

McNeilus Legacy 17 DGE Side Mount (SM) PRD Vent Line Retrofit

Modified on: Fri, Jun 17, 2022 at 10:23 AM

FRI.0012 Ver. 1.0 June 15, 2022

Introduction

Hexagon Agility has created PRD vent line retrofit kits and installation instructions for several Agility Fuel Solutions compressed natural gas (CNG) fuel systems equipped with 17 diesel gallon equivalent (DGE) auxiliary side mount cylinders supplied on McNeilus refuse vehicles.

NOTICE

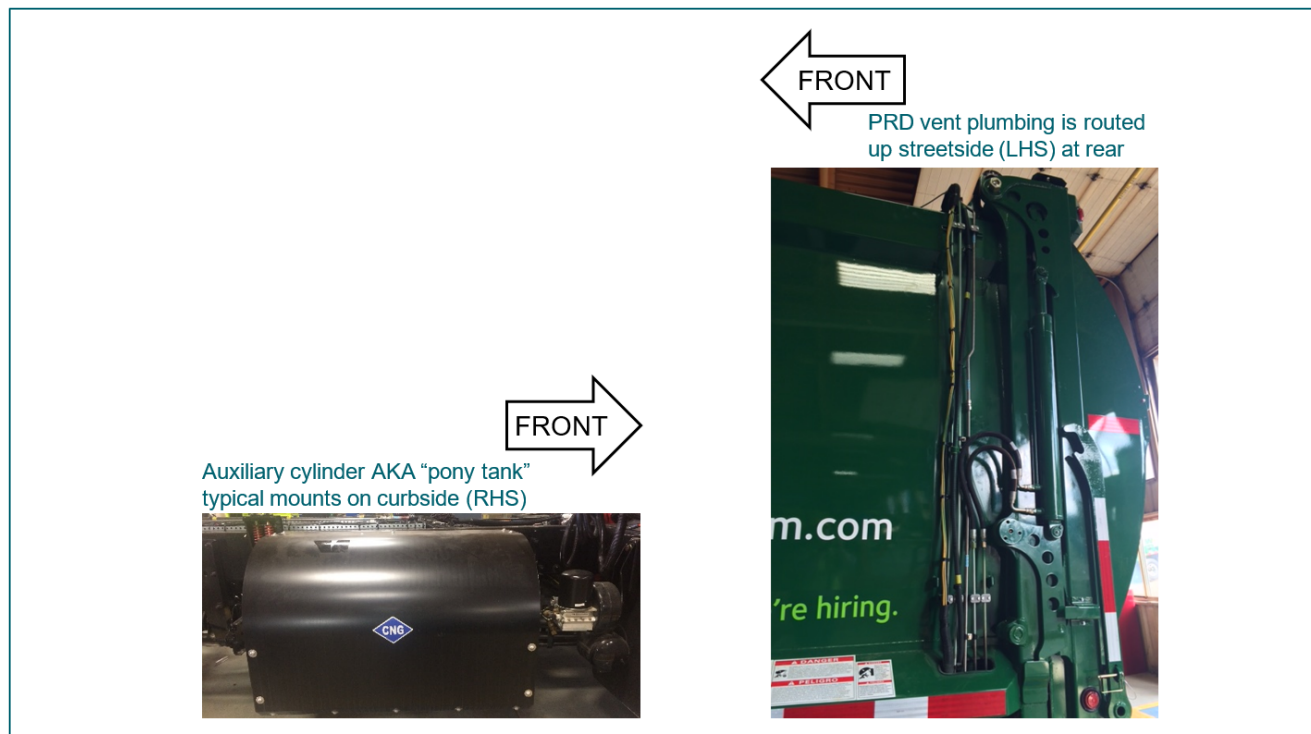
This installation guide is intended to supplement any work instruction that includes tubing, plumbing, or wiring of any CNG installation made by Agility Fuel Systems. Refer to [ENP-524 Fuel System Routing Clipping and Installation Guide](#) prior to using this document; following OEM recommended practices will help ensure maximum system life and reduced warranty claims.

NOTICE

Whenever possible, follow OEM guidelines and standards when plumbing and wiring fuel system components and assemblies into their vehicle – the goal should always be to integrate and match the fuel system installation with the OEM chassis as much as possible, and avoid the appearance of an “add-on” or “after-market” system.

Affected Vehicles

McNeilus Atlantic, Pacific, Meridian, and Contender refuse bodies equipped with 17 DGE auxiliary ProRail® side mount (SM) cylinders.



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- A. Atlantic bodies
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 - C. Pacific and Contender bodies
-

Install Overviews

The following three install kits have been issued according to body model:

| Kit Description | p/n |
|--|----------|
| Install Kit, SM Vent Lines, McNeilus Atlantic | 20103419 |
| Install Kit, SM Vent Lines, McNeilus Meridian | 20103420 |
| Install Kit, SM Vent Lines, McNeilus Pacific & Contender | 20103488 |

NOTICE

The above kits do not include high-pressure flex hoses to make all connections.

Each kit order should also include **QTY: 3** of Hose part number 10300725:

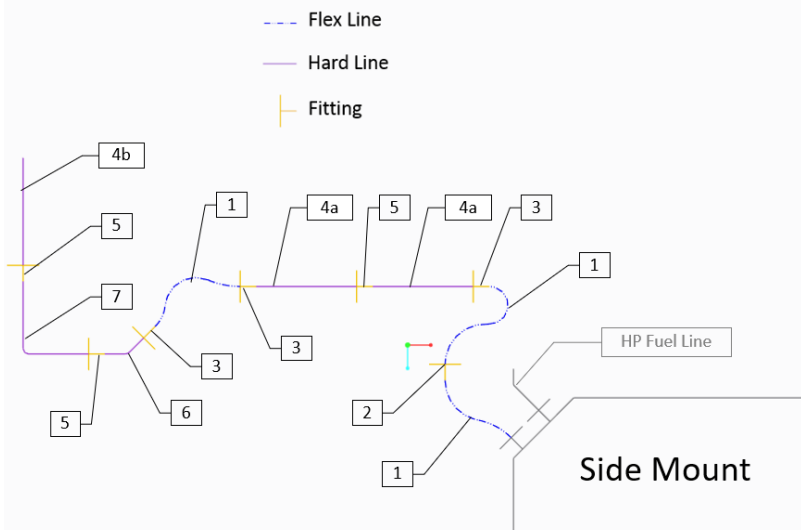
| Hose Description | p/n |
|---|----------|
| Hose, 345 BAR (5000 PSI) MAWP, CNG, 1/2-in ID, -8 Female JIC, -8 Female JIC, 34-in L, per ES.0020 1.2 | 10300725 |

A – Atlantic Body Install Overview

Atlantic Install Kit p/n 20103419 Bill Of Materials

| p/n | Part Description | QTY |
|--------------|---|-----|
| 10200003 | Fitting, Tube, Straight, 1/2-in Tube OD, 1/2in Tube OD, SS | 3 |
| 10200081 | Fitting, Tube, Union, 1/2-in Tube OD, -8 Male JIC, SS | 3 |
| 10701508 | Tube Clamp Kit, 1/2-in, Double Hole (2x10701608 + 10701708), -40F to 212F | 5 |
| 10702147 | P-Clip, 1/2-in, Rubber Clamp | 12 |
| 10800010-108 | Raw Material, Tube, 1/2-in x 0.049in, 316/316L Seamless SS, SS Tube Per ASTM A269, 108-in L | 2 |
| 10800010-60 | Raw Material, Tube, 1/2-in x 0.049in, 316/316L Seamless SS, SS Tube Per ASTM A269, 60-in L | 1 |
| 20103376 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Union | 1 |
| 20103436 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Flex Hose | 1 |

