

TYPE ML MACHINE LIMIT SWITCH

RENEWAL PARTS DATA

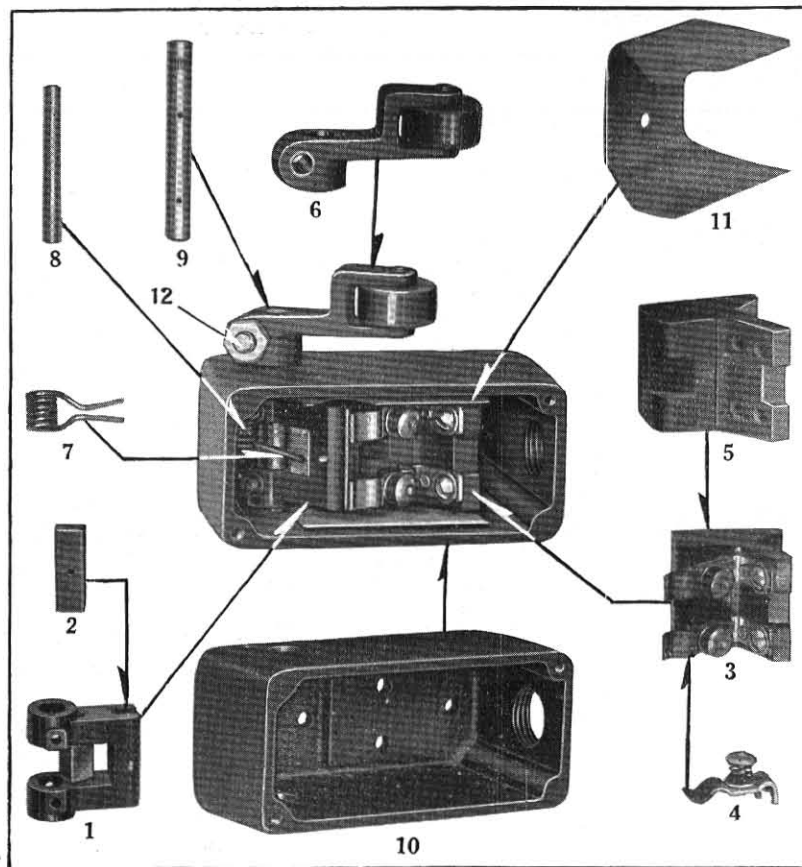


Fig. 3

This 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 shut-downs is desirable. Under such conditions more renewal parts stock should be carried, considering the severity of service and the time required to secure replacements.

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 \$1.00 net; where the total of the sale is less than this, the material will be invoiced at \$1.00.

RECOMMENDED STOCK OF RENEWAL PARTS

Characteristics of Switch		673448, A	Normally Open	Normally Closed	Normally Open	Normally Closed	Normally Open	No. Per Switch	Switches in Use Recommended For Stock	
Style Number of Switch		B, C	760645, A	817524, A	817525, A	850689, A	850690, A		1	5
Ref. No.	Description of Part	Style Number of Part								
1	Moving Contact Complete.....	774175	774175	850713	774175	1084744	1084745	1	0	0
2	Contact.....	774176	774176	774176	774176	774176	774176	1	1	2
3	Stationary Contact Complete.....	774184	774184	774184	774184	774184	774184	1	0	0
4	Contact Finger and Spring Assembled....	760566	760566	760566	760566	760566	760566	2	1	2
5	Finger Base.....	774181	774181	774181	774181	774181	774181	1	0	0
6	Operating Lever with Roller.....	774179	774179	774179	774179	774179	774179	1	0	0
7	Spring.....	774180	774180	774180	774180	.....	.....	1	0	1
†	Spring—Operating Lever Side.....	.....	.....	.....	.....	869061	869061	1	0	1
†	Spring—Opposite Operating Lever Side .....	.....	.....	.....	.....	869060	869060	1	0	1
8	Shaft for Spring.....	774182	805840	774182	774182	774182	774182	1	0	0
9	Shaft for Moving Contact.....	774183	805842	774183	774183	774183	774183	1	0	0
10	Case.....	774177	805841	805841	805841	869062	869062	1	0	0
11	Insulation for Case.....	774178	774178	774178	774178	774178	774178	1	0	0
12	Adjusting Bolt.....	401218	401218	401218	401218	401218	401218	1	0	1

Parts indented are included in the part under which they are indented.
†Not illustrated.

