



GEF-4648A

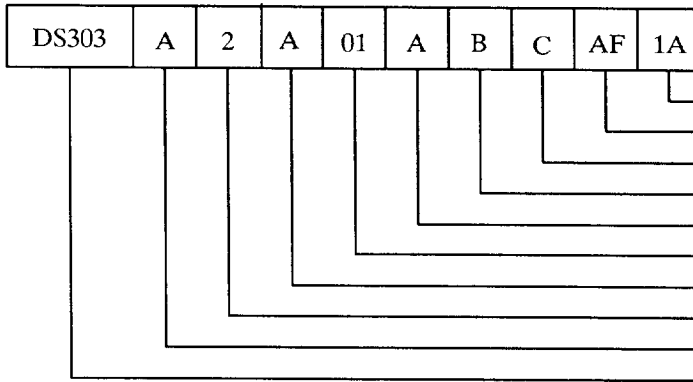
*GE Drive Systems*

---

*Renewal Parts*

**HEAVY DUTY DC CONTACTORS**  
DS303A2 (600V STYLE)  
DS303B2 (1000V STYLE)





- Special setting and stamping
- Electric interlock (See Table 4)
- Operating coil and voltage rating (see Table 3A or 3B)
- Normally closed blowout coil rating 1 or 2 poles - bottom (See Table 2)
- Normally open blowout coil rating 1 or 2 poles - top (See Table 2)
- Electro-mechanical configuration
- Contact pole configuration (See Table 1)
- NEMA size rating (50 amps)
- Design (A = 600V, B = 1000V)
- Basic catalog number

**PARTS RECOMMENDED FOR STOCK**  
(2 N.O., 2 N.O. - 1 N.O., 2 N.O. - 2 N.C.)

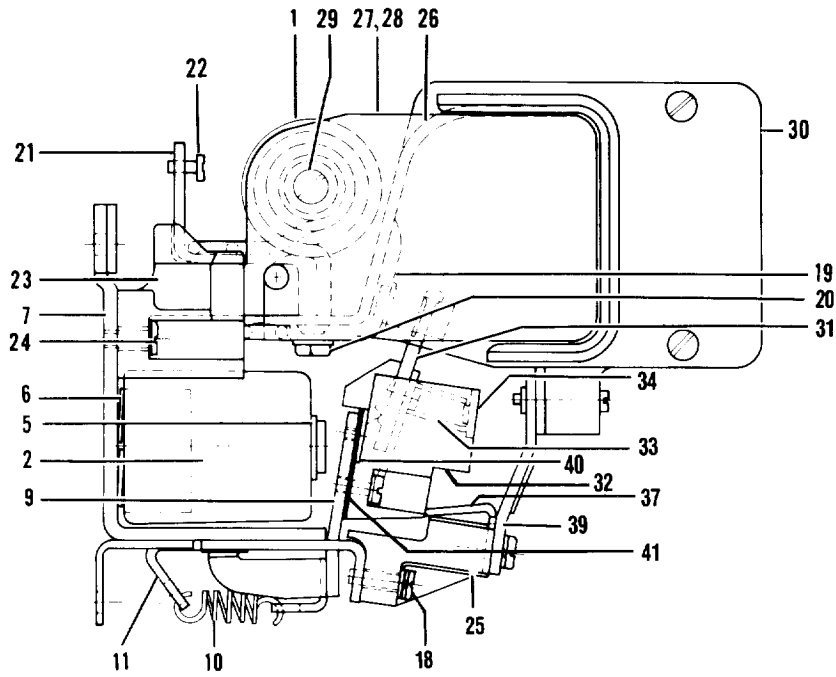
Ref. No.	Quantity Required for			Catalog Number	Description
	2 N.O.	2 N.O. 1 N.C.	2 N.O. 2 N.C.		
2	—	—	—		Operating coil (see table 3B)
3	—	—	—		Holding coil (see table 3B)
4	#	#	#		Electrical interlock (see table 4)
10	1	1	1	2412649P1	Tension spring for armature
22	2	3	4	259A5637G1	Stationary tip assembly
29	2	3	4	195B6285G1	Arc chute, complete
34	2	3	4	259A5640G1	Movable tip assembly
35	—	3	4	259A5673P1	Compression spring for movable contact finger (used with holding coil)
35	2	2	2	259A5673P1	Compression spring for movable contact finger (used with holding coil)
36	—	1	2	2417929P1	Compression spring for movable contact finger (used without holding coil)
40	2	3	4	259A5644G2	Shunt for movable contact finger

