

REFERENCE:	Nova Bus Manuals
SECTION:	11 Fuel tank
RS N°:	MQR 7621-513
EFFECTIVE IN PROD.:	L735

APPLICATION DEADLINE:
2015MA05

SUBJECT:	Plastic fuel tank with fuel gauge and auxiliary heater connections.
JUSTIFICATION:	Install a new, more robust plastic fuel tank.
THIS DOCUMENT COVERS THE FUEL TANKS INSTALLED INTO VEHICLES MANUFACTURED IN 2011. ANOTHER SERVICE DOCUMENT WILL BE ISSUED IN 2015 TO COVER VEHICLES MANUFACTURED IN 2012.	

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Replace the fuel tank.	Nova Bus	Nova Bus	5 h 20 min
2	—	—	—	—

MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
1	N8900599	—	Fuel tank cradle kit	—
1	N8900600	—	Fuel gauge kit	—
1	N8900601	—	Routing hose auxiliary heater kit	—
1	N8900602	—	Routing drain radiator kit	—
1	N8900603	—	Filler neck kit	—
1	N95703-39	—	Return flexible hose	—
1	N95709-39	—	Supply flexible hose	—
1	N68192	—	Bracket fuel tank	—
2	N43774	—	Bolt M8x25 SS	—
1	N71632	—	Bolt mush sq	—
5	N55936	—	Nut FL M12	—
4	N39684	—	Screw M12 hexagon HD	—
4	N26738	—	Washer flat M12 SS Din 125A	—
2	N43774	—	Bolt M8x25 SS flange	—
2	N43233	—	Nut hex M8 flanged with insert	—
1	N72800	—	Dustpan rear curb side	—
1	N67816	C	Cradle fuel tank plastic	
1	N68117	A	Panel wood cradle fuel tank	
2	N68118	A	Panel wood cradle fuel tank	
1	N68119	A	Panel wood cradle fuel tank	
12 m (40 pi)	N71249		Tape foam 3/16" thk x 1" width	
1	N68088-01	—	Fuel tank	—

APPROVED BY:

Daniel Theriault

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Date: 2014.02.05 13:03:18 -05'00'

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LEVEL 2				
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Materials will be available within 84 days. To order, please contact Prevost Parts by phone at 1-800-771-6682, by fax at 1-888-668-2555 or by email at prevostparts.commandes@volvo.com. Specify document number, quantity of parts required and shipping address.

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED *	RETAINED	* Dispose of the unused parts and the defective parts in accordance with local environmental standards in effect.
	Yes	—	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2014FE05	Initial release	Wilder Galiano

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Airdrie Transit - Alberta	L664	—	—	L82U2B3000507	L82U2B3000507	1
Belleville Transit - Ontario	L655	—	—	L82U3B3000385	L82U3B3000385	1
Brantford - Ontario	L663	—	—	L82U1B3000532	L82U1B3000532	1
Fredericton - New Brunswick	L672	—	—	L82U0B3000540	L82U2B3000541	2
Marketing Sales Demo - MSD 2	L616	—	—	L82U4C4500001	L82U4C4500001	1
Marketing Sales Demo - MSD 5	L619	—	—	L82X7C3000367	L82X7C3000367	1
Stratford - Ontario	L634	—	—	L82UXB3000352	L82UXB3000352	1
Strathcona County Transit - Alberta	L659	2024	2028	L82U7B3000440	L82U4B3000444	5
University of Alabama - Alabama	L640	—	—	L82U9B4000141	L82UOB4000142	2

**WARNING**

Follow your internal safety procedures.

PROCEDURE

FUEL TANK ASSEMBLY

Use number N8900599 kit.

CONTENT OF KIT # N8900599			
QTY	PART N°	REV.	DESCRIPTION
2	N75717		½ anchor rod
2	N75718		½ anchor rod
2	N75946		½ anchor rod
4	N68096		U-channel
2	N75714		U-channel with ½ rod
8	N75697		Locknut stover 1/2"-13UNC SS
8	N26738		Washer Flat M12 SS din 125A
2	N75857		Rod pin
2	N75858		Cotter pin
12	N25261		Screw cross recessed
12	N29781		Over size Washer M6 SS Gras Din 440R
12	N24407		Nut SS

1	N67816	C	Cradle fuel tank
1	N68117	A	Wood panel
2	N68118	A	Wood panel
1	N68119	A	Wood panel
12 m (40 pi)	N71249		Self-adhesive foam tape

- 1.1. Install wood panels on top of the cradle. Ensure that the wood panel with an opening is installed as shown in Figure 1.
- 1.2. Affix the wood panels with 12 N25261 bolts, 12 N29781 washers and 12 N24407 nuts.

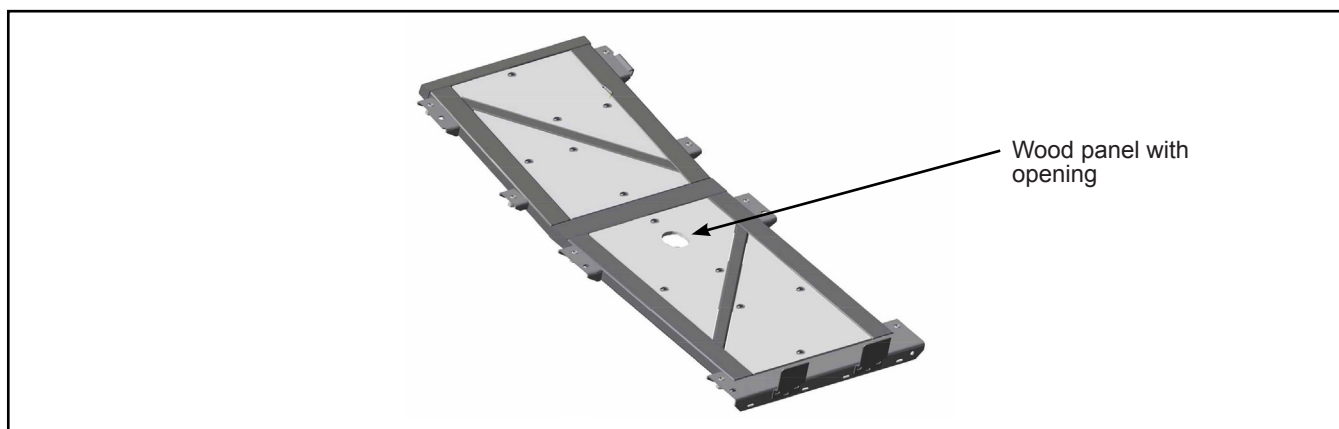


Figure 1 - Cradle with Wood Panels

- 1.3. Affix N71249 foam tape on top of the wood panels and cradle. See Figure 2 for the approximate position and lengths of tape.

