

# PREVOST

## Instruction Sheet

## IS-20932A

### H3 SERIES ENVIROCARE - IONS AIR SANITIZER

Effective vehicles: 2009+ (9-1409 and up)

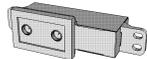
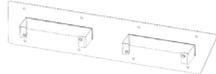
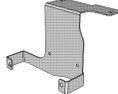
Revision A

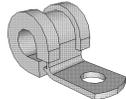
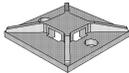
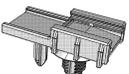
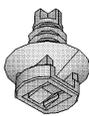
Parts info added

06-29-2021

#### MATERIAL

Kit #0610448 includes the following parts:

Part No.	Description		Qty
0610449	PLASMA CLUSTER		10
564288	DC/DC (24/12V) CONVERTER		1
0610510	SUPPORT CONVERTER DC-DC (1)		1
0610511	SUPPORT CONVERTER DC-DC ASSY. (2)		1
454472	SUPPORT PLASMA CLUSTER, EVAP. DUCT ASSY		1
454471	CLOSING, CONDENSER DUCT		1
5002071	NUT SPR U #8 .110-.187		18
506268	TAPE AD1 URE OP GY 3/8"X1/2"X25'		1 RL
454469	SUPPORT ASSY. LEFT		1
454466	SUPPORT ASSY. RIGHT		1
370377	PLASMA CLUSTER BRACKET, DEFROST UNIT		2
314937	PLASMA CLUSTER BRACKET, PARCEL RACK		4

0610501	WIRING, PLASMA CLUSTER CONDENSER		1
0610502	WIRING, PLASMA CLUSTER DC/DC		1
0610503	WIRING, PLASMA CLUSTER DRIVER		1
0610504	WIRING, PLASMA CLUSTER EVAPORATOR		1
0610505	WIRING, PLASMA CLUSTER PARCEL RACK		1
952624	CLAMP P STL ZP RUB 7.9 ID		1
500539	NUT HEX NYRT NX500 M4-0.7		2
500591	WSH FL Z050 4.3X9X.8 (M4,#8)		1
864368	SCREW 3/8 PLASTIC		12
502799	SCR CAP HEX N500 M4-0.7X16 G8.8		24
500855	WSH FL N500 .188X.438X.049 (M4,#10)		24
5001996	SCR MA PAN PH N500 M4-0.7X12		5
500957	SCR TP BDG PH N500 #10X3/4		35
500443	SCR TP PAN PH N500 #8X1/2		10
504637	CABLE TIE, NYLON BLK (STD)		40
504273	CABLE TIE, NYLON BLK (SMALL)		20
562679	4 WAY ADH. SQUARE BACKED MOUNTS		20
504335	RVT POP DOME AL CLE 3/16 (0.063_0.125)		6
564108	SELF-MOUNTING STUD		1
509815	FIR TREE MOUNTING (FT7 TYPE)		7
504534	GROMMET .875 X 1.250		1
0611019	DECAL (EN)		1

0610528	DECAL (EN/FR)		1
454769	SUPPORT PLASMA CLUSTER, EVAP. DUCT ASSY- TEMPLATE		1
454479	CLOSING, CONDENSER DUCT - TEMPLATE		1
0610547	DC/DC CONVERTER DECAL		1
IS-20932	INSTRUCTION SHEET (EN)		1
FI-20932	INSTRUCTION SHEET (FR)		1

Other parts that may be required:

Part No.	Description	Qty
7771197	AIR ION COUNTER (TESTER)	1

### NOTE

Material can be obtained through regular channels & Wiring diagram provided on page 30.

## PROCEDURE

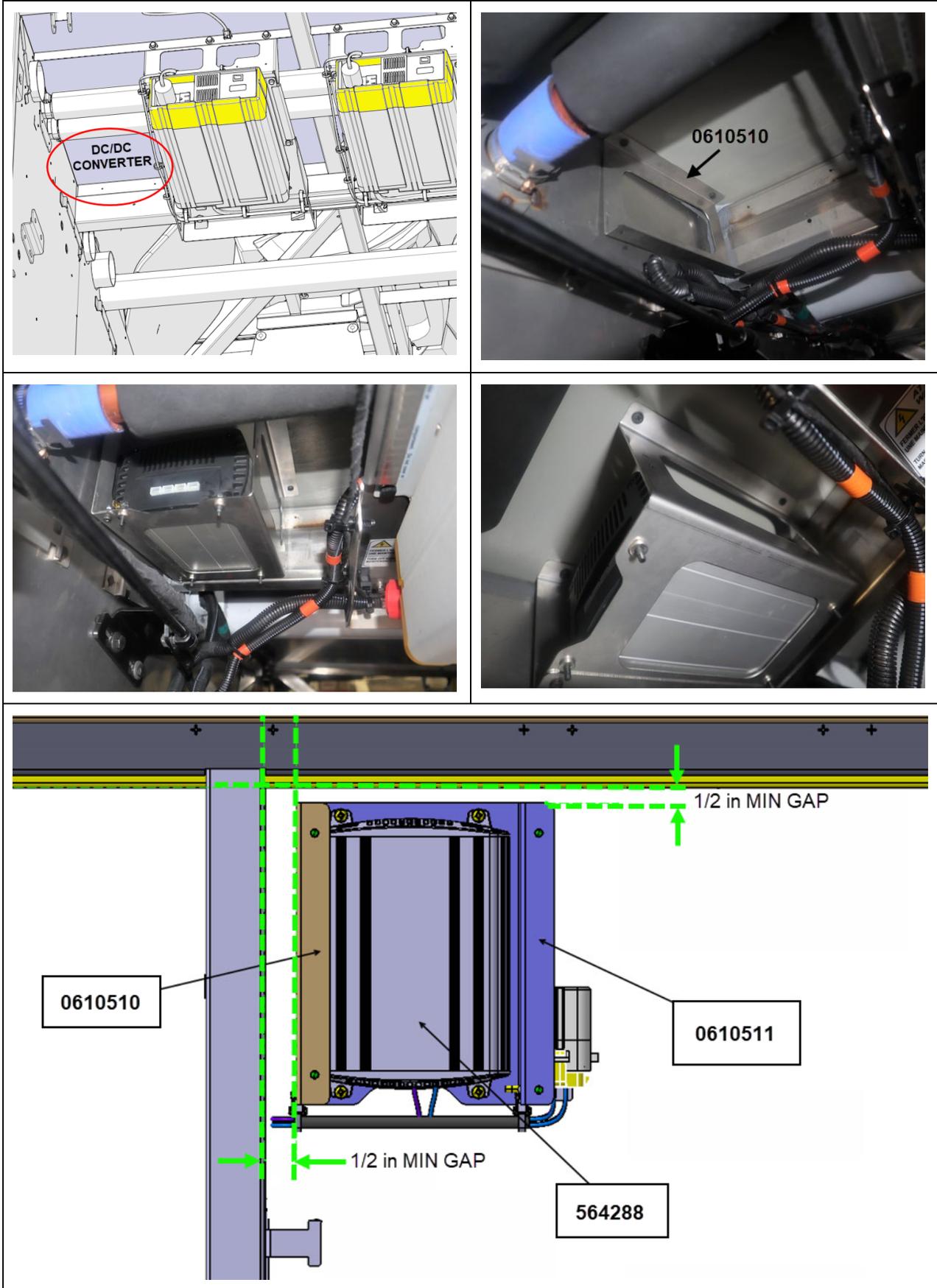


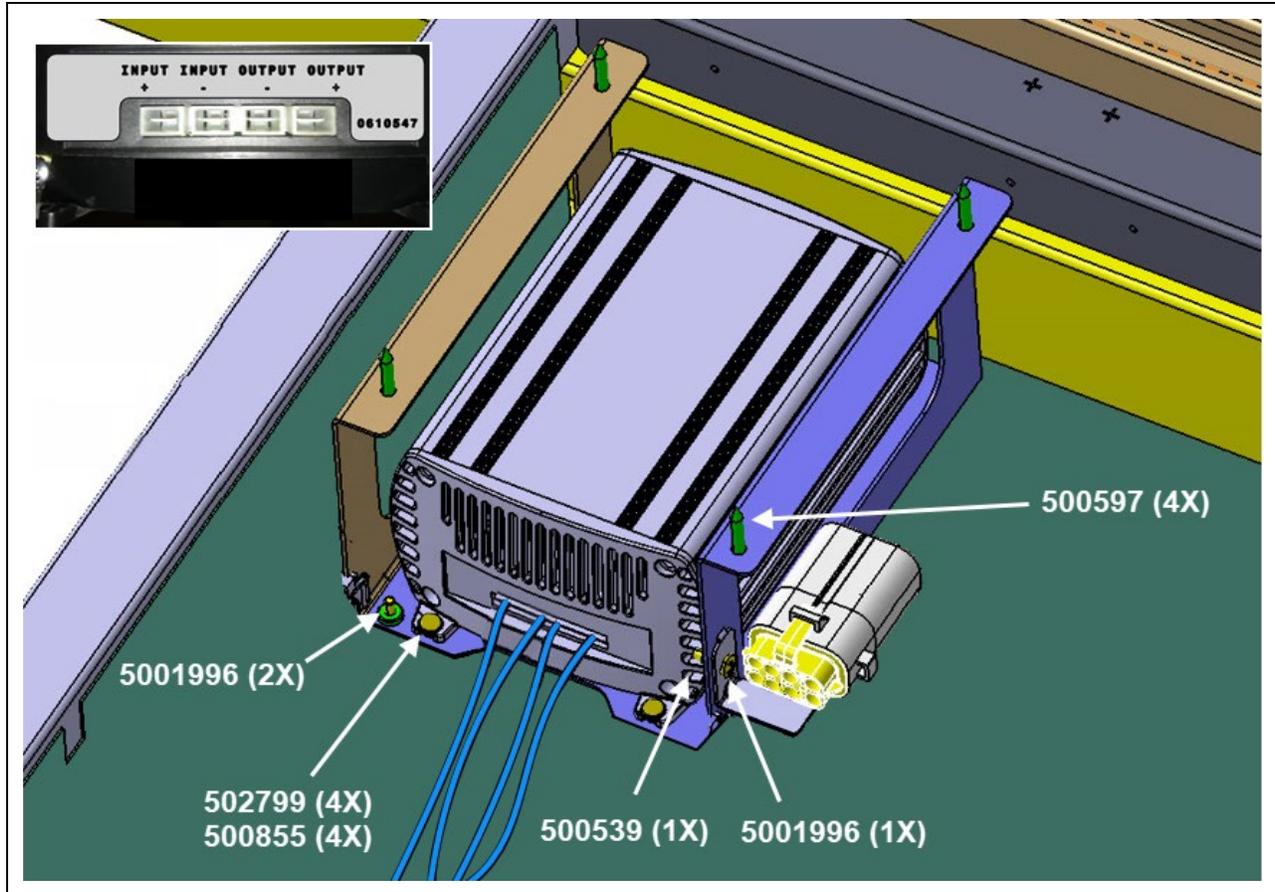
### DANGER

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.

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.

1. Install the # **564288** DC/DC converter in the vehicle last street side baggage compartment.
  - Using 2 of the supplied # **500597** screws, secure the # **0610510** part of the support to the vehicle ceiling just next to the vehicle inverters (see picture for actual location). There should be a min *1/2 inch gap* between the support and the vehicle structure.
  - Apply the # **0610547** decal to the front face of the DC/DC converter (inputs & polarity).
  - Pre-install the DC/DC converter # **564288** to the other half of the support (# **0610511**). Use 4 # **502799** screws and 4 # **500855** washers.
  - Secure that assembly to the previously installed support half in the vehicle, use 2 loosely screwed # **5001996** screws.
  - Secure the top of the assembly to the ceiling using 2 other # **500597** screws.
  - Tighten the support #**5001996** screws to secure both parts of the support together.





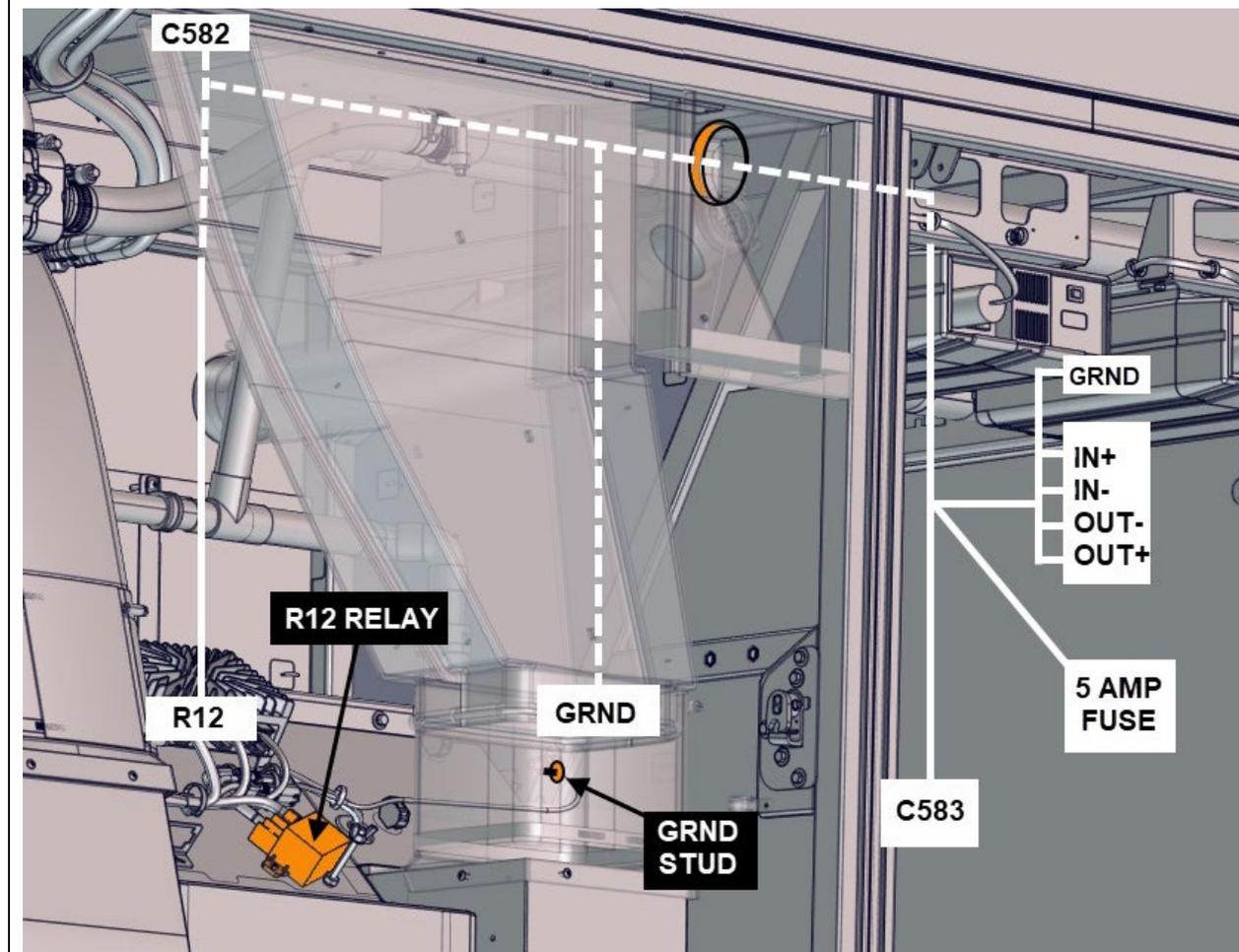
2. Pass the # **0610502** harness R12 connector (ring terminal with black fuse holder), the ground terminal & the C582 connector in the evaporator compartment through the compartment harness opening (grommet).

- Pass a fish tape or a flexible rod through the baggage/evaporator wall grommet (some cable ties may need to be removed around the rubber boot).
- First pass the **C582** connector through the grommet.



## NOTE

- Pass all wires behind the HVAC duct
- Do not connect the R12 connector (POWER+) and the GRND terminal yet.
- Keep wires loose, secure only after final connection.

