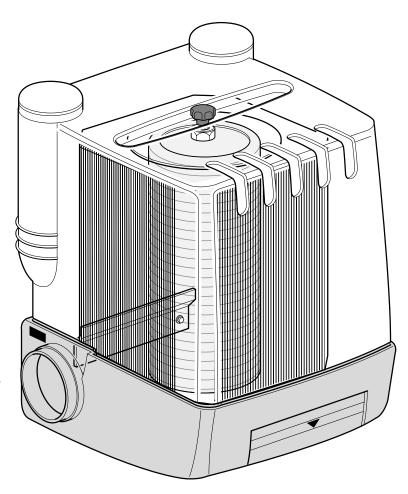
# STATIFLEX 200-M

#### **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.

Date of Purchase:_	
Serial Number:	
Code Number:	
Model:	
Where Purchased:	



# **OPERATOR'S MANUAL**



• World's Leader in Welding and Cutting Products •

• Sales and Service through Subsidiaries and Distributors Worldwide •

### **WARNING**



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

The Above For Diesel Engines

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The Above For Gasoline Engines

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.

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



 Deperate 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.



 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.
- 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.

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### **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.
- 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 with electrodes which require special ventilation such as stainless or hard facing (see instructions on container or MSDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and below Threshold Limit Values (TLV) using local exhaust or mechanical ventilation. In confined spaces or in some circumstances, outdoors, a respirator may be required. Additional precautions are also required when welding on galvanized steel.

- 5.b. 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.c. 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.d. Read and understand the manufacturer's instructions for this equipment and the consumables to be used, including the material safety data sheet (MSDS) and follow your employer's safety practices. MSDS forms are available from your welding distributor or from the manufacturer.
- 5.e. Also see item 1.b.

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# WELDING 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).
- 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.



# 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

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

the application and maintained in good condition.

- 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
- 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 1235 Jefferson Davis Highway, Arlington, VA 22202.



# 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.

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### 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.
- 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.
- 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.

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

- 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.
- Autant que possible, l'installation et l'entretien du poste seront effectués par un électricien qualifié.
- Avant de faires des travaux à l'interieur de poste, la debrancher à l'interrupteur à la boite de fusibles.
- Garder tous les couvercles et dispositifs de sûreté à leur place.



Thank You ———— for selecting a QUALITY product by Lincoln Electric. We want you to take pride in operating this Lincoln Electric Company product for selecting a QUALITY product by Lincoln Electric. We want you ••• as much pride as we have in bringing this product to vou!

#### Please Examine Carton and Equipment For Damage Immediately

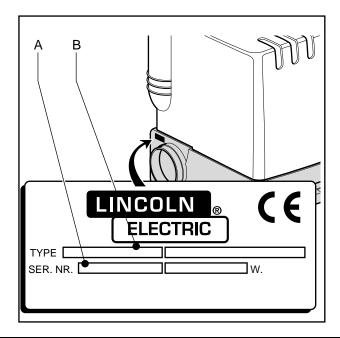
When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, Claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

Please record your equipment identification information below for future reference. This information can be found on your machine nameplate.

Model Name & Number <sub>-</sub>	
Code & Serial Number	
Date of Purchase	

Whenever you request replacement parts for or information on this equipment always supply the information you have recorded above.

Read this Operators Manual completely before attempting to use this equipment. Save this manual and keep it handy for quick reference. Pay particular attention to the safety instructions we have provided for your protection. The level of seriousness to be applied to each is explained below:



#### The identification plate specifies:

- A. Serial number
- B. Product name

### WARNING

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

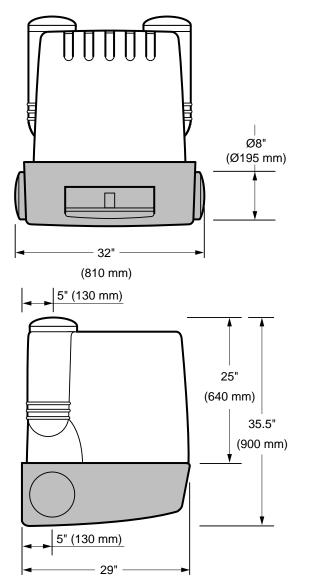
### **A** CAUTION

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

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#### **Technical Specifications- Statiflex 200-M**



