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SURGE TANK SUPPORT REPLACEMENT

Prevost vehicles

DESCRIPTION

On the vehicles affected by this bulletin, the existing surge tank support has to be replaced by a new configuration including two supports. That will allow a better distribution of the load between the tank and the support.

MODEL YEARS AND VEHICLES INVOLVED

NOTICE TO SERVICE CENTERS		
Verify vehicle eligibility by checking warranty bulletin status with SAP or via ONLINE WARRANTY SYSTEM available on Service / Warranty tab of Prevost website.		
Model	VIN	Fleet Number
X3-45 Commuter Model Year : 2014 - 2016	The following individual vehicles: 2PCG33495EC73 <u>5590</u> , 2PCG33498EC73 <u>5602</u> and From 4RKG33497F973 <u>7001</u> up to 4RKG33491G973 <u>7299</u> incl.	From 2490 up to 2789, incl.

NOTE

Material can be obtained through regular channels.

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MATERIAL NEEDED

Order kit SP18-301 that contains the following parts:

Part No.	Description	Qty
050134	SURGE TANK SUPPORT	1
050136	HOSE HOLDER SUPPORT	1
382564	COOLANT LEVEL WARNING LIGHT	1
5001868	WSH BELL SS 8.4X18X2 (M8,5/16)	3
5001923	SCR CAP HEX SS NSS M6X45	1
500877	WSH FL N500 .250X.562X.065	1
502681	NUT HEX NYRT NX500 M6-1.0 G8	1
502780	SCR CAP HEX SS NSS M8X25	3
564108	CHRISTMAS TREE TYPE MOUNTING CLIP	1
504634	HOSE HOLDER	1
504637	CABLE TIE MIDDLE SIZE BLACK	15
504775	CLAMP HOSE T-BOLT	2
509815	CABLE TIE MOUNT FT7	15

Other parts that may be required (optional):

Part No.	Description	Qty
503821	Silicone Hose 3/8 ID (by the foot)	As Req.

PROCEDURE



DANGER

Park vehicle safely, apply parking brake, stop the engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

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OLD SUPPORT REMOVAL

1. Locate the surge tank into the engine compartment (Figure 1).

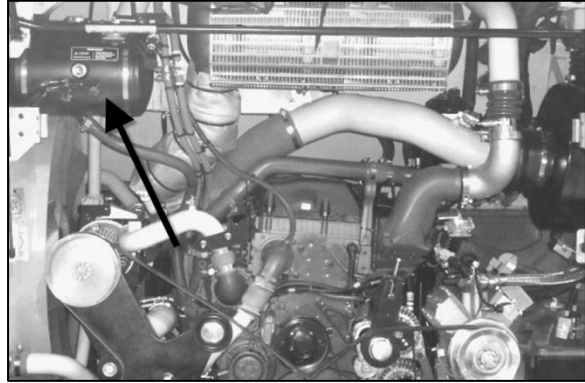


Figure 1

2. As a safety precaution, release the system pressure by pressing the relief valve button (Figure 2).



Figure 2

3. Disconnect the low coolant sensor (Figure 3).

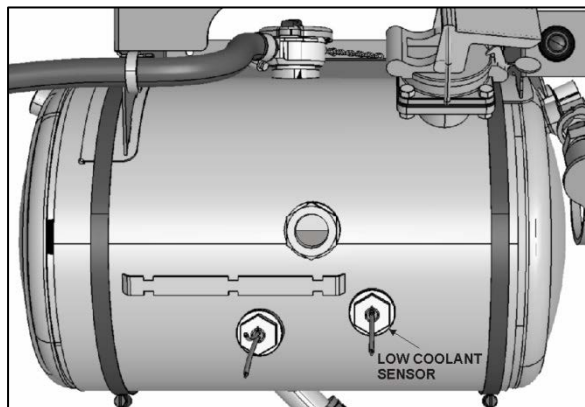


Figure 3

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4. Mark the male and the female connectors with white marker and move the wiring away from the tank to protect it (Figure 4).

NOTE

THERE ARE TWO SENSORS TO DISCONNECT. TO ENSURE THE CORRECT RECONNECTION, MARK ONLY THE LOW COOLANT SENSOR PAIR OF CONNECORS.

