GM LSx NON-DBW TERMINATED ENGINE HARNESS FOR NEXUS R5 VCU

QUICK START GUIDE

HT-186206

9 356450 011730

HARNESS OVERVIEW

Congratulations on purchasing a Haltech GM LSx Non-DBW Terminated Engine Harness.

This terminated engine harness connects directly to the Nexus R5 VCU and is designed for GM LSx engines without Drive By Wire (DBW) throttle control.

In conjunction with a Haltech Nexus R5 VCU this harness provides virtually limitless performance and tuning options for your LSx powered vehicle.

This Quick Start Guide will walk you through the installation of this terminated engine harness along with the options of adding optional sub-harnesses, sensors, actuators and other devices.

WARNING!

This harness DOES NOT ground your engine. Make sure your engine is sufficiently grounded. A ground/earthing strap should be used to ground your engine to the battery. Keep all wires away from the exhaust manifold.

Harness Features:

Haltech Nexus R5 VCU connectors

Terminated engine bay and in-cabin connections

Connection to Haltech CAN devices (eg dash displays, keypads, etc.)

Connection to sensors (eg crank, cam, MAP, temperature, pressure, position, speed, flex fuel)

Dual wideband lambda sensor allocation

Dual knock sensor connection

Direct connection to the OEM ignition sub harness

Connection to 8 primary injectors (EV1) and a breakout plug for 8 secondary injectors

Breakout connection for alternator control

Starter solenoid control

Idle stepper motor control

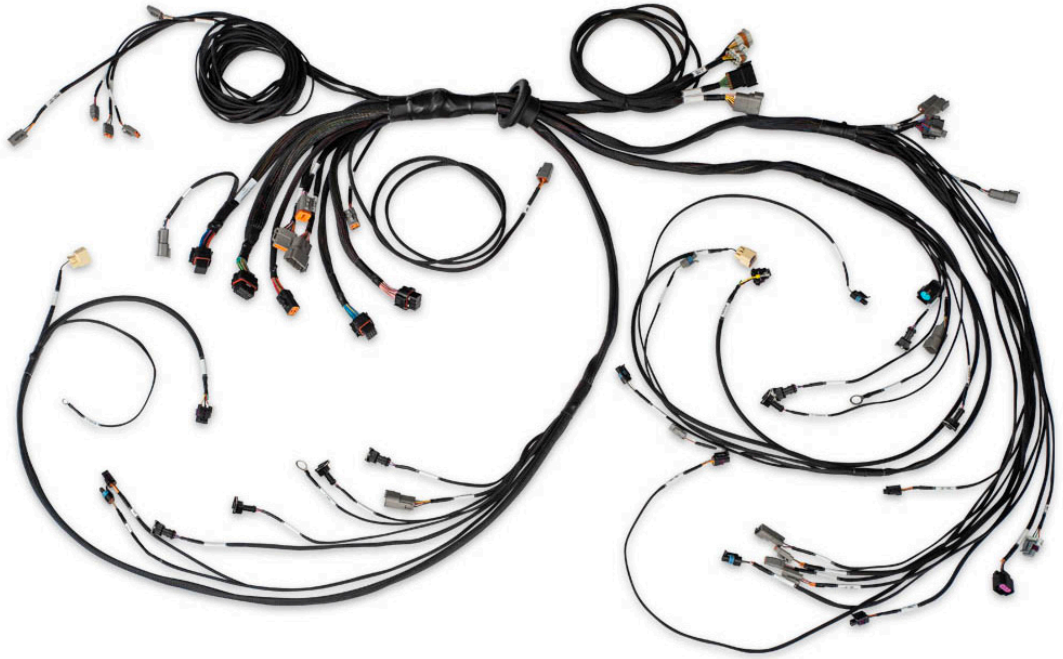
Dual boost control solenoid allocation

Breakout connection for thermofan and fuel pump control

Breakout connection for transmission control

Spare inputs and outputs

Spare high current 8 Amp PDM outputs



What's in the bag?

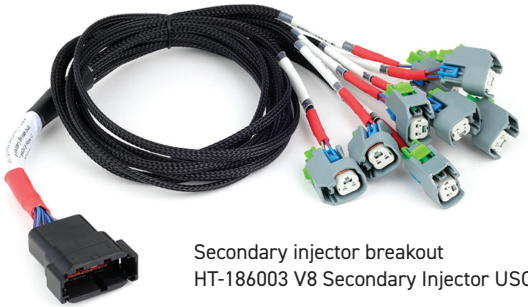
- Terminated engine harness (HT-186206)
- Pack of DTM/DT connector and pin set to terminate to sensors, solenoids and other devices
- 2 x DTP-2 connectors with pre-crimped 12AWG wires to use for fuel pump and thermofan
- 1 x DT-8 connector with pre-crimped 18AWG wires
- 2 and 4 pin alternator adapter harnesses