(730 mm)

GENERAL		
Sales Spec.	K1654-1	
Weight	66 lbs. (30 kg)	

AIRFLOW			
Extraction Type Low Vacuum, High Volume			
<b>Airflow Rate</b> 735 CFM (1,250 m <sup>3</sup> /h)			

FILTER				
Filter Type	Pretreated Paper Cartridge			
Surface Area	539 ft <sup>2</sup> (50 m <sup>2</sup> )			
Efficiency	99.8% (stabilized)			

AMBIENT CONDITIONS			
Min. Temperature 41°F (5°C)			
Max. Temperature 113°F (45°C)			
Max. Rel. Humidity 80%			

**NOTE:** Technical Specifications are subject to change without prior notice. Specifications and guarantees are valid only when specified spare parts and filters are used.



Read this entire installation section before you start installation.

#### SAFETY PRECAUTIONS

Do not attempt to use this equipment until you have thoroughly read all installation, operating and maintenance information supplied with your equipment. They include important safety precautions and detailed operating and maintenance instructions.

#### **M** WARNING



#### **ELECTRIC SHOCK can kill.**

- Do not touch electrically live parts such as internal wiring.
- Turn the input power off at the fuse box before working on this equipment.
- Have a qualified person install and service this equipment.



#### MOVING PARTS can injure.

- Do not operate with covers open or filter removed.
- Keep away from moving parts.

Only qualified personnel should install, use or service this equipment.

#### GENERAL DESCRIPTION

The K1654-1 Statiflex 200-M Wall-Mounted Filter Unit provides efficient filtration for use with a Lincoln SF2400 Stationary Fan and LFA 3.1/4.1 or LTA 2.0 Arms. The Statiflex 200-M is suitable for light duty, intermittent use. It features a spark arrester and a square, disposable paper filter cartridge with a filtration efficiency of 99.8%. Fume is captured on the inside of the cartridge, keeping hands clean during filter maintenance.

The Statiflex 200-M Filter Unit and SF2400 Stationary Fan can be combined with an LFA 3.1, 10 ft. Extraction Arm, an LFA 4.1, 13 ft. Extraction Arm, or an LTA 2.0 Telescopic Extraction Arm to form a complete extraction system. Extension cranes in 7 ft. and 14 ft. lengths may also be used with the wall-mounted system including Statiflex 200-M Filter.

A Starter/Overload Switch or Lamp Kit for Wall-Mounted Systems must be included with any wall-mounted extraction system to power the SF2400 Fan. An Automatic Start/Stop Arc Sensor is also available to automatically switch the fan on and off when an arc is detected.

#### Available Equipment:

K1656-1 SF2400 Stationary Fan

K1655-1 LFA 3.1, 10 ft. Extraction Arm

K1655-2 LFA 4.1, 13 ft. Extraction Arm

K1655-3 LTA 2.0, Telescopic Extraction Arm

K1494-2 Starter/Overload Switch

(unnecessary if using a K1669-2 Lamp Kit)

K1669-2 Lamp Kit for Wall-Mounted Systems

(replaces K1494-2 Starter/OL Switch)

K1670-1 Automatic Start/Stop Arc Sensor (requires K1669-2 Lamp Kit)

K1671-1 Extension Crane, 7 ft.

K1671-2 Extension Crane, 14 ft.

K1672-1 Feeder Hanging Rail for Extension Crane

#### **INSTALLING THE STATIFLEX 200-M**

#### WARNING

The installer is responsible for following local safety codes and regulations.

Before drilling, verify locations of existing gas, water, or electrical conduits.

This section describes installation of the K1654-1 Statiflex 200-M Wall-Mounted Filter Package only. For information on installation of wall-mounted arms and SF2400 Fan, refer to the SF2400 Stationary Fan manual.

