CALIBRATION OF PULSAMATIC ACTUATOR

LIMIT SWITCH VERIFICATION

This procedure is to verify the proper setting of the limit switches and should be performed prior to power being applied to the actuator.

With the stroke indicator counter indicating 090 or less, pull out the handwheel and rotate to increase the counter.

As the counter approaches (from 096 - 098) a faint click should be heard from the limit switch.

If an audible indication can not be heard then a continuity check can be done.

Place a voltmeter across the two terminals of the limit switch. Verify that continuity exists.

With the stroke indicator counter at 090 or less, pull out the handwheel and rotate to increase the count.

As the counter approaches (from 096 - 098) the limit switch will open, indicated by a loss of continuity.

Operation of the second limit switch may be checked in a similar manner. The limit switch will click (no continuity) as the stroke indicator counter reads between (004 - 002).

If either of the limit switches appear to be out of adjustment, loosen the two set screws and adjust appropriately.

INPUT SIGNAL CALIBRATION (Rough Adjustment)

This procedure trims the actuator circuit board to the low and high ends of the actual input control signal.

Pull out on the auto/manual switch to the manual position.

Place voltmeter (VDC) with the negative lead to TB2-1 and the positive lead to TB2-2.

Set the input control signal to the low end (0%) and record the voltage reading.

Set the input control signal to the high end (100%) and record the voltage reading.

Example: 0% - 1.8 VDC
100% - 9.8 VDC

Remove the input control signal.

Pull out on the handwheel and manually rotate to decrease the counter to 0%.

Place voltmeter (VDC) with negative lead to TB2-1 and positive lead to TB2-5.

Adjust the "LO" trim potentiometer on the circuit board to voltage recorded at 0%.

Pull out the handwheel and manually rotate to increase counter to 100%.

Place voltmeter (VDC) with negative lead to TB2-1 and positive lead to TB2-4.

Adjust the "HI" trim potentiometer on the circuit board to voltage recorded at 100%.

Reconnect process signal and place over ride switch in the auto position.

INPUT SIGNAL CALIBRATION (Fine Adjustment)

Remove voltmeter from TB2-1 and TB2-4.

Place auto/manual switch to auto by pressing in on switch.

Place the input control signal to 0%.

The actuator will automatically adjust to 0% stroke.

Adjust the "LO" trim potentiometer so that the stroke indicator counter reads (002 - 004) and the LO LED light goes out.

Place the input control signal to 100%.

The actuator will automatically adjust to 100% stroke.

Adjust the "HI" trim potentiometer so that the stroke indicator counter reads (096 - 098) and the "HI" LED light goes out.

The above adjustments are interactive and it may be required to repeat steps until voltages stabilize.

REMOTE AUTO/MANUAL CALIBRATION (Optional)

This procedure trims the manual control potentiometer to the low and high ends of the actual input control signals.

Place the remote selector switch to the "Manual" position.

Place the auto/manual switch located on the pump to "Auto".

Set the remote "Percent Stroke" control potentiometer at 0%.

The actuator will automatically adjust to 0% stroke.

Adjust the "LO" trim potentiometer on the small circuit board mounted on the back side of the percent stroke potentiometer so that the stroke indicator counter reads (000 - 002) and the "LO" LED goes out.

Set the remote "Percent Stroke" control potentiometer at 100%.

The actuator will adjust to 100% stroke.

Adjust "HI" trim potentiometer on the small circuit board mounted on the back of the percent stroke potentiometer so that the stroke indicator counter reads (098 - 100) and the "HI" LED goes out.

These adjustments are interactive and may require repeating of steps until stabilization is achieved.

METER READOUT CALIBRATION

This procedure trims the current output to the remote meter.

With the pump at 0% stroke, adjust the meter "Zero" potentiometer on the circuit board (to the left of TB3) for zero meter indication.

With the pump at full stroke, adjust the **range** potentiometer on the circuit board for 100% meter indication.

The adjustments are interactive and may require repeating steps until the meter accurately indicates both zero and full stroke settings.

FUNCTION PROGRAMMING PULSAMATIC BOARD ASSEMBLY (W206695-001)							
COMPONENT	**R1**	**R2**	**R3**	**R4**	**R4A**	**J1**	**J2**
0-10VDC	X	X	X				
1-5mA	X	X					
4-20mA	X		X				
10-50mA		X	X				
SLIDEWIRE	X	X	X				X
NO RATIO					X		
RATIO				X		X	
AUTO/MAN		X					

*NOTE: THE (X) INDICATES REMOVAL FROM THE BOARD FOR THE OPTION CHOICE.