



GENUINE PARTS

SATELLITE RADIO INSTALLATION INSTRUCTIONS

1. DESCRIPTION: SATELLITE RADIO SYSTEM

2. PART NUMBERS:	XM tuner kit	999U9-NV003
	SIRIUS tuner kit	999U9-NV004
	XM antenna kit	999U9-VQ006
	Sirius antenna kit	999U9-VQ007

3. MODEL APPLICATION: M45 (2003~ last 6 digit of VIN is 005899 or later)

4. TUNER KIT CONTENTS:

No.	Parts	Qty	Parts View
1	Tuner	1	
2	Black Tape	2	
3	Velcro Tape (hook)	2	
4	Velcro Tape (loop)	2	
5	Spacer	1	
6	Bracket	2	
7	M4 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	

⚠ CAUTION

- 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, antenna, and antenna splitter 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.
- In the event the satellite radio antenna or antenna splitter needs to be re-installed, do not use the original mounting tape. Order the low profile antenna adhesive tape kit:

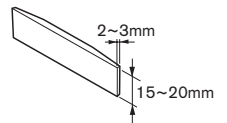
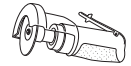
999U9-VQ010

- In the event the satellite radio antenna needs to be replaced, order the appropriate Satellite Antenna Kit.

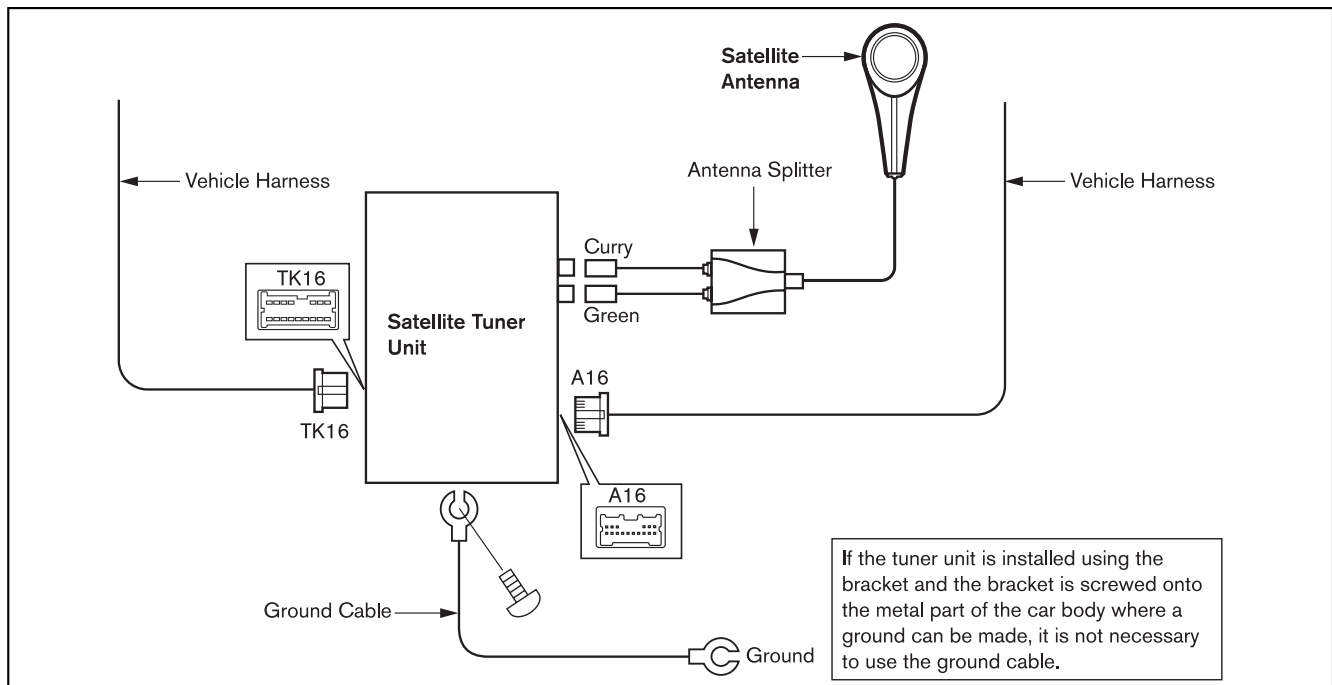
XM LPA 11' service kit	999U9-VQ012
SIRIUS LPA 11' service kit	999U9-VQ013
XM splitter	999U9-VQ004
SIRIUS splitter	999U9-VQ005

