IM7917
08/2019
Rev A01

PowerCraft® 140
PowerCraft® 185

For use with machine Part Number:-

PowerCraft® 140	K69058-1	Code 76411
PowerCraft® 185	K69059-1	Code 76412

INSTRUCTION MANUAL

Safety Depends on You
POWERCRAFT® machine 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.

POWERCRAFT®

THE LINCOLN ELECTRIC COMPANY PTY LTD
35 Byrant Street Padstow NSW 2211
www.lincolnelectric.com.au

POWERCRAFT®

Declaration of conformity

The Shanghai Lincoln Electric Co., Ltd

Declares that the welding machine:

PowerCraft® 140
PowerCraft® 185

have been designed in compliance with the following standards:

AS 60974.1, IEC 60974-1, IEC 60974-10, AS/NZS CISPR 11

08.08.2019
Charlie Wang
Product Development & R&D Director

THE SHANGHAI LICOLN ELECTRIC CO.,LTD
No 195, Lane 5008, Hutai Road, Shanghai, China

POWERCRAFT®

THANK YOU! For having choosen the QUALITY of the Lincoln Electric products.

- Please Examine Package and Equipment for Damage. Claims for material damaged in shipment must be notified immediately to the dealer.
- For future reference record in the table below your equipment identification information. Model Name, Code & Serial Number can be found on the machine rating plate.

Machine Details

Model Name:

Type	Item number	Code number (see rating plate)	Serial number
PowerCraft® 140	K69058-1		
PowerCraft® 185	K69059-1		

Purchase Place	Date	Notes

Date	Description	Signature

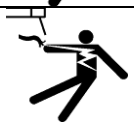
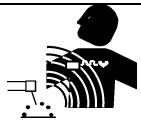
Warranty conditions are available within this Instruction Manual

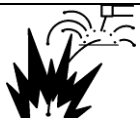
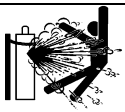
INDEX

Safety

WARNING

This equipment must be used by qualified personnel. Be sure that all installation, operation, maintenance and repair procedures are performed only by qualified person. Read and understand this manual before operating this equipment. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or damage to this equipment. Read and understand the following explanations of the warning symbols. Lincoln Electric (Aust) Pty Ltd. is not responsible for damages caused by improper installation, improper care or abnormal operation.

	WARNING: This symbol indicates that instructions must be followed to avoid serious personal injury, loss of life, or damage to this equipment. Protect yourself and others from possible serious injury or death.
	READ AND UNDERSTAND INSTRUCTIONS: Read and understand this manual before operating this equipment. Arc welding can be hazardous. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or damage to this equipment.
	ELECTRIC SHOCK CAN KILL: Welding equipment generates high voltages. Do not touch the electrode, work clamp, or connected work pieces when this equipment is turned on. Insulate yourself from the electrode, work clamp, and connected work pieces.
	ELECTRICALLY POWERED EQUIPMENT: Turn off input power using the disconnect switch at the fuse box and remove the input plug from the power receptacle before working on this equipment. Ground this equipment in accordance with local electrical regulations.
	ELECTRICALLY POWERED EQUIPMENT: Regularly inspect the input, electrode, and work clamp cables. If any insulation damage exists replace the cable immediately. Do not place the electrode holder directly on the welding table or any other surface in contact with the work clamp to avoid the risk of accidental arc ignition.
	ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS: Electric current flowing through any conductor creates electric and magnetic fields (EMF). EMF fields may interfere with some pacemakers, and welders having a pacemaker shall consult their physician before operating this equipment.

	ARTIFICIAL OPTICAL RADIATION: According with the requirements in 2006/25/EC Directive and EN 12198 Standard, the equipment is a category 2. It makes mandatory the adoption of Personal Protective Equipments (PPE) having filter with a protection degree up to a maximum of 15, as required by EN169 Standard.
	FUMES AND GASES CAN BE DANGEROUS: Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. To avoid these dangers the operator must use enough ventilation or exhaust to keep fumes and gases away from the breathing zone.
	ARC RAYS CAN BURN: 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. Use suitable clothing made from durable flame-resistant material to protect you skin and that of your helpers. Protect other nearby personnel with suitable, non-flammable screening and warn them not to watch the arc nor expose themselves to the arc.
	WELDING SPARKS CAN CAUSE FIRE OR EXPLOSION: Remove fire hazards from the welding area and have a fire extinguisher readily available. Welding sparks and hot materials from the welding process can easily go through small cracks and openings to adjacent areas. Do not weld on any tanks, drums, containers, or material until the proper steps have been taken to insure that no flammable or toxic vapors will be present. Never operate this equipment when flammable gases, vapors or liquid combustibles are present.
	WELDED MATERIALS CAN BURN: Welding generates a large amount of heat. Hot surfaces and materials in work area can cause serious burns. Use gloves and pliers when touching or moving materials in the work area.
	SAFETY MARK: This equipment is suitable for supplying power for welding operations carried out in an environment with increased hazard of electric shock.
	CYLINDER MAY EXPLODE IF DAMAGED: 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. Always keep cylinders in an upright position securely chained to a fixed support. Do not move or transport gas cylinders with the protection cap removed. Do not allow the electrode, electrode holder, work clamp or any other electrically live part to touch a gas cylinder. Gas cylinders must be located away from areas where they may be subjected to physical damage or the welding process including sparks and heat sources.

