



STERNVENT CO., INC.

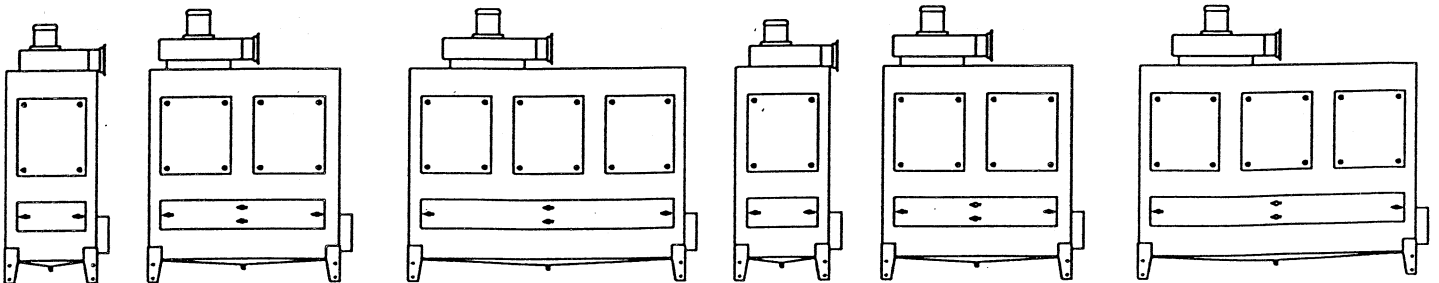
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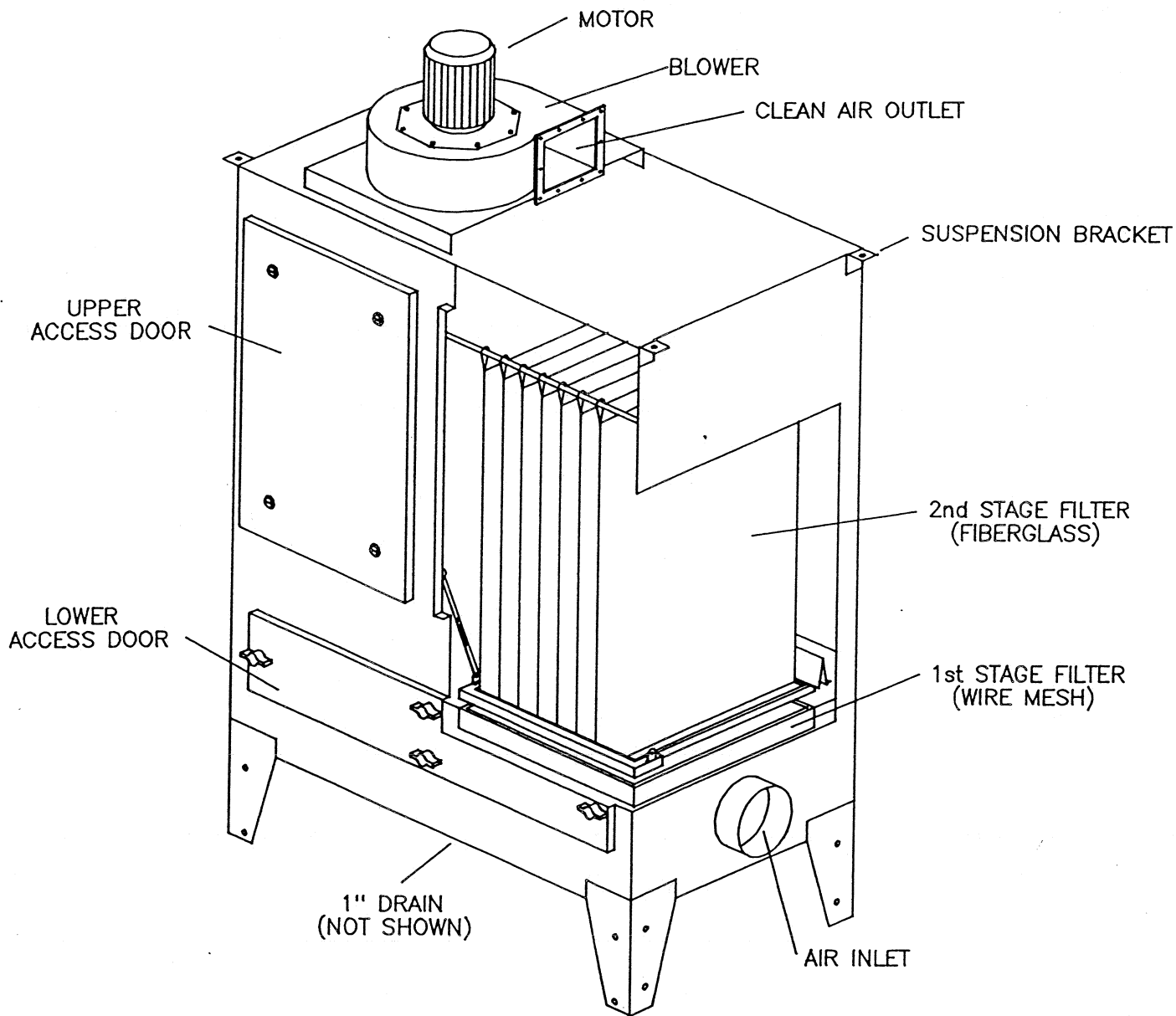
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INSTALLATION OPERATION AND SERVICE MANUAL

