



# SERVICE BULLETIN

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**PRODUCTS AFFECTED:** Cyl-Tel® Gauges on Perma-Cyl® Vessels

**DATE:** October 8, 2003

**REFERENCE:** TSB-Z01-005

Chart has discovered a potential service issue with the Cyl-Tel electronic level gauge that is supplied with most Perma-Cyl models. The Cyl-Tel gauge is supplied with a 9-volt battery that enables liquid level readings in a variety of user-selectable units. A 9-volt battery eliminates the requirement of a constant 12-volt power source to obtain periodic readings for installations without telemetry. Historically, the 9-volt batteries have been installed at our manufacturing facility as part of the final Perma-Cyl assembly. In early 2003, Chart instructed the Cyl-Tel gauge supplier to begin installing the 9-volt battery during gauge assembly. Chart maintains a detailed written specification with this supplier regarding all aspects of the gauge assembly including proper fastener tightening. Unfortunately, it was recently discovered that the fasteners joining the faceplate and the housing were not properly tightened on some Cyl-Tel gauges. With the fasteners properly tightened, the Cyl-Tel gauge is NEMA 4 rated and thus suitable for outdoor installations.



The photograph above depicts the fastener locations on the Cyl-Tel gauge. Chart has implemented a corrective action process with the supplier to insure proper fastener tightening on all new Cyl-Tel units. Additionally, Chart's quality control department will be conducting 100% inspection on all new Cyl-Tel gauges to provide additional assurance that fasteners are secured properly.

Chart recommends the following procedure on all Perma-Cyl units with Cyl-Tel gauges that were purchased between February 5, 2003 and September 12, 2003:

1. Verify operation of the Cyl-Tel gauge by pressing the “ON” button. The gauge should boot up and display the liquid level in one of the selectable units.
2. If a number is NOT displayed on the LCD screen within a few seconds, proceed to step 3. If a number is displayed, tighten all four screws (as shown on page 1) with a Phillips screwdriver. No further action is required.
3. With a Phillips screwdriver, loosen all four screws located in the corners of the gauge faceplate. Remove the faceplate and inspect the interior of the gauge housing for moisture. If moisture is discovered inside the gauge, proceed to step 7. If no moisture is found, proceed to step 4.
4. Remove the 9-volt battery and replace with a new 9-volt battery. Make sure the wiring connection from the sensor block is attached to the circuit board at the location labeled J3. Reattach the faceplate and tighten all four screws.
5. Verify operation of the Cyl-Telk gauge by pressing the “ON” button. The gauge should boot up and display the liquid level.
6. If a number is NOT displayed on the LCD screen within a few seconds, proceed to step 8. If a number is displayed and the gauge appears to be reading accurately, no further action is required.
7. Dry the inside of the gauge by wiping with a clean cloth or purging with low-pressure nitrogen. Proceed to step 4.
8. Call 1-800-400-4683 and be prepared to provide the Perma-Cyl serial number (found on the data plate). You will be supplied with a new Cyl-Tel gauge and an RMA number to return the defective gauge.