PREVOST

Instruction Sheet IS-19922

PREVOST AWARE ADAPTIVE CRUISE BRAKING (ACB) – FLR10 TO FLR21 RADAR SENSOR UPGRADE

First Release June 2019

MATERIAL

Kit #IS19922 includes the following parts:

Part No.	Description	Qty
069043	CABLE	1
145206	SUPPORT	1
145207	PLATE, RADAR MOUNTING	1
560468	FLR21 RADAR SENSOR	1
564257	STAND-OFF ADJUSTER KIT - Stand-off adjuster (3x) - Mounting screw (6x)	1
504637	NYLON TIE	6
5001648	SCREW, CAP HEXS SS NSS M6-1.0 X18mm LG	4
5001833	WASHER, BELLEVILLE SPR SS 301 6.65X17.4X1.27	4
IS-19922	INSTRUCTION SHEET	1
FI-19922	FEUILLE D'INSTRUCTIONS	1

NOTE

Material can be obtained through regular channels.

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.

IMPORTANTE NOTE

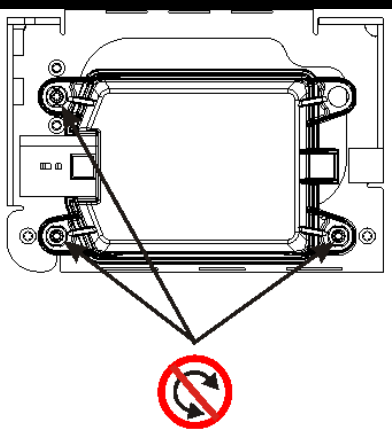
BEFORE PROCEEDING TO THE REPLACEMENT, MAKE SURE THAT THE BUMPER IS PROPERLY POSITIONED, IF NOT THE RADAR SENSOR AND ACB SYSTEM MAY NOT OPERATE PROPERLY.

IF THE BUMPER SUFFERS DAMAGES AFTER A CHOCK AND IS IMPROPERLY POSITIONED, A REPOSITIONING OR ADJUSTMENT OF THE BUMPER WILL BE NECESSARY BEFORE PROCEEDING TO THE ALIGNMENT OF THE RADAR SENSOR. RADAR SENSOR ALIGNMENT IS DONE IN RELATION TO THE BUMPER, IF THE BUMPER POSITION IS NOT ADEQUATE, THE RADAR AND ACB SYSTEM MAY NOT OPERATE PROPERLY.

RADAR SUPPORT PREASSEMBLY

STAND-OFF ADJUSTOR ASSEMBLIES ARE PRE-ADJUSTED BEFORE DELIVERY IN ORDER TO RESPECT A PRECISE MEASUREMENT BETWEEN THE RADAR SENSOR AND THE SUPPORT, **DO NOT SCREW, UNSCREW OR ALTER THE INITIAL POSITION OF THE STAND-OFFS ADJUSTMENT SCREW**.

DO NOT SEPARATE THE STAND-OFF CLIP FROM THE RADAR SENSOR RECEPTACLE. DOING SO WILL DAMAGE THE STAND-OFF CLIP.



PRE-ADJUSTED STAND-OFF SCREWS
DO NOT SCREW, UNSCREW OR ALTER THE INITIAL POSITION OF THE STAND-OFFS ADJUSTMENT SCREW

1. Secure the three (3) stand-offs to the radar sensor mounting plate #145207. Use the six (6) mounting screws included with the stand-off kit.

