

1990–1993 MIATA 4-WIRE O2 SENSOR INSTALLATION

1. Obviously, the first thing you need to do is remove your single wire sensor. Use a 7/8" open end wrench, a special O2 sensor socket –or- since we're going to throw the old puppy out, cut the wire and use a 7/8" box wrench to really get a bite on it. Pull the signal wire up behind the engine for now.
2. The new sensor comes pre-loaded with anti-seize compound, so just screw it into the bung and tighten it down. It doesn't have to be REAL tight (as tight as you'd normally make a threaded fastener of this size), but make sure it's good and snug.
3. The supplied wiring harness is also pre-loaded, with Teflon based dielectric grease. Feed the harness down behind the engine, and plug the two connectors together, and if you like place a turn or two of electrical tape around the connectors just to keep them clean—the Teflon grease will keep water out, but the tape is a nice touch.
4. Depending upon where your O2 sensor is located, use a wire-tie or two to tie the connectors and wire off to the transmission or chassis to keep it away from the header. Pull the excess wire up to the vacuum line for the power brakes (or the brake lines), coil up the excess before the split in the harness (where the power and O2 signal leads split up), and tie it off to the brake lines with a wire tie.
5. The harness' **Yellow** lead (black at the sensor) connects to the O2 sensor's signal wire, the only wire that was connected to the old sensor. Crimp the barrel connector on the Yellow wire to the signal wire and use the supplied piece of heat-shrink tubing (or tape) to insulate the connection.
6. The harness' **Green** lead (gray at the sensor) is the O2 signal ground wire. Run this behind the engine toward the passenger's side and connect it to the ground connector just behind the intake manifold --an M6 bolt (10 mm hex head) on a bracket with an existing ground wire.
7. The harness' **Red** lead (one of the white wires on the sensor) is the +12V power to the sensor's heating element. Use the supplied "Y" connector to connect this to the blue power connector just behind the driver's side headlight. The "Y" connector will allow you to still connect a timing light or whatever as needed.
8. The harness' **Black** lead (the other white wire on the sensor) is the ground for the sensor's heater, connect it to a suitable chassis ground, the forward mounting screw for the relay bank mounted on the driver's side inner fender (just aft of the shock tower) is a good place. This is also an M6, 10 mm head bolt.

That's it! Time to go for a drive...

Please contact me at cliffyk@paladinmicro.com if you have ANY problems...