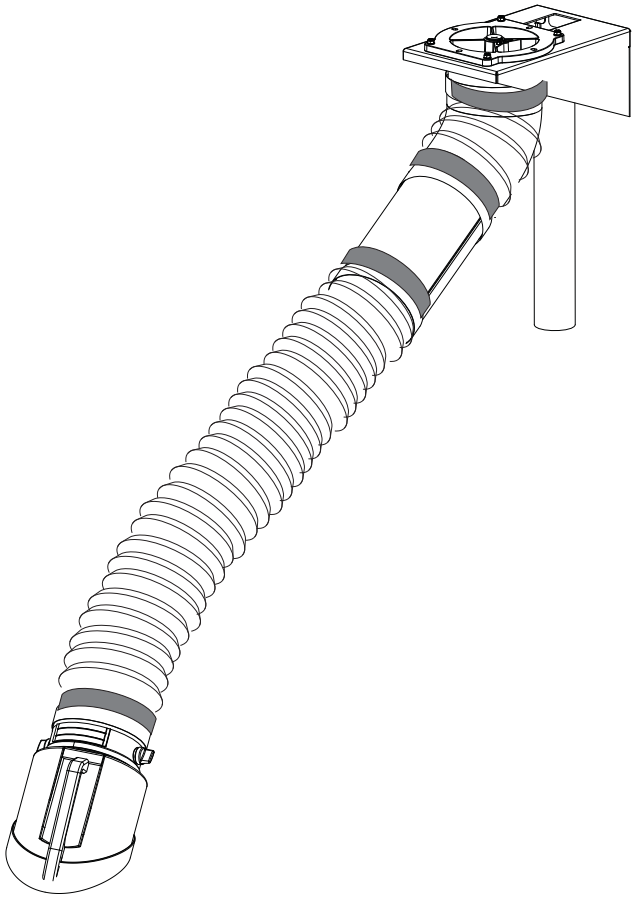
TELESCOPIC EXTRACTION ARM LTA 2.0-CW™

IM10108

July, 2011

Safety Depends on You

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. **DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT.** And, most importantly, think before you act and be careful.



OPERATORS MANUAL

ISO 9001

Designed and Manufactured Under a Quality Program Certified by ABS Quality Evaluations, Inc. to ISO 9001 Requirements.
CERTIFICATE NUMBER: 30273

LINCOLN® ELECTRIC

• World's Leader in Welding and Cutting Products •
• Sales and Service through Subsidiaries and Distributors Worldwide •
Cleveland, Ohio 44117-1199 U.S.A. TEL: 888.935.3878 FAX: 216.383.8823

THANK YOU FOR SELECTING A QUALITY PRODUCT BY LINCOLN ELECTRIC.

PLEASE EXAMINE CARTON AND EQUIPMENT FOR DAMAGE IMMEDIATELY

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

SAFETY DEPENDS ON YOU

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. **DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT.** And, most importantly, think before you act and be careful.

⚠ WARNING

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.

⚠ CAUTION

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.

KEEP YOUR HEAD OUT OF THE FUMES.

DON'T get too close to the arc. Use corrective lenses if necessary to stay a reasonable distance away from the arc.

READ and obey the Safety Data Sheet (SDS) and the warning label that appears on all containers of welding materials.

USE ENOUGH VENTILATION or exhaust at the arc, or both, to keep the fumes and gases from your breathing zone and the general area.

IN A LARGE ROOM OR OUTDOORS, natural ventilation may be adequate if you keep your head out of the fumes (See below).

USE NATURAL DRAFTS or fans to keep the fumes away from your face.

If you develop unusual symptoms, see your supervisor. Perhaps the welding atmosphere and ventilation system should be checked.

WEAR CORRECT EYE, EAR & BODY PROTECTION

PROTECT your eyes and face with welding helmet properly fitted and with proper grade of filter plate (See ANSI Z49.1).

PROTECT your body from welding spatter and arc flash with protective clothing including woolen clothing, flame-proof apron and gloves, leather leggings, and high boots.

PROTECT others from splatter, flash, and glare with protective screens or barriers.

IN SOME AREAS, protection from noise may be appropriate.

BE SURE protective equipment is in good condition.

Also, wear safety glasses in work area **AT ALL TIMES.**

SPECIAL SITUATIONS

DO NOT WELD OR CUT containers or materials which previously had been in contact with hazardous substances unless they are properly cleaned. This is extremely dangerous.

DO NOT WELD OR CUT painted or plated parts unless special precautions with ventilation have been taken. They can release highly toxic fumes or gases.

Additional precautionary measures

PROTECT compressed gas cylinders from excessive heat, mechanical shocks, and arcs; fasten cylinders so they cannot fall.

BE SURE cylinders are never grounded or part of an electrical circuit.

REMOVE all potential fire hazards from welding area.

ALWAYS HAVE FIRE FIGHTING EQUIPMENT READY FOR IMMEDIATE USE AND KNOW HOW TO USE IT.

SECTION A: WARNINGS

CALIFORNIA PROPOSITION 65 WARNINGS

WARNING: Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects, or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an exposed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65 warnings.ca.gov/diesel

WARNING: This product, when used for welding or cutting, 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 § 25249.5 *et seq.)*

WARNING: Cancer and Reproductive Harm www.P65warnings.ca.gov

ARC WELDING CAN BE HAZARDOUS. PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACEMAKER WEARERS SHOULD CONSULT WITH THEIR DOCTOR BEFORE OPERATING.

Read and understand the following safety highlights. For additional safety information, it is strongly recommended that you purchase a copy of "Safety in Welding & Cutting - ANSI Standard Z49.1" from the American Welding Society, P.O. Box 351040, Miami, Florida 33135 or CSA Standard W117.2-1974. A Free copy of "Arc Welding Safety" booklet E205 is available from the Lincoln Electric Company, 22801 St. Clair Avenue, Cleveland, Ohio 44117-1199.

BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.

FOR ENGINE POWERED EQUIPMENT.

1.a. Turn the engine off before troubleshooting and maintenance work unless the maintenance work requires it to be running.

1.b. Operate engines in open, well-ventilated areas or vent the engine exhaust fumes outdoors.

1.c. Do not add the fuel near an open flame welding arc or when the engine is running. Stop the engine and allow it to cool before refueling to prevent spilled fuel from vaporizing on contact with hot engine parts and igniting. Do not spill fuel when filling tank. If fuel is spilled, wipe it up and do not start engine until fumes have been eliminated.

1.d. Keep all equipment safety guards, covers and devices in position and in good repair. Keep hands, hair, clothing and tools away from V-belts, gears, fans and all other moving parts when starting, operating or repairing equipment.

1.e. In some cases it may be necessary to remove safety guards to perform required maintenance. Remove guards only when necessary and replace them when the maintenance requiring their removal is complete. Always use the greatest care when working near moving parts.

1.f. Do not put your hands near the engine fan. Do not attempt to override the governor or idler by pushing on the throttle control rods while the engine is running.