Atlantic Install Schematic



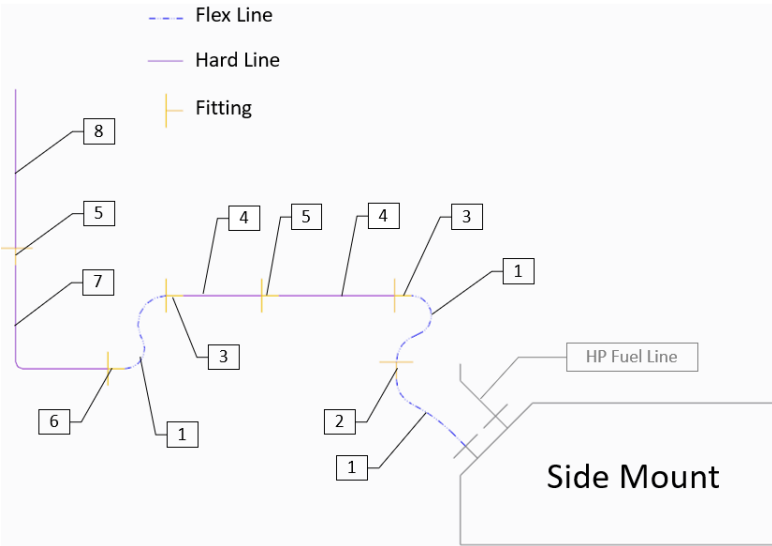
| # | p/n | QTY | Description |
|----|--------------|-----|--|
| 1 | 10300725 | 3 | Hose, 3600 psi, CNG, 1/2-in nominal, -8 Female JIC, -8 Female JIC, 34-in L |
| 2 | 10200518 | 1 | Union, 1/2-in JIC, 1/2in JIC |
| 3 | 10200081 | 3 | Union, 1/2-in Tube OD, -8 Male JIC |
| 4a | 10800010-108 | 2 | Tube, 1/2-in x 0.049in, Seamless SS, 108-in L |
| 4b | 10800010-60 | 1 | Tube, 1/2-in x 0.049in, Seamless SS, 60-in L |
| 5 | 10200003 | 3 | Union, 1/2-in Tube OD, 1/2-in Tube OD |
| 6 | 20103436 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Flex Hose |
| 7 | 20103376 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Union |

B – Meridian Body Install Overview

Meridian Install Kit p/n 20103420 Bill Of Materials

| p/n | Description | QTY |
|--------------|---|-----|
| 10200003 | Fitting, Tube, Straight, 1/2in Tube OD, 1/2-in Tube OD, SS | 2 |
| 10200518 | Fitting, Union, Straight Triple-Lok, 1/2-in JIC, 1/2in JIC, Steel | 1 |
| 10200081 | Fitting, Tube, Union, 1/2-in Tube OD, -8 Male JIC, SS | 2 |
| 10200085 | Fitting, Bulkhead, Straight, 1/2-in Tube OD, -8 Male JIC, SS | 1 |
| 10701508 | Tube Clamp Kit, 1/2-in, Double Hole (2x10701608 + 10701708), -40F to 212F | 5 |
| 10702147 | P-Clip, 1/2-in, Rubber Clamp | 12 |
| 10800010-108 | Raw Material, Tube, 1/2-in x 0.049in, 316/316L Seamless SS, SS Tube Per ASTM A269, 108-in L | 2 |
| 20103417 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Vent | 1 |
| 20103418 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Bulkhead | 1 |

Meridian Install Schematic



| # | p/n | QTY | Description |
|---|--------------|-----|---|
| 1 | 10300725 | 3 | Hose, 3600 psi, CNG, 1/2-in nominal, -8 Female JIC, -8Female JIC, 34-in L |
| 2 | 10200518 | 1 | Union, 1/2-in JIC, 1/2-in JIC |
| 3 | 10200081 | 2 | Union, 1/2-in Tube OD, -8 Male JIC |
| 4 | 10800010-108 | 2 | Tube, 1/2-in x 0.049in, Seamless SS, 108-in L |
| 5 | 10200003 | 2 | Union, 1/2-in Tube OD, 1/2in Tube OD |
| 6 | 10200085 | 1 | Fitting, Bulkhead, Straight, Union 1/2-in Tube OD, -8 JIC SS |
| 7 | 20103418 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Union |
| 8 | 20103417 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Vent |

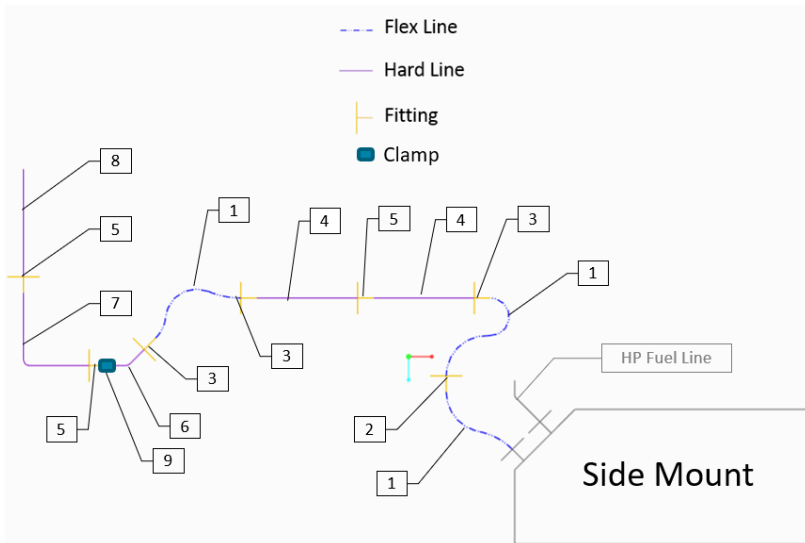
**Not Complete BOM
Part numbers subject to change*

C – Contender and Pacific Body Install Overview

Contender and Pacific Install Kit p/n 20103488 Bill Of Materials

| p/n | Description | QTY |
|--------------|---|-----|
| 10200003 | Fitting, Tube, Straight, 1/2-in Tube OD, 1/2-in Tube OD, SS | 3 |
| 10200518 | Fitting, Union, Straight Triple-Lok, 1/2-in JIC, 1/2-in JIC, Steel | 1 |
| 10200081 | Fitting, Tube, Union, 1/2-in Tube OD, -8 Male JIC, SS | 3 |
| 10702147 | P-Clip, 1/2-in, Rubber Clamp | 12 |
| 10702384 | Vent Cap, fits 1/2-in Dia. Tubing | 1 |
| 10800010-108 | Raw Material, Tube, 1/2-in x 0.049in, 316/316L Seamless SS, SS Tube Per ASTM A269 | 2 |
| 20103436 | Tube Formed, PRD Vent, 1/2 x .035 in, Union to Flex | 1 |
| 20103490 | Tube Formed, PRD Vent, 1/2 x .035 in, Union to Union | 1 |
| 20103493 | Tube Formed, PRD Vent, 1/2 x .035 in, Union to Vent | 1 |
| 10701508 | Tube Clamp Kit, 1/2 in, Double Mounting Hole, -40F to 212F | 1 |

