

2018 ENGINE PERFORMANCE**Engine Controls And Fuel - 2.0L (LTG) - Specifications - Traverse****SPECIFICATIONS****TEMPERATURE VERSUS RESISTANCE - INTAKE AIR TEMPERATURE SENSOR**

Temperature C°/F°	Resistance Minimum Ohms	Resistance Maximum Ohms
Delco Intake Air Temperature (IAT) Sensor		
-40/-40	42, 661	54, 224
-20/-4	14, 039	17, 333
-10/14	8, 529	10, 399
0/32	5, 358	6, 458
20/68	2, 308	2, 727
25/77	1, 904	2, 236
40/104	1, 113	1, 292
60/140	571	655
80/176	309	351
100/212	175	197
120/248	103	116
140/284	67	73
150/302	54	59

TEMPERATURE VERSUS RESISTANCE - ENGINE COOLANT TEMPERATURE SENSOR

Temperature	Resistance
150°C (302°F)	42 to 44 ohms
140°C (284°F)	53 to 57 ohms
130°C (266°F)	68 to 72 ohms
120°C (248°F)	88 to 92 ohms
110°C (230°F)	114 to 120 ohms
100°C (212°F)	151 to 159 ohms
90°C (194°F)	203 to 215 ohms
80°C (176°F)	275 to 293 ohms
70°C (158°F)	379 to 405 ohms
60°C (140°F)	532 to 572 ohms
50°C (122°F)	762 to 824 ohms
45°C (113°F)	921 to 997 ohms
40°C (104°F)	1118 to 1212 ohms
35°C (95°F)	1366 to 1484 ohms
30°C (86°F)	1683 to 1829 ohms
25°C (77°F)	2088 to 2266 ohms
20°C (68°F)	2608 to 2828 ohms
15°C (59°F)	3289 to 3567 ohms
10°C (50°F)	4182 to 4532 ohms
5°C (41°F)	5356 to 5800 ohms
0°C (32°F)	6914 to 7484 ohms
-5°C (23°F)	8994 to 9732 ohms
-10°C (14°F)	11796 to 12762 ohms

Temperature	Resistance
-15Â°C (5Â°F)	15589 to 16871 ohms
-20Â°C (-4Â°F)	20791 to 22517 ohms
-30Â°C (-22Â°F)	37991 to 41273 ohms
-40Â°C (-40Â°F)	72230 to 78834 ohms

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
Ignition System Type	T8 Ignition Coil - 1 - 4
Firing Order	1 - 3 - 4 - 2
Spark Plug Torque	Refer to: Fastener Specifications
Spark Plug Gap	Refer to: Engine Mechanical Specifications
Spark Plug Type	Refer to: Electronic Parts Catalog

FASTENER SPECIFICATIONS

Single Use Non-Threaded Fasteners/Components

NOTE:

All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.

Application
Camshaft Position Sensor Seal

NOTE:

All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.

Application
Crankshaft Position Sensor Seal
Evaporative Emission Canister Filter Hose Tie Strap
Fuel Injector O-ring
Fuel Injector Seal
Fuel Injector Spacer
Fuel Pump Bracket Gasket
Fuel Pump Housing Seal
Fuel Tank Filler Pipe Tie Strap
Fuel Tank Fuel Pump Module O-ring
Throttle Body Seal

Single Use Threaded Fastener/Component Tightening Specifications

NOTE:

All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.

Application	Specification
	Metric (English)
Fuel Feed Intermediate Pipe/Fitting	30 N.m (22 lb ft)
Fuel Pump Bolt	
First Pass:	8 N.m (71 lb in)
Final Pass:	50 degrees

Reusable Threaded Fastener Tightening Specifications

NOTE:

All fasteners listed in this table can be reused after removal.