1.g. To prevent accidentally starting gasoline engines while turning the engine or welding generator during maintenance work, disconnect the spark plug wires, distributor cap or magneto wire as appropriate.

1.h. To avoid scalding, do not remove the radiator pressure cap when the engine is hot.

ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS

2.a. Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). Welding current creates EMF fields around welding cables and welding machines

2.b. EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before welding.

2.c. Exposure to EMF fields in welding may have other health effects which are now not known.

2.d. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

2.d.1. Route the electrode and work cables together - Secure them with tape when possible.

2.d.2. Never coil the electrode lead around your body.

2.d.3. Do not place your body between the electrode and work cables. If the electrode cable is on your right side, the work cable should also be on your right side.

2.d.4. Connect the work cable to the workpiece as close as possible to the area being welded.

2.d.5. Do not work next to welding power source.

ELECTRIC SHOCK CAN KILL.

3.a. The electrode and work (or ground) circuits are electrically “hot” when the welder is on. Do not touch these “hot” parts with your bare skin or wet clothing. Wear dry, hole-free gloves to insulate hands.

3.b. Insulate yourself from work and ground using dry insulation. Make certain the insulation is large enough to cover your full area of physical contact with work and ground.

In addition to the normal safety precautions, if welding must be performed under electrically hazardous conditions (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, if there is a high risk of unavoidable or accidental contact with the workpiece or ground) use the following equipment:

- Semiautomatic DC Constant Voltage (Wire) Welder.
- DC Manual (Stick) Welder.
- AC Welder with Reduced Voltage Control.

3.c. In semiautomatic or automatic wire welding, the electrode, electrode reel, welding head, nozzle or semiautomatic welding gun are also electrically “hot”.

3.d. Always be sure the work cable makes a good electrical connection with the metal being welded. The connection should be as close as possible to the area being welded.

3.e. Ground the work or metal to be welded to a good electrical (earth) ground.

3.f. Maintain the electrode holder, work clamp, welding cable and welding machine in good, safe operating condition. Replace damaged insulation.

3.g. Never dip the electrode in water for cooling.

3.h. Never simultaneously touch electrically “hot” parts of electrode holders connected to two welders because voltage between the two can be the total of the open circuit voltage of both welders.

3.i. When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.

3.j. Also see Items 6.c. and 8.

ARC RAYS CAN BURN.

4.a. Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing open arc welding. Headshield and filter lens should conform to ANSI Z87. I standards.

4.b. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.

4.c. Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.

FUMES AND GASES CAN BE DANGEROUS.

5.a. Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. When welding, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone. **When welding hardfacing (see instructions on container or SDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable OSHA PEL and ACGIH TLV limits using local exhaust or mechanical ventilation unless exposure assessments indicate otherwise. In confined spaces or in some circumstances, outdoors, a respirator may also be required. Additional precautions are also required when welding on galvanized steel.**

5. b. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

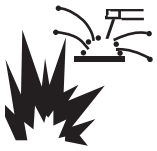
5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.

5.d. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to insure breathing air is safe.

5.e. Read and understand the manufacturer’s instructions for this equipment and the consumables to be used, including the Safety Data Sheet (SDS) and follow your employer’s safety practices. SDS forms are available from your welding distributor or from the manufacturer.

5.f. Also see item 1.b.

WELDING AND CUTTING SPARKS CAN CAUSE FIRE OR EXPLOSION.



6.a. Remove fire hazards from the welding area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas. Avoid welding near hydraulic lines. Have a fire extinguisher readily available.

6.b. Where compressed gases are to be used at the job site, special precautions should be used to prevent hazardous situations. Refer to "Safety in Welding and Cutting" (ANSI Standard Z49.1) and the operating information for the equipment being used.

6.c. When not welding, make certain no part of the electrode circuit is touching the work or ground. Accidental contact can cause overheating and create a fire hazard.

6.d. Do not heat, cut or weld tanks, drums or containers until the proper steps have been taken to insure that such procedures will not cause flammable or toxic vapors from substances inside. They can cause an explosion even though they have been "cleaned". For information, purchase "Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping That Have Held Hazardous Substances", AWS F4.1 from the American Welding Society (see address above).

6.e. Vent hollow castings or containers before heating, cutting or welding. They may explode.

6.f. Sparks and spatter are thrown from the welding arc. Wear oil free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes and a cap over your hair. Wear ear plugs when welding out of position or in confined places. Always wear safety glasses with side shields when in a welding area.

6.g. Connect the work cable to the work as close to the welding area as practical. Work cables connected to the building framework or other locations away from the welding area increase the possibility of the welding current passing through lifting chains, crane cables or other alternate circuits. This can create fire hazards or overheat lifting chains or cables until they fail.

6.h. Also see item 1.c.

6.I. Read and follow NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work", available from NFPA, 1 Batterymarch Park, PO box 9101, Quincy, MA 022690-9101.

6.j. Do not use a welding power source for pipe thawing.

CYLINDER MAY EXPLODE IF DAMAGED.

7.a. Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. All hoses, fittings, etc. should be suitable for the application and maintained in good condition.

7.b. Always keep cylinders in an upright position securely chained to an undercarriage or fixed support.

7.c. Cylinders should be located:

- Away from areas where they may be struck or subjected to physical damage.
- A safe distance from arc welding or cutting operations and any other source of heat, sparks, or flame.

7.d. Never allow the electrode, electrode holder or any other electrically "hot" parts to touch a cylinder.

7.e. Keep your head and face away from the cylinder valve outlet when opening the cylinder valve.

7.f. Valve protection caps should always be in place and hand tight except when the cylinder is in use or connected for use.

7.g. Read and follow the instructions on compressed gas cylinders, associated equipment, and CGA publication P-I, "Precautions for Safe Handling of Compressed Gases in Cylinders," available from the Compressed Gas Association, 14501 George Carter Way Chantilly, VA 20151.

FOR ELECTRICALLY POWERED EQUIPMENT.

8.a. Turn off input power using the disconnect switch at the fuse box before working on the equipment.

8.b. Install equipment in accordance with the U.S. National Electrical Code, all local codes and the manufacturer's recommendations.

8.c. Ground the equipment in accordance with the U.S. National Electrical Code and the manufacturer's recommendations.

Refer to http://www.lincolnelectric.com/safety for additional safety information.

