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Parts and Service Program

For genuine Torit replacement filters and parts, call the Torit Express Line:

1-800-365-1331

PARTS ORDERING INFORMATION

When ordering parts, give model number and serial number, part number, description and quantity of parts desired.

Donaldson.
TORIT. PRODUCTS

P.O. Box 1299
Minneapolis, Minnesota 55440

Filtration solutions for a cleaner world

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Revision A

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7.0 TROUBLESHOOTING GUIDE

TROUBLE	POSSIBLE CAUSE	REMEDY
<p>D. Visual discharge of dust or fume at collector exhaust. (cont.)</p>	<p>2. Filter gasket seals are damaged.</p>	<p>2. Remove filter element and inspect gasket seal area for visual damage or debris on gasket. Clean or replace gasket. (See Filter Element Removal Section 6.1 , Filter Element Replacement Section 6.3).</p>
<p>E. Flex-Trunk will not remain in desired set position or is difficult to move.</p>	<p>1. Friction joints not adjusted properly or they are damaged.</p> <p style="padding-left: 20px;">a. Friction joints too loose or too tight.</p>	<p>1a. Reference the Flex-Trunk Service Section 6.5 for adjustments.</p>
<p>F. Flex-Trunk does not rotate easily or bind, causing breakage of joint assemblies.</p>	<p>1. Swivel collar mount is binding.</p> <p style="padding-left: 20px;">a. Lack of lubrication.</p> <p style="padding-left: 20px;">b. Particulate has migrated into rotating parts.</p>	<p>1a. Reference the Flex-Trunk Service Section 6.5 of this manual.</p> <p>1b. Reference the Flex-Trunk Service Section 6.5 of this manual.</p>
<p>G. Flex-Trunk light does not light.</p>	<p>1. Light bulb burned out or there are loose wire connections.</p>	<p>1. NOTE: Do not touch the halogen light bulb when performing service work as it will significantly shorten the bulb life . Reference the Flex-Trunk Service Section 6.5 of this manual.</p>

7.0 TROUBLESHOOTING GUIDE

TROUBLE	POSSIBLE CAUSE	REMEDY
B. Blower wheel and motor start but do not keep running. (Cont.)	2. Collector front access panel is open or not closed tight.	2. Check to see that the front access doors are closed securely. Turn knobs clockwise to tighten.
	3. Starter kicks out.	
	a. Too much air flow for fan and motor.	3a. Check that all the flexible ducting is installed onto the joint assemblies and that it is not torn or damaged. If ducting is damaged, replace it. (Reference Replacement Parts List and Flex-Trunk Service Section 6.5 located in this manual).
	b. Wire size on the supply circuit is incorrect.	3b. Check for proper wire size on electrical supply lines. Too small of a supply wire will cause motor overload. Rewire per local and national codes.
	c. Motor is wired incorrectly.	3c. Wiring is incorrect per motor manufacturers wiring diagram. (Reference Motor Manufacturer's wiring diagram and correct wiring per supply voltage).
	4. Flex-Trunk (Bench Mount) is not installed onto collector opening.	4. Install Flex-Trunk onto collector following the Flex-Trunk Pre-Installation Section 2.4 in this manual. See Figure 6 and bolt down securely.
C. Insufficient air flow at hood.	1. Motor and fan rotation are backward.	1. Check motor rotation by looking down from the top of the motor. The rotation should be clockwise. Also reference rotation sticker on the fan housing. To correct fan rotation on the single phase motors, reference Motor Manufacturer's wiring diagram that is located on the motor. On the three phase motors, switch any two input leads.

7.0 TROUBLESHOOTING GUIDE

TROUBLE	POSSIBLE CAUSE	REMEDY
<p>A. Blower wheel and motor do not start.</p>	<ol style="list-style-type: none"> 1. Electrical supply circuit down. 2. Fuses have blown in the control box. 3. Transformer has failed. <ol style="list-style-type: none"> a. 1 phase system. b. 3 phase system. (Special units only.) 	<ol style="list-style-type: none"> 1. Check the electrical supply circuit for proper output voltage, fuse, or circuit breaker fault. 2. CAUTION: Disconnect the electrical power to the PCPT-1100 and open the access panel. Remove the electrical control box cover to access fuse(s) on the control panel. With a volt ohm electrical meter, check for blown fuses in the electrical control box and disconnect. If fuses are blown, replace fuse or fuses. (Reference Figures 5, 6, 7, 8 and 9). 3a. Using a volt ohm meter check the input voltage on terminals H₁ and H₄, (it should be 120 volts AC.) Next check output voltage on X₁ and X₂ terminals, (it should be 12 volts AC). If there is no output voltage, replace the transformer. (Reference Figures 5, 6, 7, 8 and 9). 3b. Using a volt ohm meter check the input voltage on terminals H₁ and H₄ on the primary transformer feedlines. Look at the voltage rating on the transformer that is rated for your input voltage. Check that the proper shorting bars or jumper wires have been installed per your input voltage requirements. Next check the fuse on the X₁ terminal and if it is blown out, replace with a MDX 3 amp fuse. Then check the output voltage on X₁ and X₂ terminals (it should be 120 volts AC). If there is no output voltage, replace the transformer. (Reference Figures 5, 6, 7, 8 and 9).

