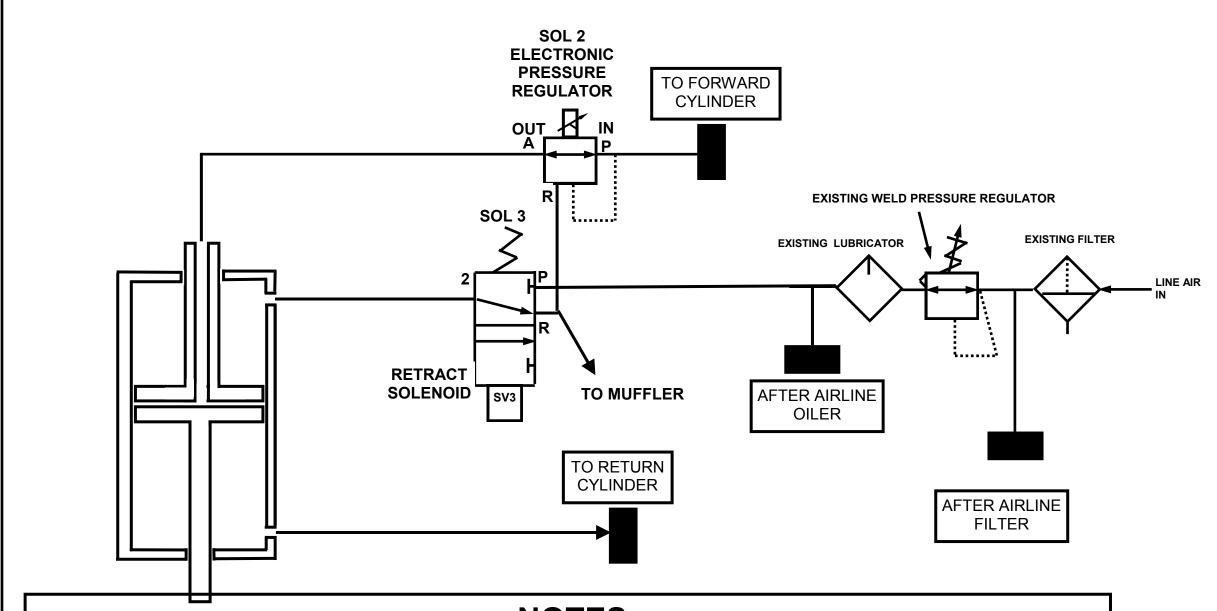


## **SEQUENCE**

- 1. First time with retract fully open, closing of FOOT SWITCH will:
- a) Close relay K1.
- b) Send 24VDC 0V through NC contact on K2 and NO contact on K1 to terminal 10 to initiate Amada welding control and energize RETRACT solenoid valve.
- c) Amada control will energize retract solenoid to bring electrodes to work position.
- d) Retract voltage from 62AC goes through NC contact on relay K1 to turn on relay K2.
- e) When the FOOT SWITCH is released, relay K1 opens.
- f) NC contact on K1 closes relay K2.
- g) Relay K2 self latches using retract voltage 62AC (retract).
- 2. Each time the FOOT SWITCH is closed until retract is released:
- K3 ONE-SHOT relay is energized for about 3/4 second to start SOFT TOUCH sensor board through SV input terminal 9.
- c) Sensor board turns on SVL to close electrodes under low force and electrodes close.
- d) If continuity is detected before the time set on the DIPswitch on this board, SVH will turn on to bring electrodes to full welding force.
- e) At the same time, the Amada welding control is energized through closing of a NO contact on the SOF TOUCH sensor board terminals 6 and 7.
- f) Voltage on output from welding control terminal 7AC keeps the sensor board energized at terminal SV until the weld solenoid is released at the end of the weld by the Amada control even if the foot switch is still closed.
- g) Pushing the RETRACT release button on the top of the footswitch drops the voltage on 62AC and resets the system.

•	WIRE COLOR	TERM	CONNECT IN WELDING CONTROL
ld-	BLACK	60AC	115VAC L
	WHITE	6AC	115VAC N
	GREEN/BLACK STRIPE	62AC	115V L RETRACT SOLENOID VOLT- AGE FROM WELDING CONTROL
	RED/BLACK STRIPE	Α	ONE SIDE OF DOWN FOOT SWITCH
′	RED	X004	START INPUT TO WELD CONTROL. 24VDC 0V (SINKING)
FT	WHITE/BLACK STRIPE	N1	24VDC 0V IN BACK OF WELDER
٧ ١	ORANGE	7AC	115V WELD START OUTPUT FROM CONTROL. ON AT CLOSING OF WELD SOL., OFF AFTER HOLD.
	GREEN	-	GROUND STUD IN WELD CONTROL

