

# MF12

## **MF-12 PINSPOTTER**

**MACHINERY  
DIVISION**



## **OWNER'S MANUAL**

## ELECTRICAL REQUIREMENTS

Connect the MF-12 to a 30 amp power supply. (208-230 volts – 60 cycle). The MF12 uses 208 – 230 volt single phase. To wire to 208-230 volt single phase, the green lead is ground and the white and black leads are power. It is suggested that the unit be permanently wired into a 30 amp disconnect box fitted with 30 amp slow blow fuses.

## MF-12 AS A BENCH TOOL

To use your work bench as a welding table, set the MF-12 alongside or on top of the work bench. Cover the bench top with a copper sheet (.025 inch) which will act as a permanent ground when the duct work is placed on the table top. Attach the MF-12 ground clamp to the duct work or copper bench top. The Clip Pins will quickly weld every time with no burn marks or wasted pins due to misfires.

## BRING MF-12 TO THE WORK

Where duct is too large to put on a bench, snap the ground clamp onto the duct and secure the insulation quickly by welding the Clip Pins inside or outside of the ducts as required. Eliminate the heat mark on the duct using the simple "heat sink" supplied on the opposite side of the weld.

## SERVICE

The MF-12 has been designed and built to withstand rugged shop usage. The Indicator lights on the front panel will help you to diagnose minor problems. If your MF-12 fails to operate follow this simple procedure to find the defective component.

1. Pull the trigger and watch the lights. The green light (24 volts) and then the red light (220 volts) should flash on and off.
2. If only the green light comes on, go to step 4.
3. If neither light comes on, press the WELD CYCLE TEST switch on the front panel.
  - A. If both lights flash and the transformers do not hum go to step 5.
  - B. If both lights flash and the transformers hum, the problem is either a bad trigger switch or bad switch cable.
  - C. If only the green light flashes, go to step 4
  - D. If neither light flashes, replace 24 volt transformer.
4. Replace the weld activator.
5. The problem is probably a bad weld transformer. Call technical service for further assistance. (1-800-899-3876)

## TIMER ADJUSTMENT

The timer dial facing you on the front panel of the unit, determines the duration of the weld cycle. For maximum efficiency of the unit, the weld cycle should be set for the shortest length of time necessary to provide a good weld. An excessive amount of time does not improve the weld. On the contrary, the resulting weld may not be an acceptable one. It is recommended that at the start of a production run, using a given length of pin with a given gauge of metal, the operator take a few moments to determine the minimum timer setting to perform the job and leave the timer at that point.

**NOTE:** There is a common misconception that the longer the weld time, the stronger the weld. This is not true. It is important that you follow the above instructions for maintaining the minimum weld time.

## "HEAT SINK"

Included with your MF-12 is a simple "heat sink" tool that looks somewhat like a cookie cutter. This tool, when placed behind the point of weld on bare metal, will eliminate any mark on the metal by dissipating the heat generated from the point of the weld. The use of a copper sheet on the work bench will also eliminate this mark.

## MAINTENANCE

The MF-12 has been designed and built to withstand rugged shop. Constant, trouble-free operation is assured with a minimum of maintenance. The GUN TIP, the GROUND CLAMP and all CABLE CONNECTIONS should be kept clean to maintain a good electrical contact. Wire brush the parts to remove any oxidation or adhesive that may have accumulated during the fastening operation.

## INSTALLING CLIP PINS

Clip Pins are welded as easily as "A", "B", "C".

### "A"

Position the Clip pin on the Magnetic tip of hand gun.



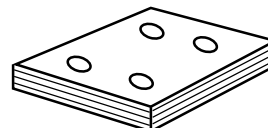
### "B"

Press down through the insulation, twist the gun, and pull the trigger. Do not release the trigger until the timer cycle has ended.



