SATELLITE RADIO INSTALLATION INSTRUCTIONS

1. DESCRIPTION: SATELLITE RADIO SYSTEM

2. PART NUMBERS:

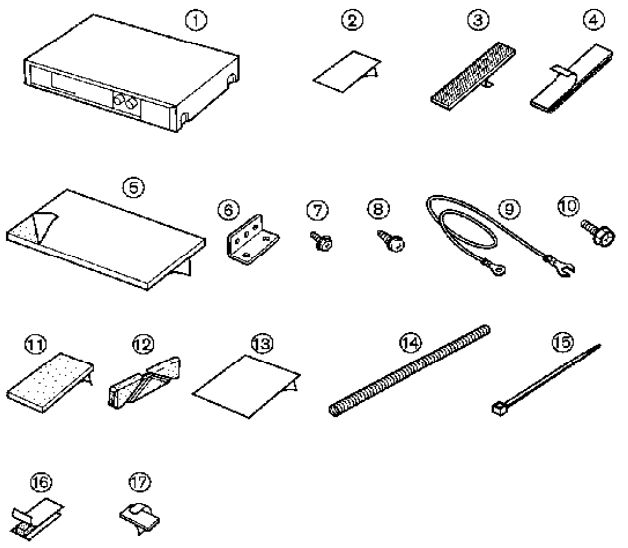
XM tuner kit	999U9-NV003
XM antenna kit	999U9-VR000
Sirius tuner kit	999U9-NV004
Sirius antenna kit	999U9-VR002
* Tuner Brackets	999U9-VQ011
** SAT harness for iPod systems	999U7-VS001

3. MODEL APPLICATION: TITAN (2004 last 6 digits of VIN is 572935 or later - 2005)

4. TUNER KIT CONTENTS:

No.	Parts	Qty
1	Tuner	1
2	Black Tape	2
3	Velcro Tape (hook)	2
4	Velcro Tape (loop)	2
5	Double-Stick Foam Pad	1
6	L Bracket	2
7	M4 Machine Screw	4
8	5mm Tapping Screw	4
9	Ground Cable	1
10	6mm Tapping Screw	1
11	Sponge Tape	14
12	Edge Protector	1
13	Clear Tape	4
14	Corrugated Tube	1
15	Cable Tie	4
16	Butyl Gum	2
17	Cable Clamp	4

Parts View



⚠ CAUTION

- Confirm that the adjustable Accelerator Control System functions properly per the service manual after re-installation.
- This can be a difficult and time consuming installation that may require the skill of the master technician who is familiar with electronics installation. Contact your regional DTS for additional information on installation support.
- Tuner unit, and antenna must be same brand, XM or Sirius.
- This is a universal installation kit so all parts may not be used.
- Re-installation of satellite radio antenna to be performed by an authorized dealer only.
- XM antenna templates should be printed at a 1:1 ratio. Templates should be checked after printing using the given dimensions to ensure accuracy.
- Cut off the excess material of the cable ties as flush with the head as possible. Face head of cable tie away from sheet metal and other objects.
- In the event the satellite radio antenna or antenna splitter (Sirius only) needs to be replaced, or re-installed order the appropriate Satellite Antenna Kit.

Sirius antenna kit	999U9-VR008-S1	Sirius splitter kit	999U9-VQ005
XM complete antenna kit	999U9-VR007-S1	XM outer antenna only	999U9-VR006-S1

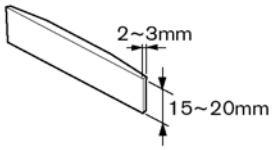
* NOTE: For vehicles after the above listed VIN or vehicles with Rockford branded stereo, DO NOT ORDER Tuner Bracket as it already comes standard on those vehicles.

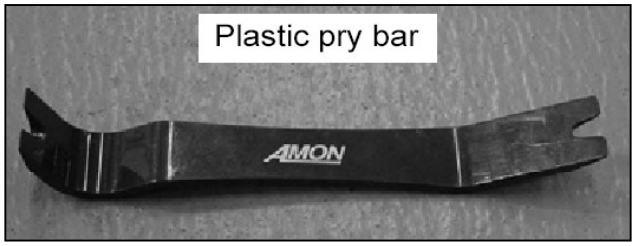
** NOTE: Only necessary for vehicles with iPod Gateway Module installed. Refer to the vehicle specific iPod Installation Instructions on ASIST.NET for further information.

5. TOOL & MATERIAL REQUIRED:

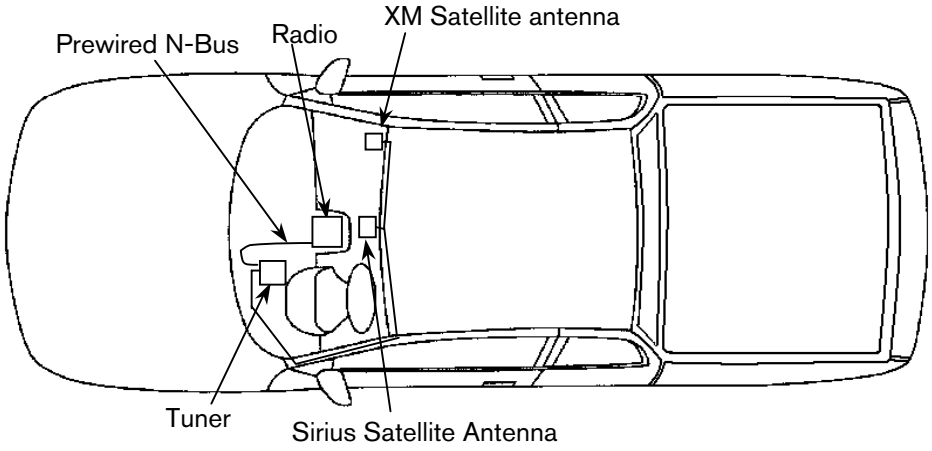
1. Phillips screwdriver (Short #2)
2. Tape measure
3. Clip remover
4. 50/50-alcohol/water solution
5. Electrical tape
6. Masking tape
7. 3/8" driver w/ 14mm socket
8. 3", 6", and 12" socket extensions
9. ¼" driver w/ 10mm normal & 12mm deep sockets

