



Troubleshooting Guide

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Prestart Checklist

Before starting the engine, double check for leaks, proper wire routing, any wiring hazards or loose nuts and bolts. This is a great time to visually inspect the overall Sniper EFI install.

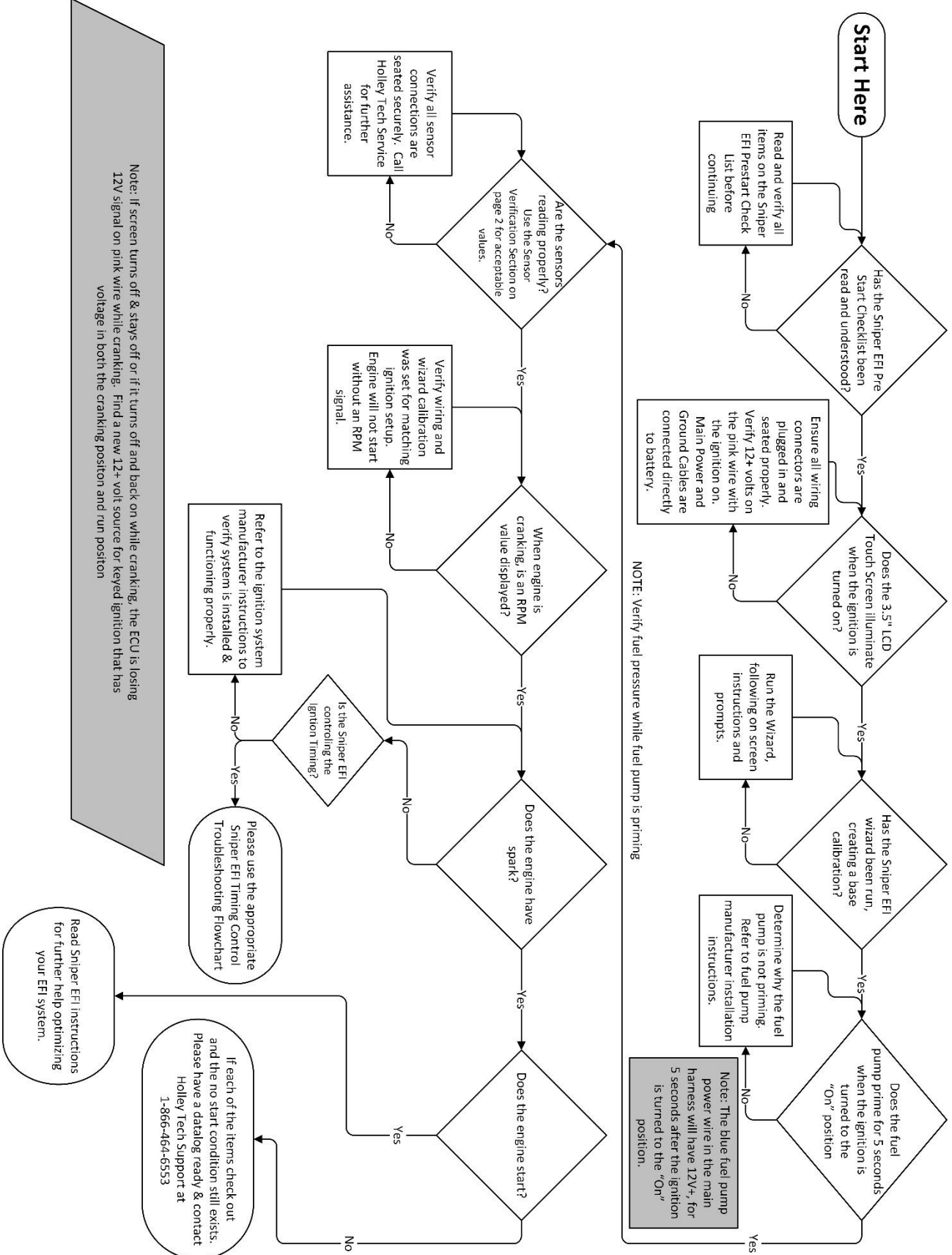
- Verify Wiring - ECU must be powered and grounded directly at the battery and the battery is fully charged.
 - Pink Wire must be attached to a 12V+ switched source that has voltage during cranking and run positions of the ignition switch. Verify this source with a multimeter.
 - Coil Negative Ignition setups must have the Yellow Wire (coil – input) on the negative terminal of the Ignition Coil
 - CD Box Ignition (no timing control) setups must have the Tach Output Wire from CD box connected to the purple wire (Crank Signal Positive) in the Sniper EFI Harness, using the provided Tach Signal Adapter.
- Handheld powers up
- Wizard has been run with correct Non Timing Controlled Ignition setup chosen
- Fuel pressure has been verified at the Sniper EFI throttle body and is between 55 & 65 psi
- All wiring has been tied away from potential hazards such as the exhaust, fans, pulleys, spark plug wires, 12 Volt accessory wires, the ignition coil and ignition coil wiring.
 - Pay specific attention to the O2 sensor cable lead. Make sure that it is tied out of the way from any heat sources or other hazards.

