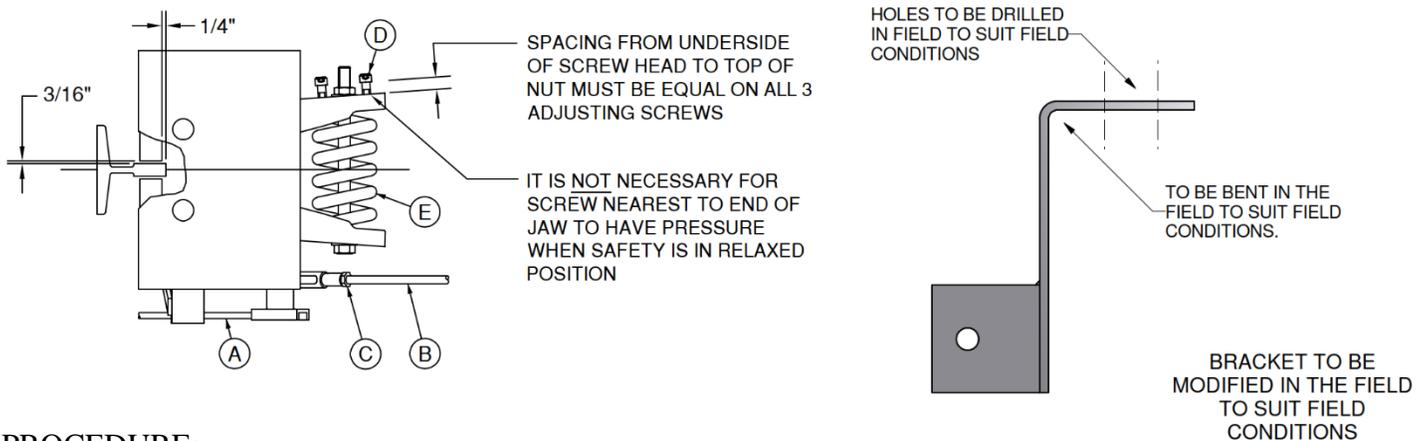


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## #480 & #481 FLEXIBLE GUIDE CLAMP SAFETY

### INSTALLATION AND ADJUSTMENT INSTRUCTIONS

The #480 & #481 FGC Safety have been preset to produce 3/16" rail clearances (face of grip to side of rail), and the spring pressure has been preset to produce a slide in accordance with ASME A17.1 Elevator Code requirements. However, due to possible variances in rail surfaces, car weights, etc. the safety springs (E) may have to be re-adjusted in the field.



#### PROCEDURE:

1. After bolting the safety blocks to the underside of the car sling bottom channels, center the safety on the guide rails. There should be approximately 3/16" clearance between the side of the rail and the face of the grip. Also, the inside edge of the grip should be approximately 1/4" back from the face of the rail.
2. Install the Connecting Rod between the safety blocks.
3. Raise the safety actuating lever (A) slowly until the grips touch the side of the rail. All four grips must engage the rail at the same instant. To accomplish this simultaneous engagement, loosen the nut (C) and adjust the rod (B).
4. Adjust the governor assembly rod and cut it to length, then attach it to the safety actuating lever (A). Adjust the 540-009 Bracket as necessary. Set the governor pull-thru at 400 pounds.
5. **To ensure proper operation of the safety, the guide rails must be clean, dry, and free of rust. If guide rail lubrication is required, a light coat of Nylube Rail Lube™ may be used and is available from Hollister-Whitney. DO NOT use any other type of lubricant (Rail Care 45™, general lubricants, or etc.) on guide rails with 480 or 481 FGC safeties.**
6. After checking the levelness of the platform, apply the safety at leveling speed with a full load placed in the car. Recheck the levelness of the platform for any possible rack. If the car shows rack, repeat Step #2 before conducting the leveling test again.

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7. Apply the safety at contract speed with a full load placed in the car and check the levelness of the platform as done in Step #5. The top of the grips must be hard-up against the underside of the top plate. Any malfunctions will show up on leveling or contract speed test.