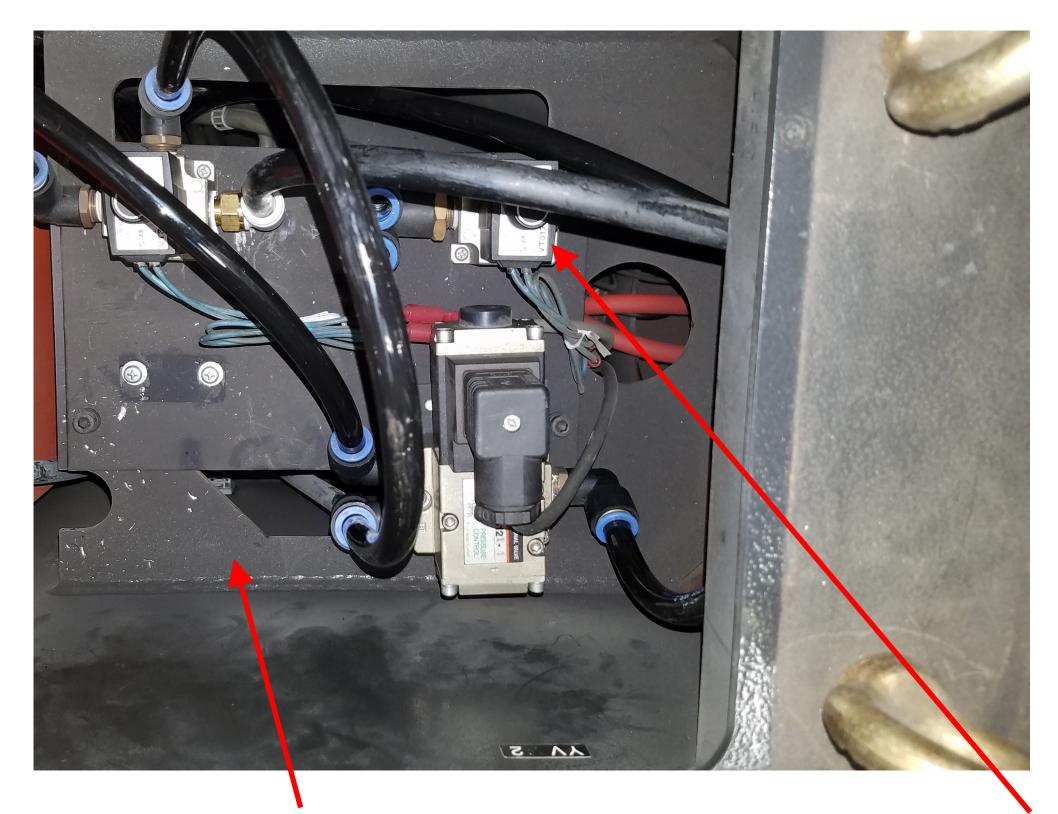
RELAYS										
K1= 1A488, 3PDT, 24VDC coil K2= 5X8410, 3PDT, 115V coil K3 = CROUZET MODEL 88827125 INTERVAL RELAY. SET FOR 0.1-1S, KNOB POS. = 8										
REV.	DI	BY	DATE							
UNITROL ELECTRONICS, INC. 702 Landwehr Road Northbrook, Illinois 60062										
DATE: 1/6/17	SCALE: NONE	APPROVED BY: R. HIRSCH	drawn by: RBH							
9181-34AM										
	DWG. NO. 2089									



## **NOTES**

- 1.If it is impossible to add a tee between the airline filter and pressure regulator, connect this line to "AFTER AIRLINE OILER".
- 2. Remove the existing pressure regulator #9.
- 3.Remove the existing Remove tubing from the existing SOL1 (originally going to RETURN cylinder port)
- 4. Eliminate flow controls on top (forward) port and lower (return) port.

			ı					
REV.	DESCRIPTION			DATE				
UN	UNITROL ELECTRONICS, INC. 702 Landwehr Road Northbrook, Illinois 60062							
DATE: 12.16.16	SCAL E:	APPROVED BY: R. HIRSCH	DRAWN BY:					
AM	AMADA ID40ST and ID40IVST							
PNI	DWG. NO. 2087							



REMOVE THE PRESSURE REGULATOR AMD REMOVE PLUMBING FROM SOLENOID VALVE SOL1 (originally connected to lower port of cylinder). CONNECT TUBING A SHOWN TO MATCH CIRCUIT ON FIRST PAGE.