



ELITE 2500 + REM
Terminated Engine Harness
QUICK START GUIDE
HT-142005
with 16 EV1 Injectors



LIMITED WARRANTY

Lockin Pty Ltd trading as Haltech warrants the Haltech™ Programmable Fuel Injection System to be free from defects in material or workmanship for a period of 12 months from the date of purchase.

Proof of purchase, in the form of a bill of sale or receipted invoice, which indicates that the product is within the warranty period, must be presented to obtain warranty service. Lockin Pty Ltd trading as Haltech suggests that the purchaser retain the dealer's dated bill of sale as evidence of the date of retail purchase.

If the Haltech™ Programmable Fuel Injection System is found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of purchase. This shall constitute the sole liability of Lockin Pty Ltd trading as 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 Lockin Pty Ltd trading as Haltech, be liable for special or consequential damages.

DISCLAIMER

Haltech will not be held responsible for any damage caused by the incorrect installation or tuning of this product. It is the installers responsibility to ensure the wiring connections and pinouts match that of the vehicle the unit is being installed into.

Haltech has taken all care to make sure the connections match the specified vehicles listed, but variations in wiring and connections on vehicles can occur and therefore this should be checked BEFORE the unit is installed.

Haltech highly recommends installation and tuning of this product is to be carried out by a professional, with an understanding on installing and tuning engine management systems. Misuse of this product can destroy your engine.

WARNING

This ECU is designed and sold for Racing use only. Using this product for street / road use may be prohibited by law. Please check with your local vehicle authority before using this product.

GENERAL INSTALLATION WARNING

Avoid open sparks, flames or operation of electrical devices near flammable substances. Always disconnect the battery cables when doing electrical work on your vehicle.

Do not charge the battery with a 24 Volt truck charger or reverse the polarity of the battery or any charging unit. Do not charge the battery with the engine running as this could expose the ECU to an unregulated power supply that could destroy the ECU and other electrical equipment.

All fuel system components and wiring should be mounted away from heat sources, shielded if necessary and well ventilated. Disconnect the Haltech ECU from the electrical system whenever doing any arc welding on the vehicle by unplugging the wiring harness connector from the ECU.

After completing the installation, make sure that there are no fuel leaks, and no wiring left un-insulated in case a spark or short-circuit occurs and causes a fire. Also make sure that you follow all proper workshop safety procedures. If you're working underneath a jacked-up car, always use safety stands!

Elite 2500 + REM

Terminated Engine Harness

Quick Start Guide

Congratulations on purchasing a Haltech Engine Management Terminated Engine Harness and Race Expansion Module. This *Plug and Play* product allows you to be up and running in a few hours.

The Harness when installed in conjunction with a Haltech Elite 2500 and the Race Expansion Module opens the door to virtually limitless performance modification and tuning of your vehicle. Programmable systems allow you to extract all the performance from your engine by delivering precisely the required amount of fuel and ignition timing that your engine requires for maximum output under all operating conditions.

This quick start guide will walk you through installation of the Haltech Terminated Engine Harness into a vehicle. This guide is accompanied by the full service manual located on the USB key provided with the ECU, or contained within the ESP Software it self, that you or your tuner will need to refer to before completing your installation and configuration.

Supported Engines

The Haltech Terminated 2500+REM Engine Harness supports the following engine configurations:

- GM Small Block / Big Block Engines (16 injector)
- Ford Small Block / Big Block Engines (16 injector)
- HEMI Big Block Engines (16 injector)

Supported ECUs

- Haltech Elite 2500
- Haltech Elite Race Expansion Module (REM)

Included in Haltech ECU Kit (HT-152005)

- Haltech Elite 2500 ECU
- Haltech Race Expansion Module (REM)
- Terminated Engine Harness with 16 EV1 Injectors
- Deutsch Connector Pack

Optional Accessories (Sold Separately)

- Dual Channel Wideband Controller Kit (HT-059986)
- Single Channel Wideband Controller Kit (HT-059976) for Single Turbo Applications
- DTM4 CAN Cable (please specify length when ordering)
- CO2 Boost Control Dual Solenoid + Pressure Kit (HT-020402)
- High Output Inductive Coils (8x HT-020114)
- High Output Inductive Coil Wiring Harness (HT-130306, Chevy/Hemi Spec)
- High Output Inductive Coil Wiring Harness (HT-130311, Ford Spec)

Harness Overview

The Haltech V8 Terminated Engine Harness is a plug and play solution for wiring a Big Block / Small Block and HEMI Engines.

Installation is simple and easy as the harness is designed for the engine, all lengths are correct and all wires are clearly labeled.

Notes on Installation:

- Make sure your Engine is grounded directly to the chassis of the vehicle. A heavy gauge ground strap should be used to ground your engine to the chassis of the vehicle. The Haltech Terminated Engine harness **does not** ground your engine.

WARNING!

Damage can occur to your harness and / or ECU if you do not ground your engine properly. Please ensure a heavy gauge cable is used.

- Keep all wires away from the exhaust manifold and extreme sources of heat.
- Base maps are available by emailing sales@haltech.com.au or usasupport@haltech.com, or contained within your ESP Software files.

WARNING!

Haltech Harnesses feature Shielded cables in both a 4 Core and 1 core design. The shielding is grounded within the harness at the ECU end and does NOT require grounding at the sensor end. The shielding wire can sometimes get tangled in the signal wire and ground out the signal, so care must be taken to ensure the shield wire is properly cut back and does not contact the inner signal wires(s).

Terminology and Descriptions

Analogue Voltage Inputs (AVI): The Analogue Voltage Inputs can accept variable voltage inputs from 0V to 5V.

Digital Pulsed Outputs (DPO): These are “pull to ground” style PWM channels that can control pulsed width modulated wave form devices and switched style discrete outputs on/off type devices.

Synchronized Pulsed Inputs (SPI): These are digital inputs that can be used for frequency based sensors like speed sensors, or switched activation inputs.

Manifold Absolute Pressure Sensor (MAP, AVI 9, in Engine Bay)

The Manifold Absolute Pressure Sensor is located on the intake manifold. Connect the MAP labeled connector directly to the sensor. The MAP sensor measures changes in the intake manifold pressure so the ECU knows the manifold pressure.

Throttle Position Sensor (TPS, AVI 10, in Engine Bay)

The TPS labeled connector connects directly to the throttle sensor on the engine. This will enable the user to know the current throttle position of the engine.

Engine Coolant Temperature Sensor (ECT, AVI 8, in Engine Bay)

The Engine Coolant Temperature Sensor input connects directly to the OEM engine coolant temperature sensor located towards front of the head of the left bank. The Engine Coolant Temperature Sensor provides the ECU with a signal that allows the ECU to know the current engine temperature. On air cooled engines, an oil temp sensor can be connected and configured in ESP as the engine temperature sensor.

Intake Air Temperature Sensor (IAT, AVI 7, in Engine Bay)

The Intake Air Temperature Sensor input connects to a temperature sensor located in the intake air stream. The Intake Air Temperature Sensor provides the ECU with a signal that allows the ECU to know the current intake air temperature.

