

## Gauge Installation

How to install Avanti Motors replacement chrome bezel Stewart Warner gauges in 1963-64 Studebaker Avantis and 1965-73 Avantis.

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### Replacement Gauges

These Avanti motors Replacement Stewart-Warner gauges have the original Avanti part numbers assigned to them. They are all the same size as the original gauges ( except the volt gauge) so they will fit in the original dash overlay holes. The chrome bezel is also the same as the originals. I am sold out of the 140 MPH speedometers #1557107R. I only have the 160 MPH Speedometer #1560098R. The clocks #1557298R are also sold out

You will receive one Stewart-Warner chrome bezel volt gauge. It will replace the clock. I also include a special stainless washer bezel that slides on the gauge before it's place in the large hole. Most Avanti owners don't know that the clock hole is a larger diameter hole, than the other gauge holes on all 1963-1964 Studebaker Avantis and all 1963-1973 Avantis.



If you look at the picture of the gauge overlay looking at the back, you should be able to see the clock hole is larger. It also has 2 tabs with studs attached. These studs are used to hold the clock in place. In other words the other 7 gauges are installed through the holes from the front and held in place by a box, u-bracket and etc. The clock hole being larger lets a normal size gauge fall through the gauge overlay. The clock was installed from the back side and held in place by those 2 studded tabs. If one or both studded tabs are broke off, which is real common, don't be concerned. The factory SW volt gauge will be installed from the front and has it's own retainer. Those 2 studded tabs will not be used with the new gauges. If your dash gauge overlay was loose and not held tight to the dash at the clock. You probably have one or both broken studded tabs. The new gauge with it's stainless washer bezel ( included with gauges kit) will hold the gauge overlay tight to the dash.

As the 1963-1973 Avanti gauges are now 47-57 years old, the failure rate has been increasing over the years. Customers will send me a gauge that no longer works or is just plain not accurate. I will send it out for repair and by the time the customer gets it back, It will have cost them form \$100.00-\$300.00 each if they can even repair it. Don't forget all those shipping costs. Then a second gauge becomes inaccurate or just plain quits.

For the last 20 or so years I have sold a large amount of these Avanti Motors replacement gauges one at a time or mostly complete replacement gauge kits. The customers that purchased the gauge kit from me have found it to be very cost effective as they can sell off the old gauges or just keep them or they will go with the car when it's sold, unfortunately for most of them, they put out money for a tach circuit board that didn't fix the problem and have other gauges repaired, then decide to purchase the gauge kit from me. If you have purchased a replacement gauge from me in the past, I will sell you the kit less that gauge. The replacement gauge kit is from the same manufacturer, Stewart Warner. the difference between the original gauges in your 1963-1973 Avanti and the replacement gauges are minor and few, other than minor esthetics, see photos of gauges.

1. The new tach is electronic and does not have a circuit board and is much easier to hook up.
2. The 160 mph speedo doesn't have a back light hole in it for the bright/dim illumination. I supply with the kit #1701006 a Avanti red pilot light assembly from the dash gauge cluster for 1974-1985. I splice this into the existing wire and relocate to another spot of your choice (see photograph below)

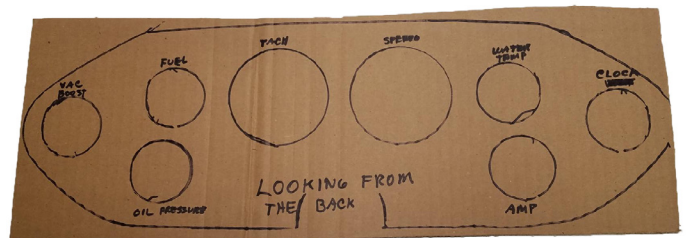


3. The original dash lights from 1963-73 had shared lighting for the temp and amp gauge with one light bulb. The fuel and oil gauge have one bulb, the new replacements gauges all have their light bulb. All you have to do is splice the new sockets, which are included in the kit.

