MAINTENANCE INFORMATION

MI20-84A

DATE : 10	June 2020	SECTION : 18 BODY
SUBJECT :	**FRONT PANEL, CENTRAL REINFORCEMENT INSTALLATION**	

Revision: A Material: Coolant was 20358716, is 685241. 09-03-2020

IMPORTANT NOTICE
This modification is recommended by Prevost to increase your vehicle's performance. Note that no reimbursement will be awarded for carrying out this modification.

APPLICATION

Model
Volvo 9700 Model Year : 2008 - 2019

DESCRIPTION

Windshield center pillar reinforcement plate installation to avoid cracks at glass.

MATERIAL

Include the following parts:

Part No.	Description	Qty
23811261	L-PROFILE, DASHBOARD, SUPPORT	1
685124	SIMSON ISR 70-03 (BLACK)	250 ml
948702	CABLE TIE	A/R
949902	CABLE TIE	A/R
685241	COOLANT 50/50 PREMIX, CHEVRON DELO ELC	A/R
21133962	WINDSHIELD SEALING MOLDING	1

NOTE
Material can be obtained through regular channels.

PROCEDURE

DANGER

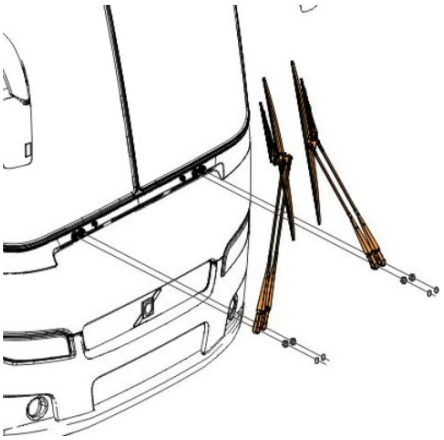
Park vehicle safely, apply parking brake, stop engine. In the battery box, set the battery cut-off switch to the OFF position prior to working on the vehicle.

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.

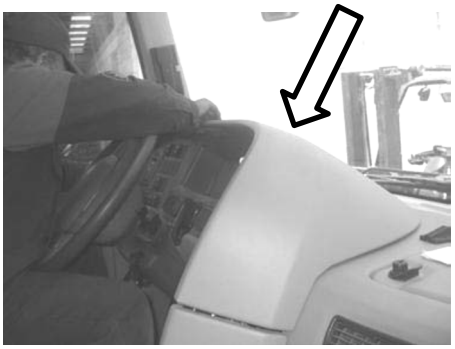
1. Open engine compartment.

2. Perform A/C system recovery. See service operation: 87406-3 Refrigerant, draining; published in IMPACT, as a reference.

3. Remove wipers arms with its wipers blades. See the service operation 36384–2 Windscreen wiper arm, replace; published in IMPACT as a reference.



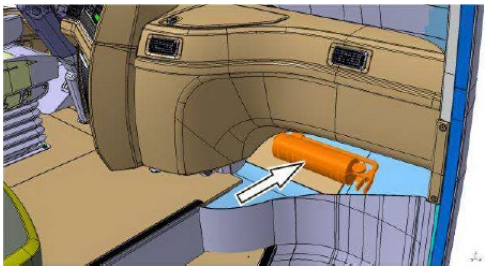
4. Remove dashboard upper cover by unscrew its 8 fixing screws placed around at the cover contour.



5. Remove the windshield (both pieces), according service operation: 84302-2 Windscreen, replace. Published in IMPACT.

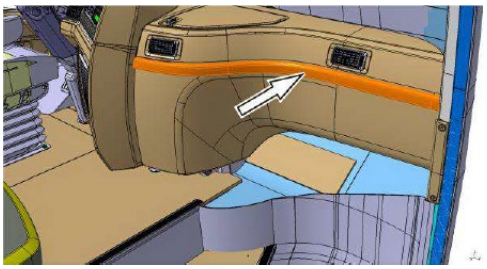
Note: This operation is necessary to avoid crack the windshield pieces, during reinforcement installation.

6. Remove fire extinguisher.



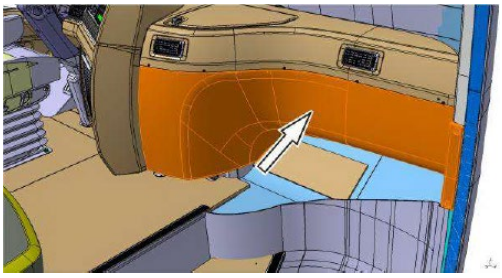
7. Remove guide panel molding.

Note: For removal of the molding, slide it up to unpin the molding from its fixation.



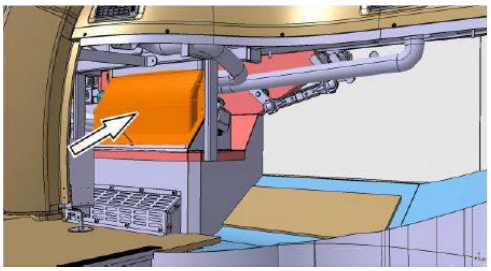
8. Remove guide panel.

Note: For removal, unscrew the 9 fixing screws placed around at the panel contour.



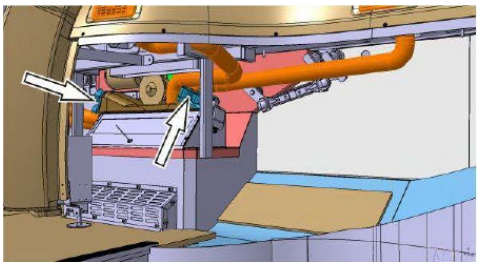
9. Remove defroster air duct.

