

NO. 175 MGM TANK GAUGE

OPERATING INSTRUCTIONS

NO. 175 MGM TANK GAUGE is designed to give a very close measurement of the liquid height when accurately installed and properly operated. Smooth operations and positive control are outstanding features of this gauge. Operation should be carried out step by step in the order described below:

1. TO REMOVE THE HOUSING, grip the handles of the housing and lift straight upward. The upward travel of the housing cage to which the handles are directly attached releases the housing dogs from their grip on the housing flange and allows the housing to be removed without the necessity of unscrewing or turning. NEVER TRY TO REMOVE THE HOUSING BY LIFTING THE HOUSING CAP OR BY PULLING ON THE HOUSING CHAIN. THIS COULD BREAK THE HOUSING CAP CHAIN RING. (See Note 2 for lock type housing).
2. TO GAUGE. (Be sure not to stand directly above the gauge when performing this operation.)
 - (a) Move the packing nut lever in a counterclockwise direction, looking from above, as far as it will go. This releases the grip ring located just above the packing.
 - (b) Press the rod latch downward as far as it will go.
 - (c) Raise the rod sufficiently high that the lower end will be well above the liquid level.
 - (d) Turn the stem of the control valve counterclockwise to open. KEEP TURNING until the check valve opens and fluid flows from the orifice in the outlet of the control valve. When the valves are fully open, the check valve on NO. 175 MGM TANK GAUGE will not close prematurely, regardless of the pressure in the tank.
 - (e) Push the gauge rod downward slowly. When the fluid intake on the lower end comes in contact with the liquid level, liquid instead of vapor will spurt from the orifice.
 - (f) "Fish" the gauge rod by moving it upward and downward several times over short distances above and below the liquid level until the exact liquid level is determined by the vapor-liquid flow.
 - (g) Read the graduation at the top of the pointer edge. This reading indicates the height of liquid in the tank, measured from the bottom of the tank, or the depth of the vapor space above the liquid, measured from the 100% full level, depending on whether the gauge rod is graduated for innage or outage measurements. Graduations on an innage rod increase downwardly and graduations on an outage rod increase upwardly. Gauge rods may be graduated in either American or Metric Systems.

NO. 175 MGM TANK GAUGE OPERATING INSTRUCTIONS (Continued)

3. TO CLOSE.

- (a) Turn the control valve stem clockwise as far as it will go. This will allow the check valve on the bottom end of the gauge rod to close by spring action, and final further movement of the control valve stem clockwise will positively seal the flow at the control valve. Close the control valve TIGHTLY, but do not use a wrench.
- (b) Press the rod latch downward as far as it will go.
- (c) Push the gauge rod completely down until the control valve rests against the pointer.
- (d) Turn the packing nut lever clockwise until the grip ring tightens on the gauge rod and further movement of the packing nut lever becomes hard. The grip ring, when tightened, SERVES AS AN ADDITIONAL PRESSURE SEAL.
- (e) Lift the housing by THE HANDLES and set it in place over the gauge. When the handles are released, the downward travel of the housing cage will force the housing dogs inward so they will grip the housing flange securely and hold the housing in latched position.

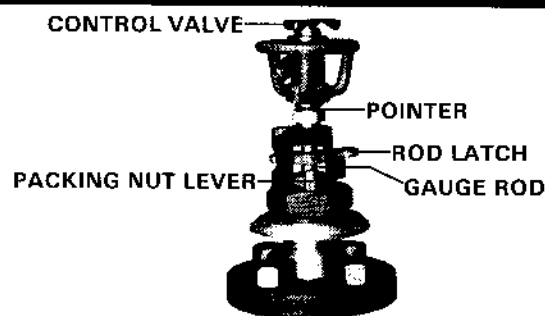
NOTES

(These notes apply to operating instructions only.)