5. Disconnect the coolant level critically low sensor (Figure 5).
6. Move the wiring away from the tank to protect it.

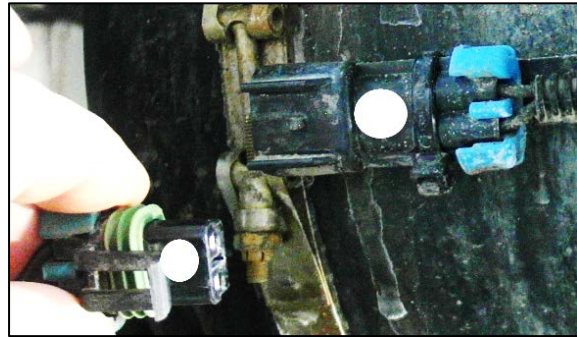


Figure 4

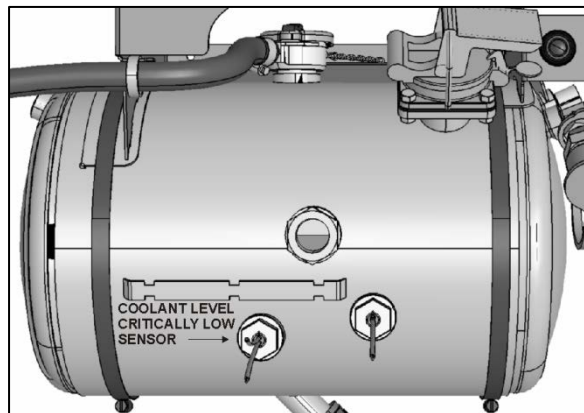


Figure 5

7. Support the surge tank using a flat nylon tie down strap (with hooks on both ends).
 - Hook one end of the strap to the vehicle chassis (bumper or other low part of the frame - Figure 6).

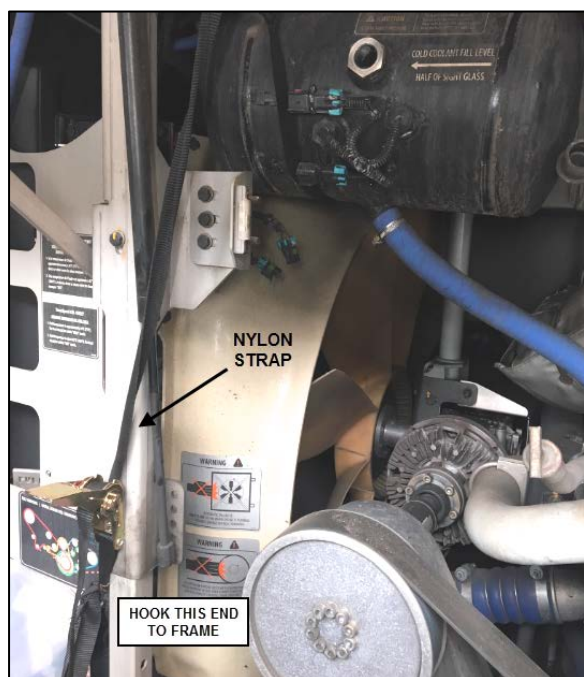


Figure 6

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- Pass the strap over the door support as shown (Figure 7).



Figure 7

- Route the strap under the surge tank (Figure 8).

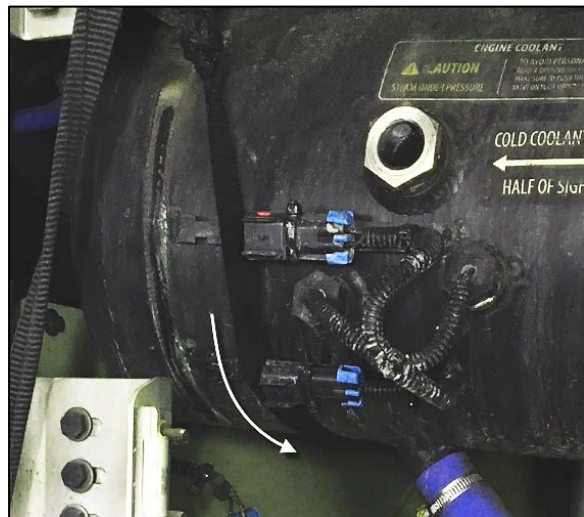


Figure 8

- Wrap the strap over the CAC pipe located behind the surge tank – Hook the strap end as shown in Figure 9 to secure the assembly (remove any slack).



