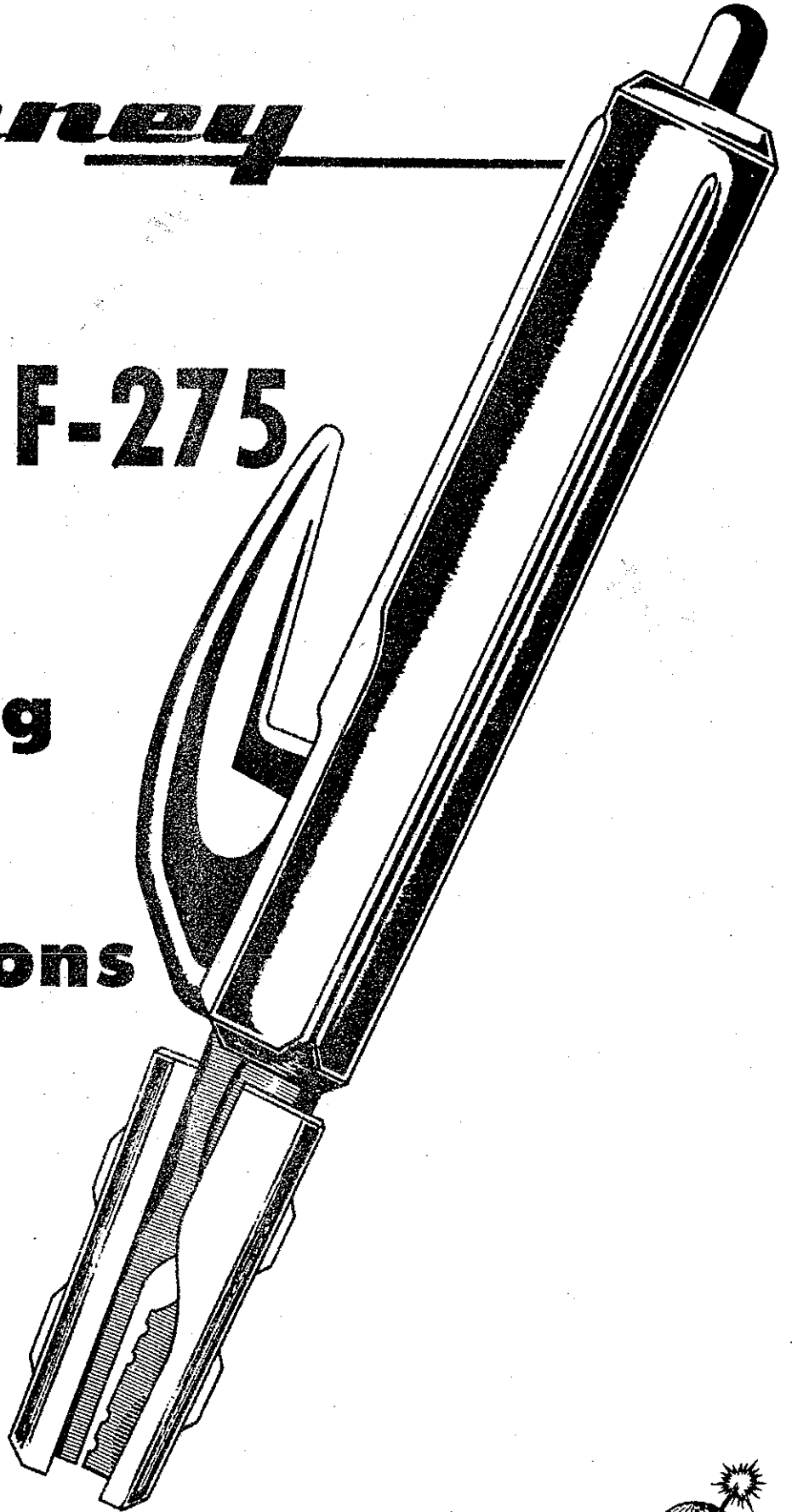


Forney

MODEL F-275

**Operating
and
Service
Instructions**



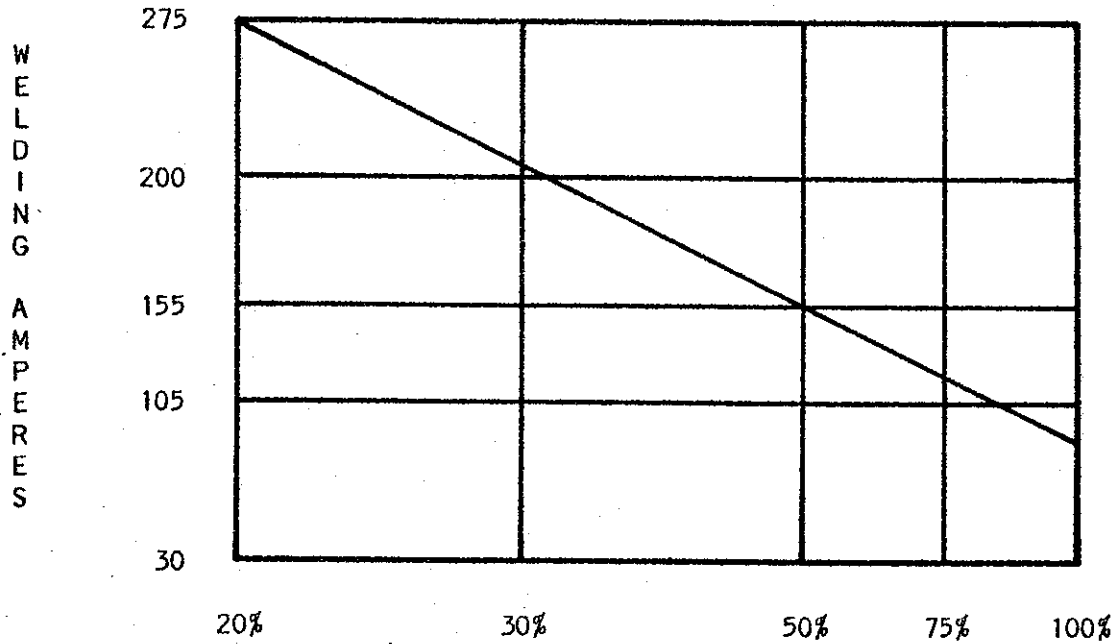
Forney INDUSTRIES, INC.

P. O. BOX 563 FORT COLLINS, COLORADO 80521



The Model F-275 is a precision engineered, quality manufactured Combination Repair Unit designed for long life and dependable service. It is an easy to use practical Welder for general repair -- especially designed for filling station and garage work -- manufacturing -- farm repair -- body and sheet metal work.

The Model F-275 has 24 output welding stages with the correct voltage automatically set for each amperage-welding output. The electrode and ground cables have "plug-in" color coded sleeves to match color on output receptacles on front of machine.



DUTY CYCLE

SPECIFICATIONS

Transformer - Heavy Duty - Limited Input	
Primary Voltage	208 or 230
Primary Max. Input	60
Phase	Single
Frequency	60 Cycles
Max. Open Circuit Voltage	80
Welding Range Amps	30 - 275
Power Factor	80%
Dimensions	19½" W. x 20½" D. x 32" L. overall
Weight net	175 lbs.

STANDARD ACCESSORIES

ELECTRODE HOLDER AND CABLE - The electrode holder is a fully insulated heavy duty holder allowing a full range of welding rod diameters and has four positions to hold welding rod. The cable is extra flexible fine strand welding cable. The plug is machined brass with a molded rubber integral insulation and grip.

GROUND CLAMP AND CABLE - The Forney Duo-Grip ground clamp has heavy duty copper alloy jaws with handles made of tough fiberglass. Will clamp to a wide variety of shapes and sizes to be welded. Cable quality and plug-in the same as on electrode holder.

HELMET - The Air-Flo helmet is molded rugged fiberglass with semi-flexible headband fully adjustable for comfort fit. The head size is controlled with easy to adjust ratchet knob to exact head fit. Its main features besides the rugged quality is its light weight and the new large size lens opening gives full view of the work. Comes complete with Government approved welding arc filter lens and special spatter resistant clear cover lens, allowing much wider visibility. Lens easy to change.

ELECTRIC ARC TORCH - a very useful accessory for brazing, heavy soldering, preheating, bending, paint and scale removing. Plugs into welding stages and gives up to 9000° F flame. Easy to use.

SOLDERING IRON - A deluxe instant heat soldering unit. Uses three ranges of output on the Welder and comes with four tips to give a range of soldering from light electronic soldering through heavy duty galvanized or copper work.

