



PROTERRA



IMPROVEMENT OFFERING

ISSUE DATE:	3-16-2021
SERVICE BULLETIN SUBJECT:	Compressor Intake Snorkel Retrofit
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-21-42
LABOR OPERATION CODE:	BC43H

NOTICE! It is expected that this process will require 3 hours per bus. Please schedule appropriately to minimize vehicle downtime.

COMPRESSOR INTAKE SNORKEL RETROFIT

Retrofit Description:

This procedure adds a one-meter extension to the compressor intake to avoid contamination of the compressor.

Tools/Parts Required

Tools and Supplies Required:

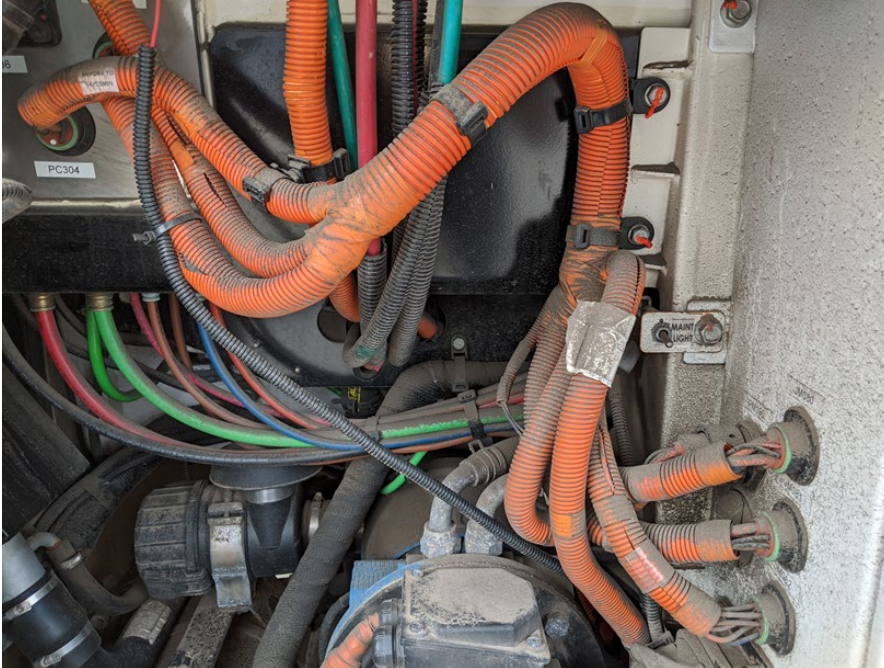
- Ratchet
- 10mm Socket
- 13mm Socket
- 10mm Combination Wrench
- 13mm Combination Wrench
- Side Cutting Pliers
- Approved Safety Knife
- Orange Torque Stripe Paint

Kit Parts Required:

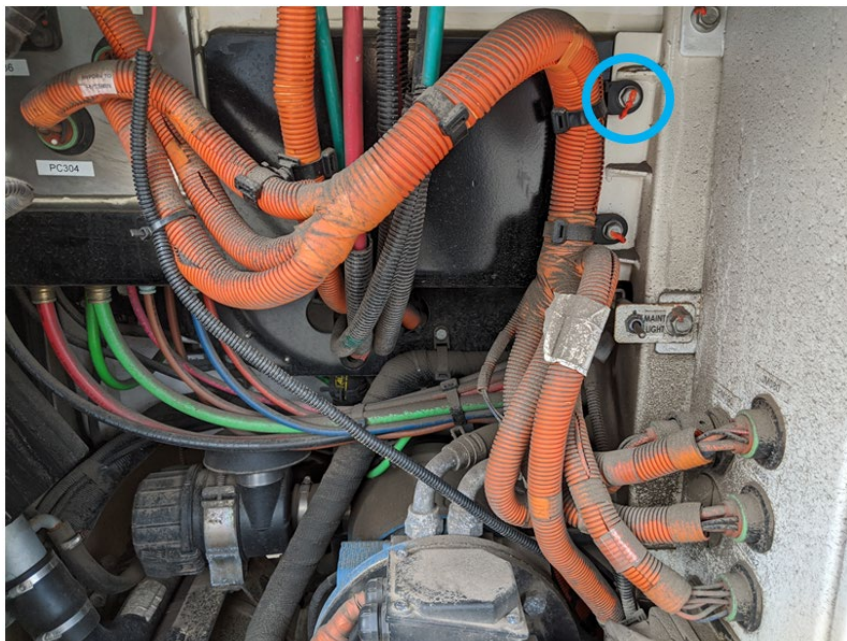
- 055196 RETROFIT KIT, AIR COMPRESSOR INTAKE (Consisting of)
 - 054841 KIT, AIR FILTER HOUSING RELOCATION TUBE 1 EA
 - 117-6415 BRACKET, AIR INTAKE, REROUTE 1 EA
 - 020955 MOUNTING BASE, CABLE TIE, M10 STUD, 1X SADDLE, BLK 1 EA
 - 013569-004 BOLT,HEX,FLG,STL,1000HSS,CLASS10.9,M8-1.25X25X25 1 EA
 - 013569-003 BOLT,HEX,FLG,STL,1000HSS,CLASS10.9,M8-1.25X20X20 1 EA
 - 013575 LKNT,HEX,FLANGE,STL,1000HSS,CLASS 10, M8-1.25 2 EA
 - 011013 MOUNTING BASE, CABLE TIE, .25 STUD, 2X SADDLE GRAY 1 EA
 - 013568-006 BOLT,HEX,FLANGE,STL,1000HSS,CLASS10.9,M6-1.0X30X30 1 EA
 - 013574 LKNT,HEX,FLANGE,STL,1000HSS,CLASS 10, M6-1.0 2 EA
 - 020891 WASHER, DIN 9021, SST, M8 4 EA
 - 011014 MOUNTING BASE, CABLE TIE, .25 STUD, SINGLE, BLACK 1 EA
 - 023831 CABLE TIE, EDGE CLIP, 8" 1 EA
 - 012138 CABLE TIE, HEAVY DUTY .5WIDE 9.1" BLACK 5 EA
 - 013569-005 BOLT,HEX,FLG,STL,1000HSS,CLASS10.9,M8-1.25X30X30 2 EA
 - 013569-007 BOLT: HEX: M8-1.25X35X22 2 EA
 - 012108 SWIVEL BUNDLE, SPACER 5 EA
 - 012138 CABLE TIE, HEAVY DUTY .5WIDE 9.1" BLACK 20 EA

Procedure

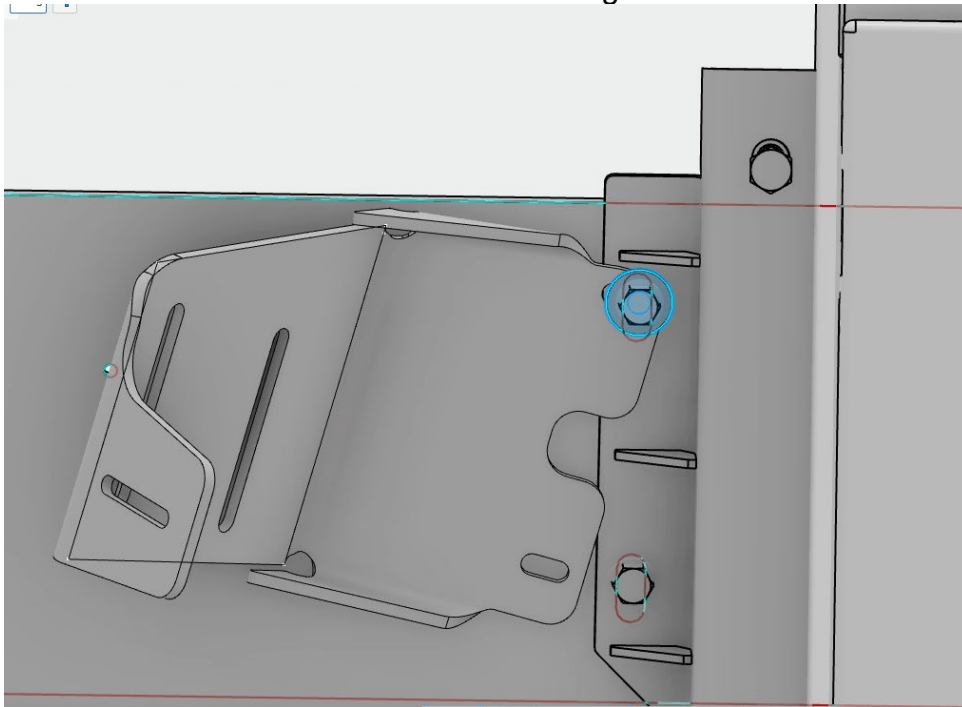
1. Perform the Proterra approved Lockout/Tagout procedure to make the bus safe for work.
2. Open the Trunk Panel to access the HVJB area. Using Side Cutting Pliers, cut any Cable Ties necessary to move the Orange cables away from the HVJB.