Figure 9

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8. Remove surge tank existing collars (Figure 10).

9. Cut all cable ties supporting the wires and hoses to the surge tank support.

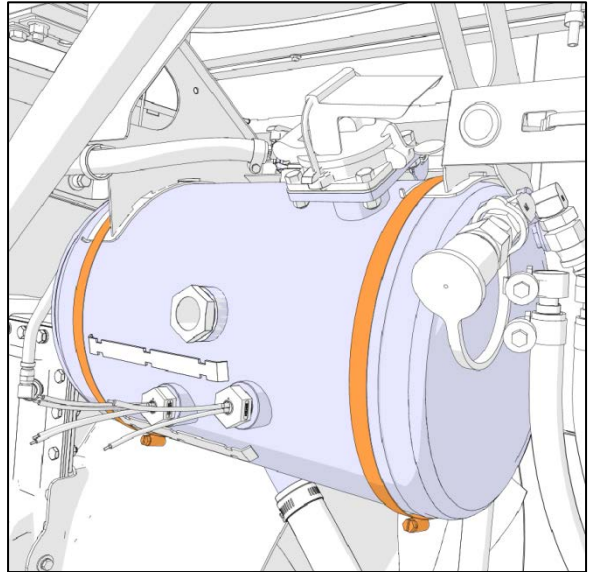


Figure 10

10. To allow support removal, the surge tank must be lowered slightly (right side of the tank) – Make sure that the tank is well supported (Figure 11).

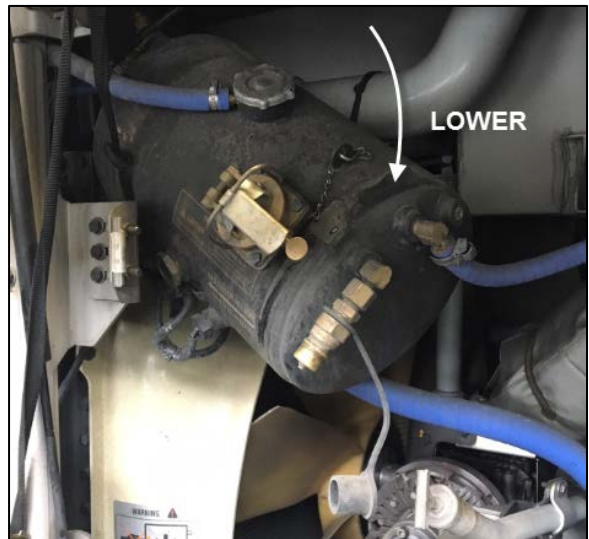


Figure 11

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11. Remove the longitudinal screws (2) inside the tank support (Figure 12).

NOTE

DO NOT USE EXCESSIVE TORQUE TO REMOVE THE SCREWS BECAUSE THEY ARE ASSEMBLED WITH NUTS WELDED ON THE STRUCTURE. BREAKING THE SCREW WILL ADD IMPORTANT AMOUNT OF LABOR.

USE LUBRICANT IF NECESSARY.