Sensor Verification

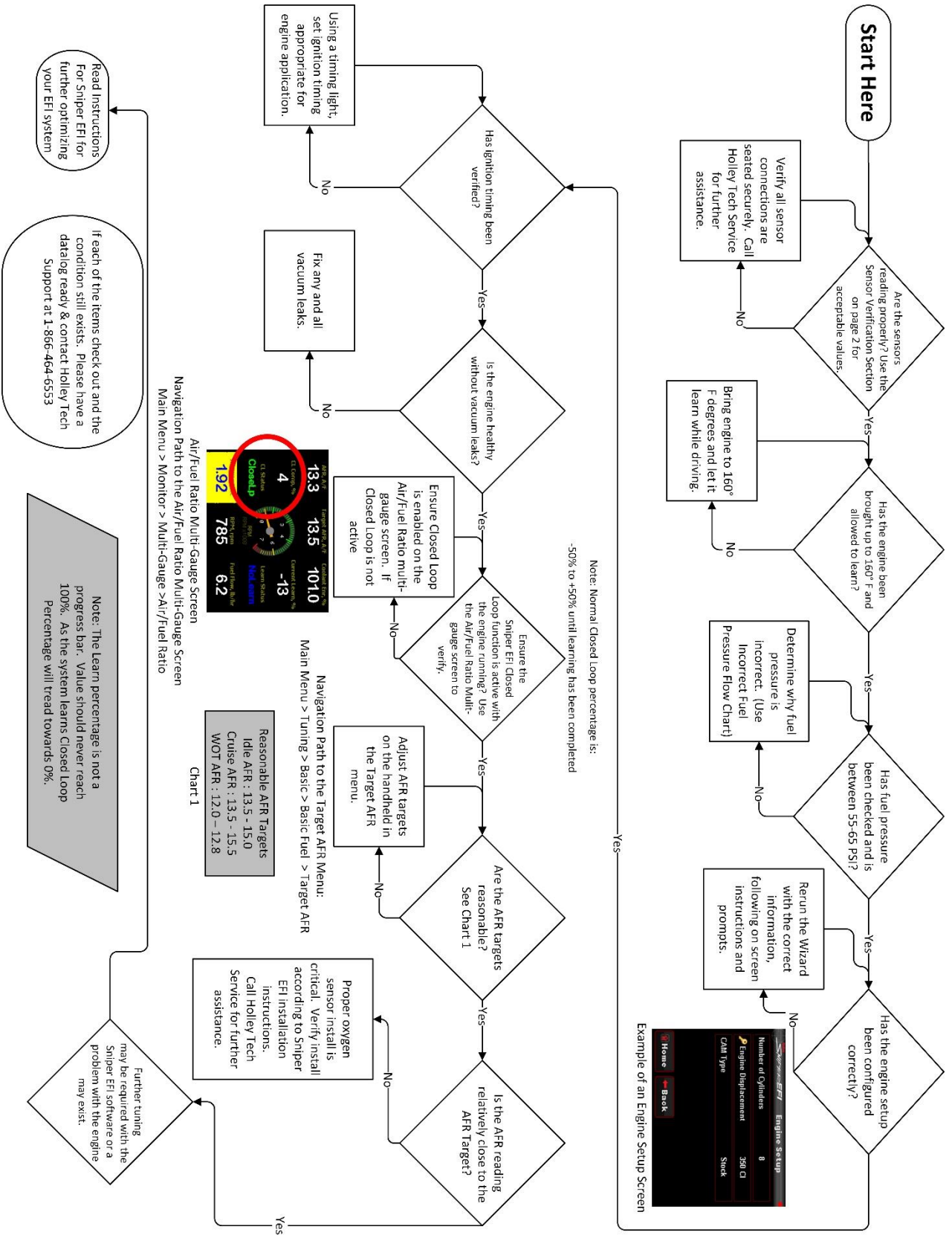
Verify all sensors are reading properly on the handheld.