Application	Specification
	Metric (English)
Accelerator Pedal Position Sensor Fastener	2.5 N.m (22 lb in)
Air Cleaner Outlet Duct Clamp	4 N.m (35 lb in)
Air Cleaner Upper Housing Bolt	4 N.m (35 lb in)
Camshaft Position Actuator Solenoid Valve Bolt	10 N.m (89 lb in)
Camshaft Position Sensor Bolt	10 N.m (89 lb in)
Charge Air Bypass Valve Bolt	7.8 N.m (69 lb in)
Charge Air Cooler Bolt	5 N.m (44 lb in)
Charge Air Cooler Inlet Air Hose Bolt	22 N.m (16 lb ft)
Charge Air Cooler Outlet Air Hose Bolt	9 N.m (80 lb in)
Crankshaft Position Sensor Bolt	10 N.m (89 lb in)
Engine Control Module Bracket Nut	9 N.m (80 lb in)
Engine Oil Pressure Sensor	35 N.m (26 lb ft)
Evaporative Emission Canister Fastener	9 N.m (80 lb in)
Fuel Injection Fuel Rail Bolt (In Sequence)	25 N.m (18 lb ft)
Fuel Injection Fuel Rail Fuel Pressure Sensor	33 N.m (24 lb ft)
Fuel Pump Power Control Module Fastener	9 N.m (80 lb in)

NOTE:

All fasteners listed in this table can be reused after removal.

Application	Specification
	Metric (English)
Fuel Pump Shield Bolt	10 N.m (89 lb in)
Fuel Tank Filler Hose Clamp	4 N.m (35 lb in)
Fuel Tank Filler Pipe Bolt @ Filler Housing	2.5 N.m (22 lb in)
Fuel Tank Filler Pipe Bolt @ Wheelhouse	9 N.m (80 lb in)
Fuel Tank Strap Bolt	22 N.m (16 lb ft)
Heated Oxygen Sensor	42 N.m (31 lb ft)
Ignition Coil Bolt	10 N.m (89 lb in)
Intake Air Duct Bolt	9 N.m (80 lb in)
Intake Air Pressure and Temperature Sensor Bolt	4 N.m (35 lb in)
Knock Sensor Bolt	25 N.m (18 lb ft)
Manifold Absolute Pressure Sensor Bolt	5 N.m (44 lb in)
Mass Airflow Sensor Bolt	4 N.m (35 lb in)
Oil Pump Flow Control Valve Bolt	10 N.m (89 lb in)
Oil Pump Flow Control Valve Heat Shield Bolt	58 N.m (43 lb ft)
Pump and Component Oil Heat Shield Bolt	9 N.m (80 lb in)
Spark Plug	20 N.m (15 lb ft)
Throttle Body Bolt	10 N.m (89 lb in)
Turbocharger Wastegate Actuator Bolt	20 N.m (15 lb ft)
Turbocharger Wastegate Regulator Solenoid Valve Bracket Bolt	7.8 N.m (69 lb in)
Vacuum Pump Bolt	10 N.m (89 lb in)

APPROXIMATE FLUID CAPACITIES

Application	Specification	
	Metric	English
Fuel Tank Capacity	73.4 liters	19.4 gallons

ADHESIVES, FLUIDS, LUBRICANTS, AND SEALERS

Application	Type of Material	GM Part Number
Anti-Seize Compound	Lubricant	GM P/N 88862477 (Canadian P/N 88862478)
Camshaft Gear Access Hole Plug	Sealant	GM P/N 12346004 (Canadian P/N 10953480)
Coolant Temperature Sensor Threads	Sealant	GM P/N 12346004 (Canadian P/N 10953480)

Application	Type of Material	GM Part Number
Dielectric Grease for Spark Plug Wires	Lubricant	GM P/N 19260901 (Canadian P/N 19260902)
Fuel Injection Fuel Rail Bolt	Threadlocker	GM P/N 12345382 (Canadian P/N 10953489)
High Pressure Fuel Pump Bolt	Threadlocker	GM P/N 12345382 (Canadian P/N 10953489)
Silicon Free Engine Oil	5W-30	GM P/N 19293000 (Canadian P/N 19386321)
Top Engine Cleaner	Cleaner	GM P/N 1052626 (Canadian P/N 993026)