Contender and Pacific Install Schematic



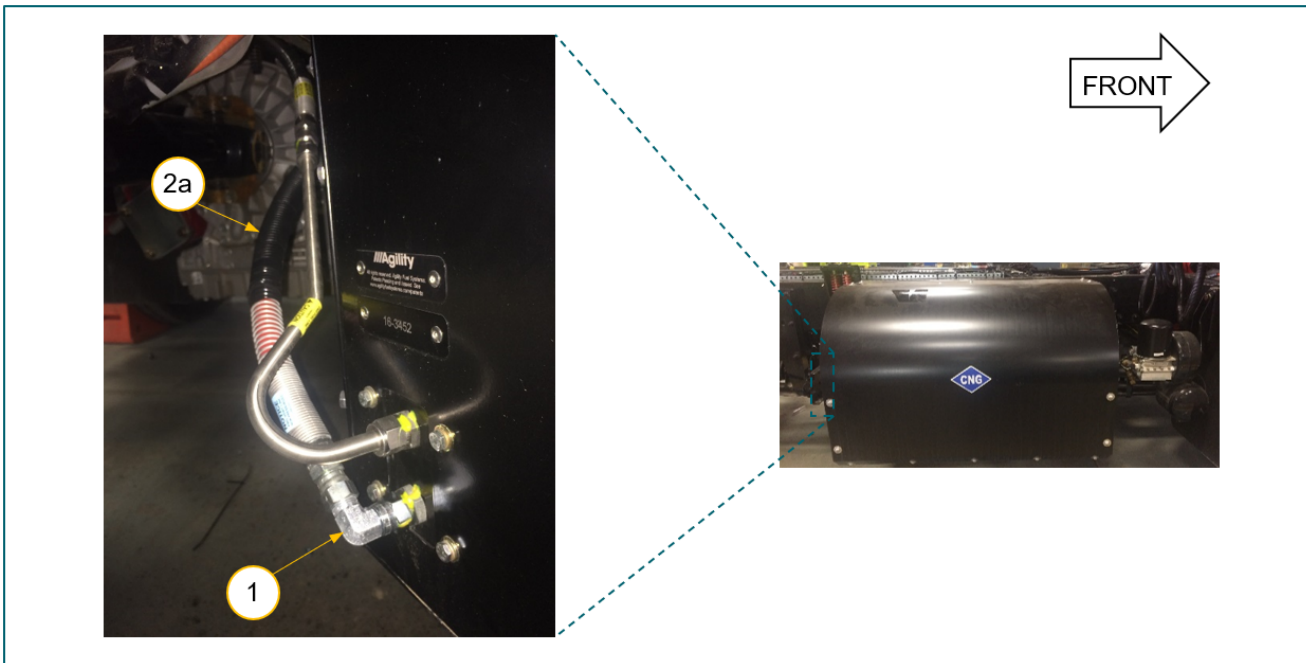
| # | p/n | QTY | Description |
|---|--------------|-----|---|
| 1 | 10300725 | 3 | Hose, 3600 psi, CNG, 1/2-in nominal, -8 Female JIC, -8Female JIC, 34-in L |
| 2 | 10200518 | 1 | Union, 1/2-in JIC, 1/2-in JIC |
| 3 | 10200081 | 3 | Union, 1/2-in Tube OD, -8 Male JIC |
| 4 | 10800010-108 | 2 | Tube, 1/2-in x 0.049in, Seamless SS, 108-in L |
| 5 | 10200003 | 3 | Union, 1/2-in Tube OD, 1/2-in Tube OD |
| 6 | 20103436 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Flex Hose |
| 7 | 20103490 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Union |
| 8 | 20103493 | 1 | Tube, Formed, PRD Vent, 1/2 x .035, Union to Vent |
| 9 | 10701508 | 1 | Tube Clamp Kit, 1/2 in, Double Mounting Hole, -40F to 212F |

*Not Complete BOM

Chassis Prep Installation

Follow this procedure for all body types.

- Existing elbow fitting (1) from PRD vent outlet is positioned on the rear edge of the SM cover and is oriented roughly 30° up from horizontal towards chassis frame.



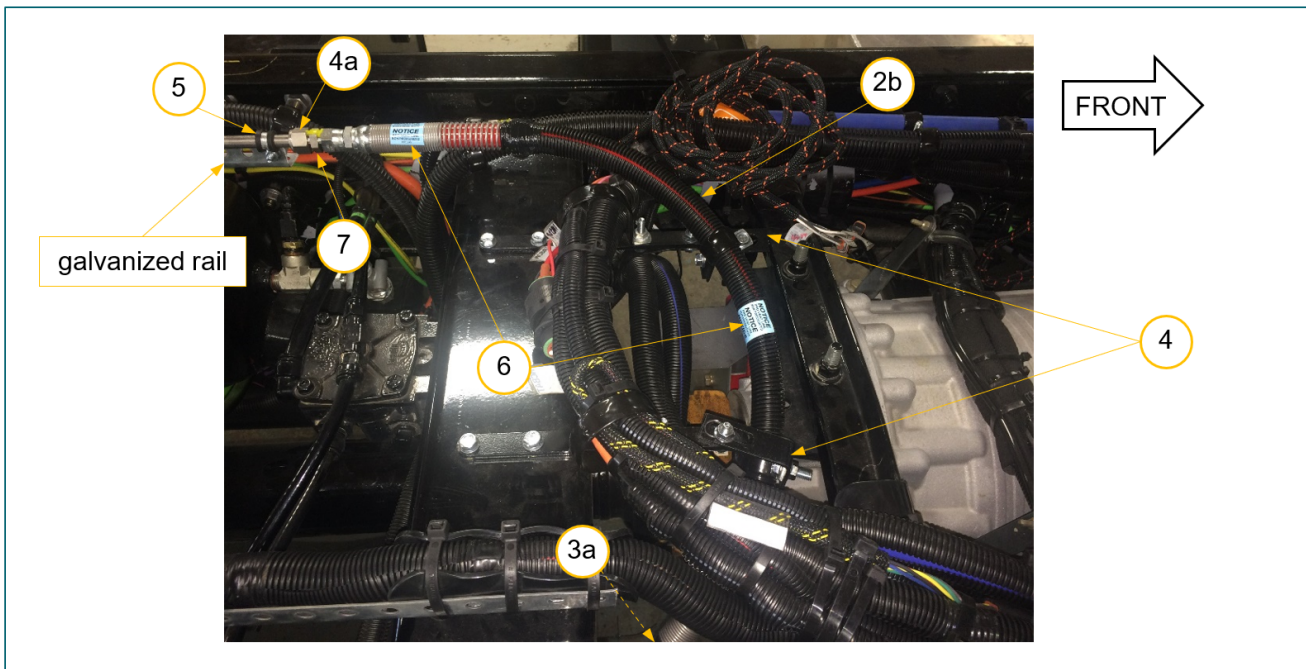
2. Connect vent hose 10300725 (2a) to elbow fitting (1).

NOTICE Route hose to come up in between the frame rails. Do not route hose over top.

NOTICE 4.0-in maximum bend radius for hose.