Note: For removal, unscrew the 10 fixing screws placed at all around the duct.



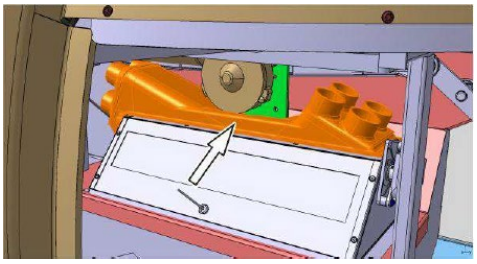
10. Disconnect defroster vent hoses.

Note: For remove, unscrew each hose clamps and remove cable ties as necessary.

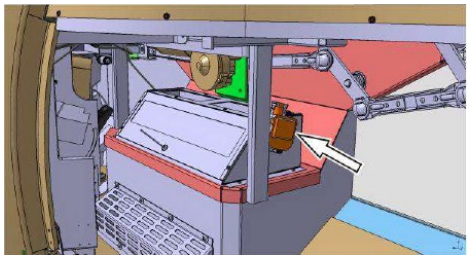


11. Remove defroster air distribution duct box.

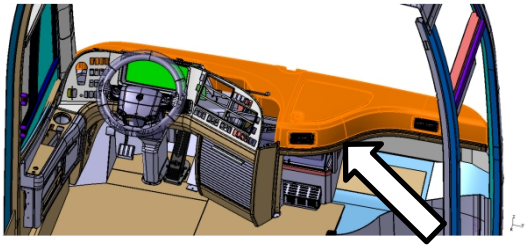
Note: For removal, unscrew the 12 fixing screws placed at all around the distribution box.



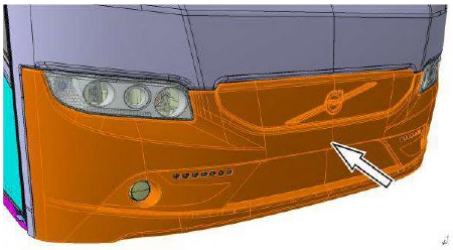
12. Unplug defroster electrical harness.



13. Remove complete dashboard panel assembly.

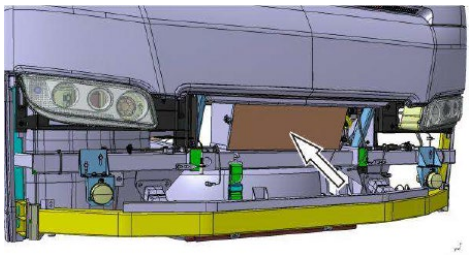


14. Open front hatch.

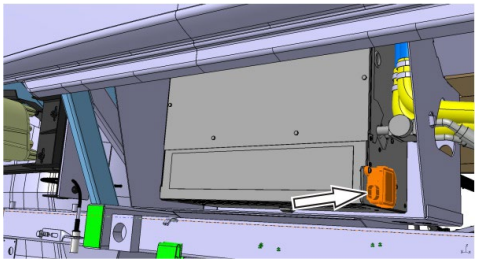


15. Remove defroster compartment front cover plate.

Note: For remove, unhooking the locking pins that secure the cover at the both sides to defroster unit compartment and turn swivel clamps.

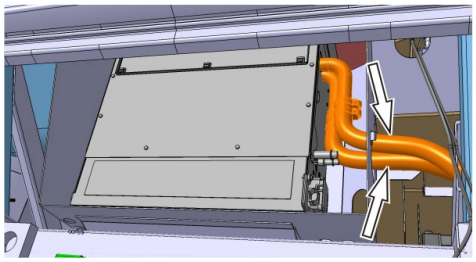


16. Unplug the defroster unit electrical harnesses.

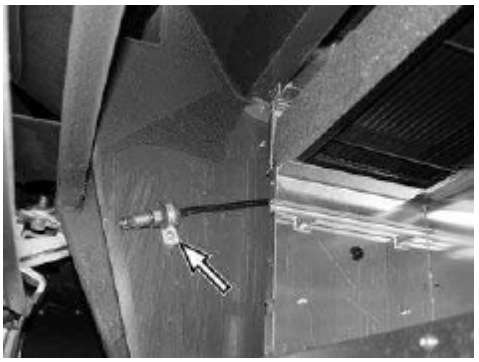


17. Pinch off hoses so no extra coolant is lost.

Use two **1158957 PLIERS**, for pinch off hoses.

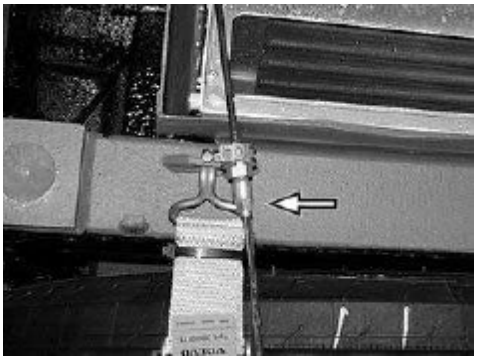


18. Unscrew defroster heater coil bleed valve.

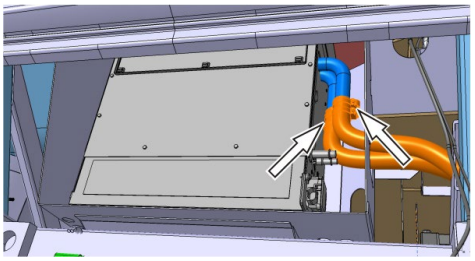


19. Drain coolant from defroster heater coil.

Note: Place a tray for collect the coolant drained.

