



Control Products Division INSTALLATION - MAINTENANCE-PARTS LIST 14-163-750-405

DESCRIPTION

The Type 716-1600 amp definite purpose D.C. contactors are designed for specific application to electric power circuits. The design of the equipment provides for the safety of the operating and service personnel, provided care and caution are taken in performing the operating and service functions.

WARNING: DO NOT OPERATE CONTACTOR BEYOND ITS MAXIMUM RATINGS.

INSTALLATION

The Type 716 contactor mounts on a 3" wide vertical support with three - 3/8" Dia. Mtg. Bolts. Two - 3/8"-16 Tapped Holes per terminal are provided for the customer's power connections. All 3/8" Mtg. Bolts are supplied by customer. The 1/4" faston tabs are provided for DC coil & auxiliary switch connections; (see exploded view).

WARNING: DO NOT OPERATE WITHOUT ARC CHUTE. DO NOT REMOVE ARC CHUTE WHILE CONTACTOR IS ENERGIZED.

MAINTENANCE

Only skilled personnel familiar with electrical equipment and the hazards involved should be permitted to service these contactors. All safety precautions must be observed.

WARNING: REMOVE POWER FROM CONTACTOR BEFORE INSPECTION OR MAINTENANCE.

Periodically inspect contactor, specifically the contacts. Note that contacts which appear dark, rough, or both after a few weeks of operation are normal. Do not clean, dress, or file contacts. It is important to check the thickness of the contact tips. If the moveable or stationary contact tips are eroded through to less than 1/32" thickness, contact welding is likely and therefore all contacts should be replaced.

WARNING: DO NOT TOUCH METAL PARTS WITH POWER APPLIED. THESE PARTS CAN BE AT A LINE VOLTAGE.

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Moving mechanical parts should be free from excess friction. The bearing surfaces on the contactors are designed to operate without lubrication. Therefore, do not oil or grease at anytime.

MAIN CONTACT REPLACEMENT (for stationary contact and alignment see Sheet 5.)

Refer to Exploded View. Remove arc chute assembly (285) by depressing latch spring (237) and pulling out arc chute (285). To replace three stationary main contacts (227) see sheet 5 for details. To replace one movable main contact (245), remove hardware (246) & (247). Replace contact (245), and then reinstall.