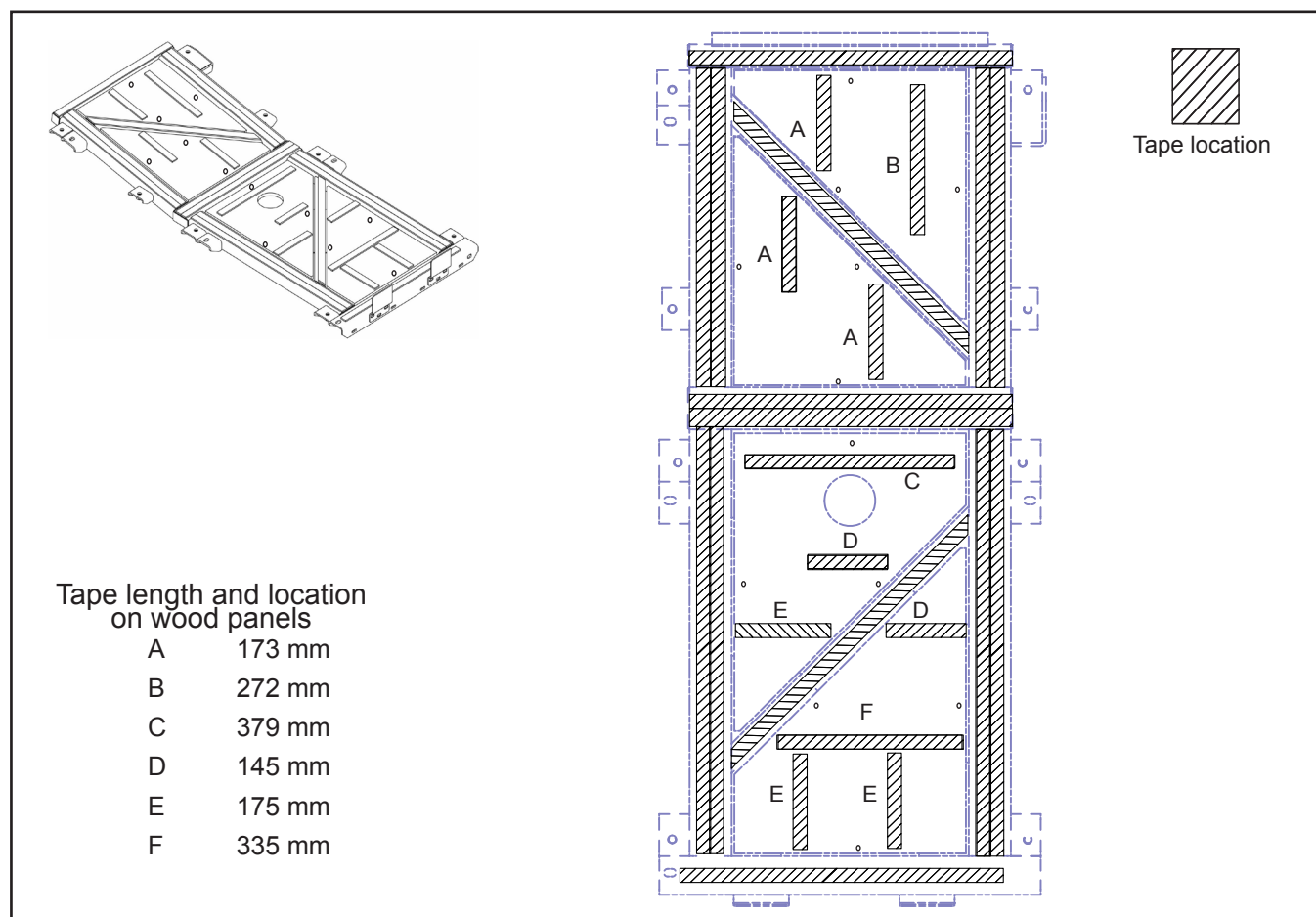


Figure 2 - Foam Tape Location

- 1.4. Install the fuel tank on top of the cradle.
- 1.5. Install the N68096 U-channels on top of the fuel tank. See Figure 3.
- 1.6. Insert the six anchor rods through the U-channels and the cradle supports. See Figure 3. Do not insert rods through the centre U-channel.

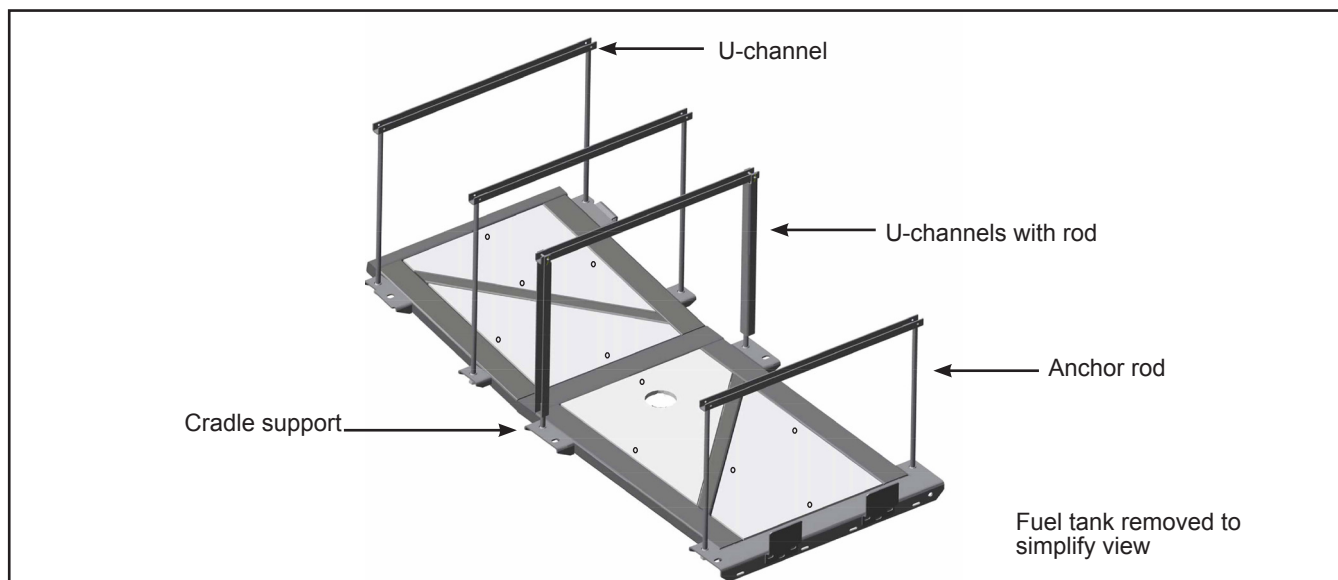


Figure 3 - Securing Fuel Tank to Cradle

- 1.7. Use N75857 rod pins and N75858 cotter pins to affix each N75714 U-channel with rod to the center U-channel. See Figure 4.

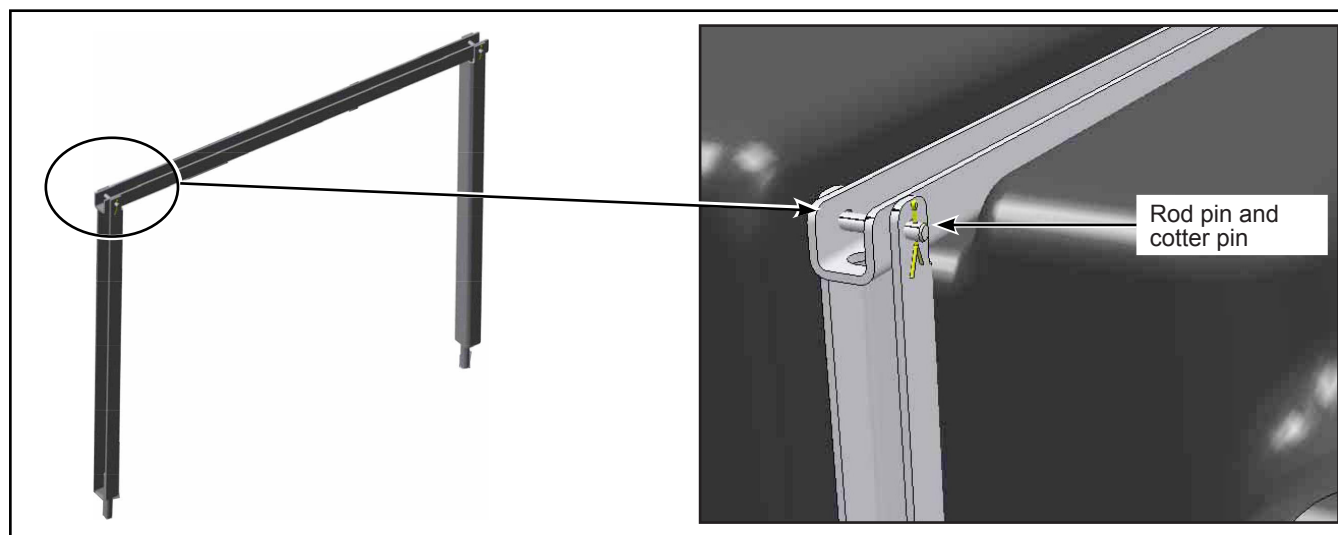


Figure 4 - Cotter Pin Assembly

- 1.8. Lay the U-channel assembly on top of the fuel tank and insert the rods into the cradle supports.
- 1.9. Affix the anchor rods and the $\frac{1}{2}$ rods with N26738 flat washers and N75697 lock nuts. Tighten to the torque specified in Figure 5.

