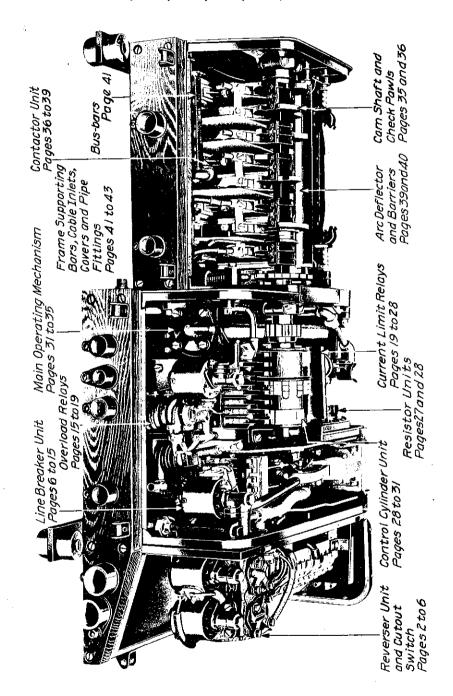
# General Electric Company Schenectady, N.Y.

JULY, 1921

\*BULLETIN NO. 54662A

PARTS OF TYPE PC-5 CONTROLLERS FORMS B1, C1, C2, C3, C4, F1 AND G1



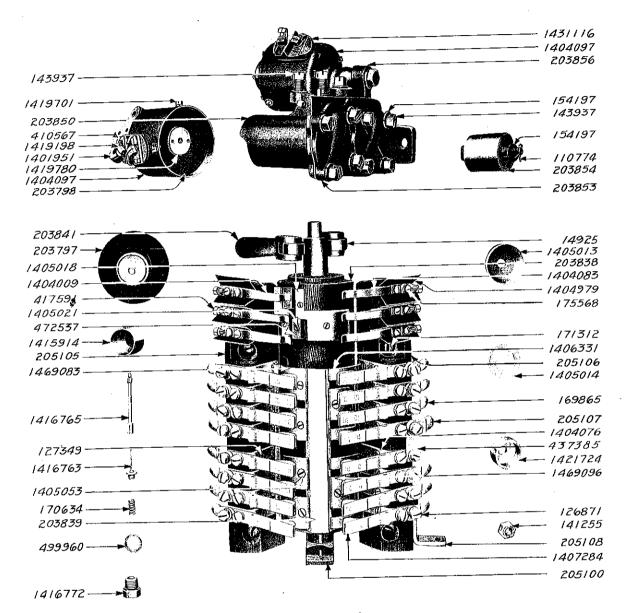
NOTE:-Data subject to change without notice. \*Supersedes Bulletin No. 54662 and Engineering Advice No. 1533.

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### REVERSER UNIT AND CUTOUT SWITCH

#### (Illustration Page 3)

Cat.No. 203836	Description REVERSE CYLINDER with shaft, segments and operating
200000	crank .
203837	Fiber insulation sleeve for shaft (3/4 in. by 7/8 in. by 11 in.)
203838	Wooden body with shaft
1406331	"U" shaped copper contact segment for wide contact fingers (3 1/8 in. long)
1469083	Wide copper contact segment for wide contact fingers (1 3/8 in. long)
<b>1</b> 469096	Narrow copper contact segment for wide contact fingers (1 3/8 in. long)
1405018	Copper contact segment for narrow contact fingers
472537	Fiber filler segment for narrow contact fingers
203839	Fiber filler strip between wide contact finger
	segments, with dowel pin
1405021	Small segment screw (No. 8, 3/4 in. f.h. sp'1)
1405053	Large segment screw (No. 12, 1 in. f.h. sp'1)
203840	Complete set of copper and fiber segments.
	Includes 4 copper contact segments each Nos.
	1406331, 1469083, 1469096; 2 copper contact
	segments No. 1405018; 2 fiber filler
	segments No. 472537; 2 fiber filler strips
	No. 203839; 6 screws No. 1405021 and 32
	screws No. 1405053
203841	
14925	Roller with pin
205100	Bearing bracket for reverse cylinder shaft
144057	Cap screw fastening bearing bracket to frame
	(3/8  in.-16, 1  in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 144057 (13/32 in. by
	25/32 in. by 3/32 in. thick)
205101	FINGER BLOCK, left-hand, with finger bases and
	fingers
205102	Finger block, right-hand, with finger bases and
_ •	fingers
205103	Finger block, left-hand, with finger bases,
	without fingers
205104	Finger block, right-hand, with finger bases,
	without fingers
205105	Finger block, left-hand
205106	Finger block, right-hand
1404076	Finger base for wide contact finger
1404083	Finger base for narrow contact finger



Reverser Unit

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### REVERSER UNIT AND CUTOUT SWITCH

Cat.No.	Description
127349	Screw fastening No. 1404076 to finger block
	(No. 10, 1 in. f.h. sherardized)
121840	Screw fastening No. 1404083 to finger block
	(No. 8, 5/8 in. f.h. sherardized)
1407284	WIDE CONTACT FINGER. Per set of 16. Cat.No.
1.10.10.00	is for one finger Name and the finger Per act of 6 Cat No.
<b>140</b> 4009	Narrow contact finger. Per set of 6. Cat.No. is for one finger
437385	Copper connection strip for wide contact fingers
1404979	Fiber insulation barrier for narrow contact finger
1404010	Double washer for narrow contact finger
126871	Cap screw fastening wide contact finger to finger
120011	base (14-24, 3/4 in. hex.h. slot. sherardized)
143974	Washer for No. 126871 (17/64 in. by $1/2$ in. by
110011	0.0625 in. sherardized)
154194	Spring lock washer for No. 126871 (17/64 in. by
	29/64 in. by 5/64 in. thick)
175568	Screw fastening narrow contact finger to finger
ð	base (10-30, 5/8 in. r.h. sherardized)
$\boldsymbol{150279}^{'}$	Washer for No. 175568 (13/64 in. by 13/32 in. by
	0.044 in. sherardized)
154191	Spring lock washer for No. 175568 (13/64 in. by
	25/64 in. by 0.0625 in.)
205107	Large punched copper tube cable terminal for wide
	contact finger (9/32 in. bolt hole)
169865	Small punched copper tube cable terminal for wide
	contact finger (9/32 in. bolt hole)
417591	Copper terminal for narrow contact fingers
171312	Screw fastening finger block to frame (3/8 in16,
	3 in. r.h. sherardized)
141259	Washer for No. 171312 (13/32 in. by 3/4 in. by
	0.0625 in. sherardized)
154197	Spring lock washer for No. 171312 (13/32 in. by
100015001	25/32 in. by 3/32 in. thick)
182315961	REVERSE OPERATING MECHANISM with pistons, packing
000050	and cylinder heads
$203850 \\ 203851$	Reverse operating air cylinder
203001	Cap screw fastening air cylinder to frame (1/2 in -13,
154198	7/8 in. hex.h. slot. sherardized) Spring lock washer for No. 203851 (17/32 in. by
104190	1 1/32 in. by 1/8 in. thick)
203852	Pipe plug for air cylinder (1/8 in, st'd, cast
200002	iron)
203853	Cylinder head for air cylinder
1406325	Gasket between cylinder head and air cylinder
	wormon of rimeor mode and arr cyringer

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### REVERSER UNIT AND CUTOUT SWITCH

Cat.No.	Description
144057	Long cap screw fastening cylinder head to air
111001	cylinder (3/8 in16 by 1 in. hex.h. slot.
	sherardized)
143937	Short cap screw fastening cylinder head to air
rannor.	cylinder (3/8 in16, 7/8 in. hex.h. slot.
	sherardized)
4 5 4 4 0 5	Spring lock washer for No. 143937 or 144057
154197	
000001	(13/32 in. by 25/32 in. by 3/32 in. thick)
203854	Piston with stud and packing
1405013	Leather packing for piston
1405014	Retainer for piston packing
1421724	Piston follower
141255	Nut for piston stud (3/8 in16, hex. st'd,
	sherardized)
154197	Spring lock washer for No. 141255 (13/32 in. by
•	25/32 in. by 3/32 in. thick)
110774	Spring cotter for piston stud (3/32 in. by
•	5/8 in. sherardized)
203855	MAGNET VALVE, complete
203856	Magnet valve body and support for magnet coil
	housing, with valve seat
193565	Valve seat .
1404097	Magnet coil housing
203797	Cover for magnet coil housing, with bushing and
	operating pin
1419701	Cap screw fastening cover to magnet valve housing
	(10-30, 3/8 in. hex.h. slot. sp'l)
154191	Spring lock washer for No. 1419701 (13/64 in. by
	25/64 in. by 0.0625 in.)
203798	MAGNET COIL with connection blocks
1448582	Insulation washer between magnet coil housing and
	magnet coil (1 1/16 in. by 3 in. by
	0.012 in.)
1419198	Connection screw for magnet coil (10-30, 7/8 in.
	sq.h. slot. brass, sp'l)
150279	Washer for No. 1419198 (13/64 in. by 13/32 in. by
	0.044 in. sherardized)
154191	Spring lock washer for No. 1419198 (13/64 in. by
	25/64 in. by 0.0625 in.)
1431116	Insulation block for connection screws
1415914	Armature
1419780	Magnet core
203799	Set screw for magnet core (10-30, 3/8 in. headless,
.,	pointed, sp'1)
141676 <b>5</b>	Exhaust stem

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### REVERSER UNIT AND CUTOUT SWITCH

Cat.No.	Description
1416763	Inlet valve
170634	Compression spring for inlet valve
1416772	Cap plug
499960	Copper gasket for cap plug(5/8 in, by 7/8 in, by 0.015 in.)
410567	Copper terminal for connection screw
1401951	Gasket between magnet valve body and air cylinder
143937	Cap screw fastening magnet valve body to air cylinder (3/8 in16, 7/8 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. $143937$ ( $13/32$ in. by $25/32$ in. by $3/32$ in. thick)
1978193G1	CUTOUT SWITCH
205108	Supporting bracket for cutout switch
127349	Screw fastening supporting bracket to finger block (No. 10, 1 in. f h. sherardized)
143510	Screw fastening cutout switch to supporting bracket (5/16 in18, 5/8 in. r.h. sherardized)
148915	Screw fastening cutout switch to reverse cylinder
	bearing bracket (5/16 in18, 2 in. r.h. sherardized)
203866	Fiber spacing bushing used with screw No. 148915 (11/32 in. by 5/8 in. by 1 1/4 in.)
<b>14559</b> 8	Washer for Nos. 143510, 148915 (21/64 in. by 5/8 in. by 0.0625 in. sherardized)
154196	Spring lock washer for Nos. 143510, 148915 (21/64 in. by 37/64 in. by 5/64 in. thick)
1407293	Copper terminal for cutout switch
169865	Punched copper tube cable terminal for cutout switch (9/32 in. bolt hole)
•	LINE BREAKER UNIT

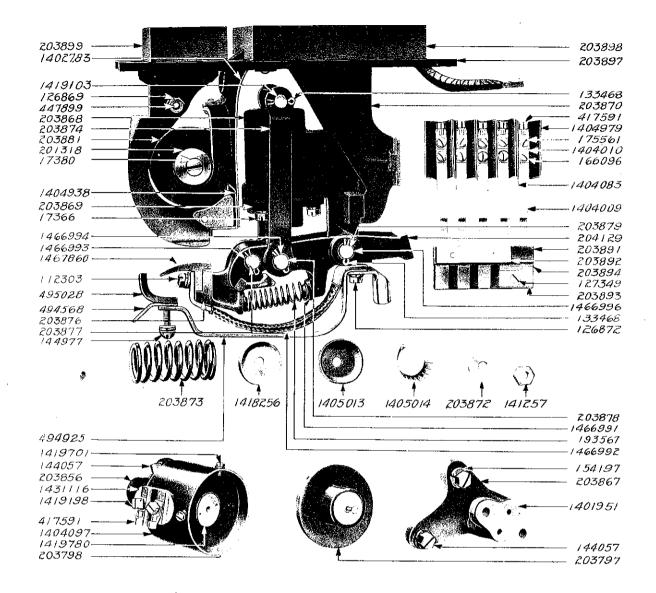
#### LINE BREAKER UNIT

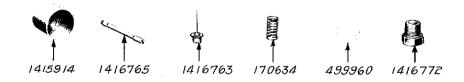
#### (Illustrations Pages 7 and 13)