# If interlock is used, a quantity of one set is required for each interlock.

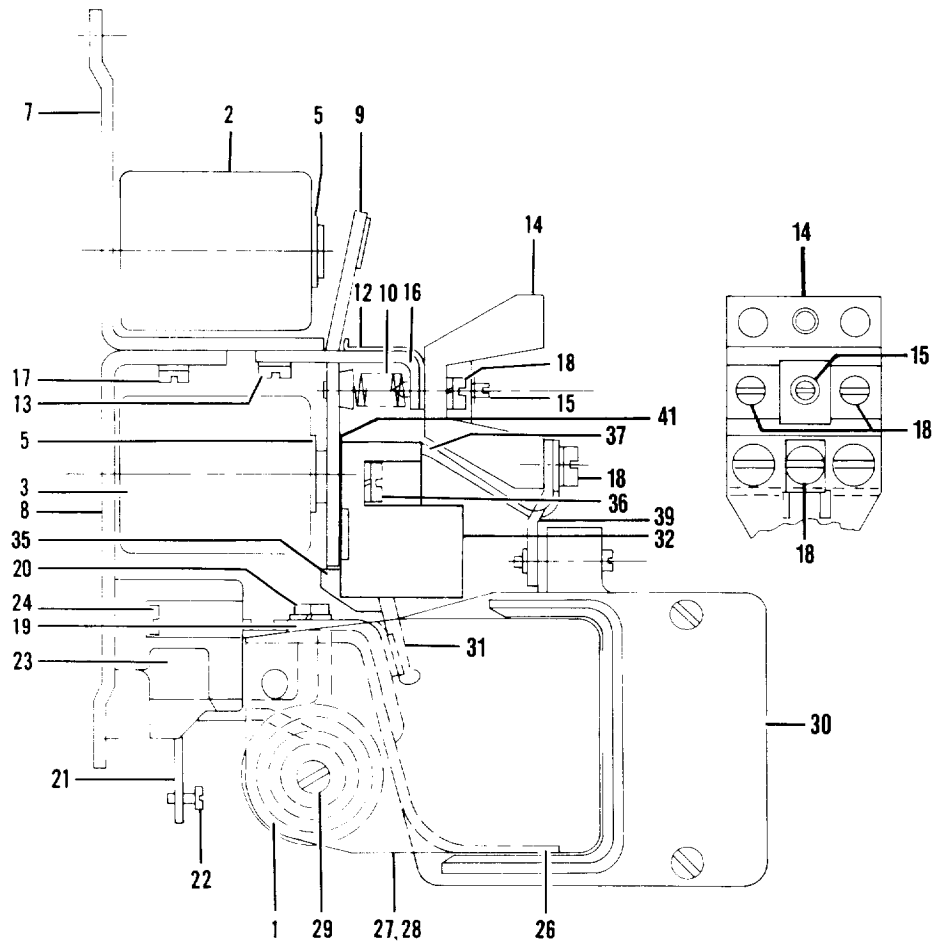
**PARTS RECOMMENDED FOR STOCK**  
(1 N.O., 1 N.C., 1 N.O. - 1 N.C.)

Ref. No.	Quantity Required for			Catalog Number	Description
	1 N.O.	1 N.C.	1 N.O. 1 N.C.		
2	—	—	—		Operating coil (see table 3A)
3	—	—	—		Holding coil (see table 3A)
4	#	#	#		Electrical interlock (see table 4)
10	1	—	—	2417924P1	Tension spring for armature
10	—	1	1	2418822P1	Tension spring for armature
19	1	1	2	259A5615G1	Stationary tip assembly
30	1	1	2	195B6285G3	Arc chute assembly
31	1	1	2	259A5614G1	Movable tip assembly
33	—	1	2	304A6611P1	Compression spring for movable contact finger (used with holding coil)
33	1	—	1	304A6611P1	Compression spring for movable contact finger (used without holding coil)
33	—	1	1	2418819P1	Compression spring for movable contact finger (used without holding coil)
37	1	—	—	259A5683G2	Shunt assembly
37	—	1	2	259A8160G2	Shunt assembly

