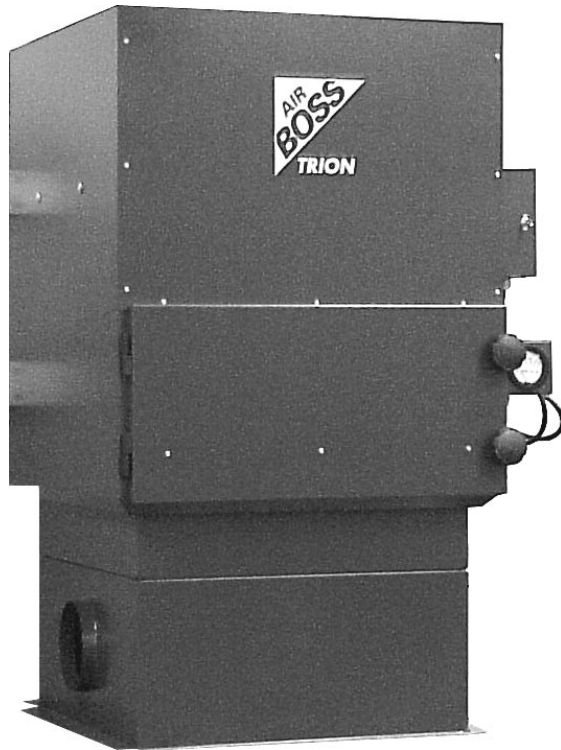




MP 600E



Installation • Operation • Maintenance

TRION[®]

A **FEDDERS** ENGINEERED PRODUCTS COMPANY

INSTALLATION

Remove the unit from shipping pallet and inspect for damage. Any damage from shipping or which occurs when the unit is being removed or has been removed from the shipping pallet, is the responsibility of the consignee or his agent. Before installing the unit, remove the cell. Store in such a manner as not to damage it. The unit has a blast gate fitted (Item 5) to allow control of the air flow through the unit. Should it be necessary to reduce the flow, loosen the two lock nuts and slide the gate across the opening. It is recommended to only move the gate a small distance at a time until the ideal setting is achieved to suit requirements. The drain at the base of the unit which has a 3/4" NTP thread should be connected to a pipe in order that the oil collected can run off either back into the machine tool sump, or a suitable container. In order for the oil to run off while the fan is running, the pipe should be trapped and primed with oil.

NOTE:

The installation of the unit is the responsibility of the installation engineer, and as such, it is his responsibility to ensure that all anchorage points, and any other means of support are within safe working loads. Unit weight 125 Lbs.

ELECTRICAL CONNECTION

A wiring schematic is on the inside of the enclosure cover and in the instruction manual, figure 2, 3, and 4.

RATING LABEL

The unit rating label is fitted on the electrical access plate (Fig. 1).

NOTE:

The electrical connection of this unit is the responsibility of the electrical engineer. It is his responsibility to ensure that all circuit breakers, cables and connectors to and from the unit are compatible with the unit. Any external device which is connected to an operating electrical circuit, which in turn is connected to the unit, must fully comply with the applicable electrical codes.

WARNING

The unit must be grounded.

OPERATION

PERFORMANCE

The system performance curve without filters is shown in figure 5. Refer to this curve for the specific filter combination provided to ensure the operating characteristics are within the unit capabilities.

UNIT CONTROL

The unit is controlled by either a switch on the unit or is remote controlled. The switch controls the operation of the unit's electrical power supply. This electrical power is used to operate the high

voltage power pack and the blower/fan assembly. Before any routine maintenance work is carried out the unit control switch must be in the "OFF" position, and the integral L.E.D. light must be out.

INDICATING LIGHTS

The lights give an indication of the electrical operation of the electronic air cleaner. With the power switch in the "ON" position the built-in white neon indicates power is supplied to the unit. The red L.E.D. indicates the operation of the power pack. If the light fails to glow with the switch in the "ON" position refer to the "Fault Diagnosis" section.

CELL ACCESS PANEL INTERLOCK

The cell access panel interlock is activated by the cell access door. The interlock is designed to disconnect electrical power when the door is opened for routine maintenance.

NOTE:

Access to the unit for routine maintenance must only be made through the access door. Disconnect input power to the unit before carrying out any maintenance.

CELL CLEANING

Cleaning and inspection of ionizer-collector cell, impinger and filters

The ionizer-collector cell, impinger and aluminum filters require cleaning at least once each month. (Some environments may require cleaning more often.) Failure to clean these components on a regular basis will adversely affect the performance of your air cleaner.

