

PRE AUG 1996 UH113

INSTALLATION AND SERVICE MANUAL

Model Series:

T1300

T2600

T1001 Module

T2002 Module

CONTENTS:
Installation
Operation
Service

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

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I. SPECIFICATIONS

Power Requirements:

Model	Voltage	Horse Power	Amps (Max.)
T1001 Module	120V, 60 Hz, 1 Ph.	—	.4
T2002 Module	120V, 60 Hz, 1 Ph.	—	.4
T1300	120V, 60 Hz, 1 Ph.	3/4	11.2
T1300A	230V, 60 Hz, 1 Ph.	3/4	5.6
T1300B	230V, 60 Hz, 3 Ph.	1	3.4
T1300C	460V, 60 Hz, 3 Ph.	1	1.7
T1300D	575V, 60 Hz, 3 Ph.	1	2.5
T1300E	240V, 50 Hz, 1 Ph.	3/4	6.0
T1300N	208V, 60 Hz, 3 Ph.	1	3.4
T2600	120V, 60 Hz, 1 Ph.	3/4	11.2
T2600A	230V, 60 Hz, 1 Ph.	3/4	5.6
T2600B	230V, 60 Hz, 3 Ph.	1	3.4
T2600B	230V, 60 Hz, 3 Ph.	2	6.4
T2600C	460V, 60 Hz, 3 Ph.	1	1.7
T2600C	460V, 60 Hz, 3 Ph.	2	3.2
T2600D	575V, 60 Hz, 3 Ph.	1	2.5
T2600D	575V, 60 Hz, 3 Ph.	2	4.5
T2600E	240V, 50 Hz, 1 Ph.	3/4	6.0
T2600N	208V, 60 Hz, 3 Ph.	1	3.4
T2600N	208V, 60 Hz, 3 Ph.	2	6.4

Collector Voltage: 6KV

Ionizer Voltage: 12KV

Motor (Where Applicable): Ball Bearing, Totally Enclosed, Fan Cooled

II. PREPARATION FOR 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.

The 575V, 3 Phase unit does not have internal motor overload protection. The installer must provide overload protection in accordance with National Electrical Code, Canadian Electrical Code, part 1 or other applicable electrical codes.

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

The unit can be either wall-mounted or chain-hung. Eyebolts can be supplied by the TRION Distributor.

NEW UNIT INSPECTION

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

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

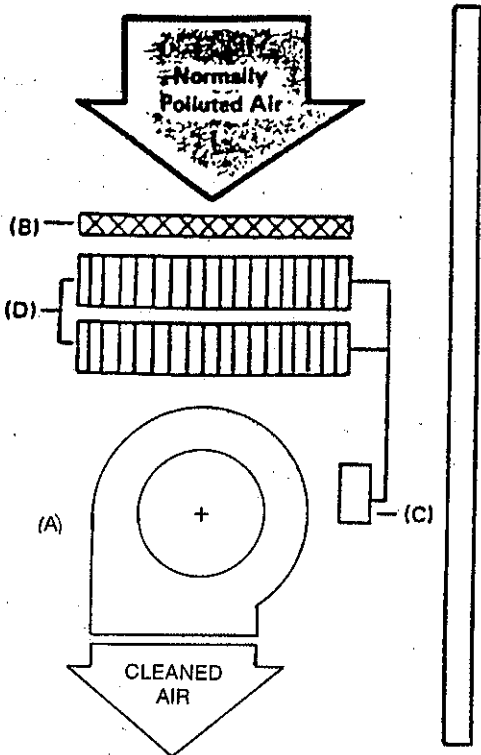
WHAT IS YOUR ELECTRONIC AIR CLEANER

Your air cleaner is a high efficiency contaminant collector designed to remove up to 95%* of the dust, smoke, liquid aerosol and other pollutants from all the air passing through it.

*Determined by the National Bureau of Standards DOP Test Method with addition of artificial dust or other contaminants.

HOW IT OPERATES

Polluted air is drawn into the unit by the belt driven blower (A) on a T1300 or T2600. The T1001 and T2002 Modules require an external air mover. After passing through a pre-filter (B), the particles in the air are given an electrical charge supplied by the power supply (C). Entering the collector cells (D), these charged particles are attracted to and collected on grounded collecting plates.



OPERATION

Control Switch (A). The control switch is located on the cell access door just below the "TRION" name plate. It controls the operation of the power pack (and the belt driven blower on T1300 and T2600). The control switch should be in the "OFF" position when the Cell Access Door is open for maintenance of the unit.

Indicating Light (B). The light located adjacent to the control switch is an indicator of the performance of your electronic air cleaner. When the control switch is "ON", the blower should operate on the T1300 and T2600, and the indicator light should glow. If the light does not glow or if it continually flickers and is accompanied with a continual snapping or arcing noise, the air cleaner requires attention.

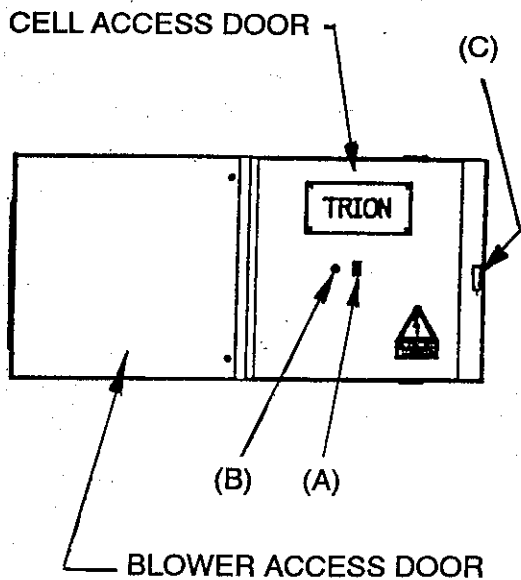
Cell Access Door Latch (C). The cell access door latch is located on the door near the intake end of the unit. To open the cell access door, lift the latch handle and rotate it 90°.

Arcing (snapping or cracking noise). An occasional arcing noise may be emitted from the air cleaner. This is a normal reaction being caused by an exceptionally large piece of dirt, etc., entering the collecting elements. Also, an arcing noise accompanied by a flickering of the indicating light may also be noted after washing. Should this happen, allow more drying time. Also, see "Troubleshooting Chart" for additional causes of arcing.

The louvers on the grills are adjustable so direction of air flow can be controlled as desired.

NOTE: The unit is equipped with an interlock switch for your safety. The unit will not operate if the control enclosure and the cell access door are not closed securely.

NOTE: The blower access door on the T1300 and T2600 is not protected by an interlock switch. Do not attempt to operate the unit unless the door is closed and secured.



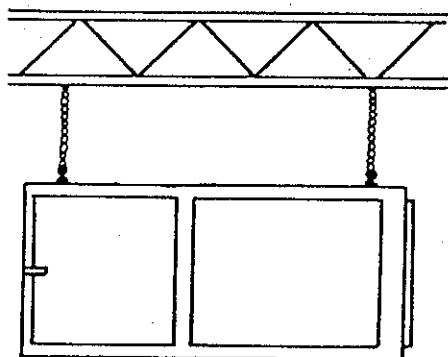
DUCTING APPLICATION

The T1300 and T2600 Air Cleaners are designed for free hanging applications or for limited duct system applications. The duct systems must be carefully designed to keep the external static pressure to a minimum while still moving the required amount of air. Some added static pressure can be overcome by adjusting the blower drive pulleys or using a more powerful motor. Capture hoods and duct design information may be obtained from the Industrial Ventilation Handbook.

THE FOLLOWING PROCEDURES ARE FOR QUALIFIED PERSONS ONLY AS HAZARDOUS LIVE AND MOVING PARTS MAY BE EXPOSED

III. INSTALLATION — READ THOROUGHLY

1. Carefully unpack unit from shipping crate or carton and examine for damage in shipment.
2. Remove ionizer(s), collection cell(s), pre-filters and after-filters.
3. Attach 500 pound test chain to the ceiling joist using:
 - (a) Wood joist - 3/8" eye bolts
 - (b) Metal joist - wrap chain around joist at least twice and secure with 500 pound test connecting link.
4. Chain should be cut to allow the unit to hang from a predetermined height from the floor. (Usually 10-12 feet)
5. The unit is equipped with a pre-punched "knock out" in each corner on the top and bottom. Using a punch, remove the 4 "knock outs" that will be required for mounting the eye bolts that will be attached to the suspension chain.
6. Position a 3/8" diameter eye bolt (or larger) in each hole and secure with a washer and appropriate nuts. **Note** — Be sure to double nut these eye bolts. Failure to do so may cause the nuts to loosen causing the unit to fall.
7. Using 3/8" connecting links, attach unit to chain. Use turnbuckles on diagonally opposite chains. **Note** — Foul threads on turnbuckles after leveling unit to insure that the turnbuckle does not "back off" and cause the unit to fall.
8. The units can be suspended with the direction of air flow from right to left. If a left to right air flow is desired the unit may be rotated 180 degrees on its axis and the eye hooks installed in what was originally the bottom.

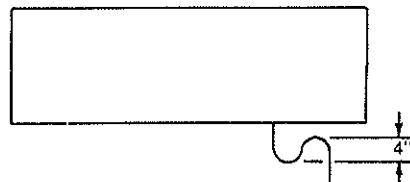


Typical Chain Supported Installation

LIQUID AEROSOL APPLICATION INSTALLATION

The unit is equipped with a sump, drain hole sized to accept a 1/2" NPT fitting. For the collection of liquid contaminant:

1. Install drain fitting to allow for attachment of a liquid collection cup or drain hose. A drain fitting is available from your distributor. An "S" trap is required in the drain hose to ensure proper drainage of collected liquid.
2. Raise the front corner of the unit 1/4" to enable the collected liquid to flow to the drain sump.



