ALTECH-ECO CORPORATION

CNG CONVERSION SYSTEM INSTALLATION MANUAL

2011 - 2013 FORD F-250/350 DEDICATED / BI-FUEL

CNG

INTRODUCTION

Note: Before beginning installation, we encourage you to read the installation manual thoroughly and familiarize yourself with the install.

1. Do a quick inventory check using the provided packing slip and make sure your kit is complete. You can also refer to the parts list located in the back of the manual. If you discover shipping damage or a missing component, please contact Altech-Eco immediately.
2. Review our limited warranty with care.
3. Make sure safety is a priority by wearing eye protection, steel toe boots, keep your work area clean and always be aware of your surroundings.
4. No smoking near or around your work area during any portion of the install.
5. Never work on a hot engine.
6. Obey all traffic laws when testing the vehicle.
7. Always do a clean snip of all zip ties.
8. Clean up all debris caused by the installation.
9. Read and be familiar with the latest NFPA 52 codes and safety procedures for dealing with natural gas before you begin the install.
10. Make sure all proper paperwork is filled out before, during, and after the install. The paperwork packet will be provided to you by Altech-Eco.
11. Never attempt to modify the fuel system and always have the fuel system maintenance performed at an authorized dealership by qualified technicians.
12. Dedicated systems – Always leave at least ¼ tank of gasoline in the tank to avoid low fuel light on the vehicle dashboard display.

!! 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 70ºF (21ºC).
!! 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).

REQUIRED/RECOMMENDED TOOL LIST FOR ALTECH-ECO CNG CONVERSIONS

Recommended /Required Tools and Supplies (F-Series)
1. CNG MyCanic
2. Wire Strippers.
3. Soldering Kit w/ Heat Gun and Solder.
4. Black Electrical Tape.
5. Impact Drill.
6. Hand Drill.
7. Zip Tie Clippers.
8. Hose Clamp Tool/Pliers.
9. Hose Clamps (to restrict fluid flow).
10. Hose Cutters.
11. Socket: 5.5mm, 7mm- 13mm (Deep well and Short).
12. Ratchet: 3/8", ¼" drive.
13. Screw Driver: Phillips head and flat head.
14. 6" Extension, ¼" drive.
15. Wrench: ¾", 7/8", 11/16", 1", ½", 19mm, 20mm, 21mm.
16. Manifold Plug Remover (Altech-Eco).
17. Terminal Removal Tool.
18. Torque Wrench: Electric and Manual.
19. Chisel/file: Half Round and Flat.
20. Hole Saw bit: 2 1/8", 2 ½".
21. Methane Detector – One can be recommended by Altech-Eco.
22. Knife/Blade.
23. Filter Socket (Altech-Eco).
24. Drill Bit: 3/8", ¾" Drill Bit.
25. Self Tapping screw socket heads: 5/16", 3/8".
26. Tape Measure.
27. Soap Water.

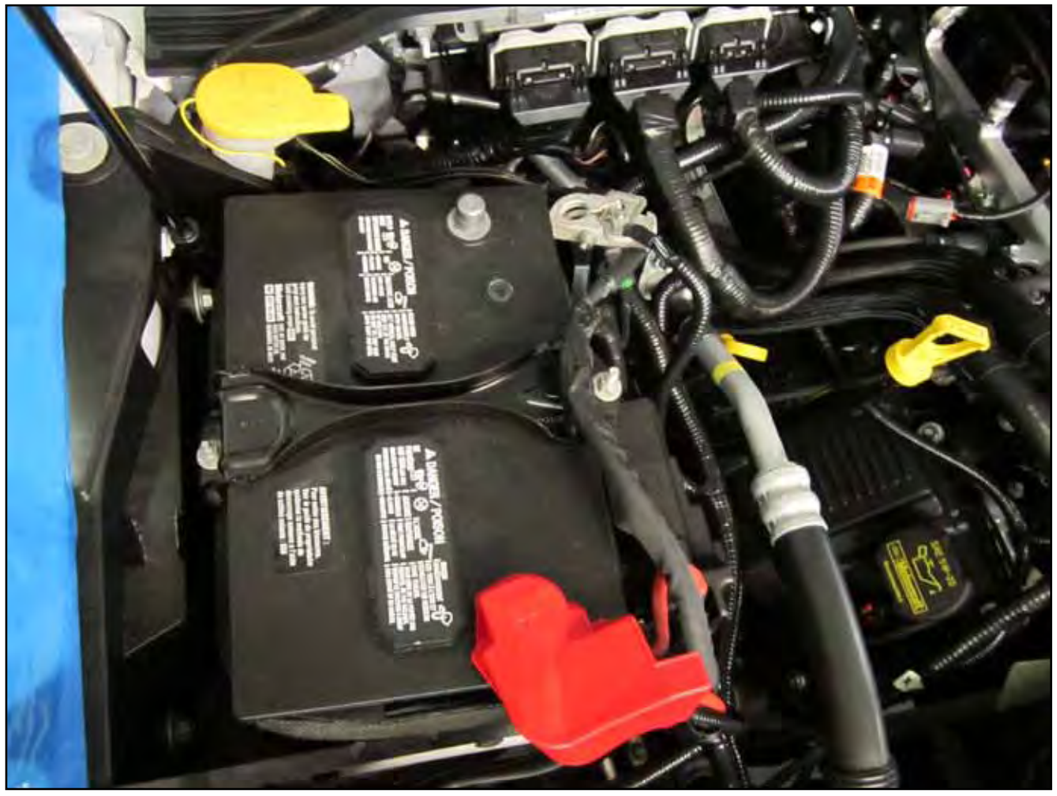
CHECK LIST:

1. Confirm packing slip to insure that you have received all components, assemblies and sub-assemblies.
2. Make sure non 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.

Before Installation

FIRST: Depressurize the fuel system: Raise the vehicle, disconnect the OEM fuel pump electrical connector, lower the vehicle and start the engine. Let run until engine stalls. Crank engine to make sure no fuel pressure remains. Reconnect the fuel pump electrical connector after the CNG system installation is complete.

Disconnect the negative terminal from the vehicle battery. Battery is to stay disconnected until a fully CNG system is installed. The vehicle battery may be reconnected before the toolbox/cover installation; connecting the vehicle battery is necessary for leak testing.



PREPARING THE TRUCK BED

Short Bed (6.75')
Drill Line and Harness Hole in Truck Bed

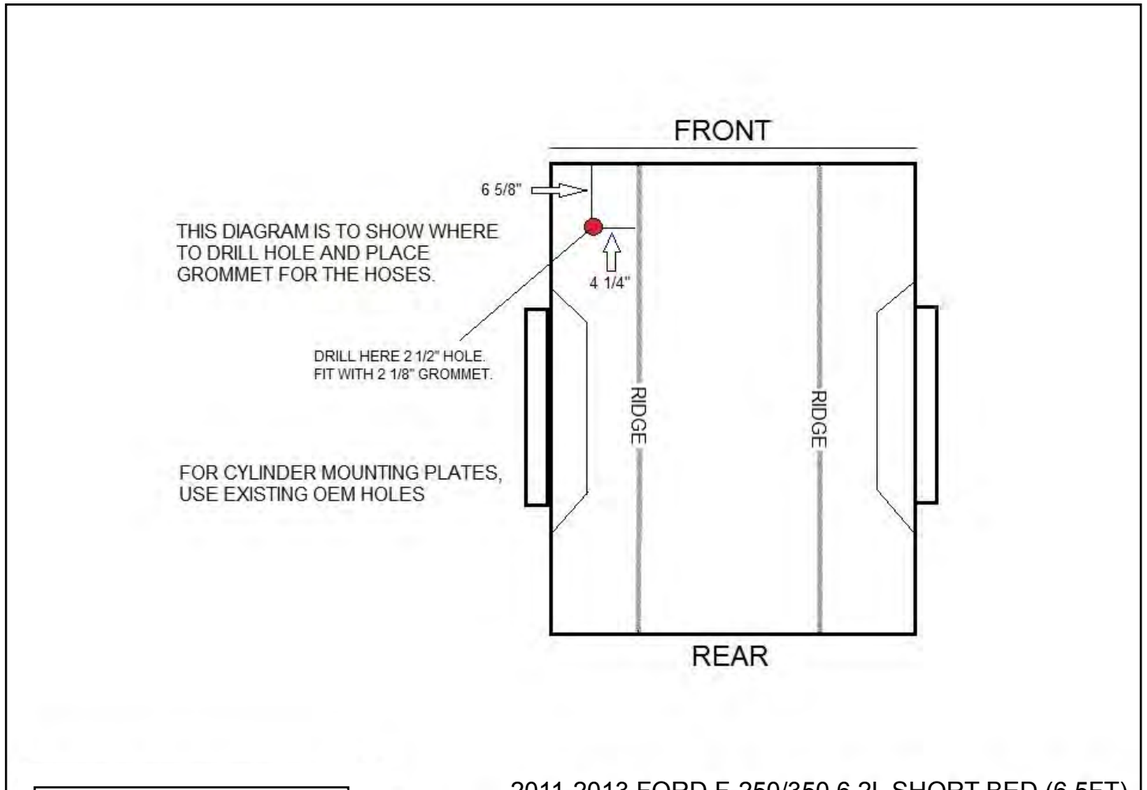
A hole must be drilled in the truck bed to accommodate the low pressure fuel line, the coolant lines, the fill line and the electrical harness. This applies to all vehicle fuel system installations.

Some original parts may be reused or will remain in place after the installation of the CNG system. Cylinder mounting will use existing OEM bolt holes to secure the mounting plates.

Tools:

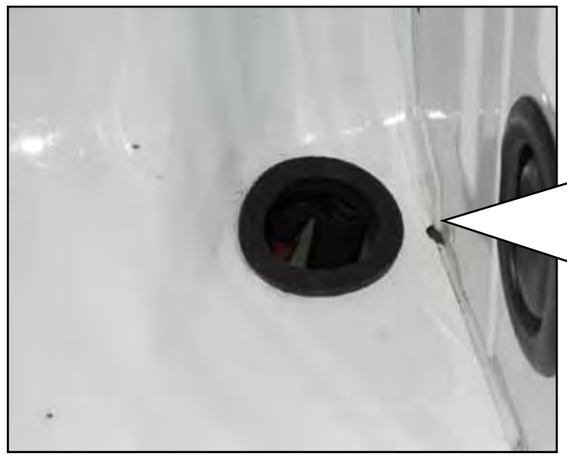
- Tape Measure
- Center Punch
- Drill
- 2 1/2" Hole Saw
- Motorcraft Premium Undercoating (PM-25-A), epoxy primer, or equivalent

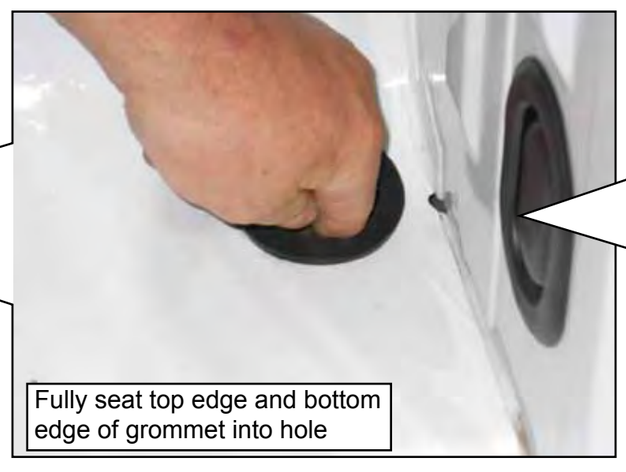
1. (*This step applies to short beds only*) To locate the bed hole, measure 6 5/8" from the front inside of the bed and 4 1/4" over from the seam in the bed floor toward the left inside of the bed.
2. In the measured location, use a centerpunch to mark the spot.
3. Using the drill and hole saw, bore a 2 1/8" hole in the bed. Use caution when drilling the hole so that the saw teeth do not damage something below the bed. Deburr the drilled hole.
4. Use the undercoating or equivalent, spray the hole to seal the metal from corrosion.
5. Install the large bed grommet into the hole to finish the hole. The grommet (AEC- 2-1/8GRW) can be found in the installation kit.



AEC-EF250SBD

2011-2013 FORD F-250/350 6.2L SHORT BED (6.5FT) SINGLE CYLINDER LAYOUT DIAGRAM





Long Bed (8’)

Drill Tank Mounting Plate Holes in Truck Bed

A hole must be drilled in the truck bed to accommodate the low pressure fuel line, coolant lines, fuel fill line and electrical harness. Refer to Drill Line and Harness Hole in Truck Bed for procedure.
All F-250/350 trucks with long bed must have the bed floor drilled to accommodate the fuel tank rear mounting plate bolts.

Tools:

- Tape Measure
- Center Punch
- Drill
- 1” Hole Saw
- Motorcraft Premium Undercoating (PM-25-A) or equivalent

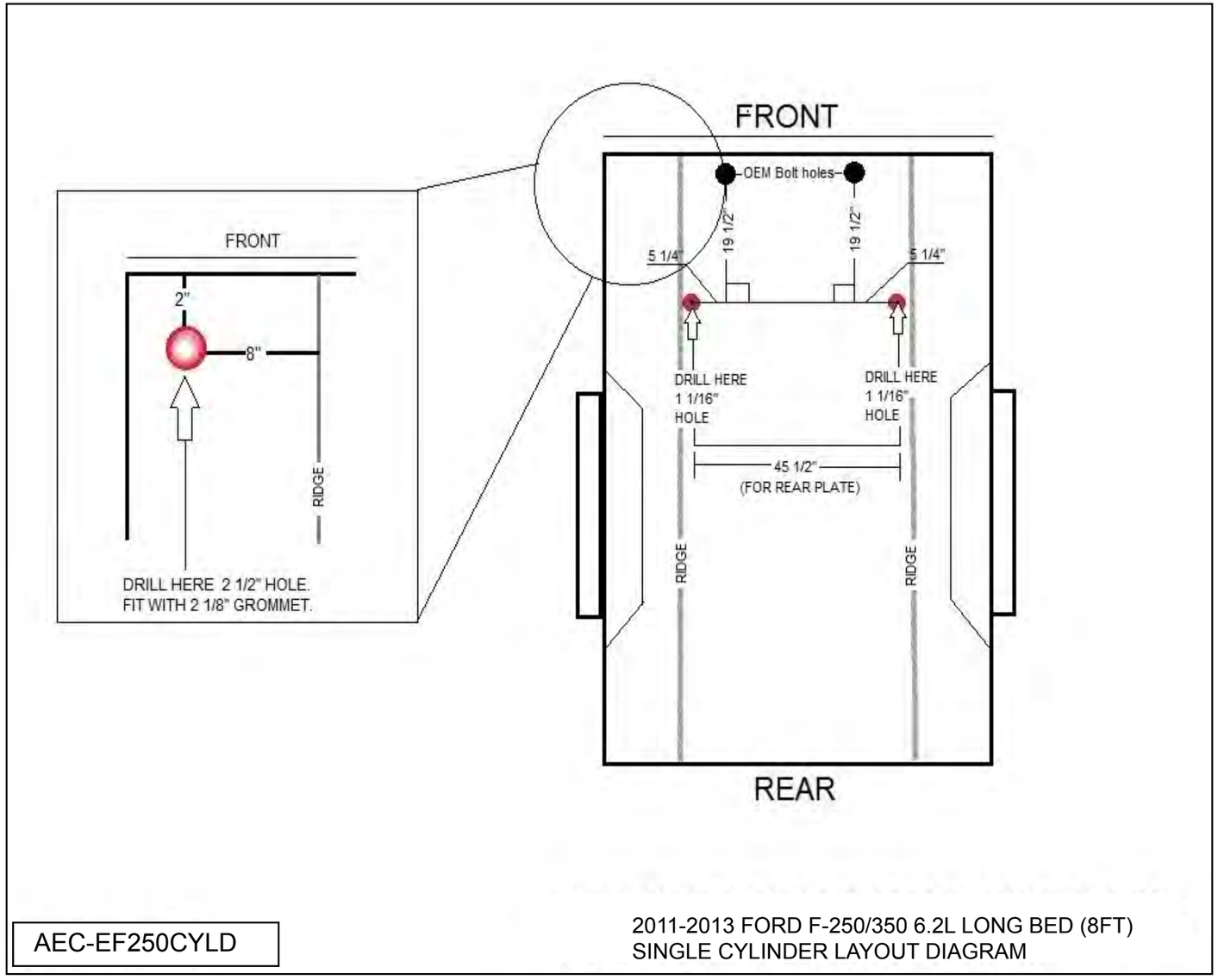
1. Mark the drilling locations for the two rear tank bed bracket bolts.
2. Measure from the front OEM bed bolt holes (left and right) to the rear 19-1/2”. Mark the locations.
3. Measure from the ends of the rear (19-1/2”) marks outward 5-1/4”. Mark the locations.
4. The distance between the two rear marks must be 45-1/2” apart and the marks will fall in the center of the valleys between the ridges at the seams of the bed.
5. From under the vehicle, drill two 1 1/16” diameter holes (one at each rear location) using the drill and a 1 1/16” hole saw. Drill the holes in the bed through the hole in the bed crossmember support.

Note: Drilling from under the vehicle through the crossmember hole helps to more accurately align the 1 1/16” hole location with the hole in the crossmember.

6. Verify that the holes align with the bed correctly according to the marked locations.
7. Deburr the two holes and using the undercoating or equivalent, spray the holes to seal the metal from corrosion.

For grommet hole on long bed:

1. ***To locate the bed hole, measure 2” from the front inside of the bed and 8” over from the seam in the bed floor toward the left inside of the bed.***
2. ***In the measured location, use a centerpunch to mark the spot.***
3. ***Using the drill and hole saw, bore a 2 1/8” hole in the bed. Use caution when drilling the hole so that the saw teeth do not damage something below the bed. Deburr the drilled hole.***
4. ***Use the undercoating or equivalent, spray the hole to seal the metal from corrosion.***
5. ***Install the large bed grommet into the hole to finish the hole. The grommet (AEC-2 1/8GRW) can be found in the installation kit.***



AEC-EF250CYLD

2011-2013 FORD F-250/350 6.2L LONG BED (8FT)
SINGLE CYLINDER LAYOUT DIAGRAM

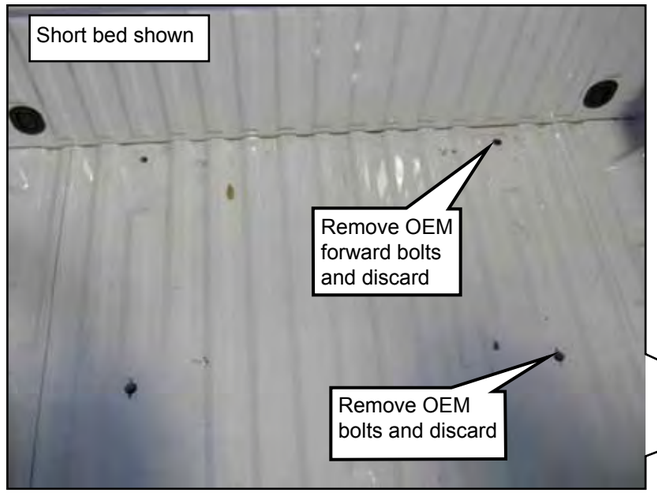
INSTALLING FUEL TANK

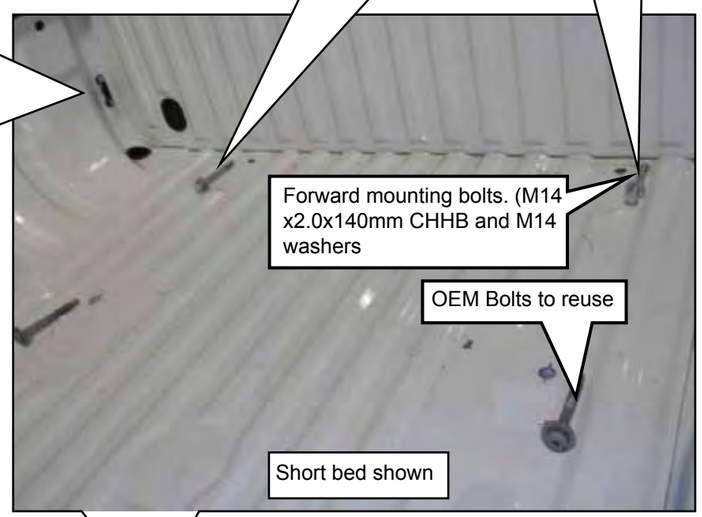
Installing the fuel tank is essentially the same for all vehicle models. However, the fuel tank rear mounting plate varies according to application. Also, for vehicles having a long bed (8’), the two rear mounting plate holes must be drilled through the truck bed before the tank can be installed. Refer to PREPARING THE TRUCK BEDbefore attempting to install the tank.

Tools:

- Crane or Hoist
- Lifting Straps

1. Remove the OEM forward-most bed bolts. Discard these bolts and replace with new bolts in the installation kit.
2. Short Bed (6.75’):Remove the OEM second row bolts and save for reuse. These two bolts are 19-1/2” to the rear of the forward-most bolts at the front of the bed. Long Bed (8’): Predrill the two tank rear mounting plate bolt holes. New bolts and spacers from the kit are to be installed. Refer to PREPARING THE TRUCK BED for hole drilling locations.
3. Obtain the two new forward bed bolts and washers from the kit. (The 8’ long-bed version uses different bushing-type spacers that are 1.0” x 3.125”.)
4. Short Bed (6.75’):Align the spacers for the rear tank mounting plate location with the holes in the bed. Long Bed (8’): Insert the new tube spacers (AEC-F250-8BEDSP) into the predrilled holes at the tank rear mounting location. The tube spacers should protrude from the floor of the bed approximately 1/2”.
5. Attach the tank assembly to the lifting device and sling. Center the sling under and around the tank so that it is balanced during lifting.
6. Lift the tank assembly into the truck bed and align the tank with the four bolt holes in the floor of the bed. The tank fuel and electrical connections must be located on the left (driver) side when installed.



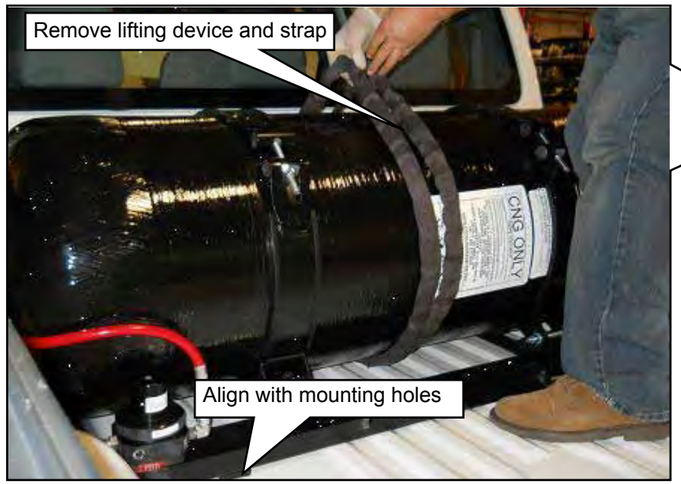


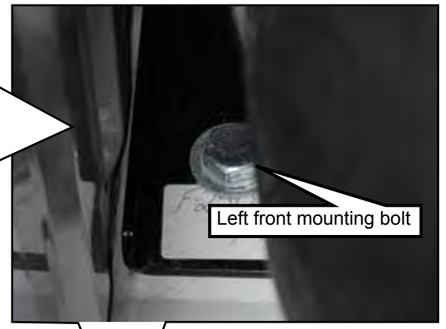
INSTALLING FUEL TANK Continued

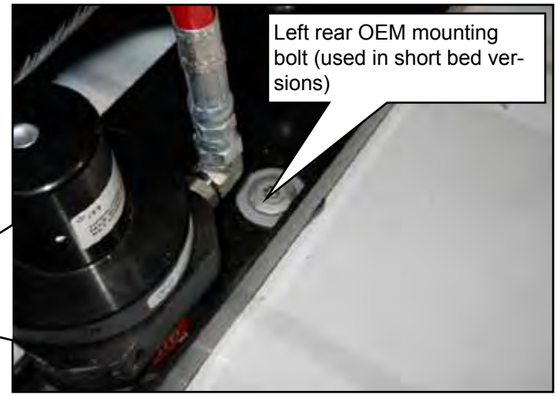
7. Double check the tank mounting plates to make sure they are aligned with the four mounting holes. Remove the lifting device and strap from the tank.
8. Install the two new front mounting bolts (M14 x 2.0 x 140 mm) with M14 washers into the mounting plate.

