



TECHNICAL TIPS – “WENCH WITH A WRENCH”

Gail Wagner

Hi, Miata Folks,

This is our last newsletter of 2015. Wow...where did the year go? Seems like we just had our 2014 Holiday Party and summer is now officially over (what little “summer” we had!).

I stumbled across the following article about the new 2016 Miata “ND” from *Road & Track Magazine* in June 2015 written by their Road Test Editor. We even get to see the editor’s written road test sheet! I thought there was some interesting things pointed out about the new model including some comparison handling observations between the NC and ND. I know a number of you have either purchased or are considering purchasing a new 2016 and but I thought you all might enjoy reading it.

So, I shall beg off writing my own column this final month and offer the following for your enjoyment by permission of *Road & Track Magazine* (which I have been reading since 1964, by the way).

See you all at the Holiday Party. I’m the one wearing the chromed wrench bracelet. ☺

Best wishes and looking forward to a 2016 driving season next year.

Drive safely (especially this winter) and zoom-zoom !

Gail

DISCLAIMER

Please note these tips and opinions are not reviewed or approved by the Mazda Motor Corporation or any other corporation or entity other than the originator. The Midstate Miata Club of NY does not accept any liability for damage or injury as a result of utilizing these tips and pointers. Please use common sense and always remember safety first.

JUN 8, 2015

Testing the 2016 Mazda Miata: Less is More, Quantified

Running the numbers on the new 2016 Mazda Miata MX-5 proves beyond a doubt that less horsepower isn't the end of the discussion.



Mazda

When I first heard that peak power from the 2016 Mazda MX-5's 2.0-liter naturally aspirated 4-cylinder engine was down to 155 hp, 12 fewer than the outgoing 2.0-liter naturally aspirated 4-cylinder engine, I was upset. A new car means more power; that's the rule, right? Mazda made clear that this MX-5 is about losing weight, not gaining power, but less? C'mon.

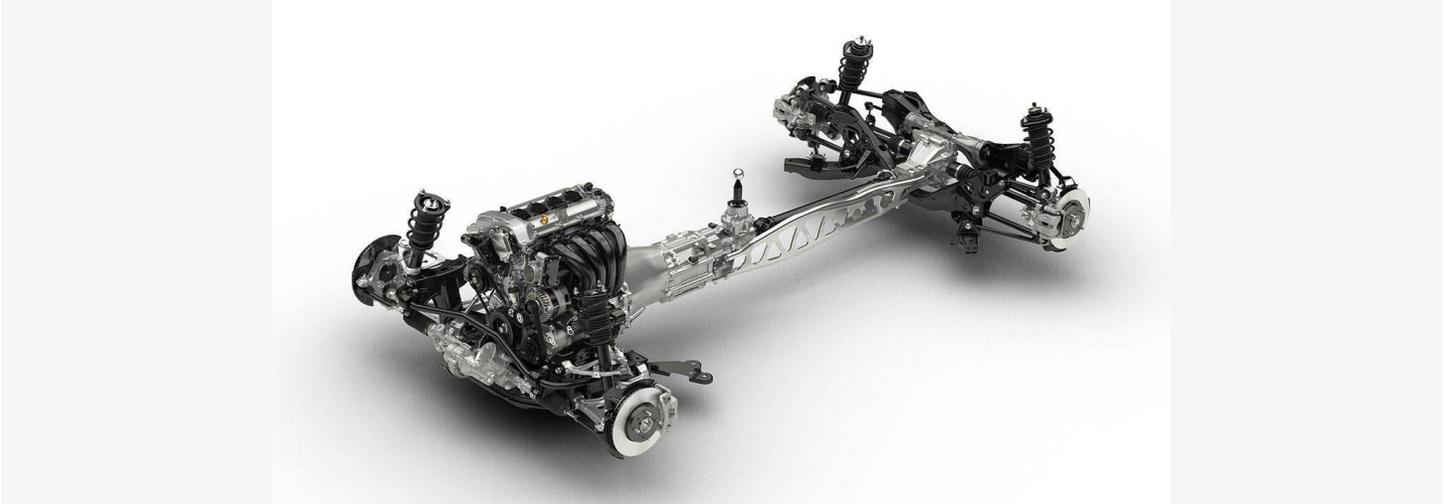
To get some perspective on the MX-5's reduced output, I spoke with Dave Coleman, Lead North American MX-5 Development Engineer at Mazda. He pointed out that the new engine actually makes more mid-range horsepower, and more torque overall. In fact, peak horsepower is the only number where the new Skyactiv power plant falls short, and even that bears a closer look. The old lump made 167 horses at 7000 rpm, the new one makes its 155 hp 1000 rpm sooner. Furthermore, torque isn't just higher, 148 verses 140 pound-feet, but it arrives earlier too, at 4600 rpm instead of 5000. So less is more, in a sense.

