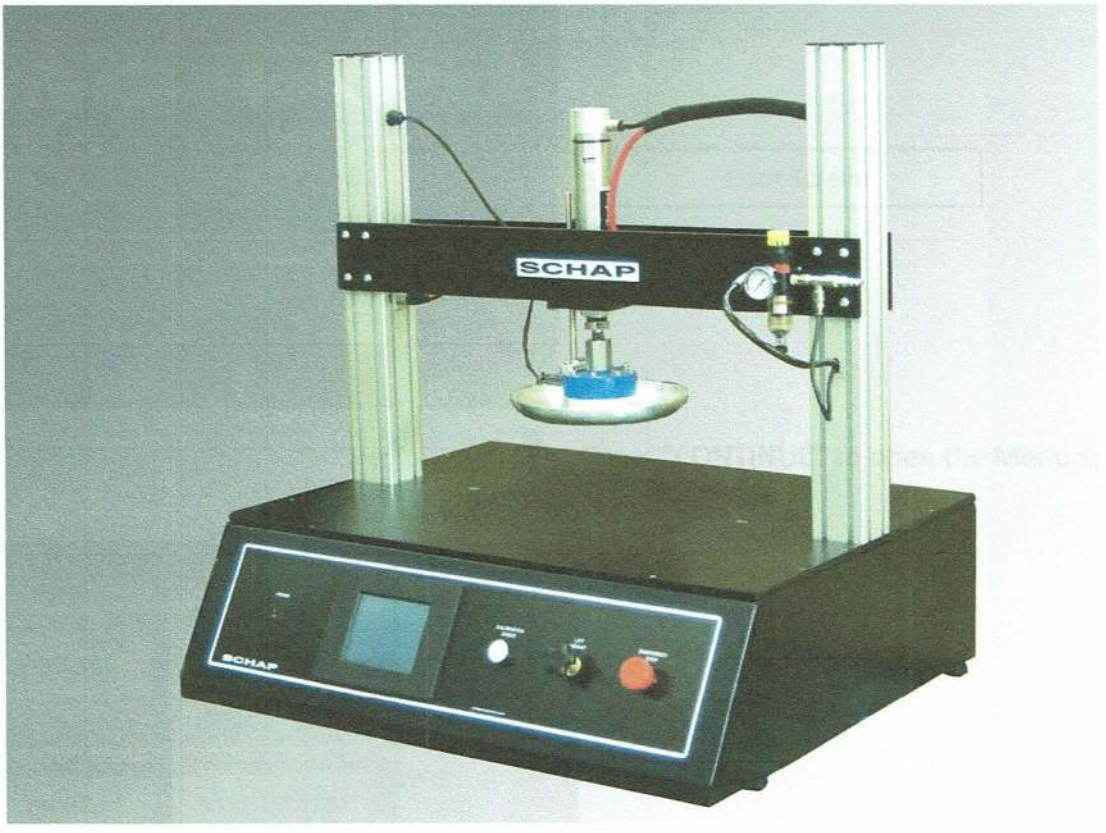
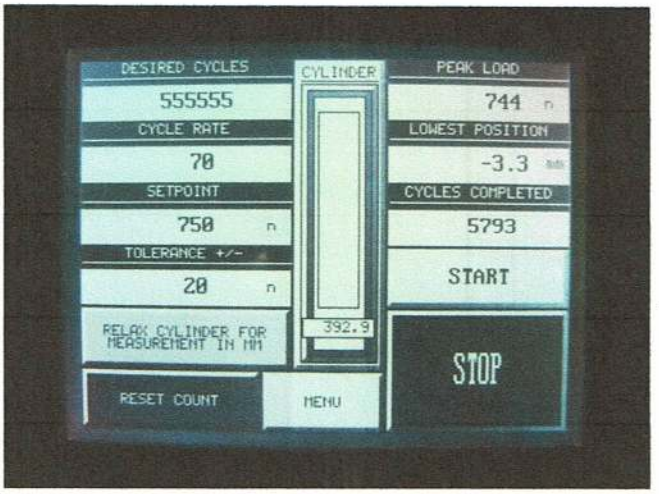
SCHAP