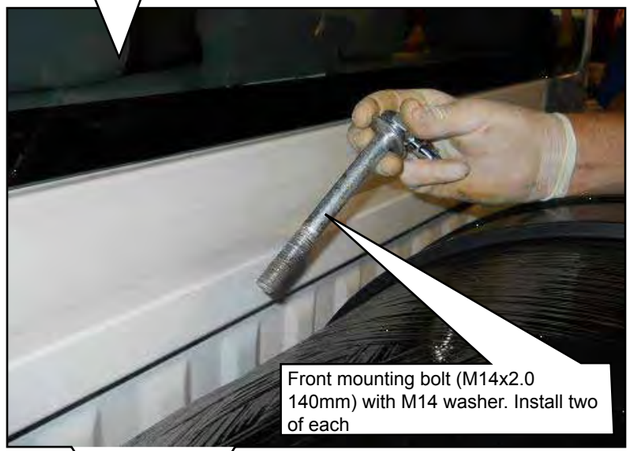
Note: Leave bolts loose until all four bolts are installed.

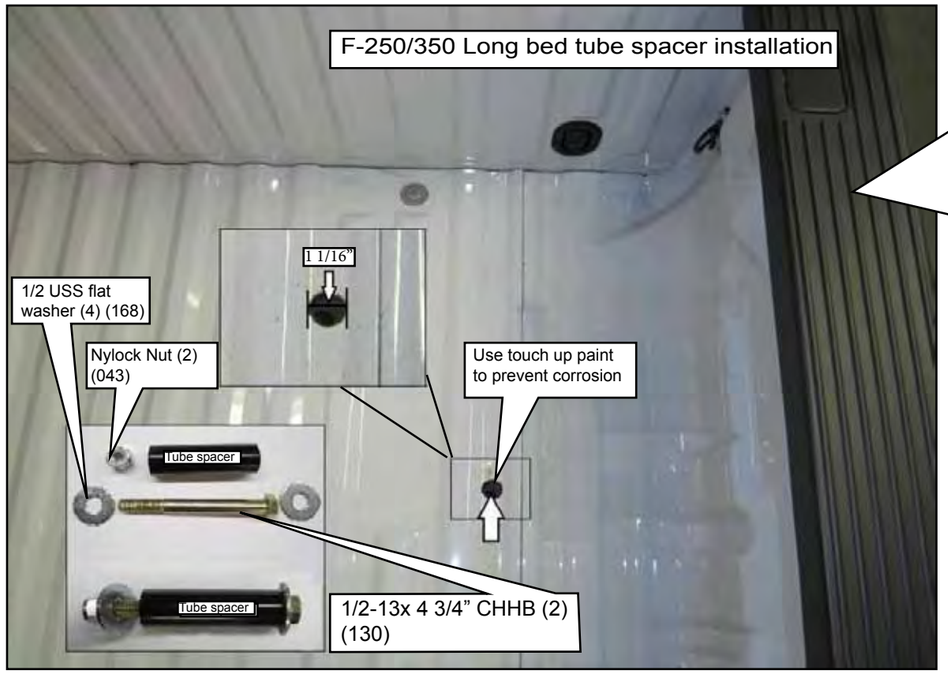
9. Install the two rear OEM mounting bolts through the mounting plate and spacers. Long bed (8'): Two new bolts from the kit are used through the mounting plate and two new long tube spacers, along with four washers and two lock nuts. The two lock nuts and washers are installed from beneath the vehicle. The two bolts and washers are installed through the mounting plate and tube spacers from the top.
10. When all mounting bolts (and washers and nuts) are installed, tighten the bolts (and nuts in long-bed version) to 75 lb-ft (102 Nm).

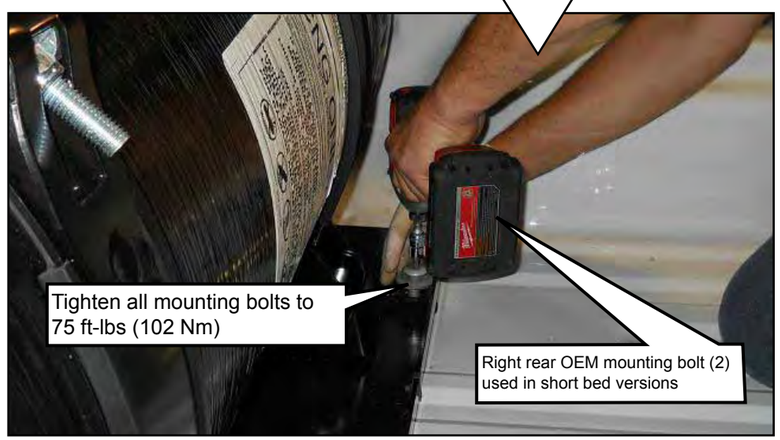








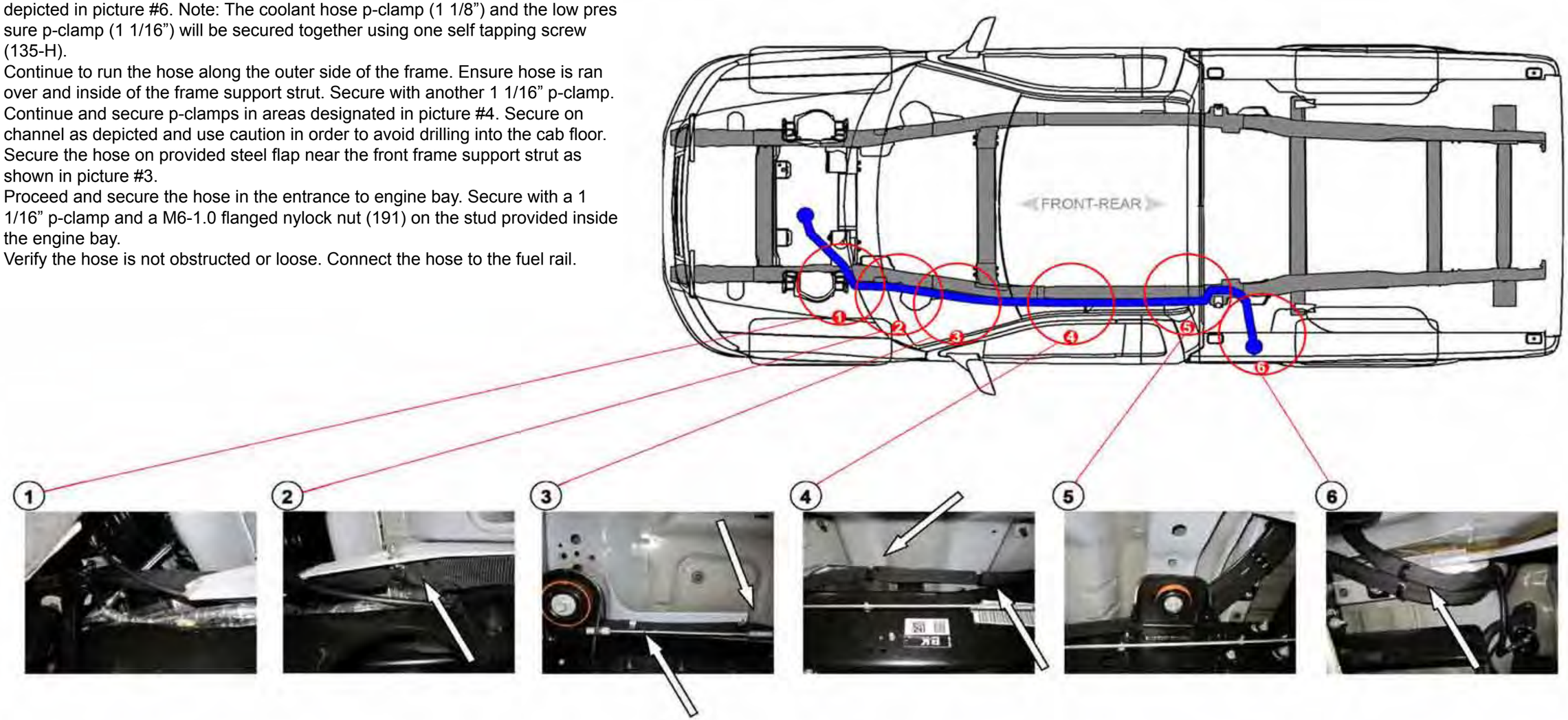




LOW PRESSURE HOSE, REAR WIRE HARNESS AND COOLANT HOSES ROUTING

Low Pressure Hose Routing

1. Begin at the bed of the truck, run the hose along the given path along the out side of the driver side frame and into the engine bay. Adjust length as needed to avoid hose slack. (picture #6).
2. Using a 1 1/16” p-clamp, secure the hose starting from the rear of the vehicle as depicted in picture #6. Note: The coolant hose p-clamp (1 1/8”) and the low pres sure p-clamp (1 1/16”) will be secured together using one self tapping screw (135-H).
3. Continue to run the hose along the outer side of the frame. Ensure hose is ran over and inside of the frame support strut. Secure with another 1 1/16” p-clamp.
4. Continue and secure p-clamps in areas designated in picture #4. Secure on channel as depicted and use caution in order to avoid drilling into the cab floor.
5. Secure the hose on provided steel flap near the front frame support strut as shown in picture #3.
6. Proceed and secure the hose in the entrance to engine bay. Secure with a 1 1/16” p-clamp and a M6-1.0 flanged nylock nut (191) on the stud provided inside the engine bay.
7. Verify the hose is not obstructed or loose. Connect the hose to the fuel rail.



COOLANT HOSES, REAR WIRE HARNESS AND LOW PRESSURE HOSE ROUTING

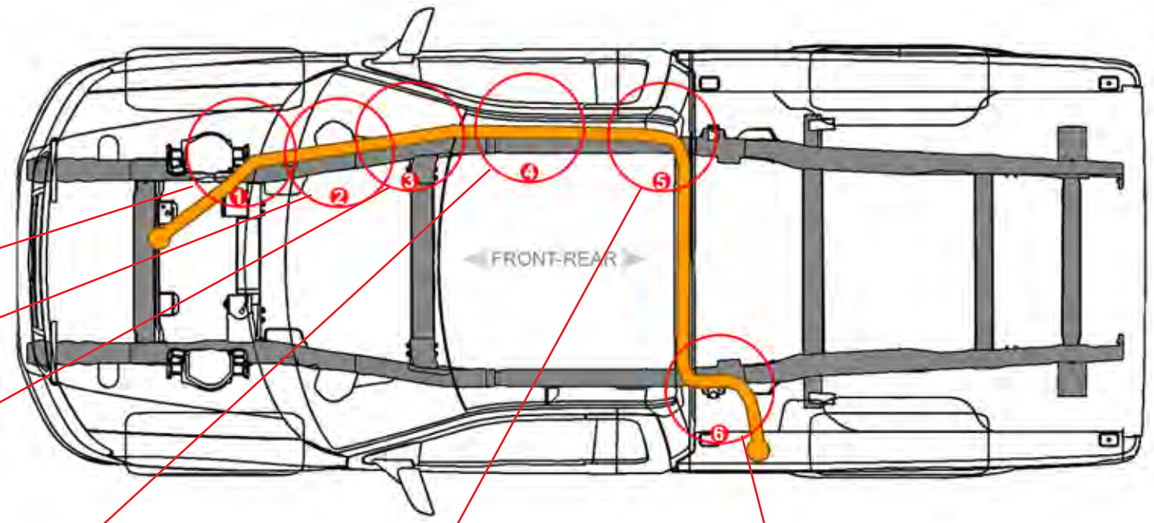
Coolant Hoses Routing

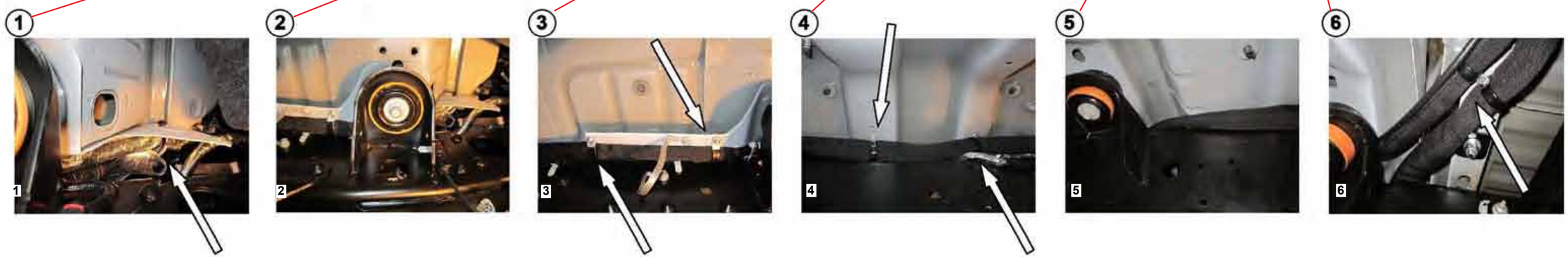
Note: Be sure that Heat Shield sleeve is on and secure before installation. Feed coolant behind the front mount towards the engine. Heat shield sleeve should start right after the mount.

Before beginning, remove an 8mm bolt that secures the inner fender shroud. Then pull back shroud to gain easy access to routing.

1. Starting at the firewall use a stub mount cable tie (AEC-CT-15-F) to secure coolant lines to the fire wall. Then use a cable tie (AEC-CT-16) at the bracket.
2. Run behind mount shown below.
3. Continue to run coolant lines along the existing bracket. Use two 1 1/8” P-Clamps (AEC-PC1 1/8) and two 12-14 x 3/4 self-taping screws (135-H) to secure hose to bracket.
4. Turn the coolant lines behind rear mount and place into channel. with two self-tapping screws (135-H) and two P-Clamps (AEC-PC1 1/8) in location shown below.
5. Routing the hose behind the rear mount into the sub-frame. Place lines into the channel and run towards the driver’s side of the cab.
6. The lines should come out behind the driver-side rear mount to meet with the Low Pressure hose and rear harness. Use two P-Clamps (AEC-PC1 1/8) and one self-tapper screw (135-H) to secure the hoses under the truck bed. Continue running up into drilled hole of truck bed.

Installation will vary in quantity of cable ties or P-Clamps depending on cab and bed size.



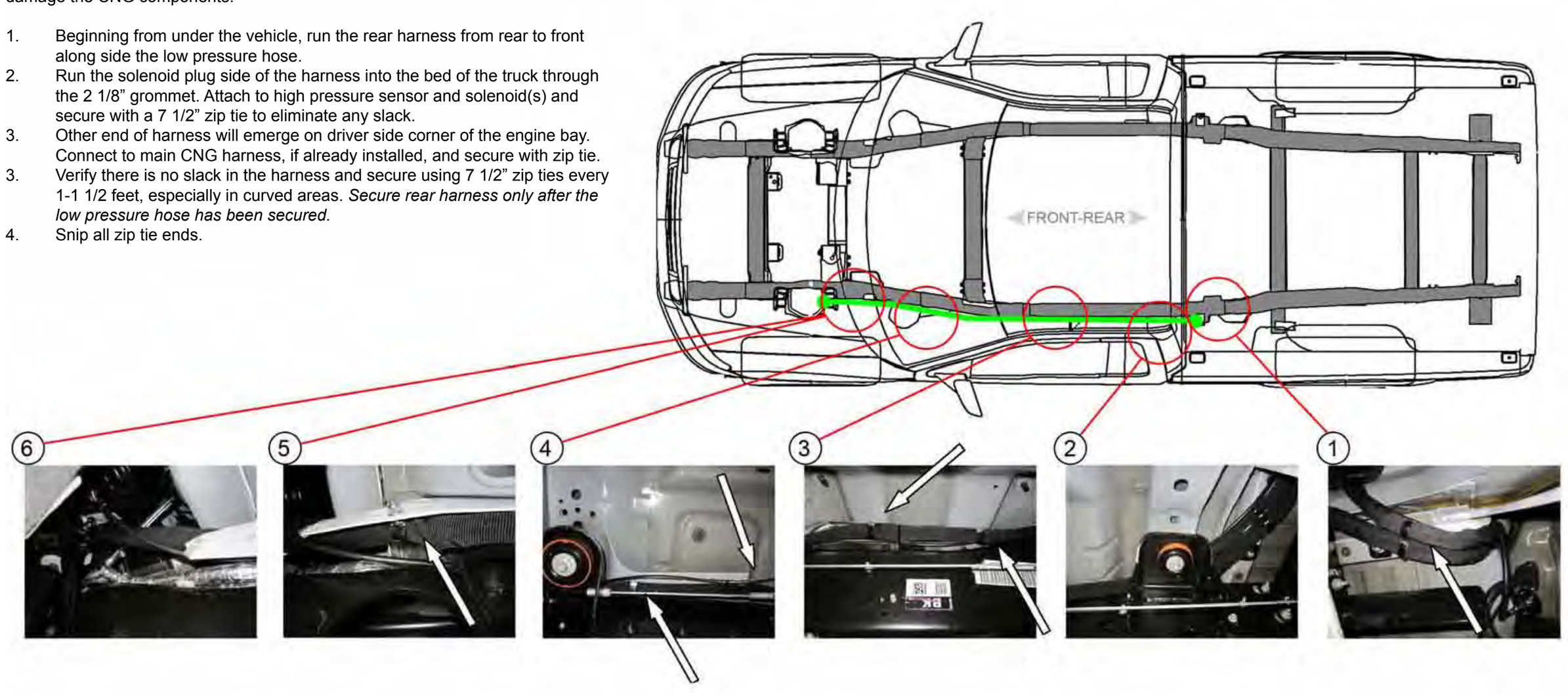


REAR WIRE HARNESS, COOLANT HOSES AND LOW PRESSURE HOSE ROUTING

Rear Harness Routing

Note: Always check to be clear of any exhaust or suspension parts that can damage the CNG components.

1. Beginning from under the vehicle, run the rear harness from rear to front along side the low pressure hose.
2. Run the solenoid plug side of the harness into the bed of the truck through the 2 1/8” grommet. Attach to high pressure sensor and solenoid(s) and secure with a 7 1/2” zip tie to eliminate any slack.
3. Other end of harness will emerge on driver side corner of the engine bay. Connect to main CNG harness, if already installed, and secure with zip tie.
3. Verify there is no slack in the harness and secure using 7 1/2” zip ties every 1-1 1/2 feet, especially in curved areas. *Secure rear harness only after the low pressure hose has been secured.*
4. Snip all zip tie ends.



INSTALLING COOLING LINES, FUEL LINES AND REAR WIRING HARNESS

Installing the fuel lines, coolant lines and rear wiring harness is essentially the same for all vehicle models. The differences between models are part number changes due to vehicle length, wheel base, cab size and bed size.

Tools:

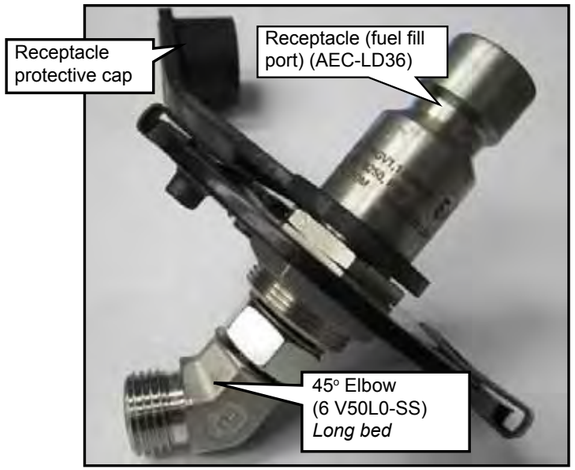
- Basic Hand Tools
- Hose Clamp Pliers

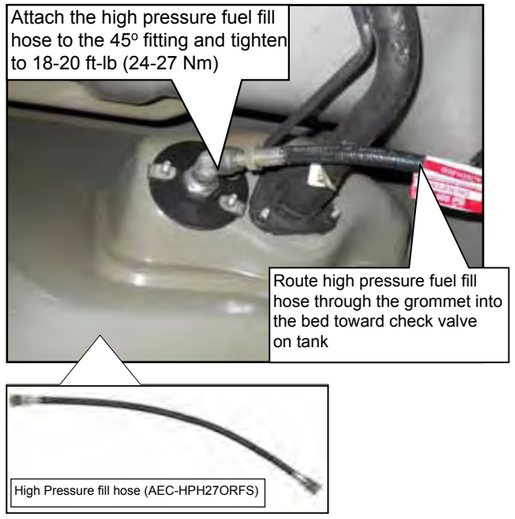
1. Obtain the coolant hoses in with flex guard sleeve (AEC-FG-20), the medium (or low) pressure line (15') and associated hardware (clamps and Y-connectors). *Hose length will vary for each cab size.*
2. Obtain the high pressure fill hose (24"), fill port assembly (receptacle with ring and elbow fitting), three U-nuts and three 1/4-20 x 3/4" CHFB bolts.
3. Attach the three U-nuts to the fuel fill ring (housing adapter). Insert the assembly into the fuel fill housing and align the three holes. Install the three bolts and tighten to specification.

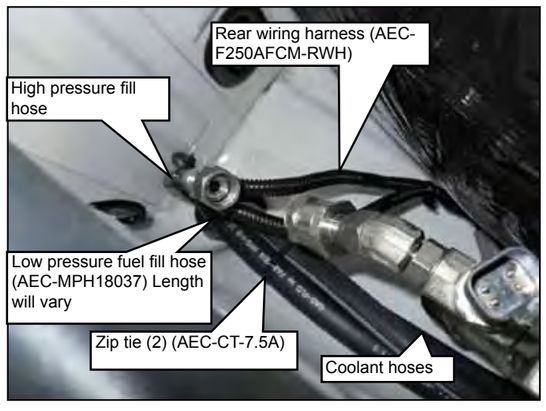
Note: If the system you are installing is for the dedicated system only, the OEM gasoline cap must be replaced with the locking gas cap. If you are installing the bi-fuel system, the OEM gasoline cap must be modified to eliminate the "E85 /" on the cap.

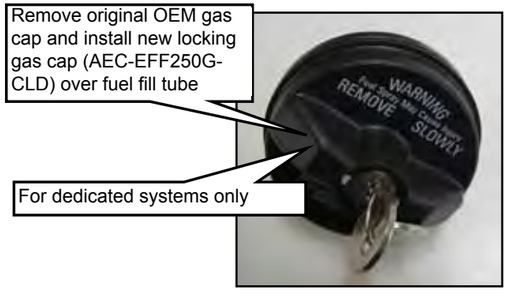
Note: Refer to *Fuel Fill* installation portion of the manual for additional detailed information.

4. Dedicated System: Remove the original OEM gas cap and replace it with the new locking gas cap (AEC-EFF250-GCLD) from the installation kit.
   Bi-Fuel System: Using sand paper, or any other safe means, remove the letters "E85" and the forward "Slash" off of the cap. Once the vehicle has been modified with the bi-fuel system, the vehicle will only support E15 fuel.
5. Attach the high pressure fuel fill hose to the 45° fitting on the receptacle (fuel fill port) assembly.
6. Route the loose end of the high pressure fuel fill hose up through the grommet in the bed floor.
7. Bundle the low pressure fuel line, coolant hose assembly and rear wiring harness.
8. From under the vehicle, run the coolant hose, low pressure hose and rear wiring harness up through the 1-15/16" grommet located in the bed floor. Adjust the hoses, lines and harness so that they are routed comfortably to their connections.
9. Use 7 1/2" zip ties to secure the coolant hoses and low pressure fuel line together in two places.







