RELAYS

221, 222, 223, 224, 225, 247, 248, 251, AND 252 TYPES

132- AND 133-TYPE INDUCTORS

AND CORRESPONDING AUTOMATIC ELECTRIC COMPANY APPARATUS

PIECE-PART DATA AND REPLACEMENT PROCEDURES

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of 221-, 222-, 223-, 224-, 225-, 247-, 248-, 251-, and 252-type relays, 132- and 133-type inductors and corresponding AECo apparatus. It also covers approved procedures for replacing these parts.

1.02 This section is reissued to add relay codes and coils in Tables A and C, to add information for replacing armatures on AECo relays of early manufacture, and to add procedures for replacing parts not readily accessible on a switch. Detailed reasons for reissue will be found at the end of the section. Since this reissue covers a general revision, the arrows ordinarily used to indicate changes have been omitted.

1.03 Part 2 of this section covers the piece-part numbers and the corresponding names of the parts which it is practical to replace in the field in the maintenance of the relays and inductors covered by this section. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called *"Piece-Part Data."*

1.04 Part 3 of this section covers approved procedures for the replacement of the parts covered in Part 2. This information is called *"Replacement Procedures."*

1.05 Modified 221- and 222-type relays are 221- and 222-type relays equipped with 1:1 ratio armatures.

2. PIECE-PART DATA

2.01 The figures included in this part show the various piece parts in their proper relation to the other parts. The piece-part numbers of the various parts are given together with the names of the parts. The part numbers given in Fig. 1 to 6 inclusive, in Table A, and the second column of Table C are WECo piece-part numbers, and the names given are those listed by the WECo merchandise department. The part numbers given in Fig. 7 (except for two WECo piece-part numbers), Table D and the third and fourth columns of Table C are AECo part numbers. Where these names differ from those in general use in the field the latter names, in some cases, are shown in parentheses.

2.02 Information enclosed by parentheses ( ) is not ordering information. It may be references to notes, parts referred to in other portions of the section and not considered replaceable, or where the name in general use in the field differs from the part name assigned by the manufacturer.

2.03 The tables in this part of the section cover the following information:

(a) *Table A* on Page 5 is a numerical list of WECo relay and inductor code numbers showing the part number of the WECo coil and a cross-reference item number to Table C. Table A is to be used for ordering coils for all WECo code relays and inductors (2.05 explains the use of the item reference to Table C).

(b) *Table B* on Page 11 is a numerical list of AECo code relays and inductors, for which equivalent WECo coils are available, showing an item number referring to Table C for coil ordering information. This table also shows in a third column the code number of the corresponding WECo relay where such exists (2.06 explains the procedure for ordering coils for AECo relays).
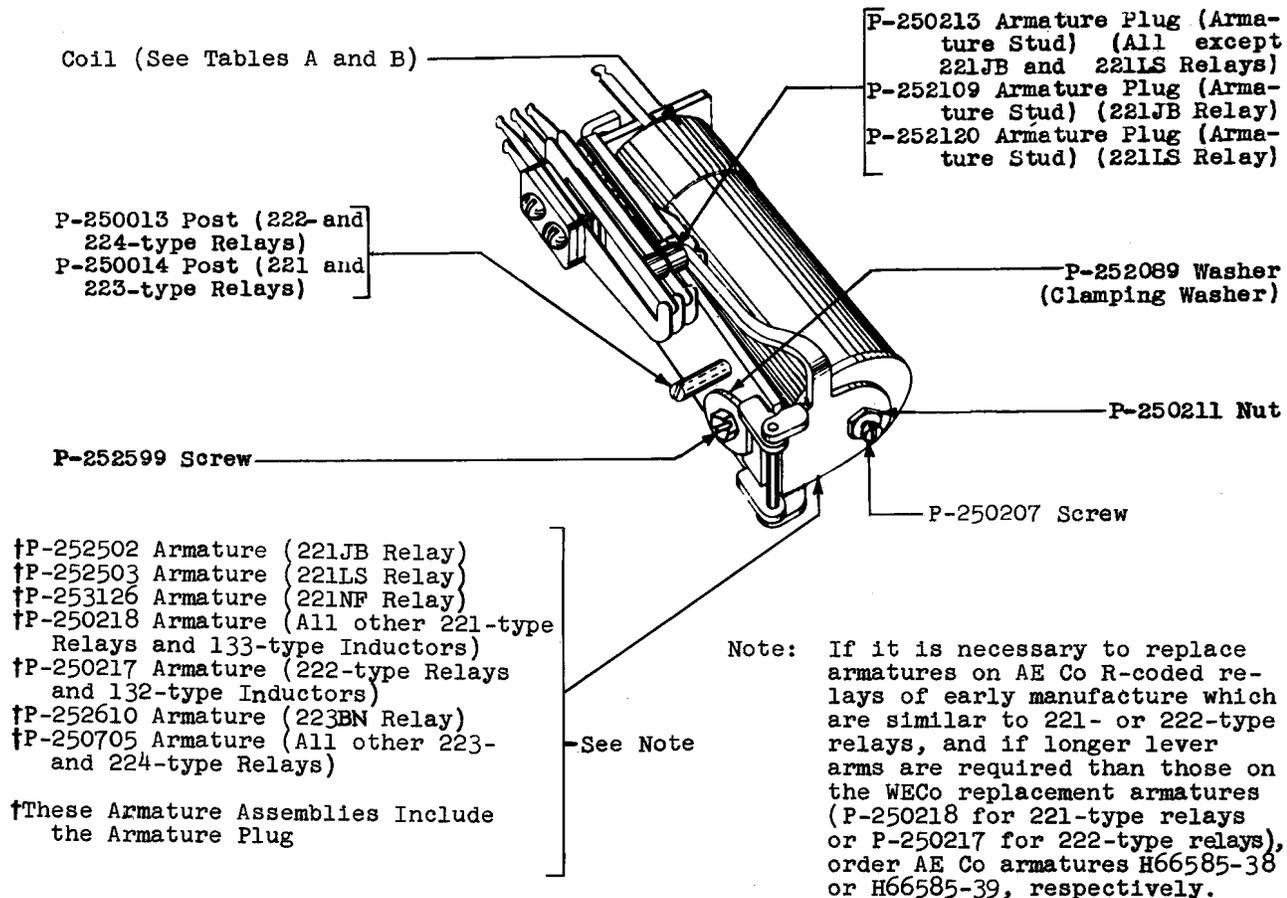
(c) *Table C* on Page 27 lists in numerical order the item numbers and the corresponding piece-part numbers for the various interchangeable coils. Item numbers below 1000 apply to WECo coils. Item numbers above

1000 apply to AECo coils which do not have corresponding WECo coils. When coils are ordered in accordance with this table, use the WECo coil number for item numbers below 1000 and use the "White Covering" coil number for item numbers above 1000. The other coil numbers are listed merely to assist in identifying interchangeable coils that may be on hand.

(d) *Table D* on Page 30 lists all AECo coils in numerical order with a cross reference to item numbers in Table C for ordering information. The coils shown in Table D are interchangeable with any of the coils shown opposite the corresponding item number in Table C.

2.04 Some AECo R coded relays of early manufacture have armatures with longer lever arms than those on armatures of corresponding 221- and 222-type relays. Since the 221- and 222-type relay armatures are not satisfactory for use on these AECo relays, order armatures for these relays as covered in Fig. 1.

2.05 *Procedure for Ordering Coils for a WECo Code Relay:* Refer to Table A and order the coil listed opposite the relay code or inductor code. To determine what interchangeable AECo coils can be used in place of the WECo coil, note the item number opposite the coil number in Table A, and refer to the corresponding item in Table C.

Coil (See Tables A and B)

P-250213 Armature Plug (Armature Stud) (All except 221JB and 221LS Relays)
P-252109 Armature Plug (Armature Stud) (221JB Relay)
P-252120 Armature Plug (Armature Stud) (221LS Relay)

P-250013 Post (222- and 224-type Relays)
P-250014 Post (221 and 223-type Relays)

P-252089 Washer (Clamping Washer)

P-250211 Nut

P-252599 Screw

P-250207 Screw

†P-252502 Armature (221JB Relay)
†P-252503 Armature (221LS Relay)
†P-253126 Armature (221NF Relay)
†P-250218 Armature (All other 221-type Relays and 133-type Inductors)
†P-250217 Armature (222-type Relays and 132-type Inductors)
†P-252610 Armature (223BN Relay)
†P-250705 Armature (All other 223- and 224-type Relays)

†These Armature Assemblies Include the Armature Plug

See Note

Note: If it is necessary to replace armatures on AE Co R-coded relays of early manufacture which are similar to 221- or 222-type relays, and if longer lever arms are required than those on the WECo replacement armatures (P-250218 for 221-type relays or P-250217 for 222-type relays), order AE Co armatures H66585-38 or H66585-39, respectively.

Fig. 1 — Parts of 221-, 222-, 223-, and 224-type Relays, 132- and 133-type Inductors, and Corresponding AECo Apparatus

2.06 *Procedure for Ordering Coils for an AECo Code Relay:* Refer to Table B. If the relay or inductor is listed in Table B, proceed as outlined in (a) below. If the relay or inductor is not listed in Table B, proceed as outlined in (b) below.

(a) *AECo relays listed in Table B.* Refer to the corresponding item number in Table C and order the coil by the WECo number shown opposite that item number. The coil numbers shown in Table C opposite that item number can be used interchangeably.
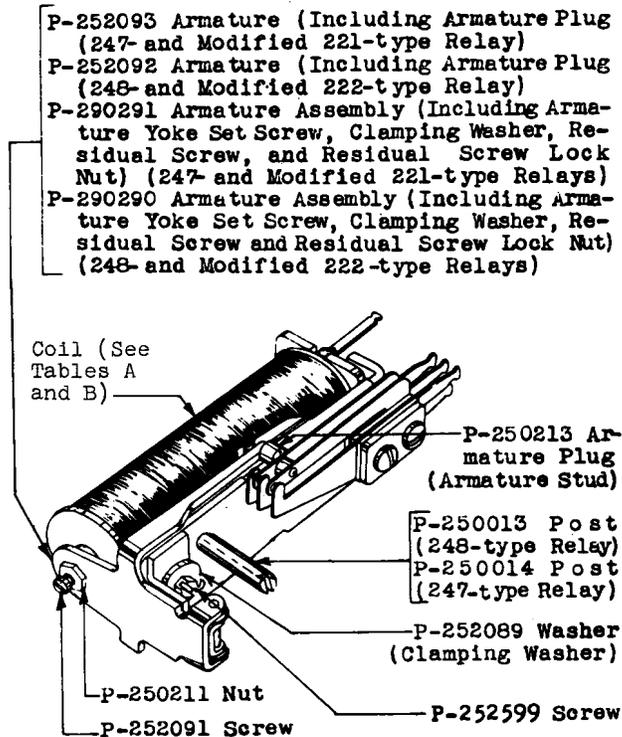
(b) *AECo relays not listed in Table B.* Note the coil number specified under the desired relay code on the circuit requirement table. If that coil number is listed in Table D refer to the corresponding item number in Table C and order the coil number listed in the column headed "WECo Coil No." If no coil number appears in the column headed "WECo Coil No.", order the coil number listed in the column headed "White Covering." If the coil number is not listed in Table D, order the coil by the number specified on the circuit requirement table.
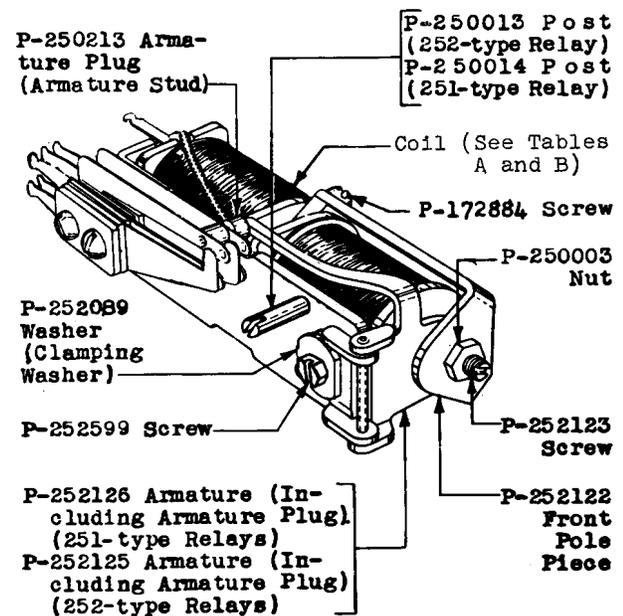
(c) If the coil number is not shown on the circuit requirement table, order a coil for a particular code relay as follows: "Coil for RXXX-A1 relay."

2.07 In Tables A and B, certain relays are designated by an asterisk (*). For these relays it is recommended that no coil replacements be made if "zero" or "slight residual" (SL) is specified for the relays.

2.08 When ordering parts for replacement purposes give the piece-part number as well as the name of the part. Example: "P-250214 — Bushing." Do not refer to the BSP number or to any information shown in parentheses following the piece-part numbers.

P-252093 Armature (Including Armature Plug (247- and Modified 221-type Relay)
P-252092 Armature (Including Armature Plug (248- and Modified 222-type Relay)
P-290291 Armature Assembly (Including Armature Yoke Set Screw, Clamping Washer, Residual Screw, and Residual Screw Lock Nut) (247- and Modified 221-type Relays)
P-290290 Armature Assembly (Including Armature Yoke Set Screw, Clamping Washer, Residual Screw and Residual Screw Lock Nut) (248- and Modified 222-type Relays)

Coil (See Tables A and B)

P-250213 Armature Plug (Armature Stud)

P-250013 Post (248-type Relay)
P-250014 Post (247-type Relay)

P-252089 Washer (Clamping Washer)

P-250211 Nut

P-252091 Screw

P-252599 Screw

Fig. 2 — Parts for 247- and 248-type Relays, Modified 221- and 222-type, and Corresponding AECo Relays

P-250213 Armature Plug (Armature Stud)

P-250013 Post (252-type Relay)
P-250014 Post (251-type Relay)

Coil (See Tables A and B)

P-172884 Screw

P-250003 Nut

P-252089 Washer (Clamping Washer)

P-252599 Screw

P-252126 Armature (Including Armature Plug) (251-type Relays)
P-252125 Armature (Including Armature Plug) (252-type Relays)

P-252123 Screw

P-252122 Front Pole Piece

Fig. 3 — Parts of 251- and 252-type Relays

When ordering P-252552 Washer also
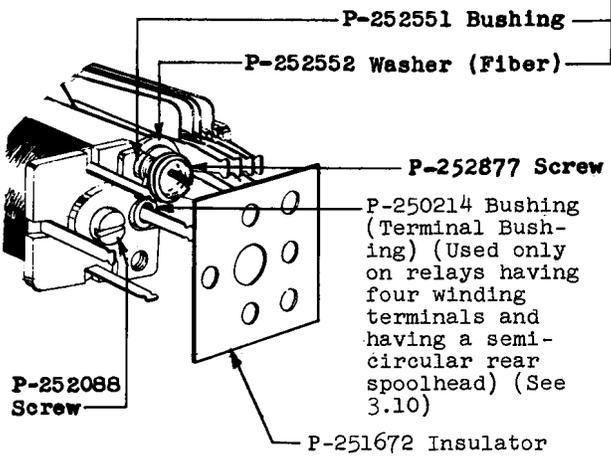order P-252551 Bushing where the
bushing was not previously furnished

—— P-252551 Bushing ——

—— P-252552 Washer (Fiber) ——

—— P-252877 Screw

P-250214 Bushing
(Terminal Bush-
ing) (Used only
on relays having
four winding
terminals and
having a semi-
circular rear
spoolhead) (See
3.10)

—— P-251672 Insulator

P-252088
Screw

**Fig. 4 – Parts Used in Mounting All Relays and
Inductors, Except the 225 and
Corresponding AECo Relays**

—— P-252088 Screw

—— P-103723 Washer

P-250854
Screw

—— Coil (See Tables A and B)

—— P-250925
Screw

—— P-250911
Nut

—— P-250207
Screw

—— P-250211
Nut

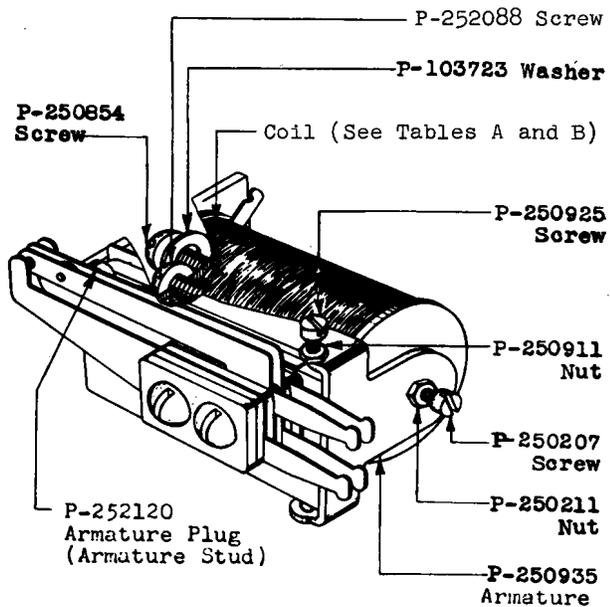—— P-250935
Armature

P-252120
Armature Plug
(Armature Stud)

**Fig. 6 – 225-type and Corresponding AECo Relays
(Pivot-type Armature Bearings)**

Armature Assembly
Note: When ordering any part of the
armature assembly except the
residual screw and lock nut and
armature plug order an armature,
armature plug and spring assem-
bly, assembled for the particu-
lar code relay involved.

