

*Avanti Repair*

## How to Eliminate a Moonroof or Sunroof From a 1971 to 1985 Avanti

## Installing a New Original Stock Roof Skin Part #1350250

**By Dan Booth**  
*Nostalgic Motor Cars*

Almost all 1971-1985 Avantis with the factory moonroof or sunroof option leak or have been leaking for decades. Those decades of neglect and/or improper repairs have made it almost impossible to rebond them. This is how I taught myself how to eliminate them using N.O.S. Avanti Parts.

I place three inch or four inch masking tape on the windshield at all connectors of the stainless moldings. Mark the tape where they meet and overlap. This will save a lot of time when the wind-

shield is reinstalled.



Remove the A-pillar weather seal from the stainless drip moldings 1351476/477 and then remove the 5 philips headed screws. Carefully pull the drip rails and pillar covers off of the A pillars. If they don't want to just slide off, please call me, Dan booth 248-349-4884

Now mark the masking tape where the stainless moldings end. Which was covered by the stainless pillar covers.

Remove the inside mirror.

Take a single edge razor blade and pair of pliers and cut back the weather seal where it



overlaps the pillars and the header panel on the inside. All the way across the top and about half way down on both sides. This allows the windshield to simply be pushed up and out



Take the palm of our hands and push out at the top of the windshield. Keep moving your hands from side to side and the windshield will start to come loose. If it doesn't call me, as the windshield may have been installed with silicone or urethane.

Note: in my over 55 years—10 years part time and 45 years full time—of Avanti service, I have never broken a windshield by this method of removal

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Remove the windshield.

The rear window removal is much easier

Mark your glass with masking tape, just like the windshield.

Your Avanti will have three Phillips screws down through the stainless clips (splice). They must be removed. These 8-32 machine screws go down through the rubber weather seal and the inside plates #1358701/702 with a 8-32 nut on the bottom of the plates.

You also may have a 8-32 machine screw and nut through the lower left clip, by the gas tank door. Remove the screw and nut. (no plate was installed here) This screw was for the radio antenna. Cut back the inside rubber weather seal just like you did the windshield again, about half way down both sides and all the way across the top. Push out the rear window, just like you pushed out the windshield working across the top from side to side.

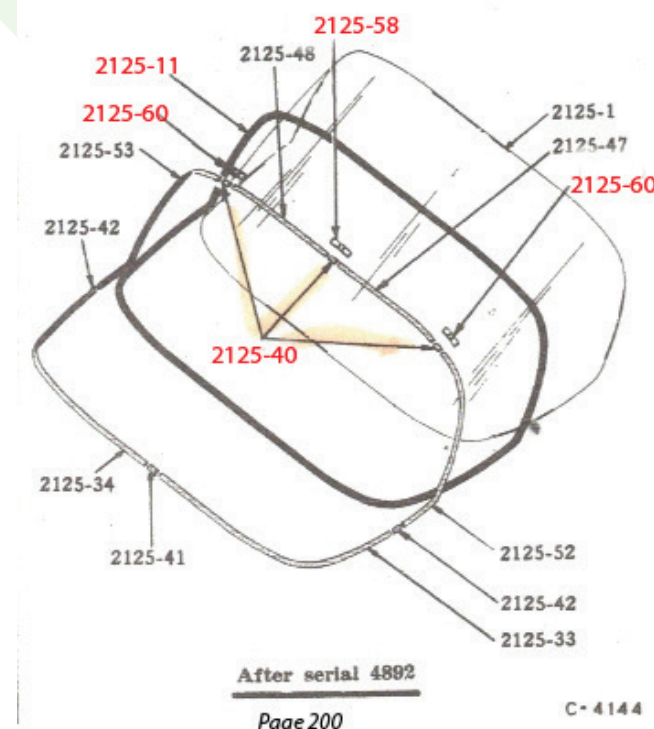
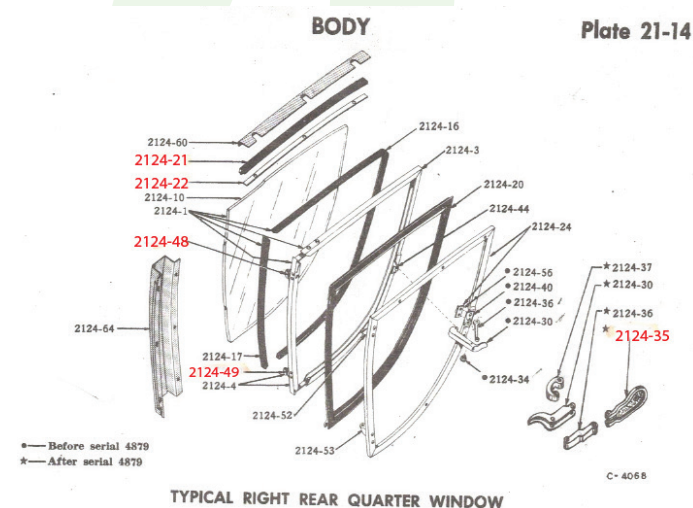
Next:

Remove both quarter windows by removing the two front hinge pins part# 1351063, Illustration # 2128-48 and 2125-49 and tap up from the bottom.

Remove the three Phillips screws that hold the escutcheon Illustration #2124-35 to the inside of the quarter panel and remove the glass.

Remove the three Phillips screws from the upper quarter window weather seals Illustration # 2124-21/2124-22 part #3202x2. Remove the seals.

On the 1963-1983-1/2 Remove the six Phillips screws from the upper door weather seals Part# 1351334-335





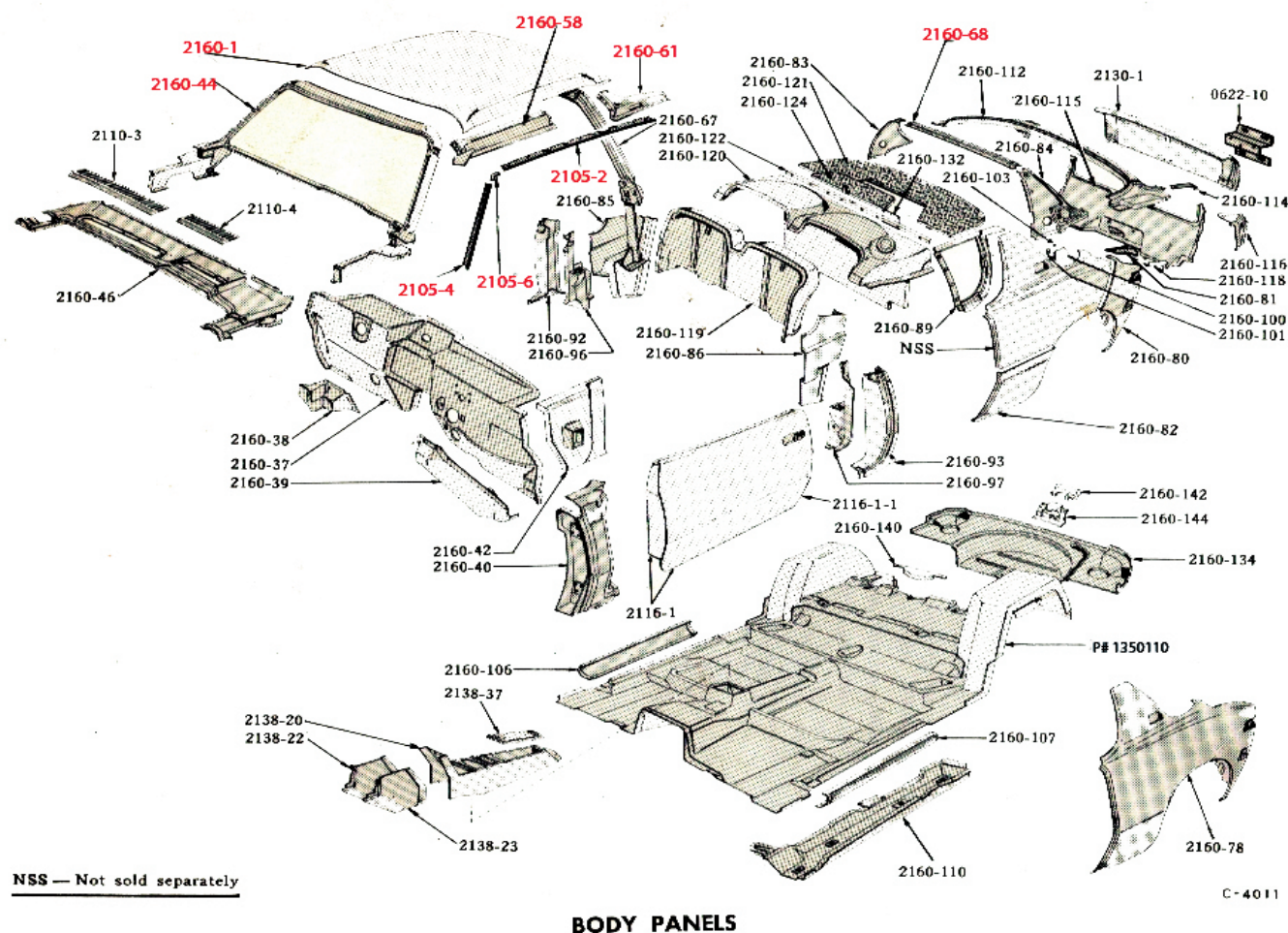
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I have never taken any pictures of this repair, so I will have to rely on the body panel page #218 from the original Avanti parts manual.