- Engine RPM – This gauge should show “Stall!”, once you begin cranking the engine it will show actual engine RPM, cranking RPM must be a minimum of 100 RPM.
- TPS (Throttle Position Sensor) – Should read 0. Slowly depress the throttle pedal to wide open. It should read between 85% and 100% at wide open throttle. If it does not, verify your throttle linkage is allowing full travel of the throttle arm.
- MAP (Manifold Air Pressure Sensor) – Should read from 95-102kPa with the key on and the engine not running. At high elevations it could read as low as 75kPa.
- MAT (Manifold Air Temperature Sensor) – Should read ambient on a cold engine with the key on and the engine not running.
- CTS (Coolant Temperature Sensor) – Reads engine temperature. With a cold engine it should read similar to the MAT sensor. If the indicator reads “LOW Err” double check the connection to the CTS.
- AFR (Oxygen Sensor) – Initially should show “Heating”. Without the engine running, AFR will read 35.6 AFR (Air Fuel Ratio). Once engine is started and closed loop is active, the AFR should read close to the Target AFR in the handheld readouts. If ignition is turned on and the engine is not started, after a period of time, the AFR will start reading “Init...” until the Sniper EFI ECU sees an RPM signal.

No Start Condition



Engine Runs Poorly at Operating Temp



Erratic Idle Condition

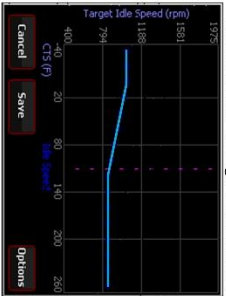
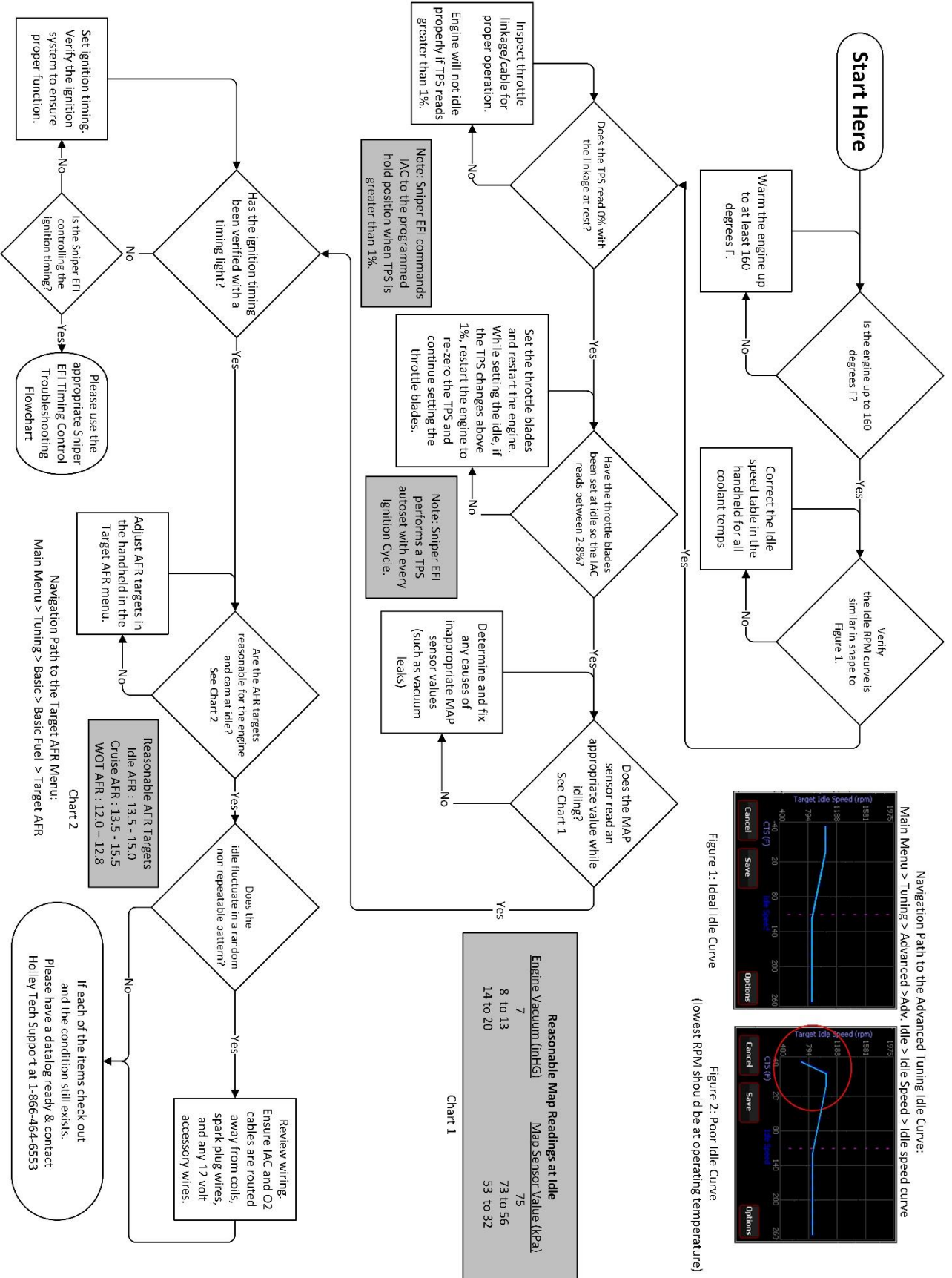