Electromagnetic Compatibility (EMC)

Conformance
Products displaying the CE mark are in conformity with European Community Council Directive of 15 Dec 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility, 2004/108/EC. It was manufactured in conformity with a national standard that implements a harmonized standard: EN 60974-10 Electromagnetic Compatibility (EMC) Product Standard for Arc Welding Equipment. It is for use with other Lincoln Electric equipment. It is designed for industrial and professional use.

Introduction
All electrical equipment generates small amounts of electromagnetic emission. Electrical emission may be transmitted through power lines or radiated through space, similar to a radio transmitter. When emissions are received by other equipment, electrical interference may result. Electrical emissions may affect many kinds of electrical equipment; other nearby welding equipment, radio and TV reception, numerical controlled machines, telephone systems, computers, etc.
WARNING: This equipment is not intended for use in residential locations where the electrical power is provided by the public low-voltage supply system. There may be potential difficulties in ensuring electromagnetic compatibility in those locations, due to conducted as well as radiated disturbances.

Installation and Use
The user is responsible for installing and using the welding equipment according to the manufacturer's instructions. If electromagnetic disturbances are detected then it shall be the responsibility of the user of the welding equipment to resolve the situation with the technical assistance of the manufacturer. In some cases this remedial action may be as simple as earthing (grounding) the welding circuit, see Note. In other cases it could involve construction of an electromagnetic screen enclosing the power source and the work complete with associated input filters. In all cases electromagnetic disturbances must be reduced to the point where they are no longer troublesome.

Note: The welding circuit may or may not be earthed for safety reasons. Follow your local and national standards for installation and use. Changing the earthing arrangements should only be authorized by a person who is competent to assess whether the changes will increase the risk of injury, e.g., by allowing parallel welding current return paths which may damage the earth circuits of other equipment.

Assessment of Area
Before installing welding equipment the user shall make an assessment of potential electromagnetic problems in the surrounding area. The following shall be taken into account:

a) other supply cables, control cables, signaling and telephone cables; above, below and adjacent to the welding equipment;

b) radio and television transmitters and receivers;

c) computer and other control equipment;

d) safety critical equipment, e.g., guarding of industrial equipment;

e) the health of the people around, e.g., the use of pacemakers and hearing aids;

f) equipment used for calibration or measurement;

g) the immunity of other equipment in the environment. The user shall ensure that other equipment being used in the environment is compatible. This may require additional protection measures;

h) the time of day that welding or other activities are to be carried out.

Electromagnetic Compatibility (EMC)

The size of the surrounding area to be considered will depend on the structure of the building and other activities that are taking place. The surrounding area may extend beyond the boundaries of the premises.

Methods of Reducing Emissions

Public Supply System
Welding equipment should be connected to the public supply system according to the manufacturer's recommendations. If interference occurs, it may be necessary to take additional precautions such as filtering of the public supply system. Consideration should be given to shielding the supply cable of permanently installed welding equipment, in metallic conduit or equivalent. Shielding should be electrically continuous throughout its length. The shielding should be connected to the welding power source so that good electrical contact is maintained between the conduit and the welding power source enclosure.

Maintenance of the Welding Equipment
The welding equipment should be routinely maintained according to the manufacturer's recommendations. All access and service doors and covers should be closed and properly fastened when the welding equipment is in operation. The welding equipment should not be modified in any way except for those changes and adjustments covered in the manufacturers instructions. In particular, the spark gaps of arc striking and stabilizing devices should be adjusted and maintained according to the manufacturer's recommendations.

Welding Cables
The welding cables should be kept as short as possible and should be positioned close together, running at or close to floor level.

Equipotential Bonding
Bonding of all metallic components in the welding installation and adjacent to it should be considered. However, metallic components bonded to the work piece will increase the risk that the operator could receive a shock by touching these metallic components and the electrode at the same time. The operator should be insulated from all such bonded metallic components.

Earthing of the Workpiece
Where the workpiece is not bonded to earth for electrical safety, nor connected to earth because of its size and position, e.g., ship's hull or building steelwork, a connection bonding the workpiece to earth may reduce emissions in some, but not all instances. Care should be taken to prevent the earthing of the workpiece increasing the risk of injury to users, or damage to other electrical equipment. Where necessary, the connection of the workpiece to earth should be made by a direct connection to the workpiece, but in some countries where direct connection is not permitted, the bonding should be achieved by suitable capacitance, selected according to national regulations.

Screening and Shielding
Selective screening and shielding of other cables and equipment in the surrounding area may alleviate problems of interference. Screening of the entire welding installation may be considered for special applications[1].

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[1] Portions of the preceding text are contained in EN 60974-10: "Electromagnetic Compatibility (EMC) product standard for arc welding equipment."