Available sub-harnesses (sold separately)



Secondary injector breakout
HT-186001 V8 Secondary Injector EV1



Secondary injector breakout
HT-186003 V8 Secondary Injector USCAR



CONNECTOR A		
Pin	**Function**	**Colour**
A1	Injector Pri : 1	Blue
A2	Injector Pri : 2	Blue/Black
A3	Injector Pri : 3	Blue/Brown
A4	Injector Pri : 4	Blue/Red
A5	Injector Pri : 5	Blue/Org
A6	Injector Pri : 6	Blue/Yellow
A7	Injector Pri : 7	Blue/Green
A8	Injector Pri : 8	Blue/Violet
A9	Cabin A3 (DP01)	Violet/Black
A10	Power Ground	Black
A11	Power Ground	Black
A12	Cabin A4 (DP02)	Violet/Brown
A13	Ign Switch Pin 1	Pink
A14	Cabin A5 (DP03)	Violet/Red
A15	Boost Up (DP04)	Violet/Org
A16	Boost Dwn (DP05)	Violet/Yellow
A17	Trans I/O A1 (DP06)	Violet/Green
A18	Cabin B5 (DP07)	Black/Yellow
A19	Idle A (HBO 1)	Brown/Black
A20	Idle B (HBO 2)	Brown/Red
A21	Idle C (HBO 3)	Brown/Green
A22	Idle D (HBO 4)	Brown/Pink
A23	CAN1 H	White
A24	CAN1 L	Blue
A25	Cabin B6 (DP08)	Violet
A26	Ign Switch Pin 2	Red
A27	Ignition 1	Yellow/Black
A28	Ignition 2	Yellow/Red
A29	Ignition 3	Yellow/Org
A30	Ignition 4	Yellow/Green
A31	Ignition 5	Yellow/Brown
A32	Ignition 6	Yellow/Blue
A33	Ignition 7	Yellow/Violet
A34	Ignition 8	Yellow/Gray

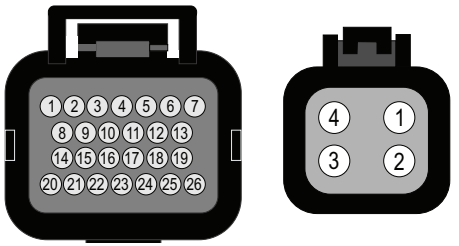


CONNECTOR B		
Pin	**Function**	**Colour**
B1	Injector Sec : 1	L.Blue
B2	Injector Sec : 2	L.Blue/Black
B3	Injector Sec : 3	L.Blue/Brown
B4	Injector Sec : 4	L.Blue/Red
B5	Injector Sec : 5	L.Blue/Orange
B6	Injector Sec : 6	L.Blue/Yellow
B7	Injector Sec : 7	L.Blue/Green
B8	Injector Sec : 8	L.Blue/Violet
B9	Cabin B1 (SPI 7)	Gray/Green
B10	Cabin B2 (SPI 8)	Gray/Violet
B11	Trans I/O B9 (SPI 9)	Gray/Blue
B12	Trans I/O B10 (SPI 10)	Gray/White
B13	Unused	
B14	Injector 17	L.Blue/Gray
B15	Trans I/O A2 (IGN9)	L.Yellow/Black
B16	Trans I/O A3 (IGN10)	L.Yellow/Red
B17	Trans I/O A4 (IGN11)	L.Yellow/Orange
B18	Trans I/O A5 (IGN12)	L.Yellow/Green
B19	Unused	
B20	Injector 18	L.Blue/Blue
B21	Wideband 2 : 1	Gray
B22	Wideband 2 : 2	Yellow
B23	Wideband 2 : 3	Red
B24	Wideband 2 : 4	Black
B25	Wideband 2 : 5	White
B26	Wideband 2 : 6	Green

NOTE: Connectors are viewed from the wire side.



CONNECTOR C		
Pin	**Function**	**Colour**
C1	Trigger +	Yellow
C2	Unused	
C3	Home +	Yellow
C4	Unused	
C5	Vehicle Spd (SPI 1)	Gray/Brown
C6	Spare SPI (SPI 2)	Gray/Red
C7	Spare SPI (SPI 3)	Gray/Org
C8	Flex Fuel (SPI 4)	Gray/Yellow
C9	8V sensor power	Org/White
C10	Coolant Temp	White
C11	Air Temp	White/Yellow
C12	Fuel Press	White/Gray
C13	Oil Press	White/Violet
C14	Oil Temp	White/Green
C15	TPS	White/Orange
C16	Spare AVI (AVI 7)	White/Black
C17	Spare AVI/APP (AVI 8)	White/Brown
C18	Spare AVI/APP (AVI 9)	White/Red
C19	Driveshft Spd (SPI 5)	Gray/Pink
C20	Cabin A6 (SPI 6)	Gray/L.Green
C21	Cabin A1 (CAN2 H)	White
C22	Cabin A2 (CAN2 L)	Blue
C23	Knock 1	White
C24	Knock 2	White
C25	5V sensor power	Orange
C26	Signal Ground A	Black/White
C27	Spare AVI (AVI 10)	L.Green
C28	MAP	L.Green/Black
C29	Wideband 1 : 1	Gray
C30	Wideband 1 : 2	Yellow
C31	Wideband 1 : 3	Red
C32	Wideband 1 : 4	Black
C33	Wideband 1 : 5	White
C34	Wideband 1 : 6	Green