### "C"

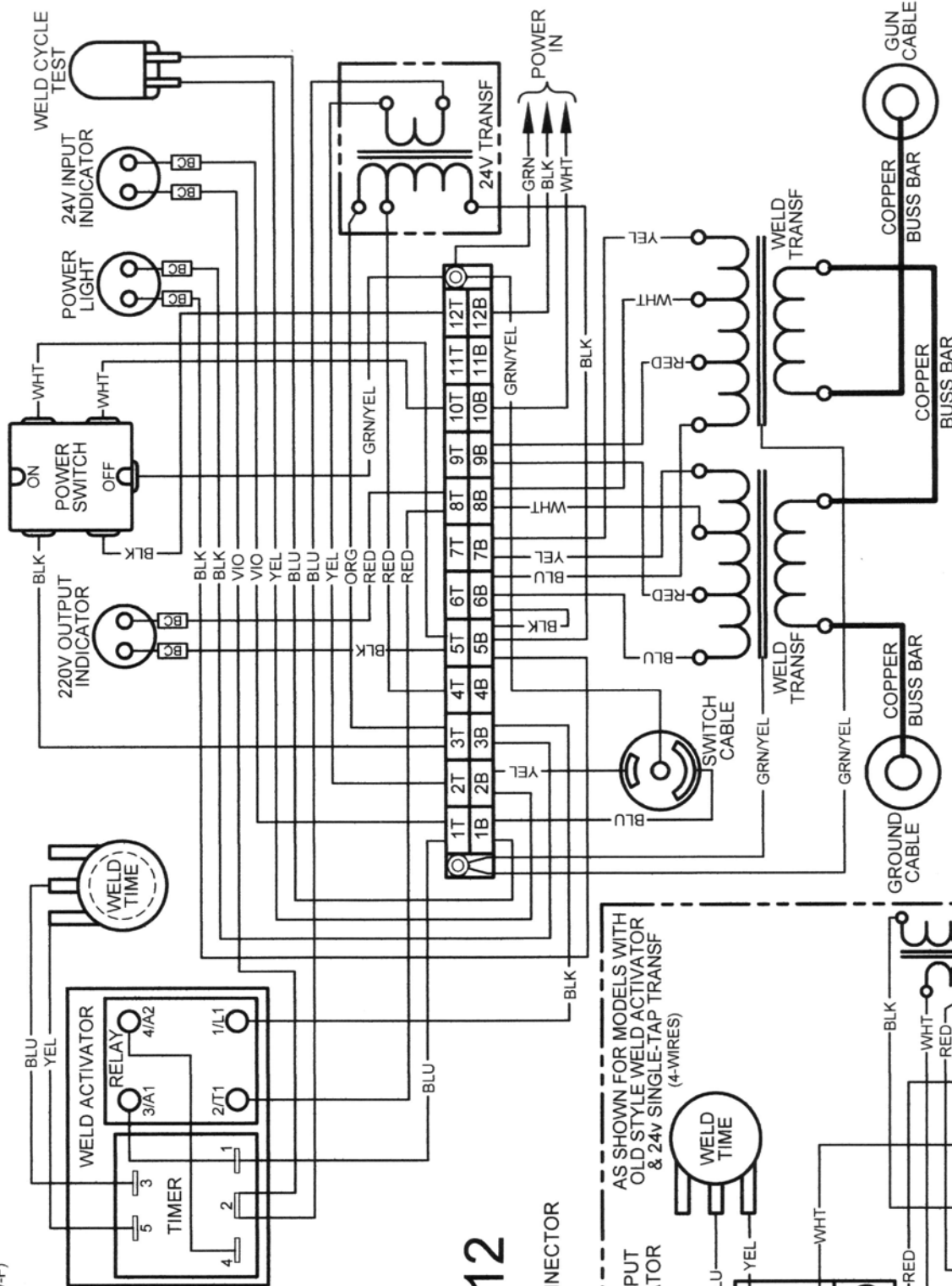
The Clip Pins are permanently welded in position flush with the insulation.