Fuel Pressure Sensor (Fuel Press, AVI 3, in Engine Bay)

The Fuel-P labeled connector connects directly to the fuel pressure sensor on the engine. This will enable the user to know the current fuel pressure of the vehicle.

Oil Pressure Sensor (Oil Press, AVI 4, in Engine Bay)

The Oil-P labeled connector connects directly to the oil pressure sensor on the engine. This will enable the user to know the current oil pressure of the vehicle.

Stepper Outputs (Low Side, High Side or both, in Engine Bay and Cabin).

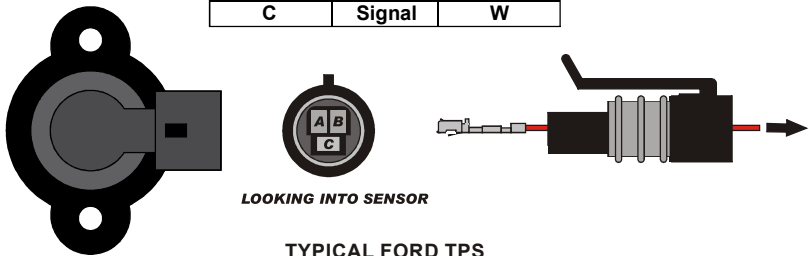
Stepper Output wires are capable of controlling both low and high side driven devices. Both the Elite ECU and the REM ECU have a total of 4 outputs each. Please see the pinout information for their corresponding assignments and locations.

Typical Throttle Position Sensors

The Haltech Terminated SBC/BBC Harness is fitted with a DTM3 TPS Connector and includes the mating connector and pins to either build an adapter for your particular TPS sensor, or the connector can be cut off and re-pinned for your particular style of sensor. Here are some examples of various TPS Sensors:

TYPICAL GM TPS
SENSOR CONNECTIONS

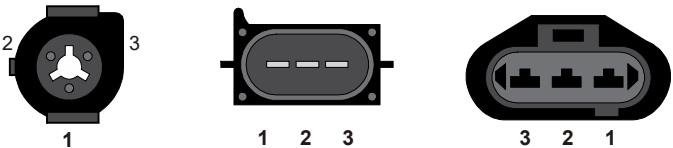
Sensor Pin	Function	Wire Color
A	+5VDC	O
B	Ground	B/W
C	Signal	W



LOOKING INTO SENSOR

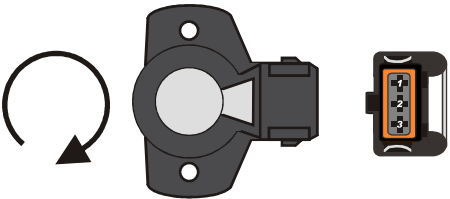
TYPICAL FORD TPS
SENSOR CONNECTIONS

Sensor Pin	Function	Wire Color
1	+5VDC	O
2	Signal	G
3	GROUND	B



HALTECH GRAY CW HT-010402
SENSOR CONNECTIONS

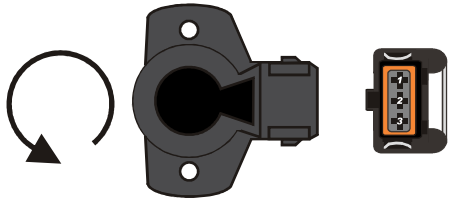
Sensor Pin	Function	Wire Color
A	Ground	B/W
B	Signal	W
C	+5VDC	O



GRAY TPS SENSOR
CLOCKWISE ROTATION

HALTECH BLACK CCW HT-010402
SENSOR CONNECTIONS

Sensor Pin	Function	Wire Color
A	Ground	B/W
B	Signal	W
C	+5VDC	O



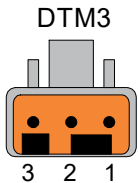
BLACK TPS SENSOR
COUNTER CLOCKWISE ROTATION

Figure 1 - Typical Throttle Position Sensors

Typical Throttle Position Sensors (Cont.)

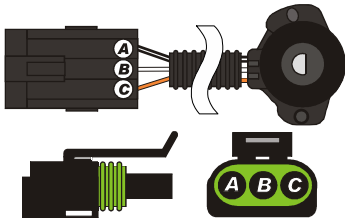
Haltech Supplied DTM4
TPS Connector

Sensor Pin	Function	Wire Color
1	Ground	B/W
2	+5VDC	O
3	Signal	W



HT-010400
SENSOR CONNECTIONS

Sensor Pin	Function	Wire Color
A	Ground	B/W
B	Signal	W
C	+5VDC	O

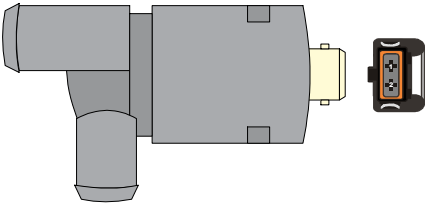


Typical 2 Wire Idle Valves

The Haltech System can control both 2 wire Solenoid style idle valves and Stepper Motor style 4 wire valves. To control 2 wire valves you can use DPO or Stepper output wires. To control Stepper style valves you need to use Stepper output wires. Here are some typical idle valve examples:

BOSCH IDLE VALVE
HT-020308
SENSOR CONNECTIONS

Sensor Pin	Function
A	+12VDC
B	Signal



Typical Ford Idle Valve
SENSOR CONNECTIONS

Sensor Pin	Function
A	+12VDC
B	Signal

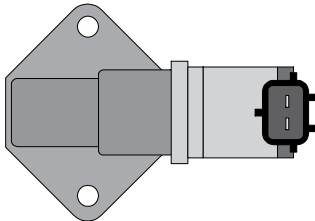
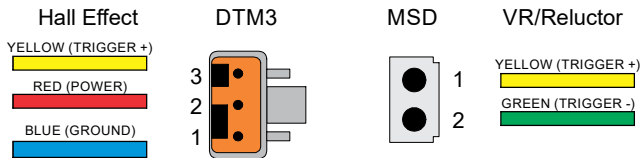


Figure 2 - Typical 2 Wire Solenoid Style Idle Valves

Crank Angle Sensor (CRANK, or Trigger)

The Crank Wires connect directly to the engine Crank Angle Sensor. The Crank sensor wires are fitted with both DTM3 and MSD connectors for convenience.

The Haltech ECU uses this signal to accurately measure crankshaft position and engine speed.



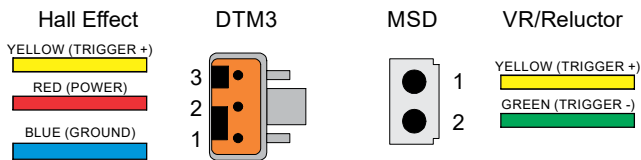
(Looking at front of connector)

Figure 3 - Crank (Trigger) Connectors

Camshaft Position Sensor Input (CAM, or Home)

The Cam Wires connect directly to the engine's Cam Sensor. The Cam sensor wires are fitted with both DTM3 and MSD connectors for convenience.

The Haltech ECU uses this signal to accurately measure cam position and provide the ECU with the necessary sync information for TDC.



