

# MF-12A

## MF-12A PINSPOTTER

**MACHINERY  
DIVISION**



## OWNER'S MANUAL

## ELECTRICAL REQUIREMENTS

Connect the MF-12A to a 60 amp power supply. (208-230 volts – 60 cycle). The MF-12A 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 60 amp disconnect box fitted with 60 amp circuit protection.

## MF-12A AS A BENCH TOOL

To use your work bench as a welding table, set the MF-12A 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-12A 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-12A TO THE WORK MAINTENANCE

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-12A 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-12A 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.

The MF-12A 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.



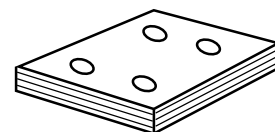
### "B"

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



### "C"

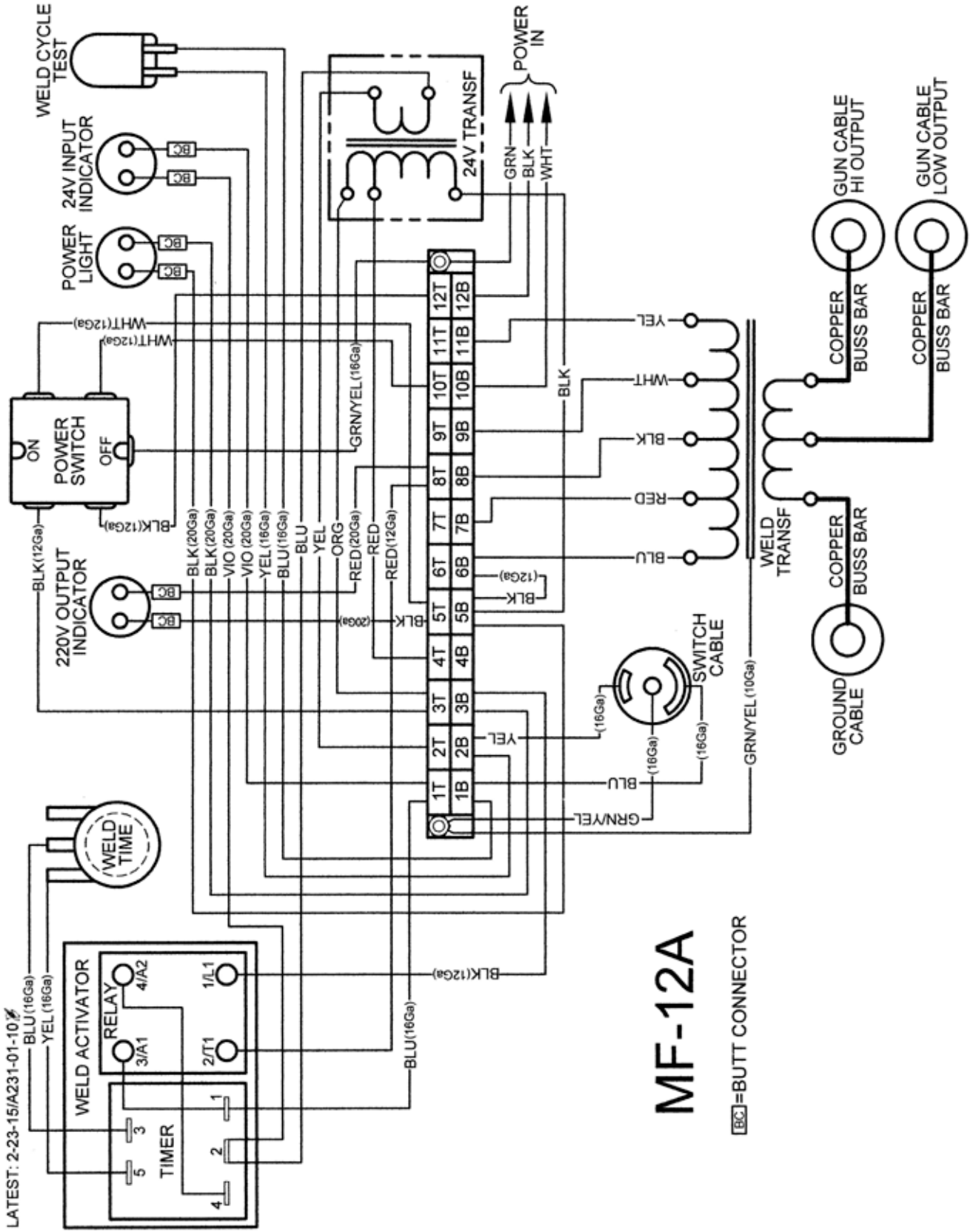
The Clip Pins are permanently welded in position flush with the insulation.





