



Description



Stationary Weld Fume Extractor

SWX-D And SWX-S Stationary Weld Fume Extractor

- For use with field test units only.
- Follow this manual and labels on unit to safely install and operate unit.
- Manual is and remains the property of MILLER Electric Mfg. Co. Return manual with unit.
- Information missing from manual was not available at time of printing.
- Additional information on field test units available from Factory Reliability Dept.

Read And Save These Instructions

OWNER'S MANUAL

File: Accessory



From Miller to You

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.



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

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 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 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

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 **Protect yourself and others from injury — read and follow these precautions.**

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. Arc Welding 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 1-5. Read and follow all Safety Standards.



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



During operation, keep everybody, especially children, away.



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 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 and ground 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.

SIGNIFICANT DC VOLTAGE exists in inverter welding 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 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 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 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 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 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 the welding process 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 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.

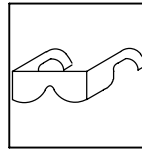


WELDING can cause fire or explosion.

Welding on closed containers, such as tanks, drums, or pipes, can cause them to blow up. Sparks can fly off from the welding 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.

- Remove all flammables within 35 ft (10.7 m) of the welding arc. If this is not possible, tightly cover them with approved covers.
- Do not weld 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 can easily go through small cracks and openings to adjacent areas.
- Watch for fire, and keep a fire extinguisher nearby.
- Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
- Do not weld on closed containers such as tanks, drums, or pipes, unless they are properly prepared according to AWS F4.1 (see Safety Standards).
- Do not weld 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 area as practical to prevent welding 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.
- 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.



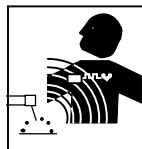
FLYING METAL or DIRT can injure eyes.

- Welding, 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.



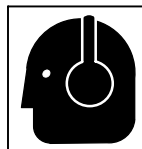
BUILDUP OF GAS can injure or kill.

- Shut off shielding 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.

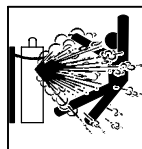
- Wearers of Pacemakers and other Implanted Medical Devices should keep away.
- Implanted Medical Device wearers should consult their doctor and the device manufacturer before going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations.



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.

Shielding 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 or other electrical circuits.
- Never drape a welding torch over a gas cylinder.
- Never allow a welding electrode to touch any cylinder.
- Never weld on a pressurized cylinder – explosion will result.
- Use only correct shielding 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.

1-3. Additional Symbols For Installation, Operation, And Maintenance



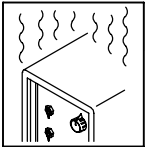
FIRE OR EXPLOSION hazard.

- 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.



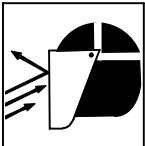
FALLING EQUIPMENT can injure.

- 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.



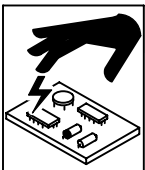
OVERUSE can cause OVERHEATING

- 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.



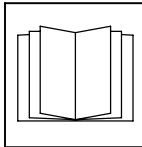
WELDING WIRE can injure.

- 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.



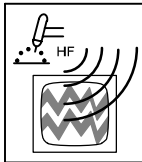
MOVING PARTS can injure.

- 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.



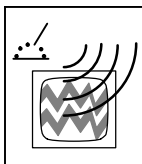
READ INSTRUCTIONS.

- 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 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 weld cables as short as possible, close together, and down low, such as on the floor.
- Locate welding operation 100 meters from any sensitive electronic equipment.
- Be sure this welding machine is installed and grounded according to this manual.
- If interference still occurs, the user must take extra measures such as moving the welding machine, using shielded cables, using line filters, or shielding the work area.

1-4. California Proposition 65 Warnings

-  **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.)**
-  **Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.**

For Gasoline Engines:

-  **Engine exhaust contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.**

For Diesel Engines:

-  **Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.**

1-5. Principal Safety Standards

Safety in Welding, Cutting, and Allied Processes, ANSI Standard Z49.1, from Global Engineering Documents (phone: 1-877-413-5184, website: 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).

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

Safe Handling of Compressed Gases in Cylinders, CGA Pamphlet P-1, from Compressed Gas Association, 4221 Walney Road, 5th Floor, Chantilly, VA 20151 (phone: 703-788-2700, website: 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 5N5 (phone: 800-463-6727, website: 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).

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).

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).

U.S. Consumer Product Safety Commission (CPSC), 4330 East West Highway, Bethesda, MD 20814 (phone: 301-504-7923, website: www.cpsc.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).

1-6. 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, access restrictions for passers-by or individual risk assessment for welders. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

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

4. Keep head and trunk as far away from the equipment in the welding circuit as possible.
5. Connect work clamp to workpiece as close to the weld as possible.
6. Do not work next to, sit or lean on the welding power source.
7. 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 – CONSIGNES DE SÉCURITÉ – LIRE AVANT UTILISATION

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⚠ Se protéger et protéger les autres contre le risque de blessure — lire et respecter ces consignes.

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 ELECTRIQUE, PIECES EN MOUVEMENT, et PIECES CHAUDES. Consulter les symboles et les instructions ci-dessous y afférant pour les actions nécessaires afin d'éviter le danger.

2-2. Dangers relatifs au soudage à l'arc



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 2-5. 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.



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.
- Se servir d'une source électrique à courant électrique UNIQUEMENT si le procédé de soudage 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 harnais 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.

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 génère des fumées et des gaz. Leur inhalation peut être dangereux pour votre santé.

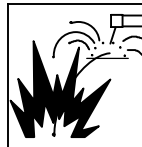
- Eloigner votre tête des fumées. Ne pas respirer les fumées.
- À l'intérieur, ventiler la zone et/ou utiliser une ventilation forcée au niveau de l'arc pour l'évacuation des fumées et des gaz de soudage.
- Si la ventilation est médiocre, porter un respirateur anti-vapeurs approuvé.
- Lire et comprendre 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. Demander toujours à un surveillant dûment formé de se tenir à proximité. Des fumées et des gaz de soudage peuvent déplacer l'air et abaisser le niveau d'oxygène provoquant des blessures ou des accidents mortels. S'assurer que l'air de respiration ne présente aucun danger.
- Ne pas souder dans des endroits situés à proximité d'opérations de dégraissage, de nettoyage ou de pulvérisation. La chaleur et les rayons de l'arc peuvent réagir en présence de vapeurs et former des gaz hautement toxiques et irritants.
- Ne pas souder des métaux munis d'un revêtement, tels que l'acier galvanisé, plaqué en plomb ou au cadmium à moins que le revêtement n'ait été enlevé dans la zone de soudure, que l'endroit soit bien ventilé, et en portant un respirateur à alimentation d'air. Les revêtements et tous les métaux renfermant ces éléments peuvent dégager des fumées toxiques en cas de soudage.



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

Le rayonnement de l'arc du procédé de soudage génère des rayons visibles et invisibles intense (ultraviolets et infrarouges) susceptibles de provoquer des brûlures dans les yeux et sur la peau. Des étincelles sont projetées pendant le soudage.

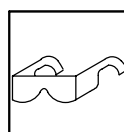
- Porter un casque de soudage approuvé muni de verres filtrants appropriés pour protéger visage et yeux pour protéger votre visage et vos yeux pendant le soudage ou pour regarder (voir ANSI Z49.1 et Z87.1 énuméré dans les normes de sécurité).
- Porter des lunettes de sécurité avec écrans latéraux même 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 peut provoquer un incendie ou une explosion.

Le soudage effectué sur des conteneurs fermés tels que des réservoirs, tambours ou des conduites peut provoquer leur éclatement. 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.

- Déplacer toutes les substances inflammables à une distance de 10,7 m de l'arc de soudage. En cas d'impossibilité les recouvrir soigneusement avec des protections homologuées.
- Ne pas souder dans un endroit où des étincelles peuvent tomber sur des substances inflammables.
- Se protéger et d'autres personnes de la projection d'étincelles et de métal chaud.
- Des étincelles et des matériaux chauds du soudage peuvent facilement passer dans d'autres zones en traversant de petites fissures et des ouvertures.
- Surveiller tout déclenchement d'incendie et tenir un extincteur à proximité.
- Le soudage effectué sur un plafond, plancher, paroi ou séparation peut déclencher un incendie de l'autre côté.
- Ne pas effectuer le soudage sur des conteneurs fermés tels que des réservoirs, tambours, ou conduites, à moins qu'ils n'aient été préparés correctement conformément à AWS F4.1 (voir les normes de sécurité).
- Ne soudez pas si l'air ambiant est chargé de particules, gaz, ou vapeurs inflammables (vapeur d'essence, par exemple).
- Brancher le câble de masse sur la pièce la plus près possible de la zone de soudage pour éviter le transport du courant sur une longue distance par des chemins inconnus éventuels en provoquant des risques d'électrocution, d'étincelles et d'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.
- 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.

- Le soudage, l'écaillage, le passage de la pièce à la brosse en fil de fer, et le meulage génèrent des étincelles et des particules métalliques volantes. 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 protecteur 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.

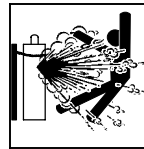
- Les porteurs de stimulateurs cardiaques et autres implants médicaux doivent rester à distance.
- Les porteurs d'implants médicaux doivent consulter leur médecin et le fabricant du dispositif avant de s'approcher de la zone où se déroule du soudage à l'arc, du soudage par points, du gougeage, de la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

Des bouteilles de gaz protecteur 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.

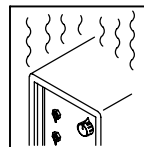
- Protéger les bouteilles de gaz comprimé d'une chaleur excessive, des chocs mécaniques, des dommages physiques, du laitier, des flammes ouvertes, des étincelles et des arcs.
- Placer les bouteilles debout en les fixant dans un support stationnaire ou dans un porte-bouteilles pour les empêcher de tomber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

2-3. 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.



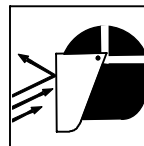
L'EMPLOI EXCESSIF peut SURCHAUFFER L'ÉQUIPEMENT.

- 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.



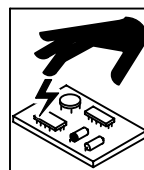
LA CHUTE DE L'ÉQUIPEMENT peut provoquer des blessures.

- 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.



LES ÉTINCELLES PROJÉTÉES 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.



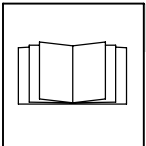
LES FILS DE SOUDAGE peuvent provoquer des blessures.

- 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.



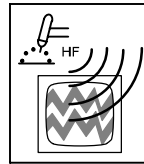
Les PIÈCES MOBILES peuvent causer des blessures.

- 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.



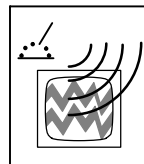
LIRE LES INSTRUCTIONS.

- 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 risque de provoquer des interférences.

- L'énergie électromagnétique risque de provoquer des interférences pour l'équipement électronique sensible tel que les ordinateurs et l'équipement commandé par ordinateur tel que les robots.
- Veiller à ce que tout l'équipement de la zone de soudage soit compatible électromagnétiquement.
- Pour réduire la possibilité d'interférence, maintenir les câbles de soudage aussi courts que possible, les grouper, et les poser aussi bas que possible (ex. par terre).
- Veiller à souder à une distance de 100 mètres de tout équipement électronique sensible.
- Veiller à ce que ce poste de soudage soit posé et mis à la terre conformément à ce mode d'emploi.
- En cas d'interférences après avoir pris les mesures précédentes, il incombe à l'utilisateur de prendre des mesures supplémentaires telles que le déplacement du poste, l'utilisation de câbles blindés, l'utilisation de filtres de ligne ou la pose de protecteurs dans la zone de travail.

2-4. 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)



Les batteries, les bornes et autres accessoires contiennent du plomb et des composés à base de plomb, produits chimiques dont l'État de Californie reconnaît qu'ils provoquent des cancers et des malformations congénitales ou autres problèmes de procréation. Se laver les mains après manipulation.

Pour les moteurs à essence :



Les gaz d'échappement des moteurs contiennent des produits chimiques dont l'État de Californie reconnaît qu'ils provoquent des cancers et des malformations congénitales ou autres problèmes de procréation.

Pour les moteurs diesel :



Les gaz d'échappement des moteurs diesel et certains de leurs composants sont reconnus par l'État de Californie comme provoquant des cancers et des malformations congénitales ou autres problèmes de procréation.

2-5. Principales normes de sécurité

Safety in Welding, Cutting, and Allied Processes, ANSI Standard Z49.1, de Global Engineering Documents (téléphone : 1-877-413-5184, site Internet : www.global.ihs.com).

Safe Practices for the Preparation of Containers and Piping for Welding and Cutting, American Welding Society Standard AWS F4.1, de Global Engineering Documents (téléphone : 1-877-413-5184, site internet : www.global.ihs.com).

National Electrical Code, NFPA Standard 70, de National Fire Protection Association, Quincy, MA 02269 (téléphone : 800-344-3555, site Internet : www.nfpa.org et www.sparky.org).

Safe Handling of Compressed Gases in Cylinders, CGA Pamphlet P-1, de Compressed Gas Association, 4221 Walney Road, 5th Floor, Chantilly, VA 20151 (téléphone : 703-788-2700, site Internet : www.cganet.com).

Safety in Welding, Cutting, and Allied Processes, CSA Standard W117.2, de Canadian Standards Association, Standards Sales, 5060 Spectrum Way, Suite 100, Ontario, Canada L4W 5N5 (téléphone : 800-463-6727, site internet : www.csa-international.org).

Safe Practice For Occupational And Educational Eye And Face Protection, ANSI Standard Z87.1, de American National Standards Institute,

25 West 43rd Street, New York, NY 10036 (téléphone : 212-642-4900, site Internet : www.ansi.org).

Standard for Fire Prevention During Welding, Cutting, and Other Hot Work, NFPA Standard 51B, de National Fire Protection Association, P.O. Box 9101, Quincy, MA 02269-9101 (téléphone : 617-770-3000, site Internet : 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, de U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 (téléphone : 1-866-512-1800) (il y a 10 bureaux régionaux – le téléphone de la région 5, Chicago, est 312-353-2220, site Internet : www.osha.gov).

U.S. Consumer Product Safety Commission (CPSC), 4330 East West Highway, Bethesda, MD 20814 (téléphone : 301-504-7923, site internet : www.cpsc.gov).

Applications Manual for the Revised NIOSH Lifting Equation, The National Institute for Occupational Safety and Health (NIOSH), 1600 Clifton Rd, Atlanta, GA 30333 (téléphone : 1-800-232-4636, site internet : www.cdc.gov/NIOSH).

2-6. 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. Des mesures de protection pour les porteurs d'implants médicaux doivent être prises: par exemple, des restrictions d'accès pour les passants ou une évaluation individuelle des risques pour les soudeurs. Tous les soudeurs doivent appliquer les procédures suivantes pour minimiser l'exposition aux CEM provenant du circuit de soudage:

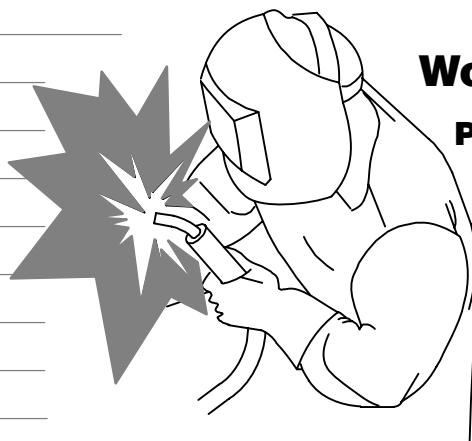
1. Rassembler les câbles en les torsadant ou en les attachant avec du ruban adhésif ou avec une housse.
2. Ne pas se tenir au milieu des câbles de soudage. Disposer les câbles d'un côté et à distance de l'opérateur.
3. Ne pas courber et ne pas entourer les câbles autour de votre corps.

