

Tank/Line Pre-qualification Parameters for SCALD/Autolearn LLD

SCALD

The Statistical Continuous Automatic Leak Detection (SCALD) option of the Franklin Fueling Systems ATGs allows a site that is continuously open to still perform 0.2 gph in-tank leak detection tests. This allows maintaining compliance without having to shut down the tank.

This method of in-tank leak detection operates by collecting data during Quiet Intervals (QI). These are times of inactivity between dispensing periods, and when no tank deliveries are occurring. After collecting several of these QIs, the system is able to determine the tightness of the tank.

An inherent limitation is that there must be periods of no dispensing in order for QIs to occur. If fuel is continuously being removed from the tank, then in-tank leak detection is not possible by any method.

Parameter 1 – In order for a tank or manifold (two tanks) to routinely complete SCALD tests, there must be an average of at least 3 QIs per night lasting an average of 30 minutes where no dispensing occurs from the tank or manifold.

In order for SCALD to determine if the tank is tight, the data collected during these QIs, must be thermally stable. If the temperature of the fuel is changing significantly during a QI, the level of fuel in the tank will be changing at a rate too great for proper data collection and a valid QI will not be recorded.

Tanks that receive frequent deliveries, especially where there are large differences in temperature between the fuel coming off the truck and the fuel in the ground, will have a hard time collecting enough QIs to get a completed SCALD test.

Parameter 2 – In order for a tank or manifold (two tanks) to routinely complete SCALD tests, there must be an average of at least 48 hours between deliveries to that tank or manifold.

This time period may need to be extended to 72 hours in areas that experience periods of extreme temperatures.

Sites that barely qualify under both Parameters 1 and 2 may still experience periods where SCALD is unable to collect QIs because of thermal instability. Restructuring the delivery schedule to the tank(s) may improve the generation of QIs. Filling a tank as full as possible in the morning and allowing as many nights, when most QIs occur, as possible to elapse before filling the tank again, will improve the chances of completing a SCALD test.

ELLD

The Autolearn Electronic Line Leak Detection option of the Franklin Fueling Systems ATGs learns the characteristics of each line during the installation process by recognizing a calibrated leak that is introduced during the Learn Process. This method does not require the programming of the size, length or type of line. This pressure-based system uses this information to monitor changes in pressure during periods of no dispensing to determine if the line is tight.

Thermal instability of the fuel in the line creates pressure changes that interfere with the systems ability to complete a test. Therefore the Autolearn LLD must continuously monitor the thermal stability of the line and wait for it to reach a stable point. If the period of no dispensing does not last long enough for the line to reach thermal stability, a test can not be completed. Since a dispensing period draws new fuel into the line from the UST, the thermal stability waiting period must restart after each dispensing cycle. The length of this waiting period will vary depending on the size of the line and the thermal instability of the fuel.

Parameter 1 - In order for a line, including a manifold line (two STPs feeding a common line) to routinely complete 0.2 gph tests, there must be an average of a least one continuous hour of no dispensing per night, on all products fed by that line.

This technical bulletin applies to the following Franklin Fueling Systems models:

- TS-5, TS-550 and TS-5000
- TS-1001, TS-2001, TS-750
- TS-LS300, TS-LS300/E