818 Clock Gauge

Installation, Maintenance & Operating Instructions

The 818 Clock Gauge is designed to be used to measure liquid level in an aboveground storage tank. The gauge mounts on top of the tank and is activated by a float connected to a cable.

Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Installation

Warnings

• **Fire Hazard** – Death or serious injury could result from spilled liquids.
• Any modification to this gauge other than those stated in these installation instructions will void the product warranty.
• This device is intended to be used as a liquid level indicator to the operator and should not be the only system in place to prevent a tank from overfilling. It is the sole responsibility of the operator to continuously prevent any spillage regardless of the situation or status of the gauge.
• Install in accordance with all applicable local, state, and federal laws.
• For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
• Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing installation. Vapors could catch fire or cause an explosion. **Avoid** sparks, open flame, or hot tools when working on gauge.

Steps

1. Verify contents of box. You should have received the gauge, float, installation instructions, and re-order/overfill stickers. Inspect the items for shipping damage. **DO NOT** use if damage is found. **DO NOT** pull and release cable like a Yo-Yo. This can cause the spring to unload. **ALWAYS** hold onto cable and move it in a slow steady motion.
2. Locate the opening on the top of the tank where the gauge is to be installed. If possible, select a location away from the fill port to avoid excessive turbulence from affecting the float. Also make certain that there are no objects inside the tank, near the selected opening, upon which the float and cable could get tangled.
3. Once an opening is selected, stick the tank to determine the actual level of liquid in the tank. Record this level as you will need it to set the gauge once it is installed.
4. Apply pipe dope or Teflon tape to the male threads on the gauge. If you have a gauge with female threads, apply the pipe dope or Teflon tape to the male threads of the pipe on the tank. **DO NOT** get pipe dope on the cable of the gauge.
5. Attach the float to the snap on the end of the cable. Make sure the snap clip is securely closed.
6. Slowly lower the float into the tank. Guide the cable through your fingers letting the cable slide through slowly. **DO NOT** allow the float to free fall into the tank as this will cause the cable to come off of the pulley mechanism and render the gauge inoperable.
7. Once the float is resting on the liquid level (or tank bottom if the tank is empty) thread the gauge into, or onto, the tank fitting. Use a pipe wrench or strap wrench, on the large hex at the bottom of the gauge, to tighten the gauge into, or onto, the tank fitting.

8. Remove the retaining ring and back metal cover from the gauge. Hold the large pulley wheel in place and loosen the nut (Fig. 1). Insert a small screwdriver into the slot on the end of the shaft. Rotate the shaft with the screwdriver, which will move the gauge hands, until the gauge hands on the clock read the level that you recorded earlier (see Fig. 2 and 3).

Fig. 1

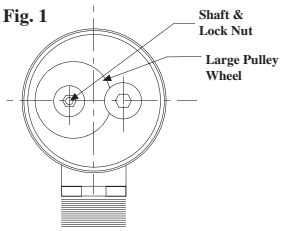


Fig. 2

STANDARD VERSION
Small hand = Feet
Large hand = Inches

EXAMPLE:
Clock reads 9:27;
Liquid level is 9 feet,
5.25 inches.

Fig. 3

METRIC VERSION
Small hand = Meters
Large hand = Centimeters (x10)

EXAMPLE:
Liquid level is 2 meters,
40 centimeters.

9. Once you have the hands in the correct position, hold the screwdriver firmly in position and tighten the nut on the shaft.
10. Reinstall the metal back plate making certain the side with the date label is positioned to the inside. Replace the retaining ring making certain the ring snaps all the way down into the groove. You may need to use pliers to squeeze the ring into the groove. You will know that the retaining ring is correctly squeezed into place if the ends of the retaining ring do not overlap.
11. Rotate the entire gauge so the face can be read by the operator on the ground.

Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Maintenance

This gauge should be maintained per applicable codes or at least once each year.

WARNINGS

• **Fire Hazard** – Death or serious injury could result from spilled liquids.
• You must be trained to maintain this gauge. **Stop** now if you have not been trained.
• For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
• Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing maintenance. Vapors could catch fire or cause an explosion. **Avoid** sparks, open flame, or hot tools when working on gauge.

