

Fuel Additive Applicator Modem & Commands

Modem

The software plus the modem, antenna, power cable and SIM card enable the commands and responses to be sent and received over a cellular network.

The modem, antenna and power cable supplied are:

- GT-HE910-EUG UMT/HSPA + Terminal, Tri band + GPS cellular terminal for GMS/UMTS GPS applications.
- AGM002P (SMA-3m) Penta Band GSM/3G Antenna (SMA male, 3m cable)
- GT-Power cable for GT terminals

SIM Card & Mobile Connection

The SIM card and mobile account are to be arranged by the customer.

The SIM card needed is a 2FF Standard measuring 15mm wide x 25mm.

To activate, phone Vodafone on 777 No 4 and give them details of the card.

Commands

The commands that are supported by the modem are:

Command	Response
'PING'	'pong' if the Applicator is powered up.
'WHERE'	The vehicle GPS coordinates. If selected, should load the location in the default mapping software.
'RESET'	Power off then power on the Applicator board.
'ALERTS'	Sets the phone number to send the alert message to, which is the last one that sent 'ALERT'. The alert is sent when low additive level is activated and also each time that the Applicator is powered up with the additive level still low.
'ADDITIVE'	The additive level if a gauge is fitted, and if so - 'Current additive tank volume is xxx L. Additive tank is not empty, or Additive tank is empty',
'TEMP'	Additive temperature - 'Additive temperature is xx degrees Celsius'.
'STATUS'	Applicator status - 'Vehicle is idle/not idle, Heater is on/off, Pump is on/off'.
'TOTALS'	Operational Totals - 'Total fuel xxxx L. Total additive xxxx mL, Total additive missed xx mL. Number of doses xx'.
'TANKS'	Fuel tank volume - 'Tank 1 volume is xxxx L. Tank 2 volume is xxxx L.
'HELP'	Sends the following message 'Supported Commands: PING, WHERE, HELP, RESET, ALERTS, ADDITIVE, TEMP, STATUS, TOTALS, TANKS'.

SMS Messages

The following SMS messages are sent:

Fuel is added – 'Fuel Added: xxxxx L'

Additive pump runs, but the additive level does not drop if a gauge is fitted – "Dosing failed, no additive level drop detected"

For a pulser build - whenever the additive pump starts.

Procedure

The procedure is:

Plug in the modem with a valid SIM card and antennae with cell coverage.

Send one of the above SMS command to the modem to receive the response.

RS232 Connections

Board Terminal P105 – P Pin No W Wire No – DCD P6 W1, DTR P5 W4, TX P4 W3, RX P3 W2, GND P13 W G/Y

RS232 Male Cable Plug - top row of 5 pins looking down on soldered end with 5 pins at the top & P5 on the LHS:

P5 GND W G/Y, P4 DTR W4, P3 TX W3, P2 RX W2, P1 DCD W1