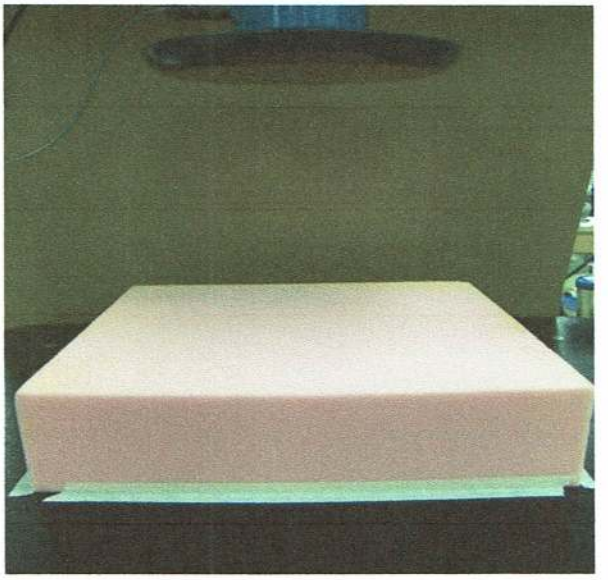
Foam Fatigue Testers



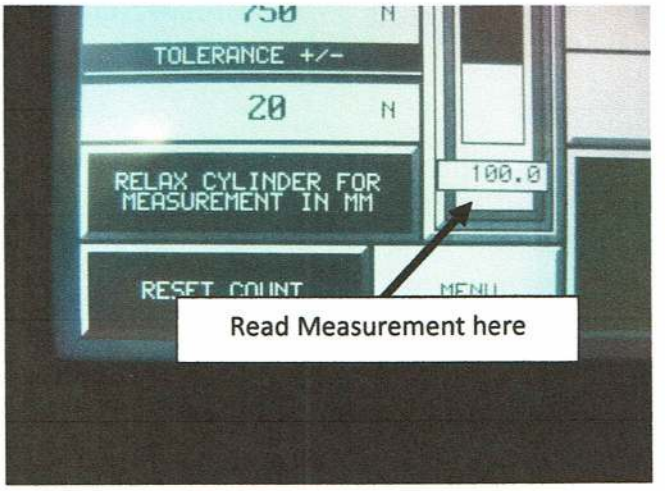


Test Controlled in Newton's

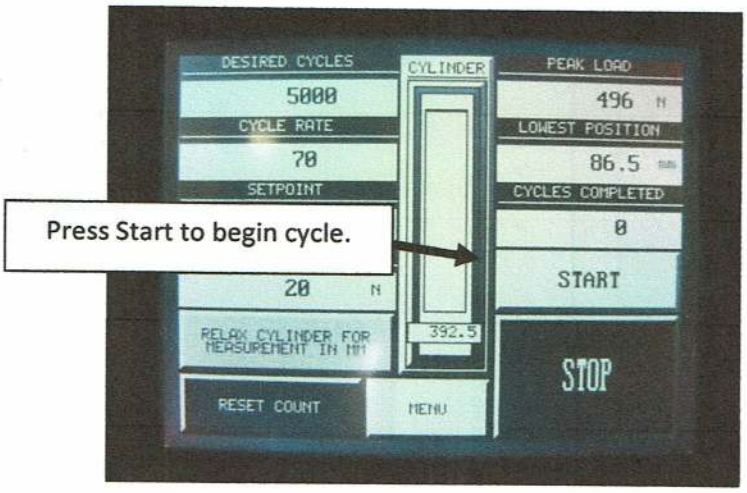
Place sample in tester. It may be necessary to tape the sample in place to prevent movement.



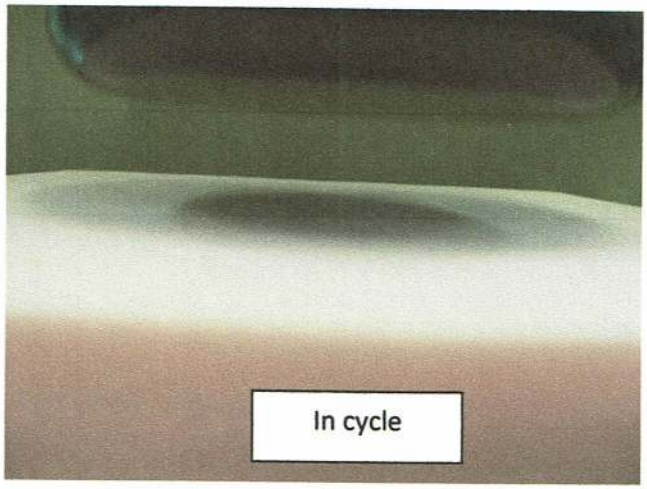
Pressing the Relax button will allow the cylinder to be moved down by hand to measure sample height. When done press Relax again to enable cylinder for testing.



