NEXUS SERIES
HIGH POWER IGNITER MODULE
8 CHANNEL

QUICK START GUIDE

HT-020058



HPI OVERVIEW

Congratulations on your purchase of a Nexus 8-Channel High Power Igniter (HPI). This module enables Haltech ECUs, as well as most aftermarket ECUs, to properly control non-smart (non-internally ignited) ignition coils by acting as a high current driver between the ECU and the ignition coils.

The HPI module is designed for reliable operation in demanding automotive environments and is suitable for a wide range of ignition system configurations. Its compact design allows for easy integration into tight installation spaces within the cabin or engine bay.

Non-internally ignited ignition coils typically have only two pins: coil positive and negative, as the igniter circuitry is located externally. The HPI provides the high-current switching required to drive these coils as shown on the right.

What's in the bag?

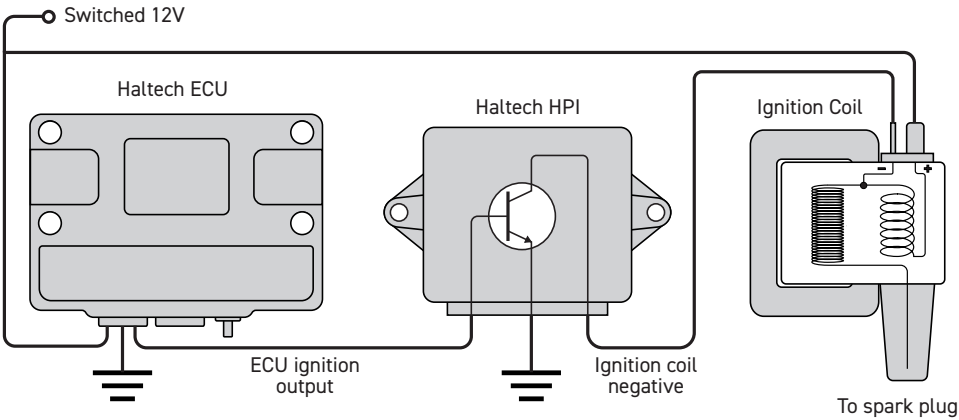
- HT-020058 - Nexus High Power Igniter (HPI) Module - 8 channel
- Quick Start Guide



Optional accessories

- HT-030010 - Connector and pins set
- HT-040025 - HPI 8 channel flying lead loom 2m (6.5')





Wiring and Installation

- The Haltech HPI module should be mounted inside the vehicle cabin or, alternatively, high on the firewall within the engine bay, with the connector facing downward.

- Wiring the Haltech HPI module is straightforward. Each channel has both an input and an output. The input is connected to the ignition signal from the ECU, while the output is connected to the negative side of the corresponding ignition coil.

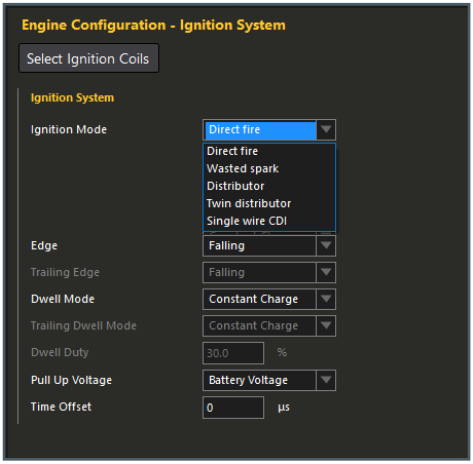
- If the HT-040025 HPI Flying Lead Loom is being used, the inputs and outputs are colour-coded. The yellow wires are the inputs, and the white wires are the outputs. The trace colours identify the individual channels. A full listing of pin allocations and wire colours can be found at the end of this guide.

- Each individual channel is capable of controlling only one ignition coil. Any unused channels can be left isolated and disconnected.