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PAGE NO. 218

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BODY PANELS



On the 1983-1/2-1985, unsnap the upper weather seal part #1750643/644 from the black anodized aluminum retainers Part #1750636/637 remove the screws and retainers (above photo).



Plate 21-22

BODY

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- Remove the phillips screws that hold the drip rail moldings Illustration # 2105-2, to the bottom side of the roof. Mark the stainless drip moldings where these screws were installed.
- The N.O.S. Roof skin #1350250 will be bonded to the top of the windshield header Illustration #2160-44
- Rear window reinforcement Illustration # 2160-68, Roof rails, Illustration # 2160-58 and roof rails Illustration # 2160-61 all these are in red.
- Remove the front and rear head liners. They will not be reused.
- Cut and remove the 4 drain tubes from the car and the roof housing. Brake the moonroof/sunroof housing from the roof skin. Remove the housing.



- Now cut the roof skin out all the way around where it is not bonded. Leaving it bonded to the header, rear enforcement and left and right roof rails.
- Remove the bond from the seam at the top of the quarter panel and roof skin. Only deep enough to expose the inside edge of the roof skin.
- Take screw drivers and a hammer and tap the screw drivers down between the inner side of the roof skin and the panels it is bonded to. It's like peeling a thick skinned orange. You want the roof skin to peel away from the inner structures leaving the original bond still attached to the inner structures. Grind off all the old bond. Place the roof skin on the car and mark where the inner structures are. Remove the roof skin and grind the bottom side where it will be bonded
- Set the roof skin on the car for fit. The roof skin should be flush with the bottom of all the side roof rails. The roof skin should be pushed all the way forward. It has a built in positive stop on the very back edge.
- This automatically stops the roof skin from going too far forward.
- Now you have to determine how you are going to hold the roof skin in place as the bond is curing. Carl Salatino made up a jig and put a weight—a portable generator, in this instance—on top of the jig to hold the roof skin in place.

Fortunately, I have enough C-clamps, Quick clamps, and squeeze clamps as I have bonded more fiberglass panels than I wish to remember over the last 55 years. I also use a lot of 2-inch wide masking tape; you chose what method you need to hold the roof skin in place. Go ahead and practice on how you are going to do it. I fit the roof skin to the car. I will place clamps and 2-inch wide masking tape, every 2 to 3 inches apart. If I am using clamps, I use paint sticks (like you stir paint in a can) on the roof, so when I

tighten the clamps down I don't have dips in the roof skin where the clamps were positioned. The paint sticks will spread out the load. I use more 2-inch wide tape than I do clamps.

I clamp and tape the roof skin to the car. I mark the roof skin with a magic marker wherever the tape and clamps are located for that quick referenced needed when I am actually bonding the roof skin.

The time is very important as you need to get it clamped and taped before the bond sets up. That's why Carl chose to make up a jig, with a weight on it.

Lastly, drill the holes in the roof skin where it will be pop-riveted to the windshield (A) pillars.



With the roof skin all marked for reference of where the tape and all clamps are to be located. I Place all my clamps and rolls of tape on the center of the roof skin and remove the roof skin. I mix my catalyst with the bond. I place the mixed bond on all the roof supports for the car. I now place the roof skin on the car I put scratch awls in the four holes in the windshield (A) Pillar for a proper repeat location, I quickly start re-taping and clamping the roof skin to their supports. I remove the scratch awls and install the pop rivets.

I start wiping off all excess bond with my fingers where ever it squeezed out.

After the bond has cured, I remove all the clamps and tape. If I can see any voids where the bond didn't come out, I mix up some and pack it up in the voids. I sand all the edges, removing any excess bond with 80 grit paper. I grind the joint of the roof skin to the sail panel (C pillar). I fill and sand the seams until it's flush I sand the new roof skin with 80 grit paper. I prime and paint it, blending my paint into the sail panel.

