

## Manual Steering Rack Tierods

Posted by AgRacer - 23 Sep 2015 11:06

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Just documenting this information here for future reference.

The early manual steering racks that many of us use for racing have tie rods that are becoming increasingly hard to find and expensive if you do find them.

The Early rack tierods have a female inner and outer end so the ball joint and steering rack thread into the tierod. The outer manual ball joint end is a male connector, and are also very expensive.

The Power rack tierods have male inner and outer ends so the ball joint and steering rack thread over the connector on the tie rod. The outer power end is a female connector, and is much cheaper than the male manual rack outer end.

A solution has been found which uses a 1990 VW Jetta, or similar VW, with a manual steering rack. You take the VW tie rod assembly, which has a female inner tie rod end, add the cheap 944 power steering rack outer tie rod ends, since the VW outer tie rod end is male, to make a new version tie rod assembly which works on a manual rack.

I found that the folks at Rennbay buy these VW tie rods in bulk, and include the power outer joint to make a new complete assembly for \$125. You can source the parts elsewhere but if you buy the VW tie rod by itself, it will come with an outer end which is curved, and not as suitable as the 944 power rack version (weaker, possible increase in bump steer).

Hope this helps. I was confused for a while until I did a little research. I may provide some pictures as able.

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## Re: Manual Steering Rack Tierods

Posted by ChuckS - 24 Sep 2015 09:57

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Hi,

Just a word of warning. There is another part out there that I believe is originally for a VW Rabbit (80's?). This part has the correct ends and is only very slightly longer than the 944 part. HOWEVER, it

is VERY weak and is NOT suitable for our race cars. Where the inner rod end connects to the shaft, it is solid on ours and a rubber bushing on the Rabbit part. It pulls out and moves during race conditions! This part was carried by a reputable Porsche distributor for awhile, but almost all of them were returned. They then dropped it. I went through three of them until I found a real TRW original part.

If Rennbay carries the Jetta part, it must be good. I trust them. I would still like to hear from somebody that has raced with it for a year and knows it to still be good.

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## Re: Manual Steering Rack Tierods

Posted by AgRacer - 24 Sep 2015 11:14

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Chuck, thanks for the addition. Both of my inner tie rods are completely shot which makes it hard to get a reliable, consistant alignment. I think its also contributing to a lot of my excessive steering wheel movement so hopefully I found something that is an improvement.

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## Re: Manual Steering Rack Tierods

Posted by ChuckS - 24 Sep 2015 11:24

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You are absolutely right regarding the alignment and wheel movement.

For all of us, I hope your use of this part goes well.

Keep us posted on how well the part holds up as I have no spares and I am sure many of us are in the same situation as you are.

Keep an eye on where the shaft necks down and goes into the tie rod end unit (inside). That is where I had movement with the parts I got. Exact same feeling as with worn inner ends.

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## Re: Manual Steering Rack Tierods

Posted by rd7839 - 25 Sep 2015 06:38

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There's another solution which I was going to do to my manual rack but I liked the depowered rack better, quicker ratio.

You can have a machine shop drill and tap the ends of the manual rack to accept the power tie rods. It's a more permanent solution and should cost the same as your idea but you don't have to worry about finding the correct replacement ends each time. My only concern was strength but it should be fine and if not you can weld up the old threads for a bit more strength.

[rennlist.com/forums/944-turbo-and-turbo-...at-s-the-answer.html](http://rennlist.com/forums/944-turbo-and-turbo-...at-s-the-answer.html)

BTW, I have a manual rack that I'm not using if anybody is interested.

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### Re: Manual Steering Rack Tierods

Posted by AgRacer - 25 Sep 2015 06:59

**rd7839 wrote:**

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BTW, I have a manual rack that I'm not using if anybody is interested.

How much for the rack shipped to 28311?

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