PRÉCAUTIONS DE SÛRETÉ

Pour votre propre protection lire et observer toutes les instructions et les précautions de sûreté specifiques qui parraissent dans ce manuel aussi bien que les précautions de sûreté générales suivantes:

Sûreté Pour Soudage A L'Arc

1. Protegez-vous contre la secousse électrique:

   a. Les circuits à l'électrode et à la piéce sont sous tension quand la machine à souder est en marche. Eviter toujours tout contact entre les parties sous tension et la peau nue ou les vétements mouillés. Porter des gants secs et sans trous pour isoler les mains.
   b. Faire trés attention de bien s'isoler de la masse quand on soude dans des endroits humides, ou sur un plancher metallique ou des grilles metalliques, principalement dans les positions assis ou couché pour lesquelles une grande partie du corps peut être en contact avec la masse.
   c. Maintenir le porte-électrode, la pince de masse, le câble de soudage et la machine à souder en bon et sûr état defonctionnement.
   d. Ne jamais plonger le porte-électrode dans l'eau pour le refroidir.
   e. Ne jamais toucher simultanément les parties sous tension des porte-électrodes connectés à deux machines à souder parce que la tension entre les deux pinces peut être le total de la tension à vide des deux machines.
   f. Si on utilise la machine à souder comme une source de courant pour soudage semi-automatique, ces precautions pour le porte-électrode s'applicuent aussi au pistolet de soudage.

2. Dans le cas de travail au dessus du niveau du sol, se protéger contre les chutes dans le cas ou on recoit un choc. Ne jamais enrouler le câble-électrode autour de n'importe quelle partie du corps.

3. Un coup d'arc peut être plus sévère qu'un coup de soliel, donc:

   a. Utiliser un bon masque avec un verre filtrant approprié ainsi qu'un verre blanc afin de se protéger les yeux du rayonnement de l'arc et des projections quand on soude ou quand on regarde l'arc.
   b. Porter des vêtements convenables afin de protéger la peau de soudeur et des aides contre le rayonnement de l'arc.
   c. Protéger l'autre personnel travaillant à proximité au soudage à l'aide d'écrans appropriés et non-inflammables.

4. Des gouttes de laitier en fusion sont émises de l'arc de soudage. Se protéger avec des vêtements de protection libres de l'huile, tels que les gants en cuir, chemise épaisse, pantalons sans revers, et chaussures montantes.

5. Toujours porter des lunettes de sécurité dans la zone de soudage. Utiliser des lunettes avec écrans lateraux dans les zones où l'on pique le laitier.

6. Eloigner les matériaux inflammables ou les recouvrir afin de prévenir tout risque d'incendie dû aux étincelles.

7. Quand on ne soude pas, poser la pince à une endroit isolé de la masse. Un court-circuit accidental peut provoquer un échauffement et un risque d'incendie.

8. S'assurer que la masse est connectée le plus prés possible de la zone de travail qu'il est pratique de le faire. Si on place la masse sur la charpente de la construction ou d'autres endroits éloignés de la zone de travail, on augmente le risque de voir passer le courant de soudage par les chaines de levage, câbles de grue, ou autres circuits. Cela peut provoquer des risques d'incendie ou d'echauffement des chaines et des câbles jusqu'à ce qu'ils se rompent.

9. Assurer une ventilation suffisante dans la zone de soudage. Ceci est particuliérement important pour le soudage de tôles galvanisées plombées, ou cadmiées ou tout autre métal qui produit des fumeés toxiques.

10. Ne pas souder en présence de vapeurs de chlore provenant d'opérations de dégraissage, nettoyage ou pistolage. La chaleur ou les rayons de l'arc peuvent réagir avec les vapeurs du solvant pour produire du phosgéne (gas fortement toxique) ou autres produits irritants.

11. Pour obtenir de plus amples renseignements sur la sûreté, voir le code "Code for safety in welding and cutting" CSA Standard W 117.2-1974.

PRÉCAUTIONS DE SÛRETÉ POUR LES MACHINES À SOUDER À TRANSFORMATEUR ET À REDRESSEUR

1. Relier à la terre le chassis du poste conformement au code de l'électricité et aux recommendations du fabricant. Le dispositif de montage ou la piece à souder doit être branché à une bonne mise à la terre.

2. Autant que possible, l'installation et l'entretien du poste seront effectués par un électricien qualifié.

3. Avant de faires des travaux à l'interieur de poste, la debrancher à l'interrupteur à la boite de fusibles.

4. Garder tous les couvercles et dispositifs de sûreté à leur place.

Page

TECHNICAL SPECIFICATIONS

INPUT	
MODEL	**DESCRIPTION**
K1655-7 LTA 2.0-CW™	**AIR HANDLING**

PHYSICAL DIMENSIONS		
COUNTERWEIGHT	**DIAMETER**	**WEIGHT**
14.3 lbs. (6.5 kg)	**8 in. (203mm)**	**59.5 lbs (27kg)**

TEMPERATURE RANGE	RELATIVE HUMIDITY
41ºF (5ºC) to 113ºF (45ºC)	**MAX. 80%**

UNRESTRICTED AIR FLOW
Max: 942 CFM (1600 m³/h)

FIGURE A.1 - STATIC PRESSURE

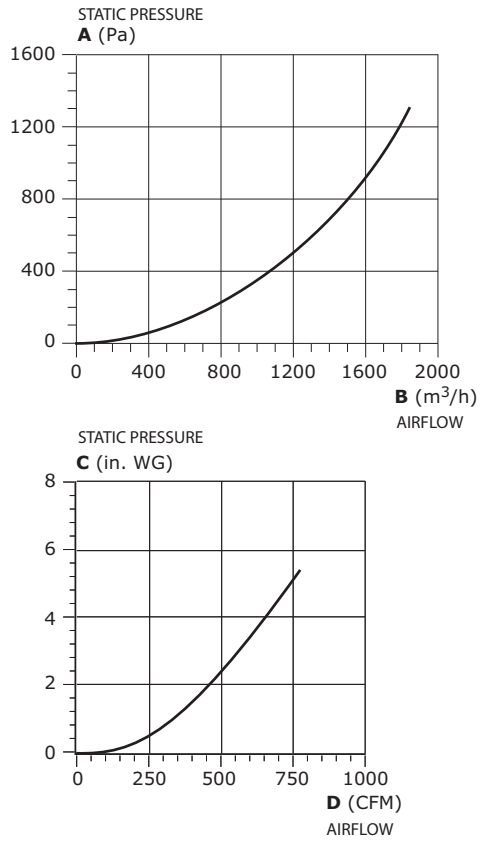
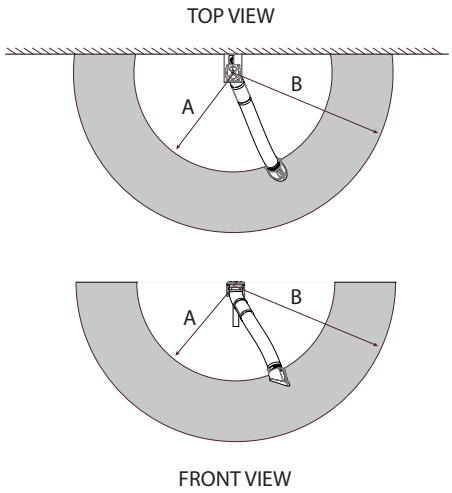