CONNECTOR D		
Pin	**Function**	**Colour**
D1	12V CAN power	Pink/Red
D2	12V Sensor power	Pink/Brown
D3	Starter output	Pink/Black
D4	Trans I/O A7 (HCO 4)	Pink/Orange
D5	Trans I/O A8 (HCO 5)	Pink/Yellow
D6	PDM Spare 1(HCO6)	Pink/Green
D7	PDM Spare 2(HCO7)	Pink/Violet
D8	PDM Spare 3(HCO8)	Pink/Blue
D9	Signal Ground B	Black/Gray
D10	Spare AVI (AVI 12)	L.Green/Brown
D11	Spare AVI (AVI 13)	L.Green/Red
D12	Spare AVI (AVI 14)	L.Green/Orange
D13	PDM Spare4 (HCO9)	Pink/Gray
D14	PDM Spare5(HCO10)	Pink/White
D15	5V sensor power	Orange/Red
D16	Spare AVI (AVI 15)	L.Green/Yellow
D17	Trans I/O B1 (AVI 16)	L.Green/Green
D18	Trans I/O B2 (AVI 17)	L.Green/Violet
D19	PDM Spare6(HCO11)	Pink/L.Green
D20	PDM Spare7(HCO12)	Pink/L.Blue
D21	Trans I/O B3 (AVI 18)	Green/Black
D22	Trans I/O B4 (AVI 19)	Green/Brown
D23	Trans I/O B5 (AVI 20)	Green/Red
D24	Trans I/O B6 (AVI 21)	Green/Orange
D25	Trans I/O B7 (AVI 22)	Green/Yellow
D26	Trans I/O B8 (AVI 23)	Green/Violet

CONNECTOR E		
Pin	**Function**	**Colour**
E1	Injector Power	Red/Blue
E2	Ignition Coil Power	Red/Yellow
E3	Fuel Pump	Red/Orange
E4	Thermofan	Red/Green

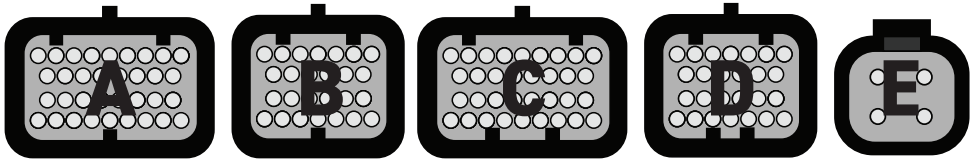


Nexus R5 VCU Connection

With the unit powered off, connect the 5 ECU plugs on the main harness to the Nexus R5:

Connector A: 34-pin, Keyway Type 1
Connector B: 26-pin, Keyway Type 1
Connector C: 34-pn, Keyway Type 2
Connector D: 26-pin, Keyway Type 3
Connector E: 4-pin DTP

Looking into connector on ECU



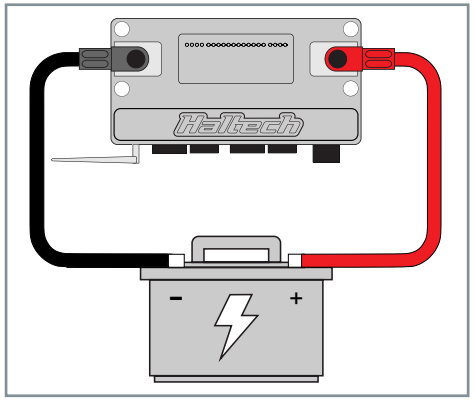
Battery Positive and Battery Negative (Nexus R5 VCU)

The battery positive and battery negative must be connected to the Nexus R5 VCU at all times.

Connect the Positive (+) battery terminal to the positive terminal (RED) on the Nexus R5 using the RED SurLok connector provided and a RED 1AWG battery cable (sold separately).

