YOUR PREMIUM SOURCE FOR MIATA PERFORMANCE

# Flyin' Miata





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We offer free lifetime tech support for the original purchaser on all of our products.

It's a level of tech support nobody else can offer. We literally wrote the book on Miatas. Heck, we wrote three of them! We have a team of dedicated support reps to help you make your FM parts experience as good as possible. If you're looking for help with non-FM parts or trying to diagnose an unrelated problem, we can help there as well. You would be surprised how many of our calls are from shops trying to fix customer cars! We also spend quite a bit of time troubleshooting our competitors' parts, simply because we know the cars better than anyone.

Have a technical question? Try the Miata Knowledge Base on our website for articles, common issues and support questions.



Call 970-464-5600 8:00 AM - 5:00 PM Mon-Fri Mountain Time, or you can e-mail us at support@flyinmiata.com









Follow us on social media!

# **EMPLOYEE OWNED SINCE 2020**

A lot of companies talk about their employees having "ownership". Usually, that's just marketing speak. In our case, it's literally true.

Flyin' Miata is an employee-owned cooperative. That means that it is fully owned and operated by us. Any employee who's been with FM for two years or more can apply to join the co-op and help determine the direction of the business, no matter what their day-to-day role in the company. Meanwhile, daily operations are handled by the same team that's been in place for years and reports back to the co-op. The co-op is not trying to generate profits for shareholders or owners, it's almost all put back into the company. All members are looking out for the best interests of Flyin' Miata and our customers.

We didn't start off this way. We were originally a family owned business that was started by Bill Cardell. When he and his wife decided to retire and sell the business after 37 years (yes, you read that right), that's when the employees stepped in. It was the best way for us to keep our values intact, so we worked for nearly a year to make the transition

At the time the co-op was formed, our members had an average of nearly 13 years of time with Flyin' Miata. This shows our committment to our business, our customers and each other. We look forward to years of providing the best Miata parts and technical support in the industry!





JEREMY FERBER



**BRANDON FITCH** 









KYLE TIGAR
Owner/Mechanical Engineer Tech



MIKE USREY Owner/Customer Support Manager



MATT HORN Owner/Customer Support Rep



TRAVIS INGRAM Owner/Marketing Director



JAMES BROOKS Data Operations Manager











**BETH THOMPSON** 







Learn more about the staff!

NIA MEJIA



Flyin Miata is unique in that we do all of our suspension R&D in-house. Every one of our suspension systems was developed, tested and signed off by our own staff, not just picked out of a catalog. This means that we only sell what we know to be the best in the market because we designed it that way. If it's not the best available, we change things until it is.

Why does it work so well? Because we believe that the suspension has to be able to move in order to work. This means we engineer as much travel as possible into it. In some cases, we design new parts to allow the car to get even more suspension movement than it did from the factory. We select springs that are stiff enough to keep the car off the bump stops as much as possible. This leads to a better ride than over-soft springs and offers improved body control. Ride heights are set to reasonable levels that work with the rates. The shocks are valved to control the springs properly while maintaining compliance.

The end result is comfortable but with loads of grip. There's no harshness, even on our highest performance options. The car is fluid. On the track with high spring rates, you can hammer over berms or through quick transitions without the chassis getting upset.

# SUSPENSION PACKAGES

Buying suspension can be nerve-wracking, because all the components interact with each other. You can have an excellent shock and a well-designed spring, but if they're not tuned to work together the result is miserable. Going on forums is confusing, as it's difficult to tell just how well the various suggested setups work. While you can easily make a huge difference in your Miata for a relatively small investment through suspension tweaks, you can also make it a very unpleasant place to be.

But don't worry! We have carefully selected suspension packages that are designed to work as a complete system. The springs, the shocks, the upper mounts, the bump stops, the sway bars - all of them are intended to complement each other. We've taken the guesswork out of the process!

Feel free to give us a call to get a personal recommendation for your use, needs and budget, and be sure to check out our informational videos on our YouTube channel. Here's how the basic breakdown works. They're not rated by stiffness or performance, but by what's included.

#### STAGE 1

This is the first step, and it replaces the components that make the biggest difference. It includes springs, shocks and bump stops. It may include new front and rear upper mounts if required.

# STAGE 2

A great handling upgrade in a box. This takes a Stage 1 kit and adds a set of swaybars to help control roll and add some extra adjustability.

#### **STAGE 1.5 AND 2.5**

Only used for the NA chassis, this takes the Stage 1 or Stage 2 and adds our blue rear shock mounts for more compression travel.

"...their stuff just works. I can't tell you how rare that is with aftermarket parts. FM's bits give gobs of travel and nice, progressive behavior at the limit."

-ROAD & TRACK

"The street-focused suspension is compliant but still satisfying and capable for track work."

"The Fox Racing suspension dampers...
have made one of the best chassis on the
market even better."

#### -AUTOMOBILE MAGAZINE

"...it was easy to get on the power early and let the MX-5 chassis do its magic, in part thanks to the FOX Racing shocks on all four corners and compliant spring selection; it's where Flyin' Miata's reputation in suspension tuning shines"



# FOX RACING SUSPENSION 🗏

Fox Racing has been a suspension specialist for 40 years, winning a huge range of motorsport events from the Paris Dakar to the Indy 500. They also understand the importance of proper suspension travel. Since they supply shocks for the Ford Raptor (talk about travel!), they also know how to build to an OE level of quality and durability. So, as you can imagine, we were pretty excited to work with the experts at Fox. We spent days at the track with Fox engineers, testing and revalving and testing again. We tested with V8 cars, with turbo cars, with supercharged cars and with naturally aspirated cars.

Our goal was for a high performance suspension that wouldn't punish on the street. We placed an emphasis on stability in corners, turn-in and body control combined with a very high level of grip. The adjustment was designed to primarily adjust the low speed rebound damping, which has the biggest affect on body movements. You can adjust from a street setup to a hyper-aware track setup quickly and easily. There are 24 clicks on the adjusters.

There are a lot of little details on these parts that aren't immediately obvious. The springs sit on a high density plastic ring that acts as a bearing, allowing the spring to rotate on the perch as they change length without the expense or wear of a bearing. It also makes it easier to adjust the height of the suspension. The internal washers are disc ground for high accuracy, giving more consistent behavior of the shock. The metering needle sits in a slot for better flow and less fade. The body of the shock is anodized to protect the shock from the elements. Even the shocks are 40% lighter than a Koni due to their light weight aluminum construction - which also lets them shed heat buildup quickly.

Because the shocks were designed from the ground up to maximize wheel travel and aren't held to using preexisting parts, they take full advantage of the suspension's possible travel and can be run at almost any ride height, including stock. The standard springs are intended for a more typical performance ride height, and will give excellent track behavior as well as a supple street ride, although they can handle much higher rates due to their extreme travel - at least 900 lb/in in the front. For the truly crazy, they can be revalved to handle even more.

#### NA/NB

550 lb/in front, 375 lb/in rear – Includes new upper mounts front and rear

STAGE 1, NA

1990-97 13-1614x 🗥 STAGE 1, NB

1999-05 13-1615x 🗥

**STAGE 2, NA** (Stage 1 plus FM sway bars) 1990-97 13-1612x 🗥

**STAGE 2, NB** (Stage 1 plus FM sway bars) 13-1612x 🗥

1999-05

Optional helper spring kit (part number varies) 1990-05 🗥

# ND

(softtop): 400 lb/in front, 225 lb/in rear (RF): 400 lb/in front, 250 lb/in rear Includes helper springs and new front upper mounts. You will reuse your rear mounts.

STAGE 1

13-16175 🗥 2016+ **STAGE 2** (Stage 1 plus FM sway bars) 13-16177 🗥 2016+

#### NC

(Sport): 375 lb/in front, 300 lb/in rear Includes helper springs and new front upper mounts. You will reuse your rear mounts. We recommend running a stock rear sway bar with this setup.

STAGE 1

2006-15 13-16165 🗥

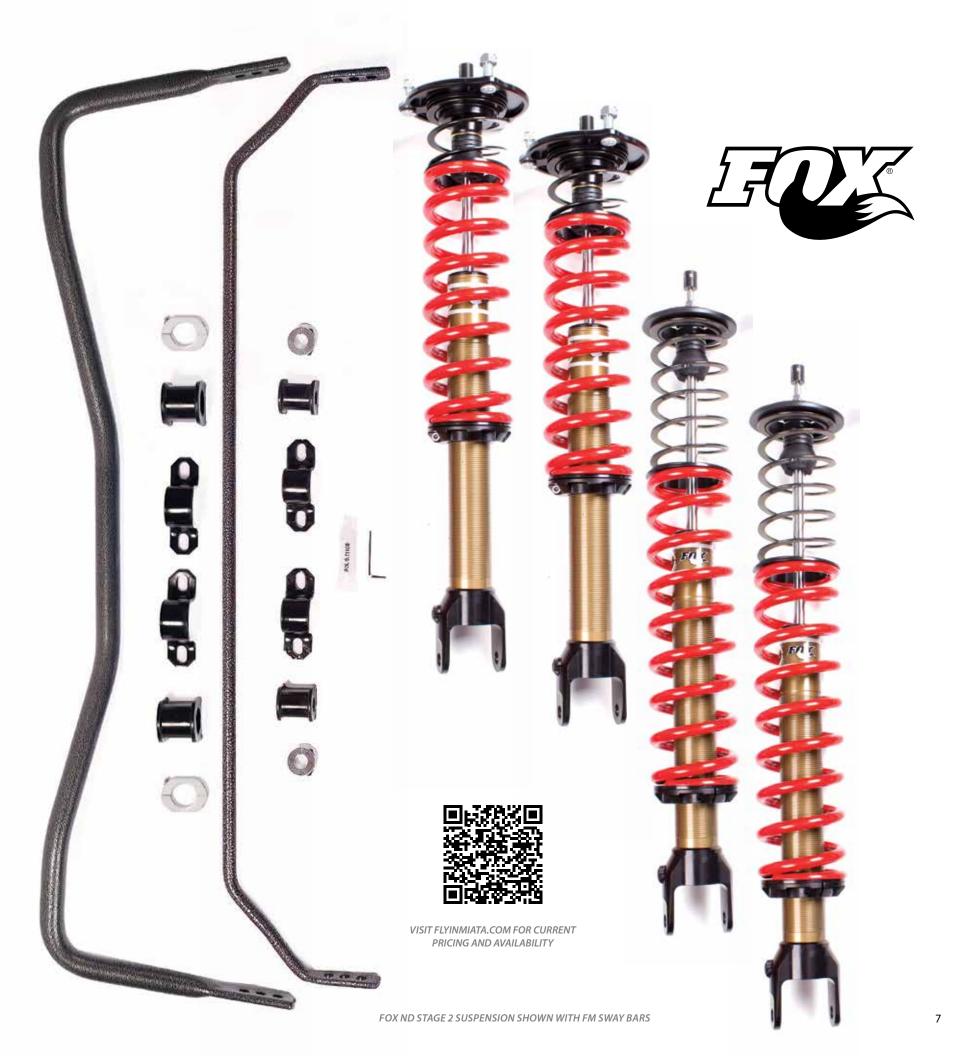
**STAGE 2** (Includes front bar only)

"Slidey, neutral, sublime. You take the car by the scruff of its neck and just chuck it toward the horizon. It makes a stock car look lethargic, roll-heavy, almost stupid. And at no time does it even hint at biting you. Woof. So good."

-ROAD & TRACK

"Ride quality, body and wheel control are all superb; without question, these are some of the finest conventional dampers available."

-MOTOR MAGAZINE



# KONI SUSPENSION PACKAGES

Our FM springs, FM sway bars and Koni Sport adjustable shocks work beautifully. It's what we use as our baseline for ride and handling - a suspension that can be driven on the interstate, on a daily commute and ripping around Laguna Seca. The sway bars let the car corner flatter and let you easily adjust the handling balance of the car, while the springs and shocks work together to keep the body under control. Every Miata will be happier with a Stage 2 suspension.

#### NA/NB

318 lb/in f, 233 lb/in r. 12.5" f, 13" r

STAGE 1 (Koni shocks, FM springs, bump stops) 1990-05 13-16310 XX 🛕

**STAGE 1.5** (Stage 1 plus rear upper mounts) 1990-97 13-16315 XX ▲

**STAGE 2** (*Stage 1 plus FM sway bars*) 1990-05 13-16320 XX **A** 

**STAGE 2.5** (Stage 2 plus rear upper mounts)
1990-97 13-16325 XX ▲

#### NC

300 lb/in f, 196 lb/in r. 14" f, 13.75" r

STAGE 1 (Koni shocks, FM springs)
2006-15 13-16310 XX0 ▲

STAGE 2 (Koni Stage 1 plus FM sway bars)
2006-15 13-16320 XX0 ▲

2016+ 13-16320 XX 🗥

#### ND

300 lb/in f, 175 lb/in r (soft top), 205 lb/in r(RF). 13" f, 13" r (soft top), 13.5" r(RF)

STAGE 1 (Koni shocks, FM springs, rear bump stops)
2016+ 13-16310 XX ▲

STAGE 2 (Stage 1 plus FM sway bars)

#### **KONI STR.T SHOCKS**

The Koni STR.T (aka Koni Orange) is a non-adjustable shock that is essentially a Koni Sport (Yellow) set to full soft. It's a very high quality replacement for stock shocks that comes with a lifetime warranty. Shocks are an important factor in your car's handling and ride, and the stock non-Bilsteins only last about 30,000 miles before needing replacement. Even Bilsteins have a lifespan of under 100,000 miles - and these Konis will ride better than a set of functioning stock Bilsteins anyhow.

Because of their valving, we do not recommend these shocks for cars with aftermarket springs. They do not have sufficient damping to control a spring with a higher spring rate, and the car will pogo around as if it had bad shocks. For that use, we recommend the Koni Sport.

1990-97 (Includes bump stops) 13-57319 **A** 1999-05 (Includes bump stops) 13-58319 **A** 2006-15 (Includes bump stops) 13-58359 **A** 

# **KONI SPORT SHOCKS**

A staple of many of our suspension packages. The Koni Sport (aka, the Koni yellows) has a reputation for long life and excellent performance, backed up by a limited lifetime warranty. They have adjustable rebound damping for fine-tuning and to match your springs. They work well with stock or FM springs and include our MCU bump stops (ND includes rear only as the stock front bump stops work well). Sold in sets of four.

990-97	13-57018 🗥
999-05	13-58018 🗥
006-15	13-58059 🗥
016+	13-58068 🗥

#### **FLYIN' MIATA SPRINGS**

The best Miata road spring on the market.

We designed them ourselves based on 30 years of driving and racing Miatas. Our goal was a spring that we could drive 250 miles to the track over bumpy, twisty mountain passes, lap ourselves silly and then drive home again. That's a good description of a typical track outing at Flyin' Miata, and the springs do a great job.

As part of our search for suspension movement, the ride height is a bit taller than most other "lowering" springs and we run a higher spring rate. It seems counter-intuitive at first that stiffer springs will ride better, but it's all a matter of staying off the bump stops and letting the suspension move. We also only use linear rates for consistent handling. Due to the spring rates, these are not suitable for stock or stock replacement shocks

**NA/NB** - 318 lb/in f, 233 lb/in r. 12.5" f, 13" r 1990-97 13-46500 XX ▲ 1999-05 13-46500 XX ▲

NC - 300 lb/in f, 196 lb/in r. 14" f, 13.75" r 2006-15 13-46500 XX ▲

**ND** - 300 lb/in f, 175 lb/in r (soft top), 205 lb/in r(RF). 13" f, 13" r (soft top), 13.5" r(RF) 2016+ 13-46500 XX ▲



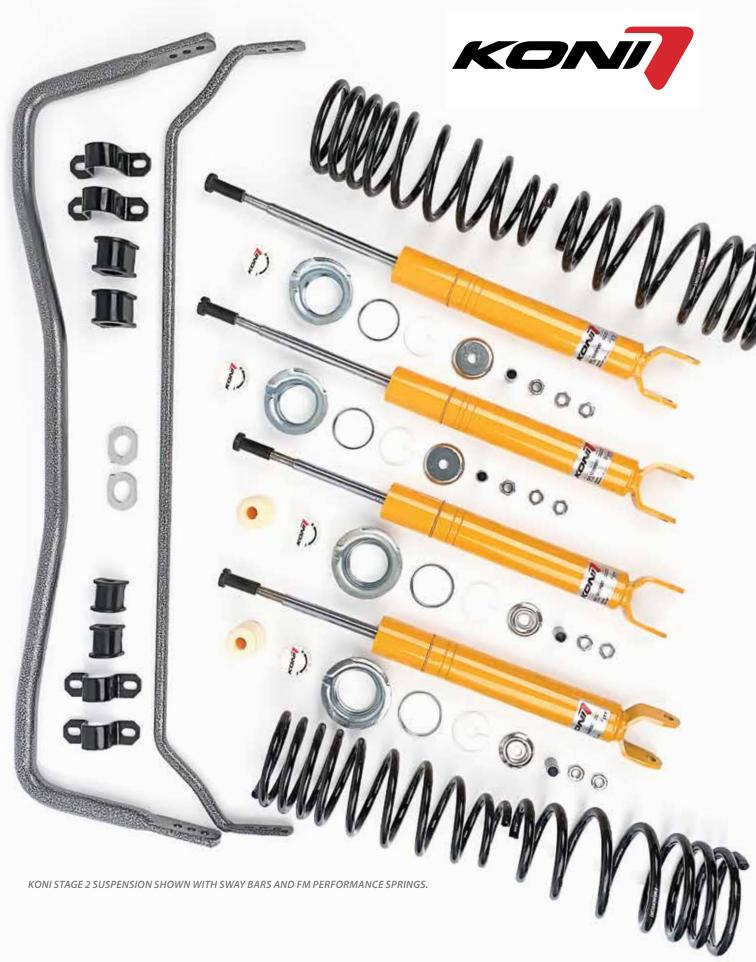
#### **KONI SPECIAL ACTIVE SHOCKS**

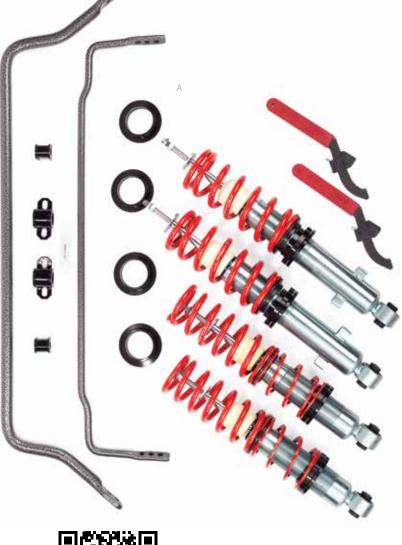
What if you want comfort more than performance, and you're not willing to spend the money for Koni Sports (which work very well with stock springs)? The Koni Special Actives are your answer. Definitely not intended for aftermarket (stiffer) springs, these are a great match for stock springs. With Koni's patented Frequency Selective Damping, these do a good job of controlling large body motions while also smoothing out rough roads.

