

# MANUAL

## FILTAIR CAPTURE 5

**aventa**  
LOCAÇÃO E VENDA  
MÁQUINAS DE SOLDA E CORTE

ALUGUEL E VENDA DE MÁQUINAS DE  
SOLDA E CORTE PLASMA

TODOS OS PROCESSOS DE SOLDAGEM

TRABALHAMOS EXCLUSIVAMENTE COM  
AS MELHORES MÁQUINAS DO MUNDO

ASSESSORIA PARA PROCESSOS ESPECIAIS

TECNOLOGIA ATUALIZADA PARA  
GARANTIR O MELHOR CUSTO BENEFÍCIO

AUMENTO DE PRODUTIVIDADE SOLDADOR-PEÇA

REDUÇÃO DE CUSTO COM ENERGIA



MIG MAG · TIG · ARCO SUBMERSO · MULTIPROCESSO · RETIFICADORAS CORTE PLASMA  
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OM-260 545A

2013-07

**Processes**



Multiprocess Welding

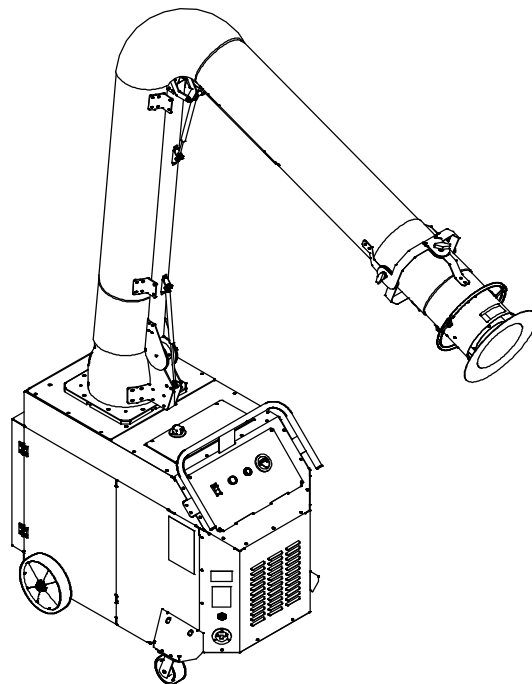
**Description**



Mobile Weld Fume Extractor

# FILTAIR<sup>®</sup>

## Capture 5 Fume Extractor



**Read And Save These Instructions**

# OWNER'S MANUAL



Visit our website at  
[www.MillerWelds.com](http://www.MillerWelds.com)

File: Accessory



# From Miller to You

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*Thank you and congratulations* on choosing Miller. Now you can get the job done and get it done right. We know you don't have time to do it any other way.

That's why when Niels Miller first started building arc welders in 1929, he made sure his products offered long-lasting value and superior quality. Like you, his customers couldn't afford anything less. Miller products had to be more than the best they could be. They had to be the best you could buy.

Today, the people that build and sell Miller products continue the tradition. They're just as committed to providing equipment and service that meets the high standards of quality and value established in 1929.

This Owner's Manual is designed to help you get the most out of your Miller products. Please take time to read the Safety precautions. They will help you protect yourself against potential hazards on the worksite.

We've made installation and operation quick and easy. With Miller you can count on years of reliable service with proper maintenance. And if for some reason the unit needs repair, there's a Troubleshooting section that will help you figure out what the problem is. The parts list will then help you to decide the exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.



Miller is the first welding equipment manufacturer in the U.S.A. to be registered to the ISO 9001 Quality System Standard.

Miller Electric manufactures a full line of welders and welding related equipment. For information on other quality Miller products, contact your local Miller distributor to receive the latest full line catalog or individual specification sheets. **To locate your nearest distributor or service agency call 1-800-4-A-Miller, or visit us at [www.MillerWelds.com](http://www.MillerWelds.com) on the web.**



Working as hard as you do – every power source from Miller is backed by the most hassle-free warranty in the business.



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# SECTION 1 – SAFETY PRECAUTIONS - READ BEFORE USING

fume 2013–02

 Protect yourself and others from injury — read, follow, and save these important safety precautions and operating instructions.

## 1-1. Symbol Usage



**DANGER!** – Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

**NOTICE** – Indicates statements not related to personal injury.

 Indicates special instructions.



This group of symbols means Warning! Watch Out! ELECTRIC SHOCK, MOVING PARTS, and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

## 1-2. Fume Extraction Hazards



The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the Safety Standards listed in Section 1-6. Read and follow all Safety Standards.



Only qualified persons should install, operate, maintain, and repair this unit.



During operation, keep everybody, especially children, away.



### FUME EXTRACTOR MISUSE can be hazardous.

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health. Combustible materials may ignite and cause fire and explosion.

- Read and follow these instructions and the safety labels carefully. The fume extractor helps protect the user from specific airborne contaminants but must be used correctly to be fully effective. Have an industrial hygienist test the air in your facility to ensure the fume extractor provides adequate protection from contaminants in your environment. If you have questions about the extractor, see equipment label and consult your Safety Director and a certified Industrial Hygienist.
- Follow all applicable ANSI, OSHA, CSA, UL, and other regulatory guidelines pertaining to the use of fume extractors and the recirculation of filtered air.
- Portions of fume collection equipment, including the clean- and dirty-air plenums, may be considered OSHA Confined Spaces. Refer to the appropriate OSHA regulations to determine if a specific installation is a confined space and if a permit program is required.
- Do not use the fume extractor without an approved and properly installed spark guard unless the unit is designed and intended to be used without one. Without the spark guard, welding sparks may ignite a non-fire retardant filter or fume collected on the filter, or damage the filter and allow unfiltered air into the breathing zone. Do not allow sparks or any burning materials to enter the hood or duct of the fume extractor.
- Only use the fume extractor to extract weld fumes. Do not use the fume extractor to extract hot gases (above 140°F/60°C) wood or cement dust, engine exhaust, liquid vapors, explosive materials, aggressive fumes (acid), fumes from burning objects, or fumes from cleaning, cutting, gouging, grinding, painting, flame spraying, sand blasting, or other non-welding operations.
- Fumes from some welding operations may be combustible. Do not install or operate fume extractor where combustible weld fumes may be present unless a fire/and/or explosion protection system is present that has been selected and approved by a qualified person familiar with applicable codes and fire/explosion protection systems.

- Use the fume extractor only in atmospheres for which it is recommended. Do not use the extractor where contaminant levels are unknown or are immediately dangerous to life, or where the contaminant levels exceed the fume extractor specifications.
- Do not weld until you are sure the fume extractor is correctly assembled and working properly.
- Before each use, inspect the fume extractor for damage and verify it operates properly.
- Dangerous contaminants may not smell or be visible. Leave the area immediately if you notice the following:
  - a. Breathing becomes difficult.
  - b. You experience dizziness, impaired vision, or eye, nose, or mouth irritation.
  - c. The equipment is damaged.
  - d. Air flow decreases or stops.
  - e. If you think the equipment is not supplying adequate protection.
- Do not repair, modify, or disassemble the fume extractor or use with parts or accessories not supplied by the manufacturer. Use only approved components from the manufacturer.
- Replace damaged or clogged filter. Do not wash or reuse filter, or clean filter by tapping or with compressed air, unless specifically instructed by the manufacturer in the Owner's Manual (filter element may be damaged). Do not breathe the dust collected by the fume extractor. Wear approved safety equipment (respirator, gloves, long sleeve shirt) when performing filter maintenance. Dispose of used filter element and collected dust according to local, state, and federal requirements.
- Read and understand the Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.
- The fume extractor must be used with the extraction arm, hoses, filter, and other components recommended by the manufacturer.



### ELECTRIC SHOCK can kill.

Touching live electrical parts can cause fatal shocks or severe burns. The input power circuit and machine internal circuits are also live when power is on. Incorrectly installed or improperly grounded equipment is a hazard.

- Do not touch live electrical parts.
- Disconnect input power before installing or servicing this equipment. Lockout/tagout input power according to OSHA 29 CFR 1910.147 (see Safety Standards).
- Properly install, ground, and operate this equipment according to its Owner's Manual and national, state, and local codes.
- Always verify the supply ground – check and be sure that input power cord ground wire is properly connected to ground terminal in disconnect box or that cord plug is connected to a properly grounded receptacle outlet.



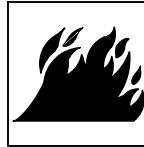
### FALLING EQUIPMENT can injure.

- Use equipment of adequate capacity to lift and support unit.
- If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.
- Keep equipment (cables and cords) away from moving vehicles when working from an aerial location.
- Follow the guidelines in the Applications Manual for the Revised NIOSH Lifting Equation (Publication No. 94–110) when manually lifting heavy parts or equipment.



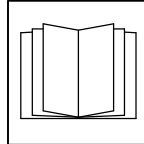
### MOVING PARTS can injure.

- Keep away from moving parts such as fans.
- Keep all doors, panels, covers, and guards closed and securely in place.
- Have only qualified persons remove doors, panels, covers, or guards for maintenance and troubleshooting as necessary.
- Reinstall doors, panels, covers, or guards when maintenance is finished and before reconnecting input power.



### FIRE OR EXPLOSION hazard.

- Do not install or place unit on, over, or near combustible surfaces.
- Do not install unit near flammables.
- Do not overload building wiring – be sure power supply system is properly sized, rated, and protected to handle this unit.



### READ INSTRUCTIONS.

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.
- Use only genuine replacement parts from the manufacturer.
- Perform maintenance and service according to the Owner's Manuals, industry standards, and national, state, and local codes.

## 1-3. Arc Welding And Plasma Cutting Hazards



### ELECTRIC SHOCK can kill.

Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and machine internal circuits are also live when power is on. In semiautomatic or automatic wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard.

- Do not touch live electrical parts.
- Wear dry, hole-free insulating gloves and body protection.
- Insulate yourself from work and ground using dry insulating mats or covers big enough to prevent any physical contact with the work or ground.
- Do not use AC output in damp areas, if movement is confined, or if there is a danger of falling.
- Use AC output ONLY if required for the welding or cutting process.
- If AC output is required, use remote output control if present on unit.
- Additional safety precautions are required when any of the following electrically hazardous conditions are present: in damp locations or while wearing wet clothing; on metal structures such as floors, gratings, or scaffolds; when in cramped positions such as sitting, kneeling, or lying; or when there is a high risk of unavoidable or accidental contact with the workpiece or ground. For these conditions, use the following equipment in order presented: 1) a semiautomatic DC constant voltage (wire) welder, 2) a DC manual (stick) welder, or 3) an AC welder with reduced open-circuit voltage. In most situations, use of a DC, constant voltage wire welder is recommended. And, do not work alone!
- Disconnect input power or stop engine before installing or servicing this equipment. Lockout/tagout input power according to OSHA 29 CFR 1910.147 (see Safety Standards).
- Properly install, ground, and operate this equipment according to its Owner's Manual and national, state, and local codes.
- Always verify the supply ground – check and be sure that input power cord ground wire is properly connected to ground terminal in disconnect box or that cord plug is connected to a properly grounded receptacle outlet.
- When making input connections, attach proper grounding conductor first – double-check connections.

- Keep cords dry, free of oil and grease, and protected from hot metal and sparks.
- Frequently inspect input power cord for damage or bare wiring – replace cord immediately if damaged – bare wiring can kill.
- Turn off all equipment when not in use.
- Do not use worn, damaged, undersized, or poorly spliced cables.
- Do not drape cables over your body.
- If earth grounding of the workpiece is required, ground it directly with a separate cable.
- Do not touch electrode if you are in contact with the work, ground, or another electrode from a different machine.
- Do not touch electrode holders connected to two welding machines at the same time since double open-circuit voltage will be present.
- Use only well-maintained equipment. Repair or replace damaged parts at once. Maintain unit according to manual.
- Wear a safety harness if working above floor level.
- Keep all panels and covers securely in place.
- Clamp work cable with good metal-to-metal contact to workpiece or worktable as near the weld as practical.
- Insulate work clamp when not connected to workpiece to prevent contact with any metal object.
- Do not connect more than one electrode or work cable to any single weld output terminal. Disconnect cable for process not in use.

### SIGNIFICANT DC VOLTAGE exists in inverter power sources AFTER removal of input power.

- Turn Off inverter, disconnect input power, and discharge input capacitors according to instructions in Maintenance Section before touching any parts.



### HOT PARTS can burn.

- Do not touch hot parts bare handed.
- Allow cooling period before working on equipment.
- To handle hot parts, use proper tools and/or wear heavy, insulated welding gloves and clothing to prevent burns.



### FUMES AND GASES can be hazardous.

Welding and cutting produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

- Keep your head out of the fumes. Do not breathe the fumes.
- If inside, ventilate the area and/or use local forced ventilation at the arc to remove welding and cutting fumes and gases.
- If ventilation is poor, wear an approved air-supplied respirator.
- Read and understand the Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.
- Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watch-person nearby. Welding and cutting fumes and gases can displace air and lower the oxygen level causing injury or death. Be sure the breathing air is safe.
- Do not weld or cut in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
- Do not weld or cut on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.



### ARC RAYS can burn eyes and skin.

Arc rays from welding and cutting processes produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.

- Wear an approved welding helmet fitted with a proper shade of filter lenses to protect your face and eyes from arc rays and sparks when welding, cutting, or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards).
- Wear approved safety glasses with side shields under your helmet.
- Use protective screens or barriers to protect others from flash, glare and sparks; warn others not to watch the arc.
- Wear protective clothing made from durable, flame-resistant material (leather, heavy cotton, or wool) and foot protection.

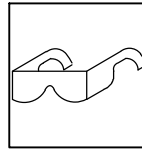


### WELDING AND CUTTING can cause fire or explosion.

Welding or cutting on closed containers, such as tanks, drums, or pipes, can cause them to blow up. Sparks can fly off from the welding or cutting arc. The flying sparks, hot workpiece, and hot equipment can cause fires and burns. Accidental contact of electrode to metal objects can cause sparks, explosion, overheating, or fire. Check and be sure the area is safe before doing any welding or cutting.

- Remove all flammables within 35 ft (10.7 m) of the welding or cutting arc. If this is not possible, tightly cover them with approved covers.
- Do not weld or cut where flying sparks can strike flammable material.
- Protect yourself and others from flying sparks and hot metal.
- Be alert that welding sparks and hot materials from welding and cutting can easily go through small cracks and openings to adjacent areas.
- Watch for fire, and keep a fire extinguisher nearby.
- Be aware that welding or cutting on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
- Do not weld or cut on containers that have held combustibles, or on closed containers such as tanks, drums, or pipes unless they are properly prepared according to AWS F4.1 and AWS A6.0 (see Safety Standards).
- Do not weld or cut where the atmosphere may contain flammable dust, gas, or liquid vapors (such as gasoline).
- Connect work cable to the work as close to the welding or cutting area as practical to prevent welding or cutting current from traveling long, possibly unknown paths and causing electric shock, sparks, and fire hazards.

- Do not use welder to thaw frozen pipes.
- Remove stick electrode from holder or cut off welding wire at contact tip when not in use.
- Wear oil-free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.
- Remove any combustibles, such as a butane lighter or matches, from your person before doing any welding or cutting.
- After completion of work, inspect area to ensure it is free of sparks, glowing embers, and flames.
- Use only correct fuses or circuit breakers. Do not oversize or bypass them.
- Follow requirements in OSHA 1910.252 (a) (2) (iv) and NFPA 51B for hot work and have a fire watcher and extinguisher nearby.



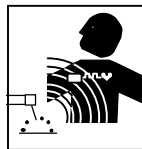
### FLYING METAL or DIRT can injure eyes.

- Welding, cutting, chipping, wire brushing, and grinding cause sparks and flying metal. As welds cool, they can throw off slag.
- Wear approved safety glasses with side shields even under your welding helmet.



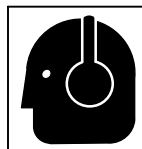
### BUILDUP OF GAS can injure or kill.

- Shut off compressed gas supply when not in use.
- Always ventilate confined spaces or use approved air-supplied respirator.



### ELECTRIC AND MAGNETIC FIELDS (EMF) can affect Implanted Medical Devices.

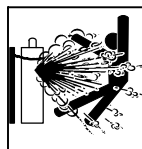
- Wearers of Pacemakers and other Implanted Medical Devices should keep away.
- Implanted Medical Device wearers should consult their doctor and the device manufacturer before going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations.



### NOISE can damage hearing.

Noise from some processes or equipment can damage hearing.

- Wear approved ear protection if noise level is high.



### CYLINDERS can explode if damaged.

Compressed gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Since gas cylinders are normally part of the welding process, be sure to treat them carefully.

- Protect compressed gas cylinders from excessive heat, mechanical shocks, physical damage, slag, open flames, sparks, and arcs.
- Install cylinders in an upright position by securing to a stationary support or cylinder rack to prevent falling or tipping.
- Keep cylinders away from any welding, cutting, or other electrical circuits.
- Never drape a welding or cutting torch over a gas cylinder.
- Never allow a welding electrode or cutting torch to touch any cylinder.
- Never weld on a pressurized cylinder – explosion will result.
- Use only correct compressed gas cylinders, regulators, hoses, and fittings designed for the specific application; maintain them and associated parts in good condition.
- Turn face away from valve outlet when opening cylinder valve.
- Keep protective cap in place over valve except when cylinder is in use or connected for use.
- Use the right equipment, correct procedures, and sufficient number of persons to lift and move cylinders.
- Read and follow instructions on compressed gas cylinders, associated equipment, and Compressed Gas Association (CGA) publication P-1 listed in Safety Standards.



## 1-4. Additional Symbols For Installation, Operation, And Maintenance



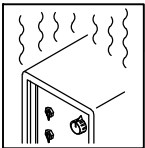
### FIRE OR EXPLOSION hazard.

- Do not install or place unit on, over, or near combustible surfaces.
- Do not install unit near flammables.
- Do not overload building wiring – be sure power supply system is properly sized, rated, and protected to handle this unit.



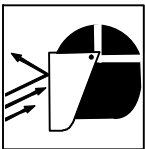
### FALLING EQUIPMENT can injure.

- Use lifting eye to lift unit only, NOT running gear, gas cylinders, or any other accessories.
- Use equipment of adequate capacity to lift and support unit.
- If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.
- Keep equipment (cables and cords) away from moving vehicles when working from an aerial location.
- Follow the guidelines in the Applications Manual for the Revised NIOSH Lifting Equation (Publication No. 94-110) when manually lifting heavy parts or equipment.



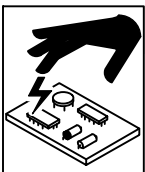
### OVERUSE can cause OVERHEATING

- Allow cooling period; follow rated duty cycle.
- Reduce current or reduce duty cycle before starting to weld again.
- Do not block or filter airflow to unit.



### FLYING SPARKS can injure.

- Wear a face shield to protect eyes and face.
- Shape tungsten electrode only on grinder with proper guards in a safe location wearing proper face, hand, and body protection.
- Sparks can cause fires — keep flammables away.



### STATIC (ESD) can damage PC boards.

- Put on grounded wrist strap BEFORE handling boards or parts.
- Use proper static-proof bags and boxes to store, move, or ship PC boards.



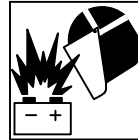
### MOVING PARTS can injure.

- Keep away from moving parts.
- Keep away from pinch points such as drive rolls.



### WELDING WIRE can injure.

- Do not press gun trigger until instructed to do so.
- Do not point gun toward any part of the body, other people, or any metal when threading welding wire.



### BATTERY EXPLOSION can injure.

- Do not use welder to charge batteries or jump start vehicles unless the unit has a battery charging feature designed for this purpose.



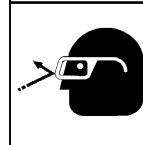
### MOVING PARTS can injure.

- Keep away from moving parts such as fans.
- Keep all doors, panels, covers, and guards closed and securely in place.
- Have only qualified persons remove doors, panels, covers, or guards for maintenance and troubleshooting as necessary.
- Reinstall doors, panels, covers, or guards when maintenance is finished and before reconnecting input power.



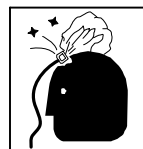
### COMPRESSED AIR can injure or kill.

- Before working on compressed air system, turn off and lockout/tagout unit, release pressure, and be sure air pressure cannot be accidentally applied.
- Relieve pressure before disconnecting or connecting air lines.
- Check compressed air system components and all connections and hoses for damage, leaks, and wear before operating unit.
- Do not direct air stream toward self or others.
- Wear protective equipment such as safety glasses, hearing protection, leather gloves, heavy shirt and trousers, high shoes, and a cap when working on compressed air system.
- Use soapy water or an ultrasonic detector to search for leaks—never use bare hands. Do not use equipment if leaks are found.
- Reinstall doors, panels, covers, or guards when servicing is finished and before starting unit.
- If ANY air is injected into the skin or body seek medical help immediately.



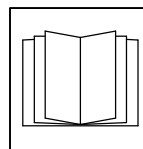
### BREATHING COMPRESSED AIR can injure or kill.

- Do not use compressed air for breathing.
- Use only for cutting, gouging, and tools.



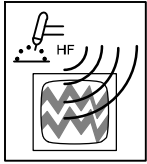
### TRAPPED AIR PRESSURE AND WHIPPING HOSES can injure.

- Release air pressure from tools and system before servicing, adding or changing attachments, or opening compressor oil drain or oil fill cap.



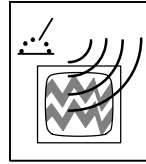
### READ INSTRUCTIONS.

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.
- Use only genuine replacement parts from the manufacturer.
- Perform maintenance and service according to the Owner's Manuals, industry standards, and national, state, and local codes.



### H.F. RADIATION can cause interference.

- High-frequency (H.F.) can interfere with radio navigation, safety services, computers, and communications equipment.
- Have only qualified persons familiar with electronic equipment perform this installation.
- The user is responsible for having a qualified electrician promptly correct any interference problem resulting from the installation.
- If notified by the FCC about interference, stop using the equipment at once.
- Have the installation regularly checked and maintained.
- Keep high-frequency source doors and panels tightly shut, keep spark gaps at correct setting, and use grounding and shielding to minimize the possibility of interference.



### ARC WELDING AND PLASMA CUTTING can cause interference.

- Electromagnetic energy can interfere with sensitive electronic equipment such as computers and computer-driven equipment such as robots.
- Be sure all equipment in the welding area is electromagnetically compatible.
- To reduce possible interference, keep cables as short as possible, close together, and down low, such as on the floor.
- Locate welding or cutting operation 100 meters from any sensitive electronic equipment.
- Be sure welding machine or plasma cutter is installed and grounded according to this manual.
- If interference still occurs, the user must take extra measures such as moving the welding or cutting machine, using shielded cables, using line filters, or shielding the work area.

