LINCOLN® WELDERS

IM-287-B

March 1989

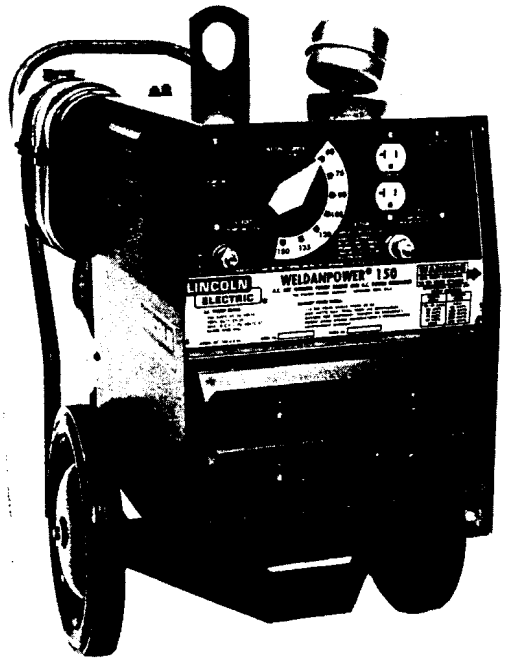
OPERATING MANUAL

IM287
Weldanpower 150
7732; 7733; 7784; 7785; 7904; 7905; 7921; 7978; 7979; 8127; 8281; 8282; 8331; 8678; 8679; 8680; 8840; 8997; 8998; 8999; 9000; 9119; 9120; 9287; 9288; 9289; 9290; 9447; 9448; 9449; 9450; 9675; 9676; 9677; 9678

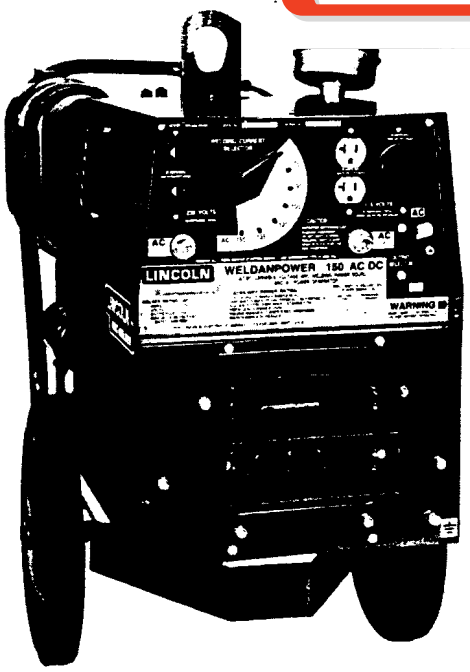
Weldanpower® 150

Combination Arc Welding Power Sources and 4500 Watt AC Power Generators

This manual covers equipment which is obsolete and no longer in production by The Lincoln Electric Co. Specifications and availability of optional features may have changed.



AC MODEL



AC/DC MODEL

DAMAGE CLAIMS

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 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 OPERATING MANUAL AND THE ARC WELDING SAFETY PRECAUTIONS ON THE INSIDE FRONT COVER. And, most importantly, think before you act and be careful.

LINCOLN® ELECTRIC

THE LINCOLN ELECTRIC COMPANY
World's Largest Manufacturer of Arc Welding Products • Manufacturer of Industrial Motors
Sales and Service Worldwide
Cleveland, Ohio 44117-1199 U.S.A.

ARC WELDING SAFETY PRECAUTIONS

WARNING: PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH.

ELECTRIC SHOCK can kill.

1. 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.

   b. In semiautomatic or automatic wire welding, the electrode, electrode reel, welding head, nozzle or semiautomatic welding gun are also electrically "hot".

   c. Insulate yourself from work and ground using dry insulation. When welding in damp locations, on metal framework such as floors, gratings or scaffolds, and when in positions such as sitting or lying, make certain the insulation is large enough to cover your full area of physical contact with work and ground.

   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.

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

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

   g. Never dip the electrode in water for cooling.

   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.

   i. When working above floor level, protect yourself from a fall should you get a shock.

   j. Also see Items 4c and 6.

ARC RAYS can burn.

2. 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 Z87.1 standards.

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

   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.

3. 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 on galvanized, lead or cadmium plated steel and other metals which produce toxic fumes, even greater care must be taken.

   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.

   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.

   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.

   e. Also see item 7b.

WELDING SPARKS can cause fire or explosion.

4. 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. Have a fire extinguisher readily available.

   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.

   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.

   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 F4.1-80 from the American Welding Society (see address below).

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

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.

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.

h. Also see item 7c.

CYLINDER may explode if damaged.

5. 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.

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

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.

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

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

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

g. Read and follow the instructions on compressed gas cylinders, associated equipment, and CGA publication P-1, "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.

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

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

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

FOR ENGINE powered equipment.

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

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

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.

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.

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.

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.

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.

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

HAVE ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR WORK performed by qualified people.

For more detailed 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.

The United States National Electrical Code does not require this machine to be grounded under normal operating circumstances.

Some state, local or other codes or unusual operating circumstances may require the machine frame to be grounded. It is recommended that you determine the extent to which such requirements apply to your particular situation and follow them explicitly. A machine grounding stud marked with the symbol ⏚ is provided below the welder *control panel.*

In general, if the machine is to be grounded it should be connected with #10 or larger copper wire to a solid earth ground such as a metal water pipe going into the ground for at least ten feet and having no insulated joints, or to the metal framework of a building which has been effectively grounded. The National Electrical Code lists a number of alternate means of grounding electrical equipment.

PRODUCT DESCRIPTION

The Weldanpower 150 is a gasoline engine driven combination welder/generator power source. The unit was designed to provide a maximum output of 150 amperes at 25 volts of alternating welding current or 4.5KW, 115/230 volts, 60 Hertz auxiliary power suitable for temporary, standby, or emergency power using engine manufacturer's recommended maintenance schedule. The unit is designed to be used with all common AC stick welding electrodes and all AC power tools within the rating of the unit.

The Weldanpower 150 AC/DC has the same capabilities as the Weldanpower 150 AC plus 125 amperes DC welding current for use with all common DC stick welding electrodes.

INSTALLATION (For Permanent Standby Power)

⚠ WARNING

Do not attempt to use this equipment until you have thoroughly read the engine manufacturer's manual supplied with your welder. It includes important safety precautions, detailed engine starting, operating and maintenance instructions, and parts lists.

STANDBY POWER CONNECTIONS

The Weldanpower 150 can be permanently installed as a standby power unit for a 230 volt-3 wire, 20 ampere service. Connections must be made by a licensed electrician who can determine how the 115/230 volt Weldanpower 150 can be adapted to the particular installation and comply with all applicable electrical codes. The following information can be used as a guide by the electrician for most applications (refer also to the connection diagrams below).