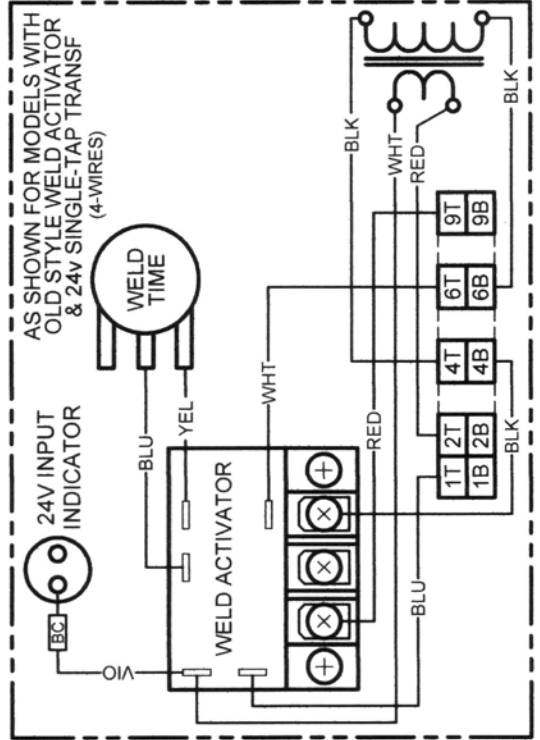
# MF-12 WIRING DIAGRAM

LATEST: 8-9-13 (B086-01-20/REV-F)

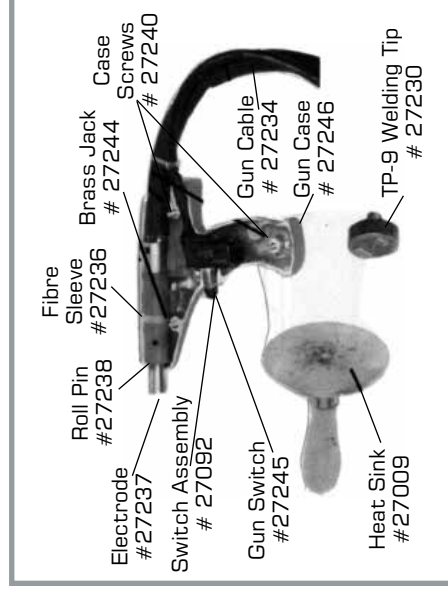
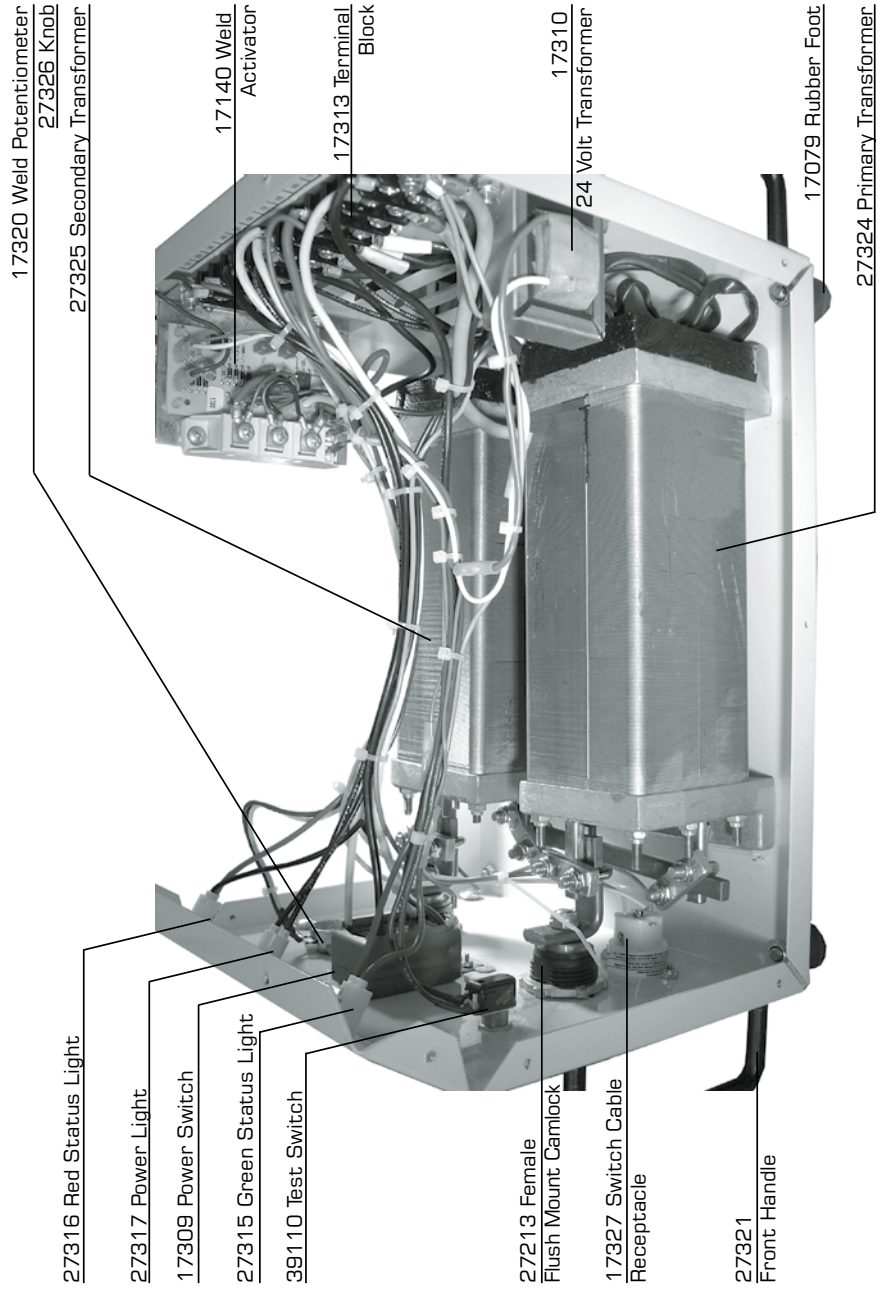