FOR STERNVENT SELF CONTAINED MIST ARRESTERS

MISTCHECK SIZES MA1000-6000





TYPICAL MISTCHECK MIST ARRESTER
(MODEL MA 2005 SHOWN)

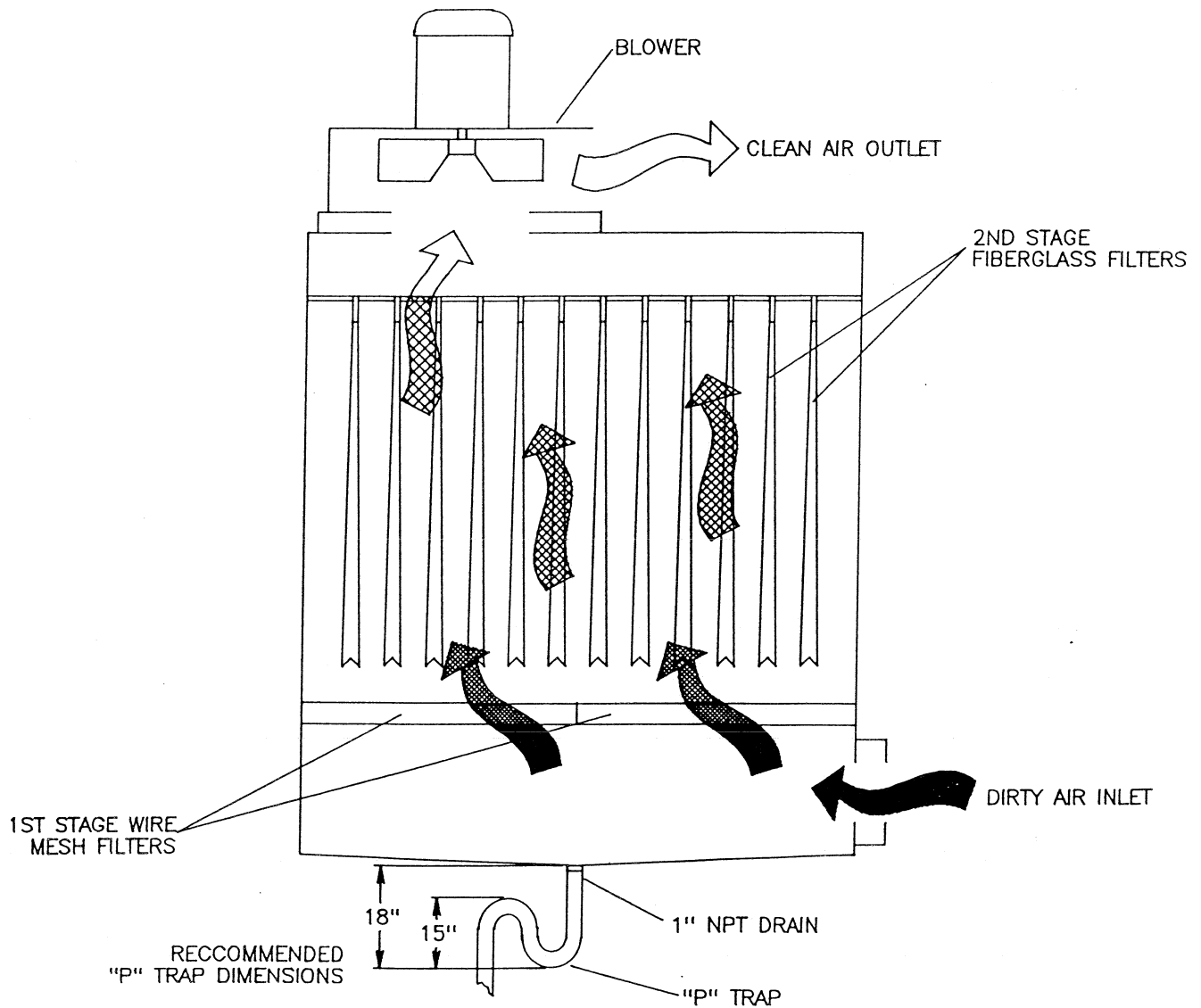
FIG. 1

IMPORTANT

IT IS IMPERATIVE THAT THESE INSTRUCTIONS BE THOROUGHLY READ BY BOTH THE INSTALLER AND THE OPERATOR OF THIS EQUIPMENT.

BASIC FACTS

The STERNVENT *MISTCHECK* is a compact and highly efficient system designed to collect water soluble or oil based coolant mists generated in industrial processes such as wet-machining and grinding. Dependable and economical to operate, the STERNVENT *MISTCHECK* can improve in-plant safety conditions by catching the mist at its source; before it spreads throughout the plant. Units are shipped factory assembled and tested.



OPERATIONAL ILLUSTRATION

FIG. 2

OPERATIONAL EXPLANATION (See Figure 2)

The STERNVENT MISTCHECK cleans in two stages. The first stage of filtration occurs as the mist passes through a wire mesh screen at high velocity, causing the air stream to change direction frequently. This deposits chips and particle laden droplets on the filter; resulting in increased air capacity, and thus greater cleaning efficiency than ordinary straight-flow filters. The filter screen is easy to remove and is washable with water.

The second stage is accomplished by fine, fiber glass filter cartridges, which trap solid particles and liquid droplets. These droplets drain back into the bottom pan of the arrester for easy disposal through a 1" drain. For up to 99.97% cleaning efficiency on particles as small as 0.3 microns an optional third stage HEPA filter is available.

PRE-INSTALLATION

Locate arrester as near to mist source as possible. Allow a minimum of 36" clearance from access doors for filter replacement and maintenance. Series 4000 & 6000 (15 & 20 HP) have access doors on front and rear.

INSPECTION

Check that all parts on the packing list have been delivered. Notify trucker and STERNVENT immediately if parts are missing or damaged.

INSTALLATION

1. Unit may be ceiling hung or floor mounted. For ceiling mounting, brackets are provided on the upper corners of the cabinet. Attach to ceiling with ½" diameter threaded rod. Optional legs are available for floor mounting. If legs are ordered, bolt to gussets on the lower corner of the unit. Shim and bolt leg pads to floor.