When checking the ionizer-collector cell assembly, turn the unit off and wait approximately one minute before attempting to remove the assembly. This will allow any residual electrical charge to drain from the cell.

NOTE

Note the orientation of the ionizer-collector cell in the cabinet. (Observe Warning Labels.)

CAUTION

The cell assembly weighs 34 lbs.

Remove the ionizer-collector cell, impinger and filters.

CAUTION

In the following steps, do not pry between the cell plates with screwdrivers, pliers, etc. This will bend the plates

Clean these components by first rinsing with warm to hot water, then

immerse them in a good commercial grade detergent. (Make certain the detergent will not harm aluminum or cause residue buildup on the cell plates.)

For best results, the cleaning solution should be 140°F to 160°F. The components should be soaked in the solution for 1 to 2 hours (longer if extremely dirty). Thoroughly rinse the components with warm water; make sure to rinse the ionizer-collector cell from both sides.

NOTE:

The High Temperature of a steam cleaner may cause blade warpage and damage the cell.

Allow all components to thoroughly dry before re-installing into the air cleaner. After cleaning, inspect the ionizer-collector cell for bent plates or dirty insulators. Bent plates are difficult to repair, and if the bent plates cannot be straightened, the cell will need to be replaced.

Any foreign accumulation of dirt or debris should be washed out of the cell. A close inspection around the ceramic insulators should be made. This insulator may be cleaned by removing from the cell and hand washing in a detergent. (Refer to Parts List for location of insulators.)

Inspection of the cabinet should be made while the filtering components are drying. Remove all foreign debris and dirt accumulation on the blower wheel blades and clean if there is a buildup. Inspect all wiring for loose connections and cracked insulators. Tighten or replace if required.

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

In areas where liquids are being collected, check the drain fitting for proper draining.

Reinstall all components into the cabinet (make sure the ionize collector cell is thoroughly dry). Switch unit ON at the control switch. The blower motor should start and the indicator light should be ON. The indicator light shows the power is present at control switch, but does not indicate that there is high voltage from the power supply.

An occasional snapping or arcing indicates there is high voltage from the power supply. The air leaving the unit should be clean with no visible emissions. If it is not being cleaned there is a shorted condition within the ionizer-collector; cell assembly. (Refer to Troubleshooting Section.)

OIL APPLICATION

If a unit has an oil application, the unit becomes virtually self cleaning, needing infrequent washing. This occurs due to the fact that the oil, once collected, runs down the cell plates and is allowed to drain through the drain connection, into a suitable receptacle.

RECOMMENDED MAINTENANCE

REGULAR MAINTENANCE RECOMMENDATIONS:

Your Trion unit requires the following checks:

- 1) Red L.E.D. light, on the front of the unit should ALWAYS be illuminated when operating efficiently.

This should be checked on a daily basis.

- 2) The unit should be inspected to see if excess contamination is building up. If dirty, clean in detergent and warm water solution.

This should be checked every four weeks at least until maintenance schedule is determined.

- 3) The ducting and drain connections should be checked for serviceability.

This should be checked every four weeks.

WARNING

To avoid the risk of collected contaminants, particularly oil, being blown from the drain pan of the unit back up into the filters, it is **ESSENTIAL** that the oil drain piping is trapped, at least 2 1/2 inches.

The unit should be inspected regularly and collected contaminant removed to prevent excessive accumulation which may result in flash over or fire damage.

