• Remove stock coils & wires.
• The BSK doesn’t interfere with the EGR pipe, but the Hydra ECU does not run EGR so you can optionally remove the EGR pipe & valve (1.8 only) & block it off with our block-off plate & manifold plug.
• Remove the engine hoist bracket at the rear of the engine.
• On '94 – '97 cars that retain the stock CAS, replace the adjusting bolt with the included Allen head bolt. If you don't do this, you won't be able to access that bolt once the coils have been installed.
• On 01-05 VVT-equipped engines remove the VVT pipes from the block to the VVT actuator. Cut the pipes off flush at the casting at either end. Drill each casting with a 23/64” bit and then tap with a high quality 1/8” NPT tap- this material is very hard! Install the supplied adaptors with Teflon paste on the NPT threads. (“see photo on last page) Re-install castings & connect with the supplied 30” SS braided -4an hose.
• Install the first 3 GM coils on the bracket with supplied spacers.
• Remove the push-lock tabs that are taped to the GM harness. (They make it harder to maneuver.)
• Plug in the GM harness to the coils, work it into position, then zip tie to bracket to keep wiring clean. (Trigger wire colors for each coil listed below.)
• Locate the plug & pigtail; you will hard wire this into the Mazda wiring per the following information.
• Loosely install the coils & bracket.
• Install the last coil on the bracket once it’s loosely mounted to the engine & plug it in.
• A convenient place to put new wires through the firewall is through the main harness boot on the passenger side behind the relay/fuse box. Un-bolt this box to expose it.

Year-Specific wiring instructions

Hydra ECU Pinouts looking into ECU

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90-93 wiring (probably 1.8 engine swap)

• Grab the plug that went to the stock coils. The Mazda blue wire is 12v, crimp it to the GM pink wire.
• The Mazda white wire is cyl 1, so crimp it to the GM red wire.
• The Mazda red wire is cyl 3, so crimp it to the GM blue wire.
• Run the GM green wire to BD 11 at the Hydra.
• Run the GM purple wire to BD 12 at the Hydra.
• Run the GM brown wire to GB 11 at the Hydra. T in of you need to.
• Remove Mazda igniter & plug. We’ll be re-appropriating its wires & discarding the igniter in the steps below.
• Clip the Mazda brown/yellow wire & the Mazda white wire. Crimp them together.
• Clip the Mazda brown wire and the Mazda red wire. Crimp them together.
• Clip the Mazda black/white wire & the Mazda yellow/blue wire. Crimp them together.
• Clip the Mazda black wire & crimp it to the black wire at the GM harness.
• Secure the leftover Mazda blue wire to prevent a short- it is 12V.

94-97 wiring

• Grab the plugs that went to the stock coils. The Mazda blue wires are 12v, crimp them to the GM pink wire.
• The Mazda black wires are chassis ground, crimp one of them to the GM black wire.
• Run the GM brown wire to GB 11 at the Hydra. T in of you need to.
• The Mazda brown/yellow wire is cyl 1, so crimp it to the GM red wire.
• The Mazda brown wire is cyl 3, so crimp it to the GM blue wire.
• Run the GM green wire to BD 11 at the Hydra.
• Run the GM purple wire to BD 12 at the Hydra.
• On 94-95 ½ cars there is a leftover black/white tach wire. Tape it up so it doesn’t short out.

99-00 wiring

• Grab the plugs that went to the stock coils. The Mazda black/white wires are 12v, crimp them to the GM pink wire.
• The Mazda black wires are chassis ground, crimp one of them to the GM black wire.
• Run the GM brown wire to GB 11 at the Hydra. T in of you need to.
• The Mazda brown/yellow wire is cyl 1, so crimp it to the GM red wire.
• The Mazda brown wire is cyl 3, so crimp it to the GM blue wire.
• Run the GM green wire to BD 11 at the Hydra.
• Run the GM purple wire to BD 12 at the Hydra.

01-05 wiring, incl. MSM

• Grab the plugs that went to the stock coils. The Mazda black/white wires are 12v, crimp them to the GM pink wire.
• The Mazda black wires are chassis ground, crimp one of them to the GM black wire.
• Run the GM brown wire to GB 11 at the Hydra. T in of you need to.
• The Mazda brown/white wire is cyl 1, so crimp it to the GM red wire.
• The Mazda black/yellow wire is cyl 3, so crimp it to the GM blue wire.
• Run the GM green wire to BD 11 at the Hydra.
• Run the GM purple wire to BD 12 at the Hydra.

Finishing Up

• Tighten the bracket bolts.
• Standing in front of car, starting from (LHD) passenger’s side to driver’s side, plug wires go 1-2-3-4 to the coils (where cylinder 1 is the most forward). Attach them.
• Assemble & install the ground strap from passenger side of the engine to the chassis. This augments the factory ground strap.
• Install the NGK spark plugs that come with this kit. Gap to ~.035”.
• On late model NB cars there is a sealed square black ground wiring harness component that will have to be relocated to some other place you can bolt it down as a ground.
• In the Hydra (2.1 or 2.5) software go to Select -> Settings -> Ignition, un-check the box that says Wasted Spark, and click OK. You are now running direct fire sequen-
tial instead of direct fire waste spark.
- In the Hydra (2.6) software go to Settings 1 -> Ignition and RPM Limits, un-check the box for Waste Spark Enable and click Enter. You are now running direct fire sequential instead of direct fire waste spark.
- In the Hydra (2.7) software go to Tuning Maps -> Base Ignition Table -> Setting, un-check the box that says Waste Spark Enable, and click OK. You are now running direct fire sequential instead of direct fire waste spark.
- Email jeremy@flyinmiata.com a current copy of your Hydra map with the request and we'll import the proper Dwell and Dwell Trim maps for these coils. They are derived from the factory settings in a 2008 Vette.

Generic Wiring
- Pink = switched 12v power.
- Black = chassis ground.
- Brown = signal (ECU) ground. Hydra- GB 11.
- Red = Cylinder 1, Hydra- GA 08.
- Green = Cylinder 2, Hydra- BD 11.
- Blue = Cylinder 3, Hydra- GA 07.
- Purple = Cylinder 4, Hydra- BD 12.

VVT casting modification photo-------------------------

Installation on VVT engine-----------------------------

Another view-