3. Connect union fitting 10200518 (3a) to other end of vent hose 10300725 (2a) from Step 2.

4. Connect another vent hose 10300725 (2b) to union fitting 10200518 (3a) (*not visible*).



5. Use L-brackets and clamps (4) and to secure 10300725 hose (2b) to chassis at locations indicated.

6. Connect vent hose 10300725 (2b) to fitting 10200081 (7) near end of galvanized rail.

7. Connect tube 10800010 (4a) to fitting 10200081 (7) and route along galvanized rail. Use 10702147 P-clip (5) to secure tube to end of galvanized rail as shown.

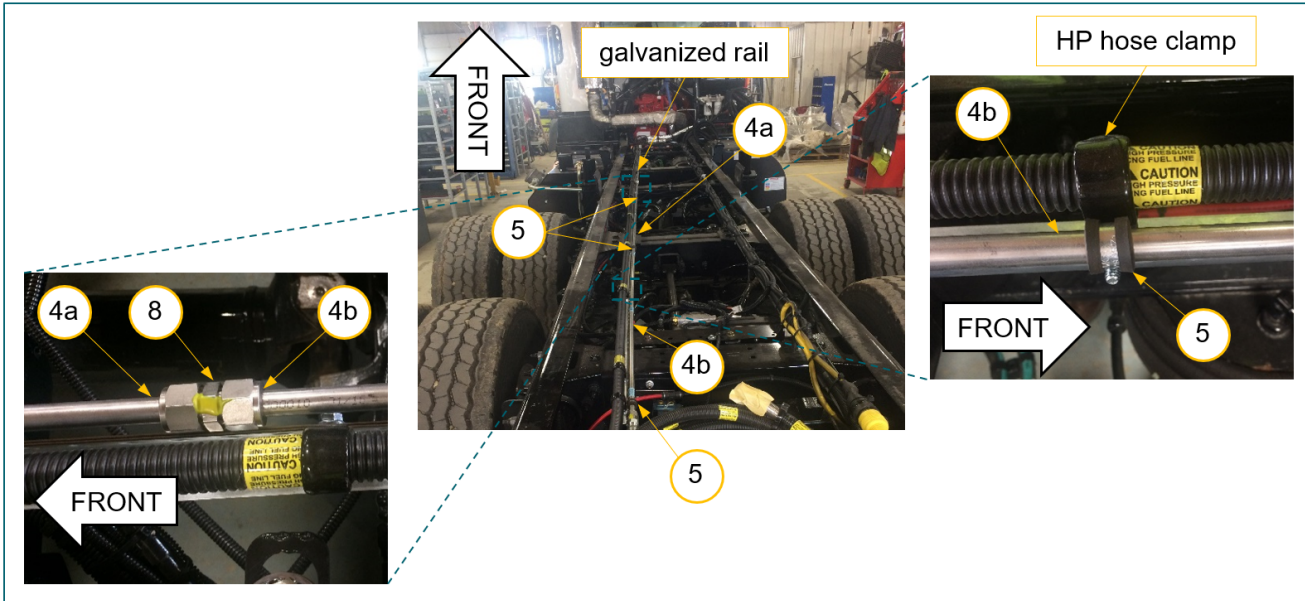
8. Apply decal 10602243 (6) to PRD lines every 24-in minimum.

9. Secure 10800010 108-in L tube (4a) to galvanized rail using 10702147 P-clips (5) placed adjacent to HP hose clamps using a common fastener from the hose clamp.

NOTICE Confirm tube and hose are supported every 24-in minimum.

10. Connect 10200003 union fitting (8) to end of 10800010 108-in L tube (4a).

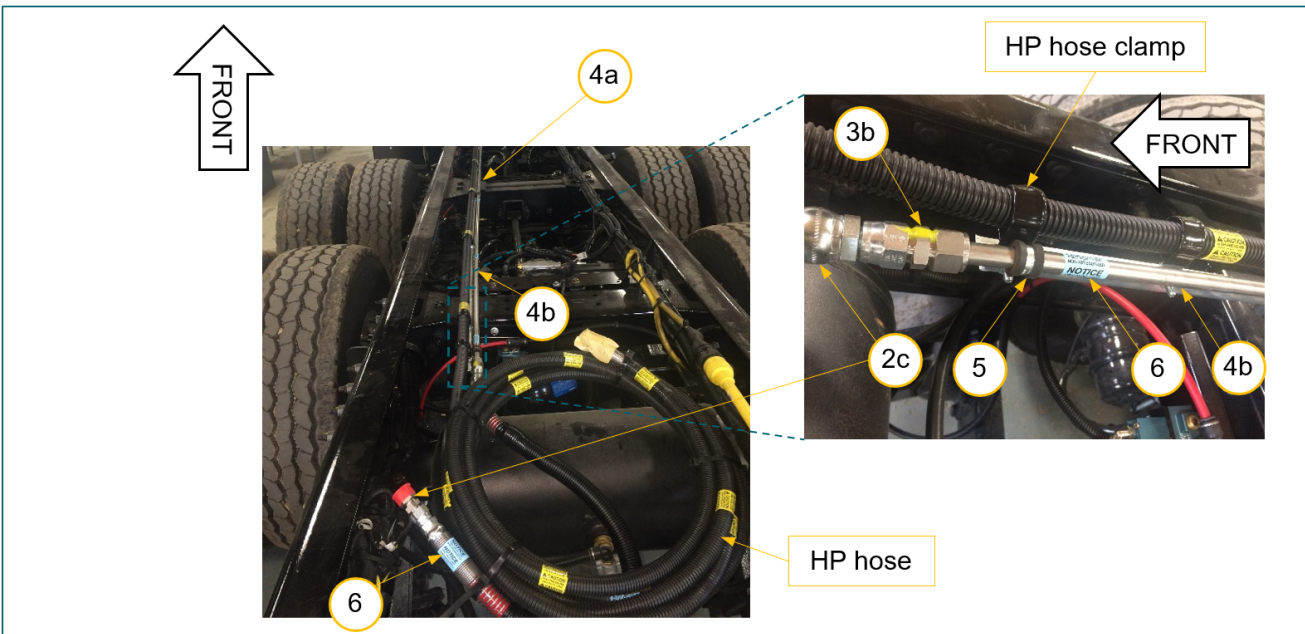
11. Connect second 10800010 108-in L tube (4b) to 10200003 union fitting (8).



12. **NOTICE** Second 10800010 108-in L tube (4b) may need to be trimmed 2.0-in past end of galvanized rail.