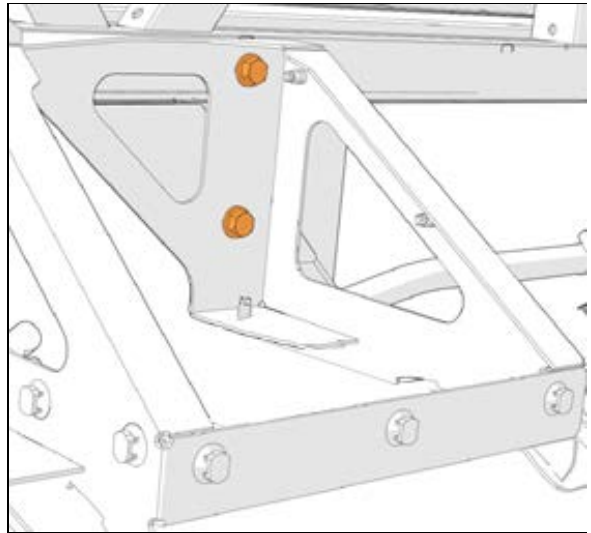


Figure 12

12. Remove the transversal screw at the top of the support (Figure 13).

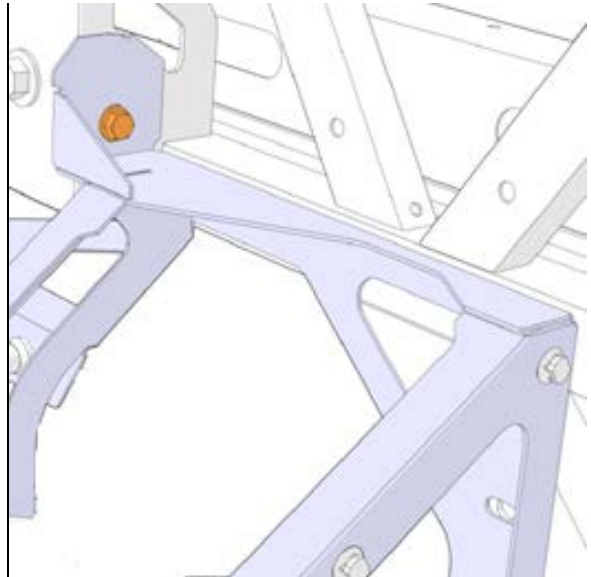


Figure 13

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13. Raise the support first to unhook and then remove it (Figure 14).

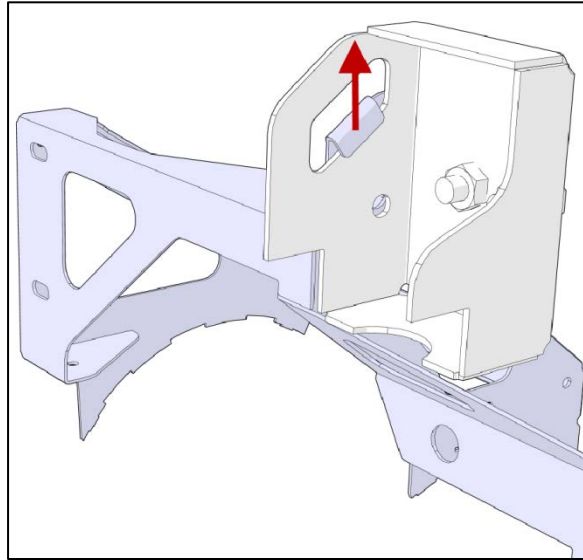


Figure 14

NEW SUPPORT INSTALLATION

14. Install all new cable tie mounts # 509815 (9) on the new surge tank support as shown on Figure 15.

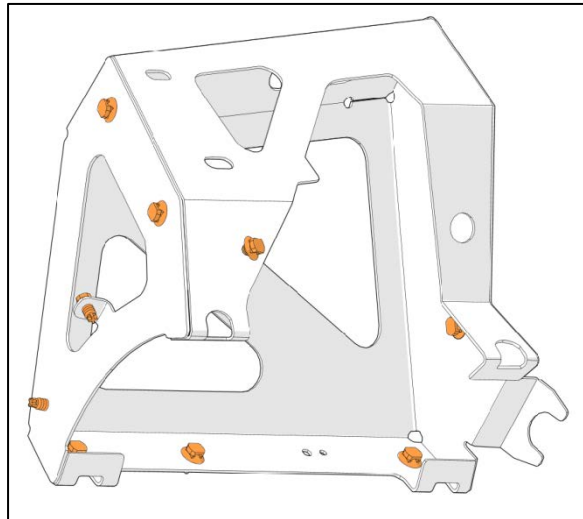


Figure 15

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15. Install the new coolant level warning light #382564 as shown on Figure 16.
16. Install the new Christmas tree type mounting clip #564108 as shown on Figure 16.

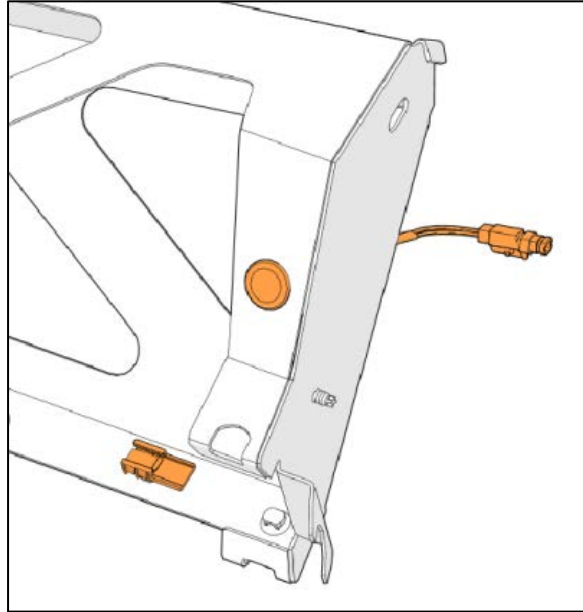


Figure 16

17. Install the new surge tank support in place. Be careful to hook the tab on the vehicle structure as shown on Figure 17.

