

OWNER'S MANUAL
INSTALLATION &
SERVICE INSTRUCTIONS

MODELS
750, 750AM, 750HE
Commercial Air Cleaner

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101 McNeill Road
Sanford, NC 27330
(919) 775-2201

SPECIFICATIONS

750

CFM:	200 - 600 Variable
Noise:	62 DBA to 41 DBA, Variable
Efficiency:	95% (ASHRAE 52-76) 65% (ASHRAE 52-76) Depending on bag used.
Input Power:	115 VAC, 60 HZ
Power Consumption:	286 watts, 3.8 amps maximum
Weight:	75 lbs.
Dimensions:	20"W x 14½"H x 30"L
Filter Area:	30 sq. ft. deep pocket
Pre-Filter:	20 ppi filter foam
After Absorber:	Partial Bypass Design, refilalble. (Optional)

750AM

CFM:	160 - 540
Module Size:	17½"L x 11¼"W x 11½"H
Activated Carbon Capacity:	14 lbs.
Alumina Capacity:	21 lbs.

750HE

CFM:	160 - 540
HEPA Filter Size:	17½"L x 11¼"W x 11½"H

PRINCIPLES OF OPERATION

The TRION Model 750 consists of four basic components:

- 1) A cabinet for housing all components
- 2) A blower for moving the air
- 3) Electrical wiring
- 4) Collecting components

The air in any room contains millions of particles of dust. The composition of the dust will vary depending on the environment. The dust may be in the form of smoke, airborne dirt from outside, small particles of grease or moisture. The size of the particles (or particulate) will range from as little as .03 micron to anything large enough to remain airborne in the air. (A micron is one millionth of a meter.)

When the unit is turned on, the blower begins moving the air through the pre-filter section. The filter collects the large dust and lint particles. The air then enters the main filter where the dust or smoke is trapped in the millions of fibers of the bag. The cleaned air then passes through the unit and back into the room.

DUCTING APPLICATION

The Model 750 Air Cleaner is designed for a very limited duct system. The duct system must be carefully designed so that the air cleaner can handle the required amount of air without excessive static pressure loss. The direct drive blowers cannot be modified by increasing blower speed or using a larger motor to correct for error in duct sizing. Capture hoods and duct design information may be obtained from the Industrial Ventilation Handbook.

When connecting ductwork, provision must be made for removing the filter elements. No access doors are provided on the unit.

NEW UNIT INSPECTION

Immediately upon receiving the unit, carefully examine the carton for damage during transit. If unit is damaged, contact the last carrier for filing claim and your TRION Distributor.

While uncartoning the unit, look for concealed shipping damage. If there is damage, it should be reported to the last carrier for filing claim and your TRION Distributor.

PREPARATION AND INSTALLATION

This manual should be carefully read before starting the preparation and installation of the air cleaner.

The installation should conform to all local ordinances associated with building codes and electrical codes required for the unit. Authorities having jurisdiction should be consulted before installation is made. If there are no local codes, the installation should conform to the National Electrical Code.

For maximum air cleaning efficiency, your air cleaner should be located as specified by your TRION Distributor.

The Model 750 is recommended for use in a dry environment.

The unit can be either wall-mounted or chain-hung. Four ¼ dia. eyebolts, flat washers and nuts are supplied with the unit. Optional wall mount brackets are available from your TRION Distributor.

NOTE: Remove the filters from the cabinet for more ease in handling.

The following materials will be needed to suspend the unit from the ceiling:

- A. 2/0 chain minimum rated at 240 lbs. working load.
- B. 12 lap links.
- C. Four 1/4 dia. eyebolts, flat washers and nuts are supplied with the unit. Optional wall mount brackets are available from your TRION Distributor.
- D. 4 - 3" adjustable turnbuckles with eye bolts.

CAUTION: NO LESS THAN FOUR CHAINS MAY BE USED TO SUSPEND UNIT FROM CEILING. CHAINS SHOULD NOT ANGLE FROM CEILING TO UNIT MORE THAN 15 DEGREES.

1. Remove outlet louver from unit.
2. Locate the four weld nuts in the top panel corners and thread one nut on each eyebolt; add lock and flat washers; then screw the eyebolt into the threaded weld nut in each corner of the top panel. Adjust eyebolts and tighten the nuts. The eyebolt should not project more than 1" into the unit.
3. Secure the chain to the ceiling by wrapping chains around beam or joist and securing with a lap link (total of 4 chains).
4. Fasten the turnbuckles to the eye bolts at each corner of the unit using four lap links. Fasten the remaining lap links to the free end of the turnbuckles.
5. Screw the turnbuckles out to approximately 1/2 full extension.
6. Raise unit up to chains and fasten lap links to chains. Adjust turnbuckles until unit is level.
7. Re-install the pre-filter and collector assemblies.

For alternate installation methods, contact your local TRION Distributor.

