

2017 ELECTRICAL

Wiring Systems and Power Management - Component Locator - Powertrain Component Views - Impala

POWERTRAIN COMPONENT VIEWS

LEFT FRONT OF ENGINE COMPONENTS (LFR)

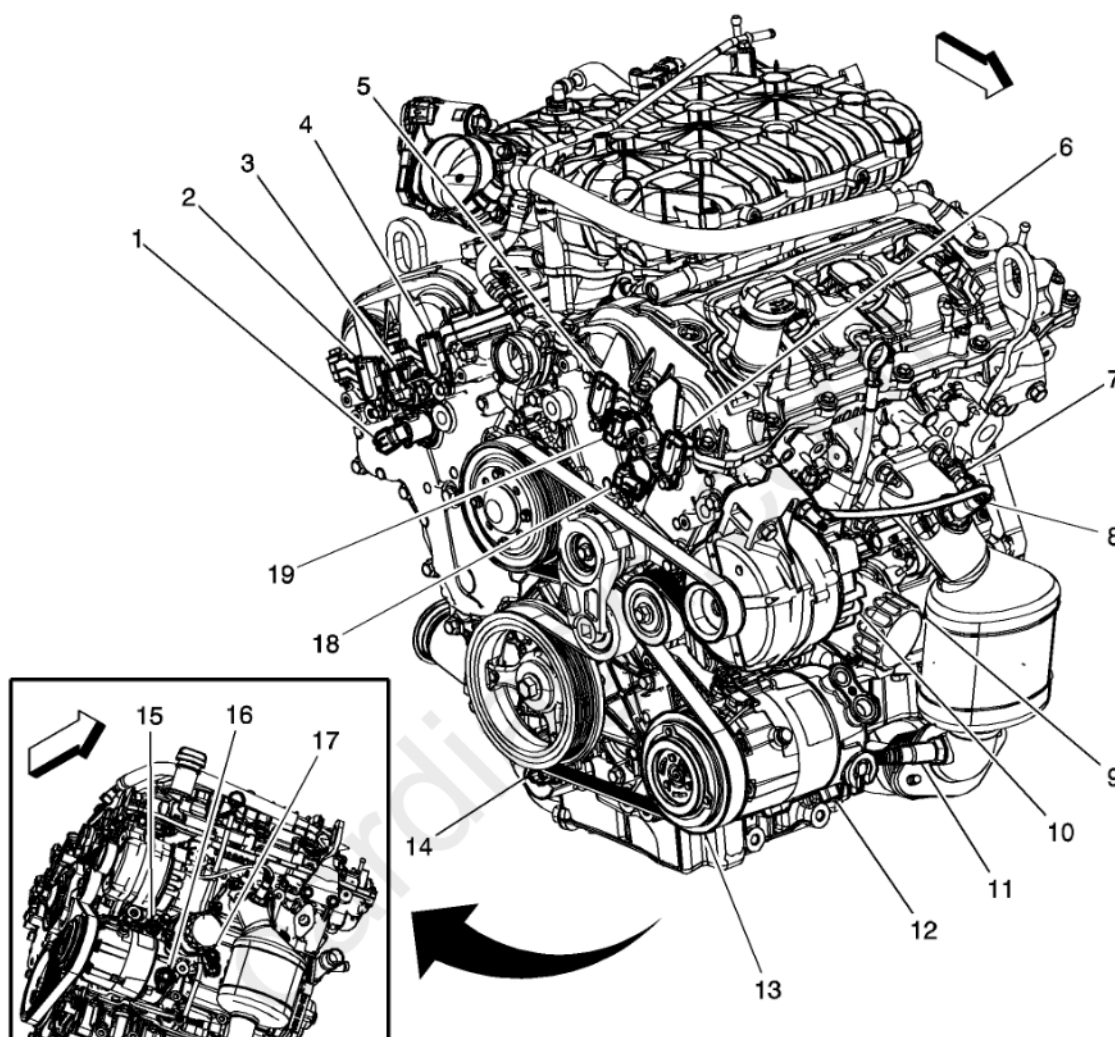


Fig. 1: Left Front of Engine Components (LFR)

Courtesy of GENERAL MOTORS COMPANY

Items

- 1: Q6A Camshaft Position Actuator Solenoid Valve - Bank 1 Exhaust (LFR or LFX) **Q6A Camshaft Position Actuator Solenoid Valve - Bank 1 Exhaust**
- 2: Q6B Camshaft Position Actuator Solenoid Valve - Bank 1 Intake (LFR or LFX) **Q6B Camshaft Position Actuator Solenoid Valve - Bank 1 Intake**
- 3: B23A Camshaft Position Sensor - Bank 1 Exhaust (LFR or LFX) **B23A Camshaft Position Sensor - Bank 1 Exhaust (LFR/LFX)**
- 4: B23B Camshaft Position Sensor - Bank 1 Intake (LFR or LFX) **B23B Camshaft Position Sensor - Bank 1 Intake (LFR/LFX)**
- 5: B23D Camshaft Position Sensor - Bank 2 Intake (LFR or LFX) **B23D Camshaft Position Sensor - Bank 2 Intake (LFR/LFX)**
- 6: B23C Camshaft Position Sensor - Bank 2 Exhaust (LFR or LFX) **B23C Camshaft Position Sensor - Bank 2 Exhaust (LFR/LFX)**

Items

- 7: B34 Engine Coolant Temperature Sensor **B34 Engine Coolant Temperature Sensor (LFR/LFX)**
- 8: B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LFR or LFX) **B52E Heated Oxygen Sensor - Bank 2 Sensor 1**
- 9: M64 Starter Motor **M64 Starter Motor X1 (LFR/LFX) M64 Starter Motor X2 M64 Starter Motor (LFX)**
- 10: G13 Generator **G13 Generator X1 G13 Generator X2**
- 11: B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (LFR or LFX) **B52F Heated Oxygen Sensor - Bank 2 Sensor 2**
- 12: G1 A/C Compressor
- 13: Q2 A/C Compressor Clutch **Q2 A/C Compressor Clutch**
- 14: B35 Engine Oil Level Switch **B35 Engine Oil Level Switch (LFR/LFX)**
- 15: B37 Engine Oil Pressure Switch (LFR or LFX) **B37 Engine Oil Pressure Switch (LFR/LFX)**
- 16: Q46 A/C Compressor Solenoid Valve **Q46 A/C Compressor Solenoid Valve**
- 17: B68B Knock Sensor 2 **B68B Knock Sensor 2 (LCV) B68B Knock Sensor 2**
- 18: Q6C Camshaft Position Actuator Solenoid Valve - Bank 2 Exhaust (LFR or LFX) **Q6C Camshaft Position Actuator Solenoid Valve - Bank 2 Exhaust**
- 19: Q6D Camshaft Position Actuator Solenoid Valve - Bank 2 Intake (LFR or LFX) **Q6D Camshaft Position Actuator Solenoid Valve - Bank 2 Intake**

