

# ***T&T Pump Co., Inc.***



**Field replacement of the T&T vented oil gauge  
with the Trico Opto-Matic constant level oiler  
on the D Frame bearing housing**



Rev. 5.31.01

\*The E, GE, and G Frame bearing housings are also referenced

# ***T&T Pump Co., Inc.***



## **Contents**

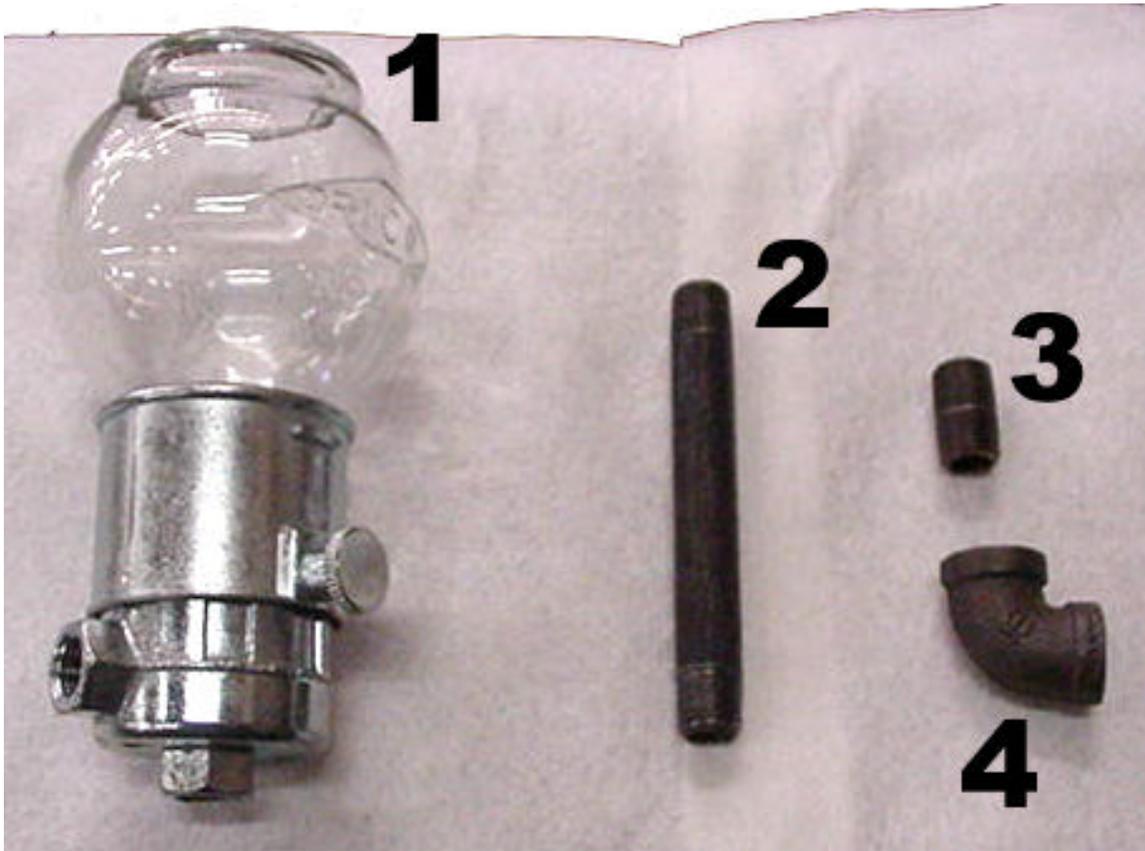
**Component description**

**Removal of T&T vented oil gauge**

**Installation of Trico Opto-Matic