OPERATION AND
SERVICE GUIDE
O-260K
NOV. 1994

AIR MOTORS FOR DRUM PUMPS
MODELS (B) and (E)

Refer to Parts Lists P-3500 Model (B), P-3750 Model (E) and Bulletin P-402.

SPECIFICATIONS	MODEL (B)	MODELS (E)
Air Inlet Connection	1/8" NPT	3/8" NPT
Air Supply Pressure	80 PSI	92 PSI
Air Consumption (maximum)	26 SCFM	17 SCFM
RPM (at maximum pressure)	6000	7500
Viscosity (maximum)	150 CS (695 SUS)	315 CS (1465 SUS)
Specific Gravity (maximum)	1.4	1.4
Oil Lube Cup Location	Air Inlet	Air Inlet

WARNING:
To prevent explosive hazard DO NOT drive this air motor with combustible gases. Injury and/or property damage can result.

SAFETY PRECAUTIONS
BEFORE STARTING DRUM PUMP

1. Read operating instructions and instructions supplied with chemicals to be used.
2. Refer to Chemical Resistance Data Chart for compatibility of materials in pump with solution to be used.
3. Note temperature and pressure limitations.
4. Personnel operating pump should always wear suitable protective clothing; face mask or goggles, apron or gloves.
5. Ensure that all fittings and connections are properly tightened.

BEFORE CHANGING APPLICATION OR PERFORMING MAINTENANCE

1. Wear protective clothing as described in item 4 above.
2. Flush pump thoroughly with a neutralizing solution to prevent possible harm to personnel.
3. Verify compatibility of materials as stated in item 2 above.

PRE-START-UP

For efficiency of output and control of speed, use air lines the same size as or the next size larger than the intake port of the motor. Install a moisture separator, filter, filter pressure regulator and automatic lubricator in the air line ahead of motor. Install quick disconnect switch swivel couplings between motor and air hose. Use detergent SAE #10 automotive engine oil is recommended. Continuous or frequent operation and high RPM service requires an automatic lubricator set to feed 1-3 drops per minute. Lubrication is necessary for the bearings, shaft seals and rust prevention.

MODEL	DESCRIPTION	PRICE CODE NO.
SF-A10½	Filter 125 PSI ½" NPT	79-0827
SF-0-½	Lubricator	79-0276
SF-PR-½	Pressure regulator w/gauge	79-0277
SF-A38-½	Kompressed - Air - Konditioner	79-0002A

Excessive moisture in the air line can cause rust formation in motor and might also cause ice to form in muffler due to expansion of air through the motor. The moisture problem can be corrected by installing a moisture separator or dryer in the air line or by installing an aftercooler between the compressor and air receiver.

OPERATION

The starting torque is less than the running torque and could vary depending on the position at which the vanes stop in relation to the air intake port. The speed and torque can be regulated by using a pressure regulator or a single shut-off valve to obtain desired power and conserve air. Both motors operate in only one direction. To obtain flow rates shown on pump curve, adjust air pressure to maximum given in the specification table. To reduce pump flow rate, reduce air pressure by adjusting pressure reducing valve.

CAUTION: DO NOT allow the air motor to "run free" at high speeds with no loads. Excessive internal heat build up, loss of internal clearances and rapid motor damage will result.

SERVICING MODEL (B) Refer to Parts List P-3500.

If the motor is sluggish or inefficient, try flushing with solvent* in well ventilated area. Disconnect the air line and muffler and add several teaspoonfuls of solvent*.

Rotate the shaft by hand in both directions for a few minutes, again connect the air line and apply pressure slowly until there is no trace of solvent in exhaust air. (Keep face away from exhaust air). Re-lubricate the motor with a squirt of oil in the chamber and bearing oilers. If the vanes need replacing, or foreign particles are present in motor chamber, an experienced mechanic may remove the end plate opposite the drive shaft end. **DON'T PRY WITH A SCREWDRIVER** as it will dent the surface of the plate and body, causing leaks. **A PULLER TOOL SHOULD BE USED** which will remove the end-plate while maintaining the position of the shaft. New vanes should have the edge with the corners cut on an angle or the notched edge (if reversible) towards the bottom of the vane slot. New gaskets should be the proper thickness, "onion skin", otherwise motor will operate inefficiently and waste air. The end-plates should be replaced carefully, using an arbor press with a pusher acting on both races of the bearing while supporting the opposite (drive) end of the shaft rigidly. This will eliminate brinelling of the bearings and misalignment of rotor.