RIGHT REAR OF ENGINE COMPONENTS (LFR)

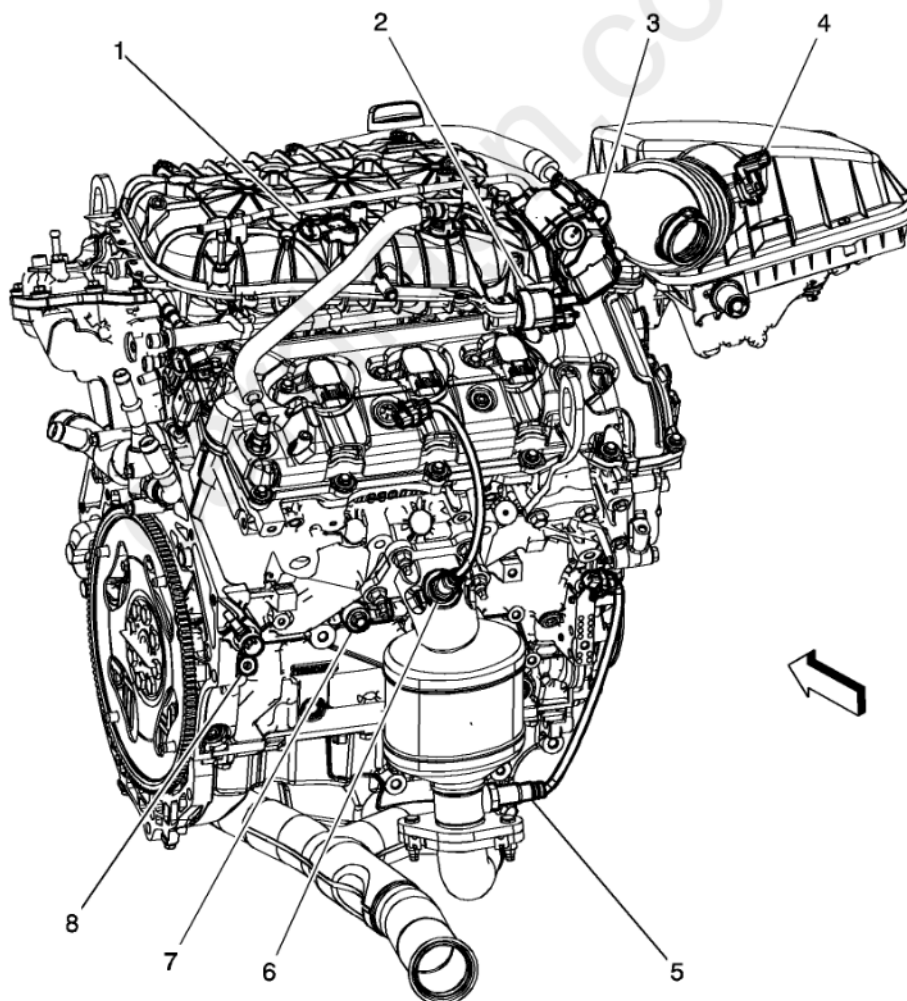


Fig. 2: Right Rear of Engine Components (LFR)

Courtesy of GENERAL MOTORS COMPANY

Items

- 1: B74 Manifold Absolute Pressure Sensor **B74 Manifold Absolute Pressure Sensor**

Items

- 2: Q12 Evaporative Emission Purge Solenoid Valve **Q12 Evaporative Emission Purge Solenoid Valve (LFR/LFX)**
- 3: Q38 Throttle Body **Q38 Throttle Body (LFX/LCV)**
- 4: B75B Mass Air Flow/Intake Air Temperature Sensor (LFR) **B75B Mass Air Flow/Intake Air Temperature Sensor**
- 5: B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (LFR or LFX) **B52D Heated Oxygen Sensor - Bank 1 Sensor 2**
- 6: B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LFR or LFX) **B52C Heated Oxygen Sensor - Bank 1 Sensor 1**
- 7: B68A Knock Sensor 1 **B68A Knock Sensor 1 (LCV) B68A Knock Sensor 1**
- 8: B26 Crankshaft Position Sensor **B26 Crankshaft Position Sensor (LFR/LFX)**

ALTERNATIVE FUEL RAIL COMPONENTS (LFR WITH FHV)

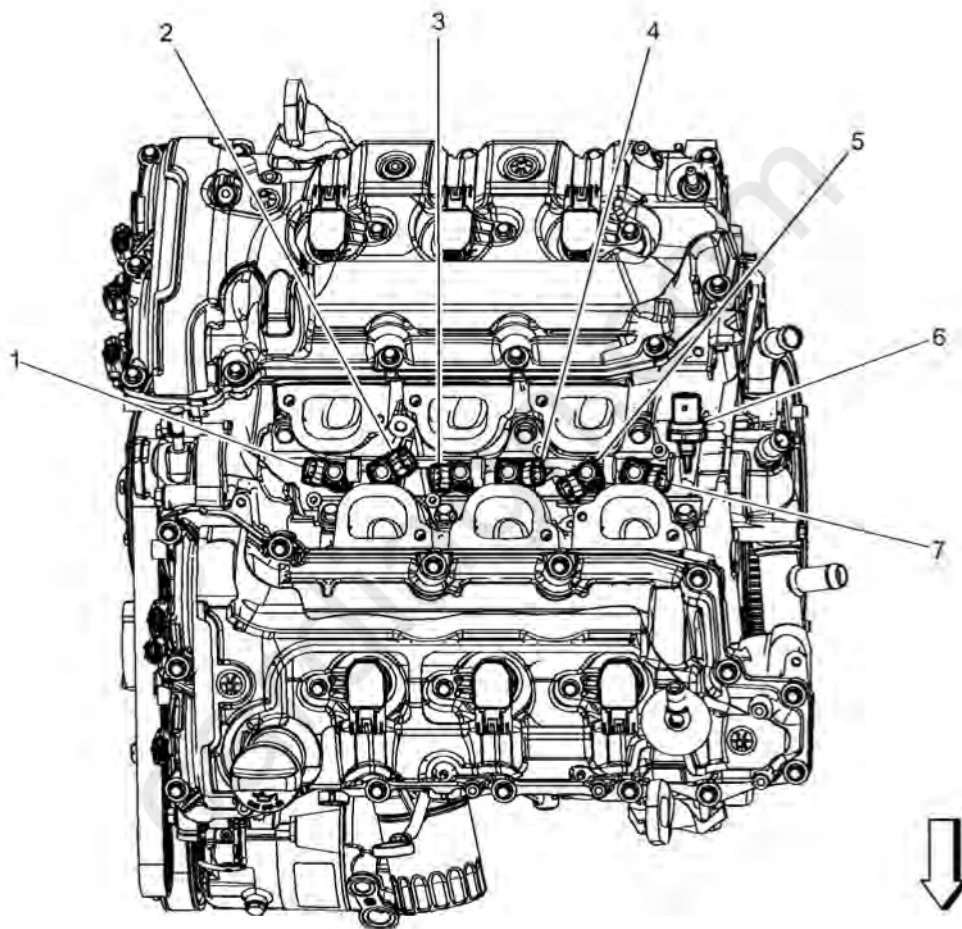


Fig. 3: Alternative Fuel Rail Components (LFR with FHV)