   Prescribed torque : 25 lb-ft

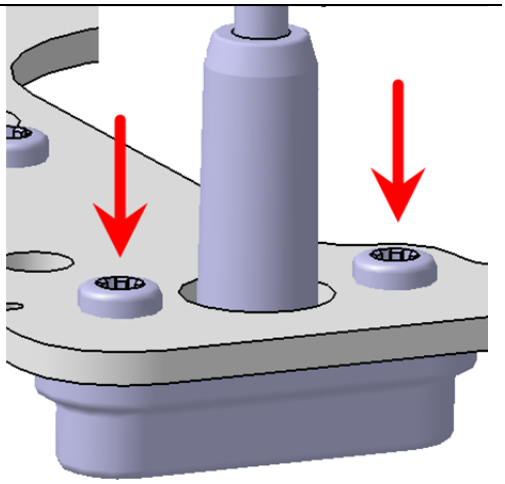


FIGURE 1

2. Engage the stand-offs in the radar assembly receptacles, placing the side that has no decal on top and the connector on L.H. side.

 = no decal on this side

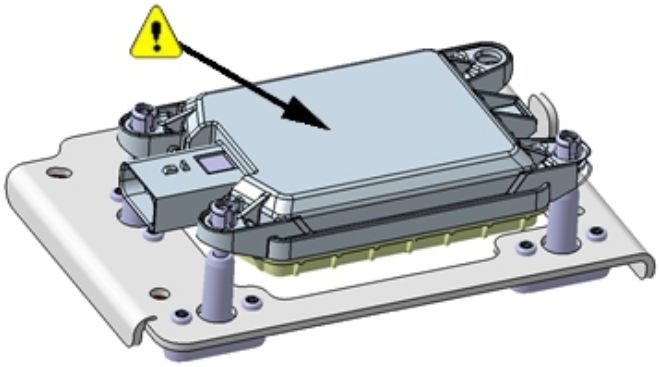
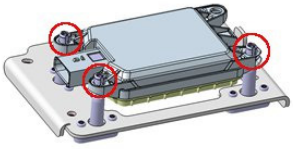


FIGURE 2

3. Stand-off height is pre-adjusted. However, validate dimension A at the three stand-offs and adjust height only if necessary.

A = 39.5mm ±0.5 (1.55 in ± 0.02)



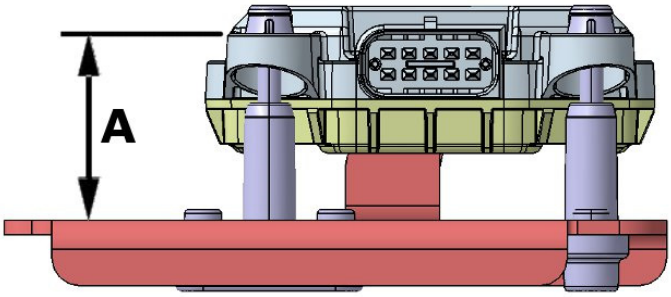


FIGURE 3

4. Install the radar mounting plate on support #145206 using four (4) washers #5001833 and four (4) screws #5001648.

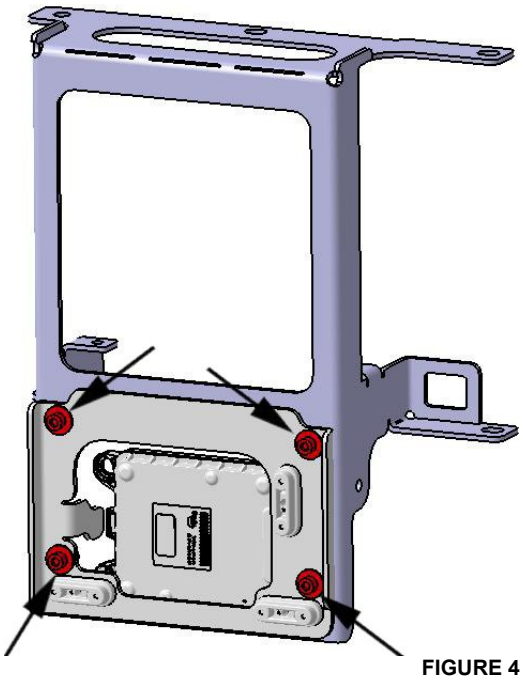


FIGURE 4

5. Connect the radar cable. Secure the cable's "tree" mounts to the holes provided for this purpose.

   Make sure that the cable forms a low point loop to allow water to drip without seeping into the connector.