4. Maintenir la tête et le torse aussi loin que possible du matériel du circuit de soudage.
5. Connecter la pince sur la pièce aussi près que possible de la soudure.
6. Ne pas travailler à proximité d'une source de soudage, ni s'asseoir ou se pencher dessus.
7. 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.

Notes



Work like a Pro!

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

SECTION 3 – FUME EXTRACTION SAFETY PRECAUTIONS – READ BEFORE USING

fume_2009-11

3-1. Fume Extraction Hazards

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



FUME EXTRACTOR MISUSE can be hazardous.

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

- 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 an Industrial Hygienist.
- Follow all applicable ANSI, OSHA, CSA, UL, and other regulatory guidelines pertaining to the use of respirators.
- 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 the filter or damage the filters and allow unfiltered air into the breathing zone.
- Only use the fume extractor only 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.
- 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.

SECTION 4 – MESURES DE SÉCURITÉ – EXTRACTION DES FUMÉES – À LIRE AVANT UTILISATION

fume_2009-11

4-1. Dangers en matière d'extraction des fumées



L'installation, l'utilisation, l'entretien et les réparations doivent être confiés à des personnes qualifiées.



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.

- 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.
- Suivre toutes les directives ANSI, OSHA, CSA, UL et autres portant sur l'utilisation des appareils de respiration.
- 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 ce dispositif, des étincelles de soudage pourraient enflammer ou endommager le filtre et permettre la présence d'air non filtré dans la zone de respiration.
- Utiliser l'extracteur de fumées uniquement pour extraire les fumées de soudage. Ne pas l'employer pour extraire des gaz chauds (à plus de 104° F/40° 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.
- 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:
 - a. La respiration devient difficile.
 - b. Apparition d'étourdissements, de problèmes de vision ou irritation des yeux, du nez ou de la bouche.
 - c. L'équipement est endommagé.
 - d. La circulation d'air subit une baisse ou s'arrête.
 - e. 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 nettoyants et les dégraissants.
- L'extracteur de fumées doit être utilisé avec le bras d'extraction, les tuyaux, le filtre et les autres composants recommandés par le fabricant.

SECTION 5 – DEFINITIONS

5-1. Symbols And Definitions

I	On	O	Off	%	Percent		Protective Earth (Ground)
A	Amperes	V	Volts		Air Filter		

SECTION 6 – SPECIFICATIONS

6-1. General Description

The SWX stationary weld fume collection system consists of three primary components: extraction arm, blower assembly, and filter cabinet.

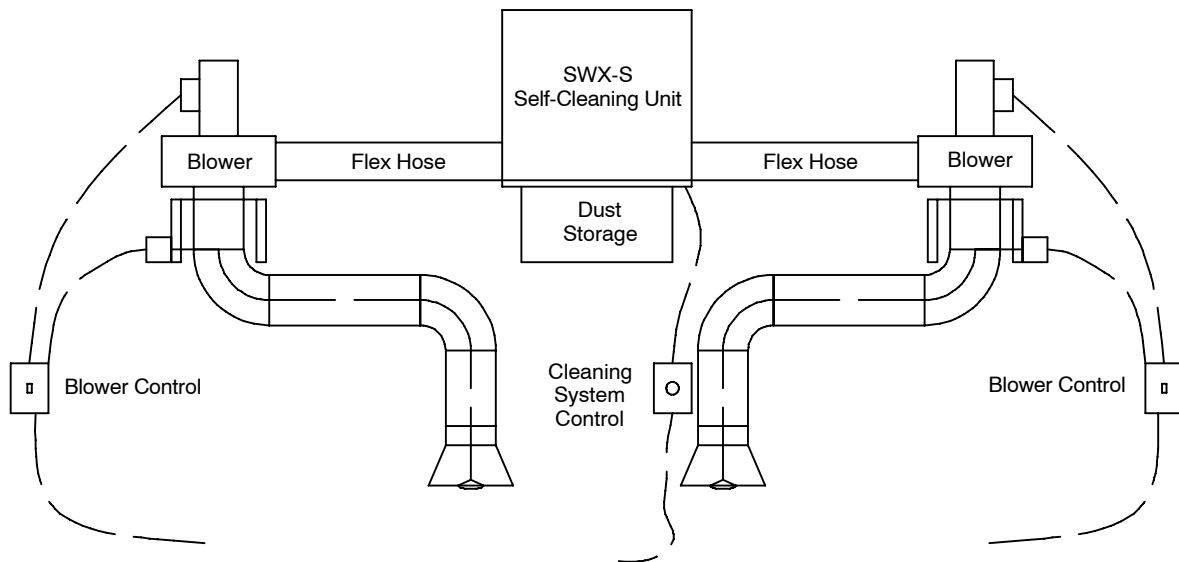
The extraction arm uses locking joints and flexible tubing to ensure the hood is placed near the source of the fumes. Captured fumes are drawn into the extraction arm, through the blower housing, and discharged into the filter cabinet.

Fumes discharged into the filter cabinet are filtered through a mesh outlet screen (spark arrester). (The mesh screen provides protection and prevents large sparks from passing into the filter housing.) The fumes then pass through the high-efficiency, nanofiber media cartridge where particles are filtered from the air. Cleaned air flows through the center of the filter and discharges through the front of the unit.

If the filter cabinet is a self-cleaning model (SWX-S), a semi-automatic filter cleaning system removes particles from the filter. When the Filter Cleaning switch is pressed, compressed air removes particles from the filter. The particles then fall into a collection tray at the bottom of the unit. The filter in the SWX-D models cannot be cleaned and must be replaced when dirty. A filter gauge indicates when it is time to clean the filter (SWX-S model only) or replace it. The fume extraction system is controlled by a wall-mounted power switch that is connected to the blower assembly.

The weld fume collector comes partially assembled and can be used with a 7 ft. (2.1 m) 10 Ft. (3 m) or 12 ft. (3.7 m) extension extraction arm.

SWX-S Self-Cleaning Fume Extractor With Two Extraction Arms



6-2. Specifications

A. Filter Cabinet (SWX-D Standard Model)

Self-Cleaning System	Filter Area	Inlet Size	Inlets	Mounting System	Weight	Dimensions (L x W x H)
No	490 sq ft (45.5 m ²)	6-3/4 in. ID (171 mm)	Two (Left and Right)	Wall Bracket	130 lb (59 kg)	33 x 27-1/2 x 28-1/4 in. (84 x 70 x 72 cm)

B. Filter Cabinet (SWX-S Self-Cleaning Model)

Self-Cleaning System	Input Power	Filter Area	Inlet Size	Inlets	Mounting System	Weight	Dimensions (L x W x H)
Yes	115 Volts AC, 1.5 A	490 sq ft (45.5 m ²)	7 in. (178 mm)	Two (Left and Right)	Wall Bracket	195 lb (88 kg)	33 x 27-1/2 x 33 in. (84 x 70 x 84 cm)

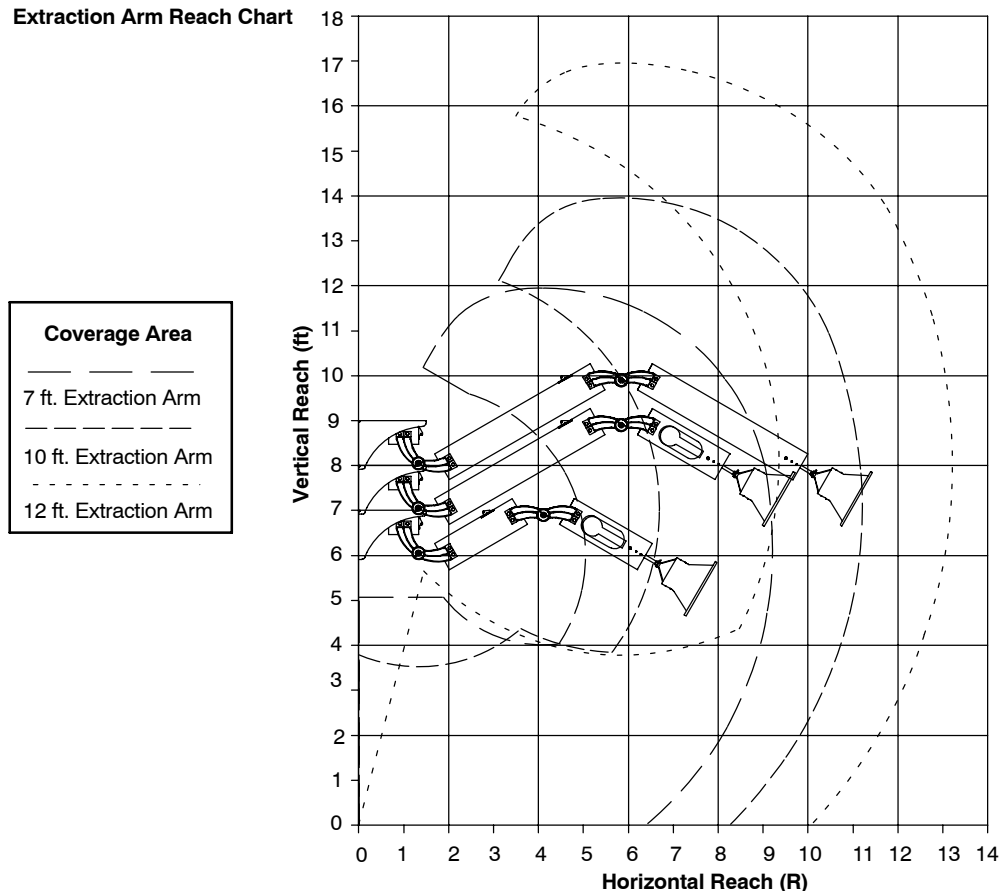
C. Blower Specifications

Input Power	Nominal Air Flow	Motor	Filter Area	Flex Duct Size	Sound Level	Weight	Dimensions (L x W x H)
115 Volts AC, 11.9 A	875 CFM (413 liter/sec)	1 HP Thermally Protected Motor	490 sq ft (45.5 m ²)	6-3/4 in. ID 191 mm	71.2 dBa AMCA Tested Sound Level at 5 ft (1.5 m)	Blower: 80 lb (36 kg) Bracket: 18 lb (8.2 kg)	21 x 18-1/2 x 20-1/2 (53 x 47 x 52 cm)

D. Extraction Arm Specifications

Model	Arm Reach	Arm Diameter	Recommended Mounting Height	Minimum Ceiling Height
SA-W807	7 ft (2 m)	8 in. (200 mm)	7ft (2.1 m)	12 ft 4 in. (3.5 m)
SA-W810	10 ft (3 m)	8 in. (200 mm)	8 ft (2.4 m)	13 ft 4 in. (3.8 m)
SA-W812	12 ft (3.7 m)	8 in. (200 mm)	9 ft (2.75 m)	14 ft 4 in. (4 m)

Extraction Arm Reach Chart

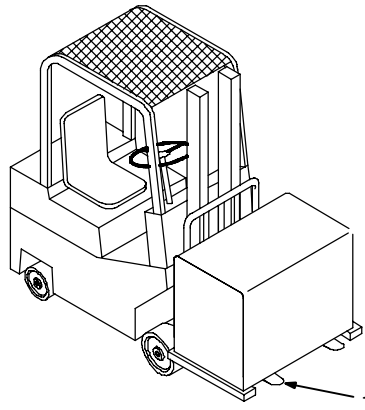


SECTION 7 – INSTALLATION

7-1. 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.

7-2. Selecting A Location



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

! Installation must meet all National, State, and Local Codes – have only qualified persons make this installation.

! Do not move or operate unit where it could tip.

! Do not use this equipment to support personnel, large tools, or other material.

! Use only the supplied control enclosures when installing this unit.

! Be sure the wall or other structural support will support the weight of the equipment.

! Special installation may be required where gasoline or volatile liquids are present – see NEC Article 511 or CEC Section 20.

1 Lifting Forks

Use lifting forks to move unit.

If using lifting forks, extend forks beyond opposite side of unit.

NOTICE – To avoid damaging filter cabinet during installation, use the attached shipping pallet to lift unit. Remove pallet after completing installation.

2 120 V, 15 A AC Power Supply

ⓘ A dedicated 115 volt AC, 15 Amp individual branch circuit protected by time delay (type D) fuses or circuit breaker is required for each blower assembly.

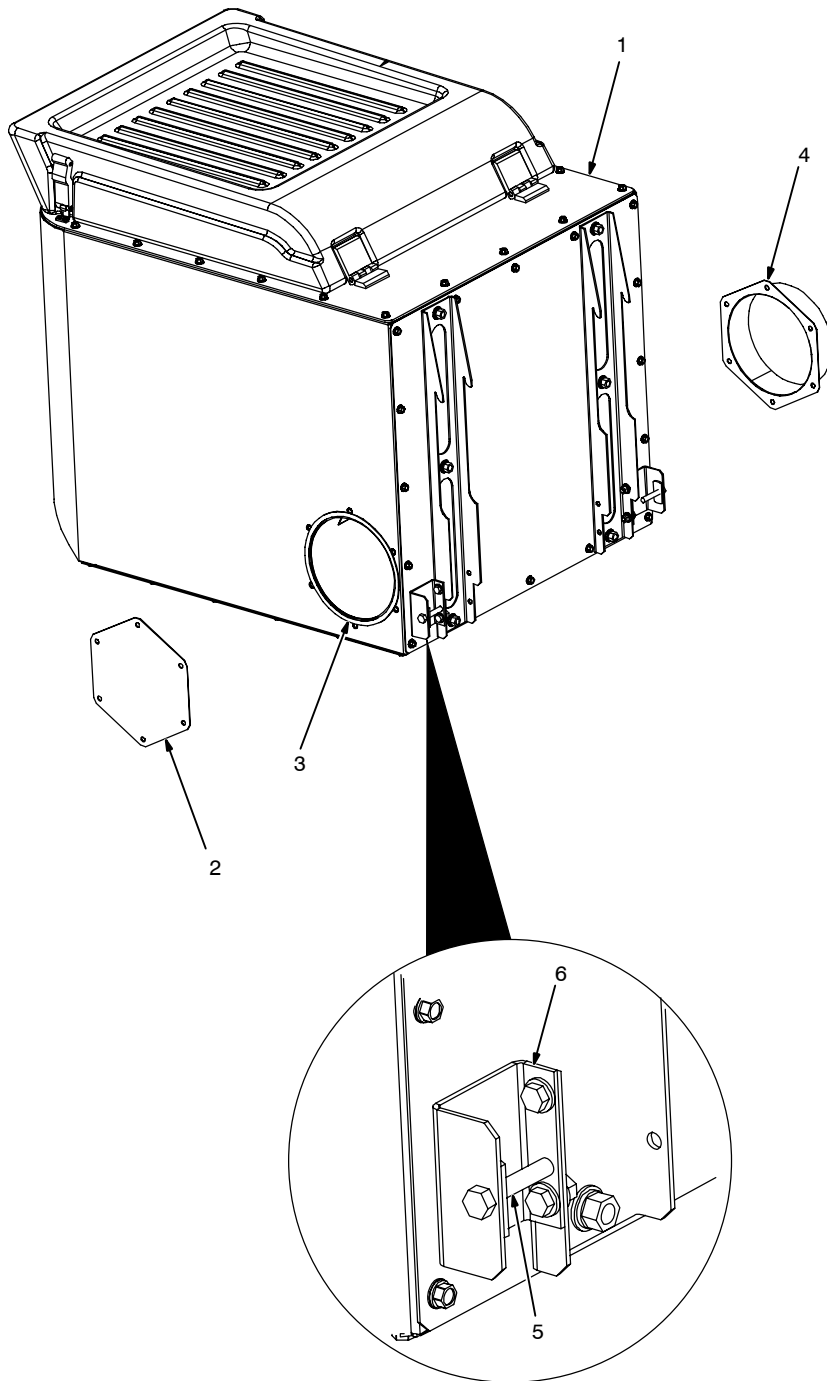
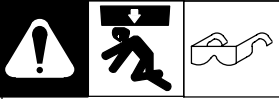
3 Compressed Air Supply (80–100 psi/3.8–4.8 kPa)

ⓘ (Compressed air is needed for SWX-S self-cleaning models only)

Position unit near the welding operation and close to compressed air supply and 115 volt AC supply. Keep unit away from obstructions that may restrict movement of the fume collector or extension arm.