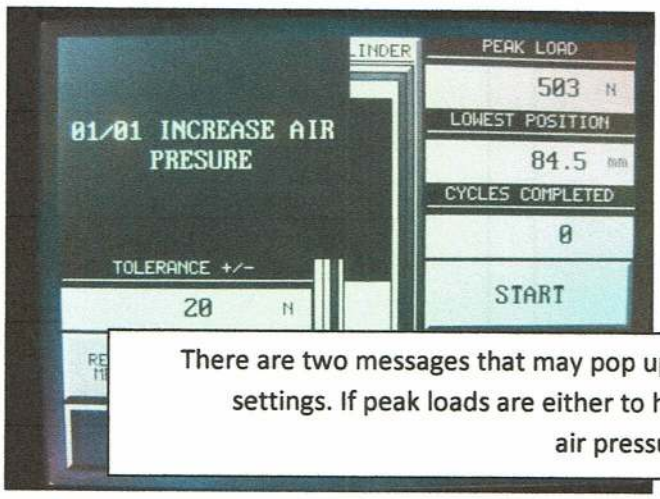
Read Measurement here

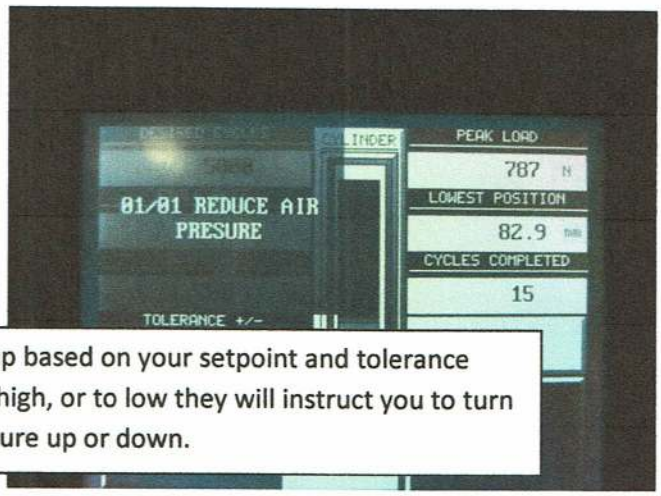


Press Start to begin cycle.



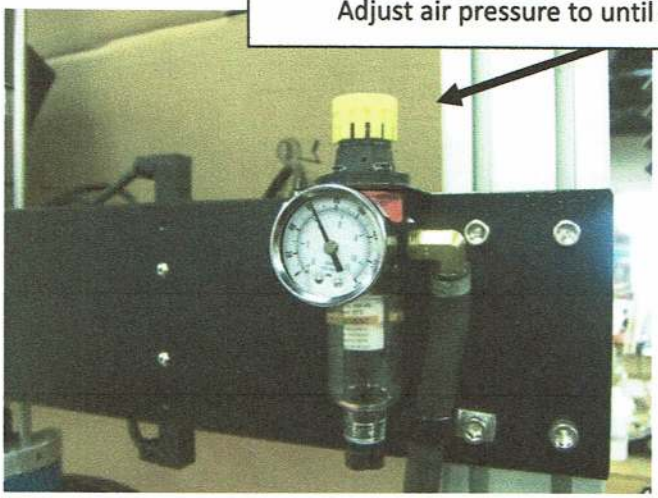
In cycle

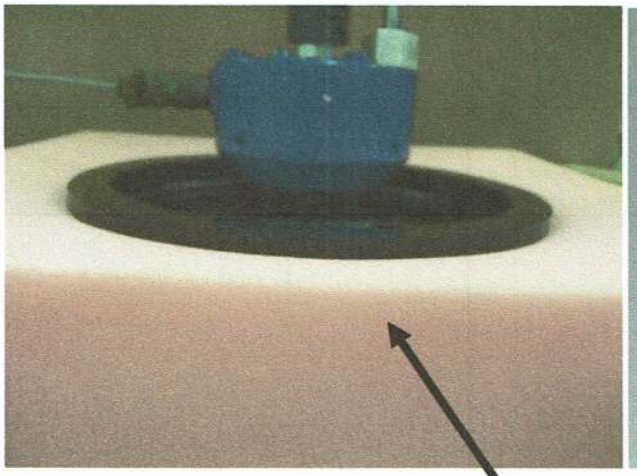




There are two messages that may pop up based on your setpoint and tolerance settings. If peak loads are either to high, or to low they will instruct you to turn air pressure up or down.

