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INSTALLATION MANUAL FOR REPLACEMENT OF FREIGHTLINER HOSE BEAD HEADER

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VERSION HISTORY

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1 INTRODUCTION

1.1 Purpose of Technical Bulletin

This document covers the removal of Freightliner DEF headers and the installation of DuraWRX headers. When a DuraWRX header is installed in a Freightliner tank, the original coolant and DEF hose routing may not provide enough length to reach the new header ports. Rerouting the hoses to an alternate position provides the required reach and allows proper connection to the DuraWRX header.

1.2 Applicable Part Numbers, Assemblies and/or Applications

Table 1

	Source	Document No.	Title/Description
1	DuraWRX	ASPFL-2335	DEF Header
2	DuraWRX	ASPFL-2336	DEF Header
3	DuraWRX	ASPFL-2383	DEF Header
4	DuraWRX	ASPFL-2384	DEF Header

1.3 Required Tools and Equipment

Table 2

	Required Tools
1	Socket wrench
2	Hex screwdriver
3	Flathead screwdriver
4	Water
5	Wire cutters or shearing pliers (optional)
6	Paper towels (optional)
7	Bucket (optional, for header)

1.4 Definitions/Acronyms

DEF: Diesel Exhaust Fluid

OE / OEM: Original equipment manufacturer

2 PROCEDURE

Prior to the start of work, read this bulletin completely and ensure that all equipment and parts are available. Three parts are involved in this procedure: Removing the Freightliner header, installing a DuraWRX header, and reattaching DEF and coolant hoses. Parts for the three steps are shown below.

2.1 Remove the Freightliner Header

Part 1 of the procedure involves removing the Freightliner header from the DEF tank. For this step one will need a socket wrench, paper towels (optionally), and a hex screwdriver.