## 1-5. California Proposition 65 Warnings

**Warning:** Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

**Warning:** This product contains chemicals, including lead, known to the state of California to cause cancer, birth defects, or other reproductive harm. *Wash hands after use.*

## 1-6. Principal Safety Standards

*Safety in Welding, Cutting, and Allied Processes*, ANSI Standard Z49.1, is available as a free download from the American Welding Society at <http://www.aws.org> or purchased from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*Safe Practices for the Preparation of Containers and Piping for Welding and Cutting*, American Welding Society Standard AWS F4.1, from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*Safe Practices for Welding and Cutting Containers that have Held Combustibles*, American Welding Society Standard AWS A6.0, from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*National Electrical Code*, NFPA Standard 70, from National Fire Protection Association, Quincy, MA 02269 (phone: 1-800-344-3555, website: [www.nfpa.org](http://www.nfpa.org) and [www.sparky.org](http://www.sparky.org)).

*Safe Handling of Compressed Gases in Cylinders*, CGA Pamphlet P-1, from Compressed Gas Association, 14501 George Carter Way, Suite 103, Chantilly, VA 20151 (phone: 703-788-2700, website: [www.cganet.com](http://www.cganet.com)).

*Safety in Welding, Cutting, and Allied Processes*, CSA Standard W117.2, from Canadian Standards Association, Standards Sales, 5060

Spectrum Way, Suite 100, Ontario, Canada L4W 5NS (phone: 800-463-6727, website: [www.csa-international.org](http://www.csa-international.org)).

*Safe Practice For Occupational And Educational Eye And Face Protection*, ANSI Standard Z87.1, from American National Standards Institute, 25 West 43rd Street, New York, NY 10036 (phone: 212-642-4900, website: [www.ansi.org](http://www.ansi.org)).

*Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, NFPA Standard 51B, from National Fire Protection Association, Quincy, MA 02269 (phone: 1-800-344-3555, website: [www.nfpa.org](http://www.nfpa.org)).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910, Subpart Q, and Part 1926, Subpart J, from U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 (phone: 1-866-512-1800) (there are 10 OSHA Regional Offices—phone for Region 5, Chicago, is 312-353-2220, website: [www.osha.gov](http://www.osha.gov)).

*Applications Manual for the Revised NIOSH Lifting Equation*, The National Institute for Occupational Safety and Health (NIOSH), 1600 Clifton Rd, Atlanta, GA 30333 (phone: 1-800-232-4636, website: [www.cdc.gov/NIOSH](http://www.cdc.gov/NIOSH)).

## 1-7. EMF Information

Electric current flowing through any conductor causes localized electric and magnetic fields (EMF). Welding current creates an EMF field around the welding circuit and welding equipment. EMF fields may interfere with some medical implants, e.g. pacemakers. Protective measures for persons wearing medical implants have to be taken. For example, restrict access for passers—by or conduct individual risk assessment for welders. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

- Keep cables close together by twisting or taping them, or using a cable cover.
- Do not place your body between welding cables. Arrange cables to one side and away from the operator.
- Do not coil or drape cables around your body.

- Keep head and trunk as far away from the equipment in the welding circuit as possible.
- Connect work clamp to workpiece as close to the weld as possible.
- Do not work next to, sit or lean on the welding power source.
- Do not weld whilst carrying the welding power source or wire feeder.

### About Implanted Medical Devices:

Implanted Medical Device wearers should consult their doctor and the device manufacturer before performing or going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations. If cleared by your doctor, then following the above procedures is recommended.

# SECTION 2 – MESURES DE SÉCURITÉ – EXTRACTION DES FUMÉES – À LIRE AVANT UTILISATION

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**!** Se protéger et protéger les autres contre le risque de blessure — lisez, appliquez et rangez en lieu sûr ces consignes importantes de sécurité et d'utilisation.

## 2-1. Symboles utilisés



**DANGER!** – Indique une situation dangereuse qui si on l'évite pas peut donner la mort ou des blessures graves. Les dangers possibles sont montrés par les symboles joints ou sont expliqués dans le texte.



Indique une situation dangereuse qui si on l'évite pas peut donner la mort ou des blessures graves. Les dangers possibles sont montrés par les symboles joints ou sont expliqués dans le texte.

**NOTE** – Indique des déclarations pas en relation avec des blessures personnelles.

 Indique des instructions spécifiques.



Ce groupe de symboles veut dire Avertissement! Attention! DANGER DE CHOC ÉLECTRIQUE, PIÈCES EN MOUVEMENT, et PIÈCES CHAUDES. Consulter les symboles et les instructions ci-dessous y afférant pour les actions nécessaires afin d'éviter le danger.

## 2-2. Dangers en matière d'extraction des fumées



Les symboles représentés ci-dessous sont utilisés dans ce manuel pour attirer l'attention et identifier les dangers possibles. En présence de l'un de ces symboles, prendre garde et suivre les instructions afférentes pour éviter tout risque. Les instructions en matière de sécurité indiquées ci-dessous ne constituent qu'un sommaire des instructions de sécurité plus complètes fournies dans les normes de sécurité énumérées dans la Section 2-6.. Lire et observer toutes les normes de sécurité.



Seul un personnel qualifié est autorisé à installer, faire fonctionner, entretenir et réparer cet appareil.



Pendant le fonctionnement, maintenir à distance toutes les personnes, notamment les enfants de l'appareil.



**LA MAUVAISE UTILISATION DES EXTRACTEURS DE FUMÉES peut comporter des dangers.**

Le soudage produit des vapeurs et des fumées qu'il est dangereux de respirer. Les matériaux combustibles peuvent s'enflammer et causer un incendie ou une explosion.

- Lire et observer minutieusement les présentes instructions et les étiquettes de sécurité. L'extracteur de fumées aide à protéger l'utilisateur contre les aérocontaminants, mais on doit l'utiliser correctement pour bénéficier de son efficacité. Confiez la vérification de la qualité de l'air dans votre établissement à un hygiéniste industriel pour confirmer que l'extracteur de fumées procure une protection adéquate contre les aérocontaminants présents dans le milieu de travail. Si vous avez des questions au sujet de l'extracteur, consultez l'étiquette apposée sur l'appareil, votre directeur de la sécurité ou un hygiéniste industriel certifié.
- Suivre toutes les directives ANSI, OSHA, CSA, UL et autres portant sur l'utilisation des extracteurs de fumées et la recirculation de l'air filtré.
- Certaines sections de l'équipement de captage de fumées, notamment les chambres d'air propre et sale, peuvent être considérées des espaces confinés aux termes d'OSHA. Consulter le règlement OSHA pertinent afin de déterminer si l'installation est un espace confiné qui nécessite l'obtention d'un permis.
- Ne pas utiliser un extracteur de fumées sans pare-étincelles approuvé et correctement installé, à moins que l'appareil soit conçu pour fonctionner sans pare-étincelles. Sans le pare-étincelles, les étincelles de soudage peuvent enflammer un filtre non ignifuge ou des vapeurs déposées sur le filtre, ou endommager celui-ci et générer la pénétration d'air non filtré dans la zone de respiration. Ne pas laisser des étincelles ou des matériaux qui se consomment pénétrer dans le capot ou le conduit de l'extracteur de fumées.
- Utiliser l'extracteur de fumées uniquement pour extraire les fumées de soudage. Ne pas l'employer pour extraire des gaz chauds (à plus de 140° F/60° C), des poussières de bois ou de ciment, des gaz d'échappement de moteur, des vapeurs de liquides, des matières explosives, des émanations agressives (acides), de la fumée produite par des objets qui se consomment ou encore des fumées provenant d'opérations de nettoyage, de découpage, de gougeage, de meulage, de peinture, de projection à la flamme, de sablage ou d'activités autres que le soudage. Ne pas installer ou utiliser un extracteur de fumées aux endroits où des matériaux combustibles peuvent être présents.
- Les vapeurs générées par des opérations de soudage peuvent être inflammables. Ne pas installer ou utiliser un extracteur de vapeurs en présence possible de vapeurs de soudage inflammables sauf si un système de protection contre l'incendie et/ou l'explosion est prévu et a été choisi et approuvé par une personne qualifiée bien informée des codes et des systèmes contre l'incendie et/ou l'explosion applicables.
- Utiliser l'extracteur de fumées seulement dans des atmosphères pour lesquelles il est recommandé. Ne pas utiliser l'extracteur dans des endroits où la concentration de contaminants est inconnue, représente un danger immédiat pour la vie ou dépasse la capacité nominale de l'extracteur.
- Ne pas souder sans être sûr que l'extracteur de fumées est bien assemblé et qu'il fonctionne correctement.
- Avant chaque utilisation, inspecter l'extracteur et vérifier qu'il fonctionne correctement.
- Les contaminants dangereux peuvent être inodores et incolores. Quitter immédiatement l'aire de travail en présence des situations suivantes:
  - h La respiration devient difficile.
  - i Apparition d'étourdissements, de problèmes de vision ou irritation des yeux, du nez ou de la bouche.
  - j L'équipement est endommagé.
  - k La circulation d'air subit une baisse ou s'arrête.
  - l Si vous croyez que l'équipement ne procure pas une protection adéquate.
- Ne pas réparer, modifier ou démonter l'extracteur de fumées ou l'utiliser avec des pièces ou accessoires non fournis par le fabricant. Utiliser uniquement des composants approuvés par le fabricant.
- Remplacer le filtre s'il est endommagé ou bloqué. Ne pas le laver, le réutiliser ou le nettoyer en le secouant ou avec de l'air comprimé, à moins que le fabricant le recommande expressément dans le mode d'emploi (l'élément filtrant pourrait s'endommager). Ne pas respirer la poussière recueillie par l'extracteur de fumées. Porter du matériel de sécurité approuvé (appareil respiratoire, gants, chemise à manches longues) pour faire l'entretien du filtre. Éliminer l'élément filtrant ainsi que les poussières recueillies en conformité avec toutes les lois et tous les règlements applicables.

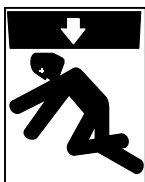
- Lire et comprendre les instructions des fiches signalétiques et du fabricant concernant les métaux, les consommables, les revêtements, les nettoyeurs et les dégraisseurs.
- L'extracteur de fumées doit être utilisé avec le bras d'extraction, les tuyaux, le filtre et les autres composants recommandés par le fabricant.



### UNE DÉCHARGE ÉLECTRIQUE peut entraîner la mort.

Le contact d'organes électriques sous tension peut provoquer des accidents mortels ou des brûlures graves. Le circuit d'alimentation et les circuits internes de la machine sont également sous tension lorsque l'alimentation est sur Marche. Un équipement installé ou mis à la terre de manière incorrecte ou impropre constitue un danger.

- Ne pas toucher aux pièces électriques sous tension.
- Couper l'alimentation ou arrêter le moteur avant de procéder à l'installation, à la réparation ou à l'entretien de l'appareil. Déverrouiller l'alimentation selon la norme OSHA 29 CFR 1910.147 (voir normes de sécurité).
- Installer le poste correctement et le mettre à la terre convenablement selon les consignes du manuel de l'opérateur et les normes nationales, provinciales et locales.
- Toujours vérifier la terre du cordon d'alimentation. Vérifier et s'assurer que le fil de terre du cordon d'alimentation est bien raccordé à la borne de terre du sectionneur ou que la fiche du cordon est raccordée à une prise correctement mise à la terre.



### LA CHUTE DE L'ÉQUIPEMENT peut provoquer des blessures.

- Utiliser un équipement de levage de capacité suffisante pour lever l'appareil.
- En utilisant des fourches de levage pour déplacer l'unité, s'assurer que les fourches sont suffisamment longues pour dépasser du côté opposé de l'appareil.

- Tenir l'équipement (câbles et cordons) à distance des véhicules mobiles lors de toute opération en hauteur.
- Suivre les consignes du Manuel des applications pour l'équation de levage NIOSH révisée (Publication N°94-110) lors du levage manuel de pièces ou équipements lourds.



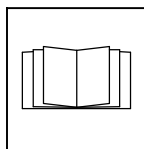
### Les PIÈCES MOBILES peuvent causer des blessures.

- S'abstenir de toucher des organes mobiles tels que des ventilateurs.
- Maintenir fermés et verrouillés les portes, panneaux, recouvrements et dispositifs de protection.
- Lorsque cela est nécessaire pour des travaux d'entretien et de dépannage, faire retirer les portes, panneaux, recouvrements ou dispositifs de protection uniquement par du personnel qualifié.
- Remettre les portes, panneaux, recouvrements ou dispositifs de protection quand l'entretien est terminé et avant de rebrancher l'alimentation électrique.



### Risque D'INCENDIE OU D'EXPLOSION.

- Ne pas placer l'appareil sur, au-dessus ou à proximité de surfaces inflammables.
- Ne pas installer l'appareil à proximité de produits inflammables.
- Ne pas surcharger l'installation électrique – s'assurer que l'alimentation est correctement dimensionnée et protégée avant de mettre l'appareil en service.



### LIRE LES INSTRUCTIONS.

- Lire et appliquer les instructions sur les étiquettes et le Mode d'emploi avant l'installation, l'utilisation ou l'entretien de l'appareil. Lire les informations de sécurité au début du manuel et dans chaque section.
- N'utiliser que les pièces de rechange recommandées par le constructeur.

## 2-3. Dangers du soudage à l'arc et du coupage au plasma



### UNE DÉCHARGE ÉLECTRIQUE peut entraîner la mort.

Le contact d'organes électriques sous tension peut provoquer des accidents mortels ou des brûlures graves. Le circuit de l'électrode et de la pièce est sous tension lorsque le courant est délivré à la sortie. Le circuit d'alimentation et les circuits internes de la machine sont également sous tension lorsque l'alimentation est sur Marche. Dans le mode de soudage avec du fil, le fil, le dérouleur, le bloc de commande du rouleau et toutes les parties métalliques en contact avec le fil sont sous tension électrique. Un équipement installé ou mis à la terre de manière incorrecte ou impropre constitue un danger.

- Ne pas toucher aux pièces électriques sous tension.
- Porter des gants isolants et des vêtements de protection secs et sans trous.
- S'isoler de la pièce à couper et du sol en utilisant des housses ou des tapis assez grands afin d'éviter tout contact physique avec la pièce à couper ou le sol.
- Ne pas se servir de source électrique à courant électrique dans les zones humides, dans les endroits confinés ou là où on risque de tomber.
- Utilisez une source de soudage AC UNIQUEMENT si le procédé de soudage et de coupage le demande.
- Si l'utilisation d'une source électrique à courant électrique s'avère nécessaire, se servir de la fonction de télécommande si l'appareil en est équipé.
- D'autres consignes de sécurité sont nécessaires dans les conditions suivantes : risques électriques dans un environnement

humide ou si l'on porte des vêtements mouillés ; sur des structures métalliques telles que sols, grilles ou échafaudages ; en position coincée comme assise, à genoux ou couchée ; ou s'il y a un risque élevé de contact inévitable ou accidentel avec la pièce à souder ou le sol. Dans ces conditions, utiliser les équipements suivants, dans l'ordre indiqué : 1) un poste à souder DC à tension constante (à fil), 2) un poste à souder DC manuel (électrode) ou 3) un poste à souder AC à tension à vide réduite. Dans la plupart des situations, l'utilisation d'un poste à souder DC à fil à tension constante est recommandée. En outre, ne pas travailler seul !

- Couper l'alimentation ou arrêter le moteur avant de procéder à l'installation, à la réparation ou à l'entretien de l'appareil. Déverrouiller l'alimentation selon la norme OSHA 29 CFR 1910.147 (voir normes de sécurité).
- Installer le poste correctement et le mettre à la terre convenablement selon les consignes du manuel de l'opérateur et les normes nationales, provinciales et locales.
- Toujours vérifier la terre du cordon d'alimentation. Vérifier et s'assurer que le fil de terre du cordon d'alimentation est bien raccordé à la borne de terre du sectionneur ou que la fiche du cordon est raccordée à une prise correctement mise à la terre.
- En effectuant les raccordements d'entrée, fixer d'abord le conducteur de mise à la terre approprié et contre-vérifier les connexions.
- Les câbles doivent être exempts d'humidité, d'huile et de graisse ; protégez-les contre les étincelles et les pièces métalliques chaudes.
- Vérifier fréquemment le cordon d'alimentation afin de s'assurer qu'il n'est pas altéré ou à nu, le remplacer immédiatement s'il l'est. Un fil à nu peut entraîner la mort.
- L'équipement doit être hors tension lorsqu'il n'est pas utilisé.
- Ne pas utiliser des câbles usés, endommagés, de grosseur insuffisante ou mal épissés.

- Ne pas enrouler les câbles autour du corps.
- Si la pièce soudée doit être mise à la terre, le faire directement avec un câble distinct.
- Ne pas toucher l'électrode quand on est en contact avec la pièce, la terre ou une électrode provenant d'une autre machine.
- Ne pas toucher des porte électrodes connectés à deux machines en même temps à cause de la présence d'une tension à vide doublée.
- N'utiliser qu'un matériel en bon état. Réparer ou remplacer sur-le-champ les pièces endommagées. Entretenir l'appareil conformément à ce manuel.
- Porter un hamais de sécurité si l'on doit travailler au-dessus du sol.
- S'assurer que tous les panneaux et couvercles sont correctement en place.
- Fixer le câble de retour de façon à obtenir un bon contact métal-métal avec la pièce à souder ou la table de travail, le plus près possible de la soudure.
- Isoler la pince de masse quand pas mis à la pièce pour éviter le contact avec tout objet métallique.
- Ne pas raccorder plus d'une électrode ou plus d'un câble de masse à une même borne de sortie de soudage. Débranchez le câble pour procédé non utilisé.

### Il reste une TENSION DC NON NÉGLIGEABLE dans les sources de soudage onduleur UNE FOIS l'alimentation coupée.

- Arrêter les convertisseurs, débrancher le courant électrique et décharger les condensateurs d'alimentation selon les instructions indiquées dans la partie Entretien avant de toucher les pièces.



#### LES PIÈCES CHAUDES peuvent provoquer des brûlures.

- Ne pas toucher à mains nues les parties chaudes.
- Prévoir une période de refroidissement avant de travailler à l'équipement.
- Ne pas toucher aux pièces chaudes, utiliser les outils recommandés et porter des gants de soudage et des vêtements épais pour éviter les brûlures.



#### LES FUMÉES ET LES GAZ peuvent être dangereux.

Le soudage et le coupage produisent des vapeurs et des gaz. Leur inhalation peut être dangereuse pour votre santé.

- Eloigner votre tête des fumées. Ne pas respirer les fumées.
- A l'intérieur, ventiler la pièce ou ayez recours à une ventilation aspirante installée près de l'arc pour évacuer les vapeurs et les gaz.
- Si la ventilation est médiocre, porter un respirateur anti-vapeurs approuvé.
- Lire et comprendre les spécifications de sécurité des matériaux (MSDS) et les instructions du fabricant concernant les métaux, les consommables, les revêtements, les nettoyants et les dégraissants.
- Travailler dans un espace fermé seulement s'il est bien ventilé ou en portant un respirateur à alimentation d'air. Prévoyez toujours un surveillant formé à proximité. Les vapeurs de soudage et de coupage peuvent déplacer de l'air et abaisser le niveau d'oxygène, cause de lésion ou de mort. Assurez-vous de la qualité de l'air que vous respirez.
- Ne soudez pas ou ne coupez pas près de zones où sont effectuées des opérations de dégraissage, nettoyage ou pulvérisation. La chaleur et les rayons de l'arc peuvent réagir en présence de vapeurs et former des gaz hautement toxiques et irritants.
- Ne soudez pas ou ne coupez pas des métaux enrobés tels que des métaux galvanisés, contenant du plomb ou de l'acier plaqué au cadmium, à moins que l'enrobage ne soit ôté de la surface de soudage, que l'endroit où vous travaillez ne soit bien ventilé, ou, si nécessaire, que vous ne portiez un respirateur alimenté en air. Les enrobages ou tous métaux contenant ces éléments peuvent créer des vapeurs toxiques s'ils sont soudés ou coupés.



#### LES RAYONS DE L'ARC peuvent provoquer des brûlures dans les yeux et sur la peau.

Les rayons d'arc issus des procédés de soudage et de coupage produisent des rayons visibles et invisibles intenses (ultraviolets et infrarouges) qui peuvent entraîner des brûlures aux yeux et à la peau. Des étincelles jaillissent de la soudure.

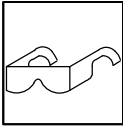
- Portez un casque de soudage approuvé muni de verres filtrants appropriés pour protéger visage et yeux contre les rayons et les étincelles d'arc pendant le soudage, le coupage ou la surveillance (voir ANSI Z49.1 et Z87.1 énuméré dans les Normes de Sécurité).
- Porter des lunettes de sécurité avec écrans latéraux même sous votre casque.
- Avoir recours à des écrans protecteurs ou à des rideaux pour protéger les autres contre les rayonnements les éblouissements et les étincelles ; prévenir toute personne sur les lieux de ne pas regarder l'arc.
- Porter des vêtements confectionnés avec des matières résistantes et ignifuges (cuir, coton lourd ou laine) et des bottes de protection.



#### Le SOUDAGE ET le COUPAGE présentent un risque d'incendie ou d'explosion.

Le soudage ou le coupage effectué sur des contenants fermés, tels que réservoirs, tambours ou conduites, peut causer leur explosion. Des étincelles peuvent être projetées de l'arc de soudure. La projection d'étincelles, des pièces chaudes et des équipements chauds peut provoquer des incendies et des brûlures. Le contact accidentel de l'électrode avec des objets métalliques peut provoquer des étincelles, une explosion, un surchauffement ou un incendie. Avant de commencer le soudage, vérifier et s'assurer que l'endroit ne présente pas de danger.