193566 LINE BREAKER with support, blowout coil, arc chute and interlock

#### Following are the parts:

203868	Air cylinder casting with bushing
1466988	Split bushing for air cylinder casting (1/2 in.
	by 5/8 in. by 1 1/8 in. phosphor bronze)
203869	Cylinder head for air cylinder casting
1402702	Gasket between cylinder head and air cylinder casting





Line Breaker Operating Mechanism

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#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

Cat.No.	Description
203870	Supporting bracket for air cylinder casting
17366	Cap screw fastening cylinder head to air cylinder
11000	casting (5/16 in18, 7/8 in. hex.h. slot.
	<del>- • •</del>
	sherardized)
144057	Cap screw fastening air cylinder casting to
	supporting bracket (3/8 in16, 1 in.
	hex.h. slot. sherardized)
143997	Cap screw fastening supporting bracket in position
110001	
	(3/8 in16, 1 1/4 in. hex.h. slot.
4 5 4 11	sherardized)
141259	Washer for No. 143997 (13/32 in. by 3/4 in. by
	0.0625 in. sherardized)
154196	Spring lock washer for No. 17366 (21/64 in. by
	37/64 in. by 5/64 in. thick)
154197	Spring lock washer for Nos. 144057, 143997
104101	
000074	(13/32  in. by  25/32  in. by  3/32  in. thick)
203871	PISTON ROD with crosshead and packing
1419102*	Piston rod
1419103	Crosshead for piston rod and hinge pin for
	operating links
496930	Copper washer for piston rod (13/32 in. by 3/4 in.
	by 0.030 in.)
1418256	Piston
1418256 1405013	Piston
1405013	Piston Leather packing for piston
$1405013 \\ 1405014$	Piston Leather packing for piston Retainer for piston packing
$1405013 \\ 1405014 \\ 203872$	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized
$1405013 \\ 1405014$	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick,
1405013 1405014 203872 141257	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized)
$1405013 \\ 1405014 \\ 203872$	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by
1405013 1405014 203872 141257 154197	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick)
1405013 1405014 203872 141257	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in.
1405013 1405014 203872 141257 154197	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick)
1405013 1405014 203872 141257 154197	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized)
1405013 1405014 203872 141257 154197 110774	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in.
1405013 1405014 203872 141257 154197 110774 133468	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized)
1405013 1405014 203872 141257 154197 110774 133468 203873	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston
1405013 1405014 203872 141257 154197 110774 133468 203873 204129	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings
1405013 1405014 203872 141257 154197 110774 133468 203873	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin
1405013 1405014 203872 141257 154197 110774 133468 203873 204129	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in.
1405013 1405014 203872 141257 154197 110774 133468 203873 204129 1466993	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze)
1405013 1405014 203872 141257 154197 110774 133468 203873 204129	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze) Split bushing for operating link hinge pin
1405013 1405014 203872 141257 154197 110774 133468 203873 204129 1466993	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze)
1405013 1405014 203872 141257 154197 110774 133468 203873 204129 1466993	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze) Split bushing for operating link hinge pin
1405013 1405014 203872 141257 154197 110774 133468 203873 204129 1466993	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze) Split bushing for operating link hinge pin (0.501 in. by 5/8 in. by 2 3/16 in. phosphor bronze)
1405013 1405014 203872 141257 154197 110774 133468 203873 204129 1466993	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze) Split bushing for operating link hinge pin (0.501 in. by 5/8 in. by 2 3/16 in. phosphor bronze) Split bushing for air cylinder hinge pin
1405013 1405014 203872 141257 154197 110774 133468 203873 204129 1466993	Piston Leather packing for piston Retainer for piston packing Piston follower, sherardized Nut for piston rod (3/8 in16, 1/4 in. thick, hex. st'd, sherardized) Spring lock washer for No. 141257 (13/32 in. by 25/32 in. by 3/32 in. thick) Spring cotter for piston rod (3/32 in. by 5/8 in. sherardized) Spring cotter for crosshead (1/8 in. by 3/4 in. sherardized) Compression spring for piston OPERATING LEVER with bushings Split bushing for contact lever hinge pin (0.501 in. by 5/8 in. by 19/32 in. phosphor bronze) Split bushing for operating link hinge pin (0.501 in. by 5/8 in. by 2 3/16 in. phosphor bronze)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

Cat.No.	Description
203874	Operating link for piston rod crosshead and
	operating lever
203875	CONTACT LEVER with bushing, shunt and contact tip
203876	Contact lever with bushing
178042	Split bushing for contact lever (0.501 in. by
21002	5/8 in. by 7/8 in. phosphor bronze)
1467860	Contact tip for contact lever
1466992	Shunt for contact lever and air cylinder casting
494925	Guard for shunt
494568	Arcing tip for contact lever
112303	Cap screw fastening contact tip and shunt to
112300	contact lever (5/16 in18, 1 in. hex.h.
	slot. sherardized)
154196	Spring lock washer for No. 112303 (21/64 in. by
154150	37/64 in. by $5/64$ in. thick)
405039	Burning tip for contact lever
495028	Screw fastening guard, arcing tip and burning tip
144977 *	
*	to arc chute (14-24, 1 1/4 in. r.h.
4 400 7 4	sherardized)
143974	Washer for No. 144977 (17/64 in. by $1/2$ in. by
154104	0.0625 in. sherardized)
154194	Spring lock washer for No. 144977 (17/64 in. by
002077	29/64 in. by 5/64 in. thick)
203877	Hinge pin for contact and operating levers (1/2 in, by 2 9/16 in. sp'l, sherardized)
203878	Hinge pin for operating links and operating lever
203010	(1/2 in. by 3 3/4 in. sp'l, sherardized)
000070	Times nin for air artinder anoting and appreting
203879	Hinge pin for air cylinder casting and operating
	lever (1/2 in. by 2 13/16 in. sp'1,
100400	sherardized)
133468	Spring cotter for Nos. 203877, 203878, 203879,
100505	(1/8 in. by 3/4 in. sherardized) Compression spring for operating and contact levers
193567 $1466991$	Fiber seat for compression spring
	Punched copper tube cable terminal for air cylinder
201314	casting (11/32 in. bolt hole)
126872	Cap screw fastening shunt and terminal to air
120012	cylinder casting (5/16 in18, 5/8 in.
	hex.h. slot. sherardized)
154100	Spring lock washer for No. 126872 (21/64 in. by
154196	37/64 in. by $5/64$ in. thick)
203881	BLOWOUT COIL with supporting bracket, contact tip
403001	and connection strip
1467860	Contact tip for blowout coil support
1401000	contact tip for prowout corr support

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

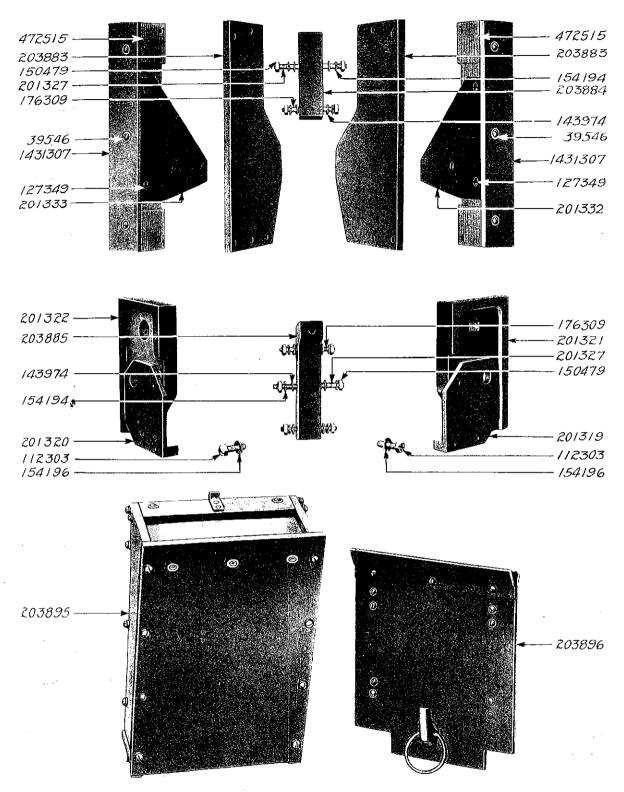
Cat.No.	Description
17376	Cap screw fastening contact tip to blowout coil
	support (5/16 in18, 3/4 in. hex.h.
	slot. sherardized)
154196	Spring lock washer for No. 17376 (21/64 in. by
	37/64 in. by 5/64 in. thick)
143733	Cap screw fastening blowout coil supporting bracket
	in position (3/8 in16, 1 3/4 in. hex.h.
	slot. sherardized)
141259	Washer for No. 143733 (13/32 in. by 3/4 in. by
	0.0625 in. sherardized)
154197	Spring lock washer for No. 143733 (13/32 in. by
	25/32 in. by 3/32 in. thick)
176344	Screw fastening blowout coil connection strip to
1,0011	wooden block (No. 12, 1 in. f.h. sherardized)
201318	Insulated magnet core for blowout coil
17380	Screw fastening magnet core to pole piece
1,000	(5/16  in18, 5/8  in. f.h. sherardized)
1402783	Large fiber insulation plate between blowout coil
	and air cylinder casting
1404938	Small fiber insulation plate between blowout coil
	and air cylinder casting
20.1319	POLE PIECE, right-hand, with feeder block
201320	Pole piece, left-hand, with feeder block
201321	Insulation side plate, right-hand
201322	Insulation side plate, left-hand
176330	Screw fastening insulation side plate to pole piece
	(10-30, 3/4 in. r.h. brass)
201323	Washer for No. 176330 (13/64 in. by 13/32 in. by
	0.030 in. brass)
154191	Spring lock washer for No. 176330 (13 64 in. by
<del> </del>	25/64 in. by 0.0625 in.)
447899	Stud for insulation side plates (5/16 i18, 3 in.
	brass)
145598	Washer for No. 447899 (21/64 in. by 5/8 in. by
	0.0625 in. sherardized)
126869	Nut for No. 447899 (5/16 in18, hex. st'd,
	sherardized)
154196	Spring lock washer for No. 126869 (21/64 in. by
	37/64 in. by 5/64 in. thick)
193568	
	field pieces and supports
203883	Arc chute side
203884	Spacing block, upper, for arc chute sides
203885	Spacing block, lower, for arc chute sides