The minimum ceiling height for a wall-mounted fume extraction system is based on the length of the extraction arm. See Section 6-2D for ceiling height requirements.

7-3. Preparing Filter Cabinet For Mounting



- 1 Filter Cabinet
- 2 Cover Plate
- 3 Inlet

The filter cabinet has left and right side inlets. Determine to which side(s) of the cabinet the fume will be ducted. Duct work can be also connected to both inlets simultaneously.

Install cover plate on unused inlet. Tighten cover plate hardware to ensure a tight seal.

- 4 Inlet Collar

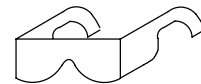
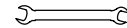
Install inlet collar on inlet where fumes will be ducted. Secure collar with supplied band clamps.

 If installing two extraction arms, follow instructions supplied with Dual Arm kit 300 695.

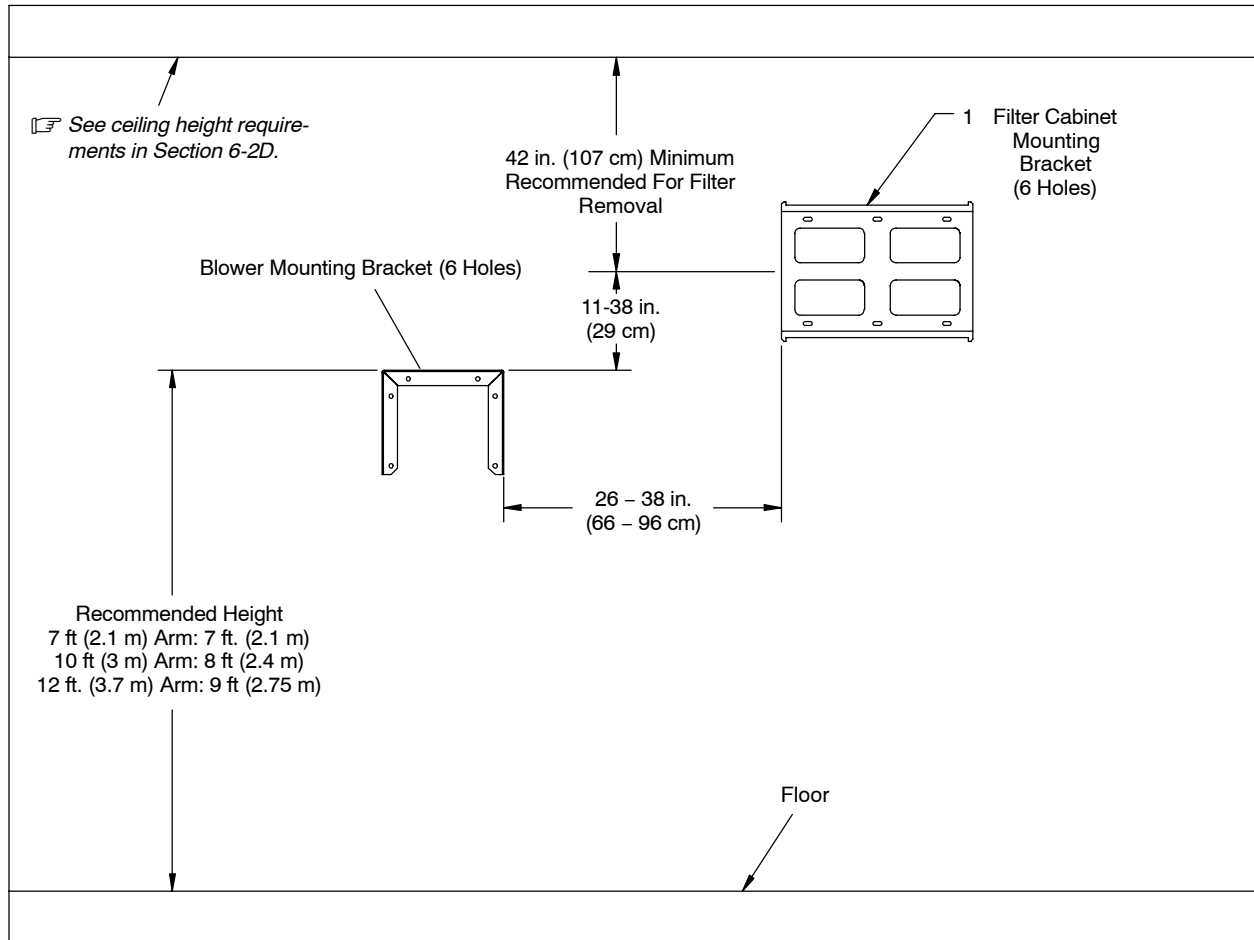
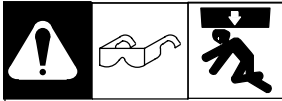
- 5 Locking Bolts
- 6 Mounting Bracket

Loosen the two locking bolts and pivot mounting bracket away from cabinet. Remove bracket from cabinet mounting forks.

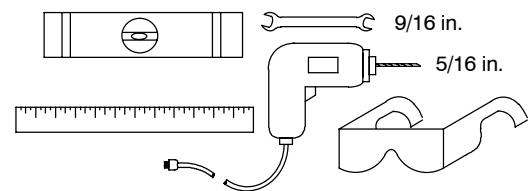
Tools Needed:



7-4. Installing Filter Cabinet Mounting Bracket



Tools Needed:



- ⚠ Only qualified persons should install, operate, maintain, and repair this unit.**
- ⚠ Installation must meet all National, State, and Local Codes – have only qualified persons make this installation.**
- ⚠ Do not use this equipment to support personnel, large tools, or other material.**
- ⚠ Do not damage electrical wiring and other utilities when drilling into wall or other structural support.**
- ⚠ Be sure the wall or other structural support will support the weight of the equipment.**

- ⚠ Use only mounting hardware specifically designed for the structure or material supporting the filter cabinet.**
- ⚠ Install hardware in all six slots in the mounting bracket.**
- ⚠ Install bracket exactly as described. For applications not covered in these instructions, consult local building codes and qualified persons to ensure the equipment is adequately supported.**

Hardware is supplied to attach the bracket to steel, concrete, brick, or block construction.

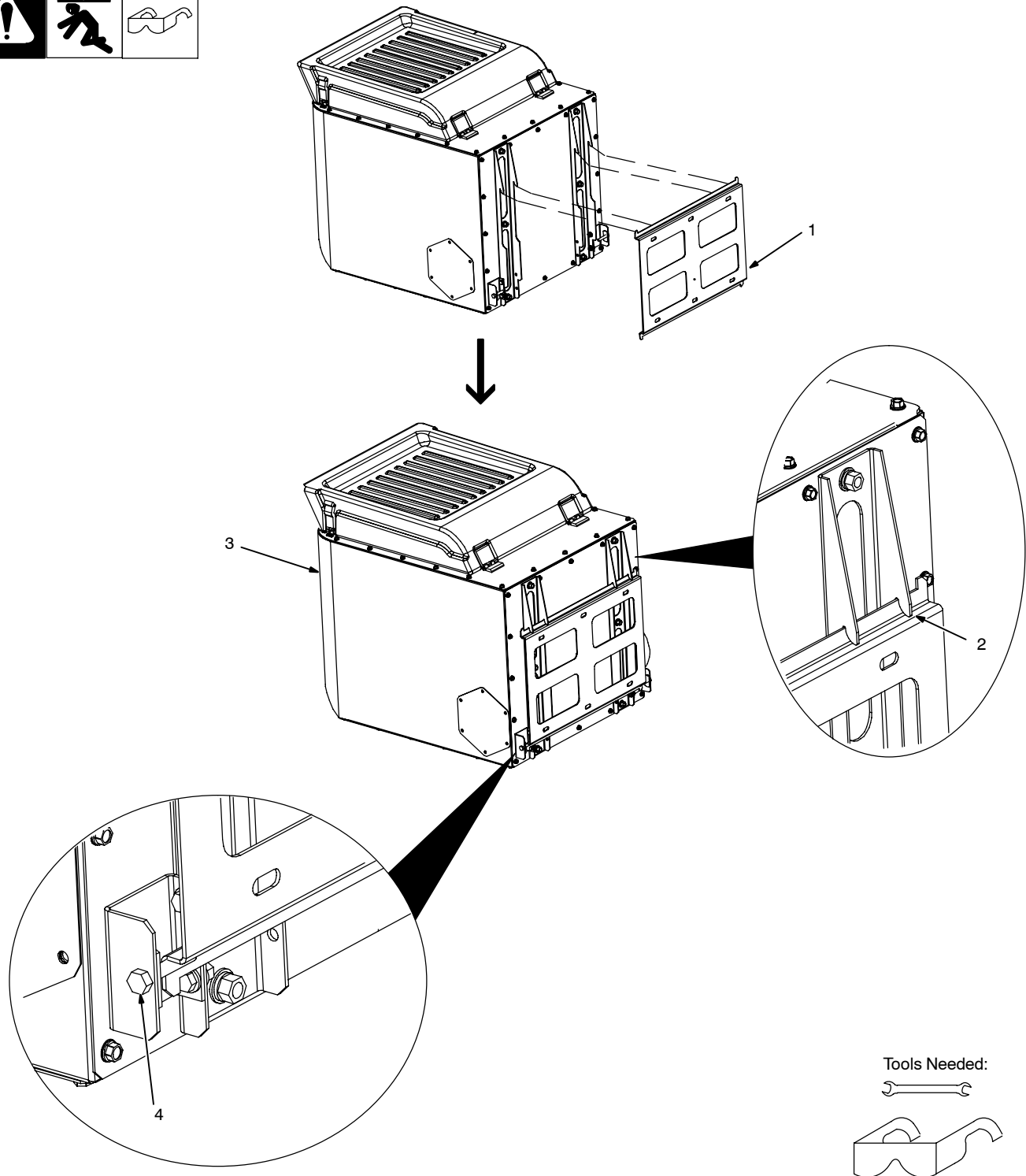
1 Filter Cabinet Mounting Bracket

Select location for mounting bracket based on the dimensions shown in layout drawing. Use bracket as a template to mark the six mounting holes on the support structure. Drill 5/16 in. (8 mm) holes where marked.

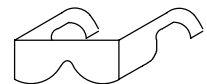
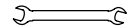
If attaching bracket to a steel beam, plate, angle, or channel use the grade 8, 3/8-16 hardware provided. Secure bracket with a screw, two flat washers, lock washer, and nut at all six locations on bracket.

If attaching bracket to concrete, hollow concrete block, grout-filled concrete block, or brick use the supplied Tapcon 3/8 x 1-3/4 in. masonry screws. Drill holes at least 1 in. (25 mm) deeper than the length of the anchor. Remove dust from holes. Secure bracket with Tapcon masonry screws.

7-5. Installing Filter Cabinet



Tools Needed:



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

⚠ Do not use this equipment to support personnel, large tools, or other material.

⚠ Be sure the wall or other structural support will support the weight of the equipment.

NOTICE – To avoid damaging filter cabinet

during installation, use the attached shipping pallet to lift unit. Remove pallet after completing installation.

- 1 Mounting Bracket (Installed On Support Structure – Section 7-4)
- 2 Ear Tabs
- 3 Filter Cabinet
- 4 Locking Screw

Using attached shipping pallet, lift filter cabinet so cabinet forks are above the mounting bracket. Lower the cabinet until both

forks are seated on bracket and within bracket ear tabs.

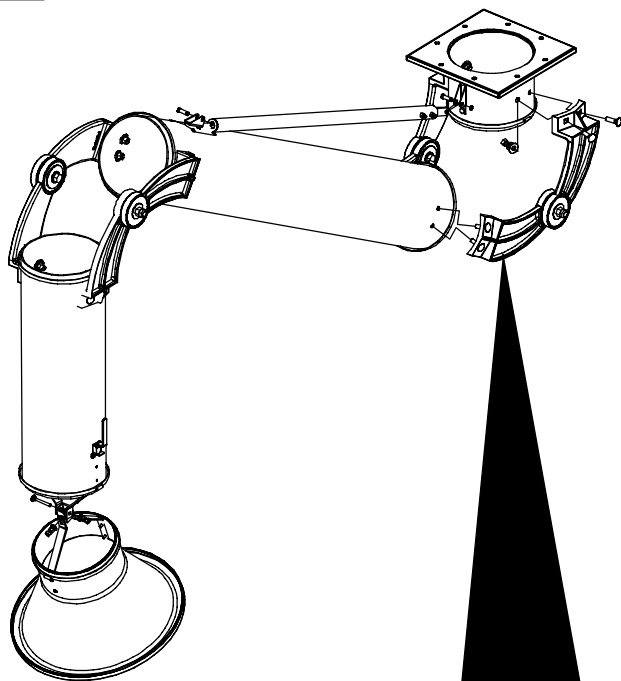
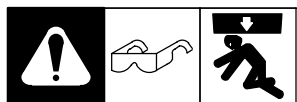
Tighten the two locking screws to secure cabinet on bracket. Remove shipping pallet.

- 5 Particle Collection Tray (Not Shown) (SWX-S Self-Cleaning Models Only)

Install particle collection tray in tracks at bottom of cabinet. (Make sure the tray's small corners slide in first.) Secure tray by closing the four side latches.

7-6. Assembling Extraction Arm

A. Attaching Elbow Brackets To Base Assembly And Installing Spring



Elbow brackets are shipped pre-assembled and torqued to the correct specifications. Verify the part number on the bracket packaging and be sure to install the correct bracket at each joint.

