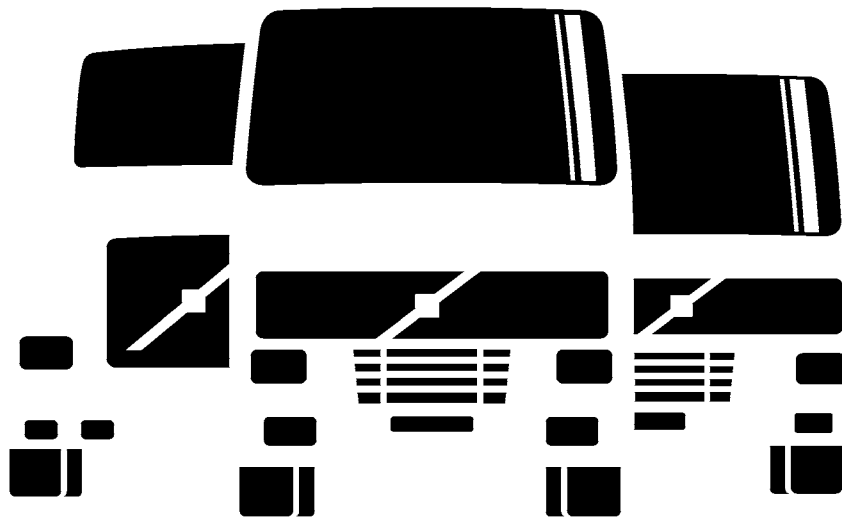


Service Manual Trucks

Group **393–500**

TV/Video System

VN



Foreword

The descriptions and service procedures contained in this manual are based on designs and methods studies carried out up to June 2001.

The products are under continuous development. Vehicles and components produced after the above date may therefore have different specifications and repair methods. When this is believed to have a significant bearing on this manual, supplementary service bulletins will be issued to cover the changes.

The new edition of this manual will update the changes.

In service procedures where the title incorporates an operation number, this is a reference to an S.R.T. (Standard Repair Time).

Service procedures which do not include an operation number in the title are for general information and no reference is made to an S.R.T.

The following levels of observations, cautions and warnings are used in this Service Documentation:

Note: Indicates a procedure, practice, or condition that must be followed in order to have the vehicle or component function in the manner intended.

Caution: Indicates an unsafe practice where damage to the product could occur.

Warning: Indicates an unsafe practice where personal injury or severe damage to the product could occur.

Danger: Indicates an unsafe practice where serious personal injury or death could occur.

Volvo Trucks North America, Inc.
Greensboro, NC USA

Order number: PV776-TSP155509

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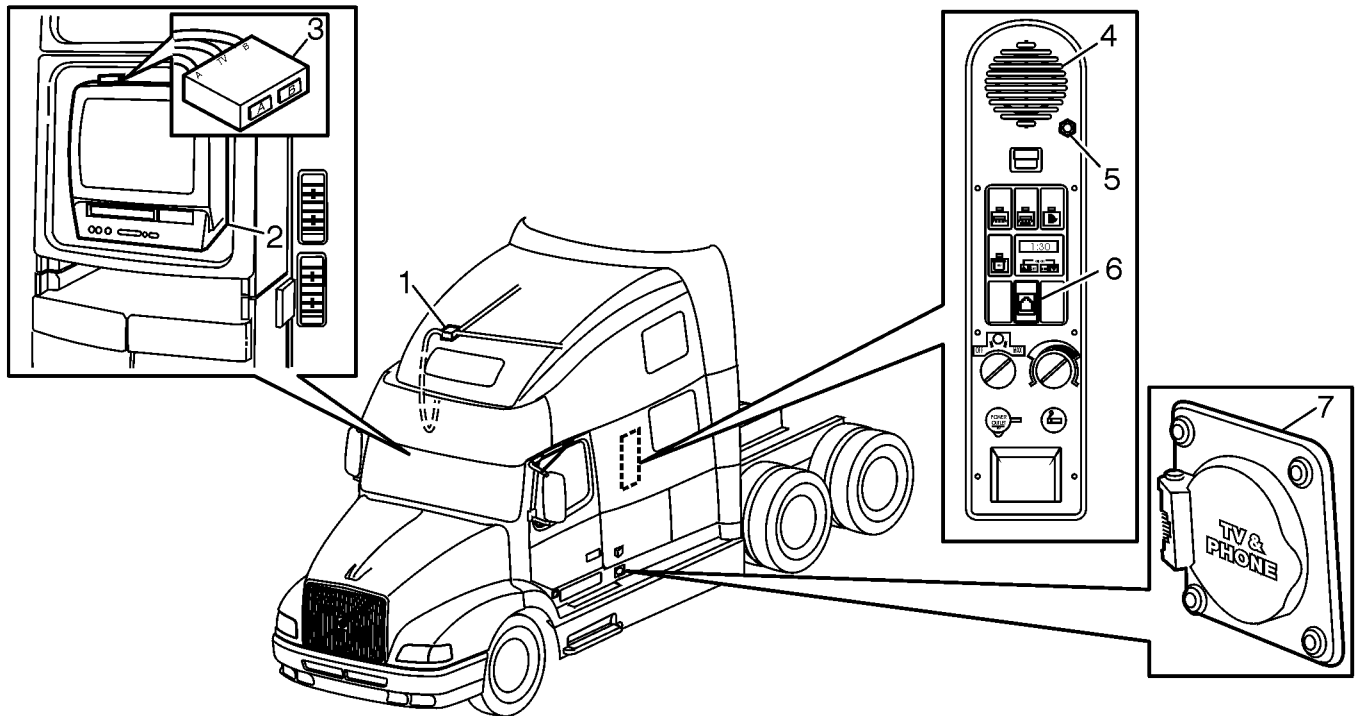
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Contents

General	3
General Information	3
Tools	5
Standard Tools	5
Design and Function	6
TV/Video System	6
TV Mounting	6
TV Antenna	6
TV Speaker and Headphone Jack	8
Cable/Modem	9
Troubleshooting	11
TV Antenna Troubleshooting	11
TV Speaker and Headphone Jack Troubleshooting	11
Service Procedures	13
TV Antenna, Replacement	13
VN 610	13
TV Antenna, Replacement	16
VN 660	16
TV Antenna, Replacement	22
VN 770	22
TV Antenna, Replacement	34
VN 770 With Integrated Headliner	34
TV Speaker/Headphone Jack, Replacement	46
Feedback	
Operation Numbers	

General

General Information



- 1 TV Antenna
- 2 TV/VCR
- 3 A/B switch
- 4 TV speaker
- 5 Headphone Jack
- 6 Phone/Modem connection
- 7 Cable/Modem connection

W3004828

The Volvo VN 610, 660 and 770 series vehicles may be equipped with various audio/video system prep kits to enhance the use of driver supplied TV and /or VCRs. The kits may include:

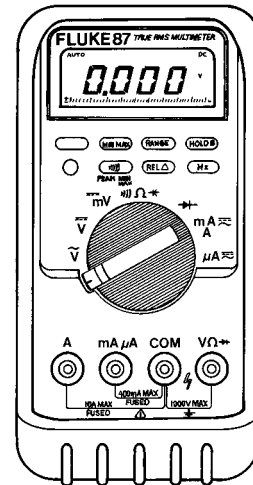
- Secure mounting provisions for the TV.
- A TV Antenna hidden beneath the bunk headliner.
- Remote TV speaker.
- Cable TV and phone/modem connection for use when parked.

Tools

Standard Tools

Digital Multimeter (DMM)

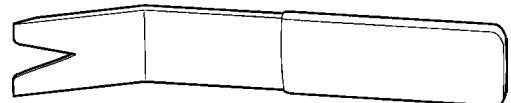
The Fluke 87 digital multimeter (P/N **J-39200**) is available from Volvo Parts or Kent-Moore at 1-800-328-6657.



W2001014

Trim Pad Remover

The trim pad remover (P/N **J-38778**) is available from Volvo Parts or Kent-Moore at 1-800-328-6657.



W0001505

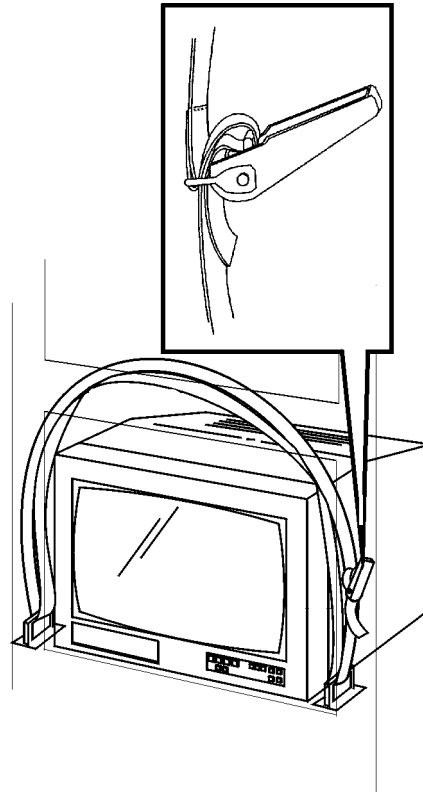
Design and Function

TV/Video System

TV Mounting

VN 610, 660, and 770 vehicles equipped with TV Prep Kits include mounting provisions in the passenger side bunk cabinets. Standard 12 volt and optional 120 volt power supplies as well as antenna and optional cable connections are provided.

To prevent the TV from falling out of its mounting position when the vehicle is in motion, a mounting strap is provided. Adjust the strap so it holds the TV securely, then clamp the buckle down to lock it into place.



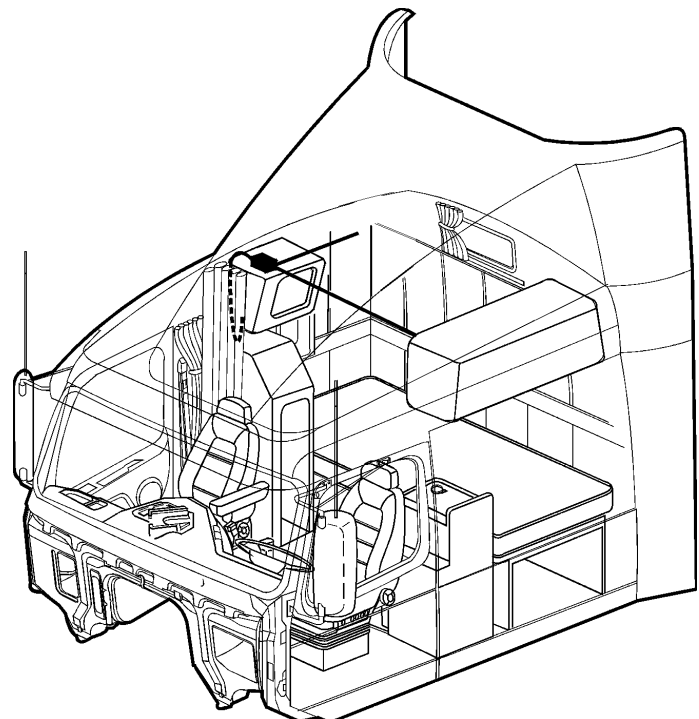
W8002366

TV Antenna

A TV Prep Kit, including an antenna and coaxial cable, is standard for the VN 770 cab and optional in the 610 and 660 cabs. The coaxial cable extends from the antenna in the headliner and runs behind the cabinets on the passenger side. It should be connected to a television, located in the cabinet on the passenger side.

The antenna is installed under the center headliner of the bunk area.

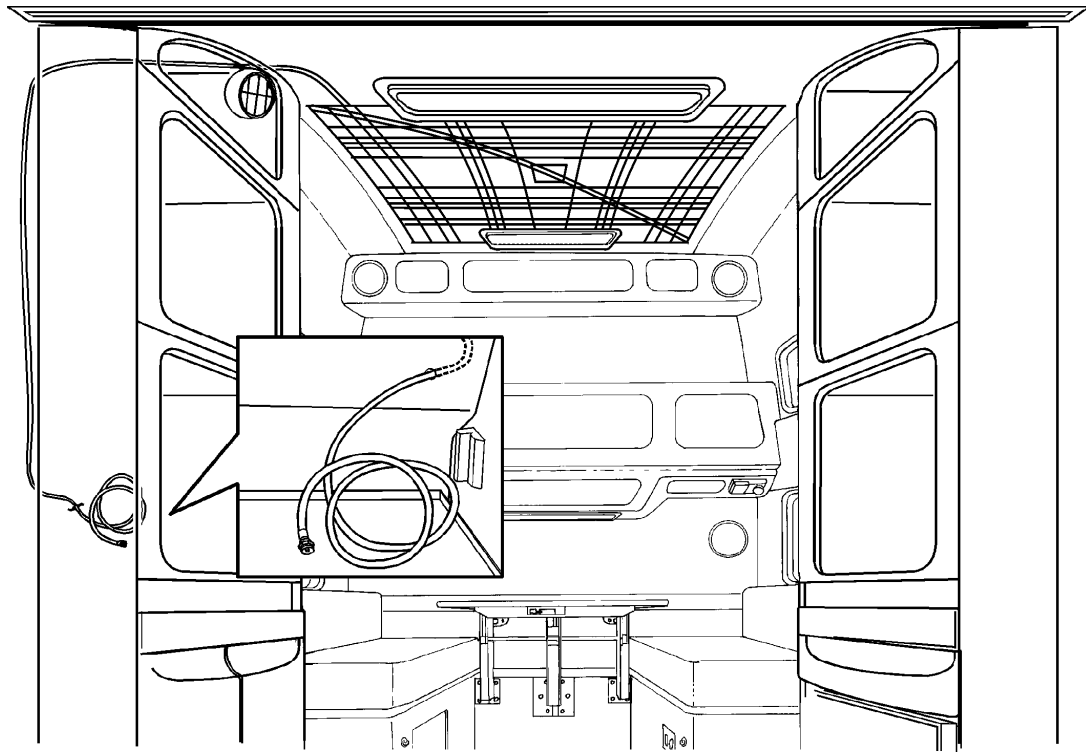
In the 610 or 660, the antenna is a "ribbon" type that is taped underneath the SMC roof panel in the bunk area. In VN 770 vehicles built after June 2000, the antenna is the same style as in the VN 610 or 660.



W3004004

VN 610 TV Antenna

In 770 vehicles built before June 2000, the television antenna is a flexible grid type antenna and is integrated into the center bunk headliner. A coaxial cable extends from the antenna in the bunk headliner and runs behind the cabinets on the passenger side. It is connected to a television, located on the middle shelf of the cabinet on the passenger side.

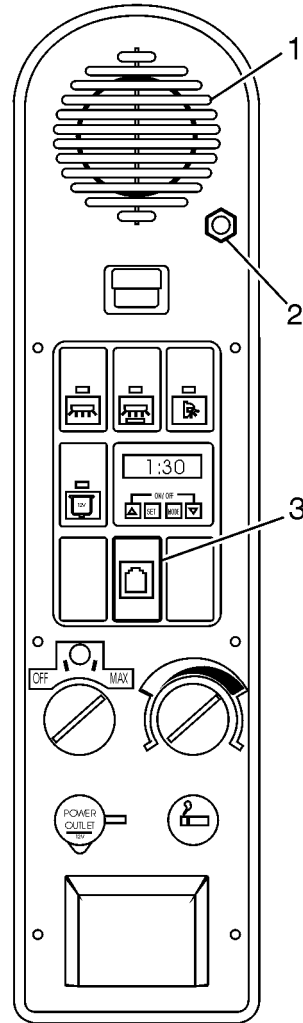


VN 770 TV Antenna (in vehicles built prior to June 2000)

W3004005

TV Speaker and Headphone Jack

The VN 770 may be equipped with an optional remote TV speaker and headphone jack, located in the sleeper control panel. If a headset is plugged into the jack, the speaker will be muted. VN 770 vehicles equipped with the "Park and View" option will also have a phone/modem jack included in the sleeper control panel.

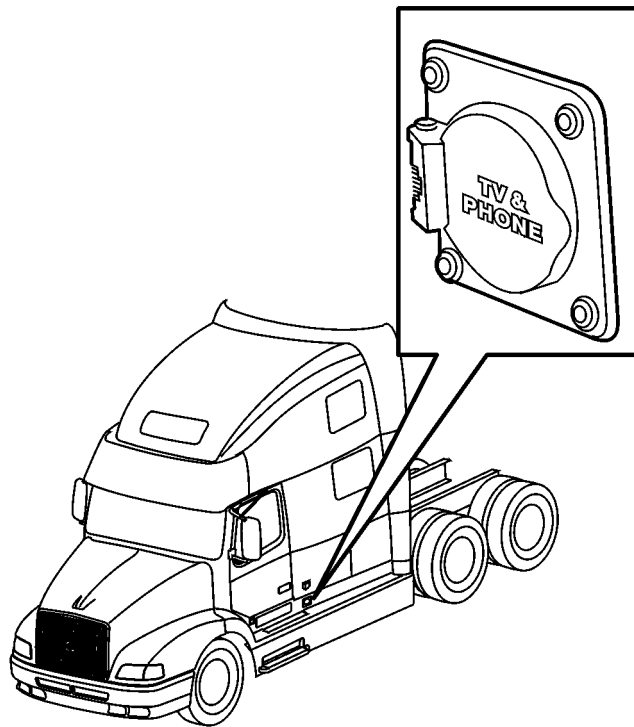


- 1 TV Speaker
- 2 Headphone Jack
- 3 Phone/Modem Jack

W3004829

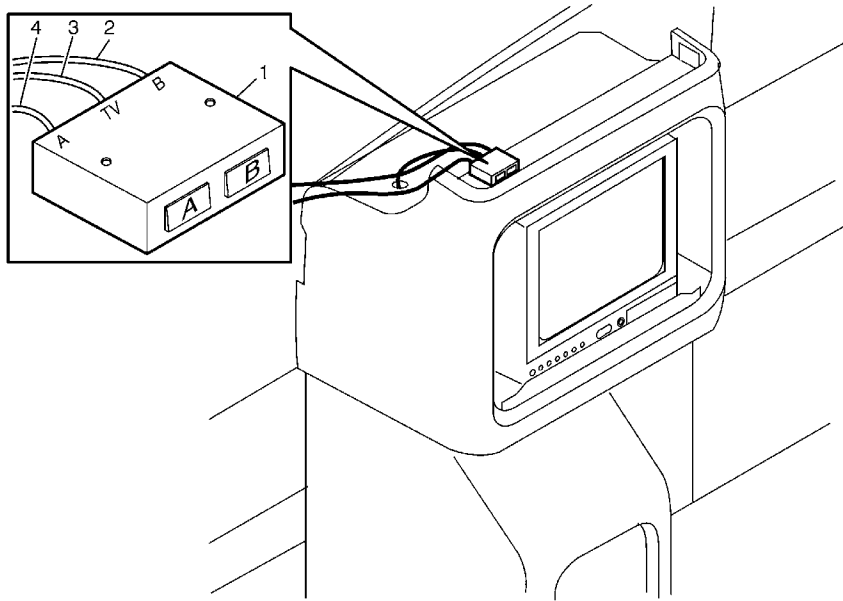
Cable/Modem

The cable/modem prep kit is installed as an option to allow access to a phone/modem line and cable TV when parked at truckstops, which provide that service.



