

## ND Suspension Upgrades (Part II)

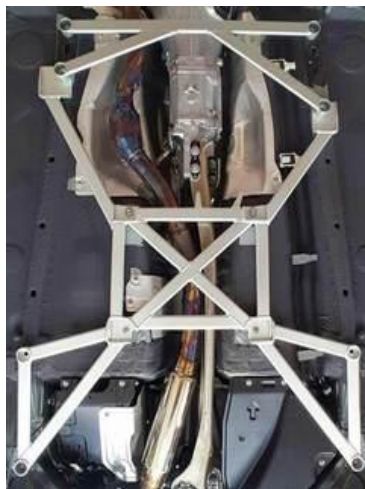
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### Ohlins FPSport DFV Coilovers

After installing the 3<sup>rd</sup> phase, swaybars, as outlined below, I drove and tracked the car throughout the rest of 2017 and all of 2018. The car was a blast to drive, but still, in my opinion, limited. I knew there were better options out there that even I, a driver with only moderate skills, could still take advantage of, and result in faster lap times. Not horsepower options, but an upgrade to the upgrade, so to speak, of the coilovers. So in November of 2018 I replaced the MeisterR coilovers with a set of Ohlins. But not just any Ohlins. These are tailored specifically for track performance, and have a spring rate of 10K/5K, up from the 8K/3K of the MeisterRs. They are marketed exclusively by [MiataSpeed](#), a company located in Fremont, California. They market the [FPSport Ohlins DFV](#), which have a longer shock length than the standard Ohlins for more suspension travel, and include Swift springs and billet aluminum top hats. They are understandably stiffer on the street, but still very manageable when the dampers are set softer. These are a pricy option, more money than I ever thought I would spend on a set of coilovers, but I plan to track the car extensively while I own it, and most of the rest of its miles will be spent canyon carving.

Installation was a snap. But several drives to Napa and beyond have confirmed that I made a good choice, as the car is faster than before in both steady state cornering as well as quick transitions. Limits are just higher.

### Chassis Braces



Chassis braces constitute an area of improvement that do not get a lot of coverage or a lot of empirical review. The two braces that HAVE garnered significant praise are the FM FrameRail and Butterfly Brace kits for the NA/NB platforms. Goodwin-Racing offers a [package of underbody braces](#) for the ND, which claim to provide additional chassis stiffness (to allow the suspension to work more effectively) without an undue weight or clearance penalty. This package, coupled with their [front subframe braces](#), complete the underbody stiffening act. Finally, since my car is a GT and does not have the shock tower brace that is standard on the Club ND Miata, I purchased the 1-piece aluminum shock tower brace from Goodwin (many folks who have the ND Club have also replaced the stock 3-piece brace with this 1-piece design). For both the Sport and the GT versions of the ND (except the 2019 with the GT-S package), an additional cowl bracket must be purchased from the dealer and installed by the user. I ordered it from Maita Miata for just \$44 using my SAMOA discount. It arrived in just one day. Installation of all of these braces can be performed by any owner who can change his/her own oil. If you have a set of jack stands, basic hand tools and wrenches/sockets and a level surface, the entire process under the car takes about 3-4 hours. I installed the shock tower brace (and cowl bracket) in about an hour. Instructions for the installation of all of these products are available on the Goodwin-Racing product pages or their [MazdaTalk Forum](#). The braces result in losing about 1/4 inch in ground clearance, which is not an issue even with my lowered car.

## Tires and Wheels



What discussion of Miata handling upgrades would be complete without a discussion of wheels and tires. I further upgraded my wheels in Mid 2017 when I started tracking. Although the TRMotorsports C4 wheel works well, it is on the heavy side at 19 pounds each, about 2 pounds per corner. They also do not clear any brake upgrades (Brembos or Wilwoods) without resorting to 5mm spacers (minimum) in the front. Once again Brian Goodwin was there to offer the Miata community functional, good looking and cost-effective options. I

bought 2 sets of Konig rims from Goodwin, both 17x8 +45 offset, both under 17 pounds, and both less than \$200 per wheel. I purchased a set of [Konig Ultraform](#) in Gloss Graphite (shiny gray) and a second set (dedicated track) of [Konig Hypergram](#) in Matte Gray (not so shiny gray). These wheels weight only 16.3 pounds each.



Track tires were an easy choice. I wanted R-compounds that I could use only on the track AND driving to and from. I also wanted a 235/40/17 tire. The recommended (and most cost effective) tire is the Nitto NT01, sourced from Discount Tire Direct. And although many ND owners track with 200 treadwear Extreme Performance summer tires, there are very few available in this size (many more in 225/45/17 however – see the ND Wheel/Tire section of the Miata Forum for more discussion of the pros/cons of this size). And in order for a set to last a complete year of tracking, I would need a second set for the streets/canyons. So R-Comps it is.

Last year I bought a set of Dunlop Direzza ZIIIs in 235/40/17, and they have been great. Unfortunately Dunlop discontinued this tire, and replaced it with the ZIII. Mine have 11,000 miles on them and are down to about 3-4/16 of tread left (not quite the wear bars). And are pretty much heat-cycled out. The ZIII has been getting mixed reviews, so I decided to go in another direction. I wanted what, IMO, offered the best compromise of dry handling, wet handling (we do have winters here in NorCal), long life, and looks. Again, virtually nothing is available in 235/40/17, but the Michelin Pilot Sport 4S, a new tire, has been getting rave reviews. Not cheap, and not in 235, so I had to decide between 225/45 or 245/40. I opted for the 245/40/17s, probably more than I need, and heavier than 215s. In addition, some ND owners have experienced minor rubbing of the fronts (on the fender liners) at full lock, without dialing back front caster (which I did NOT want to do. I mounted these on Saturday 12/22/18, and took a drive on the usual test route to Napa and back on Sunday. This was a threefold test...scrub off the mold release compound, make sure there is no rubbing, and see how they perform. I must say these tires are the real thing. On a chilly (but dry – the temps were around 48\* and the road was damp in the shade) day I was, after just 100 miles total on the tires, up to 90-95 percent of dry summer speeds, with no drama. They also offer a tad more road comfort and are quiet. I think I made a good choice.

## Conclusion

Miatas hold a LOT of money! But I think I have this car's chassis to a point where, short of a full roll cage (just kidding) the limiting factor will always be the driver. If any one in SAMOA is interested in crawling under my car to see what all of this "stuff" looks like, or needs a hand with their own install, just drop me an email and we can go from there.