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

Cat.No.	Description
201332	Field piece, right-hand, with feeder block
201333	Field piece, left-hand, with feeder block
112303	Cap screw fastening field piece to pole piece
1 1 2000	(5/16 in18, 1 in. hex.h. slot. sherardized)
154196	Spring lock washer for No. 112303 (21/64 in. by
104100	37/64 in. by $5/64$ in. thick)
472515	Support for field piece
127349	Screw fastening field piece to support (No. 10,
12/040	1 in. f.h. sherardized)
20546	Screw fastening insulation strip to support (No. 10,
39546	<u>-</u>
150050	3/4 in. r.h. blued)
150279	Washer for No. $39546 (13/64 \text{ in. by } 13/32 \text{ in. by})$
4 11 4 4 0 4	0.044 in. sherardized)
154191	Spring lock washer for No. 39546 (13/64 in. by
	25/64 in. by 0.0625 in.)
201327	Long stud fastening arc chute parts together (14-24,
	3 3/8 in. sherardized)
176309	Short stud fastening arc chute parts together (14-24,
**	2 9/16 in. sherardized)
143974	Washer for Nos. $201327$ , $176309$ (17/64 in. by
	1/2 in. by 0.0625 in. sherardized)
150479 🐔	Nut for Nos. 201327, 176309 (14-24, hex. st'd,
	sherardized)
154194	Spring lock washer for Nos. 201327, 176309
	(17/64 in. by 29/64 in. by 5/64 in. thick)
203886	Felt dust guard with tacks, for arc chute
203887	Asbestos dust guard for arc chute
1407251	Retaining plate for No. 203887
127347	Screw fastening Nos. 203887, 1407251 to arc chute
	(No. 10, 3/4 in. f.h. sherardized)
154191	Spring lock washer for No. 127347 (13/64 in. by
	25/64 in, by 0.0625 in.)
203897	Support for line breaker unit
203898	Large wooden block for No. 203897
203899	Small wooden block for No. 203897
203900	Spacer between small wooden block and blowout coil
	supporting bracket
112303	Cap screw fastening wooden blocks to supporting
112000	strips (5/16 in18, 1 in. hex.h. slot.
	sherardized)
145598	Washer for No. 112303 (21/64 in. by 5/8 in. by
1 70000	washer for No. 112003 (21/04 fm. by 0/0 fm. by $0.0625$ in. sherardized)
154196	Spring lock washer for No. 112303 (21/64 in. by
104120	37/64 in. by $5/64$ in. thick)
	orvor in. by over in. thick)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

Cat.No.	Description
144057	Cap screw fastening support to controller frame (3/8 in16, 1 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 144057 (13/32 in. by
203888	25/32 in. by 3/32 in. thick) INTERLOCK FINGER BLOCK with finger bases and fingers
203889	
	Finger block Finger base
1404083	_
121840	Screw fastening finger base to finger block (No. 8, 5/8 in. f.h. sherardized)
1404009	CONTACT FINGER. Per set of 5. Cat.No. is for one finger
1404010	Double washer for contact finger
1404979	Fiber barrier for contact finger
166096	Screw fastening contact finger to finger base
	(10-30, 3/8  in. r.h. sherardized)
175561	Screw fastening contact finger and copper terminal
	to finger base (10-30, 1/2 in. r.h.
•	sherardized)
150279	* Washer for No. 175561 (13/64 in. by $13/32$ in. by $0.044$ in. sherardized)
154191	Spring lock washer for Nos. 166096, 175561
	(13/64  in. by  25/64  in. by  0.0625  in.)
417591	Copper terminal for contact finger
144977	Screw fastening interlock finger block in position
111011	(14-24, 1 1/4  in. r.h. sherardized)
143974	Washer for No. 144977 (17/64 in. by 1/2 in. by
140014	0.0625 in. sherardized)
15/10/	Spring lock washer for No. 144977 (17/64 in. by
154194	
000000	29/64 in. by 5/64 in. thick)
203890	INTERLOCK CONTACT BLOCK with segments
203891	Contact block
203892	Large copper contact segment
203893	Small copper contact segment
203894	Fiber filler segment
176330	Screw fastening large copper contact segment to contact block (10-30, 3/4 in. r.h. brass)
127349	Screw fastening small copper contact segment and
	fiber filler segment to contact block (No. 10, 1 in. f.h. sherardized)
1 6 0 0 7 0	
150279	Washer for No. 176330 (13/64 in. by 13/32 in. by
4 = 4 4 0 4	0.044 in. sherardized)
154191	Spring lock washer for No. 176330 (13/64 in. by
100010	25/64 in. by $0.0625$ in.)
126913	Screw fastening interlock contact block in position (14-24, 7/8 in. r.h. sherardized)



Line Breaker Arc Chute.

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### LINE BREAKER UNIT

Cat.No.	Description
499960	Copper gasket for cap plug (5/8 in. by 7/8 in.
	by 0.015 in.)
417591	Copper terminal for connection screw
1401951	Gasket between magnet valve body and air port
203867	AIR PORT for magnet valve
144057	Cap screw fastening magnet valve to air port and
	cap screw fastening air port to frame
	(3/8 in16, 1 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 144057 (13/32 in. by
	25/32 in. by 3/32 in. thick)
	•

#### RELAY AND RESISTOR UNITS

#### OVERLOAD RELAYS

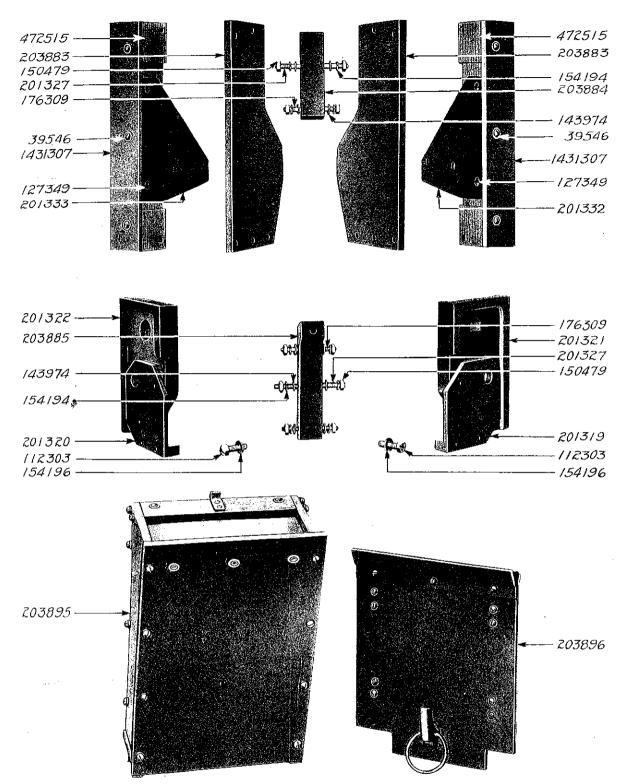
# (Illustration Page 16)

205109	OVERLOAD RELAY for Forms C1 and C4 Controllers,
205110	Type DB-690, Form B1 Overload relay for Forms C2 and C3 Controllers, Type DB-690, Form B3
	Following are the parts:-
205111	RELAY BASE
143997	Cap screw fastening relay base to controller frame
	(3/8 in16, 1 1/4 in.hex.h. slot.
1 41 0 50	sherardized)
141259	Washer for No. 143997 (13/32 in. by $3/4$ in. by
154197	0.0625 in. sherardized) Spring lock washer for No. 143997 (13/32 in. by
101101	25/32 in. by 3/32 in. thick)
204045	SERIES OPERATING EDGEWISE WOUND COIL for Form B1
	Relay
203903	Series operating edgewise wound coil for Form B3 Relay
203904	RESETTING COIL
201313	Punched copper tube cable terminal for series
	operating coil (11/32 in. bolt hole)
17366	Cap screw fastening terminal to series coil
	(5/16  in. -18, 7/8  in. hex.h. slot.)
	sherardized)
149826	Cap screw fastening line breaker blowout coil to
-	series coil (5/16 in18, 1 3/4 in. hex.h.

slot. sherardized)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

Cat.No.	Description
143974	Washer for No. 126913 (17/64 in. by 1/2 in. by
	0.0625 in. sherardized)
154194	Spring lock washer for No. 126913 (17/64 in. by
	29/64 in. by $5/64$ in. thick)
472509	Retaining block for arc chute, fastened to end frame
472516	Retaining block for arc chute, fastened to middle
	frame
126913	Screw fastening retaining block to frame (14-24,
	7/8 in. r.h. sherardized)
143974	Washer for No. $126913$ (17/64 in. by 1/2 in. by
	0.0625 in. sherardized)
154194	Spring lock washer for No. 126913 (17/64 in. by
	29/64 in. by 5/64 in. thick)
203895	Insulation box for line breaker unit
203896	Insulation cover for line breaker unit
203855	MAGNET VALVE, complete
203856	Magnet valve body and support for magnet coil
\$ 400505	housing, with valve seat
193565	Valve seat
1404097	Magnet coil housing
203797	Cover for magnet coil housing with bushing and
1419701	operating pin
1418701	Screw fastening cover to magnet valve housing (10-30, 3/8 in. hex.h. slot. sp'1)
154191	Spring lock washer for No. 1419701 (13/64 in. by
104191	25/64 in. by $0.0625$ in.)
203798	Magnet coil with connection blocks
1448582	Insulation washer between magnet coil housing and
1110000	magnet coil (1 1/16 in, by 3 in, by
	0.012 in.)
1419198	Connection screw for magnet coil (10-30, 7/8 in.
	sq.h. slot. brass, sp'1)
150279	Washer for No. 1419198 (13/64 in. by 13/32 in.
	by 0.044 in. sherardized)
154191	Spring lock washer for No. 1419198 (13/64 in. by
	25/64 in. by 0.0625 in.)
1431116	Insulation block for connection screws
1415914	Armature
1419780	Magnet core
203799	Set screw for magnet core (10-30, 3/8 in.
	headless, pointed, sp'1)
1416765	Exhaust stem
1416763	Inlet valve
170634	Compression spring for inlet valve
1416772	Cap plug



Line Breaker Arc Chute.

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

#### OVERLOAD RELAYS

Cat.No.	Description
145598	Washer for Nos. $17366$ , $149826$ ( $21/64$ in. by $5/8$ in.
	by 0.0625 in. sherardized)
126869	Nut for Nos. 17366, 149826 (5/16 in18, hex. st'd,
	sherardized)
154194	Spring lock washer for Nos. 17366, 149826 (17/64 in.
	by 29/64 in. by 5/64 in. thick)
417591	Copper terminal for resetting coil
175561	Screw fastening No. $417591$ to coil $(10-30, 1/2 in.$
-	r.h. sherardized)
150279	Washer for No. 175561 (13/64 in. by 13/32 in. by
	0.044 in. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by
	25/64 in. by $0.0625$ in.)
203906	Magnet core for series coil
203907	Mica insulation tube for magnet core (7/8 in. by
٨	31/32 in. by $17/8$ in.)
1430984	Insulation flange for magnet core
466925	Fiber spacing washer between insulation flange and
	series coil, for Form B3 Relay only
	(1 1/8 in. by 2 3/8 in. by 1/8 in. thick)
144057	Cap screw fastening magnet core to frame (3/8 in16,
	1 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 144057 (13/32 in. by
000000	25/32 in. by 3/32 in. thick)
203908	MAGNET FRAME with armature stop, pivot and stop pins
203909	Armature stop and support for tension spring stop pin, with rivets
1400076	Stop pin for operating lever
1423076	Pivot pin for operating lever, sherardized
203910	Washer for pivot pin (17/64 in. by 1/2 in. by
143960	0.034 in. sherardized)
139048	Spring cotter for pivot pin (5/64 in. by 3/8 in.
139040	sherardized)
1421794	Stop pin for tension spring
133475	Screw fastening magnet frame to base (14-24,
100410	1 1/8 in. r.h. sherardized)
143974	Washer for No. 133475 (17/64 in. by 1/2 in. by
130011	0.0625 in. sherardized)
154194	
	29/64 in. by 5/64 in. thick)
203911	Armature with bushing, spring post and stop pin
203912	Bushing for armature (1/4 in. by 5/16 in. by
	1 1/2 in. brass)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