2.1.1 Loosen Tank Mounting Bracket Bolts

1. Locate the two tank mounting bracket bolts on the side of the tank
2. Use the socket wrench to loosen both bolts

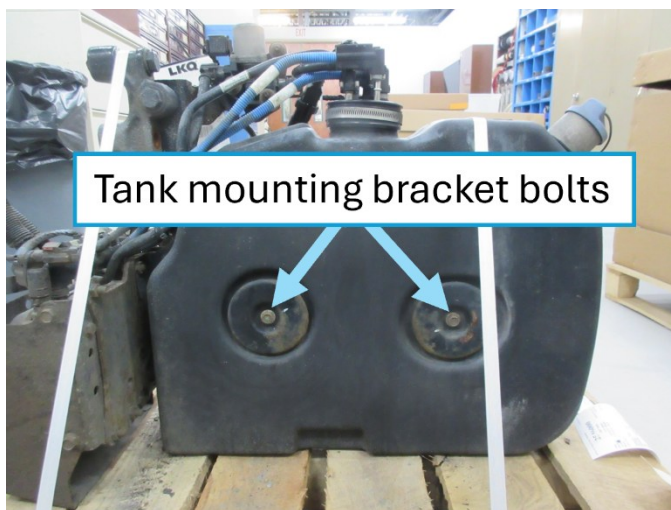


Figure 1 - Location of tank mounting bracket bolts on side of OE DEF tank

2.1.2 Disconnect Sensor Unit Connector

1. Locate the electrical connector
2. Push the red slide to the unlocked position (may use a flathead screwdriver)

3. Disconnect the two sides

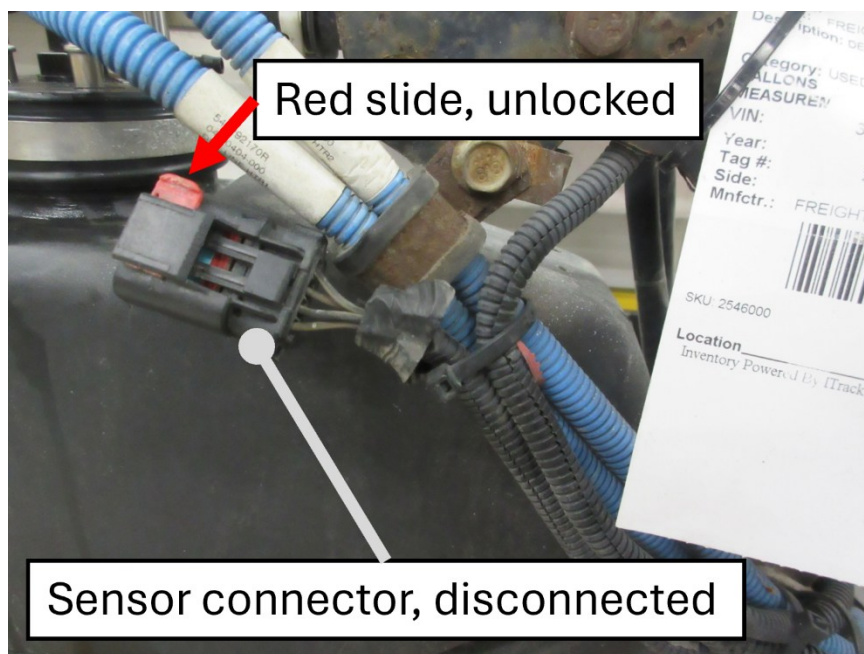


Figure 2 - Electrical connector on OE tank.

2.1.3 Detach Coolant and DEF Hoses

1. Identify the blue DEF hoses and the black coolant hoses
2. Note which hose connects to which port
3. Optionally, use a towel to soak up excess fluid
4. Put hoses away from DEF opening

