

Flyin' Miata

Tech line: 970 464 5600



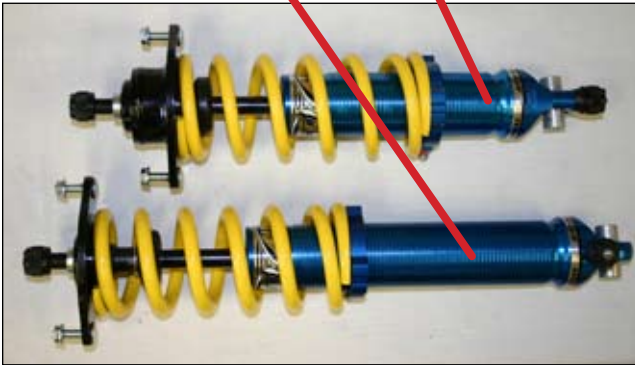
499 35 Rd, Palisade, Colorado, 81526

1-800-FLY-MX5S (1-800-359-6957—Orders only)

1-970-464-5600 (tech & product inquiries)

1-970-464-4887 (facsimile)

front rear



AFco suspension

Congratulations on purchasing what we believe to be the finest Miata suspension on the market! These instructions will not tell you how to remove/install Miata springs and shocks, but will give you AFco-specific instruction.

Initial assembly:



The front shock has the adjustment knob on the side, and uses an upper mount that is flat. The rear shock has a bottom-mounted adjustment knob and has a deep upper mount.

Start by placing the adjustment knob over the top of the shock and soften the shock (counter-clockwise). Pull the shaft out to extend the shock. If you want to feel what a difference the adjustments make, try this before you soften things up!

Push the bumpstop down the shaft a bit to expose the nut it's wrapped around. Remove the clip from the top of the shock shaft as shown at left. Install a blue spring perch, with the tapered section at the top. Spin it right down to the bottom of the shock, and slide a spring over the shock.



Place the upper mount over the shock shaft, followed by the rubber bushing with the flat side up. Top with a washer and the locking nut.

Using a 13/16" open-ended wrench (a 21mm can be used as well), hold the nut on the shaft in place as you install the 7/8" (22mm) nylock nut on the stop of the shaft. This nut should be torqued to 30-35 ft-lbs. Do **not** use Vice-Grips on the shaft!

Re-install the top clip, then install the adjustment knob using the small bolt and star washer. Voila, your shock is assembled!

For an initial setting, set the spring perch so it is snugged down hand tight on the spring. The final setting will depend on your chosen spring rates and ride height. We generally aim for around 12.5" from hub to fender in the front and 13" in the rear, but of course the suspension can be adjusted to meet your own needs!



Installation:

The front shock has the adjuster on the side of the shock body and a short upper mount. Make sure the spacers are mounted in the bearing, and install it so the side adjuster points outboard as shown in the picture. If you have ABS, you can use a ziptie to mount the wire to the side of the shock. Since the AFCOs use a urethane lower bushing, you can fully torque the lower shock bolt with the suspension at full droop.



In the rear, mount the adjuster inboard as shown above or it will interfere with the control arm. You will be able to reach the adjuster from underneath the control arm. The shocks are not internally pressurized, so they will stay compressed if you lower the spring perch and push in the shaft. This can make them easier to install. If they're stiff to move, simply soften up the damping.

In some applications, we've seen interference between the lower control arm and the edge of the shock at full droop. If this should happen, you may have to do a bit of grinding to the control arm. The shock can also be ground down, but no more than shown.

Adjustment:

Now the fun part. The upper knob adjusts the rebound and it covers a wide range. Turn it clockwise to close the valve and stiffen the damping. Adjustment numbers are given from the fully closed (fully clockwise) setting. For example, R-5 means 5 clicks softer than full stiff for Rebound. With the standard 450/300 lb springs, we recommend about R-10 front and R-18 rear. Feel free to experiment, of course. A softer rebound setting will give a better ride, but you don't want the car bobbing around.

The lower knob is for compression damping, and it mostly adjusts the low-speed range. This is related to rate of body roll and weight transfer, so you can adjust it to alter your handling balance in transitions. We typically run them fairly soft, in the C-15 to C-20 range.

The locking screw on the perches has a spring-loaded ball to lock it into place. There are three vertical grooves on the shock, and the screw should be lined up with one of those. The picture of the perch on the first page has the correct alignment.

If you have any problems or concerns, please contact us. We're here to support you and we want your feedback - good and bad. We'd also like to hear what settings you end up using so we can fine-tune our recommendations.