5. TOOL & MATERIAL REQUIRED:

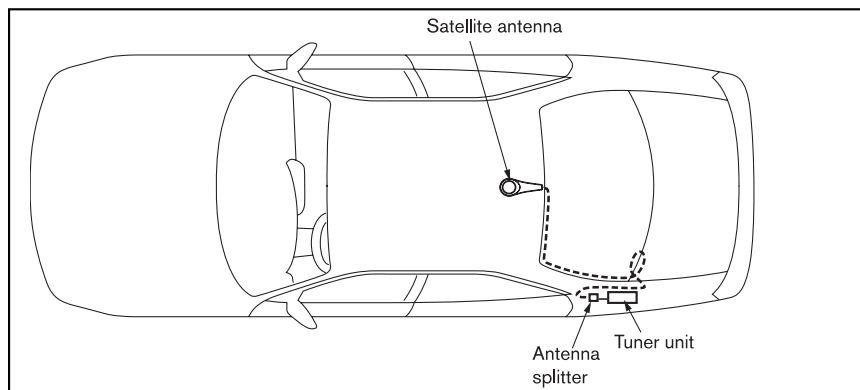
1. Phillips screw driver	6. Bitumen wax (999MP-9G001P) or equivalent	9. Die grinder with cutoff wheel (wheel no larger than 3" diameter)
2. Clip remover	7. 50/50-alcohol/water solution	
3. Electrical tape	8. Drill with 4mm (5/32") bit equipped with 1cm (1/2") stop	10. PGF stick for antenna cable routing
4. Tape measure		
5. Masking tape		



6. STANDARD CONNECTION METHOD



7. INSTALLATION OUTLINE



⚠ CAUTION

Using PGF stick to confirm no excessive amount of sealant under rear window molding at the area where antenna cable will be tucked into. Do not proceed to install satellite radio if excessive amount of sealant exists

8. VEHICLE PREPARATION

(1) Record the customer radio preset.

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

(2) Apply parking brake.

(3) Make sure that the shift lever is engaged in the "P" position.

(4) Open the trunk lid.

(5) Disconnect the battery negative terminal to prevent short circuits during installation.

(6) Remove the following trunk interior trim parts as shown in figure 1.

1. Trunk floor carpet.
2. Trunk floor board (center).
3. Trunk floor board (left).
4. Trunk floor spacer.
5. Trunk rear plate.
6. Trunk rear finisher.
7. Trunk side finisher (left).
8. Trunk front finisher.

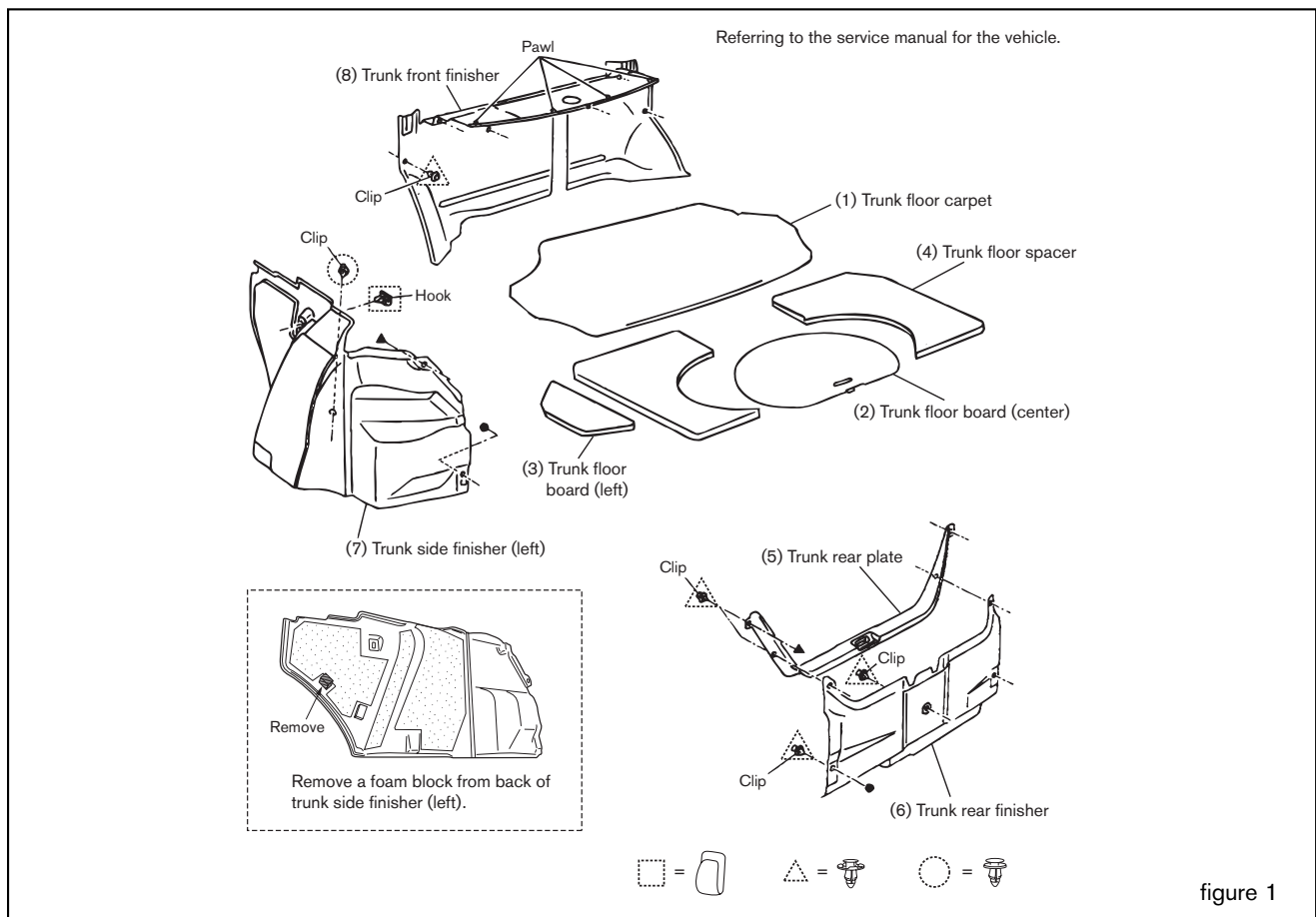
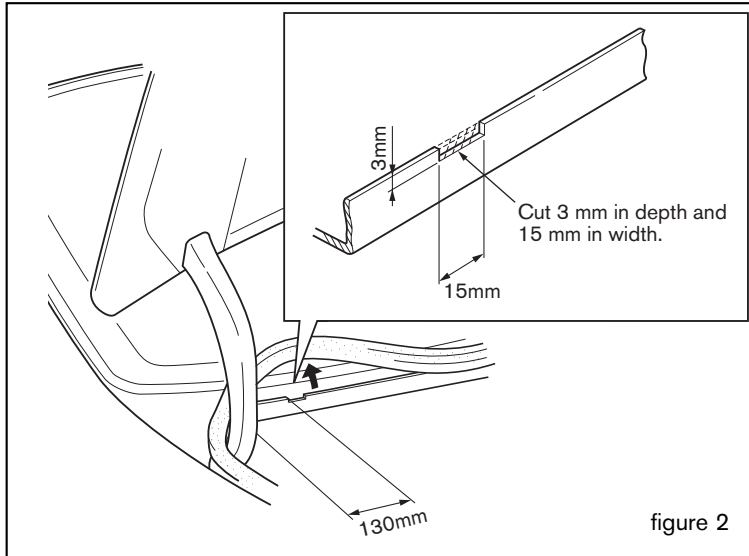