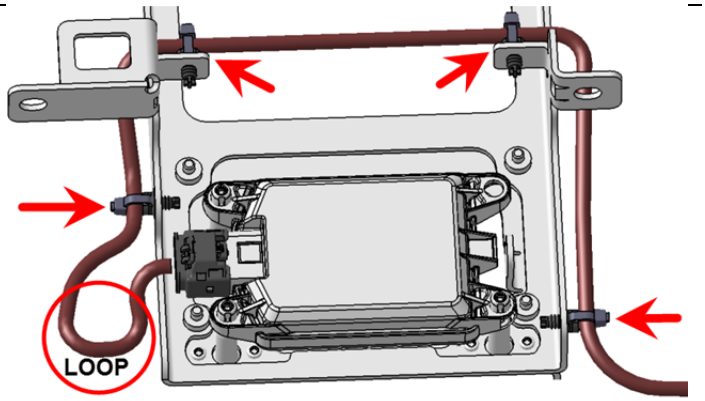


FIGURE 5

REMOVAL OF THE EXISTING RADAR

6. Lower the reclining bumper.
7. Place a lift table under the bumper to support it in reclined position.

8. Using a marker, draw a line around the four (4) identified washers. This will be useful to keep the current bumper adjustment at time of reinstallation.

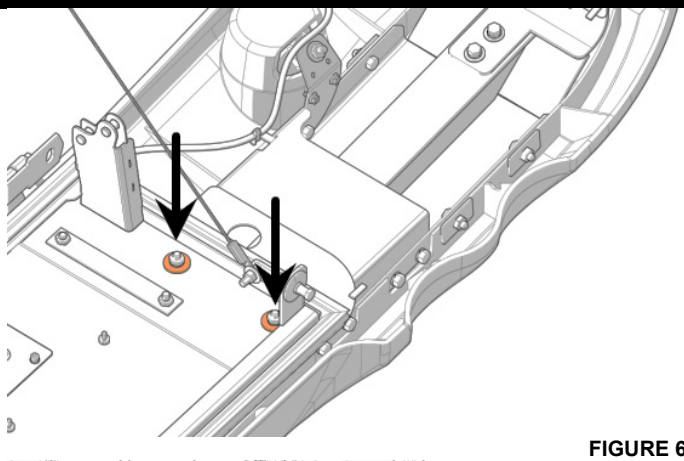


FIGURE 6

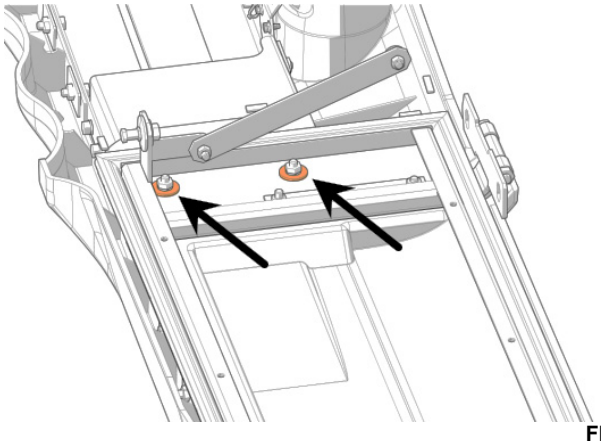


FIGURE 7

9. Unscrew the four (4) nuts identified on the image in order to separate the bumper from the panel which closes the spare wheel compartment. Keep the nuts and washers.

