

Mysteries of the 1963-1985 Avantis

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The unknown facts, finally revealed in print, about the Avanti Motors Installed sunroofs & moonroofs from 1971-1985

I have been asked to do an article about the sunroof and moonroofs that were installed as an option by Avanti Motors.

Let me start out with this statement The Avanti Motors factory installed sunroof and moonroofs did not leak when the Avanti was built, as a franchised, New Avanti Dealership, most of the Avantis that I ordered & sold had the electric moonroof option, and they did not leak. The first Avanti to receive the electric sunroof option was RQB 1686 in August of 1971. It was a painted steel panel that electrically dropped down and back into a steel housing that was attached to the bottom side of the roof skin.

The inside of the sliding, steel roof panel had a thin layer of foam glued to the leather, vinyl or fabric which matched the interior. This was then glued to the bottom side of that sliding steel roof panel. There was a large plastic bezel that went around the perimeter that covered up the attachments for the cables, slide guides and adjusters.

Avanti also made up a head liner insert, from flat steel strips, (about 1" wide x 1/16" thick) welded together with the same leather, vinyl or fabric that matched the

car. This style covered up the entire bottom side of the sunroof sliding panel. This style was not recessed, but flush with the regulator head liner. both styles moved, trouble free, with the opening and closing.

New for 1974 was a glass sliding roof panel, it was called a "Moonroof". This was by the same manufacturer as the sliding steel roof panel. It had the same large plastic bezel, that went around the perimeter which covered up the attachments for the cables, slide guides and adjusters. the glass roof had a sliding close out panel to keep out the hot sun or open to let in the moonlight. This all slid back as an assembly, but when you closed the moonroof panel. The close out panel remained inside the housing until you pulled it out.

The first Avanti to receive the electric glass moonroof was RQB-2200, in October of 1974.

The electric steel sunroof was offered from 1971 through about the middle of 1979 production run.

The first style electric glass moonroof was available from 1974 through about the middle of the 1979 production run,

The sunroofs and moonroofs offered from 1971 through middle of 1979 were trouble free and did not leak, and still don't on properly maintained Avantis.



1st style sunroof/moonroof offered 1971- mid 1979, American Brand

As the Avantis became older, the secret to a no leak sun and moonroof was installing correct N.O.S. weather seals and pulling service on the cable mechanism by somebody experienced with the Avantis. Nostalgic Motor Cars was the most referred and preferred for Avanti service by Avanti Motors and Avanti Owners.



These steel roof housings were bonded to underside and then riveted through the roof skin. Avanti Motors drilled and counter bored through the top of the roof skin and steel housing. Then fastened with pop rivets. Then dressed the roof skin with body filler. Over time this body filler could shrink and you would have small depression under the paint.

The worst problems that I repaired was the body filler over the rivet heads would crack and allow water in, then the body filler would pop out. This was a very easy fix. I simply drilled out the old rivet, installed a new rivet, sand blasted the hole and rivet head, dressed it with body filler, primed and painted.



2nd style moonroof offered from mid 1979-1985, Sky Top Brand

The 2nd style was only offered as a moonroof (glass panel) and by a different manufacturer, Sky Top. This new style was first installed some time in the 1979 production run. It was a different size and totally different from the American Sunroof. The American

brand used cables to move the steel or glass panel, the Sky Top style moonroof did not use rivets and only relied on the bond to hold that steel housing to the roof skin. The Sky Top brand used a worm gear and a sliding bar for moving the glass panel.

The Sky Top brand was also leak and trouble free, until Stephen Blake took over control. The new, Stephen Blake, late 1982 Avanti that I had ordered and sold were starting to leak within their new car warranty. The moonroof housing was coming loose from the roof skin.

For the Factory Warranty repair, I prepared the steel housing and bottom side of the roof skin and re-bonded them. I was instructed by Avanti Motors to only re-bond where it was breaking loose. This was all done with out any paint damage or respray. and under Avanti Motor warranty program. I gave the customer a lifetime warranty on the area I repaired as long as he or she owned the Avanti. If it broke loose again, where I repaired it, I would fix it again, free of charge.

Avanti Motors was starting to get complaints from other customers about leaking moonroofs. The customers were instructed to get their Avanti to Nostalgic Motor Cars for the free warranty repair. Most of the time I had to re-bond every Avanti 3 or 4 different times as it would break loose in different areas. I never had to rebond where I had bonded it prior.

In a previous issue of the Avanti Magazine, one of my customers wrote an article on how to repair a leaky moonroof. He purchased the need N.O.S. parts from me and I gladly (over the phone) gave him step by step instructions, on how to service and repair the moonroof.

I asked him to write an article for the Avanti Magazine if he had the time. This was before I forced myself to find the time to write these requested articles. If I recall correctly, he did a great job explaining how a person that knew nothing about a moonroof except how to push the button to open and close it could accomplish this daunting task.