**If the safety does not produce a slide to satisfy your specifications, re-adjust the spring pressure as follows:**

8. Tighten the adjusting screw D to shorten the slide or loosen it to lengthen the slide.
9. Limit adjustment of adjusting screws to 1/8" increments.
10. All adjusting screws D must be equally adjusted.

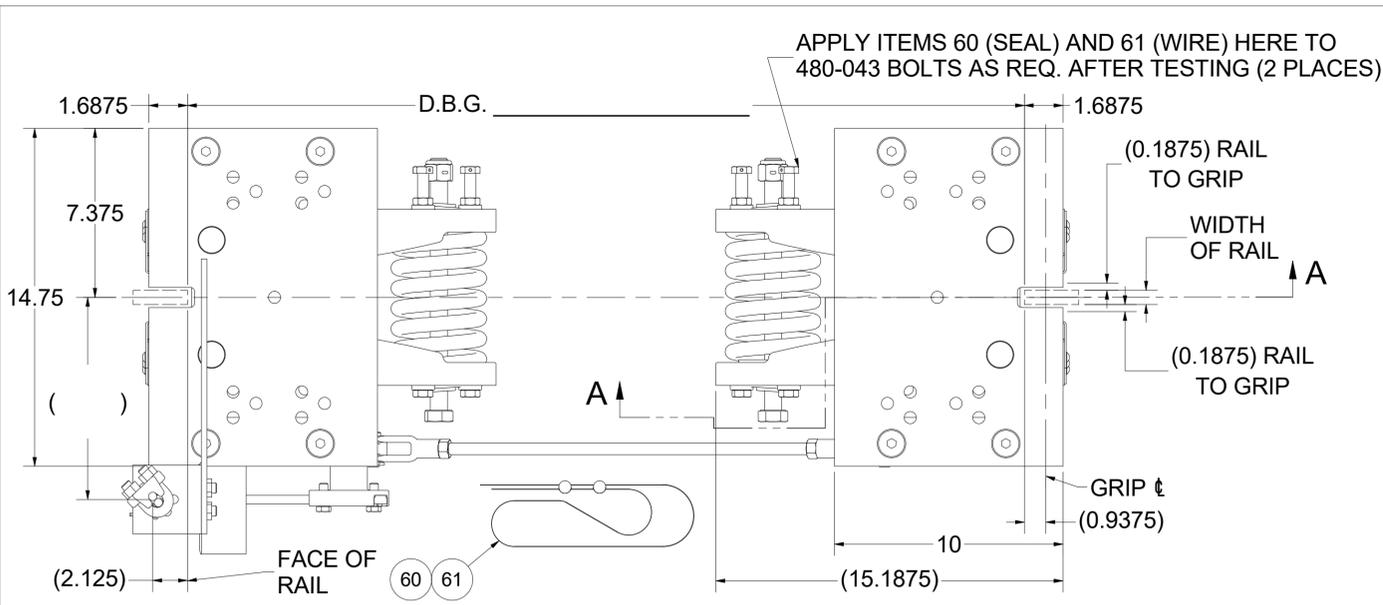
### **CHANGING HAND OF 480 SAFETY**

**Note:** Before starting, check location of #34 Stop-lever.

When finished with the following procedure, you will want the Stop-lever located on the opposite side but in relatively the same distance from the front edge of the safety.

1. Loosen and remove #50 3/8" hex head cap screw.
2. Remove #19 lever.
3. Loosen 5/16" socket head set screw in #34 Arm-lever.
4. Remove #34 Arm-lever.
5. Remove #22 Switch assembly.
6. Loosen 5/16" socket head set screw in #35 Arm - linkage.
7. Remove #35 Arm-linkage.
8. Loosen 5/16" socket head set screw in #9, 480-3 Arm-grip.(master side only).
9. With a soft hammer, tap #33 shaft, until it protrudes out the opposite side of the safety.
10. Retighten the set screw from step 6.
11. Reassemble everything on opposite side of safety, beginning with step 7 back thru 1.
12. Grind top and bottom of the weld that is attaching #34 Stop- lever. After enough weld is ground away, remove the Stop-lever.
13. Relocate Stop-lever on the opposite side of the safety. Raise #19 lever until grips just touch the bottom side of #10 Top-plate.
14. As step 13 is being done, have an assistant clamp the Stop-lever to #12, 480-6 Channel, as the Stop-lever is contacting the #19 lever.
15. Weld Stop-lever to channel. (If welding is not possible, the stop can be bolted).