TROUBLESHOOTING

| SYMPTOM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|--|--|--|
| Failure to start (motor does not start when unit is turned on) | Proper power not reaching unit | Check that unit is connected to live power line with good fuses, and that the voltage at the unit is correct |
| | Loose electrical connections | Check; tighten if necessary |
| | defective control switch | Replace control switch |
| | Defective safety switch | Replace safety switch |
| | Defective motor | Replace motor |
| Motor operates intermittently | Dirt on motor causing overheating | Clean Motor |
| | Motor requires lubrication | Lubricate motor |
| | Blower belt too tight | Loosen belt |
| | Improper wiring | Check Wiring according to wiring diagram |
| | Access door not closed | Close access door |
| Motor operates with little or no air volume | Blower wheel blades loaded with dirt | Clean blower wheel blades |
| | Blower wheel rotating in wrong direction | Check wiring according to wiring diagram |
| | Motor requires lubrication | Lubricate motor |
| | Blower wheel loose on motor shaft | Supply correct line voltage |
| On/Off switch not illuminated | Check power supply | Connect power |
| | Control switch off | Switch on |
| | Fuse/circuit breaker open | change fuse/reset |
| | Faulty Switch | Replace switch |
| Red L.E.D. out | Control switch off | switch on |
| | Broken cell insulator | Replace |
| | Extremely dirty cells | Wash |
| | Power supply failure | Replace |
| | Loose electrical connections | Tighten-if necessary |
| Electrostatic not working or Continuous arcing and flickering L.E.D. | Excessive dirt | Wash |
| | Object between plates | Remove |
| | Damaged (bent) plate | Straighten or replace |
| | Damaged (bent) ionizer | Straighten or replace |
| | Broken Insulator | Replace |
| | Defective power supply | Replace |
| | Bad contact to cell ionizer | check |
| Power Pack not working | No power | Check input to pack |
| | Defective power pack | Replace |
| Unit will not work | No power at service connection | Rectify |
| | Access panel not closed | Close |
| | Bad (open) safety switch | Replace |
| | Bad (open) wiring | Replace |

TROUBLESHOOTING (CONTINUED)

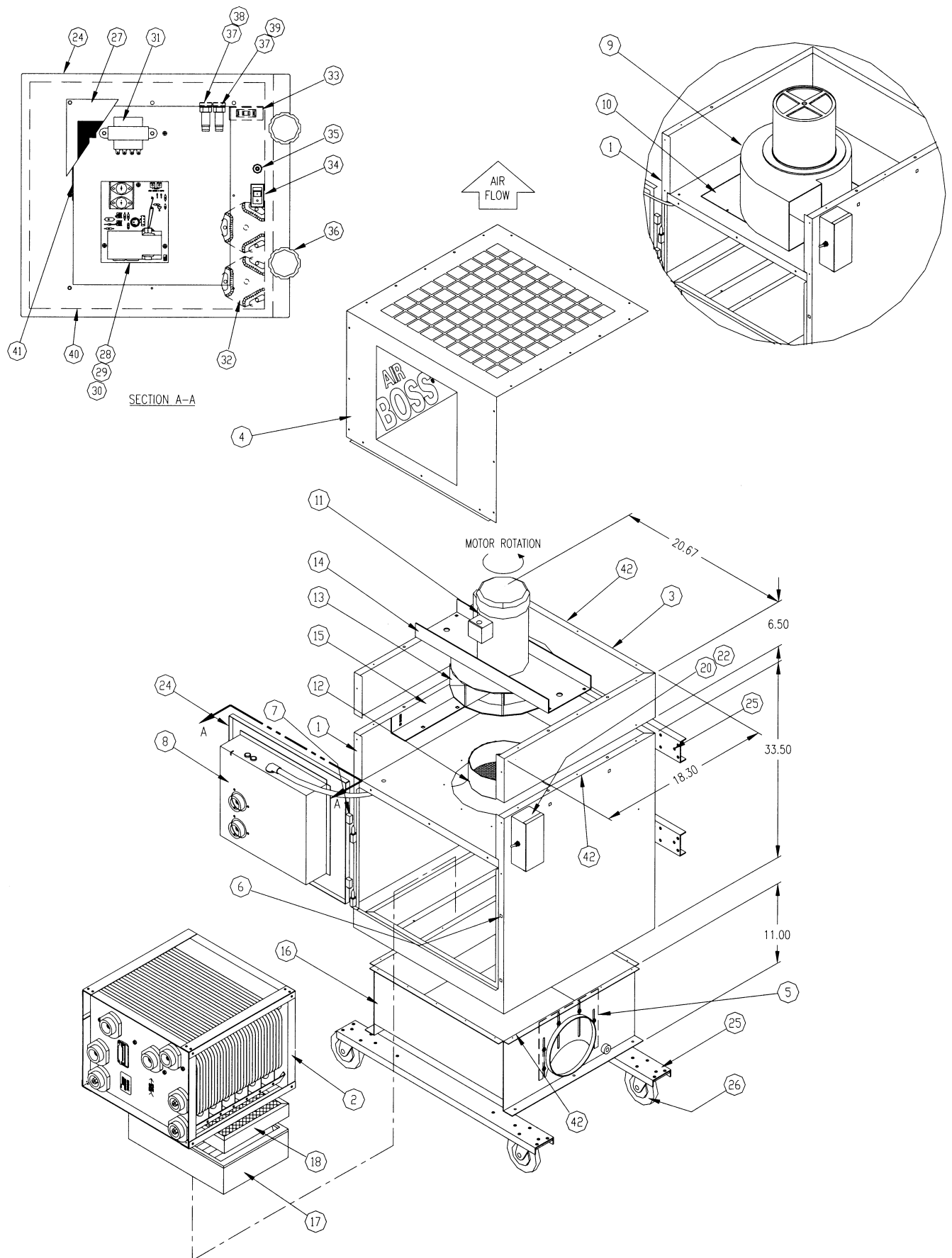
| SYMPTOM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|-------------------------------|-------------------------------|-----------------------------|
| Heavy arcing after washing | Collector elements still wet | Allow more drying time |
| Loud hissing noise | Dirty Cell | Wash |
| | Loose high-voltage connection | Rectify |
| Radio and/or TV Interference | Improper earth connection | Wash |
| | Loose high-voltage connection | Rectify |
| | Cell "floating" | Clean cell rails |
| Visible dirty air penetration | Cells not working | Check as above |
| | Cell too dirty | Wash |
| | Air flow too great | Slow air speed (blast gate) |
| | Fault on electrostatics | Rectify (see above) |