- Ecartez tout produit inflammable situé à moins de 35 pieds (10,7 m) de l'arc de soudage ou de coupage. En cas d'impossibilité les recouvrir soigneusement avec des protections homologués.
- Ne soudez pas ou ne coupez pas dans un endroit où des étincelles pourraient atteindre des matières inflammables.
- Se protéger et d'autres personnes de la projection d'étincelles et de métal chaud.
- Assurez-vous qu'aucune étincelle ni matière chaude provenant du soudage ou du coupage ne peut se glisser dans de petites fissures ou tomber dans d'autres pièces contiguës.
- Surveiller tout déclenchement d'incendie et tenir un extincteur à proximité.
- Si vous soudez ou coupez sur un plafond, un plancher ou une cloison, soyez conscient que cela peut entraîner un incendie de l'autre côté.
- N'effectuez pas de soudage ou de coupage sur des contenants ayant stocké des combustibles ou sur des contenants fermés tels que des réservoirs, tambours, ou conduites, à moins qu'ils n'aient été préparés correctement conformément à AWS F4.1 et AWS A6.0 (voir les Normes de Sécurité).
- Ne soudez pas ou ne coupez pas si l'air ambiant est chargé de particules, gaz, ou vapeurs inflammables (vapeur d'essence, par exemple).
- Fixez le câble de masse sur la pièce à couper, le plus près possible de la zone à souder ou à couper afin d'éviter que le courant de soudage ou de coupage ne prenne une trajectoire inconnue ou longue et ne cause ainsi une décharge électrique ou un incendie.
- Ne pas utiliser le poste de soudage pour dégeler des conduites gelées.
- En cas de non utilisation, enlever la baguette d'électrode du porte-électrode ou couper le fil à la pointe de contact.
- Porter des vêtements de protection dépourvus d'huile tels que des gants en cuir, une chemise en matériau lourd, des pantalons sans revers, des chaussures hautes et un couvre chef.
- Avant de souder, retirer toute substance combustible de vos poches telles qu'un allumeur au butane ou des allumettes.
- Une fois le travail achevé, assurez-vous qu'il ne reste aucune trace d'étincelles incandescentes ni de flammes.
- Utiliser exclusivement des fusibles ou coupe-circuits appropriés. Ne pas augmenter leur puissance; ne pas les ponter.
- Suivre les recommandations dans OSHA 1910.252(a)(2)(iv) et NFPA 51B pour les travaux à chaud et avoir de la surveillance et un extincteur à proximité.



### DES PIÈCES DE MÉTAL ou DES SALETES peuvent provoquer des blessures dans les yeux.

- Welding, cutting, chipping, wire brushing, and grinding cause sparks and flying metal. Pendant la période de refroidissement des soudures, elles risquent de projeter du laitier.
- Porter des lunettes de sécurité avec écrans latéraux ou un écran facial.



### LES ACCUMULATIONS DE GAZ risquent de provoquer des blessures ou même la mort.

- Fermer l'alimentation du gaz comprimé en cas de non utilisation.
- Veiller toujours à bien aérer les espaces confinés ou se servir d'un respirateur d'adduction d'air homologué.



### Les CHAMPS ÉLECTROMAGNÉTIQUES (CEM) peuvent affecter les implants médicaux.

- Les porteurs de stimulateurs cardiaques et autres implants médicaux doivent rester à distance.
- Les porteurs d'implants médicaux doivent consulter leur médecin et le fabricant du dispositif avant de s'approcher de la zone où se déroule du soudage à l'arc, du soudage par points, du gougeage, de la découpe plasma ou une opération de chauffage par induction.



### LE BRUIT peut endommager l'ouïe.

Le bruit des processus et des équipements peut affecter l'ouïe.

- Porter des protections approuvées pour les oreilles si le niveau sonore est trop élevé.

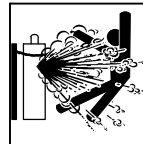


### LES BOUTEILLES peuvent exploser si elles sont endommagées.

Les bouteilles de gaz comprimé contiennent du gaz sous haute pression. Si une bouteille est endommagée, elle peut exploser. Du fait que les bouteilles de gaz font normalement partie du procédé de soudage, les manipuler avec précaution.

- Protéger les bouteilles de gaz comprimé d'une chaleur excessive, des chocs mécaniques, des dommages physiques, du laitier, des flammes ouvertes, des étincelles et des arcs.
- Placer les bouteilles debout en les fixant dans un support stationnaire ou dans un porte-bouteilles pour les empêcher de tomber ou de se renverser.
- Tenir les bouteilles éloignées des circuits de soudage ou autres circuits électriques.

- Ne jamais placer une torche de soudage sur une bouteille à gaz.
- Une électrode de soudage ne doit jamais entrer en contact avec une bouteille.
- Ne jamais souder une bouteille pressurisée – risque d'explosion.
- Utiliser seulement des bouteilles de gaz comprimé, régulateurs, tuyaux et raccords convenables pour cette application spécifique; les maintenir ainsi que les éléments associés en bon état.
- Détourner votre visage du détendeur-régulateur lorsque vous ouvrez la soupape de la bouteille.
- Le couvercle du détendeur doit toujours être en place, sauf lorsque la bouteille est utilisée ou qu'elle est reliée pour usage ultérieur.
- Utiliser les équipements corrects, les bonnes procédures et suffisamment de personnes pour soulever et déplacer les bouteilles.
- Lire et suivre les instructions sur les bouteilles de gaz comprimé, l'équipement connexe et le dépliant P-1 de la CGA (Compressed Gas Association) mentionné dans les principales normes de sécurité.



### LES BOUTEILLES peuvent exploser si elles sont endommagées.

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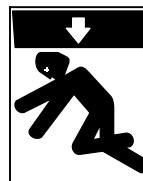
- Protéger les bouteilles de gaz comprimé d'une chaleur excessive, des chocs mécaniques, des dommages physiques, du laitier, des flammes ouvertes, des étincelles et des arcs.
- Placer les bouteilles debout en les fixant dans un support stationnaire ou dans un porte-bouteilles pour les empêcher de tomber ou de se renverser.
- Les bouteilles ne doivent pas être près de la zone de soudage ou de coupage ni de tout autre circuit électrique.
- Ne placez jamais une torche de soudage ou de coupage sur une bouteille de gaz.
- Ne laissez jamais une électrode de soudage ou une torche de coupage en contact avec une bouteille.
- Ne jamais souder une bouteille pressurisée – risque d'explosion.
- Utiliser seulement des bouteilles de gaz comprimé, régulateurs, tuyaux et raccords convenables pour cette application spécifique; les maintenir ainsi que les éléments associés en bon état.
- Détourner votre visage du détendeur-régulateur lorsque vous ouvrez la soupape de la bouteille.
- Le couvercle du détendeur doit toujours être en place, sauf lorsque la bouteille est utilisée ou qu'elle est reliée pour usage ultérieur.
- Utiliser les équipements corrects, les bonnes procédures et suffisamment de personnes pour soulever et déplacer les bouteilles.
- Lire et suivre les instructions sur les bouteilles de gaz comprimé, l'équipement connexe et le dépliant P-1 de la CGA (Compressed Gas Association) mentionné dans les principales normes de sécurité.

## 2-4. Dangers supplémentaires en relation avec l'installation, le fonctionnement et la maintenance



### Risque D'INCENDIE OU D'EXPLOSION.

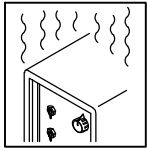
- Ne pas placer l'appareil sur, au-dessus ou à proximité de surfaces inflammables.
- Ne pas installer l'appareil à proximité de produits inflammables.
- Ne pas surcharger l'installation électrique – s'assurer que l'alimentation est correctement dimensionnée et protégée avant de mettre l'appareil en service.



### LA CHUTE DE L'ÉQUIPEMENT peut provoquer des blessures.

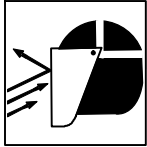
- Utiliser l'anneau de levage uniquement pour soulever l'appareil, NON PAS les chariots, les bouteilles de gaz ou tout autre accessoire.
- Utiliser un équipement de levage de capacité suffisante pour lever l'appareil.
- En utilisant des fourches de levage pour déplacer l'unité, s'assurer que les fourches sont suffisamment longues pour dépasser du côté opposé de l'appareil.

- Tenir l'équipement (câbles et cordons) à distance des véhicules mobiles lors de toute opération en hauteur.
- Suivre les consignes du Manuel des applications pour l'équation de levage NIOSH révisée (Publication N°94-110) lors du levage manuel de pièces ou équipements lourds.



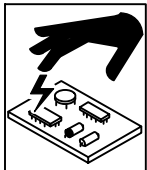
### L'EMPLOI EXCESSIF peut SURCHAUFFER L'ÉQUIPEMENT.

- Prévoir une période de refroidissement ; respecter le cycle opératoire nominal.
- Réduire le courant ou le facteur de marche avant de poursuivre le soudage.
- Ne pas obstruer les passages d'air du poste.



### LES ÉTINCELLES PROJETÉES peuvent provoquer des blessures.

- Porter un écran facial pour protéger le visage et les yeux.
- Affûter l'électrode au tungstène uniquement à la meuleuse dotée de protecteurs. Cette manœuvre est à exécuter dans un endroit sûr lorsque l'on porte l'équipement homologué de protection du visage, des mains et du corps.
- Les étincelles risquent de causer un incendie – éloigner toute substance inflammable.



### LES CHARGES ÉLECTROSTATIQUES peuvent endommager les circuits imprimés.

- Établir la connexion avec la barrette de terre avant de manipuler des cartes ou des pièces.
- Utiliser des pochettes et des boîtes antistatiques pour stocker, déplacer ou expédier des cartes de circuits imprimés.



### Les PIÈCES MOBILES peuvent causer des blessures.

- Ne pas s'approcher des organes mobiles.
- Ne pas s'approcher des points de coincement tels que des rouleaux de commande.



### LES FILS DE SOUDAGE peuvent provoquer des blessures.

- Ne pas appuyer sur la gâchette avant d'en avoir reçu l'instruction.
- Ne pas diriger le pistolet vers soi, d'autres personnes ou toute pièce mécanique en engageant le fil de soudage.



### L'EXPLOSION DE LA BATTERIE peut provoquer des blessures.

- N'utilisez pas l'appareil de soudage pour charger des batteries ou faire démarrer des véhicules à l'aide de câbles de démarrage, sauf si l'appareil dispose d'une fonctionnalité de charge de batterie destinée à cet usage.

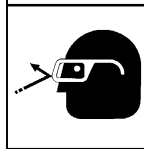


### Les PIÈCES MOBILES peuvent causer des blessures.

- S'abstenir de toucher des organes mobiles tels que des ventilateurs.
- Maintenir fermés et verrouillés les portes, panneaux, recouvrements et dispositifs de protection.
- Lorsque cela est nécessaire pour des travaux d'entretien et de dépannage, faire retirer les portes, panneaux, recouvrements ou dispositifs de protection uniquement par du personnel qualifié.
- Remettre les portes, panneaux, recouvrements ou dispositifs de protection quand l'entretien est terminé et avant de rebrancher l'alimentation électrique.

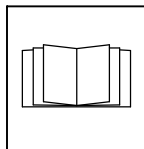


### L'AIR COMPRIMÉ risque de provoquer des blessures ou même la mort.



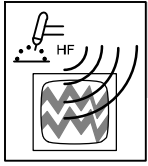
- Avant d'intervenir sur le circuit d'air comprimé, couper l'alimentation électrique, verrouiller et étiqueter l'appareil, détendre la pression et s'assurer que le circuit d'air ne peut être mis sous pression par inadvertance.
- Détendre la pression avant de débrancher ou de brancher des canalisations d'air.
- Avant d'utiliser l'appareil, contrôler les composants du circuit d'air comprimé, les branchements et les flexibles en recherchant tout signe de détérioration, de fuite et d'usure.

- Ne pas diriger un jet d'air vers soi-même ou vers autrui.
- Pour intervenir sur un circuit d'air comprimé, porter un équipement de protection tel que des lunettes de sécurité, des gants de cuir, une chemise et un pantalon en tissu résistant, des chaussures montantes et une coiffe.
- Pour rechercher des fuites, utiliser de l'eau savonneuse ou un détecteur à ultrasons, jamais les mains nues. En cas de détection de fuite, ne pas utiliser l'équipement.
- Remettre les portes, panneaux, recouvrements ou dispositifs de protection quand l'entretien est terminé et avant de mettre en marche l'appareil.
- En cas d'injection d'air dans la peau ou le corps, demander immédiatement une assistance médicale.
- Demander seulement à un personnel qualifié d'enlever les dispositifs de sécurité ou les recouvrements pour effectuer, s'il y a lieu, des travaux d'entretien et de dépannage.
- Remettre en place les portes, panneaux, recouvrements ou dispositifs de protection à la fin des travaux d'entretien et avant de mettre le moteur en marche.



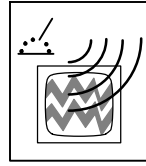
### LIRE LES INSTRUCTIONS.

- Lire et appliquer les instructions sur les étiquettes et le Mode d'emploi avant l'installation, l'utilisation ou l'entretien de l'appareil. Lire les informations de sécurité au début du manuel et dans chaque section.
- N'utiliser que les pièces de rechange recommandées par le constructeur.
- Effectuer l'entretien en respectant les manuels d'utilisation, les normes industrielles et les codes nationaux, d'état et locaux.



## LE RAYONNEMENT HAUTE FRÉQUENCE (H.F.) risque de provoquer des interférences.

- Le rayonnement haute fréquence (H.F.) peut provoquer des interférences avec les équipements de radio-navigation et de communication, les services de sécurité et les ordinateurs.
- Demander seulement à des personnes qualifiées familiarisées avec des équipements électroniques de faire fonctionner l'installation.
- L'utilisateur est tenu de faire corriger rapidement par un électricien qualifié les interférences résultant de l'installation.
- Si le FCC signale des interférences, arrêter immédiatement l'appareil.
- Effectuer régulièrement le contrôle et l'entretien de l'installation.
- Maintenir soigneusement fermés les portes et les panneaux des sources de haute fréquence, maintenir les éclateurs à une distance correcte et utiliser une terre et un blindage pour réduire les interférences éventuelles.



## LE SOUDAGE À L'ARC ET LE COUPAGE PLASMA risquent de provoquer des interférences.

- L'énergie électromagnétique peut gêner le fonctionnement d'appareils électroniques sensibles comme des ordinateurs et des équipements commandés par ordinateur, tels que des robots.
- Veillez à ce que tout l'équipement de la zone de soudage soit compatible au plan électromagnétique.
- Pour réduire la possibilité d'interférence, maintenez les câbles aussi courts que possible, groupez-les et posez-les aussi bas que possible (ex. par terre).
- Veillez à souder ou à couper à une distance de 100 mètres de tout équipement électronique sensible.
- Assurez-vous que le poste de soudage ou le découpeur plasma est branché et mis à la terre conformément au présent manuel.
- Si l'interférence persiste, l'utilisateur doit prendre des mesures supplémentaires comme écarter le poste de soudage ou le découpeur, en utilisant des câbles blindés, des filtres de ligne, ou en protégeant la zone de travail.

## 2-5. Proposition californienne 65 Avertissements

**⚠ Les équipements de soudage et de coupage produisent des fumées et des gaz qui contiennent des produits chimiques dont l'État de Californie reconnaît qu'ils provoquent des malformations congénitales et, dans certains cas, des cancers. (Code de santé et de sécurité de Californie, chapitre 25249.5 et suivants)**

**⚠ Ce produit contient des produits chimiques, notamment du plomb, dont l'État de Californie reconnaît qu'ils provoquent des cancers, des malformations congénitales ou d'autres problèmes de procréation. Se laver les mains après utilisation.**

## 2-6. Principales normes de sécurité

*Safety in Welding, Cutting, and Allied Processes*, ANSI Standard Z49.1, is available as a free download from the American Welding Society at <http://www.aws.org> or purchased from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*Safe Practices for the Preparation of Containers and Piping for Welding and Cutting*, American Welding Society Standard AWS F4.1, from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*Safe Practices for Welding and Cutting Containers that have Held Combustibles*, American Welding Society Standard AWS A6.0, from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*National Electrical Code*, NFPA Standard 70, from National Fire Protection Association, Quincy, MA 02269 (phone: 1-800-344-3555, website: [www.nfpa.org](http://www.nfpa.org) and [www.sparky.org](http://www.sparky.org)).

*Safe Handling of Compressed Gases in Cylinders*, CGA Pamphlet P-1, from Compressed Gas Association, 14501 George Carter Way, Suite 103, Chantilly, VA 20151 (phone: 703-788-2700, website: [www.cganet.com](http://www.cganet.com)).

*Safety in Welding, Cutting, and Allied Processes*, CSA Standard W117.2, from Canadian Standards Association, Standards Sales, 5060

Spectrum Way, Suite 100, Ontario, Canada L4W 5NS (phone: 800-463-6727, website: [www.csa-international.org](http://www.csa-international.org)).

*Safe Practice For Occupational And Educational Eye And Face Protection*, ANSI Standard Z87.1, from American National Standards Institute, 25 West 43rd Street, New York, NY 10036 (phone: 212-642-4900, website: [www.ansi.org](http://www.ansi.org)).

*Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, NFPA Standard 51B, from National Fire Protection Association, Quincy, MA 02269 (phone: 1-800-344-3555, website: [www.nfpa.org](http://www.nfpa.org)).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910, Subpart Q, and Part 1926, Subpart J, from U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 (phone: 1-866-512-1800) (there are 10 OSHA Regional Offices—phone for Region 5, Chicago, is 312-353-2220, website: [www.osha.gov](http://www.osha.gov)).

*Applications Manual for the Revised NIOSH Lifting Equation*, The National Institute for Occupational Safety and Health (NIOSH), 1600 Clifton Rd, Atlanta, GA 30333 (phone: 1-800-232-4636, website: [www.cdc.gov/NIOSH](http://www.cdc.gov/NIOSH)).

## 2-7. Informations relatives aux CEM

Le courant électrique qui traverse tout conducteur génère des champs électromagnétiques (CEM) à certains endroits. Le courant de soudage crée un CEM autour du circuit et du matériel de soudage. Les CEM peuvent créer des interférences avec certains implants médicaux comme des stimulateurs cardiaques. Pour les personnes portant des implants médicaux, il convient de prendre des mesures de protection en limitant par exemple tout accès aux passants ou procédant à une évaluation des risques individuels pour les soudeurs. Tous les soudeurs doivent appliquer les procédures suivantes pour minimiser l'exposition aux CEM provenant du circuit de soudage:

- Rassembler les câbles en les torsadant ou en les attachant avec du ruban adhésif ou avec une housse.
- Ne pas se tenir au milieu des câbles de soudage. Disposer les câbles d'un côté et à distance de l'opérateur.
- Ne pas courber et ne pas entourer les câbles autour de votre corps.

- Maintenir la tête et le torse aussi loin que possible du matériel du circuit de soudage.
- Connecter la pince sur la pièce aussi près que possible de la soudure.
- Ne pas travailler à proximité d'une source de soudage, ni s'asseoir ou se pencher dessus.
- Ne pas souder tout en portant la source de soudage ou le dévidoir.

### En ce qui concerne les implants médicaux :

Les porteurs d'implants doivent d'abord consulter leur médecin avant de s'approcher des opérations de soudage à l'arc, de soudage par points, de gougeage, du coupage plasma ou de chauffage par induction. Si le médecin approuve, il est recommandé de suivre les procédures précédentes.





# SECTION 4 – SPECIFICATIONS

## 4-1. Introduction

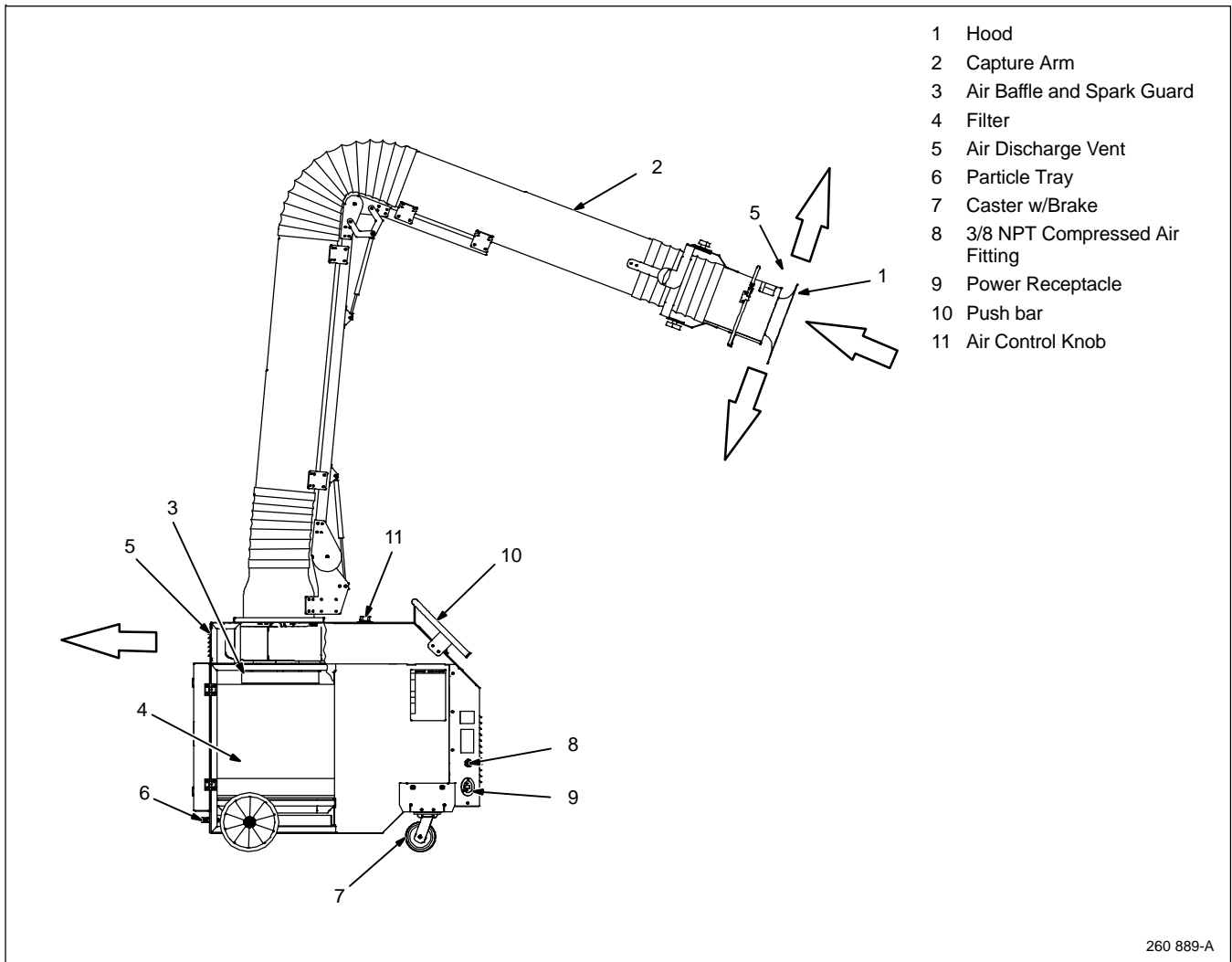
The Capture series of weld fume collectors incorporates a high-volume vacuum system that uses a high efficiency, nanofiber-media cartridge filter to collect airborne weld fume particles. Weld fumes are captured at the source by a unit-mounted extraction arm. The extraction arm uses gas-shock assisted friction joints and flexible tubing to ensure the hood is placed near the source of the fumes.

