



SAFETY MANUAL FOR FLAMMABLE PRODUCT TRANSFER *SUPPLIMENT TO EDM*

IMPORTANT

READ THIS MANUAL BEFORE PRODUCT INSTALLATION, OPERATION, INSPECTION & MAINTENANCE

Tougher and more rigid guidelines are being established daily for safety in the workplace. To this end, specific Neoflux pumps are manufactured for the chemical, petrochemical, and petroleum industries to meet the safety requirements. Specific aluminum and stainless steel, alloy-fitted pumps assembled with Teflon® or Buna® elastomers for use in transferring volatile liquid.

- Petroleum product dispensing systems should be limit to 3.4 bar (50 psig) air supply pressure and 3.4 bar (50 psig) discharge pressure.
- In addition, pumping temperatures must be within the range of -20°F to +125°F (-29°C to 52°C).
- Pump exhaust to be connected to pipe or tubing to be routed outdoors or other location determined to be equivalent.
- All pipe & connections must be of Gasoline Resistance Compound
- Pump should be fitted with a pressure relief valve rated to a maximum of 3.4 bar (50 psig). This valve should be connected to the pump discharge line to vent pressure resulting from thermal expansion. The pressure relief valve should incorporate a return line back to the supply tank.
- Pump must be electrically grounded. The ground connection is marked with a tag having the grounding symbol.



FIRE AND EXPLOSION PREVENTION – USE OF PRODUCTS IN EXPLOSION ZONES

There is a risk of fire and/or explosion if certain conditions exist. These conditions include, but are not limited to, the following:

- Pumping flammable fluids (in some cases an additional risk may be created by vapors or gases resulting when the process fluid escapes by leaking, component failure, or improper maintenance.)
- Product used in flammable atmospheres (flammable atmospheres can be caused by the presence of gases, dusts, or vapors)
- Placement of flammable materials near product
- Product powered by flammable gases (Example: Natural gas or air/flammable compressor oil mixture)
- Standard *Neoflux* pump models should not be powered by flammable gases. Consult factory for specific models intended to be powered by flammable gases.
- Be aware of the hazards associated with the specific application and the application environment. Conform to all applicable laws, regulations and codes.
- Do not use the product if there is any doubt about the safety of the application.
- Mechanical operation and flowing fluids can generate static electricity. Groundable products are required for all potentially flammable or explosive applications to prevent static spark. The pump, piping, valves, containers and other equipment must be grounded. Periodic inspection of the ground connection should be performed to ensure the equipment is properly grounded.
- The surface temperature of the equipment must be kept below the ignition temperature of any potential explosive atmosphere. The surface temperature is affected by the temperature of the fluid being pumped and the kinetic energy added by the pump and application (**e.g.** recirculation of process media). The end user must ensure process media and equipment maximum temperature is acceptable for the environment.
- Electrical products have special considerations when used in explosive environments. Ensure electrical products possess the correct rating for the intended application.

READ, UNDERSTAND & FOLLOW THIS INFORMATION TO AVOID INJURY & PROPERTY DAMAGE

1. Excessive Air Pressure:



- Can cause personal injury, pump damage or property damage.
- Do not exceed MAX. Air Inlet Pressure of 3.5 BAR (50 PSIG) as per U.L. 79 Specifications.
- Please make sure that the material of the hose & other components are able to withstand fluid pressures develop by this pump. Check all hoses for damage or wear. Be certain dispensing device is clean & in proper working conditions.

2. Excessive Discharge Pressure:



- Can result into personal injury or property damage. Do not service or clean pump, hoses or dispensing valve while the system is pressurized.
- Dis-connect air supply line & relieve pressure from the system by opening dispensing valve or device & / or carefully & slowly loosening & removing outlet hose or piping from pump.