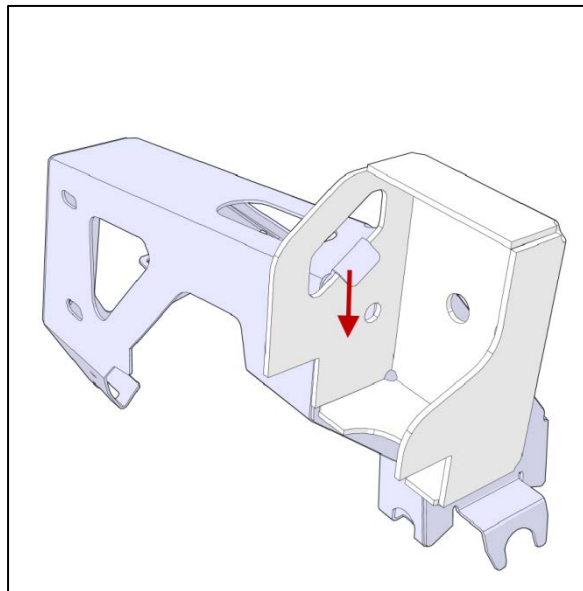


Figure 17

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18. Install the new Belleville washer #5001868 and the new transversal screw #502780.

Apply blue, *medium strength thread locker* on the screw threads (Figure 18).



- *Hand tighten only.*

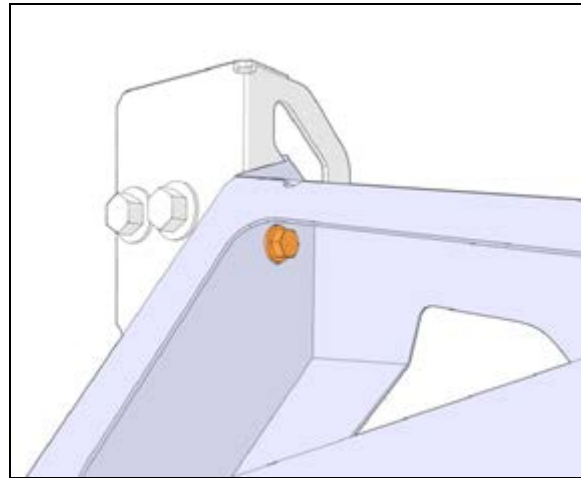


Figure 18

19. Install the new Belleville washers #5001868 (2) and the new longitudinal screws #502780 (2).

Apply blue, *medium strength thread locker* on the screw threads (Figure 19).



20. Starting with *the transversal screw (shown in step 18)*, torque all screws # 502780 (3) to a value of **14 lb-ft.**

Apply a stripe of *tamper proof indicator paint* (torque seal) to all screw heads.

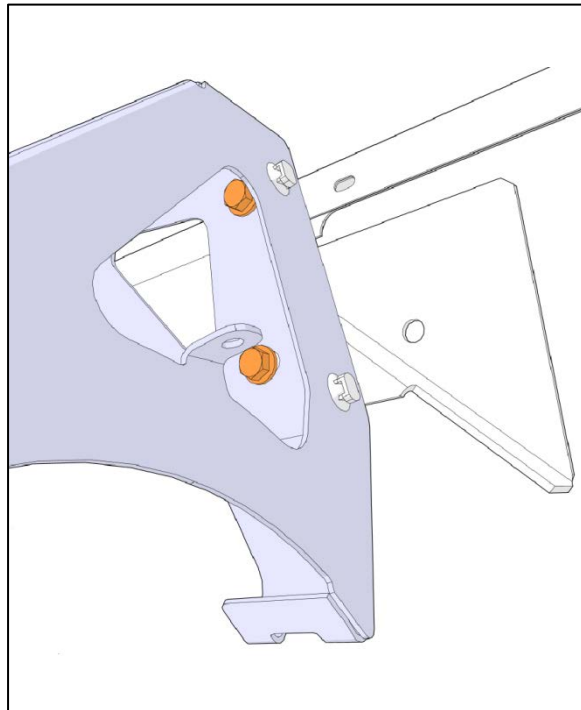
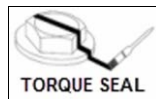


Figure 19

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21. Connect the new coolant level warning light #382564 male connector to the existing connector (Figure 20).