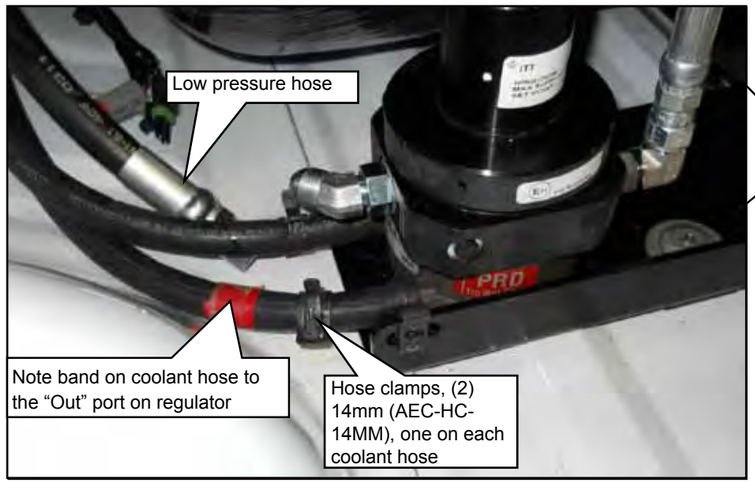


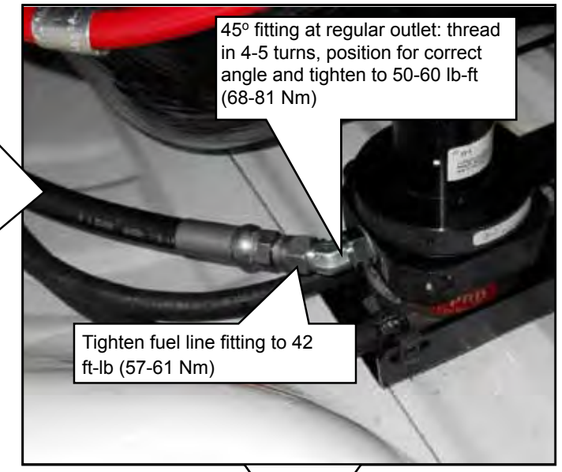
INSTALLING COOLING LINES, FUEL LINES AND REAR WIRING HARNESS Continued

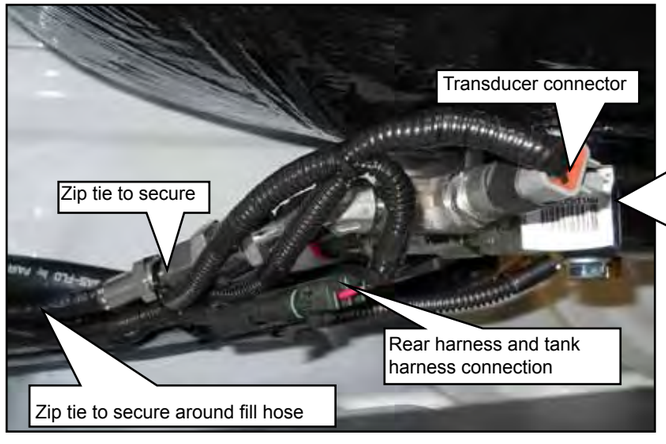
10. Route the coolant hoses and low pressure fuel line over to the regulator on the rear mounting plate.
11. Install a 14mm hose clamp, one on each coolant hose. Slide the clamps up the hose to allow for coolant hose connection to the regulator.
12. Connect the two coolant hoses to the coolant ports on the regulator.

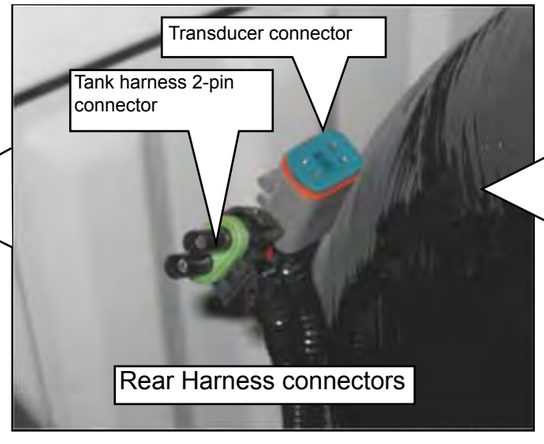
Note: Make sure to connect the hoses to the correct ports. Install the coolant hose with the colored band to the outlet port (marked “Out”) of the regulator. The unmarked hose is connected to the coolant inlet port of the regulator.

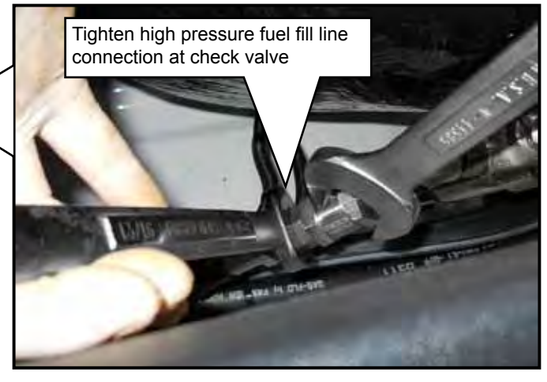
13. Using hose pliers, position the hose clamps to secure the coolant lines.
14. Attach the low pressure fuel line to the 45° fitting on the fuel port of the regulator. Tighten the connection to 42–45 lb-ft (57–61 Nm).
15. Attach the high pressure fill line to the check valve on the tank fittings. Tighten the connection to 18–20 lb-ft (24–27 Nm).
16. Plug the rear harness connections in. One to the transducer, the other to the tank harness connector.
17. After connections are made, wrap harnesses together and secure to the fill line and check valve. Use two cable ties (AEC-CT-7.5A).











CONNECTING COOLING HOSES TO ENGINE

The AlTech-ECO regulator requires engine coolant be used to maintain a consistent temperature for proper CNG fuel system operation. The OEM coolant hoses (heater hoses) in the engine compartment are used to obtain the coolant necessary for regulator operation. Y-connectors and clamps are used for coolant hose connection. If the coolant hoses have not been installed yet, refer to INSTALLING THE FUEL LINES, COOLANT HOSES AND REAR ELECTRICAL HARNESS for the procedure.

Tools:

- Hose Clamp Pliers
- Hose Cutters
- Hose Clamps (to prevent coolant loss)

1. Obtain the coolant Y-connectors, four 3/4” hose clamps and two 14mm hose clamps. (Two of the pictured hose clamps are used to secure the coolant hoses at the regulator.)
2. Drain the cooling system as necessary to prevent coolant loss. Refer to the 2011–2013 F-250 or F-350 Ford Owner’s Guide for the type of recommended Motorcraft coolant for replenishing the system as needed.

Warning: Make sure to wear safe eye protection when handling engine coolant. Failure to heed this caution can cause serious eye injury.

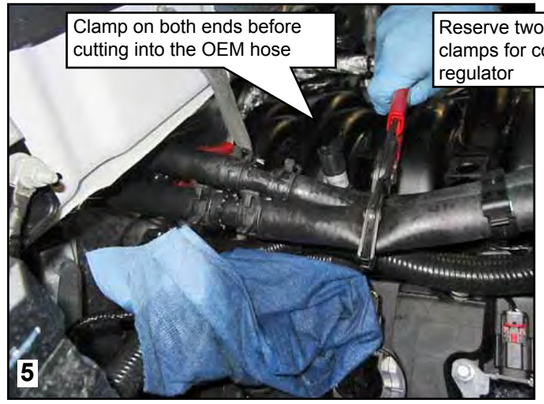
3. Using the hose cutters, cut the OEM heater hoses in an accessible location on the right side of the engine compartment. Offset the cut in each hose enough to avoid clamp and coolant Y-connector interference between hoses.
4. Position two 3/4” hose clamps, one on each end of the OEM cut splice for the heater INLET hose. Move the clamps up the hose(s) a bit to allow installation of the Y-connector.
5. Position two 3/4” hose clamps, one on each end of the OEM cut splice for the heater OUTLET hose. Move the clamps up the hose(s) a bit to allow installation of the Y-connector.
6. Attach the new coolant Y-connectors to the OEM heater hoses and install the four 3/4” clamps. Make sure to push the heater hoses completely onto the Y-connectors so that the hoses are engaged with the 3/4” sections of the Y-connector.
7. Position the four new 3/4” hose clamps to engage the ends of the OEM heater hoses for a good seal. Angle the narrow 3/8” end of the Y-connectors to engage the coolant hoses from the CNG regulator.

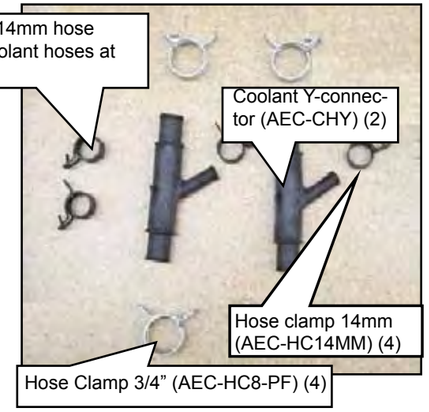
Note: Make sure the coolant Y-connectors are installed into the OEM heater hoses in the correct direction of flow.

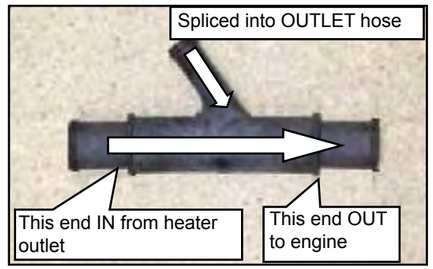
8. Finish routing the coolant hose assembly (AEC-CH-B-H) as needed to avoid moving or hot exhaust components and near the OEM coolant hoses. Make sure to cable tie the hose assembly to secure it in the engine compartment.
9. If necessary, cut the two coolant hoses so that there is enough length (without stretching) to comfortably reach the two coolant 3/8” ends of the Y-connectors.
10. Position one 14mm hose clamp onto the coolant hoses from the CNG regulator. Move the clamps up the hoses a bit to allow installation of the hoses onto the Y-connectors.
11. Attach the coolant hoses to the Y-connectors and install the hose clamps to secure the hoses.

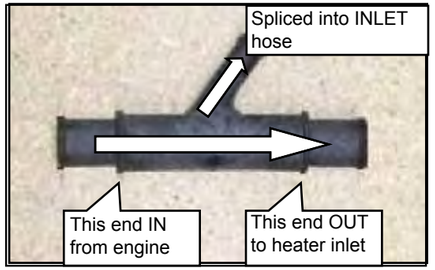
Note: Make sure the coolant hoses are installed into the Y-connectors in the correct direction of flow. The unmarked coolant hose should be connected to the Y-connector in the OEM hose for the INLET to the heater core. The marked coolant hose with the band should be connected to the Y-connector in the OEM hose from the OUTLET of the heater core.

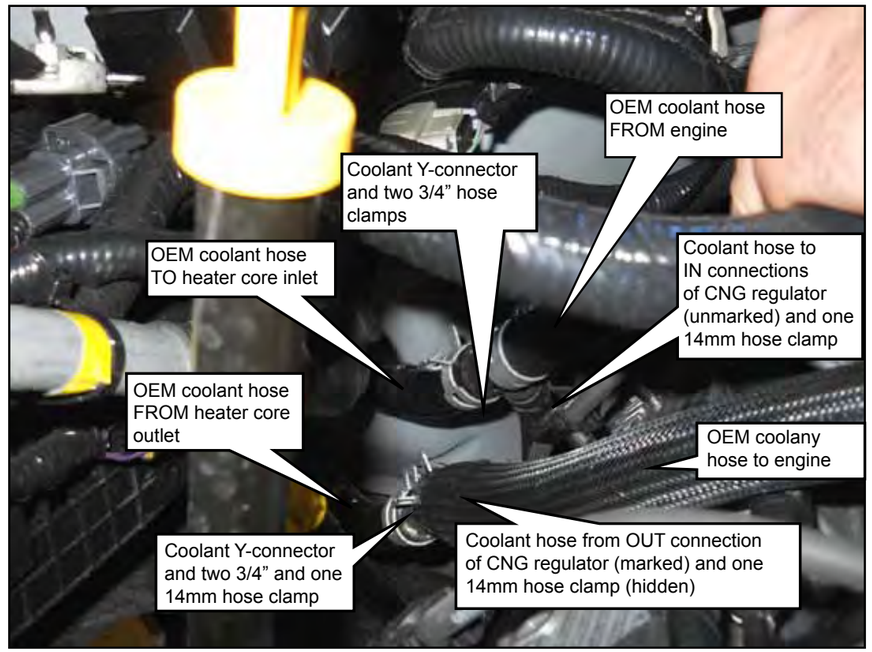
12. Make sure to replenish the cooling system after the CNG system is complete. Always use the Ford recommended type of approved and compatible coolant.





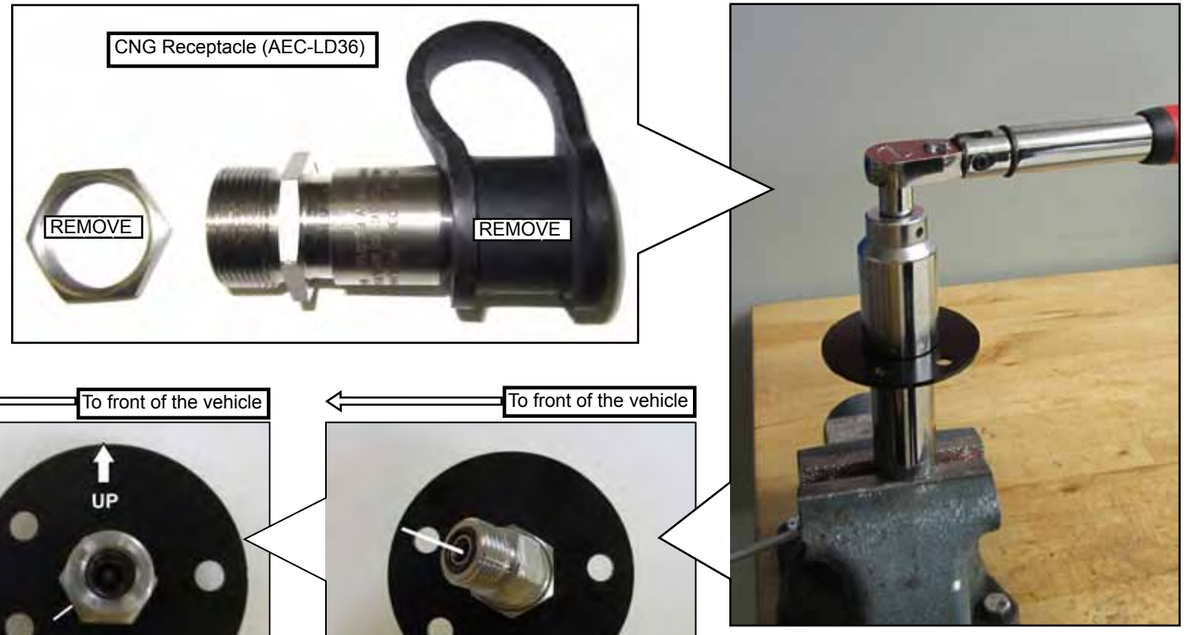


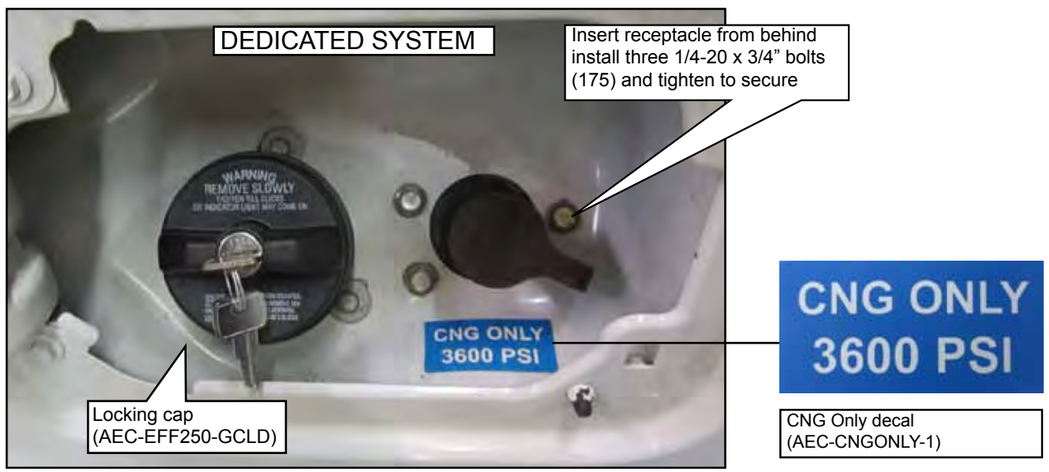




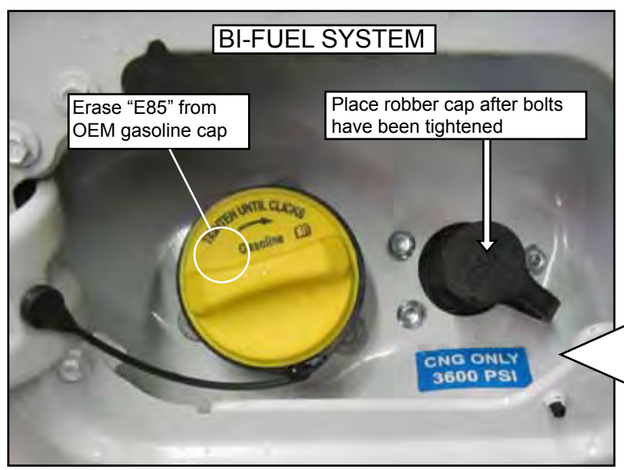
Installing Fuel Fill

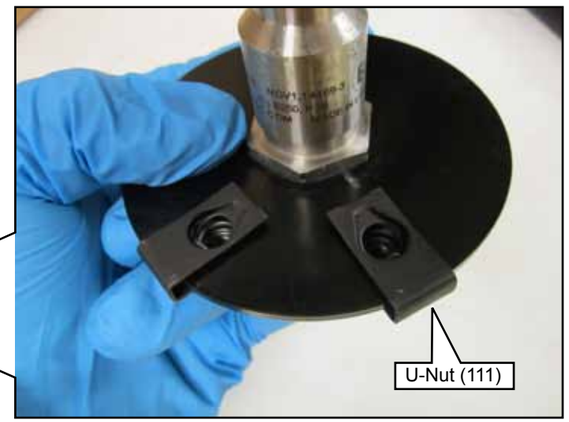
1. Remove rubber cap and nut from the back end of the receptacle (AEC-LD36).
2. Screw receptacle into fuel fill adaptor ring (AEC-EF250FFA). Verify the adaptor ring is positioned as given in the example below.
3. Hand thread nut back on and tighten with a socket to 100 ft-lb.
4. Attach the 45° Elbow fitting connector (6 V5OLO-SS) to the back end of the receptacle. Must position the fitting exactly as depicted, refer to illustration. Tighten and torque to 35 ft-lb.
   Note: use industrial food grade silicon spray on the rubber O-ring during assembly.
5. Install U-Nuts (111).
6. Install fuel fill assembly from the back of OEM fueling compartment. Hand start the 3/4" bolts (175-H) from inside of the compartment to secure fuel fill assembly in place. Tighten and torque the bolts to 10-15 ft-lb.
7. Connect the high pressure fuel fill hose from the high pressure assembly, *if high pressure was previously installed.* Tighten and torque to 35 ft-lb.
8. Bi-fuel only: Erase "E85" from OEM gasoline cap.
   Dedicated: Replace OEM gasoline cap with a locking cap (AEC-EFF250-GCLD) provided with kit.
9. Apply "CNG Only" to the interior OEM fueling compartment.



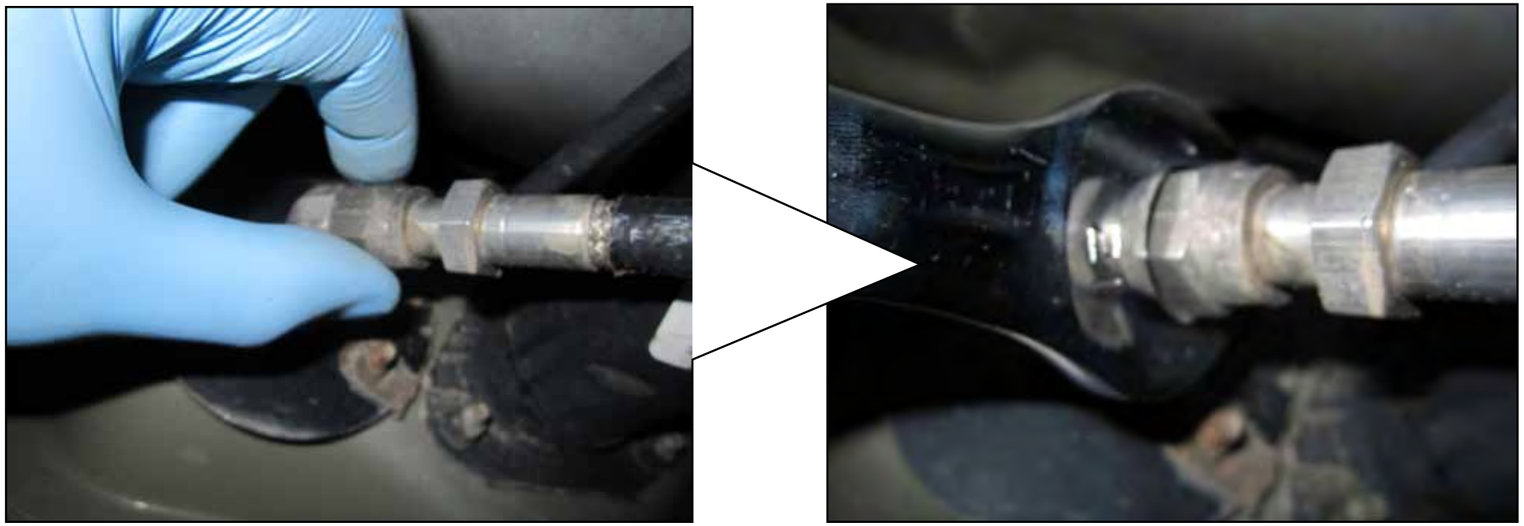


CNG Only decal (AEC-CNGONLY-1)





Installing Fuel Fill continued



(step 7) Hand start the high pressure fuel fill hose (AEC-HPH27ORFS) then wrench tighten and torque to 35 ft-lbs.

Note: High pressure fuel fill hose is part of the high pressure assembly. It is recommended to have the high pressure assembly installed prior to installing the fuel fill.
Ensure the high pressure hose is labeled with a high pressure warning sticker. Sticker should be located on the hose beneath the bed and must be clearly visible to avoid tampering.

High pressure sticker, 3600 psi
(AEC-PSI3600-1)

INSTALLING THE BI-FUEL SYSTEM COMPONENTS ON ENGINE

Remove or Disconnect OEM Components to Access Engine

There are two AITech-ECO compressed natural gas (CNG) fuel systems that can be installed on the Ford F-250 and F-350 vehicles. The bi-fuel system, which allows the vehicle engine to run on either gasoline or CNG, or the dedicated fuel system, which when installed, only allows the vehicle engine to run on CNG. Either of these systems applies to all vehicle configurations.
Some original parts may be reused or will remain in place after the installation of the CNG system. The components in this section may be saved, discarded or new.

Tools:

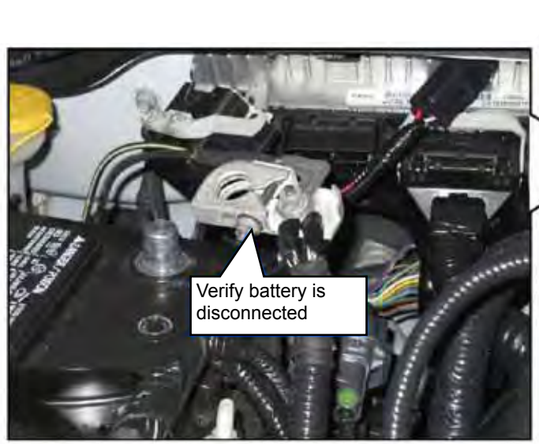
- Basic Hand Tools

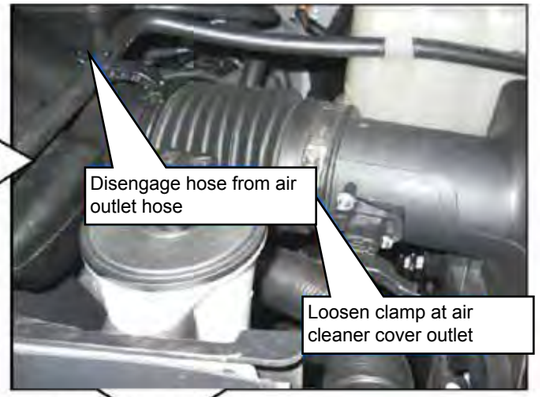
Note: The CNG fuel rails come assembled with the exception of the crossover low pressure hose.
Note: Remove injector seats from fuel rail assembly prior to install.
Note: Do not disconnect the electrical connectors or the spark plug wires leading to the outer spark plugs.

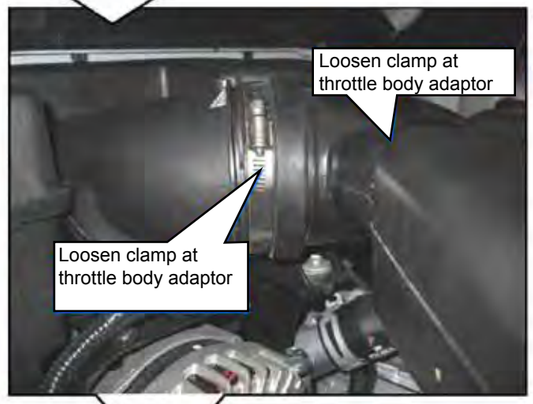
1. Disconnect battery negative terminal and secure away from battery negative post.
2. Remove the air cleaner cover outlet pipe from the air cleaner cover outlet and from the air box (throttle body adaptor) on the throttle body.
3. Disconnect ventilation hoses from throttle body adapter (left side).
4. Loosen two bolts and remove the air box (throttle body adaptor) from the throttle body.