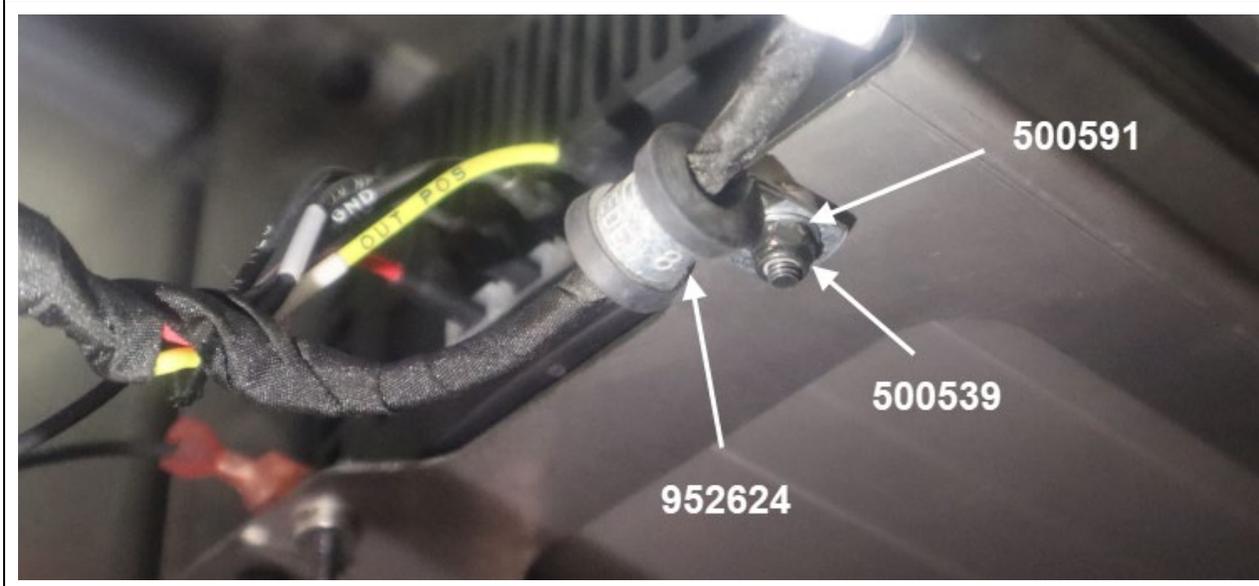
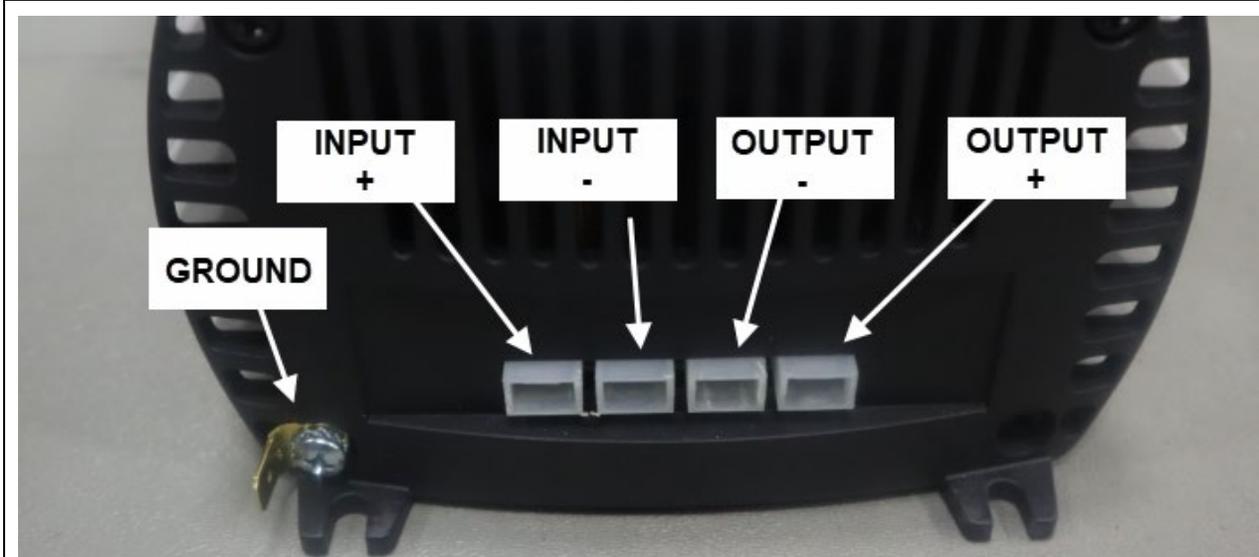
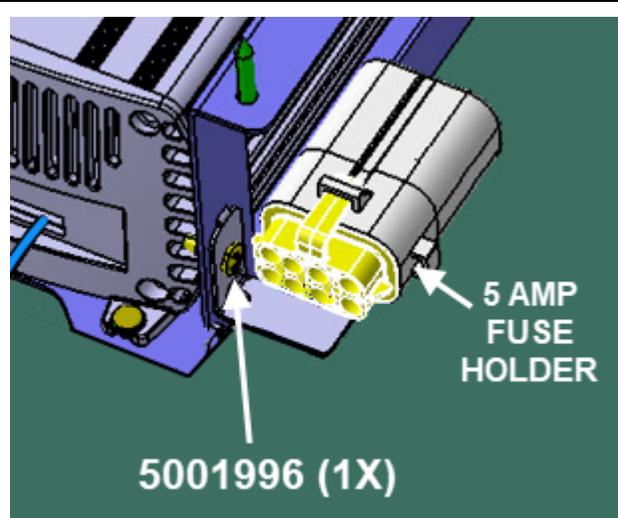
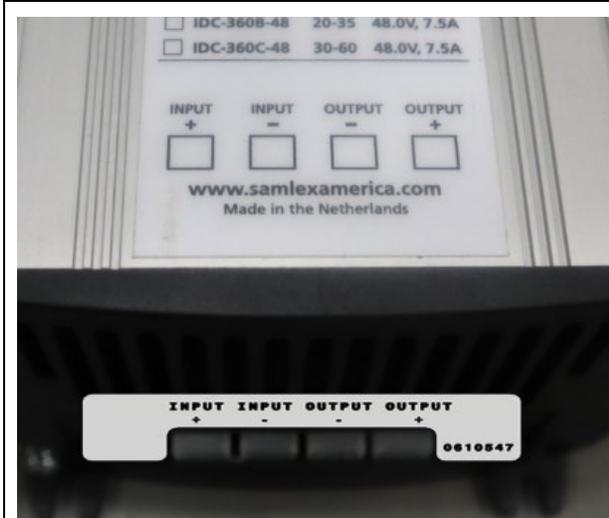


### 3. Connect the DC/DC converter to the # 061502 wiring harness.

- Connect the DC/DC converter outputs and input wires as shown in the picture below. Wires are numbered, *make sure the order is correct.*

**NOTE:** *Make sure that the converter outputs & inputs are identified using the supplied # 0610547 decal.*

- Connect the DC/DC converter ground wire to the converter body.
- Secure the clear fuse holder to the side of the DC/DC converter support using a # 5001996 screw as shown (make sure that there is a good 5-amp fuse in the fuse holder).
- Secure the fuse holder harness to the support using the supplied # 952624 clamp, # 500539 nylon lock nut and # 500591 washer. Use the free length of the previously installed converter to support screw as shown.



4. Connect the # **0610504** harness inside the vehicle (LH evaporator side).

- Inside the vehicle, locate the HVAC diffuser cover located between the seats at foot height (just above the HVAC duct in the evaporator compartment).
- Loosen the seat bases from the floor and slide them back or forth to gain access to the cover.
- Remove the cover to access the “gull wings” shaped deflector.

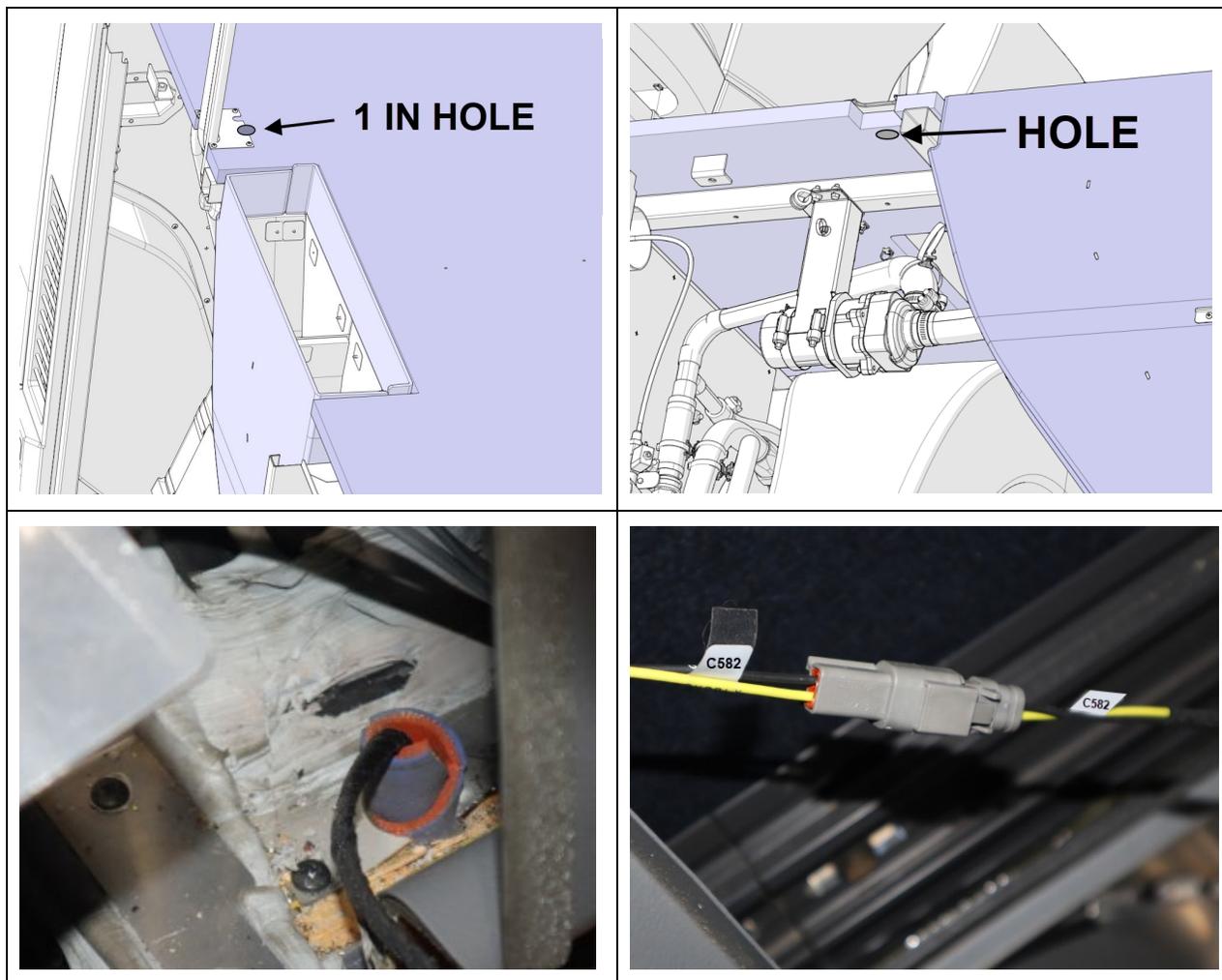
**NOTE**

*In some vehicles, the REI Seat Audio system wiring harness (or other optional systems) may be routed through the middle of the cover. In those cases, the corresponding system will need to be unplugged to remove the cover and complete seat removal may be necessary.*



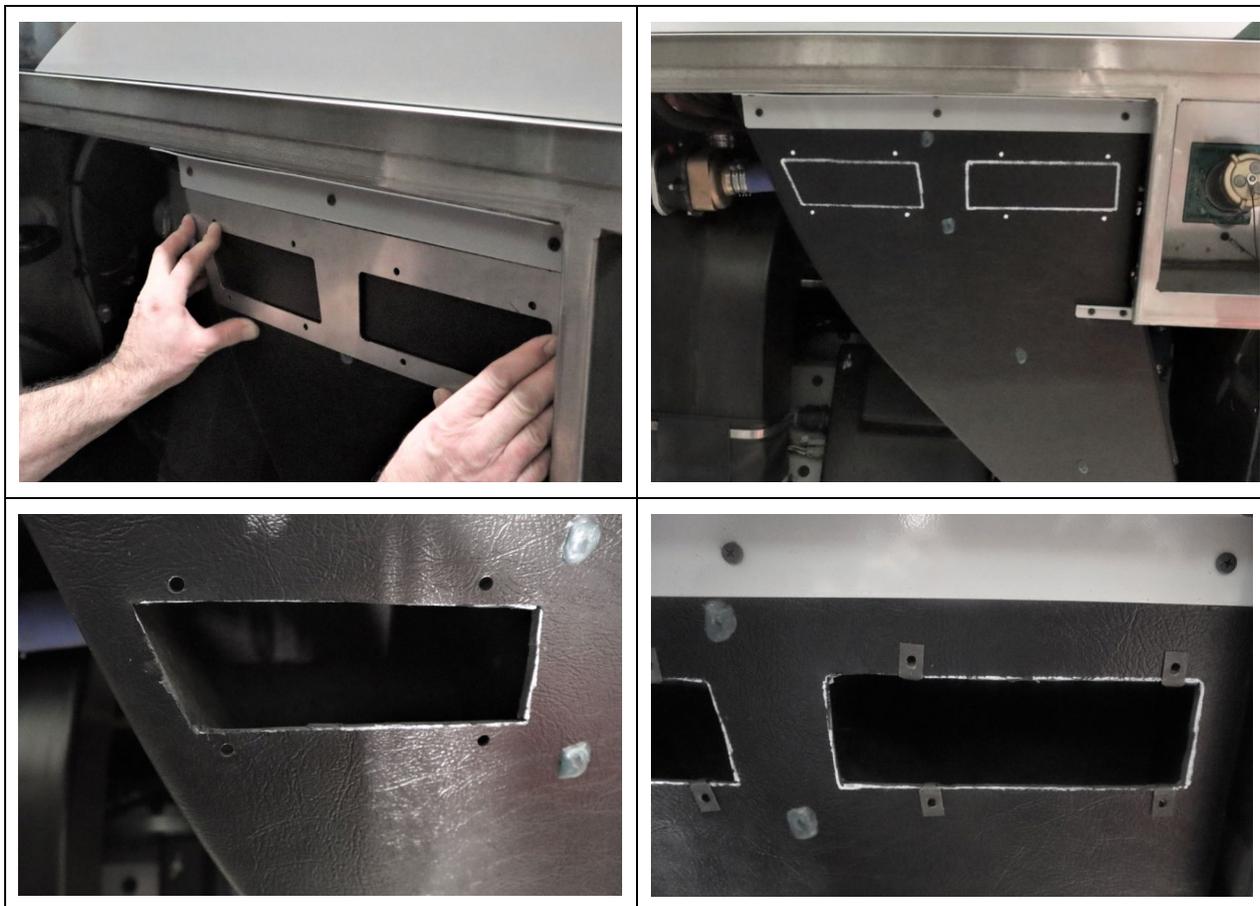
- From the evaporator compartment, drill a 1-inch hole through the ceiling that will exit in front of the diffuser area inside the vehicle as shown (hole must be close to the edge and be hidden by the cover after reinstallation).
- Pass the **C582** connector of the # **0610502** harness inside the vehicle through the 1-inch hole.
- Protect the connector harness from the hole sharp edge using a piece of rubber material (hose).
- Connect the # **0610504** to the # **0610502** harness (**C582** connector on both harnesses).