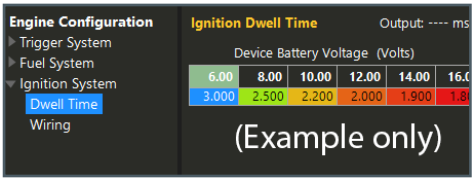
- Do not connect the HPI module to the wiring until the ECU has been configured in the software. An incorrect software configuration may cause the ignition coils to overheat and become damaged.



NSP Software Setup



- **Ignition Mode** - Select the appropriate ignition system configuration.
- **Edge** - Set to Falling.
- **Dwell Mode** - Set to Constant Charge.
- **Dwell Time** - Populate the dwell table according to the ignition coil manufacturer's specifications.



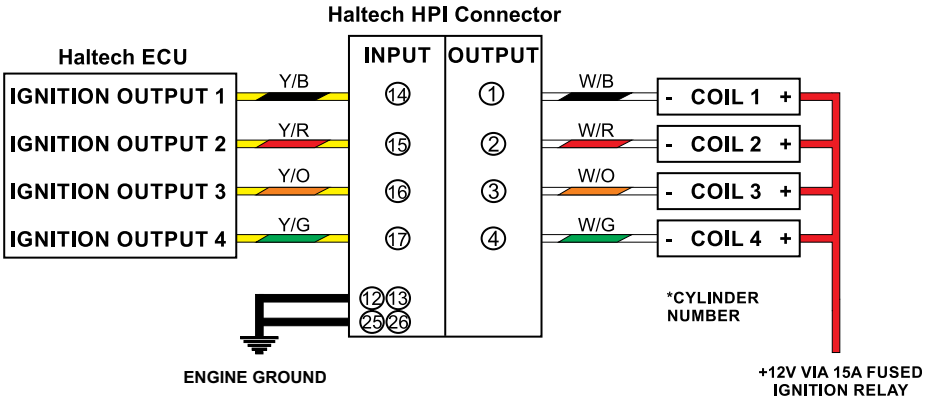