# MF-12A WIRING DIAGRAM

LATEST: 2-23-15/A231-01-10



## MF-12A

[BC] = BUTT CONNECTOR

# PARTS LOCATION



27098 Case Body

27213 Female Flush Mount Camlock

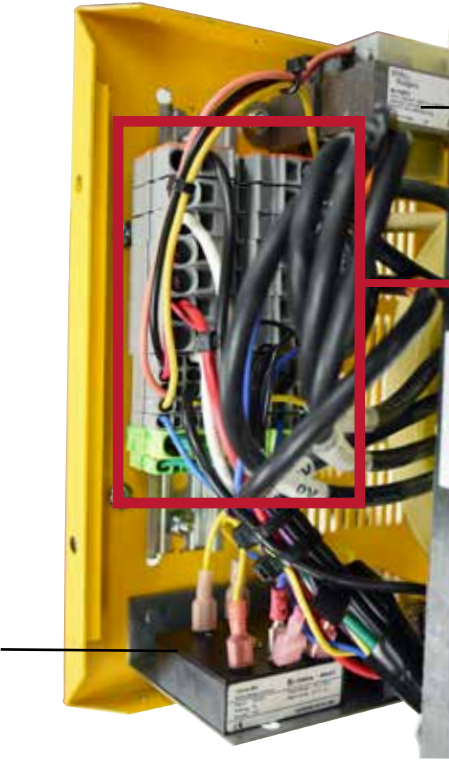
17327 Switch Cable Receptacle

27097 Oval Grip Handle

27094 220 Volt Transformer

17079 Rubber Foot

17140 Weld Activator



17310 24 Volt Transformer

27354 20-6 Push-in Term Grnd Bock

27354 Terminal Block Jumper

27355 22-12 Push-in Term Grnd Block

17308 Universal Amber Light

27316 Red Status Light

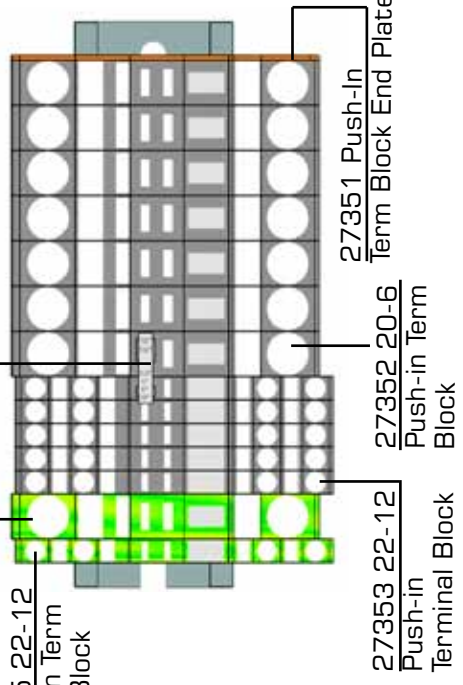
17309 Power Switch

17320 Weld Potentiometer

27326 Knob

27315 Green Status Light

39110 Test Switch



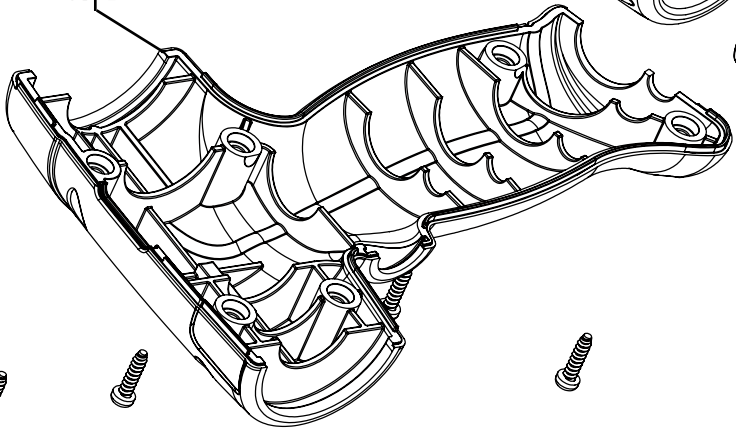
27351 Push-In Term Block End Plate

27352 20-6 Push-in Term Block

27353 22-12 Push-in Terminal Block

# PARTS LOCATION

27100 Screws (6)



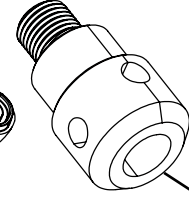
27103 Gun Body  
(Rt & Lft Halves)

27102 Spindle Shaft

27103 Gun Body  
(Rt & Lft Halves)



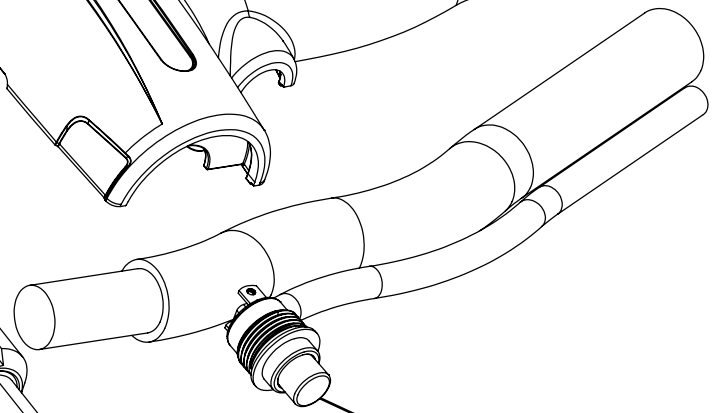
27101 Taper Adapter



27104 Face Plate Nut



27099 Trigger Switch  
(No Leads)





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

ITEM	DESCRIPTION	ITEM	DESCRIPTION
17049	Male Camlock	27231	Electrode Assembly
17079	Rubber Foot	27236	Fibre Sleeve
17140	Weld Activator	27237	Electrode