• PGFstick for antenna cable routing





6. INSTALLATION OUTLINE:

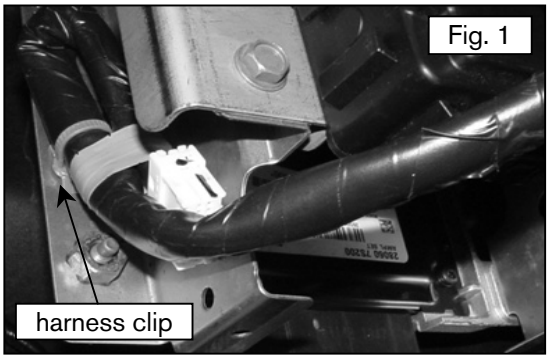


7. VEHICLE PREPARATION:

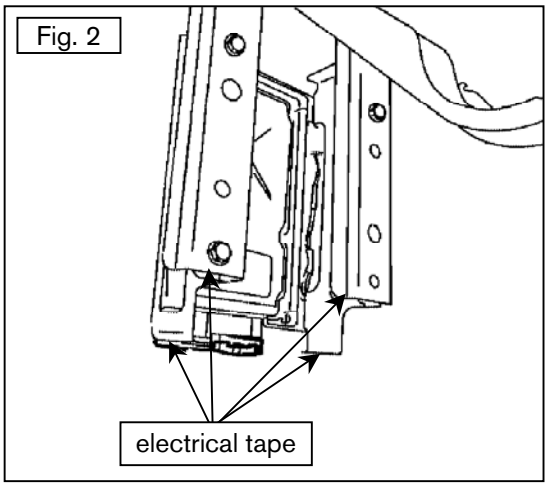
(1) Park vehicle on a flat surface.
(2) Apply parking brake.
(3) Record the customer radio presets.

	1	2	3	4	5	6	7
AM							
AM2							
FM1							
FM2							
FM3							
ESN number located on tuner box:							

(4) Make sure that the shift lever is engaged in the "P" position.
(5) Move the accelerator and brake pedals to the front most position.
(6) Turn the ignition switch OFF
(7) Open engine hood.
(8) Disconnect the battery negative terminal to prevent short circuits during installation.



(9) Release N-BUS harness from the speaker amplifier bracket. Fig. 1



(10) Apply electrical tape to the sharp edges of the speaker amplifier bracket. Fig. 2

(11) Remove the following interior parts as shown in Fig. 3 (Refer to vehicle service manual)

- Body Control Module
- Lower knee protector LH
- Instrument lower cover LH
- Speaker amplifier and bracket (if equipped)
- Lower driver instrument panel LH
- Accelerator control system (* see note)

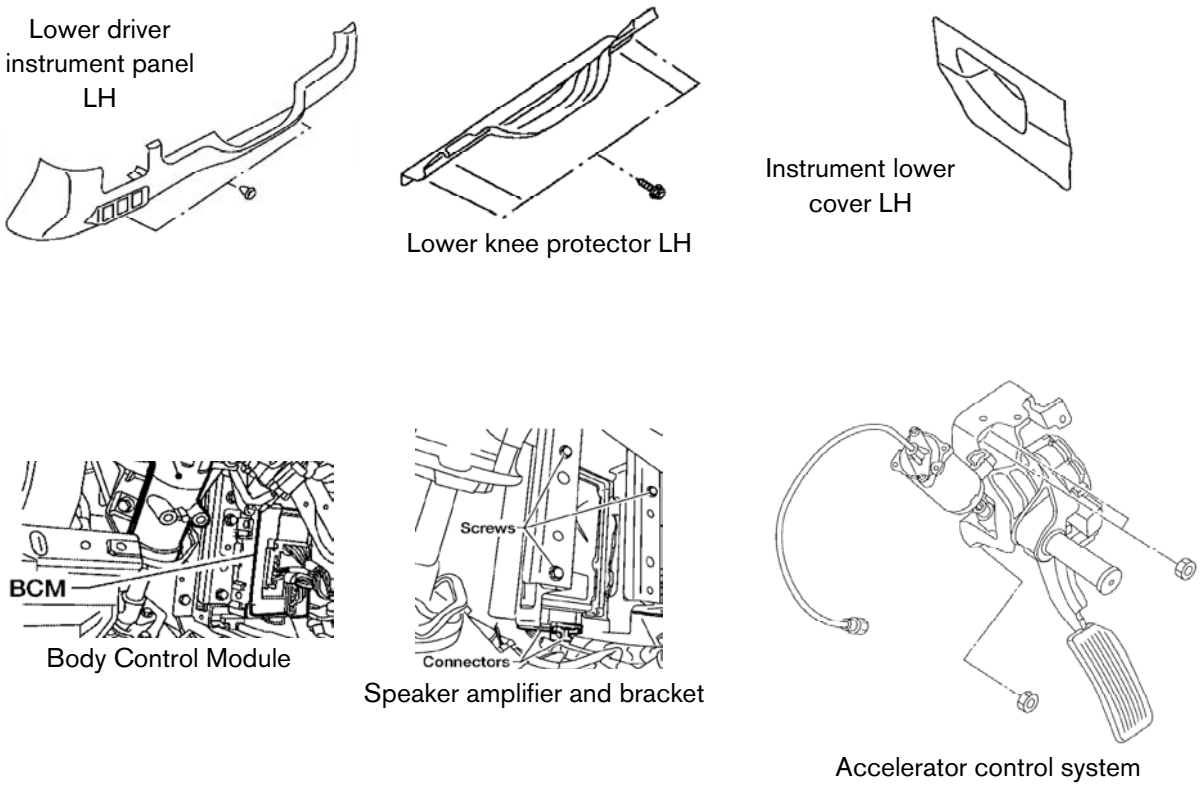


Fig. 3

⚠ CAUTION

Use caution when removing the Accelerator control system so it is not damaged.

