



Jimny Kingpin Repair Guide



by x8rltd

The problem

The first generation Suzuki Jimny have a 4 wheel drive suspension set-up using kingpins and a swivel joint system, although a fairly good set-up they are prone to oil leaks and the kingpins and bearings fail when excessively used off-road. Not only are these faults MOT failures, they are also dangerous if driven when the faults become excessive- known as the "death wobble".

Symptoms of the fault

Steering "shimmy" AKA "death wobble" the steering wheel shaking usually around 35-45mph (60-80mk/h), can be anything from a slight shake to a violent steering wheel shake. Oil/grease leaking from the swivel joints. Vertical play in front wheels when hovering above ground.

Vehicles affected

Suzuki Jimny 1998-2018 (JB23/JB33/JB43/JB53)

Associated part numbers:

Kingpins – 45610-63002

Bearings – 09265-15006

Swivel seal – 45120-81A04

Oil seal – 09283-26016

Our solution

We have made a kit that comprises of all the components you need to refurbish one side of your front axel (for both sides, purchase two kits). These kits are few & far between, with some kits comprising of unnecessary parts.

The X8R kit contains unique items such as the bungs to pop over the vacuum lines to prevent any dust or corrosion from entering the system, in addition to the most highly recommended high-temperature and highly resistant CV grease from Maxima Racing Oils. This grease combined with the brand new seals limits the possibility of water ingress into the bearings and swivel hub.

You will receive

1 x Swivel Seal

8 x Swivel Seal Bolts

2 x Kingpin Bearings

8 x Kingpin Bolts

2 x Kingpins

1 x Driveshaft Oil Seal

- 1 x Circlip for the Driveshaft
- 2 x Vacuum Line Bung
- 2 X Vacuum Hose Plugs
- 1 x 454g Maxima Waterproof Grease



Step 1: Remove the Wheel

For this repair you will need to work on one corner at a time. Also apply penetrating fluid (such as WD40) to all rusted nuts and bolts, and place the races in the fridge or freezer, this will help them contract so it is easier to fit them (trust us!).

We found it easiest to spray warm water on the back of the swivel knuckle (where the swivel seal is) and use a wire brush to get rid of any excess dirt, mud and corrosion. Our Jimny had clearly been off-roading and the mud was preventing access to the bolts.

Firstly loosen the small bolts on the central wheel nut with an e10 star hex bolt. Jack up the vehicle on the corner you are working on, undo the wheel nuts and remove the wheel.





Step 2: Remove the Brake Pads and Caliper

Undo the 12mm slider bolts from the caliper carrier and pull them out. Also undo the 17mm bolts on the back of the caliper. Remove the brake caliper and the brake pads, along with the caliper carrier.



Step 3: Remove the Free Wheeling Hub

Completely remove the bolts that were loosened during step one (the star hex bolts), and remove the free wheeling hub. Should you have an ABS sensor on your vehicle (not all do), remove the ABS sensor from the back of the knuckle with an 11mm socket.



Step 4: Remove Driveshaft Components and Brake Disc

Remove the circlip from the end of the driveshaft using a set of external circlips pliers. Also remove the vacuum plate, which should slide out by hand.

Remove the brake disc, if it is stuck in place you can push the M8 bolts provided in the kit in the two locating holes in the disc, this should release the disc.



Step 5: Remove the Vacuum Hoses

Mark the vacuum hoses with a piece of coloured tape so you know which one goes on which outlet and remove them. Place the bungs over the top of the vacuum lines, and place the plugs into the hoses. This stops any loose dirt or rust entering the outlets.

Using a wire brush, brush away any surface rust on the swivel hub.



Step 6: Remove the Kingpins

Use a 17mm socket to undo the bolt on the steering arms. If you find it is constantly turning, you can jack it up at the base of the steering arm.

Using a 12mm socket, remove all 4 bolts on the kingpins and lift them out. You may find that they have been sealed in with silicone, so you might have to scrape this away first to lift them out. If they are difficult to remove, using a large, flat head screwdriver and a hammer to "chisel" them out of place.



Step 7: Remove the Swivel Knuckle

Remove the old swivel hub gasket by removing the bolts on the back of the swivel ball, they will come off with a 12mm socket. If they are rusted, apply heat to loosen the bolts.

The swivel knuckle will now be completely loose, pull it off. If you require, mark the top of the hub with a marker to ensure it goes back on the right way up.

Pull out the driveshaft and clean it of any old CV grease and oil.