Courtesy of GENERAL MOTORS COMPANY

Items

- 1: Q70A Alternative Fuel Injector 1 (FHV) **Q70A Alternative Fuel Injector 1**
- 2: Q70B Alternative Fuel Injector 2 (FHV) **Q70B Alternative Fuel Injector 2**
- 3: Q70C Alternative Fuel Injector 3 (FHV) **Q70C Alternative Fuel Injector 3**
- 4: Q70D Alternative Fuel Injector 4 (FHV) **Q70D Alternative Fuel Injector 4**
- 5: Q70E Alternative Fuel Injector 5 (FHV) **Q70E Alternative Fuel Injector 5**
- 6: B229 Alternative Fuel Rail Pressure/Temperature Sensor (FHV) **B229 Alternative Fuel Rail Pressure/Temperature Sensor**
- 7: Q70F Alternative Fuel Injector 6 (FHV) **Q70F Alternative Fuel Injector 6**

FUEL RAIL COMPONENTS (LFR OR LFX)

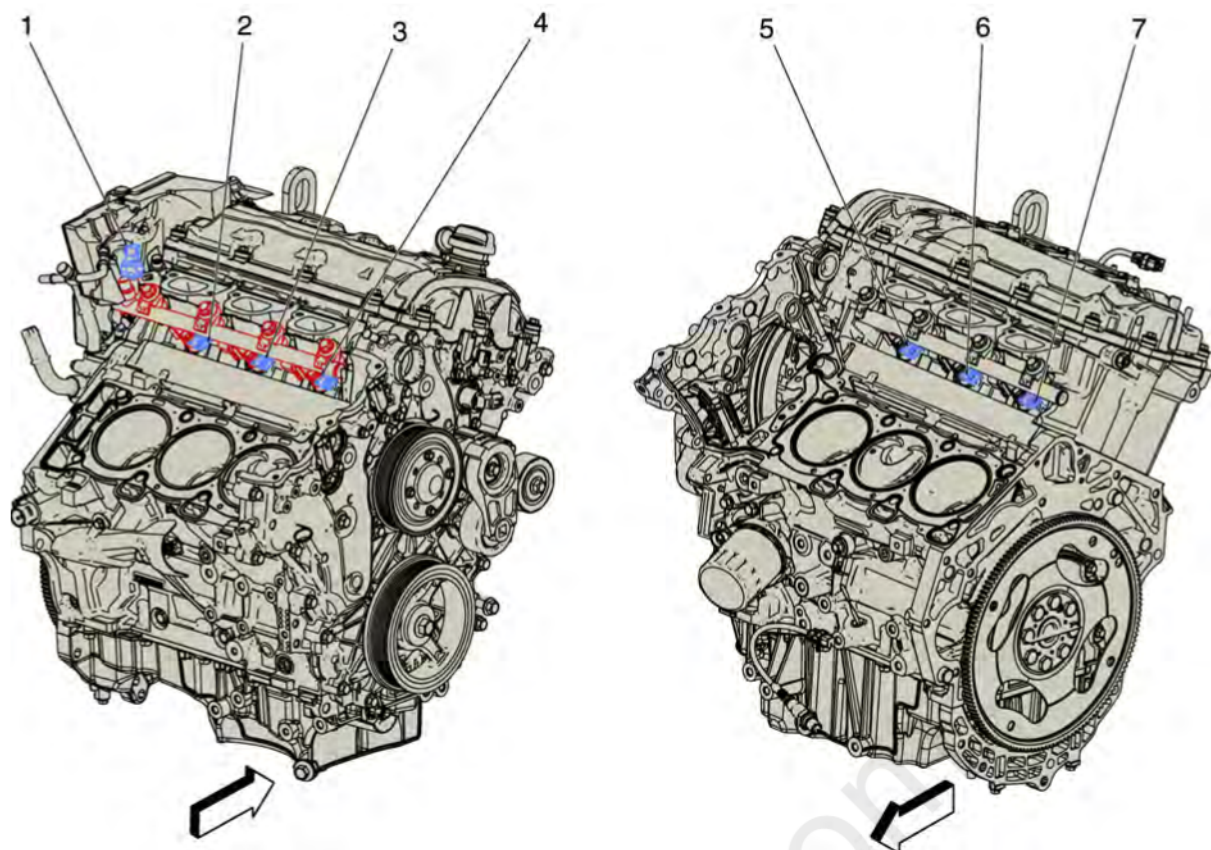


Fig. 4: Fuel Rail Components (LFR or LFX)
Courtesy of GENERAL MOTORS COMPANY

Items

- 1: B47B Fuel Rail Pressure Sensor **B47B Fuel Rail Pressure Sensor**
- 2: Q17F Fuel Injector 6 (LFR or LFX) **Q17F Fuel Injector 6 (LFR)** **Q17F Fuel Injector 6 (LFX)**
- 3: Q17D Fuel Injector 4 **Q17D Fuel Injector 4 (LFR/LFX)**
- 4: Q17B Fuel Injector 2 **Q17B Fuel Injector 2 (LFR/LFX)**
- 5: Q17E Fuel Injector 5 (LFR or LFX) **Q17E Fuel Injector 5 (LFR/LFX)**
- 6: Q17C Fuel Injector 3 **Q17C Fuel Injector 3 (LFR/LFX)**
- 7: Q17A Fuel Injector 1 **Q17A Fuel Injector 1 (LFR/LFX)**

LEFT FRONT OF ENGINE COMPONENTS (LCV)