ELECTRICAL INSTALLATION

All units must be wired directly into the terminal block provided in the junction box on the back side of the unit. Use NEC Class I wiring methods. Size branch circuit protection in accordance with NEC. Refer to appropriate enclosed wiring diagram.

IV. MAINTENANCE

The following instructions are for use by qualified personnel.

WARNING:
THE FOLLOWING PROCEDURES WILL EXPOSE
HAZARDOUS LIVE PARTS. DISCONNECT POWER
BEFORE PROCEEDING.

CLEANING

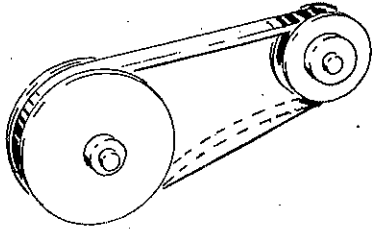
The PRE-FILTER(S), IONIZER(S), AND COLLECTING CELL(S) should be removed from the unit periodically and soaked in a solution of hot water and a commercial detergent for 2 to 4 hours. Your Trion Distributor has a detergent called Tridex specifically formulated for cleaning collector cells. The frequency of cleaning is dependent on the contaminant being collected. Liquid aerosol is virtually self cleaning while welding smoke may require accumulation being blown or rapped off every few days. Unit should be kept clean for maximum efficiency.

Wash Dirt Collecting Elements

1. Turn the control switch OFF and disconnect power to the unit.
2. Open the cell access door.
3. Remove ionizing-collecting cells and wash in hot detergent water. If the collected contaminant is of an extremely dry nature, it can be blown from the collecting cells with a pressure hose or removed by gently tapping the end plate of the cell. When blowing or tapping cell clean, carry cell outdoors.
4. Remove the mechanical pre-filter. Remove collected dust or lint by vacuuming or brushing. Wash with warm, soapy water.
5. Rinse all components thoroughly in warm, clear water and permit them to DRIP DRY THOROUGHLY.
6. Replace pre-filter and ionizing-collecting cells. BE SURE AIR FLOW ARROW POINTS IN DIRECTION OF AIR FLOW (TOWARDS BLOWER).
7. Close access door, reconnect power to the unit.
8. Turn control switch to "ON". If arcing occurs or the indicating light flickers, the components may still be damp. Simply shut unit off and allow more drying time.

CAUTION: Do not run any objects, such as a bottle brush, between the plates of the cell. This might change the plate spacing or damage the ionizer plates.

INSPECTIONS



The motors and blowers on Trion T1300 and T2600 Industrial Air Cleaners have sealed ball bearings and never need lubricating.

Belt tension should be checked periodically. When a moderate force is applied to the belt midway between the pulleys, the belt should deflect approximately 1/2".

CAUTION: Having too much tension on the belt will shorten belt life and place undue stress on the motor bearings and blower bearings.

V. REPLACEMENT PARTS ORDERING INFORMATION

The following pages contain exploded views and Bill of Material for TRION Air Cleaners. 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.

	LOCATED
1. Unit model number	Inside door
2. Unit serial number	Inside door
3. Part number and description	Exploded views

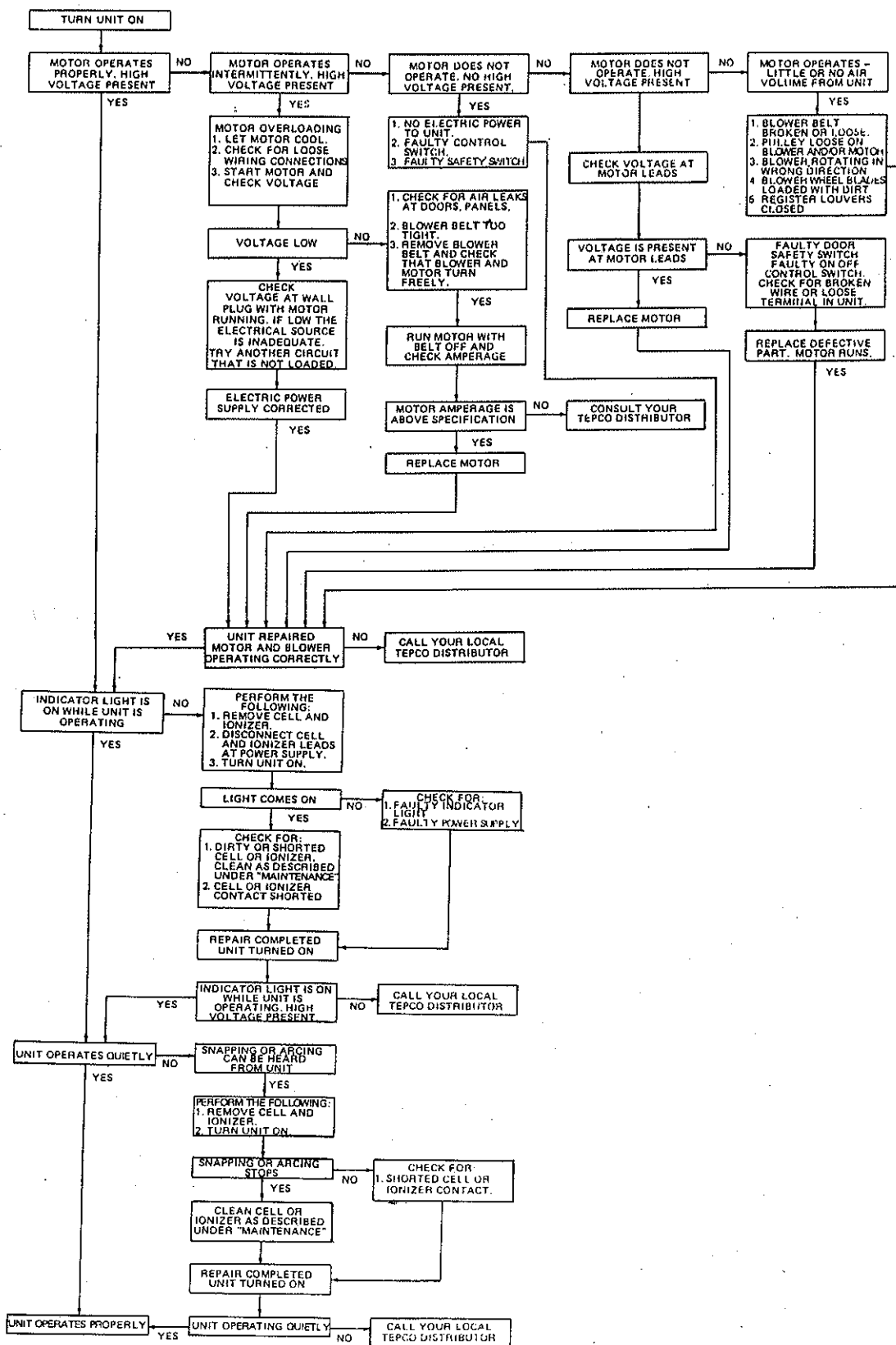
VI. WARRANTY

All TRION Electronic Air Cleaners are warranted for component failure and workmanship for a period of one year after purchase, provided the Warranty Card has been properly filled out and returned. Do not return defective parts without prior permission from the factory.

VII. T1300/T2600 TROUBLESHOOTING GUIDE

The troubleshooting chart will enable the user to pinpoint the cause of most problems. Refer to the Ordering Information section for replacement parts. Before doing any troubleshooting, measure the input line voltage.

WARNING: HIGH VOLTAGE IS PRESENT INSIDE CABINET. DO NOT DEFEAT DOOR INTERLOCK SWITCH. ALWAYS UNPLUG UNIT WHILE PERFORMING SERVICE WITHIN THE CABINET.