PARTS LIST • CONTINUED ON PAGE 5 (REFER TO FIGURE 1 - PG. 6)

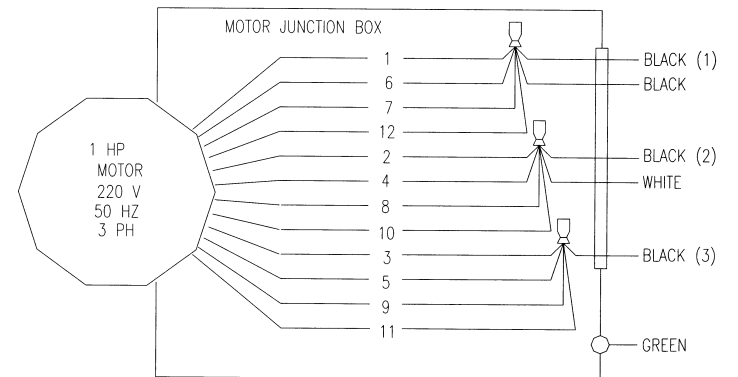
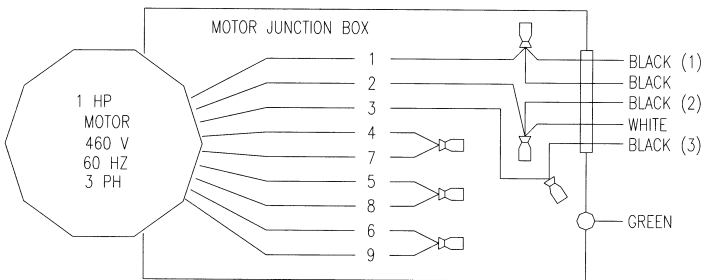
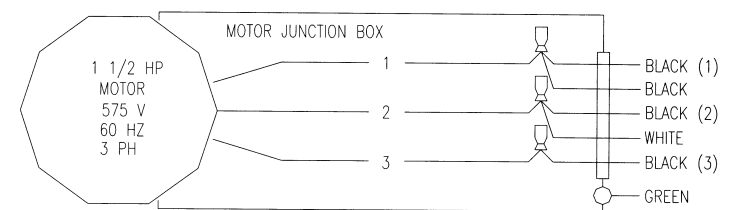
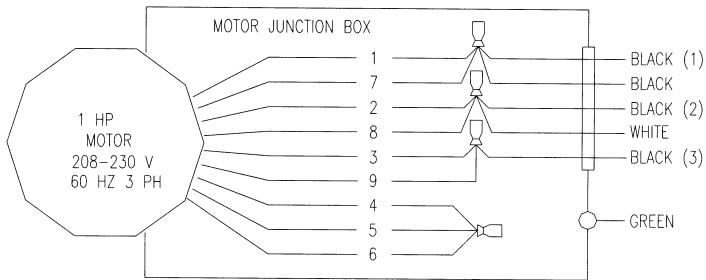
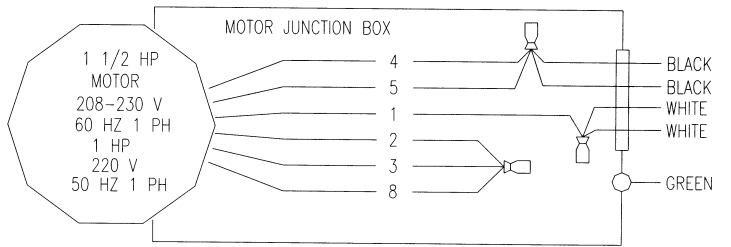
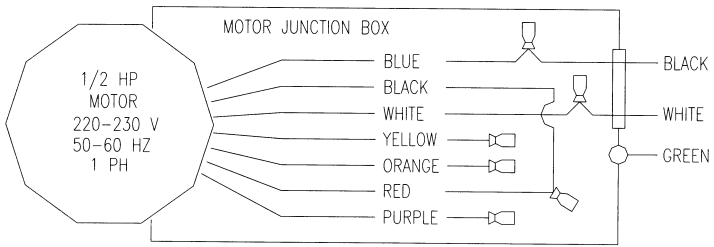
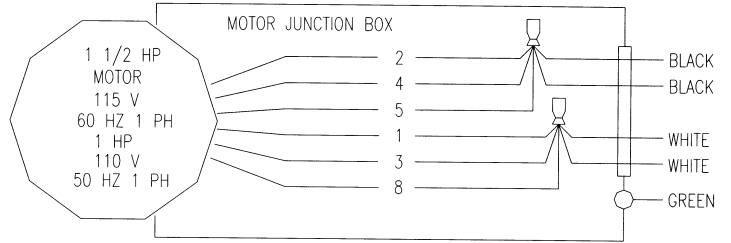
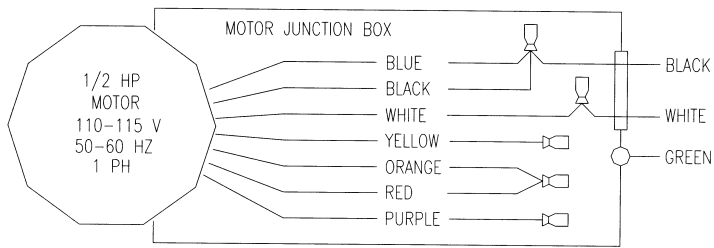
| ITEM | PART NO. | DESCRIPTION |
|------|------------|--|
| 1 | 354584-001 | CABINET ASSEMBLY |
| 2 | 450568-004 | IONIZING CELL |
| 3 | 254610-001 | CABINET EXTENSION |
| 4 | 354609-001 | BLOWER PLENUM COVER |
| 4A | 354609-002 | BLOWER PLENUM COVER |
| 5 | 354607-001 | BLAST GATE |
| 6 | 321449-002 | NUT RETAINER |
| 7 | 146442-002 | HINGE |
| 8 | 224779-013 | GASKET, 3/4" X 1/4" |
| 9 | 247350-101 | BLOWER MOTOR ASS'Y (120 V / 240-50 / 60 Hz-1 PH) |
| 10 | 253631-001 | ADAPTER PLATE |
| 11A | 150825-001 | MOTOR 115/208-230/460/1 |
| 11B | 150825-003 | MOTOR 208-230/460/60/3 |
| 11C | 150825-004 | MOTOR 575/60/3 |
| 11D | 150825-005 | MOTOR 110/220/50/1 |
| 11E | 250819-006 | MOTOR 220/380-440/50/1 |
| 12 | 250819-007 | INLET CONE |
| 13 | 250837-102 | BLOWER WHEEL |
| 14 | 253617-001 | MOTOR MOUNT |
| 15 | 253621-001 | MOTOR ADJUSTING ANGLE |
| 16A | 354604-001 | PLENUM - HOSE |
| 16B | 354604-002 | PLENUM - ARM |
| 17A | 246901-014 | IMPINGER 2" |
| 17B | 345392-007 | PLEATED PREFILTER 4" - 35% |
| 17C | 345392-008 | PLEATED PREFILTER 4" - 65% |
| 18A | 254630-001 | PREFILTER ASS'Y 2" |
| 18B | 224451-023 | ALUMINUM MESH FILTER 2" |
| 20A | 253625-002 | SWTCH BOX ASS'Y 3Ø |

PARTS LIST • CONTINUED (REFER TO FIGURE 1 - PG. 6)