I make sure I have sanded and painted all the exposed bare fiberglass surfaces including the bottom where the drip rails will be installed and the edges for the roof where the windshield and rear window weather seals are. This is commonly called the fence as this is what the weather seal wraps around.



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There is now about a 2-inch void between the top of the roll bar and the inside of the roof skin. I take a piece of thick foam, cut it for length and slide it up into the void. I will have to keep cutting and grinding the foam until it fit's nicely in the void. I will leather, or vinyl cover the foam so when it is in place, it will look like a very thick roll bar.

I make up new front and rear headliners from automotive cardboard. If you don't want to make these headliners, I have them in stock. They are just plain tan automotive cardboard without any pattern. I glue on the thinnest brightest white vinyl and wrap it around all the edges.

I refuse to install the reproduction fiberglass headliners in my Avantis as in my personal opinion, they are an accident, waiting to happen., They could become a guillotine as they are made from hard, thin fiberglass, not cardboard like to originals.

I install the headliners that are glued to foam or jute strips that get glued to the bottom of the roof skin.

I now make up a left and right crash pad from the automotive cardboard, that will get a thin layer of foam glued before it is wrapped with matching leather or vinyl these are the panels that are located over your shoulders as front seat passenger or driver. The rear crash pads with the interior lights in them will stay in place (they were never removed)

I grind and /or sand windshield pillars and paint them with P.O.R. 15 (which I have in stock)

I install the N.O.S. windshield weather seal #1350769 at \$150 on the windshield #1351310 R tinted m \$295; #1351311R tinted/shaded \$310. I install the stainless in the weather seal using my marks on the masking tape as my reference. I install my rope in the weather seal I install the beading agent on the fence of the opening and pull the rope. Next I shim the windshield as needed.

I install the N.O.S. Rear window weather seal Illustration # 2125-11 part# 3260x2 at \$110 on the rear glass . I tape the plates Illustration # 2125-58 part # 1358701 and illustration # 2125-60 Part # 1358702 to the inside of the reinforcement.

I install the stainless in the weather seal using my marks on the masking tape as a reference, I install my rope, I install the bedding agent on the fence of the opening. I put the rear window in place and pull it in. I take a scratch awl carefully push it down through the holes in the stainless clips, Illustration # 2125-40, through the weather seal and line up with the hole in the inside plates. Install the new screws and nuts.

I install dum dum on the top of the stainless drip rails before I install

the drip rails. Make sure you installed the drip rails screws in the holes you marked. I install dum dum on the top of the quarter window upper weather seal #3260x2 and install the 3 screws. I reinstall the quarter windows. I put dum dum on the top of the upper door weather seals #1351334/335 and/or black aluminum retainers 1750636/637 install.

I put bedding agent on the back side of the stainless windshield pillar covers Illustration #2147-30 Part # 1350642 and Illustration # 2147-31 Part number 1350643 I install the covers

I put dum dum on the back sides of the windshiled pillar drip rails and install the 5 screws. I install the drip rail corner. I now install a window sealant between the rubber and the glass. I also install the window sealant on the rear window between the rubber and glass. Install the A pillar weather seal part # 1360896



Now I have a Avanti that looks fantastic and does not leak with a lot more resale value.

For the Avanti owner that insists on keeping the moon-roof and/or sunroof in their car. I hope for the next issue to write a article on how to rebond a moonroof and/or sunroof to the Avanti roof skin.



I would like to thank Carl and Jennifer Salatino, from Williamson, New York for their pictures for this article.

Carl was a new customer, a couple years ago. He wanted to purchase a New Original Stock dash pad, Part #1350250 for his 1977 Avanti. He was somewhat reluctant on installing the dash pad, as he had no previous experience. I told him that you didn't have to be a professional or have previous experience. That I could talk him through the procedure. As most professionals may not have any more experience on the Avanti dash pad than he did. This was before I wrote an article on How to Install an Avanti Dash Pad, for the *Avanti Magazine*, Issue #190 spring/summer 2020.

Carl is a very good listener, as he would call me when he had a question, so he totally understood and would not screw up \$2,000 dash pad. The dash pad came out flawlessly.

Next he needed to remove the moonroof and replace it with a new original stock roof skin #1350250. Again, no experience at replacing the roof skin, he ordered the N.O.S Roof skin. I talked him through the procedure, the rest is what you might refer to as history.