6.4.4 Middle Friction Joint Replacement (See Figures 13, 15, 16 and 17)

Tools required:

- (1) Phillips Screwdriver
 - (1) 5/16" Hex Nut Driver
 - (2) 9/16" Open or Box End Wrenches or Torque Wrench
1. Follow Steps #2 through #4 in the Friction Joint Adjustment Section 6.4.1 (See Figures 13, 15 and 16). First relieve tension from the spring by extending the flex trunk arm to its full length of movement. Remove the spring by stretching and then removing from the spring bracket mount. Next remove the four (4) 8-32 screws, washers, and locknuts that hold the spring bracket mounts onto the friction joint casting collars. Next remove the two (2) 8-32 screws, washers and locknuts that retain the rigid plastic duct. Remove the rigid plastic ducting, being careful of the electrical cable connections if applicable. Remove the other two (2) 8-32 locknuts and remove the friction joint assembly from the other rigid plastic ducting. Disassemble the friction joint assembly by removing the 3/8-24 outer jam nut, then the inner 3/8-24 jam nut, and setting them aside. Next remove the spring washer and then the 3/8-24 bolt and spring washer from the opposite side. The friction disc material that is between the two friction joints will fall out. Replace the necessary friction joint by aligning the friction disc material between the two friction joints and installing the 3/8-24 bolt and washer which were removed. Next install the spring washer on the opposite side onto the 3/8-24 bolt. Install the first 3/8-24 jam nut and tighten to 60 to 80 in/lbs of torque. Install the second 3/8-24 jam nut, but do not tighten to the other nut as adjustment will be required after assembly is installed.
 2. Install the friction joint assembly onto the swivel rigid plastic ducting by aligning the four (4) holes and then installing the two (2) 8-32 screws, washers and locknuts that are opposite of where the spring bracket mount is located and tighten securely. Next position the spring bracket mount (See Figures 16 and 17), install the two (2) 8-32 screws, washers and locknuts and tighten securely.

3. Position the other rigid plastic ducting onto friction joint assembly and follow the same procedure as in Step 3. Hook the spring eyelet onto the spring bracket mount and stretch the spring onto the other spring bracket mount.
4. Check the arm movement and adjust as in Friction Joint Adjustment Section 6.4.1 (See Figure 13).
6. Position flex duct over friction joint and tighten the band clamps onto the friction joint collar. Reinstall the cable clamps following the Friction Joint Adjustment Section 6.4.1 (See Figures 16 and 17)
7. Secure electrical cable back to the rigid tubing. (Refer to Step 7 in the Friction Joint Adjustment Section 6.4.1).

6.5 U-Joint Replacement

Tools Required:

- (1) Phillips Screwdriver
 - (1) 11/32" Hex Nut Driver or (1) Slotted Screwdriver
 - (1) 9/16" Open End Wrench
 - (1) Torque Wrench - 9/16" Socket in/lb.
1. Follow Steps #2 through #5 in Friction Joint Adjustment Section 6.4.1 (See Figures 13, 15 and 16).
 2. Remove the four (4) 8-32 screws, washers and locknuts securing the hood to the U-joint and set aside.
 3. Remove the four (4) 8-32 screws, washers and locknuts that are holding the U-joint assembly and remove the U-joint from the rigid ducting.
 4. Reposition the replacement U-joint assembly by aligning the four (4) holes in the rigid ducting and fasten in place using the fasteners that were removed in Step #3.
 5. Reposition the hood onto the U-joint assembly by aligning all four holes and fastening in place using the fasteners removed in Step #2.

1. Remove the four (4) 1/4" - 14 x .50" lg. screws that fasten the Flex-Trunk adapter collar to the collar insert mount and carefully remove the Flex-Trunk, being careful of the electrical cable connections.
2. Remove the 5/16" - 18 x 1" lg. bolts, lock washers, and nuts that fasten the Flex-Trunk collar mount to the Porta-Trunk. Remove the collar mount assembly from the Porta-Trunk. Set the ring spacer mount aside (See Figure 15).
3. Disassemble the collar insert mount from the collar mount by sliding it out. Clean the inside and outside surfaces of the collar insert mount. Apply a thick film of grease to the entire outside surface and the entire machined inside surface of the collar mount.
4. Insert the greased collar insert mount into the collar mount. Grease should flow out, showing that all gaps are completely filled with grease. Slide the ring spacer mount that was removed in Step #2 back over the collar insert mount.
5. Install the collar mount back onto the Porta-Trunk by aligning the four (4) holes and fasten in place using the 5/16" - 18 x 1" lg. bolts, lock washers, and nuts that were removed in Step #2 (See Figures 5, 14 and 15).
6. Raise the trunk assembly and slide onto the collar insert mount, the spacer ring mount and align the four (4) holes. Fasten in place with the four (4) 1/4" - 14 x .50" lg. pan head screws that were removed in Step #1. Tighten all four (4) screws until they bottom out and then loosen 1/4 turn or until the swivel collar rotates smoothly (See Figures 14 and 15).

