

## SUBJECT: Cummins ISX Injector Install Tips

Engine operation creates high pressure fuel that could remain in the injection lines after shutting down the engine. Do not perform any service to the engine while running. Prior to servicing the fuel injection system, make sure the work area is clean and free of dirt or contaminants in the area. *Failing to do so can introduce contaminants into the fuel system leading to premature or immediate injector failure.*

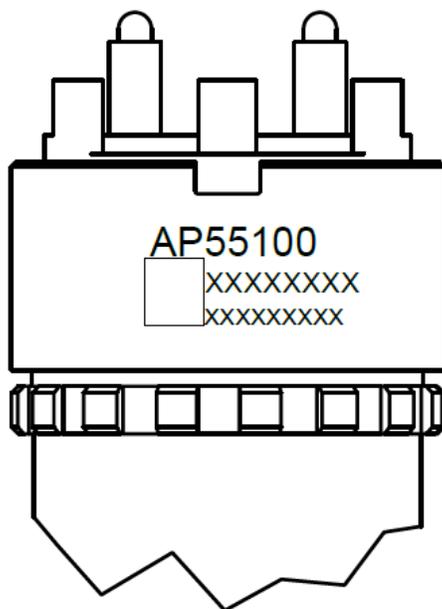
1. After removing injectors, clean the injector bore with a suitable brush. It is important to clean out any debris or grease left behind to avoid having contaminants in the fuel system. Clean out engine oil residue in the injector hold down bolt hole.
2. Lubricate the injector O-ring with clean engine oil. Place the injector and hold down clamp into the bore in the correct orientation (injector fuel inlet facing high pressure connector bore). Push the injector down to properly seat it in the bore.
3. Screw in the injector hold down bolt but do not tighten.
4. Install the new injector feed tube into the bore making sure it properly seats against the injector fuel inlet.
5. Proceed to pre-torque the injector hold down bolt to 20 Nm (177 in-lb)
  - a. *Please note this is not the final torque value*
6. Install the injector feed tube retaining nut and pre-torque to 20 Nm (177 in-lb)
  - a. *Please note this is not the final torque value*
7. *Final Torque values below only apply to AP55100, AP55101, AP55012*
  - a. You may now perform a final torque of 80 Nm (59 ft-lb) to the injector hold down bolt.
  - b. Injector feed tube retaining nut may also be set to a final torque of 77 Nm (57 ft-lb).
8. *Final Torque values only apply to AP55103*
  - a. You may now perform a final torque of 65 Nm (48 ft-lb) to the injector hold down bolt.
  - b. Injector feed tube retaining nut may also be set to a final torque of 77 Nm (57 ft-lb).

9. Proceed to install the injector harness. Make sure the wires will not interfere with the rocker lever or engine brake housing. Failing to do so may result in injector circuit faults.
10. Injector solenoid nuts should be torqued down to 2 Nm (18 in-lb) to avoid terminals on the injector breaking off.

### Trim Code Programing

1. With the suitable scan tool, it is important to program the new injector trim code(s) of each injector into the engines ECM. Each injector from Alliant Power will have a unique trim code. Down below is how to identify the part number, serial number and trim code on each injector.

*Note:* ISX CM2350 X101 & CM2350 X102 engine models do not require trim codes to be programmed into the engine ECM. Per service manuals 4310641 and 4310646, only a fuel injector rest is required. This only applies to the following part numbers: AP55100 and AP55103



Line 1	Alliant Power Part Number
Line 2	Injector Serial Number
Line 3	Injector Trim Code

R1-Trim code programming instructions updated. Updates to torque values specific to AP55100, AP55101, AP55102 and AP55103.