HP EFI SMART COIL HIGH POWER KIT
P/N 556-128

Overview

PN **556-128** contains two terminated harnesses and Holley HP Smart Coils designed for 8 cylinder engines. One end plugs directly into the Holley smart coil. The other end is terminated with a 7-pin metripak connector and three loose 12ga wires. This connector plugs into the Holley Universal Coil-On-Plug harness (PN **558-307**, not included), Holley LSx main harnesses, factory GM LSx harnesses, as well as other upcoming Holley CNP harnesses. The layout is similar to factory GM LSx coil harnesses with some added length for coil mounting flexibility.

Installation

1. The coil connectors are marked based on engine type (GM/Others with 1-3-5-7 and 2-4-6-8 cylinder banks and Ford with 1-2-3-4 and 5-6-7-8 cylinder banks). Install these as marked. The 7 pin metripak connectors (it has 8 cavities and 5 are populated) are labeled “GM EVEN” and “GM ODD”. The “GM EVEN” plugs into the “DIS CONNECTOR EVEN” on the **558-307** harness or “IGNTION EVEN” on Holley LSx main harnesses. The “GM ODD” goes into corresponding “ODD” connectors on these harnesses.

2. 12 gauge **BROWN** ground wire – This ground **MUST** go to the cylinder head that the coil is discharging to. This connection should be independent of other grounds. Do **NOT** connect this ground wire to sheet metal, or other locations that may not have a solid ground path to the battery. If this wire needs to be extended, use 10-12 gauge wire and appropriate connectors.

3. 12 gauge **BLACK** ground wire – This high current ground should go to the battery or to a ground stud that is directly connected to the battery. This connection should be independent of other grounds and as close to the battery as possible. Do **NOT** ground on sheet metal, etc. If this wire needs to be extended, use 10-12 gauge wire and appropriate connectors.

4. 12 gauge **RED** power wire – Do **NOT** connect directly to the battery. Install with fused relay(s) as described below:
   A) 5msec of dwell or less can be wired with a single fused 40A relay for 8 coils
   B) Over 5msec of dwell should use a single fused 70A+ relay for 8 coils or two 40A relays with 4 coils on each.

Connector Pinouts

These are pre-terminated.

Coil Connectors

- **Pin A** – Coil Trigger – Connect to individual ECU EST Outputs. EST A should go to cylinder #1, EST B to cylinder #2, etc.
- **Pin B** – Coil Trigger Ground (Black w/ white tracer) – These can be all tied together and go to Pin B14 (EST Ground Output).
- **Pin C** – Ground to Cylinder Head (Brown) – This ground **MUST** go to the cylinder head that the coil is discharging to. It is recommended to tie each cylinder bank together. Do **NOT** connect any other grounds to this point. This **MUST** be the only ground in this location.
- **Pin D** – Battery Ground (Black) – This high current ground should go to the battery or to a ground stud that is directly connected to the battery. Do **NOT** ground on sheet metal, etc.
- **Pin E** – High current switched +12V Power (Red) – Do **NOT** connect directly to the battery. On applications with 5msec of dwell or less, it is recommended to install to a fused 40A relay source to power all 8 coils. On applications over 5msec, it is recommended to use a single fused 70A+ relay for 8 coils or two 40A relays with 4 coils on each

Metripak Connector Pinouts

This information is contained with the **558-307** harness.

Coil Specifications:

Peak Voltage – 44,000 Volts
Peak Output – 102 mJ
Maximum Battery Voltage – 17.0 Volts

Dwell Settings:

- **For street cars below 1.5HP per cubic inch, the dwell should be set to 4.0 msec.**
- **For cars that exceed 1.5HP per cubic inch, the dwell should be set to 4.5 msec.**
- **For high boost, maximum effort drag racing engines, the dwell can be set to 5.0 msec.**