FLUID METERING, INC.
5 AERIAL WAY, SUITE500, SYOSSET, NY 11791
(800) 223-3388 (516) 922-6050 Fax: (516) 624-8261 http://www.fmipump.com

ISO 9002

INSTRUCTIONS & PARTS LIST

DISPENSER MODEL QC72/ QC216

INSTALLATION & OPERATING TIPS

1. OPERATION - The QC has three switches to control its functions:
a) An air-activated hand/foot switch at the end of a 6' long hose. This switch starts and stops each operating cycle. It can be operated by hand, foot, or other remote pressure means.
b) A mode switch in the up or dispense position. This switch permits only one dispense or aspirate per squeeze of the hand/foot switch. The pump will make a complete uninterrupted dispense cycle once hand/foot switch is squeezed and held and will reset itself when released. The down or pump position permits the unit to operate continuously as a pump. The hand/foot switch is inoperable in this mode.
c) A direction switch controls the direction of fluid flow through the pump head when the hand/foot switch is squeezed, i.e., pushing the direction switch to the FWD or up position will cause flow in that direction when the hand/foot switch is squeezed. Push switch down to the REV position to reverse flow direction.* A center "OFF" position on this switch provides system off facility.

*Preferred pumping and dispensing direction is from left to right when facing the pump head.

2. CAM ADJUSTMENT - Your QC Dispenser hand/foot switch relates directly to a Cam Q502 actuated Limit Switch Assembly Q501. This is timed to the piston suction position. To adjust, loosen mounting Screws 110477-10 on Terminal Strip 110476. Adjust Limit Switch Assembly to Cam Q502 so that you get 2 clicks per revolution. Tighten screws 110477-10 on Terminal Strip.

3. CALIBRATION - Hook-up inlet and outlet tubing, set mode switch in down (PUMP) position and clear the pump of bubbles (see FMI Q431 instructions and Parts Identification sheet, Sec. 12).
Calibration for specific shot volumes is rather straightforward.
a) Determine volume required per shot.
b) Estimate approximate percentage of maximum per shot flow for your particular pump head, i.e., -3 or 1/2" piston pump heads at 100% = 1.28 ml per shot, -2 or 3/8" piston pump heads at 100% = 0.72 ml per shot, -1 or 1/4" piston pump heads at 100% = 0.32 ml per shot and -0 or 1/8" piston pumps at 100% = 0.08 ml per shot.
c) When approximate setting is made, pump 20 shots into a calibrated receiver (pipette, burette, graduate), and divide the measured volume by 20 to find the exact per shot volume. If your volume is too low, increase stroke volume by turning the STROKE LENGTH ADJUSTMENT KNOB Q464 counterclockwise. If too high, decrease by turning clockwise. Repeat calibration check as you fine-tune to your requirements.