Adjust air pressure to until messages stop appearing



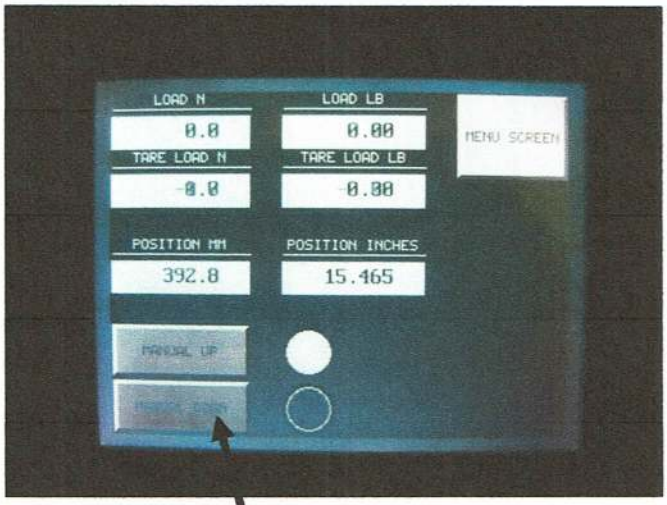


Now that the cycle is running you will want to adjust the flow control on top of the front of the machine, to achieve the desired pull back from the sample.

You may find you need to make adjustments back and forth between air psi and air flow to achieve a smooth consistent repeatable cycle. This is normal for a tester with the extended length cylinder installed.

I/O Screen

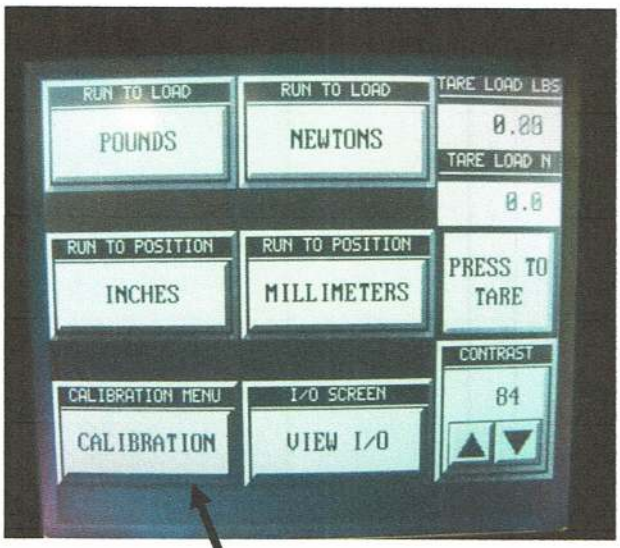
From the menu select " VIEW I/O"



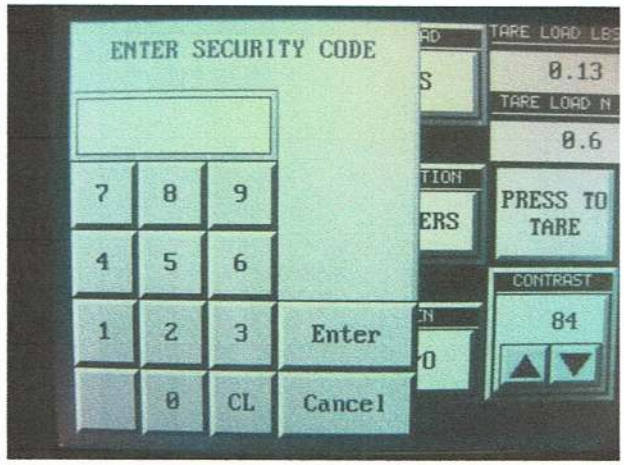
From the I/O screen you may view the analog inputs and digital outputs.

You may also toggle the cylinder up or down.

