



# Drum Pump Recirculation Kit Part #30032

## Setup and Operating Instructions



Rev B, FEB 2024



1235 Hickory Street | Pewaukee, WI 53137  
For Customer Support: (800) 558-7008

61443

## INTRODUCTION

The Trico Drum Pump Recirculation Kit has been designed to handle lubricants that have a viscosity of 1250 cSt (5500 SUS) and below, directly filtering and recirculating lubricant from a standard 55-gallon drum back into the same 55-gallon drum. With the use of Trico's Drum Pump Filtration System and the Recirculation Kit, oil can be filtered as long as necessary with the self-contained kit.

**NOTE:** Exceeding the viscosity limits of this system can cause damage to the motor. Before purchasing this unit, the customer should be aware of any specific requirements and/or hazards of their lubricant and ensure that the fluid being filtered and dispensed is compatible with the filter media and hose material.

## REQUIRED ITEMS

Drum Pump Filtration System and one Drum Pump motor – A motor is required to drive the pump shaft and is attached to the drive coupler. It is interchangeable with different Trico Drum Pump Filtration System designs. Only one motor is needed and can be interchanged with multiple drum pumps.

- 30018 – Drum Pump Electric Motor, 1.1Hp, 110-120V, 50/60 Hz
- 30021 – Drum Pump Electric Motor, 1.1Hp, 220-230V, 50/60 Hz
- 30019 – Drum Pump Pneumatic Motor, 3/4 HP
- 30035 – Drum Pump Filtration System

## WARNING

- The use of **30018 and/or 30021 Trico Drum Pump Electric Motor** is prohibited with flammable or combustible materials which could ***cause serious injury or death if used.***
- When filtering higher viscosity oils, such as **ISO 460 and ISO 680** gear oils, the use of a drum heating blanket is required to reduce the viscosity to under 1250 cSt (5500 SUS).
- The minimum allowable micron level for higher viscosity oil is 10 microns. Hydraulic oils may be filtered down to 3 microns at room temperature.

## CAUTION

Bonding and ground safety procedures must be used when operating in hazardous duty environments or when there is a danger of static discharge. See national Fire Protection Code 77 for proper grounding and bonding procedures. It is the responsibility of the operator to properly inspect and ground equipment before use.