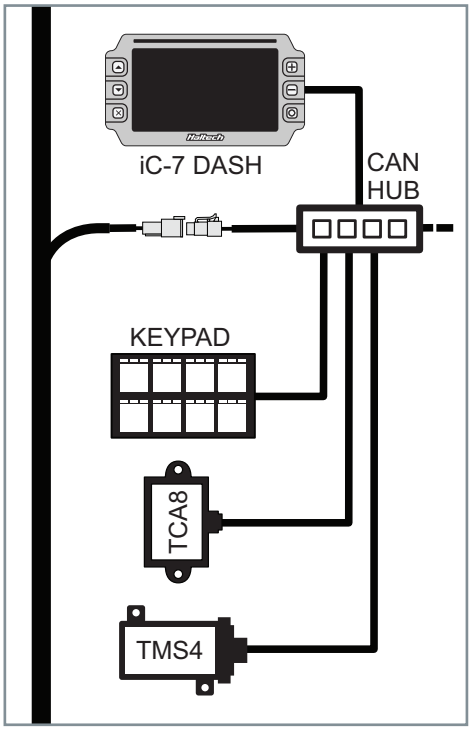
Connect the Negative (-) battery terminal to the Negative terminal (BLACK) on the Nexus R5 using the BLACK SurLok connector provided and a BLACK 1AWG battery cable (sold separately).

Note: There is an internal 32VDC 200A positive inline fuse inside the VCU for overcurrent protection (this fuse is not user-serviceable).



Haltech CAN connection
(Label: CAN 1)

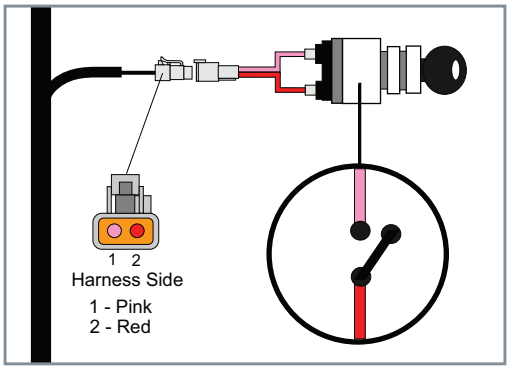
This harness is fitted with two DTM-4 plugs used to connect Haltech CAN devices, both in-cabin and in the engine bay (displays, keypads etc).



Ignition Switch
(Label: Ignition Switch)

An ignition switch must be wired in to turn the Nexus R5 unit on. This harness includes a terminated ignition switch 2-pin plug for this purpose.

Use the pink and red wires to turn the ignition on and off.



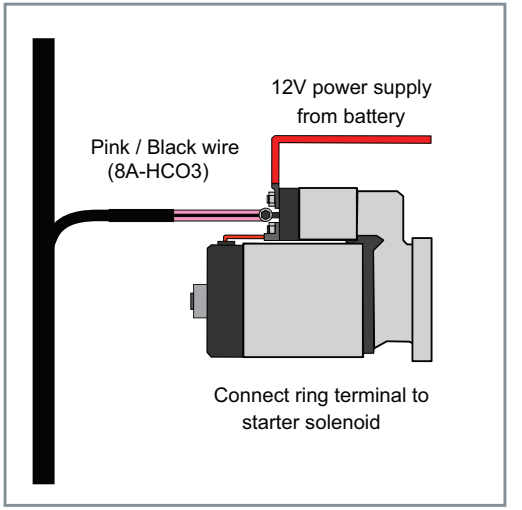
Starter Motor Control
(Label: Starter Solenoid)

The Nexus R5 has a dedicated 6mm ring terminal to control a starter motor.

This ring terminal is connected to a High Current Output (8A-HCO3) from the ECU and will supply 12V to the starter motor solenoid when starting conditions are met.

An engine start button can be set up using a Haltech CAN Keypad, or by wiring a physical switch to an ECU input.

NOTE: Starter motors draw large amounts of current and MUST be wired directly to the battery using a properly sized battery cable.



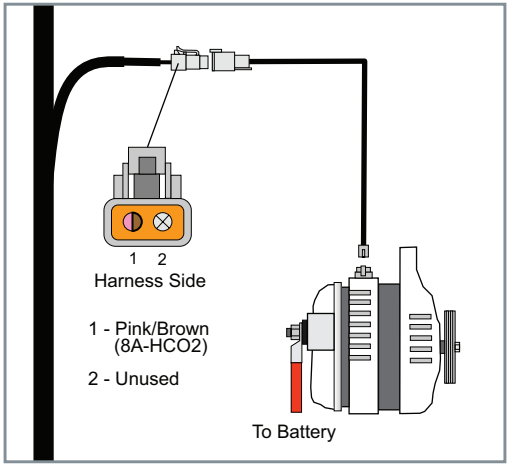
Alternator Control
(Label: Alternator Breakout)

This harness is fitted with a breakout connector that provides switched 12V power to the alternator.

