



Tri-Lube HD™ 24 VDC Heavy-Duty Grease Pumps

DESCRIPTION

The Tri-lube H.D. electric motor driven grease pump package is designed for series progressive central lubrication systems on heavy duty construction, mining, or other mobile equipment.

The pump body can include from one to three fixed displacement cartridge piston pumps and a choice of reservoir capacities up to 45 lbs. This heavy duty pump is designed to deliver grease with consistencies rated up to NLGI #2 (dependent upon ambient temperature) at pressures up to 3500 psi (241 bar).

The rugged Tri-Lube H.D. package is corrosion protected and suitable for permanent outdoor installation where 24 volt DC power is available.



FEATURES/BENEFITS

- Designed for use with Trabon® series-progressive divider valve systems. These systems provide positive lubrication and distribute accurately measured amounts of lubricant to each connected point.
- Electric motor driven (24 VDC) —for applications where air or hydraulic power is unavailable or undesirable.
- Modular design based on common pump body, electric motor, pump drive and fixed displacement cartridge piston pump. Body accommodates 1 to 3 pump cartridges, with four optional sizes of reservoirs to configure pump package for various output volume and reservoir refilling cycle requirements.
- Cartridge pumps are radially mounted (threaded) into circumference of pump body and may be externally connected to combine output volumes or as single pumps connected to individual divider valves. Cartridges may be replaced or added in the field, without dismounting or disassembling the pump.
- Optional low reservoir sensing system provides a (sourcing) signal output for use with an external lamp, bell, or controller input.
- Control options include a Solid State DC Timer or a Programmable DC Timer located in a protected cavity in the pump base; or a cable connection for a remote external controller, such as a Trabon 24 VDC WMP III Maxi-Monitor. An auxiliary power relay is included with the latter option. Built-in circuitry prevents interference with other electronic apparatus, protects against improper wiring connections, and provides gradual start-up of the electric motor.
- All external surfaces are corrosion protected and all internal cavities are protected with weather-tight seals and condensate drains. A vent/overflow tube prevents water from entering the reservoir and facilitates refilling.
- A 12 foot power cable with gasketed strain relief is standard with the pump.
- The cast aluminum pump body incorporates heavy, gusseted mounting lugs. The lower lugs are slotted to simplify installation. Stabilizing lugs integral to the reservoir cover, anchor the pump package for use on rough terrain.
- Convenient fill stud in the pump body simplifies filling the reservoir while keeping the lubricant clean and free of air.

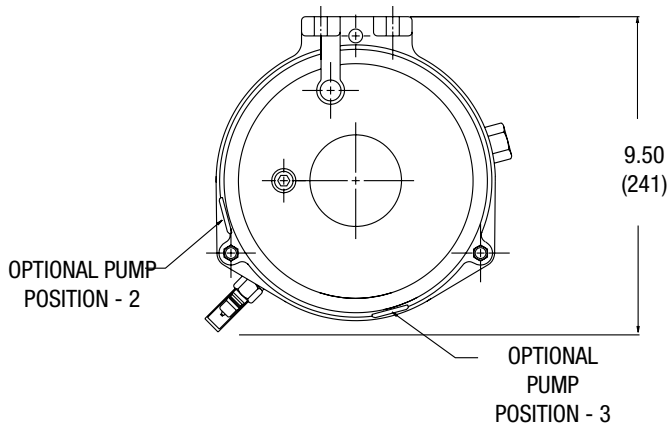
OPERATION

The DC motor (rated for maximum 25% duty cycle) is attached to the vertically oriented gear shaft that drives a cam. As the cam rotates, the cartridge piston pump(s) are powered and primed on each rotation.

The bottom of the lubricant reservoir is open to the intake port(s) on the cartridge pump(s). A rotating paddle wiper, also attached to the gear shaft, continuously forces lubricant downward, toward the intake port(s).

The pump motor is intermittently activated by a signal from the on-board timer or remote controller in accordance with the user determined lube cycle. A manual jog switch is provided for system test purposes on timer equipped versions only.

SPECIFICATION	
Pumping Cartridges (1 to 3 cartridges per unit) Max Output Pressure (intermittent duty) Output Volume, fixed (per cartridge element)	3500 psi (241 bar) 0.08 in ³ /min (1.3cc) Note: Output may vary with changes in temperature, system pressure, grease viscosity, nominal applied voltage, etc.
Lubricants Temp Above Freezing Temp Below Freezing	up to and including NLGI #2 grease progressively lower viscosity (fluid) greases may be required, depending on the temperature and pumpability characteristics of the particular manufacturer's grease
Operating Temp	-20°F to 140°F (-29°C to 60°C)
Reservoir (1/4 in thick Acrylic) Capacity	13, 20, 30 or 45 lbs (5.9, 9.0, 13.6 or 20.4 kg) "Quick-Connect", protected fill fitting in pump body
Electrical Requirements Motor Voltage	24VDC, user must fuse @ 2 amps slow-blow style Note: Fuses and fuse holders (supplied by user) to be located for maintenance convenience.
On-Board Solid-State Timer Electrical On-Time Off-Time Duty Cycle	24 VDC (matches motor voltage) adjustable in steps from 30-480 sec adjustable in steps from 15-450 min not to exceed 25% (max motor run time 15 min) Example: If pump on-time is set for 10 min, off-time (time between cycles) must be set for 30 min or longer. Total cycle time for this example is now 40 min: 10 = 25% of 40 Note: A fully programmable timer with a broader selection of on/off-times, external monitoring feature and digital display is also available.
Optional Low Level Sensing	SPST, 10W max (intermittent signal on/off with each paddle revolution)
Electrical Connection	Strain relieved, gasketed 12 ft (3.7m) cable
Weight Empty	40 lbs (18.2 kg)