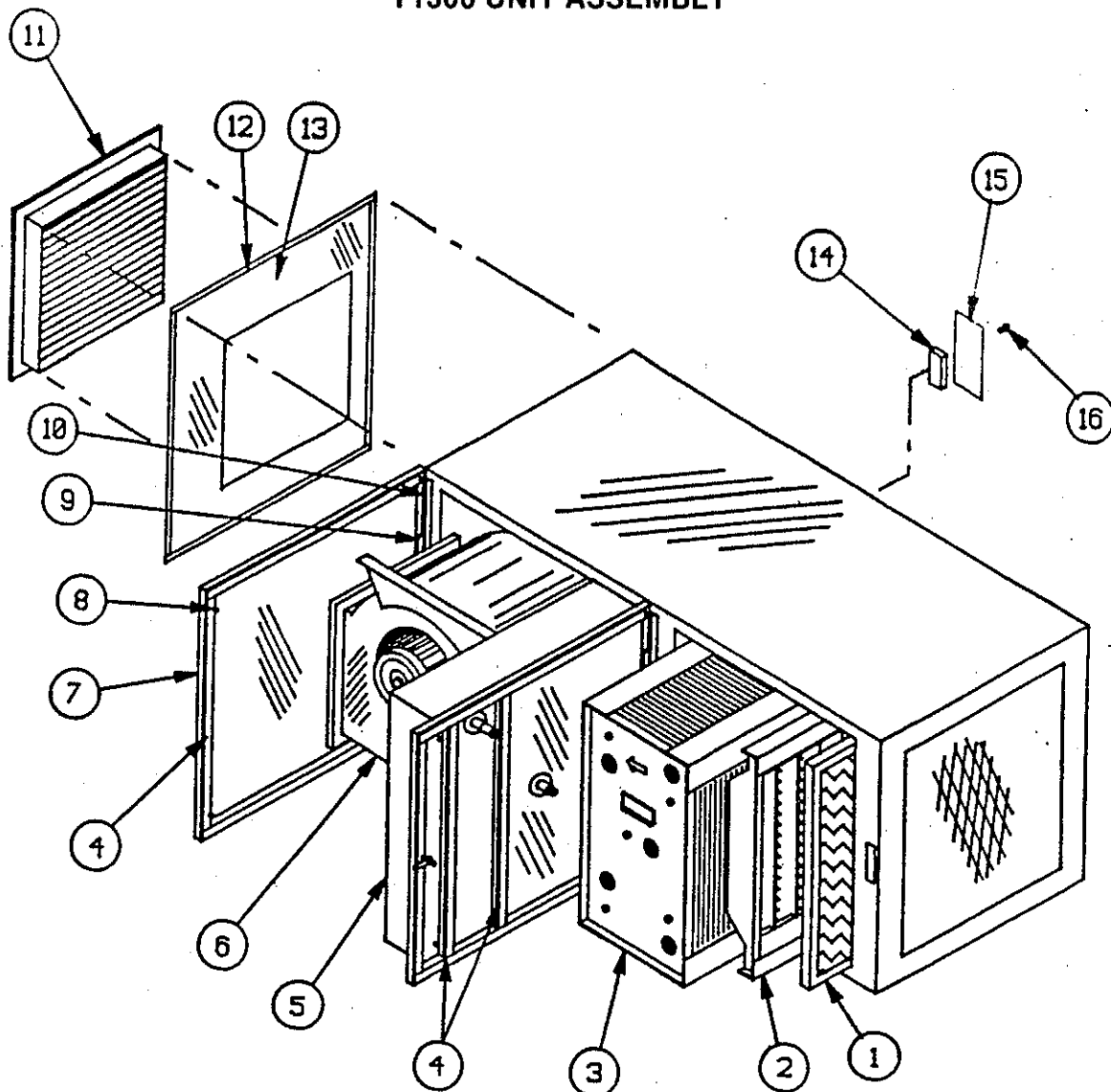
T1001/T2002 TROUBLESHOOTING GUIDE

Problems and Possible Causes:

1. Indicating light out
 - A. Unit not plugged in
 - B. Control switch "Off"
 - C. Cell access panel not fully closed
 - D. Broken cell insulator
 - E. Extremely dirty cells
 - F. Service panel not securely in place
2. Heavy arcing noise after washing
 - A. Collector elements still wet. Allow more drying time.
 - B. See continuous arcing noise below
3. Continuous arcing noise and flickering indicating light
 - A. Extremely dirty collector elements
 - B. Loose ionizing wire (units prior to '91)
 - C. Bent collector plates
 - D. Large piece or foreign material lodged
4. Contaminant by pass
 - A. Velocity too great through unit
 - B. Collector elements not grounded (tracks that elements rest on may become insulated).
 - C. Collector element contacts not making connection

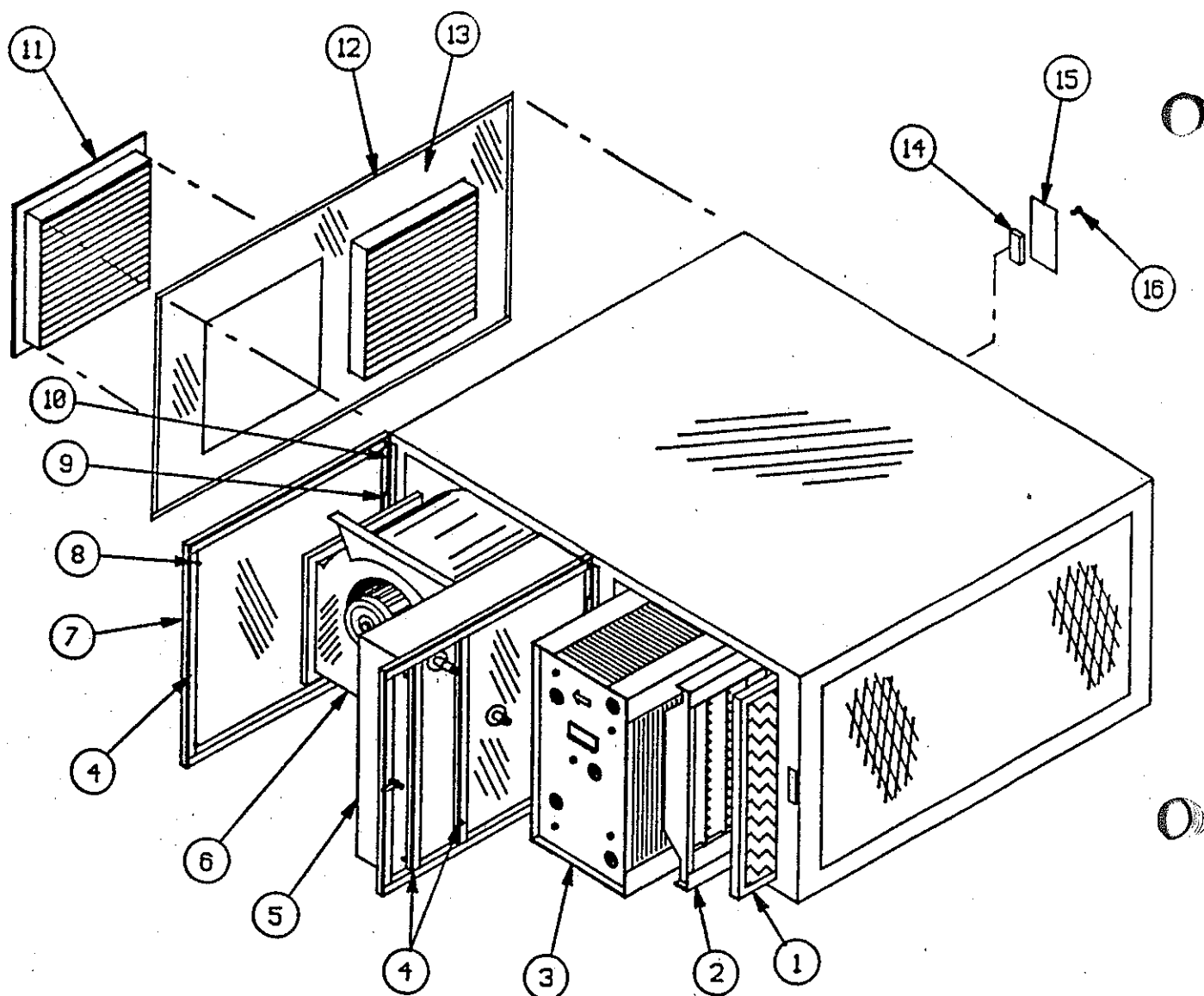
IF PROBLEM CANNOT BE DETERMINED OR CORRECTED — CALL YOUR LOCAL TRION DISTRIBUTOR.

T1300 UNIT ASSEMBLY



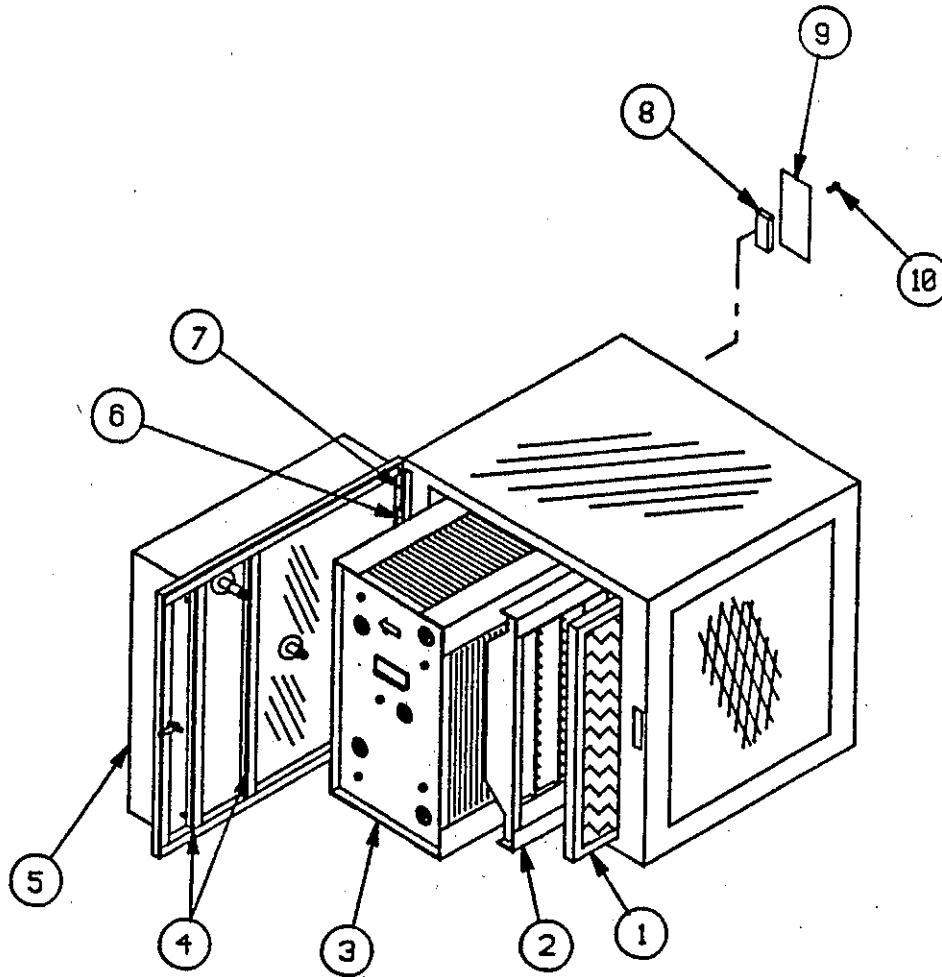
Item	Part Number	Description	Quantity
1	224451-006	Aluminum Mesh Filter	1
2	426467-014	Ionizer Assembly	1
3	426561-017	Collector Cell	2
4	224779-028	Gasket, 3/4 x 11/16 x	13'
5	(No Part No.)	Enclosure Assembly (See Diagram Pg. 12)	1
6	337861-001	Blower Asby. (See Diagram Pg. 14)	1
7	443644-001	Cell Door Assembly	1
8	124610-006	Button Socket Head Screw	2
9	224779-014	Gasket, 1/2 x 3/16 x	4'
10	237880-003	Hinge	2
11	69000-0002-05	Double Deflection Grill	1
12	224779-026	Gasket, 1/2 x 1/16 x	7'
13	337848-003	Outlet Panel	1
14	221442-004	Terminal Block	1
15	243654-001	Terminal Block Cover	1
16	222005-017	Hex Washer Head Screw	4