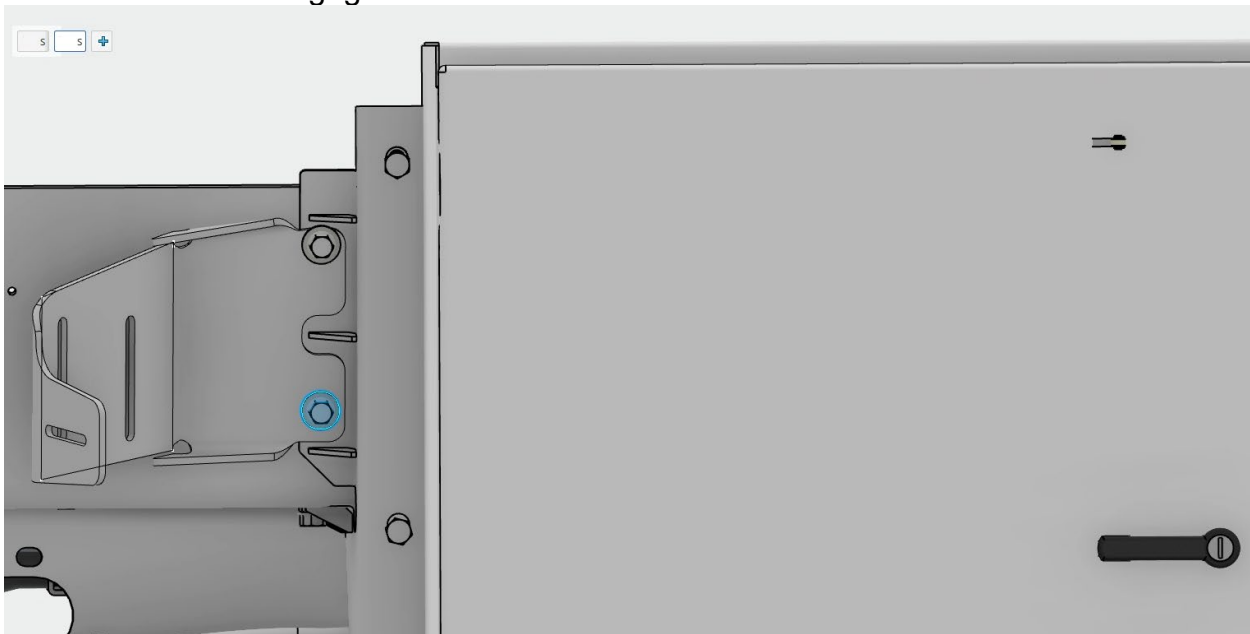
3. Using a 13mm Ratchet/Socket, remove the M8 Bolt and Cable Tie Base shown circled in Blue below.