2. Suction pipe connections must be liquid tight. PVC piping may be used if elbows are 45 degrees. If sheet metal ducts are used, the joints and pitch should run in the same direction as the air flow. This reduces pressure loss due to friction and minimizes leakage. All joints must be caulked to make liquid tight.
3. The first and second stage filters are shipped installed inside the arrester. Discharge silencer or third stage HEPA filters, if ordered, are shipped loose and must be bolted to blower discharge and field supported.
4. Install a "P" trap to 1" NPT drain at bottom of unit and run pipe or tubing to receptacle or back to machine that collected fluids came from. See fig. 2. Fill "P" trap with coolant.

5. Electrical wiring and hook-up should be done by a qualified electrician, following the wiring diagram on the motor. Be sure to include starter with the proper size overload heaters.

START-UP PROCEDURE CHECK LIST

1. Check that all connections are air and water tight.
2. Open top door(s) and check that filters are sealed at bottom and hanging from top loops.
3. Check that motor has been connected for proper voltage and rotation. Make sure that the incoming voltage at the motor corresponds to the voltage listed on the motor label (a maximum + 10% variation is permissible), otherwise the motor manufacturer will not guarantee the motor.
4. Check that blower rotation is in the direction of the arrow on the blower housing, by starting and stopping motor and viewing either blower wheel or motor cooling fan. If rotation is incorrect, switch any two power leads. Incorrect rotation will substantially decrease blower efficiency.

IMPORTANT

Do not run the motor until the ductwork is in place and connected. If you do, you will overload the motor.

MAINTENANCE

1. Periodically check the condition of the filters. If collector efficiency declines or suction at machines decreases, then filters may be dirty or torn.
2. Shut off blower and open lower front access door(s). Make sure that bottom of unit is not filled with coolant, due to drain being clogged.