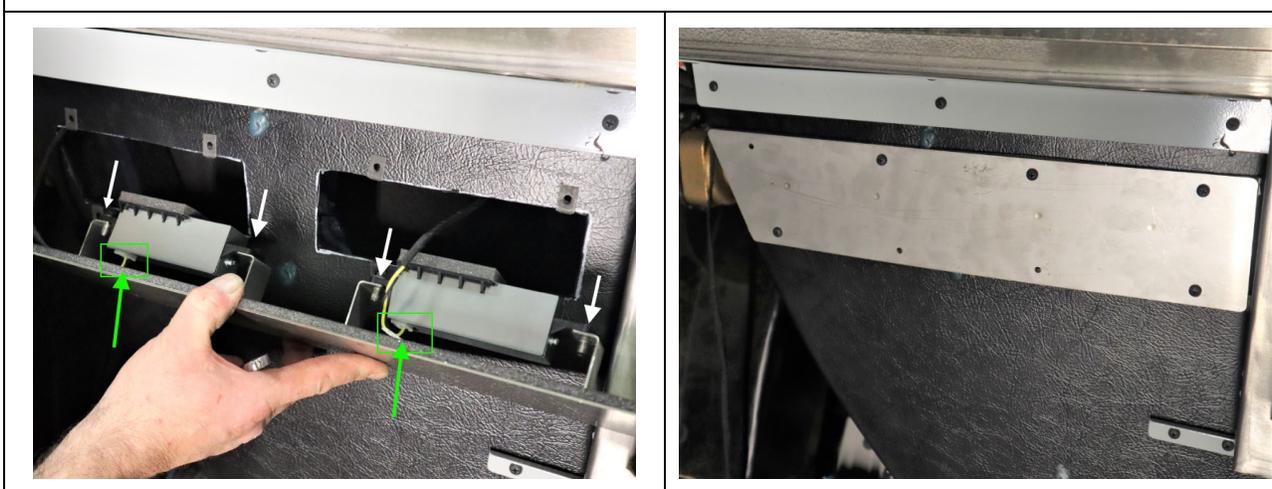
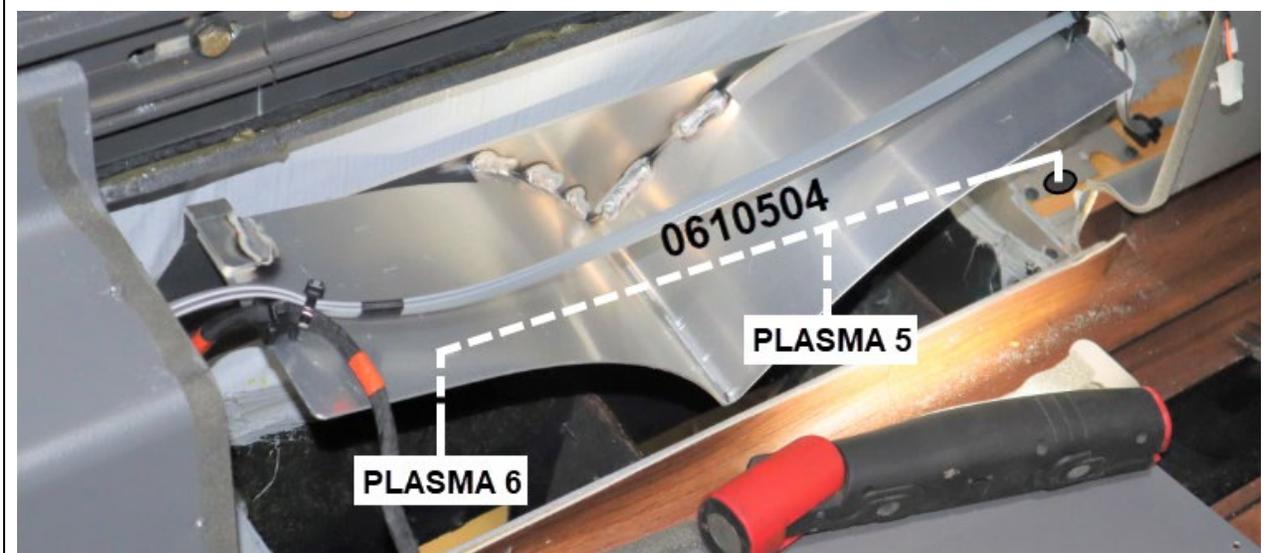
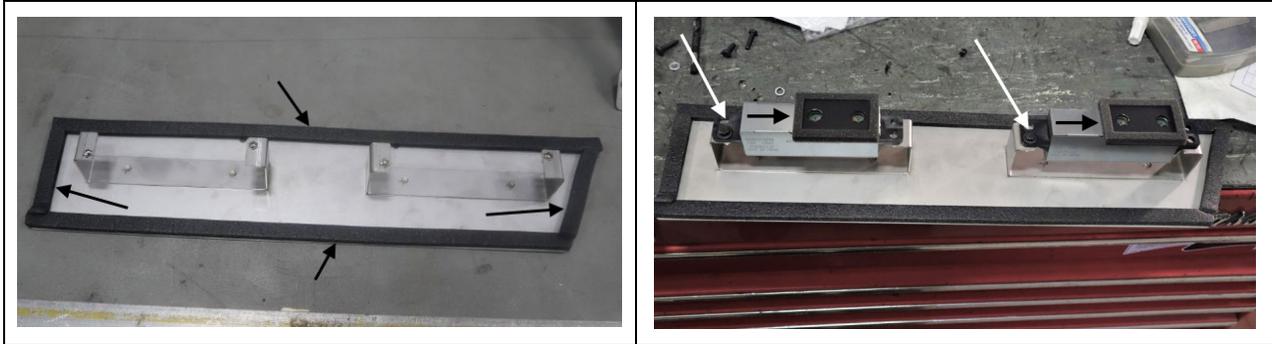


5. Install two plasma cluster modules in the HVAC duct on the evaporator side.

- Position the supplied # **454769** template on the top part of the duct (template must contact the upper metal edge).
- Using a light-colored paint marker, draw the position of the two modules opening.
- Also mark the position of the 8 support plate screws.
- Cut both marked openings in the duct.
- Drill all screw marks using a 1/4 inch drill bit.
- Install 8 of the supplied # **5002071** spring nuts over the screws openings.



- Apply a length of supplied # 506268 foam tape around the edges of the # 454472 evaporator duct support.
- Install 2 of the supplied # 0610449 plasma cluster modules on the support using only 2 loosely mounted # 502799 screws and # 500855 washers.  
IMPORTANT: The modules sensors must be mounted toward the slanted edge of the support as shown.
- Inside the vehicle, pass the connectors **Plasma 5** and **Plasma 6** of the previously connected harness # 0610504 inside the duct so they can be reached from the 2 cut openings.  
IMPORTANT: Make sure the connectors wires are passing over the deflector wings and away from any sharp edge.
- From outside of the vehicle, connect the Plasma 5 & 6 connectors at the back of the plasma cluster modules (order is not important).
- Install the missing # 502799 screws and # 500855 washers and secure the modules to the support (*do not overtight*).
- Secure the support to the duct using 8 supplied # 500957 screws.



6. Route the **C581**, the **Plasma 3** & the **Plasma 4** connectors inside the left (evaporator side) parcel rack frame.

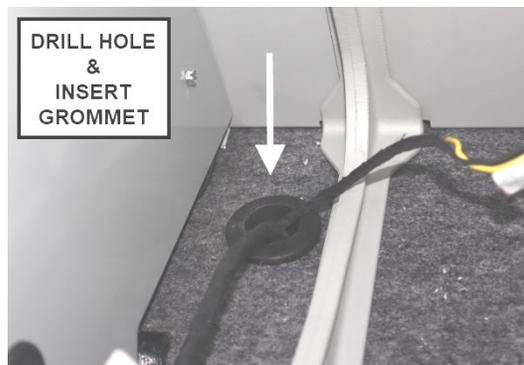
- Remove the lower HVAC deflector cover, the window pillar cover and the parcel rack HVAC cover.
- Remove the wall upper and lower rails fasteners in the pillar area
- Fish connectors **Plasma 3** **Plasma 4** and **C581** from the deflector area up to the base of the window (pass behind the carpeted lateral panel).
- Pass the connectors wiring along the window pillar up to the underside of the parcel rack.
- Pull out the connectors from the upper grommet in the parcel rack floor (next to the HVAC unit).

**NOTE**

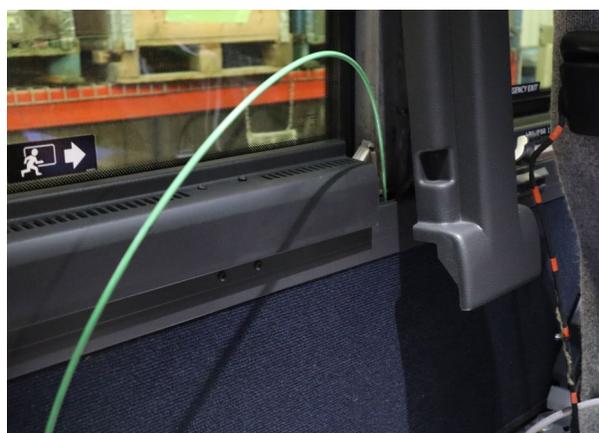
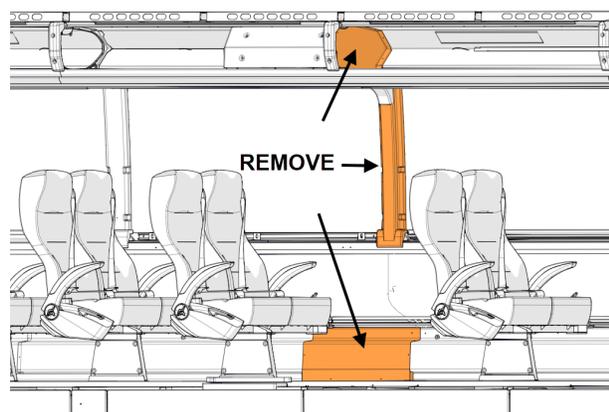
*In some vehicles not equipped with parcel rack doors, the hole & grommet may not be present. In this case, the hole must be drilled using a suitable hole saw and the provided # 504534 grommet.*

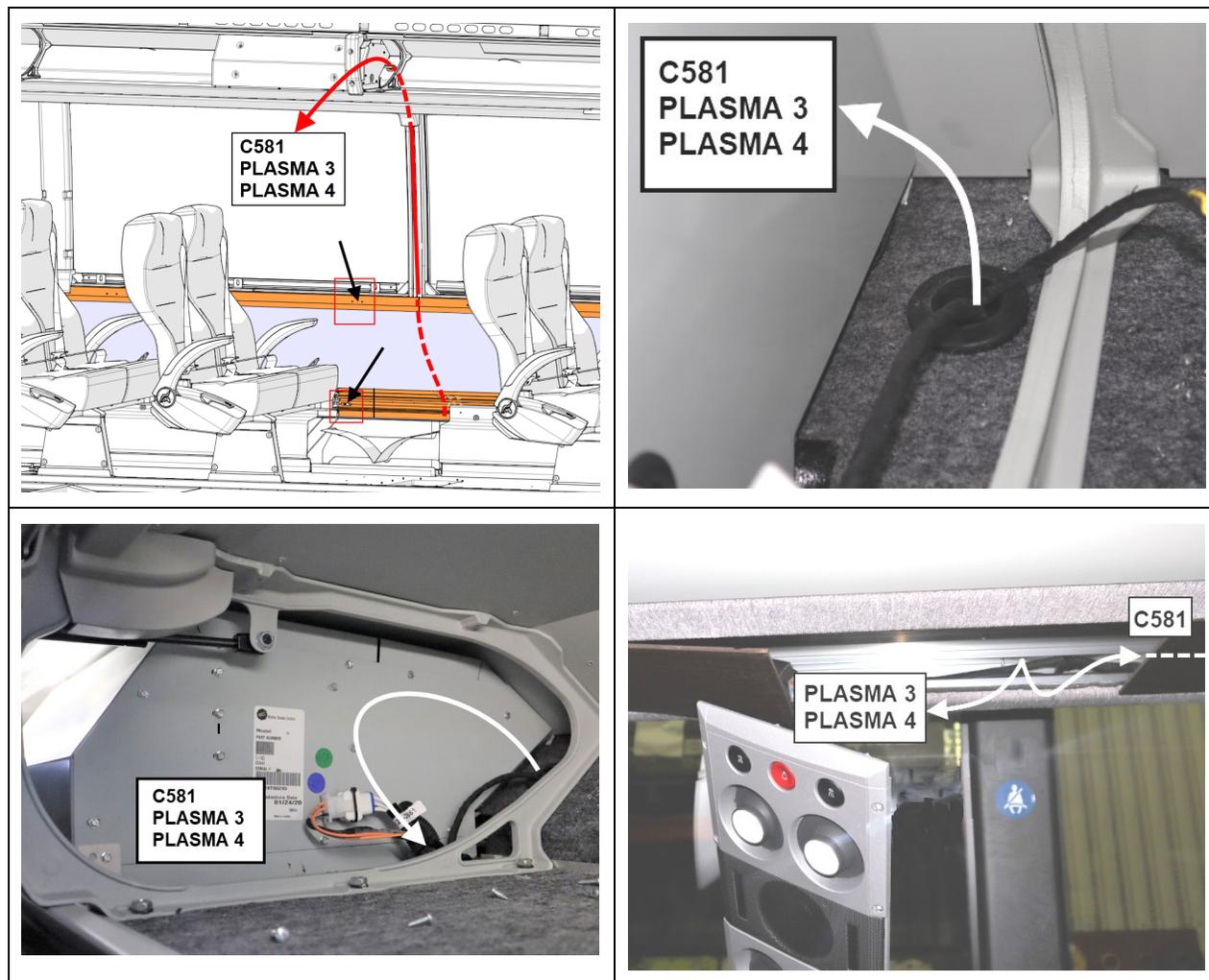


# 505534



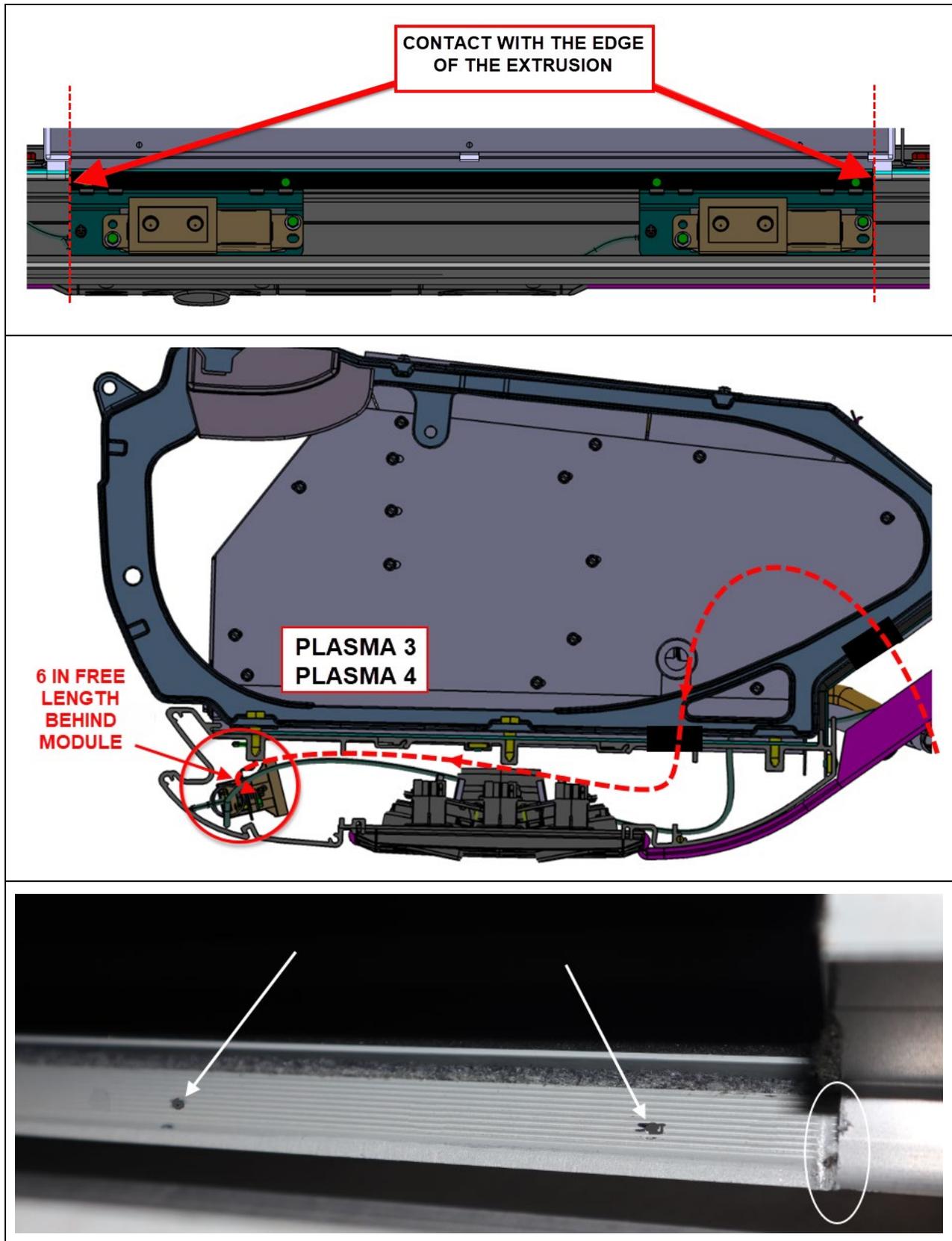
- Pass the connectors in the lower floor grommet (HVAC harness grommet).
- Remove the over head light/register console to access the connector from under the parcel rack HVAC unit.

