

# PROPANE FUEL SYSTEM Installation Manual

2017 Ford F450/550

Gen 4 Liquid Propane Autogas Fuel System – RH Single Side Saddle Tank

Version		
AC		12/1/2017



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- Field Service Contacts ..... 123
- Service Hotline: +1 (734)-779-7777 ..... 123
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Contact our service hotline at:







**Phone:** +1 (734)-779-7777

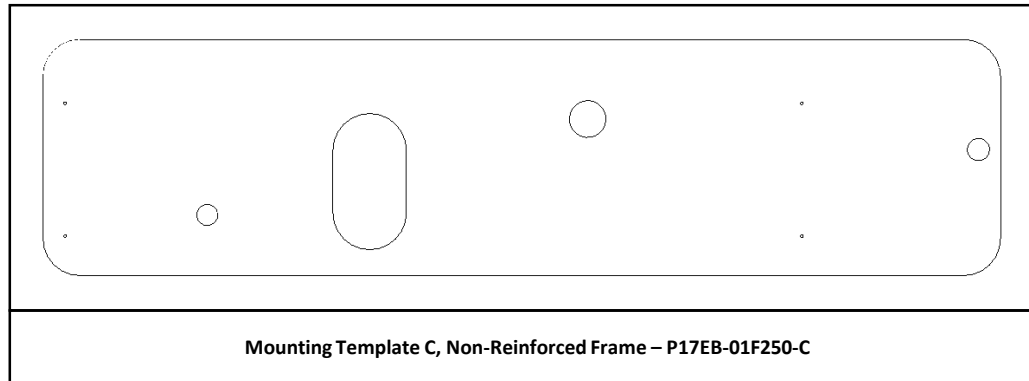
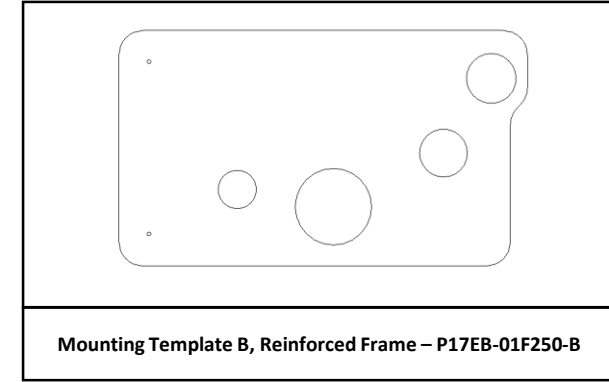
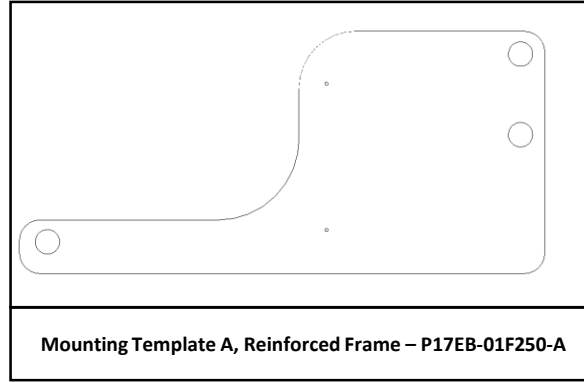
**email:** [support@roushcleantech.com](mailto:support@roushcleantech.com)

**Sales Inquiries:**

1-800-59-ROUSH (76874)

						
Touch-Up Paint	Liquid Leak Detector	Premium Aerosol Undercoating	Torque Wrenches (4 Nm to 110 Nm)	Gloves (Approved for Propane)	Scan Tool	J2044 Quick Disconnect Tool (1/4" and 3/8")

					
Hole Saw – 35 mm.	Vacuum Gauge	Dielectric Grease	Stepless Ear Clamp Pliers	Drill Bits – 1/8", 9/32", and 5/8".	Tubing Cutter





**A** Perform a vehicle self-test for any fault codes prior to propane conversion.

**A1** Using an ODB scan tool (such as Ford IDS, ROUSH RDT, or equivalent) connect to the vehicles ODB-II Diagnostic port and scan the vehicle for any active DTC's.

**A2** If any are found, these DTC's will need to be corrected prior to starting the ROUSH CleanTech propane system conversion.



Location of OBDII Port



**B** Fill in required information needed to access ROUSH Installer portal and to obtain VECI labels with the ability to flash the PCM.

Many data items can be found on the FORD VECI Label, located on the passenger side valve cover

Data Item	Value
Emission Level	
Ford Test Group	
Ford EVAP Group	
Vehicle Options	
Kit Part Number	
Fuel Tank and Fuel Rail Serial Number	
Passenger capacity	
GVWR	
Mileage	
Tire Size	
Axle Ratio	
Dealer Information (Name, State of Operation, Country)	
Customer Information (Name, State of Operation, Country)	

Link to ROUSH CLEANTECH portal: <http://service.roushcleantech.com/>



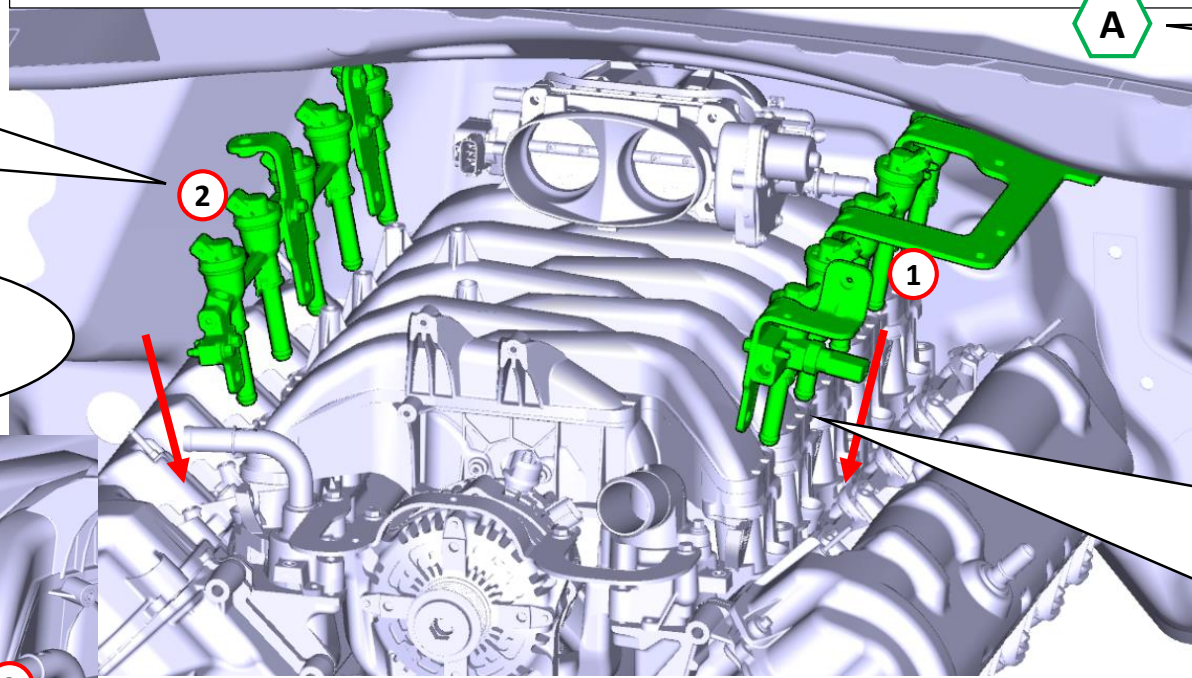
Icons represent different frame lengths.  
RC = Regular Cab  
SC = Super Cab  
CC = Crew Cab  
REF = Reinforced Frame

Important details will be mentioned in the adjacent textbox

The Bill of Materials give you the parts involved in the current step as well as Torque Specs

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-03D001-A	LH Fuel Rail Assembly	N/A
2	1	P17EB-10E201-B	FRPCM Bracket, Upper	N/A
3	3	W500213-S	M6 Fasteners, mounting to intake manifold	8-12 Nm

Push rails down until they are seated, and mounting holes align on manifold

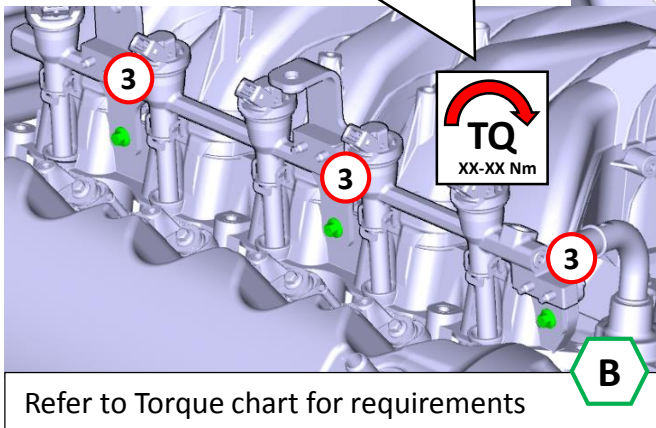


The hexagonal symbols represent the order of installation

Hexagonal symbols with numbers contain more details of that installation step

This circled number corresponds to the part in the bill of materials, as well as the order of installation

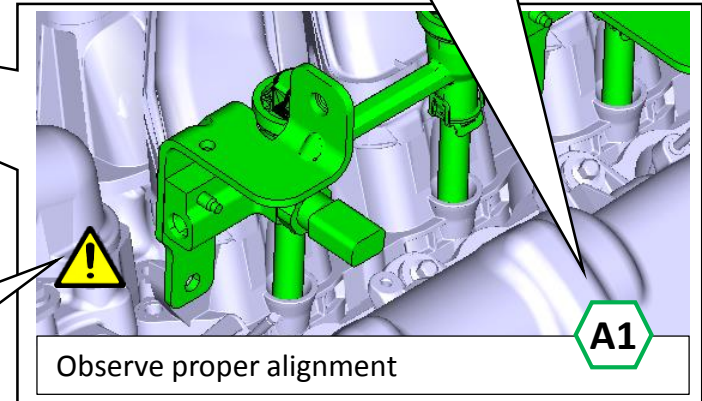
"Torque" Diagrams points you to torque values for critical joints



Refer to Torque chart for requirements

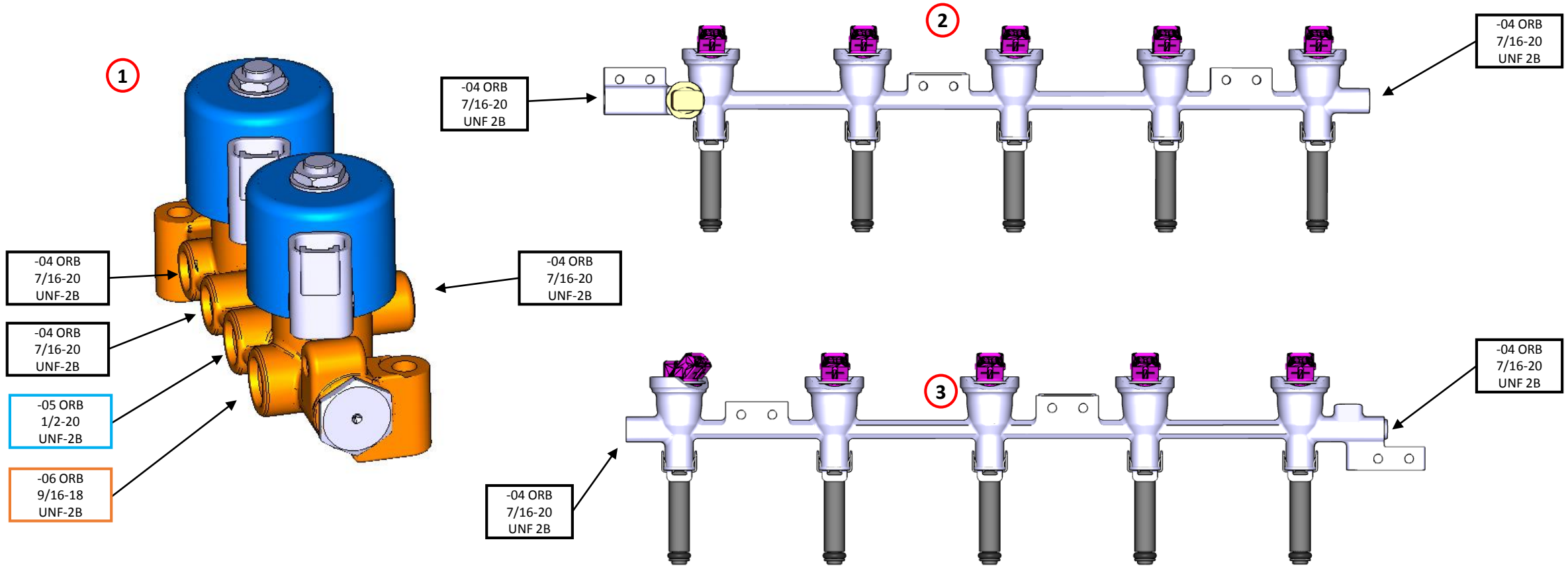
Note the colors of the parts highlighted in the diagrams

Very Important details must be followed



Observe proper alignment

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-10E200-A	FRPCM	N/A
2	1	P16MB-03D001-A	LH Fuel Rail Assembly	N/A
3	1	P16MB-03D002-A	RH Fuel Rail Assembly	N/A





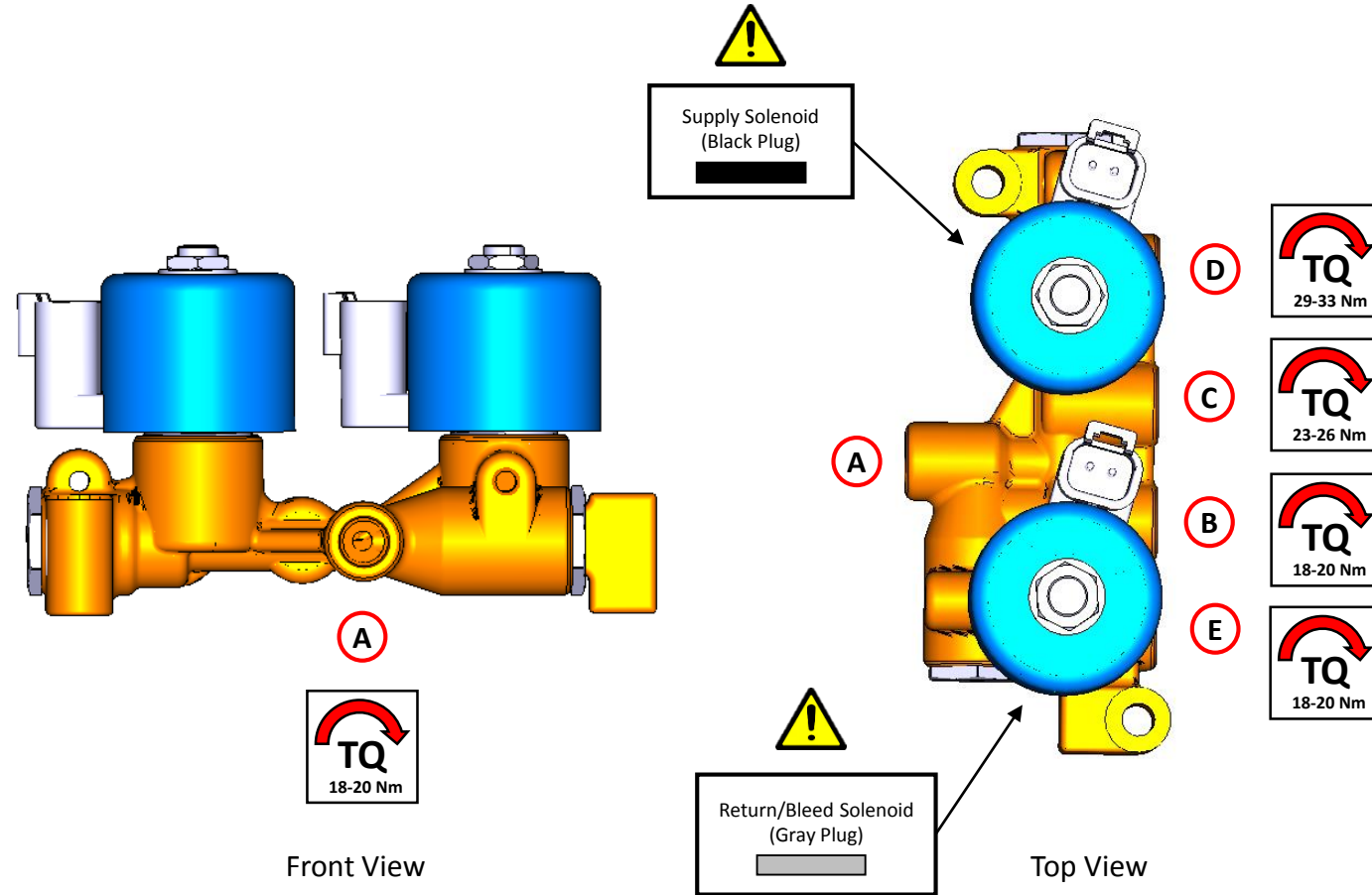
Black Wiring Plug = Supply Solenoid



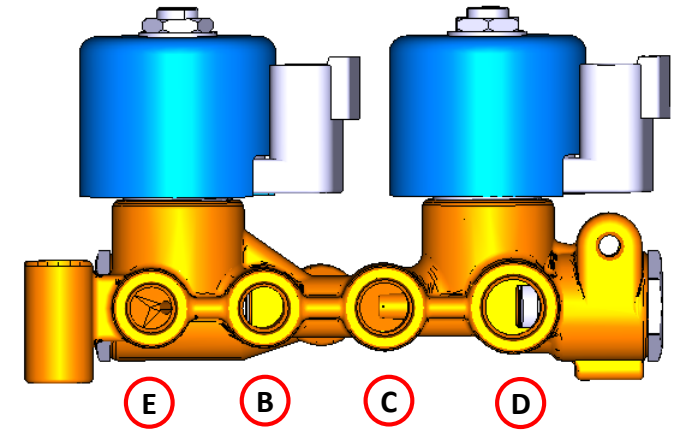
Gray Wiring Plug = Bleed Solenoid



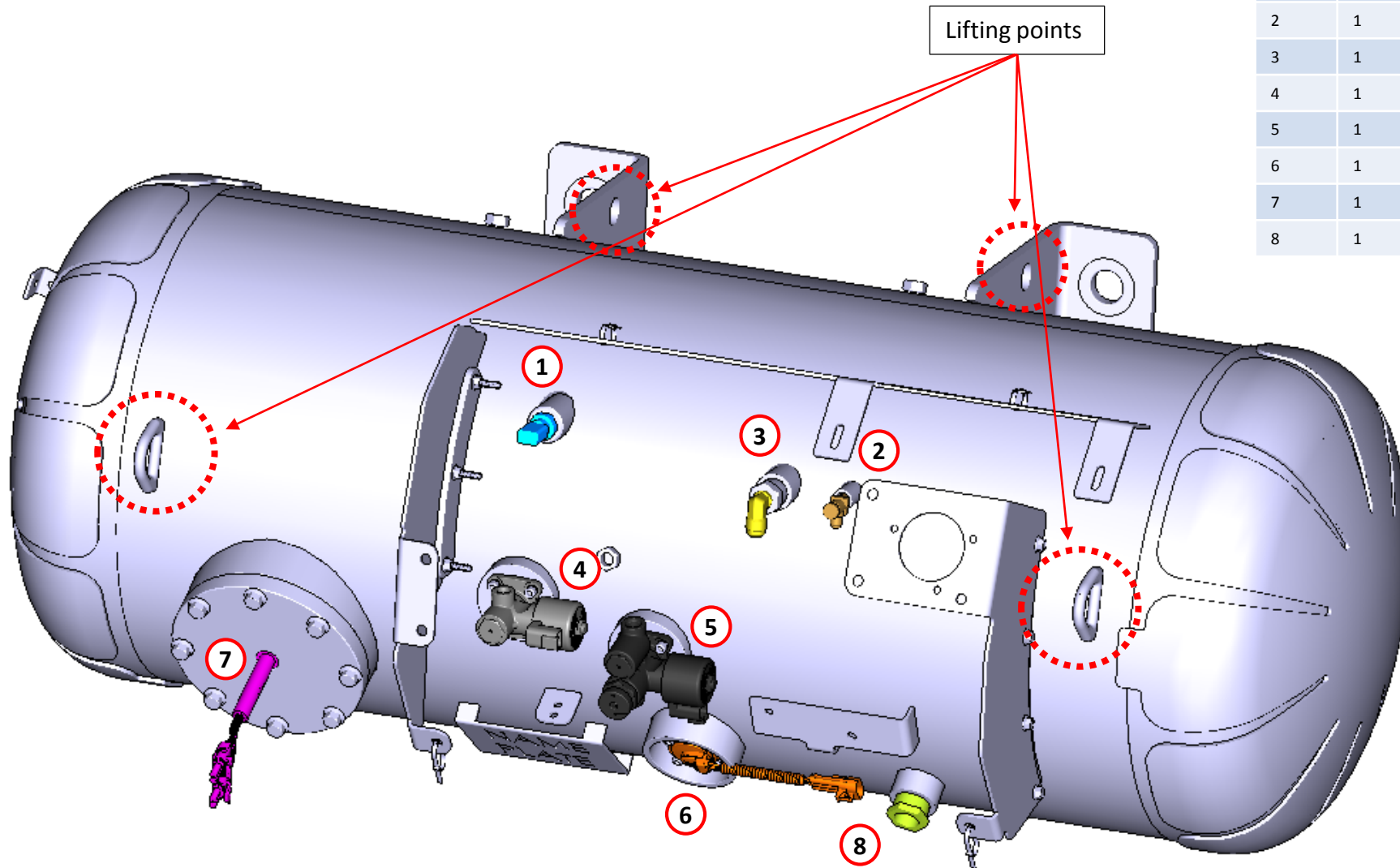
Note: Female Connectors on FRPCM are BOTH Black. Only the wiring plugs differ in color.



Port #	Description	Size	Torque
A	Fuel Rail Return Inlet	-04 O-Ring Boss	18-20 Nm
B	Fuel Rail Return, Outlet	-04 O-Ring Boss	18-20 Nm
C	Fuel Rail Supply Outlet	-05 O-Ring Boss	23-26 Nm
D	Fuel Rail Supply Inlet	-06 O-Ring Boss	29-33 Nm
E	Fuel Vapor Outlet	3/8" J2044 Quick Connect	18-20 Nm

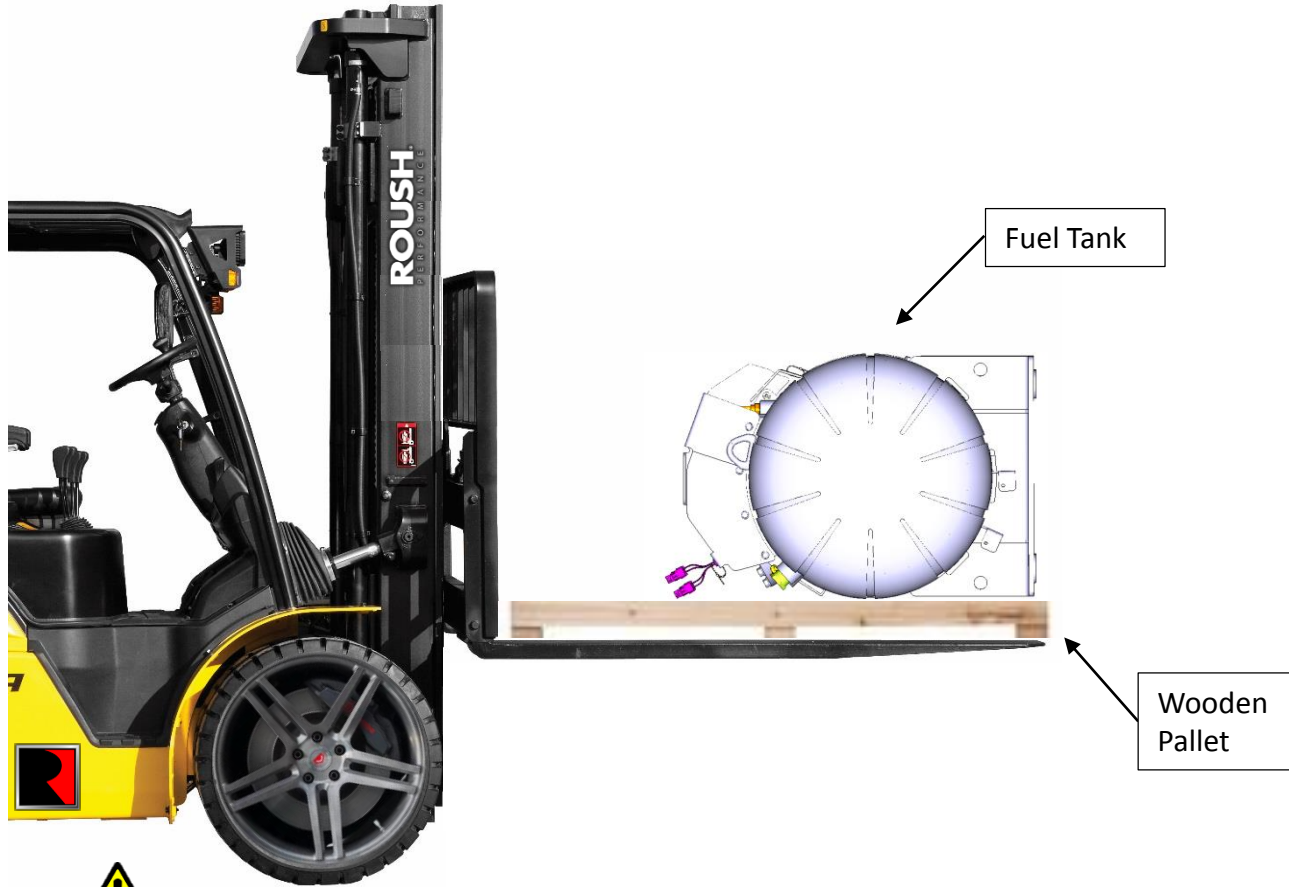


Back View

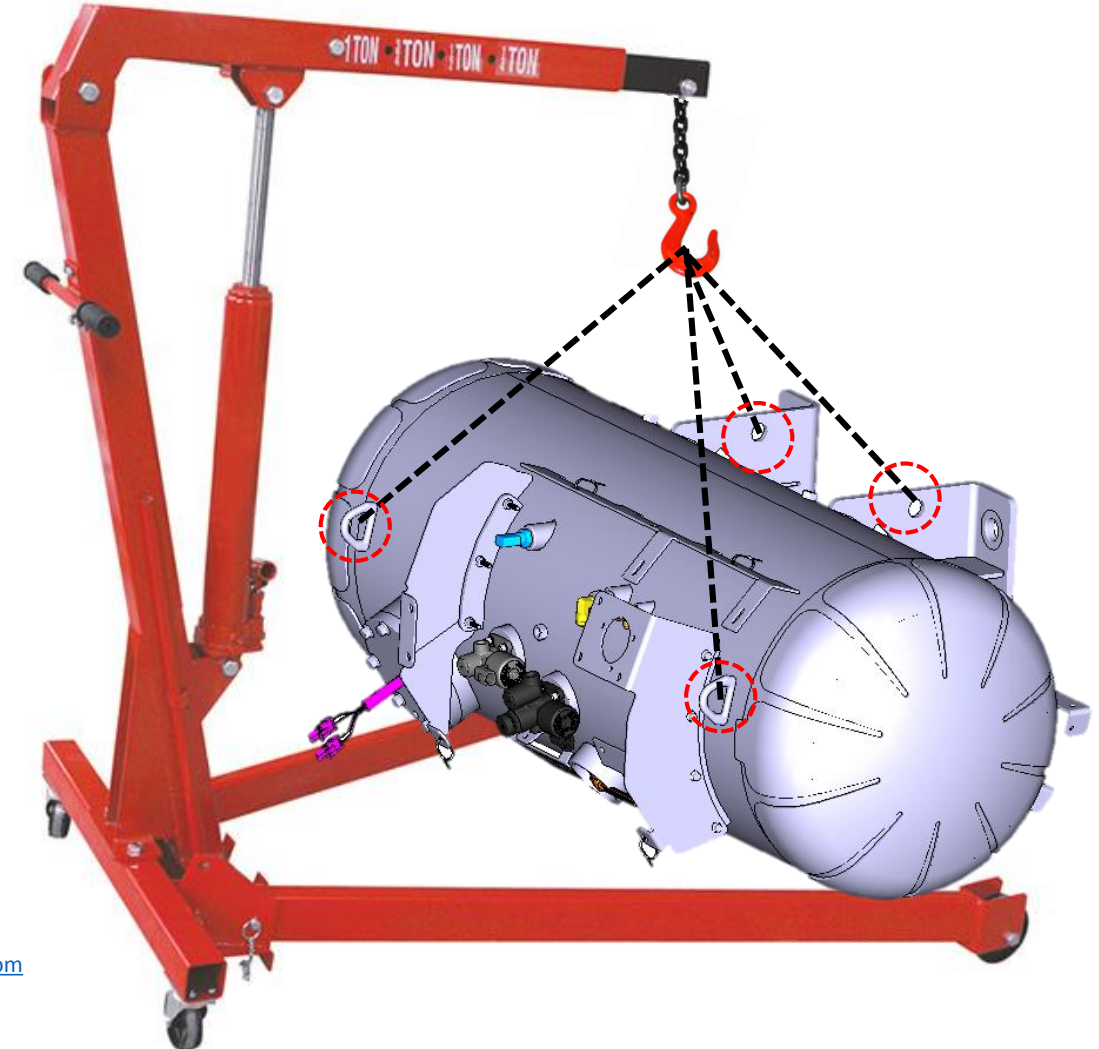


Item #	QTY	Part Number	Description
1	1	P17EB-10A016-A	Fuel Pressure and Temperature Sensor
2	1	A17100022	Bleeder Valve
3	1	A10110100	Fuel Fill Valve
4	1	P16MB-10A200-A	Fuel Return Valve
5	1	P16MB-10A100-A	Fuel Supply Valve
6	1	P17EB-10A616-A	Fuel Level Sender Assembly
7	1	P11GD-18K277-A	In-tank fuel pump harness
8	1	P14KJ-10A400-A	375 PSI Pressure Relief Valve

**Option 1:** Lift with a forklift with tank on a wooden pallet, or utilize a transmission lift under the fuel tank on a pallet.



**Option 2:** Lift with an engine hoist at the specified lifting points. The lift must be capable of lifting 1000 lbs or 373 KG.



**Option 3: Other** You may encounter situations where options 1 and 2 may not work for your application. For other options, contact ROUSH Cleantech support.



Service hotline:  
**Phone:** +1 (734)-779-7777  
**email:** [support@roushcleantech.com](mailto:support@roushcleantech.com)

**Sales Inquiries:**  
1-800-59-ROUSH (76874)

Follow the below guide to ensure that zip ties are properly fastened

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	20-403-0003	Zip Tie	N/A



Zip-tie fastened **CORRECTLY**

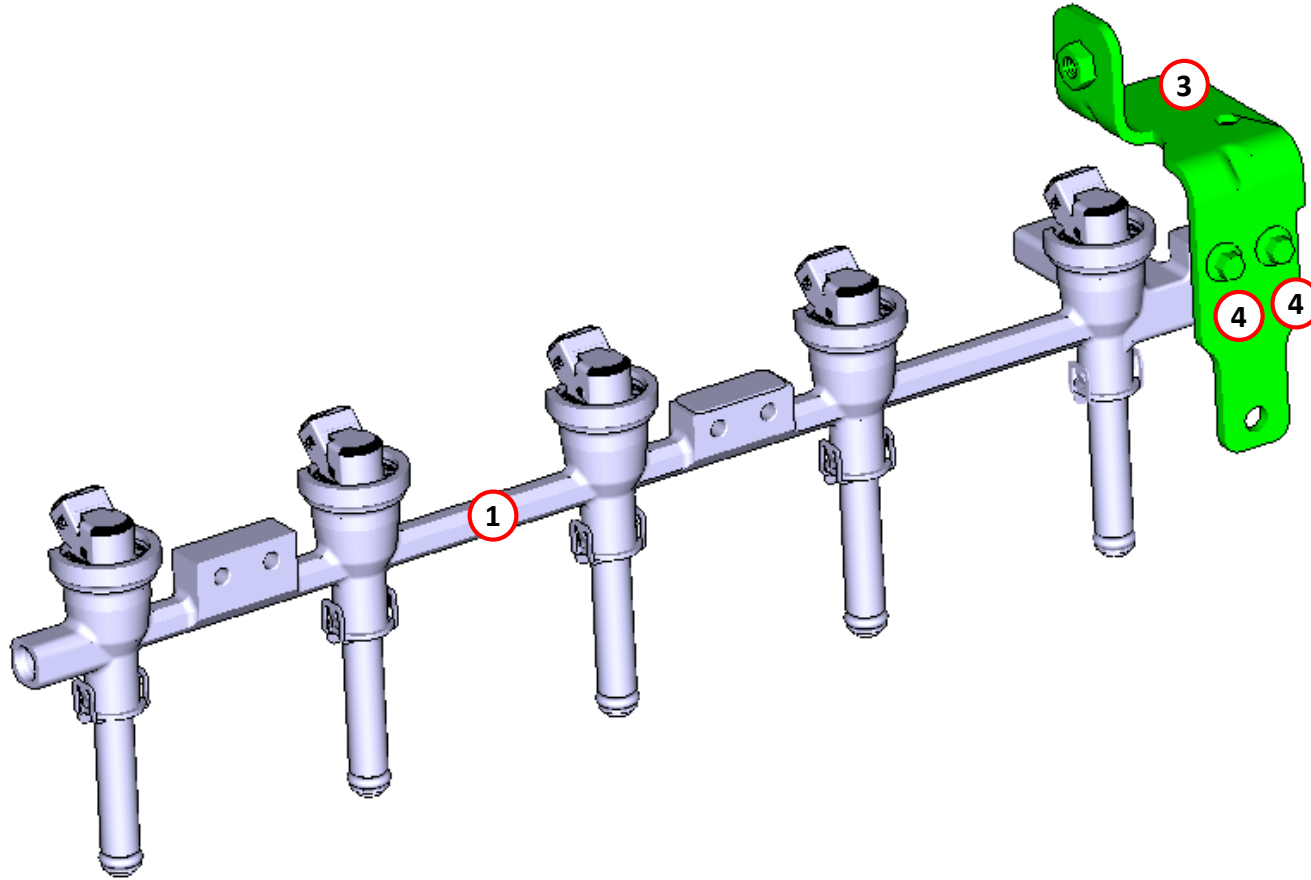


Zip-tie fastened too **LOOSE**



Zip-tie fastened too **TIGHT**

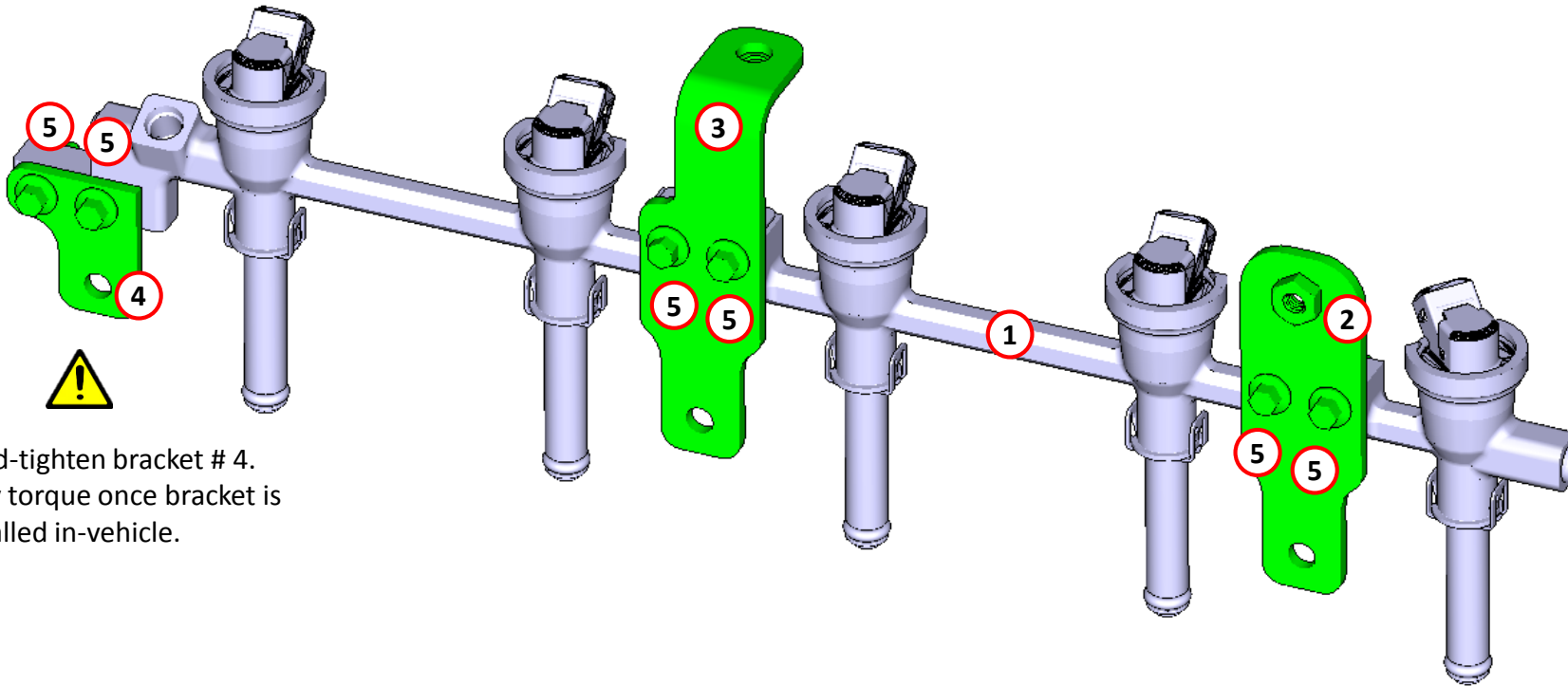
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-03D001-A	LH Fuel Rail Assembly	N/A
2	1	P17EB-03D200-A	LH Fuel Rail Bracket	N/A
3	2	W500215-S439	M6 Fasteners	8-12 Nm



Hand-tighten bracket # 2. Fully torque once bracket is installed in-vehicle.

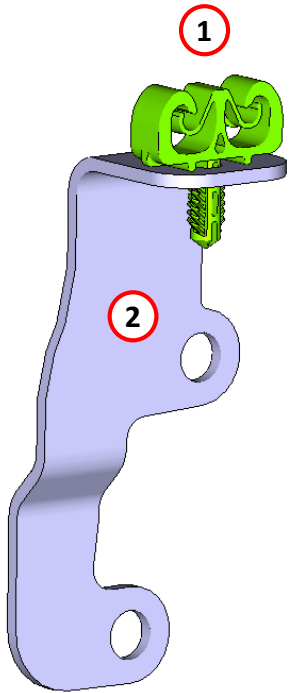


Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-03D002-A	RH Fuel Rail Assembly	N/A
2	1	P17EB-03D200-B	RH Fuel Rail Bracket, Rear	N/A
3	1	P17EB-03D200-A	LH Fuel Rail Bracket, Mid	N/A
4	1	P16MB-03D200-C	RH Fuel Rail Bracket, Front	N/A
5	6	W500215-S439	M6 Fasteners	8-12 Nm

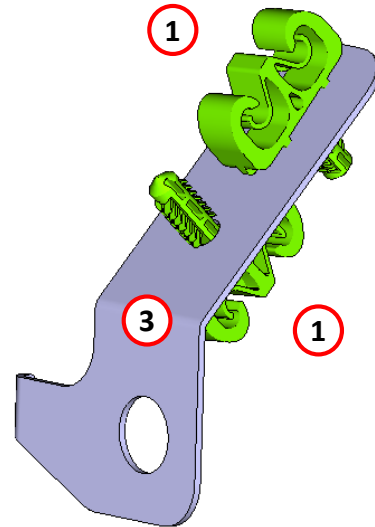


Hand-tighten bracket # 4.  
Fully torque once bracket is  
installed in-vehicle.

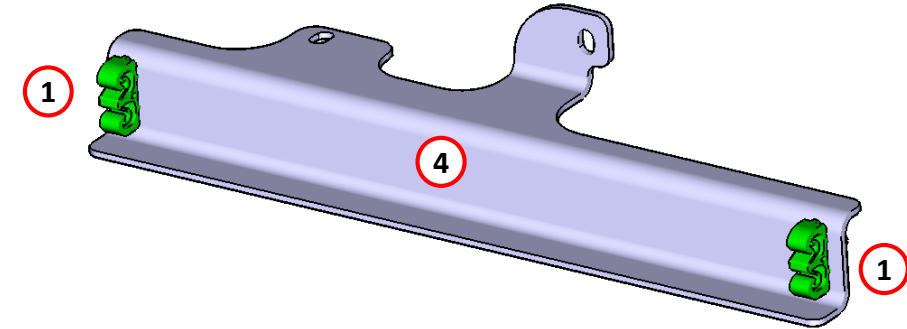
Item #	QTY	Part Number	Description	Torque (Nm)
1	3	15-004175	Snail Clip (EFC)	N/A
2	1	P17EB-10F100-A	Front Fuel Line Bracket	N/A
3	1	P17EB-10F100-B	Transmission Fuel Line Bracket	N/A
4	1	P17EB-10F100-C	Rear Fuel Line Bracket	N/A



Snap Snail Clips into Front Fuel Line Bracket. Note the orientation of the clips.

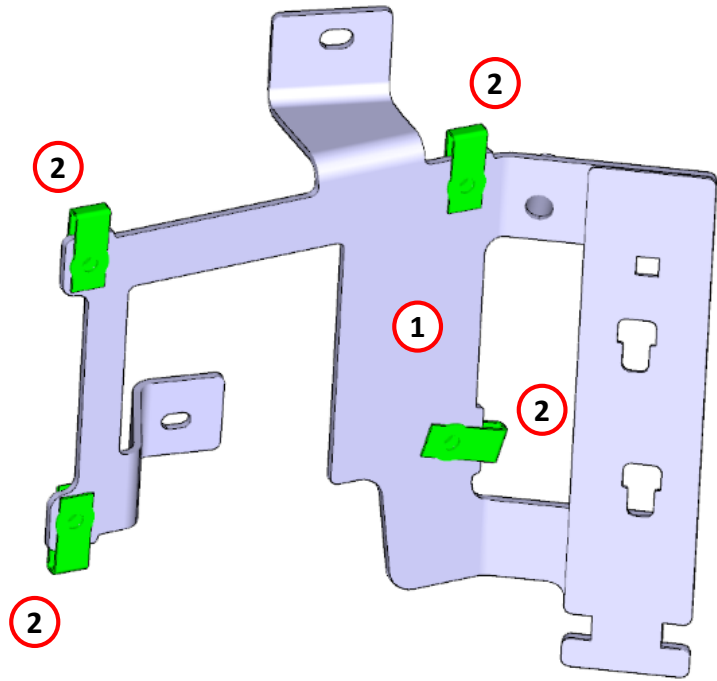


Snap Snail Clips into Transmission Fuel Line Bracket. Note the orientation of the clips.

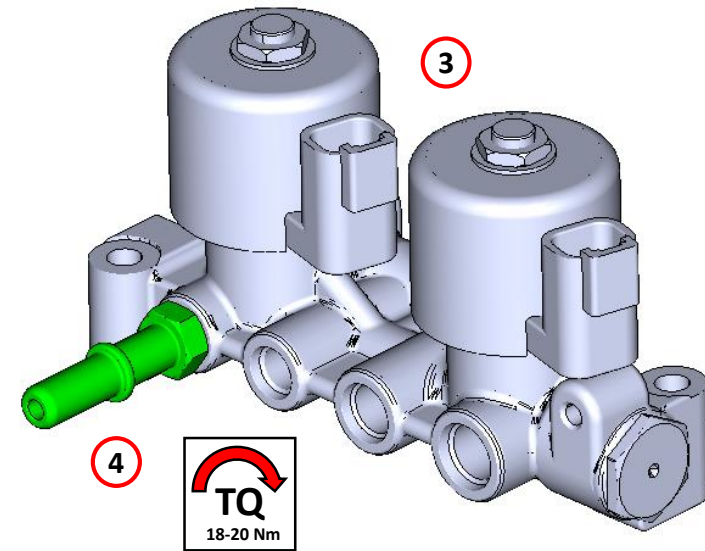


Snap Snail Clips into Rear Fuel Line Bracket. Note the orientation of the clips.

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03P211-A	SRM Bracket	N/A
2	4	11-056-0043	M6 J-Clip, Long	N/A
3	1	P16MB-10E200-A	FRPCM	N/A
4	1	P16MB-10E215-A	FRPCM Bleed Port Fitting	18-20 Nm

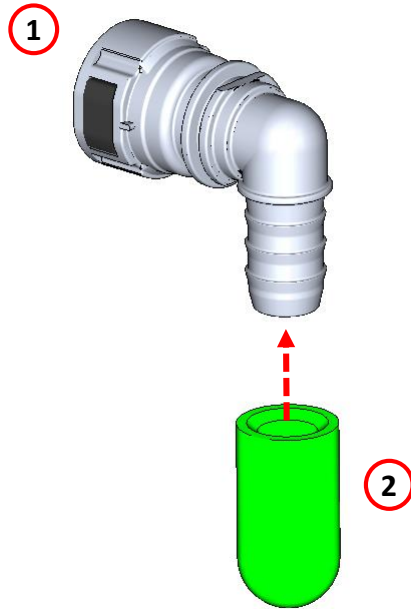


Snap the J-Clips into the SRM Bracket. Note the orientation of the clips.



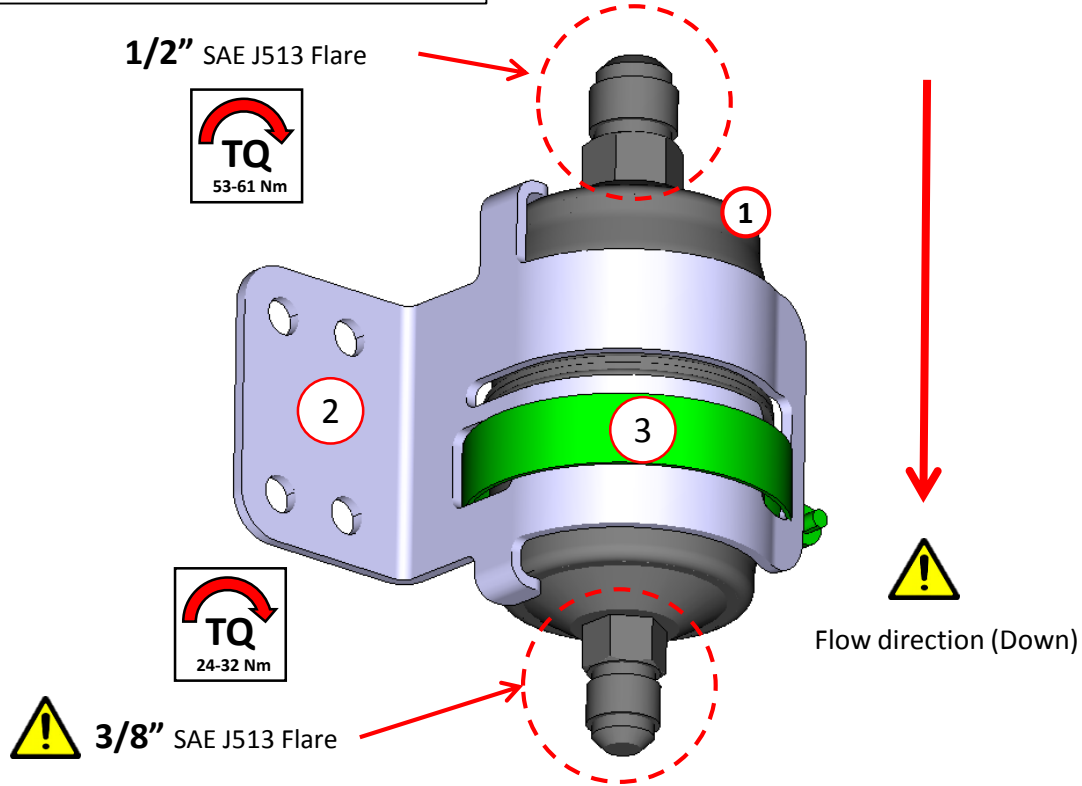
Install the bleed port onto the FRPCM

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	203576.000	90 Deg Quick Connect	N/A
2	1	22-073-0020	Vapor Cap	N/A



Install the cap on the quick connect elbow

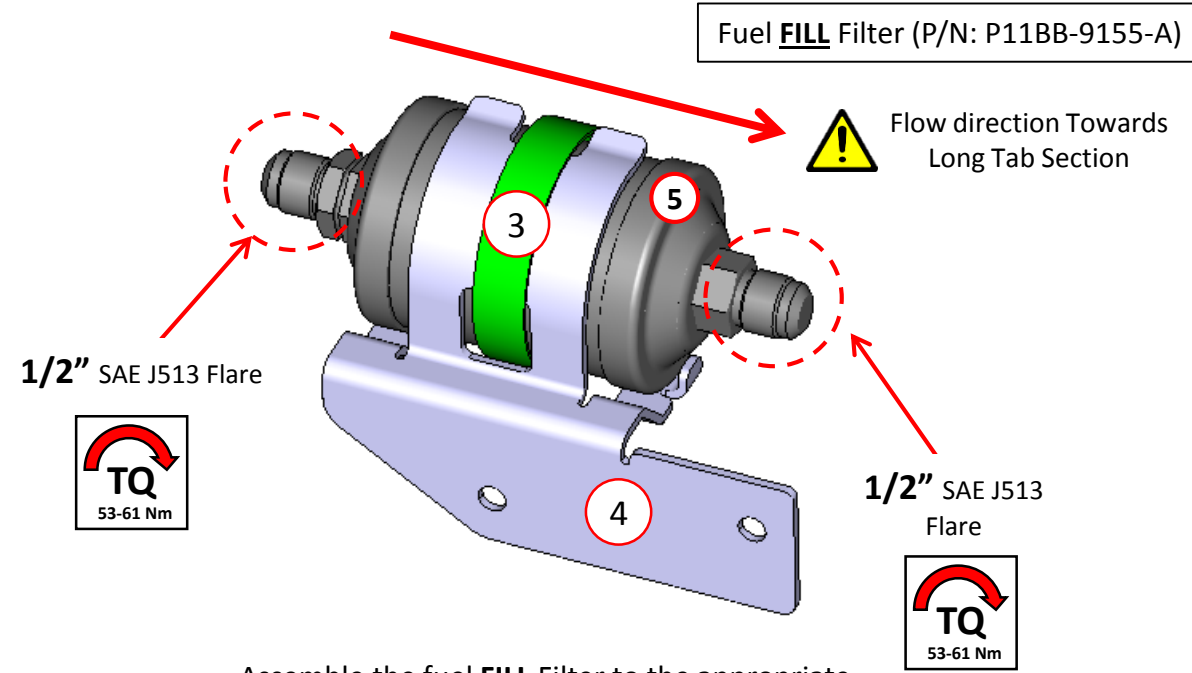
Fuel **SUPPLY** Filter (P/N: P-10S200-A)



Assemble the **SUPPLY** filter to the bracket using a worm gear clamp in the flow direction as shown.

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P-10S200-A	Fuel Supply filter	N/A
2	1	P10C2-10S220-A	Bracket, Fuel Supply Filter	N/A
3	1	6P-300-52	Worm gear clamp	N/A
4	1	P11GD-10D220-A	Bracket, fuel fill filter	N/A
5	1	P11BB-9155-A	Fuel Fill Filter	N/A

Fuel **FILL** Filter (P/N: P11BB-9155-A)



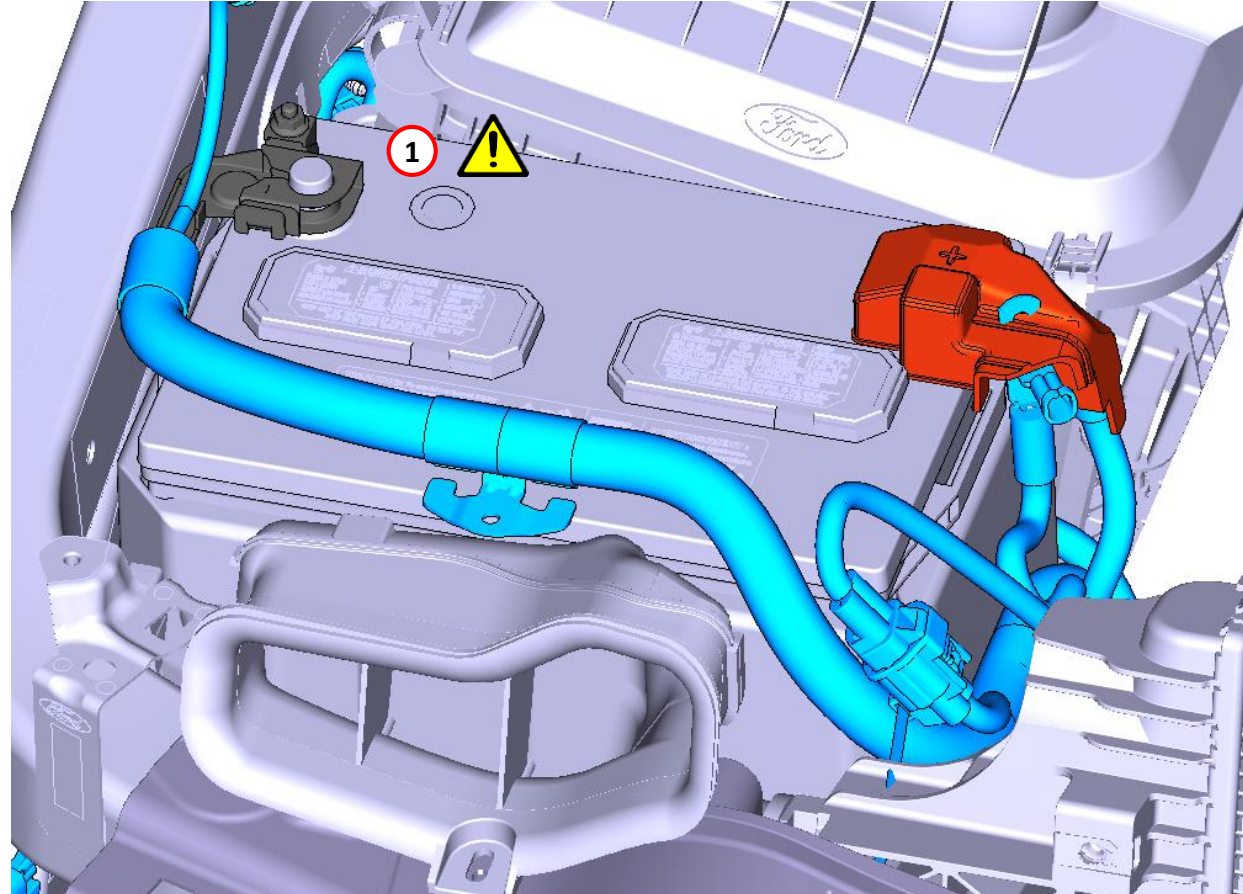
Assemble the fuel **FILL** Filter to the appropriate bracket and worm clamp

Note: The two filters have different part numbers and different fittings



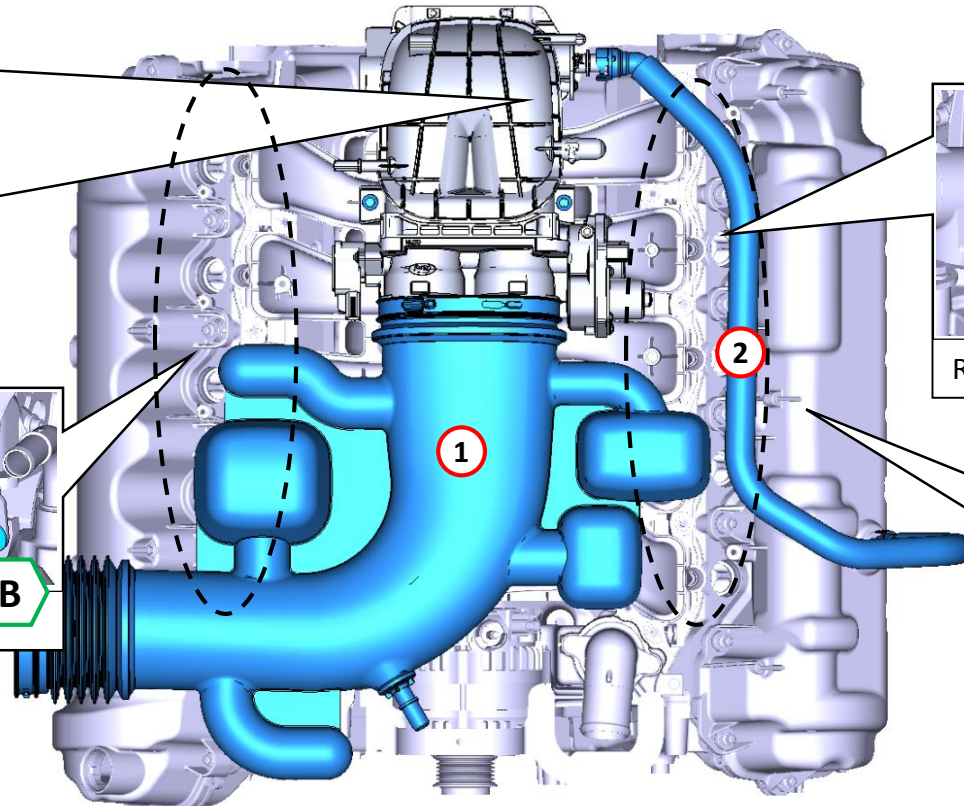
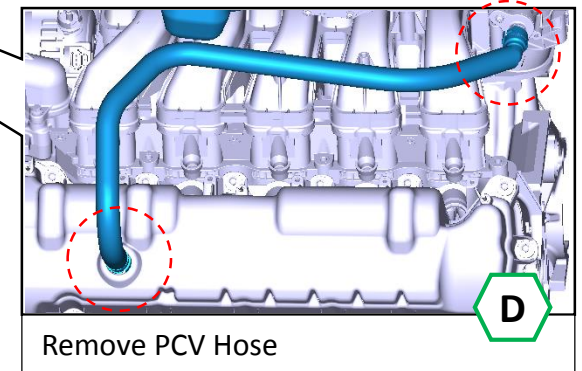
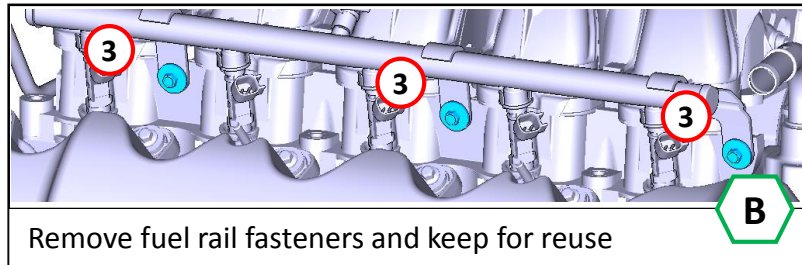
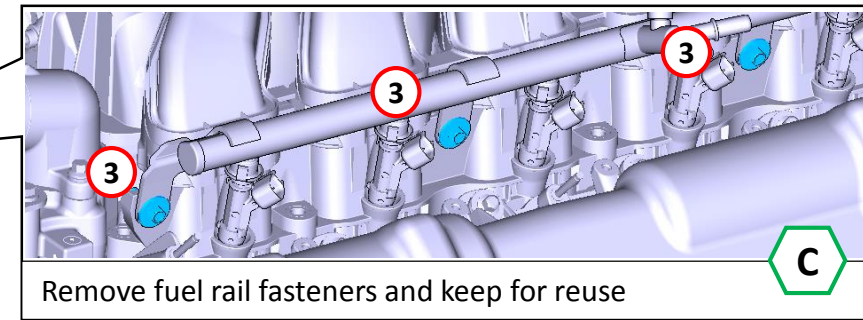
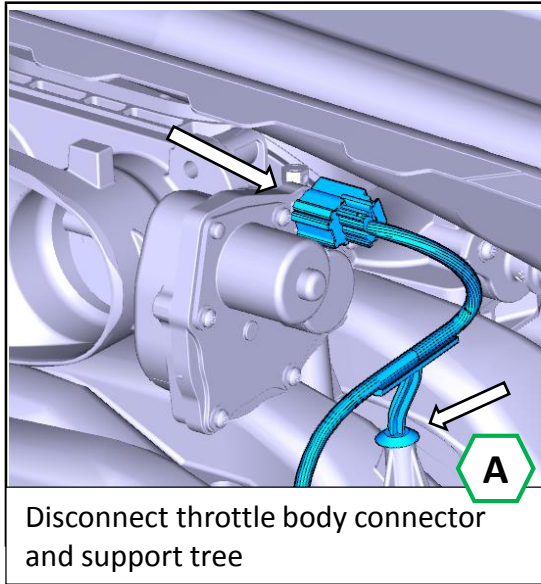
Ensure loose negative battery lead is secured away from the negative battery terminal.

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	Existing (Reuse)	Negative Battery Terminal	N/A

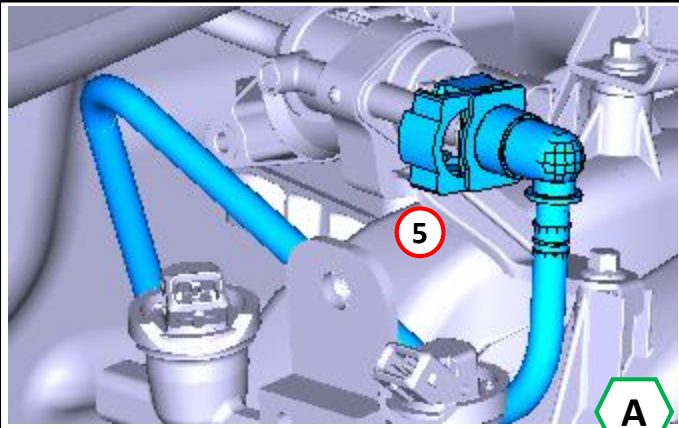


Disconnect Negative Battery Terminal. **Secure the loose negative lead such that it cannot contact the negative battery terminal.**



Item #	QTY	Part Number	Description	Torque (Nm)
1	2	Existing (reuse)	Air Intake Tube	N/A
2	1	Existing (reuse)	PCV Hose	N/A
3	6	Existing (reuse)	Fuel Rail Fasteners	N/A



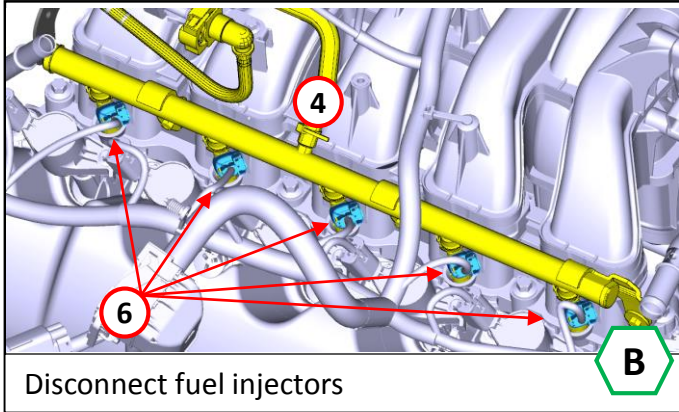
Remove fuel blue highlighted components and set aside for reuse.



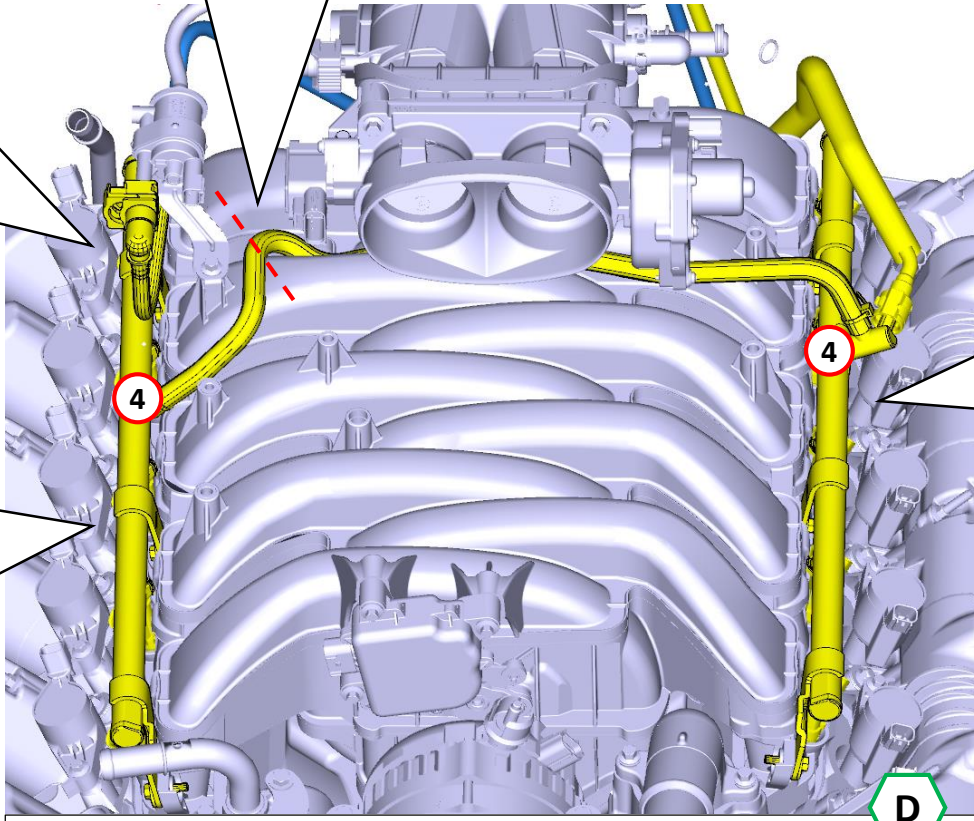
Disconnect VMV valve connector and vapor tube. Keep for reuse.

 The cross-over fuel line must be cut to remove the fuel rails. 

