



The following instructions come from our copy of the RAM Factory Service Manual (FSM). To further help you out, we've added a few tips that we've learned from the folks at the Turbo Diesel Register ([www.tdr1.com](http://www.tdr1.com)) along the way. We hope you find these tips to be helpful.

### **WHAT DOES A FCA DO?**

The Fuel Control Actuator (FCA) is an electronically controlled solenoid valve. The ECM controls the amount of fuel that enters the high-pressure pumping chambers by opening and closing the FCA based on a demanded fuel pressure. When the FCA is opened, the maximum amount of fuel is being supplied to the fuel injection pump. Any fuel that does not enter the injection pump is directed to the overflow valve. The overflow valve regulates how much excess fuel is used for lubrication of the pump and how much is returned to the fuel tank through the drain manifold. An audible click from the FCA is normal when operating the key to either the ON or OFF positions.

### **REMOVAL OF THE FCA**

The Fuel Control Actuator is located at the rear of the high-pressure, fuel injection pump (Fig. 13).

1. Clean FCA mounting area at rear of fuel injection pump with an evaporative-type cleaner.
2. Disconnect electrical connector at FCA.
3. There are 3 FCA mounting bolts that you will have to remove. The 3 mounting bolts are T25 Torx and likely they were installed using a dab of Loctite at the factory. Or, perhaps, the clear coat paint makes the 3 T25 Torx difficult to remove and/or round out the Torx head.  
Be forewarned. Some mechanics like to use a "tap" on the ratchet, some like to use a slow and steady torque and others like to heat the bolts with a small flame to loosen them up.
4. Remove 3 FCA mounting bolts.
5. Remove FCA from injection pump.

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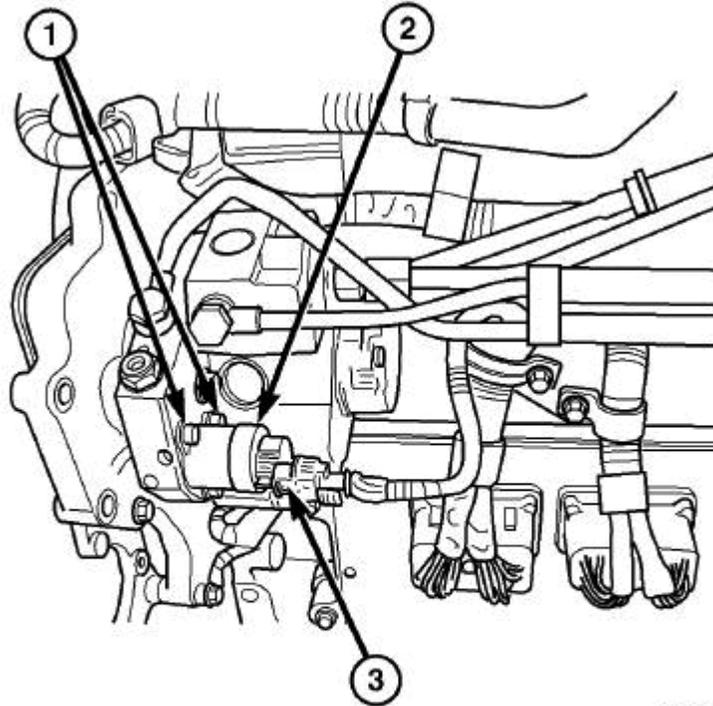
If you need more assistance, we are only a phone call away.

**(770) 886-2500**

Monday-Friday  
8:30am-5:30pm EST

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# Installation: Fuel Control Actuator



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**Fig. 13 FUEL CONTROL ACTUATOR**

- 1 - ACTUATOR MOUNTING BOLTS
- 2 - FCA (FUEL CONTROL ACTUATOR)
- 3 - ACTUATOR ELECTRICAL CONNECTOR

## **INSTALLATION OF THE FCA**

1. Install new O-rings to the Fuel Control Actuator (FCA).
2. Lubricate O-rings with clean, light grease.
3. Using the supplied 5/32" Allen head mounting bolts\*, install FCA into injection pump. Tighten the bolts in two stages. First to 3 N·m (27 in.-lbs.), and then to 7 N·m (62 in.-lbs.) torque.
4. Ensure FCA is mounted flush to injection pump.
5. Connect electrical connector to FCA.
6. Start engine and observe for leaks.

\* Your time is valuable. We attempt to make your job easier by providing parts like these 5/32" Allen head bolts to a kit, while still keeping the kit competitively priced. Please contact us with suggestions about this or other items we sell.

*We hope you find these ideas to be valuable. If you haven't already, please consider the TDR as a great resource for all things Dodge/RAM Cummins Turbo Diesel. Their website address is [www.tdr1.com](http://www.tdr1.com) and an annual subscription to the membership club is \$35.00 per year. A great value.*