

# Troubleshooting

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## **2506-15 Industrial Engine**

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MGA (Engine)  
MGB (Engine)  
MGD (Engine)

## Important Safety Information

Most accidents that involve product operation, maintenance and repair are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. A person must be alert to potential hazards. This person should also have the necessary training, skills and tools to perform these functions properly.

**Improper operation, lubrication, maintenance or repair of this product can be dangerous and could result in injury or death.**

**Do not operate or perform any lubrication, maintenance or repair on this product, until you have read and understood the operation, lubrication, maintenance and repair information.**

Safety precautions and warnings are provided in this manual and on the product. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

The hazards are identified by the "Safety Alert Symbol" and followed by a "Signal Word" such as "DANGER", "WARNING" or "CAUTION". The Safety Alert "WARNING" label is shown below.



The meaning of this safety alert symbol is as follows:

**Attention! Become Alert! Your Safety is Involved.**

The message that appears under the warning explains the hazard and can be either written or pictorially presented.

Operations that may cause product damage are identified by "NOTICE" labels on the product and in this publication.

**Perkins cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication and on the product are, therefore, not all inclusive. If a tool, procedure, work method or operating technique that is not specifically recommended by Perkins is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that the product will not be damaged or be made unsafe by the operation, lubrication, maintenance or repair procedures that you choose.**

The information, specifications, and illustrations in this publication are on the basis of information that was available at the time that the publication was written. The specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service that is given to the product. Obtain the complete and most current information before you start any job. Perkins dealers or Perkins distributors have the most current information available.



**When replacement parts are required for this product Perkins recommends using Perkins replacement parts.**

**Failure to heed this warning can lead to premature failures, product damage, personal injury or death.**

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# Troubleshooting Section

## Electronic Troubleshooting

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### System Overview

### System Operation

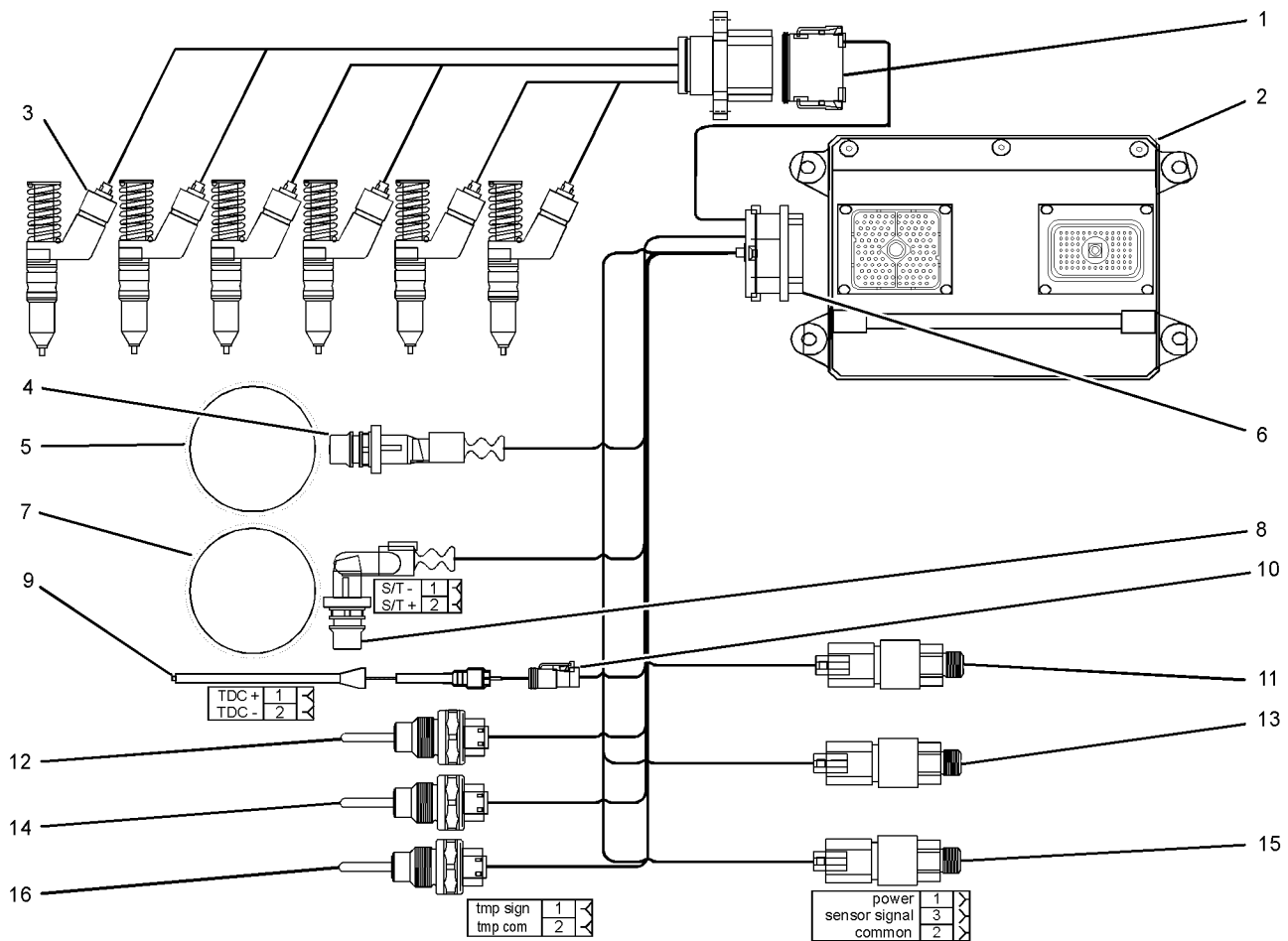


Illustration 1

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Block diagram for the 2506-15 engine

- (1) 12 Pin Connector
- (2) Electronic Control Module (ECM)
- (3) Electronic Unit Injectors
- (4) Crankshaft Position Sensor
- (5) 36 - 1 Tooth Gear
- (6) 120 Pin Connector
- (7) 36 + 1 Tooth Gear
- (8) Camshaft Position Sensor
- (9) Timing Calibration Probe
- (10) Timing Calibration Probe Connector
- (11) Atmospheric Pressure Sensor
- (12) Inlet Manifold Temperature Sensor
- (13) Inlet Manifold Pressure Sensor
- (14) Coolant Temperature Sensor
- (15) Engine Oil Pressure Sensor
- (16) Fuel Temperature Sensor

This engine is electronically controlled. Each cylinder has an electronic unit injector. The Electronic Control Module (ECM) sends a signal to each injector solenoid in order to control the operation of the fuel injection system.

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