Automation Kit No. 9-9385

Installation Instructions

Scope

These instructions cover the Automation kit for converting the CutMaster® 52, 82, 102 and 152 manual and mechanized systems for Automation Cutting. Installation and service of this equipment is restricted to properly trained personnel; unqualified personnel are strictly cautioned against attempting repairs or adjustments not covered in this manual, at the risk of voiding the Warranty.

Read these instructions thoroughly. A complete understanding of the characteristics and capabilities of this equipment will assure the dependable operation for which it was designed.

General Description

The Automation Kit is for use with Thermal Dynamics Manual and Mechanized Cutmaster® Plasma Cutting Systems. Do not use this device with any other equipment.

The Automation kit allows for the use of the CutMaster® power supply for automated and mechanical cutting..

Included Items

The following items are included in this kit:

- Automation Harness (1)
- Harness Mounting Screws (2)
- Snap in Plug (1)
- Instructions

Installation Procedure

WARNING

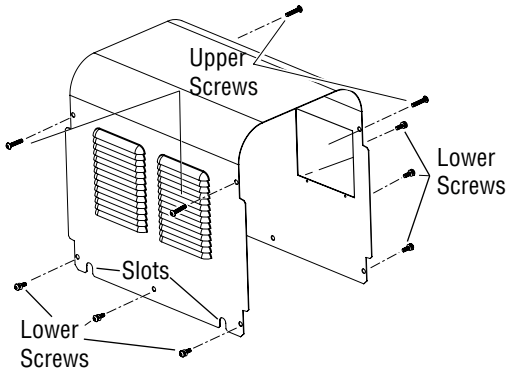
Disconnect primary power at the source and bleed down the system before starting the procedure.

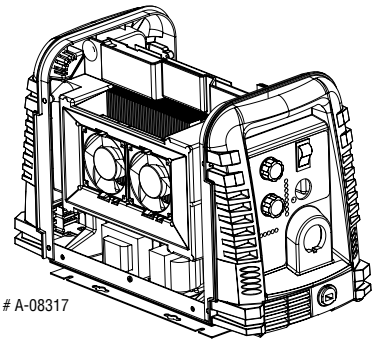
A. Cover Removal

1. Remove the upper and lower screws which secure the cover to the main assembly. Do not loosen the lower screws inside the cut out slots in the bottom of the cover.

Note

The upper screws and lower screws are not the same. Do not mix them. The upper screws are for threading into the plastic of the front and rear panels. DO NOT use the finer threaded lower screws for this.





2. Carefully pull the Cover up and away from the unit.

B. Cover Installation

1. Reverse previous procedures for cover installation.

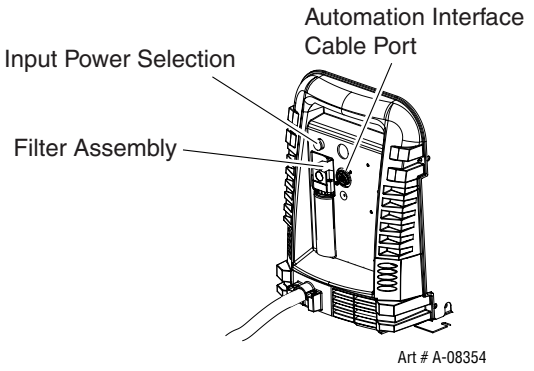
NOTE

When installing the upper screws, attempt to reuse the original threads. The easaiest way to do this is by turning the screw counter-clockwise until you feel the threads lign up, then begin to turn the screw clockwise to tighten. Do not over tighten.

C. Automation Harness Installation

1. Remove the metal plate covering the two access holes in the rear panel. You can save this for converting back to just a manual system or discard if you have no intensions of doing so.