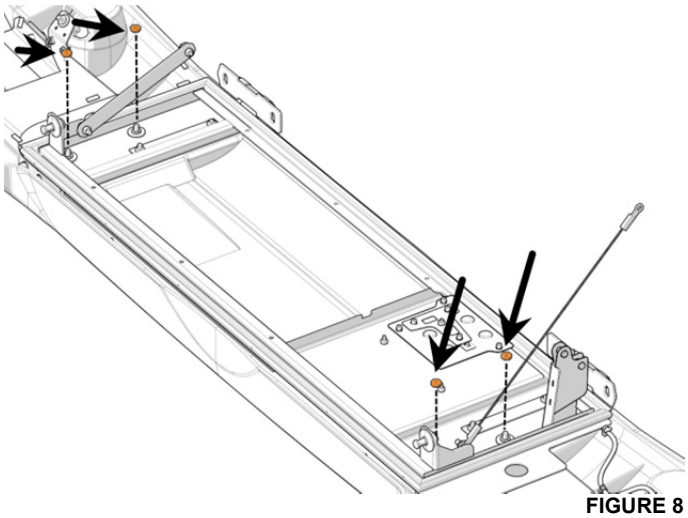


FIGURE 8

10. Close the spare wheel compartment access panel.

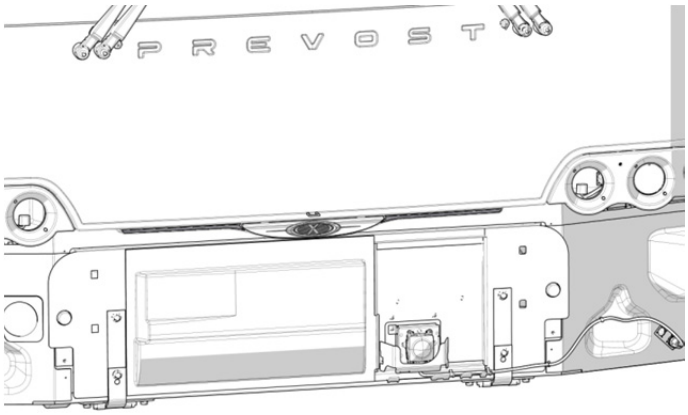


FIGURE 9

11. Disconnect the radar cable and cut the nylon ties.

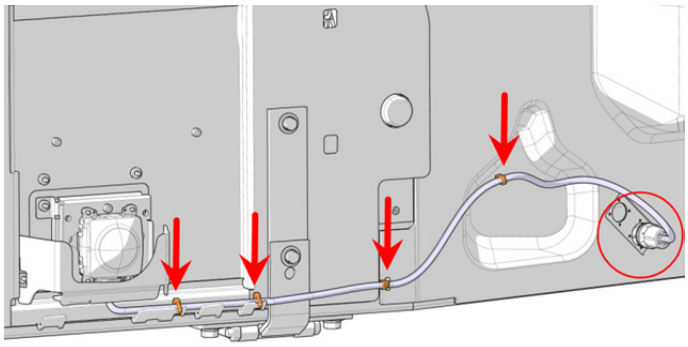


FIGURE 10

12. Lower the spare wheel compartment access panel.
13. Remove the four (4) screws identified on the image and then remove the radar sensor.