T2600 UNIT ASSEMBLY



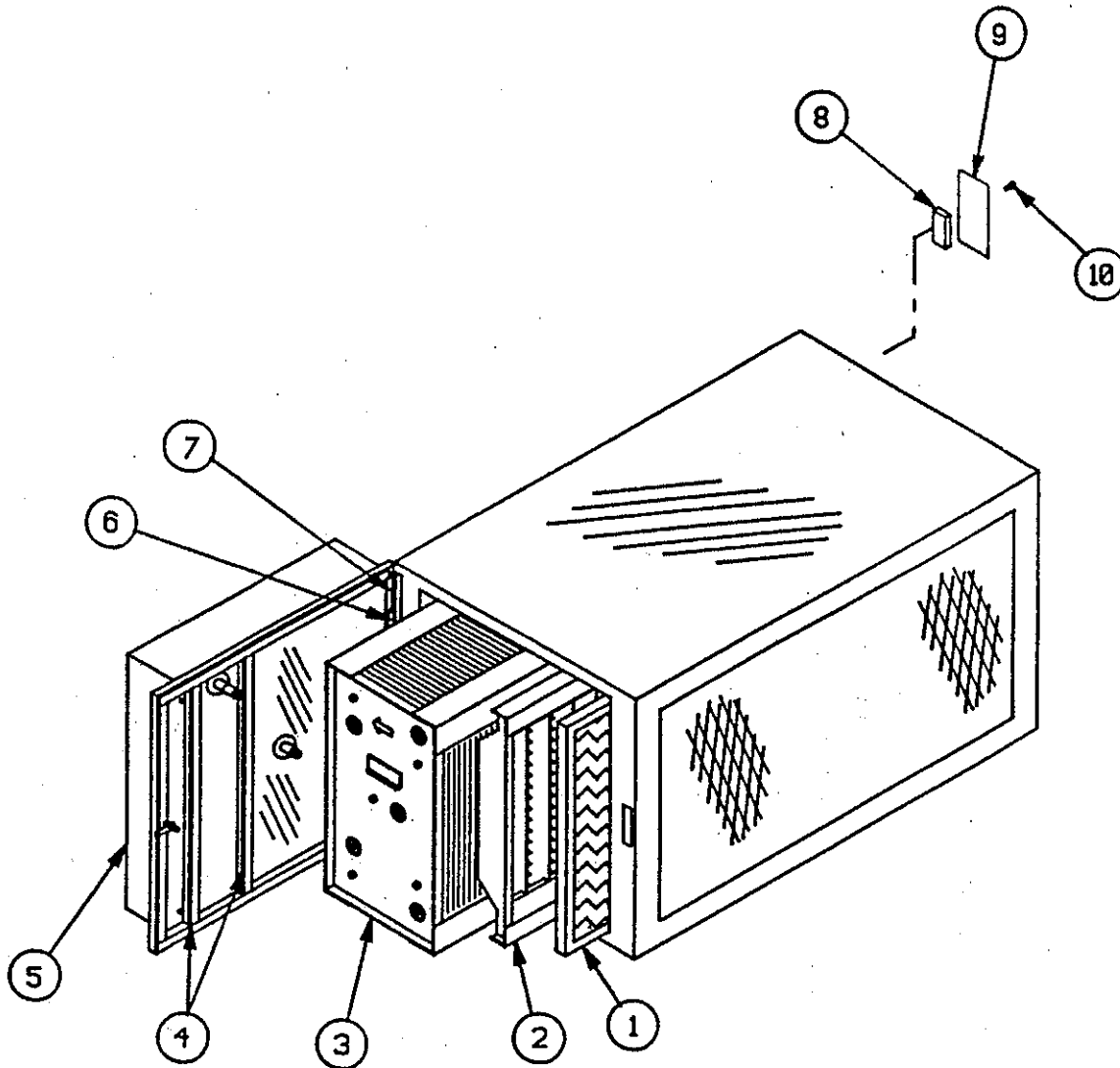
Item	Part Number	Description	Quantity
1	224451-006	Aluminum Mesh Filter	2
2	231983-003	Ionizer Assembly	1
3	426561-017	Collector Cell	2
4	224779-028	Gasket, 3/4 x 11/16 x	13'
5	(No Part No.)	Enclosure Assembly (See Diagram Pg. 12)	1
6	437945-001	Double Blower Asby. (See Diagram Pg. 14)	1
7	443644-001	Cell Door Assembly	1
8	124610-006	Button Socket Head Screw	2
9	224779-014	Gasket, 1/2 x 3/16 x	4'
10	237880-003	Hinge	2
11	69000-0002-05	Double Deflection Grill	2
12	224779-026	Gasket, 1/2 x 1/16 x	10'
13	337944-002	Outlet Panel	1
14	221442-004	Terminal Block	1
15	243654-001	Terminal Block Cover	1
16	222005-017	Hex Washer Head Screw	4

T1001 MODULE ASSEMBLY



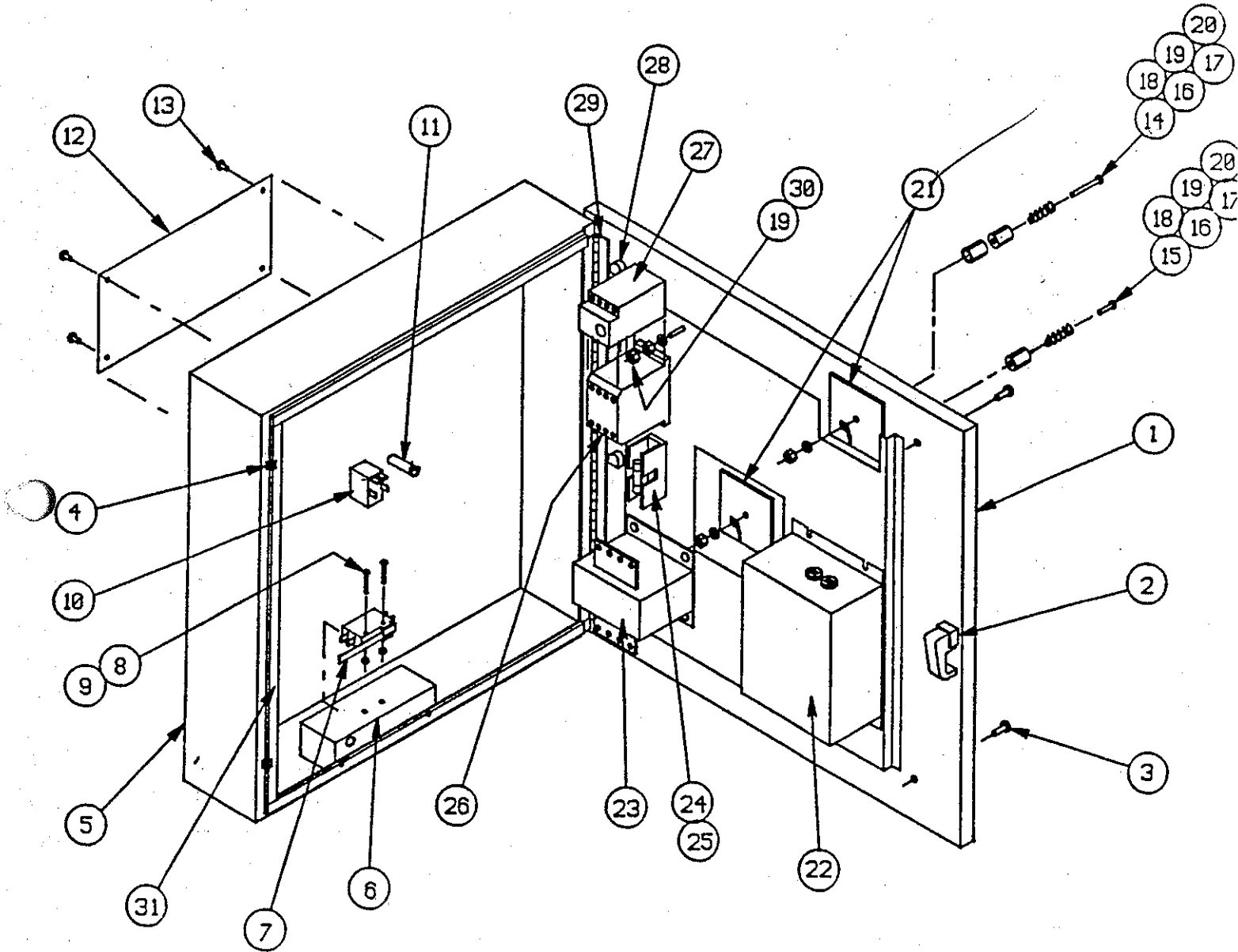
Item	Part Number	Description	Quantity
1	224451-006	Aluminum Mesh Filter	1
2	426467-014	Ionizer Assembly	1
3	426561-017	Collector Cell	1
4	224779-028	Gasket, 3/4 x 11/16 x	8'
5	(No Part No.)	Enclosure Assembly (See Diagram Pg. 12)	1
6	224779-014	Gasket, 1/2 x 3/16 x	2'
7	237880-003	Hinge	2
8	221442-004	Terminal Block	1
9	243654-001	Terminal Block Cover	1
10	222005-017	Hex Washer Head Screw	4