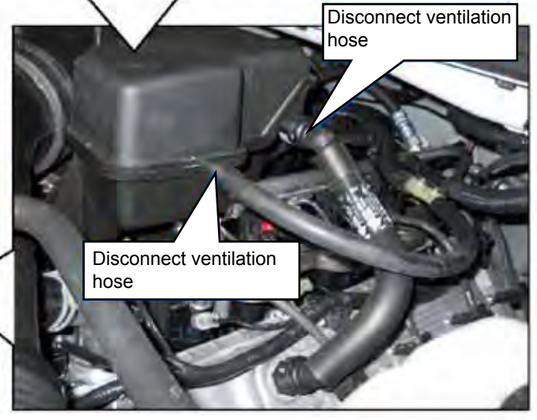
Note: there is a boot behind the air intake box. Loosen the hose clamp and remove the air intake box with boot simultaneously.

5. Remove the EVAP sensor.
6. Disconnect all eight OEM fuel injector connectors.
7. Loosen the fasteners and disengage the ignition coils from the inner spark plug bores of the cylinder head.









INSTALLING THE BI-FUEL SYSTEM COMPONENTS ON ENGINE Continued

8. Using F-250 plug remover, remove all 8 plugs from the manifold.

Note: To use the plug remover, hand tighten the nut on top of the plug remover, then use a speed wrench on the nut to complete the plug extraction. Discard the plugs. Make sure the walls of the hole where the plug was in is clear of any plastic debris.

9. Install injector seats. (make sure to lubricate all o-rings).
10. Remove all 4 OEM fuel rail bolts and discard.
11. Install the 4 new modified bi-fuel FX bolts (AEC-FSERFRBOLTX). Tighten and torque to OEM specification; 65 in-lb.


Plug puller (available for order from Altech-Eco)


Discard plug


Using your finger, feel around and clean off any loose plastic debris

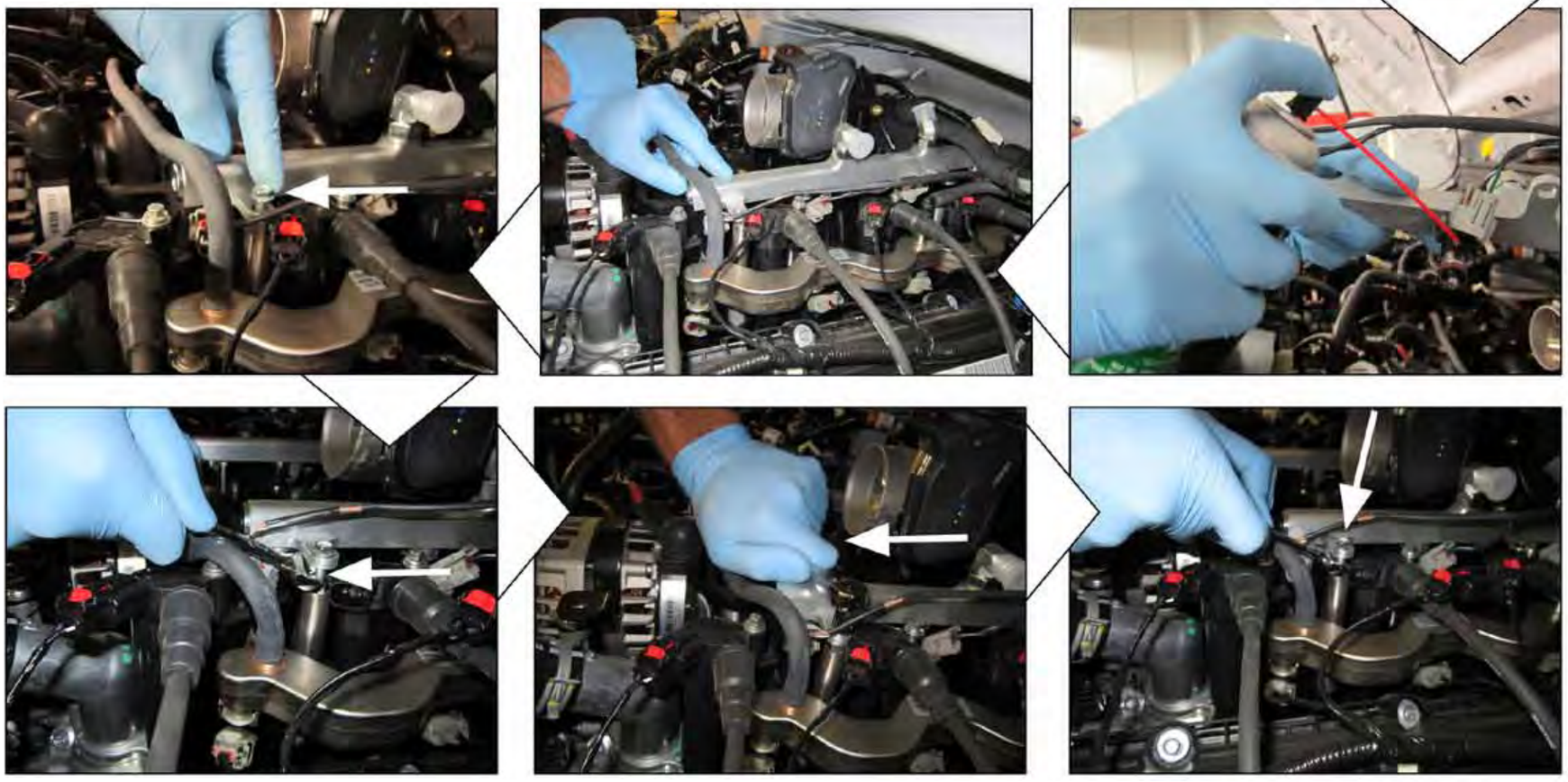

Remove OEM fuel rail bolts

INSTALLING THE BI-FUEL SYSTEM COMPONENTS ON ENGINE Continued

11. Attach both interceptor wiring harnesses unto fuel rail and CNG injectors.
    Plug side of the interceptor harness facing to the rear of the vehicle.
12. Lubricate the CNG injector o-rings.
13. Install the fuel rails one on each side.

Note: Install fuel rails upright and wiggle the rails into place. This is to avoid possible o-ring damage that can cause leaks.

14. Hand start all 4 new CNG fuel rail bolts that go into the FX bolt. Then tighten the new CNG fuel rail bolts to the factory OEM fuel rail bolt specification.



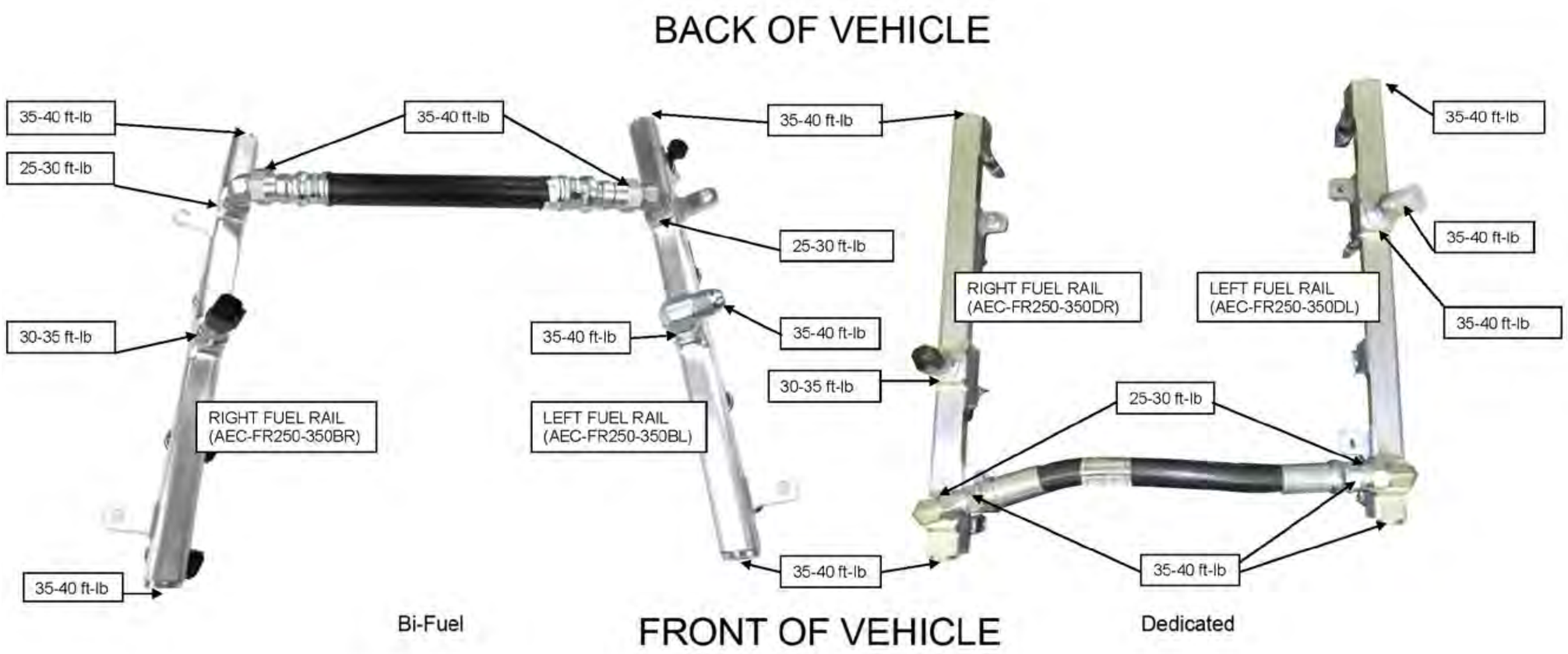
INSTALLING THE BI-FUEL SYSTEM COMPONENTS ON ENGINE Continued

15. Attach the low pressure hose connecting both fuel rails and torque to 35-45 ft-lbs.
16. 2011-2013: Re-install Evap sensor.
    2013 only: Replace original Evap sensor with provided by-pass sensor (AEC-CX-2369). This only applies to 2013 F-250 6.2L models with v2 CNG fuel rails.
17. Re-install the air intake box. Tighten the hose clamp on the boot behind the air intake box.
18. Reconnect all OEM hoses and wiring including the CNG low pressure fuel line.
19. Re-install air cleaner cover outlet pipe. Tighten hose clamps and snap OEM coolant hose back into place.

2013 Evap Sensor

2011-12 By-pass sensor

INSTALLING FUEL RAIL



20. The CNG fuel rails come assembled with the exception of the low pressure crossover hose. The fittings and TPS are pre-assembled, but broken out here for identification.
21. Attach the low pressure hose crossover hose between the CNG fuel rail face fittings at the rear of the rails. Leave finger tight.
22. Attach the fuel line coming from under the vehicle to the swivel flare adaptor and leave fitting finger tight. Secure the low pressure fuel line using a p-clamp and screw.
23. When all of the CNG fuel rail components are attached, tighten the connections to torque specification provided in the diagram above.
24. Install the two CNG fuel injector wiring harnesses (interceptor harnesses) along the intake manifold and fuel rails with main wiring harness connectors at the rear of the engine.
25. Connect each injector harness connector, one to each fuel injector.
26. Connect the rear connector of the injector interface for wiring harnesses to the main engine compartment wiring harness.

Note: if the main wiring harness has to be installed, refer to *Installing the Main Wiring Harness* for installation procedures. Then, make the injector harness electrical connections at the main harness. Also, connect or install all other disconnected or removed components including: air intake box to throttle body (2 bolts), air tube to air filter cover (tighten two clamps), snap coolant hose to air tube and connect all vacuum and PCV hoses. Connect the battery negative terminal **only** after all CNG system components have been installed.

ALTECH-ECO

2011-2012 Ford F-250/350 Bi-Fuel and Dedicated Manifold Part List

Full Manifold Kit:
Bi-Fuel: AEC-INTBI6.2
Dedicated: FRF250-BC

1/2 37° FLARE x
3/4 SAE 45° ELBOW
(8 V50X-S)
QTY: 1 DEDICATED

1/2 37° FLARE x
9/16 SAE
DEDICATED: (8-6 C5OX-S)
BI FUEL: (8-5 V5OX-S)
QTY: 2 PER KIT

3/4SAE HOLLOW
HEX PLUG
(8 HP5ON-S)
QTY: 4 PER KIT

200PSI TRANSDUCER
(AEC-TRANS2TST)
QTY: 1 PER KIT

LOW PRESSURE CROSSOVER HOSE

BI FUEL 11 1/4" (AEC-LPH11 1/4)
DEDICATED 13.5" (AEC-MPH13.5)
QTY: 1 PER KIT

1/2 37° FLARE x
3/4 SAE ELBOW
(8 C50X-S)
QTY: 1 BI FUEL ONLY

INSTALLING THE DEDICATED SYSTEM COMPONENTS ON ENGINE

Note: The CNG fuel rails come assembled with the exception of the low pressure crossover hose. Remove injector seats prior to installation.

There are two Altech-Eco compressed natural gas (CNG) fuel systems that can be installed on the Ford F-250/350 vehicles. The bi-fuel system, which allows the vehicle engine to run on either gasoline or dedicated fuel system, which when installed, only allows the vehicle engine to run on CNG. Either of these systems applies to all vehicle configurations.

Some original parts may be reused or will remain in place after the installation of the CNG system. The components in this section may be saved, discarded or new.

1. Snap off the OEM coolant hose attached to the air cleaner hose.
2. Remove the air cleaner cover outlet pipe from the air clearer cover outlet and from the air box (throttle body adaptor) on the throttle body.
3. Disconnect all other attachments on air intake box (ventilation hose and wiring).

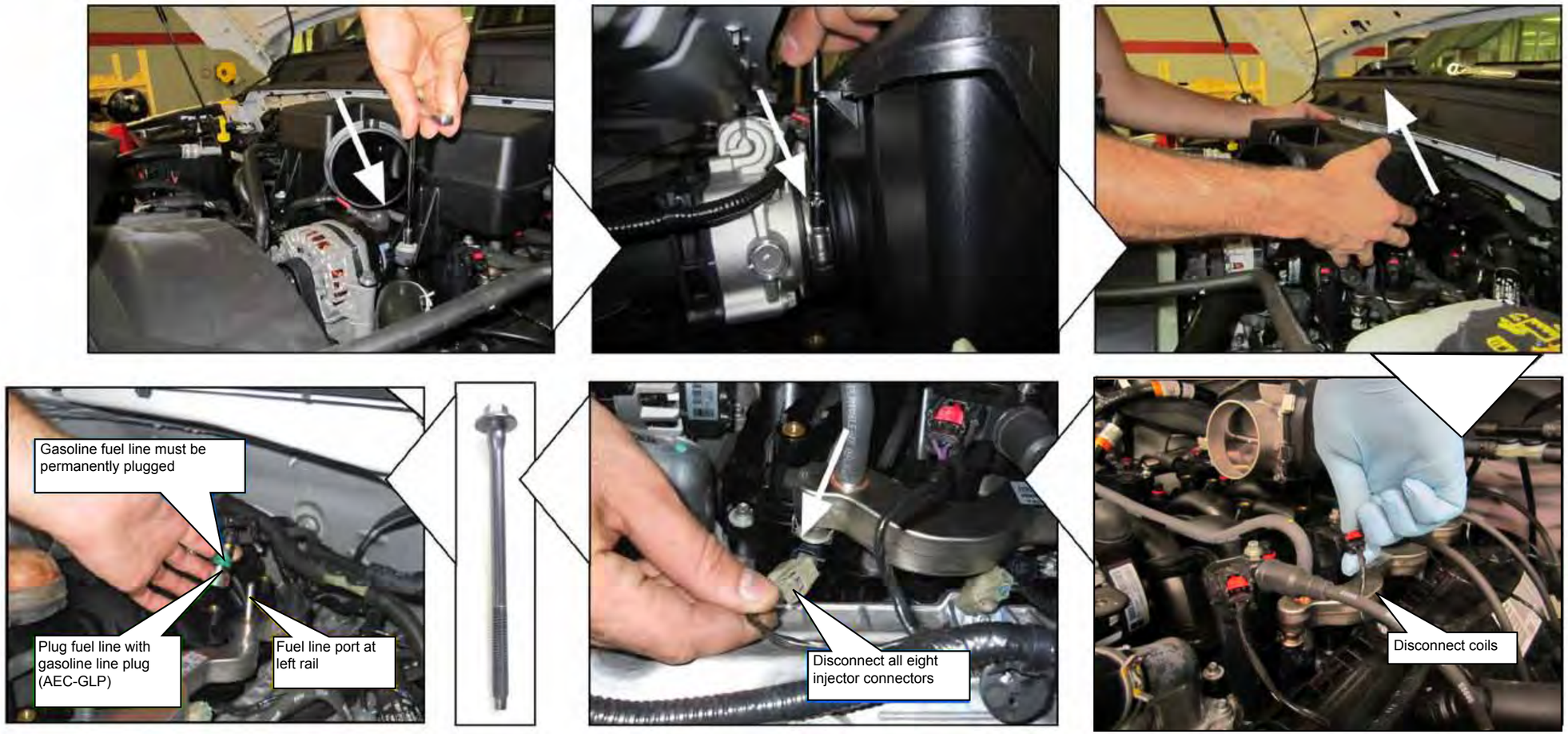
INSTALLING FUEL RAIL INSTALLING THE DEDICATED SYSTEM COMPONENTS ON ENGINE continued

5. Loosen the two bolts and remove the air intake box.

Note: There is a boot behind the air intake box. Loosen the hose clamp and remove the air intake box with the boot together.

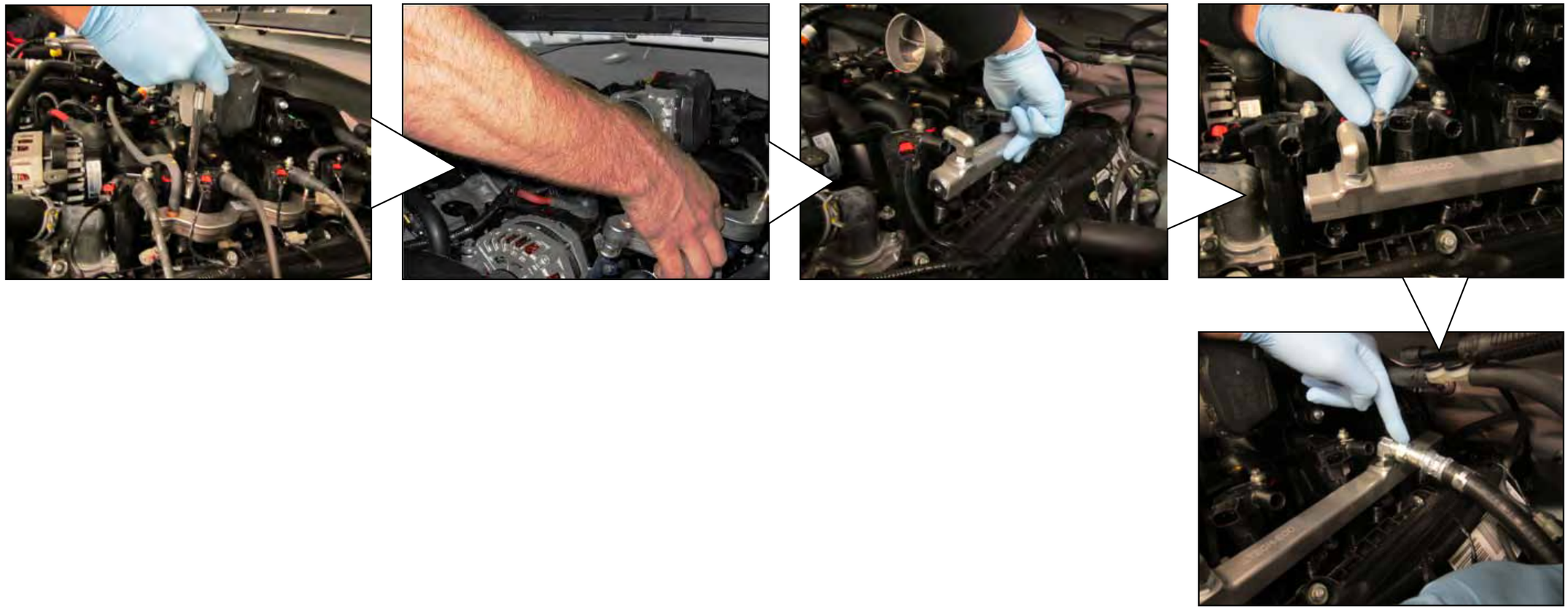
6. Disconnect all eight OEM fuel injector connectors. Also disconnect the coils.
7. Remove OEM fuel rail bolts and set aside, these will be reused (4 total)
8. Detach the OEM fuel line and plug the line with fuel plug (AEC-GLP) provided with the installation kit.

WARNING: The OEM fuel line may spray gasoline upon disconnect. Wear eye protection.
WARNING: DO NOT USE POWER TOOLS.



INSTALLING FUEL RAIL INSTALLING THE DEDICATED SYSTEM COMPONENTS ON ENGINE continued

10. Remove OEM fuel rails and discard along with injectors and crossover hose.
    Note: The fuel rail still contains gasoline. Wear eye protection.
11. Install assembled fuel rail with injector seats (AEC-INJADAP-F-DED) into the manifold. Driver side fuel rail: AEC-FR250-350DR-v2, Passenger side fuel rail: AEC-FR250-350DL-v2.
    Note: install fuel rails upright and wiggle the rails into place. This is to avoid possible o-ring damage which can cause leaks.
12. Install the second fuel rail on the other side in similar fashion.
13. Secured the CNG fuel rails using the original OEM fuel rail bolts. Torque to factory specification. Refer to Ford's vehicle workshop manual.
14. Attach the CNG fuel line low pressure hose to the CNG fuel rail. Also connect the transducer to the harness if the main harness has already been installed.



INSTALLING FUEL RAIL INSTALLING THE DEDICATED SYSTEM COMPONENTS ON ENGINE continued

15. Attach the low pressure hose (AEC-LPH14 3/8) connecting both fuel rails and torque to 35-40 ft-lbs.
16. Re-install the Evap sensor and reconnect the wiring.
17. Re-install the air intake box. Tighten the hose clamp on the boot behind the air intake box.
18. Attach eight CNG injector electrical jumpers (AEC-JWH) to the OEM injector harness connectors. Attach the jumpers to the CNG fuel injectors.
19. Reconnect all OEM hoses and wiring including the CNG low pressure fuel line.
20. Re-install air cleaner cover outlet pipe. Tighten the hose clamps and snap the OEM coolant hose back into place.

INSTALLING THE MAIN WIRING HARNESS

Installing AFCM

Installing the main wiring harness is essentially the same for all vehicle models. The main wiring harness is installed in the engine compartment and provides take-out connections for the components attached to the harness. Refer to provided wire harness diagrams) :

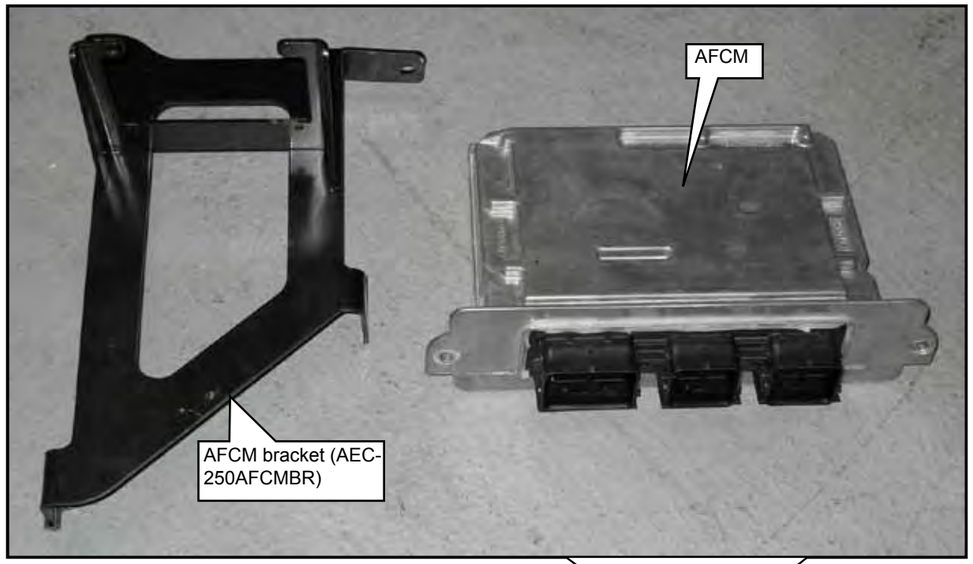
- AlTech-ECO alternate fuel control module (AFCM) connectors
- AlTech-ECO fuse and relay panel (hard wired into main harness)
- Positive and negative leads (connect to vehicle battery)
- Three lead harness to controller area network (CAN) bus (connect into Ford powertrain control module (PCM) harness)
- Temperature pressure sensor (TPS) connector
- Fuel injector wiring harnesses (bi-fuel system)
- 10-pin connector for rear electrical harness
- 6-pin connector for the fuel gauge and bi-fuel selector (switch) if equipped.

