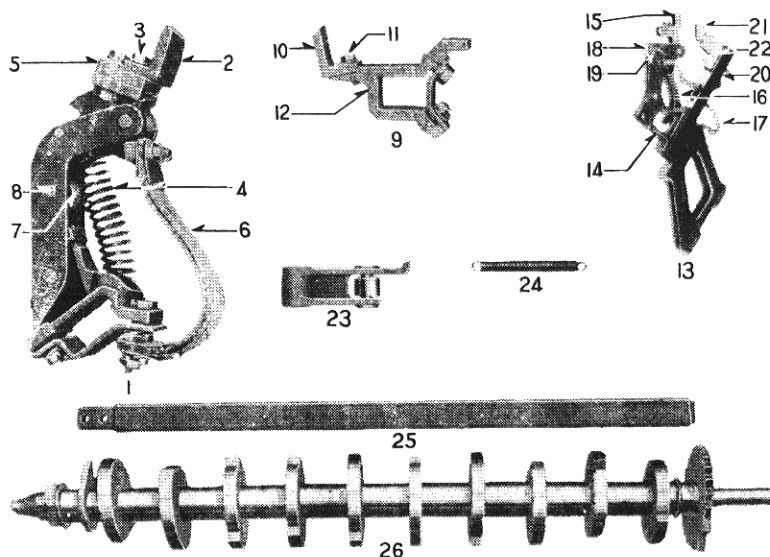


TYPE S DRUM CONTACTOR CONTROLLER, FRAME 70

RENEWAL PARTS DATA



The following is a list of the Renewal Parts and the quantities of each that we recommend should be stocked by the user of this apparatus to minimize service interruptions caused by breakdowns. The parts recommended are those most subject to wear in normal operation, or to damage or breakage due to possible abnormal conditions.

This list of Renewal Parts is given only as a guide. When continuous operation is a primary consideration, additional insurance against shutdowns is desirable. Under such conditions more renewal parts stock should be carried, considering the severity of service and the time required to secure replacements.

Controller Points				10		11		14	
Controller Style Numbers				378265		492765-Rev. 511035-Rev. 545936-Non-Rev.		653783	
For Controllers in use up to and including				1	5				
				Style Number of Part					
Ref. No.	Name of Part	Recommended For Stock	No. Per Contr.	No. Per Contr.	No. Per Contr.	No. Per Contr.	No. Per Contr.	No. Per Contr.	No. Per Contr.
+1	Moving Contact Element	1 1	10	466811	10	466811	16	466811	
2	Moving Contact Element	0 0	10	293587	10	293587	16	293587	
3	Moving Contact (same as Ref.10)	5 10	10	74983	10	74983	16	74983	
4	Moving Contact Screw (same as Ref.11)	2 4	20	106149	20	106149	32	106149	
5	Moving Contact Spring	0 1	10	293613	10	293613	16	293613	
6	Contact Adapter	0 1	10	418221	10	418221	16	418221	
7	Shunt	1 2	10	559791	10	559791	16	559791	
+8	Cam Roller	0 1	10	309493	10	309493	16	309493	
+9	Cam Roller Pin	0 1	10	466810	10	466810	16	466810	
9	Stationary Contact Element	1 1	10	293589	10	293589	16	293589	
10	Stationary Contact (same as Ref.2)	5 10	10	74983	10	74983	16	74983	
11	Stationary Contact Screw (same as Ref.3)	2 4	20	106149	20	106149	32	106149	
12	Stationary Contact Support	0 1	10	418220	10	418220	16	418220	
13	Reset Switch	0 0	1	392385	5	392385	2	392385	
14	Moving Contact Element	0 1	1	466722	5	466722	2	466722	
15	Moving Contact (same as Ref.21)	1 2	1	184665	5	184665	2	184665	
16	Reset Contact Spring	0 1	1	221847	5	221847	2	221847	
17	Shunt	0 1	1	530111	5	530111	2	530111	
18	Roller	0 0	1	283008	5	283008	2	283008	
19	Roller Pin	0 0	1	466721	5	466721	2	466721	
20	Stationary Contact Element	0 1	1	325013	5	325013	2	325013	
21	Stationary Contact (same as Ref.15)	1 2	1	184665	5	184665	2	184665	
22	Stationary Contact Support	0 1	1	312631	5	312631	2	312631	
23	Pawl with Roller and Pin, R.H.	0 0	1	462394	1	462394	1	462394	
24	Pawl with Roller and Pin, L.H.	0 0	1	462395	1	462395	1	462395	
25	Pawl Spring	0 0	1	282842	1	282842	1	282842	
26	Insulated Support for Contacts	0 0	4	501455	4	499794	4	499794	
27	Shaft Complete - Metal Cams	0 0	1	None	1	551757	1	551757	
28	Shaft Complete - Nicarta Cams	0 0	-	750960	1	**499793	-	None	
29	Hand Wheel	0 0	1	416503	-	None	-	None	
30	Horizontal Handle	0 0	-	None	1	508864	1	508864	
31	Handle Grip	0 0	-	None	1	77350	1	77350	
32	Arc Shield	1 1	-	None	-	None	16	368719	

Parts indented are included in the part under which they are indented.
 +S/466811 is assembled with renewal roller and pin.
 *S/293587 is assembled with riveted roller pin. Renewal roller and pin can be used by changing 3/8 inch round hole in Right Hand Contact Arm to 1/2 inch square hole.
 -Renewable Roller and Roller Pin
 #Used only on S/511035 and S/545936.
 ** Used only on S/492765.
 Note: When ordering cams order same by number starting with cam No. 1 from handle end of shaft.