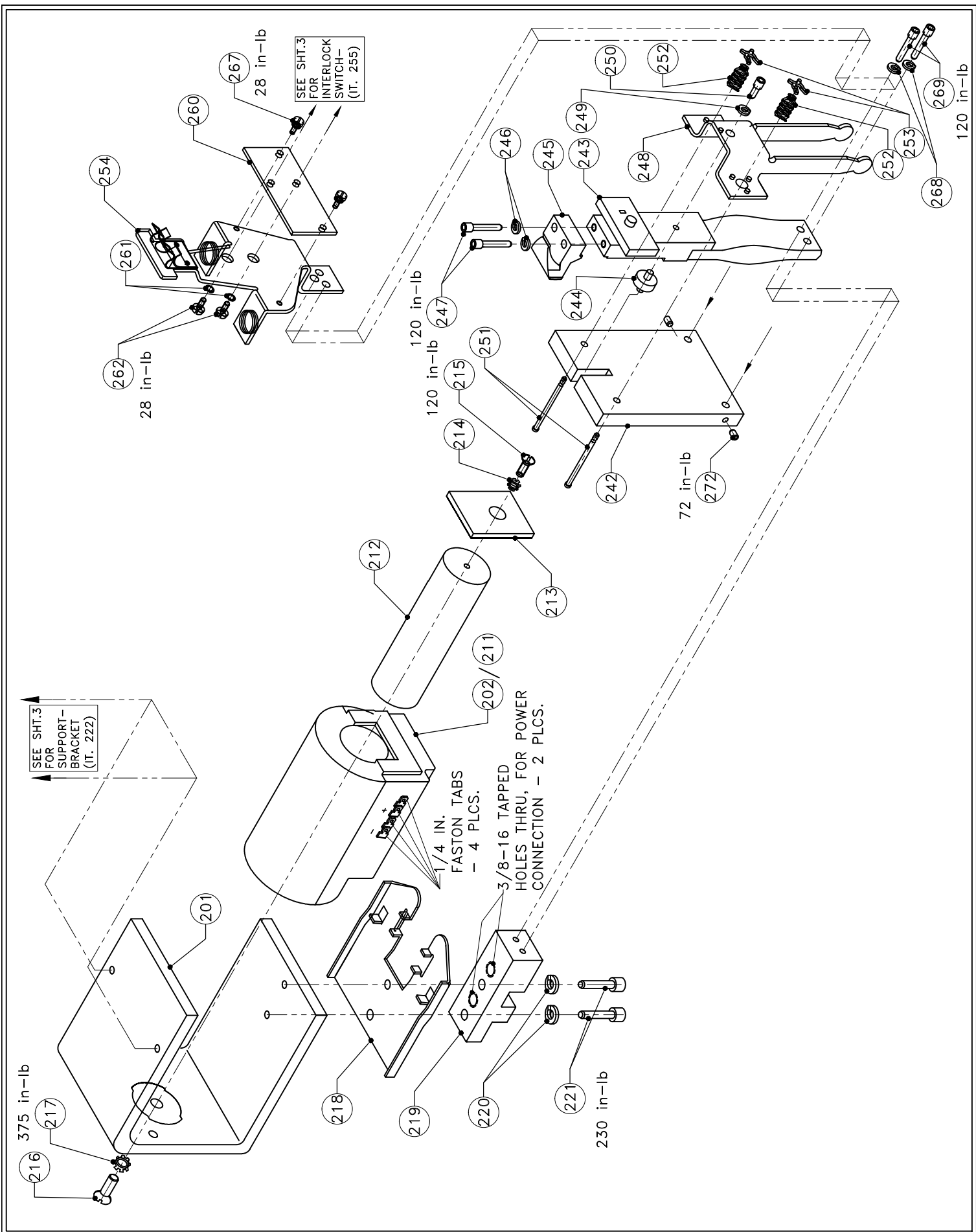
OPERATING COIL REPLACEMENT

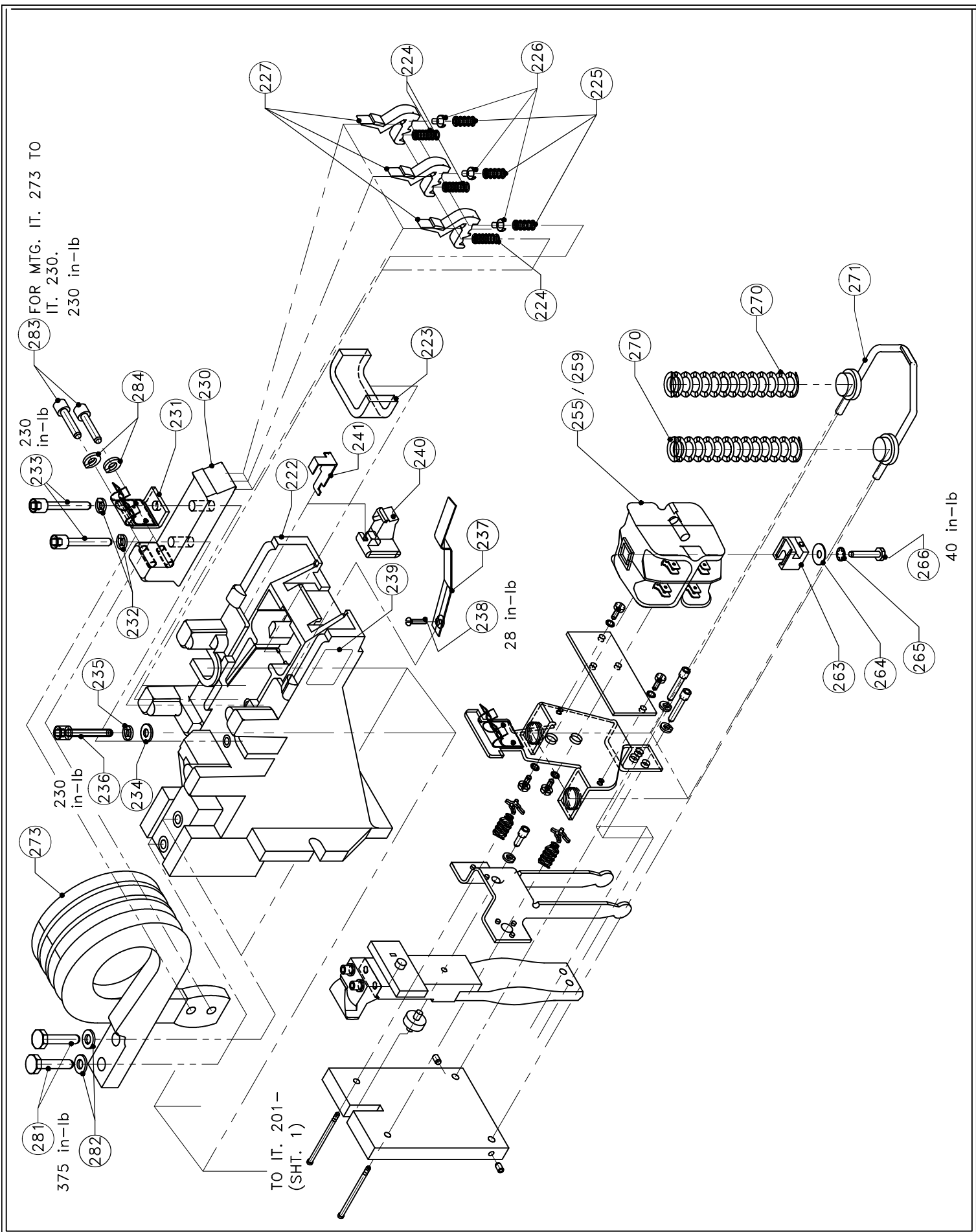
To replace operating coil (202 / 211), remove the arc chute assembly (285). Then remove the power cable from bottom terminal (219), & wires from auxiliary switch (255 / 259) & coil (202 / 211). Remove the complete armature assembly. Remove hardware (214) (215) and pole plate (213). Then replace the coil & reinstall. There should be no binding in armature motion (242) and contact tips should mate properly. Binding can cause contactor failure when energized.