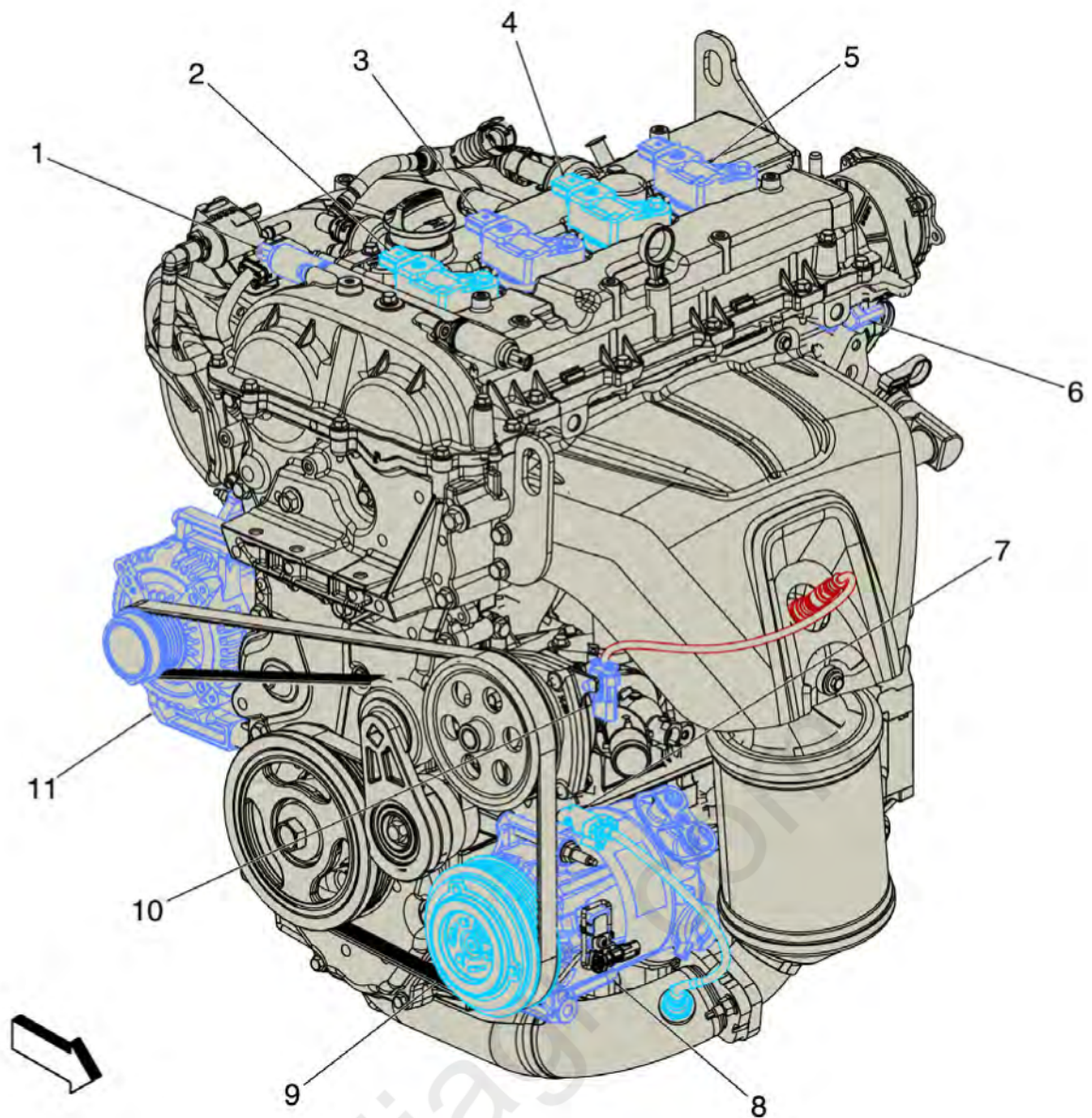


Fig. 5: Left Front of Engine Components (LCV)

Courtesy of GENERAL MOTORS COMPANY

Items
Q6F Camshaft Position Actuator Solenoid Valve - Intake (LCV) <u>Q6F Camshaft Position Actuator Solenoid Valve - Intake</u>
1: T8A Ignition Coil 1 <u>T8A Ignition Coil 1 (LCV)</u>
2: T8B Ignition Coil 2 <u>T8B Ignition Coil 2 (LCV)</u>
3: T8C Ignition Coil 3 <u>T8C Ignition Coil 3 (LCV)</u>
4: T8D Ignition Coil 4 <u>T8D Ignition Coil 4 (LCV)</u>
5: B23E Camshaft Position Sensor - Exhaust (LCV) <u>B23E Camshaft Position Sensor - Exhaust (LCV)</u>
6: B52B Heated Oxygen Sensor 2 (LCV) <u>B52B Heated Oxygen Sensor 2</u>
7: Q46 A/C Compressor Solenoid Valve <u>Q46 A/C Compressor Solenoid Valve</u>
8: Q2 A/C Compressor Clutch <u>Q2 A/C Compressor Clutch</u>
9: B52A Heated Oxygen Sensor 1 (LCV) <u>B52A Heated Oxygen Sensor 1</u>
10: G13 Generator <u>G13 Generator X1 G13 Generator X2</u>

RIGHT SIDE OF ENGINE COMPONENTS (LCV)