T2002 MODULE ASSEMBLY



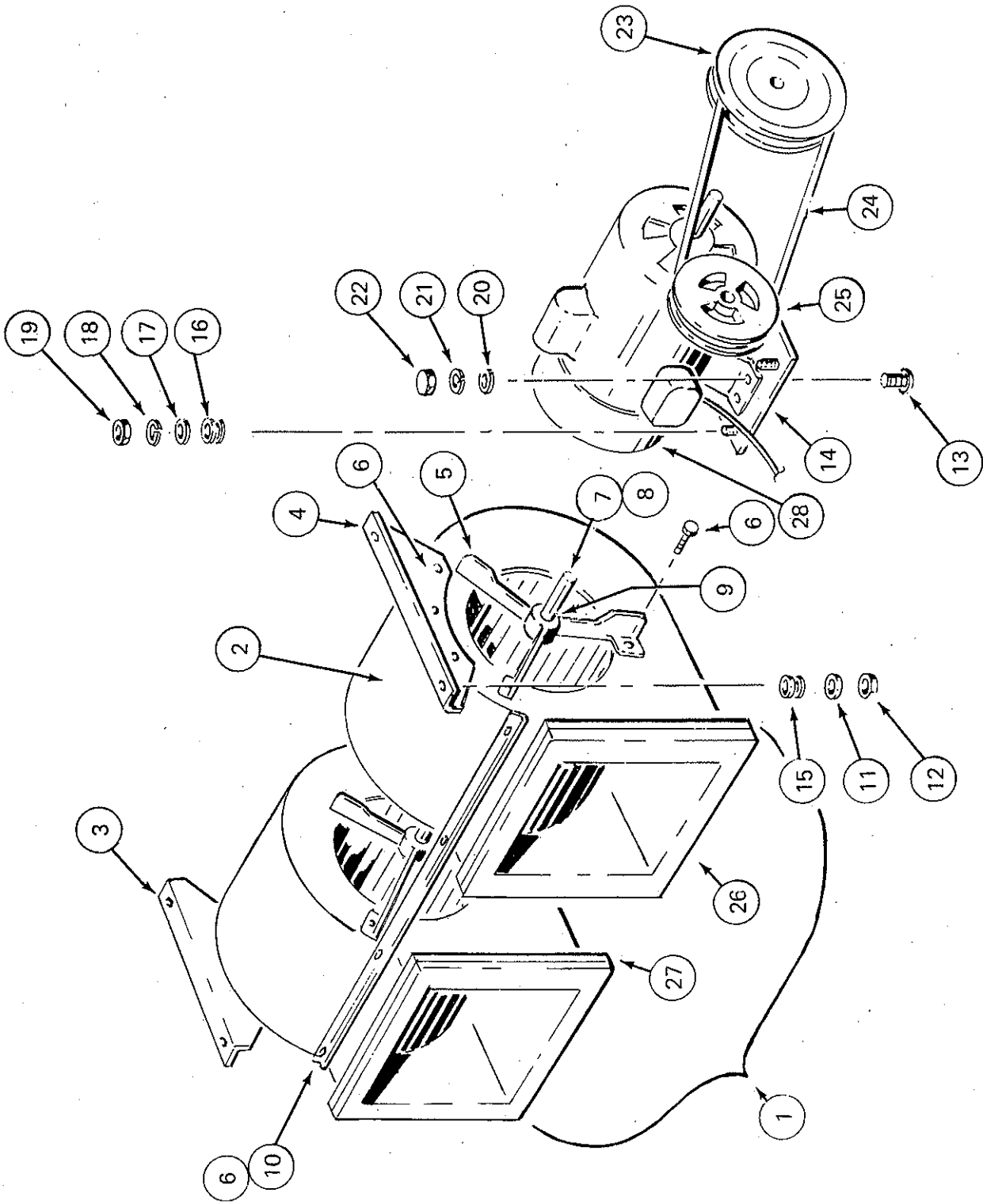
Item	Part Number	Description	Quantity
1	224451-006	Aluminum Mesh Filter	2
2	231983-003	Ionizer Assembly	1
3	426561-017	Collector Cell	2
4	224779-028	Gasket, 3/4 x 11/16 x	8'
5	(No Part No.)	Enclosure Assembly (See Diagram Pg. 12)	1
6	224779-014	Gasket, 1/2 x 3/16 x	2'
7	237880-003	Hinge	2
8	221442-004	Terminal Block	1
9	243654-001	Terminal Block Cover	1
10	222005-017	Hex Washer Head Screw	4

ENCLOSURE ASSEMBLY
T1300/T2600
T1001/T2002



ENCLOSURE ASSEMBLY

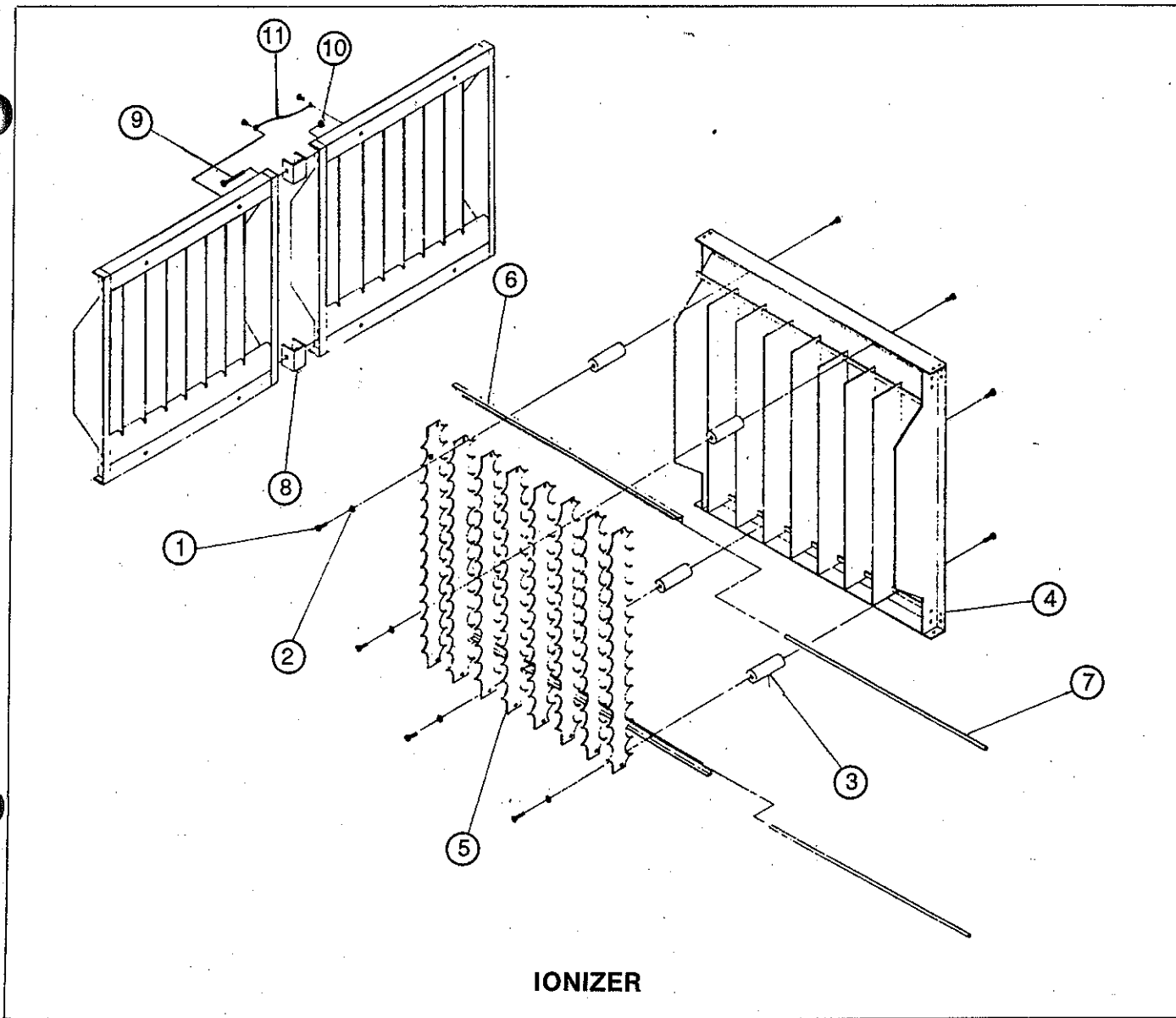
Item	Part Number	Description	Quantity
1	443644-001	Cell Access Door Assembly	1
2	334562-003	Lift and Turn Latch	1
3	120236-105	Slotted Hex Head Mach. Screw	2
4	237911-006	Self-Retaining Nut	4
5	443645-001	Control Enclosure	1
6	343615-001	Switch Enclosure	1
7	235893-001	Interlock Switch	1
8	120034-112	Pan Head Mach. Screw	2
9	121800-003	Nut-Lockwasher	2
10	243765-001	On/Off Switch (Domestic Units)	1
	243847-001	On/Off Switch (240V Lighted)	
11	241101-005	Indicator Light (Green)	1
12	236936-001	"TRION" Name Plate	1
13	137389-102	Pan Head Thread Forming Screw	4
14	120286-095	Round Head Machine Screw	1
15	120286-089	Round Head Machine Screw	1
16	2400-0000-03	Spring Contact	2
17	243607-001	Insulator Cup	3
18	120298-004	Tab Adaptor	2
19	120032-004	External Lockwasher	4
20	123149-008	Elastic Stop Nut	2
21	243617-001	Contact Board	2
22	340102-013	Power Supply (T1300, T1001, 120V)	1
	340102-026	Power Supply (T2600, T2002, 120V)	
	340102-113	Power Supply (T1300, 230V)	
	340102-126	Power Supply (T2600, 230V)	
23	237921-001	Control Transformer (3-Phase Only)	1
24	141622-001	Fuse Block (3-Phase Only)	1
25	132473-010	Fuse (3-Phase Only)	1
26	243861-001	Contactactor (3-Phase Only)	1
27	243862-009	Overload Relay (2HP, 480V, 3-Phase)	1
	243862-011	Overload Relay (2HP, 208/230V, 3-Ph.)	
28	143817-001	Strain Relief Bushing (Right Angle)	2
29	237880-003	Hinge	1
30 *	143704-001	Brass Nut (M5)	4
31	224779-014	Gasket, 1/2 x 3/16 x	5'