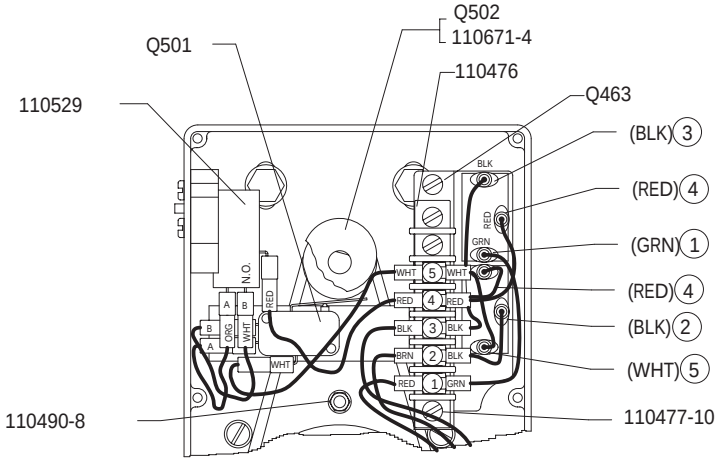

Fig. 1

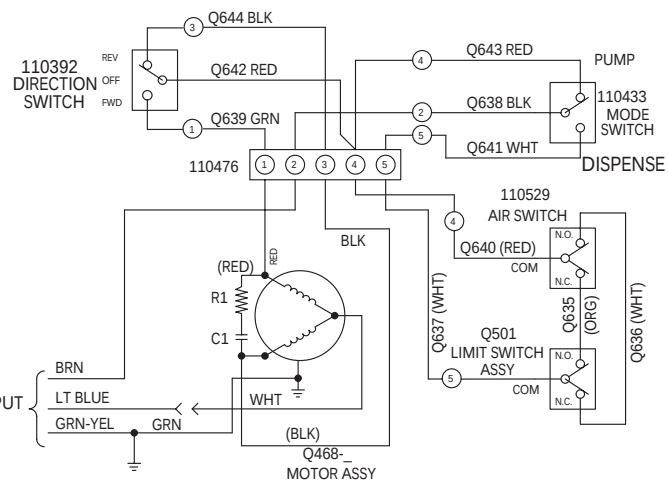

Fig. 2

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QC72/QC216 - PARTS PRICE LIST

PARTS NO.	DESCRIPTION
Q424	SPINDLE ASSEMBLY
Q442-3	CASE ASSEMBLY
Q443-1	COVER ASSEMBLY
Q448-2	PULLEY, 2" DIA., .313 I.D. 72S.PM
Q448-4	PULLEY, 2" DIA., .376 I.D. 72S.PM
Q448-1	PULLEY, 1" DIA., .313 I.D. 216 SPM
Q448-5	PULLEY, 3" DIA., .376 I.D. 216 SPM
Q454-3	FOLLOWER, FLOW CONTROL
Q456-1	POWER CORD ASSEMBLY 110 VOLT
Q456-2	POWER CORD ASSEMBLY 320 VOLT
Q463	BRACKET
Q468-1	MOTOR ASSEMBLY QC115 VAC 60HZ
Q468-2	MOTOR ASSEMBLY QC 230 VAC 50HZ
Q501	LIMIT SWITCH ASSEMBLY
Q502	CAM
Q616	RETAINER ASSEMBLY
Q635	JUMPER ASS'Y ORANGE (2-3/4" LG)
Q636	JUMPER ASS'Y WHITE (2-3/4" LG)
Q637	JUMPER ASS'Y WHITE (3-5/8" LG)
Q638	JUMPER ASS'Y BLACK (2-1/2" LG)
Q639	JUMPER ASS'Y GREEN (3-1/2" LG)
Q640	JUMPER ASS'Y RED (3-1/2" LG)
Q641	JUMPER ASS'Y WHITE (2-1/2" LG)
Q642	JUMPER ASS'Y RED (4" LG)
Q643	JUMPER ASS'Y RED (2-3/4" LG)
Q644	JUMPER ASS'Y BLACK (3" LG)
110049	WASHER #8 INT. LOCK
110126	1/4 ID X 1/2 OD WASHER
110132-10	SCREW 8-32 X 5/8 PAN HEAD
110133	#8-32 X 11/32 D HEX NUT
110258	FOOT RUBBER