17288	Switch Cable Plug	27238	Roll Pin
17308	Universal Amber Light	27240	Case Screws
17309	Power Switch	27244	Brass Jack
17320	Weld Potentiometer	27245	Gun Switch
17327	Switch Cable Receptacle	27246	Gun Case
27005	TP-2 Tip	27253	Line Cord - Strain relief
27091	Gun or Ground Cable only - 10ft	27315	Green Status Light
27092	Gun Switch Assembly - 11ft	27316	Red Status Light
27093	Cable & Electrode Assembly - 10ft	27318	Case Top Cover with Handle
27094	220 Volt Transformer	27320	Case Side Panel
27095	Ground Clamp Assembly - 10ft	27322	Top Handle
27096	Gun Cable Assembly - 10ft	27326	Weld Potentiometer Knob
27097	Oval Grip Handle	27343	Socket Cover
27098	MF12-A Case Body	27351	Push-In Term Block End Plate
27099	Trigger Switch - No Leads	27352	20-6 Push-in Term Block
27100	Thread Form Screw - 6pk	27353	22-12 Push-in Terminal Block
27101	Tapered Adapter	27354	MF12A Terminal Block Jumper
27102	Spindle Shaft	27355	22-12 Push-in Term Grnd Block
27103	Gun Body (Rt & Left)	27356	20-6 Push-in Term Grnd Block
27104	Face Plate Nut	39110	Test Switch
27213	Female Flush Mount Camlock	44091	24V Multi-Tap Transformer
27217	Line Cord		
27230	TP-9 Tip		



**NOTES**

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**MACHINERY DIVISION**

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