

Technical Support Notification

Troubleshooting CSLD – Periodic Test Fail

► Overview

Continuous Statistical Leak Detection (CSLD) is a type of tank test that runs in the background while a station is open. CSLD monitors idle time and calculates an accurate leak detection rate. When the console detects a product loss during idle periods, the console will display a Periodic Test Fail Alarm.

For more information on CSLD, please refer to the [TLS-450PLUS Troubleshooting Guide \(577014-075\)](#).

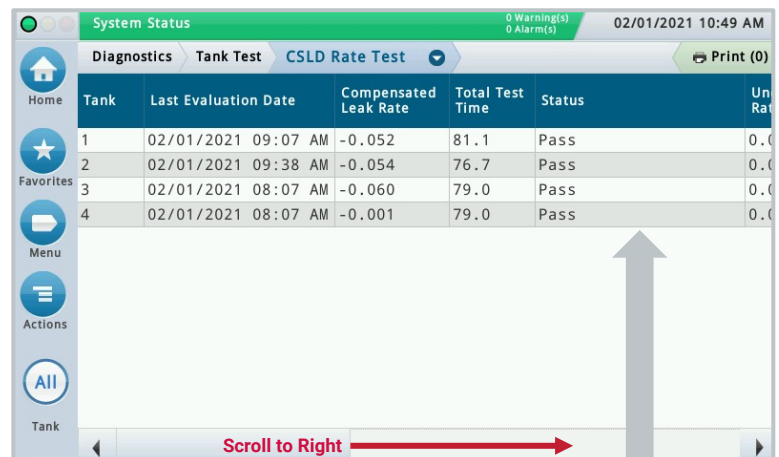
► Troubleshooting

Review the CSLD Diagnostics Report

TLS4 Series

Menu → Diagnostics → Tank Test → CSLD Rate Test

The CSLD Diagnostic Report for each tank will be displayed on this screen. (Scroll to the right for additional test results.)



Tank	Last Evaluation Date	Compensated Leak Rate	Total Test Time	Status	Un Rat
1	02/01/2021 09:07 AM	-0.052	81.1	Pass	0.0
2	02/01/2021 09:38 AM	-0.054	76.7	Pass	0.0
3	02/01/2021 08:07 AM	-0.060	79.0	Pass	0.0
4	02/01/2021 08:07 AM	-0.001	79.0	Pass	0.0

Tank	Last Evaluation Date	Compensated Leak Rate	Total Test Time	Status	Uncompensated Leak Rate	Average Volume	Total Count of Records	Total Count of Acceptable Records	Feedback Factor	Throughput	Average Evaporation Rate	Positive Rejects
1	02/01/2021 09:07 AM	-0.052	81.1	Pass	0.018	525	60	32	23.0	0.0	0.000	0.0
2	02/01/2021 09:38 AM	-0.054	76.7	Pass	0.017	525	57	29	19.0	0.0	0.000	0.0
3	02/01/2021 08:07 AM	-0.060	79.0	Pass	0.011	525	59	31	21.0	0.0	0.000	0.0
4	02/01/2021 08:07 AM	-0.001	79.0	Pass	0.009	526	59	31	21.0	0.0	0.000	0.0

CSLD Diagnostics

❑ Test Rate:

The CSLD leak rate threshold is -0.17 gph for a stand-alone tank, -0.16 gph for a siphoned tank.

❑ Total Tests:

Total number of accepted tests listed in the rate table. Tests are rejected due to temperature change, deliveries, or the testing duration is too short.

❑ Total Time:

Sum of all the accepted tests. CSLD requires a minimum of 6 hours to produce a valid result.

► Troubleshooting (Continued)

CSLD Diagnostics

❑ Average Volume:

Tank's average fuel volume during testing times. CSLD can only detect leaks in the part of the tank that has fuel in it. A higher average volume indicates a more comprehensive test.

❑ POS (Positive) Rejects:

The number of tests rejected due to a leak rate of +0.4 gph or higher, out of the last 20 completed tests.