W3004830

A receptacle plug is installed into the air fairing on the driver's side of the vehicle to connect the phone/modem and cable TV line.



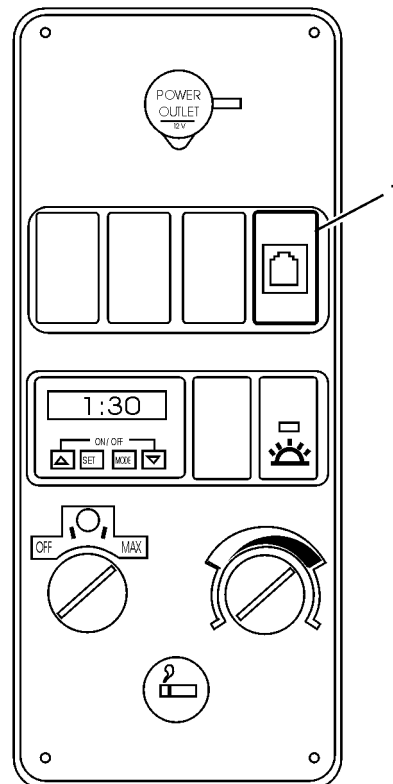
W3004831

VN 610

- 1 A/B Switch
- 2 To Cable
- 3 To TV
- 4 To Antenna

An A/B switch is mounted near the TV to select cable or the vehicle antenna. Press A for Antenna. Press B for Cable TV service from outside source.

A connector for a phone or modem is provided in the bunk control panel. (Note: For location in VN 770, see section on "TV Speaker and Headphone Jack" page 8.



W3004832

1 Phone/Modem Jack VN 610, 660 shown.

Troubleshooting

TV Antenna Troubleshooting

Suspected fault with the TV antenna assembly. Check the following:

- 1 TV - Connect the TV to a known working signal source, such as a home cable TV coaxial. If reception improves, the TV is unlikely to be at fault.
- 2 TV Antenna - Obtain a TV test antenna. Connect the test antenna to the TV with the TV mounted in its normal location. Position the test antenna at the approximate mounting location of the existing antenna. If reception improves, the TV antenna assembly is probably faulty.

Note: Note: Volvo P/N 20357698, (ribbon type TV antenna) may be used as a test antenna.

Note: Note: For more accurate testing, the vehicle should be outside and away from any sources of electrical interference.

- 3 If it is determined that the antenna assembly is faulty, check for proper connections at the coaxial cable ends before replacing.

TV Speaker and Headphone Jack Troubleshooting

Note: The TV speaker and headphone jack must be connected to a TV with remote speaker capability in order for it to function correctly.

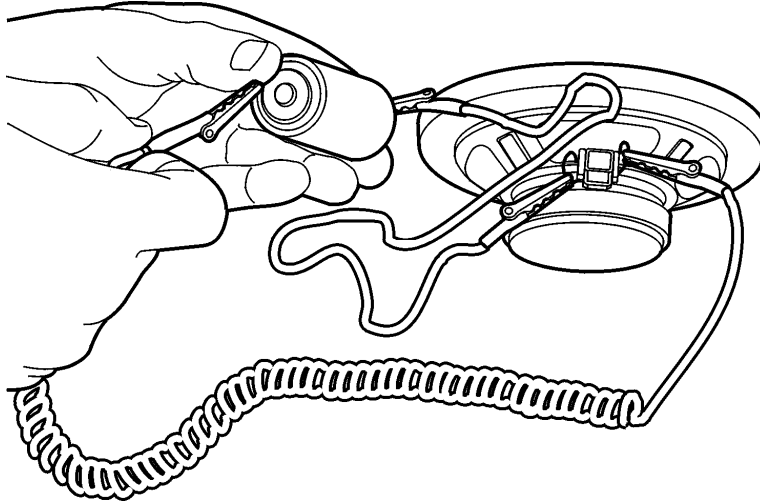
Suspected fault with the TV speaker and headphone jack assembly. Check the following:

- 1 Remove the bunk control panel to access the speaker/jack assembly.
- 2 Visually inspect for obvious damage such as a torn cone or faulty wiring connectors. Repair/replace as needed.

- 3 Check the resistance value of the speaker with a multimeter. The specified resistance value is usually printed on the speaker.

- 4 Check the AC voltage at the A and B (+ and -) speaker terminals with a multimeter. With the TV on, a small AC voltage should be present and increase proportionately with increases in the TV volume control. If not correct, check the TV or wiring and connections between the TV and speaker/jack assembly.

5



W3003097

The speaker may be tested with a 1.5 volt "flashlight" battery by connecting one speaker terminal to the battery negative post and momentarily touching the other speaker terminal to the positive post. The speaker should produce a "pop" when connected. If the speaker contains a capacitor, it will only "pop" once. Do not leave the battery connected.

Service Procedures

3935-03-02-02 TV Antenna, Replacement

VN 610



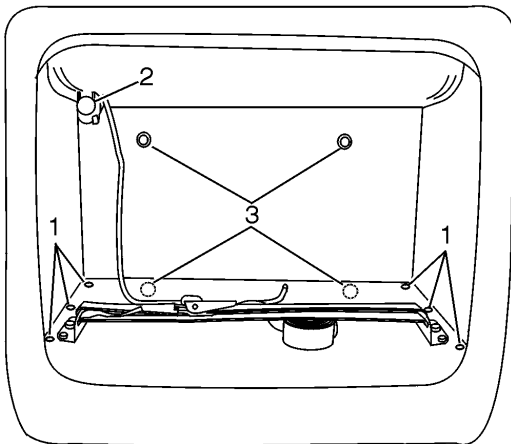
Before working on a vehicle, set the parking brakes, place the transmission in neutral and chock the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

Removal

1

Remove the mattress from the vehicle.

2

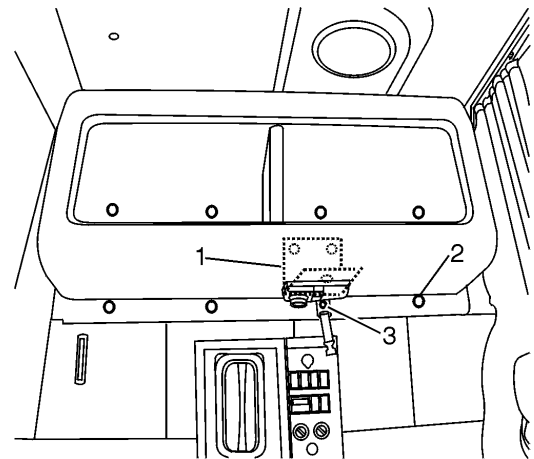


W8002514

Remove the upper right TV cabinet as follows:

Remove the TV support plate by removing the screws (1). Unplug the interior light and power supply connector (2). Remove the 4 wall mounting bolts (3). Remove the cabinet from the vehicle.

3

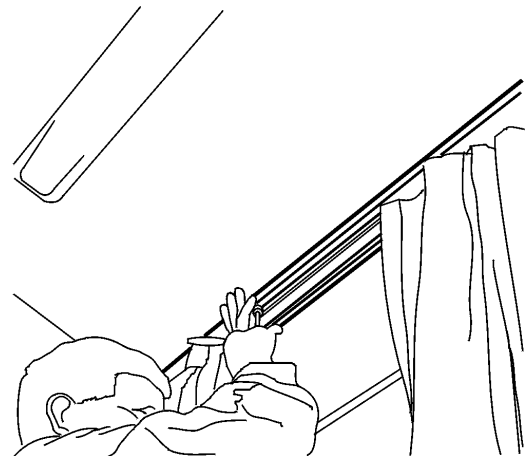


W8002513

Remove the upper left cabinet as follows:

Remove the interior light connector cover plate (1), with its 3 screws and unplug the light connector. Remove the mounting screw covers and remove the 8 wall mounting bolts (2), including the one to the lower bunk tether (3).

4



W8002490

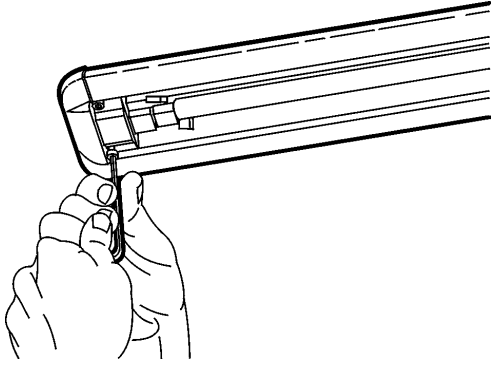
Remove the bunk curtain rail assembly.

5

Remove the bunk headliner speakers as follows:

Remove the speaker cover, the 4 screws and finally disconnect the connector on the back.

6



W8002459

Remove the bunk headliner overhead lamp assembly. Disconnect the connector.

7

Remove the right upper trim panel as follows:

Remove the right lower bunk restraint tether bracket. Separate the interlock fasteners at the top to allow the trim panel fold down.

Note: The panel doesn't have to be completely removed. It's enough if it just falls down a bit.

8

Remove the 2 coat hooks from the center rear wall trim panel. Separate the interlock fasteners at the top to allow the trim panel to be pulled back for removal of the top rear wall trim panel.

9

Remove the top rear wall trim panel as follows:

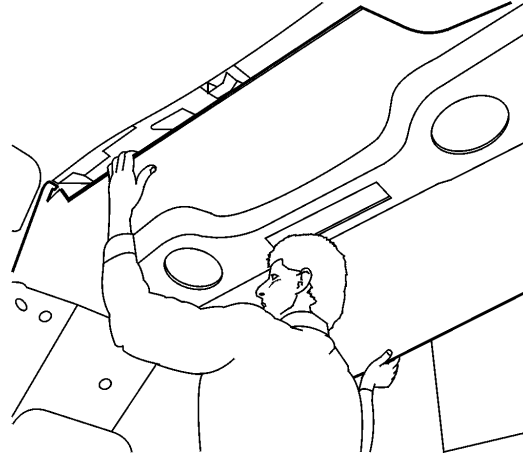
Remove the 2 snap covers and screws.

Separate the Velcro fasteners and remove the panel from the vehicle. Use caution not to tear the panel around the rear window seal.

10

Remove the bezels around the left and right overhead storage bins over the seats.

11



W8002515

Remove the bunk headliner as follows:

Remove the 2 Christmas tree fasteners and separate the interlocking fasteners as necessary. Carefully work the bunk headliner out from under the front headliner and away from the rear wall trim. Remove it from the vehicle. Use caution not to crease the headliner material.

12

Note the position of the TV antenna assembly to be able to install the replacement antenna correctly. Pull down gently on the front headliner and pull back the vinyl tape as necessary to free the TV antenna and remove it from the vehicle.

Installation

1

Position the replacement TV antenna/coaxial cable into the proper mounting location. Secure it with vinyl tape.

2

Carefully work the bunk headliner under the front headliner and behind the rear wall trim. Secure with interlock and Christmas tree fasteners. Use caution not to crease the headliner material.

Note: Two people are required for this step.

3

Install the bezels around the left and right overhead storage bins over the seats.

4

Install the top rear wall trim panel as follows:
 Work the panel into position behind the top of the center wall trim panel. Install the snap screws and covers. Engage the Velcro fasteners. Work the rear window seal around the panel.

5

Engage the interlock fasteners on the center rear wall trim panel. Install the 2 coat hooks and torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

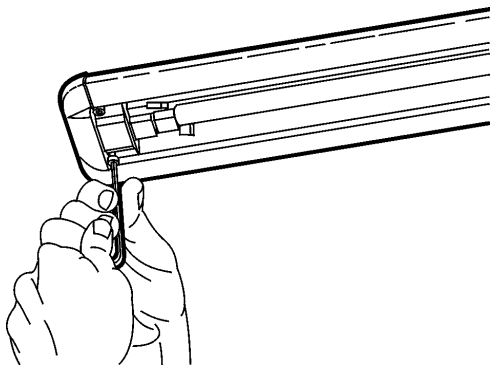
3 ± 0.5 Nm
 (27 ± 4 in-lb).

6

Install the right upper trim panel as follows:
 Work the interior light wiring through the panel. Position the panel and engage the interlock fasteners. Install the right lower bunk restraint tether bracket. Torque the bolt to 24 ± 4 Nm (18 ± 3 ft-lb).

24 ± 4 Nm
 (18 ± 3 ft-lb)

7



W8002459

Connect the bunk headliner overhead lamp connector and install the lamp. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

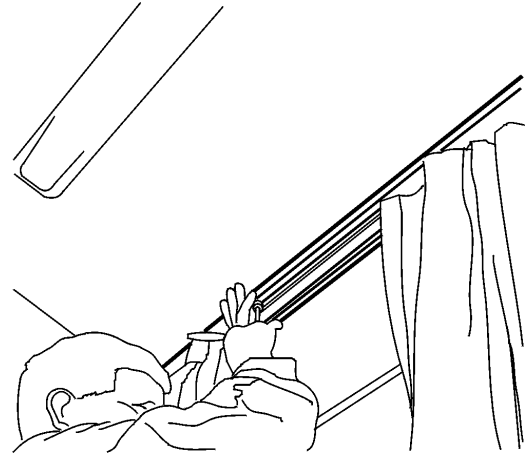
3 ± 0.5 Nm
 (27 ± 4 in-lb)

8

Install the bunk headliner speakers as follows:
 Connect the connector on the back and install using the 4 screws. Torque to 3 ± 0.5 Nm (27 ± 4 in-lb). Install the cover.

3 ± 0.5 Nm
 (27 ± 4 in-lb)

9

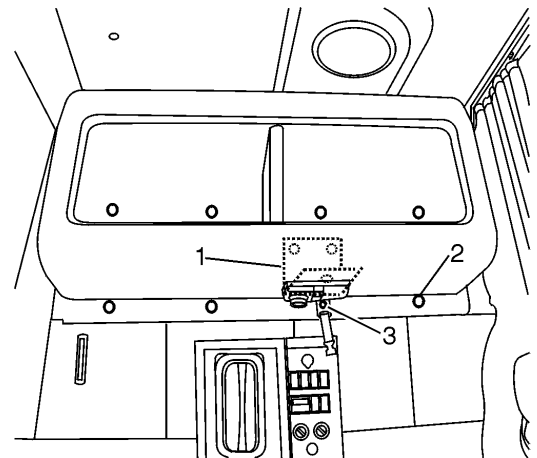


W8002490

Install the bunk curtain rail assembly. Torque the screws to 5 ± 1 Nm (44 ± 9 in-lb).

5 ± 1 Nm
 (44 ± 9 in-lb)

10

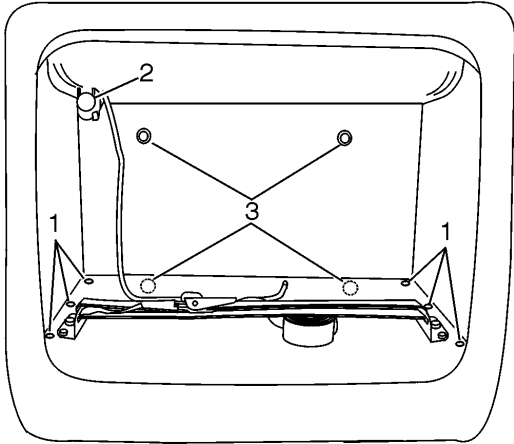


W8002513

Install the upper left cabinet as follows:
 Insert the interior light wiring through the cabinet access hole. Position the cabinet and install the mounting bolts (2). Torque to 24 ± 4 Nm (18 ± 3 ft-lb). Install the left lower bunk restraint tether bracket with spacer (3). Torque to 24 ± 4 Nm (18 ± 3 ft-lb). Install the lower bolt trim covers. Connect the light connector and install the light connector cover (1). Torque to 3 ± 0.5 Nm (27 ± 4 in-lb).

24 ± 4 Nm
 (18 ± 3 ft-lb)
 24 ± 4 Nm
 (18 ± 3 ft-lb)
 3 ± 0.5 Nm
 (27 ± 4 in-lb)

11



W8002514

Install the upper right cabinet as follows:

Insert the power supply and coaxial cable through the upper cabinet access hole. Insert the light wire through the lower access hole.

Install the 4 wall mounting bolts. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

Connect the interior light and power supply connector.

Install the TV support plate. Torque the 6 screws to 5 ± 1 Nm (44 ± 9 in-lb).

24 ± 4 Nm
(18 ± 3 ft-lb)
 5 ± 1 Nm
(44 ± 9 in-lb)

12

Install the mattress in the vehicle.

3935-03-02-02 TV Antenna, Replacement

VN 660

! DANGER

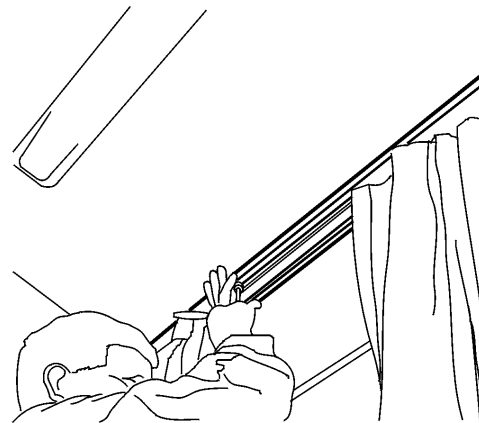
Before working on a vehicle, set the parking brakes, place the transmission in neutral and chock the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

Removal

1
Remove the mattress from the vehicle.

2
Remove the upper right tower cabinet by removing the bolt and spacer between the upper and lower cabinet. Then disconnect the power supply connector. Remove the 4 wall mounting bolts and remove the cabinet from the vehicle.