Figure 1 – 4 Cylinder Direct Fire

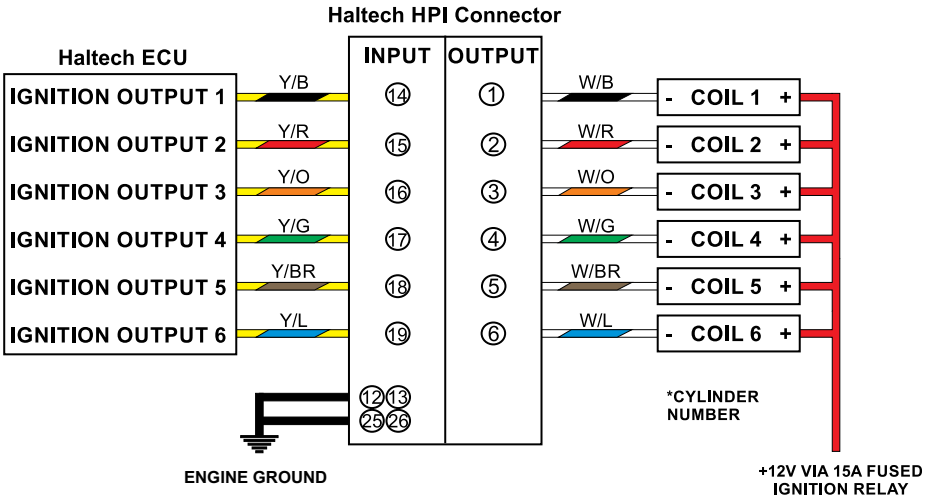


Figure 2 – 6 Cylinder Direct Fire

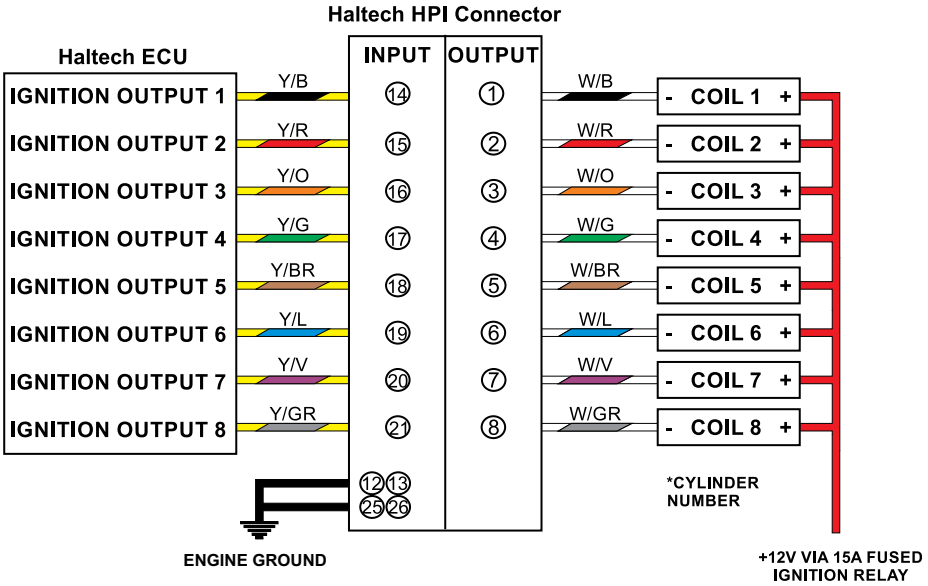


Figure 3 – 8 Cylinder Direct Fire

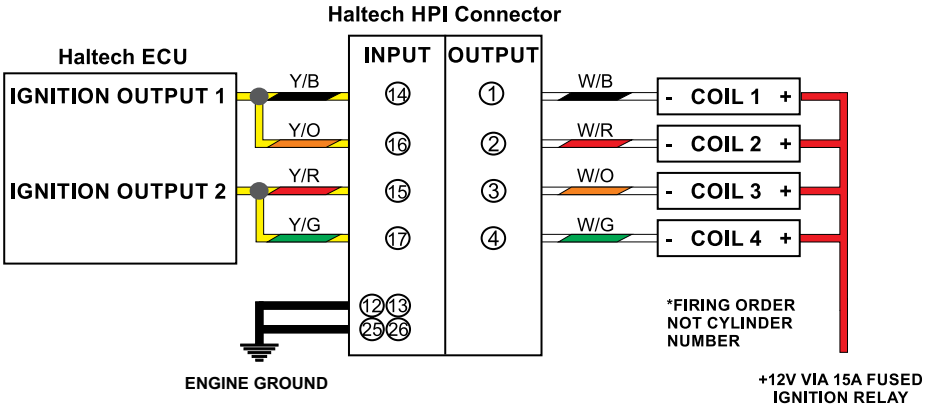


Figure 4 – 4 Cylinder Wasted Spark

