



Dear Sir,

Regarding the item in SL No. 7 Turbo lube pump motor, Part Number-4947308R, we would like to define some terms related to this pump motor. As previously indicated, this part number relates to the Turbo Soak Back Pump for all EMD Diesel Engine classes. The motor's original constructional shape is as seen in Figure 1 below. The original specification for this item (Utex No. 40013526) was DC 3/4 HP, 74 VDC, and 1200 RPM. This horizontal- mounting model uses the locomotive control as a direct DC power supply to operate without the use of an inverter.

A separate lubricating oil pressure source is offered to guarantee lubrication of the turbocharger before engine start-up and the removal of any leftover heat from the turbo following engine shutdown. The locomotive control system automatically regulates this pressure system. Oil is drawn from the oil sump, fed through a soak-back filter, and then sent to the turbo by an electrically powered turbo soak-back pump. Inside the soak-back filter housing is a 40-PSI soak-back filter bypass valve that allows the filter to be bypassed anytime it gets clogged to safeguard the turbocharger. Before starting the engine, this soak- back pump automatically begins to operate. The relief valve is included in the filter head and is set to 32 PSI, returning the oil to the engine sump because there is no outlet for the lower-pressure oil.

With built-in DC-AC inverter-driven arrangements, modified vertical-type AC-Lube oil pump motors (such as the Paragon Fuel Pump Motor Assembly) power majority of the locomotives on Indian railways.

For extended life and durability, this is almost a permanent fix for soak-back pump motors and no more maintenance is needed. Except for using flexible hardcore hose pipes for the input and outlet connections for this motor, it may be mounted on the present site using four mounting bolts.

These motors' electrical characteristics and specifications are the same as those of the horizontal model.

There are significant disadvantages to the horizontal model, however, we recommend a vertical model (as seen in Figure 2) instead of a horizontal one.

The horizontal motors will be delayed since spare components are not readily available in the market, but Vertical motors are in stock and can be supplied whenever you need them.

There won't be any such technical fault if you install the vertical type if you are familiar with them and comprehend the application and modification of locomotives.



### Vertical SOAKBACK PUMP



### Horizontal SOAKBACK PUMP



Sl. No	Vertical Type	Horizontal Type
1	¾ HP 64VDC operating at 1200 RPM 3 Output	¾ HP 64VDC operating at 1200 RPM
2	Flow Rate – 3 GPM Minimum 6-7 GPM Maximum	Flow Rate – 3 GPM Minimum 6 GPM Maximum
3	Working Pressure Minimum 40PSI	Working Pressure Minimum 40PSI
4	Nominal Current - 4 Amps to 10 Amps	Nominal Current - 4 Amps to 10 Amps
5	This can be used for both 645 and 710 Engine series with V-16	Only for 645 Engine series
6	Inbuilt Inverter Design	Additional Inverter Design
7	Mounting with 4 mounting bolts	Mounting with 4 mounting bolts
8	Inlet Port – 0.50 – 14 NPT	Inlet Port – 0.50 – 14 NPT

**Note:** The Vertical Type Motor can be replaced with Horizontal Type without any additional operation. Inlet Port Male Nipple will be provided along with Motor. This Vertical Pump can also be used in any class of EMD Diesel Engines.



### **Advantages of Vertical Type Fuel Pump Motor**

1. Better Performance and durability up to 6years
2. Fit and Forget
3. Accurate delivery within the time
4. Smaller size and weightless (30 Lbs)
5. Easy to install.
6. Diesel itself acts as a cooling media (Self-cooling technique)
7. Additional protecting circuitry for Inverter
8. Pure Sinewave Inverter with filtration
9. Brushless AC Motor

10. Gear driven mono pump with accurate delivery pressure. 11. Easy for Maintenance

The Vertical Type FPM is already fitted in Bangladesh Railways (Loco Model GT18LA-2) and is working satisfactorily without any issues till date. Fitment photos shown below.





# Haltic