1990-97 13-57210 🛕 1999-05 13-57220 🛕

KONI STR.T SHOCKS SHOWN WITH FM BUMPSTOPS









VISIT FLYINMIATA.COM FOR **CURRENT PRICING AND** AVAILABILITY



# FM V-MAXX COILOVERS

What makes them work? One of the problems with a lot of coilover setups is that the spring can go loose under full droop. When that happens, there's nothing to extend your shock any further so you've essentially reached the end of your suspension travel. The helper spring in the V-Maxx coilovers helps to extend the wheel further and gives more useful suspension travel. Both springs work together to give excellent compliance that absorbs small bumps. This means high levels of grip and composure. Once the helper spring is fully compressed, the main spring takes over.

Because the spring perch is adjustable, you have full control over ride height and cornerweighting. The NA/NB shock bodies are slightly shorter to give more compression travel at a low ride height, as these are designed to run at performance heights. They have a two-year warranty.



#### V-MAXX CLASSIC COILOVERS A

Fixed damping to go with the Sport spring rates. This is a great value for anyone who's looking for a performance suspension out of the box and very popular - including with our staff.

**STAGE 1 NA** (Includes new upper mounts) 13-16210 🗥

1990-97

STAGE 1 NB 1999-05

13-16210 🗥

**STAGE 2** (Stage 1 plus FM sway bars)

13-16720 🗥 13-16720 🗥

#### **FM V-MAXX XXTREME ADJUSTABLE COILOVERS B**

The popular V-Maxx with adjustable damping! Both rebound and compression are adjusted together with a small knob on the side, allowing you to fine-tune the shock to your needs.

These are available with a choice of two spring sets. The Sport spring rates are 391 lb/in in the front and 258 lb/in in the rear, which gives a good handling balance and good ride quality. The Track rates are 504 lb/in front and 336 lb/in in the rear. This is firm but liveable on the street, but not ideal for a daily driver. Let us know what spring rate you want to use at the time of order.

#### **SPORT**

**STAGE 1 NA**(*Includes new upper mounts*)

1990-97 13-16255 🗥

STAGE 1 NB

13-16255 🗥 1999-05

STAGE 2 (Stage 1 plus FM sway bars)

1990-97 13-16755 🗥 1999-05 13-16755 🗥

# MARNING: Cancer and Reproductive Harm www.P65Warnings.ca.gov

# **FM FRONT SWAY BAR MOUNT** REINFORCEMENT KIT A

ND Miatas can actually rip their sway bar mounts off the subframe under hard cornering with uprated sway bars. The fix is a new subframe. That's an

We worked with Paco Motorsports to bring this solution to market. They're a simple bolt-on upgrade with no drilling that will increase the strength of your sway bar mounts dramatically. Made of powdercoated steel and less than a pound of extra mass on the nose of the car, they're cheap insurance. Easy to install when you're doing a sway bar swap. For the ultimate in protection, we offer the Stage 2 kit for 1.125" diameter bars, such as ours, that utilizes our Billet Sway Bar Brackets!

STAGE 1

2016+ FRONT 13-39020 🗥

STAGE 2

FRONT 13-39021 🗥 2016+

# FLYIN' MIATA SWAY BARS B

Possibly the best bang for the buck in Miata performance. Upgraded sway bars are a great way to improve your Miata's handling by reducing body roll. This means less camber change for your suspension, quicker turn-in and much faster transitions. Because they only come in to play when only one wheel tries to move, they have little impact on the ride.

We've designed them to keep roughly the same handling balance as your stock sways, but they have two or three settings in the front and three in the rear for fine-tuning. By adjusting the stiffness of the bars front and rear, you can also easily change the handling balance of the car to suit your needs. Our swaybars are hot formed in the US from 4140 CrMo spring steel, which means they're stronger than the cold-formed bars found elsewhere.

Includes brackets and urethane bushings with waterproof grease. Designed as a matched set, but individual bars are available. You may need adjustable end links to reach all of the holes, especially on NA models.

1990-93 – 0.875" front, 0.625" rear	13-36500 XX 🗥
1994-05 – 1.0″ front, 0.625″ rear	13-36500 XX 🗥
2006-15 – 1.0" x 0.156" front, 0.75" x 0.120"rear	13-36500 XX 🗥
2016+ – 1.25" x 0.188" front, 0.625" rear	13-36500 XX 🗥

#### **HEAVY DUTY SWAY BAR MOUNTS** C

Under extreme use, the stock front sway bar mounts on the NA/NB Miatas can tear right off the car. This is usually only a concern with oversize sway bars and motorsport use with sticky tires, but it can happen in these conditions. The 1999-05 cars are weaker than the 1990-97 in this regard.

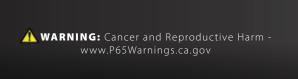
For the NA and NB, we have a full replacement sway bar mount that's fully boxed and can be either bolted or welded into place.

1990-05 13-36600 🗥

# FM BILLET SWAY BAR BRACKETS D

Our billet aluminum sway bar brackets are 13% lighter and stiffer than the ones that come with our bars. Plus they're less likely to end up with the bolts pressed up against the edge of the bracket - if that's happened to you, you know what we're talking about. No more messing around with inexpensive bent steel brackets, these drop right in to place with a nice flat surface to mate up to the mount. Anodized matte black, sold in pairs.

1990-05	FRONT	13-36535 🗥
1990-05	REAR	13-36545 🗥
2016+	FRONT	13-36535 🗥
2016+	REAR	13-36545 🗥









# **BLUEPRINTED FRONT WHEEL HUB**

Blueprinted front hubs. They start off as factory hubs, but they're carefully checked and repacked with a high temperature grease using the "good" OE casting.

1990-05 16-10010 🗥

#### **UPGRADED NC HUB**

This is NOT the factory Mazda NC front hub, but rather the stronger and less expensive front hub from the RX8. Mazda part number F189-33-04X, from the 09-11 RX8. Sold individually - that's one hub.

2006-2015 16-10016 🗥

#### **MAZDA COMPETITION WHEEL HUB**

The product of two years of R&D (with lots of learned lessons), these hubs use a burly 4150 chromoly body with carefully designed geometry to get rid of stress risers and make the hub as strong as possible (no more runaway wheels). Buy the right hub and buy it once.

1990-2005 16-10020 🗥



# **FM MCU BUMP STOPS**

We design our suspensions to avoid the bump stops as much as possible, but there's always a bump big enough. These MCU bump stops are long enough to give a gradual transition when you hit them, but short enough to stay out of the way until you really need them. Even if you're running stock springs and shocks, you'll be amazed at the improvement you feel. 4 stops are needed per car, included with most of our Koni shocks and suspension packages.

SET OF 2

1990+



# **FM REAR SHOCK MOUNTS**

Our shock mounts increase rear wheel compression travel dramatically without affecting ride height. This makes a huge difference in the ride and allows the suspension to work properly instead of slamming into the bump stops. You'll find an improvement in both ride and grip.

Available for almost all aftermarket shocks. Not recommended with stock springs due to a loss in suspension droop, and they don't work with the V-Maxx or Fox because you end up with too much travel. Sold in pairs, not for use in the front because the front wheels will hit the fenders. Will not fit the NB.

AVAILABLE SHOCK SHAFT SIZES: 10MM, 12MM, 9/16"

1990-97 13-57105 🗥



## FLYIN' MIATA ADJUSTABLE END LINKS (NA end links shown)

Why do you need adjustable end links? They allow you to remove any preload from the sway bar, which is the last step in corner-weighting the car to ensure it's perfectly neutral. They also allow you to adjust for a lowered car.

Sold in pairs, two pairs needed for an entire car.

MINIMUM LENGTH 4.125", bushing on one end, NA front/rear

1990-97 13-99050 XX 🗥

MINIMUM LENGTH 3.125", NB front/rear, NC rear 1999-15 13-99050 XX 🗥

13-99050 XX 🛕 MINIMUM LENGTH 2.5", ND rear 2016+ 13-99050 XX 🗘



#### **RUBBER SUSPENSION BUSHINGS** A

Designed by IL Motorsports in Germany, this bushing set is just like the factory set but with rubber that's about 30-40% stiffer. Mazda Competition makes a set like this but it's very expensive. The magic of the IL Motorsports parts is that they're actually affordable. The stiffer rubber will decrease the amount of deflection in your suspension, giving more precision than stock parts. They are a bit more difficult to install than poly, as they have to be pressed in.

COMPLETE CONTROL ARM SET 1990-05 M13-98124 🗥

#### **SUPERPRO DIFFERENTIAL INSERTS B**

The differential is mounted in the car with some surprisingly flexible rubber bushings. Replacing these with stiffer bushings will cut down on differential movement, but they're a headache to install. Looking for an easy answer? Enter these bushing inserts. These inserts, made by SuperPro, fill in the voids in the stock bushings to minimize the movement of the differential - this actually makes your shifting more precise due to the way the Miata's drivetrain is mounted. They're a pretty easy install, as you just have to lower the differential enough to slip the smaller part into place, then put the bottom piece in place. With full replacement bushings, you need to remove the differential altogether then remove the stock bushings (which typically requires fire. Seriously.). A definite plus for competition cars - you don't want to hit 5th instead of 3rd in the heat of competition!

1990-05 M13-98101 🗥

# **SUPERPRO POLYURETHANE SUSPENSION BUSHINGS** C

Banish rubber from your car's suspension completely! Polyurethane bushings will make your suspension move differently. Instead of relying on a rubber bushing that twists and can preload your suspension, these bushings move freely throughout their entire range. There's less deflection and thus more precision. You'll get a bit more high-frequency vibration through the car, but it will feel smoother. SuperPros don't require regreasing and have a lifetime

The differential bushing upgrade will cut down on differential movement, making it harder to do the classic accidental 2-5 shift and transmitting power to

**COMPLETE SET** control arms and end link bushings 1990-05 13-98112 🗥 **DIFFERENTIAL BUSHINGS ONLY** 13-98100 🗥 1990-05

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov





## **PACO MOTORSPORTS 3" LIFT KIT**

This is a bolt-on lift for NA and NB Miatas. It basically extends your lower shock mounting point. Ride height will increase by 3" in the front and 3.25" in the rear. You can run tires up to 25.5" in diameter on an NA without fender modifications, but the front fascia on the late NB will interfere in this case. The car in the picture is on 215/65-15 tires, which are 26" in diameter and required some light massaging. Installation is easy and 100% reversible, unlike fender modifications.

1990-05

13-59100 🗥

#### **EXTENDED LOWER BALL JOINTS**

Add 3 degrees of negative camber with these ball joints. A direct replacement for stock, they effectively lengthen the lower control arm slightly. Legal for Spec Miata and the same price as stock. Sold in pairs.

1990-05 13-81070 🗥





# **NA FRONT UPPER BALL JOINTS**

The NA front upper control arm contains a ball joint that was not designed to be replaceable. Moog to the rescue! This replacement unit will let you change a worn upper ball joint without having to change the whole arm. It's pressed in and includes a snap ring to hold it in place. Sold individually.

1990-97

M13-81055 🛕

#### **ND OFFSET BUSHINGS**

These offset camber bushings replace the concentric steel bushings found in the front steering knuckles and shift the range of camber adjustment toward increased negative camber by approximately 2.3°. That means they allow up to -3.8° camber depending on your other suspension settings





#### PACO MOTORSPORTS ECCENTRIC LOCKS R

If you run your Miata hard on track, you know the feeling of a slipping eccentric. The big "clunk" followed by an off-center steering wheel and the end of your session or race. These doodads replace one of the cams on your bolts and lock firmly into place so there's no possible way for your alignment to slip. Made of stainless steel. There are 8 eccentric bolts per car, but it's the forward front eccentrics that are most prone to slipping. Sold individually.



LOCK ONLY 1990-05

13-98221 🛕

1990-05

13-98201 🗥

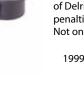
WITH NEW ALIGNMENT BOLT





#### **NB STEERING RACK BUSHINGS UPGRADE KIT**

Make your NB more like the ND by getting rid of that slop and bolting your steering rack straight to your subframe. This will make your steering even sharper than it already is, and is a great compliment to chassis stiffening and improved suspension bushings. These bushings are made out of Delrin, so they're even stiffer the poly bushings available elsewhere. But with no noticeable NVH penalties. The passenger side bushing is printed on our Markforged printers out of Onyx material. Not only is Onyx strong, but it's also highly resistant to chemicals such as oil and gasoline.



# **INNOVATIVE PERFORMANCE ENGINE MOUNTS**

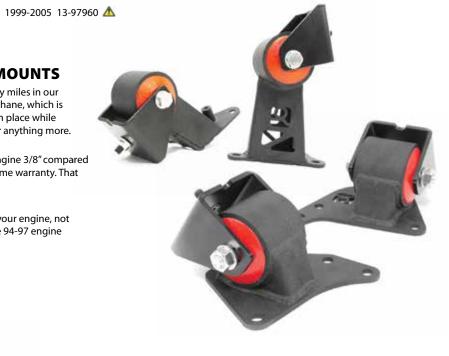
We discovered the Innovative mounts a while ago, and after many miles in our cars, we're impressed. These mounts use 60A durometer polyurethane, which is the softest they offer. They do a great job holding the drivetrain in place while transmitting as little NVH as possible, so we don't see a reason for anything more.

Featuring adjustable mounting that let you raise or lower your engine 3/8" compared to stock. These are the last mounts you'll need - they have a lifetime warranty. That applies to both the metal structure and the poly pucks.

This is a pair, one kit = one car. Please note that you must match your engine, not your chassis. E.g., a 90-93 chassis with a 94-97 engine will use the 94-97 engine mount pair.

NA6 04-702XX~NA6 🛕 NB1 04-702XX~NB1 🗥 2006-2015 04-70270 🗥

NA8 04-702XX~NA8 🗥 NB2 04-702XX~NB2 🗥





# IL MOTORSPORTS COMPETITION ENGINE MOUNTS

These stiffer IL Motorsport competition mounts are similar to the Mazda Motorsports version, with one notable difference - they're roughly half the price. They're made of 40% stiffer rubber, just like the Mazda Motorsports versions, to help keep the engine under control. Shifting will be easier as the transmission will move less - you'll be less likely to make the classic 2-5 shift.

Sold as a pair (enough for one car).

1990-2005 04-70160 🗥

2006-2015

04-701700 🗥

#### **MAZDA COMPETITION ENGINE MOUNTS**

These stiffer Mazda Competition mounts are made of 40% stiffer rubber to help keep the engine under control. Shifting will be easier as the transmission will move less - you'll be less likely to make the classic 2-5 shift. These are Mazda Competition parts which are usually only available to racers. They are not the same mounts that are used on the Mazdaspeed MX-5

Two needed per car, sold individually. Fits all NA and NB Miatas, including the Mazdaspeed. 1990-2005 04-70155 🗥









No matter if your car is a daily driver or a weekend track warrior, FM offers a variety of brake kits that will make your car's braking the perfect match for the Miata's legendary handling. From basic factory performance upgrade parts to full Wilwood 6 piston kits and everything in between, we've got your Miata

# **BIG BRAKE KITS**

The classic upgrade. A big rotor and shiny caliper looks great behind an open wheel - but if you go too big, you can't fit underneath some wheels and you start getting weird gyroscopic behavior through the steering if your rotors are too heavy. That's why we use two-piece front rotors on all our big brake kits. Those bigger rotors also generate more braking torque, so we also upgrade the rear to maintain balance.

Available with two choices of calipers, the standard four-piston Dynapro and the huge six-piston Dynapro 6A. The latter is a bit heavier but very stiff and carries a big pad for maximum heat resistance. We call those kits "Big Mama Jama" brake kits because...well, because it's fun.

The Stage 3 rear kits retain the stock rear caliper, but we often increase the rotor diameter. Stage 4 and 5 kits use a light and stiff Powerlite caliper in the back with an optional parking brake. That brake is not as strong as the factory parking brake and cannot be used for drifting, but it is legal for classes that require parking brakes. We also have options with a real parking brake with a separate caliper, or a second caliper for drifting. Real PB and drift only for NA/NB.

There's a wide range of compounds available for both caliper so you can run different pads on the street and track. It is easier to change pads on the fourpiston model, however. All systems are designed to work well with stock master cylinders.

