

Long term seat wear and possible spring modification to increase spring seat life.

Like most people rebuilding the rubber suspension components on your Z31, you probably found one or both of the rear lower spring seats missing or tore up and the upper ones mashed.



This is normal wear and tear for these parts. They take a real beating, especially if you live in an area with poor roads of speed humps.

The real purpose of these seat, or isolators as they are some times called, is to reduce road noise being transmitted into the passenger compartment.

A month ago I received an email from one of the first purchasers of the seats. Here is an excerpt from his message:

“I know that I made payment for them on 3-06-05 and installed them within a few days. I know that since 8-20-05 I've put 10K on my car so I'm betting that the spring seats have seen near 20K miles. The car is an 88 NA 5 speed currently at 236K and the only suspension mod till now have been Tokico HP springs and shocks.

Have you gotten any feedback from other users after this kind of mileage? I'm a pretty aggressive driver so that may also have an affect. The top seats appear to be in great condition, dirty as hell, but good.”

He attached a couple of pictures to show the wear.



Hey, I thought to my self, not bad for 20K miles, but why the wear and is there anything that can be done to reduce the wear?

In looking at the rear suspension where the lower end of the spring seats over a metal “hat”, it looks like Nissan did not form the metal hat and the rubber seat to evenly support the last coil of the spring.



Note that there is little support under the coil as it rises from the urethane seat. Also, one can see that the distal end of the coil is lower than the side 180° opposite. Sand, dirt and other road grit will accumulate in this low area as the spring flexes up and down, creating an abrasive condition that promotes wear. Even when the spring is under full compression, the vehicle's weight is not evenly distributed the over the seat.

To correct this problem, this is what I did with my springs I will be installing on my Z31. I ground down the distal end, flattening it about a 1/4" and rounding the end over as seen in the following pictures. And of course the spring will be painted to prevent rusting.



PLEASE NOTE: I am not recommending that you as the buyer or user of these spring seat perform this modification. If you chouse to do this modification, you assume all responsibility.

MFP-RSS, Z31 Polyurethane Rear Spring Seats Installation Instructions

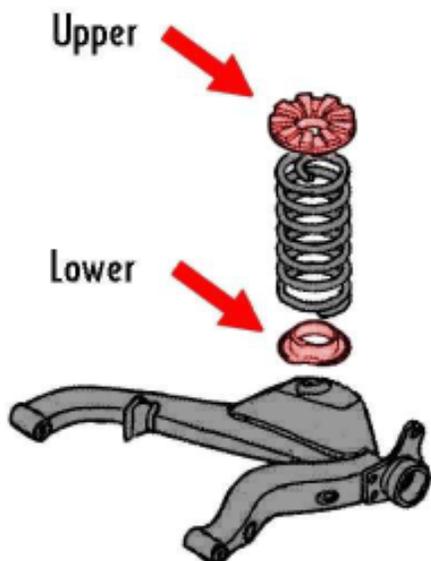
CAUTION Read fully before any work is done on the vehicle: Use these instructions as a guide. If you do not have adequate mechanical skills, have this work done by a qualified automotive mechanic. If you are doing the work yourself, you should be following the guidelines in the Haynes "Nissan 300ZX Automotive Repair Manual" #1137. See Chapter 10 "Suspension and Steering".



Your spring seats have been made from custom molded urethane rubber with these specifications; 90 Shore A hardness, 300 pli (pounds per linear inch) tear strength and 600% elongation at break.

After manufacturing they were coated with silicon spray, which should eliminate any squeaking. If the squeaking returns, you can spray the surfaces where the springs contact the urethane with "lithium grease spray"

The larger of the two seats is the upper or



top seat. These seats are much stiffer than the OEM

version. This stiffness can make installing the seat on the spring a bit difficult. However, these seats are heat resistant to 250°F. By placing the **upper** seats in boiling water for six minutes, just prior to installation, they become pliable, allowing for easy installation. The hot water will not remove the silicone lubricant. Remember, the temperature of boiling water is 212°F, use tongs to remove the seats from the boiling water and wear rubber gloves to handle the seat while installing the seat on the spring. Do one seat at a time to eliminate the possibility of the water boiling away, which might result in causing damage to the seat and leading to a flammable condition.



The upper seats have tabs, as indicated by the green arrows in the following picture.



These tabs hold the seat on the spring and prevent it from rotating. **Do not cut them off.** With the spring on a stable surface, lined up the end of the spring coil (both ends are the same) with the space provided on the seat, as indicated by the green arrow "Butt end", and insert the larger seat tab under the spring coil. Press down on the seat so that the small tab snaps over the coil.

Turn the coil over and inspect the seat for correct alignment and tab position. If the smaller tab is found to be trapped under the spring, use a lubricated and dull

screwdriver, to gently pop the tab over the coil, as seen in the two images below.

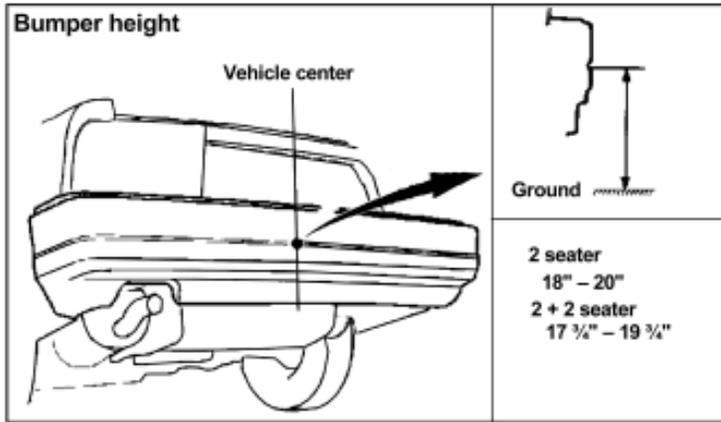


Place the lower, "hat" shaped seat in its original location on the suspension arm with "notch" facing toward the front of the car. Actually, there is only one way to set the seat due to the shape of the steel retainer.



The springs can now be returned to the suspension arm.

This picture, from the Nissan Service Manual, you may find useful in determining the correct height of the rear



after the MFP spring seats have been installed. A note to remember, the car must be driven before the measurement is taken. This is to allow the suspension to reach equilibrium.

As stated earlier, the upper seats are stiffer and will not compress as much as the OEM version and may raise ride height a 1/4" or more. The upper seat can be altered to reduce ride height by using a right angle sander or sanding disk and grinding down the pie shaped feet. Do this only at your own risk. Seats can not be replaced if altered.

Do not alter seats until you have checked ride height.

Always use good safety precautions while working with tools. Use proper jacking equipment on a level surface when jacking up a car. Tires must be blocked to prevent the car from rolling off the jack. Once the tires are off the ground, support the car with jack stands to prevent it from falling and harming a person under the car.

**KEEP CHILDREN AWAY FROM CARS
THAT ARE BEING WORKED ON.**

Another "Z31 Product" from
the Studio of Gary William Molitor



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