

Installation Tips: Macpherson Struts & Cartridges

REMOVAL/DISASSEMBLY

To remove the existing Macpherson strut, **follow the procedure outlined in the manufacturer's repair manual.** In general, this can be summarised in the following steps:

1. Position the vehicle on the lift.



2. Before lifting the vehicle, loosen (but do not remove) bolts securing the wheel



3. Open the hood and lift the vehicle.



4. Remove the wheel.







5. If necessary, loosen the ball joints from tie rod ends and stabiliser links. Also loosen the bolts holding the strut to the steering knuckle and any other steering link.



6. Locate the strut top mounting. Loosen and remove the bolts securing the top mounting kit to the strut tower. Be careful; removing these bolts can allow the strut assembly to fall.



7. **Carefully extract the strut assembly** from the vehicle. In some vehicle models, it will be necessary to compress the spring prior to extracting the strut assembly.



8. Compress the spring using a spring compressor. Be certain the strut and spring compressor are secure and pointed away from you. Always follow the instructions provided by the spring compressor manufacturer.







9. Once the spring is compressed and secured, use the correct tooling (hollow spanner, ratchet and socket combination) to remove the nut on top of the strut rod.



10. Remove the old top mounting kit (strut bearing and rubber bushing), spring and protection kit (compression bumper and dust shield).



11. **Remove the ring that retains the strut cartridge** and all internal components (centering bushing, etc.) within the body of the strut.





ASSEMBLY



1. Prime the strut cartridge by compressing and extending it in its working position. Repeat this process 5 times.



2. **Pour a small amount** (approximately 50 cc) **of oil into the strut tube.** This will help prevent heat-related deterioration of the unit, reduce noise and promote long service life.



3. Place the new cartridge inside the strut housing.

4. Install the new retaining ring supplied with the new cartridge and tighten it to the manufacturer-specified torque. Make sure the unit is secure within the housing.

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STRUT FITMENT



1. Install the spring in its correct position on the strut's spring seat



2. Place the new protection kit (compression bumper and dust shield) over the strut rod.

3. Install the new top mounting kit over the strut rod and spring and tighten the strut rod nut to the manufacturer-specified torque.



4. Attach the completed strut assembly onto the steering knuckle. Leave the bolts only finger-tight, allowing the assembly to move freely.







5. Place the strut assembly back into the strut tower and finger-tighten the top mounting kit bolts to temporarily fix the assembly to the chassis

6. **Tighten all bolts attaching the strut to the corresponding steering and suspension elements** (stabiliser link, tie rods, steering knuckle, etc.), then torque to manufacturer specifications.



7. Mount the wheel and torque the bolts to manufacturer specifications

8. Torque the strut top mounting kit bolts to manufacturer specifications.



9. Perform a final check of all components.







10. Align wheels.



11. Test drive the vehicle prior to delivery to the customer.

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