3



W8002490

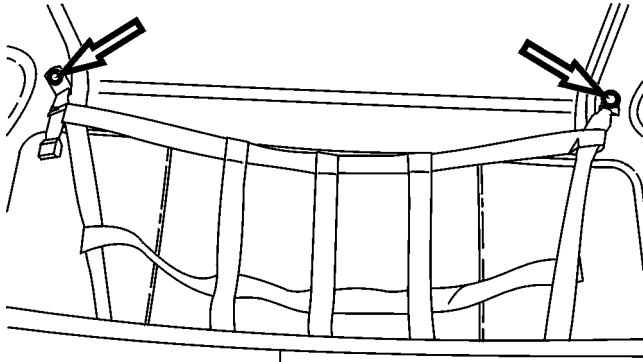
Remove the bunk curtain rail assembly.

Note: The curtains do not need to be removed from the rail.

4
Remove the upper bunk mounting bolts and remove the bunk from the vehicle.

Note: Two people are required for this step.

5



W8002457

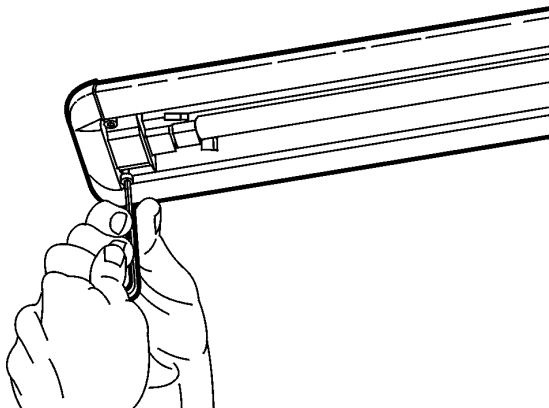
Remove the upper bunk restraint by removing the 2 bolts.

6

Remove the rear wall interior trim panel. It is held in place with Christmas tree and interlocking fasteners. Disengage fasteners and remove the panel from the vehicle.

J-38778

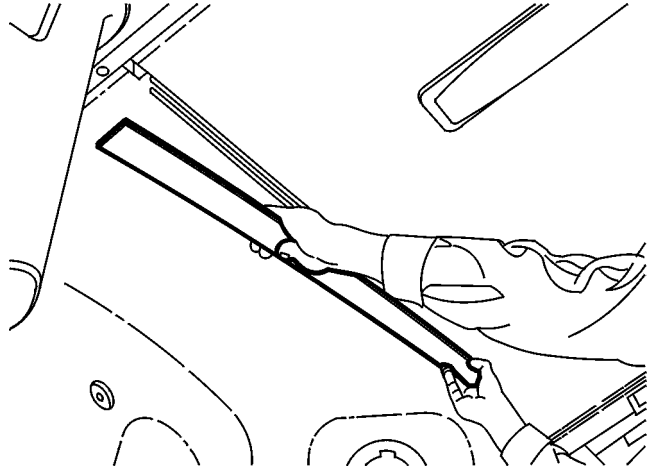
7



W8002459

Remove the overhead lamp assembly from the center rear headliner. Disconnect the electrical connector.

8



W8002461

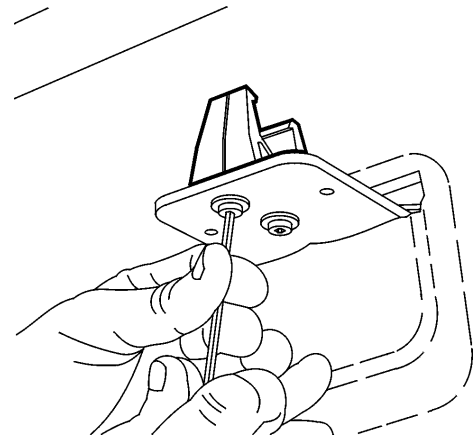
Remove the 2 trim strips on each side of the center bunk headliner.

9

Remove the center bunk headliner. It is held in place by Christmas tree and interlocking fasteners. Disengage fasteners and remove the panel from the vehicle.

J-38778

10



W8002456

Remove the right side upper bunk support by removing the 2 screws to the cover and the 2 screws to the striker plate.

11

Remove the right side lower bunk restraint tether bracket.

12



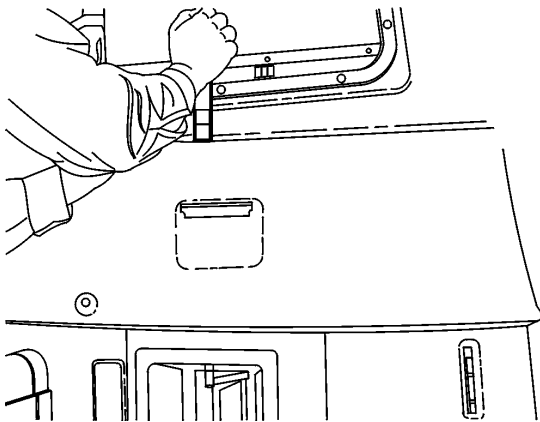
W8002930

Remove the right side center trim panel as follows:

Remove the front curtain rail from the first 2 right side clips to allow removal of one panel bottom mounting screw, nylon spacer and curtain rail mounting clip (1).

Remove one forward mounting screw with curtain hold-back snap fitting.

13



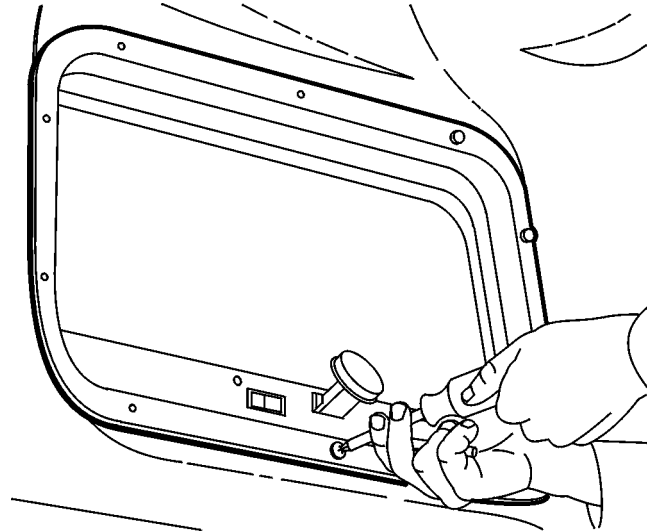
W8002462

The panel is now held in place with Christmas tree and interlocking fasteners.

Disengage fasteners and remove the panel from the vehicle.

J-38778

14



W8002458

Remove the right side bunk window trim bezel.

15

Remove the speaker assembly from the right side bunk headliner panel as follows:

Remove the speaker cover, remove the 4 screws and finally disconnect the connector on the back.

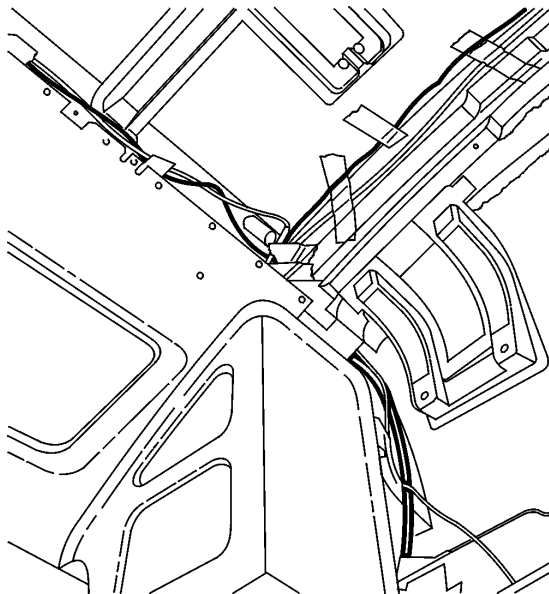
16

The right side bunk headliner panel is held in place with an upper trim support piece and Christmas tree fasteners.

J-38778

Remove the panel as follows: Disengage fasteners, pull the wires out through the cut-out and remove the panel from the vehicle.

17



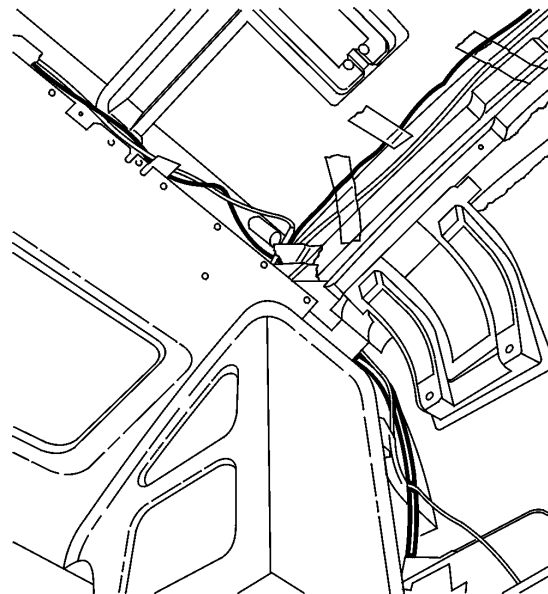
W8002460

Note the position of the TV antenna/coaxial cable to aid in installation.

Pull back the vinyl tape securing the antenna and remove the antenna from the vehicle.

Installation

1



W8002460

Install the replacement TV antenna/coaxial cable into the proper mounting position. Secure with the vinyl tape.

2

Install the right side bunk headliner panel as follows:

Place the panel in position and insert the power supply and coaxial cable through the cut-out in the panel. Work the panel behind the overhead storage cabinet and under the front headliner. After positioning the panel, install the upper trim support piece and secure all with Christmas tree fasteners.

Note: Two people are required for this step.

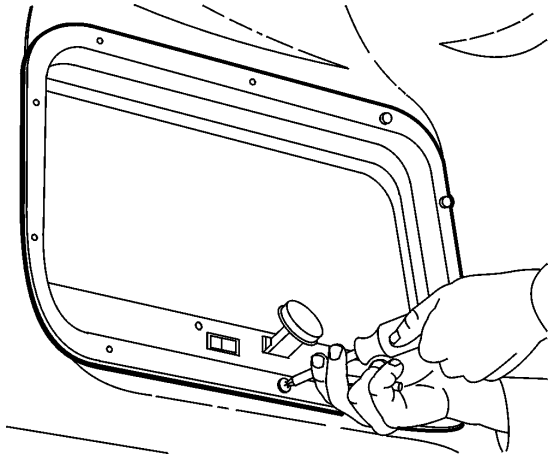
3

Install the speaker in the right side bunk headliner panel as follows:

Connect the connector on the back, install the speaker and torque the 4 screws to 3 ± 0.5 Nm (27 ± 4 in-lb). Install the speaker cover.

3 ± 0.5 Nm
(27 ± 4 in-lb)

4



W8002458

Install the right side sleeper window trim bezel. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

3 ± 0.5 Nm
(27 ± 4 in-lb)

5



W8002930

Install the right side center trim panel as follows:

Note the position of the Christmas tree and interlocking fasteners.

At the bottom of the panel, install the mounting screw, nylon spacer and curtain rail mounting clip (1) through the hole in the panel trim material. Torque to 5 ± 1 Nm (44 ± 9 in-lb).

Tuck the excess trim material under the bottom edge of the panel. Install the forward mounting screw with curtain hold-back snap fitting. Torque to 3 ± 0.5 Nm (27 ± 4 in-lb).

Snap the front curtain rail into the mounting clips.

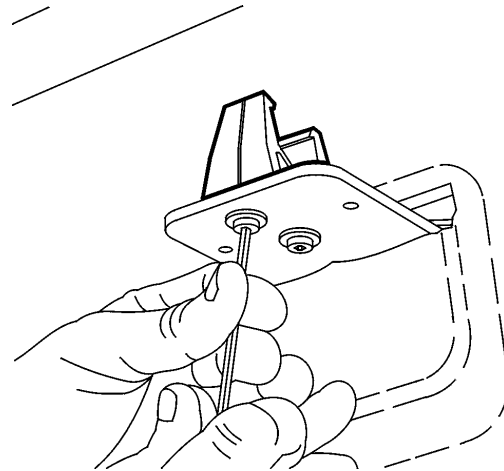
5 ± 1 Nm
(44 ± 9 in-lb)
 3 ± 0.5 Nm
(27 ± 4 in-lb)

6

Install the right side lower bunk restraint tether bracket. Torque the bolt to 24 ± 4 Nm (18 ± 3 ft-lb).

24 ± 4 Nm
(18 ± 3 ft-lb)

7



W8002456

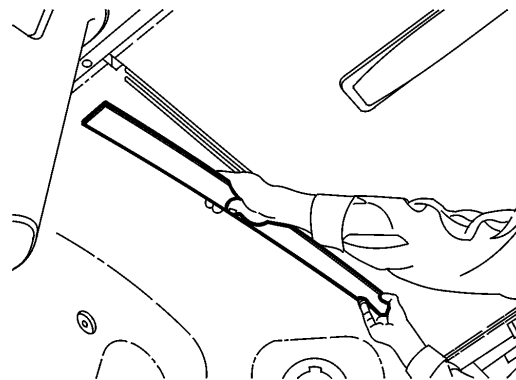
Install the right side upper bunk support cover and striker plate. Torque the screws to 10 ± 1.5 Nm (7 ± 1 ft-lb).

10 ± 1.5 Nm
(7 ± 1 ft-lb)

8

Install the center bunk headliner and secure with Christmas tree and interlocking fasteners.

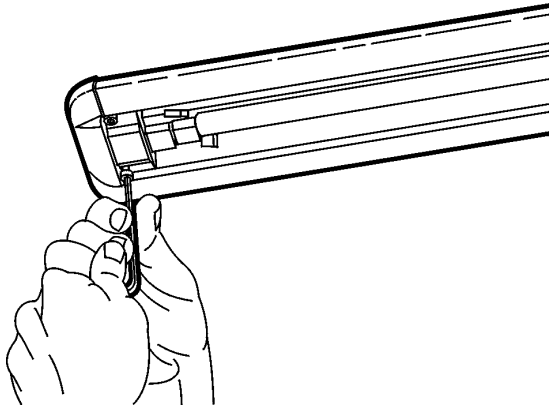
9



W8002461

Install the 2 trim strips on each side of the center bunk headliner.

10

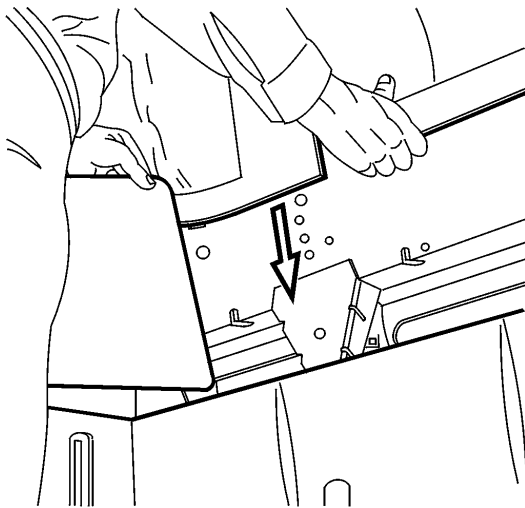


Connect the electrical connector for the center bunk overhead lamp assembly, and install. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

W8002459

3 ± 0.5 Nm
(27 ± 4 in-lb)

11



W8002455

Install the rear wall interior trim panel as follows:

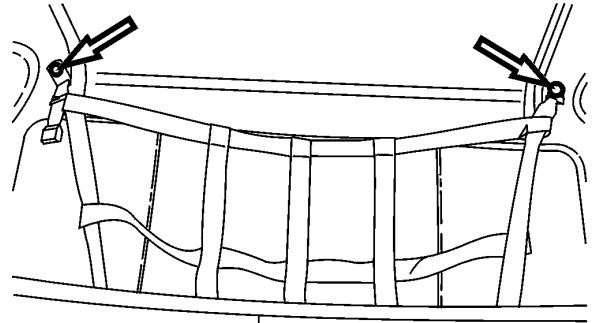
First pull back the rear section of the left and right center trim panels (this will aid in installation).

Noting the position of the Christmas tree and interlocking fasteners, position the rear wall trim panel high on the rear wall. Slide the panel down the wall and behind the lower trim panel AND behind the left and right center trim panels.

After the panel is properly positioned secure with the Christmas tree and interlocking fasteners.

Note: Two people are required for this step.

12



W8002457

Install the upper bunk safety restraint. Make sure the latch is on the right hand side. Torque the bolts to 68 ± 7 Nm (50 ± 5 ft-lb).

68 ± 7 Nm
(50 ± 5 ft-lb)

13

Install the upper bunk by first securing the hinge bracket upper bolts. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

24 ± 4 Nm
(18 ± 3 ft-lb)

Then secure the hinge bracket with the upper bunk restraint using the lower bolt. Torque to 68 ± 7 Nm (50 ± 5 in-lb).

68 ± 7 Nm
(50 ± 5 in-lb)

Note: Two people are required for this step.

14

Install the sleeper curtain rail assembly. Torque the screws to 5 ± 1 Nm (44 ± 9 in-lb).

5 ± 1 Nm
(44 ± 9 in-lb)

15

Install the upper right tower cabinet by lifting the cabinet into position and inserting the power supply wiring and coaxial cable. Fit the cabinet over the HVAC duct at the rear of the cabinet. Install the 4 wall mounting bolts and torque to 68 ± 7 Nm (50 ± 5 ft-lb). Install the through bolt and spacer between the upper and lower cabinet. Torque to 12 ± 2 Nm (106 ± 18 in-lb).

68 ± 7 Nm
(50 ± 5 ft-lb)
 12 ± 2 Nm
(78 ± 1.5 ft-lb)

16

Install the mattress in the vehicle.

3935-03-02-02 TV Antenna, Replacement

VN 770

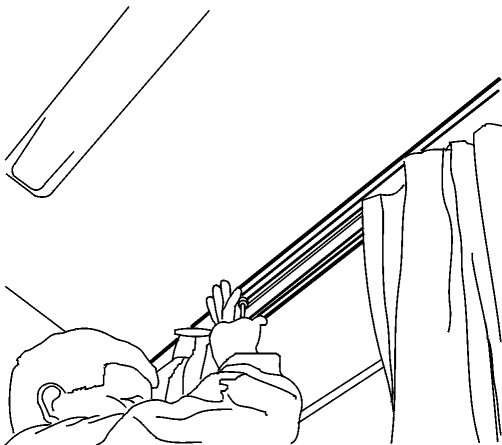


Before working on a vehicle, set the parking brakes, place the transmission in neutral and chock the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

Removal

1
Remove the lower mattress/work station cushions from the vehicle.

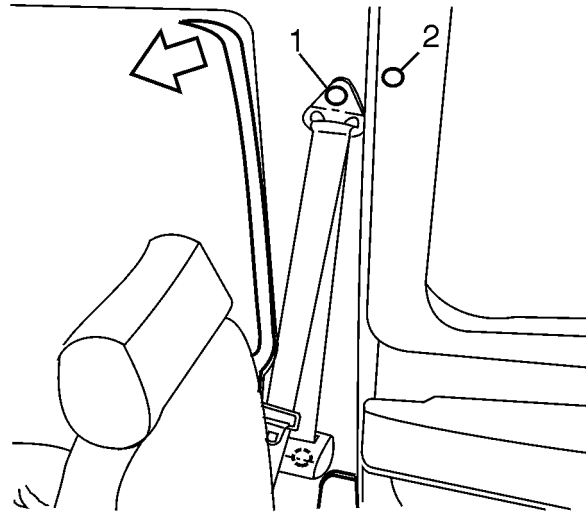
2



W8002490

Remove the bunk curtain rail assembly.

