Don't Break Your Avanti Door Glass !

By Dan Booth
Nostalgic Motor Cars
Dan Booth has over 46 years of exclusive, hands on Avanti sales, service, collision and parts, not Studebaker cars or trucks, just 1963-1985 Avantis.

The deterioration of the left and right door window lift channel can lead to very expensive repairs, if not corrected.

Most Avanti owners aren't aware of a problem, or problems, that they may have been developing on their 1963-1985 Avanti door glass. Which is rusted out steel parts that have been exposed to moisture for 37-59 years and dried out, deteriorated cushion strips. Each Avanti door glass is secured to the stainless frame Illust # 2120-3 part #1350728/729 which I have in N.O.S. @ $150.00 each with cushion strip Illust #2120-12 part #1479x50# 1.45 per ft. The stainless window frame is also attached with 2 Phillips screws to the front door glass lift assembly (shot guns) Illust#2120-17 part #1350734/735 which I have in N.O.S. @ $450.00 each. The door Glass is also secured to the top of these shot guns. There is a channel that's welded to the top of the shot gun assembly Illust # 2120-17 (see page 191 from the parts manual, included in this article. The glass is also secured to the shot gun with a cushion strip illust #2120-12. The biggest problem is the steel channel, part #1857x1, it will rust out over time.

The shot gun assemblies were painted black before installing the glass. Most of the paint on that upper channel has weathered off and started to rust. Any water that runs down the door glass has to pass over the steel channel. As time presses on, the cushion strips dry out and deteriorate. The deteriorated cushion strip allows water to enter the inside of the channel. Now you have rust working 24/7 inside and outside of the steel channel. The rusted channel and or the deteriorated cushion will allow the glass to move away from the shot gun assembly.

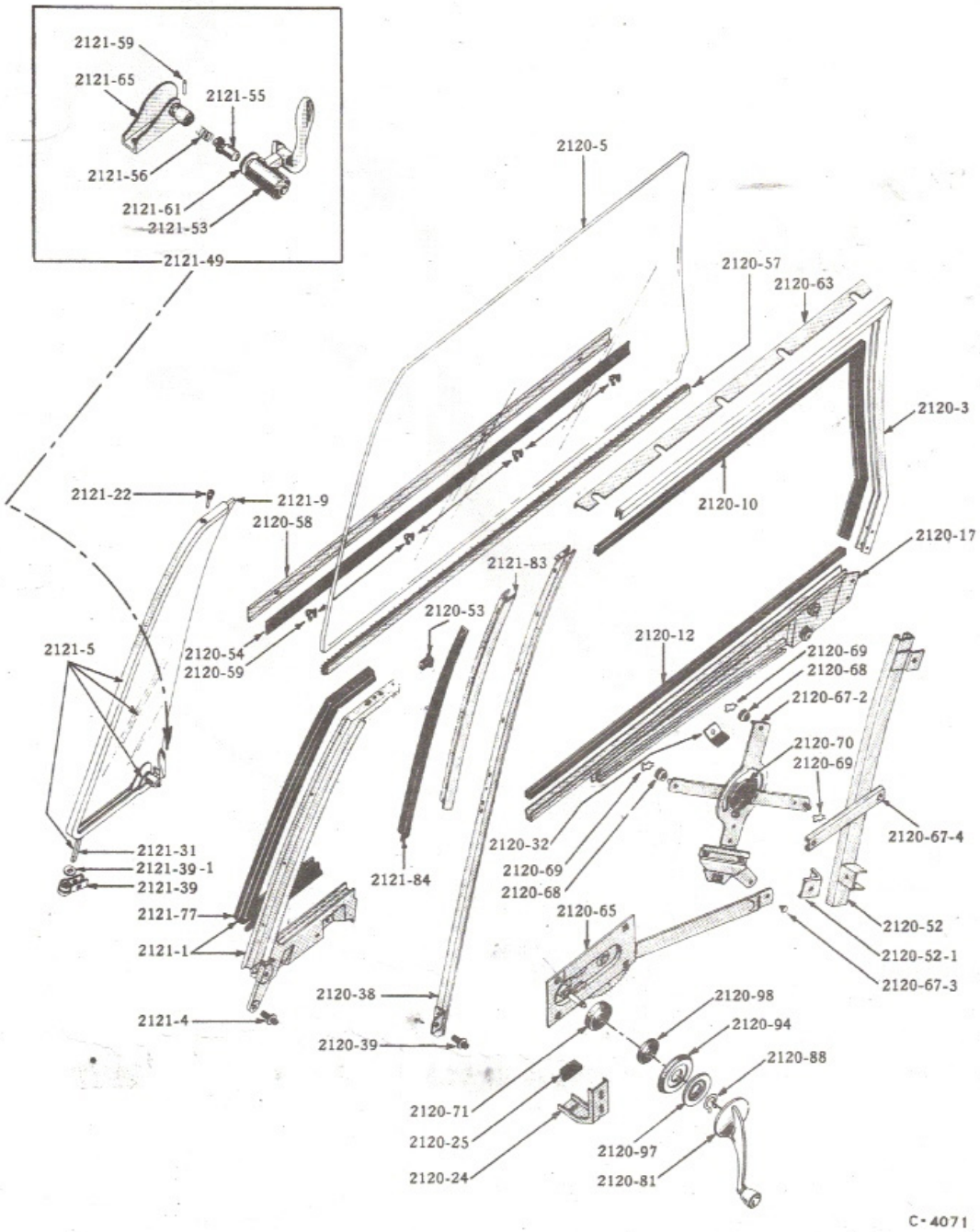
The second problem that develops is the 37-59 year old cushion strip as it deteriorates will allow the stainless glass frame to pull away from the door glass. If either or both of these problems are left uncorrected, the third problem starts The third problem is the stainless glass frame could get hung up on the vent assembly, or elsewhere and become bent and/or break at the weld where the tow pieces of stainless meet. Which could create the fourth problem, that could be quite expensive. When the door glass is being raised or lowered, the glass separates from the rusted shot gun and glass frame and goes crashing down in the door, which will most likely shatter the glass.