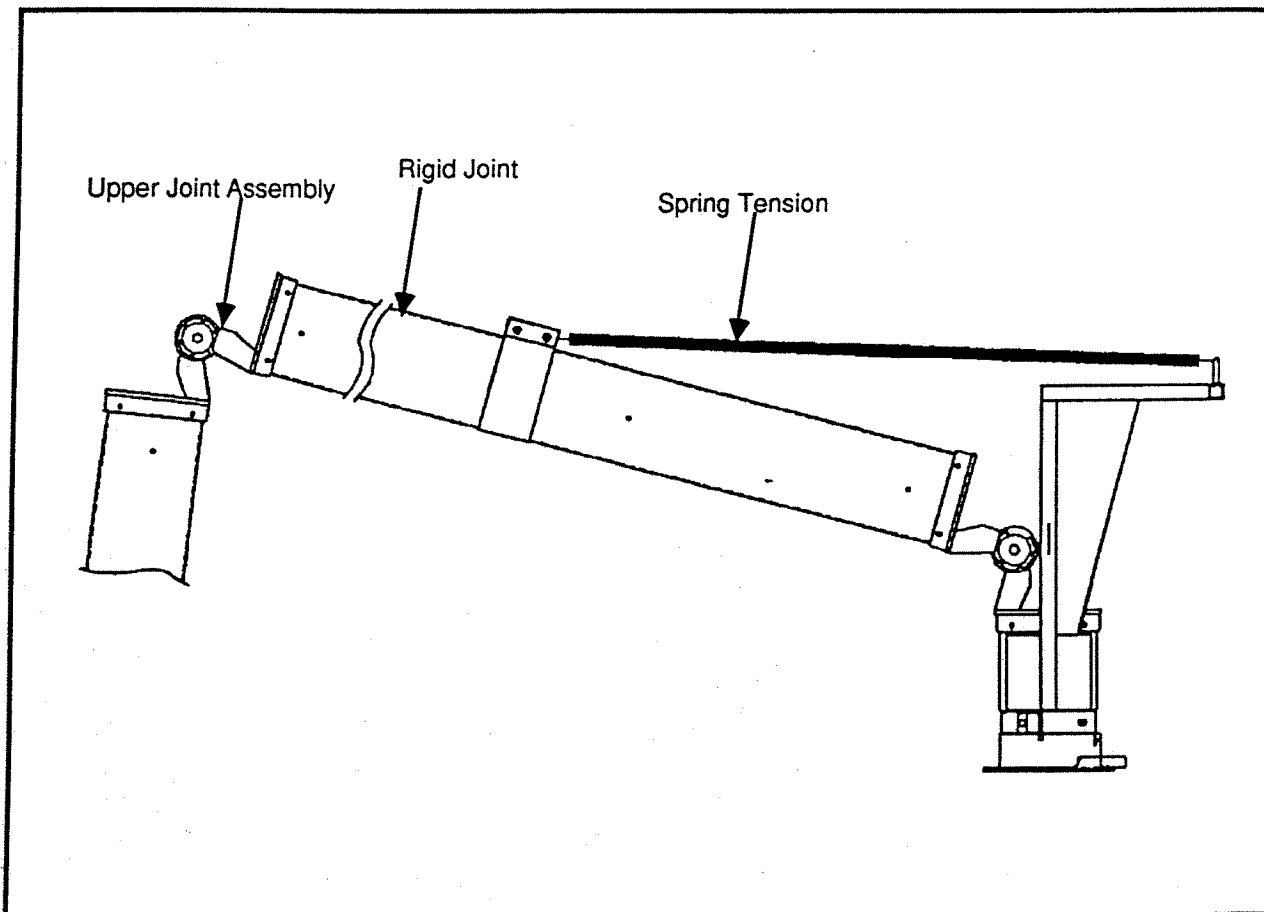


Figure 15
Collar Joint Assembly - 14 Foot Bench Mount

NOTE

Over tightening of friction joint assembly may cause damage.

5. Fully extend the arm joint where the most weight is applied to the upper or middle friction joint assembly that requires adjustment. Loosen the outer jam nut first using a 9/16" wrench. With the joint fully extended adjust by tightening or loosening the inner 3/8-24 jam nut until the friction joint holds the weight of the flex trunk arm. Tighten the outer 3/8-24 jam nut to the inner jam nut by using a 9/16" wrench to hold the inner jam nut. Torque the outer jam nut to 250 in/lbs (See Figure 13). Check the movement of the entire flex trunk arm. Repeat the above adjustment until desired performance is achieved.
6. Now install the flex duct over the friction joint assembly and tighten band clamps.
7. With the center button on the cable clamp still pulled out, position it back into the 5/16" hole in the rigid duct and secure by pushing extended button inward.

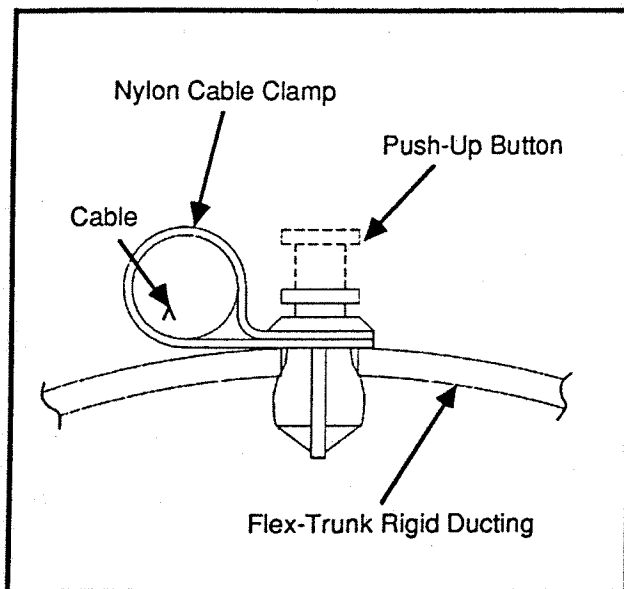


Figure 12
Nylon Cable Clamp

8. For adjustments of the U-joint at the hood, the two (2) 3/8-24 bolts and locknuts should be tightened or loosened individually until the best movement and support of the hood is achieved. All other instructions are applicable (See Figures 13, 16 and 17).

6.4.2 Swivel Collar Mount (Bench Mount) (See Figures 14 and 15)

Tools Required:

- (1) Phillips Screwdriver
- (1) 1/2" Open or Box End Wrench

NOTE

- Do not drop, as damage to the Flex-Trunk parts may occur.
- Too little lubrication will cause the swivel to bind due to gauling of metal parts and also dust particulate migration into the rotating parts, resulting in Flex-Trunk joint failure.
- Periodic lubrication of the mounting collar assembly may be required or damage to the Flex-Trunk joints may occur.

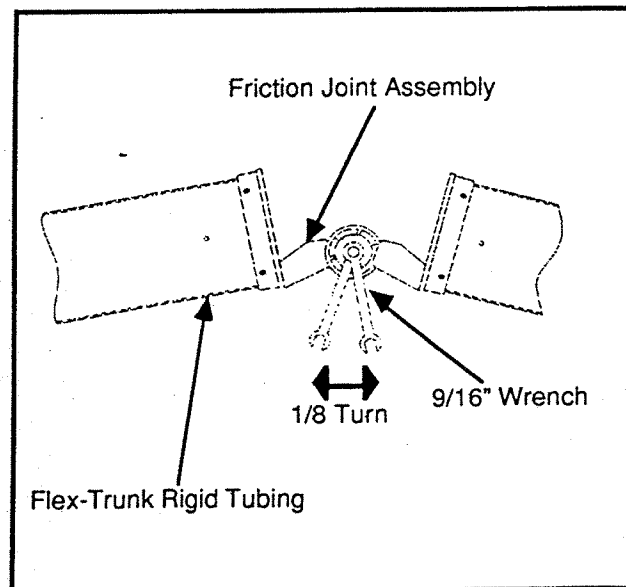


Figure 13
Joint Assembly

2. Remove the accumulated dust from the hopper section by vacuum or wipe out the dust that has settled in chamber.
3. Install the hopper access door by turning the two (2) knobs clockwise and tightening securely.