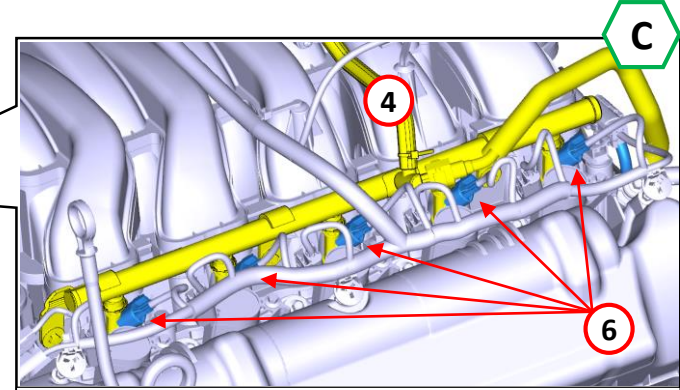
Item #	QTY	Part Number	Description	Torque (Nm)
4	1	Existing (discard)	OEM Fuel Rail Assembly	N/A
5	1	Existing (reuse)	VMV Hose Connector	N/A
6	1	Existing (reuse)	Fuel Injector connectors	N/A



Disconnect fuel injectors



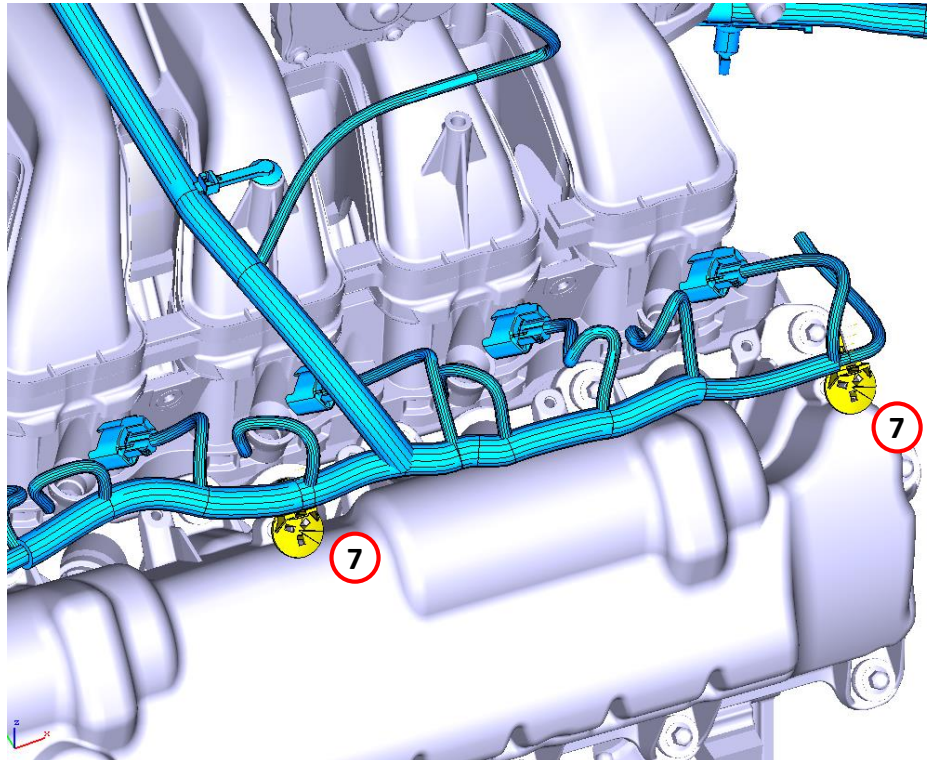
Remove and discard fuel rails



Disconnect Fuel Injectors

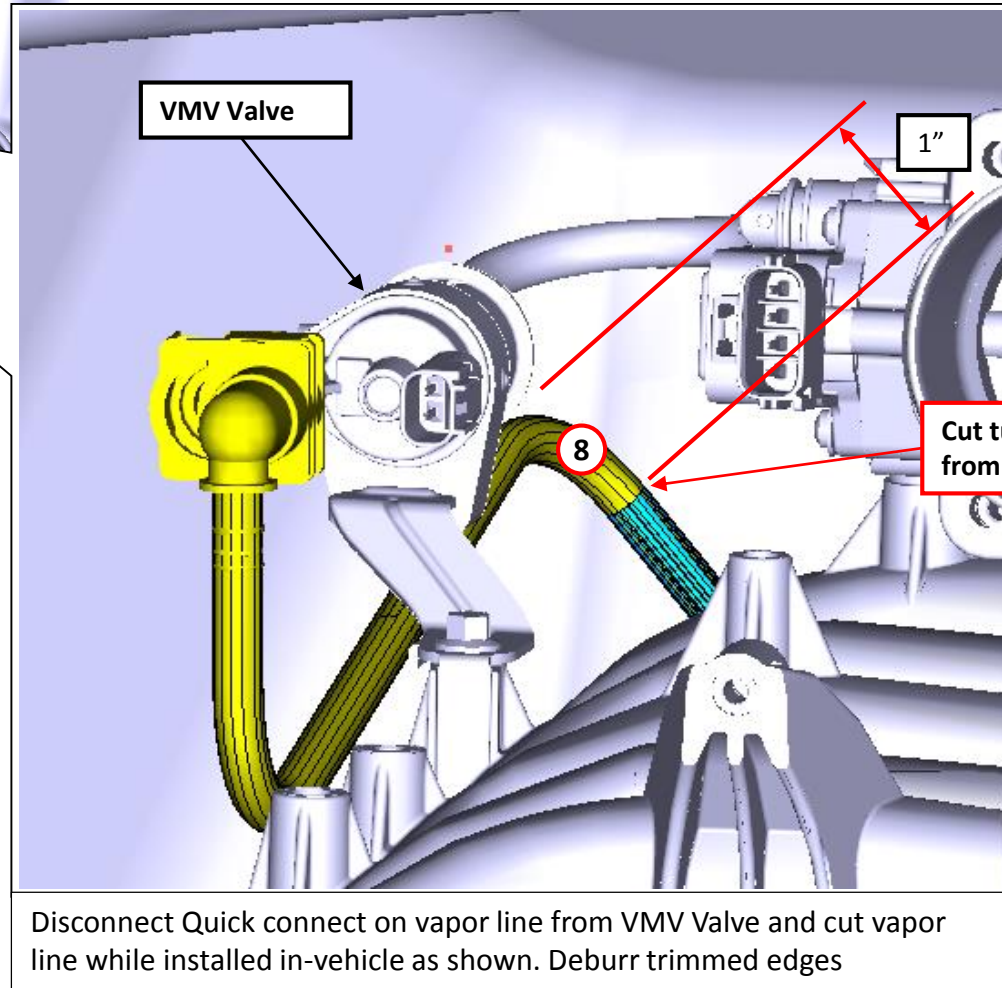
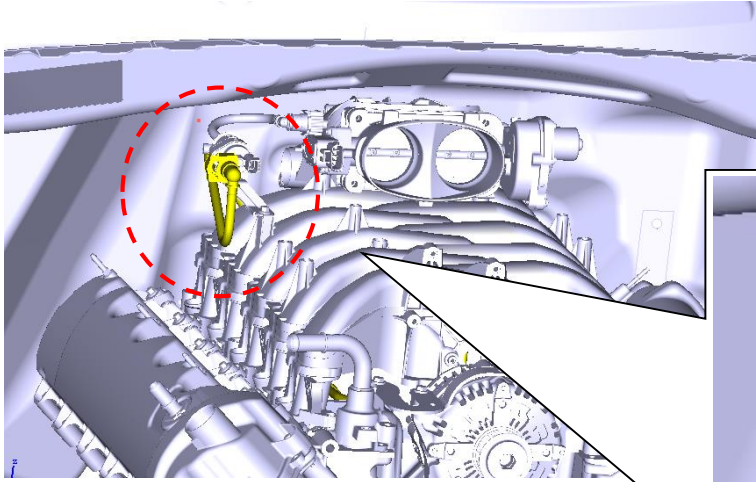


Item #	QTY	Part Number	Description	Torque (Nm)
7	2	Existing (Discard)	Clips for wiring harness	N/A



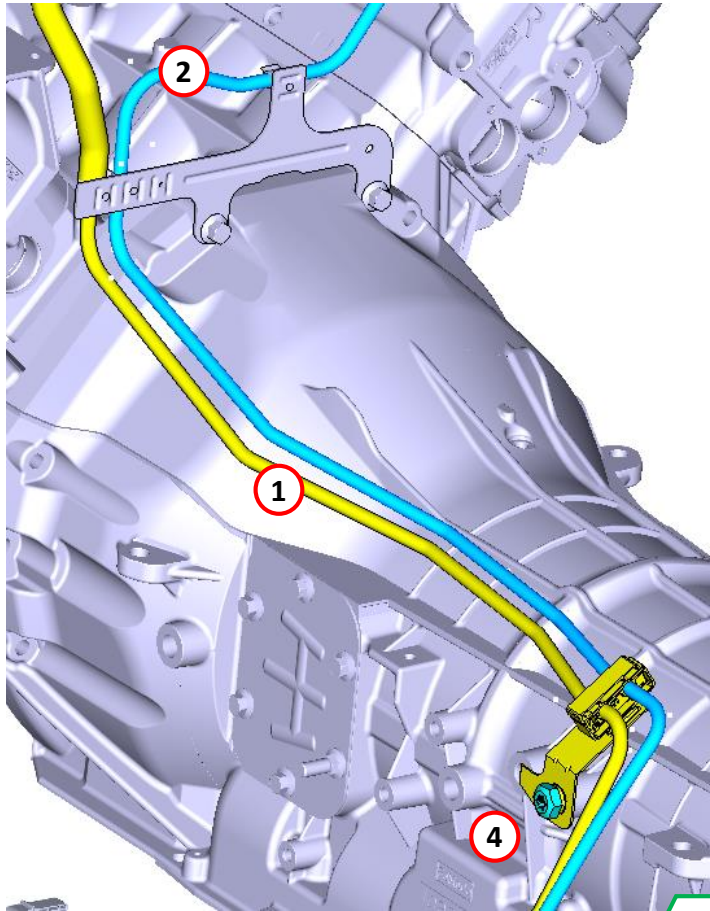
Remove and discard clips attached to main wiring harness

Item #	QTY	Part Number	Description	Torque (Nm)
8	1	Existing (Modify)	Vapor Line	N/A



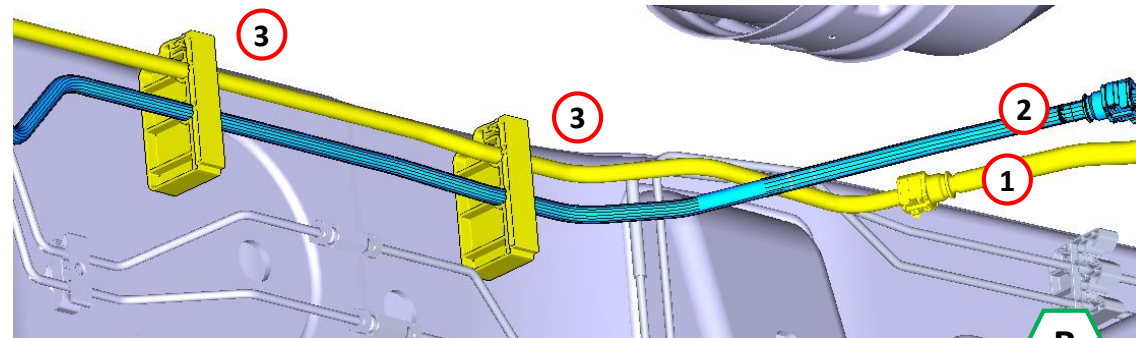
Use a small pipe cutter to cut the vapor tube



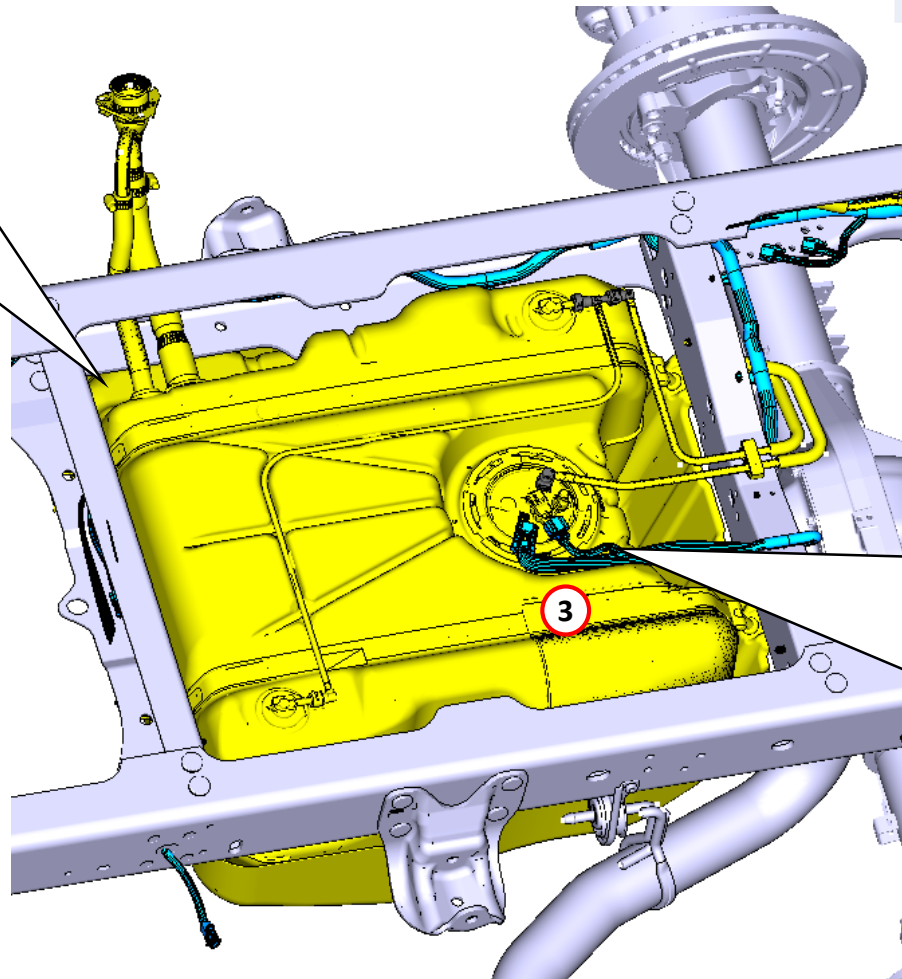
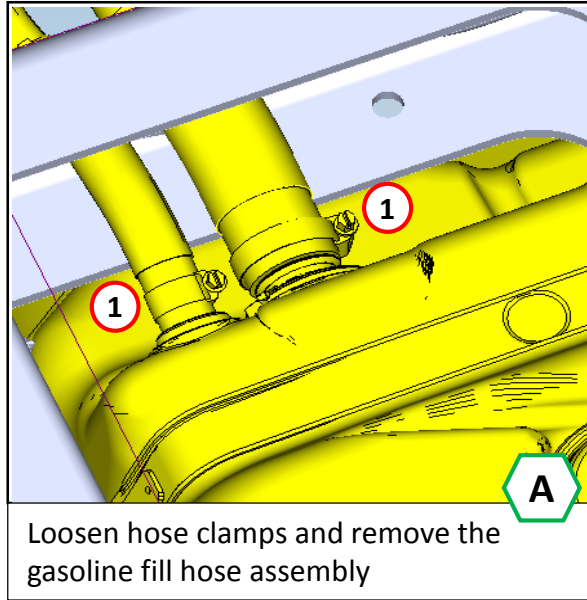


**A**  
Remove the parts shown in yellow and discard. Keep the bolt and vapor line highlighted in blue.

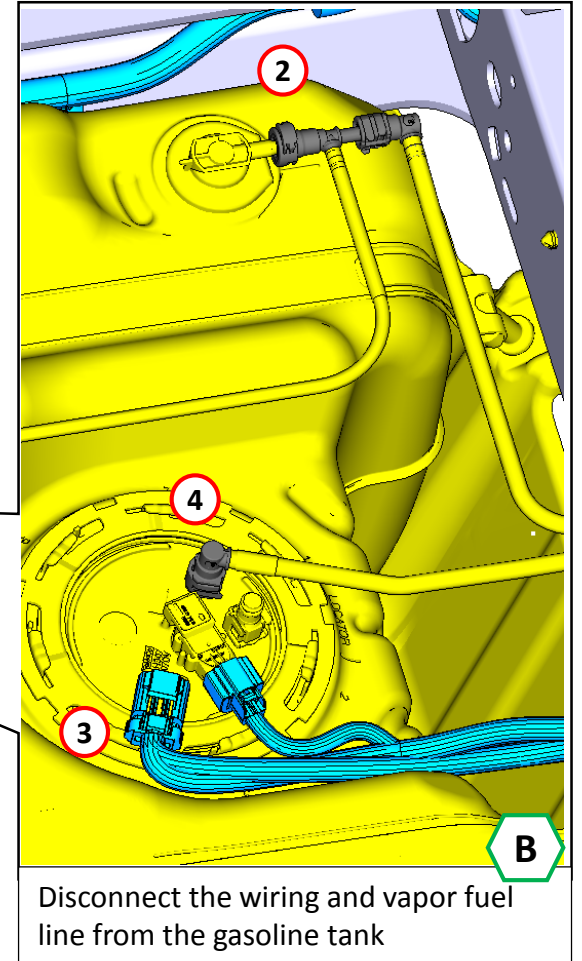
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	Existing (Discard)	Fuel Supply Line	N/A
2	1	Existing (Reuse)	Vapor Return Line	N/A
3	2	Existing (Discard)	OEM Fuel Line Frame Rail Bracket	N/A
4	1	Existing (Reuse)	Torx Fastener (9/16-12 UNC X 1.0)	62-67 Nm

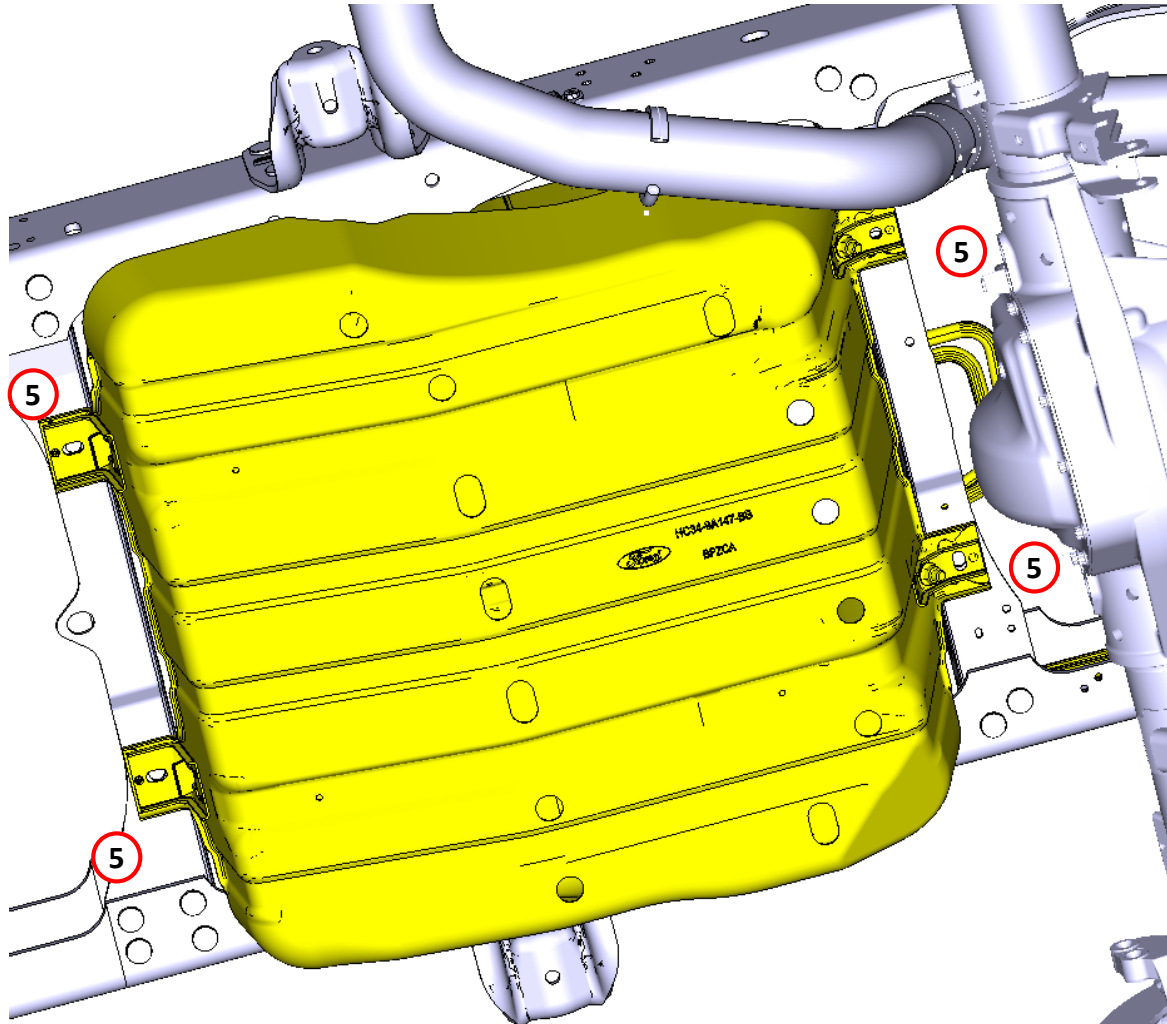


**B**  
Remove and discard the parts shown in yellow. Keep the blue vapor line.



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	Existing (Discard)	Clamps for fill hose	N/A
2	1	Existing (Discard)	OEM Vapor line	N/A
3	2	Existing (Reuse)	OEM wiring connectors	N/A
4	1	Existing (Discard)	OEM Fuel Supply Line	N/A



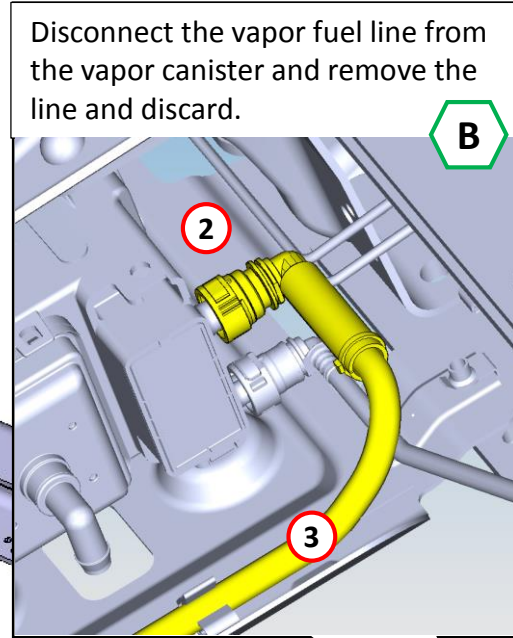
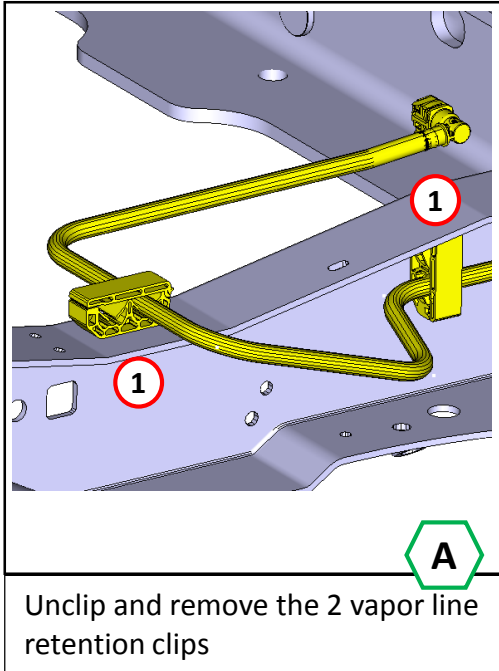


Remove 4 mounting bolts to drop and remove the gasoline tank. Follow Ford recommended service procedure for safe gasoline tank removal.

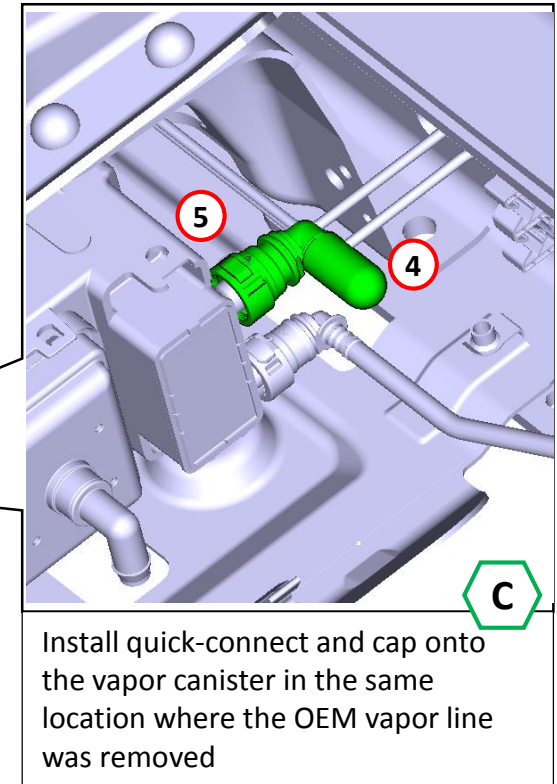
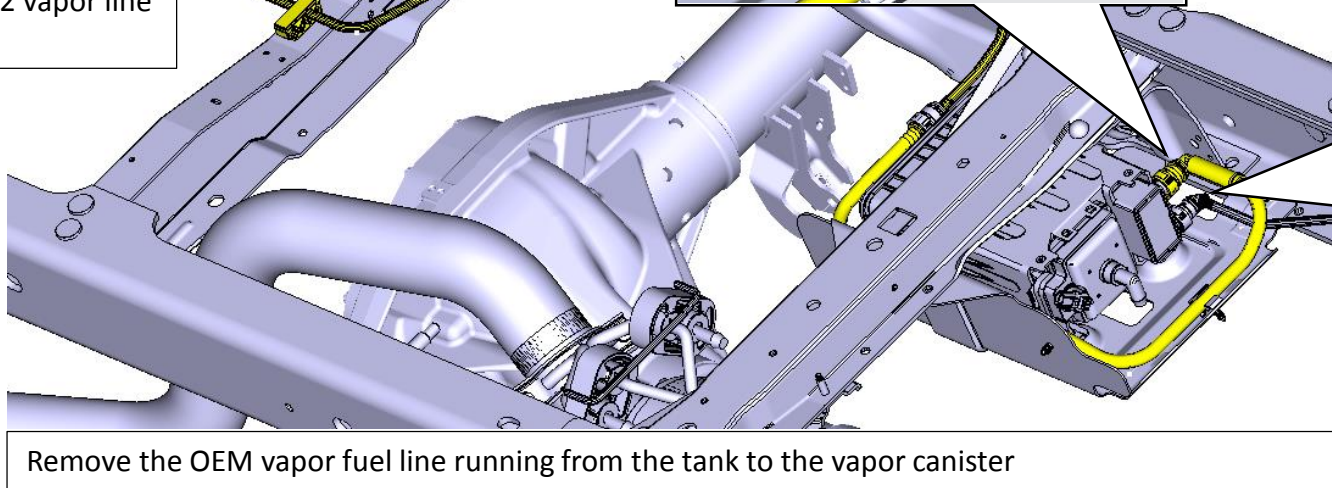
Item #	QTY	Part Number	Description	Torque (Nm)
5	4	Existing (Discard)	Gasoline tank mounting bolts	N/A



Follow Ford recommended service procedure for safe gasoline tank removal.



Item #	QTY	Part Number	Description	Torque (Nm)
1	2	Existing (Discard)	Clips for vapor line	N/A
2	1	Existing (Discard)	Vapor line quick connect fitting	N/A
3	1	Existing (Discard)	OEM Vapor fuel line	N/A
4	1	20-073-0020	Vapor Canister Cap	N/A
5	1	203573.000	90 degree quick connect female	N/A



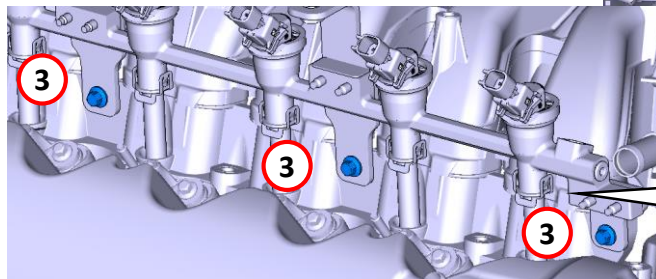
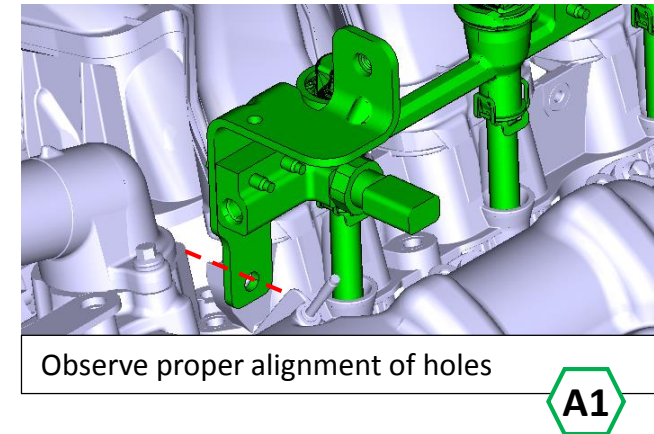
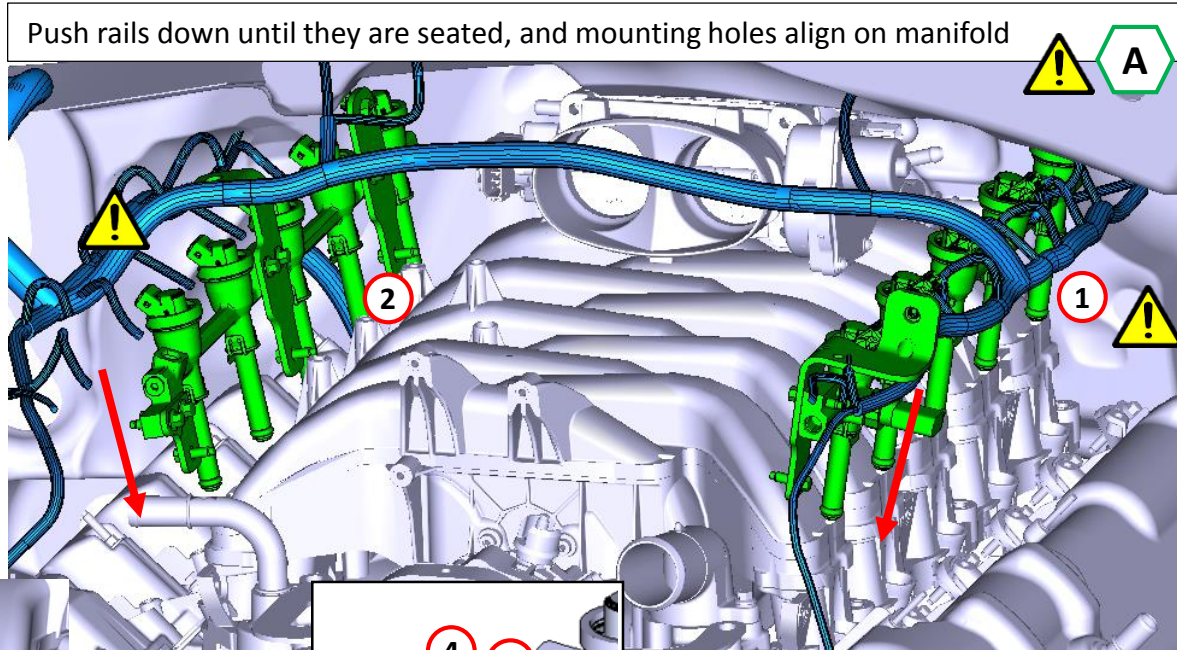


To aid installation, use a light coat of engine oil or dielectric grease on the O-rings

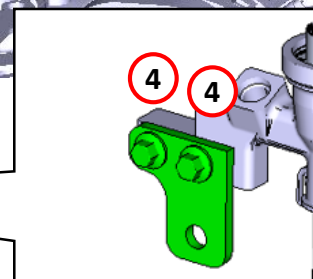


Ensure the fuel rails are installed *below* the engine harness.

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-03D001-A	LH Fuel Rail Assembly	N/A
2	1	P16MB-03D002-A	RH Fuel Rail Assembly	N/A
3	3	Existing (Reuse)	M6 Fasteners, mounting to intake manifold	8-12 Nm
4	2	W500215-S439	M6 Fasteners	8-12 Nm



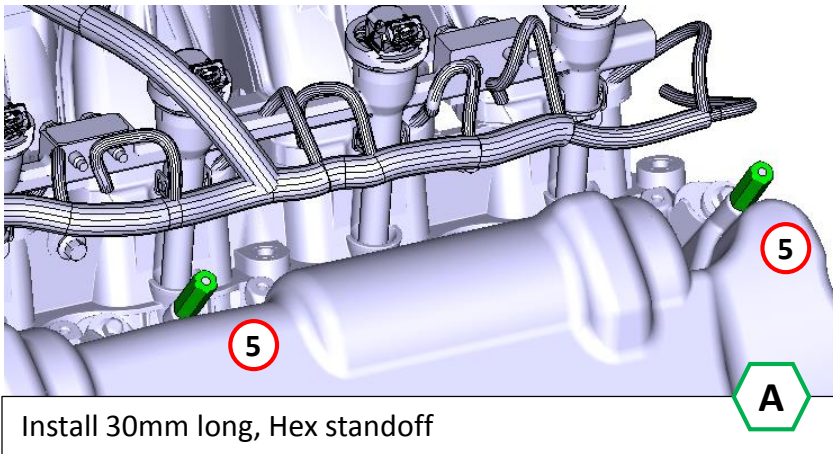
Refer to BOM for torque requirements



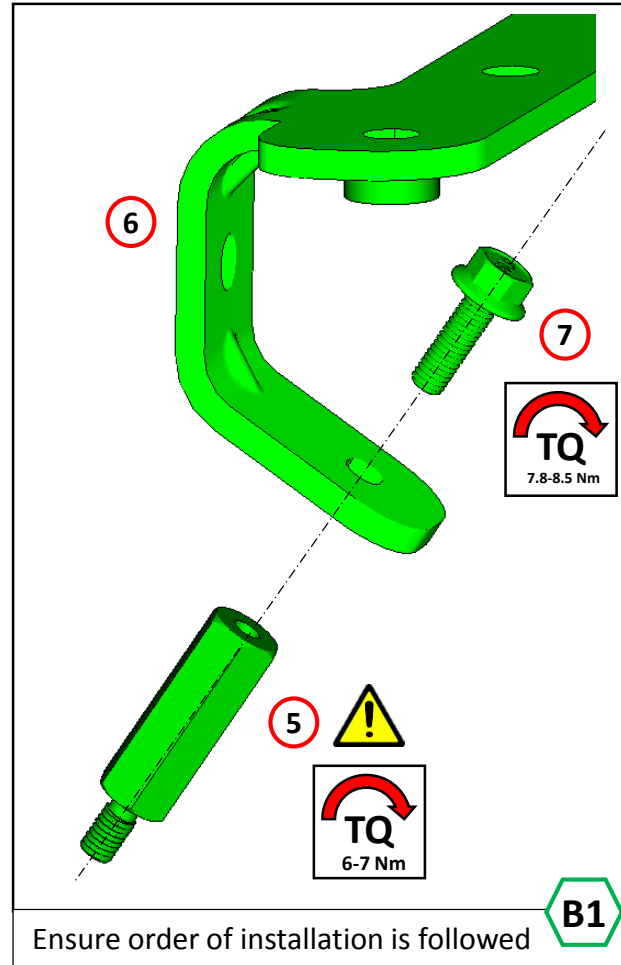
Torque fasteners on fuel rail bracket



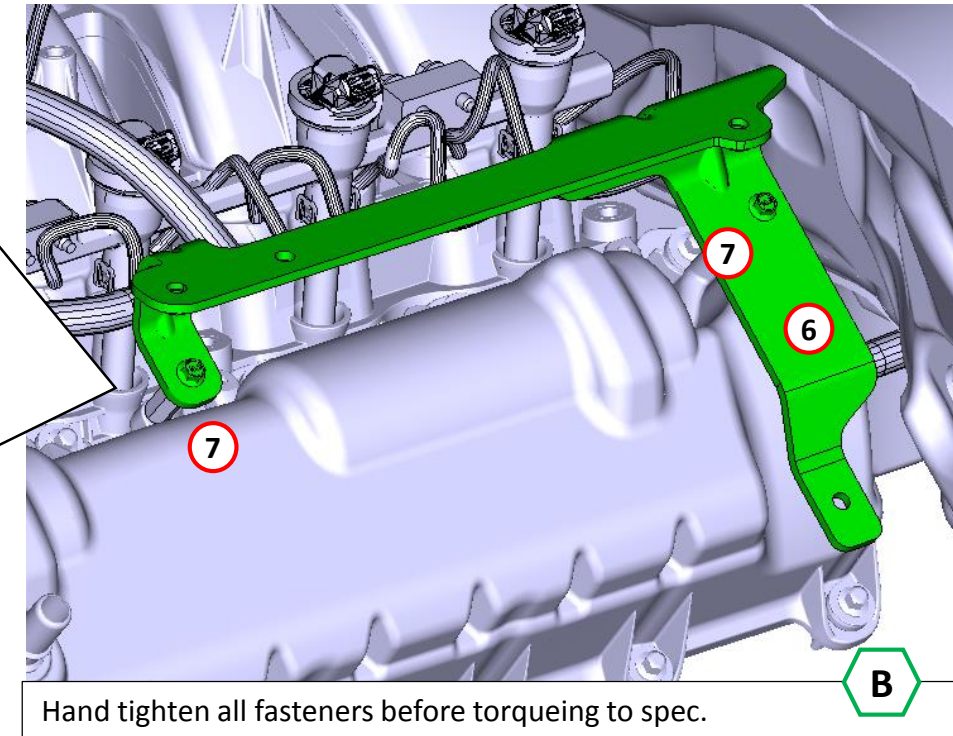
Use anti-seize on all threaded components on this page



Install 30mm long, Hex standoff



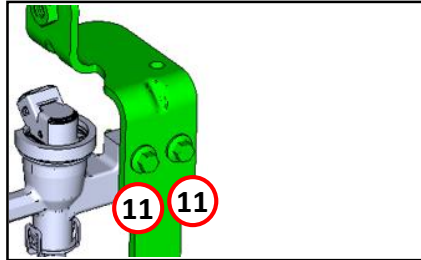
Ensure order of installation is followed



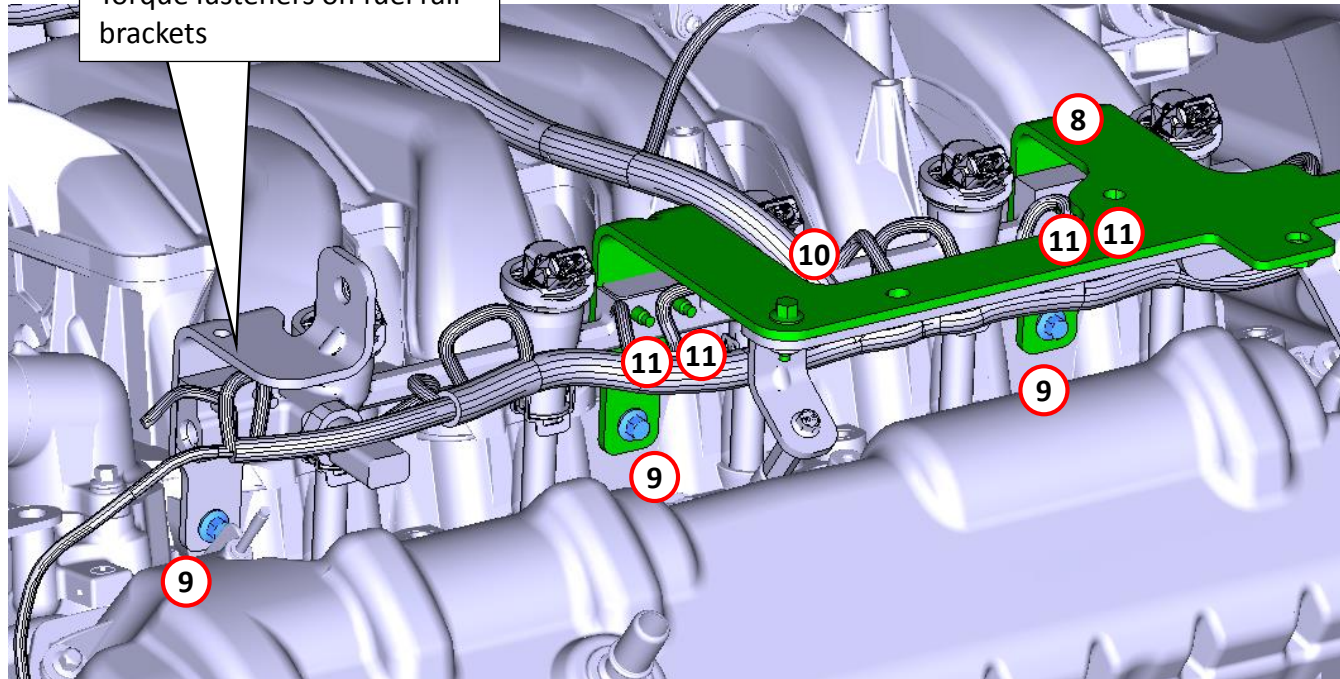
Hand tighten all fasteners before torquing to spec.

Item #	QTY	Part Number	Description	Torque (Nm)
5	2	P17EB-10E201-C	FRPCM Bracket Standoff (30mm M5 Male/Female Standoff)	6-7 Nm
6	1	P17EB-10E201-A	FRPCM Bracket (Lower)	N/A
7	2	11-031-0647	M5 X 0.8 X 16 Flange Head Bolt	7.8-8.5 Nm





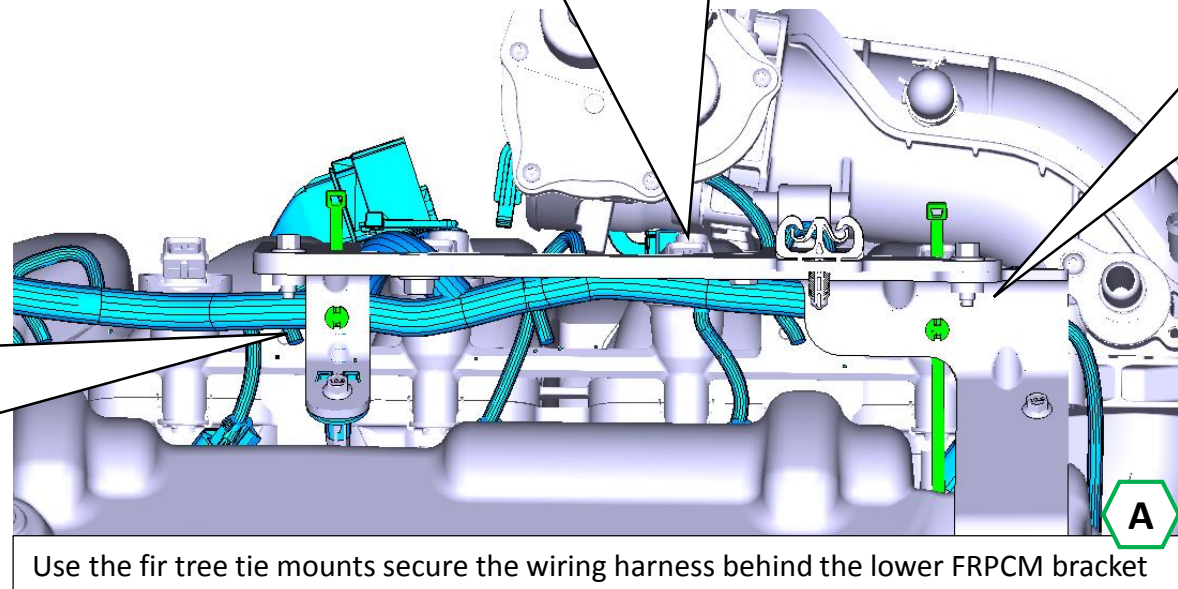
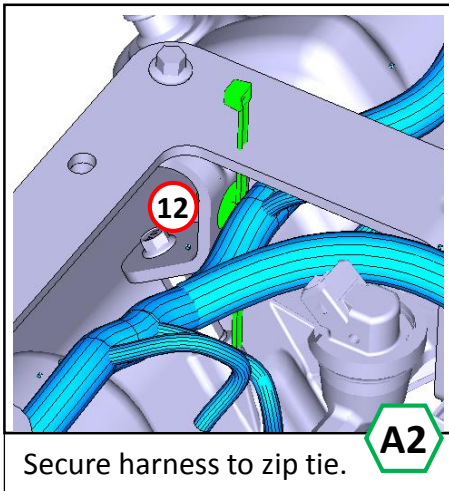
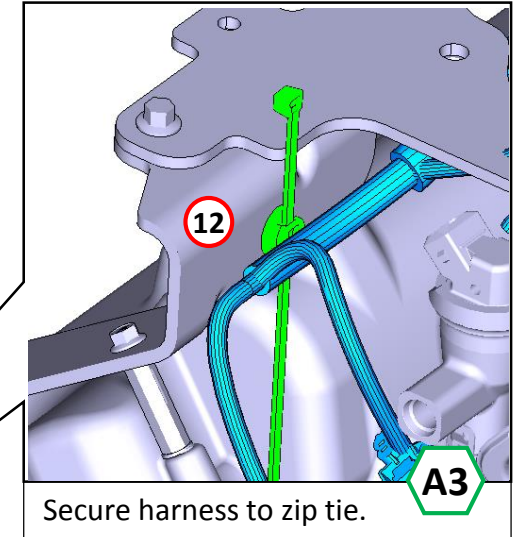
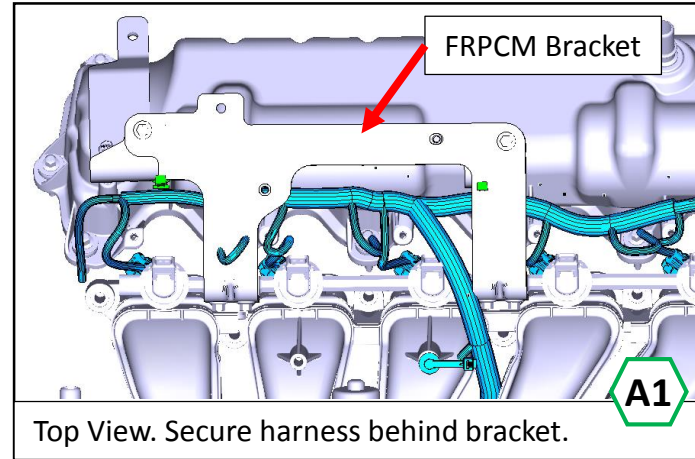
Torque fasteners on fuel rail brackets



Install Upper FRPCM Bracket. Refer to BOM for torque requirements

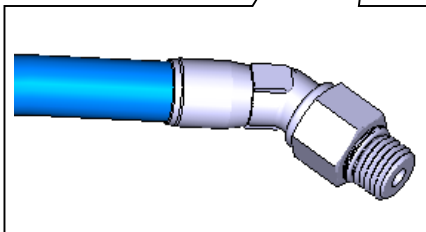
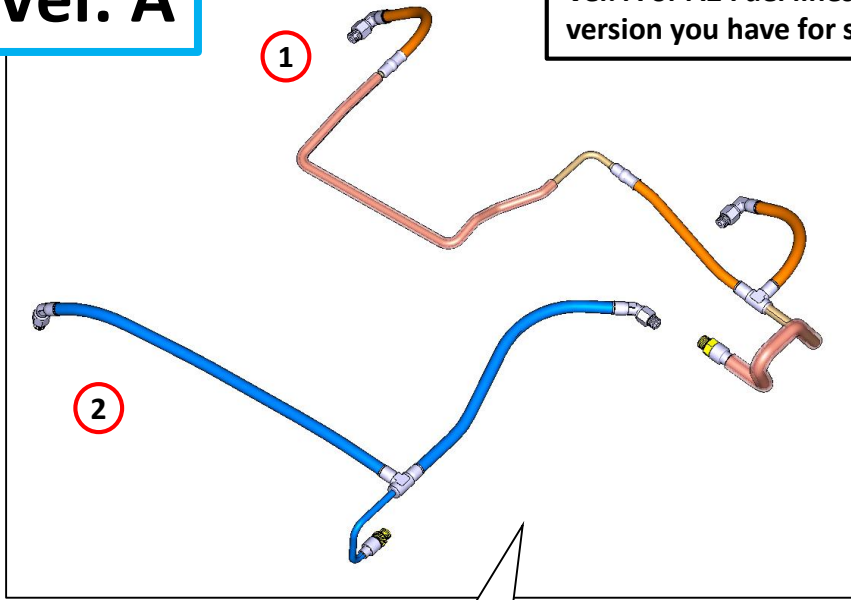
Item #	QTY	Part Number	Description	Torque (Nm)
8	1	P17EB-10E201-A	FRPCM Bracket (Upper)	N/A
9	3	Existing (Reuse)	M6 Fasteners, mounting to intake manifold	8-12 Nm
10	1	N605891-S437	M6 X 1 X 18.5 (FRPCM Bracket Fasteners)	8-12 Nm
11	6	W500215-S439	M6 Fasteners	8-12 Nm

Item #	QTY	Part Number	Description	Torque (Nm)
12	2	11-403-0024	Fir Tree zip-tie mounts	N/A



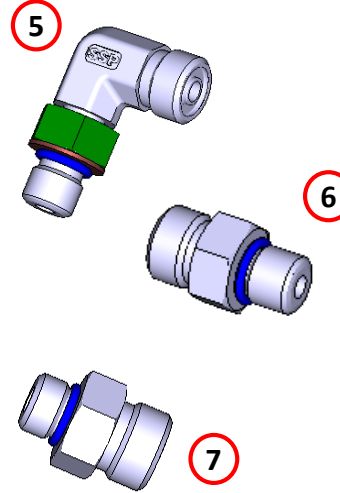
## Ver. A

In your propane kit, you may be supplied with either Ver. A or A2 Fuel lines. This page will help identify which version you have for specific installation methods

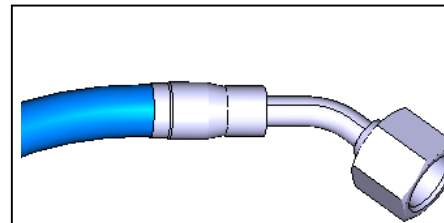


Ver. A Fuel lines will have **O-Ring Boss Fittings** at the end of each section

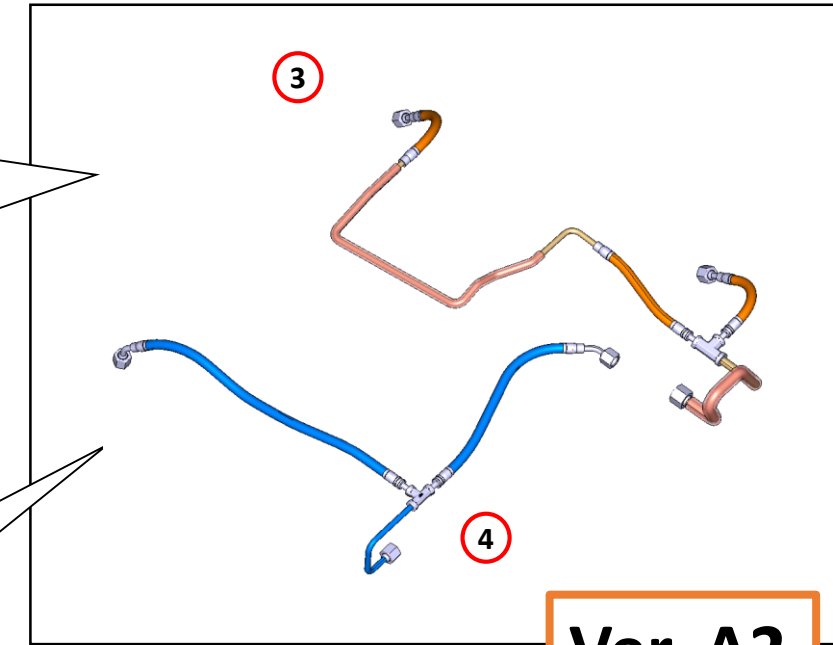
For installation instructions, go to: Page 33



Ver. A2 Fuel lines will be supplied with adapters to mate fuel lines to fuel rails and other components



Ver. A2 Fuel lines will have **O-Ring Face Seal** at the end of each section

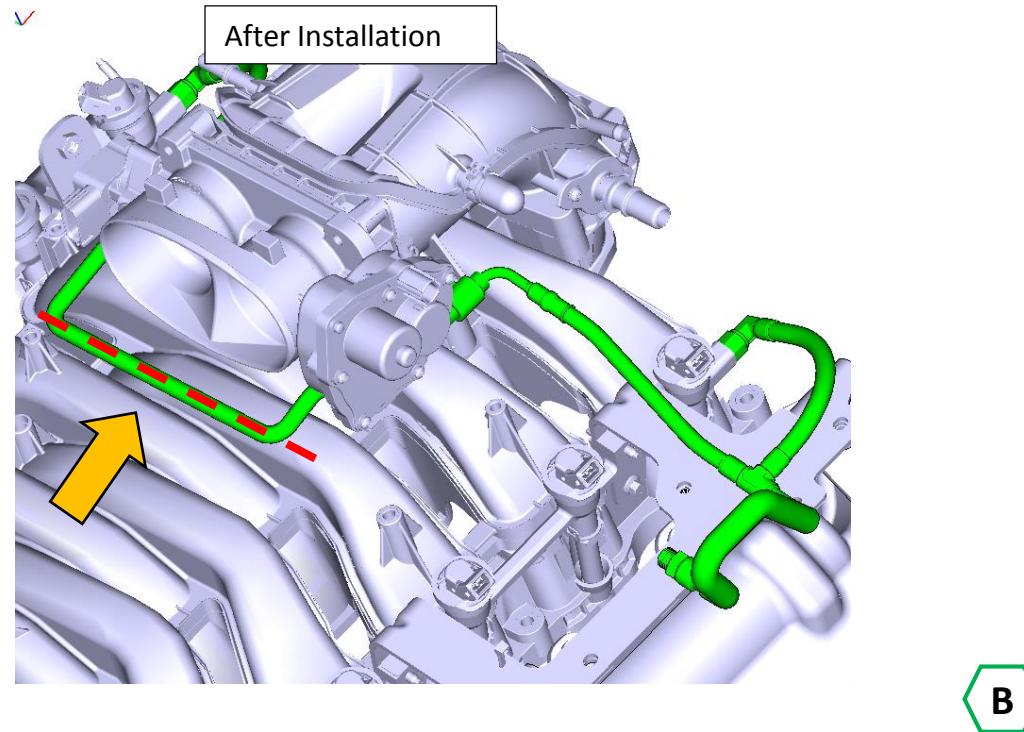
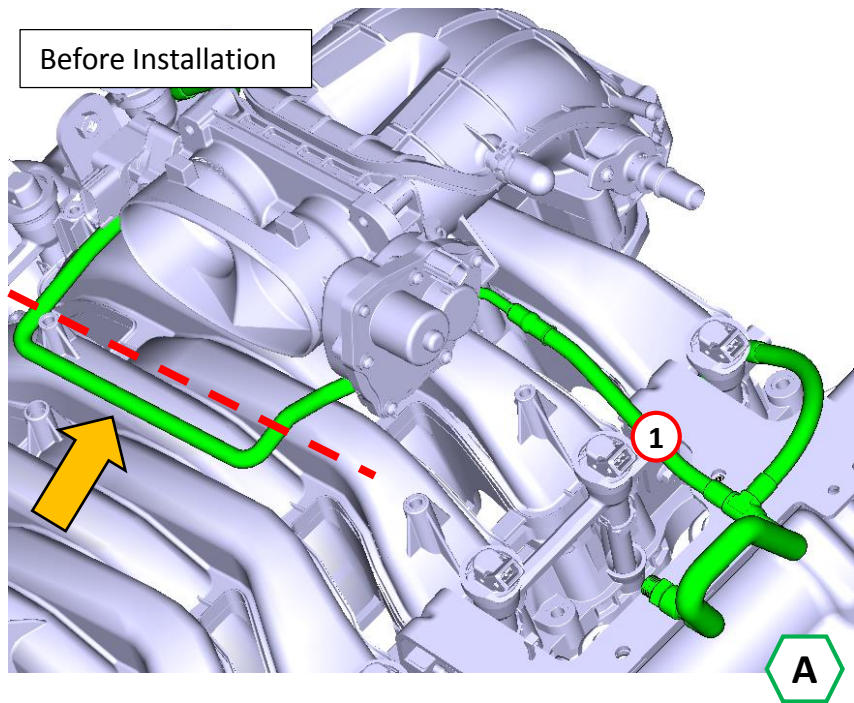


## Ver. A2

For installation instructions, go to: Page 37

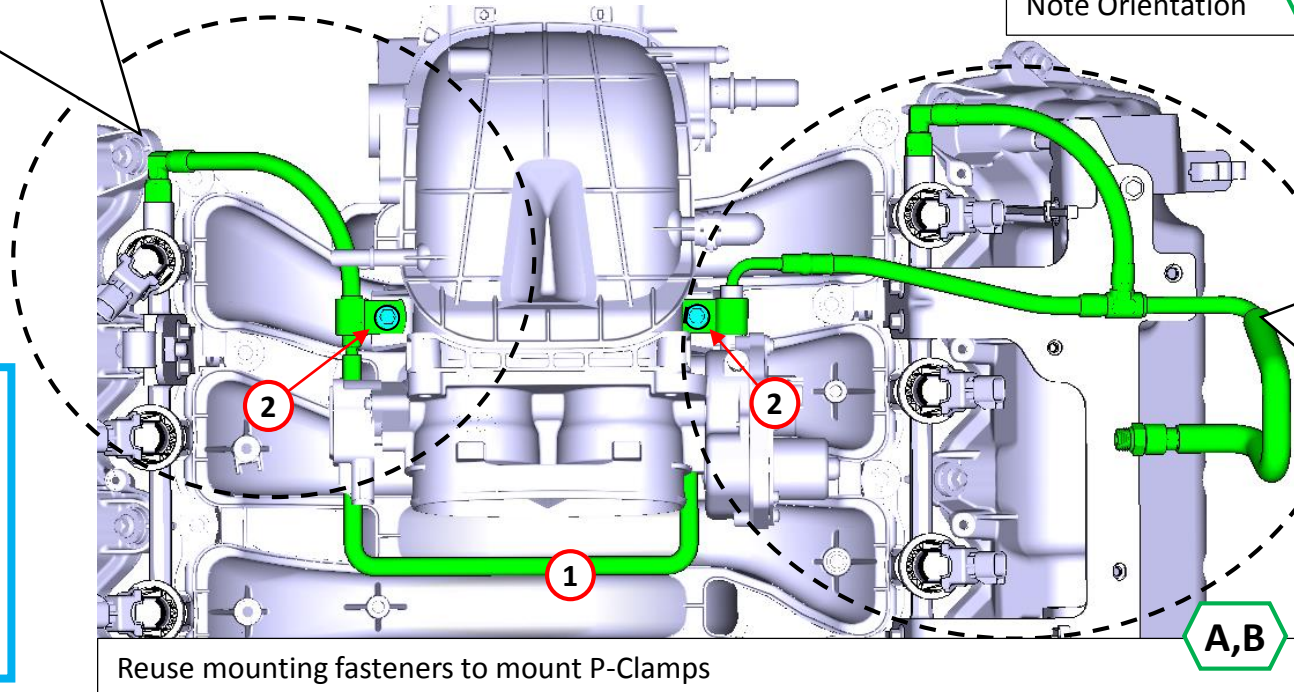
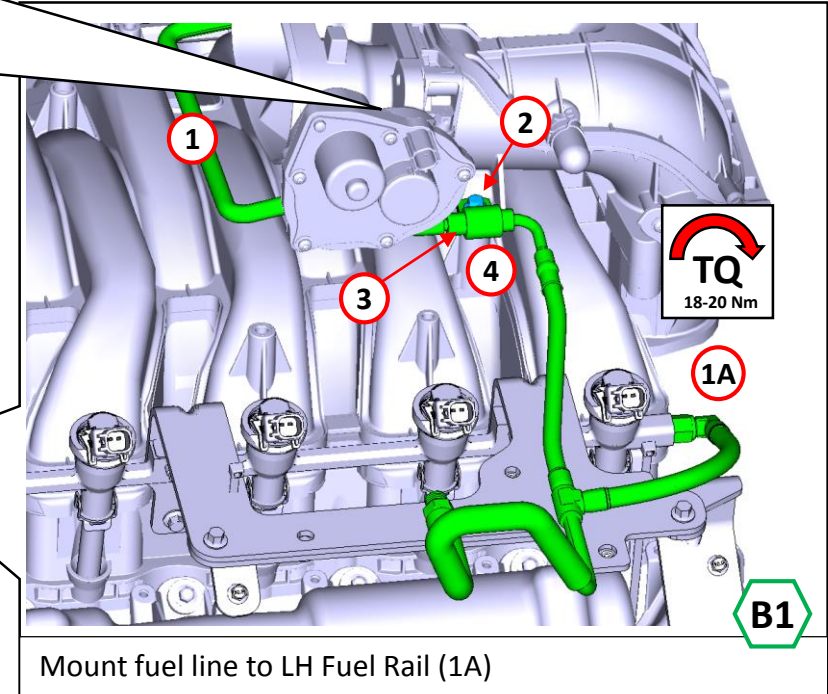
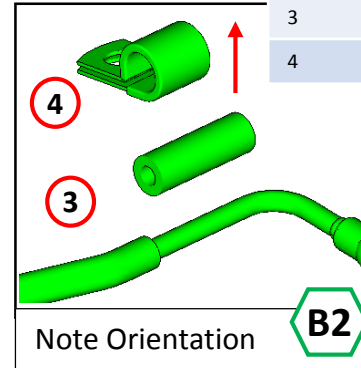
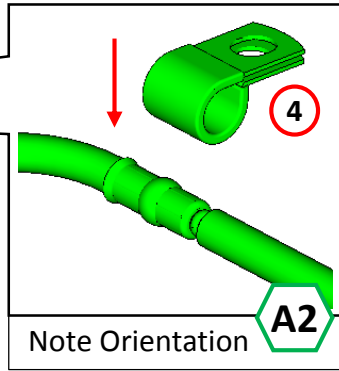
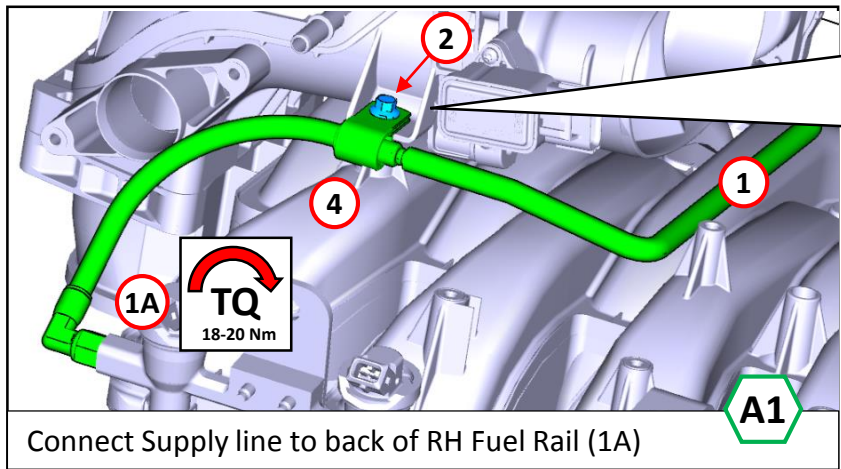
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03D110-A	Fuel Rail Supply + Return, Ver. A	N/A
2		P17EB-03D120-A		
3	1	P17EB-03D110-A2	Fuel Rail Supply + Return, Ver. A2	N/A
4		P17EB-03D120-A2		
5	2	11-126-0716	90 Deg. -04 ORB to ORFS Adapter	See Details
6	3	11-126-0717	Straight -04 ORB to ORFS Adapter	See Details
7	1	11-126-0718	Straight -05 ORB to ORFS Adapter	See Details

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03D110-A	Fuel Rail Supply	N/A



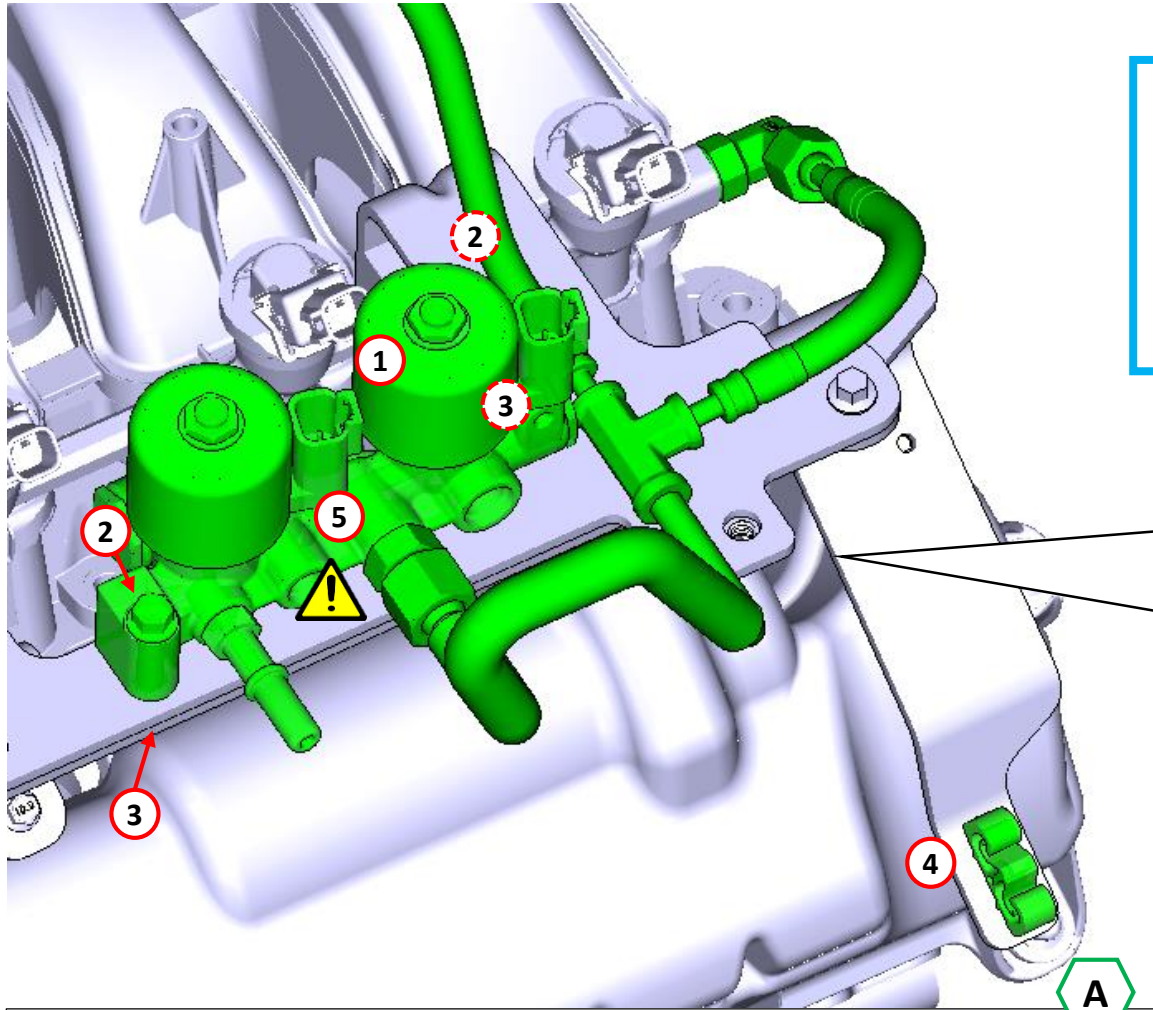
Slide the engine fuel supply line into position from the front, ensuring the front of the fuel line is lined up with the red dotted line


Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03D110-A	Fuel Rail Supply	N/A
1A	2		-04 O-Ring Boss Seal	18-20 Nm
2	2	W503275-S/3	Bolt, M6 X 20 (Reuse Bolt)	8-12 Nm
3	1	P07L3-9C328-A	Sleeve, 1/4" ID, 1/2" OD	N/A
4	2	11-054-0160	1/2" P-Clamp	N/A



**!**  
For engine fuel line part number P17EB-03D120  
**A**

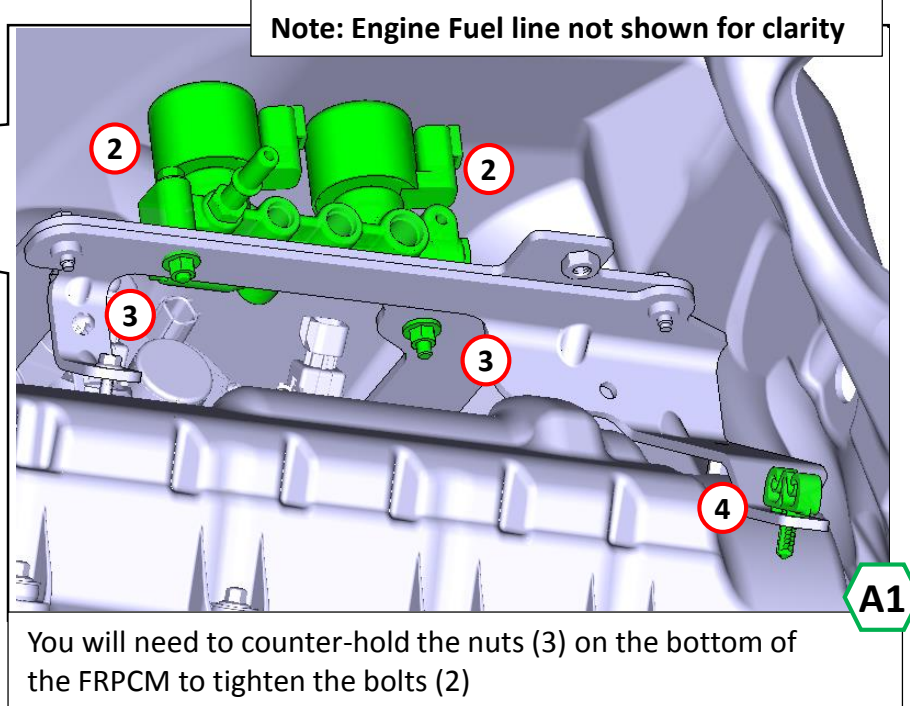
 Do not install Engine Supply line to FRPCM port "C" until Forward Return Fuel Line is installed as shown later in this installation manual



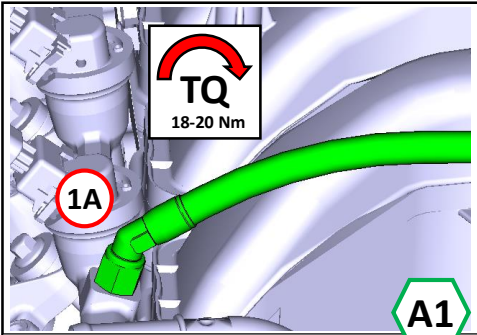
  
For engine fuel line part number P17EB-03D120  
**A**

Ensure orientation of FRPCM is correct

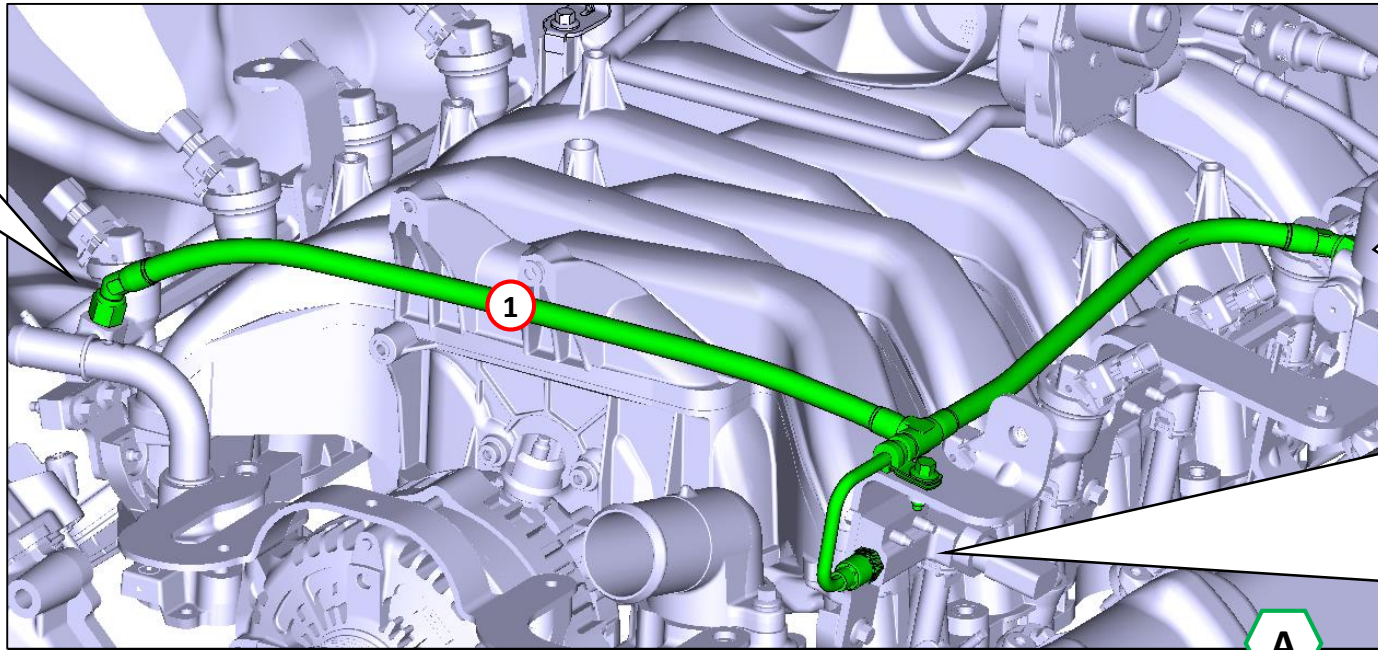
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-10E200-A	FRPCM (Fuel Rail Pressure Control Module)	NA
2	2	11-031-0648	M6 X 1.0 X 45 Hex Flange (FRPCM to bracket)	8-12 Nm
3	2	11-278-0274	FRPCM to Bracket Nuts (M6 Flange Nut)	8-12 Nm
4	2	15-004175	FRPCM Bracket Snail Clip (EFC)	N/A
5	1	P17EB-03D110-A	-05 O-Ring Boss Seal	23-26 Nm



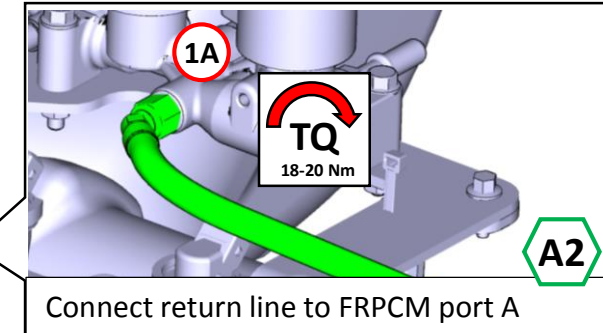
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03D120-A	Fuel Line, Fuel Rail Return	NA
1A	NA		-04 O-Ring Boss Seal	18-20 Nm
2	1	11-054-0173	1/4" P-Clamp	NA
3	1	N605891-S437	M6 X 1.0 X 18.5	8-12 Nm



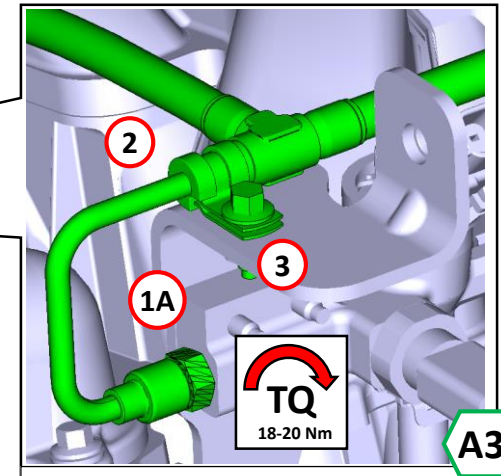
Connect return line to RH fuel rail



Install fuel return line as shown.

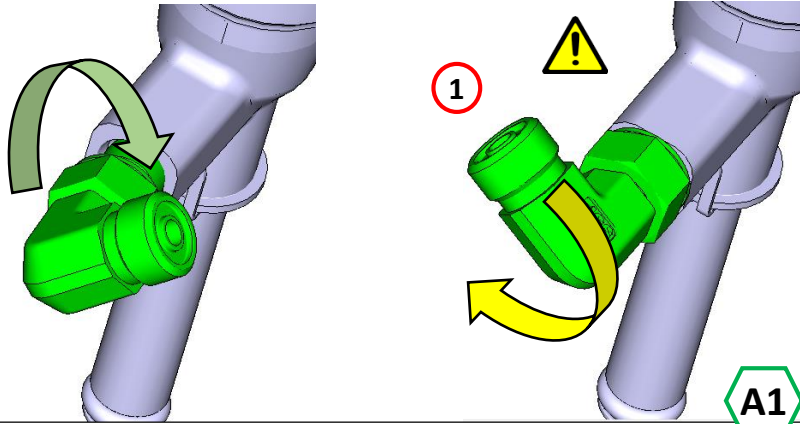


Connect return line to FRPCM port A

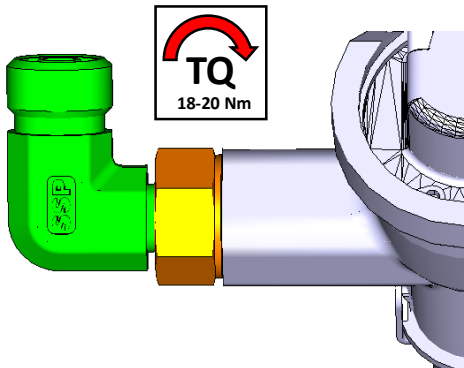


Connect fuel line to LH fuel rail, as well as P-Clamp and Fastener

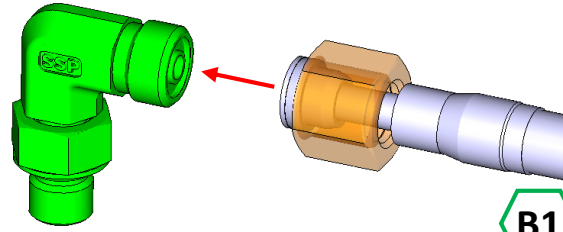
For engine fuel line part number P17EB-03D120 -A



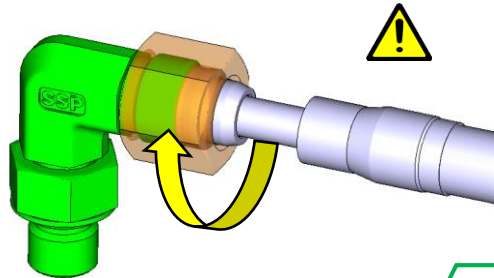
Rotate fitting into proper orientation, stopping after the O-ring has made contact with the sealing surface



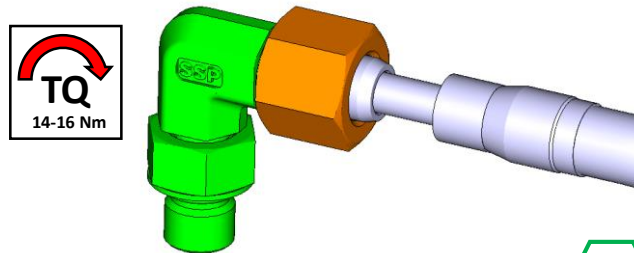
Counter-hold fitting in place, torque locknut using appropriate torque



Place adapter flush against sealing surface

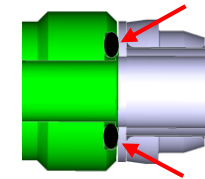


Hand-tighten until O-ring contacts both sealing surfaces.