#### OVERLOAD RELAYS

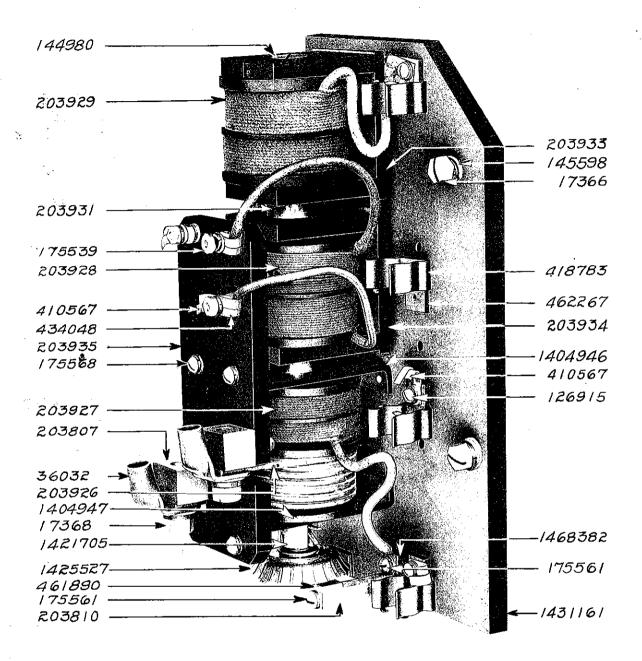
Cat.No.	Description
203913	Spring post for tension spring
1420941	Stop pin for tripping lever
203914	Hinge pin for armature and tripping levers (1/4 in. by 3 5/16 in, sherardized)
139048	Spring cotter for hinge pin (5/64 in. by 3/8 in. sherardized)
203915	Tension spring for armature, with holder
1417291	Holder for tension spring
1466930	Adjusting screw for tension spring
175539	Locking nut for adjusting screw (10-30, hex. st'd,
	sherardized)
154191	Spring lock washer for No. 175539 (13/64 in. by 25/64 in. by 0.0625 in.)
203916	OPERATING LEVER with bushing
203917	Bushing for operating lever (1/4 in. by 5/16 in.
	by 2 3/16 in. brass)
203918*	TRIPPING LEVER with catch plate
204030	Catch plate with rivets
224805	Compression spring for tripping lever
203920	Magnet core for resetting coil, with guide for
	plunger
203921	Guide for plunger, with pin
203922	Contact disk rod with plunger
1425527	CONTACT DISK
170966	Compression spring for contact disk
1420957	Spring seat for compression spring
196908	Hinge pin for contact disk rod and operating lever
	(3/16  in. by  1  1/4  in. sherardized)
168996	Spring cotter for hinge pin $(1/16 \text{ in. by } 3/8 \text{ in.})$
	sherardized)
203924	Contact post with contact tip
461890	Contact tip
175561	Screw fastening contact tip to contact post
	(10-30, 1/2  in. r.h. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by
	25/64 in. by 0.0625 in.)
1468382	Terminal block for contact post
133475	Screw fastening contact post and terminal block to
	base $(14-24, 1 1/8 in. r.h. sherardized)$
143974	Washer for No. 133475 (17/64 in. by 1/2 in. by
	0.0625 in. sherardized)
154194	Spring lock washer for No. 133475 (17/64 in. by
	29/64 in. by $5/64$ in. thick)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

#### OVERLOAD RELAYS

Cat.No.	Description
434048	Copper terminal for connection block, right-hand
410567	Copper terminal for connection block, left-hand
166096	Screw fastening copper terminal to connection block
100090	(10-30, 3/8 in. r.h. sherardized)
150070	
150279	Washer for No. 166095 (13/64 in. by 13/32 in. by 0.044 in. sherardized)
464461	
154191	Spring lock washer for No. 166096 (13/64 in. by
	25/64 in. by 0.0625 in. sherardized)
	CUDDENCE LIKE BOYATE C. D. O. O. C. 11
	CURRENT LIMIT RELAY for Form C1 Controller
	(Illustration Page 20)
203925	CURRENT LIMIT RELAY, Type DB-696, Form A2
	Following are the parts:
1431161	RELAY BASE
17366	Cap screw fastening relay base to supporting strip
	(5/16 in18, 7/8 in. hex.h. slot.
	sherardized)
145598	Washer for No. 17366 (21/64 in. by 5/8 in. by
	0.0625 in. sherardized)
154196	Spring lock washer for No. 17366 (21/64 in. by
	37/64 in. by 5/64 in. thick)
203926	SERIES OPERATING EDGEWISE WOUND COIL
203927	LIFTING COIL
203928	HOLDING COIL
203929	BY-PASS COIL
36032	Punched copper tube cable terminal for edgewise
	wound coil (13/32 in. bolt hole)
434048	Copper terminal for lifting and holding coil leads
410567	Copper terminal for by-pass coil lead
17368	Cap screw fastening edgewise wound coil and terminal
	to terminal block (3/8 in16, 3/4 in.
•	hex.h. slot. sherardized)
141259	Washer for No. 17368 (13/32 in. by 3/4 in. by
111800	0.0625 in. sherardized)
154197	Spring lock washer for No. 17368 (13/32 in. by
101101	25/32 in. by $3/32$ in. thick)
175561	Screw fastening No. 434048 to terminal block
110001	(10-90 1/9 is a backgradical)
	(10-30, $1/2$ in. r.h. sherardized)



Type DB-696 Form A2 Relay For Form C1 Controller

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

#### CURRENT LIMIT RELAY for Form Cl Controller

Cat.No.	Description
150279	Washer for No. 175561 (13/64 in. by 13/32 in. by 0.044 in. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by 25/64 in. by 0.0625 in.)
203930	Mica insulation tube for edgewise wound coil (1 1/64 in. by 1 7/64 in. by 1 1/2 in.)
1404947	Fiber insulation flange for edgewise wound coil (1 1/8 in. by 2 3/4 in. by 1/8 in. thick)
203931	Brass guide sleeve with by-pass coil magnet core
203932	Magnet core for by-pass coil, with pins
144980	Screw fastening magnet core in position (3/8 in16)
111000	3/4 in. f.h. sherardized)
1469001	Long plunges for by-pass and holding coils
1423010	Short plunger for holding and lifting coils
1404909	Brass stop plate for No. 1423010
203983	MAGNET FRAME for by-pass coil
203934	Magnet frame for holding coil
180235	Screw fastening magnet frame parts together
,200400	(10-30, 1/2 in. f.h. sherardized)
160980	Spacing washer between magnet frame and relay base
	(17/64  in. by  3/4  in. by  0.0625  in.
	sherardized)
128612	Screw fastening magnet frame to relay base (14-24,
	1 in. r.h. sherardized)
143974	Washer for No. 128612 (17/64 in. by 1/2 in. by
	0.0625 in. sherardized)
154194	Spring lock washer for No. 128612 (17/64 in. by
-	29/64 in. by 5/64 in. thick)
1404946	Support for guide sleeve and connection board
175568	Screw fastening support to relay tase (10-30,
	5/8 in. r.h. sherardized)
150279	Washer for No. 175568 (13/64 in. by $13/32$ in. by
	0.044 in sherardized)
154191	Spring lock washer for No. 175568 (13/64 in. by
	25/64 in. by 0.0625 in.)
203808	Contact disk rod with plungers
203809	Short plunger for contact disk rod, with pin
1421705	Long plunger for contact disk rod
207637	Spring cotter for No. 1421705 (1/8 in. by 1 in.
-	brass)
1425527	CONTACT DISK
1421750	Brass collar for contact disk rod

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

# CURRENT LIMIT RELAY for Form C1 Controller

Cat.No.	Description
105302	Spring cotter for No. 1421750 (1/8 in. by 1 in.
	sherardized)
203810	Contact post with contact plate
461890	Contact plate
175561	Screw fastening contact plate to contact post (10-30, 1/2 in. r.h. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by 25/64 in. by 0.0625 in.)
1468382	Terminal block for contact post
128612	Screw fastening terminal block and contact post to
	relay base (14-24, 1 in. r.h. sherardized)
143974	Washer for No. $128612$ ( $17/64$ in. by $1/2$ in. by $0.0625$ in. sherardized)
154194	Spring lock washer for No. 128612 (17/64 in. by 29/64 in. by 5/64 in. thick)
410567 🌯	Copper terminal for No. 1468382
175561	Screw fastening copper terminal to terminal block
	(10-30, 1/2 in. r.h. sherardized)
150279	Washer for No. 175561 (13/64 in. by 13/32 in. by 0.044 in. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by
- "	25/64 in. by 0.0625 in.)
203935	Connection board with terminal blocks, connection
	screws and terminals
203807	terminal block with rivets
434048	Copper terminal, right-hand
410567	Copper terminal, left-hand
175538	Connection screw (10-30, 1 in. r.h. sherardized)
150279	Washer for No. 175538 (13/64 in. by 13/32 in. by
185500	0.044 in. sherardized)
175539	Nut for No. 175538 (10-30, hex. st'd, sherardized)
154191	Spring lock washer for No. 175539 (13/64 in. by 25/64 in. by 0.0625 in.)
175568	Screw fastening connection board in position
	(10-30, 5/8  in. r.h. sherardized)
150279	Washer for No. 175568 (13/64 in. by 13/32 in. by
-	0.044 in. sherardized)
154191	Spring lock washer for No. 175568 (13/64 in. by 25/64 in. by 0.0625 in. sherardized)
418783	Contact clip for small resistor unit
462267	Connection plate for contact clip
410567	Copper terminal for No. 462267

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

#### CURRENT LIMIT RELAY for Form C1 Controller

	CURRENT LIMIT RELAT TOT FORM CT CONTROLLER
Cat.No. 126915	Description Screw fastening copper terminal to terminal block
105326	(8-32, 3/8 in. r.h. sherardized) Screw fastening contact clip and connection plate to relay base (8-32, 7/8 in. r.h. sherardized)
155830	Washer for Nos. 126915, 105326 (3/16 in. by 3/8 in. by 0.034 in. sherardized)
154190	Spring lock washer for Nos. 126915, 105326 (3/16 in. by 3/8 in. by 0.031 in.)
1404993	Copper connection strip, back of relay base
CURRE	NT LIMIT RELAYS for Forms C2, C3 and C4 Controllers
205112	CURRENT LIMIT RELAY for Form C2 Controller, Type DB-808, Form B5
205113	CURRENT LIMIT RELAY for Form C3 Controller, Type DB-808, Form B8
205 <b>f</b> 14	CURRENT LIMIT RELAY for Form C4 Controller, Type DB-808, Form B6
·	(Illustration Page 24)
1431317 145651	Following are the parts:- RELAY BASE Cap screw fastening relay base to supporting strip
145598	(5/16 in18, 1 in. r.h. sherardized) Washer for No. 145651 (21/64 in. by 5/8 in. by 0.0625 in. sherardized)
154196	Spring lock washer for No. 145651 (21/64 in. by 37/64 in. by 5/64 in. thick)
196881	SERIES OPERATING EDGEWISE WOUND COIL with terminal block, for Form B5 Relay
205116	Series operating edgewise wound coil with terminal block, for Form B8 Relay
205117	Series operating edgewise wound coil with terminal block, for Form B6 Relay
205118	LIFTING COIL

Screw fastening series operating coil and magnet frame

to base (14-24, 1 in. r.h. brass) Washer for No. 22115 (17/64 in. by 1/2 in. by

0.0625 in. sherardized)