13. Use a 10702147 P-clip (5) to secure second 10800010 tube 108-in L (4b) as close as possible to end.

14. Connect 10200081 union (3b) to end of second 10800010 tube 108-in L (4b).



15. Connect third 10300725 vent hose (2c) to 10200081 union (3b).

16. Apply decal 10602243 (6) along PRD lines at a minimum 24" spacing.

17. Coil 10300725 line (2c) and temporarily secure (shown secured to HP hose).

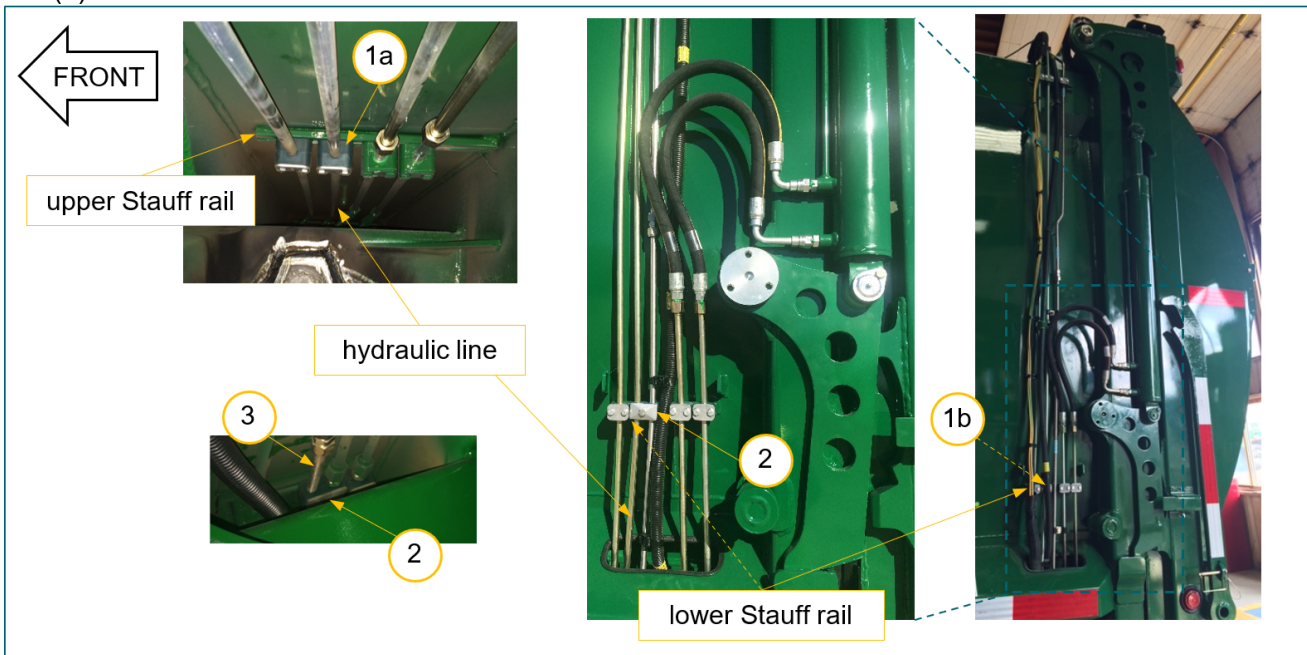
Body Mount Installations

Three body mount installations are used for the four body models:

- A. Atlantic
- B. Meridian
- C. Pacific & Contender

A - Atlantic Body Mount Installation

1. Replace existing single hole clamps (1) on the lower and bottom Stauff rails with double hole clamps 10701508 (2).

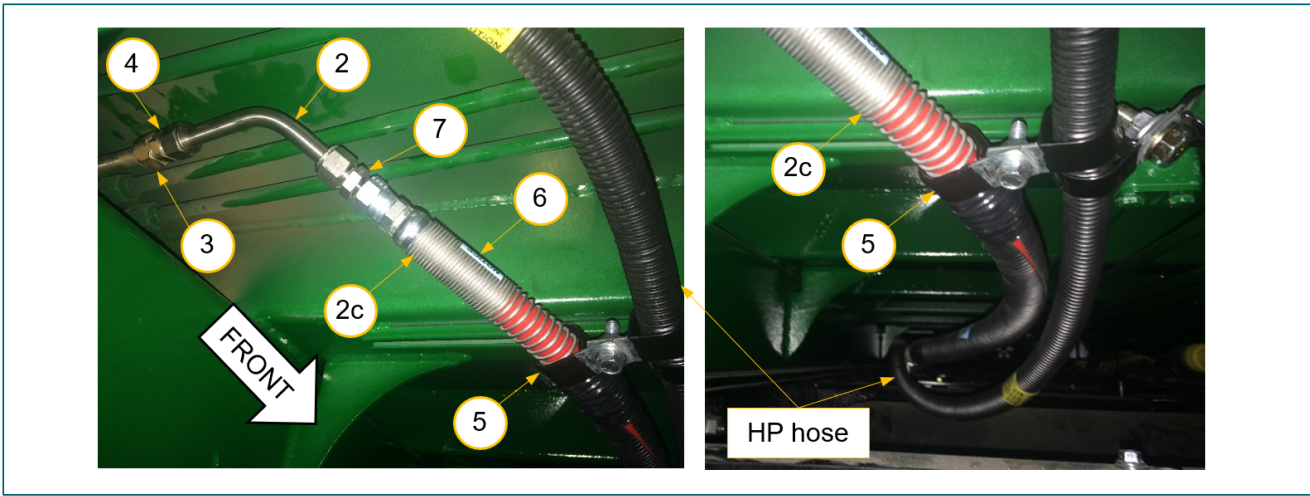


2. Install hydraulic line which was secured in each single hole (1) clamp in the left hole of each double hole clamp (2).

3. Secure tube 20103376 (3) from install kit in right hole of each double hole clamp (2) with straight 28.5-in leg of the tube going up the body (through skirt cover) and 32-in leg with a 3.5-in jog extending under body.

4. Secure tube 20103376 (3) under the body in back hole (closest to vehicle center) of double hole clamp (2).

5. Install 10200003 union fitting (4) on end of 20103376 tube (3).



6. Install 20103436 tube (2) on 10200003 union (4) with short leg of tube oriented toward front of the vehicle as shown.

7. Install union fitting 10200081 (7) on end of 20103436 tube (3).

8. Install vent hose 10300725 (2c) (*installed during chassis prep*) on 10200081 union fitting (7).

NOTICE Do not allow vent hose to contact chassis or body.

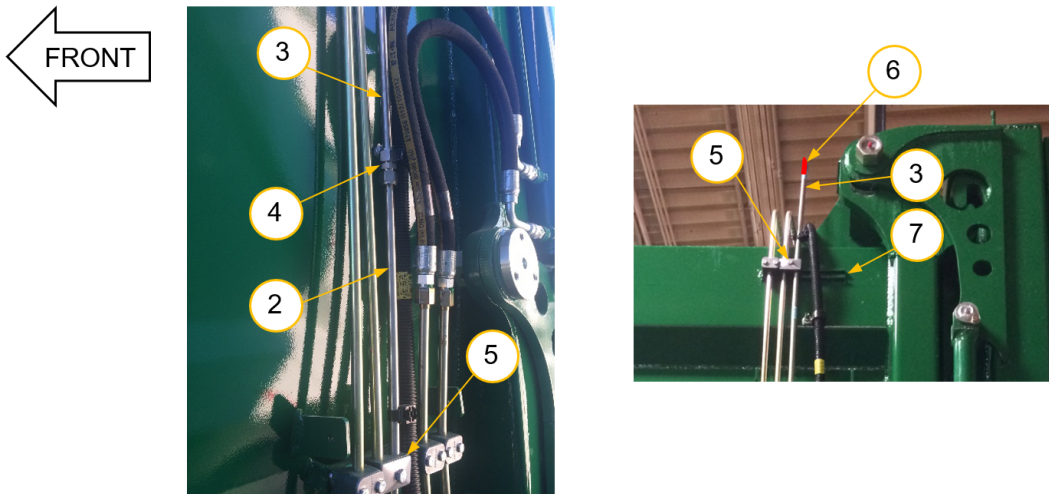
9. Use butterfly clamps (5) to constrain vent hose 10300725 (2c) to limit its range of motion.

NOTICE 4.0-in maximum bend radius for vent hose.

NOTICE Position butterfly clamp near clamp used to secure HP hose to chassis.