All of our big brake kits include upgraded GT-style slots on the rotors. The Spec 37 and GT-48 front rotors used in the kits are dimensionally very stable and long-lasting, so your brakes last and are consistent under heavy use.

All big brake kits include new rotors, new pads, stainless brake lines and new calipers where applicable. They also come with the option for two bottles of Redline RL-600 brake fluid. NA/NB kits also include an adjustable proportioning valve (other than Sport cars with ABS).

PLEASE VISIT FLYINMIATA.COM TO CONFIGURE THE PERFECT BIG BRAKE KIT FOR YOUR MIATA. 🛦 🔚



# STAGE 1: PERFORMANCE BRAKE KIT

A good-looking, effective brake upgrade for all Miatas with stock brakes. This is basically a refresh of the stock braking system, updating all the wear parts to new, high-quality replacements. Direct replacement for stock parts, fits all Miata stock wheels. Stage 1 kits include performance R4S pads, braided lines, and optionally: rotors, Speedbleeders, and fluid.



Note: "Sport" brakes refers to 2001-02 cars that came with the optional 10.6" front and 10.9" rear brakes as well as all 2003-05 Miatas. These cars had 16" or 17" wheels from the factory, not 15". Note that not all 2003-05 Miatas outside the US have Sport brakes, so please check your car.





# STAGE 2: LITTLE BIG BRAKE KITS

The Little Big Brake Kit (LBBK) concept is one that started at Flyin' Miata. The idea is to replace one of the most important parts of the brake system - the caliper with a lighter, stiffer option that is also better at radiating heat than the cast iron stock unit. This means up to 18 lbs of weight savings, and that's unsprung weight. We keep the stock rotor so that consumable costs are low. This also allows the use of small diameter wheels if desired. This makes them a real favorite for those chasing the lightest option, as not only the brakes are light but they also allow the use of light wheels.

#### NA/NB

The NA/NB version uses a light, stiff Powerlite caliper front and rear. These will fit under all stock wheels with the unfortunate exception of the 1990-93 "daisies". 10" rotors are the standard size for 1994-00 and 2001-02 cars without the Sport brakes, and 11" is our shorthand for Sport rotor size. We've found the 11" setup fits the widest variety of wheels. Fitment templates are available on our website if you want to confirm wheel clearance.

The four wheel kit is available with and without a rear parking brake. That brake is not as strong as the factory parking brake and cannot be used for drifting, but it is legal for classes that require parking brakes.

If you want to change rotor diameter, all you need is the appropriate LBBK setup and a matching set of rotors. Includes calipers, stainless lines and pads. Proportioning valves are included with the four wheel kits (other than Sport cars with ABS). Parking brake kits include custom parking brake cables. Rotors are not included, as you can reuse the ones already on the car. Standard front pads are Wilwood BP-20X, rears are BP-10. We've found that BP-20X pads are prone to squealing when used on the rear of street cars.

#### NC

The NC version of the LBBK is a really nice setup that's halfway to a Big Brake Kit. Due to the size of the stock brakes on the car, we've found it's all the brake you ever really need - even on a V8 car. It even saves 15 lbs of unsprung weight! The pedal feel has to be felt to be believed - there is no springiness in the pedal at all. Fits under most aftermarket 17" wheels, stock wheels will need a 3-5mm spacer up front. (The stock NC3 Club wheels need a 5mm spacer, the others are fine with

We use the same Dynapro four-piston front caliper used on our Big Brake Kits for the other generations. The rear caliper is the same Powerlite used on all the other LBBKs. Due to packaging, we went to a larger 11.9" rear rotor borrowed from a Mazda5.

Proportioning is handled by the electronic brake distribution built into the car. Includes new calipers, BP-10 pads, stainless lines, new rear rotors and brake fluid.

#### ND

Part of the winning recipe for National-level STR autocrossers, this kit allows the use of 15" wheels and knocks off up to 18 lbs of unsprung weight. We'll say that again - 18 lbs. The pedal feel is excellent and reassuring. The pedal isn't heavier, it just doesn't have any slack or bounce in it.

Light and stiff Powerlite calipers are used on all four corners. We've found that they hold up well to track work on naturally aspirated cars and even on boosted cars on street tires. V8s and hard-charging forced induction cars should consider our big brake kit. Includes new calipers, pads, stainless lines and brake fluid. Standard front pads are Wilwood BP-20X, rears are BP-10. We've found that BP-20X pads are prone to squealing when used on the rear of street cars.

PLEASE VISIT FLYINMIATA.COM TO CONFIGURE THE PERFECT LITTLE BIG BRAKE KIT FOR YOUR MIATA. 🛦 🔚



**MARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov



# FM DUAL CALIPER DRIFT BRAKE KIT

There are a few different ways to initiate a drift, but if you're doing more than messing around here and there, you need a hydraulic hand brake setup. This kit is your solution. Easy install and awesome leverage to easily initiate a drift - maintaining it is up to you! This kit also has very light parts - that means it weighs roughly the same as your stock setup, despite having 5 times as many pistons!

> Please note that this kit doesn't include anything to actuate the drift calipers. There are a number of different options in terms of plumbing, master cylinders, master cylinder mounting, levers, etc., so we've left that open to the user. Please be sure to read the instructions before purchasing anything – partially for specifics on the drift hydraulics, partially so you're aware of the (minor) trimming / grinding required for install. Available in red or grey.

> > 1990-05 14-166XX 🗥

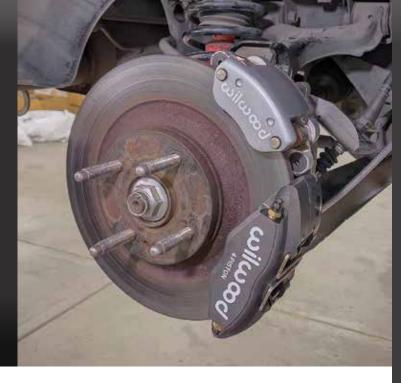




# FM DUAL CALIPER PARKING BRAKE

Looking for a better parking brake solution for your big brake kit? This kit puts a separate Wilwood MC4 mechanical parking brake caliper on the rotor, in addition to the Powerlite calipers we've been using forever, to give you the stiff pedal and sex appeal of the Powerlite but with a truly functional parking brake. This kit reuses your stock parking brake cables for strength and economy - if you have our custom parking brake cables for the rear Powerlite calipers, you'll need to replace them with stock cables. Available in red or silver.





#### FM BRAKE PROPORTIONING KIT

This kit lets you easily install an adjustable proportioning valve in place of your factory one. That gives you control over the brake bias so you can dial in the perfect balance for your car and even for the conditions on a race track on a particular day if you want. The key to making this a bolt-on is FM's exclusive 10mm flare adapter, a part so elusive we had to have it made to our own specs! Possibly one of the best values in brake upgrades. Included in many of our four-wheel brake kits.

COMPLETE PROPORTIONING KIT 14-76240 🗥

NPT TO M10X1.0 INVERTED FLARE ADAPTER

14-76255 🛕 1990+ METRIC BRAKE UNION

14-76260 🗥 1990+



# **SPEED BLEEDERS**

Speed Bleeders replace your original bleed screw and let you service your brakes without the need for a helper. Just crack them loose, attach a hose, and pump away. An internal check valve will let fluid and air escape but won't let any air back into the system. When you're done, just snug them up again. Sold in pairs. Available for stock and Wilwood calipers.

14-49100 🗥



# **BRAKE DUCTING**

Our brake duct kits paired with Singular Motorsports backing plates are a great way to feed your brakes nice cool air on the track. Available separately in 2.5" or 3" for 90-97 R package style lips\*, or as a complete kit for R Package style lips\* with backing plates, hoses and hardware. Also available as ducts only for NB2 (01-05) to replace the stock fog lights. \*\*

2001-2005 NB2 Ducts only\*\*

1990-97 Complete kit\*

R-Pkg Ducts only\*

1990-05

1990-97



# **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

# **FM BRAIDED STAINLESS STEEL** BRAKE LINES A

Stainless steel brake lines don't expand under pressure, so they'll give your Miata a firmer brake pedal - especially when compared to aged rubber. Our lines are DOT-approved and have a clear plastic sheath over the braid to protect everything else from the lines. For use with Mazda calipers only, Wilwood calipers use a different fitting on the end.

As a bonus, our ND rear lines are extended so you can relocate the hard lines for improved tire clearance. See flyinmiata.com for details on that modification.

14-66000 🚄
14-66000 🔏
14-66050 🗸
14-66060 🚄

#### **BRAKE FLUID B**

Super-high dry boiling point of 604°F/318°C, wet boiling point 400°F/°204C. Because it's a DOT 4, it'll mix with stock, DOT 3, DOT 4 and DOT 5.1 brake fluids. Optional add on for many of our brake kits. We recommend flushing your fluid at least once a year on a street car and more often for track use. As fluid gets older, it absorbs water and becomes more prone to boiling. Can also be used in the clutch hydraulics.

Redline 1990+ 16.9 oz(500 ml) 10-36020 🗥 StopTech 1990+ 16.9 oz (500 ml) 10-36030 🗥

# **PORTERFIELD BRAKE PADS** C

The R4S is a sweetheart of a brake pad. Carbon-Kevlar construction with no dusting, no squealing, easy on rotors, but excellent stopping power both on the street and the autocross course. They've even won the Baja 1000...although not in a Miata. Even other brake manufacturers envy this compound. It'll work well in just about every situation except for heavy track use. You must re-use your stock anti-rattle clips.

R4S (14-39100 / 14-39200) Available for all gens, including Brembo. A

# **FM REPLACEMENT BRAKE ROTORS D**

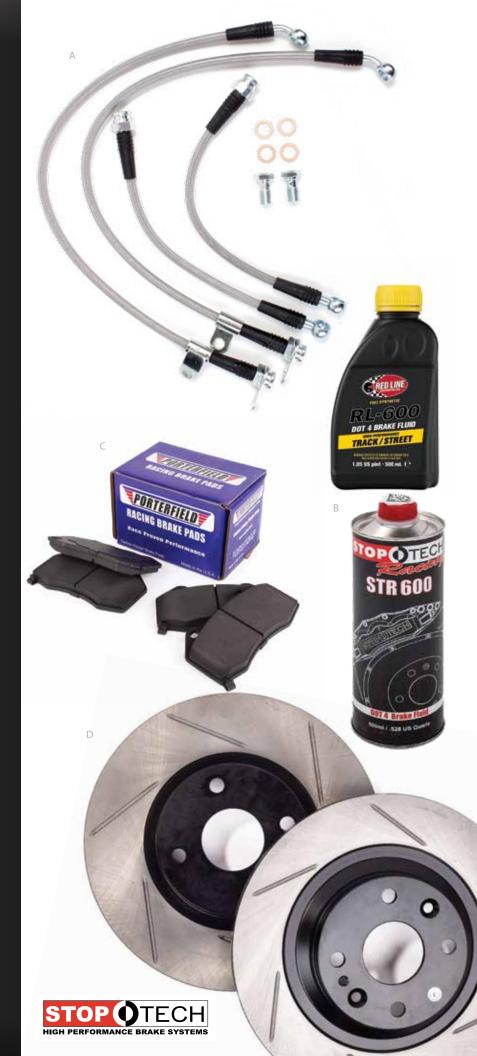
Not all brake rotors are created equal. These StopTech slotted rotors are cast to very high material specification and tight tolerances. The slots extend brake pad life by "wiping" the white-hot boundary layer from the disc and pad, increasing braking efficiency and extending pad life, and they have ramped edges to cut down on noise. Non-slotted rotors are high quality units from Centric.

The rotors have a Black E-Coat" ("Electrocoating") that's only applied to non-friction surfaces to keep the rotors from rusting outside of the pad contact area. Factory size, these are a direct replacement for stock parts. Sold in pairs.

Please visit our website to configure the brake options for your

**MARNING:** Cancer and Reproductive Harm www.P65Warnings.ca.gov

VISIT FLYINMIATA.COM FOR CURRENT PRICING AND AVAILABILITY





#### PACO MOTORSPORTS STRONG ARMS A

All the loads from your front suspension are transferred to the chassis through the two front chassis arms. Strong Arms bolt on underneath the front fenders and reinforce this stressed area, giving more precision to your handling. They extend all the way to the shock towers and attach in multiple planes. This makes them far more effective than other, simpler products. They also don't affect your airbags. Built of high-strength low alloy steel. 6 lbs per side, sold in pairs.

13-7101x 🗥

#### FM TOW HOOKS B (ND Shown, NA/NB not shown,)

SCCA-legal front and rear tow hooks for all Miatas. Great for track cars, cool for street cars. You never want to have to use a tow hook, but it can happen.

NA and NB models are made from 3/16" steel and powdercoated white for visibility. The front one can be mounted on the left or the right. The rear mounts to the right (pass) side and is not compatible with our trailer hitch. Fits 1990-97 models only.

SET

29-90000 🗥 💻 1990-97

FRONT

1990-05 29-99010 🗥 2006-20

REAR

29-99001 🛕 📕 1990-97 29-99011 🗥 2006-20

# FM MASTER CYLINDER BRACE C

Under hard braking, the firewall will actually deform. This allows the brake pedal, booster and master cylinder to move. This flex takes away some of your brake pedal stiffness and makes it more difficult to balance the car on the edge of lockup because there's essentially a big spring in the system. You'll find your braking will be more precise and will require less pedal travel. This simple brace bolts into your Miata and keeps the master cylinder right where it's supposed to be. It's adjustable

Fits 1990-05 Miatas except for cars with the big double-size brake booster (2001-02 without ABS, 2001-05 Sport non-Mazdaspeed with ABS). If your booster is 3" thick measured from the firewall, it will fit. 4" boosters will not. Not compatible with factory shock tower braces, although it is compatible with all Flyin' Miata braces, past and present. Does not fit with our Randall Cowl Intake on the 1990-97 cars. 1990-91 cars will require one hole to be drilled and some metal massaging. Black

14-76190 🗥 1990-05

#### FM CANNON REAR SUBFRAME BRACE D

This is a big burly brace machined out of 1/4" aluminum and powdercoated black. It ties together both lower rear control arm mounting points, and triangulates them to the subframe to prevent any possibility of shifting under side loads. The factory brace isn't triangulated - if the car even has one! Similar braces on the market are generally made of thin steel and aren't strong enough to handle the load without flexing. Exclusive to Flyin' Miata! Exhaust removal not required for installation

1990-91, 1999-05 13-69000 🗥



# FRAME RAILS & **BUTTERFLY BRACE**

Our original butterfly brace was a very popular upgrade for NA and NB Miatas. Now it's better in every way! It's lighter, it has more ground clearance, it's more effective, it's easier to install and it costs less.

Ground clearance is unchanged from the factory Sport bracing. The new design gives more clearance for various exhaust configurations and is easier to remove if you need to do work like dropping the trans. It's fully compatible with factory front and rear subframe braces. Cars with the "Sport" undercar bracing will have to remove two cross braces in the center. It's made of stainless steel so there is no concern about rust. Naturally, it's made here in the US. Total weight for rails and braces is 33.3 lbs, low and in the center of the car.

The butterfly brace includes our frame rail kit and supplements it with two cross-braces. If you already have our version 2.0 frame rails (the ones with Flyin' Miata cut through the sides), you can add the butterfly brace upgrade. If you have our older frame rails then they're unfortunately not directly compatible without welding in some mounting plates.

FRAME RAILS ONLY

1990-02 13-69011 🗥

**COMPLETE BUTTERFLY BRACE** (includes frame rails)

1990-05 I13-69021 🛕

**BUTTERFLY BRACE UPGRADE** 

(For use with Frame Rails, not included) 1990-05 13-69016 🗥



#### FM EXCLUSIVE DOOR BUSHINGS

In a convertible, the doors provide a surprising amount of structural rigidity if they're properly anchored. Our newest door bushing design replaces the stock rubber bushings, allowing the door to reinforce the chassis. Since the block cannot deform - that's the whole point! Sold in pairs, fits all Miatas.

M21-97105 🗥



# FM EXCLUSIVE SHOCK TOWER BRACE

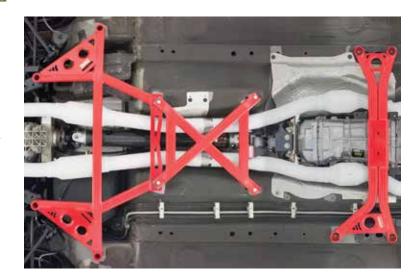
New Design! While the Miata has a good double-wishbone suspension, there's still stress on the shock towers from the shocks and overall chassis loads. Reinforcing this area will improve steering feel and precision as well as cut down on cowl shake. Many bars on the market are just for looks, but we designed ours to bolt solidly together instead of having a pivot where the bar meets the tower. Stainless steel.

1990-05 COMING SOON! A



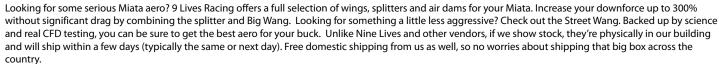
A floppy chassis means less precision, more rattles and decreased ride quality as the chassis bends instead of letting the suspension deal with it. We've also found that the rear subframes on high-power NCs want to move around and crack. IL Motorsports has developed these red powdercoated aluminum braces to keep your NC chassis as rigid as possible. Loss of ground clearance is minimal and the powdercoated aluminum won't rust.