figure 1

9. ANTENNA INSTALLATION

9-1. Notch cutting



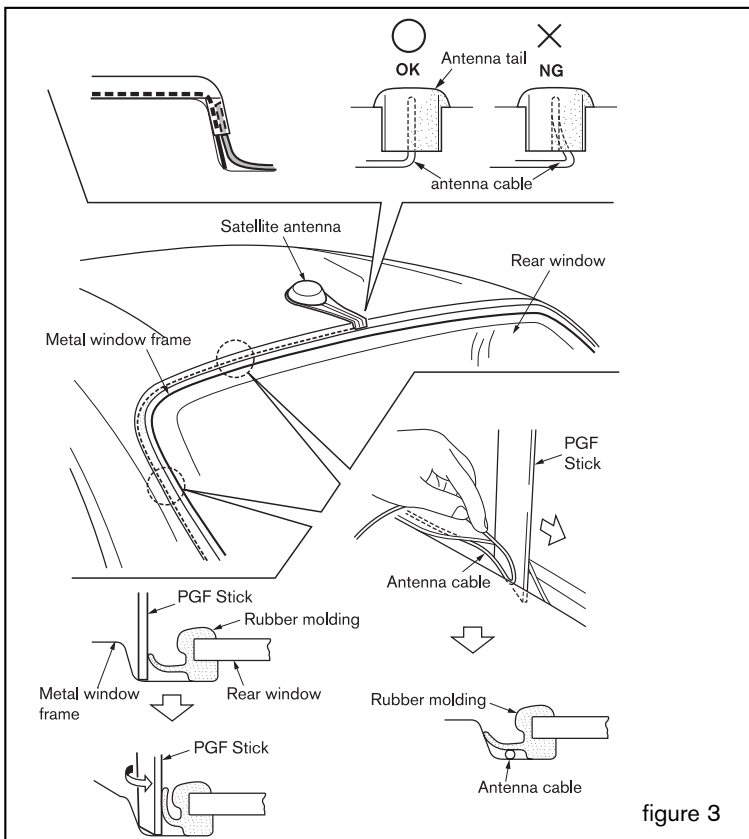
- (1) Remove the weather strip at left front of trunk.
- (2) Cut a notch on gutter lip using die grinder. (figure 2)

CAUTION

Do not damage vehicle parts during notch cutting procedure. Protect window and trim with fender cover or similar.

- (3) Remove burrs or sharp edges from the notch.
- (4) Apply Rust-proof to cut surface.

9-2. Antenna installation



- (1) Wet the rear window rubber molding, under which antenna cable will run, with soapy water. Insert PGF stick will run under the rubber molding, between rubber molding and metal window frame. Then move it both vertically and horizontally along the rubber molding to wet all the part of it. (figure 3)
- (2) Clean the vehicle roof with 50/50 alcohol/ water solution where the antenna is to be mounted.