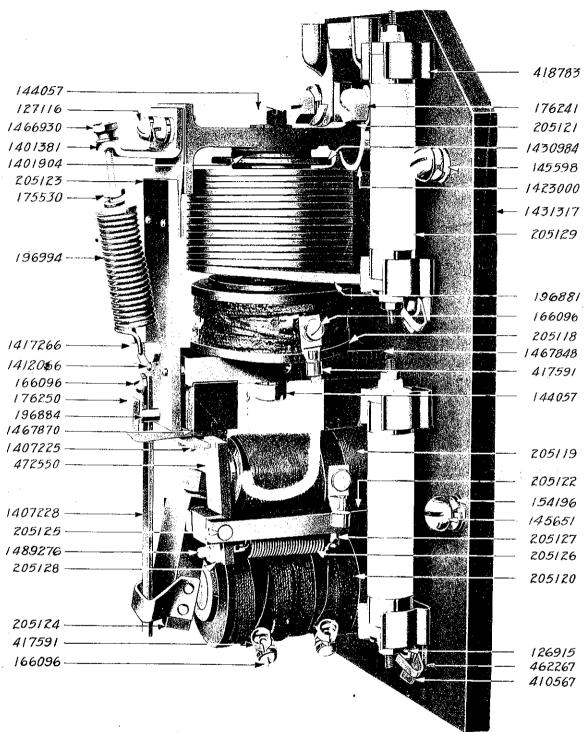
HOLDING COIL

BY-PASS COIL

205119 205120

22115

143974



Type DB-808 Form B5 Relay For Form C2 Controller

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

Cat.No.	Description
154194	Spring lock washer for No. 22115 (17/64 in. by
101101	29/64 in. by 5/64 in. thick)
36031	
20021	Punched copper tube cable terminal for series
	operating coil (13/32 in. bolt hole)
417591	Copper terminal for lifting, holding and by-pass
	coils
176241	Cap screw fastening terminal to series coil
	(3/8  in.-16, 1/2  in. hex.h. slot. sherardized)
166096	Screw fastening terminal to lifting, holding and
100000	by-pass coils (10-30, 3/8 in. r.h.
	to the control of the
454400	sherardized)
154198	Spring lock washer for No. 176241 (17/32 in. by
	1 1/32 in. by 1/8 in. thick)
154191	Spring lock washer for No. 166096 (13/64 in. by
	25/64 in. by 0.0625 in.)
2051,21	MAGNET FRAME for series operating coil
1467848	Magnet frame for lifting coil
205122	Magnet frame for holding and by-pass coils, with
200122	spring posts for tension spring
1 4 9 9 0 0 0	Fiber insulation bushing for No. 205121
1423000	
22115	Screw fastening lifting coil magnet frame to base
	(14-24, 1 in. r.h. brass)
126913	Screw fastening holding and by-pass coil magnet frame
	to base (14-24, 7/8 in. r.h. sherardized)
143974	Washer for Nos. 22115, 126913 (17/64 in. by 1/2 in.
	by 0.0625 in. sherardized)
154194	Spring lock washer for Nos. 22115, 126913 (17/64 in.
	by 29/64 in. by 5/64 in. thick)
1419155	Magnet core for series operating and lifting coils
196913	Mica insulation tube for No. 1419155 (57/64 in. by
190913	31/32 in. by 2 $1/2$ in.)
4.4055	
144057	Cap screw fastening No. 1419155 to magnet frame
	(3/8 in16, 1 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 144057 (13/32 in. by
	25/32 in. by 3/32 in. thick)
127116	Screw fastening lifting coil to magnet frame (14-24,
	5/8 in. r.h. sherardized)
154194	Spring lock washer for No. 127116 (17/64 in. by
201101	29/64 in. by 5/64 in. thick)
144066	Screw fastening holding coil to magnet frame (14-24,
T44000	
15000'	5/8 in. f.h. sherardized)
17380´	
	(5/16  in.-18, 5/8  in. f.h. sherardized)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

Cat.No.	Description
1430984	Insulation flange for series operating coil
1401904	Fiber spacing washer between insulation flange and
	magnet frame $(63/64 \text{ in. by } 1  1/2 \text{ in. by}$
	1/8 in. thick)
205123	ARMATURE for series operating and lifting coils, with
200120	spring, stop and contact posts
1417266	Spring post for tension spring
1412066	Armature stop
196884	Steel contact post with contact tip
472550	Armature for holding coil, with bushing and contact
412000	plate
205124	Armature for by-pass coil, with bushing and hook
200124	for tripping lever
205125	Hinge pin for Nos. $472550$ , $205124$ (1/4 in. by
200120	3 1/8 in. sherardized)
150606	Spring cotter for hinge pin (5/64 in. by 1/2 in.
100000	sherardized)
1407228	Tripping lever
166096	Screw fastening tripping lever to armature (10-30,
100000	3/8 in. r.h. sherardized)
154191	Spring lock washer for No. 166096 (13/64 in. by
101101	25/64 in. by $0.0625$ in.)
196994	Tension spring with holder, for series coil armature
1466930	Adjusting screw for No. 196994
175539	Locking nut for adjusting screw (10-30, hex. st'd,
110000	brass)
154191	Spring lock washer for No. 175539 (13/64 in. by
201201	25/64 in. by $0.0625$ in.)
1401381	Supporting bracket for adjusting screw
127116	Screw fastening supporting bracket and armature to
18,110	magnet frame (14-24, 5/8 in. r.h. sherardized)
143974	Washer for No. 127116 (17/64 in. by 1/2 in. by
1100.1	0.0625 în. sherardized)
154194	Spring lock washer for No. 127116 (17/64 in. by
201101	29/64 in. by 5/64 in. thick)
205126	Tension spring for holding and by-pass coil armatures
205127	Pin fastening tension spring to magnet frame,
	sherardized
1489276	Adjusting screw for No. 205126
205128	Locking nut for No. 1489276 (10-30, sq. st'd,
<b></b>	sherardized)
176250	Contact for series coil armature

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

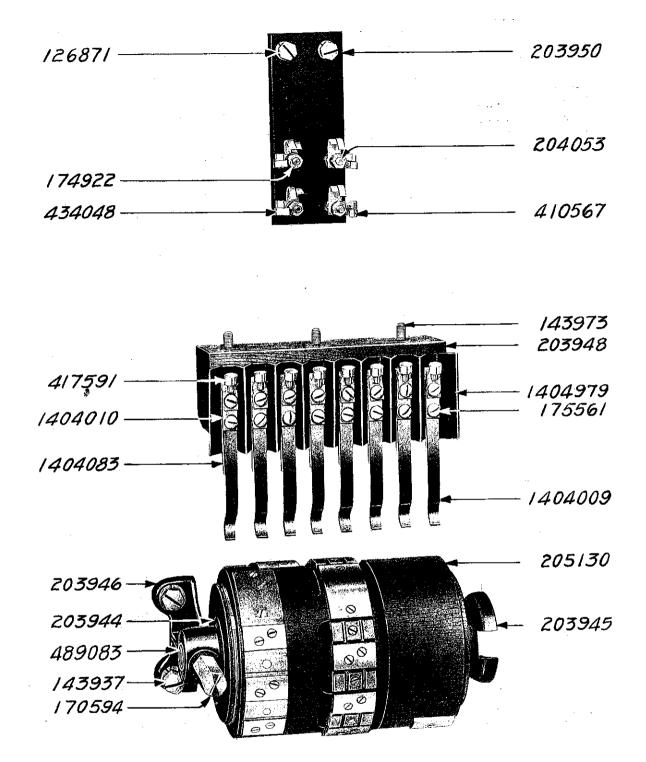
# RELAY AND RESISTOR UNITS

Cat.No.	Description
1407225 .	Contact for holding coil armature
1400874	Terminal base for Nos. 176250, 1407225
1467870	Supporting block for terminal base
175538	Screw fastening supporting block to magnet frame
119990	(10-30, 1  in. r.h. sherardized)
175568	Screw fastening terminal base to supporting block (10-30, 5/8 in. r.h. sherardized)
175561	Screw fastening contacts to terminal base (10-30, 1/2 in. r.h. sherardized)
150279	Washer for Nos. 175538, 175568, 175561 (13/64 in. by 13/32 in. by 0.044 in. sherardized)
154191	Spring lock washer for Nos. 175538, 175568, 175561 (13/64 in. by 25/64 in. by 0.0625 in.)
418783	Contact clip for small resistor unit
462267	Connection plate for contact clip
4105\$67	Copper terminal for connection plate
126915	Screw fastening copper terminal to connection plate
	(8-32, 3/8  in. r.h. sherardized)
12828	Screw fastening contact clip and connection plate to base (8-32, 7/8 in. r.h. brass)
155830	Washer for Nos. 126915; 12828 (3/16 in. by 3/8 in.
10000	by 0.034 in. sherardized)
40728	Nut for No. 12828 (8-32, hex. st'd, brass)
154190	Spring lock washer for Nos. 126915, 40728 (3/16 in.
101100	by 3/8 in. by 0.031 in.)
1407223	Copper connection strip (2 7/16 in. long)
1407224	Copper connection strip (2 11/16 in. long)
203936	SMALL RESISTOR UNIT for Form C1 Controller, 500 J,
200,700	Form QC
205129	Small resistor unit for Forms C2, C3 and C4
200120	Controllers, 1000 J. Form QC
244829	Large resistor unit, 2500 B, Form QCS
203937	Base for large resistor units
	#
126931	Screw fastening base to controller frame (14-24, 7/8 in. hex.h. sherardized)
143974	Washer for No. 126931 (17/64 in. by 1/2 in. by 0.0625 in. sherardized)
154194	Spring lock washer for No. 126931 (17/64 in. by 29/64 in. by 5/64 in. thick)
434708	Contact clip for large resistor unit
1401924	Connection plate for No. 434708
411512	Copper terminal for No. 1401924
*****	44544 100 m s o m s o m s o m s o m s o m s o m s

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### RELAY AND RESISTOR UNITS

Cat.No.	Description
105331	Screw fastening copper terminal to connection plate
	(14-24, 3/8) in. r.h. sherardized)
127116	Screw fastening contact clip and connection plate to
	relay base (14-24, 5/8 in. r.h. sherardized)
143974	Washer for Nos. 105331, 127116 (17/64 in. by
154104	1/2 in. by 0.0625 in. sherardized)
154194	Spring lock washer for Nos. 105331, 127116 (17/64 in. by 29/64 in. by 5/64 in. thick)
203938	Long supporting strip for current limit relay base
203939	Short supporting strip for current limit relay base
$\frac{200000}{126872}$	Cap screw fastening supporting strip in position
120012	(5/16 in18, 5/8 in. hex.h. slot. sherardized)
154196	Spring lock washer for No. 126872 (21/64 in. by
101100	37/64 in. by $5/64$ in. thick)
	0,701 111, 2011 111, 0111 011,
	CONTROL CYLINDER UNIT
	(Illustration Page 29)
205130	CONTROL CYLINDER with shaft, segments, clutch for
	pinion and collar
203942	Complete set of copper and fiber segments.
	Includes 10 segments No. 1468322: 9 segments
	No. 1468364; 7 segments No. 1467864; 5
	segments No. 1405032; 2 segments No. 1468370;
	1 segment each Nos. 1468361, 1468362,
	1468363, 1468365, 1468366 and 53 screws
	No. 1405021
	For development of contact segments see Page 30
203944	Wearing plate for wooden body
121840	Screw fastening wearing plate to wooden body
11010	(No. 8, 5/8 in. f.h. sherardized)
203945	Clutch for shaft and pinion
196922	Taper pin for clutch (No. 4, 1 3/4 in. sp'1)
203946	Bearing bracket for shaft, with bushing
489083	Bushing for bearing bracket
143937	Cap screw fastening bearing bracket to frame
	(3/8 in16, 7/8 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 143937 (13/32 in. by
•	25/32 in. by 3/32 in. thick)
170594	Oil cup for cylinder shaft bearing
203947	CONTROL FINGER BLOCK with finger bases and fingers