(Looking at front of connector)

Figure 4 - Cam (Home) Connectors

ECU Injectors 1-8 (INJ1, INJ2, INJ3, INJ4, INJ5, INJ6, INJ7, INJ8)

The injector outputs connect directly to the injectors. Please ensure the correct injector output is connected to the corresponding injector in the engine. Please refer to the label on the harness for correct injector allocation. The connector is a DTM12.

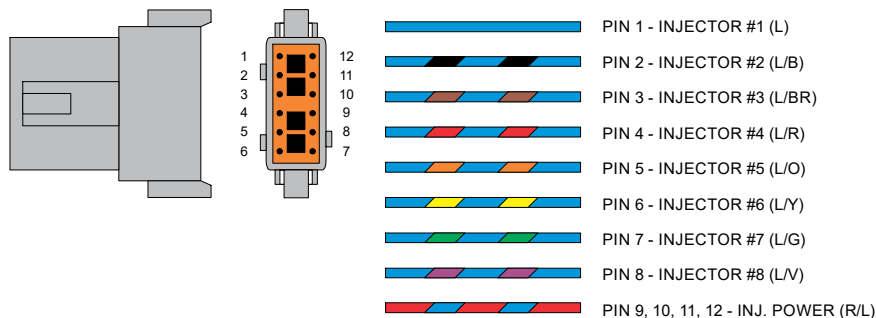


Figure 5 - Injector Breakout Connector

REM 2nd Stage Injectors 1-8 (INJ1, INJ2, INJ3, INJ4, INJ5, INJ6, INJ7, INJ8)

The injector outputs connect directly to the injectors. Please ensure the correct injector output is connected to the corresponding injector in the engine. Please refer to the label on the harness for correct injector allocation. The connector is a DTM12.

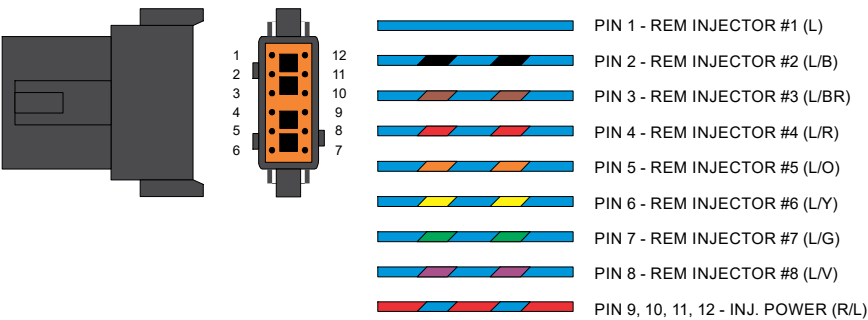


Figure 6 - REM Injector Breakout Connector

Ignition 1-8 (IGN1, IGN2, IGN3, IGN4, IGN5, IGN6, IGN7, IGN8)

The ignition outputs connect to the Ignition Breakout Connector. Please ensure the correct Spark Mode and Ignition Type is correctly configured in the software for the corresponding ignition system on the engine. Please refer to the label on the harness for correct output allocation. The connector fitted is a DTM12.

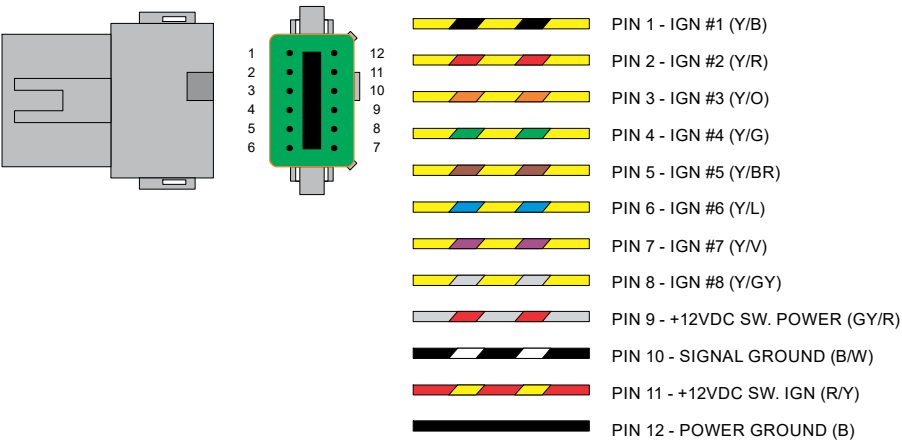
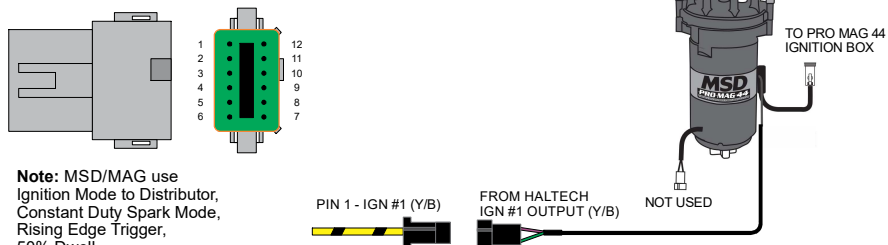


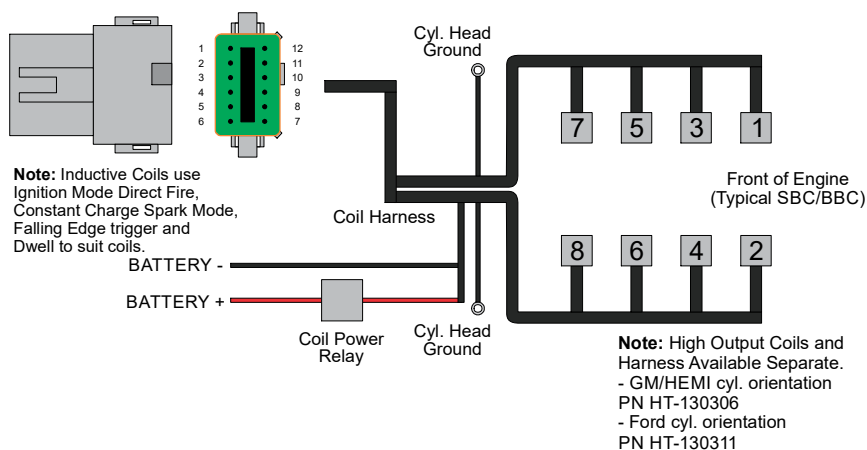
Figure 7 - Ignition Breakout Connector

Typical Ignition Control Options

Single Coil MSD PRO MAG Setup



Multicoil Inductive Setup



Multicoil CDI (PowerSelect 8)