1. Install a double pole, double throw switch between the power company meter and the premises disconnect. Switch rating must be the same as or greater than the customer's premises disconnect and service overcurrent protection.

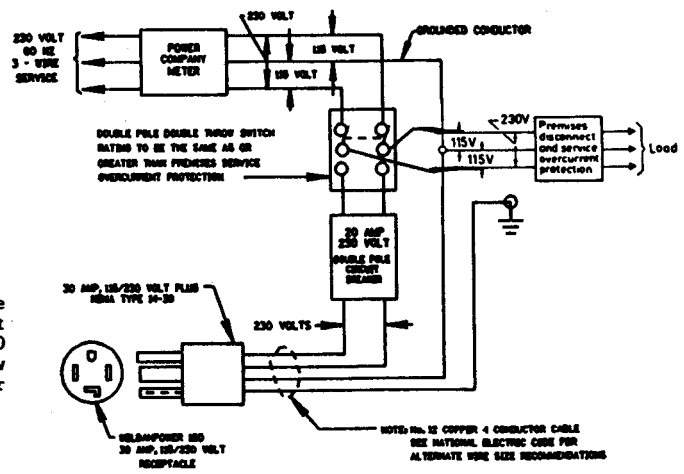
2. Take necessary steps to assure load is limited to the capacity of the Weldanpower by installing a 20 amp, 230 volt double pole circuit breaker. Maximum rated load for the 230 volt auxiliary is 20 amperes. Loading above 20 amperes will reduce output voltage below the allowable -10% of rated voltage which may damage appliances or other motor-driven equipment.

3. Install a 30 amp 115/230 volt plug (NEMA Type 14-30) to the double pole circuit breaker using No. 12, 4-conductor cable of the desired length. (The 30 amp 115/230 volt plug is available in the K802-H plug kit.)

4. Plug this cable into the 30 amp 115/230 volt receptacle on the Weldanpower 150 case front.

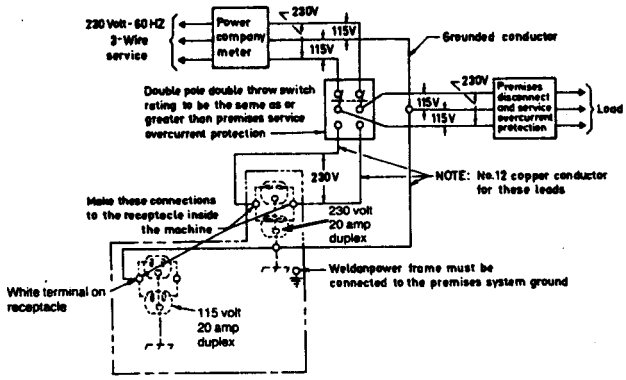
CONNECTION OF W/P-150 TO PREMISES SYSTEM

For all Weldanpower 150's CODE 9000 & UP. Code numbers are on the welder nameplate.

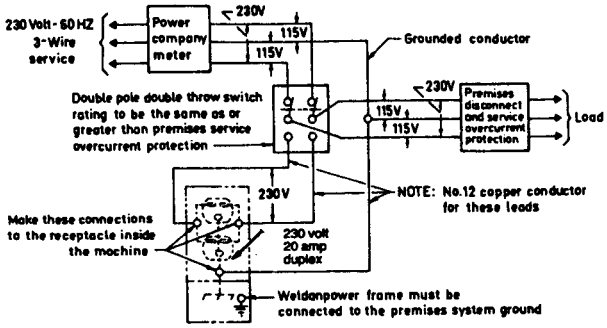


For all Weldanpower 150's CODE 8840-8999. Code numbers are on the welder nameplate.

CONNECTION OF W/P-150 TO PREMISES SYSTEM



For all Weldanpower 150's AT OR BELOW CODE 8840. Code numbers are on the welder nameplate.



OPERATION

⚠ WARNING

ELECTRIC SHOCK can kill.

- **Do not touch electrically live parts or electrode with skin or wet clothing.**
- **Insulate yourself from work and ground.**

FUMES AND GASES can be dangerous.

- **Keep your head out of fumes.**
- **Use ventilation or exhaust to remove fumes from breathing zone.**

WELDING SPARKS can cause fire or explosion.

- **Keep flammable material away.**

ARC RAYS can burn.

- **Wear eye, ear and body protection.**

EXHAUST SPARK ARRESTER

Some federal, state or local laws may require that gasoline engines be equipped with exhaust spark arresters when they are operated in certain locations where unarrested sparks may present a fire hazard. The standard mufflers included with these welders do not qualify as spark arresters. When required by local regulations, suitable spark arresters must be installed and properly maintained.

CAUTION: An incorrect arrester may lead to damage of the engine or its performance. Contact the engine manufacturer for special recommendations.

STARTING THE ENGINE

WARNING: Operate internal combustion engines in open, well ventilated areas or vent the engine exhaust fumes outdoors. Do not move welder unless fuel line is shut off.

Your engine may be equipped with either the standard manual rope pull starter or the optional factory installed electric starter.

The manual start unit is equipped with an engine throttle rod and ignition switch located on the control panel.

The electric start unit is equipped with a wetcharged battery, an ignition switch starter pushbutton, engine throttle rod and ammeter (for battery charging circuit) located on the control panel.

WARNING: Use care as battery fluid is a strong acid. Avoid contact with eyes and skin.

Remove all loads connected to the AC power receptacles before starting.

To start either the manual or electric start units with a Kohler engine, turn fuel line on, rotate the choke lever on the side of the carburetor down (closing the choke). Place the ignition switch in the run position. With rope start, crank the engine with a firm steady pull on the rope. With electric start, depress the starter button. Immediately after the engine has started, slowly rotate the choke lever to the up position (choke open).

NOTE: The starting procedures are the same as above for the Briggs and Stratton manual start unit except the choke lever on the side of the carburetor is rotated clockwise to start (closing choke) and counter clockwise (open choke) immediately after starting.

Allow the engine to warm up gradually by letting it run at low idle for a few minutes. For longest life and lowest fuel consumption run at low idle whenever power is not being drawn.

STOPPING THE ENGINE

Remove the load and let the engine run at low idle speed for a few minutes before stopping. Stop the engine with the ignition switch. The Kohler engine can also be stopped by pressing the button on the side of the breaker point box and holding until the engine comes to a complete stop. Turn fuel line off before moving welder.

BATTERY CHARGING

The battery is maintained at its proper state of charge by the battery charger P.C. board which automatically regulates the charging current from 2.5 amps when the battery is low (after starting the engine) to less than 0.5 amps when the battery is fully charged.

If the welder is operated with the battery disconnected, the battery cable terminals should be taped separately with insulating tape to avoid damage to the charging circuit.

When replacing, jumping, or otherwise connecting the battery to the battery cables, the proper polarity *must* be observed. Failure to observe the proper polarity could result in damage to the charging circuit. The positive battery cable is designated with a "P" stenciled on the cable lug and the negative battery cable has an "N" stenciled on the cable lug.