A sample of Forney's Superweld rods in sizes 3/32", 1/8" and 5/32" is made available for you to try. This is excellent all purpose, all position rod for use on most mild steel metals.

A COMPLETE FORNEY WELDING MANUAL IS ALSO AVAILABLE, easy to read, practical, and easy to understand. Cat. No. 57200 Price \$2.50

INSTALLATION LOCATION - The location you pick for your Arc Welder is quite important and certain factors should be considered. Among them are the following:

1. Place your welder in an area that is free of any volatile liquids, excessive dust, or other easy inflammable items that sparks from welding may ignite.
2. An open area with adequate floor space is important as quite often items to be welded need to be laid out on the floor or on a large bench for easier operation.
3. Location of your welder should be free from damp or wet floor or ground.
4. If it is intended to weld on large equipment such as farm equipment or vehicles that cannot be brought inside the building, it is best to locate the welder near the door or provide a power receptacle near the door so that your welder can be used both outside and inside.
5. Your welder should be located where there is adequate power supply. The Model F-275 requires a 60 amp fuse or breaker. A power supply wire size for the welder only over a short distance can be a size #8. If longer distances are required, a #6 wire is recommended to eliminate any excessive voltage drop. If other electrical equipment is to be operated at the same time you are welding, increasingly larger wire size will be necessary and can be figured by your electrician.

WELDING WITH THE MODEL F-275 is as easy or easier than with any other Electric Arc Welder. Good strong welds can be easily attained by following these easy procedures.

1. Prepare the joint to be welded making certain that the metal is clean of all foreign material.
2. Select the correct rod type and size to properly weld the joint.
3. Connect the electrode holder and ground clamp cables to the proper output jacks so that the output amperage is matched to the amperage requirements of the rod used.
4. Turn the Welder on and proceed to weld using accepted welding procedures.

BRAZING - with the Forney Carbon Arc Torch is very easy with the Model F-275. You simply use the regular amperage plugs and grounds with the torch. The torch is designed to use 1/4", 5/16", 3/8", and 1/2" copper coated carbon rods. The most popular sizes for brazing are 5/16" and 3/8" diameters. For heating and bending 1/2" diameter.

The increase in amperage up to a certain point causes the flame to become hotter. The size of the carbon has much to do with this. Listed here are the maximum heats to be used with various sizes of carbons:

3/16" carbon,.....not more than 30 amps	1/4" carbon,.....not more than 50 amps
5/16" carbon,.....not more than 70 amps	3/8" carbon,.....not more than 90 amps
	1/2" carbon,....not more than 145 amps

SOLDERING - A complete range of soldering can be accomplished with your Model F-275. The Deluxe Instant Heat Soldering Iron plugs into the front of the Welder. The chart below shows which stages can be used for soldering.

Heat	Tip Lead	Ground Lead
Low	60 Ⓞ 80	185 Ⓞ 240
Medium	165 Ⓞ 200	185 Ⓞ 240
High	130 Ⓞ 155	165 Ⓞ 200

MAINTENANCE - The Model F-275 does not require any maintenance other than normal care. Keep the Welder case clean and waxed to preserve the original finish. The electrode holder, ground clamp, and plugs should be kept clean to give best performance.

