

COMPONENT LOCATOR

DISASSEMBLED VIEWS

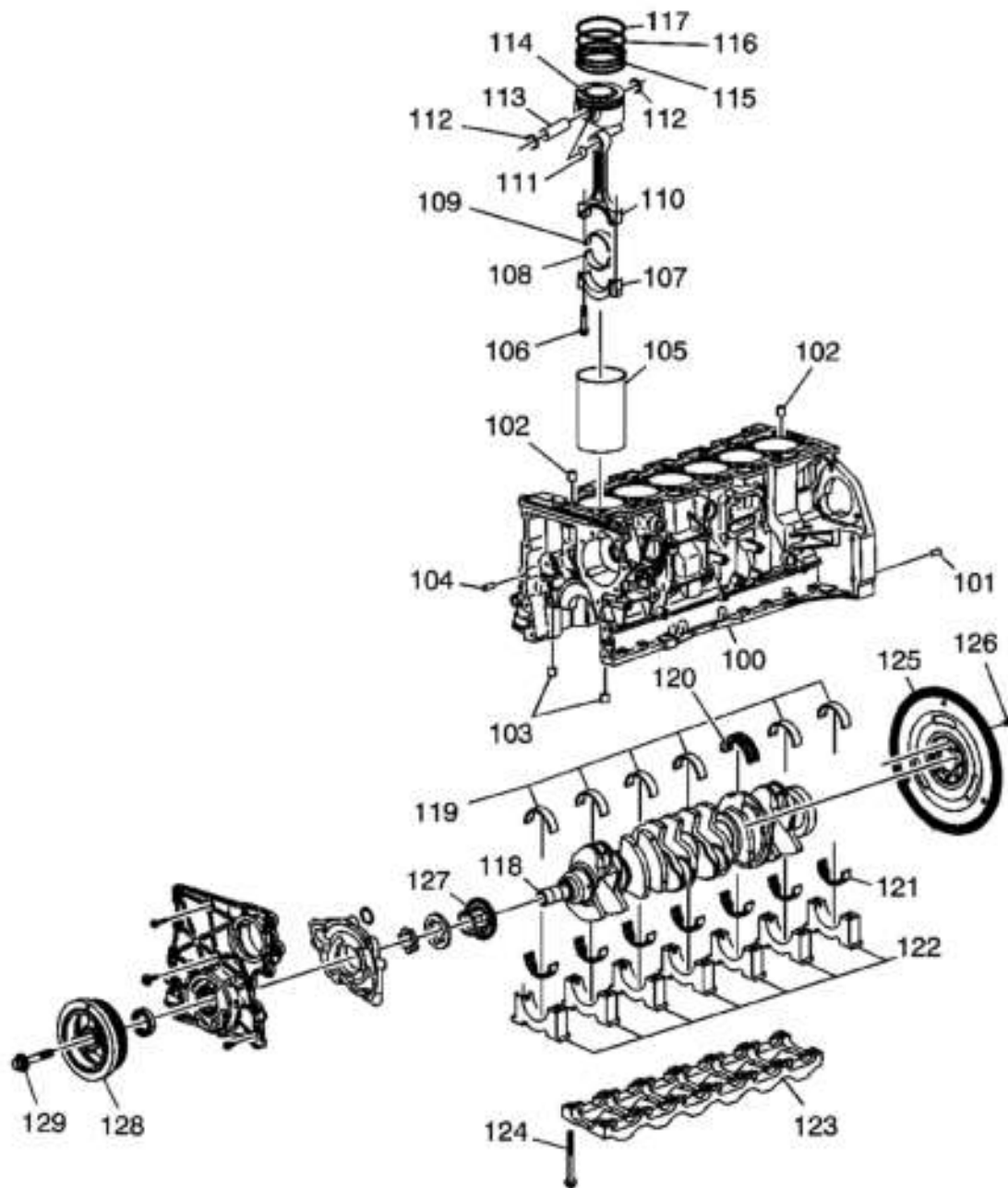


Fig. 18: Disassembled View Of Engine Block, Crankshaft & Pistons
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
100	Engine Block
101	Transmission Locator Pin
102	Cylinder Head Locator Pin
102	Cylinder Head Locator Pin