FIGURE A.2 - REACH



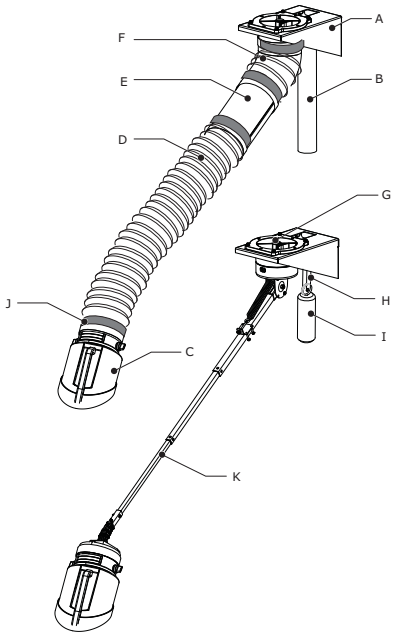
	inch	mm
A	61	1550
B	98	2500

COMPONENTS

The product consists of the following main components and elements:

A. Wall mounting bracket
B. Counterweight casing
C. Rotatable hood
D. Hose 65 in. (1650 mm)
E. Tube
F. Hose 20 in. (500 mm)
G. Rotating hinge
H. Rope
I. Counterweight
J. Rubber gaskets (4)
K. Extension arm

*Hardware (not shown)



READ ENTIRE INSTALLATION SECTION BEFORE STARTING INSTALLATION.

SAFETY PRECAUTIONS

⚠ WARNING

ELECTRIC SHOCK CAN KILL

- **Only qualified personnel should perform this installation.**
- **Turn the input power OFF and unplug the machine from the receptacle before working on this equipment.**
- **Insulate yourself from the work and ground.**
- **Always connect the machine to a power supply grounded according to the National Electrical Code and local codes.**

⚠ CAUTION

NEVER USE THIS PRODUCT FOR:

- **Oil mist**
- **Paint mist**
- **Extraction of hot gases (more than 113⁰ F/45⁰ C continuously)**
- **Explosive environments or explosive substances/gases**

NOTE: This list is not all inclusive.

INSTALLATION

- The installation of this product is exclusively reserved to well authorized, trained and qualified engineers.
- During installation, always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area during installation.
- Use sufficient climbing gear and safety guards when working on a higher level than 78.74 inches (2 meters) (local restrictions may apply).
- Never install the product in front of entrances and exits which must be used for emergency services.
- Mind any gas and water pipes and electric cables.
- Make sure the wall, ceiling or support system are strong enough to carry the product.
- Ensure the workspace is well illuminated.
- Use common sense. Stay alert and keep your attention to your work. Do not install the product when you are under the influence of drugs, alcohol or medicine.
- Make sure that the workshop, in the vicinity of the product, contains sufficient approved fire extinguishers.
- Air containing particles such as chromium, nickel, beryllium, cadmium, lead etc., which is a health hazard, should never be recycled. This air must always be brought outside the working area.

USE

- Inspect the product and check it for damage. Verify the functioning of the safety features.
- During use, always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.
- Check the working environment. Do not allow unauthorized persons to enter the working environment.
- Protect the product against water and humidity.
- Make sure the room is always sufficiently ventilated; this applies especially to confined spaces.

INSTALLATION HEIGHT

The recommended installation height of the wall mounting bracket is 11.5 ft. (3500 mm). If the subject work bench is lower than the standard height of 3.0 ft. (900 mm), it is advisable to install the wall mounting bracket at a height of 9.8-10.6 ft. (3000-3250 mm). See Figure A.3.

TOOLS AND REQUIREMENTS

The following tools are needed to install and maintain the extraction arm.

- 17mm wrench
- 13mm wrench
- 10mm wrench (2)

UNPACKING

Check that the product is complete. ***See Components*** in this section.

If parts are missing or damaged, contact your supplier.

MOUNTING

The package contains no mounting hardware for the wall mounting brackets since the required mounting hardware depends on the wall type. Wall mounting brackets can be mounted on:

- A thin brick or concrete wall (min. thickness of 4 inches/100 mm), using four threaded rods M10.
- A thick brick or concrete wall, using four cotter bolts M10x120x60.
- Steel profile (e.g. H-profile), using four threaded rods M10.

NOTE: For this purpose, two square tubes (30x30x3mm) need to be mounted to prevent bending.

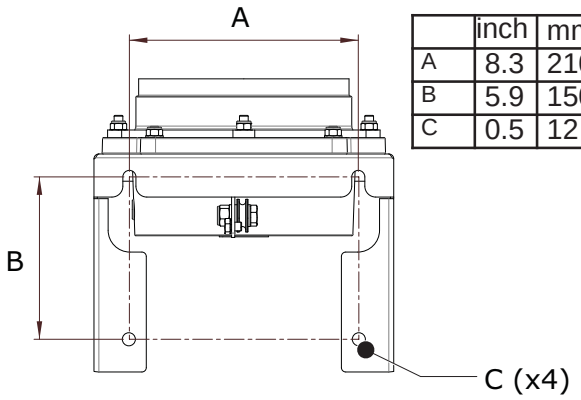
NOTE: For central extraction systems, a tapered fan flange is required.

⚠ CAUTION

USE CAUTION WHEN MOUNTING

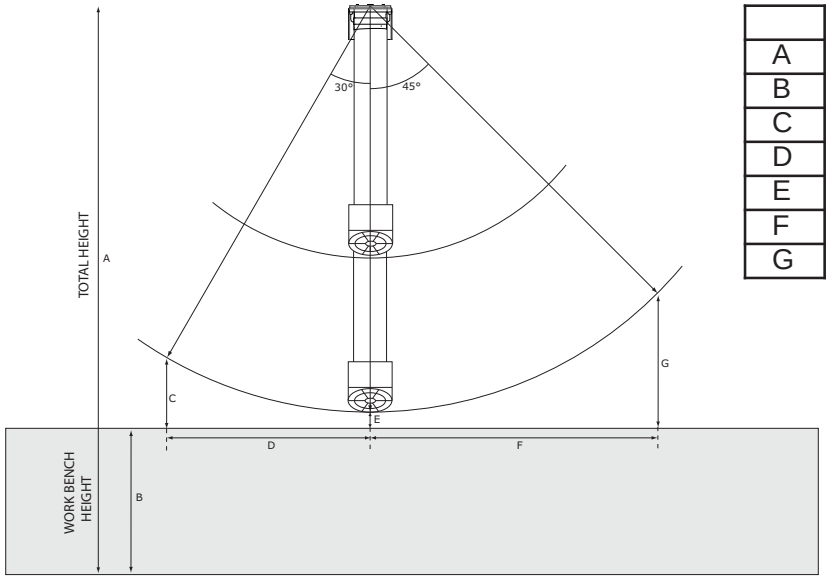
- **Check that the wall composition is strong enough before mounting the wall brackets.**
- **Before drilling,verify locations of existing gas, water and electrical conduits.**

- Mount the wall mounting bracket to the wall.