It also includes a set of adapter harnesses to fit a range of alternator connector types including:

- 2-pin Bosch alternators
- 4-pin Delco alternators
- 2-pin Yazaki alternators

The adapter harness exctes the alternator using an inline resistor in place of a charge indicator light.



INJECTOR / IGNITION CONNECTIONS

Fuel Injectors

Label: Injectors 1-8 (EV1 plugs)
Label: Secondary Injectors (DTM-12 Black plug)

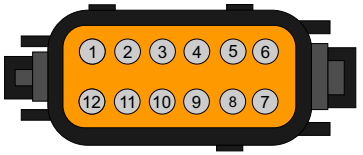
The Haltech LSx Non-DBW Terminated Engine Harness allocates fuel injection into primary and secondary stages

The eight primary injector output (1-8) connections are terminated with Bosch EV1 plugs which branches out into two groups for each of the engine banks.

A secondary injector breakout plug (injector outputs 9-16) is also available and can be used with a secondary injector sub-harness (sold separately). See page 3 or visit the Haltech website for a range of sub-harnesses to fit your application,

The last two injector outputs (17/18) are intended to be spare outputs terminated with DTM-2 plugs, but can also be used as tertiary injectors if the application requires.

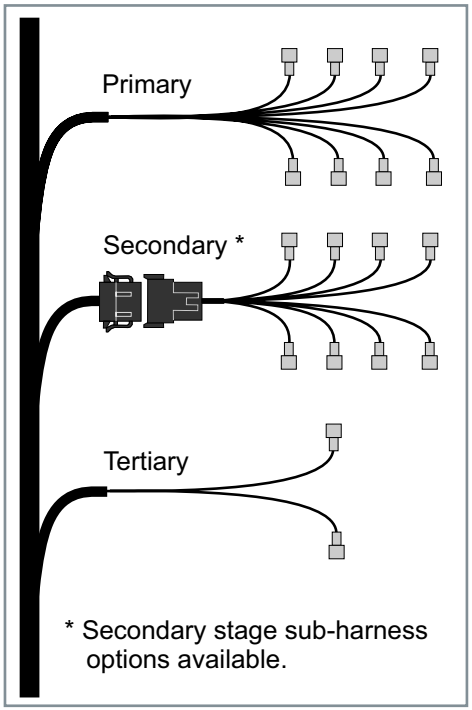
Wire side view of main harness plug



SECONDARY INJECTOR STAGE BREAKOUT		
Pin	**Function**	**Colour**
1	Secondary Injector 1	Light Blue
2	Secondary Injector 2	Light Blue/Black
3	Secondary Injector 3	Light Blue/Brown
4	Secondary Injector 4	Light Blue/Red
5	Secondary Injector 5	Light Blue/Orange
6	Secondary Injector 6	Light Blue/Yellow
7	Secondary Injector 7	Light Blue/Green
8	Secondary Injector 8	Light Blue/Violet
9	Injector 12V	Red/Blue
10	Injector 12V	Red/Blue
11	Injector 12V	Red/Blue
12	Injector 12V	Red/Blue







Crankshaft and Camshaft Position Sensors

(Label: Crank position, Cam position)

The crank position sensor plug connects directly to the engine crank angle sensor.

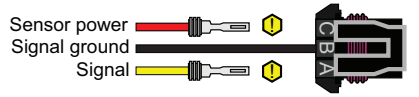
The cam position plug connects directly to the sensor, but note that the wiring varies between models for the GM LSx engines. Hence the plug has the signal wire (yellow) and sensor power wire (red) both unplugged and is left for the installer to "pin" into the connector to suit what the cam sensor requires.

Refer to the table below for the pinout and insert the pins into the connector until they lock.

Crank sensor wiring



Cam sensor wiring



⚠ Wires left unplugged will need to be pinned to suit the specific cam sensor used.

CAM SENSOR PLUG PINOUT WIRING			
PIN	**LS1 CAM SENSOR**	**LS2/3 CAM SENSOR**	**LS2/3 CAM (WIRING TO PIGTAIL HARNESS)**
A	Signal (Yellow)	Sensor power (Red)	Signal (Yellow)
B	Signal ground (Black)	Signal ground (Black)	Signal ground (Black)
C	Sensor power (Red)	Signal (Yellow)	Sensor power (Red)

Ignition Outputs

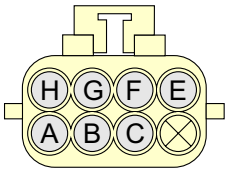
(Label: Ignition bank 1, Ignition bank 2)

This harness is designed to plug into the OEM ignition sub-harness and therefore no ignition loom is supplied. Ensure the correct ignition output is connected to the corresponding coil bank on the engine.