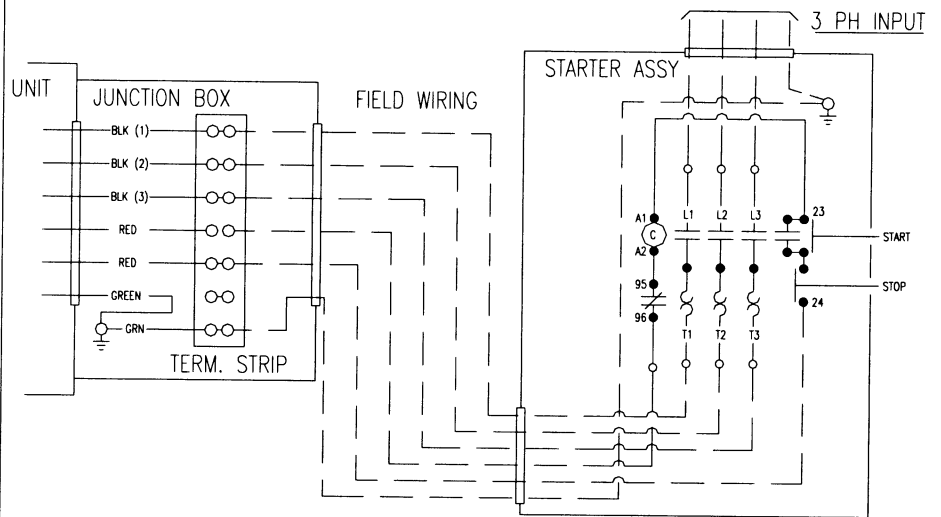
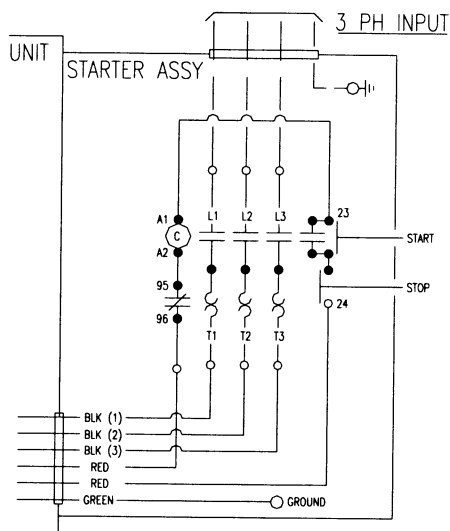
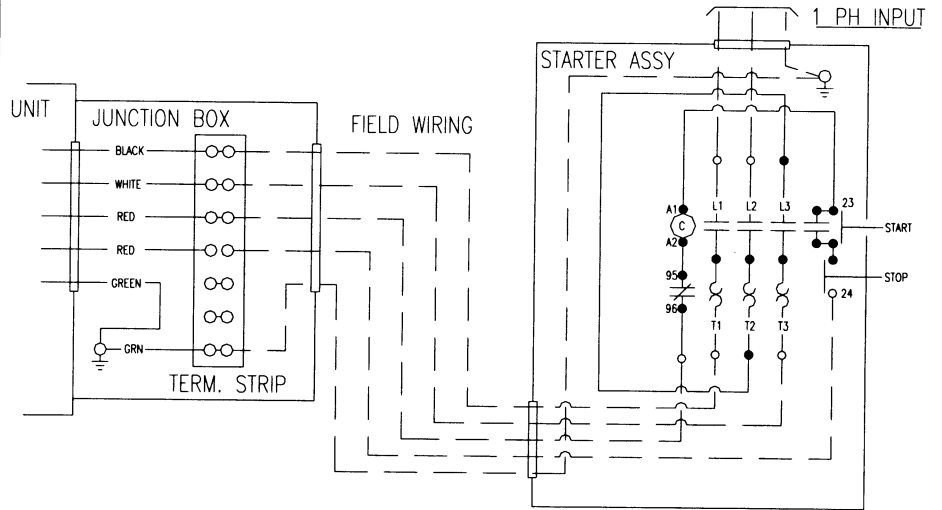
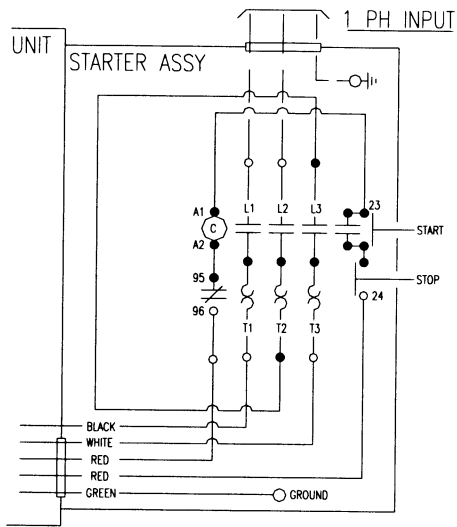
| ITEM | PART NO. | DESCRIPTION |
|------|------------------|-----------------------------------|
| 1 | 354584-001 | CABINET ASSEMBLY |
| 20B | 253625-003 | SWTCH BOX ASS'Y 1phase |
| 20C | 253625-004 | SWTCH BOX ASS'Y 1 phase W/ CORD |
| 20D | 250928-006 | COMPACT STARTER 1 phase |
| 20E | 250928-007 | COMPACT STARTER 3 phase |
| 20F | 250929-023 | COMPACT STARTER 3 phase |
| 20G | 250929-025 | COMPACT STARTER 3 phase |
| 22 | 253625-005 | ARM ASSEMBLY 8" X 10' (NOT SHOWN) |
| 23A | 445500-001 | ARM ASSEMBLY 8" X 14' (NOT SHOWN) |
| 23B | 445500-011 | ACCESS DOOR ASSEMBLY |
| 24A | 354592-001 | ACCESS DOOR ASSEMBLY |
| 24B | 354592-002 | ACCESS DOOR ASSEMBLY |
| 24C | 354592-003 | ACCESS DOOR ASSEMBLY |
| 24D | 354592-004 | ACCESS DOOR ASSEMBLY |
| 24E | 354592-005 | ACCESS DOOR ASSEMBLY |
| 24F | 354592-006 | ACCESS DOOR ASSEMBLY |