3



W8002928

Remove the following in both the right and left sides: **J-38778**

Remove the shoulder harness mounting bolts (1).

Pull back the upper rear of the door seal to loosen the B pillar trim.

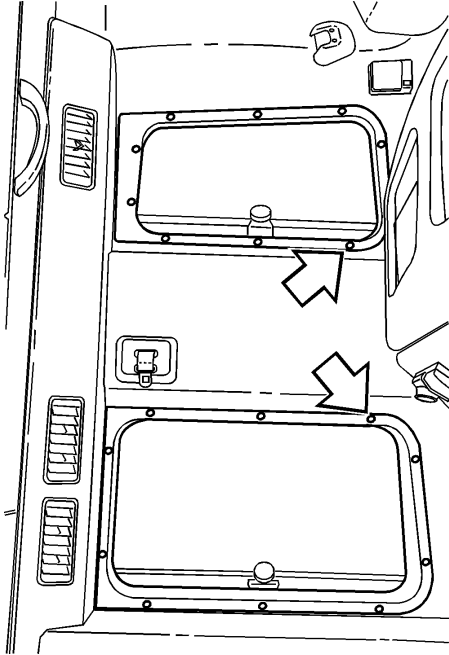
Gently pull back the B pillar trim and remove the Christmas tree fastener (2) to the upper tower cabinets.

Note: Use caution not to crease the trim panel.

4

Remove the bunk ladder assembly (if equipped).

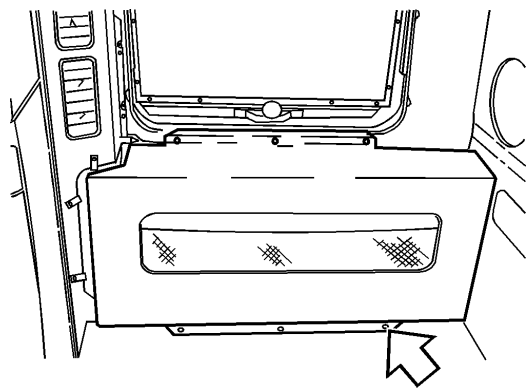
5



W8002176

Remove the 4 bunk windows' trim bezels. There are 10 screws to be removed for each window's trim bezel.

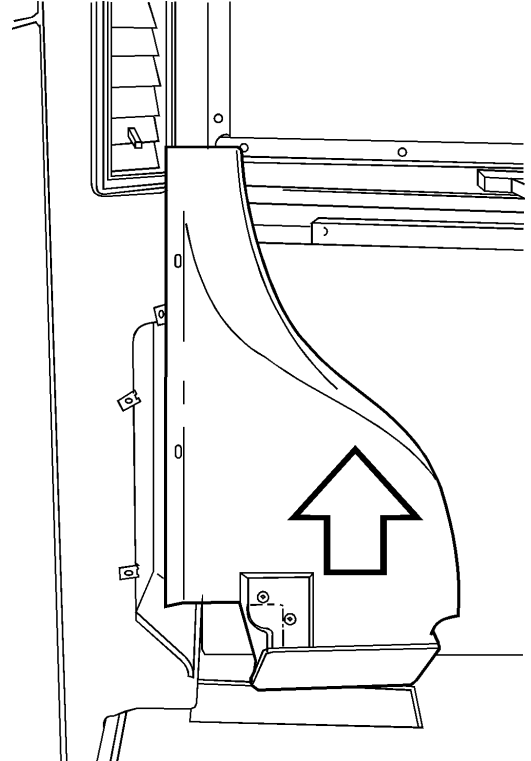
6



W8002177

Remove the torx screws holding the cabinet below the lower right bunk windows.

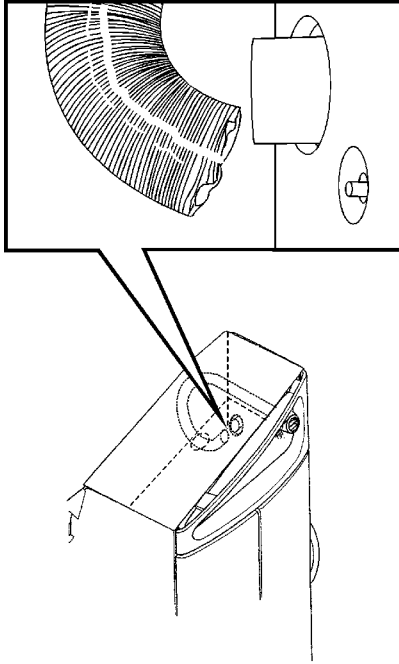
7



W8002178

Remove the 6 torx screws holding the ducting from the bunk HVAC unit to the right bunk fascia panel.

8



W8002180

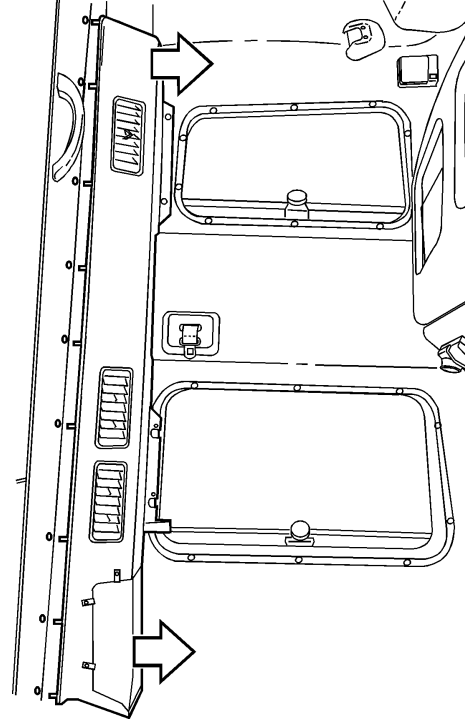
Remove the duct hose in the upper right tower cabinet from the right bunk fascia panel.

9

Pull back the lower right trim panel to expose the lower right bunk fascia panel mounting screws. This panel is secured with Christmas tree and/or interlock fasteners.

J-38778

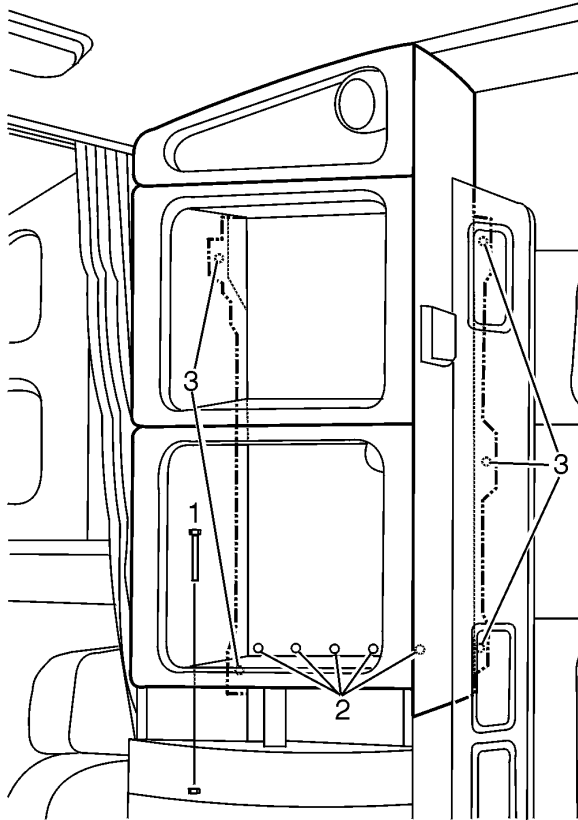
10



W8002179

Remove 5 torx screws, 3 along the top and 2 behind the trim panel, mounting the vent fascia to the wall. Remove the eight nuts from the plastic studs. Remove the fascia panel from its mounting location and remove it from the vehicle.

11



Remove the upper right tower cabinet as follows:

Remove any objects stored in the cabinet.

Unplug the power supply connectors.

Remove the 5 bolts from the rear bottom wall (2).

Remove the 8 bolts between the upper and lower cabinet (1).

Pull the upper front trim panel back to expose the upper front wall mounting bolt. Remove the bracket from the cabinet that holds the interlock fastener.

Pull back the B pillar trim to expose the lower front wall mounting bolt.

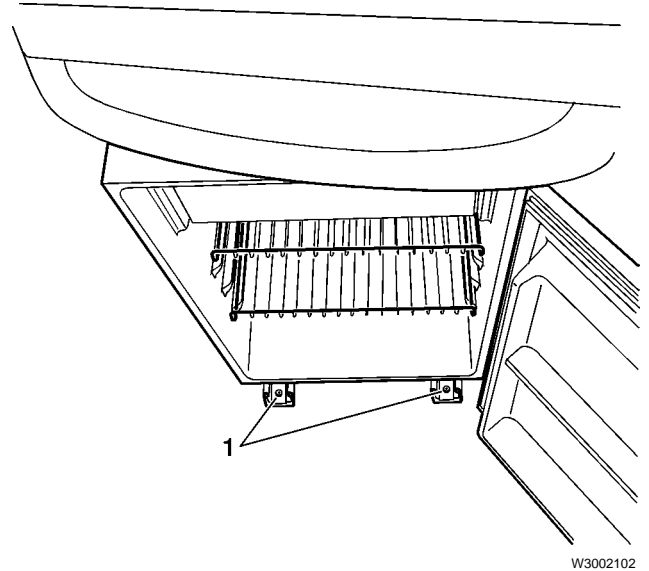
Remove the 5 wall mounting bolts (3).

12

Remove the upper right tower cabinet from its mounting location and out of the vehicle.

Note: This step requires 2 people.

13



Remove the refrigerator (if equipped). Open the refrigerator door. Remove the 2 locks from the floor mounting rail.

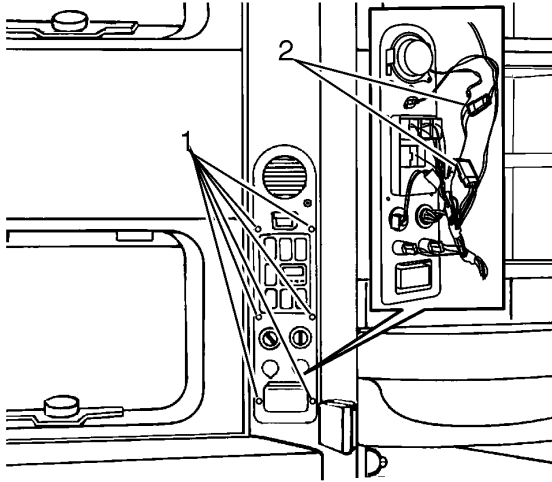
14

Slide the refrigerator out from the cabinet and disconnect the 12 V connector. Remove it from the vehicle.

15

Remove the left tower cabinet drawer stops. Remove the sink plumbing and electrical connectors (if equipped). Remove the drawer.

16



W8002927

Remove the bunk master control panel mounting screws (1) from the left bunk fascia panel.

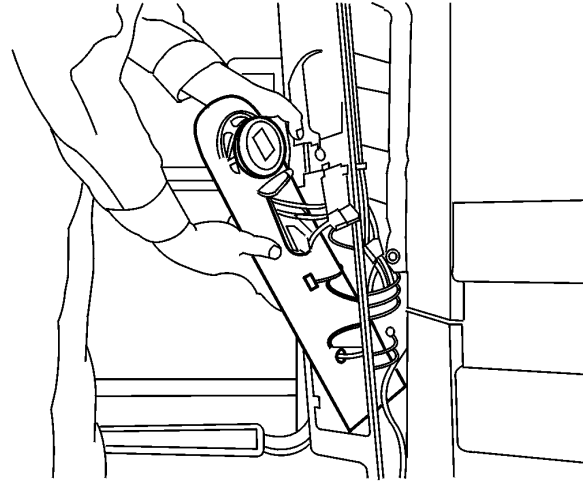
Remove the panel and disconnect the 2 connectors at the top (2). Let the bunk master control panel hang from the wiring harness.

17

Pull back the lower left trim panel to expose the lower left bunk fascia panel mounting screws. The panel is secured with Christmas tree and/or interlock fasteners.

J-38778

18

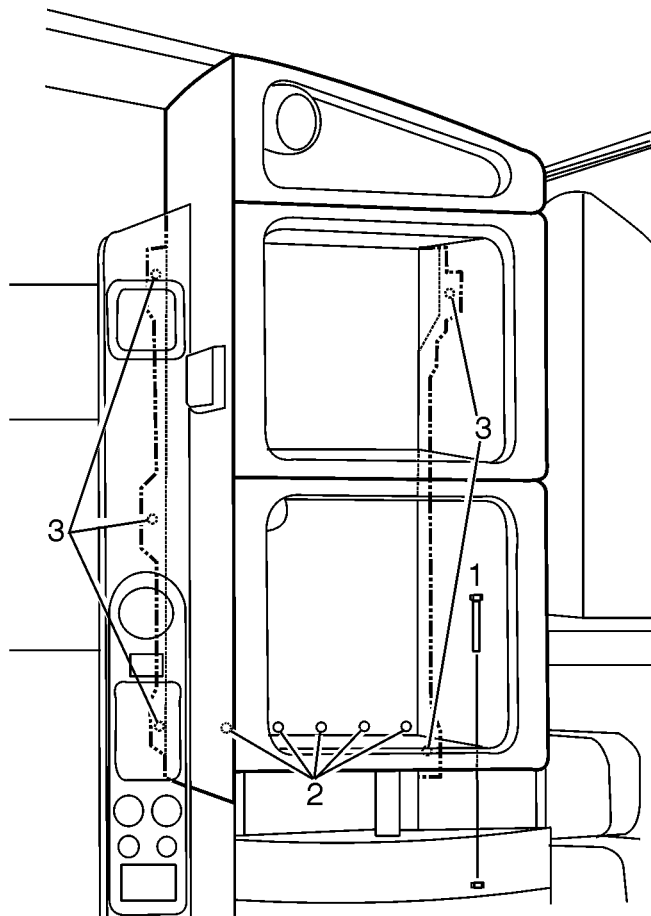


W8002494

Remove the screws securing the left bunk fascia panel to the wall and the nuts securing the panel to the left tower cabinet, and remove it from its mounting location.

Turn the bunk master control panel to fit through the cut out in the fascia panel and remove the fascia panel from the vehicle.

19



W8002929

Remove the upper left tower cabinet as follows:

Remove any objects stored in the cabinet. Unplug the power supply connectors.

Remove the 5 bolts from the rear bottom wall (2). Remove the 6 bolts between the upper and lower cabinet (1).

Note: The lower cabinet door hinges may need to be temporarily removed to remove the 2 front bolts. Install hinges before removing the cabinet.

Pull the upper front trim panel back to expose the upper front wall mounting bolt.

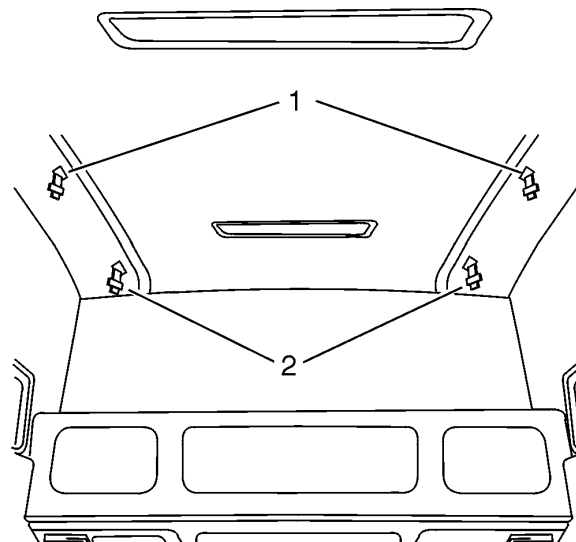
Remove the bracket from the cabinet that holds the interlock fastener. Pull back the B pillar trim to expose the lower front wall mounting bolt. Remove the 5 wall mounting bolts (3).

20

Remove the upper left tower cabinet from its mounting location and out of the vehicle.

Note: This requires 2 people.

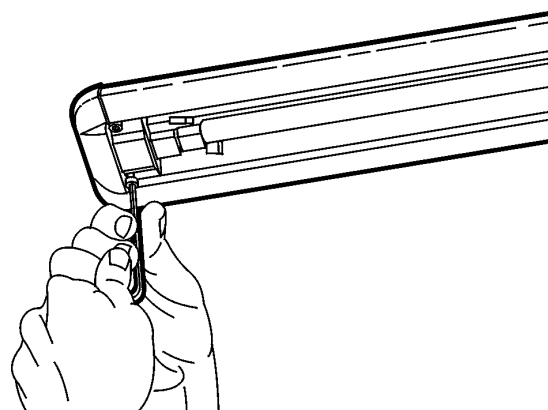
21



W8002497

Remove the upper bunk/roof restraint receivers (1).

22



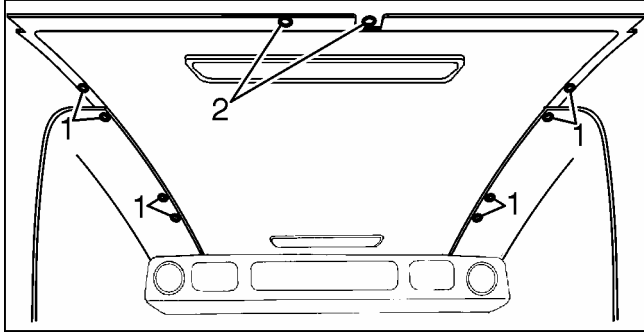
W8002459

Remove the front bunk headliner overhead lamp assembly. Disconnect the connector.

23

Remove the 2 trim strips on each side of the center bunk headliner.

24



W3004837

Disengage the Christmas tree fasteners that secure the plastic support strips between the bunk center and side headliners (1). Use caution when bending back the side headliner panels not to crease the material. Disengage the 2 Christmas tree fasteners at the front of the center bunk headliner (2).

