PROPANE ENERGY SOLUTIONS
100 RegO Drive, Elon NC 27244
www.regoproducts.com

July 2024
Rego Field Topics
Rotogage® Rotary Dip tubes Operation & Maintenance

Field Topics are intended to provide useful information to the network of authorized LP-Gas and Anhydrous Ammonia distributors regarding the proper use of RegO® products. **Warning Bulletins** covering many of the hazards involved are available from RegO for more detailed information. These bulletins can be found in our **L-500, L-102 and NH3-102** catalogs. Neither the Field Topic or the Warning Bulletins are intended to conflict with federal, state, or local ordinances and/or regulations, which should be observed at all times. This information also is not intended to be a substitute for or to supplement any training in the safe handling and use of propane and related equipment, as required by any applicable law. By providing this material, ECI assumes no responsibility for providing any such training. Only individuals properly trained in the safe handling and use of propane and related equipment should be permitted to do so, and by providing this information, ECI does not assume responsibility for providing such training.
For more information on LP Gas system requirements, refer to Liquefied Petroleum Gas Code (NFPA 58), National Fuel Gas Code (NFPA 54), National Propane Gas Association Safety Handbook, the RegO LP-Gas Serviceman's Manual L-545, RegO catalogs L-500/L-102/NH3-102, ANSI K61.1 Safety Requirements for Storage and Handling of Anhydrous Ammonia, as well as any applicable local codes and ordinances.

What Are Rotogage® Rotary Dip tubes?

The Rotogage® is a rotary dip tube designed to provide a determination of the contents of LP-Gas or Anhydrous Ammonia containers.

A9090 Series

It is available for both 1" NPT (F) standard couplings on large mobile or stationary containers, and 3/4" NPT (F) standard couplings on smaller mobile or stationary containers. The Rotogage® may be fitted in the side or end of containers having ellipsoidal or hemispherical ends. A dip tube, which is provided, is cut to length to provide the correct clearance from the inside of the container.

2070 Series

An adjustable gland is provided to seal the rotating stem and the lever which indicates the level of the liquid. It is positioned onto the stem by means of a key in keyways both in the lever and stem. The vent screw assembly may be easily replaced. The dial is held in position by means of a nut. This allows correct alignment during installation to insure accurate readings.

NOTE: Local, provincial, state and/or country codes, ordinances, and regulations sometimes do not permit the filling of containers with Rotogages® -- requiring the use of a fixed level gauge instead. Always consult these requirements.

Ordering a Rotogage® Assembly

When ordering a Rotogage you must order the following components:

1. Rotary Gauge
2. Dial
3. Dip tube

Before ordering you will need the follow information for the container to determine the proper components.

1. service(mobile or stationary)
2. Inside diameter
3. NPT connection.

Installation

The Rotogage® may be fitted in the side or end of containers having ellipsoidal or hemispherical ends. Please follow the steps below:

1. Cut the dip tube to length. A dip tube, which is provided, is cut to length to provide the correct clearance from the inside of the container. The following formula can be followed for proper dip tube selection.

$$\text{Dip Tube Length} = \left(\frac{\text{Continer I.D.}}{2}\right) - 5\ 3/4"$$

2. Clean dip tube and prep for soldering into the Rotogage® stem. Use a quality flux and solder to attach the dip tube to the stem.
3. Verify the dip tube is pressed fully into the Rotogage® stem flush against the bottom of the predrilled hole.
4. Install using a suitable pipe joint compound for use in LP-Gas or NH3. Apply to the male NPT threads of the Rotogage®. Engagement should be 1-1/2 to 2 wrench turns beyond hand tight.
5. After installation, check for leakage using a high quality leak detection solution.

Operation

Note: The accuracy of the Rotogage® depends on the level of the container and the accuracy of the installation.

To Operate the Rotogage®

1. Rotate the Lever to 100%
2. Open the Vent valve to vent vapor.
3. Rotate the tube slowly in either direction – moving from the top of the container down towards the liquid space.
   Stop rotation when discharge changes from vapor to liquid and note the level of the gauge.

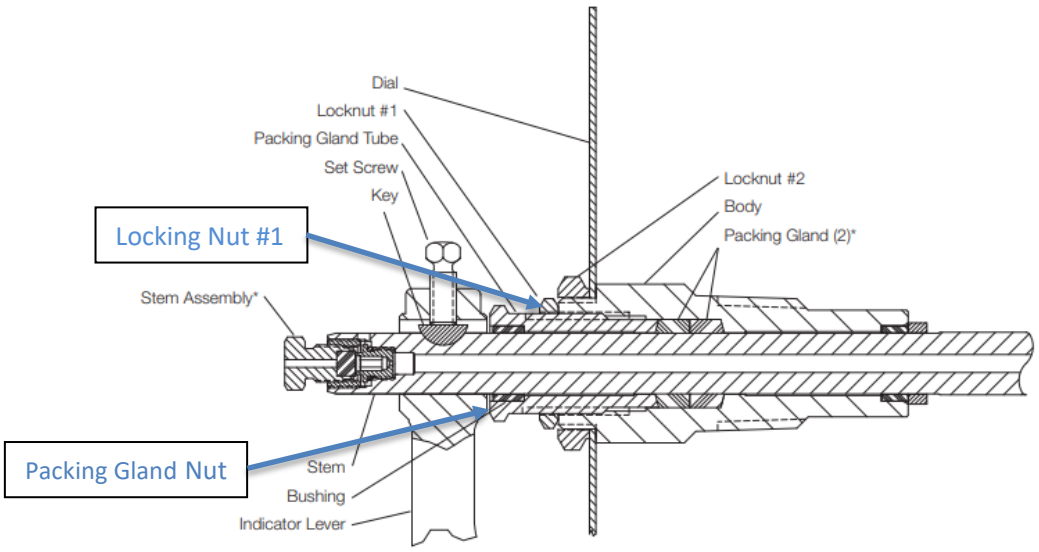
4. Repeat step #3 in the other direction and average the 2 values to get the liquid level.

NOTE: When using the Rotogage® for the first time it is good practice to take a second reading by rotating the lever in the opposite direction. The reading should be the same. If it is not the same, the dial is positioned incorrectly.

Maintenance

The Rotogage® should be checked regularly to verify a leak tight seal. Inspection should take place when other valves on container are inspected – at least once a year.

Leakage is prevented by way of an adjustable gland sealing the rotating stem and lever which indicates the liquid level. If leakage is found, loosen the Locking Nut #1 and tighten the Packing Gland Nut. Finally, retighten the Locking Nut #1. This will normally stop the leak, but if it does not, follow your company's standard operating procedure. The packing gland nut should be tightened sufficiently to prevent the Rotogage® from rotating under its own weight but not enough to make it difficult to operate. The dial is held in position with a nut allowing correct alignment in the installation process assuring accurate readings. If dial adjustment is needed, carefully align the dial to ensure accurate readings.



Repair kits are available for the stem & packing gland assembly.

Rotogage Part Number	Repair Kit Part Number	Components
A9090 Series	A9090-50	Stem Assy & packing gland