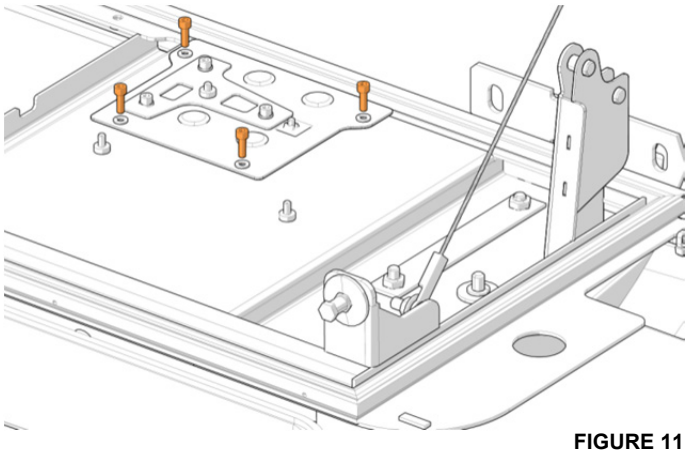


FIGURE 11

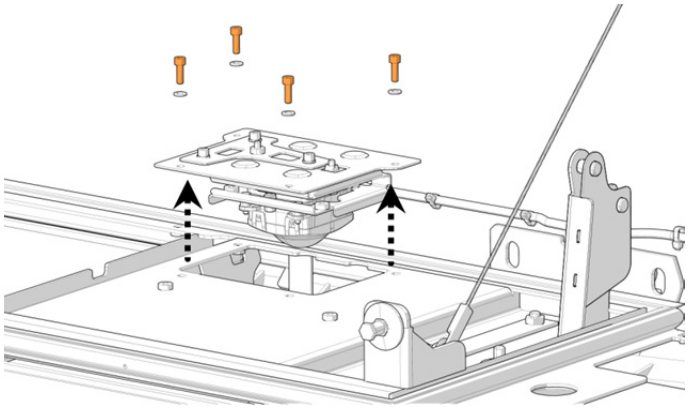


FIGURE 12

14. Close the spare wheel compartment access panel.
15. Using a cutting tool (cutting wheel), remove the welded radar support.

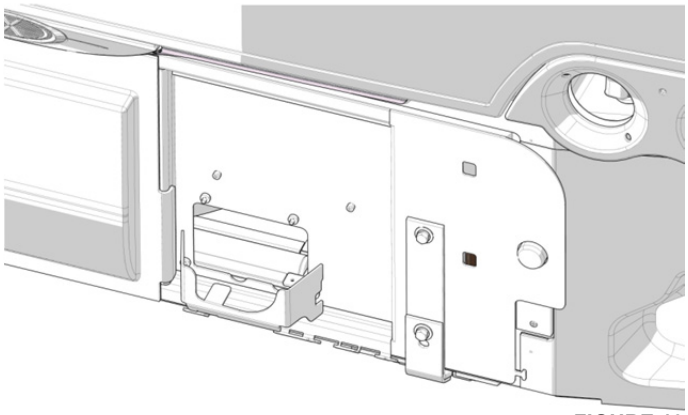


FIGURE 13

16. Cut where indicated by the red dotted lines.
17. Remove excess of metal in order to have a smooth finish.

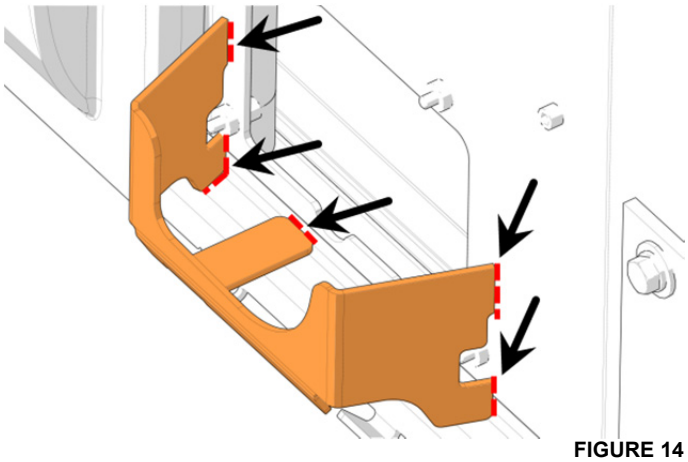
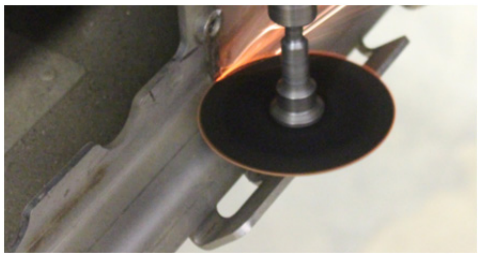