* Note: It is not necessary to completely remove the Accelerator control system to install the satellite radio tuner. The Accelerator control system can be released and moved out of the way without disconnecting the adjustable brake pedal cable and the accelerator position sensor electrical connector. Follow the proceedure specified in the Release Accelerator Control System section (section 3 on page 5 of these instructions).

8. RELEASE ACCELERATOR CONTROL SYSTEM:

⚠ CAUTION

- Before removal and installation the accelerator and brake pedals must be in the front most position. This is to align the base position of the accelerator and brake pedals.
- Do not disassemble the accelerator pedal assembly.
- Do not remove the accelerator pedal position sensor from the accelerator pedal bracket.
- Do not disassemble the accelerator pedal adjusting mechanism.
- Avoid damage from dropping the accelerator pedal assembly during handling.
- Keep the accelerator pedal assembly away from water.

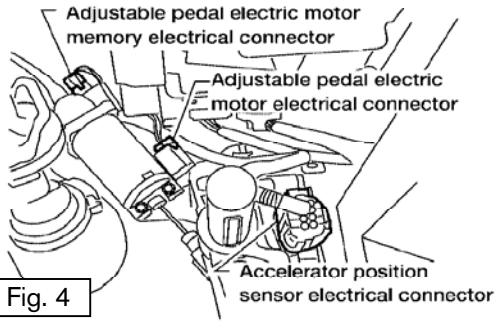


Fig. 4

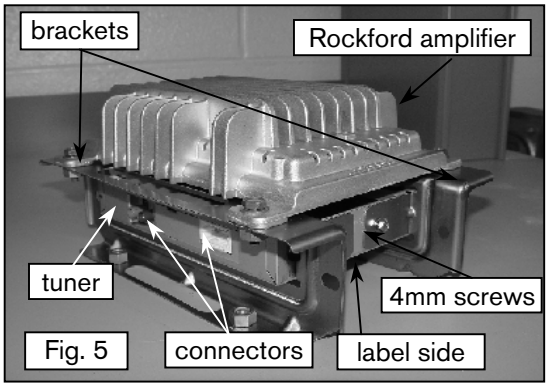
(1) Disconnect the adjustable pedal electric motor electrical connector. Fig. 4

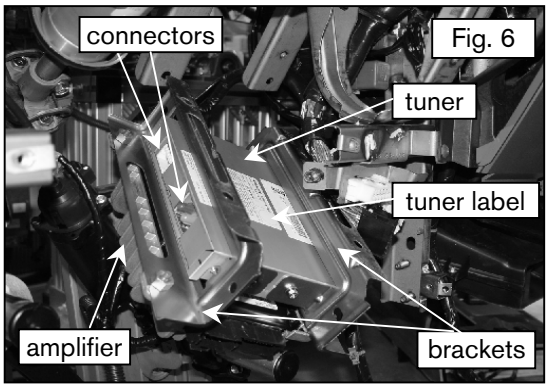
(2) Disconnect the adjustable pedal electric motor memory electrical connector, if equipped. Fig. 4

(3) Remove the two upper and one lower accelerator pedal nuts.

(4) Release the adjustable accelerator pedal assembly from mounting location and rest the assembly on the floor of the vehicle.

9. TUNER INSTALLATION:





(1) For Titan installations with the last six digits of the VIN being 572935 or later (excluding non-Rockford stereos) the Tuner Brackets will need to be removed from the vehicle per the service manual . The Tuner Brackets will not be present for Titans with non-Rockford stereos, and will need to be ordered. Install two (2) tuner brackets (one to each side of the tuner) using four (4) 4mm screws. If stereo is non-Rockford an amplifier will not be attached. Tuner label should face down with antenna and N-BUS connectors facing the driver door. Ensure the 4mm screws are centered in slotted hole of bracket. If installing in non-Rockford stereo attempt to dry fit the bracket and tuner in the vehicle to make certain of alignment. Fig. 5

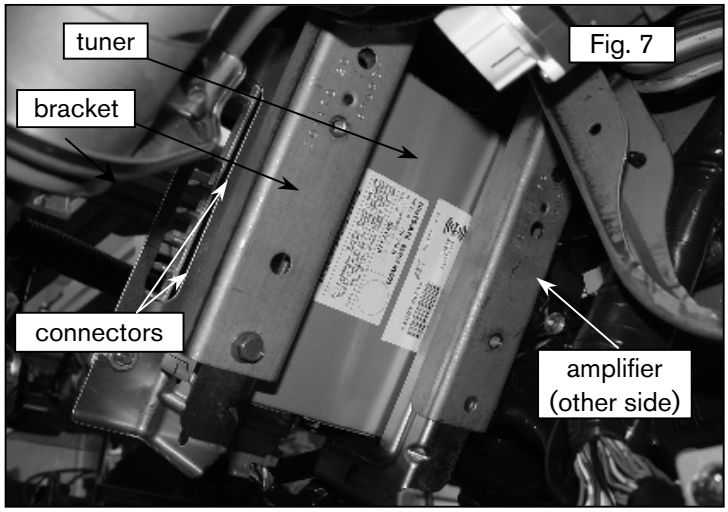
(2) Carefully navigate the amplifier/tuner assembly to the proper location. Fig. 6

(3) Install the amplifier/tuner assembly back into the original position per the service manual.

(4) Remove the temporary electrical tape from the amplifier brackets.

(5) Connect the N-Bus to the tuner. Fig. 7

(6) Re-connect the N-BUS harness clip to the speaker amplifier bracket.