—— P-181248 Screw (Armature
Assembly Mounting Screws)

—— Coil (See Tables A and B)

—— P-166881
Screw

P-205654
Screw (Re-
placement
for F. H.
Screw)

P-252088
Screw (Re-
placement
for Fil.
Hd. Screw)

—— P-250207 Screw

—— P-250211 Nut

—— P-252120 Ar-
mature Plug
(Armature Stud)
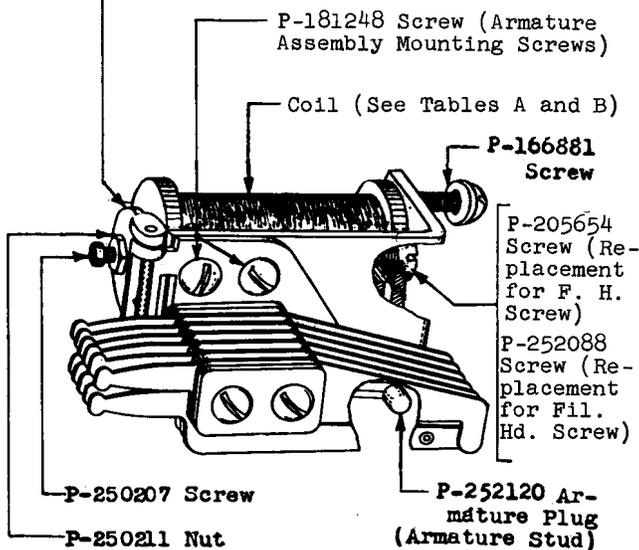
**Fig. 5 – 225-type and Corresponding AECo Relays
(Pin-type Armature Bearing)**

Coil (See
Table B)

—— A.E.Co. D-7500
Separator
(Armature Stud)

—— P-205652 Screw

—— A. E. Co.
D-7721 Nut

—— P-250207
Screw

—— A. E. Co.
D-7709 Nut

A.E.Co. D-76333 Screw (For
D-810984, D-810985, D-811110,
D-811111, D-811307 and
D-811308 Relays
D-76124 Screw (For all other
relays)

A.E. Co. D-71023 Armature
(Right Mounting)
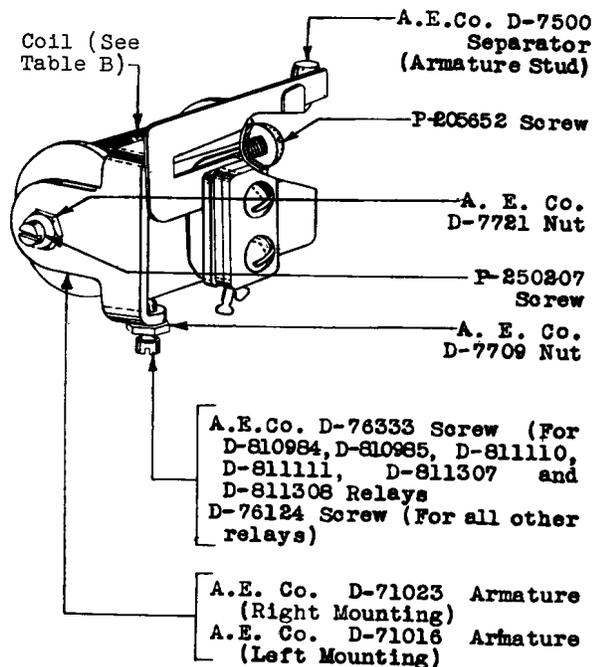A.E. Co. D-71016 Armature
(Left Mounting)

**Fig. 7 – AECo Pivot-type Relays Used on Line
Switches and Master Switches**

TABLE A — NUMERICAL LIST OF WECo RELAY AND INDUCTOR CODE NUMBERS SHOWING PART NUMBERS FOR WECo COILS AND CROSS REFERENCE TO TABLE C FOR INTERCHANGEABLE AECo COILS [SEE 2.03 (a) AND 2.05]

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
221-TYPE RELAYS			221-TYPE RELAYS			221-TYPE RELAYS		
221A	P-251478	89	221BJ	P-250720	5	*221DR	P-251244	50
221B	P-252262	173	221BK	P-250723	6	*221DS	P-251244	50
221C	P-250242	3	221BL	P-250778	11	*221DT	P-251244	50
221D	P-252262	173	221BM	P-250998	33	*221DU	P-251244	50
221E	P-252262	173	221BN	P-251287	59	*221DW	P-251244	50
221G	P-252262	173	221BR	P-250940	25	221DY	P-250229	2
221H	P-252262	173	221BS	P-250940	25	221EA	P-250737	7
221J	P-252262	173	221BT	P-250941	26	221EB	P-251478	89
221K	P-252262	173	221BU	P-250738	8	221EC	P-251248	52
221L	P-252262	173	221BY	P-250229	2	221ED	P-252263	174
221M	P-251478	89	221CA	P-250229	2	221EE	P-250229	2
221P	P-251478	89	221CB	P-250229	2	221EF	P-252263	174
221R	P-251478	89	*221CC	P-251053	35	221EG	P-251478	89
221T	P-250229	2	221CD	P-252263	174	221EH	P-250989	30
221U	P-250229	2	221CE	P-252263	174	221EJ	P-250229	2
221W	P-252874	195	221CF	P-252263	174	*221EK	P-251244	50
221Y	P-250229	2	221CG	P-252263	174	*221EL	P-251244	50
221AA	P-250229	2	221CH	P-252263	174	221EM	P-250229	2
221AB	P-250229	2	221CJ	P-252263	174	221EN	P-250752	10
221AC	P-250229	2	221CK	P-252263	174	*221ER	P-251053	35
221AD	P-250738	8	221CL	P-252263	174	221ES	P-251292	60
*221AE	P-251053	35	221CM	P-250997	32	221ET	P-250746	9
221AF	P-251951	131	221CN	P-251951	131	221EU	P-251479	90
221AG	P-251951	131	221CP	P-251002	34	221EW	P-251295	61
221AH	P-251951	131	221CR	P-251083	42	221EY	P-251163	47
*221AJ	P-251951	131	*221CS	P-251053	35	221FA	P-251951	131
221AK	P-250954	28	221CT	P-250778	11	221FB	P-251314	62
*221AL	P-250752	10	221CU	P-250737	7	221FC	P-251315	63
221AM	P-250746	9	*221CW	P-251053	35	*221FD	P-251053	35
221AN	P-250737	7	221CY	P-251076	36	221FE	P-251322	65
221AP	P-250737	7	*221DA	P-251053	35	*221FF	P-251083	42
221AR	P-250737	7	221DB	P-251108	44	221FG	P-250229	2
221AS	P-250737	7	221DC	P-251053	35	221FH	P-251077	37
221AT	P-250737	7	221DD	P-250866	15	221FJ	P-252263	174
221AU	P-250792	13	221DE	P-250737	7	221FK	P-251053	35
221AW	P-250866	15	221DF	P-251163	47	221FL	P-252263	174
221AY	P-250873	19	221DG	P-250746	9	*221FM	P-251350	68
221BA	P-251479	90	221DH	P-250229	2	*221FN	P-251053	35
221BB	P-251479	90	*221DJ	P-251218	49	*221FP	P-251053	35
221BC	P-250790	12	*221DK	P-251218	49	221FR	P-250229	2
*221BD	P-252142	145	*221DL	P-251053	35	221FS	P-251478	89
221BF	P-250242	3	*221DM	P-251244	50	221FT	P-252263	174
221BH	P-250865	14	221DN	P-251083	42	*221FU	P-251053	35
			221DP	P-251252	53	*221FW	P-251375	74

*See 2.07

TABLE A (Cont)

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
221-TYPE RELAYS			221-TYPE RELAYS			221-TYPE RELAYS		
221FY	P-251053	35	221JG	P-251292	60	221LR	P-250865	14
*221GA	P-251377	76	221JH	P-251479	90	*221LS	P-250737	7
*221GB	P-251374	73	221JJ	P-251383	81	221LT	P-250737	7
221GC	P-251478	89	221JK	P-251053	35	221LU	P-252142	145
*221GD	P-250865	14	221JL	P-251585	107	221LW	P-252177	150
221GE	P-251478	89	221JM	P-250870	18	221LY	P-252188	153
221GF	P-250229	2	221JN	P-251494	95	221MA	P-252203	157
221GH	P-250229	2	221JP	P-251493	94	221MB	P-252189	154
221GJ	P-250892	23	221JR	P-251163	47	221MC	P-252187	152
221GK	P-251478	89	221JS	P-250737	7	221MD	P-252263	174
221GL	P-250229	2	221JT	P-251830	115	221ME	P-252487	177
221GM	P-251292	60	221JU	P-251080	40	221MF	P-252565	180
221GN	P-251426	86	221JW	P-251168	48	221MG	P-252566	181
221GP	P-251080	40	221JY	P-251053	35	221MH	P-252569	182
221GR	P-251080	40	221KA	P-250737	7	221MJ	P-250890	22
221GS	P-250892	23	221KB	P-251942	128	221MK	P-252251	168
221GT	P-251080	40	221KC	P-251905	123	221ML	P-250229	2
221GU	P-251431	87	221KD	P-251292	60	221MM	P-252252	169
221GW	P-250752	10	221KE	P-250720	5	221MN	P-252238	159
*221GY	P-251053	35	221KF	P-252263	174	221MP	P-250737	7
221HA	P-250752	10	221KG	P-252246	164	221MR	P-251244	50
221HB	P-250229	2	221KH	P-250242	3	221MS	P-251244	50
*221HC	P-251053	35	221KL	P-251942	128	221MT	P-252177	150
221HD	P-251481	92	221KM	P-251053	35	221MU	P-252261	172
221HE	P-250737	7	*221KN	P-251053	35	221MW	P-250229	2
221HF	P-250720	5	221KP	P-251080	40	221MY	P-250866	15
*221HG	P-251244	50	*221KR	P-251244	50	221NA	P-251643	109
221HH	P-250890	22	221KS	P-251905	123	221NB	P-251905	123
221HJ	P-250737	7	221KT	P-250865	14	221NC	P-251375	74
221HK	P-250229	2	221KU	P-251643	109	221ND	P-252419	175
221HL	P-252263	174	221KW	P-250737	7	221NE	P-252419	175
221HM	P-250865	14	221KY	P-251375	74	221NF	P-252657	192
221HN	P-251053	35	221LA	P-252062	135	221NG	P-252659	193
221HP	P-251666	110	221LB	P-251907	125	221NH	P-252420	176
221HR	P-252249	166	221LC	P-251908	126	221NJ	P-252421	197
221HS	P-250866	15	221LD	P-251909	127	221NK	P-251478	89
221HT	P-251521	98	*221LE	P-251053	35	221NL	P-250242	3
221HU	P-251522	99	221LF	P-252072	138	221NN	P-252668	218
221HW	P-251520	97	221LG	P-251295	61	221NP	P-250790	12
221HY	P-251504	96	221LH	P-251426	86	221NR	P-252262	173
221JA	P-251572	104	*221LJ	P-251053	35	221NS	P-252262	173
*221JB	P-250737	7	221LK	P-250229	2	221NT	P-252660	171
221JC	P-251666	110	221LL	P-250866	15	221NU	P-252660	171
221JD	P-251292	60	221LM	P-250229	2	221NW	P-251079	39
221JE	P-251703	112	221LN	P-250866	15	221PA	P-250737	7
221JF	P-250752	10	221LP	P-251080	40	221PB	P-253215	219

*See 2.07

TABLE A (Cont)

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
221-TYPE RELAYS			222-TYPE RELAYS			222-TYPE RELAYS		
221PC	P-252263	174	222S	P-251079	39	222CF	P-250955	29
221PD	P-252665	215	222T	P-251079	39	222CG	P-251079	39
221PE	P-252667	217	222W	P-251478	89	222CH	P-250229	2
221PF	P-252874 or	195	222Y	P-251478	89	222CJ	P-250229	2
	P-250229	2	222AA	P-251478	89	222CK	P-252263	174
221PG	P-250997	32	222AC	P-250229	2	222CL	P-250996	31
			222AD	P-250229	2	222CM	P-251084	43
221PH	P-252666	216	222AF	P-250229	2	222CN	P-251077	37
221PJ	P-252429	205	222AG	P-250229	2	*222CP	P-251084	43
221PK	P-251244	50	222AH	P-250229	2	222CT	P-250229	2
221PL	P-251248	52	222AJ	P-250229	2	222CU	P-250229	2
221PM	P-251263	55	222AK	P-250229	2	*222CW	P-251053	35
221PN	P-250242	3	222AL	P-250229	2	222CY	P-251053	35
221FAA	P-252248	165	222AM	P-250229	2	222DA	P-250229	2
221FAB	P-252248	165	222AN	P-250229	2	222DB	P-250229	2
221FAC	P-252151	147	222AP	P-250738	8	222DC	P-250737	7
221FAD	P-252151	147	*222AR	P-251053	35	222DD	P-250892	23
221FAE	P-252186	151	*222AS	P-251053	35	222DE	P-250229	2
221FAF	P-252151	147	*222AT	P-251053	35	222DF	P-251168	48
221FAG	P-252202	156	*222AU	P-251053	35	222DG	P-252868	194
221FAH	P-252186	151	*222AW	P-251053	35	222DH	P-251108	44
221FAJ	P-252151	147	*222AY	P-251053	35	222DJ	P-251079	39
221FAK	P-252488	178	222BA	P-251053	35	222DK	P-250752	10
221FAL	P-252518	179	222BB	P-251078	38	222DL	P-250752	10
221FAM	P-252488	178	222BC	P-251078	38	222DM	P-250229	2
221FAN	P-252186	151	222BD	P-251078	38	222DN	P-250229	2
D-89593	P-251079	39	222BE	P-250746	9	222DP	P-251079	39
D-90770	—	—	222BF	P-250746	9	222DR	P-251079	39
D-90771	—	—	222BH	P-250892	23	222DS	P-252868	194
D-96329	—	—	222BJ	P-251080	40	222DT	P-252868	194
D-97944	—	1061	222BK	P-250873	19	222DU	P-251478	89
D-159566	P-250790	12	222BL	P-250874	20	222DW	P-251478	89
			222BM	P-250790	12	222DY	P-251267	56
222-TYPE RELAYS			*222BN	P-252142	145	222EA	P-251478	89
*222A	P-251053	35	222BP	P-250868	17	222ED	P-251280	57
222B	P-250229	2	222BR	P-250720	5	222EE	P-251263	55
222C	P-250955	29	222BS	P-250720	5	222EF	P-250229	2
222D	P-252262	173	222BT	P-250870	18	222EG	P-250752	10
222E	P-251079	39	222BU	P-250778	11	222EH	P-251053	35
222F	P-251079	39	222BW	P-250953	27	222EJ	P-250229	2
222G	P-251079	39	*222BY	P-251081	41	222EK	P-250229	2
222H	P-251079	39	222CA	P-250867	16	222EL	P-251053	35
222J	P-252868	194	222CB	P-250229	2	222EM	P-251318	64
222K	P-251079	39	222CC	P-250229	2	222EN	P-250229	2
222L	P-251079	39	222CD	P-252868	194	222EP	P-251079	39
*222R	P-251079	39	*222CE	P-251053	35	222ER	P-251079	39

*See 2.07

TABLE A (Cont)

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
222-TYPE RELAYS			222-TYPE RELAYS			222-TYPE RELAYS		
*222ES	P-251369	72	222HB	P-251771	113	222KH	P-250954	28
222ET	P-250229	2	222HC	P-251053	35	222KJ	P-251080	40
222EU	P-250229	2	222HD	P-251827	114	222KK	P-252653	188
222EW	P-251340	66	222HE	P-251830	115	222KL	P-252656	191
222EY	P-251389	85	222HF	P-251380	78	222KM	P-252419	175
222FA	P-251263	55	222HG	P-251263	55	222KN	P-252419	175
222FB	P-251363	71	222HH	P-250229	2	222KP	P-252419	175
222FC	P-251340	66	222HJ	P-250229	2	222KR	P-252419	175
222FD	P-250229	2	222HK	P-250720	5	222KS	P-252419	175
222FE	P-252868	194	222HL	P-250229	2	*222KT	P-251168	48
222FF	P-251053	35	222HM	P-252245	163	222KU	P-252422	198
*222FG	P-251376	75	222HN	P-251906	124	222KW	P-252423	199
*222FH	P-251356	69	222HP	P-250737	7	222KY	P-250720	5
222FJ	P-250229	2	222HR	P-252250	167	222LA	P-252424	200
222FK	P-251383	81	222HS	P-251080	40	222LB	P-250229	2
222FL	P-250229	2	222HT	P-252023	132	222LC	P-252419	175
222FM	P-251053	35	*222HU	P-251053	35	222LD	P-254710	202
*222FN	P-251374	73	222HW	P-252025	134	222LE	P-252874 or P-250229	195 2
*222FP	P-251053	35	222HY	P-250954	28			
*222FR	P-251374	73	222JA	P-251315	63			
*222FS	P-251053	35	222JB	P-251108	44	222LF	P-11A088	221
222FT	P-251385	83	222JC	P-251263	55	222LH	P-251478	89
*222FU	P-251369	72	222JD	P-250229	2	222LJ	P-251478	89
*222FW	P-251374	73	222JE	P-251643	109	222LK	P-251079	39
222FY	P-250720	5	222JF	P-252063	136	222LL	P-252661	212
222GA	P-250229	2	222JG	P-251053	35	222LM	P-251267	56
222GB	P-251493	94	*222JH	P-251053	35	222LN	P-252661	212
222GC	P-251494	95	222JJ	P-252121	141	222LP	P-252428	204
222GD	P-250229	2	222JK	P-250866	15	222LS	P-251267	56
222GE	P-251376	75	222JL	P-252868	194	222LT	P-250229	2
222GF	P-250229	2	222JM	P-250229	2	222LU	P-251267	56
222GG	P-251053	35	222JN	P-252142	145	222LW	P-252868 or P-251079	194 39
222GH	P-250229	2	222JP	P-251426	86			
222GJ	P-251527	101	222JR	P-251944	130			
222GK	P-250229	2	222JS	P-252570	183	222LY	P-252658	211
222GL	P-251267	56	222JT	P-250865	14	222MA	P-251263	55
222GM	P-251478	89	222JU	P-251168	48	222MB	P-251218	49
222GN	P-251248	52	222JW	P-251478	89	222MC	P-11A088	221
222GP	P-251079	39	222JY	P-250229	2	222MD	P-252431	207
222GR	P-250954	28	222KA	P-252239	160	222PA	P-251862	122
*222GS	P-251053	35	222KB	P-250229	2	222PB	P-251862	122
222GT	P-251670	111	222KC	P-250229	2	D-90538	—	—
222GU	P-251080	40	222KD	P-251080	40	D-90550	P-251944	130
222GW	P-251478	89	222KE	P-251053	35	D-90551	P-251053	35
222GY	P-251547	103	222KF	P-251670	111	D-91041	P-251267	56
*222HA	P-251586	108	222KG	P-252652	187	D-96328	P-251951	131

