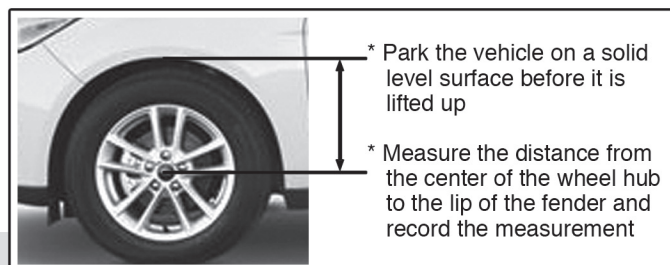


SAFETY FIRST

WARNING: SERIOUS INJURY AND/OR FATALITY CAN OCCUR FROM REMOVAL OF THE ROD NUT. (2) UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT THIS. DURING INSTALLATION, THE COIL SPRING IS UNDER HIGH PRESSURE. FAILURE TO PROPERLY RESTRAIN THIS FORCE WHEN REMOVING THE STRUT FROM ITS HOUSING CAN RESULT IN INJURY.

- * **IMPORTANT:** Read this installation instruction sheet before attempting to remove the existing strut from the vehicle.
- * Do not grasp the piston rod (polished metal part of the strut) with any type of tool. Any minor imperfection of the piston rod will result in seal failure and the part losing the oil and gas charge.
- * Do not, under any circumstances, heat or open this gas pressured strut.
- * Do not rely on the jack alone; always use jack stands to prevent injury.
- * Discard the old strut assembly in a safe manner. Do not tamper with the piston rod nut.
- * Keep children away from the vehicle and parts.
- * The vehicle will appear higher when the new SPEEDY STRUTS[®] are installed. This will adjust over time when the springs settle in to their final resting height.

For more complete instructions, please consult a professional repair manual.



TO BEGIN REMOVAL

1. After locating the upper mounting nuts of the bearing plate, **(1)** loosen, but do not completely remove them. Mark one of the mounting studs as a reference point, locate the same stud on the strut and mark as well. This allows for proper orientation during installation. **(see Figure A) CAUTION: DO NOT LOOSEN THE CENTER STRUT MOUNT NUT! (2)**
2. Lift the vehicle, making sure the vehicle frame is properly and safely supported.
3. Remove the wheels for the struts you will be installing.

BEFORE CONTINUING THE INSTALLATION, MAKE SURE THE VEHICLE IS SECURELY SUPPORTED TO INSURE YOUR SAFETY & AVOID DAMAGE TO THE VEHICLE

4. Remove all items attached to the strut, including brake hoses, stabilizers, and anti-lock braking system (ABS) connections.
5. It is strongly recommended you use a protector to minimize damage to the drive shaft if anything goes wrong.
6. Remove the holding nut from the outer tie rod end. **(8)**

Retain any hardware for potential re-use unless they are beyond repair, in this case use the correct fasteners when re-installing.

VARIOUS STRUT CONFIGURATIONS

Single Bolted Strut

For a single lower bolt style nut, unfasten and retain the pinch bolt and nut **(3)** for later use.

Begin by using a large flat head screwdriver to separate the spindle-to-strut pinch-points. **(4)**

Force the spindle **(5)** off of the strut assembly with a rubber mallet. **(see Figure B & C)**

Double Bolted Strut

Unfasten the lower mounting nuts. **(6)** Slide the bolts past their connecting components. **(7)** Retain the removed hardware, if possible.

Loosen the old strut from the steering knuckle connector. **(see Figure D)**

Now remove the loosened upper mounting nuts, **(1)** new nuts are included with the newly acquired complete strut unit. **(see Figure A)**

Remove the old strut assembly from the wheel well. **(see Figure E, F & G, page 2)**

FIGURE A



FIGURE B

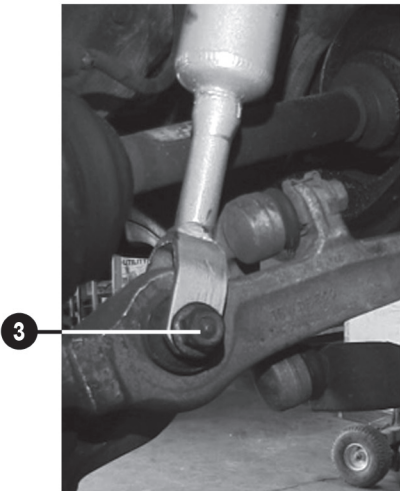


FIGURE C

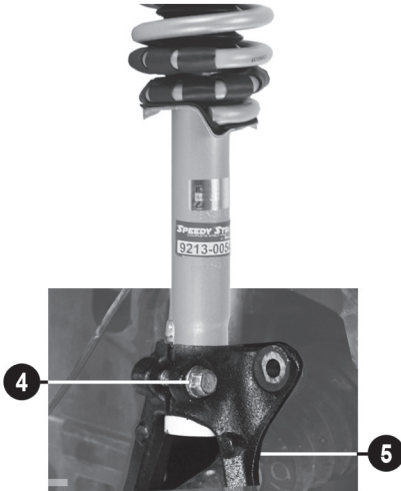
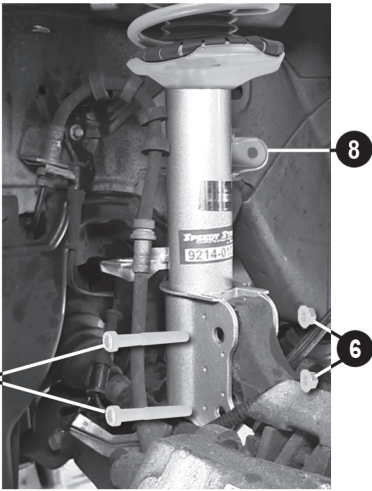