6.0 Service (See Figure 11)

CAUTION

- Respiratory equipment should be used when opening the dust collector for the removal of contaminants or filter elements.
- Dispose of contaminants in a safe and responsible manner.

6.1 Filter Element Removal (See Figure 11)

CAUTION

Disconnect the collector from the electrical power supply source and shut off and bleed down the compressed air supply before servicing any portion of the collector.

1. Remove the access covers by unscrewing the knobs counterclockwise by hand. Set them aside.
2. Move the filters to break the gasket seals between the filters and the tube sheet sealing surfaces. Rotate the element slowly 1/2 turn to dump any loose dust off the top of the filter element. Slide the filter element along the suspension yoke, and out the front of the collector access port.

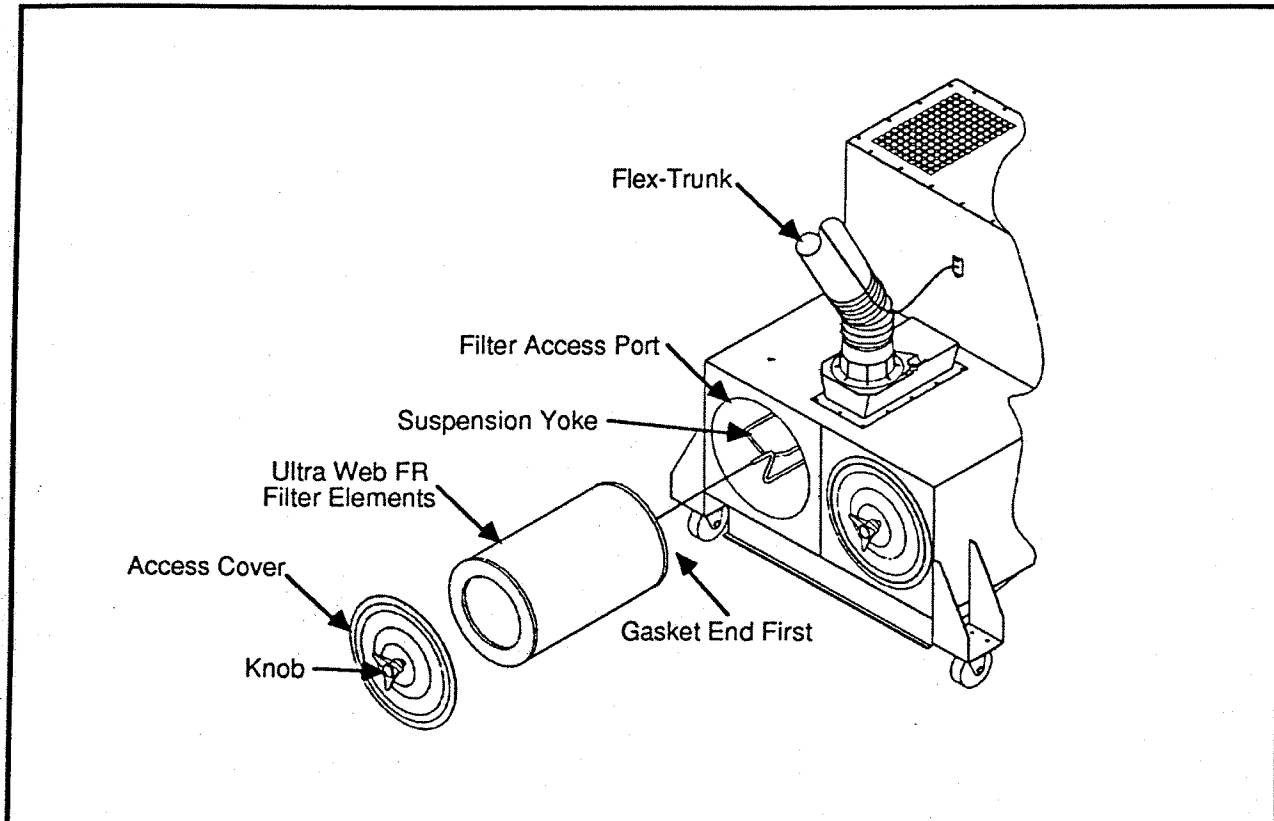


Figure 11
Filter Element Replacement - PCPT-1100

2.7 Assembly of Optional Equipment (See Figure 10)

2.7.1 Magnehelic Gage (See Figure 10)

The Magnehelic gage pressure taps are an optional feature on the Pulse Cleaned Porta-Trunk 1100. The pressure taps have been pre-installed in our factory.

1. After unpacking the Magnehelic parts, choose a convenient, visible and accessible location on the unit for mounting the gage.
2. Prior to mounting, plug the pressure ports on the back of the Magnehelic gage using the two (2) 1/8" NPT pipe plugs that are supplied with the gage. Next, install the two (2) 1/8" NPT tubing male adapters that are supplied with the gage

into the openings on the side of the gage marked high and low pressure. Mount the gage to the mounting bracket with three (3) #6 - 32 x 1/4" long screws that are supplied with the gage, as shown in Figure 10.

3. Locate the Magnehelic gage and mounting bracket assembly for the best visual advantage. The plastic tubing will determine the maximum distance from the collector that the mounting bracket and gage can be located. Thirty-five (35) feet of plastic tubing is supplied. Remember that the tubing will have to be cut and that one piece may be longer than the other. If more tubing is required, please contact your local Torit representative. Once the mounting bracket assembly position is determined, mount this assembly to the supporting structure using two (2) self-drilling screws.