CAUTION: DO NOT TAKE CHANCES. IF YOU ARE UNSURE ABOUT THE PRECEDING METHOD, STOP THE INSTALLATION UNTIL YOU ARE SATISFIED THAT THE METHOD OR PROCEDURE IS CORRECT.

The Model 750 is shipped with a power cord suitable for plugging into a standard 3-wire, 115 volt wall outlet (see Wiring Diagram). The outlet must have available 15 amps at 115 volts for proper operation. The power cord must be protected against damage.

CAUTION: DO NOT REMOVE THE THIRD PRONG ON THE POWER CORD. THIS UNIT (AS WITH MOST ELECTRICAL APPLIANCES) MUST BE GROUNDED FOR SAFEST OPERATION.

UNIT OPERATION

Plug the Model 750 unit into a standard wall receptacle. If the receptacle is not of the 3-wire grounded type, an adapter can be purchased at any local electrical supply dealer.

To turn the unit ON, rotate the knob clockwise. The speed controller allows a wide range of adjustment in the air flow through the unit.

As the bag begins loading with particulate, an increase in blower speed by adjusting the control knob may be required to maintain a given air flow.

MAINTENANCE

Precision equipment, such as your TRION Air Cleaner, will require minimum amount of maintenance to keep it in good operating condition. All normal preventative maintenance can be done by you, or your local TRION Distributor may offer a maintenance and cleaning contract at a nominal charge. Contact him for details.

CAUTION: ALWAYS DISCONNECT THE POWER SOURCE BEFORE WORKING ON OR NEAR THE MOTOR OR ITS WIRING ASSEMBLY. IF THE POWER DISCONNECT POINT IS OUT OF SIGHT, LOCK IT IN THE OPEN POSITION AND TAG TO PREVENT UNEXPECTED APPLICATION OF POWER.

The Model 750 cleaning components consist of pre-filter, main filter and/or optional absorbent module.

The filters and module are accessible from the inlet end of the unit allowing simple, fast replacement.

Filters are changed according to the pressure across the filter. An optional helic gauge and static pressure taps are available from Trion. A U-tube or slant gauge with a range of 0-2" water column can also be used to read filter pressure. Install pressure tap in "Low" side of the gauge.

MAIN FILTER	BOTH FILTERS CLEAN	CHANGE PRE-FILTER	RECOMMENDED FINAL
95%	.50	.70	1.0
65%	.40	.70	1.0

NOTE: These readings will vary slightly due to altitude and temperature. Approx. 10% airflow reduction. Approx. 20% airflow reduction.

(Above chart based on highest speed obtained by control. These readings are not actual, but are typical of what you should see.)

Upon installation of the unit, note the initial pressure reading. Check daily and clean or replace pre-filter at the reading shown in the table. Pressure should return to near the initial pressure reading. When the pressure reading, with clean pre-filter, shows little improvement (less than 0.1") allow unit to run until recommended final pressure is reached. At that point, pre-filter should be cleaned, and the main filter should be replaced.

Once a pattern has been established, the pre-filters can be cleaned or replaced on a calendar basis with the main filter being replaced when the gauge reads as "Recommended Final" in the table.

For example, if the unit takes six weeks to go from 0.50 to 0.70, the pre-filter would then be cleaned every six weeks until no change occurs in the pressure reading when the pre-filter is replaced. At that point, the unit would be allowed to run until 1.0 and both filters replaced.

NOTE: The unit can continue to run beyond the 1.0 pressure reading; however, air flow will be further reduced.

The above information is provided as a guide for when to change filters. However, the real determining factor for filter change is your own judgment. If the unit does not seem to move as much air as it did when it was new, the pre-filter or pleated filter may need to be replaced.

CLEANING AND INSPECTION OF CABINET

After the dirty components have been removed, an inspection of the cabinet should be made. Remove all foreign debris and dirt accumulation inside the cabinet. Check for dirt accumulation on the blower wheel blades and clean if there is a buildup. Inspect all wiring for loose connections and cracked insulation.

Bearing of both blower and blower motor should be checked for signs of unusual wear.

Models having motors with oil cups require periodic lubrication. Use SAE 20 non-detergent motor oil every six months. Motors with ball bearings do not require lubrication.

REPLACEMENT PARTS ORDERING INFORMATION

The following pages contain Exploded Views and Bill of Material for the TRION Model 750. Use these pages to determine the part numbers of items which are needed.

To order repair parts, contact your local TRION Distributor.

