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www.Haltech.com



ELITE 2000/2500 Lexus IS300 02-05 QUICK START GUIDE HT-141341



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.

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. 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. This 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.

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 care to ensure that connection 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, be carried out by a professional, with an understanding on installing and tuning engine management systems. Misuse of the product can damage your engine.

Haltech Off-Road Usage Policy

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.

Using Haltech products for street/road use on public roads is prohibited by law. 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 using any Haltech product

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 uninsulated. 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!

[illegible]



Congratulations on purchasing a Haltech Engine Management System. This *fully programmable* product 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.

Compatibility

- Lexus IS300 Model Year 2002-2005

- Elite 2000
- Elite 2500

- Elite ECU with USB Cable and associated hardware
- Plug & Play Parallel Harness

- Haltech Single Channel CAN Wideband Controller Kit (HT-159976)
- FlexFuel Sensor includes Plugs n Pins (HT-011000)
- ECU Pins Only Pack of 10 (HT-030050)

Harness Overview

The Haltech Lexus IS300 plug and play solution allows for full control of the engine while maintaining functionality of the dashboard and transmission.

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 vehicle is ready to be worked on.
- Please make sure to perform a Throttle and Pedal Calibration before starting the vehicle.
- Please make sure the ECU and all wiring is installed properly and away from extreme heat sources.

WARNING!

Damage can occur to your ECU if your ignition system is not configured correctly. Please make sure to load the Base Map for the ignition coils you will be using.

- Keep all wires away from the exhaust manifold and extreme sources of heat.
- The harness is designed to plug directly into the OEM wiring loom.
- Base maps are available by emailing sales@haltech.com.au or usasupport@haltech.com.

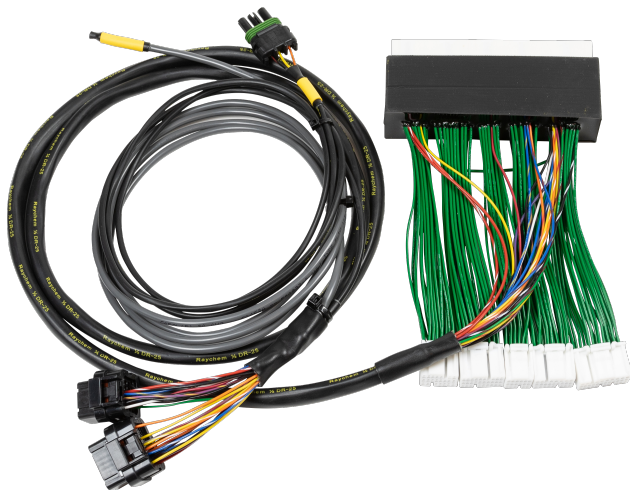
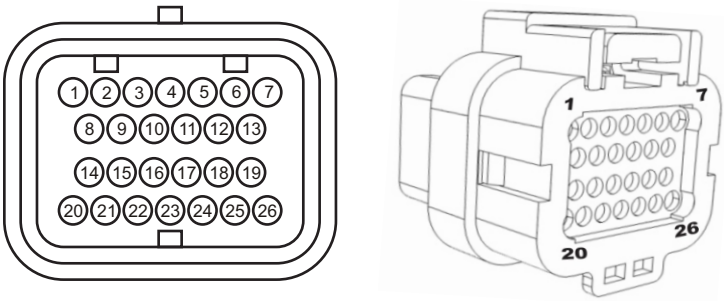


Figure 1 - HT-141341 Parallel Harness

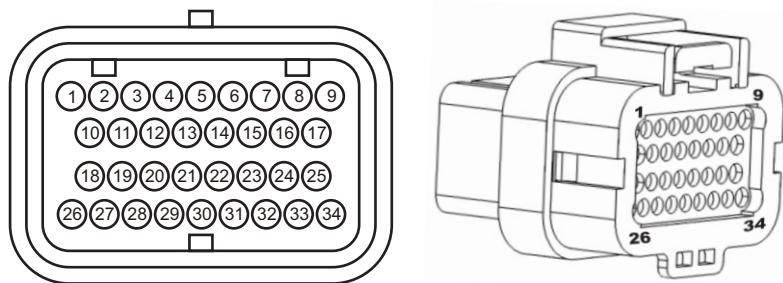


ECU CONNECTOR (26 PIN)