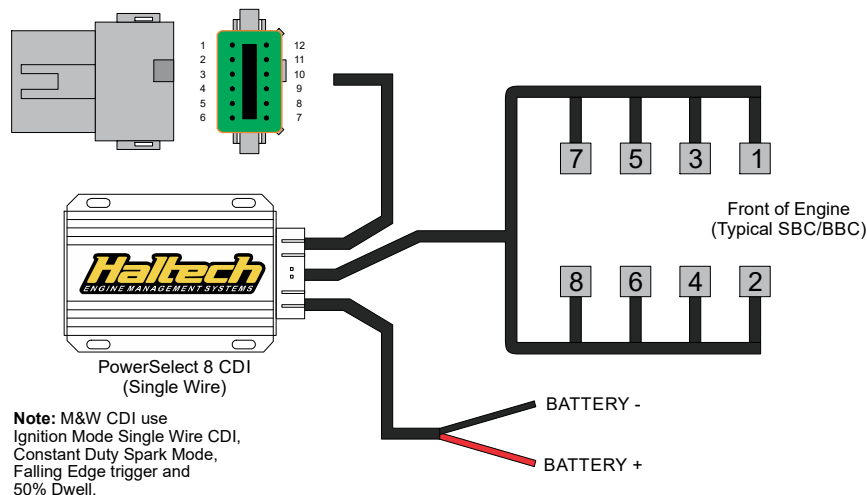


Figure 8 - Typical Ignition System Configurations

Spare Pressure Sensor (AVI 5, in Engine Bay)

The AVI 5 labeled connector is a spare Analogue Voltage Input (AVI 5). The 3 pin connector has the following terminations. Please isolate all unused terminations.

- Pin # 1 – Blk/Wht : Sensor Ground
- Pin # 2 – Org : +5V Sensor Power
- Pin # 3 – Org/Grn : Sensor Signal (AVI 5)

This input can be programmed within the ESP Software to read inputs such as:

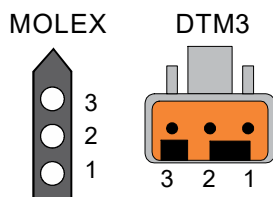
- O2 Sensors
- Pressure Sensors
- Temperature Sensors
- Various Switches
- Trim Module

Vehicle Speed Sensor Input (DSS-Input, SPI 1, in Cabin Harness)

The Driveshaft Speed sensor provides information on vehicle speed to the Haltech ECU which can be used to display vehicle speed, detect gears or controlling of switches, etc. The Input has been fitted with 2 connection options. Molex Connector will connect directly to Racepak MSC-5 Driveshaft Sensor.

Connections on the plug are as follows:

- Pin# 1: Blk/Wht, Sensor Ground
- Pin# 2: Org/Wht, +8V Sensor Power
- Pin# 3: GreyBlk (Shielded), Sensor Signal (SPI 1)



Spare Pressure Sensor (AVI 2, in Cabin Harness)

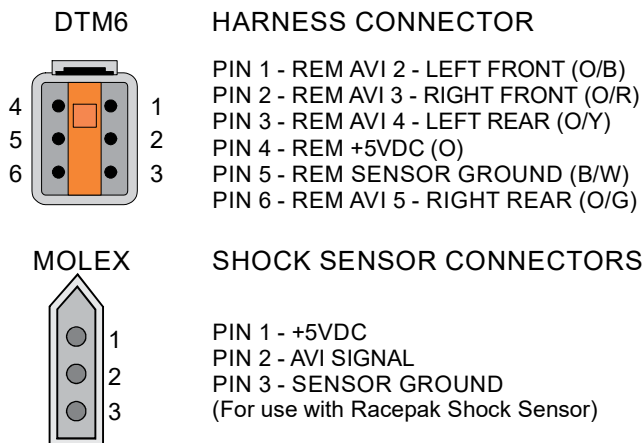
The AVI 2 labeled Pressure is a spare Analogue Voltage Input (AVI 2). The 3 pin connector has the following terminations. Please isolate all unused terminations.

- Pin # 1 – Blk/Wht : Sensor Ground
- Pin # 2 – Org : +5V Sensor Power
- Pin # 3 – Org/Blk : Sensor Signal (AVI 2)

This input can be programmed within the ESP Software to read inputs such as: Nitrous Pressure, CO2 Pressure, Trans Brake Pressure, Activation Switches, etc.

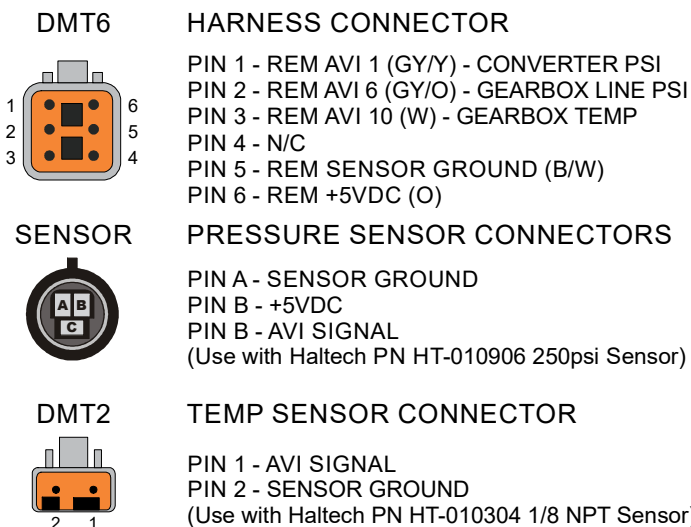
Shock Sensor Harness

The Haltech Terminated SBC/BBC Harness is fitted with all the necessary sensor inputs to connect four individual Shock Travel Sensors to measure your Front Left/Right and Rear Left/Right wheelspeeds. They will need to be connected using the provided breakout harness labeled as 'Shock Inputs'. The connections to the sensors are made through a Molex 3 pin connector to be used directly with Racepak Shock sensors.



Gear Box Sensor Harness

The Haltech Terminated SBC/BBC Harness is fitted with all the necessary sensor inputs to connect to your transmission to measure Gearbox Temp, Gearbox Line Pressure and Gearbox Converter Pressure. They will need to be connected using the provided breakout harness labeled as 'Gear Box Inputs'. The connections are made through the corresponding sensor input connectors already pinned to the harness.