# If interlock is used, a quantity of one set is required for each interlock.



DS303A2 N.O. Contact

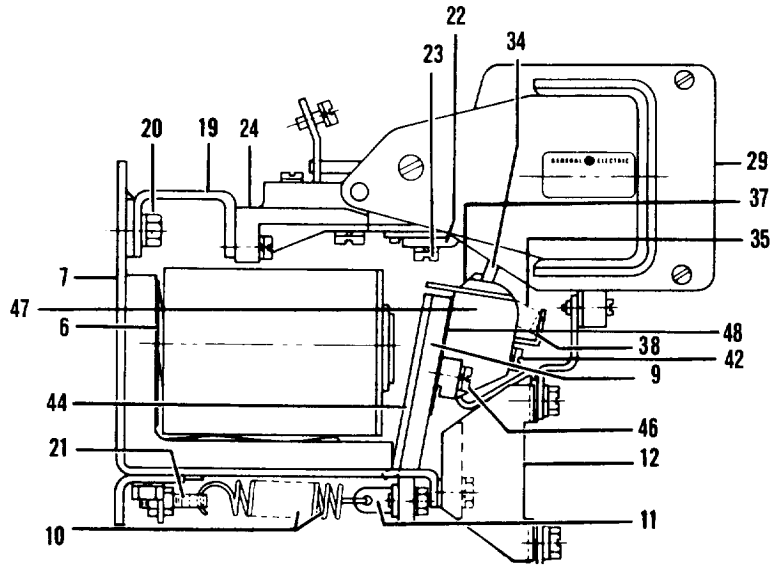


DS303A2 N.C. Contact

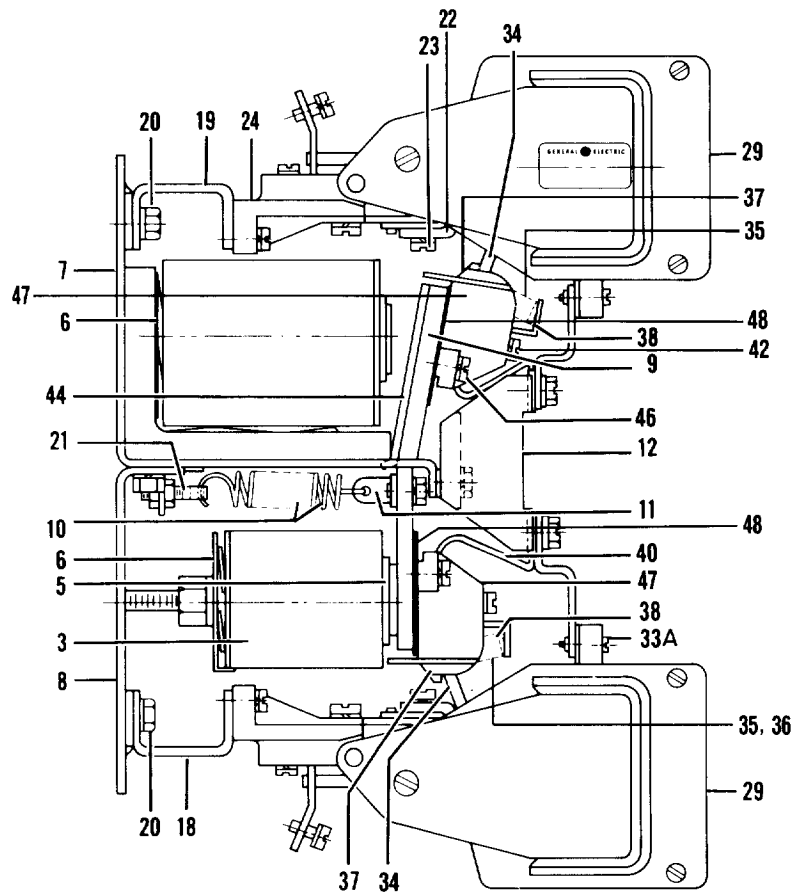
## LIST OF PARTS

Ref. No.	Quantity Required for			Catalog Number	Description
	1 N.O.	1 N.C.	1 N.O. 1 N.C.		
1	—	—	—		Blowout coil (see table 2)
2	—	—	—		Operating coil (see table 3A)
3	—	—	—		Holding coil (see table 3A)
4*	—	—	—		Electrical interlock (see table 4)
5	1	1	1	N931P50C6	Coil retainer
6	1	1	1	151A3966P1	Washer for operating or holding coil
7	1	—	—	202B3632G1	Magnet frame with core for operating coil
7	—	1	1	237B7702G1	Magnet frame with core for operating coil and holding coil
9	1	—	—	259A5681G1	Armature assembly
9	—	1	1	259A8164G1	Armature assembly
10	1	—	—	2417924P1	Tension spring for armature
10	—	1	1	2418822P1	Tension spring for armature
11	1	—	—	161A7368G7	Spring support
12	—	1	1	181A4841P2	Armature stop
13	—	2	2	N144P15006C6	Screw with lock washer fastening support to armature
14	—	1	1	202B3636G1	Terminal block
15	—	1	1	9023691P1	Adjusting screw for tension spring
16	—	1	1	8650775P5	Supporting bracket for terminal block
17	—	2	2	N57P15024B6	Screw with lock washer fastening upper magnet to lower magnet frame
18	2	3	4	N144P16010C6	Screw with lock washer fastening terminal block to supporting bracket
19	1	1	2	259A5615G1	Stationary tip assembly
