



SERVICE BULLETIN

MAINTENANCE INSTRUCTIONS AND SPARE PARTS
BULLETIN 7400 TYPE KD — D.C. MAGNETIC CONTACTOR
NORMALLY OPEN POLE—100 AMPERE, 150 AMPERE AND 300 AMPERE

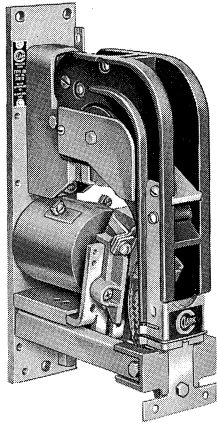
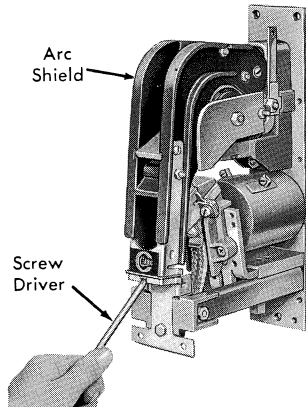


Fig. 1. Bulletin 7400, Type KD, 100 Ampere D.C. Contactor. The 150 and 300 Ampere Models are of similar configuration. Instructions that follow apply to all sizes.

Fig. 2 (below). Loosening Arc Shield.



When replacing arc shield, firmly seat bottom clip.

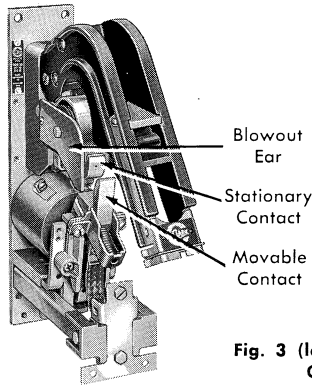


Fig. 3 (left). Arc Shield Offset for Contact Inspection.

CONTACTS — INSPECTION

To inspect contacts, pry arc shield loose as shown in fig. 2. Shield may then be raised, offset to one side and rested on either blowout ear as in fig. 3, for inspection.

Replace contacts when the gap produced between points A and A' in fig. 4 becomes less than 1/8" (3/32" for 300 Ampere) with armature fully closed. This will assure that the contacts are made under a proper amount of spring pressure. New contacts will produce a gap of approximately 3/16" (1/4" for 300 Ampere) when the armature is fully closed.

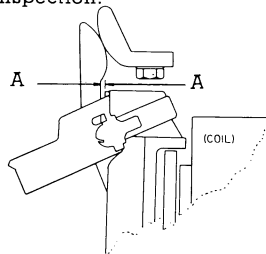


Fig. 4. Determining Contact Wear.

CONTACT REPLACEMENT

To change contacts, first remove arc shield entirely by raising and levering it free from the spring clip (see fig. 5). Disconnect flexible connector from movable contact as in fig. 6. Then, as shown, pry out contact spring with screw driver, holding movable contact while doing so, and remove the contact.

NOTE: DO NOT LOOSEN BRACKET SCREWS LOCATED ON EITHER SIDE OF THE MOVABLE CONTACT.

Stationary contact may be removed by unscrewing hex head bolt holding it in place.

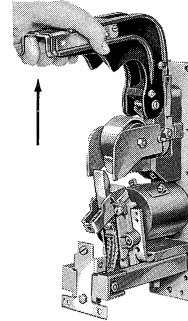


Fig. 5 (left). Removing Arc Shield.

Do Not Loosen Bracket Screws

Contact Spring

Flexible Connector

Front Connector Plate

Fig. 6 (right). Removing Movable Contact.

To re-assemble, bolt in new stationary contact. New movable contact and new spring are replaced in bracket as follows (refer to fig. 7): Place bottom of spring against boss in inside of spring retainer bracket and hold other end of spring firmly against recessed seat in movable contact. Push spring and contact downward until contact snaps into place. Make sure spring is seated in contact recess.

Replace flexible connector and arc shield.

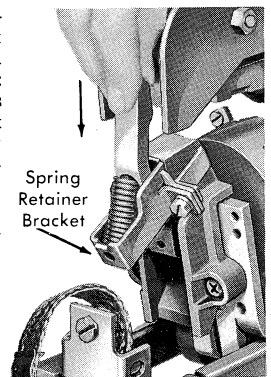


Fig. 7. Replacing Movable Contact.

COIL REPLACEMENT

Remove arc shield as shown in figs. 2 and 5. If a bottom-mounted control circuit contact block is being used the operating arm must be removed from the contactor armature (See service bulletin SB 7400.54). Side mounted control circuit contact blocks need not be disturbed.

