Ford Mustang ECU

Racing Data Power

INTRODUCTION

AIM has developed special applications for many of the most common ECUs: by special applications we mean user-friendly systems which allow to easily connect your ECU to our hi-tech data loggers: user need only to install harness between the logger and the ECU.

Once connected, the logger displays (and/or records, depending on the logger) values like RPM, engine load, throttle position (TPS), air and water temperatures, battery voltage, speed, gear, lambda value (air/fuel ratio), analog channels etc…

All AIM loggers include – free of charge – **Race Studio 2** software, a powerful tool to configure the system and analyze recorded data on your PC.

Warning: once the ECU is connected to the logger, it is necessary to set it in the logger configuration in Race Studio 2 software.
Select Manufacturer "Ford" and Model "Mustang 2005/07".
Refer to Race Studio configuration user manual for further information concerning the loggers configuration.

INDEX

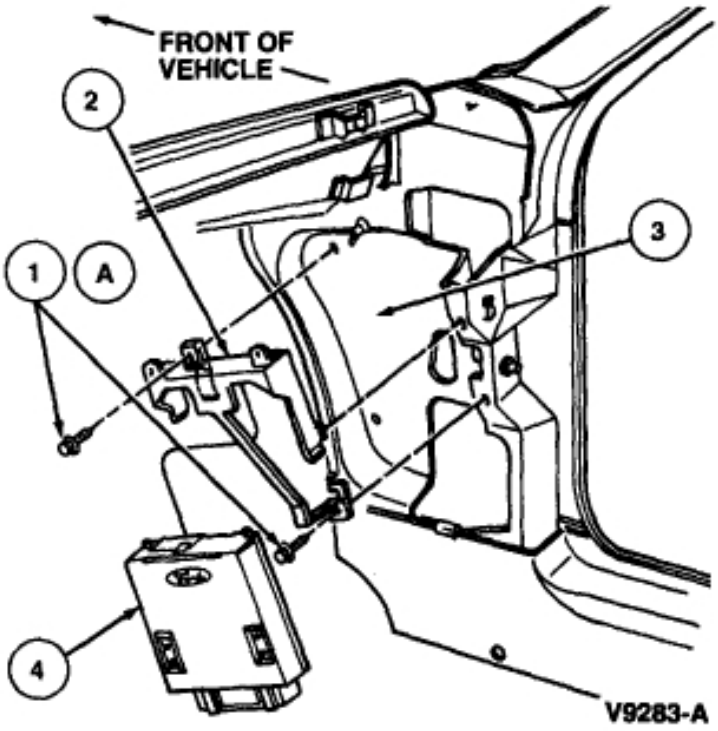
Chapter 1 – Car Models

Ford Mustang OEM 5+ ECU is installed on the following car models:

- Ford Mustang V6 2005-2008
- Ford Mustang GT 2005-2008
- Ford Mustang GT 500 2005-2008

1.1 – ECU position

Ford OEM 5+ ECU is installed on the front bottom right part of the vehicle as shown in the figure below.



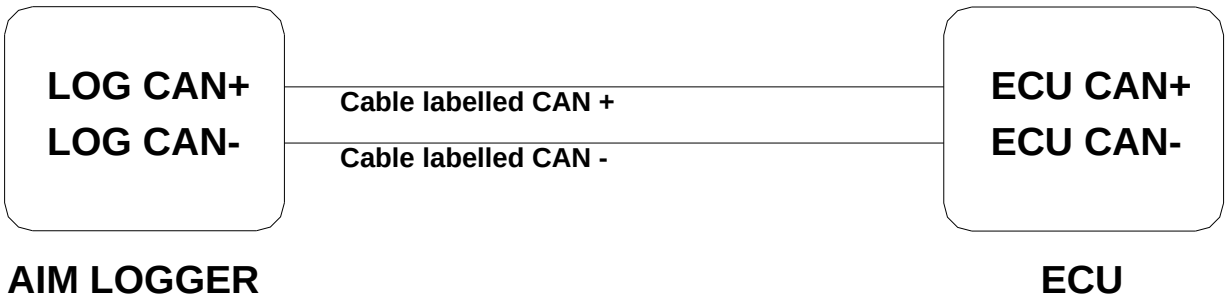
Item	Description
1	Screw (2 Req'd)
2	Powertrain Control Module Bracket
3	Cowl Side Panel
4	Powertrain Control Module
A	Tighten to 2.7-3.7 N·m (24-32 Lb-In)

