



SNP Speed Innovations 22RE Complete Harness Multi-Coil Kit Installation Instructions

Do Not Call LCE for Tech Support!
Do Not Call Haltech for Tech Support!

Tech support is available for installation questions and for online support in regards to no start or calibration issues. Online remote tech support will need to be scheduled. Please call (928) 854-1320 Mon-Fri 8 A.M. to 5 P.M. Arizona time.

Remote Tuning is available for an added fee and will need to be scheduled in advance. A Windows based laptop and an active wireless internet connection will be required. To use remote access support you will need to download "ANYDESK". This is a free service and can be found at WWW.ANYDESK.COM

Online remote tuning available by appointment only, contact us for more information or visit our website snpspeed.com/tuning

We also have an installation videos of our products on YouTube

For tech support or tuning questions please contact Gabe Salazar at
SNP Speed Innovations
Phone: (928) 854-1320
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SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

Product Installation Instructions

Before You Begin:

- **Safety First:** Ensure your vehicle is in **Park** or **Neutral**. Set the **emergency brake**.
- **Disconnect Power:** Disconnect the **negative cable** from the battery to prevent any electrical shorts during installation.

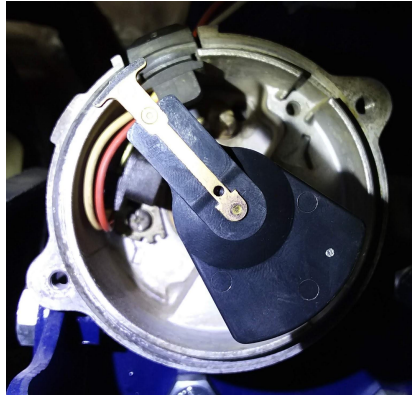
Step 1: Distributor Setup

- **Locate the Distributor Cap:** Find the **number 1 spark plug tower** on your original distributor cap.
- **Mark Alignment Points:** Use a marker to mark the **center of the cap** and the **distributor housing** for reference and remove your distributor cap.
- **Set Engine to TDC:** Using a **19mm or ¾ SAE socket** on a **½ drive ratchet**, rotate the engine clockwise until the **TDC mark** on the balancer aligns with the **0** on the timing tag and the rotor is pointed to #1.
- **Remove your Distributor:** Once you have confirmed TDC, remove your old distributor.
- **Install new Distributor:** install the new distributor and make sure the rotor is pointed just like the image below and lock the distributor down, remove the rotor, and re-install the SNP distributor cap. See image on next page.

SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions



Step 2: Old Harness Removal

- **Disconnect Factory Harness:** Unplug each connector from the factory engine harness. Take note of the connectors and wire colors for the starter, oil pressure, coolant temperature, and transmission.
- **Remove the Harness:** Once disconnected, remove the entire engine harness from the vehicle.
- **Prepare for New Harness:** Open the harness and extract the necessary wires and connectors, as you will need these to build your own **Lower Engine** sub-harness. If your original wiring is unusable, we offer a **Lower Engine** harness upgrade. Note that the alternator wiring is integrated into the body/chassis harness and is not included.

Step 3: ATS-Air Temperature Sensor Installation

- **Remove Cold Start Injector:** Carefully detach the cold start injector and its feed line from the intake manifold and fuel rail.
- **Install Air Temp Sensor (ATS):** Attach the supplied ATS to the provided mounting plate. Note that the threads are tapered; ensure you thread the ATS into the plate to determine the correct mounting side.
- **Seal and Install:** Apply a thin layer of silicone along the bottom of the plate, then install it onto the plenum and tighten the sensor securely.

SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

- **Block Off Cold Start Injector Feed:** Use the supplied **M8x12x1.00 bolt** with the stock crush washer to block off the fuel rail where the cold start injector feed line was connected.

Step 4 : Mounting the ECU

- **Access the ECU Area:** Enter the vehicle and remove the right kick panel to access the factory ECU.
- **Install the New ECU:** Mount the new ECU onto the supplied mounting plate and install the plate in place of the old factory ECU.

Step 5: Engine Harness Routing

- **Routing the Engine Harness:** Feed the supplied engine harness through the firewall using the factory wiring grommet. You may need to cut the bottom of the grommet for proper fit.
- **Secure Ground Connection:** Connect the black "**Ground**" wire to the battery Negative.
- **Routing the New Harness:** Route the harness along the back of the intake manifold, the new harness branches in the middle of the intake manifold between cyl 2 and 3.
- **Plug in Components:** Connect the injectors as labeled, and plug in the TPS, ATS, CTS, injectors, Coil, and DIST to the appropriate items.
- **Coil Connector bracket:** Bolt this bracket down at the rear of the cylinder head EGR bolt hole, behind cyl #4 intake runner.
- **Connect the ECU:** Bring the harness into the cab area and connect it to the ECU.

SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

Step 6: Distributor Wiring

- **Route the Wiring:** Carefully route the distributor wiring branch along the intake and around the front of the engine to the distributor. This positioning helps prevent interference with the spark plug wires.
- **Distributor connectors:** This part is easy. The distributor connectors on our SNP harness only plug in one way, round to round, oval to oval.

Step 7: Coil assembly and Wiring

- **Bolt Down Coil Assembly:** Using the supplied hardware, bolt the coil plate assembly to the valve cover making sure the short spacer goes to the furthest front passenger side bolt hole.
- **Wiring:** Next plug in all **spark plug wires** into each coil and onto each spark plug-these only plugs in one way. Finally Plug in the **coil harness** into the main engine harness labeled “**Coils**”

Step 8: MAP Sensor Hose

- **Connect the Hose:** Once the ECU is plugged in, connect the supplied plastic hose to the plenum side of the intake manifold (**do NOT install it to the throttle body**). This is normally connected to the **Black round fitting with 3 ports** at the rear of your plenum. For supercharger applications, attach the hose below the supercharger.
- **Functionality:** This connection allows the Haltech ECU to read the manifold pressure, eliminating the need for the stock AFM. Remove factory AFM if desired.

SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

Step 9: Fuel Pump Relay Wiring

- **Remove the Speaker Grill:** Detach the right speaker grill above the right kick panel and remove the speaker.
- **Locate the Fuel Pump Relay:** Find and remove the fuel pump (Open Circuit) relay.
- **Splice the Wires:** Identify the **green/yellow wire** and strip ½ inch of insulation about 2-3 inches from the relay plug. Splice and solder the supplied **black/yellow** wire from the sub-harness to this wire, ensuring the splice is well insulated with tape or heat shrink.



SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

Step 10: Key Switch Power

- **Connect the Red/White Wire:** Locate the **Red/White wire** labeled “**12V SW**” and connect it to the same wire/circuit as the ECU fuse. If using our “**Lower Engine Harness**” Plug the Haltech side single pin connector to the new **Lower Engine Harness matting single pin connector** labeled “**12v SW**”

Step 11: Battery Supply

- **Route the Wires:** Run the **12 gauge Red wire** and **14 gauge Black wire** into the engine bay.
- **Connect to Battery:** Connect the **Red wire** to the **Positive battery terminal** and the **Black wire** to the **Negative battery terminal**.

Step 12: Wideband Control Module

- **Weld O2 Sensor Bung:** Install the supplied O2 sensor bung into the exhaust, ensuring it is positioned within the **9-3 o'clock range** just past the collector flange. For turbo installations, mount the bung on the downpipe before the bottom bend. You can also thread the sensor into an existing factory O2 sensor bung if available.
- **Mount the Wideband Module:** Using the supplied cables and hardware, find a suitable location for the wideband module, ensuring clear access to the connectors. Velcro strips can be used for mounting.
- **Connect the ECU:** Use the cable labeled **#HT-130025** to connect the ECU to the wideband module.
- **Route O2 Sensor Wiring:** Carefully route the O2 sensor wiring from the inside of the cab to the exhaust mounting location, keeping it away from heat sources and moving parts to prevent damage.

Wiring Connector Label Abbreviations

- **ATS:** Air Temp Sensor

SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

- **BATT:** Battery
- **CAN:** CAN Bus Communications
- **CTS:** Coolant Temp Sensor
- **DIST:** Distributor
- **GND:** Ground
- **IGN:** Ignition
- **INJ:** Injectors
- **I/O:** Inputs/Outputs
- **KEY:** Ignition Key Switch On
- **TPS:** Throttle Position Sensor

Finish work

Reconnect the battery. Download the latest Haltech **NSP** software and install it on a Windows based laptop. Google, MAC, and Android operating systems will NOT work. You can find the current software at WWW.HALTECH.COM/DOWNLOADS. Open the Haltech software. Once the **NSP** software is open, use the communication cable supplied in the kit, connect the ECU to your laptop. Turn the key on and you should see the ECU "Power" LED indicator is on. Your ECU should auto connect, if not, you may hover your cursor over the top left icon labeled "**Connec/Disconnect**" and click. You should live with the ECU.

Calibrate TPS-Throttle Position Sensor: Make sure this step is done with the engine not running. Once you are connected to the Haltech ECU, go to the navigation tree on the left side of your screen. Next locate:

- **Engine functions**
- **Throttle**
- **Calibration**

Once you are in that window, click on "**Start**" and follow the next steps, the Haltech software will take it from here.

Setting Ignition timing:

- Connect your timing light to the battery and #1 spark plug wire.
- Start the engine

SNP Speed Innovations

22RE Complete Harness Multi-Coil Kit Installation

Instructions

- Adjust the distributor until the timing mark on the balancer lines up with 8 degrees on your timing tag.
- Once the timing is set, bring the engine **RPMs up to 2500** and check the timing one more time. You should be within a degree or two of **8 degrees**.
- After timing is confirmed, go back to the Haltech NSP software,
 - Navigation tree
 - Ignition Tuning
 - Lock Mode
 - And click on “Disabled”

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