PARTS NO.	DESCRIPTION
110288-2	SET SCREW, #8-32 X 1/8" LONG
110288-4	SET SCREW, #8-32 X 1/4" LONG
110290-14	SCREW 8-32 X 7/8 SHD CAP
110295-1	LOCK NUT, #8-32
110388-1	BUSHING STRAIN RELIEF STR.
110388	BUSHING STRAIN RELIEF ANG.
110392	SWITCH-TOGGLE (ON-OFF)
110405	REST PAD
110407	SCREW, SHEET METAL
110433	SWITCH-TOGGLE (ON-OFF)
110436	EXTERNAL HAIR COTTER PIN
110437	THUMB SCREW, #8-32 X 13/32" LONG
110476	TERMINAL STRIP
110477-10	SCREW, #6-32 X 5/8" LG. PAN HEAD
110479	LOCK WASHER, #6 INT. TOOTH
110489-30	STANDOFF, #8-32 X 1-7/8" LONG
110490-8	SCREW, #8-32 X 1/2" 82° FLAT HEAD
110492	#1/4-20 NYLON CAP NUT
110502	NYLON PLUG
110505	NYLON WASHER
110506-12	SHC SCREW #10-32 X 3/4"
110511	WASHER, 1/4" INT. LOCK
110512	WASHER, 1/4" EXT. LOCK
110529	AIR SWITCH
110531	AIR PENDANT
110542-6	8-32 X 3/8" HD NYLON
110650-8	SCREW HEX HD 1/4-20 X 1/2" LONG
110655-12	SCREW PHP 8-32 X 3/4"
110671-4	SET SCREW,CP 8-32 X 1/4" DRI-LOC
110674	BELT "V"
110863-10	SCREW PHP 8-32 X 5/8" SEMS FLAT WACHER
110950	SCREW PHP 8-32 X 3/8"
200038	BASE ASSEMBLY
200051	SPEED KNOB ASSY
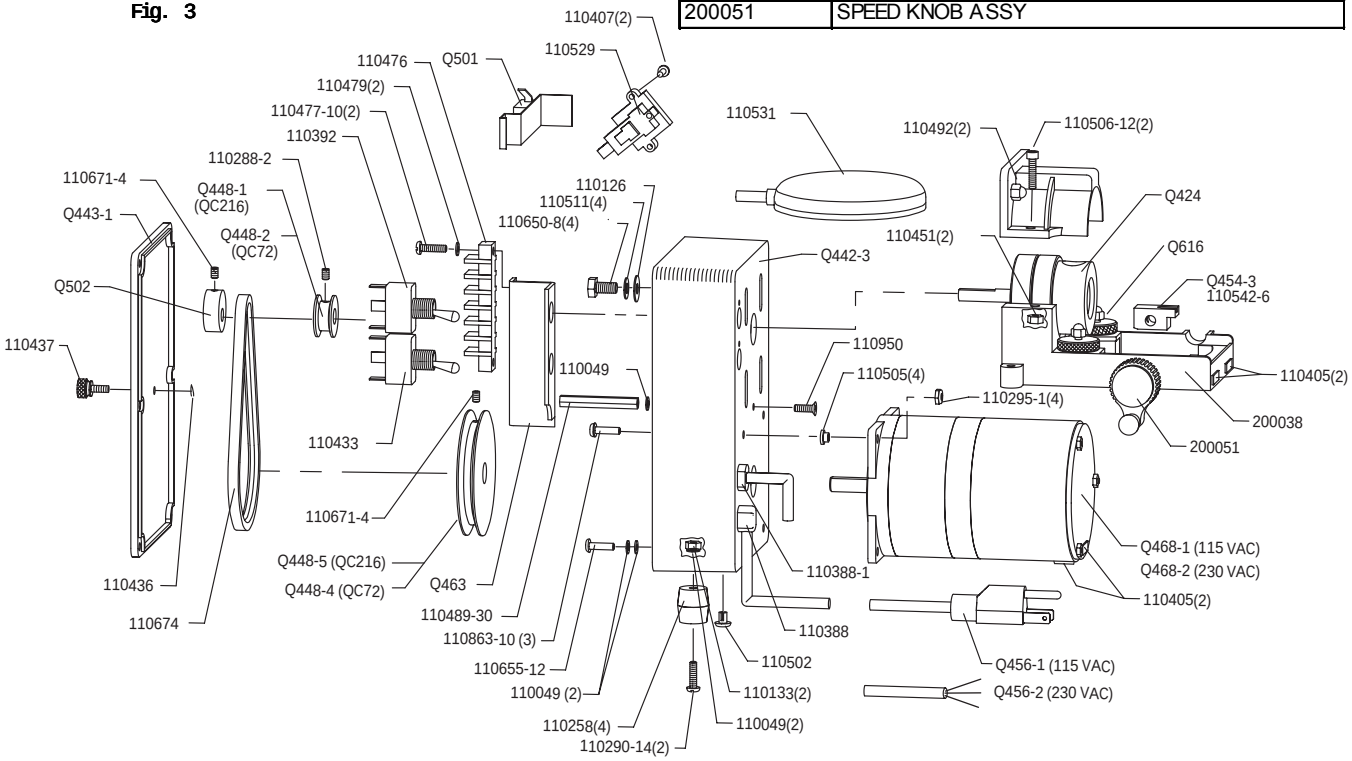
Fig. 3