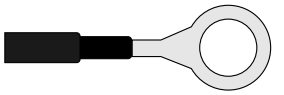
The harness also has two 13mm ignition coil ground ring terminals that will need to be bolted on to each of the engine heads to provide ground to the coils.

NOTE: If changing to a different type of ignition coil, do not connect the ignition output wires directly to the ignition coils unless the coils have internal ignitors. In installations with ignition coils without internal ignitors, an external ignitor must be used.

Wire-side view of main harness plug



Ignition breakout connector

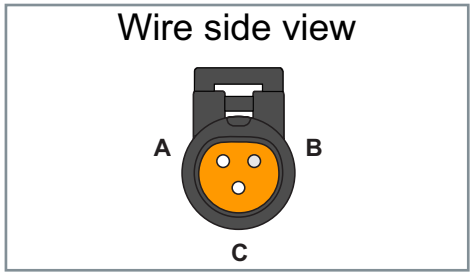


Ignition ground ring terminal

IGNITION COIL BREAKOUT					
	IGNITION BANK 1			IGNITION BANK 2	
Pin	**Function**	**Colour**	**Pin**	**Function**	**Colour**
A	Ground	Black	A	Ground	Black
B	Ignition 7	Yellow/Violet	B	Ignition 2	Yellow/Red
C	Ignition 5	Yellow/Brown	C	Ignition 4	Yellow/Green
D	Unused		D	Unused	
E	Ground	Black	E	Ground	Black
F	Ignition 3	Yellow/Orange	F	Ignition 6	Yellow/Blue
G	Ignition 1	Yellow/Black	G	Ignition 8	Yellow/Grey
H	Ignition 12V	Red/Yellow	H	Ignition 12V	Red/Yellow

Throttle Position Sensor (TPS)
(Label: TPS)

Use this connector to plug into the throttle position sensor.

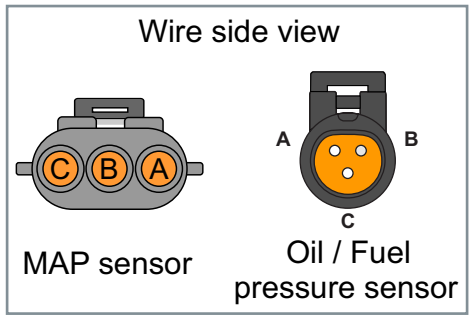


TPS PLUG PINOUT		
Pin	**Function**	**Colour**
A	+5V	Orange
B	Signal Ground	Black/White
C	Signal	White/Orange

Manifold Absolute Pressure (MAP), Oil Pressure, Fuel Pressure

(Label: MAP)
(Label: Oil Pressure)
(Label: Fuel Pressure)

Use these connectors to connect to the MAP and fluid pressure sensors.



TERMINATION			
MAP SENSOR		**OIL/FUEL PRESSURE**	
A	Signal Ground	A	Signal Ground
B	Signal	B	Power (+5V)
C	Power (+5V)	C	Signal

Coolant Temp, Intake Air Temp, and Oil Temp Sensor
(Label: Coolant Temperature)
(Label: Air Temperature)
(Label: Oil Temperature)

Plug this connector into the 2-pin temperature sensor. These sensors are not polarity dependent.

Flex Fuel Sensor
(Label: Flex Fuel Input)

Use this plug to connect directly to the Haltech Flex Fuel Sensor (HT-011000 sold separately).



Wideband Lambda Sensors 1 and 2
(Label: Wideband 1 and Wideband 2)

The harness is fitted with two wideband Lambda sensor breakout plugs on each engine bank.

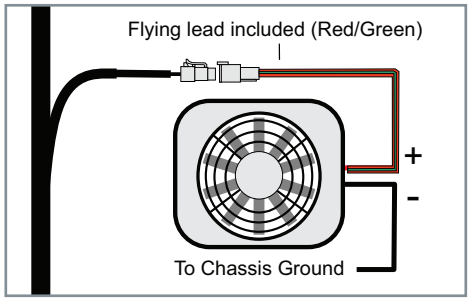
These connect directly to Haltech's Bosch or NTK wideband sensor kit (sold separately):
HT-010746 - Bosch LSU4.9
HT-010747 - NTK LZA08-H5.



Thermofan Control
(Label: Thermofan/HCO25A-4)

This harness has provision for thermofan with an allocated 2-pin DTP connector.

The breakout plug is located towards the rear of the engine and the opposing connector included with the harness kit is pre-terminated with a length of 12AWG cable to connect directly to the thermofan.



Boost Control
(Label: Boost Up DPO-4 / Boost Down DPO-5)

Included with this harness are two DTM-2 connectors for dual boost control solenoid control.

These connect directly to Haltech boost control solenoid kits (HT-020400, HT-020401, HT-020402 sold separately).

