ISSUE DATE:	2-10-2021
SERVICE BULLETIN SUBJECT:	40 Foot 800 Volt Parking Brake Release Retrofit
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-21-21
Labor Operation Code:	BD42Z

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

40 FOOT 800 VOLT PARKING BRAKE RELEASE RETROFIT

Retrofit Description:

This procedure updates the parking brake air tank from a half-gallon to a two and one-half gallon tank for improved performance.

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Tools/Parts Required

Tools and Supplies Required:

- Ratchet
- 13mm Socket
- 13mm Combination Wrench
- Standard Combination Wrench Set
- Calibrated Torque Wrench
- Orange Torque Stripe Paint
- Side Cutting Pliers
- Approved Lifting Devices for the Bus
- Loctite 567

Parts Required:

- 055961 KIT, PNEUMATIC COMPONENTS, 2 1/2 GALLON TANK 40FT (Consisting of)
  - 000321 VALVE, SINGLE CHECK, SC-3 1 EA
  - 000624 TUBING, AIR BRAKE, BROWN, 3/8 OD" 120 IN
  - 006722 FITTING, COMPOSITE, 90 DEG, SWIVEL, 1/2 MPT"X 3/8 TUBE" 2 EA
  - 111-5683 VALVE, DRAIN, AIR TANK 1 EA
  - 042547 CABLE TIE, EDGE CLIP, FRONT EDGE, 8" 2 EA
  - 052278 TANK, AIR, 2.5GAL 1 EA
  - 006487 FITTING, MALE ELBOW, 1/2 NPT 1 EA
  - 001146 FITTING, PTC, COMPOSITE, UNION, 3/8 OD TUBE" 1 EA
  - 003784 PIPE BUSHING, BRASS, 1/2 X ¼ 1 EA
  - 000640 FITTING, BRASS, BUSHING, 3/8 MPT 1/4" FPT 1 EA
  - 001161 FITTING, BRASS, PLUG, SOCKET HEAD, 1/2 PT" 1 EA
  - 005443-004 BOLT,HEX,FLANGE,STL,YZPL,CLASS 10.9, M8-1.25X25X25 4 EA
  - 013575 LKNT,HEX,FLANGE,STL,1000HSS,CLASS 10, M8-1.25 4 EA

