



# MODEL 73-851 SAFETY & INSTRUCTIONS MANUAL

## **GENERAL INFORMATION**

Carefully inspect the unit for concealed damage that may have occurred during shipping and handling. If any damage is found, then you as the receiver must note and immediately contact the freight company. Make sure there are no dents in the housing, as they will prevent the filters from sliding into the units smoothly. **THIS IS YOUR RESPONSIBILITY.**

**NOTE: Careful when unloading the unit off the skid, the unit is top heavy.**

**CAUTION:** This device is powered by rotating electrical machinery!!! Careless or improper use may result in personal injury. Read the Safety Precautions and Warnings contained within **prior** to operating this machine.

## **READ AND SAVE THESE INSTRUCTIONS**

### **SAFETY WARNINGS & CAUTIONS**

FAILURE TO OBSERVE THE FOLLOWING PRECAUTIONS COULD RESULT IN SERIOUS INJURY, INCLUDING DEATH IN EXTREME CASES. SAVE THESE INSTRUCTIONS.

#### **WARNING: (EXPLOSION HAZARD)**

This unit contains parts which can arc or spark during normal operation. Do not use in areas contaminated by volatile or flammable materials as these sparks may ignite the contaminants and cause a dangerous explosion.

#### **WARNING: (EXPLOSION HAZARD)**

This machinery is not suitable for collection of combustible metal as listed in NFPA 484, which includes: **Aluminum, Titanium, Magnesium, Lithium, Niobium, and Zirconium.**

#### **WARNING: (VOC'S & AIRBORNE MICROBES)**

The filters used in this unit will remove solid particulate ONLY, and will not eliminate Volatile Organic Compounds (VOC's) or airborne microbes (bacteria, mold & viruses) that may be a health hazard. Failure to observe the presence of such fumes could cause serious illness or death.

#### **CAUTION: (SHOCK HAZARD)**

To insure continued protection against shock hazard, connect A.C. cord only to properly grounded outlets. Replace defective cords immediately. Don't expose to moisture or liquid as this could defeat the electrical insulation thus causing electrical shock.

#### **CAUTION: (STRONG VACUUM)**

Care must be taken to avoid personal injury by not allowing hose inlet to contact any body area such as eyes, ears, mouth, etc.

#### **CAUTION: (LIFTING)**

Improper lifting or handling of this unit could cause back injury. Follow the recommended method for lifting.

#### **CAUTION: (AIR FLOW BLOCKAGE)**

Since exhaust air leaves the end of this unit, caution should be observed not to position unit in such a way as to block the exhaust.

#### **MISCELLANEOUS CAUTIONS:**

1. Use of any attachment not recommended or sold by the air cleaner manufacturer may result in risk of fire, electric shock, or injury to persons.
2. To reduce the risk of damage to the electric plug or cord, disconnect by pulling plug rather than cord when removing power from the air cleaner.
3. Make sure cord and hose are located so they will not be stepped on, tripped over, or otherwise subjected to damage or stress.
4. An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in risk of fire and electric shock.

**NOTE:** If extension cord must be used, use only a grounded cord and follow these recommendations:

(25 ft.	#12 AWG.)
(50 ft.	#10 AWG.)
(100 ft.	# 8 AWG.)

5. Do not disassemble the air cleaner. Take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in risk of electric shock or fire.
6. To reduce the risk of electric shock or bodily injury, unplug the air cleaner from outlet before attempting any maintenance or cleaning. Turning off the power switch will not eliminate this risk.

## **THEORY OF OPERATION**

This unit employs one thermally protected, high performance motor producing very high velocity air flow through the unit. Fine solid particulate material and smoke may be removed from the air by the filter media. An initial spark trap collects large particles before they reach the cartridge filter. This trap further isolates the filters from sparks in the case of a welding operation. Upon leaving the trap, the air is passed through the cartridge filter. The unit has a filter cleaning system that removes built up of particulate and extends the life of the filter. (See Filter Cleaning).