Counterhold fitting and Torque locknut using appropriate torque

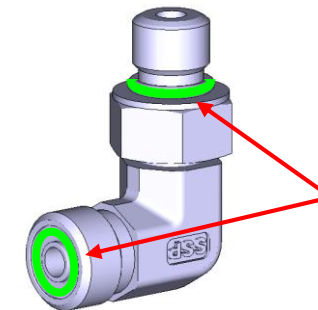
Item #	QTY	Part Number	Description
1	2	11-126-0716	-04 O-Ring Boss Seal to ORFS Adapter, 90 Deg



Before final torque application, hand-tighten until O-ring contacts both sealing surfaces

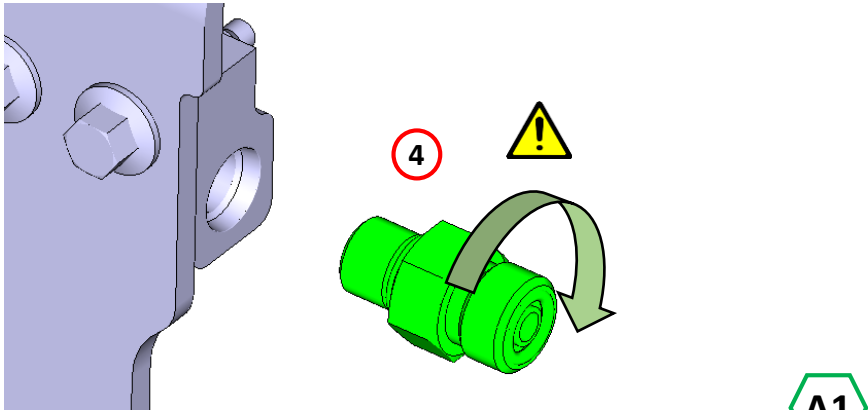


Apply final torque as specified, ensuring counterhold is used.

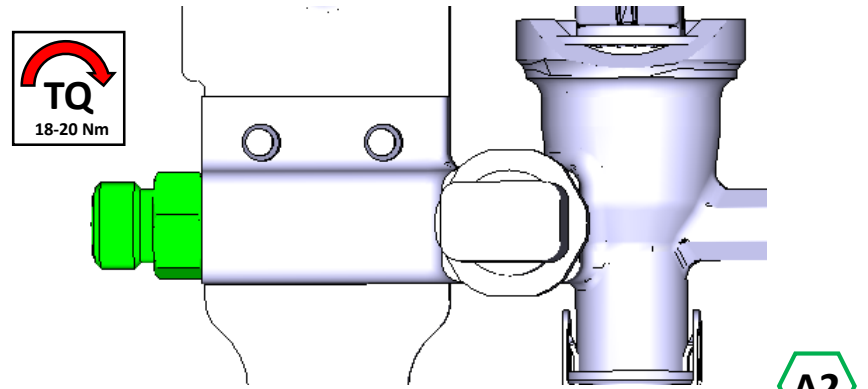


Ensure 2 X O-rings are present in Adapter assembly

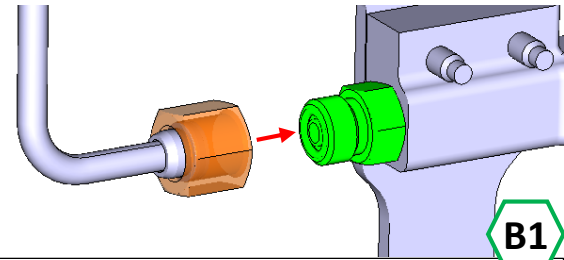




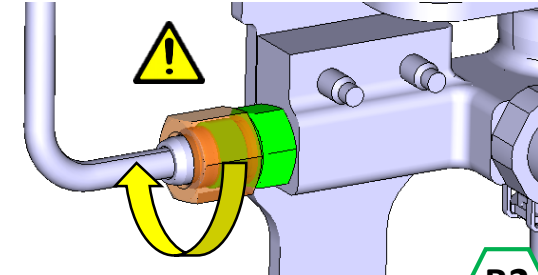
Rotate fitting into proper orientation, stopping after the O-ring has made contact with the sealing surface



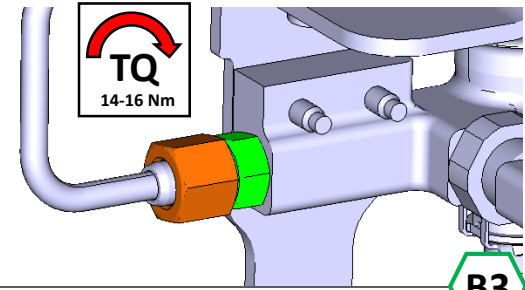
Torque adapter in place using appropriate torque



Place adapter flush against sealing surface

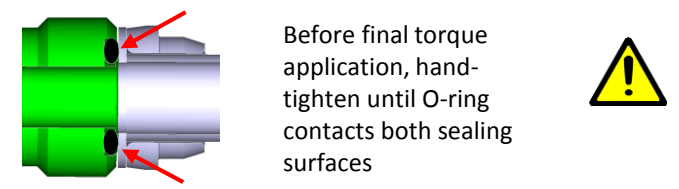


Hand-tighten until O-ring contacts both sealing surfaces.



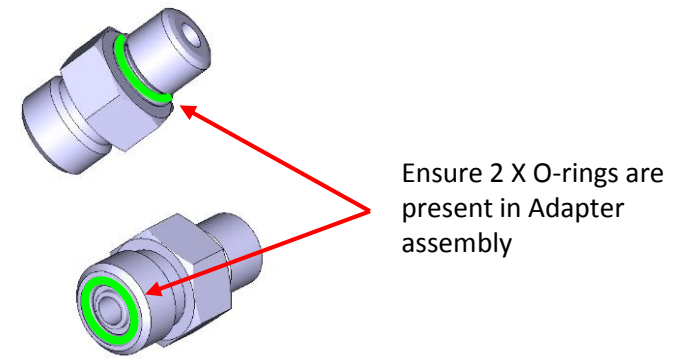
Counterhold fitting and Torque locknut using appropriate torque

Item #	QTY	Part Number	Description
2	1	11-126-0717	-04 O-Ring Boss Seal to ORFS Adapter, Straight

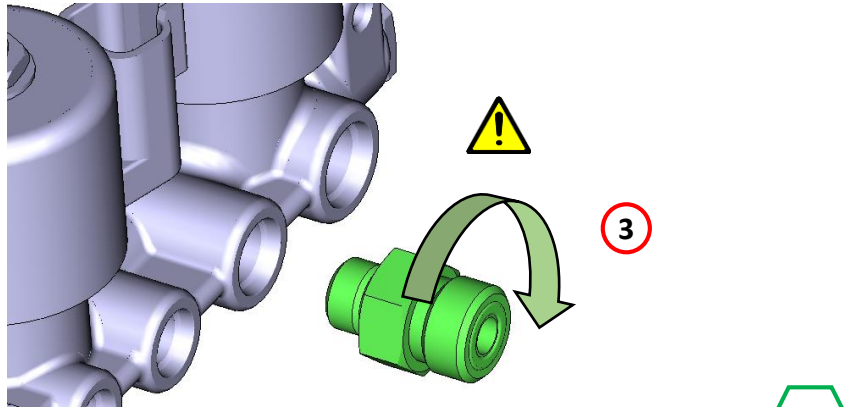


Before final torque application, hand-tighten until O-ring contacts both sealing surfaces

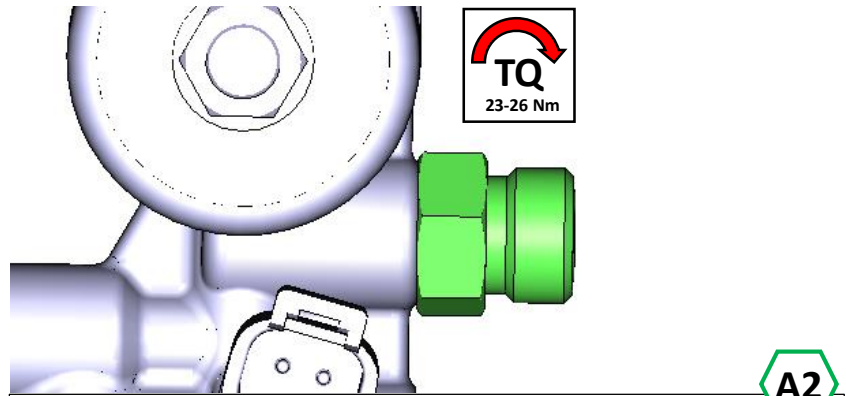
Apply final torque as specified, ensuring counterhold is used.



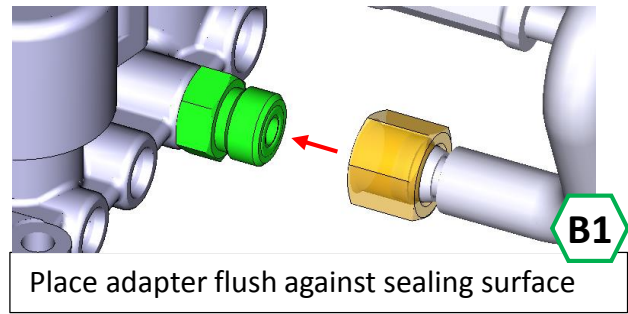
Ensure 2 X O-rings are present in Adapter assembly



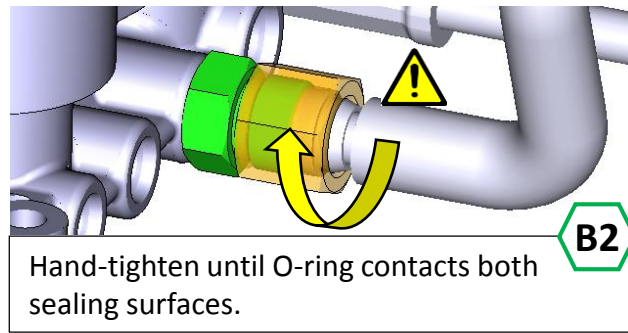
**A1**  
Rotate fitting into proper orientation, stopping after the O-ring has made contact with the sealing surface



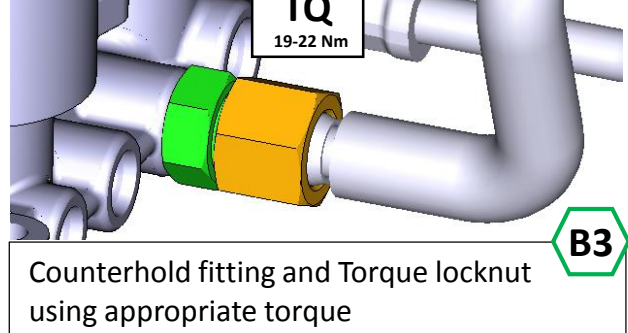
**A2**  
Torque adapter in place using appropriate torque



**B1**  
Place adapter flush against sealing surface

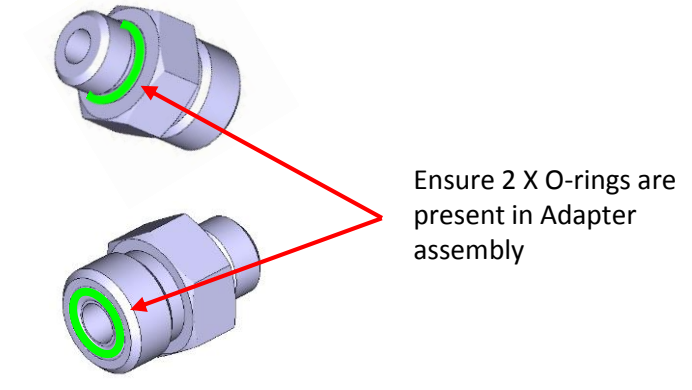
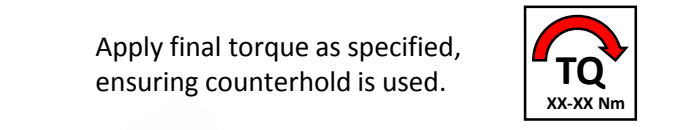
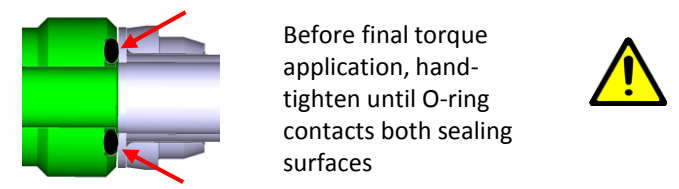


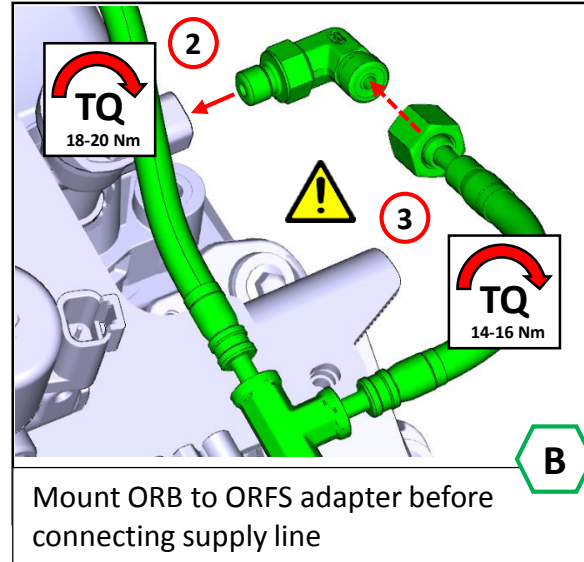
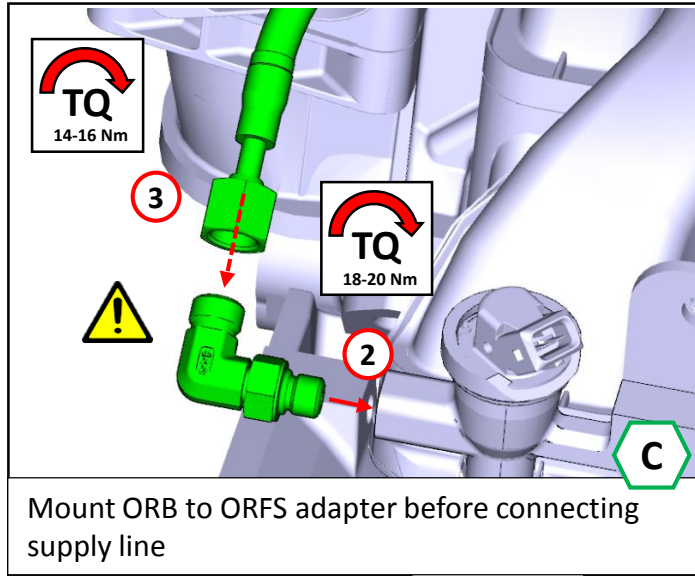
**B2**  
Hand-tighten until O-ring contacts both sealing surfaces.



**B3**  
Counterhold fitting and Torque locknut using appropriate torque

Item #	QTY	Part Number	Description
3	1	11-126-0718	-05 O-Ring Boss Seal to ORFS Adapter, Straight





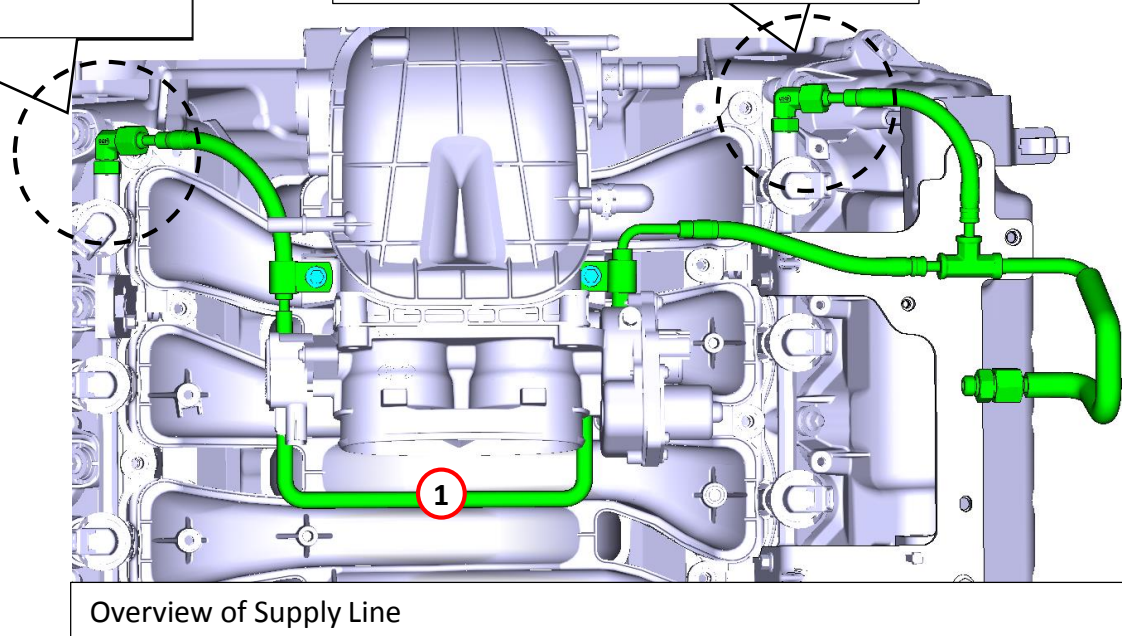
Item #	QTY	Part Number	Description	Torque
1	1	P17EB-03D110-A	Fuel Rail Supply	N/A
2	2	11-126-0716	-04 O-Ring Boss Seal	18-20 Nm
3			-04 O-ring Face Seal	14-16 Nm

**!**


For engine fuel line part number P17EB-03D110-**A2**

**!** Tighten O-Ring Boss Seal (2) Before O-Ring face seal (3)

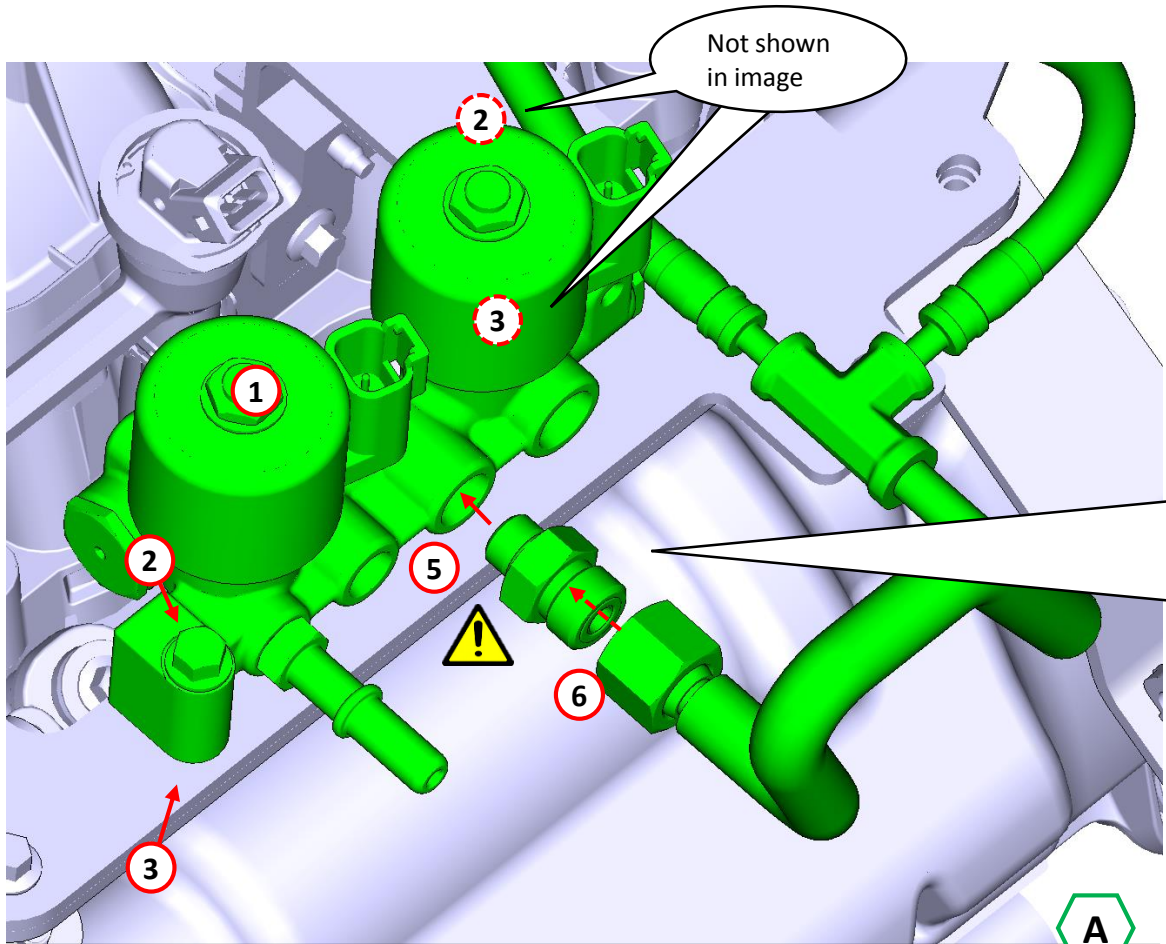
**TQ** Counterhold and torque all fittings according to special instructions for A2 fuel lines




 **Do not install Engine Supply line to FRPCM port "C" until Forward Return Fuel Line is installed as shown later in this installation manual**

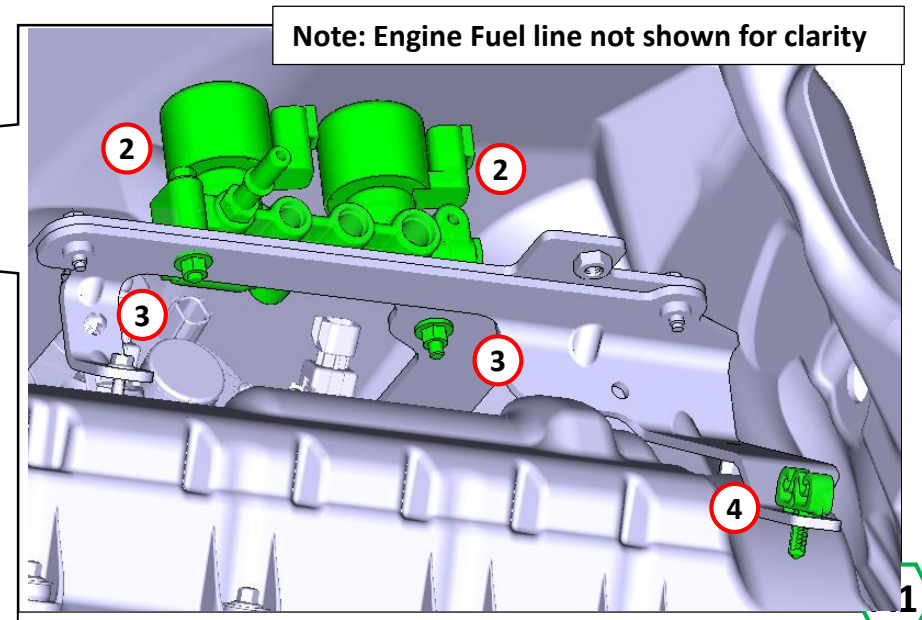
 For engine fuel line part number **P17EB-03D120-A2**

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-10E200-A	FRPCM (Fuel Rail Pressure Control Module)	NA
2	2	11-031-0648	M6 X 1.0 X 45 Hex Flange (FRPCM to bracket)	8-12 Nm
3	2	11-278-0274	FRPCM to Bracket Nuts (M6 Flange Nut)	8-12 Nm
4	2	15-004175	FRPCM Bracket Snail Clip (EFC)	N/A
5	1	11-126-0718	-05 O-Ring Boss Seal	23-26 Nm
6			-05 O-Ring Face Seal	19-21.5 Nm

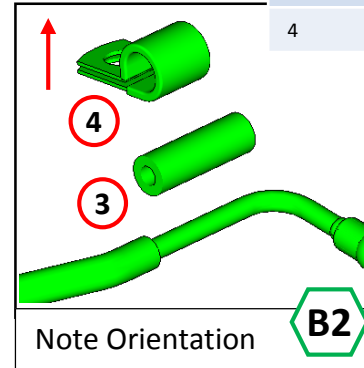
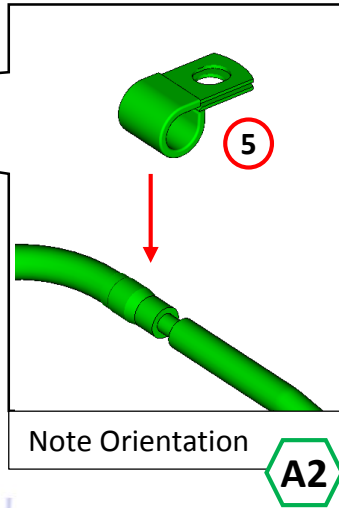
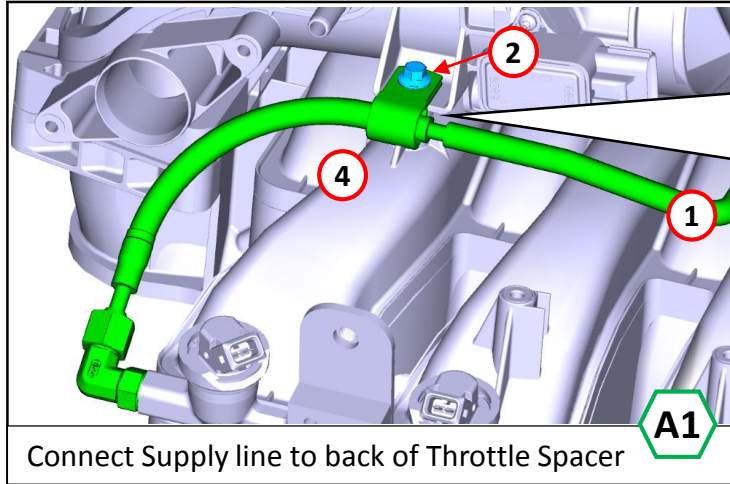


Ensure orientation of FRPCM is correct 

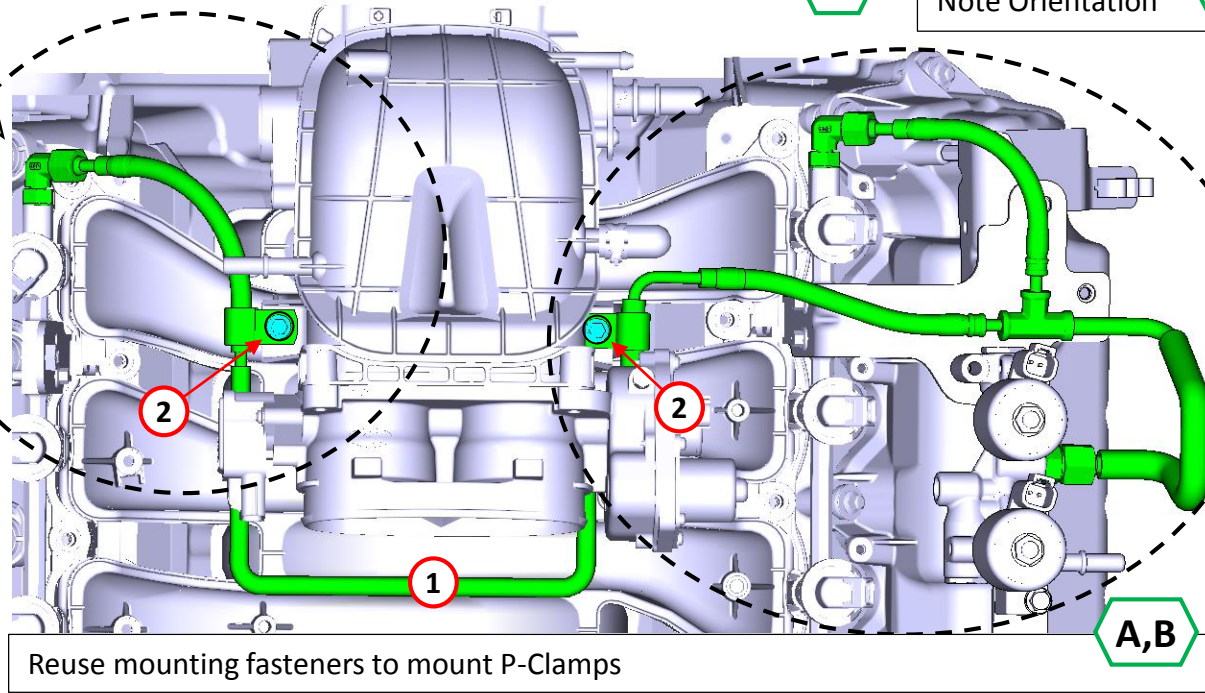
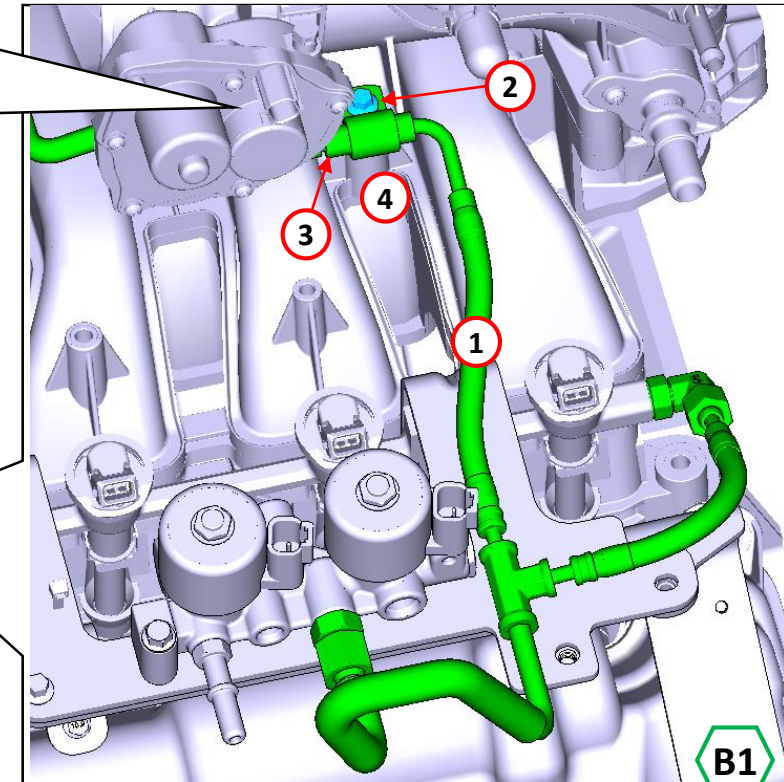
**Optional: Install Engine fuel line to FRPCM *after* installing Forward Return Fuel line (Page 67)**



You will need to counter-hold the nuts (3) on the bottom of the FRPCM to tighten the bolts (2)



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03D110-A	Fuel Rail Supply	N/A
2	2	W503275-S/3	Bolt, M6 X 20 (Reuse Bolt)	8-12 Nm
3	1	P07L3-9C328-B	Sleeve - 1/4" ID, 1/2" OD	N/A
4	1	11-054-0160	1/2" P-Clamp	N/A

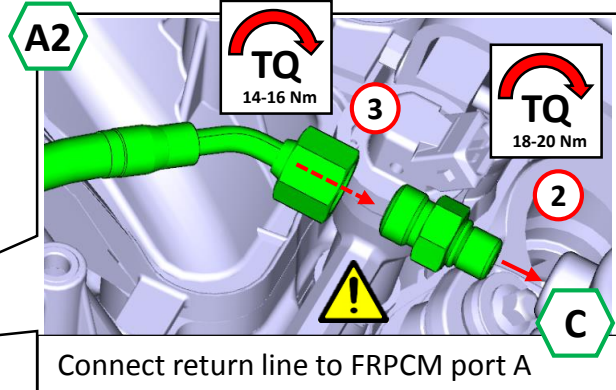
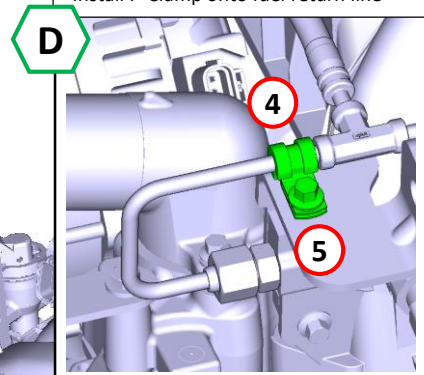
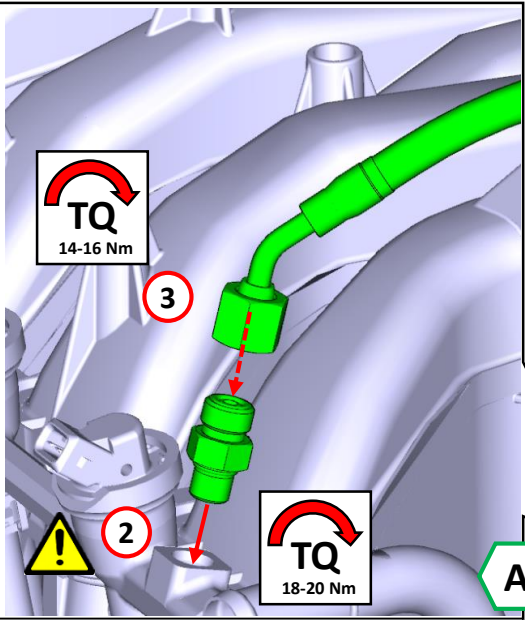


**!**  
For engine fuel line part number P17EB-03D110-  
**A2**

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-03D120-A	Fuel Line, Fuel Rail Return	NA
2	1	11-126-0717	-04 O-Ring Boss Seal	18-20 Nm
3			-04 O-Ring Face Seal	14-16 Nm
4	1	11-054-0173	1/4" P-Clamp	NA
5	1	N605891-S437	M6 X 1.0 X 18.5	8-12 Nm

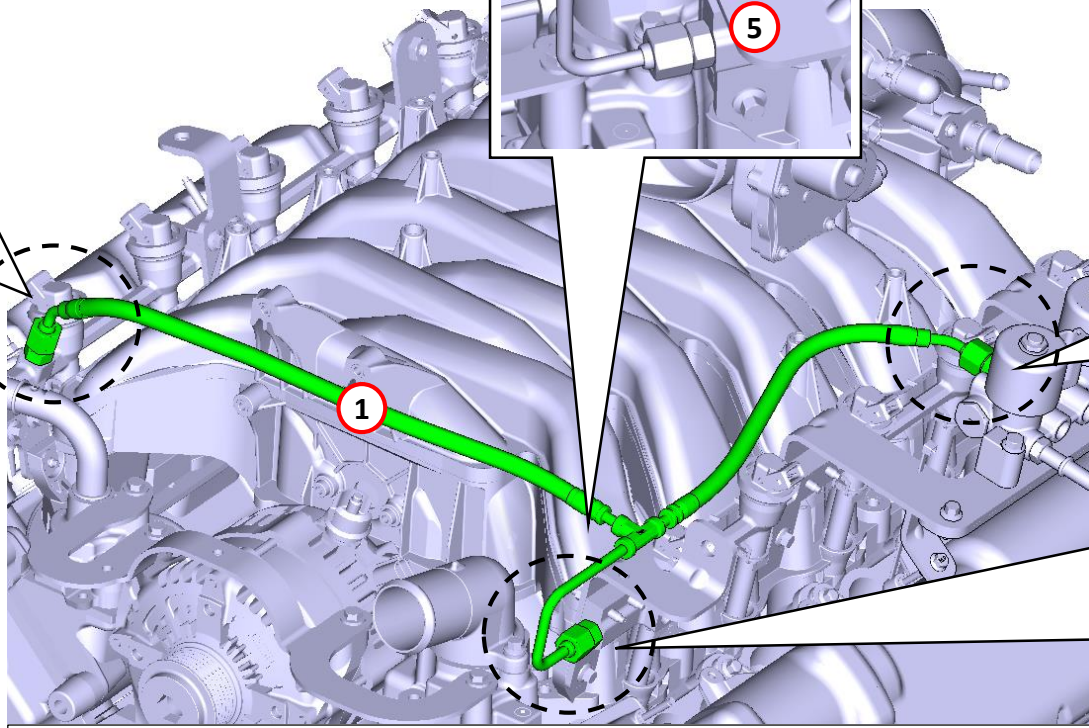
Tighten O-Ring Boss Seal (2)  
Before O-Ring face seal (3)

Install P-Clamp onto fuel return line



Connect return line to fuel rail

Connect return line to FRPCM port A

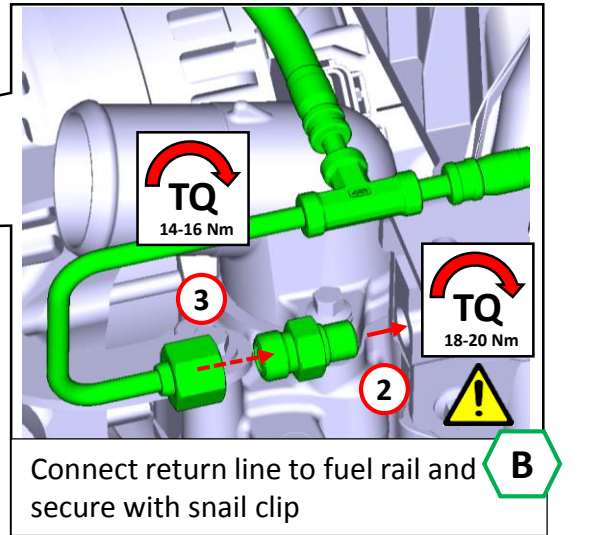


Install Fuel Return Line as Shown

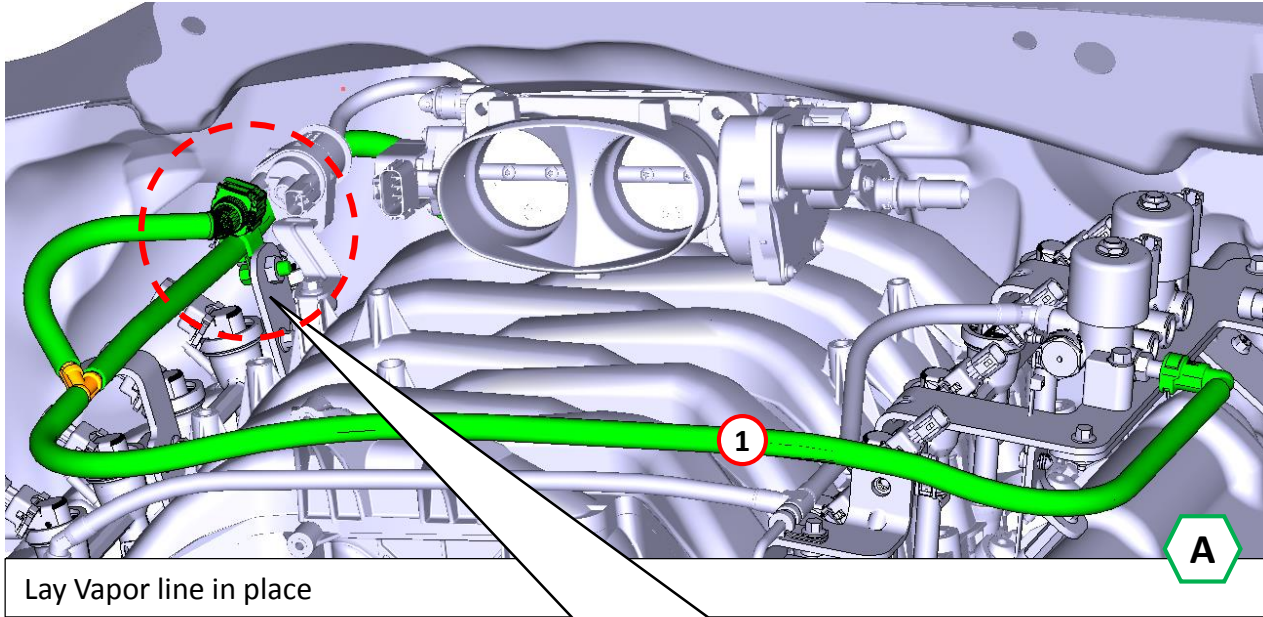
Tighten O-Ring Boss Seal (2)  
Before O-Ring face seal (3)

Counterhold and torque all fittings according to special instructions for A2 fuel lines

For engine fuel line part number P17EB-03D120-**A2**




Connect return line to fuel rail and secure with snail clip


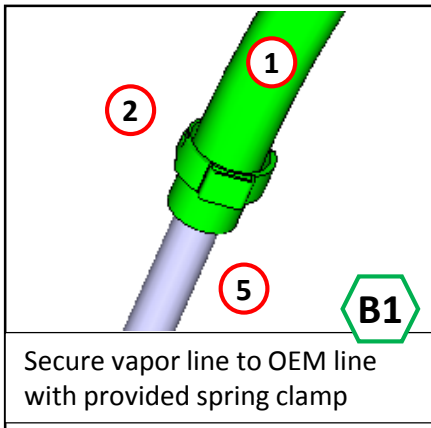


Lay Vapor line in place

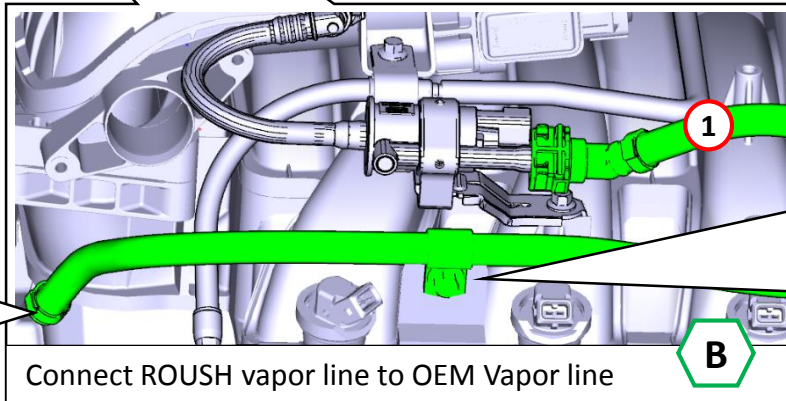
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-VAPOR-A	Vapor Management Hose	N/A
2	1	11-054-0147	Spring Clamp	N/A
3	1	11-054-0160	1/2" P-Clamp	N/A
4	1	W500023-S437	Bolt (M8 X 1.25 X 20) PC8.8 FLANGE HEAD	18-20 Nm
5	1	Existing (Reuse)	OEM Vapor Line (modified)	N/A



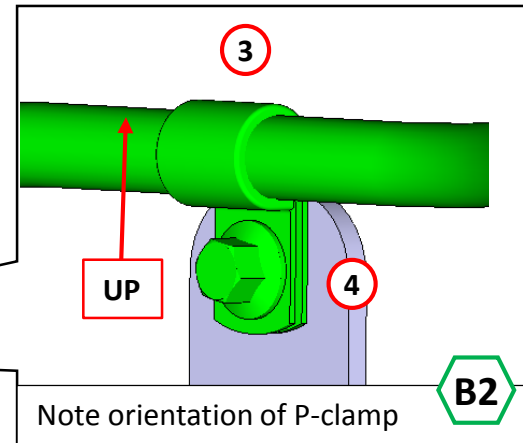
Use Stepless earclamp pliers to install Spring clamp (2)

Secure vapor line to OEM line with provided spring clamp

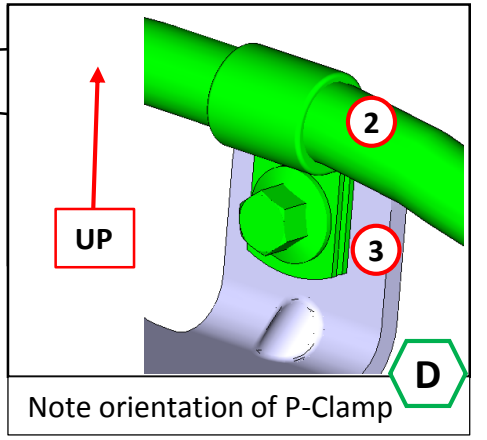
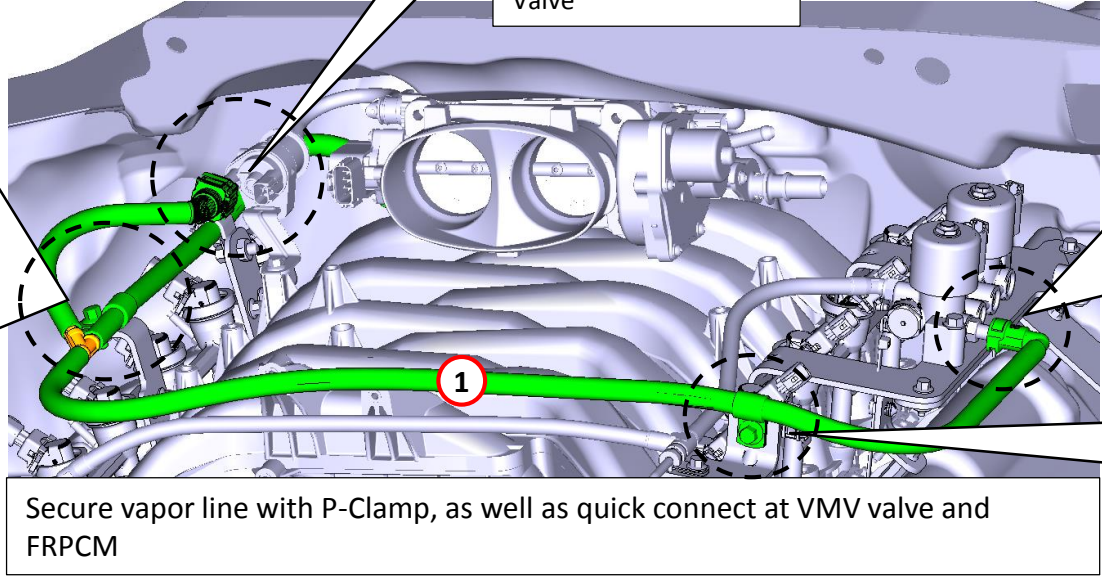
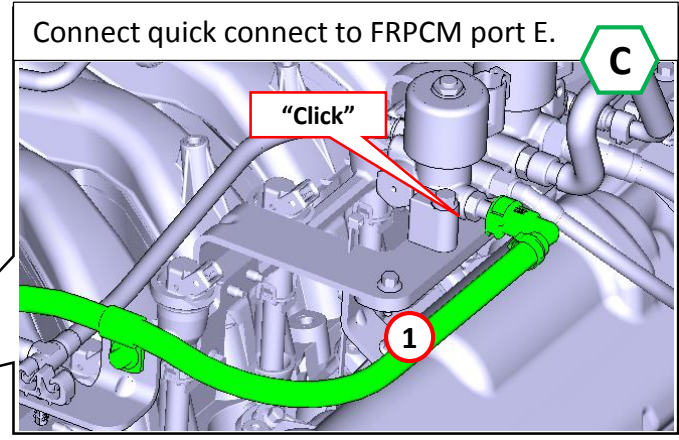
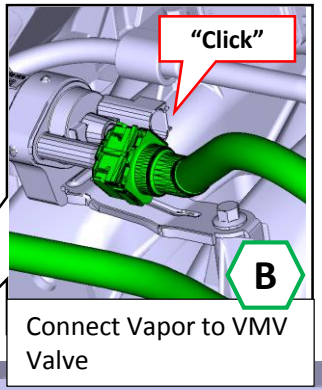
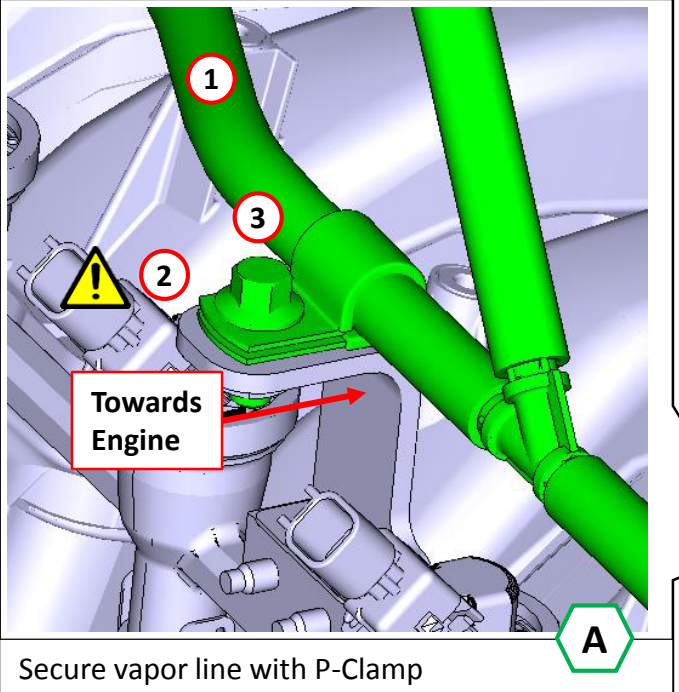


Connect ROUSH vapor line to OEM Vapor line



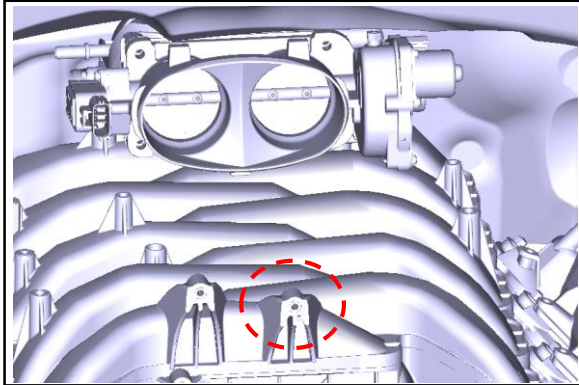
Note orientation of P-clamp

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-VAPOR-A	Vapor Management Hose	N/A
2	2	11-054-0160	1/2" P-Clamp	N/A
3	2	W500023-S437	Bolt (M8 X 1.25 X 20) PC8.8 FLANGE HEAD	18-20 Nm



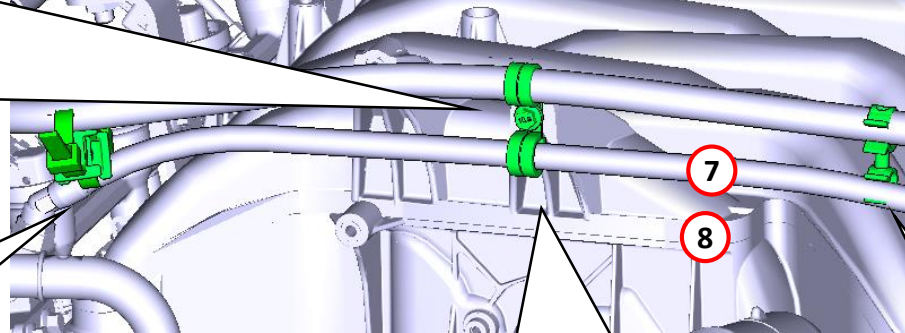
Note: Orientation



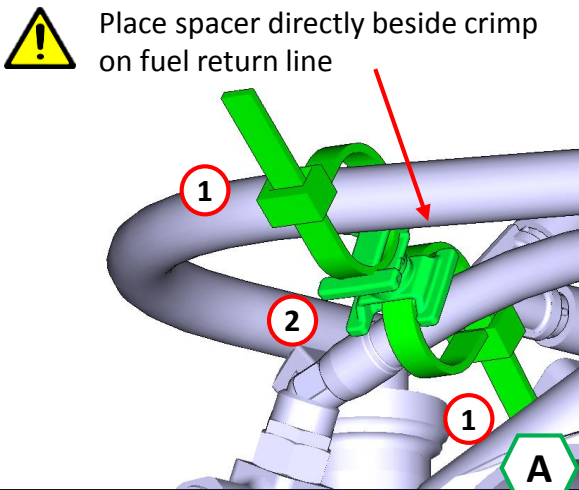


Use Driver's side mounting on manifold for P-Clamps

Secure Vapor and fuel return line as shown

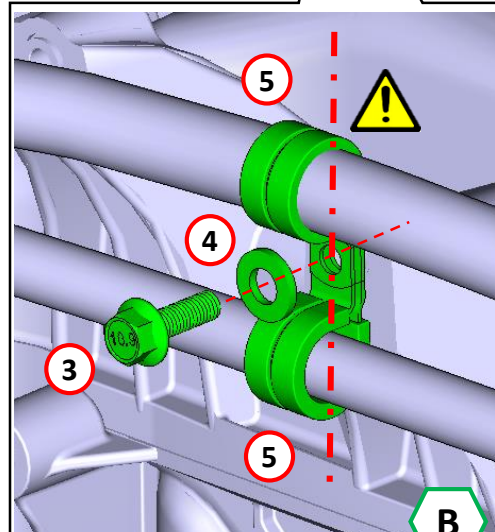


Item #	QTY	Part Number	Description	Torque (Nm)
1	2	20-403-0003	Zip Tie	N/A
2	1	151-06500	Dual Saddle Swivel Spacer	N/A
3	1	11-031-0647	Bolt, M5 X 0.8 X 16	4.5-5.6 Nm
4	1	MW6360000A40000	M6 Flat Washer DIN 125	NA
5	2	11-054-0172	1/2" P-Clamp	NA
6	1	W713776-S300	Double C-Clip	NA
7	1	P17EB-VAPOR-A	Vapor Management Hose	N/A
8	1	P17EB-03D120-A	Fuel Line, Fuel Rail Return	N/A



Place spacer directly beside crimp on fuel return line

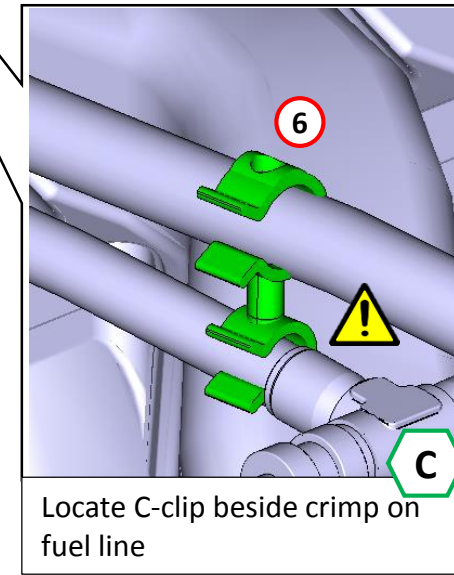
Mount double zip-tie and spacer as shown, between vapor and fuel return line



Note orientation of P-Clips



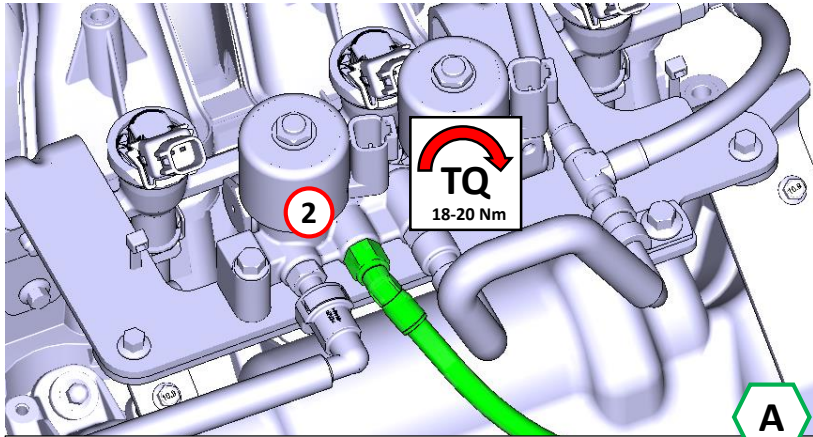
P-Clamps must both be aligned vertically



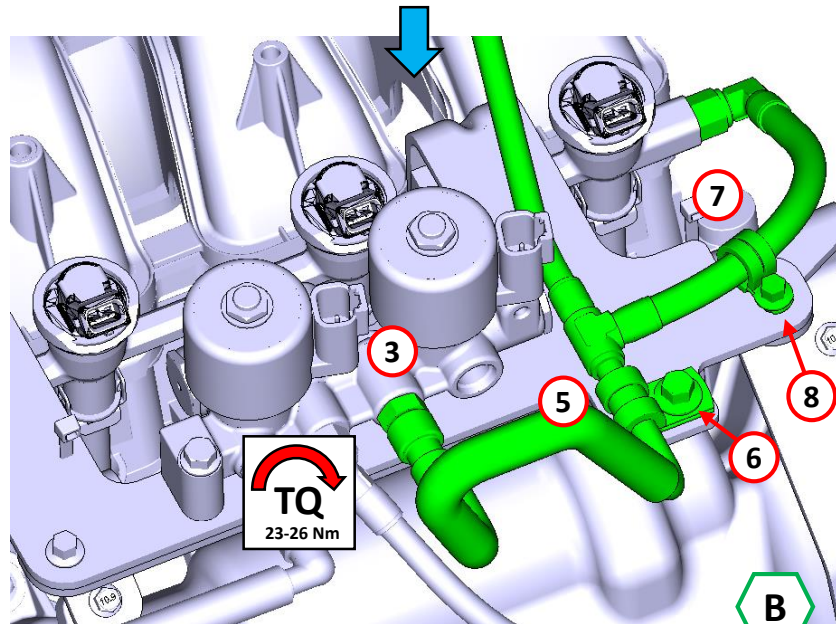
Locate C-clip beside crimp on fuel line



Place double C-Clip directly beside crimp on fuel return line

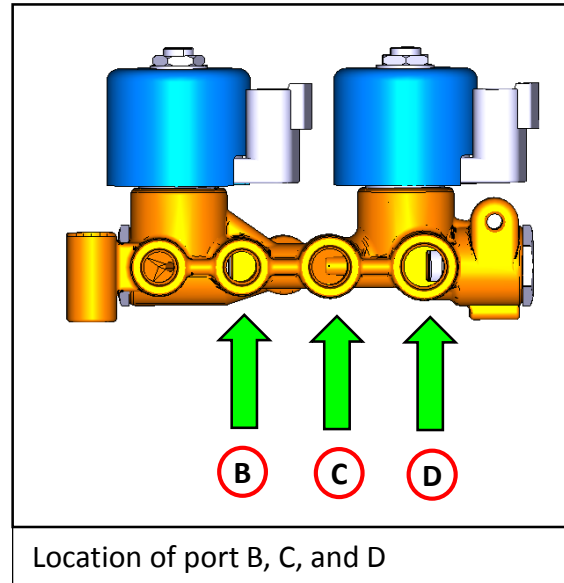


Tighten Forward Fuel Return line to FRPCM Port "B".



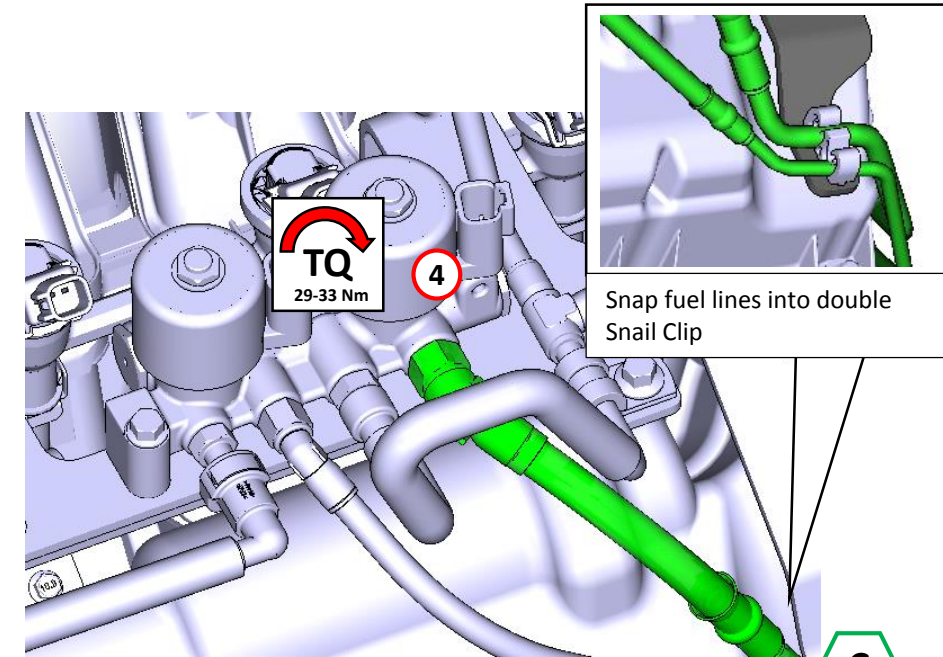
Tighten Engine Supply line to FRPCM Port "C".

For engine fuel line part number  
 P17EB-03D120-  
**A**



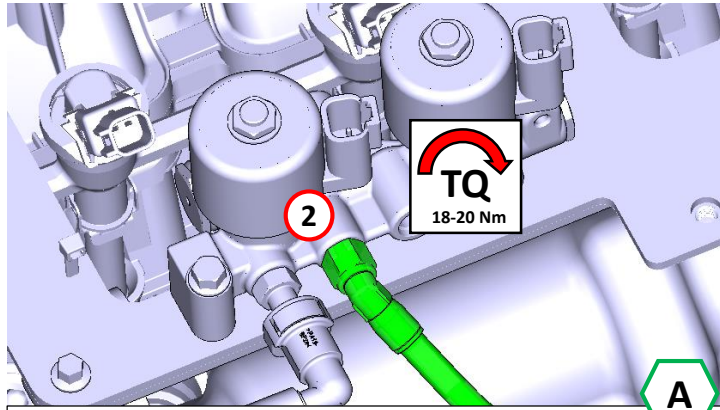
Location of port B, C, and D

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-10E200-A	FRPCM (Fuel Rail Pressure Control Module)	NA
2	1	P17EB-10R110-A	-04 Forward Fuel Return Line	18-20 Nm
3	1	P17EB-03D110-A	-05 O-Ring Boss Seal	23-26 Nm
4	1	P17EB-10S110-A	-06 Forward Fuel Supply Line	29- 33 Nm
5	1	11-054-0174	3/8" P-Clamp, M8 hole	N/A
6	1	W500023-S437	M8 X 1.25 X 20mm Hex Flange	18-20 Nm
7	1	11-056-0048	1/2" P-Clip, M6 hole	N/A
8	1	N605891-S437	M6 X 1 X 18.5	8-12 Nm

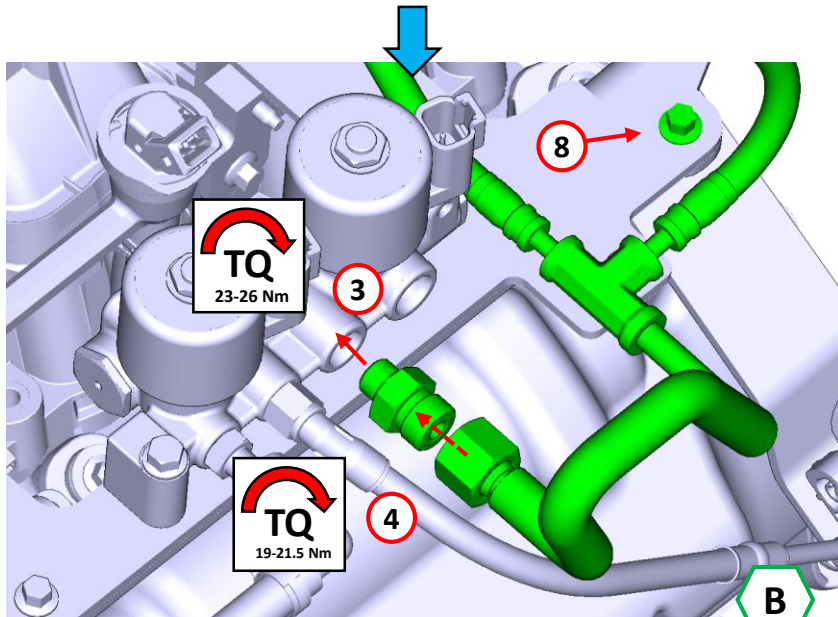


Tighten Forward Fuel Supply Line to FRPCM Port "D"

Snap fuel lines into double Snail Clip

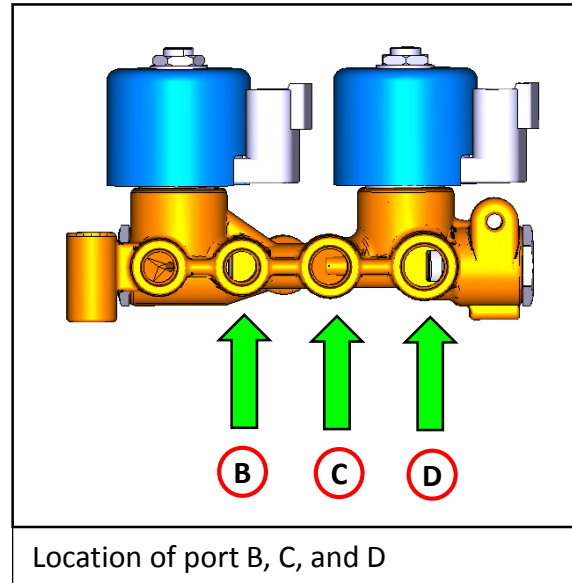


Tighten Forward Fuel Return line to FRPCM Port "B".  
*Note: Engine Supply line not shown*

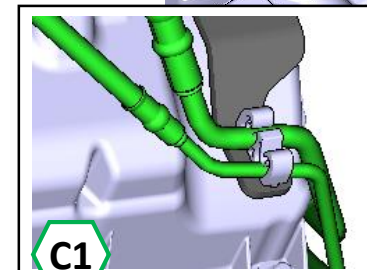
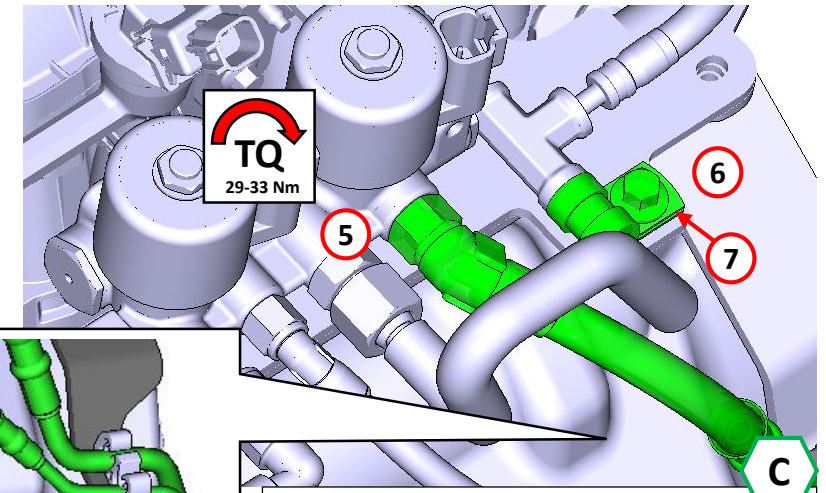


Tighten Engine Supply line to FRPCM Port "C".

For engine fuel line part number  
 P17EB-03D120-  
**A2**



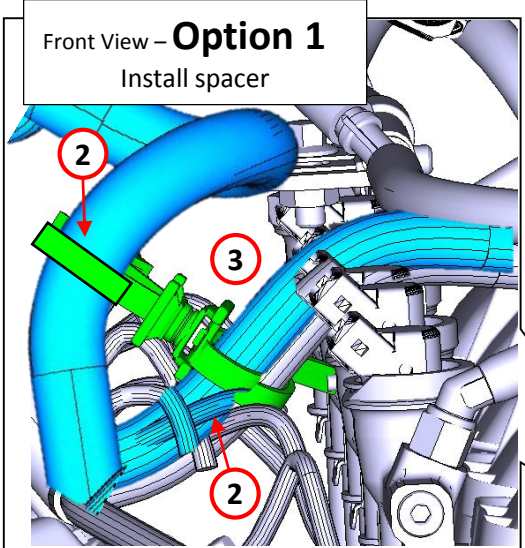
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P16MB-10E200-A	FRPCM (Fuel Rail Pressure Control Module)	NA
2	1	P17EB-10R110-A	-04 Forward Fuel Return Line	18-20 Nm
3	1	11-126-0718	-05 O-Ring Boss Seal	23-26 Nm
4			-05 O-Ring Face Seal	19-21.5 Nm
5	1	P17EB-10S110-A	-06 Forward Fuel Supply Line	29- 33 Nm
6	1	11-054-0174	3/8" P-Clamp, M8 hole	N/A
7	1	W500023-S437	M8 X 1.25 X 20mm Hex Flange	18-20 Nm
8	1	N605891-S437	M6 X 1 X 18.5	8-12 Nm



C1  
Snap fuel lines into double Snail Clip

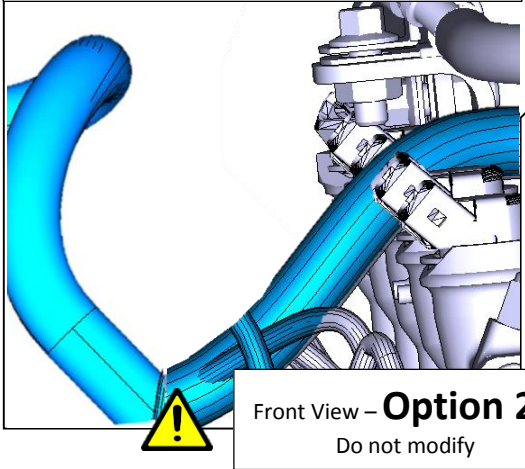
Tighten Forward Fuel Supply Line to FRPCM Port "D"

Item #	QTY	Part Number	Description	Torque (Nm)
1	10	P07L3-9C978-AB	Fuel Injector Jumper	N/A
2	2	20-403-0001	Zip Ties	N/A
3	1	151-06500	Dual Swivel Saddle Spacer	N/A

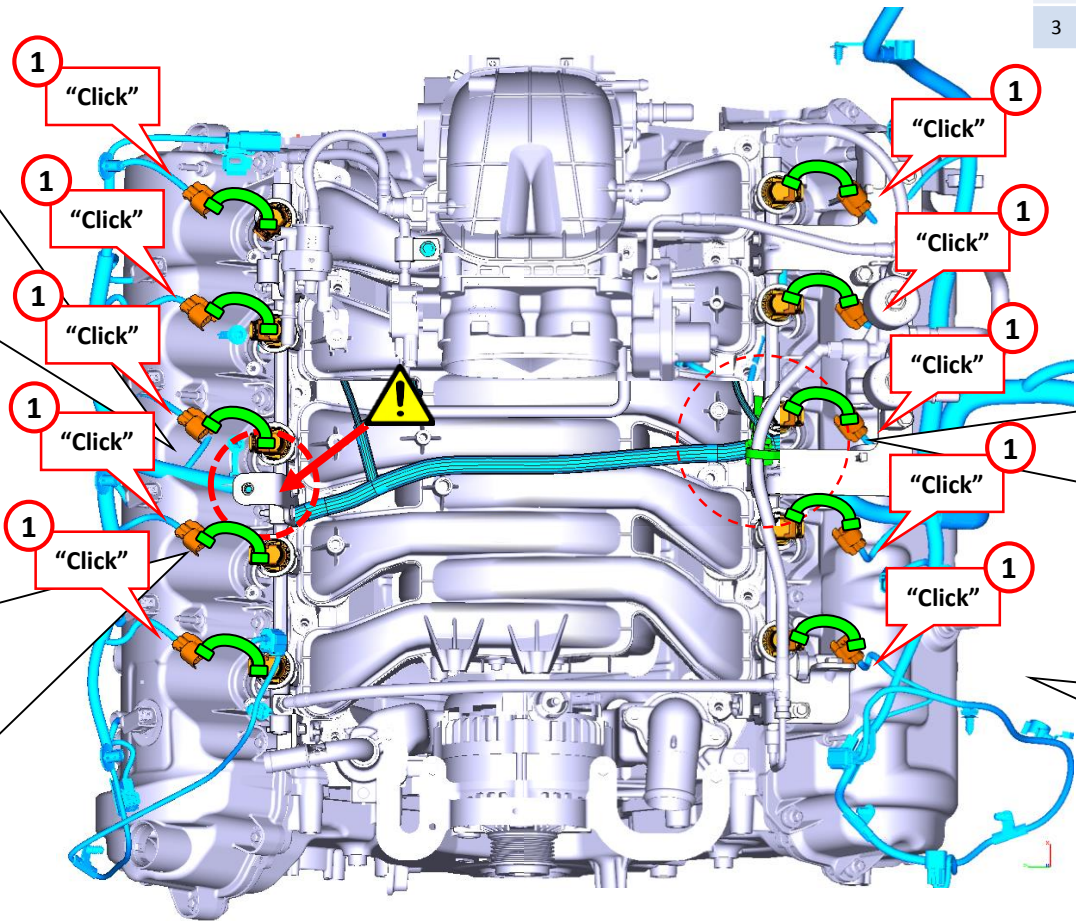


If OEM Harness is seen in **Option 1**,  
- Secure using a dual swivel saddle spacer.