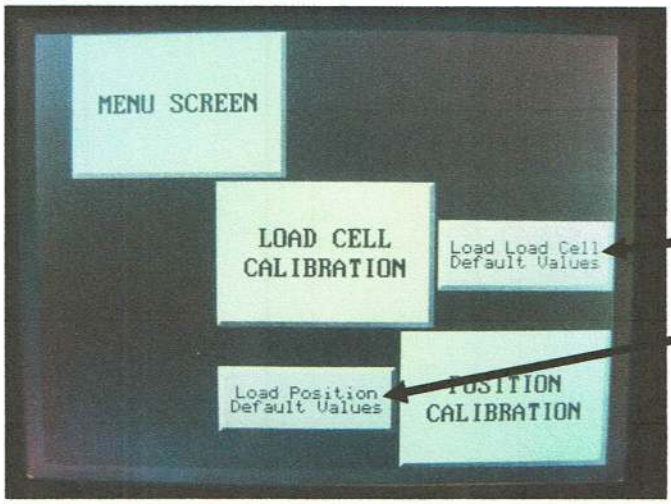
Calibration



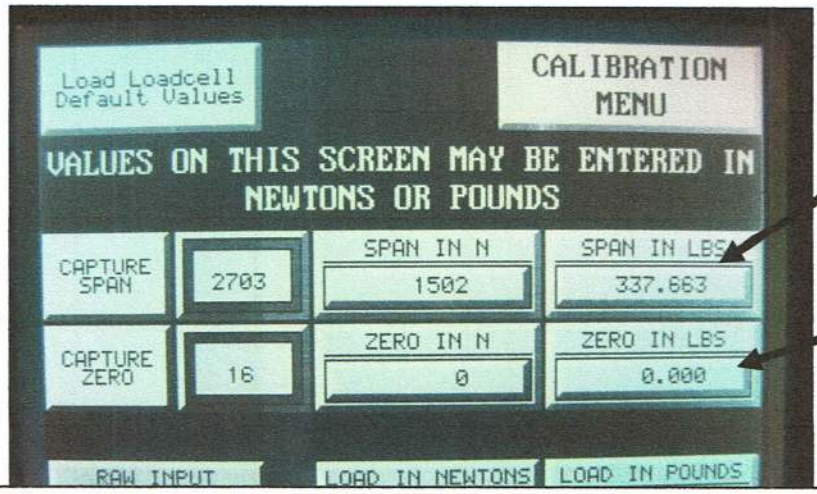
Press Calibration



Enter password (6530)



From this screen you may load restore calibration defaults or continue to either load cell or position calibration



Shunt Cal Value

Zero No Load Value

Load Cell calibration is achieved by applying two known loads and pressing the capture button while at that load. Here a shunt resister was used for the span load and no load for zero.