## MF-12

[BC] = BUTT CONNECTOR



# **PARTS LOCATION**



## ***MF-12 PARTS & SPECIFICATIONS***

ITEM	DESCRIPTION	ITEM	DESCRIPTION
17049	Male Camlock	27243	Gun Cable / Electrode
17079	Rubber Foot	27244	Brass Jack
17140	Weld Activator	27245	Gun Switch
17288	Switch Cable Plug	27246	Gun Case
17309	Power Switch	27253	Line Cord - Strain relief
17313	Terminal Block	27256	Aluminum Connector Block
17320	Weld Potentiometer	27257	U-Clamp & Nuts
17327	Switch Cable Receptacle	27276	Universal Weld Gunt - 16ft
27005	TP-2 Tip	27315	Green Status Light
27007	Gun & Cable Assembly	27316	Red Status Light
27008	Ground Clamp Assembly	27317	Power Light
27009	Heat Sink	27318	Case Top Cover with Handle
27092	Gun Switch Assembly - 11ft	27319	Case Body
27213	Female Flush Mount Camlock	27320	Case Side Panel
27217	Line Cord	27321	Front Handle
27230	TP-9 Tip	27322	Top Handle
27231	Electrode Assembly	27323	Rear Handle
27234	Gun Cable	27324	MF-12 Primary Transformer
27236	Fibre Sleeve	27325	MF-12 Secondary Transformer
27237	Electrode	27326	Weld Potentiometer Knob
27238	Roll Pin	39110	Test Switch
27240	Case Screws	44091	24V Multi-Tap Transformer

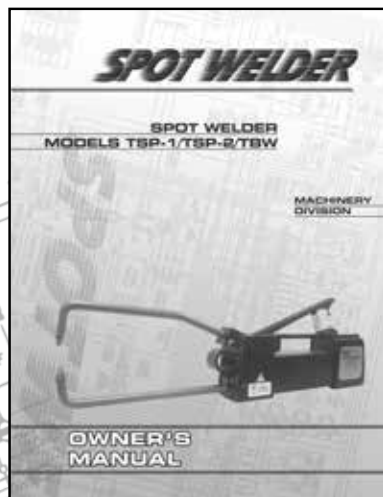






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