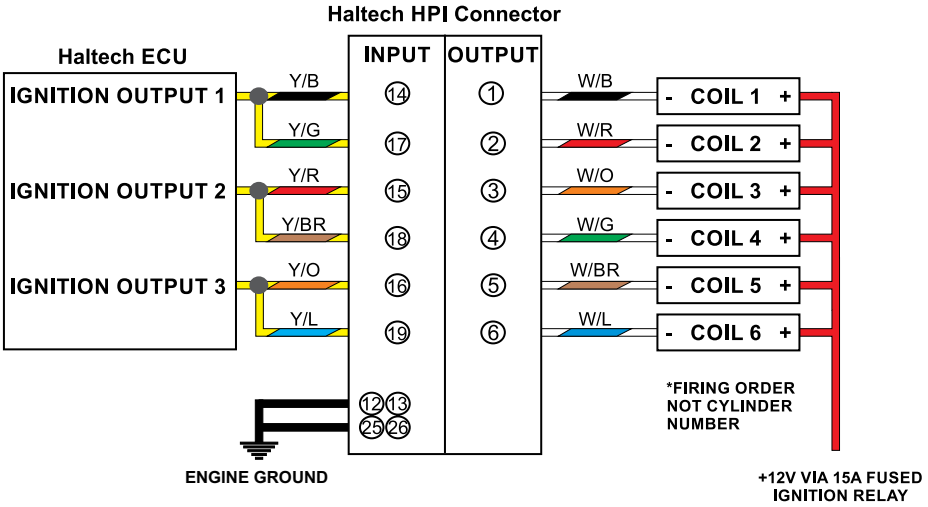


Figure 5 – 6 Cylinder Wasted Spark

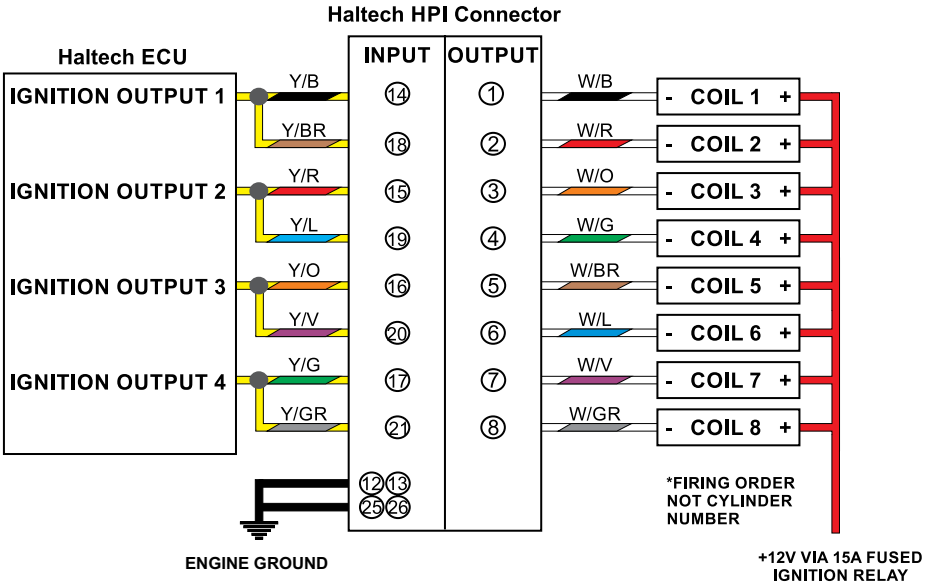


Figure 6 – 8 Cylinder Wasted Spark

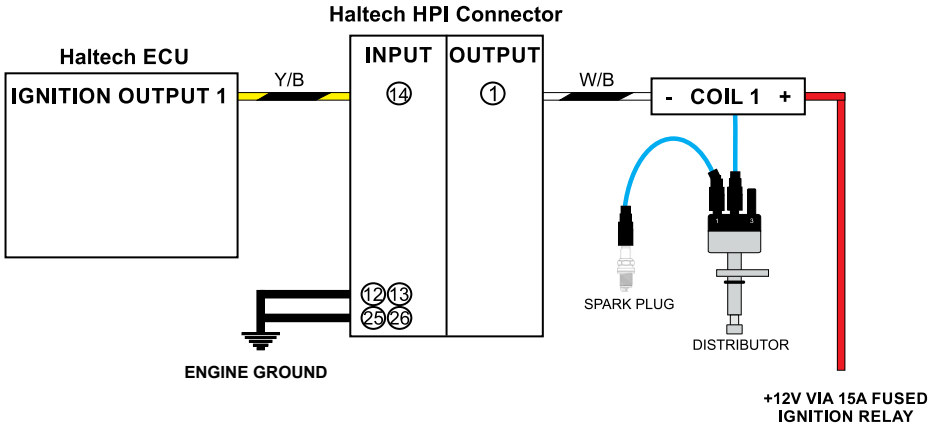


Figure 7 – Single Distributor

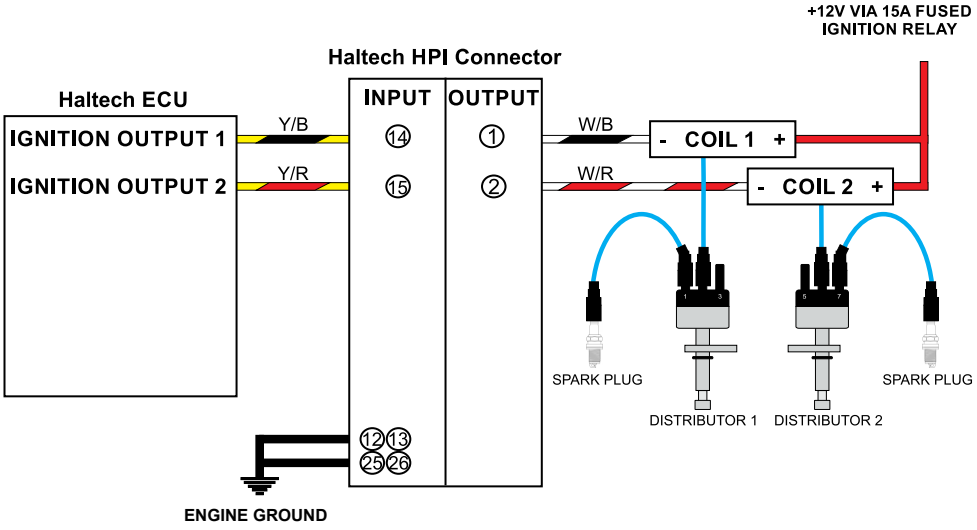