Technical Specifications

INPUT			
	Input Power at Rated Output kW @ Duty Cycle	Input Voltage	Frequency
PowerCraft® 140	1,6 kW @ 100%	240V ± 15% Single Phase	50/60Hz
	2,1 kW @ 60%		
	4,7 kW @ 10%		
PowerCraft® 185	1,7 kW @ 100%		
	2,4 kW @ 60%		
	6,9 kW @ 15%		
RATED OUTPUT AT 40°C for MMA			
	Duty Cycle (Based on a 10 min. period)	Output Current	Output Voltage
PowerCraft® 140	100%	50 A	22,0 Vdc
	60%	65 A	22,6 Vdc
	10%	130 A	25,2 Vdc
PowerCraft® 185	100%	70 A	22,8 Vdc
	60%	90 A	23,6 Vdc
	15%	180 A	27,2 Vdc
OUTPUT RANGE			
	Welding Current Range	Maximum Open Circuit Voltage Peak	
PowerCraft® 140	10 -140 A	91 Vdc	
PowerCraft® 185	10 -185 A	75 Vdc	
RECOMMENDED INPUT CABLE AND FUSE SIZES			
	Fuse (delayed) or Circuit Breaker ("D" characteristic) Size	Input Power Cable	Type of Plug (Included with Machine)
PowerCraft® 140	16A/25A (I_2>130A)	3 x 1,5mm^2	10A / 250V
PowerCraft® 185	16A/25A (I_2>130A)	3 x 2,5mm^2	15A / 250V
PHYSICAL DIMENSIONS			
	Height x Width x Length (mm)	Weight (kg)	
PowerCraft® 140	230 x 130 x 290	3,7	IP21S
PowerCraft® 185	230 x 130 x 290	4,2	IP21S

Installation and Operator Instructions

Read this entire section before installation or operation of the machine.

Location and Environment

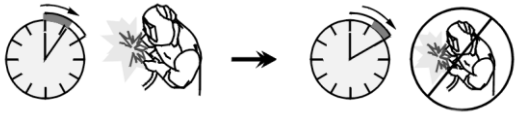
This machine can operate in harsh environments. However, it is important that simple preventative measures are followed to assure long life and reliable operation:

- Do not place or operate this machine on a surface with an incline greater than 15° from horizontal.
- Do not use this machine for pipe thawing.
- This machine must be located where there is free circulation of clean air without restrictions for air movement to and from the air vents. Do not cover the machine with paper, cloth or rags when switched on.
- Dirt and dust that can be drawn into the machine should be kept to a minimum.
- This machine has a protection rating of IP21S. Keep it dry when possible and do not place it on wet ground or in puddles.
- Locate the machine away from radio controlled machinery. Normal operation may adversely affect the operation of nearby radio controlled machinery, which may result in injury or equipment damage. Read the section on electromagnetic compatibility in this manual.
- Do not operate in areas with an ambient temperature greater than 40°C.

Duty cycle and Overheating

The duty cycle of a welding machine is the percentage of time in a 10 minute cycle at which the welder can operate the machine at rated welding current.

20% duty cycle:



Welding for 2 minutes. Break for 8 minutes.

Excessive extension of the duty cycle will cause the thermal protection circuit to activate.

Input Supply Connection

Check the input voltage, phase, and frequency supplied to this machine before turning it on. The allowable input voltage is indicated in the technical specification section of this manual and on the rating plate of the machine. Be sure that the machine is grounded.

Make sure the power available at the input connection is adequate for normal operation of the machine. The fuse / circuit breaker rating and cable sizes are both indicated in the technical specification section of this manual.

Input Supply from Engine Driven Generators

This machine is designed to operate on engine driven generators as long as the auxiliary can supply adequate voltage, frequency and power as indicated below. The auxiliary supply of the generator must meet the following conditions.

- Frequency: in the range of 50 – 60Hz.

- RMS Voltage of the a.c. waveform: 190 - 265Volts.
- Peak Voltage Max: 370Volt

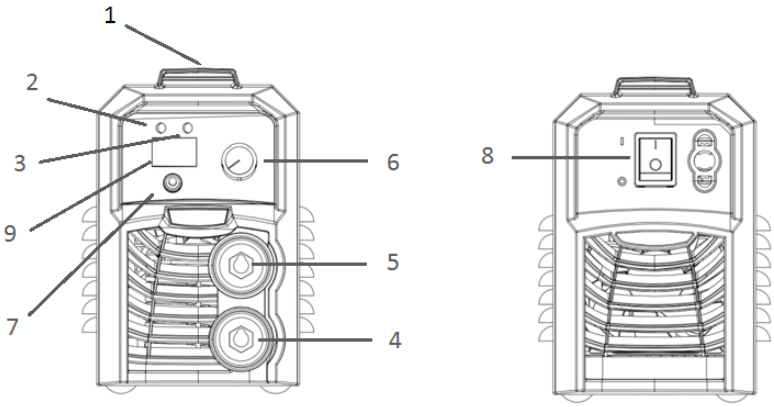
Generator Minimum capacity:

9.5kW is required for the POWERCRAFT® 140
11kW is required for the POWERCRAFT® 185

Output Connections and Front Panel Controls

A quick disconnect system using Twist-Mate™ cable plugs is used for the welding cable connections.