T1300 & T2600 BLOWER/MOTOR

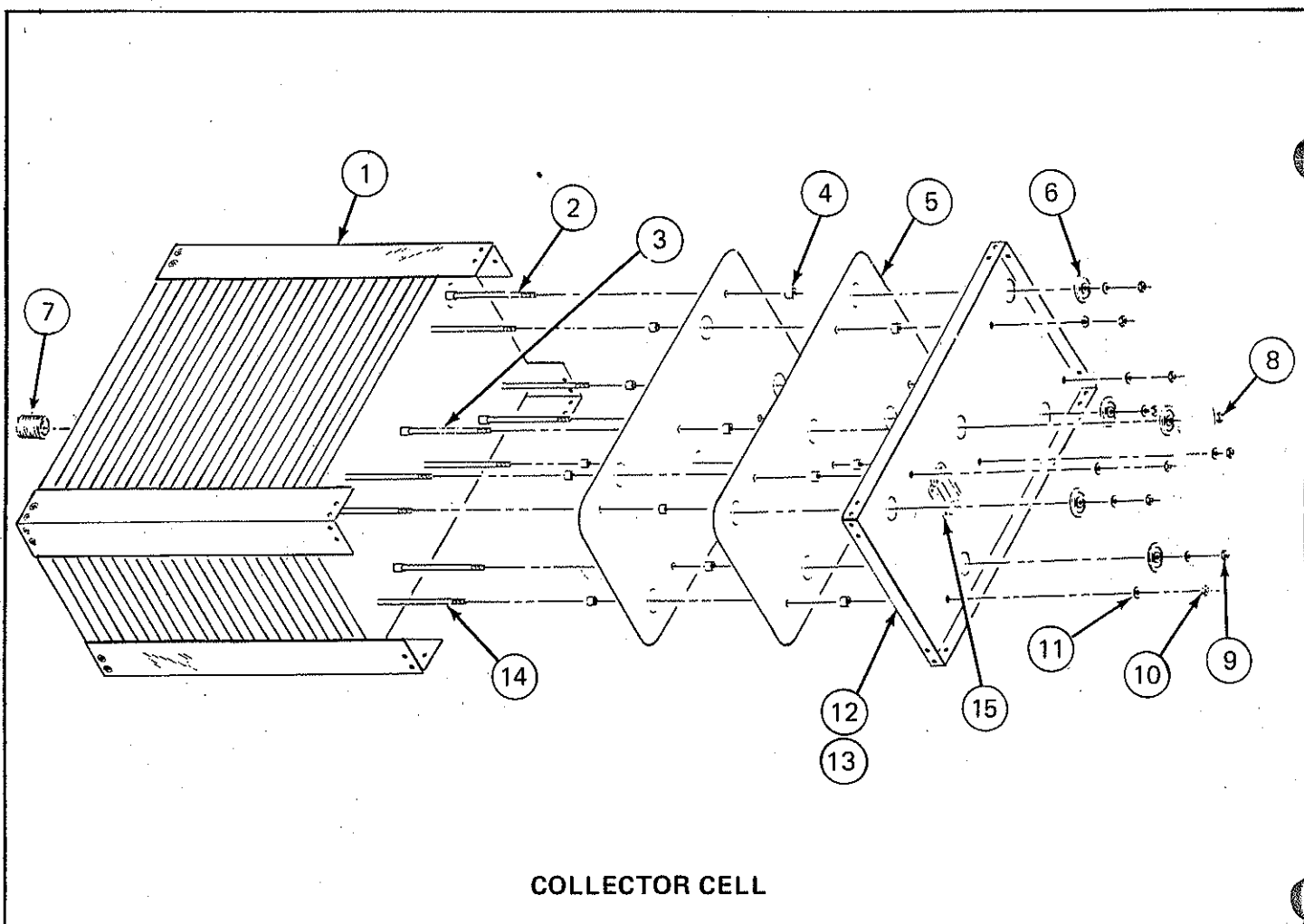
T1300 & T2600 BLOWER/MOTOR

Item	Part Number	Description	1300	2600
1	437945-001	DBL. Blower Assy.-Less Motor		X
1A	337861-001	Blower Assy.-Less Motor	X	
2	337923-103 201	Blower Housing & Fan	444348-001	444349-001
3	337923-104	Blower Foot R.H.	X	X
4	337923-105	Blower Foot L.H.	X	X
5	337923-103	Bearing Frame	X	X
6	137343-402	Screw, Self Tap	X	X
7	237787-001	Shaft, Blower		X
7A	237959-001	Shaft, Blower	X	
8	1250-1200-07	Key, Shaft	X	X
9	62000-0003-0100	Bearing, Ball	X	X
10	337958-001	Spreader Bar		X
11	120608-012	Washer, Flat	X	X
12	123149-004	Nut, Lock	X	X
13	120635-017	Bolt, Carriage	X	X
14	343636-001	Motor Mounting Plate	X	X
15	425541-114	Grommet	X	X
16	425541-114	Grommet	X	X
17	120608-012	Washer, Flat	X	X
18	120033-010	Washer, Lock	X	X
19	123149-004	Nut, Lock	X	X
20	120608-012	Washer, Flat	X	X
21	120033-010	Washer, Lock	X	X
22	123149-004	Nut, Lock	X	X
23	125699-002	Sheave or Pulley (Motor)	X	X
23A	125699-011	Sheave or Pulley (Motor) 2 H.P.		X
24	220926-026	Belt 4L400	X	X
24A	220926-032	Belt 4L430, 2 H.P.		X
25	124053-014	Pulley Blower	X	X
25A	124053-042	Pulley Blower, 2 H.P.		X
26	224779-028	Gasket 3/4 x 11/16 x 4' Per Blower	X	X
27	337849-001	Blower Gasket Flange	X	X
28	141434-001	Motor 120-240V, 60 Hz, 1 Ph, 3/4 HP	X	X
28A	128138-002	Motor 240V, 50 Hz, 1 Ph, 3/4 HP	X	X
28B	137128-001	Motor 208-240-480, 60 Hz, 3 Ph, 1 HP	X	X
28C	132230-001	Motor 208-240-480, 60 Hz, 3 Ph, 2 HP		X



Single Section Ionizer (T1300, T1002) Part Number 426467-014
Double Section Ionizer (T2600, T2002) Part Number 231983-003