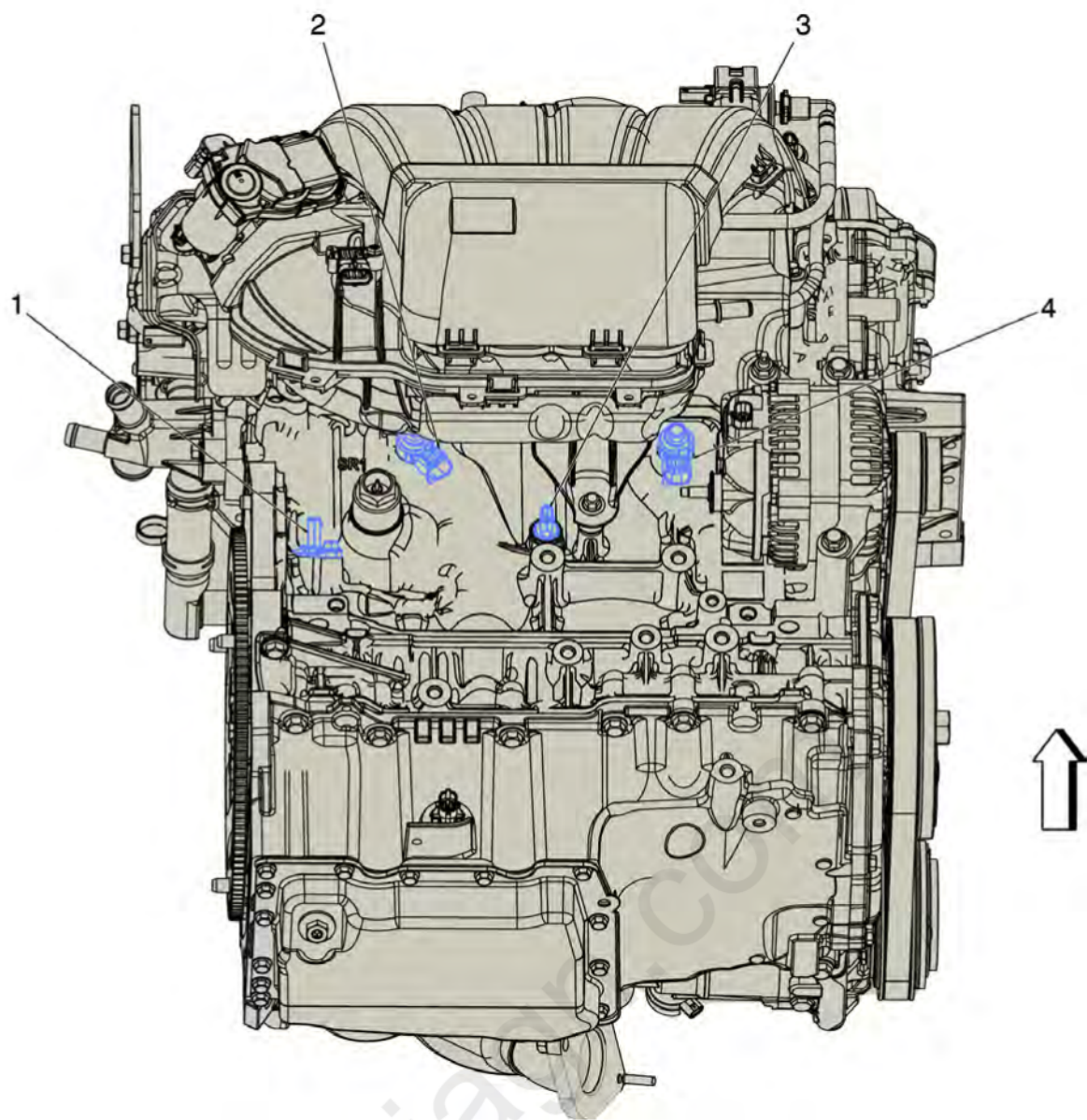


Fig. 6: Right Side of Engine Components (LCV)

Courtesy of GENERAL MOTORS COMPANY

Items

- 1: B26 Crankshaft Position Sensor **B26 Crankshaft Position Sensor (LCV)**
- 2: B68B Knock Sensor 2 **B68B Knock Sensor 2 (LCV)**
- 3: B37 Engine Oil Pressure Sensor **B37B Engine Oil Pressure Sensor (LCV)**
- 4: B68A Knock Sensor 1 **B68A Knock Sensor 1 (LCV)**

RIGHT FRONT OF ENGINE COMPONENTS (LCV)

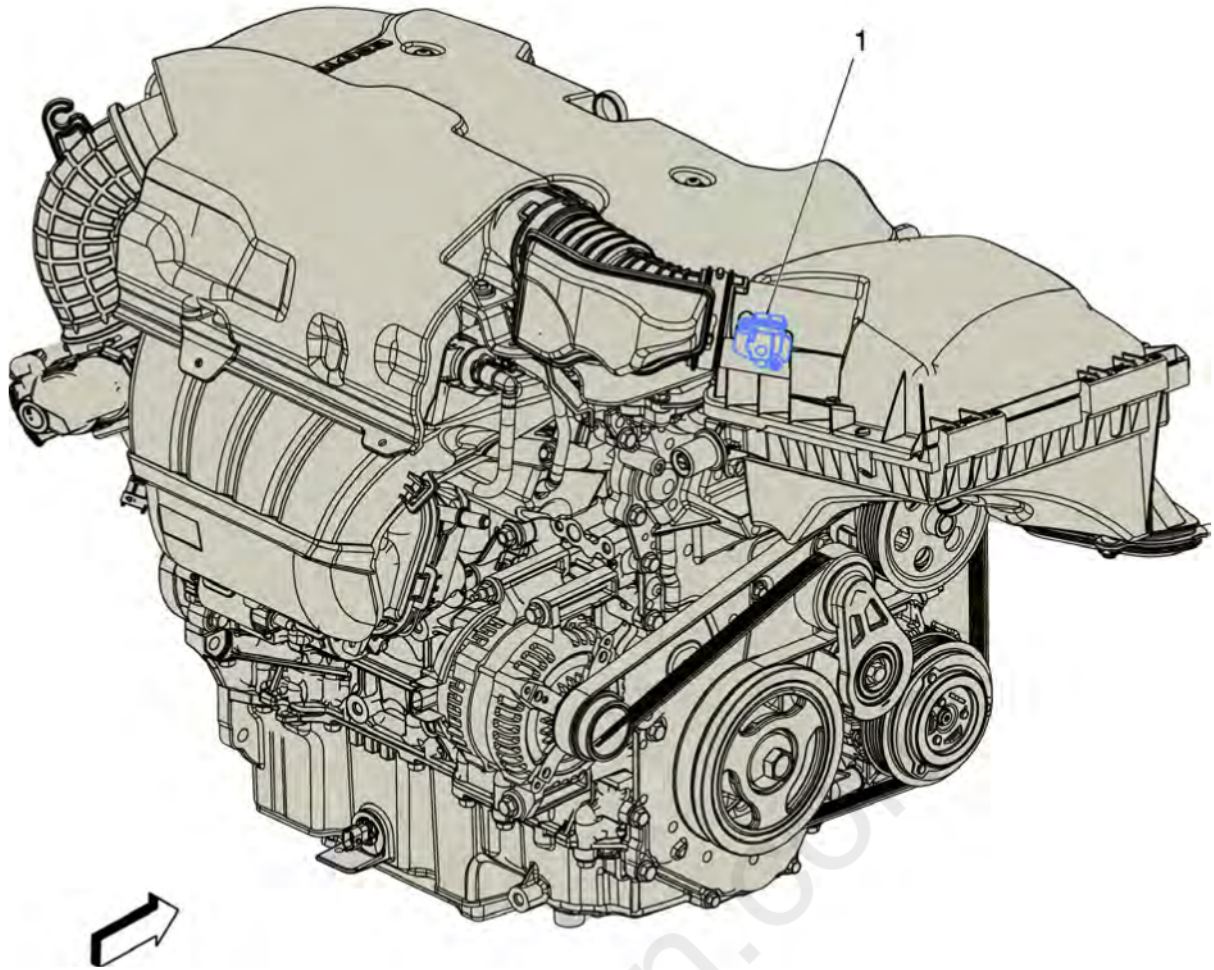


Fig. 7: Right Front of Engine Components (LCV)

Courtesy of GENERAL MOTORS COMPANY

Items
1: B75C Multifunction Intake Air Sensor (LCV or LFX) B75C Multifunction Intake Air Sensor

REAR OF ENGINE COMPONENTS (LCV)

