PART ONE STEERING BOX FRAME PLATES

Instructions for the Astrovan power steering conversion from ZuksOffRoad
This is a DIY kit that requires; welding, torching, drilling, sanding etc. This kit does not include a steering box, steering linkage, bolts, pump or pump bracket.

Step 1) Remove the stock Samurai steering box and cut off the driver side radiator frame mount and sand in front of the existing mounting plate. Save the OEM brace for the radiator.

Step 2) Cut the inner fender on the bottom front for clearance. Do not cut front body mount.

Step 3) Place and weld in the extension. Sand smooth on front surface.

Step 4) Sand the welds on the out side of driver frame on old steering box bushing (shown through hole) until the recessed cover comes off the frame.
Step 5) Place one of the sleeves in the upper hole of the plate and rest across frame to mark where to notch the top of the frame.

See Step 6. Once the notch is made come back to Step 5 and trace your two through the frame holes.

Step 6) Here I am showing two pictures of marking along the top sleeve so that the fold going over the top of the frame can be notched.

On the next page there is a picture showing the notch finished.
With this notch finished and looking like this you can now go back to Step 5) and mark your circles that go through the frame.

Step 7) Begin by torching through the frame, it is better to have bigger holes than needed than too small.

NOTE; Make sure the bottom sleeve stays inside the frame.

Step 8) By measuring and guessing cut the holes on the outside of the frame to match.
Step 9) Place all three sleeves on the steering box and put the inner frame plate on. Bolt tightly and make sure that there is space between the plate and the AV power steering box, try and get it as close as possible and then tack in place all three sleeves on the steering box side. Unbolt the box and trial fit your plate on the frame making any needed hole corrections for the next frame plate.

Step 10) Due to the variable of where you mount the first plate the second plate usually needs to be trimmed around the upper sleeve to run along the front driver body mount.

Trim as needed for it to fit around the three sleeves.

Step 11) Once both plates fit, weld up all along sleeves and edges of both plates. Weld the top sleeve to the top of the frame also.
Step 12) Place trim top plate on and bend as needed for it to touch the frame between the new plates.

Weld in place and using a hammer fold over the front lip as needed.

Sand edges smooth and apply paint.
Paint applied and box mounted.

Step 13) Remove Pitman arm nut and pitman arm. Note it is a tapered shaft so it only goes on one way. The larger portion of the taper hole faces down. Drill a 1” hole in the pitman arm tapered hole and weld in the new tapered bushing. (Only if using a small ball joint) If your after-market ball joint fits skip Step 13).

PART TWO STEERING LINKAGE

This picture shows a completed Samurai to Astro Van Steering Linkage along with the parts that were cut off to show how it is done. Drill the plastic pins out of the Samurai linkage then separate to cut. It is essential that the Astro Van linkage is fully EXTENDED when getting your “to fit length” see arrow!
After you have your steering linkage finished and you have verified it will collapse enough to remove from the firewall u-joint and then as an assembly come off the astrovan box, go ahead and paint.

Final Step) Take a good size washer, fold over and tack weld onto the astro van linkage using the rubber collar as a stop. This will prevent the Samurai u-joint of separating the inner shaft in the steering column and dropping down into the engine compartment.
PART THREE POWER STEERING PUMP

If using a 1.3 AC pulley then you will be using what is commonly referred to as a “P” Pump. urbanrockcrawler.com* has a great bracket reasonably priced. Unfortunately, at this time they do not have a serpentine pump bracket so you are on your own to fabricate a good adjustable bracket for 1.6 engines using a serpentine pulley. *urbanrockcrawler.com can be reached at 850-723-4417 FYI I usually end up cutting his bracket and making mods, so consider making it from scratch. His bracket is a good start though.

PART FOUR RADIATOR MOUNT

The next step is to replace the driver side radiator support. The first thing you need to do is remove the overflow bottle bracket by drilling out the two spot welds and peeling it off. If you bend it you can straighten it back to it’s original shape. The concept is to spin it around backwards and weld it to the center round frame support.

The end of the mounting arm has to be cut to fit the tube. Once located, weld in place and re-weld the overflow bottle bracket back onto the edge of the mounting arm. You should have ample clearance from the steering box to the lower radiator edge.

The warranty on this product is simple. For the original purchaser of the ZOR AVPS kit used under normal use I will replace or repair the damaged part* at no cost other than shipping charges to and from my location.

*Does not cover steering box, steering pump or hoses.

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