SERVICING MODEL (E)
Refer to Parts List P-3750.

This Air Motor Model (E) requires special tools for disassembly and assembly of repair parts. These tools are not available and it is suggested that the air motor be removed from the pump and returned to the factory for servicing. Call the Factory and request a "Return Goods" number before shipping air motor.

* Recommended commercial solvents for air motors and lubricated pumps are "Loctite Safety Solvent, Inhibisol Safety Solvent, Dow Chemical Chlorothane, or non-flammable solvents".

GROUND WIRE is for use with Air Motors (E) on metal pump tubes to prevent static discharge when pumping flammables and combustibles. Secure the spade lug end to motor and attach spring clamp to a ground. Also use **BOND WIRE** to bond containers.

DO NOT USE PLASTIC PUMPS FOR COMBUSTIBLES OR FLAMMABLES.

WARNING

When using a drum pump to fill cans, drums or other portable or fixed containers with flammable or combustible liquids such as gasoline, both the container being pumped from and the container being pumped to must be effectively **BONDED** and **GROUNDED** to prevent discharge of sparks of static electricity which could cause explosion.

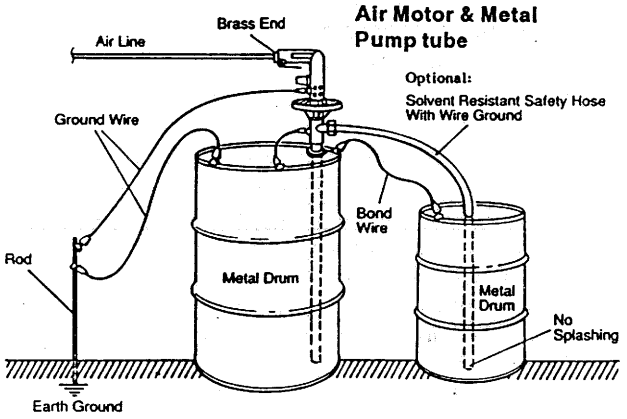
BONDING is the electrical interconnection between containers (such as drum and receiving can). Bonding must be completed before pumping begins. (See diagram).

GROUNDING is the electrical connection between a container and a "constant ground". A "constant ground" would be a metal pipe or rod in contact with the earth. An underground tank and piping connected to it would be inherently grounded by nature of the installation.

Both **BONDING** and **GROUNDING** of containers of flammable liquids are required under U.S. Government OSHA regulations and National Fire Protection Association Code 77, static electricity. Metal pumps must be bonded to metal container or grounded, if used with plastic container.

Normal safety procedures must be used at all times when operating any piece of machinery. Do not modify or make any changes to the product without receiving written permission from factory.

OPTIONAL	
REQUIRED WHEN PUMPING FLAMMABLES OR COMBUSTIBLES	**PRICE CODE NO.**
BONDING WIRE 10 ft. long with spring clamp at each end.	55-0245
GROUNDING WIRE 6 ft. long, spring clamp one end, spade lug one end.	55-0246



SERFILCO, LTD.

1777 Shermer Road 708-559-1777
Northbrook, IL 60062-5360 U.S.A. 800-323-5431
2900 MacArthur Blvd. FAX: 708-559-1995 (800) 323-5431
Northbrook, IL. 60062-2005 U.S.A. (847) 509-2900
email: sales@serfilco.com Fax: (847) 559-1141
www.serfilco.com

DISTRIBUTED BY

EASTERN
● One Lark Avenue 717-656-2161
Leola, PA 17540 FAX : 717-656-0477

WESTERN
● 5005 S. Hampton Street 213-588-0801
Los Angeles, CA 90058 FAX: 213-588-6826