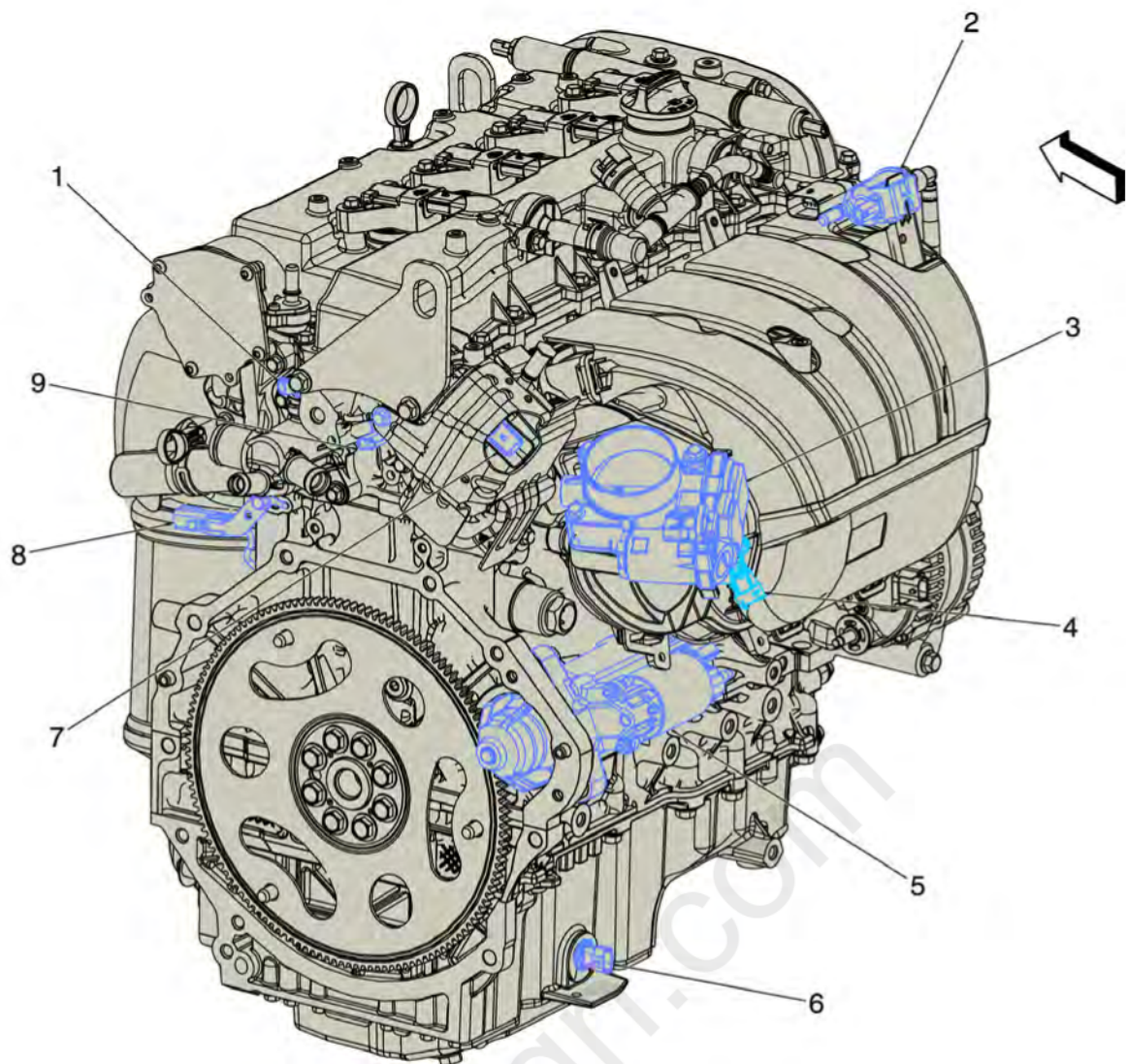


Fig. 8: Rear of Engine Components (LCV)

Courtesy of GENERAL MOTORS COMPANY

Items

- 1: B34 Engine Coolant Temperature Sensor **B34 Engine Coolant Temperature Sensor (LCV)**
- 2: Q12 Evaporative Emission Purge Solenoid Valve **Q12 Evaporative Emission Purge Solenoid Valve (LCV)**
- 3: Q38 Throttle Body **Q38 Throttle Body (LCV)** **Q38 Throttle Body (LFX/LCV)**
- 4: B74 Manifold Absolute Pressure Sensor **B74 Manifold Absolute Pressure Sensor**
- 5: M64 Starter Motor **M64 Starter Motor X1 (LCV)** **M64 Starter Motor X2**
- 6: B35 Engine Oil Level Switch **B35 Engine Oil Level Switch (LCV)**
- 7: G18 High Pressure Fuel Pump **G18 High Pressure Fuel Pump (LCV)**
- 8: Q44 Engine Oil Pressure Control Solenoid Valve (LCV) **Q44 Engine Oil Pressure Control Solenoid Valve**
- 9: B23F Camshaft Position Sensor - Intake (LCV) **B23F Camshaft Position Sensor - Intake (LCV)**

LEFT FRONT OF ENGINE COMPONENTS (LFX)