- (+) Positive Quick Disconnect: Positive output connector for the welding circuit.
- (-) Negative Quick Disconnect: Negative output connector for the welding circuit.



1 – Carrying handle, 2 – Power ON/OFF LED, 3 – Thermal LED, 4 – Positive output, 5 – Negative output, 6 – Output current control, 7- TIG Lift/Stick switch, 8 – ON/OFF Switch 9 – Digital display

	Output Current Knob: Potentiometer used to set the output current used during welding.
	Power ON/OFF LED: This LED lights up when the machine is ON.
	Thermal LED: This indicator will turn on when the machine is overheated and the output has been disabled. This normally occurs when the duty cycle of the machine has been exceeded. Leave the machine on to allow the internal components to cool. When the indicator turns off, normal operation is again possible.

With the MMAW welding there are available the following features:

Arc Force. When MMAW welding is activated the function Auto Adaptive Arc Force that increases temporarly the output current, used to clear intermittent connections between the electrode and the weld puddle that occur during stick welding. The feature "Auto Adaptive Arc Force" has instead of a fixed or manual regulation, an automatic and multilevel setting: its intensity depends on the output voltage and it is calculated in real time by the microprocessor (where the Arc Force levels are also mapped). The control continuously measures the output voltage and it determines the amount of peak current to apply; so that the value is enough to break the metal droplet that is being transferred from the electrode to the workpiece to guarantee the arc stability, but not too high to avoid spatters around the welding puddle. This means:-

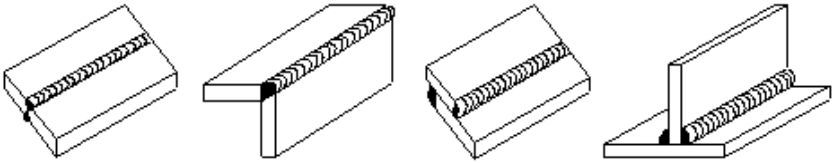
- Electrode / workpiece sticking is minimised with low current values.
- Spatter reduction.

Hot Start: This is a temporary increase in the initial welding current. This helps to ignite the arc quickly and reliably.

Anti-Sticking: This is a function that decreases the output current of the machine to a low level when the operator makes an error and sticks the electrode to the work piece. This decrease in current allows the operator to remove the electrode from the electrode holder without creating large sparks that can damage electrode holder

How to weld

Common basic joint form: butt joint, corner joint, joint lap & T joint (Fillet).



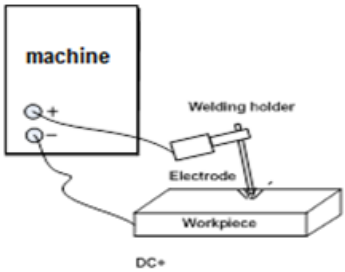
Output Connections

A quick disconnect system using Twistmate cable plugs is used for the welding cable connections. Refer to the following sections for more information on connecting the machine for operation of stick welding (MMAW) or TIG welding (GTAW).

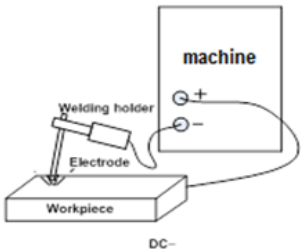
Stick Welding (MMAW)

First determine the proper electrode polarity for the electrode to be used. Consult the electrode data for this information. Then connect the output cables to the output terminals of the machine for the selected polarity. Shown here is the connection method for DC(+) welding. (See Figure B.1)

Connect the welding cable to the (+) terminal and the work clamp to the (-) terminal. Insert the connector with the key lining up with the keyway and rotate approximately 1/4 turn clockwise. Do not over tighten.



(Figure B1)



(Figure B2)

For DC(-) welding, switch the cable connections at the machine so that the welding cable is connected to (-) and and the work clamp is connected to (+). (See Figure B.2)

Electrode selection

The electrode diameter selection is based on the workpiece thickness, welding position, joint form, welding layer, etc. Please refer to the following table.

Electrode diameter selection guide:

Workpiece thickness/mm	2	3	4~5	6~12	＞13
Electrode diameter/mm	2.5	3.2	3.2~4	4~5	4~6

The welding current reference for different electrode diameter:

Workpiece thickness/mm	1.6	2.0	2.5	3.2	4.0
Welding current/A	25~40	40~60	50~80	100~ 130	160~ 210

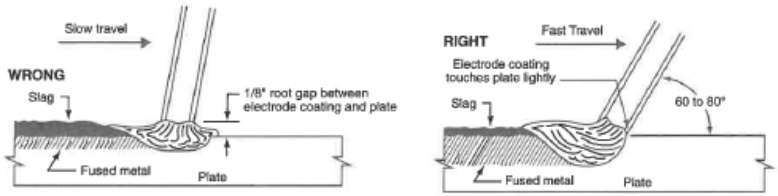
1. The electrode should be dryed according to user manual before using to reduce the hydrogen content of the molten pool and welding bead, thus avoiding prorosity and cold cracking.