103	Main Bearing Cap Locator Pin
104	Engine Front Cover Locator Pin
105	Cylinder Sleeve
106	Connecting Rod Bolt
107	Connecting Rod Cap
108	Connecting Rod Lower Bearing
109	Connecting Rod Upper Bearing
110	Connecting Rod
111	Connecting Rod Bushing
112	Piston Pin Retainer
112	Piston Pin Retainer
113	Piston Pin
114	Piston
115	Oil Control Ring Set
116	Lower Compression Ring
117	Upper Compression Ring
118	Crankshaft
119	Upper Main Bearings
120	Main Thrust Bearing
121	Lower Main Bearing
122	Main Bearing Cap
123	Main Bearing Cap Stiffener
124	Main Bearing Cap Bolt
125	Flywheel - Automatic Transmission
126	Flywheel Bolt
127	Crankshaft Sprocket
128	Crankshaft Balancer
129	Crankshaft Balancer Bolt

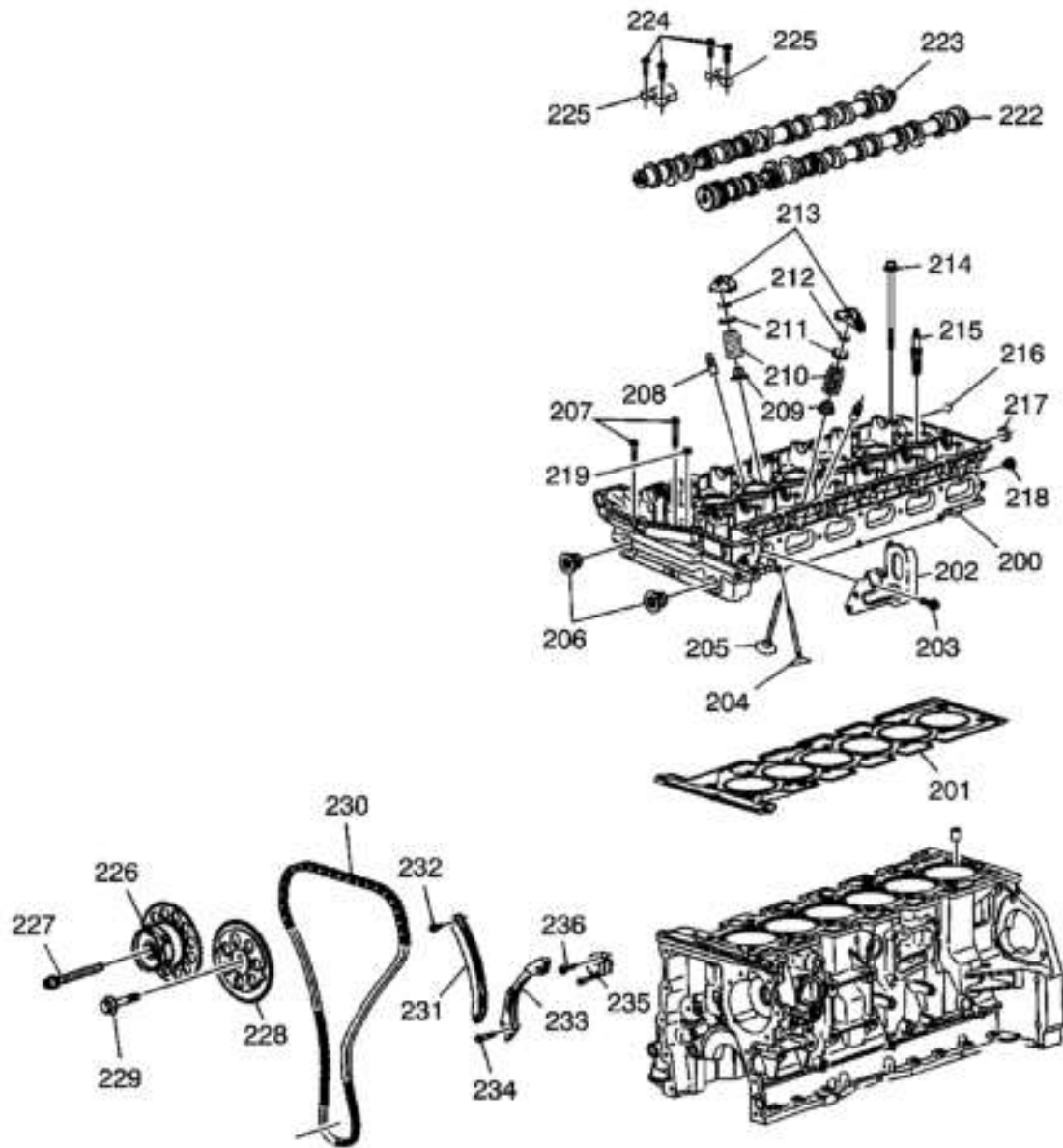


Fig. 19: Disassembled View Of Cylinder Head, Valves, Lifters, Timing Components & Camshaft
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
200	Cylinder Head
201	Cylinder Head Gasket
202	Engine Lift Bracket
203	Engine Lift Bracket Bolts
204	Intake Valve
205	Exhaust Valve
206	Access Hole Plugs
207	Cylinder Head Bolt
208	Valve Lash Adjusters
209	Valve Seals

210	Valve Springs