If connecting to an existing boost solenoid - use the opposing connector included.

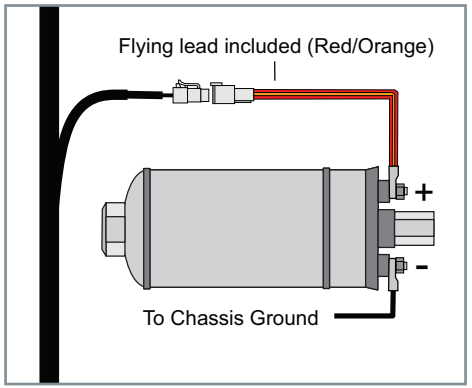




Fuel Pump Control
(Label: Fuel Pump/HCO25A-3)

The 2-pin DTP breakout connector for fuel pump control is located near the main harness junction.

The opposing connector included is pre-terminated with a length of 12AWG cable and connects directly to your fuel pump.



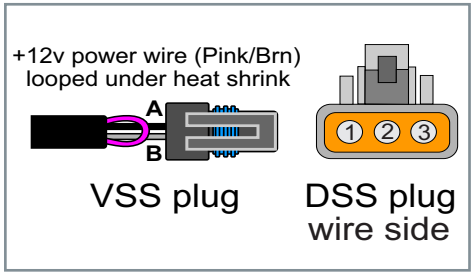


Vehicle and Driveshaft Speed Sensors

Label: Vehicle speed input, Driveshaft speed input

Use the vehicle speed input to plug into a 2 pin sensor. A spare 12V wire is available looped under the heatshrink if wiring to a 3 pin digital sensor.

Wire a driveshaft speed sensor to take advantage of advanced tuning options available in the Nexus R5 including Torque Management and Traction Control.



DSS PLUG PINOUT			
VSS		DSS	
A	Sig Gnd (Blk/Wht)	1	Power (Org/Wht)
B	SPI 1 (Gry/Brn)	2	SPI 5 (Gry/Pnk)
12v loop (Pnk / Brn)		3	Sig Gnd (Blk/Wht)

Spare Analogue Voltage Inputs (AVI)

This harness is fitted with multiple connectors to Analogue Voltage Inputs (AVIs) which you can use for a range of pressure sensors, temperature sensors, position sensors, laser ride height sensors, Haltech rotary trim knobs, switches, etc.

The DTM-6 connector labeled APP located in the cabin side of the harness can be used to connect to an accelerator pedal position sensor if converting to a drive by wire throttle system.

Knock Sensors

(Label: Knock 1, Knock 2)

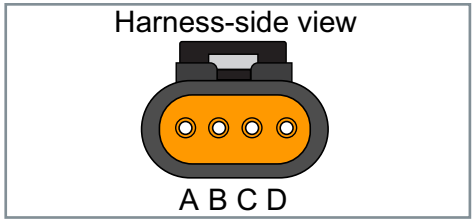
Connect these plugs to the engine's knock sensors to use the ECU's knock detection and control features.

Idle Stepper Motor Control

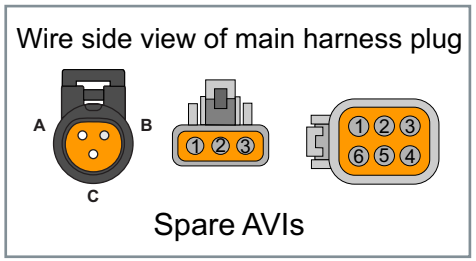
(Label: Idle)

Use this connector to plug into a GM 4 pin idle stepper motor.

The connector uses the four half bridge outputs from the ECU which can also be repurposed to control drive by wire throttles or electronic wastegates if the application requires.



IDLE PLUG PINOUT		
Pin	Function	Colour
A	Idle A / HBO 1	Brown/Black
B	Idle B / HBO 2	Brown/Red
C	Idle C / HBO 3	Brown/Green
D	Idle D / HBO 4	Brown/Pink



SPARE AVI PLUGS					
DELPHI		DTM-3		DTM-6 (APP)	
Pin	Function	Pin	Function	Pin	Function
A	Signal Ground	1	Power (+5V)	1	Signal Ground
B	Power (+5V)	2	Signal	2	Signal (AVI 8)
C	Signal	3	Signal Ground	3	Power (+5V)
				4	Signal Ground
				5	Signal (AVI 9)
				6	Power (+5V)

Spare Synchronised Pulsed Inputs (SPI)

Label: Spare SPI-2
Label: Spare SPI-3

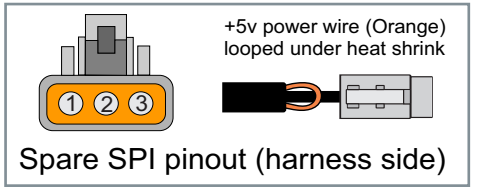
Spare SPI plugs can be used to connect frequency based sensors like vehicle and/or wheel speed sensors as well as analogue 0-5V sensors like linear position or laser ride height sensors.