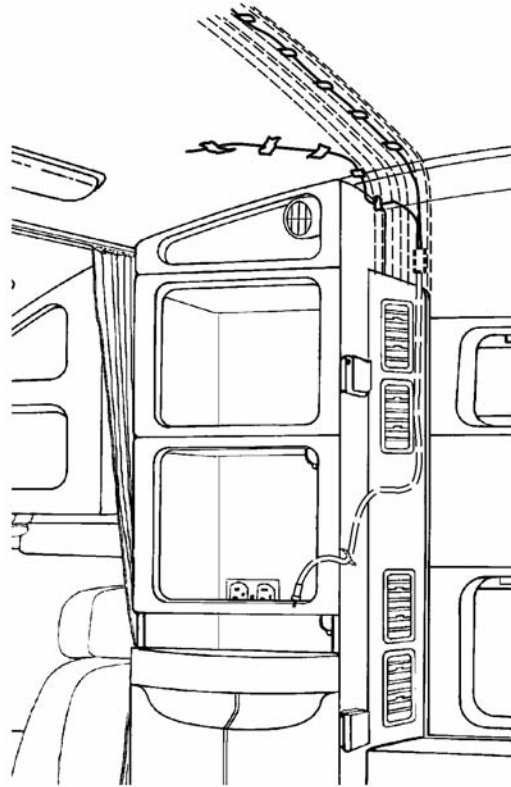
J-38778

25

The center bunk headliner is now held in place with interlocking fasteners and the mating headliner components. Begin at the front and carefully work the headliner out of the mating headliner components. Allow the front of the headliner to "droop" down allowing access to the TV antenna.

Note: Use caution not to crease the headliner panels or mating components.

26



W3004740

Note the routing of the TV coaxial cable and antenna wires to aid in installation. Carefully reach under the headliner panels to access the cable/antenna assembly. Remove the vinyl tape enough to free the assembly and remove from the vehicle.

Note: Use a step stool as needed to reach the antenna assembly under the headliner. Use caution not to crease or damage the headliner material.

Installation

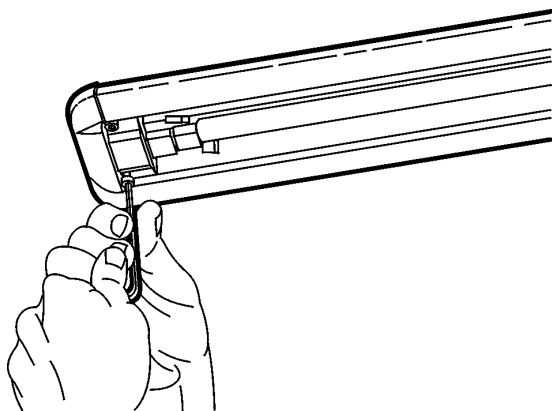
1
Install the replacement cable/antenna assembly. Secure with vinyl tape.

2
Note the location of the interlock fasteners before installation of the center bunk headliner. Carefully work the headliner into its mounting location. Use caution not to crease the headliner panels or mating components during installation. Engage the interlock fasteners when the headliner is properly positioned.

3
Install the plastic support strips between the bunk center and side headliners and secure with Christmas tree fasteners. Use caution when bending back the side headliner panels not to crease the material. Engage the 2 Christmas tree fasteners at the front of the center bunk headliner.

4
Install the 2 trim strips on each side of the center bunk headliner.

5

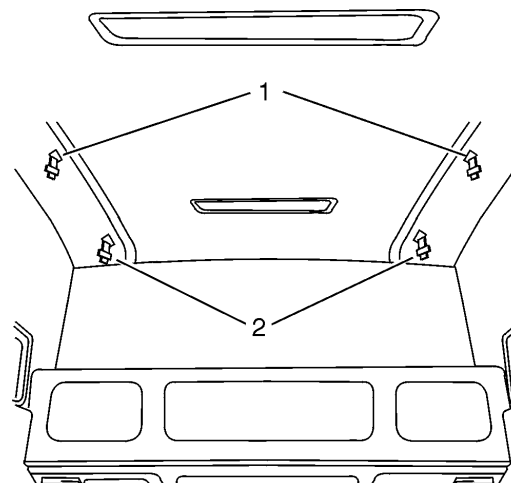


Install the overhead lamp assembly as follows:

Connect the connector. Install the assembly and torque the 4 screws to 3 ± 0.5 Nm (27 ± 4.5 in-lb).
Install the lamp cover.

W8002459
 3 ± 0.5 Nm
(27 ± 4.5 in-lb)

6



W8002497

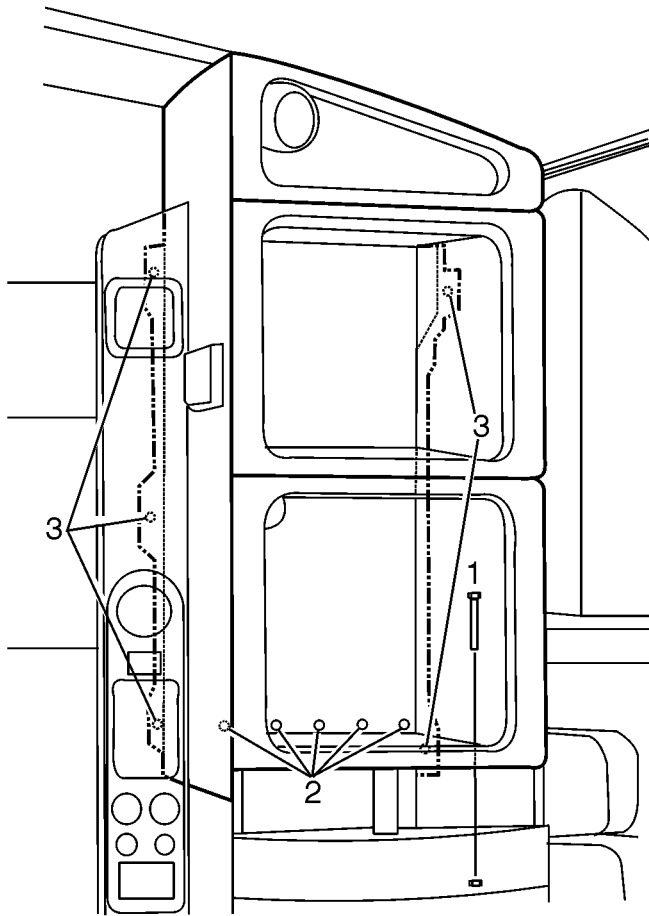
Install the upper bunk/roof restraint receivers (1). Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

7

Position the upper left tower cabinet into its mounting location. Work the cabinet around trim panels and pull the wiring through the cabinet as necessary.

Note: This step requires 2 people.

8



W8002929

Install the upper left tower cabinet as follows:

Start all cabinet mounting bolts before beginning tightening. Install the 5 wall mounting bolts. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

Install the 6 bolts between the upper and lower cabinet. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

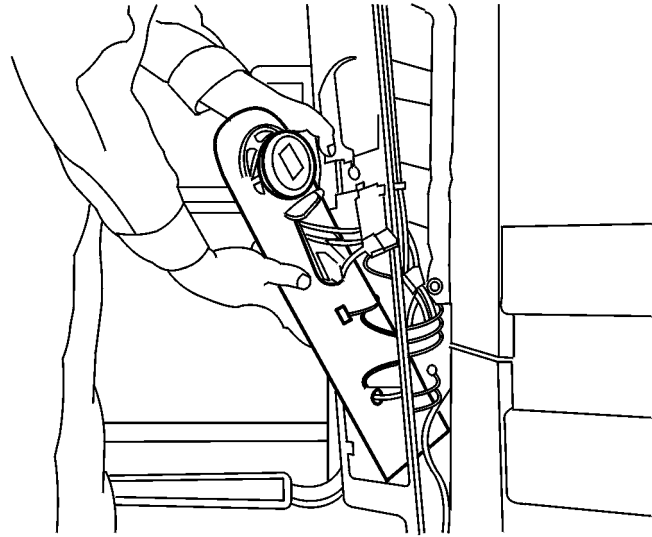
Note: The lower cabinet door hinges may need to be temporarily removed to install the 2 front bolts. Install hinges after the bolts between the upper and lower cabinet have been tightened.

Install the 5 bolts to the rear bottom wall. Torque to 10 ± 1.5 Nm (7 ± 1 ft-lb).

Torque all cabinet mounting bolts. Install the bracket that holds the interlock fastener to the cabinet. Secure the upper front trim panel with the interlock fasteners. Connect the power supply connectors.

- 24 ± 4 Nm (18 ± 3 ft-lb)
- 24 ± 4 Nm (18 ± 3 ft-lb)
- 10 ± 1.5 Nm (7 ± 1 ft-lb)

9



W8002494

Fit the bunk master control panel through the cut out in the left bunk fascia panel.

3 ± 0.5 Nm (27 ± 4 in-lb)

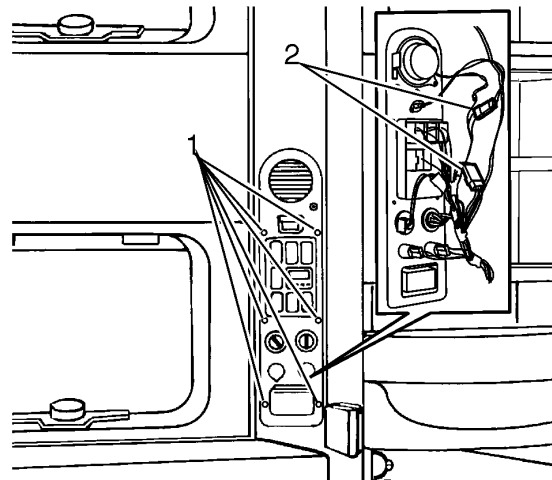
Position the left bunk fascia panel into its mounting location. Secure the panel to the tower cabinets with the plastic stud nuts.

Secure the panel to the wall with screws. Torque to 3 ± 0.5 Nm (27 ± 4 in-lb).

10

Secure the lower left trim with Christmas tree and/or interlock fasteners.

11



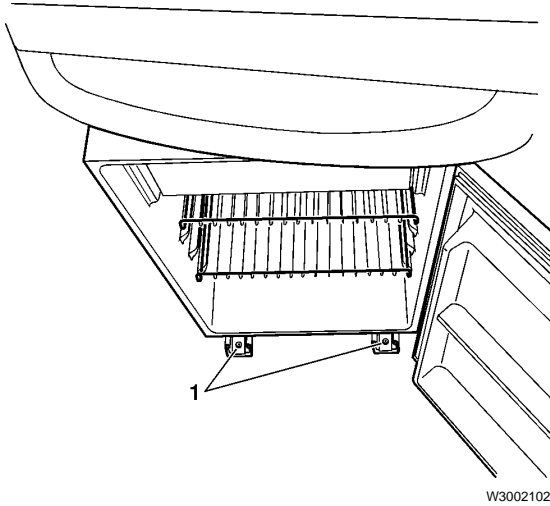
W8002927

Connect the bunk master control panel connectors (2). Using the 6 screws (1), install the bunk master control panel into the left bunk fascia panel.

12

Install the left tower cabinet drawer.
Connect the sink plumbing and electrical connectors (if equipped).
Install the drawer stops.

13



Install the refrigerator (if equipped) as follows:

Place the refrigerator on the floor just in front of the cabinet.
Connect the 12 V power supply, using the locking connector.
Align the refrigerator mounting brackets with the floor tracks and slide it as far back on the tracks as possible.
Open the refrigerator door and install the locks (1) in the floor mounting rail.
Torque to 13 ± 2 Nm (10 ± 1.5 ft-lb).

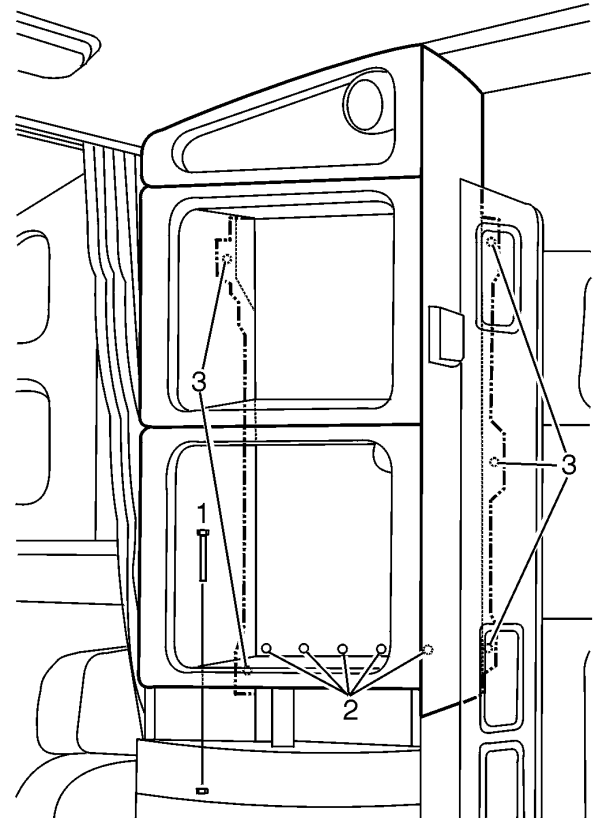
13 ± 2 Nm
(10 ± 1.5 ft-lb)

14

Position the upper right tower cabinet into its mounting location. Work the cabinet around trim panels and pull wiring through the cabinet as necessary.

Note: This step requires 2 people.

15

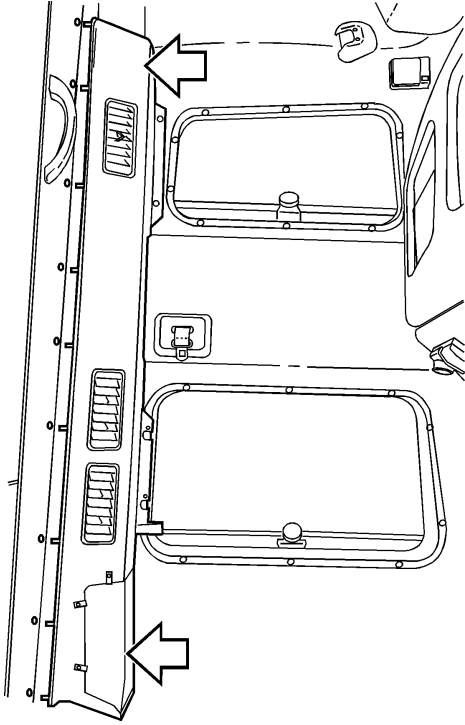


Install the upper right tower cabinet as follows:

Start all cabinet mounting bolts before beginning tightening.
Install the 5 wall mounting bolts (3).
Torque to 24 ± 4 Nm (18 ± 3 ft-lb).
Install the 8 bolts between the upper and lower cabinet (1). Torque to 24 ± 4 Nm (18 ± 3 ft-lb).
Install the 5 bolts to the rear bottom wall (2). Torque to 10 ± 1.5 Nm (7 ± 1 ft-lb).
Torque all cabinet mounting bolts.
Install the bracket that holds the interlock fasteners to the cabinet. Secure the upper front trim panel with the interlock fasteners.
Connect the power supply connectors.

24 ± 4 Nm
(18 ± 3 ft-lb)
 24 ± 4 Nm
(18 ± 3 ft-lb)
 10 ± 1.5 Nm
(7 ± 1 ft-lb)

16



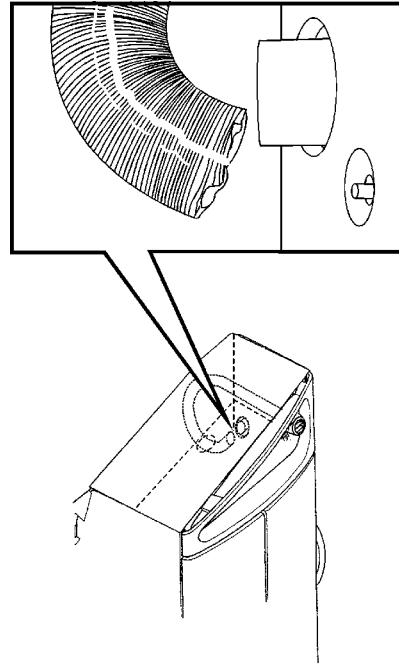
Position the right bunk fascia panel into its mounting location. Secure the panel to the tower cabinets with the plastic stud nuts. Secure the panel to the wall with screws. Torque to 3 ± 0.5 Nm (27 ± 4 in-lb).

W8002182
 3 ± 0.5 Nm
 (27 ± 4 in-lb)

17

Secure the lower right trim with Christmas tree and/or interlock fasteners.

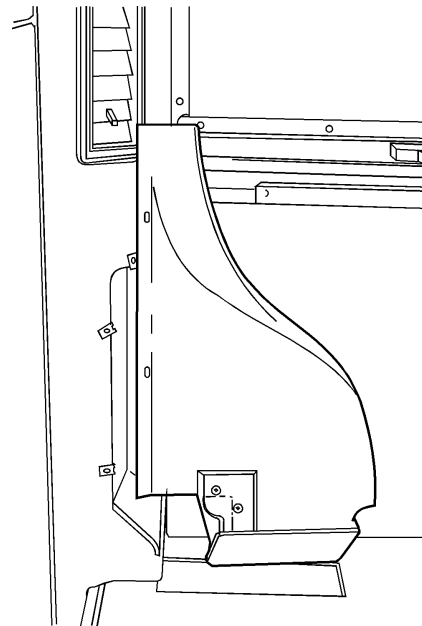
18



Secure the duct hose in the upper right tower cabinet to the right bunk fascia panel.