The following information will be required for prompt delivery of repair parts:

Information

1. Unit Model Number
2. Unit Serial Number
3. Part Number and Description

Located

- ID Plate below switch
- ID Plate inside cabinet
- Exploded Views

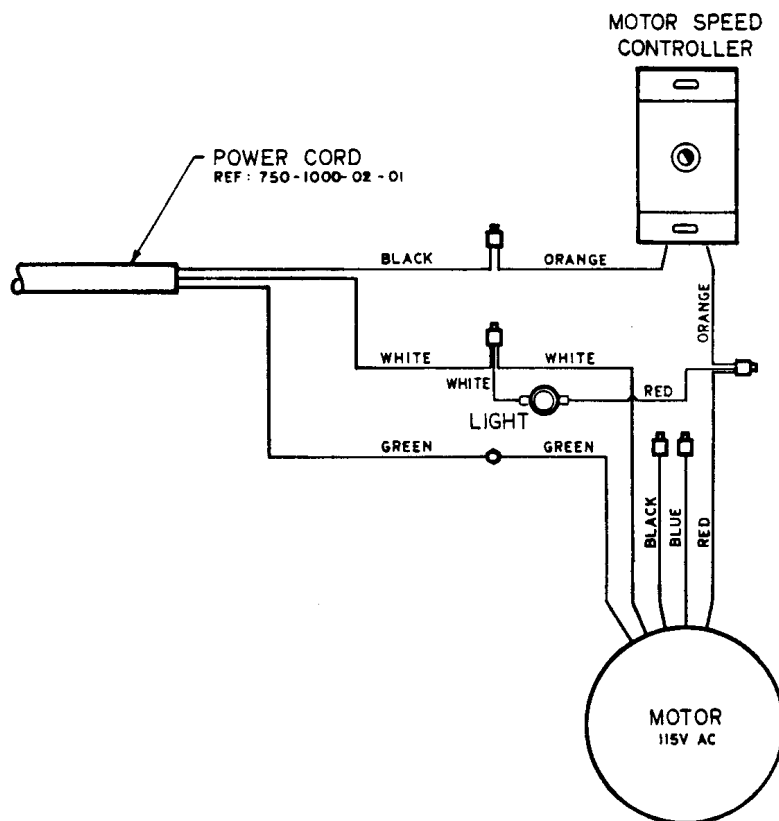
TROUBLESHOOTING

THE FOLLOWING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL. **WARNING:** THE FOLLOWING PROCEDURES WILL EXPOSE HAZARDOUS LIVE PARTS. DISCONNECT THE AIR CLEANER BEFORE PROCEEDING.

All TRION Air Cleaners are manufactured to give the user continued, trouble-free service. However, as with all mechanical equipment, breakdowns do occur.

Troubleshooting the unit is very easy as there are only three electrical components in the unit: the motor with capacitor, the speed controller, and a light.

<u>Problem</u>	<u>Solution</u>
A. Unit does not operate. Light does not light.	A1. Check 120 VAC input power. A2. Broken lead in power cord. A3. Bad speed controller.
B. Light lights. Blower does not run.	B1. Broken wire between the speed controller and the motor. B2. Bad motor capacitor. B3. Bad motor.



PARTS LIST

750, AM, HE

	Part Number	Description	Qty.
1.	750-9000-00	Cabinet, welded	1
2.	750-8001-00	Register	1
3.	137343-404	Screw, Motor Mounting	3
4.	71090-0000-0004	Motor, 120 V.	1
5.	62000-0012-16	Blower	1
6.	1500-1000-0203	Speed Control	1
7.	135379-001	Knob	1
8.	750-1000-02	Power Cord	1
9.	750-1000-01	Label, "Trion 750"	1
10.	750-9002-00	Side Frame	2
11.	750-9003-00	Top/Bottom Frame	2
12.	7300-0001-03	Light, 115 V	1
13.	750-1000-08	Hanging Kit	1
14.	137405-001	Owner's Manual	1
15.	750-1000-03	Pre-Filter	1
16.	4-750-3000-0001	Bag 95%	1
17.	4-750-3000-0002	Bag 65%	1 opt.
18.	750-8000-00	Final absorber	1 opt.
19.	4-750-0000-0003	HEPA Filter 95%	1 opt.
20.	750-8002-00	Absorber Module	1 opt.
21.	750-9020-00	Top/Bottom Frame	2 opt.
21a.	750-9021-00	Side Frames	2 opt.
22.	137564-001	Pawl	2 opt.
23.	224779-023	Gasket	6' opt.
24.	120034-519	Screw, 1/4 20 x 3	2 opt.
25.	123149-001	Nut - 1/4 - 20	2 opt.
26.	750-1000-09	Wall mounting kit	1 opt.
27.	4-750-0000-0004	Textwood Bag	1 opt.
28.	55900-0004-02	Activated alumina	
29.	55900-0004-03	Activated charcoal	

NOTES:

1. Either 19 or 20 only, bags cannot be used in conjunction with item 19 and 20. Items 21, 22a, 23, 24 and 25 are used with either 19 or 20 **only**.
2. Final absorber media: 4 lbs. activated charcoal or; 6.8 lbs. activated alumina or; 1.7 lbs. charcoal and 3.4 lbs. of alumina.
3. The absorber module, item 20, requires either 14 lbs. of activated charcoal or 21 lbs. activated alumina, or 7 lbs. charcoal and 11 lbs. alumina.
4. Final absorber may be used with any bag combination.

