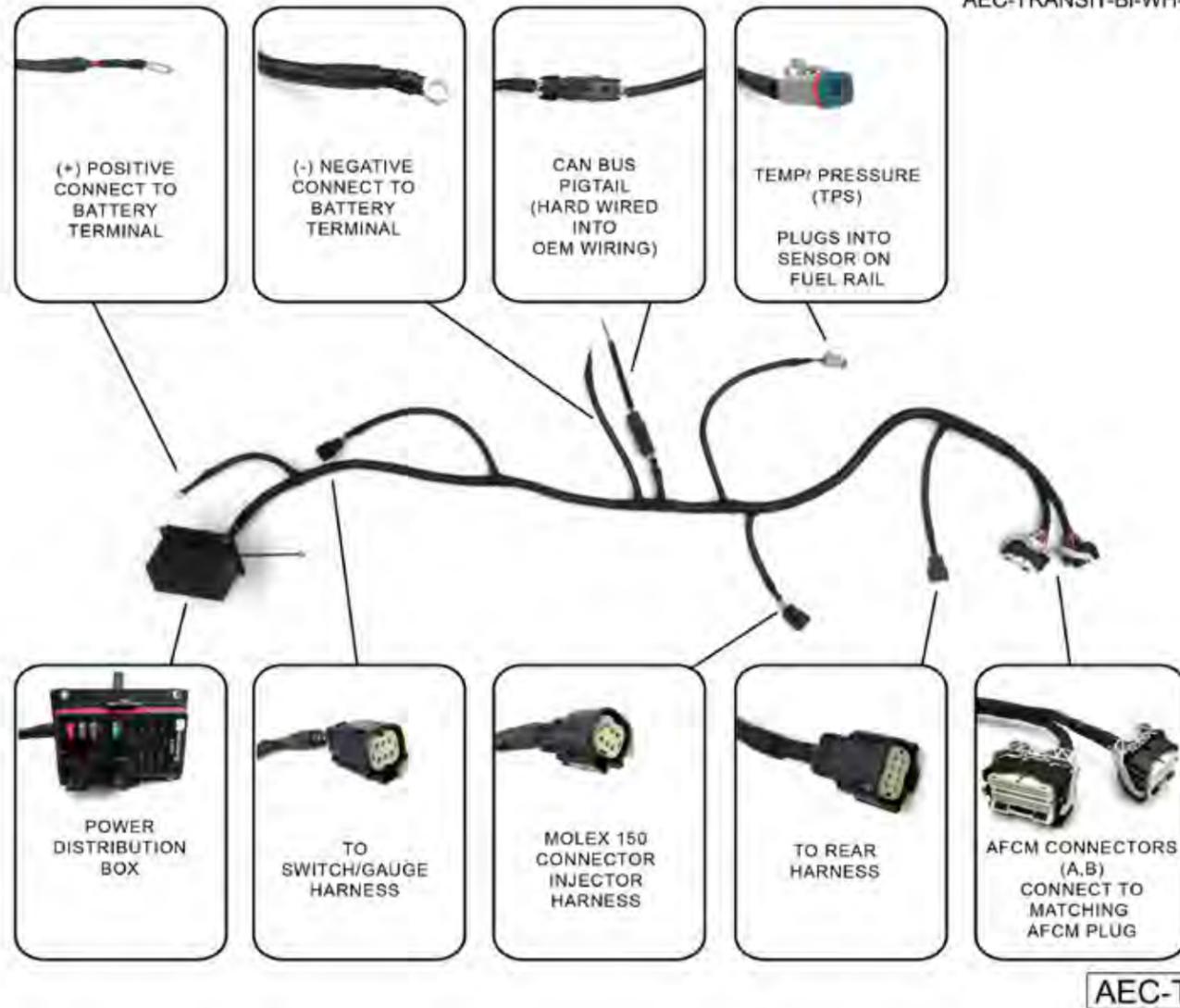
1. Confirm packing slip to insure that you have received all components, assemblies and sub-assemblies.
2. Make sure none of the components and assemblies have been damaged in shipping.
3. Pre-inspect the vehicle following the QVM Q185 and NFPA 52 regulations (Contact ALTECH-ECO for the inspection check list).
4. Begin your conversion process.
  - Cylinder Installation
  - Regulator assembly installation
  - Fuel fill installation
  - High pressure line installation and routing
  - Low pressure and coolant line installation and routing
  - Underhood installation
  - Wiring (Including Switch and gauge) Installation
  - Decal placement
  - Fill and leak test
  - Begin your QC Process
5. Check Tire Pressure before test driving.
6. Check and fill coolant fluid before starting and test driving.
7. Be sure the rear harness is routed properly and is not loose under vehicle.
8. Be sure all provided parts are installed.
9. Final test drive.

**Wiring Harness - Bi-Fuel System**

ALTECH-ECO 2012 FORD TRANSIT MAIN WIRING HARNESS DIAGRAM BI-FUEL SYSTEM

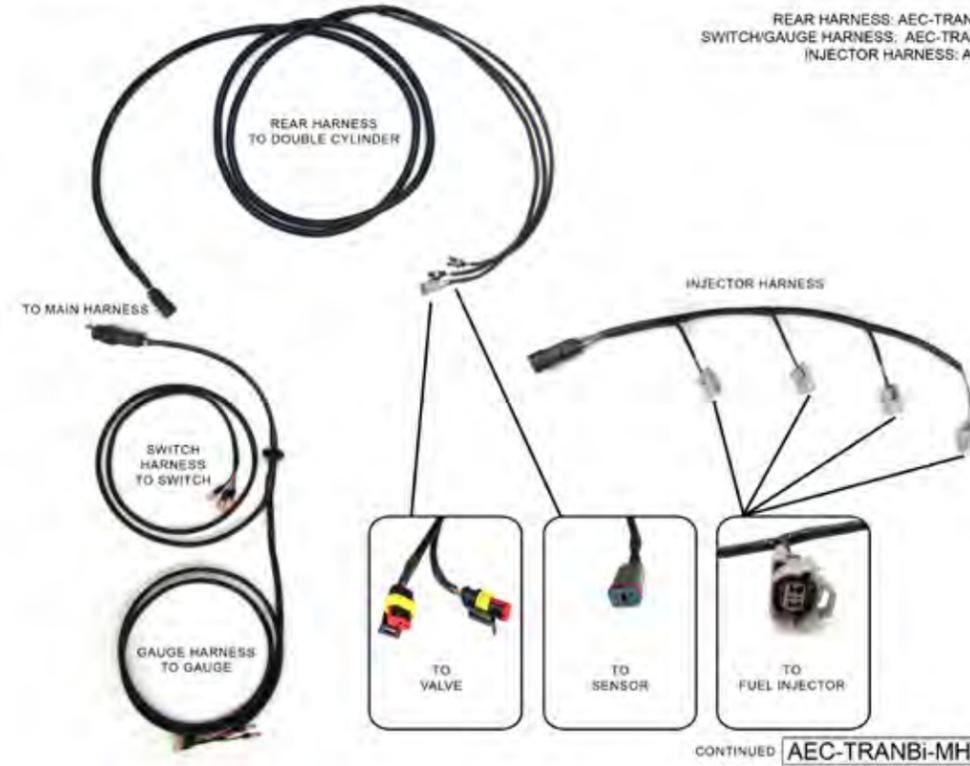
MAIN WIRING HARNESS: AEC-TRANSIT-BI-WH2-V2 (DOUBLE CYLINDER)

AEC-TRANSIT-BI-WH-V2 (SINGLE CYLINDER)



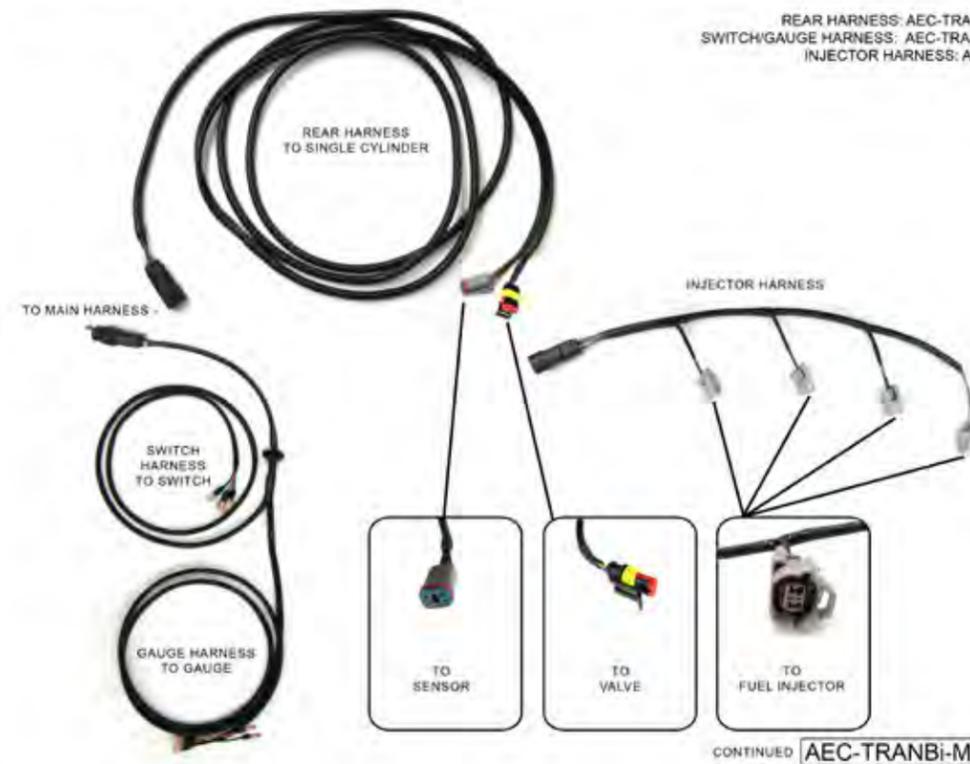
ALTECH-ECO 2012 FORD TRANSIT REAR, SWITCH/GAUGE INJECTOR HARNESS DIAGRAM BI-FUEL SYSTEM

REAR HARNESS: AEC-TRANSIT-RWH2  
SWITCH/GAUGE HARNESS: AEC-TRANSWGA-BI  
INJECTOR HARNESS: AEC-INJWH



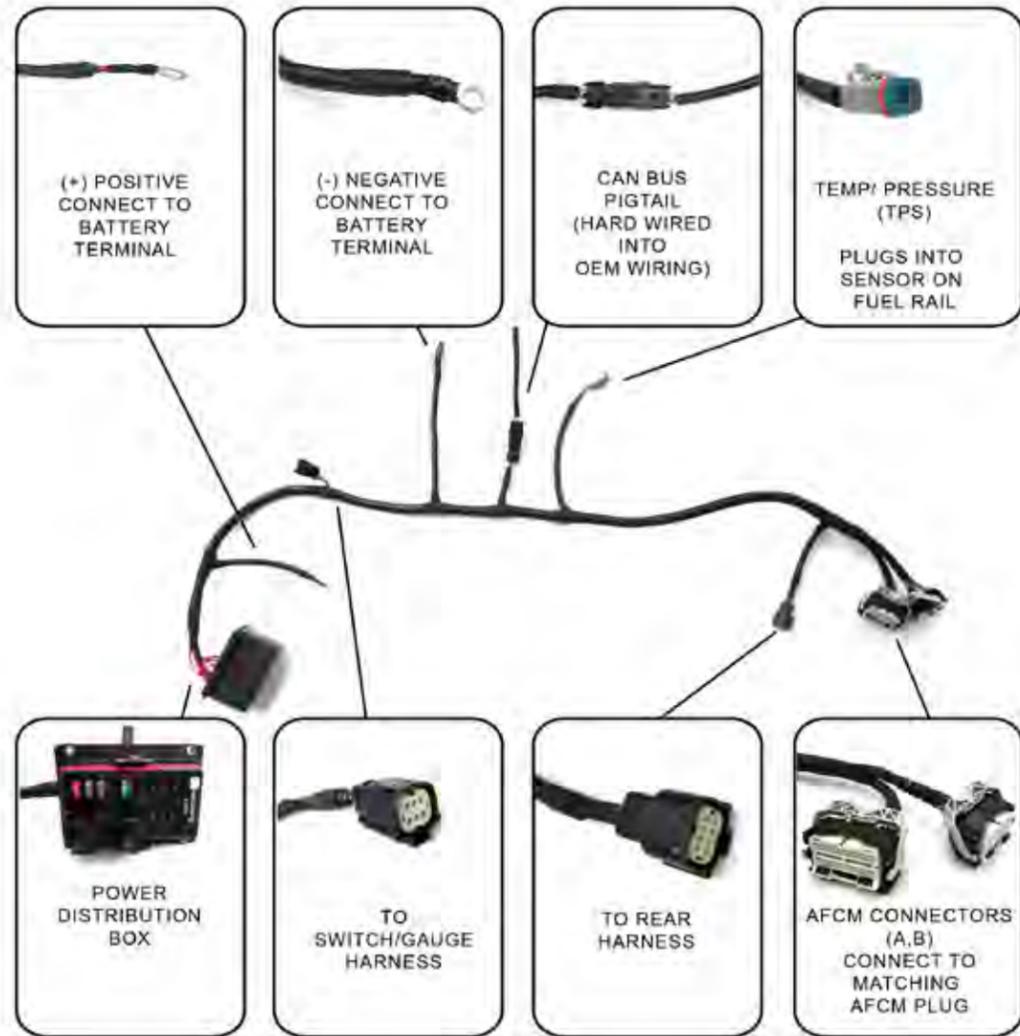
ALTECH-ECO 2012 FORD TRANSIT REAR, SWITCH/GAUGE, INJECTOR HARNESS DIAGRAM BI-FUEL SYSTEM

REAR HARNESS: AEC-TRANSIT-RWH  
SWITCH/GAUGE HARNESS: AEC-TRANSWGA-BI  
INJECTOR HARNESS: AEC-INJWH



**Wiring Harness - Dedicated System**

ALTECH-ECO 2012 FORD TRANSIT MAIN WIRING HARNESS DIAGRAM DEDICATED SYSTEM  
 MAIN WIRING HARNESS: AEC-TRANSIT-DED-WH-V2 (SINGLE CYLINDER)  
 AEC-TRANSIT-DED-WH2-V2 (DOUBLE CYLINDER)

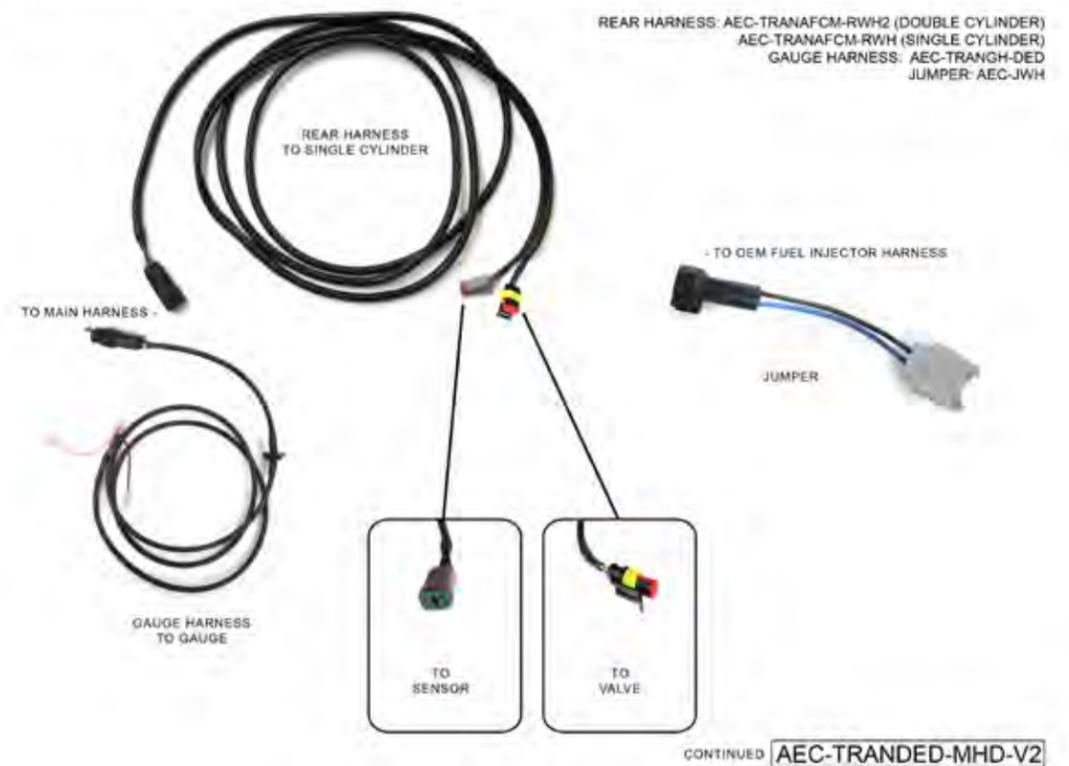


AEC-TRANDED-MHD-V2

ALTECH-ECO 2012 FORD TRANSIT REAR, FUEL GAUGE, JUMPER HARNESS DIAGRAM DEDICATED SYSTEM



ALTECH-ECO 2012 FORD TRANSIT REAR, FUEL GAUGE, JUMPER HARNESS DIAGRAM-DEDICATED SYSTEM



**Disconnect the negative terminal on the battery and place a plastic cap on it to protect from accidental contact.**



**Remember to remove spare tire first and set aside.**

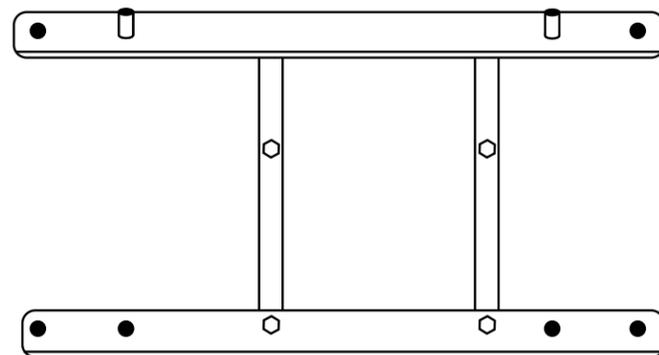
## INSTALLING TANK BASE PLATE

### Drill Locations for SINGLE tank base plate

In this step you will be installing the CNG base plate. In this process 10 holes will need to be drilled. Always check underneath before drilling. We recommend drilling using a uni-bit.

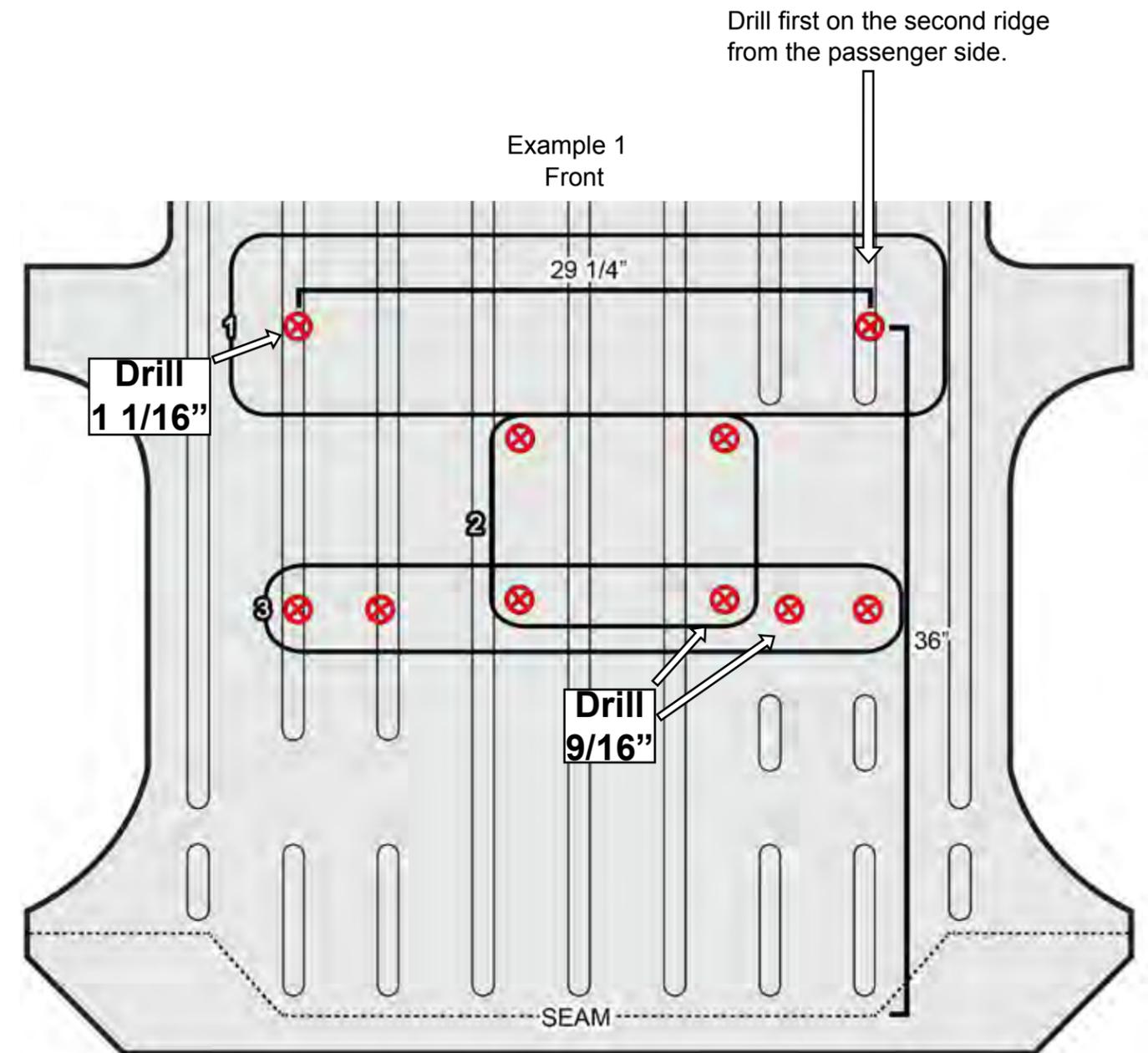
**The spare tire will need to be removed for this part of the installation.**

1. In section one you will need to drill two (2) 1 1/16" holes to accommodate the tube spacers. The two holes need to be offset from the rib as shown in example 1. Start by measuring from the rear seam of the cargo space. Measure 36" from the seam along the ridge mark then measure across 29 1/4" to mark the second drill hole. Once you have cut the hole install the tube spacers into the holes. They should rest on the cross member. Place the Base Plate into the cargo space, line up the front holes of the Base Plate and your drilled holes. Install the bolts to hold Base Plate in place. Align to match the drawing and continue with step 2.
2. With the Base Plate in place, mark out the four holes in section two. Once all the studs have been traced remove the Base Plate. If all is clear underneath drill four 9/16" holes. Once holes have been drilled replace the Base Plate into cargo area. The Base Plate should fit into place with the bolts from section one and studs from section two fitting into the drilled holes.
3. Before continuing be sure that the Base Plate is lined up properly. Once the you have inspected underneath the vehicle remove Base Plate, drill four 9/16" holes thru the existing holes in the CNG tank bracket. Once drilled seal all drilled holes with undercoating, install Base Plate in place. insure all holes line up.



Front

Single tank Base Plate



Some models include a cargo liner or carpeting. In which case you will have to remove the trim piece that covers the rear seam. Or measure from the center of the screw that secures the trim.

## DRILLING PRD HOLES

### Drill Locations for PRD Tube, Wire harness and High Pressure Line SINGLE tank

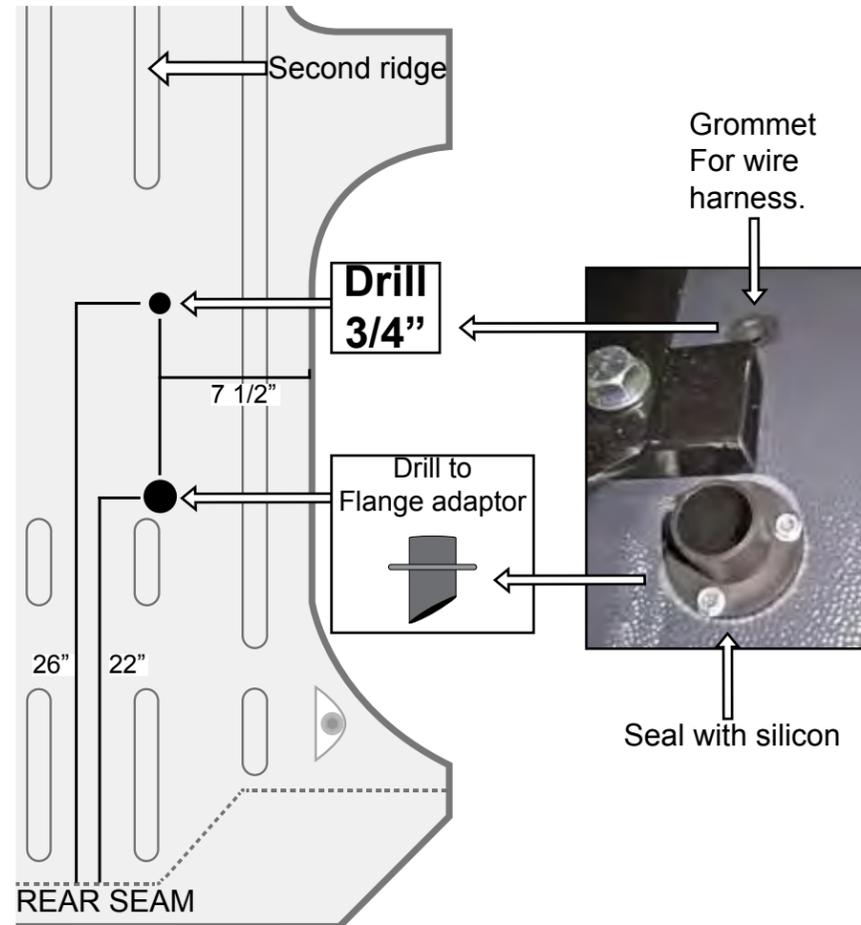
In this step you will be drilling the holes for the PRD tube. Always check underneath before drilling. Measure from passenger wheel well. Measurement will vary 1/4" if equipped with plastic panel.