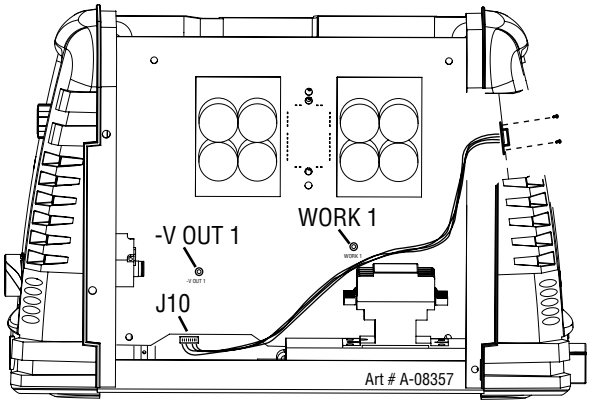
2. Using the two screws included in this kit, install the CPC end of the interface cable harness connector in the lower hole in the back of the power supply. Tighten the hardware securely. Do not overtighten.



CAUTION

Do not overtighten these screws. Overtightening could strip out the holes in the plastic flange supporting the cable connector.

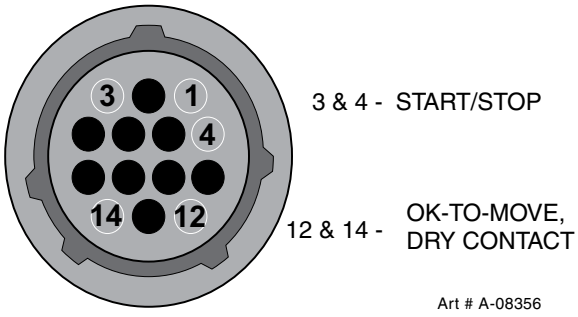
3. Route the harness behind the contactor and under existing wiring. Connect the multi pin strip end of the harness to J-10 on the Main PCB along the bottom toward the front of the unit.



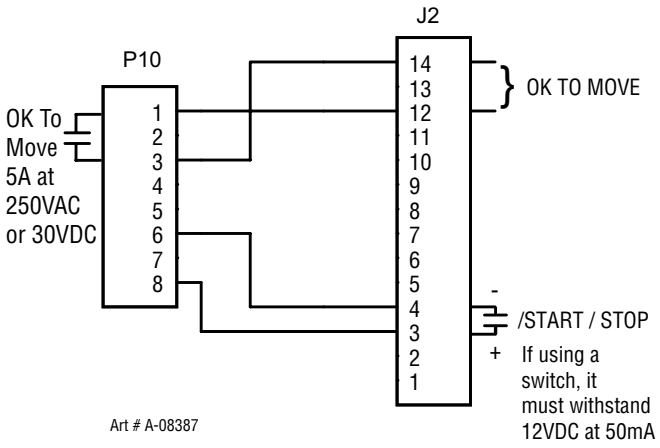
4. If not using a height sensing device skip to the next step. If using a customer supplied auto voltage sensing device for height control, the wires will need to be fitted with a proper size ring terminal. Feed those wires through the top hole in the rear panel. Use an M4 .7x8mm screw to secure the negative wire to the main PCB at "-V out 1" above the terminal strip just done. Remove the screw securing the Work Lead to "Work 1" and attach the positive wire to this same terminal with the Work Lead. Secure these wires to the rear panel with a proper sized Hayco type through hole protector.

5. If not using a height sensing device just snap the included plug into the top hole of the rear panel from the rear.

6. Harness pin-out is as shown in the following illustrations.



BASIC CNC INTERFACE OPTION



This completes the installation of the Automation Kit.

NOTE

Every effort has been made to provide complete and accurate information in this manual. However, the publisher does not assume and hereby disclaims any liability to any party for any loss or damage caused by errors or omissions in this Manual, whether such errors result from negligence, accident, or any other cause.