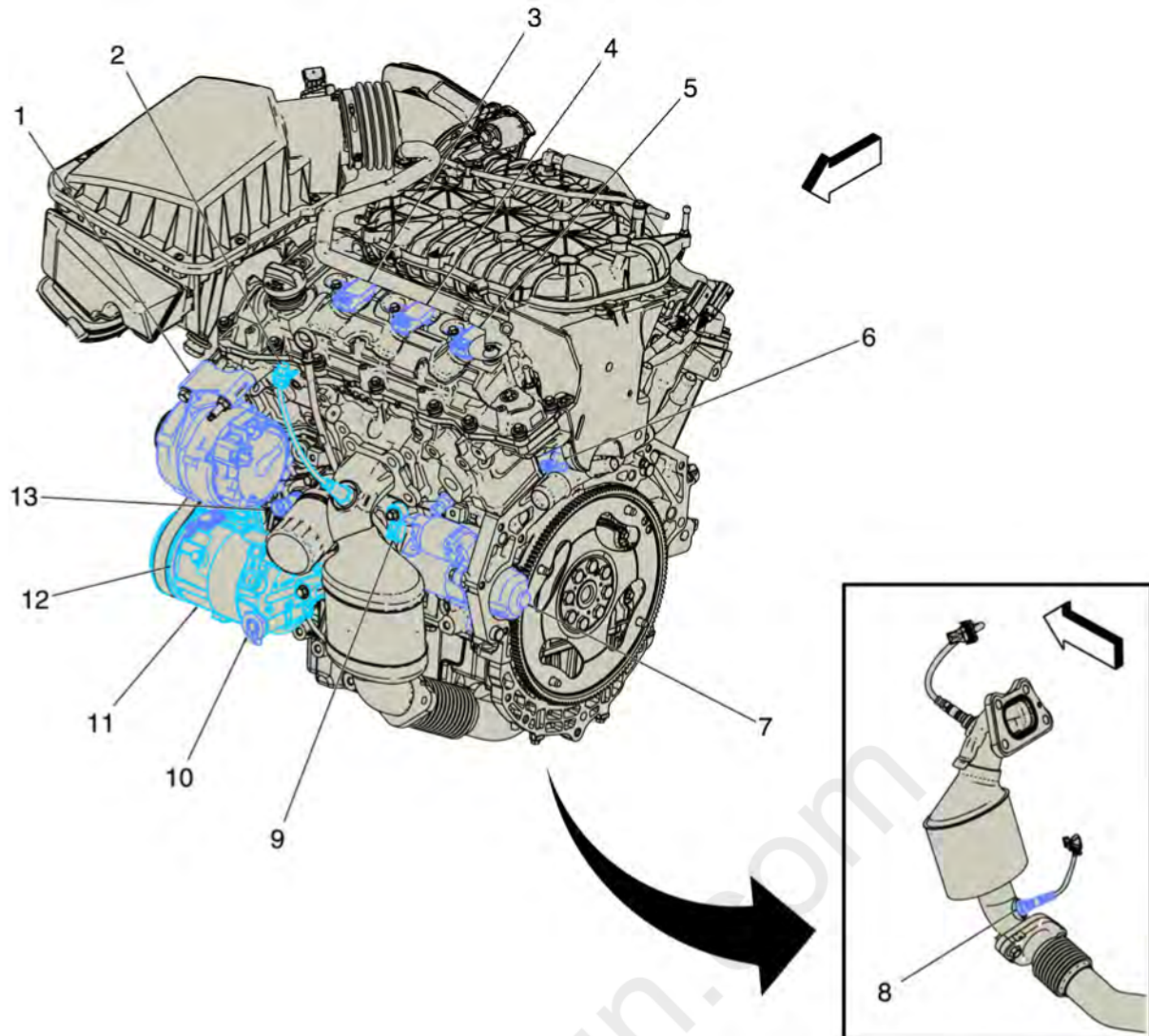


Fig. 9: Left Front of Engine Components (LFX)
Courtesy of GENERAL MOTORS COMPANY

Items

- 1: G13 Generator **G13 Generator X1 G13 Generator X2**
- 2: B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LFR or LFX) **B52E Heated Oxygen Sensor - Bank 2 Sensor 1**
- 3: T8B Ignition Coil 2 **T8B Ignition Coil 2 (LFR/LFX)**
- 4: T8D Ignition Coil 4 **T8D Ignition Coil 4 (LFR/LFX)**
- 5: T8F Ignition Coil 6 **T8F Ignition Coil 6**
- 6: G18 High Pressure Fuel Pump **G18 High Pressure Fuel Pump (LFX)**
- 7: M64 Starter Motor **M64 Starter Motor X1 (LFR/LFX) M64 Starter Motor X2 M64 Starter Motor (LFX)**
- 8: B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (LFR or LFX) **B52F Heated Oxygen Sensor - Bank 2 Sensor 2**
- 9: B68B Knock Sensor 2 **B68B Knock Sensor 2**
- 10: Q46 A/C Compressor Solenoid Valve **Q46 A/C Compressor Solenoid Valve**
- 11: G1 A/C Compressor
- 12: Q2 A/C Compressor Clutch **Q2 A/C Compressor Clutch**
- 13: B37 Engine Oil Pressure Switch (LFR or LFX) **B37 Engine Oil Pressure Switch (LFR/LFX)**

RIGHT REAR OF ENGINE COMPONENTS (LFX)

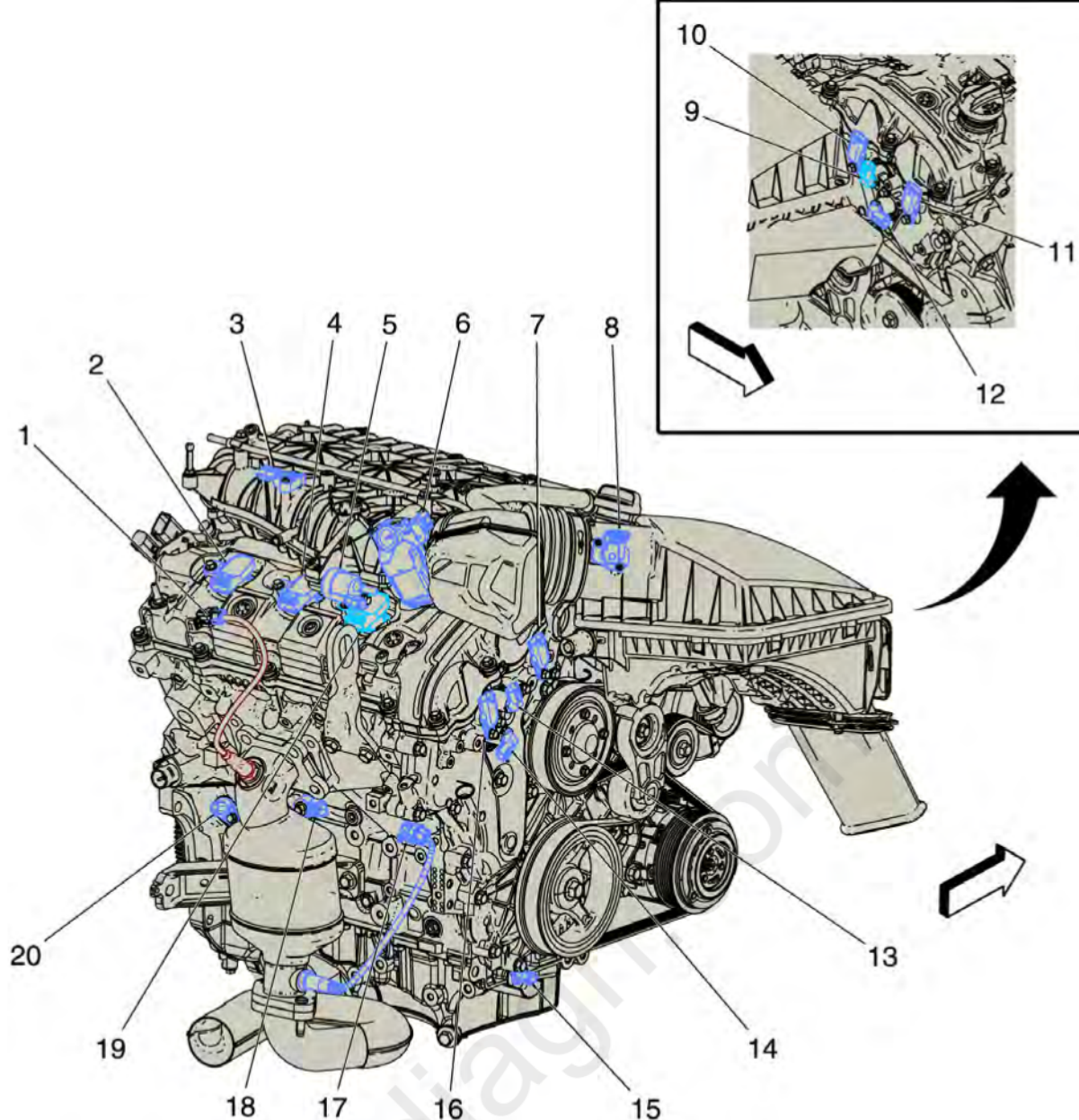


Fig. 10: Right Rear of Engine Components (LFX)