Disconnect flexible connector from front connector plate.

Remove two shoulder bolts on bottom of armature.

With hand in position as shown in fig. 8, exert thrust towards the base plate with the thumb. Counter-pressure with the index and forefingers at the same time and pull downward to free the armature. Armature may then be removed by drawing the assembly upward and out.

Disconnect coil leads. Remove coil retainer by removing screw at center of coil core and slip coil off. When replacing coil, be sure coil spring washer is in place over coil core, then slide new coil onto core so that terminals are up and boss at rear of coil seats in recess in mounting plate (see fig. 9 on page 2).

Replace coil retainer and flat-head screw in center and tighten securely.

Replace armature assembly by exerting thumb pressure as before and seating alignment studs (see ref. no. 7 in fig. 10 on page 3) on pivot support into holes in bottom of frame. Replace shoulder bolts.

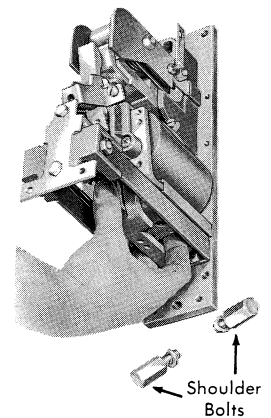


Fig. 8. Detaching Armature.

Shoulder Bolts



Re-attach flexible connector to front connector plate. Replace coil leads and arc shield.

ARMATURE ASSEMBLY

Armature is removed and re-placed in contactor as explained above.

If it is necessary to replace the parts composing the contact retaining assembly at the top of the armature other than the movable contact and spring, it may be done as shown in fig. 10 on page 3. Refer to references 49, 50, 51 and 52. **DO NOT LOOSEN THIS ASSEMBLY IF REPLACING CONTACT ONLY** (see page 1 for contact replacement instructions).

To dis-assemble the lower hardware on the armature, first remove screw (45), then unseat spring retainer (46) to free the spring (47) and pivot support (48).

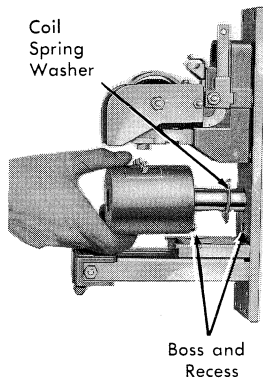


Fig. 9. Replacing Coil.

To re-assemble, re-position pivot support in armature molding assembly (7). Seat spring on boss of spring retainer (46). Insert spring and retainer, seating other end of spring on boss in armature. Then, compress and seat boss on spring retainer (located next to drilled hole) into recess provided in underside of pivot support. Replace screw (45) and lock-washer (23).

BLOWOUT ASSEMBLY REPLACEMENT

Refer to fig. 11 on page 3. Remove hardware (ref. 26 and 27), blowout ears (28) and blowout washers (29). Slide out core (30) and core insulator (31).

Remove stationary contact (21), as shown and remove screws (33) and (34) and rear arc runner (35). Remove blowout clip (36) as shown.

Remove two screws (37) and (38) from the rear of the insulator to free blowout coil assembly (32). Reassemble in reverse order.

SPARE PARTS (Refer to exploded views on page 3)

