

Miata Clutch Adjustment

For all year Miatas

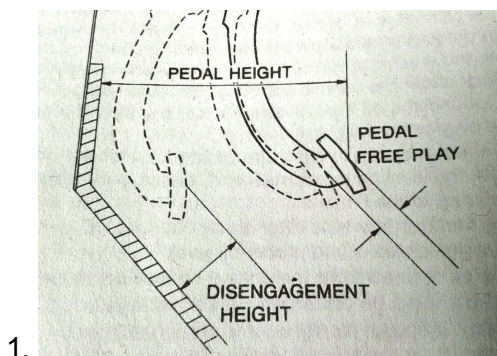
This article covers all year Miatas with a Manual Transmission. The purpose of this article is to help you determine if your clutch pedal is properly adjusted, not how to adjust it. If you find your clutch pedal needs adjusted, I have books here to help you learn how to do it, or you can take it to your favorite garage and have it done. Surprisingly enough, I read that quite a few early NC Miatas came from the factory set incorrectly, and mine was one of them. Checking and setting mine is how I learned this.

If the pedal is not set correctly, it can cause 2 major problems. If the pedal does not disengage the clutch disc enough, shifting will be very hard. This makes shifting a chore and can damage tranny internals. If the clutch does not engage firmly enough, the clutch disc will slip, overheating the pressure plate and flywheel, and prematurely wear out the clutch disc itself. So it is important to have it adjusted properly.

NA & NB. I will first touch on the earlier Miatas up to and including 2005. The settings for these earlier years are totally different from the newer ones, so please do not get things confused. Look at the picture #1, below LEFT. The first thing you should measure is the "Pedal Height". This is simply a measurement from the carpet on the floor to the face of the pedal at rest. This should be between 6-7/8" and 7-1/4" max. The next measurement you need to make is the free play in the pedal. This should be between 1/32" to 1/8" of free play. Use gentle hand pressure when checking this.

The final measurement is the disengagement height. This is the point where the clutch disk is not being turned by the pressure plate and flywheel, and now the transmission is free to shift. Checking this can be a trick, but one I learned from the Mazda Factory Manual while adjusting mine. Get someone to help you. Set the Parking Brake firmly, and put a chock behind the car tires. Start the motor, and have a person sit in the driver's seat. Without touching the clutch and the motor at idle, have the person move the shifter as if they were trying to put it into reverse. With gentle pressure against the reverse gear, you will feel resistance. At that point have that person SLOWLY depress the clutch pedal while you have a measuring tool along side of the clutch pedal. When the pedal gets to the disengagement height, the gentle pressure on the shifter will allow the transmission to go into reverse. (This works for ALL year Miatas)

The MINIMUM measurement you should get at this point for up to year 2005 should be about 2-11/16". The book does not give a maximum, just a minimum.



The picture #2 above RIGHT shows BOTH the Brake and Clutch fluid reservoirs for up to year 2005 Miatas. In this picture above right you will see the power brake booster tank and brake master cylinder & reservoir on the left side, and the clutch master cylinder has the little reservoir on the right side with the black cap. Be sure to keep them both filled with the proper fluid.

NC. The picture #3 below LEFT is how to check if the clutch pedal is set correctly for the 2006 and newer. Please notice this clutch pedal is measured in a different manner. The first measurement to take is the pedal length of TRAVEL. First put a piece of masking tape at the bottom of your dash. Then draw a line on it like I did with a magic marker. I had someone sit in the driver's seat, and press the clutch pedal to the floor. From the top of the pedal at rest, to the top of the pedal when it is pushed down against the floor, the book calls for 130mm, or about 5-1/8".



To save cost and weight, Mazda combined both Brake and Clutch fluid reservoirs into one for 2006 and newer. The picture #4 above RIGHT shows the one combined fluid reservoir. In this picture above right you will see the power brake booster tank and brake master cylinder on the left side, and the clutch master cylinder is the little black casting on the right side. Both feed off of the one reservoir in the 2006 and newer.

The next measurement is pedal free play. Note all of these measurements start from the pedal at rest and are measured from the line drawn on the masking tape. The free play should be around 1/4" to 1/2". Use gentle hand pressure on the pedal to measure the free play.

The last measurement is the Pedal Disengagement point. The measurement is done in the same manner as I described in the last part of the NA & NB section above (Please read carefully above). With the motor idling, and someone trying to gently push the shifter into reverse, slowly depress the clutch pedal and measure from the tape mark to the pedal when the transmission slips into reverse. This measurement should be between 3-3/16" to 4-5/16" down from the top resting point. Of course, as soon as the shifter pushes the tranny into reverse, take your measurement and have the person put the tranny back into neutral.

Feel free to contact me if you have any questions, or need someone to help you make these measurements. I will help in any way I can.

Zoom-Zoom with care!
Bill Latsha