

SERVICE INSTRUCTIONS FOR PETRO-METER 1329 GAUGE

SERVICE INSTRUCTIONS MODEL 1329 Tank Gauge



www.petro-meter.com

Petro-Meter 1329 series

Service Instructions

HOW TO DETERMINE IF A PETRO-METER IS IN GOOD WORKING CONDITION

First check that the proper scale is in gauge. Reading errors are often caused by nothing more than the wrong scale for the product being measured. The degrees A.P.I. that the scale is calibrated for is marked in a box at lower left side of the scale. This number, 30:00, 35:00, etc., should correspond to that of the tank product. Several common products are listed in chart on Bulletin 2004-M. If number on scale does not match with the degrees A.P.I. for your tank liquid, notify us and we will send the proper inch scale at no charge. DO NOT CONFUSE gallon discrepancies with malfunctions of the gauge. When checking gauge readings always compare inch readings to stick readings to determine if gauge is reading accurately. Gallon discrepancies are mathematical errors caused by applying wrong measurements of the tank to calculate the inch to gallon conversion chart.

NOTE: Procedure outlined below will indicate whether gauge is operating correctly or not. If gauge passes these tests it is operating correctly and the cause of any problem will be found outside the actual operation of the gauge. Some of these are, incorrect scale, air leaks at fittings, pitched tank, blocked air bell or transmission line, air bell not at correct distance from bottom of tank, incorrect or diluted indicating liquid, etc.

1. Leave gauge mounted or hold vertically.
2. Make certain aerator is in open (up) position. If not, unscrew counter-clockwise.
3. Make sure scale is inserted correctly in gauge. See instructions on bottom of scale.
4. Disconnect the copper tube transmission line at the elbow fitting. As soon as the fitting is loose, the Red-X liquid should drop all the way down to first (or empty) line on scale.
 - a) LIQUID AT FIRST (OR EMPTY) LINE – Proceed to step 5.

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- b) LIQUID DROPS BUT FALLS BELOW FIRST (OR EMPTY) LINE – check for sign of lost liquid through aerator and at bottom of gauge. If it appears that liquid was lost through aerator only, with no sign of liquid at bottom of gauge, add Red-X liquid to bring level to first line and proceed to step 5. If it appears that liquid was lost through bottom of gauge, gauge is probably leaking internally and should be replaced.
- c) LIQUID DROPS BUT IS ABOVE FIRST (OR EMPTY) LINE – this indicates that tank product or condensate has entered the gauge. Clean and refill as per instructions on inside back cover and proceed to step 5.
- d) LIQUID FAILS TO DROP – this indicates a blockage of the aerator vent. Take the following steps until liquid drops, then proceed to step 5.

Rotate aerator and check if the vent hole on side of cylinder is open. Pierce through with a pin or wire if clogged.

Push aerator all the way down and screw clockwise all the way, then re-open. This will open check valve if it is stuck closed.

Unscrew aerator and remove. Install new aerator if liquid drops. Specify Part No. 1329-Pa. If liquid does not drop, drain liquid through aerator opening and clean and refill as per instructions on inside back cover.

- 5. Place finger tightly over the elbow fitting. Pump aerator once. You should feel a “compression of air” caused by this pumping, and the liquid should rise to some height. If the aerator does not produce this compression or does not operate smoothly, without sticking, replace it with a new one. Specify Part No. 1329-Pa. If aerator is acting normally and raised the liquid to some height, the liquid should stay put without dropping. If reading does not hold while finger is tightly over elbow fitting, the gauge has an internal air leak and should be replaced. If liquid does not drop when finger is removed, check as per step 4d.
- 6. If gauge reading holds when aerated while elbow fitting is plugged, and drops to empty line when released, it is operating correctly. With the exception of incorrect or diluted indicating liquid or wrong scale any other problem is caused by something outside of the gauge.

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7. Connect gauge back to the line and make sure that the connection is made air tight. When connected properly the initial aeration should require about 25 strokes to purge all liquid from the tank assembly bell and tube. The liquid in the gauge should rise to the height corresponding to the tank contents level, and stay there, no matter how much you pump the aerator. Make sure the tank is not abnormally filled (liquid in the fill line will show as if the tank would be deeper).
8. If the gauge liquid keeps rising after each pumping until it is well above known tank level (avoid "flooding" gauge, if possible), it indicates that the transmission line, tank air bell or tank vent is blocked. Once it is determined that the tank vent is clear, disconnect the transmission line from gauge and blow clear with compressed air or Petro-Meter Model 1503 Blow-Out Gun. See back cover.
9. If gauge will not hold a reading after aeration it indicates an air leak anywhere between the gauge and tank air bell. Leaks occur often in the line when unions were used and become loose with time or connection at elbow fitting is not made up properly. The leak must be found and stopped.
10. If the gauge refuses to produce a consistent reading but keeps going up and down within several inches, this is an indication of "U" traps in the transmission line filled with tank product or condensate. Transmission line must be blown clear and traps eliminated if possible. If not possible, periodic blowing out of the line should be performed.
11. A constant error of a fixed amount of inches indicates that the tank assembly air bell is not at correct distance from bottom of the tank (normally 2", see first inch reading on scale) or that the tank is pitched with the stick well some distance from the tank assembly location. Any constant inch reading error can be corrected by moving the scale so that the gauge reading and stick reading agree. Note that this "fix" will only produce accurate inch readings but the gallon figures will not be useable.