The weld fumes are first drawn through a mesh outlet screen (spark arrestor) which prevents large sparks from passing into the filter housing. The fumes then pass through the filter where particles are filtered from the air. Cleaned air flows through the center of the filter and into the blower housing. The blower housing discharges the clean air from the perimeter of the hood (to establish the fume capture zone) and from the back of the unit.

An adjustable air control knob allows the user to regulate the amount of clean air discharged from the perimeter of the hood to create the most effective fume extraction zone for the work environment.

The weld fume collector includes a semi-automatic filter cleaning system to remove particles from the filter. When the Cleaning Cycle button is pressed, compressed air removes particles from the filter. The particles then fall into a collection tray at the bottom of the unit.

The weld fume collector comes partially assembled and can be used with a 10 Ft. (3 m) or 12 ft. (3.7 m) extension extraction arm.



## 4-2. Serial Number And Rating Label Location

The serial number and rating information is located on the front of the unit. Use rating label to determine input power requirements and/or rated output. For future reference, write serial number in space provided on back cover of this manual.

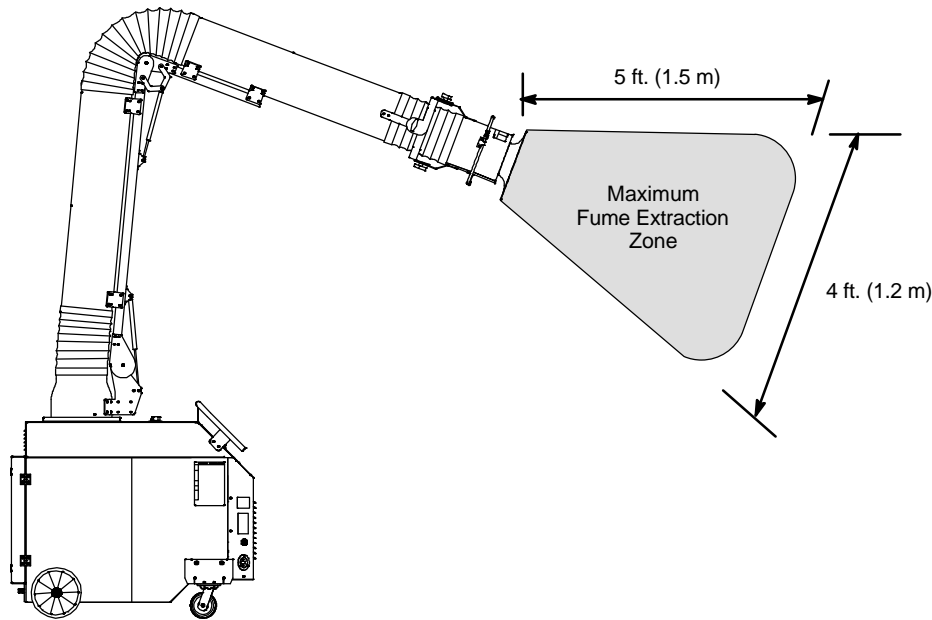
## 4-3. Fume Extractor Specifications

Input Power	Nominal Air Flow	Motor	Filter Area	Sound Level	Weight	Dimensions
460 Volts AC, 4.6 A	900 CFM (425 liter/sec)	5 HP (3.73 kW)	452 ft <sup>2</sup> (42 m <sup>2</sup> )	77 dBa AMCA Tested Sound Level At 5 ft (1.5 m)	610 lb (17.3 kg)	48 x 31 x 39 in. (102 x 79 x 99.1 cm)

#### 4-4. Extraction Arm Specifications


Model	Arm Reach	Arm Diameter
XD-10	10 ft (3 m)	10 in. (254 mm)
XD-12	12 ft (3.7 m)	10 in. (254 mm)

#### 4-5. Fume Capture Zone



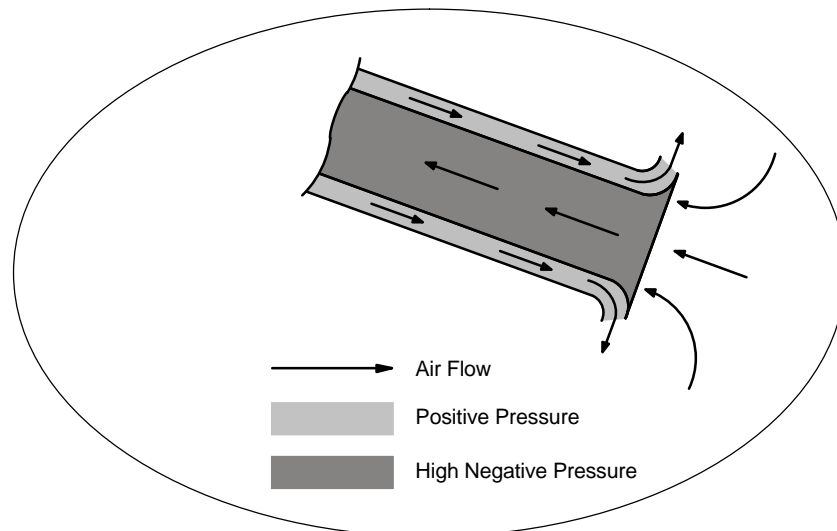
The fume capture zone represents the maximum size and shape of the fume withdrawal area in normal conditions (open room with no air movement) and with air control knob in max position.

The actual fume capture zone may be smaller than that shown.

 Improper placement of the extraction arm may affect shielding gas in the weld zone and negatively impact weld quality.

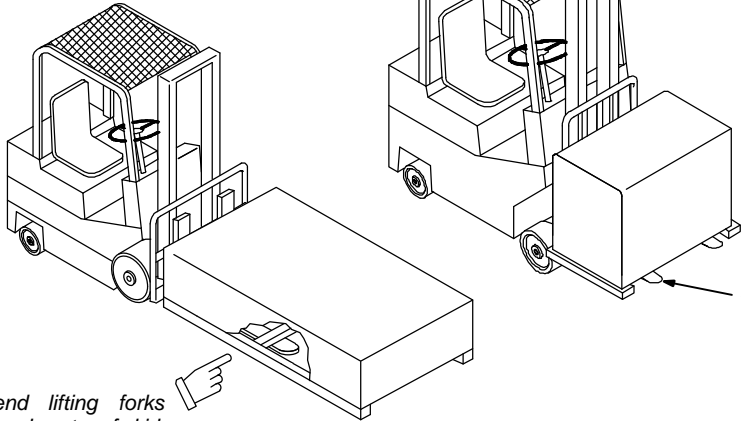
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#### Capture Zone Air Flow And Pressure Differential

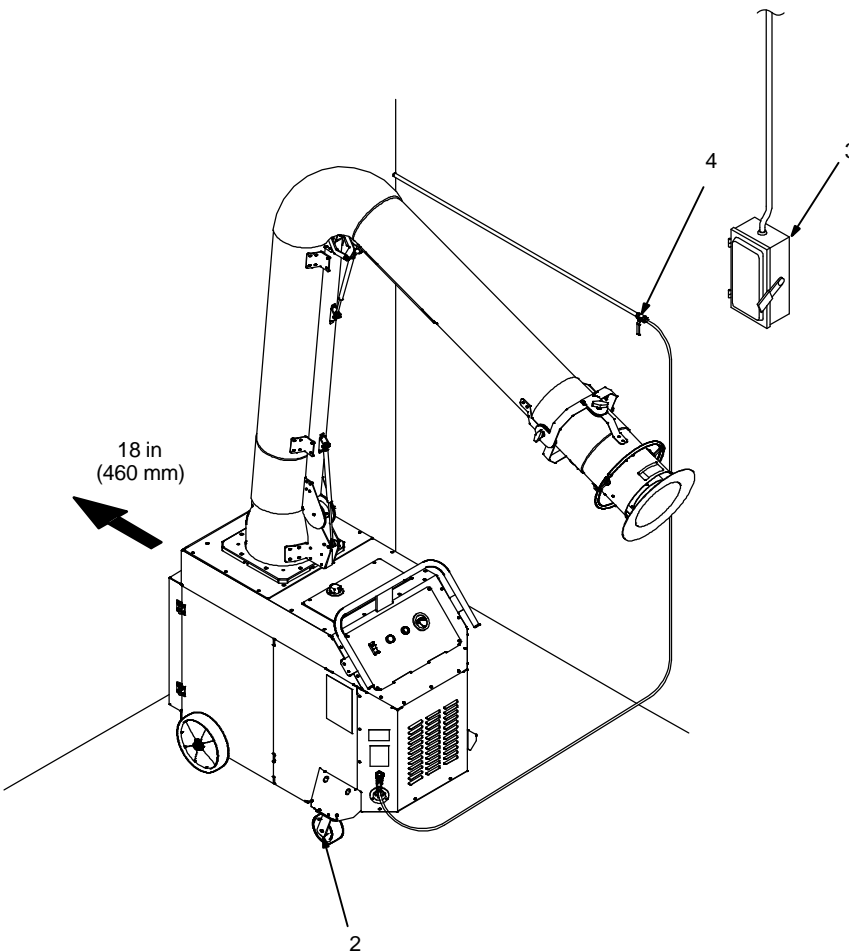


# SECTION 5 – INSTALLATION

## 5-1. Selecting A Location



Extend lifting forks beyond center of skid.



- Do not move or operate unit where it could tip.
- Do not use this equipment to support personnel, large tools, or other material.
- Special installation may be required where gasoline or volatile liquids are present – see NEC Article 511 or CEC Section 20.

Unit shown with extraction arm already installed.

- 1 Lifting Forks
- 2 Caster w/Brake
- 3 Three-Phase, 460 Volt AC Power Supply – Line Disconnect Device
- 4 Compressed Air Supply (80–100 psi/3.8–4.8 kPa)

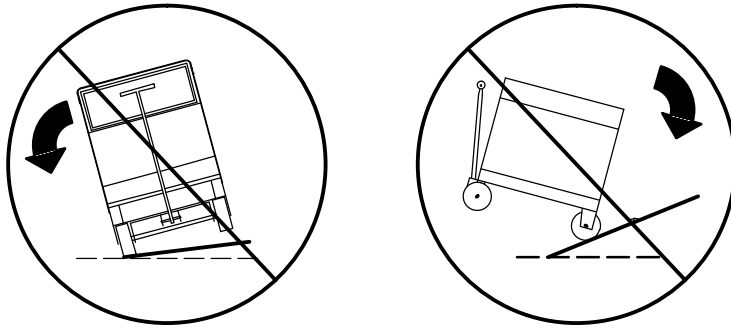
Use wheels or lifting forks to move unit.

If using lifting forks, extend forks beyond opposite side of small containers and beyond midpoint of large/long containers.

Position unit near the welding operation and close to compressed air supply and 460 volt AC input power supply. Keep unit away from obstructions that may restrict movement of the fume collector or extension arm.

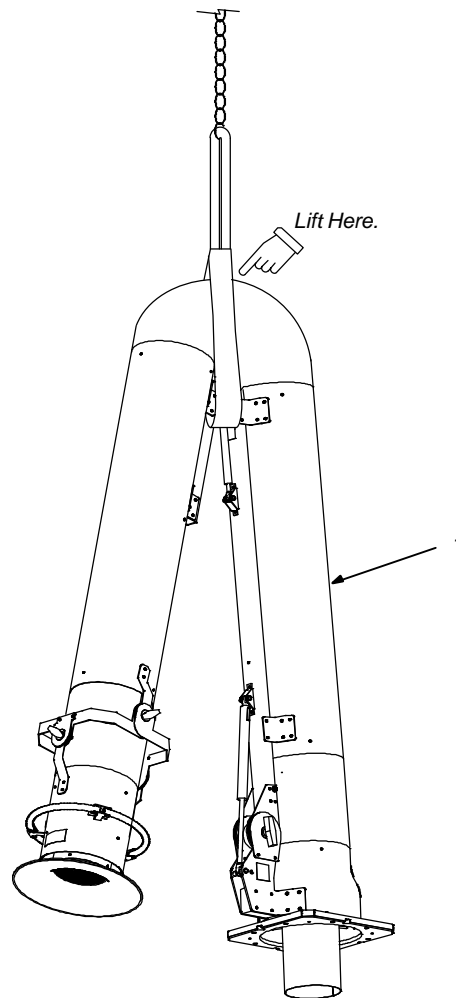
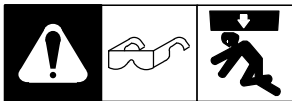
A three-phase, 460 volt AC individual branch circuit protected by time delay (type D) fuses or circuit breaker is required.

## 5-2. Tipping



- Do not move or operate unit where it could tip.
- Do not move unit with extraction arm extended or unit may tip.
- Do not move unit by pulling on extraction arm or equipment may tip. Use handle on fume extractor to move unit
- Do not use this equipment to support personnel, large tools, or other material.

## 5-3. Lifting Extraction Arm



- Use equipment of adequate capacity to lift and support unit.

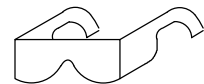
**NOTICE** – With extraction arm vertically aligned, carefully guide extraction arm tube into cart to avoid damaging gasket and other components.

Stabilize fume extractor by locking front wheels (casters).

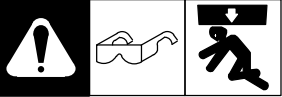
### 1 Extraction Arm Assembly

Position lifting device on extraction arm at location shown. Lift extraction arm onto cart. See Section 5-4.

Tools Needed:



## 5-4. Installing Extraction Arm Base Assembly



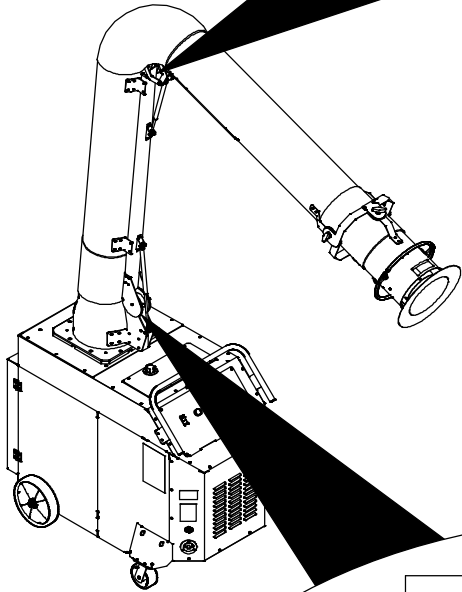
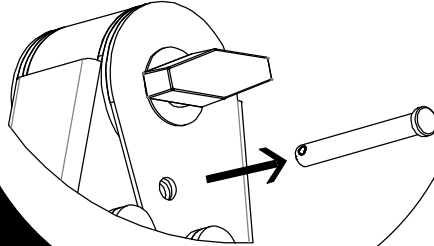
**⚠ Turn Off and disconnect input power.**

☞ Stabilize fume extractor by locking front wheels (casters).

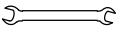
- 1 Base Assembly
- 2 3/8 in. Screw
- 3 3/8 in. Flat Washer

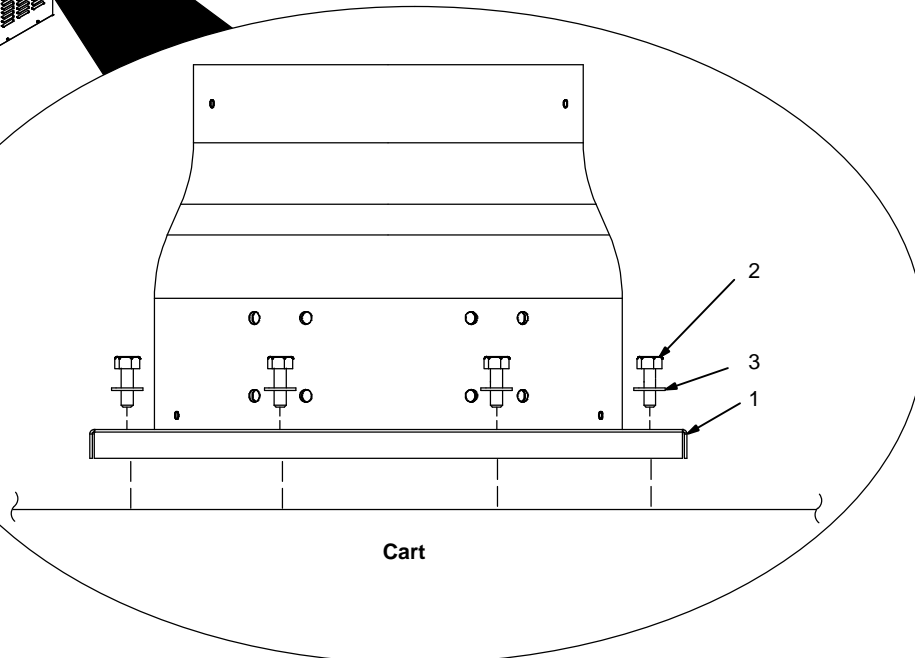
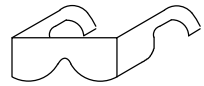
Place base assembly on cart. Secure base assembly with supplied hardware. Tighten hardware to 3.0 ft lb (4.0 N-m).

☞ After installing extraction arm on cart, remove pin so arm moves freely.



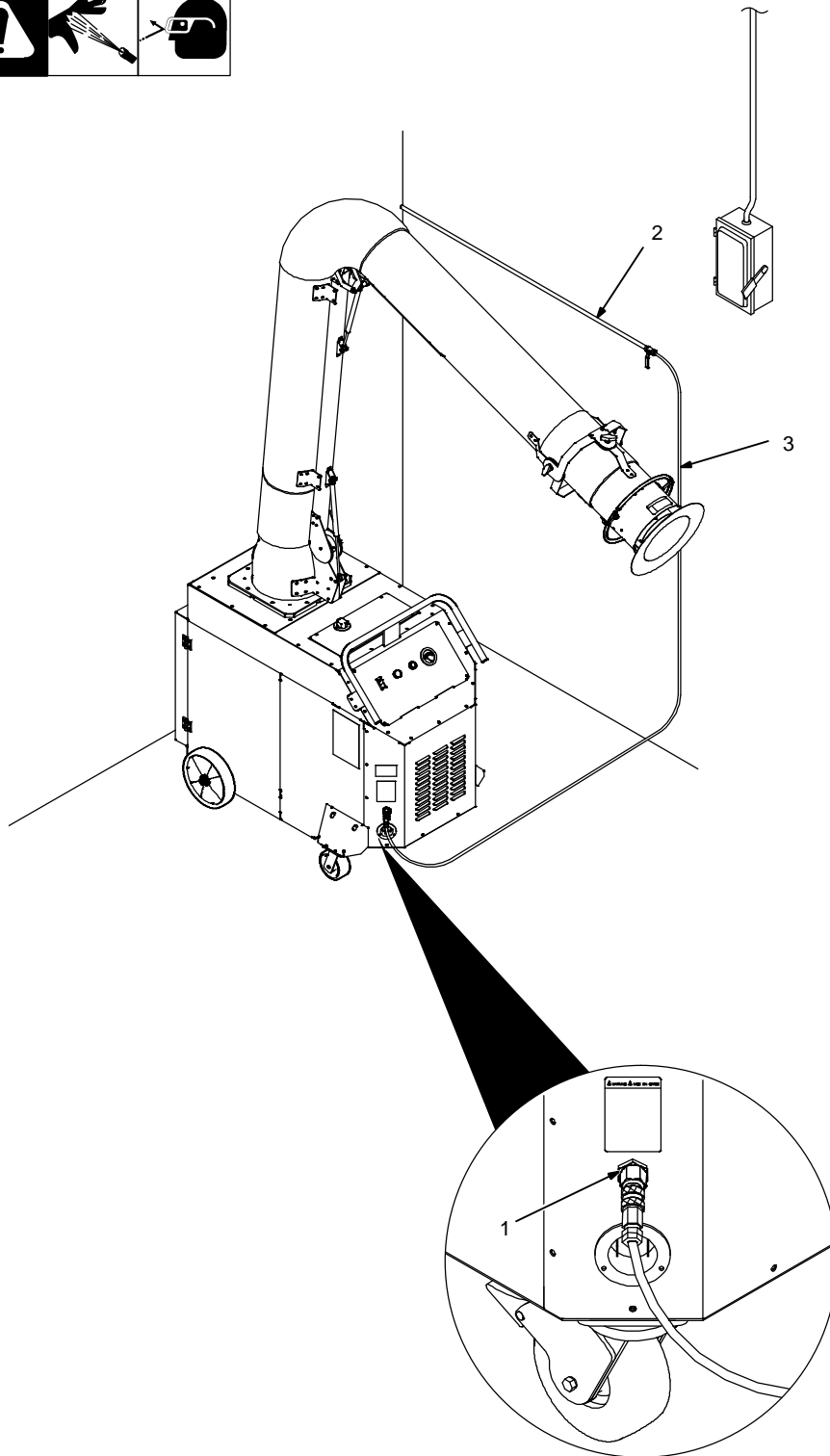
Tools Needed:






 9/16 in.



260 882-A / 260 889-A / 260 983-A

## 5-5. Connecting To Compressed Air Supply



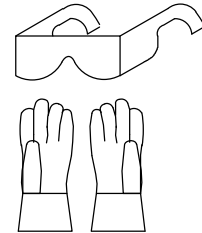
-  Shut off air supply before disconnecting or connecting air hose.
-  Wear protective equipment when disconnecting compressed air supply. Internal air tank is under pressure and will discharge when air supply is disconnected.
-  Latch filter and close door before starting unit or operating filter cleaning system.
-  Do not direct air stream toward self or others.
-  If ANY air is injected into the skin or body seek medical help immediately.

- 1 3/8 NPT Compressed Air Fitting
- 2 Compressed Air Supply (80 – 100 psi / 3.8 – 4.8 kPa)
- 3 Air Hose

Install customer-supplied compressed air fitting in 3/8 NPT fitting on front of unit.

Connect customer-supplied air hose to fitting when Filter Pressure gauge indicates cleaning is required.

Tools Needed:



## 5-6. Wiring Input Power Connector (NEMA L16-20R)

**⚠ Installation must meet all National and Local Codes – have only qualified persons make this installation.**

- 1 Input Power Cord  
Select cord according to Section 5-7.
- 2 480 V AC, Three-Phase, 20 A, 3P4W Connector (Supplied)
- 3 Cord Grip  
Strip insulation from end of each wire in cord and connect wires to connector as follows:
  - Green Or Green/Yellow Wire To G Terminal
  - Black Wire To X Terminal
  - White Wire To Y Terminal
  - Red Wire To Z Terminal

Reinstall outer shell and cord grip.