Typical Boost Control Setup

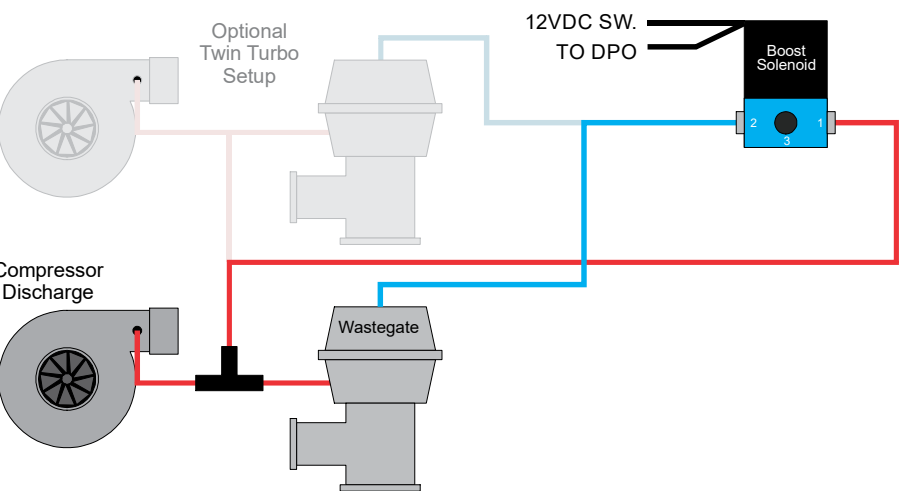


Figure 9

Typical CO2 Boost Control Setup

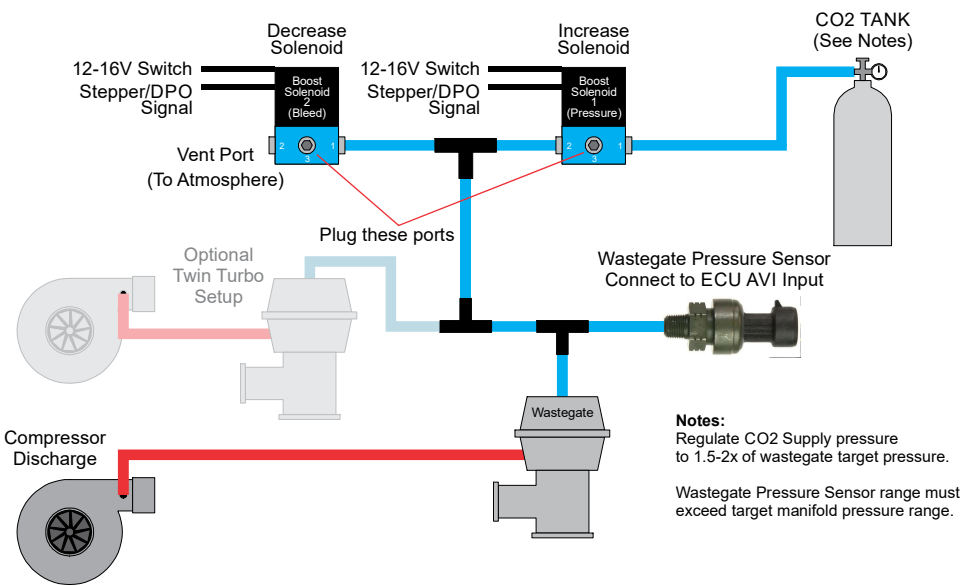


Figure 10

Typical Trans Brake Setup (NA, Supercharged or Nitrous Applications)

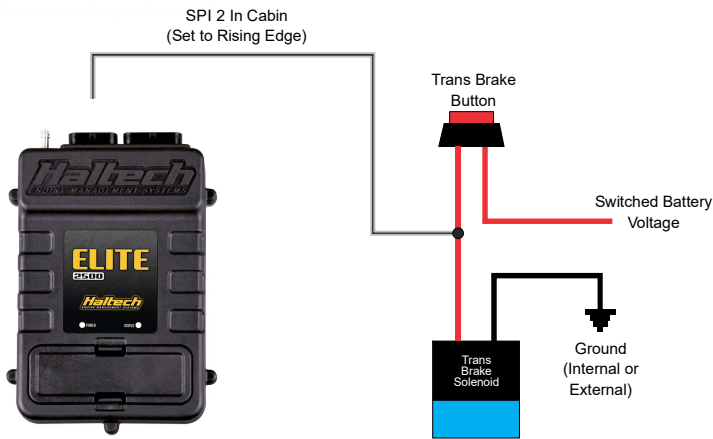


Figure 11

Typical Trans Brake and Bump/Creep Setup (Turbo Applications)