The ammeter is the best indicator of the condition of the battery and charging circuit. If the ammeter shows a charging current with the engine stopped, then the battery cables are reversed and should be connected correctly. If the ammeter shows a discharging (−) current with the engine stopped, the control SCR is shorted and the P.C. board must be replaced.

If the battery is in a poor state of charge, the charging current will be approximately 2.5 amps for as long as it takes to bring the battery up to full charge.

WARNING:

To prevent EXPLOSION when:

a) Installing a new battery — disconnect the negative cable from the old battery first and connect the negative cable to the new battery last.

b) Connecting a battery charger — remove the battery from the welder by disconnecting the negative cable first, then the positive cable and battery clamp. When reinstalling, connect the negative cable last.

c) Using a booster — connect the positive lead to the battery first then connect the negative lead to the copper strap on the engine foot.

To prevent ELECTRICAL DAMAGE when:

a) Installing a new battery.

b) Using a booster.

Use correct polarity — Negative Ground.

To prevent BATTERY DISCHARGE, if you have an ignition switch, turn it off when engine is not running.

To prevent BATTERY BUCKLING, tighten nuts on battery clamp only until snug.

OPERATION AS A WELDER

Weldanpower 150 AC

With the engine off, connect the "work" cable to the welder output stud marked "to work." Connect the "electrode" cable to the welder output stud marked "electrode."

Weldanpower 150 AC/DC

DC Welding: For DC(+) welding, connect the electrode cable to the "+" output stud and the work cable to the "−" output stud. [For DC(−) welding, reverse these connections.] Put the Output Selector in the DC position (down).

AC Welding: With the engine off, connect the work cable to one output stud and the electrode cable to the other output stud (makes no difference which cable goes to which output stud for AC welding). Put the Output Selector in the AC position (up).

Start the engine and set the throttle control for full speed. Set the selector switch for the desired welding current and the machine is ready for welding.

The selector switch is a seven position switch with welding positions at 60, 75, 90, 105, 120, 135 and

150 amps for AC welding. Each tap is rated at 100% duty cycle for AC welding. The WP-150 AC/DC also provides DC welding settings of 45, 55, 65, 75, 90, 105 and 125 amps; DC settings of 75 amps and less are rated at 100% duty cycle, 90-105 amps at 50% and 125 amps at 40%. Duty cycle is based on a 10 minute period; thus, the welder can be loaded at rated output for 10 minutes of every 10 minute period on AC and 10, 5 or 4 minutes every 10 minute period on DC depending on the current setting specified above.

AC/DC Output Selector Switch (on WP-150 AC/DC only)

A toggle-handle two-position selector switches the output terminals from the AC welding supply to the output of the DC welding rectifier.

CAUTION: Never change the Welding Current Selector or Output Selector Switch settings while under load. This will cause severe damage to the switches.

The electrode guide in Table 1 shows the recommended electrodes and settings for these machines. DC electrodes should only be used on DC with the WP-150 AC/DC.

TABLE 1

Electrode Type	Electrode Polarity	Electrode Size			
		5/64	3/32	1/8	5/32
Fleetweld 5P	DC(+)	—	55	75-105	125
Jetweld LH-78	DC(+)	—	75	105-125	—
Stainweld 308-16	DC(+) AC	45 —	55 75	75-105 90	— —
Fleetweld 180	AC	—	60	90	135
Fleetweld 35	AC	—	60	75	120
Fleetweld 37 & 57	AC	75	90	135	—
Jetweld LH-73	AC	—	90	105-135	—
Jetweld 1	AC	—	—	135	—
Steel Thickness		18 GA to 12 GA		1/8 and Over	

OPERATION AS AN AC POWER SOURCE

Suitable for temporary, standby or emergency power using engine manufacturer's recommended maintenance schedule. Not recommended for long term primary power.

Start the engine and slip the throttle control into the notch so that the engine runs at full speed. Voltage is now at the receptacle for the auxiliary power. Do *not* apply a load to the machine until the engine is up to full speed. Failure to do this may keep the Weldanpower from building up its voltage. Bringing the engine up to full speed without the load will again provide output voltage if this should happen.

When using the 115 volt duplex receptacle, each receptacle can supply 20 amps load for a total maximum load of 40 amps. Drawing the full 20 amps requires a male plug specifically rated at 20 amps. (The standard plug furnished with most power tools is rated at 15 amps.) Up to 20 amps may also be drawn from the 115 volt portion of the 115/230 volt receptacle. When using a combination of all the 115 volt outlets, the total maximum load must not exceed 40 amps.

When using the 230 volt auxiliary power receptacle, up to 20 amps can be drawn from the 115/230 volt receptacle.

Most 1.5 hp motors can be started if there is no load on the motor or other load connected to the Weldanpower since the full load current rating of a 115 volt, 1.5 hp motor is approximately 20 amperes (10 amps for 230 volt motors).

The auxiliary power ratings are with no welding load. Simultaneous welding and power loads are permitted by following Table 2. The permissable currents shown assume that current is being drawn from either the 115 volt or 115/230 volt supply, not both at the same time.

TABLE 2

Welding Output	Permissible Auxiliary Power Loads	
	Amps — 115V Receptacles	Amps — 230V Receptacles
120-150 amps	0	0
105 amps	1.5	.75
90 amps	12	6
65-75 amps	17	8.5
45-60 amps	22	11
None	40	20

Inherent short circuit protection of the auxiliary power circuit is provided. If the power winding is short circuited, the output current and voltage fall to zero. When the short is removed, the power voltage returns to normal.

The auxiliary power receptacle should only be used with three or four wire grounded type plugs or approved double insulated tools with two wire plugs.

PIPE THAWING

Due to their 100% AC duty cycle rating, the Weldanpowers may be used for pipe thawing on AC only without harm to the welder.

WARNING: Pipe thawing, if not done properly, can result in fire, explosion, damage to wiring which may make it unsafe, damage to pipes or other hazards. Do not use a welder to thaw pipe before reviewing Lincoln bulletin E-695.1 (dated May 1987 or later). Do not use the machine for any other purpose while thawing pipe.

OPTIONAL FEATURES

TIG WELDING

The Weldanpower 150 AC or AC/DC may be converted to a portable TIG welding outfit with the K-799-WP field installed High Frequency Kit. The kit includes a high frequency generator, solenoid, and mounting hardware. The customer must supply the TIG torch and gas supply. The system is rated at 150 amps for AC TIG welding. DC TIG welding may be done using the scratch start method without the K-799-WP.

NOTE: The Hi-Freq unit includes an R.F. by-pass capacitor kit for power source protection. Installation instructions are in the kit. (When using the Weldanpower 150 AC/DC with any other high frequency equipment, an R.F. by-pass capacitor must be installed. Order kit T-12246.) To provide protection, the welder grounding stud or frame must be connected to ground. Also follow the grounding instructions given in the Hi-Freq instruction manual (IM-298).