10. Apply decal 10602243 (6) to PRD lines every 24-in minimum.

11. Install union fitting 10200003 (4) on top of 20103376 tube (2).

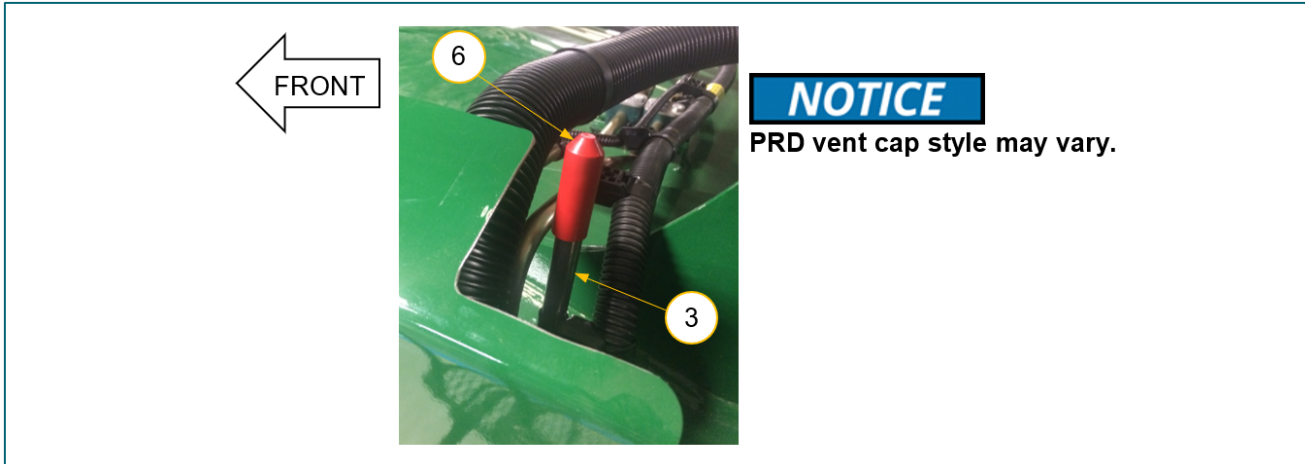


12. Install minimum 80-in long straight length of 10800010 tube (3) on union fitting 10200003 (4).

13. Replace single hole clamp (*not shown*), with double hole clamp (5) on the upper Stauff rail, and secure 10800010 vent tube (3).

14. Trim tube 10800010 (3) above top body skirt to allow vent cap (4) to be visible from the ground, but low enough for protection from branches.

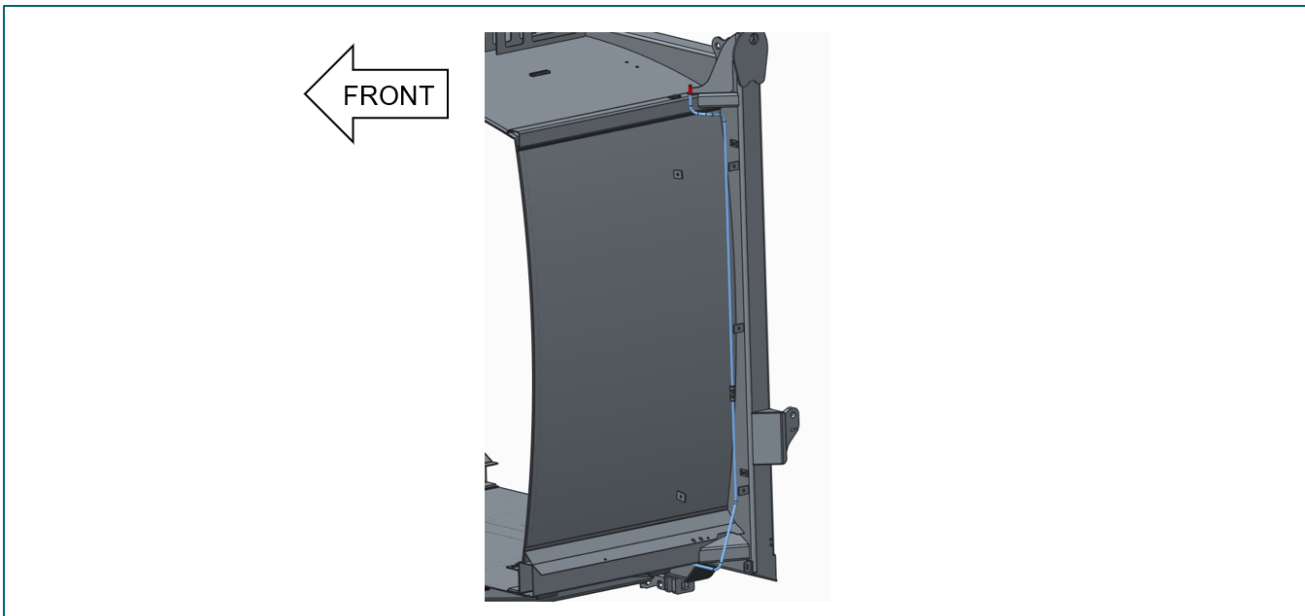
15. Install PRD vent cap 10702384 (4) on the top of trimmed 10800010 tube (3). Refer to **FRI.0010 PRD Vent Cap Installation**.



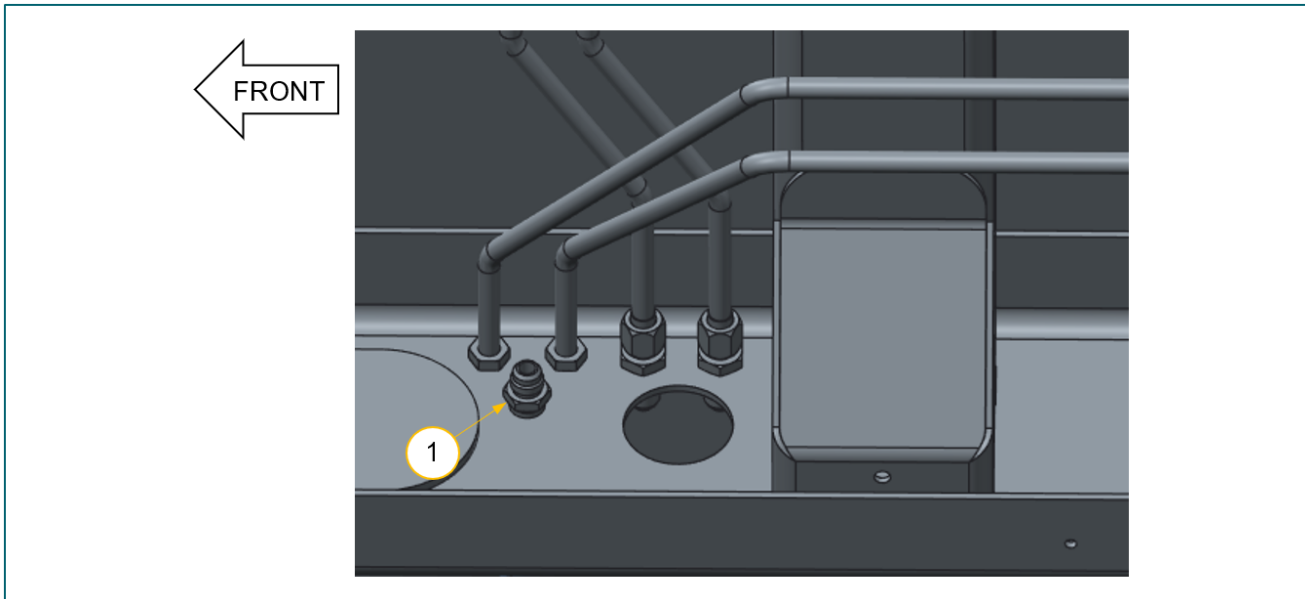
16. Apply decal 10602243 (6) to PRD lines every 24-in minimum.