This is the 2016 Mazda MX-5 Mazda Raceway Pace Car

Which brings us to weight reduction. The last [NC-chassis MX-5 we tested, in July 2012](#), weighed 2555 pounds. The new Miata weighs almost 250 pounds less, for a total of 2313—a 10% drop. That's huge. And it makes the weight-to-power ratio the most appropriate figure for evaluating the ND against the NC. The old car made do with 15.3 lbs per horsepower; the new car lugs around just 14.9 lbs per pony.

With all those numbers dancing in my head, I bolted on some data acquisition equipment to our test vehicle. The results further illustrated how less (peak power) can still result in more—in this case, a faster spring to 60 mph. My best launch came with a fast clutch release at 3800 rpm. With more mid-range power, less wheel-spin was necessary for quick launches. The shift lever requires a beautifully light touch, better than the outgoing gearbox, helping improve my 0-60 time. Despite the peak power drop, the Skyactiv-powered 2016 MX-5 is quicker in every 10 mph increment and a full half-second faster to 60 mph—it did the deed in 6.1 seconds, 0.5 seconds faster than before. The ¼ mile clocked at

14.7 sec @ 93.2 mph, 0.3 seconds and 0.6 mph better than last year's Miata. Braking performance vastly improves as well, the ND shaving nine feet from the NC's 60-0 stopping distance.



Around the skidpad, the roadholding number is effectively the same, but the sensation is not. Where the previous MX-5 felt composed, light and tossable, this car feels organic, like an extension of my intentions expressed precisely to the road. Under steady, light throttle, the MX-5's front end breaks loose first, but lifting off the throttle tucks the nose back immediately. With more mid-range grunt, stuffing the throttle does the same thing, with a puff of tire smoke. The MX-5 sets a benchmark for steady-state cornering feel: It's near-perfect.

The lesson here is, "less peak power" doesn't really tell the whole story of the new MX-5. The 2016 Miata not only carries on the car's 25-year tradition, it brings the car closer to its delightful roots while delivering a ton more performance. That's the kind of compromise we can get behind.





Road Test Worksheet

Year Make Model: 2016 MAZDA MX-5 Sport (It's a Miata)

Performance - Must get while testing

Acceleration:	time
1 foot rollout	0.2
60 feet	2.1
5-60 mph	7.0
1/4 mile time	14.7
1/4 mile speed	93.2
0-10 mph	0.4
0-20 mph	1.1
0-30 mph	1.8
0-40 mph	3.1
0-50 mph	4.3
0-60 mph	6.1
0-70 mph	8.1
0-80 mph	10.6
0-90 mph	13.5
0-100 mph	17.2
0-110 mph	23.3
0-120 mph	30.9
0-130 mph	
0-140 mph	
0-150 mph	
0-160 mph	
0-170 mph	

Braking:	distance
60-0 mph	113
80-0 mph	204
Fade	(none) low medium high

Weather:	
Temperature	59°
Humidity	39%
Barometer	30.15
Elevation	950 ft
Wind	calm
Test Location	Chelsea MI

Handling:	R	CW	CCW
Skidpad	0.86	14.5	12.45
Balance	neutral	mild	moderate heavy understeer

Shift Points:	mph	rpm
Max in 1st		
Max in 2nd		
Redline		6500?
Shift point		maybe 6800
Fuel Cutoff		6900

Weight:		
Total	2313	
LF / RF	607	607
LR / RR	561	541
% Frt / % RR	52%	48%

Sound Level:	west	east
Idle		
Max, 0-70 mph		
Cruise at 70 mph		

VBO file name/CF card #: 1

Date: 5/20/2015

TEST NOTES:

- Best launch rev to 3750 - 4000 rpm's, quick release of the clutch and let the tires spin. Quick shifts are easy with the light throws, but you need two to get to 60mph
- The brakes get hot and we experienced just a touch of fade
- Beautifully balanced machine, a dream drive on the skidpad

Specifications - Must get from car

Engine:	
Location	front mid rear
Layout	transverse longitudinal
Recommended Fuel	regular premium
Transmission: # of speeds	6
Type	manual auto cvt dual-clutch
Other	
Drivetrain:	FWD RWD AWD
Steering: lock-to-lock:	2.7

Tires:		
Brand	Bridgestone	Potenza S001
Size	205/45R17 84W	205/45R17 84W
Brakes:	front	rear
Brake disc	solid, vented	solid, vented
Brake caliper	fixed, sliding	fixed, sliding
# of pistons	4	1
Top/Base Windshield Width:	62	49
Doors/Seats:	2 / 2	Monroney: yes no