**All Factory furnished filters have a U.L. class II rating and using any filters other than those supplied for this unit is not recommended.**

Use of any product other than that recommended by the manufacturer will void the warranty.

A differential pressure gauge is an integral part of the unit. When the filters become clogged, the gauge will indicate an increase in differential pressure. At this point, the filter should be changed.

## **FILTER CLEANING**

The cartridge filter is a cylinder of pleated filter media enclosed with a bottom end cap. The top end is open to allow the air-jet to flow through the filter during cleaning. A gasket seal on the top end provides a dust-tight seal when the filter is mounted on the filter mounting plate. The bottom end cap is closed, to absorb the air-jet's force during cleaning. The cartridge filter used in this unit is made from cellulose media with an inner metal core, which strengthens the cartridge's structure. The filter is cleaned every minute with the automatic purge system to prolong the effective use of the filter. This "purging" of the filter is controlled by a timer when running or manually flipping a switch when the unit is off on the collector's control panel (an air supply must be hooked up to the unit for this to work). The filter is cleaned by forcing high pressure air in a reverse direction into the core of the filter cartridge and blows the accumulated dust off the outside of the filter. The manual switch is located next to the gage and should be used before and after the unit is used. Some of the dust will fall through the bracket that the filter sits on, to the bottom of the collector which should be cleaned out periodically and disposed of properly. (See waste disposal).

## **ASSEMBLY INSTRUCTIONS**

1. Lift the unit from the pallet into vertical position.  
2. Mount the hose assembly to the unit. Insert the shaft into the lower swivel joint. The flexible hose must be pulled back. Insert the cotter pin (supplied) by reaching through both swivel joints to the underside of the lower swivel joint (Fig. 1)

3. Make sure that the seal is pulled up from the lower swivel joint to cover the gap between the lower and upper swivel joints (Fig. 2).  
4. Slip the end of the hose over the nozzle and secure it in place with the band clamp (supplied; Fig 3).  
5. Mount the handle to the side of the unit with four 5/16-18 hex bolts and washers (supplied; Fig. 4).

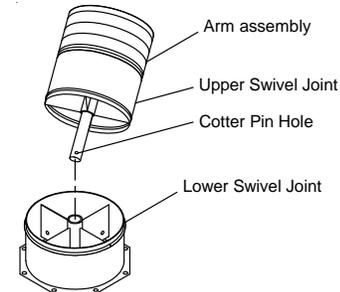


Fig. 1

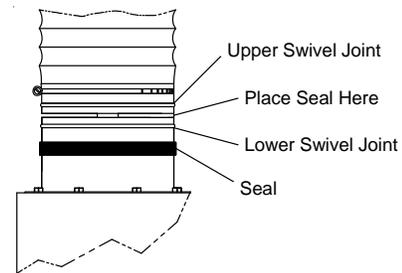


Fig. 2

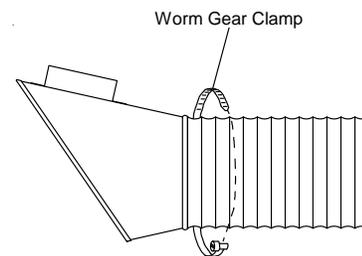


Fig. 3

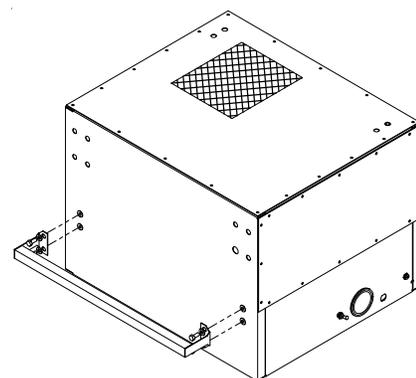


Fig. 4

## OPERATION

Your ACE Industrial Products machine is designed as a source capture device, i.e., it is intended to eliminate smoke and particulate at their point of origin. Keeping this in mind, the machine should be operated in the following manner:

### Re-read the section on Safety Warnings & Cautions before proceeding any further

1. Place the machine on a flat, level surface. Pick a location that will allow unrestricted flow of the exhaust air to the atmosphere.
2. For units with wheels or casters, lock the wheels or block the wheels.
3. Place the collection nozzle as close to the work as practical without interfering with the operator. Secure the nozzle if necessary.
4. Using the On/Off switch, turn the machine On. Should the motor not start, or should the machine make unusual noises, immediately turn the machine off and seek trained maintenance personnel. Do not continue to use the device.
5. Upon completion of the specific manufacturing or welding operation, turn the machine off. Continuous running of the air cleaner will reduce the life of the filters and increase utility costs.
6. When the differential pressure gage reads 2.4", the filter is clogged and needs to be replaced. Connect air fitting (customer supplied) to 3/8" N.P.T. female air inlet, located on the side of the unit, to an air line at 120 PSI. Use of a quick connect fitting incorporating a check valve is highly recommended. Purging the filter is described in the section about filter cleaning. See the section on Filter Installation when installing a new cartridge filter.

## GENERAL MAINTENANCE

ONLY QUALIFIED SERVICE TECHNICIANS SHOULD MAKE REPAIRS TO THIS UNIT. DO NOT REPLACE THESE MOTORS WITH MOTORS OTHER THAN THOSE RECOMMENDED BY THE MANUFACTURER.

## FILTER INSTALLATION

1. Remove the door to expose the cartridge filter.
2. Once the door is off, pull the filter toward the opening and take the filter out.
3. If necessary, clean the filter mounting plate so that the new filter can make a good seal.
4. Put the new filter in the reverse way you took the old filter out and see that the filter is centered to the hole in the mounting plate.

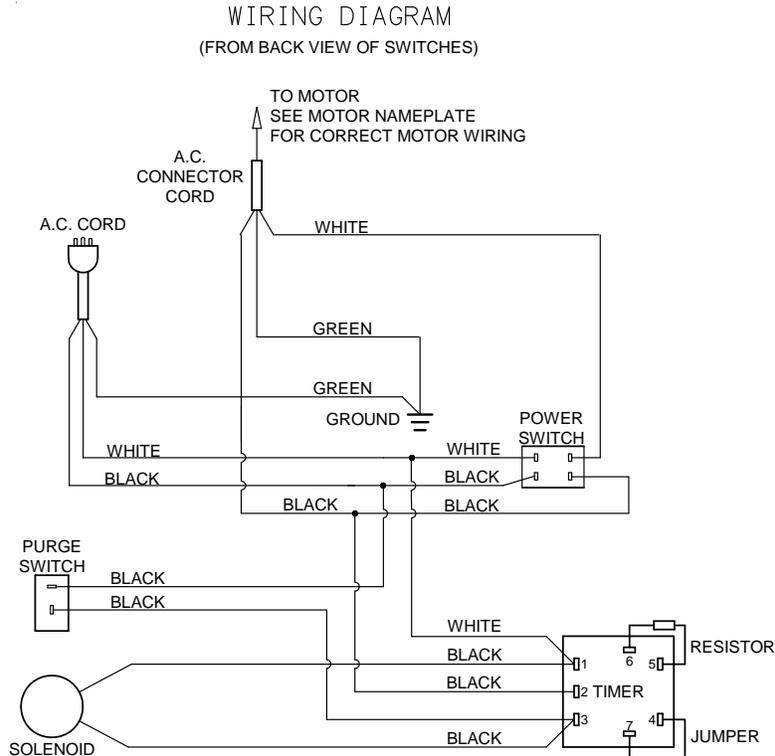
### Note: When to change filter?

When you start to see small holes or tears though filter.