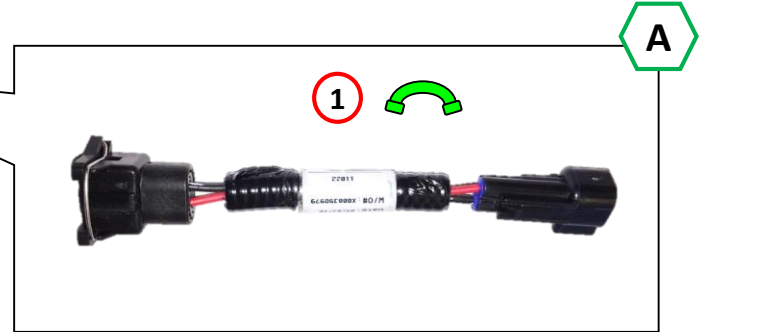
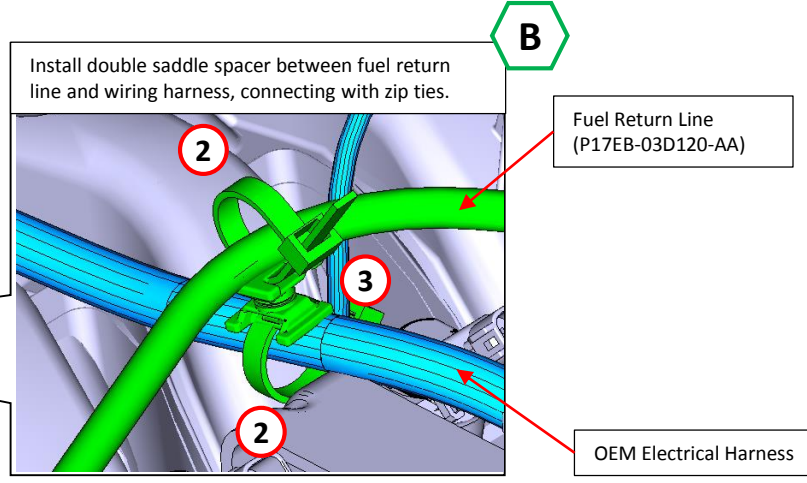
If OEM Harness is seen in **Option 2**,  
- Do not install the spacer



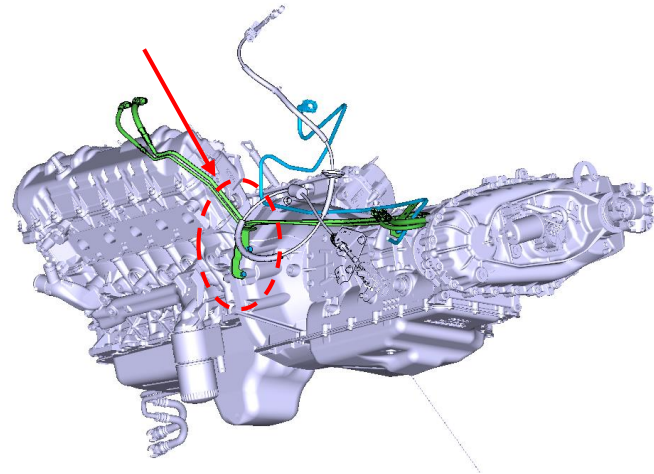
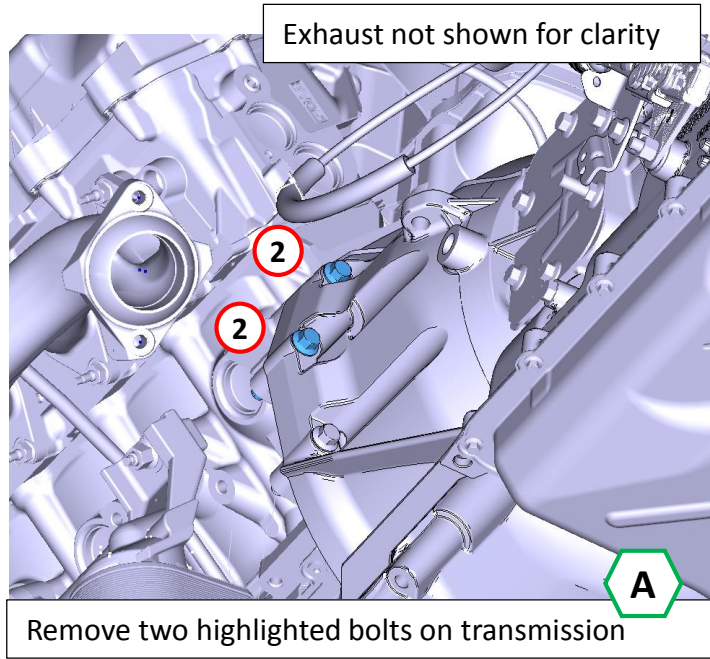
Review Option 1 or 2 to determine correct OEM wiring placement and avoid contact with circled bracket



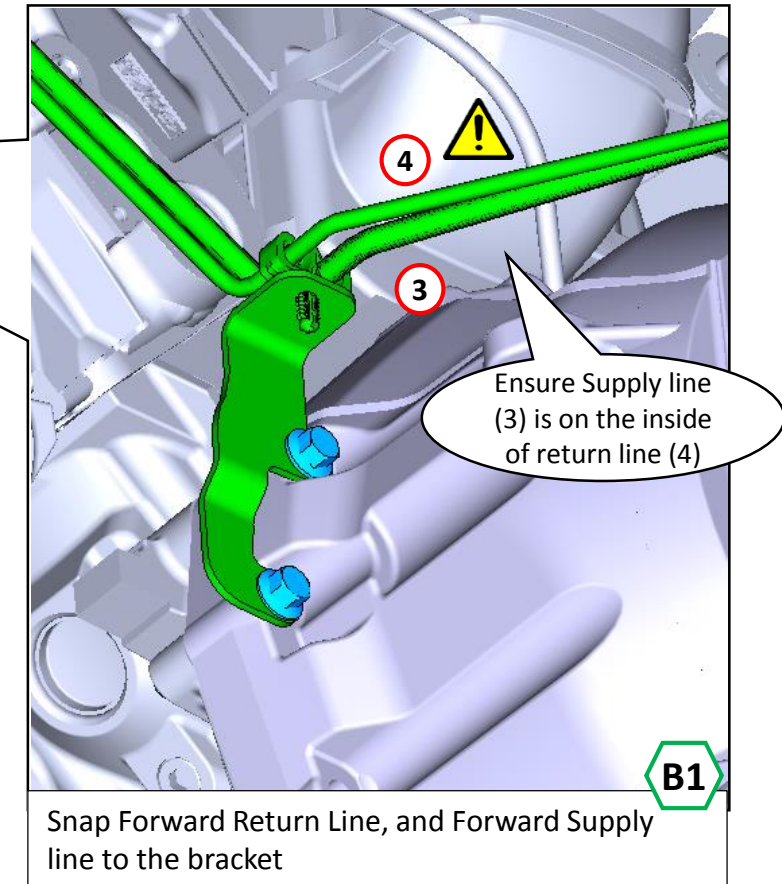
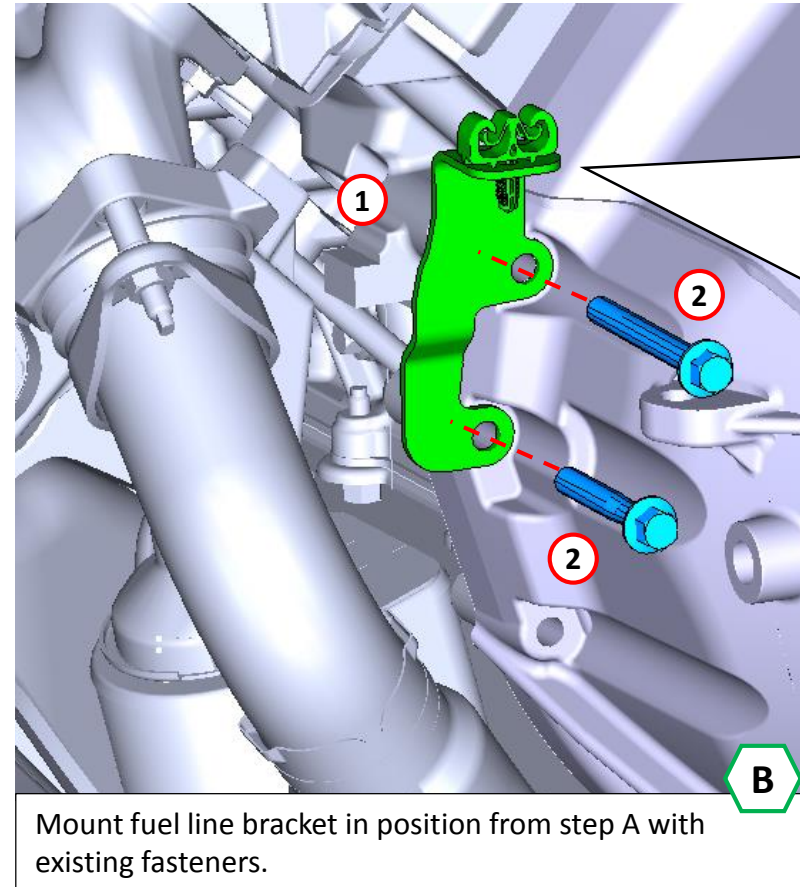
Connect all OEM fuel injector leads to their respective fuel injectors on the rail. Using a Fuel Injector Jumper.



Use part number P07L3-9C978-AB to connect the wiring harness to the fuel injectors

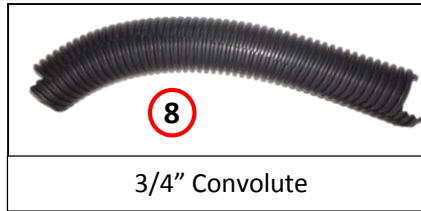


Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-10F100-A	Forward Fuel Line Bracket	N/A
2	3	Existing (Reuse)	M10 X 1.0 X 65	40-55Nm
3	1	P17EB-10S110-A	Forward Fuel Supply Line	N/A
4	1	P17EB-10R110-A	Forward Fuel Return Line	N/A
5	1	Existing (Modify)	Vapor Line	N/A



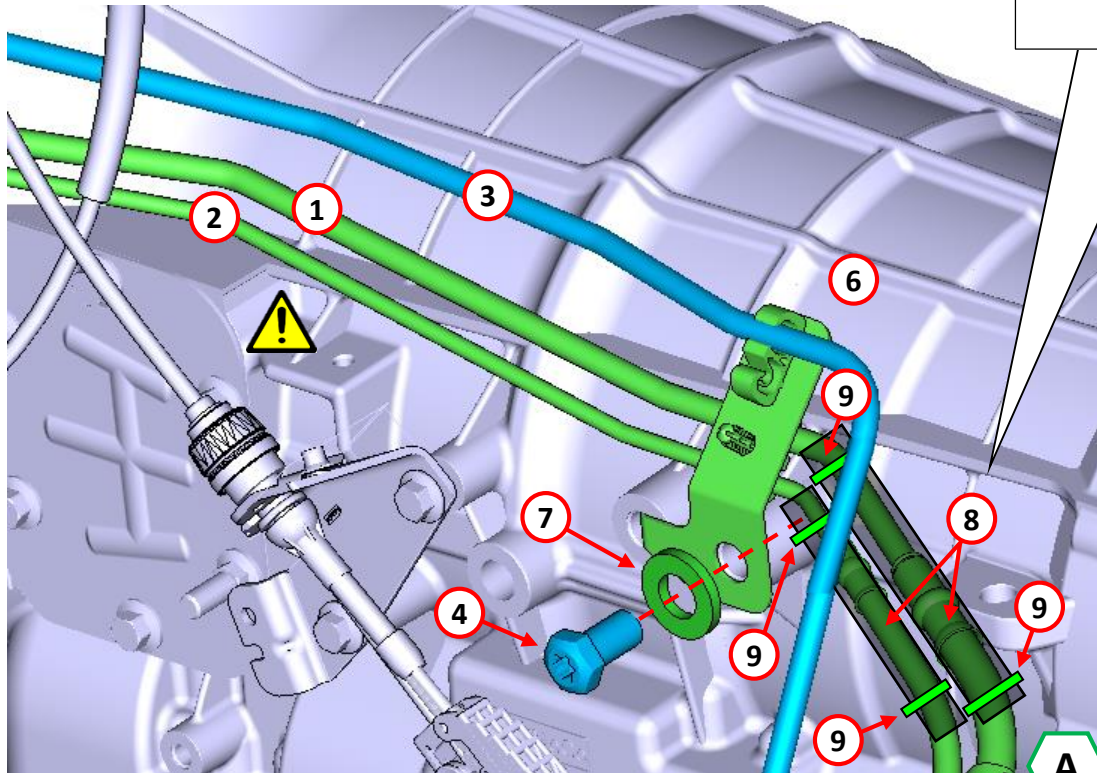


Ensure SUPPLY line (larger diameter) is on the outside while the return line (smaller diameter) is on the inside

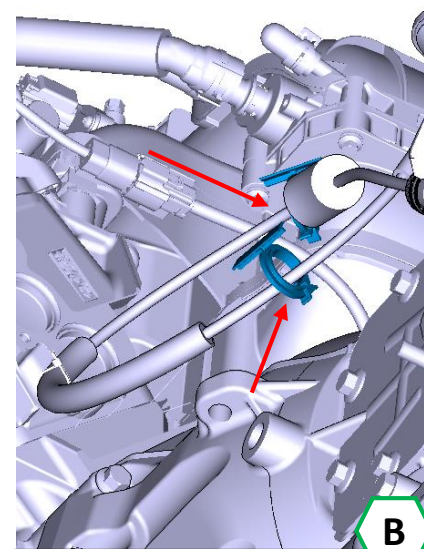


3/4" Convolute

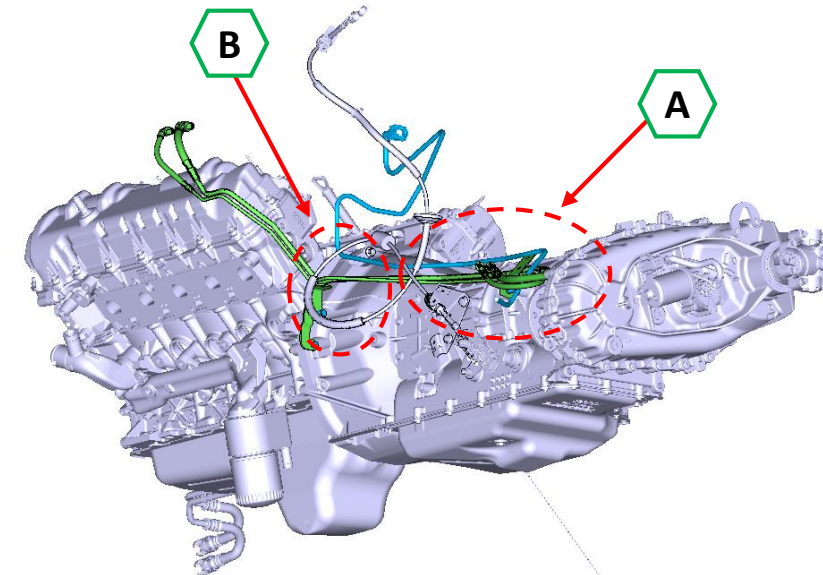
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-10S110-A	Forward Fuel Supply Line	N/A
2	1	P17EB-10R110-A	Forward Fuel Return Line	N/A
3	1	Existing (Reuse)	OEM Vapor Line	N/A
4	1	Existing (Reuse)	Torx (9/16-12 UNCX1.0)	62-67 Nm
5	1	TBD	9/16" Flat Washer	N/A
6	1	P17EB-10F100-B	Forward Fuel Line Bracket, Mid	N/A
7	1	11-452-0176	Washer, 9/16" X 1-11/64", Extra Thick	N/A
8	2	PLS-34-100-B-170	3/4" Convolute, 170mm long	N/A
9	4	20-403-0003	Zip Tie	N/A



Reusing the previously modified bracket, secure Fuel lines as seen, into the double snail clip, and securing with provided clips.



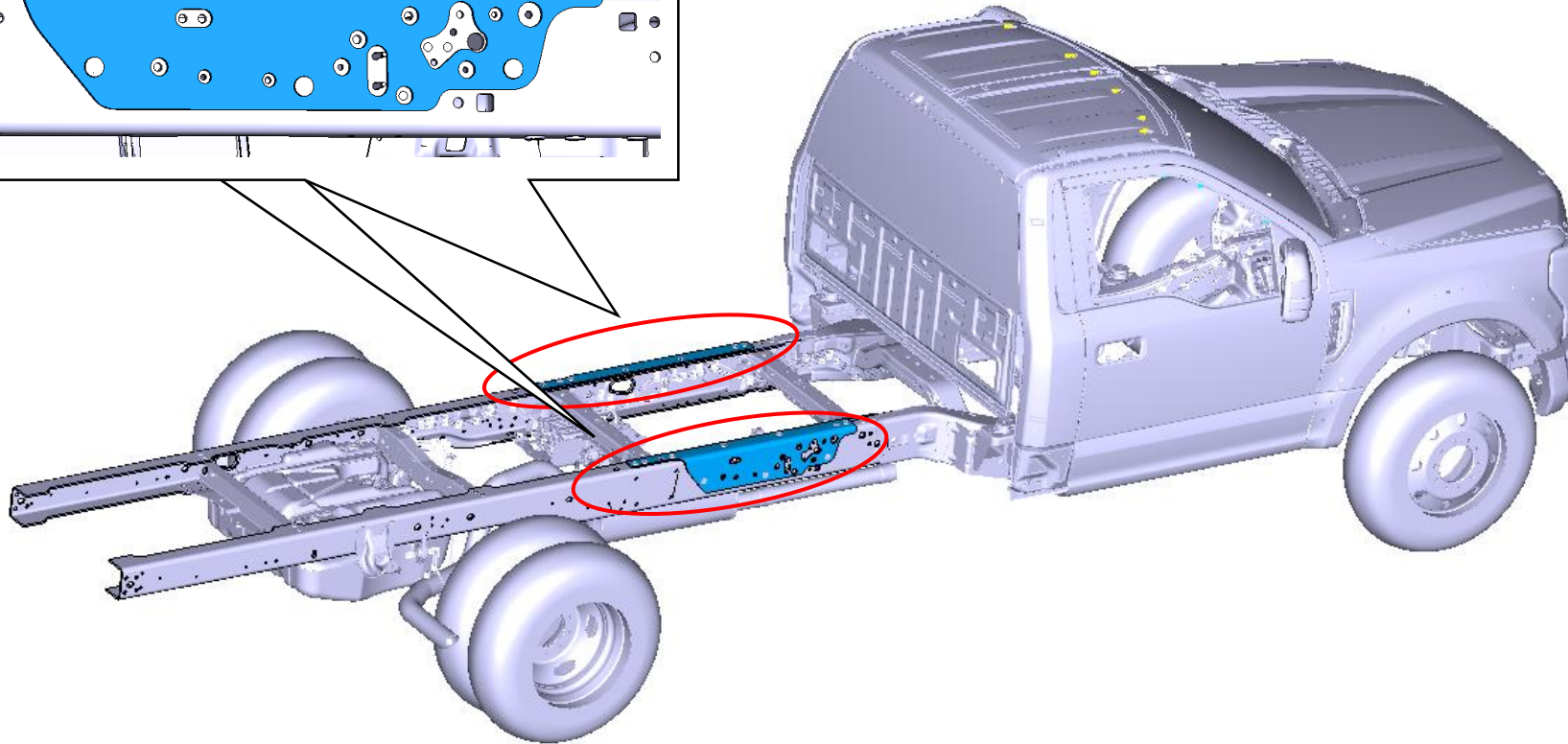
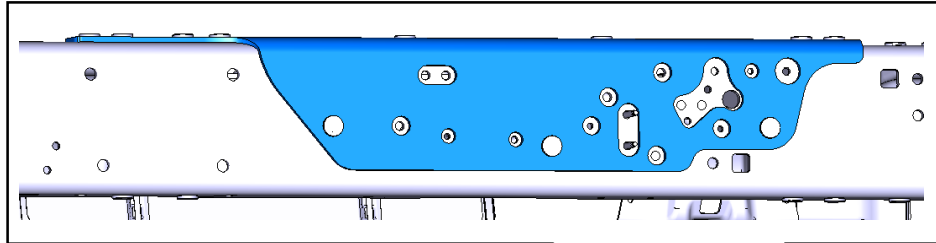
Ensure shift cable is properly snapped into OEM Clips.  
*Note: Floor not shown for clarity*





## Reinforced Frame Identification

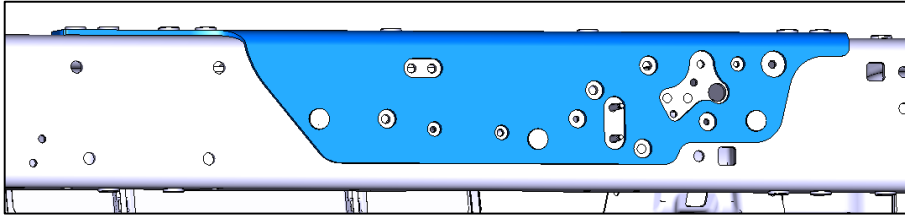
A Reinforced frame can be identified with the additional reinforcement on the chassis in these locations



The propane tank mounts on the passenger side frame rail near the cab

**REF**

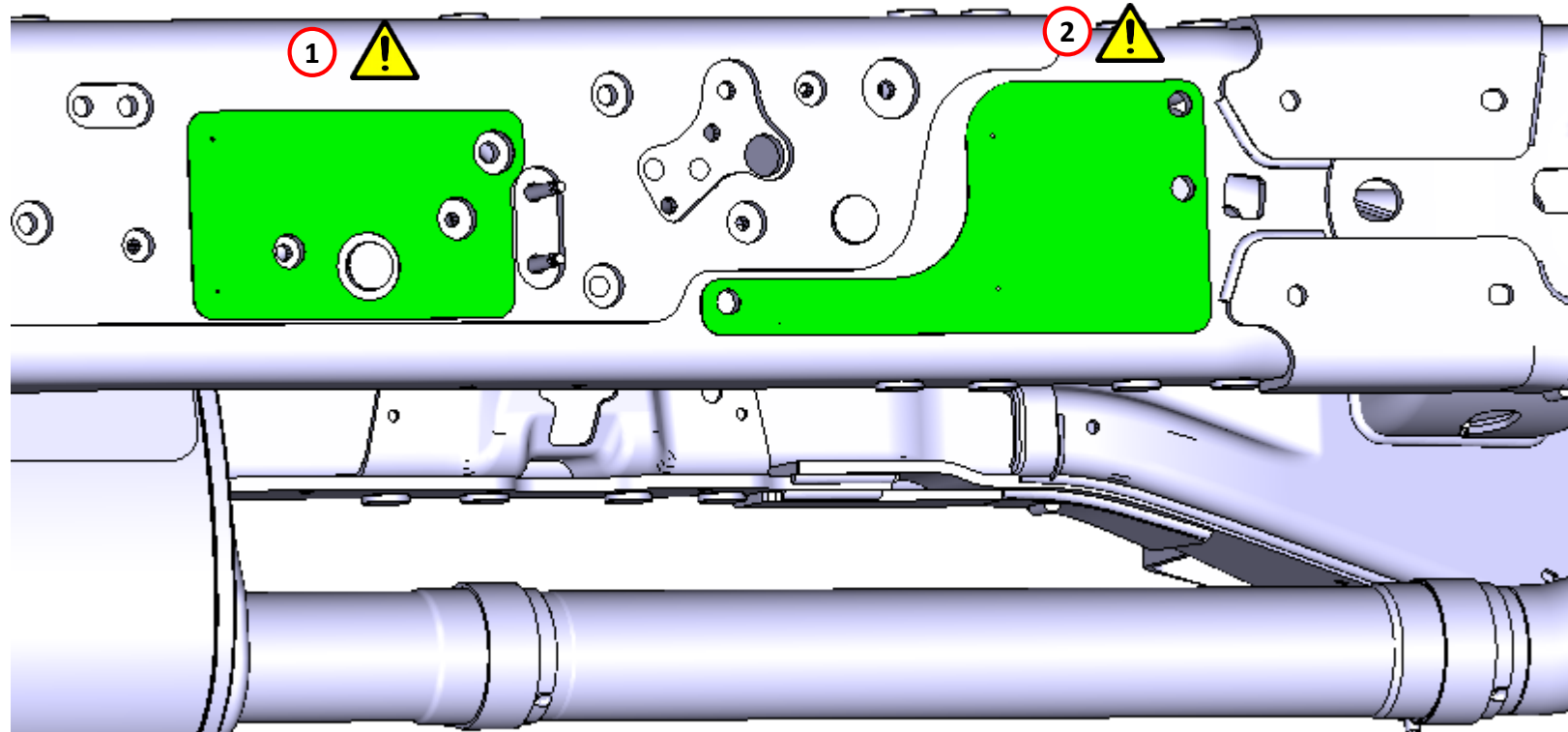
NOTE: This page only applies to **REINFORCED** frame configurations. 



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-01F250-B	Rear tank mounting holes template	N/A
2	1	P17EB-01F250-A	Front tank mounting holes template	N/A



Use spray-on undercoating to cover any exposed metal caused by drilling

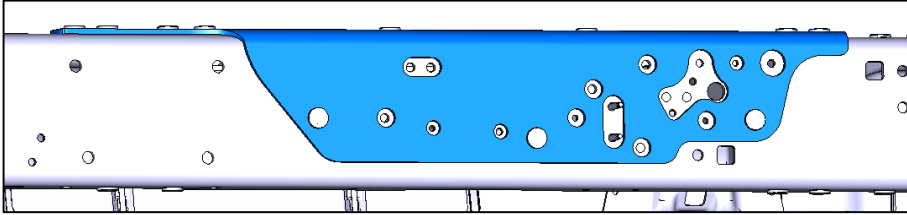


Align the templates on the outside of the RH frame rail as shown using the reference holes. **Follow the instructions on the template to drill the new tank mounting holes.**

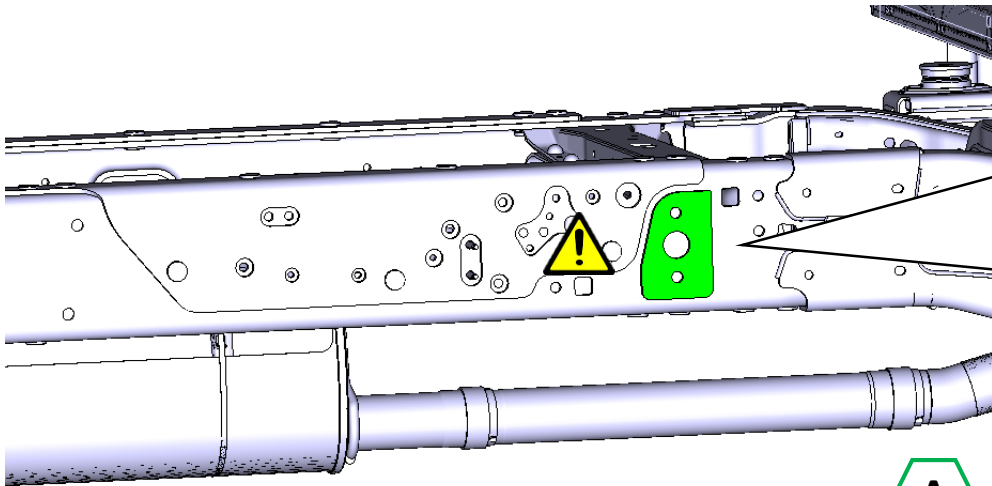


**REF**

NOTE: This page only applies to **REINFORCED** frame configurations. 

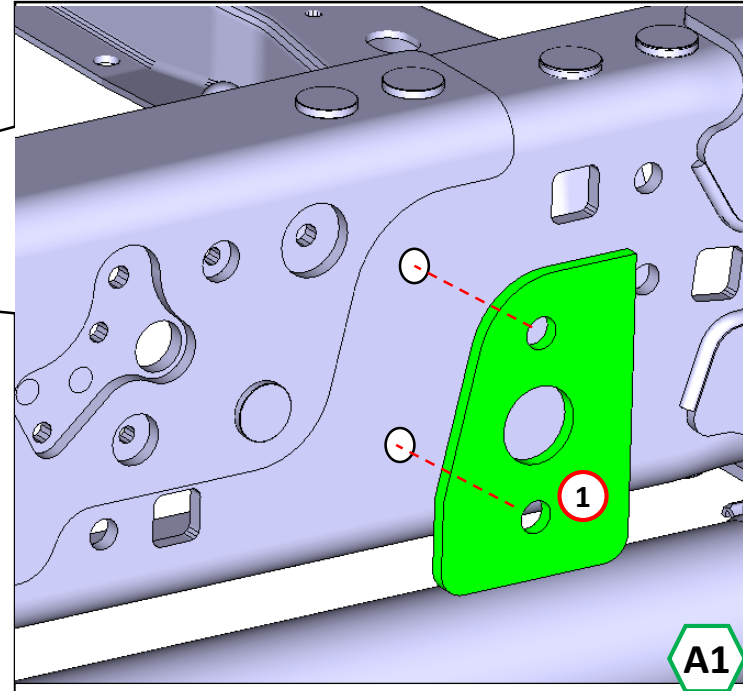


Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-02G004-A	Tank mounting spacer plate	N/A



Install the spacer plate (REINFORCED frame ONLY)

**A**



A spacer plate is installed on the front tank mounting holes located along the outside of the frame.

**A1**

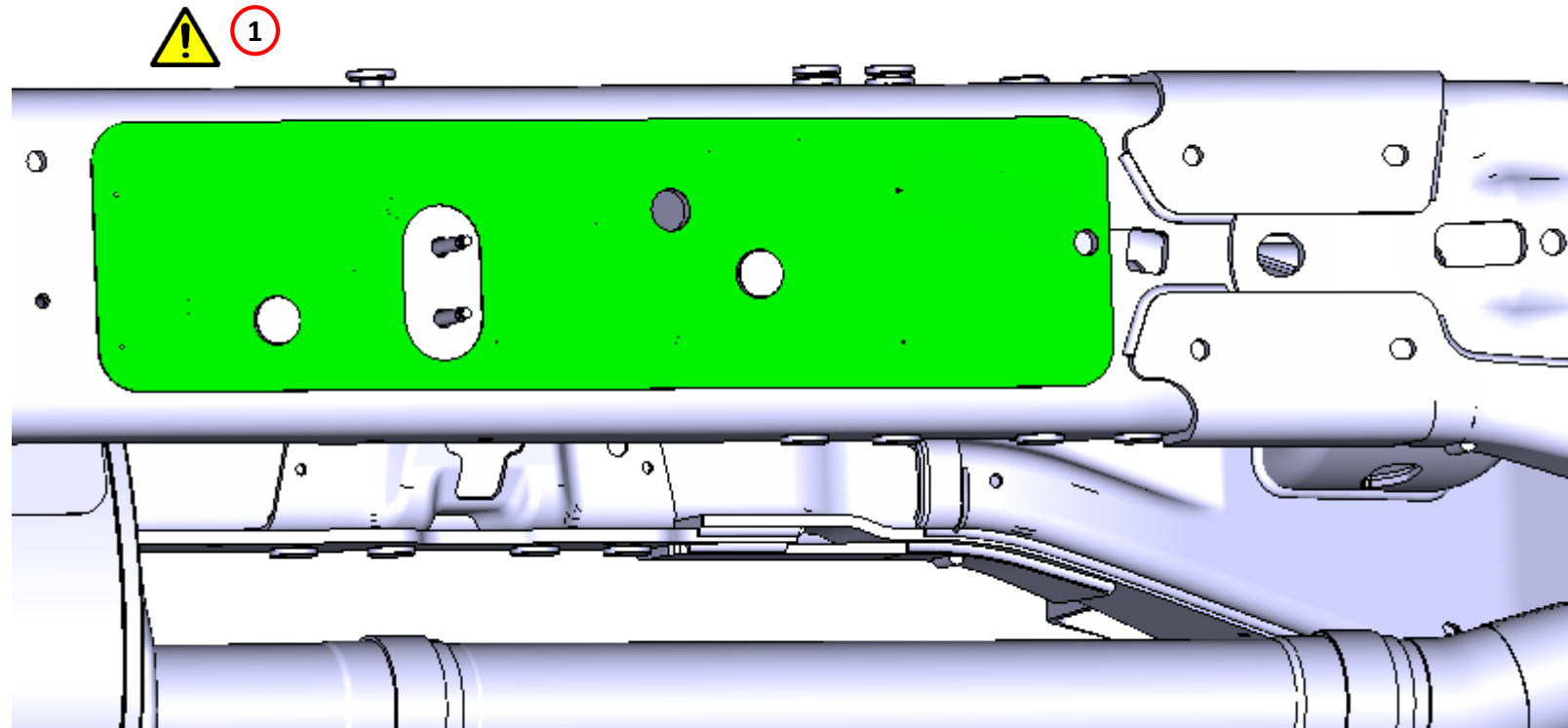
NOTE: This page only applies to **NON-REINFORCED** frame configurations.



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-01F250-C	Tank mounting holes template	N/A



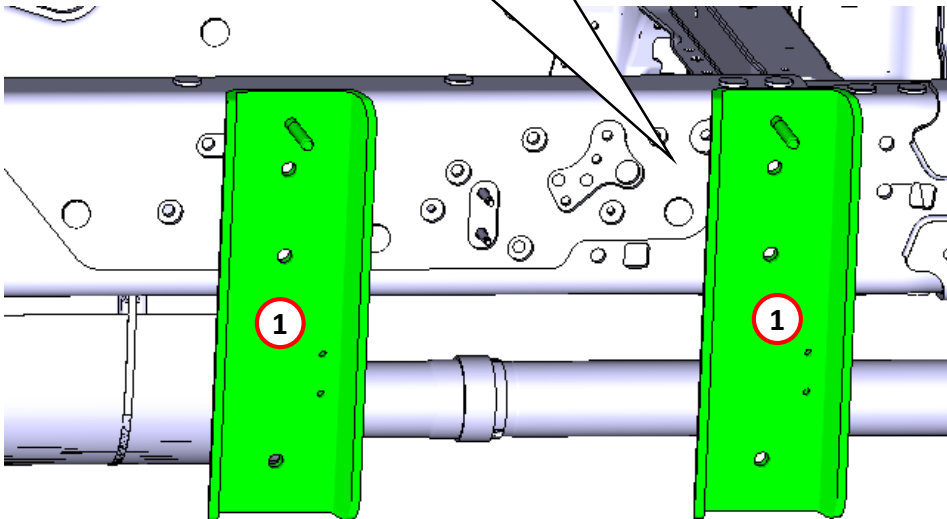
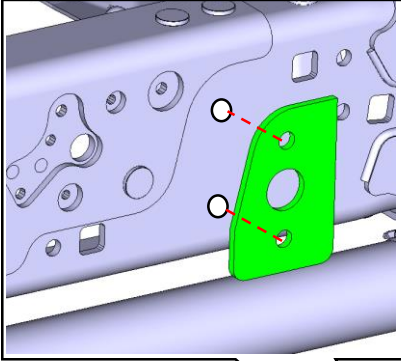
Use spray-on undercoating to cover any exposed metal caused by drilling



Align the template on the outside of the RH frame rail as shown using the reference holes. **Follow the instructions on the template to drill the new tank mounting holes.**

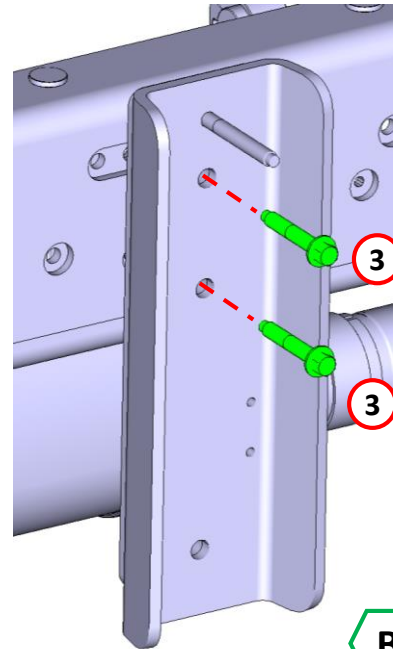
**REF**

If a **reinforced frame rail** is identified, use a spacer plate.



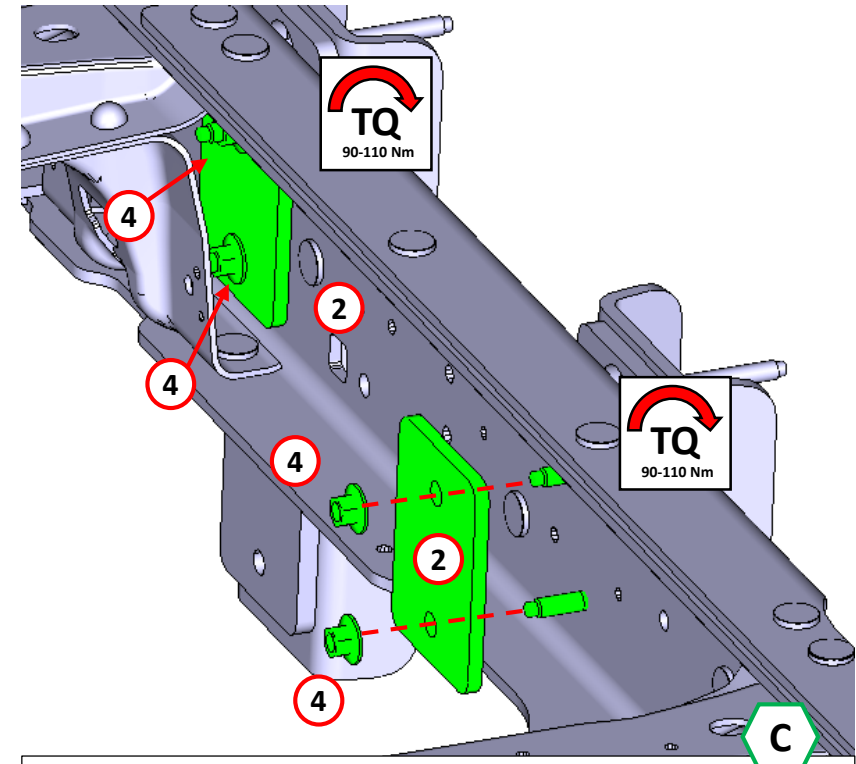
**A**

Place the tank mounting C-channel brackets where the tank mounting holes were drilled



**B**

Install the M12 bolts from the inside of the C-Channel as shown



**C**

The doubler plates and M12 nuts are installed on the inside of the frame rail

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-02G100-A	Tank mounting brackets	N/A
2	2	P17EB-02G001-A	Frame doubler plate	N/A
3	4	W500745-S439	M12 x 1.75 x 70mm Hex flange bolt	90-110 Nm
4	4	11-278-0310	M12 x 1.75 Nut	N/A

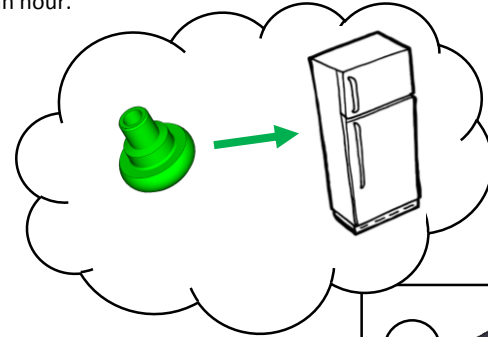


DO NOT use any lubricant to aid installation

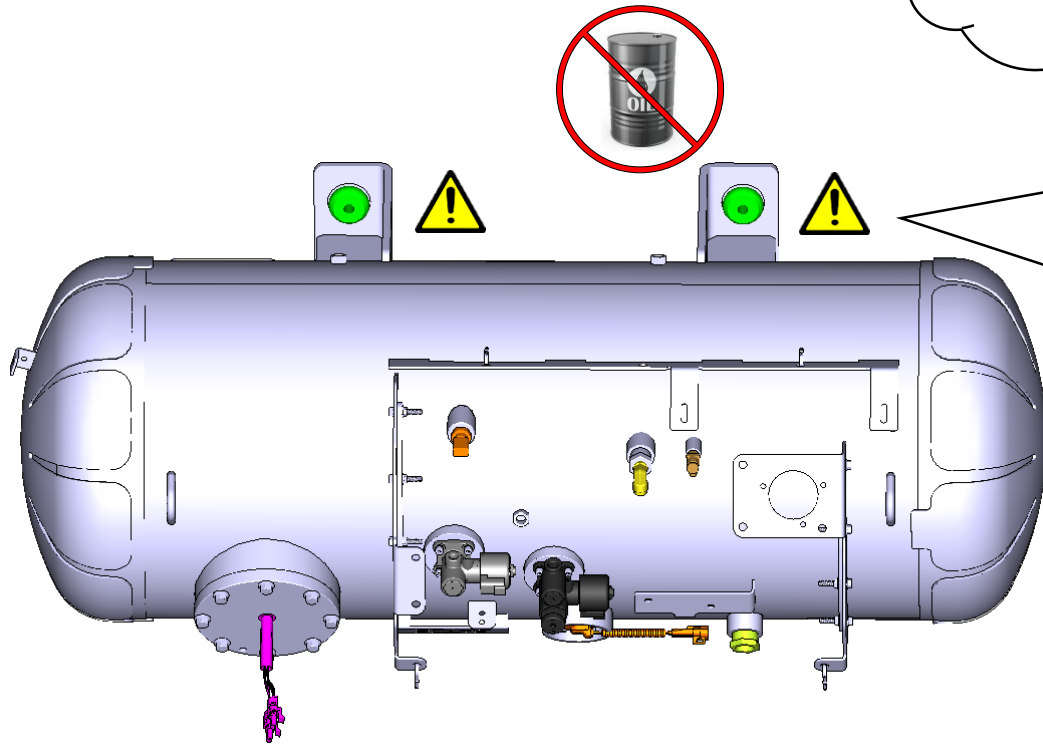


Note: Orientation of isolators is different, top to bottom

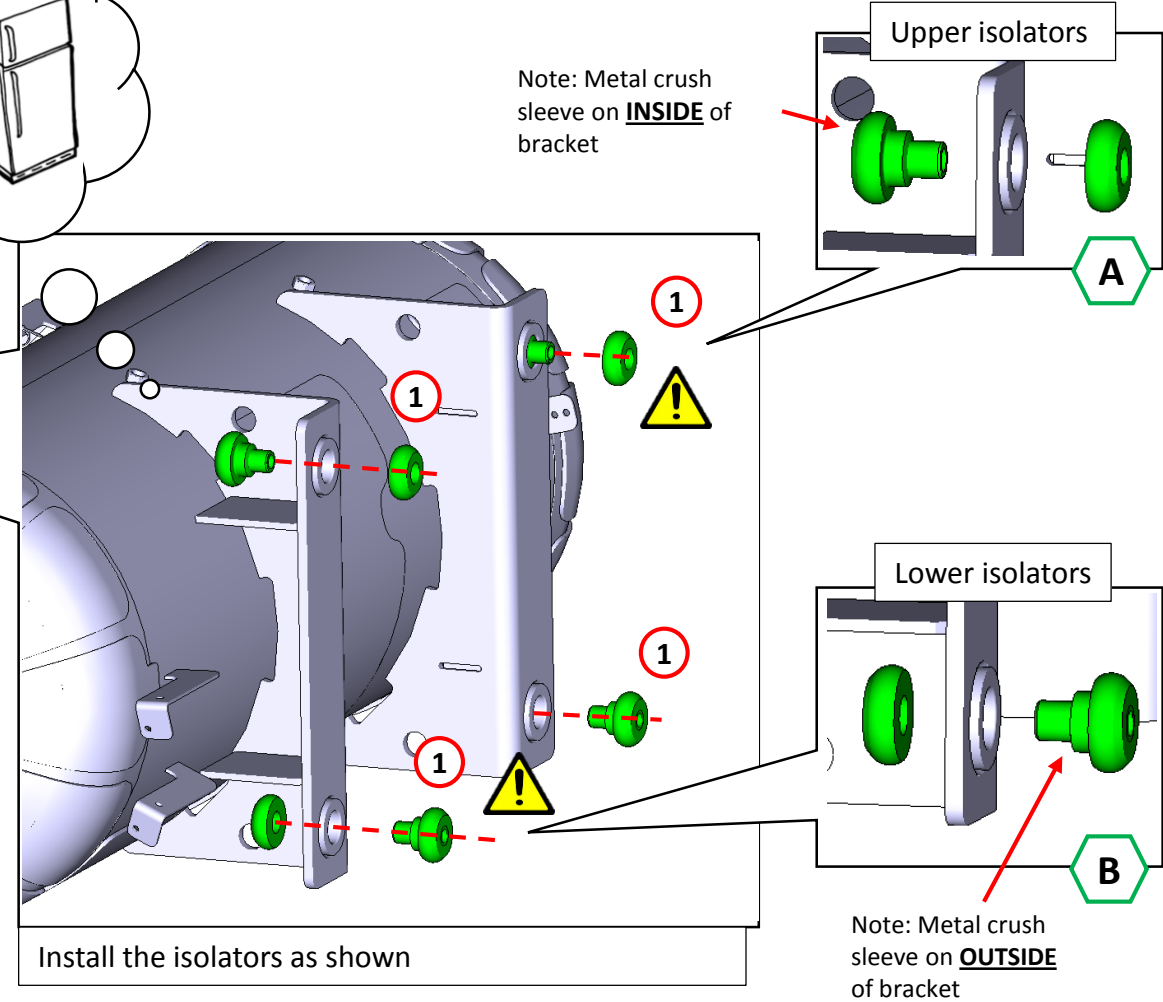
NOTE: To ease installation of the isolators place the isolator with the metal crush sleeve into a freezer for an hour.



Item #	QTY	Part Number	Description	Torque (Nm)
1	4	22002-15	Isolator assembly	N/A



Install isolators onto the tank brackets



Install the isolators as shown

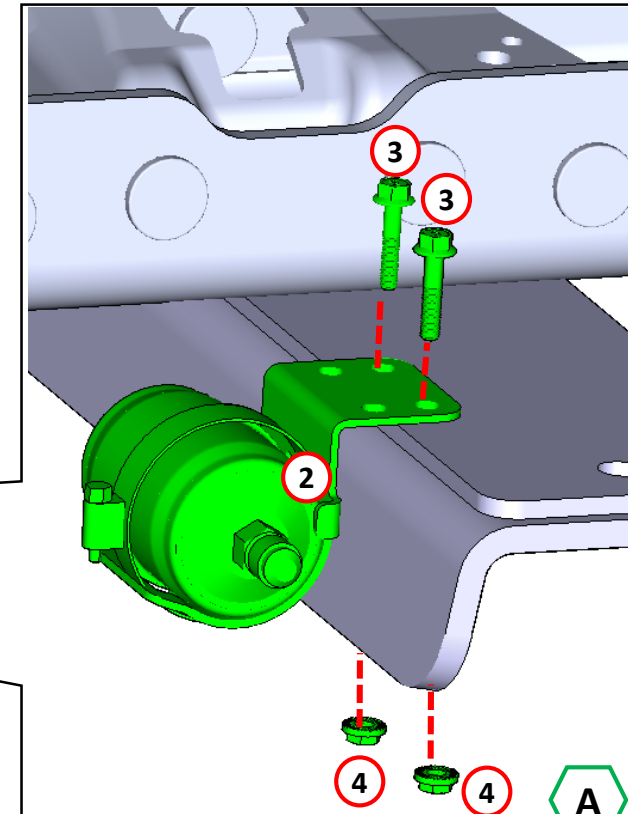
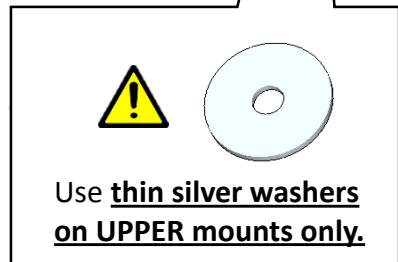
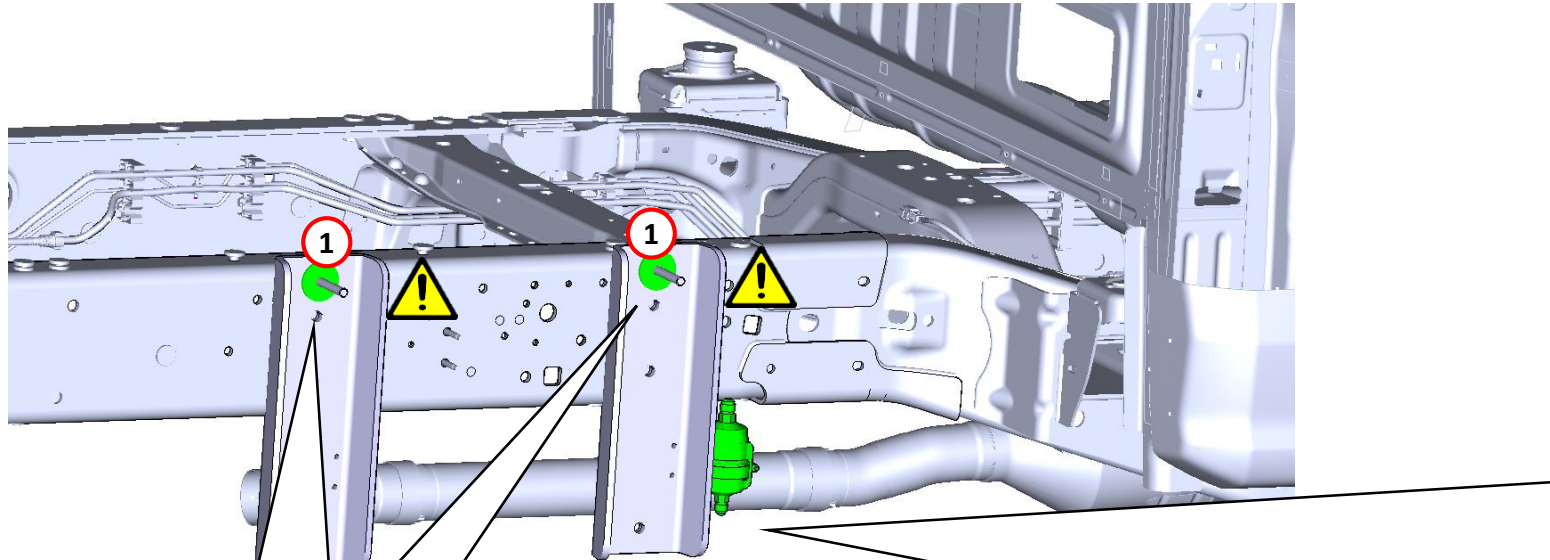
Note: Metal crush sleeve on **INSIDE** of bracket

Note: Metal crush sleeve on **OUTSIDE** of bracket

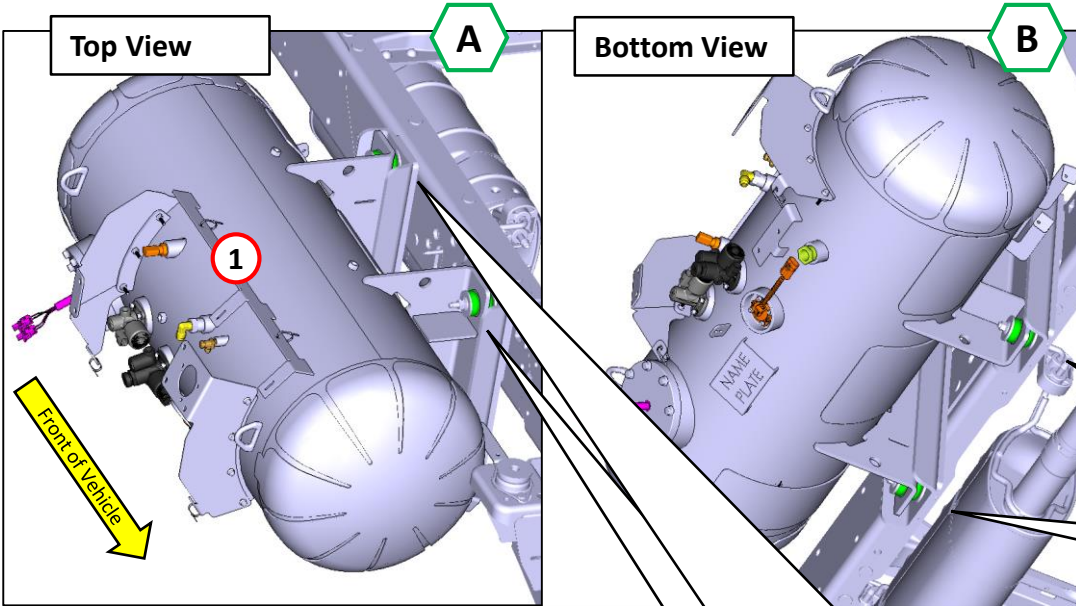


Install tank mounting **thin silver washers** onto the weld studs as shown

Item #2	QTY	Part Number	Description	Torque (Nm)
1	2	11-452-0202	Thin silver washers	N/A
2	1	Assembly	Supply line filter assembly	N/A
3	2	11-031-0636	M6 x 1.0 x 30mm Hex flange bolt	8-12Nm
4	2	11-278-0274	M6 Nut	8-12Nm



Install supply line filter assembly onto the back of the tank mounting c-channel brackets

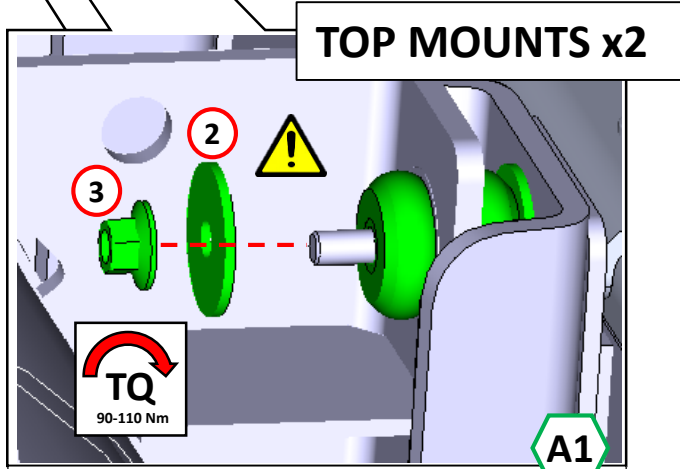
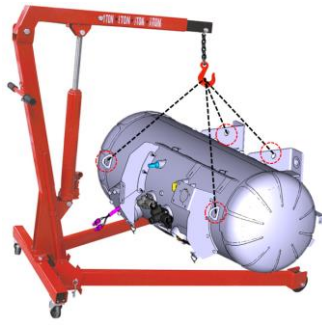


Install tank assembly onto tank mounting brackets

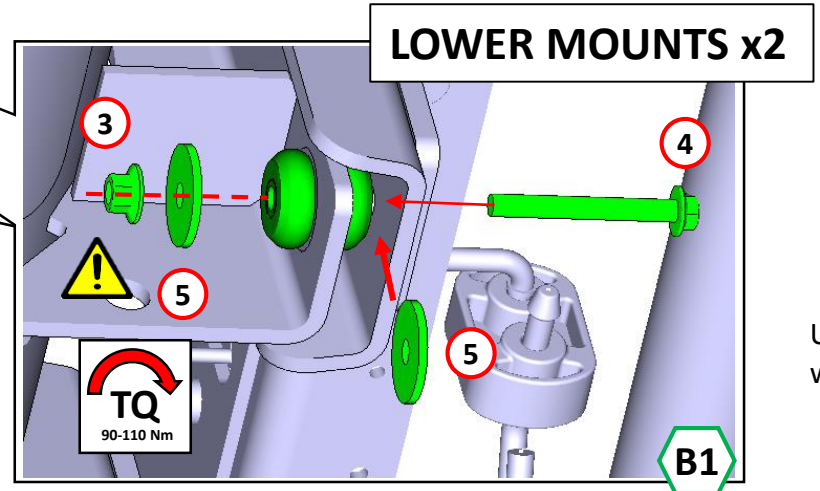
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-10A006-A	Propane Tank Assembly	N/A
2	2	11-452-0202	Thin silver washers	N/A
3	4	11-278-0310	M12 x 1.75 Nut	90-110Nm
4	2	11-031-0604	M12 x 1.75 X 95mm Hex flange bolt	N/A
5	4	P13FB-02G004-A	Thick black washer	N/A



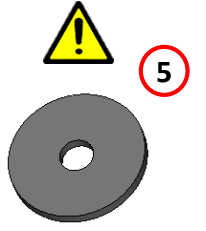
Refer to page 13 for proper tank lifting requirements



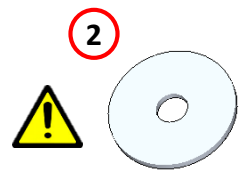
Install **thin silver washers (#2)** and nuts onto the weld studs as shown



**LOWER MOUNTS x2**

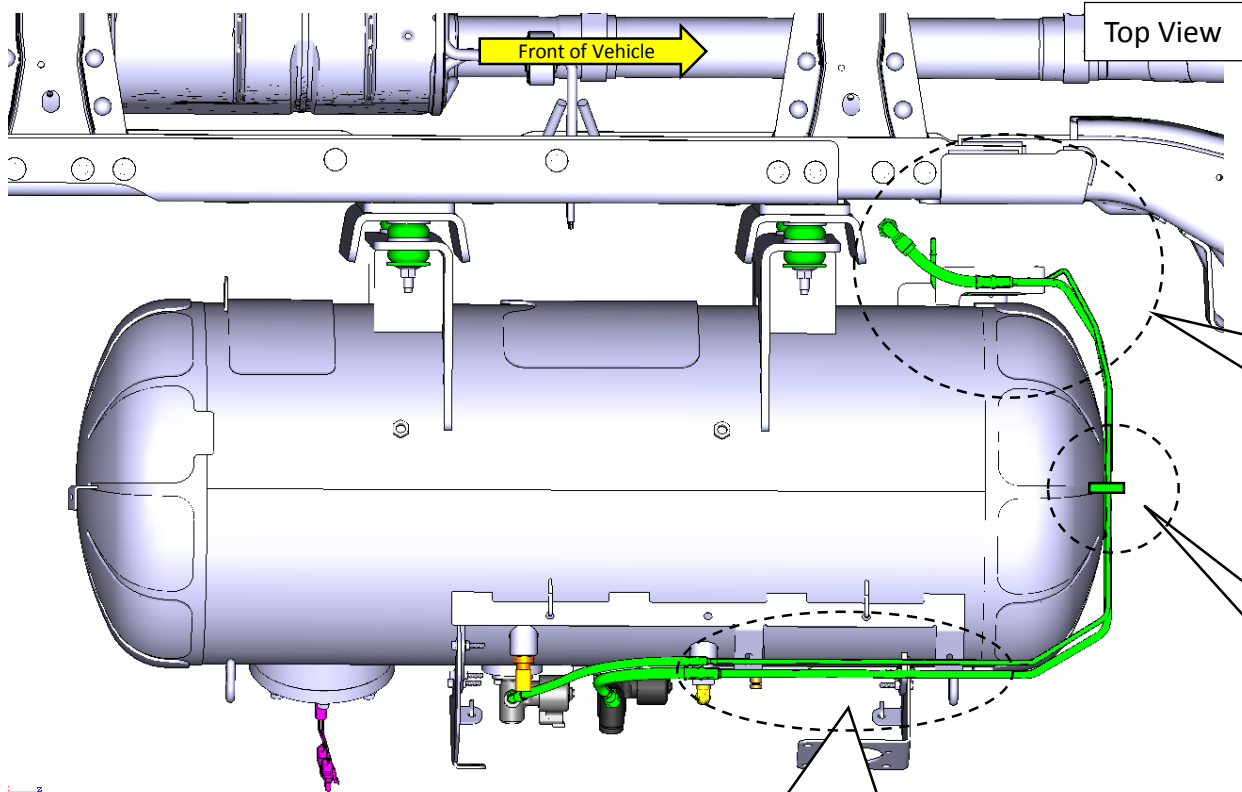


Use thick black washers for Step B

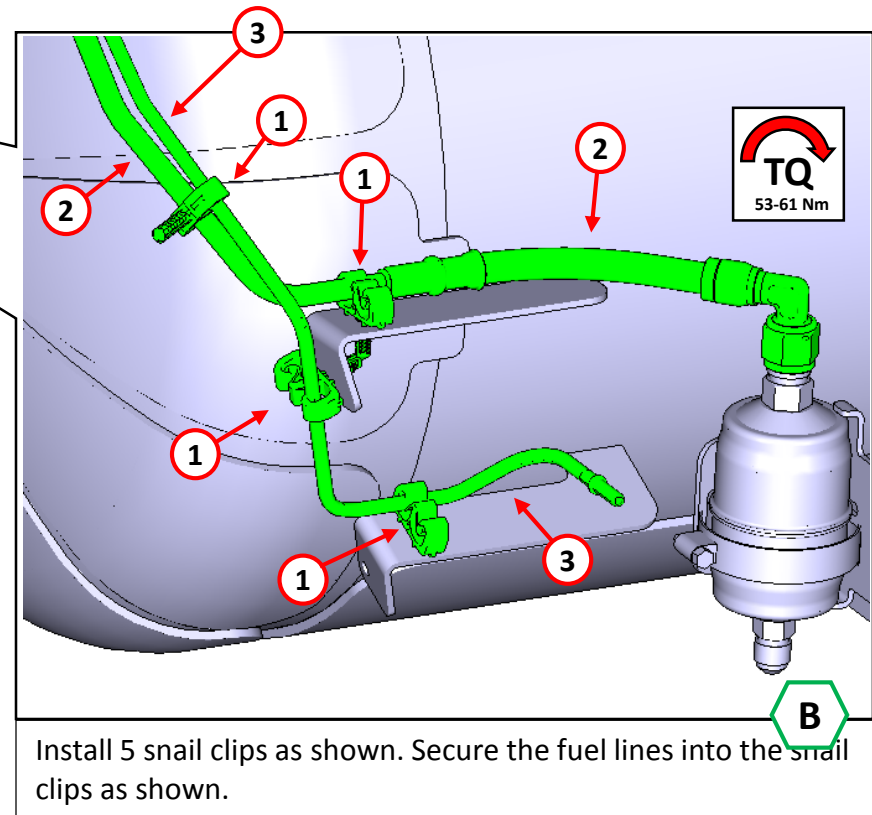
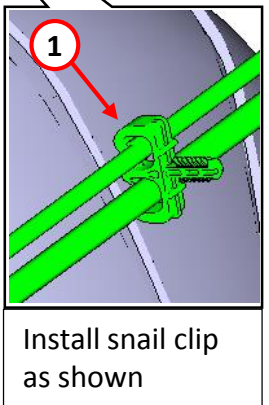
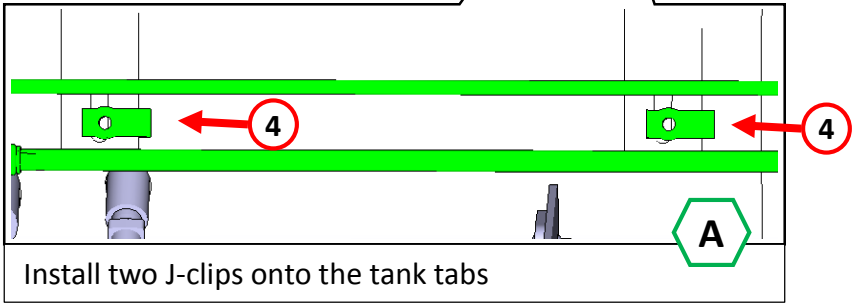


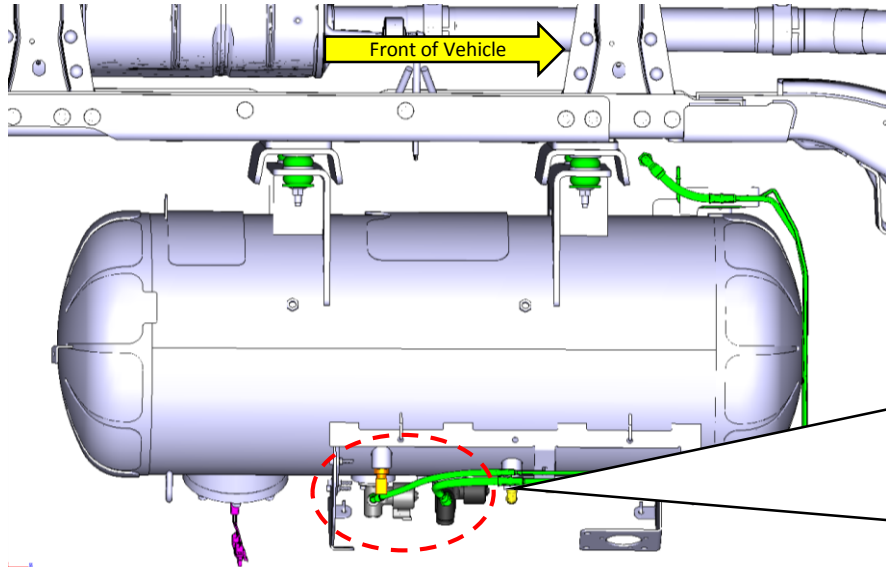
Use thin silver washers for Step A

Item #	QTY	Part Number	Description	Torque (Nm)
1	5	15-004175	Fuel Line Snail Clip	N/A
2	1	P17EB-10S130-A	Tank fuel supply line	53-61 Nm
3	1	P17EB-10R130-A	Tank fuel return line	N/A
4	2	11-056-0043	M6 J-Clip	N/A

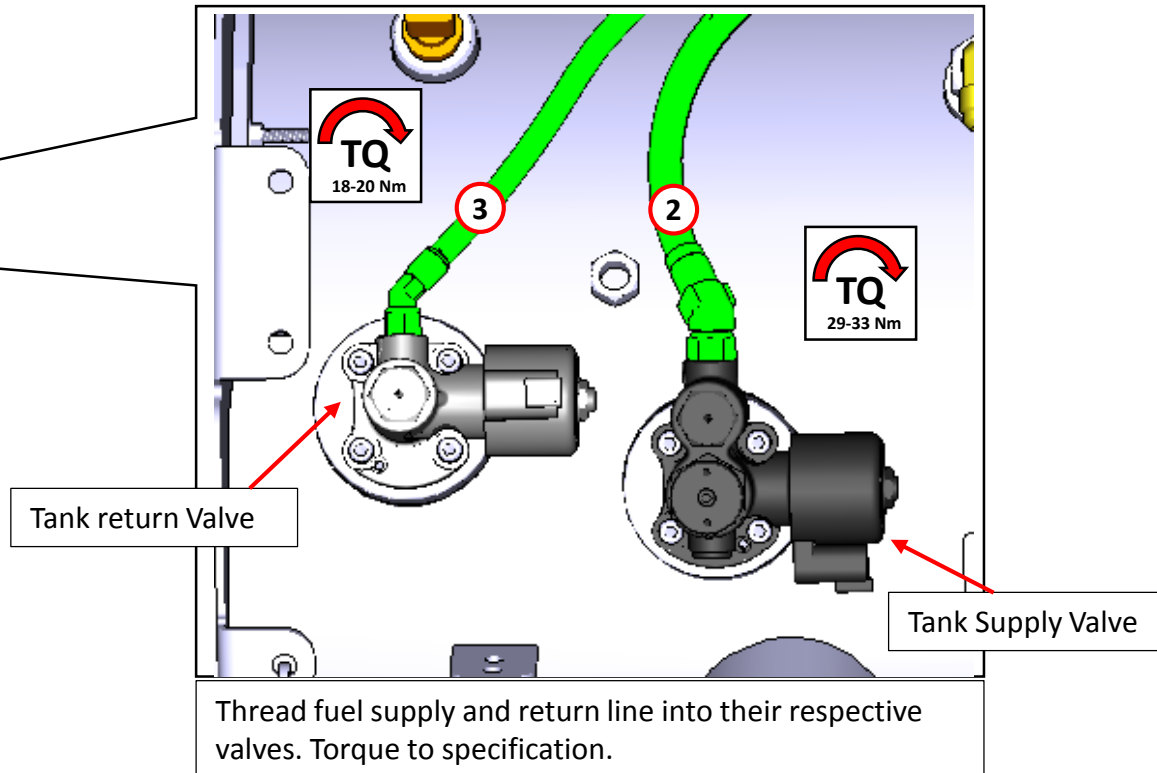


Install fuel tank supply and return lines

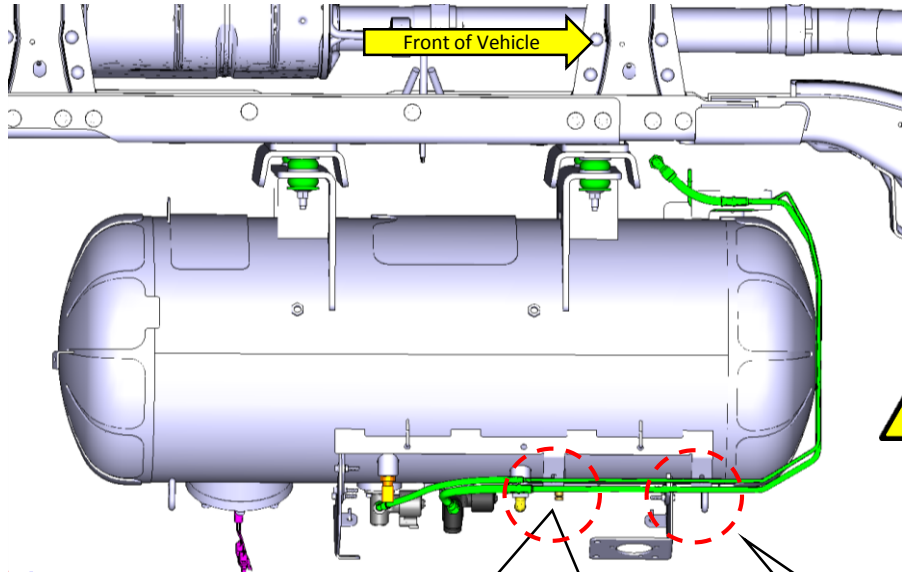




Item #	QTY	Part Number	Description	Torque (Nm)
2	1	P17EB-10S130-A	Tank fuel supply line	29-33 Nm
3	1	P17EB-10R130-A	Tank fuel return line	18-20 Nm



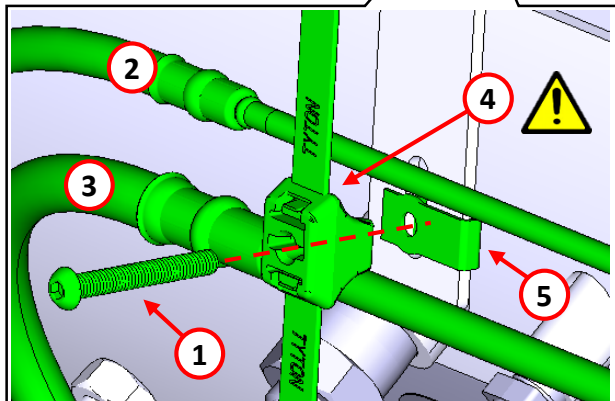




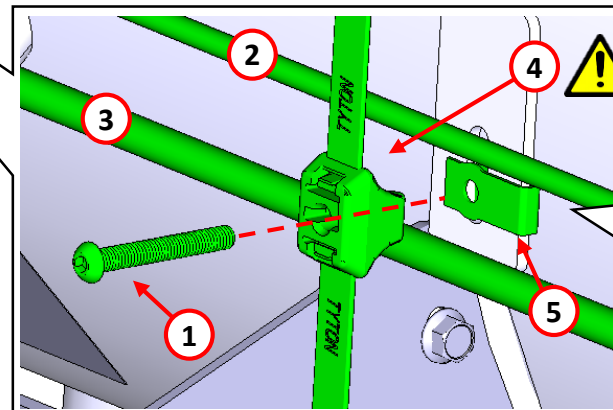
Item #	QTY	Part Number	Description	Torque (Nm)
1	2	92095A250	M6 x 45mm Button head socket cap screw	Snug
2	1	P17EB-10S130-A	Tank fuel supply line	29-33 Nm
3	1	P17EB-10R130-A	Tank fuel return line	18-20 Nm
4	2	20-403-0004	Dual clamp zip tie	N/A
5	2	11-056-0043	M6 U-Type Clip	N/A

**NOTE: Follow this procedure to tighten zip ties:**

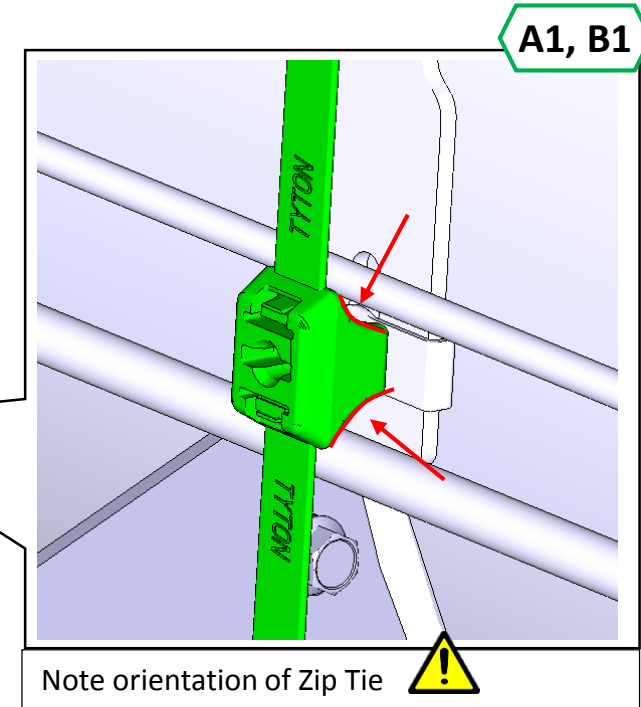
1. Tighten the zip ties tight to the fuel lines
2. Trim the excess zip tie tail
3. Secure to J-clips on the tank tabs
4. Use provided M6 fastener to fasten zip ties to J-clips



Secure the fuel lines to the tank "L" tabs.