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## INCLUDED COMPONENTS

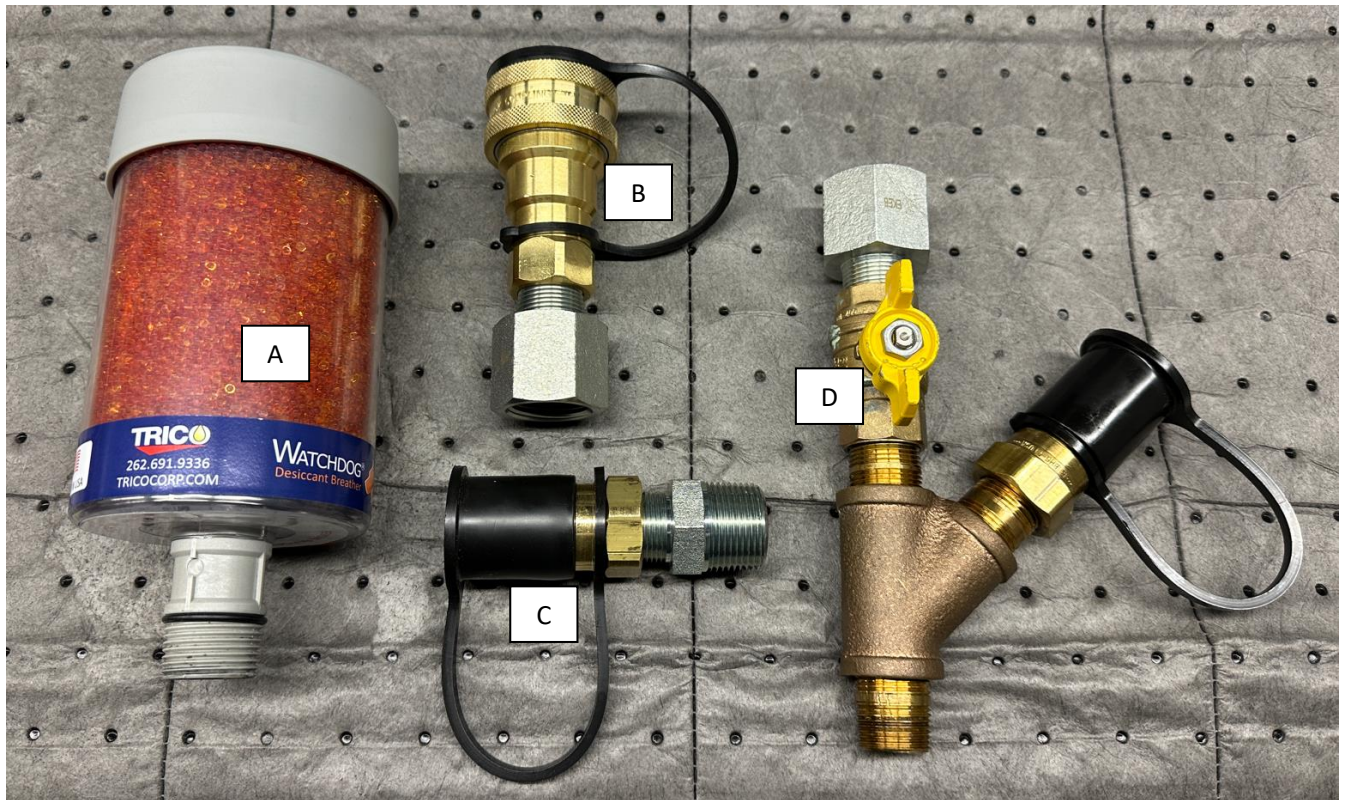
Remove the Drum Pump Recirculation Kit components from the shipping container and inspect components for any signs of damage. If items are damaged contact the shipper. Trico Corporation provides a manufacturing warranty against product defect and workmanship up to 1 year of purchase, proof of purchase required. It does not cover damage due to mishandling by shipper or customer nor damages caused by misuse.

### Tools required for assembly:

- (2) x 2.5" adjustable wrenches or pipe wrenches

### Included Components:

- (A) Watchdog EX Breather
- (B) Male Quick Coupler Hose Connector
- (C) Plug Connection for Equipment/Dispensing Nozzle
- (D) Ball Valve/Wye Fitting/Plug Connector/Drum Adapter Assembly



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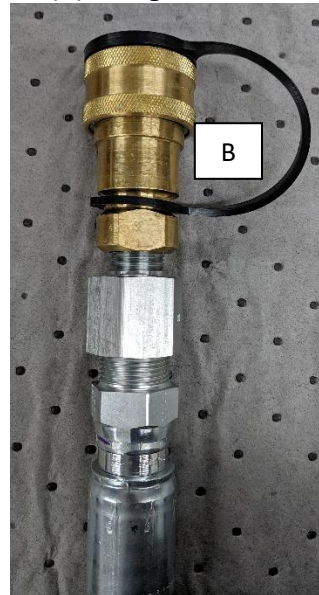


## DRUM RECIRCULATION KIT ASSEMBLY

1. Install the Drum Pump Filtration System (P/N 30035) per instructions.
2. Remove the  $\frac{3}{4}$ " Breather Plug from 55-gallon drum.
3. Thread Drum Adapter Assembly (D) into 55-gallon drum and tighten.



4. Remove the dispensing nozzle from the hose attached to the Drum Pump Filtration System and attach the Male Quick Coupler Hose Connector (B) using thread lock.