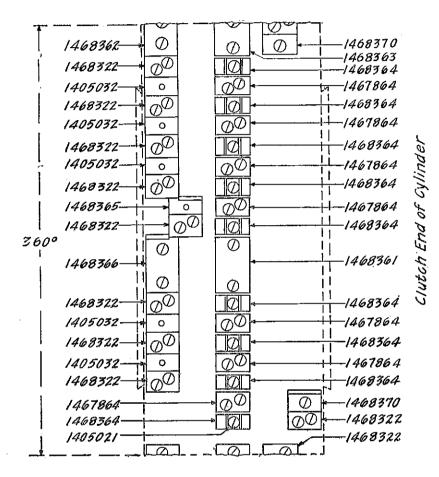


Control Cylinder Unit

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### CONTROL CYLINDER UNIT

Cat No.	Description
203948	Finger block
1404083	Finger base
153979	Screw fastening finger base to block (No. 8,
	3/4 in. f.h. sherardized)



1404009	CONTACT FINGER. Per set of 8. Cat.No. is for one
	finger
1404979	Fiber insulation barrier for contact finger
14040 <b>10</b>	Double washer for contact finger
175561	Screw fastening contact finger, double washer and
	copper terminal to finger base (10-30,
	1/2 in. r.h. sherardized)
150279	Washer for No. 175561 (13/64 in. by 13/32 in. by
	0.044 in. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by
	25/64 in. by 0.0625 in.)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

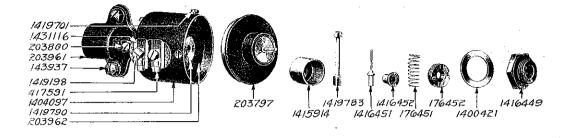
#### CONTROL CYLINDER UNIT

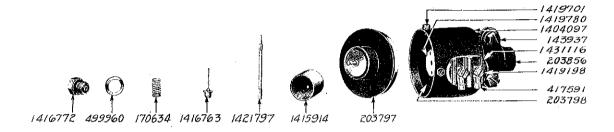
Cat.No.	Description
417591	Copper terminal for contact finger
143973	Screw fastening finger block to supporting strip
	(14-24, 1 1/2 in. r.h. sherardized)
143974	Washer for No. 143973 (17/64 in. by 1/2 in. by
	0.0625 in. sherardized)
154194	Spring lock washer for No. 143973 (17/64 in. by
	29/64 in. by 5/64 in. thick)
1404981	Fiber insulation strip between finger block and
	supporting strip
203949	Supporting strip for control finger block
126872	Cap screw fastening No. 203949 to controller frame
	(5/16  in.-18, 5/8  in. hex.h. slot. sherardized)
154196	Spring lock washer for No. 126872 (21/64 in. by
	37/64 in. by 5/64 in. thick)
203950	Connection board
126871	Cap screw fastening connection board to controller
	frame (14-24, 3/4 in. hex.h. slot. sherardized)
143974	Washer for No. 126871 (17/64 in. by 1/2 in. by
§*	0.0625 in. sherardized)
154194	Spring lock washer for No. 126871 (17/64 in. by
	29/64 in. by 5/64 in. thick)
204053	Connection screw (10-30, 1 1/4 in. r.h. brass)
150279	Washer for No. $204053$ ( $13/64$ in. by $13/32$ in. by
	0.044 in. sherardized)
174922	Nut for No. 204053 (10-30, hex. st'd, brass)
154194	Spring lock washer for No. 174922 (17/64 in. by
	29/64 in. by $5/64$ in. thick)
410567	Copper terminal, right-hand
434048	Copper terminal, left-hand
205132	CONTROL CABLE, complete, with taps and terminals
	WATER ORDER AND

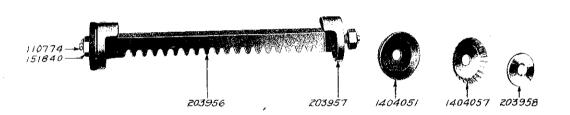
#### MAIN OPERATING MECHANISM

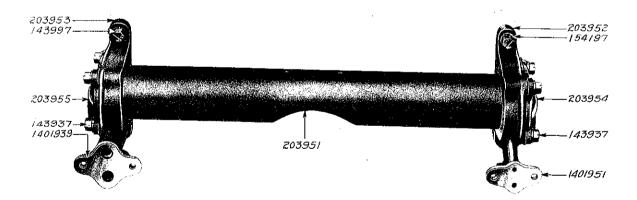
#### (Illustration Page 32)

203951	MAIN OPERATING CYLINDER with end castings
203952	End casting, right-hand, and support for "on"
	magnet valve
203953	End casting, left-hand, and support for "off"
	magnet valve
143997	Cap screw fastening end casting to frame (3/8 in16,
	1 1/4 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 143997 (13/32 in. by
	25/32 in. by 3/32 in. thick)
203954	Cylinder head, "on" magnet valve end









Main Operating Mechanism

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### MAIN OPERATING MECHANISM

Cat.No.	Description
203955	Cylinder head, "off" magnet valve end
2038 <b>52</b>	Pipe plug for No. 203954 or 203955 (1/8 in. st'd,
	cast iron)
1402734	Gasket for No. 203954
1402728	Gasket for No. 203955
143937	Cap screw fastening cylinder head to end casting (3/8 in16, 7/8 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 143937 (13/32 in. by 25/32 in. by 3/32 in. thick)
203956	PISTON RACK with piston, piston packing, retainer and follower
1405086	Copper washer for piston rack (17/32 in. by 1 in. by 0.010 in.)
203957	Piston
√1404051	Leather packing for piston
1404057	Retainer for leather packing .
203958	Piston follower, sherardized
151840	Nut for piston rack (1/2 in13, 3/8 in. thick,
	hex. st'd, sherardized)
154198	Spring lock washer for No. 151840 (17/32 in. by
-	1 1/32 in. by 1/8 in. thick)
110774	Spring cotter for piston rack (3/32 in. by 5/8 in.
	sherardized)
<b>′2</b> 03959	"ON" MAGNET VALVE, complete
203856	Magnet valve body and support for magnet coil
	housing, with valve seat
193565	Valve seat
1404097	Magnet coil housing
203797	Cover for magnet coil housing, with bushing and
	operating pin
1419701	Cap screw fastening cover to magnet coil housing (10-30, 3/8 in. hex.h. slot. sp'l)
<b>1</b> 54191	Spring lock washer for No. 1419701 (13/64 in. by 25/64 in. by 0.0625 in.)
203798	"ON" MAGNET COIL with connection blocks
1448582	Insulation washer between magnet coil housing
	and magnet coil $(1 1/16 in. by 3 in. by$
• • •	0.012 in.)
1419198	Connection screw for magnet coil (10-30, 7/8 in. sq.h. slot. brass, sp'l)
150279	Washer for No. 1419198 (13/64 in. by 13/32 in. by 0.044 in. sherardized)
154191	Spring lock washer for No. 1419198 (13/64 in. by 25/64 in. by 0.0625 in.)
1431116	Insulation block for connection screws

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### MAIN OPERATING MECHANISM

Cat.No.	Description
1415914	Armature
1419780	Magnet core
203799	Set screw for magnet core (10-30, 3/8 in. headless,
	pointed, sp'l)
1421797	Exhaust stem
1416763	Inlet valve
170634	Compression spring for inlet valve
1416772	Cap plug
499960	Copper gasket for cap plug (5/8 in. by 7/8 in. by
	0.015 in.)
417591	Copper terminal for connection screw
1401951	Gasket between "on" magnet valve body and cylinder end casting
143937	Cap screw fastening "on" magnet valve to end casting (3/8 in16, 7/8 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 143937 (13/32 in. by 25/32 in. by 3/32 in. thick)
203960	"OFF" MAGNET VALVE, complete
203961 🌯	Magnet valve body and support for magnet coil
	housing, with valve seat
235156	Valve seat
,203800	Air port screw for No. 203961 (14-24, 5/8 in.
	r.h. brass, sp'l)
203801	Check nut for No. 203800 (14-24, hex. brass, sp'1)
1404097	Magnet coil housing
203797	Cover for magnet coil housing, with bushing and operating pin
1419701	Cap screw fastening cover to magnet coil housing (10-30, 3/8 in. hex.h. slot. sp'l)
154191	Spring lock washer for No. 1419701 (13/64 in. by 25/64 in. by 0.0625 in.)
203962	"OFF" MAGNET COIL with connection blocks
1448582	Insulation washer between magnet coil housing and
111000	magnet coil (1 $1/16$ in. by 3 in. by 0.012 in.)
1419198	Connection screw for magnet coil (10-30, 7/8 in. sq.h. slot, brass, sp'l)
150279	Washer for No. 1419198 (13/64 in. by 13/32 in. by 0.044 in. sherardized)
154191	Spring lock washer for No. 1419198 (13/64 in. by 25/64 in. by 0.0625 in.)
1431116	Insulation block for connection screws
1415914	Armature
1419790	Magnet core
203799	Set screw for magnet core (10-30, 3/8 in. headless,
	pointed, sp'1)

# TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### MAIN OPERATING MECHANISM

Cat.No.	Description
<b>141</b> 978 <b>3</b>	Exhaust stem
1416451	Exhaust valve
1416452	Inlet valve
<b>176451</b>	Compression spring for inlet valve
176452	Inlet valve seat
1416449	Cap plug
1400421	Copper gasket for cap plug (1 3/16 in. by 1 3/4 in.
	by 0.030 in.)
417591	Copper terminal for connection screw
1401939	Gasket between "off" magnet valve body and cylinder
	end casting ·
143937	Cap screw fastening "off" magnet valve body to end
	casting $(3/8 \text{ in.}-16, 7/8 \text{ in. hex.h. slot.})$
	sherardized)
154197	Spring lock washer for No. 143937 (13/32 in. by
	25/32 in. by $3/32$ in. thick)
•	

#### CAM SHAFT AND CHECK PAWL

# (Illustration Page 45)

203963	CAM SHAFT with cams, spacing collars, star wheel
	and pinion
1425089	Hexagonal shaft with insulation
203964	ΔCam for 1st and 2nd contactors
203965	ΔCam for 3rd contactor
203966	ΔCam for 4th and 5th contactors
203967	ΔCam for 6th and 7th contactors
203968	ΔCam for 8th contactor
1445994	Clamping spring for Nos. 203964, 203966, 203967
1445993	Clamping spring for Nos. 203965, 203968
1418237	Set screw for clamping spring (3/8 in16, 9/16 in.
	sq.h. cupped point, sp'1)
1402792	Locking plate for set screw (2 in. long)
1401921	Locking plate for set screw (1 7/8 in. long)
151930	Spring cotter holding locking plate in position
•	(1/8 in. by 5/8 in. sherardized)
422681	Spacing collar
460329	Felt washer between spacing collar and cam
• •	(1 9/16  in. by  2 1/8  in. by  1/16  in. thick)
203969	Star wheel
	Taper pin for No. 203969 (No. 4, 2 in. sp'1)
△Contactor	rs are located by counting from end frame toward middle
frame.	
· .	

