Oso: 2013 JKUR Billet Silver - Manual

There is a lot of discussion in various threads about how easy (or not) it is to install the bolt on coil overs. I'm going to digress and throw out my only-one-install-opinion on that topic.

First a little context about my experience at this: Um, essentially none. However, I'm doing this build with a friend (Chris) who has a whole lot of experience working on cars, although never a Jeep. You can see some of his work in the background of my photos on the build thread. He helped me 25 years ago when I installed a lift on a 1988 Toyota pickup, which was IFS and sprung rear; totally different.

The biggest thing going for me is tools. Chris has just about everything we needed, and what he didn't have we bought. It took me two months to do this whole build, but the scope of what I am doing is significantly more than the bolt-on kits. Chris and I are doing everything ourselves except 1) regearing and 2) the finish welding (we prepped and tack welded everything in-place). Here is a repeat list of all the things I am tackling at once:
Steering ram assist with new power steering pump
Cold air intake
EVO JK long arm upgrade (high clearance) – 8 arms with weld-on brackets
EVO bolt-on front / rear kits
Exhaust
Front driveshaft
Rear driveshaft
Front axle shafts
Front axle c-gussets
4.88 gears
Beadlocks and tires
New front bumper
Winch
Remove rear bumper
Rock sliders
Rock skins

The coil over installation is actually pretty simple and straightforward. The problem is, I am starting from a completely stock Jeep. If I already had aftermarket control arms installed, or just did the minimum and swapped a set of upper adjustable control arms in there, this whole thing would have taken a weekend. There is one thing I strongly recommend to anyone doing this install: Ask EVO to send you the instructions in pdf format. The photos in the printed copies you get with the kits are too dark to be of much help. The photos are much easier to see in the electronic pdf's.

EVO numbers the bolt bags, but there is no BOM for any of this; you have no idea what those numbers mean. Marking what bags came with which kits might help,

but you never know how EVO packaged things together in boxes. Mine was kind of random. This might not be a problem if you only purchased the coil over kits, but for me I was constantly trying to figure out what bolts went with what kits.

A note about supporting the Jeep while doing this: I was very lucky to have access to Chris's Lift. This EVO system has such massive droop that you need very tall jack stands to get the shocks to hang free. I have 6 ton jack stands. They are tall enough but barely. And to do anything you will have to take your wheels off first. That of course means eventually putting the wheels back on, which is always fun at 137 lbs each.

Rear Bolt-On Coil Over Kit

Removing the exhaust is not rocket science but it is physically difficult and just takes time. That alone probably takes an hour. Installing the upper strengthening brackets takes a bit of head scratching to get them up in there, but other than that no real issue. After loosening the body mounts, I had to use a pry bar with one hand while inserting the bracket up in there with the other. Lifting the body with a jack just started lifting the whole Jeep, even though the bolts were completely loose.

Here is a pic of the strengthening bracket in place on the passenger side. Taken looking "Northeast" from the back of the Jeep.

I did not install the rock stars, and instead opted for the high-clearance weld on kit. So I cannot comment on installing those and connecting the bottom of the coil overs, but it looks fairly straightforward in the instructions. You do have to cut some things to install the rear coil overs: The factory track bar mount on the axle and the bottom part of the lower control arm (for the rock stars).

Tricks and suggestions for the rear:
There is really not much to this but here are a few simple notes:
The instructions say to bend the passenger side exhaust hanger up and out of the way, but I had to bend both rear exhaust hangers out of the way (driver and passenger) to get the strengthening brackets up in between the body and the frame. If you are thinking about a Dynomax Competition exhaust that dumps under the rear doors, do it now!

Although not mentioned in the instructions, EVO sends along two aluminum blocks with some machine bolts. These are for remounting the factory sway bar back about about 1 inch. Doing so gives you plenty of clearance for the coil overs.

There is a lot of discussion in regards to the orientation of the top shock brackets that come installed from King. Either one or both are often installed backwards. Truth is it doesn't really matter now that EVO provides a way to move the sway bar back. Just make sure they are both oriented the same way and don't stress about it.[1]

<u>Front Bolt-On Coil Over Kit</u>
There is a small amount of metal cutting / grinding of the axle spring perch. We used a plasma cutter followed by grinding, but it is pretty thin material. A sawsall would probably work if you can negotiate it in there. Trimming the plastic for shock tower clearance takes time and patience but that's it. I had to cut into the battery compartment, but most people don't have to go that far.[2]

Flipping the drag link and installing the associated brackets is pretty simple. Note they changed the instructions for drilling out the knuckle. Used to be a 7/8" drill bit. Now they recommend a 13/16" and the machined collar is now smaller. I was working off an old set of instructions, so I used a 7/8. There ended up being too much slop so I had to make a new collar that matched their new drawing. Not a big deal but time consuming. Just make sure you have new install instructions!

