



1615 Tech Drive  
 Bay City, MI 48706  
 Ph. (989) 686-8920 • Fax (989) 686-6520  
 www.brinninc.com

### Brinn/Millican Shock Dynamometer Operating Instructions

**WARNING:** Make sure hands and loose clothing are clear of all moving parts on shock absorber dynamometer.

**WARNING:** Dynamometer is designed to test 7" and 9" stroke racing shocks. Make sure the extended length of the shock you are testing is not less than 18.75 inches and the compressed length is not more than 16.5 inches.

Instructions:

1. Open the front door of the dynamometer and determine if you are using Setting #1 (long stroke) or Setting #2 (short stroke). Change the stroke at this time if necessary.
2. Close the front door before proceeding.
3. Turn the main power on by turning the power switch to the ON position.
4. With the mounting bolt in the upper clevis, press the TARE button for each force meter.
5. Mount one end of the shock in the upper clevis.
6. Mount the other end of the shock in the lower clevis.

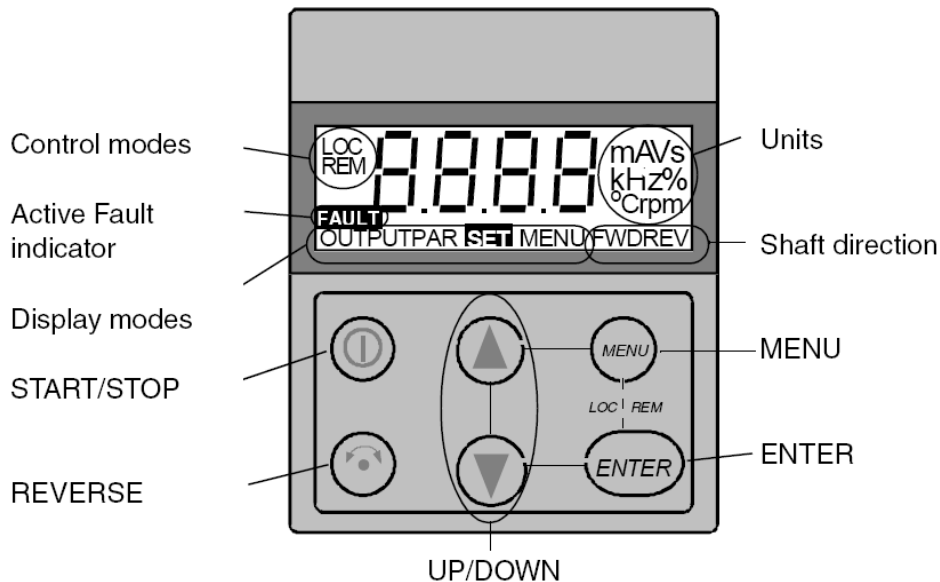


Figure 1. Digital Display

7. The upper left corner of the digital display must display LOC before testing can begin. Press the MENU and ENTER buttons simultaneously until LOC is displayed.
8. Now press the ENTER button until SET is displayed along the lower edge of the digital display.
9. Now use the UP/DOWN arrows to adjust the frequency of the motor.
10. The motor can be started or stopped by pressing the START/STOP button.
11. The motor can be reversed by pressing the REVERSE button.
12. Pressing the peak button on each force meter toggles it from “instantaneous” to “peak capture” modes. The blinking display indicates the “peak capture” mode. This is the mode you will need to get accurate force value readings. The “instantaneous mode” is not of any value in this application except to see if the clevis and pin are tared properly.
13. Let the shock cycle a few times then press the “peak” and “reset” buttons on each force meter at the same time to clear the old value and register the new peak force value of the shock. Sometimes you may have to press the “peak” button again to get back to the “peak capture” mode. The values displayed on the force meters are in pounds of force.
14. Adjust the dynamometer speed by using the arrow keys on the digital display to increase or decrease the speed. See Table 1 to correlate the Hertz reading on the digital display to inches per second (IPS) shock shaft velocity. **If you decrease the speed of the dynamometer at any time, you must follow Step 13 to reset the peak force values on the force meters.**
15. This dynamometer is designed to run on 220V service or 110V service with a transformer. In case of a severe voltage spike, circuit breakers are located inside the dynamometer and would need to be reset. The circuit breakers can be accessed by first unplugging the dynamometer then removing the back panel of the dynamometer.
16. Call Brinn Incorporated at (989) 686-8920 if you have any questions.

Table 1. Hertz to IPS Conversion Chart

<b>IPS on Setting #1 (long stroke)</b>		<b>IPS on Setting #2 (short stroke)</b>	
<b>IPS</b>	<b>Hertz</b>	<b>IPS</b>	<b>Hertz</b>
0.5	2.2	0.25	3.1
1.0	4.5	0.5	6.3
1.5	6.7	0.75	9.4
2.0	8.9	1.0	12.6
3.0	13.4	1.5	18.9
4.0	17.9	2.0	25.2
4.7	21.0	2.5	31.5
5.0	22.3	3.0	37.8
6.0	26.8	3.5	44.1
7.0	31.2	4.0	50.4
8.0	35.7	4.5	56.7
9.0	40.2	4.7	60.0
10.0	44.6		
11.0	49.2		
12.0	53.6		
13.0	58.0		
13.3	60.0		