Now after decades of the steel housing being separated from the fiberglass, it is almost impossible to re-bond the two together and expect them to stay bonded and not leak. Even if you got the steel housing to stay bonded to the fiberglass roof skin, there are other factors that will allow water to enter inside the car. The purpose of the weather seals on all four sides of the moving panel (glass or steel) is to divert as much water from going down into the steel housing. The steel housing from American Sunroof and Sky

Top both have four drain tubes that connect to the plastic tubing which drain down through both A pillars (windshield pillars) and both C pillars (sail panels). The original soft plastic tubing that attaches to the 4 drain nipples is now hard and can cause those nipples to break loose. Rust is also an issue where the steel nipples are welded to the housing. That hard plastic tubing can also be kinked where it had to make some very hard curves, down through the A pillars, when it was new and soft. It also could be plugged with debris.



If you want to clean your four drain tubes, two in the front windshield pillars, or "A-pillars", two in the rear sail panels, or "C pillars", Here's how:

1. Remove both of the black fresh air grills (3 screws each) from the kick panels. Move both fresh air controls forward. The doors will now be open, remove the cable from the door and lift up on the door, which will remove it from the lower pivot hole. Push the door towards the outside of the car. The door will now come out of the upper pivot hole. Remove the doors. Reach inside and you will find a plastic tube, that is attached to the inside of the cowl. Pull the bottom towards you and take compressed air and blow into the tube. The air and debris will exit in the front corners of the steel housing. If you blow from the top, down, it can jamb debris in the plastic tube. These tubes make some rear sharp bends, snaking down the windshield pillars.



2. For the rear drain tubes, remove the back seat bottom, it just lifts up and out. Remove the 2 outside rear seat belt retractor bolts and remove the seat belt retractor. Reach inside and you will feel a plastic drain tube. Pull the bottom toward you. Take compressed air and blow into the tubes. The air and debris will exit in the back outside corners of the steel housing. Open your sunroof or moonroof (removing is better) and keep blowing out the housing and keep repeating the process for cleaning out your drain tubes, until its all cleaned out. Reinstall the removed parts.



Please notice in this picture, the drain tube nipples, located at each corner

The steel housing is made up of many pieces, that are welded together. These housing were never painted. They only had some kind of primer coating. These steel housings are know for rusting out in places that you can't see, until you remove them from the car.



I removed this Sky Top housing about 6-7 years ago. The owners really wanted me to rebond the housing to the roof skin. I talk them out of that and told them the housing could be rusted through, in places that I cannot see until I get it out. His was rusted through over the roll bar, where it is impossible to see. If I had rebonded this car it would have still leaked. I have seen countless numbers of Avanti that have had the steel or glass panel sealed closed with silicone, windshield urethane and etc.

I have never seen an Avanti that had a sunroof or moonroof that was sealed closed, with whatever jury-rigged method of repair. that didn't start leaking again. I have seen some Avantis that somebody had filled over top of the glass or steel panel. That was still in the car and painted the roof.

I still have most of the N.O.S. parts need to service both the American and Sky Top sunroofs and moonroofs on my shelves.

List of N.O.S. Parts on my Shelves Currently

Sun & Moon Roof steel housing assemblies (these are large and measure about 3' x 3' x2") This is the part that is attached to the bottom of the roof skin that all parts attach to:

- Glass Sliding Panels
- Electric Motors & Circuit Boards
- Cable Assemblies
- Wind Deflectors
- Weather Seals
- Sun Close Out Sliding Panels
- Wind Deflector Springs
- Worm Gears
- Shear Pins
- Worm Gear Blocks
- Tracks
- Slide
- Positive Stops
- Slide Guides and etc.

I have just about everything you will need if you want to try and fix your leaky roof.



A leaky roof can and does destroy the interior from the head liners, windshield pillar upholstery, seats, carpet and etc.

Health issues can also arise, with that dreaded mold.



In the next issue #195 of the *Avanti Magazine* I will write an article on how to replace a N.O.S. roof skin part # 1350250 with photos. Until then I can still explain over the phone how to replace your roof skin. As I have been doing for over 30 years. Don't forget I have a limited supply of N.O.S. roof skins, part number 1350250.

I also have N.O.S. roof skins part #1350250 this roof skin goes from the windshield to the rear window, from drip rail to drip rail. It's a lot easier to install than the average Avanti Owner thinks with my instructions. I have had a number of novices (Avanti owners and body shops) that have successfully installed these N.O.S. roof skins #1350250 I have a limited number of N.O.S. roof skin available, currently they are \$550.00 plus shipping

They can be installed with the windshield and rear window in the car or out. I prefer the windshield and rear window out of the car.

The Avantis with the sunroof or moonroof option have a very bad reputation of

“they all leak”, but this is not true!

I have had and still have Avantis that I rebonded 20,30,40 years ago, that sill don't leak. I also have Avantis with the sunroof or moonroof option that have never leaked as they were serviced, by Nostalgic Motor Cars, to prevent that from happening.