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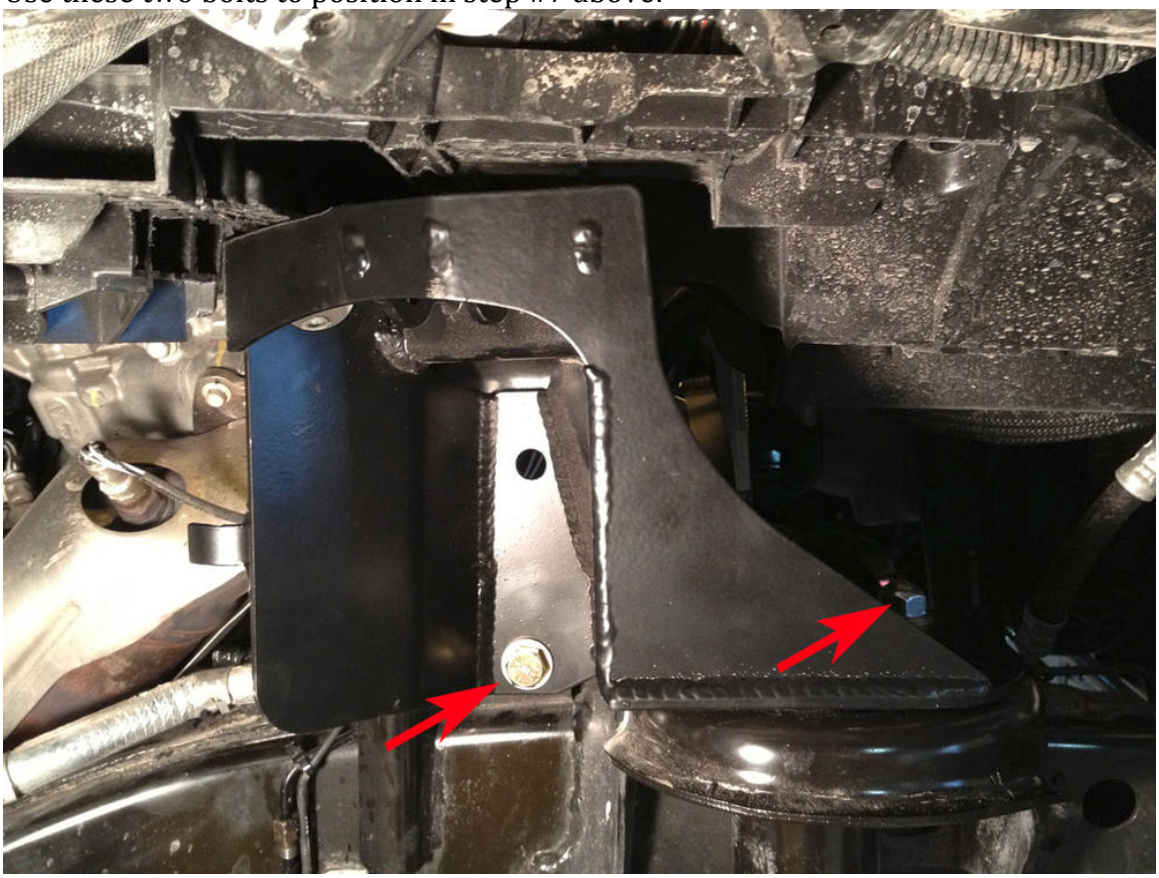
[1] From a phone call with Andrew at EVO Mfg.
[2] I still wonder about this. I was anal about ensuring the bolt-on shock tower lined up precisely as it should. In order to do that I had to cut up higher than others claim necessary. Who knows…
I still wonder about this. I was anal about ensuring the bolt-on shock tower lined up precisely as it should. In order to do that I had to cut up higher than others claim necessary. Who knows…

Tricks and suggestions for the front:
I would mount and drill the shock towers using the following sequence to simplify alignment:

1. Temporarily mount the CO bracket using the 1/2" bolt (no nut)
2. Swing the CO bracket around and do the necessary plastic cutting above for clearance
3. Cut enough plastic ribs away to get the bracket swung into position and lined up with the two upper holes in the stock shock mount
4. Add the bottom plate around the bump stop
5. Add the nut to the existing 1/2" bolt above the bump stop and begin tightening
6. Add a 1/2" nut and bolt to the lower hole in the stock shock mount
7. Using these two bolts as a positioning guide, tighten them up (see pic below). At the same time position the bottom ring centered around the bump stop
8. Now drill one of the two 7/16" holes. You can check your alignment using the butt end of two drill bits; one above in the CO mount and one from below in the bottom ring
9. Install the bolt for the new hole (this eliminates the possibility of accidentally twisting the bottom ring while drilling the second hole)
10. Drill the second hole and install the bolt

Use these two bolts to position in step #7 above:



EVO provides spacers that slide onto the ½" bolt for mounting the shocks. So does King. Use EVO's everywhere except the top of the front shocks. They get the King spacers, which are smaller. Getting the top mounted is tricky. The parts are small and there is not a lot of room to maneuver. We did this:

1. Center the eye of the top shock
2. Superglue the King spacers to the eye of the upper shock
3. Fit that glued assembly up into the new shock tower
4. Slide the mounting bolt in from the back

Moving to the bottom shock mounts, keep the (3) bolts loose that mount the new lower shock mount bracket. Tighten them after you get the bottom of the shock mounted. It just makes it easier to get the bottom of the shock in there with the spacers.

The front can be a real bear to get back together. I connected the trackbar last. Regardless, your last connection, be it control arms, shocks or trackbar will make you sweat. Again, the lift was a real help here. We actually supported the axle housing from some really tall jack stands, like these below. You can raise or lower them just by spinning the handles. Very handy:

Once you get it all together you will probably freak out (like I did) that the lift is much higher than you expected. But it will settle a bit and you will add heavy stuff like winches, bumpers, tire carriers, etc. that will lower the Jeep. However, I do have a problem with lift height. I have the king bump stops both front and rear. These are considerably longer than the stock bumps. The bumps sit right on the bump stop extension, which I don't like. Makes the ride real rough and bouncy in the back.

So I lifted the back about 1.5" to get the stops up off the extension about 1 inch. The Jeep isn't level like this; it is up in the back. I don't want that much lift, so I do not want to raise the front to compensate. I am debating whether to cut down the bump stop extensions, or just live with it. I have to do some trigonometry to see how much I can cut down the bump stop extension without bottoming out the shocks.