



11 Rear suspension shock absorber - removal, overhaul and installation

Note:

Always replace the shock absorbers in pairs.

Removal

1 Check the front wheels, then jack up the rear of the vehicle and support it on axle stands. To improve access, remove the rear wheel.

2 If you're working on a 3-Series model, remove the rear speaker (see [Chapter 12](#)). Release the rear light access cover fastener by rotating it 90-degrees and removing the cover. Pry out the retaining clips securing the luggage compartment side trim cover in position, and remove the trim and insulation panel to gain access to the shock absorber upper mount (see illustrations) .

11.2a To gain access to the rear shock absorber upper mounting, remove the luggage compartment side trim panel . . .



11.2b . . . and lift out the insulation panel (3-Series models)



3 If you're working on a Z3 model, lower the convertible top (but don't lock it down), then pull out the clips retaining the carpet behind the front seats. Peel the carpet back for access to the shock absorber upper mount.

4 Position a jack underneath the rear of the trailing arm and raise the jack so that it is supporting the weight of the arm and the force of the coil spring. **Warning:** *The jack must remain in this position throughout the entire procedure.* Remove the bolt securing the shock absorber to the trailing arm (see illustrations) .

11.4a Remove the shock absorber lower mounting bolt (3-Series models)



11.4b Shock absorber mounting bolt (arrow) (Z3 models)



5 Unscrew the upper mounting nuts (see illustrations) . Lower the shock absorber out from underneath the vehicle, and recover the gasket which is installed between the upper mount and the body.

11.5a Upper mounting nuts (arrows) (3-Series models)



11.5b Upper mounting nuts (arrows) (Z3 models)



Overhaul

Note:

A new piston nut will be required.

6 Remove the trim cap from the top of the shock absorber, then remove all traces of dirt. Loosen and remove the piston nut and dished washer, noting which way it is installed.

7 Lift off the upper mounting plate and remove the dust cover.

8 Slide the spacer and rubber stop off the shock absorber piston.

9 Examine the shock absorber for signs of fluid leakage. Check the piston for signs of pitting along its entire length, and check the body for signs of damage. While holding it in an upright position, test the operation of the shock absorber by moving the piston through a full stroke, and then through short strokes of two to four inches.

In both cases, the resistance felt should be smooth and continuous. If the resistance is jerky, or uneven, or if there is any visible sign of wear or damage, replacement is necessary.

10 Inspect all other components for signs of damage or deterioration, replacing any that are suspect.

11 Slide the rubber stop and spacer onto the strut piston, then install the dust cover.

12 Install the upper mounting plate and dished washer, and screw on the new piston nut and tighten it securely. Install the trim cap.

Installation

Note:

New shock absorber upper mounting nuts and a new mounting gasket will be required on installation.

13 Ensure the upper mounting plate and body contact surfaces are clean and dry, and install a new gasket to the upper mounting plate.

14 Maneuver the shock absorber into position, and install the new upper mounting nuts.

15 Ensure the lower end of the shock absorber is positioned with the mounting bushing spacer thrustwasher facing towards the bolt. Screw in the lower mounting bolt, tightening it by hand only at this stage.

16 Tighten the upper mounting nuts to the specified torque then install all components removed previously for access.

17 Install the wheel and lower the vehicle to the ground. With the vehicle resting on its wheels, tighten the shock absorber lower mounting bolt and wheel bolts to the specified torque.