*See 2.07

TABLE A (Cont)

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
222-TYPE RELAYS		
D-97945	—	1061
D-99887	P-251218	49
223-TYPE RELAYS		
223A	P-252874	195
223B	P-250890	22
223C	P-250720	5
223D	P-251478	89
223E	P-251478	89
*223F	P-250865	14
223G	P-251340	66
223H	P-250229	2
223J	P-250229	2
223K	P-251379	77
223L	P-251380	78
223M	P-250229	2
223N	P-250892	23
223P	P-250892	23
*223R	P-251053	35
223S	P-251478	89
223T	P-251447	88
223U	P-250892	23
223W	P-250892	23
223Y	P-250866	15
223AA	P-251053	35
223AB	P-251526	100
223AC	P-251380	78
223AD	P-251542	102
223AE	P-250229	2
223AF	P-250890	22
223AG	P-251263	55
223AH	P-250229	2
223AJ	P-251643	109
223AK	P-251263	55
223AL	P-251263	55
223AM	P-250229	2
223AN	P-251447	88
223AP	P-250892	23
223AR	P-250229	2
223AS	P-250752	10
223AT	P-251836	120
223AU	P-251295	61
223AW	P-251447	88
223AY	P-251834	118
223BA	P-251831	116
223BB	P-251835	119

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
223-TYPE RELAYS		
223BC	P-251833	117
223BD	P-251859	121
223BE	P-251526	100
223BF	P-250890	22
223BG	P-250229	2
223BH	P-251263	55
223BJ	P-250890	22
223BK	P-250890	22
223BL	P-251944	130
223BM	P-250737	7
223BN	P-250229	2
223BP	P-252071	137
223BS	P-252146	146
223BT	P-250229	2
223BU	P-250866	15
223BW	P-252176	149
223BY	P-250229	2
223CA	P-252176	149
223CB	P-250865	14
223CC	P-252205	158
223CD	P-251374	73
223CE	P-251526	100
223CF	P-250737	7
*223CG	P-250865	14
223CH	P-252176	149
223CJ	P-250865	14
*223CK	P-250865	14
223CL	P-250229	2
223CM	P-252571	184
223CN	P-252260	171
223CP	P-250892	23
223CR	P-252259	170
223CS	P-250229	2
223CT	P-252571	184
223CU	P-250229	2
223CW	P-250229	2
223CY	P-250242	3
223DA	P-252419	175
223DB	P-252419	175
223DC	P-252874	195
223DD	P-250865	14
223DE	P-11A087	220
223DF	P-11A470	222
223DG	P-251547	103
223DH	P-252434	210
D-97463	—	1060

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
224-TYPE RELAYS		
224A	P-250229	2
224B	P-250229	2
224C	P-250229	2
224D	P-250713	4
224E	P-250713	4
224F	P-250713	4
224G	P-250713	4
224H	P-250713	4
224J	P-250880	21
224K	P-250229	2
224L	P-250229	2
224M	P-250229	2
224N	P-250892	23
224P	P-251128	45
224R	P-251382	80
224S	P-251267	56
224T	P-251267	56
224U	P-251478	89
224W	P-250890	22
*224Y	P-251356	69
224AA	P-250713	4
224AB	P-251382	80
224AC	P-251342	67
224AD	P-250867	16
*224AE	P-251384	82
224AF	P-251382	80
224AG	P-251381	79
224AH	P-251385	83
224AJ	P-251295	61
224AK	P-250229	2
224AL	P-251381	79
224AM	P-251447	88
224AN	P-251382	80
224AP	P-250229	2
224AR	P-251267	56
224AS	P-250229	2
224AT	P-251295	61
224AU	P-251480	91
224AW	P-251573	105
224AY	P-251480	91
224BA	P-251480	91
224BB	P-251382	80
224BC	P-250890	22
224BD	P-251447	88
224BE	P-251447	88
224BF	P-251943	129

*See 2.07

TABLE A (Cont)

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
224-TYPE RELAYS		
224BG	P-252024	133
224BH	P-251295	61
224BJ	P-251447	88
224BK	P-250229	2
224BL	P-251447	88
224BM	P-250229	2
224BN	P-252571	184
224BP	P-252571	184
224BR	P-250713	4
224BS	P-251480	91
224BT	P-250713	4
224BU	P-252571	184
224BW	P-252651	186
224BY	P-252571	184
224CA	P-252654	189
224CB	P-251447	88
224CC	P-252651	186
224CD	P-251447	88
224CE	P-251382	80
224CF	P-252427	201
224CG	P-251447	88
224CJ	P-252427	201
224CK	P-252432	208
224CL	P-252430	206
224CM	P-252433	209
225-TYPE RELAYS		
225A	P-250910	24
225B	P-250910	24
225C	P-250910	24
225D	P-250910	24
225E	P-251262	54
225F	P-251358	70

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
225-TYPE RELAYS		
225G	P-251386	84
225H	P-250910	24
225J	P-251482	93
225K	P-250910	24
225L	P-250910	24
225M	P-250910	24
225N	P-251584	106
225P	P-250910	24
225R	P-252174	148
225S	P-252241	161
225T	P-250910	24
225U	P-485096	203
225W	P-250910	24
225Y	P-250910	24
225AA	P-250910	24
225AB	P-252664	214
225AC	P-252663	213
247-TYPE RELAYS		
247A	P-252099	139
247B	P-252099	139
247C	P-252928	196
247D	P-252100	140
247E	P-252100	140
247F	P-252100	140
247G	P-252099	139
247H	P-252928	196
247J	P-252928	196
247K	P-252928	196
247L	P-252928	196
247M	P-252928	196
247N	P-252928	196
247S	P-252242	162

WECo RELAY CODE NO.	WECo COIL NO.	ITEM NO. TABLE C P 27-30
247-TYPE RELAYS		
247T	P-252242	162
248-TYPE RELAYS		
248A	P-252099	139
248B	P-252099	139
248C	P-252099	139
248D	P-252099	139
248E	P-252099	139
248F	P-252099	139
248G	P-252099	139
248H	P-252242	162
248J	P-252099	139
248K	P-252655	190
248L	P-252099	139
248M	P-252099	139
251- AND 252-TYPE RELAYS		
251A	P-252131	143
251B	P-252132	144
251C	P-252198	155
251D	P-252130	142
251E	P-252130	142
252A	P-252130	142
252B	P-252132	144
INDUCTORS		
132A	P-251951	131
132B	P-251286	58
132C	P-251478	89
132D	P-250792	13
133A	P-251152	46
133B	P-251951	131
133C	P-251426	86

TABLE B — NUMERICAL LIST OF AECo RELAY AND INDUCTOR CODE NUMBERS SHOWING CROSS REFERENCE TO TABLE C FOR COIL NUMBERS AND SHOWING CORRESPONDING WECo CODE NUMBER [SEE 2.03 (b) AND 2.06]

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1-A1	89	—
R1-A3	145	—
R2-A1	131	—
R5-A2	131	—
R5-A3	7	—
R5-A4	89	—
R6-A2	131	—
R18-A2	2	—
*R18-A6	35	—
R18-B1	7	—
R18-B2	1	—
R18-B4	23	—
R18-B8	38	—
R18-B9	29	—
R18-C2	89	—
R18-C6	13	—
R18-C7	28	—
R18-D1	145	—
R18-D1A	145	—
R19-A1	131	—
R20-A1	131	—
R20-A2	10	222DL
R25-A1	38	—
R25-A4	2	—
R25-A4A	2	—
R25-A5	145	—
R25-A6	15	—
R25-A7	7	—
R25-A9	10	221GW
R29-A2	8	—
R30-A1	2	—
R30-A3	55	—
R34-A3	29	—
R44-A1	10	—
R44-A3	2	—
R44-A5	8	—
R45-A1	2	—
R45-A5	15	—
R45-A6	10	—
R47-A5	29	—
R47-A6	35	—
R49-A1	10	—
R49-B1	8	—
R49-B3	2	—
R49-B8	34	221CP

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R49-B9	65	221FE
R49-C2	97	221HW
R49-C7	50	—
R50-A1	2	—
R50-A1A	2	—
R53-A2	131	—
R53-A6	2	—
R55-A1	89	—
R56-A2	29	—
R56-A3	7	—
R58-A1	29	—
R58-A2	35	—
*R60-A1	29	—
*R60-A2	35	—
R60-A3	39	—
R60-A4	5	—
R64-A2	2	—
R65-A1	131	—
*R66-A1	35	—
R69-A4	2	—
R71-A1	126	—
*R71-A2	7	—
R72-A1	89	—
R73-A1	74	—
R74-A1	29	—
R74-A3	7	—
*R76-A1	29	—
R78-A1	29	—
R78-A2	1	—
R78-A3	35	—
R78-A4	2	—
R78-A5	126	—
R78-A6	9	—
R80-A1	8	—
R87-A1	9	—
R87-A2	131	—
R91-A1	131	—
R92-A1	2	—
R94-A2	131	—
R95-A1	2	—
R99-A1	89	221A
R99-A1A	89	—
R99-A1B	89	—
R99-A3	15	221DD
R99-A3A	15	—