	inch	mm
A	8.3	210
B	5.9	150
C	0.5	12

FIGURE A.3 - INSTALLATION HEIGHT



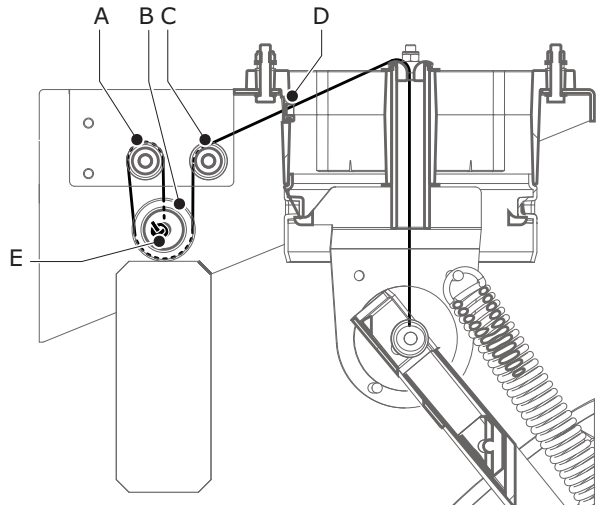
	mm	inch	feet
A	3500	138.8	11.5
B	900	35.4	3
C	450	17.7	1.5
D	1250	49.2	4.1
E	100	4.0	0.3
F	1800	70.9	5.9
G	800	31.5	2.6

ATTACHING THE ROPE

- Pull the arm to the longest position.
- Guide the rope through the rotating hinge (D) and over the pulley (C), the counterweight pulley (B) and the other small pulley (A).
- Keep the counterweight in the highest position, which means just below the small pulleys. Securely fasten the rope to the counterweight by tying a knot (E). The rope should be threaded through the hole in the counterweight pulley. The knot must be large enough so the rope cannot slip back through the hole.

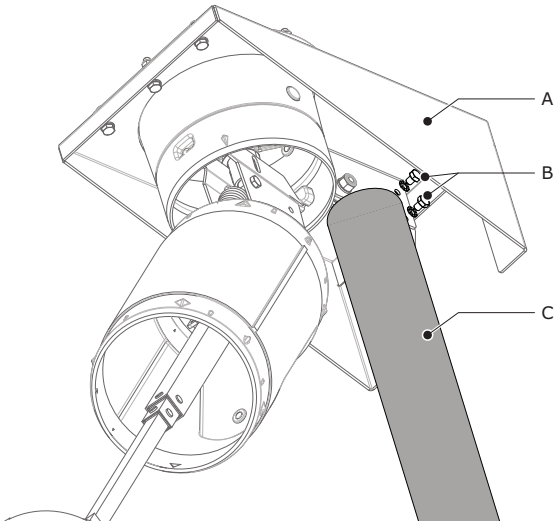
⚠ CAUTION

- **Tying the counterweight too low will affect the reach of the extraction arm.**



ATTACHING THE COUNTERWEIGHT CASING

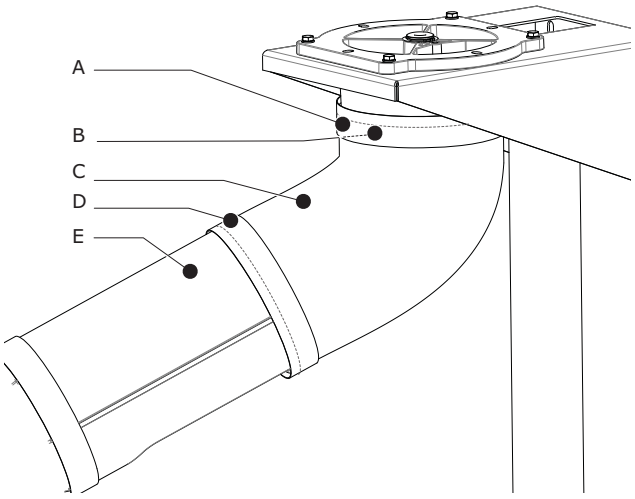
- Slide the counterweight casing (C) over the counterweight.
- Using a 13mm wrench, fasten the casing to the wall mounting bracket (A) using 2 bolts M8x10 and 2 lock washers M8 (B).
- Securely tighten bolts.



ATTACHING THE HOSE TO THE ROTATING HINGE

The rotating hinge and the tube are both provided with a rubber gaskets. To attach the shorter flexible hose proceed as follows:

- Remove the banding straps from the flexible hose.
- Fold back 2/3 of both rubber gaskets. (A+D).
- Place the flexible hose (C) over the collar (B) and the tube (E). To secure the hose, at least one metal ring of the hose should be applied over the ridges of the collar. The same goes for the tube.
- Fold back the gaskets and place them over the hose. Make sure the upper gasket overlaps the aluminum rotating hinge approximately 0.4 in. (10 mm).



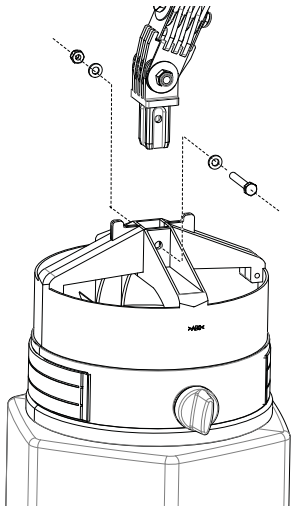
ATTACHING THE HOSE AND EXTRACTION HOOD

To mount the 65 in. (1650 mm) hose and the extraction hood, proceed as follows:

- Make sure the extraction arm is fully extended.
- Place a rubber gasket over the tube and fold back 2/3.
- Place the flexible hose 65 in. (1650 mm) over the tube. To secure the hose, at least one metal ring of the hose should be applied over ridges of the tube.
- Fold back the gasket and place it over the hose.

MOUNTING OF THE EXTRACTION HOOD

- Place a gasket over the extraction hood and fold back 2/3.
- Mount the extraction hood to the extraction arm using a bolt M6x40, a nut M6 and 2 washers M6. Tighten using two 10mm wrenches.
- Place the flexible hose over the extraction hood. To secure the hose, at least one metal ring of the hose should be applied over the ridges of the hood.
- Fold back the rubber gasket and place it over the hose.



GENERAL DESCRIPTION

The LTA 2.0-CW™ is a wall-mounted telescopic extraction arm with a rotatable hood. Located in the hood is a throttle valve that can be fully opened, partially opened or completely closed to control airflow. The arm features a focus extraction spoiler which directs the air into the hood. The extraction arm is based on a telescopic tube, allowing it to be extended to give a 8.2 ft (2.5 m) working radius and compressed to 5 ft (1.5 m). The arm is fitted with a spring balance which enables it to be moved from a vertical to a horizontal position in one easy movement. If mounted on a column, the arm can be turned 300° due to the rotating hinge. The LTA 2.0-CW™ is often used in welding booths.