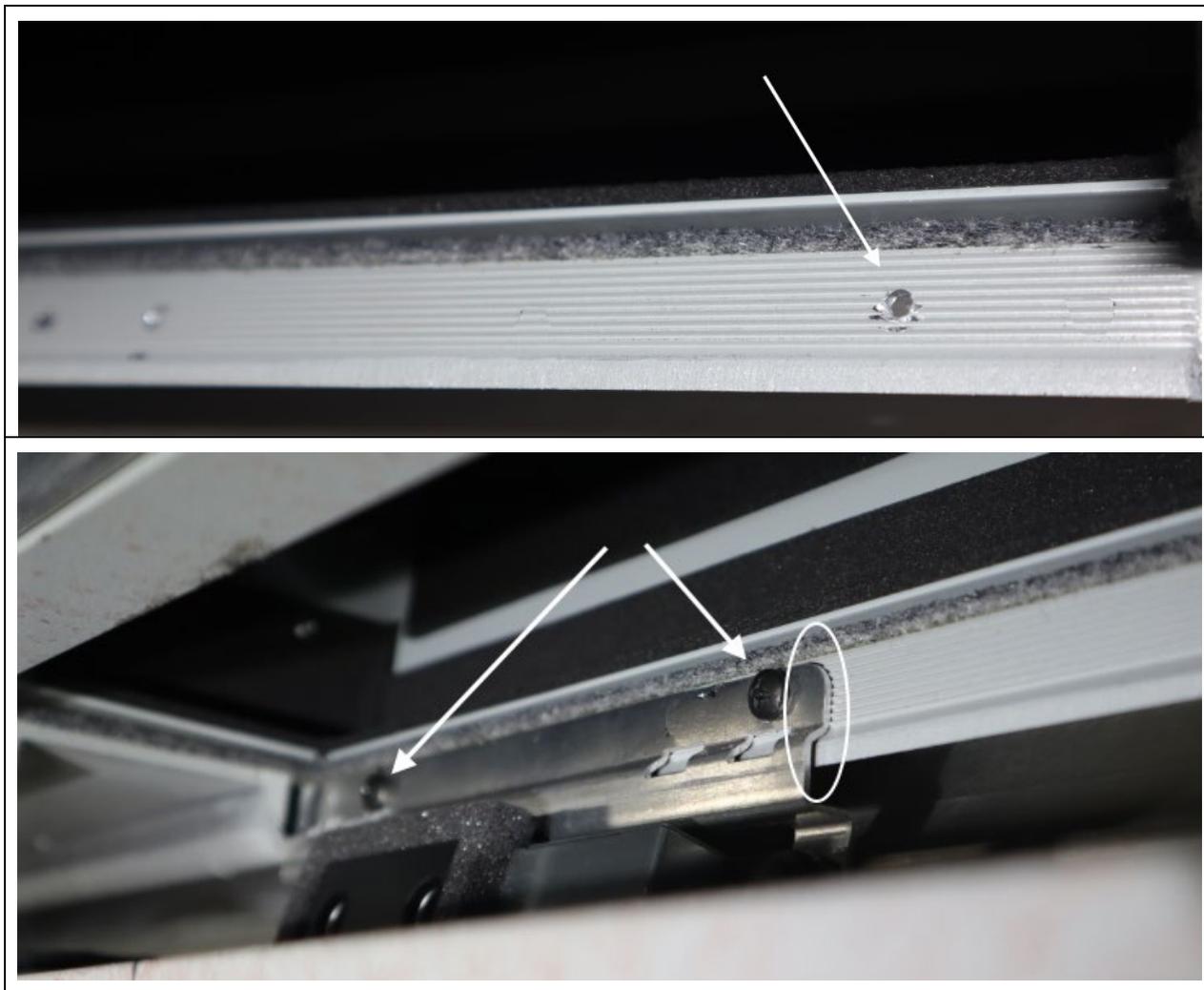




7. Install 2 plasma cluster modules # 0610449 in the area below the left parcel rack HVAC unit.

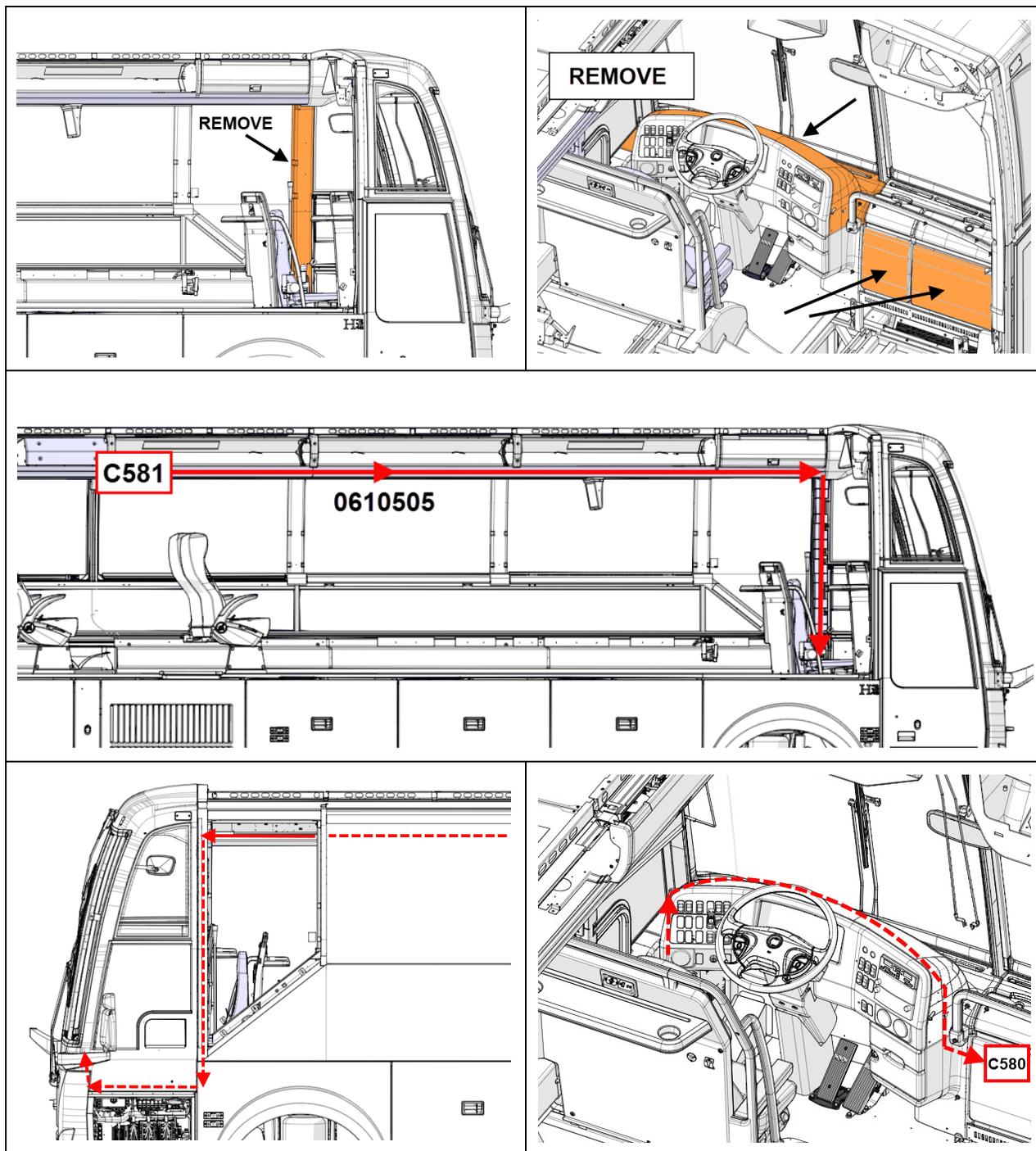
- With a sharpie, mark the location of the # 314937 supports (2X) on the inner parcel rack rail. Both supports must contact the extrusion edges, one on both sides (the support back shape must fit the ribbed extrusion profile horizontally as shown).
- Drill the 4 mounting points for a # 8 screw (1/8 or 9/64th inch drill bit).
- Install 2 of the supplied # 0610449 plasma cluster modules on the supports using supplied # 502799 screws and # 500855 washers.
- Connect the **Plasma 3** and the **Plasma 4** connectors (previously routed to the underside of the parcel rack) to the two modules. Leave +/- 6 inches of wire behind the module to ease future removal / installation during maintenance.
- Secure the supports (and modules) to the extrusion using the supplied # 500443 screws.





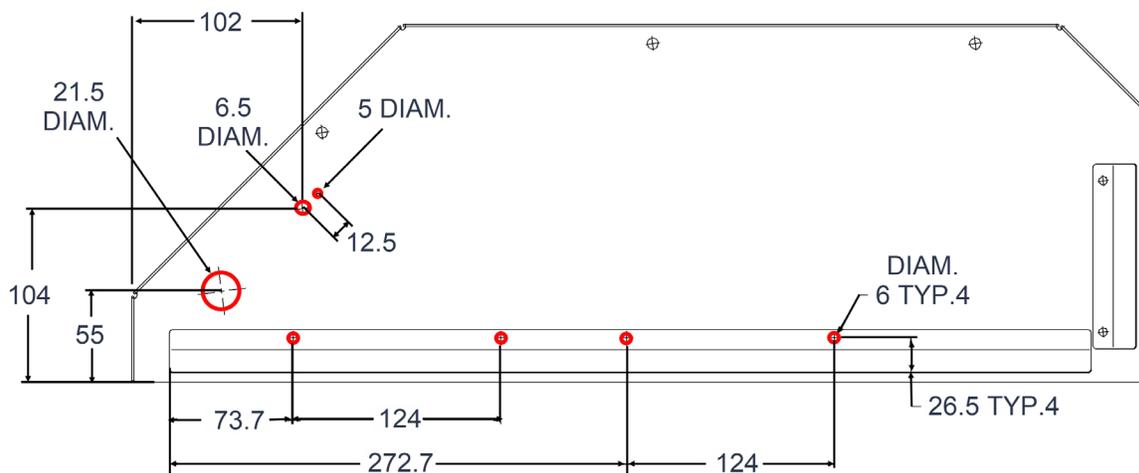
8. Route the # **0610505** harness from the HVAC unit to the front defrost unit area.

- Remove the driver window pillar cover. Also remove the dash cover and the 2 defrost unit covers.
- Connect the **C581** connector of the # **0610504** harness (previously routed under the HVAC unit with Plasma 3 & 4 connectors) to the **C581** connector of the long # **0610505** extension harness.
- Using a fish tape or a long flexible rod, pass the # **0610505** harness inside the parcel rack frame up to the driver's pillar area.
- Follow the pillar down (use cable ties) and using a flex rod, fish the harness inside the front electrical junction box.
- Secure the harness inside the front junction box (in the upper area from rear to the front)
- Still using the flex rod, route back the harness **C580** connector inside the vehicle up to the dashboard area.
- Pass the harness over the dash cluster (secure with supplied cable ties) and make it exit the **C580** connector near the front defrost unit cover.



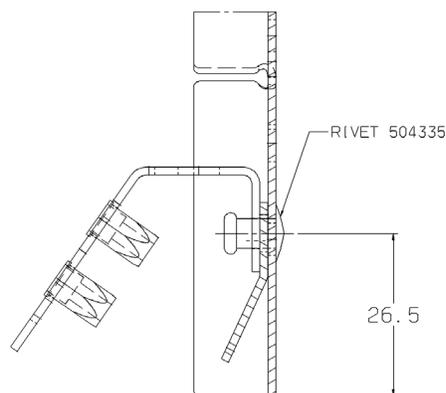
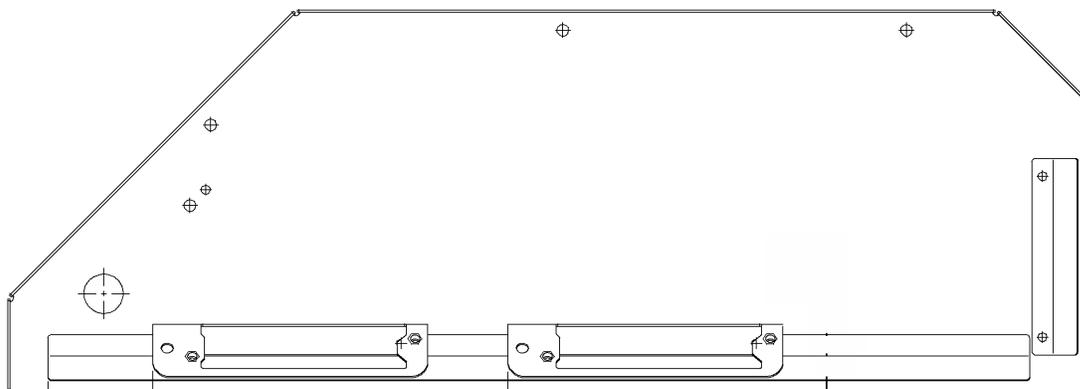
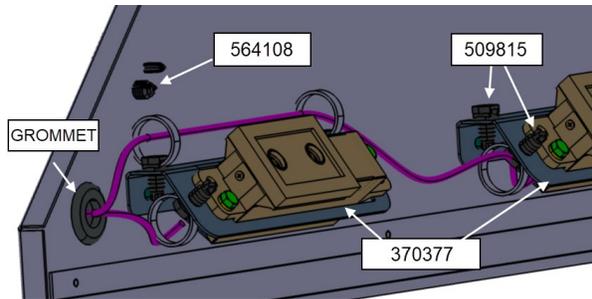
9. Install two # **0610449** plasma cluster modules in the front defrost unit.

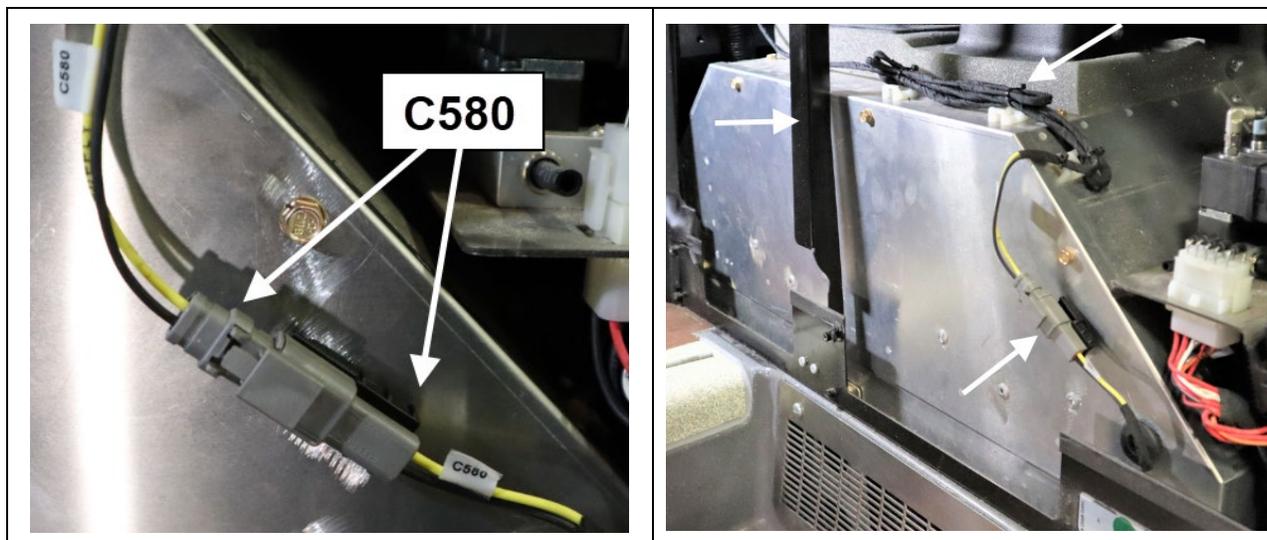
- Remove the top bolt of the metal support preventing the removal of the defrost unit cover.
- Remove the defrost unit cover screws and slide the cover out.
- From inside the cover, mark the required new holes center point with a sharpie and drill the holes using the appropriate step drill bit (see image below for hole size and positioning). Use # **370377** bracket as a template to mark and drill the remaining holes as shown.



- Using the supplied # 504335 rivets, fasten the two # 370377 supports to the inside of the cover.
- Insert the # 0610503 harness through the larger 21.5mm hole making sure that the **C580** connector is positioned outside the cover and that the **Plasma 1** and **Plasma 2** connectors are inside.
- Insert the harness grommet in the 21.5mm hole.
- Clip the # 564108 self-mounting support on the outside of the cover (5mm & 6.5 mm holes) and secure the **C580** connector to it (connector pointing upward).
- Connect 2 # 0610449 plasma cluster modules to the **Plasma 1** and **Plasma 2** connectors.
- Install the plasma cluster modules to the brackets using supplied # 502799 screws and # 500855 washers.