No Special tools are needed and this is a very easy and simple job that doesn't require a lot of mechanical skill. I'm a phone call away. Dan Booth, Nostalgic Motor Cars 248-349-4884. so don't be intimidated by a repair that you may think is over your head. It's actually very easy and rewarding when finished.

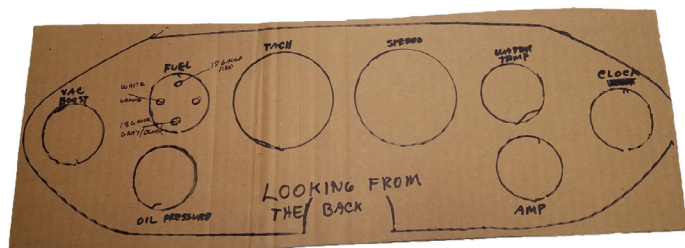
## Changing Out Gauges

1. Disconnect battery and remove front drivers seat.
2. Remove the steering wheel, this is not necessary, but it does make the job much easier. Auto Zone and others have steering wheel pullers on loan. If you want to, you can call me and I will walk you through how to pull your steering wheel. It also is very easy.
3. Get some pillows to put on the drivers side floor, as that front seat floor riser starts to feel like a mountain on your back.
4. Draw a picture of a blank gauge overlay. showing all the gauges from the back side, as you will be labeling this drawing for reference.
5. With the drawing in your hand, look at the back side of the gauge cluster. Start with any gauge you want to. Take note of what color and the wire size of each wire coming off the gauges. Example; fuel gauge will have n 18 gauge red and 18 gauge grey/black( which means gray with a black tracer) Now on your drawing, mark the correct circle for the fuel gauge, don't forget you are looking from the back.

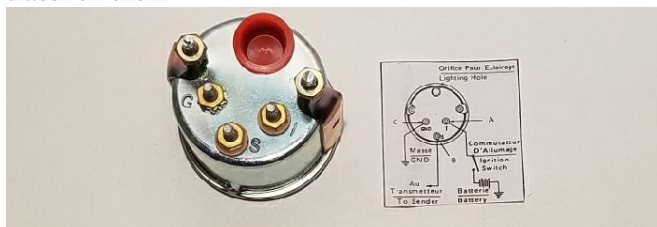


# Avanti Repair

Now on your drawing, mark the top left gauge circle as fuel. Now draw small circles to indicate the studs. Draw lines to label color of wires on the studs.

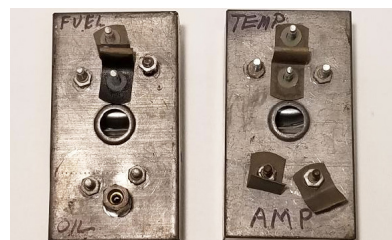


Do this with all your wires on all the gauges. I check and recheck my drawing. I take 1/4" wide masking tape, label ( example) fuel, as I remove a wires from a gauge, I wrap the tape around the wires. Studebaker and Avanti Motors used many styles of wire terminal ends, from a nut down to a push on you may have to change some terminal ends to work on the new gauges. Remove all your gauges. Each new Avanti Motors replacement gauge will come with a wiring diagram. showing what each stud is to be used for. Example Fuel gauge has 5 studs. 2 studs are not marked which are used to retain the gauge to the dash. 1st stud is labeled "G" for ground, the 2nd stud is labeled "S" for signal and the 3rd is labeled "I" for ignition. white is ground on 1963-1973 Avantis. If you see a white wire, don't just assume it is a ground wire, check it out. Studebaker and Avanti Motors used white wires that had a color tracer on them. Avanti motors when they ran out (my guess) of white wire with a color tracer on them



They used a magic marker to put on as a tracer. Don't laugh, it actually worked real good. You can normally find the colored tracer if you peel back the tape, as it has weathered off where it was exposed. Simply check it just to make sure that white wire in question is a ground.

These Light boxes will no longer be used with the new gauges.