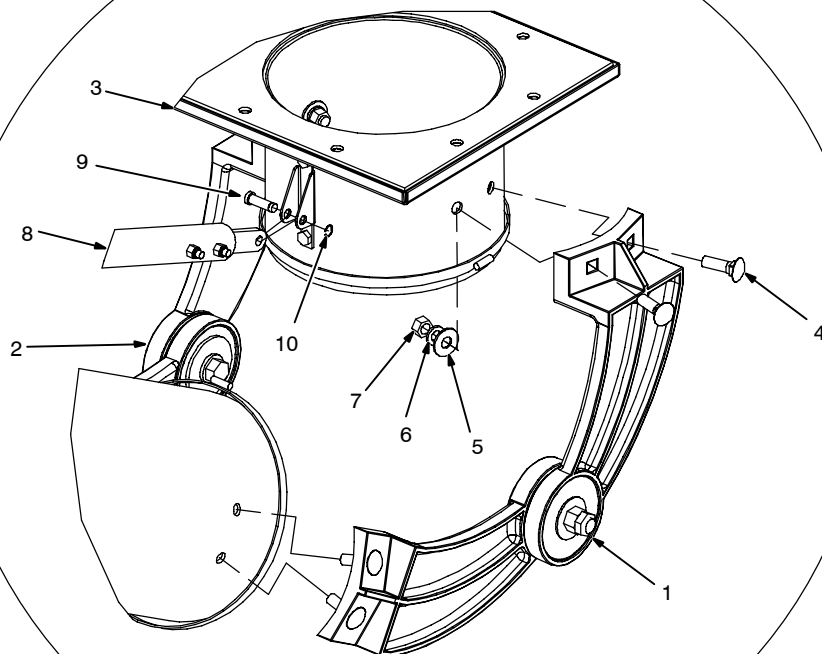
- 1 Base Elbow Bracket ____
- 2 Base Elbow Bracket ____
- 3 Base Assembly
- 4 3/8 in. Screw
- 5 3/8 in. Flat Washer
- 6 3/8 in. Lock Washer
- 7 3/8 in. Nut

Attach the elbow brackets to the rolled collar with the supplied 3/8 in. hardware. Tighten hardware to 30 ft lb (41 N·m).

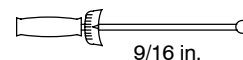
- 8 Spring
- 9 Pin
- 10 Clip

Point lower tube assembly straight up. Use pin and clip to attach spring to gas spring mounts.

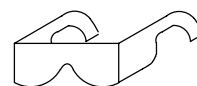
To ensure proper lubrication, install gas spring with thin shaft pointing down. Be careful not to over-extend spring during installation.



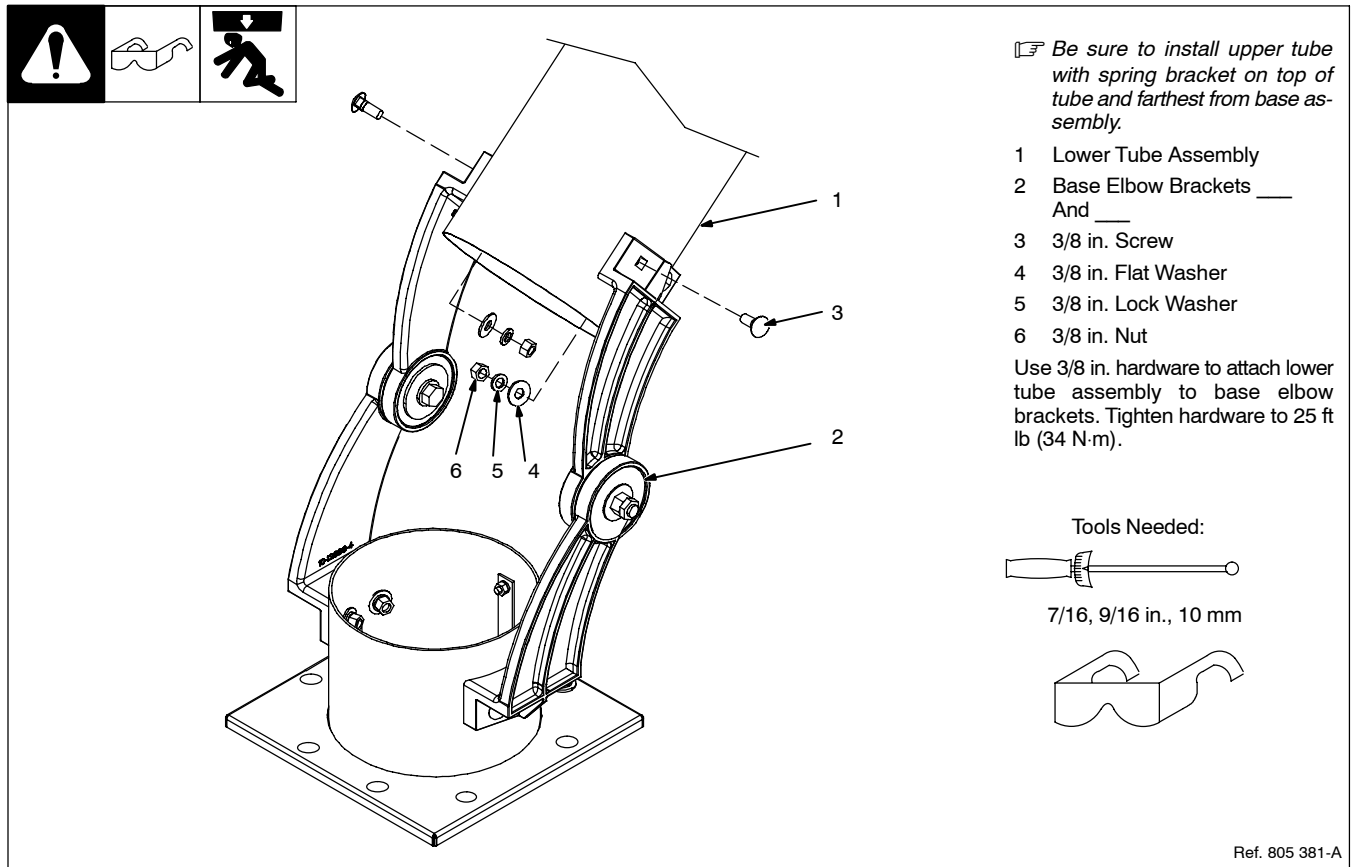
Tools Needed:



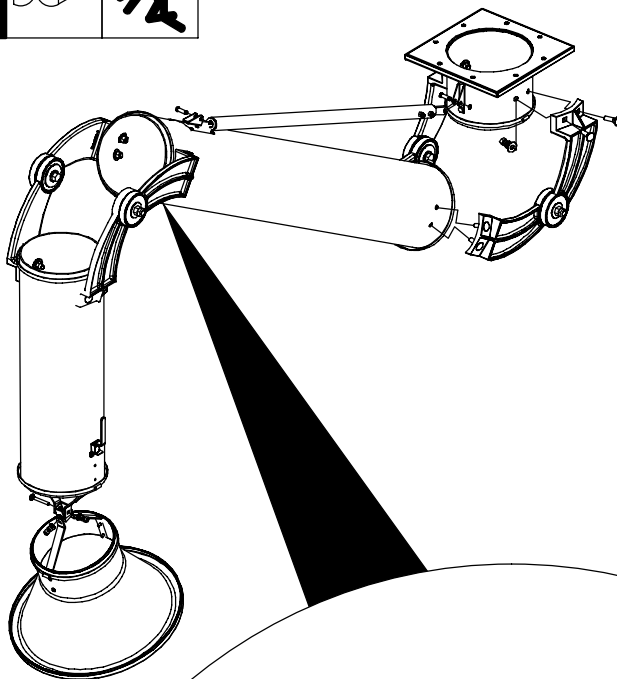
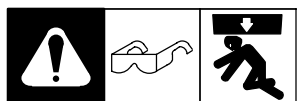
9/16 in.



B. Assembling Extraction Arm Lower (Longer) Tube



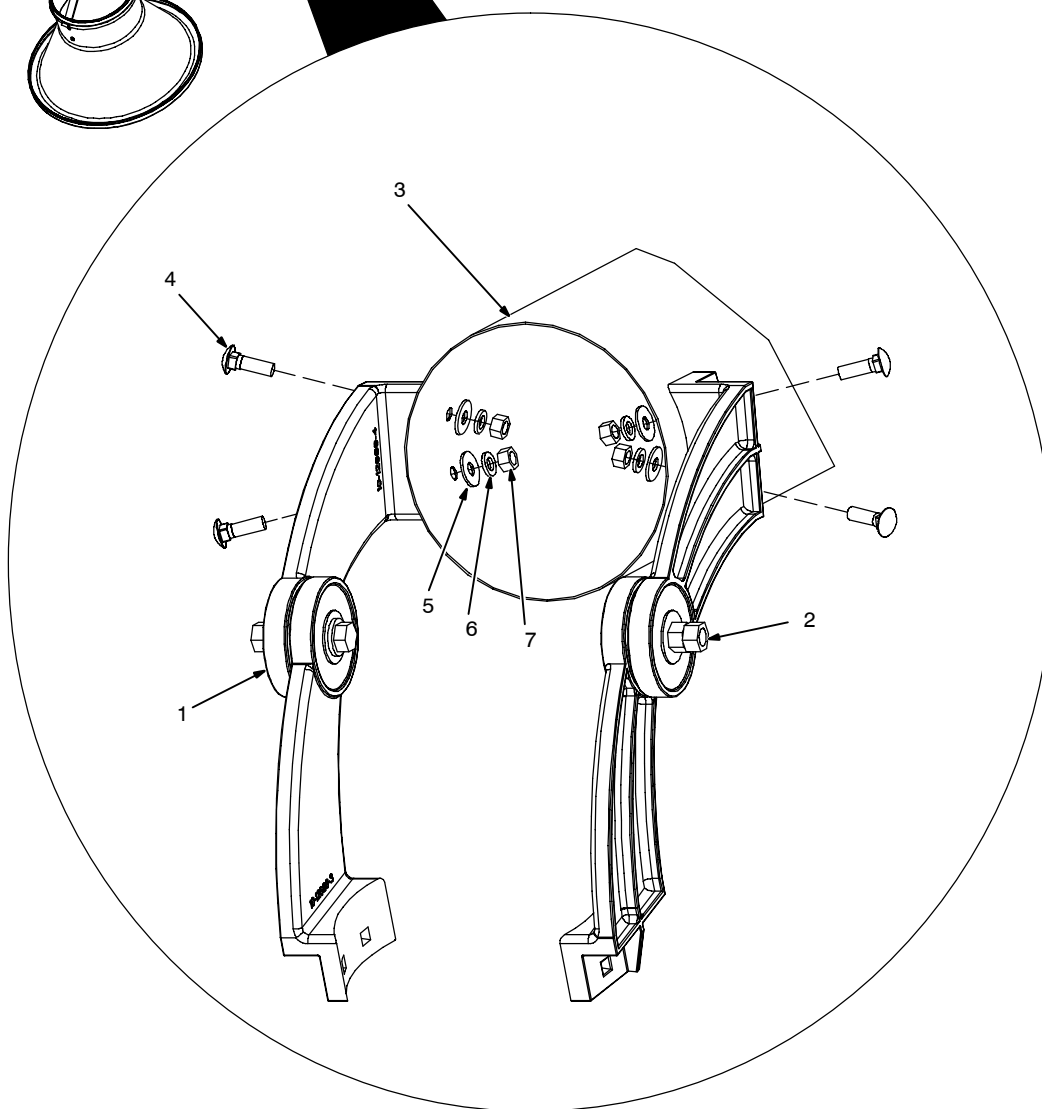
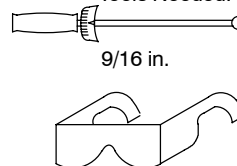
C. Assembling Extraction Arm Upper Tube Brackets



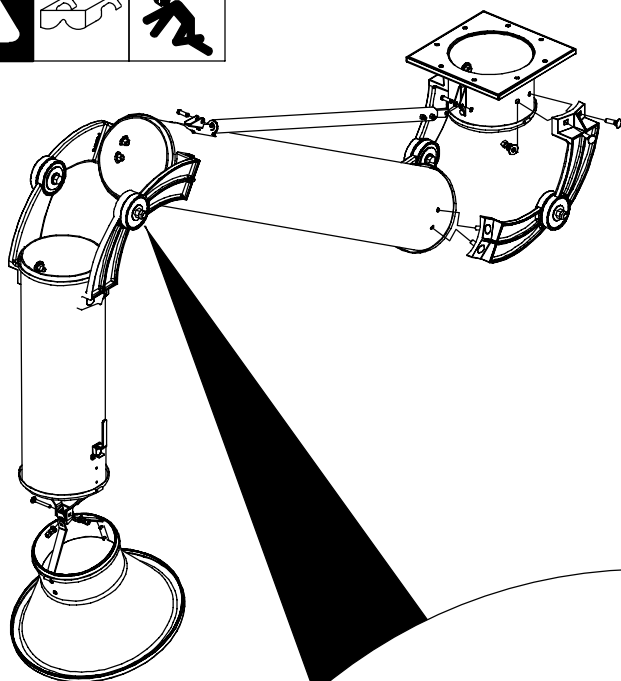
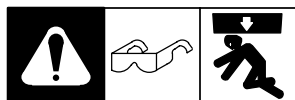
- 1 Elbow Bracket 241 060
- 2 Elbow Bracket 241 059
- 3 Lower Tube Assembly
- 4 3/8 in. Screw
- 5 3/8 in. Flat Washer
- 6 3/8 in. Lock Washer
- 7 3/8 in. Nut

Use 3/8 in. hardware to attach elbow brackets to lower tube assembly as shown. Tighten hardware to 25 ft lb (34 N·m).

Tools Needed:



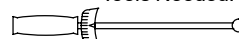
D. Assembling Extraction Arm Upper Tube



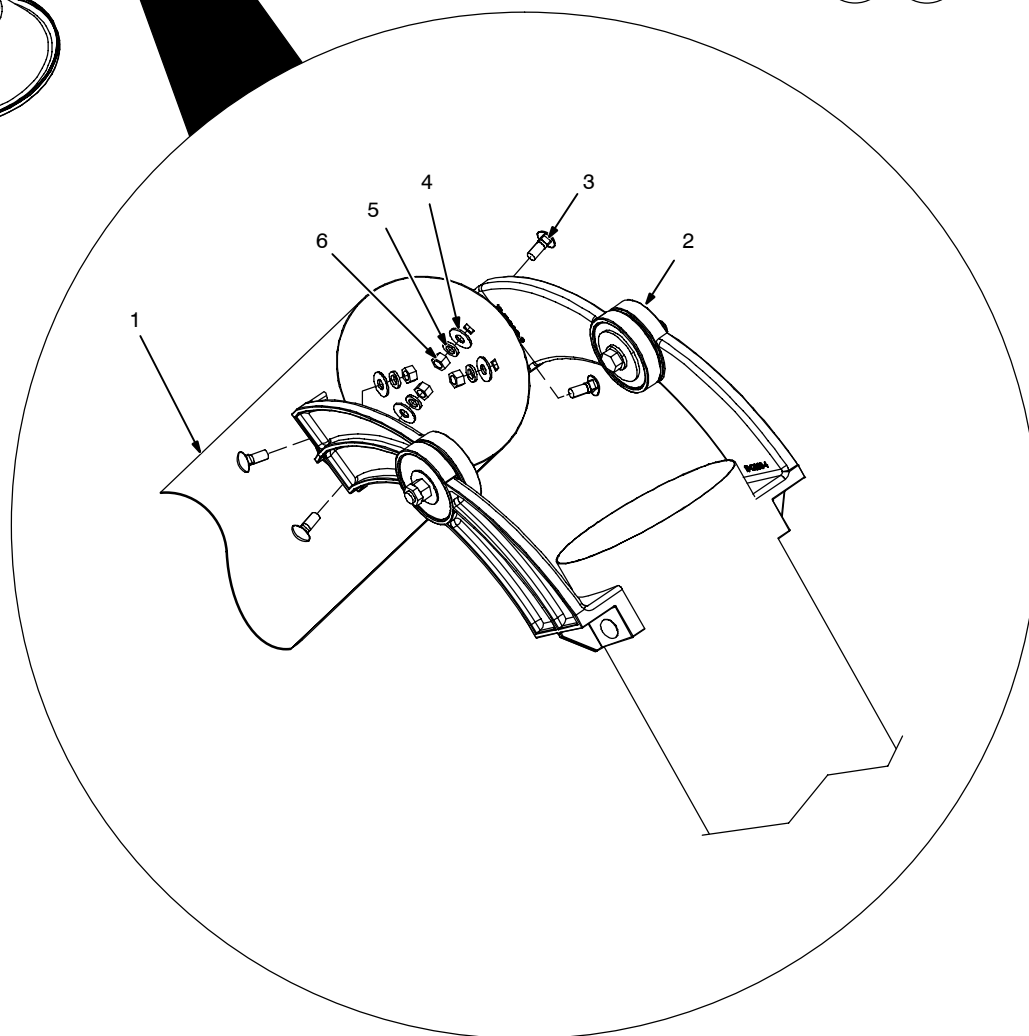
- 1 Upper Tube Assembly
- 2 Elbow Brackets ____ And ____
- 3 3/8 in. Screw
- 4 3/8 in. Flat Washer
- 5 3/8 in. Lock Washer
- 6 3/8 in. Nut

Attach upper tube assembly to elbow brackets with 3/8 in. hardware. Tighten hardware to 25 ft lb (34 N·m).