constant level oiler**

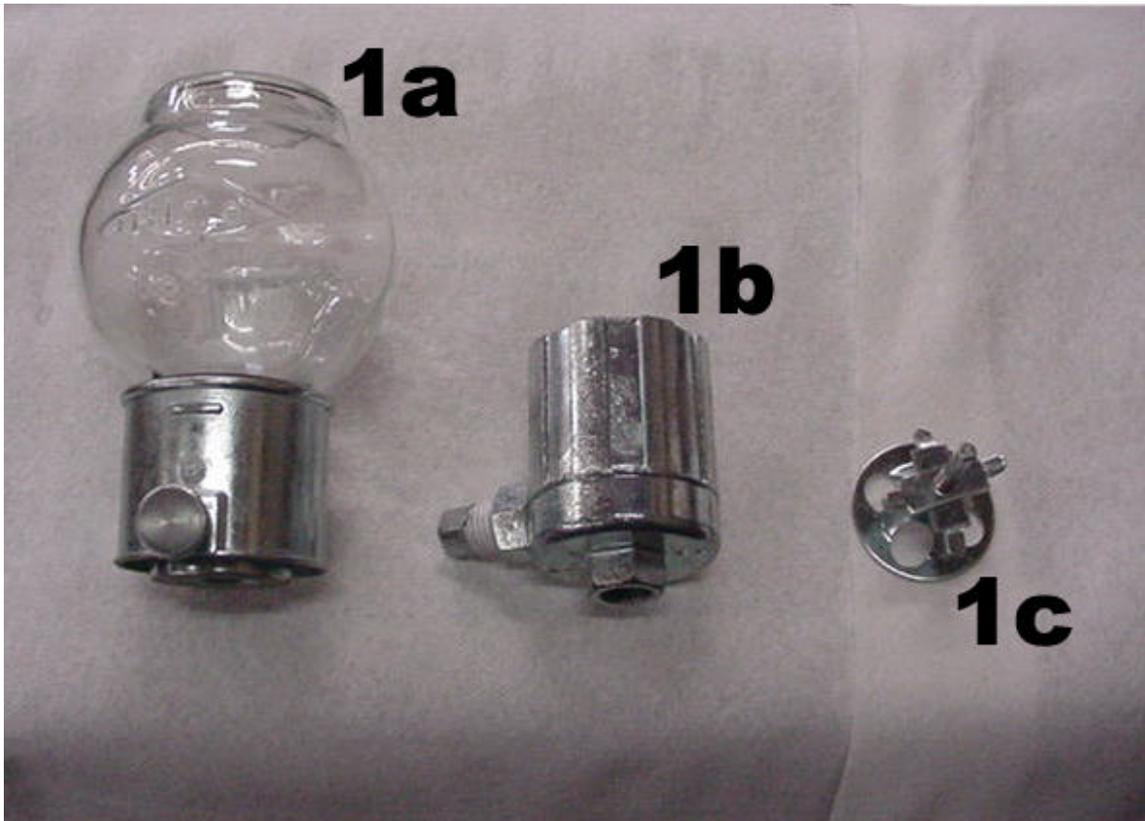
**Special notes on operation**

**Component description**



1. Trico Opto-Matic constant level oiler (8 oz capacity)
2. 1/4" x 4" NPT nipple
3. 1/4" x 1" NPT nipple
4. 1/4" NPT elbow

# ***T&T Pump Co., Inc.***



- 1a. Trico Opto-Matic glass globe assembly (reservoir)
- 1b. Trico Opto-Matic base assembly
- 1c. Trico Opto-Matic level adjuster assembly

