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Other Languages:	NONE	**Author**:	Gintarus Andriusis
Viewed:	1208		

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Title: Gasoline Engine Bus Fuel System Issues

Applies To: PSI Gasoline Bus

Change Log

Please refer to the change log text box below for recent changes to this article:

12/06/2018 - Added updated Part Numbers
11/09/2018 - Revised diagnositc steps and added additional repair steps
10/19/2018 - Revised Evaporative System Test PDF file
10/17/2018 - Added Evaporative System Test step, added note for over stretching fuel fill line in Repair Steps, added note for clocking fuel receiver tie strap in the PDF document
10/11/2018 - Added clean dates for repairs, and note about orientation of flapper valve

Description

This article identifies known fueling issues on the PSI 8.8 Gasoline Engine for Bus.

Symptoms

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
No Faults or Warning Lights	

Customer Observations or Concerns:

- Hard to fuel/Does not take fuel in
- Incorrect fuel level reading

Special Tools / Software

Tool Description	Tool Number	Comments	Instructions
Not Applicable			

Service Parts Information

Kit Description	Part Number	Quantity Required	Notes
Valve, Check, Fuel Fill Inlet (flapper/spit back valve)	4109247C1	1	
Tie Strap	306132C1	1	
Fuel Fill Receiver Bracket (30degree angle)	4109896C3	1	

Filler Assembly Kit, Fuel Fill Receiver and Hose Kit (no bracket)	4107649C93	1	
Formed Fuel Hose	2520493C1	1	
Formed Hose (not cut to size, cut 50mm from formed end)	2520482C1	1	

Diagnostic Steps

Fueling issues diagnostic steps

If a unit has a complaint of not taking fuel in, please take pictures of any issues found before repairs are made and submit it to technical support case file

Step	Action	Decision
1	**DIAGNOSTIC:** Difficulties fueling the Bus **YES/NO QUESTION?** Is the bus hard to fuel/not taking fuel in?	**Yes:** Go to Step 2 **No:** End of Diagnostics

Step	Action	Decision
2	**DIAGNOSTIC:** Verify the fuel fill tube Mat/Diaper is installed properly **YES/NO QUESTION?** Is the rubber Mat/Diaper NOT installed properly or touching the filler tube?	**Yes:** Go to Repair Steps for Fuel Fill Tube Mat/Diaper Installation **No:** Go to step 3

Step	Action	Decision
3	**DIAGNOSTIC:** Verify fuel fill receiver is properly secured with the tie strap as per Figure 3 **YES/NO QUESTION?** Is the fuel fill receiver properly secured and NOT able to be moved by hand just holding on to the fuel cap?	**Yes:** Go to Step 4 **No:** Go to Repair steps for Filler Neck Alignment

Step	Action	Decision
4	**DIAGNOSTIC:** Verify fuel fill receiver is installed properly with vent orientation at 10-11o'clock position as per Figure 1 **YES/NO QUESTION?** Is the filler receiver and vent line in the correct orientation?	**Yes:** Go to Step 5 **No:** Verify the updated Part Number for Fuel Fill Receiver is installed as per Repair steps for Filler Neck Alignment

Step	Action	Decision
5	**DIAGNOSTIC:** Inspect the fuel fill hose for excessive droop. Acceptable droop Figure 4 Unacceptable droop Figure 5 **YES/NO QUESTION?** Is the fuel fill hose within acceptable droop range?	**Yes:** Go to Step 6 **No:** Go to Repair steps for Fuel Fill Hose Excessive Droop

Step	Action	Decision
6	**DIAGNOSTIC:** Verify vent line routing through the frame (at 3o'clock position) and over the fill hose as per Figure 1 **YES/NO QUESTION?** Is the vent line routed and secured properly?	**Yes:** Go to Step 7 **No:** Route the vent line as Figure 1

Step	Action	Decision
7	**DIAGNOSTIC:** Check the gap between the fuel fill receiver bracket and the sill Acceptable - Figure 6 Unacceptable - Figure 7 **YES/NO QUESTION?** Is there excessive gap noticed?	**Yes:** Go to Repair Steps for Fill Receiver Bracket Repair **No:** Go to Step 8

Step	Action	Decision
8	**DIAGNOSTIC:** Check for sticking flapper valve/spit back valve. Check for any residue on the valve as per Figure 2 **YES/NO QUESTION?** Is the valve sticking, or any residue seen on the valve? or Is valve orientated incorrectly with hinge (flat edge) side on the bottom?	**Yes:** Go to Repair Steps for Valve replacement **No:** Go to Step 9

