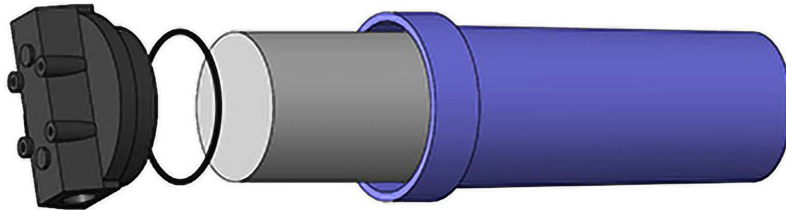


Low-pressure water system

Replace the water filter and test the water quality:

- every 1,000 hours.
- if the difference between the values on the prefilter water pressure gauge and the postfilter water-pressure gauge is more than 0.7 bar (10 psi).

Replace the water filter



Parts, tools, and materials

Filter cartridge, water, 1.0 micron, 10-inch

Filter wrench (included in the standard tool kit)

Recommended materials

Bucket or pail

Do this task when the pump is off.

1. Turn **OFF** the water to the pump.
2. Remove the top cover and the front panel from the pump.
3. Use the filter wrench to loosen the filter canister.
4. Remove the used filter cartridge from the filter canister. Discard the used filter.



There is an O-ring in the top of the canister.

5. Pour all of the water and debris out of the canister. Rinse or wipe out the canister, if necessary.
6. Put a new filter cartridge in the canister. The filter does not have a designated top or bottom.
7. Use the filter wrench to install the filter canister.
8. Turn **ON** the water to the pump.
9. Turn **ON** the pump.
10. On the operator interface, touch the **START** symbol.
11. Make sure that the difference between the values on the prefilter water-pressure gauge and the postfilter water-pressure gauge is less than 0.7 bar (10 psi).

Test the water quality

Total dissolved solids (TDS) cause deposits that can cause damage to check valves, seals, orifices, and other consumables.

Parts, tools, and materials

TDS meter
 Container for a water sample
 Clean, deionized water or filtered water
 pH tester
 Silica test kit
 Water hardness (calcium carbonate) test kit

Recommended materials

Bucket or pail

Do this task when the pump is not operating.

1. Take a sample from the **WASTE WATER OUT** hose. If you cannot access the hose, take a sample from the boost pump or from the hose going to the inlet water solenoid (for pumps without a boost pump).
2. Make sure that the water is clear and odorless.
3. Test the pH. The optimal pH measurement is between 6.0 and 8.0.
4. Test the silica (SiO₂) content. The silica content must be lower than 0.0015% (15 parts per million [ppm]).
5. Test the water hardness. The result must be equal to or lower than 0.006% (60 ppm/3.5 grains per gallon).

Test the total dissolved solids (TDS) concentration

 CAUTION	The TDS meter is not waterproof. Do not submerge the meter in water.
	Some TDS meters must be calibrated before use. For best results, calibrate the meter at 25°C (77°F). Refer to the instructions supplied with the TDS meter.

A TDS test measures the total concentration of dissolved substances in postfilter water. Dissolved solids cause deposits that can cause damage to check valves, seals, orifices, and other consumables. The optimal range is 0.005% to 0.015% (50 ppm to 150 ppm).

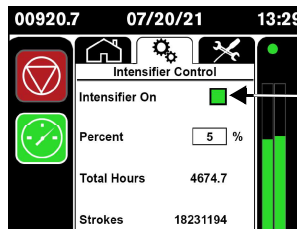
1. Push the button on a quick-disconnect fitting to remove a low-pressure water line from the intensifier.
2. Disengage the intensifier.
 - a. On the operator interface, touch the adjustments symbol to open the primary adjustments screen.



- b. Touch this symbol to open the **Intensifier Control** screen.



- c. Touch the **Intensifier On** box. This engages and disengages the intensifier.



3. Set the target water pressure to 345 bar (5,000 psi).



Refer to [Set the target water pressure](#) on page 36 for instructions.

4. Turn **ON** the pump.
5. Take a sample of the water from a low-pressure water line after the water filter. Make sure that the water is clear and odorless.
6. Put the TDS meter in the water sample up to the maximum immersion level (5 cm/2 inches). Tap the meter gently to release air bubbles.



Wait approximately 20 seconds for the reading to become stable.



If multiple readings are taken, turn **OFF** the TDS meter between readings.

7. Compare the reading to the table.



A TDS level that is lower than 0.005% (50 ppm) can harm waterjet parts and requires the use of nonmetallic or stainless steel fittings.
A TDS value of lower than 0.0005% (5 ppm) can damage stainless steel parts.



If the TDS level is higher than 0.015% (150 ppm), treat the water with reverse osmosis.

Unsatisfactory	Optimal	Satisfactory	Unsatisfactory
Lower than 0.005% (50 ppm)	0.005% to 0.015% (50 ppm to 150 ppm)	0.015% to 0.022% (150 ppm to 220 ppm)	Higher than 0.022% (220 ppm)
Use nonmetallic or stainless-steel fittings	—	A reverse osmosis system can be used to remove TDS	Use a reverse osmosis system to remove TDS

8. Rinse the meter in clean, deionized water or filtered water after use.
9. Connect the low-pressure water line.
10. Go to the Intensifier Control screen to engage the intensifier. (Refer to [step 2](#).)