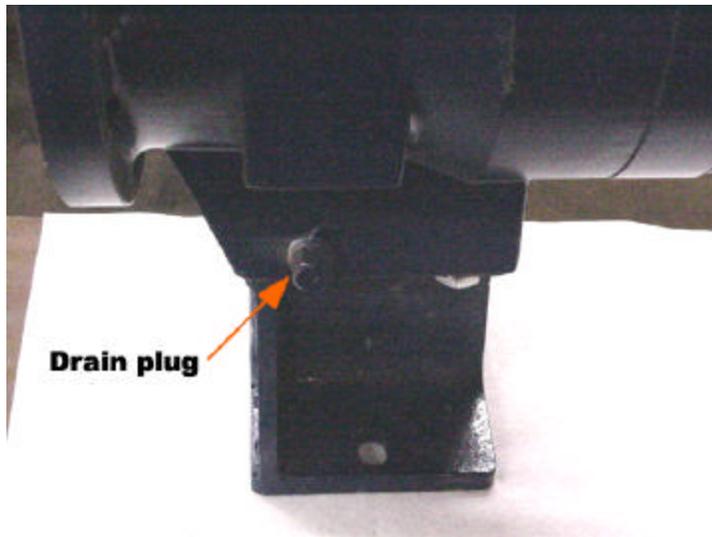
## **Removal of the T&T vented oil gauge**

**Warning: Follow proper lock-out/ tag-out procedures before servicing any equipment.**

1. The vented oil gauge is pre-marked for the proper oil level. Make reference of the measurement from this mark to the top surface of the pump base. This measurement will be used to set the oil level and will aid in properly adjusting the new Trico Opto-Matic oiler to the proper oil level setting.



2. Remove the drain plug from the bearing frame sump and allow the oil to drain into a suitable container. The capacity of the D Frame bearing housing is 16 ounces at operation level. The capacity of the E and GE Frame bearing



# ***T&T Pump Co., Inc.***

housing is 12 ounces at operation level. The capacity of the G Frame bearing housing is 16 ounces at operation level.

3. Once the oil has completely drained, replace the drain plug.
4. Remove the vented oil gauge from the bearing frame sump. The vented oil gauge is connected to the bearing frame via a  $\frac{1}{4}$ " NPT nipple. The vented oil gauge and nipple may be removed as an assembly by unscrewing in a counter clockwise direction. A small pipe wrench may be needed.



5. Set the vented oil gauge aside to be cleaned and prepared for return to T&T Pump Co., Inc.

## **Installation of Trico Opto-Matic constant level oiler**

**Please note that the Trico Opto-Matic constant level oiler will be shipped unassembled and will require assembly.**

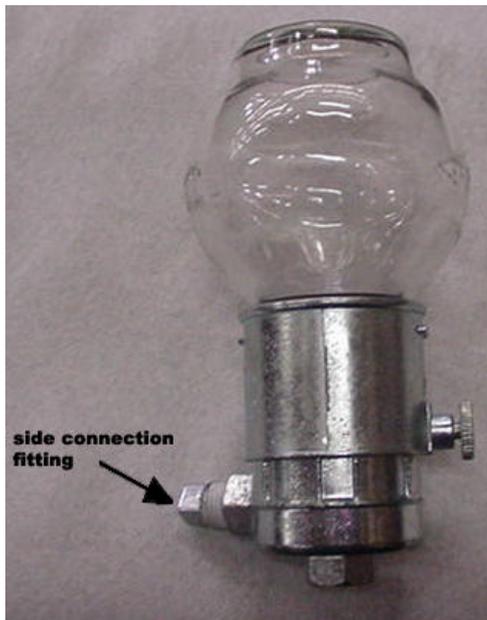
The Trico Opto-Matic oiler will include a  $\frac{1}{4}$ " x 1" NPT nipple,  $\frac{1}{4}$ " NPT elbow, and a  $\frac{1}{4}$ " x 4" NPT nipple.

Use thread tape or thread compound on all threaded areas except for the  $\frac{1}{4}$ " NPT plug supplied with the Trico Opto-Matic oiler.