20	1	1	2	9384190P1	Screw with lock washer fastening stationary tip to support
21	1	1	2	259A5690P1	Terminal
22	1	1	2	N144P21008C6	Terminal screw with lock washer
23	1	1	2	259A5685G1	Blowout coil and terminal support
24	1	1	2	N144P16008C6	Screw with lock washer fastening terminal to support
25	1	—	—	259A6597G1	Terminal support
26	1	1	2	259A5687P1	Arc horn for stationary tip
27	1	1	2	259A5689G1	Pole piece with core
28	1	1	2	305A1210G1	Pole piece
29	1	1	2	N51P16008B6	Screw fastening pole pieces together
30	1	1	2	195B6285G3	Arc chute assembly
31	1	1	2	259A5614G1	movable tip assembly
32	1	—	—	202B2627G1	Movable tip assembly (complete) N.O.
32	—	—	1	202B3638G1	Movable tip assembly (complete) N.O.
32	—	1	1	202B3638G5	Movable tip assembly (complete) N.C.
33	—	1	2	304A6611P1	Compression spring for movable contact finger (used with holding coil)
33	1	—	1	304A6611P1	Compression spring for movable contact finger (used without holding coil)
33	—	1	1	2418819P1	Compression spring for movable contact finger (used without holding coil)
34	1	1	2	259A5684P1	Spring support
35	1	1	2	259A5682G1	Movable tip support
36*	2	2	4	N144P13004C6	Screw with lock washer fastening spring support to molded support
37	1	—	—	259A5683G2	Shunt assembly
37	—	1	2	259A8160G2	Shunt assembly
38*	1	1	2	259A8165P1	Arc Barrier
39	1	—	—	259A5695P1	Arc support
39	—	1	2	259A8161P1	Arc support
40	1	—	—	259A8156P2	Spacer
41	1	1	2	273A4945P1	Insulation (1000 volt form only)