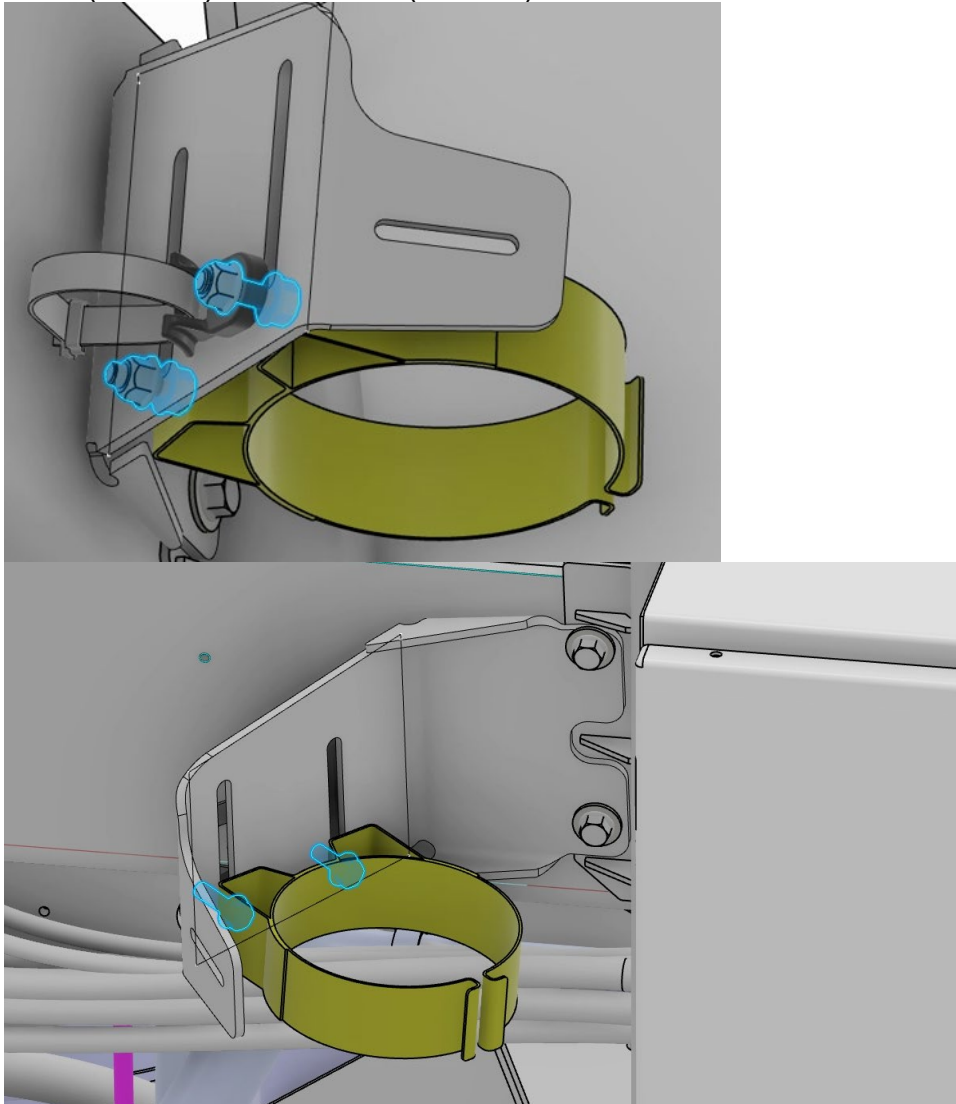
- Place the upper mounting slot of the Air Intake Bracket (117-6415) over the location where the bolt was removed as shown in the following illustration.



- Using a 13mm Ratchet/Socket, install an M8 bolt to secure the Air Intake Bracket (117-6415) to the HVJB. Multiple length Bolts have been provided for this. It is expected that the M8x30 Bolt (013569-005) with one Washer (020891) will be the best fit. If it is not, select the best Bolt length and Washer(s) combination that allows for the best thread engagement.
- Using a 13mm Ratchet/Socket, remove the Lower Bolt and Cable Tie Mount.
- Using a 13mm Ratchet/Socket, install an M8 bolt to secure the Air Intake Bracket (117-6415) to the HVJB as shown in the following illustration. Use the Bolt/Washer combination that allows for the best thread engagement.