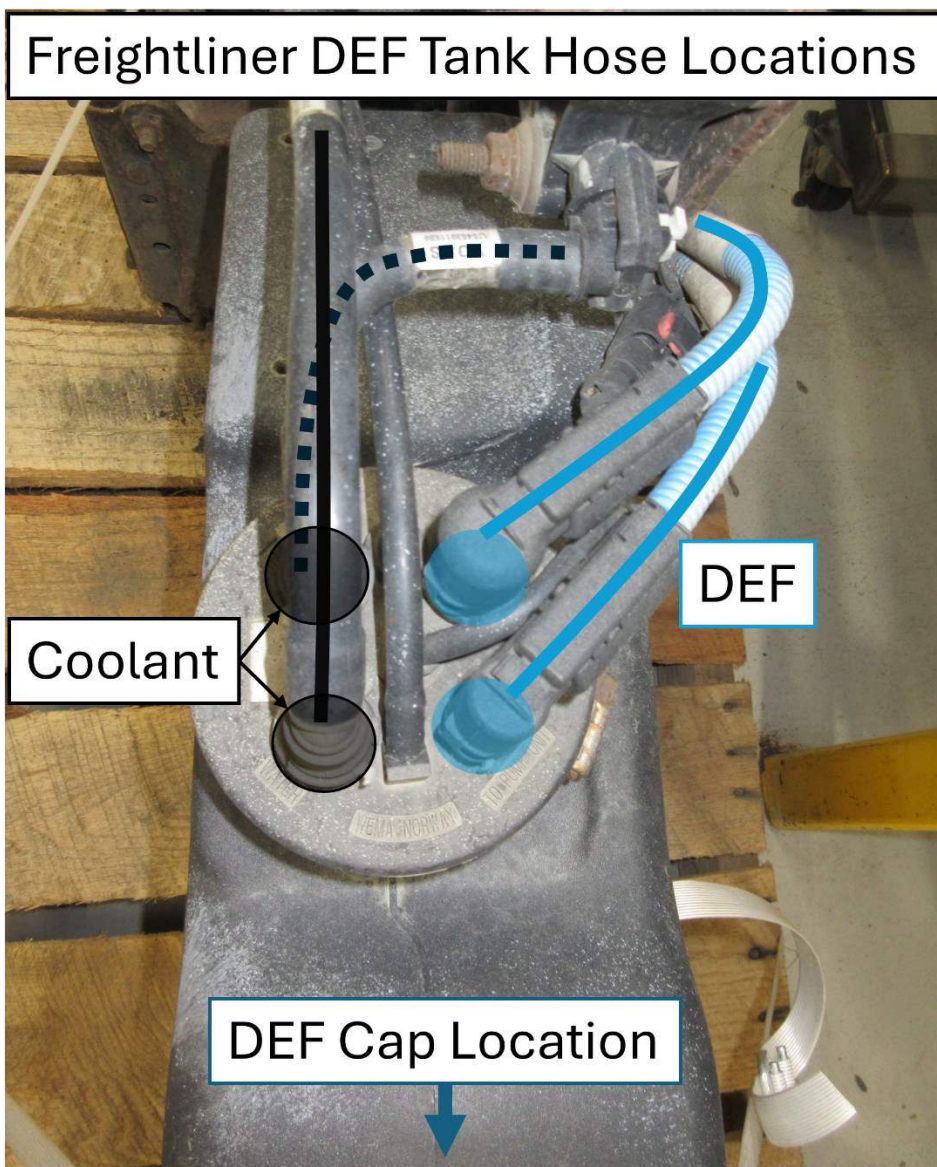


Figure 3 - OE hose locations

2.1.4 Loosen Header Hose Clamp

1. Locate the hose clamp on the header base
2. Use the hex screwdriver to loosen the clamp screw
3. Remove the hose clamp

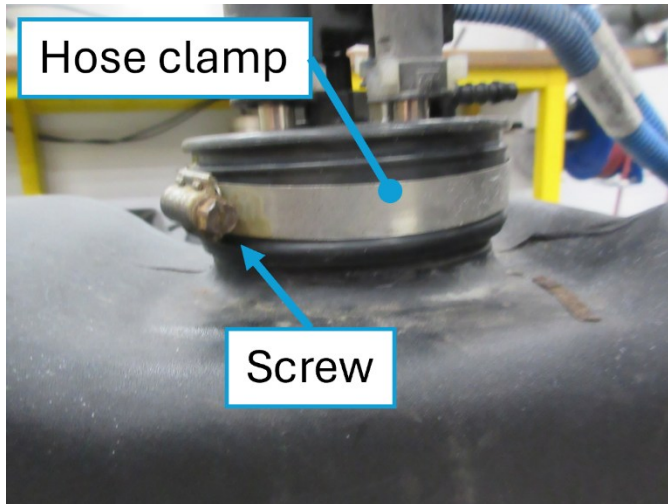


Figure 4 - Hose clamp around OE header base

2.1.5 Maneuver Header Out of Tank

1. Lift outer lip of head unit
2. Rotate and pull up on the Freightliner header at the same time
3. Lift vertically and angle head toward rear of tank to work heat exchanger tubes through tank opening