Position	Connection	Function	Notes
B1	Trigger +	Crank Signal	Crank Sensor Signal
B2	Home +	Cam Signal	Cam Sensor Signal (Intake Cam)
B3	Air Temp	-	Intake Air Temp Sensor Signal
B4	Coolant Temp	-	Coolant Temp Sensor Signal
B5	Trigger -	-	Crank Sensor (-) Signal
B6	Home -	-	Cam Sensor (-) Signal
B7	SPI 4	Synchronized Pulsed Input	-
B8	SPI 1	Synchronized Pulsed Input	VSS
B9	SPI 2	Synchronized Pulsed Input	-
B10	SPI 3	Synchronized Pulsed Input	-
B11	ECU Power	-	-
B12	AVI 6	Analog Input	-
B13	AVI 1	Analog Input	-
B14	Signal Ground	Signal Ground	Map Input Connector Pin A
B15	Signal Ground	Signal Ground	-
B16	Signal Ground	Signal Ground	-
B17	IGN 7	Digital Pulsed Output	-
B18	IGN 8	Digital Pulsed Output	-
B19	DPO 4	Digital Pulsed Output	Connection for Electronic Boost Control Output
B20	AVI 5	Analog Input	-
B21	Knock 1	Knock 1	Knock 1
B22	Knock 2	Knock 2	Knock 2
B23	CAN Hi	-	-
B24	Can Lo	-	-
B25	DBW 1	Digital Pulsed Output	-
B26	DBW 2	Digital Pulsed Output	-

Figure 9 - 26 Pin Harness Connector Pin Allocation

Harness Pinout



ECU CONNECTOR (34 PIN)

Installation:

- Disconnect Battery
- Access and Unplug Factory ECU
- Install plug-and-play parallel harness and connect both the Elite and OE ECU.
- Route 1.8m (6') Haltech Elite sub-harness into passenger compartment, firmly secure your Haltech Elite ECU.
- Harness is sleeved in DR-25 Raychem for superior protection against elements.
- Reconnect Battery
- Connect & configure Haltech Elite and confirm TDC Offset prior to startup.

For Technical Help Videos check us out at
www.youtube.com/haltechecu

Position	Connection	Function	Notes
A1	DPO 2	MIL	MIL
A2	AVI 4	Analog Input	-
A3	IGN 1	Ignition Output 1	Coil 1
A4	IGN 2	Ignition Output 2	Coil 2
A5	IGN 3	Ignition Output 3	Coil 3
A6	IGN 4	Digital Pulsed Output	-
A7	IGN 5	Digital Pulsed Output	-
A8	IGN 6	Digital Pulsed Output	-
A9	5VDC	5V Sensor Power	Map Input Connector Pin C
A10	Chassis Ground	Chassis Ground	-
A11	Chassis Ground	Chassis Ground	-
A12	8VDC	-	-
A13	Ignition Input	Ignition Input	Not Used
A14	AVI 10	TPS Signal	TPS
A15	AVI 9	MAP Signal	Map Input Connector Pin B
A16	AVI 2	Analog Input	-
A17	AVI 3	Analog Input	-
A18	DPO 1	VVTI	VVTI
A19	INJ 1	Injection Output 1	Injector 1
A20	INJ 2	Injection Output 2	Injector 2
A21	INJ 3	Injection Output 3	Injector 3
A22	INJ 4	Injection Output 4	Injector 4
A23	DPO 3	Digital Pulsed Output	-
A24	DPO 5	Digital Pulsed Output	-
A25	DPO 6	Engine Control Relay	Not Used
A26	Injector Power Input	Injector Power Input	-
A27	INJ 5	Injection Output 5	Injector 5
A28	INJ 6	Injection Output 6	Injector 6
A29	INJ 7	Digital Pulsed Output	-
A30	INJ 8	Digital Pulsed Output	-
A31	Stepper 1	Idle Control Output	-
A32	Stepper 2	Idle Control Output	-
A33	Stepper 3	Idle Control Output	-
A34	Stepper 4	Idle Control Output	-

Figure 8 - 34 Pin Harness Connector Pin Allocation

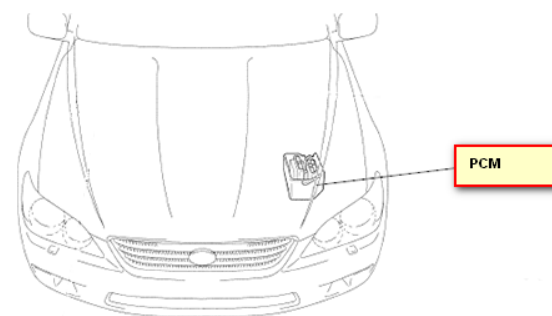


Figure 2 - Factory ECU Location

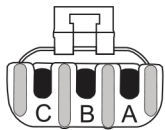
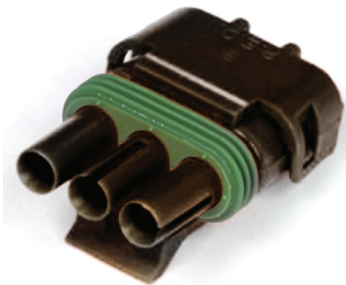
WARNING!