UNDERCARRIAGES

The K-759 undercarriage (hand moving) is available for field installation on gasoline engine powered 150 amp Weldanpowers. Also, it can be used with the K-829 frame.

The K-829 frame is available for field installation on 150 amp Weldanpowers. Also, it can be used with the K-759 undercarriage.

MAINTENANCE

⚠ WARNING

MOVING PARTS can injure.

- Have qualified personnel do maintenance and troubleshooting work.
- If possible, turn the engine off and disconnect the battery before working inside the machine.
- Remove guards only when necessary to perform maintenance, and replace them when the maintenance requiring their removal is complete.
- If fan guards are missing from a machine, obtain replacements from a Lincoln Distributor. (See Operating Manual Parts List.)

Inspect the machine at least once a year to be sure all guards and covers are firmly in place and that all labels are clearly readable. If needed, repair or replace with Lincoln parts from your local Field Service Shop.

1. Blow out the welder and controls with low pressure air periodically. In particularly dirty locations this may be required once each week.
2. Governor and carburetor joints and the throttle shaft must be kept clean and lubricated.
3. Refer to the engine manufacturer's manual for engine maintenance and troubleshooting instructions.

SLIP RINGS AND BRUSHES

The rotor slip rings and brushes require practically no attention. They should be inspected when a general overhaul is necessary. To fit replacement brushes, stop the engine and install the new brushes. Then slide one end of a 24" long piece of sandpaper between slip ring and brushes, with coarse side against brush. Putting slight finger pressure on top of the brush, pull the sandpaper around the circumference of the slip rings in the direction of rotation only until brushes are seated. Touch up slip rings by stoning with a 220-230 grit commutator stone until 100% seated. Form brush pigtails so they will not hang up on brushholder.

WARNING: Uncovered rotating equipment can be dangerous. Use care so hands, hair, clothing or tools do not catch in the rotating parts. Protect yourself from particles that may be thrown out by the rotating rotor when stoning the slip rings.

ROTOR

In the event of a major engine overhaul, it will be necessary to remove the rotor. This is accomplished by loosening the rotor thru bolt and backing it out a few turns. Then give the thru bolt a blow with a hammer. The rotor assembly should break loose from the engine shaft.

TROUBLESHOOTING

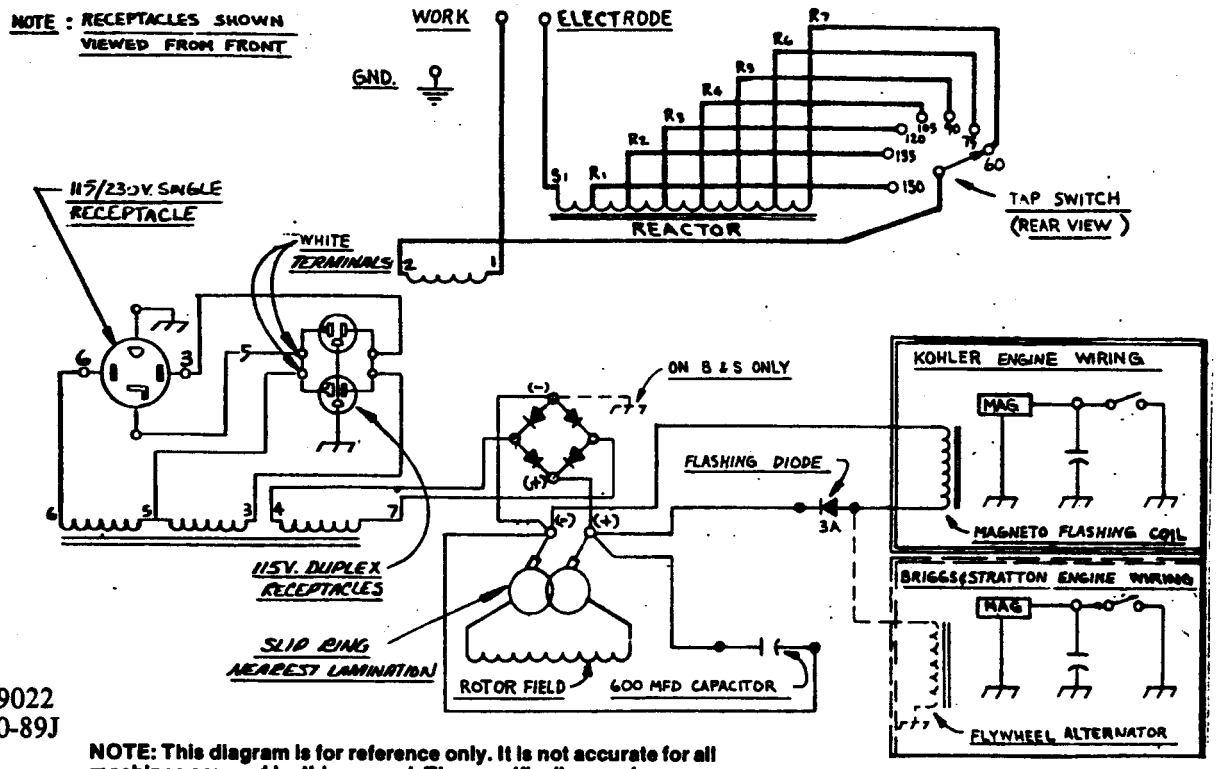
⚠ WARNING

MOVING PARTS can injure.

- **Have qualified personnel do maintenance and troubleshooting work.**
- **If possible, turn the engine off and disconnect the battery before working inside the machine.**
- **Remove guards only when necessary to perform maintenance, and replace them when the maintenance requiring their removal is complete.**
- **If fan guards are missing from a machine, obtain replacements from a Lincoln Distributor. (See Operating Manual Parts List.)**

Trouble	Cause	What To Do
A. No output of welding power or auxiliary power.	1. Flashing circuit inoperative.	1. Check flashing circuit voltage at slip ring brushes. Disconnect (+) lead on feedback rectifier (located on fire wall) before taking flashing reading. Take reading at high idle: Kohler Engine 1½-4 volts DC. Briggs and Stratton 12-14 volts DC.
	2. Brushes not making good contact or slip rings dirty.	2. Seat brushes and clean rings with commutator stone.
	3. Open connections or broken leads.	3. Inspect and repair.
	4. Open field winding on rotor or stator.	4. Check continuity — motor resistance approximately 4.6 ohms.
	5. Shorted capacitors.	5. Check capacitors, replace if defective.
	6. Defective bridge rectifier.	6. Check diodes, replace if defective.
B. Low voltage from auxiliary power supply or too low an output from welder.	1. Defective capacitor.	1. Check capacitors, replace if defective.
	2. Engine RPM too low.	2. Check engine manual or contact your authorized Lincoln Field Service Shop.
	3. Engine needs a tune up.	3. Check the RPM under load, if low check manual and contact your authorized Lincoln Field Service Shop. (RPM under load 3400-3520 for Briggs or Kohler.)
C. Engine will not turn when start button pushed.	1. Start button defective.	1. Inspect, replace if defective.
	2. Loose cables, corroded connections.	2. Tighten and clean.
	3. Batteries dead.	3. Check, recharge or replace.
	4. Defective starting motor or solenoid.	4. Check and replace.
D. Ammeter reads discharge when engine is stopped.	1. Battery cables reversed.	1. Disconnect and reconnect correctly.
	2. Defective P.C. board.	2. Inspect and replace.
E. Ammeter reads zero when engine is running.	1. Defective P.C. board.	1. Inspect and replace.
	2. Defective ammeter or open leads in charging circuit.	2. Inspect, test, repair or replace.
	3. No output from welder.	3. Check flashing circuit voltage (see Item A Note 1).

