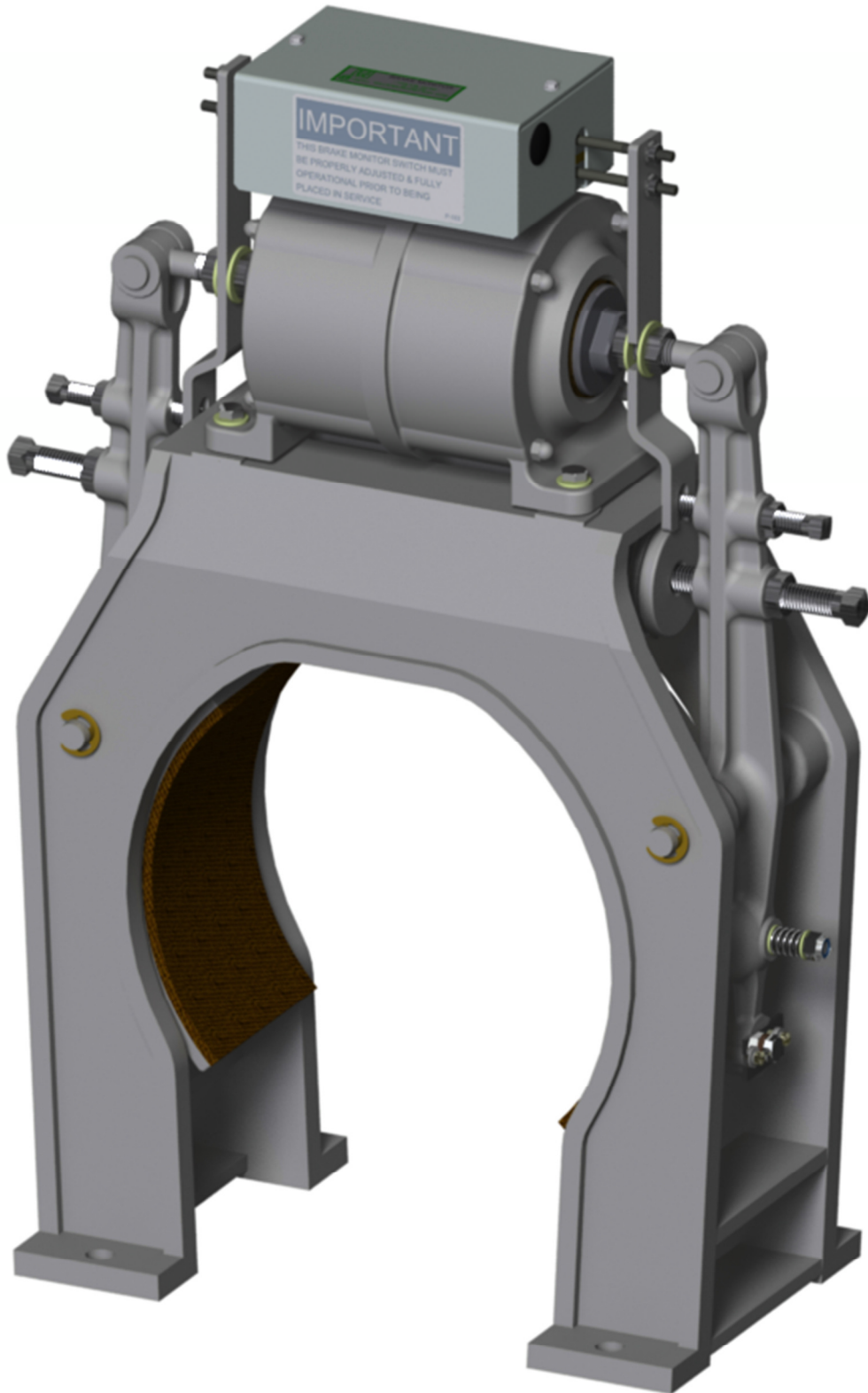


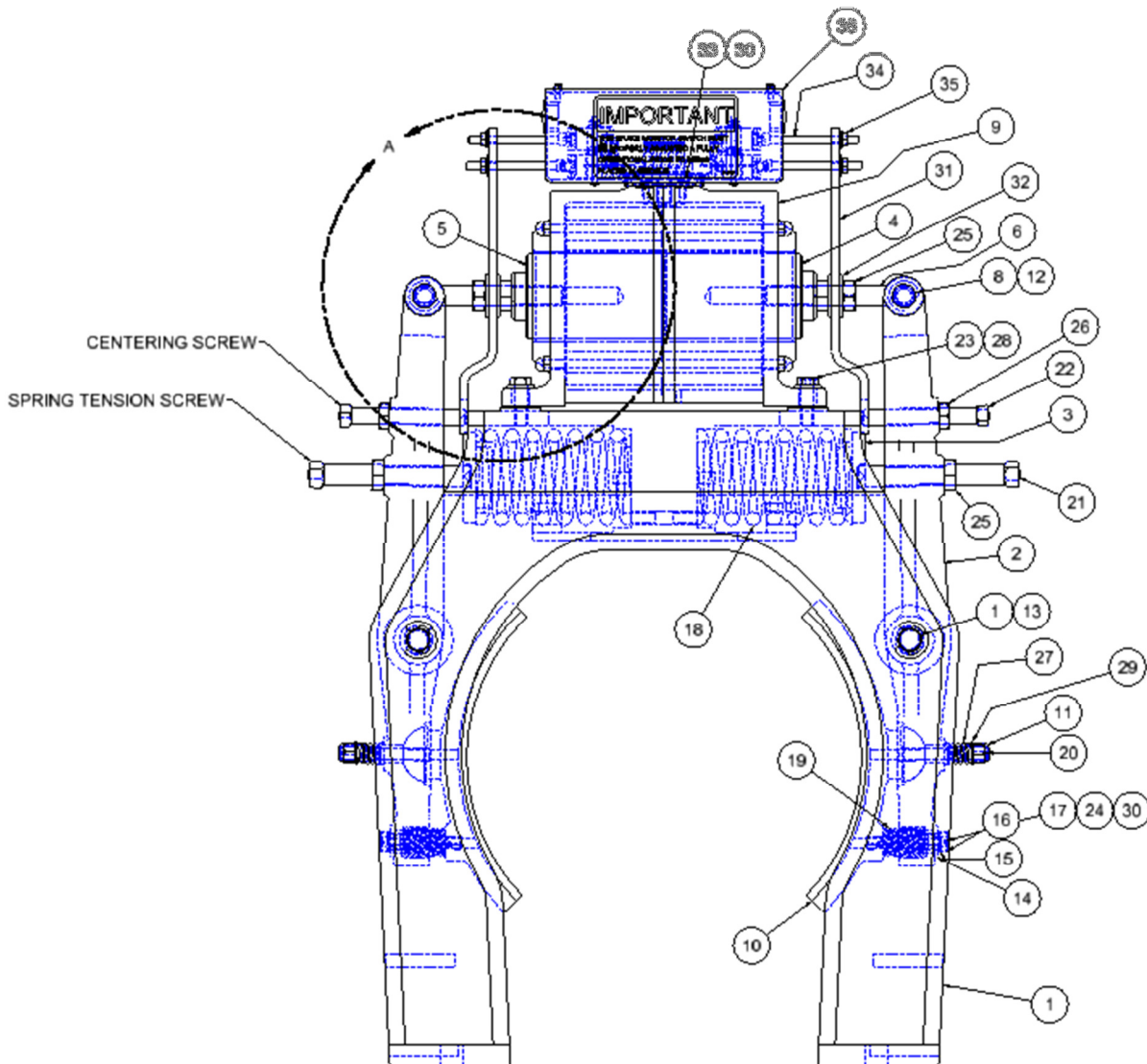
**DRUM BRAKE ADJUSTMENTS, MODELS #90, #100, #110 & #120  
#102-092 BRAKE MONITOR**