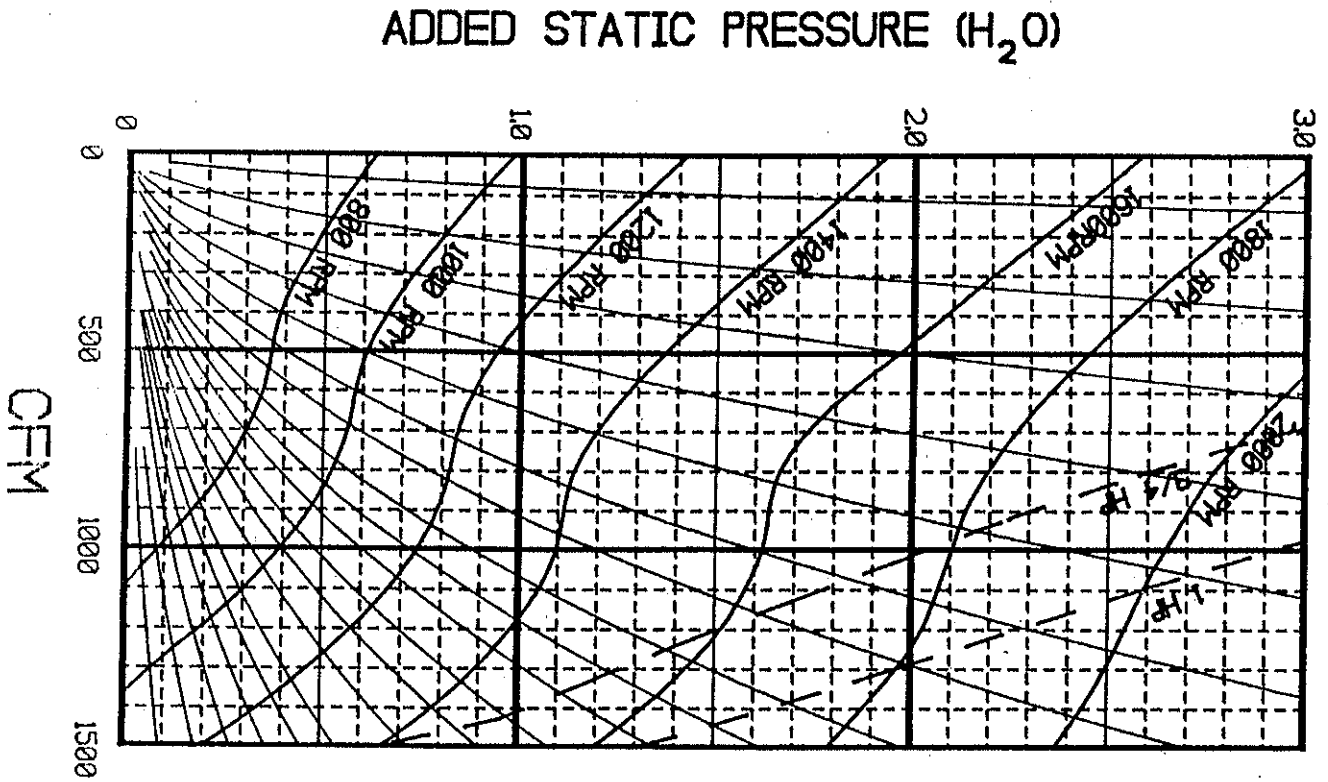
Item	Part Number	Description
1	120523-404	Screw
2	120033-007	Lockwasher
3	221441-064	Insulator
4	443300-008	Ionizer Welded Assembly
5	342345-001	Spiked Ionizer Blade
6	242343-001	Ionizer Blade Support
7	142438-001	Tie Rod
8	129819-001	Ionizer Connector
9	221235-310	Screw
10	121800-008	Nut-Lockwasher
11	129820-001	Ionizer HV Strap



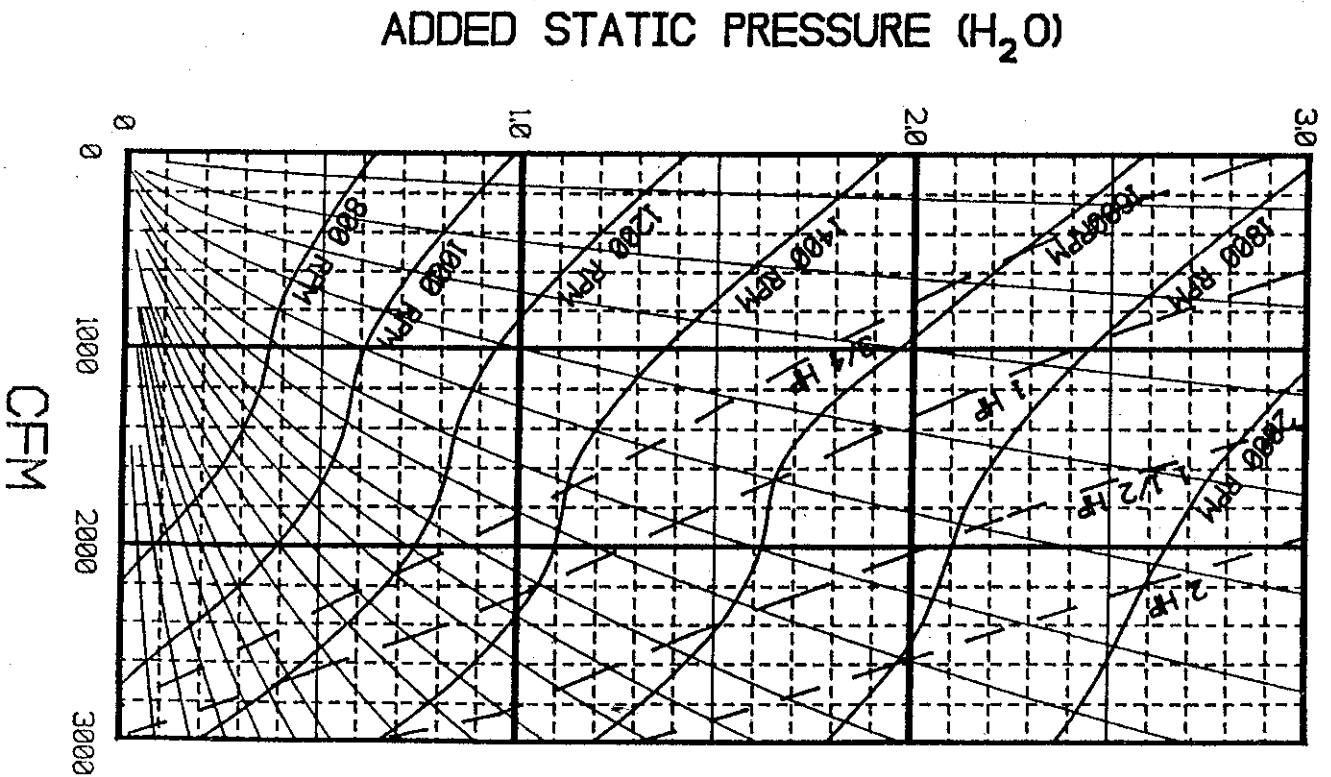
Part Number 426561-017 Collector Cell

<u>Item</u>	<u>Part Number</u>	<u>Description</u>
1	237994-001	Cell Brace
2	233137-015	Tie Rod, Ground
3	222794-011	Tie Rod
4	220107-073	Spacer
5	226555-001	H.V. & Grd. Plate
6	222961-001	Insulator
7	2400-0000-03	Contact Spring
8	120538-001	Acorn Nut
9	122138-001	Hex Nut
10	123149-001	Nut, Elastic Stop
11	120456-001	Nylon Washer
12	426553-005	End Plate RH
13	426553-004	End Plate LH
14	233137-015	Tie Rod
15	124537-001	Handle