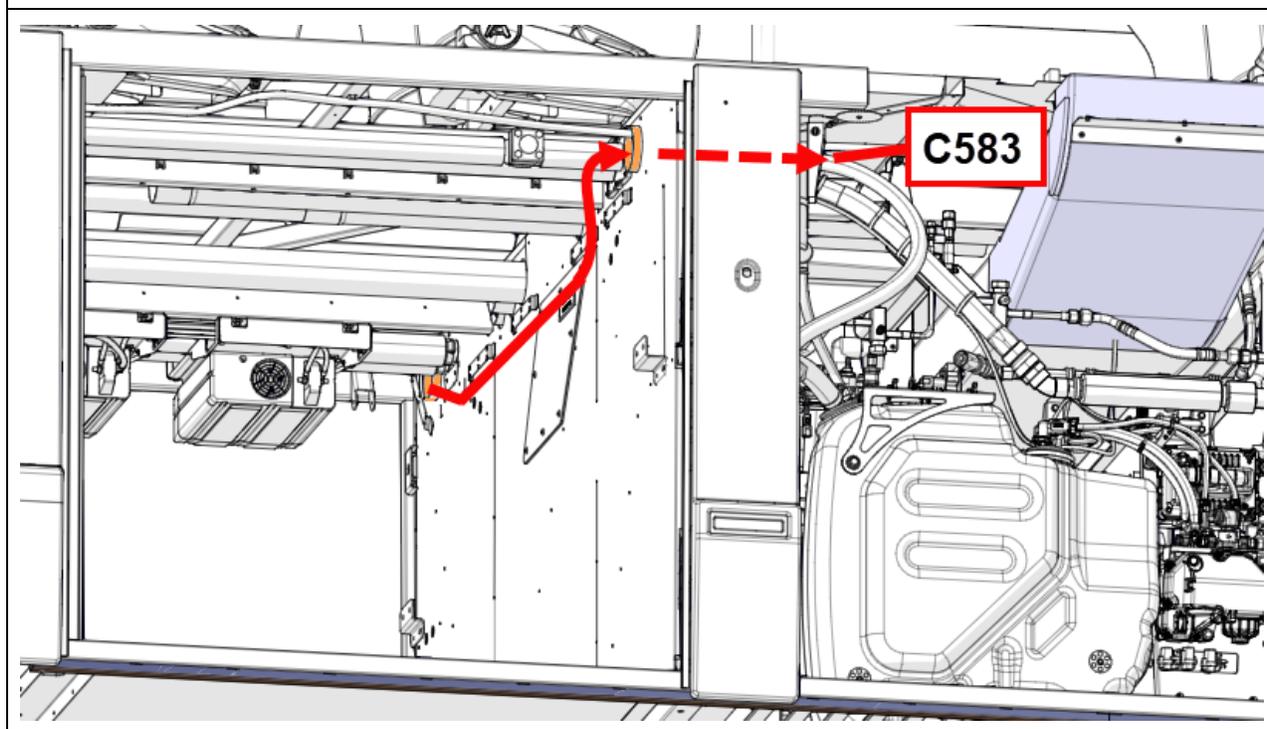
- Install the supplied # **509815** cable tie mounting clips and secure the harness (use supplied cable ties).
- Reinstall the defrost unit cover.
- Connect the # **0610503** harness **C580** connector to the **C580** connector previously routed under the dashboard cover (# **0610505** harness).
- Secure the wiring on top of the defrost unit, reinstall the metal support and all covers previously removed in the driver's area.

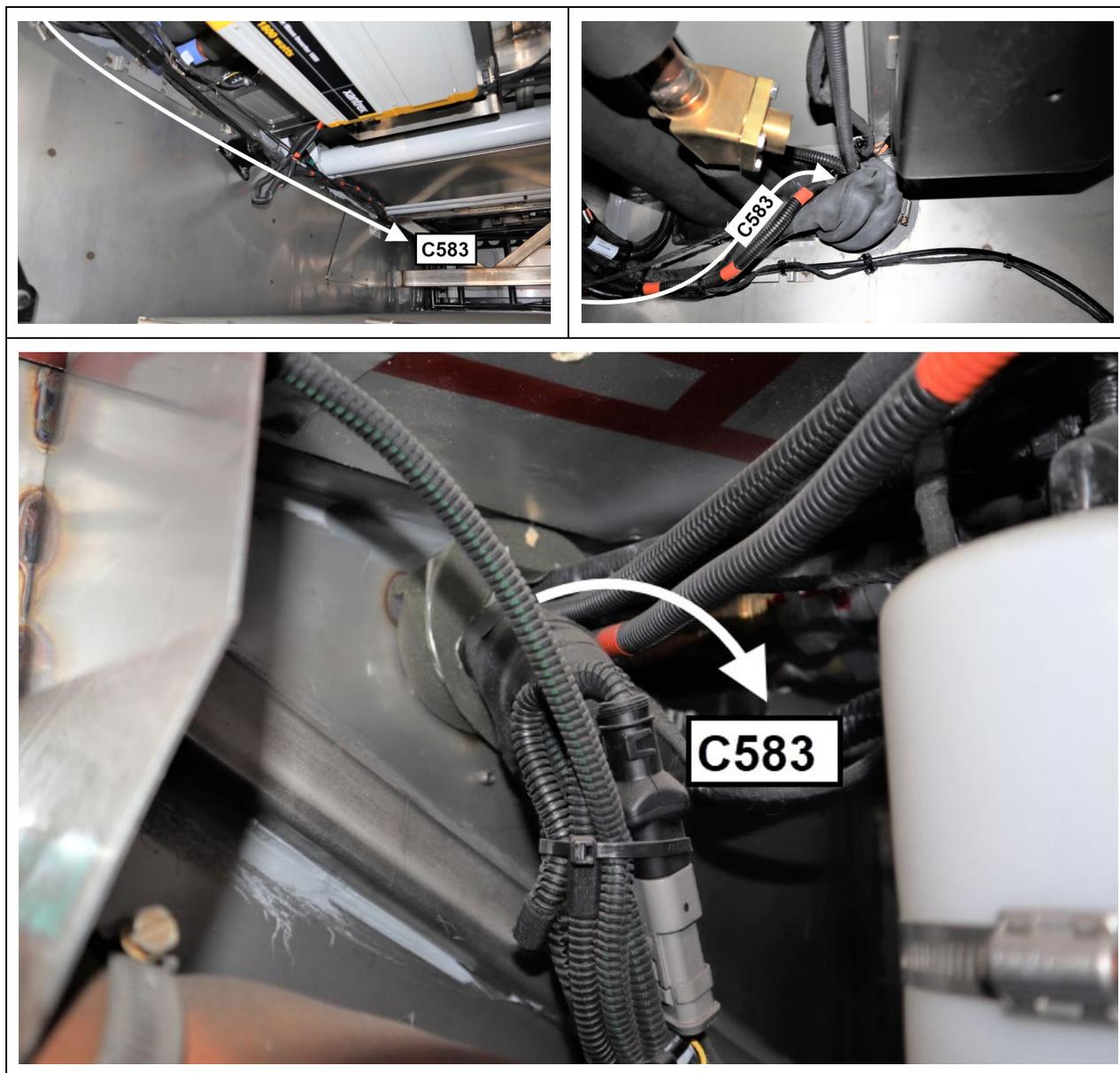




10. Route the remaining **C583** connector (# **0610502** harness) through the last baggage compartment up to the condenser compartment.

- Pass the wires of the C583 harness along the vehicle harness (left to right of the baggage compartment) and secure with some supplied cable ties.
- Using a flex rod, fish the C583 connector through the right side grommet (baggage compartment to condenser compartment) of the vehicle.





11. Route & connect the # **0610501** harness (RH condenser side of the vehicle).

- Inside the vehicle, locate the HVAC diffuser cover located between the seats at foot height (just above the HVAC duct in the condenser compartment).
- Loosen the seat bases from the floor and slide them back or forth to gain access to the cover.

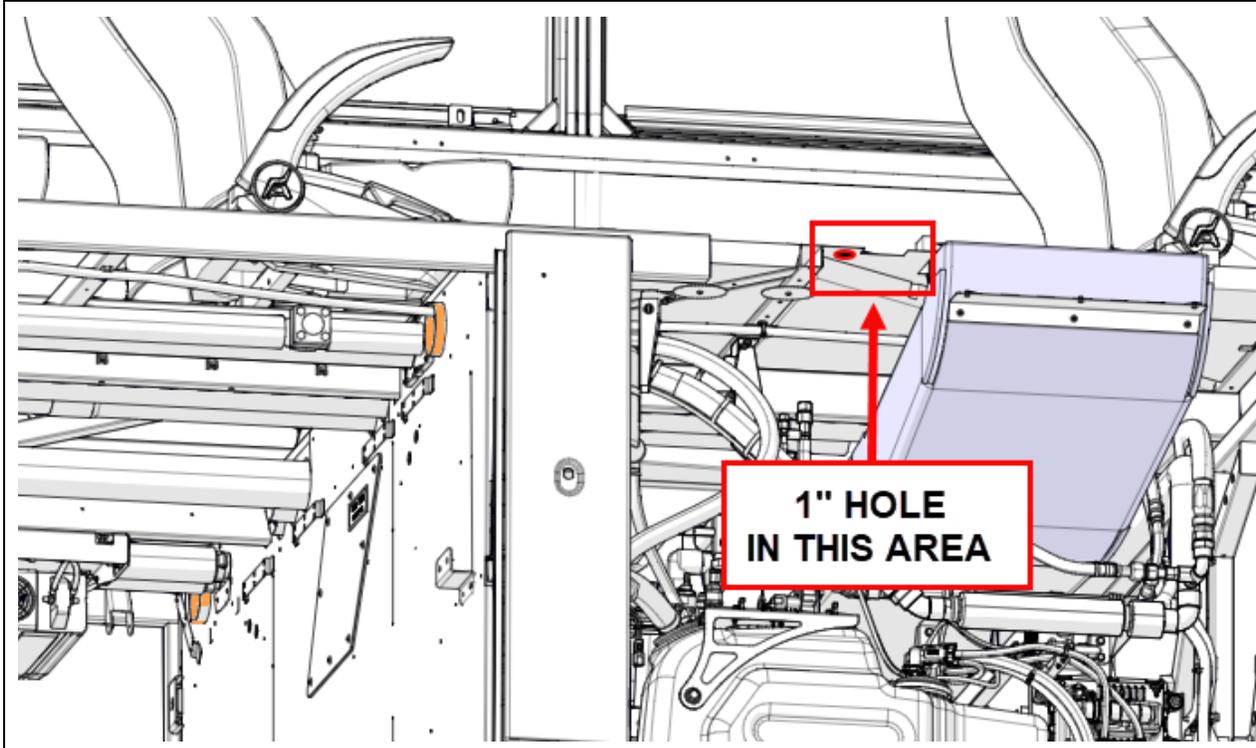
**NOTE**

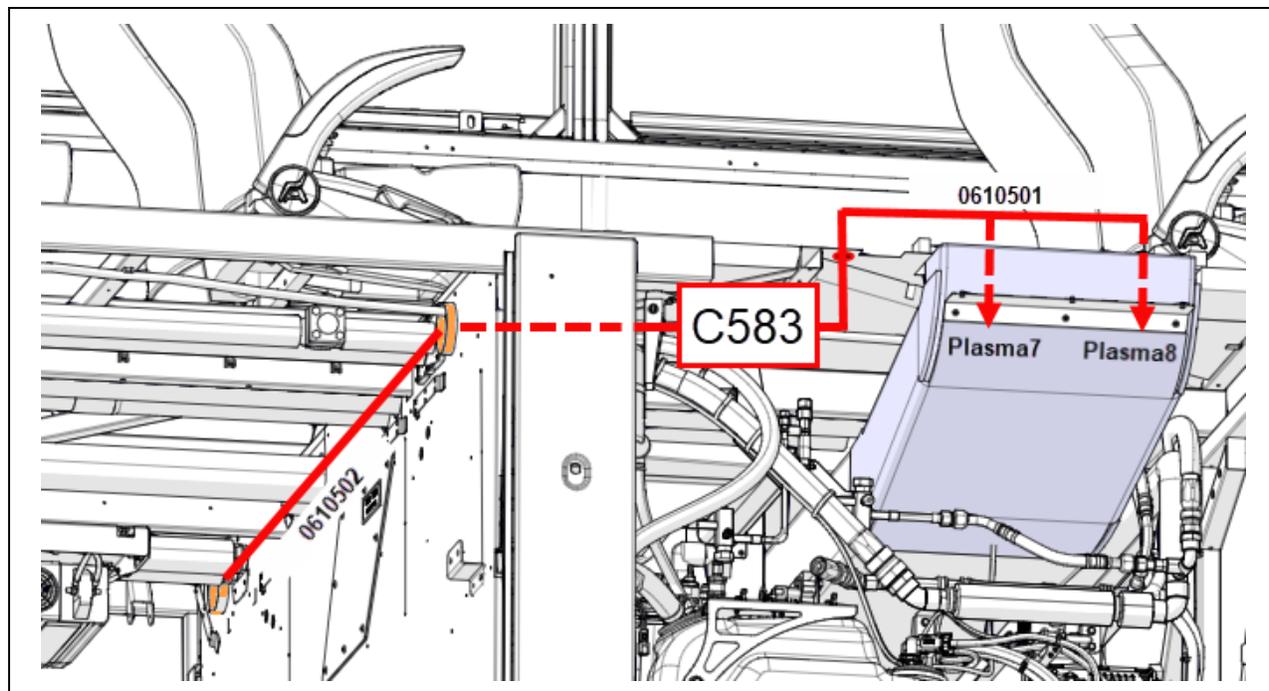
*As for the LH evaporator side, the Seat Audio system wiring harness (or other optional systems) may be routed through the middle of the cover. In those cases, the corresponding system will need to be unplugged to remove the cover and complete seat removal may be necessary.*

- Remove the cover to access the “gull wings” shaped deflector.



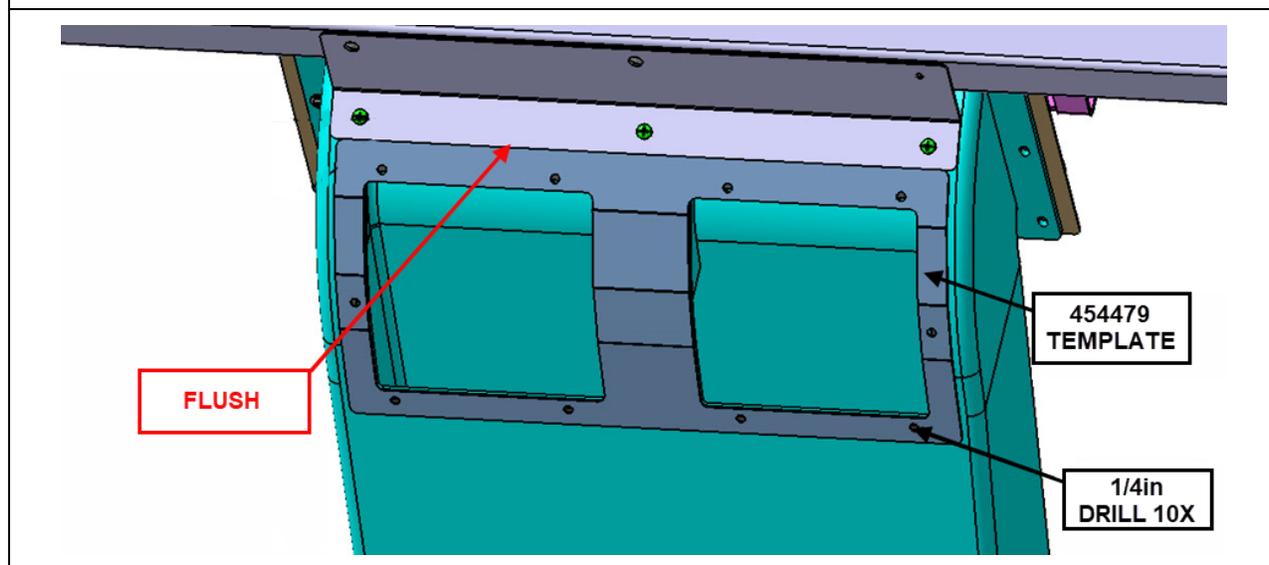
- From the condenser compartment, drill a 1-inch hole through the ceiling that will exit at the rear of the diffuser area inside the vehicle as shown (hole must be close to the edge and be hidden by the cover after reinstallation).
- Pass the **C583** connector of the **# 0610501** harness inside the vehicle through the 1-inch hole.
- Protect the connector harness from the hole sharp edge using a piece of rubber material (hose).
- Connect the **# 0610501** to the **# 0610502** harness (**C583** connector on both harnesses).

