

GAMMON TECHNICAL PRODUCTS, INC.
INSTRUCTIONS: INSTALLATION AND OPERATION
ONE-CC WATER PROBE
GTP-9330



GENERAL DESCRIPTION

This instruction is for the installation, operation, and testing of GTP-9330 series water detection probes. This is a single level water detection probe.

INSTALLATION

It is the customer's responsibility to select an appropriate weathertight and/or explosion-proof control box containing an intrinsically safe barrier relay (IS relay). We recommend our GTP-1750 systems described in Bulletin No.67.

1. Install the new probe in a $\frac{3}{4}$ " NPT threaded fitting using Teflon thread sealant on the threads. A 1 $\frac{1}{2}$ " NPT model is also available. It may be oriented horizontal or vertical, as long as any water present in the drain pipe and fittings will be removed when the manual drain valve is operated.

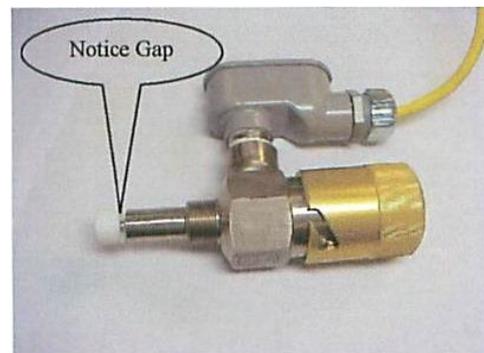


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2. Make an electrical connection to the L-type conduit body mounted on the side of the GTP-9330 probe assembly.
3. Connect the black wire from the GTP-9330 probe to a ground wire using a wire nut. The yellow wire connects to the intrinsically safe power wire.



Note: The IS relay may be wired by the installer to the deadman system to stop fuel flow, provide an audible warning, and/or provide a visual signal such as a red light labeled “water in sump.”



OPERATION

The GTP-9330 will constantly monitor for presence of water. Function of the probe can be tested using the following procedure while the fuel system is in operation.

1. Remove the large gold-colored aluminum cap from the probe housing. This causes the internal mechanism to shift into the test position.
2. The test water injection pump has two sections; a cylinder and piston. Rotate both sections together $\frac{1}{4}$ turn counterclockwise and then pull to remove the entire pump assembly.

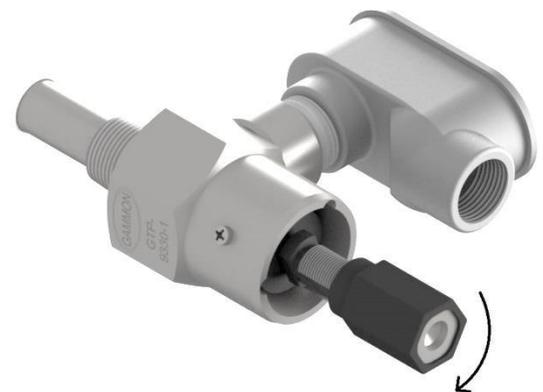
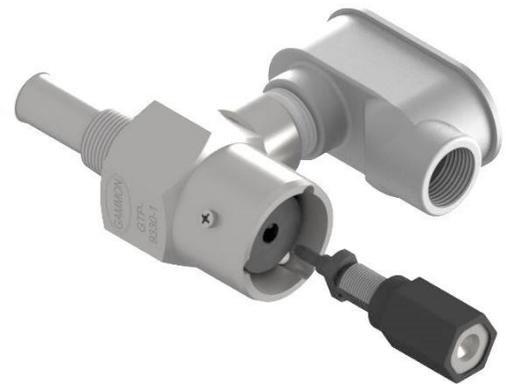


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3. Separate the 2 sections of the pump by unscrewing the piston (insulated by heat shrink) from the hardcoat anodized cylinder.
4. Hold the cylinder vertically in one hand with the small end down and resting on a finger tip. Fill the cylinder to the top with clean water. **DO NOT USE DISTILLED OR DEIONIZED WATER.**
5. Insert the piston and rotate until the first thread is engaged. There is now 1 cc (1 ml) of water in the cylinder for performing the test.
6. Insert the small end of the cylinder to connect it to the probe assembly and rotate **both halves** of the water injection pump clockwise to engage the bayonet pin.

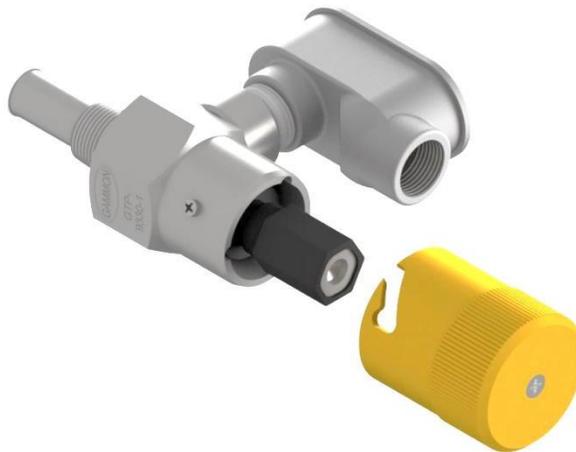
CAUTION: NEVER ATTACH THE WATER PUMP IF THE PISTON IS NOT INSTALLED. FUEL WILL BE RELEASED.

7. Rotate the piston (section insulated with heat shrink) clockwise rapidly to inject one cc of water into the probe. If a "water in sump" signal is received, the probe is operating correctly. In some cases, a second injection may be necessary. If the signal is not received, the probe has failed the test.



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8. For **winter operation** and extremely cold climates, it is possible that the test water that is inside the probe will freeze. To prevent such a problem, follow this procedure:
 - a. After the test described above, remove the injection pump by rotating it counterclockwise to disconnect the bayonet pin. See “Step 2” above. Disassemble the pump and then fill the cylinder with fuel instead of water.
 - b. Insert the piston and rotate it into the first thread of the cylinder as in “Step 5” above.
 - c. Insert the small end of the cylinder to the probe and rotate in $\frac{1}{4}$ turn to engage the bayonet pin as in “Step 6” above.
 - d. Rotate the piston all the way in to displace residual water and fill the passageways with fuel.
9. After testing is complete, be sure the water pump is installed with the piston turned all the way in. Attaching the large aluminum cap automatically forces the internal mechanism out of the testing position and into the operating position.



DISCUSSION

Depending on design of the IS relay circuit, water detection may cause the fuel pump to stop or a flow control valve to close. It may also cause a warning horn to be energized, a red light to turn on, or other signals to be energized.

PARTS

1. GTP-9330-1
2. GTP-9330-1A
3. GTP-9330-101