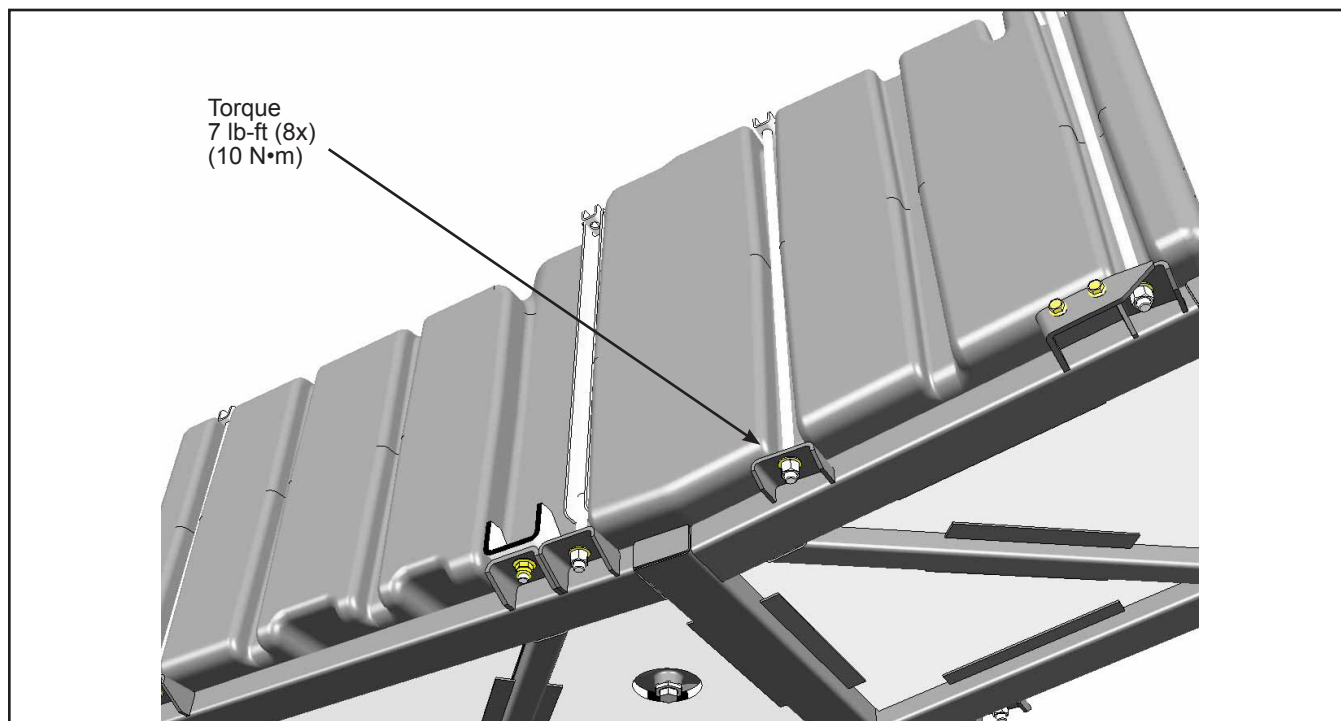


Figure 5 - Assembly and Torque



NOTE

If required, tighten the nuts one additional quarter turn to apply slightly more pressure, without deforming the plastic fuel tank.

FUEL GAUGE ASSEMBLY

Use the kit number N8900600 for this assembly.

CONTENT OF KIT # N8900600			
QTY	PART N°	REV.	DESCRIPTION
1	N59969		Fuel gauge
1	N58481		Gasket
5	N29153		Lock washer
5	N60164		Bolt 10-24