FIGURE D



Step 2: NEW STRUT INSTALLATION

Realign the new strut assembly in the strut tower housing and hand-tighten the mounting nuts. **(1)** (see **Figure A**) Some rotation of the upper bearing plate may be required. Some units are fixed and non-rotational. To line up the bottom of the strut, carefully examine upper and lower ball joints, tie rod assemblies and outer tie rod ends to see if replacement is necessary. All of these items will cause rattles and squeaks if worn out.

VARIOUS STRUT CONFIGURATIONS

Single Bolted Strut

Loosely install the pinch bolt. **(3)** (see **Figure B**) Lift the vehicle using a jack until the wheel is above contact with the floor. Securely fasten the pinch bolt. Torque values can be found in specific *vehicle repair manuals*.

Line up the strut to the spindle pinch joint. Now in reverse, separate the pinch joint with the screwdriver and use the rubber mallet to tap the spindle assembly into the strut. (see **Figure C**) Properly torque the nut **(4)** to the values found in the *vehicle repair manual*.

Double Bolted Strut

Connect the lower mounting nuts **(6)** and bolts **(7)** onto one another. If there is a cam bolt, make sure it is installed in the correct hole. Properly torque the nuts down to the values in the *vehicle repair manual*.

GENERAL INSTALLATION GUIDE

Inspect the sway bar bushings, ball joints and tie rod ends to see if replacement is needed.

Connect the tie rod end to the strut. (see **Figure D**) Properly torque the nut **(8)** down to the values found in the *vehicle repair manual*.

If so equipped, place stabilizer link with strut, then properly torque the nut down to the values found in the *vehicle repair manual*.

Install all items to the strut that were removed in the removal process. **(3)** These may include (but not limited to) brake hoses, stabilizers and ABS connections. Torque bolts to specifications found in *vehicle repair manual*.

If used, remove retainer and protector from drive shaft.

Refer to the *vehicle repair manual* to determine the intervals within which to tighten the bearing plates and upper mounting nuts. Torque values are also found here.

Replace the wheels and torque the lug nuts.

GENERAL TORQUE SPECIFICATIONS	Nm	Ft Lbs
STRUT MOUNT TO BODY NUTS	39	29
STEERING KNUCKLE BOLTS	160	125

WARNING!

IT IS VERY IMPORTANT TO NOT OVER TIGHTEN ANY OF THE NUTS OR BOLTS ON YOUR VEHICLE. EXCESSIVE TORQUE WILL CAUSE DAMAGE TO THREADS OR THE BOLT OR NUT ITSELF. EACH BOLT OR NUT MUST BE TORQUED TO EXACT MANUFACTURER'S SPECIFICATIONS IN ORDER TO MAINTAIN A PROPERLY WORKING VEHICLE AND AVOID VOIDING THE WARRANTY.

OBSERVATIONS

- * Your new SPEEDY STRUT® complete strut assembly has been carefully engineered to the OEM assembly that was originally installed on the vehicle. The new strut assembly may raise the vehicle up to 1 inch; allow 1,000 miles or at least 4 weeks for the vehicle to settle. Refer to the measurements taken prior to installaing the new strut. Do not use a visual reference of the distance from the top of the tire to the edge of the fender well. Remember, if the vehicle has different size tires or wheel rims, the height measurements will not be the same as the factory measurements. Make sure the tire does not rub the spring or any other part of the wheel well or suspension system. Wider tires or wheel rims that are different than the original parts may not work with OEM design strut assemblies.
- * Drive the vehicle to listen for noise to make sure everything is installed correctly.
- * Always have an 2 or 4 wheel alignment performed on the vehicle after installation is complete to ensure all alignment angles are correct.

FIGURE E

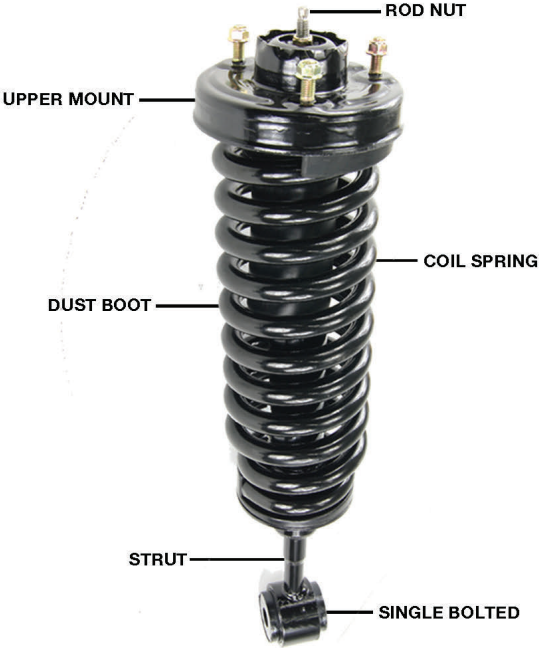


FIGURE F



FIGURE G