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R99-A4	131	—
R99-A5	90	—
R99-B1	10	—
R99-B1A	10	—
R99-B8	165	221FAA
R99-C1	150	221LW
R103-A4	29	—
R109-A2	89	—
R109-A4	10	—
R109-A5	15	—
R109-A6	90	—
R111-A1	2	—
R113-A1	7	—
R113-A2	35	—
R116-A2	17	—
R117-A1	89	—
R117-A2	2	—
R117-A4	94	221JP
R117-A5	40	221KP
*R121-A2	35	—
R128-A3	29	—
R129-A1	1	—
R129-A3	174	221HL
R130-A1	2	—
R130-A2	131	—
R131-A4	2	—
R132-A2	3	—
R133-A1	131	—
R134-A1	2	—
R135-A1	35	—
R137-A1	131	—
R140-A3	2	—
R141-A1	1	—
R143-A1	17	—
R144-A1	2	—
R146-A1	131	—
R148-A1	89	—
R148-A3	2	—
R148-A7	28	—
R148-A7A	28	—
R148-A7B	28	222GR
R148-B1	131	—
R148-B2	15	—
R148-B5	18	—
R148-B6	55	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R148-B6A	55	—	R195-A2	89	—	R206-A4	44	222DH
R148-B7	122	—	R195-A3	2	—	R207-A1	1	—
R152-A1	74	—	R195-A5	22	—	R207-A2	7	—
R152-A4	39	—	*R196-A1	35	222EL	*R207-A2A	7	—
R154-A1	35	—	R196-A1A	35	—	R207-A3	30	—
R155-A4	3	—	*R196-A1B	35	—	*R207-A4	50	221HG
R158-A1	9	—	*R196-A1C	35	222EH	*R208-A1	35	222AR
R160-A1	2	—	*R196-A1D	35	222CE	R208-A1A	35	—
R162-A2	28	—	*R196-A2	29	—	R208-A1B	35	—
R162-A3	29	—	R196-A3	154	—	*R208-A1C	35	222HU
R164-A2	2	—	R196-A4	74	—	R208-A2	29	222CF
R164-A2A	2	—	R196-A9	11	—	*R208-A2A	29	—
R164-A3	7	—	*R196-B1	29	—	R208-A5	7	—
R164-A6	35	—	R196-B2	49	D-99887	R208-A6	1	—
R164-A6A	35	—	R197-A1	2	—	R208-B3	74	—
R164-B6	89	—	R198-A1	39	—	R208-B4	39	—
R164-B7	29	—	R198-A1A	39	—	R209-A1	173	221E
R165-A1	2	—	R198-A1B	39	222DS	R209-A3	7	—
*R168-A1	35	—	R200-A1	2	222B	*R209-A4	74	—
R169-A1	131	—	R200-A1A	2	222CC	*R209-A4A	74	221FW
R171-A1	89	—	R200-A1B	2	222CJ	R209-A5	29	—
R171-A2	2	—	R200-A1C	2	—	*R209-A7	35	—
*R172-A1	29	—	R200-A2	16	—	R209-B1	39	—
R172-A1A	29	—	R201-A5	2	—	R209-B4	11	—
R172-A2	7	—	R201-A6	3	221C	R209-B9	145	—
*R172-A3	35	—	R202-A2	2	—	R209-C2	174	221CL
R172-A3A	35	—	R202-A2A	2	—	R209-C4	2	221CA
R172-A4	39	222S	R202-A3	22	—	R209-C6	127	221LD
R172-A6	1	—	R202-A4	89	—	R210-A2	2	—
R172-A7	31	222CL	R202-A4A	89	—	R211-A2	7	221DE
*R172-A8	75	222FG	R202-A7	15	—	*R211-A3	50	221DS
R172-A9	141	222JJ	R202-A8	28	—	R212-A1	89	—
R174-A1	29	—	R202-B3	9	—	R212-A2	2	—
R178-A1	2	—	R202-B3A	9	—	R212-A4	22	—
R180-A1	39	—	R202-B7	16	—	R213-A1	7	—
R185-A1	35	—	R203-A1	1	—	R214-A1	39	—
R186-A1	35	—	R203-A3	7	221AP	R214-A1A	39	—
R187-A1	1	—	*R203-A3A	7	—	R215-A1	2	—
R187-A3	7	—	R203-A4	29	—	*R216-A1	35	222AS
R187-A4	29	—	*R203-A6	50	221DU	R216-A1A	35	—
R190-A2	2	—	R203-A8	174	221ED	R216-A1B	35	—
R190-A3	22	—	R204-A1	89	—	R216-A1C	35	—
R191-A1	13	—	R204-A2	2	—	*R216-A3	29	—
R192-A1	7	—	R204-A3	23	—	*R216-A5	5	—
R193-A7	2	—	R204-A9	31	—	R217-A1	55	—
R194-A1	35	—	R205-A1	2	—	R217-A3	2	221DY
R195-A1	15	—	R206-A3	56	—	R217-A6	89	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R217-A8	131	—	R276-A3	145	—	R341-A1	29	—
R217-B2	22	—	R276-A4	29	—	R341-A2	2	—
R217-B6	60	221JD	*R276-A4A	29	—	R341-A6	1	—
R221-A1	1	—	R277-A1	2	—	R341-A7	131	—
R223-A1	35	—	R278-A2	2	222AC	R341-A8	35	—
R224-A2	131	—	R278-A3	28	—	*R341-A8A	35	—
R228-A1	2	—	R278-A4	124	222HN	R341-A9	7	—
R228-A3	15	—	R280-A1	29	—	R341-B1	89	—
R228-A4A	48	222DF	R284-A1	2	—	R341-B1A	89	221GC
R228-A5	9	—	R286-A1	1	—	R341-B6	38	—
R228-A5A	9	—	R287-A1	131	—	R341-E1	22	—
R228-A6	18	222BT	*R288-A1	35	—	R341-E4	10	—
R228-A6A	18	—	R292-A1	1	—	R341-E6	16	—
R229-A2	10	—	R292-A2	7	—	R341-E7	23	—
R229-A2A	10	—	R292-A3	29	—	R341-E8	174	221FJ
R229-A4	131	—	R293-A1	131	—	R341-E8A	30	—
R229-A5	90	—	R296-A1	7	—	R341-E9	20	—
R230-A1	74	—	*R296-A2	35	—	R341-F3	61	221LG
R232-A1	131	—	R296-A3	29	—	R342-A1	74	—
R235-A1	89	—	*R296-A5	126	—	R344-A1	29	—
R235-A3	2	—	R301-A2	90	221EU	R345-A1	29	—
R235-A3A	2	—	R301-A3	138	221LF	R345-A3	1	—
R235-A6	16	—	R302-A1	39	—	R345-A5	35	—
R237-A1	1	—	R304-A2	2	222AK	R345-A8	145	—
*R237-A2	7	—	R304-A4	16	222CA	R346-A2	2	—
*R237-A3	29	—	R306-A1	29	—	R347-A1	1	—
R237-A4	145	—	R316-A1	2	—	R347-A2	7	—
R239-A1	2	—	R316-A2	79	—	R347-A3	35	—
R239-A1A	2	221GH	R318-A1	29	—	*R347-A4	50	—
R240-A1	89	—	R319-A1	28	—	*R350-A1	35	—
R243-A4	29	—	R319-A2	89	—	R350-A2	29	—
R246-A2	2	—	R323-A1	89	—	R351-A2	1	—
R246-A2A	2	—	R323-A2	2	—	R351-A3	2	—
*R248-A1	35	222AY	R323-A3	29	—	R351-A3A	2	—
*R248-A1A	35	—	R325-B1	23	—	R351-A6	28	—
R248-A2	154	—	*R326-A1	35	—	R351-A7	29	—
*R250-A1	35	—	R326-A2	74	—	R351-B2	7	—
R251-A3	1	—	R327-A1	29	—	R351-B4	13	—
R251-A4	30	—	R330-A1	2	—	R351-B7	35	—
R252-A1	2	—	R331-A1	2	—	R351-B7A	35	221FY
R252-A2	131	—	R335-A1	1	—	R351-B8	131	—
R259-A1	89	—	R337-A1	9	—	R351-C4	89	—
R269-A1	2	—	R337-A4	2	221U	R351-D1	30	—
R269-A2	145	—	R339-A1	2	—	R352-A1	126	—
R272-A1	2	—	R339-A5	29	—	R353-A1	2	—
*R276-A1	35	—	R339-A6	112	221JE	R354-A1	7	—
R276-A2	1	—	R340-A1	29	—	*R354-A2	35	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R354-A3	74	—	*R362-A1	35	—	R382-A1	2	—
R355-A1	2	221T	R363-A3	2	—	R383-A1	1	—
R355-A4	89	—	R363-A3A	2	—	*R384-A1	35	—
R356-A1	7	—	R363-A5	89	—	R385-A1	2	—
R357-A3	2	—	R363-A5A	89	—	R386-A1	2	—
R357-A4	131	—	R363-A5B	89	221M	R387-A1	7	—
R357-A5	89	—	R363-A6	131	221AF	R387-A2	1	—
R357-A6	15	—	R363-A6A	131	—	R388-A1	2	—
R357-A8	16	—	R363-B5	15	—	R389-A1	1	—
R357-A9	28	—	R363-B5A	15	221HS	R390-A1	10	—
R357-B1	9	—	R363-B7	10	—	R391-A1	131	—
R357-B6	22	—	R363-C2	9	—	R392-A1	1	—
R357-B7	22	—	R363-D1	8	221BU	R394-A1	39	—
R357-C2	60	221GM	R363-E2	22	—	*R396-A1	35	—
R357-C3	110	221HP	R363-E6	16	—	R396-A3	7	—
R357-C4	92	221HD	R363-F3	37	—	R398-A1	131	—
R358-A1	35	—	R363-F3A	37	221FH	R399-A2	89	—
R359-A1	16	—	R363-F7	145	—	R400-A1	29	—
R359-A3	8	221AD	*R363-F9	76	221GA	R401-A1	2	—
R359-A7	2	—	R363-G1	98	221HT	R403-A1	1	—
R359-A7A	2	221Y	R363-G2	152	221MC	R403-A3	35	—
R359-A8	89	—	R365-A3	29	—	R403-A4	29	—
R359-A8A	89	—	R367-A2	145	—	*R403-A5	50	221DM
R359-A8B	89	—	*R368-A1	35	—	R408-A1	2	—
R359-A8C	89	—	R371-A1	29	—	R409-A1	145	—
R359-B1	13	221AU	R371-A6	1	—	R409-A2	2	—
R359-B1A	13	—	R371-A6A	1	—	R410-A1	7	—
R359-B3	10	—	R371-A8	35	221DC	R411-A1	1	—
R359-B3A	10	—	R371-A8A	35	—	R413-A2	1	—
R359-B3B	10	—	*R371-A8B	35	221CW	R414-A1	2	—
R359-B8	90	—	R371-B3	74	—	R416-A1	89	—
R359-C2	9	—	R371-B7	7	—	*R418-A1	35	—
R359-C2A	9	—	R371-B8	38	—	R419-A2	7	—
R359-C2B	9	—	R371-C9	11	—	R425-A1	2	—
R359-C7	55	—	R371-D6	30	—	R432-A1	2	—
R359-C9	131	—	*R371-D7	73	221GB	R434-A1	29	—
R359-C9A	131	—	R371-D8	115	221JT	R436-A1	38	—
R359-D2	15	—	R371-D9 ,	131	221CN	R437-A1	2	—
R359-D3	28	—	R371-E1	1061	D-97944	R439-A1	29	—
R359-E4	23	—	R371-E3	169	221MM	R440-A1	74	—
R359-F4	31	—	R371-E4	159	221MN	R442-A1	131	—
R359-H1	168	221MK	R372-A1	55	—	R442-A2	39	—
R359-J6	33	221BM	R372-A2	2	—	*R444-A1	74	—
R359-K2	145	—	*R374-A1	35	—	R445-A3	131	—
*R359-K3	14	—	*R376-A1	35	—	R447-A1	131	—
R359-K4	81	221JJ	R379-A1	28	—	R447-A2	89	—
R360-A1	131	—	R380-A1	2	—	R454-A1	39	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R454-A1A	39	—	*R524-A1	35	—	R593-A5	35	—
R454-A3	39	—	R525-A1	131	—	R596-A1	89	—
R455-A1	2	—	*R526-A1	35	—	R600-A1	39	—
R457-A1	29	—	R533-A1	39	—	*R602-A1	35	—
R458-A1	2	—	R538-A1	39	—	R604-A1	39	—
R462-A1	2	—	R540-A1	29	—	R605-A2	2	—
R464-A1	35	—	R540-A2	1	—	R605-A3	13	—
R466-A1	89	—	R541-A1	131	—	R606-A1	2	—
R466-A4	2	222EJ	R544-A1	9	—	R607-A1	39	—
R468-A1	2	—	R549-A1	2	—	R608-A1	2	—
R469-A1	2	—	R550-A1	2	—	R608-A5	40	222GU
R471-A1	2	—	*R552-A1	35	222AU	R609-A4	22	—
R472-A2	10	—	R552-A1A	35	—	R610-A1	10	—
R472-A4	2	—	R553-A1	131	—	R610-A5	2	222AN
R472-A4A	2	—	R553-A2	2	—	R610-A9	131	—
R472-A5	22	—	R555-A1	2	221DH	R611-A1	2	—
R472-A6	28	—	R555-A3	22	—	R613-A1	7	—
R472-A8	131	—	R556-A1	2	—	R614-A2	95	222GC
R472-A9	16	—	R556-A2	131	—	R616-A1	5	—
R475-A1	10	—	R557-A1	10	—	*R616-A2	35	—
*R478-A1	35	—	R559-A1	29	—	*R617-A1	7	—
R482-A3	2	—	R559-A2	35	—	R618-A2	2	—
R485-A1	13	—	R560-A2	17	—	R618-A2A	2	—
R486-A1	2	—	R563-A1	39	—	R618-A3	22	—
*R487-A1	7	—	R563-A1A	39	—	R620-A1	2	—
*R488-A1	35	—	R565-A1	89	—	R621-A1	195	221W
R492-A1	7	—	R565-A3	2	—	R621-A1A	2	—
R492-A2	35	—	*R568-A2	35	—	R621-A1B	2	—
R493-A1	29	—	R568-A4	74	—	R621-A2	22	—
R494-A2	17	222BP	R570-A1	2	—	R621-A3	59	221BN
R498-A1	74	—	R572-A3	131	—	R622-A1	7	—
R499-A1	29	—	R572-A5	22	—	R622-A2	35	—
R501-A1	7	—	R572-A6	2	—	R622-A4	29	—
R503-A1	2	—	R574-A1	35	—	R624-A1	35	—
R504-A2	35	—	R575-A1	89	—	*R628-A1	35	—
R507-A1	131	—	R576-A2	2	—	R628-A1A	35	—
R508-A1	29	—	R577-A1	2	—	R628-A2	29	—
R511-A1	7	221AS	*R578-A1	35	—	R628-A3	7	—
*R511-A1A	7	—	*R580-A1	35	—	R628-A5	5	222BR
*R511-A2	50	221DT	*R580-A2	74	—	R629-A1	89	—
R512-A1	35	—	R580-A3	29	—	R631-A1	7	—
R515-A1	89	—	*R581-A1	1	—	R634-A4	79	—
R515-A2	131	—	R584-A3	2	—	R634-A5	16	—
R518-A1	2	—	R586-A1	2	—	R637-A1	35	—
R518-A3	29	—	R588-A1	35	—	R637-A1A	35	—
R519-A1	131	—	R593-A1	7	—	*R637-A1B	35	—
R522-A1	2	—	R593-A4	29	—	R637-A2	7	221LT

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R637-A3	39	—	R706-A3	74	—	R741-A1	173	221B
R637-A6	128	221KL	R706-A5	35	—	R741-A3	9	—
R639-A1	1	—	*R706-A5A	35	—	R741-A4	29	—
R641-A1	2	—	R706-A7	5	—	R741-A6	10	—
R641-A3	89	—	R706-A8	17	—	R741-A9	38	—
R645-A1	2	—	R707-A1	131	—	R741-B1	7	221CU
R646-A2	17	—	R708-A1	2	—	*R741-B2	35	221DA
R648-A1	2	—	R715-A1	1	—	R741-B5	174	221CD
R648-A4	131	—	R715-A2	7	—	*R741-B6	50	221DW
R650-A1	2	—	R715-A2A	7	221HJ	R742-A1	2	—
R650-A1A	2	—	R715-A4	29	—	R742-A1A	2	—
R650-A5	55	—	R715-A5	35	—	R745-A1	2	—
R651-A1	89	—	R715-A6	39	—	R746-A1	35	—
R653-A1	10	—	R715-A8	23	—	R750-A1	39	—
R654-A1	35	—	R715-B6	30	—	R751-A5	89	—
R656-A1	74	—	R716-A1	2	—	R751-A6	2	—
R658-A1	39	—	*R717-A1	35	221HC	R751-A8	22	—
R659-A1	2	—	R717-A1A	35	—	R751-A9	18	—
R660-A1	29	—	*R717-A1B	35	221FU	R751-B1	86	221LH
R662-A1	39	—	*R717-A1C	35	—	R752-A1	2	—
R664-A1	35	—	R717-A2	29	—	R752-A1A	2	—
R666-A1	35	—	R717-A4	7	221EA	R753-A1	1	—
R668-A2	2	—	*R717-A4A	7	—	R753-A2	35	—
R669-A3	2	—	R717-A5	1	—	R757-A1	89	—
R669-A6	9	—	R717-A6	74	—	R757-A2	131	—
R674-A1	2	—	R717-A9	8	—	R757-A9	10	—
R675-A1	10	—	R717-B7	145	—	R757-B1	15	—
R676-A1	2	—	*R717-B9	39	—	R757-B2	28	—
R677-A1	2	—	R717-B9A	39	—	R758-A1	10	—
R679-A1	2	—	R718-A1	39	—	R759-A2	2	—
R681-A1	89	—	R720-A5	2	—	R764-A1	39	—
R683-A1	2	—	*R721-A1	35	—	R765-A1	1	—
R684-A1	89	—	R722-A1	39	—	R766-A1	39	—
R684-A3	2	—	R722-A1A	39	—	R769-A1	28	—
R686-A1	35	—	R724-A1	2	—	R769-A2	89	—
R688-A1	2	—	R725-A1	1	—	R769-A3	10	—
*R690-A1	35	—	R725-A4	35	—	R769-A4	131	—
R696-A1	2	—	R725-B1	5	—	R770-A1	2	—
R697-A1	15	—	R725-B2	7	—	R772-A2	29	—
R698-A1	10	—	R728-A1	39	—	R773-A2	131	—
R698-A3	22	—	R733-A1	131	—	R773-A3	89	—
R698-A6	2	—	R734-A1	2	—	R774-A1	29	—
R698-A7	89	—	R736-A2	89	—	R778-A2	130	—
R701-A1	2	—	R737-A2	173	221L	R779-A1	131	—
R703-A1	2	—	R737-A3	174	221CE	R780-A1	35	—
R706-A1	29	—	R738-A1	2	—	R783-A1	131	—
R706-A1A	29	—	R740-A1	2	—	*R786-A1	35	222FS