22. Install the connectors on the new Christmas tree type mounting clip #564108 (Figure 20).



Figure 20

23. Fix the wiring along the support with cable ties using the new cable tie mounts (Figure 21 & Figure 22).



Figure 21



Figure 22

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24. Rise the tank until it comes in contact with the tank support legs (4) as shown in Figure 23.
25. Install the new hose clamps with the screws pointing toward the level sensors.

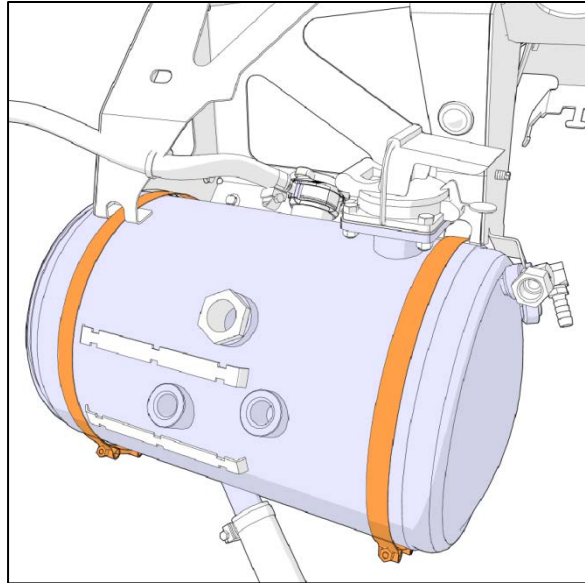
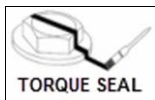


Figure 23

26. Put the tank in position by hooking the support tab on the second fitting on the right when facing the tank.
27. Move the tank toward the right until it touches the support tab (Figure 24).
Tighten the clamps to a **maximum of 65 lb-in** and apply a stripe of *tamper proof indicator paint* (torque seal) to all clamp bolt heads.



NOTE

MAKE SURE THE SUPPORT LEGS HAVE A GOOD CONTACT WITH THE TANK. REMOVE ANY OBJECTS THAT MAY INTERFERE.

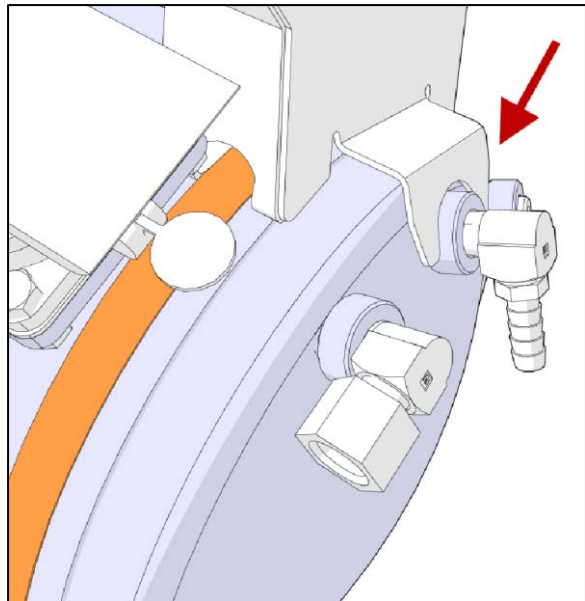


Figure 24

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28. Fix the overflow hose on the tank support with a cable tie as shown on Figure 25.



CAUTION

Make sure that there is no contact between the hose and the edge of the support as shown below.