MANUAL OPERATION

The extracted welding fume enters the extraction arm via the rotatable hood. The arm discharges the polluted air to a filter unit or directly to the atmosphere. The hood of the arm is fitted with a throttle valve, which can be controlled using the rotary knob(s). The throttle valve is mostly used when several extraction arms are integrated in a line installation; in such configurations closing the throttle valve prevents the loss of costly heated air.

NOTE: If an automatic damper system is part of the assembly, keep the manual damper open at all times.

⚠ WARNING

ELECTRIC SHOCK CAN KILL

The manufacturer does not accept any liability for damage to the product or personal injury caused by ignoring the safety instructions in this manual, or by negligence during installation, use, maintenance, and repair of the product mentioned on the cover of this document and any corresponding accessories. Specific working conditions or used accessories may require additional safety instructions. Immediately contact your supplier if you detect a potential danger when using the product.

The user of the product is always fully responsible for observing the local safety instructions and regulations. Observe all applicable safety instructions and regulations.

USER MANUAL

- Everyone working on or with the product, must be familiar with the contents of this manual and must strictly observe the instructions therein. The management should instruct the personnel in accordance with the manual and observe all instructions and directions given.
- Never change the order of the steps to perform.
- Always keep the manual with the product.

USERS

- The use of this product is exclusively reserved to well authorized, trained and qualified users. Temporary personnel and personnel in training can only use the product under supervision and responsibility of skilled engineers.
- Use common sense. Stay alert and keep your attention on your work. Do not use the product when you are under the influence of drugs, alcohol or medicine.
- The product is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

INTENDED USE

This product has been designed exclusively for extracting gases and particles which are released during the most common welding processes. Using this product for other purposes is considered contrary to its intended use. The manufacturer accepts no liability for any damage or injury resulting from such use. The product has been built in accordance with state-of-the art standards and recognized safety regulations. Only use this product when in technically perfect condition in accordance with its intended use and the instructions explained in the user manual.

PRODUCT COMBINATIONS

If the product is used in combination with other products or machines, the safety instructions in the documentation of these products also apply.

⚠ WARNING

RISK OF FIRE

NEVER USE THE PRODUCT FOR:

- **Extracting flammable, glowing or burning particles or solids or liquids.**
- **Extracting of aggressive fumes (such as hydrochloric acid) or sharp particles.**
- **Extracting dust particles which are released when welding surfaces treated with primer.**
- **Smoking cigarettes, cigars, oiled tissues, and other burning particles, objects, and acids.**

⚠ WARNING

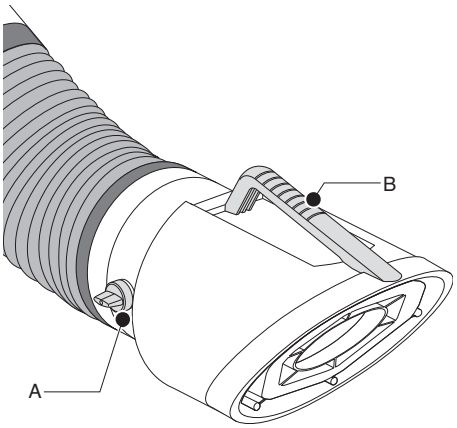
- **Always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.**

CONTROLS

The LTA 2.0-CW™ is provided with a handle for easy positioning and a throttle valve for adjustment of the airflow. All movement of the arm is controlled from the hood.

A. Rotary knobs for adjustment of throttle valve.
B. Handle for positioning of the extraction arm and hood.

FIGURE B.1 - CONTROLS



- Using the handle (B), position the hood of the extraction arm in the desired position at approximately 6-20 inches (15-50 cm) from the source of fume.

NOTE: Retraction movement must happen slowly to allow counterweight to descend.

- Open the throttle valve (A).
- Turn on the connected extraction fan; refer to the corresponding manual.
- Start welding.
- If desired, adjust the airflow by turning the rotary knob of the throttle valve (A).

NOTE: If an automatic damper system is part of the assembly, keep the manual damper open at all times.

- Turn off the connected extraction fan approx. 20 seconds after finishing welding; refer to the corresponding manual.

GENERAL OPTIONS / ACCESSORIES

PRODUCT COMBINATIONS

In order to operate the extraction arm, selection of one of the following products is required:

- Single fan type SF 1400 + wall bracket type TMB.
- Single fan type FAN 2400 + wall bracket type TMB.
- Single fan type FAN 4200.
- Central fan +NCF (flange).

OPTIONS AND ACCESSORIES

The following products can be obtained as an option and/or accessory:

- WCS (welding cable sensor) + AD-200 or AD-8. (automatic damper)
- NCF (flange in case of duct connection).
- Lamp kit for wall mounted systems (K1669-1). ***See IM627***
- Automatic start/stop arc sensor (K1670-1). ***See IM628***

SAFETY PRECAUTIONS

⚠ WARNING

ELECTRIC SHOCK can kill.
- **Do not touch electrically live parts or electrode with skin or wet clothing.**
- **Insulate yourself from work and ground.**
- **Always wear dry insulating gloves.**

MOVING PARTS can injure.
- **Do not operate with doors open or guards off.**
- **Stop engine before servicing.**
- **Keep away from moving parts.**

DISPOSAL

After life of the product, dispose of it in accordance with federal, state and local regulations.

SERVICE, MAINTENANCE AND REPAIRS

- Observe the maintenance intervals given in this manual. Overdue maintenance can lead to high costs for repair and can render the guarantee null and void.

- During service, maintenance and repair jobs, always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.

- Always use tools, materials, lubricants and service techniques which have been approved by the manufacturer. Never use worn tools and do not leave any tools in or on the product.

- Safety features which have been removed for service, maintenance or repairs, must be put back immediately after finishing these jobs and it must be checked that they will still function properly.

- Use sufficient climbing gear and safety guards when working higher than 2 meters (local restrictions may apply).

- Ensure the workspace is well illuminated.

The product has been designed to function without problems for a long time with a minimum amount of maintenance. In order to guarantee this, some simple regular maintenance and cleaning activities are required which are described in this chapter. If you observe the necessary caution and carry out the maintenance at regular intervals, any problems occurring will be detected and corrected before they lead to a total breakdown. The indicated maintenance intervals can vary depending on the specific working and ambient conditions. Therefore it is recommended to thoroughly inspect the complete product once every year beside the indicated periodic maintenance. For this purpose contact your supplier. ***See Table D.1.***