Figure 8 – Twin Distributor

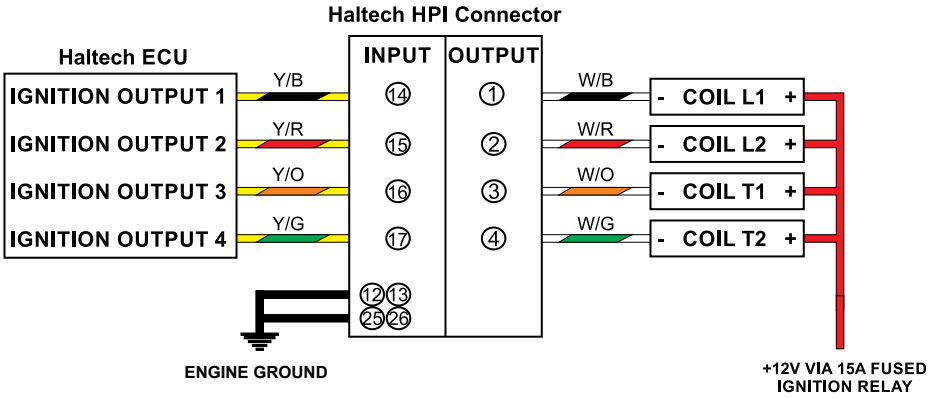


Figure 9 – 2 Rotor Direct Fire

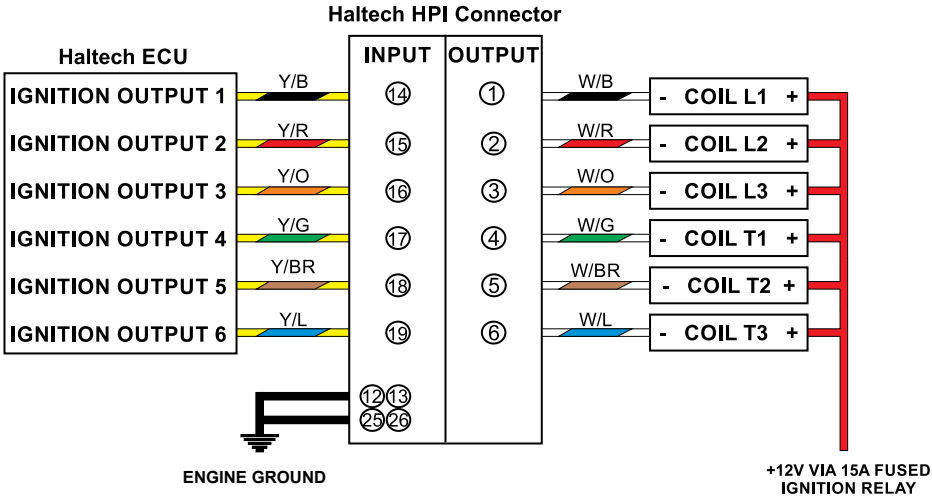


Figure 10 – 3 Rotor Direct Fire

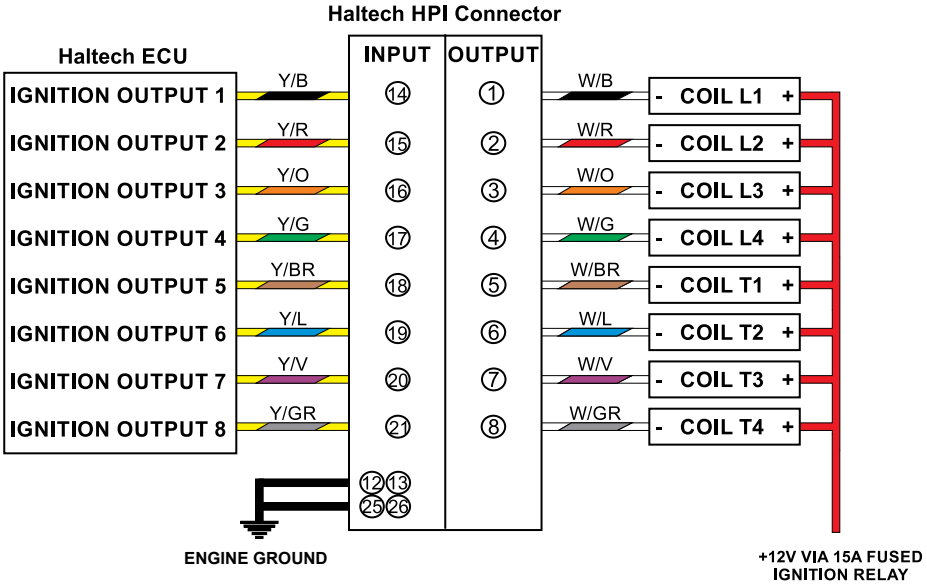
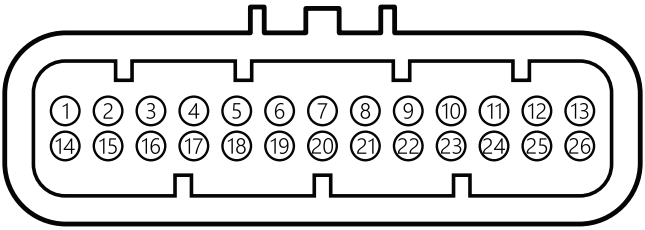