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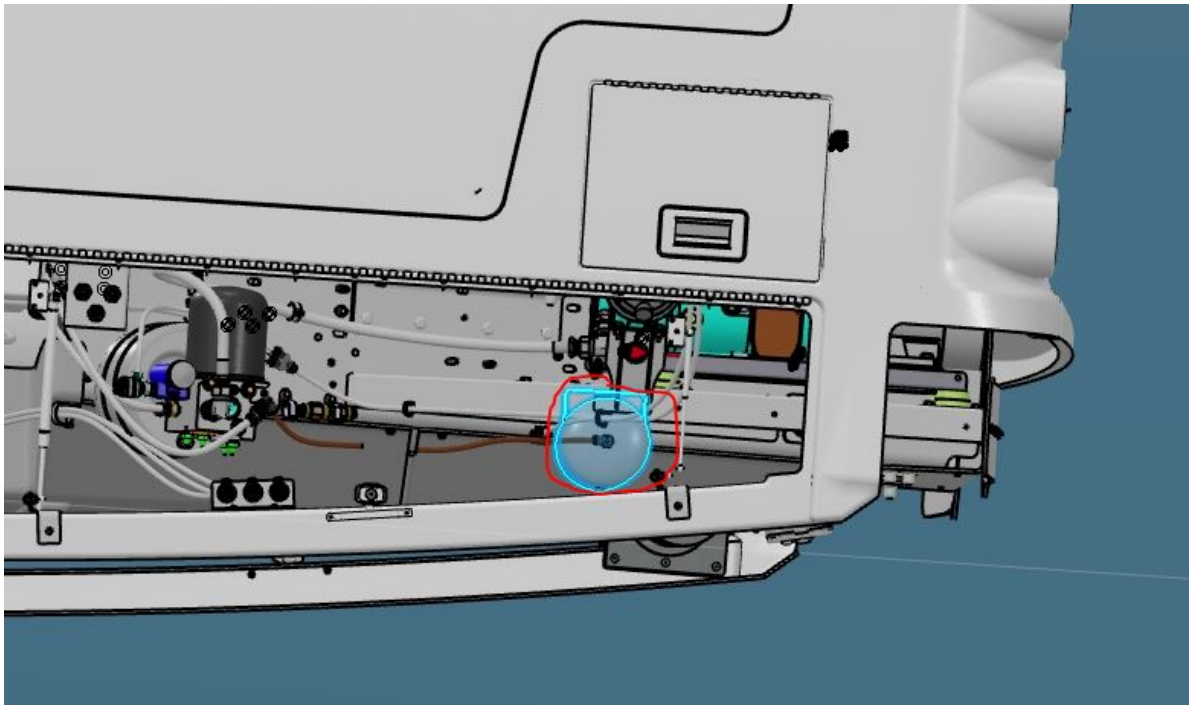
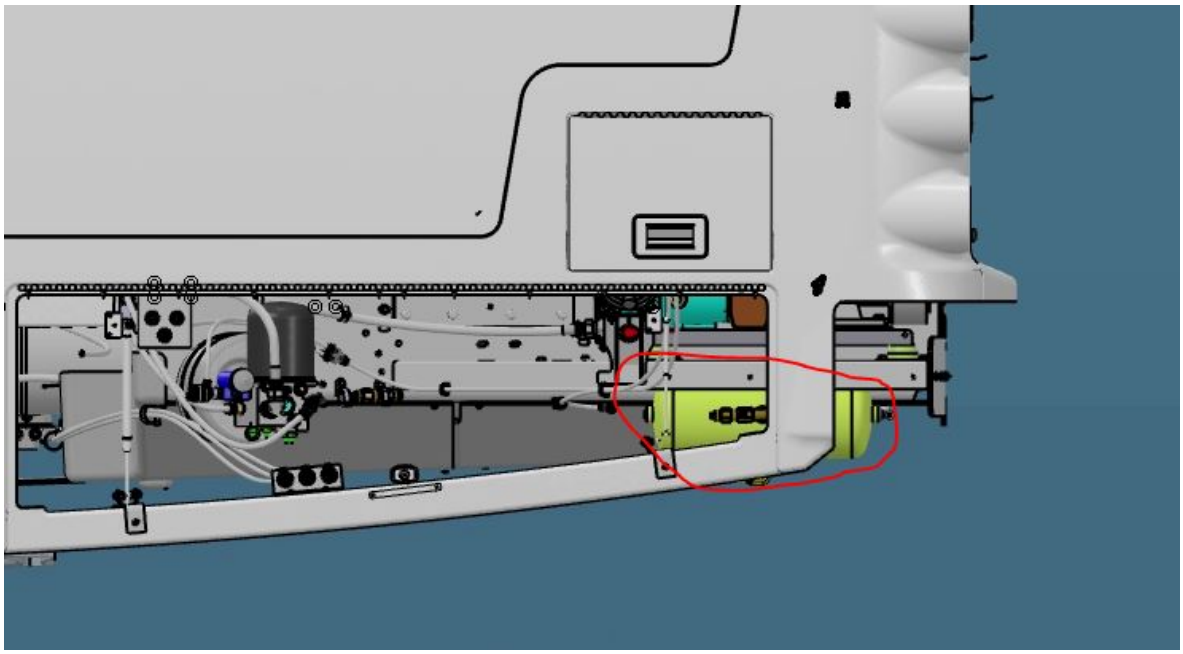
Procedure:

1. Complete the Proterra approved Lockout/Tagout procedure to make the bus safe for work.
2. This procedure is best accomplished with the bus lifted for better access to the Prodrive area of the bus.
3. This procedure will remove the 1/2 Gallon Air Tank at the curbside rear of the bus as shown in the following illustration.