If used for a metal turning operation and excessive metal shavings are clogging the drain, either place a screen at the beginning of the suction pipes or use a damper in each pipe to reduce the suction so that only mist is pulled into the system.

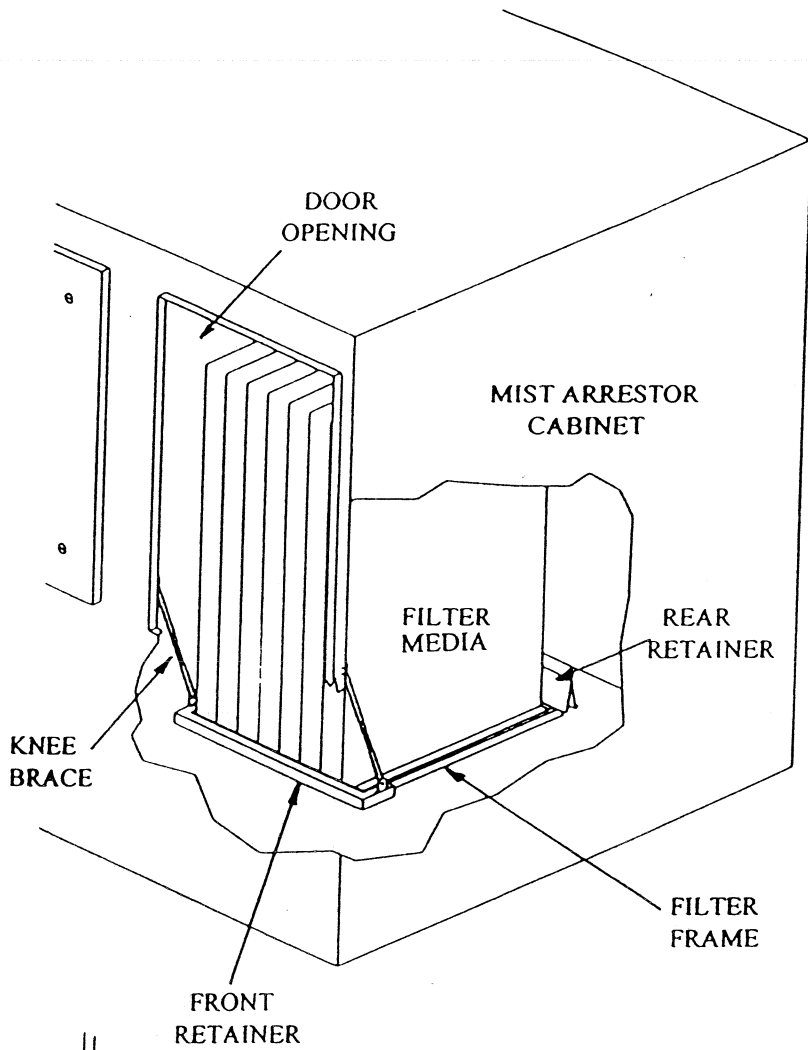
3. The first stage (horizontal) wire mesh filters may be pulled out and removed through the lower access door opening and cleaned with high pressure water, steam or soaked in appropriate solvent. Dry filters and replace in unit.

4. The second stage (vertical) fiberglass filters are inspected through the upper access door(s). They are typically changed once per year. To remove, lower support rods and slip off bag loops.

In units made prior to December 1994, the filters are held in place by 1/4 turn wire clamps. Replace gasket with new style, when changing filters. Order additional clips, if necessary.

In units made December 1994 and after, the filters are held in place by a locking mechanism. See next page for removal and installation of these filters.

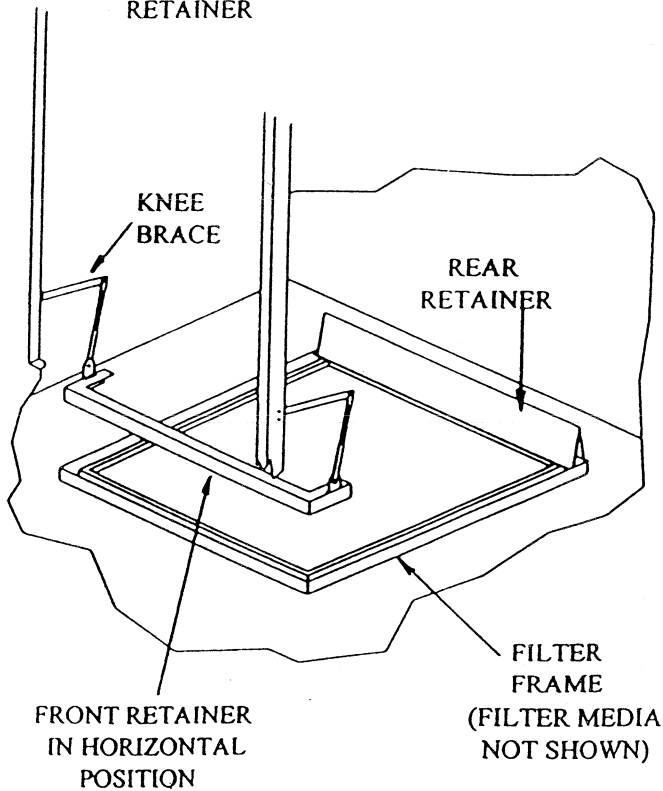
FILTER REMOVAL INSTRUCTIONS FOR MIST ARRESTORS
MANUFACTURED AFTER DECEMBER 15, 1994



