

Working with the new HPCR engines

With the prevalence of high-pressure-common-rail (HPCR) engines in the newest models of tractors and combines, it's a good idea to review the proper procedure for installing fuel filters on these engines. On this and the next page you will find the recommended steps for installing fuel filters for both tractors and combines that use the new HPCR engines. If you have any questions or concerns, please feel free to contact one of our service managers: Stacey Erstrom (tractors) or Ron Schultz (combines).

Case IH Models

MX Magnum - MX215, MX245, MX275,
MX305
Magnum - 215, 245, 275, 305

STX Steiger - STX280, STX330
Steiger - 280, 330

New Holland Models

TG215, TG245, TG275, TG305
T8010, T8020, T8030, T8040

TJ280, TJ330
T9010, T9020

Installation of new fuel filters on the high-pressure-common-rail (HPCR) engine can result in difficulty in starting because air is in the fuel system. Fuel filters contain a significant amount of fuel. Until the filters fill, the air in the filters is moving through the system and causes problems with engine starting and running.

The suction-side (also know as the low-pressure or primary) filter can be pre-filled before replacement. However, under no circumstances can the pressure (also known as the secondary) filter be pre-filled before installation. Install the pressure filter (secondary) dry. Use these steps to bleed the fuel system:

1. Identify the suction-side (or primary) filter. Of the two engine-mounted filters, this is the one nearest the flywheel. It has a 10-micron density.
2. Pre-fill the filter from a clean fuel source
3. Direct the clean fuel into the inlet holes on the perimeter of the filter. This allows the majority of the fuel to pass through the filter media
4. Install the suction-side (or primary) filter.
5. Install the pressure (secondary) filter if necessary.

If both suction (primary) and pressure (secondary) filters are new, continue to follow these steps:

6. Cycle the electric lift pump. Turn the key switch to the OFF position, and then to the ON position to repeat the cycles. Each time, let the electric lift pump run for the pre-set time. The electric lift pump runs for approximately 30 seconds each cycle. Repeat this procedure a minimum of six times or until the sound of the fuel priming pump changes. The sound that the pump makes will change to a lower tone to indicate that the system is full and that the pump is now building pressure.
7. Start the unit.

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Case IH Models

2300-series: 2377, 2388

2500-series: 2577, 2588

New Holland Models

None

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The suction-side (also known as the low-pressure or primary) filter can be pre-filled before replacement. However, under no circumstances can the pressure (also known as the secondary) filter be pre-filled before installation. Install the pressure filter (secondary) dry. Use these steps to bleed the fuel system:

1. On HPCR combines, the suction-side (primary) filter is located at the electric supply pump on the left-hand side of the chassis of the combine.
2. Pre-fill the filter from a clean fuel source.
3. Direct the clean fuel into the inlet holes on the perimeter of the filter. This allows the majority of the fuel to pass through the filter media.
4. Install the suction-side (or primary) filter.
5. Install the pressure (secondary) filter if necessary.
6. Remove the inlet test port located on the fuel filter head and install a Compuchek fitting (part number 3824842) in the test port. The inlet test port is located closest to the fan side of the engine. Attach an orificed drain line (part number 3164621) to the Compuchek fitting and route the line to a clean fuel container.
7. Turn the key to the ON position and let the electric lift pump run until the fuel from the drain line is free of air. On combines the electric lift pump runs continuously without the need to cycle the key switch.
8. Remove the drain line and the Compuchek fitting and replace the inlet test port plug. Cycle the key to the ON position for an additional two minutes.
9. Start the unit.

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