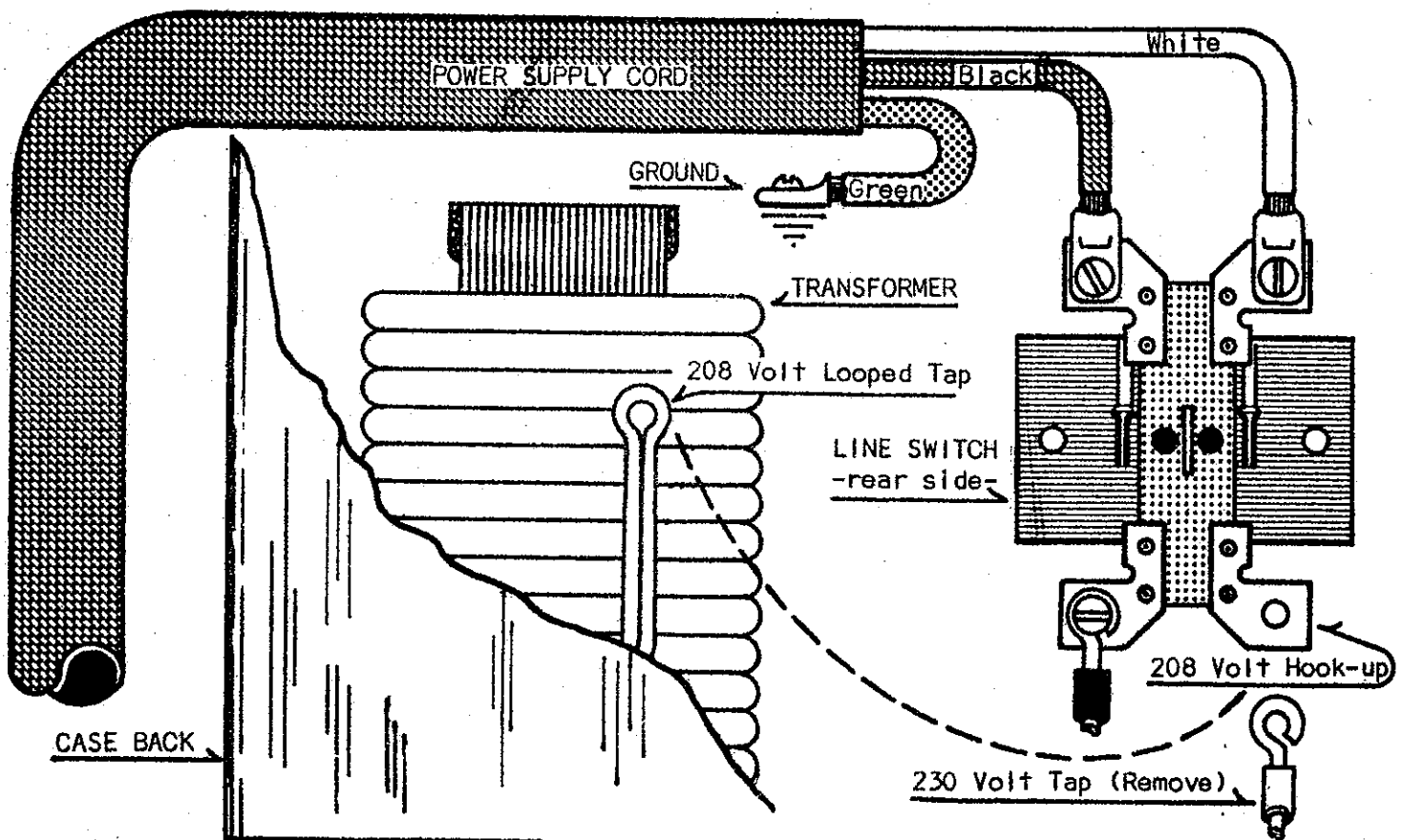
DO NOT connect this Welder to a 3-phase supply as a 3-phase machine. If no 230 volt single phase power is available, the Welder can be used by connecting to only two of the 3-phase connections. However, care must be taken that the third ground safety wire is properly connected to a separate approved ground.