Assembled tank will look like Example 3

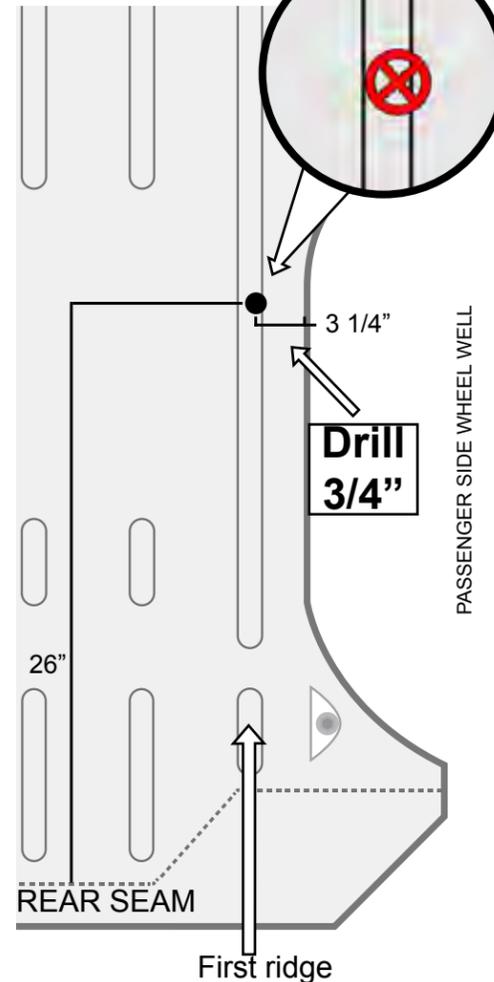
The the wiring harness grommet and the high pressure line flange adaptor are installed thru the hole drilled in Example 1.

The PRD tube hole drilled to specification should line up with the existing holes in the sub frame. Use a 9/16" drill bit to drill a hole to accommodate the PRD tube. Measure from the rear seal towards the front of the vehicle, along the ridge as shown in Example 2. The hole locations a critical for a correct installation and the PRD tube correctly going thru the existing holes in the sub-frame.

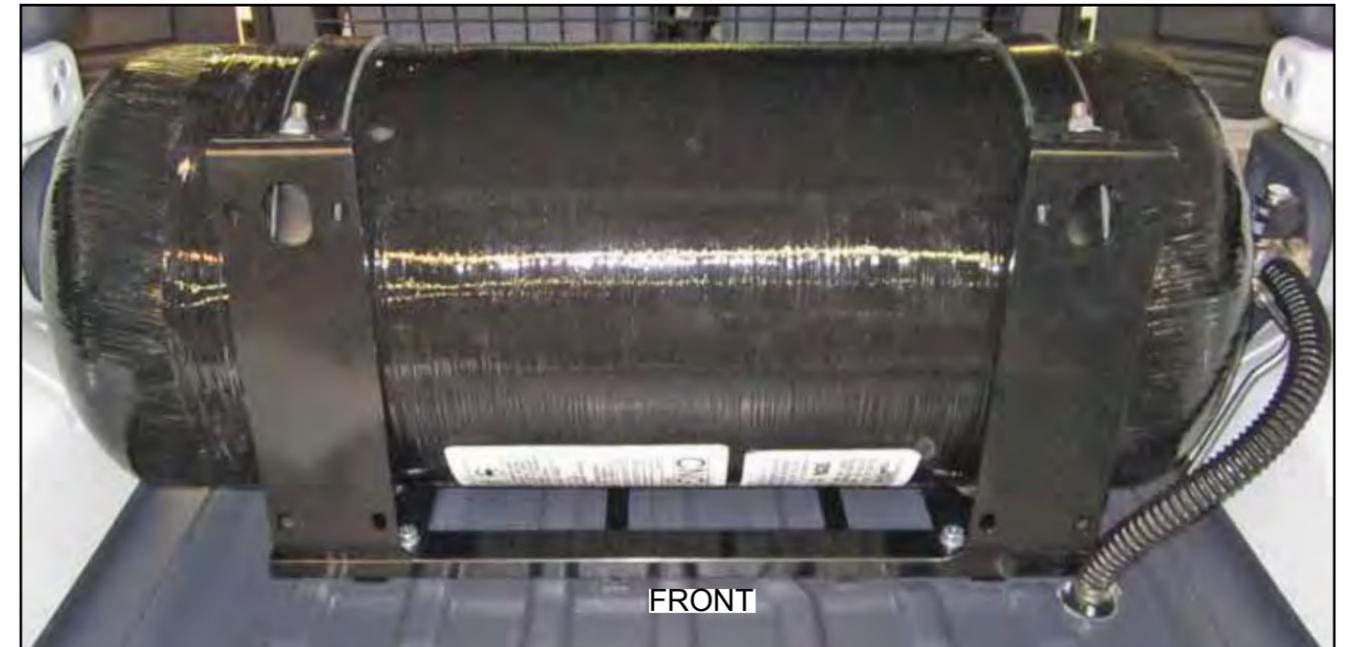
Example 1  
WIRE AND HIGH PRESSURE



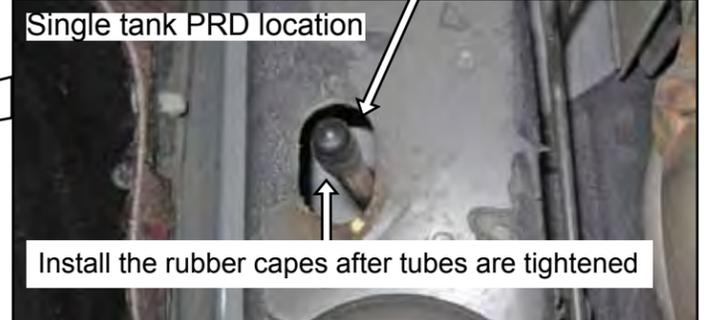
Example 2  
PRD TUBE



Example 3



To prevent vibration open up the hole in the frame to 3/4".



**UNDERNEATH**

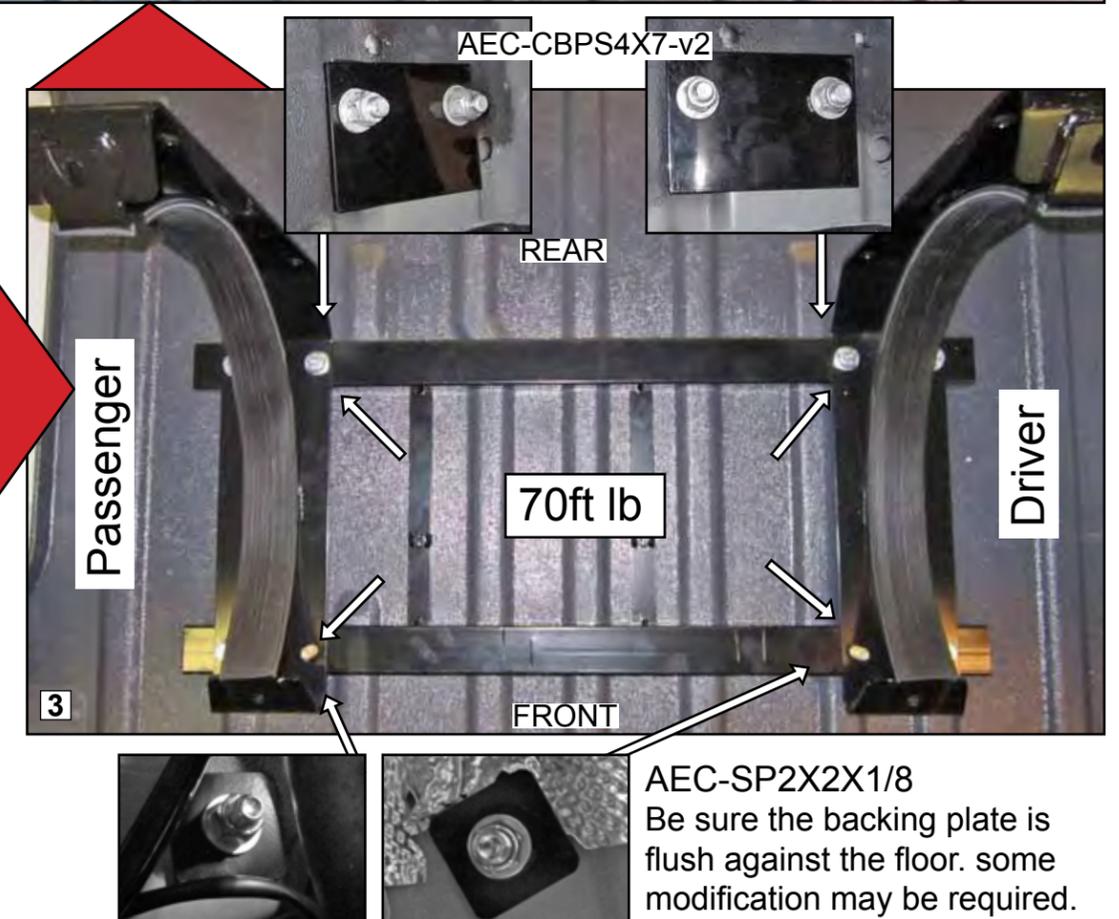
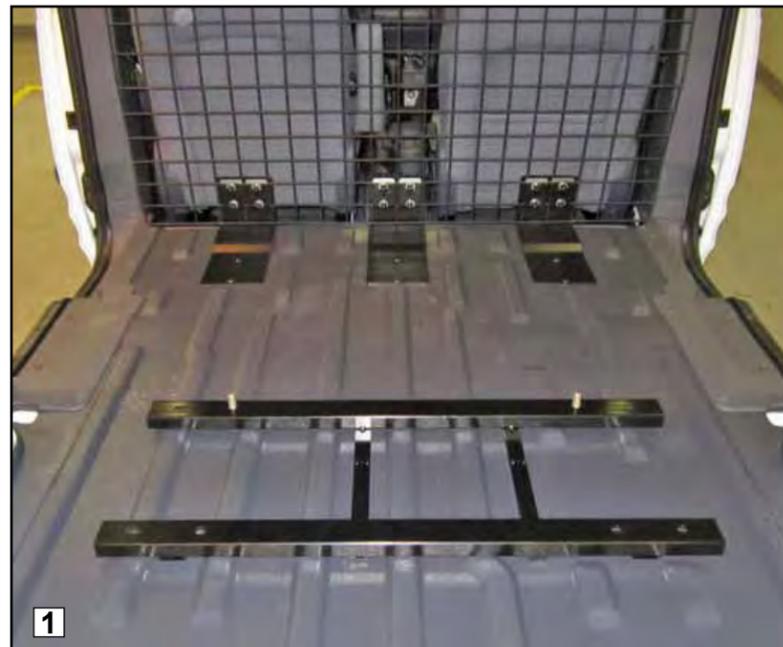
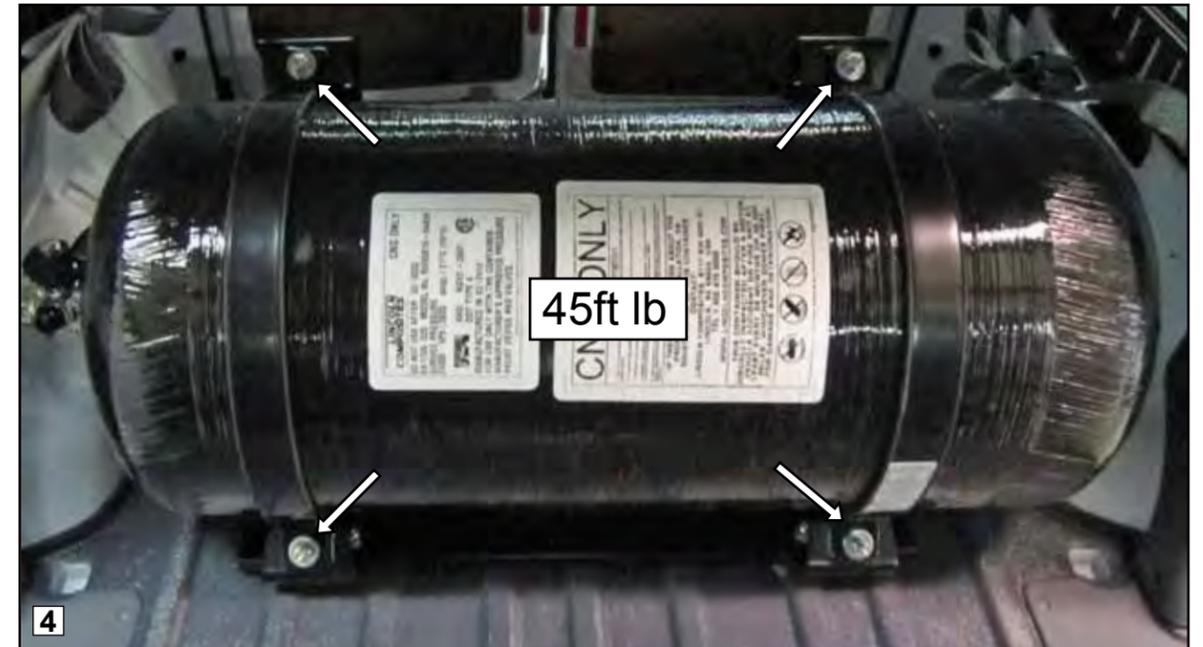
## TANK BRACKET INSTALLATION

### Bracket Installations and Assembly SINGLE tank.

- 1-2. Place the tank bracket with the open side facing the front of the vehicle. Place the Rubber strip on the surface of the bracket. This will protect the tank from damage. Install the two front bolts and locking nuts into the front holes of the bracket. And four rear bolts and locking nuts to secure the Tank Bracket.
3. From underneath the vehicle place backing plates(AEC-SP2X2X1/8) and nuts on the front two bolts. Torque and continue to the rear two backing plates(AEC-CBPS4X7-v2). Secure with nut, washer and spacer. Be sure to torque all bracket bolts to 70ft lb.

Continue to **“PRD and FLANGE ADAPTOR INSTALLATION”** Then return to step 4.

4. Install tank and secure with straps. Solenoid should be facing up as shown. Torque to 45ft lb. The Valve should be on the passenger side of the vehicle. Leave 1/2” from the tank to the panel on the drivers side of the tank. Once all bolts have been torqued to specification continue with **COALESCENT FILTER and REGULATOR** installation.



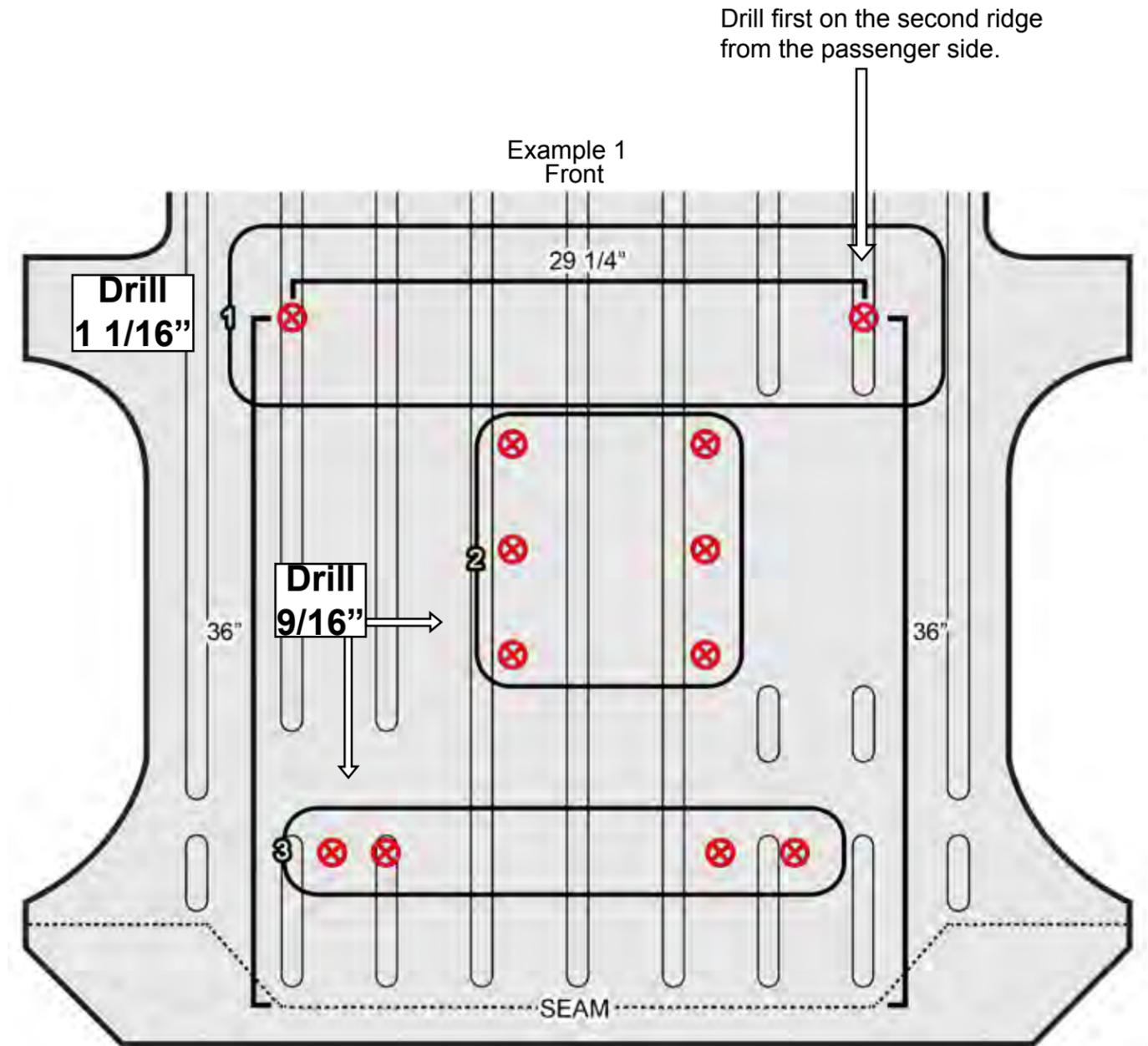
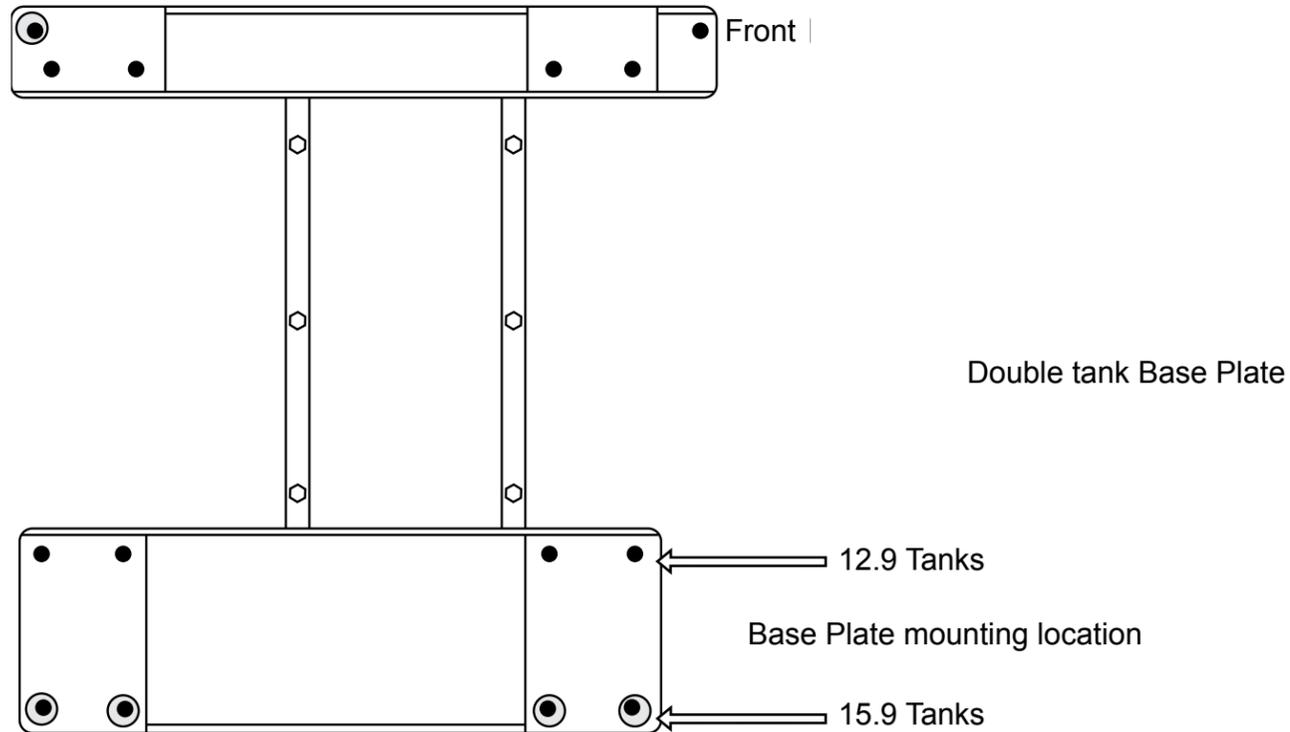
## INSTALLING TANK BASE PLATE

### Drill Locations for DOUBLE tank base plate

In this step you will be installing the CNG base plate. In this process 12 holes will need to be drilled. Always check underneath before drilling. We recommend drilling using a uni-bit.

**The spare tire will need to be removed for this part of the installation.**

1. In section one you will need to drill two (2) 1 1/16" holes to accommodate the tube spacers. The two holes need to be offset from the ridge as shown in example 1. Start by measuring from the rear seam of the cargo space. Measure 36" from the seam along the ridge mark then measure across 29 1/4" to mark the second drill hole. Once you have cut the hole install the tube spacers into the holes. They should rest on the cross member. Place the Base Plate into the cargo space, line up the front holes of the Base Plate and your drilled holes. Install the bolts to hold Base Plate in place. Align to match the drawing and continue with step 2.
2. With the Base Plate in place, mark out the six holes in section two. Once all the studs have been traced remove the Base Plate. If all is clear underneath drill six 9/16" holes. Once holes have been drilled replace the Base Plate into cargo area. The Base Plate should fit into place with the bolts from section one and studs from section two fitting into the drilled holes.
3. Before continuing be sure that the Base Plate is lined up properly. Once the you have inspected underneath the vehicle remove Base Plate, drill four 9/16" holes thru the existing holes in the CNG tank bracket. Once drilled seal all drilled holes with undercoating, install Base Plate in place. insure all holes line up.



Some models include a cargo liner or carpeting. In which case you will have to remove the trim piece that covers the rear seam. Or measure from the center of the screw that secures the trim.

## DRILLING PRD HOLES

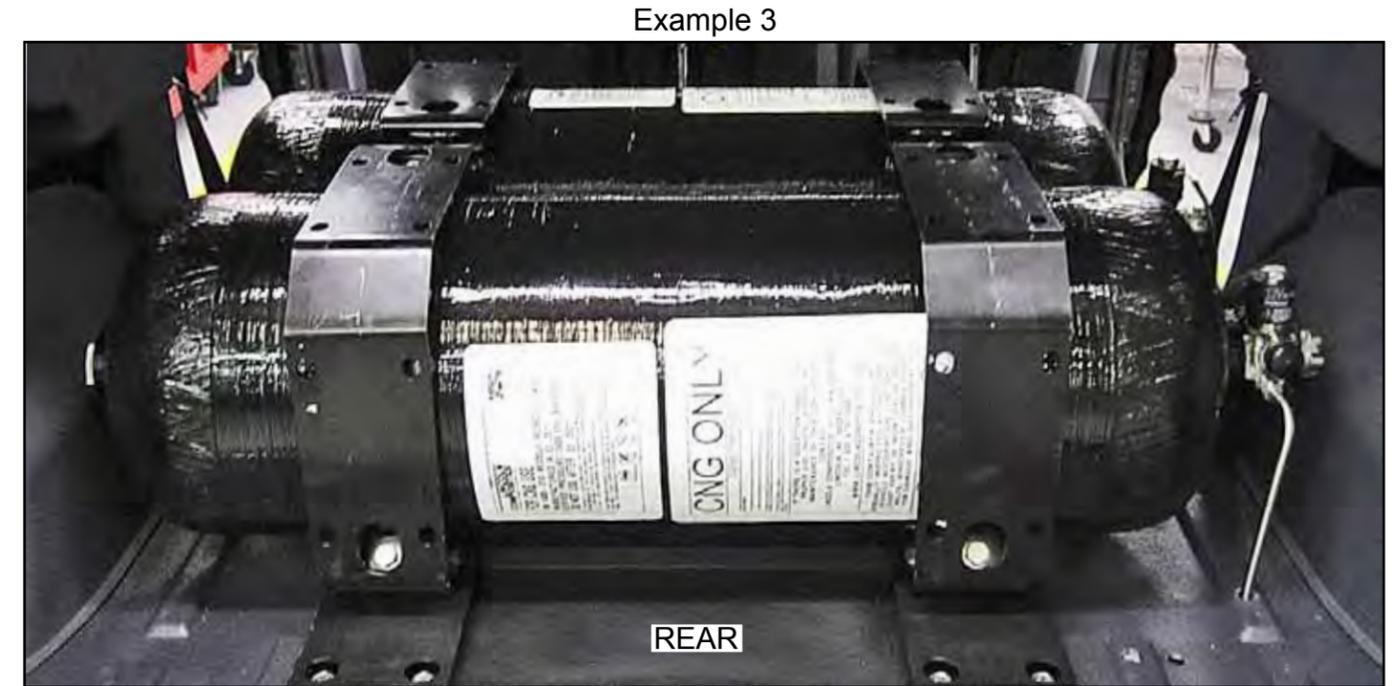
### Drill Locations for PRD Tubes, Wire harness and High Pressure Line DOUBLE tank

In this step you will be drilling the holes for the PRD tubes. Always check underneath before drilling. Measure from passenger wheel well. Measurement will vary 1/4" if equipped with plastic panel.