If filter is taken out and inside looks dirty.  
When the gage reads approximately 2.4"

## WASTE DISPOSAL

The lower section of the air cleaner will slowly fill from repeated use and purge cycles. Some of this waste may be drawn back onto the cartridge filter if not removed. Follow all local codes in disposal of this built up waste. For non-hazardous waste, an appropriate vacuum cleaner could be used.



## FILTER LIST

<u>FILTER</u>	<u>DESCRIPTION</u>	<u>NUMBER</u>
Main Filter	Cartridge Filter .....	91-990

## OPTIONAL EQUIPMENT

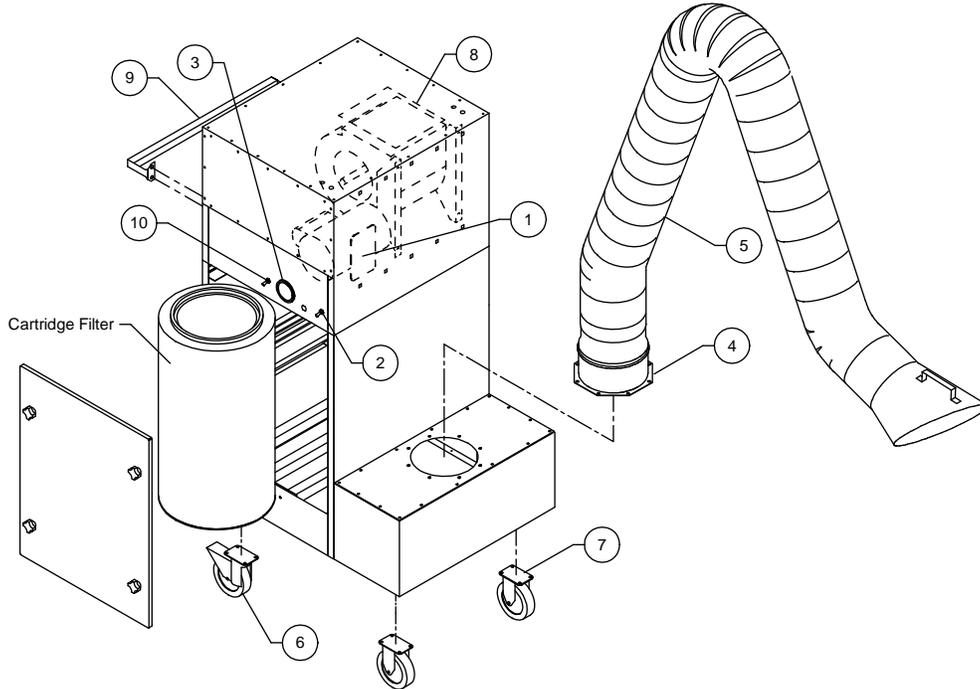
<u>DESCRIPTION</u>	<u>PRODUCT NUMBER</u>
Dual Arm .....	99-799
“POWER-MATIC” Controller .....	99-800
Heavy Duty TDS Hose (Hose Only) .....	65062

## REPLACEMENT PARTS LIST

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>NUMBER</u>
1	Motor .....	65024
2	Power Switch .....	65026
3	Vacuum Gauge .....	65027
4	Arm Assembly (Includes Base & Hose) .....	65028
5	Replacement Hose (Hose only) .....	65029
6	Swivel Caster (Pkg. of 1) .....	65030
7	Fixed Caster (Pkg. of 1) .....	65031
8	Blower Assembly .....	65035
9	Handle .....	65061
10	Purge Switch .....	610422

### Items Not Shown

Solenoid .....	65047
Timer (includes Resistor & Jumper) .....	65050
Power Cord .....	65055
V-Belt (Not Shown) .....	65056
Dump Valve .....	610769



## **ACE INDUSTRIAL PRODUCTS**

A Division Of:  
 ASSOCIATED EQUIPMENT CORPORATION  
 5043 Farlin Avenue St. Louis, MO. 63115  
 TEL: (314)385-5178 FAX: (314)385-3254  
[www.aceindustrialproducts.com](http://www.aceindustrialproducts.com)