FIGURE 14

18. Remove the weld nut identified on the image at right.



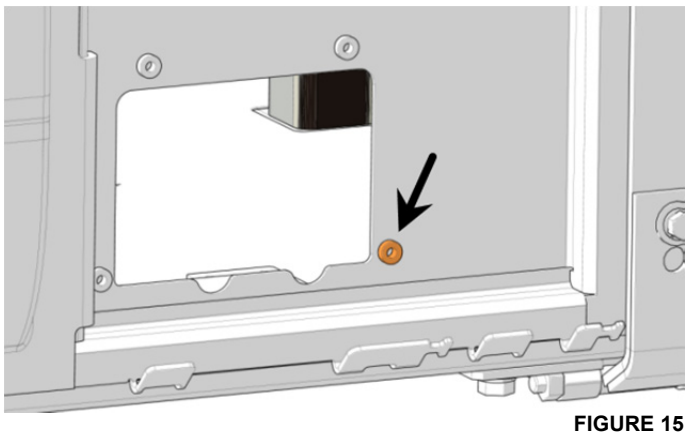


FIGURE 15

CUTTING OUT OF THE BUMPER SKIN

19. It is necessary to cut out an opening larger than the existing one on the bumper skin.

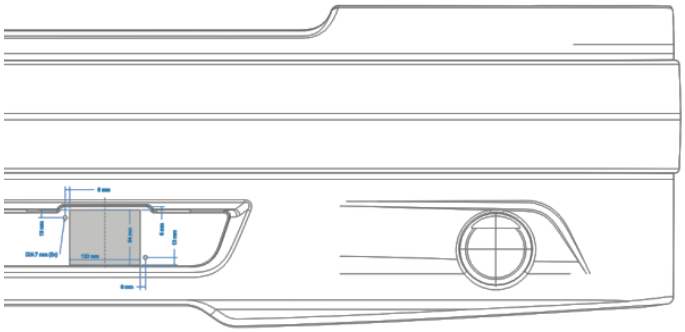


FIGURE 16

20. The cutout dimensions are 120 mm X 94 mm (4.72 in X 3.7 in). This new opening is centered horizontally on the existing one.

Using an oscillating multi-tool gives good results.

21. Drill two (2) holes of 7mm.

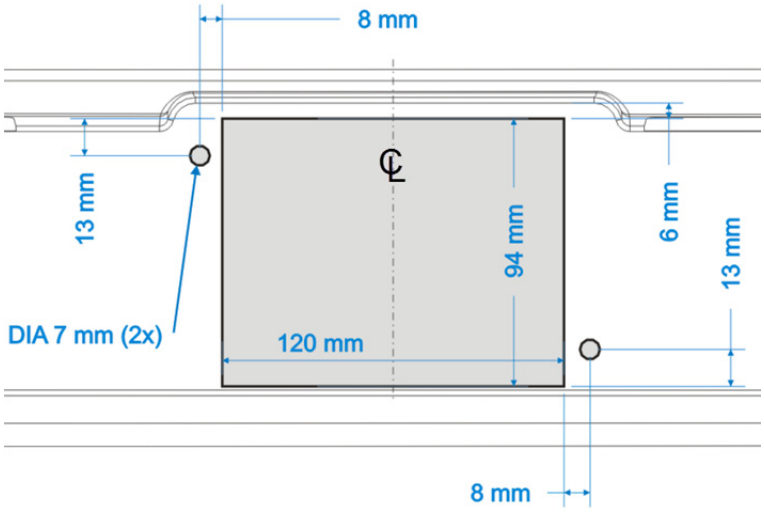


FIGURE 17

6mm = 15/64"
7mm = 9/32"
8mm = 5/16"
13mm = 33/64"
94mm = 3' 45/64"
120mm = 4' 23/32"

RADAR INSTALLATION

22. Install support #145206 inside the bumper. Place the support in relation with the opening of the radar using existing mounting points.