W8002180

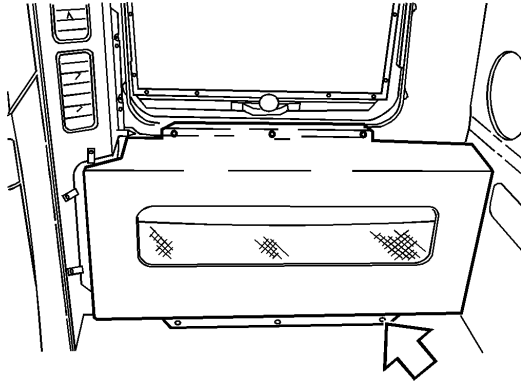
19



Install the duct from the bunk HVAC unit to the right bunk fascia panel. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

W8002183
 3 ± 0.5 Nm
 (27 ± 4 in-lb)

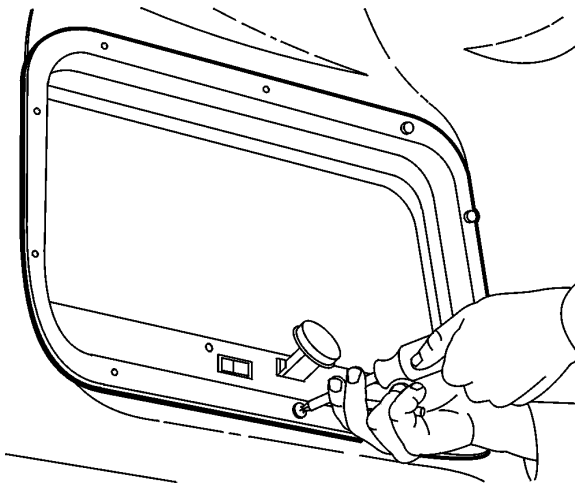
20



W8002177

Install the cabinet below the lower right bunk window. Torque the 3 bottom screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

21



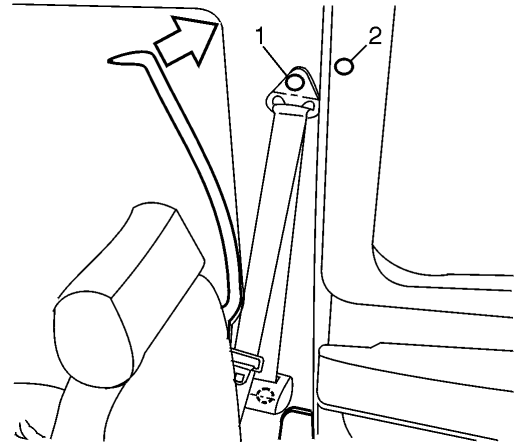
W8002458

Install the 4 bunk window trim bezels. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

22

Install bunk ladder assembly (if equipped). Torque the bolts to 10 ± 1.5 Nm (7 ± 1 ft-lb).

23



W8002501

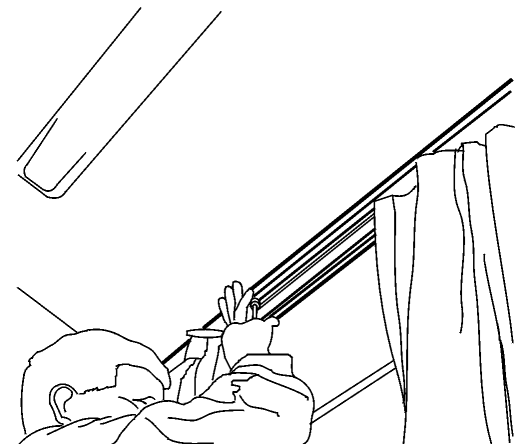
Install both right and left B pillar trims as follows: 68 ± 7 Nm (50 ± 5 ft-lb)

Secure the B pillar trim to the upper tower cabinets with the Christmas tree fasteners. Properly position the B pillar trim and reinstall the door seal to secure.

Install the seat belt shoulder harness mounting bolts. Torque to 68 ± 7 Nm (50 ± 5 ft-lb).

Note: Use caution not to crease the trim panel.

24



W8002490

Install the sleeper curtain rail assembly. Torque the screws to 5 ± 1 Nm (44 ± 9 in-lb).

25

Install the lower mattress/work station cushions in the vehicle.

3935-03-02-02

TV Antenna, Replacement

VN 770 With Integrated Headliner

⚠ DANGER

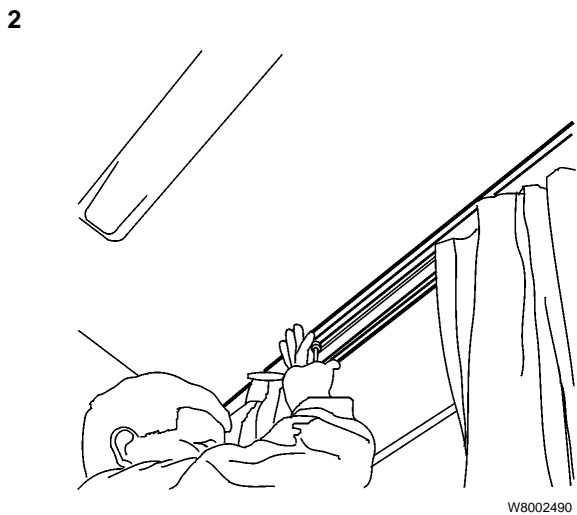
Before working on a vehicle, set the parking brakes, place the transmission in neutral and chock the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

⚠ CAUTION

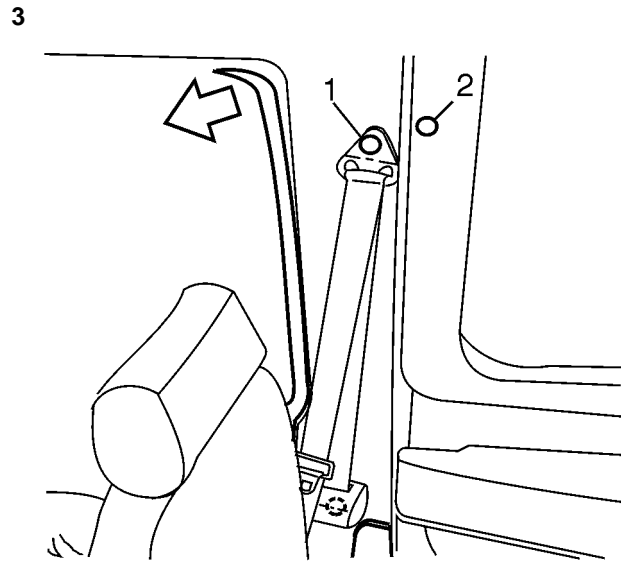
When installing the headliner, care should be taken not to bend the antenna. Any defects in the antenna could cause permanent damage to the circuit board traces.

Removal

1
Remove the lower mattress/work station cushions from the vehicle.



Remove the bunk curtain rail assembly.



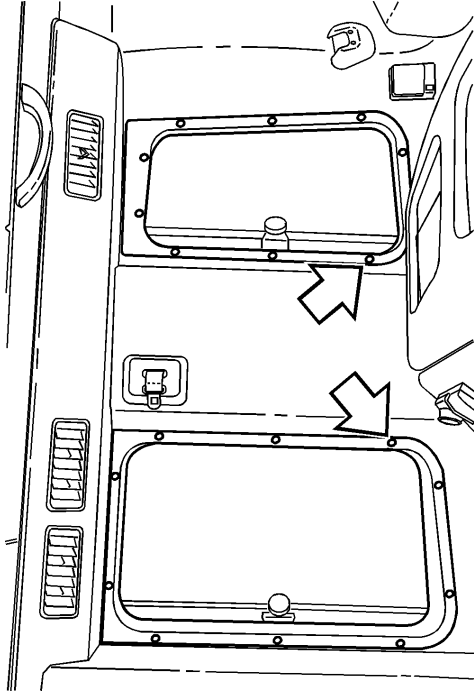
W8002928

Remove the following in both the right and left sides: **J-38778**
 Remove the shoulder harness mounting bolts (1).
 Pull back the upper rear of the door seal to loosen the B pillar trim.
 Gently pull back the B pillar trim and remove the Christmas tree fastener (2) to the upper tower cabinets.

Note: Use caution not to crease the trim panel.

4
Remove the bunk ladder assembly (if equipped).

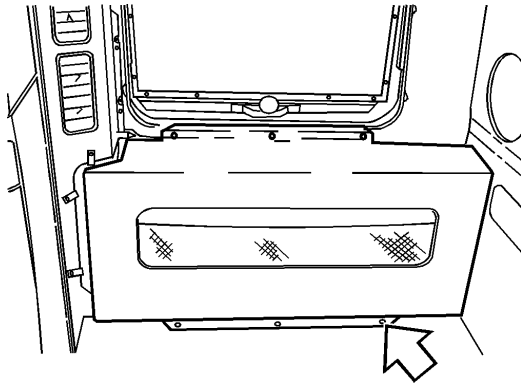
5



W8002176

Remove the 4 bunk windows' trim bezels. There are 10 screws to be removed for each window's trim bezel.

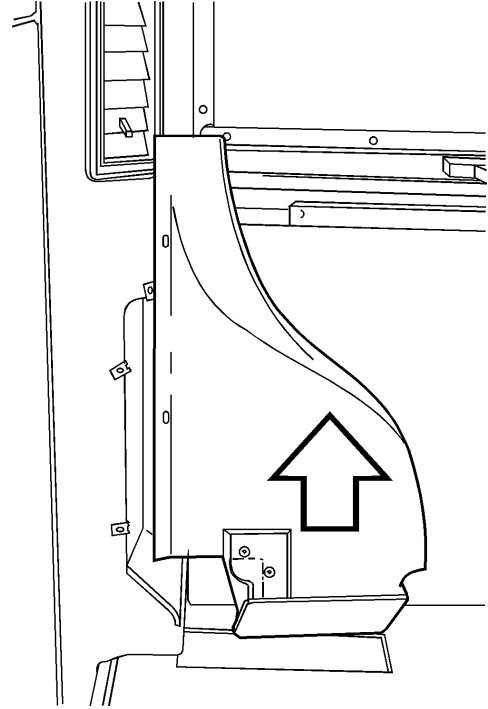
6



W8002177

Remove the torx screws holding the cabinet below the lower right bunk windows.

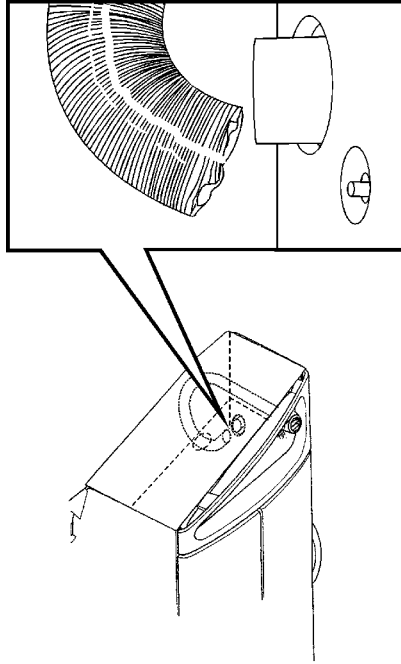
7



W8002178

Remove the 6 torx screws holding the ducting from the bunk HVAC unit to the right bunk fascia panel.

8



W8002180

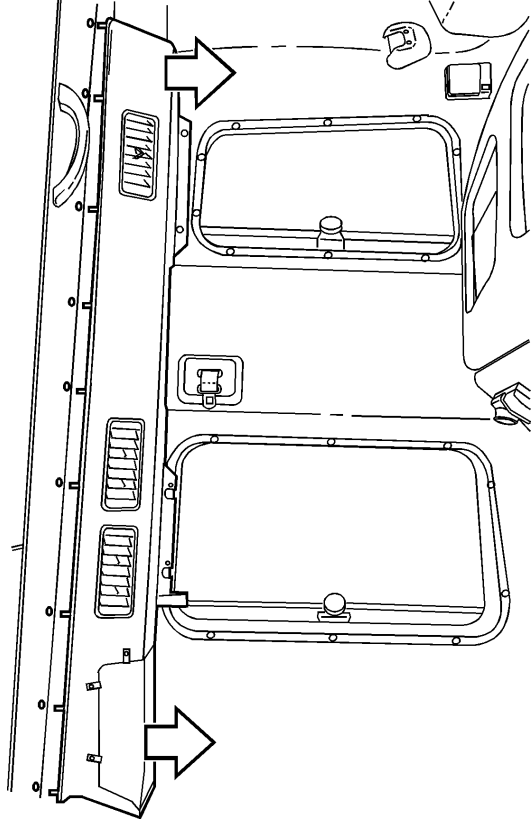
Remove the duct hose in the upper right tower cabinet from the right bunk fascia panel.

9

Pull back the lower right trim panel to expose the lower right bunk fascia panel mounting screws. This panel is secured with Christmas tree and/or interlock fasteners.

J-38778

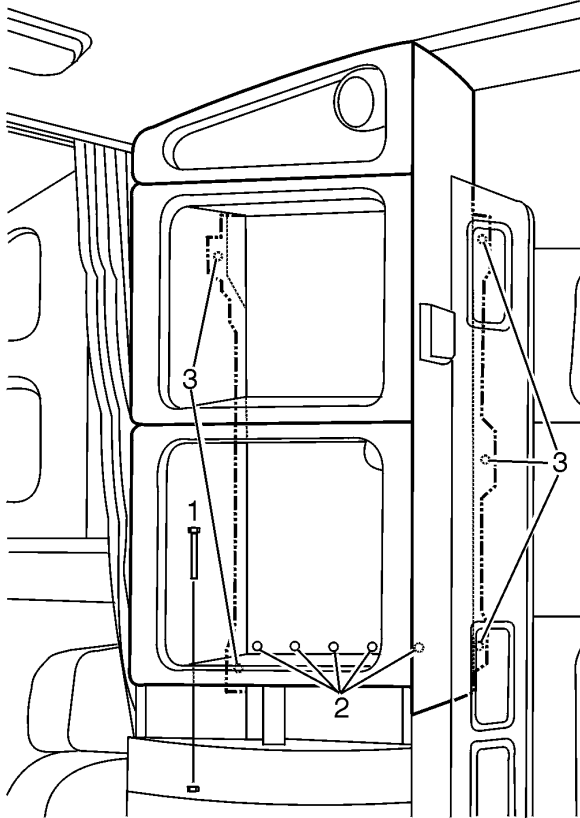
10



W8002179

Remove 5 torx screws, 3 along the top and 2 behind the trim panel, mounting the vent fascia to the wall. Remove the eight nuts from the plastic studs. Remove the fascia panel from its mounting location and remove it from the vehicle.

11



W8002492

Remove the upper right tower cabinet as follows:

Remove any objects stored in the cabinet.

Unplug the power supply connectors. Remove the 5 bolts from the rear bottom wall (2).

Remove the 8 bolts between the upper and lower cabinet (1).

Pull the upper front trim panel back to expose the upper front wall mounting bolt. Remove the bracket from the cabinet that holds the interlock fastener.

Pull back the B pillar trim to expose the lower front wall mounting bolt.

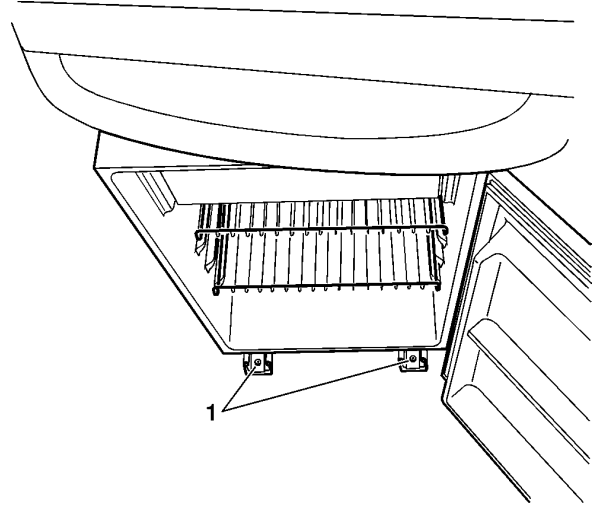
Remove the 5 wall mounting bolts (3).

12

Remove the upper right tower cabinet from its mounting location and out of the vehicle.

Note: This step requires 2 people.

13



W3002102

Remove the refrigerator (if equipped). Open the refrigerator door. Remove the 2 locks from the floor mounting rail.

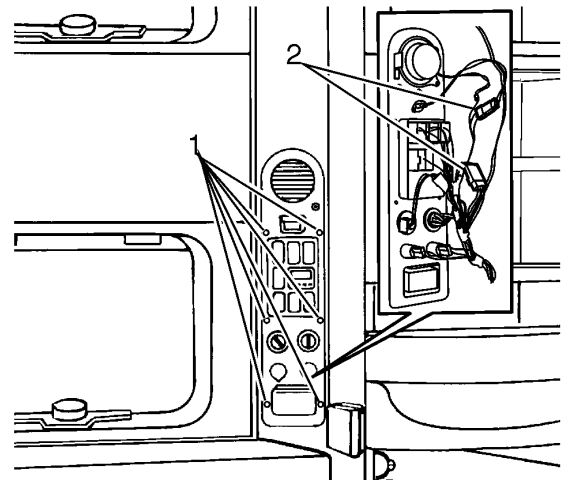
14

Slide the refrigerator out from the cabinet and disconnect the 12 V connector. Remove it from the vehicle.

15

Remove the left tower cabinet drawer stops. Remove the sink plumbing and electrical connectors (if equipped). Remove the drawer.

16



W8002927

Remove the bunk master control panel mounting screws (1) from the left bunk fascia panel.

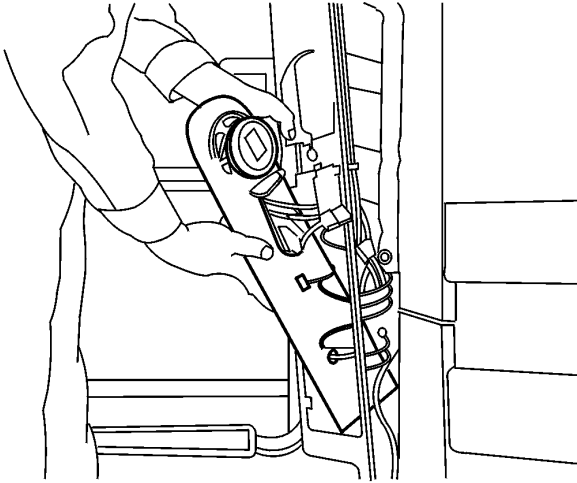
Remove the panel and disconnect the 2 connectors at the top (2). Let the bunk master control panel hang from the wiring harness.

17

Pull back the lower left trim panel to expose the lower left bunk fascia panel mounting screws. The panel is secured with Christmas tree and/or interlock fasteners.

