

1UZ FJ40 • ELECTRIC POWER STEERING • METAL-TECH GX470

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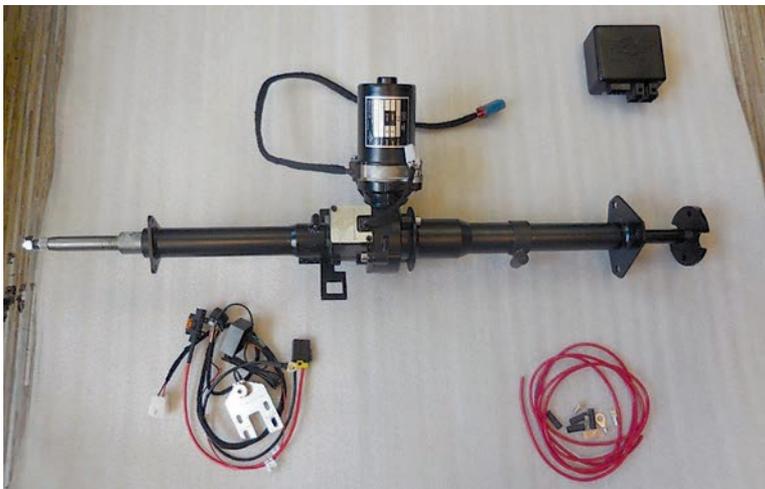


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If you have a 1973-1984 FJ40, you can avoid the headaches of gathering together the parts for a Saginaw power steering setup and do a swap/plug/play electric power steering unit from City Racer LLC! No welding, no plumbing, no leaks! And if you have a pre-1973 like the 1970 FJ40 pictured here, we can show you how to put this awesome PS system into your Land Cruiser with minimal headaches.



ELECTRONIC POWER STEERING FOR FJ40

Possibly the coolest mod ever for the Land Cruiser?

By Jason Medina

The vintage and well-documented option for FJ40 power steering is the Saginaw conversion using various GM parts and other items. It certainly works well enough, although to do it right requires careful placement and welding, plus plumbing hoses, lines, a master cylinder, drive belt, and more.

But this is 2018. Technology has moved forward. Electricity is our friend. No longer are we stuck with leaky pumps, messy oil and grinding/welding. Folks,

electronic power steering is now available for the FJ40. Electronic power steering; did you read that right? Yes, you did! With advancements in technology, why not have

an electric power steering (EPS) option? Now when considering adding power steering into Land Cruisers, it's time to consider the electric option!

EZ ELECTRIC POWER STEERING

This Tesla-era setup was designed by EZ Electric Power Steering in the Netherlands (www.ezelectricpowersteering.com).



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1. Here is our EZ Electric Power Steering unit new and ready to go. Above it are the various tie and relay rods of the factory steering system onto which we are installing new tie rod ends, since we have the whole thing apart anyway. And at top is the bell crank and arm that we also rebuilt at the same time.

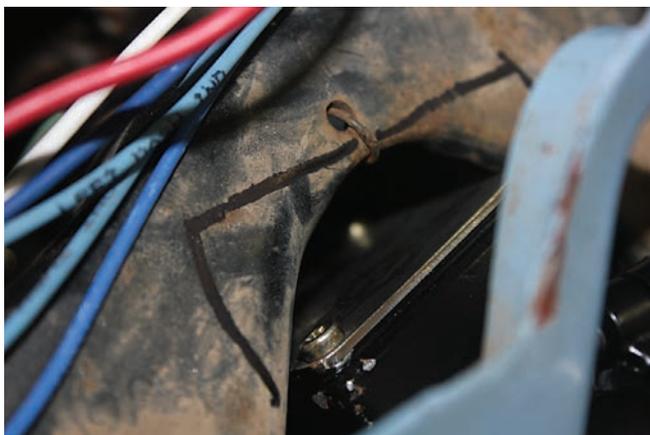


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2 & 3. The electric motor of our EZ EPS looks like this. They have options for LHD and RHD, plus 12V and 24V systems (they do recommend a 24V-to-12V converter for 24V trucks; the part is on the www.cityracerllc.com website. The stylish engraved plaque on the reverse is a nice touch.