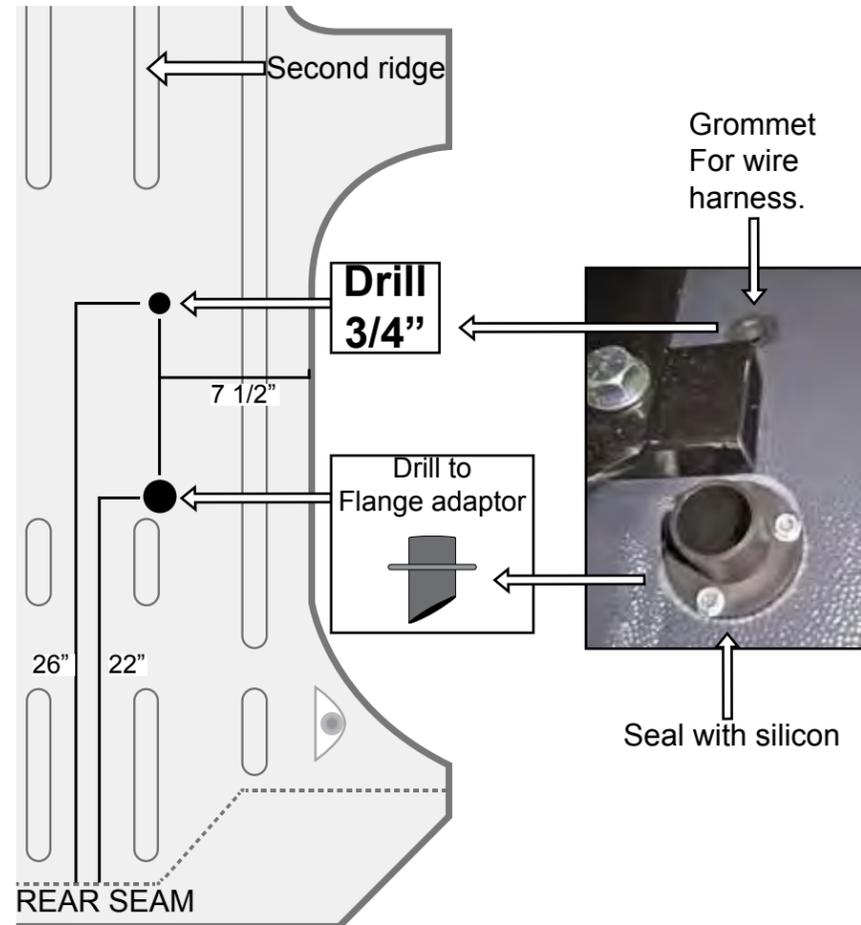
The the wiring harness grommet and the high pressure line flange adaptor are installed thru the holes drilled in Example 1.

The PRD tube holes drilled to specification should line up with the existing holes in the sub frame. Use a 9/16" drill bit to drill a hole to accommodate the PRD tubes. Measure from the rear seal towards the front of the vehicle, along the ridge as shown in Example 2. The hole locations a critical for a correct installation and the PRD tubes correctly going thru the existing holes in the sub-frame.

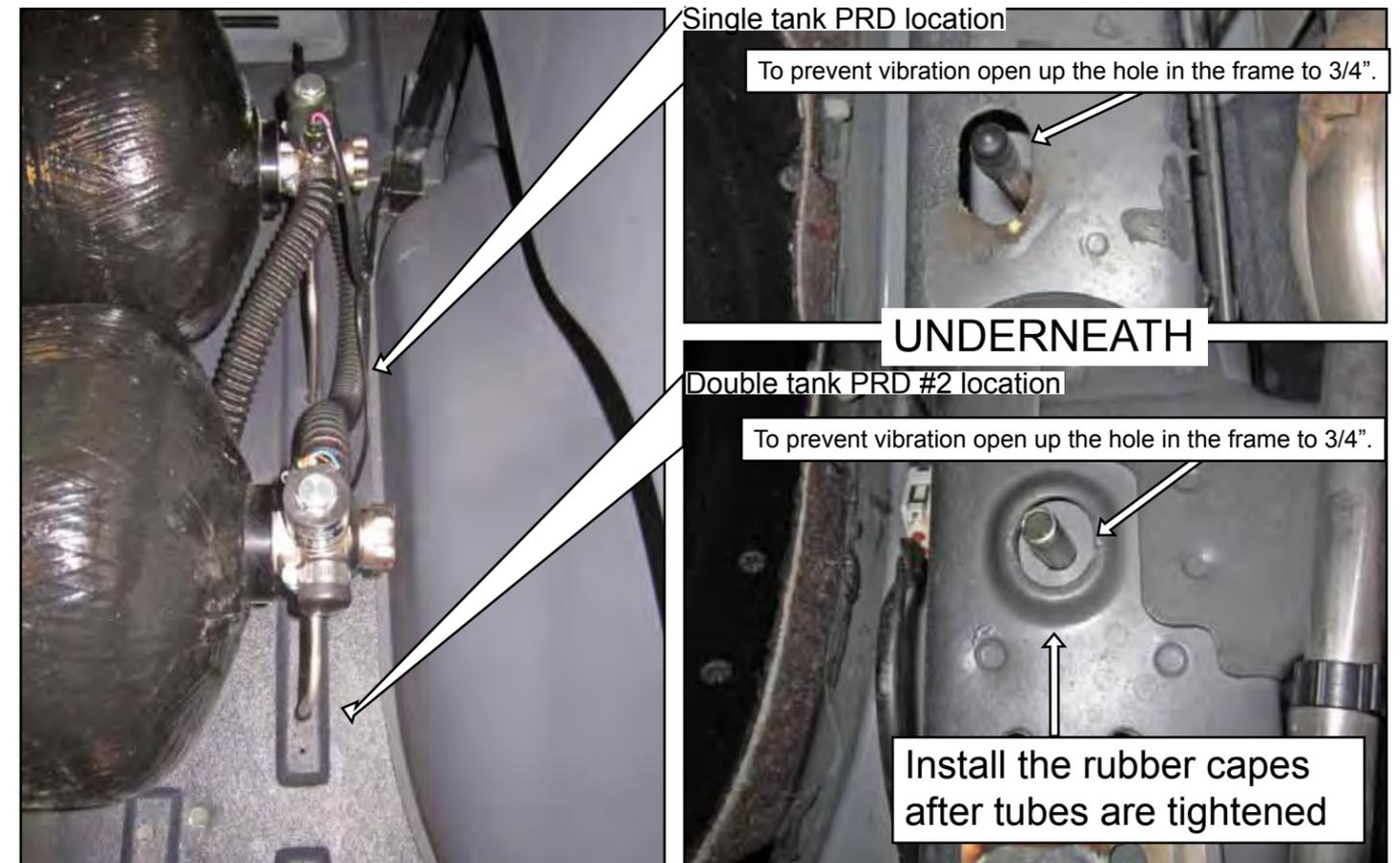
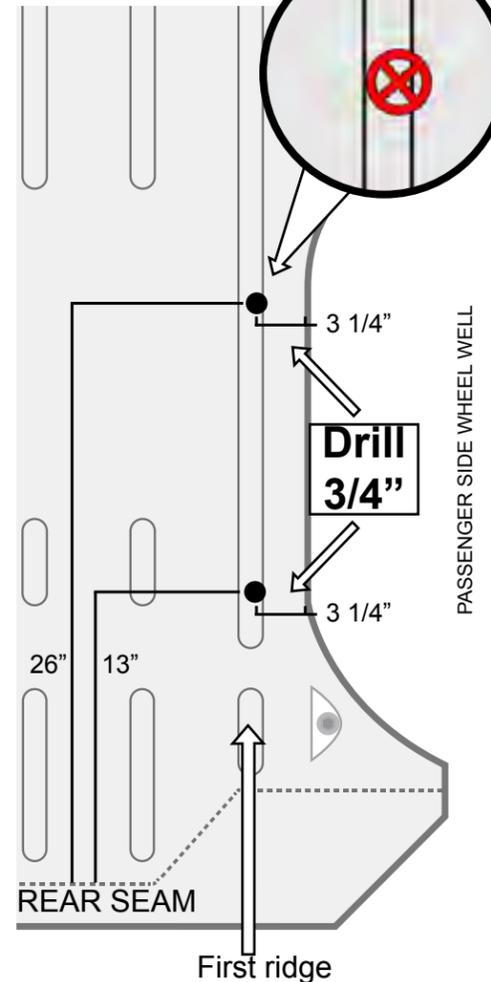
Assembled tank will look like Example 3



Example 1  
WIRE AND HIGH PRESSURE



Example 2  
PRD TUBES



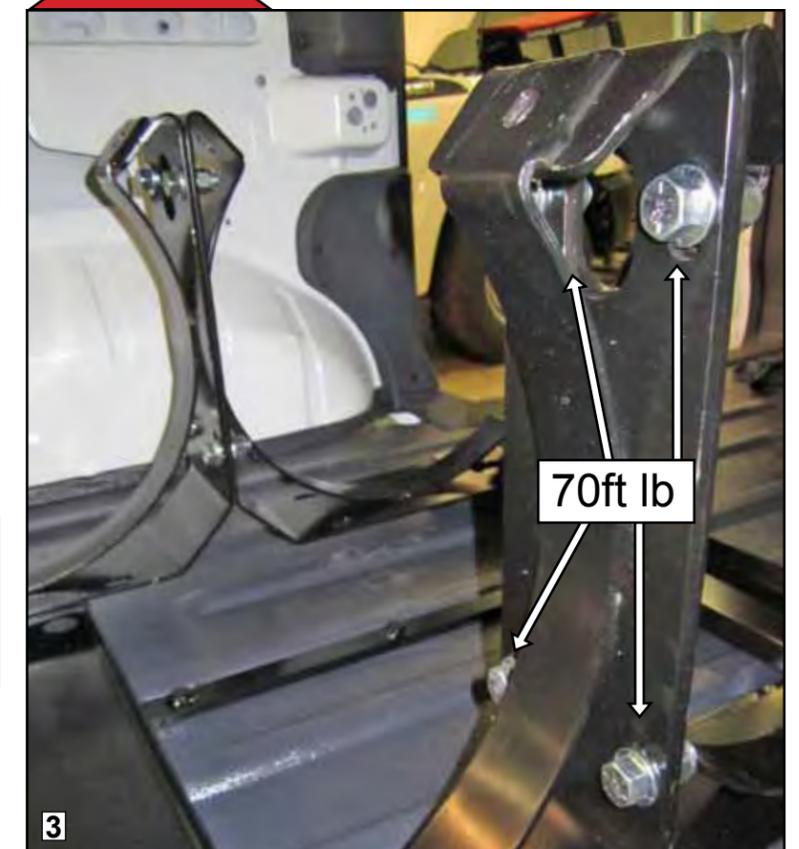
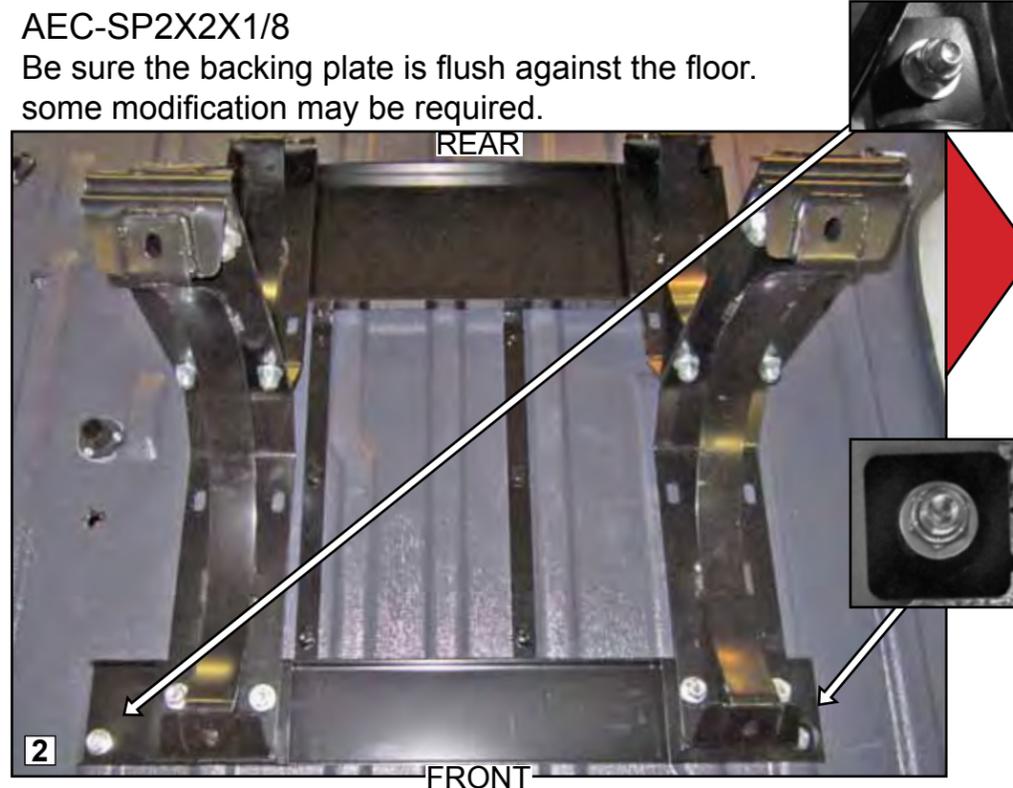
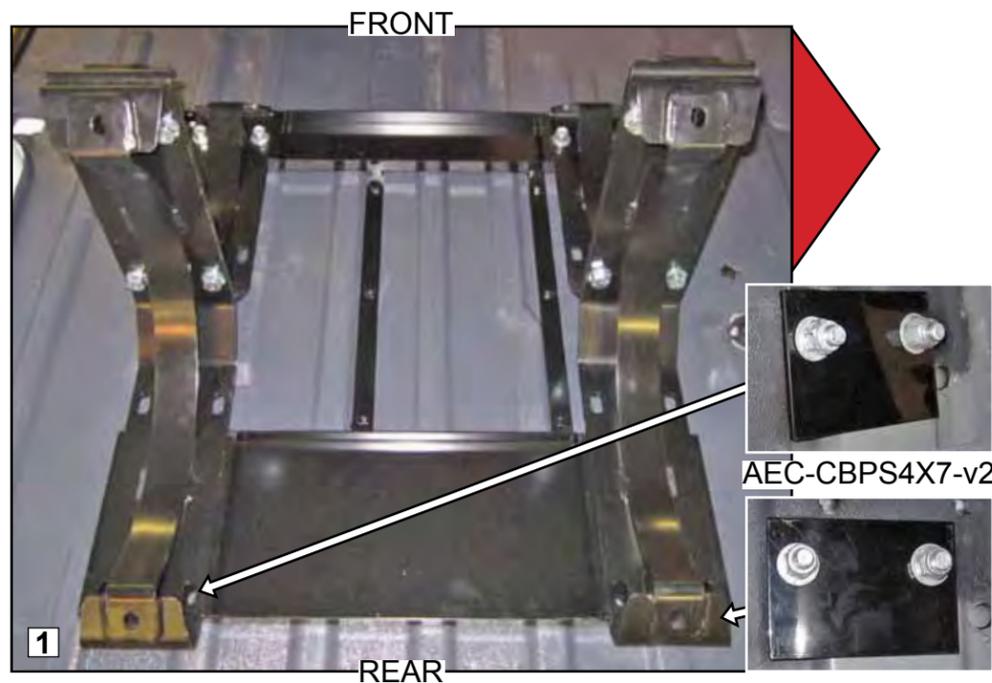
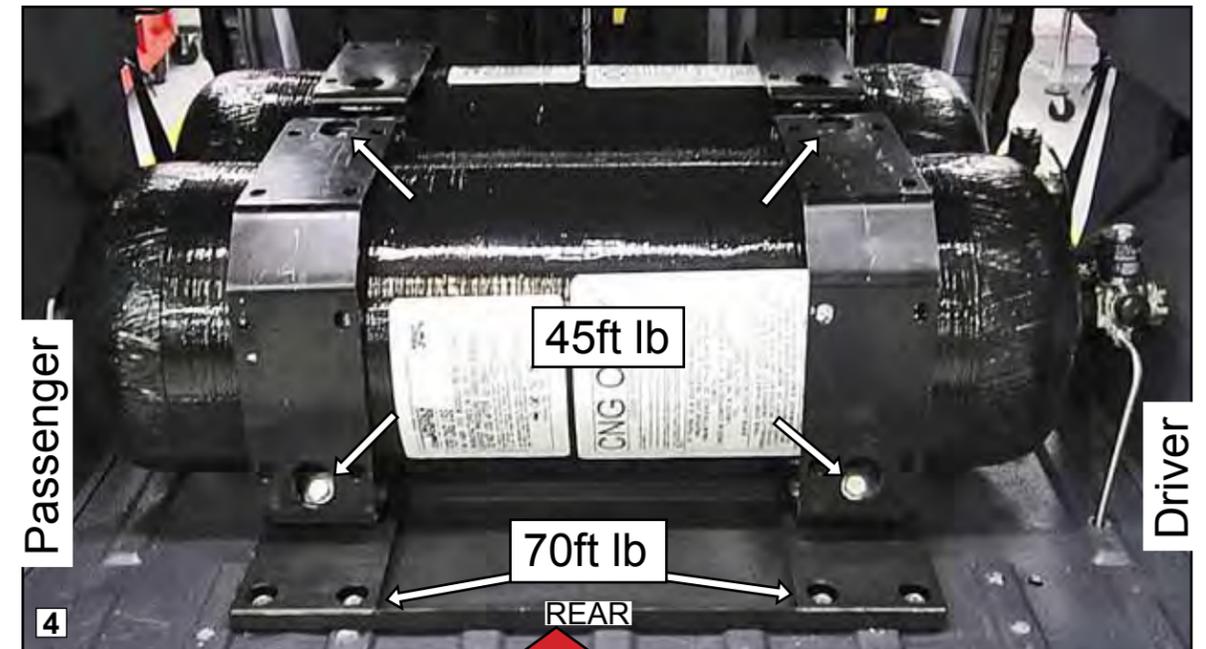
## TANK BRACKET INSTALLATION

### Bracket Installations and Assembly DOUBLE tank.

- 1-2. It is easier to assemble the tank bracket and base plate outside the vehicle. *Do not torque.* Place assembled base plate into vehicle correctly. Install the Rubber strip on the surface of the bracket. This will protect the tank from damage. Install the two front bolts and locking nuts into the front holes of the bracket. And four rear bolts and locking nuts to secure the tank bracket. From underneath the vehicle place backing plates(AEC-SP2X2X1/8) and nuts on the front two bolts. Torque and continue to the rear two backing plates(AEC-CBPS4X7-v2). Secure with nut, washer and spacer. Be sure to torque all bracket bolts to 70ft lb.
3. Be sure that the tank brackets are torqued to each other at 70ft-lb.

Continue to **“PRD and FLANGE ADAPTOR INSTALLATION”** Then return to step 4.

4. Install tanks and secure with straps. Front tank solenoid should be facing up and the rear tank solenoid should be facing to the rear horizontally. Torque to 45ft lb. The Valves should be on the passenger side of the vehicle. Leave 1/2” from the tank to the panel on the drivers side of the tanks. Once all bolts have been torqued to specification continue with **COALESCENT FILTER and REGULATOR** installation.



## PRD and FLANGE ADAPTOR INSTALLATION

PRD Tube installation and tightening.

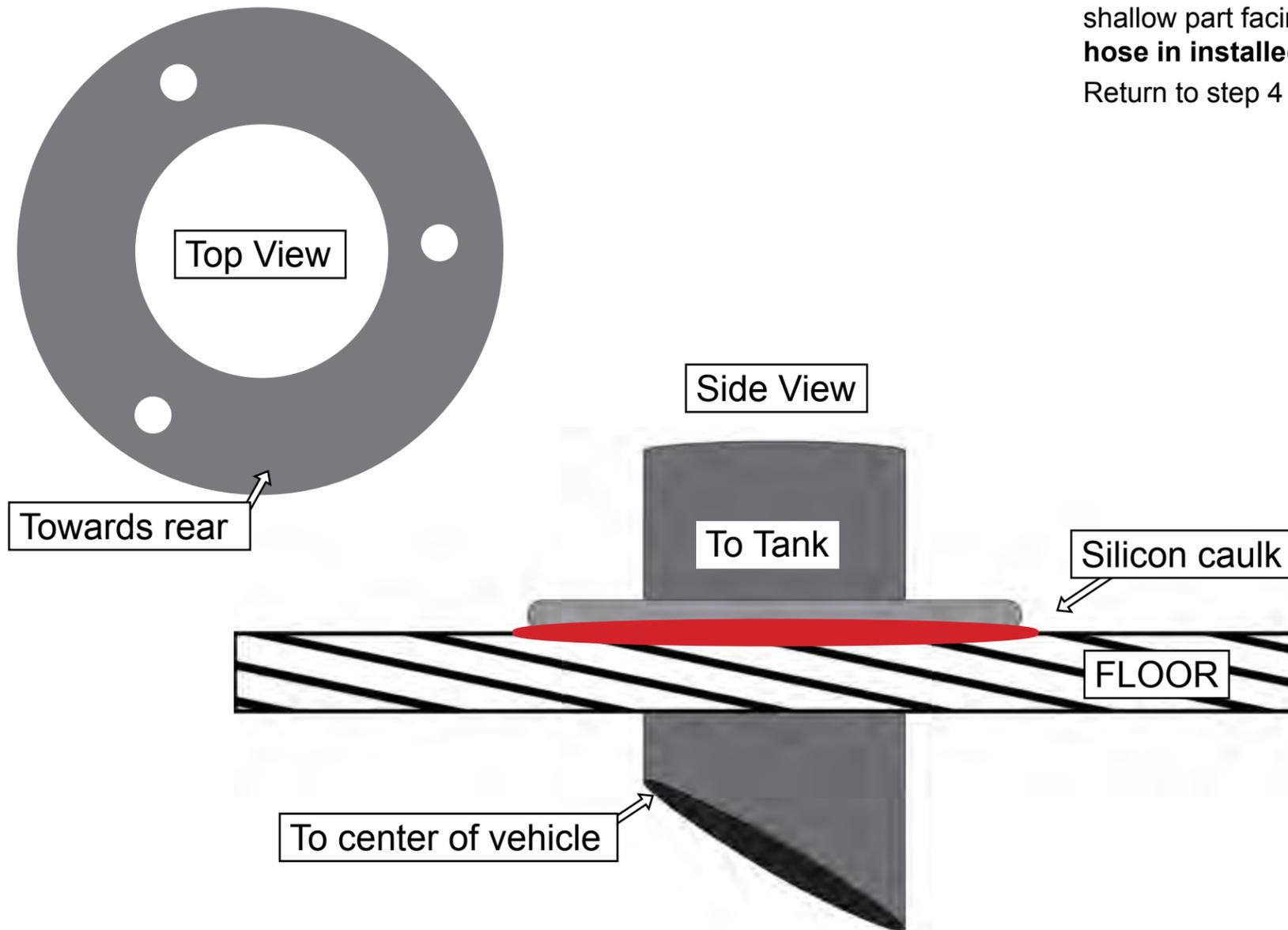
**PRD TUBES MUST BE INSTALLED AND TIGHTENED BEFORE TIGHTENING THE TANK BRACKETS.** PRD grommet(s) must be installed under cargo liner/carpet if equipped.

### FLANGE INSTALLATION AND POSITION

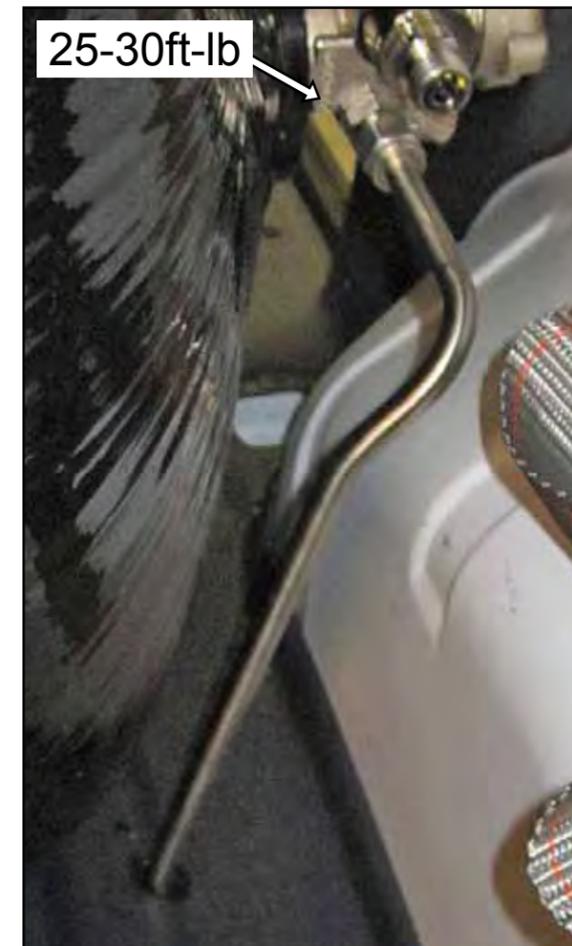
Once all your holes have been drilled and sealed begin the installation of the PRD tubes. PRD tubes come bent and ready to instal. Once placed into the valve tighten PRD Tubes to 25-30ft-lb. Remember to leak test this area once your installation is complete.

The Flange valve must be installed with the one of the screws facing the back. And the bottom shallow part facing towards the center of the vehicle. **Double check once the high pressure hose is installed that the screws do not rub on it.** This can cause damage to the line.