I do have N.O.S. tinted or clear door glass in stock for both left and right sides. I actually have N.O.S. glass for the entire Avanti, in stock.

Follow along as Nostalgic Motor Cars unlocks the History and Mysteries of the 1963-1985 Avantis "so you don't break your door glass.

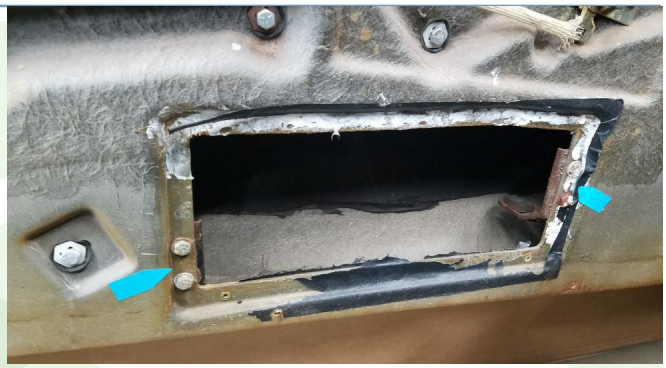
This article is about a customer's car that required a new drivers door glass, stainless window frame, cushion strips and etc. I also had to rebuild his shotgun with a N.O.S. channel that I welded on. I also had to make up the parts for the two rear slid guides. The channels and slide guides were never sold separately by Studebaker, or Avanti Motors. Some of the pictures are from that repair. This is a problem that gives no warning of what could happen, until it happens. Like my article on steering coupler (rag joint) replacement in issue #191 of the Avanti Magazine " Is Your Avanti Really Safe To Drive" Which could be catastrophic, if that 37-59 year old rubber rag joint suddenly breaks !

Its very easy to tell if you have a rusted out door glass lift channel. Look down into the top of the door, with door glass in up position, the glass is set into a piece of steel channel that's welded to the lift assembly (shot Gun), you may be surprised how



RIGHT FRONT DOOR WINDOW AND REGULATOR MECHANISM

Printed in U.S.A.



rusted this channel has become. It can have surface rust but should not have pieces missing or rust pushing it our away from the glass.

This channel was not ever intended to last 37-58 years. It's only .050 thick (less than 1/16"). Every time the door glass gets wet, the water runs down into and or over this .050 thick bare steel.

The second thing that should be checked is the stainless door glass frame. Simply put your window about halfway down. Try pulling the stainless frame away from the top of the glass. It should not move at all. If it moves away from the glass, it means that the glass cushion strip has dried out, deteriorated and is not holding the stainless frame to the door glass as it once did.

Nostalgic's easy way to repair deterioration of the 1963-1985 Avantis door glass restraints, at a very affordable price.