Westinghouse Electric & Manufacturing Company
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TYPE ML MACHINE LIMIT SWITCH INSTRUCTIONS

General

The type ML machine limit switch is a slow make or break switch, completely enclosed in a case. It is designed with single pole, double break, light duty contact. It can be furnished for normally closed or two positions of normally open contacts. The switch is designed for a general purpose limit switch to be applied on pilot circuits for operating doors, windows, etc.

Rating

- 10 amperes, continuous duty.
- 15 amperes, intermittent duty.

D-C. Arc Rupturing Capacity

- 1.5 amperes at 250 volts.
- .3 amperes at 550 volts.

A-C. Arc Rupturing Capacity

- 25 amperes at 550 volts, 60 cycles.
- All rupturing capacities are considered as inductive.

Insulation

- 250-Volts D-C.
- 600-Volts A-C.

Case

(Ref. No. 10)

The case is made from cast iron with a sheet metal cover.

The entire underside surface of cover is protected with a high grade gasket material which serves as an insulator also prevents dust getting into the contacts.

The cover is usually furnished with two screws for holding it in place. However, four screws, one in each corner may be used if necessary.

The inside of case is protected with an insulation to prevent arc from contacting with case.

One end of case is provided with $\frac{1}{2}$ -inch pipe thread for conduit connection.

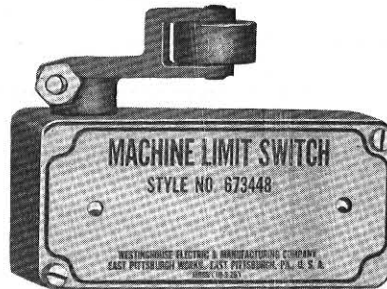


FIG. 1—TYPE ML MACHINE LIMIT SWITCH

Operating Lever

(Ref. No. 6)

The operating lever is provided with a Micarta duck roller which has good mechanical strength and eliminates the metallic sound when in service. It can be mounted on either side of the case. To change from one side to the other, remove the two screws which hold the moving contact supports, (Fig. 3, Ref. No. 1) then holding the moving contact supports so that the spring block will not slip from between the ends of the spring, (Fig. 3 Ref. No. 7), pull the lever with shaft out of case and insert from the opposite side. Replace the screws in the moving contact member and tighten securely.

The operating lever has a micrometer screw adjustment which serves as an adjusting screw and clamping bolt and can be set in any position in the 360° circle. To set the operating lever, loosen the lock nut and turn the screw until the desired position is reached, then tighten the nut firmly.

Contacts

(Ref. Nos. 2 and 4)

The stationary contacts are made from hard drawn copper strap formed to shape. They are mounted on an

individual base which is made from a good grade of moulded insulating material. The contacts are so designed that they are easily removed by sliding out of a slot in the support. This permits replacement easily and quickly. A steel compression spring gives positive and sufficient contact pressure up to the maximum life of the contacts.

The moving contact is made from hard drawn copper rods mounted in a groove of the moving contact support and is held in place with a cotter pin.

The contacts receive a slight wiping action on opening or closing; this action insures a clean low resistance contact area.

Contact Gap

The operating lever should be set so that the contact gap, when switch is in the open position, is not less than $\frac{3}{32}$ of an inch.

Maintenance

Examine the switch to see that all screws are tightened securely.

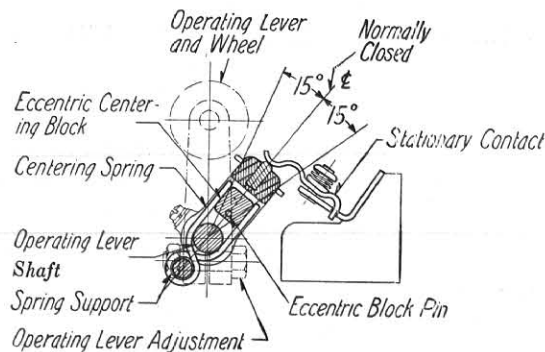
Examine the contacts periodically to see that they are clean and making good contact.

Replace any defective or worn parts which may cause trouble.

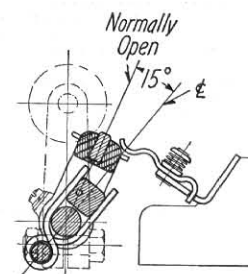
Check the position of the operating lever, to see that it has not changed its position and that the contacts have the desired amount of motion. This is important, to prevent damage to the switch.

Location

Care should be given in the selection for mounting the switch, in order that foreign matter will not collect on the switch and thus cause interference with correct operation.



NORMALLY CLOSED SWITCH



NORMALLY OPEN SWITCH