1. FILTER IN LOCKED POSITION

FILTER FRAME IS TUCKED UNDER REAR RETAINER AND PRESSED DOWN BY FRONT RETAINER.

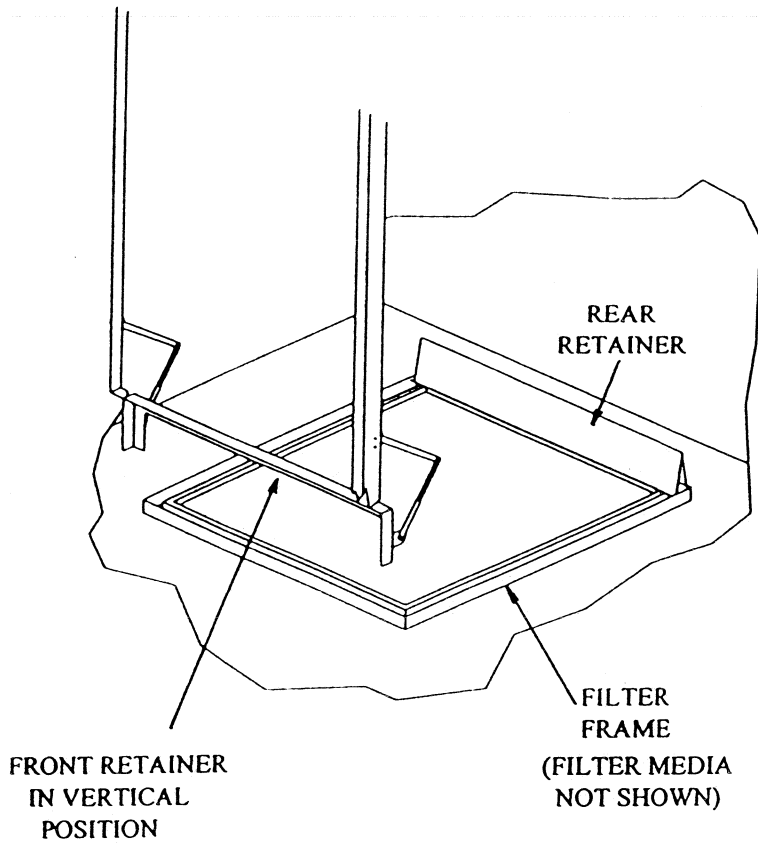
KNEE BRACES ARE EXTENDED AND LOCKED IN POSITION.