2006-15 13-69110 🗥 X-Brace 2006-15 **Lower Front** 13-69115 🗥 2006-15 Lower Rear 13-69105 🗥





### 9 LIVES RACING



•					
1990-05	"Sturdy Boi" Splitter Mount	29-76119 🗥	1990-05	Front Splitter	29-76110 🗥
1990-97	"Damn Dam" Front Air Dam	29-77310 🗥	1999-05	"Damn Dam" Front Air Dam	29-77320 🗥
1990-05	"Big Wang" kit	29-77410 🗥	2006-15	"Big Wang" kit	29-77430 🗥
2016+	"Big Wang" kit	29-77440 🗥	1990-2005	"Duece" Double Element kit	29-77600 🗥
1990-2005	"Street Wang" kit	29-77210 🗥	2006-2015	"Street Wang" kit	29-77230 🗘



#### RGR SPLITTERS

Splitters do exactly what they say - split the air. The goal is to keep as much air out from under the car as possible, and make sure what air does get under the car is smooth and stable. Doing so decreases drag and increases downforce (or decreases lift), making the car more stable at speed. This splitter does all of that while not requiring any body modifications.

1990-97	29-7613X 🛭
1999-05	29-7613Y 🔏
Splitter Seal	36-90085

# RGR SPATS

These spats cover the front edge of the tires that are exposed because of the stock bodywork to help clean up that air and reduce drag. They also work with the splitter to help create a high pressure zone around the bumper, helping speed up the air under your car due to the pressure differential. These are made out of 5052 aluminum, like the splitters, for both strength and resiliency. They're intended to work together with our RGR splitters.

1990-97 29-76

29-76050 🗥

1999-05

29-760550 🗥



#### HOOD LOUVERS A

Increase airflow through the nose and add front downforce with these well-tested louvers. They're designed to avoid any structural cuts in the hood and come with a handy template. A great way to improve your cooling. Sold as a full set. (Verus louvers shown.)

 Singular 1990-15
 29-40020 XX ▲

 Spiked Performance 90-05
 29-40050

 Verus louvers 2016+
 29-40030 ▲

 Verus rain guards 2016+
 29-40032 ▲

# FENDER VENTS B

Designed to evacuate some of that turbulent air from your front wheel wheels – improving brake and engine cooling, lowering tire temps, and generally improving airflow around the car. They're constructed from powdercoated laser cut aluminum. Simply use the included template as a guide, cut away your fenders and rivet in the vents. The end result is probably stiffer than stock, and will extract large amounts of air from your front wheel wells for better aerodynamics.

LLD 1990-05 29-721X0 A
Spiked 1990-05 29-72130 A

# **VERUS CANARDS** c

They add downforce while reducing drag by cleaning up the airflow around the front wheels. Yes, lower drag and increased downforce is possible. The canards provide 60 lbs of downforce at 100 mph and remove 10 lbs of drag at the same speed.

They're made of real carbon fiber with no gel coat and include stainless hardware. Paper templates are included to make sure you get the perfect alignment. Includes a pair of canards, enough for one car. A great match to the rear diffuser..

016+ 29-76040 🗥

# VERUS FLAT UNDERBODY PANELS D ■

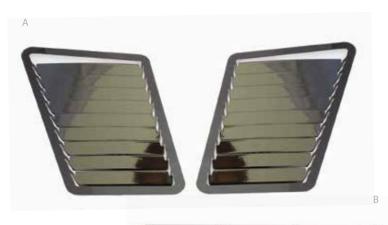
Improve your Miata's efficiency! Mazda did a decent job of smoothing the underside of the ND, but there are still some gaps. These flat panels are shown to decrease drag by 10 points, leading to a higher top speed and better fuel economy. Okay, it's not a massive change but every bit helps. These should also help drive your diffuser. Made of powdercoated 5052 aluminum. Simple installation.

2016+ S29-78060 🗥

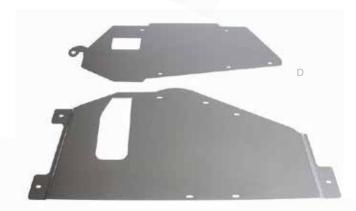
#### VERUS REAR DIFFUSER E

Again with the CFD and the science! This diffuser cuts down drag and lift and has been shown to drop laptimes. Plus it looks awesome.

2016+ 29-78040 🗥









#### **REAR VIEW CAMERA D**

Give your ND an integrated rear view camera! These are especially useful on RFs, but we like them on all our cars. This is a full factory-style integration without the weird little bumper pimple that the 2019 cars got. Shift into reverse, and the screen on your dash changes to the camera view including side traffic alerts. Head forward and you're back to normal. If you have any questions, we have a step by step video available!







#### **MX5THINGS ROOF CONTROLLERS E**

The NC PRHT and ND RF tops are great, but the functionality could be better. Of course, what works for one person may not be great for the next, so ideally it could be customized to what each person wants. Fortunately, this controller solves those problems and more.

2006-15 PRHT 25-91135 🗥 2017+ RF 25-91145 🗥

#### **MX5THINGS CONTROL MODULES**

The ND Miata has some great creature comfort options, but at times the usability is limited. Wouldn't it be great if you could modify and customzie some of those electronics to do what you wanted? These control modules from MX5Things give you more control over the power features you want such as your DRL lights, Accessory Power and Power Windows!

ND ACC Module 25-91200 🗥 ND DRL Module 25-91210 🗥 ND Window Controller 25-9134X~RF 🛕 28-39520 🗥 NC Smartflasher





# **TOP LOCK CAPS E**

The latches on your top and hardtop rely on this little doodad in order to stay closed. If it's broken or worn, you'll find that the latch has trouble staying latched or is very easy to open, even if you've adjusted the tension. Confused? Check out our video for a full explanation.

1990-02 M29-19000 🗥

2003-05 M29-19000 🗥



#### SPIKED PERFORMANCE RADIATOR SHROUD

This panel installs in front of the radiator and between the headlights to do just that. Plus, it looks awesome! Carefully laser cut out of aluminum and available in a brushed bare aluminum finish or a wrinkle satin black, this easily bolts into existing holes (with new bolts and spacers to get the height just right) and has plenty of room for your latch to function perfectly.

1990-97 09-5600X 🗥





# **FM TWIN HYDRAULIC HOOD LIFT KITS** A

It's such a small thing. But these hood lifts get the hood prop out of the way and open the hood farther than stock, giving you more room to work and making it easier to show off your engine bay. Once you've got them, you'll wonder why you waited. Twin props means a nice even lift to your hood and no twist. Easy installation, bolt-on in most cases but NAs and NBs need new holes drilled.

1990-05 29-97021 🗥 29-97022 🗥 2006-12 2016+ 29-97024 🗥 Drill/tap kit

1990-05

M35-49100 🗥

# **BILLET ALUMINUM TOP LATCH LOCKS B**

Over time, your top latches wear and get loose. There's no adjustment for this. So we offer these replacement latches with a few bonus features. Not only will they restore a nice solid click to your top latches, you can adjust them to compensate for wear on the rest of the mechansim. They come with an alternate screw that will make them essentially into a lock, great for latches you rarely want to remove like a hardtop. Available in low-key black or "press here to eject" red. Engraved with the FM initials.

1990-05 (Red or Black)

M21-91000 🗥

#### **FM WASHER BOTTLE** c

Inspired by the popular Cappucino washer mod, this little guy fits at the base of the windshield, adding a much larger capacity, cleaning up your engine bay nicely and opening up space for other things. Exclusively from FM!

02-50031 🗥

#### **DEI INSULATION KITS**

Miatas are great, but they're not exactly quiet cars. These kits won't turn your Miata into a quiet Rolls, but they're a good step in the right direction. We have a CNC-cut under-carpet insulation kit for the NA/NB, a chassis sound damping kit for NA/NB (that will also fit the NC), and a door sound damping kit for all Miatas. Decrease the noise - especially the harshness of the noise - and make that stereo sound better.

1990-05 carpet insulation 21-67400 🛕 1999-05 chassis damping 21-67450 🗥 1990+ door damping 21-67500 🗥

WARNING: Cancer and Reproductive Harm -



# HARD DOG ROLL BARS

The complete line of Hard Dog products is fairly complex, and the right bar for you will depend on your particular needs. We've chosen the most popular options that suit the majority of owners. Give us a call if you want to go over all options. These products ship directly from the manufacturer.

#### 1990-2005 SPORT BAR

The Sport bar is our favorite street bar for NA and NB because it's easy to live with, but is still accepted at many track events - although we do recommend checking with the organizers. Made of 1.5" DOM tubing, it allows the use of both hard and soft tops and plastic or glass windows and does not interfere with seat travel.

#### SPORT

1.5" tubing 20-17000 🗥

**"FAT BOY"** (1.75" tubing, includes harness tabs)

1.75" tubing 20-28020 🗥

#### SFI PADDING WITH COVER

vinyl or leather 🗥

#### 1990-2005 HARD CORE BAR 🔤

The Hard Core sits a bit farther forward and a bit taller than the Sport. It's made of 1.75" DOM tube and is legal for SCCA Solo I or NASA use if you can get low enough to meet the required 2" clearance. Unfortunately, it is not compatible with the hardtop and does affect seat travel slightly. It comes standard with harness mounting points and diagonals. Usually not recommended for street cars with stock seats as it sits closer to your head.

1.75" tubing 20-28000 🗥

#### **SFI PADDING WITH COVER**

vinvl or leather 🗥

#### 1990-2005 DEUCE

Fancy the old Cobra look? The Deuce is for you. It's made of beefy 1.75" tubing and has lots of solid structure underneath - it's not just a useless style bar. The double-hump design avoids the race car look of more traditional roll bar designs, and the rear bracing can be attached at the top of the bar or the side. No seat travel restrictions or interference with any sort of top or rear window style. It sits a bit lower than the Sport so it does not offer as much clearance in the event of an unplanned inversion. It's best for those who put a bit more emphasis on form than function. Not legal for track use in most cases. Black powdercoat.

1990-05 20-36100 🗥

# 1990-2005 HARNESS BAR 🔚

Prefer to attach your harnesses to a bar instead of tabs? This bar bolts into any 1990-05 Miata to provide a solid attachment point. Intended for use with a roll bar only.

1990-05 20-66000 🗥

#### 2006-2015 TRANSFORMER BAR

A Flyin' Miata exclusive, this bar has a removable main hoop. You can run the normal height version for day-to-day use, then swap over to a version that's a full 7" taller than stock. All the parts for the tall bar will fit in the trunk so you can swap over at the track in about 15 minutes. The top has to remain down in track mode, and you either have to remove the trunklid or have a spare with holes cut in it. See the video on our website!

2006-15 20-28010 🗥

#### 2006-2015 SPORT & HARD BAR

This bar bolts into the beefy mounting points for the factory hoops. Made of strong 1.75" DOM tubing. Full seat movement is retained, and the optional harness bar gives you a place to anchor yourself down. The soft top Sport version is 3" taller than the stock hoops with rear braces hidden under the rear deck of the car with large backing plates for a strong footing. The Hard Bar for Power Retractable Hard Top cars is no taller than the factory hoops and has no rear bracing due to the way the top fits.

 SOFT TOPS
 2006-15
 20-19000 ♠

 PRHT
 2006-15
 20-16000 ♠

#### 2016-2023 SPORT BAR

NASA legal, no change in seat travel, full top compatibility, full access to the storage bins, minimal plastic cutting and a tall height. It's the perfect roll bar. 1.75" DOM tubing. Soft top cars only.

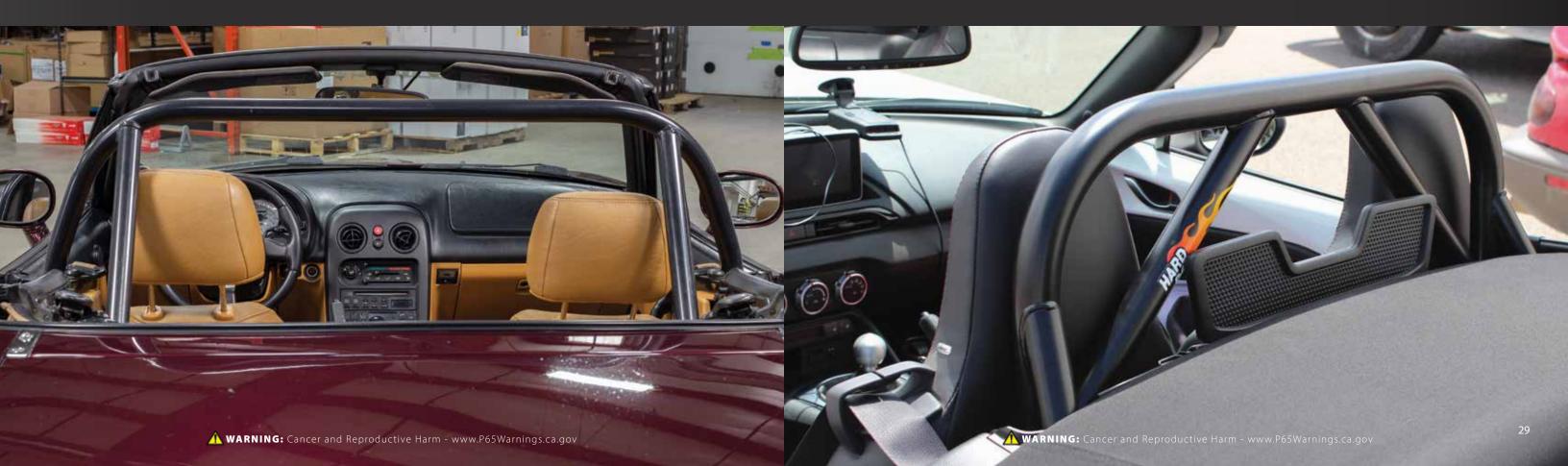
no diagonals 20-19020 🛕 double diagonals 20-19020 🛕

# 2017-2023 EXCLUSIVE RF ROLL BAR

We worked with our friends at Hard Dog to give you as much overhead protection as possible. With this bar installed, you can no longer drop the top. Your retractable fastback is now a non-retractable fastback - or maybe it's a coupe with an odd hatch. The bar is made of 1.75" DOM tubing with a 0.120" wall, almost overkill for such a light car. The new rear legs come with 3/16" backing plates that require six holes to be drilled in the chassis. You do gain some storage area under the "sail panel" where the top would usually go, and it's easily accessed with the dash switch.

Includes a harness bar and retains full function of the stock seatbelts. The double diagonals are spread at the top to provide maximum visibility out the back and stay well clear of the storage compartment behind the passenger seat.

2017+ RF 20-19030 🗥



#### CRAVENSPEED SHIFT KNOB & SHORT SHIFTER KIT A



The ND doesn't exactly have a shifter like a truck. It's pretty short and tight. But you can make it shorter and tighter with this Cravenspeed part! 30% shorter, to be exact. Believe it or not, it gives your car an even shorter and more precise shift feel. The shift knob core is dense stainless steel for mass. It's wrapped in acetal, which insulates you from the burn. The top is aluminum, engraved with a stylish FM logo. The shift knob fits all manual Miatas!

Short Shifter Kit M08-45020 🗥 2016+ 21-16270 🗥 Shift Knob

#### FM PEDAL COVERS B

High performance driving means high performance footwork. These covers offer 50% more grip than stock when dry and 30% more when wet. They fasten securely to your stock pedals with locking hardware for worry-free driving. They even have a cover for the dead pedal, because we all need high-traction dead

1990-97	21-74000 🗥	2006-15	21-74000 🗥	1990+	21-74900 🗥
1999-05	21-74000 🗥	2016+	21-74000 🗥		

#### **CIPHER AUTO STEERING WHEELS** C

These quality wheels are a direct bolt-in replacement for your stock unit and retain your stock airbag. They're not just stock replacements, either - the wheel is contoured to be exceptionally comfortable and has a slightly flattened bottom for a bit more leg room. The real leather feels great under your hands and the crosssection of the wheel is slightly thicker for better grip. The overall diameter is the same as stock other than the flat bottom. (NB Shown Below)

1999-03 M21-41105 🗥 M21-41110 🗥 2006-15 M21-41115 2016+

#### **NA CUP HOLDER** D

This cupholder easily presses into the front of your center console and is held securely in place with geometry (and is easy to remove). This is a much more convenient location than the stock cupholders, as it's not so close to the shifter, and is invisible when you're not using it (assuming you close your center console). 1990 -1997 21-61100 🗥

#### **ND CENTER CONSOLE SHELF** E

Made of powdercoated aluminum, this simple yet stout shelf takes advantage of existing mounting points to fit within your ND glove box, providing you with a more organized and usable storage space. No modifications are required. Be aware that you may have to flex the shelf out of the way slightly in order to fit your cupholders into the glove box. Works in all ND gloveboxes.

2016+ 21-61120 🗥

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov



#### **DELRIN SHIFT KNOB** A

The knob is made of Delrin so it won't become scorching hot in the sun or transmit transmission heat to your palm, unlike aluminum knobs. It's a bit taller than stock to give you a little more leverage and to make the gates more distinct. It's also a bit lighter than stock, but comes with a metal insert so it doesn't buzz or make shifting more difficult, like a too-light knob would. Fits all manual Miatas!

21-16250 🗥

#### SPIKED TEAR DROP SHIFT KNOB B

Striking a great middle cost between our Delrin shift knob and our Cravenspeed shift knob. The extra height makes it a bit closer to the wheel, but more importantly, it increases the leverage over the shifter and decreases the effort to shift. The smaller diameter makes it similar to the stock NA and NB knobs, but with a definite improvement in feel. CNCmachined out of aluminum for long life and great looks (do be careful when it's especially hot or cold out). Fits all manual Miatas!

21-16261 🗥

#### **ECLIPTECH SHIFT-P2 SHIFT LIGHT** C

An F1-style sequential tach! 7 LEDs light up in series as you move through the rev range, making it easy to shift perfectly every time. You can configure it however you want, including trigger points, LED color and the way the LEDs behave. There's a small display that can also show you battery voltage or other alerts. Small enough to sit on your steering column. Easy installation, and works with most cars and motorcycles. We love this kind of thing. The P2+ adds extra programmability

Shift P2 23-963xx 🗥

#### **ND TRUNK POPPERS** D

Fully open your trunk lid with the press of the open button - no more popping slightly open, then pulling it up the rest of the way. Convenient when you have to open the trunk of the car with your hands full. This kit may not work with extra weight on the lid, like a heavy liner, luggage rack, etc.