# HOLLISTER-WHITNEY DRUM BRAKE WITH MONITOR ADJUSTMENTS

**IMPORTANT:** READ ENTIRE INSTRUCTIONS BEFORE ATTEMPTING ADJUSTMENT!!!  
**SHOCK WARNING:** ACTIVE ELECTRIC CIRCUITS!!

1. Energize and de-energize solenoid to determine that each plunger moves an equal distance, meeting in center with equal amounts protruding from housing. Adjust spring adjustment screws to assure this centering.
2. Make sure there is approximately 1/32" between each centering screw and the housing when the solenoid is energized (i.e. plungers make contact). **IMPORTANT:** DO NOT use centering screws as stops to limit the travel of either plunger.
3. Turn heel and toe adjustment bolt, with solenoid energized, to adjust top and bottom of shoes to get equal drum clearance. Clearance between shoes and drum may be increased or decreased by adjusting plunger eye bolts (by rotating plungers) equally on each plunger. Final drum clearance should be 0.005". Re-adjust centering screws so they are spaced properly to the housing as described in 2.) above.
4. With the heel and toe adjusting plate screws partially tightened, lightly tap side of adjusting plate to correct twisting motion created when shoe contacts drum face. Re-adjust heel and toe main bolt for clearance between shoe and drum.
5. Run car to determine overall Brake performance. Spring tension may have to be varied to obtain harder or softer stops and can only be determined by specific job conditions.



DRUM BRAKE PARTS LIST

ITEM	90 (10" DRUM)		100 (12" DRUM)		110 (14" DRUM)		120 (16" DRUM)		DESCRIPTION
	QTY	PART NUMBER	QTY	PART NUMBER	QTY	PART NUMBER	QTY	PART NUMBER	
1	1	90-001	1	100-001	1	110-001	1	120-001	BRAKE HOUSING
2	2	90-003A	2	90-003A	2	110-003A	2	120-003A	BRAKE LEVER w/ BUSHING
3	2	90-005	2	90-005	2	90-005	2	90-005	CAP - BRAKE SPRING
4	1	90-006	1	90-006	1	90-006	1	120-006	PLUNGER - BRAKE
5	1	90-007	1	90-007	1	90-007	1	120-007	PLUNGER w/ PLUNGER RING
6	2	90-064	2	100-008	2	100-008	2	90-008	PLUNGER EYEBOLT
7	2	90-012	2	100-012	2	110-012	2	120-012	PIN - BRAKE LEVER
8	2	90-013	2	90-013	2	90-013	2	90-013	PIN - 0.625" DIA.
9	1	90-028	1	90-028	1	90-028	1	120-028	BRAKE SOLENOID ASSEMBLY
9A	1	90-035	1	90-035	1	90-035	1	120-035	115V COIL
9B	1	90-022	1	90-022	1	90-022	1	120-022	230V COIL
10	2	90-029A	2	100-029A	2	110-029A	2	120-029A	BRAKE SHOE ASSEMBLY
11	2	90-030	2	90-030	2	90-030	2	90-030	3/8 NYLON LOCK NUT
12	2	90-032	2	90-032	2	90-032	2	90-032	E-CLIP, #5133-62
13	4	90-033	4	90-033	4	90-033	4	90-033	E-CLIP, #X5133-74
14	2	90-036	2	90-036	2	90-036	2	90-036	PLATE - HEEL & TOE ADJUSTMENT
15	2	90-045	2	90-045	2	90-045	2	90-045	BUSHING
16	2	90-038	2	90-038	2	110-038	2	110-038	BOLT - HEEL & TOE ADJUSTMENT
17	4	90-039	4	90-039	4	90-039	4	90-039	WASHER
18	2	400-032	2	400-032	2	400-032	2	400-034	SPRING - LEVER
19	2	400-039	2	400-039	2	400-039	2	400-019	SPRING - SHOE
20	2	500-023	2	500-023	2	500-023	2	500-023	STUD
21	2	5/8 - 11 UNC X 4	2	5/8 - 11 UNC X 4.5	2	5/8 - 11 UNC X 5	2	5/8 - 11 UNC X 4	SCREW, SQ HD SET
22	2	1/2 - 13 UNC X 3.5	2	1/2 - 13 UNC X 3.5	2	1/2 - 13 UNC X 4	2	1/2 - 13 UNC X 5	SCREW, SQ HD SET
23	4	3/8 - 16 UNC X 1.25	4	3/8 - 16 UNC X 1.25	4	3/8 - 16 UNC X 1.25	4	3/8 - 16 UNC X 1.5	HEX HEAD CAP SCREW
24	4	#10-32 X 0.5	4	#10-32 X 0.5	4	#10-32 X 0.5	4	#10-32 X 0.5	SCREW, FILLISTER HEAD
25	6	5/8 - 11 UNC	6	5/8 - 11 UNC	6	5/8 - 11 UNC	6	5/8 - 11 UNC	HEX JAMNUT
26	2	1/2 - 13 UNC	2	1/2 - 13 UNC	2	1/2 - 13 UNC	2	1/2 - 13 UNC	HEX JAMNUT
27	2	400-070	2	400-070	2	400-070	2	400-070	SPRING - PIVOT
28	4	3/8 WASHER	4	3/8 WASHER	4	3/8 WASHER	4	3/8 WASHER	STANDARD WASHER
29	4	5/16 WASHER	4	5/16 WASHER	4	5/16 WASHER	4	5/16 WASHER	STANDARD WASHER
30	6	#10 WASHER	6	#10 WASHER	6	#10 WASHER	6	#10 WASHER	LOCK WASHER
31	2	90-093	2	100-093	2	100-093	2	120-093	EXTENSION - BRAKE ARM
32	2	5/8 WASHER	2	5/8 WASHER	2	5/8 WASHER	2	5/8 WASHER	STANDARD WASHER
33	2	#10-24 UNC X 0.5	2	#10-24 UNC X 0.5	2	#10-24 UNC X 0.5	2	#10-24 UNC X 0.5	SCREW, SLOTTED PAN HEAD
34	4	1/4 - 20 UNC X 2.75	4	1/4 - 20 UNC X 2.75	4	1/4 - 20 UNC X 2.75	4	1/4 - 20 UNC X 2.75	SOCKET HEAD CAP SCREW
35	4	1/4 - 20 UNC	4	1/4 - 20 UNC	4	1/4 - 20 UNC	4	1/4 - 20 UNC	WHIZ NUT
36	1	102-091	1	102-091	1	102-091	1	102-091	MONITOR ASSEMBLY
		102-092		102-092		102-092		102-092	MONITOR ASSEMBLY - GOLD CONTACTS