If contact is present, replace the hose with a longer one. Use the required length of 3/8" ID hose # **503821**

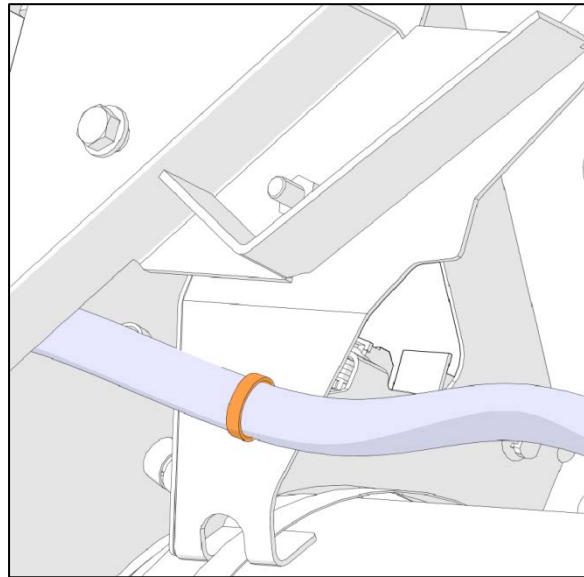


Figure 25

29. Loosen the screw that fixes the SCR support to the vehicle structure (Figure 26). Do not remove the screws.

NOTE

DO NOT USE EXCESSIVE TORQUE TO LOOSEN THE SCREWS BECAUSE THEY ARE ASSEMBLED WITH NUTS WELDED ON THE STRUCTURE. BREAKING THE SCREWS WILL ADD IMPORTANT AMOUNT OF LABOR.

USE LUBRICANT IF NECESSARY.

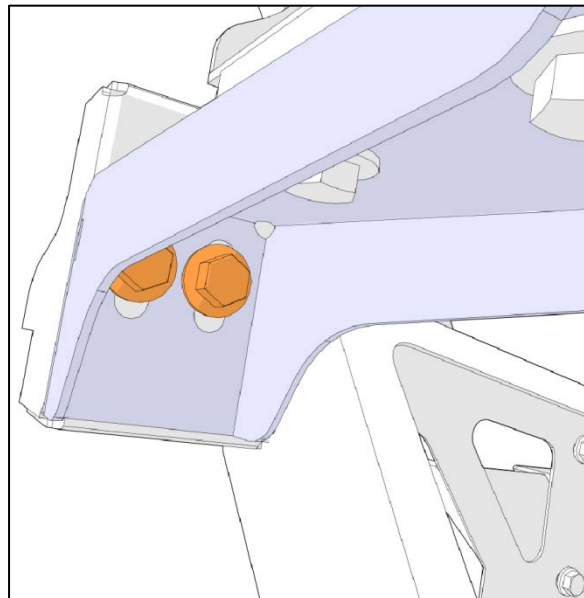


Figure 26

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30. Install the new hose holder support #050136 as shown in Figure 27. Make sure the new holder slides between the existing SCR support and the existing Belleville washers and screw heads.

Apply blue, *medium strength thread locker* on the screw threads (Figure 27).



31. Tighten the screws (2) to **59 lb-ft.** and apply a stripe of *tamper proof indicator paint* (torque seal) to all screw heads.

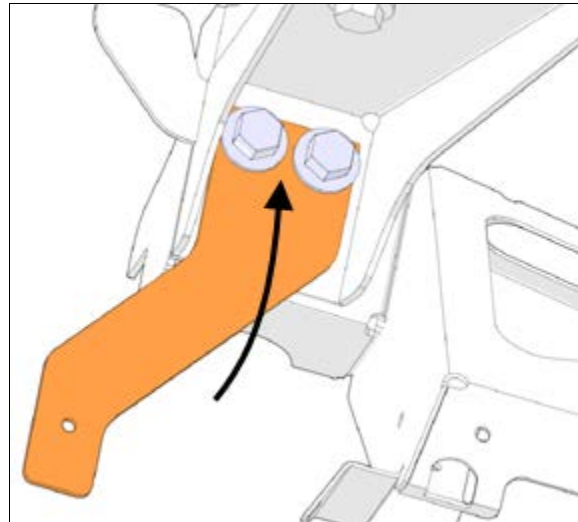
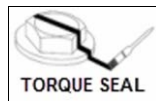


Figure 27

32. Install the new hose holder #504634 on the hose holder support with the hoses, the screw #5001923, the flat washer #500877 and the nut #502681. Apply blue, *medium strength thread locker* on the screw threads (Figure 28).



33. Tighten the nut to a torque value of **48 lb-in** and apply a stripe of *tamper proof indicator paint* (torque seal) to the nut.