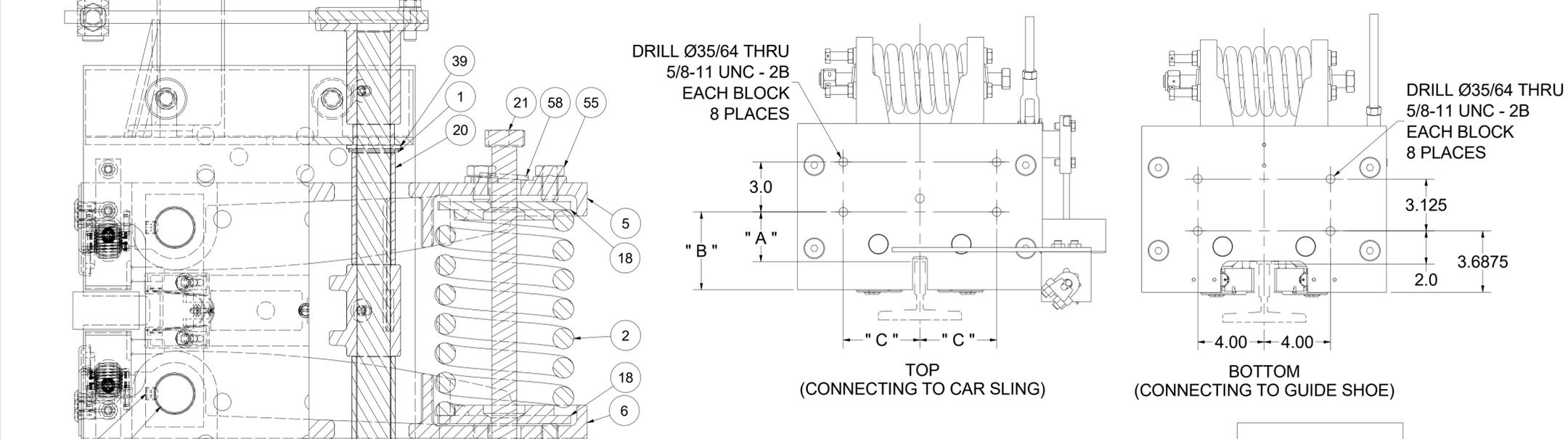
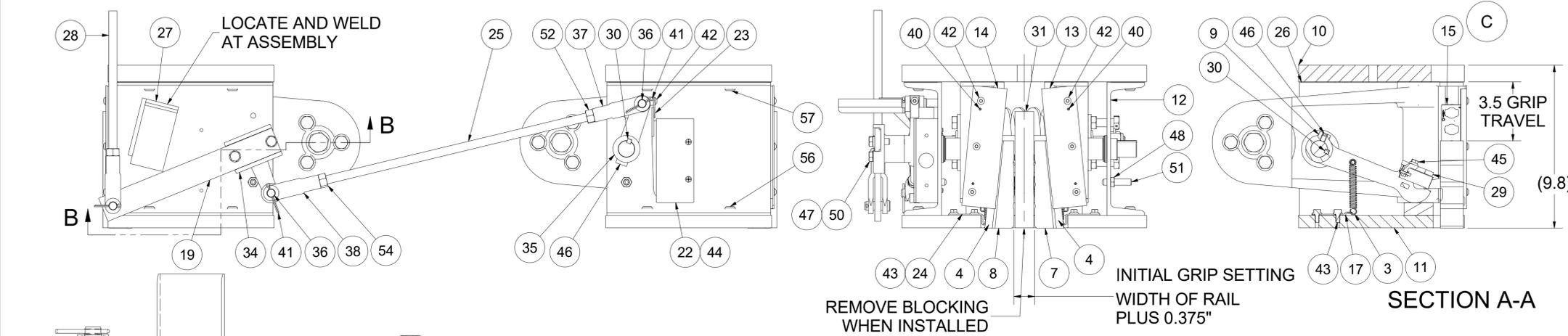
**NOTE: REFERENCE ATTACHED SAFETY AND GOVERNOR ROD PRINTS**