21-37140 🗥

#### **ND1 GLOVE BOX UPGRADE B**

With the ND2s (2019+), Mazda decided to ditch the CD player between the seats which gave them the opportunity to put in a larger, more functional storage compartment - the floor of the ND2 box is about 2" lower than the ND1. The good news is that the mounting points for the glove boxes did not change between the models, so ND1 owners who desire more in-car storage and don't mind getting rid of the CD player now have that chance. The larger box is especially handy when storing the cup holders.

2016-18 21-64140 🗥

# **REPLACEMENT GAUGE HOOD F**

The stock gauge hood is usually great until you try to remove it. They're notoriously brittle, and will break the tabs off easily. Fortunately, we have a solution! This gauge hood is built to OE specifications and is available at much lower price than the Mazda version. It's made from a UV resistant material that will keep your investment looking good for years to come, backed by a 12 month warranty. It even comes with the necessary metal clips so that it is a true direct replacement with no modications required to

1994-97 M21-16315 🗥 1990-93 M21-16301 🗥

#### **VENT GAUGE PODS** G

This is an adapter that allows a 2-1/16" (52mm) gauge to be easily installed where the stock vents originally were. Works with NAs and NBs, in any of the "eyeball" vent locations. You could band-aid your gauge into place by disassembling your stock vent, using part of it, and layering tape to increase the OD on the gauge, but that will still leave an ugly edge around the gauge. It'll work, but it's not a terribly clean solution. This is just about as clean as it gets, is a perfect fit, and is fully reversible.

1990 -2005 21-16520 🗥







# LED LIGHTING

We're big fans of LED lighting. It responds quickly, it generates almost no heat, it lasts for a long time and it uses minimal power. What's not to love?

We use LEDs from Diode Dynamics because they're the best ones we've found. They're made in the US to high standards, not just the minimum price. They've got constant-current circuitry to protect the bulbs from transients and offer a three year warranty. Even their lumen ratings are based on actual measurements instead of advertising promises. You can buy cheaper LEDs, but you can't buy better ones.

For the side markers, we have the option of amber and red bulbs that use your existing housings, or complete replacement housings that are either white or smoked when off but still light up the right color. Note that the complete housing sets are not made by Diode Dynamics and are sold in packs of four while the bulbs are sold in pairs.

About hyperflash: the flasher in your Miata expects some resistance from the light bulbs. If that resistance isn't there, it will flash faster, like you have a blown bulb. That's a clear sign of someone who has replaced their LEDs but hasn't paid any attention to actual function. It's a little embarassing to see. The solution is to either add inline resistors or install an appropriate flasher. We offer both options.

WE OFFER LED LIGHTING FOR EVERY GENERATION OF MIATA.

▲ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov





We know that one of the biggest challenges in running a high-power Miata is cooling. So we built a special dyno rig and spent hours and hours doing instrumented testing. Then we took to the track and the street, testing in our thin, high-altitude air to torture-test our parts as much as possible. Nobody else has tested to this extent. The results? The most efficient cooling upgrades available for the Miata.



# STAGE 3 FM BRUSHLESS AIRFLOW KIT

The latest technology in fan design comes to Miatas. These fans aren't usually available to the aftermarket, but we worked with Spal to bring them to you!

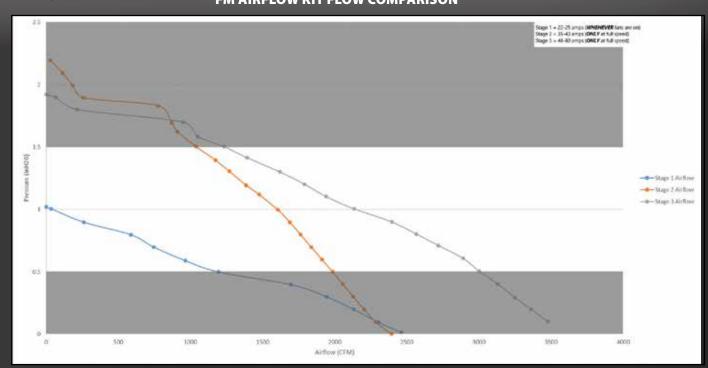
The brushless fans have a variable speed and an intelligent controller so they can deliver as much or as little airflow as is required, from a slight whisper to a hurricane. They're tied into the coolant temperature, so they can anticipate problems and prevent the car from getting hot in the first place.

Certain ECUs such as the Hydra and MS3 can control the fans directly so they do not require the standalone controller. Stock ECUs, MS2 and the FM221 will require the controller. The fans will not work without PWM control of some sort.

#### STAGE 3 BRUSHLESS

1990-05 09-5623x ▲ (Controller kit available as an add-on)

# FM AIRFLOW KIT FLOW COMPARISON





#### **STAGE 2 V2 FM BRUSHLESS AIRFLOW KIT**

The same technology as our Stage 3 Brushless Airflow Kit, but in a smaller and more affordable package. Our newly designed Stage 2 kit features a high-watt (500W) version of Spal's 14" brushless fan. Peaking at 2400 cfm, the fan does not fall off nearly as fast as our Stage 1 airflow kit when pulling through multiple heat exchangers. Even at high restriction levels it flows more than the previous Stage 2 kit did with no restriction.

Certain ECUs such as the Hydra and MS3 can control the fans directly so they do not require the standalone controller. Stock ECUs, MS2 and the FM221 will require the controller. The fans will not work without PWM control of some sort.

#### STAGE 2 V2 BRUSHLESS

1990-05 09-5621x 🗥

(Controller kit available as an add-on)



#### **STAGE 1 FM AIRFLOW KITS**

We started with a laser-cut aluminum shroud to maximize efficiency of the fans. It ensures that all the air gets pulled through the radiator - and we mounted the shroud far enough away from the radiator to make sure the whole core gets air. The shroud is made with threaded inserts to make life easier and comes with spacers to ensure proper standoff from the core. A pair of Spal fans were chosen not only for their flow, but their ability to pull air through a stack of heat exchangers such as an intercooler and A/C condenser. Most fans are rated for their flow at 0 pressure and their performance drops off rapidly as they have to work harder. Not these! They're also low-profile enough to clear most intercooler piping. The end result is a compact package that does an excellent job of cooling highpower Miatas. 1990-93 kits include the wiring upgrades.

**STAGE 1** (1900 cfm at 0 pressure, low-profile)

1990-05 Crossflow radiator 09-56205x 📤 1990-05

Non-crossflow radiator

09-56200x 🛆





#### **FM RADIATORS**

From extensive dyno testing, we've learned that the design of the radiator core is critical to how well a radiator works - and that a thin, efficient core works better than a fat inefficient one. We also learned that turning the radiator sideways so the water flows from side to side makes it more effective. Mazda agrees, as all NC and ND radiators are crossflow from the factory.

That's why all our radiators are crossflows. According to our testing, it's the best radiator available for the Miata. They've won at the 25 Hours of Thunderhill. They've survived 15 hours of turbo abuse at Laguna Seca. And now they're improved. The newest generation NA/NB crossflow relocates the neck for faster filling and the drain for faster draining. The plastic stock replacement rad is just that - no real increase in performance, just not old.

**CROSSFLOW** 

1990-05

09-10000 🗥

PLASTIC STOCK REPLACEMENT 1990-97

1999-05

09-17010 🗥 M09-17200 🗥

#### FM COOLANT REROUTE KIT B

To get consistent coolant flow through the entire engine, you need a reroute. Why do you need this reroute? Simple, it's the best. It's a single piece for the best reliability, it uses a standard thermostat for easy maintenance and different temps, it fits great with EGR, and it's relatively easy to install. But the biggest thing is the turbo water routing - that hot turbo water is put into the radiator, where it can cool off, instead of being put back into the engine where it will make your engine even hotter.

Our reroutes now include a custom bracket to hold the hose in the perfect position, and we now offer a custom adapter hose to get the perfect fit if you're using a stock / upright / downflow (i.e., not crossflow) radiator.

1990-05 Essential Reroute Kit Turbo Connection Kit for FM Garrett Turbos Turbo Connection Kit for MSM Turbo Upright Adapter Hose Kit

09-6002x 🗥

#### 09-61000 🗥 09-61050 🗥 09-60026 🗥

## **FM RADIATOR CAPS**

These are made with a silicone seal for long life and an anodized finish with a laser-engraved logo. Available in 16 psi or 20 psi versions. Most cars running at least 30% antifreeze will want the 16 psi version. If you're running more water you'll want the 20 psi version - 100% water boils at a lower temp than water + antifreeze, raising the pressure of the system brings the boiling point back up.

1990+ 16 PSI 09-46010~16 1990+ 20 PSI 09-46010~20 🗥



#### TRANSMISSION & DIFFERENTIAL COOLERS

The ND transmission and differential are very efficient but prone to overheating on track. We've seen sustained fluid temperatures over 300F in our low speed testing, and we know that high speed testing would be even worse. This means while you're at a risk of losing your lubrication, a hot driveline also sucks down power - and gets even hotter doing so. The Global Cup Cars run coolers on both the transmission and differential, and so should you. With these coolers in place, we saw temperatures at a stable 200-220F during our 15-hour high speed track test using a turbo Miata.

These coolers have an external pump hooked up to a temperature sensor. This prevents over-cooling and maintains fluid temperature in the ideal range. They also increase fluid capacity and have an integrated filter so that a broken gearset won't kill the pump or cooler. The transmission cooler is mounted in the nose and is fully compatible with our turbo intercoolers. The diff cooler is tucked in an existing vent by the rear wheels. No modifications are required to the transmission or differential housings, the plumbing bolts right into place.



Differential cooler

Edelbrock relocation bracket

08-90320 🗥

03-10120 🛆

# FM TOTALLY COOL KIT: OIL, TRANSMISSION & DIFFERENTIAL COOLER PACKAGE

Includes our ND oil cooler kit, transmission cooler kit and differential cooler kit to help all your fluids keep their cool. For increased airflow, we also offer the package with a set of Verus hood louvers.

2016+

2016+

2016+ 108-99200 🗥

2019+ OIL COOLER ADAPTOR KIT 04-37249 🛕



#### **FM OIL COOLER KIT** A

Your oil is the lifeblood of your engine, and if it overheats it starts to lose viscosity - then Bad Things happen. But many oil cooler kits aren't well thought out and can fail too easily. So we developed our own. Yes, that's a bit of a common theme around here.

We use an oil thermostat so your engine comes up to temperature as quickly as possible, as cold oil isn't any better than overheated oil. Braided stainless steel lines with AN-8 fittings ensure a long, reliable life in this critical system.

The 13-row Setrab oil cooler is mounted to custom brackets where it gets good airflow. Torture tested as part of our 15-hour track test - as well as countless track Miatas. They simply

don't fail. Compatible with our oil filter relocation kits.

1990-93	04-37240x
1994-97	04-37240x
1999-05	04-37240x
2016-18	04-37240x
010 LADARTOR KIT	04-37240

#### FM COOLANT TANKS B

Stock radiator tanks are made of plastic, which gets brittle with age and can eventually crack. If this happens on an NA, NB or ND, it's embarassing - especially given how slippery coolant is. On the NC, it means you've just lost most of your cooling capacity. Don't let it happen to you, install an aluminum tank instead. Only Flyin' Miata includes sight tubes so you can check your coolant level.

OVERFLOW TANK EXPANSION TANK

1999-05 09-16026 🛕 2006-15 09-16030 🛕

#### **FM OIL THERMOSTAT KITS** C

The problem with running an oil cooler is keeping your oil warm enough! This thermostat fits in behind your oil filter and opens up at 190F. It comes with fat -8 AN fittings for minimal pressure drop and a threaded fitting so it's an easy install on the engine. 1.6 versions include a spacer under the thermostat as well as a longer pipe for the oil filter. Oil lines not included. (This is included in our full oil cooler kits.)

1990-93 04-37310 **A** 1994-05 04-37310 **A** 

#### **180 DEGREE THERMOSTAT** D

Slightly cooler than the stock thermostat, but still warm enough that your engine runs at a happy temperature and your heater works. Includes a gasket. Fits all NA and NB engines.

1990-05 09-46109 🗥



We have a full range of engine rebuild parts on the shelf. They're all chosen for maximum strength and performance. There are far too many to list here, so please give us a call. We can also supply parts for other relatives of the Miata engine, such as the B6T in the 323 GTX.

#### VALVE SPRING KIT A

At 7000 rpm, your valves open and close every 17 milliseconds. Too stiff a spring means extra drag which costs power. Too soft a spring means the valve starts to float and never closes all the way.

Carefully specified for the Miata, these springs are part of the ideal Miata head. The titanium retainer's light weight means there's less reciprocating mass, which lets the valves respond more quickly and reduces stress on the valvetrain. The well-matched spring rate means your valves are better controlled at high engine speed, but without the drag and extra stress of a too-stiff spring. In turbo cars, the exhaust valves will seat better even under high backpressure or boost. As an added bonus, they also

allow for greater lift (12mm / 0.472") if you're running different cams. They are designed to allow engine speeds of up to 9000 rpm before valve float.

Aluminum spring seat, chrome silicon steel spring and titanium retainer. Sold in sets of 16 for a complete head. Requires the use of valve keepers from a 1999-05 engine (not included). The dual spring kit is recommended for extended use above 7500 rpm or 18+ psi.

**DUAL SPRING KIT** 1990-05 04-66602 **A** 

#### OVERSIZE INCONEL VALVES B

Oversized exhaust valves will flow better and make more power. Our valves are heavily backcut to give more airflow at a given lift and are 1mm larger in diameter than stock. The exotic lconel 751 alloy can handle much higher heat than stainless steel. It's a lot more difficult to machine and heat treat so they cost more, but it's well worth it.

There are 8 intake and 8 exhaust valves in a Miata engine.

**EXHAUST** 1994-05 M04-66555 **A** 

#### FM WISECO PISTONS c

These pistons are Flyin' Miata's exclusive design, produced by Wiseco. You can't get them anywhere else. Forged for high strength, they're perfect for extreme use such as high boost - and we mean extreme. FM pistons have been used in an 800 hp Miata motor.

They're manufactured from extruded enhanced high-silicone 2618 alloy with additional copper, nickel and magnesium for low thermal expansion and maximum wear resistance. They're heat-treated several times. Then they're coated with a phosphate dry lubricant for minimum friction, given a ceramic coating on the top surface to protect the piston in case of detonation and cut for oversize valve clearance. You can even use oversize valves on the VVT engines, something you can't do with most others. Includes premium rings and CrMo wristpins.

While forged pistons are a bit noisier when cold due to greater clearances, we've designed them to minimize this. Sold in sets of four.

Please see our website for options. A



#### **FM HEAD GASKETS**

Designed for us! All metal multi-layered steel head gasket, perfect for high boost applications. The FM gaskets are made by Cometic and available in 1mm overbore or 2mm overbore sizes. These head gaskets are also used in our engine rebuild and head gasket kits. The 0.040" gaskets will drop compression slightly - a 9:1 engine will drop to 8.85:1.

FM STEEL		FACTORY STEEL	L
1990-93 1994-00	04-20005 🚣 04-20004 🚣	1994-00 2001-05	04-20006 🔔 04-20006 🗘
2004 05	04 20002 A		

#### **HEAD GASKET SETS**

Head gasket sets have all the gaskets, seals and o-rings you need to remove, rebuild and replace a head. Valve stem seals and your choice of spark plugs included. Our engine rebuild kits also include a full head gasket set.

FM GASKET	
1990-93	04-29001 👍
FACTORY GASKET	
1994-97	04-29003 🗳
1999-00	04-29005
2001-05	04-29007 4

# FM 1.8 CONVERSION KIT

Over the years, dropping a 1.8 engine into a 1990-93 Miata has become more and more common. Why? Well, it's a good way to add power and torque. It's surprisingly affordable. If your plans are for big power, it's easier to accomplish with the larger engine. It also means you can fit a stroker engine in for maximum power from a Miata block.

But the biggest reason it's become so widespread is the existence of the Flyin' Miata conversion kit. A 1.8 swap used to involve a certain amount of fabrication. No more. The conversion kit includes the following: a throttle body adaptor to install your 1.6 throttle body on the 1.8 intake manifold, a coil bracket to mount your coils on the new head, a throttle cable mount, wiring parts to extend the cam angle sensor harness (extension harness optional) and rubber mounts.

For a short version of what needs to be done, check out the Technical section of flyinMiata.com or Mazda Miata Performance Projects.

There are many options available, so please go to our site to configure for your needs.

1990-93 04-70500 🗥

#### **FM ENGINE REBUILD KITS**

Every belt, seal and gasket you need to rebuild an engine from 1990-2005. Piston rings, oil pump and water pump are not included with this kit and will need to be purchased separately. The kit includes (where appropriate): a timing belt; a multi-layer steel head gasket; gaskets for the thermostat, valve cover, oil pickup, intake and exhaust manifolds; ACL Race main, thrust and rod bearings in stock or over size; o-rings for the cam sensor, thermostat housing, oil pump, oil cooler and dip stick tube where applicable; seals for the front and rear of the crank, the valve stems, the oil pan ends and the camshafts: NGK spark plugs: a new PCV valve and grommet; tensioner and idler pulleys and a 180 degree thermostat. There's even a container of Redline assembly lube.

The parts list varies and can be customized for your specific needs at flyinmiata.com.



**MARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

#### FLOWFORCE 725CC/MIN EV-14 INJECTORS A

The latest Bosch EV-14 design, these are state of the art injectors and an FM exclusive. The best spray pattern (an off-axis dual-cone) and response time available, and flow-tested and matched to  $\pm 0.4\%$  (tighter than most).

These are true plug-in installation for all 1990-05 Miatas, with no need for adapters or wiring harness modifications. An adapter is required (and included) to match the height of the fuel injector to the Miata's engine. Enough fuel for most pump gas setups, as well as E85 on stock engines. Bear in mind that you'll need aftermarket engine management to deal with an injector this big, these will not work with a stock ECU. High impedance. Sold in sets of four.

1990-05 04-41300 0550CC 🛝

# FM FUEL RAIL KITS B

Our billet fuel rail offers a feed from each end to promote better distribution between cylinders and offer higher flow overall. AN fittings on the ends of the rail make it easy to install instead of dealing with brass hose barbs. 1999-05 cars use all stainless steel lines that clip on to the factory hard lines, 1990-97 cars have a short section of E-85 compatible rubber. Compatible with Miata engine swaps, too!

1990-05 kit 04-46550 **A** 1990-05 rail only 04-46591 **A** 

#### **DEATSCHWERKS FUEL PUMPS** c

Quiet and reliable DeatschWerks pumps are the standard of the industry. They're E85 compatible and the base of all our builds.

**165 LPH STOCK REPLACEMENT**1990-05 04-47012 ▲

**325 LPH HIGH VOLUME** 1990-05 04-47015 **265 LPH HIGH VOLUME** 2005-16

04-47030 🗥

# FM FUEL RELAY UPGRADE D

This kit was originally designed by our friends at Trackspeed and bypasses the stock fuel pump relay and prevent failures. This provides an end-to-end wiring solution that is designed for higher loads, pulling power directly from the battery (or kill switch) and running it through a 35A dedicated relay instead of the factory main and fuel pump relays. The harness comes pre-pinned to plug into your OEM fuel pump connector so the pump is controlled just like stock while the new mil-spec wire takes the load. Uses factory connectors and mounting points and includes a 25A fuse.

1990-05 07-46150 🗥

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov



#### MAGNECOR SPARK PLUG WIRES A

Quality plug wires, stainless steel spiral wound core. Much higher quality than the NGKs. No RF interference. 8.5mm diameter. Lifetime warranty.

#### NGK EXTENDED SPARK PLUGS (Not Shown)

Heat range 6. The extended reach starts the fuel/air mixture closer to the center of the combustion chamber, giving a better burn. The heat range helps prevent detonation on turbo cars, but resists fouling. Works great for naturally aspirated cars too. Sold in sets of four.

1990-05 04-56201 🗥

# NGK IRIDIUM SPARK PLUGS (Not Shown)

According to the box, these are laser iridium plugs. We don't know what lasers have to do with them either, but this is the right plug for your NC. Sold in sets of four.

2006-15 M04-56210 🗥

#### **NGK RACE SPARK PLUGS B**

No internal resistor means more of the spark energy goes into the arc. Better spark means a bigger plug gap and more power. Great for high power cars and an excellent match to the Big Spark kit. Heat range 7. There is the potential for more radio noise, but we haven't heard it yet.

1990-05 M04-56205 🗥

#### **OEM MAIN RELAY** C

Your car's running fine. You park it and it never starts again. That's what a failed main relay looks like. At this point, it's worth carrying a spare with you. Real Mazda parts - don't take a chance with lesser brands, use the same quality that lasted a couple of decades the first time around!

1990-05 80A Upgrade M36-80310 A 1990-05 Stock M36-80312 A

#### **ND TRANSMISSION STUD KIT** D

This is an easy upgrade to hedge your bets. This kit, which includes eight studs and nuts, replaces the bolts that hold the parts of the transmission case together - specifically, the bellhousing, transmission itself, and the tailshaft housing. The stock bolts can fail, but even if they're together they can allow more case flex than is healthy. The studs are made much higher quality than the stock bolts, plus they're studs as opposed to bolts, so this kit will hold your transmission together better.

2016+ 08-90700 🗥

#### **BANKS PEDAL MONSTER E**

The ND gas pedal has a pretty linear relationship with the throttle - unlike other modern DBW cars - but wouldn't it be great if your engine felt stronger? This won't add any power, but it will make it feel like your engine is bigger, thanks to more aggressive throttle curves. Very adjustable, very smooth, and very safe. Easy OBD-II plug-in installation.

2016+ 07-92000 🗥

#### BANKS IDASH F

Have an NC or ND and need ALL of the data? With the ability for warnings, a shift light, and 2-8 parameters per screen, with up to five screens? And the (optional) ability to datalog it? The Banks iDash is your answer. Easy plug-in to OBD-II, extremely capable and flexible. .

2006+ 23-20000 🗥

# **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov



#### ATI SUPER DAMPER A

As you increase the power of an engine, those power pulses get stronger. The stock damper can't always keep up. The result is cracked gears on oil pumps and damaged bearings on 300+ hp Miatas. ATI is well known in the drag racing world for their effective dampers, and we worked with them to develop one for the Miata.

This unit replaces the stock damper with what is essentially two in one, and includes stock-size accessory drive pulleys. The result is not only a safer engine, but one that runs more smoothly all the time thanks to the improved vibration absorption. We've found that we can easily run more ignition advance and thus make surprising power increases as well. Flyin' Miata sells the damper with the required belt guide - don't be fooled by lower prices elsewhere. SFI approved!

INCLUDES STOCK TRIGGER WHEEL NO TRIGGER WHEEL 1996-05 04-95570 XX 🗥

04-95570 XX 🗥

# 1.6 TPS UPGRADE (Not Shown)

The stock TPS on the 1.6 5-speed cars is basically just an idle switch. Aftermarket ECUs work much better with a potentiometer style, like those used on every Miata from 1994 on. This kit allows you to bolt on a BMW TPS that can talk to any aftermarket ECU. Plug-in for the FM 221, some other ECUs might need small wiring changes. Available with a quality BMW part or you can source your own aftermarket option.

1990-93 07-360xx 🗥

# ARP HEAD & MAIN CAP STUDS (Not Shown)

Keep it together! There's no point in building a bulletproof bottom end and not using top-quality fasteners. These studs are more evenly tensioned than bolts and can be re-used. We worked with ARP to ensure these fit the Miata perfectly, and they've been torture-tested for years and proven to work.

**HEAD STUDS** 1990-05 04-66205 🗥 MAIN CAP STUDS 1990-05 04-6621 🗥

#### 36-2 TRIGGER WHEEL B

Looking for more resolution for your crank pickup? This 36 (minus 2) tooth wheel is your answer. More resolution means more accurate timing information, especially when your engine speed is changing rapidly. Designed to use factory sensors, this bolts in place of the OE four tooth wheel on 1996-05 cars and can be retrofitted to all "long nose" engines from 1991 to 2005. Not compatible with stock engine computers, this is for Miatas with a Hydra or some other form of replacement ECU only. You will need a crank sensor from a 1999-05.

Available in two versions: one for the ATi damper and one for the stock pulley. If you have a 1990-95 Miata with an ATI pulley that does not already have a trigger wheel, you will need a different belt guide. Call for details.

04-95400 🗥 1990-05

#### **SKUNK2 THROTTLE BODY** c

Stock throttle bodies on track cars have a tendency to lose the screws holding the throttle plate to the throttle shaft, which means that the engine then ingests those screws with poor results. Not on this unit! A larger 64mm bore also lets your engine really suck in air at higher RPM. There may be a small loss in torque down low, but it'll pay off up top. This is particularly useful for supercharged cars. The idle will probably be a bit funky, so this is more of a track upgrade than a street one.

1994-97 S05-41000 🗥 1999-05 S05-41000 0 🗥







**MARNING:** Cancer and Reproductive Har www.P65Warnings.ca.gov

#### VERUS OIL SEPARATOR A

Direct injection engines can suffer from deposits on the backside of the intake valves. On older engines, these were washed off by the fuel spray - but not anymore. This is particularly a problem with boosted engines as they tend to have more oil vapor in the crankcase. The stock PCV system burns this off by feeding it into the intake air, which increases the buildup on the intake valves. To make matters worse, the usual gas additives that clean off your valves don't work because the fuel is injected directly into the cylinder, bypassing the valves.

We worked with Verus Engineering to test their newest air/oil separator. It collects the air from both the crankcase and the head. It's then run through a separate 5 micron filter for each source, then the air passes through a series of baffles and stainless mesh. It's run through a separate 5 micron filter for each source, then the air passes through a series of baffles and stainless mesh. Two more 5 micron filters give the air one final scrub before it heads for the intake manifold and intake piping. The extracted oil is captured by the separator and can be easily drained with a turn of the drain valve. This allows you to monitor the level of oil vapor in the engine, which is an indicator of engine health.

Cars with a sound tube will need a sound tube delete.

**VERUS AIR OIL SEPARATOR** 04-37960 🗥 2016+ **VERUS SOUND TUBE DELETE B** 2016+ 05-95020 🛝

# **MOROSO OIL SEPARATOR** c

Your crankcase is full of oil mist. If that gets into your intake via the PCV system, you'll find yourself burning oil. Not only is it uncool to have blue smoke coming out of your tailpipe, oil is also very low octane so it can mean a loss in power. Mazda knows this, it's why they put an oil separator on the 2004-05 Mazdaspeed. Unfortunately, it's harder to make a good oil separator than you might think and there's a lot of misinformation out there on how to plumb them in correctly. Moroso knows, though. Their separator has a tight steel mesh to encourage the oil to drop out of suspension, and it collects in the lower half. Includes all brackets and fittings to install.

1990-05 M04-37955 🗥

#### FM OIL FILTER RELOCATION KIT D

Our hoses are teflon-line braided stainless steel with AN-8 fittings for maximum strength and minimum pressure loss. We paid close attention to the design of the interior passages in the billet aluminum oil filter block and adapter, to maximize flow and minimize turbulence. The oil filter block itself is mounted on rubber isolators with a backing plate to cut down on the common gurgling noise. We even included a 1/8 NPT fitting that can be used to feed oil to a turbo or a gauge. Fits all 1990-05 Miatas, although it's a tight fit on cars with ABS.

1990-05 04-36150 🗥

# **BOUNDARY ENGINEERING OIL PUMPS E**

Stock Miata oil pumps have gears made of sintered steel, which can shatter under hard use. Boundary Engineering oil pumps have chromoly steel gears that are 15 times stronger to avoid expensive failures. A good match to our ATI damper for a bombproof oil system.

Stage 1, assembled 1991-05 pump 1991-00 04-6951x 🗥

Stage 3, Stage 2 plus hardened relief valve and sleeve 1990-05 04-6951x 🗥

Stage 2, assembled high volume pump 1990-91 04-6951x 🗥 04-6951x 🗥 1991-05

⚠ WARNING: Cancer and Reproductive Harm www.P65Warnings.ca.gov



#### **FM CLUTCHES**

2016+

A hugely popular clutch. These clutches will hold as much torque as an ACT, but have a pedal effort that is much lower and an engagement point that's not buried in the carpet. This makes them easier to drive. Level I clutches work for any Miata with stock engine internals. The Level II is a little bit heavier, but will hold massive torque - a good option for built engines. If you want to install on a 1.6 engine, you'll need a 1.8 flywheel as well. We've tested these at over 400 hp at the wheels.

All clutch kits include the disc, pressure plate, release and pilot bearings, an alignment tool and a clutch switch override to minimize thrust bearing wear on the NA/NB. 90 day limited warranty.

LEVEL 1		LEVEL 2			
1990-05	318 ft-lb	08-19010 🗥	1990-05	353 ft-lb	08-19015 🗥
2006-15	260 ft-lb, 5-speed	08-19055 🗥			
2006-15	260 ft-lb. 6-speed	08-19055 🗥			

#### **FM LIGHTWEIGHT FLYWHEEL**

08-19070

Give your Miata some zing! A lighter flywheel will make the engine respond faster when you blip the throttle or go to shift. In other words, it makes it feel like a sports car! There's a slight gain in acceleration in lower gears too. An integral part in building maximum zoom zoom into your car.

None of our flywheels will affect street driveability, but they will make you smile. To fit an FM flywheel on a 1.6 engine, you will need a 1.8 clutch.

1990-05	10.3 lb	08-26500 🗥	2006-15 8 lb	08-26105 🗥
2016-18		08-2611X 🗥	2019+ NO DUAL MASS	08-2611X 🗥

## EXTENDED BRAIDED SS CLUTCH HOSE

Ensures 100% of clutch pedal effort gets to the clutch. The extended length allows you to replace the steel "pigtail" for easier bleeding.

1990-05 08-66050 🛕 22006-15 M08-66005 🛕

#### **CLUTCH SLAVE CYLINDER**

A weak point in the Miata driveline, the clutch slave is prone to leaks. When that happens, you lose the ability to disengage the clutch and both you and your Miata have a bad day. These quality replacements will put off that day as long as possible. We also have a "clutch hydraulics kit" that includes master, slave and SS hose.

#### SLAVE CYLINDER ONLY

1990	VIN up to 111969	08-46500 🗥
1990-05	VIN from 111969	08-46500 🗥

#### **CLUTCH HYDRAULICS REFRESH BUNDLE**

1990-05 08-46900 Please see our website for options 🗥

#### **FM CLUTCH HAPPY MEAL**

The popular Flyin' Miata clutch, billet flywheel, pilot and release bearings and clutch switch override combination package. Fits NA, NB, NC Miatas. What's the toy? A clutch tool! Available in regular with a Level I clutch or Supersize it for a Level II clutch. We recommend the Supersize meal for cars over 300 rwhp.





08-36000 🗥

08-36050 🗥

08-36050 🗥

08-36060 🛕

08-36060 🗥

08-36000 🗥

VISIT FLYINMIATA.COM FOR CURRENT PRICING AND AVAILABILITY

# **MARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov



# MIATA BOOKS BY THE EXPERTS

Keith Tanner has been at Flyin' Miata for over two decades. During that time, he's written three books on the Miata to help enthusiasts everywhere make their Miatas more fun. There's something for everyone, from a step-by-step on how to change the oil to discussions of the physics of performance. It's all illustrated with clear color photos and written in Keith's accessible and entertaining style.

#### **MAZDA MIATA MX-5 PERFORMANCE PROJECTS**

This is the how-to book of the series. While "How to Build" tells you what suspension parts do and how to adjust them, "Performance Projects" tells you how to install them. The projects range from novice level such as changing oil to expert such as 1.8 conversions and installing a 1999-00 head on a 1994-97 block.

Naturally, it's all clearly explained with lots of clear color pictures. This book has become a standard for Miata owners who work on their car. Covers 1990-05 Miatas, but predates the 2004-05 Mazdaspeed.

990-05 46-86000 🗥

#### **MAZDA MIATA MX-5: FIND IT. FIX IT. TRICK IT.**

The reference book. "Find It, Fix It, Trick It" covers the history of the Miata, a buyer's guide, stories from owners, quotes from magazine tests and information on modifying the car. It also has full specifications on dimensions and performance as well as a year-by-year breakdown of changes. If you want to know how to tell a 2003 Shinsen from a 2004 Azure Blue, it's the one to have. There are a few projects included but it's aimed more at providing general information about the car. When Keith was writing it, he called it "Miata 101". Covers all the 1990-05 Miatas, including the Mazdaspeed MX-5 turbo. Over 400 pictures.

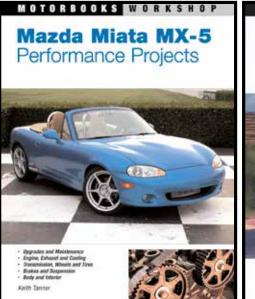
1990-05 46-86010 🗥

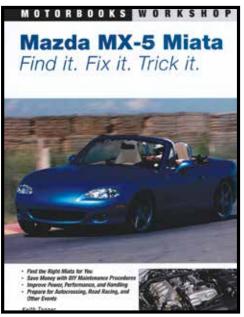
#### **HOW TO BUILD A HIGH PERFORMANCE MAZDA MIATA**

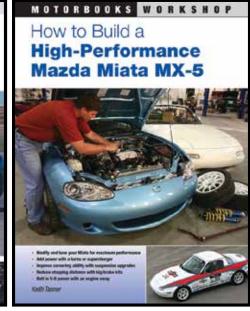
This one is technical, and covers every Miata from the 1990 to 2015. It isn't just a list of parts to buy. You'll gain a solid technical understanding of what's going on with your car. For example, the suspension section starts off with the theory of weight transfer and how it affects your Miata. Then you'll find out what each part of the suspension does and how they all interact. Finally you'll learn what to adjust and how in order to reach your goals. All the systems of the car are addressed in this way.

The book includes sections on engine fundamentals, intake/exhaust, forced induction, fuel and engine managment, the drivetrain, handling and suspension, the braking system, wheels and tires, body and chassis modifications, safety gear and engine swaps.

990+ 46-86015 🗥







**WARNING:** Cancer and Reproductive Harm www.P65Warnings.ca.gov



Great sound, classic looks and solid construction - there's a reason Flyin' Miata exhausts are so popular. They're not the least expensive on the market, but we firmly believe they are the best. Nobody else pays the same attention to detail as we do. They even come with a limited lifetime warranty for the original buyer. That's right - it's the last exhaust you'll ever have to buy.

All of our exhausts use polished and engraved double-wall tips for a subtle, quality look. In most cases, the tip diameter is 3"/75mm. The mufflers and resonators are tuned to avoid any nasty rasp and provide a deep, powerful sound. The entire system is made in the US out of 304 stainless steel and polished to a mirror finish. Even the flanges are polished stainless! All tubes are mandrel-bent on a CNC bender for high accuracy. The tips are adjustable to make it a snap to get the perfect fit. It might all sound a little obsessive, but do you want anything less on your car?