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### CAM SHAFT AND CHECK PAWL

Cat.No.	Description
203971	Pinion for shaft
150447	Key for star wheel and key for pinion
1418280	Nut for shaft (3/4 in16, 3/8 in. thick, hex.
	sp'l, sherardized)
154200	Spring lock washer for No. 1418280 (25/32 in. by 1 13/32 in. by 3/16 in. thick)
203972	Bearing block (2 parts) for cam shaft
203973	Self aligning bushing for bearing block
203974	Oiler for cam shaft bearing
156850	Cap screw fastening bearing block to frame (3/8 in16, 2 1/2 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 156850 (13/32 in. by $25/32$ in. by $3/32$ in. thick)
203975	Check pawl with roller bearing
204032	Roller bearing for cam shaft star wheel
203976	Starting pawl for cam shaft
2400051	Pivot pin for check pawl
2400052	*Pivot pin for starting pawl
178288	Washer for No. 2400051 or 2400052 (13/16 in. by
	1 1/4 in. by 0.094 in. sherardized)
139648	Spring cotter for No. 2400051 or 2400052
`	(3/16  in. by  1  1/4  in. sherardized)
193592	Compression spring for check pawl
224795	Tension spring for starting pawl
1467861	Retainer for compression spring
	CONTACTOR UNIT
	(****
	(Illustration Page 37)
205133	CONTACTOR, complete (8 used, Cat.No. is for one contactor)
	Following are the parts:-
1431197	INSULATION BASE for supporting bracket or blowout coil support
472514	Supporting strip for contactor
205134	Cap screw fastening insulation base to supporting
	strip (5/16 in18, 1 in. hex.h. sp'1, sherardized)
154196	Spring lock washer for No. 205134 (21/64 in. by
·0.0 E * 0.5	37/64 in, by $5/64$ in, thick)
205135	OPERATING AND CONTACT LEVERS with contact and arcing
	tips, shunt, pressure spring and supporting bracket
	DIACKEL

Contactor Unit

## TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

## CONTACTOR UNIT

Cat.No.	Description
203983	Operating lever (2 parts)
203984	Contact lever with bushing
1412040	
1420968	Hinge pin for operating and contact levers
1466032	Contact tip
1400457	Arcing tip
1466947	Shunt for contact lever and supporting bracket
112303	Cap screw fastening arcing tip, shunt and contact
	tip to contact lever (5/16 in18, 1 in.
145500	hex.h. slot, sherardized)
145598	Washer for No. 112303 (21/64 in. by 5/8 in. by 0.0625 in. sherardized)
154196	Spring lock washer for No. 112303 (21/64 in. by 37/64 in. by 5/64 in. thick)
203985	Roller bearing for cam
1402784	Guard between shunt and roller
203986	Compression spring for contact lever
1469051	Retainer for compression spring
1418240	Seat for compression spring
203987	Supporting bracket for operating and contact
•	levers, with bushing
1412040	Bushing for supporting bracket
1420968	Hinge pin for operating lever and supporting
	bracket
126872	Cap screw fastening shunt and terminal to
	supporting bracket (5/16 in18, 5/8 in.
151100	hex.h. slot. sherardized)
154196	Spring lock washer for No. 126872 (21/64 in. by 37/64 in. by 5/64 in. thick)
1401988	Guard for shunt and support for insulation barrier
160990	Cap screw fastening supporting bracket to insulation
	base (3/8 in16, 2 3/4 in. hex.h. slot.
	sherardized)
141259	Washer for No. 160990 (13/32 in. by 3/4 in. by
1 4 4 0 5 5	0.0625 in. sherardized)
141255	Nut for No. 160990 (3/8 in16, hex. st'd, sherardized)
154197	Spring lock washer for No. 141255 (13/32 in. by
005100	25/32 in. by 3/32 in. thick)
205136	BLOWOUT COIL with pole pieces, supporting bracket
1 466040	and contact tip
1466942	Supporting bracket for blowout coil and pole pieces Contact tip
1466032	Contact tip

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### CONTACTOR UNIT

Cat.No.	Description
126872	Cap screw fastening contact tip to supporting
_	bracket (5/16 in18, 5/8 in. hex.h. slot.
-	sherardized)
154196	Spring lock washer for No. 126872 (21/64 in. by
	37/64 in. by 5/64 in. thick)
205137	Fiber insulation shield for blowout coil
1406377	Retaining plate for insulation shield and blowout
	coil
143733	Cap screw fastening blowout coil supporting bracket
	to insulation base (3/8 in16, 1 3/4 in.
	hex.h. slot. sherardized)
141255	Nut for No. 143733 (3/8 in16, hex. st'd, sherardized)
154197	Spring lock washer for No. 141255 (13/32 in. by
	25/32 in. by 3/32 in. thick)
32538	Punched copper tube cable terminal for blowout coil
	and small terminal for operating lever
	supporting bracket (11/32 in. bolt hole)
201313	Large punched copper tube cable terminal for
. 💠	operating lever supporting bracket
	(11/32 in. bolt hole)
30522	Cap screw fastening copper terminal to blowout coil
	(5/16  in.-18, 1/2  in. hex.h. slot. sherardized)
145598	Washer for No. 30522 (21/64 in. by 5/8 in. by
	0.0625 in. sherardized)
126869	Nut for No. 30522 (5/16 in18, hex. st'd, sherardized)
154196	Spring lock washer for No. 126869 (21/64 in. by
	37/64 in. by 5/64 in. thick)
154519	Cap screw fastening contactor to controller frame
	(3/8 in16, 5/8 in. hex.h. slot. sherardized)
154197	Spring lock washer for No. 154519 (13/32 in. by
	25/32 in. by 3/32 in. thick)
	t

#### ARC REFLECTOR FOR CONTACTOR UNITS

#### (Illustration Page 44)

203991	ARC DEFLECTOR, complete, with channel iron, hinge
	brackets and arcing plates
1431024	Front supporting strip for arcing plates
203992	Bottom supporting strip for arcing plates, with
	retainer for auxiliary arc chute
1415979	Plunger for auxiliary arc chute retainer
176406	Compression spring for plunger
176407	Plunger ring
1431027	Arcing plate

## TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

#### ARC DEFLECTOR FOR CONTACTOR UNITS

Cat.No	Description					
1431127	Spacing block between arcing plates					
127347	Screw fastening front support to arcing plates					
	(No. 10, 3/4 in. f.h. sherardized)					
144066	Screw fastening front supporting strip to hinge					
	bracket (14-24, 5/8 in. f.h. sherardized)					
154333	Screw fastening channel iron and bottom supporting					
	strip to arcing plates (No. 10, 1 in. r.h.					
	sherardized)					
121834	Screw fastening bottom supporting strip to arcing					
	plates (No. 10, 7/8 in. f.h. sherardized)					
203993	Screw fastening spacing block to front supporting					
	strip (No. 5, 1 in. f.h. sherardized)					
203994	AUXILIARY ARC CHUTE					
1431052	Side plate					
1431055	Spacing block for side plates					
121840	Screw fastening side plate to spacing block					
121010	(No. 8, 5/8 in. f.h. sherardized)					
203995	Channel iron and support for arcing plates					
1402719	•••					
203996	Hinge bracket, next to end frame, with rivets					
203997	Hinge bracket, next to middle frame, with rivets					
1420905	Lock bolt for arc deflector					
203998	Compression spring for lock bolt					
203999	Collar for lock bolt					
151310	Spring cotter for collar (1/8 in. by 1 1/2 in.					
101010	sherardized)					
204000	Handle for lock bolt, with pin					
1421734	Hinge bolt for arc deflector					
146149	Nut for No. 1421734 (1/2 in13, hex. st'd,					
110110	sherardized)					
154198	Spring lock washer for No. 146149 (17/32 in. by					
10.100	1 1/32 in. by 1/8 in. thick)					
	2 2/02 111 NJ 2/0 111 0111 011					

#### INSULATION BARRIERS

#### (Illustration Page 45)

204001	INSULATION BARRIER between Line Breaker and Reverser Units
204002	Insulation barrier between Line Breaker and Control
205138	Cylinder Units Insulation barrier between contactors
126872	Cap screw fastening No. 205138 in position
	(5/16  in.-18, 5/8  in. hex.h. slot. sherardized)
154196	Spring lock washer for No. 126872 (21/64 in. by 37/64 in. by 5/64 in. thick)

#### TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

## BUS-BARS

Cat.No.	Description
204004	BUS-BAR for cutout switch (8 7/8 in. long)
204005	Bus-bar for cutout switch (5 5/8 in. long)
204006	Bus-bar for cutout switch (2 3/8 in. long)
204007	Bus-bar for contactors (2-3/4 in. long)
205139	Bus-bar for contactors (8 1/8 in. long)
204009	Bus-bar, "U" shape, for contactors
205140	Bus-bar, "U" shape, with offset, for contactors

## FRAME, SUPPORTING BARS, CABLE INLETS, COVERS AND PIPE FITTINGS

#### (Illustrations Pages 44 and 45)

205141	FRAME, complete, consists of angle irons, end frames,
	middle frames and pivot pins for pawls
205142	End frame, reverser end
204013	End frame, contactor end, with cover
204014	Middle frame between Line Breaker and Control
\$	Cylinder Units
204015	Middle frame between Main Air Cylinder and
	Contactor Units, with pivot pins for pawls
1468313	Supporting bar for controller frame, reverser end
1467803	Supporting bar for controller frame, contactor end
208220	Cap screw fastening supporting bar to frame
	(5/8 in11, 1 3/4 in. hex.h. slot.
	sherardized)
154199	Spring lock washer for No. 172616 (21/32 in. by
	1 5/32 in. by 3/16 in. thick)
1421757	Fiber insulation sleeve for supporting bar (21/32 in.
	by 7/8 in. by 3 1/2 in.)
1468315	Fiber collar for insulation sleeve (29/32 in. by
	2 1/4 in. by 1 1/4 in.)
205143	Door for cutout switch, with dust guards and hinges
205144	Catch for latch, with rivets
205145	Fiber stop for door
175561	Screw fastening fiber stop in position (10-30,
	1/2 in. r.h. sherardized)
154191	Spring lock washer for No. 175561 (13/64 in. by
	25/64 in. by 0.0625 in.)
205146	Wooden insulator for six cable inlets
204025	Wooden insulator for two cable inlets
143997	Cap screw fastening wooden insulator to controller
	frame $(3/8 \text{ in.}-16, 1 1/4 \text{ in. hex.h. slot.})$
	sherardized)

## TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

## FRAME, SUPPORTING BARS, CABLE INLETS, COVERS AND PIPE FITTINGS

Cat.No.	Description
141259	Washer for No. $143997$ ( $13/32$ in. by $3/4$ in. by $0.0625$ in. sherardized)
154197	Spring lock washer for No. 143997 (13/32 in. by 25/32 in. by 3/32 in. thick)
204026	CABLE INLET (1/2 in. pipe tap)
204027	Cable inlet (1 in. pipe tap)
204028	Cable inlet (1 1/4 in, pipe tap)
204029	Cable inlet (1 1/2 in. pipe tap)
176500	Carriage bolt fastening cable inlet to wooden
	insulator (3/8 in16, 1 1/2 in. sherardized)
141255	Nut for No. 176500 (3/8 in16, hex. st'd,
	sherardized)
154197	Spring lock washer for No. 141255 (13/32 in. by
	25/32 in. by 3/32 in. thick)
196972	Hinge bracket for cover, with hinge pin
164995	Screw fastening hinge bracket to wooden insulator
\$	(10-30, 11/4  in. r.h. sherardized)
150279	Washer for No. 164995 (13/64 in. by 13/32 in. by
•	0.044 in. sherardized)
175539	Nut for No. 164995 (10-30, hex. st'd, sherardized)
<b>1</b> 54191	Spring lock washer for No. 175539 (13/64 in. by
	25/64 in. by 0.0625 in.)
205147	TOP COVER with dust guards and hinges for covers
196972	Large hinge bracket for covers, with hinge pin
499387	Small hinge bracket for line breaker insulation
	box
204033	Hinge pin for No. 499387
143497	Spring cotter for hinge pin $(1/16 \text{ in. by } 1/2 \text{ in.})$
	sherardized)
175539	Screw fastening No. 499387 to top cover (10-30,
151101	1 in. r.h. sherardized)
154191	Spring lock washer for No. 175539 (13/64 in. by
107110	25/64 in. by $0.0625$ in.)
127116	Screw fastening top cover and dust guard to
	controller frame (14-24, 5/8 in. r.h. sherardized)
143974	Washer for No. 127116 (17/64 in. by $1/2$ in. by
740014	0.0625 in. sherardized)
154194	Spring lock washer for No. 127116 (17/64 in. by
101101	29/64 in. by 5/64 in. thick)
205148	END COVER with latch, for reverser unit
204035	Large side cover for line breaker and main air
202000	cylinder compartments, with catch
	-v