CAUTION

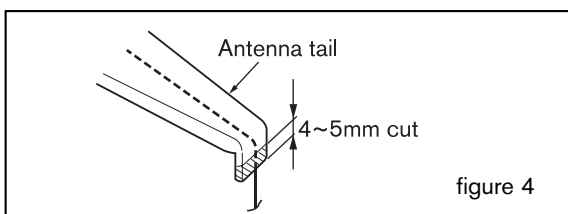
Do not touch or contaminate the cleaned roof or the adhesive tape on the antenna to prevent the adhesion strength from being reduced.

- (3) Cut the antenna tail 4~5mm off. figure 4

CAUTION

Do not damage antenna cable.

- (4) Place antenna roughly centered.
- (5) Unwrap antenna cable. Apply soapy water to antenna cable.
- (6) Tuck antenna cable under rubber molding. Antenna tail flap will over lap rubber molding.
- (7) Use PGF stick to route the antenna cable to the left upper corner of the rear window glass while tucking the antenna cable under the rubber molding.



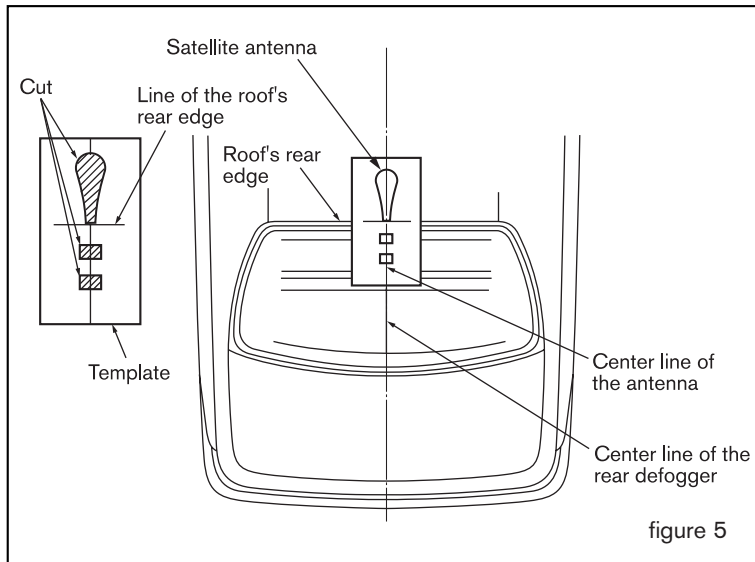


figure 5

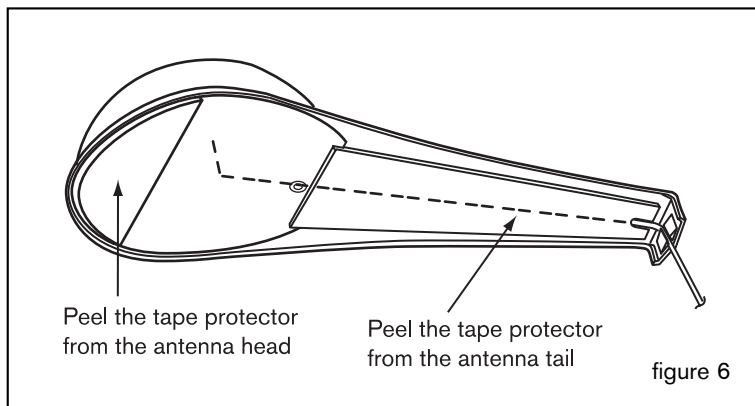


figure 6

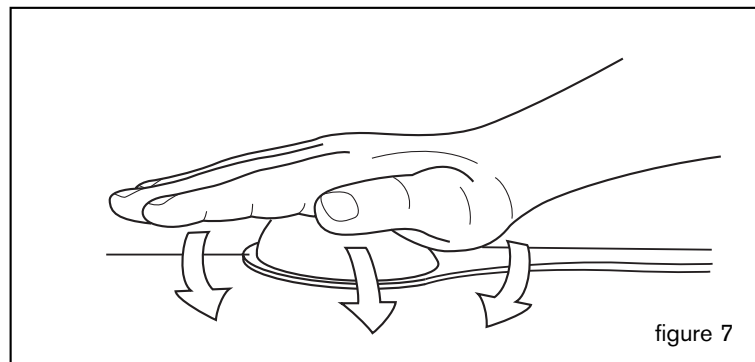


figure 7

⚠ CAUTION

Do not route antenna cable all the way to left hand side of rear window glass. It would be impossible or difficult to adjust the antenna alignment. Continue to route antenna cable in step (15) only after completion of antenna installation steps (7) to (13).

NOTE

- Insert the PGF stick under the rubber molding.
- Twist it to make room under the rubber molding.
- Place the antenna cable, while making a loop at the end of the cable, under the rubber molding.