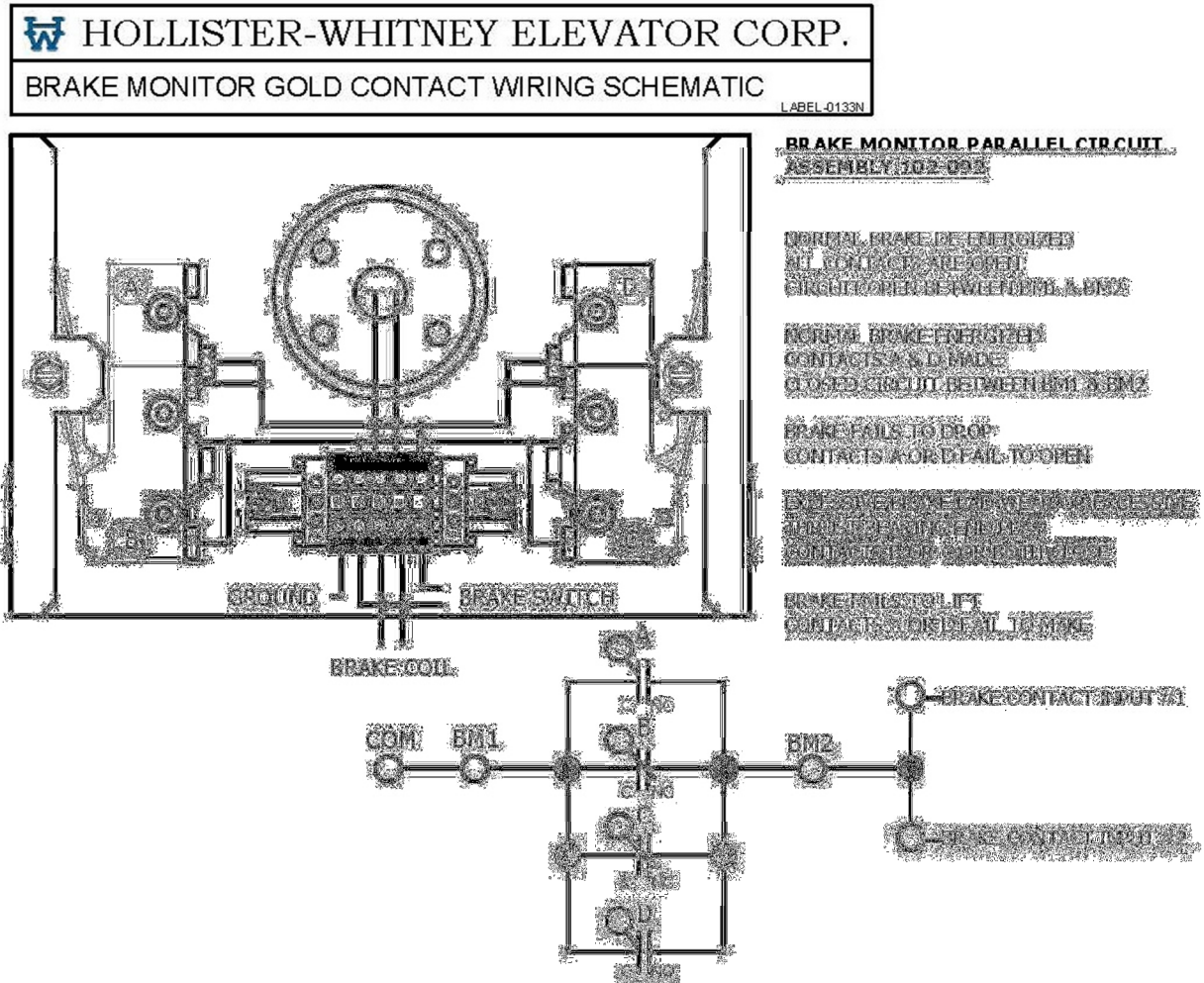
## BRAKE MONITOR SCHEMATIC AND WORKING PROCEDURE:

**WARNING:** IN ORDER TO DETECT A BRAKE FAILURE, THIS BRAKE MONITOR SWITCH MUST BE PROPERLY ADJUSTED & FULLY OPERATIONAL PRIOR TO BEING PLACED INTO SERVICE.

**IMPORTANT: READ ENTIRE INSTRUCTIONS BEFORE ATTEMPTING ADJUSTMENT!!!**

**▲WARNING**

**SHOCK WARNING: ACTIVE ELECTRIC CIRCUITS!!**

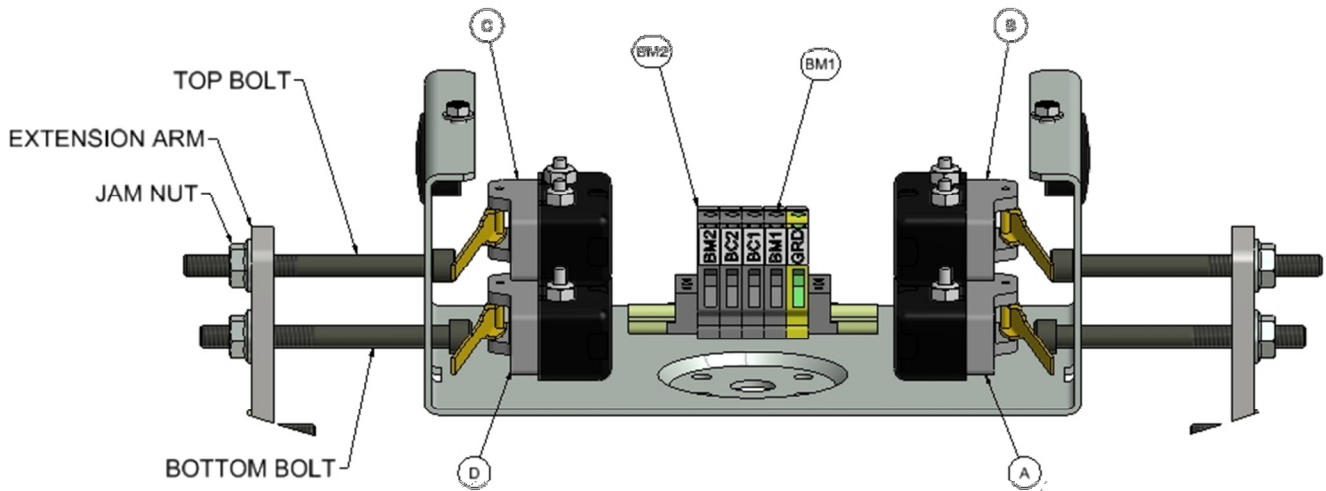


### BRAKE MONITOR ADJUSTMENT:

1. Adjust top bolt “in” until you hear micro switch “click”.
2. Rotate top bolt “in” 1 full revolution then tighten jamb nut against extension arm.
3. Adjust bottom bolt “in” until you hear micro switch “click”.
4. Rotate bottom bolt “out” until you hear micro switch “click”
5. Rotate bottom bolt “out” 1 full revolution then tighten jamb nut against extension arm.
6. Repeat steps 1 thru 5 on opposite side of monitor.
7. Cycle Brake – check for micro switch activation and circuits are performing as designed.
8. Run machine and check adjustment when machine is at operating temperature.
9. Fine tuning may be needed per bolt until proper adjustment is obtained.