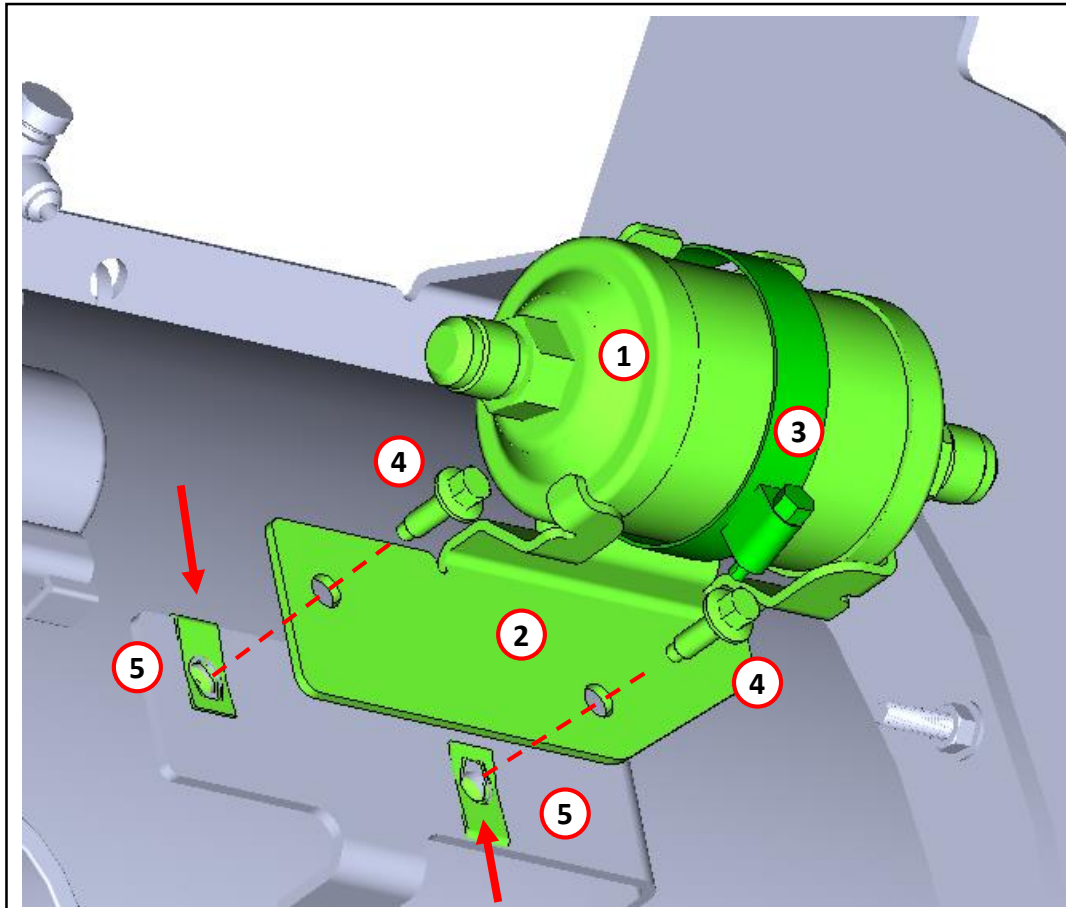
Secure the fuel lines to the tank "L" tabs.



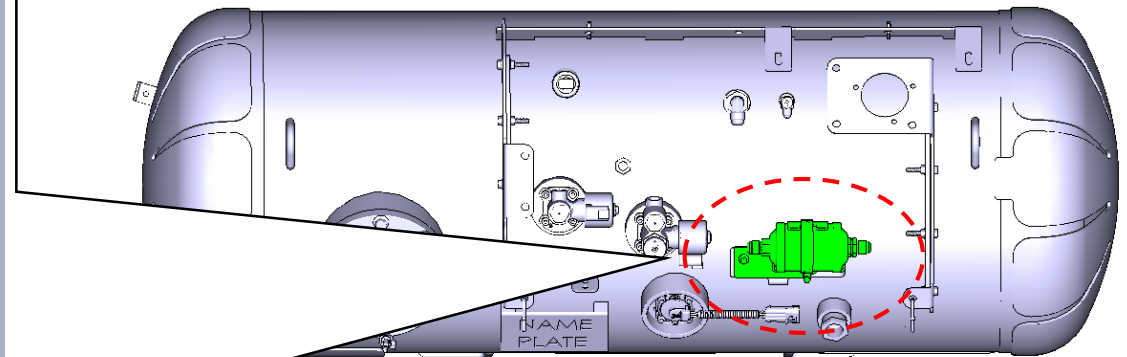
Note orientation of Zip Tie



Item #2	QTY	Part Number	Description	Torque (Nm)
1	1	P11BB-9155-A	Fill filter	N/A
2	1	P11GD-10D220-B	Fill filter bracket	N/A
3	1	6P-300-52	Worm gear clamp	N/A
4	2	W500213-S437	M6 x 16mm Hex flange bolt	8-12 Nm
5	2	W520822-S439	M6 J-Clip	N/A

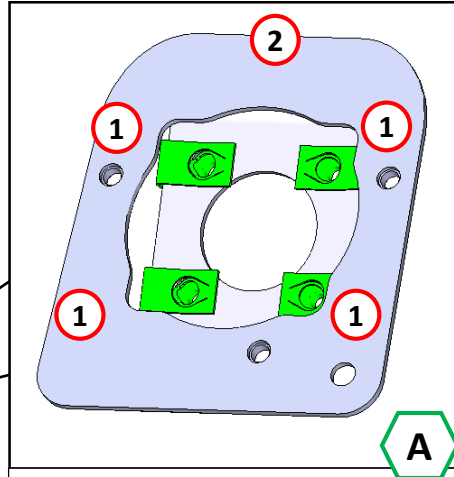


Install the fill filter assembly to the tank using M6 J-clips and bolts

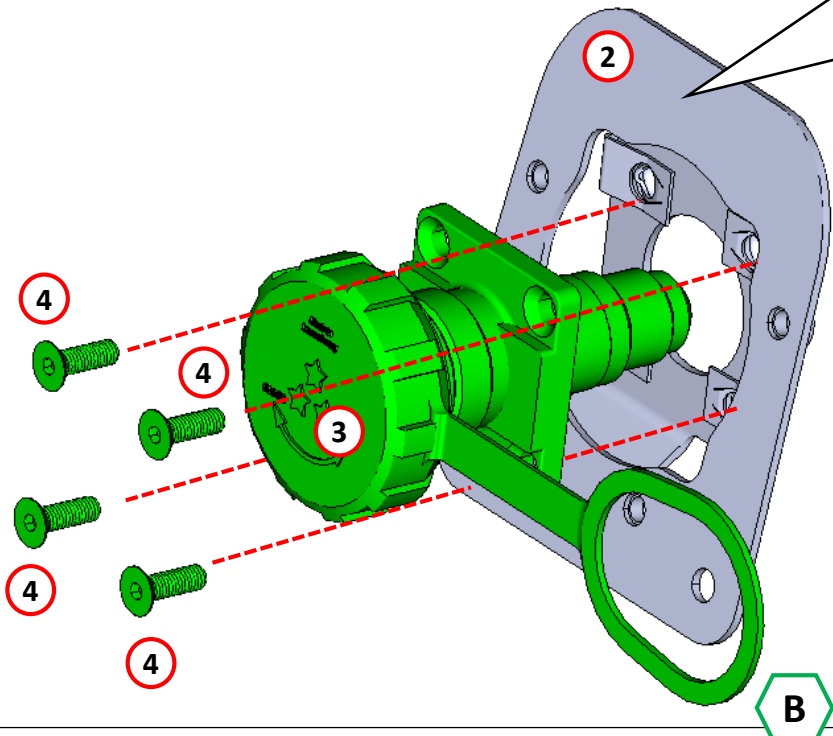


Item #	QTY	Part Number	Description	Torque (Nm)
1	4	N623331-S2	M5 J-Clip	N/A
2	1	P16MB-10D310-A	Fill Valve Bracket	N/A
3	1	A13100005	ACME (threaded) fill valve	N/A
4	4	11-357-0321	M5 x 0.80 x 16mm Flat Head Cap Screw	5-7 Nm
5	1	22-4945	Euro Style Fill Valve	N/A

### ACME FILL VALVE OPTION

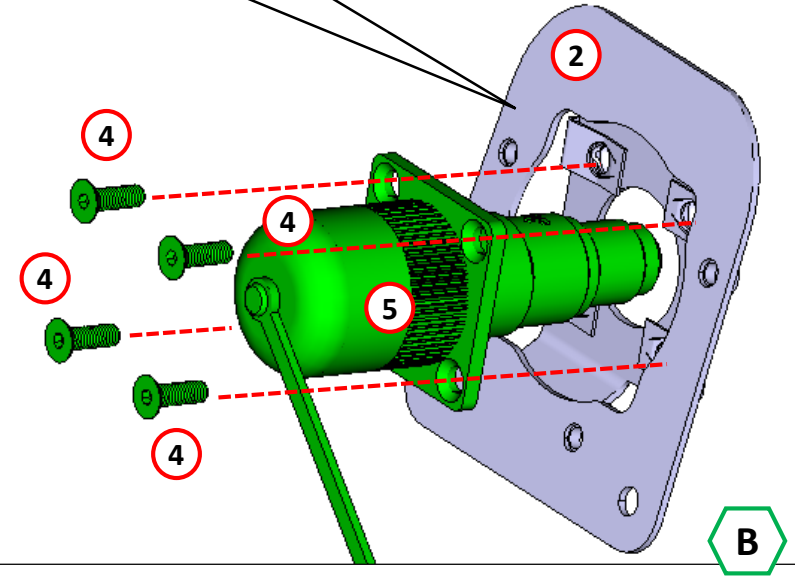


Assemble the fill valve bracket with the supplied J-Clips



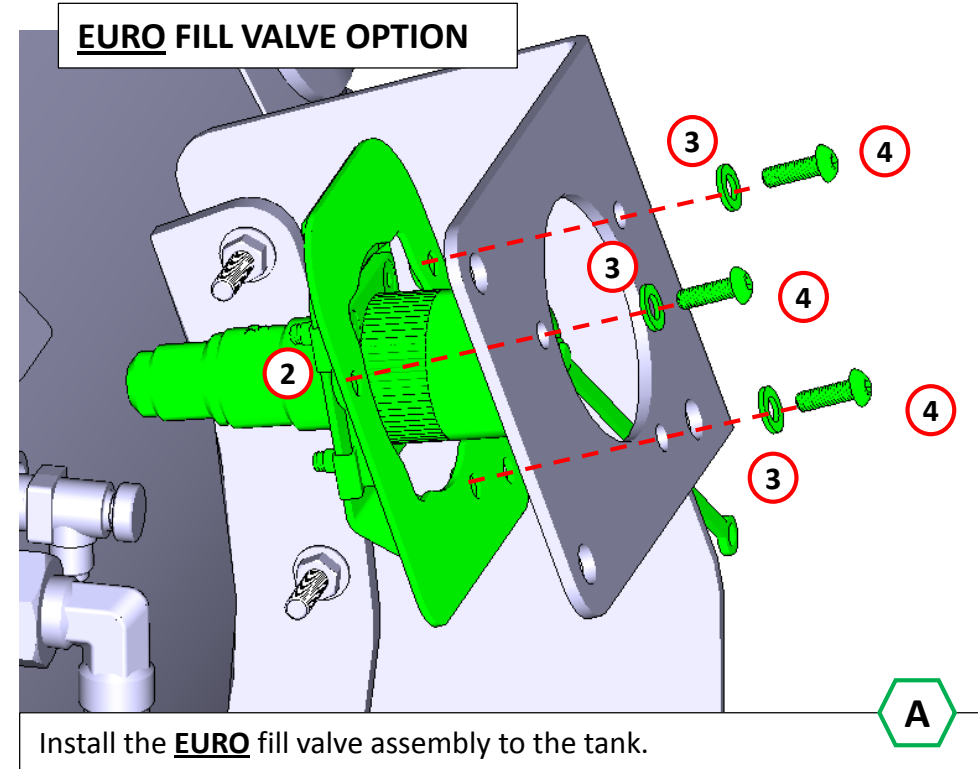
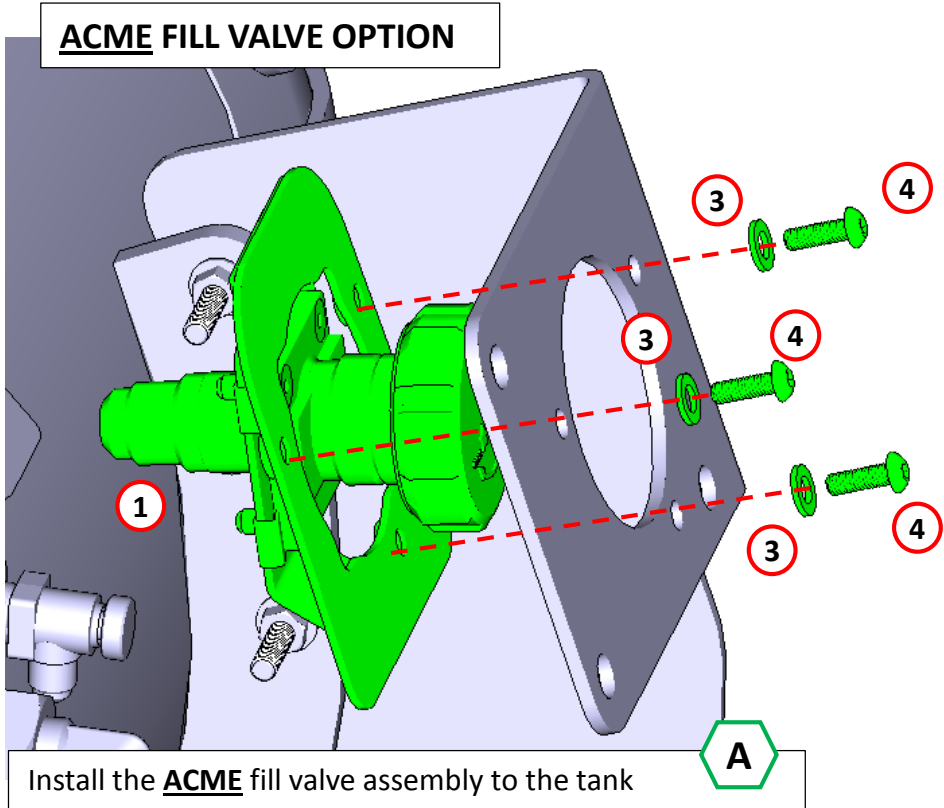
Attach the ACME fill valve to the fill valve bracket with the supplied socket head cap screws

### EURO FILL VALVE OPTION



Attach the EURO fill valve to the fill valve bracket with the supplied socket head cap screws

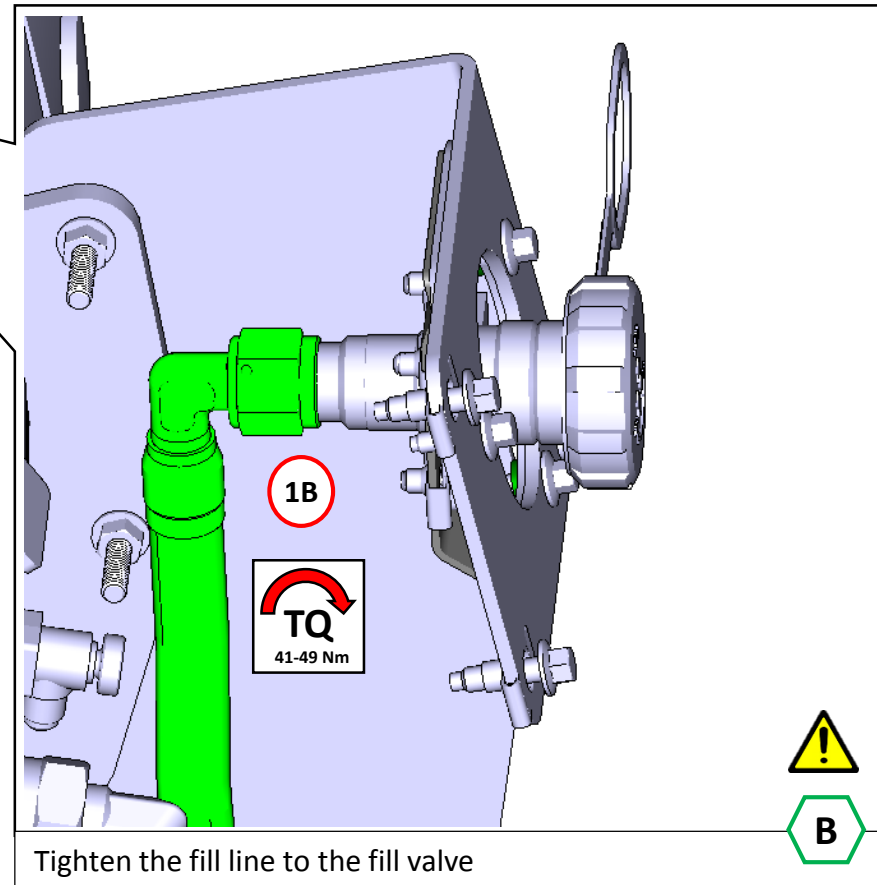
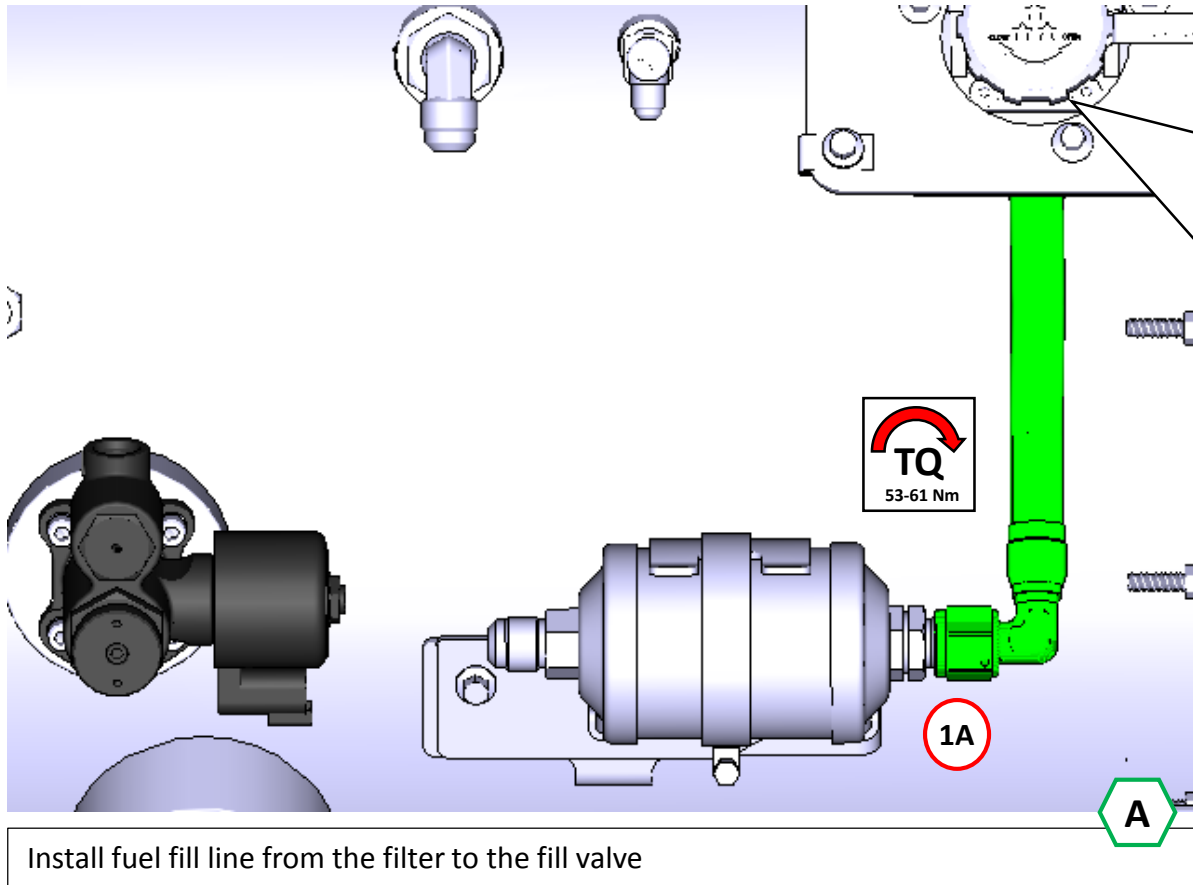
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	A13100005	ACME (threaded) fill valve	N/A
2	1	22-4945	EURO (QC) fill valve	N/A
3	3	40219	M5 Washer	N/A
4	3	11-031-0583	M5 Button head bolt	5-7 Nm





Use instructions for both EURO valve **and** ACME Valve

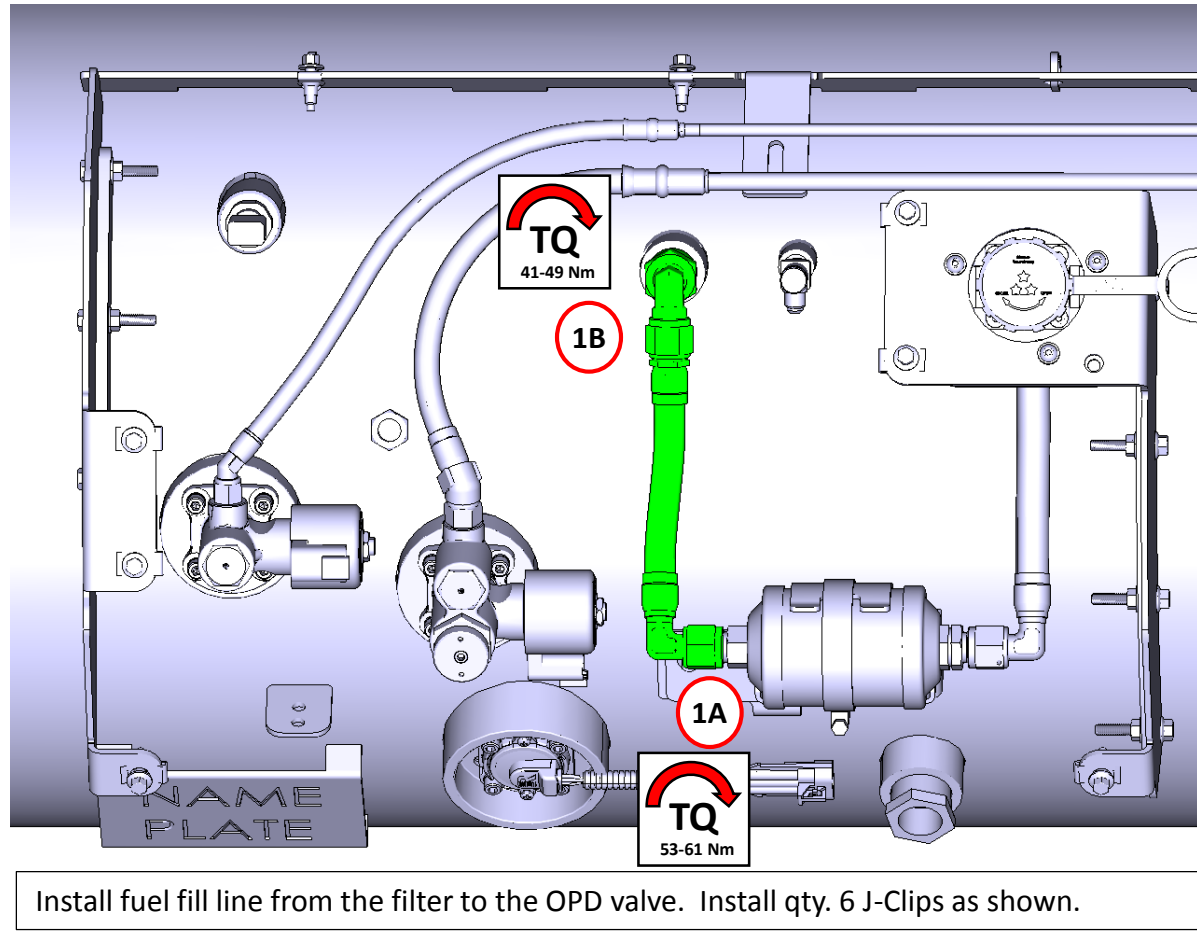
Item #	QTY	Part Number	Description	Torque (Nm)
1A	1	P-10D127-A-192	Fuel fill line (filter side)	53-61 Nm
1B			Fuel fill line (valve side)	41-49 Nm





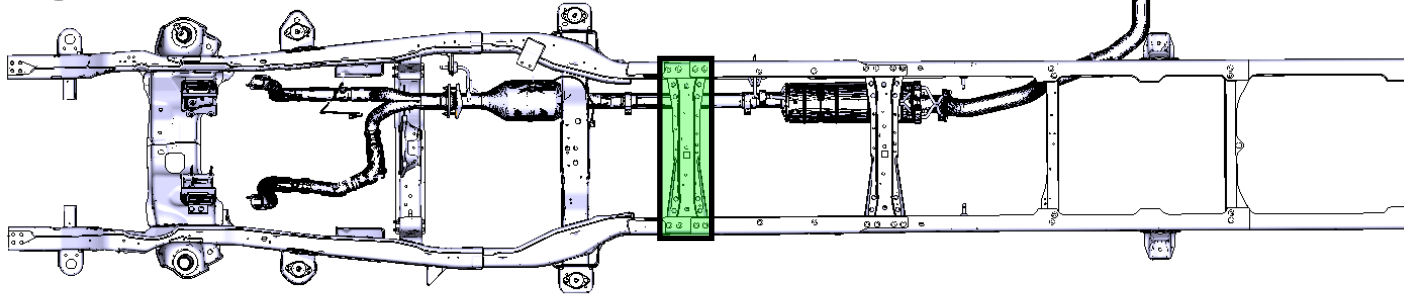
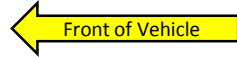
Use instructions for both EURO valve **and** ACME Valve

Item #	QTY	Part Number	Description	Torque (Nm)
1A	1	P-10D121-C-177	Fuel fill line (filter side)	53-61 Nm
1B			Fuel fill line (valve side)	41-49 Nm



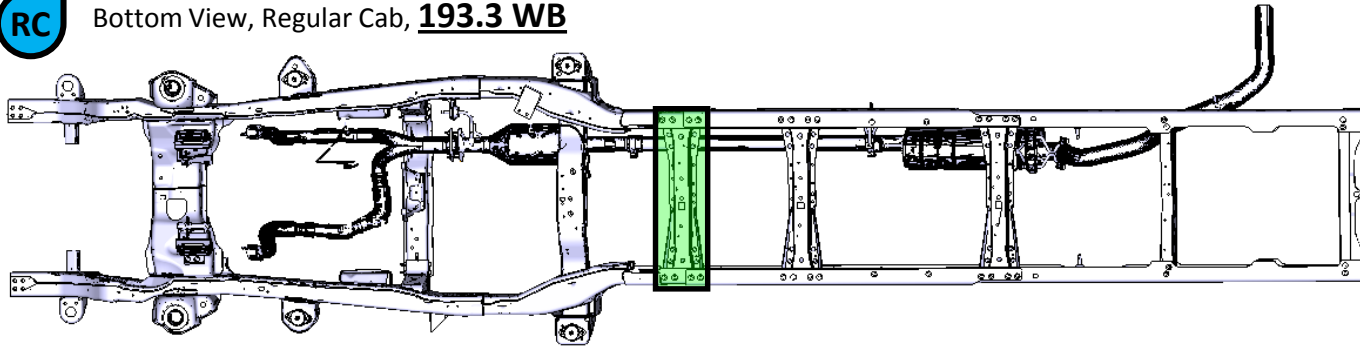
RC

Bottom View, Regular Cab, **169.3 WB**



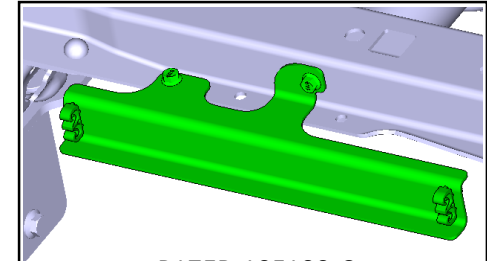
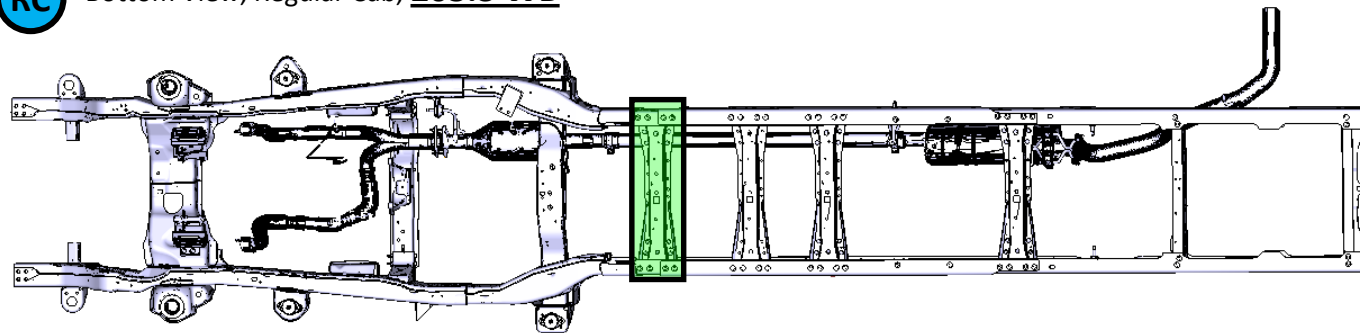
RC

Bottom View, Regular Cab, **193.3 WB**



RC

Bottom View, Regular Cab, **205.3 WB**



P17EB-10F100-C



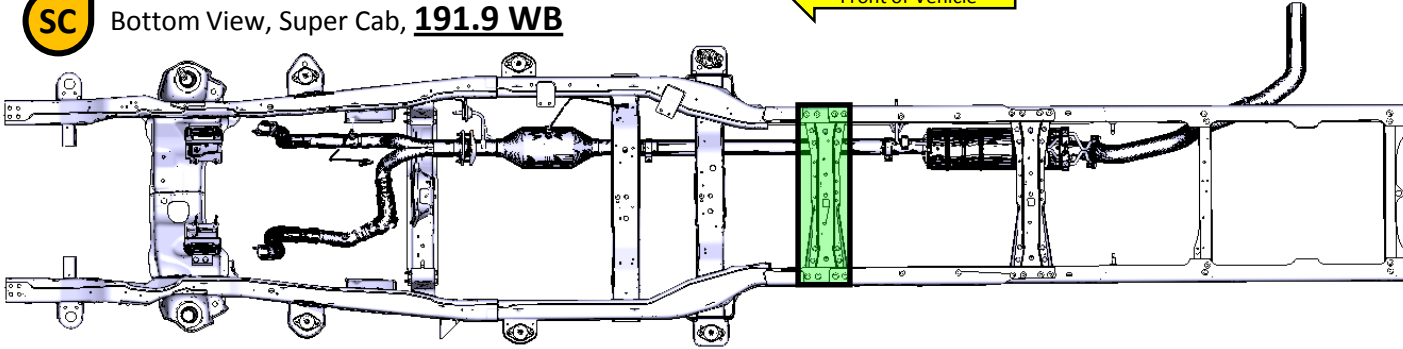
For Regular Cab Wheelbase

When installing rear fuel line bracket, note location of the bracket with relation to which wheelbase vehicle you have.

**SC**

Bottom View, Super Cab, **191.9 WB**

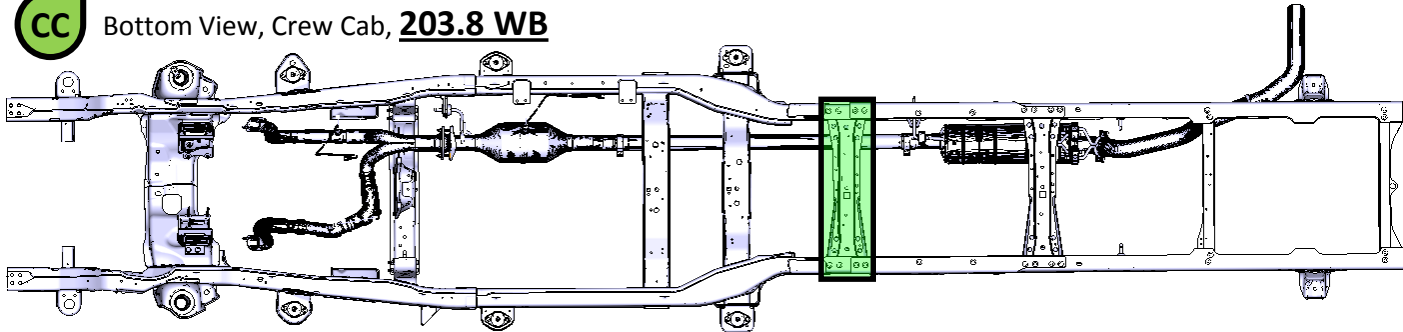
← Front of Vehicle



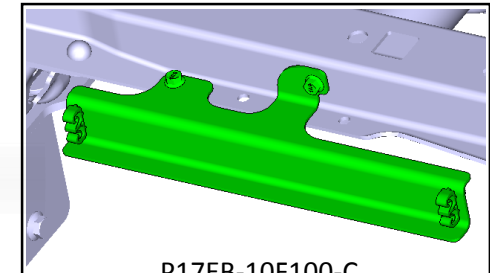
For Super Cab Wheelbase

**CC**

Bottom View, Crew Cab, **203.8 WB**



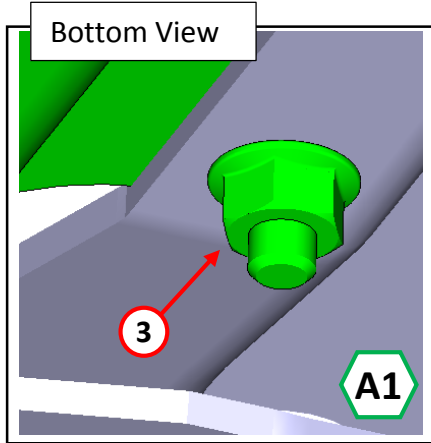
For Crew Cab Wheelbase



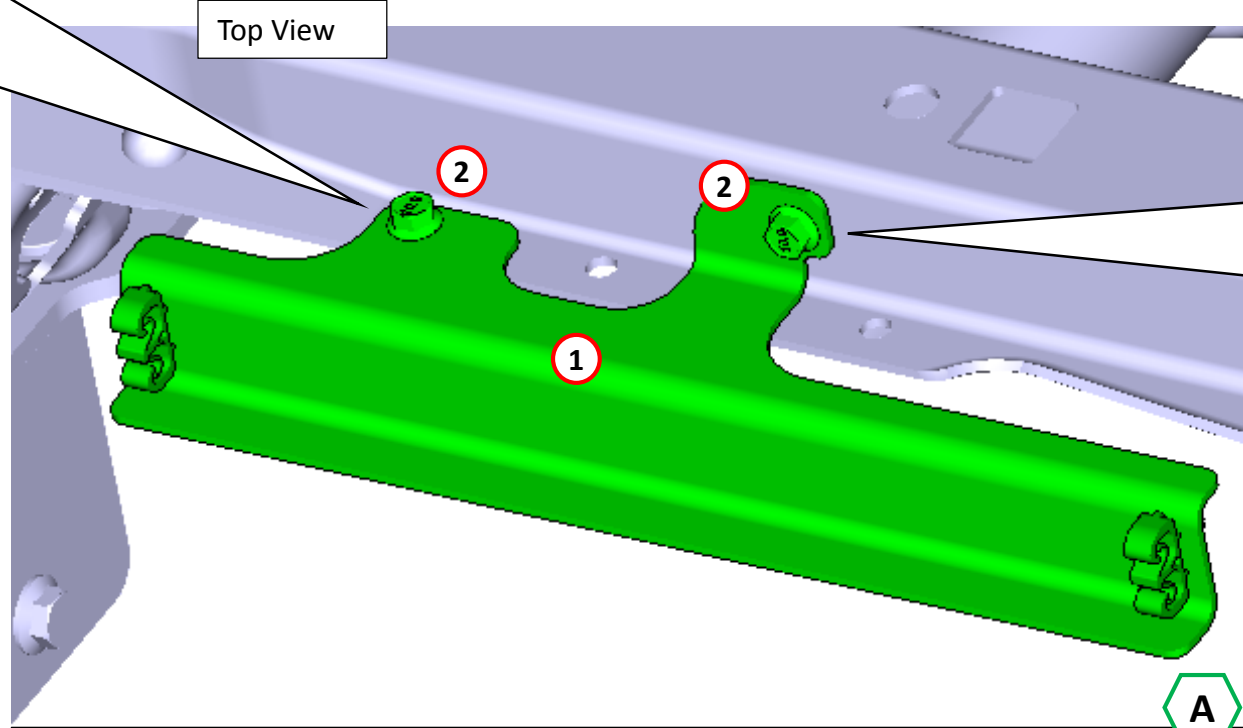
P17EB-10F100-C

When installing rear fuel line bracket, note location of the bracket with relation to which wheelbase vehicle you have.

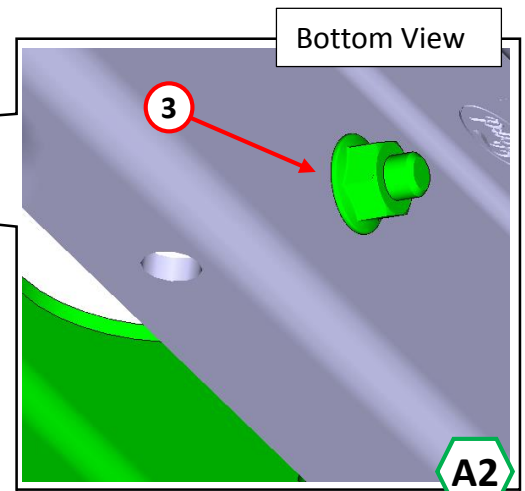




Use the provided M8 nuts to secure the bolt



Install the rear fuel line bracket using M8 nuts and bolts provided. Refer to BOM for torque spec.



Use the provided M8 nuts to secure the bolt

Item #	QTY	Part Number	Description	Torque (Nm)
1	2	P17EB-10F100-C	Rear Fuel Line Bracket	N/A
2	2	11-278-0302	M8 Flange Nut	N/A
3	2	W500023-S437	M8 X 1.25 X 20 Hex Flange BLT	25-30 Nm

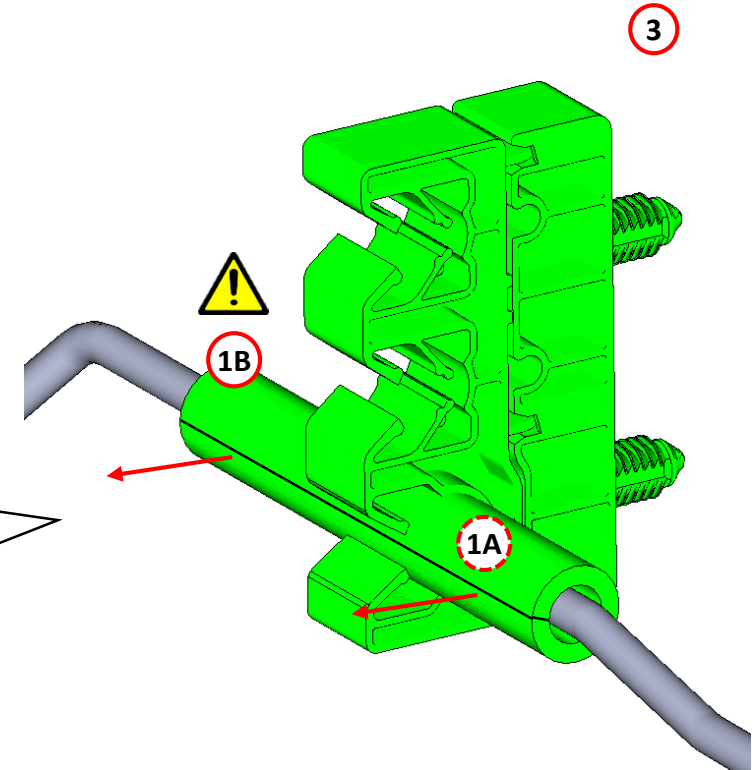
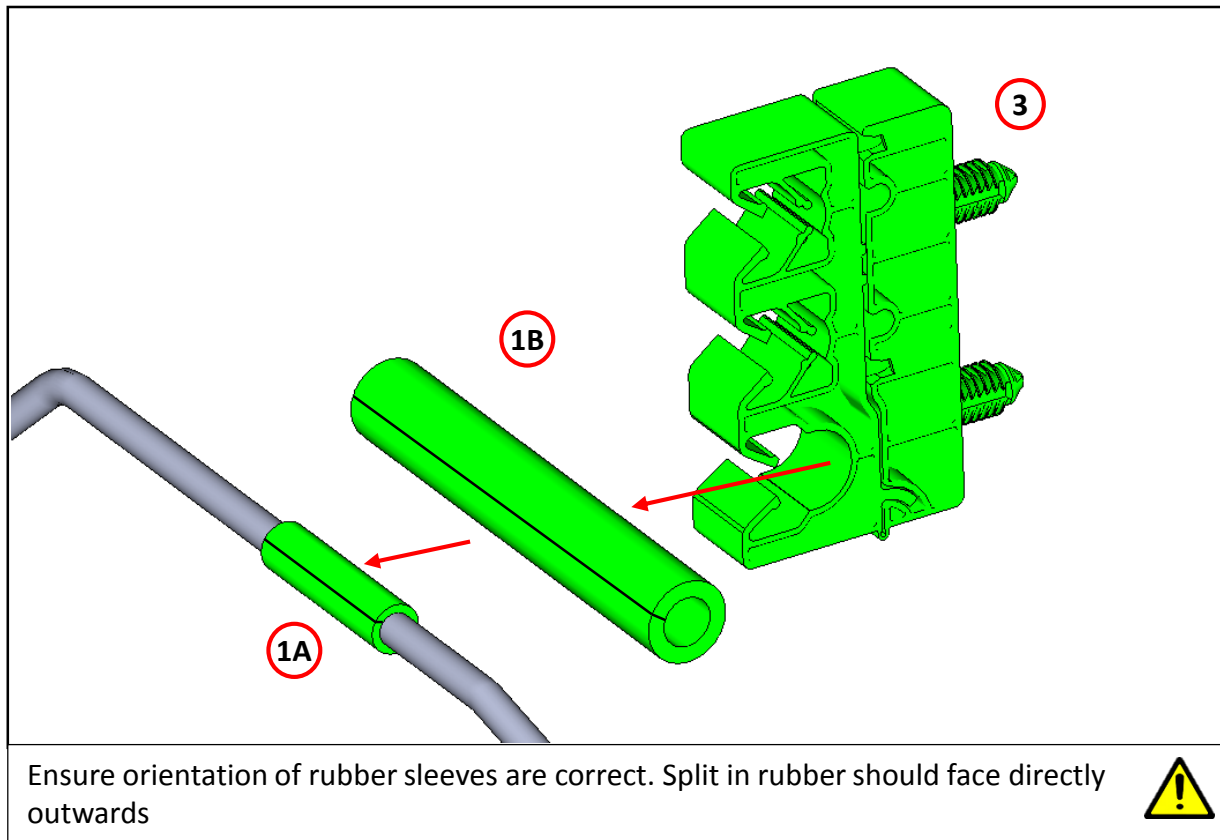
RC
SC
CC
**ALL** Cab Wheelbase

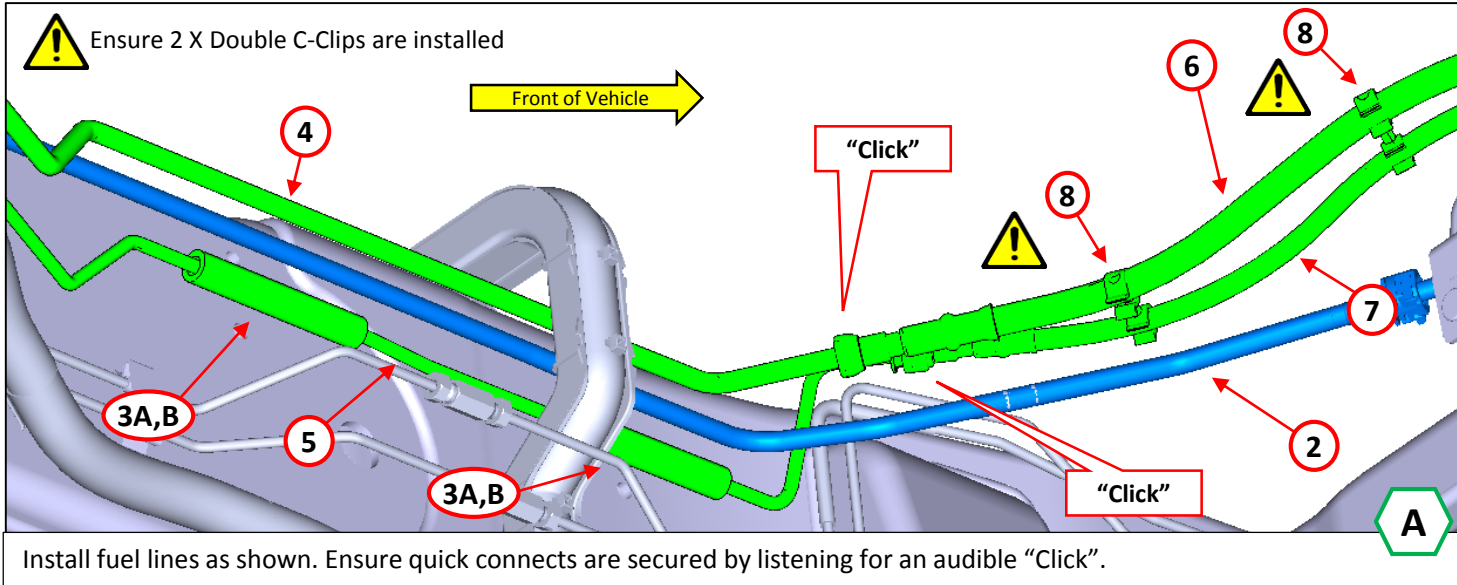
When installing the following clips and sleeves for fuel lines, follow the instructions on this page.

Item #	QTY	Part Number	Description	Torque (Nm)
1A	7	P07L3-9C328-B	Sleeve (Inner)	N/A
1B	7	P07L3-9C328-A	Sleeve (Outer)	N/A
3	1	11-056-0047	5-Way Christmas Tree	N/A



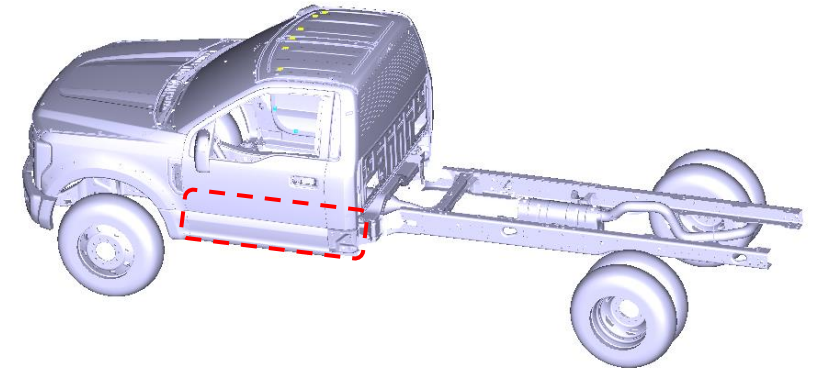
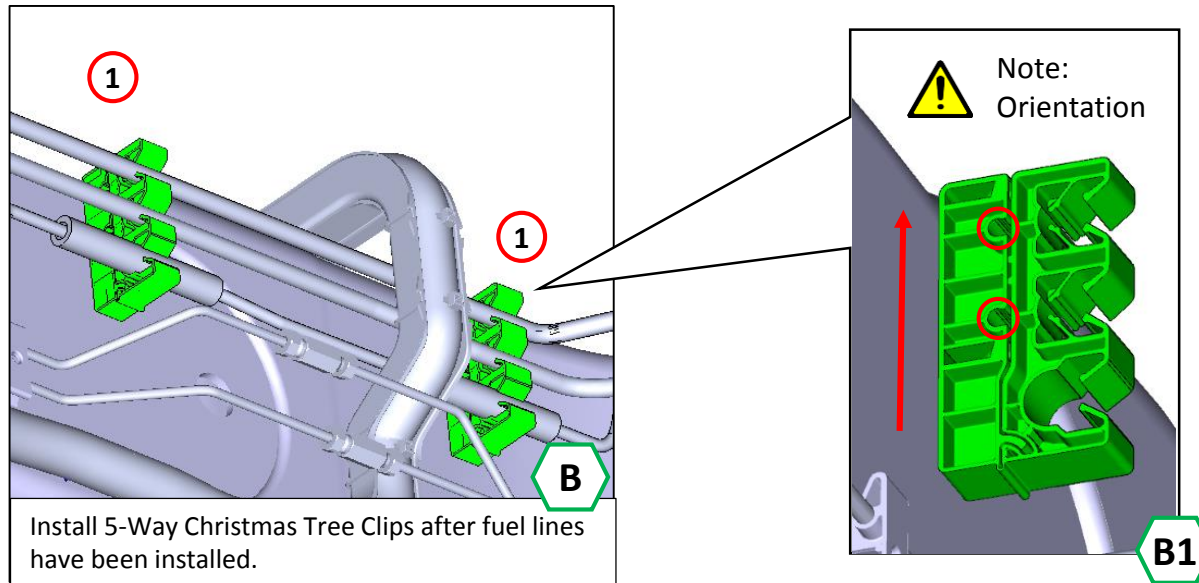
Ensure split in rubber is facing directly outwards





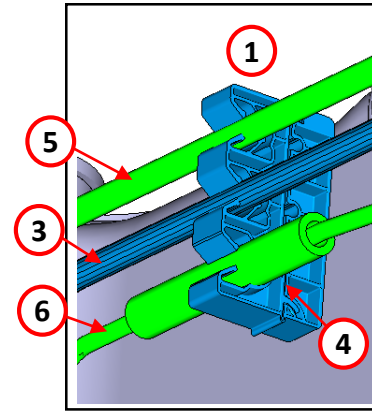
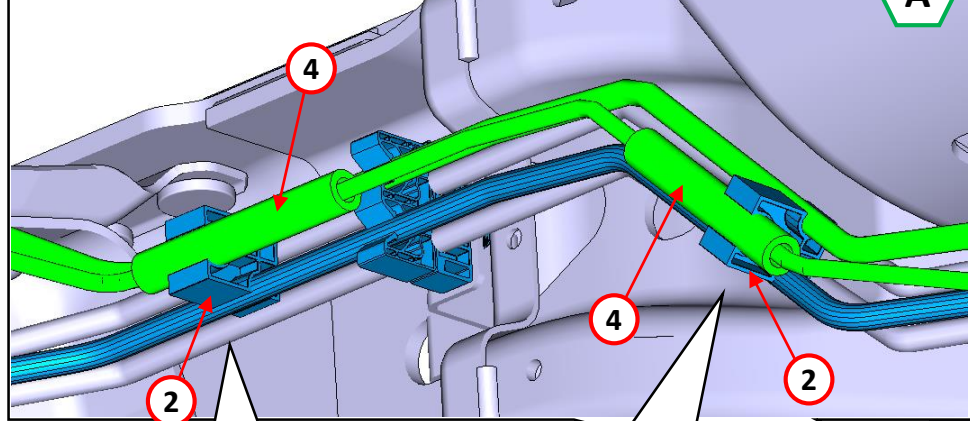
Item #	QTY	Part Number	Description	Torque (Nm)
1	2	11-056-0047	5-Way Christmas Tree	N/A
2	1	Existing (Reuse)	Vapor Line	N/A
3A + 3B	7	P07L3-9C328-A + B	Sleeve (Inner + Outer)	N/A
4	1	P17EB-10S110-C	Intermediate Fuel Supply Line	N/A
5	1	P17EB-10R110-C	Intermediate Fuel Return Line	N/A
6	1	P17EB-10S110-A	Forward Fuel Supply Line	N/A
7	1	P17EB-10R110-A	Forward Fuel Return Line	N/A
8	2	W713776-S	Double C-Clip	N/A

RC
SC
CC
**ALL** Cab Wheelbase



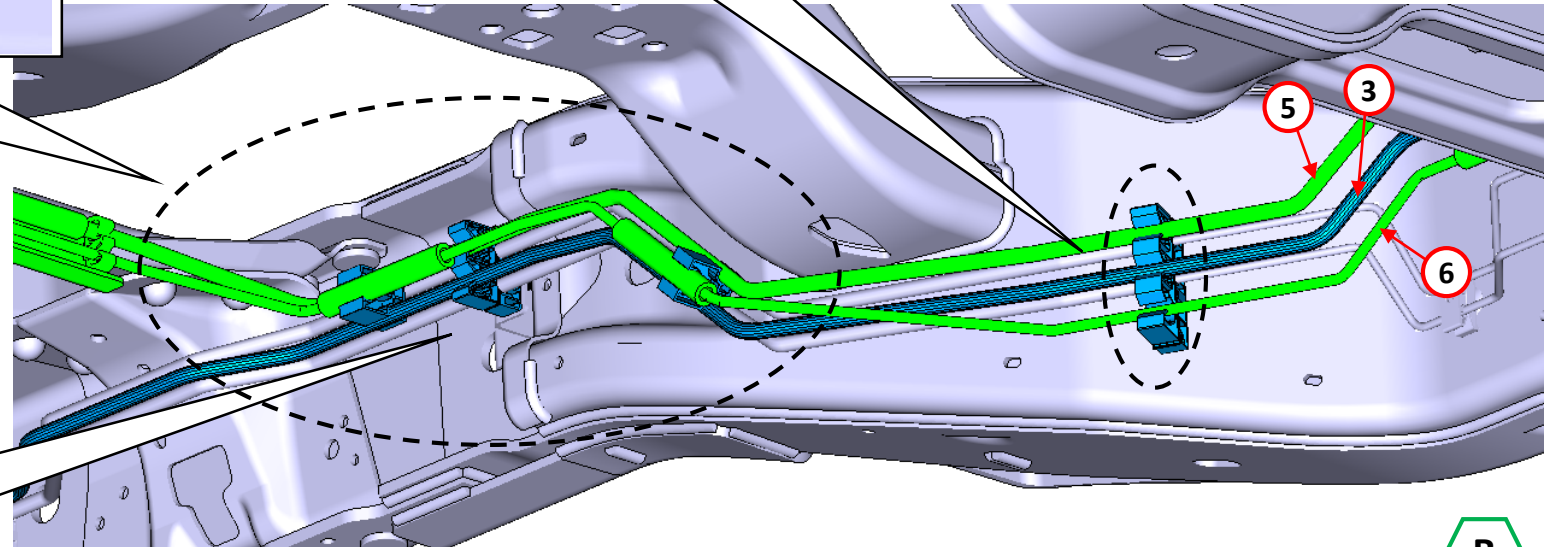
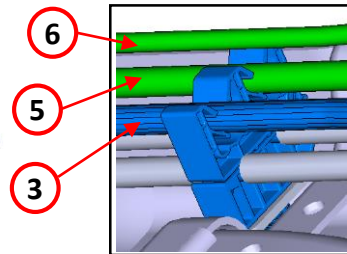
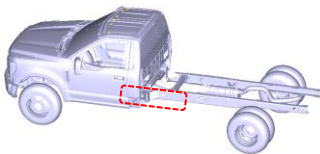
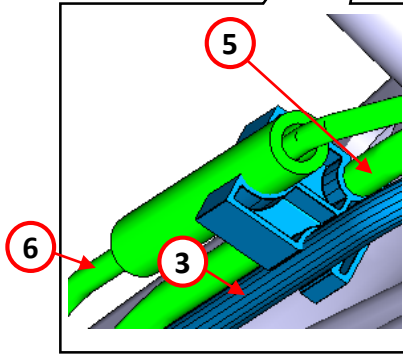
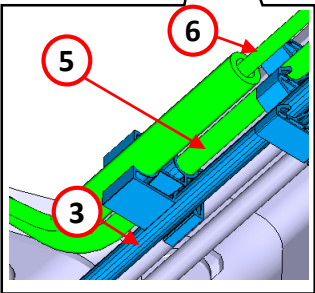
Snap the fuel lines into the retainers as shown, ensuring that you use the provided sleeves.

**A**



Item #	QTY	Part Number	Description	Torque (Nm)
1	2	Existing (Reuse)	Triple Locator Retainer	N/A
2	2	Existing (Reuse)	Tube Spacer	
3	1	Existing (Reuse)	Vapor Line	N/A
4A + 4B	7	P07L3-9C328-A + B	Sleeve (Inner + Outer)	N/A
5	1	P17EB-10S120-C	Intermediate Fuel Supply Line	N/A
6	1	P17EB-10R120-C	Intermediate Fuel Return Line	N/A

**RC** Regular Cab Wheelbase

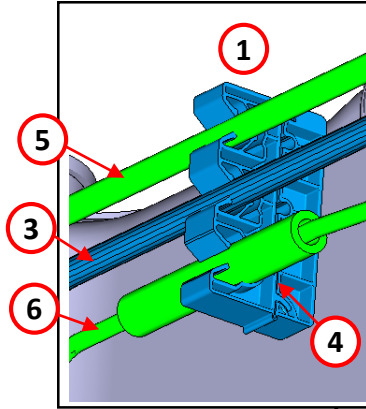
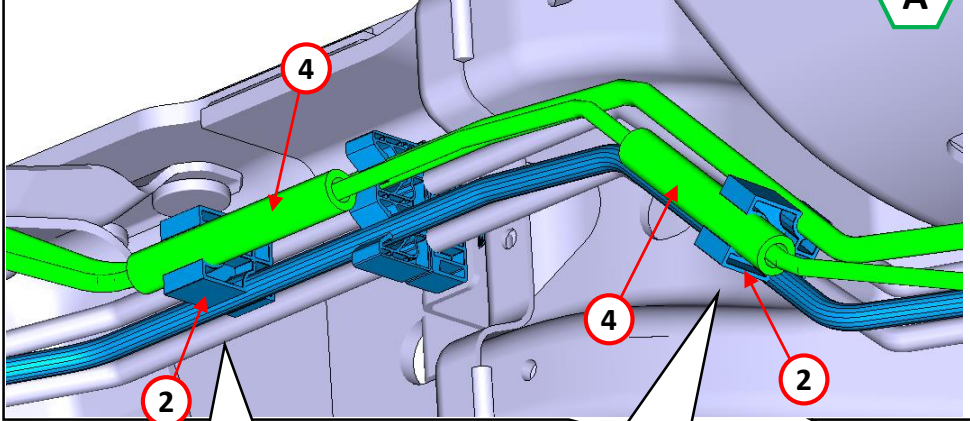


Install the intermediate lines as shown. Connect them to the corresponding forward fuel lines

**B**

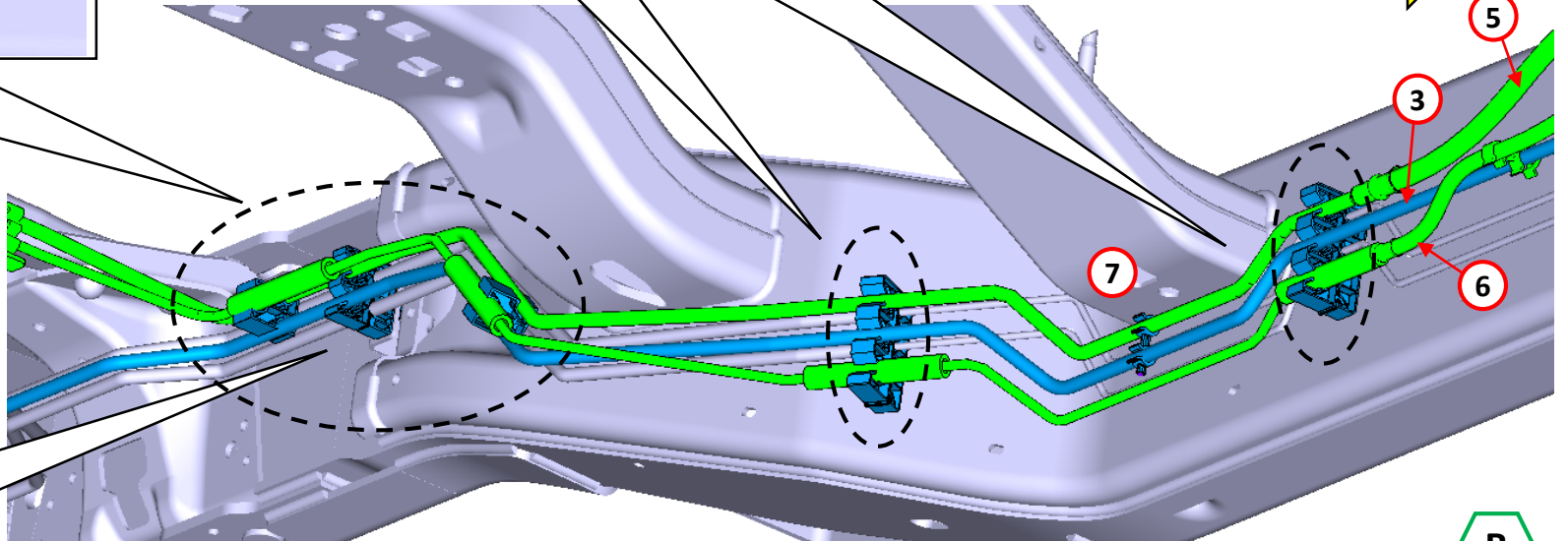
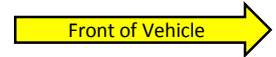
Snap the fuel lines into the retainers as shown, ensuring that you use the provided sleeves.

**A**



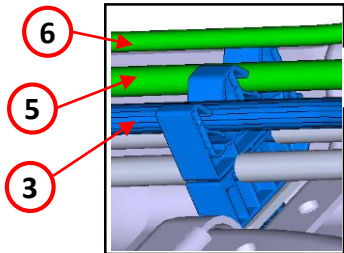
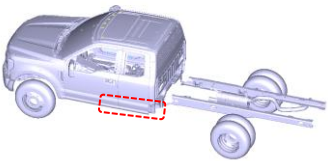
Item #	QTY	Part Number	Description	Torque (Nm)
1	2	Existing (Reuse)	Triple Locator Retainer	N/A
2	2	Existing (Reuse)	Tube Spacer	
3	1	Existing (Reuse)	Vapor Line	N/A
4A + 4B	7	P07L3-9C328-A + B	Sleeve (Inner + Outer)	N/A
5	1	P17EB-10S120-CA	Intermediate Fuel Supply Line	N/A
6	1	P17EB-10R120-CA	Intermediate Fuel Return Line	N/A
7	2	Existing (Reuse)	Double C-Clip	N/A

**SC** Super Cab Wheelbase

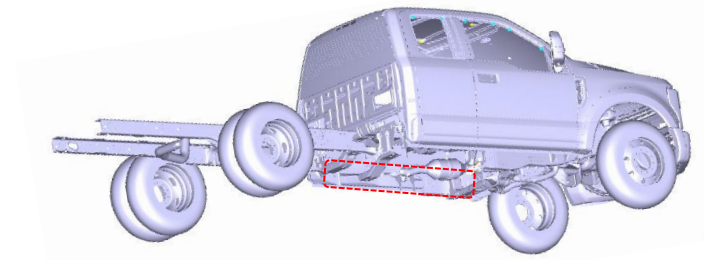
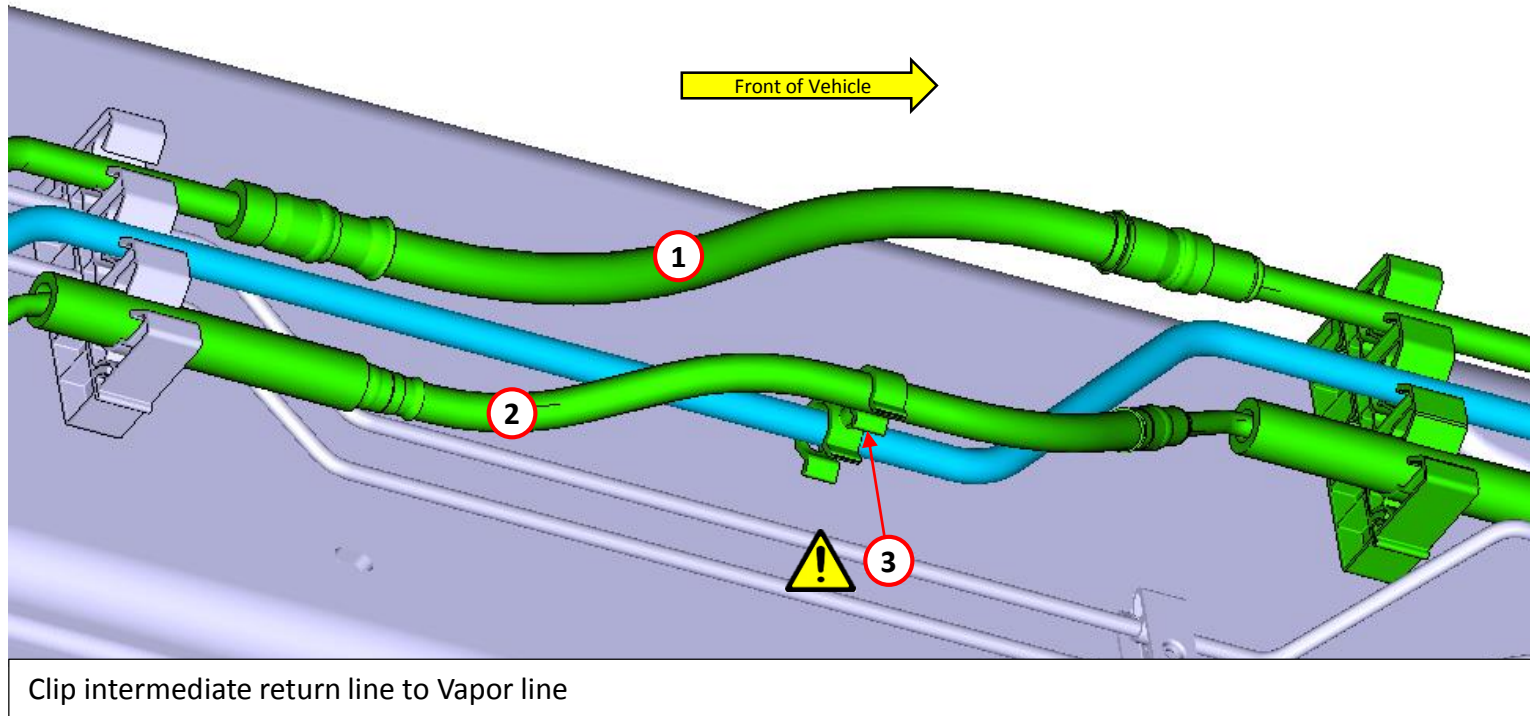


**B**

Install the intermediate lines as shown. Connect them to the corresponding forward fuel lines



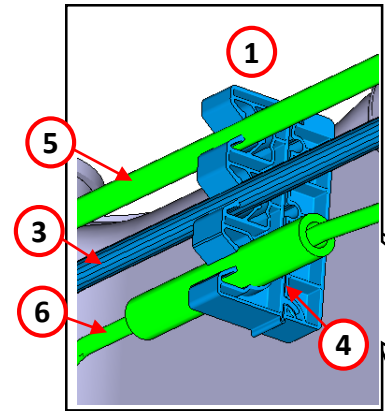
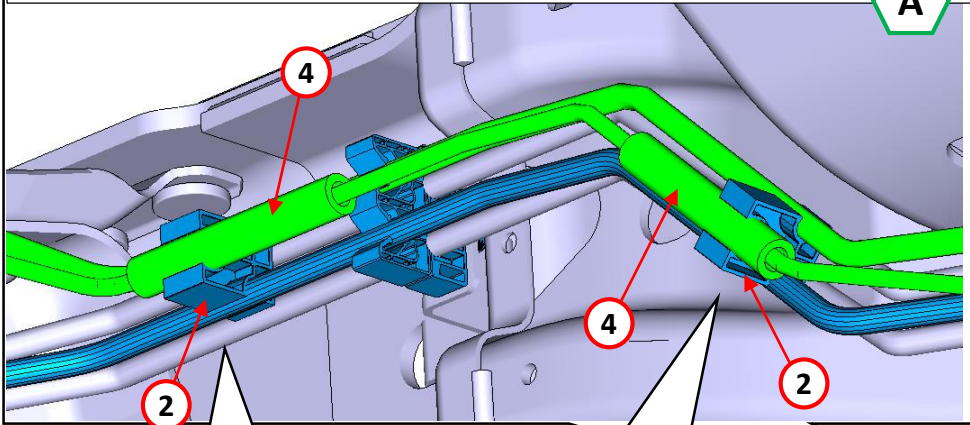
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-10S110-C	Intermediate Fuel Supply Line	N/A
2	1	P17EB-10R110-C	Intermediate Fuel Return Line	N/A
3	1	W713776-S300	Double C-Clip	N/A



**sc** Super Cab Wheelbase ONLY

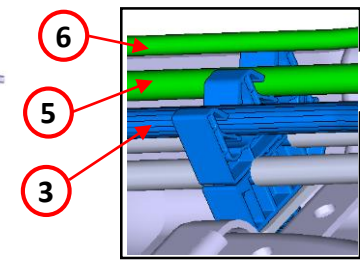
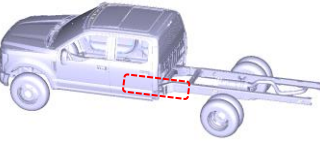
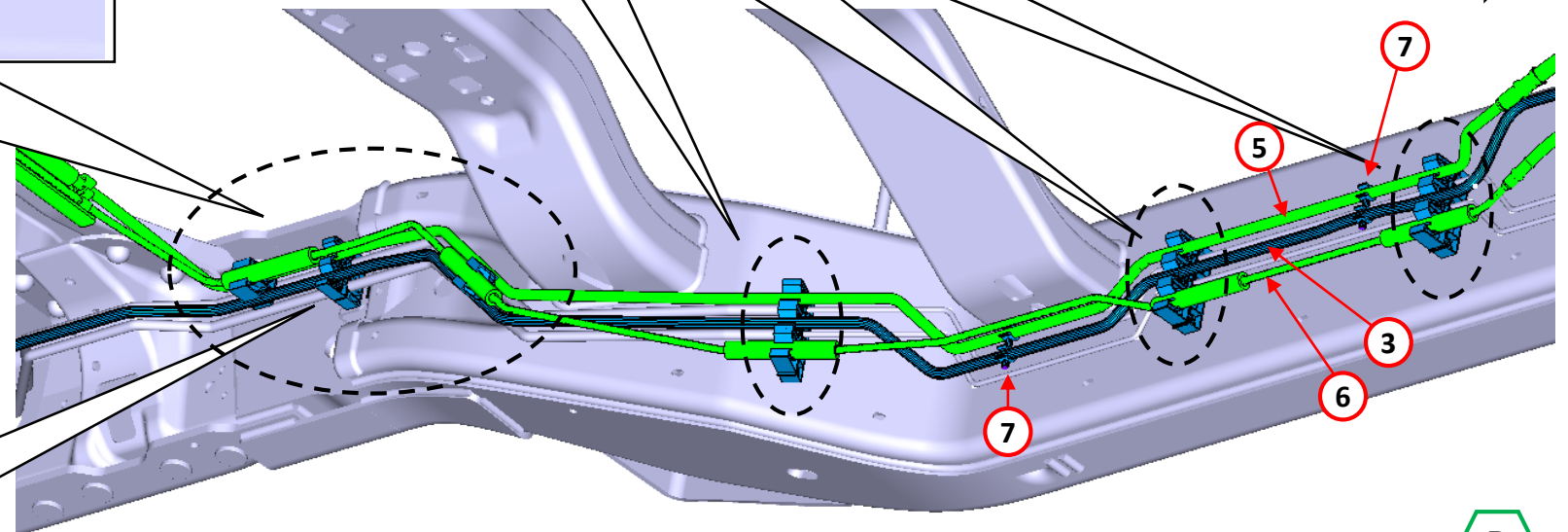
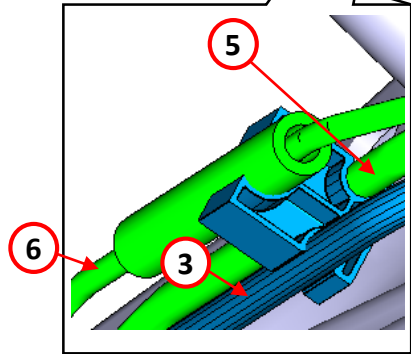
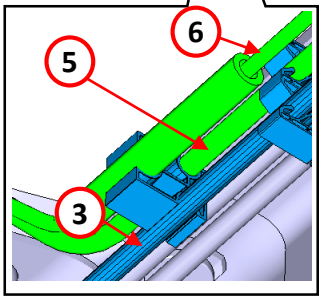
Snap the fuel lines into the retainers as shown, ensuring that you use the provided sleeves.