Plug 5 2013 -06 261 487-A

## 5-7. Electrical Service Guide

Elec Serv 2011-08

**⚠ Failure to follow these electrical service guide recommendations could create an electric shock or fire hazard. These recommendations are for a dedicated circuit sized for the rated output and duty cycle of the fume extractor.**

In dedicated circuit installations, the National Electrical Code (NEC) allows the receptacle or conductor rating to be less than the rating of the circuit protection device. All components of the circuit must be physically compatible. See NEC articles 210.21, 630.11, and 630.12.

	60 Hz Three Phase
<b>Input Voltage (V)</b>	460
<b>Input Amperes (A) At Rated Output</b>	5.8
<b>Max Recommended Standard Fuse Rating In Amperes<sup>1</sup></b>	
<b>Time-Delay Fuses<sup>2</sup></b>	20
<b>Normal Operating Fuses<sup>3</sup></b>	
<b>Min Input Conductor Size In AWG<sup>4</sup></b>	12
<b>Max Recommended Input Conductor Length In Feet (Meters)</b>	50
<b>Min Grounding Conductor Size In AWG<sup>4</sup></b>	12

Reference: 2011 National Electrical Code (NEC) (including article 630)

1 If a circuit breaker is used in place of a fuse, choose a circuit breaker with time-current curves comparable to the recommended fuse.

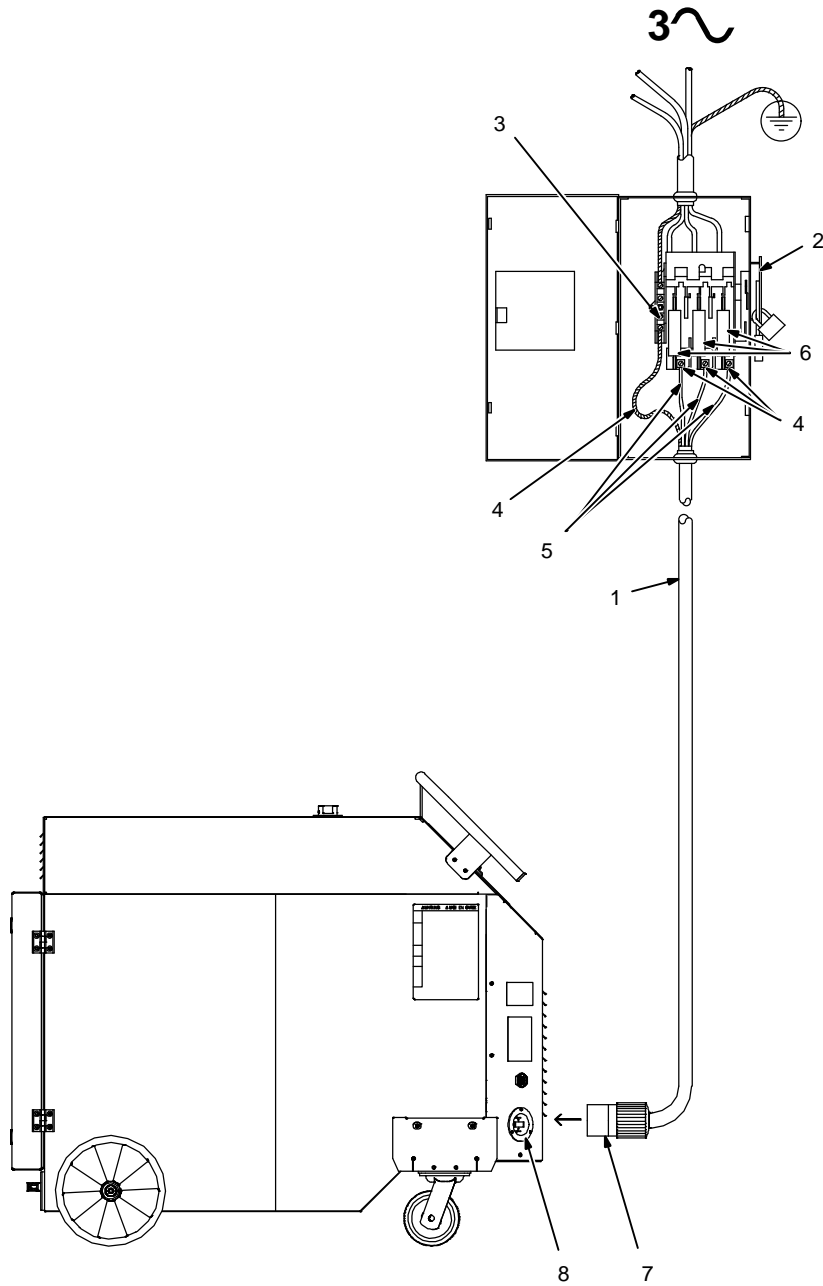
2 "Time-Delay" fuses are UL class "RK5" . See UL 248.

3 "Normal Operating" (general purpose - no intentional delay) fuses are UL class "K5" (up to and including 60 amps), and UL class "H" ( 65 amps and above).

4 Conductor data in this section specifies conductor size (excluding flexible cord or cable) between the panelboard and the equipment per NEC Table 310.15(B)(16). If a flexible cord or cable is used, minimum conductor size may increase. See NEC Table 400.5(A) for flexible cord and cable requirements.



## 5-8. Connecting Input Power



Input 8 2012-11 / 260 889-A / 261 487-A

**⚠** Installation must meet all National and Local Codes – have only qualified persons make this installation.

**⚠** Disconnect and lockout/tagout input power before connecting input conductors from unit. Follow established procedures regarding the installation and removal of lockout/tagout devices.

**⚠** Always connect green or green/yellow conductor to supply grounding terminal first, and never to a line terminal.

**⚠** Do not use the fume extraction equipment unless you are sure it is correctly assembled and working properly.

See rating label on unit and check input volt-

age available at site.

1 Input Power Conductors (Customer Supplied Cord)

Select size and length of conductors using Section 5-7. Conductors must comply with national, state, and local electrical codes. If applicable, use lugs of proper amperage capacity and correct hole size.

### Disconnect Device Input Power Connections

2 Disconnect Device (switch shown in OFF position)

3 Disconnect Device (Supply) Grounding Terminal

4 Disconnect Device Line Terminals

5 Input Conductors L1 (X), L2 (Y), And L3 (Z)

Connect green or green/yellow grounding conductor to disconnect device grounding terminal first.

Connect input conductors L1 (X), L2 (Y) And L3 (Z) to disconnect device line terminals.

6 Over-Current Connector

Select type and size of over-current protection using Section 5-7 (fused disconnect switch shown).

7 Input Power Connector

See Section 5-6.

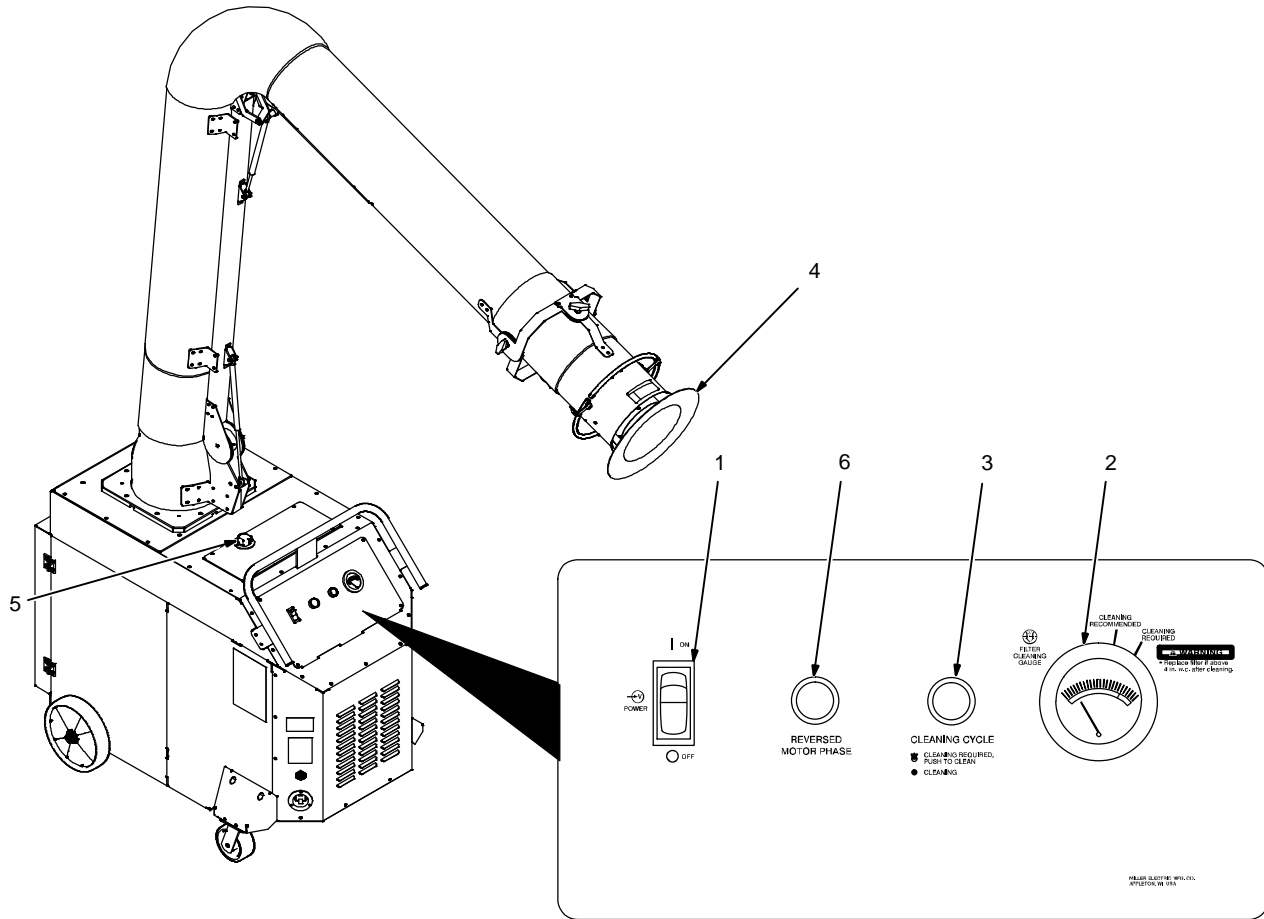
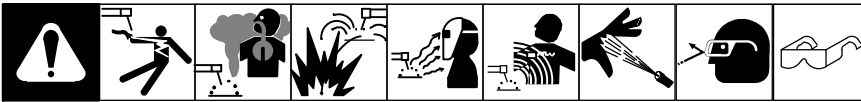
8 Input Power Receptacle (Machine-Mounted)

Connect input power connector to input power receptacle.

Close and secure door on line disconnect device. Follow established lockout/tagout procedures to put unit in service.

# SECTION 6 – OPERATION

## 6-1. Controls



260 882-A / 261 582-A

**⚠ Only use the fume extractor to extract weld fumes. Do not use the fume extractor to extract hot gases (above 104° F/40° C), wood or cement dust, engine exhaust, liquid vapors, explosive materials, aggressive fumes (acid), fumes from burning objects, or fumes from cleaning, cutting, gouging, grinding, painting, flame spraying, sand blasting, or other non-welding operations.**

### 1 Power Switch

Use switch to turn unit On and Off, and to interrupt filter cleaning cycle.

### 2 Filter Pressure Gauge

Gauge only indicates air pressure drop across the filter. Clean or replace filter when Cleaning Cycle button is flashing blue, Filter Pressure gauge reading is over 4 in. w.c., or whenever air flow is too low to extract fumes. The gauge should read between 0.1 and 0.5 in. w.c. at start-up (with

a new filter).

### 3 Cleaning Cycle Button

Press button to operate filter cleaning system. Button is illuminated during cleaning cycle. Clean or replace filter when Cleaning Cycle button is flashing blue, Filter Pressure gauge reading is over 4 in. w.c., or whenever air flow is too low to extract fumes. (See Sections 7-3 and 7-4 for filter maintenance information).

**ℹ Filter cleaning cycle automatically starts every time the machine is turned off to maximize filter life.**

### 4 Hood

Position the hood to minimize the effects of cross drafts from outside air sources or from other operations. Tilt the hood at a 30° angle and position it as close to the welding arc as possible; the distance from the hood to the arc must not exceed the effective length of the fume capture zone (see Section 4-5).

**ℹ Improper placement of the extraction arm may affect shielding gas in the weld zone and negatively impact weld quality.**

### 5 Air Control Knob

Use Air Control knob to regulate the amount of clean air discharged from the perimeter of the hood to create the most effective fume extraction zone for the work environment.

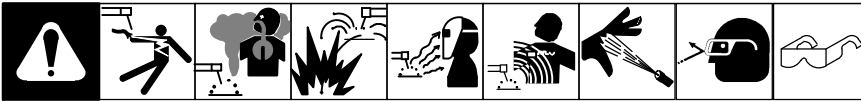
Rotate knob toward Max position to expand the size of the fume extraction zone. Higher settings are recommended for open work areas.

Rotate knob toward Min position to decrease the size of the extraction zone. Lower settings are recommended for confined work areas.

### 6 Motor-Phase Reversed Light

Light goes on and motor does not start when motor phases are reversed due to incorrect input power cord connections at connector (see Section 5-6). Rewire connector before attempting to start unit.

## 6-2. Prestart Checklist (Before Welding)



**⚠ Do not use the fume extraction equipment unless you are sure it is correctly assembled and working properly.**

☞ Check for free and easy movement of the extraction arm and swivel base before each use.

- 1 Clean Air Outlets
- 2 Filter Pressure Gauge

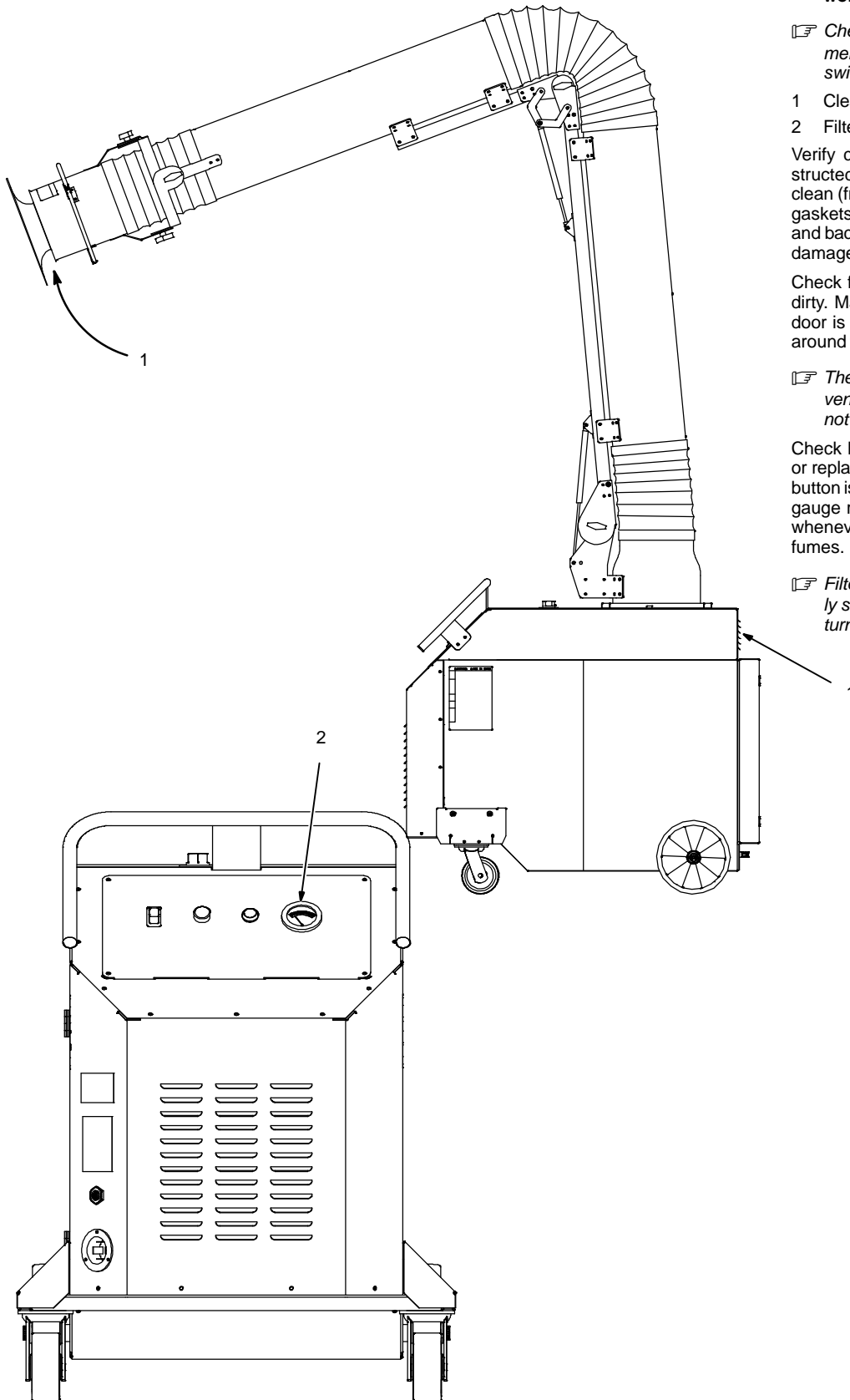
Verify clean air outlets are not obstructed and discharge air appears clean (free of welding fumes). Check gaskets on access door, particle tray, and back of filter. Replace gasket(s) if damaged.

Check filter if discharge air appears dirty. Make sure filter is latched and door is closed to ensure a tight seal around the filter.

☞ The safety interlock system prevents unit from starting if filter is not properly latched.

Check Filter Pressure gauge. Clean or replace filter when Cleaning Cycle button is flashing blue, Filter Pressure gauge reading is over 4 in. w.c., or whenever air flow is too low to extract fumes.

☞ Filter cleaning cycle automatically starts every time the machine is turned off to maximize filter life.




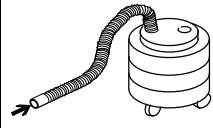
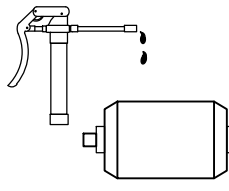
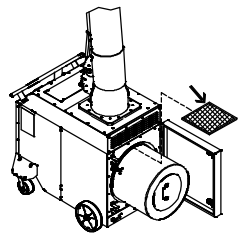
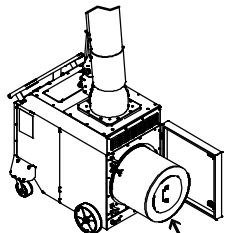
# SECTION 7 – USER SERVICING INSTRUCTIONS (MAINTENANCE)

## 7-1. Routine Maintenance



**⚠ Disconnect Power before maintaining.**

*🔧 Service equipment more often if used in severe conditions.*

🕒	✓ = Check * To be done by Factory Authorized Service Agent	◇ = Change	● = Clean	☆ = Replace	
Daily	✓ Filter Pressure gauge. Clean or replace filter if necessary (Section 7-3)	✓ Free Movement Of Arm Base Assembly	✓ Extraction Arm Hood And Joints Stay In Position	✓ Extraction Arm Ducts And Tubing	● Inner Surface Of Hood
Every Month	● Outer Surfaces				
Every 3 Months	 ☆ Unreadable Labels	● Inside of Extraction Arm With Warm Water And Detergent			
Every 6 Months	 ● Inside Unit	 ✓ * Motor Bearing Lubrication. Grease Bearings Every 5500 Hours Of Operation.	 ✓ ☆ Fume Extractor Spark Guard	 ✓ ☆ Filter ✓ ☆ Gaskets On Door, Particle Tray	

## Notes

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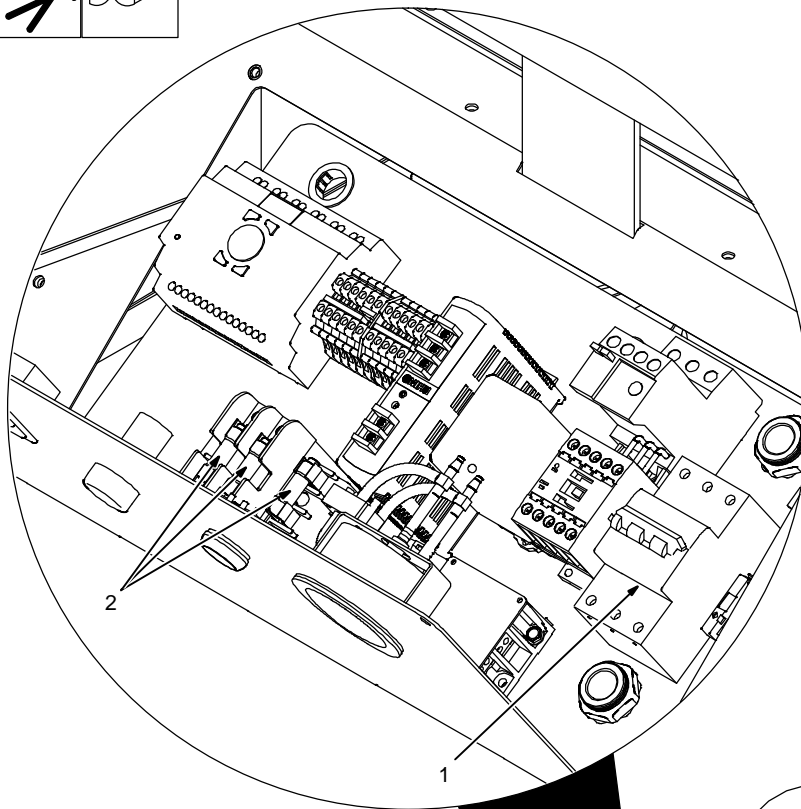
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**Work like a Pro!**

**Pros weld and cut safely. Read the safety rules at the beginning of this manual.**

## 7-2. Overload Protection



**⚠ Turn off power and disconnect input power cord.**

- 1 Circuit Breaker CB1  
(See Parts List For Rating)

CB1 protects the blower motor from overload. If CB1 opens the unit does not operate. Check breaker and re-set if open.