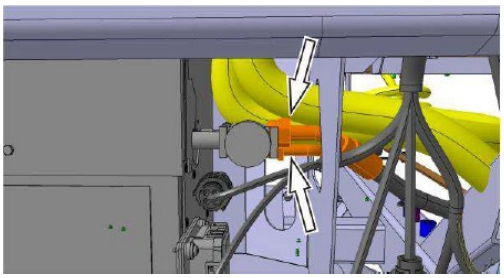


20. Disconnect defroster coolant hoses.



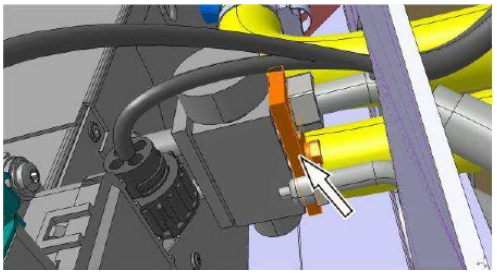
21. Loose defroster A/C system hoses connections.

Note: Do not remove expansion valve from the defroster unit, to avoid replace sealing O-rings with a new ones.



22. Remove defroster expansion valve lower connections lock plate.

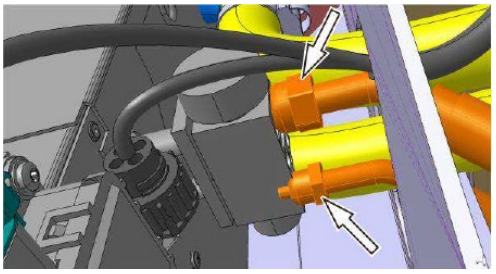
Note: Do not remove expansion valve from the defroster unit, to avoid replace sealing O-rings with a new ones.



23. Plug off A/C system hoses.

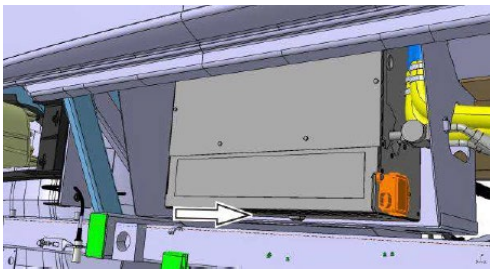
Note: Do not remove expansion valve from the defroster unit, to avoid replace sealing O-rings with a new ones.

Install a caps at the end of both hoses so dirt does not contaminate the A/C system.



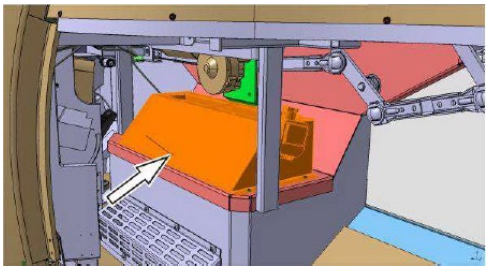
24. Secure defroster unit.

Note: Place a wedge between the defroster unit lower side and at the bottom of its installation compartment, so that the defroster unit does not fall at the moment of disassembling the air distribution box, because the fixing screws simultaneously join both parts.



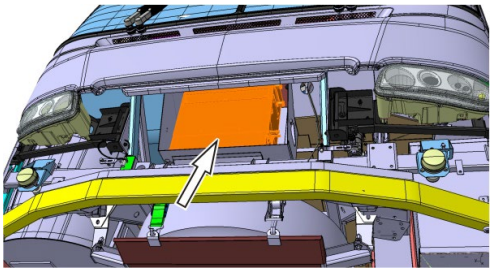
25. Remove defroster air distribution box.

Note: For removal, unscrew the 4 fixing screws, placed at the both sides of air distribution box.



26. Remove defroster unit completely.

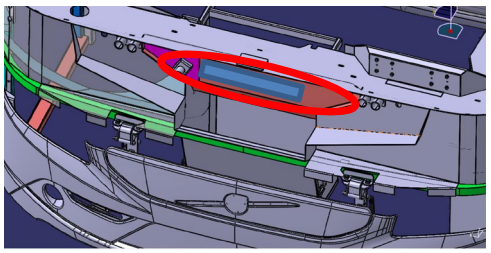
Note: Remove the wedges that was placed between the defroster unit and the bottom of the compartment.



27. Install reinforcement L-profile **P/N: 23811261**. Welded at center and under front plate frame according separately assembly drawing document: **22314124 Frame front section DOT**, see annex on this service document as a reference.

Note: Entrance through space exists when remove defroster unit, in order to weld the reinforcing L-profile under structural plate of the front frame.

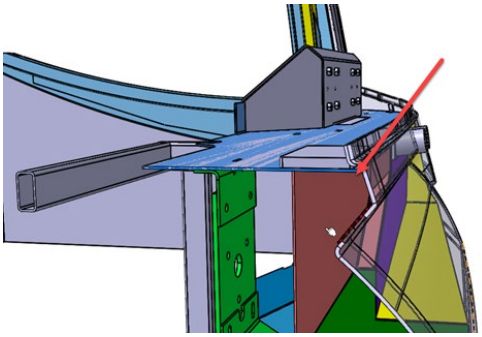
CAUTION: Before weld, you must disconnect all vehicle control modules and batteries. Failure to do this, can result in electrical components damage.