4. The procedure will replace the removed tank with a new 2.5 Gallon Air Tank as shown in the following illustration.



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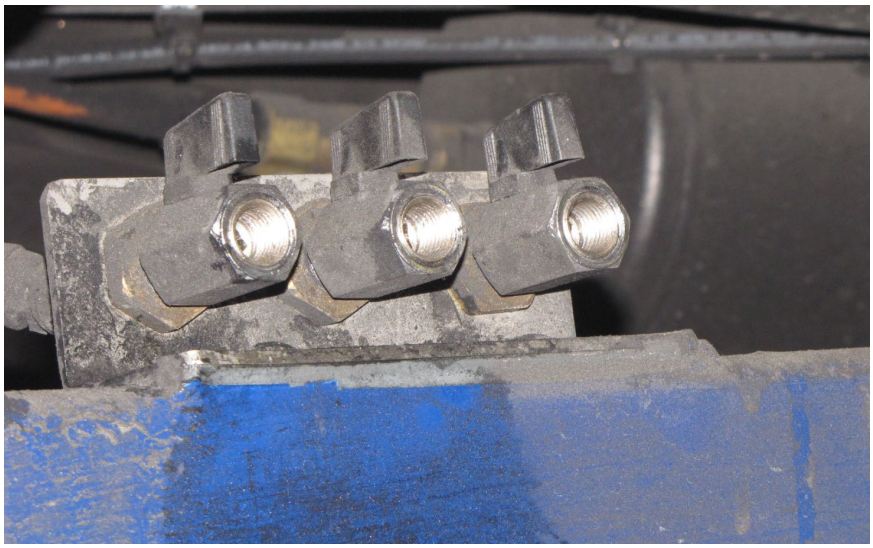
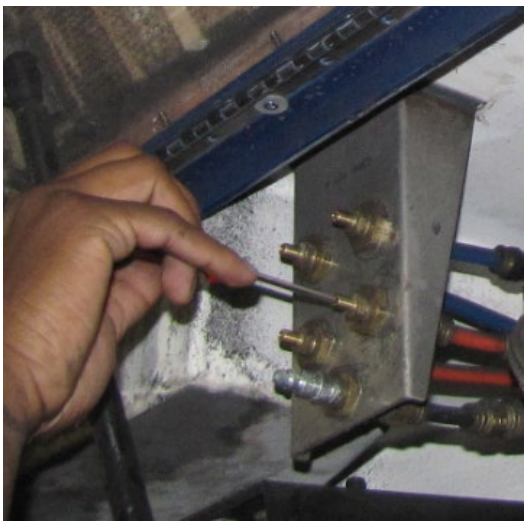
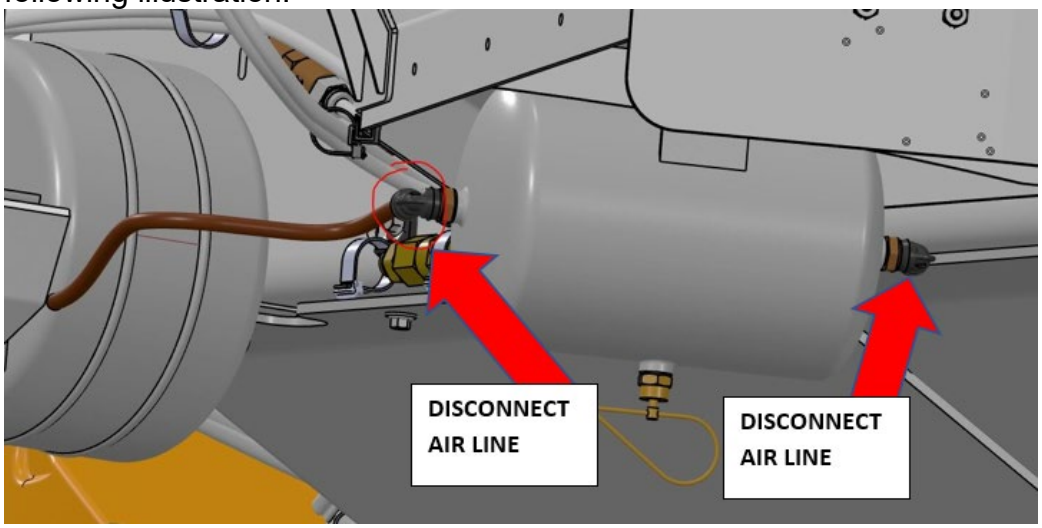
5. Working on the Streetside Rear of the bus, open the curbside hatch and open the three air valves shown in the following photograph to drain the air tanks.