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R786-A1A	35	—	R852-A2	15	222JK	R925-A4	35	—
R787-A1	2	—	R853-A1	2	—	R925-A5	59	—
R791-A1	2	—	R853-A1A	2	—	R927-A1	29	—
R791-A4	2	—	R857-A1	2	—	R929-A1	2	—
R792-A1	39	—	R859-A1	1	—	R932-A2	17	—
R796-A1	2	—	R859-A2	30	—	R934-A1	39	—
R802-A1	39	—	R860-A1	2	—	R935-A1	2	—
R805-A1	10	—	R861-A3	2	—	R936-A1	2	—
R805-A2	131	—	R861-A4	40	221GT	R937-A1	2	—
R808-A1	89	—	R861-A5	89	221GK	R938-A1	2	—
R808-A2	2	—	R864-A1	39	—	R940-A1	2	—
R812-A1	39	—	R864-A2	74	—	R940-A2	55	222JC
R814-A1	2	—	R865-A1	2	—	R943-A1	39	—
R814-A1A	2	222HH	R871-A3	39	—	R945-A1	7	—
R814-A2	16	—	R874-A1	29	—	R945-A2	39	—
R815-A2	1	—	R878-A1	16	—	R945-A2A	39	—
R815-A4	29	—	R879-A2	89	—	R945-A3	31	—
R815-A5	5	—	R880-A1	2	—	R945-A4	166	221HR
R816-A1	29	—	R882-A1	2	—	R948-A1	39	—
R816-A2	35	—	R884-A1	2	—	R949-A1	55	—
*R816-A3	108	222HA	R894-A1	2	—	R950-A1	39	—
R821-A1	2	—	R894-A3	16	—	R951-A1	131	—
R822-A1	89	—	R894-A4	22	—	R953-A2	1	—
R824-A2	2	—	R894-A5	55	—	R953-A3	7	—
R824-A3	22	—	R894-A5A	55	222FA	R953-A5	30	—
R826-A1	2	—	R894-A7	145	—	R955-A1	131	—
R827-A1	7	—	R900-A1	29	—	R959-A1	1	—
R832-A1	2	—	R902-A1	39	—	R959-A2	22	—
R835-A1	2	—	R906-A1	39	222E	R959-A3	30	—
R835-A1A	2	221GL	R906-A1A	39	—	R959-A4	2	—
R835-A2	89	—	R906-A1B	39	—	R961-A1	1	—
R835-A2A	89	—	R906-A1C	39	—	*R963-A1	35	—
R835-A3	22	—	R906-A1D	39	—	R963-A2	39	—
R835-A8	131	—	R906-A1E	39	—	*R963-A7	49	221DK
R835-B9	16	—	R907-A1	35	—	R964-A1	2	—
R835-B9A	16	—	R909-A1	2	—	R964-A5	50	—
R835-C6	14	221HM	R911-A1	2	—	R965-A1	2	—
R835-C7	47	221JR	R912-A1	2	—	R966-A2	2	—
R835-C8	164	221KG	R913-A1	2	—	R967-A1	2	—
R835-C9	87	221GU	R915-A1	2	—	R969-A1	7	221HE
R836-A1	2	—	R919-A1	7	—	R969-A2	29	—
R837-A3	131	—	R919-A2	29	—	*R969-A2A	29	—
R837-A4	2	—	R924-A2	101	222GJ	R969-A3	5	221BJ
R837-A6	89	—	R925-A1	29	—	*R969-A4	35	221FD
R845-A1	29	—	R925-A2	39	—	R970-A4	23	—
R845-A2	39	—	R925-A2A	39	—	R970-A6	79	—
R848-A1	35	—	R925-A3	21	—	R970-B2	50	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R974-A1	2	—	R1019-A4	9	—	R1033-B3	39	—
R975-A1	2	—	R1019-A5	2	—	R1033-B7	174	221CK
R976-A3	35	—	R1019-A6	131	—	*R1033-B8	50	221EK
R984-A2	22	—	R1019-B6	28	—	R1034-A1	2	222EN
R984-A3	2	—	R1019-B9	16	—	R1035-A1	2	—
R984-A3A	2	222FL	R1020-A1	89	—	R1036-A1	2	—
R984-A4	39	222DR	R1023-A1	1	—	R1037-A3	2	—
R985-A1	39	—	*R1023-A2	35	—	R1040-A1	2	—
R986-A1	2	—	*R1023-A2A	35	221GY	R1040-A1A	2	—
R988-A1	2	—	R1023-A3	7	—	R1041-A1	29	—
R989-A1	2	—	R1023-A4	29	—	*R1041-A1A	29	—
R990-A1	39	—	R1023-A9	26	221BT	R1042-A1	39	—
R991-A2	29	—	R1023-B1	11	221CT	R1043-A1	2	—
R992-A3	89	—	R1023-B3	30	—	R1044-A2	28	—
R992-A6	29	—	*R1023-B4	49	221DJ	R1045-A1	2	—
R992-A7	35	—	R1023-B5	25	221BR	R1046-A1	145	—
R994-A1	2	—	R1026-A1	89	—	R1046-A2	135	—
R994-A1A	2	—	R1027-A1	39	—	R1046-A2A	35	222FM
R996-A1	2	—	R1029-A3	131	—	R1047-A1	2	—
R1000-A1	2	—	R1031-A1	89	221P	R1048-A1	2	—
R1000-A3	50	—	R1031-A1A	89	221GE	R1048-A1A	2	—
R1001-A2	28	221AK	R1031-A2	10	—	R1048-A4	89	—
R1001-A3	9	221AM	R1031-A3	131	—	R1048-B2	23	—
R1001-A5	154	—	R1031-A3A	131	—	R1050-A1	2	—
R1001-B2	26	—	R1031-A8	28	—	R1051-A1	173	221K
R1001-B6	12	221BC	R1031-B5	90	—	R1051-A2	29	—
R1001-B6A	12	—	R1031-B8	15	—	R1051-A5	35	—
R1001-B7	14	221BH	R1032-A3	2	—	*R1051-A5A	35	—
R1002-A1	10	—	R1032-A4	131	—	R1051-A9	7	—
R1003-A3	154	—	R1032-A4A	131	—	R1051-B1	74	—
*R1004-A1	35	—	R1032-A9	23	—	R1051-B2	11	—
R1005-A3	15	—	R1032-B1	16	—	R1051-B4	174	221CF
R1005-A3A	15	221AW	R1032-B4	10	—	R1052-A1	2	—
R1007-A1	6	—	R1032-B7	89	—	R1053-A1	2	—
*R1008-A7	35	222A	R1032-B9	9	222BE	R1054-A2	2	—
R1013-A1	7	—	R1032-B9A	9	—	R1055-A1	2	221AB
R1013-A2	1	—	R1032-C3	8	—	R1055-A2	89	—
R1015-A1	1	—	R1032-C8	15	—	R1055-A2A	89	221FS
R1015-A2	7	—	R1032-D2	22	—	R1055-A4	131	—
*R1015-A2A	7	—	R1032-D4	55	—	R1055-A9	22	—
R1015-A4	35	—	R1032-D9	154	—	R1055-B4	61	221EW
*R1015-A6	50	—	R1033-A1	7	221AN	R1056-A1	23	—
R1016-A1	2	—	R1033-A3	1	—	R1056-A2	2	—
R1017-A1	2	—	R1033-A3A	173	221D	R1057-A1	2	—
R1019-A1	55	—	R1033-A5	29	—	R1057-A1A	2	221CB
R1019-A2	89	—	*R1033-A9	35	221CC	R1057-A3	28	—
R1019-A2A	89	—	R1033-A9A	35	—	R1057-A6	10	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1057-B1	16	—	R1073-A2	1	—	R1099-C5	16	—
R1057-B4	39	—	R1073-A3	35	—	R1101-A1	7	—
R1058-A1	89	—	R1073-A4	39	—	R1101-A2	35	—
R1059-A1	131	221AG	R1073-A6	29	—	R1101-A6	173	221H
R1059-A2	90	—	R1074-A1	2	—	R1101-A8	174	221CH
R1059-A2A	90	—	R1076-A1	7	—	R1103-A1	38	—
R1059-A2B	90	221BA	R1077-A5	14	—	R1103-A5	131	—
R1059-A2C	90	221BB	R1077-A5A	14	—	R1103-A6	89	—
R1059-A3	89	—	R1078-A1	2	—	R1108-A1	29	—
R1059-A3A	89	—	R1079-A1	2	—	*R1108-A2	35	—
R1059-A4	10	—	R1080-A1	89	—	R1109-A2	55	—
R1061-A4	2	—	R1080-A1A	89	—	*R1110-A1	35	—
R1061-A4A	2	221FG	R1080-A2	5	—	R1111-A1	29	—
R1061-A5	15	—	R1080-A2A	5	—	R1111-A2	7	—
R1061-A7	55	—	R1080-A3	2	—	R1111-A4	173	221G
R1061-A9	131	—	R1080-A3A	2	—	R1111-A5	35	—
R1061-B3	39	—	R1080-A3B	2	222FD	R1111-A8	174	221CJ
R1061-B6	23	—	R1083-A1	39	—	*R1111-B2	68	221FM
R1061-B7	9	—	R1083-A1A	39	—	R1112-A1	5	—
R1061-B8	89	—	R1083-A2	5	—	R1115-A1	173	221J
R1062-A1	39	—	R1083-A3	31	—	R1115-A2	174	221CG
R1063-A1	1	—	R1084-A1	39	—	R1116-A1	7	—
R1063-A2	30	—	R1084-A1A	39	—	R1117-A1	2	—
R1067-A5	1	—	R1085-A2	7	221AR	R1119-A1	89	—
*R1067-A5A	1	—	R1088-A1	39	—	R1119-A2	16	—
R1067-A6	30	—	R1089-A1	89	221R	R1120-A1	39	—
R1067-A6A	30	—	R1089-A3	131	—	R1120-A1A	39	—
R1068-A1	2	—	R1089-A7	10	—	R1121-A1	2	—
R1068-A2	16	—	R1089-A8	90	—	R1122-A1	15	—
R1068-A3	13	—	R1091-A1	19	221AY	R1123-A2	9	—
R1068-A5	89	—	R1091-A2	11	221BL	R1124-A3	78	222HF
R1068-A7	131	—	R1091-A2A	11	—	R1126-A1	28	—
R1068-B2	28	—	R1091-A3	154	—	R1127-A1	2	—
R1068-B4	31	—	R1091-A5	1	—	R1127-A2	10	—
R1068-B4A	31	—	R1091-B6	147	221FAJ	R1132-A1	2	—
R1069-A1	1	—	R1092-A1	89	—	R1134-A1	2	—
R1069-A1A	1	—	R1093-A1	89	—	R1135-A1	7	221AT
R1069-A2	35	—	R1093-A2	131	—	*R1135-A1A	7	—
*R1069-A3	7	—	R1094-A2	2	—	R1135-A2	1	—
*R1069-A3A	7	—	R1095-A1	10	—	*R1135-A6	35	—
R1069-A5	30	—	R1097-A1	39	—	R1135-A8	29	—
R1070-A1	89	—	R1099-A1	2	—	R1135-A9	11	—
R1071-A1	2	—	R1099-B1	9	—	R1135-B1	145	—
R1071-A2	9	—	R1099-B4	10	—	R1135-B2	39	—
R1071-A2A	9	221DG	R1099-B9	89	—	*R1135-B3	50	221DR
R1071-A6	89	—	R1099-C3	22	—	R1136-A1	89	—
R1071-A7	18	221JM	R1099-C4	23	—	R1136-A4	2	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1136-A5	39	—	R1174-A2	2	222AH	R1224-A2	7	—
R1137-A1	6	221BK	R1174-A2A	2	—	R1226-A2	37	—
R1137-A2	2	—	R1174-A9	22	—	R1226-A3	39	—
R1137-A3	55	—	R1176-A1	2	—	R1227-A2	23	221GS
R1138-A1	2	222DA	R1178-A2	2	—	R1227-A3	2	—
R1138-A1A	2	—	R1179-A1	2	—	R1227-A3A	2	221HK
R1138-A4	16	—	R1179-A5	10	—	R1228-A1	29	—
R1142-A1	16	—	R1180-A1	2	—	R1228-A2	5	—
R1142-A2	2	—	R1181-A1	2	—	R1228-A3	21	—
R1142-A3	22	—	R1182-A1	2	—	R1230-A1	2	—
R1143-A1	22	—	R1183-A1	2	—	R1231-A1	131	—
R1143-A4	13	—	R1183-A1A	2	—	R1232-A1	2	—
R1143-A5	2	—	R1183-A4	110	221JC	R1233-A1	2	221AC
R1143-A9	23	221GJ	R1183-A5	48	221JW	R1233-A2	39	—
R1144-A1	2	—	R1185-A1	35	—	R1233-A3	32	221CM
R1145-A1	23	—	R1188-A1	39	—	R1234-A1	2	—
R1146-A3	56	—	R1190-A1	2	—	R1235-A1	39	—
R1151-A1	89	—	R1191-A2	36	221CY	R1235-A2	7	—
R1151-A3	35	—	R1192-A1	2	—	*R1235-A4	35	—
*R1151-A3A	35	221CS	R1192-A2	29	—	*R1235-A4A	35	—
R1151-A5	7	—	R1194-A2	29	—	*R1235-A4B	35	221FN
R1151-A6	74	—	*R1194-A3	35	222FP	R1235-A4C	35	221KM
R1151-A7	126	—	R1196-A1	2	—	R1236-A1	89	—
R1151-B2	123	221KC	R1197-A1	29	—	R1237-A1	7	—
R1151-B3	128	221KB	R1197-A2	35	—	R1239-A1	2	—
R1151-B4	126	221LC	R1197-A2A	35	—	R1240-A2	2	—
R1153-A2	29	—	R1197-A3	1	—	R1240-A2A	2	222CU
R1157-A1	29	—	R1197-A5	7	—	R1240-A5	57	222ED
R1158-A1	2	—	R1198-A1	2	—	R1241-A1	131	—
R1158-A3	89	—	R1203-A1	2	—	R1243-A1	89	—
R1158-A6	8	—	R1205-A1	89	—	R1244-A1	89	—
R1158-A8	131	—	R1205-A4	90	—	R1246-A1	2	—
R1158-A9	22	—	R1205-A6	157	221MA	R1250-A1	2	—
R1158-B6	31	—	R1205-A7	172	221MU	R1250-A1A	2	222GF
R1158-B9	13	—	R1207-A1	7	—	R1255-A1	2	—
R1158-C1	52	222GN	R1208-A1	29	—	R1259-A1	2	—
R1159-A1	89	—	R1209-A1	2	—	R1259-A1A	2	221EM
R1160-A1	2	—	R1209-A1A	2	—	R1260-A2	2	—
R1161-A2	131	—	*R1210-A1	35	—	R1262-A1	39	—
R1163-A1	29	—	R1211-A2	15	—	R1263-A1	39	—
R1164-A1	10	—	R1211-A3	2	—	R1264-A1	22	—
R1165-A1	29	—	R1213-A1	29	—	R1267-A1	35	—
R1168-A1	2	—	R1213-A2	39	—	R1269-A1	35	—
R1169-A1	89	—	R1214-A1	39	—	R1271-A1	89	—
R1170-A1	7	—	R1217-A1	18	—	R1272-A3	154	—
R1170-A2	29	—	R1221-A2	89	—	R1272-A6	26	—
R1172-A1	2	—	R1224-A1	1	—	R1272-A7	12	222BM