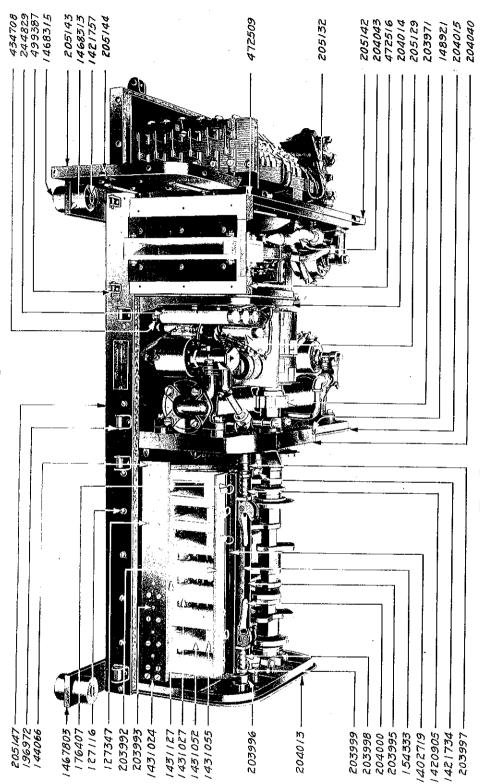
## TYPE PC-5 FORMS C1, C2, C3 AND C4 CONTROLLERS

## FRAME, SUPPORTING BARS, CABLE INLETS, COVERS AND PIPE FITTINGS

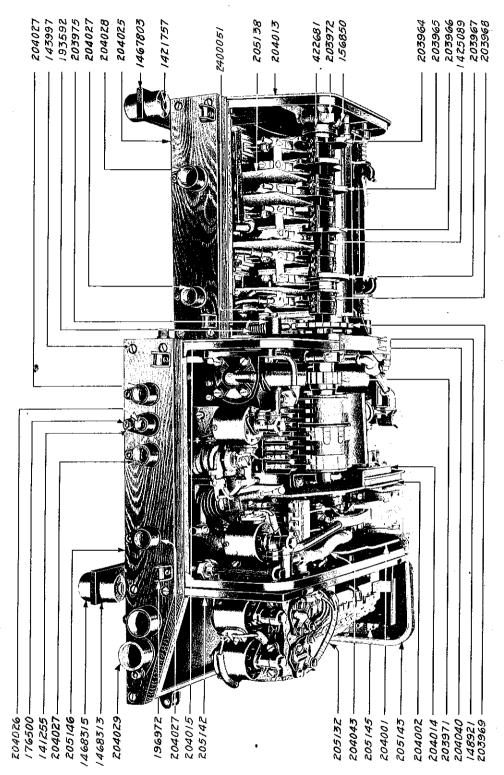
Cat.No.	Description						
204036	Small side cover for line breaker and main air						
	cylinder compartments, with latch						
204037	Large side cover for contactor compartment, with						
	latch						
204038	Small side cover for contactor compartment, with						
	catch						
204039	Latch for Nos. 204036, 204037 and large latch for						
	end cover						
205149	Small latch for end cover						
205150	Catch for No. 204039, with rivets						
204040	Supporting strip for cover						
148921	Screw fastening No. 204040 to middle frame (14-24,						
	1/2 in. f.h. sherardized).						
176888	1/4 in. standard union elbow (ground seat)						
176891	1/4 in. standard union tee (ground seat)						
176892	1/4 in. standard tee						
203852	1/8 in. standard pipe plug						
204041	3/8 in. standard union						
204042	Reducing elbow (3/8 in. to 1/4 in.)						
224796	Reducing tee $(1/2 \text{ in. by } 1/4 \text{ in. by } 1/4 \text{ in.})$						
204043	Insulation hose for line breaker pipe						

#### TOOLS AND WRENCHES

194600	Special single head socket wrench with offset
	handle, for 1/2 in. hexagonal head cap screws
194601	Special single head socket wrench with pin handle,
	for 3/8 in. hexagonal head cap screws
89996	Wrench for turning cam shaft
189416	Spanner wrench for magnet core
189906	Double open end "S" wrench for 1/4 in. and 5/16 in.
	cap screws
178419	Double open end straight wrench for 1/4 in. and
	5/16 in. nuts
189907	Double open end "S" wrench for 3/8 in. and 1/2 in.
	cap screws
472536	Jig for grinding lower valve in "off" magnet
1408379	Gauge (0.020 in. thick) for adjusting magnet valves
1408350	Gauge (0.036 in. thick) for adjusting magnet valves
1408378	Gauge (0.052 in. thick) for adjusting magnet valves



Type PC-5 Form C2 Controller



Type PC5 Form G2Controller

#### TYPE PC-5 FORM B1 CONTROLLER

Following are the parts of the Type PC-5, Form B1 Controller which differ from those of the Type PC-5 Form C2:-

#### REVERSER UNIT AND CUTOUT SWITCH

	•				
Cat.No.	Description				
205151	REVERSE CYLINDER with shaft, segments and operating				
•	crank				
224797	Wooden body with shaft				
1468372	Large fiber filler segment for narrow contact				
	fingers				
1469092	Small fiber filler segment for narrow contact				
	fingers				
205152	Complete set of copper and fiber segments.				
	Includes 4 copper contact segments each				
	Nos. 1406331, 1469083, 1469096; 2 copper				
	contact segments No. 1405018; 2 fiber filler				
	segments each Nos. 1468372, 1469092; 2				
	fiber filler strips No. 203839; 14				
	screws No. 1405021 and 32 screws No. 1405053				
205153	FINGER BLOCK, left-hand, with finger bases and				
	fingers				
205154	Finger block, right-hand, with finger bases and				
	fingers				
205155	Finger block, left hand, with finger bases,				
201200	without fingers				
205156	Finger block, right-hand, with finger bases,				
	without fingers				
1400404	Finger base for narrow contact finger				
205157	MAGNET VALVE, complete				
205158	MAGNET COIL with connection blocks				
	MANAGED TO THE WORLD COUNTY OF THE PROPERTY OF				
LINE BREAKER UNIT					
205157	MAGNET VALUE				
205157	MAGNET VALVE, complete				
400100	MAGNET COIL with connection blocks				
	DETAIL AND DEGRAMOR TIVE				

#### RELAY AND RESISTOR UNITS

## OVERLOAD RELAY

205159	OVERLOAD	RELAY,	Туре	DB-690	. Form	B2
204045	SERIES	OPERAT.	ING EI	DGEWISE	WOUND	COIL
205160		ING COL				

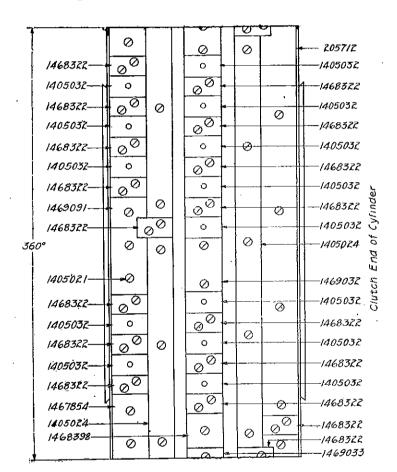
#### TYPE PC-5 FORM B1 CONTROLLER

#### CURRENT LIMIT RELAY

Cat.No.	Description				
205161	CURRENT LIMIT RELAY, Type DB-808, Form A1	'			
205162	LIFTING COIL				
205163	HOLDING COIL				
205164	BY-PASS COIL				

#### CONTROL CYLINDER UNIT

205165 CONTROL CYLINDER with shaft, segments, clutch for pinion and collar



#### TYPE PC-5 FORM B1 CONTROLLER

#### CONTROL CYLINDER UNIT

Cat.No.	Description				
205167	Complete set of copper and fiber segments.				
	Includes 17 segments No. 1468322; 13				
	segments No. 1405032; 2 segments No.				
	1405024; 1 segment each Nos. 1469032,				
	1469033, 1467854, 1468398, 1469091, 205712				
	and 60 screws No. 1405021				
	For development of contact segments see Page 47				
	CONTROL FINGER BLOCK with finger bases and fingers				
1400404	Finger base				
1826493G1	CONTROL CABLE, complete, with taps and terminals				

#### MAIN OPERATING MECHANISM

205726	"ON" MAGNET VALVE, complete	
205158	MAGNET COIL with connection blocks	
205169	"OFF" MAGNET VALVE, complete	
205170	MAGNET COIL with connection blocks	

#### TYPE PC-5 FORM F1 CONTROLLER

Following are the parts of the Type PC-5, Form F1 Controller which differ from those of the Type PC-5, Form C3:-

#### MAIN OPERATING MECHANISM

193575	"Off" magnet valve, complete
193576	Magnet valve body and support for magnet coil
	housing, with valve seat
193577	Valve seat
193578	ACCELERATING VALVE with air pipe and connection
193579	Valve body
193580	Air pipe with connection
193581	Valve stem
236323	Compression spring for valve stem
1416772	Cap plug
499960	Copper gasket for cap plug (5/8 in. by 7/8 in.
	by 0.015 in.)
144048	Cap screw fastening accelerating valve to
	supporting bracket (5/16 in18, 1 1/2 in.
	hex.h. slot. sherardized)
154196	Spring lock washer for No. 144048 (21/64 in. by
	37/64 in. by 5/64 in. thick)
193583	Support for accelerating valve

#### TYPE PC-5 FORM F1 CONTROLLER

#### MAIN OPERATING MECHANISM

Cat.No.	Description
2400052	Pivot pin for support
178288	Washer for pivot pin (13/16 in. by 1 1/4 in. by 0.094 in. sherardized)
139648	Spring cotter for pivot pin (3/16 in. by 1 1/4 in. sherardized)
188126	Adjusting screw for support (3/8 in16, 2 1/4 in. sq.h. st'd, set screw)
141257	Locking nut for No. 188126 (3/8 in16,1/4 in. thick, hex. st'd, sherardized)
	CAM SHAFT AND CHECK PAWLS

224798	CAM SHAFT with cams, spacing collars, star wheel
	and pinion
1939738P1	Star wheel
193591	Check pawl with roller bearing, spring and plunger
204032	Roller bearing for cam shaft star wheel
179894	Compression spring
1489209	Plunger
2403766	Nut for plunger
150606	Spring cotter for No. 2403766 (5/64 in. by
	1/2 in. sherardized)

## FRAME, SUPPORTING BARS, CABLE INLETS, COVERS AND PIPE FITTINGS

1823162G2 Top cover with dust guards and hinges for side covers Wooden insulator for seven cable inlets 221172

#### TYPE PC-5 FORM G1 CONTROLLER

Following are the parts of the Type PC-5, Form G1 Controller which differ from those of the Type PC-5, Form C3:-

#### RELAY AND RESISTOR UNITS

#### CURRENT LIMIT RELAY

224799	CURRENT LIMIT RELAY, Type DB-808, Form F8
1155817P77	'Terminal base
410567	Copper terminal for No. 1155817P77
126915	Screw fastening copper terminal for base (8-32,
	3/8 in. r.h. sherardized)

546624-50

## PARTS OF TYPE PC-5 FORMS B, C, F AND G CONTROLLERS

#### TYPE PC-5 FORM G1 CONTROLLER

#### RELAY AND RESISTOR UNITS

#### CURRENT LIMIT RELAY

Cat.No. 154190

Description
Spring lock washer for No. 126915 (3/16 in. by 3/8 in. by 0.031 in.)

FRAME, SUPPORTING BARS, CABLE INLETS, COVERS AND PIPE FITTINGS

221172 Wooden insulator for seven cable inlets 1823162G2 Top cover with dust guards and hinges for covers

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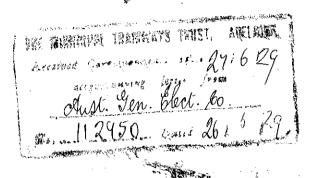
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