Capture Values

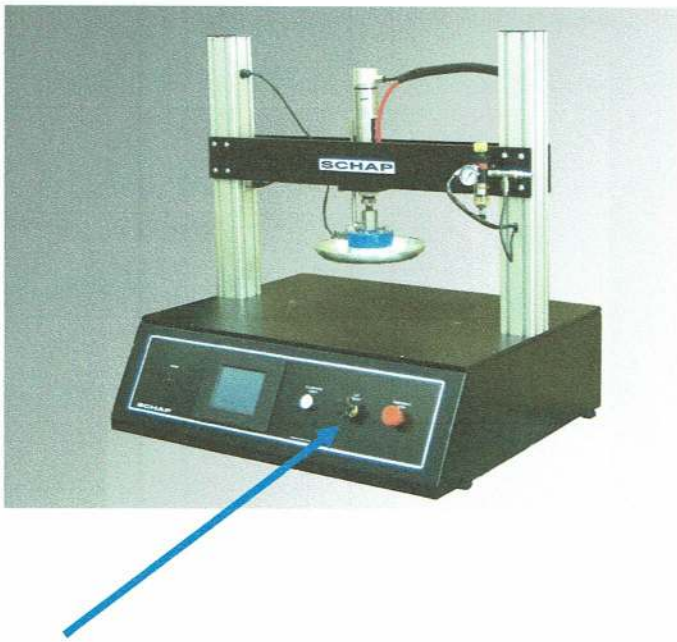
Full Retract Value

Full Extend Value

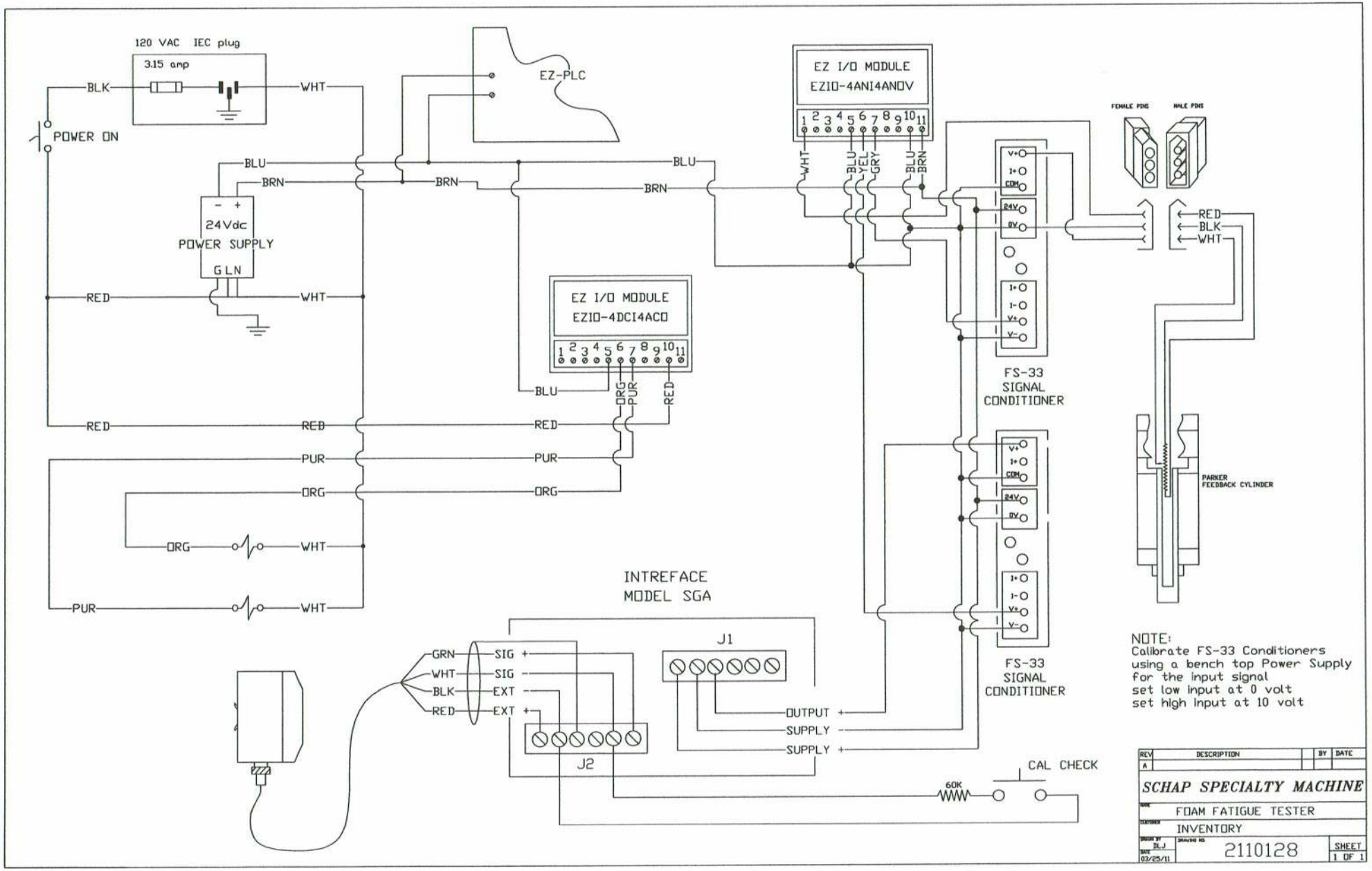
Position calibration is achieved in much the same way. Enter two known positions and capture the values while at that position. Here full retract of the cylinder was used for the span and full extend was used for the zero.

