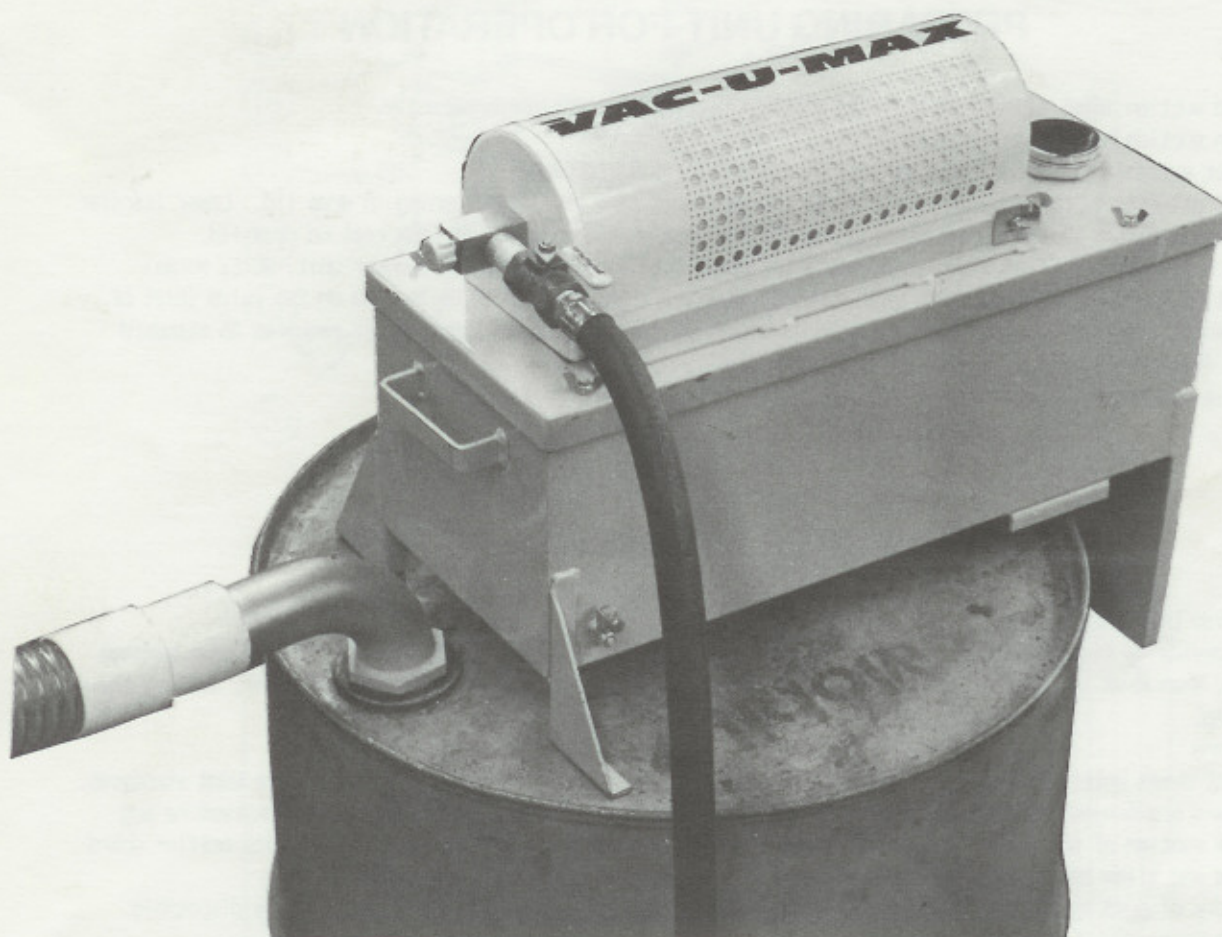


OPERATION AND SERVICE MANUAL

MODEL TK

AIR-POWERED TRANSFER UNIT FOR LIQUIDS



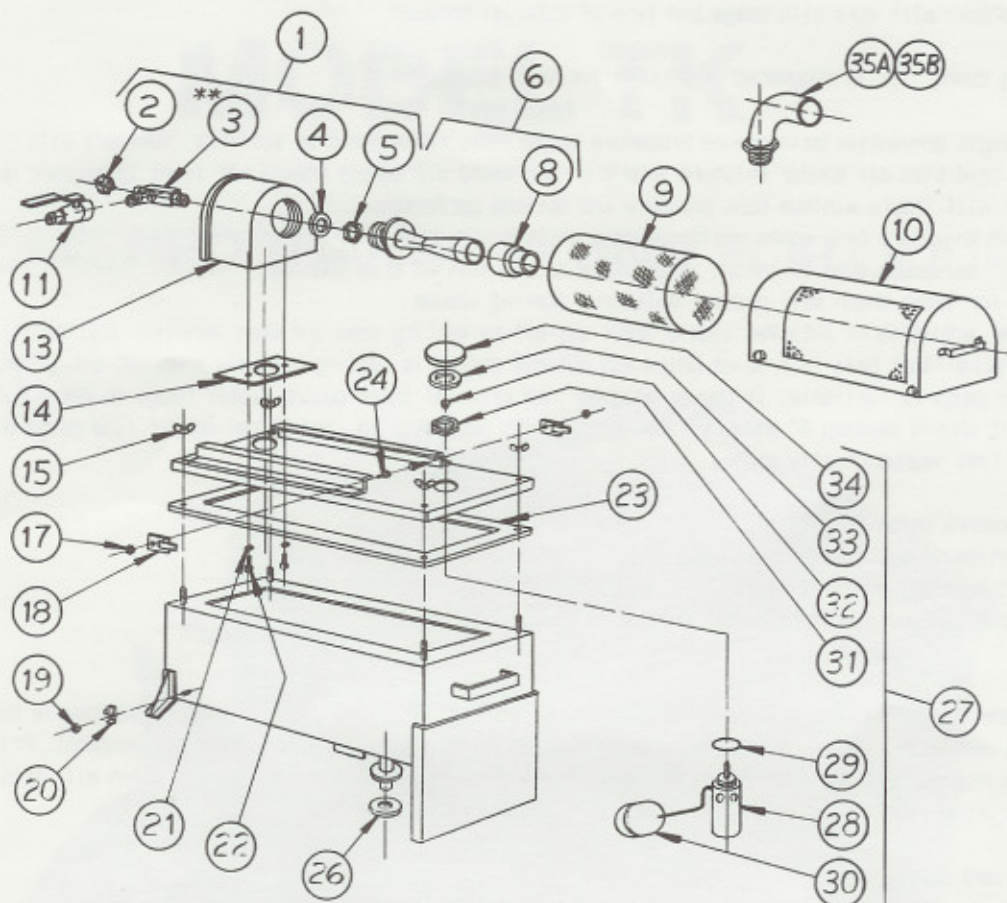
WHEN ORDERING SPARE PARTS BE SURE TO SPECIFY THE
MODEL NUMBER OF THE UNIT AND ITS SERIAL NUMBER.

PROTECT YOUR INVESTMENT IN THIS PRECISION ENGINEERED PRODUCT.
USE ONLY GENUINE VAC-U-MAX REPLACEMENT PARTS WHEN MAKING REPAIRS.

VAC-U-MAX

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VAC-U-MAX MODEL TK AIR POWERED TRANSFER UNIT FOR LIQUIDS



			Sale No.			
			TK-01	TK-02	TK-03	TK-04
Item	Cat. No.	Description	Quantity			
1	03850	Variable orifice assembly consisting of items 2 thru 5	1	1	1	1
2	03855	Cap, variable orifice	1	1	1	1
3	**	Variable orifice body	1	1	1	1
4	03854	Washer, lock, variable orifice	1	1	1	1
5	03853	Nut, variable orifice	1	1	1	1
6	04080	Venturi assembly	1	1	1	1
8	03679	Venturi extension, plastic	1	1	1	1
9	01376	Muffler	1	1	1	1
10	04081	Guard, muffler	1	1	1	1
11	03728	Valve, manual air control .5" NPT brass	1	1	1	1
12	01844	Nipple, pipe .5" NPT X 2" long	1	1	1	1
13	03882	Housing, venturi	1	1	1	1
14	03637	Gasket, housing	1	1	1	1
15	02214	Nut, wing .25-20	4	4	4	4
17	04078	Nut 8-32	2	2	2	2
18	03840	Clip, muffler guard	2	2	2	2
19	02198	Nut, elastic stop .25-20	1	1	1	1
20	02466	Lug, grounding	1	1	1	1
21	02123	Washer, lock .25	2	2	2	2
22	04059	Screw, socket hd.cap .25-20 X .75" long	2	2	2	2
23	03626	Gasket, cover	1	1	1	1
24	02061	Screw, flat hd. machine 8/32 X .5" long	2	2	2	2