2. In the welding process, the arc must not be too long; otherwise, it will cause unstable arc burning, high spatter, light penetration, undercut, porosity, etc. If the arc is too short, it will cause the electrode to stick.

3. In MMAW welding the arc length is usually equal to 0.5~1.0 times the electrode diameter. The basic electrode's arc length is to be less than the electrode diameter.

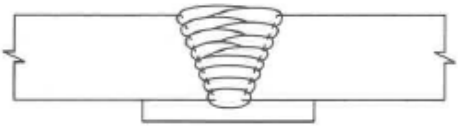
Easyarc® Electrode Operating Techniques

Use a drag technique – Tip the electrode 10 to 30° in the direction of travel and make stringer beads. Weld with the electrode end lightly dragging on the work to force the molten metal out from under the electrode tip allowing adequate penetration. The smooth welds look almost like automatic welds.

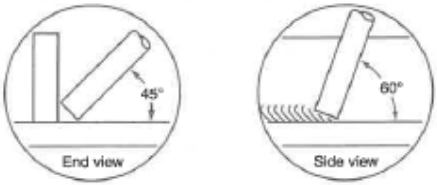


Travel fast, but not too fast for good slag coverage. Stay about 6mm to 10mm ahead of the molten slag. If travel speed is too slow, a small ball of molten slag may form and roll ahead of the arc causing erractic bead shape, spatter, and poor penetration.

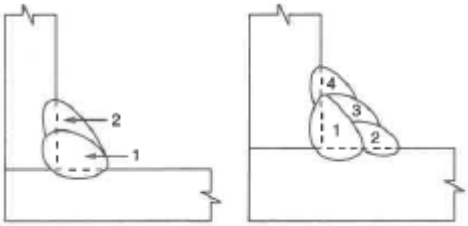
Deep Groove Welds – To hold the large pool of molten weld metal from Easyarc® electrodes, either a weld backing plate or a root pass is required. Deposit Easyarc® beads with s stringer technique or a slight weave to obtain fusion to both plates. Split weave welds are better than a wide weave near the top od the deep grooves. Size the 2nd to last layer so the last layer will not exceed a 1.5mm buildup.



Fillet and Lap Welds – The ideal fillet or lap weld has equal legs and a flat or slightly convex bead. Excess convexity wastes weld metal. A concave bead is susceptible to shrinkage cracks.
Flat fillet and lap welds are made with the same general techniques as groove welds.



Weld single pass fillets using a drag technique with the tip of the electrode touching both plates. Usually weld with the electrode at a 45° angle (end veiw) from the horizontal plate. However adjust this angle from as little as 30° to as much as 60° when required to maintain equal leg sizes on both plates.
When 2 passes are needed, deposit the 1st bead mostly on the bottom plate. To weld the 2nd pass hold the electrode at about 45° angle fusing into the vertical plate and the 1st bead.



Make multiple pass horizontal fillets as shown in the sketch. Put the 1st bead in the corner with fairly high current even though there maybe slight under-cut, succeeding passes will burn it out. Deposit the 2nd bead on the horizontal plate fusing into the 1st bead. Hold the electrode angle needed to deposit the filler beads as shown, putting the final bead against the vertical plate.

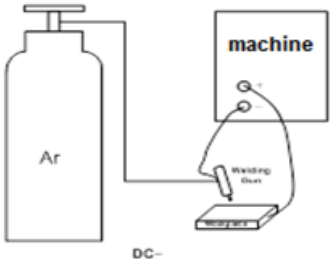
TIG Welding (GTAW)

The POWERCRAFT® machine does not have a built in Gas Solenoid so a one piece gas valve TIG Torch is required.. Refer to the accessories section for more information about TIG Torches. Most TIG welding is done with DC(-) polarity shown here.(See Figure B.3) If DC(+) polarity is necessary switch the cable connections at the machine.

Connect the torch cable to the (-) terninal of the machine and the work clamp to (+) terminal. Insert the connector with key lining up with the key way and rotate approximately 1/4 turn clockwise.Tighten firmly. Finally, connect the adapter gas hose to the gas regulator on the cylinder of gas to be used.

Striking arc of TIG operation

When the tungsten electrode touches the workpiece, the short-circuit current is only 20A. After generating the arc, the current can rise to the preset welding current. If the tungsten electrode touches the workpiece during welding, the current will drop to 20A within 2s, which can reduce tungsten damage and prolong the tungsten electrode life.