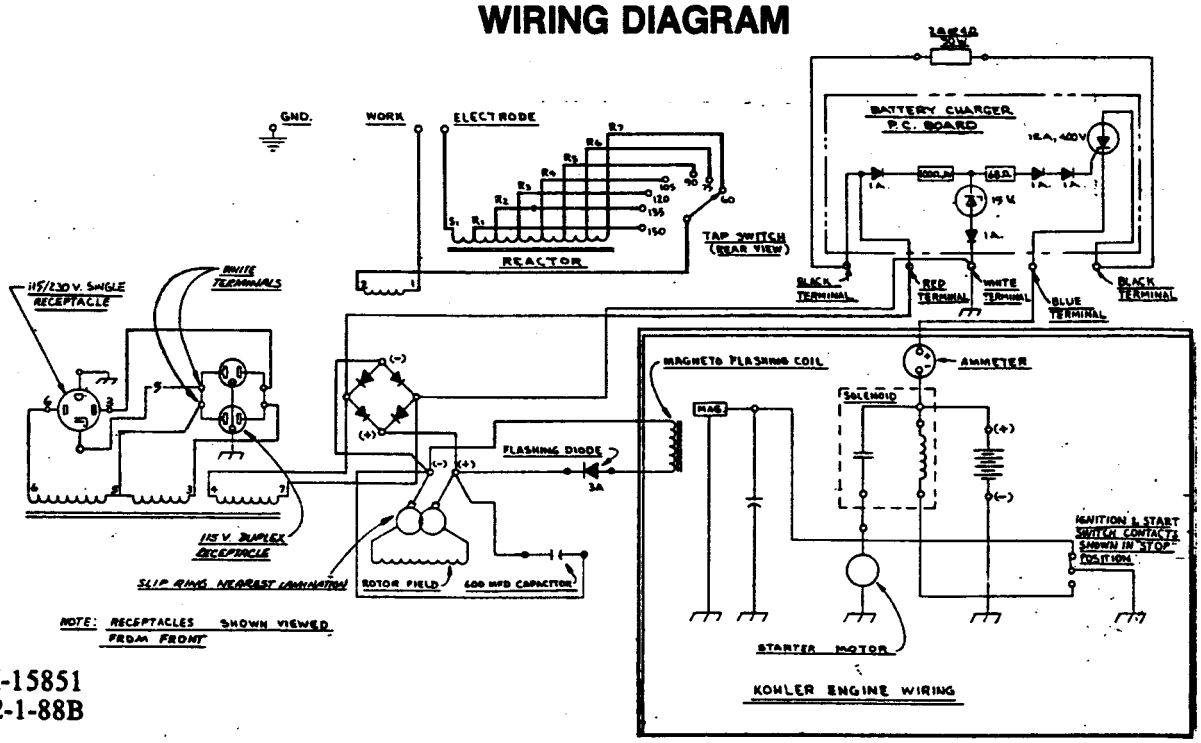
WELDANPOWER 150 W/O ELECTRIC START
WIRING DIAGRAM (Briggs & Stratton or Kohler)



S-19022
1-20-89J

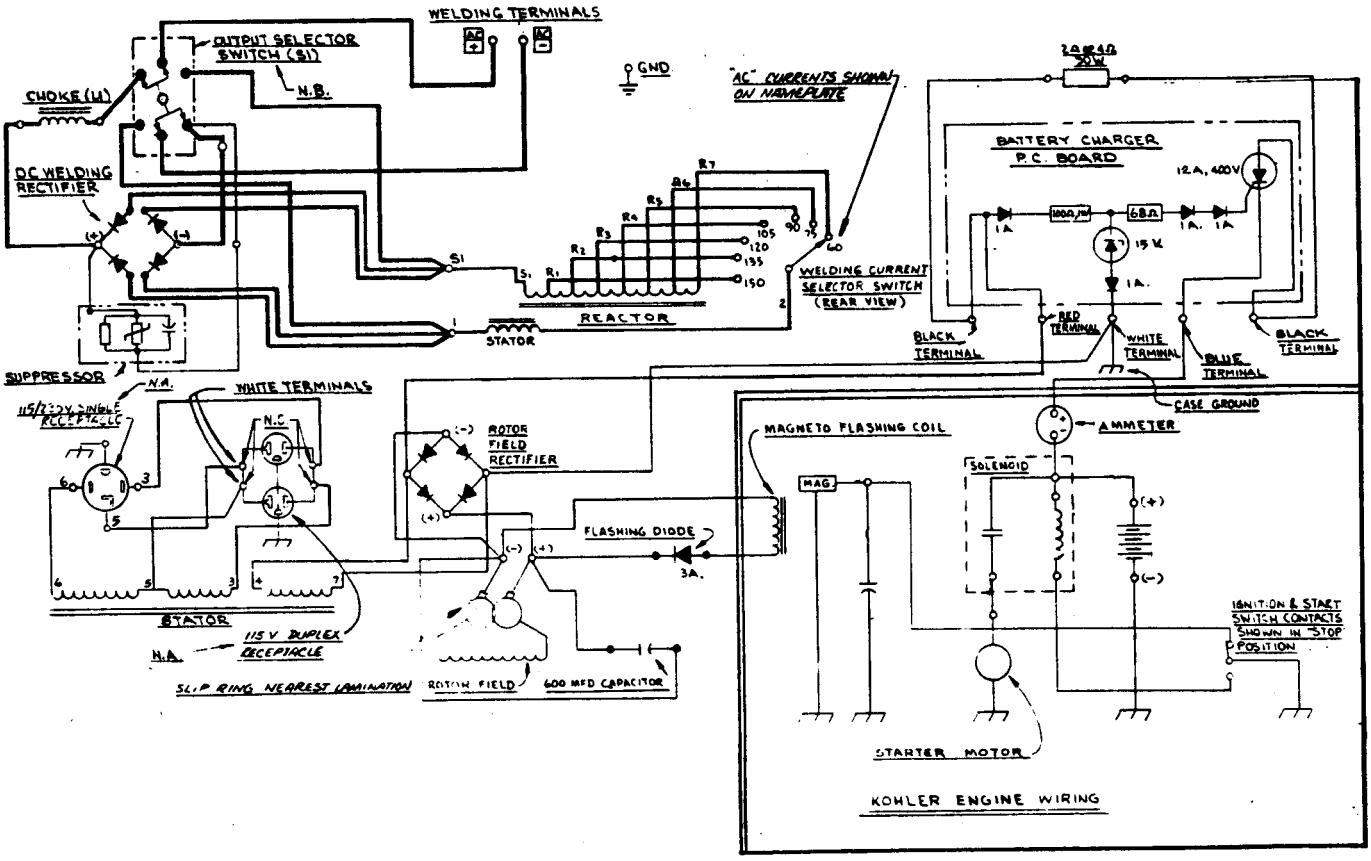
NOTE: This diagram is for reference only. It is not accurate for all machines covered by this manual. The specific diagram for a particular code is pasted inside the machine on one of the enclosure panels. If the diagram is illegible, write to the Service Department for a replacement. Give the welder code number.