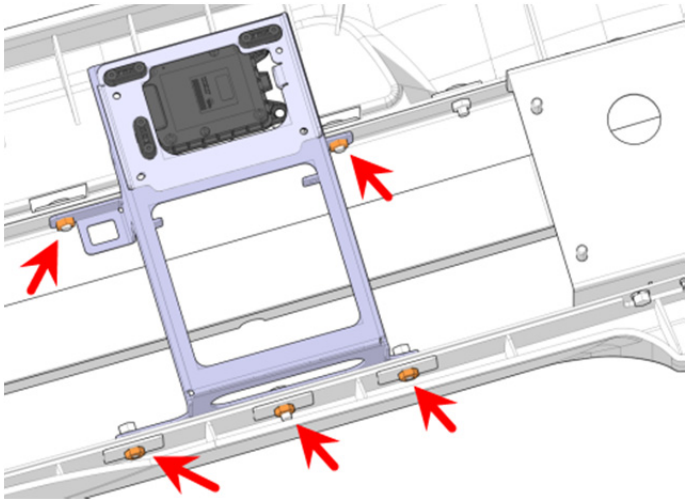


FIGURE 18

23. Secure the radar cable at the bottom of the spare wheel compartment access panel. Use one (1) nylon tie #504637.

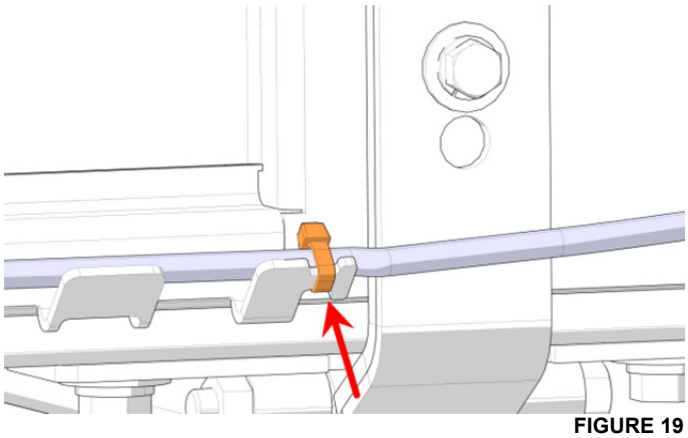


FIGURE 19

24. Secure the radar cable to the bumper as shown. Use four (4) nylon ties #504637.

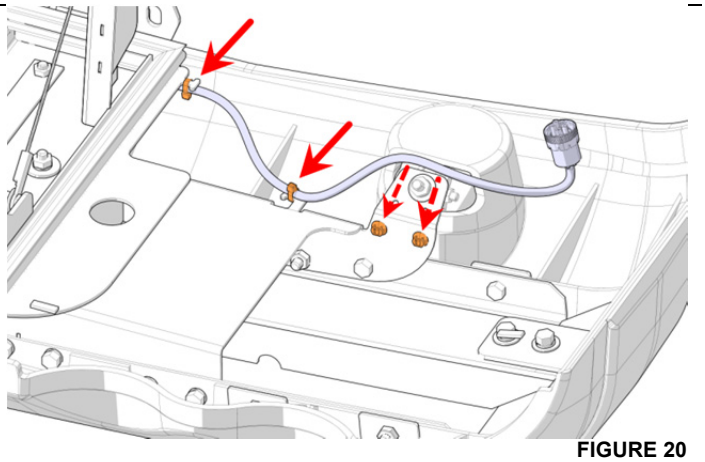
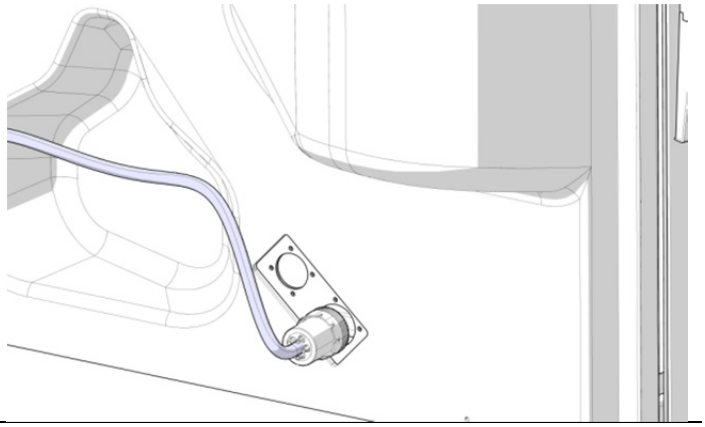