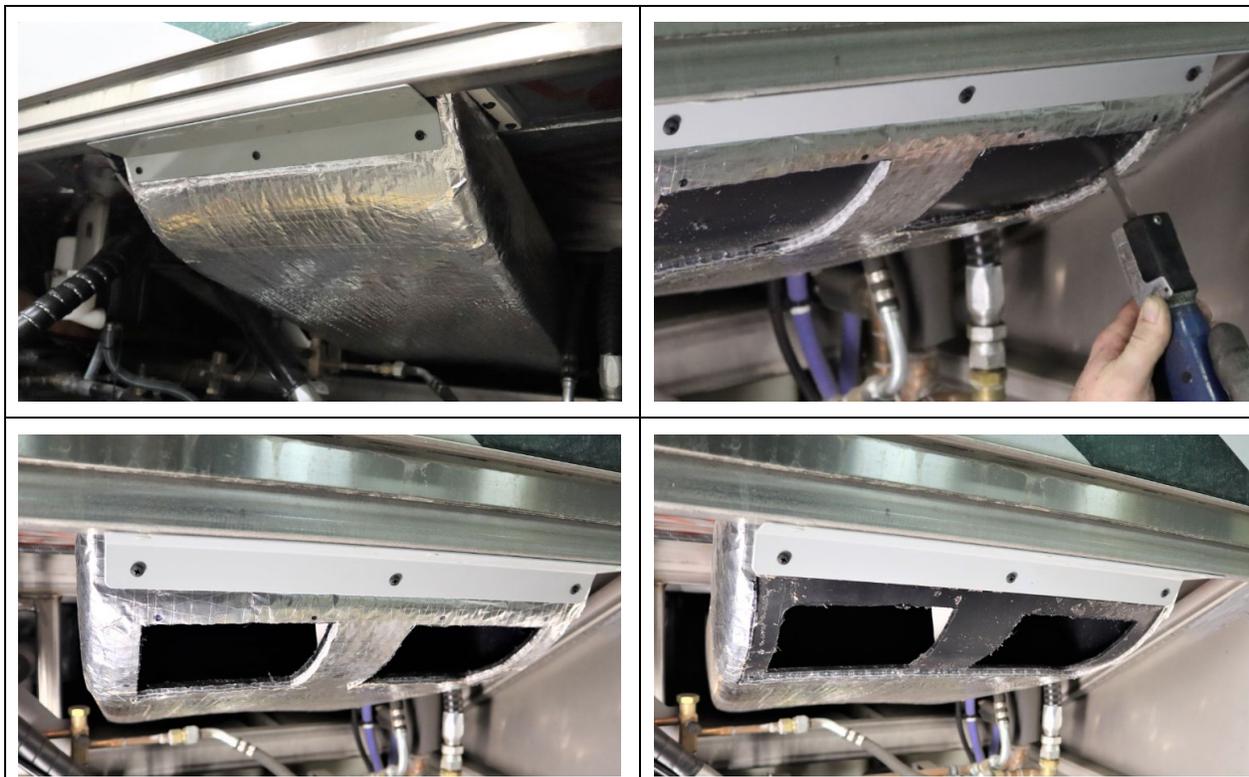




12. Install two plasma cluster modules in the HVAC duct on the condenser side of the vehicle.

- Position the supplied # **454479** template on the top part of the duct (template must contact the upper metal edge).
- Using a sharpie, draw the perimeter of the template on the insulating material.
- Also draw the position of the two inside opening & the position of the 10 support plate screws.
- Cut both marked openings in the duct (cut through the insulating material and the plastic duct).
- Drill all screw marks using a 1/4 inch drill bit.
- Cut the insulating material around the two openings following the previously scribed perimeter mark (do not cut through the plastic duct).





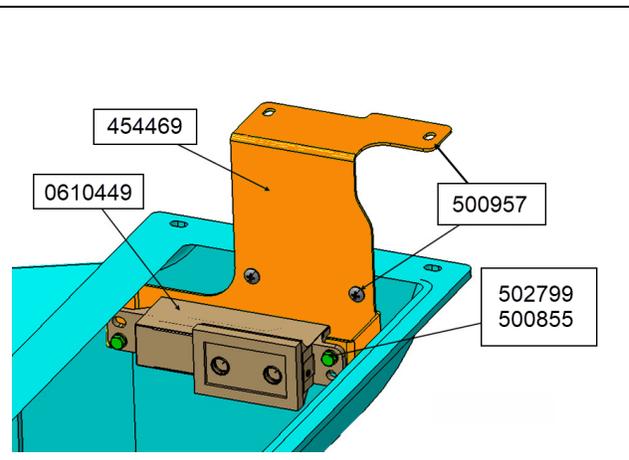
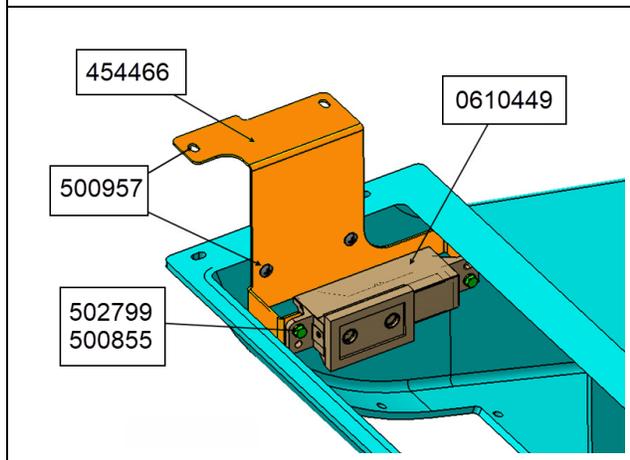
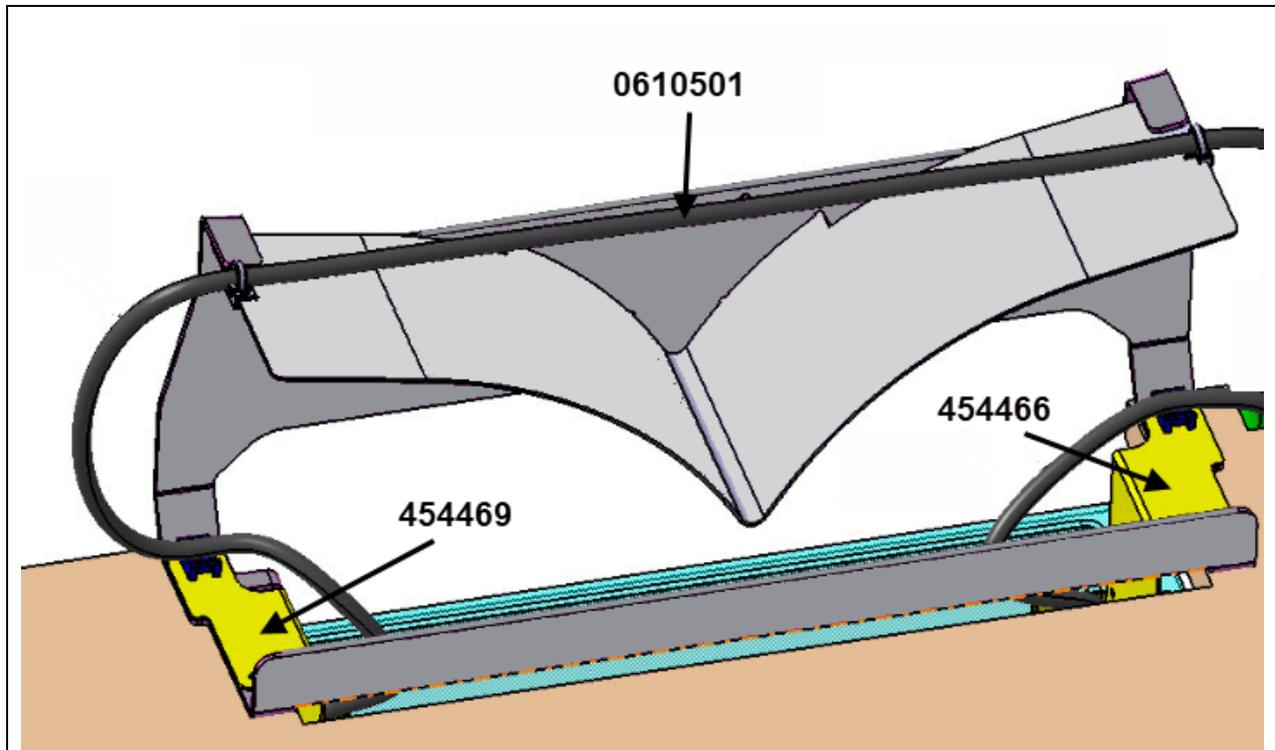
- Inside the vehicle, install the # **454469** and the # **454466** supports on each side of the duct opening. Use 4 supplied # **500957** screws for each support, two on the top and two on the side of the duct.

***IMPORTANT:*** Before the installation of the support remove any sealant accumulation or insulating material that could prevent the straight and square installation of the support.

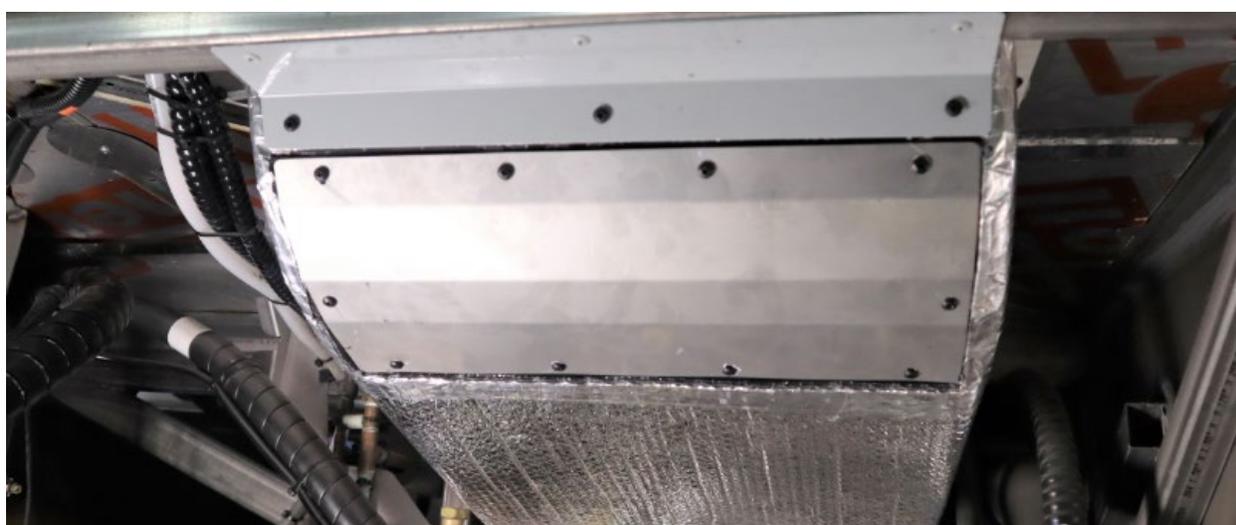
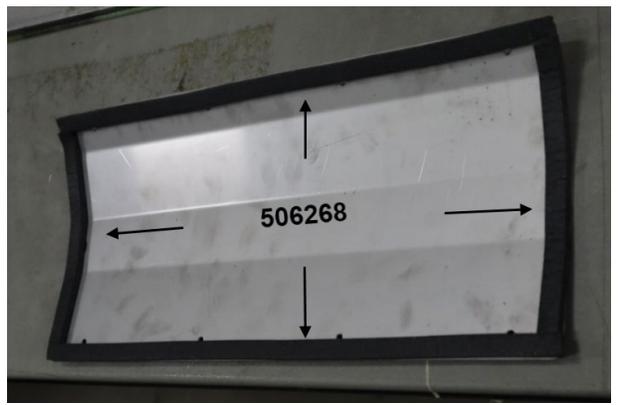
- Install a # 0610449 plasma cluster module to each support using only one loose screw so it can rotate freely (# **502779** & # **500855** screw & washer).
- Pass the connectors **Plasma 7** and **Plasma 8** of the # **061501** harness inside the duct(pass over the diffuser) so they can be reached from the 2 cut openings.

***IMPORTANT:*** Make sure the connectors wires are passing away from any sharp edge.

- Connect the **Plasma 7 & 8** connectors at the back of the plasma cluster modules (order is not important).
- Install the missing # **502799** screws and # **500855** washers and secure the modules to the support (*do not overtight*).



- Apply a length of supplied # **506268** foam tape around the edges of the # **454471** condenser duct cover.
- Install a # **5002071** spring nut at each screw position around the duct openings.
- Close the duct opening with the # **454471** cover and 10 # **500957** screws.
- Optional, stick some insulating material back to the cover using spray contact cement or aluminum conduit tape.



13. Route the **Plasma 9** & the **Plasma 10** connectors inside the right (condenser side) parcel rack frame.

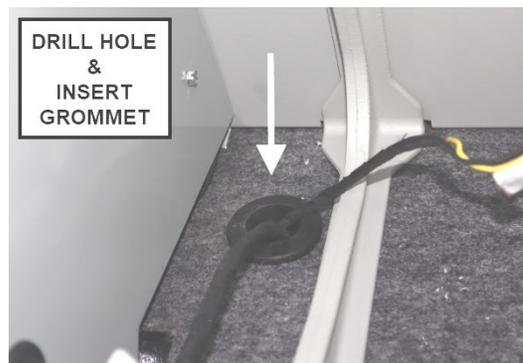
- Remove the window pillar cover and the parcel rack HVAC cover.
- Remove the wall upper and lower rails fasteners in the pillar area
- Fish connectors **Plasma 9 Plasma 10** from the deflector area up to the base of the window (pass behind the carpeted lateral panel).
- Pass the connectors wiring along the window pillar up to the underside of the parcel rack.
- Pull out the connectors from the upper grommet in the parcel rack floor (next to the HVAC unit).

### NOTE

*In some vehicles not equipped with parcel rack doors, the hole & grommet may not be present. In this case, the hole must be drilled using a suitable hole saw and the provided # 504534 grommet.*



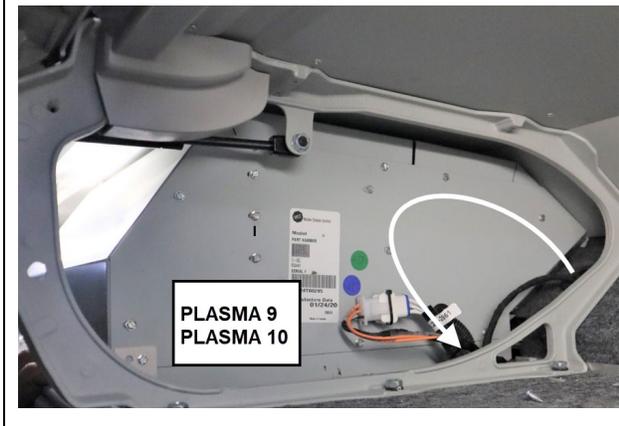
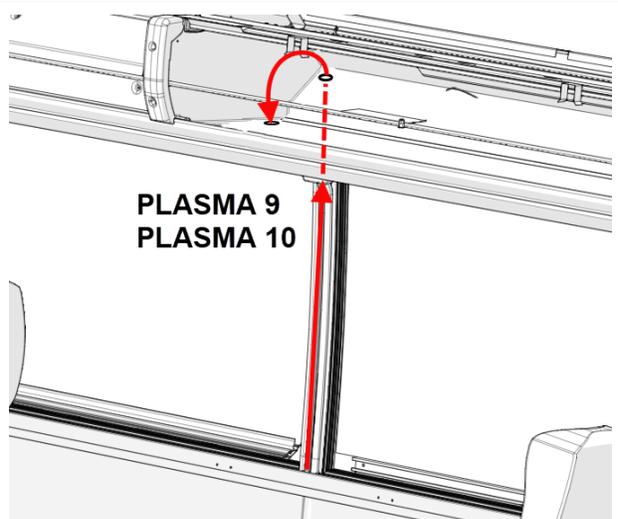
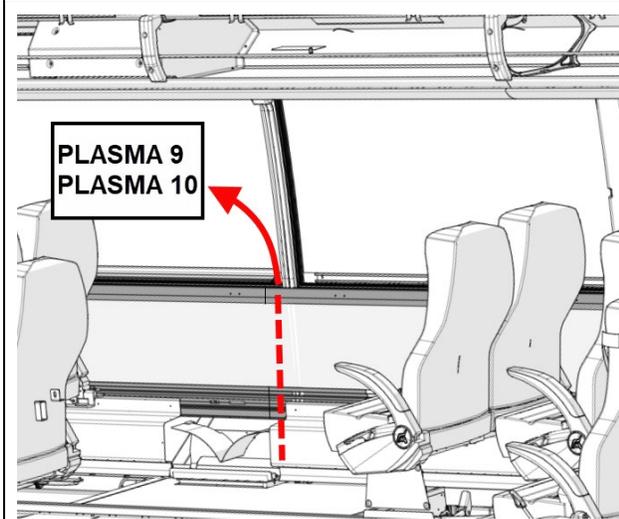
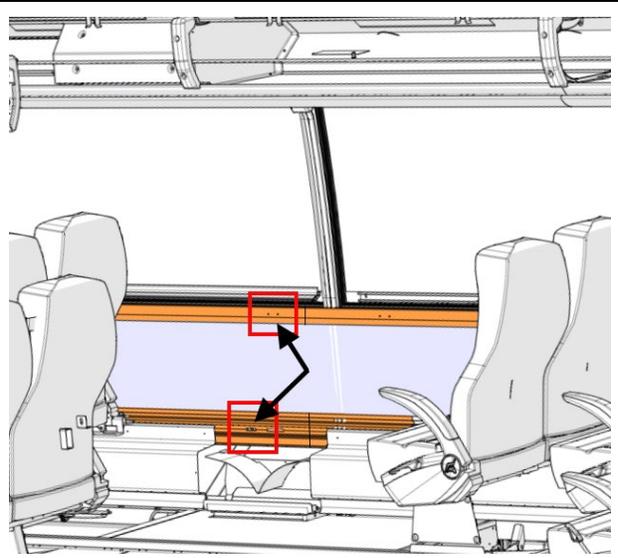
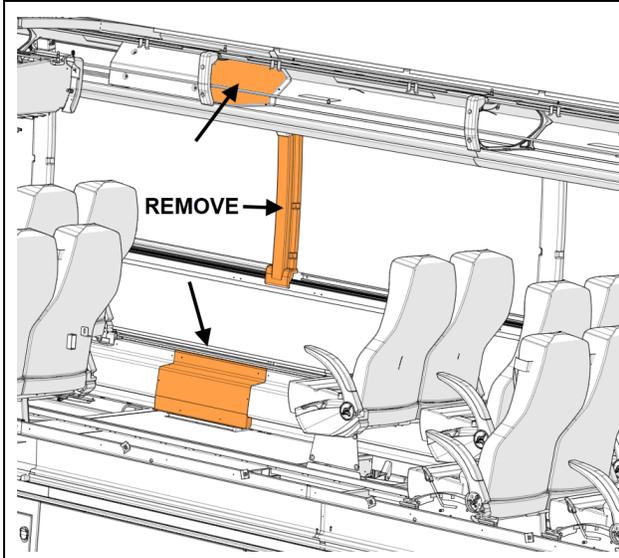
# 505534



On vehicles equipped with a wheelchair lift (WCL) the front WCL door pillar and lower cover must be removed.