211	Valve Spring Retainers
212	Valve Keys
213	Valve Rocker Arms
214	Cylinder Head Bolt
215	Spark Plug
216	A.I.R. Pipe Plug
217	Water Jacket Plug
218	Oil Gallery Plug
219	Oil Gallery Plug
222	Intake Camshaft
223	Exhaust Camshaft
224	Camshaft Cap Bolts
225	Camshaft Cap
225	Camshaft Cap
226	Exhaust Camshaft Actuator
227	Exhaust Camshaft Actuator Bolt
228	Intake Camshaft Sprocket
229	Intake Camshaft Sprocket Bolt
230	Timing Chain
231	Timing Chain Tensioner Shoe
232	Timing Chain Tensioner Shoe Bolt
233	Timing Chain Guide
234	Timing Chain Guide Bolt
235	Timing Chain Tensioner
236	Timing Chain Tensioner Bolt

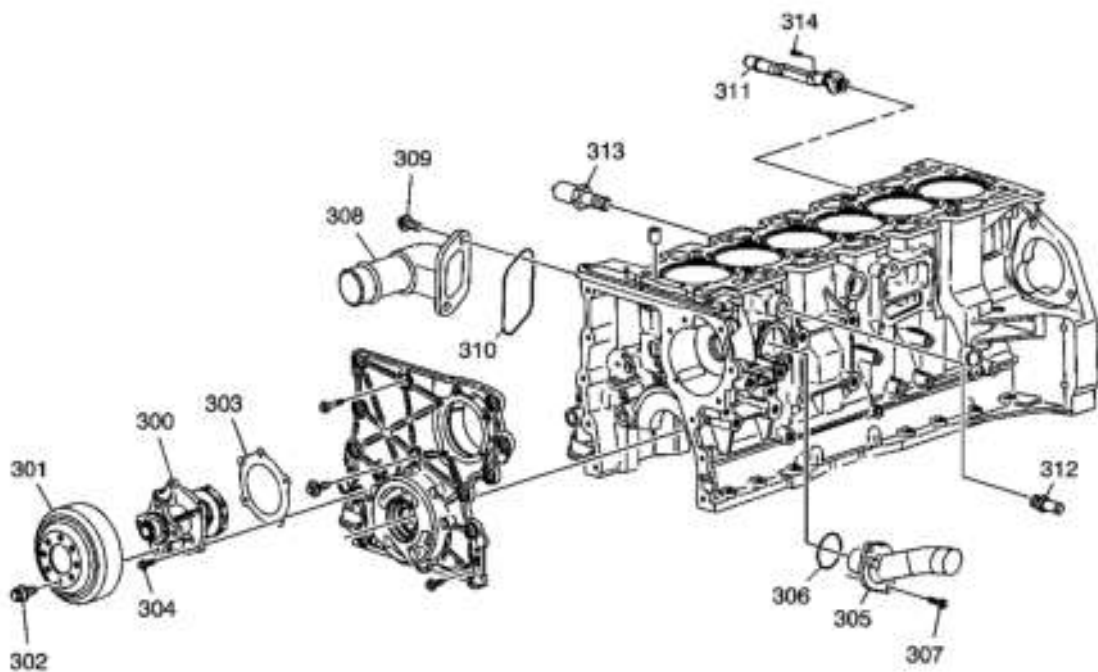


Fig. 20: Disassembled View Of Cooling & Water Pump
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
300	Water Pump
301	Water Pump Pulley
302	Water Pump Pulley Bolt
303	Water Pump Gasket
304	Water Pump Bolt
305	Thermostat Housing
306	Thermostat Housing Seal
307	Thermostat Housing Bolt
308	Water Outlet
309	Water Outlet Bolt
310	Water Outlet Seal
311	Heater Inlet Pipe
312	Heater Outlet Hose Fitting
313	Coolant Temperature Sensor
314	Heater Inlet Pipe Bolt