See annex for more information about welding application.

28. Apply adhesive **P/N: 685124**, between at reinforcement plate seating surface side and front panel seating surface, as a reference see: **21242039 Front panel assembly**, drawing attached on annex in this service document.

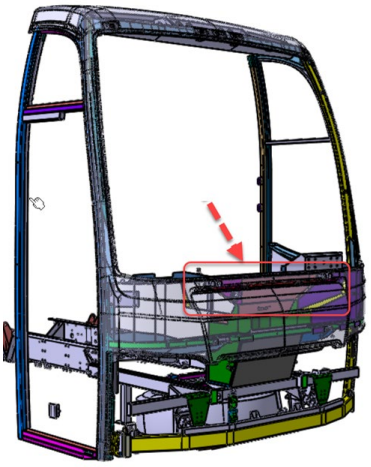
For adhesive application, use: 88890051 LUBRICATING GUN.



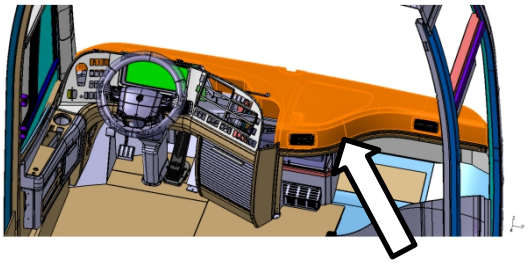
29. Press the front panel to the reinforcement plate using three hand **8 in** C-frame press tools distributed and keep pressure to secure glued process on both parts.

Note: Keep C-frame press tools for over 2 hours as minimum for secure gluing process at both parts with environment temperatures between **41ºF to 95°F**.

See annex for more information about placing C-frame press tools.

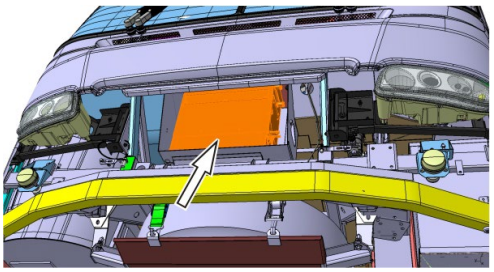


30. Install dashboard panel assembly.



31. Install the defroster unit on the vehicle.

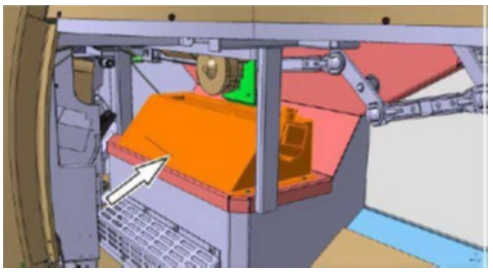
Note: For install the new defroster complete unit, place a wedge between the defroster unit lower side and at the bottom of its installation compartment, so that the defroster unit does not fall at the moment of assembling the air distribution box, because the fixing screws simultaneously join both parts.



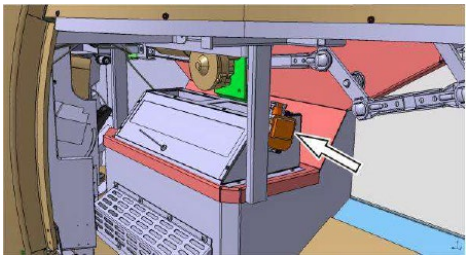
32. Install defroster air distribution box.

SPECIFICATION: Tighten the defroster unit and air distribution box assembly fixing screws, applying the following torque: 6 N-m.

Use: 88890148 TORQUE WRENCH.

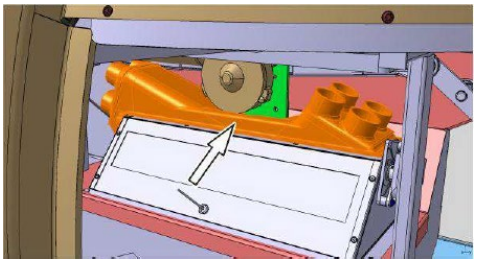


33. Plug defroster electrical harness.



34. Install defroster air distribution duct box.

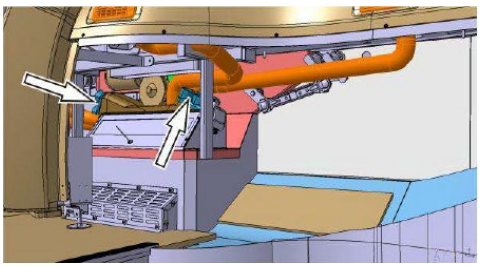
Note: Tighten firmly the air distribution duct box fixing screws on the defroster unit.



35. Connect defroster vent hoses.

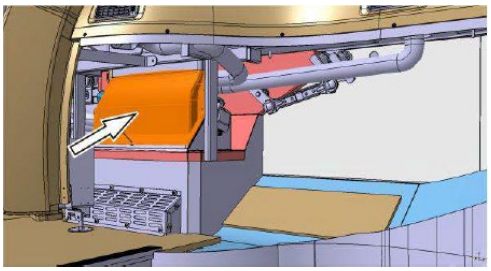
Note: Tighten firmly the defroster ventilation hoses clamps and make sure the hoses are not kinked so the air flow is still good.

Place a new cable ties for fix the defroster vent hoses as necessary. Use: 949902 CABLE TIE.