26	03639	Gasket, tube	1	1	1	1
27	03954	Auto Vac liquid level cut-off assembly consisting of items 28 thru 34	1	1	1	1
28	07019	Auto Vac liquid level cut-off housing with arm	1	1	1	1
29	03958	Gasket, copper ring	1	1	1	1
30	03959	Ball float, plastic	1	1	1	1
31	07081	Nut, mounting .25-20	1	1	1	1
32	02184	Nut, hex .25-20	1	1	1	1
33	03640	Gasket, cap	1	1	1	1
34	03957	Cap, Auto Vac liquid level cut-off	1	1	1	1
35A	07017	Elbow assembly 1.5"	1	0	1	0
35B	07018	Elbow assembly 2"	0	1	0	1

** Not sold separately: purchase item 1

DESCRIPTION

The Model TK Air-Powered Transfer Unit is specifically designed to transfer liquids from tanks, sumps, spill areas, containers, etc. into closed top drums at rates better than one gallon per second. Unit is simply set on the drum with its gasketed vacuum tube protruding into the vent opening in the lid. The suction hose elbow is threaded into the filler opening in the lid. Compressed air passing through the VAC-U-MAX venturi power unit on top of the unit causes air to be evacuated from the tank on which the power unit is mounted and from the drum via the vacuum tube. The resulting vacuum pulls liquid into the drum through the suction hose and elbow. When the liquid in the drum reaches the bottom of the vacuum tube, it is drawn into the tank, raising the float on the Auto Vac liquid level cut-off. This vents the tank, breaking the vacuum and automatically preventing overfilling of the drum.