Step	Action	Decision
9	**DIAGNOSTIC:**	**Yes:** End of Diagnostics

	In Repair Steps, follow the procedure under Evaporative System Test to check for restrictions within Evap lines and canisters **YES/NO QUESTION?** Are the Evap lines and canisters free of any blockage and restrictions?	**No:** Repair as Needed. Verify the Repair Resolved the Complaint

Figure 1

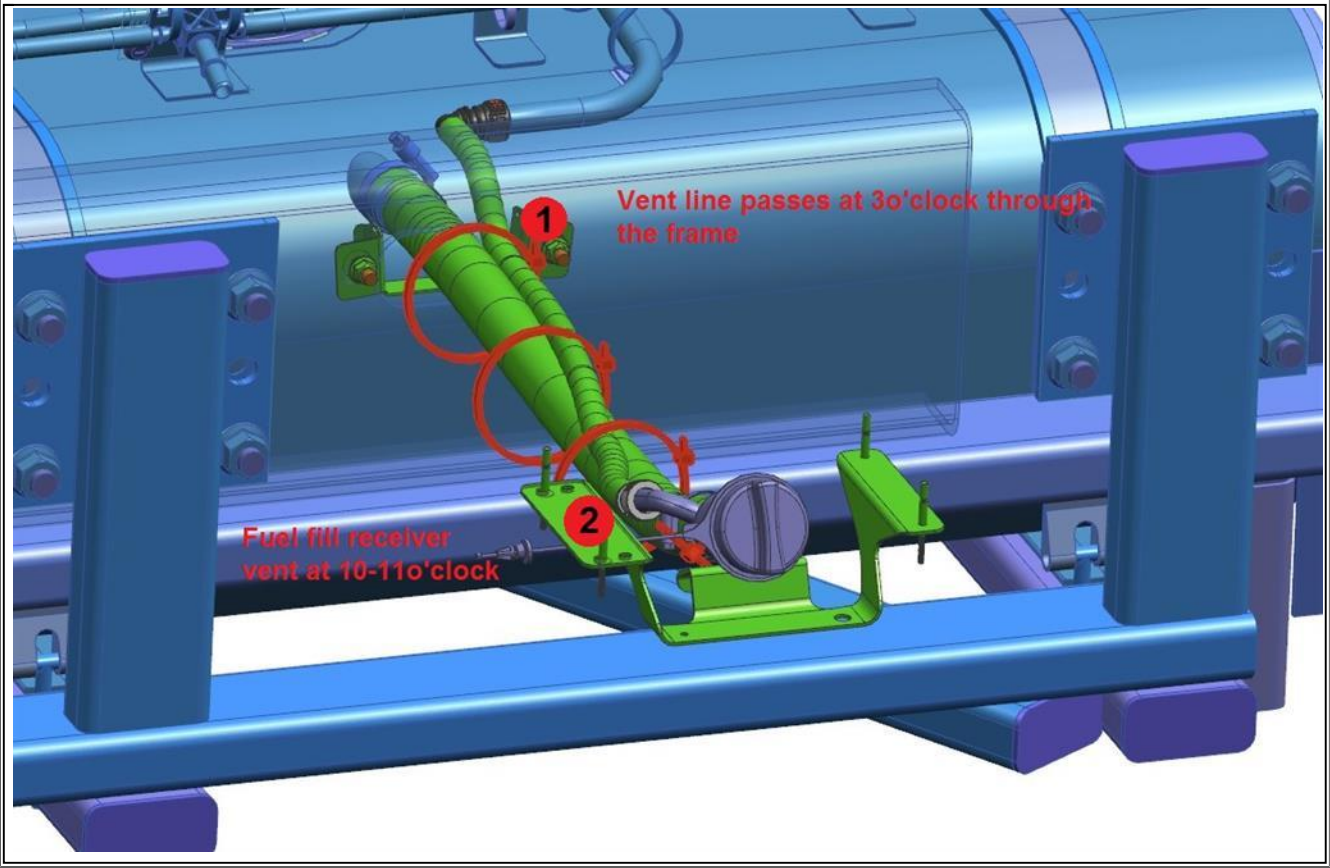


Figure 2

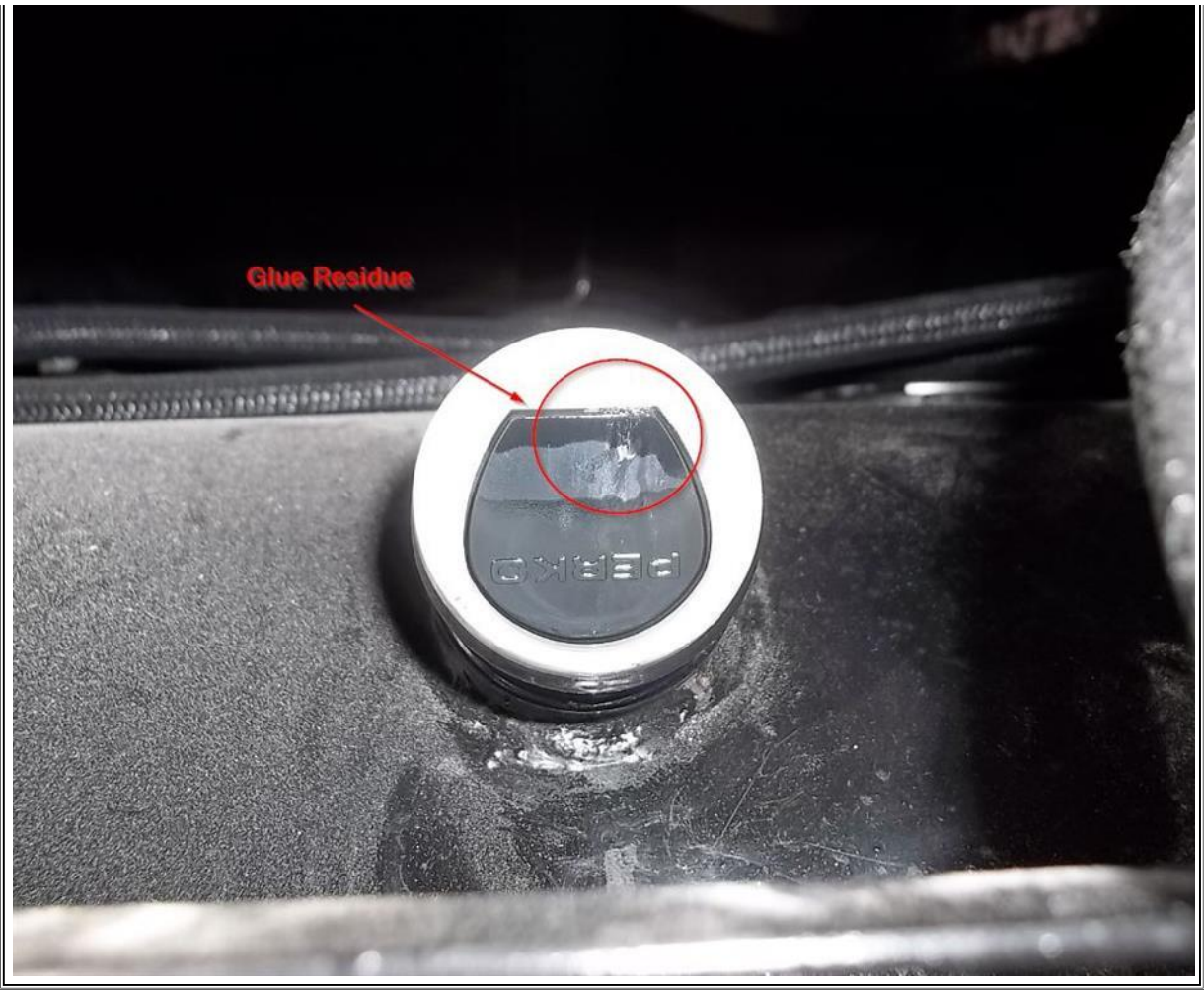


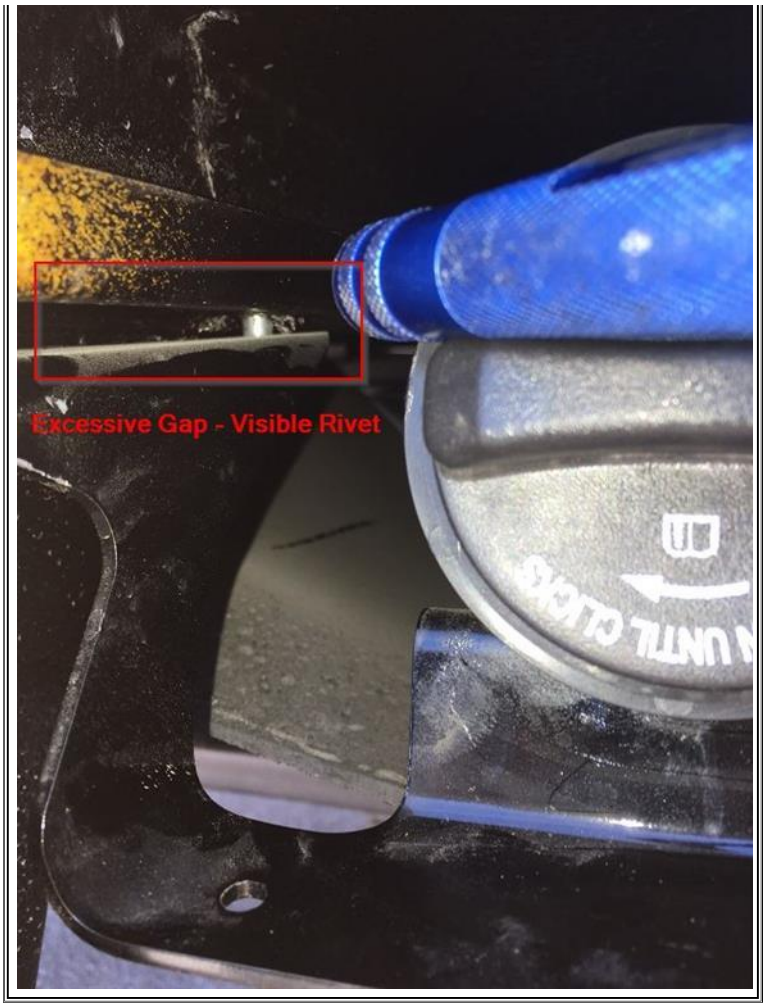
Figure 3

Figure 4 - Acceptable Fuel Fill Hose Droop

Figure 5 - Unacceptable Fuel Fill Hose Droop

Figure 6 - Acceptable Fill Receiver Bracket Gap

Figure 7 - Unacceptable Fill Receiver Bracket Gap



Repair Step(s)

Fuel Neck Alignment (Plant clean date 6/15/2018)

1. Step 1: Follow the procedure in the link on Step 2
2. Step 2: Fuel Neck Alignment Repair
3. Step 3: Verify that the fuel receiver tie strap is clocked in the correct position as per drawing in the procedure above

Flapper/Spit Back Valve Replacement (Clean date 7/2018)