# ***T&T Pump Co., Inc.***



6. Thread the 1/4" x 4" NPT nipple into the 1/4" NPT elbow.
7. Remove the 1/4" NPT plug from the bottom connection fitting at the base of

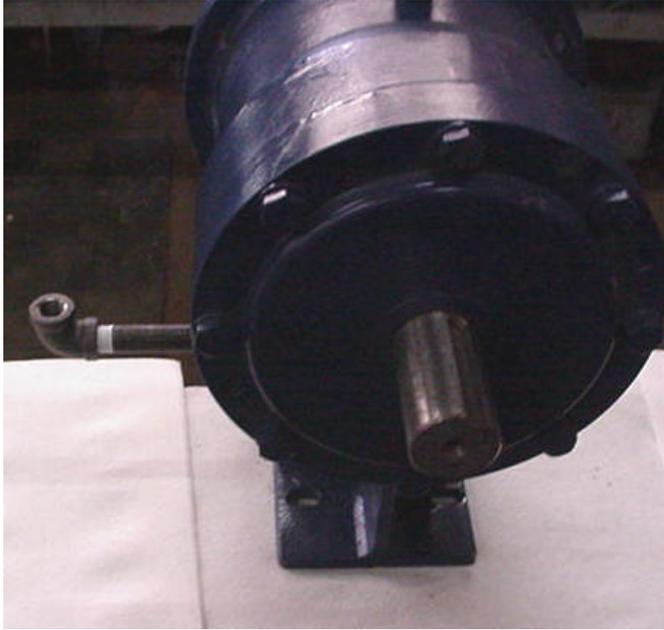


the oiler and place it into the side connection fitting.

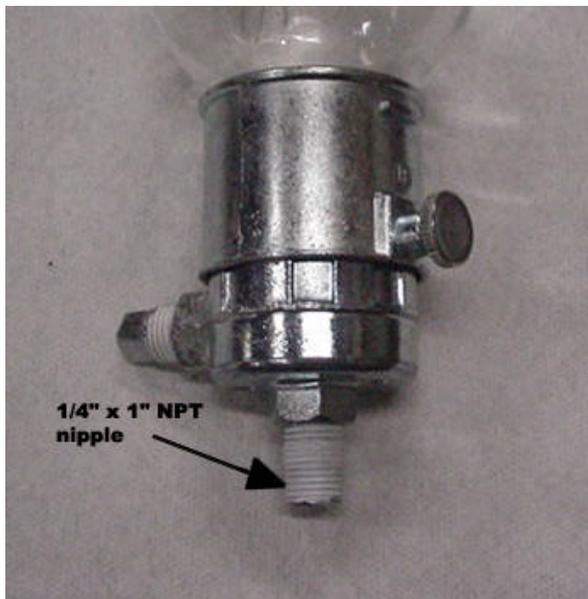
8. Loosen the thumbscrew on the side of the oiler and remove the reservoir and the level adjuster assembly from the oiler base.

NOTE: Looking from the rear of the bearing frame (end closest to the motor), the Trico Opto-Matic oiler will be mounted on the left hand side of the bearing frame. Move the bearing frame drain plug to the opposite side if necessary.

# ***T&T Pump Co., Inc.***

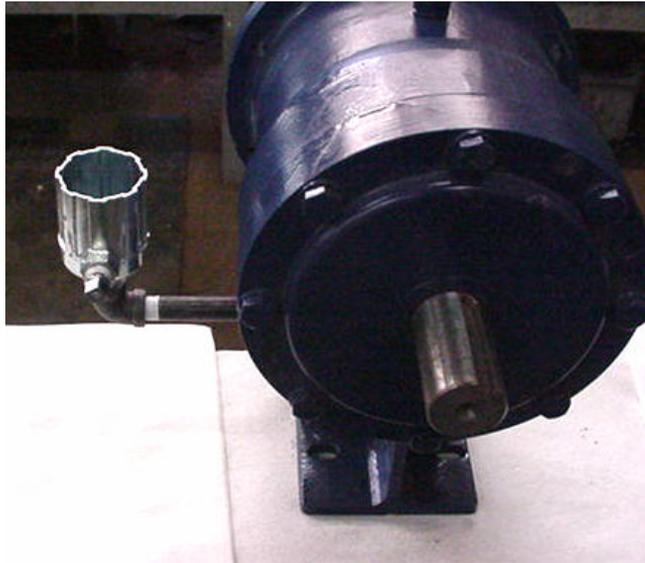


9. Thread the  $\frac{1}{4}$ " x 4" nipple and  $\frac{1}{4}$ " elbow assembly into the threaded drain hole in the bearing frame sump.