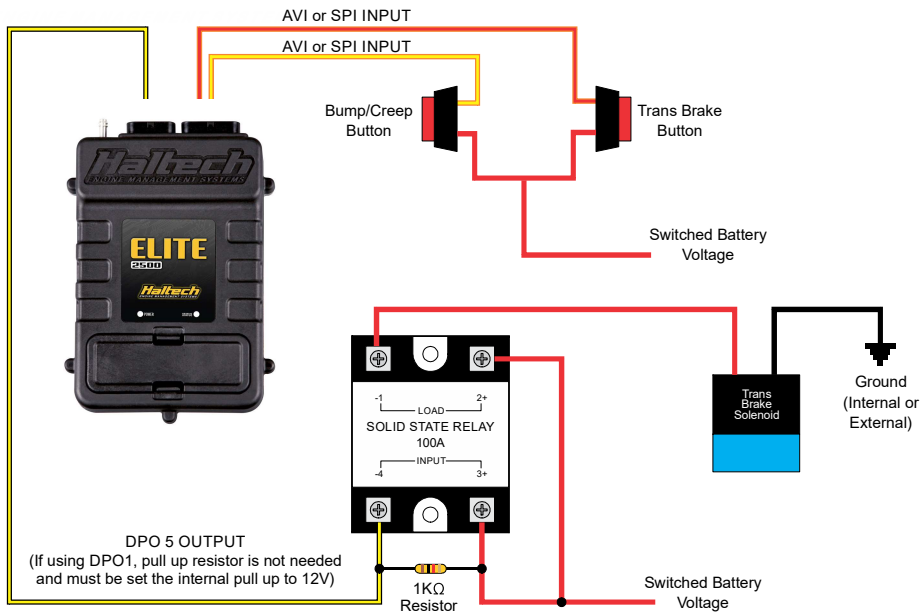


Figure 12

Typical Multi-Stage Nitrous Wiring

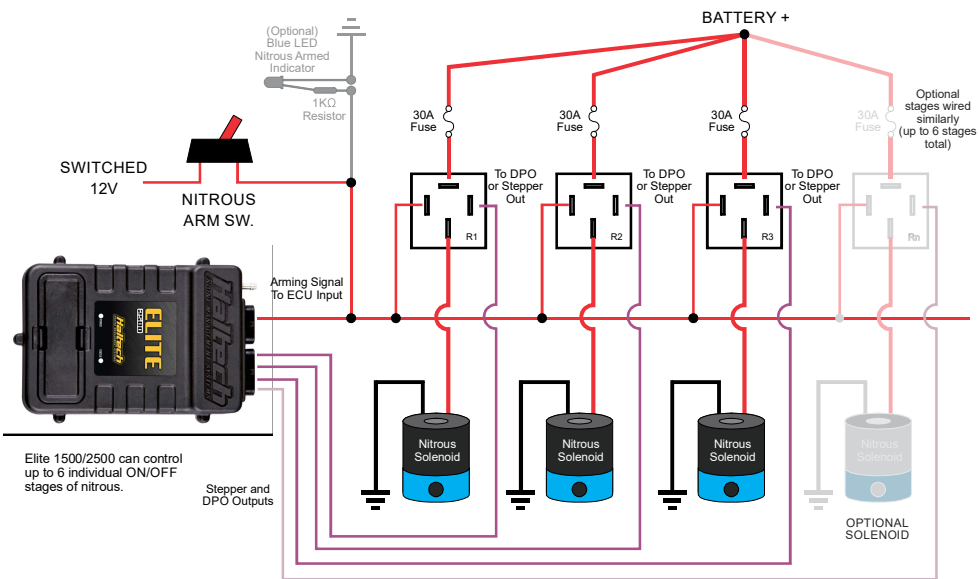


Figure 13

Typical Progressive Nitrous Wiring

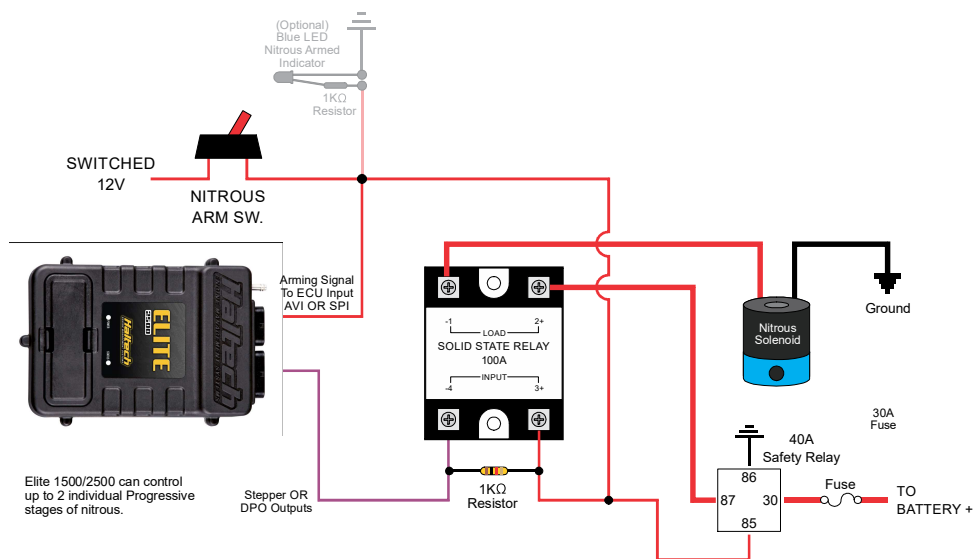


Figure 14

Synchronized Pulsed Inputs (SPI 2 and SPI 3, in Cabin Harness)

Spare in the Cabin Harness. These inputs can be programmed within the ESP Software to control auxiliaries such as:

- Air Con Input Switch
- Aux RPM Limit
- Switched Inputs
- Flex Fuel Sensor
- Vehicle/Driveshaft Speed Sensors
- Trans Brake Input Switch
- Launch Control Switch
- Flat Shift Switch
- Trans Brake Bump/Creep Control

Spare Analog Voltage Input (AVI 1 and 6, In Cabin Harness)

AVI inputs 1 and 6 are spare Analogue Voltage Input that can be programmed within the ESP Software to do the following options:

- Trim Switch Panel Input
- Various Activation Switches
- 0-5V Analog Voltage Input
- Various Pressure Sensors (Nitrous, CO2, Trans Brake, etc.)
- Temperature Sensors

For a full list of input options and explanations please go to the help within the ESP Software.

Ground (GND)

The Ground cable connects directly to the Battery.

WARNING!

This is **NOT** the earth cable for the engine, please ensure that you earth the engine with an earth strap from the block of the engine to the chassis of the car.

Ensure that the chassis of the vehicle and engine block are connected to the battery negative (-) terminal with heavy gauge cable or earthing strap. Damage to the ECU and or terminated harness may result if this is not done.

Initial Setup

When installation is complete it is now time to upload the basemap to your ECU. Connect to the ECU using the Haltech Elite Software Programmer (ESP). When connected navigate through the software to File>Upload Map>Base Maps and select the basemap that suits your application. ESP will now upload the selected basemap to your ECU. When upload is complete it is now time to check and setup any non OEM performance parts and accessories (ie. injector size, boost control, etc.) that your engine may require.

*** Please refer to our software Help Guide using F1 on your Keyboard for additional information.**

Cabin Wiring

The Cabin Wiring is made up multiple inputs and outputs. Correct connection of these cables is essential for proper operation of the harness.

All wires have been labeled and required cables should be connected as outlined bellow.

PINK	—	+12V IGNITION SWITCH SIGNAL (P)
GREY/RED	—	+12VDC SW. POWER (FOR SENSORS, GY/R)
ORANGE	—	+5VDC SENSOR SUPPLY (O)
BLACK/WHITE	—	SIGNAL GROUND (B/W)
VIOLET/BLACK	—	SPARE DPO1 OUTPUT - TACHO (V/B)
BLACK/YELLOW	—	DPO5 TRANS BRAKE RELAY OUTPUT (B/Y)
GREEN	—	STEPPER 1 - SHIFTER (G)
GREEN/BLACK	—	STEPPER 2 - SPARE OUTPUT (G/B)
GREY/BLACK	—	SPI2 - TRANS BRAKE INPUT (GY/B)
GREY/BROWN	—	SPI3 - BUMP/CREEP INPUT (GY/BR)
GREY/YELLOW	—	AVI1 - SPARE ANALOG INPUT (GY/Y)
GRAY/ORANGE	—	AVI6 - SPARE ANALOG INPUT (GY/O)

Figure 15 - Cabin Harness Wiring

IMPORTANT NOTE:

Crank Input, Cam Input, SPI Inputs 1 & 4 and use single or multi core shielded cables to protect the signal wires from interference. These are indicated with a '<SHD>' note above. The shielding wire is grounded internally inside the harness. Take care during installation that this shielding wire is NOT connected to the signal wire and does NOT make contact with the ECU +5v, +8v or any switched or constant battery power.

Communications and Communications Wiring

In order for the Elite 2500 and REM to communicate accurately, consistently and at high speeds we need several communications lines. These communications lines include CAN Communications, Digital outputs to Digital inputs as well as a power relay control system.

Solid State Relay (SSR) Communication:

The solid state relay which is used to power all stages of injection is controlled with 2 outputs, one from the REM and one from the Elite 2500. This method ensures that all stages of injection have the same power supply which is important when determining injector current control. This communication system requires REM DPO5 (A24) to be connected to pin 2 on the Haltech Conditioning Circuit, while Elite 2500 DPO4 (B19) will be connected to pin 3 on the Haltech Conditioning Circuit. This function is hard set in the ECU and the input and output cannot be re-assigned.

Injector Stage wiring:

Each stage of injection running off the REM unit requires a synchronization output from the Elite 2500 to be wired to an SPI on the REM unit. This function is hard set in the ECU and the inputs and outputs cannot be re-assigned. Wiring for up to 3 stages of injection controlled via the REM is as follows:

For Stage 2 connect Elite 2500 DPO2 (A1) must be connected to REM (B1)

Watchdog Communication:

The Watchdog communications are a high speed error checking to ensure that the Elite 2500 and REM units are both online and errorfree. This communication system requires REM IGN1 (A3) to be connected to the Elite 2500 SPI4 (B7). This function is hard set in the ECU and the input and output cannot be re-assigned.

CAN Communication:

The REM CAN wiring must be connected to the Elite 2500 via the REM ECU connector (Pins B23 and B24).

NOTE:

The HT-142005 Terminated Harness includes all these communications and safety connections pre-wired for your convenience.

Please see the diagram for these connections on the next page.

