TYPE HD0-1, SERIES B, NEMA SIZE 2, 50 AMPERE, DC CONTACTOR SINGLE POLE, NORMALLY OPEN

INSTALLATION AND ADJUSTMENT

Mount the contactor vertically on a rigid support. Provide at least .8” clearance above the top of the contactor base and 1.7” in front of the arc chute for arcing clearance and arc chute removal.

- With the contactor power OFF, lift straight up on the arc chute (1) and remove it from the contactor. Operate the contactor by hand to see that the contact tips meet squarely. If they do not, adjust by the procedure described below in step 9 of “Contact Tip Replacement”. When released, the contactor should open freely. If it does not, check for the impaired operation of the contact arm assembly. Check all electrical connections to see that they are tight and replace the arc chute. No further adjustments are necessary.

CAUTION: Do not operate the contactor under load without the arc chute installed in its proper position.

TROUBLESHOOTING

PROBLEM: Contactor will not close when energized.
- SOLUTION: Check the voltage at the operating coil terminals. An absence of voltage indicates a fault elsewhere in the circuitry. If the coil voltage is normal, disconnect the coil leads and check the coil for proper resistance. Resistance value for standard coils are listed in the parts lists on page 2. Resistance value for other coils are listed in the Class 9998 Magnet Coil Application Data catalog sheet. An open or shorted coil must be replaced.

REPAIR and MAINTENANCE

CONTACT TIP REPLACEMENT

To determine when the contact tips should be replaced, the contact follow up must be measured. The contact follow up is the distance “F” measured at the upper edge of the contact arm with the contactor fully closed, as shown on the right. When this distance is reduced to 1/32” or less, the contact tips must be replaced to assure that proper contact pressure is maintained.

Should it be necessary to replace the tips, a screwdriver is the only tool needed and the following procedure should be followed:

1. Lift straight up on the arc chute (1) and remove it from the contactor.
2. Unscrew the arc horn assembly (43), and remove the flexible connector and moveable contact tip.
3. Loosen the two pan head screws (22) and push the contact arm pin (23) out.
4. Remove the contact arm assembly and unscrew the screw (41) holding the stationary contact tip in place.
5. Install the new stationary contact tip (38), screw (41)*, and lock washer (40)*.
6. Replace the contact arm assembly making sure that the opening spring (31) is seated properly over the head of screw 29.
7. Replace the contact arm pin (23) and tighten the two pan head screws (22).
8. Reassemble the new movable contact tip (42), flexible connector (24), and arc horn (43), in that order.
9. Operate the contactor by hand to see that the tips meet squarely. Contact tip alignment can be adjusted by loosening the tip retaining screws and shifting the tips. After the contacts are properly aligned, retighten the screws securely.
10. Replace the arc chute.

COIL REPLACEMENT

To replace the operating coil, a screwdriver is required and the following procedure should be followed:

1. Lift straight up on the arc chute (1) and remove it.
2. Remove the coil leads.
3. Loosen the two pan head screws (22), and push the contact arm pin (23) out.
4. Remove the contact arm assembly.
5. Unscrew the screw (29) on the top of the magnet core and remove the coil.
6. Install the new coil and replace the core cap (26), the core cap spacer (27), lock washer (28), and screw (29). Make sure the core cap (heavy steel washer) is next to the coil.
7. Replace the contact arm assembly, making sure that the opening spring (31) is seated properly over the head of screw 29.
8. Replace the contact arm pin (23) and tighten the two pan head screws (22).
9. Reconnect the coil leads to the new coil and replace the arc chute.

LUBRICATION

The type “H” contactor requires no lubrication. The pivot pins bear in a self-lubricating material.

NOTE: * The special non-magnetic bolts and lockwashers supplied with the contact parts kit must be used.

** Minor revision since previous issue.
# SERVICE BULLETIN

## TYPE HD-1, SERIES B, NEMA SIZE 2, 50 AMPERE, DC CONTACTOR, S.P., N.O.

### Item No. | Part No. | Description
---|---|---
1. | A5105-035-50 | Assembled Arc Chute
2. | B50512-562-29 | Blowout Core Insulator
3. | B50502-776-08 | Blowout Core
4. | 1/4"-20 Hex Steel Jam Nut, 2 Req.d.
5. | 1/4" Plain Lock Washer, 5 Req.d.
6. | 1/4"-20 Hex Steel Nut, 4 Req.d.
7. | A51015-119-01 | Terminal Tie Bar
8. | A51015-064-50 | Assembled Blowout Core
9. | A51015-032-01 | Blowout Ear, 2 Req.d.
10. | A51015-034-01 | Arc Shield Spring, 2 Req.d.
11. | # 8-32x1/4" Pan Head, Tri-Lobe Screw, 2 Req.d.
12. | # 10-24x1/2" Hex Head Steel Screw, 2 Req.d.
13. | A51015-056-50 | Assembled Operating Coil (24OV Approximate Resistance 214 ohms)
15. | A51017-041-01 | Spring Washer
16. | A51015-076-50 | Assembled Magnet Frame
17. | A51015-033-01 | Blowout Guard
18. | C51015-028-50 | Assembled Contactor Base
19. | 1/4"-20x1/2" Hex Head Steel Screw, 2 Req.d.
20. | 1/4"-20x7/8" Hex Head Steel Screw
21. | 1/4"-20x1/3-4" Hex Head Steel Screw, 2 Req.d.
22. | # 8-35x3/8" Pan Head Screw, 2 Req.d.
23. | A51015-102-01 | Contact Arm Pin

### Item No. | Part No. | Description
---|---|---
24. | A51015-050-50 | Assembled Connector
25. | A51015-040-50 | Assembled Coil Core
26. | B50502-006-08 | Core Cap
27. | B50502-006-09 | Core Cap Spacer
28. | # 10 Plain Lock Washer, 5 Req.d
29. | # 10-24x3/8" Pan Head Steel Screw
30. | A51015-043-01 | Armature
31. | B50502-562-07 | Opening Spring
32. | C51015-103-50 | Contact Arm Assembly with Bushings
33. | A51139-173-03 | Nameplate
34. | # 8-35x1/4" Pan Head, Type F, Tapping Screw, 2 Req.d
35. | # 10 Plain Washer, 2 Req.d
36. | # 10-24x5/8" Pan Head Steel Screw, 2 Req.d
37. | B50502-562-18 | Auxiliary Arm Spring
38. | 29907-01410 | E Ring
39. | # 10 Silicon Bronze Lock Washer
40. | # 10-24x1/2" Round Head Silicon Bronze Screw
41. | Type HD-1 Kit
42. | Assembled Arc Horn
43. | A51015-053-01 | Stop Plate
44. | 1/4"-20x5/8" Hex Head Slotted Steel Screw, 2 Req.d
45. | A51015-059-01 | Auxiliary Arm Pin
46. | B51015-145-50 | Auxiliary Arm
47. | 1/4" Plain Washer, 3 Req.d
48. | # 8 Plain Washer
49. | # 8 Plain Lock Washer

* Standard hardware, listed without a Square D part number, should be obtained from a local hardware supplier.

### NOTE:
Parts Kits are sold only as complete kits and are listed under Class 969 of Catalog.
User Modification Kits such as Interlocks, Tie Bars, and Timers are listed under Class 9998.
*Essential Parts for General Maintenance.
Minor revision since previous issue.