Remove the door panel Please see my article in issue #192 of the Avanti Magazine or go to my web site

NostalgicMotorCars.net click on "Tech Articles". "How

to prevent your 1963-1985 Door panels from warping"

Remove the positive stop, Illust # 2120-24 #1350931 on manual windows or on power windows you will be removing 2. Sometime in the 1984 & 1985production run, Avanti Motors stopped installing the positive stops #1350931. They replaced them with a piece of 4x4 hardwood that was cut on an angle to match the bottom of the shotgun

This may sound a little unorthodox, but it worked extremely well as it did stop the inside of the fiberglass door from flexing as the heavy window was lowered down, or raising up. The wood block was held to the bottom of the inside of the door with silicone, at the center point of the shotgun.

The downsides to this wood block as a window positive stop were just a few.

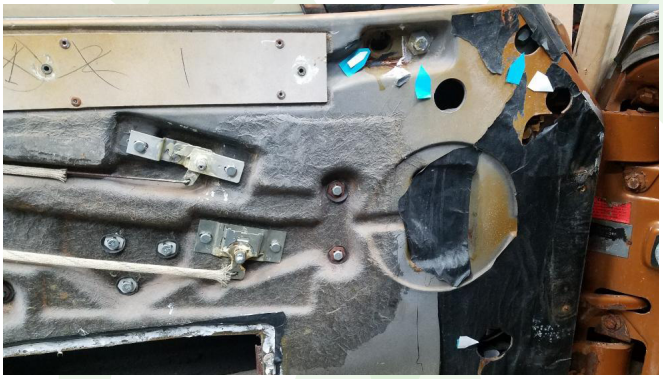
1. It would come loose from the bottom of the door as the fiberglass was not sanded to break the gloss finish of the fiberglass and the block would just bounce around, inside the door.

2. You had to remove it to pull the power window regulator assembly from the door

3. Since it was untreated hardwood, it was susceptible to rot.

In 1984 when I first noticed the wood block and it's shortcomings, I made some very simple changes. I first ground the fiberglass where the wood block was located.

Then drilled two holes up through the bottom of the door bottom, into the wood block. I ground the bottom of the wood block, installed new silicone and installed 2 Phillips head screws to assist the silicone for holding it in place. It's kind of a shock to see a piece of wood, bouncing around the inside of a $38,000.00 (1984 money) car.



The two blue arrows are pointing to 2 bolts that hold the vent assembly, Illust # 2121-1 to the inner door. Remove these 2 bolts.

The 2 white arrows are pointing to special adjusting bolts. Illust # 2124-4 and 2120-39 part #1350482 $19.98 each, they have a slot in the head and a lock nut. Remove the lock nuts and flat washers. The blue and white arrow is pointing to a bolt that secures the door skin to the vent assembly, remove this bolt. Turn the 2 slotted adjusting bolts in (count your turns, for reference when reassembling) until they bottom out.

Take some nylon filament tape and tap it to the glass on angles. This gives you a handle to pull the glass up and out of the door. Don't trust this tape handle after the glass is removed. The blue tape is stuck to the sticky side of the filament tape, so it won't stick to my hand.

Remove the upper stop, Illust # 2120-32 part#1350933

Lower the door glass all the way down to the bottom of the door.

Mark the circumference of the washers with a felt tip pen or spray paint, which gives you a reference point for reassembly and loosen the 2 bolts that hold that rear window guide. Illust#2120-52 to the door

The shot gun assembly has 2 rollers illust#2120-68 Part# 1350837 in the lower track. These rollers have a clip, illust # 2120-69 part # 1350838 inserted in them that locks the rollers to the 2 regulator studs. Remove the 2 clips. The roller and clip are sold together, part#1350837 at $3.00ea, and yes I have them in stock. It takes 3 per door for manual or power windows

Pull the window regulator away from the rollers, now pull up on the glass assembly as you tilt the vent assembly forward at the top or you can remove the vent assembly if you wish. The glass assembly will now come

straight up and out of the door

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Steel Channel part #1857x1 (Which is rusted out)

Photo of N.O.S. 1857x1 window lift channel and illust# 2120x12 part #1479x50 cushion strip

1- 1479x50 cushion and 1- 1857x1 N.O.S. lift channel is $35.00 per side.

Studebaker and Avanti Motors never sold part # 1857x1 window lift channel separately, they only sold the assembly shot gun illust# 2120-17 part # 1350734/735

How to replace a rusted 1857x1 window lift channel

All the parts I will be discussing are the same for manual and power windows on all 1963-1985 Avantis

The white arrow is showing the rusted out lift channel 1857x1 which isn't capable of holding the glass securely in the lift channel anymore.