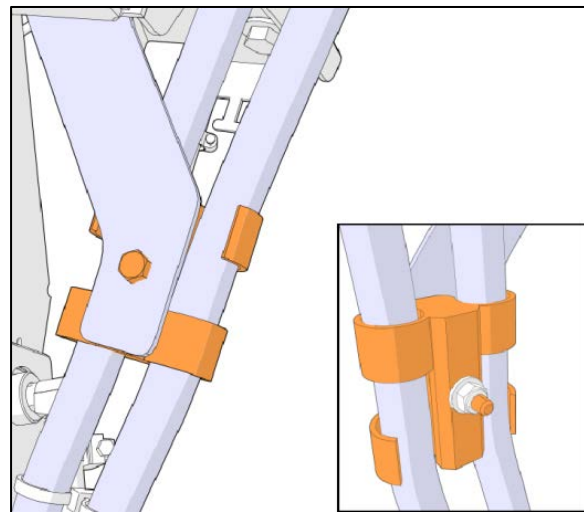
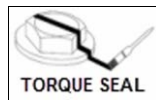


Figure 28

NOTE

MAKE SURE THE HOSES ARE NOT IN CONTACT WITH ANY OBJECTS BEFORE TIGHTENING THE NUT.

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34. Reconnect the low coolant sensor (Figure 30).
Make sure the marks made in step 4 are matching (Figure 29).

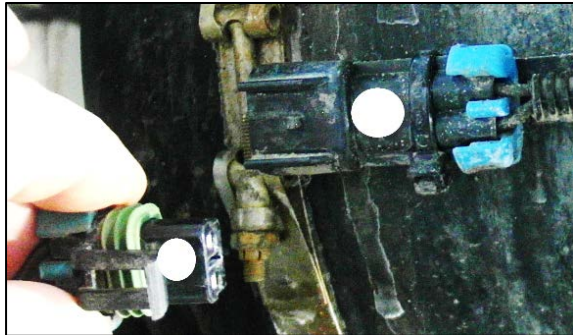


Figure 29

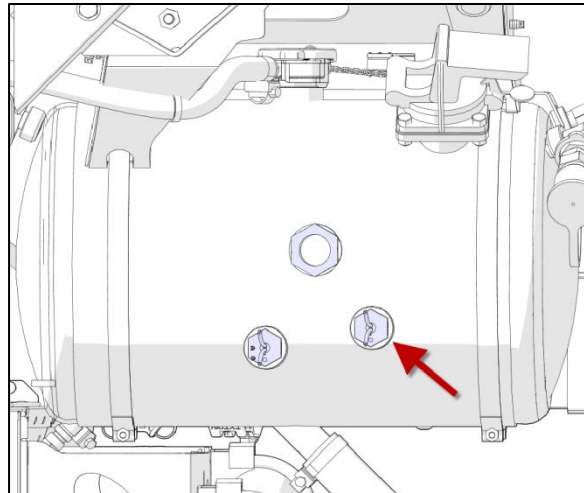


Figure 30

35. Reconnect the coolant level critically low sensor (Figure 31).

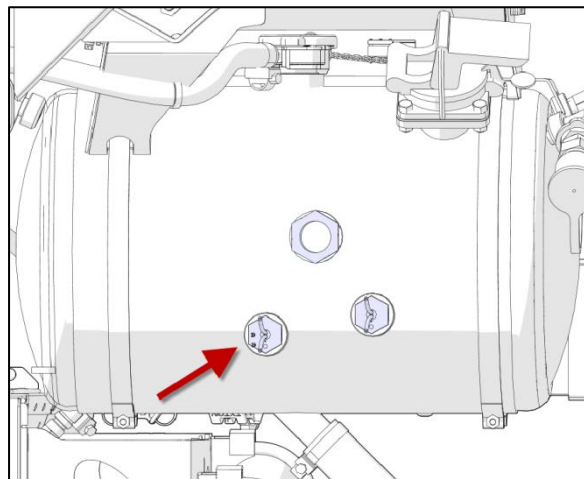


Figure 31

36. Bulletin is complete.

NOTE

***DOUBLE CHECK THAT HOSES ARE NOT
IN CONTACT WITH ANY SHARP EDGES.***

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PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

ESTIMATED TIME

The time required to perform this special bulletin is approximately 1H00.

OTHER

VBC Bulletin	N/A
Fail Code	05.00
Defect Code	09
Syst. Cond	B
Causal Part	053715

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