



M2500M Mobile

Portable Air Cleaner

Installation Operation Service

Please read these instructions carefully for trouble-free operation and to get the most out of your purchase. For further information concerning this unit, contact your local Trion representative.



A **FEDDERS**® ENGINEERED PRODUCTS COMPANY

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I. SPECIFICATIONS: M2500M Mobile

Power Requirements:	120 volts, 60 Hz, 1 Phase, 9.4 amps, 975 watts
Weight:	250 lbs. (114 kg)
Dimensions:	48.1" L x 24.1" W x 30.9" H (1222 x 61.3 x 786 mm)
Pre-Filter Area:	28 Sq. Ft. (2.6 Sq. m)
Primary Filters Available	
95% ASHRAE:	194 Sq. Ft. (18 Sq. m) media
95% DOP:	194 Sq. Ft. (18 Sq. m) media
99.97% HEPA:	154 Sq. Ft. (14.3 Sq. m)
Arm:	6.5' L, 8" diameter externally supported with 360° rotation (2m x 200mm)
Max. Pick-Up Velocity:	2200 FPM (11 MPS)
Max. Duct Velocity:	3150 FPM (16 MPS)
Capture Zone:	12" to 18" (300 to 450mm)
Filtered Air:	1100 CFM (1870 M3H) Max

II. SYSTEM DESIGN

WARNING!

The M2500M Mobile is not designed to collect wet or oily particulate and should not be installed in applications collecting coolants, grease, processing fluids or other types of liquid aerosols. Contact the Trion Sales Department for special units for these type installations at 800-884-0002.

The M2500M Mobile Air Cleaner is designed to pick up and collect dry solid particulate such as weld fumes and industrial dust. Clean air is then discharged back into the work space. The unit is equipped with casters, a source capture arm, a filtration compartment and a blower compartment. Simply roll the unit to a level location near the source of pollutants, adjust the arm and place the casters in the locked position. Then connect the electrical power and the unit is ready for operation.

In operation, the pick-up arm delivers the contaminated air to the cartridge filter for collection. See Filter Maintenance, page 4 for details.

III. INSTALLATION

1. UNPACK AND INSPECT

Upon receipt, all shipping containers and their contents should be examined for damage. NOTE: Any damage occurring in shipment must be immediately reported to the carrier, an inspection report completed and a claim filed with the carrier at the receiving point.

The M2500M Mobile cabinet is shipped assembled. Please check to ensure all components are included:

- Painted steel cabinet with pre-filter, primary filter, casters, and power cord
- Minihelic gauge
- Source capture arm, hood and mounting hardware (shipped loose) and field assembled.

2. INSTALLING SOURCE CAPTURE ARM

To simplify packaging and reduce the possibility of shipping damage, the source capture arm is shipped separately. The necessary mounting hardware is included with the arm. Using washers and bolts provided, secure the arm to the cabinet. Weld nuts are provided in the cabinet for mounting the arm. The tension is adjustable at each arm elbow (five places). The hood tension adjustment is located outside the hood.

3. POSITIONING THE UNIT

Roll the unit to a level floor space in the area in which it is to be used. When the unit has been properly positioned, lock the two swivel casters to prevent movement during operation.

WARNING!

Do not install this equipment in any area where combustible vapors or gases exist. Do not use this equipment for the collection of any materials where there is a risk of fire or explosion.

4. INSTALLATION FIRE HAZARDS

- Due to potential fire hazards, do not mix combustible materials with those that would be a potential source of ignition. Examples of combustible materials include but are not limited to wood dust, paper dust, lint from fabrics or buffing wheels, grinding dust from painted surfaces and aluminum or magnesium dusts. Examples of potential ignition sources include but are not limited to grinding dust from ferrous metals or sparks from any source.

- This equipment should not be used for the collection of any materials where there is a risk of explosion. Pressure relief or explosion vents should not be applied to the equipment or any adjoining system.
- Equipment location, installation and operation should comply with all national and local fire codes. When in doubt, consult the proper authorities.
- Workers and machine operators should be instructed to keep any burning objects, such as cigarettes, safely away from air inlets leading to the equipment.
- All those involved with the use of this equipment should comply with the statements pertaining to worker safety as noted in this manual.

WARNING!

Electric shock can cause personal injury or death.