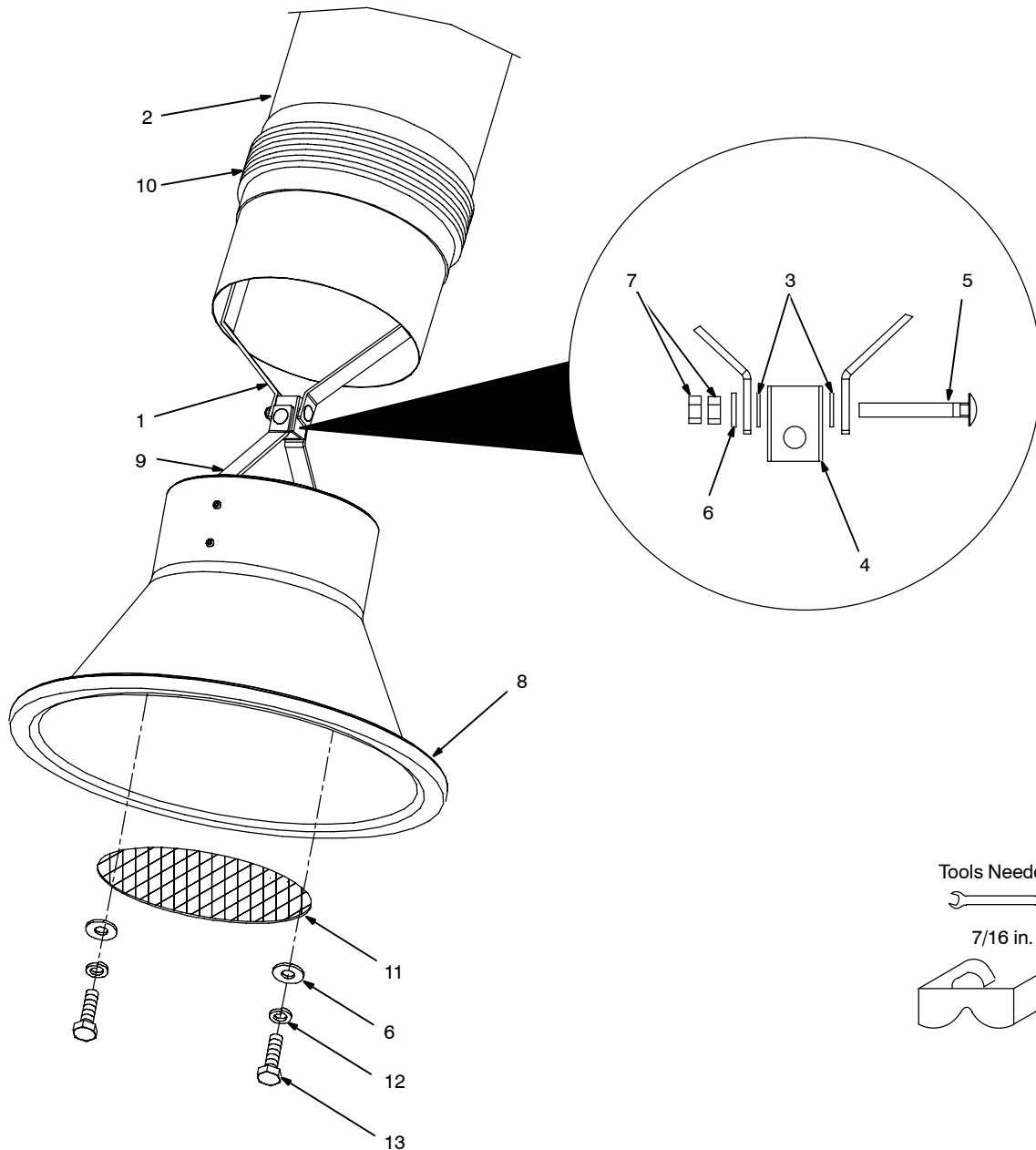
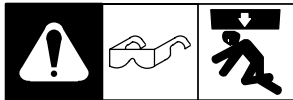
Tools Needed:



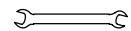
9/16 in.



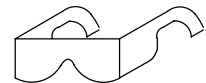
E. Assembling Extraction Arm Hood



Tools Needed:



7/16 in.



Ref. 805 386-B

Flex duct must be installed prior to installing hood.

- 1 Upper Tube Brackets
- 2 Upper Tube
- 3 Fiber Washers
- 4 Square Tube
- 5 1/4 in. Carriage Screw
- 6 1/4 in. Flat Washer
- 7 1/4 in. Nut
- 8 Hood

- 9 Hood Brackets
- 10 12 in. Flex Duct
- 11 Screen w/Gasket
- 12 1/4 in. Lock Washer
- 13 1/4 in. Hex Head Screw

Before bolting the hood to the hood bracket weldments, slide the 12 in. (30 cm) piece of flex duct over the upper tube.

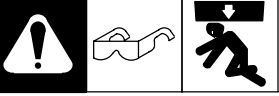
Position the fiber washers between the square tube and hood brackets. Secure components with 1/4 in. screw, flat wash-

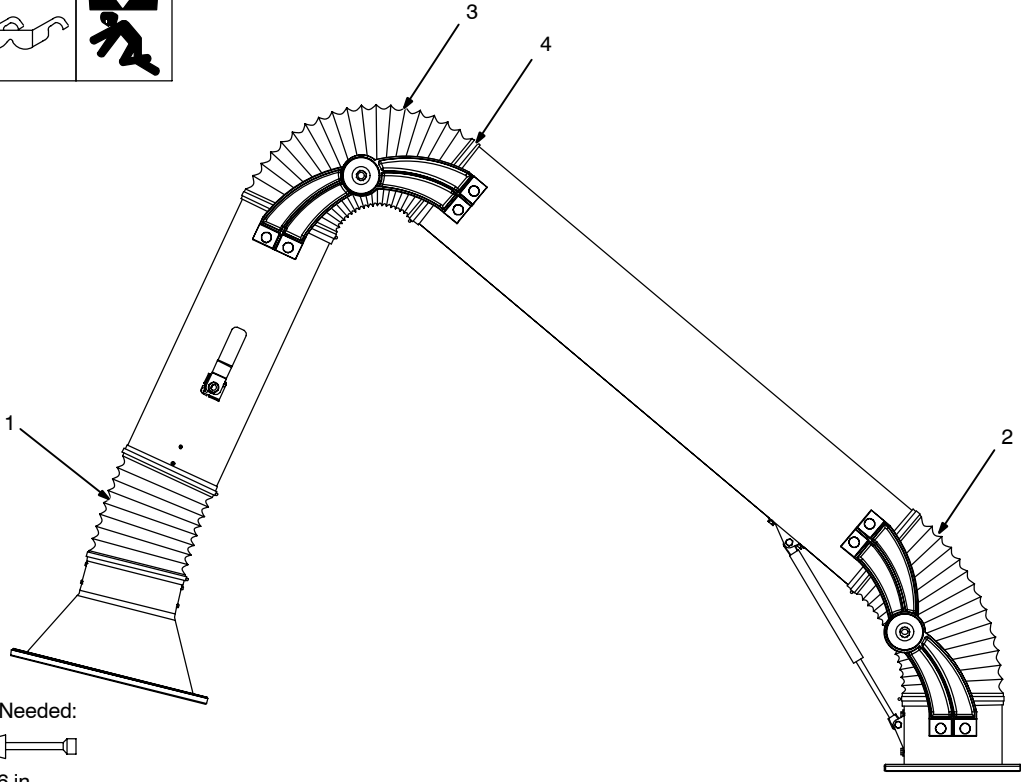
ers, and nuts. Position fiber washers between the square tube and upper tube brackets. Secure components with 1/4 in. screw, flat washers, and nuts. Tighten or loosen hardware so hood can be easily moved and positioned.

Attach screen to hood with 1/4 in. hex head screws, flat washers, and lock washers.

Remember to install the fiber washers between the bracket weldments and the square tube.

F. Installing Flexible Duct

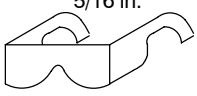




Tools Needed:



5/16 in.



1 12 in. (30.5 cm) Flexible Duct
2 24 in. (61 cm) Flexible Duct
3 30 in. (76 cm) Flexible Duct
4 Hose Clamp

Three sections of flexible duct are provided

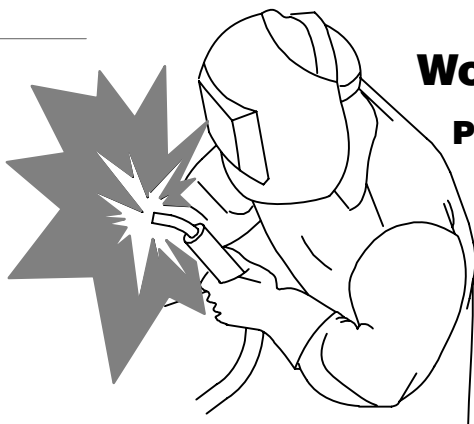
to connect the joints. The three lengths included are 12 in., 24 in., and 30 in. The 12 in. section should already be in place between the upper tube and hood (see Section 7-6E). Install the 30 in. piece at the middle joint and the 24 in. piece between

the fume extractor and the lower tube. Pull flex duct over tubes and securely tighten hose clamps.

⚠️ Secure both ends of flexible ducts with hose clamps.

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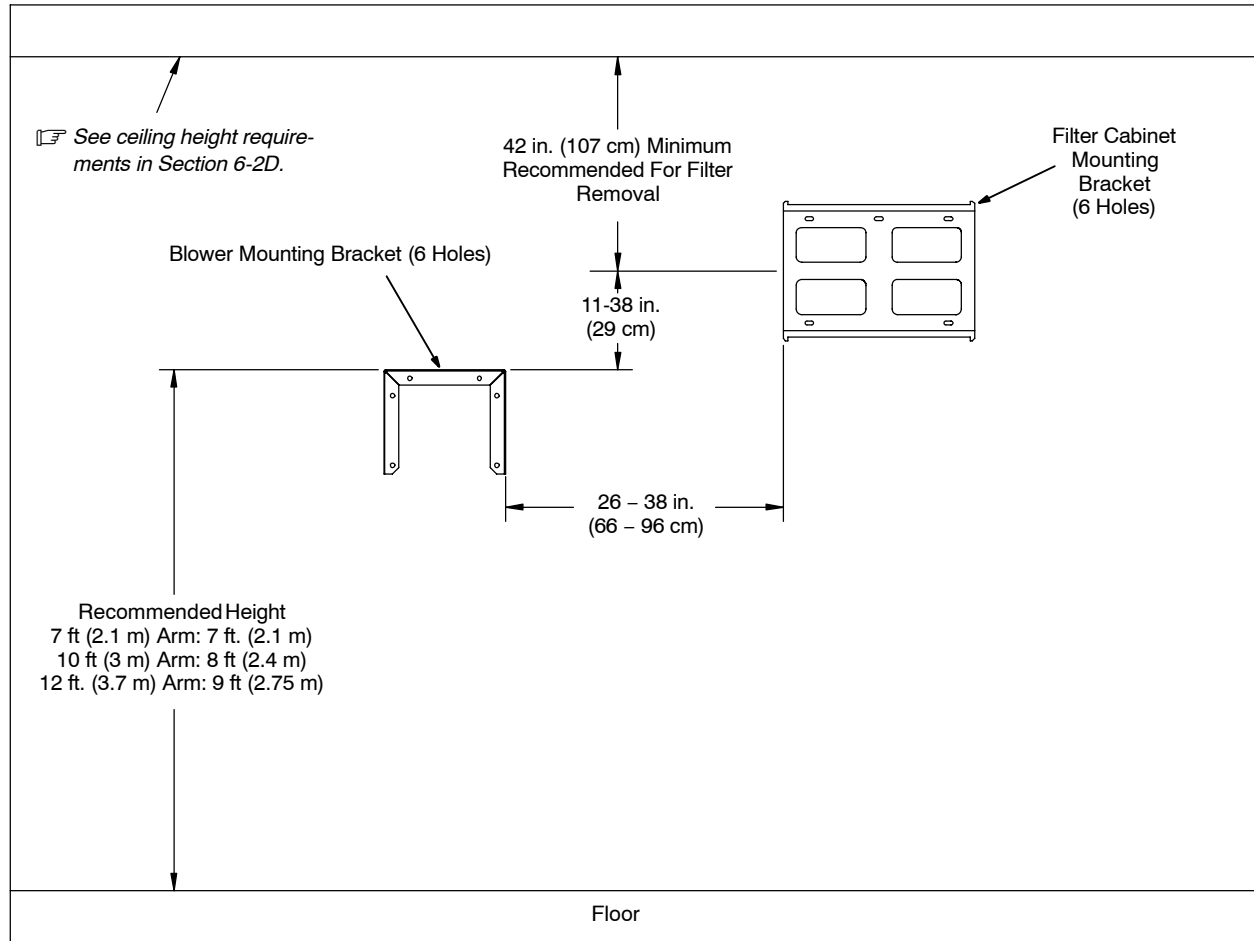
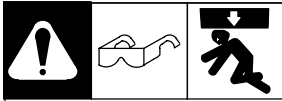
Notes



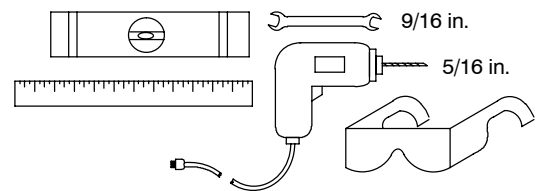
Work like a Pro!

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

7-7. Mounting Blower Assembly Bracket



Tools Needed:



- ⚠** Installation must meet all National, State, and Local Codes – have only qualified persons make this installation.
- ⚠** Do not use this equipment to support personnel, large tools, or other material.
- ⚠** Do not damage electrical wiring and other utilities when drilling into wall or other structural support.
- ⚠** Be sure the wall or other structural support will support the weight of the equipment.
- ⚠** Use only mounting hardware specifically designed for the structure and material supporting the filter cabinet.

