

PG-08 Control System

Power Generation & Stationary Engine Control System

APPLICATIONS

Woodward's PG-08 control system controls engines in generator sets, irrigation and oil well pumps, and other stationary industrial equipment. It controls spark-ignited engines fueled by LPG (vapor or liquid), natural gas or gasoline. Suitable for engines ranging in size from 1.6L to 8.1L (25 to 220 HP [18.64 to 164 kW]).

The closed-loop control system helps OEMs and packagers comply with New Source Performance Standards (NSPS) proposed by the Environmental Protection Agency (EPA). These standards are effective in 2008 for stationary spark-ignited engines. PG-08 also helps meet requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP).

PG-08 provides accurate and reliable performance control over the useful life of the engine in the extreme operating environments typical of heavy-duty, stationary industrial applications.

DESCRIPTION

PG-08 commands full authority over spark, fuel, and air. This integrated approach permits precise steady-state speed governing for generator frequency control and air/fuel ratio control for low fuel consumption and emissions at best torque. Continual updates to adaptive parameters allow for fast response to rapid changes in load.

Components include:

- Electronic control module
- Electric fuel lock off solenoid valve
- Fuel pressure regulator
- Fuel trim valves
- Fixed venturi mixer assembly or air valve mixer
- Electronic throttle assembly
- Oxygen sensors
- Integrated temperature and manifold pressure sensor
- Smart ignition coils

- Helps MORs meet NSPS and NESHAP emission requirements
- Reduces fuel consumption and engine wear
- Complete packaged system minimizes integration costs
- Calibrations tailored to specific engine applications
- Closed-loop fuel control with adaptive-learn technology
- Sequential spark ignition increases torque and decreases fuel consumption and regulated emissions

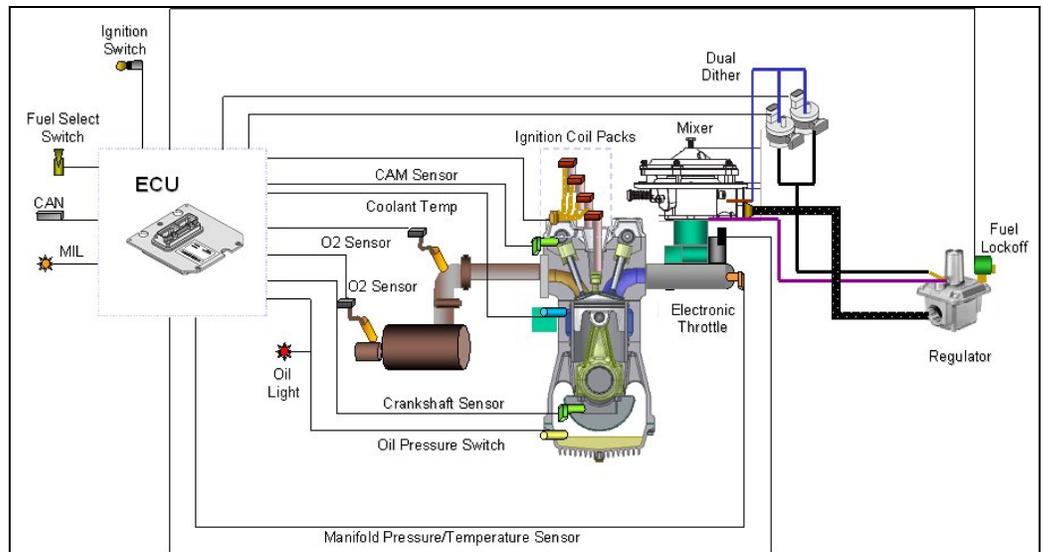
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PG-08 CONTROL SYSTEM FEATURES

- Closed-loop control of air-fuel ratio improves equipment durability by reducing maintenance, fuel consumption, and engine component wear.
- Control strategy ensures optimal transient performance for efficient system response.
- Comparisons of actual engine operation to expected values allows the system to compensate for wear, tolerances and adverse operating environments.
- Programmable idle speed control includes speed setpoint modifications for coolant temperature and speed selector switch input.
- Monitoring and diagnostic communication allows immediate assessments and corrections either on-site or remotely.
- Individual diagnostic codes detect and log functional faults, intermittent faults, sensor and actuator failures, and engine protection problems.
- Malfunction indicator lamp (MIL) allows instant analysis and troubleshooting.
- Extensive engine protection features include monitoring of engine coolant temperature, oil pressure, and overspeed.
- Actions in response to fault conditions can be individually calibrated to trigger a limited operating mode, shutdown or activate a warning light.



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