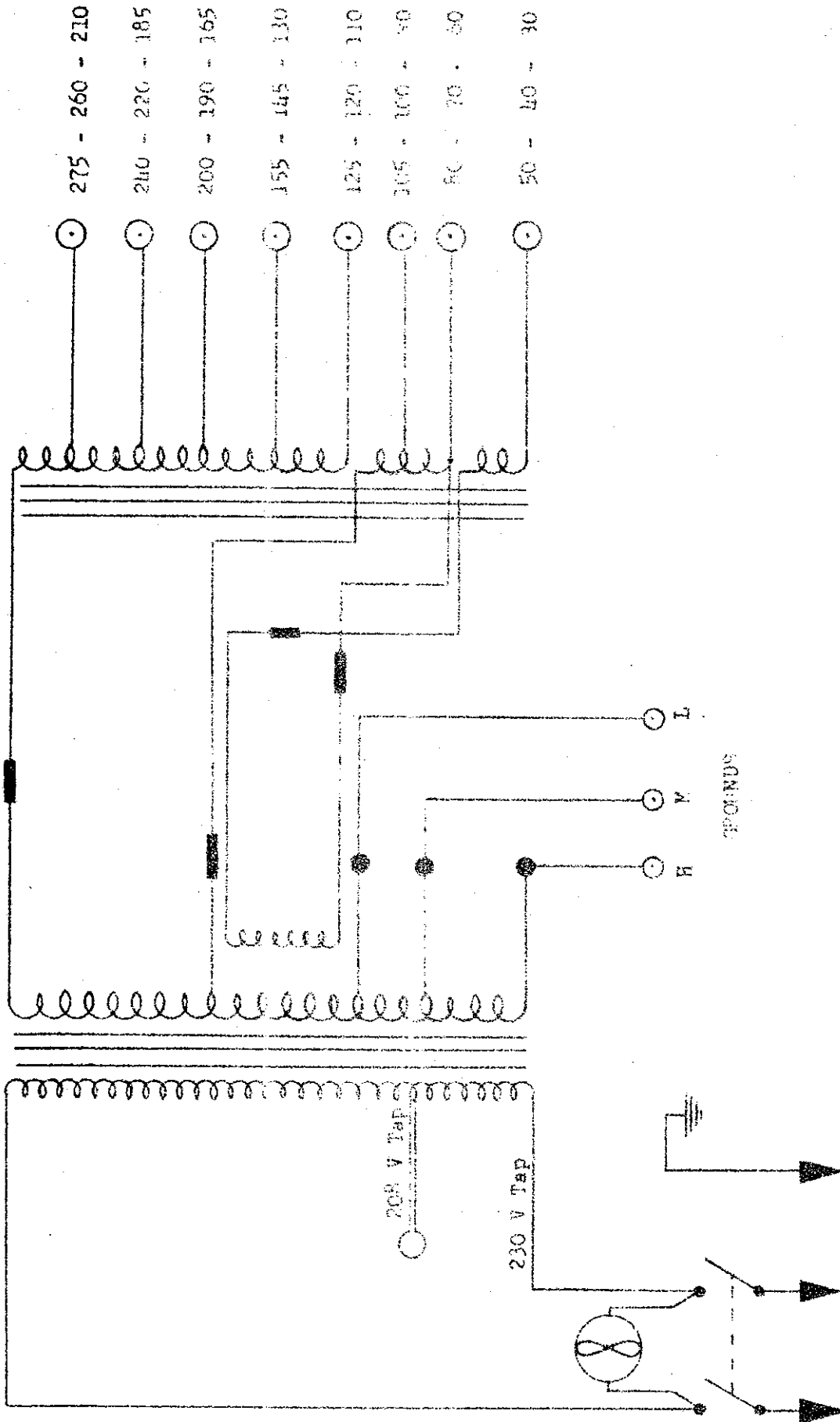
INPUT VOLTAGE CHANGEOVER:

Unless otherwise specified, all units shipped from the factory are wired for 230V operation. However, the input voltage can be changed to 208V operation on standard machine having a 208V primary tap (in form of a loop at the outside of the primary leg) for such areas where 208V power supply is available.

The changes to 208V are as follows:

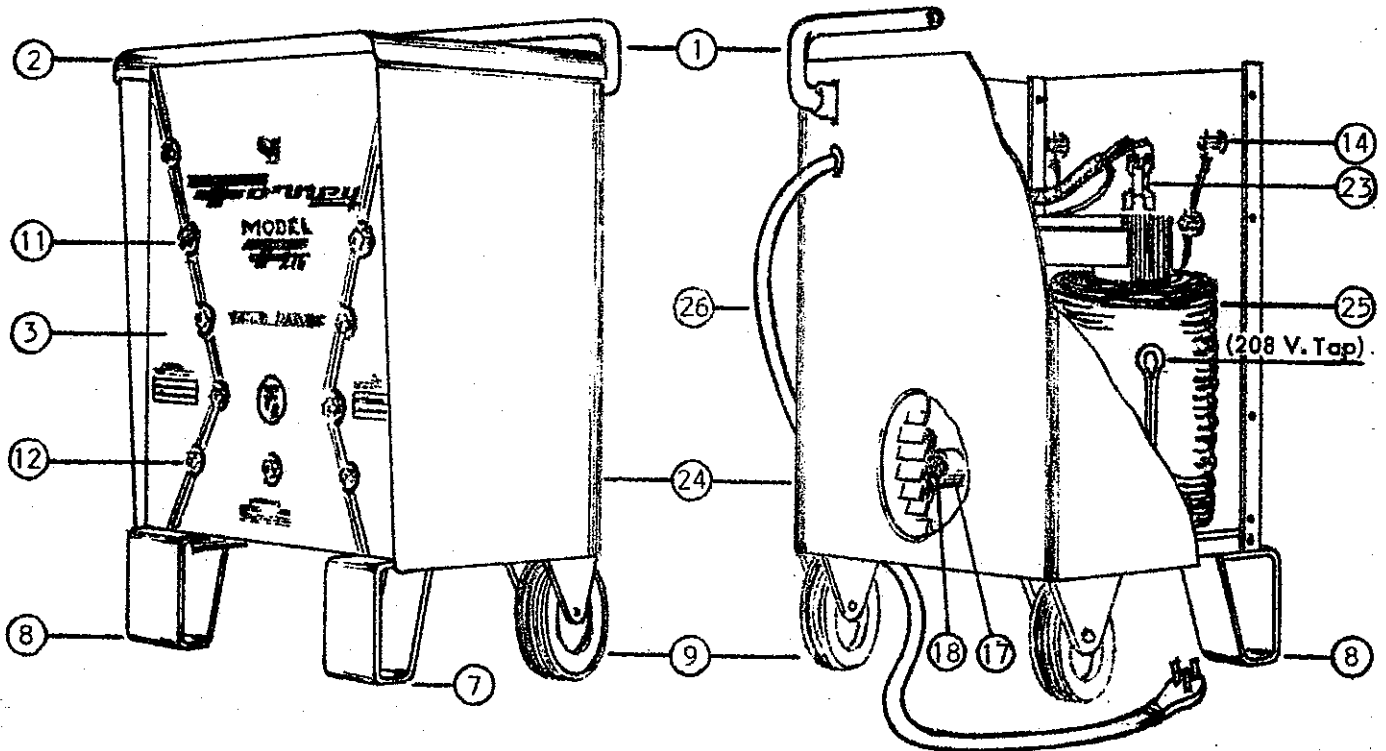
1. Disconnect power cord from electrical supply.
2. Remove top.
3. Disconnect wire on lower left (facing unit) tab of switch.
4. Tape this wire adequate for electrical insulation and position, so it does not touch any wire or components.
5. Locate 208 volt tap. It is recognized as a double solid wire looped at the end having a vinyl safety sleeve. Located on left side of primary leg. Attach this looped tap to the lower left switch.
6. Check to see that all wires are clear from each other before replacing top panel.





SCHEMATIC, ELECTRICAL

MODEL F-275



PARTS LIST

Part No.		Part No.	
1. Handle	F - 1	14. Output Jack Assembly, Includes plastic washers and brass bolt	F - 14.
2. Case Top	F - 2	17. Fan Motor	F - 17
3. Front Case	F - 3	18. Fan Blades	F - 18
4. Left Leg & Support Assembly	F - 7	23. On-Off Switch (60 A.)	F - 23
5. Right Leg & Support Assembly	F - 8	24. Case Sides and Back	F - 24
9. Wheel - 6" semi-pneumatic	F - 9	25. Main Transformer	F - 25
11. Molded Insulating Knob - Black	F - 11	26. Lead-in Cable Assembly (8-8-10)	F - 26
12. Molded Insulating Knob - Green	F - 12		

GUARANTEE AND SERVICE POLICY

This is to certify that this FORNEY MODEL F-275 ARC WELDER, Serial No. _____ has been built of quality materials and workmanship and has been carefully and completely tested. We, therefore, make the following guarantee and warranty:

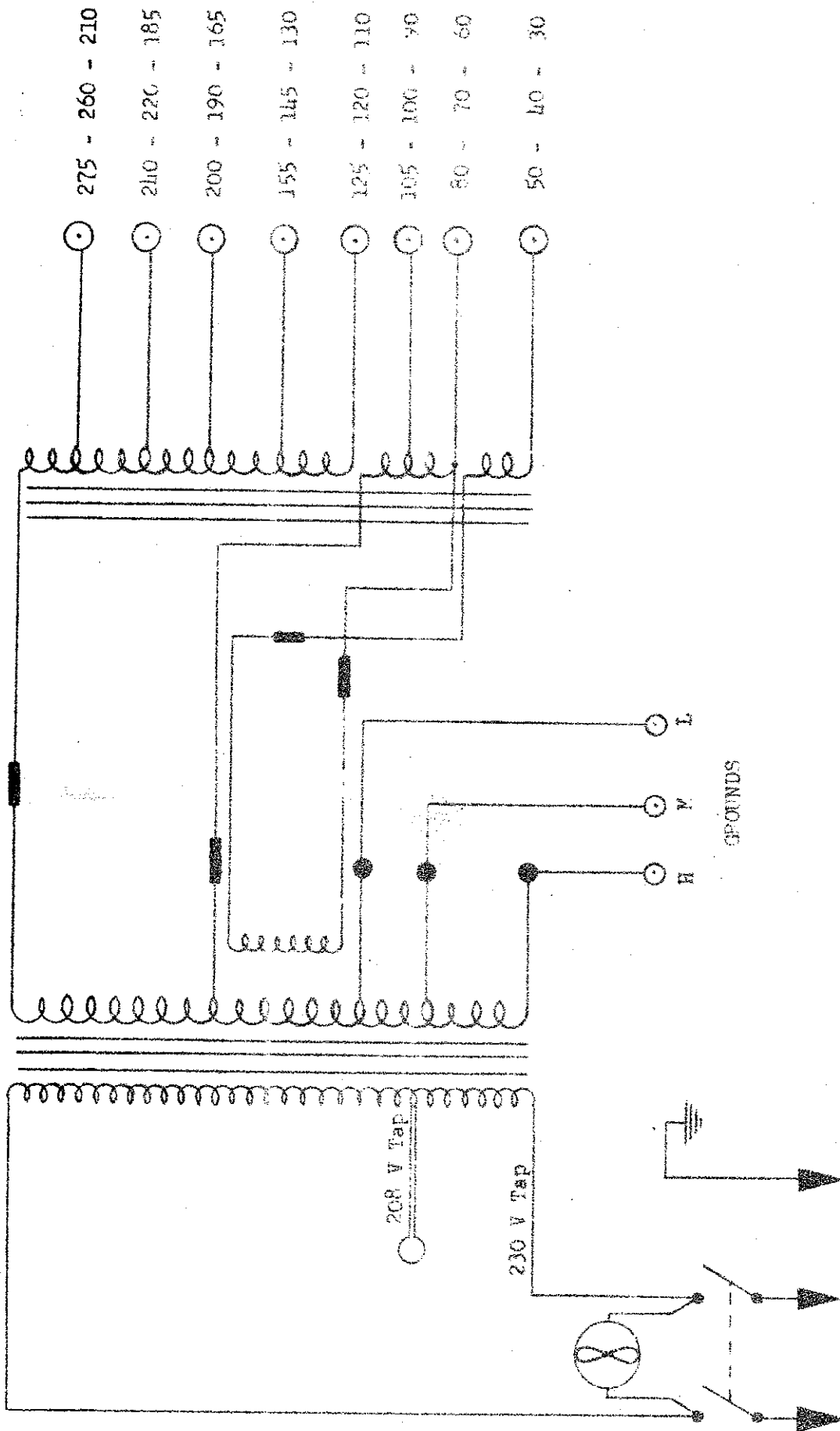
UNCONDITIONAL SIX-MONTH GUARANTEE

The Forney Manufacturing Company agrees to repair or replace this FORNEY F-275 without charge to the original owner if, for any reason whatsoever, it fails to give satisfactory service within a period of six months from date of purchase. This unusual guarantee is your INSURANCE POLICY for six months covering your FORNEY F-275 Unit against the hazards of fire, windstorm, hail, flood, falling aircraft, or moving vehicles.