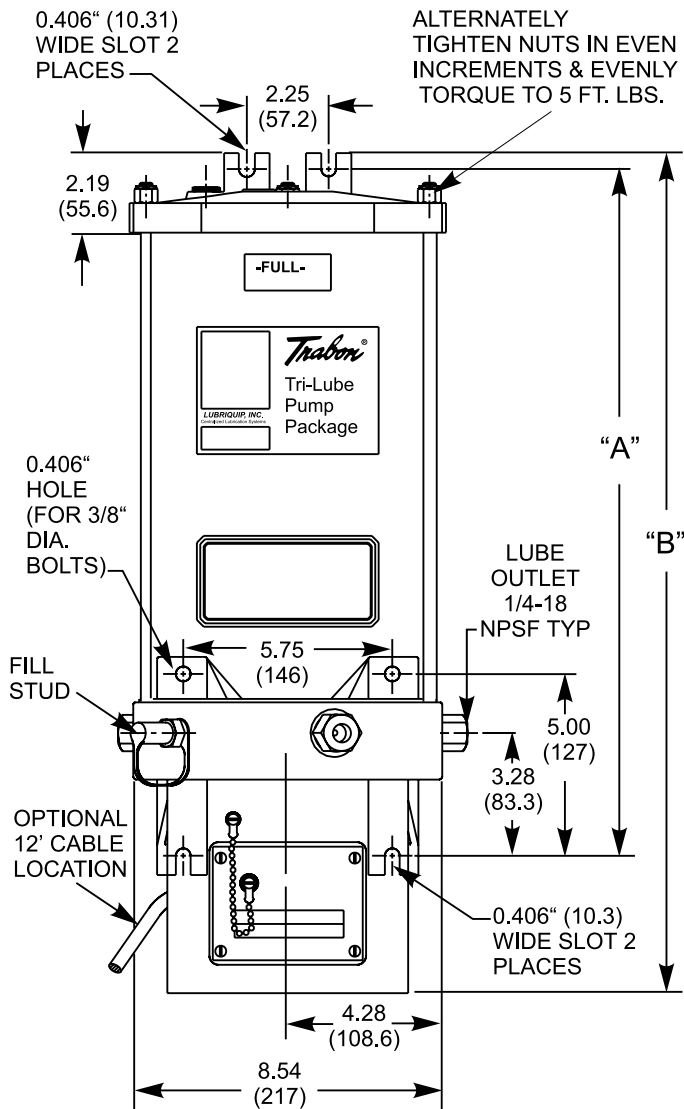
MOUNTING

Pump must be mounted in a vertical position only, with the reservoir above the pump. Use four (4) 3/8" diameter mounting bolts for pump body, and two (2) 3/8" diameter bolts for upper support.

WIRING

On-Board Timer Version	
White	+ VDC
Black	- VDC (earth ground)
Green	Not Used
Red	Low Level (When Used)

External Controller Version	
White	+ VDC
Black	- VDC (earth ground)
Green	Control Signal
Red	Low Level (When Used)



Reservoir Capacity	Dim A	Dim B
13 lb. (5.9 kg)	15.9 (404)	20.1 (511)
20 lb. (9.0 kg)	20.9 (531)	25.1 (638)
30 lb. (13.6 kg)	28.4 (722)	32.6 (829)
45 lb. (20.4 kg)	38.9 (988)	43.1 (1095)

SYSTEM COMPONENT ORDERING		
Description	Part No.	Old Part No.
Base Pump Drive Assembly (less reservoir, pump cartridges, timer, remote and wiring kits)		
24 VDC	563536	529-820-060
Controller Kits (include timer or remote circuit board, order wiring kit below as separate item)		
24 VDC Timer	563544	529-860-000
24 VDC Remote Controller Connection	—	529-860-020
24 VDC Programmable Timer	563547	529-860-090
Scraper Kits		
With Low Level	563548	529-860-120
Without Low Level	—	529-860-125
Reservoir Kits (includes cover, tie rods, tube seals, mounting brackets, decals and hardware)		
13 lb (6.7 kg)	563543	529-840-030
Impact Shield	—	529-845-022
20 lb (9.1 kg)	563541	529-840-000
Impact Shield	—	529-845-024
30 lb (13.6 kg)	563542	529-840-010
Impact Shield	—	529-845-025
45 lb (20.4 kg)	—	529-840-020
Impact Shield	—	529-845-026
Accessories		
Pump Output Manifold Kit w/5000 psi Press Gauge	—	529-805-002
Spare Parts		
Pump Cartridge	563538	529-825-026
Pressure Gauge, 5000 psi (345 bar)	557352	503-557-001
Reservoir Seal Gasket	776719	439-060-185

PACKAGE ORDERING INFORMATION

TLP - XX - X - XX - X - X

RESERVOIR OPTIONS

13 - 13 LB RESERVOIR
 20 - 20 LB RESERVOIR
 30 - 30 LB RESERVOIR
 45 - 45 LB RESERVOIR

NUMBER OF CARTRIDGE PUMPS

1 - ONE
 2 - TWO
 3 - THREE

MOTOR

24 - 24 VDC

CONTROLLER OPTION

T - ON-BOARD DC TIMER*
 R - REMOTE CONTROLLER CONNECTION*
 P - PROGRAMMABLE TIMER*
 N - NO CONTROLLER

*12 FT CABLE INCLUDED

LOW LUBRICANT LEVEL SENSING

0 - NONE
 L - YES

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Contact us today!

To receive product information or talk with a Graco representative, call 800-533-9655 or visit us online at www.graco.com.