(Figure B3)

Maintenance

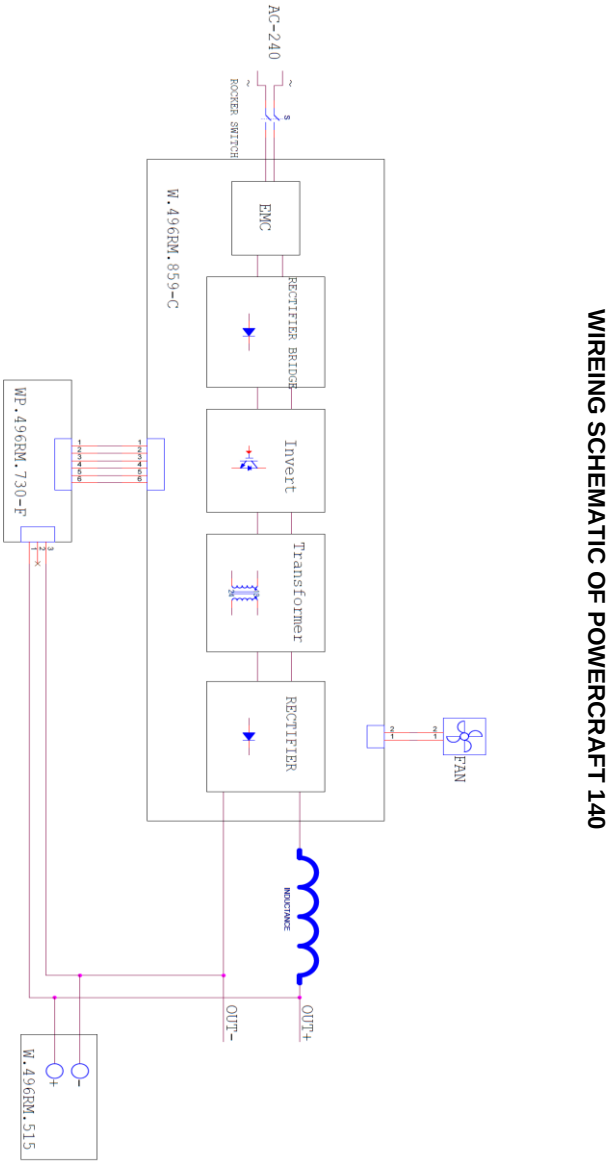
WARNING

For any maintenance or repair operations, it is recommended to contact the nearest Lincoln Electric technical service center or Lincoln Electric (Aust) Pty Ltd.
Maintenance or repairs performed by unauthorized service centers or personnel will null and void the manufacturer's warranty.

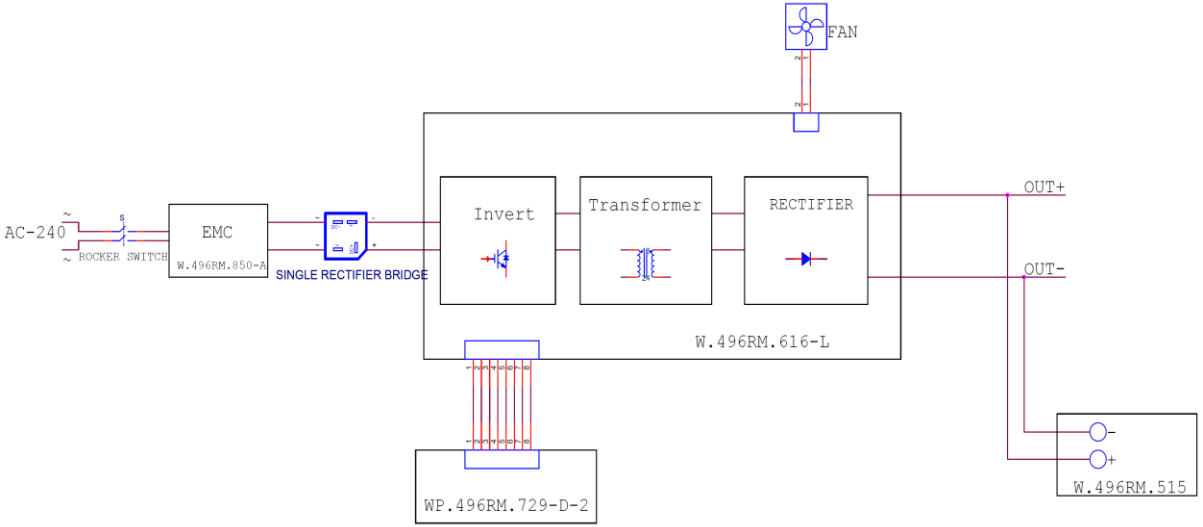
WARNING

Mains supply input cable must be disconnected from the mains supply before maintenance and /or service is performed. After each repair, perform proper tests to ensure safety.

Electrical Schematic



WIREING SCHEMATIC OF POWERCRAFT 185



Accessories

Item number	Description	PowerCraft ®140	PowerCraft® 185
KIT-140A-16-3M	Welding Lead Kit 140A 16mm^2, 3M, Twistmate plug 10-25mm^2	x	
KIT-200A-25-3M	Welding Lead Kit 200A 25mm^2, 3M, Twistmate, plug 35-70mm^2		x
KIT-250A-35-5M	Welding Lead Kit 250A 35mm^2, 5M, Twistmate, plug 35-70mm^2		x
PC9FV-4I	TIG torch, Flex Neck, Valve, air-cooled, 4m, 125A@60%.	o	
PC17FV-8I-2	TIG torch, Flex Neck, Valve, air-cooled, 8m, 150A@60%.	o	
PC17FV-4I	TIG torch, Flex Neck, Valve, air-cooled, 4m, 150A@60%.		o
PC17FV-8I	TIG torch, Flex Neck, Valve, air-cooled, 8m, 150A@60%.		o

Spare Parts

Part List Notes

- Do not use this part list for a machine if its code number is not listed. Contact the Lincoln Electric. Service Department for any code number not listed.
- Use the illustration of assembly page and the table below to determine where the part is located for your particular code machine.
- Use only the parts marked "X" in the column under the heading number called for in the assembly page (# indicate a change in this printing).