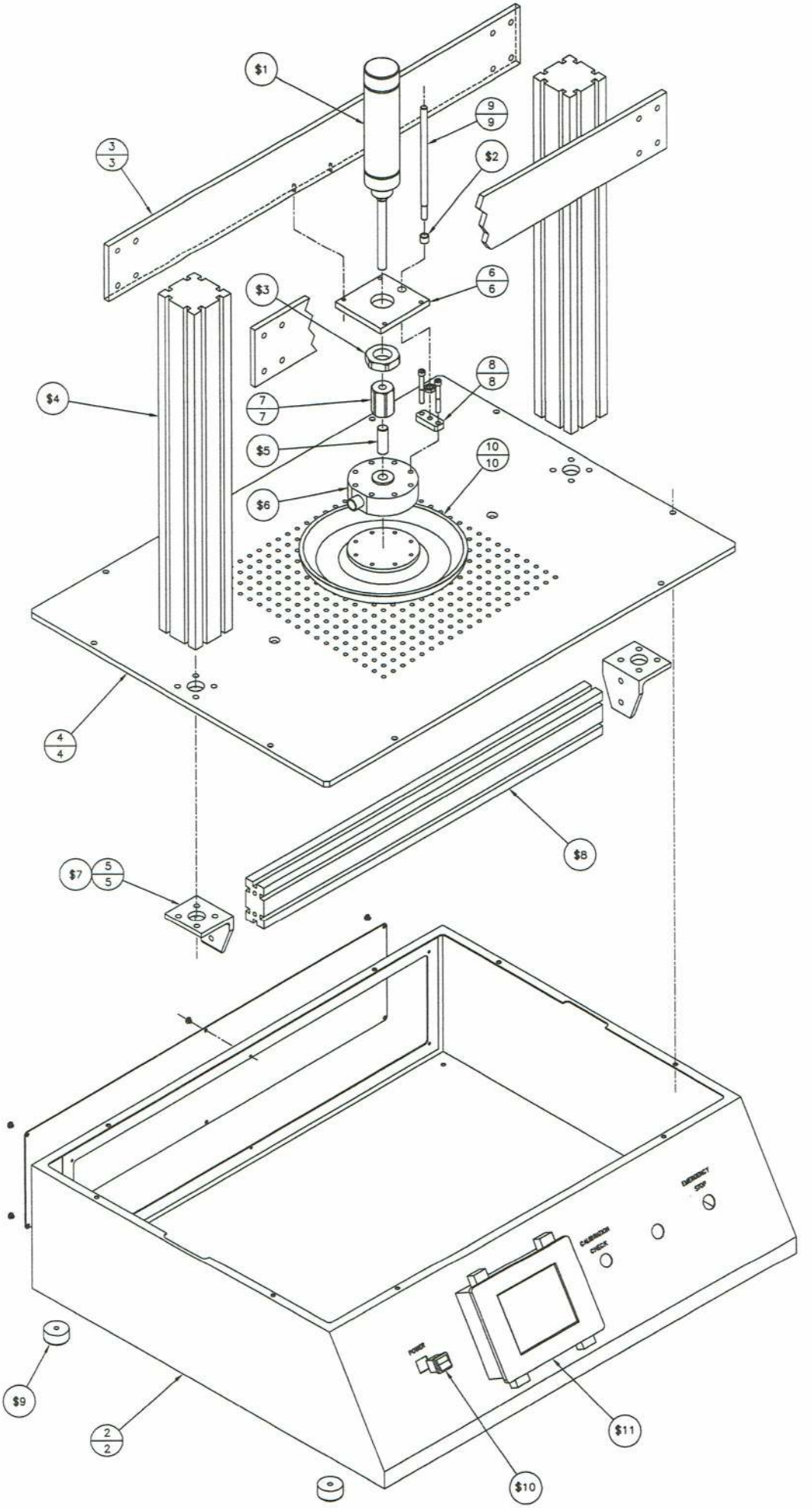
SCHAP
SPECIALTY MACHINE, INC.
17309 Taft Road Spring Lake, MI 49456 ph (616)-846-6530

ADJUSTMENT OF THE TOP SETTING
SCHAP FOAM FATIGUE TESTER



The blue arrow is pointing to the knob that you use to adjust the HEIGHT setting – how high the indenter lifts off of the foam after compression. You want the indenter to completely extend above your sample, but not by a lot.