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1272-A8	27	222BW	R1315-A1	35	—	*R1348-A2	35	—
*R1273-A1	10	221AL	R1315-A2	7	—	R1348-A2A	35	—
R1275-A1	89	—	R1316-A1	9	—	R1348-A2B	35	—
R1282-A2	35	—	R1316-A1A	9	—	R1348-A4	29	—
R1282-A3	74	—	R1316-A2	39	—	R1348-A6	145	—
R1283-A1	1	—	R1317-A1	89	—	*R1348-A7	1	—
R1285-A1	2	—	R1317-A1A	89	221EB	R1348-A9	7	—
R1286-A1	55	—	R1317-A2	90	221JH	R1348-B1	7	—
R1286-A2	131	—	R1317-A3	154	221MB	R1348-B7	5	—
R1286-A3	89	—	R1317-A4	147	221FAD	R1348-B8	39	—
R1287-A1	29	—	R1317-A5	178	221FAK	R1348-C7	115	222HE
R1288-A1	2	—	R1318-A1	2	—	R1349-A1	2	—
R1289-A1	89	—	R1319-A1	131	—	*R1350-A1	2	—
R1289-A1A	89	—	R1321-A1	2	—	R1350-A5	131	—
R1292-A2	39	—	R1322-A1	2	—	R1350-A6	10	—
R1292-A2A	39	—	R1323-A1	131	—	R1351-A1	131	—
R1292-A2B	39	—	R1324-A2	2	—	R1352-A1	2	—
R1292-A2C	39	—	R1325-A1	89	—	R1352-A1A	2	—
R1292-A2D	39	—	R1326-A1	16	—	R1352-A5	16	—
R1293-A1	1	—	R1327-A1	89	—	R1353-A1	39	—
R1293-A2	174	221EF	R1327-A2	15	—	R1354-A1	173	222D
R1294-A1	22	—	R1330-A2	2	—	*R1354-A2	35	222CW
R1295-A1	89	—	R1331-A1	9	221ET	R1354-A2A	35	—
R1297-A1	2	221AA	R1333-A1	131	—	R1354-A3	7	—
R1299-A1	2	—	R1333-A2	52	221EC	R1354-A4	74	—
R1302-A4	2	222GK	*R1334-A1	35	222AT	*R1354-A5	29	—
R1302-A7	89	—	R1336-A1	39	—	R1354-A5A	29	—
R1302-A8	9	—	R1336-A1A	39	—	R1354-B3	5	—
R1302-B1	10	—	R1336-A1B	39	—	R1354-B8	11	—
R1302-B2	131	—	R1336-A1C	39	—	R1354-B9	174	222CK
R1302-B2A	131	—	R1336-A1D	194	222J	R1356-A1	2	—
R1302-B6	16	—	R1336-A1E	39	—	R1356-A2	22	—
R1302-B7	22	—	R1336-A2	35	—	R1356-A4	131	—
R1302-C1	23	—	R1337-A1	2	—	R1356-A5	89	—
R1304-A1	9	—	R1337-A1A	2	221GF	*R1357-A1	7	—
R1304-A2	10	—	R1338-A1	89	222Y	R1358-A1	2	—
R1304-A4	2	—	*R1339-A1	145	—	R1358-A6	10	—
R1304-B4	89	—	R1341-A1	2	—	R1358-B2	23	—
R1306-A1	2	—	R1342-A1	2	—	R1359-A1	35	—
R1306-A3	22	—	R1344-A1	29	—	R1360-A1	2	—
R1307-A1	8	—	R1345-A2	3	—	R1360-A3	39	—
R1308-A1	35	—	R1346-A1	2	—	R1360-A3A	39	—
R1310-A1	2	—	R1348-A1	38	222BB	R1360-A3B	39	—
R1311-A1	16	—	R1348-A1A	38	—	R1360-A3C	39	—
R1313-A1	16	—	R1348-A1B	38	222BD	R1360-A3D	39	—
R1314-A1	2	—	R1348-A1C	38	222BC	R1362-A1	22	—
R1314-A1A	2	222AL	R1348-A1D	38		R1363-A1	16	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1364-A1	22	—	R1398-B3	38	—	R1424-A1	39	—
R1364-A2	89	—	R1398-B7	154	—	R1425-A1	53	—
R1364-A2A	89	222W	R1398-B9	7	—	R1426-A1	29	—
R1364-A2B	89	—	R1399-A1	89	—	R1426-A1A	29	—
R1364-A4	2	222AD	R1400-A1	2	—	R1426-A2	7	—
R1365-A1	29	—	*R1402-A1	35	—	*R1426-A3	35	—
R1366-A1	39	—	R1402-A1A	35	—	R1426-A3A	35	—
R1366-A1A	39	—	R1402-A2	7	—	R1426-A3B	35	—
R1366-A1B	39	—	R1402-A4	39	—	*R1427-A1	7	—
R1366-A1C	39	—	R1402-A5	29	—	R1428-A1	2	—
R1366-A1D	39	—	R1403-A1	90	—	R1428-A3	39	—
R1367-A1	2	—	R1403-A2	131	—	R1430-A1	2	—
R1367-A2	123	221KS	R1404-A1	2	—	R1431-A1	5	—
R1368-A1	29	—	R1405-A1	2	221BY	R1433-A2	42	221DN
R1368-A2	5	—	R1406-A1	35	—	R1434-A1	20	—
R1368-A2A	5	222BS	R1406-A2	29	222C	R1434-A2	16	—
R1368-A3	35	—	R1406-A3	145	—	*R1435-A1	35	—
R1368-A3A	35	—	R1407-A1	2	—	R1438-A1	2	—
R1368-A4	145	—	R1409-A1	7	—	R1440-A1	29	—
R1371-A1	89	—	R1410-A1	89	—	*R1440-A2	35	—
R1372-A1	2	222DM	R1410-A2	22	—	R1441-A2	42	—
*R1373-A1	35	221AE	R1411-A2	35	—	R1443-A1	29	—
R1375-A1	35	—	R1412-A1	2	—	R1444-A1	29	—
R1376-A1	35	—	R1413-A1	35	—	R1445-A1	53	221DP
R1377-A1	2	—	R1414-A1	19	222BK	R1445-A2	96	221HY
R1378-A2	22	—	R1414-A2	11	222BU	R1446-A1	29	—
R1380-A1	39	222T	R1414-A3	154	—	R1447-A1	29	—
R1380-A1A	39	—	R1415-A2	42	221CR	R1448-A1	39	222H
R1380-A1B	39	—	R1416-A1	8	222AP	R1448-A1A	39	—
R1380-A1C	39	—	R1416-A5	2	—	R1448-A1B	39	—
R1380-A1D	39	—	R1416-A5A	2	222CH	R1450-A2	2	—
R1382-A1	29	—	R1416-A9	131	—	R1452-A1	22	—
R1382-A2	17	—	R1416-B1	55	—	R1453-A1	2	—
R1383-A2	39	—	R1416-B5	89	—	R1453-A3	14	221KT
R1388-A1	2	—	R1416-B9	9	222BF	R1454-A1	2	—
R1391-A1	3	221BF	R1416-B9A	9	—	R1454-A1A	2	—
R1394-A1	35	—	R1416-D6	16	—	R1456-A1	7	—
R1395-A1	39	—	R1416-D9	18	—	*R1457-A1	145	221BD
R1396-A2	22	—	R1416-E3	10	—	*R1459-A1	50	—
R1396-A4	131	—	R1416-E6	22	—	*R1463-A1	50	—
R1396-A9	2	—	R1416-F1	81	222FK	R1464-A1	39	—
*R1398-A1	35	—	R1418-A1	2	—	R1465-A1	30	—
*R1398-A1A	35	—	*R1419-A1	35	—	R1466-A1	7	—
*R1398-A1B	35	—	*R1419-A1A	35	221FP	R1468-A1	29	—
*R1398-A1C	35	—	R1420-A1	2	—	R1468-A3	35	—
R1398-A4	29	—	R1421-A2	44	221DB	R1473-A1	60	221ES
R1398-A6	8	—	R1423-A2	99	221HU	R1474-A1	39	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1474-A1A	39	—	R1502-A3	89	—	R1544-A1	35	—
R1474-A1B	39	—	R1502-A4	16	—	R1545-A3	88	—
R1474-A1C	39	—	R1502-A6	55	222EE	R1546-A1	2	—
R1474-A1D	39	—	R1504-A1	35	222BA	R1546-A2	16	—
R1475-A1	145	—	R1505-A1	2	221HB	R1546-A3	13	—
*R1476-A1	145	—	R1507-A1	10	221HA	R1548-A1	16	—
R1477-A1	174	221FT	R1508-A1	29	—	R1550-A1A	23	222BH
R1478-A1	23	—	R1510-A1	29	—	R1552-A1	2	222AG
R1478-A2	2	—	*R1511-A1	35	221ER	R1553-A1	23	—
R1478-A6	28	222HY	*R1511-A1A	35	221KN	R1554-A1	2	222AJ
R1479-A1	2	221FR	R1512-A1	22	—	R1556-A2	2	—
R1480-A1	2	—	R1512-A3	2	—	*R1558-A1	35	—
R1481-A1	2	221EE	R1513-A1	35	—	*R1562-A1	35	—
R1482-A1	2	—	R1514-A1	22	—	R1566-A3	2	—
R1482-A2	22	—	R1514-A2	2	—	R1566-A3A	2	222EF
R1483-A1	174	221FL	R1515-A1	10	221EN	R1568-A1	16	—
R1483-A2	7	221MP	R1516-A1	39	—	R1570-A1	2	—
R1484-A1	2	—	R1517-A1	35	—	R1572-A1	22	—
R1484-A1A	2	222CB	R1520-A1	2	—	R1574-A1	2	—
R1484-A2	89	—	R1521-A1	7	221JS	R1578-A1	2	—
R1484-A3	28	—	R1523-A1	95	221JN	R1580-A1	35	—
R1484-A6	9	—	R1524-A1	29	—	R1585-A1	5	221KE
R1484-A7	35	—	R1525-A1	40	221JU	R1586-A1	2	—
R1484-A8	7	—	*R1526-A1	35	222AW	R1587-A1	174	221KF
R1484-A9	131	—	R1528-A1	2	—	R1588-A1	89	—
R1484-B1	29	—	R1530-A1	2	—	R1590-A1	2	—
R1484-B2	20	222BL	R1532-A1	28	—	*R1594-A1	35	—
R1484-B4	18	—	*R1534-A1	29	—	R1596-A1	35	—
*R1485-A1	50	221EL	R1534-A2	35	—	R1596-A2	7	—
R1487-A1	2	221EJ	R1534-A3	7	—	*R1598-A1	35	—
R1487-A2	135	221LA	*R1536-A1	35	—	R1600-A1	15	—
R1487-A3	40	221LP	R1538-A1	29	—	R1600-A2	131	—
R1487-A4	14	221LR	R1538-A3	35	—	R1604-A1	2	—
R1488-A2	2	222GH	*R1538-A3A	35	—	R1605-A1	185	221KH
*R1489-A1	14	221GD	*R1538-A4	126	—	*R1606-A1	35	—
R1491-A1	39	—	R1538-A5	145	—	R1608-A1	2	—
R1492-A1	39	—	R1538-A6	7	—	R1609-A1	165	221FAB
R1493-A1	22	221HH	R1538-A7	74	—	R1609-A2	40	221GP
R1494-A3	2	—	R1540-A1	29	—	R1609-A3	2	221LK
R1495-A1	5	221HF	*R1542-A1	35	—	R1610-A1	2	—
R1496-A1	39	—	R1542-A1A	35	—	R1614-A1	29	—
R1496-A2	194	222JL	R1542-A1B	35	—	R1614-A2	75	222GE
*R1499-A1	49	—	R1542-A2	29	—	R1620-A1	2	—
R1500-A1	2	—	R1542-A3	7	—	R1622-A1	2	—
R1500-A6	89	—	R1542-A3A	7	—	R1626-A1	89	—
R1501-A1	10	—	R1542-A6	74	—	R1628-A1	39	—
R1502-A1	2	222AM	R1542-B2	1	—	R1628-A1A	39	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1632-A1	9	—	R1733-A1	35	221HN	R1838-A1	2	—
R1634-A1	29	—	R1734-A1	21	—	R1838-A2	89	—
R1636-A1	35	—	R1740-A1	37	—	R1838-A2A	89	222DW
*R1636-A2	39	222R	R1742-A2	39	—	R1838-A4	40	222BJ
*R1641-A1	50	221KR	R1744-A1	2	—	R1842-A1	29	—
R1642-A1	2	—	R1746-A1	2	—	R1846-A1	16	—
R1643-A1	109	221KU	R1748-A1	2	—	R1848-A1	89	—
R1646-A1	7	—	R1748-A2	40	222HS	R1852-A1	2	—
R1646-A2	29	—	R1750-A2	2	—	R1853-A1	—	D-96329
*R1651-A2	42	221FF	R1758-A1	39	—	R1854-A1	2	—
R1653-A1	63	221FC	R1760-A1	89	—	R1856-A1	2	—
R1655-A1	7	221KW	R1760-A1A	89	—	R1860-A1	10	—
R1655-A2	2	221LM	R1762-A1	2	—	R1864-A1	2	—
R1656-A1	29	—	R1764-A1	131	—	R1866-A1	2	—
R1658-A2	29	—	R1764-A3	10	223AS	R1868-A1	2	224B
R1660-A1	29	—	R1766-A1	39	—	R1872-A1	2	—
R1662-A1	2	—	R1768-A1	55	—	R1874-A2	2	—
R1664-A1	2	—	R1778-A1	29	—	R1876-A1	89	—
R1666-A1	1	—	R1780-A1	29	—	*R1877-A1	7	221JB
R1670-A1	2	—	R1782-A1	89	—	R1878-A1	35	—
R1672-A1	2	—	R1786-A1	2	—	R1879-A1	15	221LN
R1672-A3	22	—	R1788-A1	2	—	R1880-A1	2	—
R1674-A1	2	—	R1788-A4	79	—	R1884-A1	2	—
R1676-A1	35	—	R1788-A6	28	—	*R1887-A1	7	221LS
R1678-A2	4	224D	R1790-A1	22	—	R1888-A1	2	—
*R1683-A1	35	221LE	R1792-A1	2	—	*R1889-A1	35	221DL
R1685-A1	74	221KY	R1794-A1	2	—	R1890-A1	2	—
R1687-A1	125	221LB	R1798-A1	29	—	R1891-A1	60	221JG
R1688-A1	39	—	R1798-A1A	29	—	R1892-A1	89	222AA
R1692-A1	35	—	R1799-A1	7	221KA	R1894-A1	195	223A
R1694-A1	22	—	R1800-A1	35	—	R1895-A1	153	221LY
R1694-A2	2	—	*R1802-A2	55	—	R1896-A1	2	224C
R1694-A2A	2	—	*R1805-A1	35	221LJ	R1896-A2	88	224AM
R1696-A1	2	—	*R1806-A1	35	—	R1897-A1	139	247A
R1700-A1	29	—	R1808-A1	2	—	R1899-A1	10	221JF
R1702-A1	131	—	R1812-A1	29	—	R1900-A1	5	223C
R1708-A1	2	—	R1814-A1	2	—	R1902-A2	4	224F
R1709-A1	86	221GN	R1818-A1	2	—	R1906-A2	4	224E
R1709-A2	147	221FAF	R1820-A1	2	—	R1908-A1	22	223B
R1712-A1	2	—	R1821-A1	35	221JY	R1910-A1	2	224A
R1716-A1	16	—	R1821-A2	39	D-89593	R1911-A1	139	247B
R1720-A1	16	—	R1828-A1	22	—	R1914-A1	2	222AF
R1722-A1	7	—	R1828-A2	2	—	R1916-A1	29	—
R1722-A2	1	—	R1830-A1	2	—	R1918-A2	5	—
R1726-A1	29	—	R1832-A1	89	—	R1922-A1	2	—
R1726-A2	35	—	R1834-A1	39	—	R1924-A1	89	—
*R1730-A1	41	222BY	R1836-A1	2	—	R1926-A1	89	—

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R1930-A1	23	—	R2017-A1	151	221FAH	R2100-A2D	56	—
R1931-A1	145	221LU	R2018-A1	23	—	R2102-A1	39	—
R1934-A1	2	—	R2019-A1	179	221FAL	R2102-A1A	39	—
R1938-A1	21	—	R2021-A1	140	247F	R2104-A1	39	222DP
R1940-A1	22	—	R2026-A1	89	—	R2104-A1A	39	—
R1948-A1	89	—	R2026-A1A	89	—	R2108-A1	39	—
R1950-A1	39	—	R2029-A1	142	251D	R2110-A1	39	—
R1954-A1	2	—	R2032-A1	89	—	R2110-A1A	39	—
R1955-A1	144	251B	R2034-A1	2	—	R2112-A1	5	—
R1956-A1	21	224J	R2035-A1	150	221MT	R2112-A1A	5	—
R1957-A1	196	247C	R2038-A1	2	—	R2114-A1	2	—
R1958-A1	2	—	R2039-A1	196	247H	R2116-A1	2	222CT
R1959-A1	147	221FAC	R2040-A2	4	224H	*R2120-A1	35	—
R1959-A2	151	221FAE	R2041-A1	196	247J	R2126-A2	35	222HC
R1960-A2	94	222GB	R2042-A2	4	224G	R2128-A1	2	223H
R1960-A3	122	222PB	R2044-A1	2	224K	*R2130-A1	2	—
R1963-A1	40	221GR	R2048-A1	194	222CD	R2130-A3	79	—
R1964-A1	10	222EG	R2048-A2	2	—	R2132-A1	29	—
R1966-A1	35	—	R2050-A1	2	224L	R2134-A1	35	222FF
R1966-A2	2	—	R2052-A1	2	224M	R2152-A1	2	—
*R1968-A1	35	—	R2056-A1	39	222CG	R2154-A1	2	222DN
R1972-A1	35	—	R2056-A1A	39	—	*R2156-A1	145	222BN
R1976-A1	2	—	R2062-A1	37	222CN	R2158-A1	39	—
R1978-A1	29	—	R2066-A2	85	222EY	R2162-A1	39	—
R1979-A1	140	247E	R2072-A1	2	—	*R2164-A1	35	—
R1984-A1	23	—	R2072-A1A	21	223J	R2168-A1	2	—
R1986-A1	10	222DK	R2072-A2	116	223BA	R2168-A1A	2	—
R1987-A1	155	251C	R2074-A2	77	223K	R2170-A1	15	—
R1988-A1	89	—	R2078-A2	16	224AD	R2172-A1	2	—
R1989-A1	174	221MD	*R2080-A1	82	224AE	R2174-A2	16	—
R1990-A1	39	222F	R2082-A1	2	—	R2178-A1	2	224AK
R1990-A1A	39	222G	R2088-A1	5	—	R2180-A1	39	222ER
R1992-A1	39	—	R2090-A1	3	—	R2180-A1A	39	—
R1992-A1A	39	—	R2092-A1	194	222DG	R2182-A1	4	224AA
R1993-A1	156	221FAG	*R2092-A2	43	222CP	R2184-A1	29	—
R1994-A1	39	—	R2094-A1	39	222DJ	R2186-A1	2	—
R1994-A1A	39	—	R2094-A1A	39	—	R2192-A1	2	222FJ
R1996-A1	39	222K	R2096-A1	39	—	R2194-A1	66	222FC
R1996-A1A	39	222L	R2096-A1A	39	—	*R2196-A1	69	222FH
R1998-A1	39	—	R2098-A1	39	—	R2198-A1	78	223L
R1998-A1A	39	—	R2098-A1A	39	—	R2200-A1	71	222FB
R2000-A1	2	—	R2100-A1	39	—	R2202-A1	79	224AG
R2003-A1	177	221ME	R2100-A1A	39	—	*R2204-A1	73	222FN
R2004-A1	2	—	R2100-A1B	39	—	*R2206-A1	73	222FR
R2006-A2	43	222CM	R2100-A1C	39	—	R2208-A1	2	223M
R2008-A1	37	—	R2100-A1D	39	—	R2210-A1	79	224AL
R2014-A1	23	—	R2100-A2	56	222GL	R2212-A1	194	222FE

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.	AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R2214-A1	80	224AF	R2302-A1	89	222GW	R2826-A1	7	223BM
R2218-A1	39	222EP	R2304-A1	22	223AF	R2838-A1	2	222HJ
R2218-A1A	39	—	R2306-A1	55	223AK	R2842-A1	137	223BP
R2220-A1	89	223S	R2308-A1	109	223AJ	R2870-A1	2	223BN
R2222-A1	80	224AN	R2310-A1	29	—	R3116-A1	15	223Y
R2224-A1	89	223D	R2312-A3	50	—	*R3228-A1	35	222GS
R2226-A1	56	224T	R2316-A1	55	223AG	R3232-A1	22	224W
R2226-A2	55	—	R2318-A1	2	223AH	*R3278-A1	14	223F
R2228-A1	194	222DT	R2320-A1	88	—	R3372-A1	131	D-96328
R2230-A1	66	223G	R2322-A1	23	223AP	R3382-A1	83	222FT
R2230-A1A	66	—	R2324-A1	2	—	R3386-A1	100	223BE
R2232-A1	89	223E	R2326-A1	35	—	R3388-A1	61	224AT
R2234-A1	2	—	R2328-A1	113	222HB	R3448-A1	23	223P
R2236-A1	64	222EM	R2330-A2	50	—	R3476-A1	100	223AB
R2238-A1	66	222EW	R2358-A1	55	—	R3486-A1	2	223AR
R2238-A1A	66	—	R2366-A1	114	222HD	R3510-A1	139	248A
R2240-A1	80	224AB	R2370-A2	88	—	R3520-A1	1060	D-97463
R2242-A1	80	224R	R2410-A1	79	—	R3522-A1	139	248B
R2242-A2	2	223AM	R2412-A1	79	—	R3524-A1	139	248C
*R2244-A1	69	224Y	R2418-A2	50	—	R3526-A1	139	248D
*R2246-A1	73	222FW	R2432-A1	79	—	R3566-A1	35	222JG
R2248-A1	35	222GG	R2462-A1	50	—	R3622-A1	146	223BS
R2250-A1	35	223AA	R2464-A1	50	—	R3634-A1	35	222JH
R2252-A1	2	224AS	R2466-A1	50	—	R3636-A1	142	252A
R2256-A1	56	224AR	R2470-A2	131	—	R3638-A1	2	223BT
R2258-A1	2	224AP	R2478-A1	50	—	R3640-A1	15	223BU
R2260-A1	91	224AY	R2480-A1	95	—	*R3646-A1	35	223R
R2262-A1	2	222ET	R2488-A1	110	—	*R3648-A1	72	222FU
R2264-A1	89	222GM	R2502-A1	2	222HL	R3650-A1	61	224AJ
R2266-A1	2	222GA	R2504-A1	22	224BC	R3678-A1	149	223CA
R2268-A1	88	223T	R2510-A1	30	—	R3682-A1	88	224BJ
R2270-A1	91	224AU	R2556-A1	2	223AM	R3690-A1	149	223BW
R2272-A1	5	222FY	R2570-A1	130	223BL	R3692-A1	2	223BY
R2276-A1	122	222PA	R2574-A1	55	223BH	R3704-A1	14	223CB
R2276-A2	2	222DE	R2578-A1	22	223BJ	R3706-A1	158	223CC
*R2278-A1	35	—	R2580-A1	7	222HP	R3708-A1	73	223CD
R2280-A1	102	223AD	R2590-A1	167	222HR	R3710-A1	100	223CE
R2282-A1	2	222EU	R2592-A1	132	222HT	R3726-A1	7	223CF
R2286-A1	91	224BA	R2624-A1	2	222JD	*R3728-A1	14	223CG
R2288-A1	80	224BB	R2626-A1	44	222JB	R3730-A1	2	222JM
R2290-A1	2	223AE	R2638-A1	119	223BB	R3732-A1	171	223CN
R2292-A1	39	222GP	R2674-A1	134	222HW	R3738-A1	149	223CH
R2294-A1	78	223AC	R2676-A1	133	224BG	R3782-A1	2	222KB
R2296-A1	2	222GD	R2678-A1	109	222JE	R3784-A1	160	222KA
R2298-A1	111	222GT	R2718-A1	61	224BH	R3788-A1	48	222JU
R2300-A1	103	222GY	R2810-A1	136	222JF	R3790-A1	4	224BR

*See 2.07

TABLE B (Cont)

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
R3792-A1	170	223CR
R3802-A1	139	248J
D-811157	24	225B
D-811321	24	225C
D-811412	54	225E
D-811421	24	225A
D-811560	24	225D
D-811566	24	225M
D-811567	70	225F

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
D-811568	24	225H
D-811569	24	225K
D-811570	24	225L
D-811571	93	225J
D-811580	84	225G
D-811603	24	225P
D-811604	148	225R
D-811610	106	225N
D-811624	161	225S