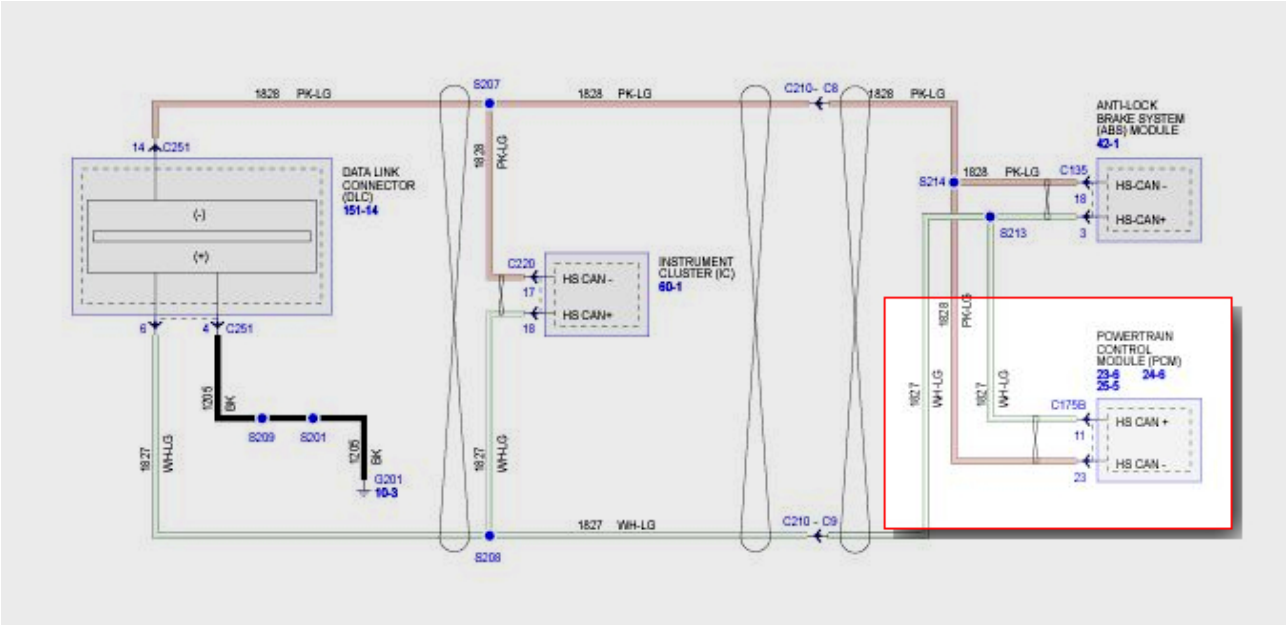
Chapter 2 – CAN communication setup

Mustang OEM 05+ protocol applies to Ford Mustang V6, Mustang GT and GT500 models from 2005 onward. Sampled channels depend on the model.

The ECU is equipped with a CAN communication protocol used to communicate parameters to a data logger.

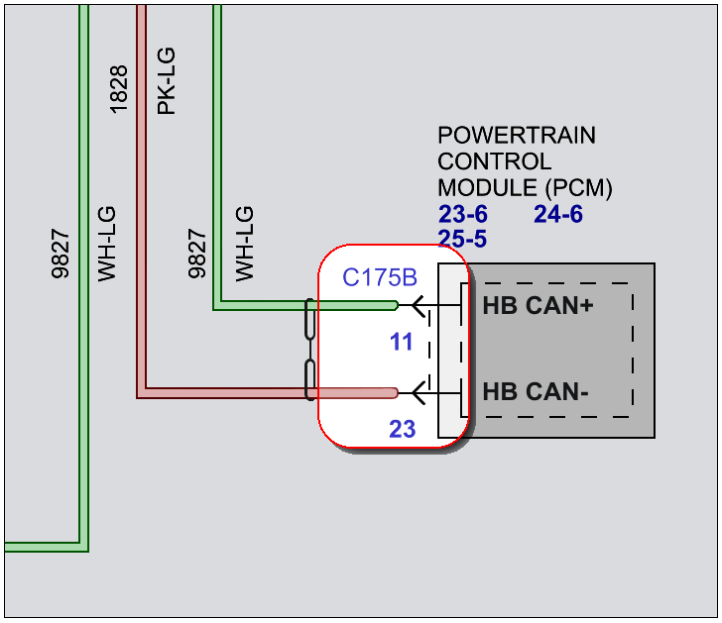
The images here below show the standard CAN communication setup on top and the ECU wiring diagram bottom. The image on bottom highlights the connector labelled C175B used to connect the ECU with AIM loggers.





Chapter 3 – Connection with AIM loggers

To connect the ECU with AIM loggers connect **AIM cable labelled CAN+ to pin 11** of ECU **connector labelled C175B** and **AIM cable labelled CAN-** with **pin 23** of ECU **connector labelled C175B**. The image here below shows in detail the connection between the ECU and AIM loggers.



Chapter 4 – Ford Mustang communication protocol

Ford Mustang OEM 05+ communication protocol is:

ID	CHANNEL NAME	FUNCTION
ECU_1	M_RPM	RPM
ECU_2	M_SPEED	SPEED
ECU_3	M_PEDAL_POS	Throttle pedal position
ECU_4	M_WH_SPD_FL	Front left wheel speed
ECU_5	M_WH_SPD_FR	Front right wheel speed
ECU_6	M_WH_SPD_RL	Rear Left wheel speed
ECU_7	M_WH_SPD_RR	Rear right wheel speed
ECU_8	M_TENGINE	Engine temperature
ECU_9	M_ETC_TELTAL	Traction control alarm
ECU_10	M_TBO_BST	Turbo boost
ECU_11	M_FUEL_LEV	Fuel level
ECU_12	M_FUEL_I_1	Instant fuel level - sensor 1
ECU_13	M_FUEL_I_2	Instant fuel level - sensor 2
ECU_14	M_FUEL_AVE	Average fuel level
ECU_15	M_FFLUX	Fuel flux
ECU_16	M_CLCH_SW	Clutch switch
ECU_17	M_TCS_BRK	Traction control brake switch
ECU_18	M_TCS_ENG	Traction control engine switch
ECU_19	M_BRK_SW	Brake switch
ECU_20	M_ABS_TELTAL	ABS alarm
ECU_21	M_AXLE_RATIO_R	Rear axle ratio
ECU_22	M_MIL_TELTAL	Malfunction Indicator Light
ECU_23	M_FAILSAFE_COOL	Fail safe cooling mode
ECU_24	M_GEAR	Engaged gear
ECU_25	M_TYRE	Tyre revolutions per km
ECU_26	M_SMART_AL	