1. Step 1: Remove the filler hose/line
2. Step 2: Pry off the old valve, clean surface of any debris on the fill neck
3. Step 3: On a new valve apply one drop of Loctite on the bottom of the valve to secure the valve to the fill neck
4. Step 4: Install the valve in the same orientation as it was removed, flapper part facing down and hinge (flat edge) on top (or as shown in Figure 2)
5. Step 5: Reinstall the filler hose/line, torque fill neck clamp to 38-42 in-lb

Fuel Tank Replacement (Clean date 6/11/2018)

1. Step 1: Follow the procedure in the link on Step 2
2. Step 2: Fuel Tank Removal and Installation Procedure

Fuel Fill Hose Excessive Droop (Clean date 9/10/2018)

1. Step 1: Disconnect the fuel fill hose from the filler neck
2. Step 2: Trim the fuel fill hose as needed
3. Step 3: Reattach the hose as per "Fuel Neck Alignment" steps above
4. Step 4: Make sure to torque fill neck clamp to 38-42 in-lb

5. Step 5: Verify the fuel fill hose is within an acceptable droop range
6. ***Note*** Do not over stretch the fuel fill line to the point it is effecting the angle of the fuel fill receiver

Fill Receiver Bracket Repair (Clean date 9/25/2018)

1. Step 1: Remove the fill hose protecting diaper
2. Step 2: Remove the fill receiver from the support bracket by cutting the zip ties
3. Step 3: Drill out the improperly installed rivets
4. Step 4: Mount the bracket flush to the sill with new rivets
5. Step 5: Reinstall the fuel fill receiver as per "Fuel Neck Alignment Repair" above
6. Step 6: Verify the gap is no longer visible

Evaporative System Test

1. Step 1: Follow the procedure in the link on Step 2
2. Step 2: Evaporative System Test

Fuel Fill Tube Mat/Diaper Installation

1. Step 1: Refer to installation diagrams in Step 2
2. Step 2: Fuel Fill Tube Mat/Diaper Diagrams

Warranty Information

Warranty Claim Coding:

Refer to the Warranty Coding Manual for Group and Noun Codes.

Standard Repair Time(s):

Refer to the SRT Manual for Repair Times

Other Resources

Master Service Information Site

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