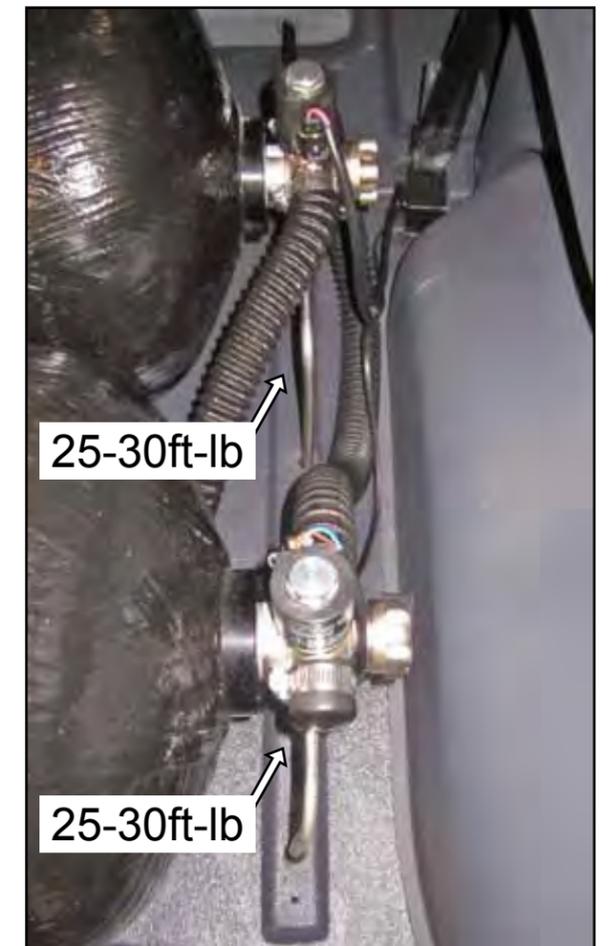
Return to step 4 on **“TANK BRACKET INSTALLATION”**



Single Tank



Double Tank



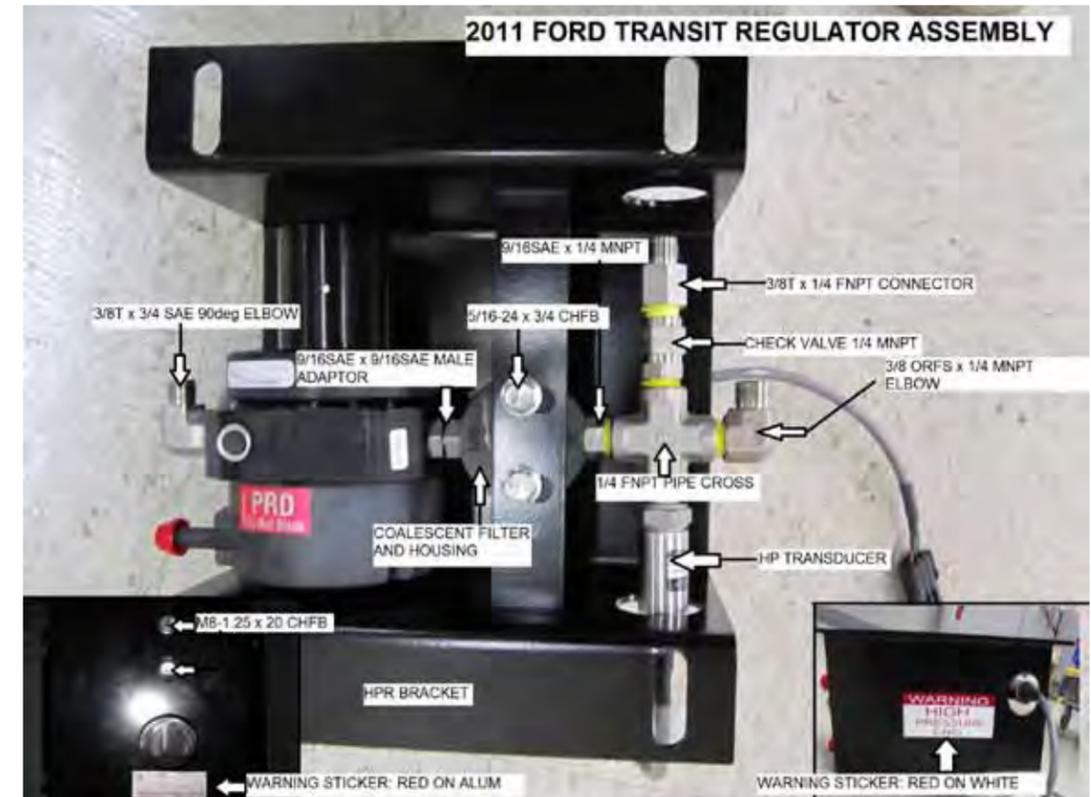
## INSTALLING THE COALESCENT FILTER AND REGULATOR ASSEMBLY.

### Undercarriage Installation of CNG Filter and Pressure Regulator Assembly.

In this step you will need to cut the rear bumper to accommodate the fuel fill all systems kits.  
Fuel Fill Drill Template (AEC-TC-FFT)

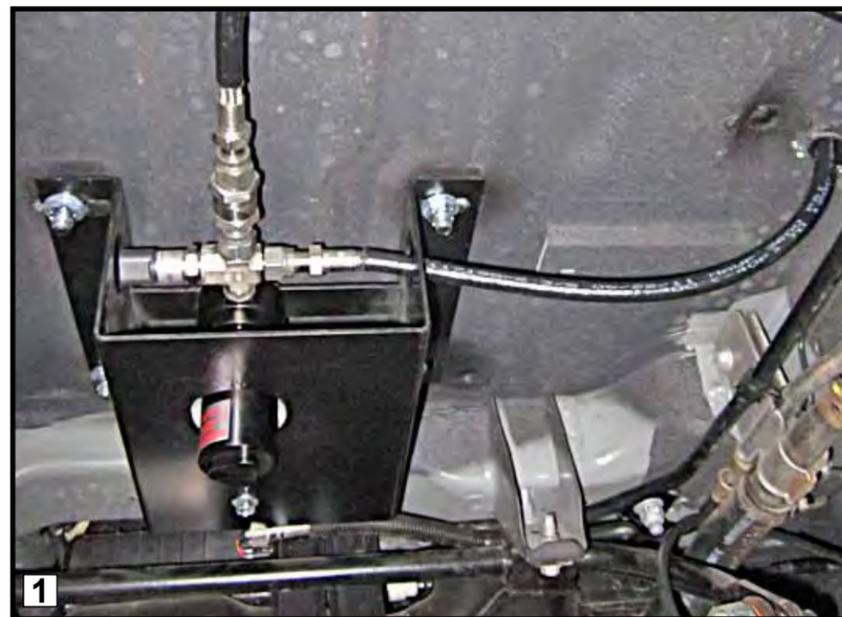
- Once the tank bracket has been installed you can install the coalescent filter and pressure regulator assembly. The assembly is bolted on underneath using the tank bracket studs as shown in Example 1.
- The Fuel Fill on the Bi-fuel Dedicated systems is located on the rear bumper. The hole will have to be drilled on the passenger side using a hole saw. Use the provided template to find the correct drill sizes and location.  
Note: It is easier to drill the holes with the bumper attached, but will have to be removed for assembly of the fuel fill housing. On models with backup sensors you will need to move it to the right so the CNG fuel fill can be installed. Continue on next page for installation instructions.

All fittings that have O-Rings must be torqued to 30-35ft-lb.



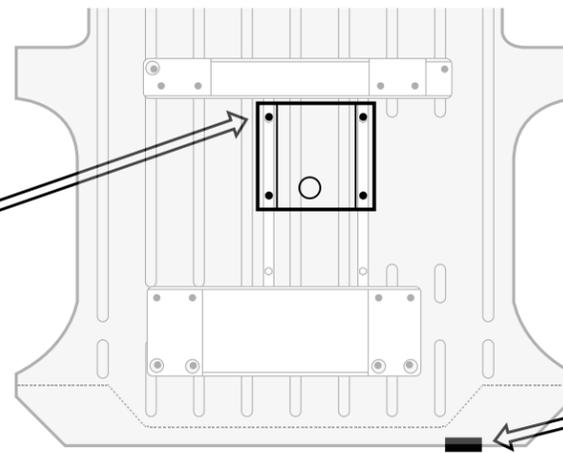
COALESCENT FILTER AND REGULATOR ASSEMBLY EXAMPLE.

REAR



FRONT

Example 1



Installed Fuel fill With backup sensor. Torque six hex bolts to 35-40in lb.



## FUEL FILL HOUSING

Fuel Fill comes assembled for service **ONLY**.

### FUEL FILL ASSEMBLY AEC\_VFFF150\_BCBS



Housing  
AEC-FRH



Fuel Fill Ring  
AEC-FRR



Receptacle  
AEC-LD36



To receptacle



To Tank

Straight thread connector  
6 F50LO-SS

1. Remove nut from the back end of the receptacle.
  2. Fit receptacle into fuel fill housing.
  3. Hand thread nut back on and tighten with a socket.
- Torque to (70ft-lb)  
Attach the straight thread connector to the back end of the receptacle and Torque to (30-35ft-lb) . *Important* use industrial food grade silicon spray on the rubber O-ring during assembly.  
continue to INSTALLING FUEL FILL (BI-FUEL)

Assembly of the Receptacle is basically the same for both the Bi-fuel and Dedicated systems.

## FUEL FILL INSTALLATION

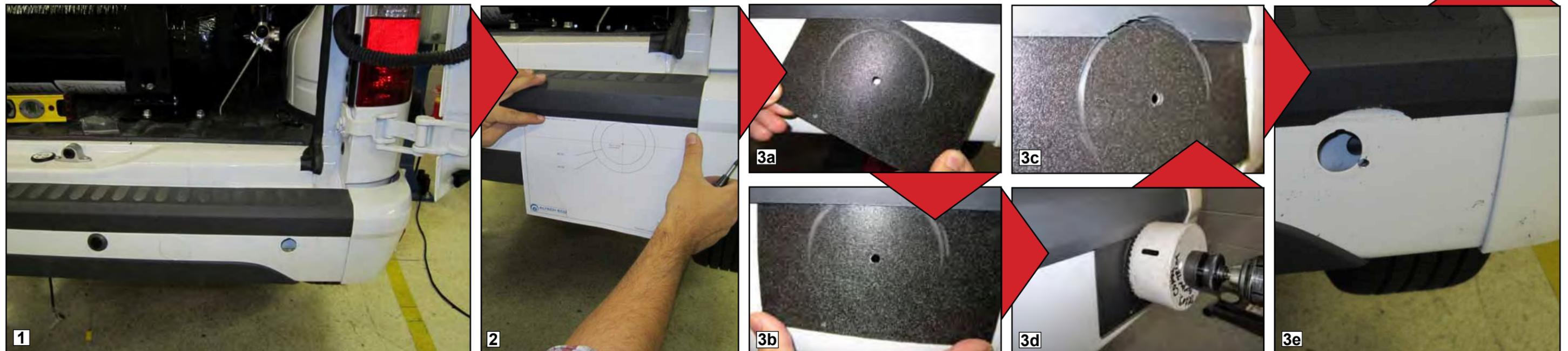
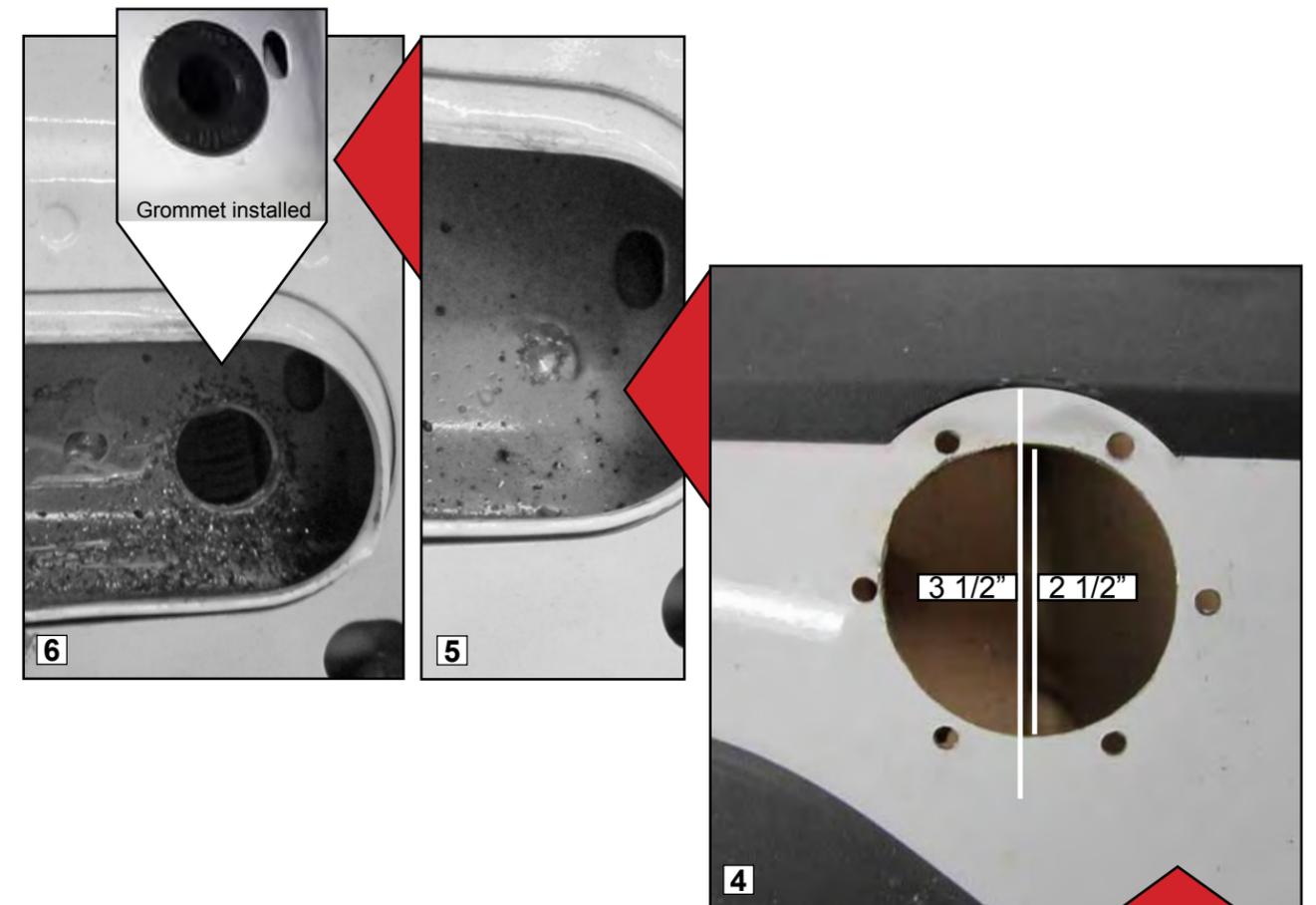
### Fuel Fill Housing Installation and Bumper Modification

You will need to modify the rear bumper to accommodate the fuel fill housing. The Fuel Fill on the Bi-fuel and Dedicated systems are located on the rear bumper.

1. With bumper attached begin with separating the backup sensor (Not all models are equipped with backup sensors) from the rear bumper. Unplug the sensor harness and make sure all wires are clear from drilling
2. Find the fuel fill housing template in your kit. Place on the bumper and continue.  
Note: When drilling the holes be sure the drill is parallel with the bumpers surface.
- 3a-e. After making a pilot hole line up a piece of plastic to the pilot hole. The drill the plastic trim using a 3 1/2" hole saw. Once the bumper trim piece is cut off clean up the cut and remove plastic sheet.  
Note: Take caution when cutting the trim, sometimes using holes saw in reverse helps with a clean cut.
4. Continue with drilling a 2 1/2" hole and place the fuel fill ring to mark out the bolt holes. Drill the six holes and assemble the CNG fuel fill housing. Connect the high pressure hose to housing and continue with the next step.

Continue to **"BACK UP SENSOR INSTALLATION"** Then return to step 5.

5. Use a long drill bit to continue a pilot hole thru the rear body panel. Remove bumper to access the rear body panel.
  6. Using the hole saw to drill 1 1/4" hole to fit grommet. Clean out the shavings and install grommet.  
Continue to Backup sensor housing installation if your vehicle has this option.
- Note: Remember to epoxy all the drilled holes to prevent rust.



## BACK UP SENSOR INSTALLATION

### Backup Sensor Housing Installation and Bumper Modification

Finishing the fuel fill installation. Remember to torque and tighten all the fuel fill components.

7. Mark and drill a pilot hole for the backup sensor.
8. Use a hole saw to carefully make the hole using a 29mm hole saw.
9. Clean up and seal the hole. Install the housing.  
Because the sensor location was moved you will need to move the entire backup sensor harness over to accommodate for the lack of slack. You will need to remove the OEM zip ties and reattach with the five provided in your kit. Also notch the top of sensor hole to accommodate tab on sensor housing.
10. Replace bumper onto the vehicle and re install the backup sensor.  
Continue on **"FUEL FILL INSTALLATION" STEP 5**

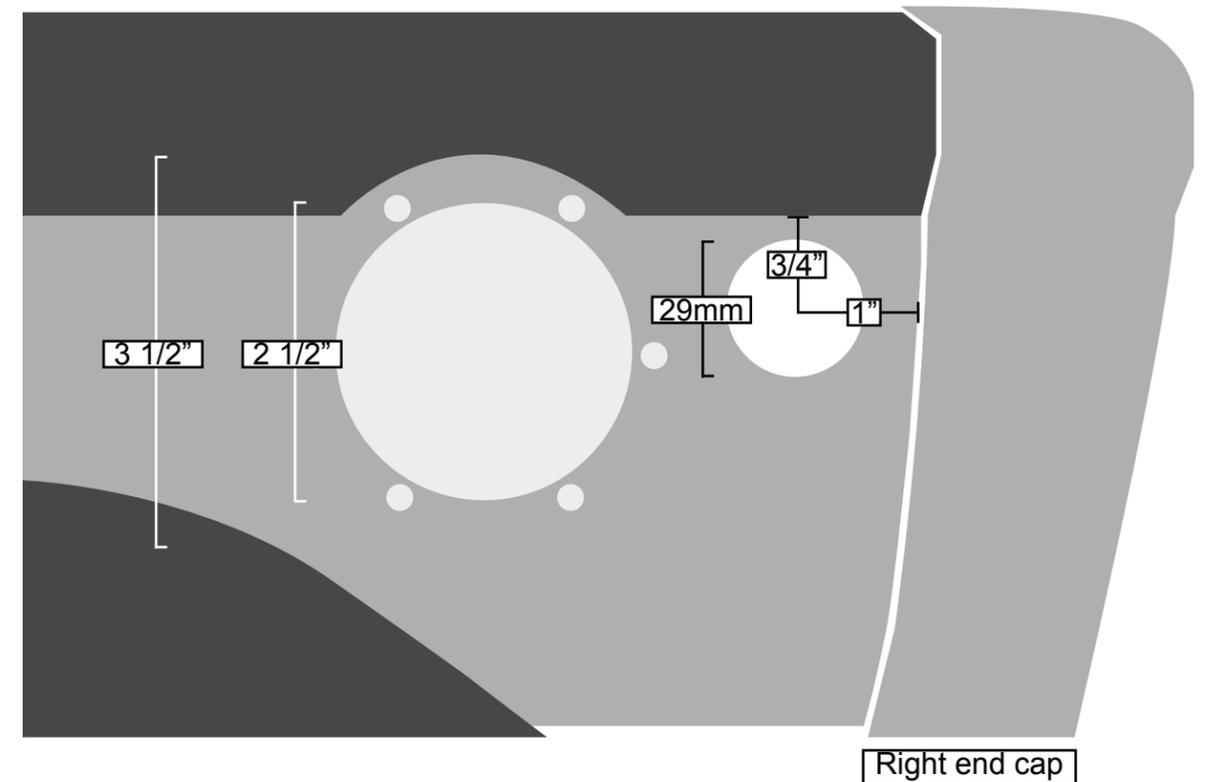
When feeding the HP hose into the car follow the OEM fuel fill hose. Use two P-clamps to secure it to the car and zip tie as needed to keep the HP line from moving around.



Installed fuel fill.



