

## Governor Diagnosis – internal engine throttle

Though many customers perform their own diagnosis and repairs, we recommend that more intricate cases should be brought to a RigMaster or Perkins/CAT Dealer as complete/accurate diagnosis may not always be effectively advised otherwise.

**Experienced dealer technicians are familiar with safety procedures that must be observed when performing any repair where there is the possibility of the engine starting or running during the repair.**

Hosted in this area of the website are files describing the Governor spring diagnostic and replacement process which should only be performed by dealer technicians experienced with safety guidelines that must be observed when working with Perkins/CAT engines.

When a Governor Spring fails, the engine usually doesn't run.

There is a small possibility that your engine may run but the Governor assembly does not respond properly to a load by applying more throttle.

To help diagnose this problem, the "run solenoid" should be removed from the engine. When it is removed, the engine can only be shut off by operating the fuel rack on the injection pump with a magnet inside the engine. **Be sure you can control the injection pump rack before attempting to start the engine.**

Attempt to start the engine allowing the "throttle governor linkage" inside engine to control the throttle and respond to loads. If the "throttle governor linkage" does not adjust the throttle to start the engine and respond to loads, use the magnet to move the injection pump rack manually inside the engine.

This eliminates the run solenoid and more accurately indicates the "throttle governor linkage" as being the problem.

### Note:

The Dealer technician must read the attached PDF Document "Solenoid and Injection Pump Removal.pdf(197 KB)" before performing the other work outlined in the rest of the procedure.

When removing the High Pressure injection pump, the dealer technician must **be careful to lift the pump only enough to remove the cotter pin** from the linkage. **The dealer technician must not lift it any higher or damage to the linkage or pump will result.**

Also, the dealer technician must take care to preserve the "shim" under the base of the pump (resembles a gasket) as proper operation of the pump relies on it's specific thickness.

### Parts: Governor Spring and Timing Cover Gasket

Governor Spring Part # 198217820 is for RMP/RMC 14-6 models (orange or yellow coloured)

Previous models with a Grey colored (KN) engine is 198217110.

The spring should be less than \$10 in the U.S.A.

Timing Cover Gasket (all RigMaster engines) Part # 165996500