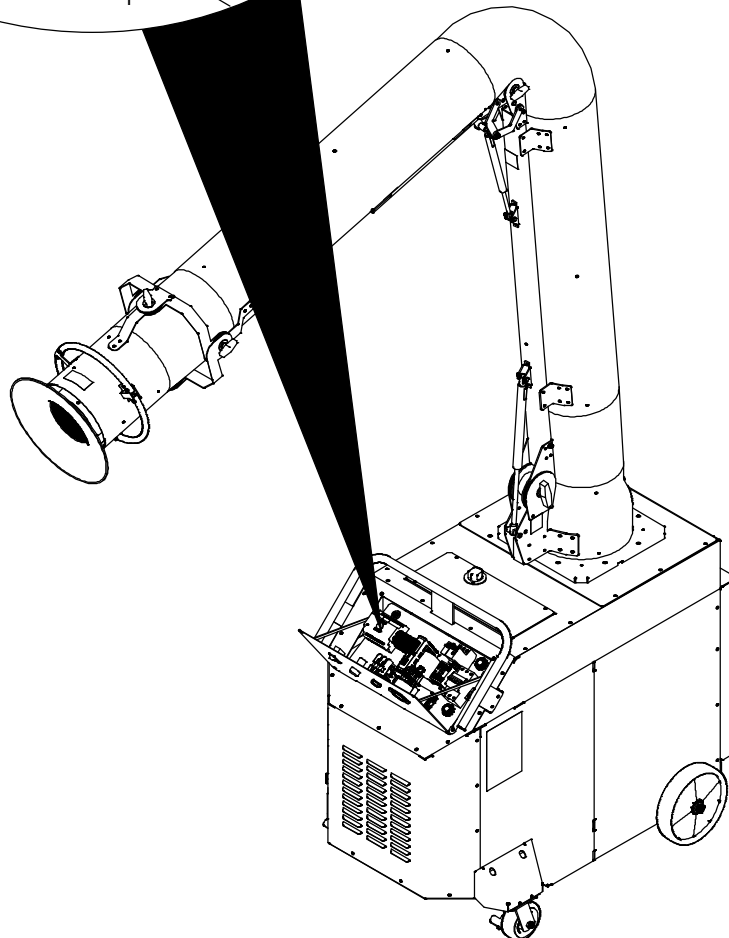
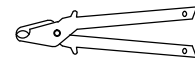
- 2 Fuses F1, F2, And F3  
(See Parts List For Rating)

F1, F2, and F3 protect the controller and internal power supply from overload. If any of these fuses open the unit does not operate. Check fuse(s) and replace if open.

To access fuses, remove the four screws securing the front nameplate. Reinstall nameplate after checking fuse.

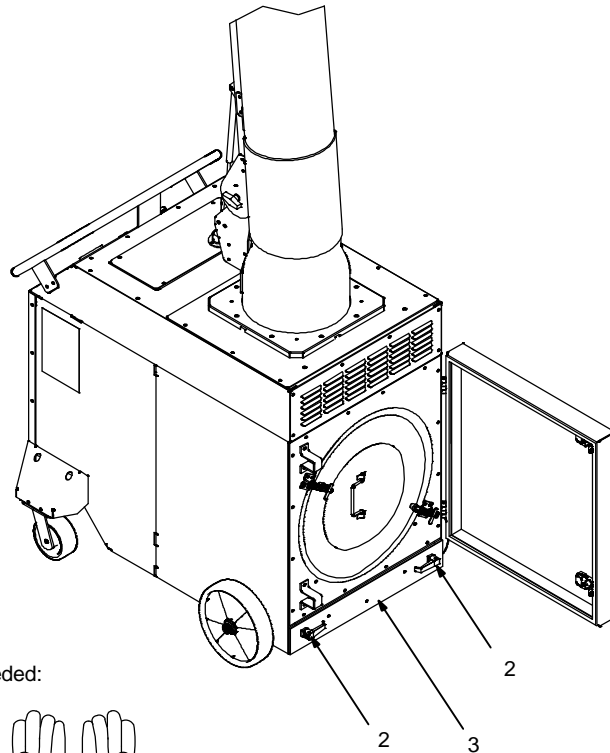
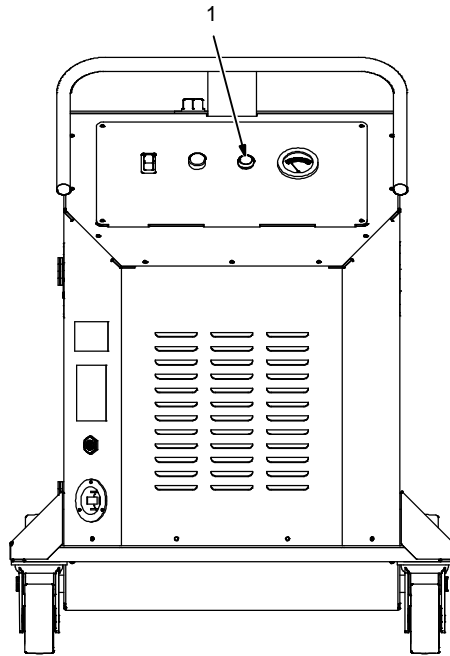
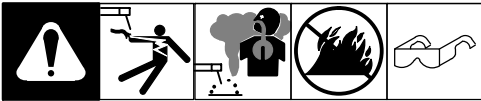
*☞ If a circuit breaker or fuse opens, it usually indicates a more serious problem exists. Contact a Factory Authorized Service Agent.*

Tools Needed:

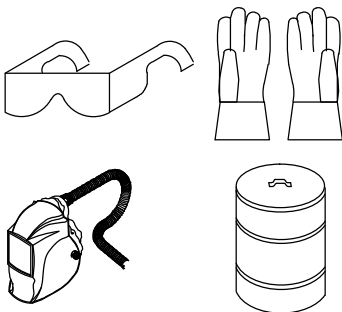


261 118-B

## 7-3. Cleaning Filter



### Tools Needed:



- ⚠** Latch filter and close door before starting unit or operating filter cleaning system.
- ⚠** Do not operate unit without filter or with dirty filter.
- ⚠** Clean or replace filter when dirty.
- ⚠** Do not breathe the particles collected by the fume extractor. Wear approved safety equipment (respirator, gloves, long sleeve shirt) when servicing filter and spark guard. Dispose of used element and collected particles according to local, state, and federal requirements.
- ⚠** If ANY air is injected into the skin or body seek medical help immediately.
- ⚠** Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.

☞ See Section 5-5 for compressed air requirements for proper filter cleaning.

- ⚠** Wear protective equipment when disconnecting compressed air supply. Internal air tank is under pressure and will discharge when air supply is disconnected.

### 1 Cleaning Cycle Button

Press button to operate filter cleaning system. Clean or replace filter when Cleaning Cycle button is flashing blue, Filter Pressure gauge reading is over 4 in. w.c., or whenever air flow is too low to extract fumes. Keep filter latched and door closed during cleaning to maintain a tight seal around filter.

To clean filter, press and release Cleaning Cycle button. The filter cleaning system operates only when the unit is off.

☞ Filter cleaning cycle automatically starts every time the machine is turned off to maximize filter life.

The system cleans the filter in about 60 seconds. Wait until the cleaning has stopped and particles have settled before removing particles from tray.

### 2 Particle Tray Release Levers

### 3 Particle Tray

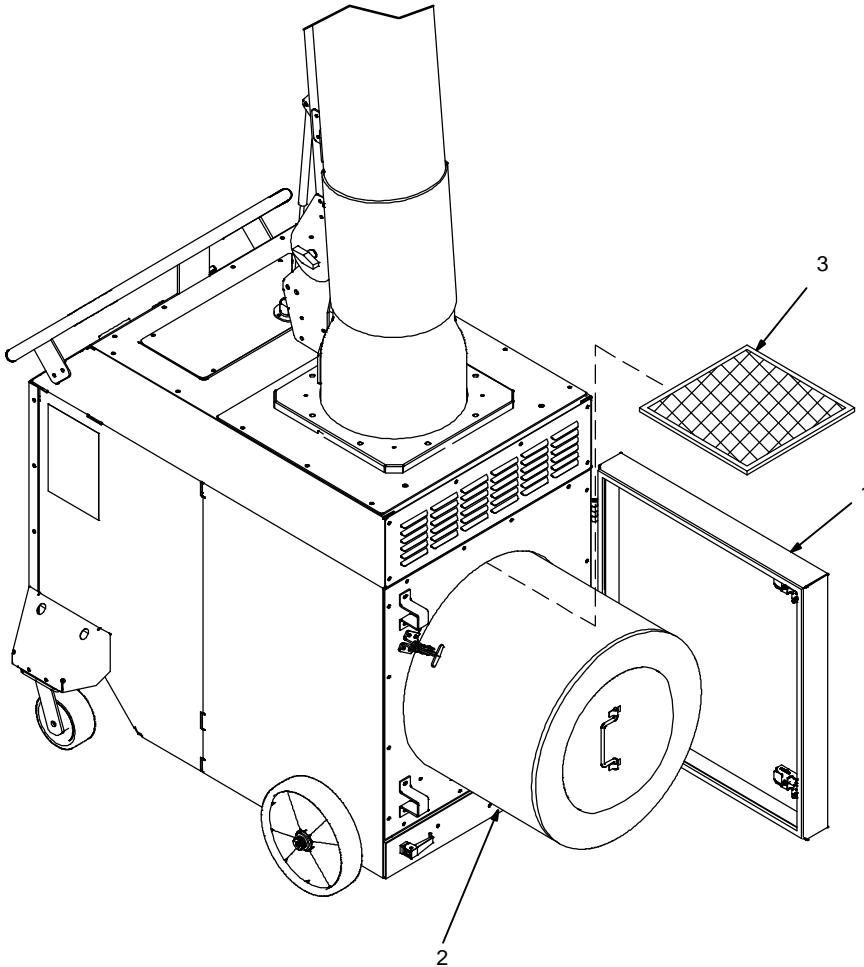
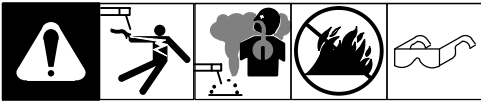
Release latches and open door. Lift and turn levers down to release particle tray. Pull out tray. Remove particles from tray after every cleaning cycle. Reinstall tray and pull levers up to secure tray in position.

Inspect filter after cleaning (Section 7-4).

Start unit and check Filter Pressure gauge reading.

- ⚠** Replace filter if, after cleaning, Filter Pressure gauge reading is over 4 in. w.c. or air flow is too low to extract fumes.

## 7-4. Inspecting Filter And Spark Guard



- ⚠ Turn off power and disconnect input power cord.
- ⚠ Do not operate unit without filter or with dirty filter.
- ⚠ Clean or replace the filter when dirty.
- ⚠ Do not breathe the particles collected by the fume extractor. Wear approved safety equipment (respirator, gloves, long sleeve shirt) when servicing filter and spark guard. Dispose of used element and collected particles according to local, state, and federal requirements.
- ⚠ Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.

- 1 Door
- 2 Filter
- 3 Spark Guard

Release latches and open door. Released latches on filter. Use filter handle to remove filter.

Clean or replace filter if dirty or damaged.

Wipe off door. Remove particles from inside of housing.


Remove spark guard (from behind baffle).

Clean and inspect spark guard screen. Replace spark guard if screen wires are broken or missing.

Check gaskets on access door, particle tray, and front and back of filter. Replace gasket(s) if damaged.

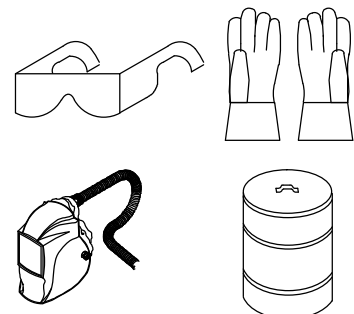
Install spark guard.

Install filter and secure with latches.

 Verify filter is securely latched. The safety interlock system prevents unit from starting if filter is not properly latched.

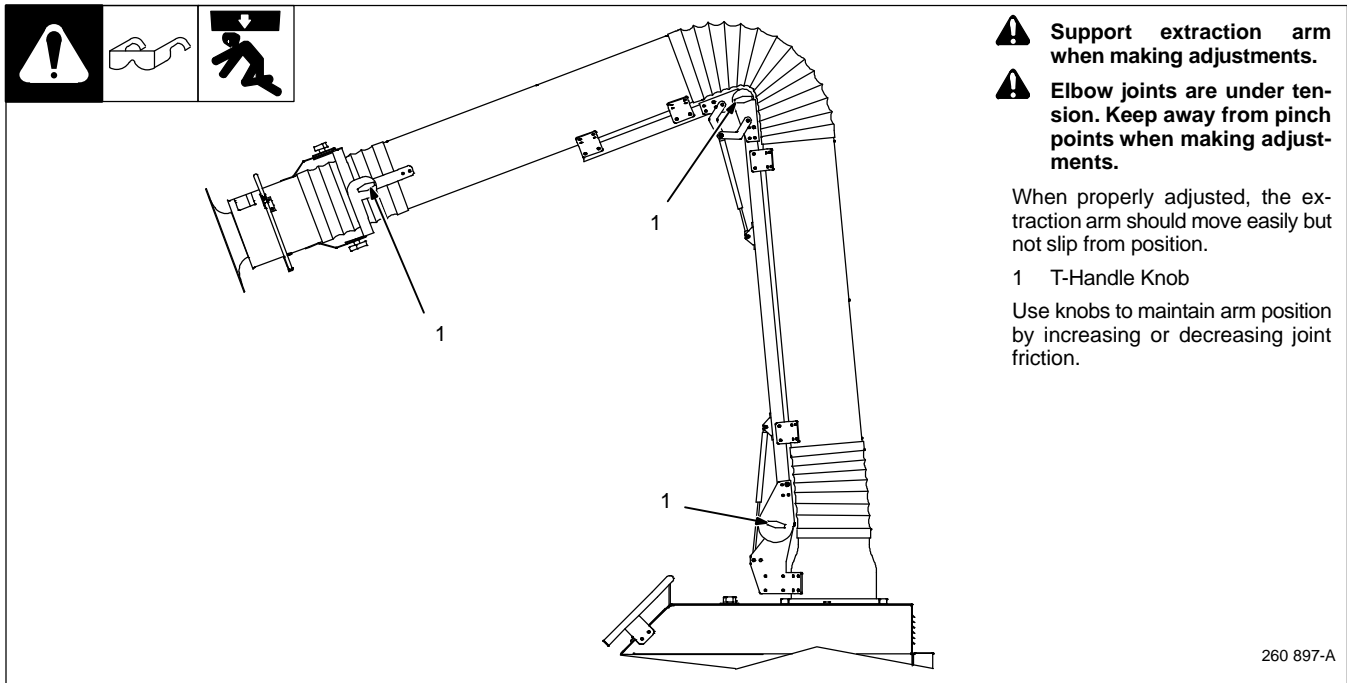
Close door and secure with latches.

Tools Needed:



260 950-A

## 7-5. Adjusting Extraction Arm Joints



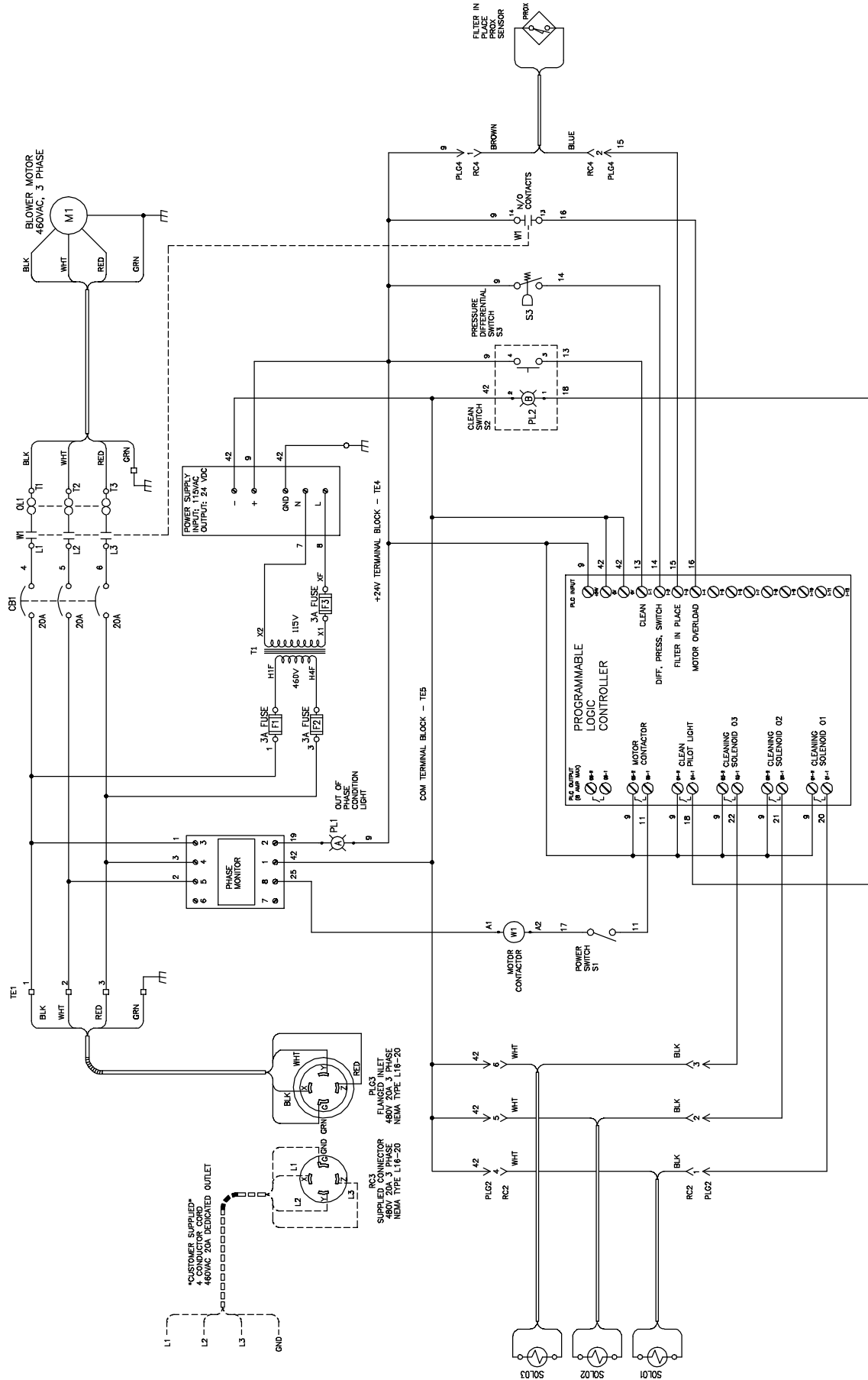
# SECTION 8 – TROUBLESHOOTING

## 8-1. Troubleshooting Table

Trouble	Remedy				
Motor/blower will not start or continue running.	Check input power connection (see Section 5-8).				
	Verify filter is securely latched. Safety interlock system prevents unit from starting if filter is not properly latched.				
	Check circuit breaker CB1, and reset if open (see Section 7-2)				
	Check fuses F1, F2, and F3, and replace if open (see Section 7-2)				
	Check Reversed Motor Phase light on front panel. If light is on, switch phases by rewiring connector (see Section 5-6).				
	Have Factory Authorized Service Agent check motor and wiring.				
Decreased air flow.	Reconnect extraction arm flexible tubing.				
	Inspect extraction arm tubing and replace if damaged.				
	Remove obstructions from fume extraction arm.				
	Remove debris from spark guard (see Section 7-4).				
	Clean or replace filter (see Sections 7-3 and 7-4).				
	Have Factory Authorized Service Agent check for correct fan rotation (clockwise).				
Filter cleaning system does not operate.	Check circuit breaker CB1, and replace if open (see Section 7-2).				
	Verify filter is securely latched. Safety interlock system prevents unit from starting if filter is not properly latched.				
Fume extractor discharges fumes or particles.	Inspect filter (including gasket) and replace if damaged or dirty. Be sure filter is installed properly (see Section 7-4).				
Extraction arm does not stay in position.	Adjust extraction arm joints (see Section 7-5).				
Extraction arm does not turn easily.	Verify hardware securing extraction arm to base is properly tightened (see Section 5-4).				



# SECTION 9 – ELECTRICAL DIAGRAM




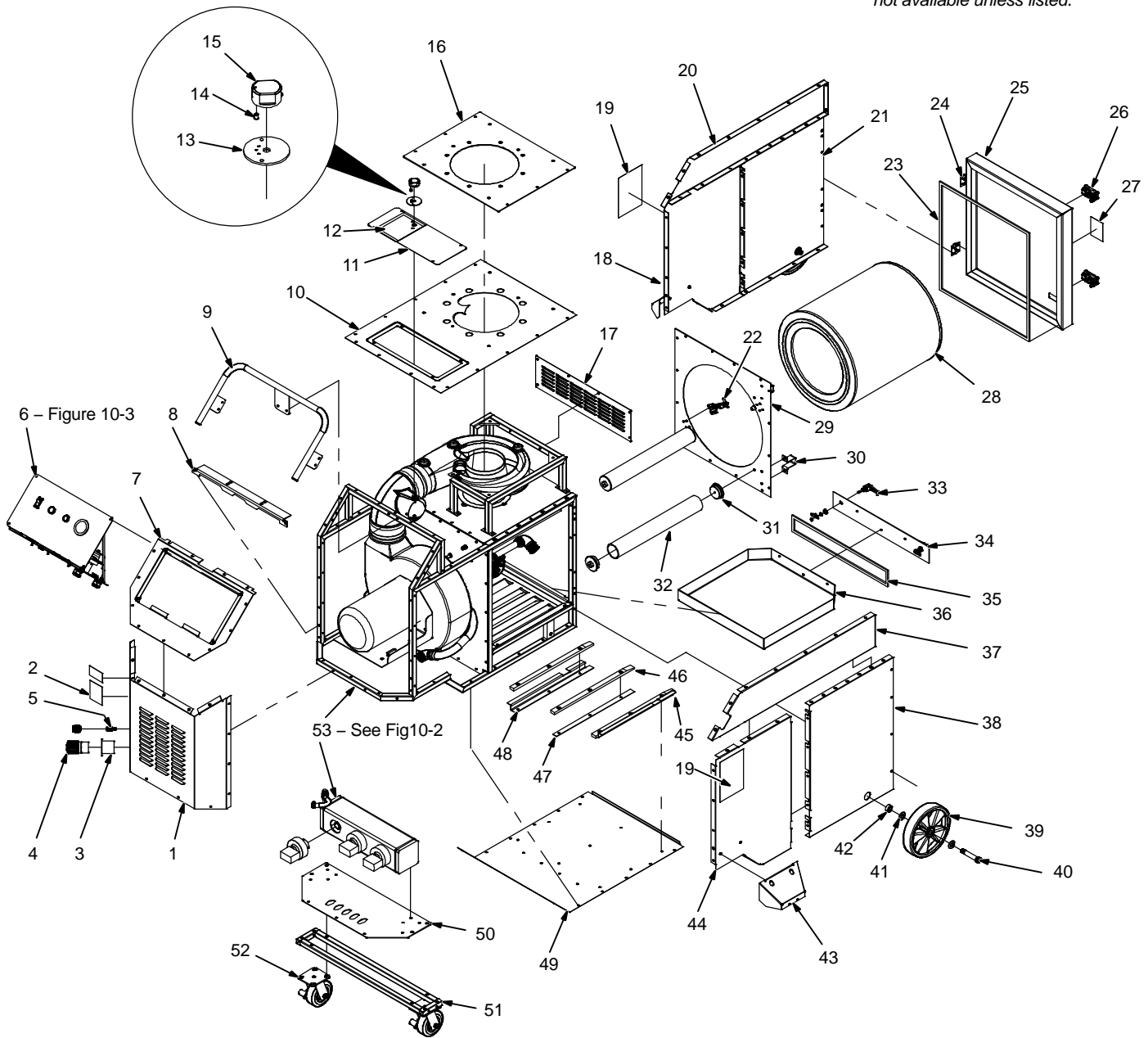
<b>WARNING</b> 	<ul style="list-style-type: none"> <li>• Do not touch live electrical parts.</li> <li>• Disconnect input power or stop engine before servicing.</li> <li>• Do not operate with covers removed.</li> <li>• Have only qualified persons install, use, or service this unit.</li> </ul>
	<b>ELECTRIC SHOCK HAZARD</b>

Figure 9-1. Circuit Diagram

# SECTION 10 – PARTS LIST

☞ Hardware is common and not available unless listed.