120 VAC IEC plug
3.15 amp
BLK
WHT
POWER ON
BLU
BRN
24Vdc
POWER SUPPLY
G LN
RED
WHT
EZ-PLC
EZ I/O MODULE
EZIO-4ANI4ANOV
WHT
BLU
YEL
GRY
BLU
BRN
EZ I/O MODULE
EZIO-4DCI4ACO
ORG
PUR
RED
BLU
RED
PUR
ORG
ORG
WHT
PUR
WHT
FEMALE PINS
MALE PINS
V+
I+
COM
24V
0V
I-
V-
FS-33
SIGNAL
CONDITIONER
PARKER
FEEDBACK CYLINDER
INTREFACE
MODEL SGA
J1
GRN
WHT
BLK
RED
SIG +
SIG -
EXT -
EXT +
J2
OUTPUT +
SUPPLY -
SUPPLY +
60K
CAL CHECK
NOTE:
Calibrate FS-33 Conditioners
using a bench top Power Supply
for the input signal
set low input at 0 volt
set high input at 10 volt
REV
DESCRIPTION
BY
DATE
A
SCHAP SPECIALTY MACHINE
FOAM FATIGUE TESTER
INVENTORY
DRAWN BY DLJ
DATE 03/25/11
DRAWING NO.
2110128
SHEET 1 OF 1


$1
9
9
3
3
$2
6
6
$3
8
8
$4
7
7
$5
10
10
$6
4
4
$8
$7
5
5
CALIBRATION
CHECK
EMERGENCY
STOP
POWER
$9
2
2
$11
$10

Bill Of Materials - Mechanical / Electrical

SHEET 1			SCHAP SPECIALTY MACHINE, INC.		CUSTOMER:	Schap Specialty Machine, Inc.			
					JOB DESCRIPTION:	PLC Foam Fatigue Tester			
JOB # 2110363					ORDERED BY:	Stock			
		Total		T Jones, Proj.Mgr	DATE	August 28, 2012			
Assembly NO.	Qty. Per	ORD. QTY.	PART NUMBER	DESCRIPTION	VENDOR	CONTACT			
			Mechanical Items Purchased:						
	4		# 9540K28 / PKG 25	RUBBER BUMPER FEET	McMaster-Carr	630-833-0300			
	1		6391K172	Brozen Sleeve Bearing	McMaster-Carr	630-833-0300			
	1		122BB53AKN00030	Numatics Valve, 3 Pos, 2 Sol, Cen Ex,110 with Displacement Module and Pilot Air	Youngblood Automation	616-245-4111			
	2		# PS2932BY	Parker Solenoid Cord	Michigan Fluid Power	616-538-5700			
	1		# 14E11813F	Parker Filter Regulator	Michigan Fluid Power	616-538-5700			
	1		# K4515N18160	Parker 0-160 Gauge	Michigan Fluid Power	616-538-5700			
	1		# S417BP	Parker Mounting Bracket	Michigan Fluid Power	616-538-5700			
	1		# 2.00DFSRXF6.00	Parker Displacement Cylinder, 2" Bore,	Michigan Fluid Power	616-538-5700			
				6" Stroke, Single Rod, Low Friction					
				Seals, Nose Mount, Resistive Strip					
				SRX SERIES					
	1		# BNT-128	Bronze Bushing/Bearing, 3/8 x 1/2	Reid Supply	800-253-0421			
	1		3400X2	Street Elbow 1/8 FPT X MPT	Aeroquip	231-798-7675			
			Electrical Items Purchased:						
	1		# 89F5313	AC Inlet With Fuse Holder	Newark Electric	800-263-9275			
	1		# 84K0325	Power Cord	Newark Electric	800-263-9275			
	1		# 42K9310	Fuse, 10A, Slo Blow, 5 x 20	Newark Electric	800-263-9275			
	1		# 81F1286	Relay, 120VAC, DPDT	Newark Electric	800-263-9275			
	1		# 25K3834	Rocker Switch	Newark Electric	800-263-9275			
	1		#89f5313	Fused Powder Entry Mode Plug	Newark	800-463-9275			
	1		# LPU-500	Transducer Techniques Load Cell - 500#	Transducer Techniques	800-344-3965			
	1		# EZPP-S6C-FS-PLC-E	EZ Series Touch PLC	EZ Automation	877-774-3279			
	1		# EZIOP-4DCI4ACO	EZ I/O Card	EZ Automation	877-774-3279			
	1		# EZIOP-4ANI4ANOV	EZ I/O Card	EZ Automation	877-774-3279			
	1		EZ-FLASH	512 Flash Memory EZ-Flash-1	EZ Automation	877-774-3279			
	1		# MS2-H50	Power Supply	Keyence	888-539-3623			
	2		# FC-33	Signal Conditioner, Isolator	Automation Direct	800-633-0405			
	1		GCX1131	Emergency Stop Mushroom Red	Automation Direct	800-633-0405			
	1		# DV10	Signal Conditioner	Honeywell	800-867-3888			