B - Meridian Body Mount Installation

Meridian PRD Vent Line Routing Overview



1. Install 10200085 bulkhead fitting (1) in bulkhead port at bottom rear LHS of body.



2. Install vent hose 10300725 (2c) (installed during chassis prep) on 10200085 bulkhead fitting (1).

NOTICE Do not allow hose to contact chassis or body.

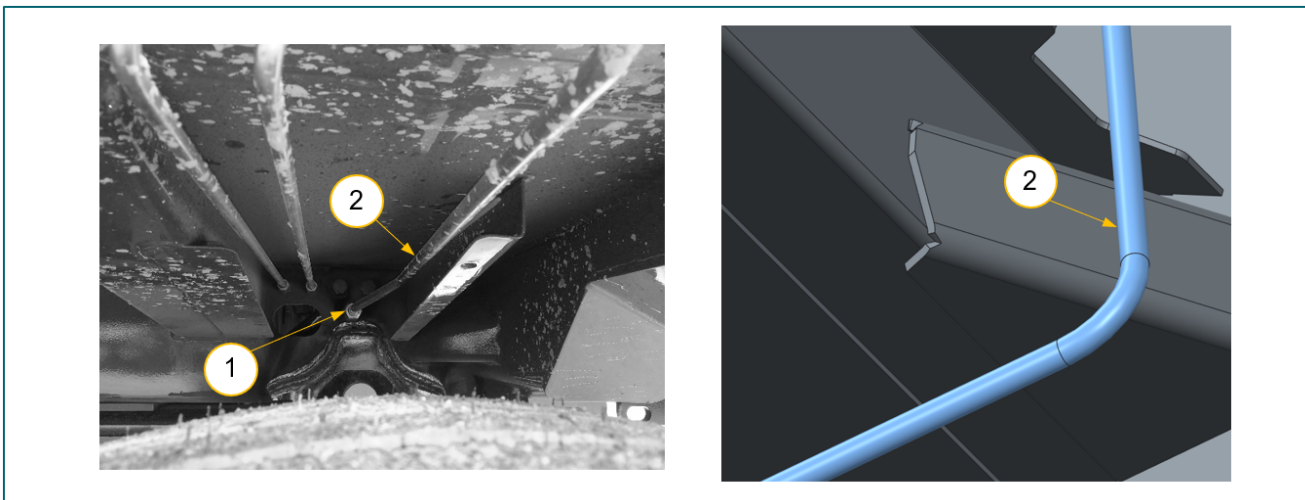
3. Use existing butterfly clamps (5) (not shown) to secure 10300725 (2c) to limit its range of motion.

NOTICE 4.0-in maximum bend radius for vent hose.

NOTICE Position butterfly clamp near clamp used to secure HP hose to chassis.

4. Apply decal 10602243 (6) along PRD lines every 24-in minimum.

5. Install 20103418 tube (2) on 10200085 bulkhead fitting (1).



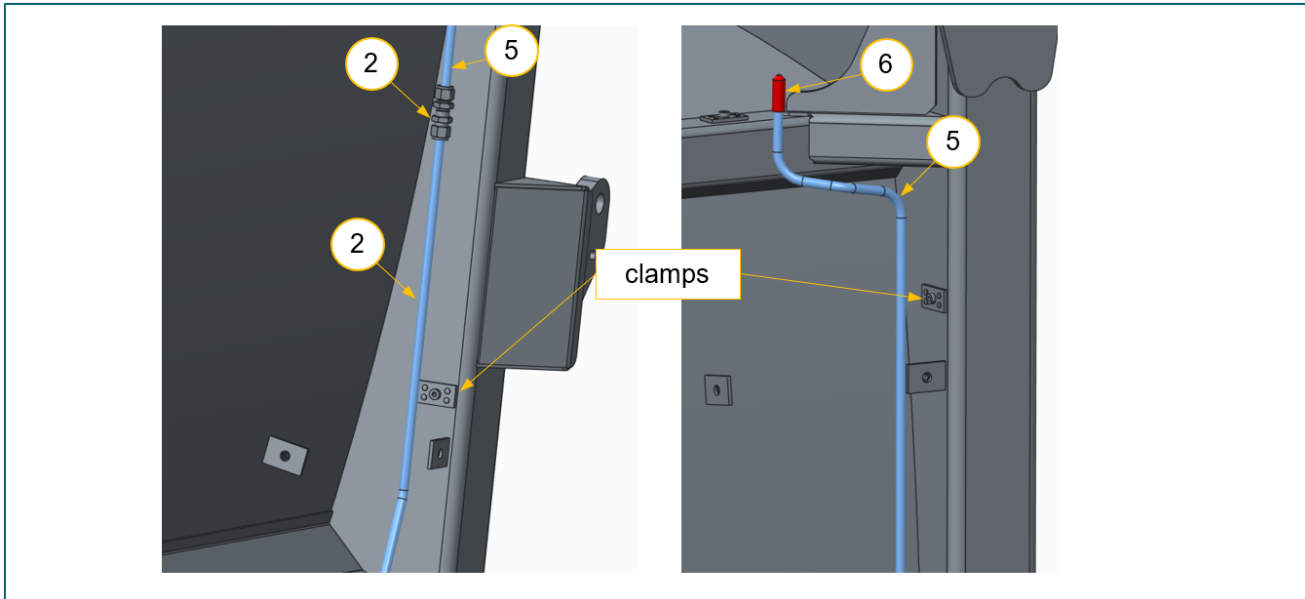
6. Orient 20103418 tube (2) as shown so tube routes up through skirt cover.

NOTICE Do not allow vent tube to contact chassis or body.

