

## What will I need to... Replace the Worn Shocks

- Quality replacement shocks
- A secure work bench with an attached vice
- A vehicle jack - A wheel spanner
- 2 x Trestles - Coil spring clamps
- A half inch drive socket set
- A ring flat spanner set - Shock fluid
- Hand cleaner - Mutton cloth

# Hints & Tips

## REPLACING WORN SHOCKS



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## REPLACING WORN SHOCKS



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# Replacing Worn Shocks



Exclusive Brands only available at AutoZone

Worn or damaged shock absorbers will drastically reduce braking operation and efficiency, and will result in premature tyre wear. Unsafe shock absorbers also negatively affect road holding, stability control and make the vehicle very difficult to control around corners.

To test a vehicle's shock absorbers, use the Bounce Test: Apply a downwards force to one corner of the vehicle and "bounce" the vehicle three times. Release the vehicle at the bottom of a "bounce" and allow the vehicle to recover to its original position. This should happen instantly. If the vehicle continues to "bounce" then the shock absorber on that corner needs to be replaced.

Please note: It is vitally important that both the left and right shock absorbers on one axle are replaced at the same time.

There are two main types of shock absorbers available. They are (a) gas pressurised shock absorbers and (b) normal type shock absorbers, which use oil.

Important: Always use the specified tools and equipment when replacing shock absorbers.

## TELESCOPIC SHOCK ABSORBERS

- STEP 1:** Loosen the wheel securing nuts. Jack up the front or back of the vehicle and use trestles to support the vehicle. Ensure the handbrake is applied to prevent the vehicle from moving forwards or backwards while supported by the safety trestles. Remove the wheels from the vehicle.
- STEP 2:** Remove the top and bottom bolts securing the shock mounting. Remove the shock absorber from the vehicle.
- STEP 3:** For adjustable shock absorbers, select the desired setting on the shock. It is advised that the setting is done on both shocks before installation to ensure that they are on the same setting.
- STEP 4:** Secure the new shock in the relevant top and bottom mounting positions and tighten or torque the bolts according to the manufacturer's specifications. Do not over tighten the bolt, as this will damage the shock mounting rubbers.
- STEP 5:** Refit the wheel of the vehicle. Remove the trestle and lower the vehicle to the ground.

## MACPHERSON STRUTS AND CARTIDGES

- STEP 1:** Loosen the wheel securing nuts. Jack up the front or back of the vehicle and use trestles to support the vehicle. Ensure the handbrake is applied to prevent the vehicle from moving forwards or backwards while supported by the safety trestles. Remove the wheels from the vehicle.
- STEP 2:** Use the correct size socket and power bar to remove the top nut on the piston rod of the relevant shock absorber one full turn (360 degrees).

- STEP 3:** Remove the top mounting bolts that secure the strut assembly to the body of the vehicle. Unbolt and remove the shock absorber from the lower locating surface.
- STEP 4:** Disconnect the hydraulic brake hoses, ABS cables and all other applicable systems.
- STEP 5:** Remove the complete strut assembly and place it in a vice.
- STEP 6:** Using the required spring compressor clamps, compress the coil spring equally until the shock mounting and retaining plate rotates freely.
- STEP 7:** Remove the strut rod retaining nut, top mounting spring retaining plate and spring. **WARNING:** Removing the retaining nut is dangerous if the coil spring is not compressed sufficiently. The coil spring will cause damage if it is dislodged while still under pressure.
- STEP 8:** For a sealed unit, remove the strut and move to STEP 13. If the strut is not sealed and is serviceable, then follow STEP 9 to STEP 13.
- STEP 9:** Unscrew the shock locating nut and remove the internal cartridge. Ensure that the shock absorber oil is drained into a suitable container.
- STEP 10:** Clean the inside of the shock housing thoroughly, removing all the dirt deposits and contamination.
- STEP 11:** Add +/- 10ml of shock fluid into the strut housing. Insert the new shock cartridge and use a rotating movement until it reaches the bottom of the strut housing. Ensure that the threads on the retainer are free of any debris and dirt. Secure the shock absorber into position with the screw retainer.
- STEP 12:** Re-assemble the coil spring, retainer plate and mounting assembly and nut into the new / rebuilt strut.
- STEP 13:** Tighten the nyloc nut according to the required specification and carefully release and remove the spring clamps.
- STEP 14:** Remove the assembled strut assembly from the vice. In order to refit the strut, position the lower control arm downwards and install the strut into the relevant position. Re-install all the relevant components in reverse order of removal.
- STEP 15:** Verify the correct torque specification and condition of all the relevant components prior to replacing the wheel. Refit the wheel of the vehicle.
- STEP 16:** Repeat the above procedure on the opposite wheel. Remove the trestles and lower the vehicle onto the ground.