

# PREVOST

## Instruction Sheet

## IS-21070B

### OBSOLETE TPMS ANTENNAS REPLACEMENT

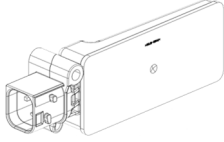
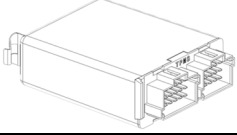
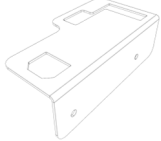
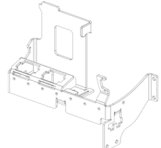
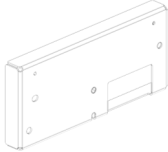

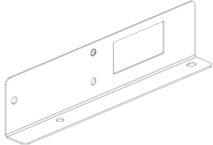
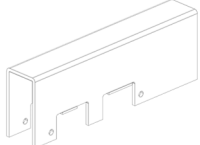
Revision: B

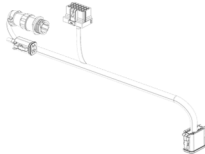
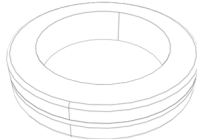

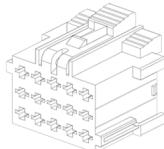

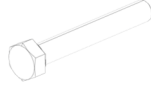






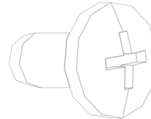
ADD PROCEDURE FOR PROGRAMMING

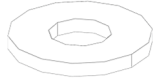
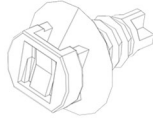




09-18-2024

### MATERIAL

Kit # **IS21070** includes the following parts:

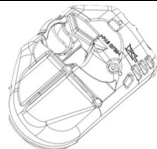


Part No	Description		Qty
564305	TPMS, ANTENNA SENSATA		3
564413	ECU, TPMS SENSATA		1
381044	SUPPORT ECU (BEFORE ELECTRIC FANS)		1
380252	SUPPORT ECU (AFTER ELECTRIC FANS)		1
406762	SUPPORT, FRONT ANTENNA		1
406119	PROTECTOR, FRONT ANTENNA		1
401333	SUPPORT, REAR ANTENNA		2
406764	PROTECTOR, REAR ANTENNA		2

0610632	FRONT JUNCTION BOX TPMS HARNESS		1
504622	GROMMET 1.500X1.750X.0625X.4375X2.125		1
0610631	ANTENNA HARNESS		1
562795	CONNECTOR / JUNIOR POWER TIMER / SH 15C		1
5001182	NUT HEX NYRT SS M6-1		2
502708	SCREW CAP HEX SS M5X35		3
5001137	WASHER FLAT SS .203 X. 438X. 06		3
502848	SCREW TC HEX F N500 1/4-20X3/4		4
5001608	WASHER BEL SPRING G500 6.2X15X0.7		4
5001681	SCREW CAP HEX SS M6-1 X 60 LG. PT		4
500411	WASHER FLAT SS .260 X. 697X. 05		8
502681	NUT HEX NYRT NX500 M6-1.0 G8		4
502868	SCREW TC BDG PH SS410 Z050 10-24 X3/8		2



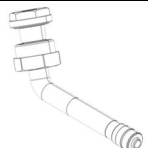
500804	WASHER FLAT N500 .219X. 500X.049		2
509815	FIR TREE MOUNTING (FT7 TYPE)		17
504637	CABLE TIE, NYLON BLACK (STD)		20
8631155	CABLE TIE WITH TREE MOUNT		2
504013	CABLE TIE MOUNT, BLACK 1/4		2
504347	RIVET POP 3/16 x1/4 AL		2
IS-21070	INSTRUCTION SHEET		1
FI-21070	FEUILLE D'INSTRUCTION		1

You need to order the valve and the sensor separately one kit per wheel.

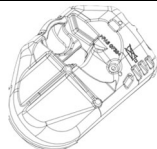

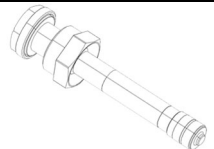
Kit # **150006 (steel wheel 9")** includes the following parts:

Part No	Description		Qty
564307	TPMS WHEEL SENSOR SENSATA		1
651200	SCREW MA TO AD M6X10 SENSATA		1
651198	VALVE, STEEL WHEEL 9"		1



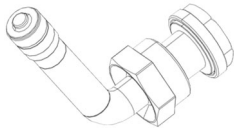
Kit # **150201 (aluminum wheel 9")** includes the following parts:

Part No	Description		Qty
564307	TPMS WHEEL SENSOR SENSATA		1
651200	SCREW MA TO AD M6X10 SENSATA		1
651196	VALVE, ALUMINUM WHEEL 9"		1




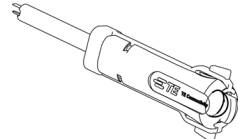
Kit # **150149 (aluminum wheel 10.5")** includes the following parts:

Part No	Description		Qty
564307	TPMS WHEEL SENSOR SENSATA		1
651200	SCREW MA TO AD M6X10 SENSATA		1
651195	VALVE, ALUMINUM WHEEL 10.5"		1

Kit # 150177 (aluminum wheel 14") includes the following parts:

Part No	Description		Qty
564307	TPMS WHEEL SENSOR SENSATA		1
651200	SCREW MA TO AD M6X10 SENSATA		1
651194	VALVE, ALUMINUM WHEEL 14"		1

Other parts that may be required:

Part No.	Description		Qty
684517	GLUE SIMSON ISR 70-03 GREY, CART 290ML		1
680038	LOCTITE 243 50 ML.		1
685324	DIELECTRIC GREASE 3 OZ TUBE		1
568103	EXTRACTION TOOL FOR MCP 2.8 CONTACT		1

**NOTE**

Material can be obtained through regular channels.

## SAFETY PRECAUTIONS

- Eye protection should always be worn when working in a shop.
- Rules for Personal Protection Equipment should always be respected. Wear your PPE including but not limited to the following:



# Safety First!



## PROCEDURE



### DANGER

Park vehicle safely, apply parking brake, stop 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.

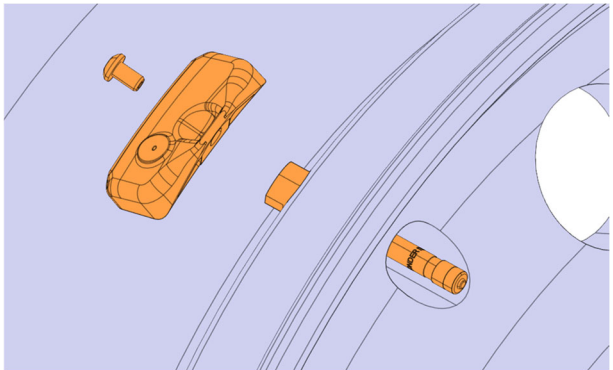
Lock out & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

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### TPMS WHEEL SENSOR REPLACEMENT

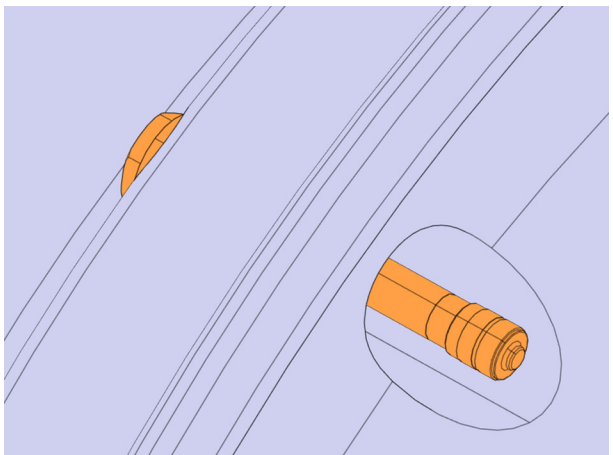
1. Remove the old TPMS sensor and valve and discard.



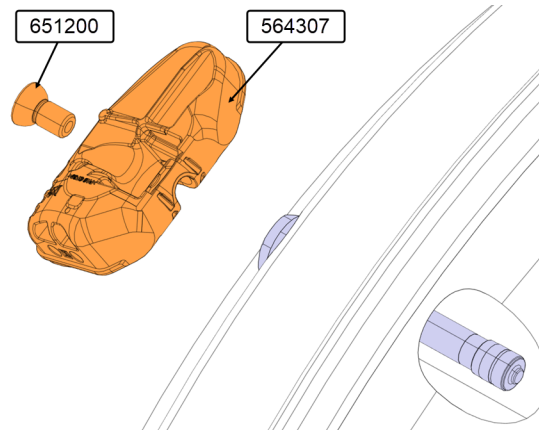
2. Apply dielectric grease to the O-ring and valve threads.

With 9" steel wheel: 651198  
With 9" aluminum: 651196  
With 10.5" aluminum: 651195  
With 14" aluminum: 651194

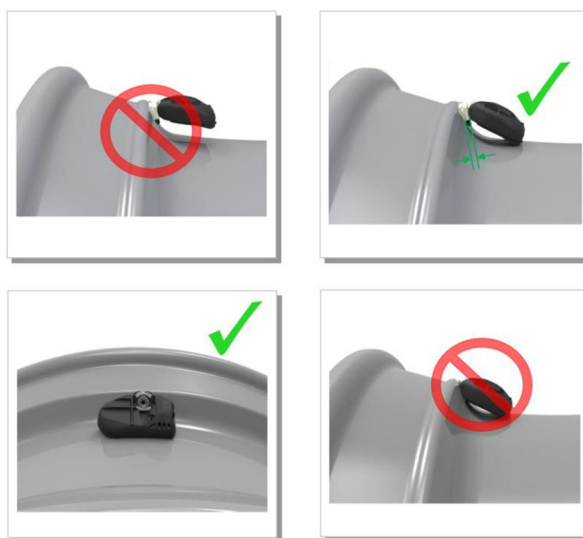
3. Install the new valve.
4. Apply torque 119.5lb-in +/- 4



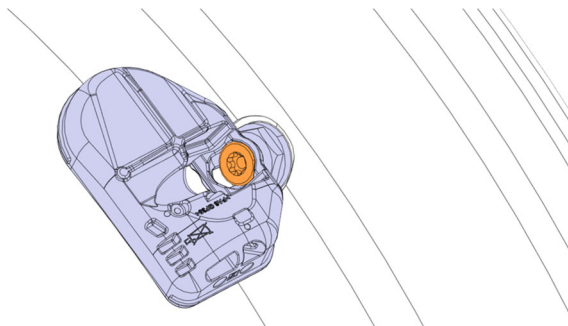
5. Apply Loctite 243 on screw 651200 thread.
6. Install the sensor 564307 with screw 651200 on the valve.