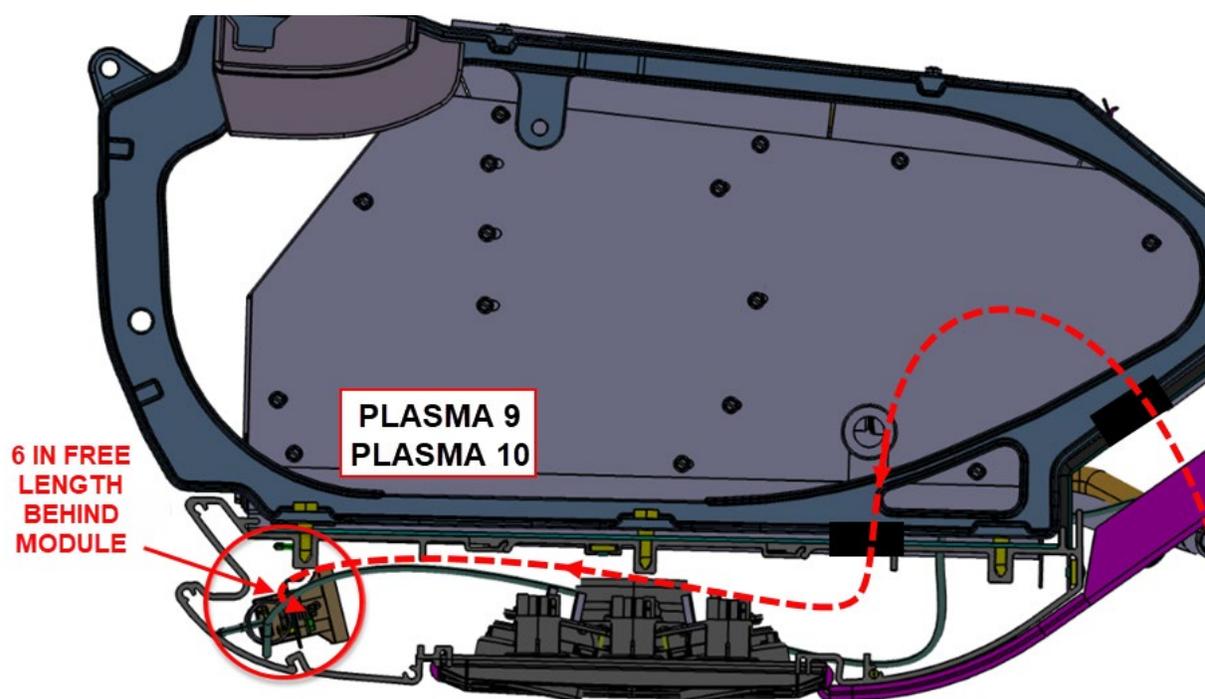
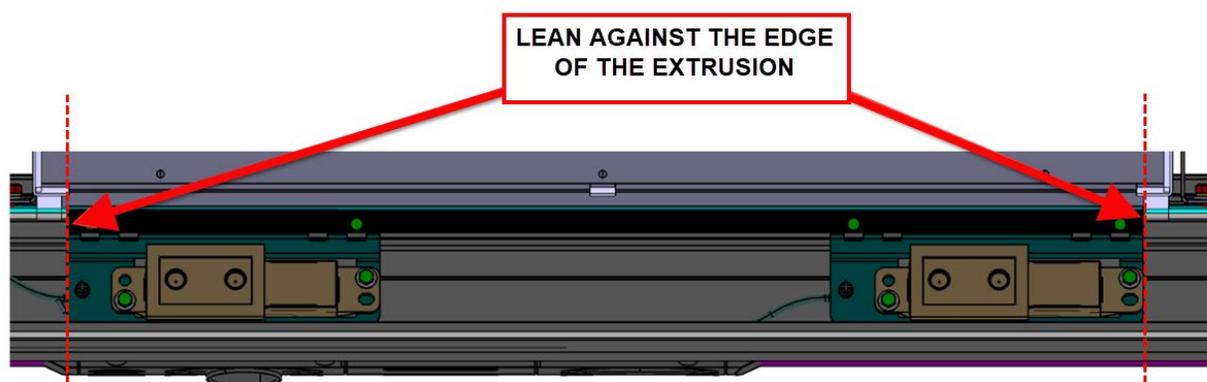


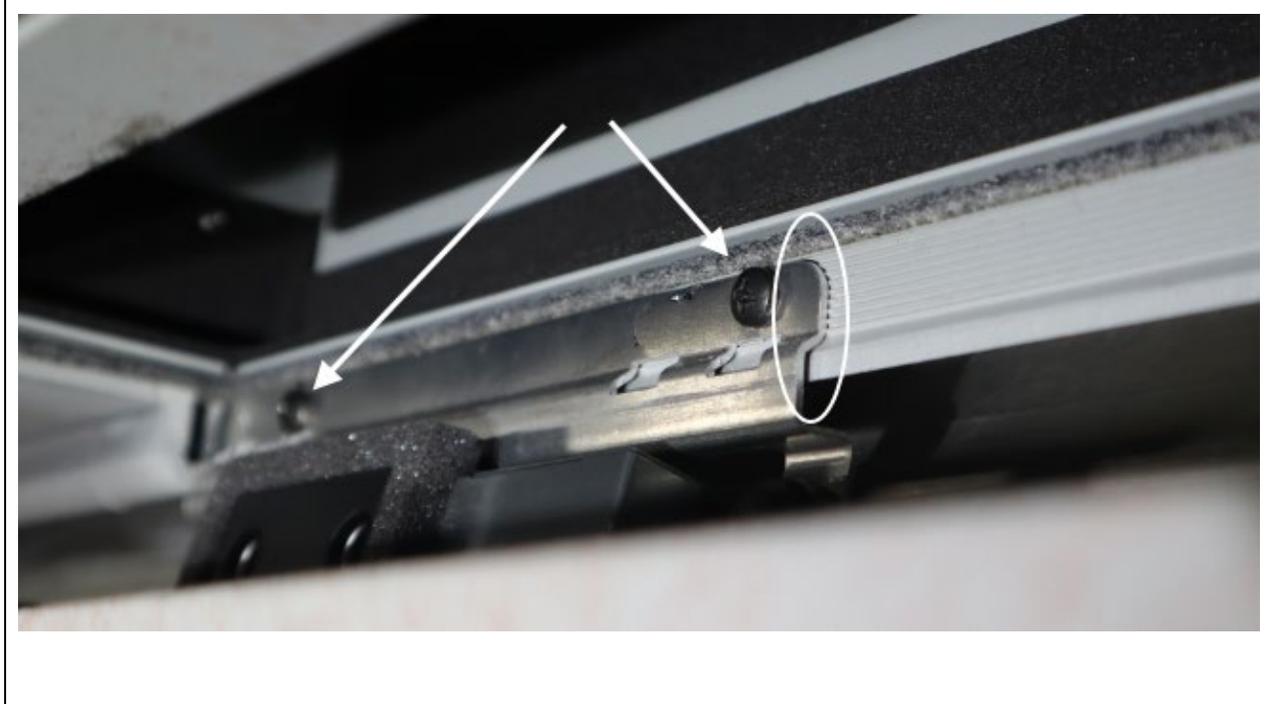
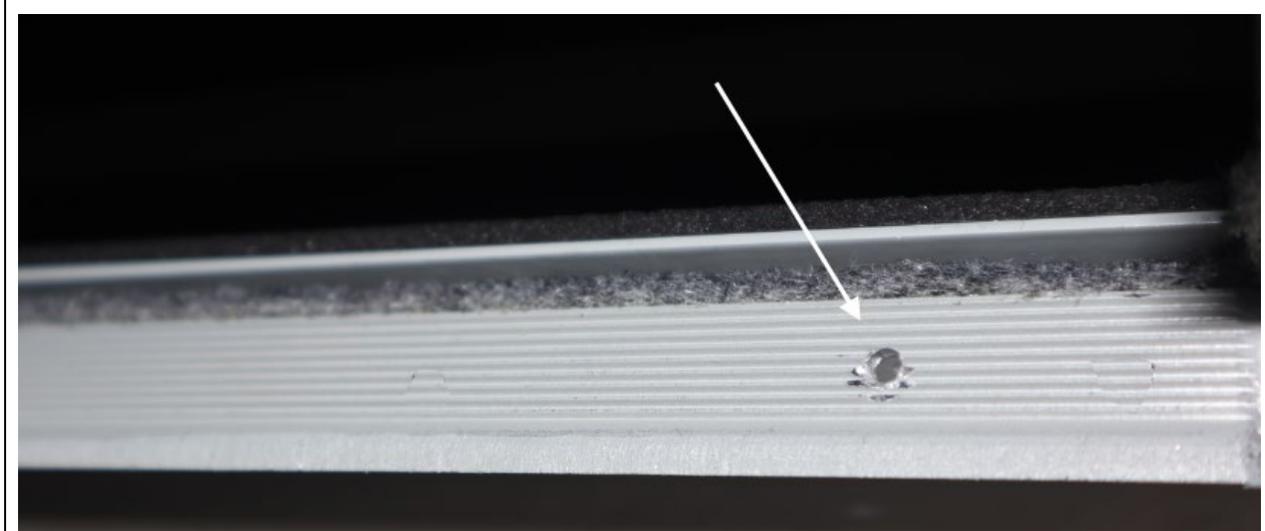
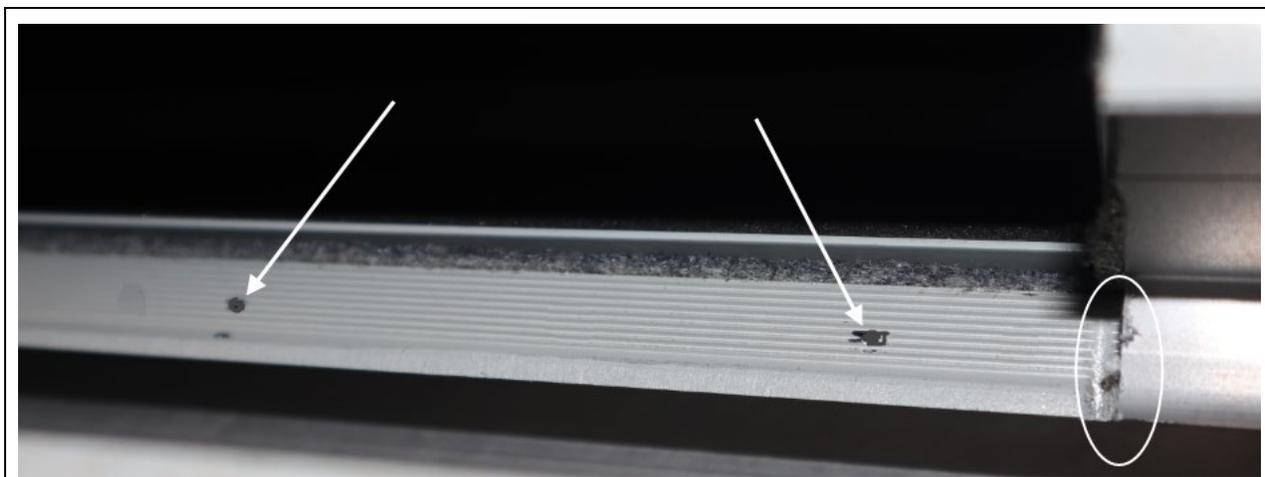
- Pass the connectors in the lower floor grommet (HVAC harness grommet).
- Remove the over head light/register console to access the connector from under the parcel rack HVAC unit.



14. Install 2 plasma cluster modules # **0610449** in the area below the right parcel rack HVAC unit.

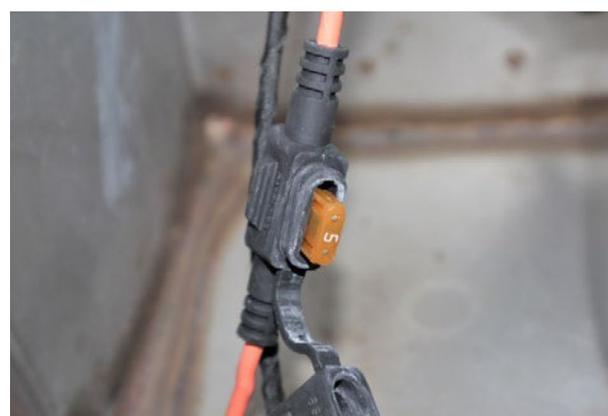
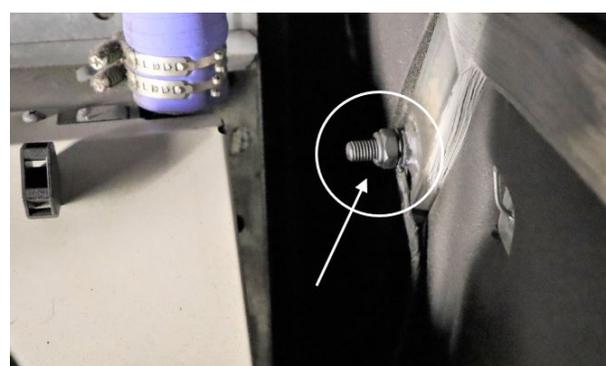
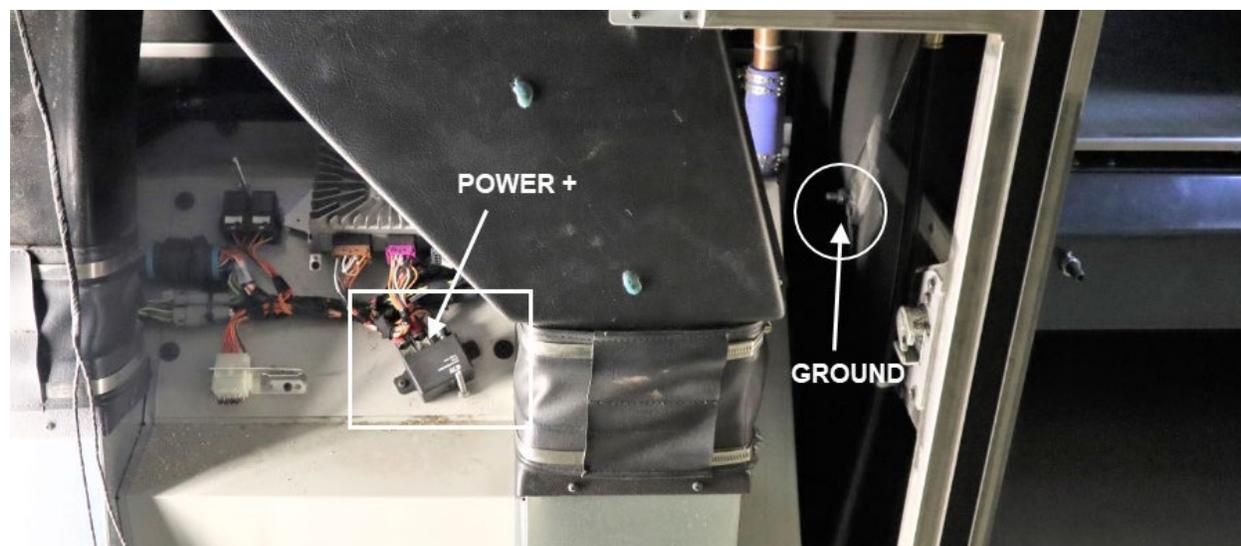
- With a sharpie, mark the location of the # **314937** supports (2X) on the inner parcel rack rail. Both supports must contact the extrusion edges, one on both sides (the support back shape must fit the ribbed extrusion profile horizontally as shown).
- Drill the 4 mounting points for a # 8 screw (1/8 or 9/64th inch drill bit).
- Install 2 of the supplied # **0610449** plasma cluster modules on the supports using supplied # **502799** screws and # **500855** washers.
- Connect the **Plasma 9** and the **Plasma 10** connectors (previously routed to the underside of the parcel rack) to the two modules. Leave +/- 6 inches of wire behind the module to ease future removal / installation during maintenance.
- Secure the supports (and modules) to the extrusion using the supplied # **500443** screws.



