

## Replacing the tie rod ends

This is a guide to help you remove and replace a tie rod end on an FTO GPX

Disclaimer: This guide is to assist you only; you follow it at your own risk. I am not responsible for anything undesirable that may happen during or after doing this procedure!

I completed this in about 1-2 hours, which includes jacking up the car and removing the wheels. The tools I used were.

17mm socket

2x 17mm spanners

WD40

Hammer

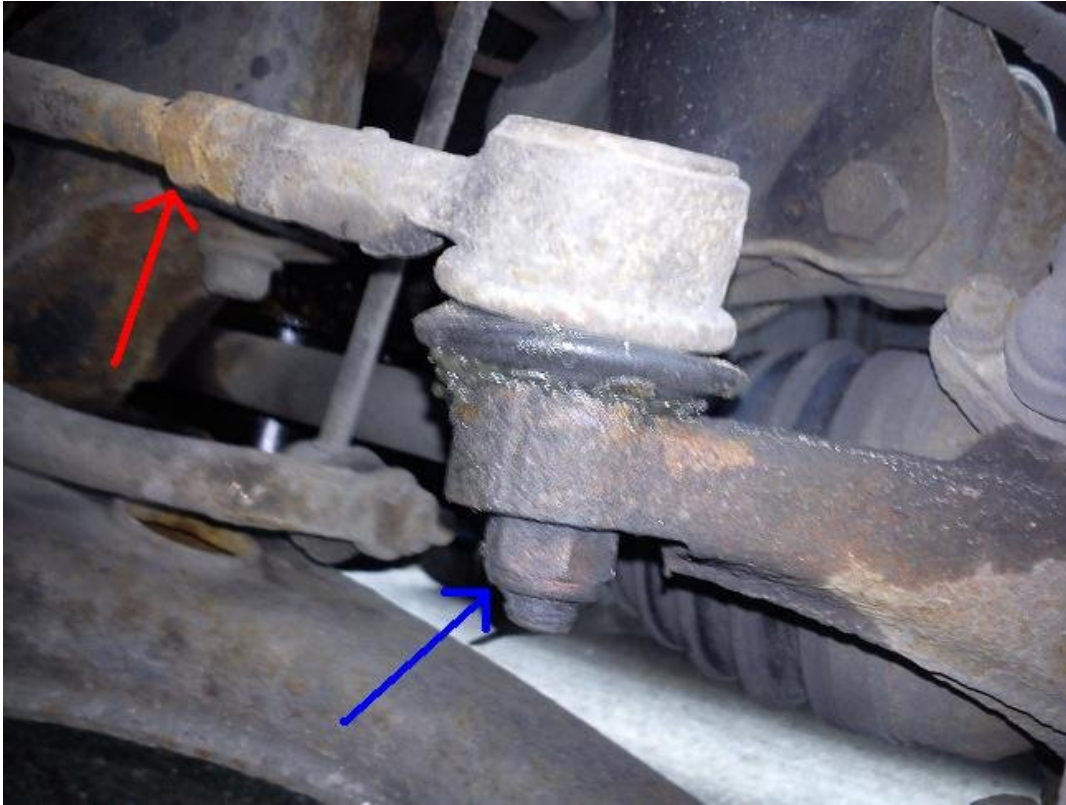
Hacksaw or angle grinder

First jack the car up to remove the front wheel and put the car on an axel stand. Below is a picture showing the position of the tie rod end



You can see tie rod end, indicated with a red arrow

Below is a close up of the tie rod end, in this case the rubber seal is split and is leaking grease. To remove it, there are two nuts that need undoing, which are highlighted with coloured arrows. The red arrow is pointed to the Jam nut, which is there to stop the tie rod end from coming loose, and the blue one to secure it to the steering knuckle.



To start, spray the bolts/nuts with WD40 to try and help release them, as they'll almost certainly be rusted up. You might find it best to leave them to soak for 10-15 minutes before starting.

We now need to loosen the jam nut, this can be done by using two 17mm spanners, one attached to old tie rod end and wedged against the lower arm or strut, to stop it turning and the other to the jam nut. You may need to hit the spanner with a hammer to loosen it a little bit.



Once the jam nut is loose, you will now need to loosen off the 17mm nut holding the tie rod end to the steering knuckle, it's best to completely remove it and then screw it back on with just a few turns. Again you might find it necessary to loosen it by hitting the spanner with a hammer. But when you do get it loose, to make life easier switch to a 17mm socket.

When both nuts are loose, we need to remove the old tie rod end from the knuckle, which will be very firmly stuck in place. There are various tools to do this, but a popular method is to "shock" the knuckle, which basically involves hitting it very hard with a hammer





The above picture shows where you need to hit it, don't underestimate how hard you need to hit it either, I had to take a proper swing at it with a couple of practice swings. If it hasn't popped out after the third attempt, you're probably not hitting it hard enough or you may want to consider using one of the tools available to release it.

Next you need to mark off the position of the existing tie rod end. You need to ensure that the overall length of the tie rod, including the new end, is exactly the same as before. If your new rod end is identical to the old one, you can simply count off the number of times you unscrew the old tie rod end and screw in the new one the same amount of turns.

Another way is to place a mark on the tie rod and then measure the distance from that mark to the center point of the tie rod end. When you put the new one on, simply screw it on so its center point is the same distance from the mark you made previously.

Once you're happy with the above, remove the old tie rod end and then screw on the new one, fit the bolt end in to the knuckle and tighten, then tighten up the jam nut.

Finally, it's important that you get your tracking adjusted, as depending on how well you measured the position of the old tie rod end, your tracking will probably be out of alignment.