7. Position the sensor on the wheel:
  - Make sure the sensor is centered and supported on the wheel. Once tightened, it must remain firmly in position.
  - Make sure the sensor is resting on the valve, not the wheel, at the point where it is secured with the screw. There must be clearance as shown in the illustration.



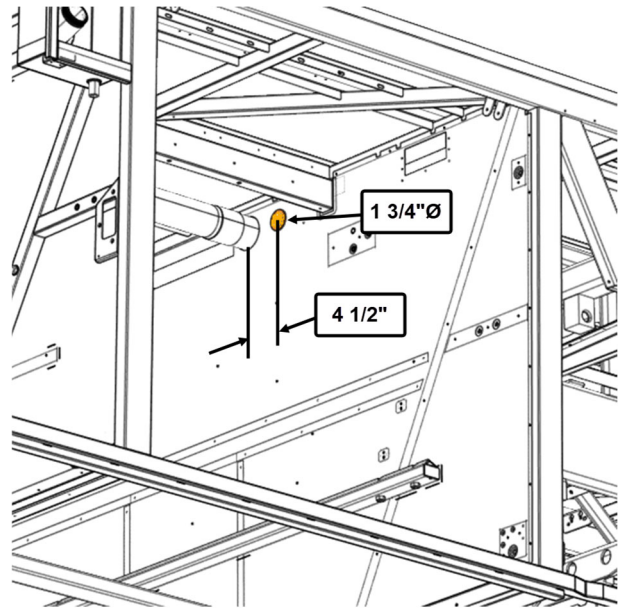
8. Apply torque 53 lb-in +/- 0.5.



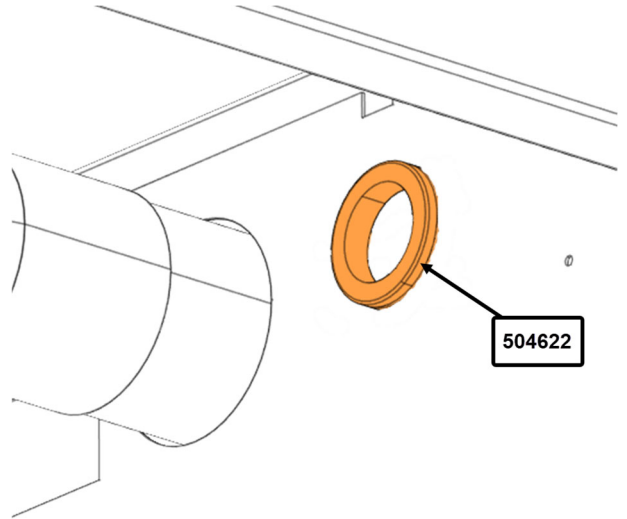


## TPMS ANTENNA HARNESS REPLACEMENT

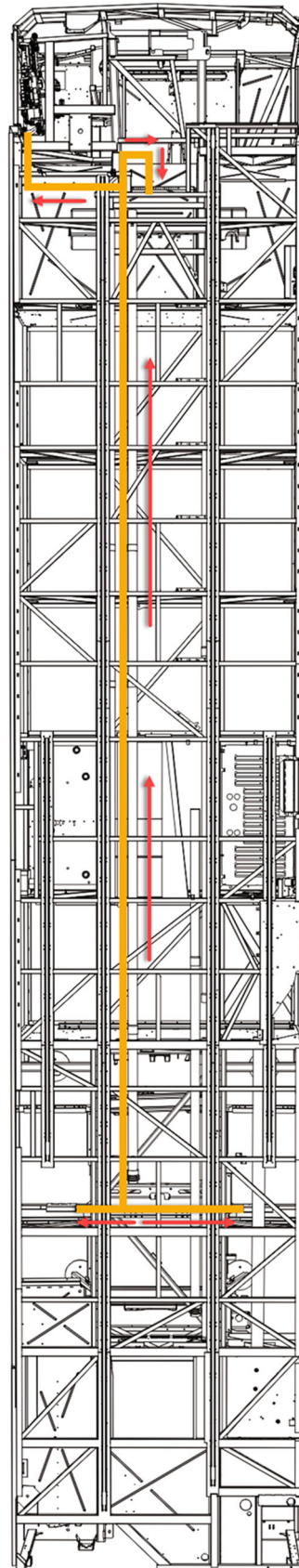
1. Drill a 1 3/4" Ø hole in the panel of the last luggage compartment.



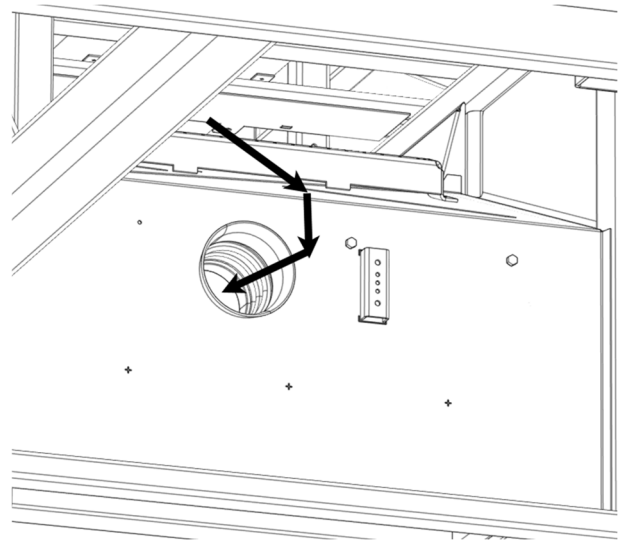
2. Install grommet 504622.



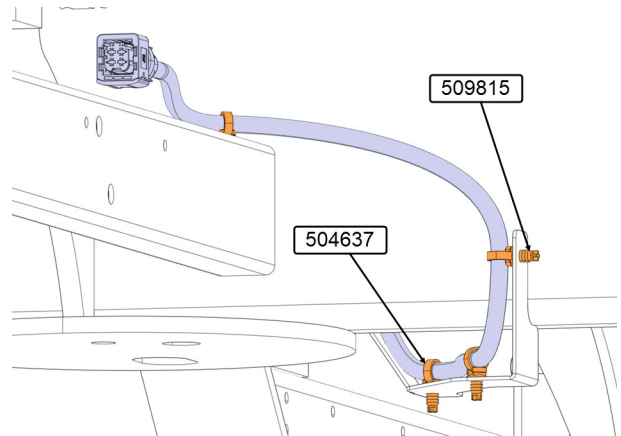
3. Install the new antenna harness 0610631 following the routing. You must start from the back of the vehicle to the front. Only the connector for the front antenna and front junction box pass into the grommet.
4. Use a fish tool to reach the front junction box and front spare compartment.



5. For the front antenna use the same routing as the harness section of the older antenna.

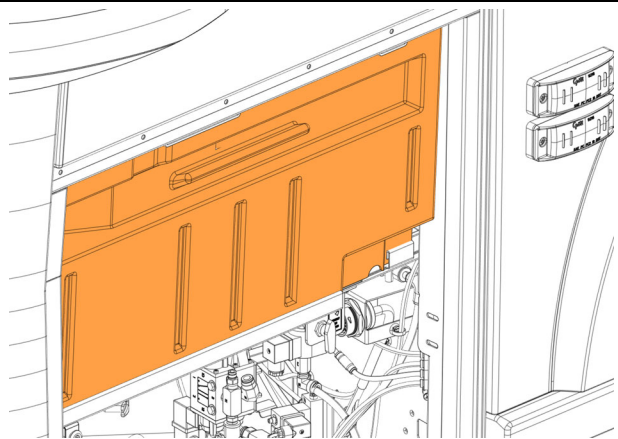


6. Secure the rear cable section for both side with mounting 509815 (8x) and cable tie 504637 (8x).

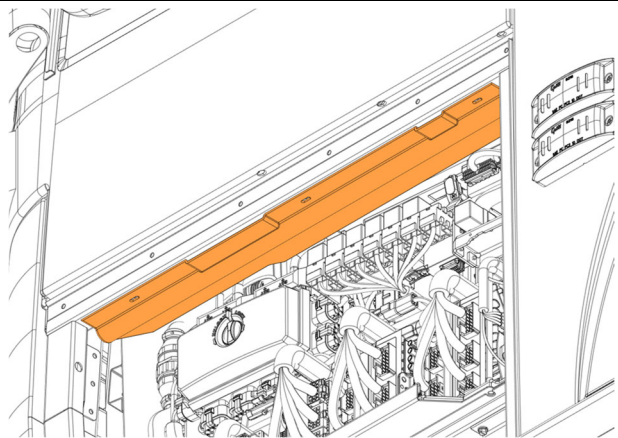


## ECU INSTALLATION FRONT JUNCTION BOX / BEFORE ELECTRIC FAN

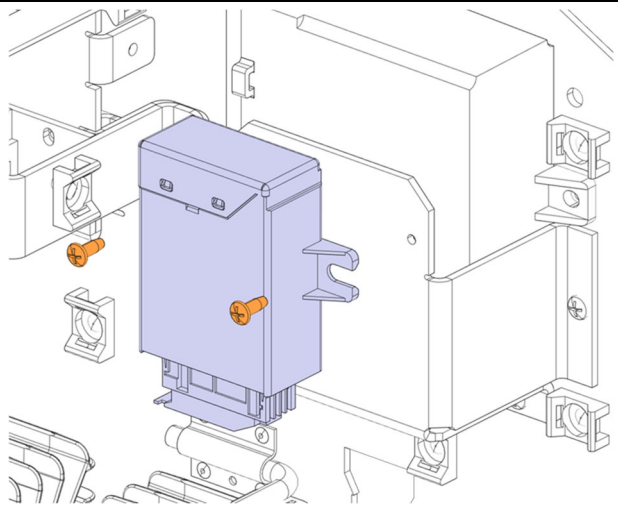
1. Open front service compartment door.
2. Remove the front junction box protector panel.



