

3K/4K GOVERNOR SPRING KIT

For 1994 to 1998 12 valve Cummins with P7100 injection pump

GOVERNOR SPRING KIT

The purpose of this governor kit is to increase the maximum engine RPM and enhance throttle response when.

Read the entire installation manual before starting the installation, make sure you have a good understanding of all of the procedures and tools required to ensure customer satisfaction. If you are unsure about the installation, have a qualified mechanic do the installation.

CAUTION: Engines intended to be operated over 3200 RPM should have heavy duty intake and exhaust valve Springs installed

IMPORTANT!

Clean the engine thoroughly around the injection pump prior to any disassembly; it is imperative no dirt or foreign material enter the injection pump.

REQUIRED TOOLS

- 7/16" deep socket
- 7/8" socket
- 10mm six-point socket
- 8mm six-point socket
- Ratchet and extensions to fit the above sockets
- 10mm combination wrench
- Pliers
- Pencil magnet
- Vernier calipers
- Flat blade screwdriver, med. to large size
- Clean shop towels
- Fender covers or blankets to protect the fenders

INSTALLATION:

1. Automatic transmission vehicles must be in PARK and manual transmission vehicles must be in NEUTRAL, both must have the parking brake applied.
2. Install fender covers or a clean blanket over the driver's side fender.
3. Loosen the lower clamp on the upper air intake hose using a 7/16" socket; allow the clamp to slide down the air intake pipe.
4. Loosen and remove the 5 cap screws securing the air intake horn to the engine using the 10 mm six-point socket.
5. Also remove the dipstick clamp. *Note: These cap screws are different lengths make a note of their original positions.*
6. Carefully remove the air intake horn, be careful not to damage the gasket. In most cases the gasket can be reused, if damaged it must be replaced. Using clean shop towels cover the air intake tube and the manifold opening.
7. Three cap screws secure the fuel shut off solenoid and bracket to the injection pump, two on top and one at the back, all three needs to be removed.
8. Remove the solenoid rod retaining clip; remove the rod from the linkage.
9. Once the solenoid is removed you will see an access plug, using a 7/8" socket loosen and remove this plug. It will be necessary to hold the shutoff linkage over to one side to attain clearance to remove the plug.



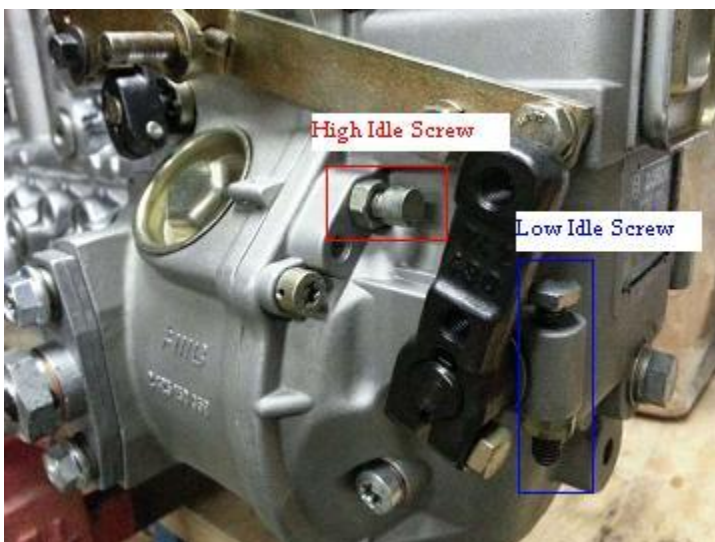


injection pump. These shims are not necessary with the replacement springs supplied and must be removed carefully.

Note: 160/175 pumps will have 2 inner springs, a 1-piece lower spring seat, and multiple shims.

Note: 180/215 pumps will have 3 inner springs, a 2-piece lower spring seat, and multiple shims.

13. Install the new lower seat, shims, then both inner springs.
14. Install the upper spring seat and retaining nut.
15. Adjust the retaining nut to the same depth as measured in step 10 (.020-.040" typically)
16. Rotate the engine until the governor spring adjustment nut is visible, and then center it in the hole. Measure the depth of the nut past the stud using the Vernier calipers. Record this measurement for re-installation.
17. Repeat steps 11 through 15.
18. Install the access plug.
20. Install the fuel solenoid, bracket, and solenoid linkage.
21. Remove the towels covering the air intake tube and intake manifold opening.
22. Install the intake manifold and gasket.



10. Rotate the engine until the governor spring adjustment nut is visible, and then center it in the solenoid hole. Measure the depth of the retaining nut past the stud using the Vernier calipers. Record this measurement for re-installation.
11. Using the straight screwdriver and pencil magnet, loosen and remove the retaining nut and upper spring seat.
12. Remove only the inner springs, shims and lower spring seat. **Be careful to leave the outermost (idle) spring and shims in place in the governor weights.** Use extreme caution when removing the stock springs; the springs have shims on the bottom which can fall into the



23. Install the air intake hose.
24. Start the engine; allow it to idle, checking idle RPM. It is normal for the idle RPM to increase or decrease by 50 RPM after installing this kit. The idle RPM is adjustable by the idle adjustment screw.

If truck will not rev to desired RPM. Remove the tamper-proof cover from the high-idle screw (the throttle lever contacts this in full throttle position). Loosen the 10mm lock nut and turn the screw in until it bottoms out (2-4 turns). *Note: Sometimes it is necessary to remove the high-idle screw with locknut and clean the paint/debris off it for it to adjust all the way in.*