**A**



Item #	QTY	Part Number	Description	Torque (Nm)
1	2	Existing (Reuse)	Triple Locator Retainer	N/A
2	2	Existing (Reuse)	Tube Spacer	
3	1	Existing (Reuse)	Vapor Line	N/A
4A + 4B	7	P07L3-9C328-A + B	Sleeve, Inner + Outer	N/A
5	1	P17EB-10S120-C	Intermediate Fuel Supply Line	N/A
6	1	P17EB-10R120-C	Intermediate Fuel Return Line	N/A
7	2	Existing (Reuse)	Double C-Clip	N/A

**CC** Crew Cab Wheelbase

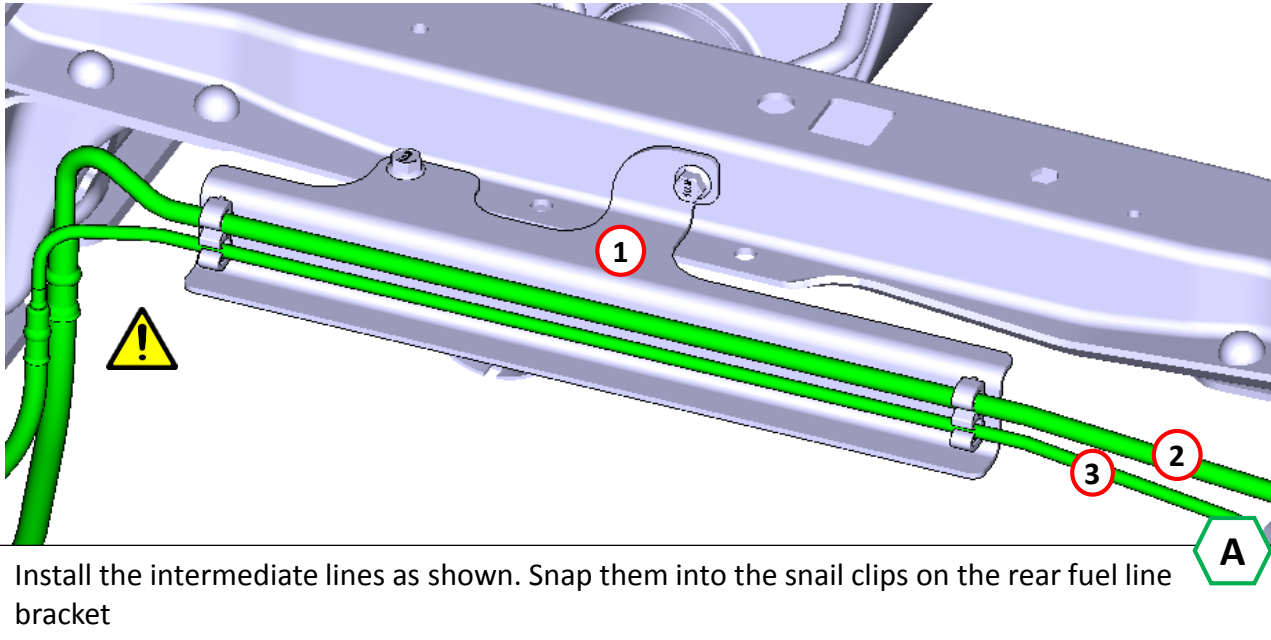
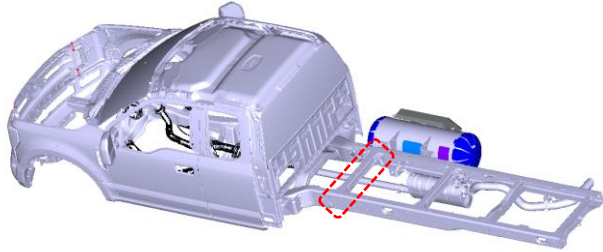


Install the intermediate lines as shown. Connect them to the corresponding forward fuel lines

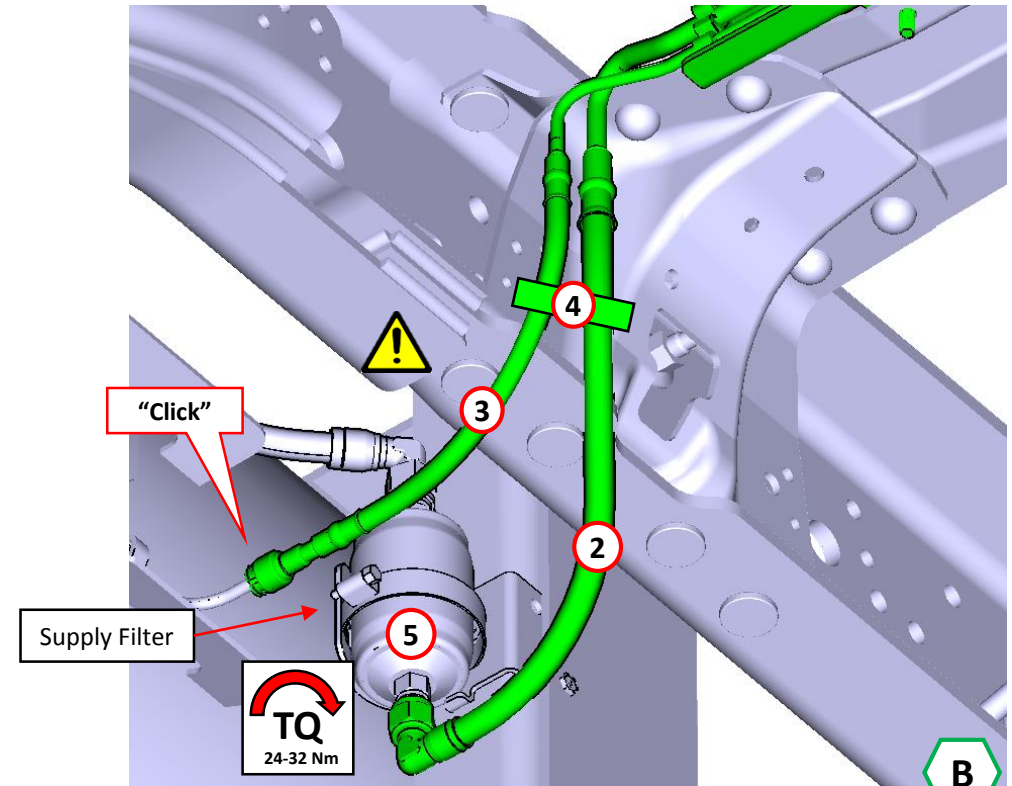
**B**



Ensure fuel line is not touching any components 



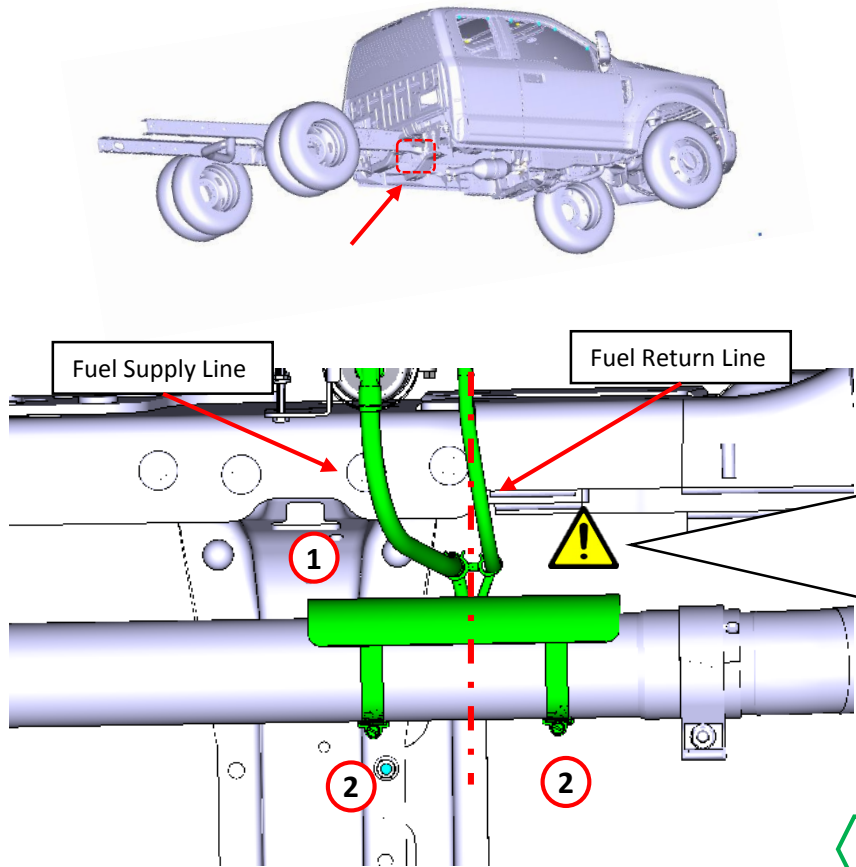
Item #	QTY	Part Number	Description	Torque (Nm)
1	2	P17EB-10F100-C	Rear Fuel Line Bracket	N/A
2	1	P17EB-10S110-C	Intermediate Fuel Supply Line	N/A
3	1	P17EB-10R110-C	Intermediate Fuel Return Line	N/A
4	1	W713776-S300	Double C-Clip	N/A
5	1	P-10S200-A	Supply Filter	24-32 Nm



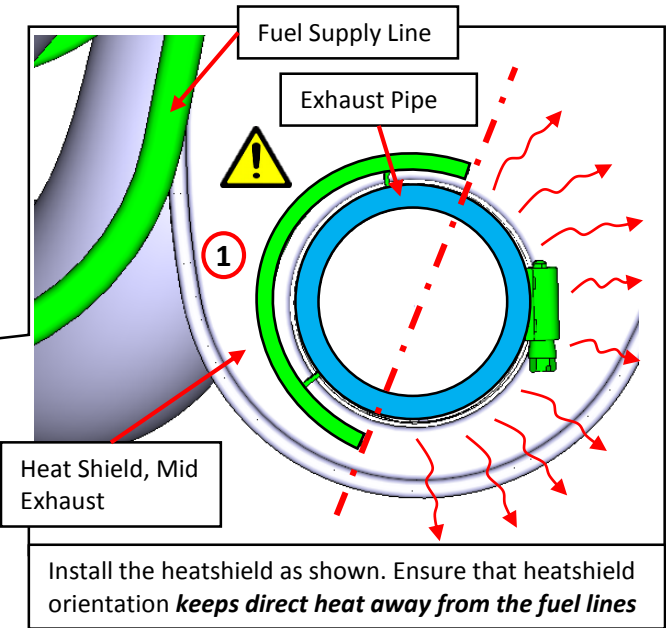
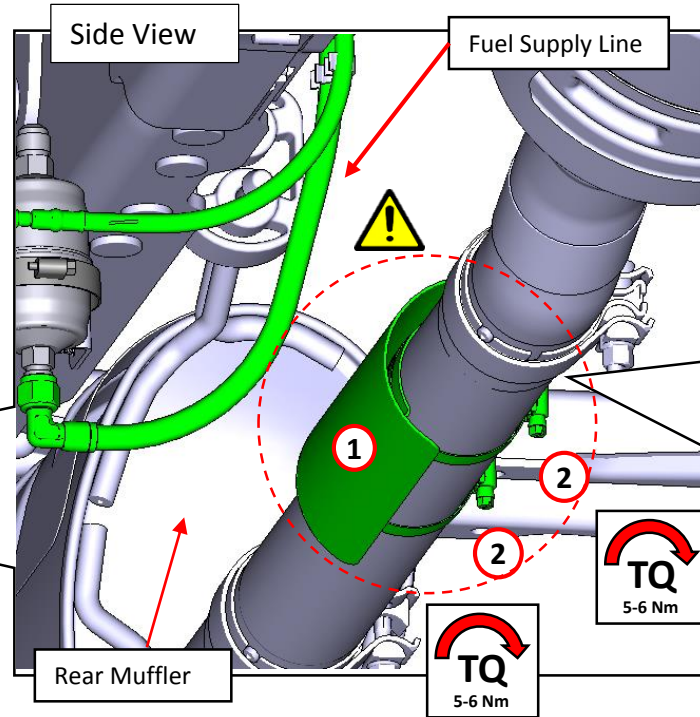




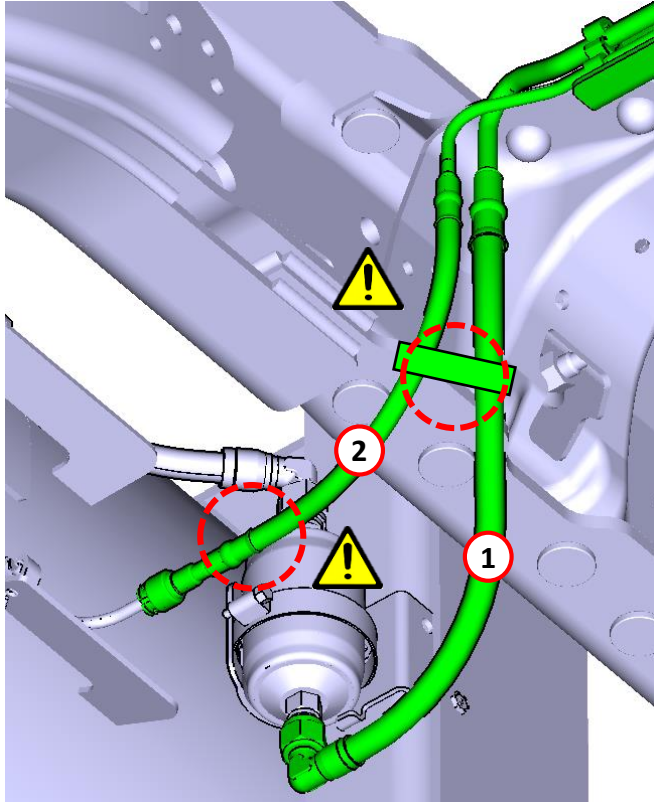
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-15D100-BA	Heat Shield, Mid Exhaust	N/A
2	2	11-054-0170	Worm Drive Hose Clamp, SAE 44, SS	5-6 Nm



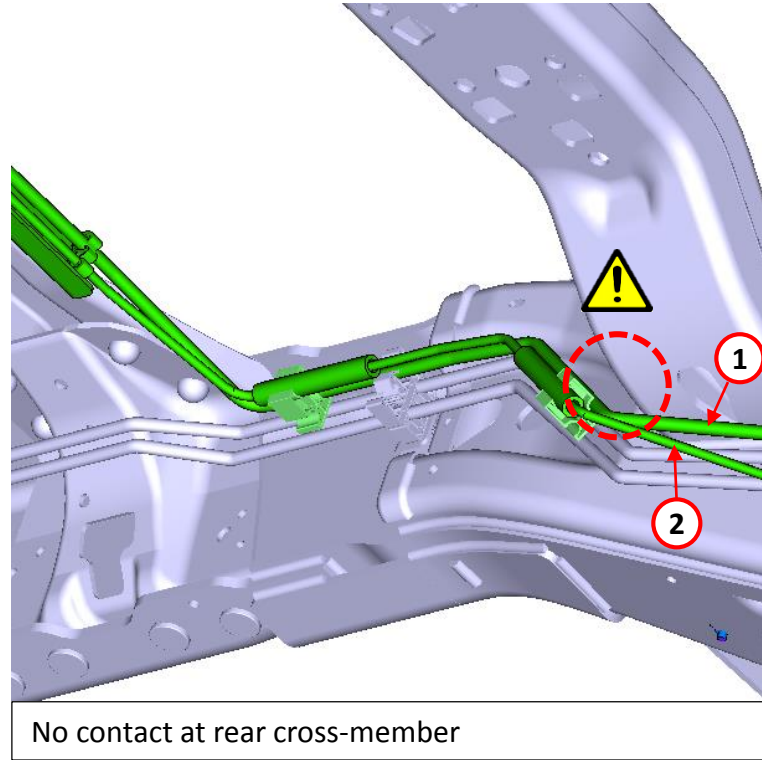
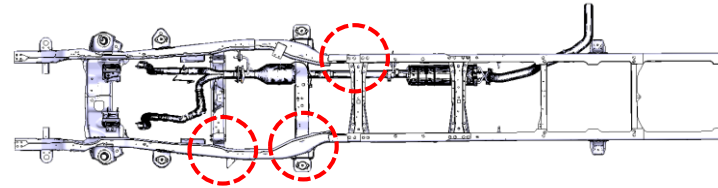
Install the heatshield as shown. **Ensure that the fuel lines are in-line with the center of the heatshield**



**!** Confirm the orientation of the heatshield **keeps direct heat away from the fuel lines**



A) No contact between fuel line and side of fuel filter  
B) No contact between frame and fuel line

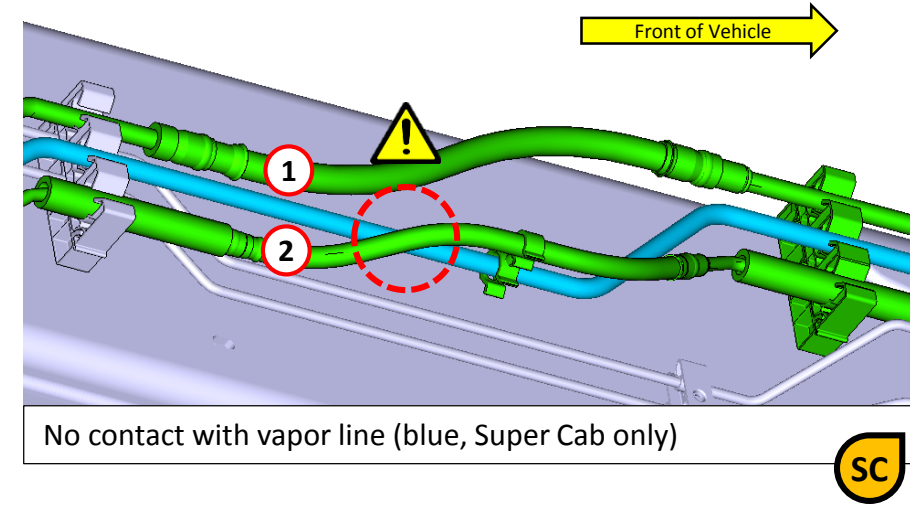


No contact at rear cross-member

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-10S110-C	Intermediate Fuel Supply Line	N/A
2	1	P17EB-10R110-C	Intermediate Fuel Return Line	N/A



Ensure fuel line is not touching any components  
*If the fuel lines are impacting any parts highlighted, the position of the fuel return and supply lines may need to be swapped*



No contact with vapor line (blue, Super Cab only)





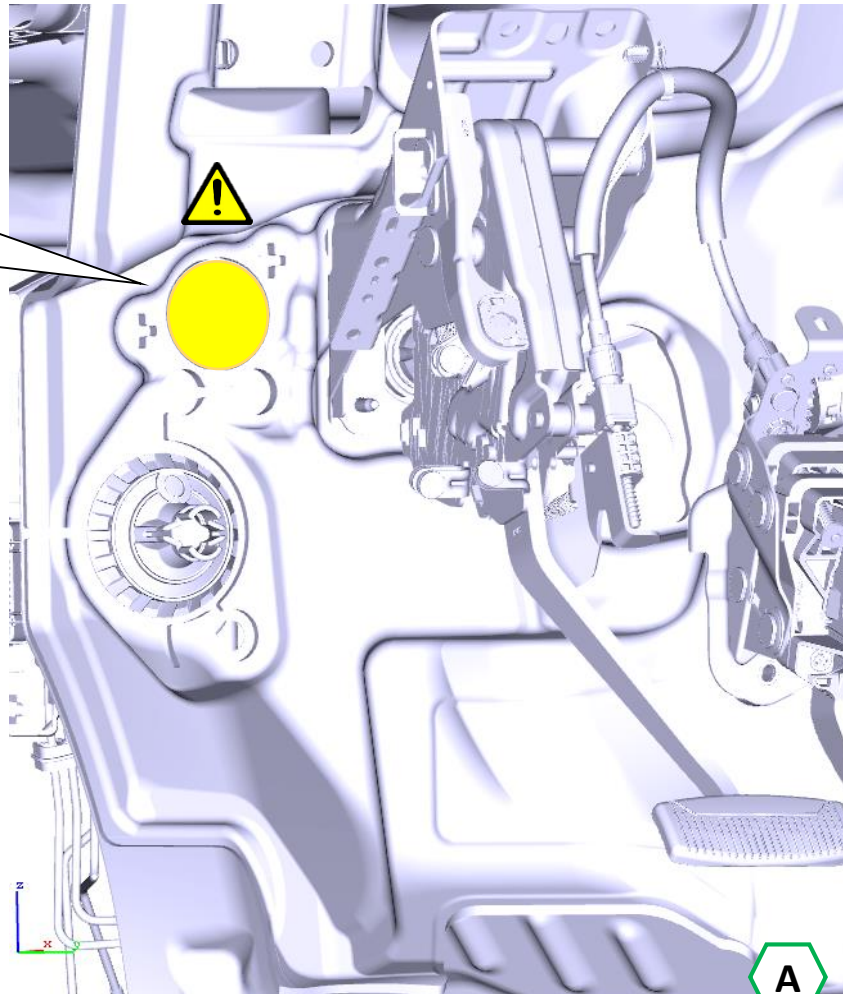
35mm Hole saw



Ensure cut hole has been deburred before undercoating is sprayed.

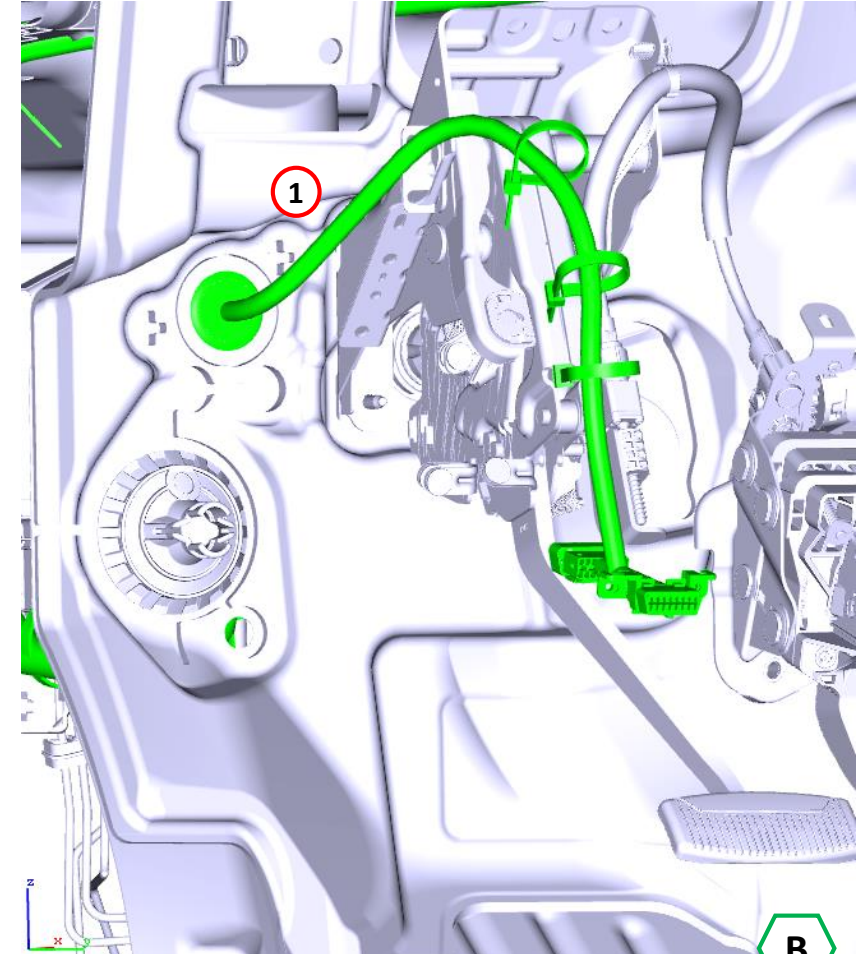


Use spray-on undercoating to cover any exposed metal caused by cutting



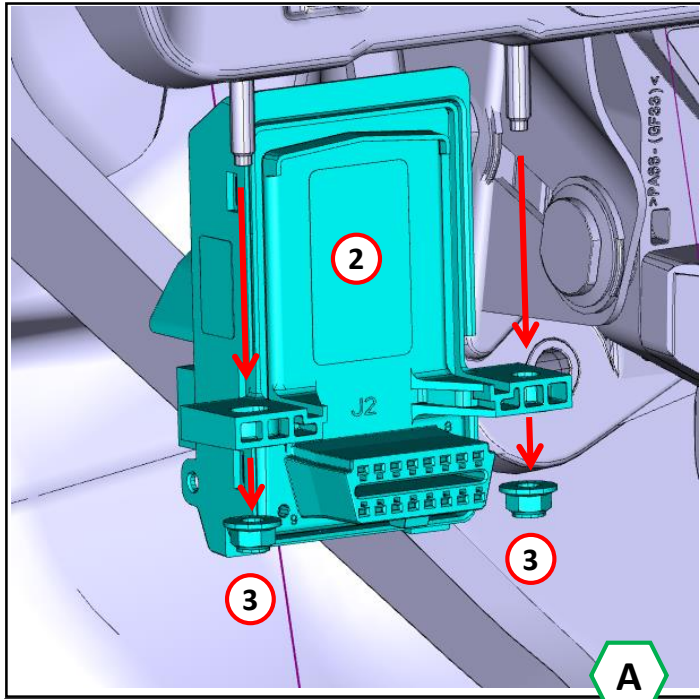
1. Remove the circular hole cover from the bulkhead insulation
2. Cut a 35mm Dia. hole through the bulkhead.

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18B100-A	Can wire harness	N/A

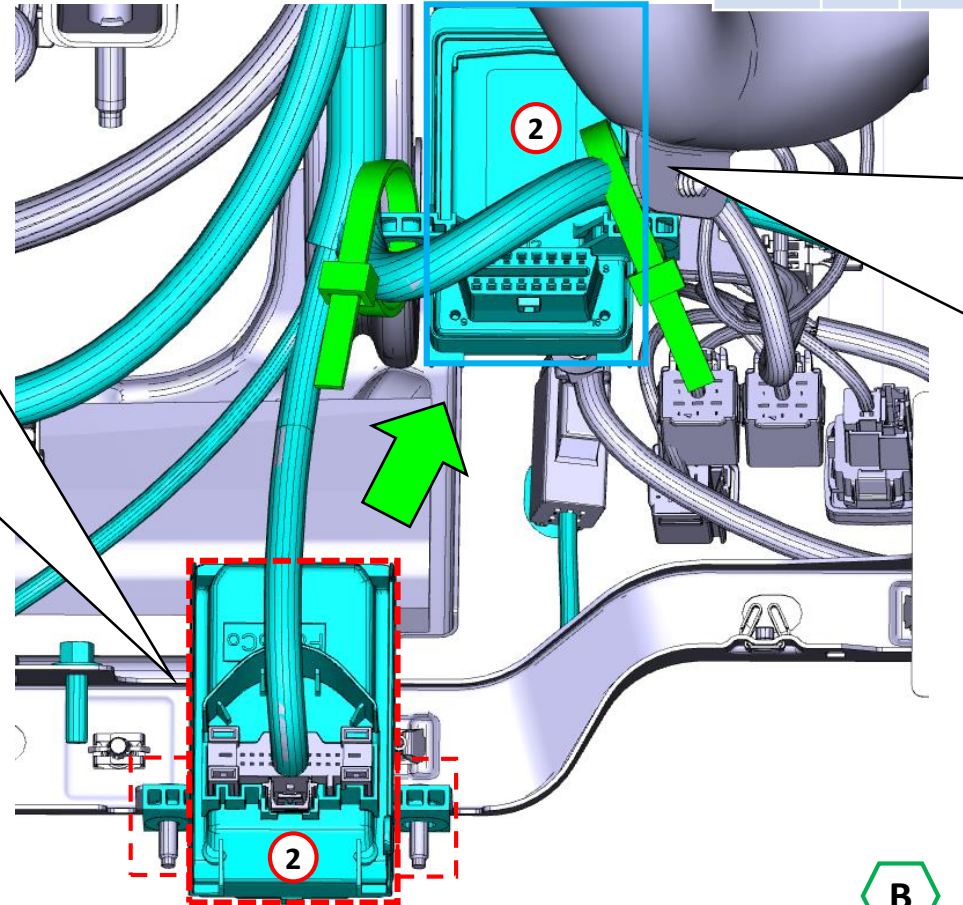


Feed the CAN wire harness through the cut hole from the interior of the vehicle allowing the gasket to seal properly.

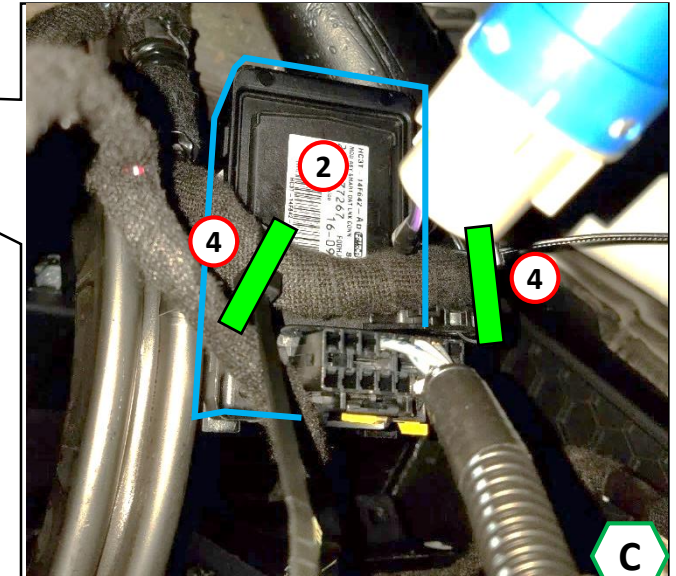
Item #	QTY	Part Number	Description	Torque (Nm)
2	1	Existing (Reuse, HC3T-14F642-A)	Smart Data Link	N/A
3	2	Existing (Reuse)	M5 X 0.8 Hex Flange Nut	N/A
4	2	20-403-0003	Zip Tie	N/A



Unscrew the two M5 Nuts holding the Smart Data Link under the IP



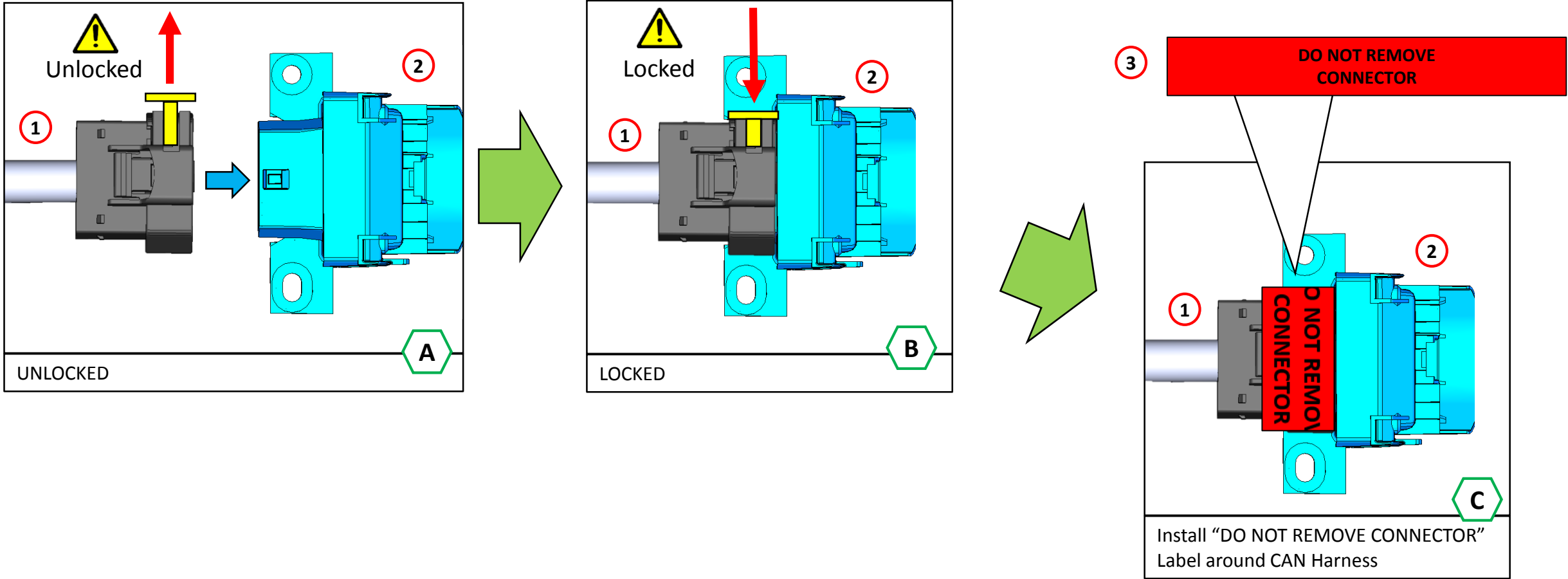
Relocate the Smart Data Link within the IP at the position outlined in blue.



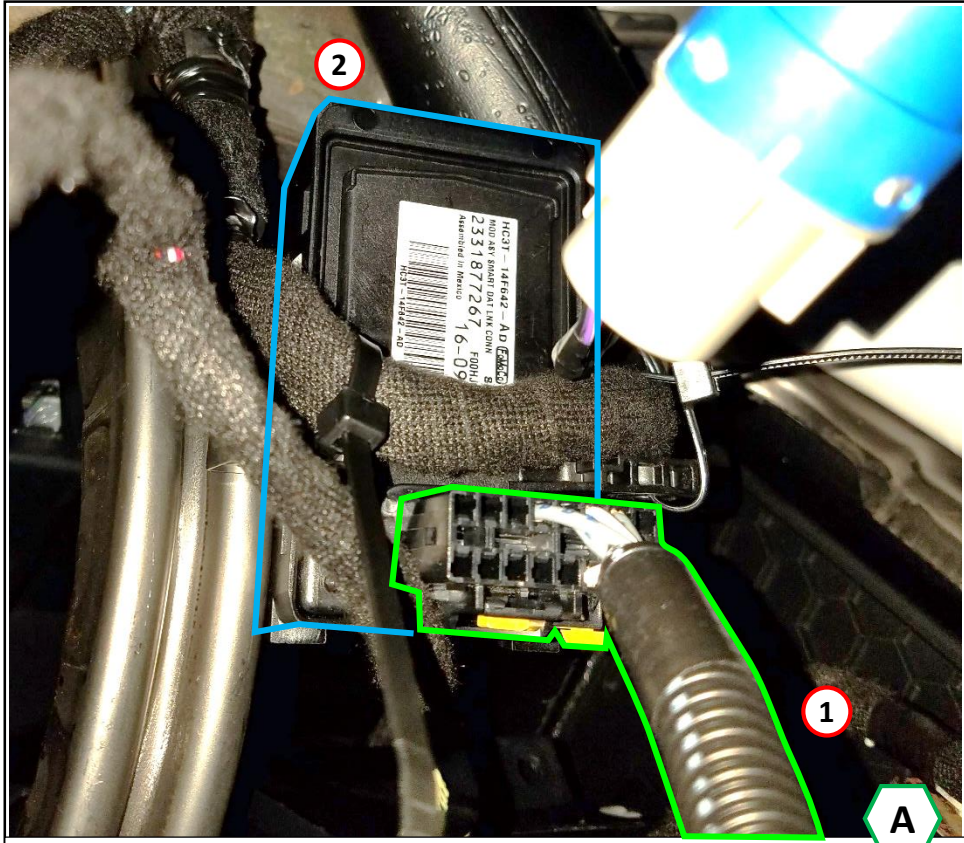
Relocate the Smart Data Link within the IP using zip ties through the mounting holes and around the OEM harness.

NOTE: When connecting the Smart Data Link, Ensure that the CAN harness is locked as shown in the images below

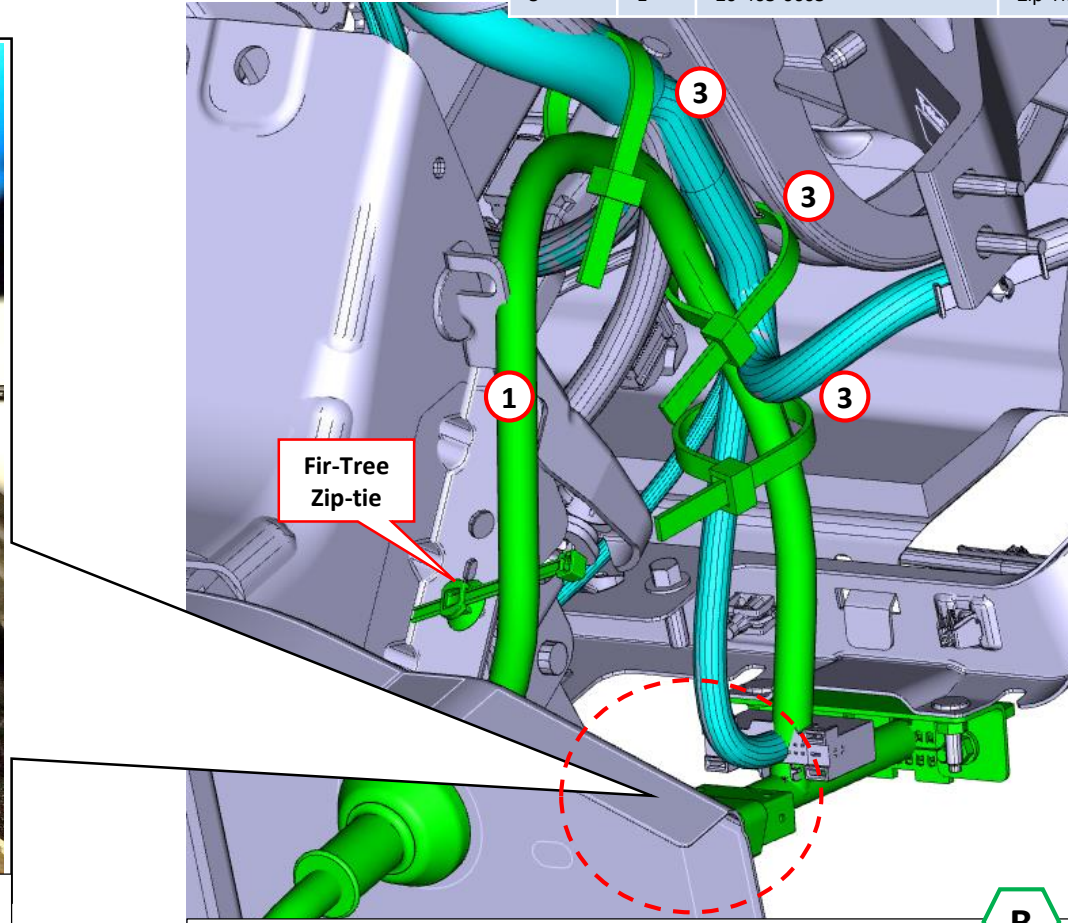
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18B100-A	ROUSH CAN Wire Harness	N/A
2	1	Existing (Reuse, HC3T-14F642-A)	Smart Data Link	N/A
3	1	P-01C500-A	Do Not Remove Label	N/A



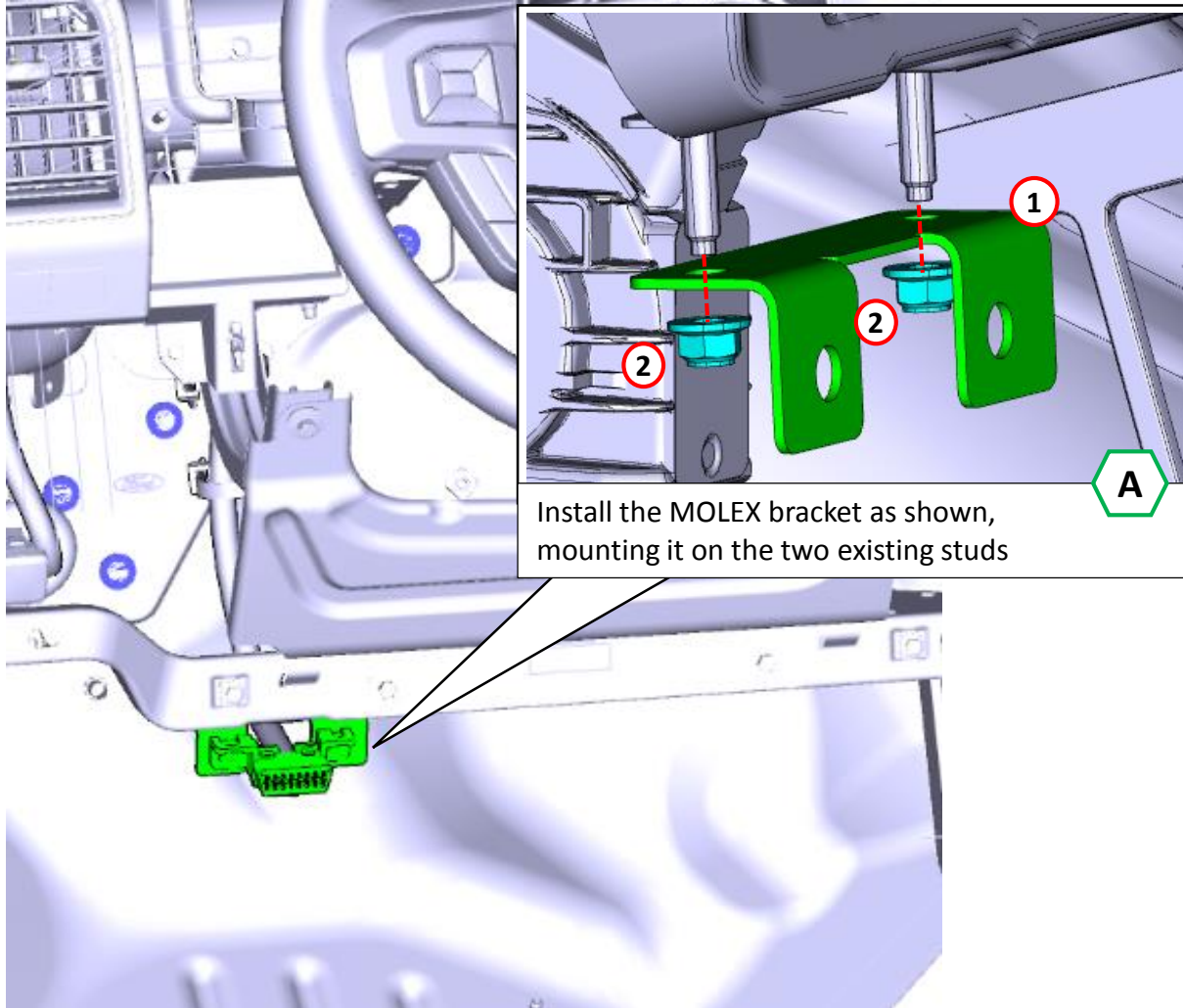
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18B100-A	ROUSH CAN Wire Harness	N/A
2	1	Existing (Reuse, HC3T-14F642-A)	Smart Data Link	N/A
3	1	20-403-0003	Zip-Tie	N/A



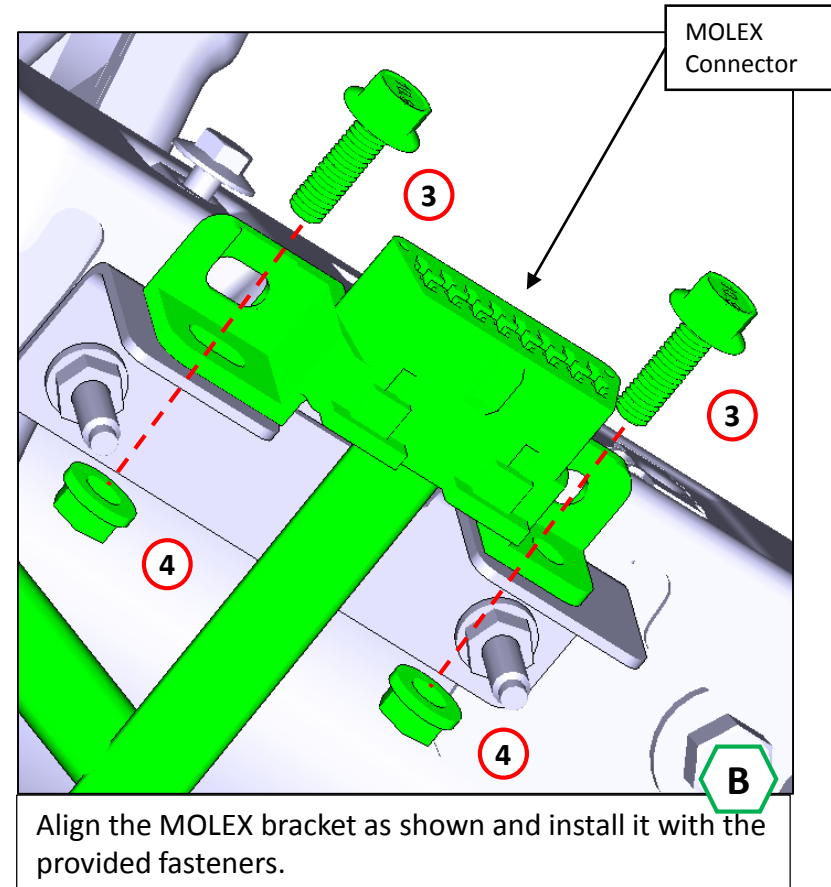
Connect Male OBD connector on the CAN Harness to the Smart Data Link

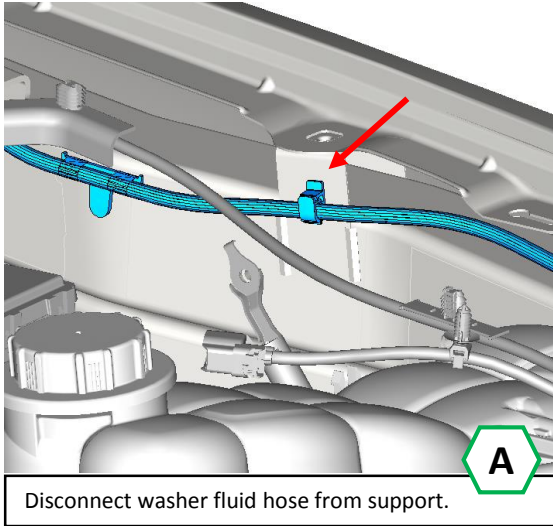


Attach fir tree on the harness to brake bracket and zip-tie to OEM harness

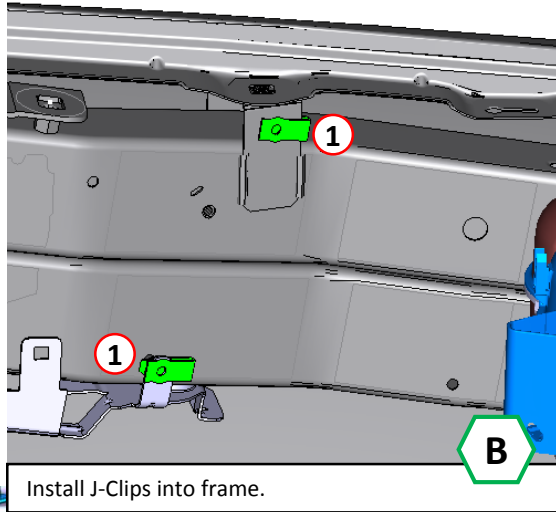


Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-98A100-A	MOLEX Connector Bracket	N/A
2	2	Existing (Reuse)	M5 X 0.8 Hex Flange Nut	4.5-6 Nm
3	2	11-031-0647	M5 X 0.8 X 16	4.5-6 Nm
4	2	11-278-0311	M5 Hex Head Nut	4.5-6 Nm

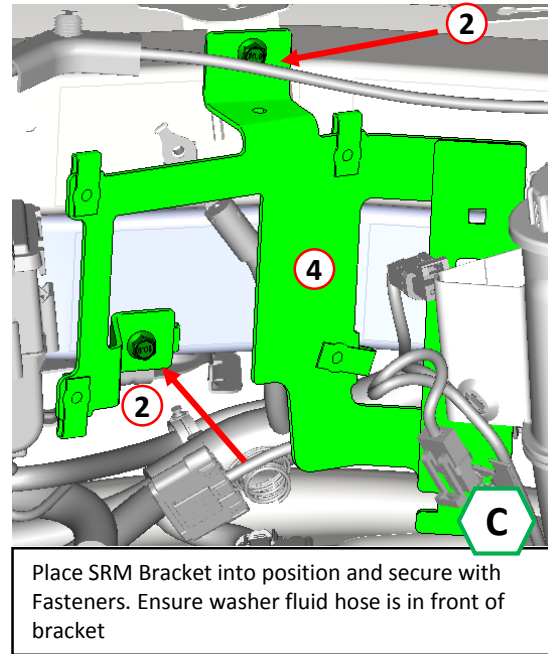




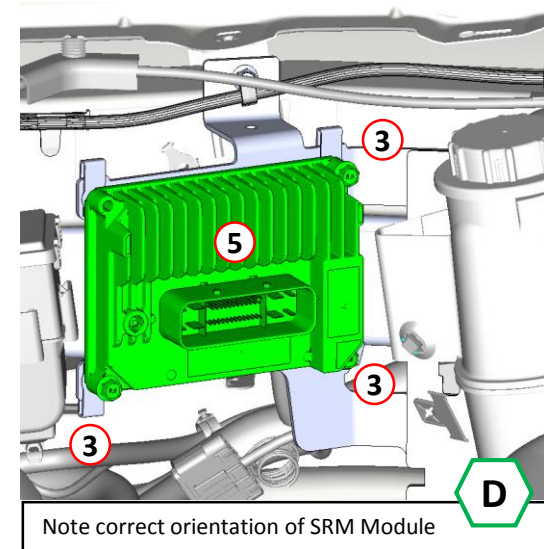
Disconnect washer fluid hose from support.



Install J-Clips into frame.

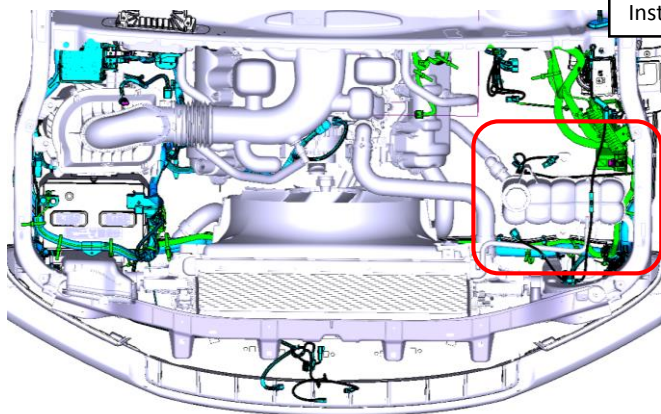


Place SRM Bracket into position and secure with Fasteners. Ensure washer fluid hose is in front of bracket



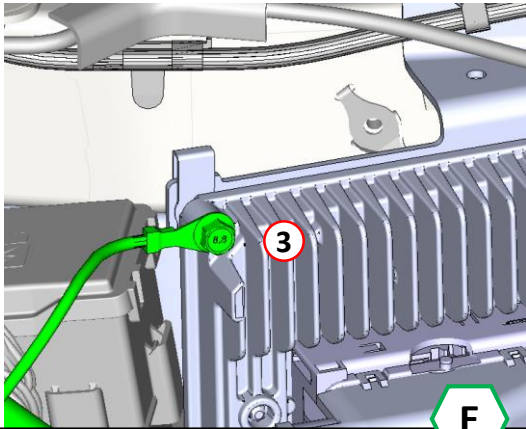
Note correct orientation of SRM Module

Item #	QTY	Part Number	Description	Torque (Nm)
1	6	11-056-0043	M6 J-Clip	N/A
2	2	98093A436	M6 X 1.0 X 16mm	8-12 Nm
3	3	11-031-0636	M6 X 1.0 X 30mm	5-7 Nm
4	1	P17EB-03P211-A	SRM Bracket	N/A
5	1	P17EB-03P240-A	SRM Module	N/A

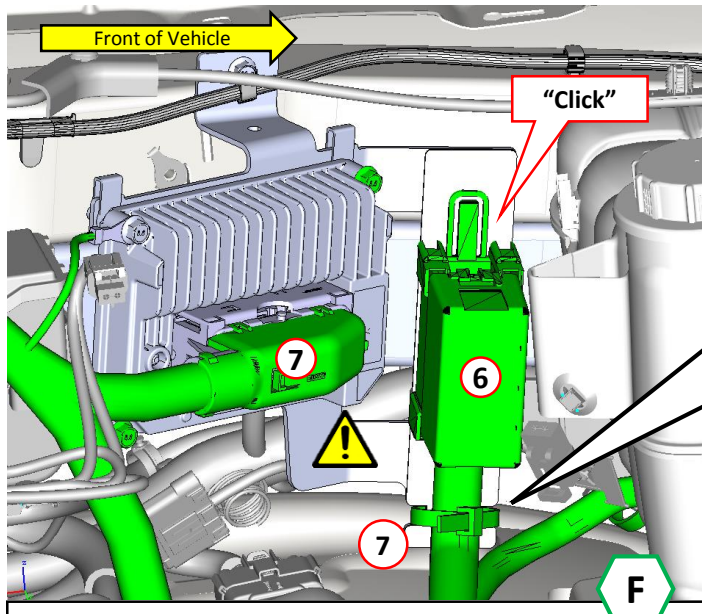




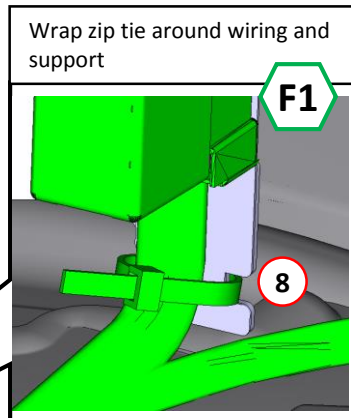
Item #	QTY	Part Number	Description	Torque (Nm)
3	1	11-030-0636	M6 X 1.0 X 30mm	5-7 Nm
6	1	P17EB-18A100-A (Underhood Harness)	Fuse Box (Part of Underhood Wiring Harness)	N/A
7	1		SRM Connector (Part of Underhood Wiring Harness)	N/A
8	1	20-403-0003	Zip Tie	N/A



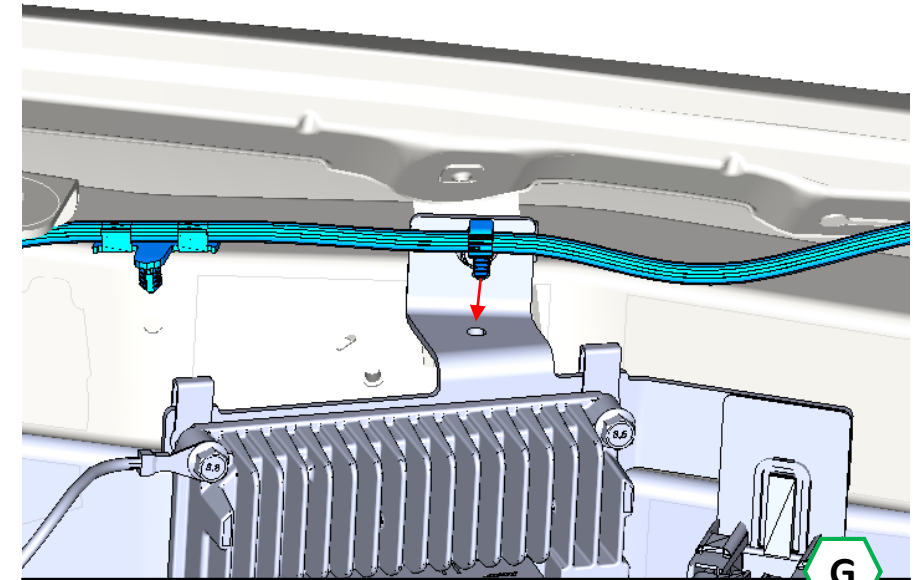
Install grounding wire from wiring harness underneath the top corner bolt.



Install wiring harness and fuse box. #6 is properly mounted when a "click" is audible.

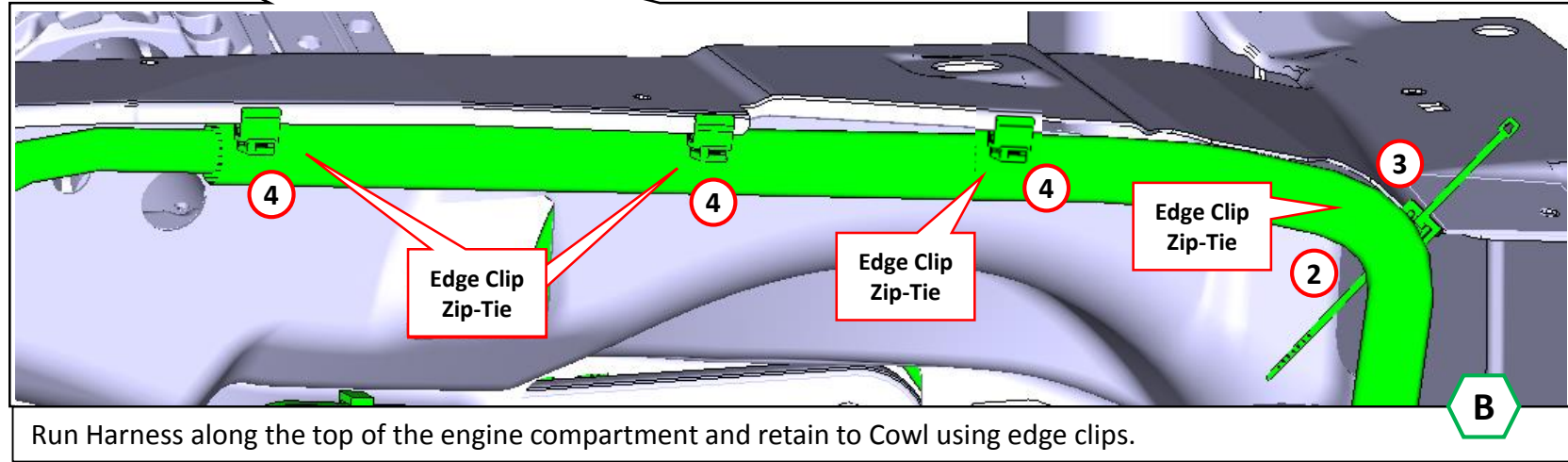
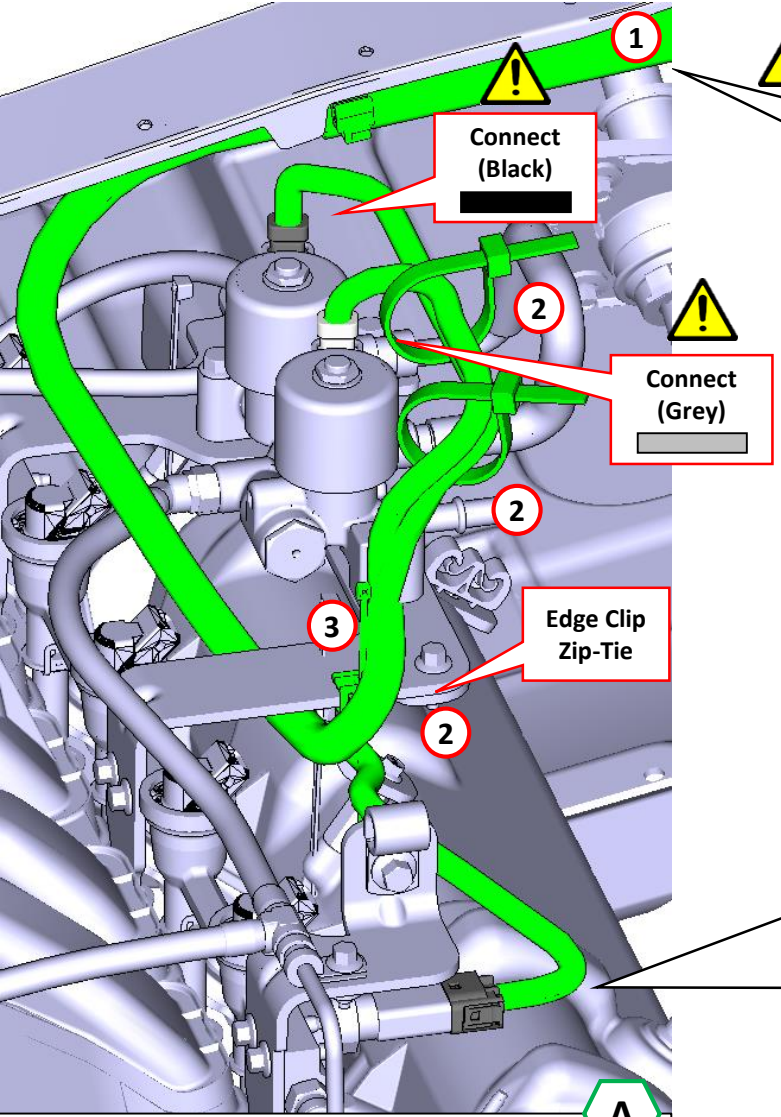


Wrap zip tie around wiring and support

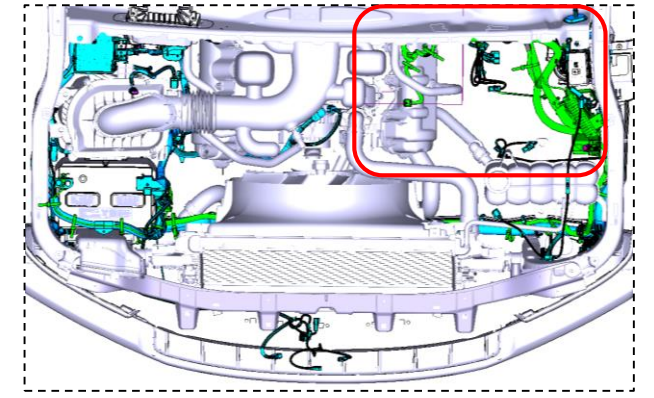
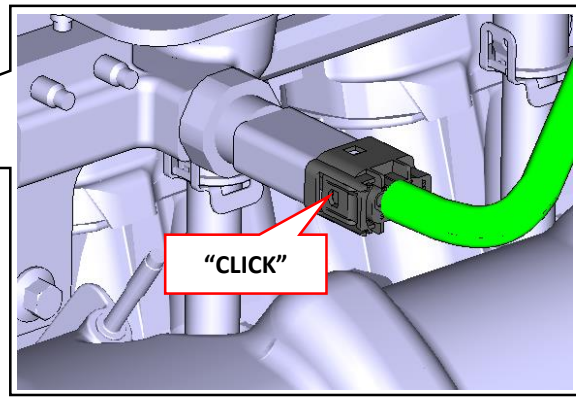


Secure washer fluid hose on top of SRM Bracket as shown

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18A100-A	Underhood Harness	N/A
2	4	20-403-0003	Zip-Tie	N/A
3	2	156-00020	Baffle Edge-Clip	N/A
4	3	20-403-0011	Edge-Clip with Tie Strap	N/A

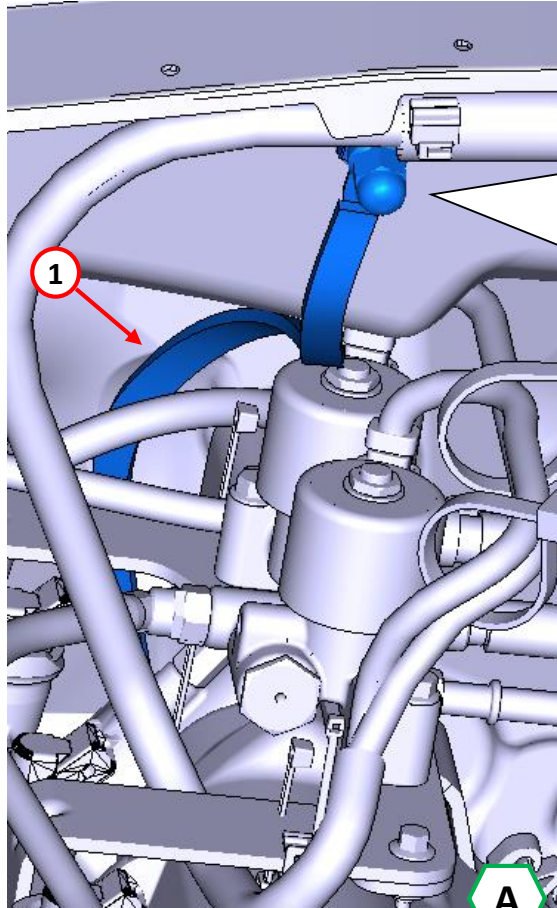


Run Harness along the top of the engine compartment and retain to Cowl using edge clips.

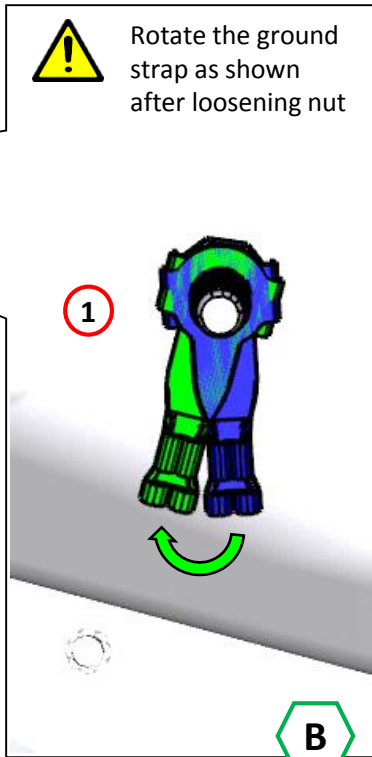


Connect Harness to Fuel Rail Assembly and retain with edge clip and zip ties.

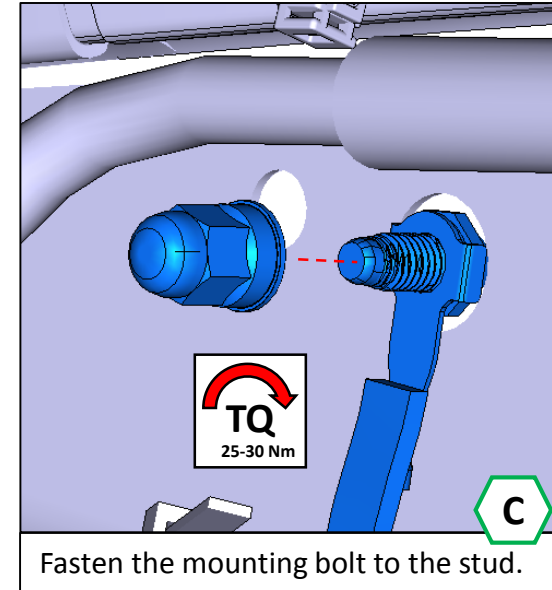
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	OEM Component	Grounding Strap	N/A
2	1	OEM	Ground Strap Bolt	25-30 Nm



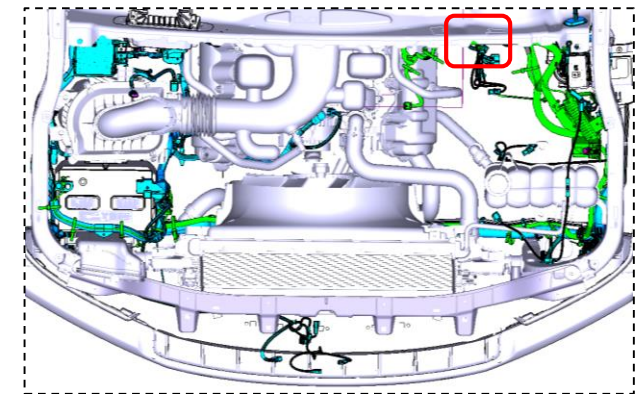
Ensure the OEM Grounding strap is properly routed, on the passenger side of the FRPCM Bracket



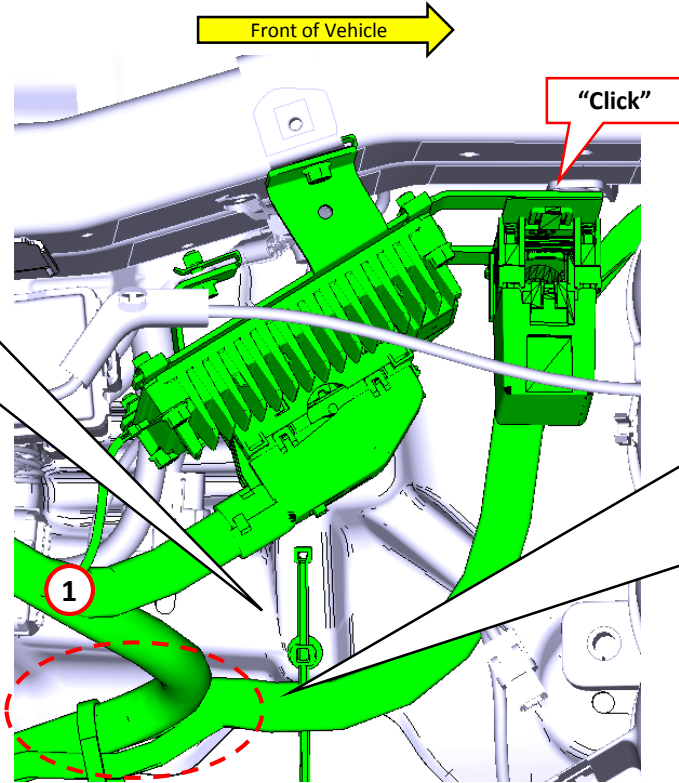
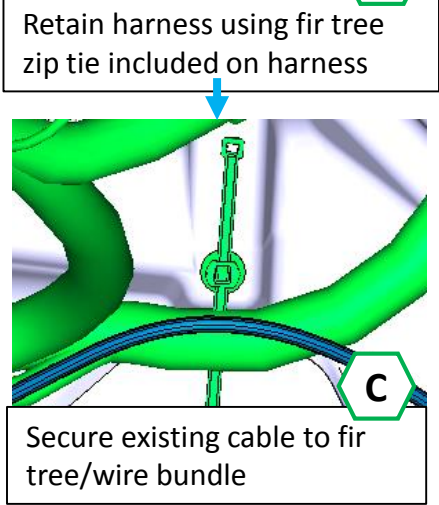
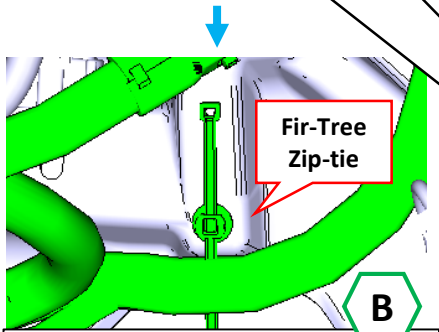
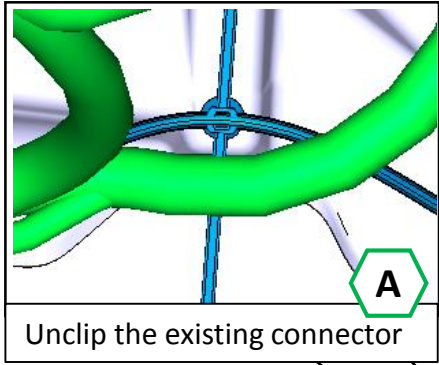
Loosen the nut and rotate the ground strap mounting from the blue position to the green position.



