SAFETY INFORMATION

DESCRIPTION
This notification is intended to provide information on the hazards and risks associated with high-pressure fuel lines and other pressurized fluid systems on Caterpillar machines. Caterpillar now makes a new type of fuel system that uses a high-pressure fuel pump to make injection pressures of more than 18,000 psi. While this High Pressure Rail system has been out for a while, it is becoming more and more integrated into a lot of our common machines. The following are precautionary measures to ensure the safety of all personnel who work on these engines. Be aware that similar hazards and injury potential are present with any fluid under pressure. Please make sure that you review this bulletin in detail and that you fully understand all of the inherent dangers.

Fluid Penetration Injury with Gloves

Point of entry

Required Incision

Debridement wound

Fluid Penetration Injury without Gloves

[Images of hand injuries]
**RECOMMENDATIONS**

- **NEVER** Crack fuel lines to bleed the system or to troubleshoot for a miss. The fuel system is self-bleeding and Electronic Technician can be used to perform Cutout tests.
- **NEVER** Check for leaks by using your hands or leaning over the engine unless the engine is not running and has been shut down for at least 1 minute and you have verified 0 PSI Rail Pressure using E.T. If you cannot find the leak using this method, with the engine running, use a long piece of cardboard or wood to check for a leak from a distance.
- **NEVER** Reuse high Pressure Fuel lines; these are one time use lines due to the inside being hardened steel. If these lines are reused, you run a great risk of causing a HIGH Pressure Leak, which could result in fire, injury, or death.

The concern is not only what this kind of pressure will do to a person, but it is also what a petroleum based substance such as fuel will do once it enters your bloodstream. Depending on the entry wound, this substance can reach your heart in a matter of hours. Once this occurs, your heart could stop beating.

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**New Components**

High pressure lines are not reusable. New high pressure lines are manufactured for installation in one position only. When a high pressure line is replaced, do not bend or distort particles to be introduced to the fuel.

All new fuel filters, high pressure lines, tube assemblies, and components are supplied with sealing plugs. These sealing plugs should only be removed in order to install the new part. If the new component is not supplied with sealing plugs, then the component should not be used. The technician must wear suitable rubber gloves. Rubber gloves should be disposed of immediately after completion of the repair in order to prevent contamination of the system.

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