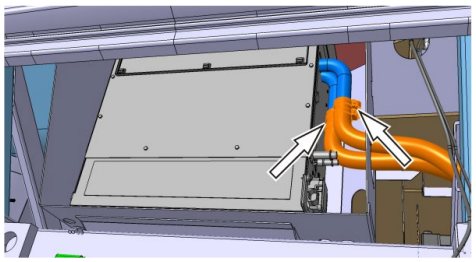
36. Install defroster air duct.

Note: Tighten firmly the defroster air duct fixing screws.



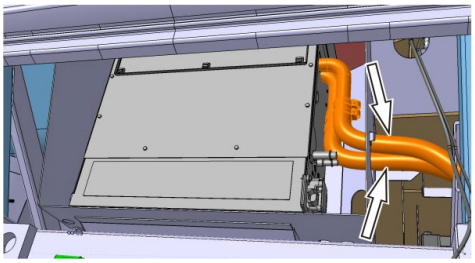
37. Connect defroster coolant hoses.

Note: Tighten firmly the both hoses clamps.



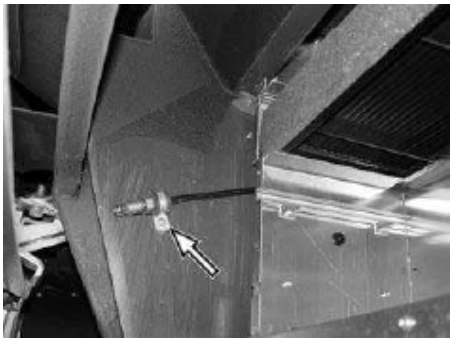
38. Release defroster coolant hoses.

Note: Check there are not leaks on the defroster heater connection ports. If leakages presents; these must be repair immediately.

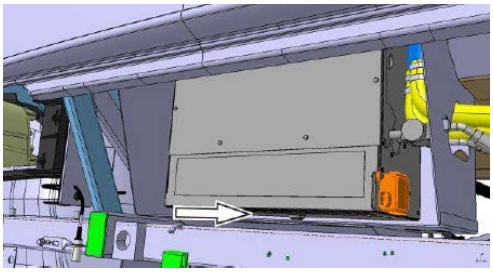


39. Fix defroster heater coil bleed valve.

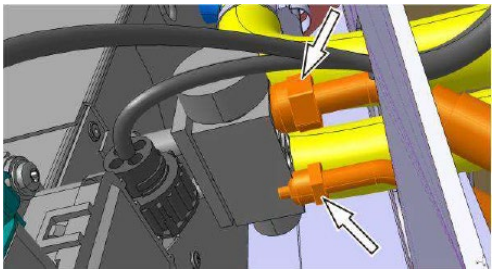
Note: Tighten firmly the bleed valve fixing screw.



40. Remove the wedge was placed between defroster unit and at the bottom of its installation compartment for secure the defroster unit during air distribution box installation.

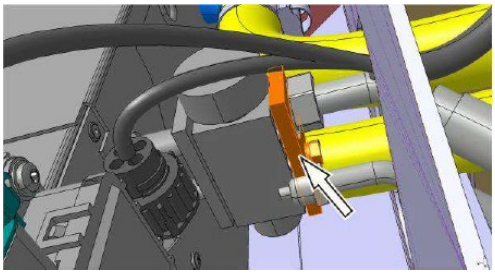


41. Connect defroster A/C system hoses.



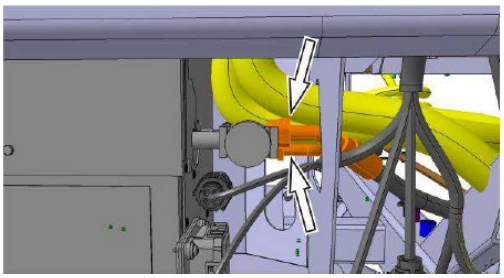
42. Install defroster expansion valve lower connection lock plate.

Note: Tighten firmly the connections lock plate fixing screw.



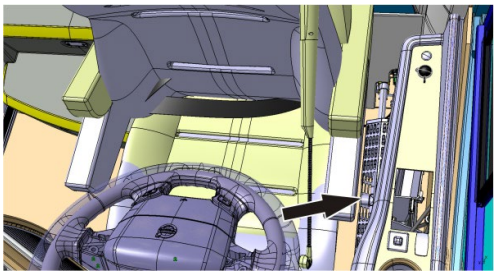
43. Tighten defroster A/C system hoses connections.

Note: Tighten firmly the A/C system hoses connection nuts.



44. Close flux valve for driver area heating circuit.

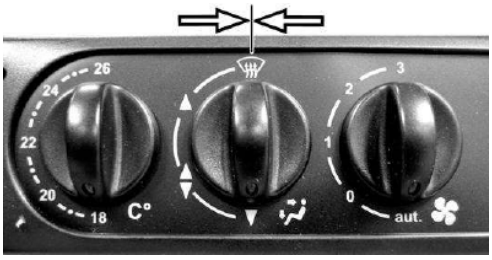
Note: For maximize the flow through the defroster heating circuit when purging.



45. Turn ON the vehicle.

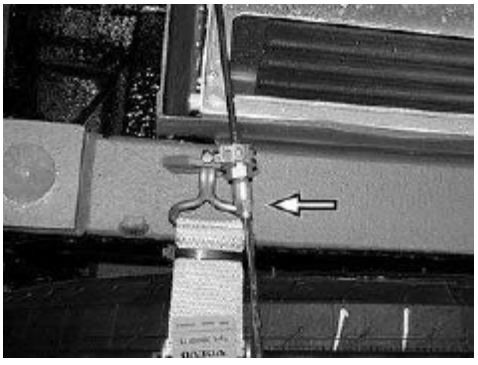
46. Start engine and increase the idle to 1500 rpm in order to perform the defroster heating system bleeding.