264 102-A

**Figure 10-1. Main Assembly**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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**Figure 10-1. Main Assembly**

...	1	+260183	Panel, Cart Front	1
...	2	260981	Label, Warning Compressed Air	1
...	3	260592	Connector, Panel Mount Male 480V 20A 3 Phase L16-20	1
...	4	261139	Connector, Socket Female 480V 20A 3 Phase L16-20R	1
...	5	260196	Coupling, Blkhd Brs 3/8 NPT(F) X 1.000 Mtg Hole	1
...	6	Figure 10-3	Control Box Assembly	1
...	7	260424	Panel, Cart Control Box	1

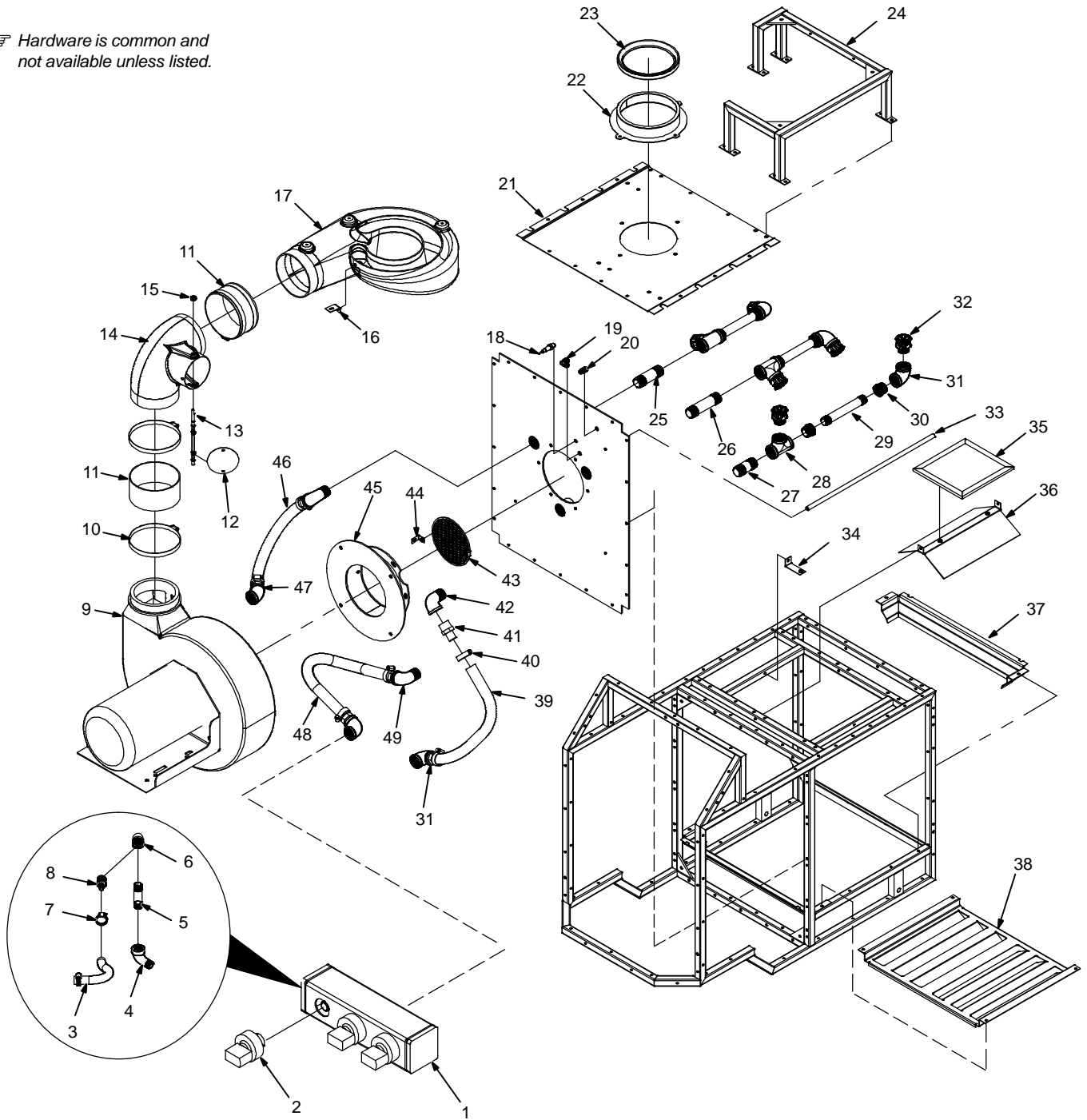
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 10-1. Main Assembly (Continued)</b>				
8		261196	Bracket, Motor Support	1
9		260511	Handle, Cart	1
10		260423	Panel, Cart Top	1
11		261198	Panel, Tool Tray Cover	1
12		261199	Label, Capture Zone Control	1
13		262651	Plate, Detent	1
14		263666	Plunger, Ball 6mm Dia	1
15		262652	Knob, Air Bleed Out	1
16		260475	Plate, Arm Mounting	1
17		260552	Panel, Cart Rear Louvers	1
18		+260421	Panel, Cart Left Side B	1
19		246340	Label, Warning General Precautionary (Eng/Fr)	2
20		260422	Panel, Cart Left Side C	1
21		260184	Panel, Cart Left Side A	1
22		261417	Clamp, Toggle Vertical 307-U	2
23		260347	Gasket, Foam Flame Retardant .50 Wide X .25 Thk	8
24		260594	Hinge, 50mm X 50mm W/Countersunk Forms For M6	2
25		+260112	Door, Filter	1
26		260328	Latch, Lever Compression	2
27		261085	Label, Caution Air Discharge	1
28		*301106	Filter, Replacement Capture 5	1
29		260182	Panel, Cart Rear	1
30		260113	Keeper, Latch Filter Door	2
31		260490	Bushing, Shaft Filter Support	2
32		260125	Shaft, Filter Support Aluminum	1
		260137	Assy, Dust Tray (Includes)	1
33		260109	Latch, Lift & Turn	2
34		260527	Plate, Tray Mounting	1
35		260347	Gasket, Foam Flame Retardant .50 Wide X .25 Thk	4.5 Ft.
36		260106	Dust Tray	1
37		260420	Panel, Cart Right Side C	1
38		260185	Panel, Cart Right Side A	1
39		263859	Wheel, Rbr 10.000 OD X 2.000 Wd X .750 Bore Blk Hub	2
40		260192	Screw, Shld Stl Sch .625-11 X .750 X 3.00 Shld	2
41		602250	Washer, Flat .812IDx1.469ODx.134t Stl Pld Ansi.750	4
42		262455	Spacer, Wheel	2
43		262976	Panel, Fender Flare	2
44		+260418	Panel, Cart Right Side B	1
45		260516	Bracket, Slide Tray Left	1
46		260123	Slide, Tray	3
47		260526	Bracket, Slide Tray Center	1
48		260515	Bracket, Slide Tray Right	1
49		260173	Panel, Cart Bottom	1
50		260425	Panel, Cart Caster	1
51		261106	Caster Frame	1
52		209479	Caster, Swvl 5.00 In Urethane W/Brake 2.000 In Wide	2
53		Figure 10-2	Blower Assembly	1

+ When ordering a component originally displaying a precautionary label, the label should also be ordered.

\* Recommended Spare Parts.

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

☞ Hardware is common and not available unless listed.



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**Figure 10-2. Blower Assembly**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 10-2. Blower Assembly (Figure 10-1, Item 53)</b>				
...	1	260608	Receiver, Tank Pulse Cleaning	1
...	2	260593	Valve, Air Pulse 1 NPT(M) W/Compressed Seal	3
...	3	260980	Hose, 0.375 ID X 0.719 OD X 12.00 In Lg 500 PSI	1
...	4	260922	Ftg, Pipe Galv Elbow St .375 NPT	1
...	5	260923	Ftg, Pipe Galv Sch40 Nipple 3/8 NPT X 3.000	1
...	6	260933	Ftg, Pipe Galv Elbow 90deg 3/8 NPT(F) X 3/8 NPT(F)	1
...	7	023562	Clamp, Hose .312 - .875 Clp Dia	2
...	8	260924	Ftg, Pipe Stst Barbed Hex .375 Tbg X 3/8 NPT(M)	2
...	9	M1	260130 Motor, Blower 5 HP 3450 RPM	1

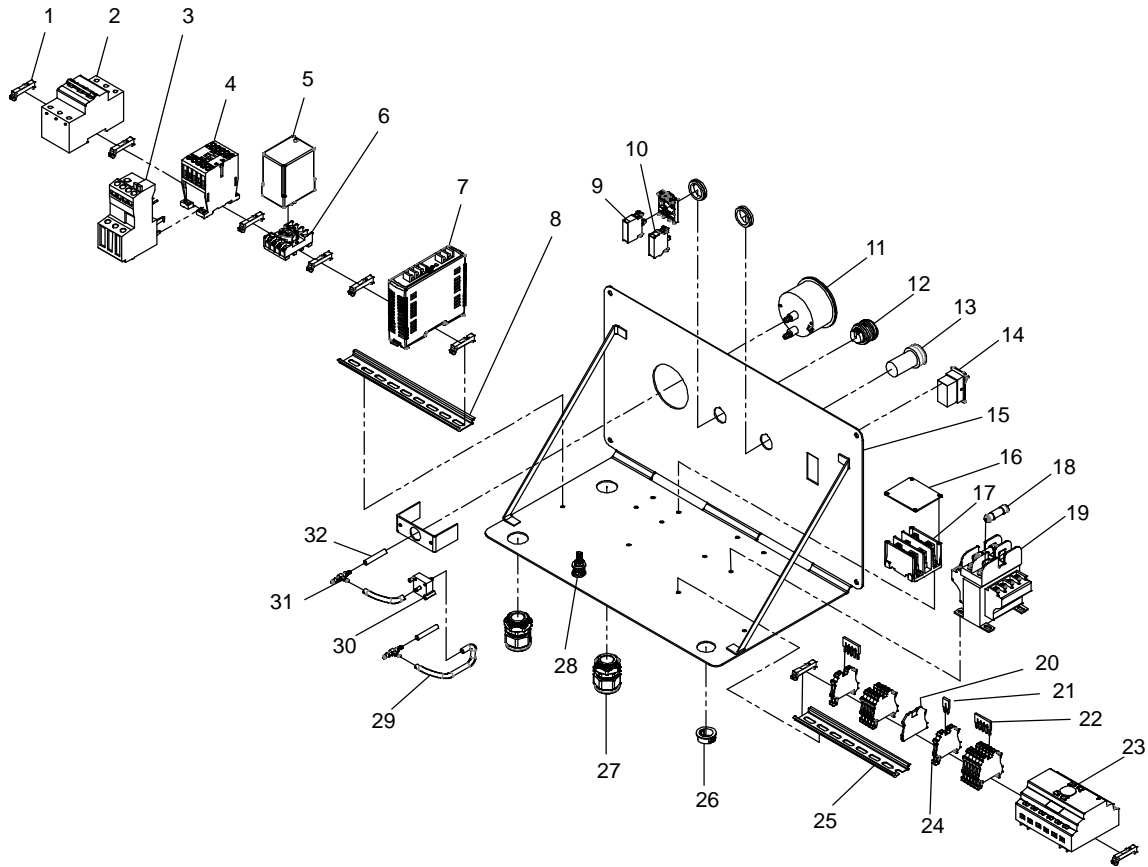
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 10-2. Blower Assembly (Figure 10-1, Item 53) (Continued)</b>				
10		260134	Clamp, Hose 4.12 – 7.00 Clp Dia	4
11		262647	Hose, 6.00 ID X 3.00 Lg	2
12		262649	Flapper, Air Bleed Out	1
13		262648	Shaft, Air Bleed-Out	1
14		260154	Elbow, Air Bleed Out	1
15		260831	Grommet, Rbr .438 Panel Hole Dia X .094 Panel Thk	2
16		262624	Bracket, Manifold Mounting	1
17		260111	Air Manifold, Cart	1
18		263946	Switch, Proximity 4 mm Range X 12 mm Thread	1
19		261073	Ftg, Conn Elbow 1/4NPT(M) X 1/4 Tubing	1
20		249369	Ftg, Connector 1/4 NPT (M) X 1/4 Tubing	1
21		260187	Panel, Cart Manifold	1
22		262449	Collar Assy, 7.594 Dia (Includes)	1
23		261105	Seal, Rubber D-Section	24 In.
24		260931	Arm Support Frame	1
25		260683	Ftg, Pipe Galv Sch40 Nipple 1.000 NPT X 4.000	1
26		260604	Ftg, Pipe Galv Sch40 Nipple 1.000 NPT X 5.000	1
27		260684	Ftg, Pipe Galv Sch40 Nipple 1.000 NPT X 3.000	1
28		260559	Ftg, Pipe Galv Tee 1.000 NPT(F)	3
29		260596	Ftg, Pipe Galv Sch40 Nipple 3/4 NPT X 8.000	3
30		260930	Ftg, Pipe Galv Bushing 1.000 NPT(M) X 3/4 NPT(F)	6
31		260597	Ftg, Pipe Galv Elbow 90deg 1.000 NPT(F) X 1.000 NPT	5
32		260606	Nozzle, Pulse Cleaning 1.000 NPT	6
33		262628	Rod, Rear Stiffener .500 OD X 21.969	1
34		260828	Bracket, Mtg Spark Filter	1
35		260827	Filter, Spark	1
36		260335	Baffle, Particulate Tray	1
37		264337	Funnel Tray, Front/Rear	2
38		264337	Baffle, Particulate Tray	2
39		260215	Hose, 1.000 ID X 1.343 OD X 16.750 Lg 100 PSI	1
40		010860	Clamp, Hose .750 – 1.750 Clp Dia	6
41		260595	Ftg, Pipe Brs Barbed Hex 1.000 Tbg X 1.000 NPT(M)	6
42		260598	Ftg, Pipe Galv Elbow St 1.000 NPT	3
43		261691	Screen, Inlet 6.438 (Includes)	1
		261692	Edge Trim, Screen Inlet	22 In.
44		256142	Bracket, Inlet Screen	2
45		260591	Flange Bulkhead And Blower Mtg Flange	1
46		260558	Hose, 1.000 ID X 1.343 OD X 15.7500 Lg 100 PSI	1
47		260603	Ftg, Pipe Galv Elbow 45deg 1 NPT(F) X 1 NPT(F)	1
48		260115	Hose, 1.000 ID X 1.343 OD X 24.000 Lg 100 PSI	1
49		260598	Ftg, Pipe Galv Elbow ST 1.000 NPT	5
		261072	Tubing, Pe Flame Ret 3/16 ID X 1/4 OD (Not Shown)	4 Ft

+ When ordering a component originally displaying a precautionary label, the label should also be ordered.

\* Recommended Spare Parts.

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

☞ Hardware is common and not available unless listed.



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**Figure 10-3. Control Box Assembly**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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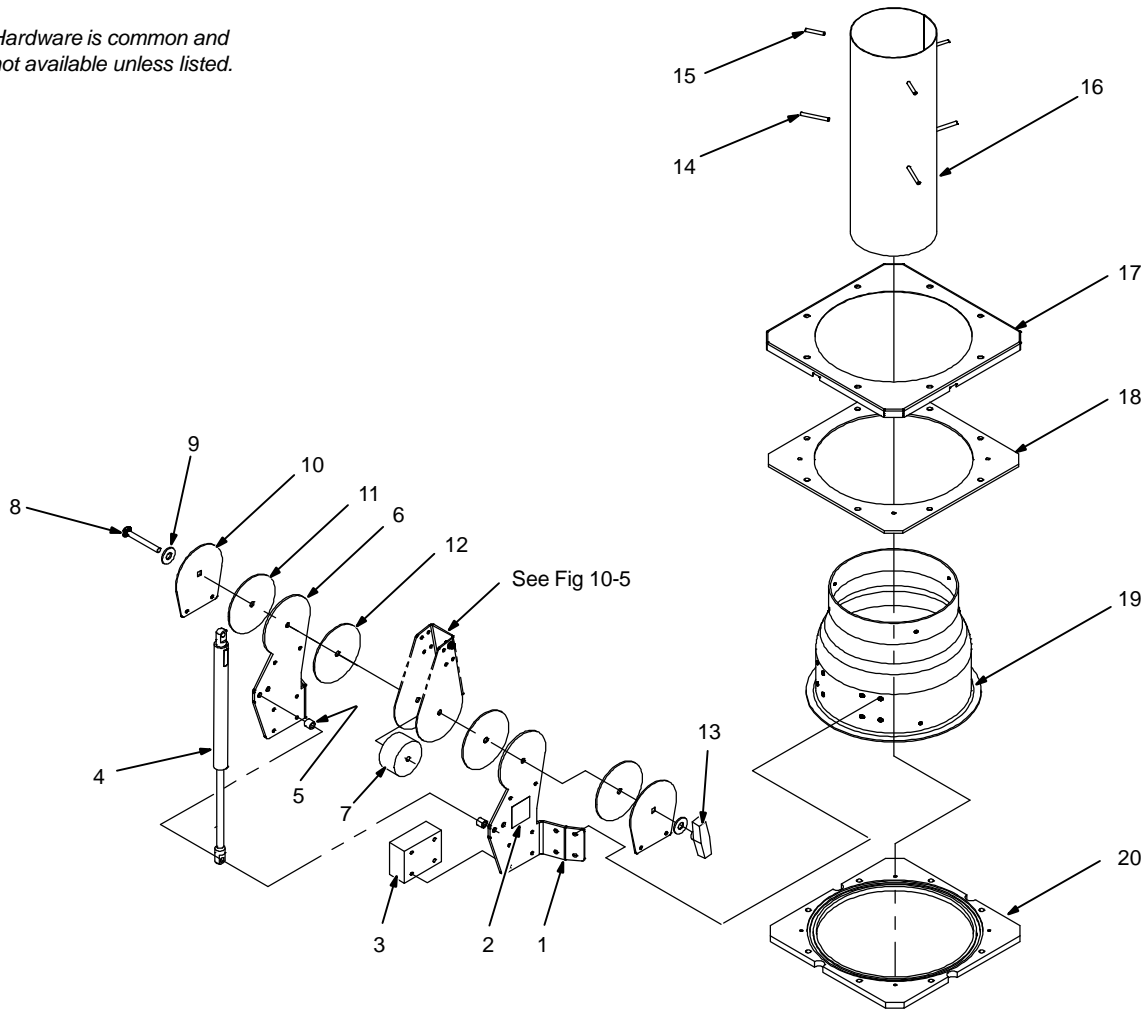
**Figure 10-3. Control Box Assembly (Figure 10-1, Item 6)**

...	1	263919	.. Stop, Din Rail Low Profile	8
...	2	CB1 263923	.. Circuit Breaker, Din Rail Mount 3P 20 A	1
...	3	OL1 260166	.. Relay, Overload 3.2–16fla Manual Reset	1
...	4	W1 260155	.. Contactor, 9 A 3 Pole 24VDC No Aux	1
...	5	PHASE MONITOR 263940	.. Relay, Phase Monitor	1
...	6	263941	.. Socket, Relay 8 Pin Base	1
...	7	PS1 263939	.. Power Supply, Din Rail In:340–550 Vac Out:24VDC 5A	1
...	8	263918	.. Rail, Din 35mm X 7.5mm X 9.000 In	1
...	9	258752	.. Contact Block, LED 24VDC N/O	1
...	10	260159	.. Contact Block N/O	1
...	11	263947	.. Gauge, Pressure Minihelic Differential 0–5 in W.C.	1
...	12	S2/PL2 260162	.. Push Button, Flush Illuminated Blue	1
...	13	PL1 263943	.. Light, Indicator LED Amber	1
...	14	S1 159039	.. Switch, Rocker Spdt 15A 125VAC On–None–On Illum	1
...	15	260156	.. Control Enclosure W/Phase Ind	1
...			Nameplate (Order By Model And Serial No.)	1
...	16	263938	.. Cover, Distribution Blk	1
...	17	263924	.. Distribution Blk, 115 A	1
...	18	F1, F2, F3 260157	.. Fuse, Low Peak Class CC 3A	3
...	19	T1 263922	.. Transformer, 46V/120V 50VA	1
...	20	260965	.. End Section, Terminal Block Fem6	3

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 10-3. Control Box Assembly (Figure 10-1, Item 6) (Continued)</b>				
21		263921	Jumper Bar, 2 Poles Bjmi6	1
22		260964	Jumper Bar, 5 Poles Bjmi6	2
23	PLC1	263942	Controller, Micro 24VDC 12i/P X 6 Relay O/P	1
24	TE	260776	Terminal Block, M 4/6 Grey	11
25		263917	Rail, Din 35mm X 7.5mm X 7.500 in	1
26		030170	Bushing, Snap-in Nyl .750 Id X 1.000 Mtg Hole	1
27		139041	Bushing, Strain Relief .450/.709 Id X1.115 Mtg Hole	2
28			Terminal (Includes)	1
		210609	Strap, Grounding 16.62 In Long (Not Shown)	1
		109398	Screw, 250-20x1.50 Hex Hd-Pln Gr5 Pld Full Thread	1
		152461	Nut, 250-20 .44hex .23h Stl Pld Sem Cone Wshr.65d	1
		601836	Nut, 250-20 .50hex .19h Brs	2
		261416	Washer,Flat .312idx0.734odx.065t Stl Pld Blk	1
29		264048	Tubing, PVC .125 Id X .250 Od Clear	1
30	S3	263948	Switch, Pressure Differential 8 PSI	1
31		249024	Fitting, Nylon Barbed Tee .156 X .125 X .156	2
32		261072	Tubing, PVC 3/16 Id X 1/4 OD Clear	1
33	PROX1	263946	Switch, Proximity 4mm Range X 12mm Thread (Not Shown)	1

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

☞ Hardware is common and not available unless listed.