1.10. Assemble the fuel level gauge N59969:

1.10.1. Cut the float arm length at 12 in. (300 mm).

1.10.2. Bend the float arm to the length specified in Figure 6.

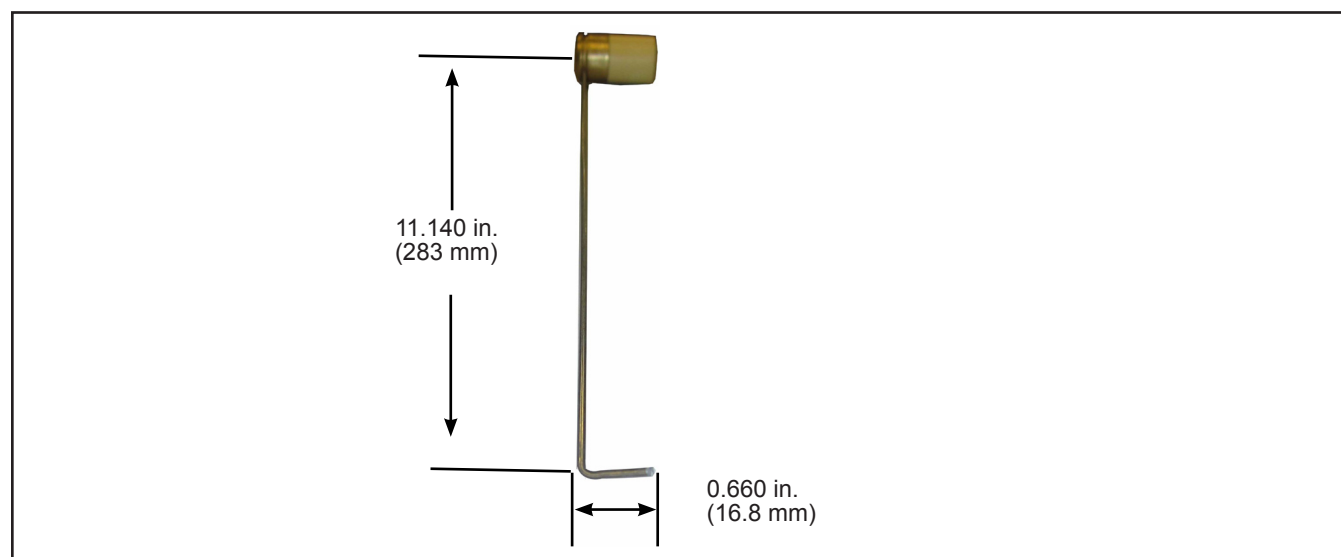


Figure 6 - Float Arm Preparation

1.10.3. Adjust the fuel level gauge to the length specified in Figure 7.

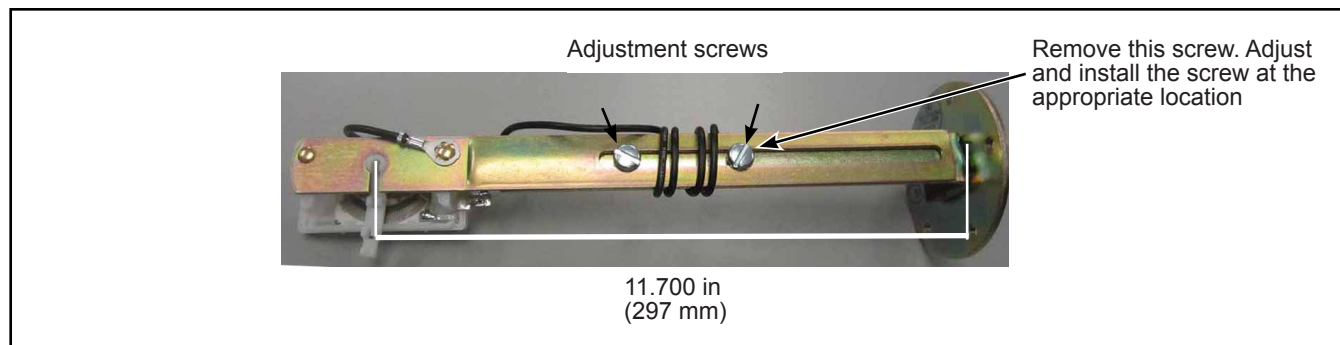


Figure 7 - Fuel Level Gauge Length Adjustment

1.10.4. Insert the bent end of the float arm into the gauge mechanism.

1.10.5. Affix the arm into the gauge mechanism's locking notches. See Figure 8.

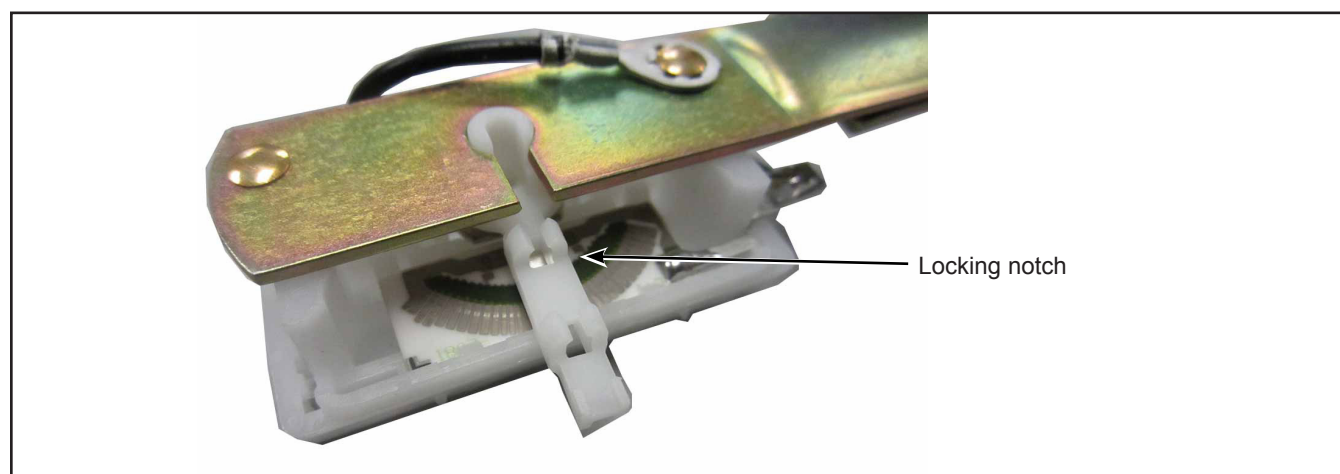


Figure 8 - Float and Fuel Level Gauge Assembly

1.10.6. Install the N58481 gasket in between the fuel tank and the fuel gauge.

1.10.7. Insert the fuel gauge assembly into the fuel tank.

1.10.8. Affix the fuel gauge assembly to the fuel tank with N60164 bolts and N29153 lock washers.

- 1.11. Remove the two rear lower curbside body panels.
- 1.12. Remove the dustpan under the diesel exhaust fluid (DEF) reservoir.
- 1.13. Remove the existing fuel tank from the vehicle according to section 11: **FUEL TANK** in the Nova Bus maintenance manual. Dispose of the holding cradle hardware to the structure.
- 1.14. Remove and dispose of the flexible hose that connects the fuel tank to the fuel filter. See Figure 9.
- 1.15. Remove and dispose of the flexible hose that connects the fuel tank to the engine. See Figure 9.

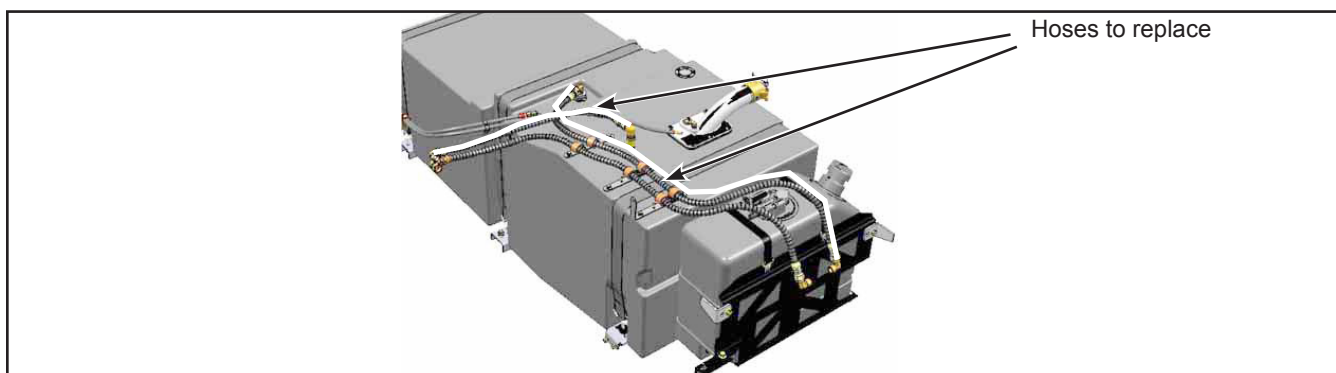


Figure 9 - Hoses to Replace

- 1.16. Install the new fuel hose N95703-39 onto the new fuel tank. Apply white thread sealer, Loctite 565, or equivalent to the connectors. See Figure 10.
- 1.17. Install the new fuel hose N95709-39 onto the new fuel tank. Apply white thread sealer, Loctite 565, or equivalent to the connectors. See Figure 10.

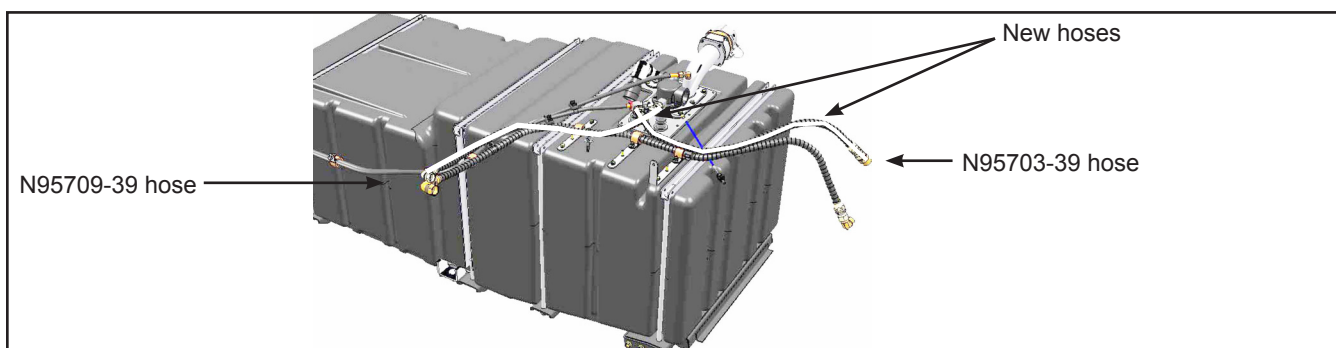


Figure 10 - New Hoses

- 1.18. Transfer the remaining hoses and hoses supports from the existing fuel tank to the new plastic tank. See Figure 11.