47. Turn ON the climate system by turning the air director knob so that it points up to the de-icing position, in this position the heater valve is fully open which simplifies purging.



48. Bleed defroster heating system.

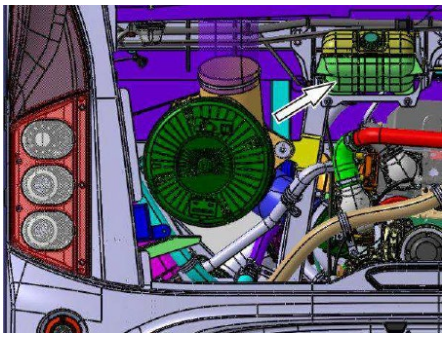
Note: Place a tray for collect the coolant drained.



49. Check the coolant fluid level in the expansion tank.

Note: Fill up coolant fluid if necessary.

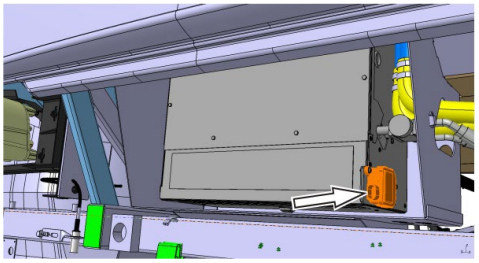
Use: 20358716 COOLANT 50/50 PREMIX, CHEVRON ELC W/ NITRITE



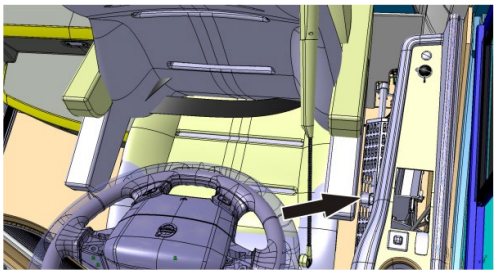
50. Shut OFF engine.

51. Plug defroster unit electrical harnesses.

Note: Put a new cable ties as required for fix the defroster electrical harness. Use: 948702 CABLE TIE



52. Open flux valve for driver area heating circuit.

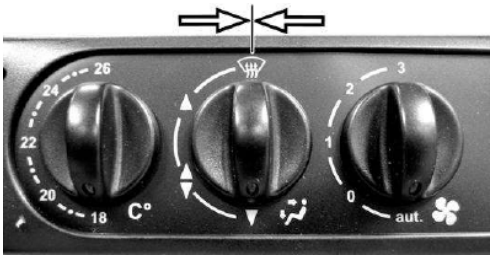


53. Perform A/C system refrigerant filling. See service operation: 87001-3 Refrigerant air conditioning system, fill; published in IMPACT, as a reference.

Note: Within refrigerant filling procedure, system vacuuming process must be carried out.

54. Start the engine and increase the idle to 1500 rpm in order to perform the A/C system refrigerant filling.

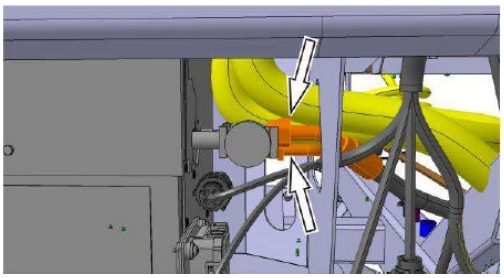
55. Set climate system at 64°F by turning the air director knob so that it points up to the driver position. Also; turning the temperature set knob, in this position the evaporator valve is fully open which simplifies the performing the A/C system refrigerant filling.



56. Check defroster A/C system refrigerant leakages.

Note: IF you detect any leaks of refrigerant at the defroster expansion valve you must repair immediately.

Use: 88800486 REFRIGERANT GAS LEAKS DETECTOR



57. Check defroster proper operation.

Check the defroster cooling proper operation on driver area.

For check the defroster heating proper operation, perform the following steps:

— Turn ON the climate system by turning the air director knob so that it points up to the de-icing position (in this position the heater valve is fully open).

— Check the defroster heating proper operation.

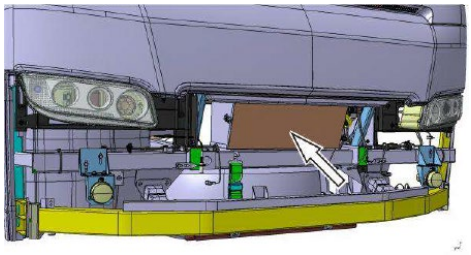
— Also check that heat is available in all circuits of the passenger's compartment.

58. Turn OFF climate system.

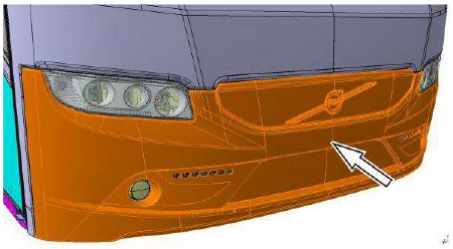
59. Shut down engine.