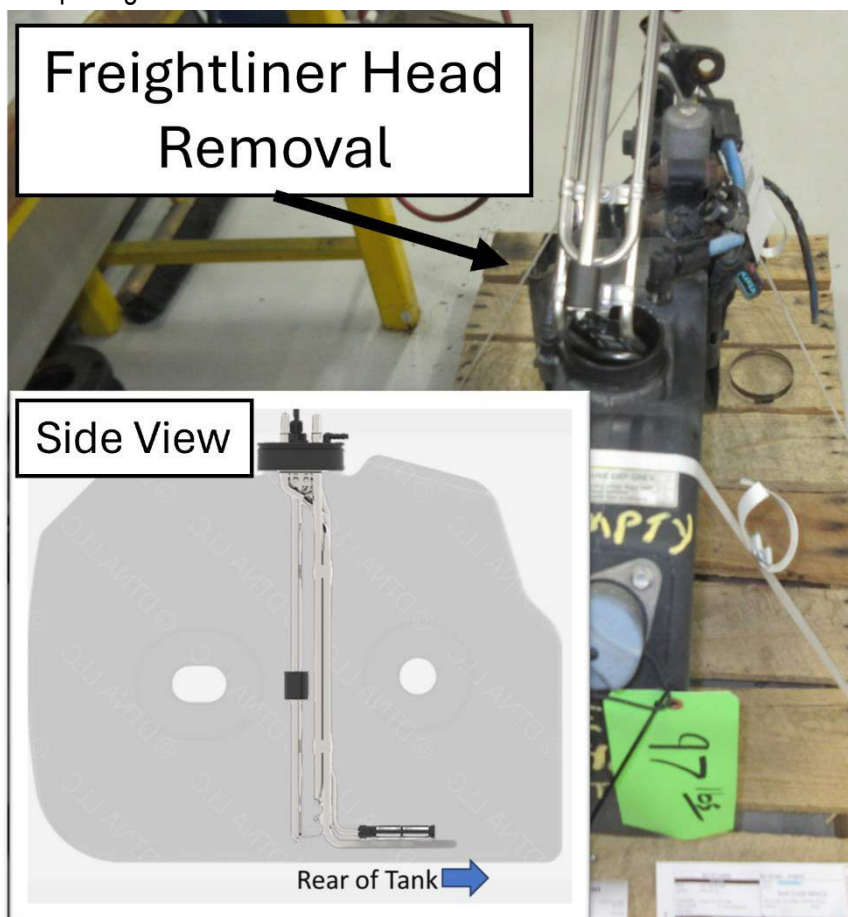


Figure 5 - Illustration of proper header orientation inside tank and way to pull out of tank.

2.2 Install a DuraWRX Header

Part 2 of the procedure involves installing the DuraWRX header where the Freightliner header once was. For this step one will need water for lubrication (as well as a spreading mechanism such as a paper towel) and a socket wrench.

The diagram at the very end, the Final DuraWRX Installation Checklist, shows what a reinstalled DuraWRX header will look like with a reminder of the necessary steps.

2.2.1 Insert Header Fully into Tank

1. Insert header into the tank opening and carefully maneuver into position. (Note: the foot of the header is oriented away from the filler port)
2. Push the header base fully into the tank. (Note: excessive force may damage header)
3. Check that the header base sits flush with the tank rim.
4. Reinstall and tighten hose clamp to 44 ± 4 lb_f-in