IV. ELECTRICAL POWER REQUIREMENTS

The blower motor is 1 HP requiring a 120 volt, 60 Hz, 1 ph (9.4 amp) source of power. The unit is supplied with a 10' (4.7 m) power cord.

V. OPERATION

Plug the power cord into a 120 volt, 60 Hz outlet. Turn the selector switch to low, medium or high position.

WARNING!

Do not remove the third prong on the power cord. This unit (as with most electrical appliances) must be grounded for safe operation.

VI. MAINTENANCE

WARNING!

Sharp edges may be located on metal. Wear protective gloves when handling.

1. FILTER MAINTENANCE

The collecting components consist of a pre-filter and a main filter. They are accessible through the access panel on the top of the cabinet, allowing simple, fast replacement.

NOTE:

Depending on the contaminant collected, it may be advisable to wear a dust respirator when handling dirty filters.

Filters are replaced according to the reading on the pressure gauge. A pressure gage is mounted on the blower panel at the discharge end of the cabinet. The initial reading when the unit is new is dependent on the particular main filter used in the unit.

Note the gage reading at initial start-up. As contaminants collect on the filters, the pressure reading will increase until the pick-up or capture zone becomes ineffective. The "final pressure" is reached when the pressure reading increases to 1.0" above the initial start-up reading. At that time the pre-filter should be replaced. Again, note the pressure reading with the new pre-filter. The pressure reading should return to near the initial pressure reading. When replacing the pre-filter causes the pressure reading to decrease only a small amount (less than 0.1"), allow the unit to operate until the "final pressure" is reached (initial reading + 1.0"). At that time, replace both the pre-filter and the main filter.

NOTE:

The unit can continue to run beyond the "final pressure" reading; however, airflow will be reduced further.

2. 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.

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

WARNING!

ELECTRICAL SHOCK HAZARD

Before cleaning or servicing this unit, it must be disconnected from any electrical supply outlet. Failure to follow these precautions could result in electrical shock, fire, death or serious personal injury.

VII. LIMITED WARRANTY

Seller warrants the equipment of its manufacture to be free from defects in workmanship and material for a period of three (3) years after shipment or if applicable – three (3) years after initial startup of equipment, whichever occurs first. This warranty is limited, however, to the repair or replacement of defective equipment, which is returned, freight prepaid, to Seller's factory.

This limited warranty does not apply to any part or component that is damaged in transit or when handling, has been subject to misuse, negligence or accident, has not been installed, operated or serviced according to Seller's instructions, or has been operated beyond the factory-rated capacity or has been altered in any way.

Seller's liability is limited to replacement of defective parts or components and does not include any cost of labor (including, but not limited to, labor required to remove and/or reinstall any defective part) other than Trion factory labor.

Trion shall not be responsible for loss of use of any product, loss of time, inconvenience, or damage to other equipment or any other indirect or consequential damage with respect to property whether as a result of breach of warranty, neglect or otherwise.