\* Not shown



DS303A2 2 N.O. Contacts



DS303A2 2 N.O. and 1 N.C. Contacts

## LIST OF PARTS

Ref. No.	Quantity Required for			Catalog Number	Description
	2 N.O.	2 N.O. 1 N.C.	2 N.O. 2 N.C.		
1	—	—	—		Blowout coil (see table 2)
2	—	—	—		Operating coil (see table 3B)
3	—	—	—		Holding coil (see table 3B)
4*	—	—	—		Electrical interlock (see table 4)
5	1	1	1	N931P112C6	Coil retainer ring
6	1	1	1	259A2698P1	Coil retainer
7	1	1	1	129B5696G2	Magnet frame with core for operating coil
8	—	1	1	129B5694G2	Magnet frame with core for holding coil
9	—	1	1	981B172G1	Armature assembly
9	1	—	—	981B172G3	Armature assembly
9	—	1	—	981B172G2	Armature assembly
10	1	1	1	2412649P1	Tension spring for armature
11	1	—	—	8067062G1	Spring support
11	—	1	1	8087264G2	Spring support
12	1	—	—	125A5940G3	Terminal block
12	—	1	—	125A5940G6	Terminal block
12	—	—	1	125A5940G1	Terminal block
16	1	—	—	151A2001UTP1	Mounting bracket
18	—	1	—	129B5702P2	Supporting bracket, bottom
19	1	1	2	129B5702P1	Supporting bracket, top
20	2	4	4	N26P21008B6	Screw fastening brackets to magnet frame
21	1	1	1	167A9802P1	Eyebolt for tension spring
22	2	3	4	259A5637G1	Stationary tip assembly
23	2	3	3	9384190P2	Mounting screw for stationary tip
24	2	3	4	195B6280P1	Blowout coil support
25	2	3	4	259A5628P1	Arc horn for stationary tip
26	2	3	4	259A5633G1	Pole piece with core
27	2	3	4	195B6281P2	Pole piece
28	2	3	4	N51P16008B6	Screw fastening pole pieces together
29	2	3	4	195B6285G1	Arc chute, complete
33A	2	3	4	259A5630P1	Latch screw
34	2	3	4	259A5640G1	movable tip assembly
35	—	3	4	259A5673P1	Compression spring for movable contact finger (used with holding coil)
35	2	2	2	259A5673P1	Compression spring for movable contact finger
36	—	1	2	2417929P1	Compression spring for movable contact finger
37	2	3	4	259A5672G2	Movable tip support
38	2	3	4	259A5674P1	Spring seat
39*	2	3	4	N144P16006C6	Screw with lock washer fastening tip to shunt
40	2	3	4	259A5644G2	Shunt for movable contact finger
41*	2	3	4	259A8165P2	Arc Barrier
42	2	3	4	N144P15008C6	Screw fastening spring seat to support
43	—	1	—	259A5995G1	Arc chute support (N.C. pole)
43	1	1	2	259A8159P1	Arc chute support (left hand)
43	1	1	2	259A8159P2	Arc chute support (right hand)
44	2	3	4	9644199P1	Spacer for movable tip
46	2	3	6	N144P16012C6	Screw fastening spacer to movable tip
47	2	2	2	195B6283G2	Movable tip assembly (complete - N.O.)
47	—	1	2	195B6283G4	Movable tip assembly (complete - N.C.)
48	2	3	4	273A4945P2	Insulation (1000 volt form only)

\* Not shown

**TABLE 1**  
**NAMEPLATE IDENTIFICATION OF**  
**CONTACT**  
**POLE CONFIGURATION**

A	1 Normally open
B	1 Normally closed
C	2 Normally open
D	1 Normally open and 1 normally closed
E	2 Normally open and 1 normally closed
F	2 Normally open and 2 normally closed
G	1 Normally closed with holding coil
J	1 Normally open and 1 normally closed with holding coil
K	2 Normally open and 1 normally closed with holding coil
L	2 Normally open and 2 normally closed with holding coil

**TABLE 2**  
**BLOWOUT COILS**  
 See nameplate reading above

		Normally Open Normally Closed 1 Pole	Normally Open Normally Closed 2 Poles	Normally Open 2 Poles	Normally Open Normally Closed 3 or 4 Poles
Blowout Coil Letter	Current Rating	Coil Cat. No. Ref. No. 1	Coil Cat. No. Ref. No. 1	Coil Cat. No. Ref. No. 1	Coil Cat. No. Ref. No. 1
A	Less B.O.	-----	-----	-----	-----
C	5 amp	259A8153G2	259A8153G2	259A5998G2	259A5998G2
D	10 amp	259A8153G1	259A8153G1	259A5998G1	259A5998G1
E*	25 amp	259A5686P2	259A5686P2	259A5635G3	259A5635G3
F*	50 amp	259A5686P1	259A5686P1	259A5635G2	259A5635G2

\* Order insulation tube cat. no. 259A5643P2 and qty. 2 insulation spacers 259A5688P1.



TABLE 3A  
 OPERATING AND HOLDING COILS  
 See nameplate reading on page 1  
 (1 N.O., 1N.C.,1N.O. - 1N.C. Poles)

Coil No.	Volts	Operating Coil Cat. No.	Volts	Holding Coil Cat. No.	Pick-up Resistor Cat. No.	Rectifier Cat. No.
A002	230/250	1D106G2A	----	-----	-----	-----
A003	115/120	1D106G3A	----	-----	-----	-----
A004	475/500	1D106G2A	----	-----	A50E4000DA-TH	-----
A005	550	1D106G2A	----	-----	A50E4000DA-TH	-----
A006	600	1D106G2A	----	-----	A50E6000DA-TH	-----
A008	12	1D106G12A	----	-----	-----	-----
A009	15/20	1D106G30A	----	-----	-----	-----
A010	24	1D106G18A	----	-----	-----	-----
A012	32	1D106G10A	----	-----	-----	-----
A013	38	1D106G93A	----	-----	-----	-----
A014	48/50	1D106G14A	----	-----	-----	-----
A015	55/60	1D106G43A	----	-----	-----	-----
A016	62/68	1D106G9A	----	-----	-----	-----
A017	74	1D106G7A	----	-----	-----	-----
A018	78	1D106G7A	----	-----	-----	-----
A019	80	1D106G7A	----	-----	-----	-----
A020	90	1D106G7A	----	-----	-----	-----
A021	100	1D106G94A	----	-----	-----	-----
A023	150	1D106G8A	----	-----	-----	-----
A025	180/190	1D106G42A	----	-----	-----	-----
A027	275	1D106G2A	----	-----	A50E1000DA-TH	-----
A028	300	1D106G2A	----	-----	A50E1500DA-TH	-----
A029	350	1D106G2A	----	-----	A50E2000DA-TH	-----
A031	440	1D106G2A	----	-----	A50E3000DA-TH	-----
A032	13.6	1D106G54A	----	-----	-----	-----
A502*	230/250	1D106G2A	----	-----	-----	-----
A503*	115/120	1D106G3A	----	-----	-----	-----
A650	115AC	1D106G7A	----	-----	A50E200DA-TH	IC3500A403C2
A651	230AC	1D106G42A	----	-----	A50E500DA-TH	IC3500A403C6
A652	460AC	1D106G2A	----	-----	A50E4000DA-TH	IC3500A403C5
A653	575AC	1D106G2A	----	-----	A50E6500DA-TH	IC3500A403C8
B002	230/250	1D106G44	----	-----	-----	-----
B013	38	1D106G38A	----	-----	-----	-----
C013	38	1D106G51A	----	-----	-----	-----
C019	80	1D106G50A	----	-----	-----	-----
J202	230/250	1D106G2A	230/250	1D106G2A	-----	-----
J203	115/120	1D106G3A	115/120	1D106G3A	-----	-----
J204	90	1D106G13A	-----	-----	-----	-----
J205	62	1D106G9A	62	1D106G9A	-----	-----
J206	90	1D106G13A	90	1D106G13A	-----	-----
J207	115/120	1D106G3A	90	1D106G13A	-----	-----
J208	230/250	1D106G2A	115/120	1D106G3A	-----	-----
J209	150	1D106G8A	150	1D106G8A	-----	-----
J210	125	1D106G41A	250	1D106G40A	-----	-----

\* Order noise suppressor cat. no. 128C4095G21 for DS303A2A 1 N.O. contact.  
 Order noise suppressor cat. no. 128C4095G22 for DS303A2B 1 N.C. contact.  
 Order noise suppressor cat. no. 128C4095G22 for DS303A2D 1 N.O. - 1 N.C. contact.

TABLE 3B

OPERATING AND HOLDING COILS

See nameplate reading on page 1

(2 N.O., 2 N.O. - 1 N.C., 2 N.O. - 2 N.C. Poles)