Figure 11 – 4 Rotor Direct Fire

Notes



PIN	CONNECTION	WIRE COLOUR (HT-040025 HARNESS)
1	Ignition coil 1 negative	White / Black
2	Ignition coil 2 negative	White / Red
3	Ignition coil 3 negative	White / Orange
4	Ignition coil 4 negative	White / Green
5	Ignition coil 5 negative	White / Brown
6	Ignition coil 6 negative	White / Blue
7	Ignition coil 7 negative	White / Violet
8	Ignition coil 8 negative	White / Grey
9	Unused	No connection
10	Unused	No connection
11	Unused	No connection
12	Engine ground	Black
13	Engine ground	Black
14	ECU Ignition 1	Yellow / Black
15	ECU Ignition 2	Yellow / Red
16	ECU Ignition 3	Yellow / Orange
17	ECU Ignition 4	Yellow / Green
18	ECU Ignition 5	Yellow / Brown
19	ECU Ignition 6	Yellow / Blue
20	ECU Ignition 7	Yellow / Violet
21	ECU Ignition 8	Yellow / Grey
22	Unused	No connection
23	Unused	No connection
24	Unused	No connection
25	Engine ground	Black
26	Engine ground	Black

WARRANTY CERTIFICATE

At Haltech we make every effort to design and manufacture fault-free products that perform up to or above the market expectations. All our products are covered by a Limited 12 Month Warranty.

Haltech Limited Warranty

Unless specified otherwise, Haltech warrants its products to be free from defects in material or workmanship for a period of 12 months from the date of purchase.

If the Haltech product is found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of purchase. Proof of purchase in the form of a copy of the original purchase invoice, receipt or bill of sale which indicates that the product is within the warranty period, must be presented to obtain warranty service.

Replacement or repair of a defective product shall constitute the sole liability of Haltech. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations, either expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Haltech, be liable for special or consequential damages.

Product Returns

Please include a copy of the original purchase invoice, receipt or bill of sale along with the unused, undamaged product and its original packaging. Any product returned with missing accessory items or packaging will incur extra charges to return the item to a re-saleable condition.

All product returns must be sent via a freight method with adequate tracking, insurance and proof of delivery services. Haltech will not be held responsible for product returns lost during transit.

Returns of Products Supplied in Sealed Packaging

The sale of any sensor or accessory supplied in sealed packaging is strictly non-refundable if the sealed packaging has been opened or tampered with. This will be clearly noted on the product packaging. If you do not accept these terms please return the sensor in its original unopened packaging within 30 days for a full refund.

A sensor or accessory product may be returned after 30 days of purchase (with its sealed packaging intact) for credit only (no refunds given) and will be subject to a 10% restocking fee.

Installation of Haltech Products

No responsibility whatsoever is accepted by Haltech for the fitment of Haltech Products. The onus is clearly on the installer to ensure that both their knowledge and the parts selected are correct for that particular application. Any damage to parts or consequential damage or costs resulting from the incorrect installation of Haltech products are totally the responsibility of the installer.

Always disconnect the battery when doing electrical work on your vehicle. Avoid sparks, open flames or use of electrical devices near flammable substances. Do not run the engine with a battery charger connected as this could damage the ECU and other electrical equipment.

Do not overcharge the battery or reverse the polarity of the battery or any charging unit. Disconnect the Haltech ECU from the electrical system whenever doing any welding on the vehicle by unplugging the wiring harness connector from the ECU.

After completing the ECU installation, make sure there is no wiring left un-insulated. Uninsulated wiring can cause sparks, short circuits and in some cases fire. Before attempting to run the engine ensure there are no leaks in the fuel system.

All fuel system components and wiring should be mounted away from heat sources, shielded if necessary and well ventilated. Always ensure that you follow workshop safety procedures. If you're working underneath a jacked-up car, always use safety stands!

Haltech Off-Road Usage Policy

In many states it is unlawful to tamper with your vehicle's emissions equipment. Haltech products are designed and sold for sanctioned off-road/competition non-emissions controlled vehicles only and may never be used on a public road or highway.

Using Haltech products for street/road use on public roads or highways is prohibited by law unless a specific regulatory exemption exists (more information can be found on the SEMA Action Network website www.semasan.com/emissions for state by state details in the USA).

It is the responsibility of the installer and/or user of this product to ensure compliance with all applicable local and federal laws and regulations. Please check with your local vehicle authority before purchasing, using or installing any Haltech product.

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