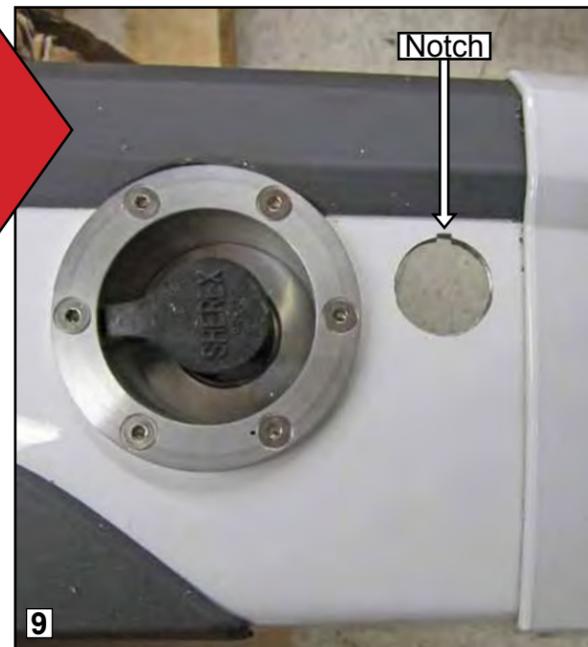
Replacement Zip tie



7



8



9

Notch

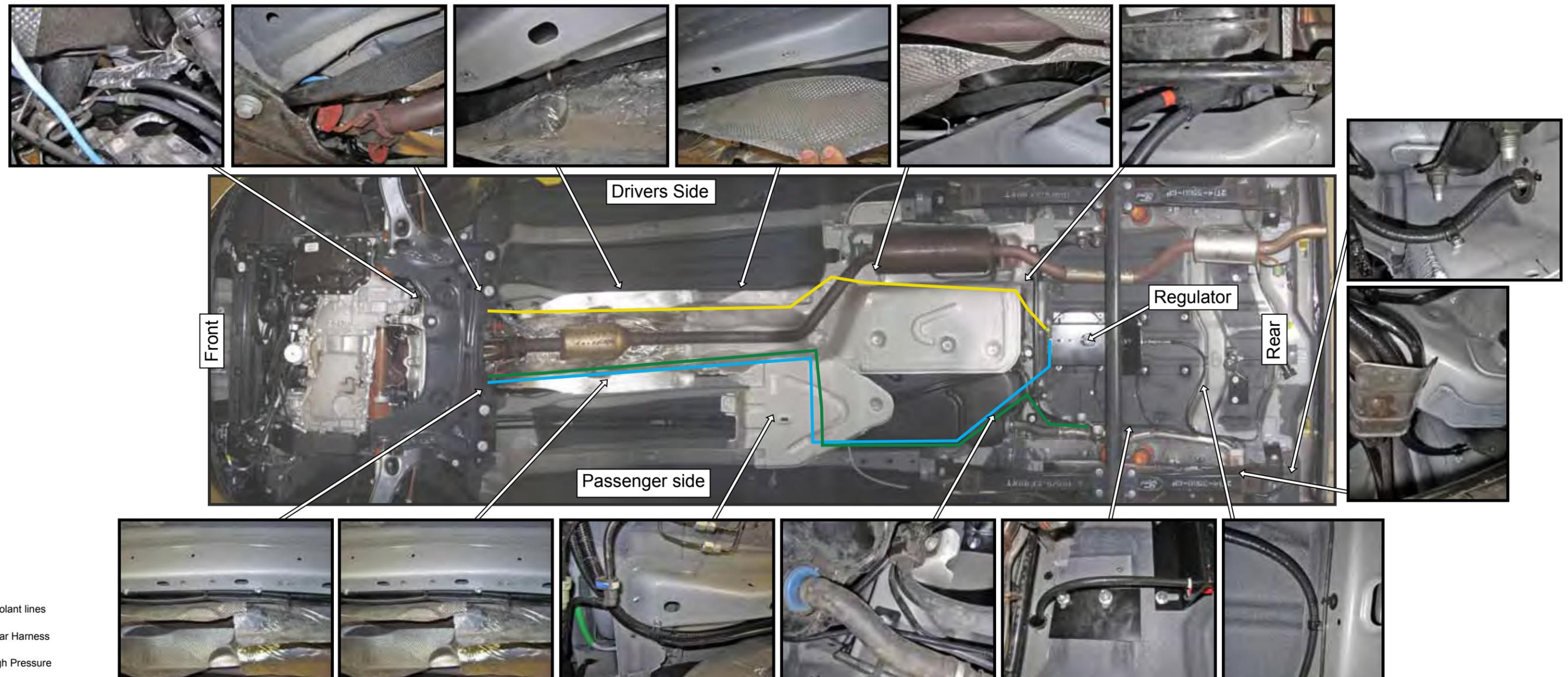


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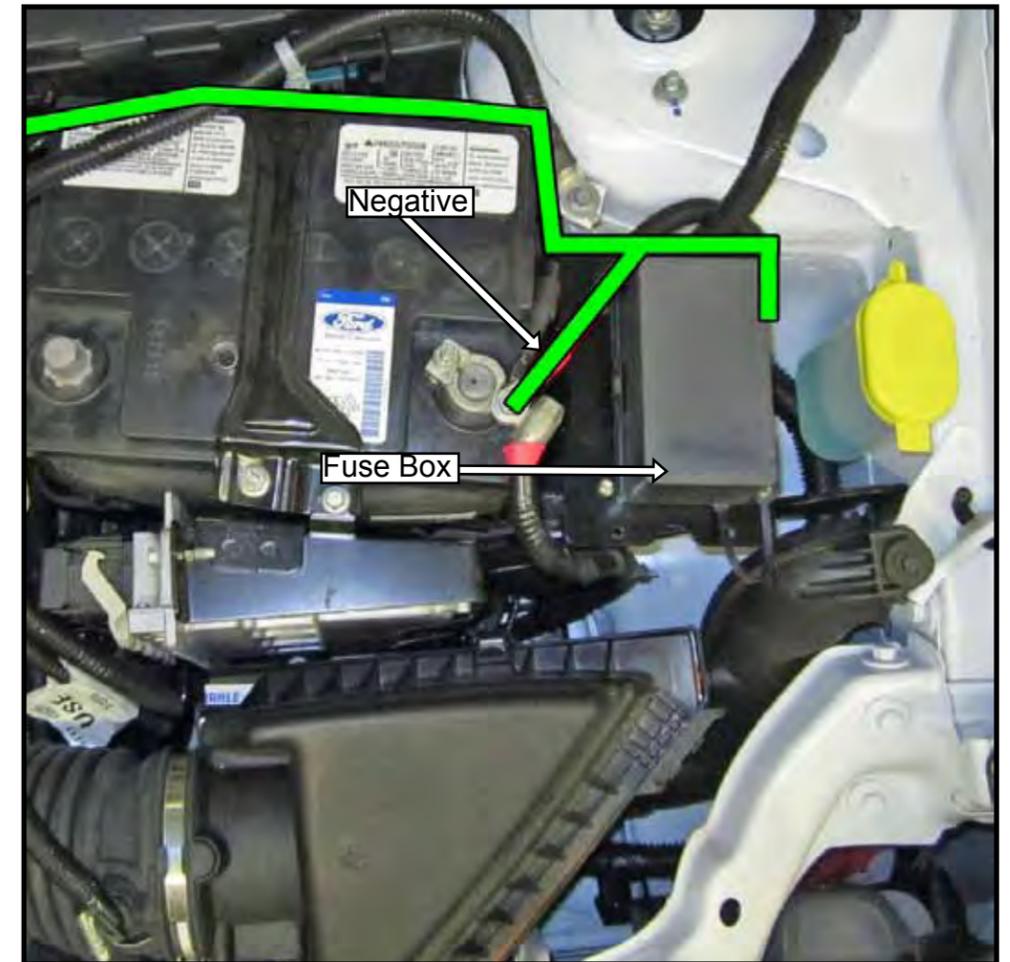
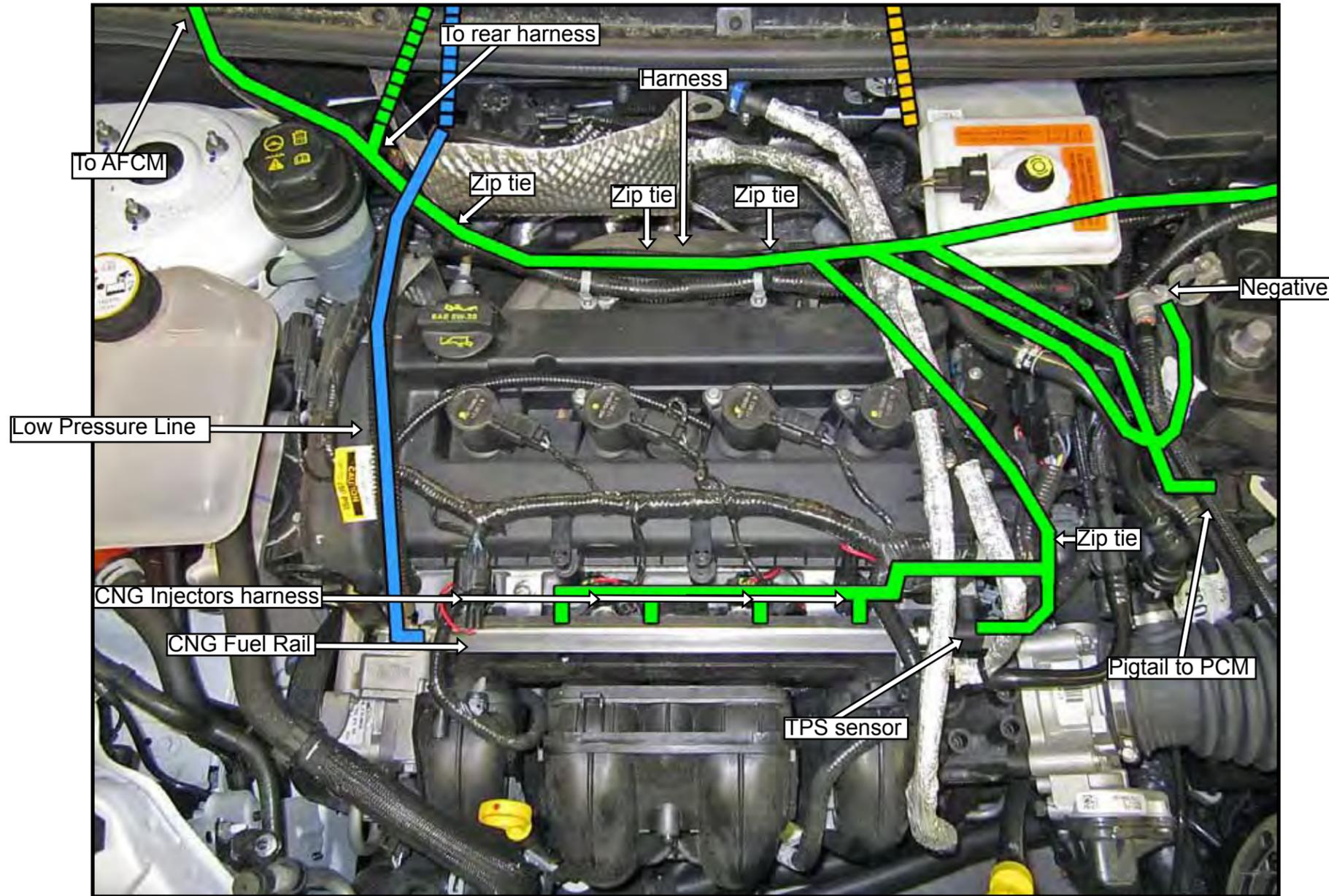
## LOW PRESSURE, COOLANT AND REAR HARNESS ROUTING

To route the Coolant line, Low Pressure line and rear harness you will need to drop the aluminum heat shield that runs along the exhaust. Carefully remove the clips that secure the shield for you will be reinstalling them back when your done routing. P-clamp after your lines are ran and connected to insure correct routing.

1. Low Pressure- Begin at the rear of the Fuel tank at the regulator assembly. Run the Low pressure line over the fuel tank and along the passenger side of the exhaust. P-clamping as you go. Rear Harness- After coming down from the tank meet with the High pressure lines and continue to the engine bay on the passenger side. Zip-tie as you go.
2. Coolant Lines- Also begin at the regulator and work your way towards the front along the exhaust on the drivers side. P-clamp as you go. when running into the engine bay rout around the steering boot and



**UNDER HOOD ROUTING**

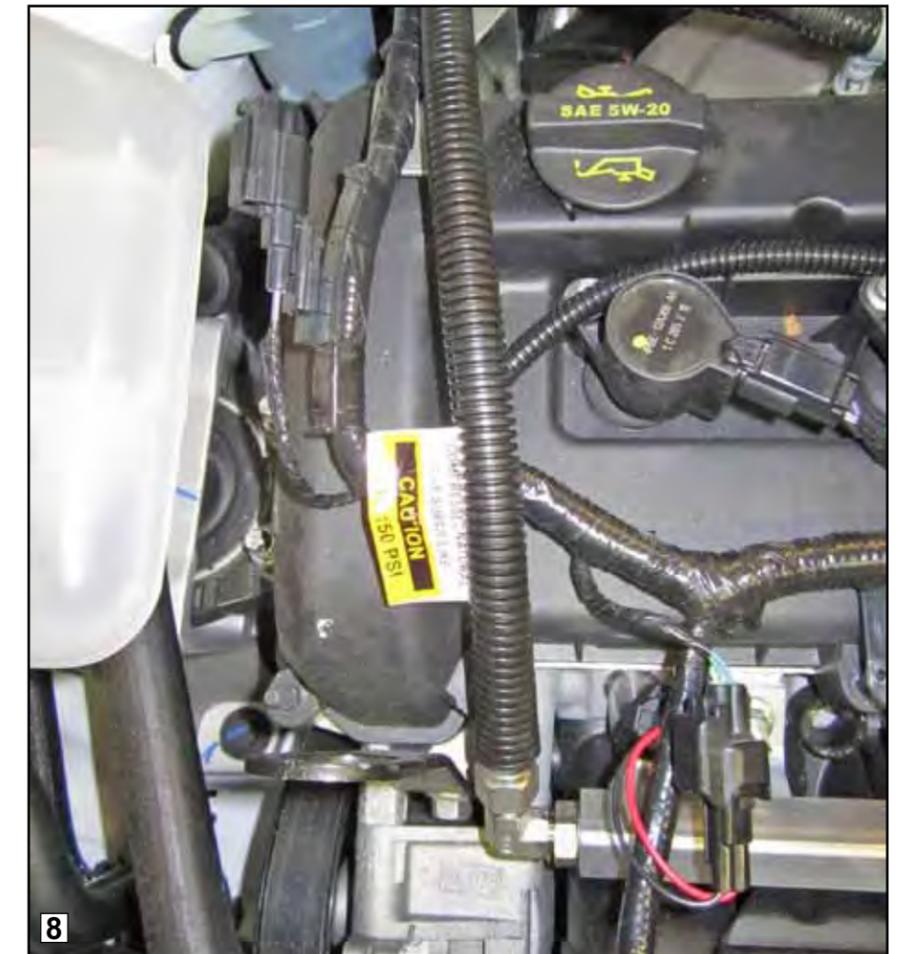
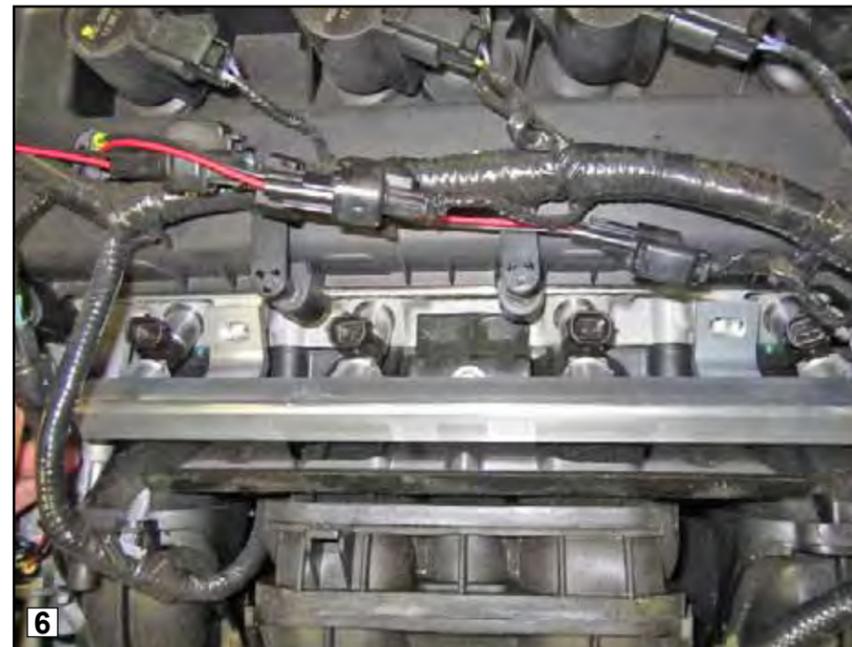


## DEDICATED UNDER HOOD

### Fuel Rail Under hood Installation.

Installation of dedicated system.

5. Locate the OEM injector harnesses and plug in the four CNG jumpers (AEC-JWH).
6. Take the assembled CNG fuel rail and install it to the OEM location. Be sure to lubricate all O-Rings before installation of the CNG fuel rail. Failing to do so will damage the O-Rings causing leaks. Do not force the CNG rail into place it should slip in fairly easy.
7. Once the CNG fuel rail is installed secure the rail with the OEM bolts. Torque them down to 75-80in lb.
8. Install the CNG Low pressure line on to the CNG fuel rail. Torque the fuel rail nuts to OEM specifications.



## INSTALLING AFCM BRACKET AND AFCM

### CNG Gauge and Switch installation

To install the AFCM

1. Begin on the passenger side with removing the seal that runs along the front of the hood cowl. Pull it back about half way to the center. Then proceed with removing the passenger side cowl by removing five Phillips head screws. Once all the screws have been removed pull cowl section up and set aside.
2. Now you will need to cut a 1" wide and 3/4" deep notch in the lower cowl. This notch will be just enough for the AFCM harness to pass through. Make cut directly above the power steering reservoir.
3. After the notch is made proceed with removing two 10mm nuts that hold the blower motor screen down. Then place the assembled AFCM bracket into place and replace the 10mm nuts. To secure both the screen and AFCM bracket in place.
4. Install the AFCM into the bracket and plug in the harness as shown. Double check that all parts are secure and installed properly.
5. Reassemble the cowl and seal. Note: Make sure the foam windshield seal on the cowl is in place. Finished install should look like this.



## AFCM PIGTAIL INSTALLATION

### Installing CAN bus harness continued

*Note: It is recommended to de-pin the wire that you are working on for a cleaner installation. Also, de-pin the three wires one at a time to prevent cross-wiring or incorrect connections. Locate the "Rear harness and Pin out" sheet from your kit to continue.*

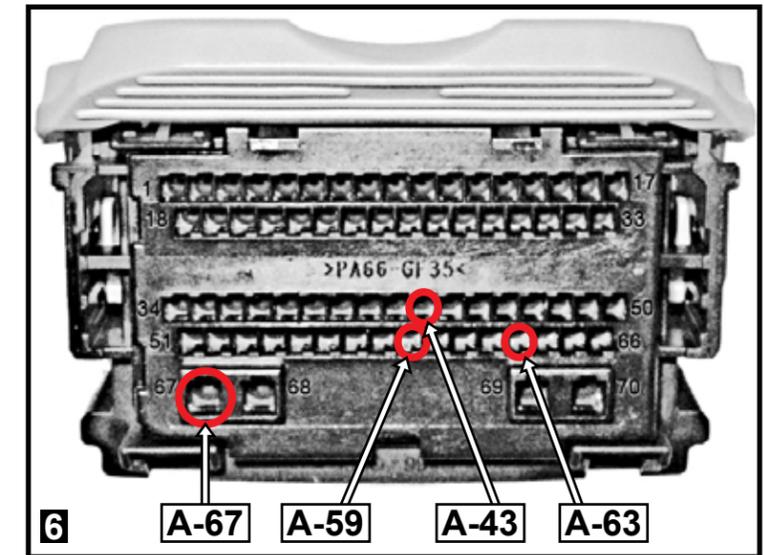
From PIG TAIL	To PCM Pin-Wire
-Red	A-67-Green/Orange
-Lt. Green/White	A-59-Grey/Red
-Pink/White	A-43-Blue/Red
-Red/Yellow	A-63-Gray/Violet

6. Locate pin number A67, A59, A43 and A-63 on the connector.
7. De-pin the first wire and proceed to strip the wire about an inch leaving insulation on both sides.
8. Solder the CAN bus wire onto the Ford wire. Let cool then inspect for a good connection. Slide the heat shrink onto the exposed wire and heat to finish.
9. Follow the steps 6-8 for the other three wires.
10. Once all four wires have been finished, reassemble the FORD connector and plug it back into the FORD PCM. Finally plug the CAN bus harness into the CNG MAIN WIRING HARNESS.

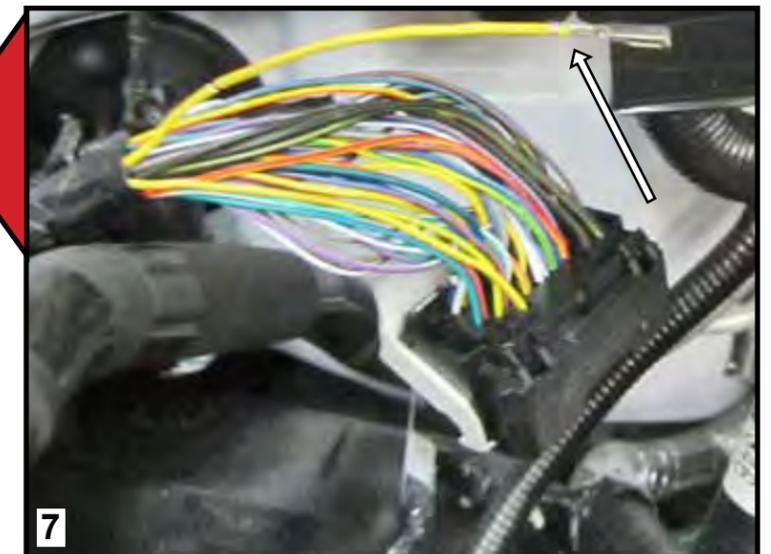
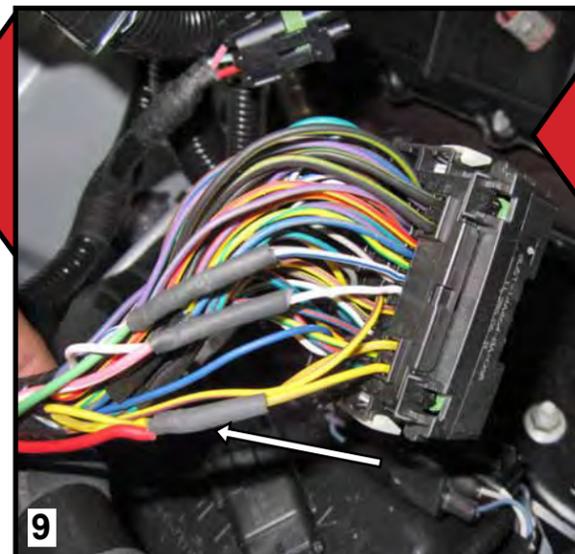
Continue to the fuse box installation.



CAN bus harness



Rear



## FUSE BOX INSTALLATION

### Installing CNG Fuse Box Bracket

The CNG Fuse Box is installed on the drivers side of the engine compartment.

1. On the right side of the battery find the mounting point for the fuse bracket.
2. Attach the fuse box bracket and bring up the fuse panel. Hand tighten three 2.5mm hex bolts (182). Leave the front one closest to the fender free.

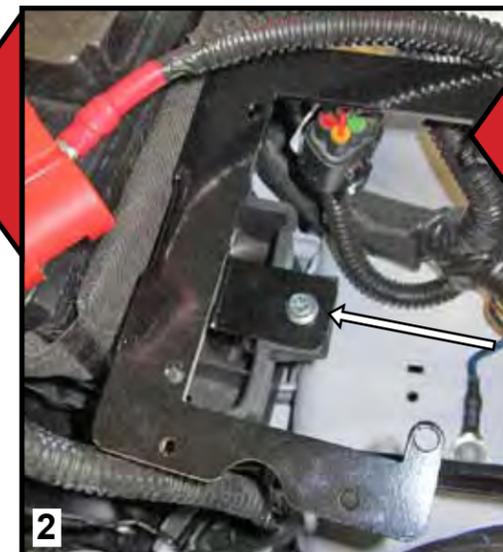
Cover: The cover will be attached to the bracket there.

3. Attach the fuse box cover to the front right hex bolt. Do not over tighten.
4. Snap fuse box cover into place and inspect that all bolts have been tightened

Fuse box bracket



Driver side



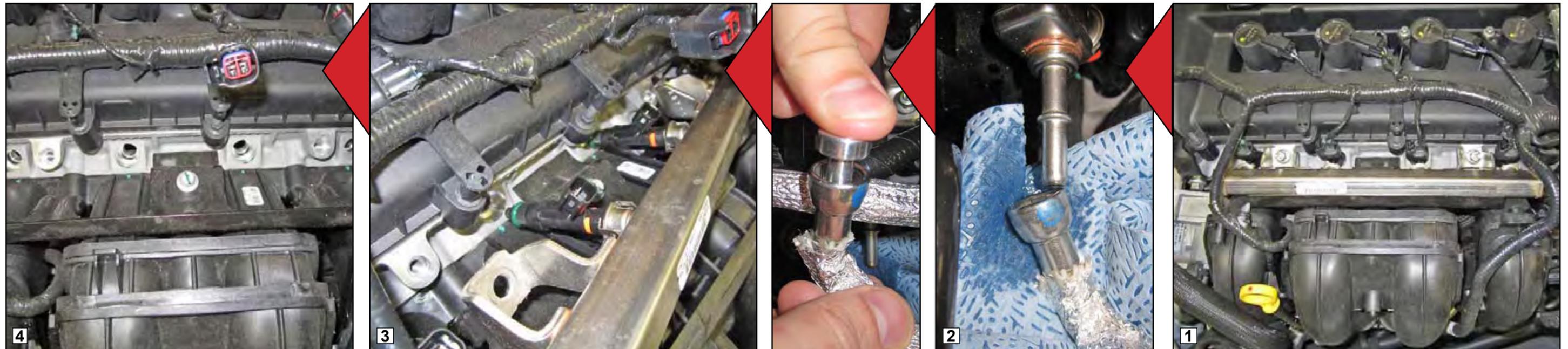
## DEDICATED UNDER HOOD

### OEM Fuel Rail Removal

Removal of OEM fuel rail and injectors.

- 1-2. Locate the OEM fuel rail. On the drivers side of the OEM rail remove the Fuel line using a fuel line removal tool. Be careful not to spill the leftover fuel in the fuel rail and fuel line. Then install the fuel plug (AEC-TF-GLP) into the OEM fuel rail.
3. Unplug the OEM fuel injectors. Then Unbolt the OEM fuel rail and remove.
4. Be sure to clean off any debris from the injector channels.

Continue on next page



**Dedicated and Bi-fuel Fuel Rail**

Upper

**Bi-fuel**

Lower



Intake manifold spacer for Bi-Fuel

**Dedicated**



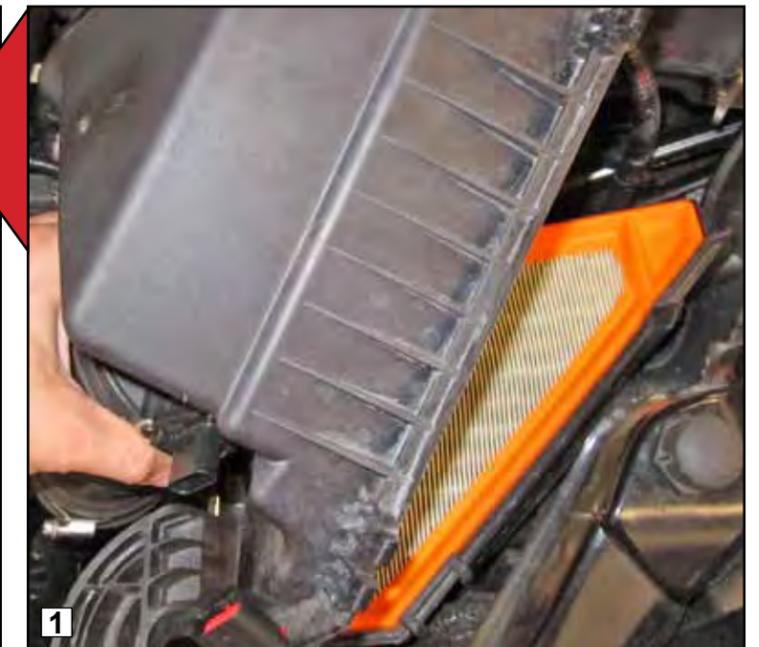
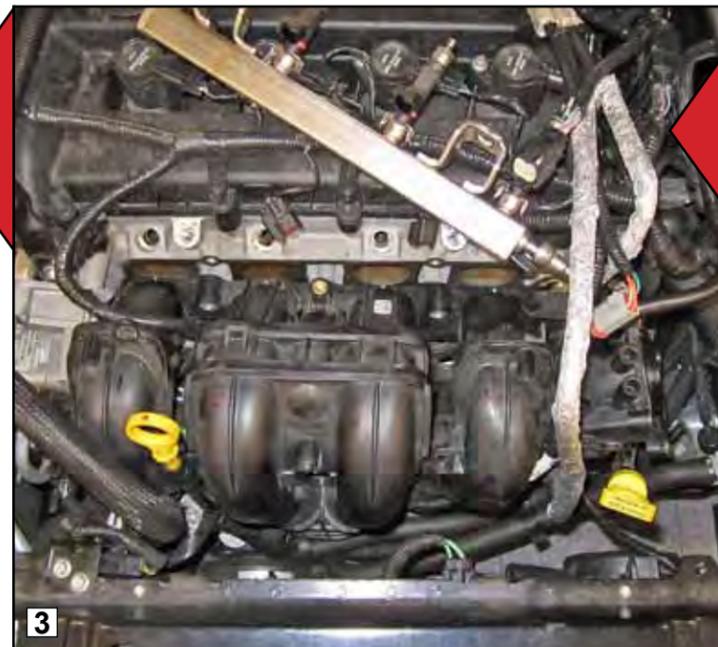
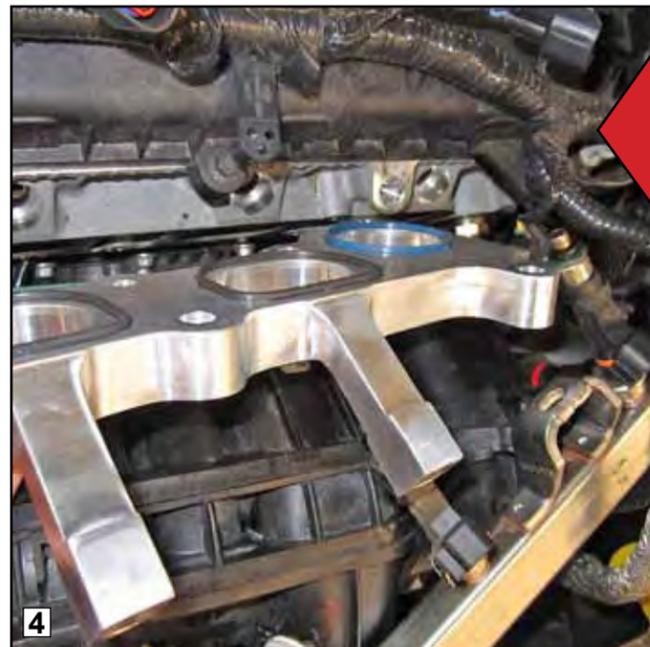
## Bi-FUEL UNDER HOOD

### Fuel Rail Under hood Installation.

You will be installing the Bi-fuel fuel rail and spacer.

