Electric Power Steering Installation Factory Five MK3/MK4 Roadster Kit



Parts List:

- Advanced EPS Controller
- 60 Amp fuse and MAXI fuse holder
- Output U-Joint to 3/4" smooth
- Input U-Joint to 3/4" smooth
- Dust boot
- Two Piece Adjustable Mounting Bracket (fits MK3 & MK4)
- ECU Mounting Bracket
- Power Plug
- Misc. bolts
- Wiring and Installation Instructions

Thanks for your purchase! I hope this unit makes you wonder, "Why didn't I do this before?" If you're just building the car, this will be easy as you have plenty of room to work with. However, if you're adding this to a running car you'll have to loosen a few things to get started... namely, the steering collar in the dash/cockpit and firewall areas, and the steering rack in the front so you can slide things around.

The steering unit needs to be mounted to the ¾" frame rail on the chassis to keep it from rotating. The new, two-piece bracket provided can be welded and bolted to the frame. It's adjustable because no two FFR chassis are the same and we're hoping this new design covers the fitment for you. It can be bent and tweaked a little if needed as well as its cold steel. It is best to get it all fitted, drilled, or welded, and then paint it afterward. Make sure it slides onto the frame rail okay and if not, just open it up a little with the vise and a crescent.

First, let's make sure the bracket will work for your frame. We'll do this by installing the frame side bracket loosely. Then, slide the EPS bracket onto the front of that bracket with the chamfered edge going over the welds on the frame bracket. Slide back and forth; you get the idea.



Essentially we want to check to see if the bracket will reach out and the steering shaft will be centered between the three holes for the EPS unit. The bracket should be roughly 9 3/8" from the neck of the yoke of the universal joint coming out of the firewall. If you can triangulate the shaft in the center at this point, and it looks like it's going to work, then let's move ahead.

Take note of length of the EPS (Electric Power Steering) unit from the end of the u-joints (from this kit) attached. This should be 14". You need 1" of engagement of shaft into each of the u-joints. So let's take 12" out of the steering shaft. See below for location of the cuts.



Cut and Remove

NOTE: THIS IS A GUIDELINE ONLY. BECAUSE THESE FRAMES ARE DIFFERENT, YOUR MEASURESMENTS MAY BE A LITTLE DIFFERENT. DO YOUR BEST TO MAKE THIS UNIT FIT WHERE YOU WANT/NEED IT TO FIT. THE IDEA IS TO SIMPLY INTERCEPT THE STEERING COLUMN WITH THE EPS UNIT AND MAKE SURE THE BRACKET REACHES THE FRAME.

THESE ARE MY MEASUREMENTS AND I WILL US TILDE "~" TO NOTE THIS.

As you can see, you will measure and cut, from the base of the yolk opening of the U-Joint, ~2 " in the front and ~4" from the rear leaving you a ~12 ½ " section (depending on your saw blade width) for a total length of ~18 ½". From there, if you wanted more play to adjust fore/aft you could simply trim the shaft back a bit on the forward or back side of the unit depending on where you would need it. There is about ½"" to play with inside the u-joints to move back and forth. As long as FFR did their job, this should fit perfectly but during the welding process at the factory, steel moves around a bit even in the jig so test fit carefully! Once you've measured twice and cut once, it's time to toss the middle section out and mock it all up.

Insert each end of the steering shaft into the u-joints. Try to get the steering shaft on the same plane as before. Once all assembled, there still should be some play here. Again, trim the shafts if needed to slide the unit forward or back.

NOTE: Be sure to tighten the steering column in the front to the chassis so you'll have that variable taken care of and it won't bind anything up upon final install.

Now it's time to finalize the fit of the bracket. Install both pieces into their prospective places: One on the frame and the other on the EPS unit. Drill a hole through the slider hole (if you haven't already) and bolt it loosely together. You may want to trace a line around the bracket for when you take it to get it welded. You may also drill another hole if you like to bolt it together and make it solid for testing and then welding.

Once you have it all in there, mark your u-joints and shafts have them welded along with the bracket.

Once you've got your u-joints welded on, time to mock it up again for one last time before install and make adjustments. Once you're happy with the fit, drill a hole(s) through the bracket top down through the frame with a $\frac{1}{4} \times 1\frac{1}{2}$ " bolt to secure it or weld it onto the frame. If bolted (what I did) tighten well to ensure the bracket closes down on the frame and there is no play.

Now that you've got it mounted tighten the rest down and test the steering side to side for any play or issues. Please refer to the wiring diagram for wiring. Placement of the control units is up to the discretion of the customer. Some feel heat could be an issue in the engine compartment however we've yet to experience any issues from heat but mount the unit where you are most comfortable.