

The arrows represent the ECM's input and output signals.

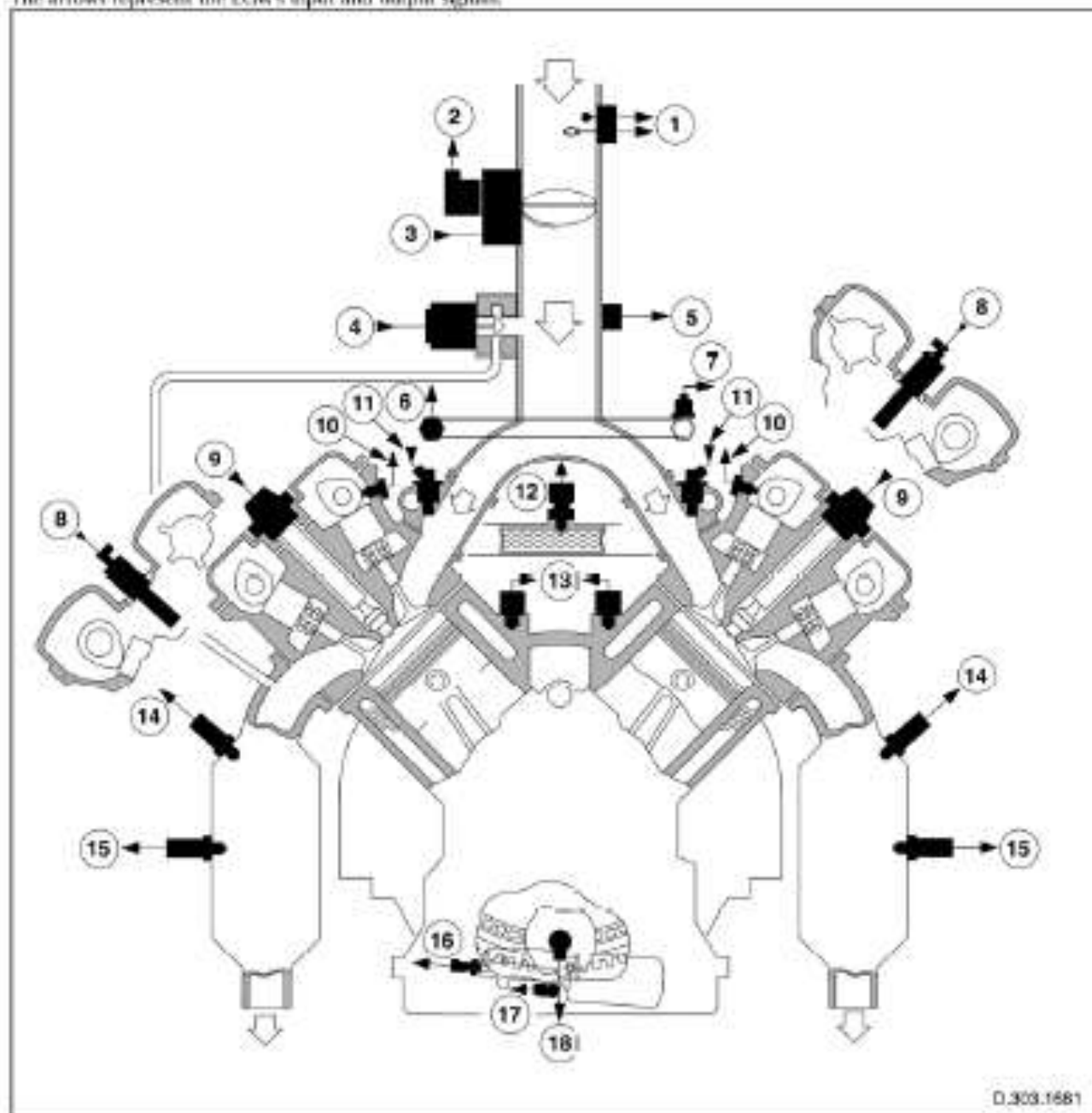


Fig. 56 V8 Normally Aspirated Engine — sensors and actuators schematic

## Powertrain

### Key to Fig. 56

- |   |                                       |
|---|---------------------------------------|
| 1. Mass air flow sensor with integrated intake air-temperature sensor | 10. Camshaft position sensor          |
| 2. Throttle position sensor   | 11. Fuel injector                     |
| 3. Throttle motor   | 12. Engine coolant temperature sensor |
| 4. Exhaust gas recirculation valve                                    | 13. Knock sensor                      |
| 5. Manifold absolute pressure sensor                                  | 14. Heated oxygen sensor 1            |
| 6. Engine fuel temperature sensor                                     | 15. Heated oxygen sensor 2            |
| 7. Fuel pressure sensor   | 16. Engine oil pressure switch        |
| 8. Oil control solenoid — variable valve timing                       | 17. Engine oil temperature sensor     |
| 9. On-plug ignition coil with integrated amplifier                    | 18. Crankshaft position sensor        |