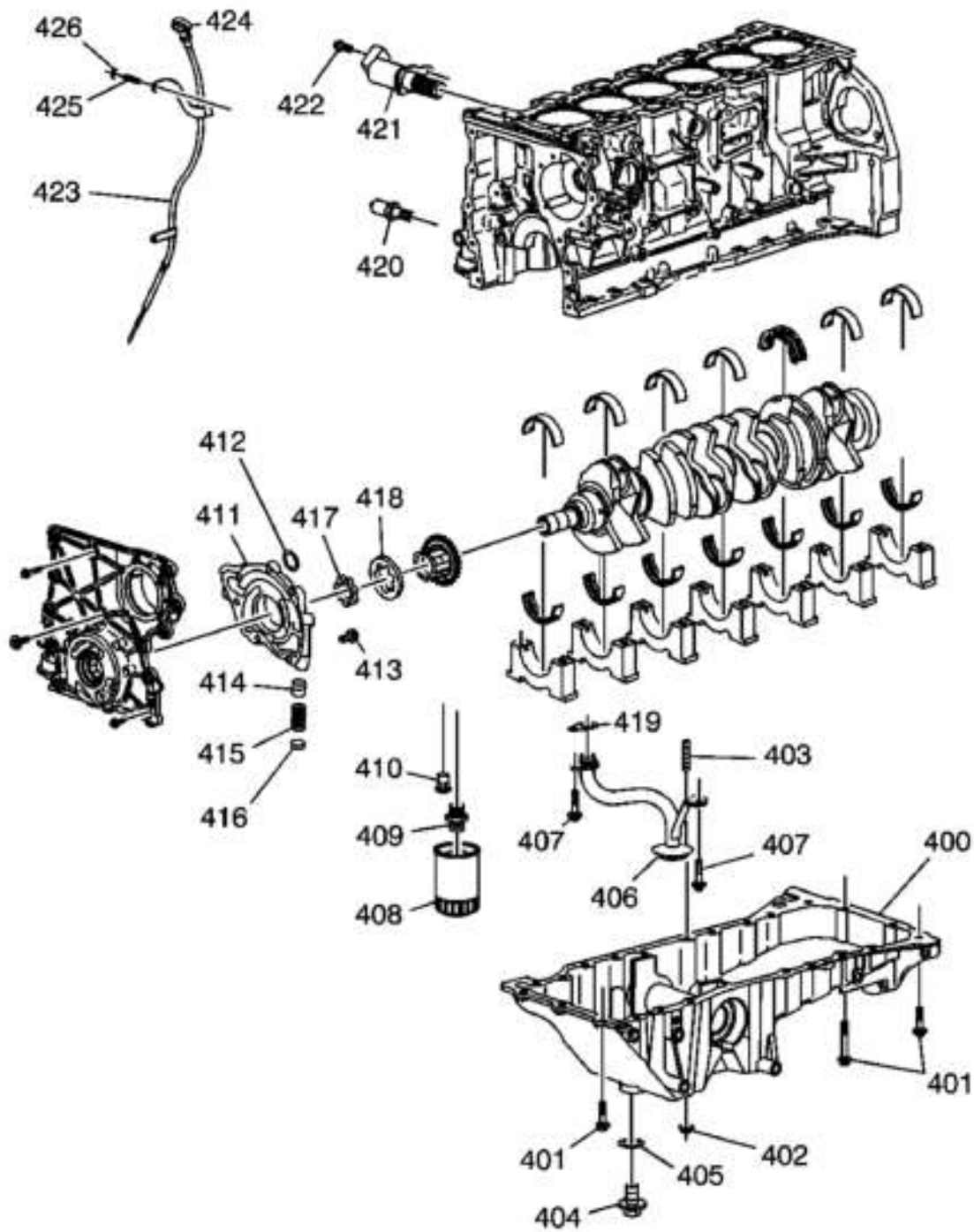


Fig. 21: Disassembled View Of Oil Pan, Pump, Filter & Tube
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
400	Oil Pan
401	Oil Pan Bolt
401	Oil Pan Bolt
402	Oil Pan Nut
403	Oil Pan Stud

