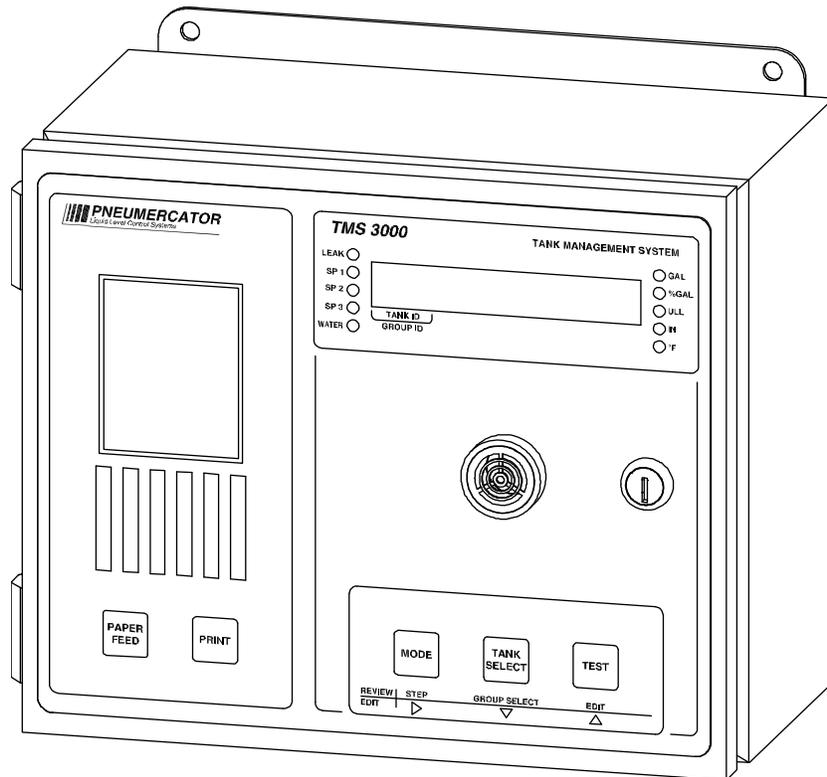


MAINTENANCE MANUAL



DRAWING NO. 20001 REV. A

TMS Series/LC2000

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This maintenance documentation presumes that the system to be tested has been installed in accordance with all current documentation for the system and has been started up by a factory certified technician. If you feel that this service has not been performed, adequately or otherwise, please contact your local authorized Pneumercator service provider to make the necessary arrangements.

The TMS Series and LC2000 products will be able to detect many conditions, including memory failure within the system, probe communication issues, and sensor wiring faults (when equipped with a Pneumercator fault detecting sensor). Reviewing and addressing any Alarm or Event conditions displayed on the TMS would be the best place to start for determining the proper functioning of the system. Inspection of all cabling for cracking or swelling and evaluating the condition of the splices will help to maintain a properly working system.

Before connecting or disconnecting ANY cables, power off the system. Once the cabling changes are complete, the system can be powered on.

While annual inspection is considered to be a good general practice, it may be required by regulation or application to perform inspections more frequently.

The following table includes a model specific list of additional points of inspection.

Model(s)	Check points
All TMS and LC2000 Systems	<ol style="list-style-type: none"> 1. If equipped with a printer, verify there is adequate paper. Press PRINT to verify the operation of the printer. If the printout is light or blank, verify the ribbon is seated properly. If so, replace the ribbon. Note: the printout generated will include a Full Inventory and Alarm Status report which can be used for further identification of problems. 2. Press the TEST button to verify all integrated lights and horn are functioning
All TMS Systems	<ol style="list-style-type: none"> 1. Take a stick reading of each tank for both Product and Water and confirm that the TMS Level Reading matches the stick reading. If there is a discrepancy, perform the float height offset procedure as outlined in the Quick Startup Guide. 2. If In-Tank Leak Testing is required, confirm the results show passing tests and verify the schedule.
Rigid Probes (MP45xS and MP55xS)	Remove the probe to verify there is no damage or residue buildup on the floats or probe shaft. Clean as necessary. No annual calibration required. Recalibration required only if probe or floats are replaced.

ES825-100F/ES825-300FL (non-discriminating)	Remove and inspect the sensor for physical damage. Test the sensor by placing in a nonreflective water-filled container shielded from ambient light. Verify the alarm received on the system display is as expected. Clean sensor to remove any contaminants.
ES825-200F/ES825-400FL (discriminating)	Remove and inspect the sensor for physical damage. Test the sensor by placing in a nonreflective water-filled container shielded from ambient light. Verify the alarm received on the system display is as expected. Repeat using a container filled with product. Clean sensor to remove any contaminants.
Float switch sensors: Includes: LS600, LS600LD, LS610, RSU800	Remove and inspect the sensor for physical damage or debris that may obstruct the movement of the float. Test the sensor by manipulating the float. Verify the alarm received on the system display is as expected. Clean sensor to remove any contaminants, as necessary.
HS100, HS100D	<ol style="list-style-type: none"> 1. Flip the bottom cap upside-down to confirm the operation of the float switch 2. Refer to the documentation supplied with the sensor for proper testing procedures for the hydrocarbon sensing polymer strip. Contact Pneumercator for additional information.
HS100ND	Refer to the documentation supplied with the sensor for proper testing procedures. Contact Pneumercator for additional information.
Remote Alarms: Includes all RA and select LC1000 systems	Press the Test button associated with the remote alarm. It is also recommended to simulate an alarm on the controlling system to verify the operation of the remote alarm.
Remote Displays: Includes TD1000 and ETD1000	Confirm the display of the TMS matches what is displayed on the Remote Display. Press the Test button to confirm proper operation of the display and integrated horn.