6. Using a Schrader Valve Tool, remove the four valve cores shown to drain the air bags.



7. Disconnect the air lines from the push-on fittings on the original Air Tank as shown in the following illustration.



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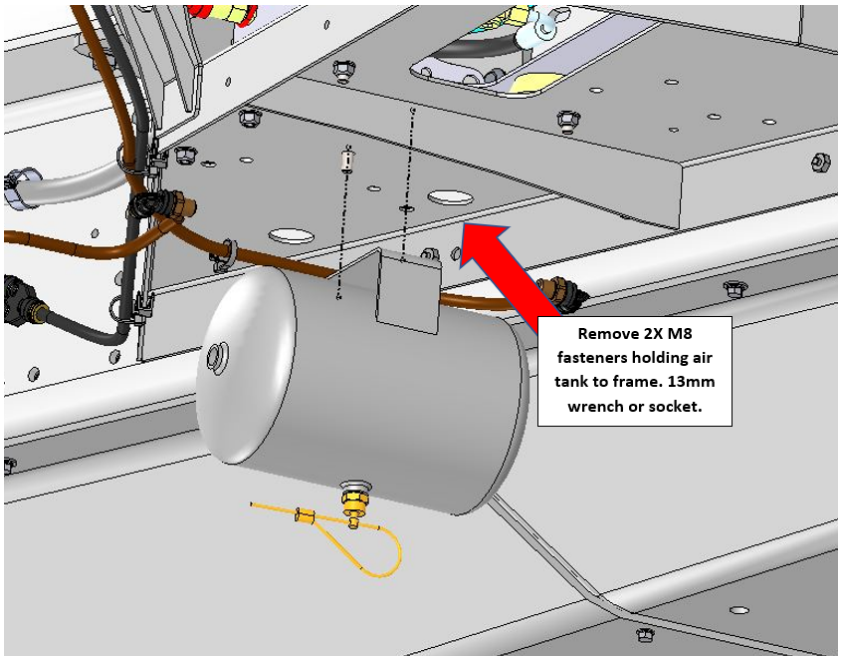
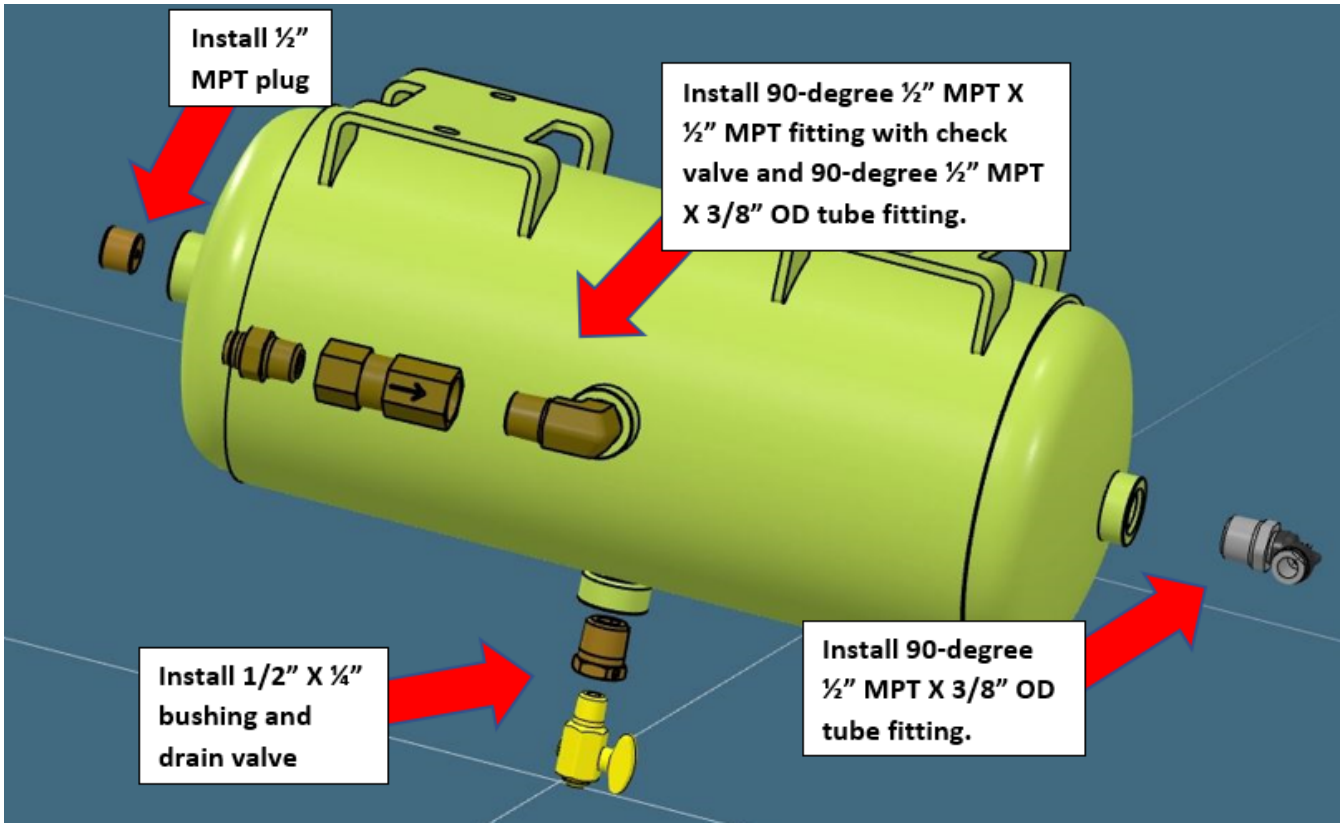
8. Using a 13mm Ratchet/Socket, remove the two M8 Bolts that secure the Air Tank to the Prodrive frame. Remove the Air Tank. It will not be reused.



9. Using the parts from the kit, install the fittings shown in the following illustration onto the new Tank (052278). Apply a small amount of Loctite 567 to the tapered threads on the fittings before installing them onto the Tank. All fittings must be torqued two to three full turns past finger tight.