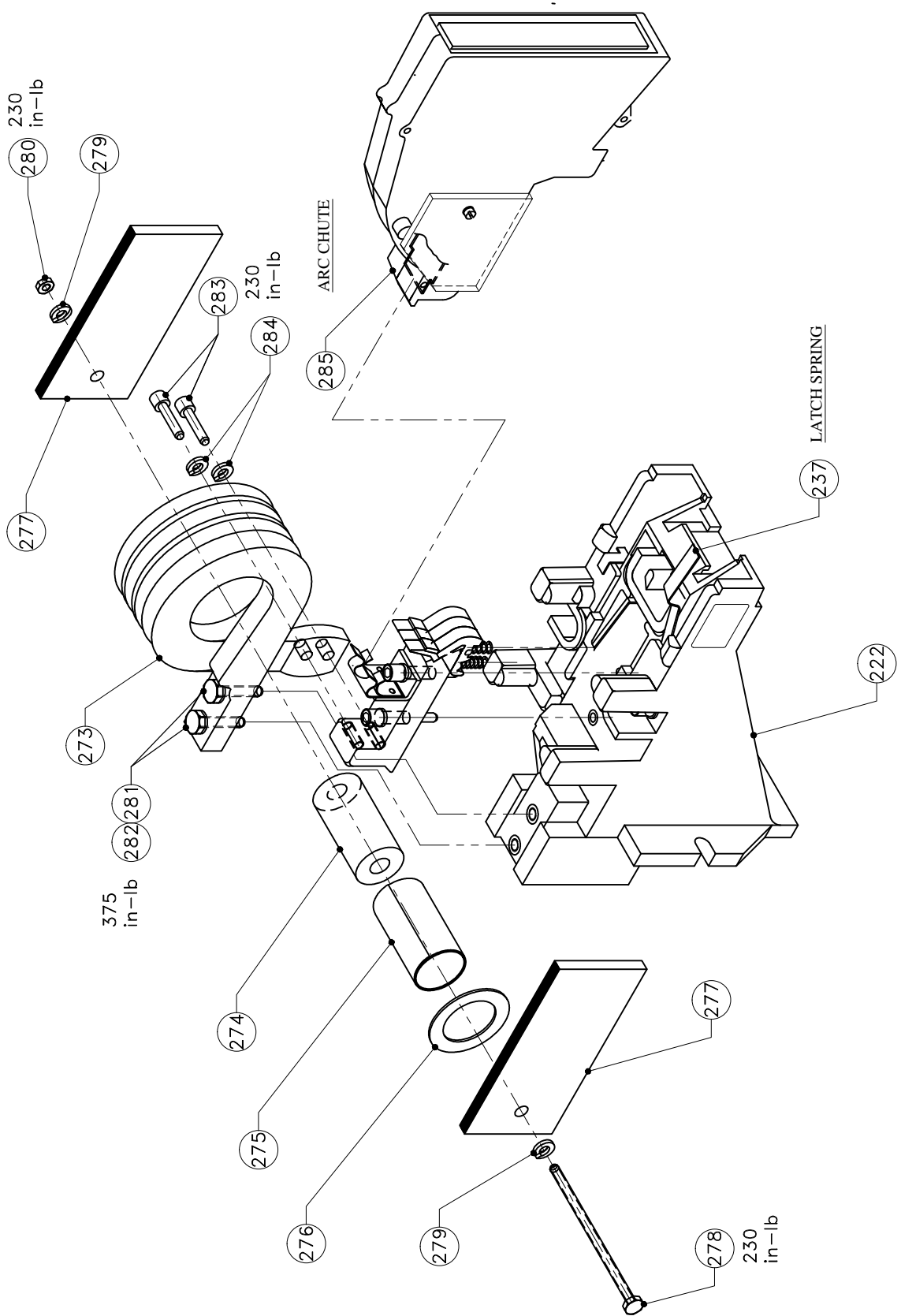
AUXILIARY SWITCH REPLACEMENT

To inspect auxiliary contacts, remove left hand cover of auxiliary switch (255/259). If contacts are not excessively worn (more than .02" per mating pair), reinstall left-hand cover. Check that switch operates freely without binding. Replace auxiliary switch (255/259) when contacts are worn (more than .02" per mating pair), compared to new contacts.

To replace auxiliary switch (255/259), remove hardware (264) (265) (266) and interlock operator (263). Remove hardware (267). Remove interlock support (260) with auxiliary switch and Remove hardware (261) (262) from interlock support (260). Replace auxiliary switch (255/259), and reinstall. Check for freedom of movement between interlock operator (263) and operating lever (271).