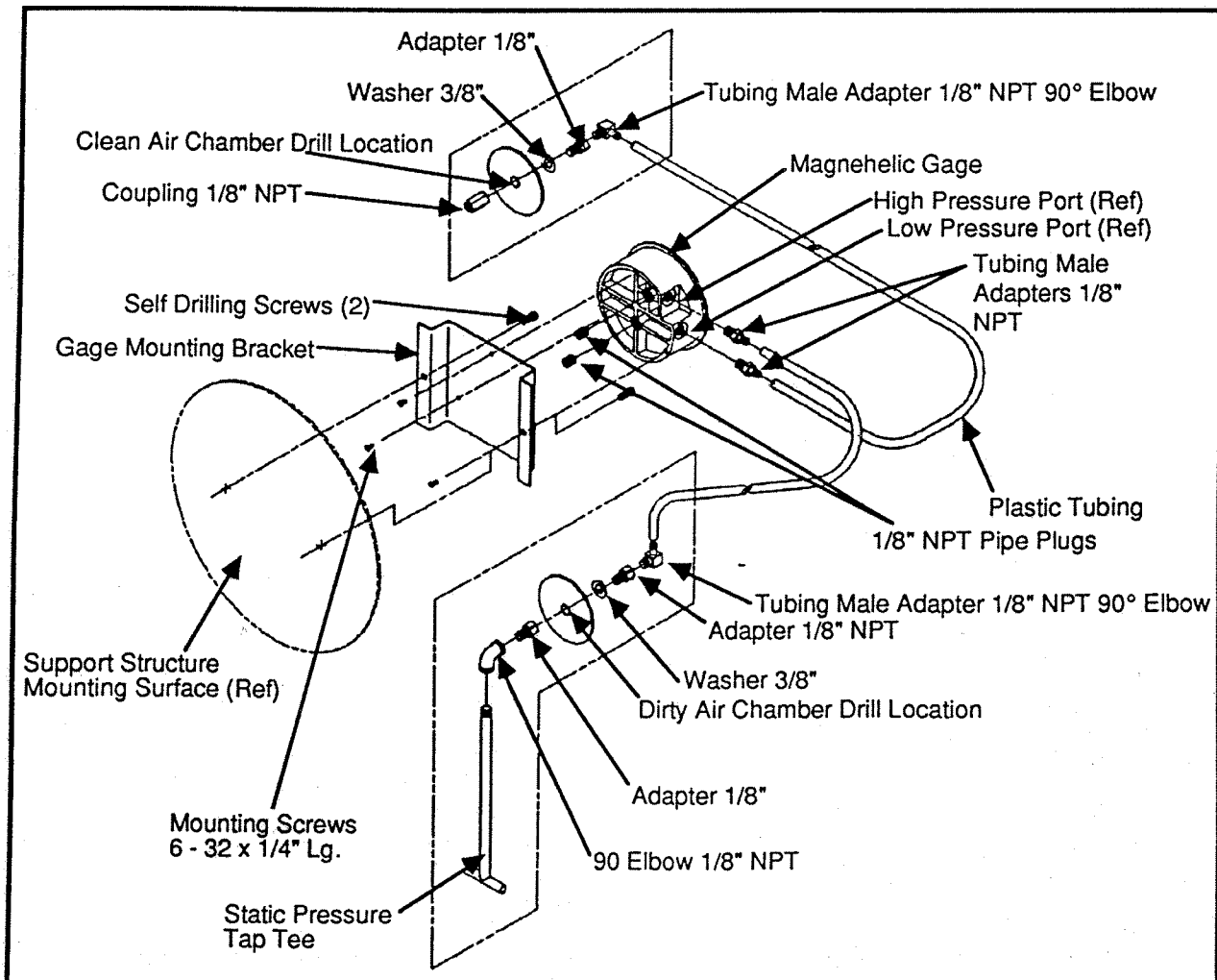


Figure 10
Installation of the Magnehelic Gage

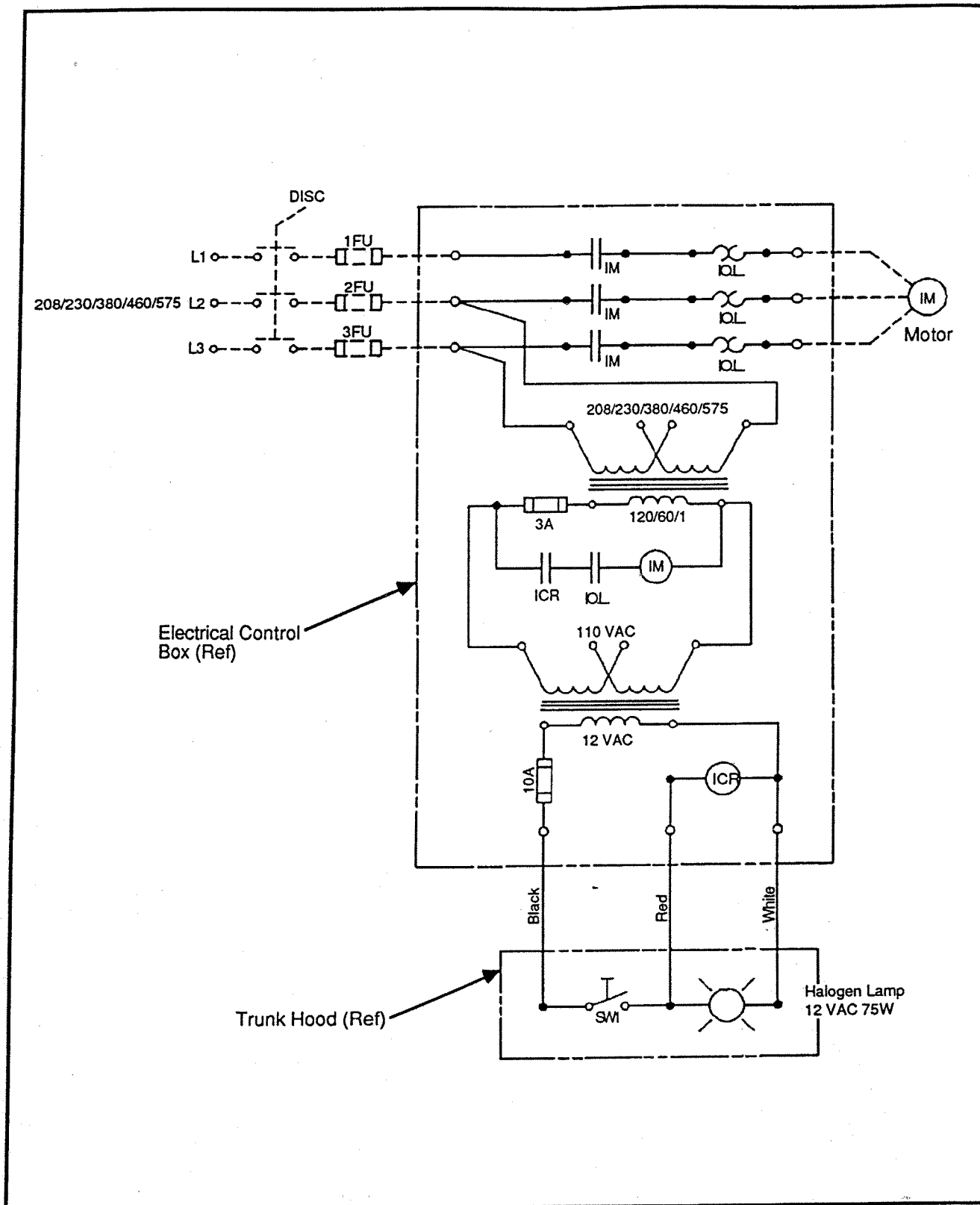


Figure 8
Wiring Diagram Trunk - 3 Phase

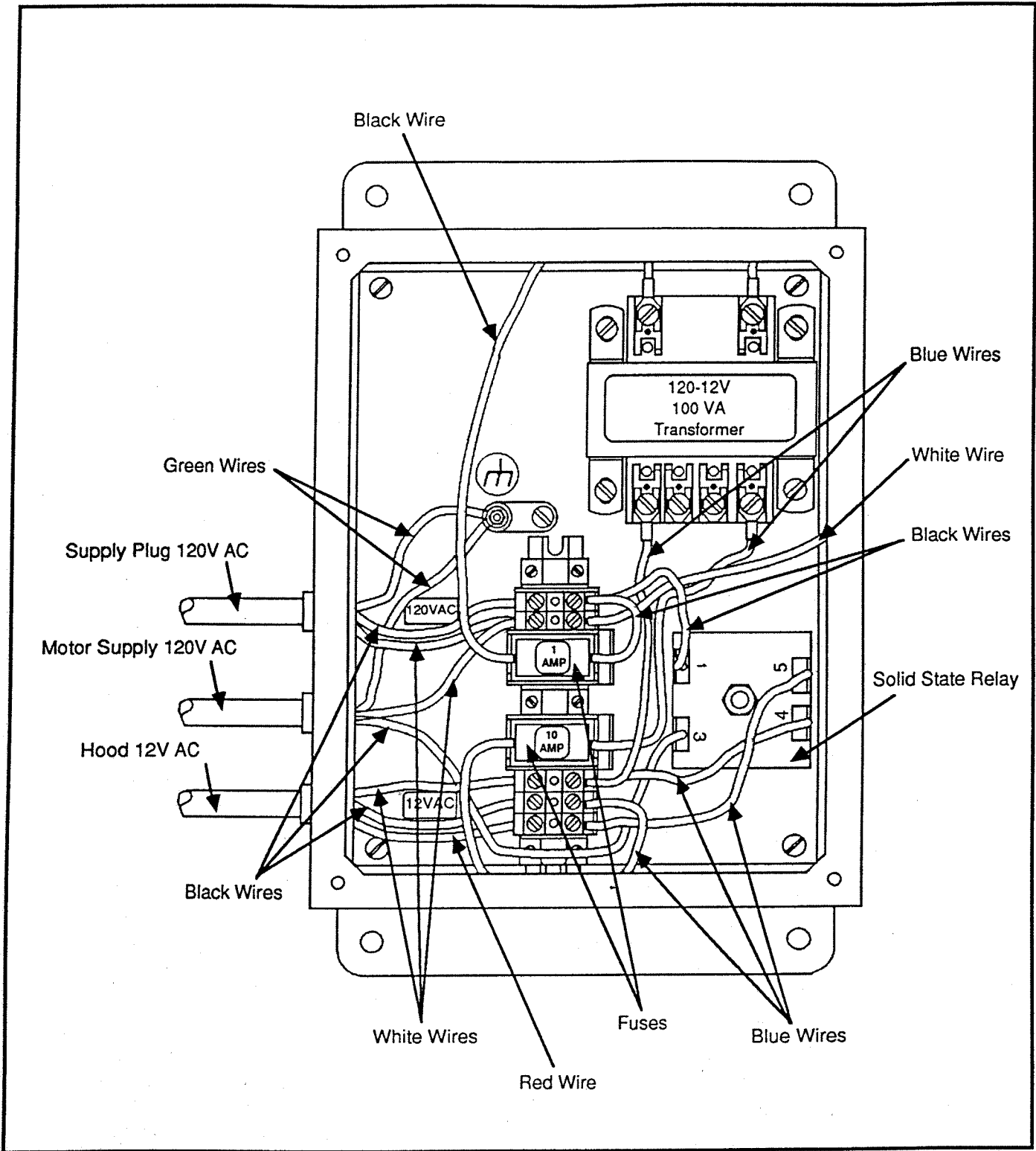


Figure 6
Electrical Control Box – Single Phase

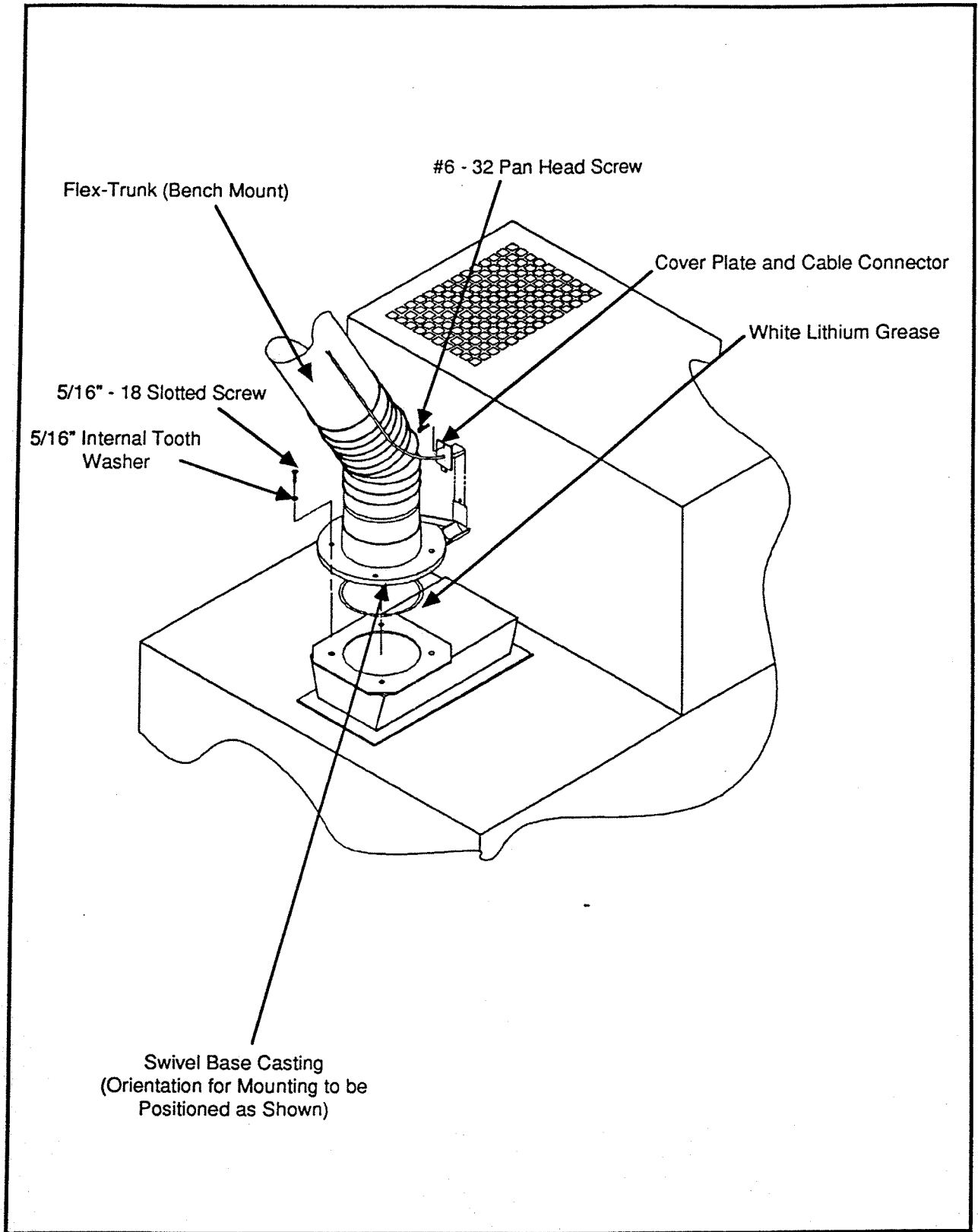


Figure 5
Flex-Trunk Electrical Mounting

The Flex-Trunk rotates 259° (stop in swivel joint base) and has three flexible joints for optimal positioning of the intake hood. Friction devices are located in each flexible joint to hold the hood where it is needed.

The Pulse Cleaned Porta-Trunk can easily be rolled to where it is needed using the push handles. It may be locked into position with the two locking casters on the collector.