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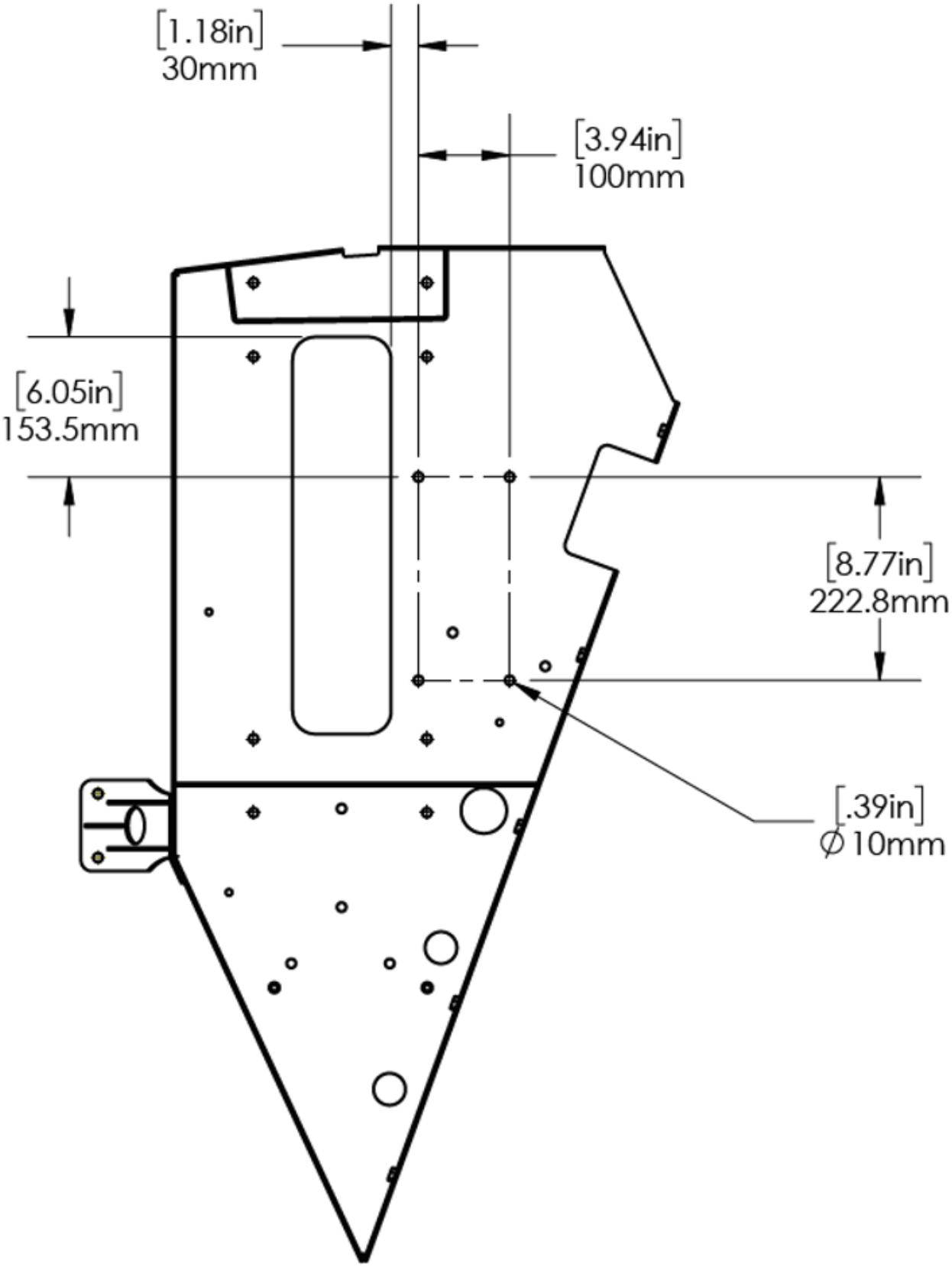
10. Using the following illustration as a guide, mark the four locations shown for drilling using a Permanent Marker.