60. Turn OFF the vehicle.

61. Install defroster front plate.



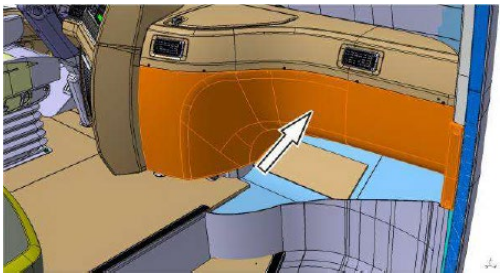
62. Close front hatch.



63. Close engine compartment.

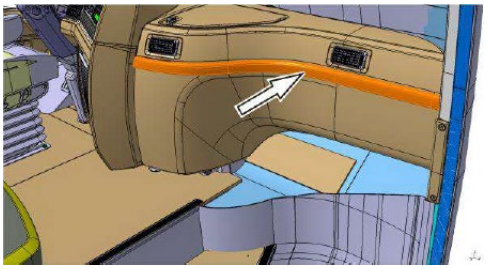
64. Install guide panel.

Note: Tighten firmly the guide panel fixing screws.

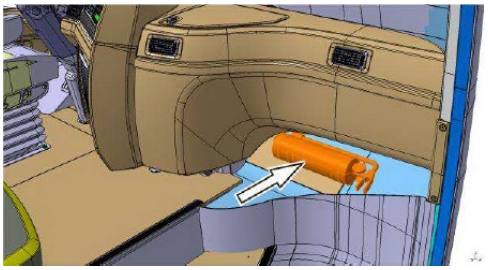


65. Install guide panel molding.

Note: For molding install, sliding down it to pin molding on its fixations.

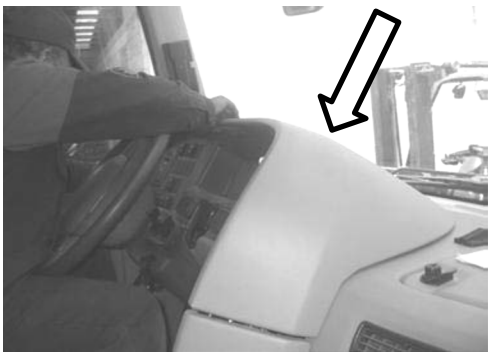


66. Install fire extinguisher.



67. Install dashboard upper cover by screw its 8 fixing screws placed around at the cover contour.

Note: Tighten firmly upper cover fixing screws.



68. Install the windshield, according service operation: 84302-2 Windscreen, replace. Published in IMPACT.

Note: Replace windshield sealing molding by a new.

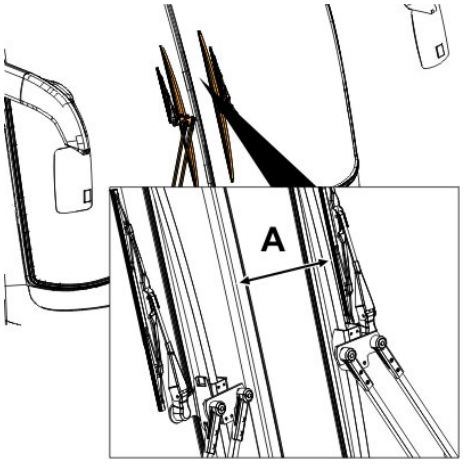
Use: **P/N: 21133962 WINDSHIELD SEALING MOLDING**.

69. Install wipers arms.

Note: See service operation: 36384-2 Windshield Wiper Arm, Replacement, published in IMPACT as a reference.

For correct install position, it must exist a distance of: **102 +/-13 mm (A)**, between the windshield pillar center and the wiper blade center, (this is for both wiper arms).

Tighten wiper arms fixing nuts applying: 35 to 45 N-m. Use torque wrench 88890148.



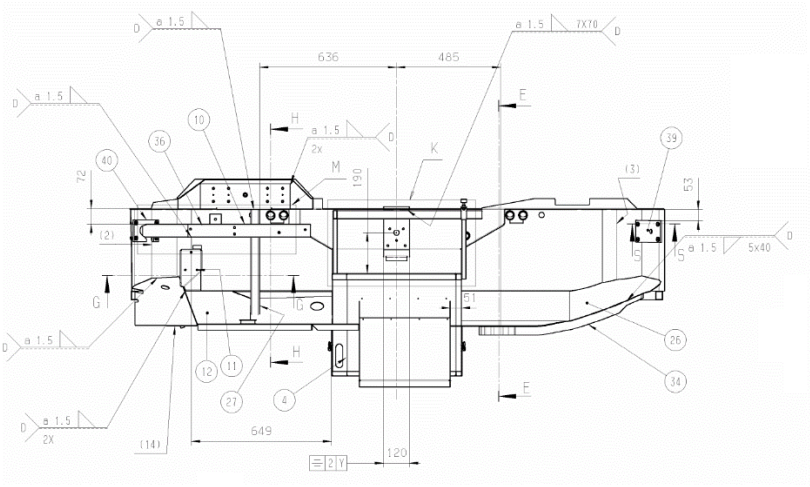
PARTS / WASTE DISPOSAL

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

ANNEX

Assembly drawings, other instructions.