404	Oil Drain Plug
405	Oil Drain Plug Gasket
406	Oil Pump Pickup Tube
407	Oil Pump Pickup Tube Bolt
407	Oil Pump Pickup Tube Bolt
408	Oil Filter
409	Oil Filter Adapter
410	Oil Filter Bypass Valve
411	Oil Pump
412	Oil Pump Seal
413	Oil Pump Bolt
414	Oil Pressure Relief Valve
415	Oil Pressure Relief Valve Spring
416	Oil Pressure Relief Valve Plug
417	Oil Pump Inner Gear
418	Oil Pump Outer Gear
419	Oil Pump Pickup Tube Gasket
420	Oil Pressure Switch
421	Camshaft Position Actuator Solenoid Valve
422	Camshaft Position Actuator Solenoid Valve Bolt
423	Oil Level Indicator Tube
424	Oil Level Indicator
425	Oil Level Indicator Tube Stud
426	Oil Level Indicator Tube Nut

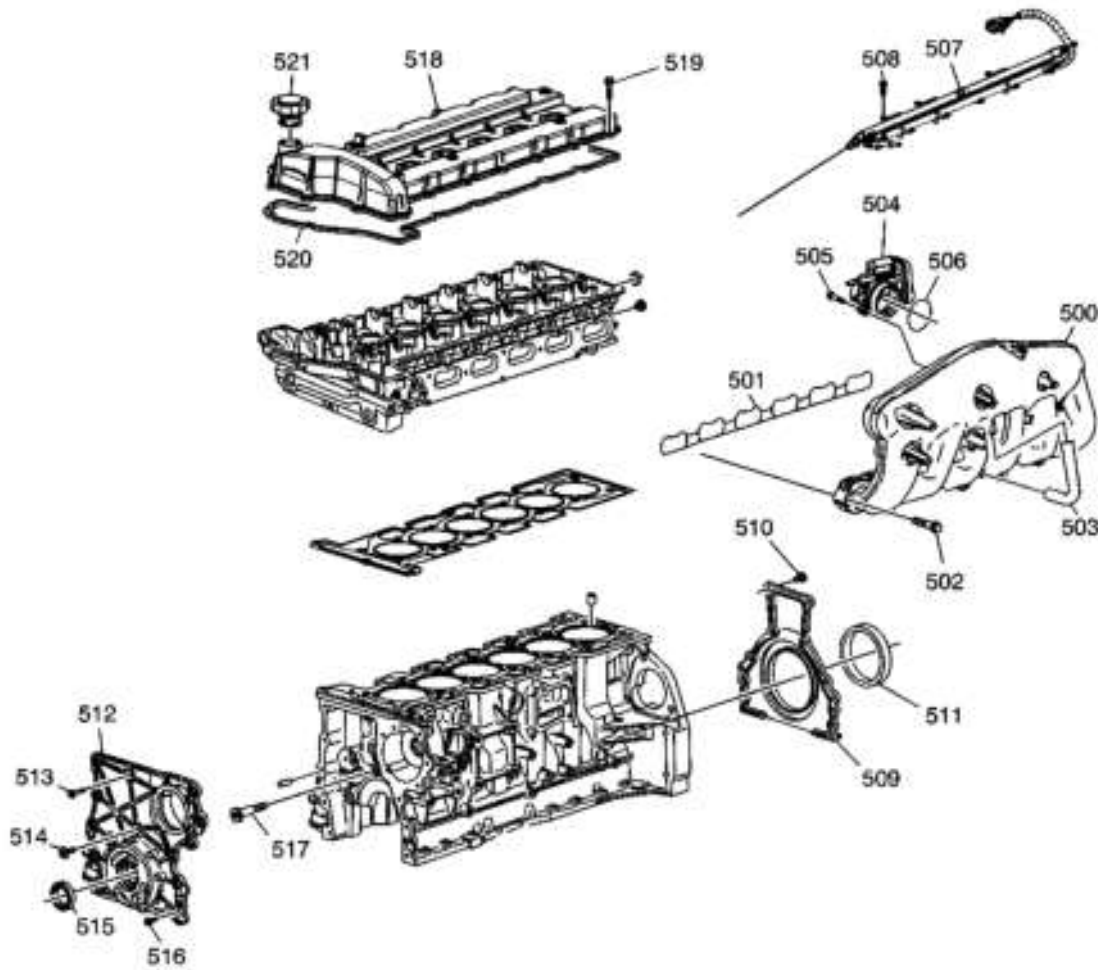


Fig. 22: Disassembled View Of Intake Manifold, Rails & Covers
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
500	Intake Manifold
501	Intake Manifold Seal
502	Intake Manifold Bolt
503	Positive Crankcase Vent Hose
504	Throttle Control Module
505	Throttle Control Module Bolt
506	Throttle Control Module Seal
507	Fuel Injector Rail
508	Fuel Injector Rail Bolt
509	Crankshaft Rear Oil Seal Housing
510	Crankshaft Rear Oil Seal Housing Bolt
511	Crankshaft Rear Oil Seal
512	Engine Front Cover
513	Engine Front Cover Bolt
514	Engine Front Center Cover Bolt

515	Engine Front Oil Seal
516	Engine Front Cover Bolt
517	Engine Front Cover Bolt Spacer
518	Camshaft Cover
519	Camshaft Cover Bolt
520	Camshaft Cover Seal
521	Oil Fill Cap