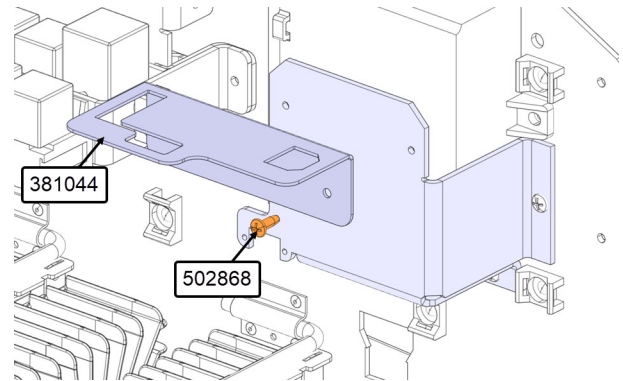
3. Remove the top panel.



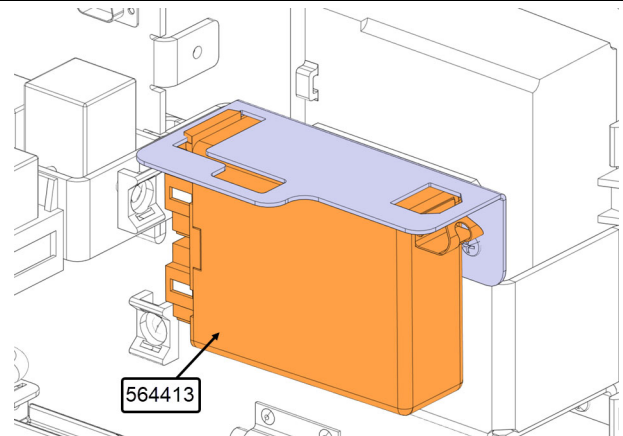
4. Remove the old TPMS front junction harness.
5. Remove the older TPMS ECU.



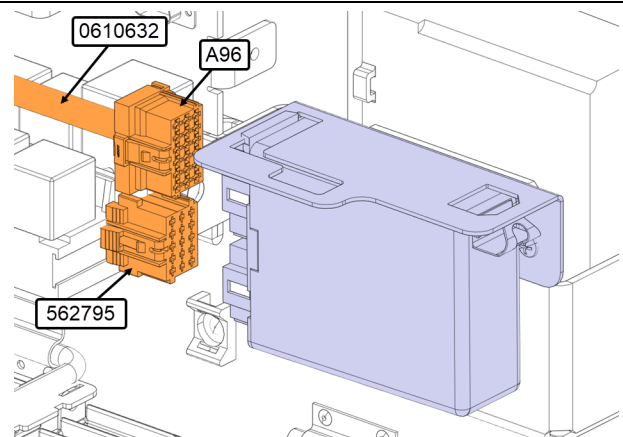
6. Install the new support 381044 with screw 502868(2x).



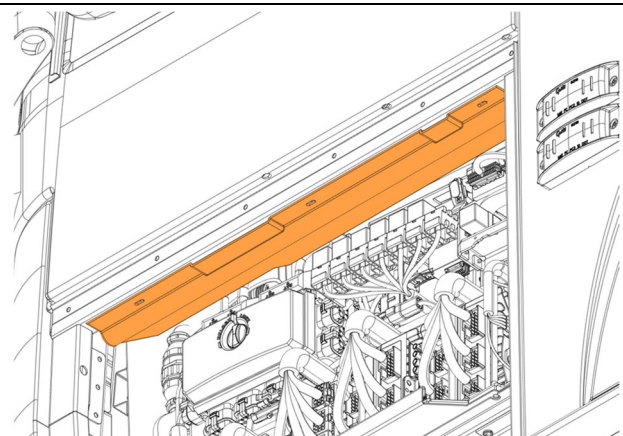
7. Install the new TPMS ECU 564413.



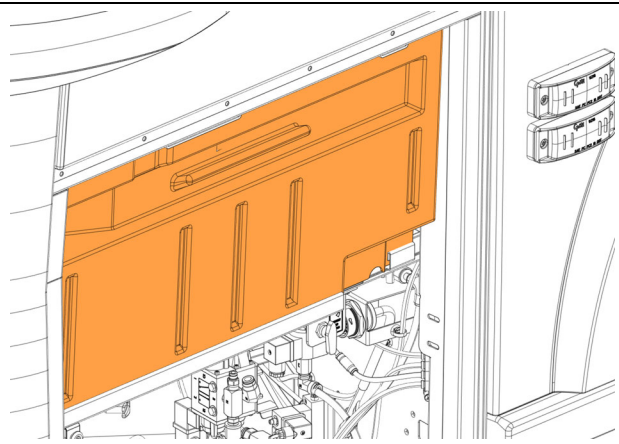
8. Install connector 562795.  
9. Install the new harness 0610632 plug A96 to ECU, plug C223 to antenna cable 0610631, plug C222 to front junction box harness and plug C224 to dashboard harness.  
10. Secure with cable ties 504637.



11. Reinstall the top panel.

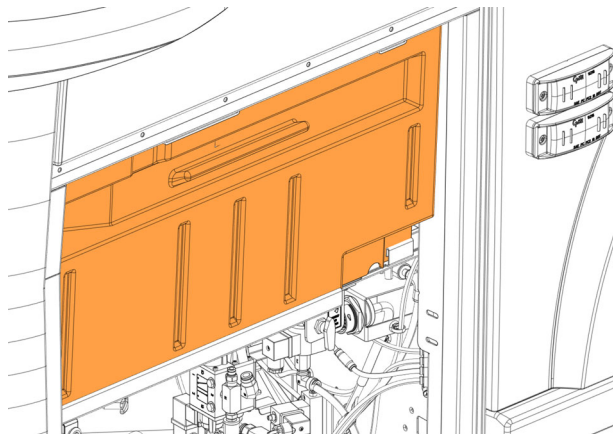


12. Reinstall the front junction box protector panel.

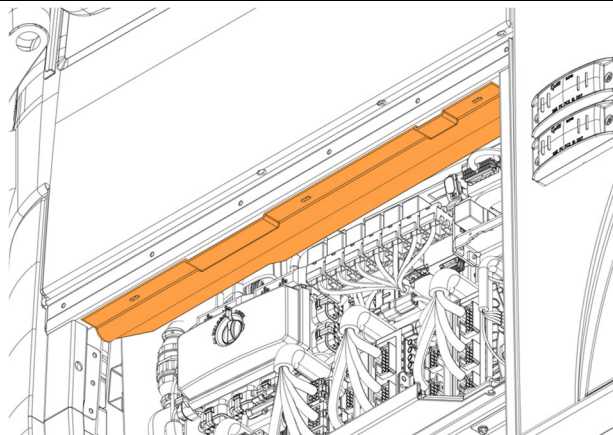


## ECU INSTALLATION FRONT JUNCTION BOX / AFTER ELECTRIC FAN

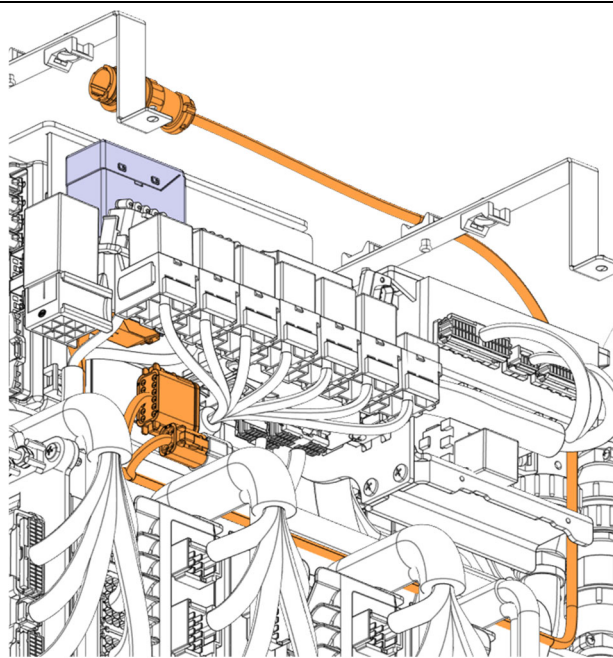
1. Open front service compartment door.
2. Remove the front junction box protector panel.



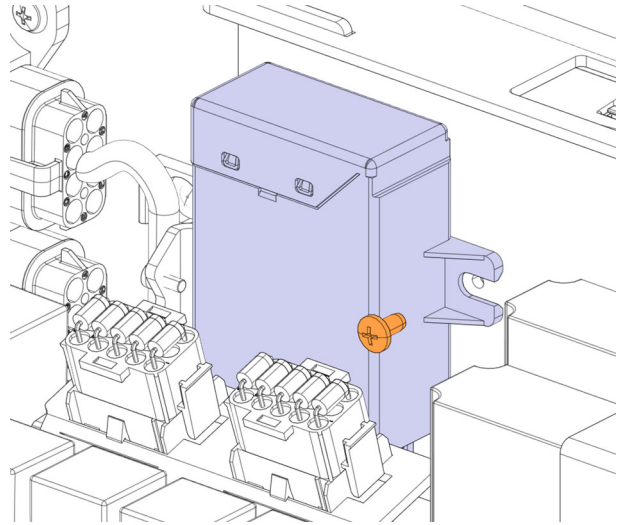
3. Remove the top panel.



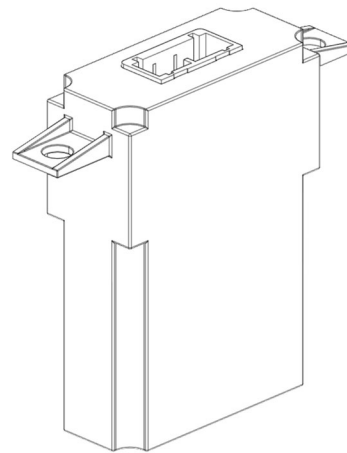
4. Unplug the old TPMS front junction harness and discard.