Figure 1: Ideal Idle Curve

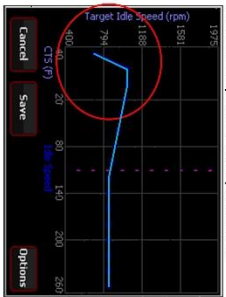
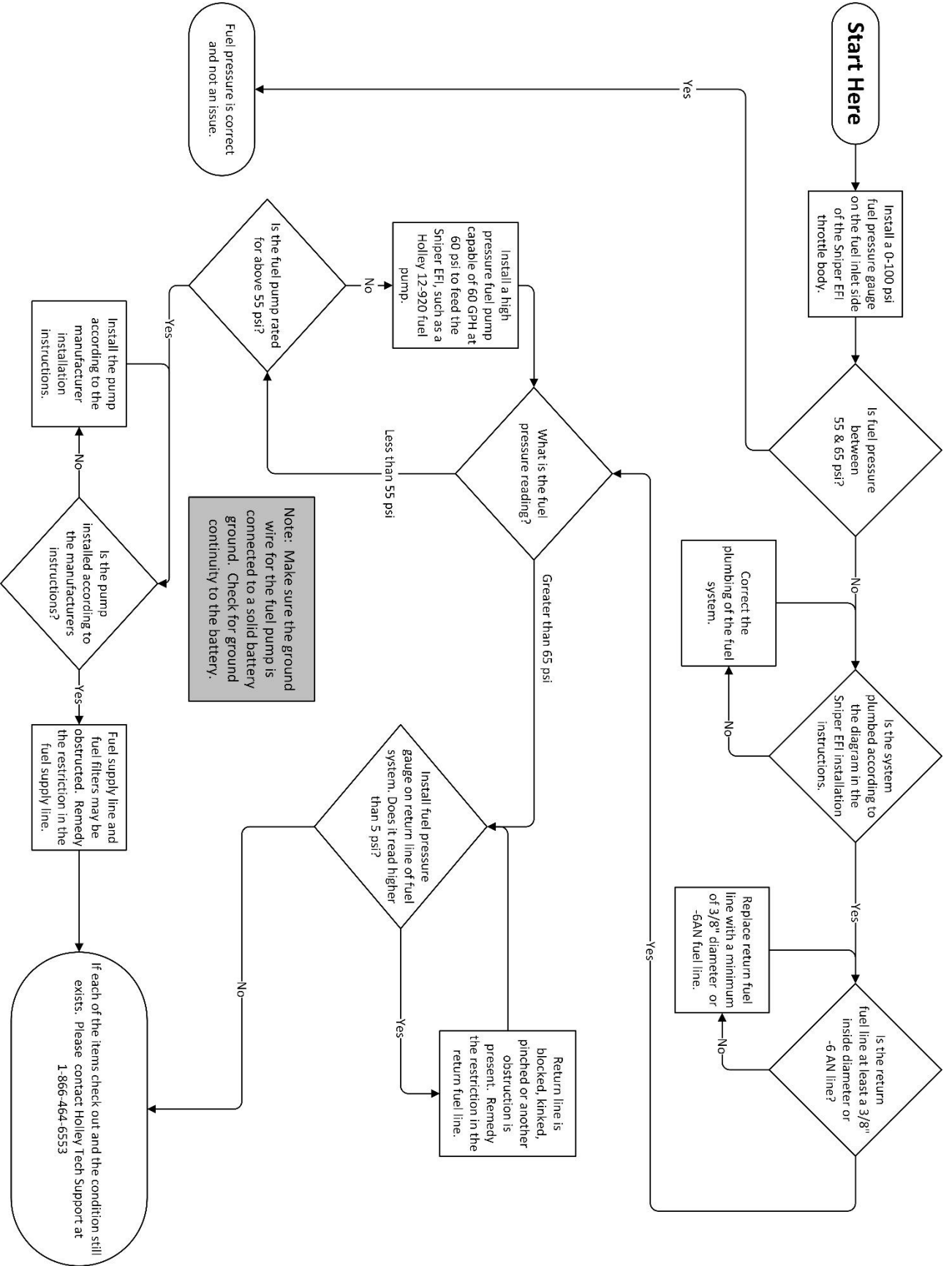