1. TO SET THE GAUGE FOR FILLING THE TANK. If it is desired to locate the gauge rod vertically at a definite position, such as at the maximum filling level, press the rod latch and move the gauge rod to the desired position as indicated by the graduation at the pointer edge. Release the rod latch and turn the packing nut lever clockwise until the grip ring securely grips the gauge rod. The rod latch will hold the gauge rod from being forced upward by pressure within the tank and the grip ring will hold the gauge rod from dropping to lower position by its own weight. If this position is to indicate the maximum filling level, the control valve can be opened and the tank filled until liquid instead of vapor spurts from the orifice in the control valve. Then the gauge rod should be "fished" as explained above in Paragraph 2 (f), to make sure the tank has been filled to the proper level.
2. LOCK TYPE HOUSINGS have a lock lever on the housing cap near the top of the housing which, when swung inwardly against the housing cap, prevents upward movement of the housing cage and prevents removal of the housing from the gauge. A padlock will hold the lock lever in locked position. To remove a lock type housing, unlock and remove the padlock, swing the lock lever outward, grip the housing handles, and lift straight upward. To replace a lock type housing, lift the housing by the handles, set the housing in place on the gauge, release the handles, swing the lock lever inward against the housing cap, and attach the padlock.
3. TO TAKE SAMPLES THROUGH THE CONTROL VALVE. Liquid samples can be taken from any level within the tank which the gauge rod will reach. Sample containers can be attached to the 1/4 inch female pipe thread in the outlet of the control valve on the top end of the gauge rod. NOS. 26A or 26C MGM FLEXIBLE CONNECTING HOSES, AND NO. 98 MGM ADAPTERS, are especially suitable for attaching sample containers. If sample containers are very large, the orifice can be removed from the control valve to allow faster flow. The orifice is very small and care should be taken against losing it. Be sure to replace the orifice after filling the sample container.

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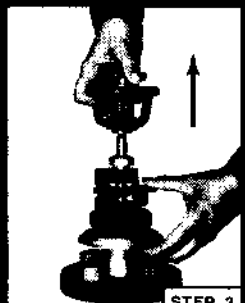
OPERATING INSTRUCTIONS



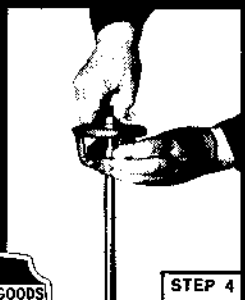
STEP 1



STEP 2



STEP 3



STEP 4

STEP 1 — GRIP HANDLES AND REMOVE HOUSING.

STEP 2 — MOVE PACKING NUT LEVER IN A COUNTER-CLOCKWISE DIRECTION.

STEP 3 — PRESS ROD LATCH AND PULL GAUGE ROD UPWARD UNTIL IT IS ABOVE THE LIQUID.

STEP 4 — OPEN CONTROL VALVE COUNTERCLOCKWISE. **KEEP TURNING** UNTIL VAPOR FLOWS FROM VALVE ORIFICE.

STEP 5 — PUSH GAUGE ROD DOWN SLOWLY UNTIL FLOW CHANGES TO LIQUID.

STEP 6 — "FISH" GAUGE ROD BY MOVING IT UPWARD AND DOWNWARD SEVERAL TIMES OVER SHORT DISTANCES ABOVE AND BELOW THE LIQUID LEVEL UNTIL THE EXACT LIQUID LEVEL IS DETERMINED BY THE VAPOR-LIQUID FLOW.

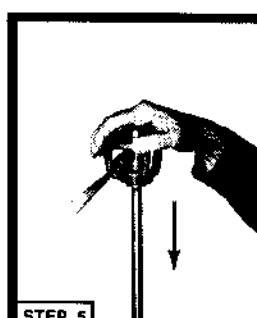
STEP 7 — CLOSE CONTROL VALVE CLOCKWISE. SET FINGER TIGHT ONLY. DO NOT USE WRENCH.

STEP 8 — READ GRADUATIONS AT TOP OF POINTER.

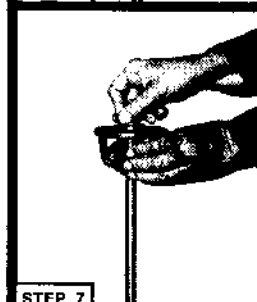
STEP 9 — PRESS ROD LATCH AND PUSH GAUGE ROD COMPLETELY DOWN.

STEP 10 — TIGHTEN PACKING NUT LEVER CLOCKWISE. (REVERSE OF STEP 2)

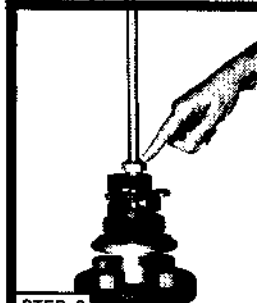
STEP 11 — REPLACE HOUSING. (REVERSE OF STEP 1)



STEP 5



STEP 7



STEP 8



STEP 9



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