10. ANTENNA INSTALLATION:

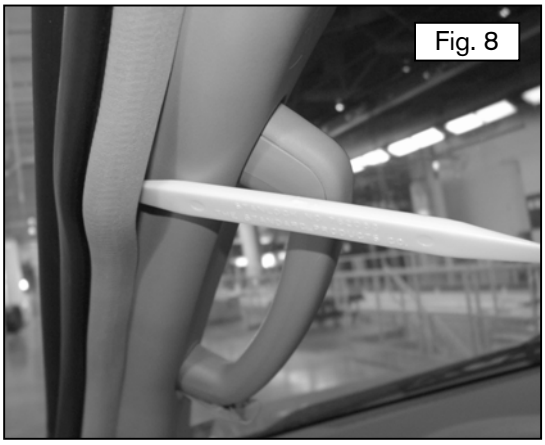


Fig. 8

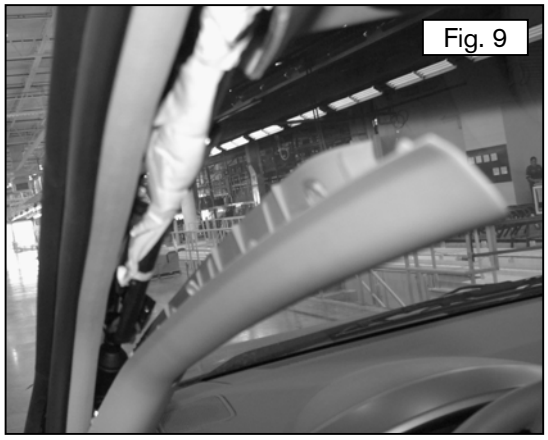


Fig. 9

(1) Detach the weather stripping from the driver side A pillar using a PGF stick. Fig. 8

⚠ CAUTION

Do not tear the weather strip.

(2) Release the top portion of the driver side A-pillar finisher by releasing the top clips.

(3) Remove the A-pillar by releasing the remaining fasteners. Fig. 9

⚠ CAUTION

In case of ambient temperatures below 20 degrees C (70 degrees F), it is required to warm the tape and mounting surface with a heater to a minimum of 20 degrees C (70 degrees F).

(4) Clean windshield with 50/50 alcohol/water solution on the upper corner passenger side (inside/outside) where both parts of the antenna are to be mounted (for XM), and on the inside center mounting location above rearview mirror (right of center for E/C rear view mirror) where the antenna is to be mounted (for Sirius).

10-1. XM ANTENNA INSTALLATION (Skip to Section 10-2 for SIRIUS Installations):

Fig. 10

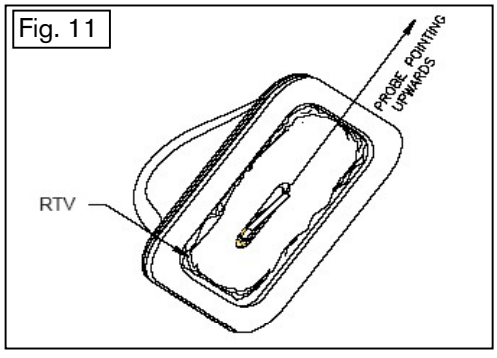


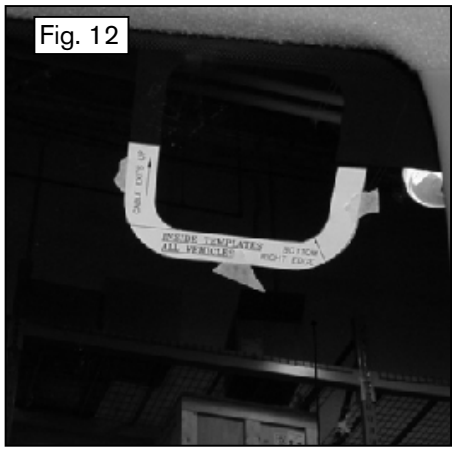
Fig. 11

⚠ CAUTION

Do not touch or contaminate the cleaned glass or adhesive tape on the antenna to prevent reduction of adhesive strength.

(5) Secure outer antenna template to windshield with masking tape. Apply a 1/8" diameter bead of RTV to inside of adhesive tape. Fig. 10 & 11

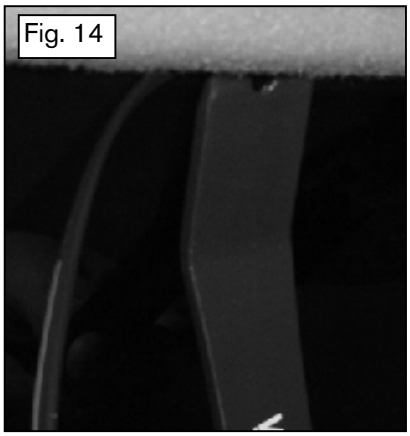
(6) With the probe pointing upwards place outer antenna housing squarely, but lightly on windshield. DO NOT apply one side first and then roll the rest down. Push corners down first, then work to the sides. Apply equal pressure downward along all portions of the housing for at least 20 seconds. Inspect for 100% wet-out along the outside of the tape from inside of vehicle with flashlight. Fig. 10 & 11



(7) Line up inner template with outer template and outer antenna. Secure inner antenna template to windshield with masking tape. Fig 12

(8) Unwrap the antenna cable. Place inner antenna housing squarely into position. DO NOT apply one side first and then roll the rest down. Apply equal pressure along all portions of the housing for at least 20 seconds. If inner template is interfering with the installation it can be removed, and the outer antenna housing can be used for visual alignment. Fig. 13

(9) Use a plastic pry bar to push the antenna cable into the headliner. While feeding wire into headliner wrap six (6) pieces of sponge tape lengthwise and evenly spaced across the length of wire being fed into the headliner. Ensure that two (2) pieces of sponge tape is placed on the antenna cable in the area of the dome lamp housing. Fig 14 & 15