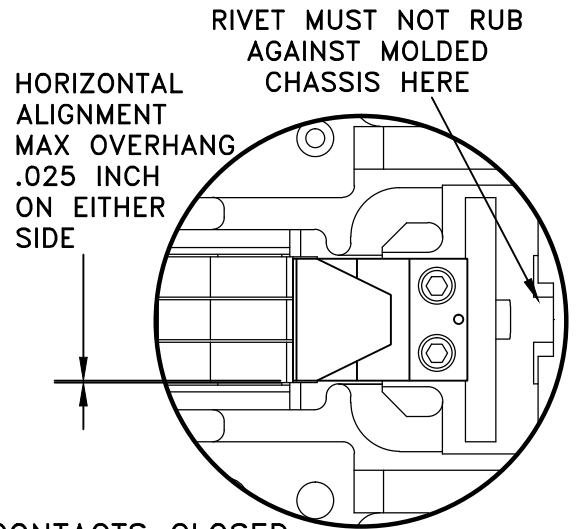




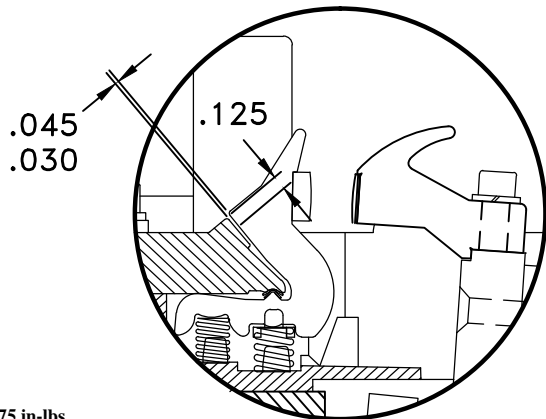
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CONTACT REPLACEMENT

To replace three stationary main contacts (227), remove B.O. Coil assembly (273) by removing screws (281) & (283). Remove top terminal by removing screws (233). Lift terminal and remove old contacts. Check springs (224), (225) and spring caps (226) are not damaged. Carefully place new contacts on springs and replace terminal (230) making sure contacts pivot freely. With the contactor in the open position, gap between contact (227) and terminal (230) should be .030" to .045" measured .125" down from the top of contact (see picture). Contact may be bent open or closed, to achieve this measurement. Reinstall B.O. coil assembly (273). To replace moving contact remove screws and lockwashers (items 247 & 246) and lift out old moving contact. Fasten new moving contact (item 245) with screws and lockwashers.

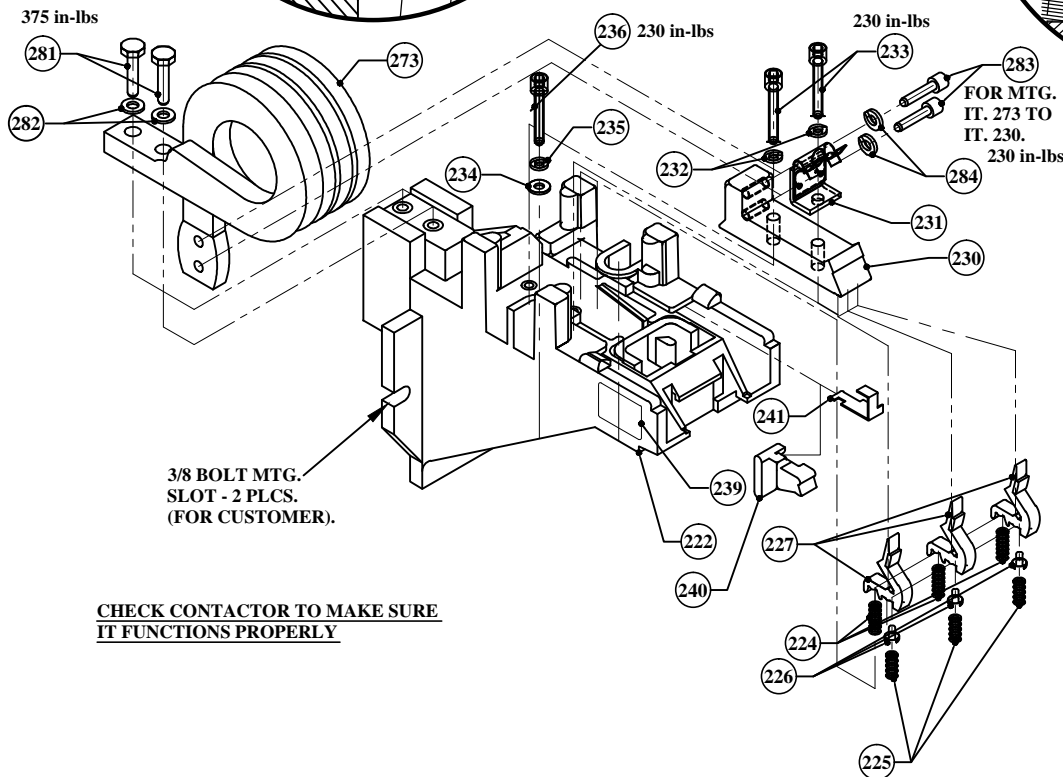
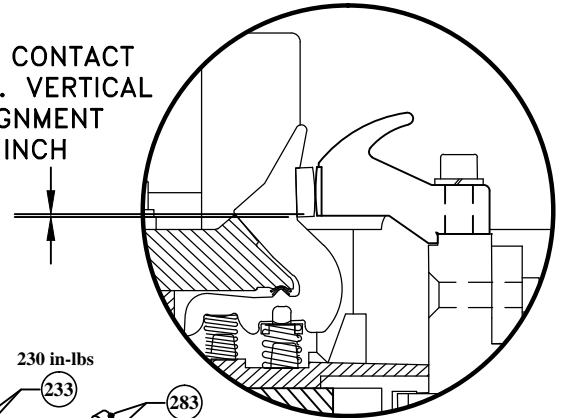