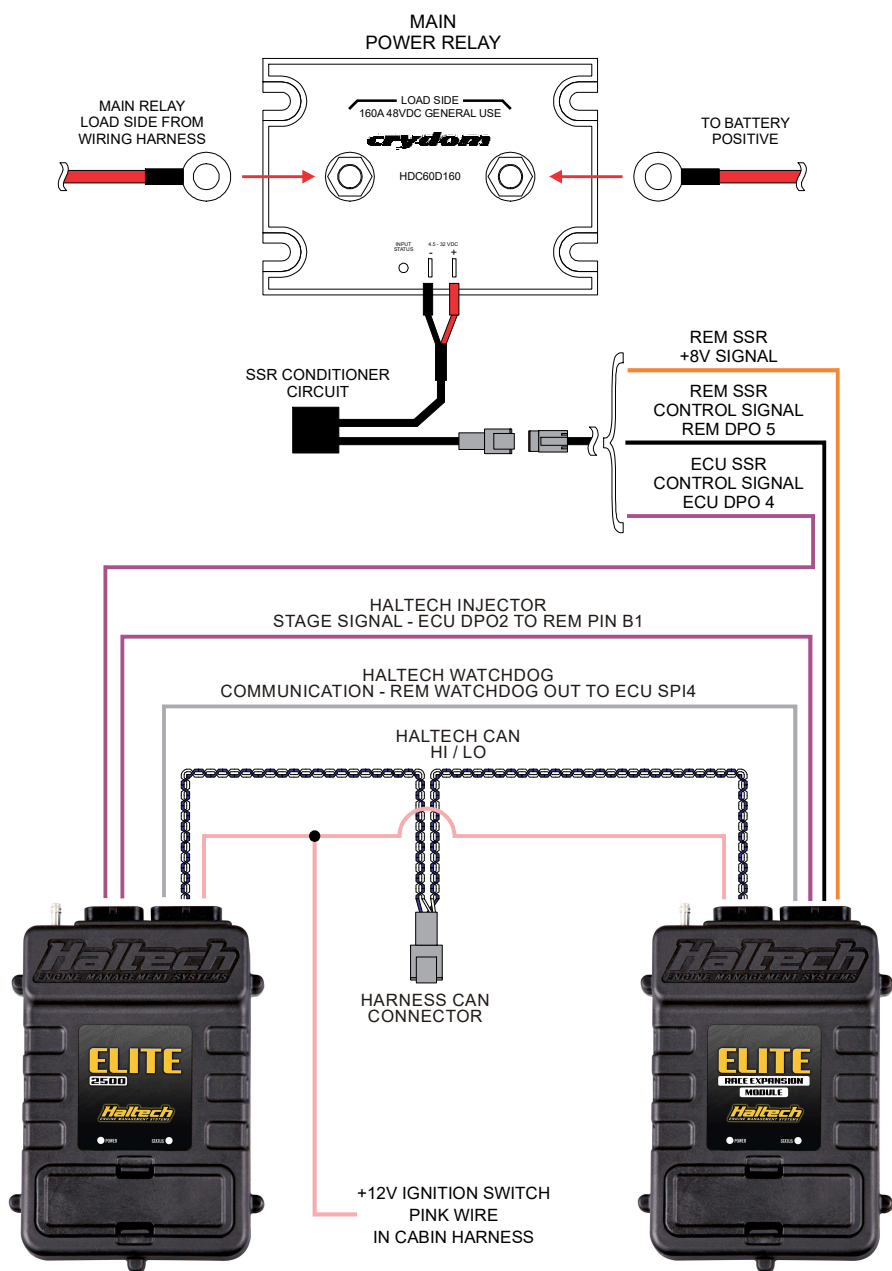
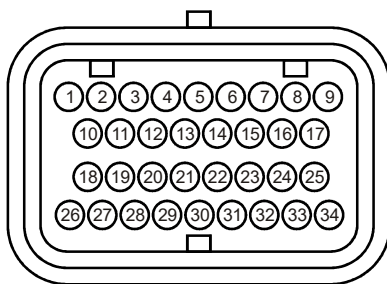


Figure 16 - Elite 2500 + REM Power, Communications and Check / Safety Connections

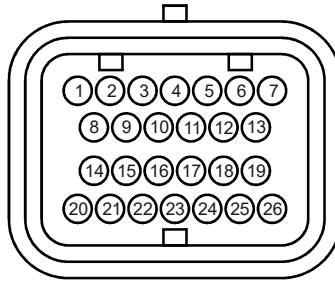
Harness Pinout



**MAIN ECU CONNECTOR (34 PIN)
(Looking into ECU)**

Position	Connection	Wire Color	Function	Notes
A1	DPO 2	GY/L	Direct to REM	Stage 2 Injector Control
A2	AVI 4	O/Y	Spare Analog Input	In Cabin Harness
A3	IGN 1	Y/B	Ignition Output 1	To Ignition Output Connector
A4	IGN 2	Y/R	Ignition Output 2	To Ignition Output Connector
A5	IGN 3	Y/O	Ignition Output 3	To Ignition Output Connector
A6	IGN 4	Y/G	Ignition Output 4	To Ignition Output Connector
A7	IGN 5	Y/BR	Ignition Output 5	To Ignition Output Connector
A8	IGN 6	Y/L	Ignition Output 6	To Ignition Output Connector
A9	5VDC	O	5V Sensor Power	5V Supply to Sensors
A10	Chassis Ground	B	Chassis Ground	Chassis Ground Terminal
A11	Chassis Ground	B	Chassis Ground	Chassis Ground Terminal
A12	+8VDC	O/W	+8V Power Supply	Inj. Relay Cond. Circuit Supply
A13	-	-	-	-
A14	AVI 10	W	TPS Signal	In Engine Bay (TPS)
A15	AVI 9	Y/B	MAP Signal	In Engine Bay (MAP)
A16	AVI 2	O/B	Pressure Sensor	In Cabin Harness
A17	AVI 3	O/R	Fuel Pressure Sensor	In Engine Bay
A18	DPO 1	V/B	Tacho Output (Spare)	In Cabin Harness
A19	INJ 1	L	Injection Output 1	To Injector # 1
A20	INJ 2	L/B	Injection Output 2	To Injector # 2
A21	INJ 3	L/BR	Injection Output 3	To Injector # 3
A22	INJ 4	L/R	Injection Output 4	To Injector # 4
A23	DPO 3	V/R	Idle Control Output	In Engine Bay
A24	DPO 5	B/Y	Trans Brake	Trans Brake Relay Output (In Cabin)
A25	DPO 6	-	-	-
A26	Injector Power Input	R/L	Injector Power Input	12V From Main Power Relay
A27	INJ 5	L/O	Injection Output 5	To Injector # 5
A28	INJ 6	L/Y	Injection Output 6	To Injector # 6
A29	INJ 7	L/G	Injection Output 7	To Injector # 7
A30	INJ 8	L/V	Injection Output 8	To Injector # 8
A31	Stepper 1	G	Shifter Control	In Cabin Harness
A32	Stepper 2	G/B	Spare Digital Output	In Cabin Harness
A33	Stepper 3	G/BR	Boost Control #1	CO2 Increase
A34	Stepper 4	G/R	Boost Control #2	CO2 Decrease