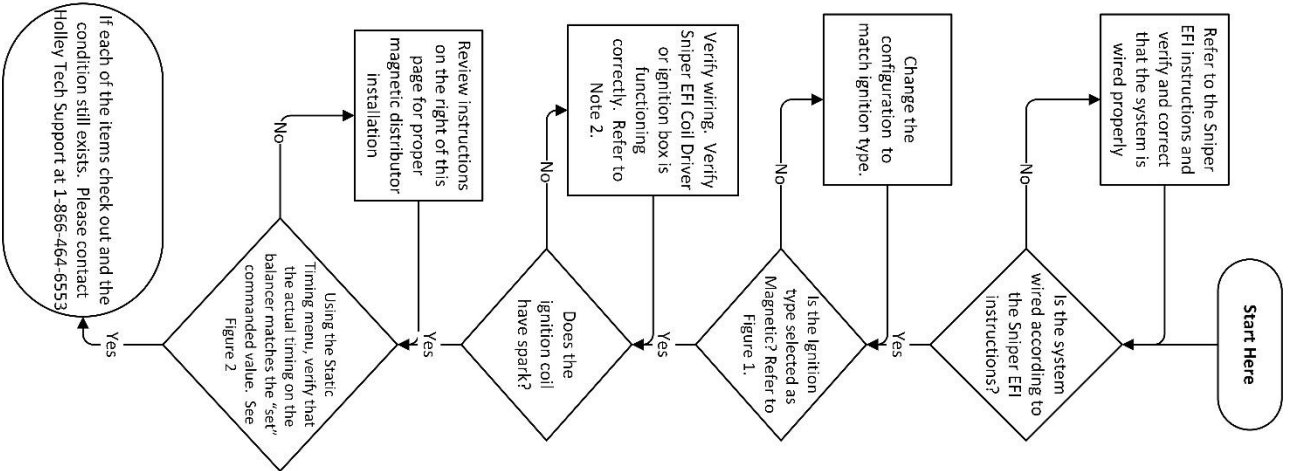
Figure 2: Poor Idle Curve (lowest RPM should be at operating temperature)