| 24G | 354592-007 | ACCESS DOOR ASSEMBLY |
| 24H | 354592-008 | ACCESS DOOR ASSEMBLY |
| 25 | 253761-001 | MOUNTING BAR |
| 26A | 60000-0003-01-00 | SWIVEL CASTER |
| 26B | 150821-001 | RIGID CASTER |
| 27 | 254597-001 | COVER PLATE |
| 28 | 347891-013 | POWER SUPPLY |
| 29 | 221441-042 | INSULATOR ROUND PILLAR |
| 30 | 149772-001 | CHOKE ASS'Y |
| 31A | 248655-005 | TRANSFORMER 120/208/24 |
| 31B | 248655-008 | TRANSFORMER 380/460 |
| 31C | 248655-007 | TRANSFORMER 575 |
| 32 | 353228-001 | STAND OFF INSULATOR |
| 33 | 250031-001 | SAFETY SWITCH |
| 34A | 245844-001 | SWITCH 240V |
| 34B | 245844-002 | SWITCH 24V |
| 34C | 250033-001 | SWITCH 240V (UK ONLY) |
| 35 | 241101-016 | LED ASS'Y |
| 36 | 248956-002 | CLAMPING KNOB |
| 37 | 151677-001 | FUSE HOLDER |
| 38A | 151678-001 | FUSE 1.2A |
| 38B | 151678-003 | FUSE 3.1A |
| 39A | 151678-002 | FUSE 5.0A |
| 39B | 151678-004 | FUSE 10.0A |
| 40 | 224779-034 | GASKET, 5/8 X 1/4 |
| 41 | 224779-003 | GASKET, 1/4 X 1/16 |
| 42 | 254781-001 | STAND |