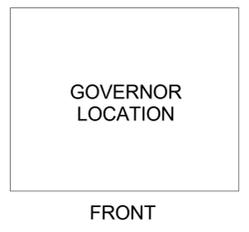
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	AS NEC	191-008	SPACER WASHER - 1" SPECIAL
2	2	400-057	SPRING - SAFETY JAW
		400-058	SPRING - SAFETY JAW
		400-059	SPRING - SAFETY JAW
		400-060	SPRING - SAFETY JAW
		400-061	SPRING - SAFETY JAW
		400-062	SPRING - SAFETY JAW
3	2	400-066	SPRING - GRIP ARM #480 F.G.C. SAFETY
4	4	400-067	SPRING - BALL RETAINER
5	2	480-001-LH	JAW - FLEXIBLE CLAMP SAFETY
6	2	480-001-RH	JAW - FLEXIBLE CLAMP SAFETY
7	2	480-002-L	GRIP - FGC SAFETY (11, 12, 15, & 22.5# RAIL)
		480-002-1-L	GRIP - FGC SAFETY (18.5 & 30# RAIL)
8	2	480-002-R	GRIP - FGC SAFETY (11, 12, 15 & 22.5# RAIL)
		480-002-1-R	GRIP - FGC SAFETY (18.5 & 30# RAIL)