The single phase blower motor is protected from overloading and overheating by an automatic thermal protection built into the motor. The three phase blower motor is protected from overloading and overheating by an adjustable thermal overload located on the magnetic motor starter.

1.1.2 Filter Element

Filter element cleaning requires 90 to 100 psig compressed air supply to the valve manifold that is located on the back of the Pulse Cleaned Porta-Trunk. Press the pulse button, located on the pulse valve, briefly to clean the filter elements. This creates a backflushing action, which will dislodge the contaminants from the filter medium and the contaminants will fall into the hopper section. Cleaning may be done while the fan motor is on during normal operation. See Figure 1.

2.0 Installation

2.1 Inspection

The Pulse Cleaned Porta-Trunk is normally shipped by common carrier and should be checked for any damage that may have occurred en route. Any damage should be noted and the carrier notified immediately.

2.2 Ship Loose Items

Items shipped loose with the Pulse Cleaned Porta-Trunk may include:

- FT-500 Bench Mount Flex-Trunk Collector Arm
- Mounting Screws

2.3 Equipment/Tools Required

The following is a list of typical tools and equipment required to install and assemble a Porta-Trunk:

- Screwdrivers
- Socket Wrenches
- Torque Wrench - inch./lbs. (9/16" Socket)
- Adjustable Wrench
- White Lithium Grease

2.4 Pre-Installation (See Figure 3)

1. Connecting the Flex-Trunk (Bench Mount) to the collector requires only a screwdriver.
2. Apply a coating of white lithium grease to the Flex-Trunk mounting surface on the Porta-Trunk to create a seal.
3. Secure the Flex-Trunk to the cabinet using the four (4) 5/16" - 18 slotted screws.