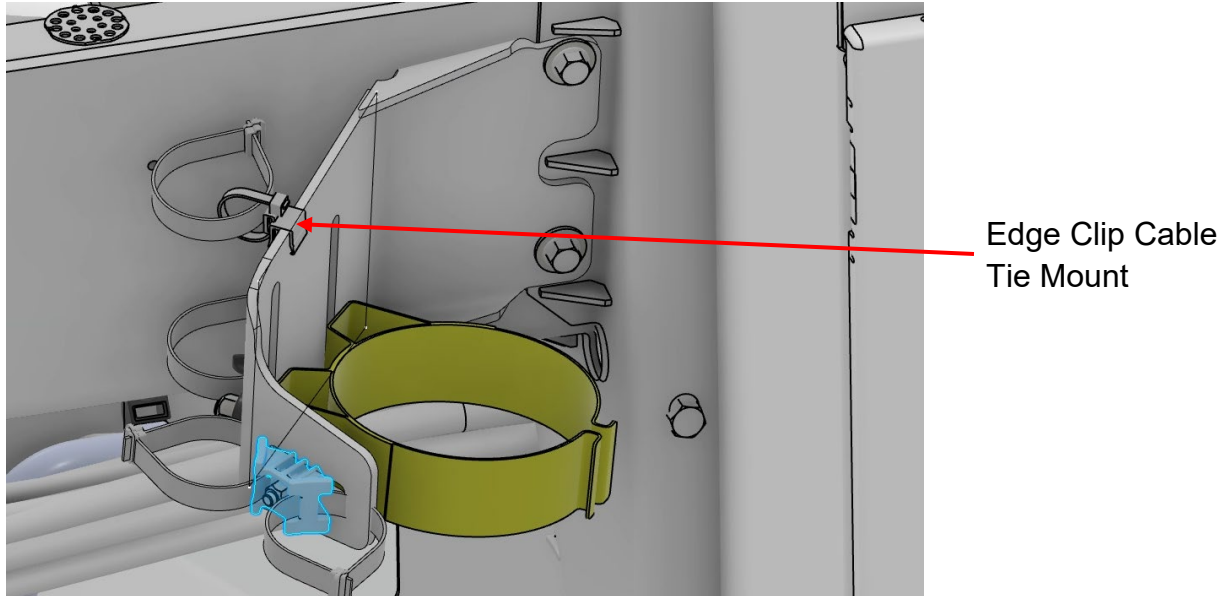


8. Using a Calibrated Torque Wrench with a 13mm Socket, **torque the M8 Bolts to 20 foot pounds.**
9. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.
10. Attach the Compressor Filter Bracket from the Kit (054841) onto the Air Intake Bracket (117-6415) as shown in the following illustration. Use an M8x20 Bolt (013569-003) and Locknut (013575) on the side closest the HVJB. Use an M8x25 Bolt (013569-004) with a Cable Tie Base (020955) and Locknut (013575) on the other side.

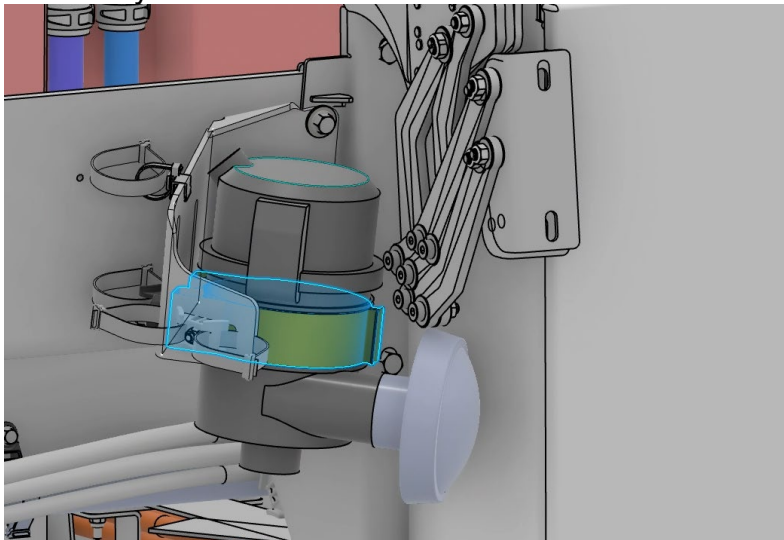


11. Using a Calibrated Torque Wrench with a 13mm Socket and a 13mm Combination Wrench, **torque the M8 Bolts to 20 foot pounds.**
12. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