FIGURE 20

25. Plug the connector.



26. Bolt the bumper and the spare wheel compartment access panel together.

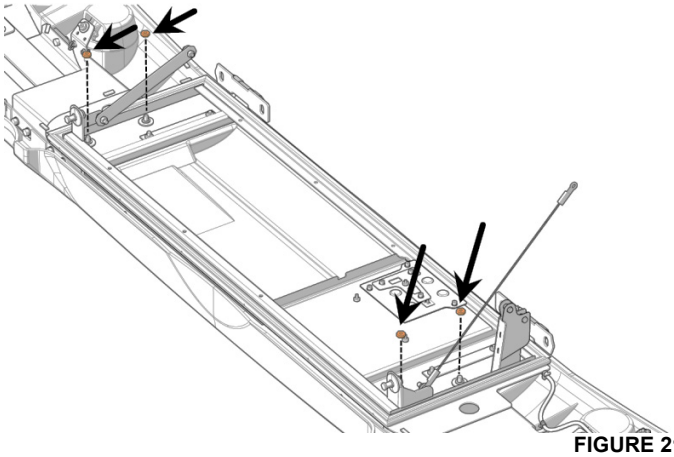
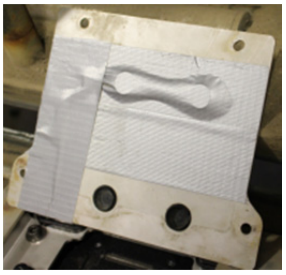


FIGURE 21

27. Keep the cover plate and the hardware of the former installation and install the cover plate on the spare wheel compartment access panel.

Limit dirt intrusion by plugging the holes on this plate. You can use 'duct tape' for example.



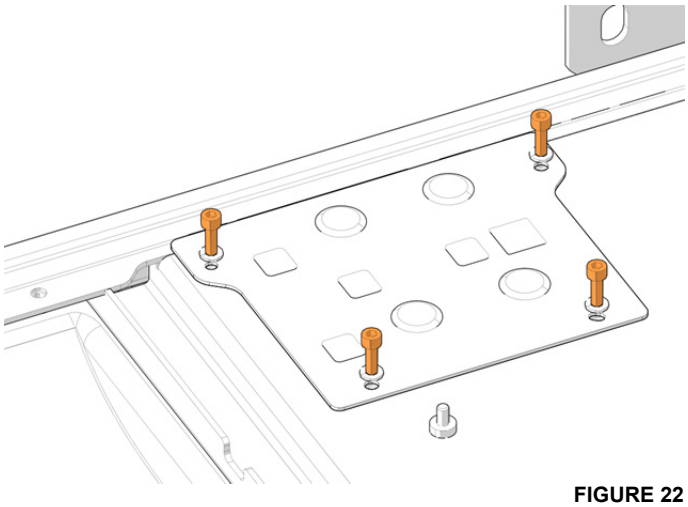


FIGURE 22

RADAR ALIGNEMENT

28. After installation, a realignment of the radar sensor may be necessary. Refer to Maintenance Information **MI14-34** for the alignment procedure. This document is available on the Technical Publications website.

https://techpub.prevostcar.com/

MI14-34

PARTS / WASTE DISPOSAL

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