3. Static Spark:



- Can cause explosion resulting in severe injury or death. Ground Pump & Pumping System.
- Sparks can ignite flammable material & vapors.
- The pumping system & the object being sprayed must be grounded when it is pumping, flushing, re-circulating or spraying flammable material such as Paints, Solvents, Lacquers etc. or used in location where surrounding atmosphere is conductive to spontaneous combustion.
- Ground the dispensing valve or device, containers, hoses & any object to which material is being pumped.
- Use the pump grounding screw terminal provided. Use *Neoflux* Ground Kit or suitable ground wire (12 ga. min.) to a good earth ground source.
- Secure pump, connections & all contact points to avoid vibration & generation of contact & static spark.
- Consult local building codes & electric codes for specific grounding requirements.
- After grounding, periodically verify continuity of electric path to ground. Test with an ohmmeter from each component (e.g. Hose, Pump, Clamps, Containers, Spray Gun etc.) to ground to insure continuity. Ohmmeter should show 0.1 ohms or less.
- Submerge the outlet hose end, dispensing valve or device in the material being dispensed if possible. (Avoid free streaming of material being dispensed)
- Use hoses incorporating a static wire.
- Use proper ventilation.

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- Keep inflammables away from heat, open flames & sparks.
- Keep container closed when not in use.

4. Hazardous Material: **WARNING**

- Can cause serious injury or property damage. Do not attempt to return a pump to the factory or service center that contains hazardous material. Safe handling practices must comply with local & national laws & safety code requirements.
- Obtain MSDS from all materials from the manufacturer for proper handling instructions.

5. Explosion Hazard: **WARNING**



- Models containing aluminum wetted parts cannot be used with III.-Trichloroethane, Methylene Chloride or other Halogenated Hydrocarbon Solvents which may react & explode.
- Check pump Air-Motor Section (Center Block), Fluid Caps, Manifolds & all wetted parts to assure compatibility before using with solvents of this type.

6. Exhaust Hazard: **WARNING**

- Pump exhaust may contain contaminants. Can cause severe injury. Pipe exhaust away from work area & personnel. (See Diagram at the end for further details)
- In the event of Diaphragm Rapture, material can be forced out of the air exhaust muffler.
- Pipe the exhaust to a safe remote location when pumping hazardous or inflammable material. (See Diagram at the end for further details)
- Use a grounded 3/8" minimum I.D. hose between the pump & the muffler

OPERATING INSTRUCTIONS

WARNING

- *Neoflux* Fuel-Transfer AODD Pump should never be operated at pressure exceeding 50 p.s.i (3.4 BAR) Air Inlet Pressure. This pump is equipped with a pressure relief valve on the Discharge Manifold which will open at 40 ± 4 p.s.i (2.75 BAR) to relieve pressure increases in the outlet hoses / plumbing caused by thermal expansion or other external force.
- Dis-connect the Air Supply from the pump if it is to be inactive for a few hours.

AIR & LUBE REQUIREMENT

⚠ WARNING

- The Air-Supply line or hose to the pump should be adequately sized to carry sufficient volume of air to the pump.
- The Flow Rate / Fluid Volume is governed not only by Air Supply but also by the Air Volume available in the inlet (CFM).
- Air Supply should be filtered to provide clean dry air. A filter capable of filtering out particles larger than 50 μ should be used on the air supply.
- The material inlet / outlet supply hose should not be too small or restrictive which will inhibit material flow.
- All *Neoflux* Pump Air-Distribution System is Lube-Free. No lubrication required other than O-ring lubricant which is applied during assembly /repairs.

INSTALLATION

⚠ WARNING

- A fluid return hose which is compatible with the fluid being pumped must be installed to the relief valve on the outlet manifold to return fluid back to the supply tank or pump inlet.
- The pump must be grounded to prevent static discharge. Grounding may be accomplished through the legs or to the ground lug provided on the pump
- Please notice that the material suction & discharge manifolds can be removed & rotated 180° to facilitate various mounting application.
- When this AODD pump is used in a force-feed situation, it is recommended that a check valve be installed at the air inlet to keep material out of air line in prevent of diaphragm failure.
- Secure AODD pump legs to a suitable surface to insure against damage by excessive vibration.

PLUMBING CONNECTION FOR FLAMMABLE PRODUCT TRANSFER:

