

# **SUPERMIATA**

# **XIDA**

## **Install Notes**

NA/NB 1989-2005 Mazda MX-5 Miata

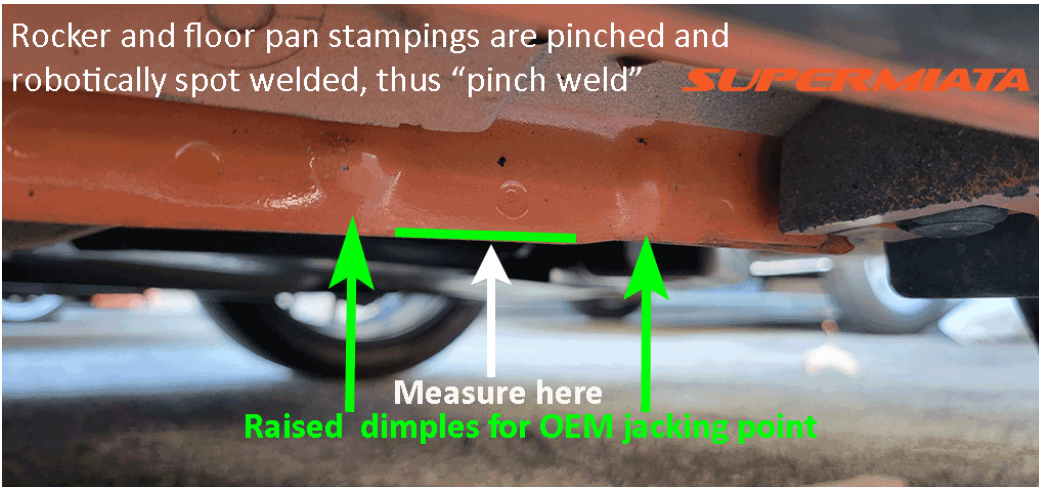
Digital copy of this Xida Install Notes sheet



- \* Use standard Mazda Factory Service Manual procedure for basic shock installation. Digital copies are available on ebay.
- \* If your Xidas are shipped fully assembled, they 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 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.
- \* Do not open the small port on the bottom of the shock. This is the nitrogen fill port. Do not attempt to change nitrogen pressure.
- \* Do not attempt to turn the black body collar on the bottom of the shock. That collar locks the tube to the mount cup.

### **Ride height and preload**

Increasing preload raises the ride height. There is no downside to adding preload, that's a myth. Focus on getting a ride height that eliminates or controls bottoming for your set up and conditions. Lower tends to be faster until the car bottoms too frequently. Experiment.



Typical pinch weld height adjustment range listed below, assuming a 22.8-23.0" tall tire. Exact range varies with weight of car and tire diameter.

Front 110mm - 130mm  
 Rear 110mm - 135mm

*2.5mm set screw to lock preload collar in place*



*Use 5mm hex key to rotate collar*



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). Chassis are never perfectly square so left and right side rake might not be the same. Just try to average it out.

**Shock spacers**

Xida Race are sized to allow maximum bump travel. Minor rubbing of front tire on tub is OK. If the front rubbing is severe enough to slow the car or tug the steering wheel in your hands, you can make the shocks a bit longer to reduce front tire rubbing

NB mounts: add the extra shock mount bushing supplied under mount or our aluminum shock spacers on top.  
 Billet Coaxial Mounts: aluminum shock spacers



## 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 determine exactly what is right for you. Experiment to become your own expert.

### Youtube video for Xida assembly



### General tech info, alignment



## 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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