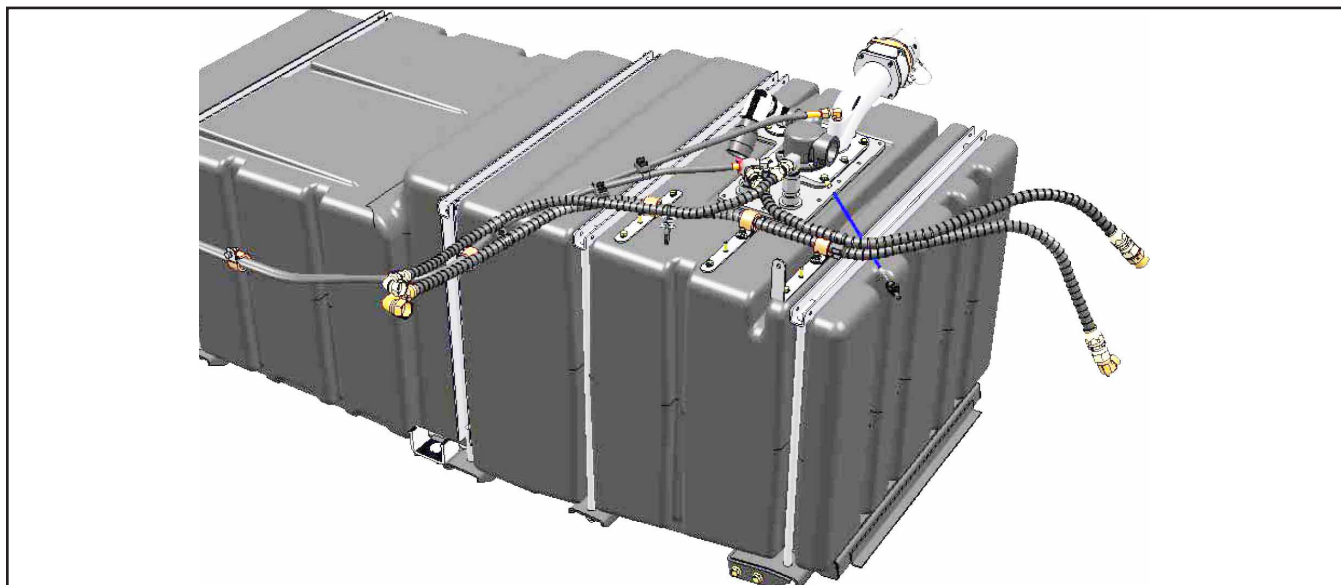


Figure 11 - Hose Assemblies

- 1.19. Transfer the mud flap onto the new cradle. See Figure 12.

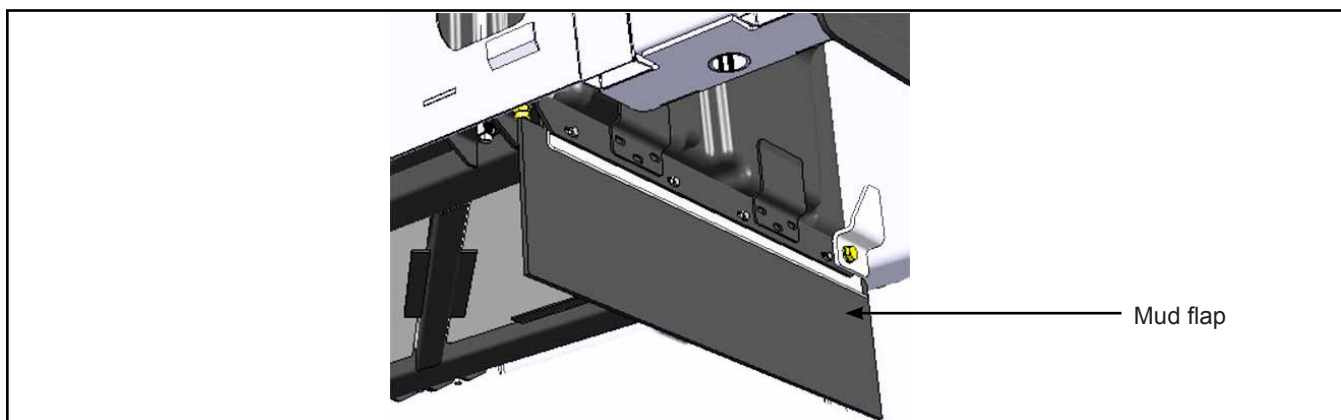


Figure 12 - Mud Flap Installation

AUXILIARY HEATER HOSE ASSEMBLY

Use number N8900601 kit for this assembly.

CONTENT OF KIT # N8900601			
QTY	PART N°	REV.	DESCRIPTION
1	N37852		Rivnut M6
1	N31320-03		P-clamp
1	N16642		Bolt M6
1	N27714		Lock washer
4.5 ft (1.3 m)	N17208		Flexible hose
4 ft (1.2 m)	8862346		Loom
2	0711918		Connector
1	2394308		L Support
1	N40492		Bolt M6x20
1	N44887		Nut M6

- 1.20. Install one 0711918 connector onto each auxiliary heater hose.
- 1.21. Install a section of N17208 flexible hose onto each 0711918 connector. Cut the hose at the appropriate length.
- 1.22. Install 8862346 protective loom onto the two flexible hoses, where P-clamps will be installed further in this procedure. See Figure 14.
- 1.23. Drill a 0.350 in. (9 mm) diameter hole at the location specified in Figure 13. This operation is performed through the transmission access panel located at the rear interior of the vehicle.

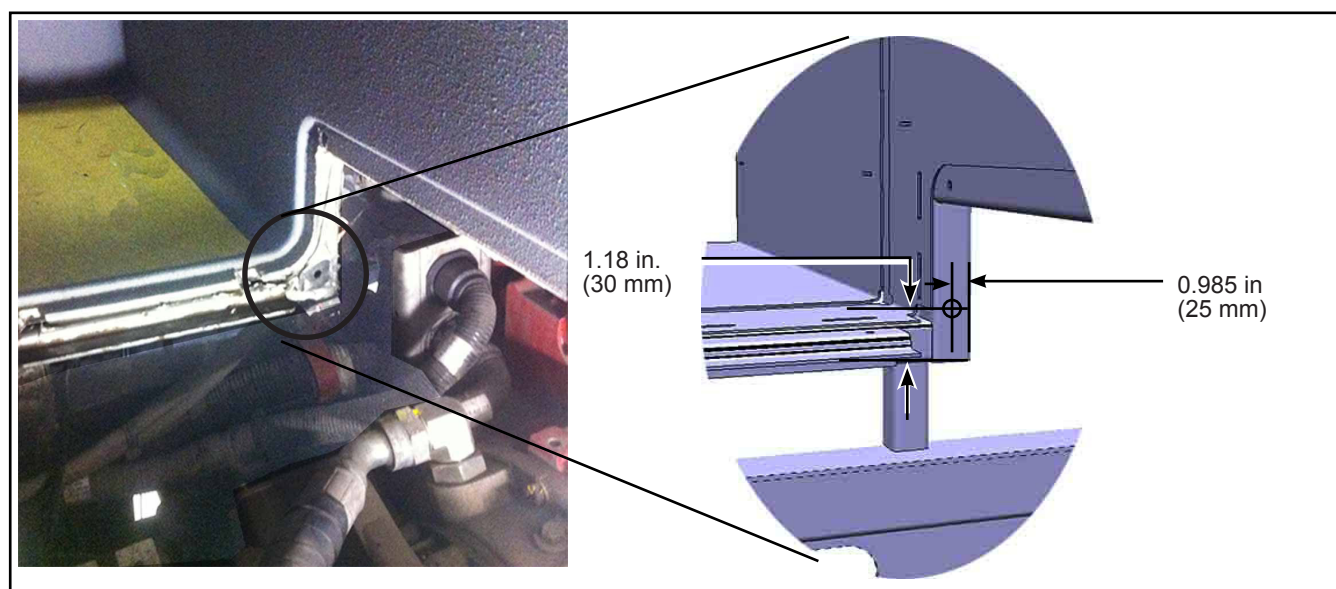


Figure 13 - Drilling for the Installation of P-clamp

- 1.24. Install the N37852 rivnut into the drilled hole.
- 1.25. Affix the L support 2394308 with bolt N16642. See Figure 14.
- 1.26. Affix the auxiliary heater hoses with a N31320-03 P-clamp, N40492 bolt and N44887 nut. See Figure 14.