- (8) Cut the shape of the antenna and 2 square holes out of the template. (figure 5)
- (9) Place template on glass and antenna. Align center line of template with center line of glass at the bottom of template and square hole.
- (10) Fine tune alignment of antenna based on centerline of template. Ensure antenna cable is still in OK condition as shown in figure 3; adjust as required.

⚠ CAUTION

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

- (11) Clean the roof once again with 50/50 alcohol/water solution. Peel the tape protector from the antenna tail and lay down tail. (figure 6)

⚠ CAUTION

Ensure alignment of rear end of antenna tail and flap to match with rear edge of the roof.

- (12) Peel the tape protector from the antenna head. Place the antenna and apply 20 lbs. of downward force for 20 seconds while rocking hand back and forth across the top of antenna to assure proper adhesion. (figure 7)

⚠ CAUTION

During antenna mounting process, make sure rubber dust seal “flares” outward while downward force is applied.

(13) With hand pressure, apply downward force to the full length of the tail to assure proper adhesion.

(14) Remove the template.

⚠ CAUTION

Keep the vehicle inside at least for an hour after applying adhesive tapes.

Avoid works imposing pressure on the adhered areas including car wash within 48 hours.

(15) Continue to route antenna cable all the way along left hand side of rear window glass to bottom of window as shown in step (6) and Figure 3. Then at the bottom of the window route the antenna cable under the rear window molding 14 mm past the right side of the notch. Attach the black tape (2) to hold antenna cable. (figure 8)

⚠ CAUTION

Do not overlap clear tape and black tape.

(16) Clean the area where clear tape will be applied with 50/50-alcohol/water solution.

⚠ CAUTION

Do not contaminate cleaned surface before application of clear tape in step (23).

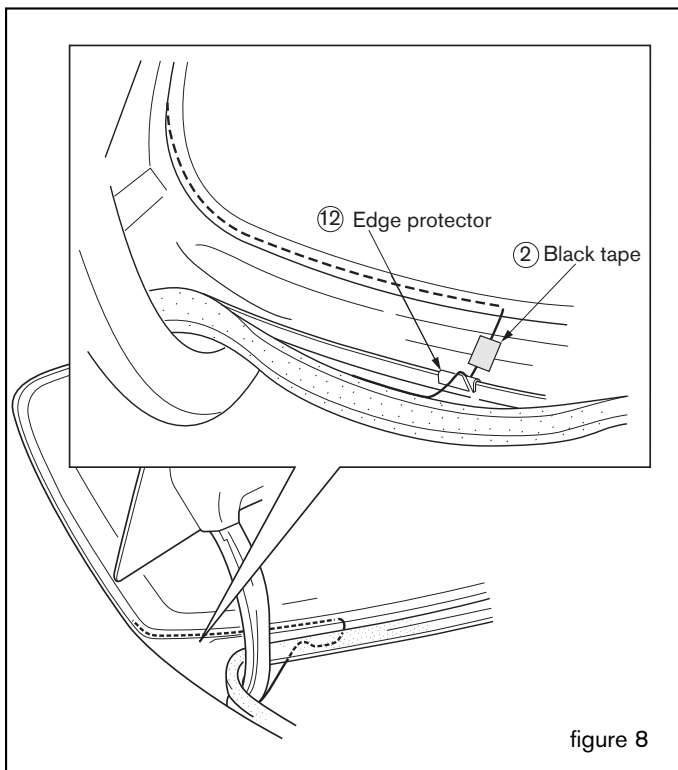
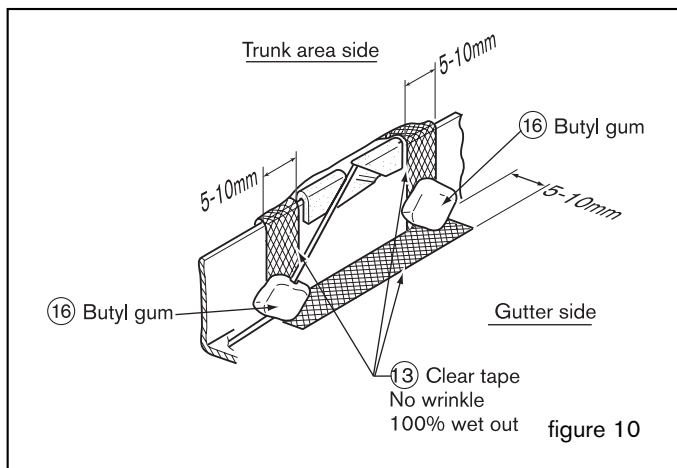
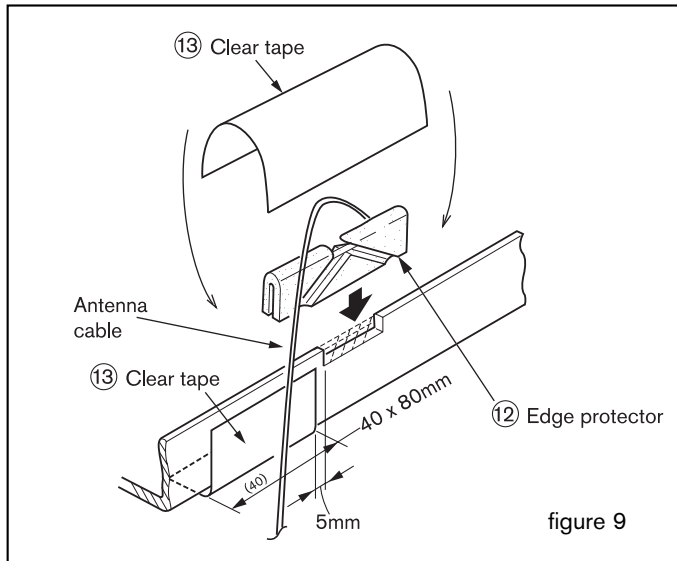