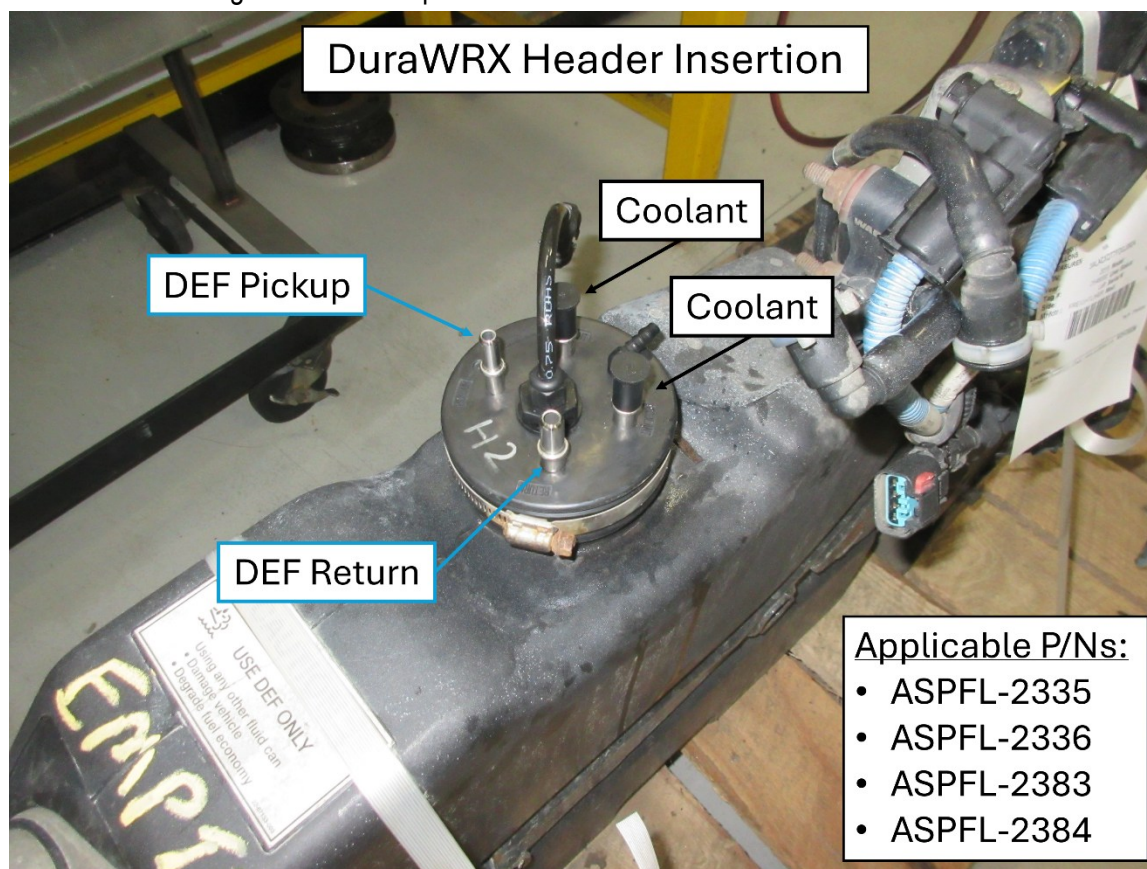


Figure 6 - Installed DuraWRX header and fitting locations.

2.3 Reattach DEF and Coolant Hoses

Part 3 of the procedure involves reattachment of DEF and coolant hoses, electrical connector and bracket. Rerouting of the DEF hoses may be required if hoses lack the length needed to reach the fitting locations on the replacement unit.

A comparison between the fitting locations of the OE (Freightliner) and DuraWRX headers is shown in the diagram below.