Warranty information: Flyin' Miata exhausts have a lifetime warranty against defects and blowouts for the original purchaser. Catalytic converters have a 25,000 mile warranty on their ability to pass emissions, and a 5 year/50,000 mile warranty on the body.

# FM 1990-97 2.25" EXHAUST

A sweet-sounding, high-quality replacement exhaust for naturally aspirated and our Stage 1 Turbo system. A resonator is included for the ideal note and no rasp.

1990-97 06-170000 🗥

### FM 1999-05 2.25" SINGLE EXHAUST

Ten minutes work gets you more ponies and it sounds great, too! Automatic cars need to have the 2.25" midpipe installed to fit. For naturally aspirated or supercharged cars. Great upgrade paired with our Stage 1 Turbo kits.

1999-05 06-18000 🗥

# FM 1999-05 2.25" MIDPIPE

Stainless steel replacement for the midpipe. Includes a three-way free-flow catalytic converter. Built in two pieces for cheaper shipping and more adjustability to get a perfect fit. A high-end clamp ensures your slip joint will never leak. This 2.25" version is resonated for improved sound control and to eliminate any chance of a rasp and is a great upgrade for cars with our Stage 1 Turbo system installed. The midpipe will be louder than stock and is not compatible with the stock rear muffler on automatic cars. Not approved for use in California, Colorado or Maine.

999-05 06-58100 🗥

# FM MIDPIPE FOR NC 🔚

Stainless steel 2.5" upgrade for your stock midpipe. Includes a high flow catalytic converter. Resonated so it won't blare. A great match for a supercharged car. Not legal for use in California, Colorado or Maine.

2006-15 06-58400 🗥

#### **FM TURBO REPLACEMENT AIR FILTER**

Custom-made for us, this is not available elsewhere. Cleanable oiled cotton, can be maintained with a normal K&N service kit. Shipped pre-oiled and ready to install.

1990-93 Voodoo Kits 05-16070 ▲
1999-05 MSM 05-16035 ▲
1990-05 Non MSM 05-16060 ▲

# FM 1990-97 CATALYTIC CONVERTER

Free flowing for better performance yet considerably less expensive than stock! That's hard to ignore. The low backpressure means turbo cars in particular will benefit with more power and quicker spoolup. The same stainless steel flanges used on our exhausts are also used on the cats. This converter is a bit louder than an OEM converter. Limited warranty. Not approved for use in any state following CARB rules for catalytic converters.

1990-97 06-76000 🗥

# FM EXCLUSIVE RANDALL COLD AIR INTAKE

New design! Our exclusive intake pulls cold, dense, high-pressure air from the base of the windshield for a dyno proven 5 hp gain. Because the air comes from outside the engine bay - unlike most other intakes for the Miata - you get maximum power even at low speeds or coming off the line after idling, which makes it great for autocross. Retains the stock air box and filter, made of carbon fiber weave. Not compatible with right hand drive Miatas, sorry. CARB LEGAL.

1990-97 05-27010 **A** 1999-05 05-27020 **A** 

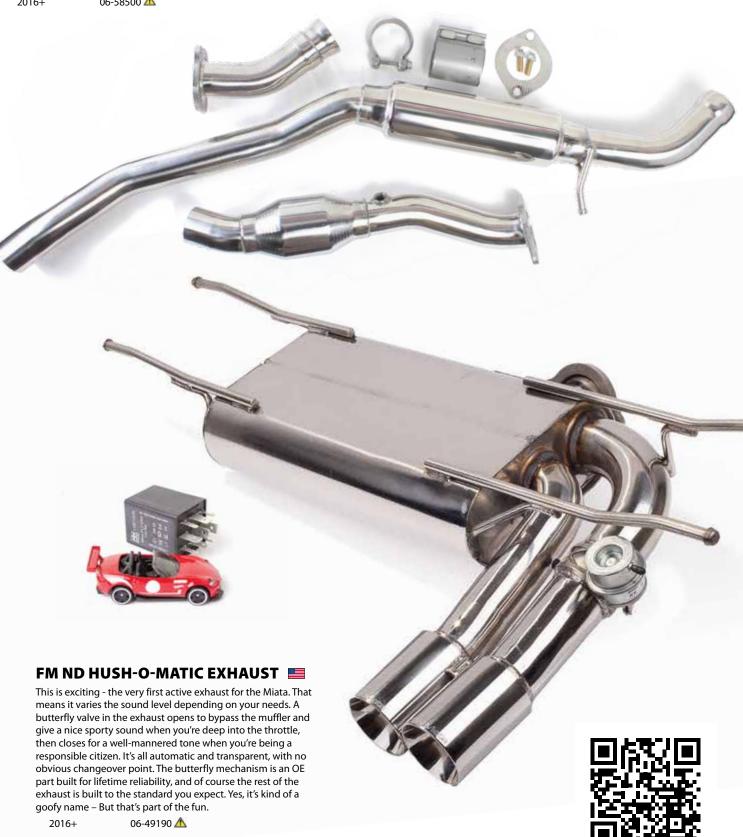




# FM ND MIDPIPE

Horsepower! When paired with the Hush-O-Matic, we've seen more than 16hp gain on an otherwise stock 2019. No shenanigans, just repeatable horsepower gains. 2.5" stainless steel and a high flow cat for maximum flow. Suitable for naturally aspirated and boosted cars with no loss in ground clearance. When mated with the Hush-O-Matic, you get a wider range of volume for even more zoom. Not legal for use in California, Colorado or Maine.

2016+



DEI TITANIUM HEAT-SHIELD

DEI makes a wide range of heat control products, and this one is ideal for downpipes and other hot exhaust components. It'll protect up to 1350F more common fiberglass shields will start to fail at 900F.

12"x6". Fits pipes up to 3" in diameter. Check the clearances on your car. 06-91100 🗥



# NC TRANSMISSION TUNNEL HEAT SHIELD KIT



The precision cut kits are constructed of an embossed ten mil aluminum face bonded to a 1/8" thick composite glass-fiber core able to withstand up to 1750°F. The multifaceted aluminum skin offers improved reflection and rigidity while remaining incredibly lightweight. The super strong high-temp pressure-sensitive adhesive backing can hold past 450°F and withstand harsh road conditions, including water, wind, and debris. The multi-piece design makes the installation easier and possible without removing the transmission.

2006-2015 29-20300 🗥





#### ALL OF OUR COMPLETE FORCED INDUCTION KITS FEATURE EMISSIONS LEGALITY IN ALL 50 STATES - YES, INCLUDING CALIFORNIA.

There's no reason you have to sacrifice clean air or resort to questionable registration tactics to get performance out of your Miata.

Flyin' Miata is well known for forced induction. We'd like to think there's a good reason for that. Ever since we turbocharged our first shop Miata in 1990 (with 1800 miles on the odometer!), we've been obsessed with putting Miatas under pressure. Nobody has been dealing with boosted Miata longer than we have.

We make sure our systems are just that - systems. It's not that difficult to bolt a compressor or blower on the side of an engine, but it's more difficult to make it reliable and transparent in operation. We're constantly tweaking and re-evaluating every component in our kit to make them more efficient, more durable and to improve the upgrade path. We also partner with other companies that share both our experience and our committment to excellence.

High performance doesn't mean low reliability, though. All of our systems are designed for years of trouble-free operation. A customer of ours has been running an FM turbo since 1991. His car has over 500,000 miles on it now. His clutch pedal has broken in half, but his turbo system is doing just fine.

Flyin' Miata turbo systems are the standard of comparison for all NA/NB forced induction. The hardware is proven and solid, with an easy upgrade path from Stage I and beyond. Silicone intercooler piping is light, strong and immune to failures. Cast manifolds are bomb proof. Downpipes are made of CNC-bent stainless steel. They even carry a lifetime warranty for the original purchaser. Hoses are reinforced and heat shielding is included. It's all built to last. Our formed reinforced silicone intercooler pipes are light, fit perfectly, and offer optimal airflow, as well as removing most potential failure points in the system. But it's not just the big parts like manifolds. All our hose clamps and silicone hoses are selected to do their job as well as possible. Our optional stainless steel hard lines mean your oil and water lines will outlast the car. We include everything you need, right down to heat shielding and zipties.

The end result is proven hardware. Thousands of Miatas around the world are running Flyin' Miata forced induction. A boosted Miata is a very happy Miata.

The driving experience? Smooth, effortless power with no weird bumps or surges. The Miata was meant to be turbocharged. When you lean on the accelerator, the car just powers forward with minimal lag due to well-chosen ball bearing turbos.

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov



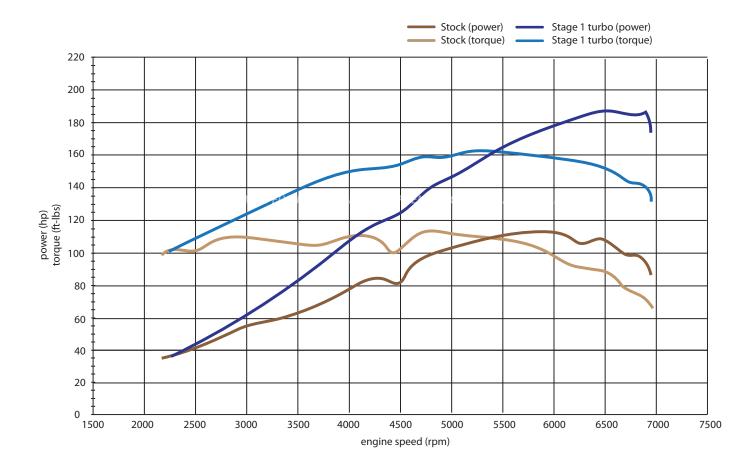
# FLYIN' MIATA NA/NB STAGE 1 TURBO SYSTEM

Our time-tested hardware mated to our Voodoo Box and no tuning! With full 50 state emissions compliance, this is an excellent choice for someone who is satisfied with a Miata that is faster than anything offered by the factory. That's right, it's fully legal in California!

Well engineered hardware producing 8 psi of boost and 160 to 200 hp depending on the year of the Miata. If you add in programmable engine management such as a Megasquirt, you can take it over 250 at the wheels - although this will invalidate your emissions certificate. Now includes Inconel studs and Stage 8 turbo hardware as standard.

1990-05 See our website for options 🗥

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov





VISIT FLYINMIATA. COM FOR CURRENT PRICING AND AVAILABILITY

"The Flyin' Miata Stage 1 turbo offered all the power you could ever use in a street Miata. Power delivery felt very progressive – no hiccups in the rev range."
-GRASSROOTS MOTORSPORTS

# BBR ND STAGE 1 TURBO SYSTEM

BBR has been doing turbo Miatas for as long as Flyin' Miata has - so it makes perfect sense that we would sign up to be their North American distributor. They do an excellent job of designing and developing their products.

The ND has the highest compression gas engine found in a production car. This means it needs a turbo system design that doesn't follow some of the traditional rules. A big turbocharger means more resistance to detonation, and the high exhaust energy from that compression ratio means it spins up really quickly. The end result might look odd on the spec sheet, but it's proven to be a very quick and effective setup. It's also hugely reliable - this is the system that Road & Track abused for 15 hours at Laguna Seca without any problems at all. They were blown away by the response and the reliability. Modified cars just aren't expected to survive that sort of abuse.

A custom 3071 turbo provides lots of power headroom with fast response thanks to a twin scroll design. It's mounted to a tubular-style cast manifold for the best flow and durability. The air/air intercooler is effective for long track sessions without heatsoaking. The high flow downpipe mates up to a stock exhaust or a higher flowing alternative. Everything required for installation is included. It's a very easy installation job with no drilling or changes to the fuel system. It's the quickest turbo install we've ever done.

What's it like to drive? Torque! A big shove in the back and a high redline makes it a very quick setup at all speeds. It's the quietest turbo we've ever driven. You can't hear any hisses or other noises, the car just digs in and gets down to business. For years, Miata owners have been asking us for "more low end power". Well, here it is. Peak power is about 200 hp at the wheels with 215 ft-lb of torque. That's a significant gain across the board.

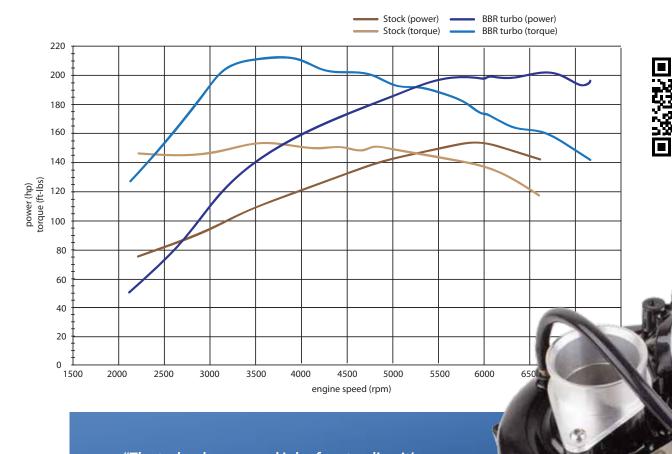
Please note: This does require you to either purchase a complete downpipe or you can weld the cat in yourself. The kit is set up for correct boost at sea level. If you live at higher altitude (2000' or more), we do recommend a manual boost controller to bring the system into the desired range. This is often not needed at lower altitudes but will improve response. Not available for the ND2 2019+ models.

Emissions legal in all 50 states!

2016-18 BBR Stage 1 turbocharger

22-18500 CARB 🗥

We have no ETA for 2019+ turbo systems



"The turbo does a good job of pretending it's not there – you just get the impression it's a bigger engine." -ROAD & TRACK

▲ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

#### FM TURBO MANIFOLDS

New version, designed with CFD to extract the maximum possible performance. 24% better flow, 24 - 36% lighter than our previous design. Fully compatible with kits using our previous manifolds. Designed to support over 450 hp at the wheels. Drilled for a T2 bolt pattern for the most popular Miata turbo sizes. This piece is appropriate for all NA6, NA8 and NB 1.8 engines,

including the Mazdaspeed. It will not fit a stock Mazdaspeed turbocharger, however. Includes Inconel studs and Stage 8 hardware to attach the turbo to the manifold.

\*New Design shown available mid-2023.

1.8 22-21020 **1** 1.6 22-21000 **1** 



Every turbo system needs a good intercooler to keep fresh, cool air feeding your engine. This is the same high quality intercooler and hardware we include with our turbo kits, but available separately for those that need a replacement or want to piece together a custom kit.

1990-97 22-35020 **1** 1999-05 22-35030 **1 M**SM 22-35001 **1** 

# GOLD FOIL FOR TURBO AIRBOX

Made from DEI's Reflect-A-Gold heat reflective material originally designed to be used in the aerospace industry, and now it's CNC cut to fit the exterior face of your FM turbo airbox. The material's multi-layer composition helps it reflect up to 80% of radiant heat. It can handle continuous exposure of up to 800°F. And no need to worry about it peeling off since its adhesive is rated to handle up to 325°F.

1990-97 22-60180 **1** 1999-05 22-60120 **1 M**SM 22-35001 **1** 

# INTAKE HUSH KITS

This kit adds a top to your airbox (for NBs) and includes sound-absorbent insulation to minimize the whooshing and hissing from your intake. It won't shut it up completely, but it will muffle the sound if you want to make your car more stealthy. There is no effect on performance.

1990-97 36-90146 **1** 1999-05 22-60110 **1** 

**WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov



#### MAZDASPEED MX-5 UPGRADES

The 2004-05 Mazdaspeed MX-5 turbo - often known as an MSM - has a nice chassis, a great interior and a bit of a disappointing powerplant. But we can fix that little problem. Whether you want to liberate just a few or a whole herd of horses, FM has the only complete line of upgrades.

# FM LITTLE ENCHILADA

The Little Enchilada brings out the MSM that should have existed on the showroom floor. It includes our **complete intake kit, intercooler, check valve, downpipe and exhaust**. This raises horsepower from 150 hp at the wheels to right around 200 hp and drives more smoothly with quicker turbo response than the stock car. It gives your MSM the ability to take full advantage of the stock ECU. It's possibly the best bang for the buck available in this catalog.

2004-05 MSM 22-10005 🗥

#### FLYIN' MIATA MSM EXHAUST 🔤

As with our other exhausts, this is stainless steel from end to end. It gives a mute MSM a deep voice that's not too loud and doesn't buzz or rasp. The adjustable tip ensures a perfect fit and the muffler is built specifically for this application. Adding the exhaust to an otherwise stock car gave us peak power 300 rpm sooner. When combined with the downpipe and intercooler, we saw a 23 hp increase. It also weighs 6.5 lbs less than stock! Lifetime warranty for the original owner. Legal in all US states.

2004-05 06-58305 🗥

#### FLYIN' MIATA MSM CHECK VALVE KIT

The factory oil separator can actually push oil into the intake with hard driving. This means oil use, blue smoke and a greater chance of detonation. This simple check valve will eliminate the oil problem with no downsides. Included in the Little Enchiladas.

2004-05 MSM 36-90100 🗥

# FLYIN' MIATA MSM DOWNPIPE 💻

Considered a "must-have" by MSM enthusiasts, this downpipe replaces the restrictive stock unit and makes a big difference to spoolup, power and smoothness. Honestly, if Mazda had put this part on the car from the factory there would be far less demand for MSM performance parts. Covered by the same warranty as our other exhaust components.

NOT APPROVED FOR USE IN ANY STATE FOLLOWING CARB RULES FOR CATALYTIC CONVERTERS.