4. The steering column brace was the first item that we found needed to be modified. We needed to open up the opening to allow for the top of the EPS unit. Hint: in order to do this we needed to remove the pedal assembly.

ezpowersteering.nl). In North America, their EZ EPS is distributed by City Racer LLC at www.cityracerllc.com (who also has a slew of cool Land Cruiser items available from 40-series to 100-series).

Saginaw kits are usually around \$1300 for a fully complete kit, plus a ton of associated labor. That makes the \$1870 price from City Racer well in line with a Saginaw, especially

considering you are not dealing with welding, master cylinder install, and a pump and lines that can leak and fail. The EZ EPS has components from Koyo and NSK, both Japanese companies with a proven reputation for quality.

EZ INSTALLATION

The EZ EPS kit is designed for two sets of trucks: 1973-1980, and then 1981-1984 Land Cruisers. 12V and 24V, LHD/RHD options are all available. For these years, the supplied steering EPS column and integrated electric motor are literally a swap-and-drop item from your OEM column, plus the associated wiring. There is no welding. There is no plumbing. No bleeding. No searching filthy junkyard trucks for parts.

It's literally this simple: for the 1973-1984 trucks: remove your factory steering

column. The EZ EPS system keeps everything from the OEM manual steering box forward! You take your OEM steering lock/ignition key unit and fit it to the new EPS column. Feed the new column into the cabin and engine bay. Secure the end of the EPS steering flange to the OEM coupling. Mount the ECU and associated electronics in a safe location, put the column turn signal levers back on, get the steering wheel and associated small items on, test everything twice, and go enjoy your EZ Electric Power Steering!

The City Racer website has an excellent instruction page for the EZ Electric Power Steering on the EPS page. Check it out. But what about the many of us who have 1972 and older Land Cruisers?



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5. With the steering column brace removed, we trimmed it to fit snugly as not to weaken it. After multiple attempts we settled on this. Still holds strong the column and will allow for the EZ EPS to clear.



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6. For pre-1972 and earlier FJ40 installs, source a 4-hole firewall mount plate from a 1973-1980 FJ40 to use with the EZ EPS unit.



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7. With the modified steering column brace installed, we can install the EZ EPS column. This unit is a heavy-duty piece, and we are using larger than factory fasteners and Grade 8 hardware we got from our local Fastenall store.



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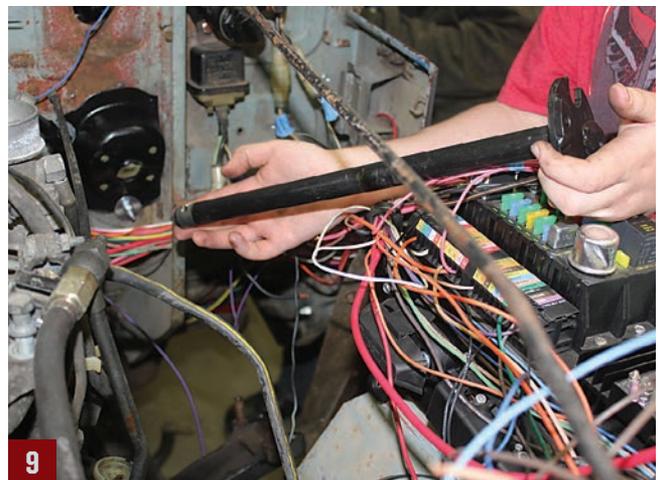
8. The firewall mount plate is normally on the inside of the firewall. We found placed ours on the outside for ease of assembly of the lower column. We used large fender washers to hold in place for fitment. Although this way avoids any welding, we will tack weld the plate in place to insure the strongest placement.

THE PRE-1973 INSTALL

That's where we stepped in. We know the 1973-1984 EZ EPS system is a very easy install. So easy in fact, it's a clear winner, labor-wise, over any Saginaw install. We decided to show you early FJ40 owners that putting the EPS system in your trucks is not that difficult either, although it is certainly a "custom" install with a few added parts needed.