7. Secure 20103418 tube (2) using existing tube clamps on Stauff rails.

8. Apply decal 10602243 (6) along PRD lines every 24-in minimum.

9. Secure 20103418 tube (2) at rightmost clamp location on top Stauff rail.



10. Install 10200003 union fitting (4) on end of 20103418 tube (2).

11. Install 20103417 tube (5) on 10200003 union fitting (4).

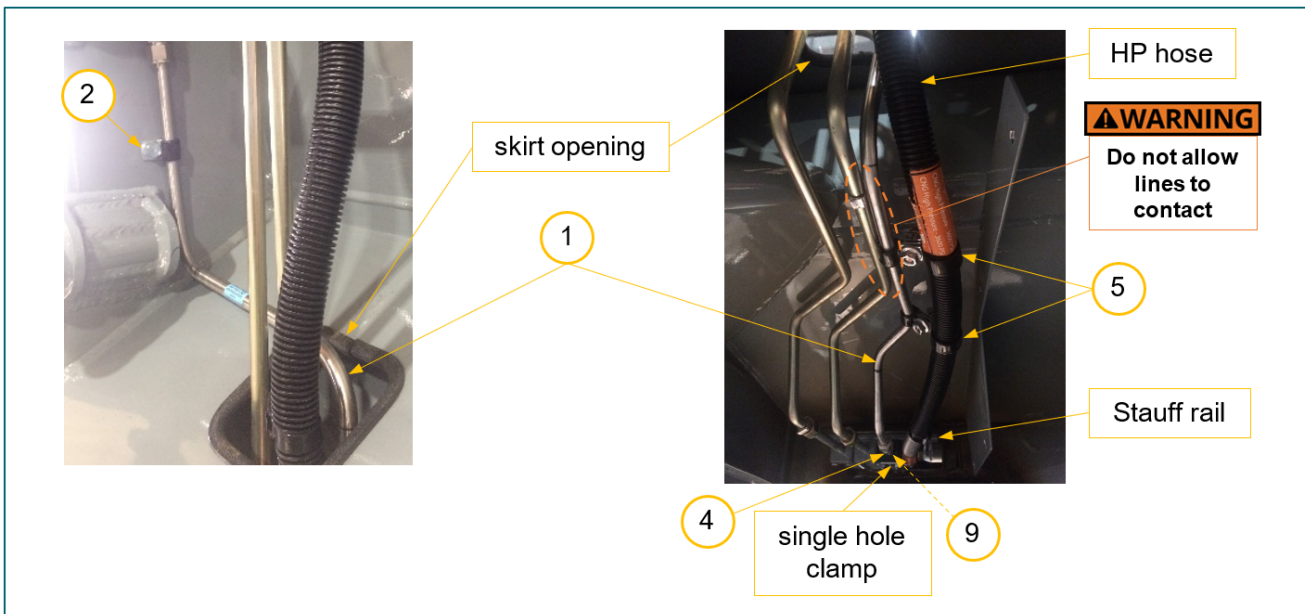
12. Secure 20103417 tube (5) in at rightmost clamp location on top Stauff rail.

13. Install PRD vent cap 10702384 (6) on end of 20103417 tube (5). *Refer to **FRI.0010 PRD Vent Cap Installation**.*

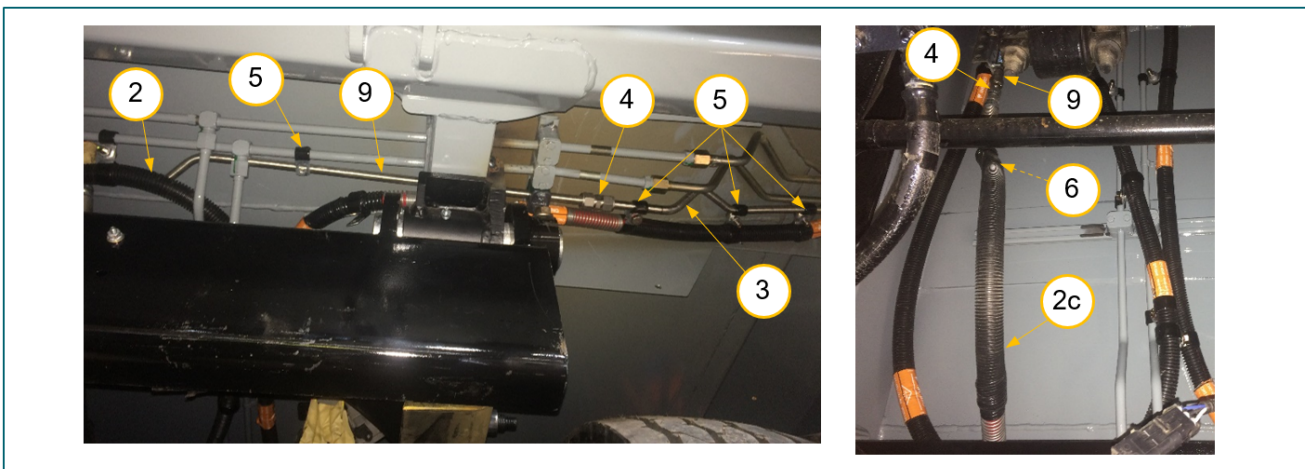
14. Apply decal 10602243 along PRD lines every 24-in minimum.

C - Pacific and Contender Body Mount Installation

1. Position 20103490 tube (1) to follow body contours and feed through skirt opening towards chassis.



2. Secure upper end of 20103490 tube (1) using 10702147 P-clip (2).



3. Secure 20103436 tube (9) to Stauff rail on bottom of body using clamp double hole tube clamp kit 10701508 (4).

4. Secure 20103490 tube (1) to HP hose using butterfly clamps (5).

5. Install 10200003 union fitting (4) on end of 20103490 tube (1).

6. Install 20103436 tube (9) on 10200003 union fitting (4) with leg of tube oriented toward front of vehicle.

7. Install union 10200081 fitting (7) on end of 20103436 tube (5).

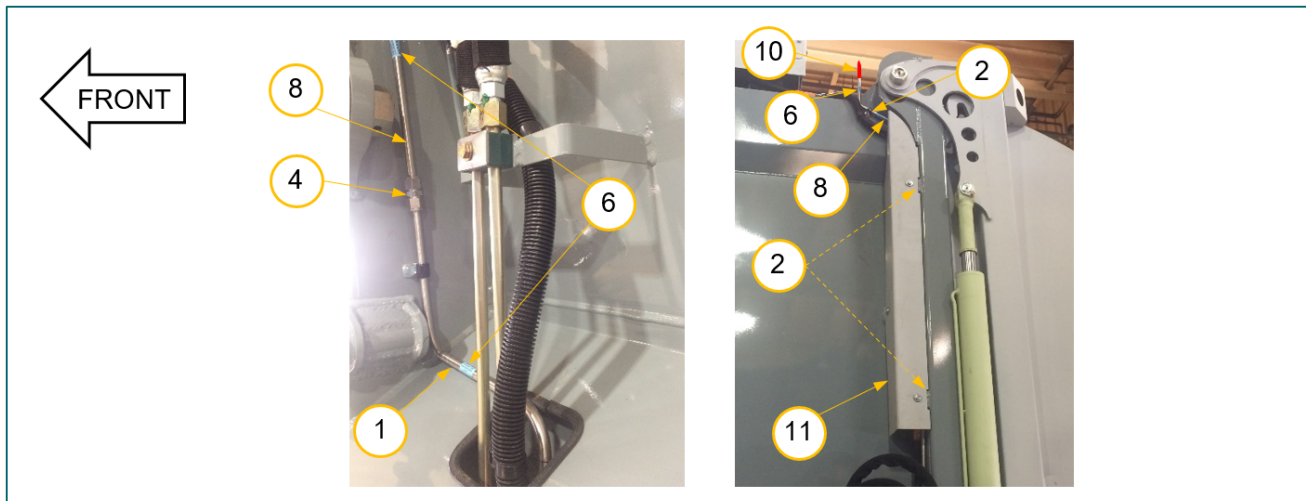
8. Install vent hose 10300725 (2c) (*installed during chassis prep*) on 10200081 union fitting (7).

9. Use butterfly clamps to constrain vent hose 10300725 (2c) to limit its range of motion.

NOTICE Position butterfly clamp near clamp used to secure HP hose to chassis.

10. Apply decal 10602243 (*not shown*) to PRD lines every 24-in minimum.

11. Remove shield (11).



12. Install union fitting 10200003 (4) on end of 20103490 tube (1).

13. Install 20103493 tube (8) on 10200003 union (4).

14. Secure 20103493 tube (8) using 10702147 P-clips (2).

15. Install PRD vent cap 10702384 (10) on end of trimmed 10800010 tube (8). **Refer to *FRI.0010 PRD Vent Cap Installation*.**

16. Apply decal 106024432 (6) to PRD lines every 24-in minimum.

17. Reinstall shield (11) per OEM procedure.

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 Preview