Other components are the AlTech-Eco AFCM and the AFCM mounting bracket.

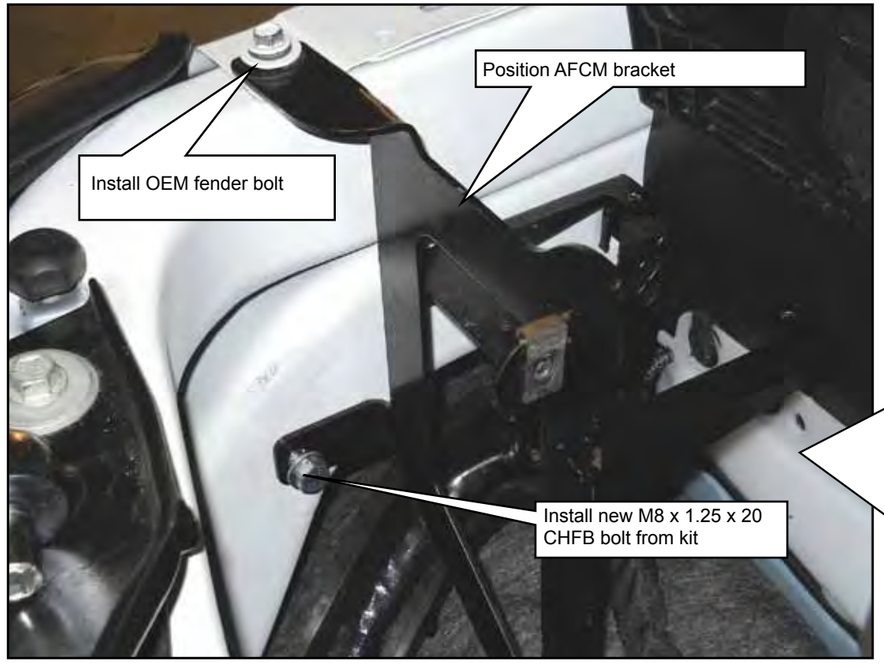
Tools:

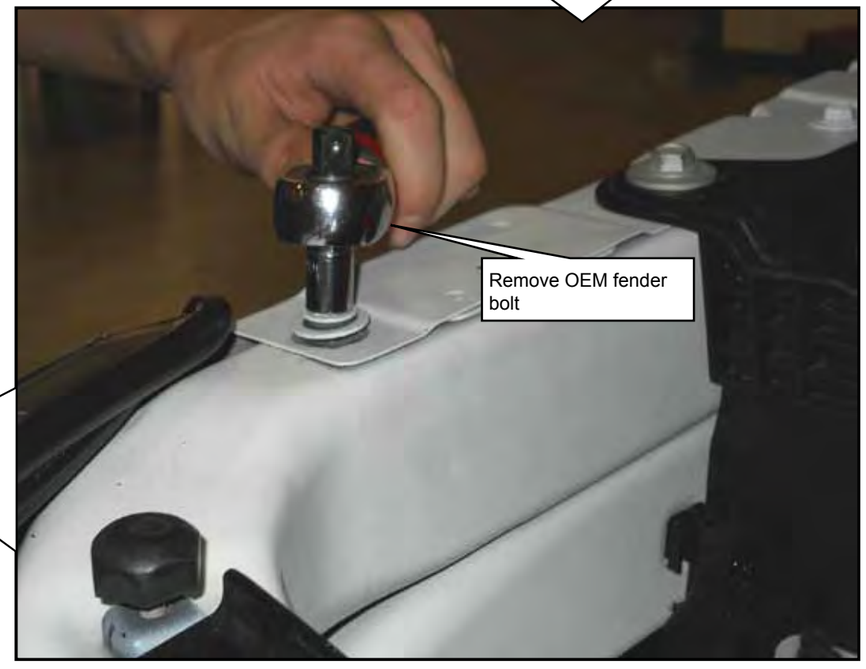
- Basic Hand Tools

Vehicle battery must be disconnected during this portion of the installation



1. Obtain the main wiring harness, AFCM, AFCM mounting bracket and the two bi-fuel injector wire harnesses (if required based on system type).
2. Remove the forward-most right fender bolt to make room for the AFCM bracket.
3. Position the AFCM bracket to the right inner fender, install the OEM fender bolt. Obtain and install a M8 x 1.25 x 20 CHFB bolt through the lower hole in the bracket into a pre-taped hole in the inner fender. Tighten to 80 in-lb (9 Nm).





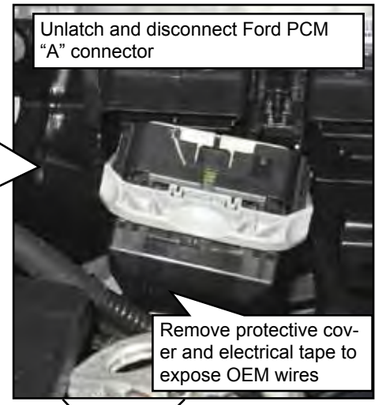
INSTALLING THE PIG TAIL CAN BUS

Make the Ignition and CAN Bus Connection

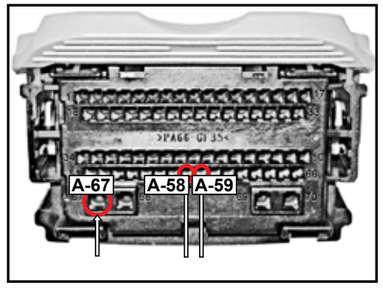
4. Separate the CAN bus harness (with three open leads) from the main wire harness.
5. Strip and solder-in the three pigtail wires to the Ford PCM connector “A” wires (pin A-67 white/brown ignition wire, pin A-59 white/blue CAN bus + wire and pin A-58 white CAN bus - wire)
   - CNG red wire goes to A-67 white/brown ignition
   - CNG twisted pair lt. green/white goes to A-59 white/blue CAN bus +
   - CNG twisted pair lt. pink/white goes to A-58 white CAN bus -
6. If not done, slide the loom (convolute) over the CNG pigtail harness and secure with electrical tape near the CNG harness connector and at the other end where the three loose wires protrude.
7. Disconnect the Ford PCM connector “A” (closest to inner fender).
8. Take the protective cover (loom or harness cover) off of the Ford PCM connector “A.”
9. Locate the three Ford circuit wires A-67, A-59 and A-58.
10. Remove the white terminal lock from each wire connection.
11. De-pin the three Ford circuit wires A-67, A-59 and A-58 from the connector using the appropriate pin removal tool.

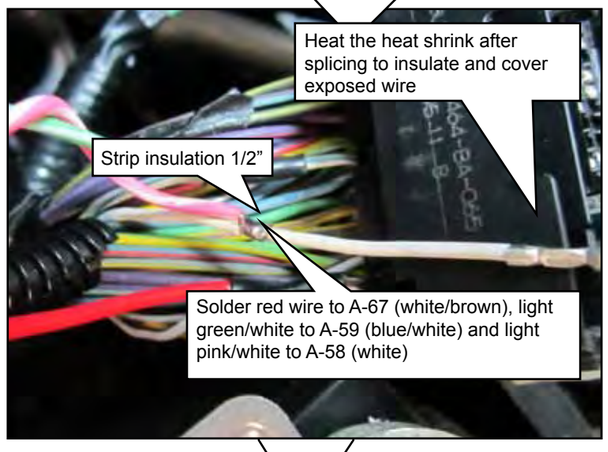
Note: It is recommended to de-pin the three wires one at a time to prevent cross-wiring or incorrect connections.

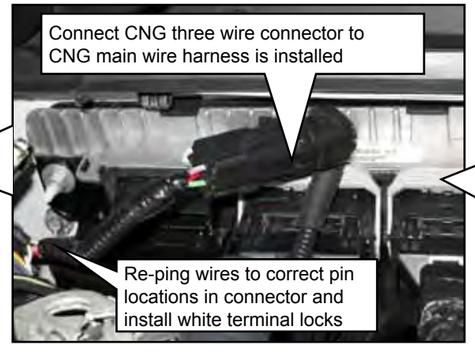
12. Slide heat shrink tubing over the three Ford connector “A” harness wires before soldering.
13. Strip the three Ford ignition, CAN bus + and CAN bus - wires near the back of the connector. Strip along the wires approximately 1/2 inch, leaving the wire insulation on both sides of the stripped location.
14. Solder the CNG wires onto the Ford wires, let cool and inspect for good connections.
15. Slide the heat shrink tubing over the exposed areas and heat to secure.
16. Re-pin the Ford ignition and bus wires to the “A” PCM connector using appropriate pin installation tool.
17. Install the white terminal locks.
18. Install the protective cover (loom or harness cover) over the back of the Ford connector “A.”
19. Install the “A” connector back onto the Ford PCM and latch to secure.
20. Connect the CNG three wire ignition and CAN bus connector to the CNG main wire harness after the main wire harness is installed.

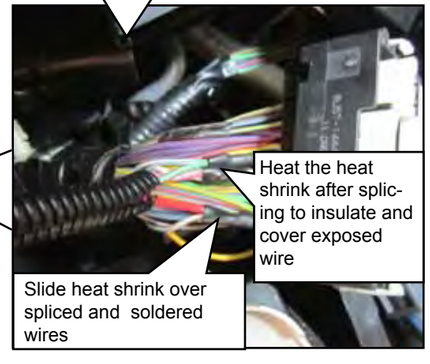


CAN bus harness









INSTALLING THE MAIN WIRING HARNESS

Continue Main Harness Installation

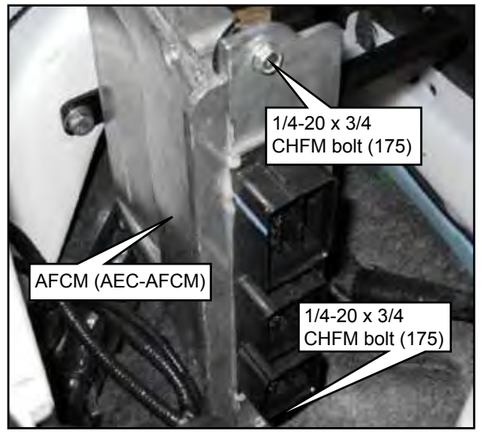
21. Position the AFCM to the front of the AFCM bracket and install two new 1/4-20 x 3/4 CHFM bolts (175) to secure the module.
22. Lay the main wire harness over the right side of the truck.

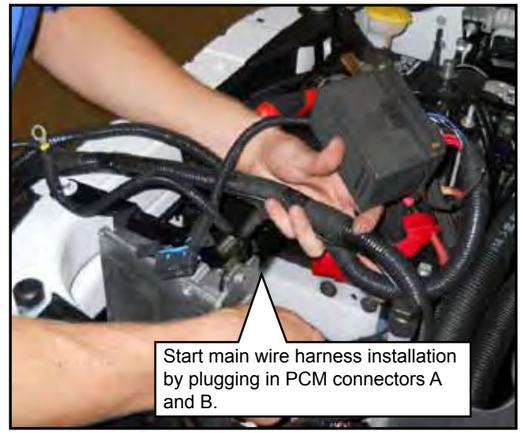
Caution: Make sure to protect the vehicle finish of the fender and surrounding areas using a fender cover or equivalent. If not protected, damage to the painted finishes can result.

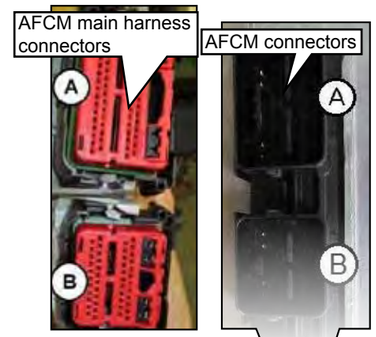
23. Plug in the two main wire harness AFCM connectors (A, B) to the AFCM. Make sure to latch the connectors in place to secure the connectors.
24. Route the fuse and relay panel harness (with fuse and relay panel) between the AFCM bracket and the vehicle battery.
25. Remove the cover from the fuse and relay panel. Separate the four panel screws from the panel.
26. Position the fuse and relay panel into the panel bracket. The panel is inserted into the bracket from below.
27. Install the four panel screws and tighten to secure.

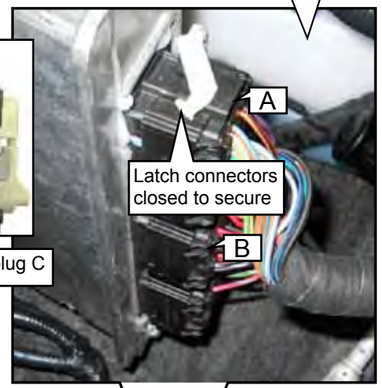
Note: Trap the end of the fuse panel cover lanyard under the front right screw and then tighten to secure the panel.

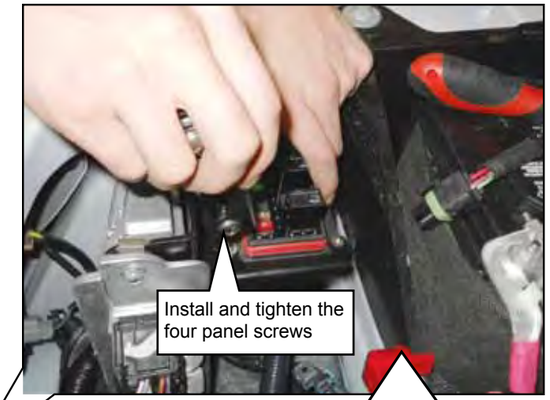
28. Snap the fuse and relay panel cover onto the panel.

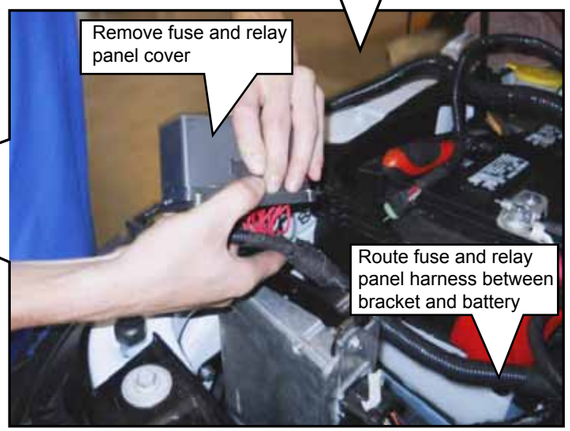


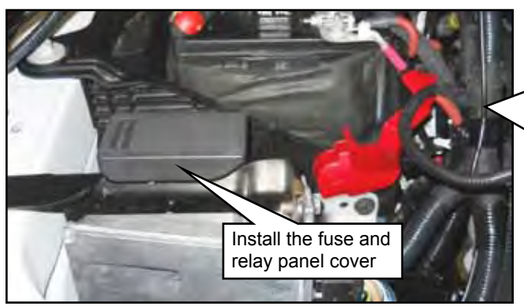


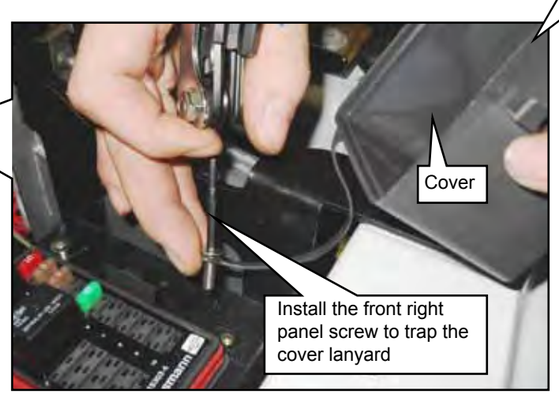












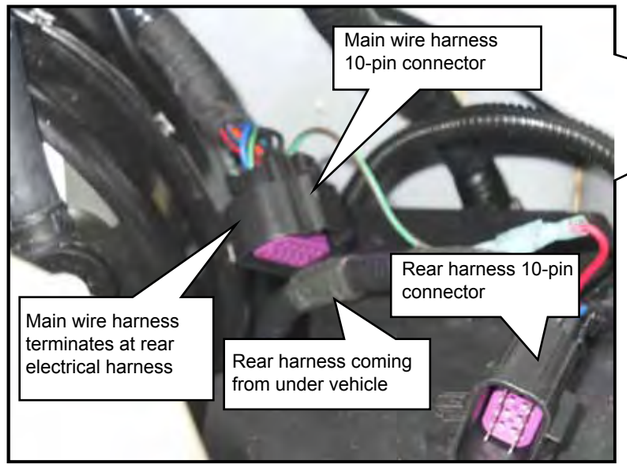
INSTALLING THE PIG TAIL

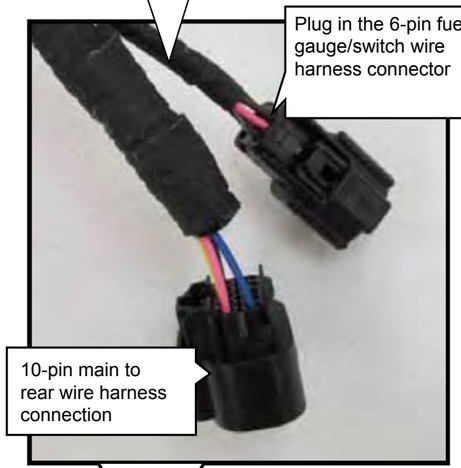
Continue Main Harness Installation

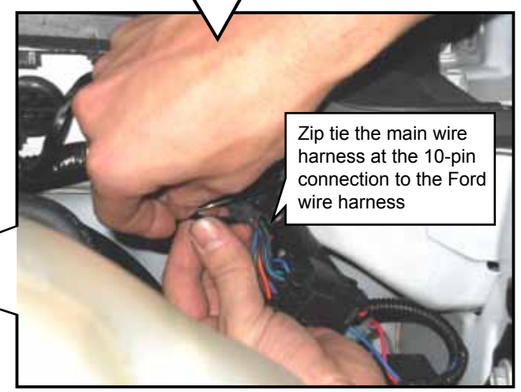
29. Complete the main wire harness routing over to the CNG rear electrical harness. Route the main harness over the brake booster to converge with rear harness.
30. Plug the two CNG main and rear wire harnesses together at the 10-pin connection. Also plug in the 6-pin Molex MX150 female connector (#38409) to the fuel gauge and or bi-fuel selector (switch) harness leading into the driver side of the passenger compartment.

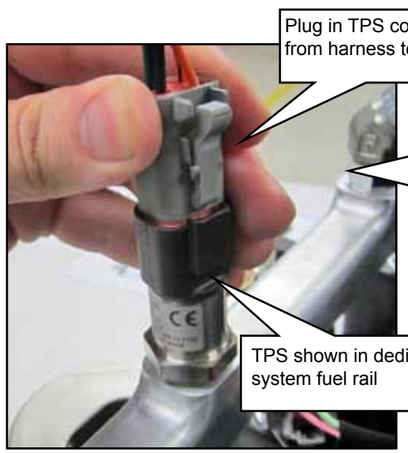
Note: If the rear wire harness has not been installed, refer to INSTALLING THE FUEL LINES, COOLANT HOSES AND REAR ELECTRICAL HARNESS. If the fuel gauge and/or the bi-fuel selector (switch) wire harness is not installed, refer to INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE.

31. Cable tie the main wire harness along the installation to secure the harness:
    - To Ford harness at 10-pin connection.
32. If you are installing the bi-fuel system, obtain and connect the two CNG injector wire harnesses (AEC-INJWH) into the main wire harness at the two 6-pin connectors located at the rear of the engine compartment.
33. Locate the TPS harness connector in the main wire harness and plug it into the sensor.





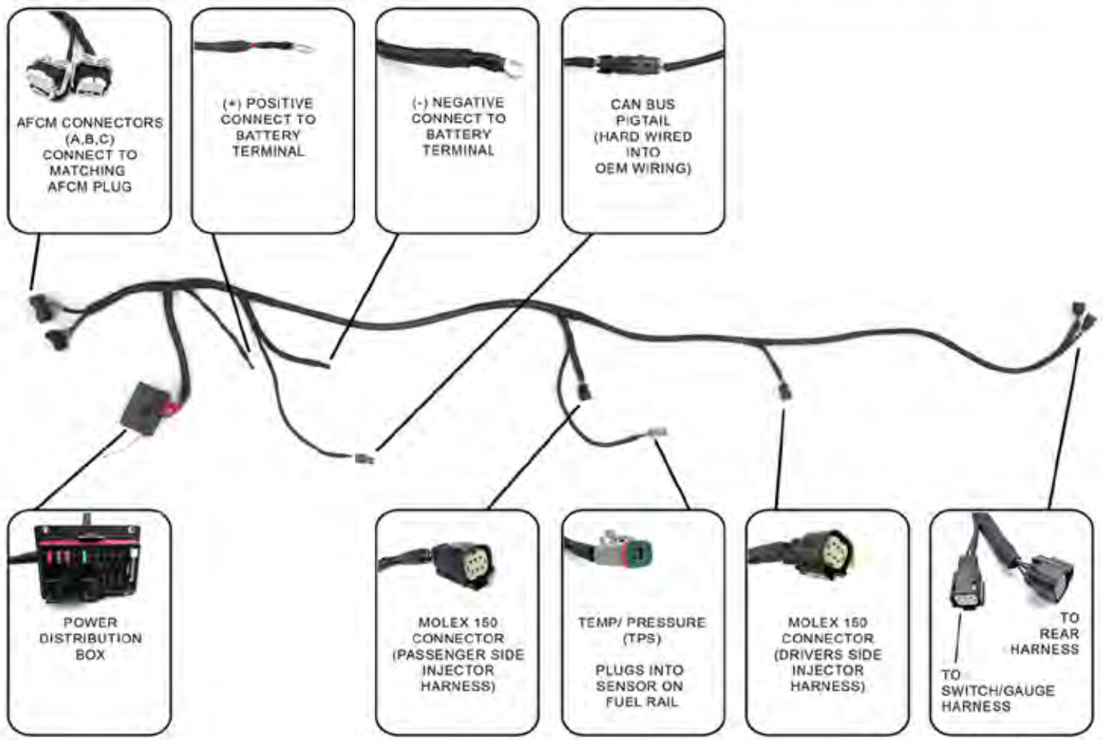




Wiring Harnesses - Bi-Fuel System

ALTECH-ECO 2011-2013 FORD F-250/350 MAIN WIRING HARNESS DIAGRAM BI-FUEL SYSTEM

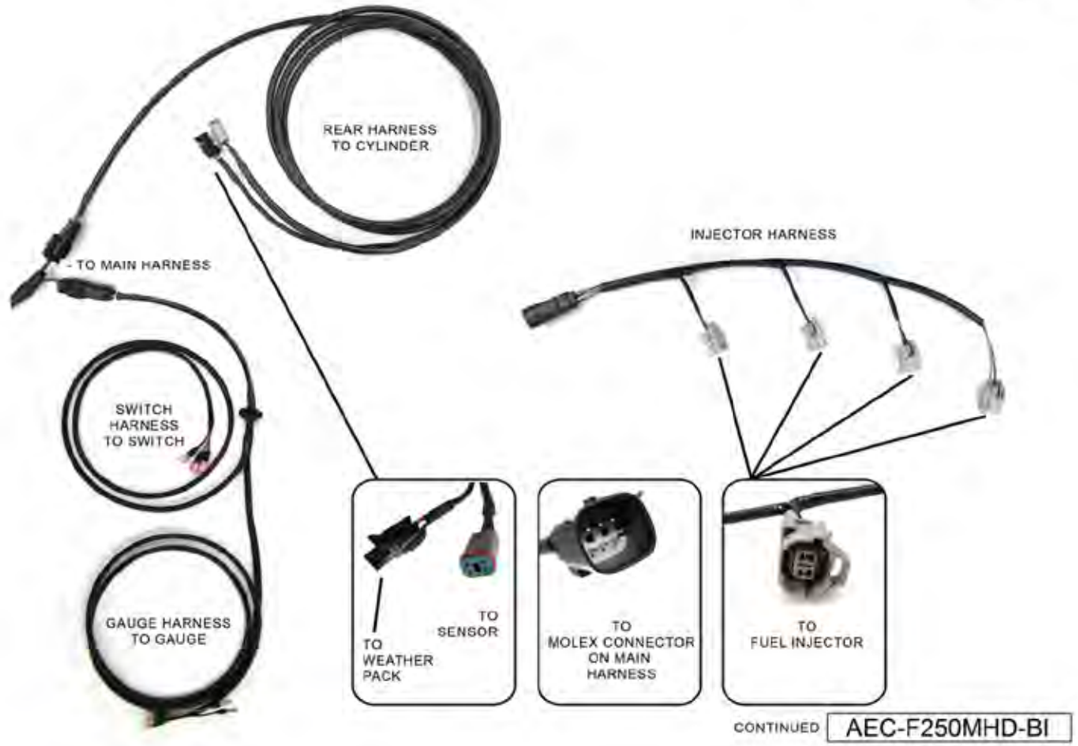
MAIN WIRING HARNESS: AEC-F250AFCM-BI-WH-V2