- ⚠** Install hardware in all six slots in the mounting bracket.
- ⚠** Install bracket exactly as described. For applications not covered in these instructions, consult local building codes and qualified persons to ensure the equipment is adequately supported.

☞ Hardware is supplied to attach the bracket to steel, concrete, brick, or block construction.

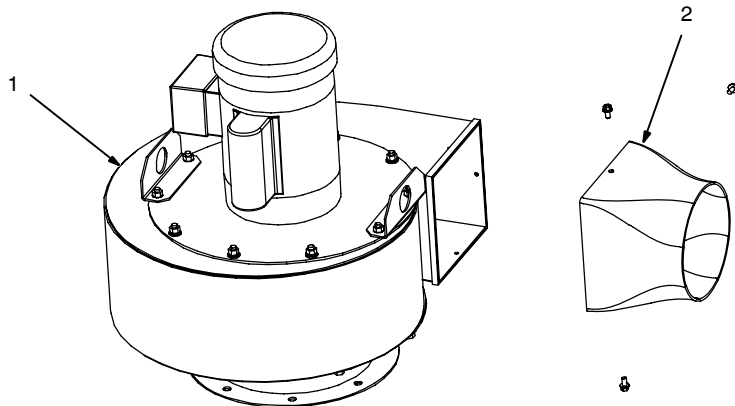
☞ Do not install blower bracket more than 54 in. (137 cm) from filter cabinet bracket or fume extraction system will not work properly and flexible duct will require support.

Select location for mounting bracket based on the dimensions shown in the above layout drawing. Use bracket as a template to carefully mark the six mounting holes on the support structure. Drill 5/16 in. (8 mm) holes where marked.

If attaching bracket to a steel beam, plate, angle, or channel use the grade 8, 3/8-16 hardware provided. Secure bracket with a screw, two flat washers, lock washer, and nut at all six locations on bracket.

If attaching bracket to concrete, hollow concrete block, grout-filled concrete block, or brick use the supplied Tapcon 3/8 x 1-3/4 in. masonry screws. Drill holes at least 1 in. (25 mm) deeper than the length of the anchor. Remove dust from hole. Secure bracket with Tapcon masonry screws.

7-8. Installing Transition On Blower Assembly

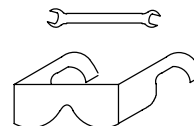


- 1 Blower Assembly
- 2 Transition

Remove the three screws from the blower housing discharge. Slide the transition over the outlet and reinstall the three screws.

Lower blower assembly onto mounting bracket so blower mounting flange is on top of bracket. Position blower so transition is pointing toward filter cabinet.

Tools Needed:



7-9. Mounting Blower Assembly And Extraction Arm



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

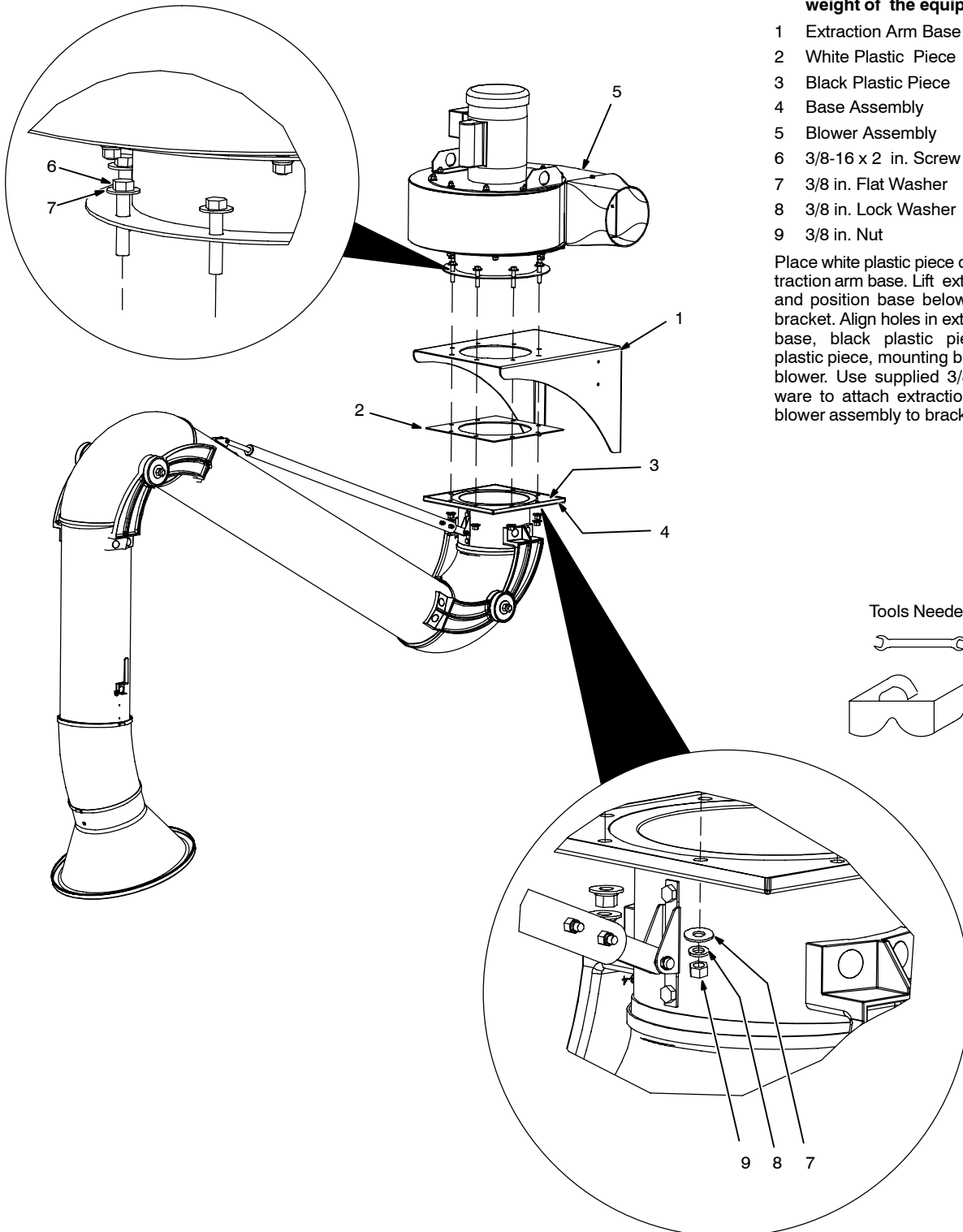
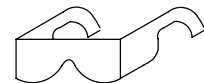
⚠ Do not use this equipment to support personnel, large tools, or other material.

⚠ Be sure the wall or other structural support will support the weight of the equipment.

- 1 Extraction Arm Base
- 2 White Plastic Piece
- 3 Black Plastic Piece
- 4 Base Assembly
- 5 Blower Assembly
- 6 3/8-16 x 2 in. Screw
- 7 3/8 in. Flat Washer
- 8 3/8 in. Lock Washer
- 9 3/8 in. Nut

Place white plastic piece on top of extraction arm base. Lift extraction arm and position base below mounting bracket. Align holes in extraction arm base, black plastic piece, white plastic piece, mounting bracket, and blower. Use supplied 3/8 in. hardware to attach extraction arm and blower assembly to bracket.

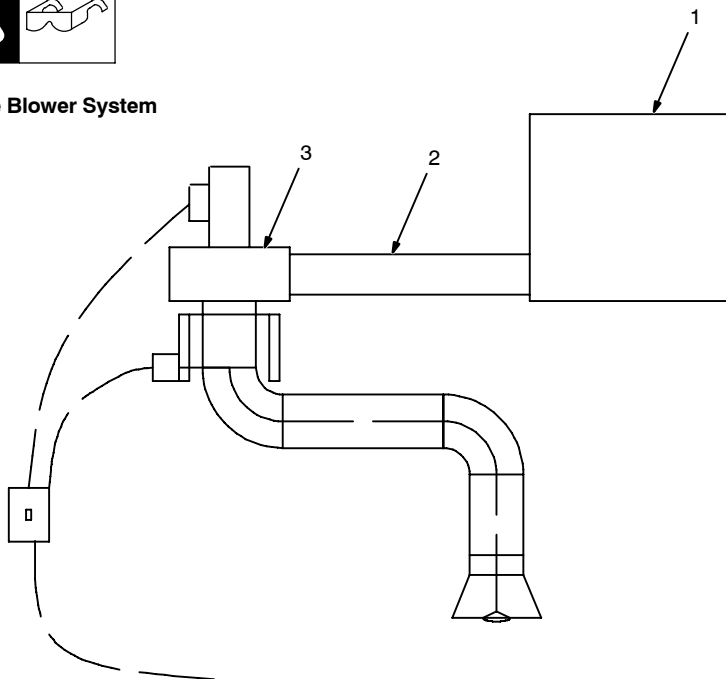
Tools Needed:



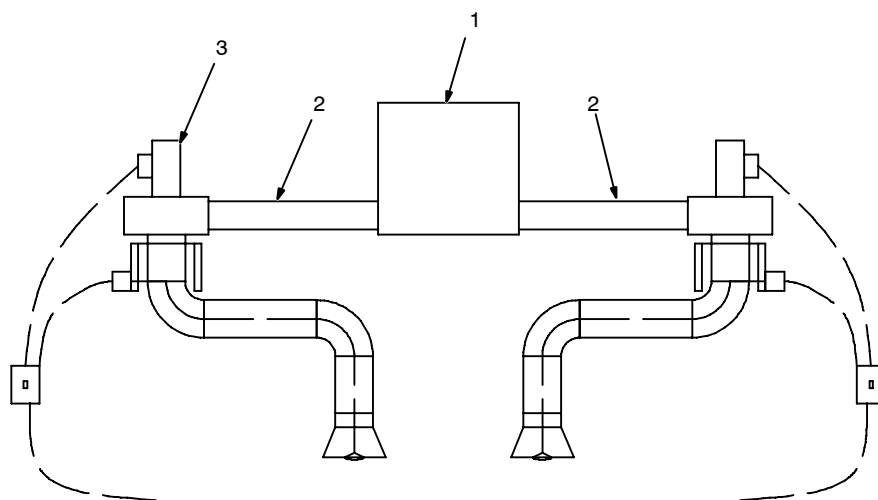
7-10. Connecting Flexible Duct From Blower To Filter Cabinet



One Blower System



Two Blower System



⚠ Be sure flexible duct is securely installed and does not leak.

☞ To reduce pressure loss, support flexible duct to eliminate bends.

Connecting One Blower to Filter Cabinet

- 1 Filter Cabinet
- 2 7 in. Flexible Duct
- 3 Blower Flange
- 4 Inlet Collar (Not Shown)
- 5 Band clamps (Not Shown)

Install flexible duct between blower flange and filter cabinet inlet. Secure duct with supplied band clamps.

Connecting Two Blowers to Filter Cabinet

Remove the inlet collar and cover plate from both inlets. Retain hardware.

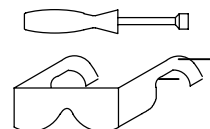
6 Backdraft Damper

Press dampers into inlets until they are flush with the outside wall of the cabinet.

☞ Install damper so damper butterfly valve opens inward and allows fumes to be blown into cabinet.

Install flexible duct between blower flanges and filter cabinet inlets. Secure ducts with supplied band clamps.

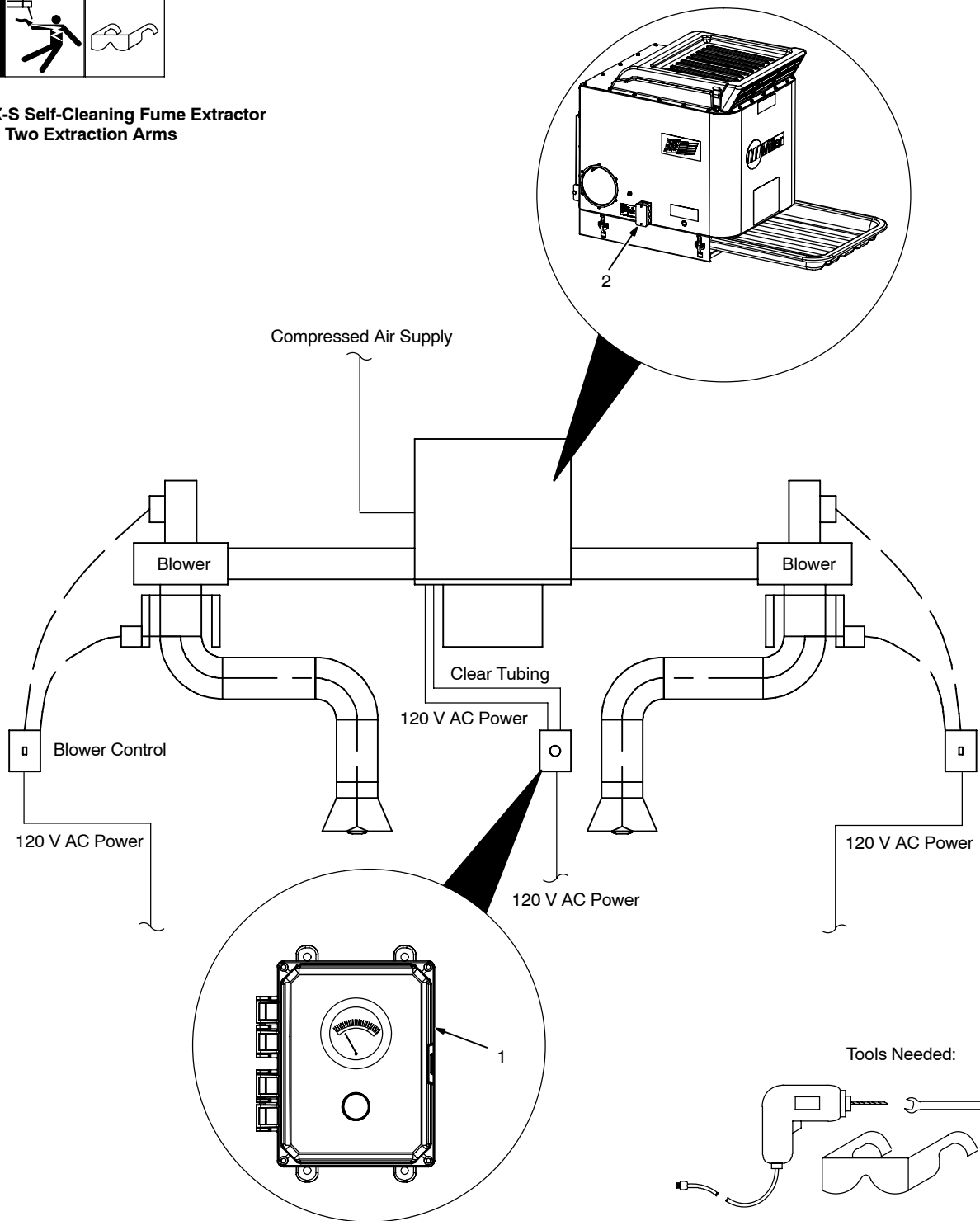
Tools Needed:



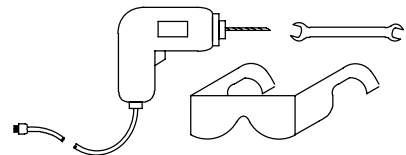
7-11. Installing Cleaning System Control Panel (SWX-S Self-Cleaning Models Only)



**SWX-S Self-Cleaning Fume Extractor
With Two Extraction Arms**



Tools Needed:



⚠ Installation must meet all National State, and Local Codes. Have only qualified persons make this installation.