NOTE: A 5V wire has been looped under the heat shrink for these spare SPI plugs for applications where 5V sensor power is required.

Remove the heat shrink to expose the wire and terminate to suit application.



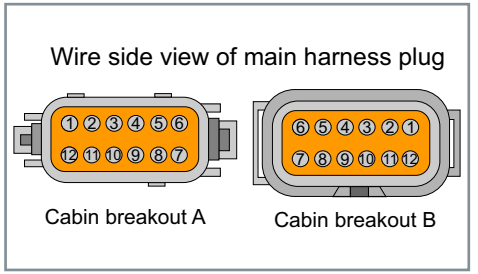
SPI PINOUT	
Pin	Function
1	Signal Ground
2	Power
3	Signal (SPI)



Cabin Harness Breakouts

(Label: Cabin breakout A, Cabin breakout B)

This harness provides two 12-pin DTM breakouts in the cabin populated with spare inputs and output. The opposing connectors and pins for these breakouts are included.



CABIN SPARE I/O				
PLUG A			PLUG B	
Pin	Function	Colour	Function	Colour
1	CAN 2 H	White	SPI 7	Gray/Green
2	CAN 2 L	Blue	SPI 8	Gray/Violet
3	DPO 1	Violet/Black	Unused	
4	DPO 2	Violet/Brown	Unused	
5	DPO 3	Violet/Red	DPO 7	Black/Yellow
6	SPI 6	Gray/Light Green	DPO 8	Violet
7	12V Sensor (HCO2)	Pink/Brown	5V Sensor Power	Orange/Red
8	5V Sensor Power	Orange/Red	Signal Ground B	Black/Gray
9	Signal Ground B	Black/Gray	Signal Ground B	Black/Gray
10	Unused		12V Sensor Power (HCO2)	Pink/Brown
11	12V CAN Power (HCO 1)	Pink/Red	12V Sensor Power (HCO2)	Pink/Brown
12	Power Ground	Black	Power Ground	Black

PDM Spares Breakout
(Label: PDM Spares)

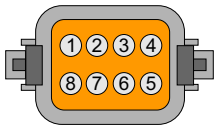
This harness is fitted with a PDM breakout connector for spare high current outputs for controlling various applications.

Headlights, indicator lights, brake lights, windscreen wipers and washers can all be controlled through these outputs.

The opposing connector is included and pre-crimped with 18AWG wires.



Wire side view of main harness plug



PDM Spares

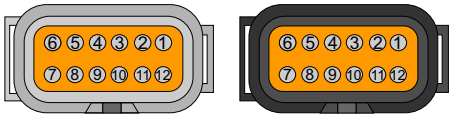
PDM SPARE OUTPUTS		
Pin	**Function**	**Colour**
1	HCO 6	Pink/Green
2	HCO 7	Pink/Violet
3	HCO 8	Pink/Blue
4	HCO 9	Pink/Gray
5	HCO 10	Pink/White
6	HCO 11	Pink/Light Green
7	HCO 12	Pink/Blue
8	Unused	

Transmission Harness Breakouts
(Label: Trans / Spare IO A (Grey plug)
(Label: Trans / Spare IO B (Black plug)

Breakouts for either transmission control or spare inputs and outputs have been provided in the engine bay.

The opposing connectors and pins for this breakout are included.

Wire side view of main harness plug



Trans/Spare IO Plug A and B

TRANSMISSION AND ENGINE SPARE I/O				
PIN	**PLUG A (GRAY)**		**PLUG B (BLACK)**	
	Function	**Colour**	**Function**	**Colour**
1	DPO 6	Violet/Green	AVI 16	Light Green/Green
2	Ignition 9	Light Yellow/Black	AVI 17	Light Green/Violet
3	Ignition 10	Light Yellow/Red	AVI 18	Green/Black
4	Ignition 11	Light Yellow/Orange	AVI 19	Green/Brown
5	Ignition 12	Light Yellow/Green	AVI 20	Green/Red
6	Unused		AVI 21	Green/Orange
7	HCO 4	Pink/Orange	AVI 22	Green/Yellow
8	HCO 5	Pink/Yellow	AVI 23	Green/Violet
9	5V Sensor Supply	Orange/Red	SPI 9	Gray/Blue
10	Signal Ground B	Black/Gray	SPI 10	Gray/White
11	12V CAN Power (HCO 1)	Pink/Red	5V Sensor Supply	Orange/Red
12	Power Ground	Black	Signal Ground B	Black/Gray

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.

02/26



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