AEC-F250MHD-BI-V2

ALTECH-ECO 2011-2013 FORD F-250/350 MAIN WIRING HARNESS DIAGRAM BI-FUEL SYSTEM

REAR HARNESS: AEC-F250AFCM-RWH
GAUGE HARNESS: AEC-F250BISWGA
JUMPER: AEC-INJWH

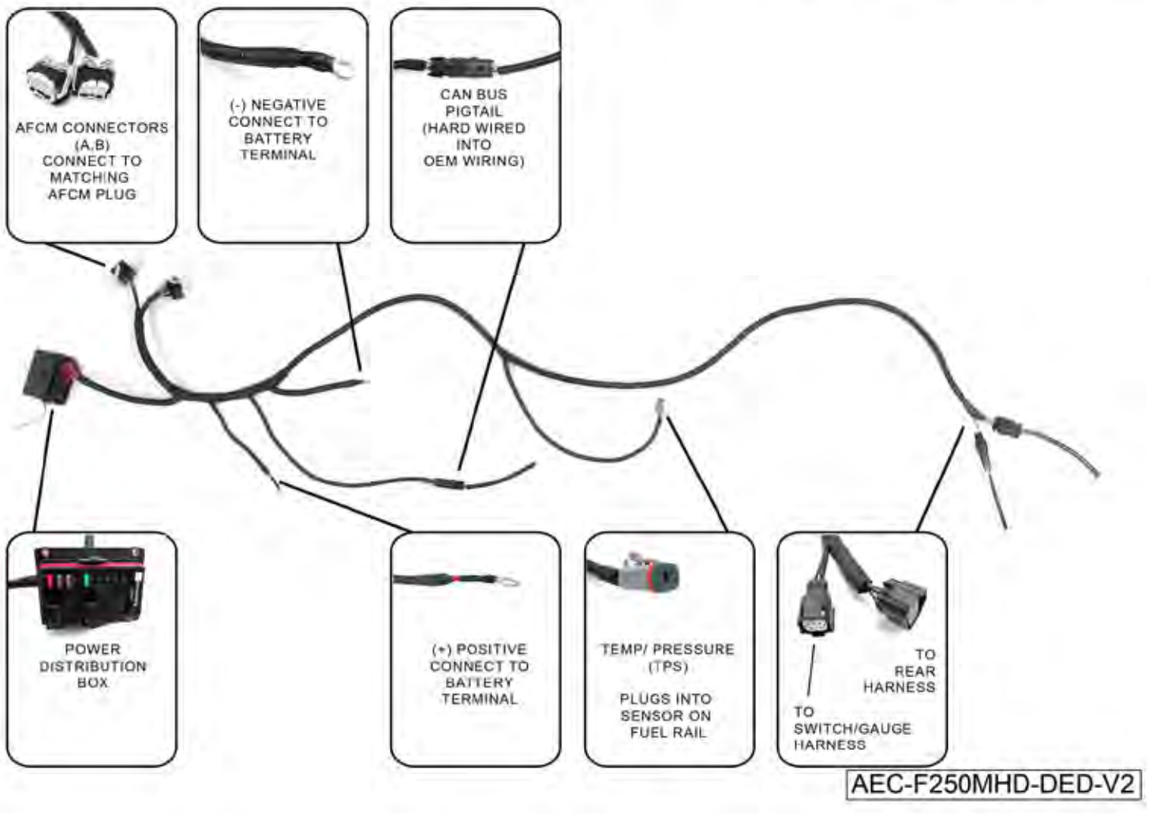


CONTINUED AEC-F250MHD-BI

Wiring Harnesses - Dedicated System

ALTECH-ECO 2011-2013 FORD F-250/350 MAIN WIRING HARNESS DIAGRAM DEDICATED SYSTEM

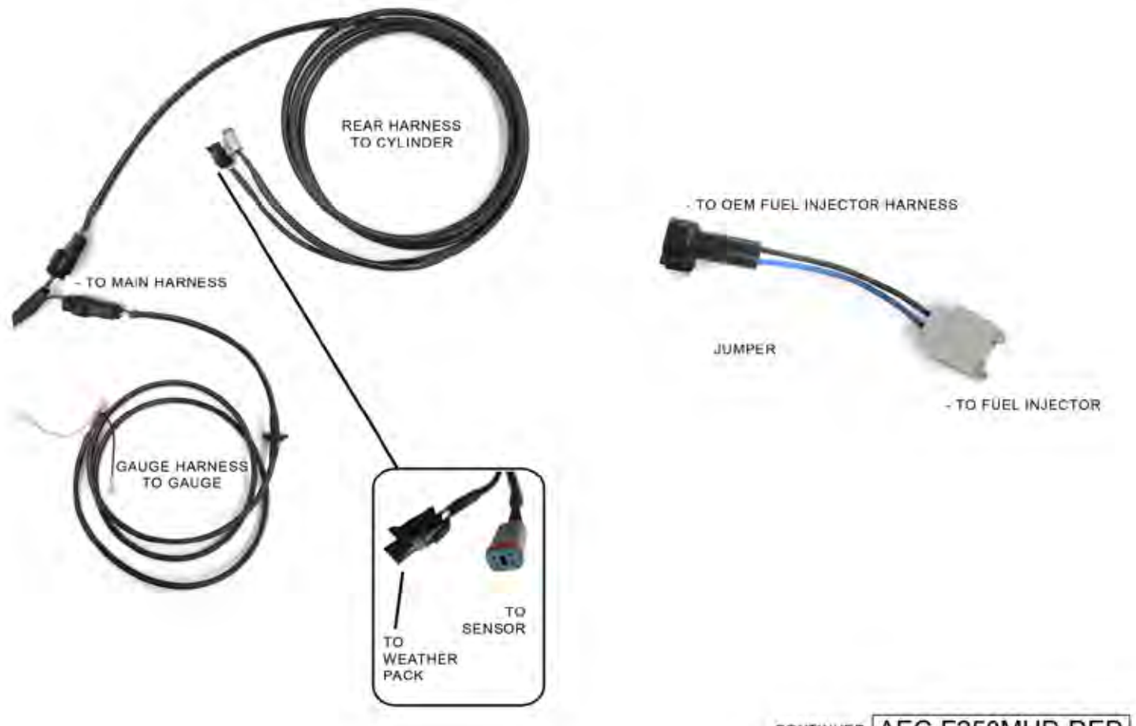
MAIN WIRING HARNESS: AEC-F250AFCM-DED-WH-V2



AEC-F250MHD-DED-V2

ALTECH-ECO 2011-2013 FORD F-250/350 WIRING HARNESSES DIAGRAM DEDICATED SYSTEM

REAR HARNESS: AEC-F250AFCM-RWH
GAUGE HARNESS: AEC-DEDSWGA
JUMPER: AEC-JWH



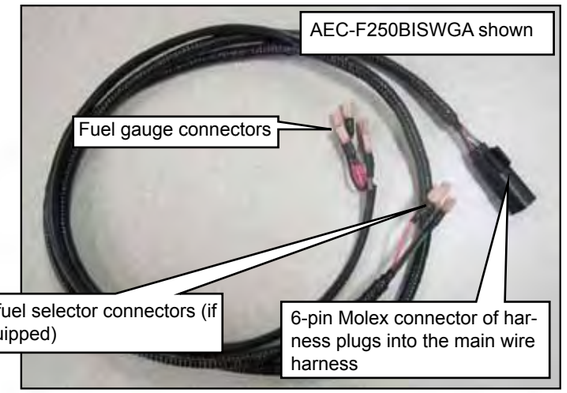
CONTINUED AEC-F250MHD-DED

INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

Installing Bi-Fuel Selector Switch/Gauge harness

The bi-fuel selector or switch is required on vehicles when the bi-fuel system is being installed. Dedicated CNG fuel systems do not require this selector. The bi-fuel selector and fuel gauge harness is AEC-F250BISWGA. The fuel gauge harness for the dedicated system is AEC-F250DEDSWGA.
A rectangular hole must be cut into the instrument cluster finish panel to accommodate the selector. A template is provided in the bi-fuel system installation kit that orients and locates the position of the hole to cut.

Caution: A precision cut must be made to protect the finish panel from damage and to ensure a precise fit of the bi-fuel selector.

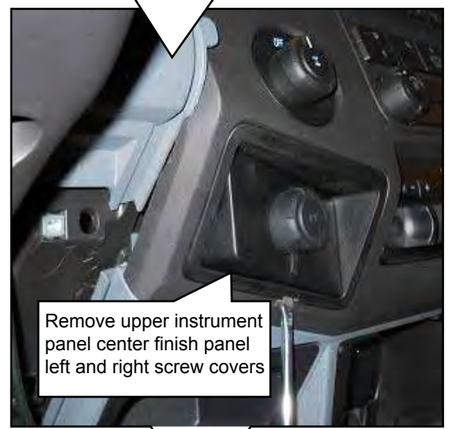


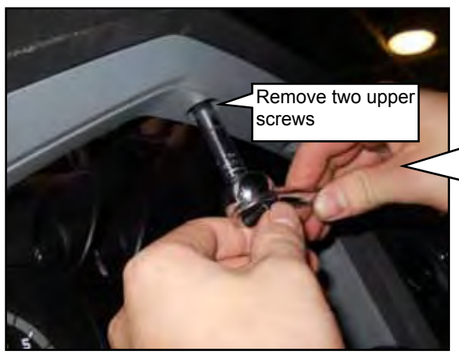
1. To install the Gauge/switch and OBD II harness locate the blank space, by pulling back the liner above the brake pedal.
2. Before drilling check to insure the space around the brake booster is clear.
3. Carefully drill a 3/4” hole to accommodate the harness and grommet.
4. Clean drilled hole, use touch up pain/rust proofing and then feed the harness from the engine compartment through the hole into the cab of the vehicle. Grommet should fit perfectly and not loose.
5. Locate the OBM II plug.
6. Remove the blue securing clip at the bottom of the plug.
7. Locate slot #13 on the OBD II plug. Install the pin into it.
8. Replace the securing clip and lock into place.
9. Zip tie to surrounding harness to secure wire.

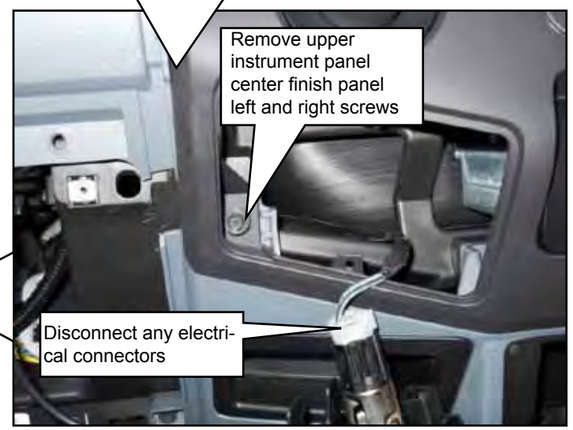
INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

Installing Bi-Fuel Selector and Electrical Wire Harness

10. Remove the steering column opening trim panel.
11. Remove the instrument panel upper center finish panel left and right screw covers.
12. Remove the instrument panel upper center finish panel left and right screws.
13. Pull outward slightly to separate the instrument panel upper center finish panel from the retention clips.
14. Disconnect all electrical connectors from components on the upper center finish panel and remove the panel.
15. Remove the two lower and two upper instrument cluster finish panel screws.







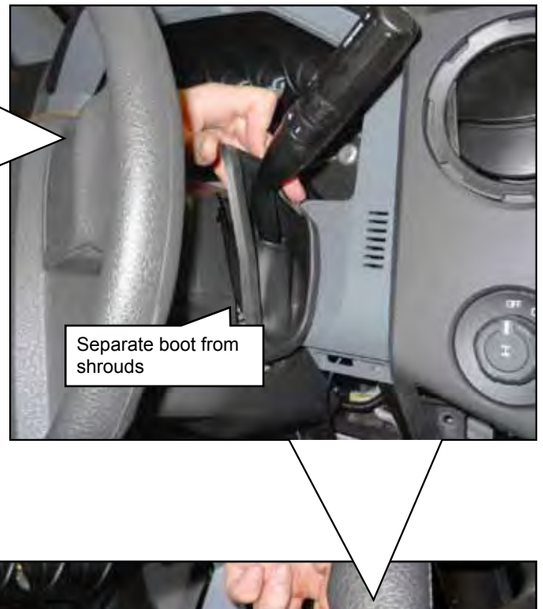
INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

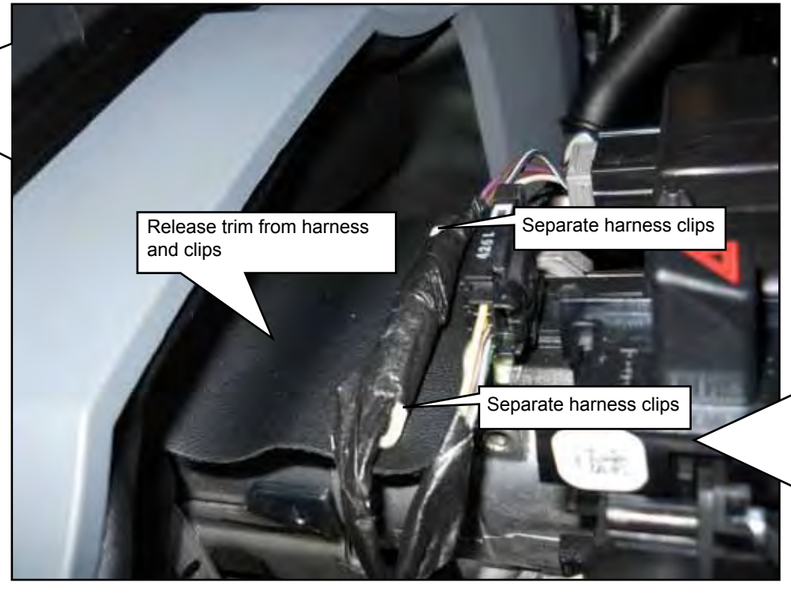
Installing Bi-Fuel Selector Switch Continued

16. Remove the three lower steering column shroud screws.
17. Separate the selector lever boot from the upper and lower steering column shrouds.
18. Separate the upper and lower shrouds and remove the upper shroud.

Note: Operate the steering column tilt lever and lower the column in a position that allows upper shroud removal.

19. Pry out the harness clips to release the harness and the flexible trim (part of instrument cluster finish panel) covering top of steering column.
20. Remove the instrument cluster finish panel.
21. Place the finish panel on a bench.

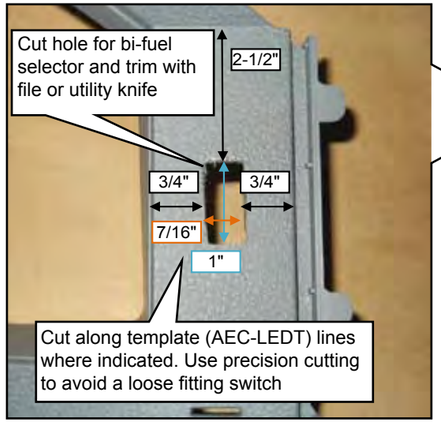


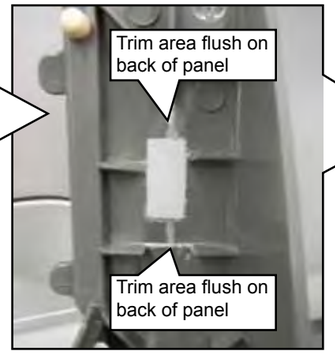


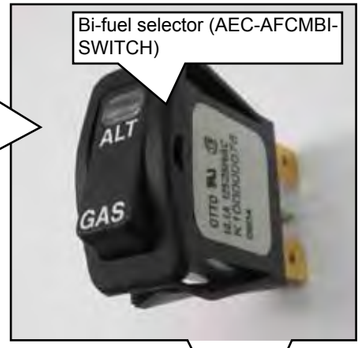
INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

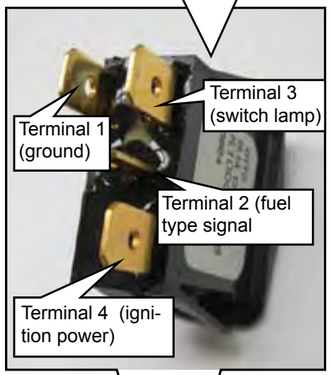
Installing Bi-Fuel Selector Switch

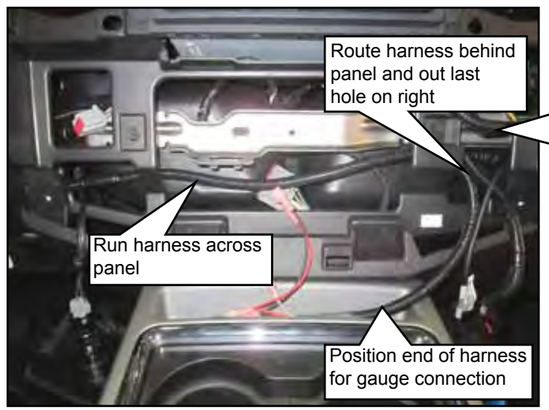
22. Obtain the bi-fuel switch template (AEC-LEDT) from the CNG installation kit.
23. Affix the template to the instrument cluster finish panel in the location indicated.
24. Using the template guide lines, cut a rectangular hole in the finish panel. Use precision cutting to avoid a loose fitting switch. If no template is available, use the dimensions shown.
25. Using a file, remove any cutting debris from the hole so that it does not interfere with selector installation. Trim the back of the panel to allow proper switch installation. The switch retention clips must have clearance for proper retention.
26. Obtain the bi-fuel selector switch (AEC-AFCMBI-SWITCH) from the installation kit.
27. Snap the bi-fuel selector into the instrument cluster finish panel. Make sure the retention clips of the switch are fully engaged in the panel.
28. Route the harness across the lower part of the instrument panel and cable tie to Ford harness. Pull the end of the bi-fuel selector part of the harness (bi-fuel system only) through left hole behind lower center finish panel and position for installation.
29. Route the fuel gauge harness out of the second hole and across center panel area and position for installation.

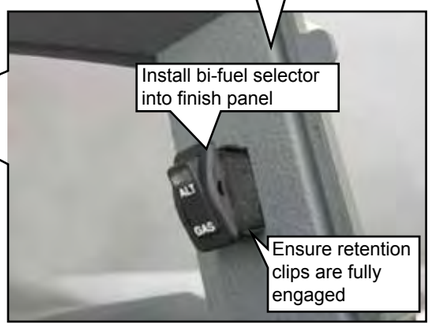








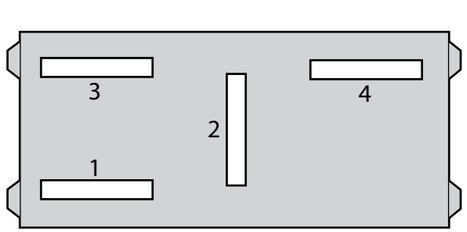




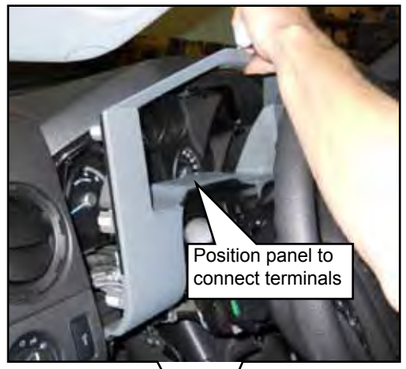
INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

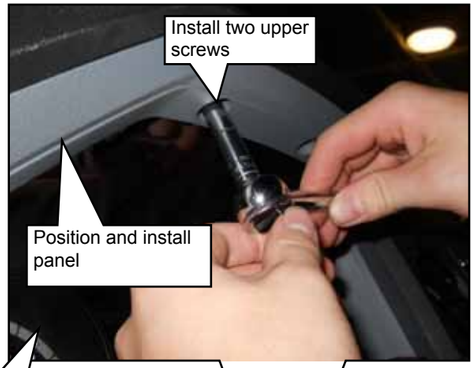
Installing Bi-Fuel Selector Switch

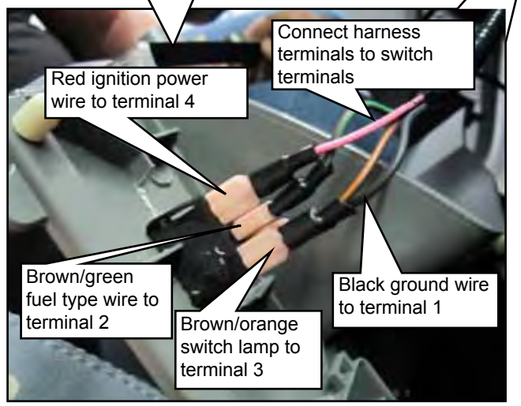
30. Position the instrument cluster finish panel close enough to make the bi-fuel selector electrical connections.
31. Then make the following connections to CNG switch (Example 2):
    - -Pink wire to terminal 4
    - -Brown/green to terminal 2
    - -Brown/orange to terminal 3
    - -Black to terminal 1
32. Position instrument cluster finish panel to instrument panel, align the locator tabs and snap panel into place.
33. Install and tighten the two upper screws and the two lower screws to secure the panel.
34. Position the two holes of the flexible trim piece under the harness and clips. Push the clips into the holes of the steering column.
35. Fit the upper to lower steering column shrouds together, install the three screws and tighten to secure.
36. Snap the shift lever boot into the upper and lower shrouds.
37. Install the steering column opening trim panel, align the tabs and snap into place.

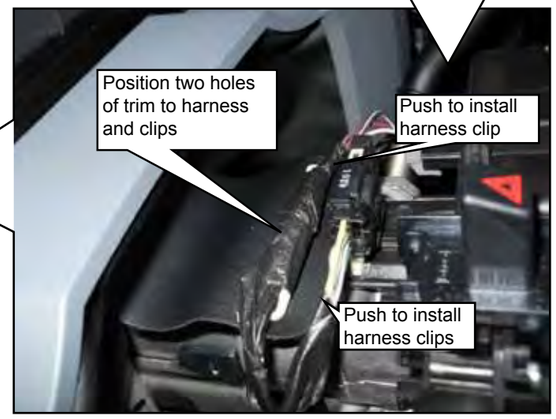


Example 2







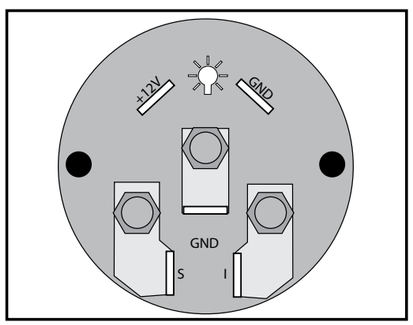


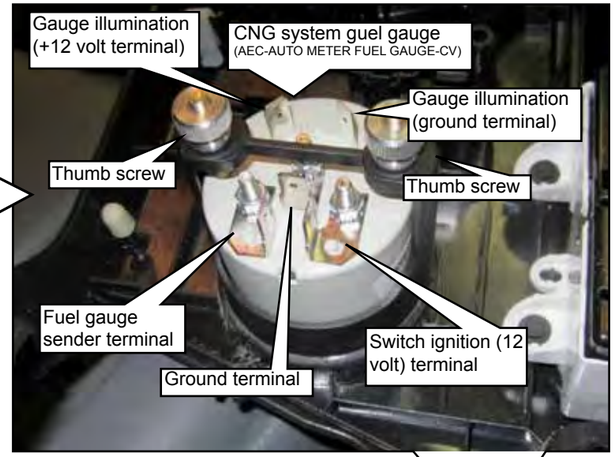
INSTALLING THE BI-FUEL SELECTOR AND CNG FUEL GAUGE

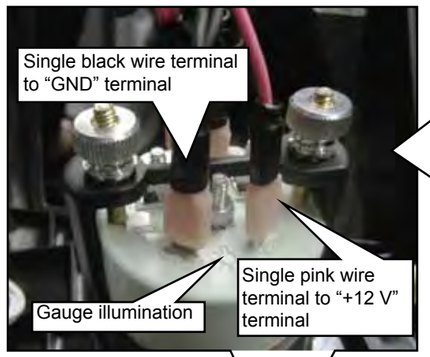
Installing Fuel Gauge

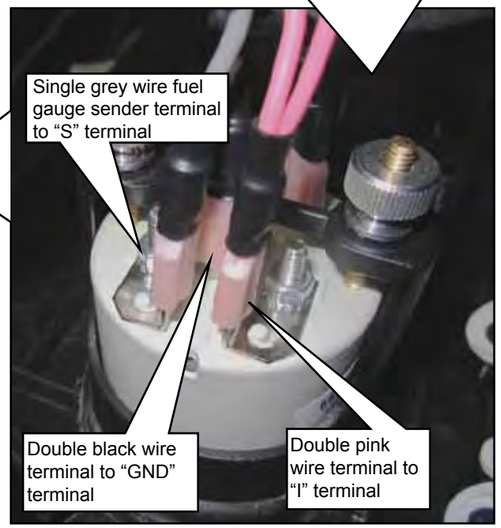
The CNG fuel gauge is to be installed on all F-250 and F-350 vehicles with either the bi-fuel system or the dedicated fuel system. However, the electrical wire harness is different for each system. The bi-fuel selector and fuel gauge harness is AEC-F250BISWGA. The fuel gauge harness for the dedicated system is AEC-F250DEDSWGA.