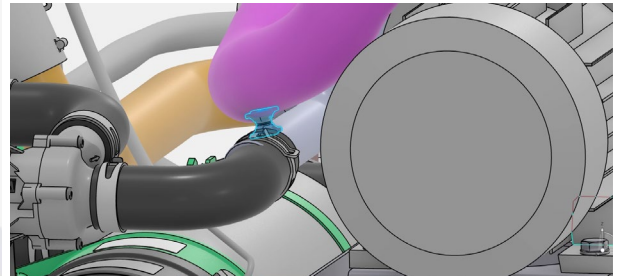
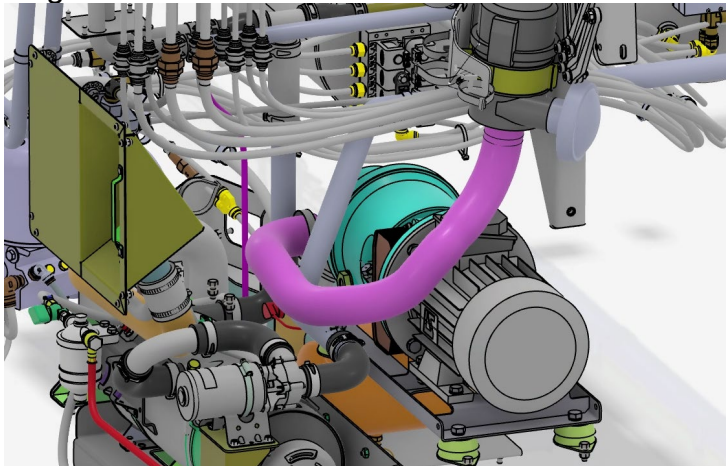
13. Attach a Saddle Cable Tie Mount (011013) to the Compressor Filter Bracket as shown in the following illustration. Use a M6x30 Bolt (013568-006) and M6 Locknut (013574) to secure the Cable Tie Mount to the Bracket.



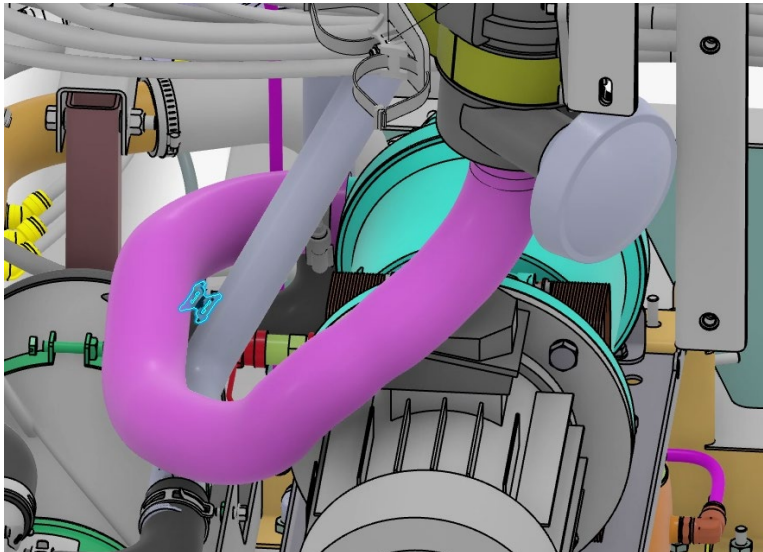
14. Using a Calibrated Torque Wrench with a 10mm Socket and a 10mm Combination Wrench, **torque the fasteners to 11 foot pounds.**
15. Attach an Edge Clip Cable Tie Mount (023831) to the top of the Air Intake Bracket (117-6415) as shown in the previous illustration.
16. Mount the Air Compressor Intake from the Kit (054841) onto the Compressor Filter Bracket as shown in the following illustration. Adjust the location of the Intake as far down as possible to prevent interference with the trunk hinge. The Hood Cap on the Intake may be removed if necessary.



17. Route the Hydrovane Flexible Tube from the Kit (054841) from the Compressor Air Intake back to the Compressor Inlet as shown in the following illustrations. Connect the Tube to the Aux Heat Coolant tube and Air Compressor Body Tab using Swivel Spacers (012108) and Cable Ties (012138). Ensure that the Tube does not contact the Coolant Tube and that no significant length of the Tube is unsupported. Using an approved Safety Knife, cut the Tube to the proper length



18. Secure the Orange HVJB Cables using Saddle Mounts installed on the back face of the Air Intake Bracket (117-6415). Ensure that there is no risk of Chaffing between the Cables and metal surfaces. Test the Trunk Panel to ensure that no Cables are caught, and no moving parts make contact. Remove the Hood Cap if necessary for clearance. Tighten any loose hardware.



19. Take photographs of the finished installation and upload them to the workorder.

20. Attach any notes on installation difficulties that were encountered to the workorder.

21. Close the Trunk Panel.

22. Remove the Lockout/Tagout devices and return the bus to service.