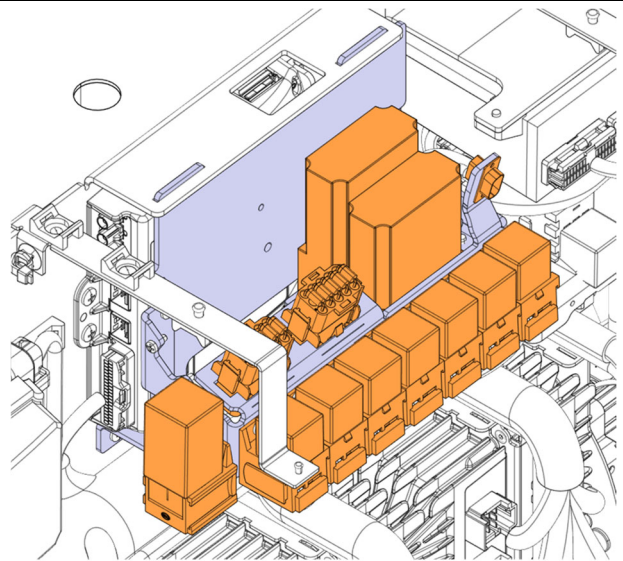
5. Remove the older TPMS ECU.
6. If you have two FMS GATEWAY see the next step to identify it.



7. If you have two FMS GATEWAY remove the one with the parts number on it 563631 or 564326.

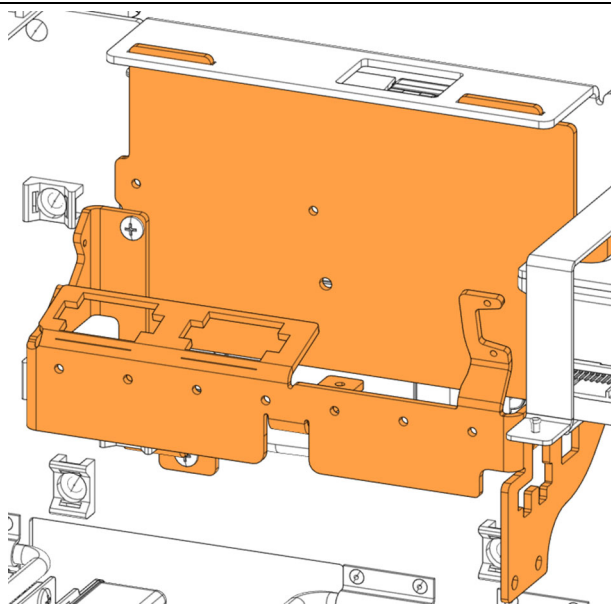


8. Uninstall all components from the support.

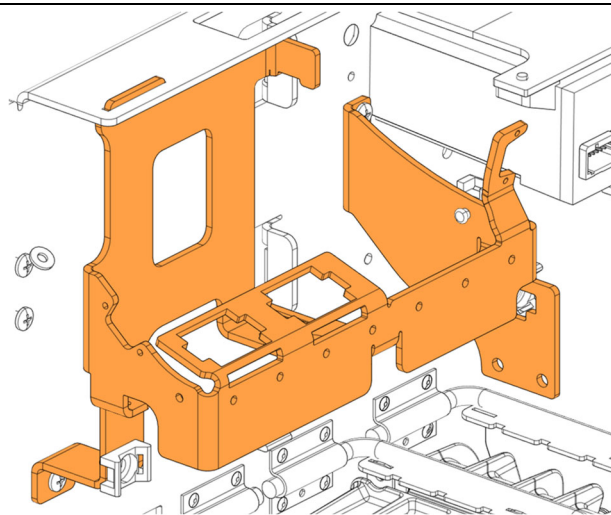




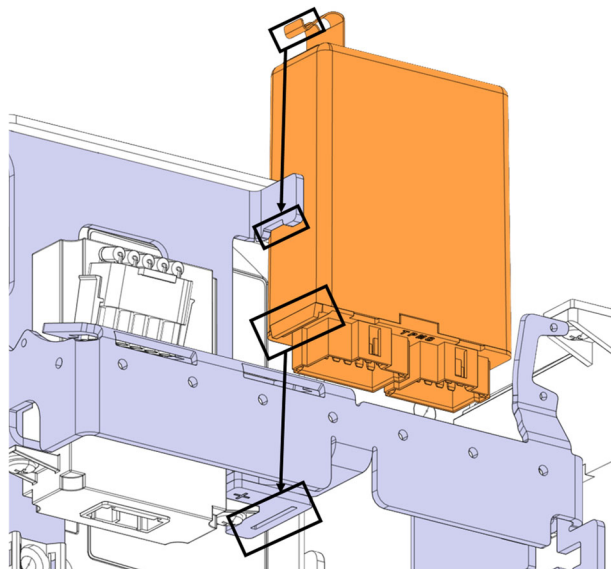
9. Remove old supports.



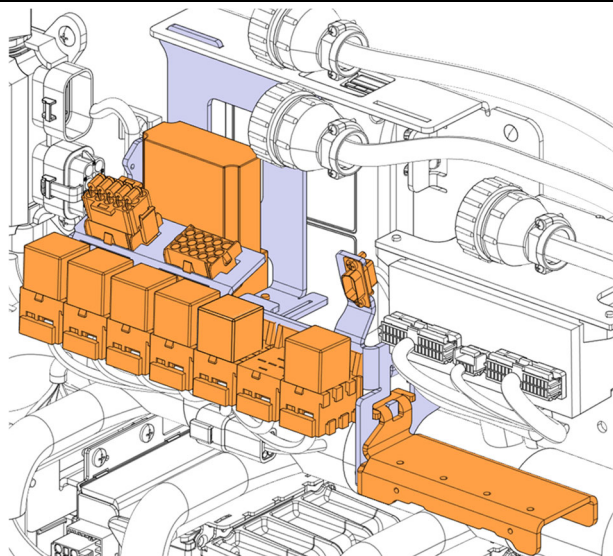
10. Install new support 380252.



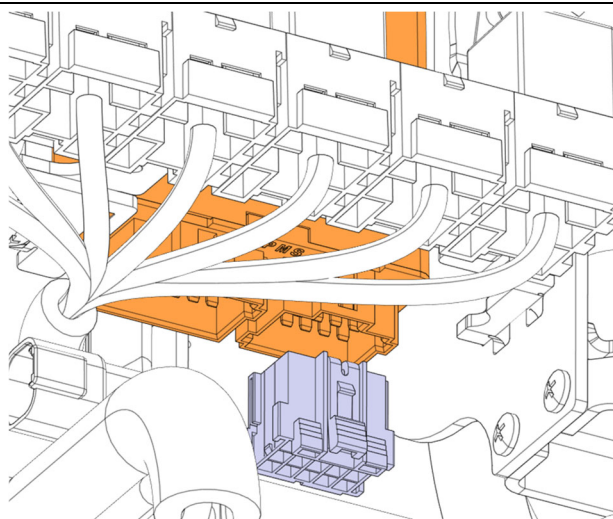
11. Install the new TPMS ECU 564413.



12. Reinstall all components and cable tie mount 504013 (2x) with rivet 504347 (2x) at the same position on the new support.

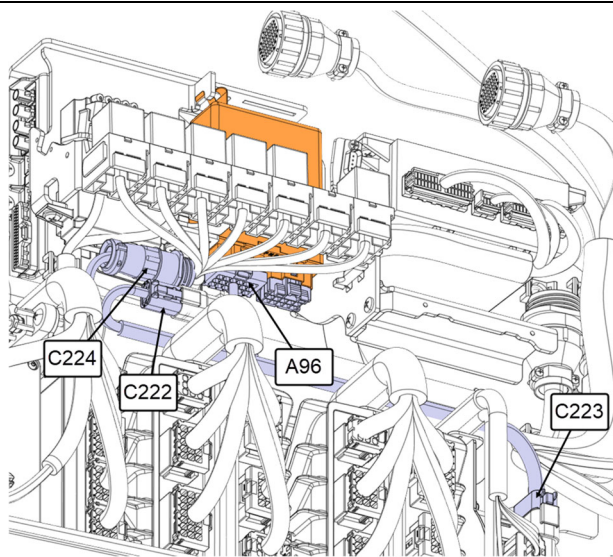


13. Install connector 562795.

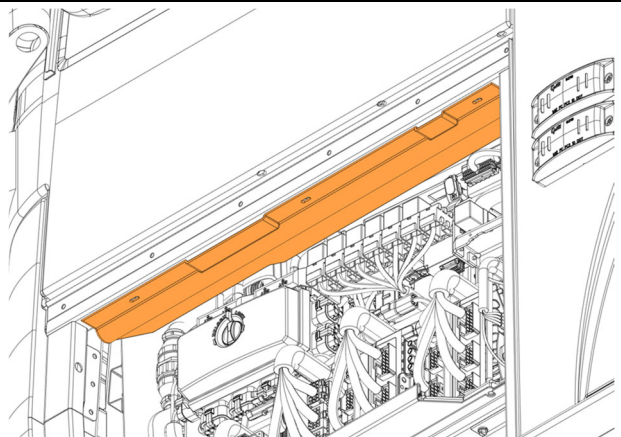


14. Install the new harness 0610632 plug **A96** to ECU, plug **C223** to antenna cable 0610631, plug **C222** to front junction box harness and plug **C224** to dashboard harness.

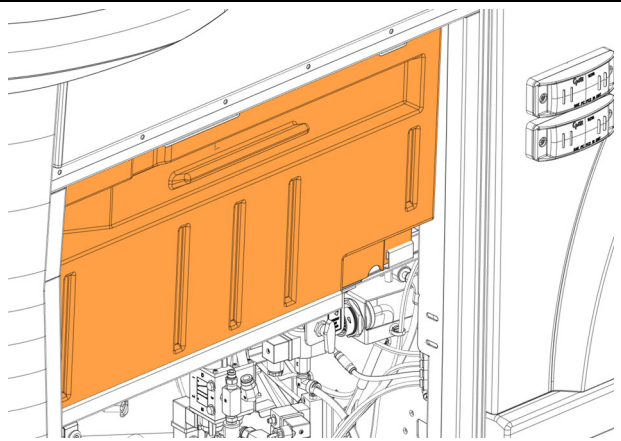
15. Secure with cable ties 504637.