Incorrect Fuel Pressure



Magnetic Distributor Timing Control

Setting Crank Reference Angle to 45°



When using the Sniper EFI to control ignition timing, the timing curve can be adjusted in the handheld. The Sniper EFI Software allows full customization of the engine's timing curve.

Note 1



Figure 1 : Ignition Setup
Navigation Path to the Ignition Setup Menu: Main Menu > Tuning > System > Ignition Setup

To test the Sniper EFI Coil Driver, touch and remove the white wire to ground. Each time this wire is touched to ground the coil should send a spark.

Note 2

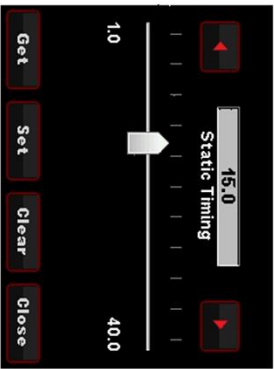
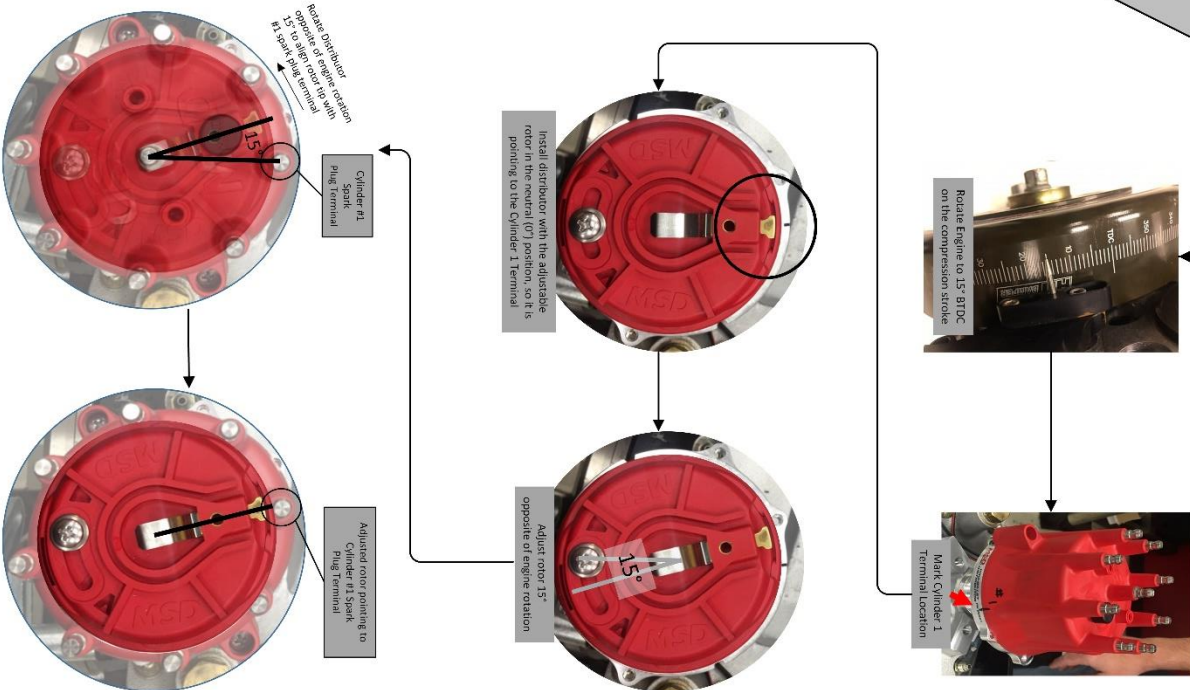
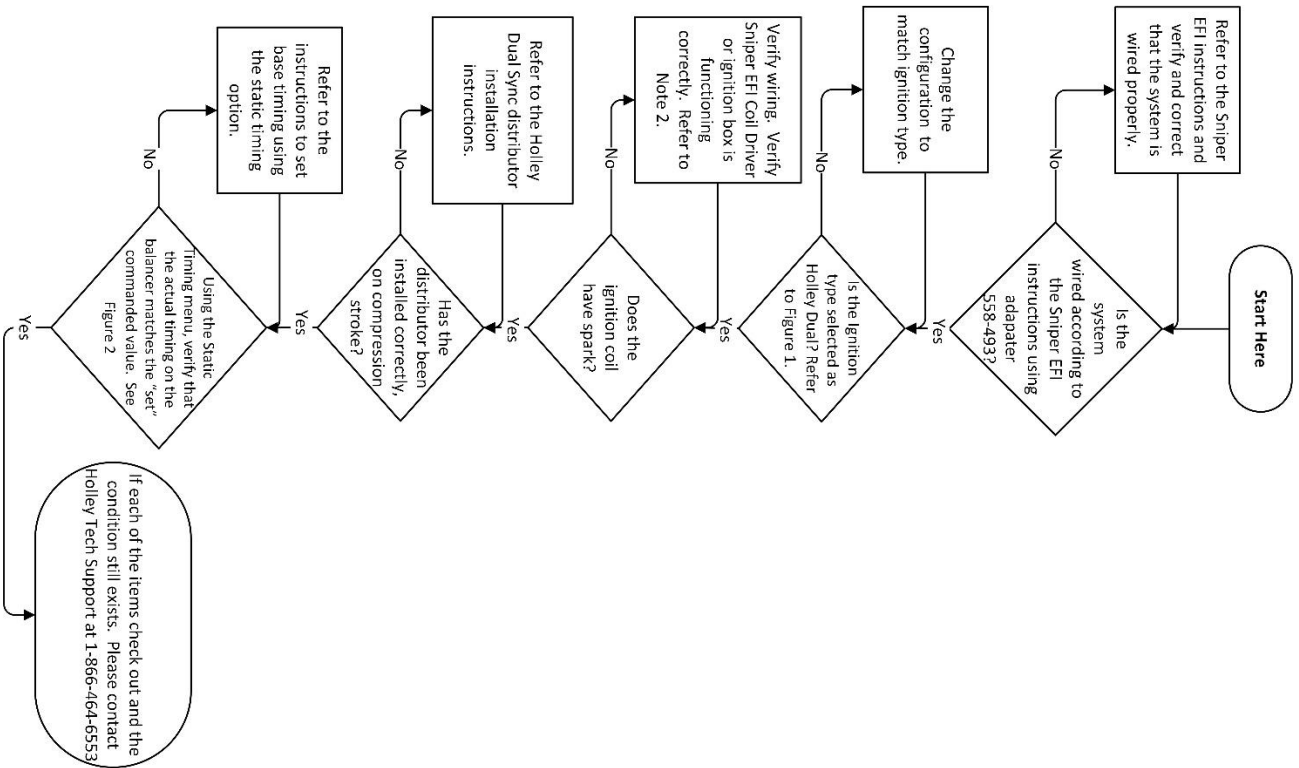


Figure 2: Static Timing Menu
Navigation Path to the Static Timing Menu
Main Menu > Tuning > System > Static Timing

Magnetic Distributor Installation



Holley Dual Sync Distributor Timing Control



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To test an ignition box, please refer to the instructions supplied by the manufacturer.

Note 2

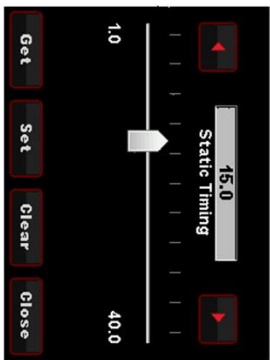


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