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**Figure 10-4. Extraction Arm Base Assembly**


Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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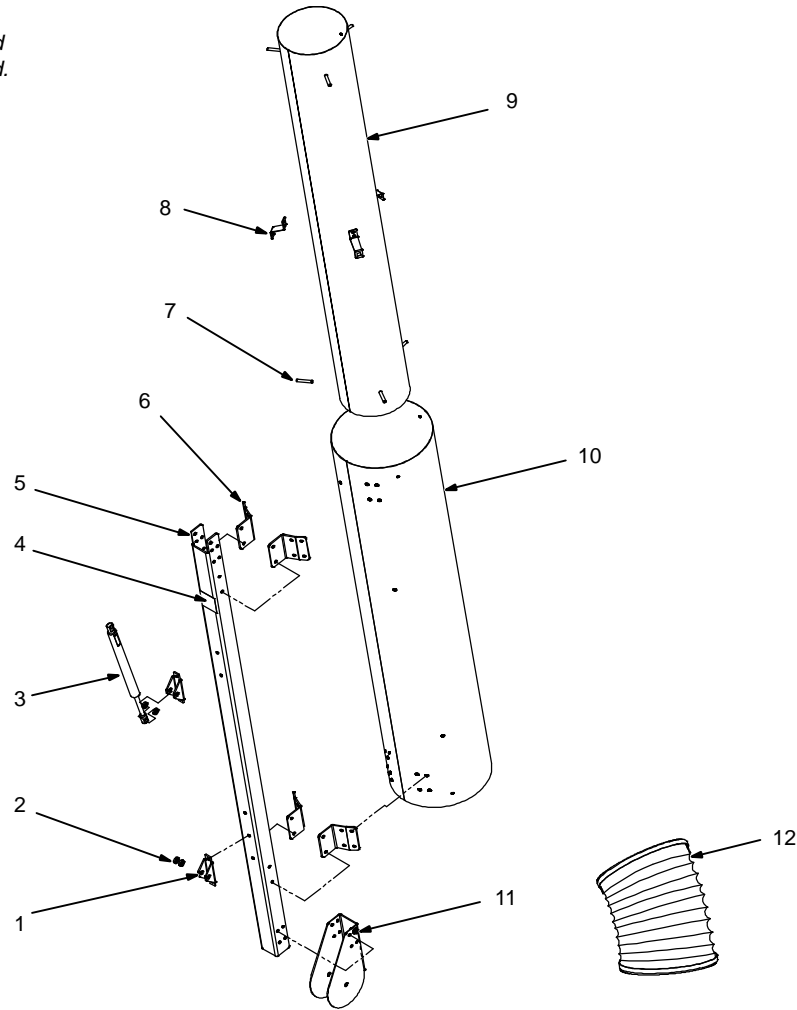
**Figure 10-4. Extraction Arm Base Assembly**

...	1	...	+259777	..	Bracket, Lower Elbow Right 12.000 Collar	...	1
...	2	...	261084	..	Label, Caution Pinch Point	...	1
...	3	...	259786	..	Spacer, Lower Elbow Rect	...	1
...	4	...	261570	..	Gas Spring, 550 Lb Lower ( <b>12 Ft Extraction Arm XD-12</b> )	...	1
...	5	...	261589	..	Gas Spring, 375 Lb Lower ( <b>10 Ft Extraction Arm XD-10</b> )	...	1
...	6	...	259909	..	Spacer, Mounting Gas Spring Wide	...	2
...	7	...	+259780	..	Bracket, Lower Elbow Left 12.000 Collar	...	1
...	8	...	259785	..	Spacer, Lower Elbow Round	...	1
...	9	...	263833	..	Bolt, Crg Stl .375-16 X 3.500 Gr 2 Pld	...	1
...	10	...	259793	..	Washer, Flat .560 X 1.380 X .109 Stl Pld	...	1
...	11	...	263225	..	Plate, Clamping Lower	...	2
...	12	...	259792	..	Friction Disc, Lower Elbow	...	2
...	13	...	263226	..	Friction Disc, Lower Elbow Nyl	...	2
...	14	...	263861	..	Knob, T 3.500 Bar W/.375-16 Nut Plstc	...	1
...	15	...	261208	..	Stand-Off, Tube 10-32 X 2.500 Lg	...	3
...	16	...	259863	..	Stand-Off, Tube 10-32 X 1.500 Lg	...	21
...	17	...	259829	..	Tube, Collar Inside	...	1
...	18	...	259828	..	Plate, Base 12.000	...	1
...	19	...	259821	..	Plate, Bearing 12.000	...	1
...	20	...	259819	..	Collar, 12.00	...	1
...	20	...	259822	..	Plate, Bearing 12.000 Ball Groove	...	1



To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

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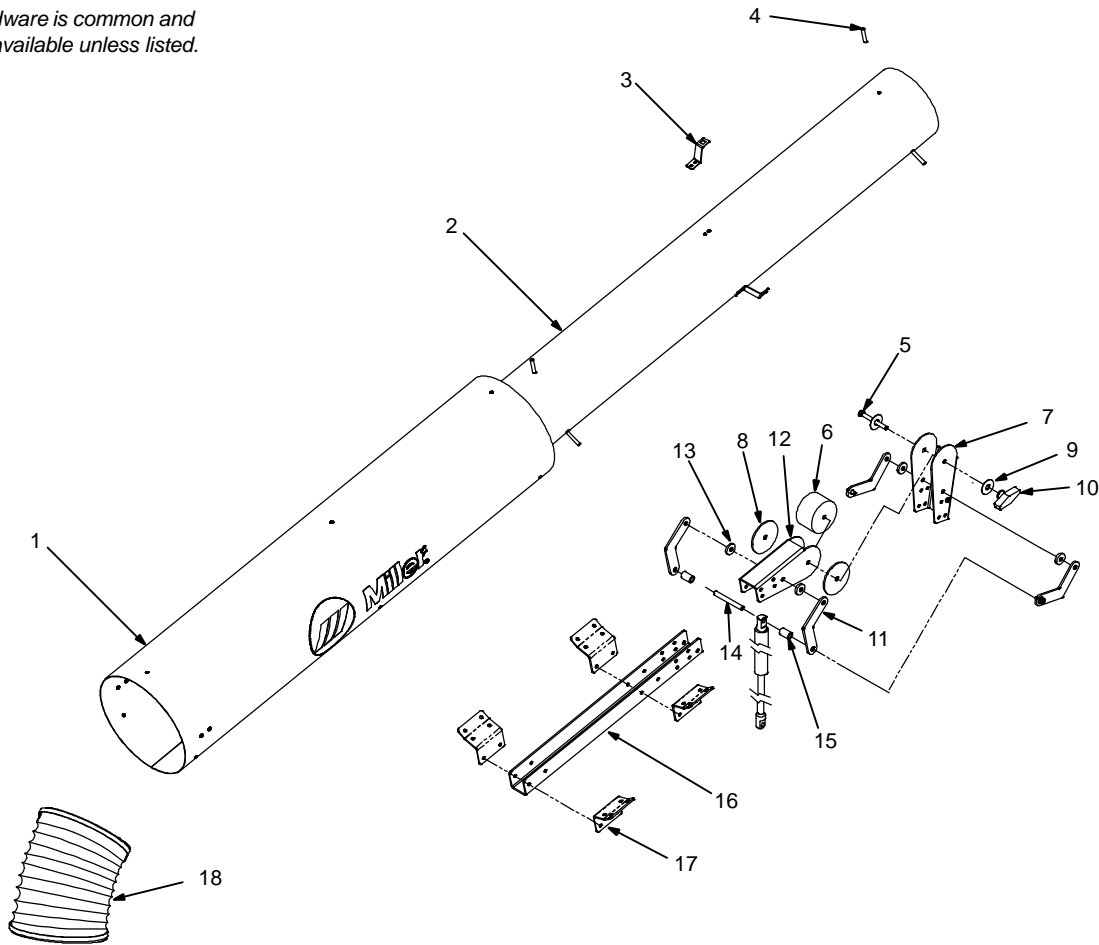
**Figure 10-5. Extraction Arm Tube Assembly**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 10-5. Extraction Arm Tube Assembly</b>				
...	1	259781	Bracket, Mounting Gas Spring	2
...	2	259908	Spacer, Mounting Gas Spring	4
...	3	261587	Gas Spring (Upper) 275 Lb <b>(12 Ft Extraction Arm XD-12)</b>	1
...	3	261588	Gas Spring (Upper) 150 Lb <b>(10 Ft Extraction Arm XD-10)</b>	1
...	4	261084	Label, Caution Pinch Point	3
...	5	+259789	Beam, Lower Arm	1
...	6	259771	Bracket, Mounting Side Tube	4
...	7	259863	Stand-Off, Tube 10-32 X 1.500 Lg	6
...	8	259770	Bracket, Tube Spacer	3
...	9	259760	Tube, Inside 7.000 X 48.000 <b>(12 Ft Extraction Arm XD-12)</b>	1
...	9	259760	Tube, Inside 7.000 X 48.000 <b>(10 Ft Extraction Arm XD-10)</b>	1
...	10	256153	Tube, Lower 10.00 X 45.00	1
...	11	259776	Bracket, Lower Elbow 5.000 OD X 2.250 Wd	1
...	12	261180	Tube, Flex 7.000 X 25.000 PVC (Base, Inner Tube)	1
...		259766	Tube, Flex 10.000 X 28.000 PVC (Base, Outer Tube)	1
...		261179	Tube, Flex 7.000 X 40.000 PVC (Middle Joint, Inner Tube)	1
...		259765	Tube, Flex 10.000 X 43.000 PVC (Middle Joint, Outer Tube)	1

+When ordering a component originally displaying a precautionary label, the label should also be ordered.

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

☞ Hardware is common and not available unless listed.




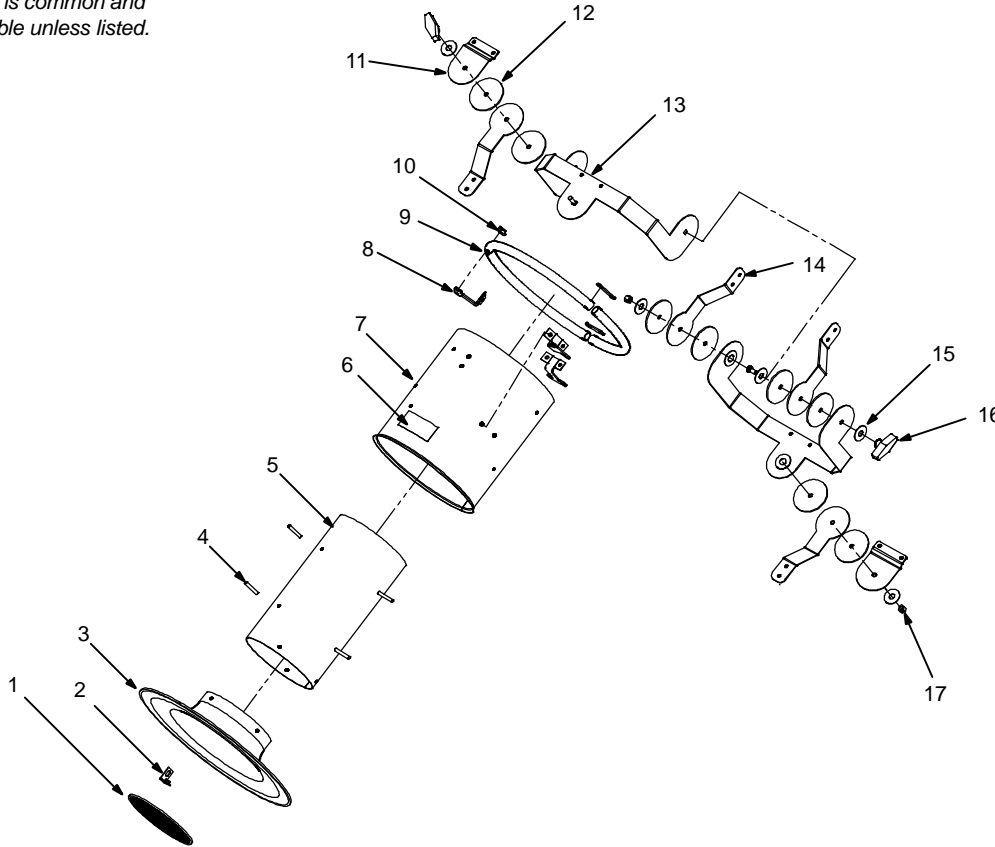
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Figure 10-6. Extraction Arm Middle Tube Assembly

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 10-6. Extraction Arm Middle Tube Assembly</b>				
...	1	256151	Tube, Upper 10.00 X 45.00 (12 Ft Extraction Arm XD-12)	1
...	1	256152	Tube, Upper 10.00 X 21.00 (10 Ft. Extraction Arm XD-10)	1
...	2	259760	Tube, Inside 7.000 X 48.000	1
...	3	259770	Bracket, Tube Spacer	3
...	4	259863	Stand-Off, Tube 10-32 X 1.500 Lg	6
...	5	261227	Bolt, Crg Stl .312-18 X 3.000 Gr 2 Pld	1
...	6	259784	Spacer, Upper Elbow	1
...	7	259775	Bracket, Upper Elbow 3.000 OD X 2.250 Wd	1
...	8	259791	Friction Disc, Upper Elbow	2
...	9	261233	Washer, Fender .438 ID X 1.375 OD X .051 Thk	2
...	10	261230	Knob, T 2.500 Bar W/.312-18 Nut Plstc	1
...	11	259783	Bracket, Linkage Gas Spring	4
...	12	259774	Bracket, Upper Elbow 3.000 OD X 1.820 Wd	1
...	13	259907	Spacer, Linkage Gas Spring	4
...	14	256141	Rod, .375 OD X 250-20 Dbl End Fem Thd	1
...	15	259906	Spacer, Rod Gas Spring	2
...	16	259788	Beam, Upper Arm	1
...	17	259771	Bracket, Mtg Side Tube	4
...	18	261181	Tube, Flex 7.000 X 17.000 PVC ( Hood Joint, Inner)	1
...		259767	Tube, Flex 10.000 X 20.000 PVC (Hood Joint, Outer)	1

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

 Hardware is common and not available unless listed.



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**Figure 10-7. Extraction Arm Hood Assembly**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
...	1	261691	Screen, Inlet 6.438	1
...		261692	Edge Trim, Screen Inlet	22 In.
...	2	256142	Bracket, Inlet Screen	2
...	3	256134	Hood, Bell Mouth	1
...	4	259863	Stand-Off, Tube 10-32 X 1.500 LG	4
...	5	256136	Tube, Hood Inside	1
...	6	261085	Label, Caution Air Discharge	1
...	7	+256135	Tube, Hood Outside	1
...	8	256139	Bracket, Handle Mounting	3
...	9	256138	Tube, Handle .50 OD X .40 ID	3
...	10	264100	Bracket, Handle Stabilizing	3
...	11	259904	Bracket, Hood Connection Clamp	1
...	12	256146	Friction Disc, Hood Connection	8
...	13	256144	Bracket, Hood Connection Middle 10.000	2
...	14	256143	Bracket, Hood Connection End	4
...	15	261233	Washer, Fender .438 X 1.375 OD X .051 Thk	8
...	16	261230	Knob, T 2.500 Bar W/.312-18 Nut Plstc	2
...	17	145675	Nut, .312-18 .50 Hex .37 H Stl Pld Deformed Lkg Thrd	2

+ When ordering a component originally displaying a precautionary label, the label should also be ordered.

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

# TRUE BLUE<sup>®</sup>

## WARRANTY

Effective January 1, 2013

(Equipment with a serial number preface of MD or newer)

This limited warranty supersedes all previous Miller warranties and is exclusive with no other guarantees or warranties expressed or implied.

### Warranty Questions?

Call  
1-800-4-A-MILLER  
for your local  
Miller distributor.

Your distributor also gives  
you ...

### Service

You always get the fast,  
reliable response you  
need. Most replacement  
parts can be in your  
hands in 24 hours.

### Support

Need fast answers to the  
tough welding questions?  
Contact your distributor.  
The expertise of the  
distributor and Miller is  
there to help you, every  
step of the way.

LIMITED WARRANTY – Subject to the terms and conditions below, Miller Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

Within the warranty periods listed below, Miller will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Miller must be notified in writing within thirty (30) days of such defect or failure, at which time Miller will provide instructions on the warranty claim procedures to be followed.

Miller shall honor warranty claims on warranted equipment listed below in the event of such a failure within the warranty time periods. All warranty time periods start on the delivery date of the equipment to the original end-user purchaser, and not to exceed one year after the equipment is shipped to a North American distributor or eighteen months after the equipment is shipped to an International distributor.

1. 5 Years Parts — 3 Years Labor
  - \* Original Main Power Rectifiers Only to Include SCRs, Diodes, and Discrete Rectifier Modules
2. 3 Years — Parts and Labor
  - \* Auto-Darkening Helmet Lenses (Except Classic Series) (No Labor)
  - \* Engine Driven Welding Generators  
**(NOTE: Engines are Warranted Separately by the Engine Manufacturer.)**
  - \* Inverter Power Sources (Unless Otherwise Stated)
  - \* Oxy-Fuel Cutting Torches (No Labor)
  - \* Plasma Arc Cutting Power Sources
  - \* Process Controllers
  - \* Semi-Automatic and Automatic Wire Feeders
  - \* Smith Series 30 Flowgauge, Flowmeter, and Pressure Regulators (No Labor)
  - \* Transformer/Rectifier Power Sources
  - \* Water Coolant Systems (Integrated)
3. 2 Years — Parts and Labor
  - \* Auto-Darkening Helmet Lenses – Classic Series Only (No Labor)
  - \* Fume Extractors – Filtair 400 and Industrial Collector Series
4. 1 Year — Parts and Labor Unless Specified
  - \* Automatic Motion Devices
  - \* CoolBelt and CoolBand Blower Unit (No Labor)
  - \* External Monitoring Equipment and Sensors
  - \* Field Options  
(NOTE: Field options are covered for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)
  - \* Flowgauge and Flowmeter Regulators (No Labor)
  - \* RFCS Foot Controls (Except RFCS-RJ45)
  - \* Fume Extractors – Filtair 130, MWX and SWX Series
  - \* HF Units
  - \* ICE/XT Plasma Cutting Torches (No Labor)
  - \* Induction Heating Power Sources, Coolers  
**(NOTE: Digital Recorders are Warranted Separately by the Manufacturer.)**
  - \* Load Banks
  - \* Motor Driven Guns (except Spoolmate Spoolguns)
  - \* PAPR Blower Unit (No Labor)
  - \* Positioners and Controllers
  - \* Racks
  - \* Running Gear/Trailers
  - \* Spot Welders
  - \* Subarc Wire Drive Assemblies
  - \* Water Coolant Systems (Non-Integrated)
  - \* Weldcraft-Branded TIG Torches (No Labor)
  - \* Wireless Remote Foot/Hand Controls and Receivers
  - \* Work Stations/Weld Tables (No Labor)

5. 6 Months — Parts
  - \* Batteries
  - \* Bernard Guns (No Labor)
  - \* Tregaskiss Guns (No Labor)
6. 90 Days — Parts
  - \* Accessory (Kits)
  - \* Canvas Covers
  - \* Induction Heating Coils and Blankets, Cables, and Non-Electronic Controls
  - \* M-Guns
  - \* MIG Guns and Subarc (SAW) Guns
  - \* Remote Controls and RFCS-RJ45
  - \* Replacement Parts (No labor)
  - \* Roughneck Guns
  - \* Spoolmate Spoolguns

Miller's True Blue<sup>®</sup> Limited Warranty shall not apply to:

1. **Consumable components; such as contact tips, cutting nozzles, contactors, brushes, relays, work station table tops and welding curtains, or parts that fail due to normal wear. (Exception: brushes and relays are covered on all engine-driven products.)**
2. Items furnished by Miller, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer's warranty, if any.
3. Equipment that has been modified by any party other than Miller, or equipment that has been improperly installed, improperly operated or misused based upon industry standards, or equipment which has not had reasonable and necessary maintenance, or equipment which has been used for operation outside of the specifications for the equipment.

MILLER PRODUCTS ARE INTENDED FOR PURCHASE AND USE BY COMMERCIAL/INDUSTRIAL USERS AND PERSONS TRAINED AND EXPERIENCED IN THE USE AND MAINTENANCE OF WELDING EQUIPMENT.

In the event of a warranty claim covered by this warranty, the exclusive remedies shall be, at Miller's option: (1) repair; or (2) replacement; or, where authorized in writing by Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Miller service station; or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at customer's risk and expense. Miller's option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a Miller authorized service facility as determined by Miller. Therefore no compensation or reimbursement for transportation costs of any kind will be allowed.

TO THE EXTENT PERMITTED BY LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL MILLER BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT TORT OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MILLER IS EXCLUDED AND DISCLAIMED BY MILLER.

Some states in the U.S.A. do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, so the above limitation or exclusion may not apply to you. This warranty provides specific legal rights, and other rights may be available, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be waived, the limitations and exclusions set out above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.

miller\_warr 2013-01





# Owner's Record

Please complete and retain with your personal records.

Model Name

Serial/Style Number

Purchase Date

(Date which equipment was delivered to original customer.)

Distributor

Address

City

State

Zip



## For Service

Contact a **DISTRIBUTOR** or **SERVICE AGENCY** near you.

Always provide Model Name and Serial/Style Number.

Contact your Distributor for:

Welding Supplies and Consumables

Options and Accessories

Personal Safety Equipment

Service and Repair

Replacement Parts

Training (Schools, Videos, Books)

Technical Manuals (Servicing Information and Parts)

Circuit Diagrams

Welding Process Handbooks

To locate a Distributor or Service Agency visit [www.millerwelds.com](http://www.millerwelds.com) or call 1-800-4-A-Miller

Contact the Delivering Carrier to:

File a claim for loss or damage during shipment.

For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.

### Miller Electric Mfg. Co.

An Illinois Tool Works Company  
1635 West Spencer Street  
Appleton, WI 54914 USA

### International Headquarters—USA

USA Phone: 920-735-4505 Auto-Attended  
USA & Canada FAX: 920-735-4134  
International FAX: 920-735-4125

For International Locations Visit  
[www.MillerWelds.com](http://www.MillerWelds.com)