❑ Throughput:

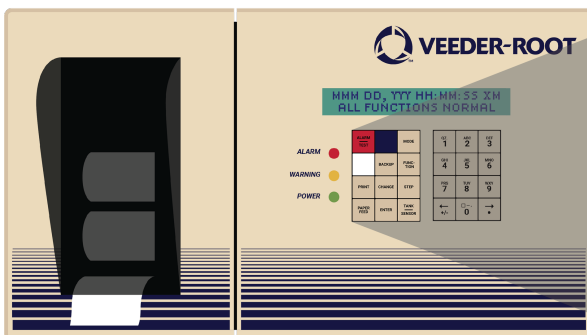
Estimated monthly throughput (in thousands of gallons). High throughput sites will have many deliveries and could cause temperature problems, reduced idle time and exceed recommended throughput limits.

Review the CSLD Diagnostics Report

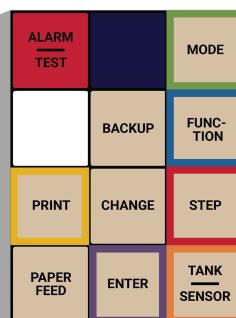
TLS-350

1. Press **MODE** for DIAG MODE
2. **FUNCTION** to CSLD DIAGNOSTICS
3. **STEP** to CSLD DIAGNOSTICS REPORT
4. Press **ENTER**
5. If needed, press the **TANK/SENSOR** button to select the correct tank
6. Press **PRINT** to easily review the results

YOUR TLS-3XX SERIES



KEYPAD



CSLD DIAGNOSTICS

T 1:UNLEADED 1
PROBE SERIAL NUM 363213

JAN 4, 2021 3:15 AM
TEST RATE: -0.21 GAL/HR
TOTAL TESTS: 26/80
TOTAL TIME: 34.8 HRS
AVE VOLUME: 4739 GALS
POS REJECTS: 2
THRUPUT EST: 15247 GALS
DISPENSE STATE: IDLE *

T 2:PREMIUM
PROBE SERIAL NUM 363163

JAN 4, 2021 11:32 AM
TEST RATE: 0.01 GAL/HR
TOTAL TESTS: 25/80
TOTAL TIME: 51.5 HRS
AVE VOLUME: 1027 GALS
POS REJECTS: 0
THRUPUT EST: 1040 GALS
DISPENSE STATE: IDLE

T 3:UNLEADED 3
PROBE SERIAL NUM 363166

JAN 4, 2021 4:01 AM
TEST RATE: -0.01 GAL/HR
TOTAL TESTS: 20/80
TOTAL TIME: 36.9 HRS
AVE VOLUME: 1361 GALS
POS REJECTS: 0
THRUPUT EST: 13181 GALS
DISPENSE STATE: IDLE *



► Possible Causes

Programming

- ❑ Confirm correct thermal coefficient.
Gas: 0.00070 or 0.00069
Diesel: 0.00045
- ❑ Incorrect tank to line assignment, if the site has PLLD or pump sense, verify programming.
- ❑ Confirm siphoned and manifolded tanks are programmed correctly.

Hardware

- ❑ Confirm the pump's relay is not stuck.
- ❑ Confirm the float is not stuck.
- ❑ Check the inventory report and compare the probe's temperature to the other tanks at this site. Large temperature differences can indicate a probe issue.
- ❑ Check alarm history for probe or tank alarms.

Evaporation or Vacuum

Most tanks naturally build vacuum during the daytime and pressure at night. When the vacuum pressure increases, it draws fresh air into the tank through the pressure vent cap. This causes evaporation and results in a CSLD periodic test failure.

- ❑ Check all tank openings for possible venting issue – probe cap, fill cap, stage one dry break, spill bucket plunger.
- ❑ Verify the pressure vent cap is working properly.

Tank Issue

- ❑ Tank Leak – Run a 2-hour static test and review the results. If the test fails, call Veeder-Root Technical Support at 1-800-323-1799. It may be necessary to have a third-party test performed.

► Further Information

- Contact Veeder-Root Technical Support at 1-800-323-1799 for additional help or questions.
- Learn more about CSLD and other features on our [TLS-450PLUS Feature Enhancements](https://www.veeder-root.com/tls-450plus-feature-enhancements) webpage.



Probe Cap



Stage One Dry Break



Spill Bucket with Plunger