All the new Avanti Motors replacement gauges installed



Looking at the back of the gauge cluster, I am showing a partial ground jumper wiring harness. from gauge to gauge. do this with all gauges, connect to the existing dash ground wires.



If you have the wiper rocker switch #1700585 you will ground the harness to one of the switch mounting studs.





# Avanti Repair

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Before I install the new gauges, I look at my drawing of what color wire is going to what gauge. I then reference the original wiring diagram from the original Avanti service manual, just in case somebody hoked up a gauge wrong. I don't want to damage the new gauges. If you don't have that diagram, simply ask me to include a copy of that wiring diagram with the purchase of the gauge kit.

I also do what Avanti Motors taught me to do. I splice in a small wiring harness that I make up from 18 gauge white wire. I splice it into the exiting white ground wires and then I jumper from gauge to gauge on their ground ( which can normally be on one of the mount studs) from the made up harness I run a lead down to the z-bar. I also run a jumper down to the wiper switch. I use a wire terminal, that the hole is large enough to slide over the wiper switch neck and then installed the wiper switch through the gauge overlay and nut it down. This gives you a good ground for all gauges and wiper switch, with out this simple harness you are simply relying on the aluminum dash gauge overlay to be the ground.



If you are going to replace only one of the following four gauges, water temperature, amp, oil pressure or fuel, with an Avanti replacement gauge, you will have to modify a gauge case, as one light bulb lights two gauges. You will have to splice in a light socket assembly, (included with gauge) into the existing gauge light wiring harness.

Avanti Motors Instructions were to cut off the case just above or just below the light bulb socket hole. Then just take electrical tape, and tape off the open end to confine the light.

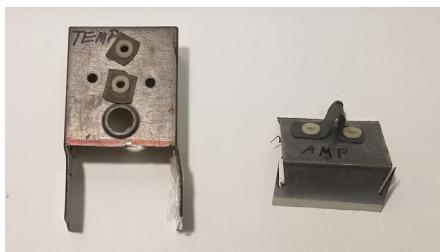


## Modify Boxes

This is what I have done over the years. If you are changing, for example the amp gauge, I draw a line just below the light bulb socket, then down each vertical bend 90 degree corner



Then I cut on those lines



I bend the two sides in to form a new, smaller box. Cut off the over lap and you are done



Reverse to install.

## Avanti Motors Stewart-Warner 8 Gauge Replacement Kit

Contains 1 each:

1557299 Volt Volt Gauge (clocks sold out)

Stainless washer bezel for volt gauge

1557112R Water Temp Gauge

1557113R Amp gauge

1560098R 160 MPH speedometer (140 mph sold out)

1557116R Electronic Tach (no pesky sender)

1557110R Fuel Gauge

1557111R oil pressure Gauge (connect to existing oil pressure line)

1557118vac Vacuum Gauge R-1 - R-4

or

1557118bost Boost Gauge R2, R3

1701006 Avanti Red Pilot Light Assy.

All new light bulb sockets and gauge retainers.

All about Stewart-Warner gauges are in stock and sold separately, call for pricing individual gauges.

# Avanti Repair

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I personally think the Avanti dash is one of the most beautiful, and functional dashes of it's time, with the exception of the 1958-62 Corvette. They both had all necessary gauges right in front of the driver. The SW Avanti gauges, hands down were a better looking, than the GM Corvette gauges, but where the Avanti dash really excelled was the safety aspect. To the best of my knowledge, it was the first car to ever have a completely safety designed, deeply padded dash, with soft foam and vinyl. Other cars had pads that were attached over their standard dash, and not soft.

Nothing gives me more pleasure when I'm driving my cars or trucks, than looking at a beautiful dash with real gauges (not idiot lights) working correctly. It takes me back in time when the car and/or truck was new. After all I am always looking at my dash when I am driving.



1963 - 1973 Chrome Bezel Stewart-Warner Gauges, installed in my 1984 Avanti Dash... STUNNING