10. Thread the  $\frac{1}{4}$ " x 1" nipple into the bottom fitting on the oiler base.

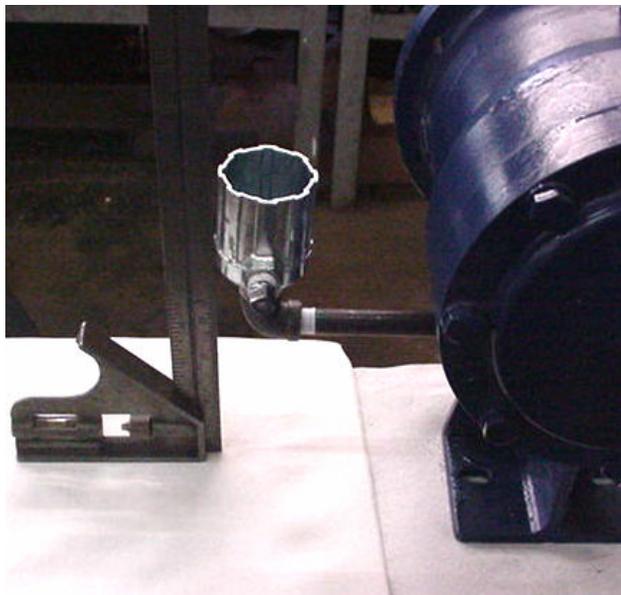
# ***T&T Pump Co., Inc.***



11. Thread the oiler base into the 1/4" elbow

NOTE: The final position of the oiler base must be perpendicular to the pump base (bedplate).

12. Measure from the top surface of the pump base 6-9/16" (for the D Frame) to the side of the oiler base and place a reference mark at that point. This is the proper oil level setting for the D Frame bearing housing (+/- 1/16"). For the E,



# ***T&T Pump Co., Inc.***

GE, and G frames use the measurement referenced from the sight glass

13. Place the level adjuster assembly inside the base of the oiler. Set the level



adjustment assembly so that the reservoir rests with the skirt 6-9/16" from the top surface of the pump base.

The D Frame bearing housing is now ready to be filled with oil.

Use only Exxon SHP Terrestrial 100 or exact equivalent oil.

The operating capacity of the D Frame bearing housing with the Trico Opto-Matic constant level oiler is 24 ounces (16 oz for the bearing housing and 8 oz for the oiler).

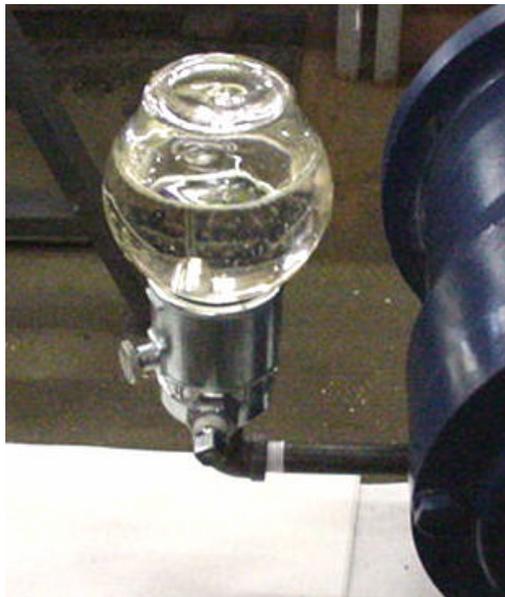
The operating capacity of the E and GE Frame bearing housing with the Trico Opto-Matic constant level oiler is 20 ounces (12 oz for the bearing housing and 8 oz for the oiler).

The operating capacity of the G Frame bearing housing with the Trico Opto-Matic constant level oiler is 24 ounces (16 oz for the bearing housing and 8 oz for the oiler).