Courtesy of GENERAL MOTORS COMPANY

Items
1: B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LFR or LFX) <u>B52C Heated Oxygen Sensor - Bank 1 Sensor 1</u>
2: T8E Ignition Coil 5 <u>T8E Ignition Coil 5</u>
3: B74 Manifold Absolute Pressure Sensor <u>B74 Manifold Absolute Pressure Sensor</u>
4: T8C Ignition Coil 3 <u>T8C Ignition Coil 3 (LFR/LFX)</u> <u>T8C Ignition Coil 3 (LFR/LFX)</u>
5: Q12 Evaporative Emission Purge Solenoid Valve <u>Q12 Evaporative Emission Purge Solenoid Valve (LFR/LFX)</u>
6: Q38 Throttle Body <u>Q38 Throttle Body (LFR)</u> <u>Q38 Throttle Body (LFX/LCV)</u>
7: B23B Camshaft Position Sensor - Bank 1 Intake (LFR or LFX) <u>B23B Camshaft Position Sensor - Bank 1 Intake (LFR/LFX)</u>
8: B75C Multifunction Intake Air Sensor (LCV or LFX) <u>B75C Multifunction Intake Air Sensor</u>
9: Q6D Camshaft Position Actuator Solenoid Valve - Bank 2 Intake (LFR or LFX) <u>Q6D Camshaft Position Actuator Solenoid Valve - Bank 2 Intake</u>
10: B23D Camshaft Position Sensor - Bank 2 Intake (LFR or LFX) <u>B23D Camshaft Position Sensor - Bank 2 Intake (LFR/LFX)</u>
11: B23C Camshaft Position Sensor - Bank 2 Exhaust (LFR or LFX) <u>B23C Camshaft Position Sensor - Bank 2 Exhaust (LFR/LFX)</u>
12: Q6C Camshaft Position Actuator Solenoid Valve - Bank 2 Exhaust (LFR or LFX) <u>Q6C Camshaft Position Actuator Solenoid Valve - Bank 2 Exhaust</u>
13: Q6B Camshaft Position Actuator Solenoid Valve - Bank 1 Intake (LFR or LFX) <u>Q6B Camshaft Position Actuator Solenoid Valve - Bank 1 Intake</u>

Items

- 13: Q6A Camshaft Position Actuator Solenoid Valve - Bank 1 Exhaust (LFR or LFX) **Q6A Camshaft Position Actuator Solenoid Valve - Bank 1 Exhaust**
- 14: B35 Engine Oil Level Switch **B35 Engine Oil Level Switch (LFR/LFX)**
- 15: B23A Camshaft Position Sensor - Bank 1 Exhaust (LFR or LFX) **B23A Camshaft Position Sensor - Bank 1 Exhaust (LFR/LFX)**
- 16: B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (LFR or LFX) **B52D Heated Oxygen Sensor - Bank 1 Sensor 2**
- 17: B68A Knock Sensor 1 **B68A Knock Sensor 1**
- 18: T8A Ignition Coil 1 **T8A Ignition Coil 1 (LFR/LFX)**
- 19: B26 Crankshaft Position Sensor **B26 Crankshaft Position Sensor (LFR/LFX)**

AUTOMATIC TRANSMISSION COMPONENTS (MHG)

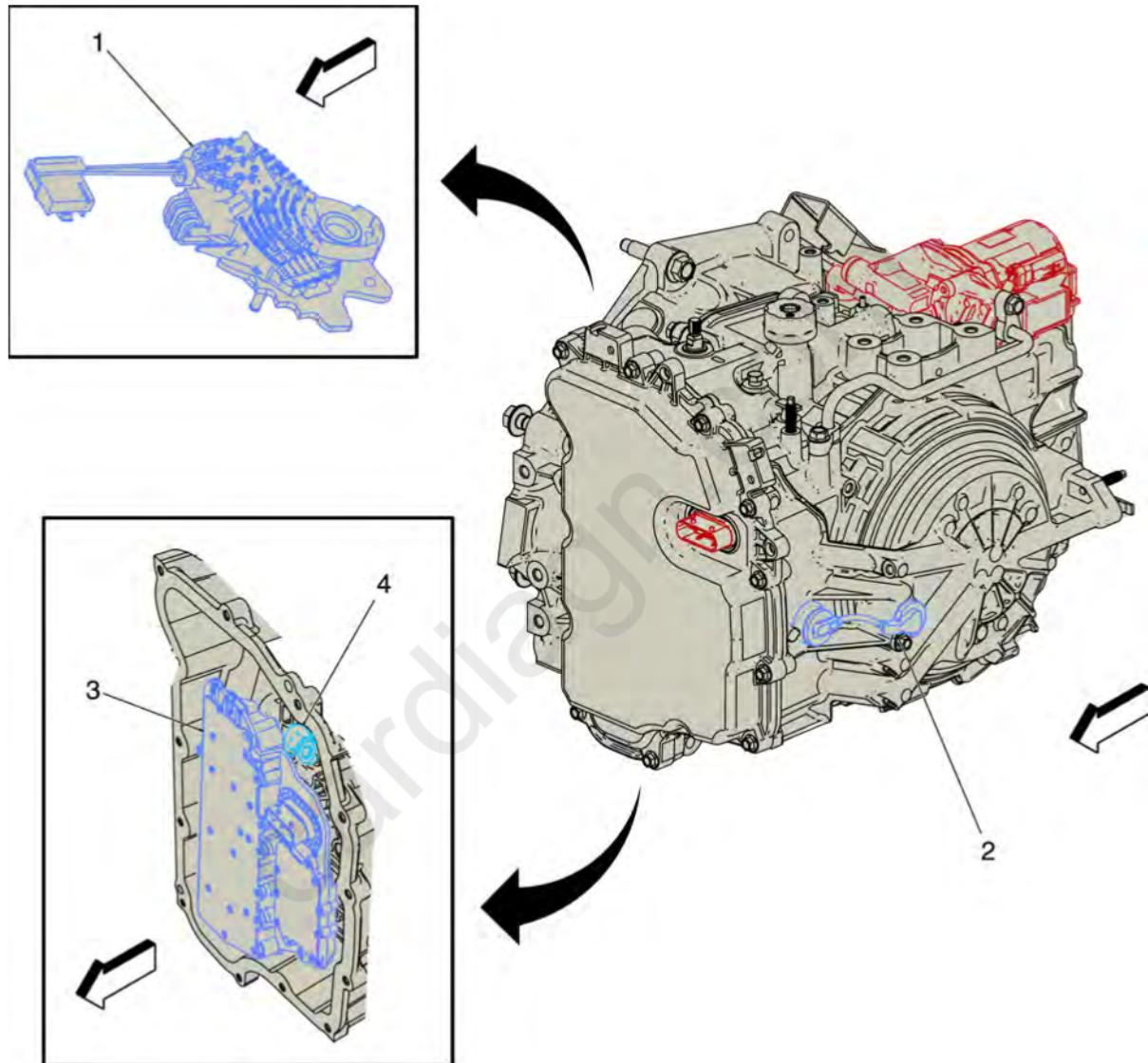


Fig. 11: Automatic Transmission Components (MHG)

Courtesy of GENERAL MOTORS COMPANY

Items

- 1: B15 Transmission Internal Mode Switch
- 2: B14C Transmission Input Shaft Speed Sensor
- 3: Q8 Control Solenoid Valve Assembly (M7W) **Q8 Control Solenoid Valve Assembly X1 (LCV) Q8 Control Solenoid Valve Assembly X1 (LFR/LFX)**
- 4: B14A Transmission Output Shaft Speed Sensor