SERVICE WARRANTY - ADDITIONAL EIGHTEEN MONTHS

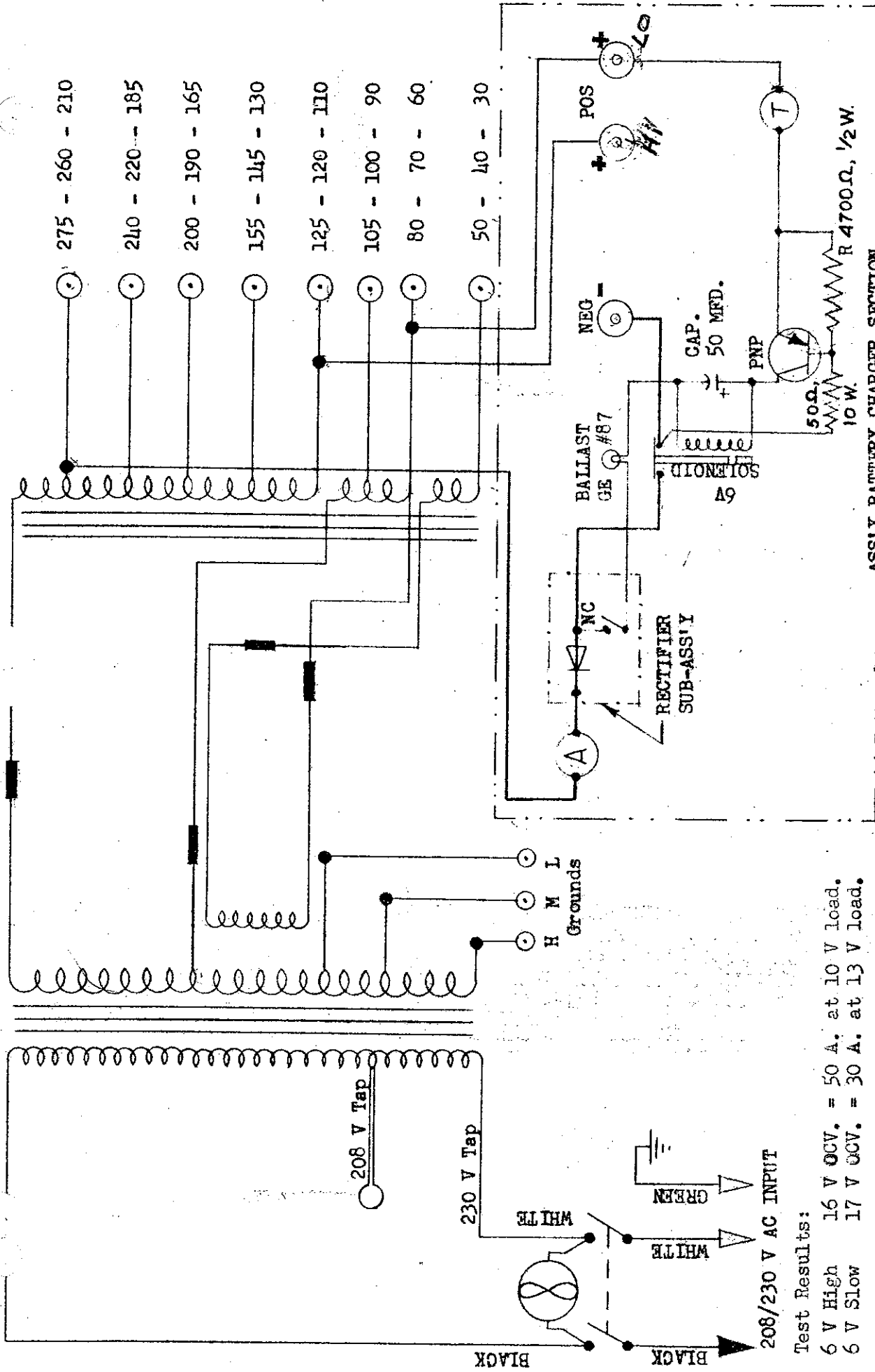
If during the next eighteen months, the FORNEY F-275 Unit fails to operate satisfactorily, the FORNEY MANUFACTURING COMPANY will repair it at factory cost of repairs, provided it is still the property of the original owner. This Service Warranty covers all components of the Unit with the exception of the welding accessories, which are expendable.

FORNEY MANUFACTURING COMPANY
P. O. Box 563, Fort Collins, Colorado



SCHEMATIC, ELECTRICAL

MODEL F-275



ASSY BATTERY CHARGER SECTION

Test Results:

6 V High	16 V OCV.	= 50 A.	at 10 V load.
6 V Slow	17 V OCV.	= 30 A.	at 13 V load.
12 V High	16 V OCV.	= 25 A.	at 15 V load.
12 V Slow	17 V OCV.	= 15 A.	at 17 V load.

Model "F" 275 w. B. T.		Schematic, Electrical		SPEC. #135-U-23	
DRAWN	C. B. [Signature]	Arc Welder		DWG. NO.	
DATE	9-7-67	FORNEY MANUFACTURING CO.		10102	
SCALE	None	DIV. OF FORNEY INDUSTRIES, INC.		FORT COLLINS, COLORADO	
J. ±					