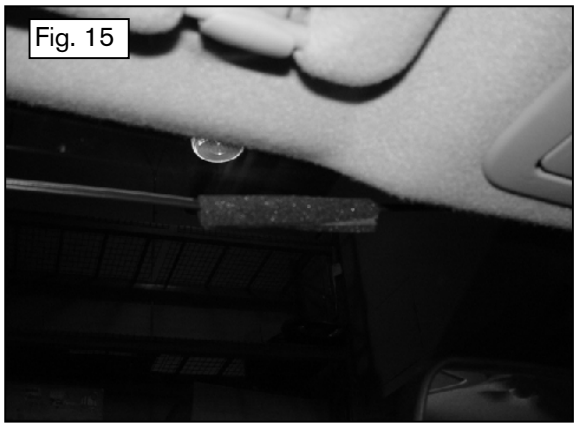
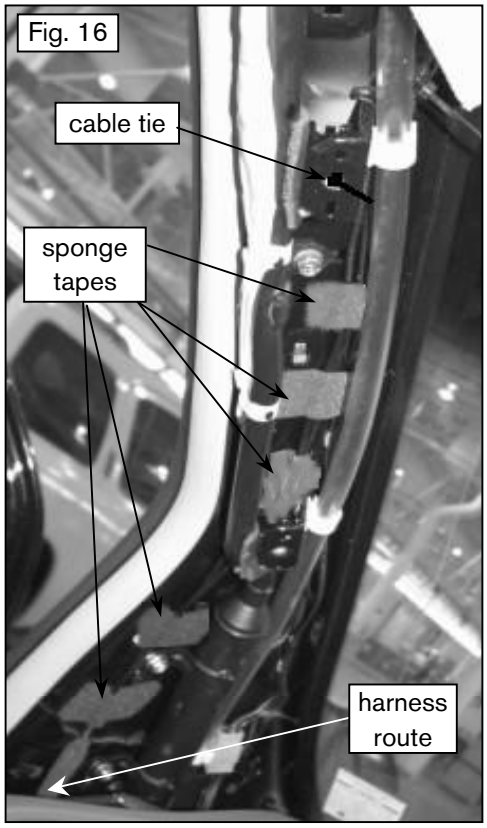


Fig. 16



(10) Use five (5) pieces of sponge tape and one (1) cable tie to secure the antenna harness to the sheet metal of the A-pillar (attach cable tie to bracket through middle hole). Cut the excess cable tie as flush with the head as possible. Face head of cable tie away from sheet metal and other objects. Fig. 16

⚠ CAUTION

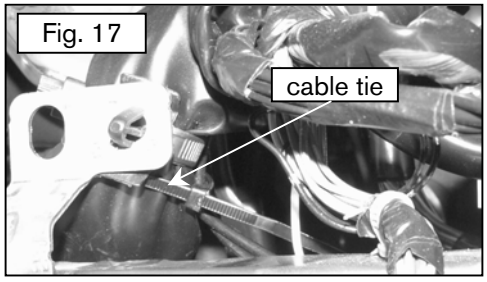
Do not secure the antenna harness to the windshield washer fluid supply line or the sunroof drain line.

(11) Reinstall the lower knee protector LH with the original four (4) screws.

(12) Route harness along the backside of the lower knee protector LH from the A-pillar towards the tuner.

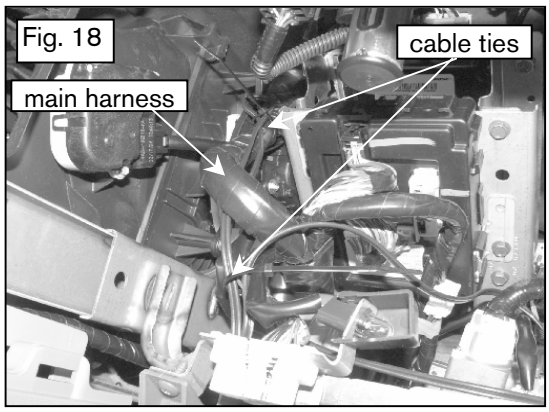
(13) Use cable tie to secure the antenna cables to the existing vehicle harness as it exits bottom portion of the A-pillar towards tuner. Fig. 17

Fig. 17



(14) Route the antenna cables through the C-channel in the lower knee protector. Estimate the length of cable needed to reach the tuner. If needed, bundle the slack and feed it over the nearby main harness to prevent the cable from falling near the pedals. Keep the bundled cable at least 25mm (1") away from the nearby metal brackets to prevent vibration noise. Secure the cables to harness with two (2) cable ties, but DO NOT tighten them down. Fig. 18

Fig. 18



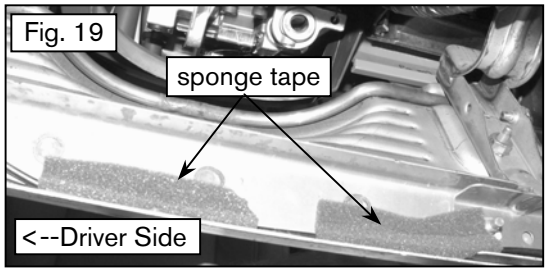
⚠ CAUTION

Do not kink antenna cable.

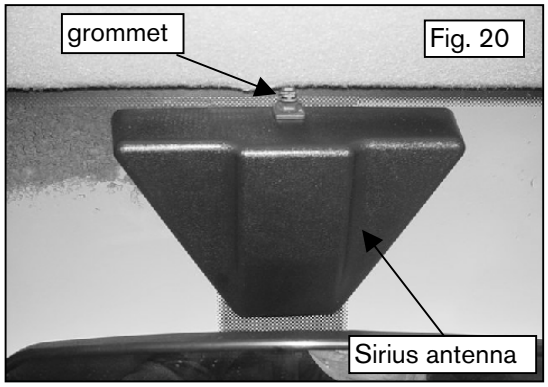
(15) Connect the antenna cables into the corresponding tuner connectors. Tighten down the cable ties after making the connection to the tuner. Cut the excess cable tie as flush with the head as possible. Face head of cable tie away from sheet metal and other objects.

