

SUPERMIATA

XIDA

Install Notes

NC 2006-2015 Mazda MX-5 Miata

Digital copy of this sheet



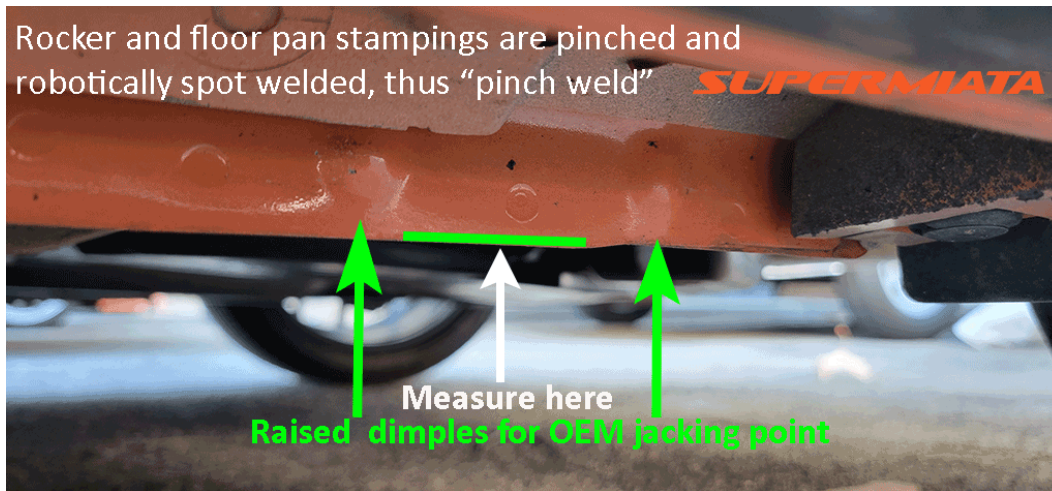
- * Use standard Mazda Factory Service Manual procedure for basic shock installation. Digital copies are available on ebay.
- * Xidas are shipped fully assembled and ready to install. You only need to adjust preload to obtain desired ride height and adjust damping setting.
- * Measure your front and rear pinch weld heights on current suspension before lifting or beginning work on car. Pinch weld is OEM jacking point, bottom of flange to ground.
- * Car should be unloaded, no driver and around ½ tank fuel when setting ride heights.
- * If OEM rubber suspension bushings, torque control arm bolts with wheels on ground, or suspension loaded with vehicle weight. This can be done by removing wheel, disconnecting end link and placing hub on floor jack. Failure to do so may preload control arm bushings at the wrong ride height. If urethane, Delrin, spherical bearing suspension bushings, OK to torque at full droop.

Rear

Adjusting rear springs shorter than the **Min** might result in coil bind which can damage the springs. Adjusting springs longer than the **Max** may result in preload collars contacting the upper mounts. Measure springs with wheel unloaded, full droop.

Min: 267mm (tallest ride height)

Max: 316mm (lowest ride height)



Typical pinch weld height adjustment range listed below. Exact range varies with weight of car and tire diameter. Rear ride heights below 120mm require cutting a vertical slit in the shorter bump stop and deleting it. Leave the taller rear stop. This only works on car that have been lightened well below OEM weight. OEM rubber bushings also bind and can keep the car from fully settling on the springs. Not an issue with Delrin, urethane or spherical bearings. To lower the car with OEM bushings, you can loosen the control arm bolts before installing shocks, retorque then install shocks.

Race springs 11/7kg

Front 110mm - 140mm
Rear 120mm - 145mm

Touring springs 5/4kg

Front 115-145mm
Rear 120-150mm

2.5mm set screw to lock preload collar in place



Use 5mm hex key to rotate collar



Travel limiters

If your tires do not clear your fenders at full bump, you can reduce bump travel using the limiters available on our website. Limiting bump travel will reduce comfort and grip. For this reason, we recommend using a wheel and tire combination that allows full travel. The limiter clips snap onto the shock shaft between the bump stop and shock mount. Number and thickness of clips needed will vary depending on your tire fitment.

Measuring rear spring length at full droop



One full rotation on rear preload collar is roughly 2mm change in pinch weld height.

Make sure to rotate collar so 2.5mm set screw remains accessible.

Aim for front pinch weld height 3-5mm lower than rear (rake). NC chassis are never perfectly square so left and right side rake might not be the same. Just try to average it out.

Front

If your car has the OEM shock tower brace, you will need to install the supplied M8 washers onto each of the brace mounting studs as shown below. Use two washers per brace mounting stud.



Rear, lower 4mm tool

Install rear shocks with damping adjuster towards back of car

Adjusting damping

Xidas are shipped with damping set to full soft. Full stiff is full clockwise. The adjuster has 20 damping settings. We count settings from full stiff. "8 clicks" is 8 clicks from full clockwise, for example.

- There is no one "best" setting for every possible situation. That's why they are adjustable.
- Softer springs and shocks always equals more mechanical grip, so try to run as soft as you can.
- Don't be fooled by too stiff settings that feel responsive but reduce overall grip, making it nervous or skittish. Add just enough damping to get rid of the wallow or excess float.
- As a general rule, the lower the tire grip or rougher the surface, the softer you might want the shocks. More grip or smoother surface might want firmer damping settings.
- Do not try to dial in shocks on worn out, heat-cycled race tires. Do not tune your track settings for hot race tires on cold street tires.

Getting shocks dialed in means investing a little time learning how the adjustments affect the car. Start near full soft. In very cold temps, drive a few minutes to warm up the shocks. Add 1-2 clicks more damping on each shock and go back out. Keep doing that in steps. At some point the car should feel about right. Continue adjusting stiffer and note how the car feels. Then go back to what you feel like your favorite setting was. You can experiment changing just front or rear independently. Street and track/auto-x settings will be very different.

Spending this time quickly learning the whole range will give you a much better idea of what the effect of too much and too little damping has on handling. This makes it much easier to adapt to changing conditions in the future without it being such a guessing game. The goal is responsiveness, predictability and stability.

No one here, on forums or social media can magically tell you exactly what is right for you. You have to experiment.

Service

We recommend servicing your Xidas every 30,000 street miles or 25 hours in competition. Inertia Laboratory in Plano, TX is our authorized service center. If you notice a sudden loss of damping or leakage, inspect all shocks and service any that exhibit those symptoms.

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