Clean up the inside of the swivel hub and knuckle of any old CV grease, there might be a fair amount. The old bearings had shattered and disintergrated within our hub, so we had to be careful to remove every piece of the old bearings so it didn't contaminate the new grease and cause further damage.







Step 8: Hammer Out the Old Races

Once you remove the old bearings (had they not disintegrated like ours), the races will remain in place within the swivel hub. The best way to remove them is by taking a one inch socket, short extension and a hammer. Place the socket on the internals of the race and use the hammer on the end of the extension. The races will eventually come out.





Step 9: Fit the New Races

Loosely place the new races within the swivel hub, ensure they are the right orientation with the lip facing the driveshaft. They should fit in easily if been chilled as this contracts the metal and they will expand in place as they get warmer. If you are still struggling, you can heat the swivel hub with a blow torch.

Take a piece of wood and place it on top of the race, this will protect it from damage, and hammer it into place. The races should be around half in place.



Step 10: Fit the New Swivel Seal

Ensure that the swivel knuckle (where the bolts secure into) is completely flat and surface corrosion has not warped the texture, if it has then rub it down with a wire brush. If that is not enough it may need grinding down.

The new swivel seal comes in three components, ensure these are fitting in the correct order and orientation.

Firstly fit the largest metal seal with the holes, then the rubber gasket, then the smallest metal gasket with the recess pointing inwards.

All of the splits in the metal gaskets should point upwards.



Step 11: Refit the Driveshaft

Put the driveshaft back into the hub, lining up the internal splines.

Use the Maxima grease to heavily coat the driveshaft and internals of the swivel hub. Do the same with the new bearings. The grease is very sticky and does not have the same consistency as normal CV grease, however because it is so sticky it will adhere itself to the metal components very well, and make it excellent to repel water (fantastic use for the off-roading capabilities of the Jimny). It is also an NLGI #2 grease which is the same compound as CV grease, making it resistant to extreme low & high temperatures.





Step 12: Fit the New Bearings

Once the new bearings are liberally covered in the Maxima grease, fit the top bearing into the top race.

The swivel knuckle needs refitting, however only fit the bottom bearing once you are sure you are ready (and fast enough!) to refit the knuckle otherwise it will fall out. It is helpful to have a friend helping you at this stage, one person to

hold in the bottom bearing whilst the other fits the swivel knuckle in place. The knuckle will need to align with the splines on the end of the CV joint, and fit over the steering arm ball joints and over the new bearings & races. If it doesn't fit, the races may not be hammered in all the way.

Reinstall the nuts over the steering arms/ball joints.



Step 13: Fit the Kingpins and Bolt Up the New Swivel Seal

Lightly coat the pin of the kingpin in the Maxima grease.

Place the top kingpin into the top hole & into the bearing, we found it easiest to loosely place it in the hole then gently hammer it in halfway with a rubber mallet. Once it is halfway fitted, place a few beads of silicone sealant around the base of the kingpin. Continue hammering it in place with the mallet until it is all the way in. Do the same with the bottom kingpin.

Fit the new bolts with a 12mm socket, and torque them up to 18 ft/lb. Wipe away any excess silicone sealant.

Bolt the new swivel seal in place with the new swivel seal bolts and torque them to 10nm.



Step 14: Refit ABS Sensor and the Vacuum Hoses

Remove the bungs and plugs on the vacuum lines and hoses.

Refit the ABS sensor (should your vehicle have one) and the vacuum hoses, remember that they were colour coded depending on location.

Refit the old vacuum plate, and fit the new circlip.

Top tip- if your driveshaft had pushed in slightly whilst fitting the new circlip, lightly screw one of the 12mm bolts from the kingpin into the end of the driveshaft and use this for leverage to pull it back into position.



Step 15: Fit the Brake Disc

Pop the brake disc back over the hub.

Reattach the freewheeling hub and loosely screw in the hex bolts.



Step 16: Refit the Caliper, Carrier and Brake Pads

Put the caliper carrier over the top of the brake disc and install the slide pins, torque them to 61ft/lb.

Refit the brake pads (ours were very rusty on the backing plate so we brushed them with a wire brush. They still had a lot of pad on though).

Put the caliper back over the top of the pads and the carrier until flush and reinstall the bolts. Torque to 16 ft/lb. If you are changing the pads for new ones, remember to use a piston wind-back tool.



Step 17: Refit the Wheel

Finally, put the wheel back on and install the wheel bolts.

Tighten the star hex bolts on the freewheeling hub.