⚠ WARNING

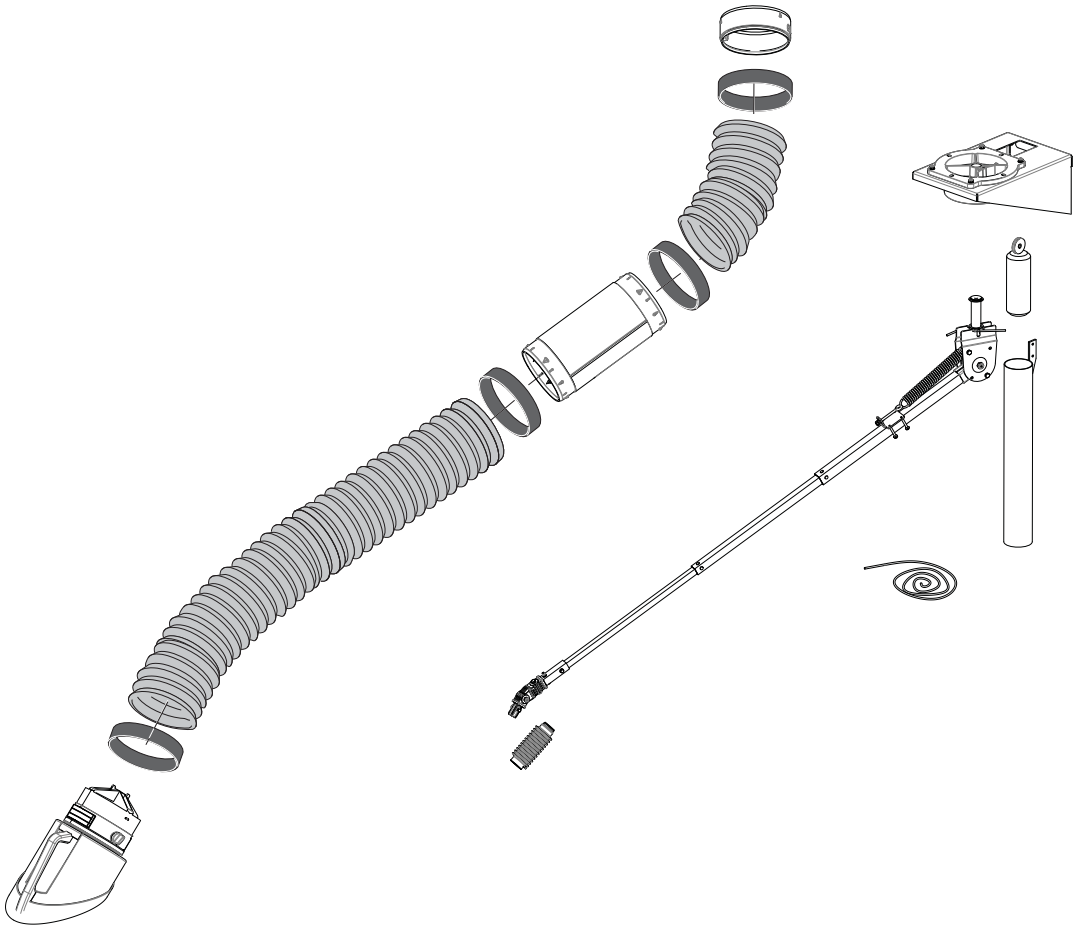
RISK OF FIRE

PAST DUE MAINTENANCE CAN CAUSE FIRE.

TABLE D.1 - PERIODIC MAINTENANCE

COMPONENT	ACTION	FREQUENCY	
		Every 3 mo.	Every 6 mo.
Outside Arm	Check and clean with a non-aggressive detergent.	X	
Flexible Hoses	Check for cracks or damages. Replace if necessary.		X
Inside Arm	Check and clean thoroughly.		X
Arm Movement	Check horizontal, vertical and diagonal arm movement. If necessary, adjust the spring and friction. ***See Figure F.2.***		X
Rotatable Arm	Check the function of the hood hinge. If necessary, adjust the friction. ***See Figure F.1.***		X
	Check the function of the throttle valve. ***See Figure B.1.***		X

TABLE D.1 - MAJOR COMPONENTS



HOW TO USE TROUBLESHOOTING GUIDE

⚠ WARNING

Service and Repair should only be performed by Lincoln Electric Factory Trained Personnel. Unauthorized repairs performed on this equipment may result in danger to the technician and machine operator and will invalidate your factory warranty. For your safety and to avoid Electrical Shock, please observe all safety notes and precautions detailed throughout this manual.

This Troubleshooting Guide is provided to help you locate and repair possible machine malfunctions. Simply follow the three-step procedure listed below.

Step 1. LOCATE PROBLEM (SYMPTOM).
Look under the column labeled "PROBLEM (SYMPTOMS)". This column describes possible symptoms that the machine may exhibit. Find the listing that best describes the symptom that the machine is exhibiting.

Step 2. POSSIBLE CAUSE.
The second column labeled "POSSIBLE CAUSE" lists the obvious external possibilities that may contribute to the symptom.

Step 3. RECOMMENDED COURSE OF ACTION
This column provides a course of action for the Possible Cause.

If you do not understand or are unable to perform the Recommended Course of Action safely, contact the Lincoln Electric Automation Division at 888.935.3878

⚠ CAUTION

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact the Lincoln Electric Automation Division at 888.935.3878 for technical troubleshooting assistance before you proceed.

TROUBLESHOOTING

Observe all Safety Guidelines detailed throughout this manual

PROBLEMS (SYMPTOMS)	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
Rotatable hood does not stay in desired position or does not move with reasonable force.	Too much or not enough friction in hood hinge.	Adjust friction. ***See Figure F.1.*** A = vertical movement B = horizontal movement
Arm does not stay in desired horizontal/vertical/diagonal position or does not move with reasonable force.	1. Spring loose. 2. Too much or not enough friction in arm.	1. Tighten spring. ***See Figure F.2.*** 2. Adjust friction. ***See Figure F.2.***
Arm does not stay in retracted position.	1. Counterweight gets stuck. 2. Rope broken.	1. Extend the arm and retract it again slowly. 2. Replace rope.
Poor suction.	1. Throttle valve closed. 2. Flexible hose(s) torn or loose. 3. Gasket(s) damaged or loose. 4. Fan. 5. Obstruction of air flow	1. Open throttle valve. 2. Mount correctly or replace. 3. Mount correctly or replace. 4. Check source. 5. Remove.