Reference Number	Description	No. Req'd	Type 100 KD Cat. No. 74U13 100 Amp.	No. Req'd	Type 150 KD Cat. No. 74U14 150 Amp.	No. Req'd	Type 300 KD Cat. No. 74U15 300 Amp.
1*	Assem. Arc Shield	1	Kit #KKD-101	1	Kit #KKD-151	1	Kit #KKD-301
2*	Movable & Stationary Contact Kit (incl. ref. nos. 3, 19, 20, 21).	1	Kit #KKD-100	1	Kit #KKD-150	1	Kit #KKD-300
3	Movable Contact (only)	1	B74-243831	1	A74-244363	1	B74-250831
4*	Movable Contact Spring (only)	1	Kit #KKD-102	1	Kit #KKD-152	1	Kit #KKD-302
5	Shoulder Bolt	2	A74-243825-1	2	A74-243825-1	2	A74-243825-2
6	Spring Lockwasher— $\frac{5}{16}$ "	2	T155-14	2	T155-14	2	T155-14
6	$\frac{1}{4}$ "	---	---	---	---	3	T155-12
6	$\frac{3}{8}$ "	---	---	---	---	3	T155-15
7	Armature Molding Assembly	1	B74-243844A	1	B74-243844A	1	B74-250826A
8	Slotted Hex Head Screw	1	T121-8	1	T121-8	2	T121-77
9	Thin Spring Lockwasher	3	T155-11	4	T155-11	3	T155-16
10	Slotted Hex Head Screw	1	T121-13	1	T121-13	1	T121-81
11	Hex Nut	8	T115-25	7	T115-25	5	T115-25
11		---	---	---	---	4	T115-38
12*	Flexible Connector Kit (incl. connector plus refs. 8, 9, 10, 11).	1	Kit #KKD-104	1	Kit #KKD-154	1	Kit #KKD-304
13	Hex Head Screw	1	T121-12	1	T121-12	1	T121-78
14	Front Connector Plate	1	A74-243824-1	1	A74-243824-2	1	B74-250809
15	Coil Retainer Screw	1	T122-61	1	T122-61	1	T172-23
16	Coil Retainer	1	A74-243823A	1	A74-243823A	1	A74-250840A
17*	Coil (Specify Voltage when ordering)	1	See table, Pg. 4.	1	See table, Pg. 4.	1	See table, Pg. 4.
18	Coil Spring Washer	1	A74-243820	1	A74-243820	1	A74-244379
19	Stationary Contact Screw	1	A74-244395	1	A74-244395	2	T121-76
20	Thin Spring Lockwasher	1	T155-13	1	T155-13	3	T155-16
21	Stationary Contact (only)	1	A74-190300	1	A74-244356	1	A74-250814
22	Hex Nut	5	T115-19	5	T115-19	2	T115-25
23	Spring Lockwasher	8	T155-10	8	T155-10	3	T155-12
24	Spacer	1	A74-244360-1	1	A74-244360-2	1	A74-244360-4
25	Spacer	---	---	1	A74-244360-3	---	---
26	Brass Rd. Head Screw	1	T120-142	1	T120-142	1	T121-258
27	Hex Head Screw	1	T121-34	1	T121-34	2	T121-10
28	Blowout Ears	2	A74-243809	2	A74-243809	2	A74-250819
29	Blowout Washer	2	A74-243806	2	A74-243806	2	A74-250816
30	Blowout Core	1	A74-243808-1	1	A74-243808-2	1	A74-250847
31	Blowout Core Insulator	1	A74-243807-1	1	A74-243807-2	1	A74-243807-3
32	Blowout Coil Assembly	1	A74-243812A	1	A74-244353A	1	A74-250822-A
33	Stl. Flat Head Screw	1	T122-110	1	T122-110	1	T122-110
34	P.A. Rd. Head Screw	1	T123-15	1	T123-15	1	T123-15
35	Rear Arc Runner	1	A74-243804-1	1	A74-243804-2	1	B74-250813
36	Blowout Clip	1	A74-243805-1	1	A74-243805-2	1	A74-250815
37	Hex Head Screw	1	T121-19	1	T121-19	1	T121-90
38	Hex Head Screw	3	T121-24	3	T121-24	3	T121-92
39	Base Insulator	1	C74-243801	1	C74-243801	1	D74-250801
40	Spring Lockwasher— $\frac{1}{4}$ "	11	T155-12	---	---	7	T155-12
40	$\frac{3}{8}$ "	---	---	---	---	6	T155-15
41	Thin Spring Lockwasher	---	---	4	T155-11	---	---
42	Arc Shield Pivot Support	1	A74-243803	1	A74-243803	1	A74-250812
43	Arc Shield Spring Clip	1	A74-243802	1	A74-243802	1	A74-250811
44	Stl. Hex Head Screw	1	T121-250	1	T121-250	1	T120-195
45	Stl. Hex Head Screw	1	T121-244	1	T121-244	1	T121-9
46	Spring Retainer	1	A74-243832	1	A74-243832	1	A74-250834
47	Spring	1	A74-243833	1	A74-243833	1	A74-250833
48	Pivot Support Assembly	1	A74-243835A	1	A74-243835A	1	A74-250818A
49	Stl. Fil. Head Screw	2	T132-20	2	T132-20	2	T132-25
50	Contact Spring Retainer	1	A74-243841-1	1	A74-243841-2	1	A74-250829
51	Pivot Plate	1	B74-243843-1	1	B74-243843-2	1	B74-250827
52	Clamp	1	A74-243842	1	A74-243842	1	A74-250846A

*Parts Recommended to Stock.