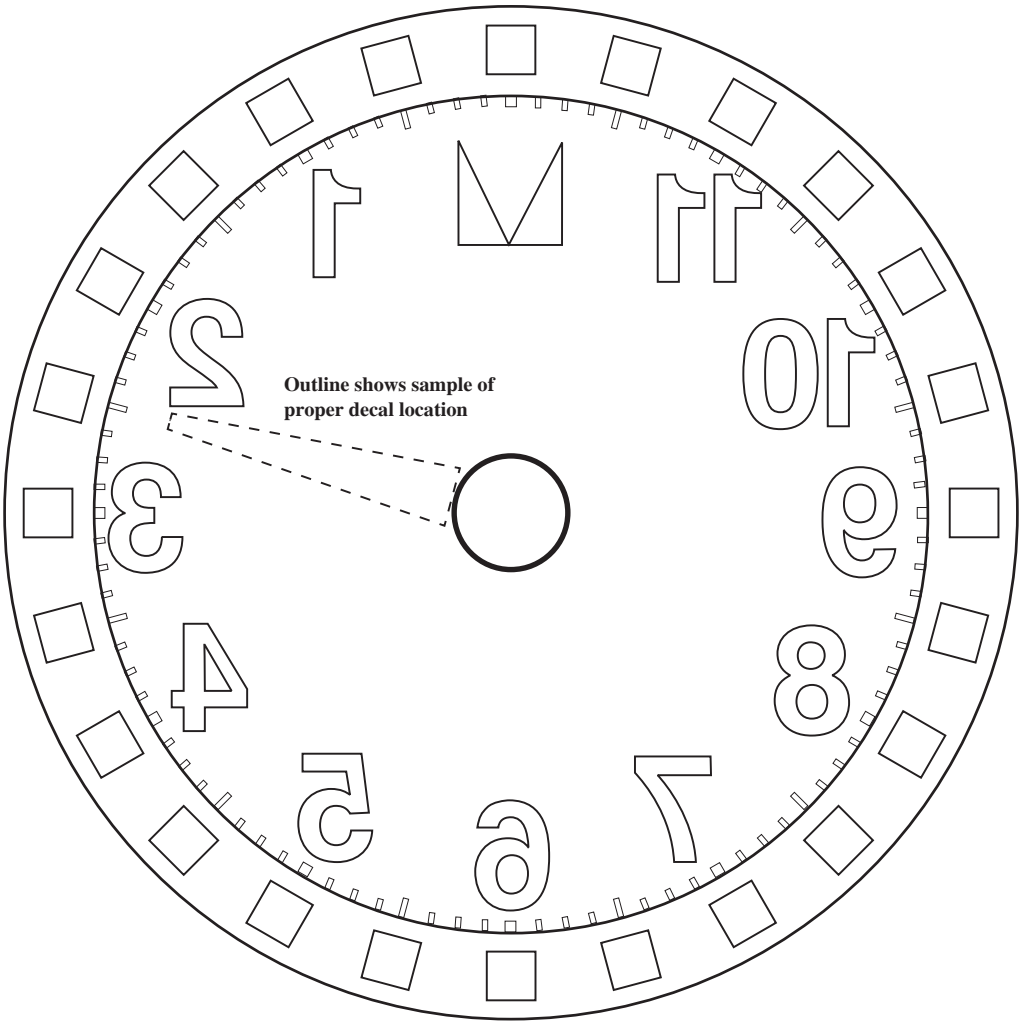
Steps

1. Visually inspect the gauge for damage or excessive wear. If either is found replace the gauge.
2. If necessary clean the clear front cover with a damp cloth.
3. Manually stick the tank to verify gauge readout. If readings do not match adjust the gauge setting according to the installation instructions.

Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

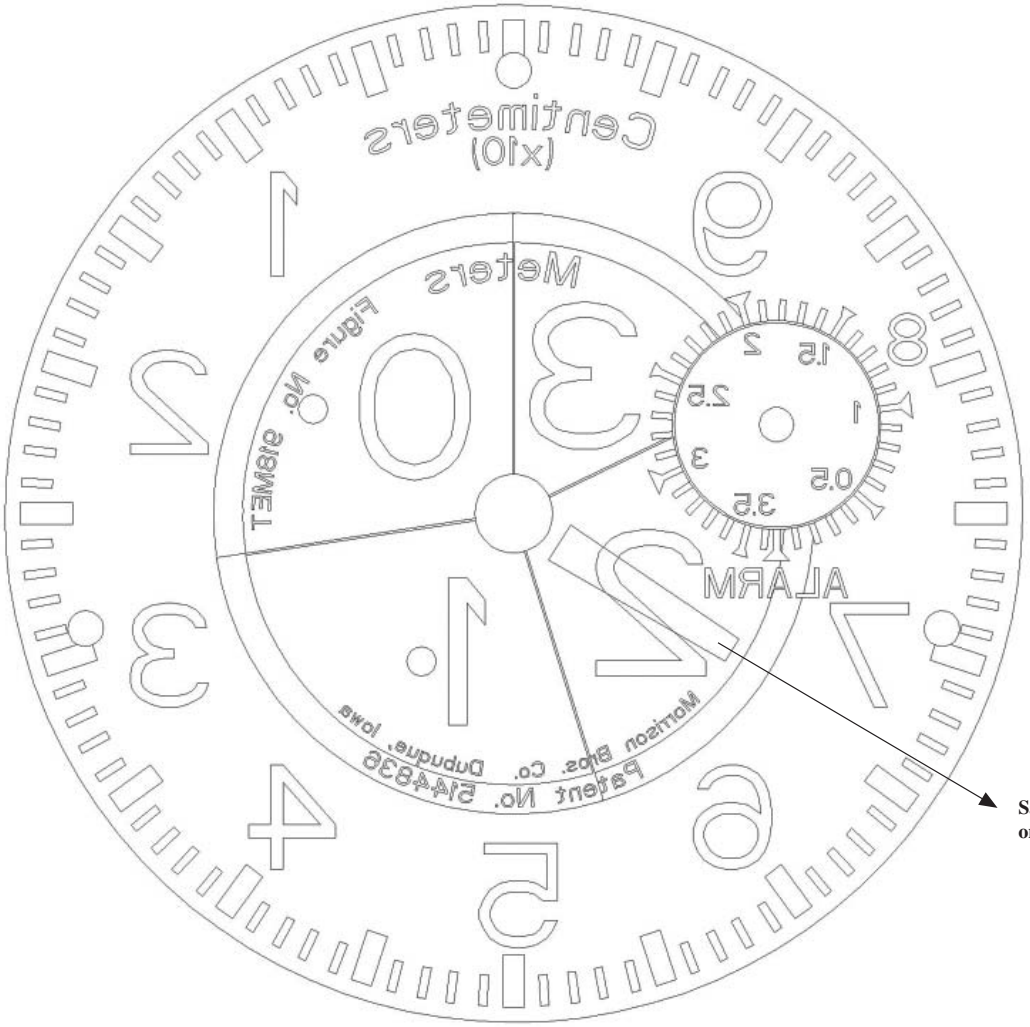
WARRANTY: If you believe this valve has a defect due to material or workmanship, please contact Morrison for a return authorization. All products are thoroughly tested before shipment. Material found to be defective in manufacture will be replaced or repaired at our discretion. Claims must be made within one year from the date of installation. Morrison will not allow claims for labor or consequential damage resulting from purchase, installation, or misapplication of the product.

Optional Over-fill and Re-order Sticker Installation (Standard)



Steps

1. Remove front (clear) lens cover.
2. Place lens onto template aligning outside edge to outside circle.
3. Remove decal backing and place decal on lens as shown on template. Align wide end against inside circle and narrow end pointing toward level you want to indicate. (NOTE: template is set for inside reading out and lettering on decal will read backwards.)
4. Decals represent small hand on clock which indicates feet. If both high level and low level decals are used, make sure each points to the correct level you want to indicate.
5. Reinstall lens cover with decals on the inside. Make sure indicators are in correct location and wording is readable before putting gauge in service.



Sample of decal (place on inside of lens cover)

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5. Reinstall lens cover with decals on the inside. Make sure indicators are in correct location and wording is readable before putting gauge in service.