AECo RELAY CODE NO.	ITEM NO. TABLE C P 27-30	WECo RELAY CODE NO.
INDUCTORS		
R673-B2	131	133B
R673-F4	46	133A
R673-G3	86	133C
R956-A1	89	132C
R956-A2	131	132A
R956-D4	58	132B
R956-C7	13	132D

TABLE C — NUMERICAL LIST OF WECo AND AECo COILS BY ITEM NUMBERS [SEE 2.03 (c), 2.05, AND 2.06]

WECo Coils Showing Interchangeable AECo Coils

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	AECo COIL NO. (BLACK COVERING)
1	P-250225	D-285002	D-280001
2	P-250229	D-285005	D-280028
3	P-250242	D-285040	D-281462
4	P-250713	D-285046	D-281611
5	P-250720	D-285029	D-280820
6	P-250723	D-285031	D-280942
7	P-250737	D-285015	D-280200
8	P-250738	D-285006	D-280047
9	P-250746	D-285014	D-280199
10	P-250752	D-285013	D-280077
11	P-250778	D-285032	D-280958
12	P-250790	D-285048	D-281620
13	P-250792	D-285016	D-280201
14	P-250865	D-285026	D-280579
15	P-250866	D-285018	D-280247
16	P-250867	D-285025	D-280533
17	P-250868	D-285027	D-280717
18	P-250870	D-285030	D-280879
19	P-250873	D-285019	D-280320
20	P-250874	D-285020	D-280324
21	P-250880	D-285035	D-281254
22	P-250890	D-285022	D-280383
23	P-250892	D-285017	D-280219
24	P-250910	D-285000	D-28888
25	P-250940	D-285140	—
26	P-250941	D-285028	D-280788
27	P-250953	D-285052	D-281644
28	P-250954	D-285010	—
29	P-250955	D-285001	D-280000

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	AECo COIL NO. (BLACK COVERING)
30	P-250989	D-285036	D-281266
31	P-250996	D-285033	D-281098
32	P-250997	D-285099	D-282044
33	P-250998	D-285050	D-281630
34	P-251002	D-285045	D-281607
35	P-251053	D-285008	D-280054
36	P-251076	D-285339	—
37	P-251077	D-285038	D-281316
38	P-251078	D-285012	D-280074
39	P-251079	D-285003	D-280003
40	P-251080	D-285049	D-281621
41	P-251081	D-285037	D-281313
42	P-251083	D-285044	D-281606
43	P-251084	D-285043	D-281601
44	P-251108	D-285053	D-281645
45	P-251128	—	—
46	P-251152	D-285340	—
47	P-251163	D-285146	D-280341
48	P-251168	D-285090	D-281882
49	P-251218	D-285071	D-281778
50	P-251244	D-285047	D-281616
51	P-251245	—	—
52	P-251248	D-285051	D-281635
53	P-251252	D-285041	D-281564
54	P-251262	D-285054	D-281675
55	P-251263	D-285023	D-280400
56	P-251267	D-285042	D-281565
57	P-251280	D-285077	D-281801
58	P-251286	D-285057	D-281689
59	P-251287	D-285039	D-281415
60	P-251292	D-285055	D-281678
61	P-251295	D-285217	—

TABLE C (Cont)

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	(BLACK COVERING)	ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	(BLACK COVERING)
62	P-251314	—	—	110	P-251666	D-285079	D-281819
63	P-251315	D-285198	—	111	P-251670	D-285095	D-281963
64	P-251318	D-285078	D-281814	112	P-251703	D-285367	—
65	P-251322	D-285066	D-281752	113	P-251771	D-285100	D-282051
66	P-251340	D-285064	D-281744	114	P-251827	D-285101	D-282055
67	P-251342	—	—	115	P-251830	D-285102	D-282085
68	P-251350	D-285067	D-281756	116	P-251831	D-285331	—
69	P-251356	D-285065	D-281745	117	P-251833	—	—
70	P-251358	D-285081	D-281838	118	P-251834	—	—
71	P-251363	D-285073	D-281788	119	P-251835	D-285183	—
72	P-251369	D-285383	—	120	P-251836	—	—
73	P-251374	D-285060	D-281739	121	P-251859	—	—
74	P-251375	D-285161	D-280073	122	P-251862	D-285086	—
75	P-251376	D-285068	D-281757	123	P-251905	D-285139	D-280823
76	P-251377	D-285059	D-281738	124	P-251906	D-285177	—
77	P-251379	D-285070	D-281759	125	P-251907	D-285220	—
78	P-251380	D-285063	D-281743	126	P-251908	D-285219	D-280336
79	P-251381	D-285069	D-281758	127	P-251909	D-285218	D-280791
80	P-251382	D-285062	D-281741	128	P-251942	D-285141	D-280568
81	P-251383	D-285056	D-281688	129	P-251943	—	—
82	P-251384	D-285074	D-281789	130	P-251944	D-285093	D-281919
83	P-251385	D-285312	—	131	P-251951	—	—
84	P-251386	D-285061	D-281740	132	P-252023	—	—
85	P-251389	D-285076	D-281797	133	P-252024	D-285200	—
86	P-251426	D-285390	—	134	P-252025	D-285199	—
87	P-251431	D-285359	—	135	P-252062	D-285221	—
88	P-251447	D-285058	D-281705	136	P-252063	D-285222	—
89	P-251478	D-285004	—	137	P-252071	D-285228	—
90	P-251479	D-285021	—	138	P-252072	D-285223	—
91	P-251480	D-285087	D-281873	139	P-252099	D-285351	—
92	P-251481	D-285075	D-281795	140	P-252100	D-285380	—
93	P-251482	D-285092	D-281885	141	P-252121	D-285387	—
94	P-251493	D-285088	D-281877	142	P-252130	D-285378	—
95	P-251494	D-285089	D-281879	143	P-252131	D-285364	—
96	P-251504	D-285091	D-281883	144	P-252132	—	—
97	P-251520	D-285082	D-281844	145	P-252142	D-285024	D-282384
98	P-251521	D-285085	D-281848	146	P-252146	D-285237	—
99	P-251522	D-285084	D-281846	147	P-252151	D-285379	—
100	P-251526	D-285337	—	148	P-252174	—	—
101	P-251527	D-285083	D-281845	149	P-252176	D-285391	—
102	P-251542	D-285094	D-281925	150	P-252177	D-285395	—
103	P-251547	D-285097	D-281970	151	P-252186	D-285393	—
104	P-251572	—	—	152	P-252187	D-285202	D-281520
105	P-251573	—	—	153	P-252188	D-285341	—
106	P-251584	D-285336	—	154	P-252189	D-285277	D-281234
107	P-251585	—	—	155	P-252198	D-285396	—
108	P-251586	D-285096	D-281969	156	P-252202	D-285401	—
109	P-251643	D-285098	D-281996	157	P-252203	D-285278	—

TABLE C (Cont)

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	(BLACK COVERING)
158	P-255205	D-285397	—
159	P-252238	D-285430	—
160	P-252239	—	—
161	P-252241	D-285442	—
162	P-252242	—	—
163	P-252245	—	—
164	P-252246	—	—
165	P-252248	—	—
166	P-252249	—	—
167	P-252250	—	—
168	P-252251	D-285386	D-281286
169	P-252252	—	—
170	P-252259	D-285441	—
171	P-252260	D-285429	—
172	P-252261	D-285440	—
173	P-252262	—	—
174	P-252263	—	—
175	P-252419	—	—
176	P-252420	—	—
177	P-252487	D-285411	—
178	P-252488	D-285412	—
179	P-252518	D-285427	—
180	P-252565	—	—
181	P-252566	—	—
182	P-252569	—	—
183	P-252570	—	—
184	P-252571	—	—
185	P-252614	—	—
186	P-252651	—	—
187	P-252652	—	—
188	P-252653	—	—
189	P-252654	—	—
190	P-252655	—	—
191	P-252656	—	—
192	P-252657	—	—
193	P-252659	—	—
194	P-252868	D-285003	D-280003
195	P-252874	D-285005	D-280028
196	P-252928	—	—
197	P-252421	—	—
198	P-252422	—	—
199	P-252423	—	—
200	P-252424	—	—
201	P-252427	—	—
202	P-484710	—	—
203	P-485096	—	—
204	P-252428	—	—
205	P-252429	—	—
206	P-252430	—	—

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	(BLACK COVERING)
207	P-252431	—	—
208	P-252432	—	—
209	P-252433	—	—
210	P-252434	—	—
211	P-252658	—	—
212	P-252661	—	—
213	P-252663	—	—
214	P-252664	—	—
215	P-252665	—	—
216	P-252666	—	—
217	P-252667	—	—
218	P-252668	—	—
219	P-253215	—	—
220	P-11A087	—	—
221	P-11A088	—	—
222	P-11A470	—	—

**Numerical List of AECo Coils
Having No Corresponding
WECo Coils**

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	(BLACK COVERING)
1001	—	D-285007	D-280050
1002	—	D-285072	D-281783
1003	—	D-285080	D-281836
1004	—	D-285114	D-281125
1005	—	D-285137	D-281455
1006	—	D-285138	D-281530
1007	—	D-285145	D-282036
1008	—	D-285147	D-280208
1009	—	D-285148	D-280401
1010	—	D-285149	D-280434
1011	—	D-285150	D-281108
1012	—	D-285151	D-281223
1013	—	D-285152	D-281499
1014	—	D-285153	D-281503
1015	—	D-285154	D-280228
1016	—	D-285163	D-280018
1017	—	D-285164	D-280217
1018	—	D-285165	D-280251
1019	—	D-285166	D-280266
1020	—	D-285167	D-280296
1021	—	D-285168	D-280355
1022	—	D-285169	D-280399
1023	—	D-285170	D-280707
1024	—	D-285171	D-280771

TABLE C (Cont)

ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	AECo COIL NO. (BLACK COVERING)	ITEM NO.	WECo COIL NO.	AECo COIL NO. (WHITE COVERING)	AECo COIL NO. (BLACK COVERING)
1025	—	D-285172	D-280848	1044	—	D-285204	D-280197
1026	—	D-285173	D-280856	1045	—	D-285205	D-280834
1027	—	D-285174	D-280967	1046	—	D-285206	D-282118
1028	—	D-285176	D-281497	1047	—	D-285207	D-280248
1029	—	D-285178	D-281318	1048	—	D-285209	D-280196
1030	—	D-285181	D-281138	1049	—	D-285210	D-280303
1031	—	D-285184	D-280071	1050	—	D-285211	D-281194
1032	—	D-285185	D-280072	1051	—	D-285212	D-281532
1033	—	D-285186	D-280209	1052	—	D-285213	D-280302
1034	—	D-285187	D-280833	1053	—	D-285214	D-280474
1035	—	D-285188	D-281062	1054	—	D-285215	D-281089
1036	—	D-285189	D-281512	1055	—	D-285226	D-281548
1037	—	D-285190	D-280710	1056	—	D-285233	D-28878
1038	—	D-285191	D-280547	1057	—	D-285234	D-280068
1039	—	D-285194	D-280292	1058	—	D-285235	D-281869
1040	—	D-285195	D-280289	1059	—	D-295239	D-280471
1041	—	D-285196	D-280262	1060	—	D-285344	—
1042	—	D-285197	D-280442	1061	—	D-285347	D-282170
1043	—	D-285203	D-281033	1062	—	D-285362	D-282169

TABLE D — NUMERICAL LIST OF AECo COIL NUMBERS WITH CROSS REFERENCES TO ITEM NUMBERS IN TABLE C FOR INTERCHANGEABLE COILS [SEE 2.03 (d) AND 2.06]

COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30
D-28878	1056	D-280209	1033	D-280401	1009	D-280942	6
D-28888	24	D-280217	1017	D-280434	1010	D-280957	1027
D-280000	29	D-280219	23	D-280442	1042	D-280958	11
D-280001	1	D-280228	1015	D-280471	1059	D-281033	1043
D-280003	39	D-280247	15	D-280474	1053	D-281062	1035
D-280018	1016	D-280248	1047	D-280533	16	D-281089	1054
D-280028	2	D-280251	1018	D-280547	1038	D-281098	31
D-280047	8	D-280262	1041	D-280568	128	D-281108	1011
D-280050	1001	D-280266	1019	D-280579	14	D-281125	1004
D-280054	35	D-280289	1040	D-280707	1023	D-281138	1030
D-280068	1057	D-280292	1039	D-280710	1037	D-281194	1050
D-280071	1031	D-280296	1020	D-280717	17	D-281223	1012
D-280072	1032	D-280302	1052	D-280771	1024	D-281234	154
D-280073	74	D-280303	1049	D-280788	26	D-281254	21
D-280074	38	D-280320	19	D-280791	127	D-281266	30
D-280077	10	D-280324	20	D-280820	5	D-281286	168
D-280196	1048	D-280336	126	D-280823	123	D-281313	41
D-280197	1044	D-280341	47	D-280833	1034	D-281316	37
D-280199	9	D-280355	1021	D-280834	1045	D-281318	1029
D-280200	7	D-280383	22	D-280848	1025	D-281415	59
D-280201	13	D-280399	1022	D-280856	1026	D-281455	1005
D-280208	1008	D-280400	55	D-280879	18	D-281462	3

TABLE D (Cont)

COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30
D-281497	1028	D-281844	97	D-285025	16	D-285075	92
D-281499	1013	D-281845	101	D-285026	14	D-285076	85
D-281503	1014	D-281846	99	D-285027	17	D-285077	57
D-281512	1036	D-281848	98	D-285028	26	D-285078	64
D-281520	152	D-281869	1058	D-285029	5	D-285079	110
D-281530	1006	D-281873	91	D-285030	18	D-285080	1003
D-281532	1051	D-281877	94	D-285031	6	D-285081	70
D-281548	1055	D-281879	95	D-285032	11	D-285082	97
D-281564	53	D-281882	48	D-285033	31	D-285083	101
D-281565	56	D-281883	96	D-285035	21	D-285084	99
D-281601	43	D-281885	93	D-285036	30	D-285085	98
D-281606	42	D-281919	130	D-285037	41	D-285086	122
D-281607	34	D-281925	102	D-285038	37	D-285087	91
D-281611	4	D-281963	111	D-285039	59	D-285088	94
D-281616	50	D-281969	108	D-285040	3	D-285089	95
D-281620	12	D-281970	103	D-285041	53	D-285090	48
D-281621	40	D-281996	109	D-285042	56	D-285091	96
D-281630	33	D-282036	1007	D-285043	43	D-285092	93
D-281635	52	D-282044	32	D-285044	42	D-285093	130
D-281644	27	D-282051	113	D-285045	34	D-285094	102
D-281645	44	D-282055	114	D-285046	4	D-285095	111
D-281675	54	D-282085	115	D-285047	50	D-285096	108
D-281678	60	D-282118	1046	D-285048	12	D-285097	103
D-281688	81	D-282169	1062	D-285049	40	D-285098	109
D-281689	58	D-282170	1061	D-285050	33	D-285099	32
D-281705	88	D-282384	145	D-285051	52	D-285100	113
D-281738	76	D-285000	24	D-285052	27	D-285101	114
D-281739	73	D-285001	29	D-285053	44	D-285102	115
D-281740	84	D-285002	1	D-285054	54	D-285114	1004
D-281741	80	D-285003	39	D-285055	60	D-285137	1005
D-281743	78	D-285004	89	D-285056	81	D-285138	1006
D-281744	66	D-285005	2	D-285057	58	D-285139	123
D-281745	69	D-285006	8	D-285058	88	D-285140	25
D-281752	65	D-285007	1001	D-285059	76	D-285141	128
D-281756	68	D-285008	35	D-285060	73	D-285145	1007
D-281757	75	D-285010	28	D-285061	84	D-285146	47
D-281758	79	D-285012	38	D-285062	80	D-285147	1008
D-281759	77	D-285013	10	D-285063	78	D-285148	1009
D-281778	49	D-285014	9	D-285064	66	D-285149	1010
D-281783	1002	D-285015	7	D-285065	69	D-285150	1011
D-281788	71	D-285016	13	D-285066	65	D-285151	1012
D-281789	82	D-285017	23	D-285067	68	D-285152	1013
D-281795	92	D-285018	15	D-285068	75	D-285153	1014
D-281797	85	D-285019	19	D-285069	79	D-285154	1015
D-281801	57	D-285020	20	D-285070	77	D-285161	74
D-281814	64	D-285021	90	D-285071	49	D-285163	1016
D-281819	110	D-285022	22	D-285072	1002	D-285164	1017
D-281836	1003	D-285023	55	D-285073	71	D-285165	1018
D-281838	70	D-285024	145	D-285074	82	D-285166	1019

TABLE D (Cont)

COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30	COIL NO.	ITEM NO. TABLE C P 27-30
D-285167	1020	D-285196	1041	D-285222	136	D-285367	112
D-285168	1021	D-285197	1042	D-285223	138	D-285378	142
D-285169	1022	D-285198	63	D-285226	1055	D-285379	147
D-285170	1023	D-285199	134	D-285228	137	D-285380	140
D-285171	1024	D-285200	133	D-285233	1056	D-285383	72
D-285172	1025	D-285202	152	D-285234	1057	D-285386	168
D-285173	1026	D-285203	1043	D-285235	1058	D-285387	141
D-285174	1027	D-285204	1044	D-285237	146	D-285390	86
D-285176	1028	D-285205	1045	D-285239	1059	D-285391	149
D-285177	124	D-285206	1046	D-285277	154	D-285393	151
D-285178	1029	D-285207	1047	D-285278	157	D-285395	150
D-285181	1030	D-285209	1048	D-285312	83	D-285396	155
D-285183	119	D-285210	1049	D-285331	116	D-285397	158
D-285184	1031	D-285211	1050	D-285336	106	D-285401	156
D-285185	1032	D-285212	1051	D-285337	100	D-285411	177
D-285186	1033	D-285213	1052	D-285340	46		
D-285187	1034	D-285214	1053	D-285341	153	D-285412	178
D-285188	1035	D-285215	1054	D-285344	1060	D-285427	179
D-285189	1036	D-285217	61	D-285347	1061	D-285429	171
D-285190	1037	D-285218	127	D-285351	139	D-285430	159
D-285191	1038	D-285219	126	D-285359	87	D-285440	172
D-285194	1039	D-285220	125	D-285362	1062	D-285441	170
D-285195	1040	D-285221	135	D-285364	143	D-285442	161

3. REPLACEMENT PROCEDURES

3.01 List of Tools

CODE OR SPEC NO. TOOLS	DESCRIPTION
43	3/16- and 1/4-inch Hex. Open Double-end Flat Wrench
48	Combination 7/32-inch and 1/4-inch Hex. Double-end Socket Wrench and Screwdriver
206	30° Offset Screwdriver
207	90° Offset Screwdriver
207	90° Offset Screwdriver, Modified (See 3.02)
209	5/16-inch Hex. Open Single-end Offset Wrench
417A	1/4- and 3/8-inch Hex. Open Double-end Flat Wrench
418A	5/16- and 7/32-inch Hex. Open Double-end Flat Wrench

CODE OR SPEC NO. TOOLS	DESCRIPTION
474A	3/16- and 1/4-inch Hex. Closed Double-end Offset Wrench
476A	3/16-inch Hex. Offset Socket Wrench
563A	90° Offset Screwdriver
564A	45° Offset Screwdriver
565A	90° Offset Screwdriver
566A	45° Offset Screwdriver
R-1482	File
—	5-inch Diagonal Pliers
—	P-Long-nose Pliers
—	3-inch Cabinet Screwdriver
—	4-inch Regular Screwdriver
—	6-inch Straight Tweezers, American Piano Supply Co., No. 56 (or equivalent)

3.02 Modify a No. 207 offset screwdriver by cutting it in two parts with a hacksaw at a line midway between the two ends and remove burrs from the cut edges with the R-1482 file.