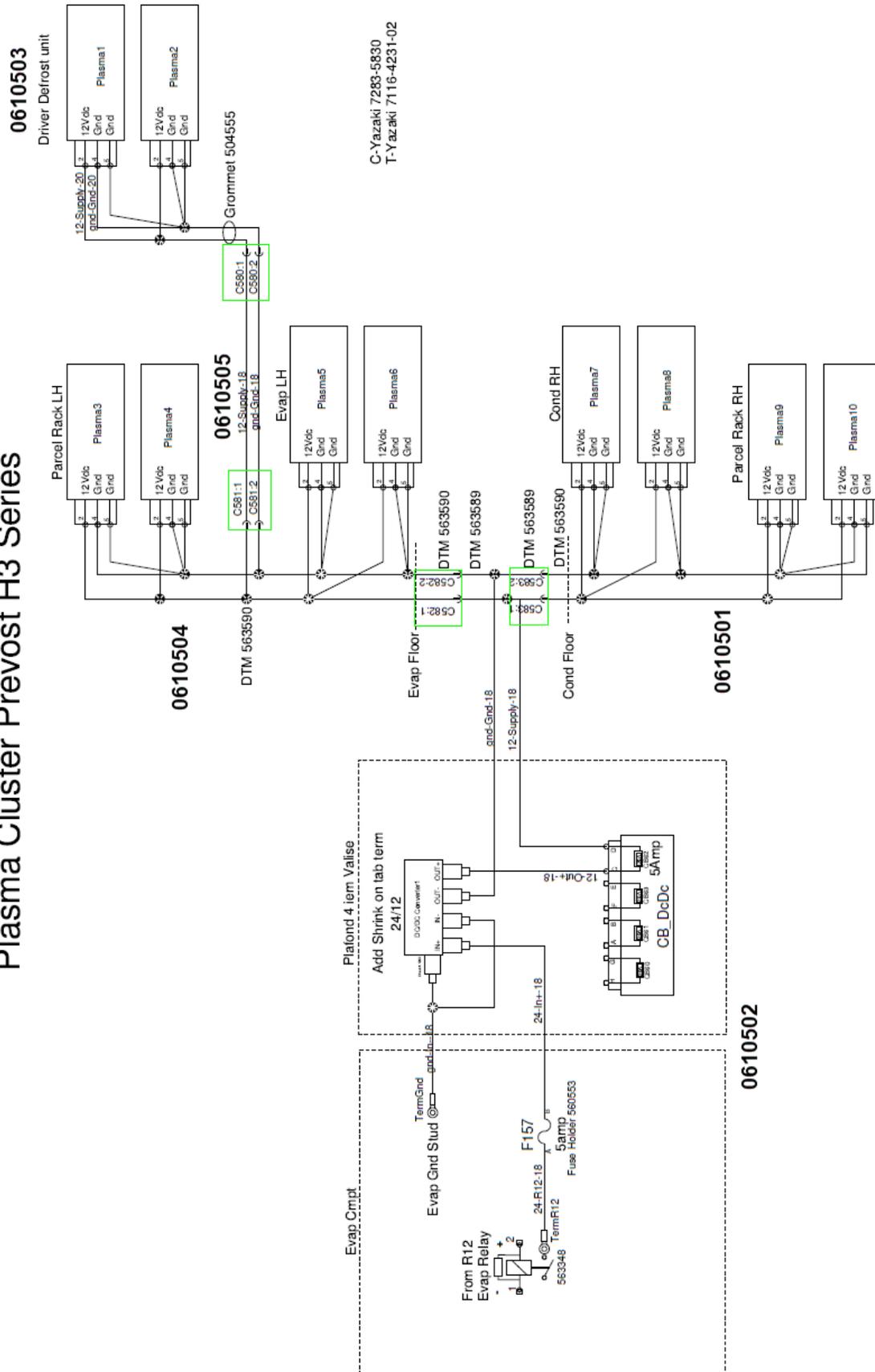


15. Connect the plasma cluster system to the vehicle power source.

- In the evaporator compartment, locate the R12 relay and the ground stud on the firewall.
- Connect the power terminal of the plasma cluster system to the middle terminal of the R12 relay.
- Connect the ground terminal of the system to the ground stud.
- Make sure both 5 amp fuses in the system are good before powering the vehicle.
- Reinstall all trim parts and seats in the vehicle and proceed with the test procedure at the end of this document to ensure proper function.



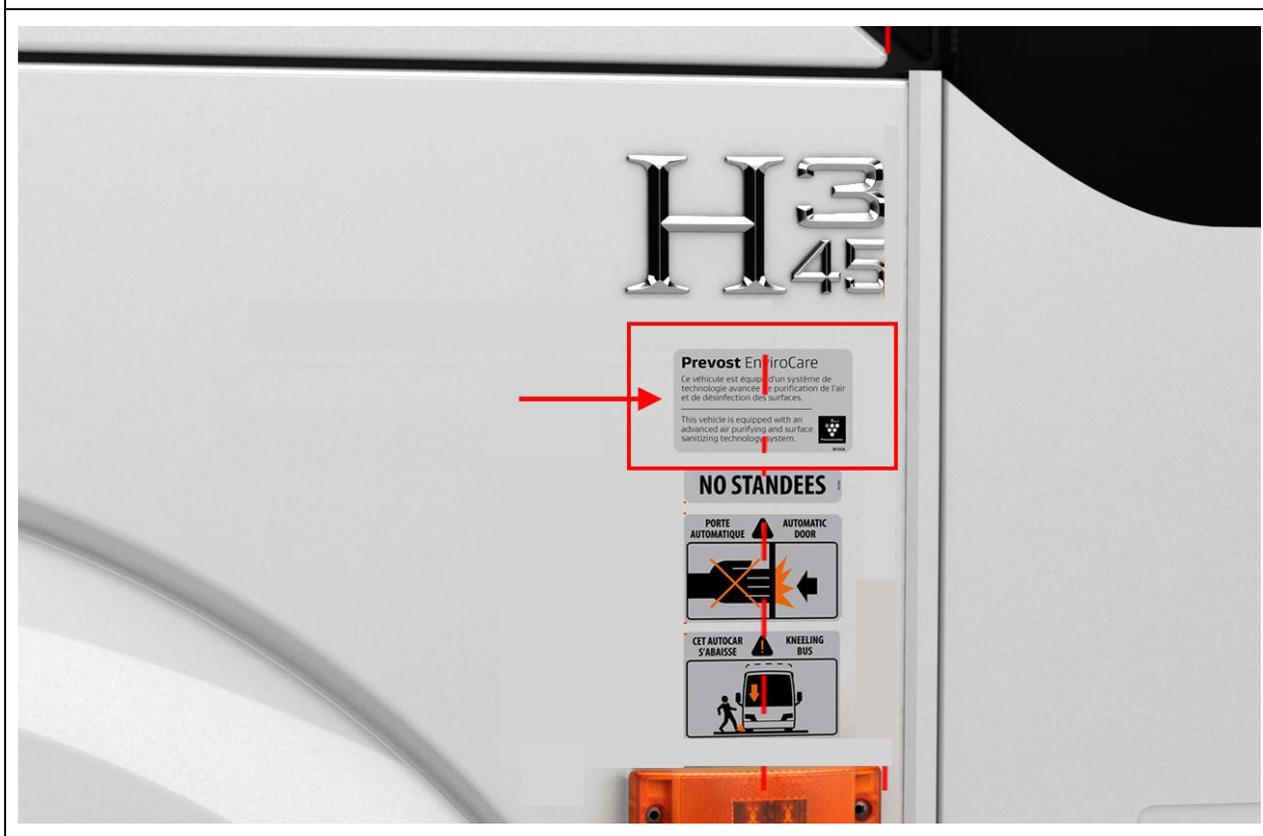
# Plasma Cluster Prevost H3 Series



16. Apply the Prevost EnviroCare decal on the vehicle body.

- Clean the area just behind the H345 crest near the entrance door. Use isopropyl alcohol or anti silicone (Some other decals may also be present in the area).
- In Canada, carefully apply the bilingual decal # **0610528** just above any already installed factory decals (leave around 10mm gap between decals).
- In the United States, carefully apply the english decal # **0611019** just above any already installed factory decals .Leave around 10mm gap (3/8in) between decals.

**IMPORTANT:** Make sure the surface is clean and dry. Do not apply in cold temperature, heat the area as necessary to ensure proper adhesion.



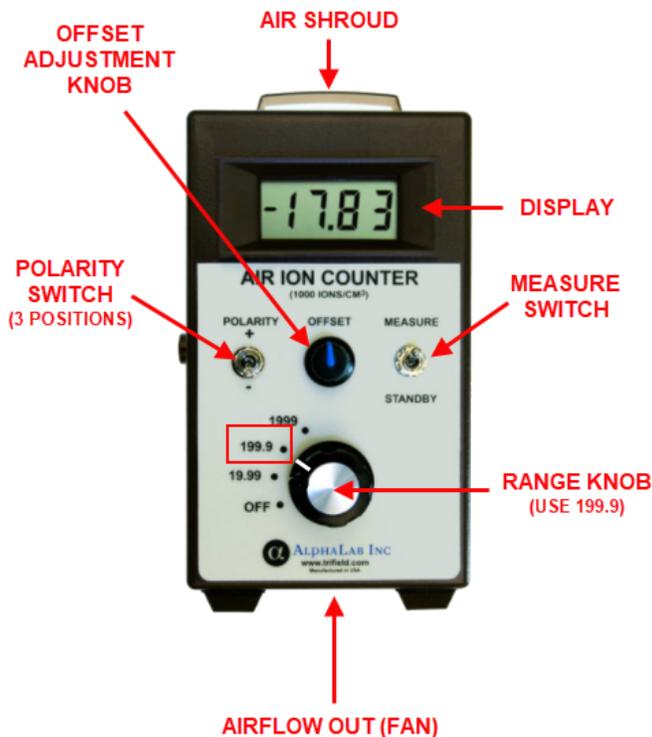
## PLASMA CLUSTER INSTALLATION - IN VEHICLE TESTS

### TESTER CALIBRATION

1. To operate the meter, flip the POLARITY switch to its center position, halfway between "+" and "-", and the MEASURE switch to the STANDBY position.
2. Turn the RANGE knob to the 199.9 position.
3. Wait until the display becomes stable to within +/-2 counts. This will take about 10 seconds after the meter is turned on.
4. Adjust the OFFSET knob so that the display reads zero +/- 2 counts (+/- 0.02). After this step, the OFFSET might not need to be readjusted again, ever. However, it should be checked at the beginning of each measurement session or if the temperature changes significantly.

### **NOTE**

*If you change the knob to another range like "19.99", you will not need to readjust the OFFSET.*

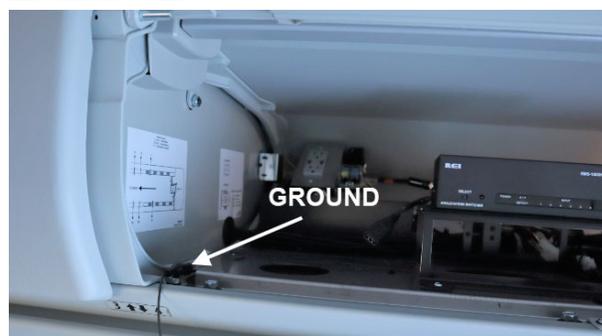


## TEST POINTS & EXPECTED RESULTS:

### AT LOWER WINDOW EXITS

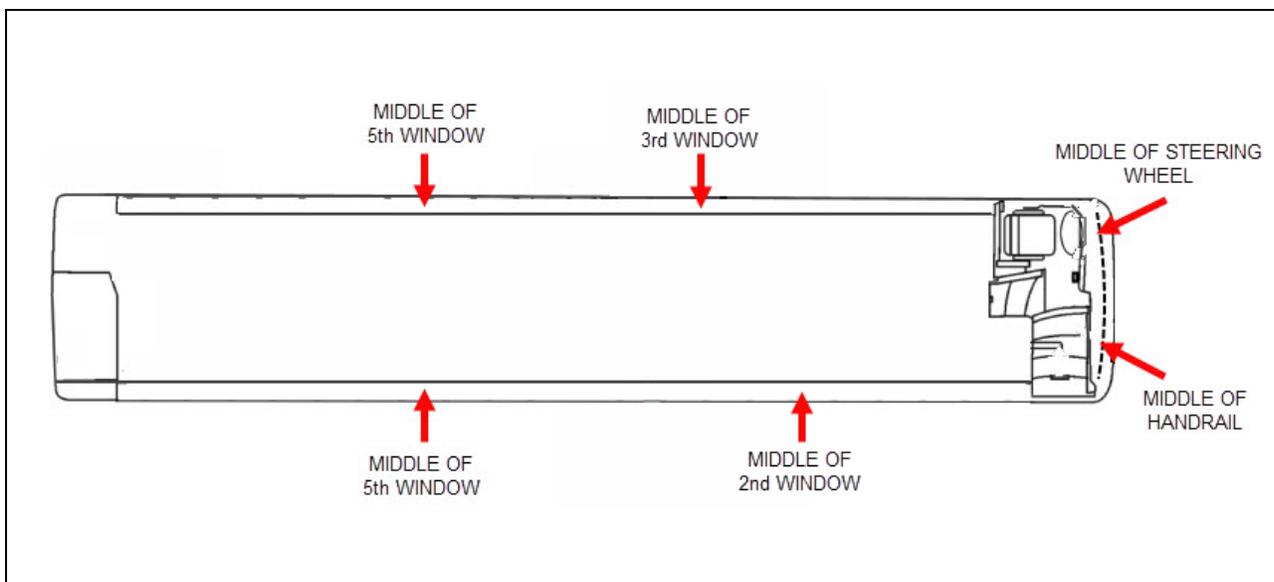
1. At the lower window height, the removable air shroud must be removed for accurate measurements.
2. Ground the tester to the Audio/Video mounting plate in the first parcel rack or the AC unit bodies in the parcel racks.
3. Flip the POLARITY switch to whichever polarity ("+" or "-") you want to measure (the MEASURE switch set at the STANDBY position). Wait for the display to become stable.
4. Wait at least 10 seconds after flipping the POLARITY switch then flip to the MEASURE position (switch upward). This will turn on the fan.
5. Place the tester opening in the middle of the airflow exiting from the grille.
  - Take a reading in the center of the steering wheel.
  - Take a second measurement in the middle of the entrance handrail.
  - On the curb side of the vehicle, take a reading in the middle of the 2<sup>nd</sup> and the 5<sup>th</sup> windows.
  - On the curb side of the vehicle, take a reading in the middle of the 3<sup>rd</sup> and the 5<sup>th</sup> windows.
6. At the 199.9 scale, the readings should top off and read  $-I$  (INFINITE).

On vehicles equipped with a *Wheel Chair Lift*, a slightly lower reading of 150+ is acceptable at the 5<sup>th</sup> window (behind the WCL).



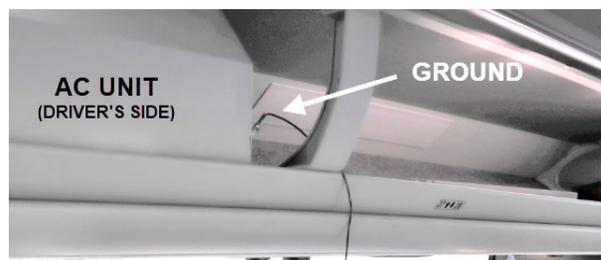
### WARNING !

Make sure that the tester airflow (rear fan area) is not blocked by either your hand, body, vehicle component (Ex: steering wheel) or other solid object.



### **AT PARCEL RACKS OVERHEAD AIR REGISTERS**

1. At the overhead registers, the removable air shroud must be removed for accurate measurements.
2. Ground the tester to the AC unit body in the parcel racks.
3. Flip the POLARITY switch to whichever polarity ("+" or "-") you want to measure (the MEASURE switch set at the STANDBY position). Wait for the display to become stable.
4. Wait at least 10 seconds after flipping the POLARITY switch then flip to the MEASURE position (switch upward). This will turn on the fan.



#### ***WARNING !***

*Make sure that the tester airflow (rear fan area) is not blocked by either your hand, body, vehicle component (Ex: steering wheel) or other solid object.*

5. Place the tester opening in the airflow stream exiting from the register grille.

- Take a reading at the register right in front of the AC unit.
- Take a reading at the register located just after the AC unit.
- Do both sides of the vehicle (4 readings total).

6. At the 199.9 scale, the reading should top off and read -/ (INFINITE).