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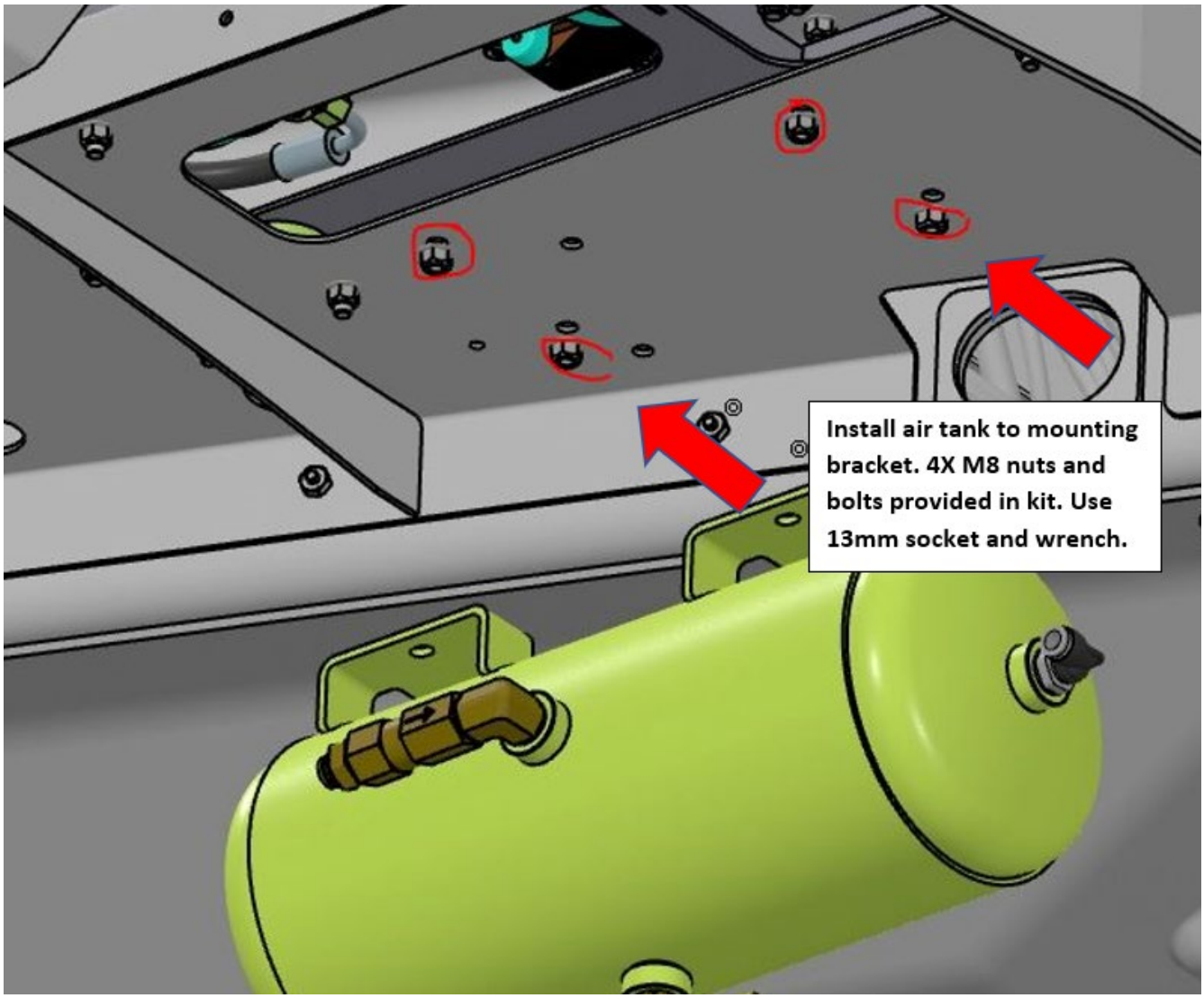
11. Using a Power Drill with a 10mm Drill Bit, drill a hole in each of the four marked locations for mounting the new Tank (052278).

12. Using a 13mm Ratchet/Socket and a 13mm Combination Wrench, install the new Tank (052278) using four M8 Bolts (005443-004) and four M8 Locknuts (013575) from the kit.



