

Engine

General Idle Airflow Fuel Spark Torque Model Torque Management

RPM

**General**

ETC Area Scalar 5,636.0000

**Effective Area**

Max 8.192

Min 0

Max Fail 200

Min Fail 5

Percent Max 2.51%

Percent Max - Brake 2.51%

**Base Running Airflow**

Airflow Final Minimum Baro Mult

ECT Mult

**AC Airflow**

AC Ramp In AC Ramp Out

**Cooling Fan Airflow**

Low On 1.6 lb/h

Med On 2.8 lb/h

Hi On 1.2 lb/h

Hi Off 2.8 lb/h

**Transmission Shift Airflow**

Drive Transition Drive Step

Drive Hold P/N Transition

P/N Step

**Startup**

Startup Time Overspeed

Startup Time Underspeed

Startup Airflow

MAF S/S Startup

MAF S/S Stepdown 0.0

MAF S/S Stepdown Del 4.50 s

**Throttle Follower**

Torque Torque 4wdLo

Airflow Step Down Airflow Step Up

Airflow Max

ECM] 12194 - Idle Startup Airflow vs. ERT vs. ECT

lb/h

(s)

	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
-40	138.9	138.9	122.5	118.4	109.3	100.8	94.3	92.6	91.0
-18	138.9	138.9	119.5	114.9	105.3	96.6	90.9	89.4	88.0
3	138.9	138.9	111.1	91.3	85.3	85.3	85.3	85.3	85.3
25	123.0	123.0	103.2	83.3	79.4	79.4	79.4	79.4	79.4
46	103.2	101.2	75.4	73.4	73.4	73.4	73.4	73.4	73.4
68	103.2	99.2	95.2	93.3	93.3	93.3	93.3	93.3	93.3
90	103.2	95.2	91.3	89.3	89.3	89.3	89.3	89.3	89.3
111	107.1	71.4	63.5	59.5	59.5	59.5	59.5	59.5	59.5
133	109.1	61.1	54.6	54.6	54.6	54.6	54.6	54.6	54.6
154	91.7	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
176	91.7	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
198	87.3	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
219	87.3	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
241	87.3	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
262	87.3	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
284	87.3	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4
306	87.3	61.1	52.4	52.4	52.4	52.4	52.4	52.4	52.4

ECM] 12320 - Cranking FA Mult Stage 1 vs. Cranking Time

Crank Time (s)

	0	10	30	60	180	300	600	1,800	3,600	5,400	7,200	10,800	14,400	21,600	28,800	36,000	43,200
-40	14.70	14.70	14.70	14.70	15.75	15.75	17.85	23.10	26.25	27.63	27.63	31.77	44.48	44.48	44.48	44.48	44.48
-22	12.60	12.60	12.60	12.60	13.65	13.65	16.80	18.90	21.92	21.92	21.92	25.21	35.30	35.30	35.30	35.30	35.30
-4	9.35	9.35	9.66	9.66	11.79	11.79	14.17	16.28	18.93	18.93	18.93	21.78	30.48	30.48	30.48	30.48	30.48
14	8.14	8.14	8.14	8.26	8.70	9.16	9.64	10.15	10.68	11.25	11.25	12.94	18.10	18.10	18.10	18.10	18.10
32	6.18	6.24	6.24	6.48	6.83	7.09	7.09	7.35	7.35	8.04	8.67	10.60	14.96	14.96	14.96	14.96	14.96
68	5.10	5.10	5.37	5.65	5.95	6.26	6.59	6.94	6.94	7.31	7.31	9.51	9.51	9.51	9.51	9.51	9.51
96	3.73	3.73	3.93	4.14	4.36	4.58	4.82	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07
104	2.80	2.80	2.95	3.11	3.27	3.44	3.62	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81
122	1.48	1.48	1.55	1.64	1.72	1.82	1.91	2.02	2.02	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
140	1.42	1.42	1.45	1.49	1.51	1.52	1.60	1.68	1.68	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
158	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
176	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
194	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
212	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.17	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
230	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.28	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
248	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32

Engine

General Oxygen Sensors Open Loop / Base Power Enrich Temperature Control Cutoff, DFCO Lean / Fuel-Saving Transient Torque Model Torque Management

**Stoichiometry**

Stoich AFR

**Injector Control**

Injector Bank Select

**Flow Rate**

Flow Rate vs. Press

Flow Rate Mult vs. Volts

Flow Rate Mult vs. IAT

Flow Rate Mult vs. MAP

Flow Rate Mult vs. Flow

**Limits**

Min Injector Pulse

**Offset**

Offset Select Vacuum

Offset vs. Inj Temp

Offset vs. Volts vs. MAP

Offset vs. Press vs. IGTV

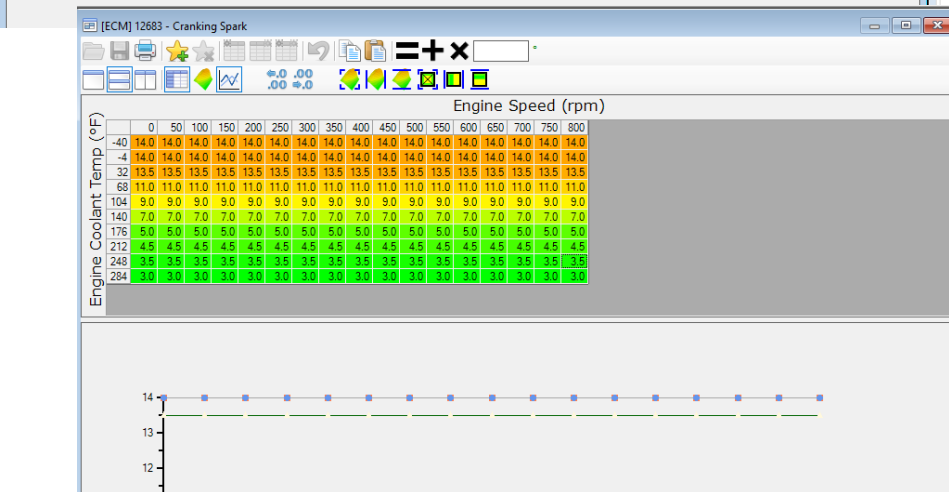
**Pulse Corrections**

**Cranking Fuel**

FA Mult Stage 1 vs. Time

**I/V T Terms**

AFR Term AFR<sup>2</sup> Term



Engine

General Advance Retard Fuel Spark Torque Model Torque Management

**General**

Spark Smoothing Disabled

Max Torque Delta 59.00 lb/ft

Max Torque Bias 36.88 lb/ft

Max Torque Loss 51.63 lb/ft

Low Torque Gain High Torque Gain

High Torque Thresh

**Base**

High Octane Low Octane

HO (DOD) LO (DOD)

**Base Corrections**

Piston Slap

**Fuel**

Flex Fuel Gas Alcohol

Mult vs. Composition

Mult vs. MAP

**IAT**

Base Mult Mult2

**ECT**

Base Mult

**EGR**

Base

**VCT**

VCP Spark

**Catalyst Heating**

Normal Coast Idle P/N

Idle Gear St ECT Mult

ECT Mult ERT Mult TPS Mult

**Launch**

Cold Launch

**MBT Corrections**

**Fuel**

Alcohol Adder Alcohol Mult

**EGR**

Adder

**Idle Spark Advance**

Base Coastdown

**Idle Spark Adder**

P/N In Gear

Mult vs. Baro

**Idle Adaptive Spark Control**

**Overspeed**

P/N Gear Coast

**Underspeed**

P/N Gear Coast

**Startup**

Cranking

Startup Ramp Cont. Mult