1. Begin with unplugging and removing the top of the air box.
2. Unplug and remove the throttle body.
3. Unbolt seven bolt that secure the intake manifold. Unseat the OEM fuel rail and set aside.  
Note: When unbolting the fuel rail remember that it may have fuel in it.
4. Pull back the intake manifold to allow the lower plate to be installed.  
Example 1. Watch that the Gaskets are correctly seated do not fall out during installation.

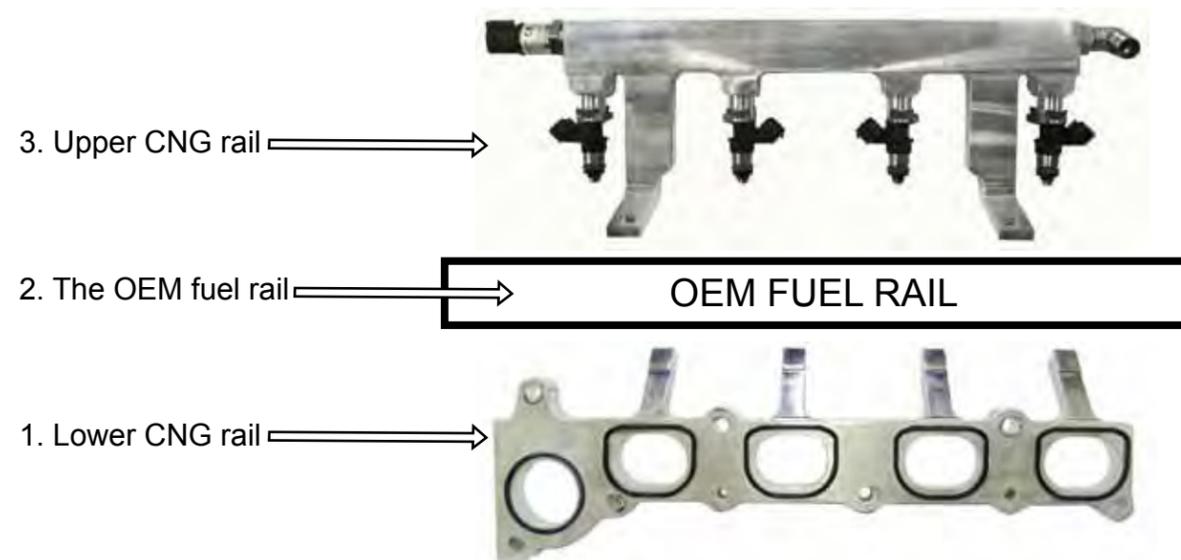
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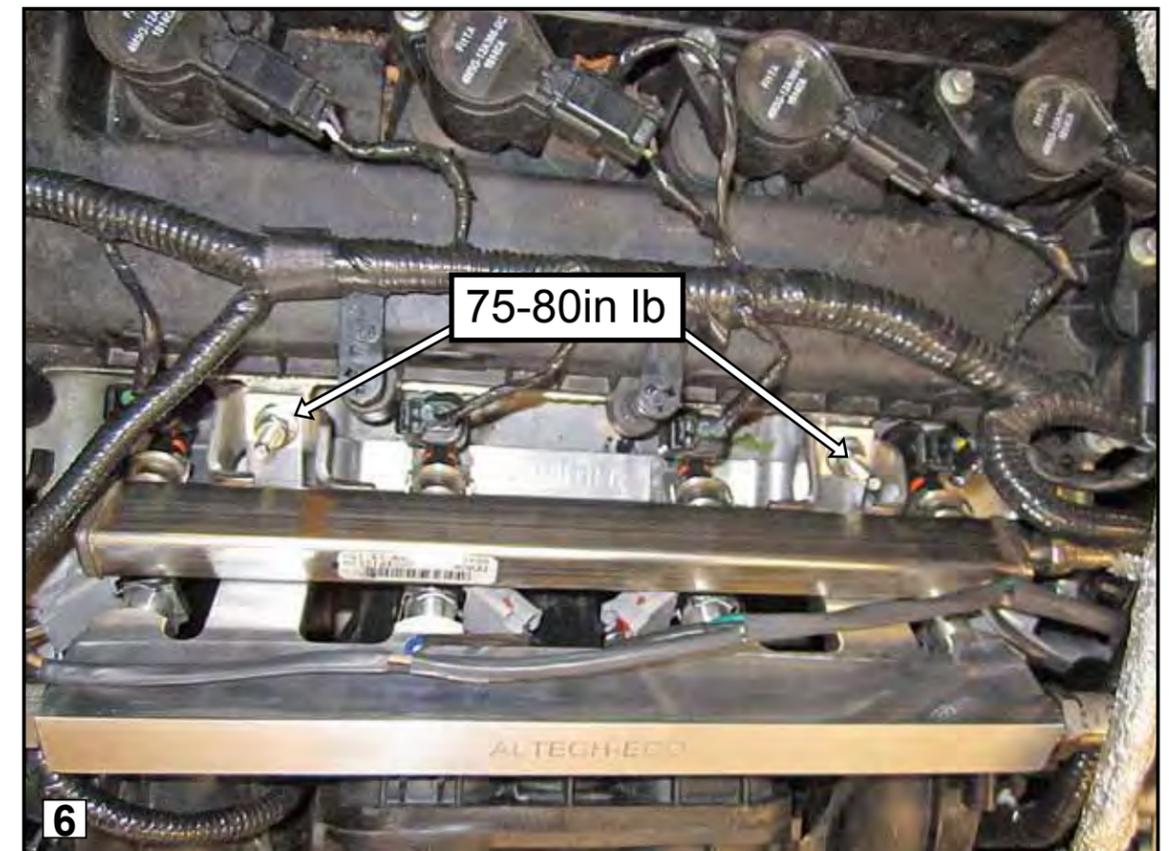
## Bi-FUEL UNDER HOOD

### Fuel Rail Under hood Installation.

Finishing the installation of the rails. The order of installation is:



5. Install the Lower CNG fuel rail and bolt spacer at the bottom of the Intake manifold. Replace the seven bolts and tighten to spec. Once the bolts have been tightened continue with the reassembly of the OEM fuel rail. Seat injectors into the OEM injector holes. After you have set the OEM fuel rail plug in the injectors and any other connections or lines that you have removed.
6. Install CNG injector harness onto the upper CNG rail. Install the CNG upper fuel rail onto the lower rail. Note: Be sure to properly lube the CNG O-Rings before installing. Secure with the OEM bolts to the factory fuel rail mounting points. Connect the Low pressure line and TPS sensor to the CNG rail.

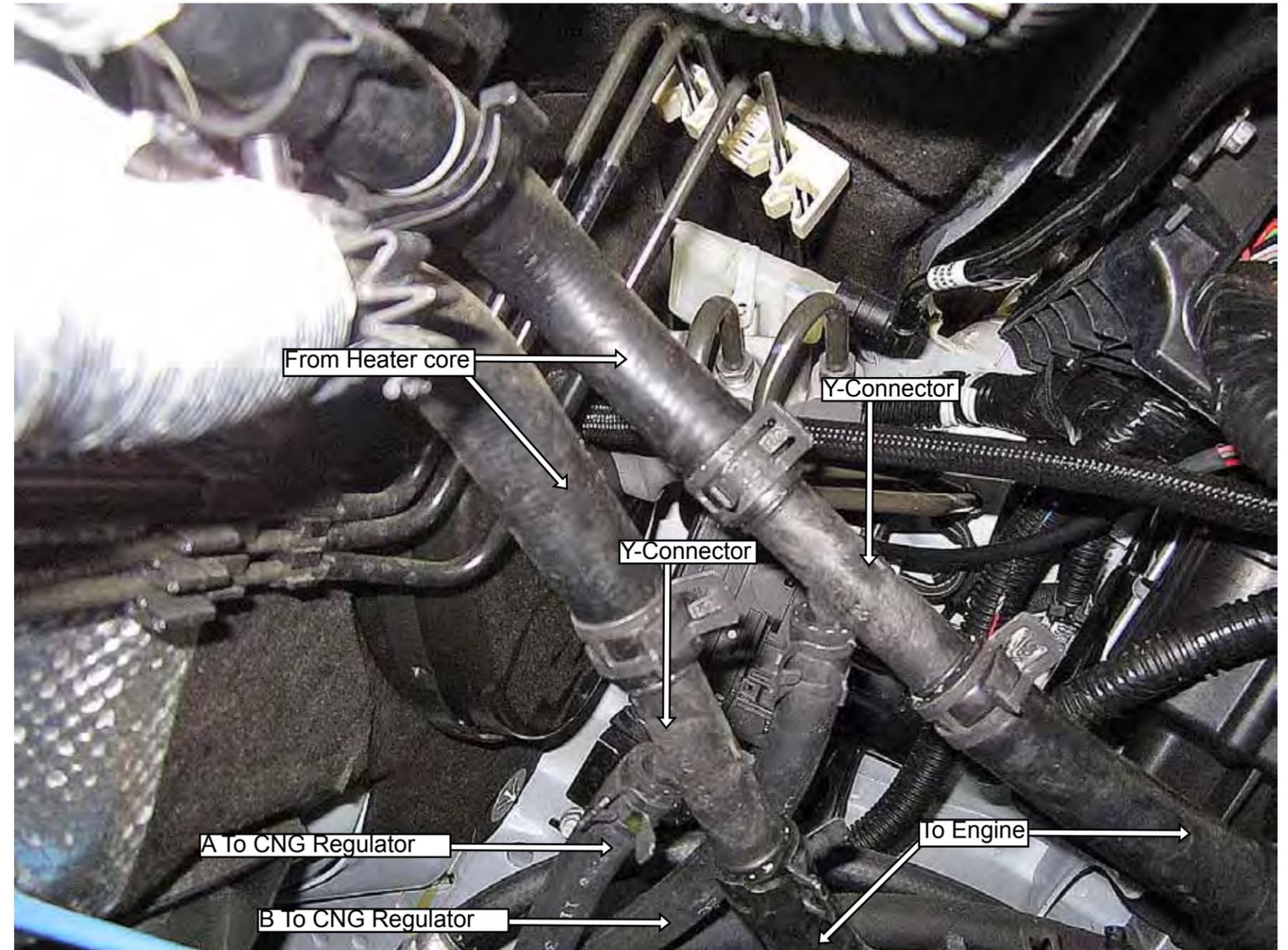
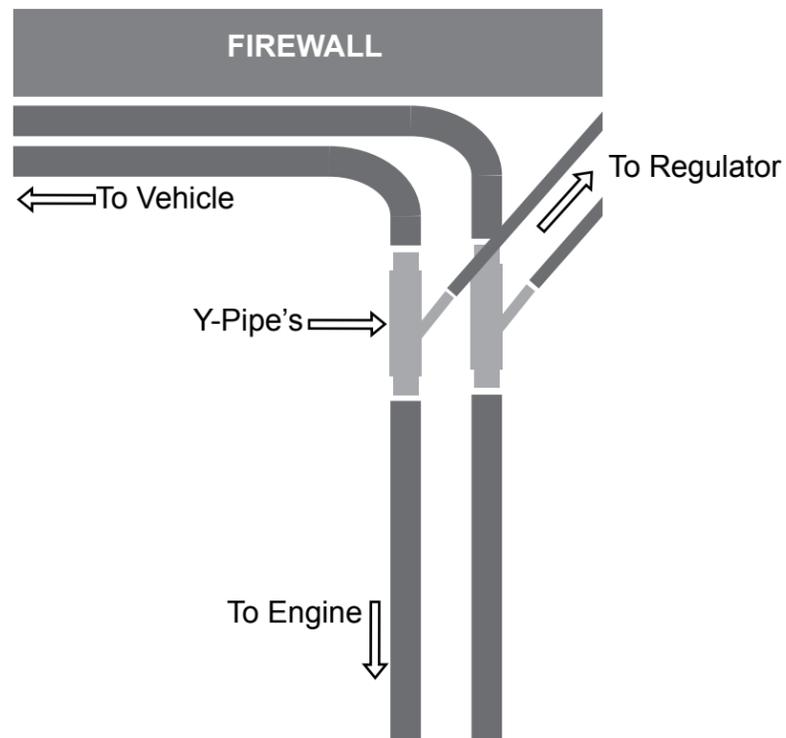


## COOLANT LINE INSTALLATION

In this step you will be cutting the heater hoses to accommodate the Y-pipe fittings. During this there is coolant fluid in the heater hoses, be sure to prevent any spills on to the engine or ground.

### Y-pipe Fitting (AEC-CHY)

1. Starting with heater hose "A". Use a hose pinch tool to restrict the flow of coolant. Pinch far enough away from the firewall to have easy access to hose.
2. Take the marked CNG cooling hose and cut to a proper size if needed.
3. Cut the OEM heater hose where the Y-pipe fitting will fit properly.
4. Place the heater hose clamps on both ends of the cut. Attach the Y-pipe fitting onto the OEM heater hose. Clamp and check for leaks. Repeat steps 1-4 for hose "B".
5. Once Both Y-pipe fittings have been installed check for leaks and clean up any spilled coolant. Also check fluid levels and top off.



## INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

### Gauge and Switch (Bi-fuel) Installation and Locations

The dash must be drilled to accommodate the CNG fuel Gauge and selector switch (on bi-fuel only). When cutting dash be sure to double check behind the drill location.

1. Mark out the holes for the gauge and switch. As shown in "example 1":  
Fuel gauge needs to be 2" tall and 1 1/8" from the dash bevel.  
The CNG switch should be 1" tall by 1/2" wide and 3/8" away from the dimmer switch.
2. Using a 2" hole saw and a dremel tool to carefully cut out the needed holes.  
Note: Tape off the dash before cutting, just incase the dremel or hole saw slips.  
Finish cuts with a file.

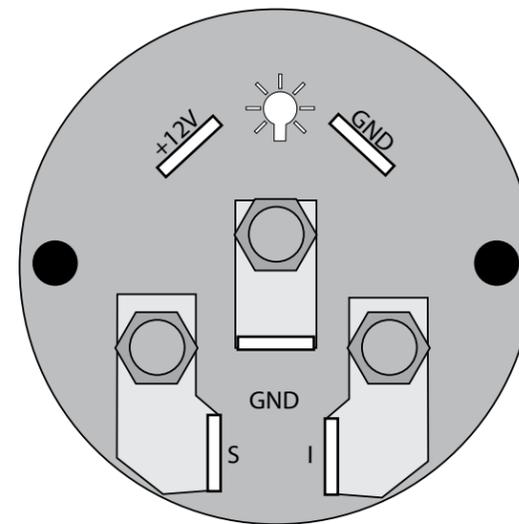
3. Feed the fuel gauge and switch harness to the holes and connect.  
Then make the following connections to CNG Fuel gauge (Example 2):

- Single Pink wire to "+12V"
- Single Black wire to "GND"
- Double Pink wire to terminal "I"
- Double Black wire to "GND"
- Single Gray wire to "S"

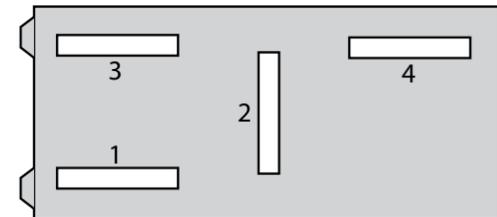
Then make the following connections to CNG switch (Example 3):

- Pink wire to terminal 4
- Brown/green to terminal 2
- Brown/orange to terminal 3
- Black to terminal 1

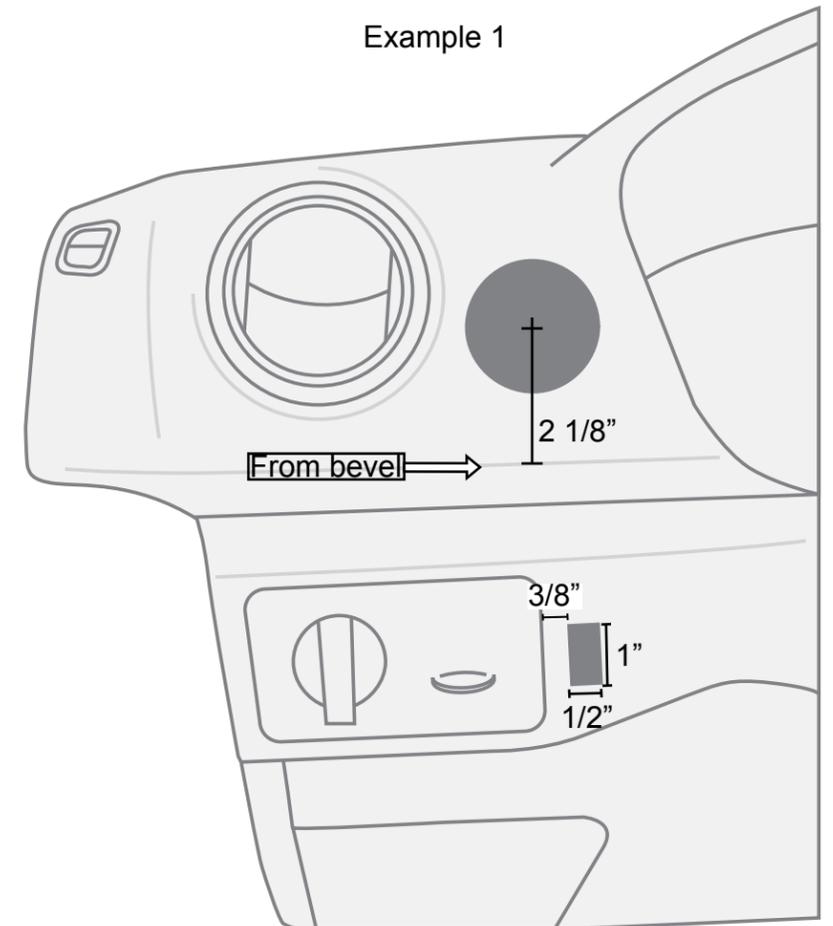
4. Once all connections are made gauge and switch into place. Finished dash should look like this.



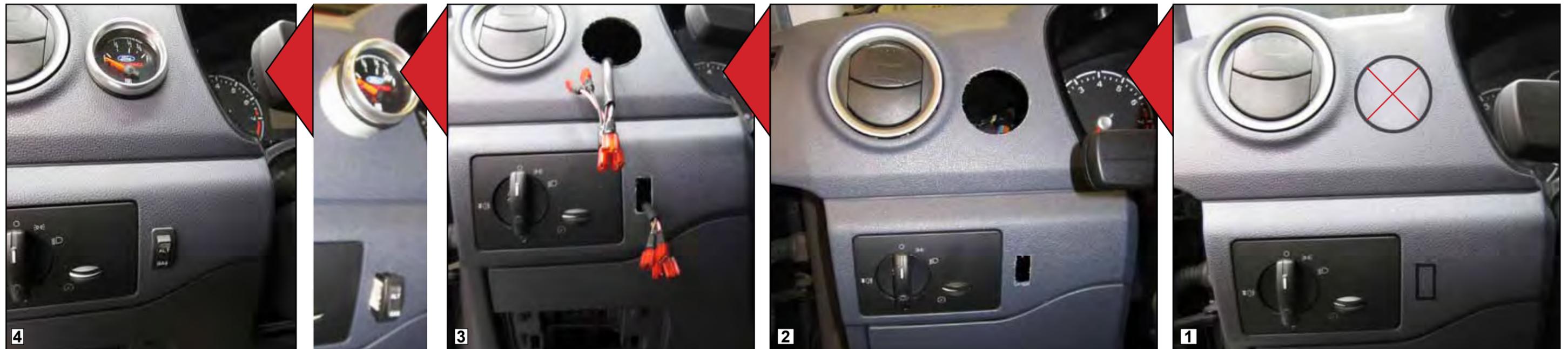
Example 2



Example 3

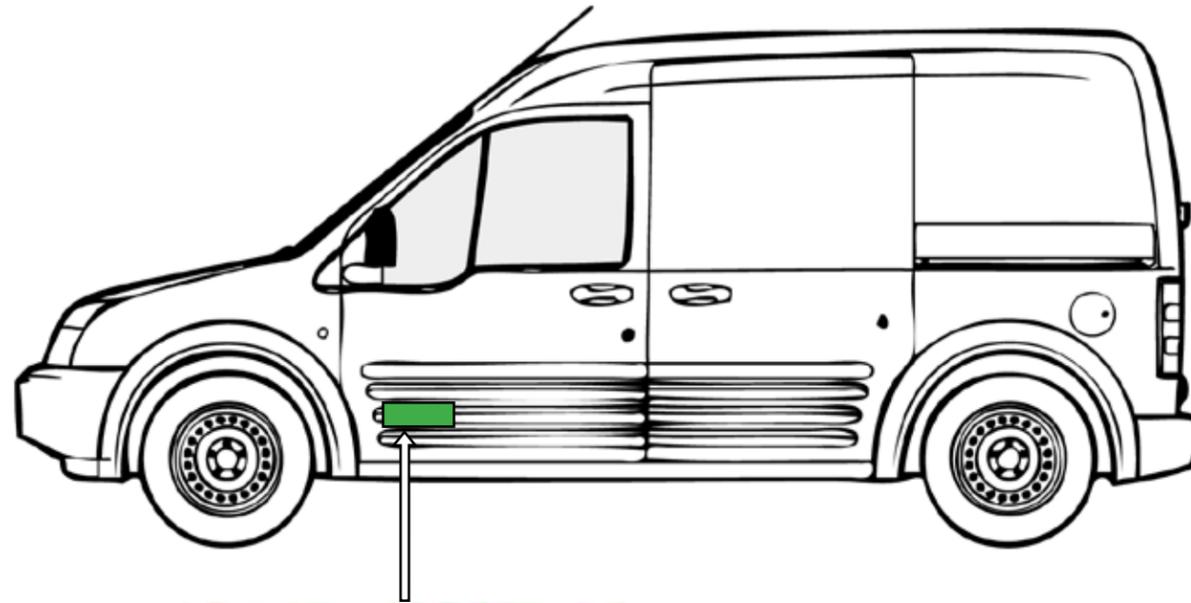


Example 1

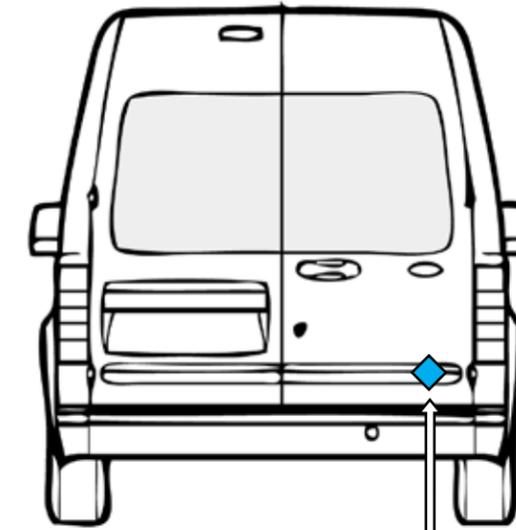


**Decal locations**

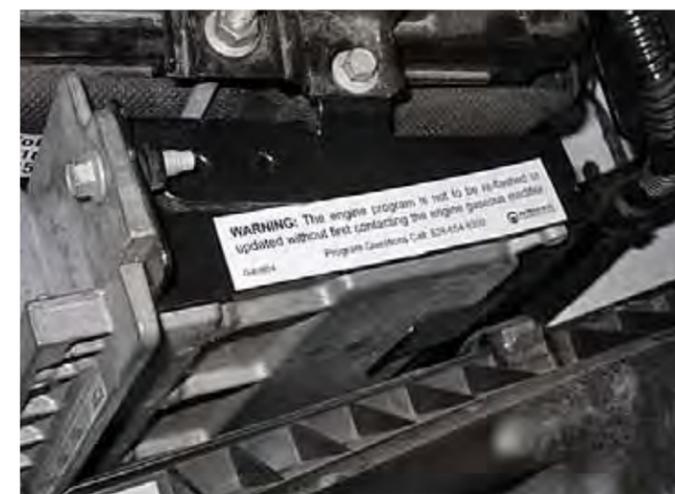
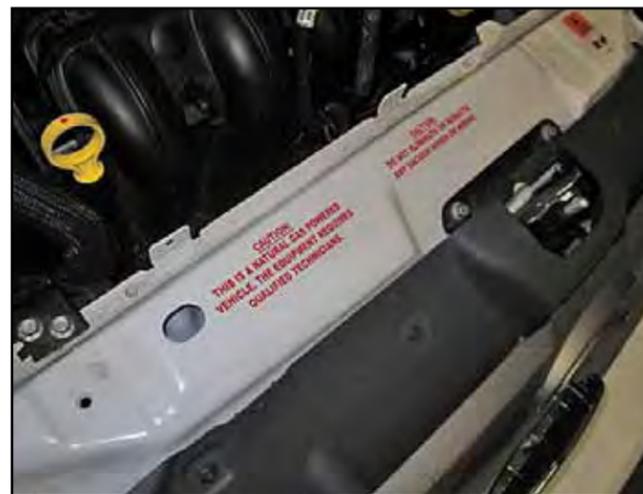
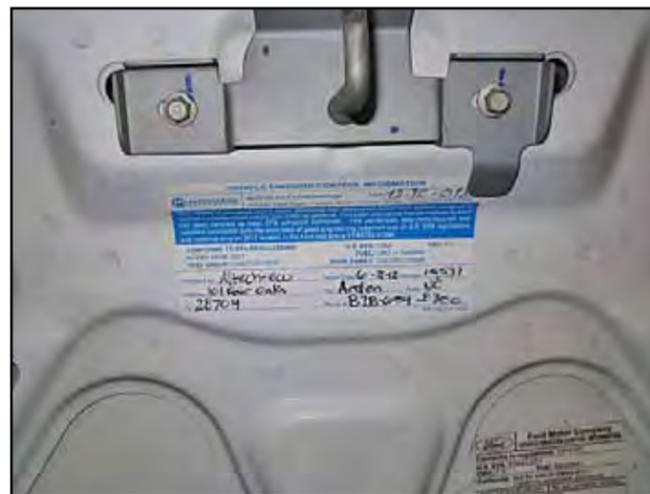
*Be sure to Clean surface before installation.*



NGV Decal goes on both sides of the vehicle inside the middle groove.