2. TO REMOVE FILTER

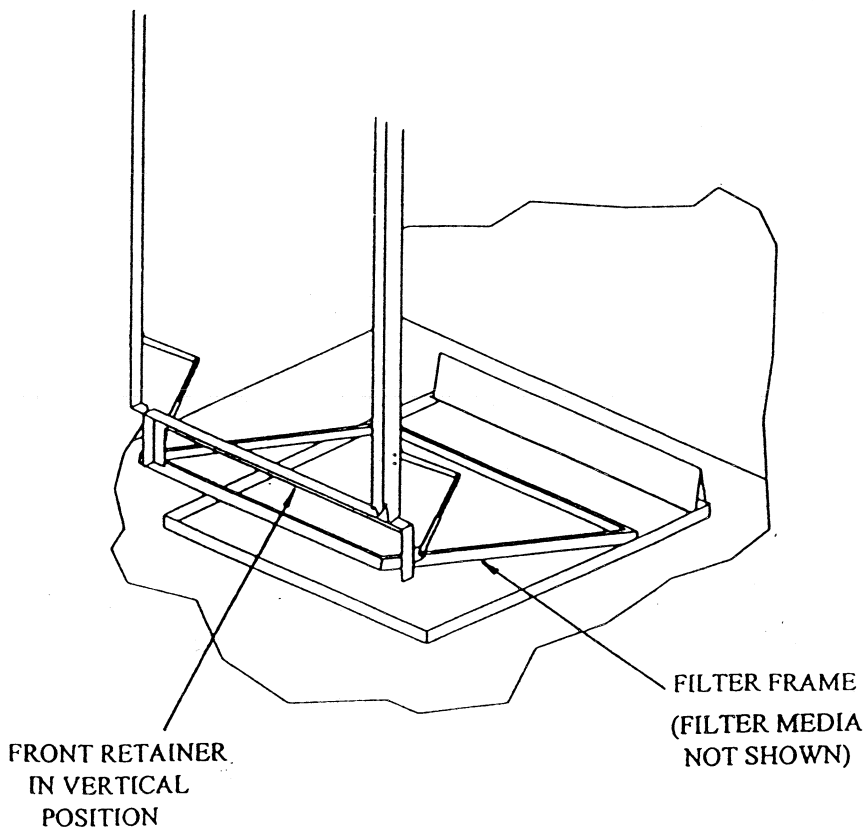
UNLOCK KNEE BRACES BY PRESSING LOCKING BUTTON AND BEND UPWARD AT THE SAME TIME.

THIS WILL LIFT THE FRONT RETAINER AND RELEASE THE PRESSURE ON THE FILTER FRAME.



3. CLEAR THE FILTER FRAME

ROTATE THE FRONT RETAINER TO A VERTICAL POSITION BY HOLDING IT AT BOTH ENDS, AND AT THE SAME TIME PULL IT TOWARD THE FRONT WALL OF THE UNIT.



4. REMOVE FILTER

PULL FILTER FRAME FROM UNDER REAR RETAINER AND PULL FRONT END UP.

DISENGAGE LOOPS AT TOP OF FILTER BAGS AND PULL FILTER THROUGH DOOR.

NOTE:

FOR INSTALLATION OF NEW FILTERS FOLLOW THE REVERSE SEQUENCE.

MAKE SURE THE FILTER FRAME IS TUCKED UNDER REAR RETAINER.

TROUBLE SHOOTING

1. MOTOR WILL NOT START
Check if overload heater are in the starter and if all switches are ON; push the reset bottom on starter.
2. MOTOR STARTS WITH A WHINE AND IS NOT RUNNING AT FULL SPEED.
Stop motor immediately. It is single phasing (getting current on two legs only) and will burn out if not stopped.
Check fuses and wires for a poor connection.
3. MOTOR MAKES A SCRAPING KNOCKING NOISE.
Check that the motor cooling fan is not rubbing against its cover.
4. LITTLE OR NO SUCTION
Check that the fan is rotating in direction indicated by arrow on unit (clockwise when looking from above). A radial fan running backwards will deliver only 50% of its rated air capacity.
Filters may be dirty or plugged up and not allowing air to pass through freely. See maintenance section.
Too many machines and branch pipes may have been added, exceeding the mist arrester air capacity. Eliminate the new machines from this mist arrester and add another Sternvent Mistcheck.
5. EXCESS VIBRATION
SHUT OFF THE UNIT IMMEDIATELY to prevent serious personal injury and/or property damage.
Remove and inspect fan wheel. If there is a build-up of sticky material, scrape or wire brush. If fan wheel is damaged, it must be replaced.

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|----|-----------------------------|--|
| 6. | MOTOR STOPPED WORKING | Check if power is on, push starter reset.

Take to nearest motor manufacturer's representative for evaluation. |
| 7. | STARTER KICKING OUT | Fan may be moving too much air. Motor will overload if ducts are not attached or if access doors are open.

Check electrical connections. Wiring and wire sizes must be up to applicable codes.

Check if starter and overload heater is correct size. |
| 8. | EXCESS MIST EXITING THE FAN | Check filters for leaks or tears. |

WARRANTY

STERNVENT equipment is guaranteed against defects in materials and workmanship for a period of one year from date of shipment (with the exception of filter bags and flexible connections, which carry a ninety (90) day warranty and motors which are guaranteed by their manufacturers). In the event of defects developing within that period under normal and proper use, seller will furnish F.O.B. its plant, without charge, parts required to replace material found defective. Seller shall not be held liable for any further costs, expenses, indirect or consequential damages and liability shall not exceed price of purchased equipment.

October 10, 1995