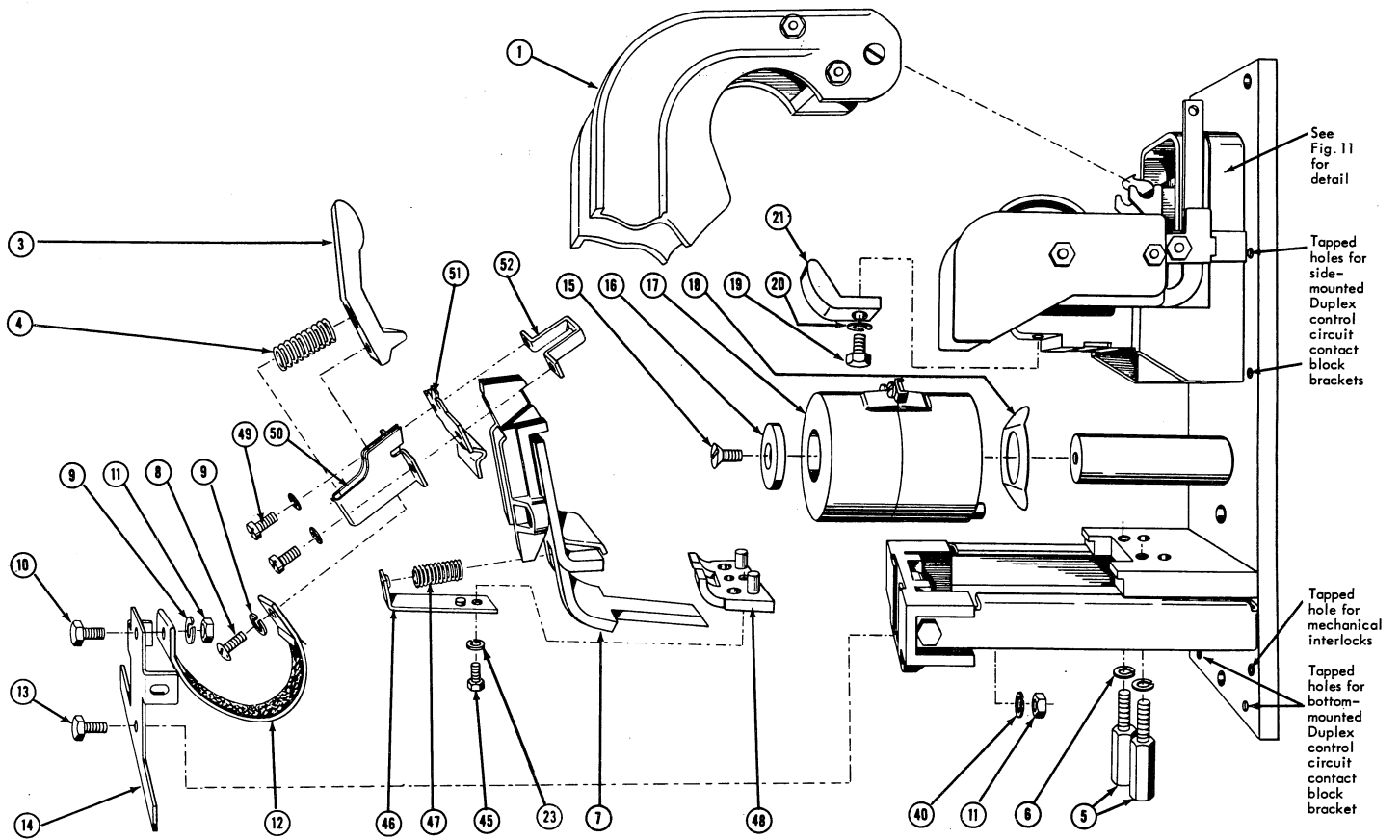
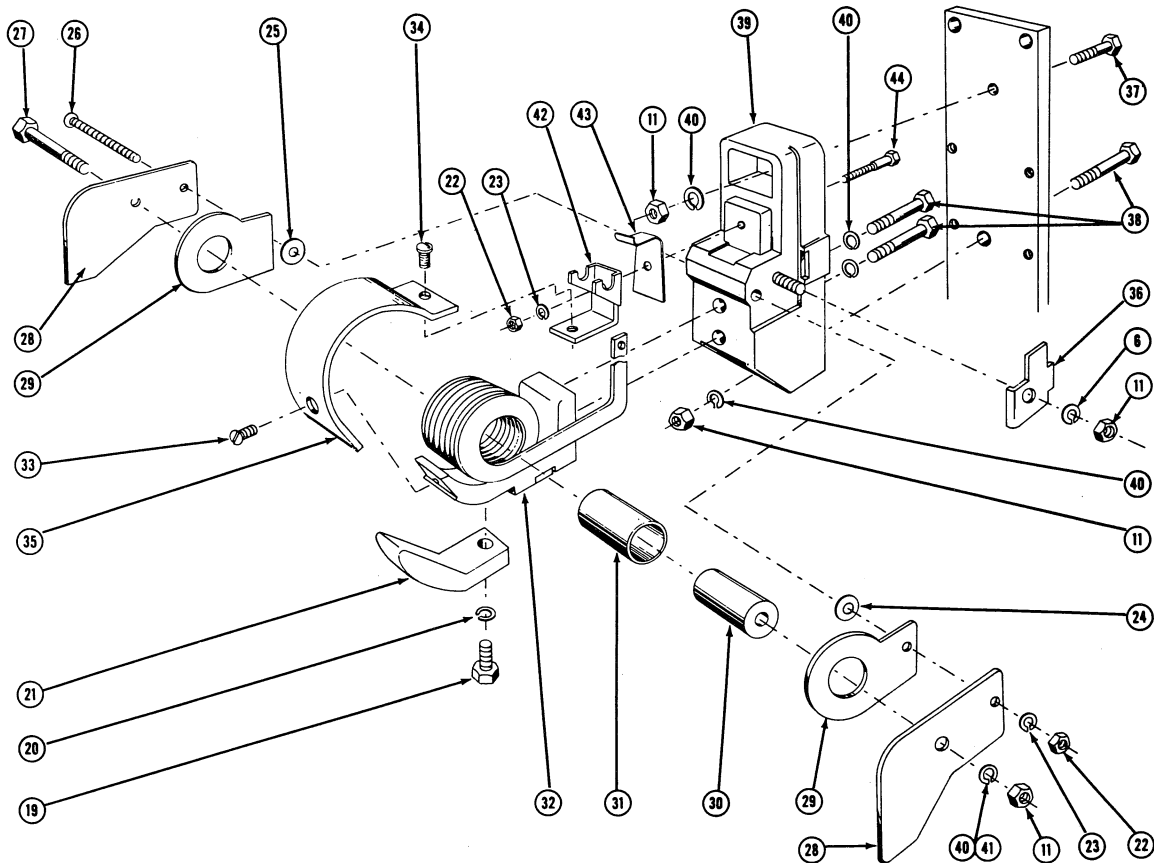