**EXPLODED VIEW
FIGURE 1**



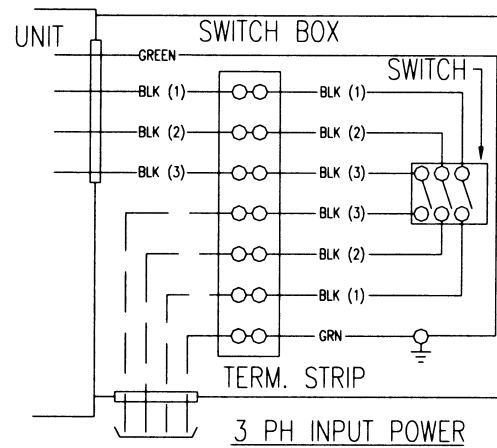
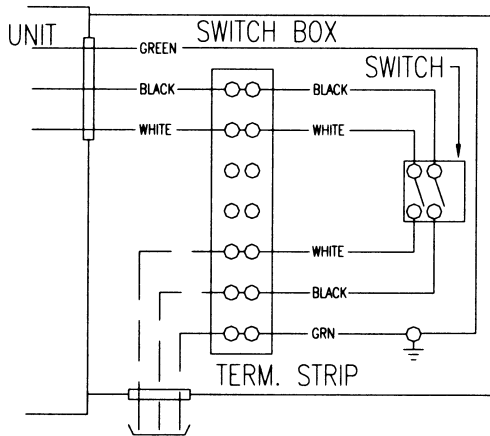
**WIRING SCHEMATIC
FIGURE 2**