What do we think? Having done it, we can understand why EZ EPS chose to build their units for 1973-1984. Their units for those model years are swap, plug, and play--it's that simple. Easy

to market and hardly any hard labor needed. But if you were thinking of doing the welding and plumbing of a Saginaw PS setup in a pre-'73, we are here to tell you that the EZ EPS is still massively less work, although there is cutting involved and additional parts to be sourced. The results are magical. The operation of the EZ EPS is whisper quiet and smooth as silk. They turn our 33" mud terrains with no effort, and without sapping engine power and fuel economy. Here is how to put the oh-so-sweet EZ Electric Power Steering into a pre-1973 FJ40.



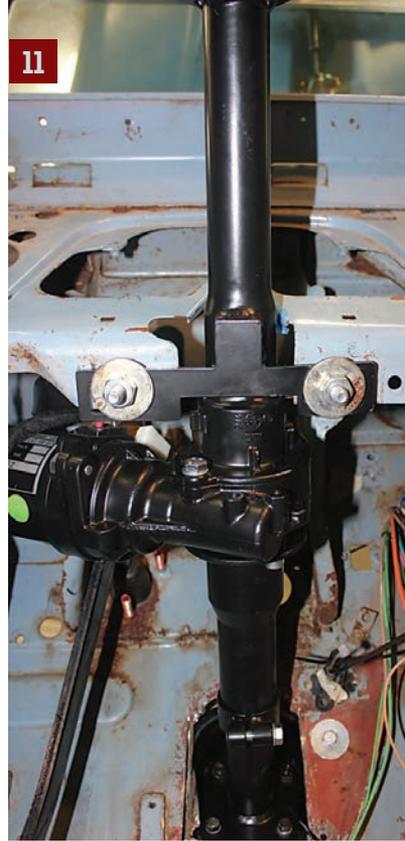
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9. The lower half of the column needs to be inserted through the firewall from the engine bay. It then splines onto the steering column motor.

FEATURE >>> ELECTRIC POWER STEERING



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10. The lower half of the steering column has a nice machined telescoping tube that is adjustable to cover the lower shaft and give it a nice finished look. The installer is holding the telescoping steering shaft cover and installing it over the shaft. Note the electric motor tucked up out of the way, under the dash near the installer's head.

11. And we are done with the EZ EPS steering column install through the firewall! This install was not as easy as the 1973-1994, as we needed to modify some pieces, but just look how clean an install this is.

12. The EZ EPS column meets up perfectly with the factory frame rail mounted steering box, needing only a rag joint to make the connection.



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LAND CRUISER 40 Series

Electric Power Steering

LHD
RHD
12V
24V

www.cityracerllc.com





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13. Locate a place to secure the ECU and do all associated wiring, and you're done! In essence, the install is basically the same with a 1972 and earlier FJ40 with the exception of having to modify your steering column brace and source a four-hole firewall mount bracket, doing associated cutting and trimming. Beyond that, it's all the same, and very easy. We truly think that for the money, it is an excellent power steering option. It can be done at home by any armchair mechanic with only minor trimming needed and absolutely no welding required, although you could tack weld the firewall mount bracket. In short, whether a 1969 or a 1979—or any in between—the EZ Electric Power Steering is an engineering marvel and highly recommended. Check out www.cityracerllc.com for more details. ✓

EZ ELECTRIC POWER STEERING FAQ

Q: What happens if power fails?

A: According to www.ezpowersteering.nl, the system reverts to the original manual steering it had previously. And unlike hydraulic systems, it won't be any harder to turn than the OEM system. Additionally the drop in assistance will be very gradual, usually after 1 or 2 seconds, avoiding a "jerk" in the steering wheel should this occur in a fast turn. If the electromotor should ever jam, there is a clutch unit which disables it from the steering column, insuring that the steering will always function freely.

Q: How does it affect fuel economy?

A: Next to none. Unlike a pump system with a parasitic drag belt, there is virtually zero effect on gas mileage. It uses the stock alternator and battery as well.

Q: Can the unit be adjusted?

A: Yes. You can adjust the level of assist with a potentiometer. The EZ EPS is silent, ECU controlled, and has load sensitive feedback for a quick response with no hesitation.

- Check the number of inside mounting plate holes on your truck. If it has 4 holes, you should always select the '73 to '80 as model year. If it has 3 holes, you should always select '81 to '84.



Vehicle specific roof light bar mounts

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