WELDANPOWER 150 AC KOHLER WITH ELECTRIC START
WIRING DIAGRAM



M-15851
12-1-88B

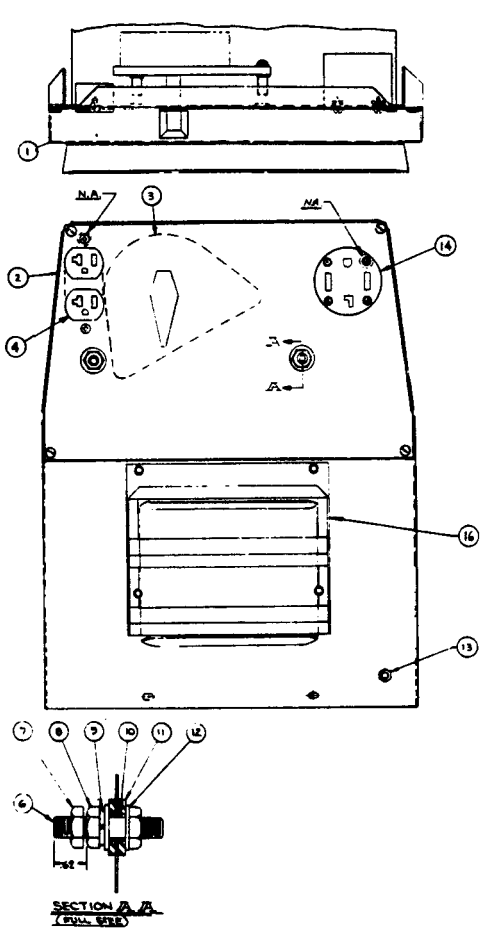
WELDANPOWER 150 AC/DC WITH ELECTRIC START



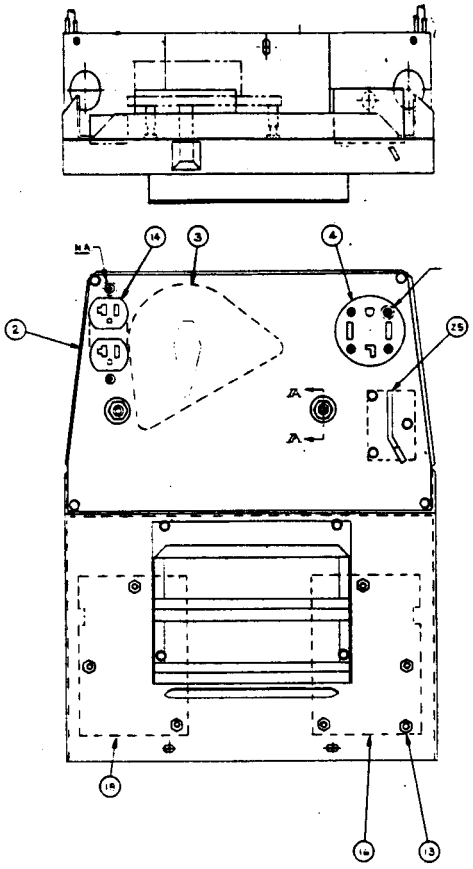
NOTE: This diagram is for reference only. It is not accurate for all machines covered by this manual. The specific diagram for a particular code is pasted inside the machine on one of the enclosure panels. If the diagram is illegible, write to the Service Department for a replacement. Give the welder code number.

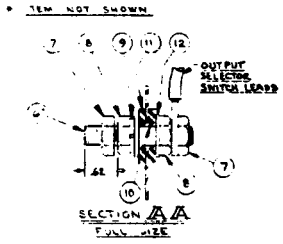
M-15854
12-1-88B

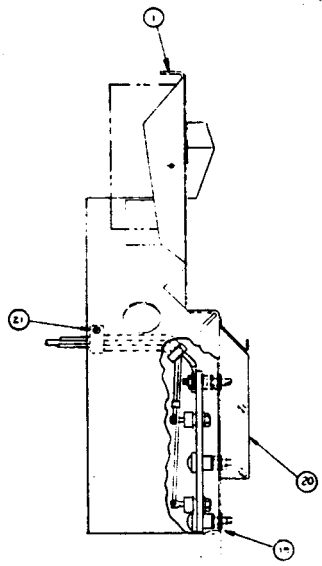
CASE FRONT ASSEMBLY — W/P-150



L-7901
12-1-88B





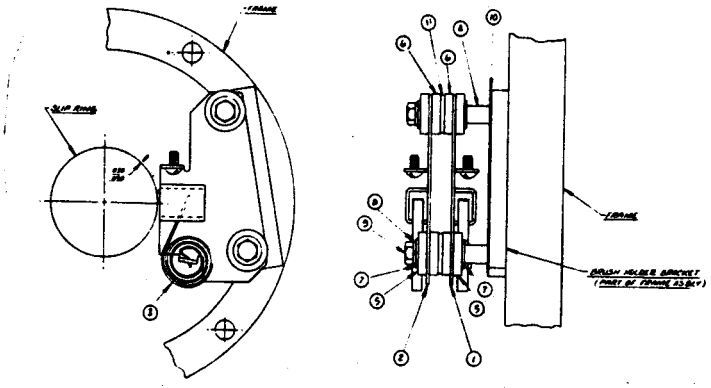


L-7932
12-15-88J

ITEM	PART NAME AND DESCRIPTION	NO. REQ'D.
1	Case Front Welded Assembly	1
2	Nameplate	1
3	Selector Switch	1
	Selector Switch Handle	1
4	Duplex Receptacle (115V)	1
4	Duplex Receptacle (230V)	1
4P	Auxiliary Power Plug (For 115V Duplex)	As Req'd
4P	Auxiliary Power Plug (For 230V Duplex)	As Req'd
5	Single Receptacle (115V, 40 Amp)	1
5P	Auxiliary Power Plug (For 115V Single)	As Req'd
6	Output Stud	2
7	Hex Nut (Steel	2
8	Hex Nut (Brass)	4
9	Lockwasher	2
10	Insulating Tube	2
11	Insulating Washer	4
12	Plain Washer	4
13	Hex Nut	2

