DEPARTMENT OF

TRADE AND COMMERCE
CANADA

S-EA.541

STANDARDS BRANCH

OTTAWA January 29, 1962.

MODIFICATION OF TYPE APPROVAL

CANADIAN WESTINGHOUSE ADJUSTABLE LOWER BEARING
FOR USE ON TYPES "MA2", "MS2", "MS5", "MB2F", "MA8", "MS8"
"MB8F" AND "MA5" POLYPHASE WATTHOUR METERS

The modification to the apparatus specified and illustrated herein has been duly approved by the Standards Branch under the provisions of the Electricity Inspection Act, Chapter 94, R.S. 1952, and the modified apparatus may be admitted to verification in Canada.

Apparatus Modified: Adjustable Lower Bearing for use on types "MA2", "MS2", "MS5", "MB2F" 2-Element, "MA8", "MS8", "MB8F" 2½-Element Y, and "MA5" 2-Element Network Polyphase Watthour Meters, manufactured by Canadian Westinghouse Company, Limited, Hamilton, Ontario.

Rating of Apparatus: All ratings covered by Circular S-EA.450, May 25, 1960.

Modification: The new adjustable lower bearing has the jewel set in a sleeve that screws into the threaded hole in the grid and is secured in position by means of a locknut. The disc can thus be raised or lowered in the air gaps. The manufacturer claims that calibration time can be reduced considerably by obtaining approximate balance of the torque between the two elements by following the procedure outlined in the Instruction Leaflet H-42-170 effective January 1,1962, which is as follows:-

1. Connect the current coils in series opposition, with the upper element connected for forward rotation and the lower element connected for reverse rotation.

2. Remove the permanent magnet.

3. Apply high load test current (unity power factor). If the disc rotates forward, lower the bearing until it stops. If the disc rotates backward, raise the bearing until it stops. After the bearing has been correctly set, tighten the locknut making sure that in doing so the bearing does not change position.

4. If it is necessary to adjust the discs excessively high or low in the gaps to balance the torques, adequate clearance and end play can be obtained by small adjustment of the torque balance adjuster. Under no circumstances should the disc shaft be able to come out of the lower bearing.

5. Replace the permanent magnet and check the calibration of the individual elements. If further trimming is required to obtain proper balance, use the torque balance adjuster.

Arrows on the meter indicate the fast and slow directions for the high load, low load and torque balance adjustments.

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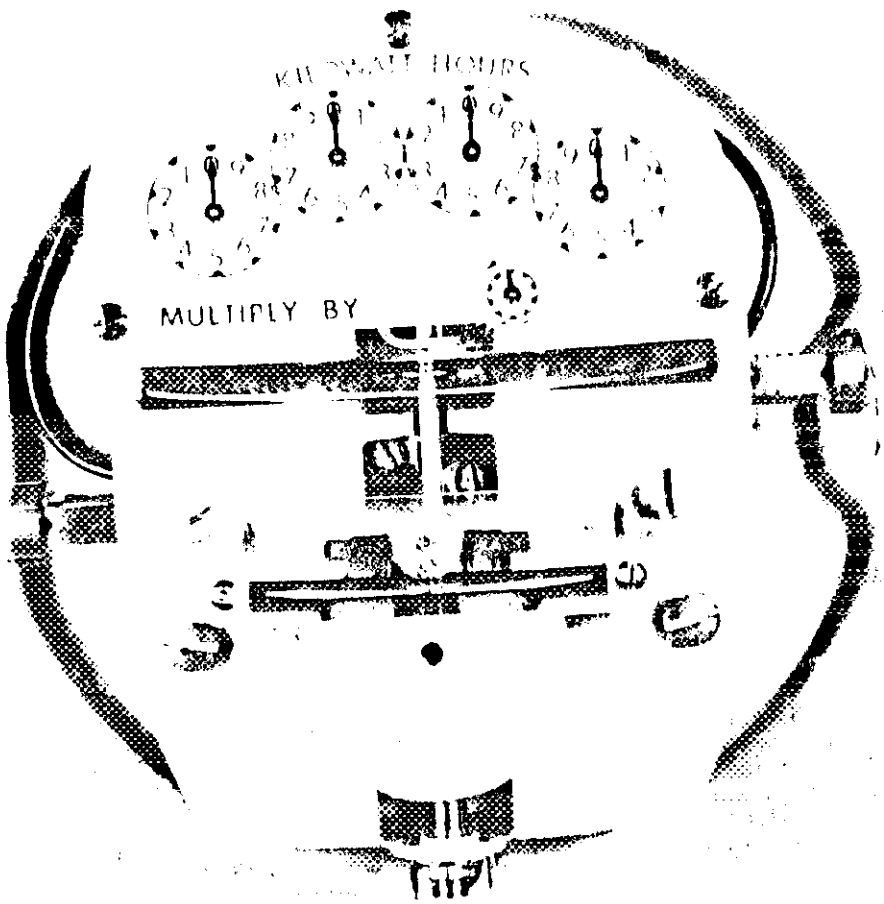
CANADIAN WESTINGHOUSE TYPE "MS" POLYPHASE WATTHOUR METER
SHOWING ADJUSTABLE LOWER BEARING



Owing to the fact that the new adjustable lower bearing has no fixed reference point, it will be necessary to re-balance the elements every time the lower bearing is disturbed.

Some of the types "MA" and "MS" will incorporate two test links. The wiring diagram has been moved from the back of the meter to a position on the nameplate.

Pertinent Circulars: S-EA.450, May 25, 1960, for ratings, and
S-EA.511, June 23, 1961, for 5-dial register with multiplier of 1.

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Ref: A-825C