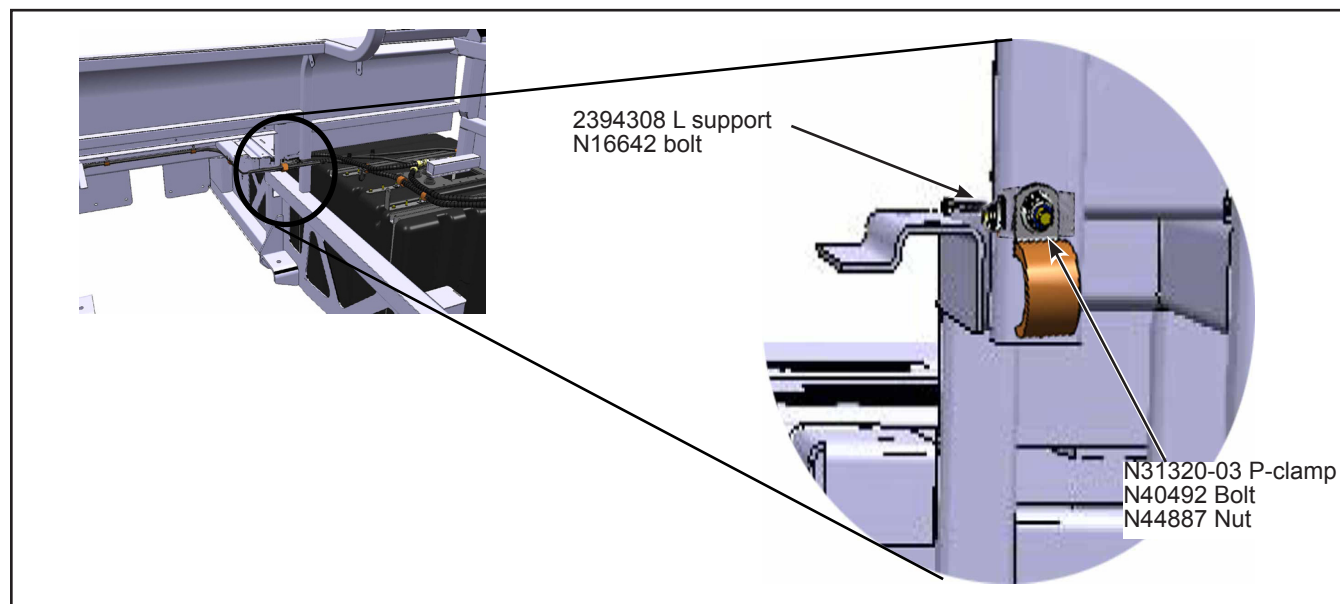


Figure 14 - Affixing the Auxiliary Heater Hose with P-clamp N31320-03

- 1.27. Install the N68192 cradle support with two N43774 bolts. See Figure 15.

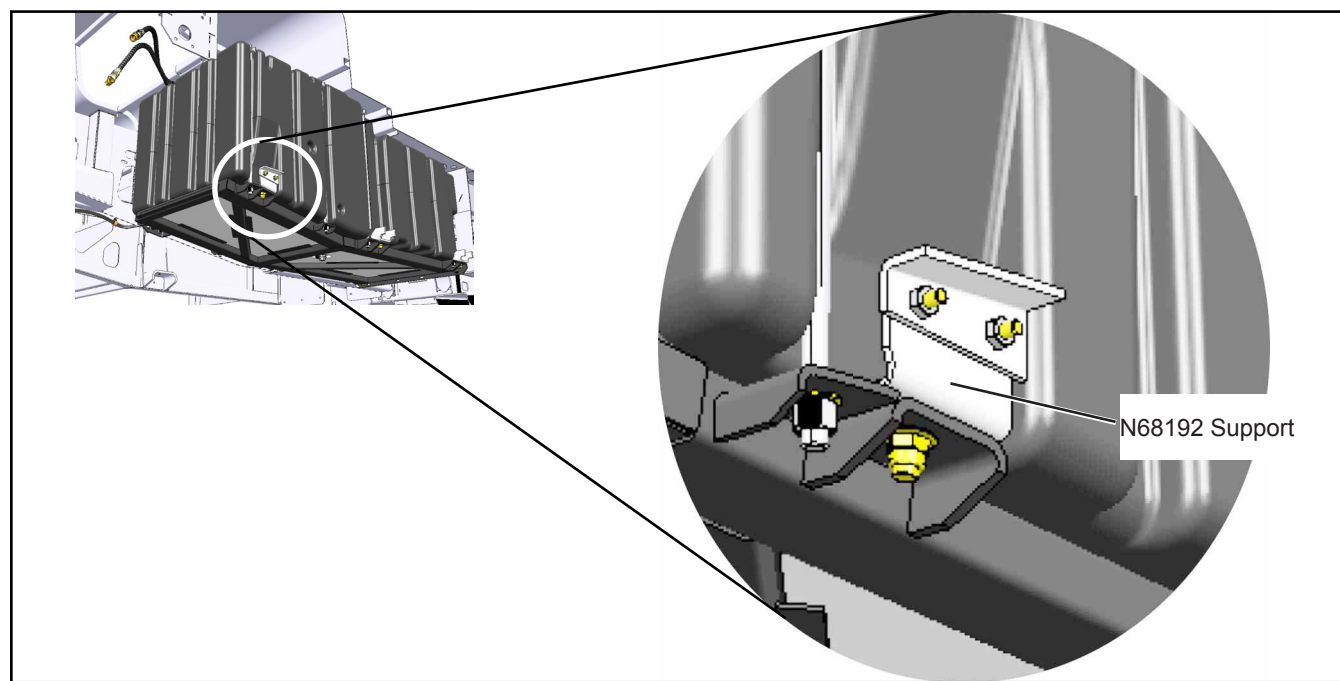


Figure 15 - N68192 Cradle Support Installation

FLOOR CONVECTOR DRAIN HOSE MODIFICATION

Use the number N8900602 kit for this assembly.