ASSEMBLY		Machine Assembly	
CODE NO.:	FIGURE NO.:	A	B
76411	PowerCraft® 140	**X**	
76412	PowerCraft® 185		**X**

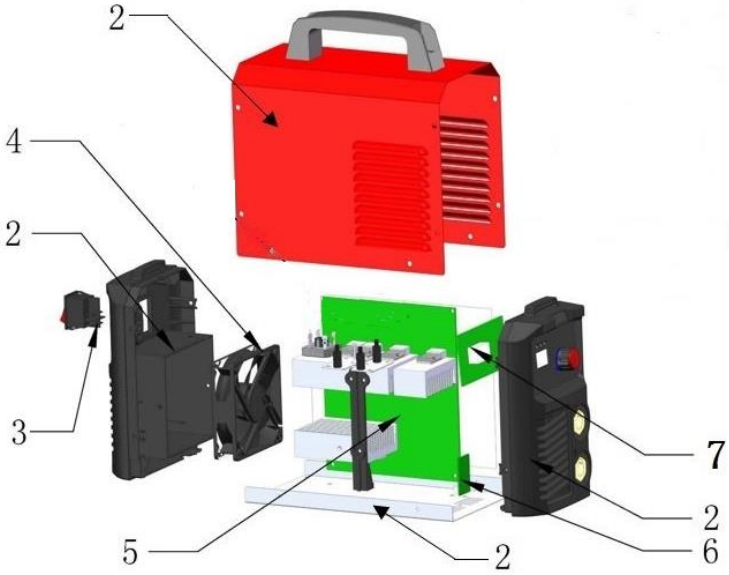


FIGURE A – PowerCraft® 140

Item	Order Number	Description	Usage
2	S33469-2	Housing	1
3	S32319-3	Power Switch	1
4	S32319-4	Fan	1
5	S33469-5	Main PC Board	1
6	S32319-6	Suppression Board	1
7	S33469-7	Encode PC Board	1

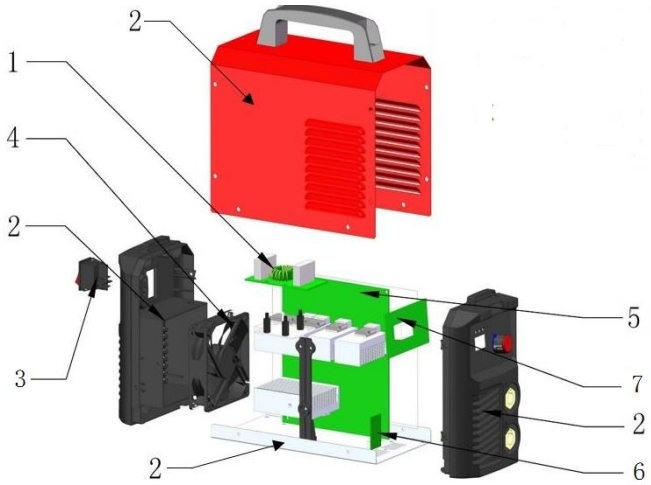


FIGURE B – PowerCraft® 185

Item	Order Number	Description	Usage
1	S33470-1	EMC Board	1
2	S33469-2	Housing	1
3	S32319-3	Power Switch	1
4	S32319-4	Fan	1
5	S33470-5	Main PC Board	1
6	S32319-6	Suppression Board	1
7	S33470-7	Encode PC Board	1

Warranty

Limited Warranty

STATEMENT OF LIMITED WARRANTY

This warranty is given by The Lincoln Electric Company (Australia) Pty Ltd ("Lincoln Electric"),

35 Bryant St, Padstow NSW 2211, Tel: 1300 LINCOLN (1300 546 265).

Under this warranty, Lincoln Electric® warrants all new machinery and equipment ("goods") manufactured by Lincoln Electric® against defects in workmanship and material subject to certain limitations hereinafter provided.

The benefits to the purchaser given by this warranty are in addition to other rights and remedies of the purchaser under a law in relation to the goods. **Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.**

This warranty is void if Lincoln Electric® or Lincoln Electric's Authorised Service Facility finds that the equipment has been subjected to improper installation, improper care or abnormal operations. Further, this warranty does not apply to:

- cable wear and consequential damage resulting from cable wear due to flexing and abrasion. The purchaser is responsible for routine inspection of cables for possible wear and to remedy the issue prior to cable failure;
- engines and engine accessories;
- any batteries supplied with the goods;
- repairs done to the goods and undertaken by the purchaser outside Lincoln Electric's premises without written authority from Lincoln Electric obtained prior to any such repair; or
- any damage or failure of the goods as a result of normal wear and tear or the neglect misuse abuse or failure to properly service goods by any purchaser.