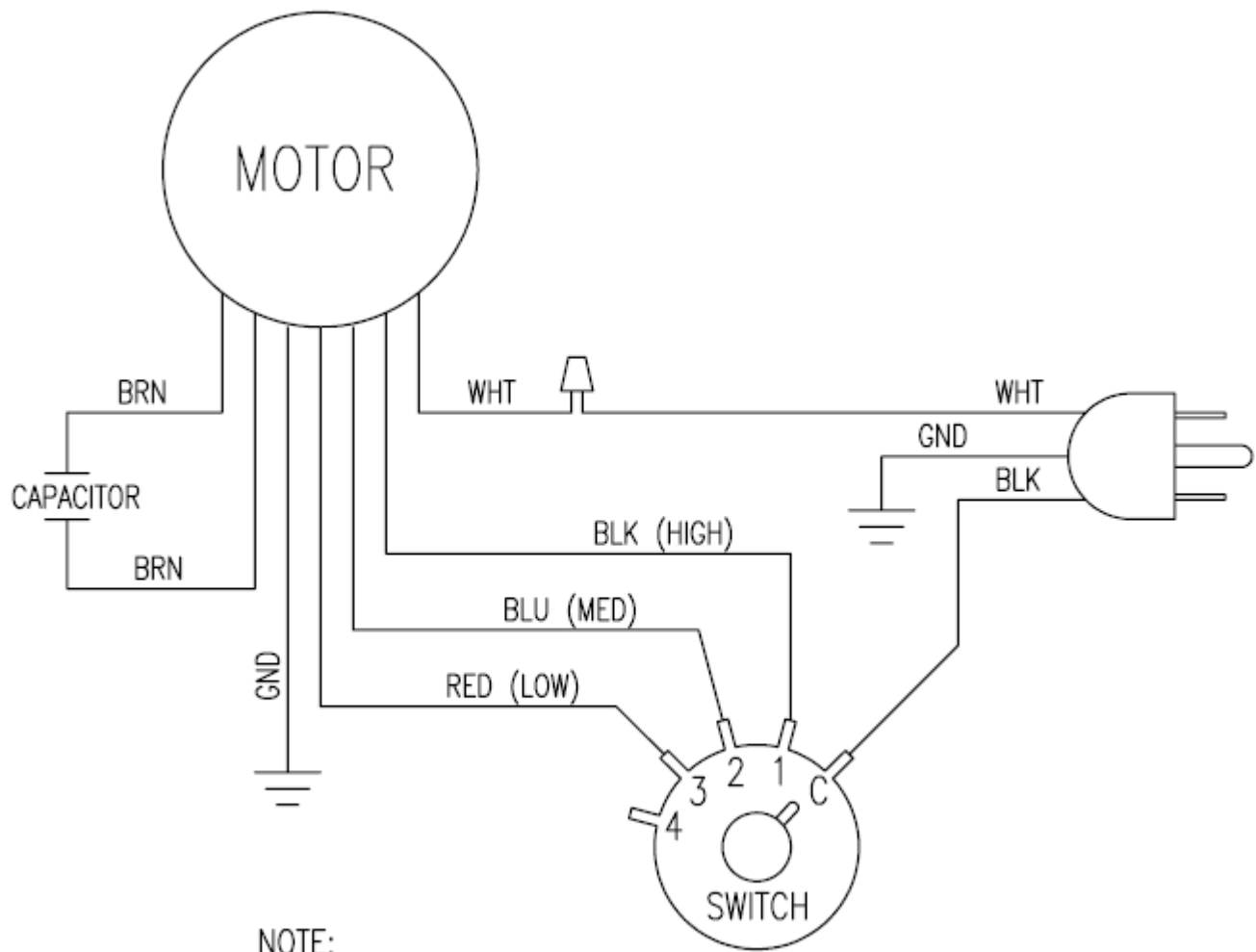
THE WARRANTIES AND LIABILITIES SET FORTH ABOVE ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.

The foregoing shall constitute the total liability of Seller in the case of defective performance of all or any of the equipment or services provided to Buyer. Buyer agrees to accept and here by accepts the foregoing as the sole and exclusive remedy for any breach or alleged breach of warranty by Seller.

VIII. TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Unit fails to start	<ol style="list-style-type: none">1. No power to the unit2. Faulty motor3. Faulty control switch4. Faulty motor capacitor	<ol style="list-style-type: none">1. Check circuit2. Replace motor3. Replace switch4. Replace capacitor
Capture velocity low	<ol style="list-style-type: none">1. Dirty filters2. Obstruction in arm3. Butterfly damper on arm closed	<ol style="list-style-type: none">1. Replace filters2. Remove obstruction3. Open damper on arm
Vibration	<ol style="list-style-type: none">1. Obstruction in arm2. Dirty filters3. Foreign object in blower	<ol style="list-style-type: none">1. Remove obstruction2. Replace filters3. Remove obstruction

Figure 1 – Wiring Diagram



NOTE:
SWITCH POSITION #4 IS OFF.