CONTENT OF KIT # N8900602			
QTY	PART N°	REV	DESCRIPTION
1	N29353		Rivnut M6
1	N33325		Rivnut M6
2	N31321-02		P-clamp
2	N12705		Bolt M6
2	N27714		Lock washer

1.28. If a floor convector drain hose is installed, modify the routing:

1.28.1. Drill two 0.350 in. (9 mm) diameter holes at the position indicated in Figure 16.

1.28.2. Install the N33325 and N29353 rivnuts. See Figure 16.

1.28.3. Affix the drain hose with N31321-02 P-clamps, N12705 bolts and N27714 lock washers. See Figure 16.

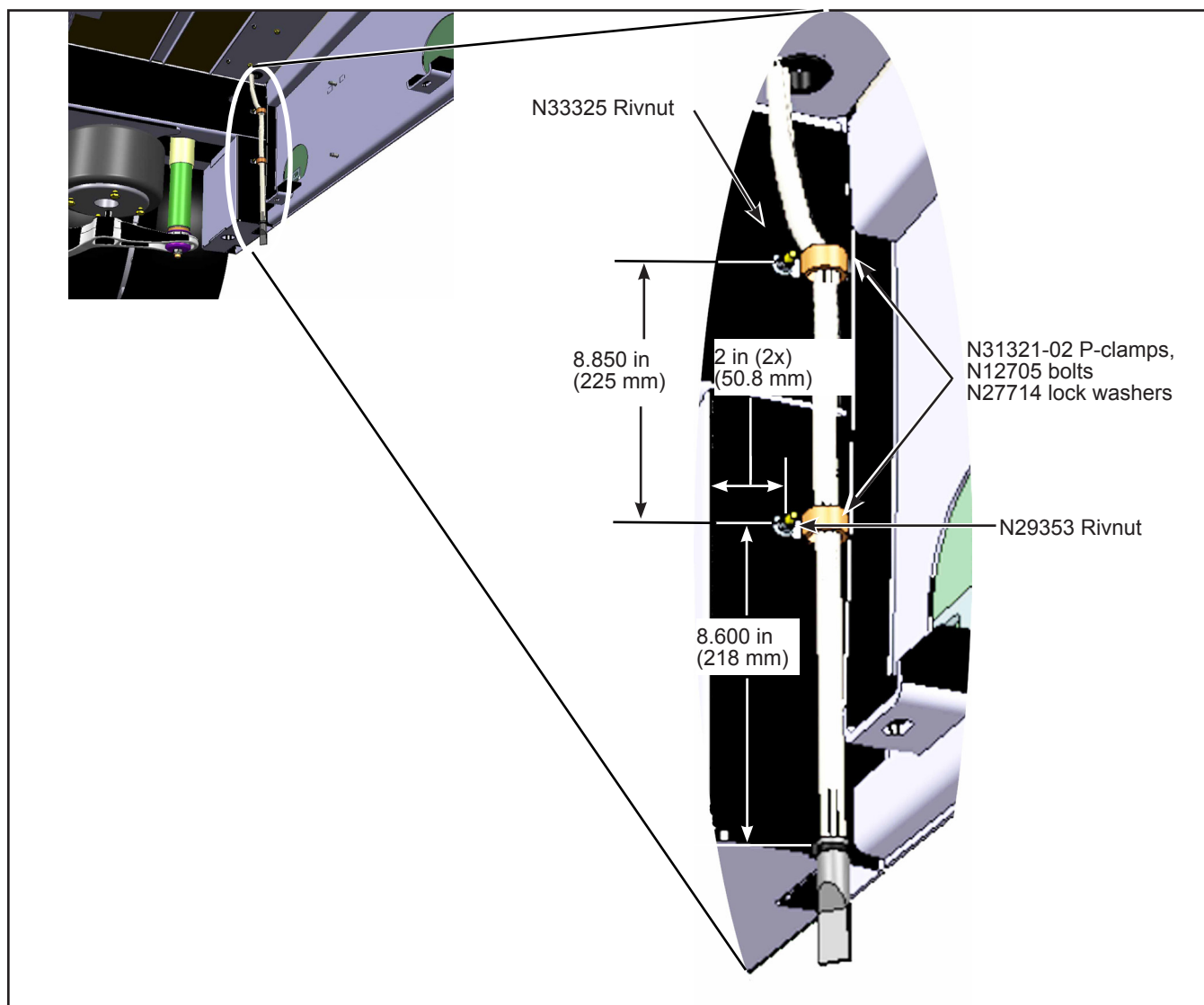


Figure 16 - New Floor Convector Drain Hose Routing

FUEL FILLER NECK INSTALLATION

Use number N8900603 kit for this assembly.

CONTENT OF KIT # N8900603			
QTY	PART N°	REV	DESCRIPTION
6	N17882		Bolt
6	N16646		Washer
6	N17904		Lock washer

- 1.29. Transfert and install the filler neck with N17882 bolts, N16646 flat washer and N17904 lock washer. See Figure 17 for the installation and torque sequence.

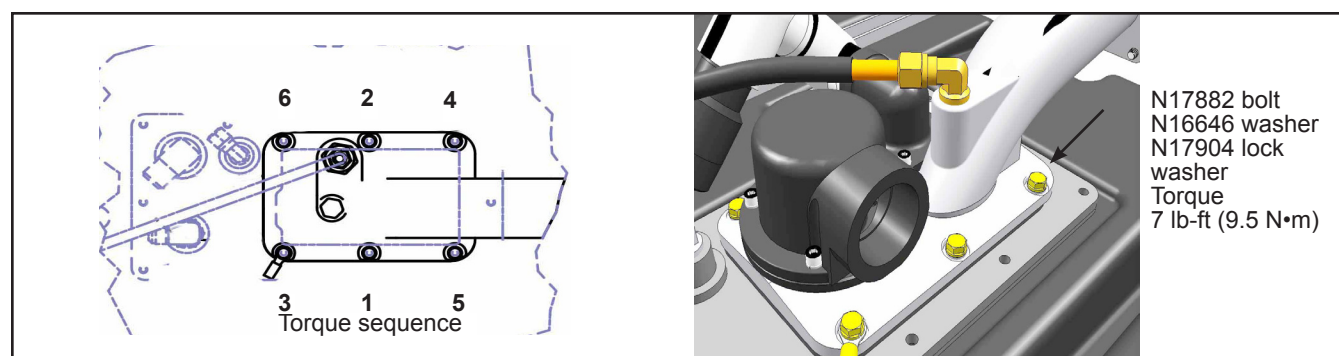


Figure 17 - Filler Neck Installation with New N17882 Bolts

FINAL FUEL TANK INSTALLATION

- 1.30. Install the fuel tank following the procedure in section 11: **FUEL TANK** of the Nova Bus Maintenance manual.
- 1.31. Install the N71632 bolt with the N55936 nut. Tighten to the torques specified in Figure 18.

**NOTE**

The bolt can be installed before the fuel tank assembly installation.

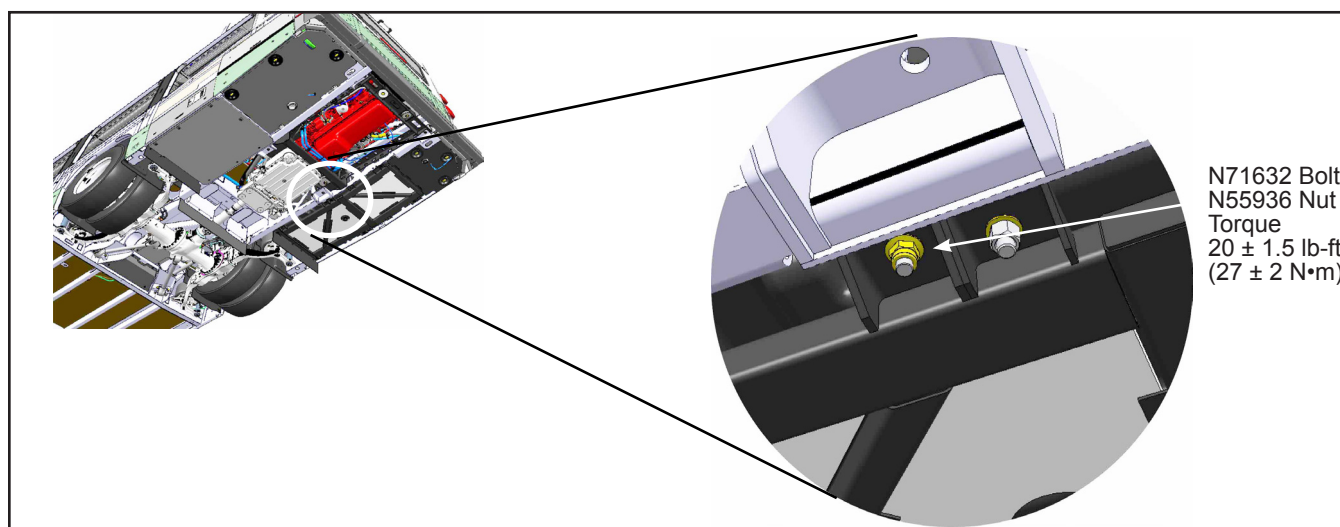


Figure 18 - Carriage Bolt Installation

- 1.32. install the new hardware to hold the cradle to the structure. Tighten the fuel tank assembly to the torques specified in Figure 19.