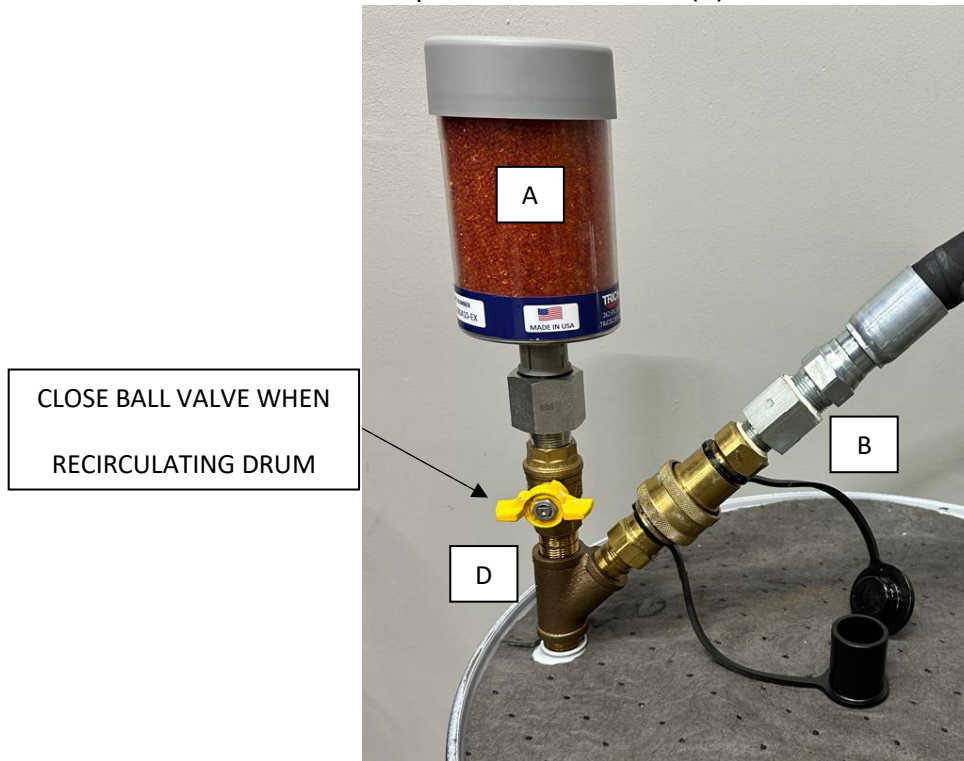


5. Remove the Watchdog EX Breather (A) from the sealed package and screw into adapter on the Drum Adapter Assembly (D).



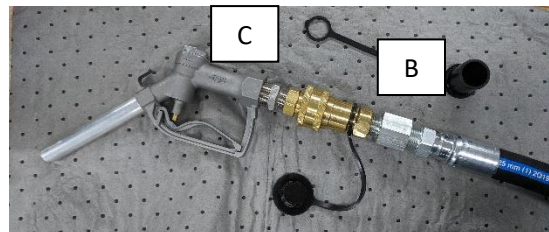
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- Remove dust cap plug from the Plug Connector on the Drum Adapter Assembly (D) and attach the Male Quick Coupler Hose Connector (B).



**NOTE: MAKE SURE BALL VALVE IS CLOSED WHEN RECIRCULATING THE FLUID IN THE DRUM AND REOPEN ONCE RECIRCULATION IS COMPLETE**

- Before starting recirculation, close the Ball Valve on the Drum Adapter Assembly (D) to prevent back flow of oil to the desiccant breather.
- Remember to open the Ball Valve when done recirculating the drum. The drum needs to be able to breath to prevent collapsing during pumping.
- The extra Plug Connection (C) could be used to either reconnect the nozzle for dispensing, or to connect directly to equipment. Modification may be needed to the Plug Connection (C) fittings to fit the desired equipment.



- Attach the Plug Connection (C) to the dispensing nozzle from the Drum Pump Filtration System using thread lock. Then the nozzle can be inserted into the hose with the Male Quick Coupler Hose Connector (B) returning the hose back to normal use with a dispensing nozzle.



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## ISO CLEANLINESS RATING

Lubricating oils stored in bulk containers may contain contaminants. Ordinarily it has been thought lubricants stored in drums prior to use were contaminant-free; however, it has now been learned it is beneficial to filter lubricants even prior to its use as the original container may impart impurities to the lubricants prior to its first use. Most rotating equipment is manufactured to a class 2 or class 3 fit typical of most industrial operations. Hydraulic components and rotary screw compressors tend to have tighter tolerances in the sliding and rotating elements. Clearances in components are used to establish cleanliness requirements. The best source for cleanliness requirements is from the equipment manufacturer. In general, as the viscosity of the oil increases the cleanliness level decreases. Below is a general guideline for cleanliness levels.

