

HELLA CRUISE CONTROL - System Overview

A tiny ECU which is surprisingly versatile and turns up in lots of different places. Sometimes it co exists with an engine management specific interface ECU to communicate to the engine management with. It has some limited reprogram ability.

HELLA CRUISE CONTROL - System Help file

Version 1.26

HELLA CRUISE CONTROL - Known Fitments

Vehicle makes, models and variants known or believed to be using this vehicle system, required diagnostic lead and degree of known compatibility.

Vehicle Make	Vehicle Model	Vehicle Variant	Diagnostic Lead	Compatibility Level
Land Rover	Range Rover MK II (P38)	Petrol 1999>	Green OBD lead	Verified

HELLA CRUISE CONTROL - Diagnostic Capabilities (Read Fault Codes)

Reads the fault code memory. The ECU can self detect up to 41 different problems with itself, its wiring and its associated sensors, storing the respective code if it detects any malfunction or reading outside of pre defined acceptable limits. Not all stored faults may cause the fault warning lamp to illuminate.

HELLA CRUISE CONTROL - Diagnostic Capabilities (Clear Fault Codes)

Clears the fault code memory.

SM039 - HELLA CRUISE CONTROL - Diagnostic Capabilities (Settings)

Values, configuration settings, and other stored information which can be read from the ECU, edited and then rewritten back. Read settings can also be stored as a standard HTML page for reference. These pages can then later be re loaded and re written back to the ECU. Please note that some values may be read only due to the fact that they are supplied from the ECU's ROM or are internally calculated.

- **Part Number:** This is the manufacturer's part number for the ECU.
- **Software Name:** This is a number which relates to the software programmed in the processor of the ECU.
- **Manufacturer:** This is the manufacturer of the ECU.
- **Diagnostic index:** This is a number that indicates the diagnostic capabilities support level.
- **Coding index:** This is a number which denotes the layout of the options within the EPROM of the ECU and denotes which coding map should be used to program the ECU with.
- **Date of Manufacture:** This is the date the ECU was manufactured in YY/MM/DD format.

- **P Amplification:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 44 for ECU default
 - 25 for Range Rover4.0
 - 34 for Range Rover4.6
 - 25 for Discovery4.6
 - 17 for Discovery4.0
- **D Amplification:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 32 for ECU default
 - 31 for Range Rover4.0
 - 40 for Range Rover4.6
 - 31 for Discovery4.6
 - 25 for Discovery4.0
- **Hysteresis Pump:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 30 for ECU default
 - 57 for Range Rover4.0
 - 64 for Range Rover4.6
 - 57 for Discovery4.6
 - 10 for Discovery4.0
- **Hysteresis Value:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 10 for ECU default
 - 47 for Range Rover4.0
 - 64 for Range Rover4.6
 - 47 for Discovery4.6
 - 12 for Discovery4.0
- **Set Pulse Offset:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 96 for ECU default
 - 85 for Range Rover4.0
 - 85 for Range Rover4.6
 - 85 for Discovery4.6
 - 75 for Discovery4.0
- **Set Pulse Gradient:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 80 for ECU default
 - 80 for Range Rover4.0

- 80 for Range Rover4.6
- 80 for Discovery4.6
- 80 for Discovery4.0
- **Initial Acceleration:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 15 for ECU default
 - 17 for Range Rover4.0
 - 17 for Range Rover4.6
 - 17 for Discovery4.6
 - 15 for Discovery4.0
- **Initial Acceleration Gradient:** This is part of the vehicle tune information and affects the way the cruise control operates relevant to the vehicle type. Based on the tune read from the ECU, the data is disassembled and displayed in the settings page. The value cannot be changed manually, it will change when an other tune is selected. The values should be:
 - 32 for ECU default
 - 60 for Range Rover4.0
 - 60 for Range Rover4.6
 - 60 for Discovery4.6
 - 60 for Discovery4.0
- **Vehicle Tune:** This is the tune selected for the cruise control. The tune is disassembled into the 8 parts and displayed in the settings page. The values for a tune cannot be changed separate. Unknown will be displayed if the tune read from the ECU does not match one of the 5 (ECU default, Range Rover 4.0/4.6, Discovery 4.0/4.6). And "UNKNOWN" map cannot be written into the ECU.

HELLA CRUISE CONTROL - Diagnostic Capabilities (Inputs)

Realtime live display of the information the electronic control unit of the selected vehicle system is currently deriving from it's input sensors.

- **Cruise Status:** The status of the cruise control, either enabled or disabled.
- **Brake/Clutch Switch:** The status of the brake/clutch switch, either on or off.
- **Brake Light:** The status of the brake lights.
- **Set Switch:** The status of the set switch.
- **Resume Switch:** The status of the resume switch.
- **Speed Input:** This shows if a speed signal was detected or not.
- **Minimum Threshold:** Displays if the minimum speed threshold was reached or not.
- **Road Speed:** The road speed in both, km/h and mph.
- **Target Speed:** The current speed stored by the cruise control ECU in both, km/h and mph.

HELLA CRUISE CONTROL - Diagnostic Capabilities (Utility)

Last Triggered Memory: This function will display the last reason the cruise control was deactivated.