The K1654-1 Statiflex 200-M Filter Unit Includes:

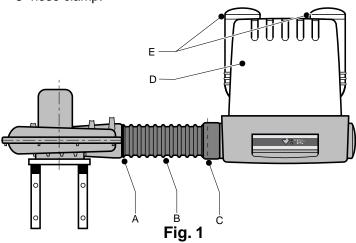
- Complete Filter Unit, with filter installed and inlet(s) and outlet(s) sealed
- Reducer, 6"-8"
- 8" Connection hose, 4 ft. long
- (2) 8" Hose Clamps

#### **INSTALLING THE STATIFLEX 200-M**

(continued)

Fit the small (6" diam.) side of the 6"-8" Reducer over the outlet of the SF2400 Fan (Fig. 1A); be sure to slide the Reducer all the way over the rubber seal. Secure with three sheet-metal screws through the reducer into the plastic-molded fan outlet.

Fit one end of the 8" Connection hose (Fig. 1B) over the larger side of the 6"-8" Reducer. Secure with one 8" hose clamp.



Mount the Statiflex mounting bracket (Fig. 2A) to the wall where convenient with the following in mind:

- Access to the filter (for maintenance) is by lifting the large red cover over the (internal) filter. The easiest method is to lift the entire filter unit off the mounting bracket (about 2-4" higher than its mounting height) and set it down on the floor, then perform any necessary maintenance.
- The 8" connection hose must reach (comfortably) the inlet of the Statiflex 200-M; the inlet (when mounted) is approximately 10 in. off the left side of the Statiflex mounting bracket.
- The Statiflex 200-M may be mounted on either side of the fan, as long as the connection hose reaches from the outlet of the fan to the inlet of the Statiflex 200-M.
- Recommended mounting height of the Statiflex mounting bracket is less than 7 ft. from the floor to the drilled holes. It is recommended to mount the bracket about 30-36 in. off the outlet of the fan (to the right).

Before lifting the Statiflex 200-M Filter Unit onto the mounting bracket:

- Cut the left inlet (or right, depending on which side of the fan it is to be mounted) open (Fig. 1 C). A hack-saw or multi-purpose power saw may be used.
- Unscrew the thumb nut and remove the filter cover (Fig. 1D). Cut one or both outlet openings (Fig. 1E) open. Replace the filter cover and thumb nut.

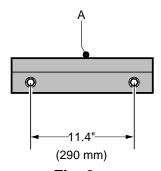
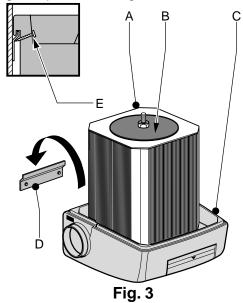


Fig. 2

Lift the Statiflex 200-M onto the mounting bracket; refer to Figure 3. The installation may be made permanent by running (2) self-tapping screws (FIg. 3E) in through the plastic base against the wall bracket.



Read and understand this entire section before operating your wall-mounted extraction system with Statiflex 200-M Filter Unit.

#### SAFETY INSTRUCTIONS

Do not attempt to use this equipment until you have thoroughly read all operating and maintenance manuals supplied with your equipment and any related welding machine it will be used with. They include important safety precautions, operating and maintenance instructions and parts lists.

#### **WARNING**



#### **ELECTRIC SHOCK can kill.**

- •Do not touch electrically live parts such as output terminals or internal wiring.
- •Insulate yourself from the work and ground.
- Always wear dry insulating gloves.



#### WELDING SPARKS can cause fire or explosion.

- Keep flammable material away.
- •Do not weld upon containers which have held combustibles.

#### ARC RAYS can burn.



Wear eye, ear and body protection.



# FUMES AND GASES can be dangerous.

• Although the removal of the particulate matter from welding smoke may reduce the ventilation requirement, concentrations of the clear exhausted fumes and gases may still be hazardous to health. Avoid breathing concentrations of these fumes and gases. Use adequate ventilation when welding. See ANSI Z49.1, "Safety in Welding and Cutting", published by the American Welding Society.

Only qualified personnel should operate this equipment.

#### ADDITIONAL SAFETY PRECAUTIONS

Always operate this equipment with the filter and arm installed and all covers in place as these provide maximum protection from moving parts and insure proper vacuum operation and cooling air flow.

#### **OPERATING INSTRUCTIONS**

Use the wall-mounted starter/overload switch or the hood-mounted remote switch (if a lamp kit is installed) to turn on the SF2400 Stationary Fan.

Position hood within 10-15 inches (250-400 mm) of the arc.

#### If using a Lamp Kit:

- The switch on the hood with a lamp symbol operates the work lamp in the hood.
- The 0/1 switch operates the SF2400 Fan.