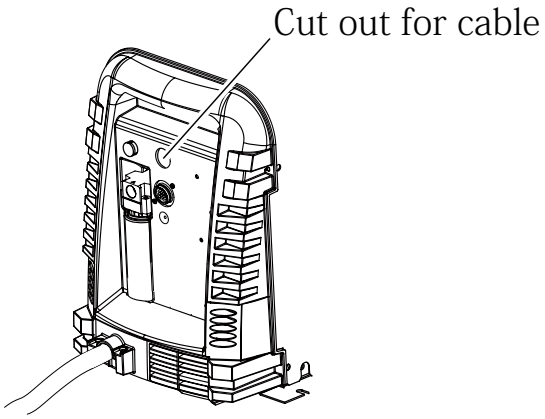
APPENDIX: RAW ARC VOLTAGE

If raw arc voltage is necessary for the torch height control, the customer must supply an 18 AWG (1.0 mm2), single pair, unshielded cable rated for 300V or greater. All work must be performed following applicable local and national codes.

1. Disconnect the power from the power supply.

2. Remove the screws that attach the power supply cover to the chassis. Remove the cover.

3. Route the cable through the customer supplied strain relief at the rear of the power supply.

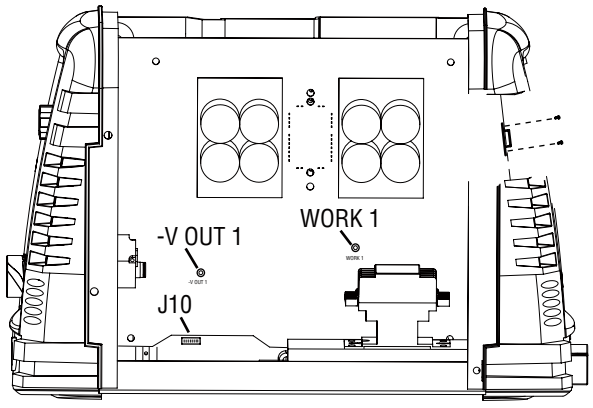


Art # A-10286

4. On the main board use insulated type 1/4-inch ring lug terminal ends to connect to –Vout1 (- polarity) and WORK 1 (+ polarity).

WARNING

The raw arc voltage can exceed 350VDC !!!!



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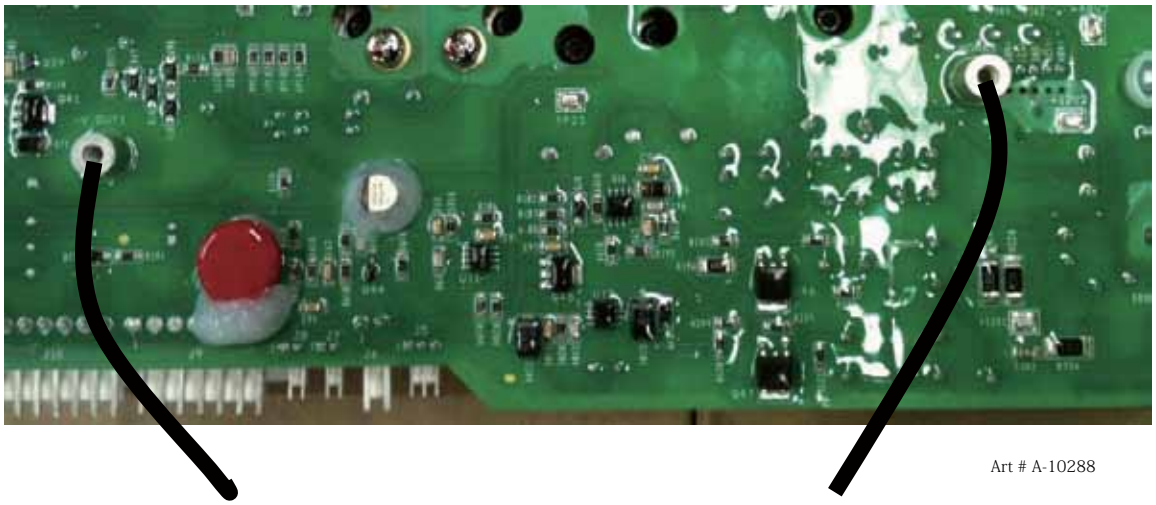

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-V out (-) Polarity

Work1 (+) Polarity

5. Tighten the strain relief.

6. Replace the cover.

7. Connect the cable to negative and positive of Torch Height Control .