REFILLING INSTRUCTIONS FOR MODEL 1329 PETRO-METER

A. To Fill PETRO-METER:

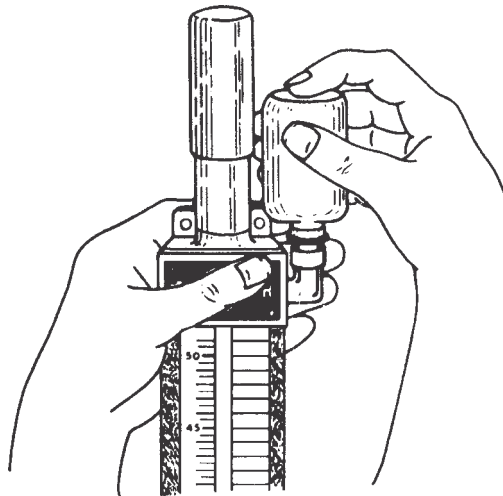
1. PETRO-METER must be mounted on wall or held in upright position.
2. Aerator in open (up) position. If closed, unscrew counter-clockwise until aerator pops up.
3. Insert tip of bottle into elbow fitting on side of PETRO-METER. Hold tip firmly and tightly against the fitting... squeeze gently (DO NOT SQUIRT) and discharge entire contents into PETRO-METER.
4. IMPORTANT: Also read part "D" and "E" of this bulletin.

B. To Clean and Refill A PETRO-METER in Service:

1. It is recommended that Aerator be replaced if PETRO-METER is to be cleaned with solvents.

IMPORTANT: Only solvents that are compatible with the Butyl U-cup in aerator, such as alcohol should be used, if aerator is not replaced. Replacement aerator comes with a convenient hexagonal base adaptor, so that no special tools are required to install it. The old aerator can be removed with a pipe wrench. Specify Part No. 1329-Pa.

(over)



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2. Disconnect from ¼ inch transmission tube and dismount PETRO-METER.
3. Pour old Red-X indicating liquid through elbow into glass or polyethylene container. Dispose as instructed in Part "E."
4. Wash out PETRO-METER using alcohol, trichloroethylene or other organic solvent. See B1 above. Aerate several times to circulate solvent.
5. Hold thumb over elbow fitting tightly, then aerate. This will bring solvent up in glass. If aerator is not being replaced, be careful not to bring liquid too high as it will flood aerator.
6. Empty PETRO-METER and repeat washing if necessary.
7. If aerator is being replaced, remove old aerator. Thoroughly dry inside of PETRO-METER by blowing out with compressed air. It is important that PETRO-METER be completely dry as solvent left in gauge will dilute new Red-X liquid causing inaccurate readings.
8. Refill as instructed above or if aerator has been removed, refill can be poured through aerator opening. See also part "D" and "E" of this bulletin.
9. Install new aerator. See instructions supplied with aerator.

C. How to Order Proper Charge of Red-X Liquid:

1. Order Red-X refills according to the Type Number which is stamped on the bottom plate of each gauge. For Types 112, 114, 225 and 227 specify Red-X Refill No. 1122; for Types 339 and 3312 specify Red-X Refill No. 3392. For non Freeling Indicators specify 112A-227A part #1178 and for 339A part #3374.

D. Checking For Proper Amount of Red-X Liquid in PETRO-METER:

1. Hold PETRO-METER vertically, preferably mounted, and check Red-X liquid level at the First (or empty) line while transmission line is disconnected. Make sure the scale is inserted correctly in gauge. See instructions on bottom of scale.
2. When level is at empty line there is sufficient liquid in the gauge.
3. If it is not, add or drain Red-X to reach empty line.
4. The Elbow (tubing connection) of the indicator is the only place to drain or fill liquid.

E. GENERAL NOTES:

If spillage occurs, wipe up with trichloroethylene, benzine or other organic solvent. Remove Red-X from skin – use soap and water. Red-X liquid should not be discarded through sink drains. It will corrode them. Mix with sawdust or earth and discard with rubbish.

RED-X INDICATING LIQUID (ACETYLENE TETRABROMIDE)

DANGER – MAY BE FATAL IF INHALED – MAY CAUSE IRRITATION –
Do Not Breathe Vapor – Avoid Contact with Eyes, Skin or Clothing –
Use Only with Adequate Ventilation – Keep Container Closed – Wash
Thoroughly After Handling.

If affected by vapors, immediately remove person to fresh air, keep him warm and quiet and get medical help promptly. If breathing stops, start artificial respiration. In case of contact, flush eyes or skin with plenty of water for at least 15 minutes.

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Manufacturers of quality liquid level measurement and control systems.

1329 Line - Revised 09/01/08

GUARANTEE

PETRO-METER CORPORATION guarantees all articles purchased for a period of one year after date of shipment from vendor's plant to be free from any defects in material or workmanship and conforming to the requirements of the applicable specifications.

No allowance will be made for repairs, alterations, or replacements, unless made by written consent. The vendor shall not be responsible for work done, material or parts furnished or repairs made by others. There are no warranties, expressed or implied, except the above. The vendor shall not be liable on any other ground whatsoever, except as herein stated.
