

FJ40 Electric Power Steering Installation Guide Addendum

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Purpose

This document is an informal addendum to the factory installation guide with additional tips.

Location of ECM and Potentiometer

The factory does not specify where to mount the ECM box or the potentiometer inside the cabin, thus it is up to the discretion of the installer. We've seen some installers fabricate a mounting bracket for the ECM, and others placing it behind the gauge cluster. The potentiometer can be installed either vertically or horizontally under the dash. Below are a couple examples.



Location of Electric Motor

The default location for the electric motor is on the left side of the steering column. However, if there is space constraint on that side (e.g. RHD car with a parking brake lever in the way), the electric motor can be swung around to the right side by loosening a couple of clamps.



Brake Pedal Clearance

The clearance between the brake pedal and the steering column is usually tight, and some may find the need to shave the pedal a bit. However, there are a few things you can do to install the unit a little higher: You can gain some length at the steering shaft splines. Try to slide it upward. Also, be sure the rubber joint is at factory thickness. The lower bracket has slotted holes. Try to get the column as high as possible in these slotted holes.



Off Center Steering

It's very important that the input shaft is never hit with a hammer or put under load during fitting. Such action will change the torque sensor settings and cause the steering to be heavier to one side, or in the worst case the unit will not work at all.

In the event the steering becomes off center, you can make an adjustment to the potentiometer to bring the system back to spec. See next page for instructions.

Off Center Steering - Adjustment

1. To readjust the system to the center position. Measure with a multimeter from earth to the White wire. There must be a voltage from 2.5V (+/- 0.05V).



2. Remove EZ Powersteering, cover plate.



3. This will show a small hole.



4. Undemeath that hole is a small potentiometer, with a small screwdriver you are able to adjust it. In the meantime read out the voltage from your mutlimeter and adjust it to untill it reads 2.5V.

There is the possibilltie that there are 2 holes, in that case the second potentiometer corresponds to the yellow wire, adjust it also to 2.5V like descriped above.

24V Circuit Diagram Explained

The 24V circuit with converter works as follows: When the ignition switch is turned on, the relay is energized and the switch closes. 24v from the battery can now go to the input of the converter. The converter sends 12v on its output to the "15+" wire. "15+" is the Bosch code for "power with ignition on".

What is a relay:

A relay is a switch that opens and closes circuits electronically. It controls one electrical circuit by opening and closing contacts in another circuit. When a relay contact is normally open (NO), there is an open contact when the relay is not energized.