PERIOD OF WARRANTY "LINCOLN ELECTRIC® BRANDED GOODS"

Lincoln Electric® will assume both the parts and labour expense of correcting defects during this warranty period. All warranty periods under this warranty start from the date of purchase from a Lincoln Electric® Authorised Distributor or Lincoln Electric® Authorised Service Facility to the original end user or from the date of manufacture if proof of purchase is not available and are as follows:

Three Years

- All Lincoln Electric® welding machines, wire feeders and plasma cutting machines unless listed in 1 Year or Two Years

Two Years

- All Invertec®, Tomahawk® Welders & Plasmas machines unless listed below (exclude V350, TPX, TX, SX & ASPECT Models which are 3 years)
- VIKING™ Helmets (Electronic ADF Lens Only).

One Year

- VRTEX™ 360 Virtual Reality Welder Trainer (not including items listed under 90 day warranty)
- Kjellberg Plasma Cutting Equipment.
- Fanuc Robotic Equipment.
- Genesis Systems Group Equipment.
- Torchmate Cutting Systems
- Weld Engineering Flux Recovery Equipment.
- Binzel Robotic Cleaning Stations & Associated Equipment.
- PCA Profile Cutting Machines.
- All water coolers (internal and external).
- Arc welding and cutting robots and robotic controllers.
- All stick electrodes, welding wires and fluxes.
- All Environmental Systems equipment, including portable units, central units and accessories. (Does not include consumable items listed under 30-day warranty).
- All welding and cutting accessories including wire feed modules, undercarriages, field installed options that are sold separately, unattached options, welding supplies, standard accessory sets, replacement parts. (Does not include expendable parts and guns/ torches listed under 90 and 30 day warranties).

90 Days

- All Gun and Cable Assemblies (manufactured by Lincoln Electric®) and Spool guns.
- All MIG, TIG and Plasma Torches.
- All “Pro Torch” TIG Torches.
- VRTEX™ 360 Guns and VR Helmet

30 Days

- All consumable items that may be used with the environmental systems described above. This includes hoses, filters, belts and hose adapters.
- Expendable Parts - Lincoln Electric® is not responsible for the replacement of any expendable part that is required due to normal wear.

PERIOD OF WARRANTY “POWERCRAFT BRANDED GOODS”

Lincoln Electric® will assume both the parts and labour expense of correcting defects during this warranty period. All warranty periods under this warranty start from the date of purchase from a Lincoln Electric® Authorised Distributor or Lincoln Electric® Authorised Service Facility to the original end user or from the date of manufacture if proof of purchase is not available and are as follows:

Three Year Limited Warranty*

- All POWERCRAFT® welding power sources, wire feeders and plasma cutting machines with a Code number 76205 or higher.

*

POWERCRAFT® welding power sources	Parts	Labour
Original main transformer, inductors, rectifiers	3 year	2 year
Original printed circuit boards	2 year	1 year
All other circuits and components including, but not limited to relays, switches, contactors, solenoids, fans and electric motors	1 year	1 year

One Year

- All POWERCRAFT® Welding power sources with a Code number lower than 76205.
- All welding and cutting accessories including wire feed modules, undercarriages, field installed options that are sold separately, unattached options, welding supplies, standard accessory sets, replacement parts. (Does not include expendable parts and guns/ torches listed under 90 and 30 day warranties).
- POWERCRAFT® Welding Helmet (Electronic ADF Lens Only).

90 Days

- All MIG, TIG and Plasma Torches.

30 Days

- Expendable Parts - Lincoln Electric® is not responsible for the replacement of any expendable part that is required due to normal wear.

WARRANTY CLAIM PROCESS

The purchaser must contact Lincoln Electric® (see contact details above) within the applicable warranty period about any defect claimed under this warranty. Lincoln Electric® may direct the purchaser to one of Lincoln Electric's Authorised Service Facilities. Determination of warranty on welding and cutting equipment will be made by Lincoln Electric® or one of Lincoln Electric's Authorised Service Facilities as directed by Lincoln Electric®. At Lincoln Electric's request, the purchaser must return, to Lincoln Electric® or Lincoln Electric's Authorised Service Facility, at the purchaser's cost, any goods claimed defective under this warranty, or permit Lincoln Electric® or Lincoln Electric's Authorised Service Facility to inspect the goods at the purchaser's premises.
Lincoln Electric® may at its absolute discretion repair or replace the goods at its own premises or at such other premises as Lincoln Electric® may designate provided that all freight charges to and from Lincoln Electric's premises or such other premises as Lincoln Electric® may designate shall be paid by the purchaser.
If Lincoln Electric® or Lincoln Electric's Authorised Service Facility confirms the existence of a defect covered by this warranty; the defect will be corrected by repair or replacement at Lincoln Electric's option.

CUSTOMER ASSISTANCE POLICY

Lincoln Electric® business is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric® for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric® is not in a position to warrant or guarantee such advice and to the extent permitted by law assumes no liability, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given. The provision of information or advice does not create, expand or alter this warranty.

Lincoln Electric® is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric® is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric® affect the results obtained in applying this type of fabrication methods and service requirements.