3.03 After making any replacements of parts of a relay, the part or parts replaced shall meet the readjust requirements involved as specified in Section 040-236-701. Other parts whose adjustments may have been directly disturbed by the replacing operations shall be checked to the readjust requirements, and an over-all operation check shall be made of the relay before restoring the circuit to service.

3.04 No replacement procedures are specified for screws or other parts where the replacement consists of a simple operation.

221-, 222-, 223-, 224-, 247-, 248-, 251- AND 252-TYPE RELAYS AND 132- AND 133-TYPE INDUCTORS

3.05 *Residual Screw and Residual Screw Locknut:* (Fig. 8)

(1) If the residual screw is readily accessible, loosen the residual screw locknut with the wrench portion of the No. 48 combination wrench and screwdriver and remove the residual screw with the screwdriver portion of the tool. Substitute the new parts. Adjust the screw to meet the residual airgap requirement covered in Section 040-236-701 and securely tighten the residual screw locknut.

(2) If the residual screw is behind a normal post spring assembly but is accessible for removal by the fingers, replace the screw as follows. First, remove the cover from the switch adjacent to the relay being worked on. Then, loosen the residual screw locknut with the No. 474A wrench, taking care to avoid grounding the adjacent springs. Turn the screw with the modified No. 207 screwdriver or with the fingers, and remove the screw and locknut. Substitute the new parts. Adjust the screw to meet the residual airgap requirement covered in Section 040-236-701 and securely tighten the residual screw locknut.

(3) If the residual screw is not accessible to the fingers, loosen the setscrew of the normal post spring assembly using the 3-inch cabinet screwdriver or the No. 476A wrench and shift or remove the spring assembly to

gain access to the screw, taking care not to damage the leads. Replace the residual screw as covered in (1) if the spring assembly has been removed, or as covered in (2) if the assembly has been shifted. Adjust the screw to meet the residual airgap requirement covered in Section 040-236-701. Reposition and adjust the normal post spring assembly.
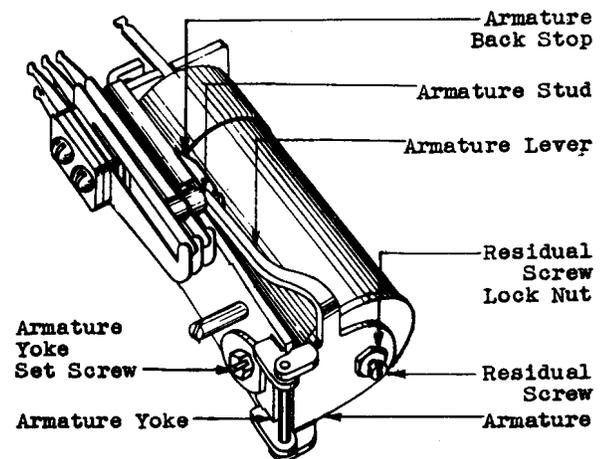
Fig. 8 – Parts of 221-, 222-, 223-, and 224-type Relays

3.06 *Armature Backstop Screw* (251- and 252-type Relays) :

(1) Replace the armature backstop screw and locknut following procedures similar to those for the residual screw and locknut covered in 3.05 (1), (2), or (3) except use the No. 209 wrench to loosen the locknut.

3.07 *Armature and Yoke, Armature Yoke Setscrew, and Armature Yoke Clamping Washer:* To replace the armature and yoke, loosen the yoke setscrew with the No. 476A offset socket wrench for 247-, 248-, and modified 221- and 222-type relays or with the No. 563A and No. 564A offset screwdrivers for all other types. Remove the armature and yoke by drawing it forward. If the setscrew or clamping washer is to be removed, do it at this time. To remove the armature and yoke on 251- and 252-type relays, remove the armature yoke setscrew and armature yoke clamping washer. Then swing

the yoke forward and remove the armature from the side of the relay. Place the new armature yoke clamping washer in position on the heelpiece so that the lug on the washer engages the hole in the heelpiece. Place the yoke setscrew in position and give it a few turns to hold the clamping washer loosely. Guide the armature into position so that the armature yoke is between the armature yoke clamping washer and the heelpiece and the armature stud is between the armature backstop and the first lever spring. Then secure the armature and yoke in position by tightening the armature yoke setscrew with the No. 563A and 564A offset screwdrivers or the No. 476A wrench as required.

3.09 *Armature Stud:* Remove the armature and yoke as described in 3.07 and then remove the old stud from the armature arm by cutting it with the diagonal pliers. Place the new armature stud on the armature arm pressing it onto the arm with the long-nose pliers far enough to hold it in position. Then heat the armature arm slightly with a soldering iron and press the stud into place with the long-nose pliers as shown in Fig. 10.
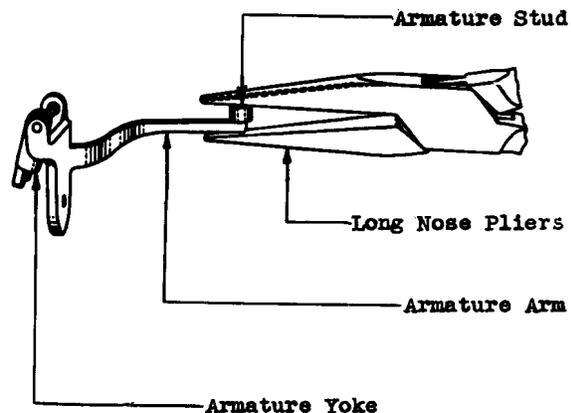
Fig. 10 — Method of Pressing the Armature Stud onto the Armature Arm

Fig. 9 — Parts of 251- and 252-type Relays

3.08 *Front Pole Piece* (251- and 252-type Relays): Loosen the front pole-piece clamping screws with the No. 206 and 207 offset screwdrivers and remove the front pole piece. Remove the backstop screw and locknut from the pole piece as covered in 3.06 and mount these parts on the new front pole piece. If the front pole-piece clamping screws are to be replaced, replace them at this time. Mount the new front pole piece in position with the armature between the front pole piece and the core and tighten the pole-piece clamping screw securely.

3.10 *Coil*

(1) Replace the coil as covered in (2) if the coil is readily accessible or as covered in (3) if the coil is behind a normal post spring assembly on a switch.

(2) If the coil is readily accessible, unsolder the leads from the winding terminals and remove the armature and yoke as described in 3.07. On 251- and 252-type relays, remove the front pole piece as covered in 3.08 and swing the armature outward. Remove the coil mounting screw with the 4-inch regular screwdriver and then remove the coil by drawing it forward until the winding terminals are free of the mounting plate. If the coil has four winding terminals and semicircular rear spoolhead, place a terminal bushing (see Fig. 4) over the winding terminal nearest the flat side of the spoolhead of the new coil so that

the collar on the bushing is adjacent to the spoolhead. If there is occasion to replace a coil having a square rear spoolhead and four winding terminals with one having a semicircular rear spoolhead, use a terminal bushing per Fig. 4. On 251- and 252-type relays, mount the front pole piece and clamping screws in the new center pole piece. If the coil has a semicircular rear spoolhead, mount it so that the flat side of the spoolhead is adjacent to the heelpiece. If the coil has a square rear spoolhead, mount it so that the two rectangular holes in the front spoolhead are on the side away from the heelpiece. If the coil has a copper slug at the front end, mount it with the embossed side of the slug toward the heelpiece. Fasten the coil in place by tightening the coil mounting screws securely and assemble the armature and yoke in its correct position as covered in procedure 3.07. On 251- and 252-type relays, mount the front pole piece as covered in 3.08. When the relays are mounted on a mounting plate similar to the 930 type, it will be necessary to remove the mounting plate from the shelf as described for a 197- or 198-type switch in Section 030-705-801, in order to reach the wiring and the coil mounting screw.

(3) If the coil is behind a normal post spring assembly on a switch, make the coil accessible for removal by shifting or removing the spring assembly as covered in 3.05 (3). Replace the coil as covered in (2) above and remount the spring assembly as covered in 3.05 (3).

3.11 *Terminal Bushing* (Fig. 4): Remove the armature, yoke, and the coil as described in 3.10. Then remove the bushing from the winding terminal with the long-nose pliers or by cutting it with the diagonal pliers. Place the new bushing in place on the winding terminal nearest the flat side of the spoolhead so that the collar on the bushing is adjacent to the spoolhead. Then reassemble the coil and the armature and yoke as described in 3.10.

225-Type Relays and AECo Pivot-type Relays

3.12 *Residual Screw and Residual Screw Locknut*

(1) Replace the residual screw and locknut as covered in 3.05 (1) if the screw is readily accessible or as covered in (2) below if the

screw is behind a rotary off-normal spring assembly on a switch.

(2) If the residual screw is behind a rotary off-normal spring assembly, first remove the cover from the switch adjacent to the relay being worked on. Loosen the residual screw locknut with the No. 474A wrench, taking care to avoid grounding the adjacent springs. Turn the screw with the modified No. 207 screwdriver or with the fingers and remove the screw and locknut. Substitute the new parts. Adjust the screw to meet the residual airgap requirement covered in Section 040-236-701 and securely tighten the residual screw locknut.

3.13 *Pivot Screw and Locknut:* Loosen the pivot screw locknut with the No. 417A wrench if the nut is 1/4 inch across flats, with the No. 418A wrench if the nut is 7/32 inch across flats, or with the No. 43 wrench if the nut is 3/16 inch across flats. Remove the pivot screw with the modified No. 207 offset screwdriver. Substitute the new screw and locknut and tighten the locknut securely.

3.14 *Armature* (Pivot-type Armature Bearing): Remove the pivot screw and locknut as described in 3.13 after which the armature may be removed by swinging the armature arm away from the coil to disengage the fixed pivot from the heelpiece. If the armature assembly is not provided with an armature stud, assemble the stud on the new armature arm as described in 3.09. Substitute the new armature by engaging the fixed armature pivot in the bearing hole in the heelpiece as shown in Fig. 11 and guide the armature arm so that the armature stud is between the backstop and the first lever spring. Hold the armature in this position, turn the pivot screw into position, and tighten the pivot screw locknut securely.

3.15 *Armature and Yoke and Armature and Yoke Mounting Screws* (Pin-type Armature Bearing): To replace the armature and yoke of a relay used as the "Z" relay of a 197-type switch, remove the switch from the shelf as described in Section 030-705-801 covering Piece-Part Data and Replacement Procedures for 197- and 198-type Switches. Then unsolder the leads from the contact springs and remove the relay mounting screws on the rear
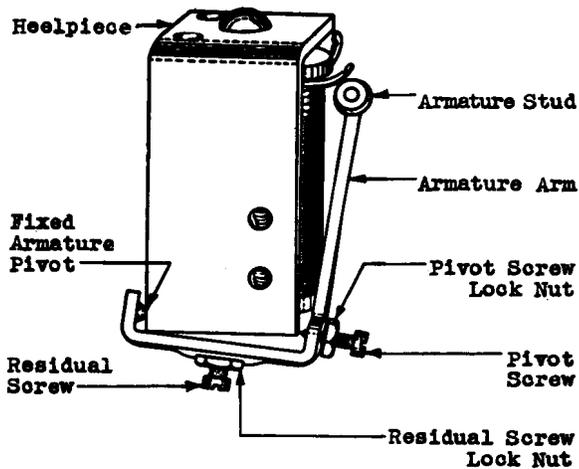
**Fig. 11 — Method of Replacing the Armature
(Pivot-type Armature Bearing)**

of the mounting plate with the 4-inch regular screwdriver. Support the relay in the hand and remove the armature and yoke mounting screws with the 4-inch regular screwdriver. Substitute the new armature and yoke and spring assembly, resolder the leads to the contact springs, fasten the relay to the mounting plate with the mounting screws, and replace the switch on the shelf as covered in Section 030-705-801.

3.16   Armature Stud: To replace the armature stud, remove the armature and yoke as described in 3.14 or 3.15 and then substitute the new armature stud as described in procedure 3.09.

Coil

3.17   225-type Relay with Pin-type or Pivot-type Armature Bearing: To replace the coil of a relay used as the "Z" relay of a 197-type switch, remove the switch from the shelf as covered in Section 030-705-801. Then unsolder the leads from the winding terminals, and remove the coil by removing the coil mounting screw from the rear of the switch mounting plate with the 4-inch regular screwdriver. Substitute the new coil and fasten it in position with the coil mounting screw so that the winding terminals extend toward the right-hand side of the switch as viewed from the front. Solder the winding leads in place and replace the switch on the shelf as covered in Section 030-705-801.

3.18   AECo Pivot-type Relay, Line Switch Mounting: To replace the coil of a pivot-type relay mounted on a plunger-type switch frame, remove the line switch from the shelf as described in Section 030-705-801 covering the requirements and adjusting procedures for Plunger-type Primary and Secondary Line Switches and Out-Trunk Switches. Then remove the switch jack mounting screw with the 3-inch cabinet screwdriver and move the jack out of the way so as to give access to the coil mounting screw. Unsolder the leads from the coil winding terminals and remove the coil by removing the coil mounting screw with the 4-inch regular screwdriver. Substitute the new coil and tighten it in position with the coil mounting screw so that the winding terminals are on top as viewed from the front of the switch. Solder the leads to the winding terminals and remount the line switch on the shelf as covered in Section 030-705-801.

3.19   AECo Pivot-type Relay, Master Switch Mounting: To replace the coil of a pivot-type relay mounted on the left side of a master switch, it will be necessary to remove the bracket on which the relays are mounted from the master switch frame. Before removing the bracket, however, unsolder the leads from the winding terminals of the coil to be replaced. Remove the relay bracket by loosening the lower mounting screw first, with the 3-inch cabinet screwdriver and then withdrawing the screw with the 6-inch tweezers. Now support the relays with one hand and remove the top mounting screw. The slack in the wiring will now permit the bracket to be turned so that the coil mounting screws are accessible. Remove the coil to be replaced by removing the mounting screw with the No. 565A and 566A offset screwdrivers, or with the 4-inch regular screwdriver, substitute the new coil and tighten the coil mounting screw so that the winding terminals are accessible from the bottom of the master switch. Reassemble the relay bracket on the master switch frame by inserting the top mounting screw through the hole in the relay bracket with the 6-inch tweezers and then tightening the mounting screw sufficiently to hold the bracket loosely in position. Then place the other mounting screw in position with the 6-inch tweezers, tighten both mounting screws securely and then resolder the leads on

the winding terminals. When replacing the coils of relays mounted on the right side of the master switch, follow the same procedure as described above except that when reassembling the bracket on the master switch frame, observe that the stud on the lower leg of the locking arm of the master switch is between the armature arm and the first contact spring of the locking relay.

REASONS FOR REISSUE

1. To reword the information to specify inductors instead of retardation coils (1.01).

2. To add a paragraph covering uses of parentheses (2.02).

3. To add a paragraph covering information for replacing armatures on AECo relays of early manufacture (2.04).

4. To reword paragraph 2.05 of the previous section covering use of the asterisk (*) designation (2.07).

5. To revise Fig. 1, 4, 5, and 6.

6. To revise Tables A, B, and C.

7. To revise the list of tools (3.01).

8. To add a paragraph for modifying a No. 207 tool (3.02).

9. To revise the procedures for replacing the residual screw and residual screw locknut (except on 225-type relays) (3.05).

10. To revise the procedures for replacing the armature backstop screw (3.06).

11. To revise the procedures for replacing coils (3.10).

12 To revise the procedures for replacing the residual screw and residual screw locknut on 225-type relays (3.12).