figure 8



The following steps 17 to 24 are critical to water leak, therefore must be followed strictly.

- (17) Apply ⑬ clear tape to the underside of the gutter to prevent abrasion. Clear tape must be cut 40mm X 80mm prior to application. (figure 9)
- (18) Attach the ⑫ edge protector over the notch.
- (19) Use alcohol wipe included in the kit to clean the surrounding area before application of clear tape.
- (20) Route the antenna cable over the edge protector.

⚠ CAUTION

Make sure antenna cable is seated in the channel of the edge protector.

- (21) Position the clear tape above the notch without peeling off the liner to estimate the correct position for the small amount of butyl gum.
- (22) Before applying the clear tape, apply a small amount of butyl gum to bottom side of antenna cable to hold antenna cable at the radius corner where antenna cable will enter the clear tape.
- (23) Do not peel off the entire clear tape protector. Pull the clear tape protector back 10mm (3/8"). Then apply 10 mm clear tape to the horizontal flat surface of the gutter. Slowly massage the clear tape with a PGF stick till you have reach the corners. Make sure that the tape does not wrinkle when applied to surface. Apply the same technique to the vertical surface. Fold the tape over and apply the technique once more. This should leave a smooth surface on all three sides. (figure 10)

⚠ CAUTION

Ensure antenna cable is entering the clear tape at the radius corner.

⚠ CAUTION

In order to stop water from entering the trunk through the clear tape, the clear tape must have complete (100%) wet out 5 - 10mm (1/4" - 3/8") on all three sides of peripheral boundary and no wrinkle (fig. 10)

- (24) Apply butyl gum at both ends of the clear tape. The butyl gum should fit into both corners to cover the antenna cable and the opposite end of the clear tape. (figure 10)

⚠ CAUTION

Butyl gum must be placed across antenna cable for good water seal.

10. TUNER INSTALLATION

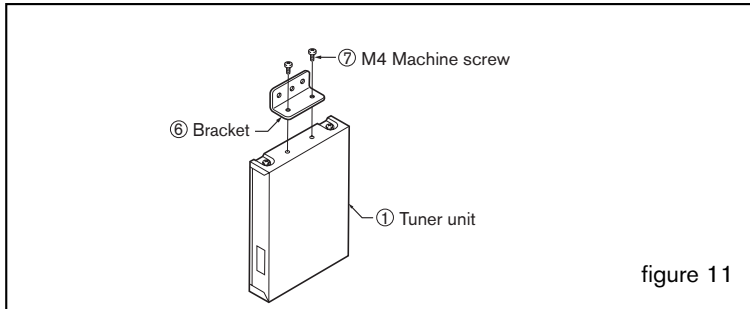


figure 11

- (1) Attach one ⑥ "R" bracket to tuner with two ⑦ M4 screws.

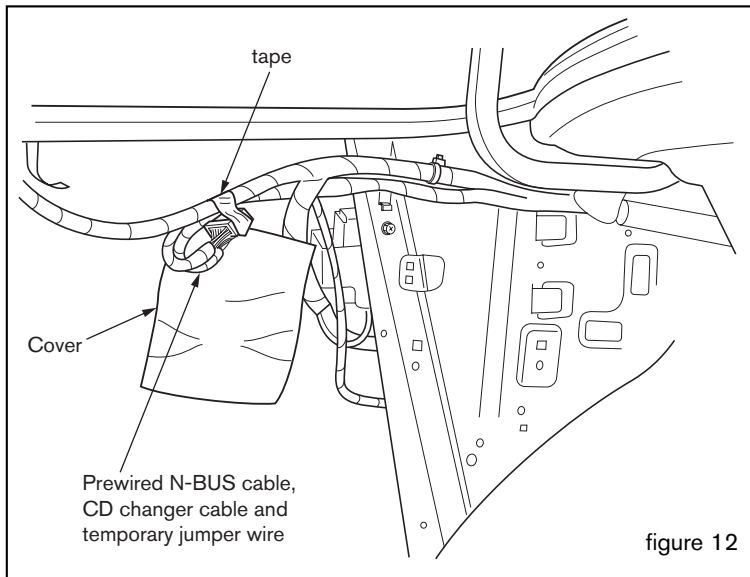


figure 12

- (2) Remove the cover, the tape and temporary jumper wire to release prewired N-BUS cable and CD changer cable.
 (3) Unwrap both N-Bus and CD Changer cables. Then cut 2 more inches of tape between both harnesses if necessary. This provides even harness. If cut, then re-tape cut portion afterward.