16. Reinstall the top panel.

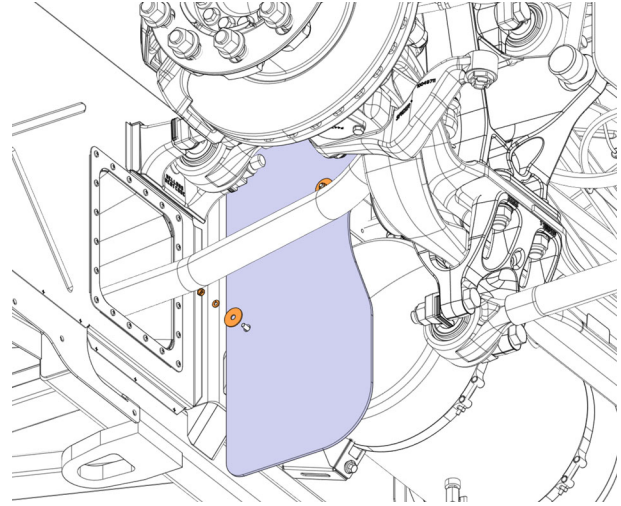


17. Reinstall the front junction box protector panel.

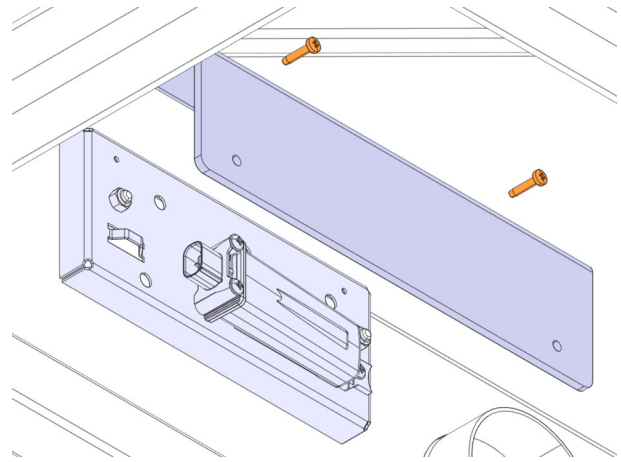


## FRONT ANTENNA INSTALLATION

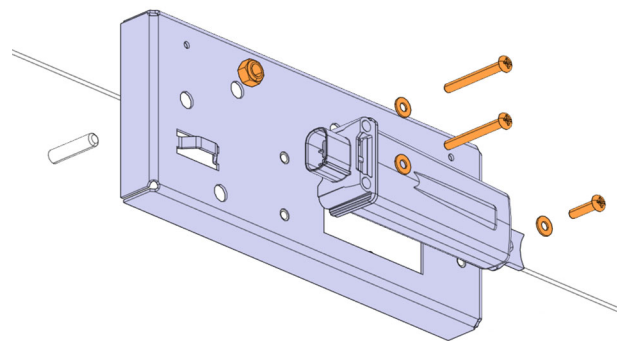
1. Remove the mud guard to access to the front antenna.



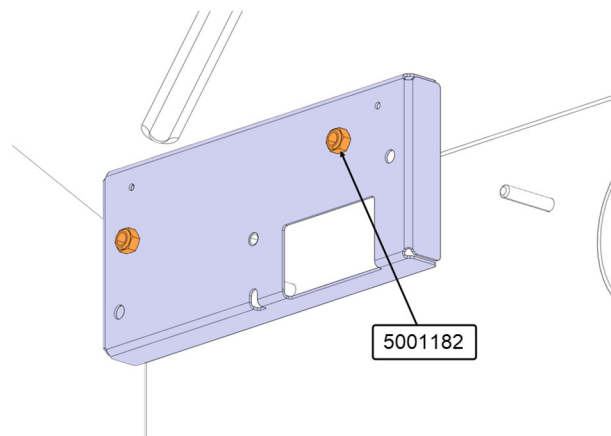
2. Remove the antenna protector and discard.



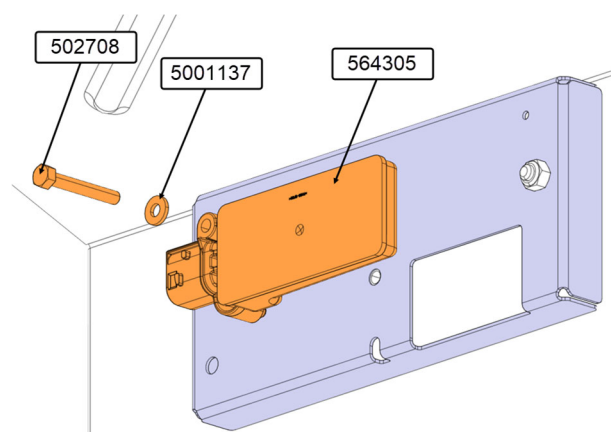
3. Remove the old antenna, support and hardware and discard.



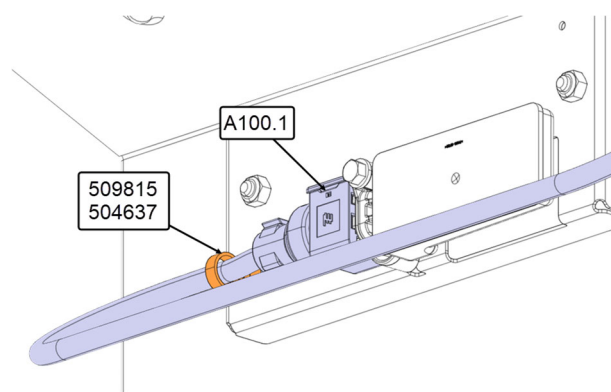
4. Install new antenna support 406762 with nuts 5001182 (2x),



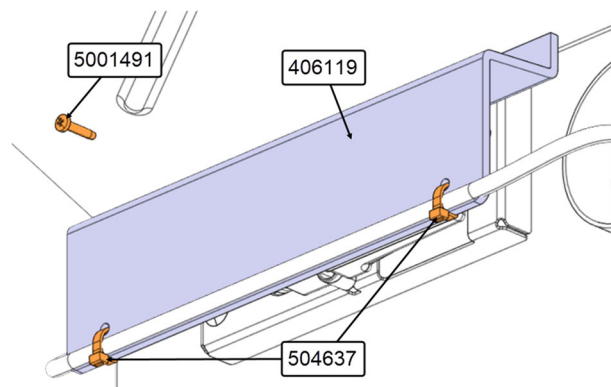
5. Install antenna 564305 with the screw 502708 and the washer 5001137 on the support.



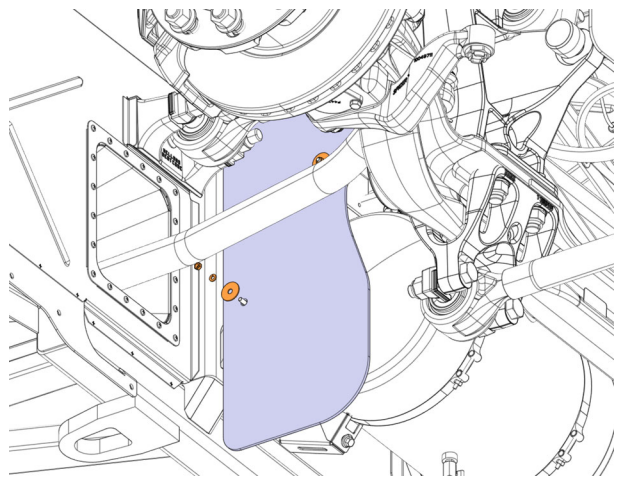
6. Plug connector **A100.1** to front antenna.  
7. Secure the cable with fir tree 509815 and cable tie 504637.



8. Install antenna protector 406119 with screw 5001491 (2x).  
9. Secure cable with cable tie 504637 (2x).

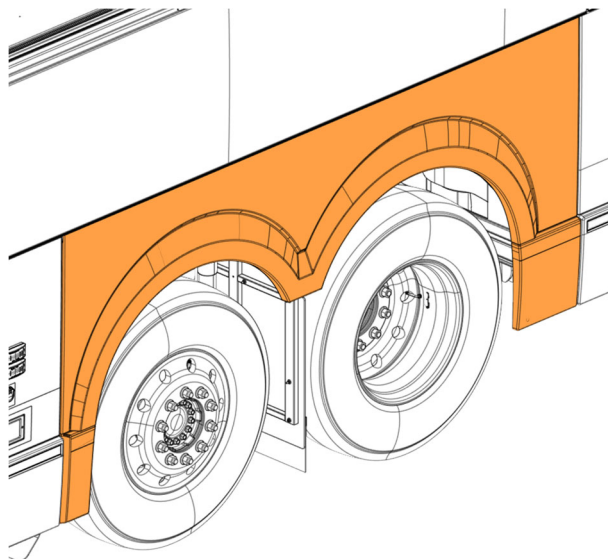


10. Reinstall the mud guard.

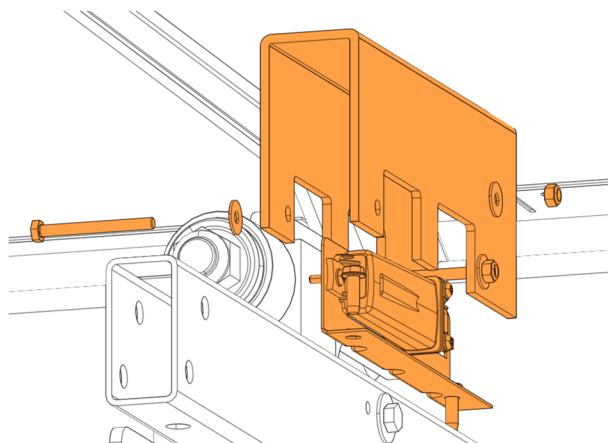


## REAR RIGHT ANTENNA INSTALLATION

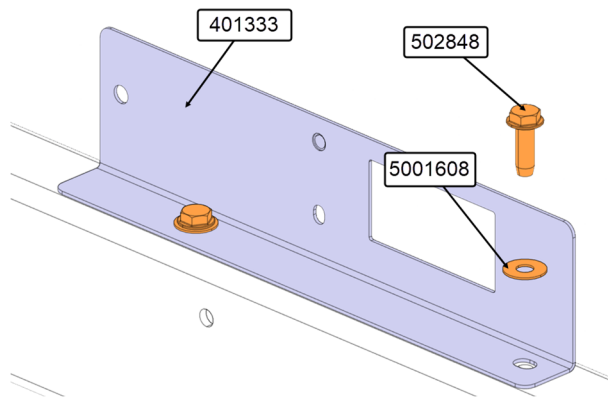
1. Remove the right rear fender.



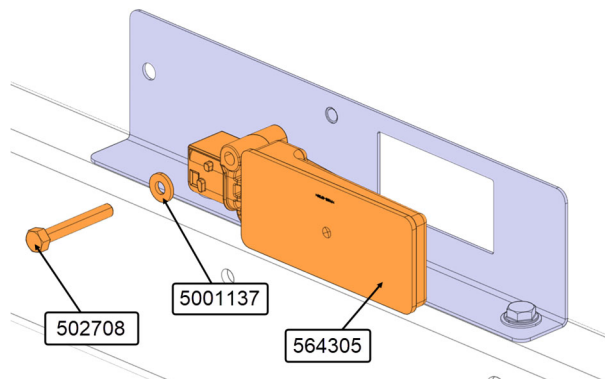
2. Remove the old antenna, support, protector hardware and discard.