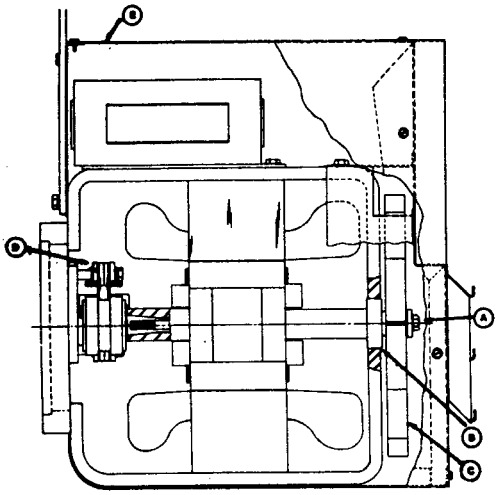
BRUSHHOLDER ASSEMBLY

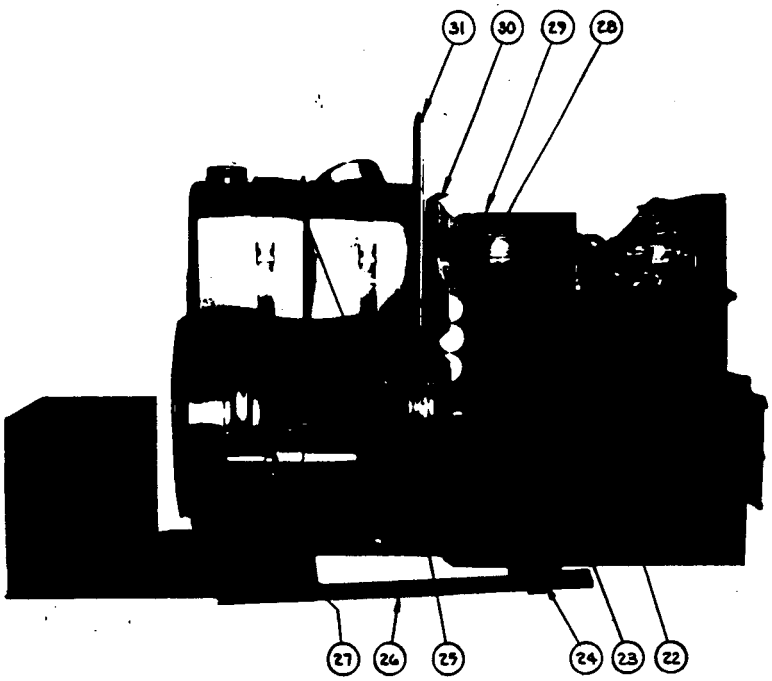
ITEM	PART NAME AND DESCRIPTION	NO. REQ'D.
1	Clockwise Brushholder	1
2	Counter Clockwise Brushholder	1
3	Brushholder Spring	2
4	Spacer	2
5	Insulator	4
6	Insulator	4
7	Plain Washer	6
8	Lockwasher	2
9	Hex Head Screw	2
10	Insulation	1
11	Plain Washer	2