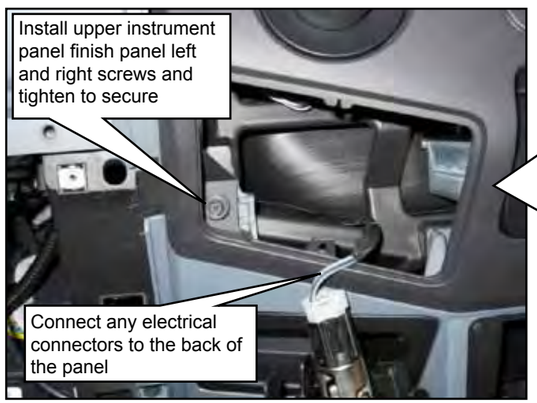
1. Place the upper center finish panel on a clean work surface.
2. Remove the 12 volt connector from the center finish panel and discard.
3. Safely enlarge the housing slightly to ensure a snug fit of the gauge using a 2 1/8” hole saw.
4. Install the O-ring (AEC-222) around the bezel of the fuel gauge.
5. Position the fuel gauge (AEC-AUTO METER FUEL GAUGE-CV) with O-ring into the panel. Insert the gauge through the front of the panel through the opening.
6. Insert the two gauge lugs into the panel bracket, install the two thumb screws and tighten to secure the gauge to the panel.
7. Locate the center finish panel near the instrument panel and make the harness wiring terminal connections to the fuel gauge.
8. Then make the following connections to CNG Fuel gauge:
   - -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”
9. Position the upper center finish panel, connect all electrical connectors, install the two screws and tighten to secure.
10. Snap-in the left and right finish panel screw covers.
11. Plug in the power receptacle.











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.

INSTALLING THE TOOL BOX

All Beds, Single Tank

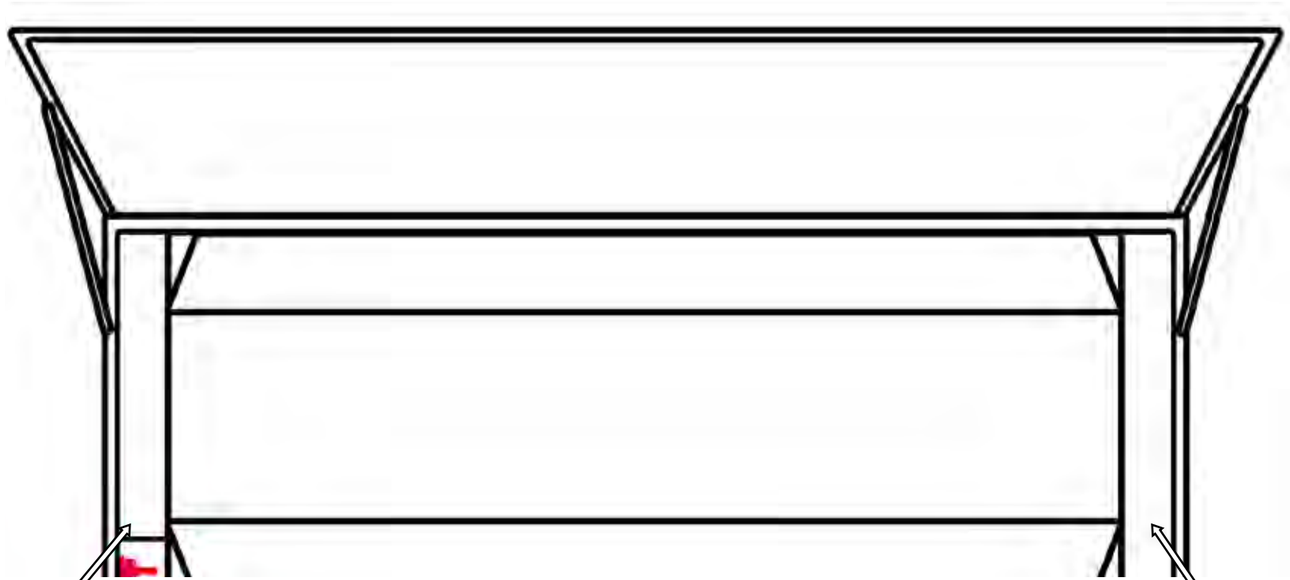
Installing the tool box is essentially the same for all vehicle models. Refer to *PREPARING THE TRUCK BED, INSTALLING THE FUEL TANK and INSTALLING THE FUEL LINES, COOLANT HOSES AND REAR WIRING HARNESS* before installing the tool box.
Holes must be drilled in the top sides of the truck bed, through the edge liner and the sheet metal of the bed.

Tools:
- Drill
- Drill bit (5/16”)
- Hand tools
- Level

1. With assistance, position the tool box onto the truck bed edge liners near the front of the bed.
2. Adjust the position of the tool box until it rests on the fourth rib of the edge liner. Adjust the box until the passenger side and the driver side are evenly spaced on both sides.
3. Adjust the position of the tool box forward until the box aligns with the front lip of the edge liner. Adjust the box until the passenger side and the driver side are equally spaced between the box and the cab of the truck.

Caution: Make sure there is enough space between the box and the cab so that when the lid of the box is open, there is no interference, or damage to the box lid and cab can occur.

4. Open the lid of the tool box and check the clearance.
5. Inside the tool box, locate the pre-drilled holes on the passenger side. Dimensions for the locations of the two holes are provided in the picture.

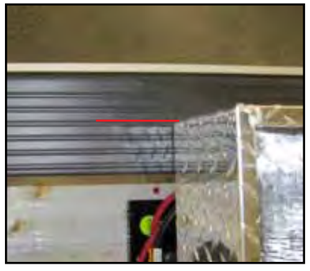


Driver side front drilling locations

Passenger side front drilling locations

Driver Side

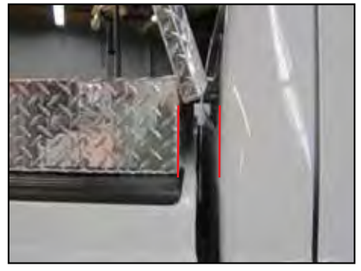
Make sure there is adequate clearance between back of cab and tool box lid when the lid is open



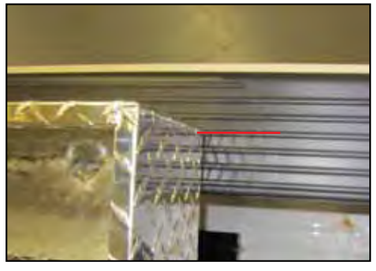
Align the tool box on the left side of the bed with the front lip of the edge liner

Adjust the box until the passenger side and the driver side are evenly spaced on both sides.

Passenger Side



Make sure there is adequate clearance between back of cab and tool box lid when the lid is open



Align tool box to the first rib on the edge liner

INSTALLING THE TOOL BOX

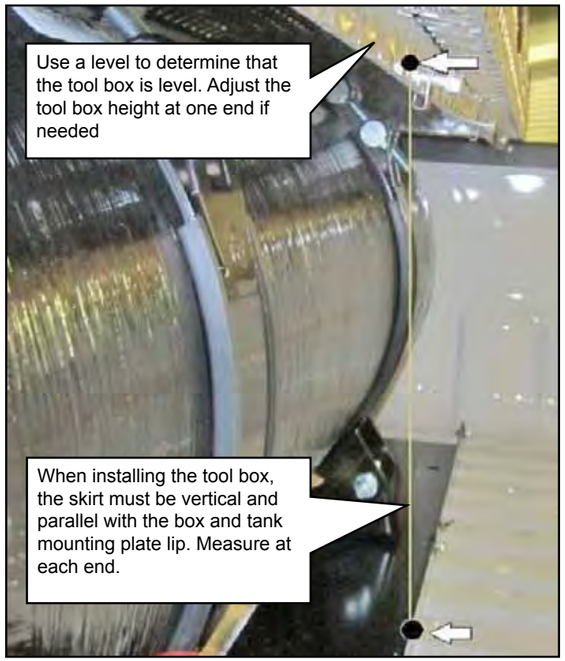
Continued All Beds, Single Tank

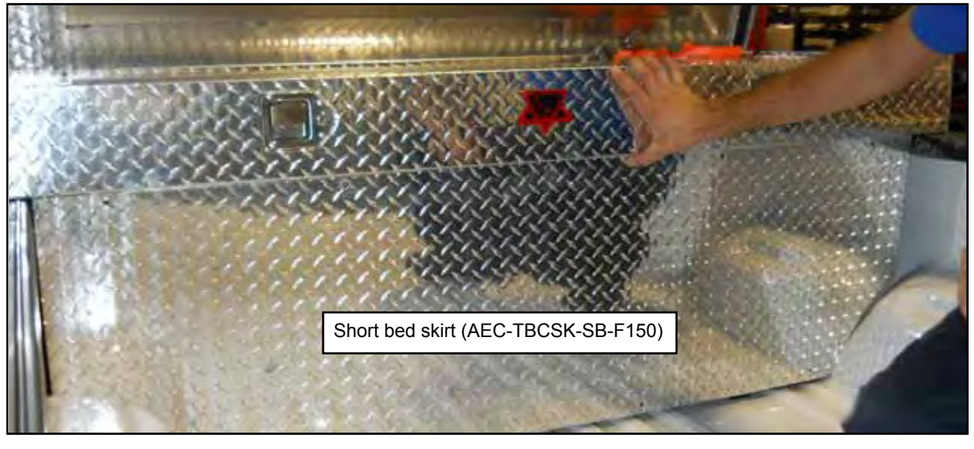
6. Inside the tool box, locate the two pre-drilled holes on the driver side. Dimensions for the locations of the two holes are provided in the picture.
7. Using a 5/16” drill bit, drill through the edge liner and sheet metal of the bed. Use the pre-drilled holes in the tool box as a guide for the drilling locations.

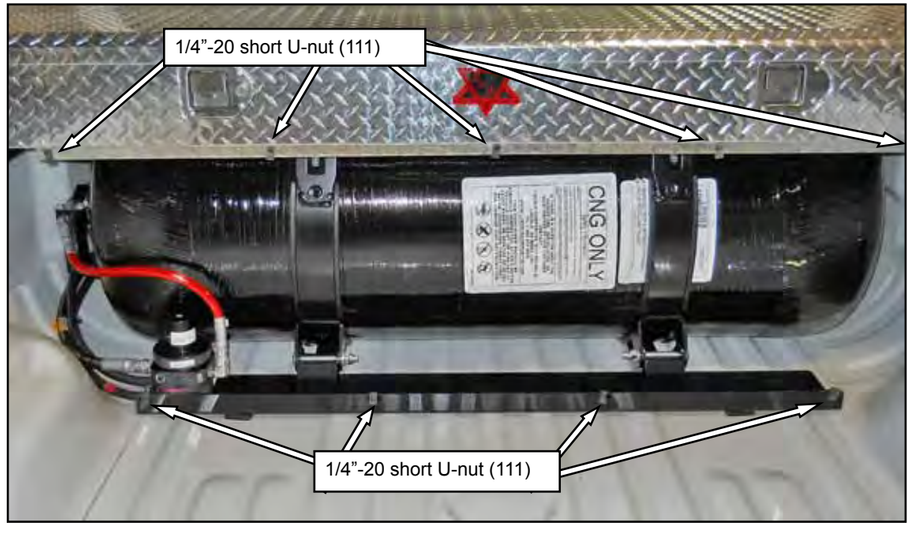
Caution: Before drilling, determine that there is no interference with the edge liner retaining clips under the side lip of the bed. These clips should not be drilled into.

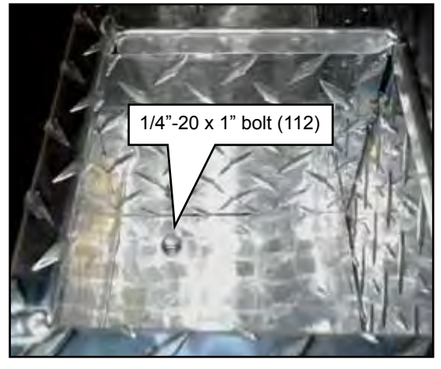
8. Use a level to determine if the tool box is level, relative to the tank mounting plate. Measure from the skirt lip of the tool box and the lip of the mounting plate. Adjust the tool box until it is level and the dimensions on each side are the same. Shim one side of the tool box if adjustment is needed.
9. Install the four 1/4”-20 x 1” CHFB bolts (112), four 1/4” flat washers (005) and four 1/4”-20 nylock nuts to secure the tool box to the bed. Install the bolts through the tool box pre-drilled holes down through the edge liner and truck bed from the top. Install the flat washers and nylock nuts from underneath.
(Recommend torque 7 ft-lb).
10. Attach nine 1/4”-20 short U-nuts (111) to five locations on the tool box skirt lip and to four locations on the rear tank mounting plate.
11. Position the skirt to the tool box and to the tank rear mounting plate. Install nine 1/4”-20 x 3/4” bolts (175) at five locations at the box and four locations at the mounting plate. (Recommended torque 7 ft-lb).

- Short bed skirt: AEC-TBCSK-SB-F250
- Long bed skirt: AEC-TBCSK-F250

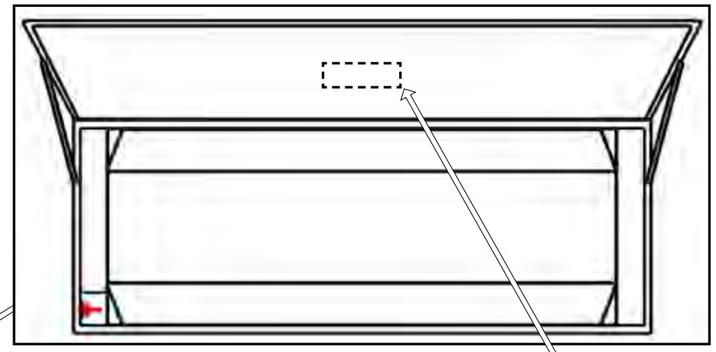




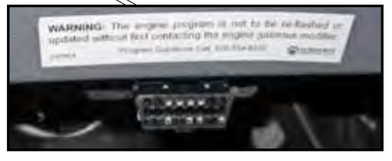




DECAL PLACEMENT



Place sticker facing to the back on driver side strap.



CNG SYSTEM PARTS AND ASSEMBLY

Contact Information

Sales Representative:	**828-654-8300**	**sales@altecheco.com**
Technical Support:	**828-654-8300**	**customerservice@altecheco.com**
Fax Number:	**828-654-8747**	
Toll Free Number:	**828-654-8300**	
AEC Hotline:	**866-727-0326**	

Address: 101 Fair Oaks Road, Arden NC 28704

PARTS LIST

2011-2012 FORD F-250/350 6.2L BI-FUEL REGULAR CAB LONG BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCA**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 14.5x2	29ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 12ft	1	AEC-MPH144
FLEX GUARD SLEEVE	11ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCAB**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
BI-FUEL CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-BI-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-A11.5
BI-FUEL SWITCH GAUGE HARNESS	1	AEC-F250BISWGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
BI-FUEL INJECTOR WIRE HARNESS	2	AEC-INJWH
1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE, 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_INTBI6.2**
F-250 INJECTOR SEAT	8	AEC-F250BI-INJADAP
INJECTOR SEATING O-RING	8	AEC-ORING-F250
FUEL RAIL LEFT	1	AEC-FR250-350BL
FUEL RAIL RIGHT	1	AEC-FR250-350BR
3/4 SAE HOLLOW HEX PLUG	4	8 HP50N-S
INJECTOR NATURAL GAS	8	AEC-INJ821-B
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE 45°	2	8-6 V50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
F-SERIES BI-FUEL FUEL RAIL BOLT EXTENSION	4	AEC-FSERFRBOLTX
M6-1.0 x 20mm CHFB	4	(190)
LOW PRESSURE HOSE 11 ¼in	1	AEC-LPH11.25
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCBL**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE 45° ELBOW	1	6 V50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCL**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (8 ft)	1	AEC-CRMPF250-8BED
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
HIGH PRESSURE HOSE, ORFS, 27in, BLACK	1	AEC-HPH27ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB BOLT	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 24in, RED	1	AEC-HPH24R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 37° FLARE x 3/4 SAE CONNECTOR	1	8 F50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
3 3/8" x 1" W/ 5/8 HOLE SPACER	2	AEC-F250-8BEDSP
1/2 - 13 x 4 3/4 CHHB	2	(130)

PARTS LIST

1/2 - 13 NYLOCK NUT	2	(043)
1/2 USS FLAT WASHER	4	(168)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX CYLINDER COVER	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCB**
SWITCH TEMPLATE	1	AEC-LEDT
GAS CAP MOD DIAGRAM	1	AEC-F250GCMOD
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-BI-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 BI-FUEL EPA CONVERSION DECAL	1	BAECT06.27HL
2012 BI-FUEL EPA CONVERSION DECAL	1	CAECT06.27HL
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250CYLD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011-2012 FORD F-250/350 6.2L BI-FUEL REGULAR CAB SHORT BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCA**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 14.5x2	29ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 12ft	1	AEC-MPH144
FLEX GUARD SLEEVE	11ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCAB**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
BI-FUEL CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-BI-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-A11.5
BI-FUEL SWITCH GAUGE HARNESS	1	AEC-F250BISWGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
BI-FUEL INJECTOR WIRE HARNESS	2	AEC-INJWH

1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE, 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_INTBI6.2**
F-250 INJECTOR SEAT	8	AEC-F250BI-INJADAP
INJECTOR SEATING O-RING	8	AEC-ORING-F250
FUEL RAIL LEFT	1	AEC-FR250-350BL
FUEL RAIL RIGHT	1	AEC-FR250-350BR
3/4 SAE HOLLOW HEX PLUG	4	8 HP50N-S
INJECTOR NATURAL GAS	8	AEC-INJ821-B
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE 45°	2	8-6 V50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
F-SERIES BI-FUEL FUEL RAIL BOLT EXTENSION	4	AEC-FSERFRBOLTX
M6-1.0 x 20mm CHFB	4	(190)
LOW PRESSURE HOSE, 11 ¼in	1	AEC-LPH11.25
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCBS**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE CONNECTOR	1	6 F50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCS**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (6.5ft)	1	AEC-250SBCRP

MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
6 ORFS SWIVEL 90º ELBOW x 6 ORFS	1	S6SE-CNG
HIGH PRESSURE HOSE, ORFS, 24in, BLACK	1	AEC-HPH24ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 22in, RED	1	AEC-HPH22R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20	2	(157-H)
1/2 x 3/4 SAE 45º ST THREAD ELBOW	1	8 V50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
“WARNING STICKER: HIGH PRESSURE…” (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT ‘U’ NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-SB-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCB**
SWITCH TEMPLATE	1	AEC-LEDT
GAS CAP MOD DIAGRAM	1	AEC-F250GCMOD
F-250 OWNER’S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-BI-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 BI-FUEL EPA CONVERSION DE-CAL	1	BAECT06.27HL
2012 BI-FUEL EPA CONVERSION DECAL	1	CAECT06.27HL
SINGLE CYLINDER LAYOUT DIA-GRAM	1	AEC-EF250SBD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011-2012 FORD F-250/350 6.2L BI-FUEL SUPER CAB LONG BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCB**
COOLANT HOSE Y’s	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 15x2	30ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 13ft	1	AEC-MPH156
FLEX GUARD SLEEVE	12ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCBB**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
BI-FUEL CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-BI-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-B13
BI-FUEL SWITCH GAUGE HARNESS	1	AEC-F250BISWGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
BI-FUEL INJECTOR WIRE HARNESS	2	AEC-INJWH

1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLEM, TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_INTBI6.2**
F-250 INJECTOR SEAT	8	AEC-F250BI-INJADAP
INJECTOR SEATING O-RING	8	AEC-ORING-F250
FUEL RAIL LEFT	1	AEC-FR250-350BL
FUEL RAIL RIGHT	1	AEC-FR250-350BR
3/4 SAE HOLLOW HEX PLUG	4	8 HP50N-S
INJECTOR NATURAL GAS	8	AEC-INJ821-B
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37º FLARE x 9/16 SAE 45º	2	8-6 V50X-S
1/2 37º FLARE x 3/4 SAE ELBOW	1	8 C50X-S
F-SERIES BI-FUEL FUEL RAIL BOLT EXTENSION	4	AEC-FSERFRBOLTX
M6-1.0 x 20mm CHFB	4	(190-F)
LOW PRESSURE HOSE 11 ¼in	1	AEC-LPH11.25
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCBL**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE 45º ELBOW	1	6 V50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCL**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (8 ft)	1	AEC-CRMPF250-8BED

MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117-H)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
HIGH PRESSURE HOSE, ORFS, 27in, BLACK	1	AEC-HPH27ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB BOLT	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 24in, RED	1	AEC-HPH24R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20	2	(157-H)
1/2 37º FLARE x 3/4 SAE CONNECTOR	1	8 F50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
3 3/8" x 1" W/ 5/8 HOLE SPACER	2	AEC-F250-8BEDSP
1/2 - 13 x 4 3/4 CHHB	2	(130)
1/2 - 13 NYLOCK NUT	2	(043)
1/2 USS FLAT WASHER	4	(168)

VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX CYLINDER COVER	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCB**
SWITCH TEMPLATE	1	AEC-LEDT
GAS CAP MOD DIAGRAM	1	AEC-F250GCMOD
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-BI-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 BI-FUEL EPA CONVERSION DECAL	1	BAECT06.27HL
2012 BI-FUEL EPA CONVERSION DECAL	1	CAECT06.27HL
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250CYLD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011-2012 FORD F-250/350 6.2L BI-FUEL SUPER CAB SHORT BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCB**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 15x2	30ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 13ft	1	AEC-MPH156
FLEX GUARD SLEEVE	12ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCBB**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
BI-FUEL CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-BI-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-B13
BI-FUEL SWITCH GAUGE HARNESS	1	AEC-F250BISWGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
BI-FUEL INJECTOR WIRE HARNESS	2	AEC-INJWH
1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE, 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_INTBI6.2**
F-250 INJECTOR SEAT	8	AEC-F250Bi-INJADAP
INJECTOR SEATING O-RING	8	AEC-ORING-F250
FUEL RAIL LEFT	1	AEC-FR250-350BL
FUEL RAIL RIGHT	1	AEC-FR250-350BR
3/4 SAE HOLLOW HEX PLUG	4	8 HP50N-S
INJECTOR NATURAL GAS	8	AEC-INJ821-B
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE 45°	2	8-6 V50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
F-SERIES BI-FUEL FUEL RAIL BOLT EXTENSION	4	AEC-FSERFRBOLTX
M6-1.0 x 20mm CHFB	4	(190-F)
LOW PRESSURE HOSE 11 ¼in	1	AEC-LPH11.25
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCBS**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE CONNECTOR	1	6 F50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCS**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR, (6.5ft)	1	AEC-250SBCRP
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117-H)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
6 ORFS SWIVEL 90° ELBOW x 6 ORFS	1	S6SE-CNG
HIGH PRESSURE HOSE, ORFS, 24in, BLACK	1	AEC-HPH24ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 22in, RED	1	AEC-HPH22R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20	2	(157-H)
1/2 x 3/4 SAE 45° ST THREAD ELBOW	1	8 V50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)

VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCS**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-SB-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTH-NUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCB**
SWITCH TEMPLATE	1	AEC-LEDT
GAS CAP MOD DIAGRAM	1	AEC-F250GCMOD
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-BI-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 BI-FUEL EPA CONVERSION DECAL	1	BAECT06.27HL
2012 BI-FUEL EPA CONVERSION DECAL	1	CAECT06.27HL
SINGLE CYLINDER LAYOUT DIA-GRAM	1	AEC-EF250SBD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011-2012 FORD F-250/350 6.2L BI-FUEL CREW CAB LONG BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCC**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 17x2	34ft	AEC-CH-B-H
FLEX GUARD SLEEVE	13.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	9	AEC-PC 1 1/8
LOW PRESSURE HOSE 15ft	1	AEC-MPH180
FLEX GUARD SLEEVE	14ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	7	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	14	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCCB**
AFMC	1	AEC-AFCM
AFMC BRACKET	1	AEC-250AFCMBR
BI-FUEL CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-BI-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-C14.5
BI-FUEL SWITCH GAUGE HARNESS	1	AEC-F250BISWGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
BI-FUEL INJECTOR WIRE HARNESS	2	AEC-INJWH
1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COM-PONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_INTBI6.2**
F-250 INJECTOR SEAT	8	AEC-F250Bi-INJADAP
INJECTOR SEATING O-RING	8	AEC-ORING-F250
FUEL RAIL LEFT	1	AEC-FR250-350BL
FUEL RAIL RIGHT	1	AEC-FR250-350BR
3/4 SAE HOLLOW HEX PLUG	4	8 HP50N-S
INJECTOR NATURAL GAS	8	AEC-INJ821-B
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE 45°	2	8-6 V50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
F-SERIES BI-FUEL FUEL RAIL BOLT EXTEN-SION	4	AEC-FSERFRBOLTX
M6-1.0 x 20mm CHFB	4	(190)
LOW PRESSURE HOSE 11 ¼in	1	AEC-LPH11.25
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCBL**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE 45° ELBOW	1	6 V50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCL**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (8 ft)	1	AEC-CRMPF250-8BED
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT

1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
HIGH PRESSURE HOSE, ORFS, 27in, BLACK	1	AEC-HPH27ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB BOLT	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 24in, RED	1	AEC-HPH24R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 37º FLARE x 3/4 SAE CONNECTOR	1	8 F50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
“WARNING STICKER: HIGH PRESSURE…” (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
3 3/8” x 1” W/ 5/8 HOLE SPACER	2	AEC-F250-8BEDSP
1/2 - 13 x 4 3/4 CHHB	2	(130)
1/2 - 13 NYLOCK NUT	2	(043)

1/2 USS FLAT WASHER	4	(168)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX CYLINDER COVER	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT ‘U’ NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCB**
SWITCH TEMPLATE	1	AEC-LEDT
GAS CAP MOD DIAGRAM	1	AEC-F250GCMOD
F-250 OWNER’S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-BI-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 BI-FUEL EPA CONVERSION DE-CAL	1	BAECT06.27HL
2012 BI-FUEL EPA CONVERSION DE-CAL	1	CAECT06.27HL
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250CYLD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011-2012 FORD F-250/350 6.2L BI-FUEL CREW CAB SHORT BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCC**
COOLANT HOSE Y’s	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 17x2	34ft	AEC-CH-B-H
FLEX GUARD SLEEVE	13.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 17ft	1	AEC-MPH204
FLEX GUARD SLEEVE	16ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCCB**
AFMC	1	AEC-AFCM
AFMC BRACKET	1	AEC-250AFCMBR
BI-FUEL CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-BI-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-C14.5
BI-FUEL SWITCH GAUGE HARNESS	1	AEC-F250BISWGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
BI-FUEL SWITCH	1	AEC-AFCMBI-SWITCH
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
BI-FUEL INJECTOR WIRE HARNESS	2	AEC-INJWH

1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_INTBI6.2**
F-250 INJECTOR SEAT	8	AEC-F250Bi-INJADAP
INJECTOR SEATING O-RING	8	AEC-ORING-F250
FUEL RAIL LEFT	1	AEC-FR250-350BL
FUEL RAIL RIGHT	1	AEC-FR250-350BR
3/4 SAE HOLLOW HEX PLUG	4	8 HP50N-S
INJECTOR NATURAL GAS	8	AEC-INJ821-B
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE 45°	2	8-6 V50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
F-SERIES BI-FUEL FUEL RAIL BOLT EXTENSION	4	AEC-FSERFRBOLTX
M6-1.0 x 20mm CHFB	4	(190)
LOW PRESSURE HOSE 11 ¼in	1	AEC-LPH11.25
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCBS**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE CONNECTOR	1	6 F50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCS**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (6.5ft)	1	AEC-CRMPF250S

MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
6 ORFS SWIVEL 90° ELBOW x 6 ORFS	1	S6SE-CNG
HIGH PRESSURE HOSE, ORFS, 24in, BLACK	1	AEC-HPH24ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 22in, RED	1	AEC-HPH22R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 x 3/4 SAE 45° ST THREAD ELBOW	1	8 V50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCS**

TOOLBOX CYLINDER COVER	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-SB-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCB**
SWITCH TEMPLATE	1	AEC-LEDT
GAS CAP MOD DIAGRAM	1	AEC-F250GCMOD
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-BI-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 BI-FUEL EPA CONVERSION DECAL	1	BAECT06.27HL
2012 BI-FUEL EPA CONVERSION DECAL	1	CAECT06.27HL
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250SBD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2013 BI-FUEL SENSOR MODIFICATION

2013 BI-FUEL LOW PRESSURE BY PASS EVAP SENSOR for v2 Fuel Rails		(replace Evap sensor with included sensor - 2013 Models only. pg 32)
BY-PASS SENSOR	1	AEC-CX-2369

2011-2012 FORD F-250/350 6.2L DEDICATED REGULAR CAB LONG BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCA**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 14.5x2	29ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 12ft	1	AEC-MPH144
FLEX GUARD SLEEVE	11ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCAD**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
DEDICATED CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-DED-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-A11.5
FUEL GAUGE HARNESS	1	AEC-F250DEDGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	6	(183)
JUMPER EV TO NIPPON DENSO	8	AEC-JWH
1/4in-20 SHORT 'U' NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_FRF250_BC**
FUEL RAIL, RIGHT	1	AEC-FR250-350DR-v2
FUEL RAIL, LEFT	1	AEC-FR250-350DL-v2
HOLLOW HEX PLUG, 3/4	4	8 HP50N-S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE ELBOW	2	8-6 C50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
CNG PREPPED: LOW PRESSURE HOSE 14 3/8in	1	AEC-LPH14 3/8
CNG FUEL INJECTOR	8	AEC-INJ821-B
F-SERIES INJECTOR ADAPTOR	8	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	8	AEC-INJ821ORINGBRN
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
GASOLINE LINE PLUG	1	AEC-GLP
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCDL**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE 45° ELBOW	1	6 V50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCL**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (8 ft)	1	AEC-CRMPF250-8BED
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
HIGH PRESSURE HOSE, ORFS, 27in, BLACK	1	AEC-HPH27ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB BOLT	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 24in, RED	1	AEC-HPH24R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 37° FLARE x 3/4 SAE CONNECTOR	1	8 F50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
3 3/8" x 1" W/ 5/8 HOLE SPACER	2	AEC-F250-8BEDSP

1/2 - 13 x 4 3/4 CHHB	2	(130)
1/2 - 13 NYLOCK NUT	2	(043)
1/2 USS FLAT WASHER	4	(168)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCD**
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-DED-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 DEDICATED EPA CONVERSION DECAL	1	BAECT06.27HA
2012 DEDICATED EPA CONVERSION DECAL	1	CAECT06.27HA
SINGLE CYLINDER LAYOUT DIA-GRAM	1	AEC-EF250CYLD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011/2012 FORD F-250/350 6.2L DEDICATED REGULAR CAB SHORT BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCA**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 14.5x2	29ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 12ft	1	AEC-MPH144
FLEX GUARD SLEEVE	11ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCAD**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
DEDICATED CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-DED-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-A11.5
FUEL GAUGE HARNESS	1	AEC-F250DEDGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
JUMPER EV TO NIPPON DENSO	8	AEC-JWH
1/4in-20 SHORT 'U' NUT	2	(111)

1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE, 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COM-PONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_FRF250_BC**
FUEL RAIL, RIGHT	1	AEC-FR250-350DR-v2
FUEL RAIL, LEFT	1	AEC-FR250-350DL-v2
HOLLOW HEX PLUG, 3/4	4	8 HP50N-S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE ELBOW	2	8-6 C50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
CNG PREPPED: LOW PRESSURE HOSE 14 3/8in	1	AEC-LPH14 3/8
CNG FUEL INJECTOR	8	AEC-INJ821-B
F-SERIES INJECTOR ADAPTOR	8	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	8	AEC-INJ821ORINGBRN
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
GASOLINE LINE PLUG	1	AEC-GLP
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCDS**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE CONNECTOR	1	6 F50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCS**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (6.5ft)	1	AEC-250SBCRP
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117)

1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
6 ORFS SWIVEL 90° ELBOW x 6 ORFS	1	S6SE-CNG
HIGH PRESSURE HOSE, ORFS, 24in, BLACK	1	AEC-HPH24ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB	1	(116-F)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 22in, RED	1	AEC-HPH22R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 x 3/4 SAE 45° ST THREAD ELBOW	1	8 V50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C5OLO-SS
“WARNING STICKER: HIGH PRES-SURE…” (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCS**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT ‘U’ NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-SB-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCD**
F-250 OWNER’S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-DED-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 DEDICATED EPA CONVERSION DECAL	1	BAECT06.27HA
2012 DEDICATED EPA CONVERSION DECAL	1	CAECT06.27HA
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250SBD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011/2012 FORD F-250/350 6.2L DEDICATED SUPER CAB LONG BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCB**
COOLANT HOSE Y’s	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 15x2	30ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 13ft	1	AEC-MPH156
FLEX GUARD SLEEVE	12ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCBD**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
DEDICATED CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-DED-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-B13
FUEL GAUGE HARNESS	1	AEC-F250-DEDGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
JUMPER EV TO NIPPON DENSO	8	AEC-JWH
1/4in-20 SHORT ‘U’ NUT	2	(111)

1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_FRF250_BC**
FUEL RAIL, RIGHT	1	AEC-FR250-350DR-v2
FUEL RAIL, LEFT	1	AEC-FR250-350DL-v2
HOLLOW HEX PLUG, 3/4	4	8 HP50N-S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE ELBOW	2	8-6 C50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
CNG PREPPED: LOW PRESSURE HOSE 14 3/8in	1	AEC-LPH14 3/8
CNG FUEL INJECTOR	8	AEC-INJ821-B
F-SERIES INJECTOR ADAPTOR	8	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	8	AEC-INJ821ORINGBRN
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
GASOLINE LINE PLUG	1	AEC-GLP
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCDL**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE 45° ELBOW	1	6 V50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCL**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (8 ft)	1	AEC-CRMPF250-8BED
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT

1/2-13 x 1 1/4 CHFB	4	(117-H)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
HIGH PRESSURE HOSE, ORFS, 27in, BLACK	1	*AEC-HPH27ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB BOLT	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 24in, RED	1	AEC-HPH24R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20	2	(157-H)
1/2 37° FLARE x 3/4 SAE CONNECTOR	1	8 F50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL SYSTEM ASSEMBLY)		
TANK PRE ASSEMBLY		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
3 3/8" x 1" W/ 5/8 HOLE SPACER	2	AEC-F250-8BEDSP
1/2 - 13 x 4 3/4 CHHB	2	(130)
1/2 - 13 NYLOCK NUT	2	(043)

1/2 USS FLAT WASHER	4	(168)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCD**
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-DED-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 DEDICATED EPA CONVERSION DECAL	1	BAECT06.27HA
2012 DEDICATED EPA CONVERSION DECAL	1	CAECT06.27HA
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250CYLD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
PACKING SLIP	1	PACKING SLIP
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011/2012 FORD F-250/350 6.2L DEDICATED SUPER CAB SHORT BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCB**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 15x2	30ft	AEC-CH-B-H
FLEX GUARD SLEEVE	11.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	5	AEC-PC 1 1/8
LOW PRESSURE HOSE 13ft	1	AEC-MPH156
FLEX GUARD SLEEVE	12ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	6	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	9	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCBD**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
DEDICATED CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-DED-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-B13
FUEL GAUGE HARNESS	1	AEC-F250DEDGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
JUMPER EV TO NIPPON DENSO	8	AEC-JWH
U-NUT	2	(111)
1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_FRF250_BC**
FUEL RAIL, RIGHT	1	AEC-FR250-350DR-v2
FUEL RAIL, LEFT	1	AEC-FR250-350DL-v2
HOLLOW HEX PLUG, 3/4	4	8 HP50N-S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE ELBOW	2	8-6 C50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
CNG PREPPED: LOW PRESSURE HOSE 14 3/8in	1	AEC-LPH14 3/8
CNG FUEL INJECTOR	8	AEC-INJ821-B
F-SERIES INJECTOR ADAPTOR	8	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	8	AEC-INJ821ORINGBRN
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
GASOLINE LINE PLUG	1	AEC-GLP
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCDS**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE CONNECTOR	1	6 F50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCS**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (6.5ft)	1	AEC-250SBCRP
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT
1/2-13 x 1 1/4 CHFB	4	(117-H)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
6 ORFS SWIVEL 90° ELBOW x 6 ORFS	1	S6SE-CNG
HIGH PRESSURE HOSE, ORFS, 24in, BLACK	1	AEC-HPH24ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 22in, RED	1	AEC-HPH22R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 x 3/4 SAE 45° ST THREAD ELBOW	1	8 V50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCS**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)

1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-SB-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCD**
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-DED-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 DEDICATED EPA CONVERSION DECAL	1	BAECT06.27HA
2012 DEDICATED EPA CONVERSION DECAL	1	CAECT06.27HA
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250SBD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011/2012 FORD F-250/350 6.2L DEDICATED CREW CAB LONG BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCC**
COOLANT HOSE Y's	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 17x2	34ft	AEC-CH-B-H
FLEX GUARD SLEEVE	13.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	9	AEC-PC 1 1/8
LOW PRESSURE HOSE 15ft	1	AEC-MPH180
FLEX GUARD SLEEVE	14ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	7	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	14	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCCD**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
DEDICATED CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-DED-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-C14.5
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
FUEL GAUGE HARNESS	1	AEC-F250DEDGA
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
JUMPER EV TO NIPPON DENSO	8	AEC-JWH
1/4in-20 SHORT 'U' NUT	2	(111)

1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_FRF250_BC**
FUEL RAIL, RIGHT	1	AEC-FR250-350DR-v2
FUEL RAIL, LEFT	1	AEC-FR250-350DL-v2
HOLLOW HEX PLUG, 3/4	4	8 HP50N-S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37° FLARE x 9/16 SAE ELBOW	2	8-6 C50X-S
1/2 37° FLARE x 3/4 SAE ELBOW	1	8 C50X-S
CNG PREPPED: LOW PRESSURE HOSE 14 3/8in	1	AEC-LPH14 3/8
CNG FUEL INJECTOR	8	AEC-INJ821-B
F-SERIES INJECTOR ADAPTOR	8	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	8	AEC-INJ821ORINGBRN
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
GASOLINE LINE PLUG	1	AEC-GLP
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCDL**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE 45° ELBOW	1	6 V50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCL**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (8 ft)	1	AEC-CRMPF250-8BED
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT

1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
HIGH PRESSURE HOSE, ORFS, 27in, BLACK	1	AEC-HPH27ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB BOLT	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 24in, RED	1	AEC-HPH24R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 37° FLARE x 3/4 SAE CONNECTOR	1	8 F50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
“WARNING STICKER: HIGH PRES-SURE…” (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL COMPONENT SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
3 3/8” x 1” W/ 5/8 HOLE SPACER	2	AEC-F250-8BEDSP
1/2 - 13 x 4 3/4 CHHB	2	(130)
1/2 - 13 NYLON NUT	2	(043)
1/2 USS FLAT WASHER	4	(168)

VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCL**
TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT ‘U’ NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCD**
F-250 OWNER’S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-DED-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
CNG BLUE DIAMOND STICKER	1	AEC-CNG-STKR
2011 DEDICATED EPA CONVERSION DECAL	1	BAECT06.27HA
2012 DEDICATED EPA CONVERSION DECAL	1	CAECT06.27HA
SINGLE CYLINDER LAYOUT DIAGRAM	1	AEC-EF250CYLD
NGV DECAL-GREEN	2	AEC-NGVSTKR
WARNING 3600psi	2	AEC-PSI3600-1
CAUTION: UP TO 150psi	2	AEC-PSI150
DO NOT REMOVE	1	ELREV
CNG ONLY 3600psi	1	AEC-CNGONLY-1
CONVERSION CHECKLIST	1	CHECKLIST
PCM REQUEST FORM	1	PCM REQUEST
WARRANTY INFO	1	WARRANTY INFO

2011/2012 FORD F-250/350 6.2L DEDICATED CREW CAB SHORT BED

Product Description	Qty	AEC Part#
VEHICLE COOLANT ASSEMBLY		**AEC_VCAF250_BCC**
COOLANT HOSE Y’s	2	AEC-CHY
HOSE CLAMP, 14mm	4	AEC-HC14MM
HOSE CLAMP 3/4in	4	AEC-HC8-PF
COOLANT HOSE, 17x2	34ft	AEC-CH-B-H
FLEX GUARD SLEEVE	13.5ft	AEC-FG-20
HEAT SHIELD 1 1/4in	2ft	AEC-HS1 1/4
P CLAMPS 1 1/8 in	9	AEC-PC 1 1/8
LOW PRESSURE HOSE 15ft	1	AEC-MPH180
FLEX GUARD SLEEVE	14ft	AEC-FG-18
HEAT SHRINK, 1 1/2in (2in x2)	4in	HEAT SHRINK, 1 1/2
P CLAMPS, 1 1/16 in	7	AEC-PC1 1/16x.281
12-14 x 1 SELF-TAPPING SCREW	14	(135-H)
CABLE TIES 15in	2	AEC-CT-15-F
M6-1.0 x 16mm CHFB	1	(200-H)
M6-1.0 FLANGED NYLOCK NUT	2	(191)
GROMMET, 2 1/8, WIDE GROVE	1	AEC-2 1/8GRW
VEHICLE WIRING ASSEMBLY		**AEC_WHF250_BCCD**
AFCM	1	AEC-AFCM
AFCM BRACKET	1	AEC-250AFCMBR
DEDICATED CNG MAIN HARNESS (NO OBD II CONN)	1	AEC-F250AFCM-DED-WH-v2
CAN BUS PIGTAIL, TRUCK	1	AEC-CANBUS
REAR WIRING HARNESS	1	AEC-F250AFCM-RWH-C14.5
FUEL GAUGE HARNESS	1	AEC-F250DEDGA
FUEL GAUGE	1	AEC-AUTO METER FUEL GAUGE-CV
O-RING #222	1	AEC-222
SHRINKING TUBE 1/8in	6in	AEC-ST 1/8DUAL-W
10-32 x 5/8in BHCS	4	(183)
JUMPER EV TO NIPPON DENSO	8	AEC-JWH
1/4in-20 SHORT ‘U’ NUT	2	(111)

1/4-20 x 3/4 CHFB	2	(175-H)
M8-1.25 x 20 CHFB	1	(157-H)
STUD MOUNT TIE 16in B	3	AEC-CT-16
CABLE TIE 7.5	12	AEC-CT-7.5-A
DO NOT REFLASH	1	AEC-G-E0604-2
DO NOT REFLASH	1	AEC-G-E0604-1
LOW PRESSURE COMPONENT ASSEMBLY (FUEL DELIVERY PRE ASSEMBLY)		**AEC_FRF250_BC**
FUEL RAIL, RIGHT	1	AEC-FR250-350DR-v2
FUEL RAIL, LEFT	1	AEC-FR250-350DL-v2
HOLLOW HEX PLUG, 3/4	4	8 HP50N-S
200psi TRANSDUCER	1	AEC-TRANS2TST
1/2 37º FLARE x 9/16 SAE ELBOW	2	8-6 C50X-S
1/2 37º FLARE x 3/4 SAE ELBOW	1	8 C50X-S
CNG PREPPED: LOW PRESSURE HOSE 14 3/8in	1	AEC-LPH14 3/8
CNG FUEL INJECTOR	8	AEC-INJ821-B
F-SERIES INJECTOR ADAPTOR	8	AEC-INJADP-F-DED
INJECTOR ADAPTOR O-RING, BROWN	8	AEC-INJ821ORINGBRN
INJECTOR CLIP	8	AEC-INJRETAINCLIP-4S
GASOLINE LINE PLUG	1	AEC-GLP
VEHICLE FUEL FILL ASSEMBLY		**AEC_VFFF250_BCDS**
FUEL FILL ADAPTOR RING	1	AEC-EF250FFA
RECEPTACLE 3600psi	1	AEC-LD36
3/8 ORFS x 9/16 SAE CONNECTOR	1	6 F50L0-SS
1/4in-20 SHORT 'U' NUT	3	(111)
1/4-20 x 3/4 CHFB	3	(175-H)
GAS CAP w/ LOCK	1	AEC-EFF250-GCLD
HIGH PRESSURE FUEL SYSTEM ASSEMBLY (CYL PRE-ASSEMBLY)		**AEC_VHPF250_BCS**
SINGLE CYL MOUNTING BASE PLATE FRONT w/SPACERS	1	AEC-CFMPF250
SINGLE CYL MOUNTING BASE PLATE REAR (6.5ft)	1	AEC-250SBCRP
MOUNTING SUPPORT RINGS	1 SET	21-STRAPBRKT

1/2-13 x 1 1/4 CHFB	4	(117)
1/2-13 x 1 1/2 CHFB	4	(124-H)
1/2SAE F/W, FLAT WASHER	8	(040)
1/2-13 NYLOCK Z	8	(043)
CNG CYLINDER (21 x 60)	1	LINCOLN 21.2 GGE
6MSAE x 60RFS x 6FSAE FEMALE	1	ZXALT8000010
TRANSDUCER, 5000psi	1	AEC-TRANS5TST
CHECK VALVE	1	CH8S6SS6-1-316-CNG
6 ORFS SWIVEL 90º ELBOW x 6 ORFS	1	S6SE-CNG
HIGH PRESSURE HOSE, ORFS, 24in, BLACK	1	AEC-HPH24ORFS
FILTER BRACKET	1	AEC-TKFB
3/8-16 x 3/4 CHFB	1	(116-H)
MALE CONNECTOR 9/16 SAE	1	ISSD6MCST6
3/8T STUD x 9/16SAE ADAPTOR	1	ISSD6MAST6
CNG FILTER HOUSING	1	AEC-FH
COALESCENT FILTER	1	AEC-FILTER-O
5/16-24 x 3/4 CHFB	2	(156-F)
6 ORFS x 6 SAE CONNECTOR	1	6 F50L0-SS
HIGH PRESSURE HOSE, 22in, RED	1	AEC-HPH22R
HIGH PRESSURE REGULATOR 135psi	1	AEC-HPR135
M8-1.25 x 20 CHFB	2	(157-H)
1/2 x 3/4 SAE 45º ST THREAD ELBOW	1	8 V50X-S
3/8 ORFS x 9/16 SAE ELBOW	1	6 C50LO-SS
"WARNING STICKER: HIGH PRESSURE…" (RED ON SILVER)	1	AEC-FHS
QVM COVER STICKER	1	AEC-G-D0609
TANK SUB ASSEMBLY (PART OF HIGH PRESSURE FUEL SYSTEM ASSEMBLY)		
M14 FLAT WASHER	2	(126)
M14-2.0 x 140 CHHB	2	(121)
VEHICLE CYLINDER COVER (TOOLBOX)		**AEC_VCCF250_BCS**

TOOLBOX	1	AEC-F250TB
1/4in-20 x 1 CHFB	4	(112)
1/4 USS FLAT WASHER	4	(005)
1/4-20 NYLOCK NUT	4	(008)
1/4in-20 SHORT 'U' NUT	9	(111)
CYLINDER SKIRT	1	AEC-TBCSK-SB-F250
1/4in-20 x 3/4 CHFB	9	(175-H)
TOOLBOX KEY	2	(PART OF TOOLBOX. MATCH TOOTHNUMBER WITH BOX)
WARNING HIGH PRESSURE CNG	1	WHPSTKR
QVM COVER STICKER	1	AEC-G-D0609
VEHICLE KIT INFORMATION		**AEC_VKIF250_BCD**
F-250 OWNER'S MANUAL	1	F-250 OWNERS
MAIN WIRING HARNESS DIAGRAM	1	AEC-F250MHD-DED-v2
ECM PIN-OUT REFERENCE	1	AEC-F250 ECM PINOUT
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