2.5 Electrical Installation (See Figures 4, 5, 6 & 7 for single phase and Figures 5, 8 & 9 for three phase)

CAUTION

All electrical work must be done by a qualified electrician in accordance with local codes.

Once the Flex-Trunk is installed onto the cabinet, the next step is the electrical connection between the trunk and the cabinet electrical control box. Follow these steps and see Figure 5:

1. Locate the cable connector plug and cover plate taped to the back of the cabinet above the Flex-Trunk base swivel joint assembly and remove the tape.
2. Take the mating cable plug from the Flex-Trunk and connect both plugs together.
3. Install receptical cover plate tab into the cabinet (the tab end into cabinet surface hole).
4. Tip up the receptical cover onto the cabinet surface and fasten into place using the #6 - 32 x 1/2" lg. screws provided.

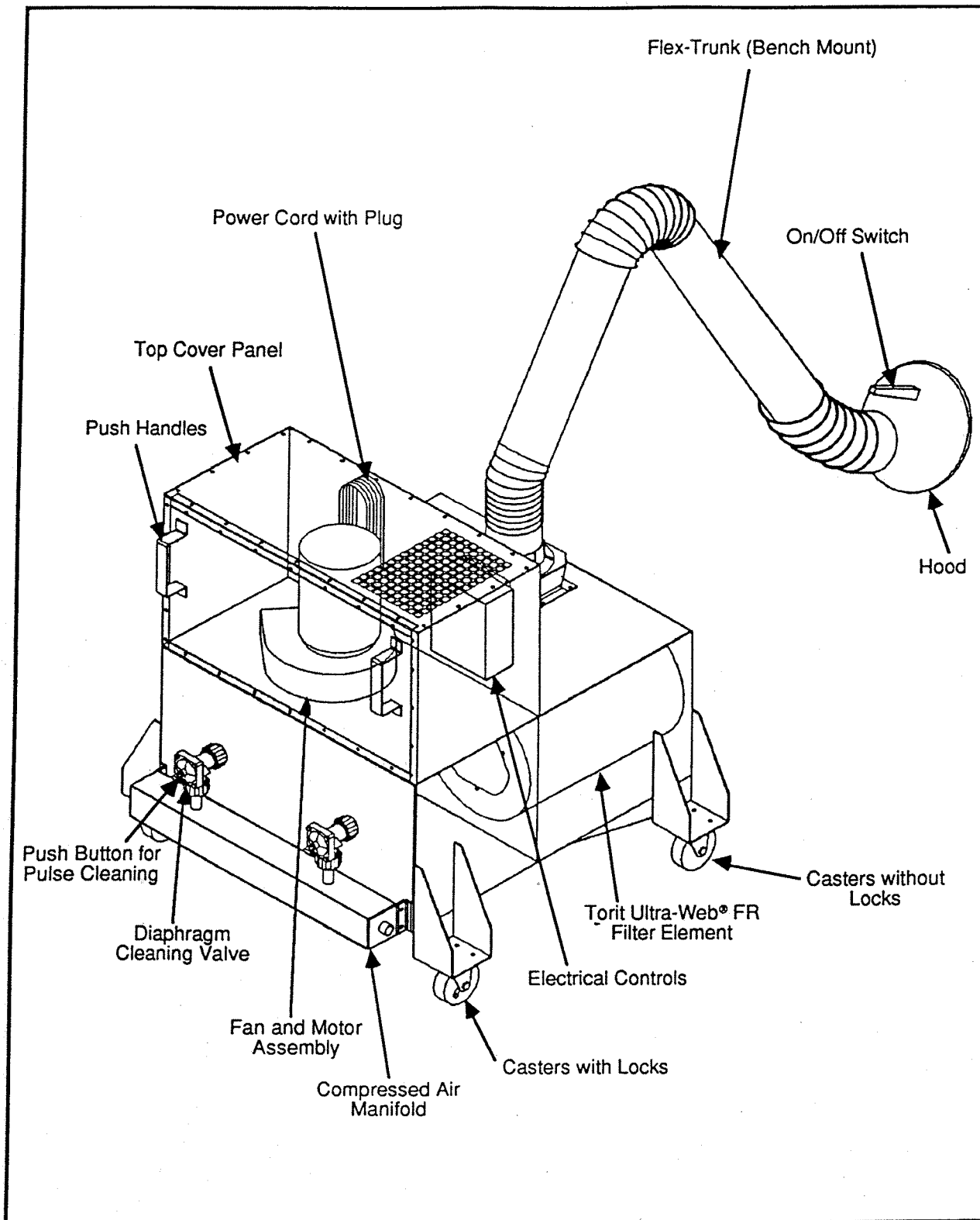


Figure 1
Phantom View of the PCPT-1100

NOTE

Statements indicate precautions necessary to avoid potential equipment failure.

CAUTION

Statements indicate potential safety hazards.

CAUTION

Application of Dust Control Equipment:

- Avoid mixing combustible materials, such as, buffing lint, paper, wood, dust, aluminum and magnesium, with dust generated from grinding ferrous metals due to the potential fire hazard caused by sparks in the dust collector.
- Under no conditions, should the machine operator be allowed to put lit cigarettes or any burning object into the hood or ducting of any dust control system.
- A prudent user of Torit equipment should consult and comply with all national and local fire codes and/or other appropriate codes when determining the location and operation of dust collector equipment.
- Dust collectors do not contain fire extinguishing equipment. When dust collectors are used to collect flammable or explosive dusts, the dust collector should be located outside the building. Also, a manufacturer of fire extinguishing equipment, familiar with this type of fire hazard and local fire codes, should be consulted for recommendations and installation of the proper fire extinguishing equipment.

Donaldson
Torit Products

Torit is the leading designer and manufacturer of dust collector systems for the control of industrial air pollution. Its systems are designed to help reduce occupational hazards, lengthen machine life, reduce in-plant maintenance requirements, and improve product quality.