STARTER - UNIT MT. WIRING

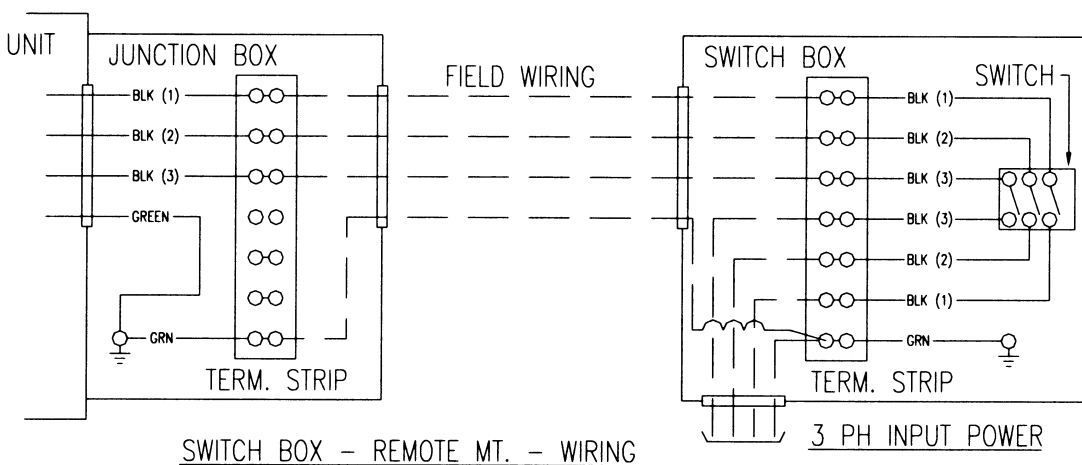
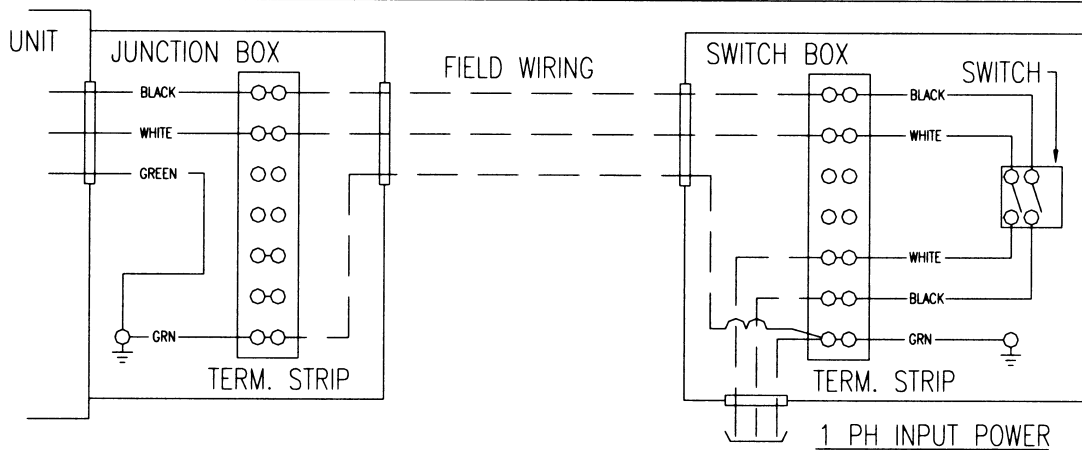
STARTER - REMOTE MT. WIRING

FIGURE 3



1 PH INPUT POWER

SWITCH BOX - UNIT MT. - WIRING



SWITCH BOX - REMOTE MT. - WIRING

FIGURE 4

WARRANTY

All Trion air cleaners are warranted for component failure and workmanship for a period of three years after purchase. Do not return defective parts without prior permission from the factory. Contact your local Trion Distributor or Trion Customer Service Department at 1-800-884-0002 or Fax 1-800-458-2379 to obtain material return authorizations and service information.

TRION[®]

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www.trioninc.com • e-mail: sales@trioninc.com

101 McNeill Road • Sanford, North Carolina 27331-0760 • Customer Service: (800) 884-0002 • Fax: (800) 458-2379
Part No. 153632-002 • 02/01