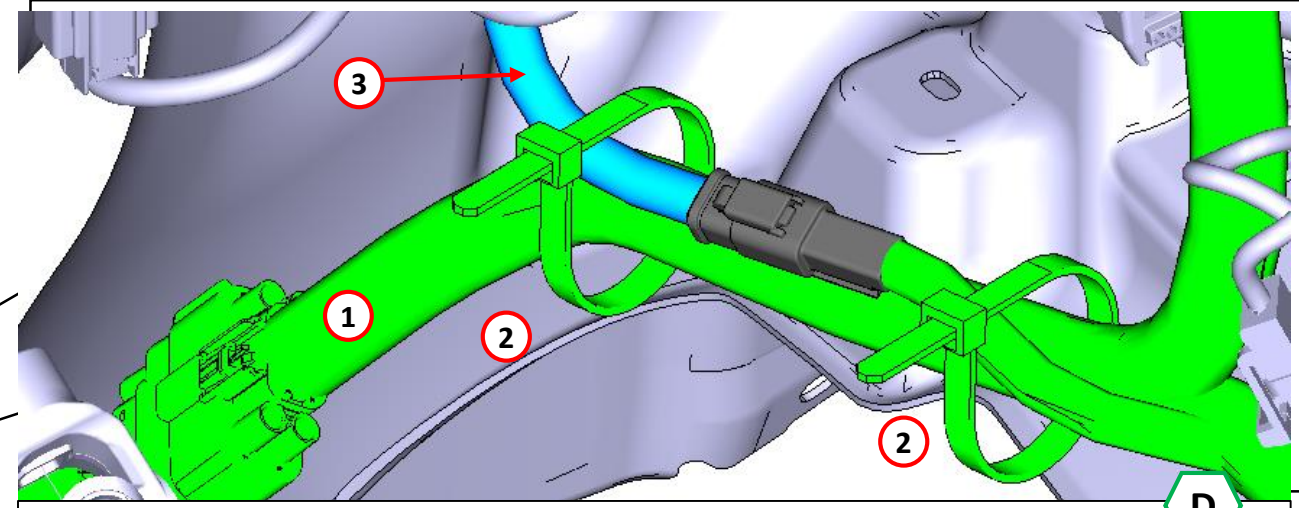
Fasten the mounting bolt to the stud.



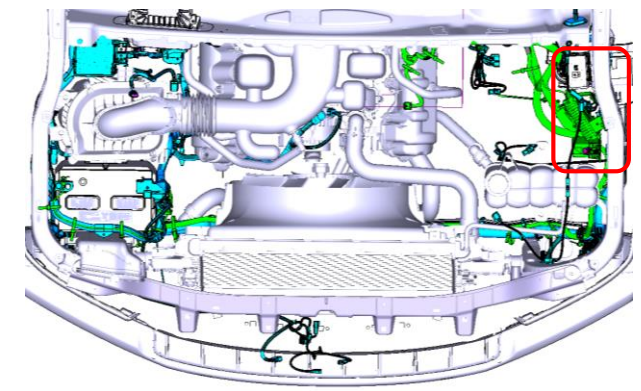
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18A100-A	Underhood Harness	N/A
2	2	20-403-0003	Zip-Tie	N/A
3	1	P17EB-18B100-A	CAN Harness	N/A

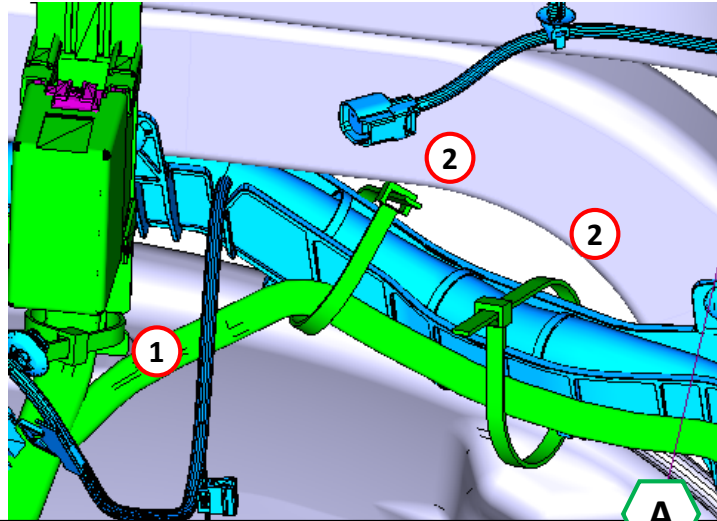


Secure SRM Connector to the SRM ensuring it seats properly. Attach the Fuse box to the bracket pushing until a click is felt or heard. Secure the Fir-Tree.

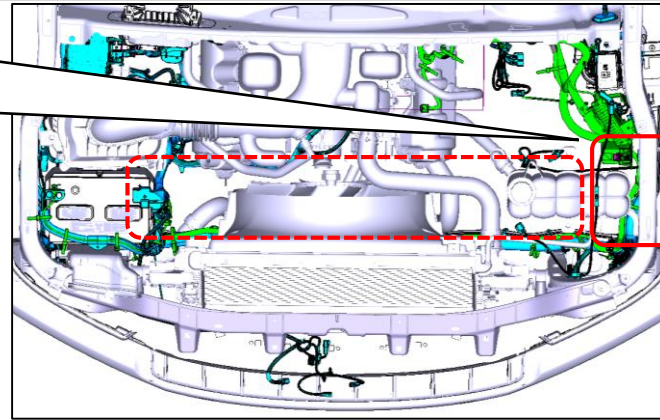


Connect Underhood harness to the CAN Harness, securing the connectors to the Underhood harness with zip ties




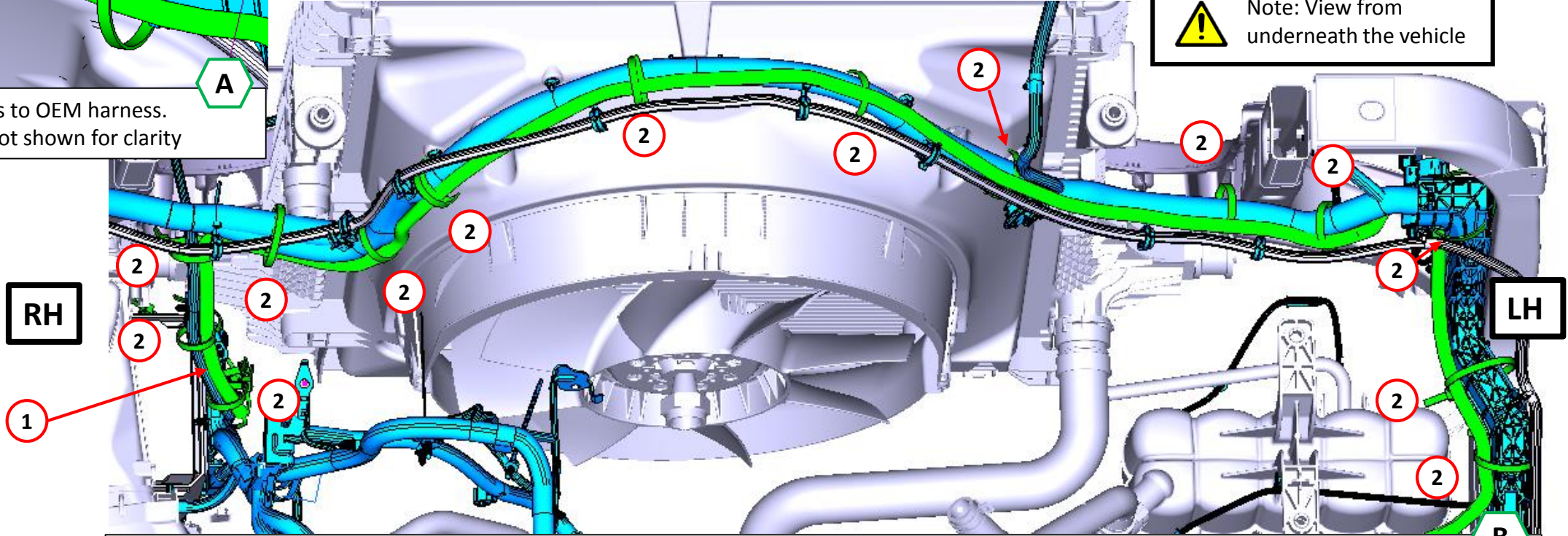


Zip tie Underhood harness to OEM harness.  
Note: Coolant Reservoir not shown for clarity



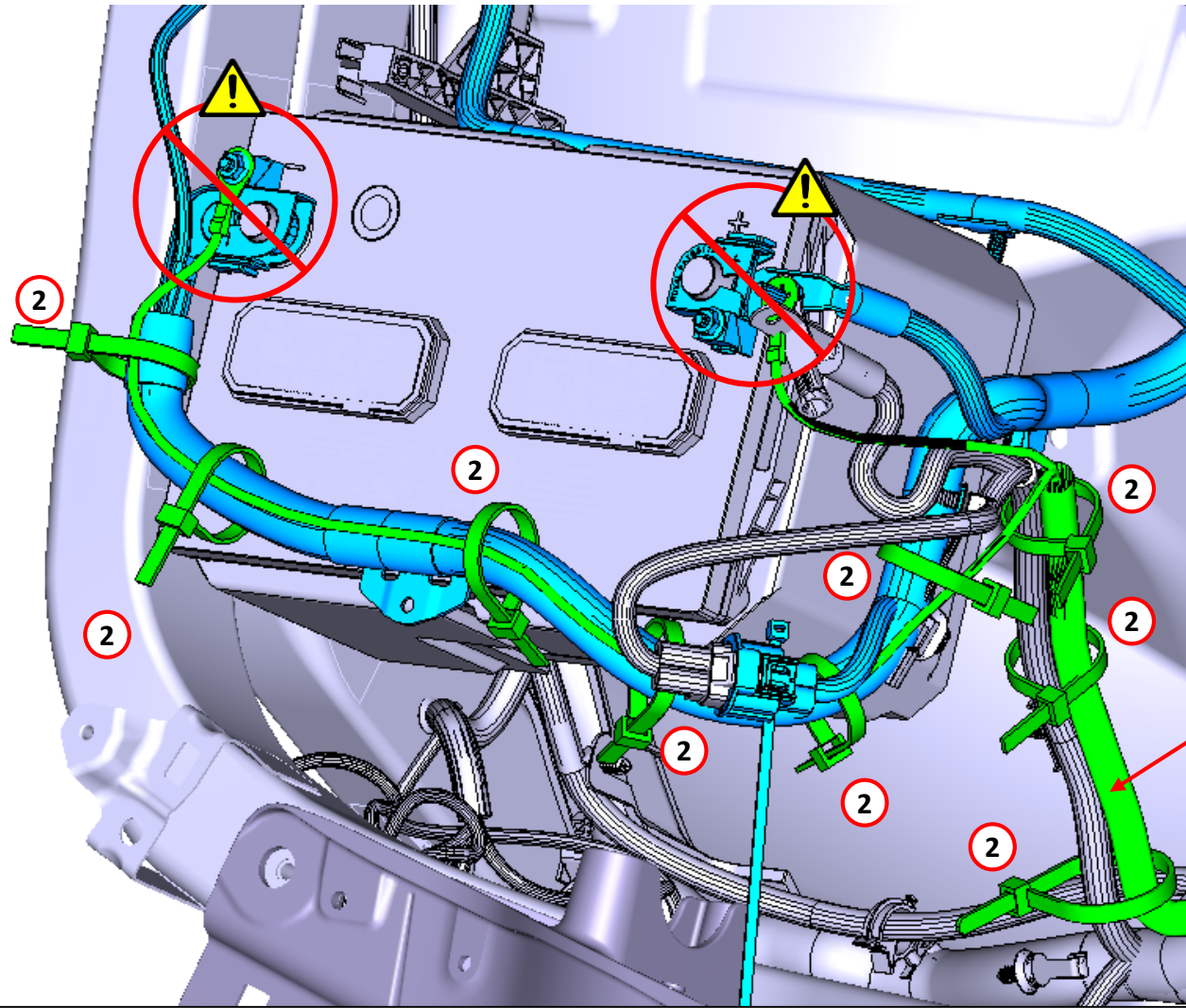
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18A100-A	Underhood Harness	N/A
2	11	20-403-0003	Zip-Tie	N/A

 Note: View from underneath the vehicle



Zip tie Underhood harness to OEM harness, routing underneath the fan shroud. Some coolant lines hidden for clarity.

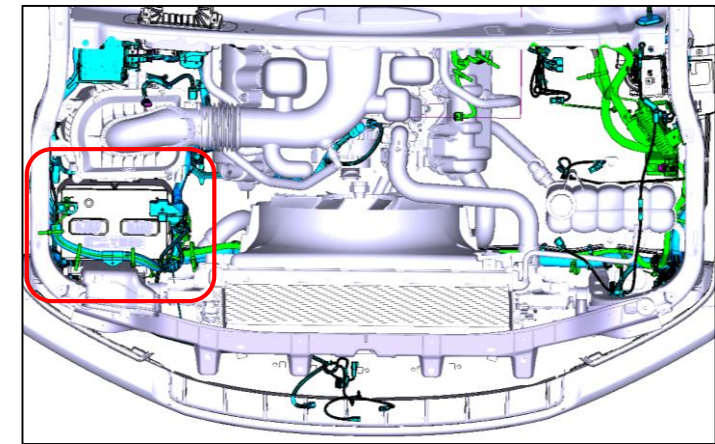
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18A100-A	Underhood Harness	N/A
2	9	20-403-0003	Zip-Tie	N/A



**DO NOT** secure the ROUSH Harness to battery terminals until after the installation of the entire propane fuel system is complete.

Reference Slide 113 for final connections to battery – To be completed as concluding step.

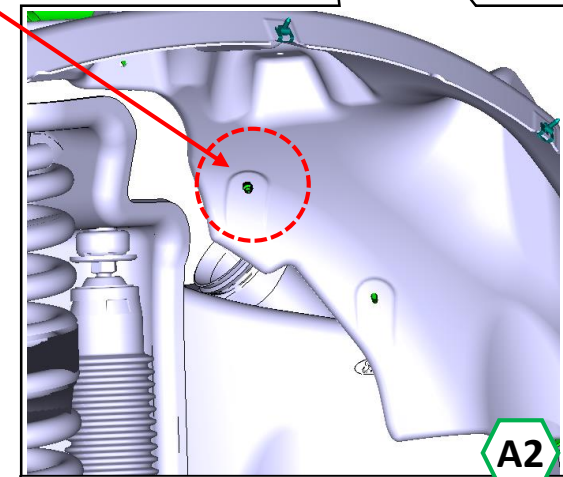
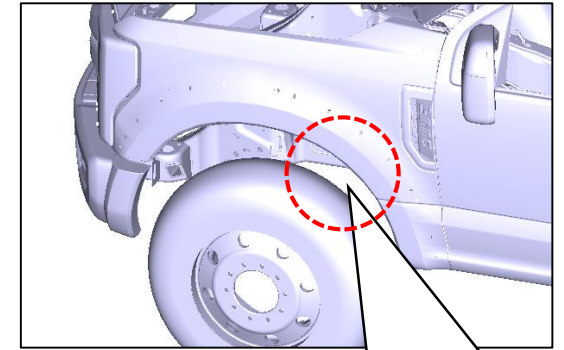
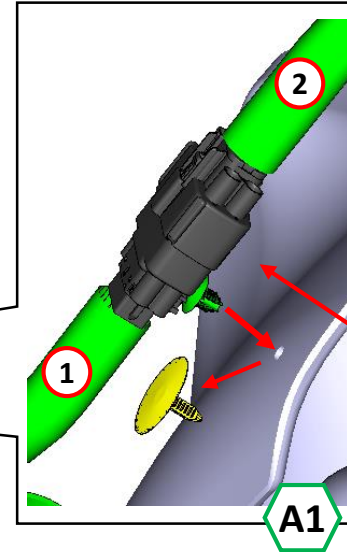
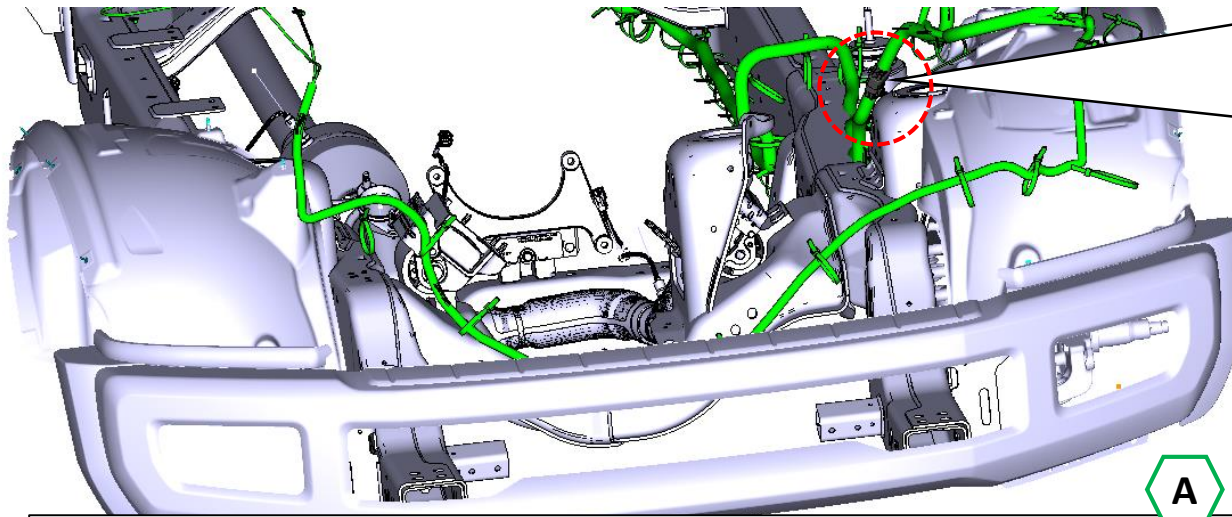
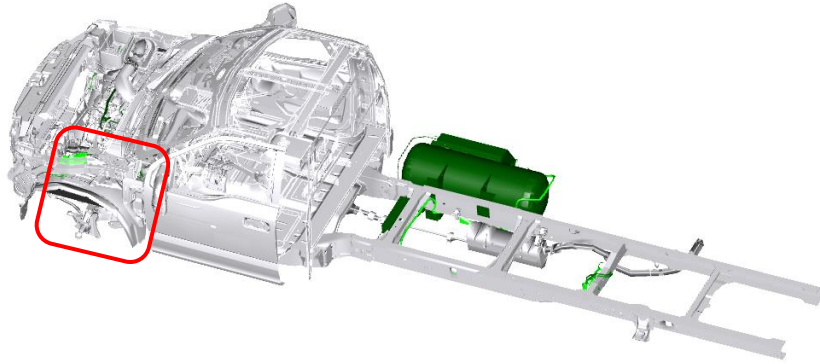
Zip-tie the Underhood harness and power leads along the OEM harness.





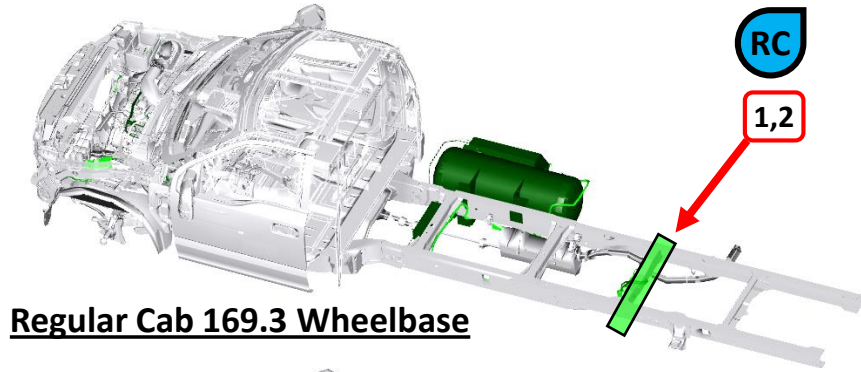
For **ALL** Cabs + Frame Lengths

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	1	P17EB-18A100-A	Underhood Harness	N/A

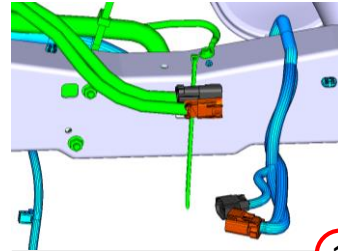


Connect Rear Frame harness to Underhood harness, and secure fir tree pin into hole on **engine-side of fender liner**

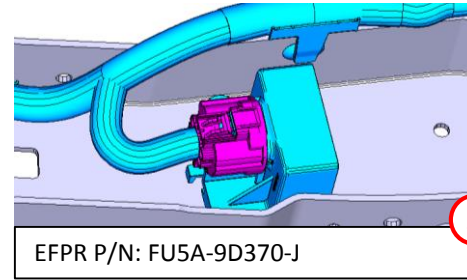
Secure fir tree pin into hole on **engine-side of fender liner**



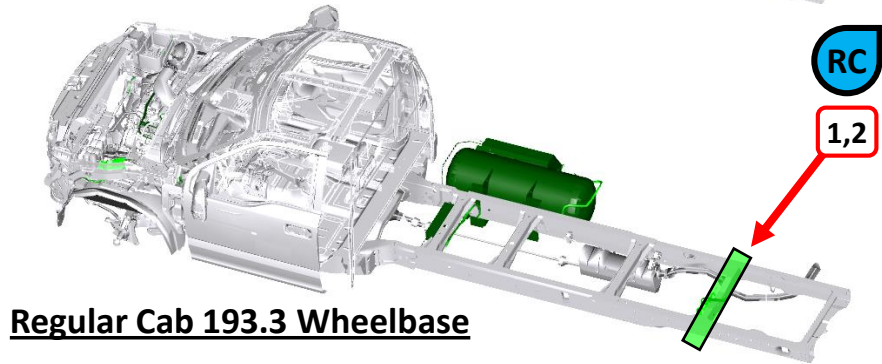
**Regular Cab 169.3 Wheelbase**



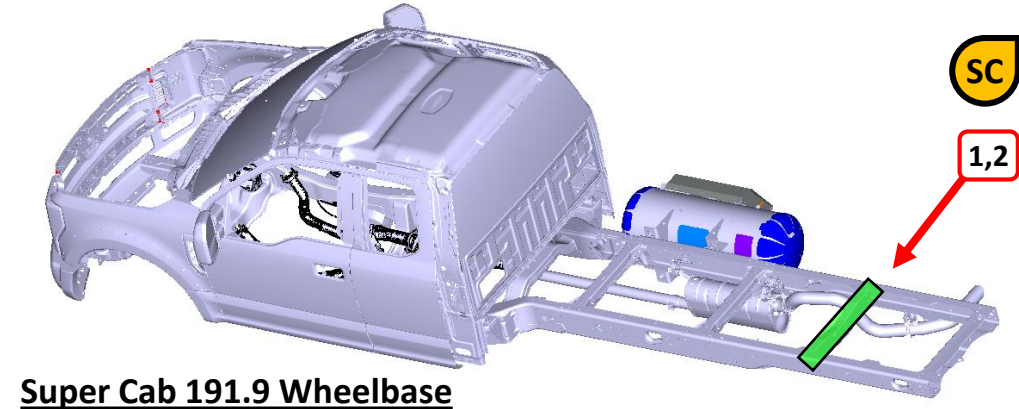
Chassis Grounds and  
Harness Connections



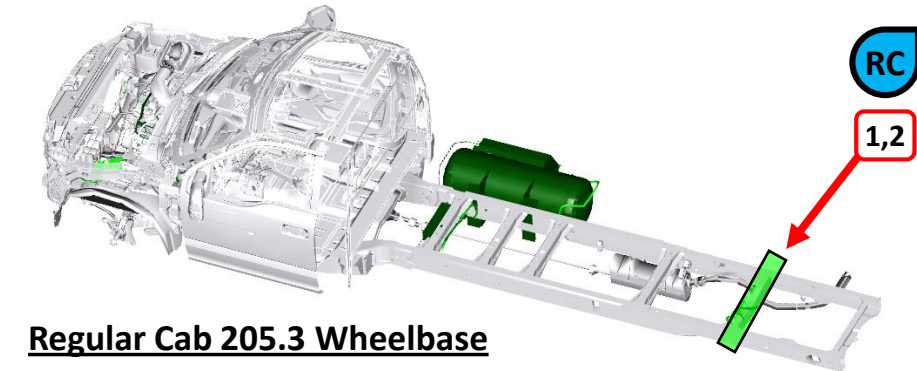
Both the EFPR mounting and the chassis grounds are located on the same cross-member, highlighted in green for their respective frame lengths



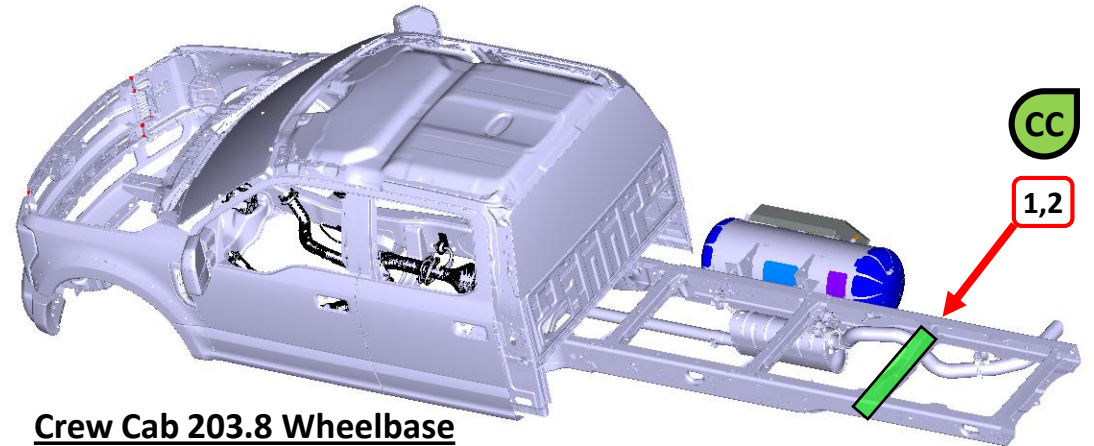
**Regular Cab 193.3 Wheelbase**



**Super Cab 191.9 Wheelbase**

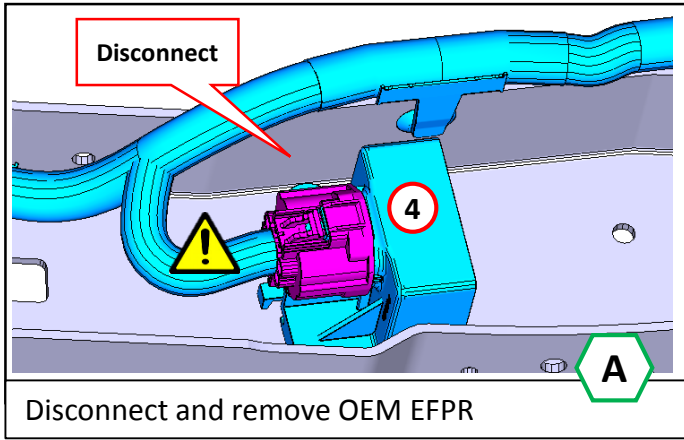


**Regular Cab 205.3 Wheelbase**

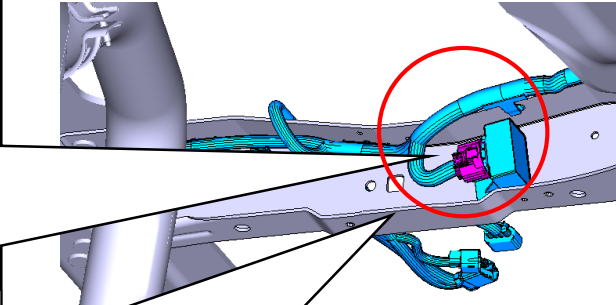


**Crew Cab 203.8 Wheelbase**

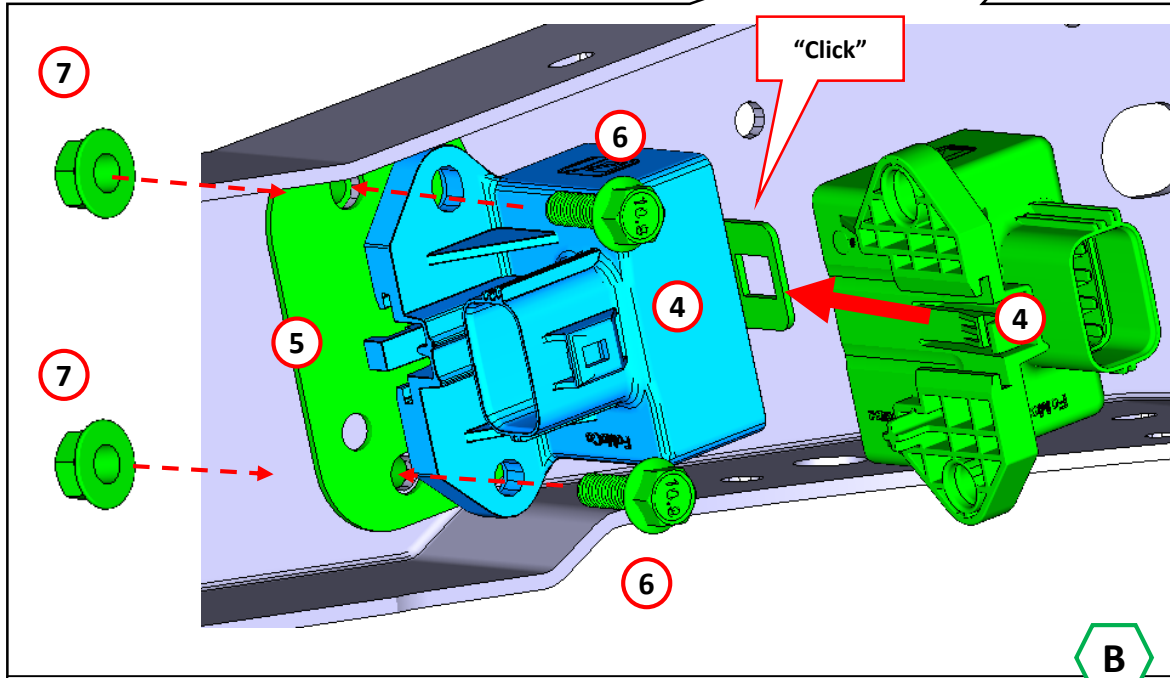




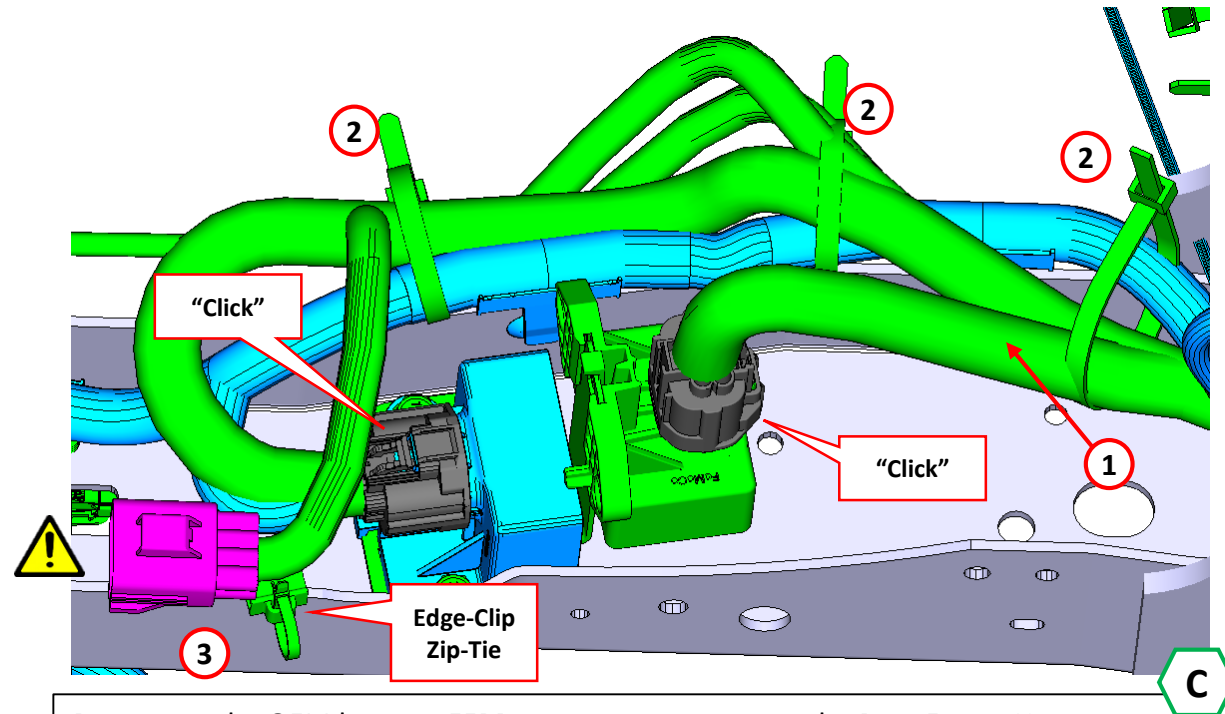
**!** Connect "Purple" connectors with each other



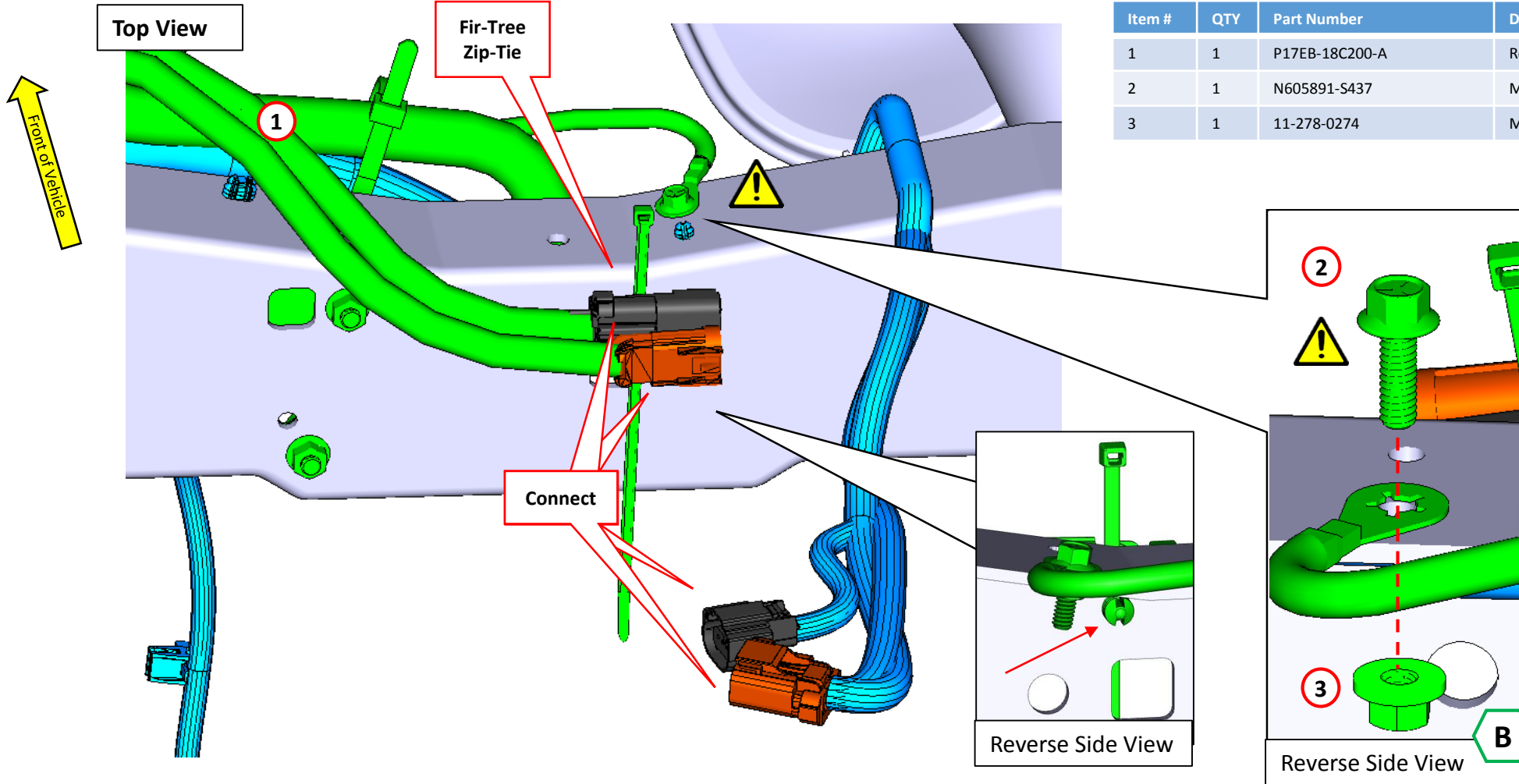
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	3	20-403-0003	Zip-Tie	N/A
3	1	156-00020	Baffle Edge Clip	N/A
4	1 X New 1 X Reuse	FU5A-9D370-J	Electronic Fuel Pump Relay Module (EFPR)	N/A
5	1	P14MB-03P301-A	EFPR Bracket	N/A
6	2	98093A543	M8 X 1.25 X 25Hex Flange	25 N-m
7	2	11-278-0302	M8 Hex Nut	25 N-m



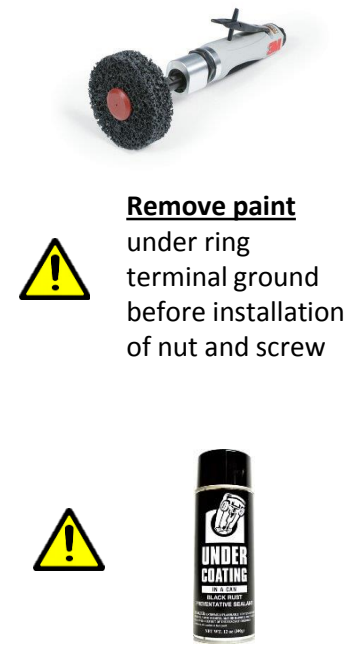
Install the supplied EFPR Bracket in position on the frame rail using two existing holes. Refer to page 96 for the position of the EFPR.



Reconnect the OEM harness EFPR connector to mate on the Rear Frame Harness. Route the Rear Frame Harness along the OEM Harness using zip-ties.



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	1	N605891-S437	M6 X 1.0 X 18.5 Hex Head Bolt	8-12 Nm
3	1	11-278-0274	M6 X 1.0 Hex Nut	8-12 Nm



**Remove paint**  
under ring  
terminal ground  
before installation  
of nut and screw

**Use spray-on undercoating**  
to cover any exposed metal

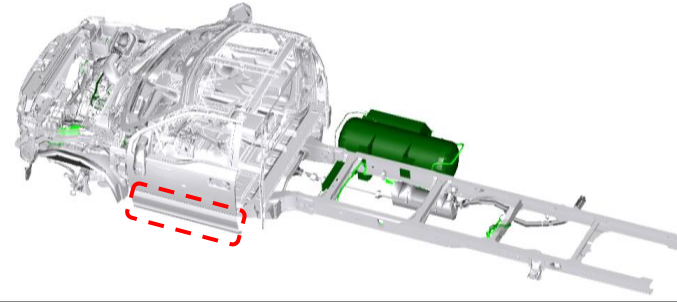
Connect the OEM Fuel Pump connectors to the Rear Frame Harness, behind the EFPR. Remove the paint under the ring terminal and bolt the ring terminal to the frame.

**A**

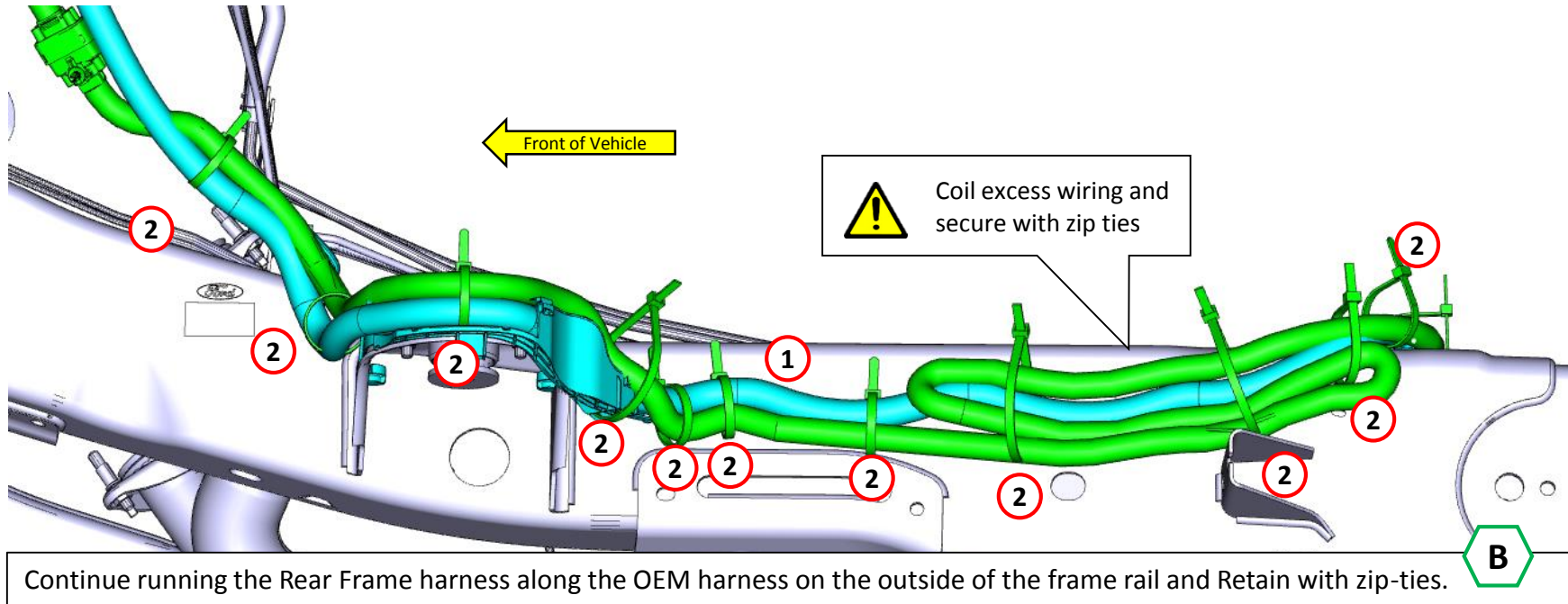
**B**



**ALL** Regular Cab



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	11	20-403-0003	Zip-Tie	N/A
3	1	P17EB-18A100-A	Underhood Harness	N/A





**ALL** Regular Cab

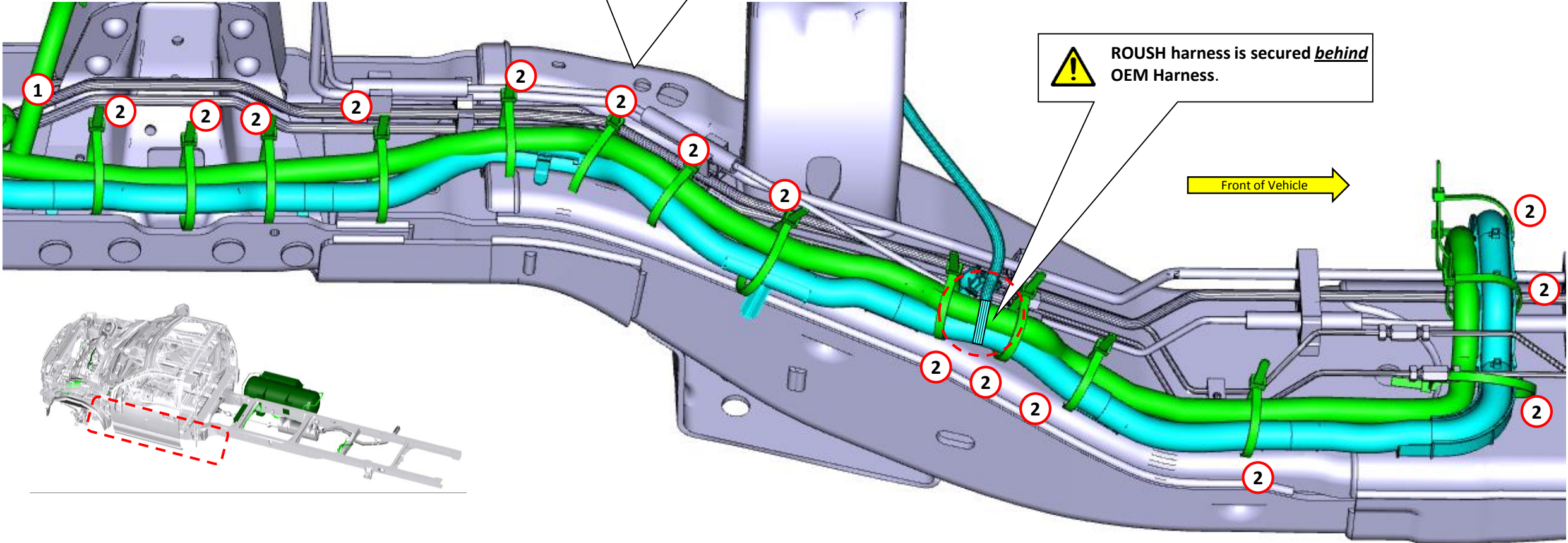


Ensure harness does not rub on the brake and fuel lines.



ROUSH harness is secured *behind* OEM Harness.

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	15	20-403-0003	Zip-Tie	N/A



**Zip-tie the Rear Frame harness along the OEM harness** and feed between the frame and the cab. Coil the excess and secure with a zip tie ensuring harness does not rub on the brake and fuel lines.



New



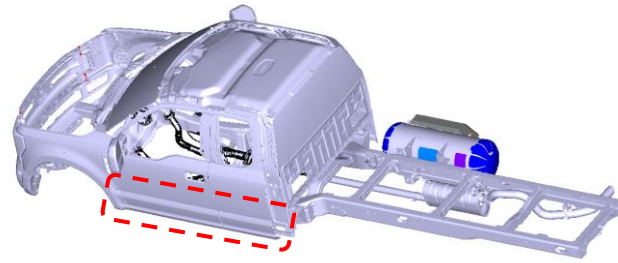
Reuse



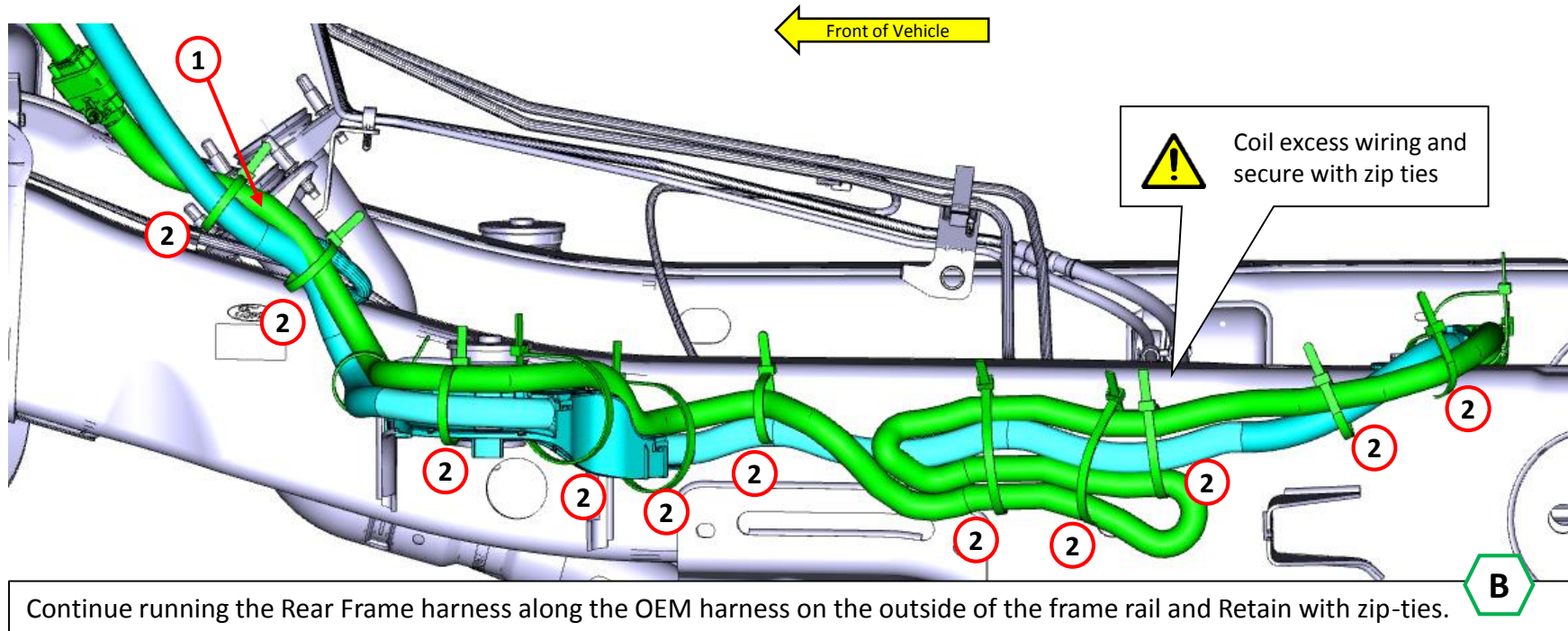
Discard



**ALL** Super Cab



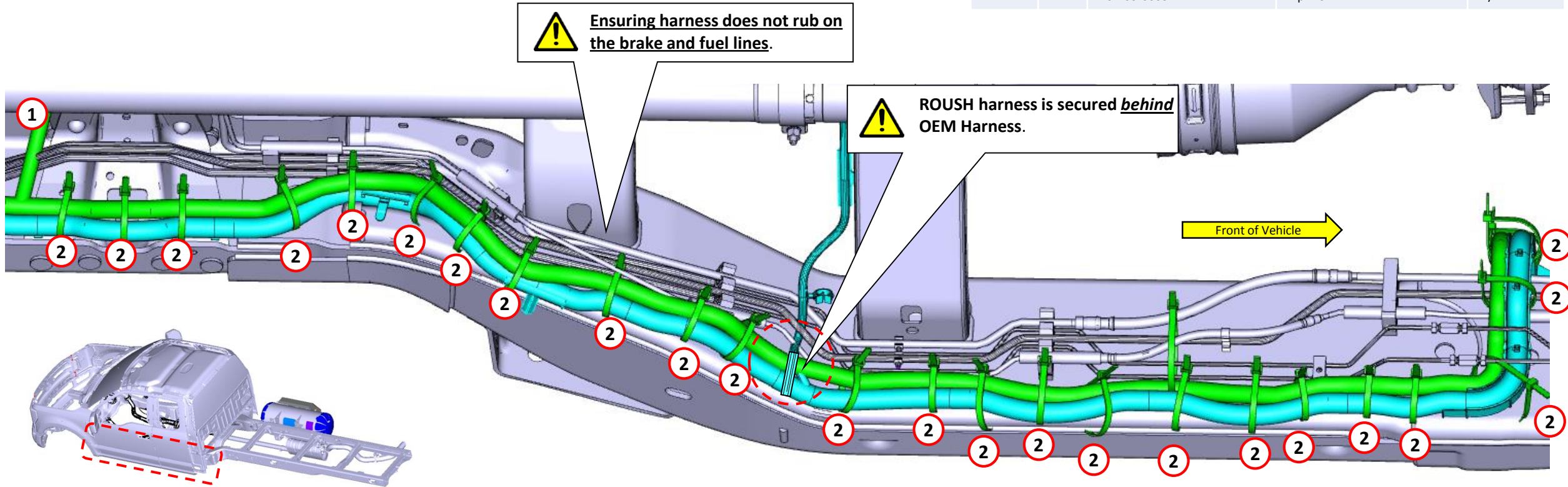
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	11	20-403-0003	Zip-Tie	N/A
3	1	P17EB-18A100-A	Underhood Harness	N/A



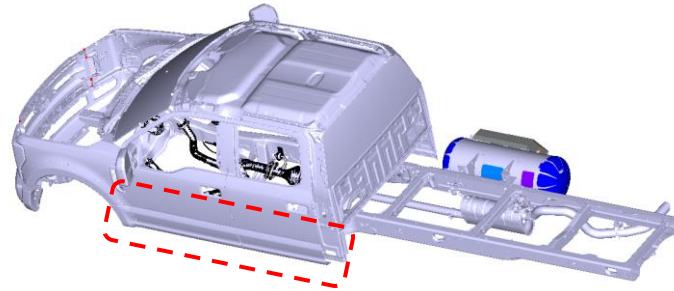


**ALL** Super Cab

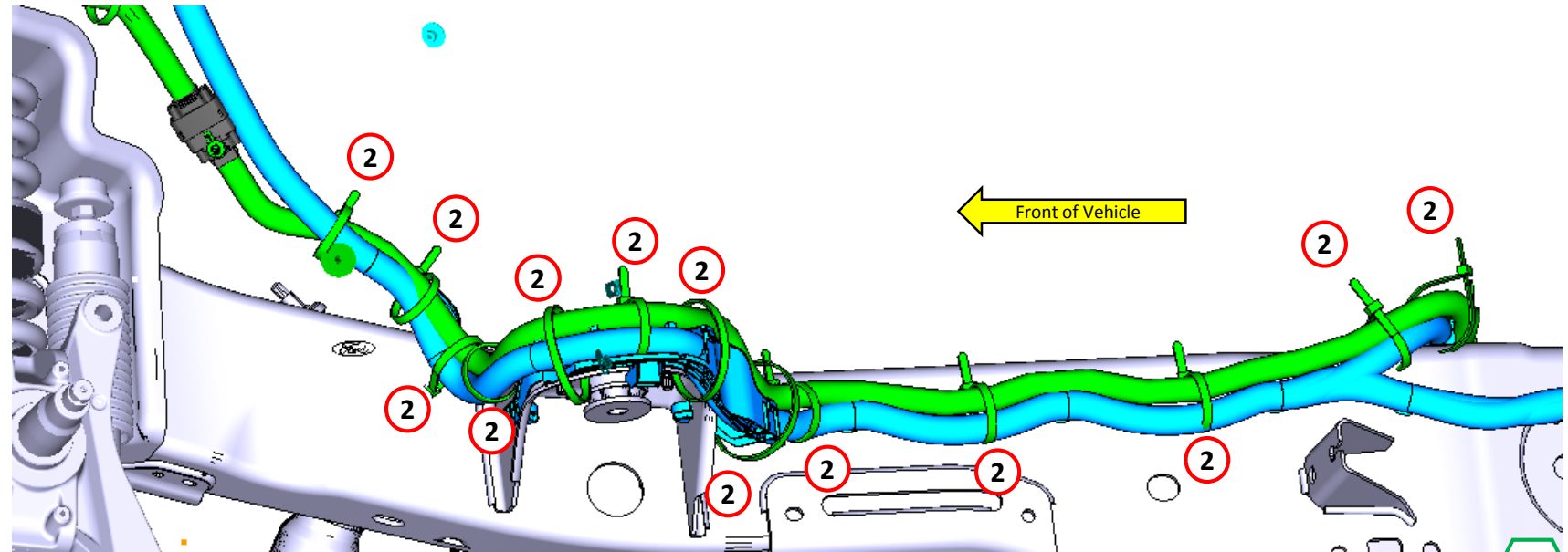
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	24	20-403-0003	Zip-Tie	N/A



**Zip-tie the Rear Frame harness along the OEM harness** and feed between the frame and the cab. Coil the excess and secure with a zip tie ensuring harness does not rub on the brake and fuel lines.



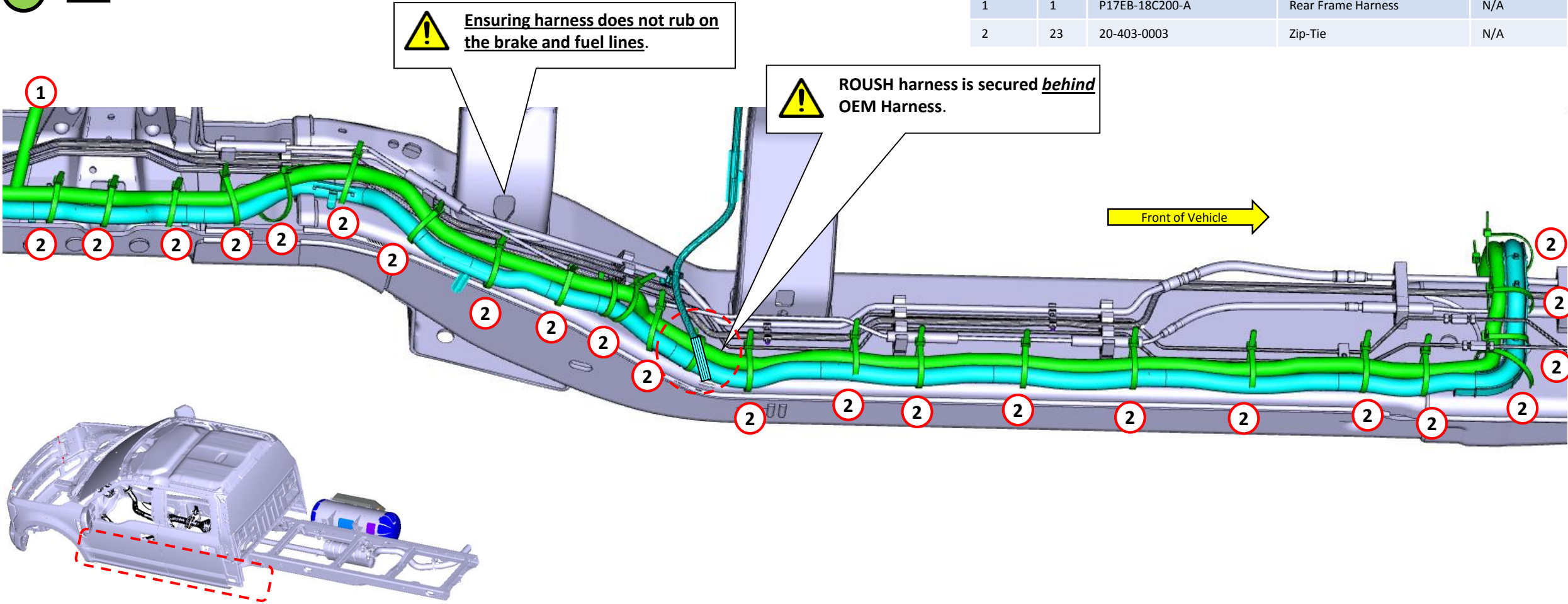
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	8	20-403-0003	Zip-Tie	N/A
3	1	P17EB-18A100-A	Underhood Harness	N/A



Continue running the Rear Frame harness along the OEM harness on the outside of the frame rail and Retain with zip-ties. **B**

**CC** ALL Crew Cab

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	23	20-403-0003	Zip-Tie	N/A



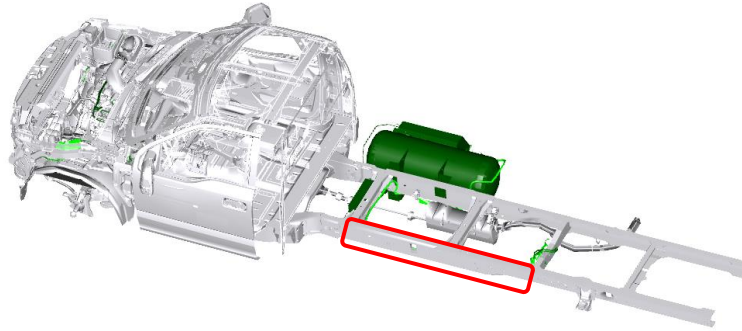
**Zip-tie the Rear Frame harness along the OEM harness** and feed between the frame and the cab.





For Wheelbase:

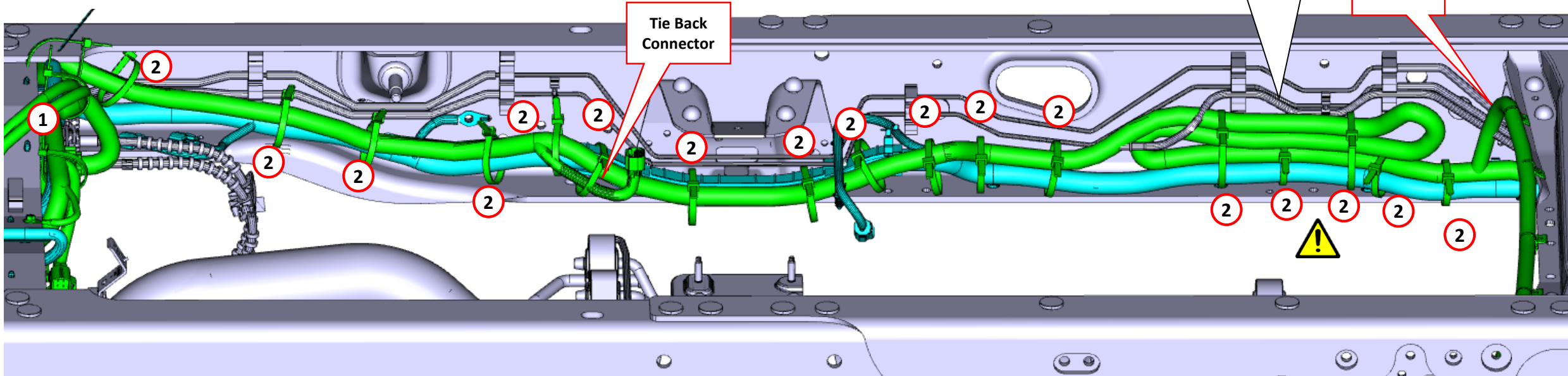
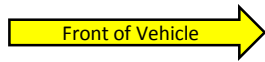
- Regular Cab **169.3**
- Super Cab **191.9**
- Crew Cab **203.8**



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	17	20-403-0003	Zip-Tie	N/A



Coil excess wiring and secure with zip ties **ensuring harness does not rub on the brake and fuel lines.**

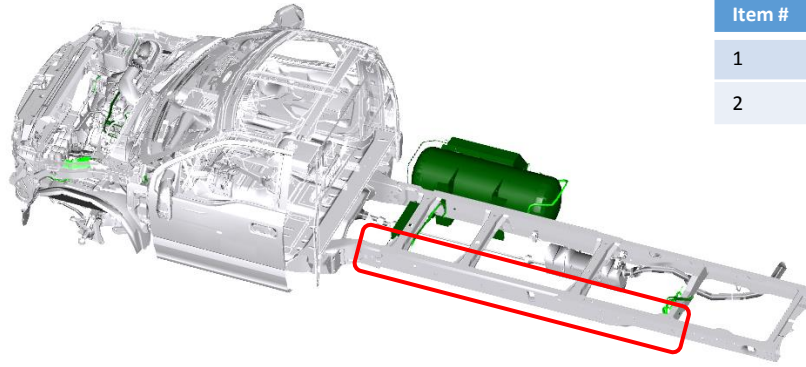


**Zip-tie the Rear Frame harness along the OEM harness.** Using the connectors at the rear and the branch that connects to the Tank harness as reference, coil any excess and secure with zip ties ensuring harness does not rub on the brake and fuel lines.



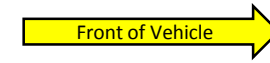
Regular Cab **193.3** Wheelbase

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	19	20-403-0003	Zip-Tie	N/A

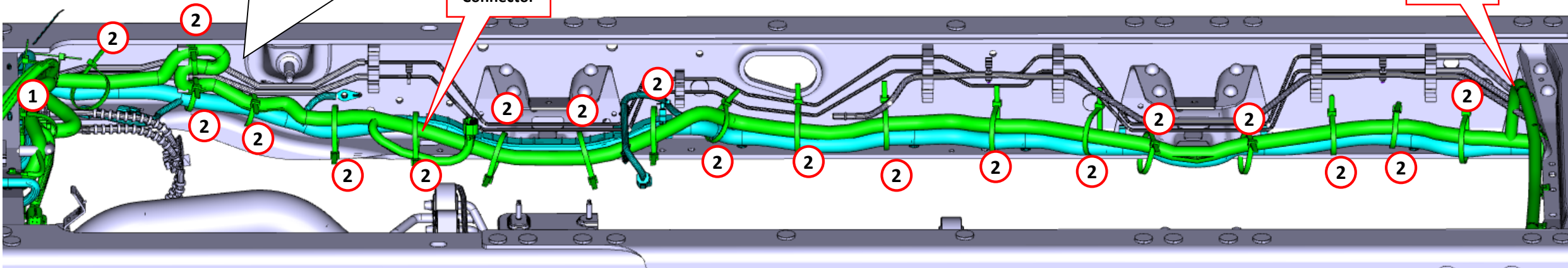


Coil excess wiring and secure with zip ties **ensuring harness does not rub on the brake and fuel lines.**

Tie Back Connector



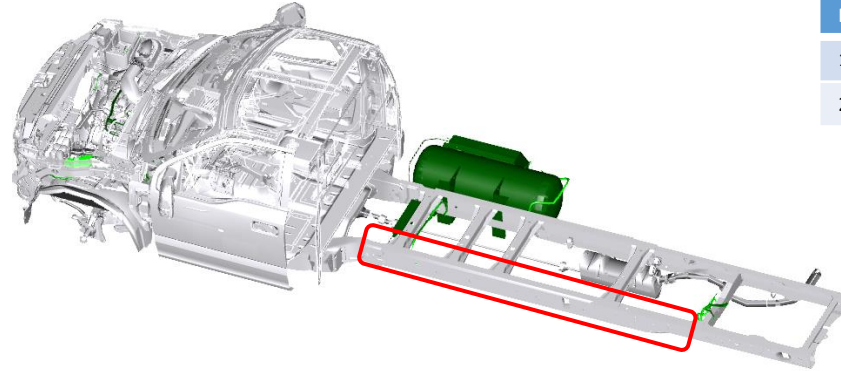
To Tank



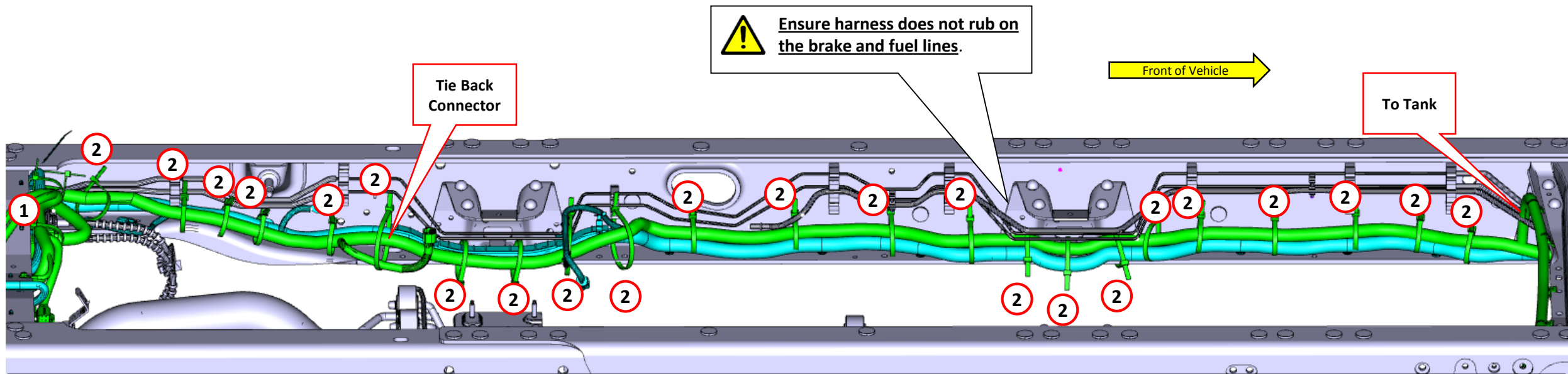
**Zip-tie the Rear Frame harness along the OEM harness.** Using the connectors at the rear and the branch that connects to the Tank harness as reference, coil any excess and secure with zip ties ensuring harness does not rub on the brake and fuel lines.



Regular Cab **205.3** Wheelbase



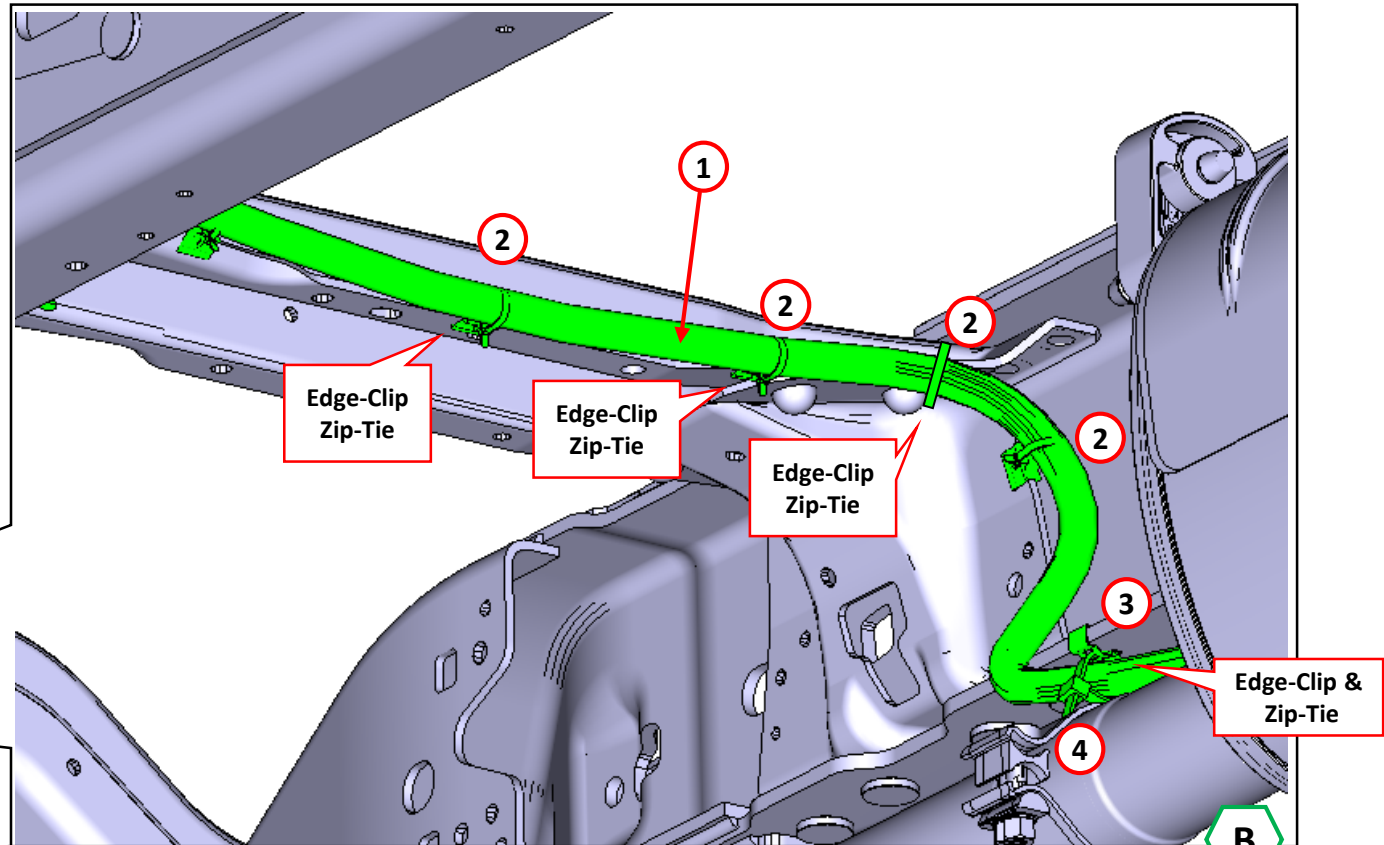
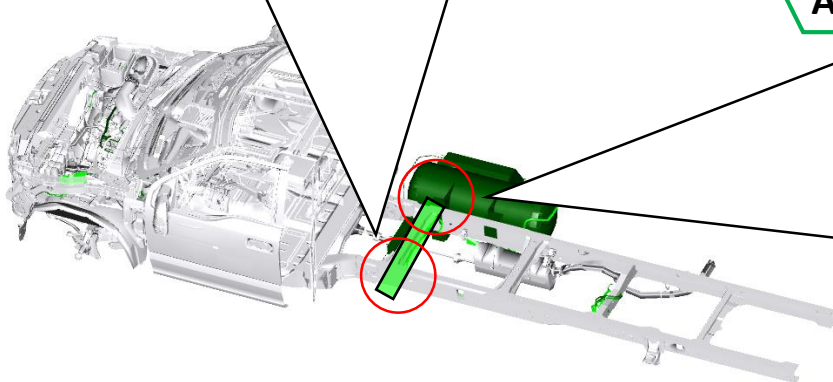
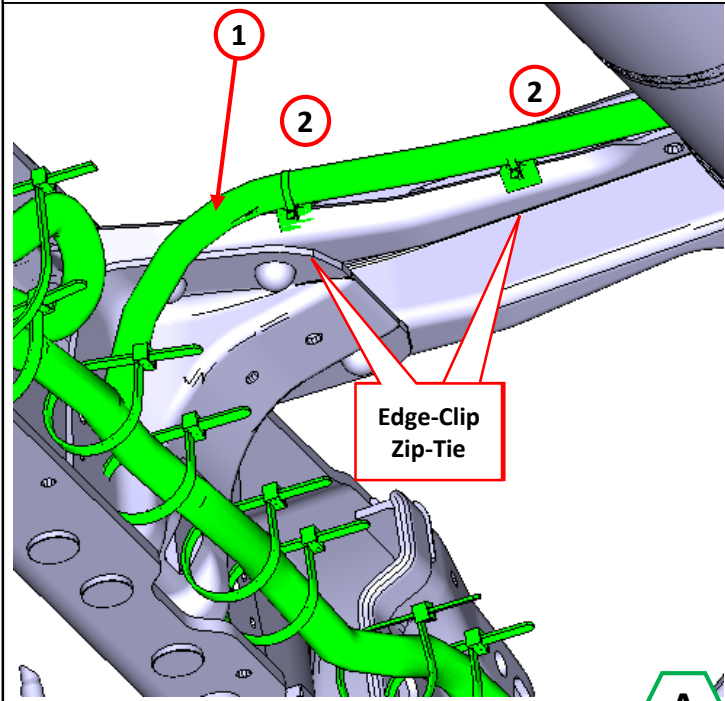
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	23	20-403-0003	Zip-Tie	N/A



**Zip-tie the Rear Frame harness along the OEM harness.** Using the connectors at the rear and the branch that connects to the Tank harness as reference, coil any excess and secure with zip ties ensuring harness does not rub on the brake and fuel lines.