Coil No.	Volts	Operating Coil Cat. No.	Volts	Holding Coil Cat. No.	Pick-up Resistor Cat. No.	Rectifier Cat. No.
A002	230/250	22D101G2A	----	-----	-----	-----
A003	115/120	22D101G3A	----	-----	-----	-----
A004	475/500	22D101G5A	----	-----	-----	-----
A005	550	22D101G6A	----	-----	-----	-----
A006	600	22D101G6A	----	-----	-----	-----
A008	12	22D101G16A	----	-----	-----	-----
A009	18/20	22D101G21A	----	-----	-----	-----
A010	24	22D101G18A	----	-----	-----	-----
A011	28	22D101G27A	----	-----	-----	-----
A012	32	22D101G14A	----	-----	-----	-----
A013	38	22D101G119A	----	-----	-----	-----
A014	48/50	22D101G8A	----	-----	-----	-----
A016	62/68	22D101G4A	----	-----	-----	-----
A017	74	22D101G25A	----	-----	-----	-----
A018	78	22D101G7A	----	-----	-----	-----
A020	90	22D101G15A	----	-----	-----	-----
A021	100	22D101G118A	----	-----	-----	-----
A022	135	22D101G111A	----	-----	-----	-----
A023	150	22D101G11A	----	-----	-----	-----
A024	165	22D101G115A	----	-----	-----	-----
A025	180/190	22D101G12A	----	-----	-----	-----
A027	275	22D101G12A	----	-----	-----	-----
A028	300	22D101G10A	----	-----	-----	-----
A030	380	22D101G17A	----	-----	-----	-----
A032	67	22D101G125A	----	-----	-----	-----
A033	50	22D101G113A	----	-----	-----	-----
A034	600	22D101G121A	----	-----	-----	-----
A035	120	22D101G126A	----	-----	-----	-----
A502*	230/250	22D101G2A	----	-----	-----	-----
A503*	115/120	22D101G3A	----	-----	-----	-----
B013	38	22D101G123A	----	-----	-----	-----
C013	38	22D101G128A	----	-----	-----	-----
C018	78	22D101G127A	----	-----	-----	-----
G002	230	22D101G102	----	-----	-----	-----
G003	115	22D101G103	----	-----	-----	-----
G004	500	22D101G105	----	-----	-----	-----
G006	600	22D101G106	----	-----	-----	-----
G009	18/20	22D101G32	----	-----	-----	-----
G010	24	22D101G110	----	-----	-----	-----
G013	38	22D101G108	----	-----	-----	-----
G015	55/60	22D101G104	----	-----	-----	-----
G018	78	22D101G116	----	-----	-----	-----
G020	90	22D101G109	----	-----	-----	-----

TABLE 3B continued on next sheet

\* Order noise suppressor cat. no. 128C4095G16 for DS303A2C 2 N.O. contacts.  
 Order noise suppressor cat. no. 128C4095G17 for DS303A2E 2 N.O. - 1 N.C. contacts.  
 2 N.O. - 2 N.C. contacts.

TABLE 3B (Cont'd)

OPERATING AND HOLDING COILS

See nameplate reading on page 1

(2 N.O., 2 N.O. - 1 N.C., 2 N.O. - 2 N.C. Poles)

Coil No.	Volts	Operating Coil Cat. No.	Volts	Holding Coil Cat. No.	Pick-up Resistor Cat. No.	Rectifier Cat. No.
G027	275	22D101G117	----	-----	-----	-----
G028	300	22D101G124	----	-----	-----	-----
G032	20	22D101G32	----	-----	-----	-----
G033	115	22D101G122	----	-----	-----	-----
G650	115AC	22D101G15A	----	-----	A50E25DA-TH	IC3500A403C2
G651	230AC	22D101G12A	----	-----	A50E150DA-TH	IC3500A403C6
G652	460AC	22D101G17A	----	-----	A50E750DA-TH	IC3500A403C5
G653	575AC	22D101G5A	----	-----	A50E750DA-TH	IC3500A403C8
G654	380AC	22D101G10A	----	-----	A50E400DA-TH	IC3500A403C5
J202	230/250	22D101G2A	230/250	22D163G2A	-----	-----
J203	115/120	22D101G3A	115/120	22D163G3A	-----	-----
J204	500	22D101G5A	500	22D163G10A	-----	-----
J205	550/600	22D101G6A	550/600	22D163G5A	-----	-----
J206	62	22D101G4A	62	22D163G6A	-----	-----
J207	190	22D101G12A	230/250	22D163G2A	-----	-----
J208	90	22D101G15A	230/250	22D163G2A	-----	-----
J209	90	22D101G15A	300	22D163G7A	-----	-----
J210	78	22D101G7A	230/250	22D163G62A	-----	-----
J211	230/250	22D101G2A	300	22D163G7A	-----	-----
J212	230/250	22D101G2A	500	22D163G10A	-----	-----
J213	115/120	22D101G3A	500	22D163G10A	-----	-----
J214	115/120	22D101G3A	300	22D163G7A	-----	-----
J215	115/120	22D101G3A	230/350	22D163G2A	-----	-----
J216	230/250	22D101G2A	115/120	22D163G3A	-----	-----
J217	38	22D101G119A	38	22D163G13A	-----	-----
J218	200	22D101G1A	300	22D163G7A	-----	-----
J219	78	22D101G7A	62	22D163G6A	-----	-----
J220	190	22D101G12A	190	22D163G11A	-----	-----
J221	135	22D101G111A	135	22D163G15A	-----	-----
J222	62	22D101G4A	62	22D163G6	-----	-----
J223	78	22D101G7A	78	22D163G16A	-----	-----
J224	600	22D101G121A	550/600	22D163G5A	-----	-----
J225	230/250	22D101G2A	32	22D163G17A	-----	-----
J226	230	22D101G2A	56 amps	278A919G3	-----	-----
J227	230/250	22D101G102	56 amps	278A919G3	-----	-----
J228	90	22D101G109	230/250	278A919G2A	-----	-----
J229	230/250	22D101G102	230/250	278A919G2A	-----	-----
J230	144	22D101G26A	90	278A919G9A	-----	-----
J231	74	22D101G25A	45	278A919G45	-----	-----