J-38778

18

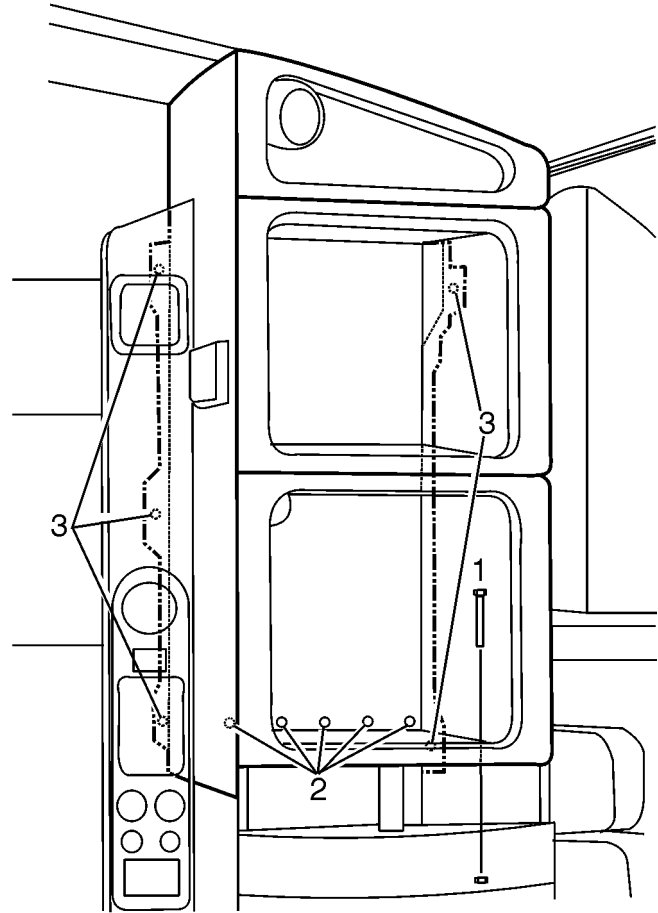


W8002494

Remove the screws securing the left bunk fascia panel to the wall and the nuts securing the panel to the left tower cabinet, and remove it from its mounting location.

Turn the bunk master control panel to fit through the cut out in the fascia panel and remove the fascia panel from the vehicle.

19



W8002929

Remove the upper left tower cabinet as follows:

Remove any objects stored in the cabinet. Unplug the power supply connectors.

Remove the 5 bolts from the rear bottom wall (2). Remove the 6 bolts between the upper and lower cabinet (1).

Note: The lower cabinet door hinges may need to be temporarily removed to remove the 2 front bolts. Install hinges before removing the cabinet.

Pull the upper front trim panel back to expose the upper front wall mounting bolt.

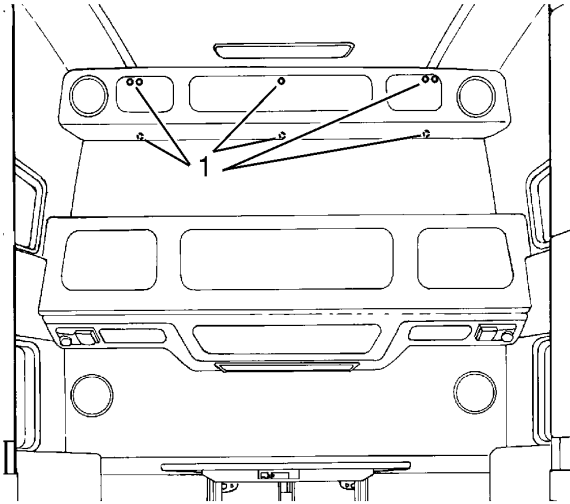
Remove the bracket from the cabinet that holds the interlock fastener. Pull back the B pillar trim to expose the lower front wall mounting bolt. Remove the 5 wall mounting bolts (3).

20

Remove the upper left tower cabinet from its mounting location and out of the vehicle.

Note: This requires 2 people.

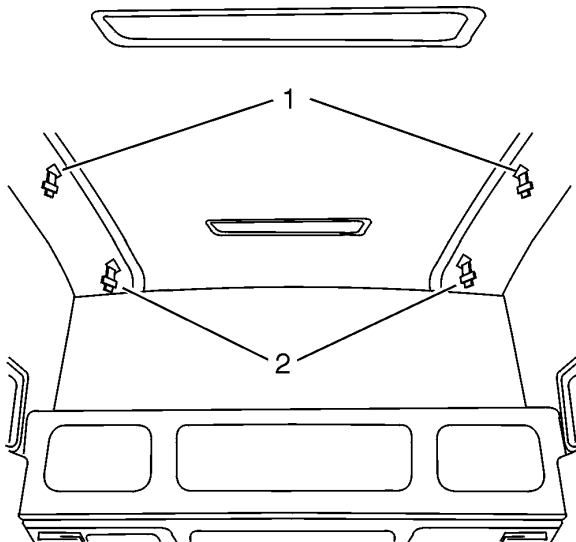
21



W8002496

Remove any objects stored in the bunk upper rear wall storage cabinet. Remove the bolts and disconnect the speaker connectors. Remove the cabinet from the vehicle.

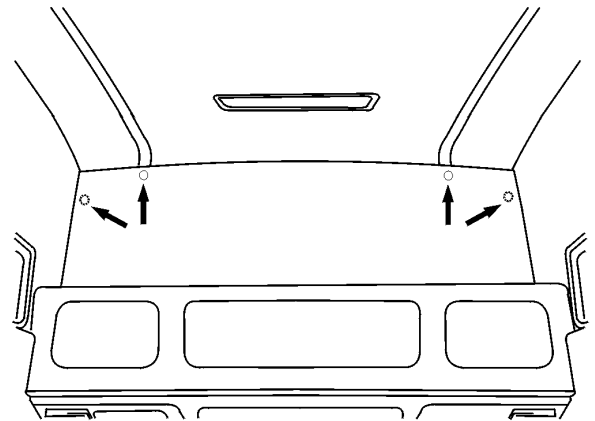
22



W8002497

Remove the upper bunk/rear wall restraint tongues (2). Remove the upper bunk/roof restraint receivers (1).

23



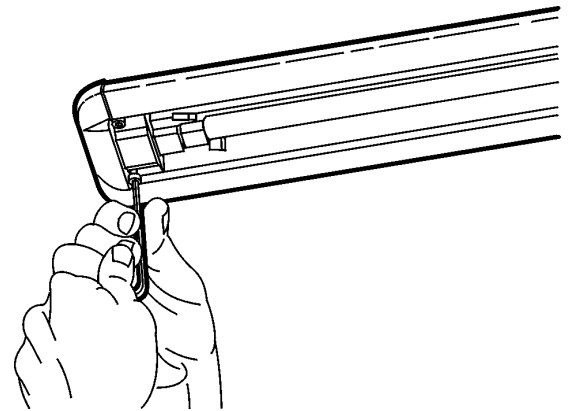
W8002498

Disengage the Christmas tree fasteners on the top of the rear wall trim panel to allow access to the rear part of the center headliner.

J-38778

Note: The 2 lower Christmas tree fasteners are not visible.

24



W8002459

Remove the center bunk headliner overhead lamp assemblies. Disconnect the connector.

25

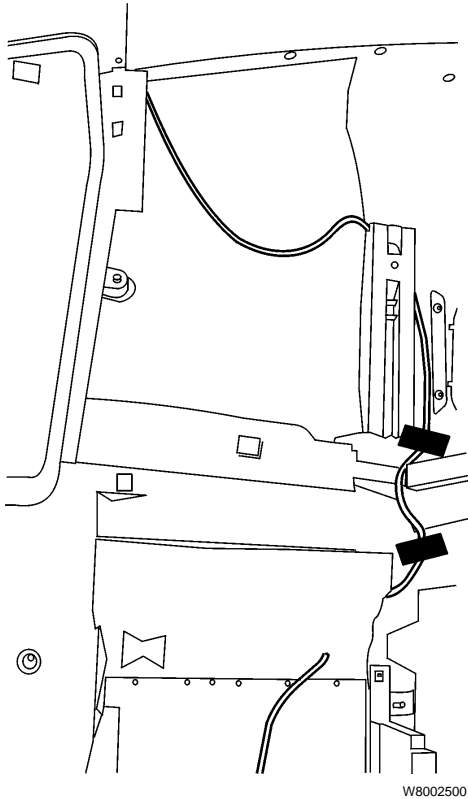
Remove the 2 trim strips on each side of the center bunk headliner.

26

Disengage the Christmas tree fasteners that secure the plastic support strips between the bunk center and side headliners. Use caution when bending back the side headliner panels not to crease the material.

J-38778

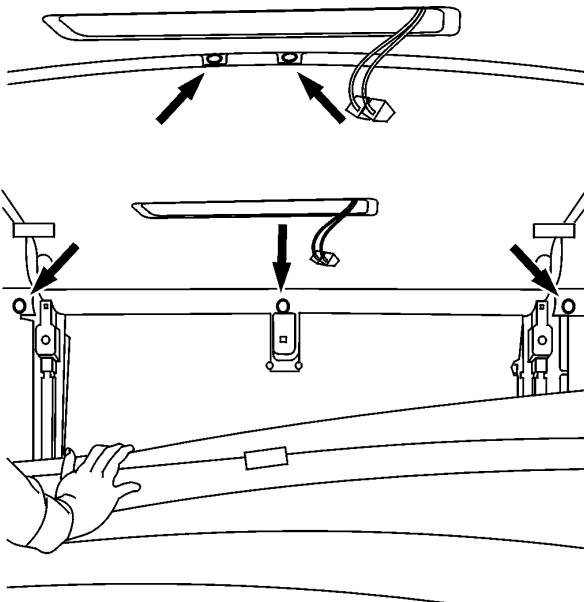
27



W8002500

Note the routing of the TV coaxial cable to aid in installation. Remove the vinyl tape as necessary to free the cable.

28



W8002499

Disengage the 2 Christmas tree fasteners at the front and the 3 at the rear of the center bunk headliner.

J-38778

29

The center bunk headliner is now held in place with interlocking fasteners and the mating headliner components. Disengage fasteners. Begin at the front and carefully work the headliner out of the mating headliner components and remove from the vehicle. Use caution not to crease the headliner panels or mating components during removal.

Note: This step requires 2 people.

Installation

1

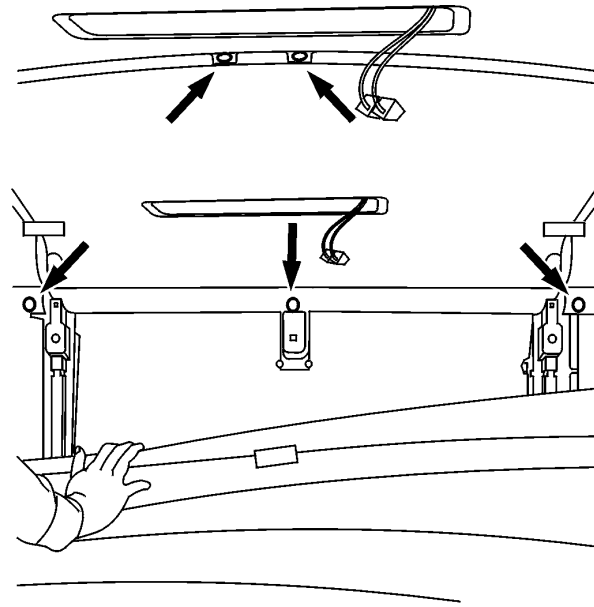
Note the location of the interlock fasteners before installation of the replacement center bunk headliner.

2

Begin at the rear and carefully work the replacement headliner into its mounting location. Use caution not to crease the headliner panels or mating components during installation. Engage the interlock fasteners when the headliner is properly positioned.

Note: This step requires 2 people.

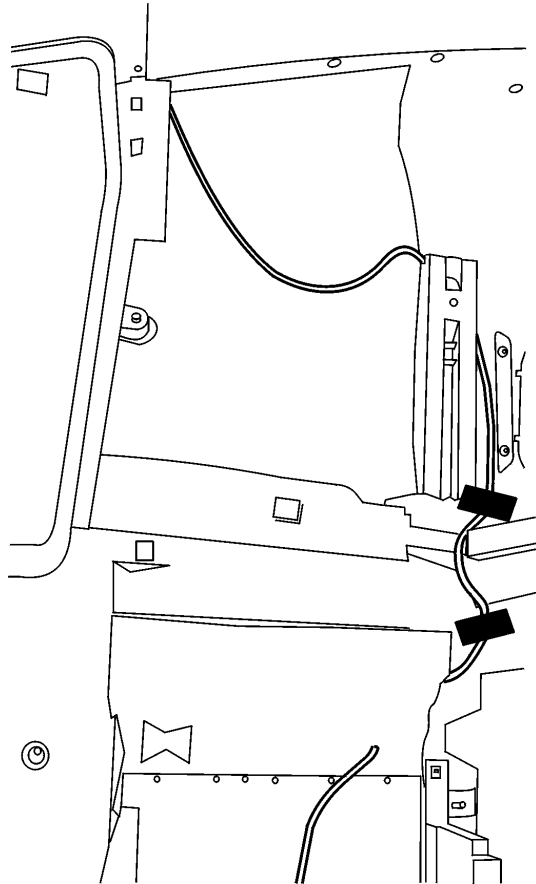
3



W8002499

Engage the 2 Christmas tree fasteners at the front and the 3 at the rear of the center bunk headliner.

4



W8002500

Route the TV coaxial cable and secure with the vinyl tape.

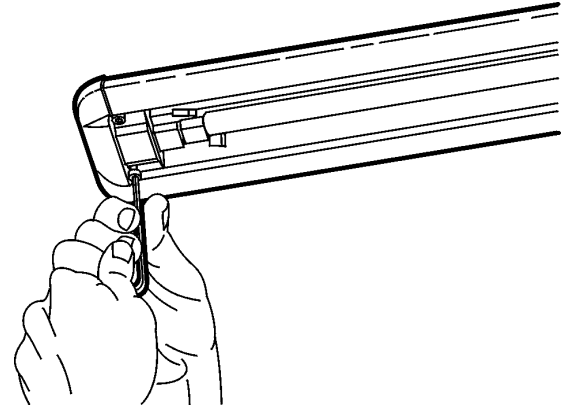
5

Install the plastic support strips between the bunk center and side headliners and secure with Christmas tree fasteners. Use caution when bending back the side headliner panels not to crease the material.

6

Install the 2 trim strips on each side of the center bunk headliner.

7



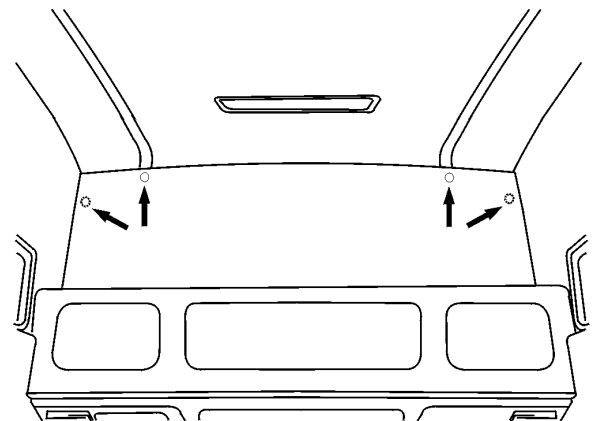
W8002459

Install both overhead lamp assemblies as follows:

$3 \pm 0.5 \text{ Nm}$
($27 \pm 4.5 \text{ in-lb}$)

Connect the connector. Install the assembly and torque the 4 screws to $3 \pm 0.5 \text{ Nm}$ ($27 \pm 4.5 \text{ in-lb}$).
Install the lamp cover.

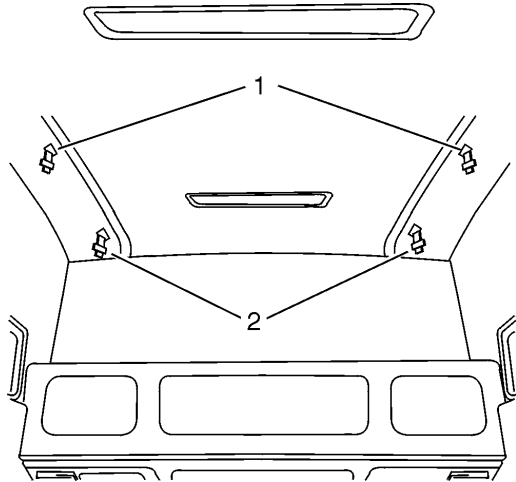
8



W8002498

Secure the rear wall trim panel with the 4 Christmas tree fasteners.

9



W8002497

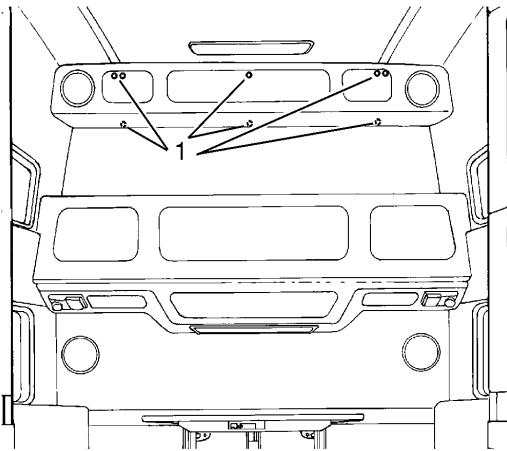
Install the upper bunk/roof restraint receivers (1). Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

24 ± 4 Nm
(18 ± 3 ft-lb)

Install the upper bunk/rear wall restraint tongues (2). Torque to 68 ± 7 Nm (26 ± 5 ft-lb).

68 ± 7 Nm
(26 ± 5 ft-lb)

10



W8002496

Position the bunk upper rear wall storage cabinet to its mounting location. Connect the speaker connectors and secure the cabinet with the fasteners. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

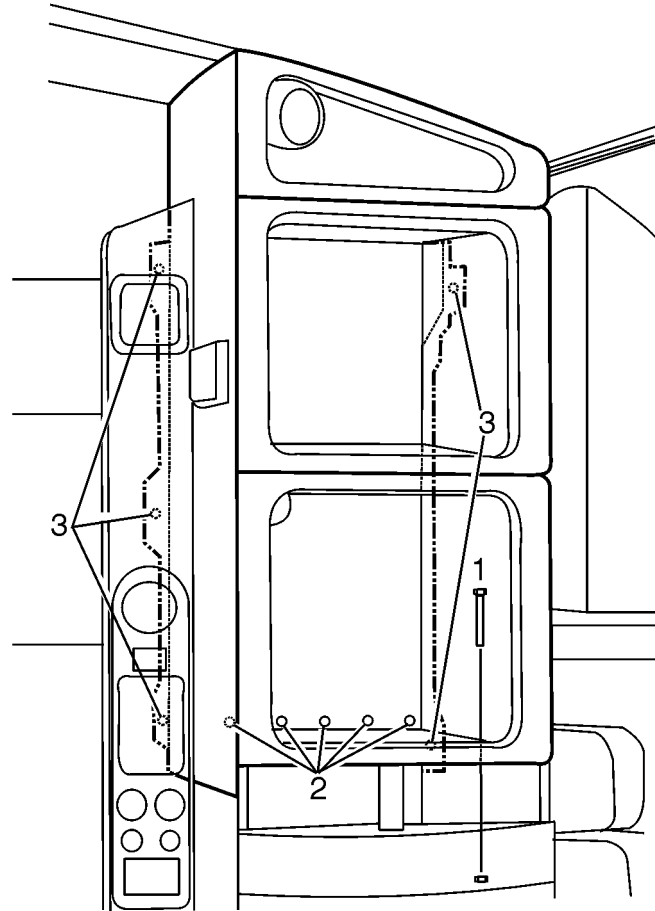
24 ± 4 Nm
(18 ± 3 ft-lb)

11

Position the upper left tower cabinet into its mounting location. Work the cabinet around trim panels and pull the wiring through the cabinet as necessary.