#### If using an Auto Start/Stop Arc Sensor:

Leave the 0/1 switch in the 0 (off) position. The arc sensor will automatically switch the fan on when it senses an arc. Standard run-out time is approximately 20 sec. The work lamp operates independently of this sensor.

DO NOT USE FOR CUTTING OR GOUGING OPER-ATIONS. The Statiflex filter unit is recommended for light duty or intermittent use. Although it can be used in production applications, this may require very frequent maintenance or replacement of the filter cartridge. Use of the Statiflex 200-M disposable filter system is cost effective if consumable use at the station is less than 1500 lbs. per year of solid wire or 1100 lbs. per year of flux-shielded consumables.

#### FILTER MAINTENANCE INDICATOR

With use, the filter will fill up with collected fume. When using the machine, regularly check the maintenace indicator on the front panel of the machine. The indicator will move gradually from white to red as the filter becomes saturated, letting you know ahead of time how close the filter is to clogging.

When the maintenance indicator shows that the filter is clogged, it is time to replace the filter.

#### **ROUTINE MAINTENANCE**

Every 3 months, clean the inside of the machine with a vacuum cleaner, including the filter compartment and spark arrester. Check the filter for damage or saturation.

#### REPLACING THE FILTER CARTRIDGE

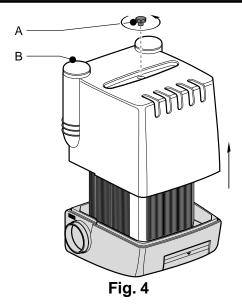
Replace the filter when it has been damaged, when the indicator shows that the filter is clogged, or when airflow is reduced to the point that extraction performance is no longer satisfactory (extracts welding fume with the hood positioned within 10-15 inches of the welding arc).

#### **WARNING**

The particulate matter collected may be dangerous to your health. Take necessary precautions so that you and your fellow workers do not breathe the dust and particulate. Wear a suitable respirator when disposing of the particulate.

Check with local authorities for regulations governing the disposal of this material.

- 1. Disconnect the fan from input power.
- 2. Unscrew the thumb nut (Fig. 4A) and remove the filter cover (Fig. 4B).
- 3. Unscrew the nut (Fig. 5A) and remove the filter sealing plate (Fig. 5B).
- 4. Lift the filter cartridge (Fig. 6A) up and out of the machine. It is not necessary to remove the spark arrester (Fig. 6B). Clean the spark arrester and filter compartment with a vacuum cleaner.
- Install the new filter and replace the filter sealing plate, nut, filter cover, and thumb nut.



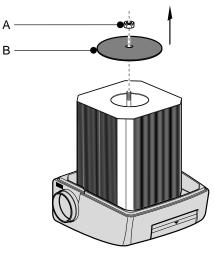


Fig. 5

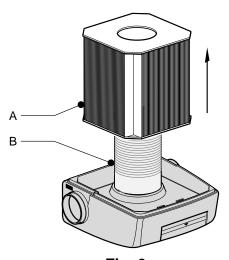


Fig. 6

Observe all Safety Guidelines detailed throughout this manual

SYMPTOM	PROBLEM	SOLUTION
Poor suction.	Leakage.	Check hose connections and integrity
	Outlet blocked.	Remove obstructions from outlet grid.
	Air path in arm blocked.	Remove obstructions from arm.
	Filter blocked (check Maintenance Indicator).	Replace filter.
	Spark arrester blocked.	Clean the spark arrester.
	Blower fan blocked.	Clean excess fume or spatter from fan.
	Fan seal damaged.	Check or replace sealing material of fan.
Dust or smoke coming out of outlet.	Filter damaged, or not seated correctly.	Replace the filter or reseat it.
Refer to SF2400 Stationary Fan, and appropriate arm manual for more troubleshooting.		

### **A** CAUTION

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your **Local Lincoln Authorized Field Service Facility** for technical troubleshooting assistance before you proceed.