- NOTES:**
- FOR RATED CAR SPEED UP TO 500 fpm  
MAX. GROSS LOAD: 15,000 #  
MAX. GOV. TRIPPING SPEED = 625 fpm
  - FOR RATED CAR SPEED 501-800 fpm  
MAX. GROSS LOAD: 13,000 #  
MAX. GOV. TRIPPING SPEED = 970 fpm
  - DIMENSIONS NOMINAL, 3 & 4 PLACES SHOWN FOR CLARITY
  - PACKAGE ITEMS 60 (SEALS) & 61 (WIRE) IN BAG AND SECURE TO SAFETY PRIOR TO SHIPPING.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
9	2	480-003	ARM - GRIP (11 THRU 18.5# RAILS)
		481-003	ARM - GRIP (22.5 & 30# RAILS)
10	2	480-004STK	PLATE (UNIVERSAL) - TOP
		480-004	PLATE (11, 12, 15# RAILS) - TOP
		480-004-1	PLATE (18.5# RAILS) - TOP
		480-004-2	PLATE (22.5# RAILS) - TOP
		480-004-3	PLATE (30# RAILS) - TOP
11	2	480-005STK	PLATE (UNIVERSAL) BOTTOM
		480-005	PLATE (11, 12, 15#, 18.5# RAILS) - BOTTOM
		480-005-1	PLATE (22.5 & 30# RAILS) - BOTTOM
12	4	480-006	CHANNEL - FGC SAFETY
13	2	480-007L	RETAINER - FGC GRIP
14	2	480-007R	RETAINER - FGC GRIP
15	4	480-047	RETAINER, BALL
16	4	480-009	PIN - JAW (FLEXIBLE GUIDE CLAMP SAFETY)
17	2	480-010	BRACKET - GRIP ARM SPRING
18	4	480-011-2.38 R	SEAT, (-058, -060, -062, -063 SPRINGS), (11 THRU 18.5# RAILS)
		480-011-2.69 R	SEAT, (-057, -059, -061 SPRINGS), (11 THRU 18.5# RAILS)
		481-011-2.38 R	SEAT, (-058, -060, -062, -063 SPRINGS), (22.5 & 30# RAILS)
		481-011-2.69 R	SEAT, (-057, -059, -061 SPRINGS), (22.5 & 30# RAILS)
19	1	480-012	LEVER (9" C.L. RAIL TO C.L. LEVER)
		480-045	LEVER (9-11" C.L. RAIL TO C.L. LEVER)
		480-046	LEVER (11-15" C.L. RAIL TO C.L. LEVER)
		481-046	LEVER (12" C.L. RAIL TO C.L. LEVER)
20	4	480-013	SPACER - FGC SAFETY (11 THRU 18.5# RAILS)
		481-013	SPACER - FGC SAFETY (22.5 & 30# RAILS)
21	2	480-014	BOLT - SPRING RETAINER (11 THRU 18.5# RAILS)
		481-014	BOLT - SPRING RETAINER (22.5 & 30# RAILS)
22	1	480-015	SWITCH (STANDARD)
		480-015-N4	SWITCH (ASSEMBLY, NEMA 1, 2, 4, 6, 6P, 12, 13)
		480-015-N7	SWITCH (ASSEMBLY, NEMA 1, 2, 4, 6, 6P, 7, 9, 12, 13)
		480-015-N4X	SWITCH (ASSEMBLY, NEMA 1, 3, 3R, 4, 4X, 6, 6P, 13)
23	1	480-015-1	SWITCH ACTUATOR (STANDARD SWITCH)
		480-015-2	SWITCH ACTUATOR (NEMA SWITCH)
24	4	480-016	BRACKET - BALL RETAINER SPRING
25	1	480-018	ROD - LINKAGE
26	AS NEC	480-019-1	SHIM (1/32)
		480-019-2	SHIM (1/64)
		480-019-3	SHIM (1/16)
27	1	480-021	ANGLE - LEVER STOP
28	1	480-025	GOVERNOR ROD ASSEMBLY
29	2	480-030	GRIPS RETAINING SPRING ASSEMBLY (11 THRU 18.5# RAILS)
		481-030	GRIPS RETAINING SPRING ASSEMBLY (22.5 & 30# RAILS)
30	4	480-034	KEY STOCK, 1/4" x 1/4" x 1-1/4"
31	2	480-040	FOAM BLOCK - 2" x 7" x 1.125" (11 - 18.5# RAILS)
		480-041	FOAM BLOCK - 2" x 7" x 1.75" (22.5 & 30# RAILS)
32	6	480-043	SPRING ADJUSTMENT BOLT
33	2	540-004	SHAFT (11 THRU 18.5# RAIL)
		481-037	SHAFT (22.5 & 30# RAIL)
34	1	540-005	ARM - LEVER
35	1	540-006	ARM - LINKAGE ROD
36	2	540-018-1	1/2" CLEVIS PIN
37	1	540-018-LH	YOKE (CLEVIS), 1/2-13 UNC, LH THREADS
38	1	540-018-RH	YOKE (CLEVIS), 1/2-13 UNC, RH THREADS
39	4	540-020	BEARING - FLANGED (BUSHING - OILITE)
40	8	1/8" x 3/8"	PIN, SPRING
41	4	1/8" x 1 1/2"	PIN, COTTER
42	13	1/4" - 20 UNC x 1/2"	BUTTON HEAD CAP SCREW
43	12	1/4" - 20 UNC x 1/2"	SERRATED FLANGE HEAD CAP SCREW
44	2	1/4" - 20 UNC x 1/2"	SERRATED FLANGE HEAD CAP (480-015, -015-N4, -015-N4X SWITCHES)
		1/4" - 20 UNC x 1-1/2"	SOCKET CAP SCREW (480-015-N7 SWITCH)
45	4	1/4" - 20 UNC x 3/4"	SERRATED FLANGE HEAD CAP SCREW
46	4	5/16" - 18 UNC x 1/2"	CUP POINT SOCKET SET SCREW
47	2	3/8"	LOCK WASHER, HELICAL SPRING, REGULAR
48	4	3/8" - 16 UNC	HEX NUT, JAM
49	4	3/8" - 16 UNC x 3/8"	CUP POINT SOCKET SET SCREW
50	2	3/8" - 16 UNC x 1"	HEX CAP SCREW
51	4	3/8" - 16 UNC x 1-3/4"	CUP POINT SOCKET SET SCREW
52	1	1/2" - 13 UNC LH	HEX NUT, NORMAL, LEFT HAND THREAD
53	6	1/2" - 13 UNC	HEX NUT, JAM
54	1	1/2" - 13 UNC	HEX NUT, NORMAL
55	AS NEC	1/2" - 13 UNC x 3/4"	HEX CAP SCREW
		1/2" - 13 UNC x 1"	HEX CAP SCREW
56	8	5/8" - 11 UNC x 1-1/4"	FLAT SOCKET CAP SCREW
57	8	5/8" - 11 UNC x 1-1/2"	FLAT SOCKET CAP SCREW
58	AS NEC	3/4"	FLAT WASHER, STANDARD, SAE
59	2	3/4" - 10 UNC	HEX NUT, NYLOCK, STANDARD
60	2	27913	LEAD SEAL
61	1	#26 WIRE - 3ft.	2-PLY #26 GALVANIZED WIRE