CONTACTS CLOSED



CONTACTS OPEN

FOR BEST CONTACT LIFE, MAX. VERTICAL MISALIGNMENT .025 INCH



NOTE: CONTACT POSITION MAY BE ADJUSTED BY LOOSENING SCREWS (ITEM 269 P.2) AND POSITIONING MOVING ASSEMBLY FOR BEST ALIGNMENT

BE CERTAIN THAT MOVING CONTACT DOES NOT RUB INSIDE ARC CHUTE OR ON MOLDED CHASSIS!!

CHECK CONTACTOR TO MAKE SURE IT FUNCTIONS PROPERLY



Replacement Parts

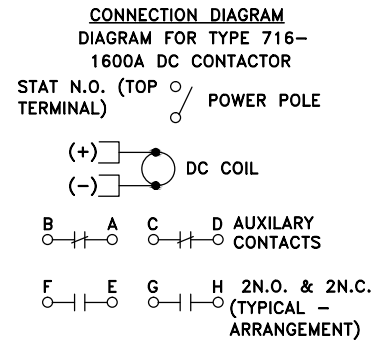
June 2012

The information contained herein is general in nature and not intended for specifications shown herein or make improvements at anytime without notice or obligation. It doesn't relieve the user of responsibility to use sound practices in application installation and maintenance of equipment purchased. Should a conflict arise between the general information contained in this publication and the contents of drawings or supplementary material or both the latter shall take precedence.

HC14-163-750-405

Type 716
1600 AMP
D.C. Contactor

ITEM No.	NAME OF PART	QTY.	PART No.
1	Main Contact Kit	1	14192908801
2	Auxiliary Switch (1 N.O. - 3 N.C.)	1	14192890524
3	Auxiliary Switch (2 N.O. - 2 N.C.)	1	14192890523
4	Auxiliary Switch (3 N.O. - 1 N.C.)	1	14192890513
5	Auxiliary Switch (4 N.O.)	1	14192890522
6	Auxiliary Switch (4 N.C.)	1	14192890525
7	Arc Chute Kit	1	14192908802



**ELECTRICAL DATA
GENERAL INFORMATION**

**Operating Coils (Continuous Duty),
Operation at 20° C Coil Temperature**

Volts DC	Ohms (20°C)	Max Pickup Volts DC	Drop-out Volts DC
12	3.08	7.20	0.6 4.0
24	12.31	14.20	1.2 8.0
36	26.50	21.60	1.8 12.0
48	41.20	28.80	2.4 16.0
74	120.00	45.00	3.7 25.0
96	173.00	58.00	6.0 32.0
125	278.00	75.00	7.5 42.0
250	1044.00	150.00	13.0 80.0

Main Contact Configuration –
Single Pole Normally Open (SPNO)
Voltage Rating 1500 Volts Standard
Mechanical Life
2 million operations.
Weight 53 pounds.

AUXILIARY CONTACT RATINGS

Resistance Load	125 VDC or less	10.0 Amps
	250 VDC	2.5 Amps

MAIN CONTACT RATINGS

Continuous Carry @ 40° C (Ambient still air) Load	1600 Amps
Maximum Make Current	12000 Amps
Maximum Break Current	2400 Amps
Maximum Interrupting Capacity	2400 KW within limits of 2400 A 2400 V
Thru Current Capacity	30000 Amps