(16) Secure the antenna cables to the lower knee protector LH, with two (2) pieces of sponge tape. Fig. 19

Fig. 19

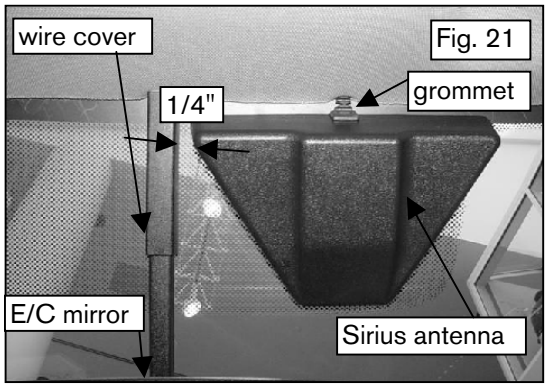


10-2. SIRIUS ANTENNA INSTALLATION:



(1) The Sirius antenna will be installed as flush as possible with the headliner. If there is grommet on the antenna tuck it under headliner as much as possible. Center the antenna above the rearview mirror. For installations of Sirius antenna in a vehicle with an E/C (Electrochromatic) mirror the antenna will be installed 1/4" to the RH side of the wire cover. Fig. 20 & 21

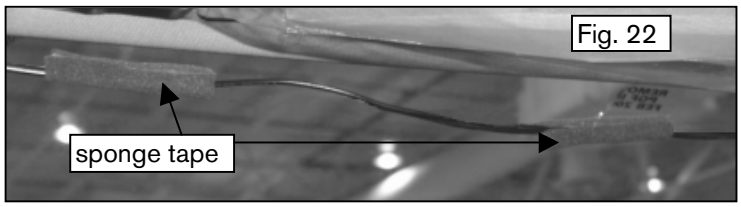
(2) Apply adhesive promoter to inner windshield where antenna is to be mounted. Let the area dry until the promoter is completely evaporated.

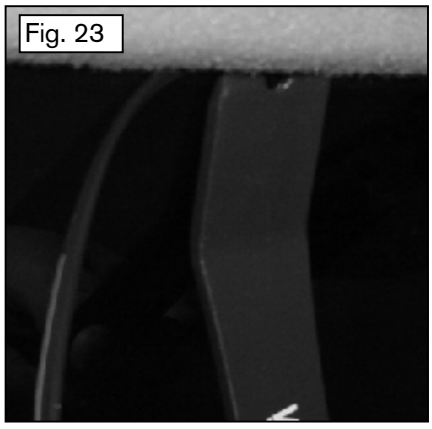


⚠ CAUTION

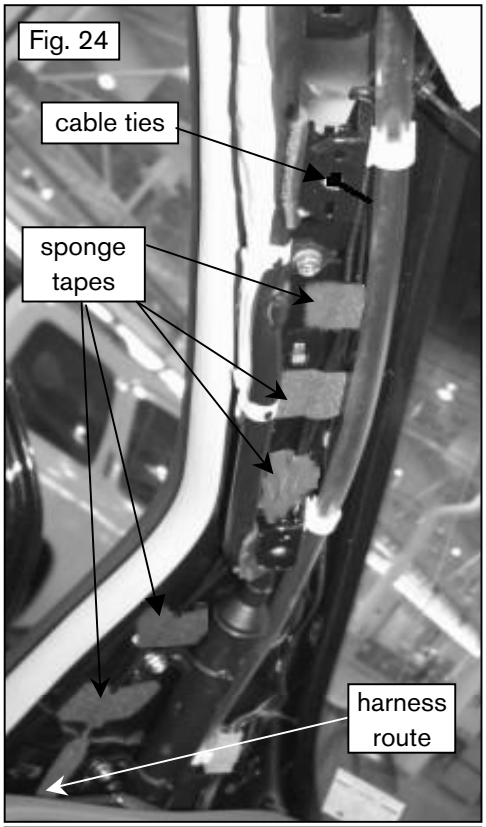
Handling of adhesive promoter should be done carefully with gloves and safety glasses.

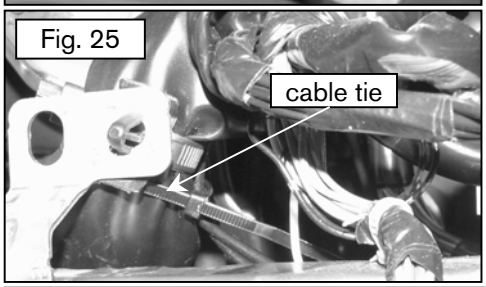
(3) Unwrap the antenna cable. Peel the tape protectors off of the antenna. Place antenna housing squarely, but lightly on windshield. DO NOT apply one side first and then roll the rest down. Push corners down first, then work to the sides. Apply equal pressure downward along all portions of the housing for at least 20-30 seconds. Inspect for at least 50% total wet-out for all three tape strips and at least 40% wet-out on each individual tape strip from outside of vehicle with flashlight. Fig. 20 & 21

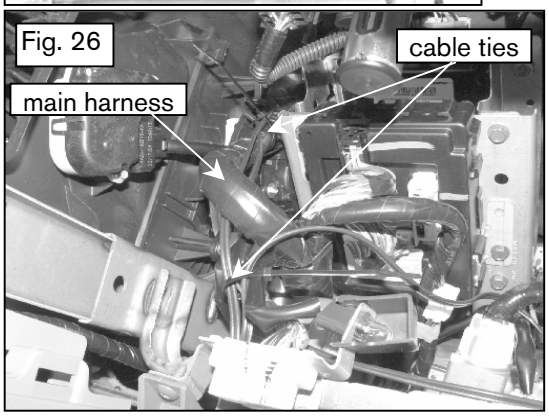


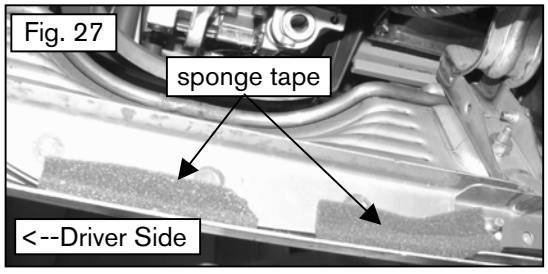


(4) Use a plastic pry bar to push the antenna cable into the headliner towards the LH A-pillar. While feeding wire into headliner wrap three (3) pieces of sponge tape lengthwise and evenly spaced across the length of wire being fed into the headliner. Fig. 22 & 23









(5) Use five (5) pieces of sponge tape and one (1) cable tie to secure the antenna harness to the sheet metal of the A-pillar (attach cable tie to bracket through middle hole). Cut the excess cable tie as flush with the head as possible. Face head of cable tie away from sheet metal and other objects. Fig. 24

⚠ CAUTION

Do not secure the antenna harness to the windshield washer fluid supply line or the sunroof drain line.