CNG Decal must go on the right side.



## LEAK CHECKING THE SYSTEM

After the AlTech-ECO CNG system has been installed on the vehicle, all fuel connections, fuel rails and injectors must be checked for leaks. Also check the overall installation of wiring, zip ties and components to make sure they are not loose or hanging.

Tools:

- Soapy Water Solution or Liquid Leak Check Solution
- Combustible Gas Leak Detector TPI 721 (Davis Instruments)
- Basic Hand Tools

1. Open the manual valve on the fuel tank. Using the appropriate size Torx bit, rotate the manual valve counter clockwise until fully open.
2. Fill the tank with CNG.
3. Check and verify that all installed hoses and fittings are not loose and are secure per torque specifications.
4. Double check and verify wiring is correct and secure with nothing hanging loose. Check that zip ties are snipped properly to avoid potential injury.
5. Pressurize the system by turning the ignition on but do not start the vehicle. This opens the solenoid and fills the lines.
6. Shut off the CNG at the cylinder (tank) manually (manual shut-off valve is located on the tank).
7. Use a methane detector, bubble soap, or other approved means to leak test all hoses, lines and fittings at connection points.
  - a. PASS: Continue to step 8.
  - b. FAIL: Turn off the vehicle ignition and double check that you have performed the manual shut-off on the cylinder (tank) valve. Locate any leak(s). Then, depressurize the system and correct the issue before continuing the leak test. Correcting a leak may simply require tightening (re-tightening) the hoses, lines or fittings. If a leak cannot be corrected, notify the appropriate personnel for further instructions.
8. Turn the ignition off, then back on and start the engine. This is to pressurize the lines again. While the engine is running, perform a leak test by using a methane detector, bubble soap, or other appropriate means.
  - a. PASS: Complete required paper work and notify your supervisor.
  - b. FAIL: Turn off the ignition and manually shut-off on the cylinder (tank) valve. Depressurize the system and correct any issues. After all corrections have been made, open the manual shut-off valve and start the engine. Run the leak test again. For un-repairable issues, notify appropriate personnel for further instructions.
9. Third party installers: After completing the final checklist, it is required that an original or a copy of the entire completed checklist be sent to AlTech-Eco. Failure to do so will void the warranty and may result in suspension of installer's license. For additional information, contact your supervisor.

Open manual valve counter-clockwise until fully open.



NOTES:

**PARTS LIST BI-FUEL**

**BI-FUEL DOUBLE CYLINDER (12.9)**

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		AEC_VCATRAN_C_v2
COOLANT HOSE Y'S	2	AEC-CHY
HOSE CLAMP,	4	AEC-HC14MM
HOSE CLAMP 5/8in	4	AEC-HC7-AV
COOLANT HOSE, 11x2	22ft	AEC-CH-B-H
HEAT SHIELD 1 1/4in	20in	AEC-HS1 1/4
CABLE TIE 7 1/2in	12	AEC-CT-7.5-A
P-CLAMP, 1 1/2	1	AEC-PC1 1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
FLEX GUARD SLEEVE	9ft	AEC-FG-20
VEHICLE WIRING ASSEMBLY		AEC_WHTRAN_CBi_DBLCYL
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-TRANS-A-BRK
FUSE BOX BRACKET	1	AEC-TRANS-FB-BRK
BRACKET BOLT 1/4-20 x 3/4	3	(175-H)
1/4-20 SHORT U-NUT	3	(111)
SHRINK TUBE 1/8in	6in	AEC-ST1/8DUAL-W
BI-FUEL MAIN HARNESS (2 CYL)	1	AEC-TRANSIT-BI-WH2-v2
REAR HARNESS (2 CYL)	1	AEC-TRANSIT-RWH2
SWITCH/GAUGE HARNESS	1	AEC-TRANSWGA-BI
INTERCEPTOR HARNESS	1	AEC-INJWH
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
CAN BUS PIG TAIL	1	AEC-CANBUS-INTERFACE
FUSE BOX BOLT, 10-32 x 5/8 BHCS	4	(183)
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
ZIP TIE, 7.5in	16	AEC-CT-7.5-A
O-RING (FOR FUEL GAUGE)	1	AEC-222
GROMMET, 5/8	1	AEC-5/8GR
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY)		AEC_TRANBi_C
CNG FUEL INJECTOR	4	AEC-INJ821-B
P-CLAMP 5/8	6	AEC-PC5/8
12-14 x 3/4 SELF TAPPING SCREW	6	(136-F)
9/16M x 3/8T 90° ELBOW	1	ISSD6MEST6

Product Description	Qty	AEC Part#
TRANSDUCER, 200psi	1	AEC-TRANS2TST
HOSE, LOW PRESSURE, 12 1/2ft	1	AEC-LPH150-P
SPLIT LOOM, 1/2in	12 1/2ft	AEC-LOOM1/2
TRANSIT BI-FUEL FUEL RAIL	1	AEC-FFT-FR-SOL-v3
INJECTOR CLIP	4	AEC-INJRETAINCLIP-4S
MANIFOLD ADAPTOR PLATE	1	AEC-FOC-TR-MAP5
INTAKE MANIFOLD GASKET	4	AEC-IGFOCUS
EGR GASKET	1	AEC-EGR-4S
M8-1.25 x 60 CHFB	8	AEC-8.8-H
INTAKE SPACER	1	AEC-IS
VEHICLE FUEL FILL ASSEMBLY		AEC_VFFTRAN_C
FILL RECEPTACLE HOUSING	1	AEC-FRH
FILL RETAINING RING	1	AEC-FRR
RECEPTACLE, 3600psi	1	AEC-LD36
6 SAE x 6 ORFS	1	S6GC-CNG
HOSE, HIGH PRESSURE, 48in, BLACK	1	AEC-HPH48ORFS
10-32 x 3/4 FHSC FLAT HEAD SOCKET CAP	6	(182)
P-CLAMP 1/2in	4	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	4	(136-F)
GROMMET, 1in, REAR BUMPER	1	AEC-1GR
CNG ONLY STICKER	1	AEC-CNGONLY-1
VEHICLE REGULATOR ASSEMBLY		AEC_TRANREG2.0_C_v2
HPR BRACKET	1	AEC-TCRBK
HIGH PRESSURE REGULATOR, 125psi	1	AEC-HPR125
9/16 SAE x 9/16 SAE MALE ADPT	1	ISST6MST-CNG
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
6 MSAE x 6 ORFS x 6 ORFS x 6 FSAE CROSS	1	ZXALT800013
CHECK VALVE, POPPET, 6 ORFS	1	CH8S6SS6-1-316-CNG
TRANSDUCER 3600psi	1	AEC-TRANS5TST
3/8T x 3/4 SAE 90° ELBOW	1	SS-600-2-8ST
M8-1.25 x 20 CHFB	2	(157-H)
5/16-24 x 3/4 CHFB	2	(156-F)
WARNING STICKER RED/WHITE	1	WHPSTKR

Product Description	Qty	AEC Part#
WARNING STICKER RED/ALUM	1	AEC-FHS
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CNG CYLINDER ASSEMBLY)		AEC_VHPTRAN_C_DBL-CYL_12.9
P-CLAMP, 1 1/4in	1	AEC-PC1 1/4
12-14 x 1 SELF TAPPING SCREW	4	(135-H)
P-CLAMP, 1/2	1	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
HOSE CLAMP, 1 1/2in	5	AEC-HC1 1/2
TUBE SPACER, 3.5in	2	AEC-TRANSIT-TSP
1/2-13 x 1 1/4 CHFB	16	(117-H)
1/2-13 x 1 3/4 CHFB	4	(146)
1/2-13 x 2 1/2 CHFB	8	(160)
1/2-13 x 4 1/2 CHFB	2	(167)
CYL BACKING PLATE, 4x7 v2	4	AEC-SP2X2X1/8
CYL BACKING PLATE, 4x7 v2	2	AEC-CBPS4X7-v2
RIB SPACER	1	AEC-RIBSP
1/2 SAE FLAT WASHER	30	(040)
1/2-13 NYLOCK NUT	30	(043)
3/8 USS FLAT WASHER	6	(025-H)
7/16-14 NYLOCK NUT	6	(032)
CYL BASE PLATE	1	AEC-TRANS-CPDC
CNG CYLINDER (12.9 x 43) BARE	2	12.9 x 43
2in CYL PLUG, O-RING	2	PLUG CYL 2 REDUCER
12.7 BOX BRACKET SET	2	12.7-BOXBRKT
CNG CYLINDER VALVE	2	AEC-VEGA
FLANGE ADAPTOR	1	AEC-T1-147
6 SAE x 6 ORFS 90° ELBOW	1	6 C5OLO-SS
6 SAE x 6 ORFS 45° ELBOW	1	6 V5OLO-SS
6 SAE x 6 ORFS CONNECTOR	1	6 F5OLO-SS
6 SAE x 3/8T SAE MALE CONNECTOR	2	ISSD6MCST6
6 SAE HEX PLUG	1	ISST6GP
HIGH PRESSURE HOSE, 24in	1	AEC-HPH24ORFS
HIGH PRESSURE HOSE, 30in	1	AEC-HPH30ORFS
3/8 STAINLESS STEEL TUBE 16in	1	SS-T6-S-049-20
3/8 STAINLESS STEEL TUBE 17in	1	SS-T6-S-049-20

## PARTS LIST BI-FUEL

Product Description	Qty	AEC Part#
GROMMET, 5/8	2	AEC-5/8GR
VINYL CAP FOR VEGA VALVE	1	AEC-VCVALVE
PRD TUBE CAP	2	AEC-VCPRD
VENT TUBE 24in	1	AEC-VT
VENT TUBE 15in	1	AEC-VT
VEHICLE CYLINDER COVER		AEC_VCCTRAN_12.9
12-14 x 1 1/4 SELF TAPPING SCREW	8	(177-H)
CYL. COVER, DOUBLE CYLINDER	1	AEC-TCDC-12.9
QVM COVER STICKER	2	AEC-G-D0609
1/2-20 x 3/4 CHFB	4	(175-H)
1/4-20 SHORT U-NUT	4	(111)
VEHICLE KIT INFORMATION		AEC_VKITRAN_CB_Bi
MOUNT PLATE/VENTING TEMPLATE	1	AEC-TCPRD-DC
FUEL FILL TEMPLATE	1	AEC-TC-FFT
INSTALLATION MANUAL	1	AEC-TCINSTALL
BI-FUEL MAIN WIRING HARNESS DIAGRAM	1	AEC-TRANBi-MHD-v2
PCM PIN-OUT REFERENCE	1	AEC-PCMPR
OWNERS MANUAL	1	AEC-TCOWNER
BLUE CNG DECAL	1	AEC-CNG-STKR
2012 EPA CONVERSION STICKER	1	
NGV DECAL GREEN	2	AEC-NGVSTKR
DO NOT ELIMINATE	1	ELREV
UP TO 150psi STICKER YELLOW	2	AEC-PSI150
3600psi STICKER RED	2	AEC-PSI3600-1

### BI-FUEL DOUBLE CYLINDER (15.9)

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		AEC_VCATRAN_C_v2
COOLANT HOSE Y'S	2	AEC-CHY
HOSE CLAMP,	4	AEC-HC14MM
HOSE CLAMP 5/8in	4	AEC-HC7-AV
COOLANT HOSE, 11x2	22ft	AEC-CH-B-H
HEAT SHIELD 1 1/4in	20in	AEC-HS1 1/4
CABLE TIE 7 1/2in	12	AEC-CT-7.5-A

Product Description	Qty	AEC Part#
P-CLAMP, 1 1/2	1	AEC-PC1 1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
FLEX GUARD SLEEVE	9ft	AEC-FG-20
VEHICLE WIRING ASSEMBLY		AEC_WHTRAN_CBi_DBLCYL
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-TRANS-A-BRK
FUSE BOX BRACKET	1	AEC-TRANS-FB-BRK
BRACKET BOLT 1/4-20 x 3/4	3	(175-H)
1/4-20 SHORT U-NUT	3	(111)
SHRINK TUBE 1/8in	6in	AEC-ST1/8DUAL-W
BI-FUEL MAIN HARNESS (2 CYL)	1	AEC-TRANSIT-BI-WH2-v2
REAR HARNESS (2 CYL)	1	AEC-TRANSIT-RWH2
SWITCH/GAUGE HARNESS	1	AEC-TRANWGA-BI
INTERCEPTOR HARNESS	1	AEC-INJWH
BI-FUEL SWITCH	1	AEC-AFCM-BI-SWITCH
CAN BUS PIG TAIL	1	AEC-CANBUS-INTERFACE
FUSE BOX BOLT, 10-32 x 5/8 BHCS	4	(183)
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
ZIP TIE, 7.5in	16	AEC-CT-7.5-A
O-RING (FOR FUEL GAUGE)	1	AEC-222
GROMMET, 5/8	1	AEC-5/8GR
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY)		AEC_TRANBi_C
CNG FUEL INJECTOR	4	AEC-INJ821-B
P-CLAMP 5/8	6	AEC-PC5/8
12-14 x 3/4 SELF TAPPING SCREW	6	(136-F)
9/16M x 3/8T 90° ELBOW	1	ISSD6MEST6
TRANSDUCER, 200psi	1	AEC-TRANS2TST
HOSE, LOW PRESSURE, 12 1/2ft	1	AEC-LPH150-P
SPLIT LOOM, 1/2in	12 1/2ft	AEC-LOOM1/2
TRANSIT BI-FUEL FUEL RAIL	1	AEC-FFT-FR-SOL-v3
INJECTOR CLIP	4	AEC-INJRETAINCLIP-4S
MANIFOLD ADAPTOR PLATE	1	AEC-FOC-TR-MAP5
INTAKE MANIFOLD GASKET	4	AEC-IGFOCUS
EGR GASKET	1	AEC-EGR-4S

Product Description	Qty	AEC Part#
M8-1.25 x 60 CHFB	8	AEC-8.8-H
INTAKE SPACER	1	AEC-IS
VEHICLE FUEL FILL ASSEMBLY		AEC_VFFTRAN_C
FILL RECEPTACLE HOUSING	1	AEC-FRH
FILL RETAINING RING	1	AEC-FRR
RECEPTACLE, 3600psi	1	AEC-LD36
6 SAE x 6 ORFS	1	S6GC-CNG
HOSE, HIGH PRESSURE, 48in, BLACK	1	AEC-HPH48ORFS
10-32 x 3/4 FHSC FLAT HEAD SOCKET CAP	6	(182)
P-CLAMP 1/2in	4	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	4	(136-F)
GROMMET, 1in, REAR BUMPER	1	AEC-1GR
CNG ONLY STICKER	1	AEC-CNGONLY-1
VEHICLE REGULATOR ASSEMBLY		AEC_TRANREG2.0_C_v2
HPR BRACKET	1	AEC-TCRBK
HIGH PRESSURE REGULATOR, 125psi	1	AEC-HPR125
9/16 SAE x 9/16 SAE MALE ADPT	1	ISST6MST-CNG
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
6 MSAE x 6 ORFS x 6 ORFS x 6 FSAE CROSS	1	ZXALT800013
CHECK VALVE, POPPET, 6 ORFS	1	CH8S6SS6-1-316-CNG
TRANSDUCER 3600psi	1	AEC-TRANS5TST
3/8T x 3/4 SAE 90° ELBOW	1	SS-600-2-8ST
M8-1.25 x 20 CHFB	2	(157-H)
5/16-24 x 3/4 CHFB	2	(156-F)
WARNING STICKER RED/WHITE	1	WHPSTKR
WARNING STICKER RED/ALUM	1	AEC-FHS
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CNG CYLINDER ASSEMBLY)		AEC_VHPTRAN_C_DBL-CYL_15.9
VENT TUBE, 36in	1	AEC-VT
VENT TUBE, 16in	1	AEC-VT
P-CLAMP, 1 1/4in	1	AEC-PC1 1/4
12-14 x 1 SELF TAPPING SCREW	4	(135-H)
6 SAE HEX PLUG	1	ISST6GP

**PARTS LIST BI-FUEL**

Product Description	Qty	AEC Part#
6 SAE x 6 ORFS 45° ELBOW	2	6 V5OLO-SS
6 SAE x 6 ORFS 90° ELBOW	1	6 C5OLO-SS
HIGH PRESSURE HOSE, 30in	1	AEC-HPH30ORFS
HIGH PRESSURE HOSE, 44in	1	AEC-HPH44ORFS
6 SAE x 3/8T SAE MALE CONNECTOR	2	ISSD6MCST6
3/8 STAINLESS STEEL TUBE, 13in	1	AEC-PRD13
3/8 STAINLESS STEEL TUBE, 17in	1	AEC-PRD17
GROMMET, 5/8	2	AEC-5/8GR
VINYL CAP FOR VEGA VALVE	1	AEC-VCVALVE
PRD TUBE CAP	2	AEC-VCPRD
P-CLAMP, 1/2	1	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
(16.1) STRAP BRACKET	2 sets	LX16104
CNG CYLINDER (15.9 x 42) BARE	2	15.9 x 42 BARE
CNG CYLINDER VALVE	2	AEC-VEGA
FLANGE ADAPTOR	1	AEC-T1-147
HOSE CLAMP, 1 1/2in	5	AEC-HC1 1/2
CYL BASE PLATE	1	AEC-TRANS-CPDC
TUBE SPACER, 3.5in	2	AEC-TRANSIT-TSP
1/2-13 x 5 CHFB	2	(122)
1/2-13 x 3 CHFB	4	(198)
1/2-13 x 1 1/4 CHFB	12	(117-H)
1/2 SAE FLAT WASHER	26	(040)
1/2-13 NYLOCK NUT	26	(043)
1/2-13 x 2 1/2 CHFB	8	(160)
7/16-14 NYLOCK NUT	6	(032)
3/8 USS FLAT WASHER	6	(025-H)
SPACER, 2 x 2 x 1/8	4	AEC-SP2X2X1/8
CYL BACKING PLATE, 4x7 v2	2	AEC-CBPS4X7-v2
RIB SPACER	1	AEC-RIBSP
VEHICLE CYLINDER COVER		AEC_VCCTRAN_15.9
12-14 x 1 1/4 SELF TAPPING SCREW	8	(177-H)
CYL. COVER, DOUBLE CYLINDER	1	AEC-TCDC-15.9
QVM COVER STICKER	2	AEC-G-D0609
1/2-20 x 3/4 CHFB	4	(175-H)

Product Description	Qty	AEC Part#
1/4-20 SHORT U-NUT	4	(111)
VEHICLE KIT INFORMATION		AEC_VKITRAN_CB_Bi
MOUNT PLATE/VENTING TEMPLATE	1	AEC-TCPRDT-DC
FUEL FILL TEMPLATE	1	AEC-TC-FFT
INSTALLATION MANUAL	1	AEC-TCINSTALL
BI-FUEL MAIN WIRING HARNESS DIAGRAM	1	AEC-TRANBi-MHD-v2
PCM PIN-OUT REFERENCE	1	AEC-PCMPR
OWNERS MANUAL	1	AEC-TCOWNER
BLUE CNG DECAL	1	AEC-CNG-STKR
2012 EPA CONVERSION STICKER	1	
NGV DECAL GREEN	2	AEC-NGVSTKR
DO NOT ELIMINATE	1	ELREV
UP TO 150psi STICKER YELLOW	2	AEC-PSI150
3600psi STICKER RED	2	AEC-PSI3600-1

**BI-FUEL SINGLE CYLINDER**

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		AEC_VCATRAN_C_v2
COOLANT HOSE Y'S	2	AEC-CHY
HOSE CLAMP, 3/8in	4	AEC-HC14MM
HOSE CLAMP 5/8in	4	AEC-HC7-AV
COOLANT HOSE, 11x2	22ft	AEC-CH-B-H
HEAT SHIELD 1 1/4in	20in	AEC-HS1 1/4
CABLE TIE 7 1/2in	12	AEC-CT-7.5-A
P-CLAMP, 1 1/2	1	AEC-PC1 1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
FLEX GUARD SLEEVE	9ft	AEC-FG-20
VEHICLE WIRING ASSEMBLY		AEC_WHTRAN_CBi
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-TRANS-A-BRK
FUSE BOX BRACKET	1	AEC-TRANS-FB-BRK
BRACKET BOLT 1/4-20 x 3/4	3	(175-H)
1/4in-20 SHORT U-NUT	3	(111)
SHRINK TUBE	6in	AEC-1/8DUAL-W

Product Description	Qty	AEC Part#
BI-FUEL MAIN HARNESS	1	AEC-TRANSIT-BI-WH
REAR HARNESS	1	AEC-TRANSIT-RWH-DBLCYL
SWITCH/GAUGE HARNESS	1	AEC-TRANSIT-SWGA-BI
INTERCEPTOR HARNESS	1	AEC-INJWH
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
CAN BUS PIG TAIL	1	AEC-CANBUS-INTERFACE
FUSE BOX BOLT, 10-32 x 5/8 BHCS	4	(183)
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
ZIP TIE, 7.5in	16	AEC-CT-7.5-A
O-RING (FOR FUEL GAUGE)	1	AEC-222
GROMMET, 5/8in	1	AEC-5/8 GR
DO NOT REFLASH	1	ARC
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		AEC_TRANBi_C
CNG FUEL INJECTOR	4	AEC-INJ821-B
P-CLAMP 5/8	6	AEC-PC5/8
12-14 x 3/4 SELF TAPPING SCREW	6	(136-F)
9/16M x 3/8T 90° ELBOW	1	ISSD6MEST6
TRANSDUCER, 200psi	1	AEC-TRANS2TST
HOSE, LOW PRESSURE, 12 1/2ft	1	AEC-LPH150-P
SPLIT LOOM, 1/2in	12 1/2ft	AEC-LOOM1/2
TRANSIT BI-FUEL FUEL RAIL	1	AEC-FFT-FR-SOL-v3
INJECTOR CLIP	4	AEC-INJRETAINCLIP-4S
MANIFOLD ADAPTOR PLATE	1	AEC-FOC-TR-MAP5
INTAKE MANIFOLD GASKET	4	AEC-IGFOCUS
EGR GASKET	1	AEC-EGR-4S
M8-1.25 x 60 CHFB	8	AEC-8.8-H
INTAKE SPACER	1	AEC-IS
VEHICLE FUEL FILL ASSEMBLY		AEC_VFFTRAN_CBi
PUSH MOUNT CABLE TIE, 8in	5	AEC-CTPM-8
FILL RECEPTACLE HOUSING	1	AEC-FRH
FILL RETAINING RING	1	AEC-FRR
RECEPTACLE, 3600psi	1	AEC-LD36
6 SAE x 6 ORFS	1	S6GC-CNG
HOSE, HIGH PRESSURE, 48in, BLACK	1	AEC-HPH48ORFS

**PARTS LIST BI-FUEL**

Product Description	Qty	AEC Part#
10-32 x 3/4 FHSC FLAT HEAD SOCKET CAP SCREW	6	(182)
P-CLAMP 1/2in	3	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	3	(136-F)
GROMMET, 1in, REAR BUMPER	1	AEC-1GR
CNG ONLY STICKER	1	AEC-CNGONLY-1
VEHICLE REGULATOR ASSEMBLY		AEC_TRANREG2.0_C_v2
HPR BRACKET	1	AEC-TCRBK
HIGH PRESSURE REGULATOR, 125psi	1	AEC-HPR125
9/16 SAE x 9/16 SAE MALE ADPT	1	ISST6MST-CNG
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
6 MSAE x 6 ORFS x 6 ORFS x 6 FSAE CROSS	1	ZXALT800013
CHECK VALVE, POPPET, 6 ORFS	1	CH8S6SS6-1-316-CNG
TRANSDUCER 3600psi	1	AEC-TRANS5TST
3/8T x 3/4 SAE 90° ELBOW	1	SS-600-2-8ST
M8-1.25 x 20 CHFB	2	(157-H)
5/16-24 x 3/4 CHFB	2	(156-F)
WARNING STICKER RED/WHITE	1	WHPSTKR
WARNING STICKER RED/ALUM	1	AEC-FHS
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CNG CYLINDER ASSEMBLY)		AEC_VHPTRAN_Cbi
TRANSIT SINGLE CYLINDER PLATE (18.4 x 49)	1	AEC-TRANS-CPSC
TRANSIT TUBE SPACER 3.5in	2	AEC-TRANSIT-TSP
CNG CYLINDER (18.4 x 49)	1	240101-038
CNG CYLINDER VALVE	1	AEC-VEGA
CYLINDER PLUG, 2in	1	16065-90
STRAP ANGLE BRACKET, 18in	1set	18.4-STRAPBRKT-C
9/16 SAE HEX PLUG	1	ISST6GP
12-14 x 1 1/4 SELF TAPPING SCREW	8	(177-H)
12-14 x 1 SELF TAPPING SCREW	3	(135-H)
FLANGE ADAPTOR	1	AEC-T1-147
GROMMET, 5/8in	1	AEC-5/8 GR