Figure 2 – Outline Diagram

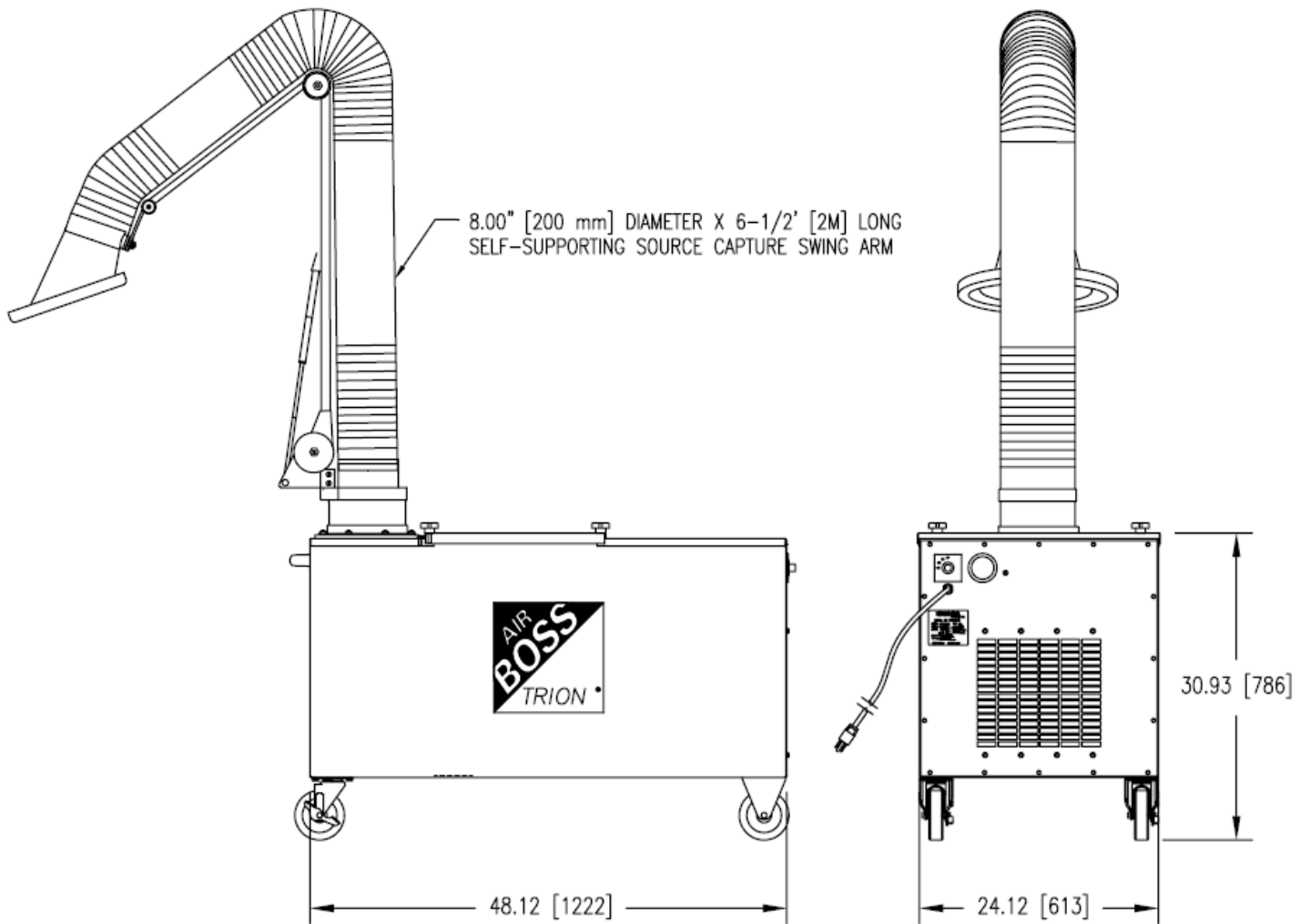
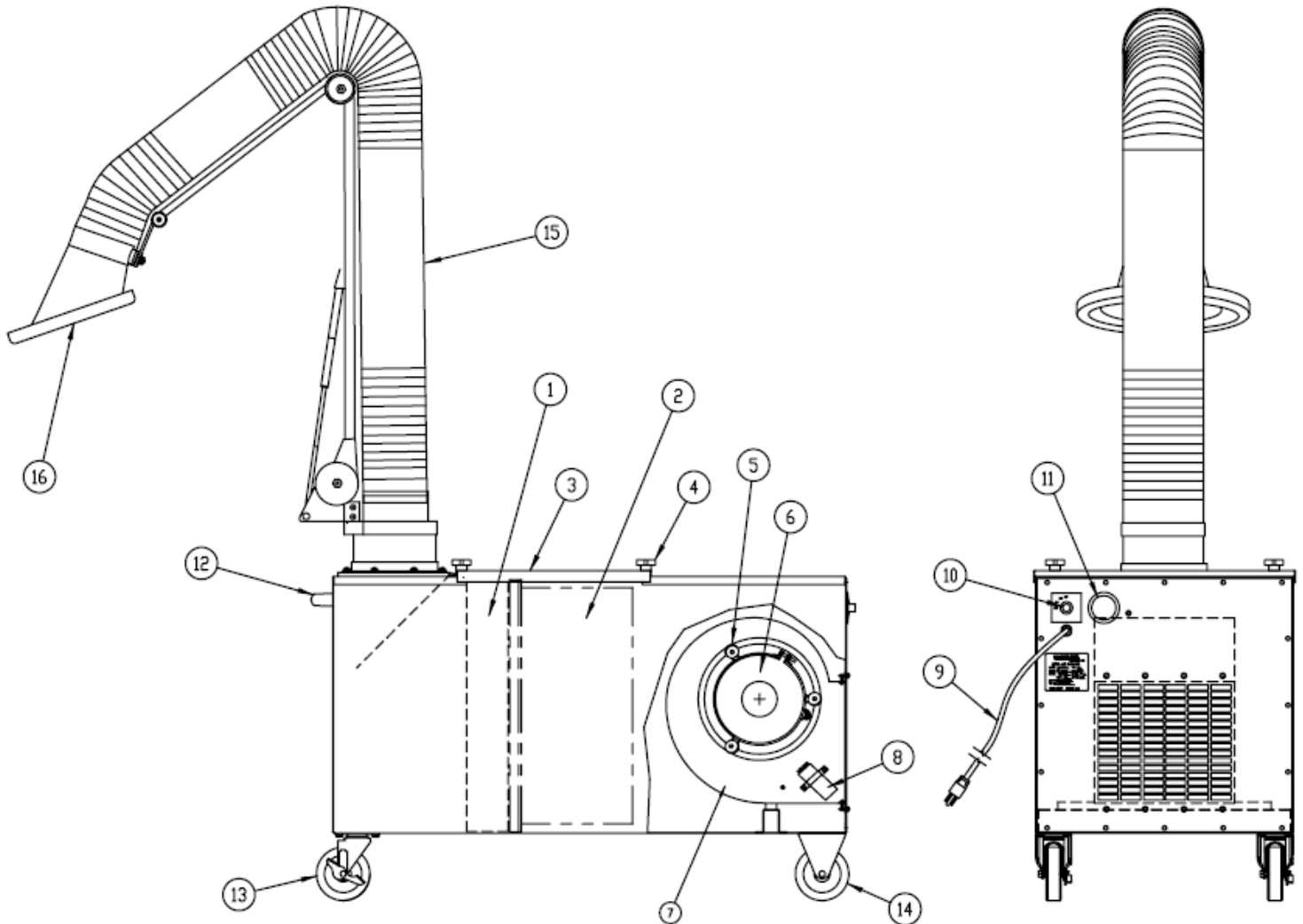


