

“I’d Like to Upgrade My Miata’s Suspension.”

I recently got an inquiry from a reader asking about upgrading the suspension in his NC Miata. He had around 75,000 miles on it, and wanted to improve handling. He had already installed the RX-8 Red and Yellow Dot Sway Bar Kit he got from **Lancaster Mazda**, and is really happy with these. Now he is looking at new Shocks, and possibly new Springs. Note he wants to keep it a street focused car too. I will start this article more generic for all Miatas, then end up focusing on what I suggested to him.

Since “Cornering” is the main focus of the Miata sports car, a good suspension can REALLY increase the enjoyment to the driver. There are 3 major working parts in the suspension. The Anti-Sway Bars, the Shocks, and the Springs. I will start with the Sway Bars, as that is what he already replaced. I feel this is a really good start point, and easy to replace too.

When you go around a corner, the car body wants to roll to the outside of the corner. The Anti-Sway Bars help keep the car from leaning over to the point where it is almost out of control. You Do want a little car body roll, as this helps transfer some weight to the outside tires for better traction. But If you have too much body roll, this can lessen the traction from the tires to the “inside” of the curve, and put too much weight on the “outside” tires. This is not good either. You want the car fully under control, so a good set of “Anti”- Sway Bars helps control the Miata’s body roll a lot.

The next point is the Springs. Soft springs like on the OEM NC Miata can give little resistance to the body roll in a corner. They can allow the car to roll from one side to the other as you go thru corners or “S-Turns”. There are several really good aftermarket spring sets that are designed to give a decent ride on the flat roads, but also help control the car’s body roll in the corners. Flyin’ Miata, and Goodwin Racing are 2 companies that sell these.

So far I have explained how the (Anti) Sway Bars and the Springs work together to help control the body roll in hard cornering. But note that without good Shock Absorbers, the car would just bounce and wallow around uncontrollably!

The 3rd important part of the suspension is a good set of Adjustable Shock Absorbers, or “Shocks” as we just call them. The job of the Shocks is to control the Springs and keep the car under control. You can use good Shocks with bouncy OEM springs, but you can’t use weak Shocks with good aftermarket “Performance” Springs. Weak Shocks will not control these Performance Springs. Tokico and Koni are really good aftermarket Shocks. My opinion is the Tokico is the better “Street” performance Shock, and that Koni is the better “Racing or Track” performance shock. I say this because the Tokico HTS allows 10 turns of the adjusting screw to fine tune the compression and rebound of the shock. You can adjust for a nice ride and still control the springs. The Koni only has one turn of adjusting, as it is more focus on track use. Also Note the Koni shock will lower the Miata ½” or more because of it’s design, not the Tokico. Again, Flyin’ Miata, and Goodwin Racing both sell performance Shocks.

Good performance Shocks are really noticed when in hard “S” turns. As you go from a hard turn in one direction to the hard turn in the other direction, the shocks help control the speed or rate of transition from one direction to the other. Without good shocks to control the rate of transition, the car would be very hard to keep under control in S-Turns. It would want to just bounce to the left and right.

I suggested to him he get a set of Tokico HTS shocks for his NC. They are easily adjusted to give a good compromise between handling and ride. I also suggested the “Flyin’ Miata” Spring set, as they are designed with street ride and cornering performance in mind. Another good option is the Goodwin Racing “Progress Technologies” Spring set. These are actually the springs that Mazda designed for the Spec Racing when they first came out with the 2006 Miata. They are also a good track and street spring. Both of these spring sets work well with the Tokico HTS shocks. Also note, Flyin’ Miata sells a “Stage 1” combo set that includes their Springs and the Tokico HTS shocks. The “Flyin’ Miata Stage 1” combo can save you a couple bucks.

Note that aftermarket shocks, springs, and sway bars are available for all year Miatas. Yes, these guys are even working on stuff for the new ND Miata. If you have questions, contact the companies below and let them help you with what you want to accomplish.

Below are some pictures for you. The Red Shocks are the Tokico HTS, the Yellow Shock is the Koni. The sway bar set is just a front and rear set for you to see what Sway Bars look like, and the last picture is the Flyin' Miata Springs.



Both Goodwin Racing and Flyin' Miata are good companies to deal with, and are receptive to you calling or by e-mails to discuss your ideas and needs with them. So call, or e-mail them if you have questions, and remember I am always also glad to help if I can. These 2 companies race what they sell, so they know what they are doing. Contact info below:

Goodwin Racing: (858) 775-2810, or at <http://www.good-win-racing.com/mazda/miata/index.html>

Flyin Miata: 800-359-6957, or at <https://www.flyinmiata.com/>

Zoom-Zoom, in control!
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