22314124 Frame front section DOT drawing



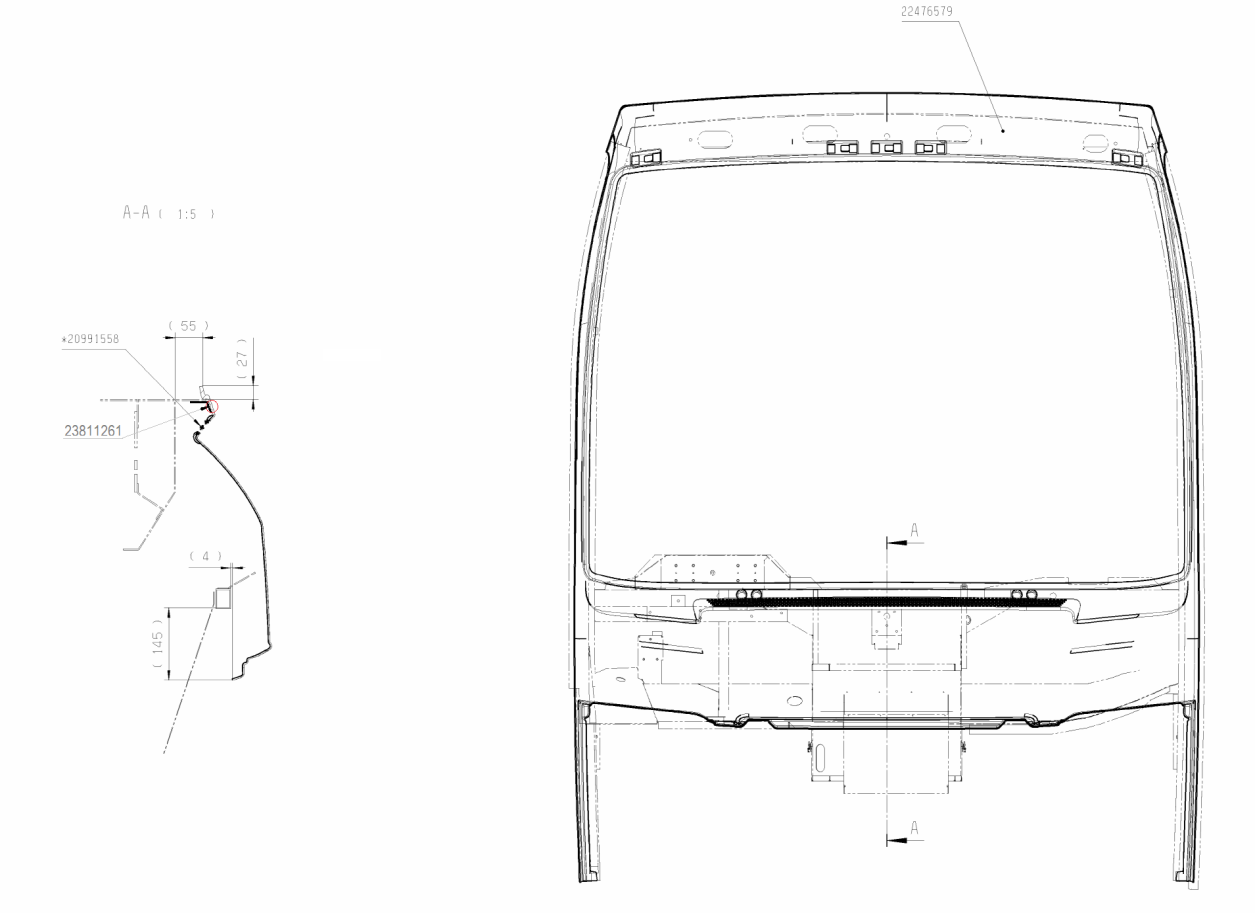
22314124 USCAN FrontSectionFrame.pdf

Welding application caution:

I M P O R T A N T !

The welding cords applied to reinforcement profile must be placed in an interrupted way to avoid overheating of base plate where the reinforcement angle profile will be installed. Should be remembered that overheating of parts in direct contact with the weld could damage parts materials of the dashboard.
To avoid possible damage to these parts, place a cloth moistened with water at affected area during all welding process over dashboard plate surface in order to cool heating of these parts.

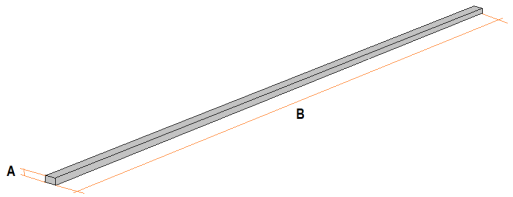
21242039 Front panel assembly drawing



21242039 USCAN FrontPanelAssy.pdf

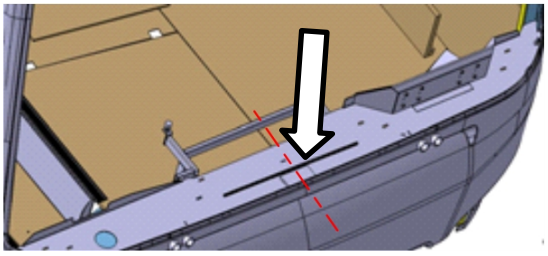
C-frame press tools placing

- Get a square profile (as auxiliary material) of following dimensions:
  - (**A**) Width of 10 mm, maximum.
  - (**B**) Large of: 600 mm, minimum.



- Place auxiliary profile over dashboard frame plate and beside of the welded plate (which is support for windshield center pillar) in a way so that the profile lock with the plate.

  Notice that the auxiliary profile is distributed symmetrically.



- Place C-Frame pressing tools so that rests along the auxiliary profile and the clamps rests on the front panel surface at the indicated points, to make pressure that allow adhesion between the interior front panel surface and the welded reinforcement.

  Use a C-Frame press tools of 6 to 8 inches of large.