

2010 ENGINE PERFORMANCE

Engine Controls and Fuel - 2.8L, 3.0L, 3.2L, or 3.6L - Equinox & Terrain

SPECIFICATIONS

TEMPERATURE VERSUS RESISTANCE - ENGINE COOLANT TEMPERATURE SENSOR

Temperature C°/F°	Resistance Minimum Ohms	Resistance Maximum Ohms
Engine Coolant Temperature (ECT)		
-40/-40	40,490	50,136
-20/-4	14,096	16,827
-10/14	8,642	10,152
0/32	5,466	6,326
20/68	2,351	2,649
25/77	1,941	2,173
40/104	1,118	1,231
60/140	573	618
80/176	313	332
100/212	182	191
120/248	109	116
140/284	068	074

TEMPERATURE VERSUS RESISTANCE - INTAKE AIR TEMPERATURE SENSOR

Temperature C°/F°	Resistance Minimum Ohms	Resistance Maximum Ohms
Intake Air Temperature (IAT) Sensor		
-40/-40	35,140	43,760
-20/-4	12,660	15,120
-10/14	7,943	9,307
0/32	5,119	5,892
20/68	2,290	2,551
25/77	1,900	2,100
40/104	1,096	1,238
60/140	565	654
80/176	312	370
100/212	184	222
120/248	114	141
140/284	74	93

ALTITUDE VERSUS BAROMETRIC PRESSURE

Altitude Measured in Meters (m)	Altitude Measured in Feet (ft)	Barometric Pressure Measured in Kilopascals (kPa)	Barometric Pressure Measured in Pounds Per Square Inch (psi)
Determine your altitude by contacting a local weather station or by using another reference source.			
4 267	14,000	56-64	8.1-9.3
3 962	13,000	58-66	8.4-9.6
3 658	12,000	61-69	8.8-10.0
3 353	11,000	64-72	9.3-10.4
3 048	10,000	66-74	9.6-10.7
2 743	9,000	69-77	10.0-11.2
2 438	8,000	71-79	10.3-11.5
2 134	7,000	74-82	10.7-11.9
1 829	6,000	77-85	11.2-12.3
1 524	5,000	80-88	11.6-12.8
1 219	4,000	83-91	12.0-13.2
914	3,000	87-95	12.6-13.8
610	2,000	90-98	13.1-14.2
305	1,000	94-102	13.6-14.8
0	0 Sea Level	96-104	13.9-15.1
-305	-1,000	101-105	14.6-15.2

IGNITION SYSTEM SPECIFICATIONS

Application	Specification	
	Metric	English
Firing Order	1-2-3-4-5-6	
Spark Plug Gap	1.1 mm	0.043 in
Spark Plug Torque	20 N.m	15 lb ft

FASTENER TIGHTENING SPECIFICATIONS

Application	Specification	
	Metric	English
Accelerator Cable Bracket Bolt	10 N.m	89 lb in
Accelerator Control Pedal Bolt and Stud	5 N.m	44 lb in
Air Cleaner Housing Cover Screws	4 N.m	35 lb in
Air Cleaner Outlet Duct Clamp	4 N.m	35 lb in
Boost Control Solenoid Nut	8 N.m	71 lb in
Bypass Valve Actuator Mounting Bolt	25 N.m	18 lb ft
Camshaft Position (CMP) Sensor Bolt	10 N.m	89 lb in
Crankshaft Position (CKP) Sensor Stud	30 N.m	22 lb ft
Engine Coolant Temperature (ECT) Sensor	20 N.m	15 lb ft

Engine Mount Strut Bolt/Nut	48 N.m	35 lb ft
EVAP Solenoid Vent Valve Bracket Bolt	10 N.m	89 lb in
Exhaust Gas Recirculation (EGR) Valve Adapter Bolt and Stud	50 N.m	37 lb ft
Exhaust Gas Recirculation (EGR) Valve Intake Pipe to Exhaust Manifold Bolt	30 N.m	22 lb ft
Exhaust Gas Recirculation (EGR) Valve Outlet Pipe to Adapter Nut	30 N.m	22 lb ft
Exhaust Gas Recirculation (EGR) Valve Outlet Pipe to Intake Manifold Bolt	30 N.m	22 lb ft
Exhaust Gas Recirculation (EGR) Valve Nut	30 N.m	22 lb ft
Fuel Feed Intermediate Pipe Fittings		
• First Pass	15 N.m	11 lb ft
• Second Pass	30 N.m	22 lb ft
Fuel Filler Pipe Screw to the Fuel Filler Pipe	2.5 N.m	22 lb in
Fuel Rail Hold-Down Bolt/Nut	10 N.m	89 lb in
Fuel Rail Hold-Down Stud	25 N.m	18 lb ft
Fuel Sender Access Panel Nut	10 N.m	89 lb in
Fuel Tank Filler Pipe Hose Clamp	2.5 N.m	22 lb in
Fuel Tank Filler Pipe Screw	13 N.m	115 lb in
Fuel Tank Retaining Strap Bolt	25 N.m	18 lb ft
Heated Oxygen Sensor (HO2S)	41 N.m	30 lb ft
Idle Air Control (IAC) Valve Screw	3 N.m	27 lb in
Ignition Coil to Ignition Control Module (ICM) Screw	4.5 N.m	40 lb in
Ignition Control Module (ICM) Nut	10 N.m	89 lb in
Ignition Control Module 14 Way Connector to Module Screw	2.1 N.m	19 lb in
In-Line Fuel Filter Mounting Bracket Bolt	20 N.m	15 lb ft
In-Line Fuel Filter Outlet Nut	30 N.m	22 lb ft
Knock Sensor (KS)	19 N.m	14 lb ft
Knock Sensor (KS) Heat Shield Bolt	60 N.m	44 lb ft
Manifold Absolute Pressure (MAP) Sensor Screw	5 N.m	44 lb in
Mass Air Flow (MAF) Sensor Screw	3 N.m	27 lb in
Powertrain Control Module (PCM) Electrical Connector Bolt	8 N.m	71 lb in
Spark Plug		
• To a New Cylinder Head	27 N.m	20 lb ft
• To an Existing Cylinder Head	15 N.m	11 lb ft
Throttle Body Nut	10 N.m	89 lb in
Throttle Body Support Bracket Bolt	16 N.m	12 lb ft
Throttle Position (TP) Sensor Screw	2 N.m	18 lb in

Throttle Inlet Absolute Pressure (TIAP) Sensor	4 N.m	35 lb in
--	-------	----------

ADHESIVES, FLUIDS, LUBRICANTS, AND SEALERS

Application	Type of Material	GM Part Number	
		United States	Canada
All Purpose Parts Cleaner	Cleaner	12378553	88900920
Anti-Seize Compound	Lubricant	88862477	88862478
Coolant Temperature Sensor Threads	Sealant	12346004	10953480
Engine Oil	5W-30 Oil	12345610	993193
Fuel Injection Fuel Rail Bolts	Threadlock	12345382	10953489
Intake Air Temperature Sensor Threads	Sealant	12346004	10953480