3. Install new support 401333 with bolt 502848 (2x) and washer 5001608 (2x).

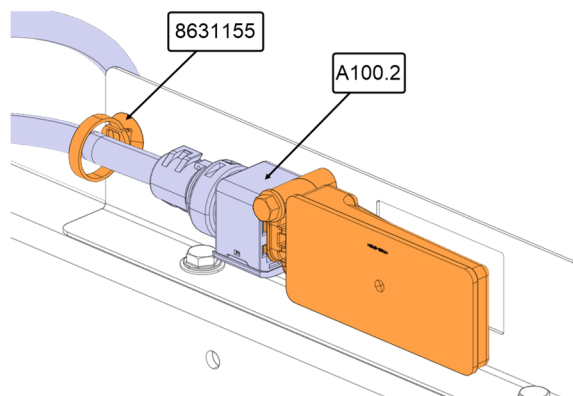


4. Install the antenna 564305 on support 401333 with bolt 502708 and washer 5001137.

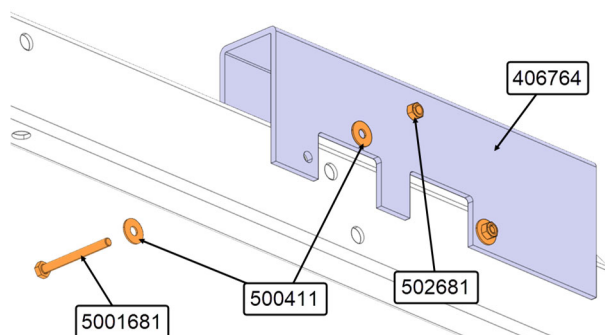


5. Plug harness 0610631 connector A100.2 to antenna,

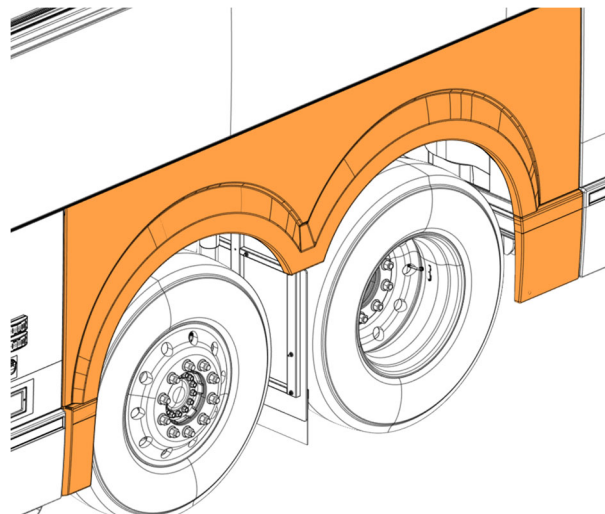
6. Secure with cable ties 8631155.



7. Install antenna protector 406764 with bolts 5001681 (2x), washers 500411 (4x) and nuts 502681 (2x).



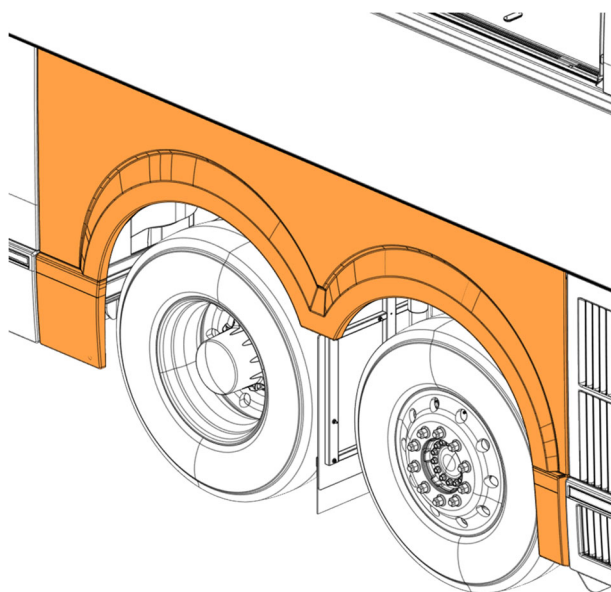
8. Reinstall the right rear fender.



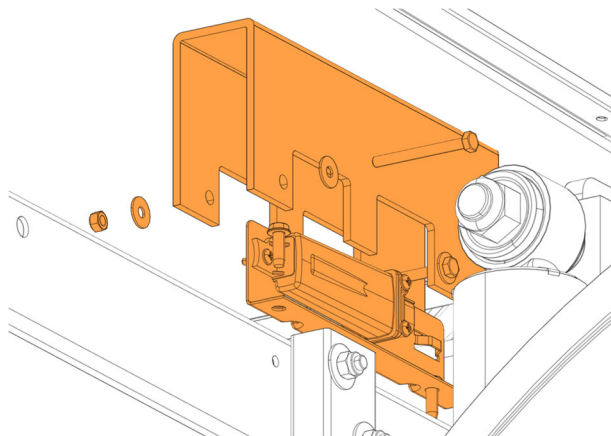


## REAR LEFT ANTENNA INSTALLATION

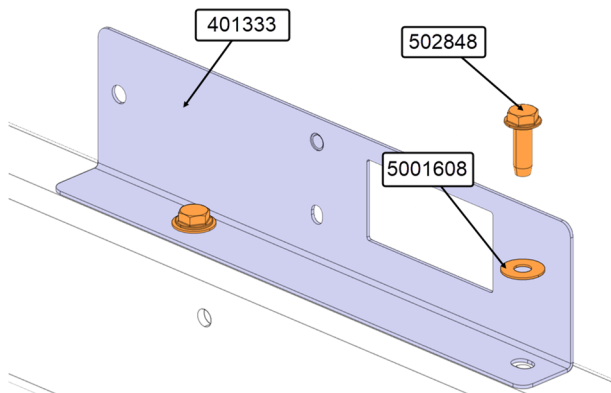
1. Remove the rear left fender.



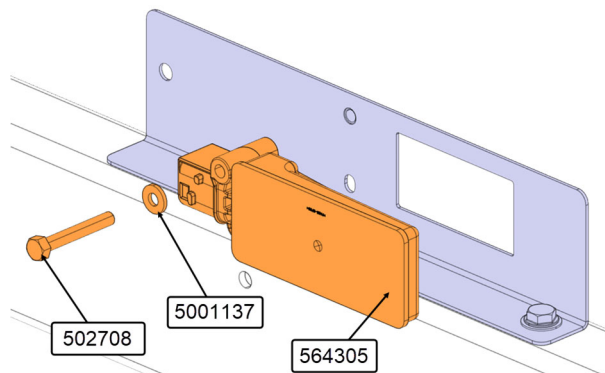
2. Remove the old antenna, support, protector, hardware and discard.



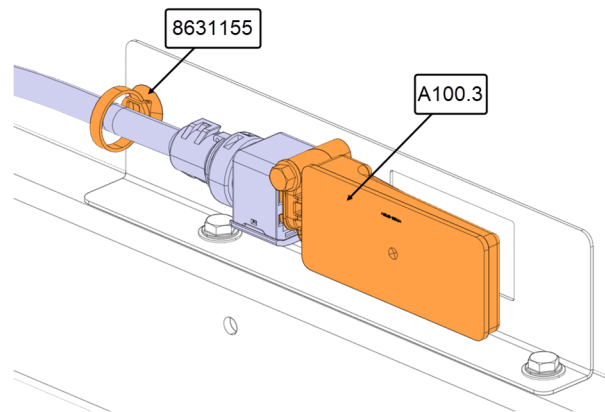
3. Install new support 401333 with bolts 502848 (2x) and washers 5001608 (2x).



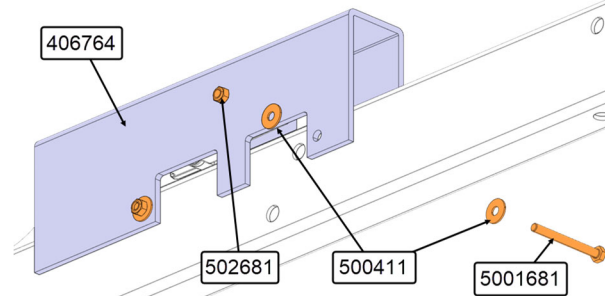
4. Install the antenna 564305 on support 401333 with bolt 502708 and washer 5001137.



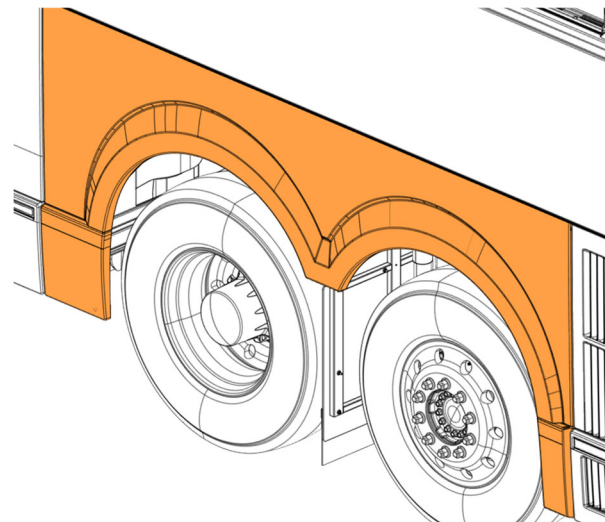
5. Plug harness 0610631 connector A100.3 to the antenna,  
6. Secure with cable ties 8631155.