☞ A 115 volt AC, 15 Amp individual branch circuit protected by time delay (type D) fuses or circuit breaker is required.

1 Cleaning System Control Panel

Install control panel near the filter cabinet.

☞ Install control panel within 40 ft (12 m) of filter cabinet. Clear tubing for control panel gauge must not exceed 40 ft (12 m) in length.

Drill holes for fittings in the panel box. Install correct fittings to secure conductor cable. Use the proper seal or cord relief as required.

For a permanent connection, use 1/2 in. (12 mm) conduit and drill 7/8 in. (22 mm) clearance holes for the fittings.

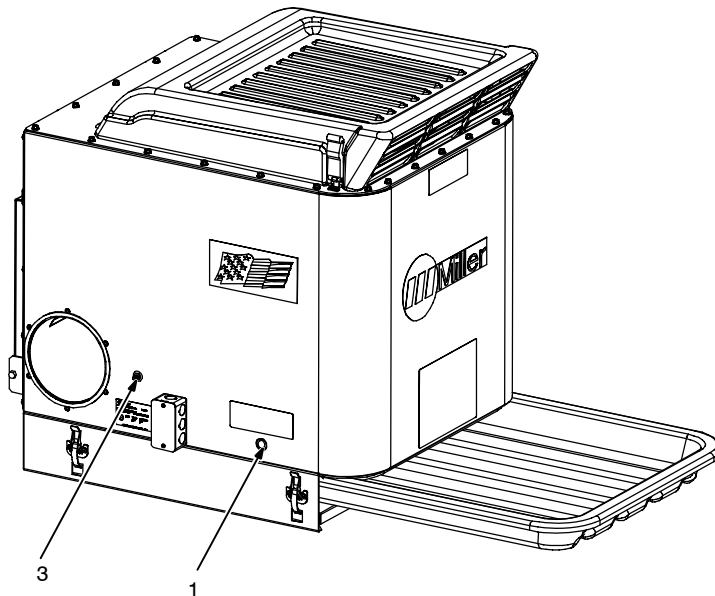
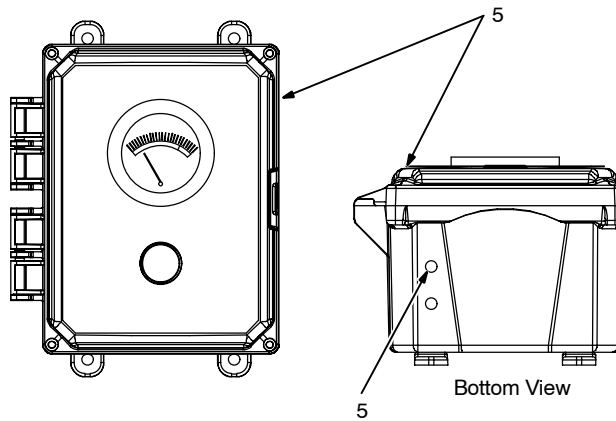
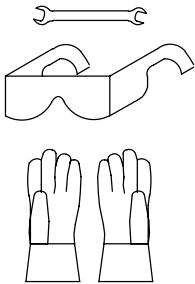
⚠ Do not make electrical connections until installation is complete.

See Section 7-12 and the circuit diagram in Section 11 for connection details.

7-12. Connecting To Compressed Air Supply (SWX-S Self-Cleaning Models Only)



Tools Needed:



⚠ 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.

⚠ Close cover 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) (Not Shown)

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

Connect customer-supplied air hose to fitting.

3 Air Pressure Tap Fitting

4 1/4 in. (6 mm) Flexible Tubing (Not Shown)

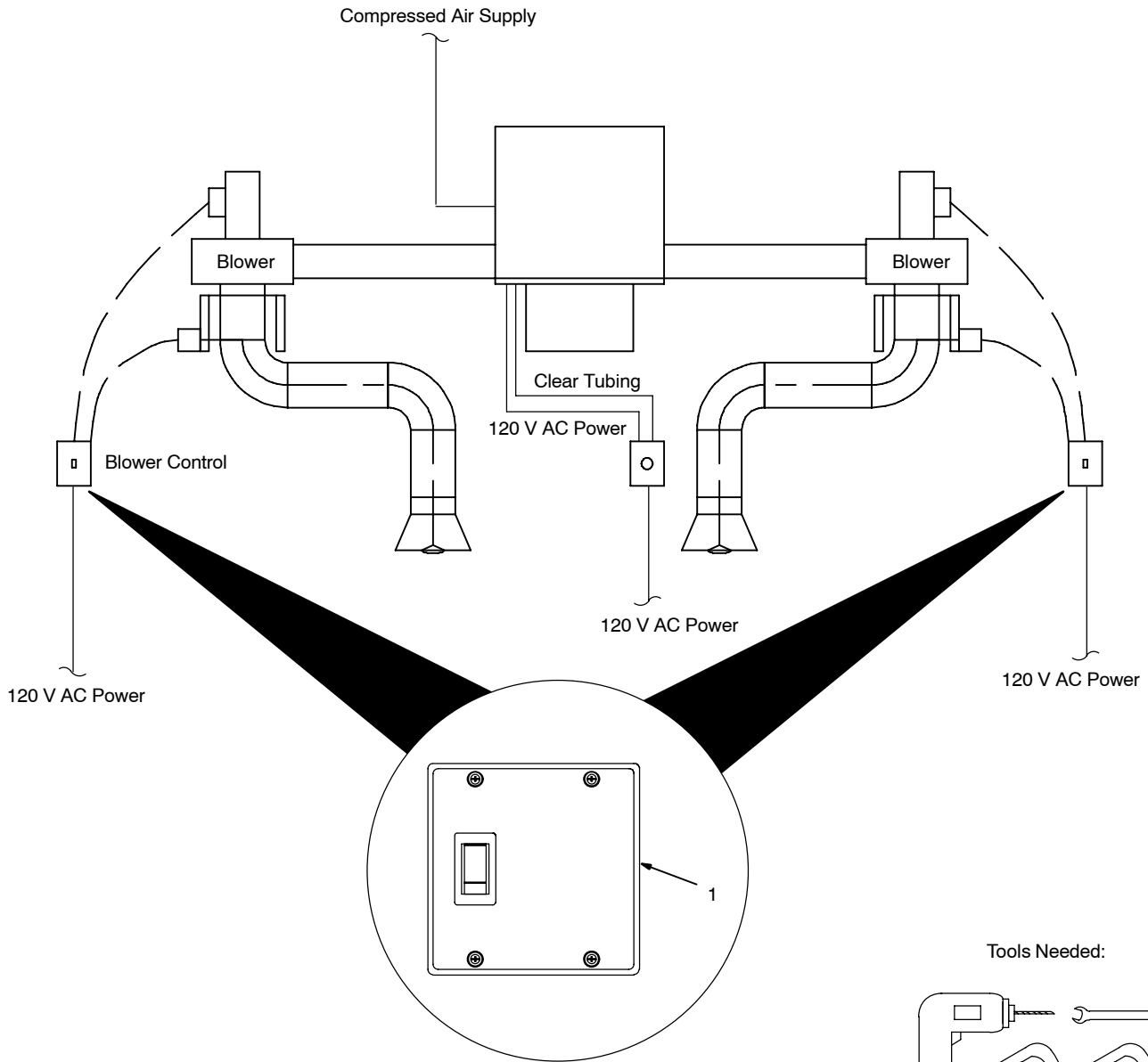
5 Dirty Air Connection

Connect customer-supplied flexible tubing to Dirty Air fitting on control panel. Connect other end of tubing to Air Pressure Tap fitting on filter cabinet.

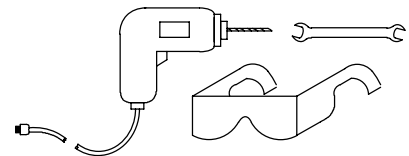
ⓘ The control panel Clean Air connection is not used.

ⓘ Do not kink or puncture tubing during installation.

7-13. Installing And Connecting Blower Control Panel (All Models)



Tools Needed:



⚠ Installation must meet all National, State, and Local Codes. Have only qualified persons make this installation.

ⓘ A dedicated 115 volt AC, 15 Amp individual branch circuit protected by time delay (type D) fuses or circuit breaker is required for each blower assembly.

1 Blower Control Panel(s)

Remove cover from panel and remove cir-

cuit breaker.

Install blower control panel near the filter cabinet. Reinstall circuit breaker in panel.

Remove knockouts from panel box. Install correct fittings in box to secure conductor cable. Use the proper seal or cord relief as required.

If using a flexible cord and plug connection, use a 3-conductor, 14 AWG, UL listed hard service cord or junior hard service cord in accordance with the National Electrical

Code. The plug should be rated for a minimum of 15 Amps and cord length should not exceed 15 ft (4.5 m).

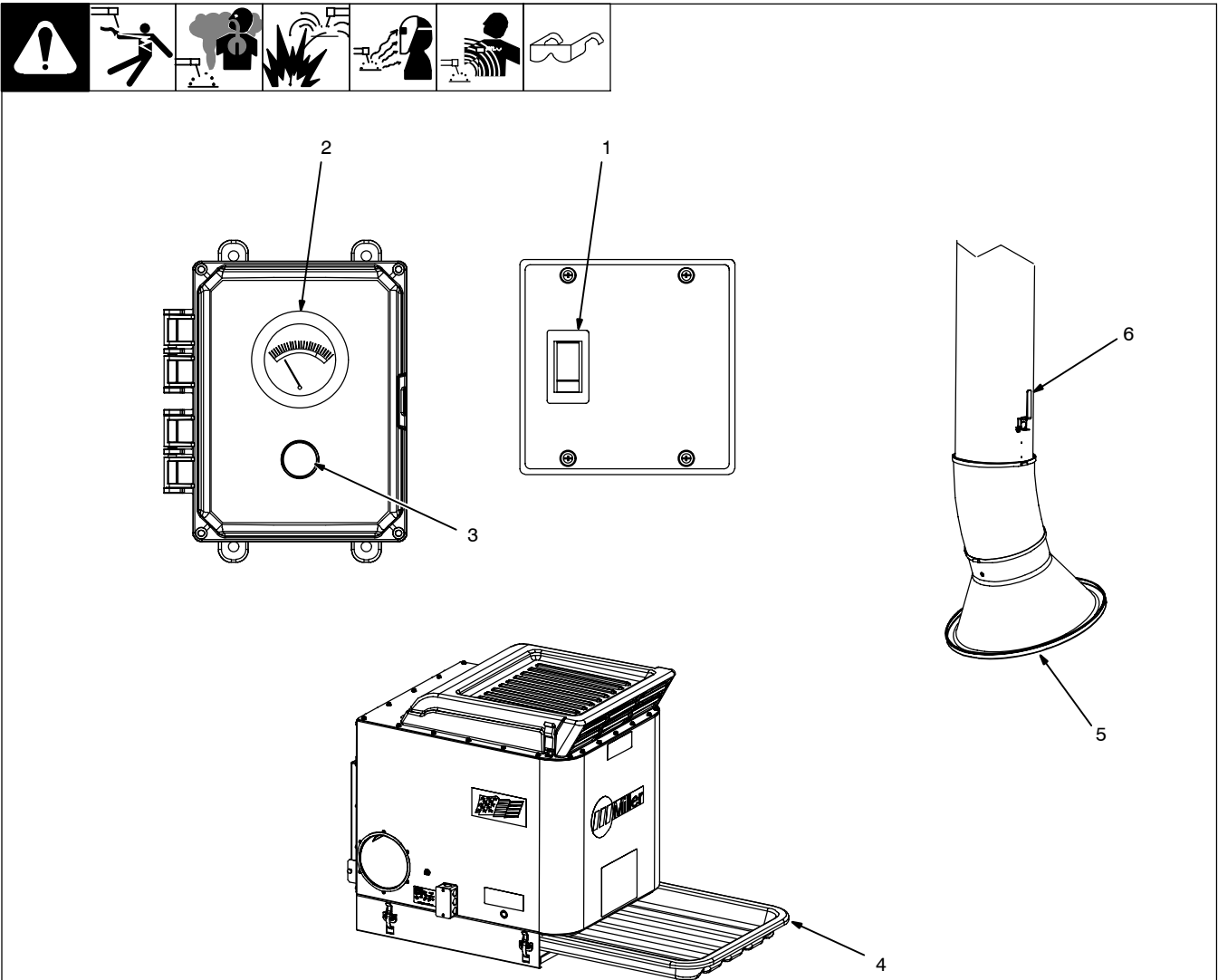
For a permanent connection, remove knockouts from panel box and install 1/2 in. conduit and connectors.

⚠ Do not make electrical connections until installation is complete.

See the circuit diagram in Section 11 for connection details.

SECTION 8 – OPERATION

8-1. Controls



245 608 / 228 000-D



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. The Power switch is located on a control panel connected to the wall-mounted blower assembly.

2 Filter Gauge

Gauge is located on filter cabinet (SWX-D) or control panel (SWX-S).

Gauge only indicates air pressure drop across the filter. Clean or replace filter when 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 clean filter).

3 Filter Cleaning Switch (SWX-S Self-Cleaning Models Only)

Use switch to operate filter cleaning system. Clean or replace filter when reading is over 4 in. w.c. or whenever air flow is too low to extract fumes. (See Section 9-4 for filter maintenance information).

Close damper (item 6) before operating filter cleaning system.

4 Particle Tray

Empty tray after cleaning filter (see Section 9-4B).

5 Hood

Position the hood to minimize the effects of cross drafts from outside air sources or from other operations. Tilt the hood at a 45° angle and position it as close to the welding arc as possible but no further than 14 in. (36 cm) from the arc.

6 Damper Control

The damper allows the user to regulate air flow. In most cases, open damper fully (as shown).

Close damper before operating filter cleaning system.

8-2. 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 Outlet
- 2 Filter Gauge

Verify all duct work and tubing is tight, secure, and does not leak.

Verify clean air outlet is not obstructed and discharge air appears clean (free of welding fumes). Check filter if discharge air appears dirty. Make sure cover is closed (and latched) to ensure a tight seal around the filter.

Check filter gauge:

- SWX-D Models – Replace filter when reading is over 4 in. w.c. or whenever air flow is too low to extract fumes (see Section 9-3).
- SWX-S Models – Replace or clean filter when reading is over 4 in. w.c. or whenever air flow is too low to extract fumes (see Section 9-4).

SECTION 9 – USER SERVICING INSTRUCTIONS (MAINTENANCE)

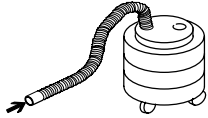
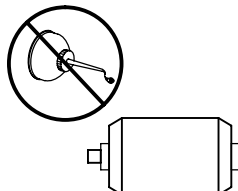
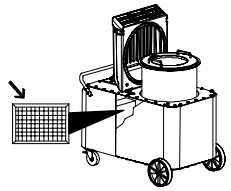
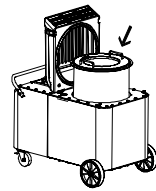
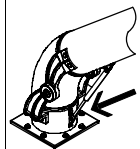
9-1. Routine Maintenance



⚠ Disconnect Power before maintaining.