Measure the distance (blue arrow) from the edge of the glass to the end of the rusted lift channel part#1857x1 This dimension will be used to reassemble the glass back in the shot gun assembly

The blue arrow is pointing to the 2 phillips head screws that need to be removed. These 2 screws very seldom will come out without heating them up and then the Phillips head strips out. What I normally do is grind off the Phillips head flush with the stainless frame illust#2120-3 Part #1350728/729

Photo of stainless frames Illust# 2120-3
1350728/725 N.O.S. $150.00 each

I now take a wooden block and tap down on the shotgun assembly to free it from the glass. Then grind the 2 screws flush with the steel shotgun assembly and take vise grips to grip the threads and remove the screws from the back side.

Make sure that the stainless frame, illust # 2120-3 is still gripping the glass very tight. If it's just a little loose on the glass, it will only get worse. Eventually the frame will hang up on the top of the vent frame and come off the glass, which leads to a bent frame and or broken door glass

Photo of cushion sold by the foot, illust#2120-12

#1475-50 $1.45 per foot

This is a shot gun with the rusted channel removed and the new channel clamped in place and welded.

Shot gun assembly with new channel welded in place, showing no offset on the inside side.

The blue arrows are showing that the new channel side should be flush with the shot gun The new welded channel should be flush for the entire length of the shot gun on the outside side.

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The cushion strip is easy to change now as the glass and frame are separated from the shot gun. If you are going to change the frame cushion take measurements, where the 2 blue arrows are. Measure from the edge of the glass to the stainless at both locations.

These measurements will be used when the stainless is reinstalled on the glass with a new cushion strip.

The glass cushion strips are very easy to install. First clean the glass with glass cleaner where the cushion will be installed. The cushion strip is about 1 1/2" wide. Install it in one piece, from the back bottom up and around the corner to the front of the glass. Fold the cushion strip over the edge of the glass with equal parts on each side use masking tape to secure it to the glass on both sides.

Cut your corner (aprox. 45 degrees) for a snug, flush, fit on the sides only. Finish taping the cushion strip to the glass. Don't worry about the cushion strip being too long as it will be trimmed off after the two are put together.

You will need a good solid work bench, preferably a wood one or place piece of wood on top of the steel bench. Put a piece of carpet on top of the wood. Clean the stainless channel out. Take glass cleaner and quirt glass cleaner all over the cushion strip (after it's been taped to the glass). This will help it slide in the channel and will also help it swell up for tight fit. Take a dead blow hammer and tap the two together, paying attention to your location marks you made earlier. Make sure the glass is bottomed out, in the stainless frame. Trim off the cushion strip at the edge of the stainless frame.

This photo shows that if the outside was flush then the inside should be 1/8" offset on only the area that has the roller slide guides. It also shows that the channel should extend about 1/2" over the section with the roller guides.

This photo is of the shotgun assembly with the new channel #1857x1 welded to the shotgun. It also has 2 new rolling studs, 4 nylon guide washers and 2 wave washers installed. I have to make these parts in my machine shop from the original Studebaker blue prints, as they were never sold separately.

Install the glass and frame back into the shotgun assembly. Install cushion on the bottom of the glass just like I explained earlier. Wet down the cushion strip and again tap the two together. Pay attention to your mark (blue arrow) of how much glass hangs over the replaced channel. Use a scratch awl and make sure the two hoes that secure the stainless frame to the shotgun are aligned. Install your screws, trim excess cushion off.

Grease the lower shotgun track and install 2 new roller / clip assemblies part# 1350837 in the track.

This photo shows how the slide guide nylon washers are installed correctly in the window guide, Illust # 2120-52 part # 1350487. The window guide should have grease, in it's entire length, on the inside and outside of the guide. The purpose of the wave washers is to keep tension on the nylon washers

This is somewhat difficult to explain, and may also be hard to digest, so don't hesitate to call if you don't understand. Dan Booth 248-349-4884 .

The greased C channel will have a white nylon roller on the inside and one on the outside. The outside also has a wave washer, please study photograph.

Lean the vent assembly slightly forward at the top. Start to install the slide guides back in the C-channel with only one nylon washer on the inside and one on the outside for both slide guide studs. As you are lowering the window assembly back down in the door. pull the vent assembly over to the door glass. insert the glass in the vent widow run continue to push the glass assembly to the bottom of the door. making sure that the glass stays in the vent window run. Snap window regulator studs into the new rollers. Tug on the regulator studs to make sure your roller clips illust#2120-69 part#1350838 lock in place. There is a small groove in the regulator studs that the clip will lock into. Reverse the process of removal and don't forget to install the vapor barrier.

I will have almost all the parts shown on page 191 of the parts manual, in stock, except for the manual window regulator assemblies, which I can normally rebuild for you.

All prices subject to change, without notice.