7. Install the antenna protector 406764 with bolts 5001681 (2x), washers 500411 (4x) and nuts 502681 (2x).

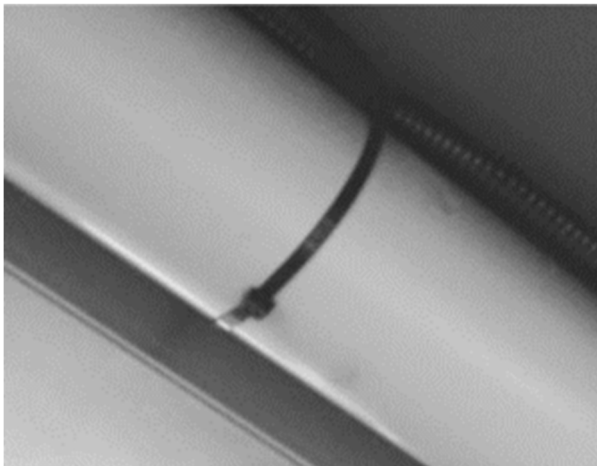


8. Reinstall the rear left fender.



## SECURE ANTENNA HARNESS

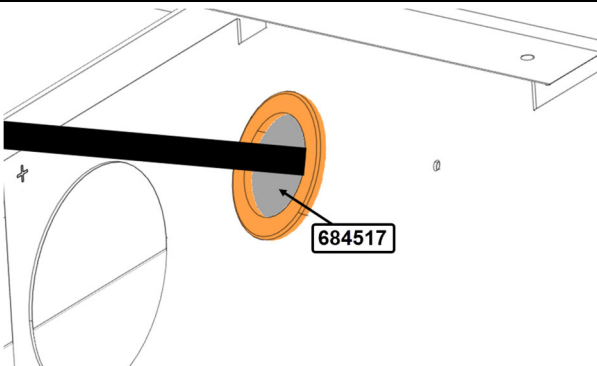
1. Secure main antenna harness to the plastic tube with cable ties 504637 (20x) at each foot.



2. Secure excess harness in the center of the rear axle compartment with cable ties 504637 (6x).



3. Seal the hole between baggage compartment and rear axle compartment with 684517.



## VEHICLE PROGRAM

- For all vehicles built before X3-45 J-6284, H3-45 J-0184, VIP-45 K-0604 and X3-45 VIP K-6439 you need a special program, Contact your Prevost representative for more information.
- For all vehicles built after X3-45 J-6285, H3-45 K-0185, VIP-45 K-0605 and X3-45 VIP K-6440 you must verify the revision number of your vehicle program and if need it change it.

### VERIFICATION OF THE VEHICLE PROGRAM REVISION NUMBER

1. Check the vehicle program revision number with the Driver Information Display (DID) in the dash.
2. Select the Diagnostics menu.

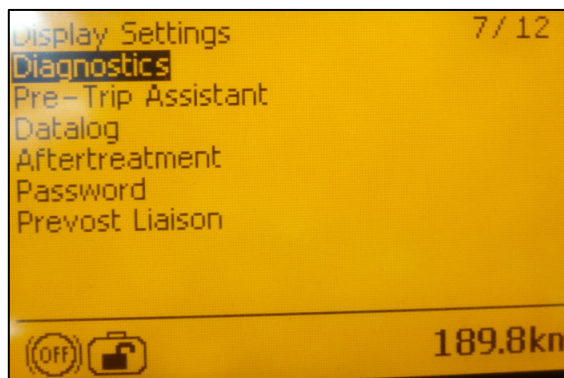


FIGURE 1

3. Select Part Number menu.

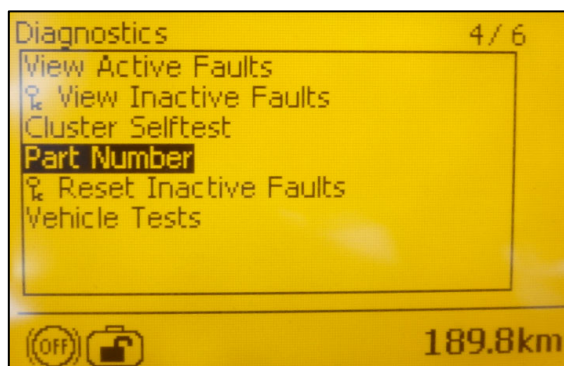


FIGURE 2

4. Select Electrical System menu.

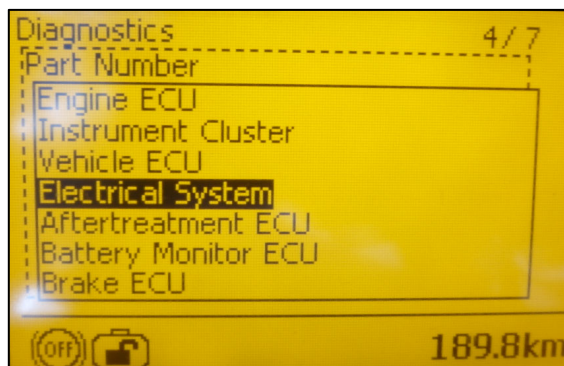


FIGURE 3

5. The DID shows the software number (program number) and the actual revision number just after the letter "P" for the vehicle. The example in Figure 4, the program number is 06100123 and the actual revision number is P08.
6. Note the program number and the revision number.

**NOTE**

***Be careful, the vehicle program number starts with "06"***

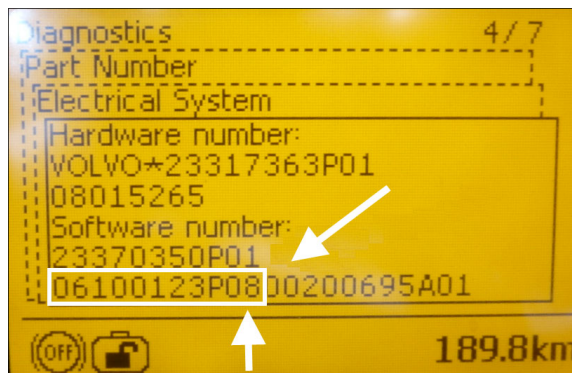


FIGURE 4

7. Table 1 shows possible program numbers and the corresponding minimal revision number (PXX) needed.
8. Compare the vehicle program number and revision number (PXX) shown in the DID with the corresponding numbers in Table 1.
9. If the vehicle has already the revision number (PXX) shown in Table 1 corresponding to the program number or a higher corresponding revision number, the bulletin is complete. Having a higher revision number means, the problem has been resolved.
10. If the vehicle needs a program upgrade, move to the next section of the bulletin.

TABLE 1

POSSIBLE PROGRAM NO.	MINIMAL REVISION NO. NEEDED
06100111	P37
06100113	P28
06100122	P41
06100123	P37
06100124	P42

## VEHICLE PROGRAM UPGRADE PROCEDURE

### VEHICLE PROGRAM UPDGRADE PROCEDURE FOR PREVOST SERVICE CENTER ONLY

11. Upgrade the program with the usual procedure.
12. Bulletin is complete.

#### NOTE

*Some owners make the vehicle program update by their own, but it is recommended to let a Prevost service center to make the work.*

For owners whom want to proceed on their own, move to next step.

#### SPECIAL TOOL REQUIRED TO UPGRADE PROGRAM

PART NO.	DESCRIPTION	QTY
N/A	LAPTOP	1
N/A	RS232 SERIAL INTERFACE CABLE	1
N/A	VIRTUAL SERIAL PORT ADAPTER USB TO RS232	1
066009	INTERFACE HARNESS DB9 PC/MASTER ID-MU	1

### VEHICLE PROGRAM UPDGRADE PROCEDURE FOR OWNERS ONLY

13. Make sure you took note of the vehicle program number and the revision number (PXX).
14. Contact your Prevost Service representative to generate the vehicle program upgrade file.
15. Refer the personal for the procedure shown bulletin SC119-20, of how to send you the file.
16. Connect the 110 power line on the vehicle.
17. Turn the ignition to "ON" position.
18. Activate the Hazard flashers.
19. Locate the RS232 serial port into the front service compartment at the right top corner.

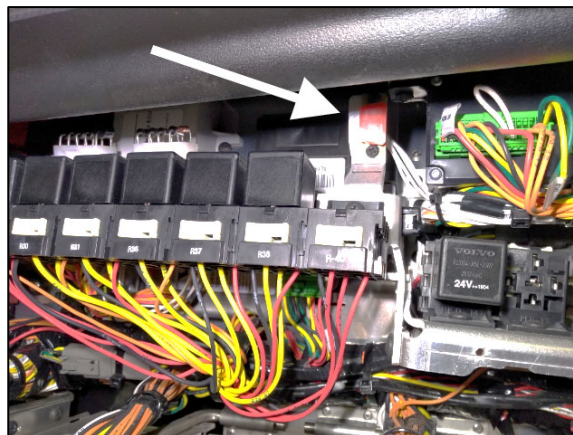


FIGURE 5

20. Remove the cap and keep in a safe place.
21. Connect the computer on the vehicle into the RS232 port.
22. Open the computer management application on your computer.
23. Right click on "My Computer" on the desk and click on Manage menu.

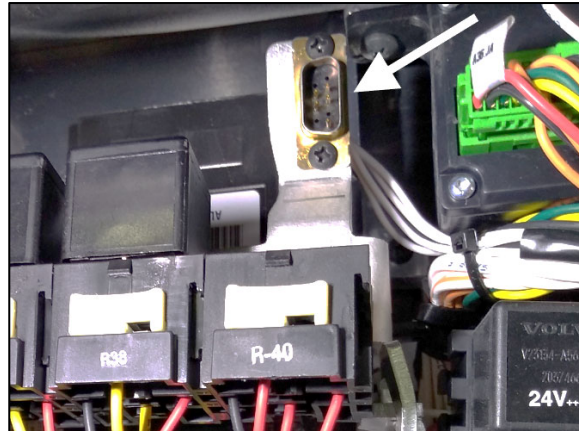


FIGURE 6

24. Click on "Device manager".
25. Expand the ports list.
26. Check the COM port number and note the number.

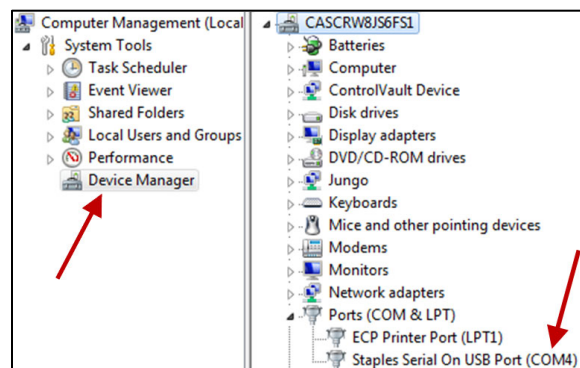


FIGURE 7

27. Double click on "COM" element to open the properties dialog box.
28. Click on "Port Setting" tab.
29. Select 115200 for the Bits per second.
30. Select Hardware for the Row control.
31. Click "OK".