# ***T&T Pump Co., Inc.***

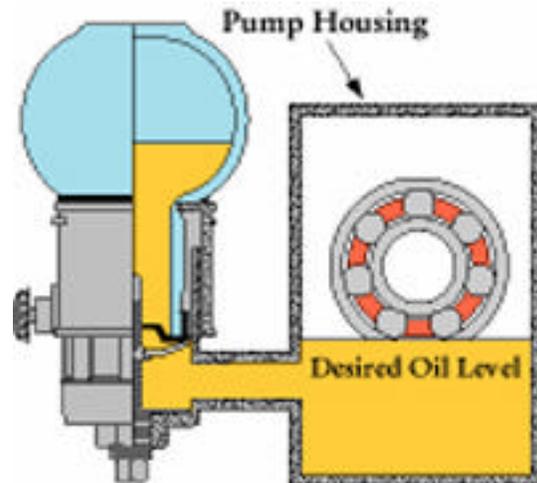
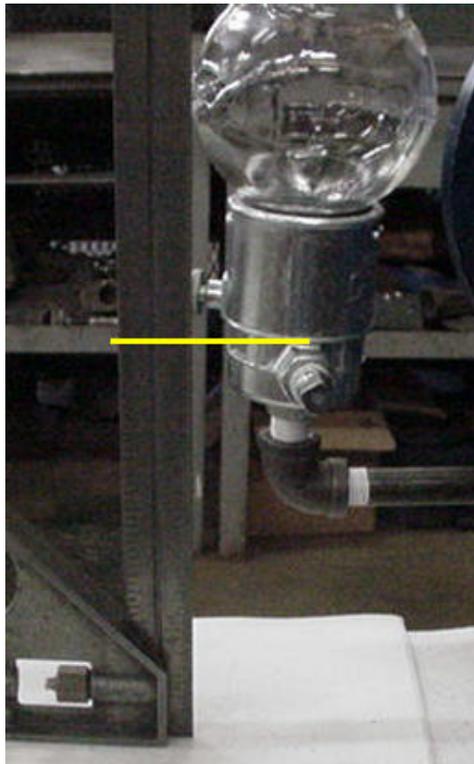


14. To fill the D frame bearing housing with oil, place the reservoir on its top and fill the reservoir to where glass globe joins to the metal base.



15. Place a finger over the opening of the glass globe assembly and place it onto oiler base assembly with the thumb screw on the glass globe assembly facing away from the bearing housing.
16. Allow the oil to completely drain into the bearing housing and repeat steps 14 and 15 two more times.

17. Once the D Frame bearing housing has been filled, measure from the bottom edge reservoir to the top surface of the pump base. This dimension should be 6-9/16" (+/- 1/6"). Adjust the level adjuster until this dimension is met. For the E, GE, and G frame bearing housings set the



level adjuster until the reference dimension from the vented oil gauge has been achieved.

## **Special notes on operation**

**Overfilling of the D frame bearing housing (or other frame) may occur due to repeated removal and replacement of the reservoir. Add oil only when less than 1/3 of reservoir capacity remains to reduce filling frequency.**

**High airflow conditions (fans, blowers, etc.) may cause the oiler to overfill the D Frame bearing housing by creating a pressure imbalance. Air flowing over the bearing frame vent, in some rare cases, can cause a pressure imbalance between the pressure inside the bearing frame and atmospheric pressure. The internal pressure drop will**

# ***T&T Pump Co., Inc.***



cause the Trico Opt-Matic oiler to feed additional oil into the bearing frame resulting in improper oil level. If this occurs a shield may be placed in front of the bearing frame vent to prevent air from flowing over and around the vent.

Frequent pump starts may cause overfilling. When the pump starts during normal running the ball bearings in the thrust bearing set displace oil. The Trico Opto-Matic oiler may allow additional oil to flow into the bearing frame and show a drop in the oil level of the reservoir. This should not be interpreted as a low oil condition.