(6) Reinstall the lower knee protector LH with the original four (4) screws.

(7) Route harness along the backside of the lower knee protector LH from the A-pillar towards the tuner.

(8) Use cable tie to secure the antenna cables to the existing vehicle harness as it exits bottom portion of the A-pillar towards tuner. Fig. 25

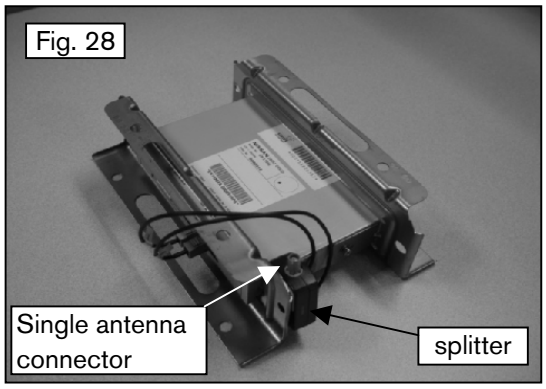
(9) Route the antenna cables through the C-channel in the lower knee protector. Estimate the length of cable needed to reach the tuner. If needed, bundle the slack and feed it over the nearby main harness to prevent the cable from falling near the pedals. Keep the bundled cable at least 25mm (1") away from the nearby metal brackets to prevent vibration noise. Secure the cables to harness with two (2) cable ties, but DO NOT tighten them down. Fig. 26

⚠ CAUTION

Do not kink antenna cable.

(10) Connect the antenna cables into the corresponding tuner connectors. Tighten down the cable ties after making the connection to the tuner.

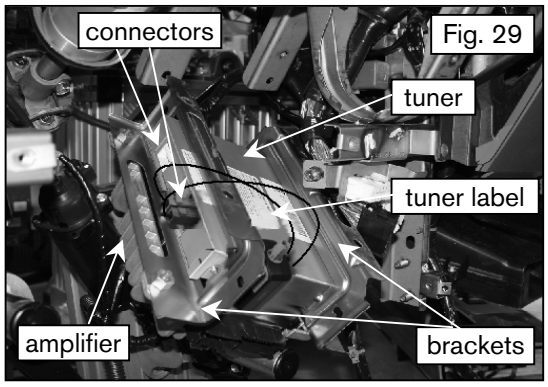
(11) Secure the antenna cables to the lower knee protector LH, with two (2) pieces of sponge tape. Fig. 27



(12) With tuner still installed insert antenna splitter cable connectors into corresponding tuner terminals. Clean bracket with 50/50 alcohol/water solution where the splitter is to be attached. Fig. 28

NOTE

Ensure that the bracket surface is thoroughly cleaned before proceeding.



(13) Peel off tape protector from splitter. Place splitter on the bracket and secure into position by applying force with hand pressure. Fig 28 & 29

(14) Connect antenna cable to corresponding antenna splitter terminal.

11. OPERATION CHECK:

(1) Connect the battery negative terminal.
(2) Turn vehicle ignition switch to the "ACC" position.
(3) If equipped, unplug the customers iPod to switch to SAT mode.
(4) Turn radio on then select satellite radio mode. Acquiring (Sirius) or Loading (XM) will display for a while. If not, move vehicle to outside with a clear view of the sky and try again.
(5) Tune to preview channel (XM: channel "1" / Sirius: channel "184") to make sure receiving preview channel correctly.
(6) Sirius: if audio is heard on channel 184 follow the instructions in step 6a. If audio is not heard on channel 184 follow the instructions in step 6b.
(6a) Remain on channel 184 and do not push any radio buttons. After 5 minutes the channel up/down button can be pushed to check for service. If audio can be heard on channel 1 then activation was successful.
(6b) Change to channel 0 and do not push any radio buttons for 10 minutes. After 10 minutes press the up channel button to channel 1. If audio can be heard on channel 1 then activation was successful.
(7) Plug in customers iPod to perform further audio operation checks.
(8) Confirm proper audio operation. (AM / FM / TAPE / CD / iPOD).

12. REINSTALLATION OF REMOVED PARTS:

(1) Re-install all removed vehicle parts referring to the service manual for the vehicle.