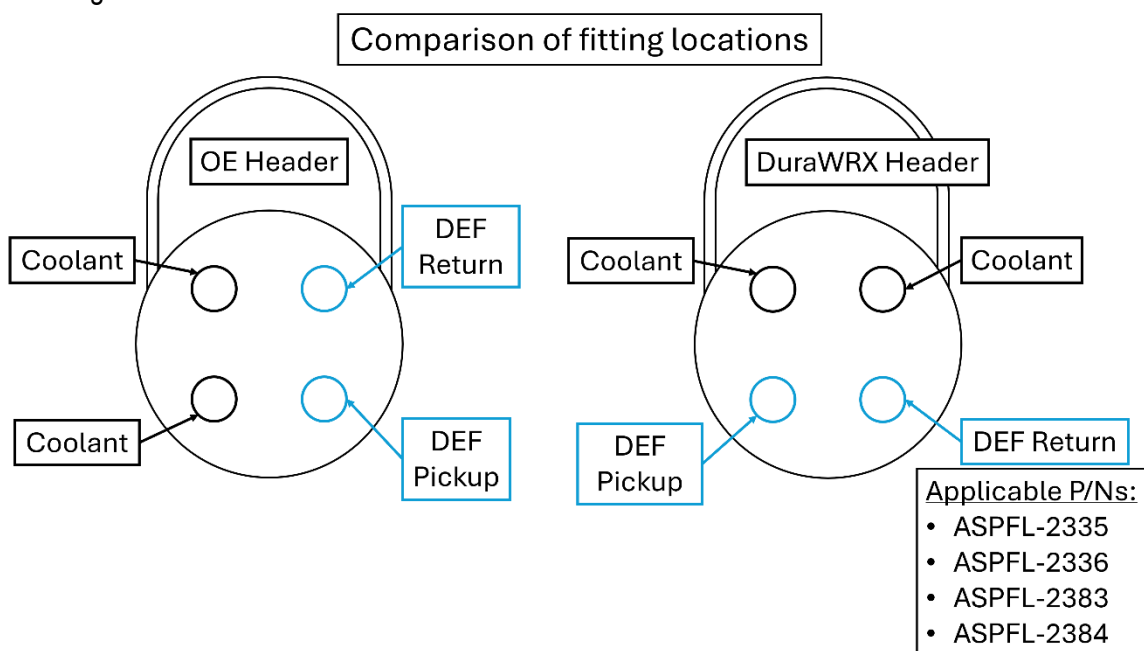


Figure 7 - Comparison between OE and DuraWRX header hose fitting locations

Note that if the hoses do not have enough length to reach the fitting locations on the DuraWRX header the hoses may need to be rerouted to achieve sufficient length. The following three sections detail optional rerouting instructions if it is deemed necessary to reroute the hoses. If rerouting is not needed, skip to section 2.3.4 and complete the installation.

2.3.1 Loosen and Remove Hose Bracket (Optional)

1. Locate the hose bracket on the side of the tank
2. Disengage the screw securing the bracket with the hex screwdriver
3. Remove and dispose of the bracket