PREPARING UNIT FOR OPERATION

1. Thread suction inlet elbow into threaded opening in drum lid and tighten securely.
2. Attach suction hose to inlet elbow.
3. Connect suitable attachment to other end of suction hose, if required.
4. Locate gasketed vacuum tube on underside of transfer unit tank over vent opening in drum lid. Lower transfer unit until gasket seats on vent opening and the two legs at opposite end of tank rest on drum lid.
5. Connect minimum 1/2" flexible high pressure air hose to inlet valve on venturi power unit. **NOTE:** Normal operating pressure is 60 psi with unit running. Pressure regulator should be located on the valve inlet or on the outlet where the high pressure hose is connected to the shop air supply. Unit requires 35 standard cubic feet of free air at 60 psi for rated performance.
6. Unit is now ready for operation.

OPERATING & MAINTENANCE TIPS

A Auto Vac Liquid Level Cut-off

This device is float actuated, opening a valve to break the vacuum when fluid level in drum reaches maximum level. When drum is emptied, cut-off is reset by pushing down on valve plunger on top of cover, sealing the vent opening.

B Mufflers

All VAC-U-MAX units are equipped with patented muffling and maintain sound levels well within OSHA standards. Mufflers are subject to clogging from water or oil in plant air supply. Clogging creates backpressure and lowers suction of the unit. To replace the muffler, release the two muffler guard clips, grasp muffler guard handle and slide away from power unit housing. With guard off, muffler is easily removed.

Mufflers clogged by oil can sometimes be rejuvenated by degreasing, but mufflers normally are disposable.

C Vacuum Hose

When handling static-producing or hazardous material, static conductive VAC-U-MAX Buna N fuel hose is recommended. For handling coolants, sludge, and most acids, Vinyloy (pure PVC vacuum hose) is recommended, and is available in several types.

D Variable Orifice

The variable orifice is similar in construction to a needle valve. It is adjusted by removing plastic cap and using a screw driver on the valve spindle. When shipped, the needle is in maximum closed position (needle in) giving an effective area of the orifice equivalent to a 3/16" diameter opening which will pass 35 scfm free air with 60 psi air pressure, and develop a vacuum of 8" mercury (109" water). By retracting the needle to its maximum (needle out) the full orifice opening of 9/32" diameter becomes effective. This orifice will pass approximately 70 scfm and develop 16" mercury (218" water) at 60 psi. Where air pressure is above 60 psi, if needle is retracted, higher vacuums up to 20" mercury (272" water) or more than 1/2 of atmospheric pressure can be developed to provide greater suction where required.

(Continued on page 4)

E Preventive Maintenance

VAC-U-MAX cleaning units are ruggedly constructed for long and efficient service. However, a simple program of preventive maintenance will extend the life of the units and their components. Extent and frequency of maintenance checks will vary with usage and type of material handled.

The following check list is suggested as a guide for your PM program:

- * The best single preventive maintenance procedure is periodic replacement of mufflers. Mufflers will eventually load with oil and/or moisture from the compressed air supply unless air is of instrument quality. Replacement will insure minimum back pressure and optimum performance.
- * Check gasket to insure tank cover seals securely on tank.
- * Check gasket on vacuum tube to insure it provides secure seal in drum opening.
- * Check drum for leaks which will prevent unit from drawing vacuum.
- * Check proper actuation of Auto Vac liquid level cut-off by seating same and then manually lifting float ball to trip. Insure float ball is free of holes and cut-off gasket is sealing properly when cut-off is seated.
- * If a vacuum gauge is available, it can be plugged into material inlet (using rubber plug) to check for vacuum. Unit should develop 8" mercury (109" water) with needle(s) in, and 60 psi on air line gauge during operation. Less vacuum usually means:

- (a) air pressure below 60 psi
- (b) restriction in air line
- (c) clogged mufflers and/or filters
- (d) leaks due to poor gasket or holes in drum

F Spare Parts

Although there are very few things to break or wear out on this VAC-U-MAX unit, a parts breakdown is supplied on page 3. A complete inventory of spare parts is maintained at the factory for immediate shipment. Prices are available on request. Please state number of unit. A standard replacement parts package which will meet factory minimum order requirements is suggested:

- 2 Spare mufflers per venturi.
- 1 Float ball
- 1 Tube gasket

G Reconditioning

A factory reconditioning service is available for older VAC-U-MAX units. Contact Sales Department.

H Accessories

A full line of vacuum cleaning accessories for general purposes is available. (Request Bulletin 123).

CAUTION

Air operated vacuums eliminate motor sparking hazards. However, when handling potentially hazardous materials, or operating in hazardous areas, it is the responsibility of the user to clear the application of the equipment with a qualified Safety Authority prior to use. VAC-U-MAX assumes no responsibility for consequences of operation because actual use of equipment is beyond VAC-U-MAX control.

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