It is recommended that the Haltech ECU be installed inside the cabin to keep it away from heat and water intrusion. The front cover must be installed to maintain IP67 water resistant rating. If you wish to leave a USB cable plugged into the ECU then you must contact your Haltech dealer to purchase caps for each connector inside the lid as well as a sealed USB cable.

Additional Features

The Haltech Elite ECU will have additional features that can be configured and connected through the provided breakout connections on the adapter harness. Specifically, users will be able to easily connect a GM 3 BAR MAP sensor through the 3-pin Weatherpack connector (be sure to modify the calibration file accordingly).

GM MAP Connector



HARNESS SIDE VIEW

Termination	
A	SIGNAL GROUND
B	SIGNAL
C	POWER (+5V)

Electronic Boost Control Loose Wiring

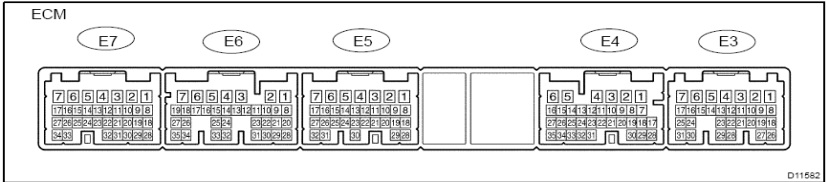
Users also have the ability to connect an electronic boost control device through the provided two sleeved wires located in the breakout. These wires are as follows:

- 12V
- DPO 4

Boomslang Haltech Elite 2500 2002-2005 Lexus IS300 6'

Function	Elite	IS300	Notes	Color
DPO 2	A1	E4-2	MIL	Yellow
AVI 4	A2	-	-	-
Ign 1	A3	E5-13	Coil 1	Blue/White
Ign 2	A4	E7-27	Coil 2	Orange/White
Ign 3	A5	E7-26	Coil 3	Yellow/White
Ign 4	A6	-	-	-
Ign 5	A7	-	-	-
Ign 6	A8	-	-	-
+5V	A9	-	Haltech MAP C	Orange
Ground	A10	E6-7	Ground	Black
Ground	A11	E5-2	Ground	Black/White
+8V	A12	-	-	-
Ignition Switch	A13	-	-	-
AVI 10	A14	E7-25	TPS	Gray
MAP	A15	-	Haltech MAP B	Yellow
AVI 2	A16	-	-	-
AVI 3	A17	-	-	-
DPO 1	A18	E7-6 (+12V to E7-5)	VVTI	Purple
Injector 1	A19	E7-15	Injector 1	Blue/Red
Injector 2	A20	E5-17	Injector 2	Orange/Red
Injector 3	A21	E7-14	Injector 3	Yellow/Red
Injector 4	A22	E5-16	Injector 4	Purple/Red
DPO 3	A23	-	-	-
DPO 5	A24	-	-	-
DPO 6	A25	-	-	-
+12V Switched	A26	E3-6	+12V Switched	Red
Injector 5	A27	E7-13	Injector 5	Brown/Red
Injector 6	A28	E5-15	Injector 6	Green/Red
Injector 7	A29	-	-	-
Injector 8	A30	-	-	-
Stepper 1 P1	A31	-	-	-
Stepper 1 P2	A32	-	-	-
Stepper 1 P3	A33	-	-	-
Stepper 1 P4	A34	-	-	-

Crank Trigger +	B1	E7-31	Crank Signal	Shielded White
Cam Home +	B2	E7-29	Cam Signal	Shielded Black
IAT	B3	E5-32	IAT	Purple/Yellow
ECT	B4	E5-24	ECT	Blue/Yellow
Crank -	B5	-	-	-
Cam -	B6	-	-	-
SPI 4	B7	-	-	-
SPI 1	B8	E4-11	VSS	Shielded Red
SPI 2	B9	-	-	-
SPI 3	B10	-	-	-
+12V Switched	B11	E3-5	+12V Switched	Red/White
AVI 6	B12	-	-	-
AVI 1	B13	E3-12	Clutch Switch	Yellow/Black
Signal Ground	B14	-	Shield Ground	Black/Red
Signal Ground	B15	-	Haltech MAP A	Black/Red
Signal Ground	B16	-	-	-
Ignition 7	B17	-	-	-
Ignition 8	B18	-	-	-
DPO 4	B19	-	Boost Control	Shielded Black
AVI 5	B20	-	-	-
Knock 1	B21	E6-1	Knock 1	Green
Knock 2	B22	E6-2	Knock 2	Blue
CAN High	B23	-	-	-
CAN Low	B24	-	-	-
DBW 1	B25	-	-	-
DBW 2	B26	-	-	-



D11582

HALTECH USA

Figure 5 - Parallel Harness Pinout
Looking into Factory ECU Connector