### BOLT ADJUSTMENT DIRECTIONS

→→→→→→→→ IN ←←←←←←←←  
←←←←←←←← OUT →→→→→→→→  
MONITOR SHOWN WITH COVER REMOVED



NOTE: BRAKES MUST BE INSPECTED DURING NORMAL ELEVATOR MAINTENANCE. IF LININGS INDICATE WEAR, THEN SPRINGS, GAPS AND MONITOR SWITCH MUST BE RE-ADJUSTED ACCORDINGLY.

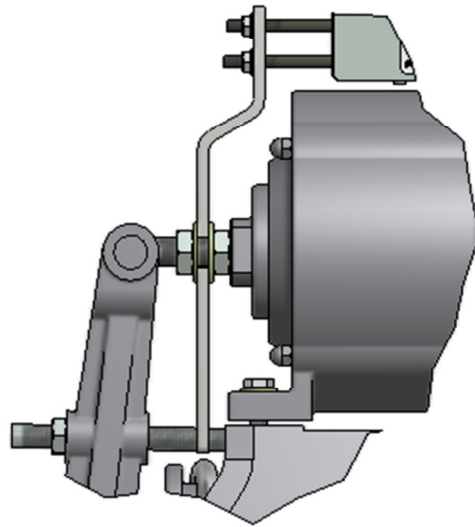
ANY ADJUSTMENT MADE TO THE BRAKE MIGHT AFFECT BRAKE MONITOR ADJUSTMENT.

Coils for #90, #100 & #110 Drum Brake

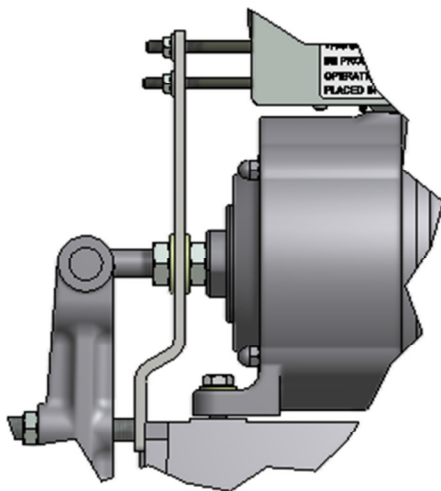
- 1) Constant 230 VDC, 0.82 A, 280 OHM or Step Down 250 V Pick, 150 V Hold
- 2) Constant 115 VDC, 1.16 A, 70 OHM or Step Down 125 V Pick, 75 V Hold

Coils for #120 Drum Brake

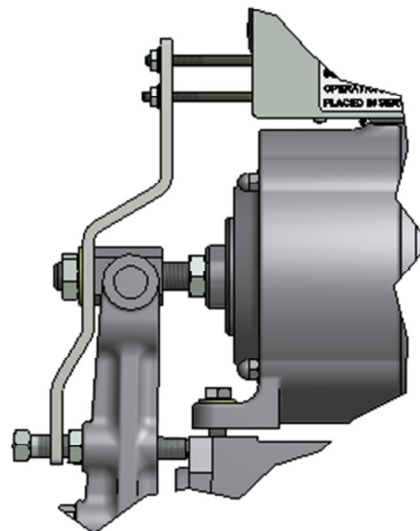
- 1) Constant 230 VDC, 0.74 A, 313 OHM or Step Down 250 V Pick, 150 V Hold
- 2) Constant 115 VDC, 1.38 A, 84 OHM or Step Down 250 V Pick, 150 V Hold



120 BRAKE  
DETAIL A



100 & 110 BRAKE  
DETAIL A



90 BRAKE  
DETAIL A

## Notes


Procedures	Date	Initials
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Procedures	Date	Initials

Reference documentation can be found at <http://www.hollisterwhitney.com/#tech-support>

