



24 Onwards S650 Mustang and F150 Calibration notes for the KPM1000HP fuel module.

The 24 onwards S650 Mustang and F150 have a superseded FPDM. This FPDM does not allow for much more amperage to the fuel pumps when needed in comparison to the 15 to 23 models which can handle far higher current.

Custom operating systems from either Whipple or Roush have made adjustments to the voltage allowed to the fuel pump to squeeze as much as possible from the OE fuel pump.

When higher amperage fuel pumps are fitted to the vehicle this higher allowed voltage to the pumps will draw more current and eventually cause the FPDM to drop power to the pumps momentarily. When the ECU sees this several times in short succession it will flag a DTC and turn the FPDM off causing the fuel pump to turn off.

We recommend putting these settings back to stock for the system to operate correctly

The following instructions are where to make the calibration changes.

HP Tuners

43002 is a Max Voltage vs Flow vs Pressure table. Set the table back to stock (values may differ depending on OE calibration but the below can also be used).

*This table CAN be adjusted to finely tune duty cycle to the pumps if required but too high and the FPDM will go into limp mode as described above.

The screenshot shows the HP Tuners Fuel System window with the 'General' tab selected. The 'Fuel Pump' section has 'Secondary Monitor' set to 'Enabled', 'Minimum On Time' at '8.00 s', and 'Desired Voltage' set to 'High'. Below this is the '[ECM] 43002 - Fuel Pump Desired Voltage' table. The table has columns for 'Fuel Pressure (kPa)' and 'Fuel' (0.0, 7.6, 22.7, 45.4). The values are color-coded: green for 0.0, yellow for 7.6, orange for 22.7, and red for 45.4.

Fuel Pressure (kPa)	0.0	7.6	22.7	45.4
379.2	5.00	5.90	7.80	10.60
386.1	5.10	7.00	7.90	10.70
496.4	6.00	7.00	9.00	11.90
503.3	6.10	7.10	9.10	12.00

43003 Fuel Pump Max Voltage. Return this to stock.

Max Voltage	12.00 v
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PCMTEC

auF0958 is a Max Voltage vs Flow vs Pressure table. Set the table back to stock (values may differ depending on OE calibration but the below can also be used).

*This table CAN be adjusted to finely tune duty cycle to the pumps if required but too high and the FPDM will go into limp mode as described above.

		lb/min			
		0	1	3	6
Pressure - psi	55	5	5.9	7.8	10.6
	56	5.1	7	7.9	10.7
	72	6	7	9	11.9
	73	6.1	7.1	9.1	12

auF61353 Fuel Pump Max Voltage. Return this to stock.

auF61353	Max pump control voltage acceptable to PEM.	12
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