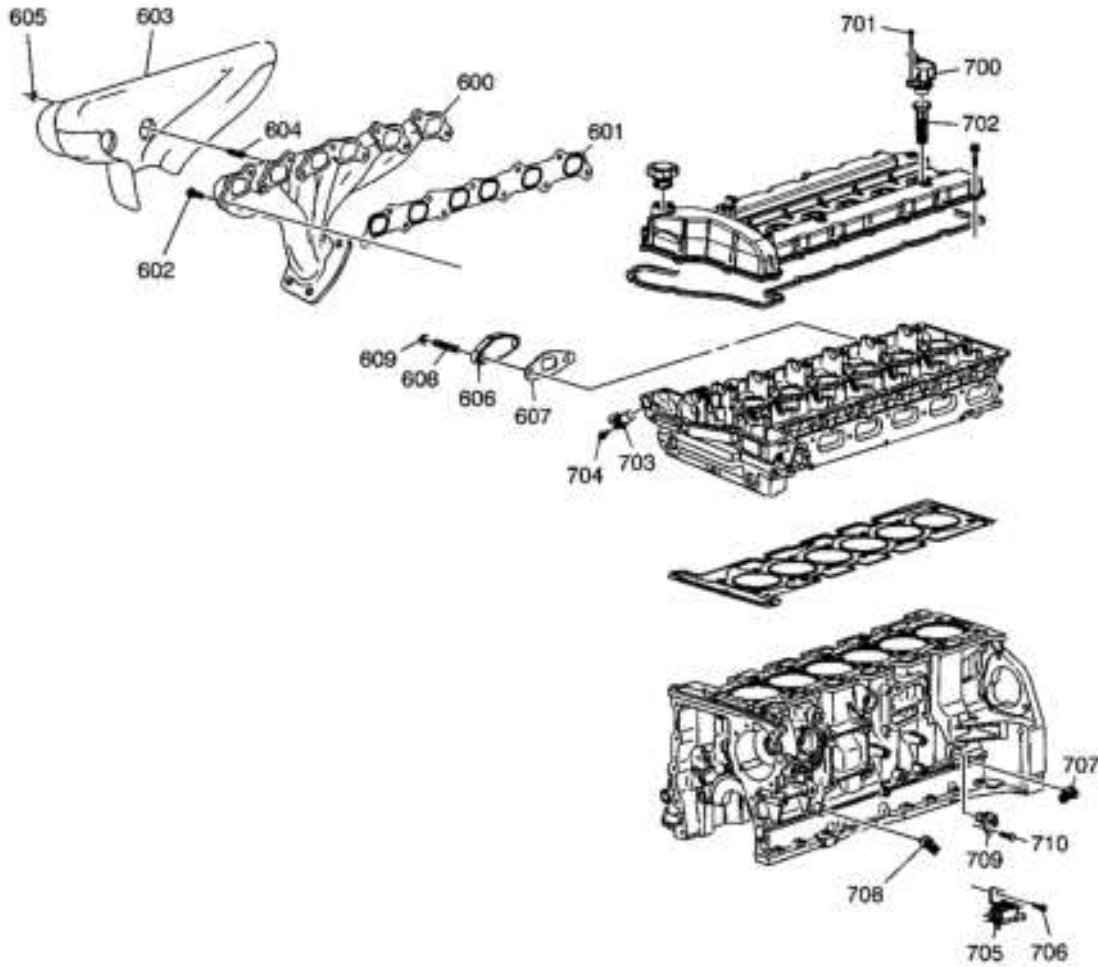


Fig. 23: Disassembled View Of Exhaust Manifold & Sensors
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
600	Exhaust Manifold
601	Exhaust Manifold Gasket
602	Exhaust Manifold Bolt
603	Exhaust Manifold Heat Shield
604	Exhaust Manifold Heat Shield Stud
605	Exhaust Manifold Heat Shield Nut
606	A.I.R. Cover

607	A.I.R. Cover Gasket
608	A.I.R. Cover Stud
609	A.I.R. Cover Nut
700	Ignition Control Module
701	Ignition Control Module Bolt
702	Ignition Control Module Boot
703	Exhaust Camshaft Position Sensor
704	Exhaust Camshaft Position Sensor Bolt
705	EVAP Emission Canister Purge Solenoid
706	EVAP Emission Canister Purge Solenoid Bolt