Fig. 10. Exploded view, Armature, Coil — Arc Shield Assembly.





MAINTENANCE INSTRUCTIONS AND SPARE PARTS
BULLETIN 7400 TYPE KD — D.C. MAGNETIC CONTACTOR
NORMALLY OPEN POLE—100 AMPERE, 150 AMPERE AND 300 AMPERE

COIL TABLE		
Volts D.C.	COIL PART NO.	
	100 Amp-150 Amp	300 Amp
240	TB109-1	TB144-1
120	TB109-2	TB144-2
95	TB109-7	TB144-8

AUXILIARY CONTROL CIRCUIT CONTACTS
AND INTERLOCKING MECHANISMS

Auxiliary contacts and interlocking mechanisms are available for use on these contactors as listed below. See service bulletin SB 7400.54 for installation instructions.

SIDE MOUNTED CONTROL CIRCUIT CONTACTS

MOUNTING HARDWARE			
Hardware For Contactors			Kit Catalog Number
NEMA Size	8 Hour Ampere Rating	Pole	
3 & 4	100 & 150	1 N.O.	KKD-10
5	300	1 N.O.	KKD-12

CONTACT BLOCKS (Includes 2 screws)	
Circuit Arrangement	Block Kit Catalog Number
1 N.O.	KKD-7
1 N.C.	KKD-8
1 N.O., 1 N.C.	KKD-1
2 N.O.	KKD-2
2 N.C.	KKD-3

BOTTOM MOUNTED CONTROL CIRCUIT CONTACTS	
These contacts for 100 and 150 Ampere N.O. Contactors only (Includes Contact Block and Mounting Hardware)	
Contact Arrangement	Kit Catalog Number
1 N.O., 1 N.C.	KKD-110
2 N.O.	KKD-111
2 N.C.	KKD-112

MECHANICAL INTERLOCK KITS			
Contactors Ampere Rating	Pole	Spacing Between Contactor	Kit Cat. No.
100 vs. 100 150 vs. 150 100 vs. 150	1 N.O. 1 N.O. 1 N.O.	3½"	KKD-113
100 vs. 100 150 vs. 150 100 vs. 150	1 N.O. 1 N.O. 1 N.O.	5"	KKD-114
300 vs. 300	1 N.O.	6"	KKD-313

ORDERING INSTRUCTIONS

- (1) Part Number
 - (2) Part Description
- If there are questions on correctness of part give:
- (3) Serial Number of Controller
 - (4) Individual Symbol designation of the Contactor