Technical Support Notification
PLLD - Gross Line Failure

▶ Overview

Pressurized Line Leak Detection (PLLD) monitors line pressure to detect leaks. This technical support notification is intended to help a certified technician troubleshoot a Gross Line Failure (3.0 gph). The TLS-450PLUS and TLS-350 consoles automatically run a gross line test after the completion of a dispense, when all handle signals are off. Depending on the console's software features and programming, additional tests (periodic – 0.2 gph and annual – 0.1 gph) will be performed following a gross test pass.

The instructions below are to be used in conjunction with the PLLD & WPLLD Troubleshooting Guide (577013-344).
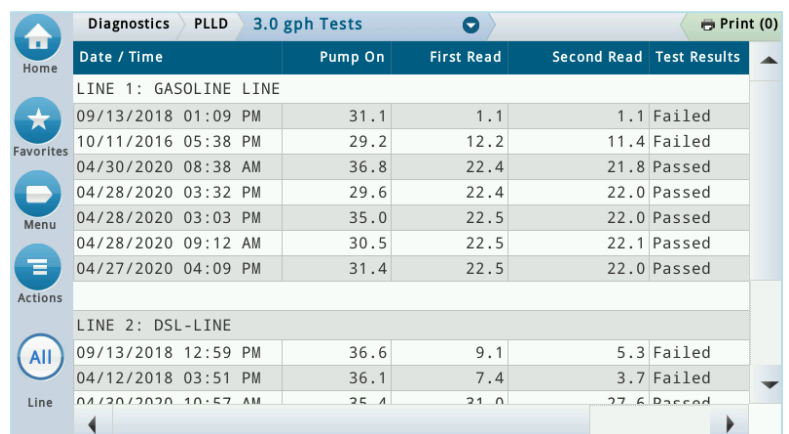
▶ Troubleshooting

During a gross test, the pump turns on and the console records the pressure (Pon). Then, the pump turns off and two additional pressure readings (P1 and P2) are recorded. If the pressure drops below 12 psi, the gross line test fails, and an alarm will be displayed.

❑ Check for visible leaks – STP sump and under all dispensers.
❑ Verify the tank is not out of fuel. An empty tank will prevent a line from properly pressurizing.
❑ Check for other alarms on the console. Depending on console programming, other alarms might prevent a manual gross line test from running.
❑ Check the line's pressure (examples on next page):

TLS-450PLUS
Menu → Diagnostics → PLLD → 3.0 gph Tests

This screen displays the five most recent passes and five most recent fails per line.

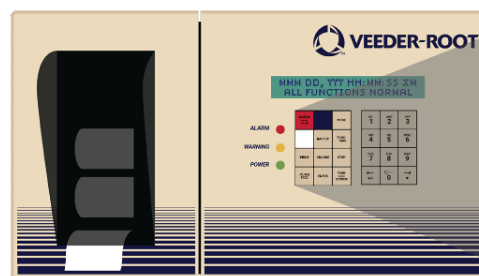**TLS-350**
1. Press **MODE** for DIAG MODE
2. **FUNCTION** to PRESSURE LINE LEAK DIAG
3. **STEP** to 3.0 DIAG
4. Press **PRINT**

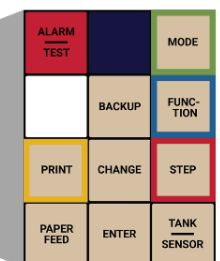*The printout will display the five most recent passes and fails for the line selected.*

❑ Run a manual gross line test.

▶ Troubleshooting

Gross Line Failure Examples			
Example #	Pump On	First Read	Second Read
1	42.1	14.7	10.0
2	5.6	2.1	1.5
3	47.8	44.8	10.1
4	31.4	5.9	5.7

▶ Possible Causes for Each Example:

Example 1
- Line leak
- Incorrect programming - line type or line length
- Bad check valve
- Bad blender valve
- Bad dispenser valve
- Bad air purge screw (The Red Jacket)
- Bad SwiftCheck valve (Standard Red Jacket)
- Bad packer o-ring (Standard Red Jacket)

Example 2
- Tripped circuit breaker
- Relay is not activating/Pump is not turning on
- Bad starting capacitor
- Bad ump
- Out of fuel
- Catastrophic leak (worst case)

Example 3
- Air in the line
- Sticky pump control relay
- Bad pressure relief check valve (The Red Jacket)
- Partially clogged functional element or vent path (Standard Red Jacket)

Example 4
- Blender valve leaking
- Bad air purge screw (The Red Jacket)
- Faulty check valve (The Red Jacket or Standard Red Jacket)
- Bad packer o-ring (Standard Red Jacket)
- Bad SwiftCheck valve (Standard Red Jacket)
- Dispenser - bad handle signal or drive board

▶ Further Information

- Contact Veeder-Root Technical Support at 1-800-323-1799 for additional help or questions.
- Learn more about pressure line leak detection on our Line Leak Detection webpage.

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