Note: This step requires 2 people.

12



W8002929

Install the upper left tower cabinet as follows:

24 ± 4 Nm
(18 ± 3 ft-lb)

Start all cabinet mounting bolts before beginning tightening. Install the 5 wall mounting bolts. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

24 ± 4 Nm
(18 ± 3 ft-lb)

Install the 6 bolts between the upper and lower cabinet. Torque to 24 ± 4 Nm (18 ± 3 ft-lb).

10 ± 1.5 Nm
(7 ± 1 ft-lb)

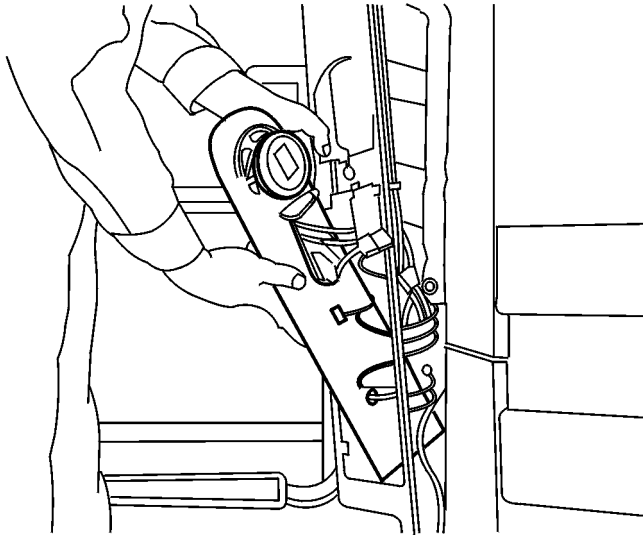
Note: The lower cabinet door hinges may need to be temporarily removed to install the 2 front bolts. Install hinges after the bolts between the upper and lower cabinet have been tightened.

Install the 5 bolts to the rear bottom wall. Torque to 10 ± 1.5 Nm (7 ± 1 ft-lb).

Torque all cabinet mounting bolts.

Install the bracket that holds the interlock fastener to the cabinet. Secure the upper front trim panel with the interlock fasteners. Connect the power supply connectors.

13



W8002494

Fit the bunk master control panel through the cut out in the left bunk fascia panel.

Position the left bunk fascia panel into its mounting location. Secure the panel to the tower cabinets with the plastic stud nuts.

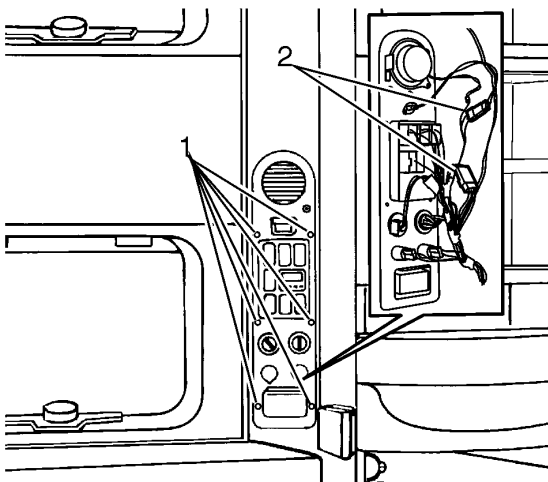
Secure the panel to the wall with screws. Torque to 3 ± 0.5 Nm (27 ± 4 in-lb).

3 ± 0.5 Nm
(27 ± 4 in-lb)

14

Secure the lower left trim with Christmas tree and/or interlock fasteners.

15



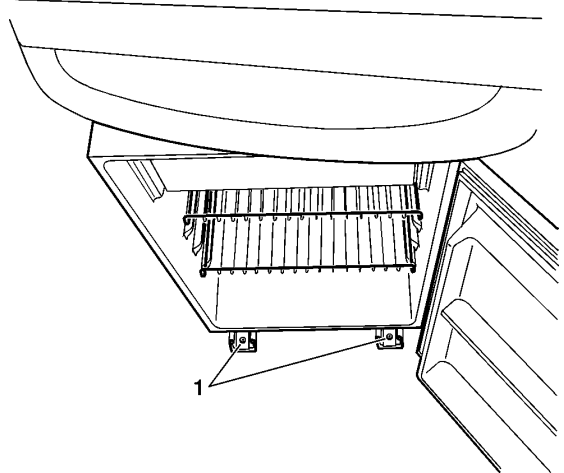
W8002927

Connect the bunk master control panel connectors (2). Using the 6 screws (1), install the bunk master control panel into the left bunk fascia panel.

16

Install the left tower cabinet drawer. Connect the sink plumbing and electrical connectors (if equipped). Install the drawer stops.

17



W3002102

Install the refrigerator (if equipped) as follows:

Place the refrigerator on the floor just in front of the cabinet.

Connect the 12 V power supply, using the locking connector.

Align the refrigerator mounting brackets with the floor tracks and slide it as far back on the tracks as possible.

Open the refrigerator door and install the locks (1) in the floor mounting rail. Torque to 13 ± 2 Nm (10 ± 1.5 ft-lb).

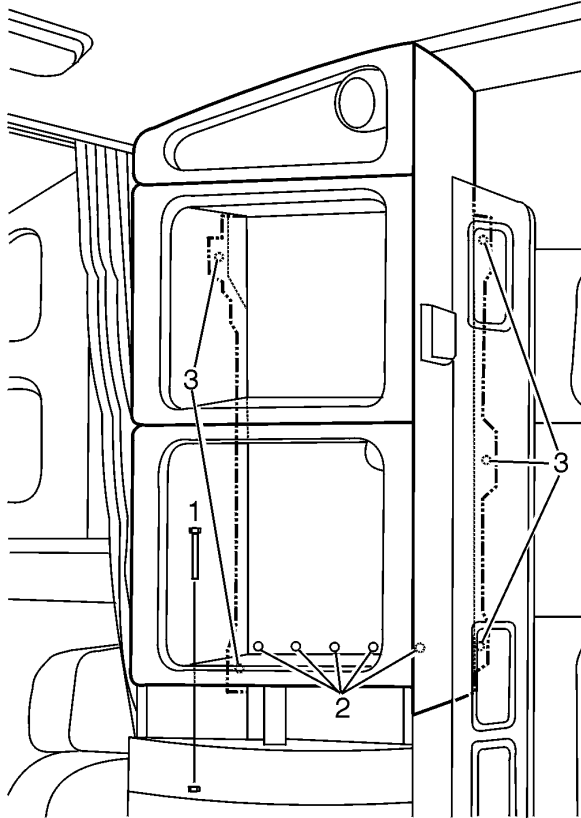
13 ± 2 Nm
(10 ± 1.5 ft-lb)

18

Position the upper right tower cabinet into its mounting location. Work the cabinet around trim panels and pull wiring through the cabinet as necessary.

Note: This step requires 2 people.

19

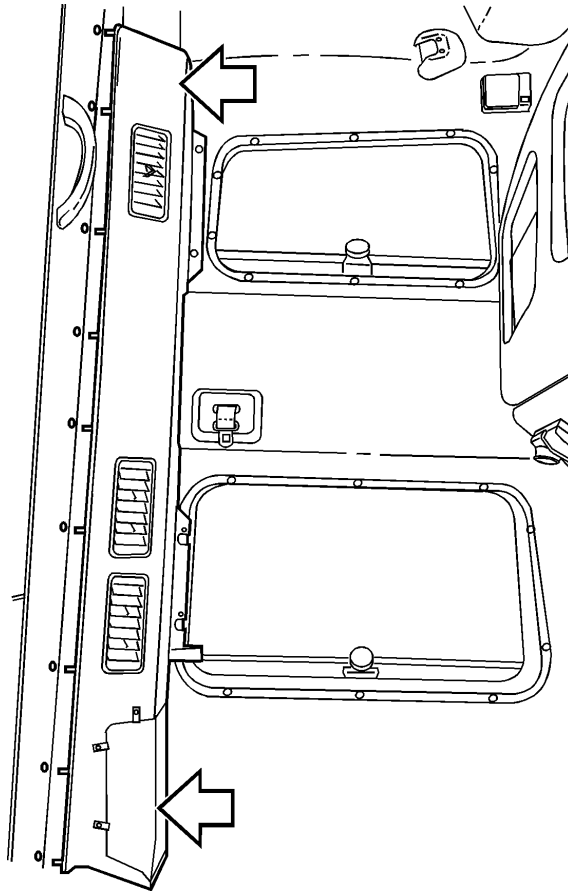


W8002492

Install the upper right tower cabinet as follows:
 Start all cabinet mounting bolts before beginning tightening.
 Install the 5 wall mounting bolts (3). Torque to 24 ± 4 Nm (18 ± 3 ft-lb).
 Install the 8 bolts between the upper and lower cabinet (1). Torque to 24 ± 4 Nm (18 ± 3 ft-lb).
 Install the 5 bolts to the rear bottom wall (2). Torque to 10 ± 1.5 Nm (7 ± 1 ft-lb).
 Torque all cabinet mounting bolts.
 Install the bracket that holds the interlock fasteners to the cabinet. Secure the upper front trim panel with the interlock fasteners.
 Connect the power supply connectors.

24 ± 4 Nm
 (18 ± 3 ft-lb)
 24 ± 4 Nm
 (18 ± 3 ft-lb)
 10 ± 1.5 Nm
 (7 ± 1 ft-lb)

20



W8002182

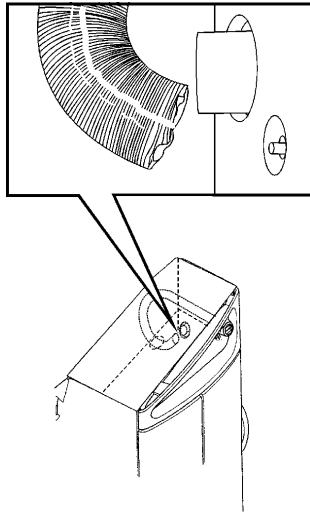
Position the right bunk fascia panel into its mounting location. Secure the panel to the tower cabinets with the plastic stud nuts. Secure the panel to the wall with screws. Torque to 3 ± 0.5 Nm (27 ± 4 in-lb).

3 ± 0.5 Nm
 (27 ± 4 in-lb)

21

Secure the lower right trim with Christmas tree and/or interlock fasteners.

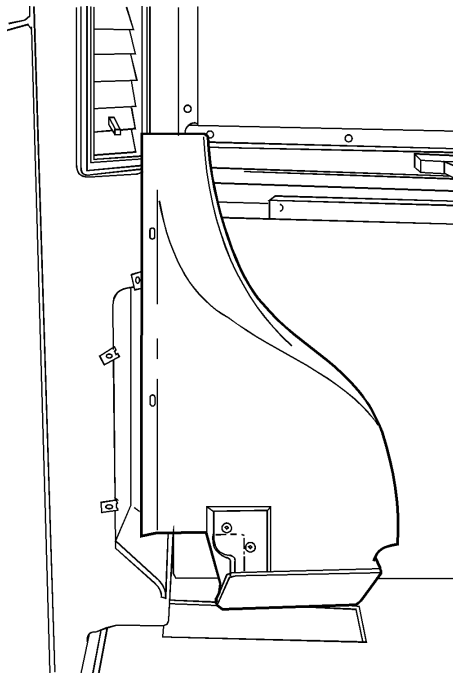
22



W8002180

Secure the duct hose in the upper right tower cabinet to the right bunk fascia panel.

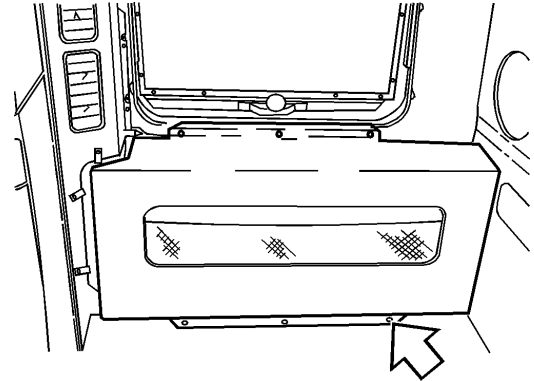
23



W8002183

Install the duct from the bunk HVAC unit to the right bunk fascia panel. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

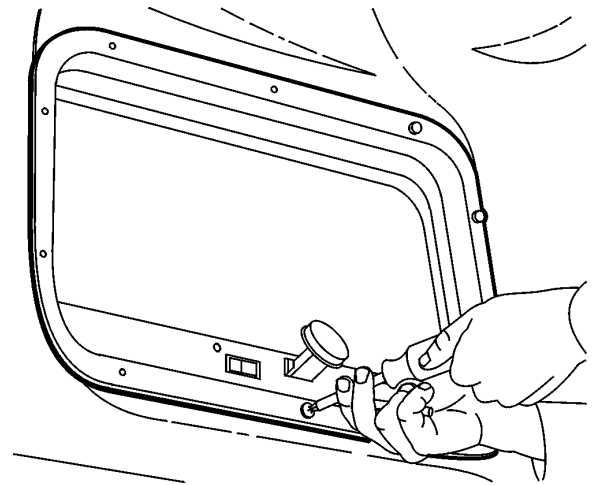
24



W8002177

Install the cabinet below the lower right bunk window. Torque the 3 bottom screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

25



W8002458

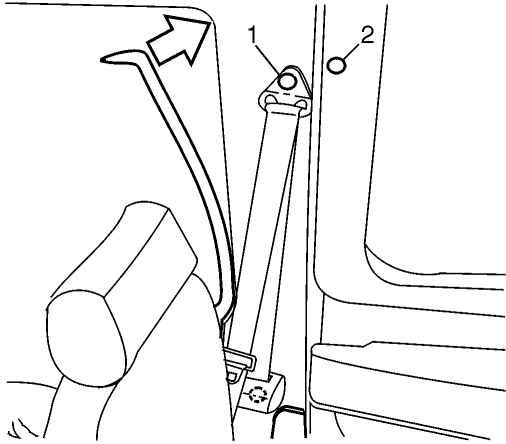
Install the 4 bunk window trim bezels. Torque the screws to 3 ± 0.5 Nm (27 ± 4 in-lb).

26

Install bunk ladder assembly (if equipped). Torque the bolts to 10 ± 1.5 Nm (7 ± 1 ft-lb).

Torque wrench

27



W8002501

Install both right and left B pillar trims as follows:

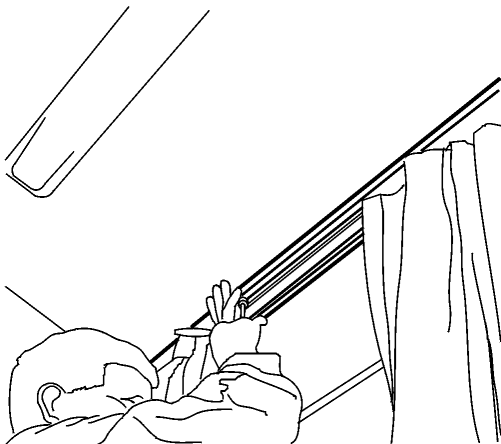
$68 \pm 7 \text{ Nm}$
($50 \pm 5 \text{ ft-lb}$)

Secure the B pillar trim to the upper tower cabinets with the Christmas tree fasteners. Properly position the B pillar trim and reinstall the door seal to secure.

Install the seat belt shoulder harness mounting bolts. Torque to $68 \pm 7 \text{ Nm}$ ($50 \pm 5 \text{ ft-lb}$).

Note: Use caution not to crease the trim panel.

28



W8002490

Install the sleeper curtain rail assembly. Torque the screws to $5 \pm 1 \text{ Nm}$ ($44 \pm 9 \text{ in-lb}$).

$5 \pm 1 \text{ Nm}$
($44 \pm 9 \text{ in-lb}$)

29

Install the lower mattress/work station cushions in the vehicle.

3935-03-02-01 TV Speaker/Headphone Jack, Replacement

Note: The TV speaker/jack is equipped on VN 770 vehicles only.



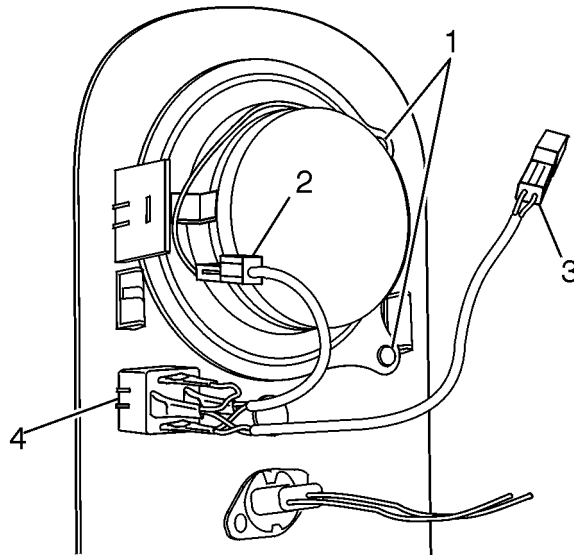
Before working on a vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury death.

Removal

1 Turn the ignition key OFF. Turn off the power to the TV.

2 Remove the six screws from the sleeper control panel. Pull the panel cover away from the bunk wall.

3



W3004368

Sleeper Control Panel, Rear View

- 1 Speaker Mounting Screws
- 2 TV Speaker Connector
- 3 TV Harness Connector
- 4 TV Jack

Disconnect the TV speaker and harness connector.

4

Remove the two mounting screws for the TV speaker. Remove the TV speaker.

5

To remove the TV speaker jack, remove the nut on the front with a 1/2 inch socket and remove the jack.

Installation**1**

Install the replacement TV speaker into the control panel with the two mounting screws.

2

Install the speaker jack and secure the nut with a 1/2 inch socket.

3

Connect the connectors.

4

Turn on the power to the TV. Check the speaker for operation.

5

Insert the sleeper control panel into the trim panel, install the six mounting screws.

Operation Numbers

3935-03-02-01 TV Speaker/Headphone Jack, Replacement 46
3935-03-02-02 TV Antenna, Replacement 13, 16, 22, 34

VOLVO

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