STILE	"A"	"B"	"C"
6	2	3.6875	4.125
7	3	4.6875	4.625
8	2	3.6875	5.25



WEIGHT: 381.5 lbmass

**HOLLISTER-WHITNEY**  
ELEVATOR CO. LLC

TITLE: FLEXIBLE GUIDE CLAMP SAFETY ASSEMBLY

C	480-047 WAS 480-008, PUR #1423	SC 12/18/20	A	REDRAWN IN INVENTOR, UPDATED BOM, ADDED 480-043, SEAL, & WIRE, PUR #821 REARRANGED	DRO 1-03-17	11-1-79 MRG
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THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC MANUFACTURER HAS AGREED TO SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS BY THE MANUFACTURER MAY AFFECT OPERATION, VOID ANY WARRANTY AND RELEASES MANUFACTURER OF ALL LIABILITY. THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DIVULGED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.

THIRD ANGLE PROJECTION

SCALE: MATERIAL 1:4

DATE: 11/1/1979

DIMENSIONAL TOL. 1 PLACE ± 0.01 2 PLACE ± 0.005 3/4 PLACE ± 0.001 ANGLES ± 0.1° REF. OPEN, (NOMINAL) ± 0.0156

480  
SHEET 1 OF 1

SECTION B-B

FRONT

DRILL AND PIN DURING ASSEMBLY

BOTTOM (CONNECTING TO GUIDE SHOE)

TOP (CONNECTING TO CAR SLING)

SECTION A-A

INITIAL GRIP SETTING

REMOVE BLOCKING WHEN INSTALLED

DRILL Ø35/64 THRU 5/8-11 UNC - 2B EACH BLOCK 8 PLACES

DRILL Ø35/64 THRU 5/8-11 UNC - 2B EACH BLOCK 8 PLACES

C

GRIP (0.9375)

(0.1875) RAIL TO GRIP

(0.1875) RAIL TO GRIP

WIDTH OF RAIL

APPLY ITEMS 60 (SEAL) AND 61 (WIRE) HERE TO 480-043 BOLTS AS REQ. AFTER TESTING (2 PLACES)

D.B.G.