707	Knock Sensor
708	Knock Sensor
709	Crankshaft Position Sensor
710	Crankshaft position Sensor Bolt

ENGINE IDENTIFICATION

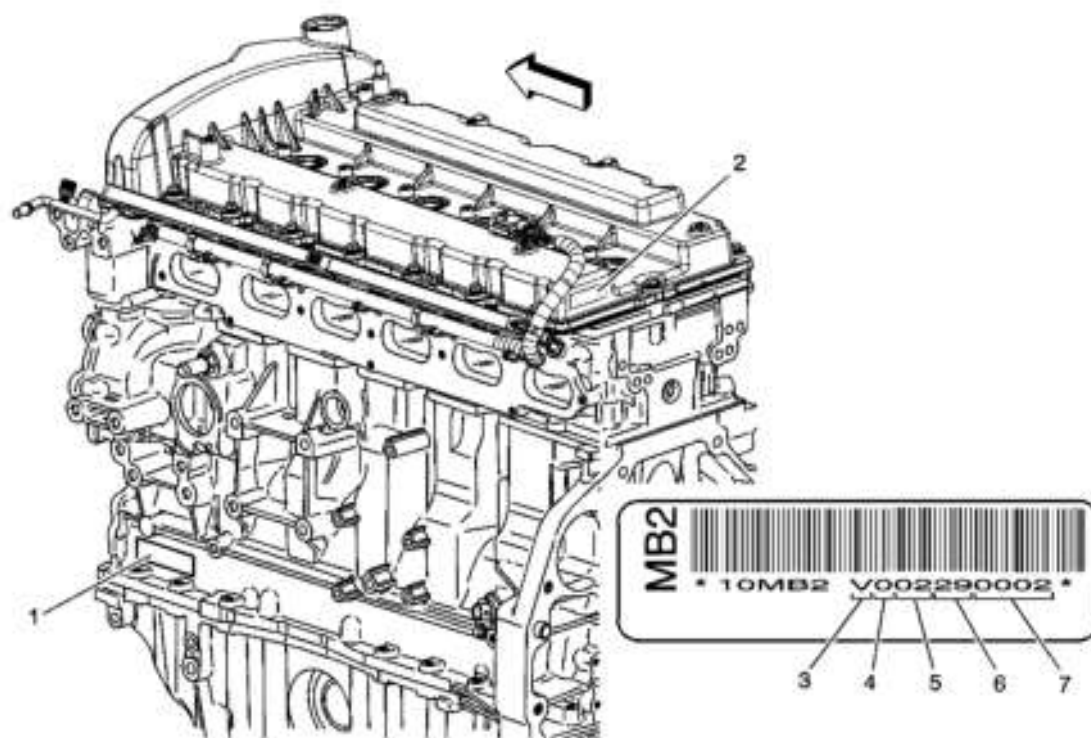


Fig. 24: Locating VIN
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
1	Engine ID Location
2	Engine ID Location
3	The first digit identifies the engine build location - All first digits will be a V, this engine is only being built at Flint Engine South

4	The second digit identifies the build year
5	The third and fourth digits identify the build month
6	The fifth and sixth digits identify the build date
7	The seventh through tenth digits identify the engine build sequence