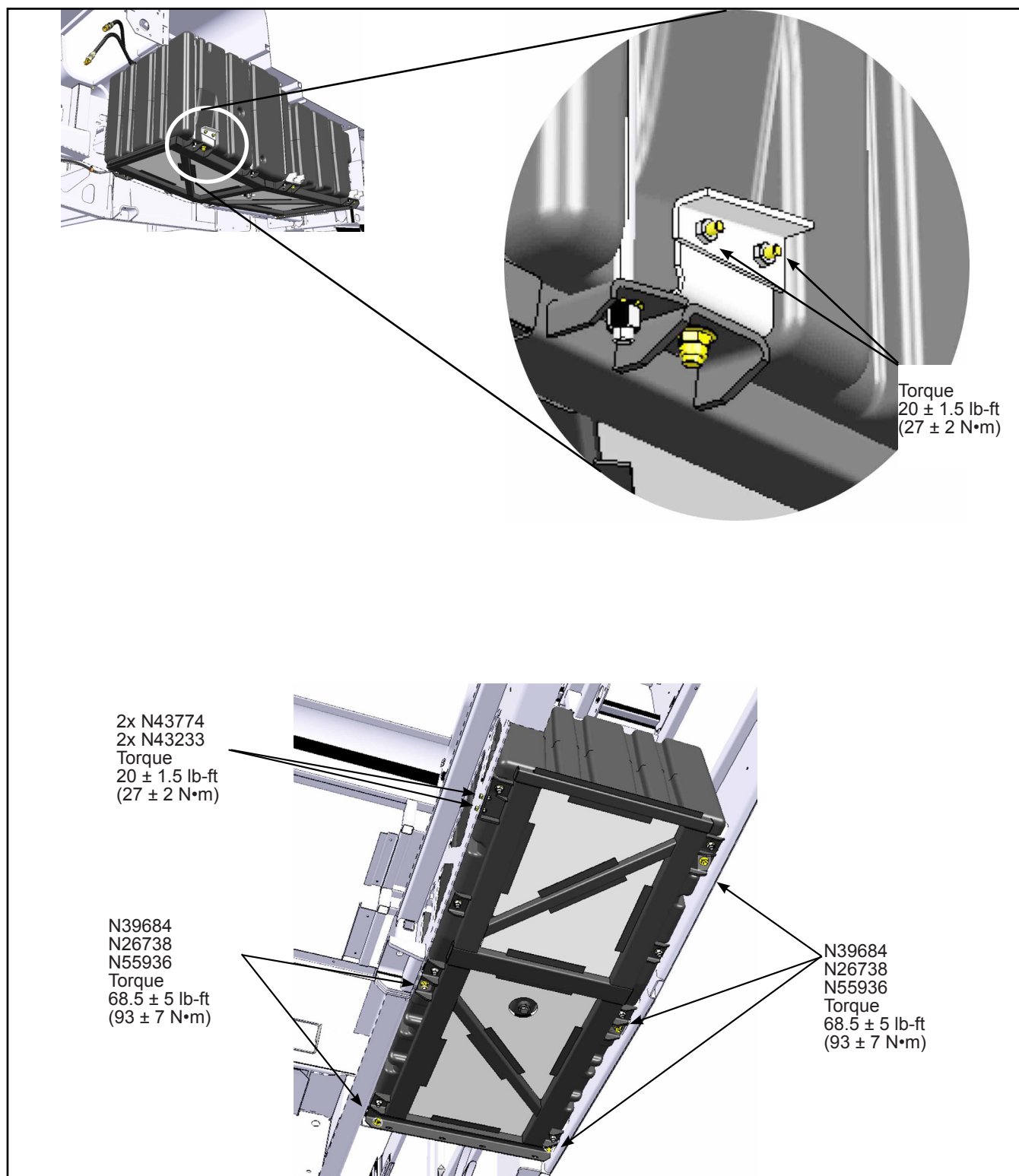


Figure 19 - Torque Values for Fuel Tank Assembly

1.33. Install and tighten the fuel hoses to the torques specified in Figure 20.

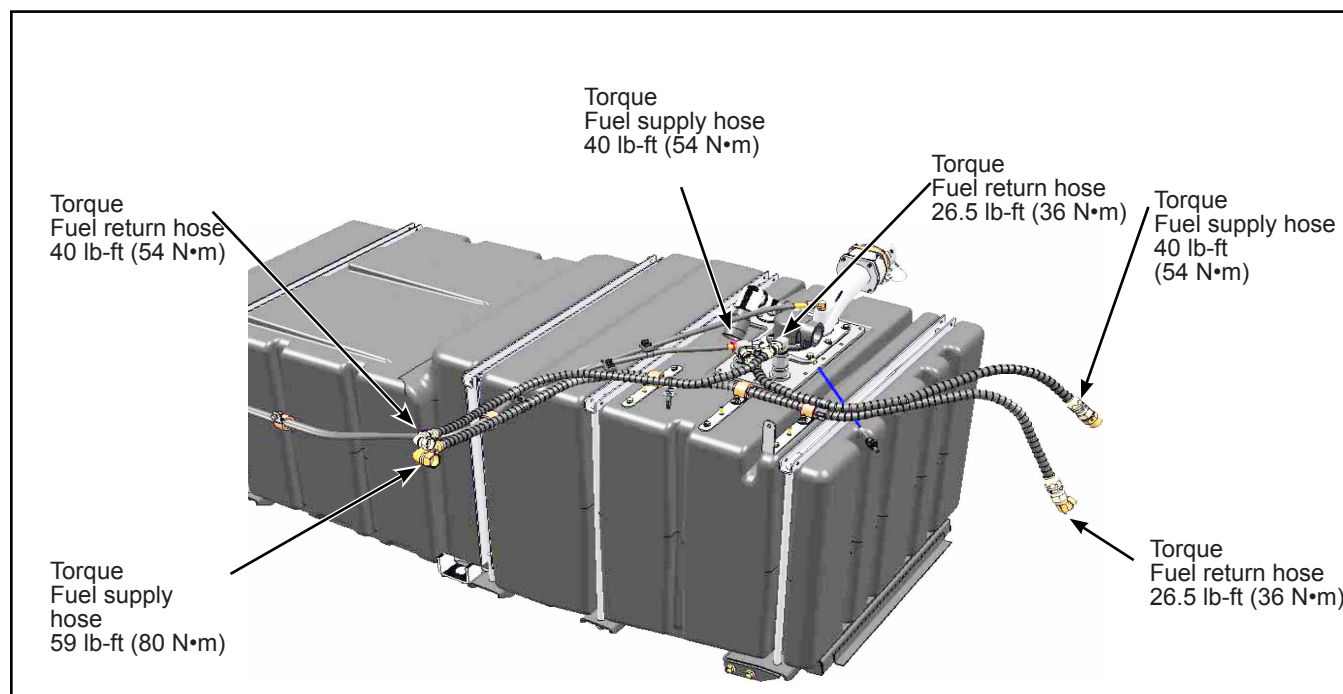


Figure 20 - Fuel Hose Torques

1.34. Install the N72800 dustpan.

1.35. Install the two rear lower curbside body panels. ❖