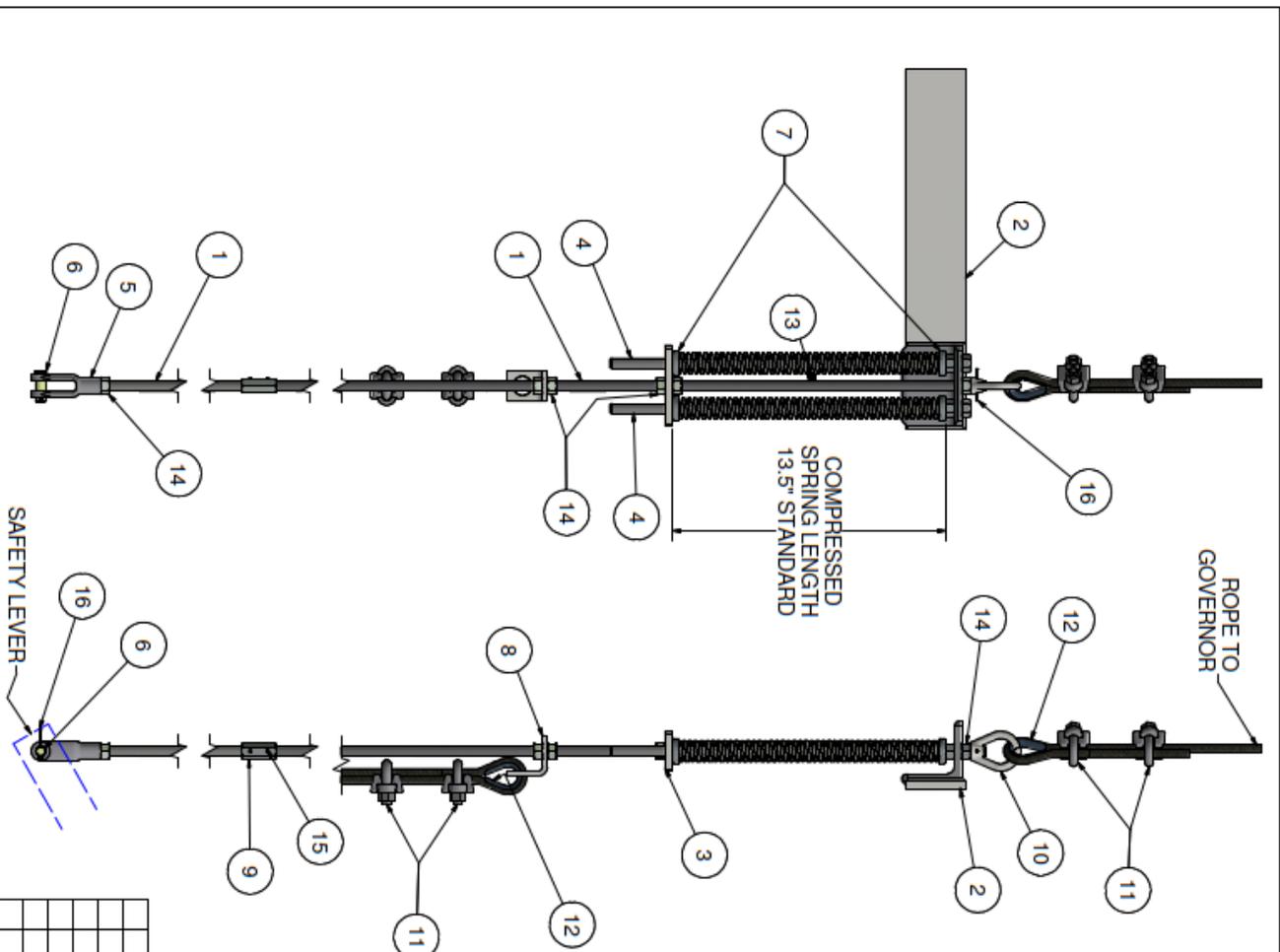
FACE OF RAIL

LOCATE AND WELD AT ASSEMBLY





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ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	540-008	GOVERNOR ROD (6)
		540-031	GOVERNOR ROD (8)
			GOVERNOR ROD (SPECIAL LENGTH)
2	1	480-051	GOVERNOR ROD BRACKET
3	1	480-052	SPRING GUIDE
4	2	480-053	ROD, THREADED, 1/2" x 18"
5	1	540-018-RH	YOKE (CLEVIS), 1/2-13 UNC, RH THREADS
6	1	540-018-1	1/2" CLEVIS PIN
7	4	540-019	RETAINER - SPRING (CUP WASHER)
8	1	540-022	ANGLE - GOVERNOR ROD
9	1	540-023	1/2-13 UNC COUPLING NUT
10	1	540-024	FORGED EYE NUT (YOKE RING)
		540-026	3/8 CABLE CLAMP
11	4	540-027	1/2 CABLE CLAMP
		540-028	3/8 CABLE THIMBLE
12	2	540-029	1/2 CABLE THIMBLE
13	2	400-068	SPRING - 480 & 481 SAFETY
14	10	1/2 - 13 UNC	NUT - STANDARD HEX
15	2	1/8 x 0.75"	SPRING PIN
16	2	1/8 x 1.25	COTTER PIN

USE FOR 480 & 481  
 TYPICAL USE IN APPLICATIONS  
 700 fpm & ABOVE

HOLLISTER-WHITNEY ELEVATOR CO., LLC		WEIGHT: 24.265 lbs/mass	
GOVERNOR ROD ASSEMBLY		REFERENCE TO:	
SCALE: 1/4" = 1"	DATE: 3/7/2018	SEE PARTS LIST	
LTL	C	480-050	
PRODUCTION	TEL:	SHEET 1 OF 1	
A	B718	RELEASE PURCHASE	