13. Using a Calibrated Torque Wrench with a 13mm Socket, **torque the fasteners to 29 foot pounds.**

14. Using Orange Torque Stripe Paint, mark the properly torqued fasteners

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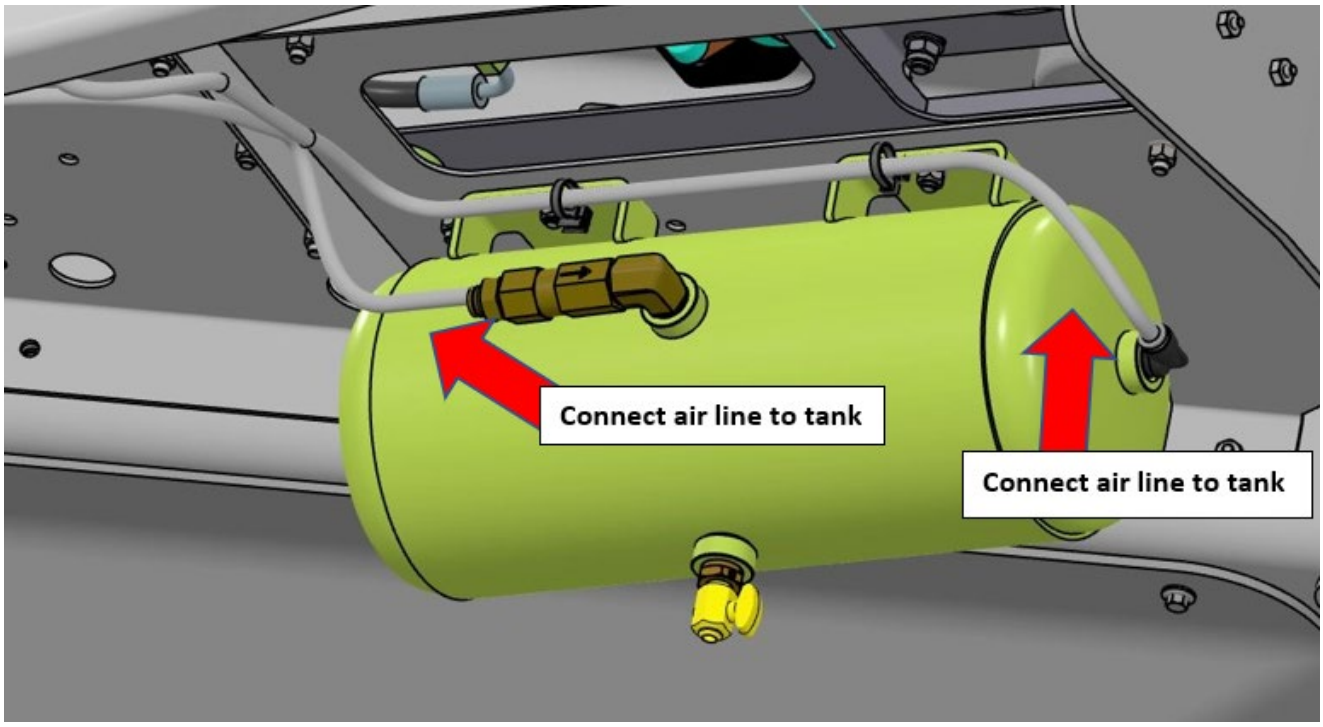
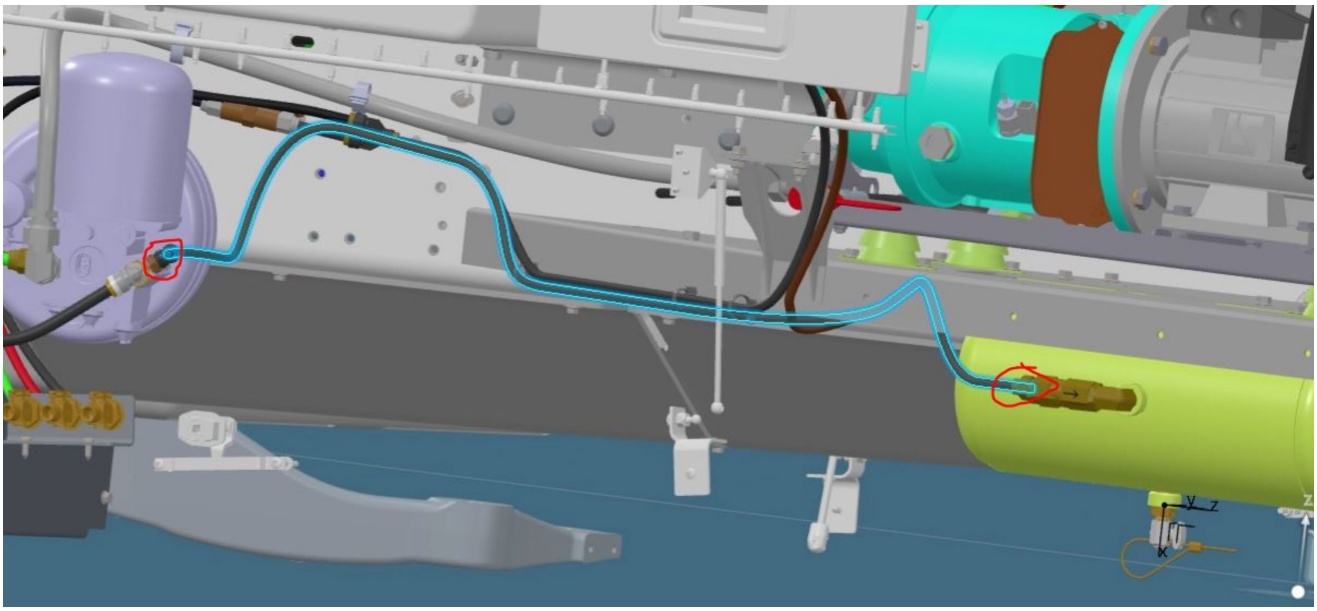
15. Connect the air lines to the new Tank (052278) as shown in the following illustration.