TABLE 4  
ELECTRICAL INTERLOCK  
See nameplate reading on page 1

Interlock Letter	Interlock Switch Unit		# Set of Contacts Cat. No.	Mounting Kit Cat. No.	Interlock Cover Cat. No.
	Left-hand Cat. No.	Right-hand Cat. No.			
XF	IC2956A200A	-----	6960053G3	IC2956A202J	-----
XG	-----	IC2956A200A	6960053G3	IC2956A202K	-----
XH	IC2956A200C	-----	6960053G3	IC2956A202J	-----
XJ	-----	IC2956A200C	6960053G3	IC2956A202K	-----
XK	IC2956A200B	-----	6960053G3	IC2956A202J	-----
XL	-----	IC2956A200B	6960053G3	IC2956A202K	-----
AF	IC2956A200A	-----	6960053G3	IC2956A202J	136C2527P1
AG	-----	IC2956A200A	6960053G3	IC2956A202K	136C2527P1
AH	IC2956A200C	-----	6960053G3	IC2956A202J	136C2527P1
AJ	-----	IC2956A200C	6960053G3	IC2956A202K	136C2527P1
AK	IC2956A200B	-----	6960053G3	IC2956A202J	136C2527P1
AL	-----	IC2956A200B	6960053G3	IC2956A202K	136C2527P1
DF	IC2956A205A	-----	6960053G24	IC2956A202J	-----
DG	-----	IC2956A205A	6960053G24	IC2956A202K	-----
DH	IC2956A205C	-----	6960053G24	IC2956A202J	-----
DJ	-----	IC2956A205C	6960053G24	IC2956A202K	-----
DK	IC2956A205B	-----	6960053G24	IC2956A202J	-----
DL	-----	IC2956A205B	6960053G24	IC2956A202K	-----
EF	IC2956A205A	-----	6960053G24	IC2956A202J	136C2527P1
EG	-----	IC2956A205A	6960053G24	IC2956A202K	136C2527P1
EH	IC2956A205C	-----	6960053G24	IC2956A202J	136C2527P1
EJ	-----	IC2956A205C	6960053G24	IC2956A202K	136C2527P1
EK	IC2956A205B	-----	6960053G24	IC2956A202J	136C2527P1
EL	-----	IC2956A205B	6960053G24	IC2956A202K	136C2527P1
XM**	IC2956A200A	-----	6960053G3	IC2956A202C	-----
	-----	IC2956A200A	6960053G3	IC2956A202T	-----
XN**	IC2956A200A	-----	6960053G3	IC2956A202C	-----
	-----	IC2956A200C	6960053G3	IC2956A202T	-----
XP**	IC2956A200A	-----	6960053G3	IC2956A202C	-----
	-----	IC2956A200B	6960053G3	IC2956A202T	-----
XR**	IC2956A200C	-----	6960053G3	IC2956A202C	-----
	-----	IC2956A200B	6960053G3	IC2956A202T	-----
XS**	IC2956A200B	-----	6960053G3	IC2956A202C	-----
	-----	IC2956A200B	6960053G3	IC2956A202T	-----

\*\* For 2 N.O. main poles only

# Includes movable and stationary contacts, springs, and contact-holding screws.