⚠ CAUTION

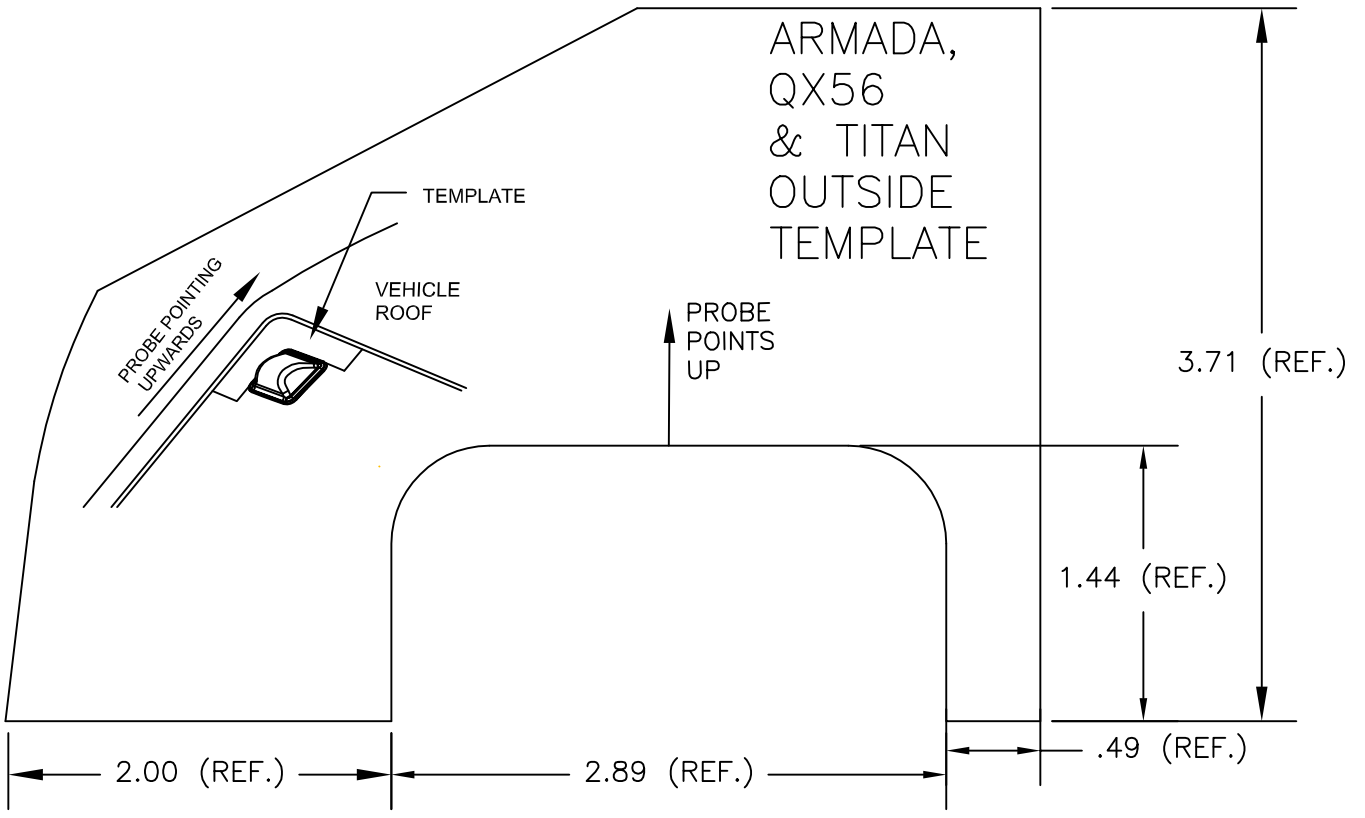
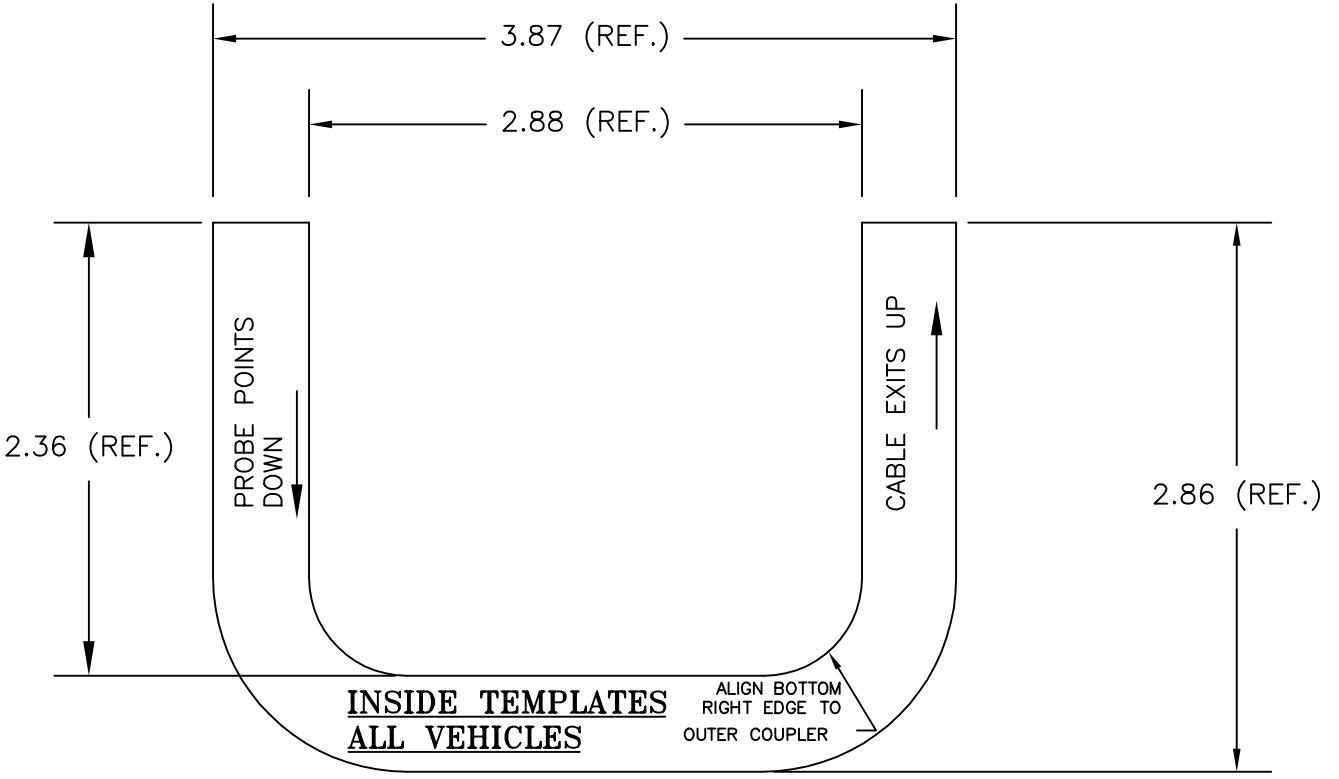
Use caution when re-installing the Accelerator control system so it is not damaged.

(2) Clean interior of vehicle.

13. FINAL INSPECTION:

(1) Inspect the vehicle interior and exterior for damage.
(2) Confirm proper operation of vehicle systems.
(3) Reset radio presets to the recorded settings.
(4) If equipped reset the sunroof per service manual requirement.

XM ANTENNA OUTER TEMPLATE



XM ANTENNA INNER TEMPLATE