FIGURE F.1 - HOOD ADJUSTMENT

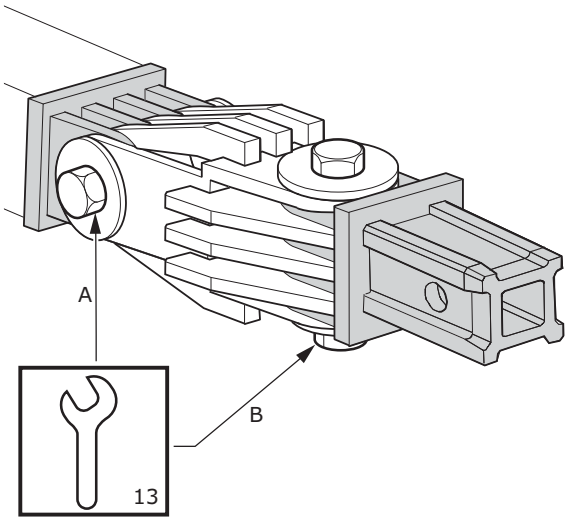
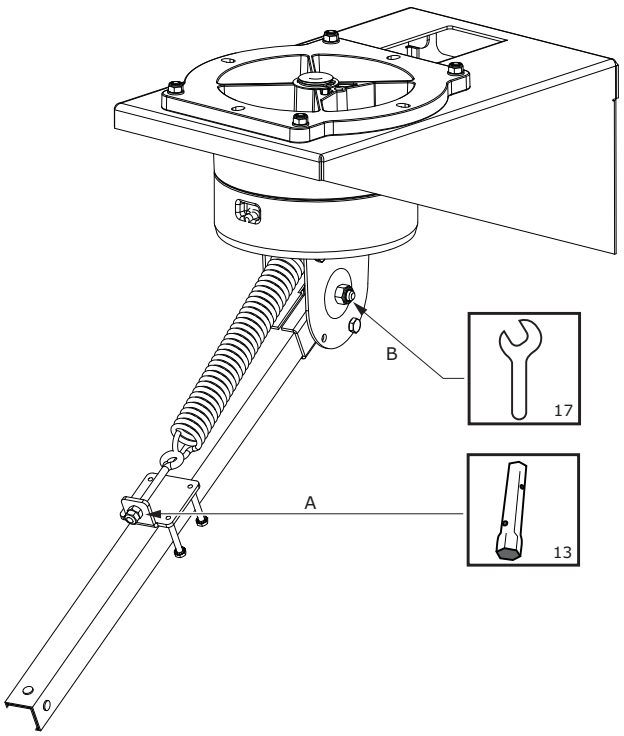


FIGURE F.2 - ARM ADJUSTMENT



⚠ CAUTION

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact the Lincoln Electric Automation Division at 888.935.3878 for technical troubleshooting assistance before you proceed.

			
WARNING	• Do not touch electrically live parts or electrode with skin or wet clothing. • Insulate yourself from work and ground.	• Keep flammable materials away.	• Wear eye, ear and body protection.
Spanish **AVISO DE PRECAUCION**	• No toque las partes o los electrodos bajo carga con la piel o ropa mojada. • Aislese del trabajo y de la tierra.	• Mantenga el material combustible fuera del área de trabajo.	• Protéjase los ojos, los oídos y el cuerpo.
French **ATTENTION**	• Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension. • Isolez-vous du travail et de la terre.	• Gardez à l'écart de tout matériel inflammable.	• Protégez vos yeux, vos oreilles et votre corps.
German **WARNUNG**	• Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung! • Isolieren Sie sich von den Elektroden und dem Erdboden!	• Entfernen Sie brennbarres Material!	• Tragen Sie Augen-, Ohren- und Körperschutz!
Portuguese **ATENÇÃO**	• Não toque partes elétricas e electrodos com a pele ou roupa molhada. • Isole-se da peça e terra.	• Mantenha inflamáveis bem guardados.	• Use proteção para a vista, ouvido e corpo.
Japanese **注意事項**	● 通電中の電気部品、又は溶材にヒフやぬれた布で触れないこと。 ● 施工物やアースから身体が絶縁されている様にして下さい。	● 燃えやすいものの側での溶接作業は絶対にしてはなりません。	● 目、耳及び身体に保護具をして下さい。
Chinese **警 告**	● 皮肤或濕衣物切勿接觸帶電部件及銲條。 ● 使你自己與地面和工件絶緣。	● 把一切易燃物品移離工作場所。	● 佩戴眼、耳及身體勞動保護用具。
Korean **위 험**	● 전도체나 용접봉을 젖은 헝겁 또는 피부로 절대 접촉치 마십시요. ● 모재와 접지를 접촉치 마십시요.	● 인화성 물질을 접근 시키지 마시요.	● 눈, 귀와 몸에 보호장구를 착용하십시요.
Arabic **تحذير**	● لا تلمس الاجزاء التي يسري فيها التيار الكهربائي أو الالكترود بجلد الجسم أو بالملابس المبللة بالماء. ● ضع عازلا على جسمك خلال العمل.	● ضع المواد القابلة للاشتعال في مكان بعيد.	● ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.

• Keep your head out of fumes. • Use ventilation or exhaust to remove fumes from breathing zone.	• Turn power off before servicing.	• Do not operate with panel open or guards off.	**WARNING**
• Los humos fuera de la zona de respiración. • Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases.	• Desconectar el cable de alimentación de poder de la máquina antes de iniciar cualquier servicio.	• No operar con panel abierto o guardas quitadas.	Spanish **AVISO DE PRECAUCION**
• Gardez la tête à l'écart des fumées. • Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail.	• Débranchez le courant avant l'entretien.	• N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés.	French **ATTENTION**
• Vermeiden Sie das Einatmen von Schweibrauch! • Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes!	• Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öffnen; Maschine anhalten!)	• Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen!	German **WARNUNG**
• Mantenha seu rosto da fumaça. • Use ventilação e exhaustão para remover fumo da zona respiratória.	• Não opere com as tampas removidas. • Desligue a corrente antes de fazer serviço. • Não toque as partes elétricas nuas.	• Mantenha-se afastado das partes moventes. • Não opere com os paineis abertos ou guardas removidas.	Portuguese **ATENÇÃO**
● ヒュームから頭を離すようにして下さい。 ● 換気や排煙に十分留意して下さい。	● メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切って下さい。	● パネルやカバーを取り外したままで機械操作をしないで下さい。	Japanese **注意事項**
●頭部遠離煙霧。 ●在呼吸區使用通風或排風器除煙。	● 維修前切斷電源。	●儀表板打開或沒有安全罩時不準作業。	Chinese **警 告**
● 얼굴로부터 용접가스를 멀리하십시요. ● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시요.	● 보수전에 전원을 차단하십시요.	● 판넬이 열린 상태로 작동치 마십시요.	Korean **위 험**
● ابعد رأسك بعيداً عن الدخان. ● استعمل التهوية أو جهاز ضغط الدخان للخارج لكي تبعد الدخان عن المنطقة التي تتنفس فيها.	● اقطع التيار الكهربائي قبل القيام بأية صيانة.	● لا تشغل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه.	Arabic **تحذير**

LEIA E COMPREENDA AS INSTRUÇÕES DO FABRICANTE PARA ESTE EQUIPAMENTO E AS PARTES DE USO, E SIGA AS PRÁTICAS DE SEGURANÇA DO EMPREGADOR.

使う機械や溶材のメーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

請詳細閱讀並理解製造廠提供的說明以及應該使用的銀焊材料，並請遵守貴方的有関勞動保護規定。

이 제품에 동봉된 작업지침서를 숙지하시고 귀사의 작업자 안전수칙을 준수하시기 바랍니다.

اقرأ بتمعن وافهم تعليمات المصنع المنتج لهذه المعدات والمواد قبل استعمالها واتبع تعليمات الوقاية لصاحب العمل.

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