ISO Oil Grade Classification	Cleanliness Code (R4/R6/R14)
32	16/14/11
46	16/14/11
68	17/14/12
100	18/15/13
150	18/15/13
220	19/16/14
320	19/16/14
460	19/16/14
680	20/18/14

Determining the ISO Cleanliness level of equipment requires analysis of the running lubricating oil. Trico's oil analysis laboratories can provide an accurate indication of the ISO Cleanliness level of lubricating oil before and after filtration. Each number in the ISO code represents the micron range of particulate in which the count lies within (R<sub>4</sub> microns/ R<sub>6</sub> microns/ R<sub>14</sub> microns).

**Example: 19/16/14, the 19 code shows that count of 4-micron particle lies between 5,000 and 2,500 per ml of fluid.**

ISO Number	Particle Count per ml of fluid		
25	160,000	to	320,000
24	80,000	to	160,000
23	40,000	to	80,000
22	20,000	to	40,000
21	10,000	to	20,000
20	5,000	to	10,000
19	2,500	to	5,000
18	1,300	to	2,500
17	640	to	1,300
16	320	to	640
15	160	to	320
14	80	to	160
13	40	to	80
12	20	to	40
11	10	to	20
10	5	to	10
9	2.5	to	5
8	1.3	to	2.5

ISO 320  
19/16/14

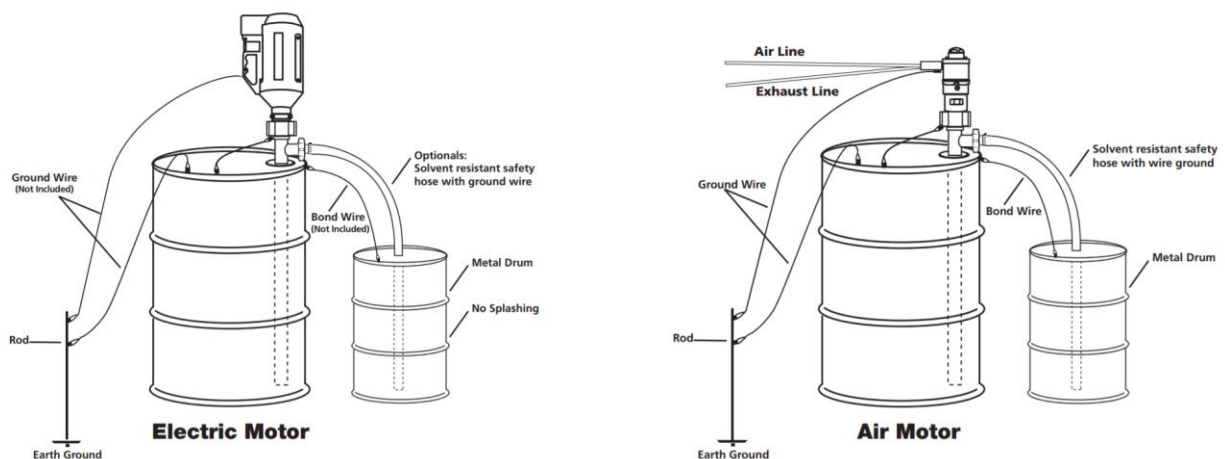


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## GROUNDING AND BONDING

The Trico Drum Pump Filtration System is not rated for a hazardous duty environment due to possible static discharge, use proper bonding and grounding per NFPA 77. A **Bonding** system connects various pieces of conductive equipment together to keep them at the same potential. Static sparking cannot take place between objects that are the same potential. **Grounding** is a special form of bonding in which conductive equipment is connected to an earthing electrode, or to the building grounding system, to prevent sparking between conductive equipment and grounded structures.

Grounding is an electrical connection between a metal vessel, pump, motor and a constant ground; i.e. a metal rod driven into the earth. Failure to bond and ground properly can cause a discharge of static electricity resulting in fire, injury or death. If in doubt, do not start the pump! Be sure bonding and grounding wires are secure before starting operation. (Ground and bond wires **must have less than one-ohm resistance** for safe usage. Check continuity before starting.) Always check with a safety engineer when any question arises and periodically check safety procedures with a safety engineer.



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