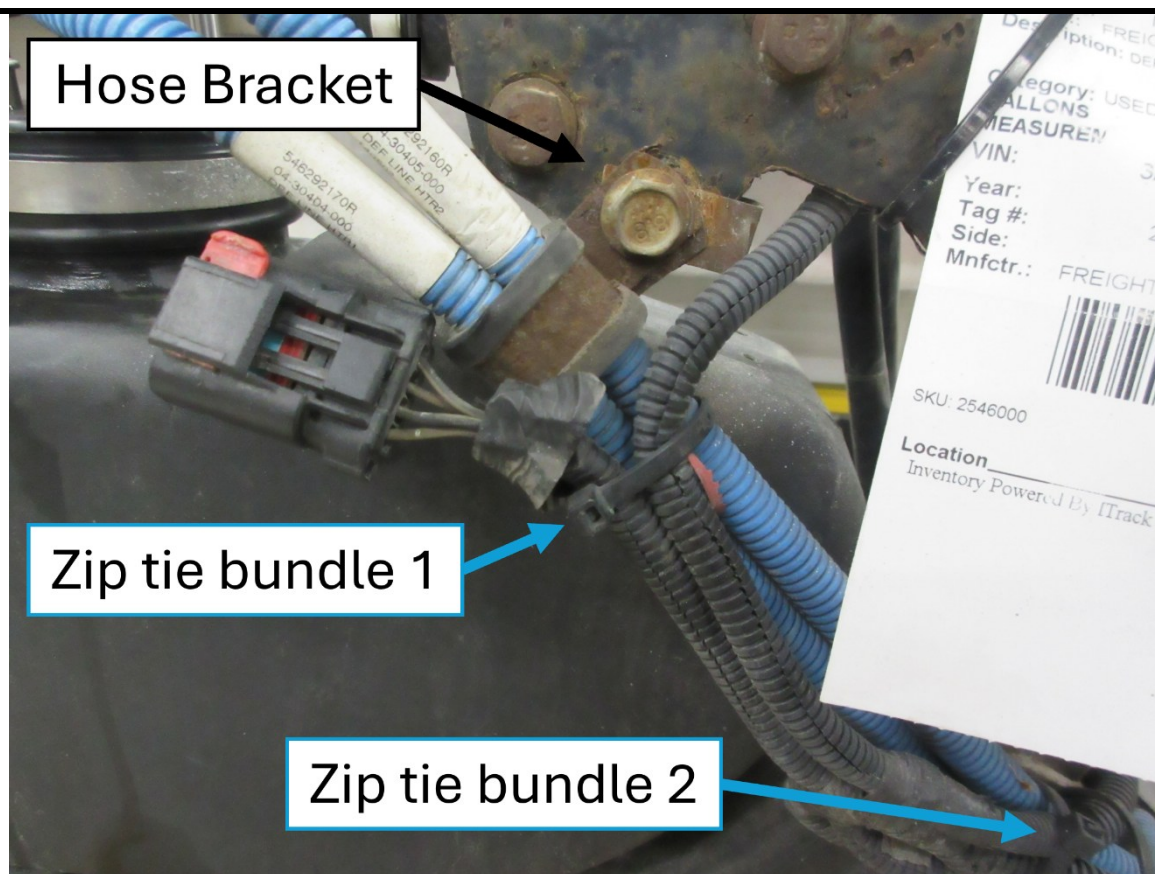


Figure 8 - Bracket and zip tie bundle locations for optional hose rerouting if needed.

2.3.2 Cut Zip Ties (Optional)

1. Locate the upper zip tie bundle and release the hose constraints by cutting the zip tie
2. Cut the lower zip tie bundle

2.3.3 Reroute DEF and Coolant Hoses (Optional)

1. Loop the DEF and coolant hoses around the other side of the tank

2.3.4 Reattach Hoses

1. Locate the black coolant and blue DEF hoses
2. Insert the hoses onto the proper ports of the DuraWRX header (refer to Figure 7)

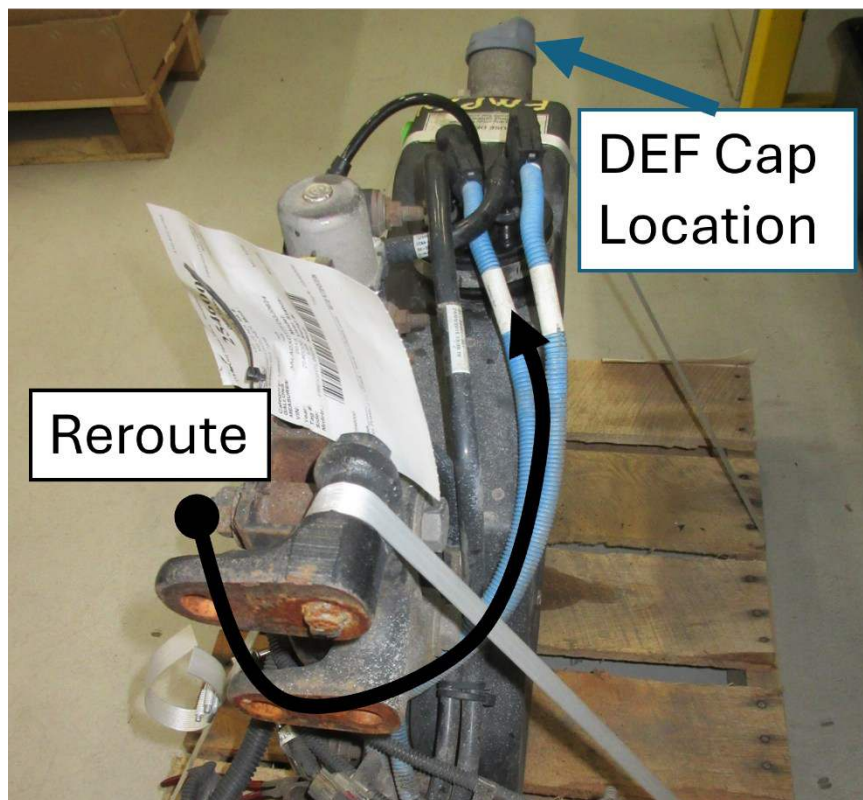


Figure 9 - Optional rerouting direction of hoses.