2004-05 06-5830x 🗸

#### FLYIN' MIATA MSM INTERCOOLER

Keep your MSM cool under pressure! We've found that the cute little stock intercooler will easily get overwhelmed under sustained boost and can't dump the heat as fast as it's being generated. This intercooler is the most efficient one we've ever sold and solves that problem handily. It also gives the MSM some visual aggression. Bolt-in installation, although the intercooler pipes need to be trimmed slightly shorter due to the larger intercooler.

2004-05 MSM 22-35001 🗥

#### **MSM COMPLETE INTAKE SYSTEM**

This is not just an intake. We swap the stock restrictive intake for for big 2.5" piping which makes it easier for the hungry turbo to suck in fresh air. The leaky bypass valve is swapped out for a Turbosmart unit. The throttle body inlet pipe that is prone to balooning and popping off gets changed for a stainless steel part. The turbo outlet pipe is replaced and a manual boost controller allows you to dial in more boost. The O2 signal modifier fixes a driveability problem that causes the engine to run lean when transitioning into boost, giving improved driveability.

All parts are available separately if you'd like, although they're designed to work as a complete system. Stainless steel parts are all polished, while the silicone couplers are our special high-grip blend to grip the pipes strongly.

2004-05 MSM 05-29120 🗥

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov





Over the years, we've developed a few tools to make our lives easier. Make your life easier too with our own line of Miata-specific helpers! Time for some maintenance? We have the replacement parts you need to help keep your Miata healthy and on the road for a long time. This is only a partial list, so call us if you don't see what you need. In some cases, we'll need to know some details about your car to make sure you get the correct parts. Don't get worried if you see a part number that covers too many years!

#### PACO MOTORSPORTS V5 HUBSTANDS A

Hub stands are a highly useful tool for adjusting your Miata's suspension. They bolt in place of your wheels, allowing the car to sit on the suspension while giving you full access. They make it easy to do your own accurate alignments as well as cornerweight the car and adjust ride height.

Made of High Strength Low Alloy steel for extra strength and corrosion resistance. Cut with a giant computer-controlled industrial laser to very close tolerances

Set of four 35-70065 🗥

## FM JACK ADAPTER (2ND GEN) B

The new second generation design features a new poly material, to provide a softer contact with the car, and has two slots in it. One slot is a press fit on the pinch weld, which lets you stick the adapter on the frame rail before you slide the jack underneath. The other is wider, allowing the adapter to work with newer cars that have more plastic trim around the weld. Fits all Miatas and many other cars.

990-18 35-70000

#### FM SEAL INSTALL TOOLS C

It can be a challenge to get seals properly installed, especially if you don't work on engines every day. This is particularly true of the expensive rear main seal! We designed these simple tools to make the job foolproof. Just slip the seal over the cam or the crank, then use the cam/crank bolt to press the seal into place with the tool. A great addition to a club toolbox.

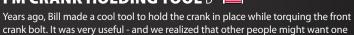
#### FRONT CRANK SEAL

B-1990 35-60001 SHORT NOSE **A** C-1990-05 35-60001 BIG NOSE **A** 

**REAR MAIN SEAL** 

E-1990-05 M35-60501

#### FM CRANK HOLDING TOOL D



1990-05 35-61000 🗥

nose cranks and ATI dampers.

#### **FM MZR FORGED CRANK TIMING TOOL E**

If you're installing a forged crank in a 2006-08 Miata engine, you need this tool. Not because it will make your life easier, but because there is absolutely no way to time the engine properly otherwise. Mazda never put a forged crank in those blocks and there are thread differences that you won't find on the factory tool. So we had to design this tool ourselves to the precise length with help from the Mazda engineers. It's a little thing, but an important one.

too. So here it is, made out of laser-cut cad-plated steel. Fits both long- and short-

2006-08 35-56100 🗥

#### FM NINJA TOOL F

From the time the Miata was introduced, NA and NB owners have complained about the difficulty of doing a timing belt change and getting the cam timing right. The intake cam is under a bit of pressure from a valve spring and wants to jump over to the next tooth. In our newest iteration we've extended the arms to line up with the timing marks on the cam gears - it's now nearly impossible to get the timing wrong. Exclusive to Flyin'

1990-05 35-62000 🗥

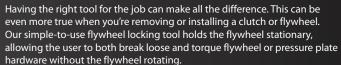


#### **NO-SPILL COOLANT FUNNEL A**

This funnel locks into your radiator cap so you can't get leaks and burps. It has a great big mouth on it so you can't miss as you pour coolant. It even has a plug that lets you remove an over-filled funnel without the usual Niagara incident that follows. All the bits and pieces pack up inside the funnel which can be closed off top and bottom so your funnel isn't full of spiders and dust when you go to use it.

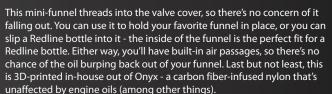
1990+ 35-50000 🗥

#### FM FLYWHEEL LOCKING TOOL B



2006+ 35-36530 **A** 1990-2005 35-36510 **A** 

#### FM OIL FUNNEL ADAPTER C



2006+ 35-51110 **A** 1990-2005 35-51100 **A** 

# FM THREAD-IN OIL FUNNEL KIT D

Our funnel threads in place of the oil cap, so it holds itself up. It also has the biggest bore possible, so it's impossible to dump oil (from a normal bottle!) in too fast. It also addresses an annoying drawback with funnels - their tendency to drip oil long-term. This funnel includes a base, so the funnel sits upright while it's being stored, with the base capturing the oil that drips down over time. Last but not least, this is 3D-printed in-house out of Onyx - a carbon fiber-infused nylon that's unaffected by engine oils (among other things).

2006+ 35-51010 **A** 1990-2005 35-51000 **A** 

#### OIL FILTER DRAIN FUNNEL E

This custom drain funnel clips onto the stock oil cooler / warmer and catches all of that oil and routes it to your drain pan. We include a hose for the funnel, so you can thread it down, past the oil pan, and into your drain pan. The funnel is big enough to catch the oil without overflowing, and it's extended (away from the block) so that it will work with or without an aftermarket oil thermostat. No more mess!

1990-2005 35-52000 🗥

#### TIRE PRESSURE GAUGE

This is a no-frills but quality tire pressure gauge with a bleeder to precisely adjust your pressure, a large (2.25") and easy to read gauge, a long enough hose (13.75"), and an easy to use chuck. Plus a protective case. 0-60 psi range - but why, when Miata tires don't go up to 60 psi? Because the gauge is most accurate in the middle of its range, right where Miata tire pressure lives. Plus, the larger range means it works for higher pressure tires you may have in the garage. With an accuracy of  $\pm 1.5$  psi overall, it's ideal for most applications.

1990+ 35-71000 🗥



**WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

# MAINTENANCE PARTS

We offer a large supply of maintenance and OEM replacement parts for every generation of Miata. Incuding seals, radiator caps and hoses, gaskets, pcv valves, water pumps, filters, belts, bearings, hydraulic parts and more! Please visit our website for the complete list of parts and accessories we have for your Miata!

#### **ENGINE REBUILD KITS A**

All the gaskets and bearings required for an engine rebuild, right down to the spark plugs. The bearings are top-quality tri-metal.

Engines with a four-slot front crank pulley and a VIN of 209446 (built mid-1991) or lower are "short nose" engines and should select the appropriate base kit. Eight slots and a VIN higher than 209446 are big nose engines.

1990-93 104-00001 🛕 1994-05 104-00001 🛕

#### **REPLACEMENT OXYGEN SENSOR** c

No splicing required! We've managed to hunt down plug-in replacement O2 sensors so you can change your old stock unit without fuss.

1990-93	single wire	06-90000 🚄
1994-05	front sensor	06-99000 🛭
1996-00	rear sensor, 1 cat car	06-99050 🗳
2001-05	rear sensor	06-99050 👍

#### FLYIN' MIATA TIMING BELT KIT B

Our timing belt kit is a little more expensive than some others because it includes the tensioner and idler pulleys. We find almost every Miata needs new ones when doing a timing belt. In addition to the timing belt, it includes cam seals, front crank seal, a cam cover gasket and a CAS O-ring (if required). Accessory belts sold separately. Don't get caught on a Saturday afternoon without parts you need!

1990-05 04-80000 XX 🗥

#### **SHIFTER REBUILD KITS D**

You might not even notice, but your shifter is not what it was. Luckily, it's easy to rebuild, and you can access everything from inside the car. This kit includes all the pieces you need to make your shifter feel new again. All components are factory Mazda parts. It even includes new small shifter boot.

1990-93	08-46910 🗥
1993-97	08-46910 🗥
1994-96	08-46910 🗥
1999-05	08-46910 🗥
Shifter Insulation	n 21-67319 🗥



# REDLINE MTL SYNTHETIC GEAR OIL

A fully synthetic transmission oil. It has a very stable viscosity across a high temperature range. The friction level is relatively high for optimum synchro function. The magicians at Redline designed it to drop the friction as rotational speeds get closer. This means easy, light shifting in all weather with smooth gear engagement. It has been a standard Miata upgrade for as long as there have been Miatas. Two quarts required unless the shift turret oil is also changed, then three quarts are required. Change every 30k miles (50k km).

1990+ 10-26000 🗥

# REDLINE MT-90 SYNTHETIC GEAR OIL

Similar to MTL, but designed for harder-working gearboxes. It won't shift quite as well when cold, but it will protect your transmission better under extreme conditions. Recommended for track cars.

1990+ 10-26020 🗥

# REDLINE 75W90 DIFFERENTIAL GEAR OIL

75W90 gear oil. Stable under a high temperature range and very efficient, this ensures as much of your power makes it to the wheels as possible. Works well in all Miata differentials including limited slip.

1990+ 10-26010 🗥

# REDLINE LIGHTWEIGHT SHOCKPROOF GEAR OIL

For maximum gearbox protection. This is some odd stuff that adheres really well to gear teeth and cushions them against high pressures. This reduces the odds of stripped teeth. It has a film thickness like a 75W140, but the viscosity of an 80W. For best results, we recommend mixing it 50-50 with Redline MTL or MT-90. Do not use if you have a transmission cooler.

1990+ 10-260409 🗥

#### REDLINE SYNTHETIC ENGINE OIL

What kind of oil do you put in a motor that's worth more than many Miatas? Full synthetic. It's thinner at low temperatures and holds viscosity better at higher temperatures than petroleum based oils. Redline is what we use in every car we drive, whether it's a fun little city car, an all-out competition turbo Miata or the tow vehicle. 0w20 for ND, 5w20 for NC, 10w30 for NA/NB. We like 10W40 for turbo NAs/NBs.

Four quarts required. Change every 3000 miles (5000 km).

0W20, 5W20, 5W30, 10W30, 10W40, 20W50

1990+ 10-16000 🗥

#### REDLINE S1 FUEL INJECTION CLEANER

To keep injectors and intake valves squeaky clean. Use 1/2 bottle every 3 months or so for the best performance.

1990+ 10-96000 📣

# REDLINE WATER WETTER

While antifreeze is good at keeping your cooling system from freezing and provides some corrosion protection, it doesn't help your car cool. Water Wetter breaks up the surface tension of your coolant, allowing the water to get things, well, "wetter". This increases the heat transfer and prevents spot boiling in the head. It will also inhibit corrosion and lubricate water pumps. An easy cooling upgrade for track-driven cars. It won't protect against freezing though!

1990-+ 10-46010 🗥

#### **OIL FILTERS**

We offer a choice of standard or high capacity oil filters for the NA and NB Miata, and standard filters for the NC and ND. All are quality parts from well-known manufacturers. These are the same filters we use on our own competition engines!

1990-05 standard 04-36000 XX ▲
1990-05 high capacity 04-36000 XX ▲
2006-15 04-36005 ▲
2016+ OE M04-36008 ▲

# MAGNETIC DRAIN PLUG

Collects metal particles before they get into your oil system and cause wear. Includes one plastic washer.

1990-05 04-36010 **A** extra washer 04-36015 **A** 



#### REPLACEMENT DIP STICK HANDLE

The dipsticks on NA and NB Miatas have a plastic handle on top that is prone to breaking. Then you're either buying a new dipstick or you have to try to grab the little remaining stub every time you want to check the oil. Our clip-on replacement handle is made of carbon-fiber reinforced nylon so it's strong, it can handle high heat levels and it's easy to install. It also has nicely curved edges on it so it's comfortable to use.

1990-05 M04-36200 🗥



# **ANTIGRAVITY BATTERIES**

Batteries have always been the densest thing in your car, and the easiest way to lose weight. However, there have always been compromises you have to make. Our new Antigravity Batteries are "LiFePO4" (lithium iron phosphate) batteries, and feature Re-Start technology, which ensures that the battery always has enough reserve to start the car, even if you leave the lights on. Visit our website for specs and information.

2006+ 51R-24 25-12100 **1** 1990-2005 U1R 25-12050 **1** 

#### MELE DESIGNS BATTERY MOUNT

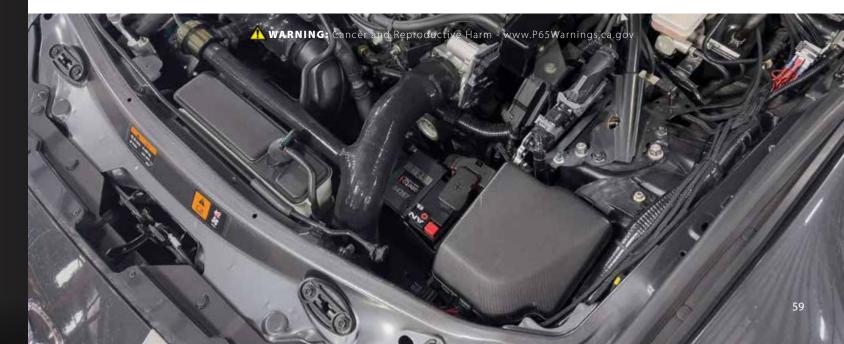
A bomb-proof setup from our friends at MeLe Design Firm, this mount is made of 5052 aluminum carefully bent and welded, then powder-coated, for the utmost in durability. How durable? Lifetime warranty durable. This mount has two possible positions, so it will fit with the stock intake and our BBR turbo intake. Each option's mounting position remains as low as possible thanks to an included extended battery cable.

2016+ Mele Designs Mount without Battery 25-02000 ⚠
2016+ Mele Designs Mount w ATX-20 Battery 25-020X0 ⚠

#### **CTEK LITHIUM BATTERY CHARGER**

This charger is intended specifically for LiFePO4 (lithium iron phosphate) batteries, like the Antigravity batteries that we carry. It has an 8-step process to maximize battery life and performance, including a testing sequence, a maximization step, and maintenance charging (float / pulse).

1990+ Lithium Battery Charger 25-13000 🗥



# FM EXCLUSIVE KOGEKI FLOW-FORMED PERFORMANCE WHEELS

Strong. Light. Fast. New Kogeki Flow-formed wheels, exclusively from Flyin' Miata. They're high-pressure cast for less porosity, then the rim is spun-forged. Because we know they'll be used hard, they're rated for 550kg (1213 lbs) of load instead of the more standard 500 kg (using J2530 JWL standards). They also have knurling to prevent tire slip. Available in 15x8, 15x9, 17x8, and 17x9 in Gloss Bronze Metallic, Gloss Gunmetal Metallic, Satin Black or Deep Silver finish.

17x8 5x114.3 15.6 lbs, +48, 73.1 mm hub

17x9 5x114.3 17.5 lbs, +48, 73.1 mm hub 15x8 4x100 12.4 lbs, +36, 67.1 mm hub

15x9 4x100 13.45 lbs, +36, 67.1 mm hub

15x7 4x100 11.7 lbs, +23, 67.1 mm hub 17x8 4x100 15.95 lbs, +45, 67.1 mm hub

17x9 4x100 16.15 lbs, +45, 67.1 mm hub





#### FM EXCLUSIVE TOBU FORGED PERFORMANCE WHEELS

Strong. Lighter. Fast. New Tobu Forged wheels, exclusively from Flyin' Miata. Forging allows wheels to be both strong and light, which is a great match for a Miata that sees extreme use. It's not cheap, but you only have to buy them once. These are rated to 550 kg (1213 lbs), instead of the typical 500 kg (1102 lbs, using the J2530 JWL standards). Available in either Gloss Bronze Metallic, Satin Black or Gloss Gunmetal Metallic finish.

#### LIMITED LIFETIME STRUCTURAL WARRANTY

(Please see our website for more details.)

17x9 4x100: 15.5 lbs +45 offset, 67.1mm center bore. 17x8 4x100: 14.5 lbs +48 offset, 67.1mm center bore.





# ALUMINUM LUG NUTS

Made of 7075-T6 aluminum alloy for high strength, fully threaded and light weight (~1 oz each), these are some high performance lug nuts. They use a 19mm socket for the best combination of strength and clearance.

Single 16-10001 🗥 1990+ 1990+ Set of 16 16-10006 🗥 16-10008 🗥 1990+ Set of 20



# TIRE VALVES

These aluminum valves will deal well with the heat of track use, unlike cheap rubber ones. They're also reusable. Sold as a set of 4. Most wheels only require one valve per wheel, but some require two - double-check your wheels if you're not sure. Won't work with TPMS. (Photo on next page)

1990+ 16-10302 🗥

# WHEEL SPACERS

Available in 3mm, 5mm, or 10mm thickness. 3mm is great when you need just a tick more wheel clearance for bigger brakes, 5mm if you need a little more than that, and 10mm if you need all of it. Without going crazy, anyway. You'll need ARP wheel studs with the 5mm spacers and track use, 10mm spacers need extended studs regardless of your use. 3mm spacers don't require extended studs.

16-101XX 🗥 4x100 Individual 16-101XXKIT 🗘 4x100 Set of 4 4x114.3 Individual 16-102XX 🗘