16. The following illustration shows the connection to the Check Valve on the new Tank (052278).



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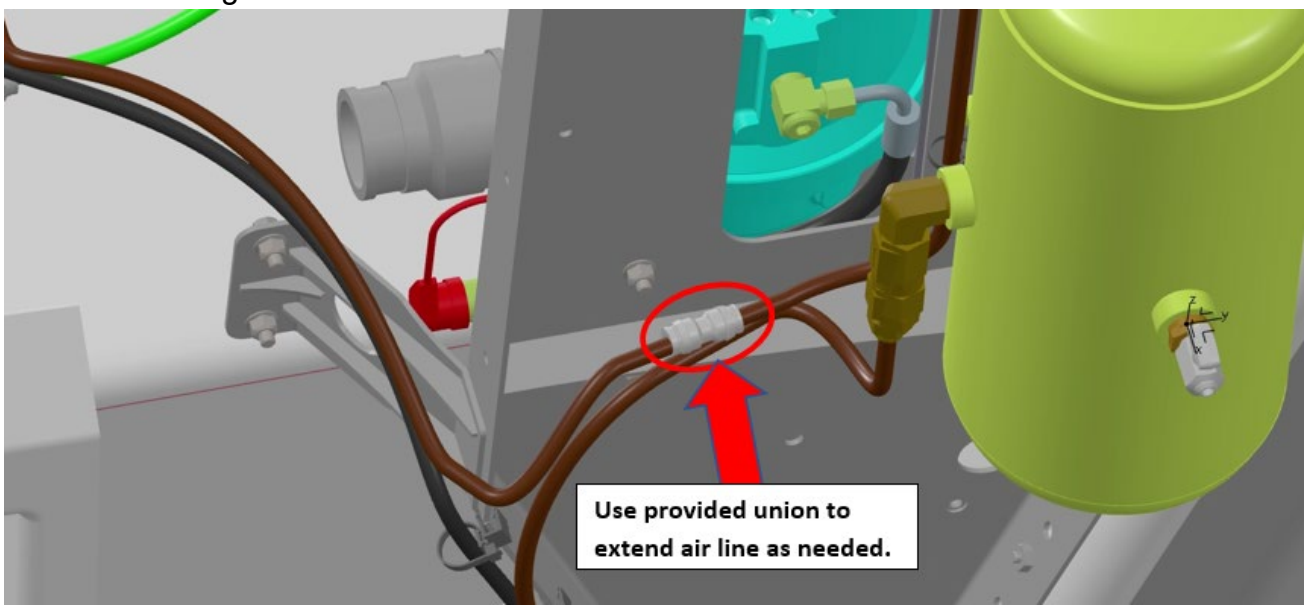
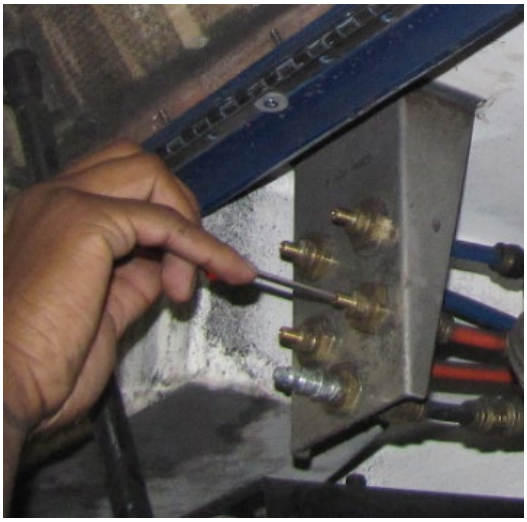
17. A Union (001146) and additional Tubing (000624) are supplied in case the installed Tubing needs extending.



18. Using Cable Ties (042547), secure the air lines to the Prodrive Frame.

19. Using a Schrader Valve Tool, replace the valve cores that were removed earlier.



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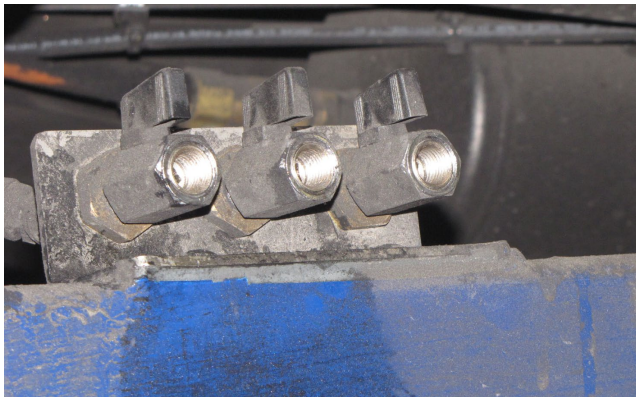
20. Close the valves that were opened earlier to drain the air system.



21. Lower the bus if it was raised to complete the retrofit.

22. Remove the Lockout/Tagout devices and power on the bus.

23. Allow the bus to build air pressure until the compressor stops.

24. Verify that there are no air leaks. Repair any leaks that exist.

25. Return the bus to service.

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