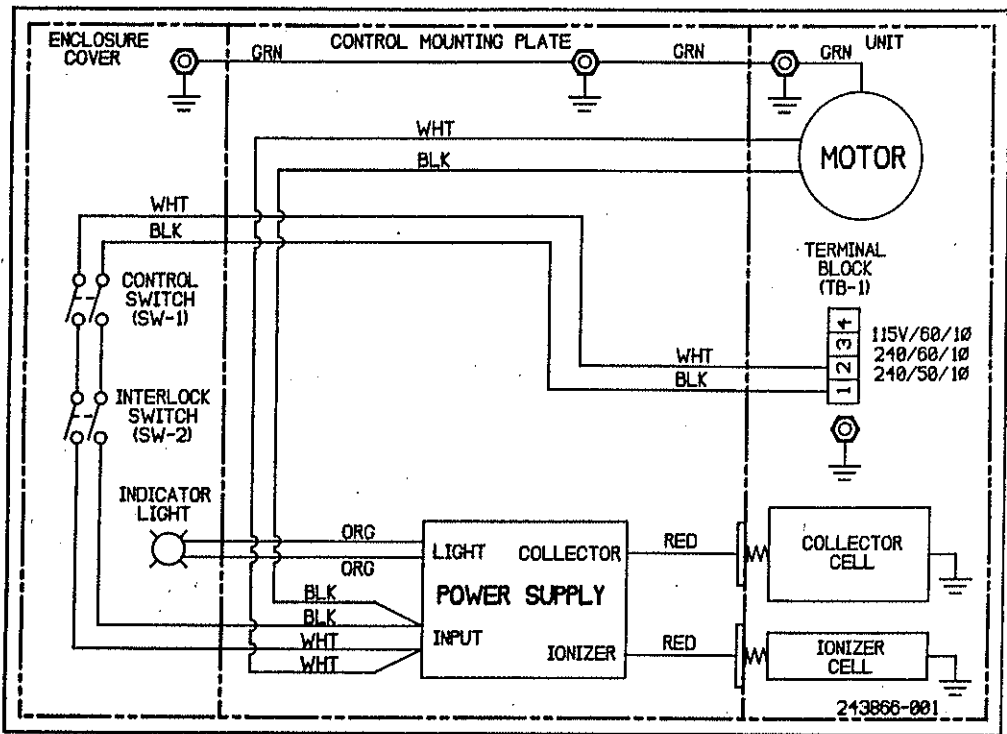
T-1300



T-2600

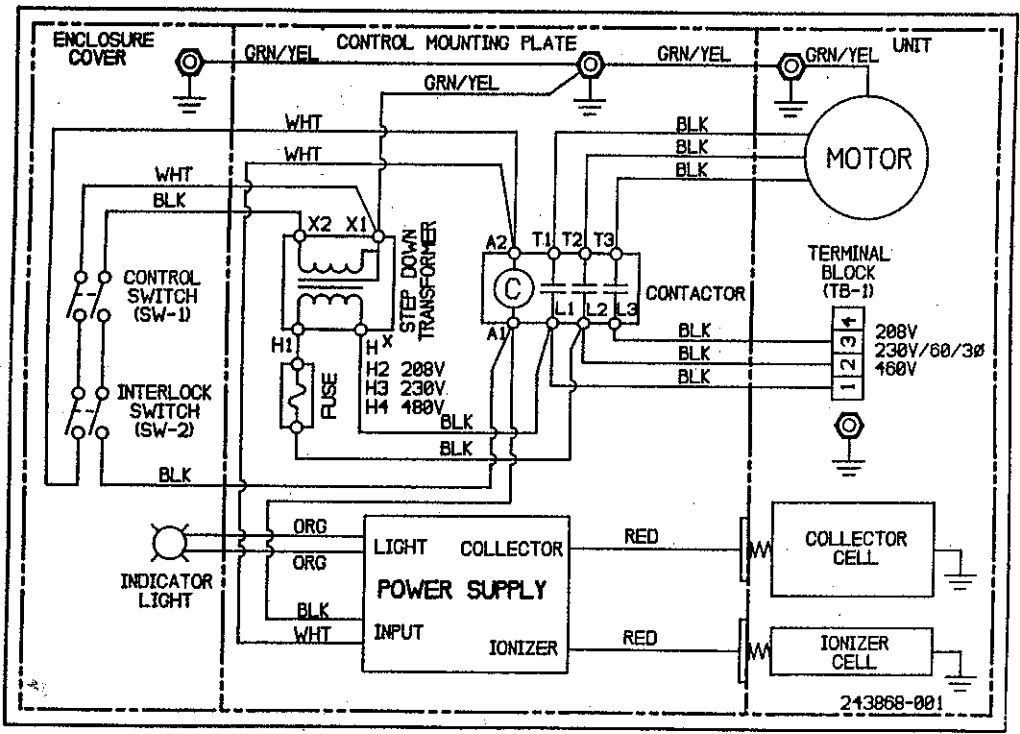


WIRING DIAGRAMS



T1300 OR T2600 (3/4 HP)

115V/60HZ/1PH.
240V/60HZ/1PH.
240V/50HZ/1PH.



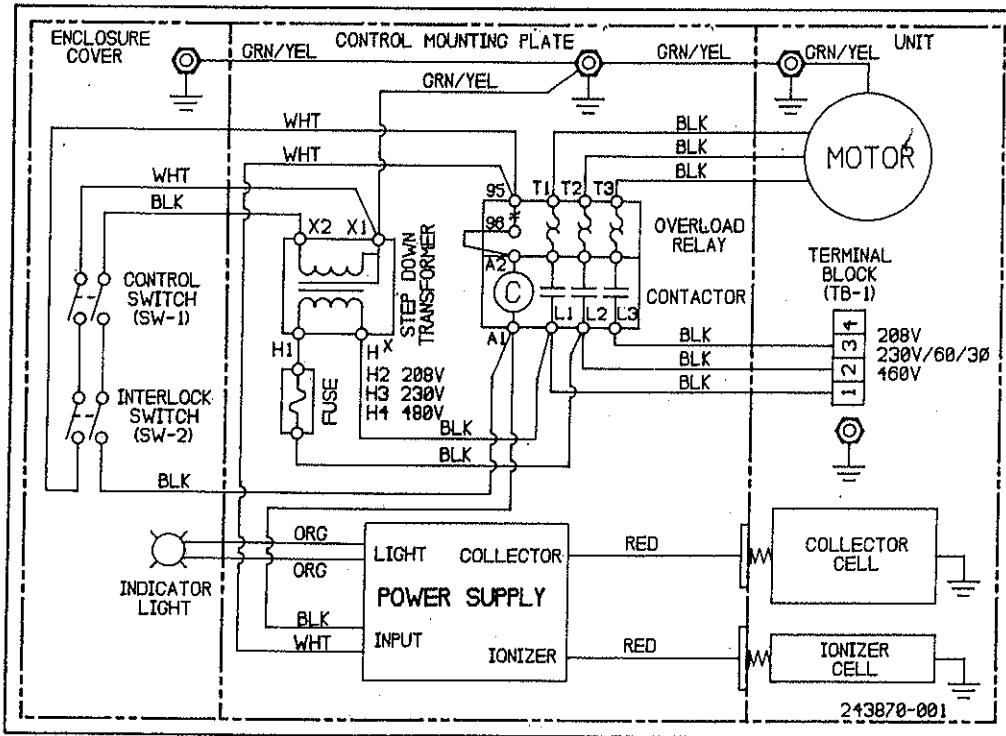
T1300 OR T2600 (1 HP)

208V/60HZ/3PH.
230V/60HZ/3PH.
460V/60HZ/3PH.

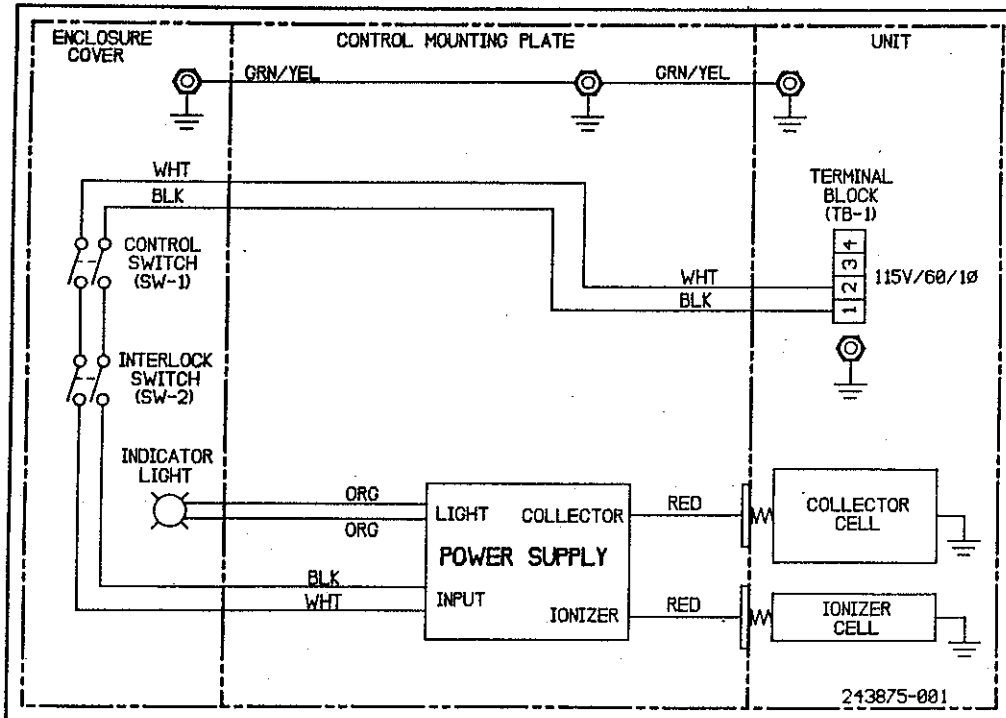
T1300 & T2600 BLOWER/MOTOR

Item	Part Number	Description	1300	2600
1	437945-001	DBL. Blower Assy.-Less Motor		X
1A	337861-001	Blower Assy.-Less Motor	X	
2	337923-100	Blower Housing & Fan	X	X
3	337923-104	Blower Foot R.H.	X	X
4	337923-105	Blower Foot L.H.	X	X
5	337923-103	Bearing Frame	X	X
6	137343-402	Screw, Self Tap	X	X
7	237787-001	Shaft, Blower		X
7A	237959-001	Shaft, Blower	X	
8	1250-1200-07	Key, Shaft	X	X
9	62000-0003-0100	Bearing, Ball	X	X
10	337958-001	Spreader Bar		X
11	120608-012	Washer, Flat	X	X
12	123149-004	Nut, Lock	X	X
13	120635-017	Bolt, Carriage	X	X
14	343636-001	Motor Mounting Plate	X	X
15	425541-114	Grommet	X	X
16	425541-114	Grommet	X	X
17	120608-012	Washer, Flat	X	X
18	120033-010	Washer, Lock	X	X
19	123149-004	Nut, Lock	X	X
20	120608-012	Washer, Flat	X	X
21	120033-010	Washer, Lock	X	X
22	123149-004	Nut, Lock	X	X
23	125699-002	Sheave or Pulley (Motor)	X	X
23A	125699-011	Sheave or Pulley (Motor) 2 H.P.		X
24	220926-026	Belt 4L400	X	X
24A	220926-032	Belt 4L430, 2 H.P.		X
25	124053-014	Pulley Blower	X	X
25A	124053-042	Pulley Blower, 2 H.P.		X
26	224779-028	Gasket 3/4 x 11/16 x 4' Per Blower	X	X
27	337849-001	Blower Gasket Flange	X	X
28	141434-001	Motor 120-240V, 60 Hz, 1 Ph, 3/4 HP	X	X
28A	128138-002	Motor 240V, 50 Hz, 1 Ph, 3/4 HP	X	X
28B	137128-001	Motor 208-240-480, 60 Hz, 3 Ph, 1 HP	X	X
28C	132230-001	Motor 208-240-480, 60 Hz, 3 Ph, 2 HP		X

WIRING DIAGRAMS



T2600 (2 HP)
 208V/60HZ/3PH.
 230V/60HZ/3PH.
 460V/60HZ/3PH.



1001 AND 2002 MODULE
 115V/60HZ/1PH.