⚠ CAUTION

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

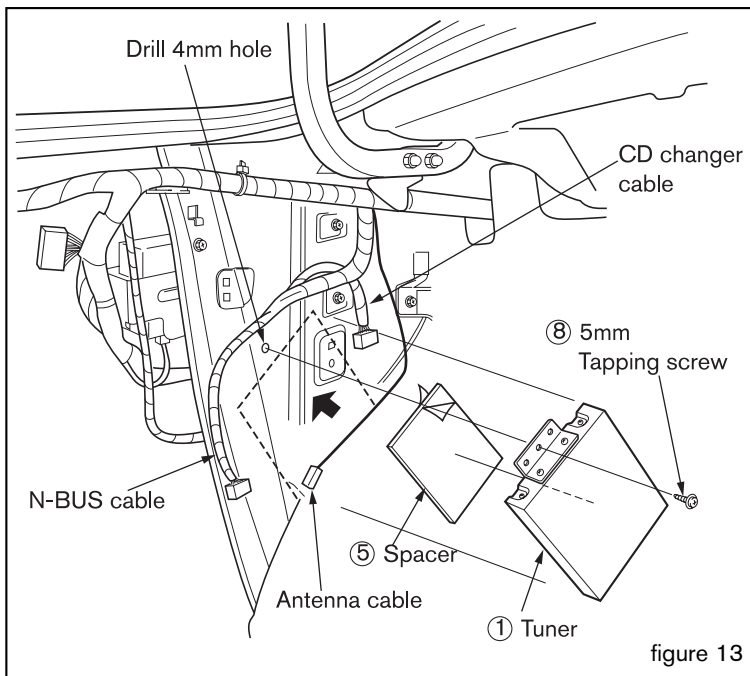


figure 13

- (4) Clean trunk panel and back of the tuner with 50/50 alcohol/water solution where the tuner is to be attached.
 (5) Cut ⑤ spacer to 100mm x 133mm (4" x 5 1/4").
 (6) Attach ⑤ spacer to back of tuner. (figure 13-2)
 Do not cover holes in tuner.

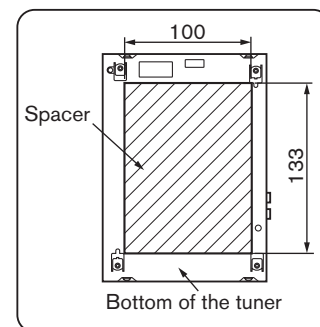
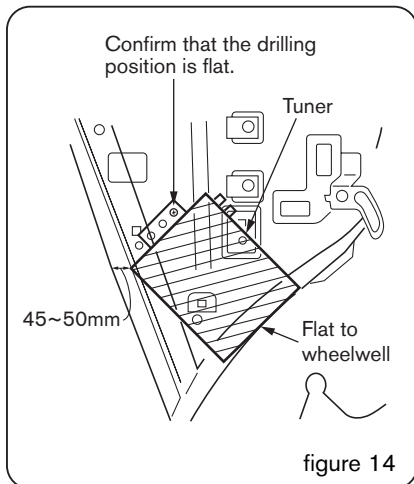


figure 13-2

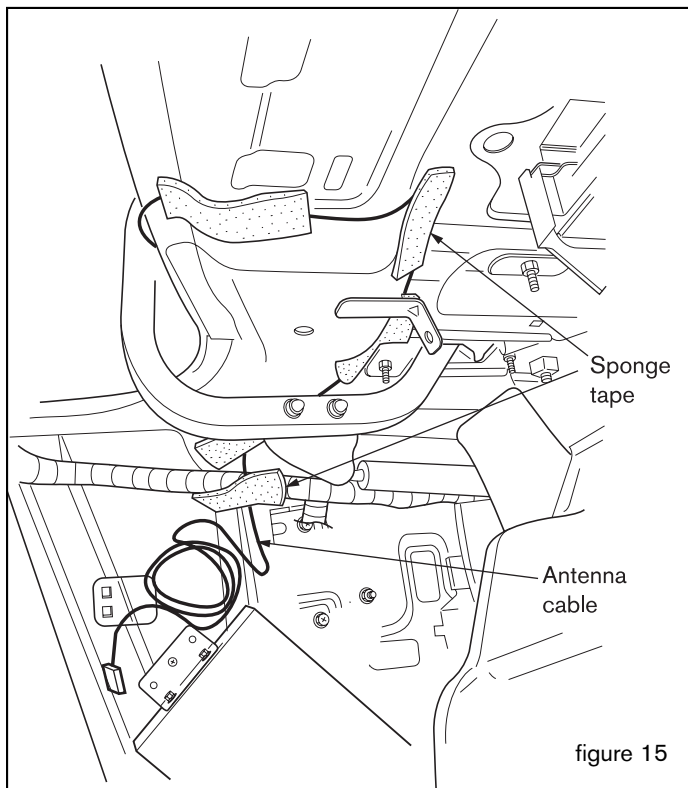


- (7) Attach tuner to trunk panel with bottom of tuner sitting on top of flat wheelwell and left edge of tuner 45-50mm to the edge of trunk panel as shown in figure 13.
- (8) Drill one 4mm hole in trunk panel through "R" bracket hole. (figure 14)

⚠ CAUTION

When drilling, take care not to damage the harness on the backside of the panel.