Product Description	Qty	AEC Part#
3/8T x 9/16 SAE MALE CONNECTOR	1	ISSD6MCST6
6 ORFS x 6 SAE	1	S6GC-CNG
PRD TUBE, 18 1/4	1	AEC-PRD18 1/4
CYLINDER COVER, SINGLE CYL	1	AEC-TCSCC
HOSE, HIGH PRESSURE 36in, O-RING FACE SEAL, BLK	1	AEC-HPH36ORFS
VINYL CAP 1-1 1/16in	1	AEC-VCVALVE
VINYL CAP 5/16-3/8in	1	AEC-VPRD
HOSE CLAMP, 1 1/2in	3	AEC-HC1 1/2
VENT TUBE, 20in	1	AEC-VT
SPACER PLATE 2x2x1/8	2	AEC-SP2x2x1/8
CYL BACKING PLATE SINGLE 4x7 v. 2	2	AEC-CBPS4X7-V2
1/2-13 x 3 CHFB	4	(198)
1/2-13 x 6 CHFB	2	(199)
1/2-13 NYLOCK	8	(043)
1/2 SAE F/W	14	(040)
QVM COVER STICKER	2	AEC-G-D0609
VEHICLE KIT INFORMATION		AEC_VKITRAN_Cbi
VENT/REGULATOR BRACKET TEMPLATE	1	AEC-TC-VTRT
FUEL FILL TEMPLATE	1	AEC-TC-FFT
INSTALLATION MANUAL	1	AEC-TCINSTALL
BI-FUEL MAIN WIRING HARNESS DIAGRAM	1	AEC-TRANBi-MHD-v2
PCM PIN-OUT REFERENCE	1	AEC-PCMPR
OWNERS MANUAL	1	AEC-TCOWNER
BLUE CNG DECAL	1	AEC-CNG-STKR
2012 EPA CONVERSION STICKER	1	
NGV DECAL GREEN	2	AEC-NGVSTKR
DO NOT ELIMINATE	1	ELREV
UP TO 150psi STICKER YELLOW	2	AEC-PSI150
3600psi STICKER RED	2	AEC-PSI3600-1

**PARTS LIST DEDICATED**

**DEDICATED DOUBLE CYLINDER (12.9)**

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		AEC_VCATRAN_C_v2
COOLANT HOSE Y'S	2	AEC-CHY
HOSE CLAMP, 3/8in	4	AEC-HC14MM
HOSE CLAMP 5/8in	4	AEC-HC7-AV
COOLANT HOSE, 11x2	22ft	AEC-CH-B-H
HEAT SHIELD 1 1/4in	20in	AEC-HS1 1/4
CABLE TIE 7 1/2in	12	AEC-CT-7.5-A
P-CLAMP, 1 1/2	1	AEC-PC1 1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
FLEX GUARD SLEEVE	9ft	AEC-FG-20
VEHICLE WIRING ASSEMBLY		AEC_WHTRAN_CD_DBLCYL
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-TRANS-A-BRK
FUSE BOX BRACKET	1	AEC-TRANS-FB-BRK
BRACKET BOLT 1/4-20 x 3/4	3	(175-H)
1/4-20 SHORT U-NUT	3	(111)
SHRINK TUBE 1/8in	6in	AEC-ST1/8DUAL-W
DEDICATED MAIN HARNESS (2 CYL)	1	AEC-TRANSIT-Ded-WH2-v2
REAR HARNESS (2 CYL)	1	AEC-TRANSIT-RWH2
GAUGE HARNESS	1	AEC-TRANGH-DED
JUMPER	4	AEC-JWH
CAN BUS PIG TAIL	1	AEC-CANBUS-INTERFACE
FUSE BOX BOLT, 10-32 x 5/8 BHCS	4	(183)
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
ZIP TIE, 7.5in	16	AEC-CT-7.5-A
O-RING (FOR FUEL GAUGE)	1	AEC-222
GROMMET, 5/8	1	AEC-5/8GR
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		AEC_TRANDED_C
CNG FUEL INJECTOR	4	AEC-INJ821-B
INJECTOR CLIP	4	AEC-INJRETAINCLIP-4S
P-CLAMP 5/8	6	AEC-PC5/8
12-14 x 3/4 SELF TAPPING SCREW	6	(136-F)

Product Description	Qty	AEC Part#
9/16M x 3/8T 90° ELBOW	1	ISSD6MEST6
200psi TRANSDUCER	1	AEC-TRANS2TST
HOSE, LOW PRESSURE, 12 1/2ft	1	AEC-LPH150-P
SPLIT LOOM, 1/2in	12 1/2ft	AEC-LOOM 1/2
INJECTOR ADAPTOR EXTENSION	4	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	4	AEC-INJ821ORINGBRN
FUEL RAIL	1	AEC-DEDFT-FR
GASOLINE LINE PLUG	1	AEC-TF-GLP
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
VEHICLE FUEL FILL ASSEMBLY		AEC_VFFTRAN_C
PUSH MOUNT CABLE TIE, 8in	5	AEC-CTPM-8
FILL RECEPTACLE HOUSING	1	AEC-FRH
FILL RETAINING RING	1	AEC-FRR
RECEPTACLE, 3600psi	1	AEC-LD36
6 SAE x 6 ORFS	1	S6GC-CNG
HOSE, HIGH PRESSURE, 48in, BLACK	1	AEC-HPH48ORFS
10-32 x 3/4 FHSC FLAT HEAD SOCKET CAP SCREW	6	(182)
P-CLAMP 1/2in	4	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	4	(136-F)
GROMMET, 1in, REAR BUMPER	1	AEC-1GR
CNG ONLY STICKER	1	AEC-CNGONLY-1
VEHICLE REGULATOR ASSEMBLY		AEC_TRANREG2.0_C_v2
HPR BRACKET	1	AEC-TCRBK
HIGH PRESSURE REGULATOR, 125psi	1	AEC-HPR125
9/16 SAE x 9/16 SAE MALE ADPT	1	ISST6MST-CNG
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
6 MSAE x 6 ORFS x 6 ORFS x 6 FSAE CROSS	1	ZXALT800013
CHECK VALVE, POPPET, 6 ORFS	1	CH8S6SS6-1-316-CNG
TRANSDUCER 3600psi	1	AEC-TRANS5TST
3/8T x 3/4 SAE 90° ELBOW	1	SS-600-2-8ST
M8-1.25 x 20 CHFB	2	(157-H)
5/16-24 x 3/4 CHFB	2	(156-F)

Product Description	Qty	AEC Part#
WARNING STICKER RED/WHITE	1	WHPSTKR
WARNING STICKER RED/ALUM	1	AEC-FHS
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CNG CYLINDER ASSEMBLY)		AEC_VHPTRAN_C_DBL-CYL_12.9
P-CLAMP, 1 1/4in	1	AEC-PC1 1/4
12-14 x 1 SELF TAPPING SCREW	4	(135-H)
P-CLAMP, 3/8	1	AEC-PC3/8
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
HOSE CLAMP, 1 1/2in	5	AEC-HC1 1/2
TUBE SPACER, 3.5in	2	AEC-TRANSIT-TSP
1/2-13 x 1 1/4 CHFB	16	(117-H)
1/2-13 x 1 3/4 CHFB	4	(146)
1/2-13 x 2 1/2 CHFB	8	(160)
1/2-13 x 4 1/2 CHFB	2	(167)
CYL BACKING PLATE, 4x7 v2	4	AEC-SP2X2X1/8
CYL BACKING PLATE, 4x7 v2	2	AEC-CBPS4X7-v2
RIB SPACER	1	AEC-RIBSP
1/2 SAE FLAT WASHER	30	(040)
1/2-13 NYLOCK NUT	30	(043)
3/8 USS FLAT WASHER	6	(025-H)
7/16-14 NYLOCK NUT	6	(032)
CYL BASE PLATE	1	AEC-TRANS-CPDC
CNG CYLINDER (12.9 x 43) BARE	2	12.9 x 43
2in CYL PLUG, O-RING	2	PLUG CYL 2 REDUCER
12.7 BOX BRACKET SET	2	12.7-BOXBRKT
CNG CYLINDER VALVE	2	AEC-VEGA
FLANGE ADAPTOR	1	AEC-T1-147
6 SAE x 6 ORFS 90° ELBOW	1	6 C5OLO-SS
6 SAE x 6 ORFS 45° ELBOW	1	6 V5OLO-SS
6 SAE x 6 ORFS CONNECTOR	1	6 F5OLO-SS
6 SAE x 3/8T SAE MALE CONNECTOR	2	ISSD6MCST6
6 SAE HEX PLUG	1	ISST6GP
HIGH PRESSURE HOSE, 24in	1	AEC-HPH24ORFS
HIGH PRESSURE HOSE, 30in	1	AEC-HPH30ORFS
3/8 STAINLESS STEEL TUBE 16in	1	SS-T6-S-049-20
3/8 STAINLESS STEEL TUBE 17in	1	SS-T6-S-049-20

**PARTS LIST DEDICATED**

Product Description	Qty	AEC Part#
GROMMET, 5/8	2	AEC-5/8GR
VINYL CAP FOR VEGA VALVE	1	AEC-VCVALVE
PRD TUBE CAP	2	AEC-VCPRD
VENT TUBE 24in	1	AEC-VT
VENT TUBE 15in	1	AEC-VT
VEHICLE CYLINDER COVER		AEC_VCCTRAN_12.9
12-14 x 1 1/4 SELF TAPPING SCREW	8	(177-H)
CYL. COVER, DOUBLE CYLINDER	1	AEC-TCDC-15.9
QVM COVER STICKER	2	AEC-G-D0609
1/2-20 x 3/4 CHFB	4	(175-H)
1/4-20 SHORT U-NUT	4	(111)
VEHICLE KIT INFORMATION		AEC_VKITRAN_CD
MOUNT PLATE/VENTING TEMPLATE	1	AEC-TCPRD-DC
FUEL FILL TEMPLATE	1	AEC-TC-FFT
INSTALLATION MANUAL	1	AEC-TCINSTALL
DEDICATED MAIN WIRING HARNESS DIAGRAM	1	AEC-TRANDED-MHD-v2
PCM PIN-OUT REFERENCE	1	AEC-PCMPR
OWNERS MANUAL	1	AEC-TCOWNER
BLUE CNG DECAL	1	AEC-CNG-STKR
DEDICATED 2012 EPA CONVERSION STICKER	1	
NGV DECAL GREEN	2	AEC-NGVSTKR
DO NOT ELIMINATE	1	ELREV
UP TO 150psi STICKER YELLOW	2	AEC-PSI150
3600psi STICKER RED	2	AEC-PSI3600-1

**DEDICATED DOUBLE CYLINDER (15.9)**

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		AEC_VCATRAN_C_v2
COOLANT HOSE Y'S	2	AEC-CHY
HOSE CLAMP	4	AEC-HC14MM
HOSE CLAMP 5/8in	4	AEC-HC7-AV
COOLANT HOSE, 11x2	22ft	AEC-CH-B-H
HEAT SHIELD 1 1/4in	20in	AEC-HS1 1/4

Product Description	Qty	AEC Part#
CABLE TIE 7 1/2in	12	AEC-CT-7.5-A
P-CLAMP, 1 1/2	1	AEC-PC1 1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
FLEX GUARD SLEEVE	9ft	AEC-FG-20
VEHICLE WIRING ASSEMBLY		AEC_WHTRAN_CD_DBLCYL
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-TRANS-A-BRK
FUSE BOX BRACKET	1	AEC-TRANS-FB-BRK
BRACKET BOLT 1/4-20 x 3/4	3	(175-H)
1/4-20 SHORT U-NUT	3	(111)
SHRINK TUBE 1/8in	6in	AEC-ST1/8DUAL-W
DEDICATED MAIN WIRING HARNESS (NO OBD II CONN)	1	AEC-TRANSIT-Ded-WH-v2
REAR HARNESS (2 CYL)	1	AEC-TRANSIT-RWH2
GAUGE HARNESS	1	AEC-TRANGH-DED
JUMPER	4	AEC-JWH
CAN BUS PIG TAIL	1	AEC-CANBUS-INTERFACE
FUSE BOX BOLT, 10-32 x 5/8 BHCS	4	(183)
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
ZIP TIE, 7.5in	16	AEC-CT-7.5-A
O-RING (FOR FUEL GAUGE)	1	AEC-222
DO NOT REFLASH	1	AEC-G-E0604-1
GROMMET, 5/8	1	AEC-5/8GR
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		AEC_TRANDED_C
CNG FUEL INJECTOR	4	AEC-INJ821-B
INJECTOR CLIP	4	AEC-INJRETAINCLIP-4S
P-CLAMP 5/8	6	AEC-PC5/8
12-14 x 3/4 SELF TAPPING SCREW	6	(136-F)
9/16M x 3/8T 90° ELBOW	1	ISSD6MEST6
200psi TRANSDUCER	1	AEC-TRANS2TST
HOSE, LOW PRESSURE, 12 1/2ft	1	AEC-LPH150-P
SPLIT LOOM, 1/2in	12 1/2ft	AEC-LOOM 1/2
INJECTOR ADAPTOR EXTENSION	4	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	4	AEC-INJ821ORINGBRN

Product Description	Qty	AEC Part#
FUEL RAIL	1	AEC-DEDFT-FR
GASOLINE LINE PLUG	1	AEC-TF-GLP
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
VEHICLE FUEL FILL ASSEMBLY		AEC_VFFTRAN_C
PUSH MOUNT CABLE TIE, 8in	5	AEC-CTPM-8
FILL RECEPTACLE HOUSING	1	AEC-FRH
FILL RETAINING RING	1	AEC-FRR
RECEPTACLE, 3600psi	1	AEC-LD36
6 SAE x 6 ORFS	1	S6GC-CNG
HOSE, HIGH PRESSURE, 48in, BLACK	1	AEC-HPH48ORFS
10-32 x 3/4 FHSC FLAT HEAD SOCKET CAP SCREW	6	(182)
P-CLAMP 1/2in	4	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	4	(136-F)
GROMMET, 1in, REAR BUMPER	1	AEC-1GR
CNG ONLY STICKER	1	AEC-CNGONLY-1
VEHICLE REGULATOR ASSEMBLY		AEC_TRANREG2.0_C_v2
HPR BRACKET	1	AEC-TCRBK
HIGH PRESSURE REGULATOR, 125psi	1	AEC-HPR125
9/16 SAE x 9/16 SAE MALE ADPT	1	ISST6MST-CNG
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
6 MSAE x 6 ORFS x 6 ORFS x 6 FSAE CROSS	1	ZXALT800013
CHECK VALVE, POPPET, 6 ORFS	1	CH8S6SS6-1-316-CNG
TRANSDUCER 3600psi	1	AEC-TRANS5TST
3/8T x 3/4 SAE 90° ELBOW	1	SS-600-2-8ST
M8-1.25 x 20 CHFB	2	(157-H)
5/16-24 x 3/4 CHFB	2	(156-F)
WARNING STICKER RED/WHITE	1	WHPSTKR
WARNING STICKER RED/ALUM	1	AEC-FHS
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CNG CYLINDER ASSEMBLY)		AEC_VHPTRAN_C_DBL-CYL_15.9
VENT TUBE, 36in	1	AEC-VT
VENT TUBE, 16in	1	AEC-VT
P-CLAMP, 1 1/4in	1	AEC-PC1 1/4

**PARTS LIST DEDICATED**

Product Description	Qty	AEC Part#
12-14 x 1 SELF TAPPING SCREW	4	(135-H)
6 SAE HEX PLUG	1	ISST6GP
6 SAE x 6 ORFS 45° ELBOW	2	6 V5OLO-SS
6 SAE x 6 ORFS 90° ELBOW	1	6 C5OLO-SS
HIGH PRESSURE HOSE, 30in	1	AEC-HPH30ORFS
HIGH PRESSURE HOSE, 44in	1	AEC-HPH44ORFS
6 SAE x 3/8T SAE MALE CONNECTOR	2	ISSD6MCST6
3/8 STAINLESS STEEL TUBE, 13in	1	AEC-PRD13
3/8 STAINLESS STEEL TUBE, 17in	1	AEC-PRD17
GROMMET, 5/8	2	AEC-5/8GR
VINYL CAP FOR VEGA VALVE	1	AEC-VCVALVE
PRD TUBE CAP	2	AEC-VCPRD
P-CLAMP, 1/2	1	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
(16.1) STRAP BRACKET	2 sets	LX16104
CNG CYLINDER (15.9 x 42) BARE	2	15.9 x 42 BARE
CNG CYLINDER VALVE	2	AEC-VEGA
FLANGE ADAPTOR	1	AEC-T1-147
HOSE CLAMP, 1 1/2in	5	AEC-HC1 1/2
CYL BASE PLATE	1	AEC-TRANS-CPDC
TUBE SPACER, 3.5in	2	AEC-TRANSIT-TSP
1/2-13 x 5 CHFB	2	(122)
1/2-13 x 3 CHFB	4	(198)
1/2-13 x 1 1/4 CHFB	12	(117-H)
1/2 SAE FLAT WASHER	26	(040)
1/2-13 NYLOCK NUT	26	(043)
1/2-13 x 2 1/2 CHFB	8	(160)
7/16-14 NYLOCK NUT	6	(032)
3/8 USS FLAT WASHER	6	(025-H)
SPACER, 2 x 2 x 1/8	4	AEC-SP2X2X1/8
RIB SPACER	1	AEC-RIBSP
CYL BACKING PLATE, 4x7 v2	2	AEC-CBPS4X7-v2
VEHICLE CYLINDER COVER		AEC_VCCTRAN_15.9
12-14 x 1 1/4 SELF TAPPING SCREW	8	(177-H)
CYL. COVER, DOUBLE CYLINDER	1	AEC-TCDC-15.9

Product Description	Qty	AEC Part#
QVM COVER STICKER	2	AEC-G-D0609
1/2-20 x 3/4 CHFB	4	(175-H)
1/4-20 SHORT U-NUT	4	(111)
VEHICLE KIT INFORMATION		AEC_VKITRAN_CD
MOUNT PLATE/VENTING TEMPLATE	1	AEC-TCPRDT-DC
FUEL FILL TEMPLATE	1	AEC-TC-FFT
DEDICATED MAIN WIRING HARNESS DIAGRAM	1	AEC-TRANDED-MHD-v2
PCM PIN-OUT REFERENCE	1	AEC-PCMPR
OWNERS MANUAL	1	AEC-TCOWNER
BLUE CNG DECAL	1	AEC-CNG-STKR
DEDICATED 2012 EPA CONVERSION STICKER	1	CAECT02.01DB
NGV DECAL GREEN	2	AEC-NGVSTKR
DO NOT ELIMINATE	1	ELREV
UP TO 150psi STICKER YELLOW	2	AEC-PSI150
3600psi STICKER RED	2	AEC-PSI3600-1

**DEDICATED SINGLE CYLINDER**

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		AEC_VCATRAN_C_v2
COOLANT HOSE Y'S	2	AEC-CHY
HOSE CLAMP, 3/8in	4	AEC-HC14MM
HOSE CLAMP 5/8in	4	AEC-HC7-AV
COOLANT HOSE, 11x2	22ft	AEC-CH-B-H
HEAT SHIELD 1 1/4in	20in	AEC-HS1 1/4
CABLE TIE 7 1/2in	12	AEC-CT-7.5-A
P-CLAMP, 1 1/2	1	AEC-PC1 1/2
12-14 x 3/4 SELF TAPPING SCREW	1	(136-F)
FLEX GUARD SLEEVE	9ft	AEC-FG-20
VEHICLE WIRING ASSEMBLY		AEC_WHTRAN_CD
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-TRANS-A-BRK
BRACKET BOLT 1/4-20 x 3/4	3	(175-H)
1/4in-20 SHORT U-NUT	3	(111)
SHRINK TUBE 1/8in	6in	AEC-ST1/8DUAL-W

Product Description	Qty	AEC Part#
DEDICATED MAIN WIRING HARNESS (NO OBD II CONN)	1	AEC-TRANSIT-DED-WH-v2
REAR HARNESS	1	AEC-TRANSIT-RWH
GAUGE HARNESS	1	AEC-TRANGH-DED
INJECTOR JUMPER	4	AEC-JWH
CAN BUS PIGTAIL	1	AEC-CANBUS-INTERFACE
FUSE BOX BOLT, 10-32 x 5/8 BHCS	4	(183)
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
O-RING	1	AEC-222
CABLE TIE, 7 1/2in	16	AEC-CT-7.5-A
PUSH MOUNT ZIP TIE, 8in	2	AEC-CTPM-8
FUSE BOX BRACKET	1	AEC-TRANS-FB-BRK
GROMMET, 5/8in	1	AEC-5/8GR
STKR: DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		AEC_TRANDED_C
CNG FUEL INJECTOR	4	AEC-INJ821-B
INJECTOR CLIP	4	AEC-INJRETAINCLIP-4S
P-CLAMP 5/8	6	AEC-PC5/8
12-14 x 3/4 SELF TAPPING SCREW	6	(136-F)
9/16M x 3/8T 90° ELBOW	1	ISSD6MEST6
200psi TRANSDUCER	1	AEC-TRANS2TST
HOSE, LOW PRESSURE, 12 1/2ft	1	AEC-LPH150-P
SPLIT LOOM, 1/2in	12 1/2ft	AEC-LOOM 1/2
INJECTOR ADAPTOR EXTENSION	4	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	4	AEC-INJ821ORINGBRN
FUEL RAIL	1	AEC-DEDFT-FR
GASOLINE LINE PLUG	1	AEC-TF-GLP
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
VEHICLE FUEL FILL ASSEMBLY		AEC_VFFTRAN_C
PUSH MOUNT CABLE TIE, 8in	5	AEC-CTPM-8
FILL RECEPTACLE HOUSING	1	AEC-FRH
FILL RETAINING RING	1	AEC-FRR
RECEPTACLE, 3600psi	1	AEC-LD36

**PARTS LIST DEDICATED**

Product Description	Qty	AEC Part#
6 SAE x 6 ORFS	1	S6GC-CNG
HOSE, HIGH PRESSURE, 48in, BLACK	1	AEC-HPH48ORFS
10-32 x 3/4 FHSC FLAT HEAD SOCKET CAP SCREW	6	(182)
P-CLAMP 1/2in	3	AEC-PC1/2
12-14 x 3/4 SELF TAPPING SCREW	4	(136-F)
GROMMET, 1in, REAR BUMPER	1	AEC-1GR
CNG ONLY STICKER	1	AEC-CNGONLY-1
VEHICLE REGULATOR ASSEMBLY		AEC_TRANREG2.0_C_v2
HPR BRACKET	1	AEC-TCRBK
HIGH PRESSURE REGULATOR, 125psi	1	AEC-HPR125
9/16 SAE x 9/16 SAE MALE ADPT	1	ISST6MST-CNG
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
6 MSAE x 6 ORFS x 6 ORFS x 6 FSAE CROSS	1	ZXALT800013
CHECK VALVE, POPPET, 6 ORFS	1	CH8S6SS6-1-316-CNG
TRANSDUCER 3600psi	1	AEC-TRANS5TST
3/8T x 3/4 SAE 90° ELBOW	1	SS-600-2-8ST
M8-1.25 x 20 CHFB	2	(157-H)
5/16-24 x 3/4 CHFB	2	(156-F)
WARNING STICKER RED/WHITE	1	WHPSTKR
WARNING STICKER RED/ALUM	1	AEC-FHS
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CNG CYLINDER ASSEMBLY)		AEC_VHPTRAN_CD
TRANSIT SINGLE CYLINDER PLATE (18.4 x 49)	1	AEC-TRANS-CPSC
TRANSIT TUBE SPACER 3.5in	2	AEC-TRANSIT-TSP
CNG CYLINDER (18.4 x 49)	1	240101-038
CNG CYLINDER VALVE	1	AEC-VEGA
CYLINDER PLUG, 2in	1	16065-90
STRAP ANGLE BRACKET, 18in	1set	18.4-STRAPBRKT-C
9/16 SAE HEX PLUG	1	ISST6GP
12-14 x 1 1/4 SELF TAPPING SCREW	8	(177)
12-14 x 1 SELF TAPPING SCREW	3	(135-H)
FLANGE ADAPTOR	1	AEC-T1-147

Product Description	Qty	AEC Part#
GROMMET, 5/8in	1	AEC-5/8 GR
3/8T x 9/16 SAE MALE CONNECTOR	1	ISSD6MCST6
6 ORFS x 6 SAE	1	S6GC-CNG
PRD TUBE, 18 1/4in	1	AEC-PRD18 1/4
CYLINDER COVER, SINGLE CYL	1	AEC-TCSCC
HOSE, HIGH PRESSURE 36in, O-RING FACE SEAL, BLK	1	AEC-HPH36ORFS
VINYL CAP 1-1 1/16in	1	AEC-VCVALVE
VINYL CAP 5/16-3/8in	1	AEC-VPRD
HOSE CLAMP, 1 1/2in	3	AEC-HC1 1/2
VENT TUBE, 20in	1	AEC-VT
SPACER PLATE 2x2x1/8	2	AEC-SP2x2x1/8
CYL BACKING PLATE SINGLE 4x7 v. 2	2	AEC-CBPS4X7-V2
1/2-13 x 3 CHFB	4	(198)
1/2-13 x 6 CHFB	2	(199)
1/2-13 NYLOCK	8	(043)
1/2 SAE F/W	8	(040)
3/8 USS FLAT WASHER	4	(025-H)
7/16-14 NYLOCK	4	(032)
QVM COVER STICKER	2	AEC-G-D0609
VEHICLE KIT INFORMATION		AEC_VKITRAN_CD
VENT/REGULATOR BRACKET TEMPLATE	1	AEC-TC-VTRT
FUEL FILL TEMPLATE	1	AEC-TC-FFT
DEDICATED WIRING HARNESS DIAGRAM	1	AEC-TRANDED-MHD-v2
PCM PIN-OUT REFERENCE	1	AEC-PCMPR
OWNERS MANUAL	1	AEC-TCOWNER
BLUE CNG DECAL DIAMOND	1	AEC-CNG-STKR
DEDICATED 2012 EPA CONVERSION STICKER	1	CAECR02.01DB
NGV DECAL GREEN	2	AEC-NGVSTKR
DO NOT ELIMINATE	1	ELREV
UP TO 150psi STICKER YELLOW	2	AEC-PSI150
3600psi STICKER RED	2	AEC-PSI3600-1