Run the frame harness section along the appropriate cross-member



Use the supplied edge clips to secure the harness to the cross-member

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	6	156-00020	Edge Clip Zip Tie	N/A
3	1	11-056-0044	Edge Clip	N/A
4	1	20-403-0003	Zip-Tie	N/A



For Regular Cab **169.9 Wheelbase**

**All** Super Cab

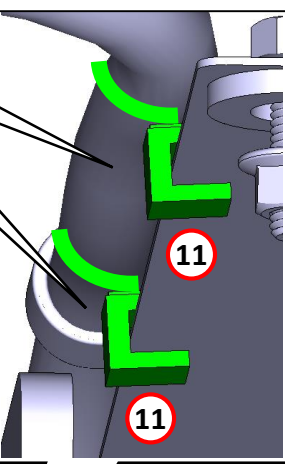
**All** Crew Cab



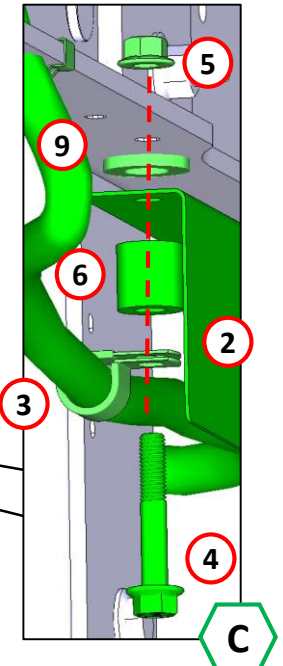
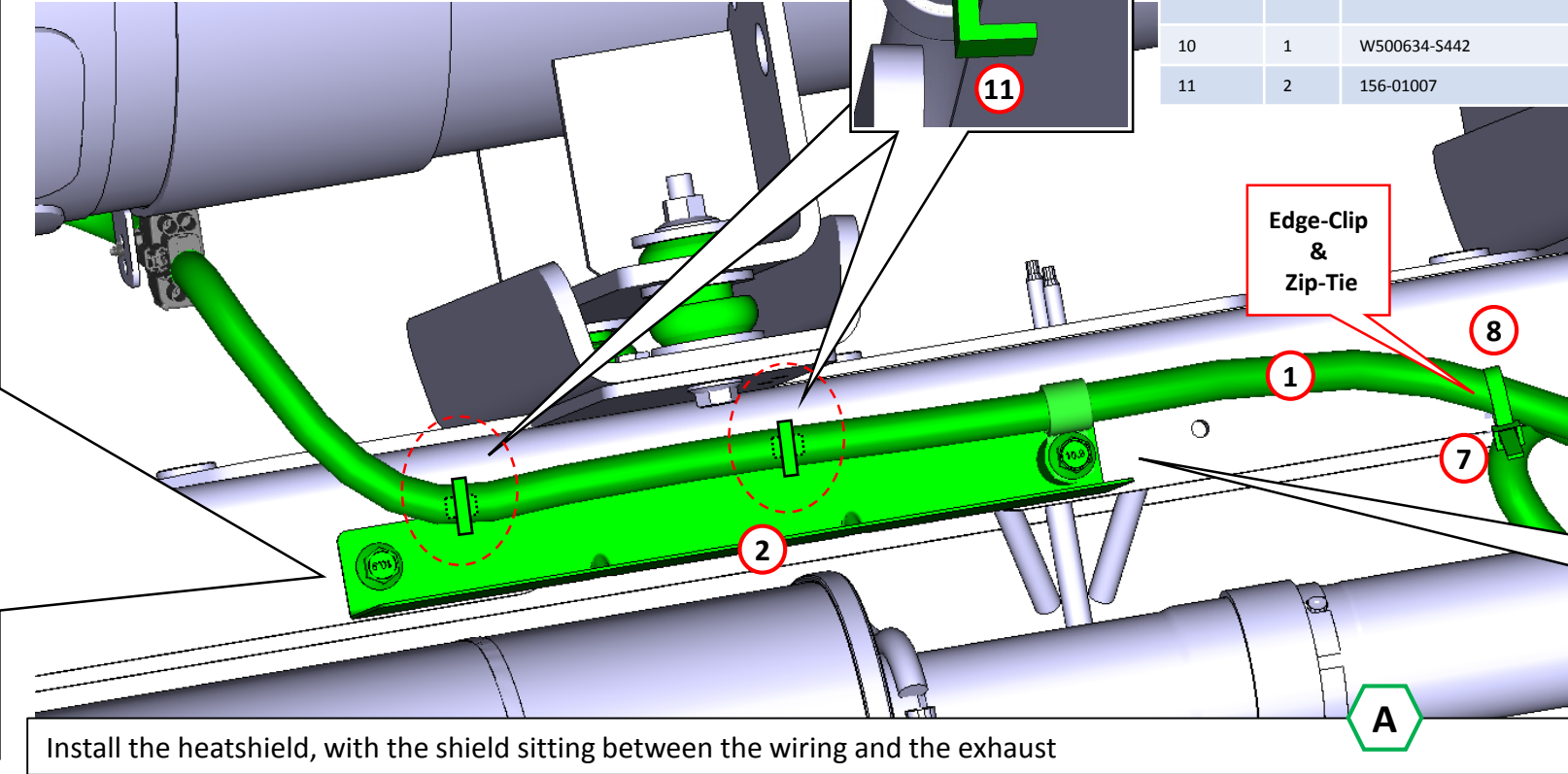
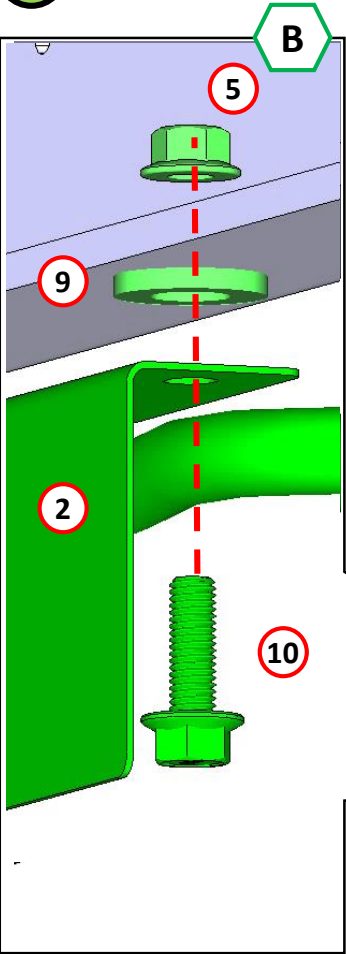
Note: Edge Clip Type



Install Edge Clips and Zip Ties as shown



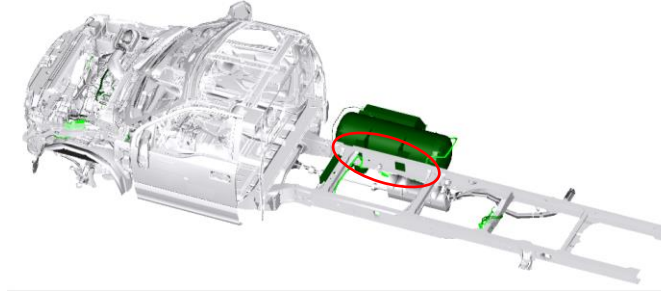
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	1	P17EB-15D100-A	Heat Shield	N/A
3	1	11-056-0042	P-Clamp 3/4"	N/A
4	1	11-031-0644	M10 x 1.5 x 60 Bolt	40-55Nm
5	2	11-278-0305	M10 Flange Nut	40-55Nm
6	1	11-373-0011	Aluminum Spacer: 1/2" bolts	N/A
7	1	11-056-0044	Edge Clip	N/A
8	1	20-403-0003	Zip-Tie	N/A
9	1	11-452-0176	Washer, 9/16" X 1-11/64", Extra Thick	N/A
10	1	W500634-S442	M10 X 1.5 X 35mm Hex Flange	40-55 Nm
11	2	156-01007	90 Degree Edge Clip	N/A



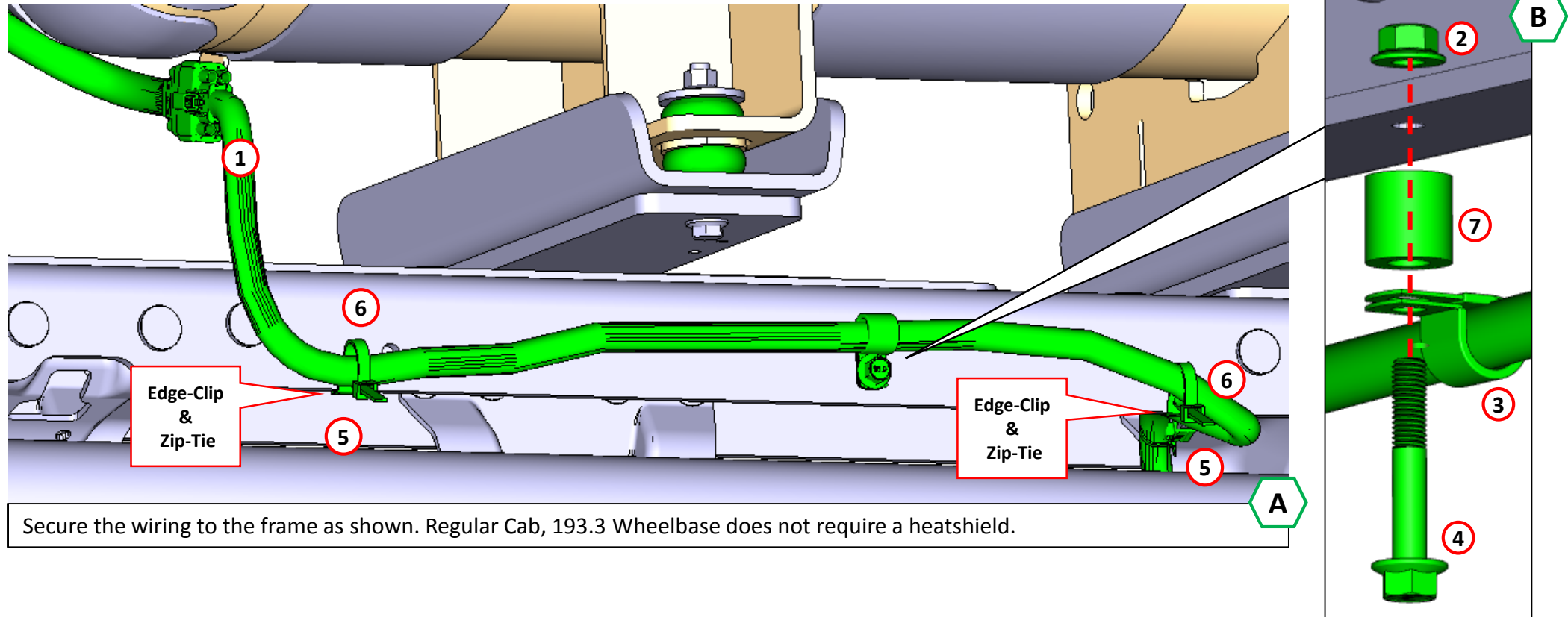
Install the heatshield, with the shield sitting between the wiring and the exhaust



Regular Cab **193.3 Wheelbase**

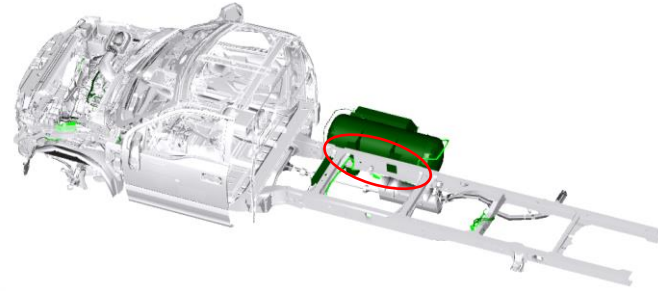


Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	1	11-278-0305	M10 Flange Nut	40-55Nm
3	1	11-056-0042	P-Clamp 3/4"	N/A
4	1	11-031-0644	M10 x 1.5 x 60 Bolt	40-55Nm
5	2	11-056-0044	Edge Clip	N/A
6	2	20-403-0003	Zip-Tie	N/A
7	1	11-373-0011	Aluminum Spacer: 1/2" bolts	N/A

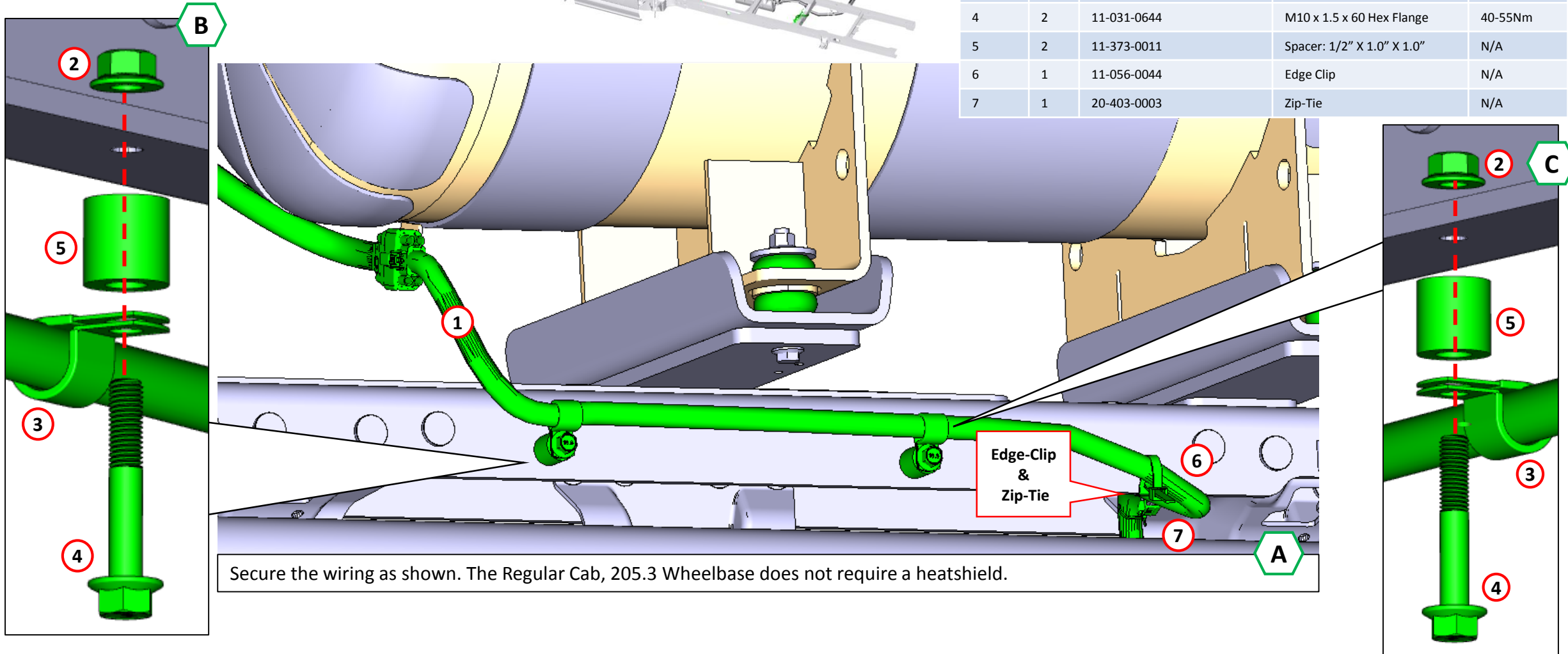




Regular Cab **205.3** Wheelbase



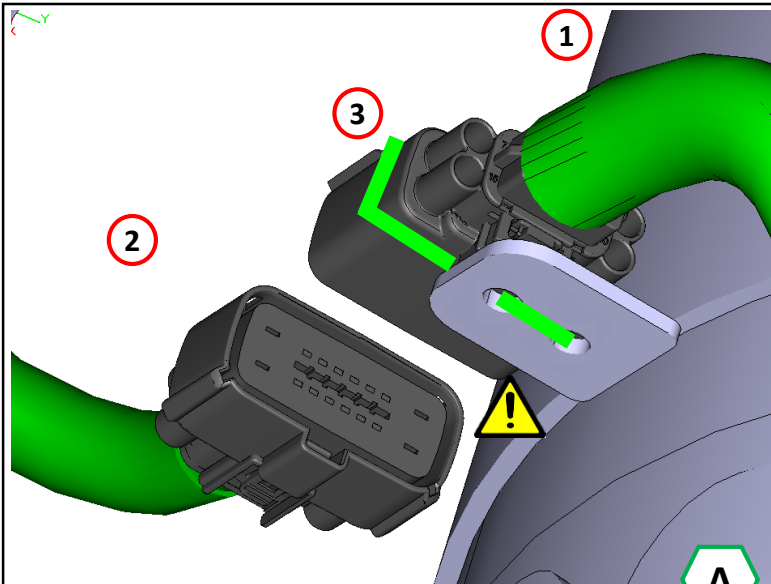
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18C200-A	Rear Frame Harness	N/A
2	2	11-278-0305	M10 Flange Nut	40-55Nm
3	2	11-056-0042	P-Clamp 3/4"	N/A
4	2	11-031-0644	M10 x 1.5 x 60 Hex Flange	40-55Nm
5	2	11-373-0011	Spacer: 1/2" X 1.0" X 1.0"	N/A
6	1	11-056-0044	Edge Clip	N/A
7	1	20-403-0003	Zip-Tie	N/A



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18K377-A	Tank Wire Harness	N/A
2	1	P17EB-18C200-A	Rear Frame Harness	N/A
3	1	20-403-0003	Zip Tie	N/A

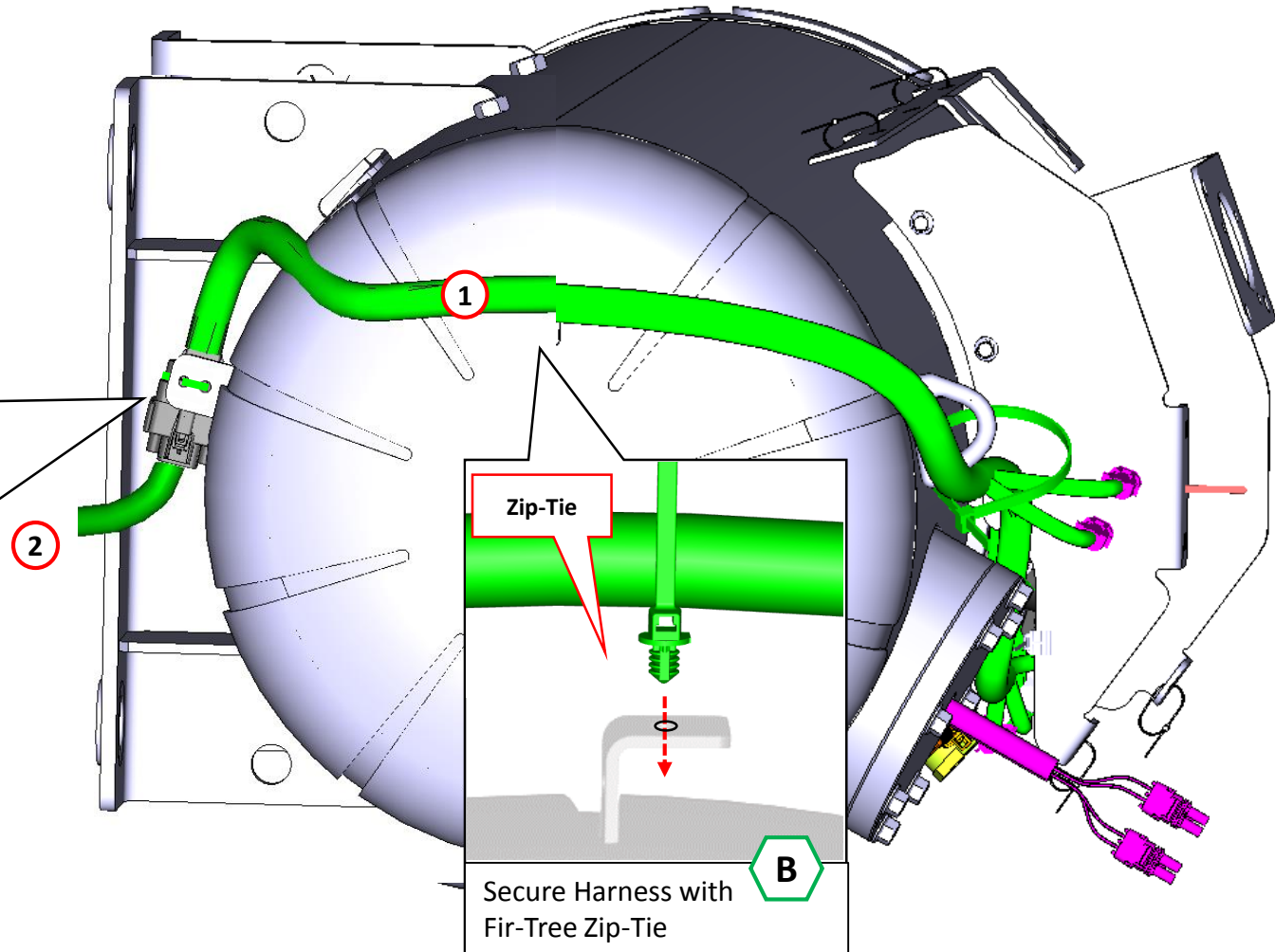


Thread the zip-tie through both holes on tab



Connect the Tank Harness to the Body Harness and attach the connector to the tank, threading the zip tie through the holes on the tab, and wrapping the entire connector with the zip-tie.

**A**



Zip-Tie

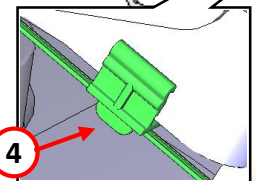
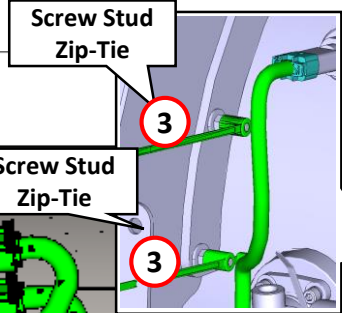
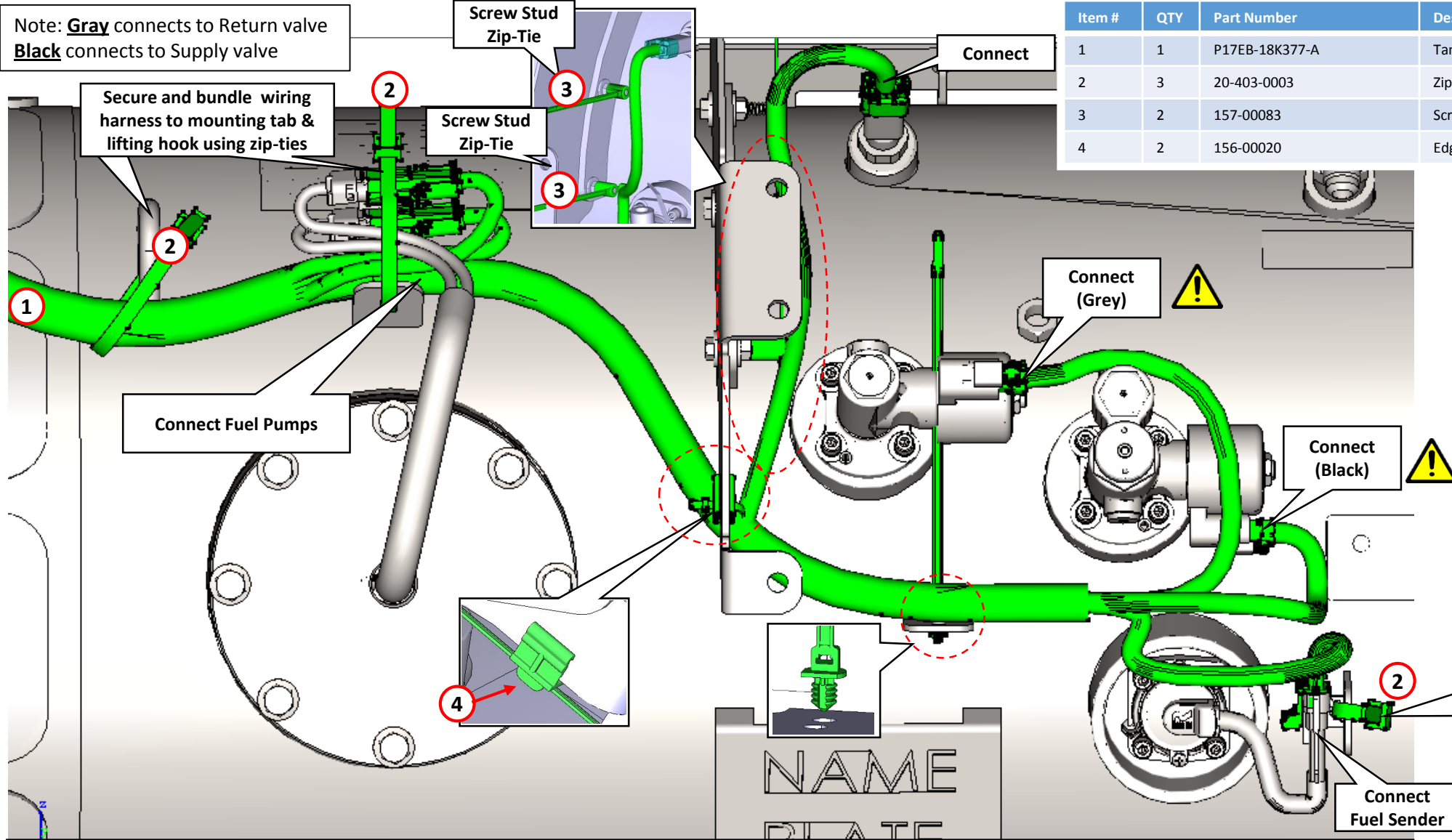
Secure Harness with Fir-Tree Zip-Tie

**B**





Note: **Gray** connects to Return valve  
**Black** connects to Supply valve



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18K377-A	Tank Wire Harness	N/A
2	3	20-403-0003	Zip Tie	N/A
3	2	157-00083	Screw Stud Grip Zip Tie	N/A
4	2	156-00020	Edge Clip Zip Tie	N/A



Join connectors and secure harness with Zip-Ties and Edge Clips as shown

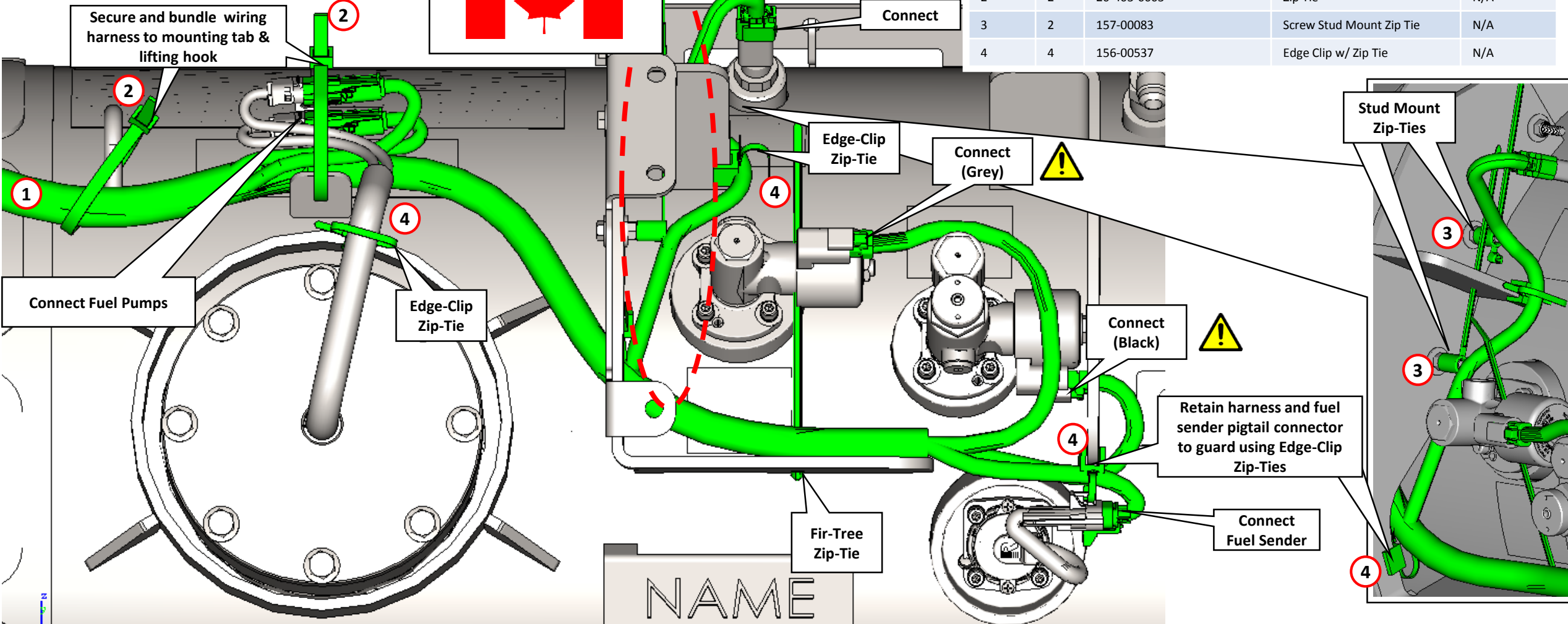


Note: **Gray** connects to Return valve  
**Black** connects to Supply valve

**CANADA TANK ONLY**



Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18K377-A	Tank Wire Harness	N/A
2	2	20-403-0003	Zip Tie	N/A
3	2	157-00083	Screw Stud Mount Zip Tie	N/A
4	4	156-00537	Edge Clip w/ Zip Tie	N/A

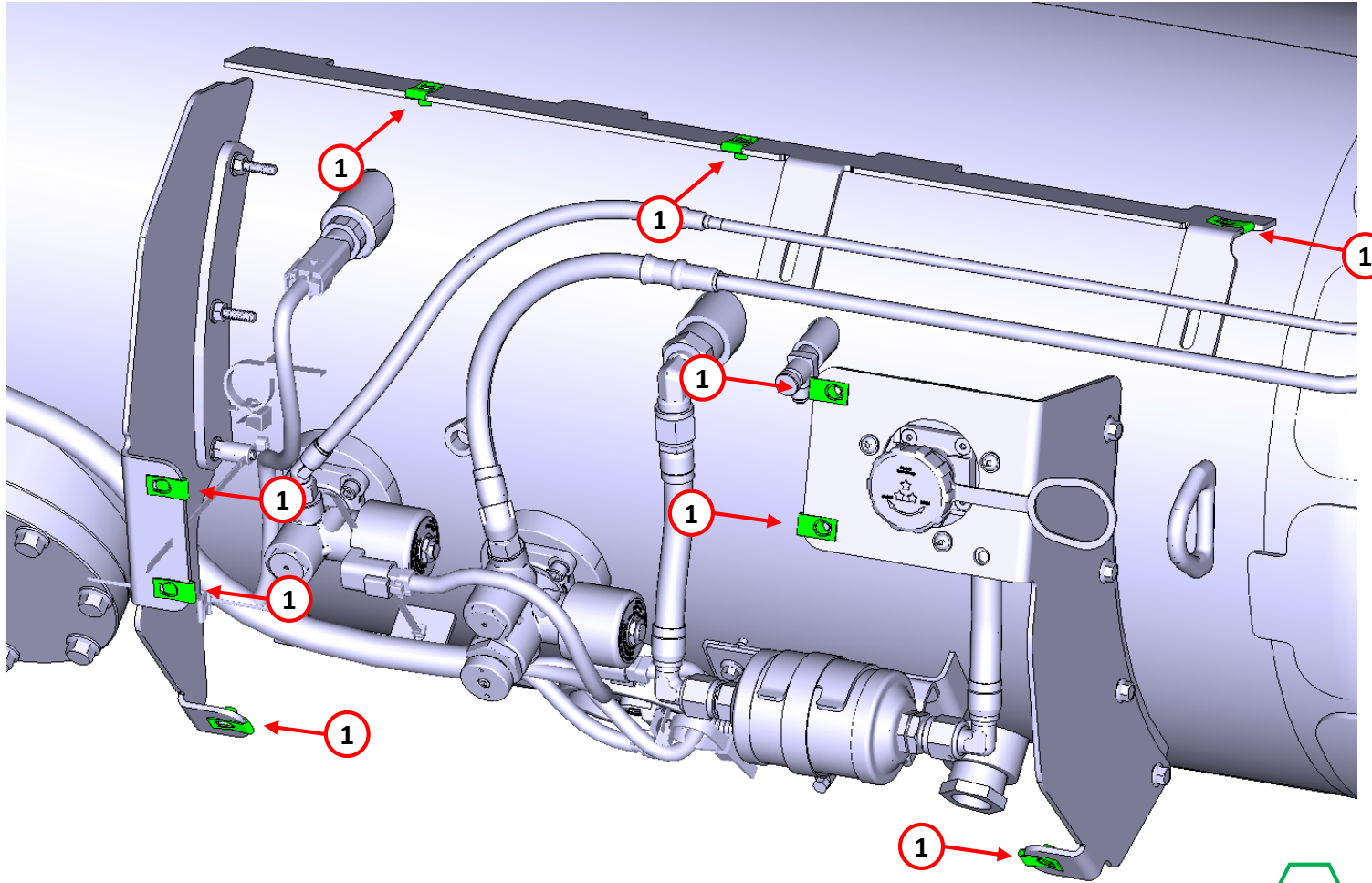


Retain harness and fuel sender pigtail connector to guard using Edge-Clip Zip-Ties



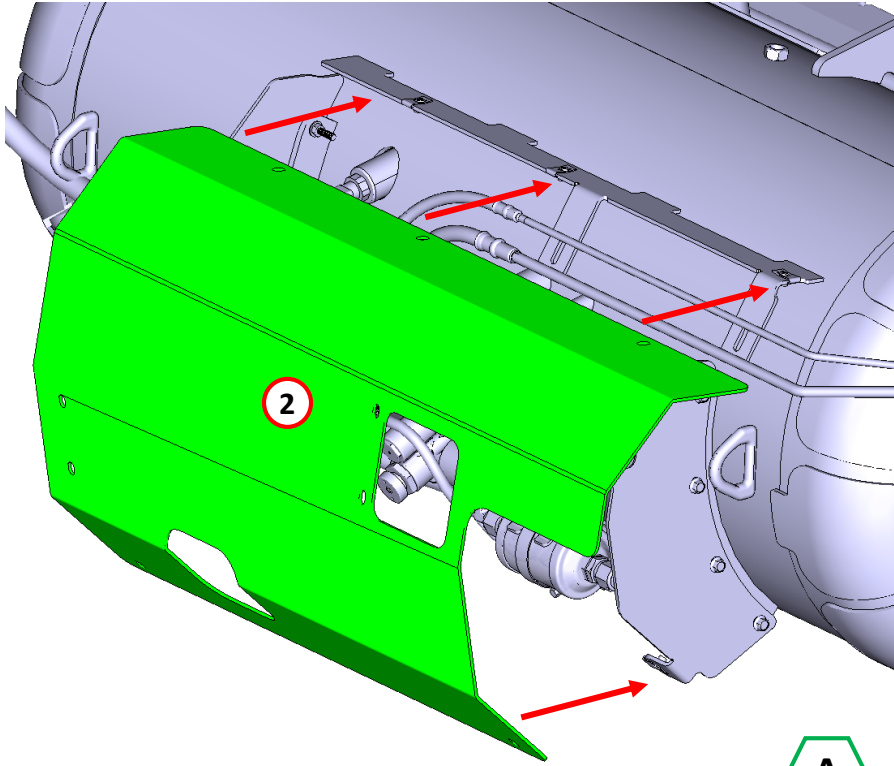
Join connectors and secure harness with Zip-Ties and Edge Clips as shown

Item #	QTY	Part Number	Description	Torque (Nm)
1	9	W520822-S439	M6 J-Clip	N/A



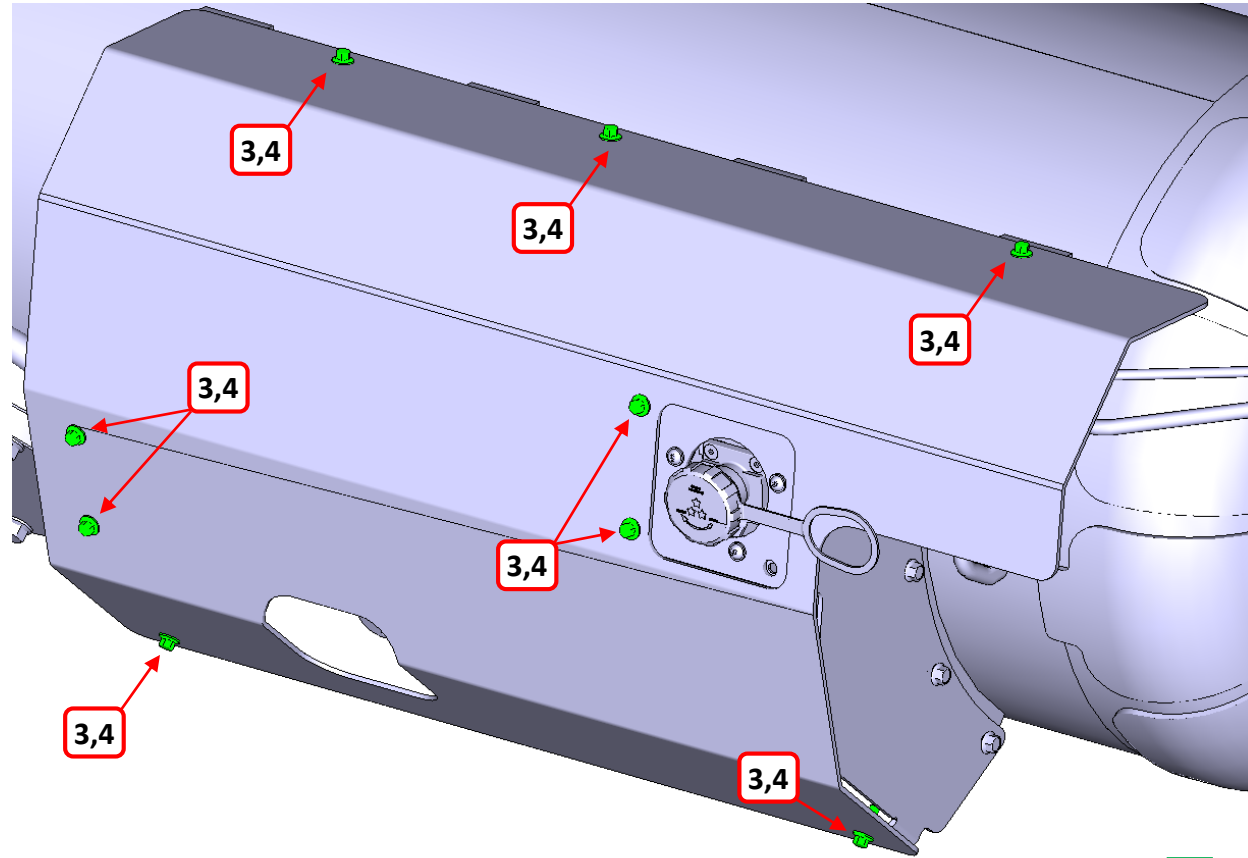
Install the J-Clips for the Tank Valve Cover A

Item #	QTY	Part Number	Description	Torque (Nm)
2	1	Included With Fuel Tank	Tank Valve Cover	N/A
3	9	W500214-S437	M6 x 1.0 X 20 Hex Flange Bolt	8-12 Nm
4	9	91100A150	M6 Flat Washer	N/A



Place the Valve Cover into position

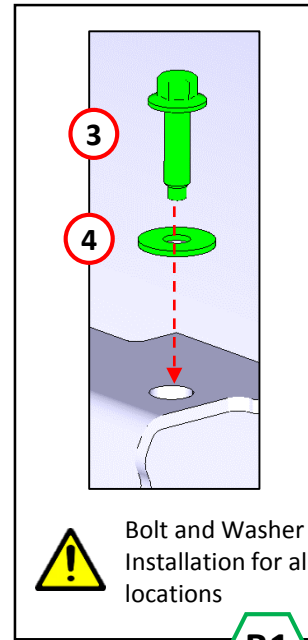
**A**



Install the M6 bolts and washers as shown



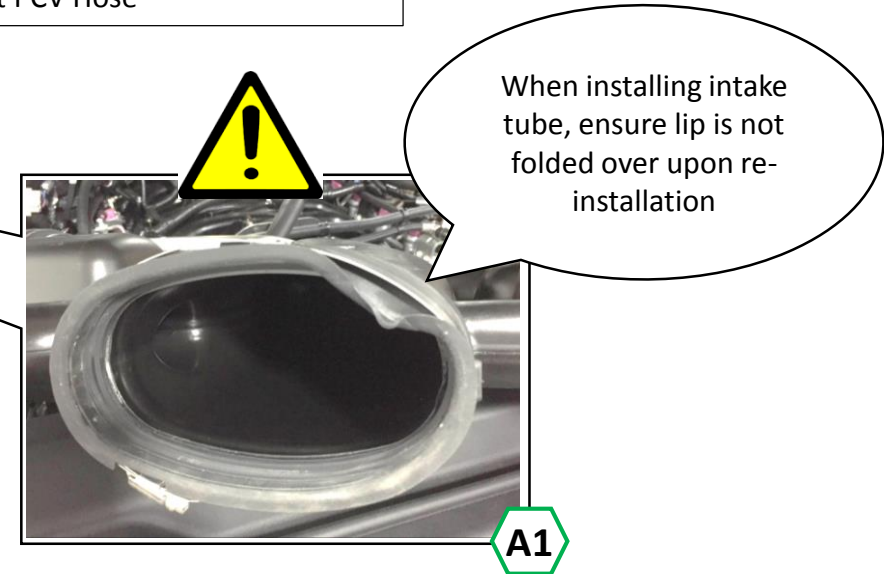
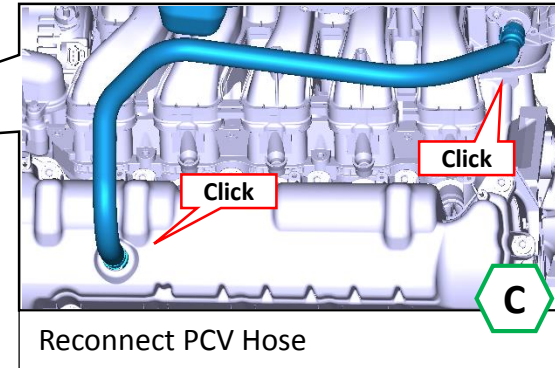
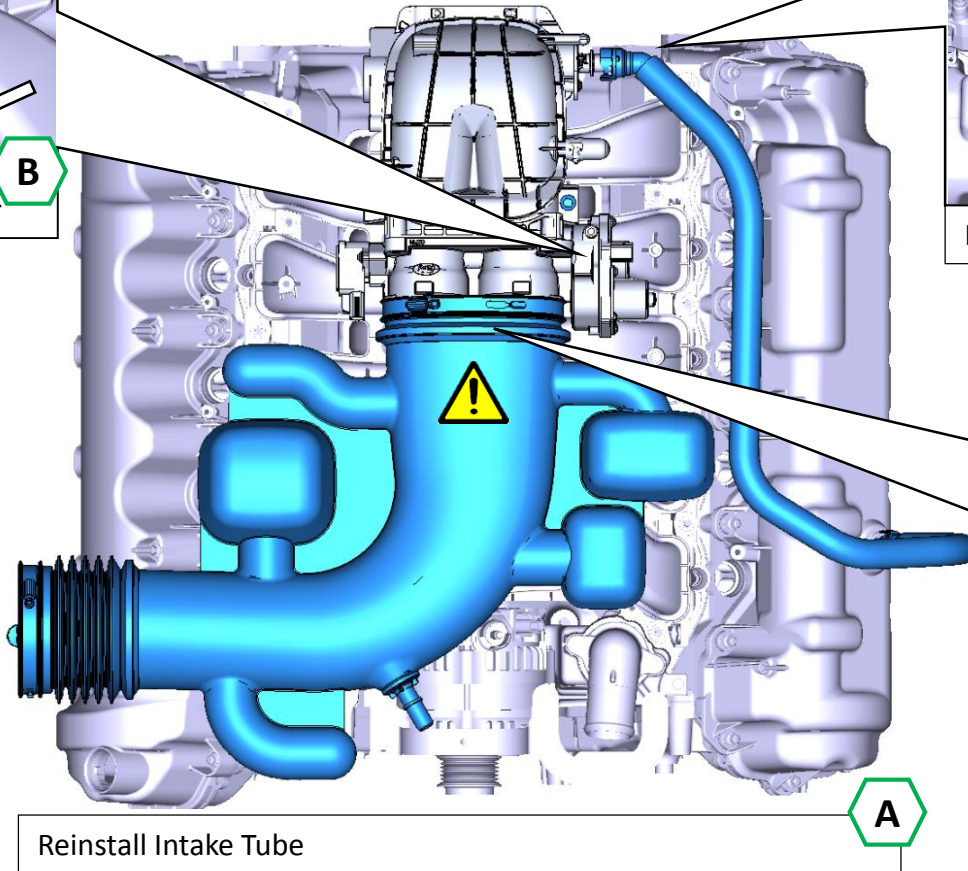
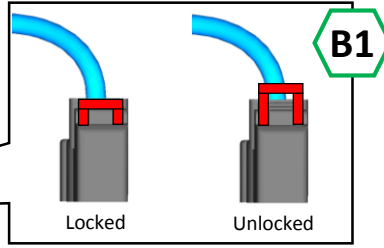
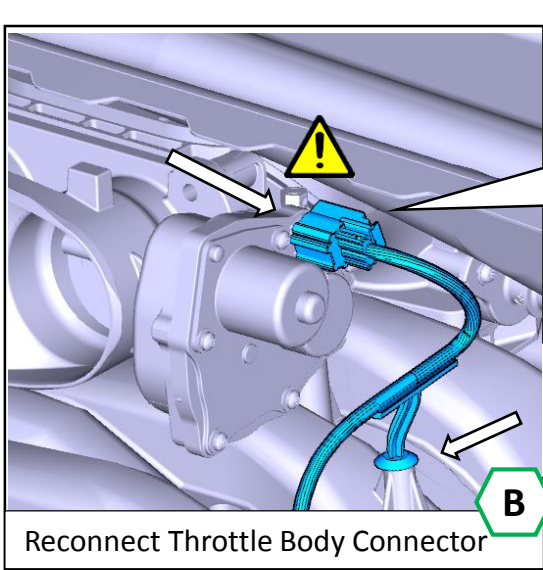
**B**

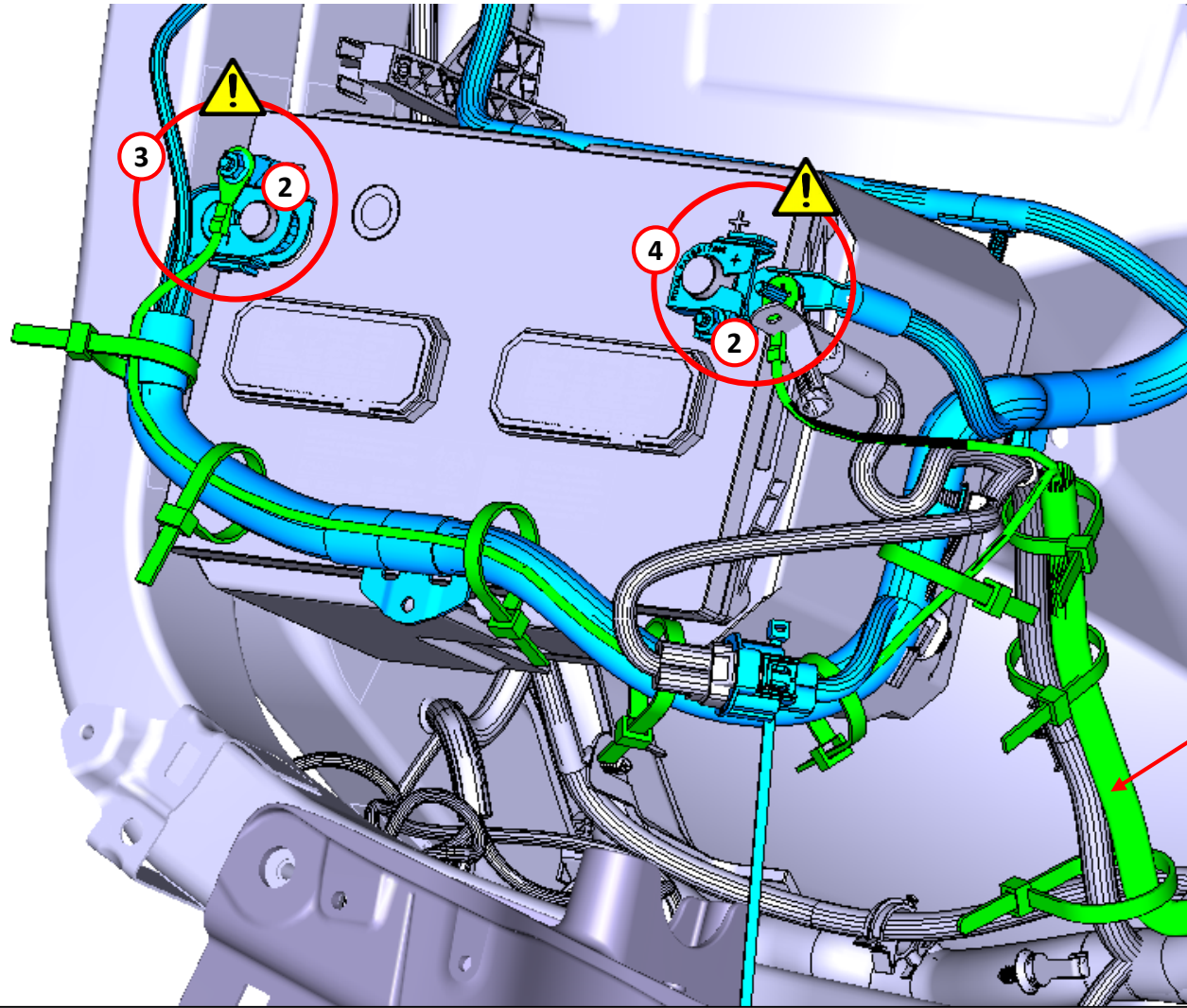


Bolt and Washer  
Installation for all  
locations

**B1**

Item #	QTY	Part Number	Description	Torque (Nm)
1	2	Existing (reuse)	Air Intake Tube	N/A
2	1	Existing (reuse)	PCV Hose	N/A
3	6	Existing (discard)	Fuel Rail Fasteners	N/A



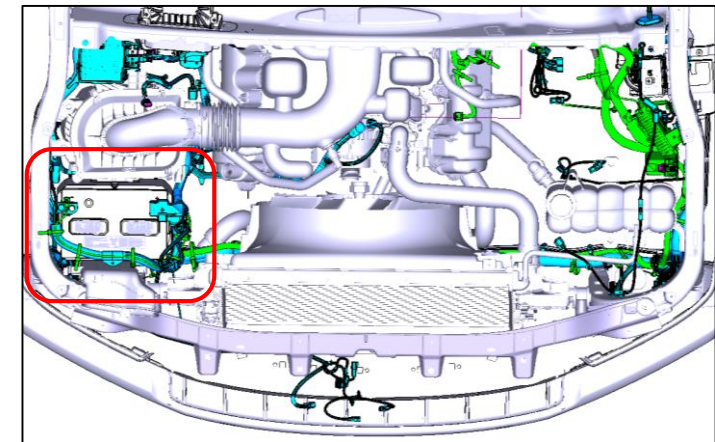


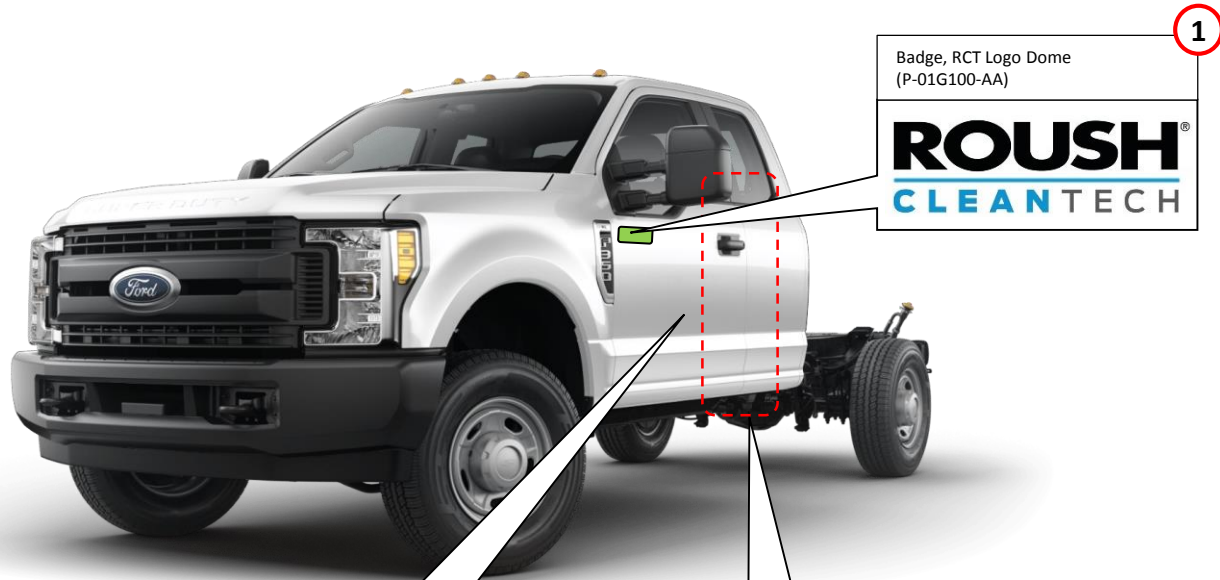
Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P17EB-18A100-A	Underhood Harness	N/A
2	2	Existing (Reuse)	Ring Terminals	5.6 – 7.9 Nm
3	1	Existing (Reuse)	Grounding (Negative) Lead	5.6 – 7.9 Nm
4	1	Existing (Reuse)	Power (Positive) Lead	5.6 – 7.9 Nm



Secure the ROUSH Harness to OEM battery terminals re-using the existing terminal screws and nuts, and following the torque chart for final tightening.

Connect the ring terminals to the battery's existing terminal screws.





Badge, RCT Logo Dome  
(P-01G100-AA)

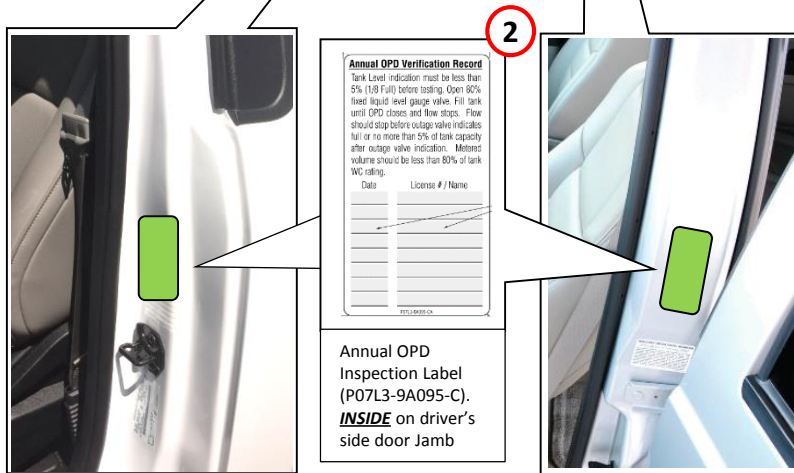
**ROUSH**  
CLEANTECH

1

Item #	QTY	Part Number	Description	Torque (Nm)
1	1	P-01G100-A	Badge, RCT Logo Dome	N/A
2	1	P07L3-9A095-C	Annual OPD Inspection Label	N/A
3	1	D85	Propane Label	N/A



When applying labels, surface must be clean, dry, and at room temperature



**Annual OPD Verification Record**  
Tank Level indication must be less than 5% (1/8 Full) before testing. Open 80% flow liquid level gauge valve. Fill tank until OPD closes and flow stops. Flow should stop before outage valve indicates full or no more than 5% of tank capacity after outage valve indication. Metered volume should be less than 80% of tank WC rating.

Date	License # / Name

Annual OPD Inspection Label (P07L3-9A095-C).  
**INSIDE** on driver's side door Jamb

2



**PROPANE**

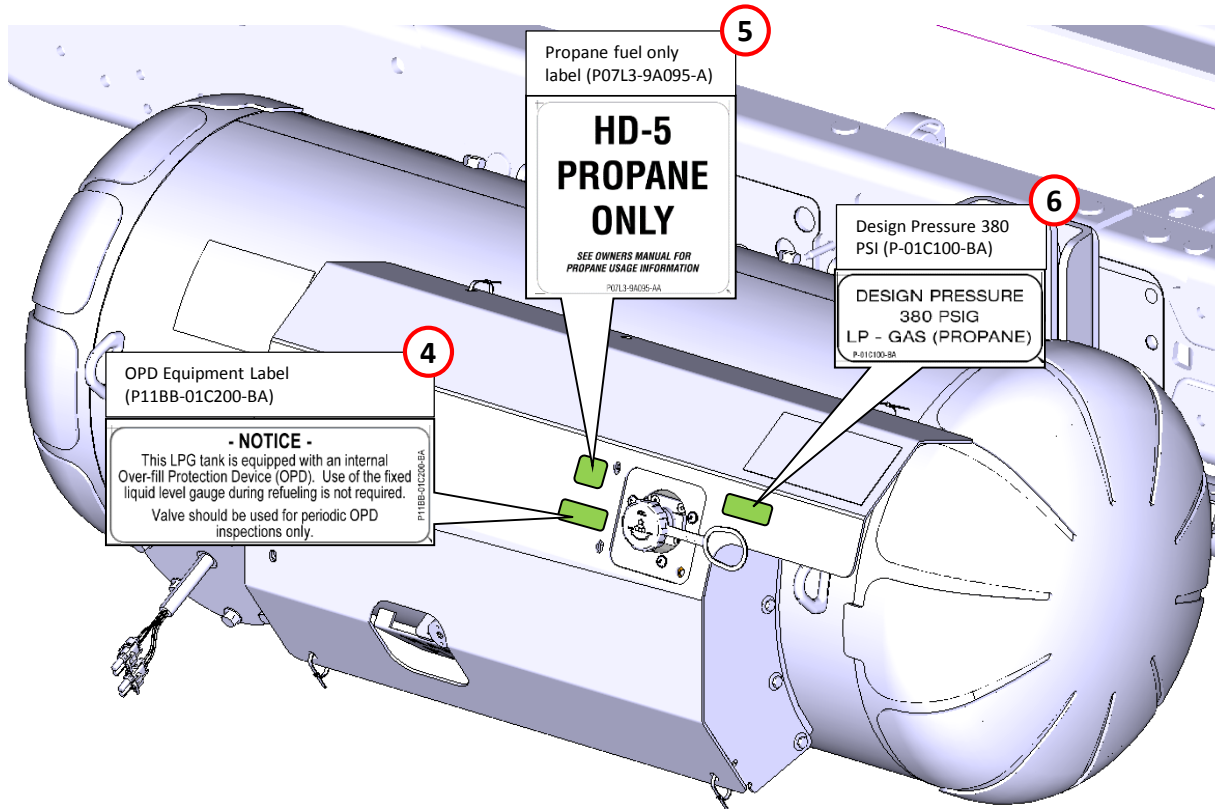
Propane Label (D85).  
Placed on RH bumper

3



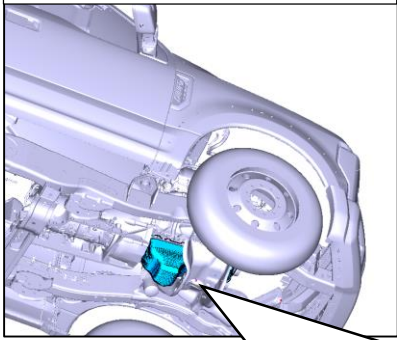
Only install propane label such that it is clearly visible. After a body has been installed, it may be placed on the body instead of the bumper. If there is no body on the truck, leave the sticker in glovebox for the body builder to install.

Item #	QTY	Part Number	Description	Torque (Nm)
4	1	P11BB-01C200-B	OPD Equipment Label	N/A
5	1	P07L3-9A095-A	Propane Fuel only Label	N/A
6	1	P-01C100-BA	Design Pressure, 380 PSIG Label	N/A



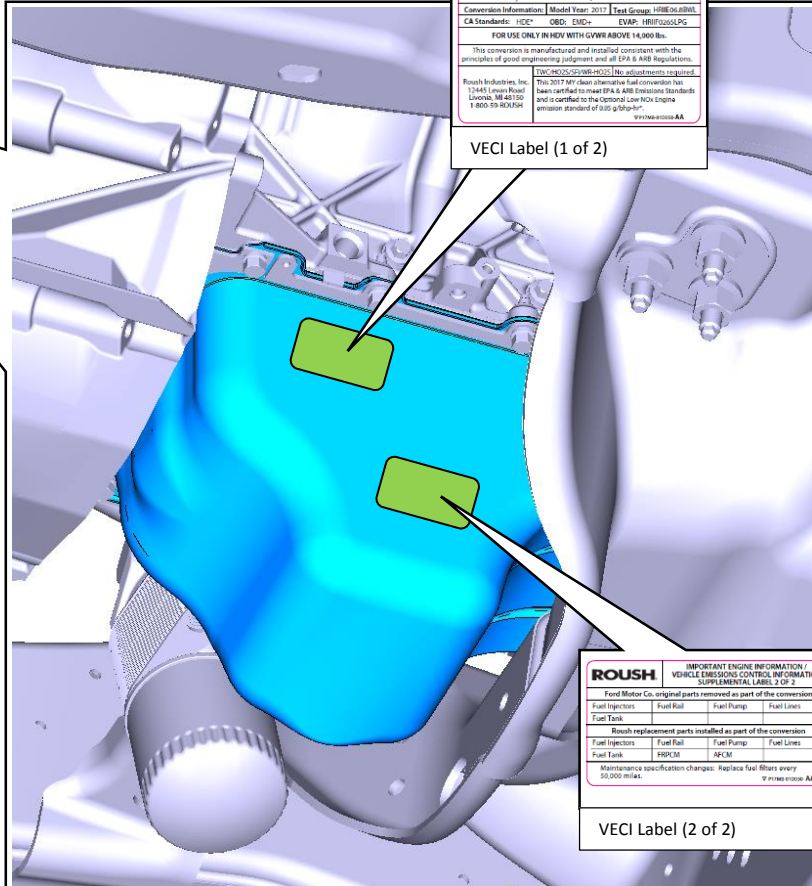


View from under-vehicle

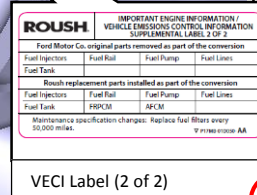
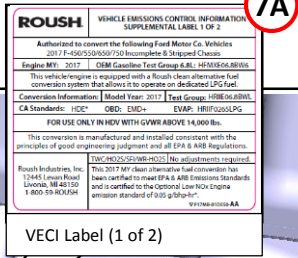


VECI Labels are *EXTREMELY* fragile when removed from backer. Ensure adhesive side is untouched until installed on the surface.

**If VECI label is damaged, it must be replaced.**



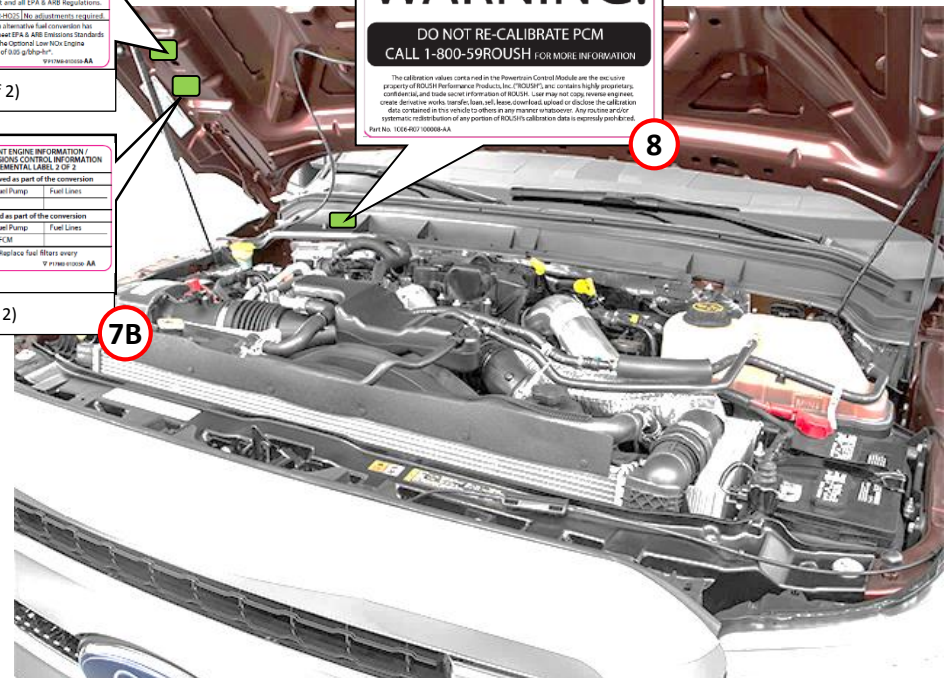
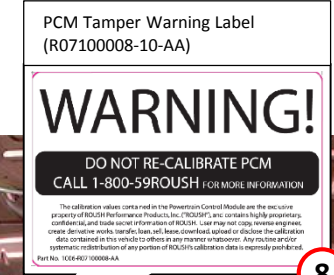
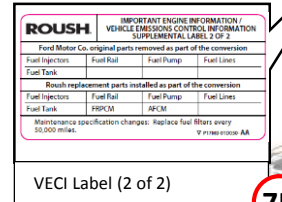
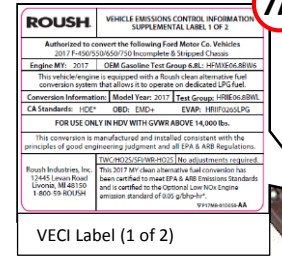
Place VECI Labels on Passenger side of oil pan.



Item #	QTY	Part Number	Description	Torque (Nm)
7A + 7B	2	Per Manufacturer	VECI Upper and Lower Label	N/A
8	1	R07100008-10-A	PCM Tamper Warning Label	N/A



When applying labels, surface must be clean, dry, and at room temperature



Place VECI Labels on the passenger side, under the hood.

Item #	QTY	Part Number	Description	Torque (Nm)
9	1	R07100008-10-A	PCM Tamper Warning Label	N/A
10	1	P-10A920-A	Hang Tag	N/A



**9**

**WARNING!**

DO NOT RE-CALIBRATE PCM  
CALL 1-800-59ROUSH FOR MORE INFORMATION

The calibration values contained in the Proton Control Module are the exclusive property of Roush CleanTech. Roush CleanTech is not responsible for any damage, loss, or injury caused by the use of this information. Roush CleanTech is not responsible for any damage, loss, or injury caused by the use of this information. Roush CleanTech is not responsible for any damage, loss, or injury caused by the use of this information. Roush CleanTech is not responsible for any damage, loss, or injury caused by the use of this information.

PCM Tamper Warning Label (R07100008-10-A) on knee bolster above OBDII Diagnostic Port

**10**

**WARNING:**  
Flammable Gas.

The installation, modification, or repair of an LPG system by a person who is not licensed or registered to install, modify, or repair an LPG system may cause injury, harm or loss. Contact a person licensed or registered to install, modify, or repair an LPG system. A person licensed to install or repair an LPG system may not be liable for damages caused by the modification of an LPG system by an unlicensed person except as otherwise provided by applicable law.

**ROUSH**  
CLEANTECH

P11BB-01A020-AA

Hang Tag, to be hung on rear view mirror (P-10A920-AA)

Visit our website at:  
[www.ROUSHCLEANTECH.com](http://www.ROUSHCLEANTECH.com)



Check out our other products:

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Ford F-750

Ford F-650

Ford E-450



Ford F-53

Ford F-59



Contact our service hotline at:

**Phone:** +1 (734)-779-7777

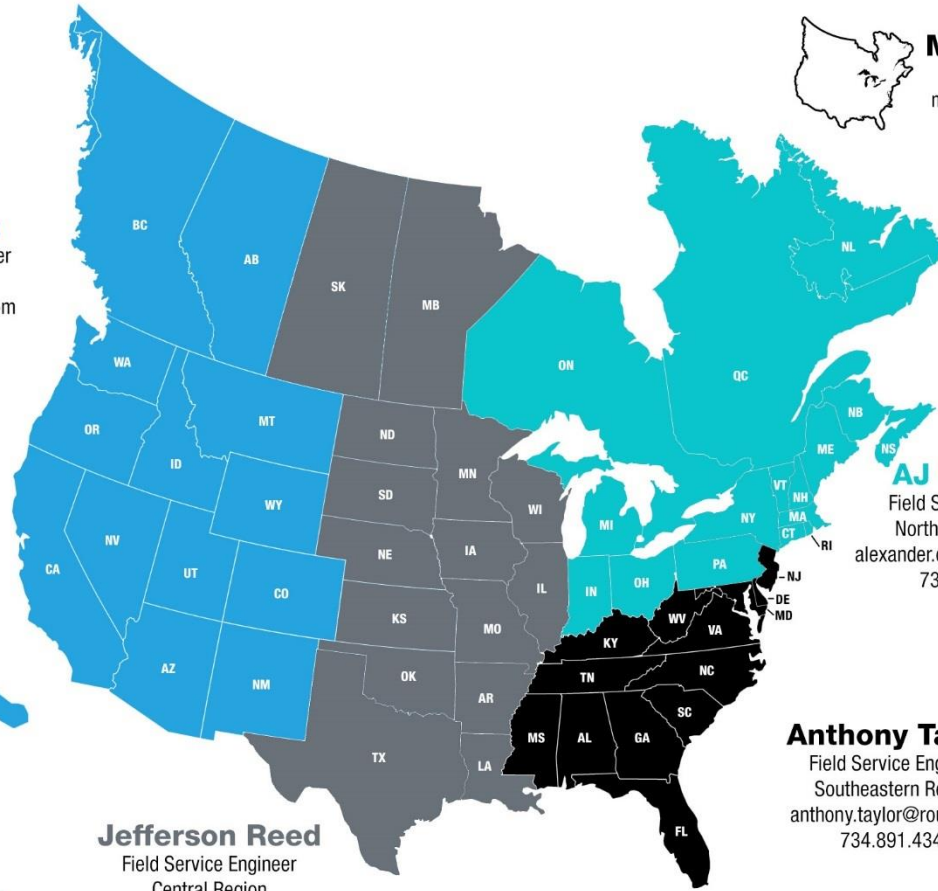
**email:** [support@roushcleantech.com](mailto:support@roushcleantech.com)

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2.20.2017



**Field Service**  
Territories

## Revision History

-AA	Initial Release	05/19/2017
-AB	<p>Revision B</p> <ul style="list-style-type: none"> <li>• P.52: Clarified installation instructions for alternate OEM wiring routing</li> <li>• P.112: Updated mounting procedure for tank harness connector</li> <li>• P.113: Updated USA fuel tank wiring routing</li> </ul>	10/13/2017
-AC	<p>Revision C</p> <ul style="list-style-type: none"> <li>• P.33: Cropped screen-shot to remove bolt that isn't installed until later in the manual. BOM item #11, changed quantity from 4 to 6.</li> <li>• P.37: BOM item #4, changed quantity from 1 to 2.</li> <li>• P.38&amp;44: BOM item #3, changed quantity from 1 to 2.</li> <li>• P.50&amp;51: BOM item #8, changed quantity from 2 to 1.</li> <li>• P.88: BOM item #3, changed quantity from 4 to 3.</li> <li>• P.92: Update instruction for fir-tree installation to clarify.</li> <li>• P.108: BOM item #2, changed quantity from 7 to 6. Deleted callout for 7<sup>th</sup> edge clip as there are only 6 used.</li> <li>• P.110: BOM item #5&amp;6, changed quantity from 1 to 2.</li> <li>• P.112: Removed item #4 from BOM, fir-tree zip-tie is included on the harness.</li> <li>• P.113&amp;114: Updated tank harness routing and retention for US and Canada tanks.</li> </ul>	11/20/17