🔧 Service equipment more often if used in severe conditions.

🔧 To make cleaning easier, apply anti-spatter spray to the extraction hood.

🕒	✓ = Check ◇ = Change ● = Clean ☆ = Replace * To be done by Factory Authorized Service Agent				
Daily	✓ Filter Gauge. Clean or replace filter if necessary (Section B)	✓ Free Movement Of Base Assembly	✓ Extraction Arm Hood And Joints Stay In Position	✓ Extraction Arm Ducts And Tubing	● Inner Surface Of Hood
Every Month	● Outer Surfaces	✓ Equipment Mounting Hardware			
Every 3 Months	 ☆ Unreadable Labels	● Inside of Extraction Arm With Warm Water And Detergent			
Every 6 Months	 ● Inside Unit	 ● Sealed Bearings – No Oil Needed	 ✓ ☆ Fume Extractor Spark Guard	 ✓ ☆ Filter	 ● Swivel Base Bearings

9-2. Overload Protection



Turn off and disconnect input power.

- 1 Fuse F1 (See Parts List For Rating)

F1 protects the electrical components of the filter cleaning system from overload. If F1 opens the filter cleaning system does not operate. Replace F1 if open.

To access F1, loosen clamp on lower flex duct and raise flex duct. Reinstall flex duct after checking fuse.

- 2 Circuit Breaker CB1

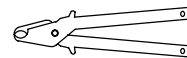
CB1 protects the blower motor from overload. If CB1 opens the blower motor will not run.

To access CB1, reach under front panel.

To reset CB1, reach under front panel and place CB1 in the On (up) position.

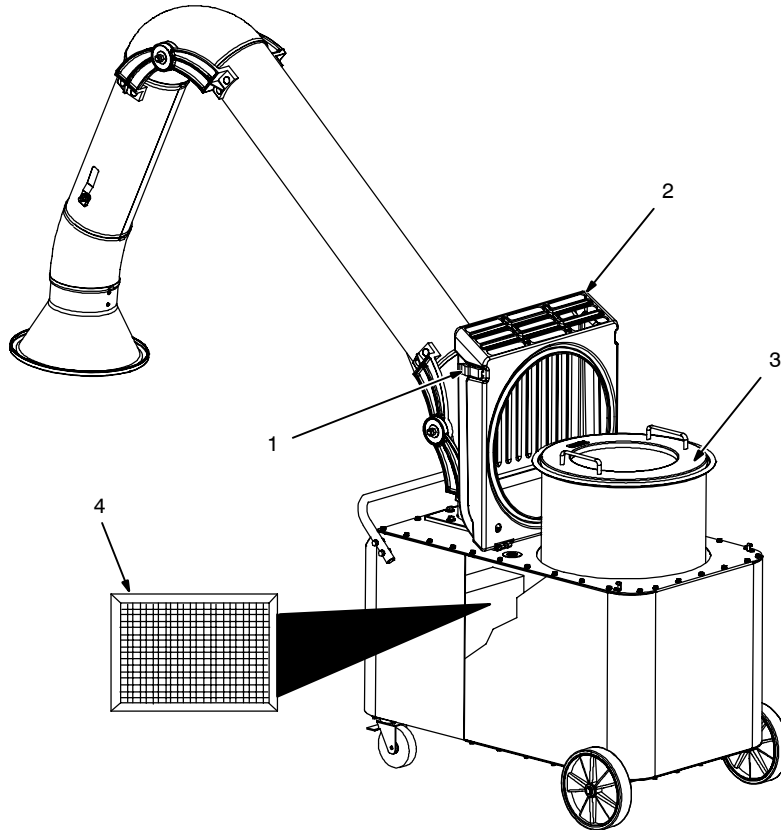
 *If a fuse or circuit breaker opens, it usually indicates a more serious problem exists. Contact a Factory Authorized Service Agent.*

Tools Needed:



Fuse Puller

9-3. Servicing Filter And Spark Guard (SWX-D Models)



- ⚠** Turn off and disconnect input power.
- ⚠** Do not operate unit without filter or with dirty filter.
- ⚠** Replace the filter when dirty. Do not clean the filter or use a filter that has been cleaned.
- ⚠** 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 Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.

- 1 Latch
- 2 Hatch
- 3 Filter
- 4 Spark Guard

Release latches and open hatch. Use filter handles to remove filter.

Replace filter if dirty or damaged.

Wipe off hatch. Vacuum particles from inside of housing.

Remove spark guard (from behind baffle).

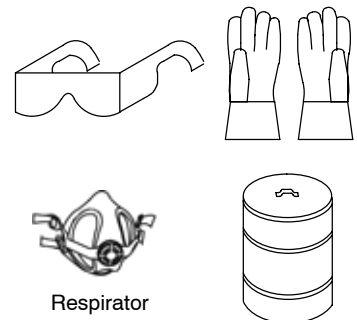
Clean and inspect spark guard screen. Replace spark guard if screen wires are broken or missing.

Install spark guard.

Install filter.

Close hatch and secure with latches.

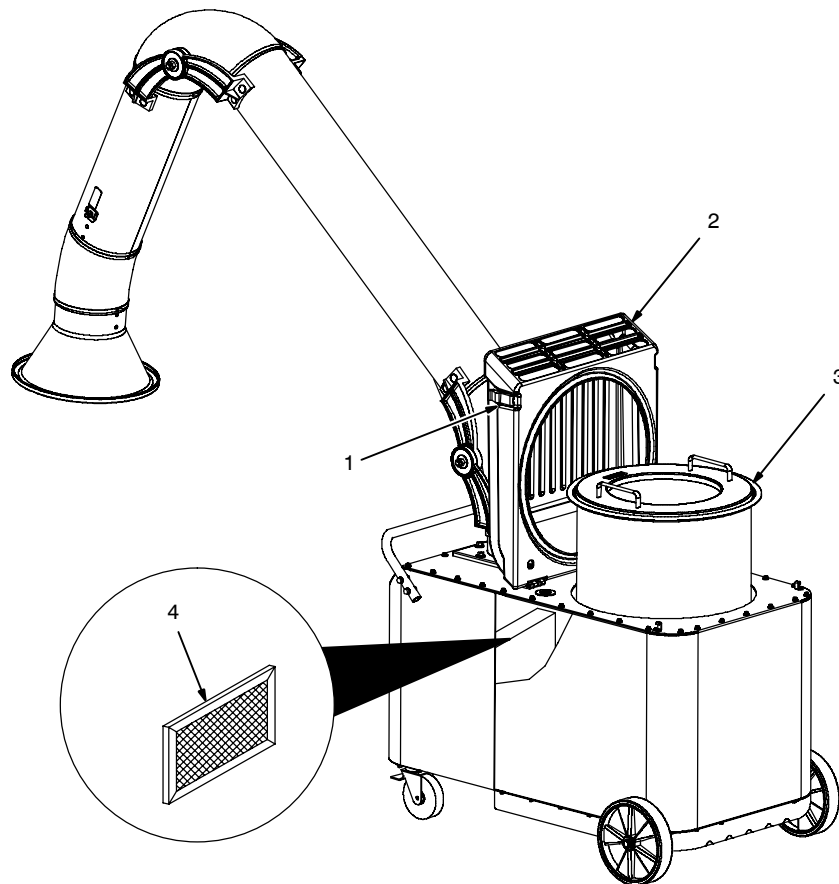
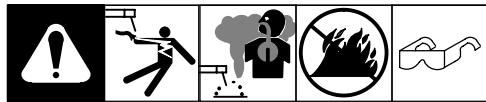
Tools Needed:



Respirator

9-4. Servicing Filter And Spark Guard (SWX-S Self-Cleaning Models Only)

A. Inspecting Filter And Spark Guard (SWX-S Self-Cleaning Models Only)



- ⚠** 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 Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.

- 1 Latch
- 2 Hatch
- 3 Filter
- 4 Spark Guard

Release latches and open hatch. Use filter handles to remove filter.

Clean or replace filter if dirty or damaged.

Wipe off hatch. Remove particles from inside of housing.

Remove spark guard (from behind baffle).

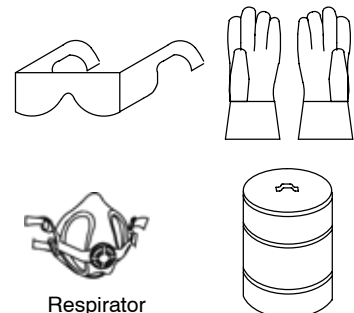
Clean and inspect spark guard screen. Replace spark guard if screen wires are broken or missing.

Install spark guard.

Install filter.

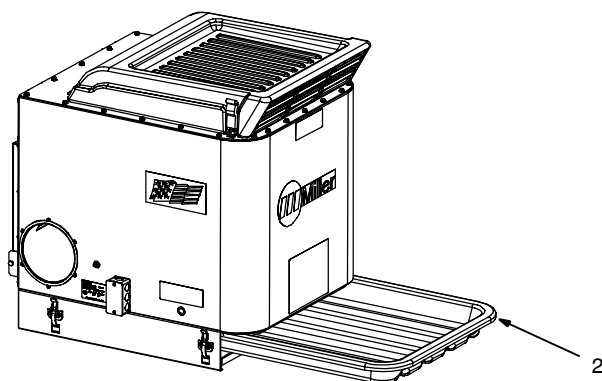
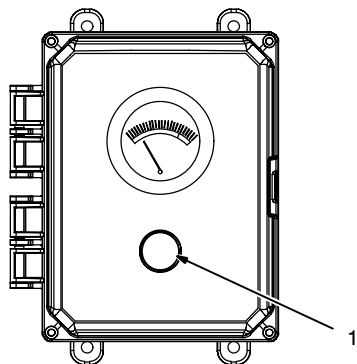
Close hatch and secure with latches.

Tools Needed:

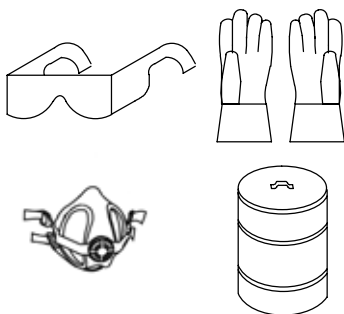


Respirator

B. Cleaning Filter And Emptying Particle Tray (SWX-S Self-Cleaning Models Only)



Tools Needed:



! Close cover 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 Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.

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

! Use lifting aid or two persons to remove particle tray. Particle tray is heavy when full.

1 Filter Cleaning Switch

Use switch to operate filter cleaning system. Clean or replace filter when Filter gauge reading is over 4 in. w.c. or whenever air flow is too low to extract fumes. Keep cover closed during cleaning to maintain a tight seal around filter.

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

! The filter cleaning system begins operation when the internal fan completely stops.

! Close damper before operating filter cleaning system.

The system cleans the filter in about 15 seconds. Wait until the cleaning has stopped and particles have settled before removing particles from tray. Inspect filter after cleaning (see Section 9-4A).

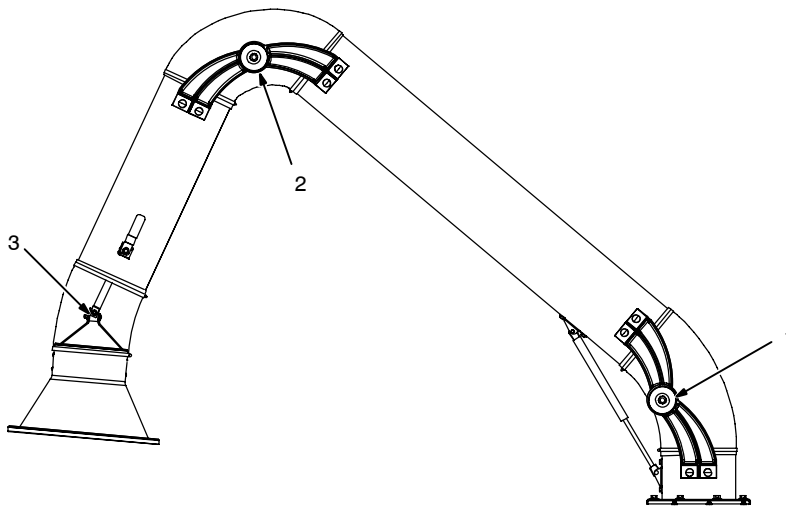
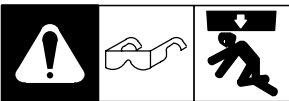
2 Particle Tray

Open latches to release particle tray. Pull out tray. Remove particles from tray after every cleaning cycle. Reinstall tray and close latches to secure tray in position.

Start unit and check Filter gauge reading.

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

9-5. Adjusting Extraction Arm Joints



- ⚠ Support extraction arm when making adjustments.**
- ⚠ Elbow joints are under tension. Keep away from pinch points when making adjustments.**

 The joints are secured with a double-nut system; the jam nut (outer) secures the inside nut.

When properly adjusted, the extraction arm should move easily but not slip from position. The initial torque specifications are provided below. Torque requirements may change due to use and wear.

1 Base Elbow Joint

Use two wrenches; hold inside nut while removing outside jam nut.

Tighten inside nut to torque value in table below. Reinstall jam nut and tighten against inside nut.

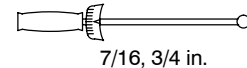
2 Mid Elbow Joint

Adjust mid elbow joint the same way as base elbow joint. Tighten inside nut to torque value in table below.

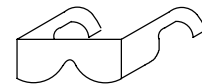
3 Hood Joint

Remove flex duct or inlet screen. Tighten or loosen hood joint nut. Reinstall flex duct or inlet screen.

Tools Needed:



7/16, 3/4 in.



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Model	Torque Value – Base Elbow Joint	Torque Value – Mid Elbow Joint
SA-807 (7 ft) (2 m)	8 ft lb (11 N•m)	5 ft lb (6.8 N•m)
SA-810 (10 ft) (3 m)	8 ft lb (11 N•m)	5 ft lb (6.8 N•m)
SA-812 (12 ft) (3.7 m)	8 ft lb (11 N•m)	7 ft lb (9.5 N•m)

SECTION 10 – TROUBLESHOOTING

10-1. Troubleshooting Table

     					
Trouble	Remedy				
Motor/blower will not start or continue running.	Check input power connections (Section 7-13).				
	Reset Circuit Breaker CB1. (See Section 9-2)				
	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.				
	Open extraction arm air damper (Section 8-1).				
	Remove debris from spark guard (Section A).				
	Clean or replace filter (Sections 9-3 and 9-4).				
	Have Factory Authorized Service Agent check for correct fan rotation (clockwise).				
Filter cleaning system does not operate.	Check fuse F1, and replace if open. (See Section 9-2).				
Filter cleaning system does not clean filter.	Check compressed air connection.				
	Replace dirty filter.				
	Have Factory Authorized Service Agent check filter cleaning system.				
Fume extractor discharges fumes or particles.	Inspect filter (including gasket) and replace if damaged or dirty. Be sure filter is installed properly. (See Section A).				
	Properly insert particle drawer.				
Extraction arm does not stay in position.	Adjust extraction arm joints (Section 9-5).				
Extraction arm does not turn easily.	Clean swivel base bearings.				

SECTION 11 – ELECTRICAL DIAGRAM

	⚠ WARNING	• Do not touch live electrical parts. • Disconnect input power or stop engine before servicing. • Do not operate with covers removed. • Have only qualified persons install, use, or service this unit.
	ELECTRIC SHOCK HAZARD	

Figure 11-1. Circuit Diagram



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 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