Figure 17 - 34 Pin Harness Connector Pin Allocation

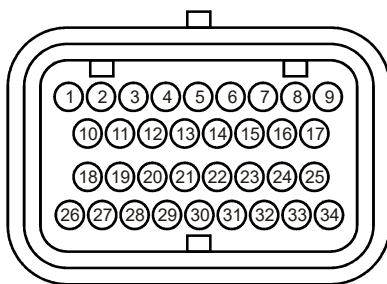


**MAIN ECU CONNECTOR (26 PIN)
(Looking into ECU)**

Position	Connection	Wire Color	Function	Notes
B1	Trigger +	Y <SHD>	Crank / Ref Signal	In Engine Bay
B2	Home +	Y <SHD>	Cam / Sync Signal	In Engine Bay
B3	AVI 7	GY	IAT Signal	In Engine Bay
B4	Avi 8	V	ECT Signal	In Engine Bay
B5	Trigger -	G <SHD>	Crank / Ref Ground	In Engine Bay
B6	Home -	G <SHD>	Cam / Sync Ground	In Engine Bay
B7	SPI 4	GY/R	REM Watchdog	In Cabin Harness
B8	SPI 1	GY	Driveshaft Speed Sensor	In Cabin Harness
B9	SPI 2	GY/B	Trans Brake Input	In Cabin Harness
B10	SPI 3	GY/BR	Bump/Creep Input	In Cabin Harness
B11	ECU Power	P	12V Input ECU Power	12V Supply From Ignition Switch
B12	AVI 6	GY/O	Spare Analog Input	In Cabin Harness
B13	AVI 1	GY/Y	Spare Analog Input	In Cabin Harness
B14	Signal Ground	B/W	Signal Ground	To Sensor Grounds
B15	Signal Ground	B/W	Signal Ground	To Sensor Grounds
B16	Signal Ground	B/W	Signal Ground	To Sensor Grounds
B17	IGN 7	Y/V	Ignition Output 7	To Ignition Output Connector
B18	IGN 8	Y/GY	Ignition Output 8	To Ignition Output Connector
B19	DPO 4	V/O	ECU Inj. Relay Control	In Cabin Harness to Cond. Circuit
B20	AVI 5	O/G	WG Pressure Sensor	In Engine Bay
B21	-	-	-	-
B22	-	-	-	-
B23	CAN Hi	W	CAN Communications	To CAN Connector
B24	CAN Lo	L	CAN Communications	To CAN Connector
B25	-	-	-	-
B26	-	-	-	-

Figure 18 - 26 Pin Harness Connector Pin Allocation

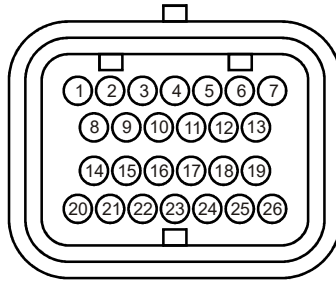
Harness Pinout



**REM CONNECTOR (34 PIN)
(Looking into ECU)**

Position	Connection	Wire Color	Function	Notes
A1	REM DPO 2	-	-	-
A2	REM AVI 4	O/Y	Shock Sensor RL	Shock Sensor Harness (DTM6)
A3	REM Watchdog	GY/R <SHD>	Watchdog Signal	Communication Signal to ECU SPI 4
A4	-	-	-	-
A5	-	-	-	-
A6	-	-	-	-
A7	-	-	-	-
A8	-	-	-	-
A9	REM +5VDC	O	5V Sensor Power	5V Supply to Sensors
A10	Battery Ground	B	Chassis Ground	Chassis Ground Terminal
A11	Battery Ground	B	Chassis Ground	Chassis Ground Terminal
A12	REM +8VDC	O/W	+8V Power Supply	Inj. Relay Cond. Circuit Supply
A13	-	-	-	-
A14	REM AVI 10	W	Gearbox Temp	Gearbox Sensor Cabin Harness (DTM6)
A15	REM AVI 9	Y	Rotary Knob #3	Dash Input Connector (DTM8)
A16	REM AVI 2	O/B	Shock Sensor FL	Shock Sensor Harness (DTM6)
A17	REM AVI 3	O/R	Shock Sensor FR	Shock Sensor Harness (DTM6)
A18	REM DPO 1	-	-	-
A19	REM INJ 1	L	Injection Output 1	To Injector # 1
A20	REM INJ 2	L/B	Injection Output 2	To Injector # 2
A21	REM INJ 3	L/BR	Injection Output 3	To Injector # 3
A22	REM INJ 4	L/R	Injection Output 4	To Injector # 4
A23	REM DPO 3	-	-	-
A24	REM DPO 5	B/Y	REM Injector Enable	Inj. Relay Cond. Circuit Relay
A25	-	-	-	-
A26	REM Inj. Power Input	R/L	REM Inj. Power Input	12V From Main Power Relay
A27	REM INJ 5	L/O	Injection Output 5	To Injector # 5
A28	REM INJ 6	L/Y	Injection Output 6	To Injector # 6
A29	REM INJ 7	L/G	Injection Output 7	To Injector # 7
A30	REM INJ 8	L/V	Injection Output 8	To Injector # 8
A31	REM Stepper 1	-	-	-
A32	REM Stepper 2	-	-	-
A33	REM Stepper 3	-	-	-
A34	REM Stepper 4	-	-	-

Figure 19 - 34 Pin Harness Connector Pin Allocation



**REM ECU CONNECTOR (26 PIN)
(Looking into ECU)**

Position	Connection	Wire Color	Function	Notes
B1	REM DPI 5	GY/L <SHD>	ECU Staging Signal	Stage 2 Injector Control
B2	REM DPI 6	-	-	-
B3	REM AVI 7	GY	Rotary Knob #1	Dash Input Connector (DMT8)
B4	REM AVI 8	V	Rotary Knob #2	Dash Input Connector (DMT8)
B5	-	-	-	-
B6	-	-	-	-
B7	REM DPI 4	-	-	-
B8	REM DPI 1	GY <SHD>	Switched Input 1	Dash Input Connector (DMT8)
B9	REM DPI 2	GY/B	Switched Input 2	Dash Input Connector (DMT8)
B10	REM DPI 3	-	-	-
B11	ECU Power	P	12V Input ECU Power	12V Supply From Ignition Switch
B12	REM AVI 6	GY/O <SHD>	Gearbox Line Pressure	Dash Input Connector (DMT8)
B13	REM AVI 1	GY/Y <SHD>	Gearbox Convertor Press.	Dash Input Connector (DMT8)
B14	REM Signal Ground	B/W	Signal Ground	To Sensor Grounds
B15	REM Signal Ground	B/W	Signal Ground	To Sensor Grounds
B16	REM Signal Ground	B/W	Signal Ground	To Sensor Grounds
B17	-	-	-	-
B18	-	-	-	-
B19	REM DPO 4	-	-	-
B20	REM AVI 5	O/G	Shock Sensor RR	Shock Sensor Harness (DTM6)
B21	-	-	-	-
B22	-	-	-	-
B23	REM CAN Hi	W	CAN Communications	To CAN Connector
B24	REM CAN Lo	L	CAN Communications	To CAN Connector
B25	-	-	-	-
B26	-	-	-	-

Figure 20 - 26 Pin Harness Connector Pin Allocation



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