# **NOTES**

# **NOTES**

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WARNING	<ul> <li>Do not touch electrically live parts or electrode with skin or wet clothing.</li> <li>Insulate yourself from work and ground.</li> </ul>	● Keep flammable materials away.	Wear eye, ear and body protection.
AVISO DE PRECAUCION	<ul> <li>No toque las partes o los electrodos bajo carga con la piel o ropa moja- da.</li> <li>Aislese del trabajo y de la tierra.</li> </ul>	<ul> <li>Mantenga el material combustible fuera del área de trabajo.</li> </ul>	Protéjase los ojos, los oídos y el cuerpo.
ATTENTION	<ul> <li>Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension.</li> <li>Isolez-vous du travail et de la terre.</li> </ul>	Gardez à l'écart de tout matériel inflammable.	Protégez vos yeux, vos oreilles et votre corps.
WARNUNG	<ul> <li>Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung!</li> <li>Isolieren Sie sich von den Elektroden und dem Erdboden!</li> </ul>	Entfernen Sie brennbarres Material!	Tragen Sie Augen-, Ohren- und Kör- perschutz!
ATENÇÃO	<ul> <li>Não toque partes elétricas e electrodos com a pele ou roupa molhada.</li> <li>Isole-se da peça e terra.</li> </ul>	<ul> <li>Mantenha inflamáveis bem guardados.</li> </ul>	Use proteção para a vista, ouvido e corpo.
注意事項	<ul><li>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。</li><li>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。</li></ul>	● 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 整 生	<ul><li>● 皮肤或濕衣物切勿接觸帶電部件及 銲條。</li><li>● 使你自己與地面和工件絶縁。</li></ul>	●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。
Rorean 위험	● 전도체나 용접봉을 젖은 헝겁 또는 피부로 절대 접촉치 마십시요. ● 모재와 접지를 접촉치 마십시요.	●인화성 물질을 접근 시키지 마시요.	●눈, 귀와 몸에 보호장구를 착용하십시요.
Arabic <b>"aci</b>	<ul> <li>♦ لا تلمس الإجزاء التي يسري فيها التبار الكهرباني أو الالكترود بجلد الجسم أو بالملابس المبللة بالماء.</li> <li>♦ ضع عاز لا على جسمك خلال العمل.</li> </ul>	<ul> <li>ضع المواد القابلة للاشتعال في مكان بعيد.</li> </ul>	<ul> <li>ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.</li> </ul>

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.

	ブ		
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
<ul> <li>Los humos fuera de la zona de respiración.</li> <li>Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases.</li> </ul>	Desconectar el cable de ali- mentación de poder de la máquina antes de iniciar cualquier servicio.	No operar con panel abierto o guardas quitadas.	AVISO DE PRECAUCION
<ul> <li>Gardez la tête à l'écart des fumées.</li> <li>Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail.</li> </ul>	Débranchez le courant avant l'entre- tien.	<ul> <li>N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés.</li> </ul>	ATTENTION
Vermeiden Sie das Einatmen von Schweibrauch!     Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes!	Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öff- nen; Maschine anhalten!)	Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen!	WARNUNG
<ul> <li>Mantenha seu rosto da fumaça.</li> <li>Use ventilação e exhaustão para remover fumo da zona respiratória.</li> </ul>	<ul> <li>Não opere com as tampas removidas.</li> <li>Desligue a corrente antes de fazer serviço.</li> <li>Não toque as partes elétricas nuas.</li> </ul>	<ul> <li>Mantenha-se afastado das partes moventes.</li> <li>Não opere com os paineis abertos ou guardas removidas.</li> </ul>	ATENÇÃO
<ul><li>● ヒュームから頭を離すようにして下さい。</li><li>● 換気や排煙に十分留意して下さい。</li></ul>	<ul><li>■ 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。</li></ul>	● 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。	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
● 얼굴로부터 용접가스를 멀리하십시요. ● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시요.	● 보수전에 전원을 차단하십시요.	● 판넬이 열린 상태로 작동치 마십시요.	Rorean 위 험
<ul> <li>ابعد رأسك بعيداً عن الدخان.</li> <li>استعمل التهوية أو جهاز ضغط الدخان للخارج</li> <li>لكي تبعد الدخان عن المنطقة التي تتنفس فيها.</li> </ul>	<ul> <li>● اقطع التيار الكهربائي قبل القيام بأية صيانة.</li> </ul>	<ul> <li>لا تشغل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه.</li> </ul>	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説明以及應該使用的銀捍材料,並請遵守貴方的有関勞動保護規定。

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

