

Is your Avanti REALLY Safe to Drive?

**By Dan Booth
Nostalgic Motor Cars**

For over 45 years, my only full time job has been 1963-64 Studebaker Avantis and 1965-85 Avantis Not Studebakers, just 63-85 Avantis. Dan Booth

How To Replace the Steering Flange and Insulator (Rag Joint)

All Avantis manufactured from 1963-1985 have a flange and insulator assembly (rag joint). The rag joint connects the steering column to the steering gear box. It has a female splined flange on the top and another on the bottom. These two splined flanges slide over the splined steering column shaft on the top and over the splined shaft from the steering gear box on the bottom.

What connects the two flanges together is a flat circle of reinforced rubber. It's like a flat donut with 4 smaller holes for attachment.

The rag joint's job was to minimize as much road noise and vibration from the steering column and steering wheel. It has a safety factor built in so if the reinforced rubber insulator ever broke, you could still somewhat steer the car to a stop and not lose total steering control.

If you look at the rag joint on your Avanti, you will see two studs that are not attached to anything, but are confined in 2 horse shoe shaped holes. This simple design should alleviate total loss of steering. I have always carried the rag joints in stock, since the late 1970s. I also stocked new frame assemblies from Avanti Motors, as I was replacing rusted out frames and always changed the rag joint way back then as a safety precaution. Over the last 10 to 15 years, I have sold a lot of the NOS rag joints to restoration shops and individuals that are concerned about safety and understand how important it is to change this part on preventative maintenance.

The insulator is a rubber part made somewhat like a tire. It's located about 2-inches or so from the left exhaust manifold back by the fire wall. The rag joint has gone through many many cycles of extreme temperature changes, over the 35-57 years it's been on the Avanti.



New Original Stock Rag Joint #1701886, Installed with jumper ground wire



Avanti Repair

One fact that shortens the life of a tire is being exposed to extreme temperature changes. These temperature changes make the insulator very brittle and prone to cracking and/or breaking.

WOULD YOU DRIVE A CAR WITH 35 TO 57 YEAR OLD TIRES?

The answer is probably no, but your driving your Avanti with a 35 to 57 year old flat donut shaped reinforcement rubber insulator made just like those old tires.

These originals to the car, have been breaking

I'm not try to scare you, but to inform you. I get a lot of questions from Avanti owner on why their Avanti has so much steering play. The replacement of that old, hard, rag joint solved their problems.

I know of now way to really check an old rag joint, except the rubber and fabric has gotten extremely hard over those year and it may start to tear or crack. I just replace it. It's not that difficult to replace. No special tools are needed

You could turn the steering wheel back and forth as you watch the rag joint change direction and assume it looks good. But that donut circle of rubber is 35-57 year sold.

To the best of my knowledge the rag joint #1557139 was unique to the Studebaker Avanti and it was not used on another brand of car. Even if it was, it probably isn't available anymore for that car.

New original stock rag joints #1557139 and #1701886 are extremely rare. As I have mentioned before, Since November 9, 1989 when I purchased the Avanti Motors parts division of all their parts, tooling, blue prints, purchase records and etc. Nostalgic Motor Cars became the world's largest manufacturer and supplier of New Original Stock Avanti Parts. Before November 9th 1989 we were second only to them.

I have the very rare NOS rag joins #1701886 in stock.

This rag joint #1557139 was installed on all 1963-1964 Studebaker Avanti and all 1965-1981 Avantis. Avanti Motors redesigned the rag joint for about the 1982 Avanti to part # 1701886. The big change was to eliminate that pesky brass horn contact strip that was breaking. The new design has a screen material in the top layer of the rubber for the horn contact. To make sure that the screen material would not fail after years of use. They added a white jumper that jumpered from one flange to the other flange.

White jumper ground wire.



The pictures show a NOS rag joint #1701886 and a rag joint I removed form a 1981 Avanti (39 years old). This 1981 was shipped to me with a little play and vibration in the steering, that nobody else could figure out what was wrong. I decide to change the rag joint, knowing there was no play that I could see in the rag joint. The NOS rag joint solved the problem of play in the steering.



I inspected the old rag joint. I took out one of the attachment bolts from the rag joint and noticed that the hole was becoming elongated and split on the outside of that hole. I further flexed the rubber and noticed it cracked at the edge of the steel retainers. In the photo, look at the fuzzy threads that show where the hard rubber and fabric are cracking, breaking and tearing, and etc.



It's hard to see the cracks in the image above. The blue tape in the below image is cut to make arrows, pointing to the cracks.

**#1557139 #
39 year old Rag Joint**

**#1701886
New Original Stock Rag Joint**



How To Change a NOS Avanti Rag Joint from 1963-1985

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1. Soak down the splined shafts and flanges, bolts and etc. with WD-40 or similar, for a couple of days. See photo 3.
2. Disconnect the battery and unbolt the master cylinder from the P.B. booster and push it away from the booster. Tape the reach rod to the P.B. booster, remove the vacuum line from the booster. Remove the booster from the fire wall bracket (do not remove the bracket) Master cylinder unbolted and pushed away from the booster See photo 1
3. It takes a 12 point socket to remove the upper and lower flange pinch bolts removed both bolts and adjust the steering wheel to the 12 O'clock position. See Photo#2
4. Take a punch or chisel and mark the 2 splined shafts and flanges for alignment reference when installing the NOS rag joint.
5. Remove the two nuts that hold the two flanges together
6. Unbolt the toe plates and clamps from the fire-wall, and steering column inside and outside. This varies from year to year.
7. Tap on the upper flange to break it loose from the shaft.
8. On the 1971-1985 Avanti with the key in the steering column. Remove the steering column lock out rod from the steering column. See photo #3.



Photo 1



Photo 2



Photo 3



Photo 4

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9. Remove the nuts that hold the steering column to the dash z-bar. As you are lowering the column down, unplug all electrical wires. You can either remove or sometimes just slide it back.
10. Remove the rag joint from the steering gear box.
11. Transfer your reference marks to the new rag joint.
12. Before I install the new rag joint I clean up the two special pinch bolts and make sure they thread into the holes. I also run the two attachment nuts on their studs. I remove the special bolts and nuts. Clean and lube both shaft splines and make sure that the rag joint slides on both shafts.
13. Reverse the process to assemble and pay good attention to your marks on the NOS rag joint assy. and the shafts. If you don't get them lined up correctly, your steering wheel will not be back to its original 12 o'clock location, See photo #2. Install your white jumper wire for future good ground. See Photo #4.

If incorrect insulator material is used to rebuild or reproduce the Avanti 1963-1985 Rag Joint, which is not the specified material stated on the original Studebaker Avanti and/or Avanti Motors blue prints. The Avanti can still have play in the steering.

The original insulator on the NOS rag joints is not flexible in any way, but rather stiff, and rigid, yet the rubber still feels soft. If that makes sense to you. You must feel and try to flex a NOS rag joint to understand what I am trying to explain or better yet, just change the rag joint and you won't have to worry about when it might break.

You may want to purchase your NOS rag joint as soon as possible, as I will probably never get this special rag joint #1701886 manufactured again, once they're gone, they will be gone forever.



**New Original Stock Rag Joint Part number 1701886
Available from Nostalgic Motor Cars.**