*To be filed as Renewal Parts Data and as an Instruction Leaflet; for Instructions, see reverse side of this sheet.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
East Pittsburgh, Pa.

WESTINGHOUSE INDUSTRIAL MOTORS AND CONTROLLERS

TYPE S DRUM CONTACTOR CONTROLLER, FRAME 70

INSTRUCTIONS

Application:

Type S Drum Contactor Controllers are used for starting and adjusting the speed of shunt, series and compound wound direct-current motors, by adjusting the resistance in series and parallel with the motor armature. They are equally well suited for starting and regulating the speed of alternating current, wound rotor motors, reversing or non-reversing service, though control of the resistance in the secondary winding. They give successful operation under the most severe operating conditions, hence they are applicable to cranes, hoists, crushers, bridges, roll and transfer tables, punches and practically all applications employing this system of control.

The horizontal handles of controllers in service can be readily replaced with vertical handles (or vice versa), as all controllers are drilled and tapped for both horizontal and vertical handles.

These controllers should be operated at least once in 24 hours when used on continuous service.

Construction:

The Type S Drum Contactor Controller consists of contactor units closed by a cam and opened by a spring. The fact that the contactors are spring actuated is positive assurance that their operation is not affected by gravity. This permits the controller to operate satisfactorily when mounted in any position. The contacts are the same as used on the corresponding size of magnetic contactors, the rolling contact being used. Instead of operating the contactor by a magnet, as in the Types C and F Contactors, a cam is used.

Moving Contact Element:

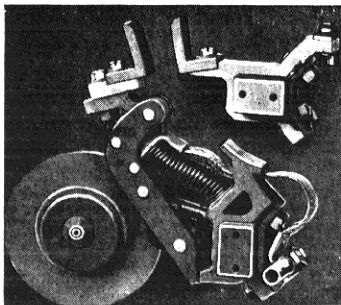
The contactor moving element is clamped to an insulated steel bar by two screws. If these two screws are taken out the clamp can be removed and the contact element taken off the insulated bar without interfering with any of the other contact elements. The clamp is located at the outside of the framework it is readily accessible. This permits the replacement by a new element of one that may have become damaged through an accidental short circuit or by some other cause.

Stationary Contact Element:

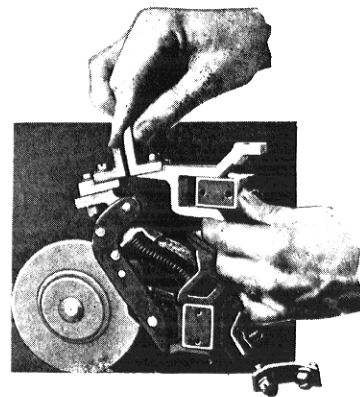
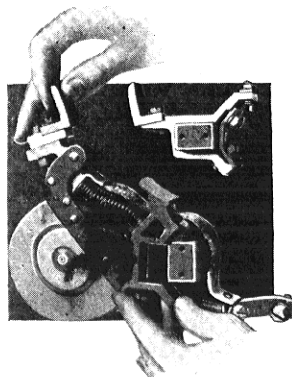
The stationary contact elements are clamped to an insulated steel bar and as easily removed as the moving contact elements. This applies to the drum mounted controllers. The panel mounted controllers have this element attached to the slate panel in the same manner as the magnetic contactors.

Contacts:

The contacts used on the Type S Drum Contactor Controller are of the well-known rolling type. This rolling action limits all arcing and burning to the contact tips, where current is carried only momentarily. This leaves the actual current-carrying contact surfaces in perfect condition, and lengthens the life of the contact considerably. New contacts are not required until the tips have been burned down to the point where little or no rolling action is left. When the contacts are renewed they should be adjusted so that the proper rolling action is produced. The stationary and moving contacts are the same, and they are interchangeable with those of Westinghouse auto-starters and magnetic contactor controllers.



View Showing Moving and



This figure illustrates the movable contactor element showing that the entire element may be easily taken out and a new one replaced in case of accident. The clamp is located at the side of the controller next to the cover where it is very accessible.

ORDERING INSTRUCTIONS

Name the part and give its style number. Give the complete name plate reading. State whether shipment is desired by express, freight or by parcel post. Send all orders or correspondence to nearest sales office of the company. Small orders should be combined so as to amount to a value of at least one dollar, as order-handling and shipping expenses prevent us from billing a smaller amount.

*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Renewal Parts, see reverse side of this sheet.

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