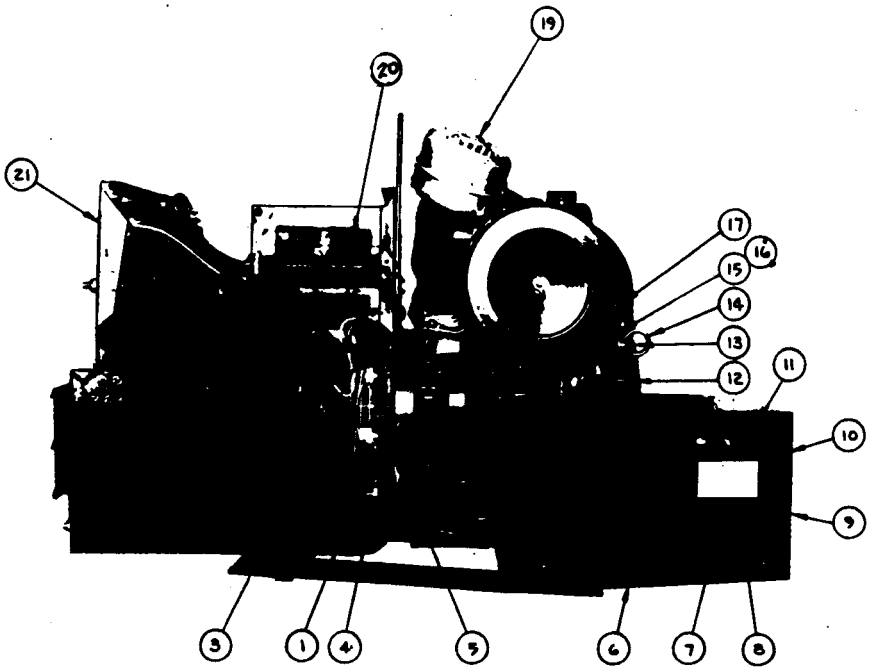


M-14356
10-1-82K

GENERAL REFERENCE — W/P-150

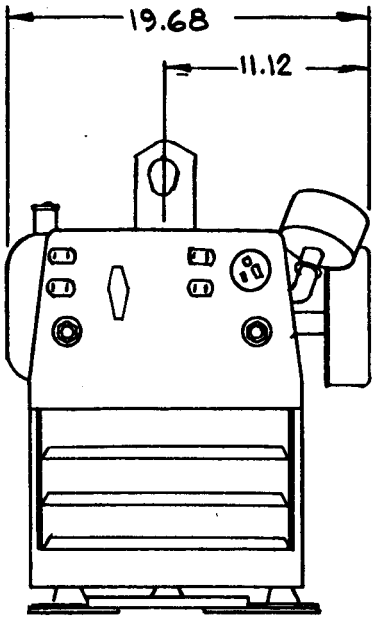


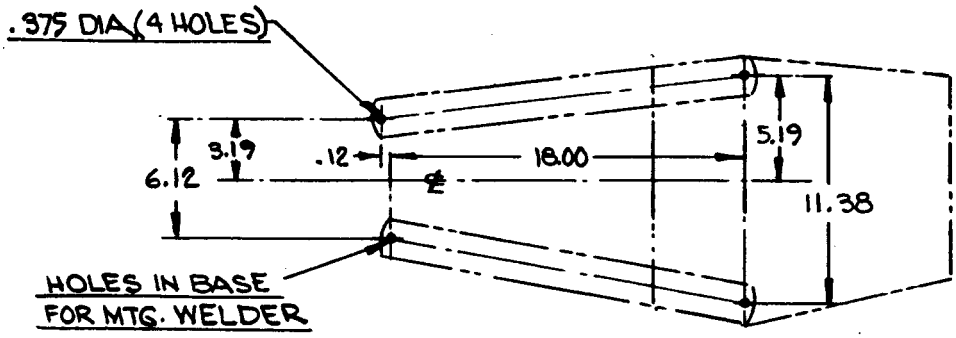


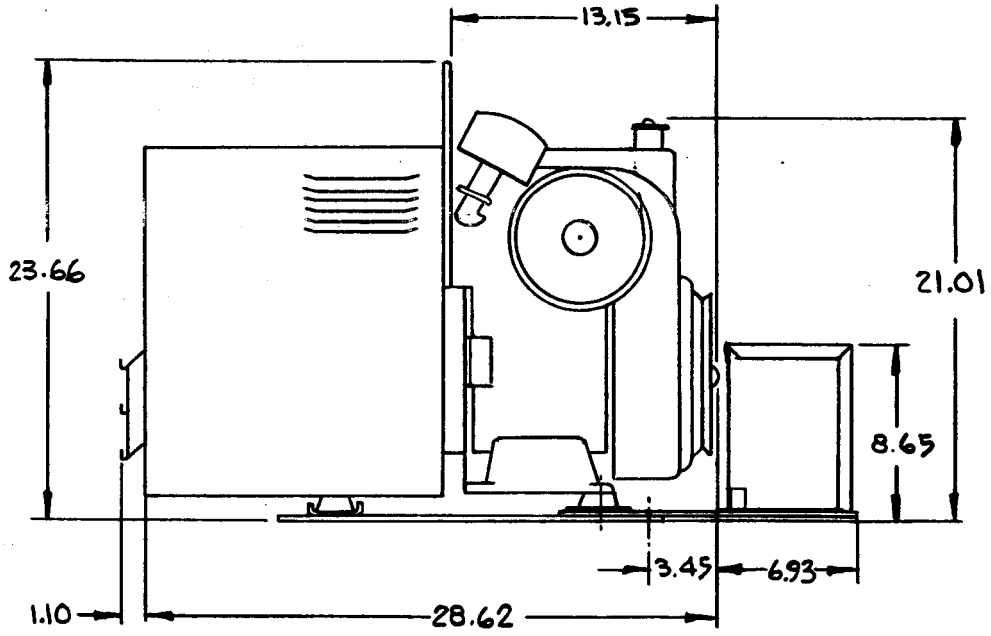


Parts List P-122-C

ITEM	PART NAME AND DESCRIPTION	NO. REQ'D.
1	Flashing Diode Assembly	1
3	Battery Charger P.C. Board	1
4	Full Wave Bridge	1
5	Grommet	1
6	Battery Base	1
7	Battery Case Sides	1
8	Negative Ground Decal (Electric Start)	1
9	Battery Case	1
10	Battery Bracket	1
	Carriage Bolt	2
11	Battery	1
12	Magneto Switch	1
	Switch Plate	1
	Switch Decal	1
13	Starter Switch	1
14	Throttle Rod Assembly	1
	Coupling (Kohler Only)	1
15	Control Panel	1
16	Throttle Rod Support (Kohler)	1
17	Ammeter	1
19	Muffler	1
20	Resistor (Kohler - Electric Start Only)	1
21	Case Front Assembly	1
22	Rotor and Shaft Assembly	1
23	Frame Assembly	1
24	Frame Mounting	1
	Base Cross Rail	1
	Stem Bumper	2
25	Starter Solenoid	1
26	Base Assembly	1
	or Base Side Rails	2
27	Engine Mounting	2
28	Capacitors	4
29	Reactor Coil Assembly	1
30	Case Back and Bottom	1
31	Lift Bail	1
A	Hex Head Bolt	1
B	Bearing	1
C	Blower	1
	Blower Key	1
D	Brushholder Assembly	1
E	Case Wraparound	1
	Items Not Illustrated:	
	Fuse Block	1
	Fuse	1
	Crank Assembly	1


19.68
11.12


.375 DIA (4 HOLES)
3.19
6.12
.12
18.00
5.19
11.38
HOLES IN BASE
FOR MTG. WELDER


13.15
23.66
21.01
8.65
3.45
6.93
1.10
28.62

S-16184
6-4-82

LIMITED WARRANTY

STATEMENT OF WARRANTY:

The Lincoln Electric Company (Lincoln) warrants to the original purchaser (end-user) of new equipment that it will be free of defects in workmanship and material.

This warranty is void if Lincoln finds that the equipment has been subjected to improper care or abnormal operation.

WARRANTY PERIOD:

All warranty periods date from the date of shipment to the original purchaser and are as follows:

Three Years:
Transformer Welders
Motor-generator Welders
Semiautomatic Wire feeders
Plasma-cutting power source
Engine Driven Welders (except engine and engine accessories) with operating speed under 2,000 RPM

Two Years:
Engine Driven Welders (except engine and engine accessories) with operating speed over 2,000 RPM

All engine and engine accessories are warranted by the engine or engine accessory manufacturer and are not covered by this warranty.

Equipment not listed above such as guns and cable assemblies, automatic wire feeders and field installed optional equipment is warranted for one year.

TO OBTAIN WARRANTY COVERAGE:

You are required to notify Lincoln Electric, your Lincoln Distributor, Lincoln Service Center or Field Service Shop of any defect within the warranty period. Written notification is recommended.

WARRANTY REPAIR:

If Lincoln's inspection of the equipment confirms the existence of a defect covered by this warranty, the defect will be corrected by repair or replacement at Lincoln's option.

WARRANTY COSTS:

You must bear the cost of shipping the equipment to a Lincoln Service Center or Field Service Shop as well as return shipment to you from that location.

IMPORTANT WARRANTY LIMITATIONS:

Lincoln will not accept responsibility for repairs made without authorization.

- Lincoln shall not be liable for consequential damages (such as loss of business, etc.) caused by the defect or reasonable delay in correcting the defect.
- Lincoln's liability under this warranty shall not exceed the cost of correcting the defect.
- This written warranty is the **only** express warranty provided by Lincoln with respect to its products. Warranties implied by law such as the Warranty of Merchantability are limited to the duration of this limited warranty for the equipment involved.

WARRANTY SUPERSEDED
SEE IMW-51

LINCOLN ELECTRIC®

THE LINCOLN ELECTRIC COMPANY

World's Largest Manufacturer of Arc Welding Products • Manufacturer of Industrial Motors
Sales and Service Worldwide Cleveland, Ohio 44117-1199 U.S.A.
Toronto M4G 2B9 – Canada • Sydney 2211 – Australia • Rouen 76120 – France

Eff. Mar. '89 Ram 7-88 Litho in U.S.A.