Figure 3 – Replacement Parts

The illustration below identifies components of the M2500M Mobile unit. Use this information to determine the part numbers of items that may be needed. To order parts, contact Trion, Inc. at 800-884-0002. The following information will be required for prompt delivery of parts:

1. Unit Model Number – Located on ID plate below switch
2. Unit Serial Number – Located on ID plate below switch
3. Part Number and Description – From list below



QTY.	ITEM	PART NUMBER	DESCRIPTION
1	1	69000-0001-19	4" PLEATED PRE-FILTER
OPT.	2	346618-004	95% ASHRAE PRIMARY FILTER
OPT.	2A	357035-001	95% DOP PRIMARY FILTER
OPT.	2B	254510-102	99.97% HEPA PRIMARY FILTER
1	3	457991-001	FILTER ACCESS PANEL ASSEMBLY
42"	3A	224779-020	CASKET
4	4	258008-001	KNOB, 4-PRONG
4	4A	244225-005	BOLT RETAINER
1	5	240501-002	MOTOR BRACKET
42"	6	258003-001	MOTOR (WITHOUT BLOWER)
1	7	241415-001	BLOWER (WITHOUT MOTOR)

QTY.	ITEM	PART NUMBER	DESCRIPTION
1	8	140204-003	CAPACITOR
1	9	02-1500-1200-01	POWER CORD
1	10	90000-0020-06	KNOB
1	10A	72003-0100-0005	SWITCH
1	10B	245293-001	LABEL
1	11	145443-001	MINIHELIC GAGE (0"-5")
1	12	145441-001	HANDLE
2	13	252122-002	CASTER, SWIVEL
2	14	252122-001	CASTER, FIXED
1	15	354970-112	FUME EXTRACTOR (PICK-UP) ARM
1	16	454970-901	HOOD

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