



Basic Installation Procedure for IFS Equipped Jeeps. (XH, WH, KJ & KK)

(Written by Murchison Products 2010)

1. Measure the **center of wheel to guard measurement** at all 4 corners on a flat level surface – record data for later comparison. (Having a minimum of ½ a tank of fuel is recommended)
2. Put vehicle up on a hoist, remove all 4 wheels/tyres and set aside. (this is a good opportunity to rotate tyres front to rear when re fitting to vehicle after lift)
3. Start with the easiest end, the rear.
4. Support rear diff in the middle via a gearbox stand/hoist to support the weight of the rear axle.
5. Unbolt rear shocks and remove.
6. Remove coils one at a time and install new coils, making sure you put the driver's side coil and passenger sides coils in their respective sides (marked appropriately LH & RH) (the left hand upper control arm to diff mount bolt may need to be removed on WH & XH models to free up droop for inserting LH Side coil, be sure to redo this arm and bolt up!!)
7. Hand Prime the rear shocks in a vertical position at least 3 times prior to install. Do not let shocks lay flat again after this, lean them up vertical somewhere close by. This ensures the oil and gas is separated prior to installing. Install new shocks, hand screw in bolts, **DO NOT TIGHTEN YET.**
8. Head to the front of the vehicle – using impact gun undo **clevis strut bolt, clevis to lower control arm bolt** and **sway bar bolt to lower control arm** (remove them)
9. **HARD PART** – remove whatever is necessary in the engine bay to get clear access to the 4 strut top bolts and undo all but 1 nut finger tight. This may involve removing battery, power steering pump reservoir, airbox, cowling panels ect. Use your best judgment to determine the minimum required to get to the 4 nuts. Different tools give you different abilities in the workshop for jobs like this. Also something to be mindful of is the presence of any aftermarket wiring looms for UHF, Spotlights ect. Make sure you don't tear or stretch any of these wires.
10. Repeat on other side of vehicle. Be sure not to crack any plastics ect as this can cause rattle issues down the track.
11. Hit Ball Joint / A Arm with the copper headed hammer to 'crack taper' of ball joint. Everything will clunk and drop all of a sudden – The 1 remaining top nut will ensure the strut doesn't fall out completely.

12. Place Original Strut in a Floor or Wall Mounted Hydraulic Spring Compressor. Clamp coil just under the bearing cap and take the strain with the lever ensuring everything is clamped safely.
13. Using a rattle gun undo the top nut making sure that your head is not directly over the strut as it can take your head off if it comes lose !!! You will feel and see it pop off.
14. Undo pressure on hydraulics to slowly release assembly.
15. Disassemble components and retain all strut tops and rubber isolators.
16. Remove OE strut and place new strut in spring compressor and tighten. Using a set of pliers, turn the top flat section of the shock shaft anti clockwise – this lets the shock shaft extend out to its maximum.
17. Place bottom rubber isolator over new strut, place over new coil with the end of the coil positioned in the same position as the old one that came off (you'll see the marks in the rubber).
18. Clamp new coil again with compressor arms – wind down till the new shock shaft is above the top surface of the coil.
19. Place bearing cap over the top and locate as per original (you may need some silicone spray to lube everything up to pop into place).
20. Tighten up top nut using NEW NUT supplied with struts using a rattle gun. This is the crucial part. Ensure the nut goes all the way down till it bottoms out. It is good practice to use some “thread locker” here. You need to watch the chrome shaft in relation the nut spinning. You CANNOT clamp the chrome shaft with multigrips or anything like that as that will severely damage the shaft, wear out the top seal and leak oil like a shipwrecked tanker..... Do the last bit by hand with spanners. There is a little flat section on the very top of the shaft which you can grip so that last part doesn't turn whilst doing it up. You'll always feel the nut bottom out. It takes time and patients to perform this part without breaking the flat tab.
21. Repeat for other front strut.
22. Re install struts in the reverse way they came out.
23. Don't do up any bolts or nuts super tight until the vehicle is ready to be put back on the ground, which includes wheels/tyres. Bounce the car up and down a few times to get everything to settle in their new locations.
24. Do up every nut and bolt that was touched and use a white tip or yellow tipex pen to put a stripe / cross over every nut or bolt that was touched just to make sure.
25. After you've got everything back together and checked for tightness, take the vehicle for a 10 min drive – try and find some kerbs and gutters to go over or some bumpy roads to give it (literally) a shake down. This will “Settle” the vehicle's new suspension around 90%. The last 10% occurs over time.
26. **After the road test, get the car straight onto the wheel alignment ramp and align.** DO NOT let the vehicle be given back to the customer without a proper wheel alignment, that is poor practise.

27. Road test vehicle for noises or any pulling to one side.

NOTES:

IFS Jeep's come up very nice and track straight when in good condition (ie: no bent control arms or worn clevis bushes) . It is always recommended to rotate the tyres front to back with the customers' consent.

As always, be careful with ABS lines and brake lines when pulling out struts ect and make sure when re-installing that you get the twist of the lines right.

Always inform the customer if you see something that isn't right with the vehicle, ie: broken plastics, bent lines or anything that doesn't seem in good condition. It is always good practise to bring this to the customers' attention.

Tyre pressures for Jeeps should be around the mid 30psi mark. Somewhere between 32-36psi max depending on tyre type. I have seen numerous times, vehicles with 45psi or more come in and on a road test after the suspension they think the suspension is firmer. Take the tyres down to the normal mid 30's and be amazed at the difference!!

Best Regards and good luck,

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