2.3.5 Reattach Electrical Connector

1. Locate and connect the sensor connectors
2. Snap the red slide into the locked position

2.3.6 Tighten the Tank Mounting Bracket Bolts

1. Locate the tank mounting bracket bolts on the side of the tank
2. Tighten the bolts to manufacturer recommended torque of 128 lb_r-ft (174 N-m)

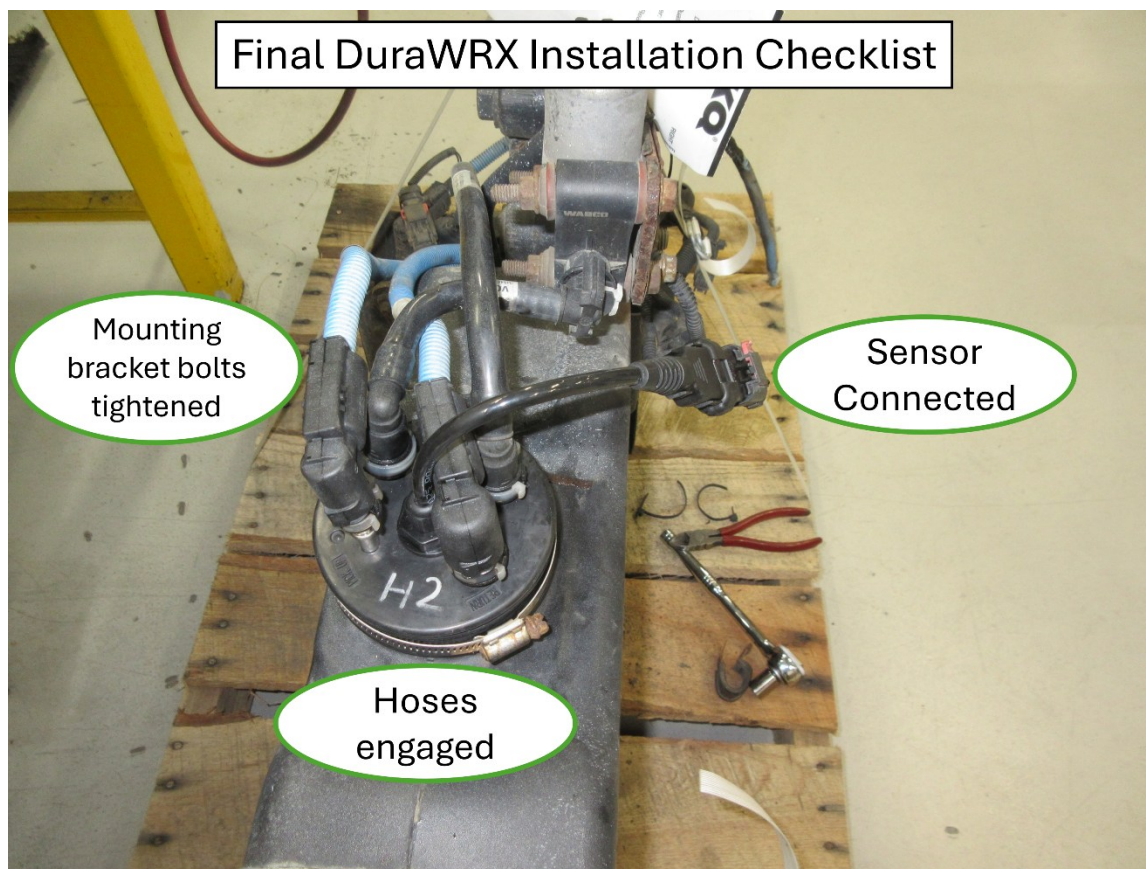


Figure 10 – Final DuraWRX installation checklist.