- (9) Secure tuner to the trunk panel with ⑧ 5mm tapping screw.
- (10) Route the antenna cable to the tuner location. Secure with sponge tapes. (figure 15)



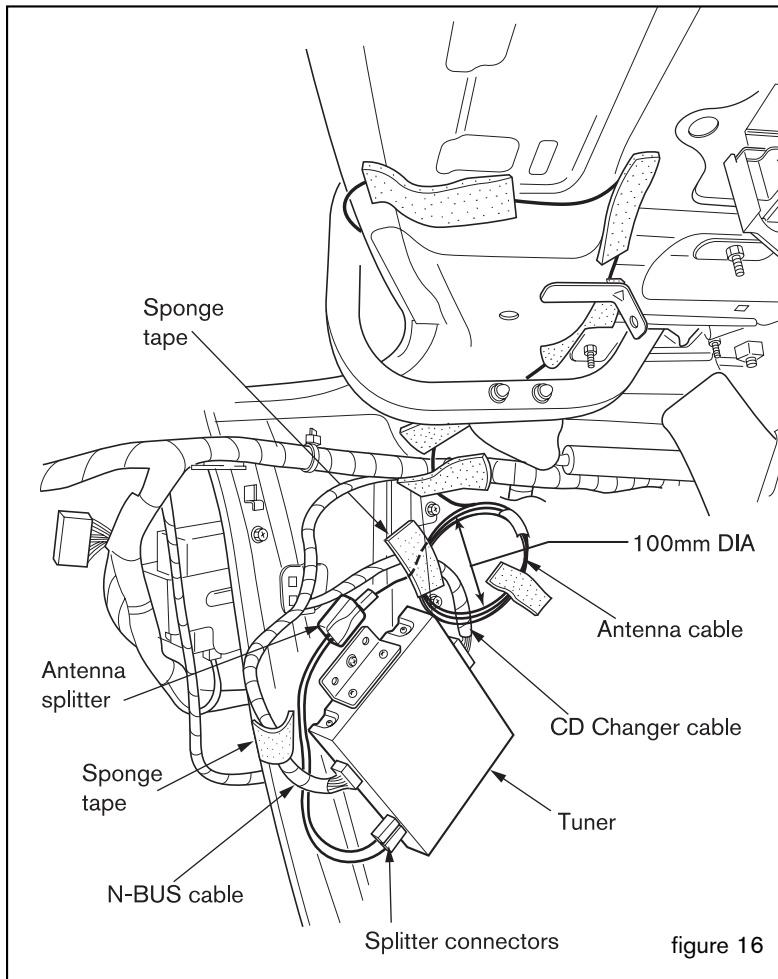


figure 16

- (11) Clean trunk panel with 50/50 alcohol/water solution where the splitter is to be attached.
- (12) Peel off the tape protector from the splitter. Place the splitter on the trunk panel and secure in position by applying downward force with hand pressure. (figure 16)
- (13) Insert antenna splitter cable connectors into corresponding tuner terminals.
- (14) Leaving enough length for the splitter connection, neatly coil excess antenna cable to create a loop 100mm (4") in diameter. (figure 16)

⚠ CAUTION

Do not kink antenna cable.
Do not change diameter of the antenna loop.

- (15) Connect the antenna cable connector to the antenna splitter.
- (16) Attach the antenna cable loop to the trunk panel with sponge tape at two locations. (figure 16)
- (17) Connect the N-Bus cable connector to the corresponding tuner terminal.
- (18) Connect CD changer cable to tuner.

11. OPERATION CHECK

- (1) Connect the battery negative terminal.
- (2) Turn vehicle ignition switch to the "ACC" position.
- (3) Turn radio on then select satellite radio mode. Acquiring (Sirius) or loading (XM) will display for a while. If not, move vehicle to outside and try again.
- (4) Tune to preview channel (XM: channel "1" / SIRIUS: channel "184") to make sure receiving preview channel correctly.
- (5) Confirm proper audio operation. (AM / FM / TAPE / CD)

12. REINSTALLATION OF REMOVED PARTS

- (1) Reinstall all removed vehicle parts referring to the service manual for the vehicle.
- (2) Be sure to engage all clips on parcel trunk finisher.
- (3) Clean vehicle interior.

13. FINAL INSPECTION

- (1) Inspect vehicle interior and exterior for damage.
- (2) Confirm proper operation of vehicle systems.
- (3) Reset radio presets to the recorded settings.