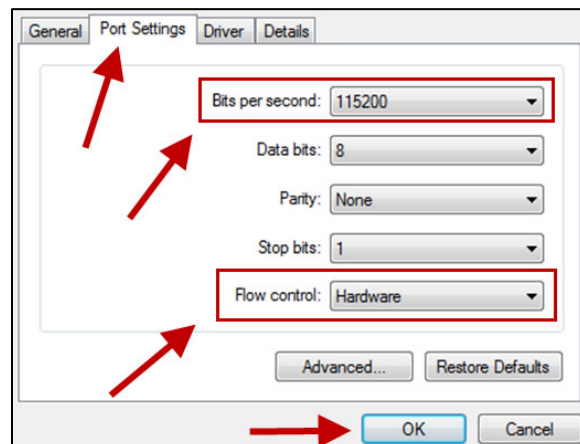
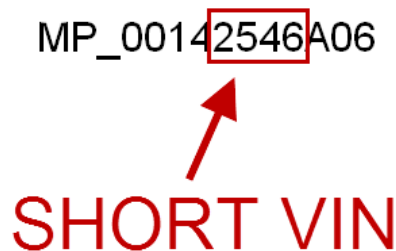


FIGURE 8

32. Make sure you have the vehicle program update, supplied by the Prevost service center, on your computer.
33. Rename the file and remove the last digits ".txt". Keep only the extension ".exe"

<b>NOTE</b>
<i>The name of the file that you received should match with the VIN of the vehicle you are about to update. It should look like this example: MP_0014<b>2546</b>A06.exe.txt. The four numbers before the last letter are the last 4 numbers of the VIN (short VIN).</i>

MP\_0014**2546**A06



**SHORT VIN**

34. Launch the vehicle program (double click on the file name or right click on the file name and select Open).
35. Select the port number noted before.
36. Click "Continue" button.

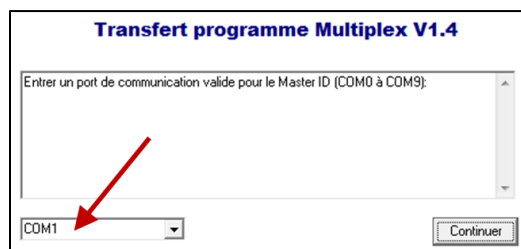


FIGURE 9

37. Select the destination of the backup file that will be generated with the update processing.
38. Click on "Continue" button.

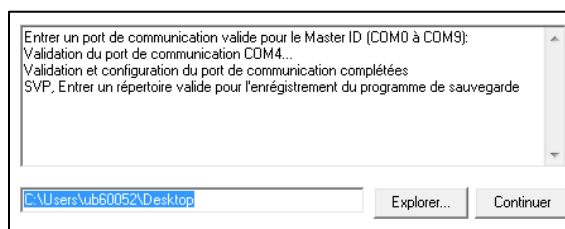


FIGURE 10

39. Program processes.

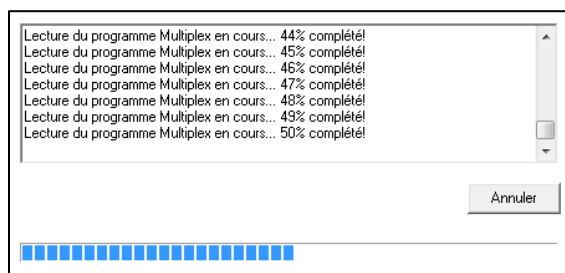


FIGURE 11

40. Wait until you get the message "TRANSFER COMPLETED".
41. Click "Finish" button.

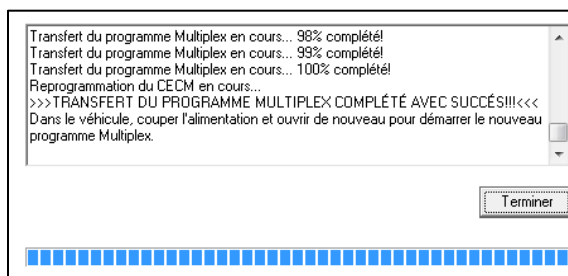


FIGURE 12



42. Disconnect the computer.
43. From the rear electrical compartment, trip circuit breaker CB6 and reset after 5 seconds.
44. The system needs some time to complete the update. Wait until the head lights shut down or until you have access to information on the DID.
45. Check in the DID the Software number (program number) and compare again with the table 1.

**NOTE**

***Be careful, the vehicle program number starts with "06"***

46. Reinstall the RS232 serial port cap.
47. Bulletin is complete.

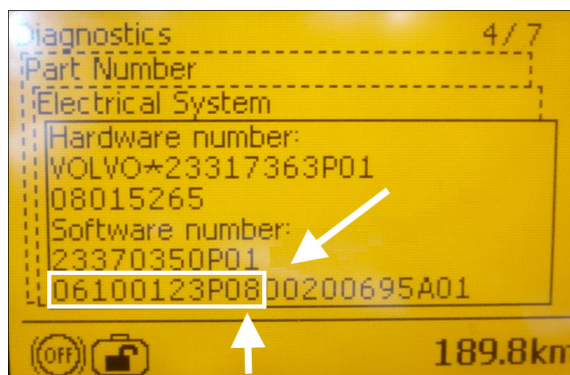


FIGURE 13

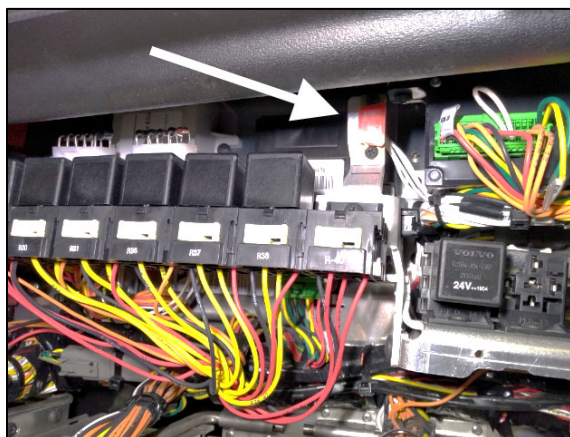


FIGURE 14

# SETTING TPMS SENSORS

## Setting The On-Screen TPMS

### Learn Wheel ID

This menu allows learning new wheel sensors ID. The user can learn only one wheel, several wheels or all wheels of the vehicle. The sequence automatically jumps to the next wheel such that a user can initiate all wheels without having to come back to the display between each wheel.

The display uses a pressure change as the criteria to recognize which wheel sensor the operator wants to get assigned to a given location. The amount of pressure change required is established at 2 PSI.

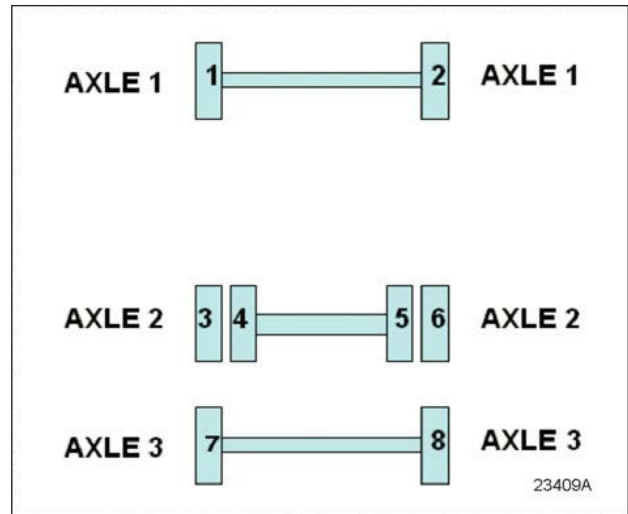
A pressure change of about 3 PSI is needed to wake up a sensor and then an extra amount of pressure change of 2 PSI is needed to trigger the display. The operator has to create a pressure change by at least 6 PSI and then wait for the display to recognize the pressure change. The wait time corresponds to the sensor sampling rate.

When entering the menu, the axle 1, wheel 1 is selected by default as a starting point for the learning. The user can select another axle with +/-, move the cursor to the wheel number with the right arrow and select another wheel with the +/- or move the cursor down to the start learning button.

After the start learning button is selected, the display stores the first transmission it gets from each sensor ID into the "initial pressure" for that sensor ID. Then it compares each subsequent pressure received for that sensor ID with the initial one and when the comparison shows a delta pressure exceeding the defined level required, this sensor ID is assigned to the selected tire location.

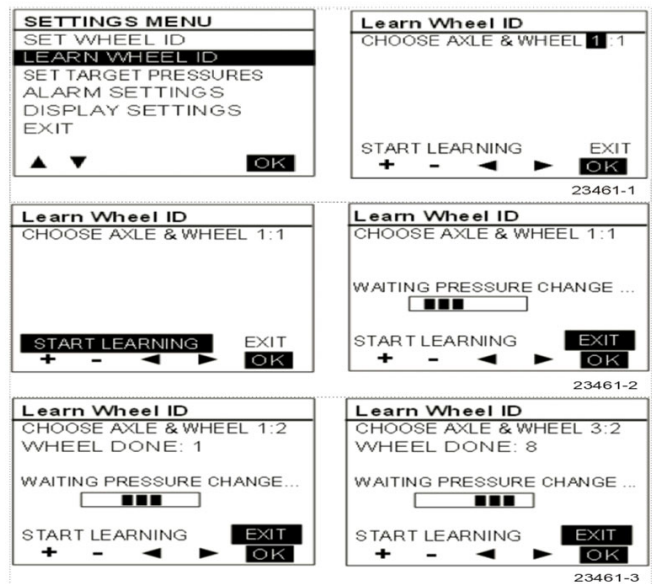
Once a wheel ID has been assigned, the display increments the number of wheels done and it moves to the next axle/wheel in the sequence, waiting for another sensor to come up with a pressure change. Within one learning session, the display remembers which sensor has been assigned and it will not assign it twice.

The sequence increments the display of the next wheel on the same axle, counting wheels from left to right, and then moves to the next axle, counting axles from front to rear.



It activates the next wheel parameter each time a wheel is done. This setting is integrated with the vehicle electronic, activating an audible signal on the vehicle, thus providing feedback to the user that he can move on to the next wheel.

The spare tire can be done by selecting the axle/wheel "spare" which is internally encoded to 15:1.



## **PARTS / WASTE DISPOSAL**

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