

TRADE AND COMMERCE
CANADA

STANDARDS BRANCH

S-EA.575

OTTAWA January 7, 1963.

MODIFICATION OF TYPE APPROVALCANADIAN WESTINGHOUSE TYPES "D2S" AND "D2A"
SINGLE-PHASE WATTHOUR METERS
WITH AND WITHOUT VOLTAGE-COMPENSATED "VC" VOLTAGE COIL

The modifications to the apparatus specified and illustrated herein have 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: Types "D2S" and "D2A" Single-Phase Watthour Meters, manufactured and distributed in Canada by the Canadian Westinghouse Company Limited, Hamilton, Ontario.

Rating of Apparatus:

| | | | | |
|------------------------|---|-------------|---------------------------|---------------------------|
| // Current Range | .12-10A | .5-50A | .75-100A | 2-200A |
| // Voltage | 115 & 230 | 115 | 230 & 115/230 | 230 |
| # Wire | 2 | 2 | 3 or 2/3 | 3 |
| Frequency | 60 cycles | 60 cycles | 60 cycles | 60 cycles |
| Watthour Constant .. | .18 for 115V | .9 for 115V | 3.6 for 230V | 7.2 for 230V |
| Register Ratio | 555-5/9 for 115V 277-7/9 for 230V | 111-1/9 | 27-7/9 or 277-7/9 x 10 | 13-8/9 or 138-8/9 x 10 |
| Register Dials | 4 | 4 | 4 | 4 or 5 |
| Register Type | clock or cyclometer | | | |
| | (see SD-EA-308, -394, -405, S-EA-412, -442) | | | |

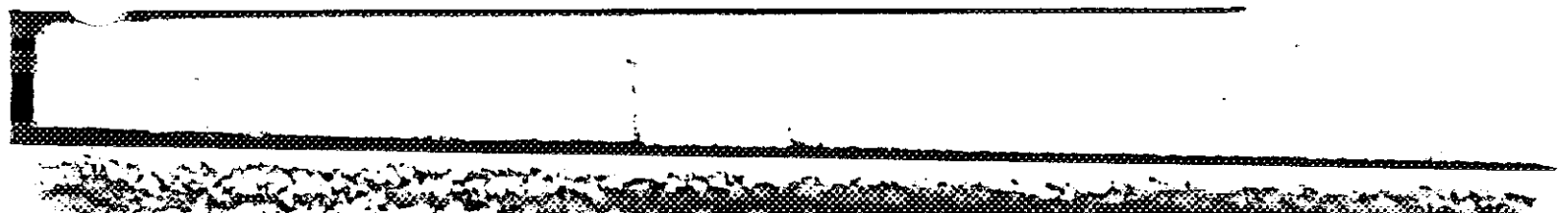
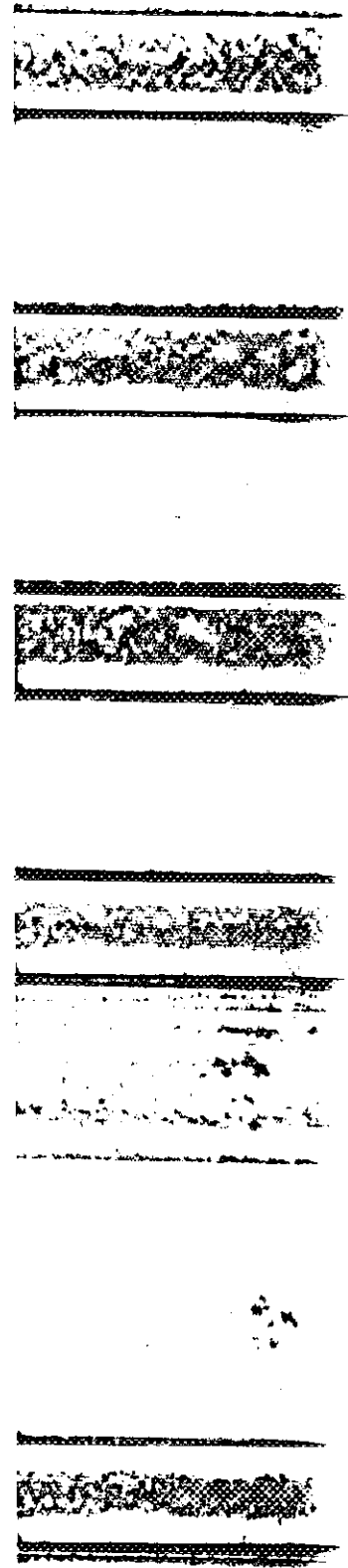
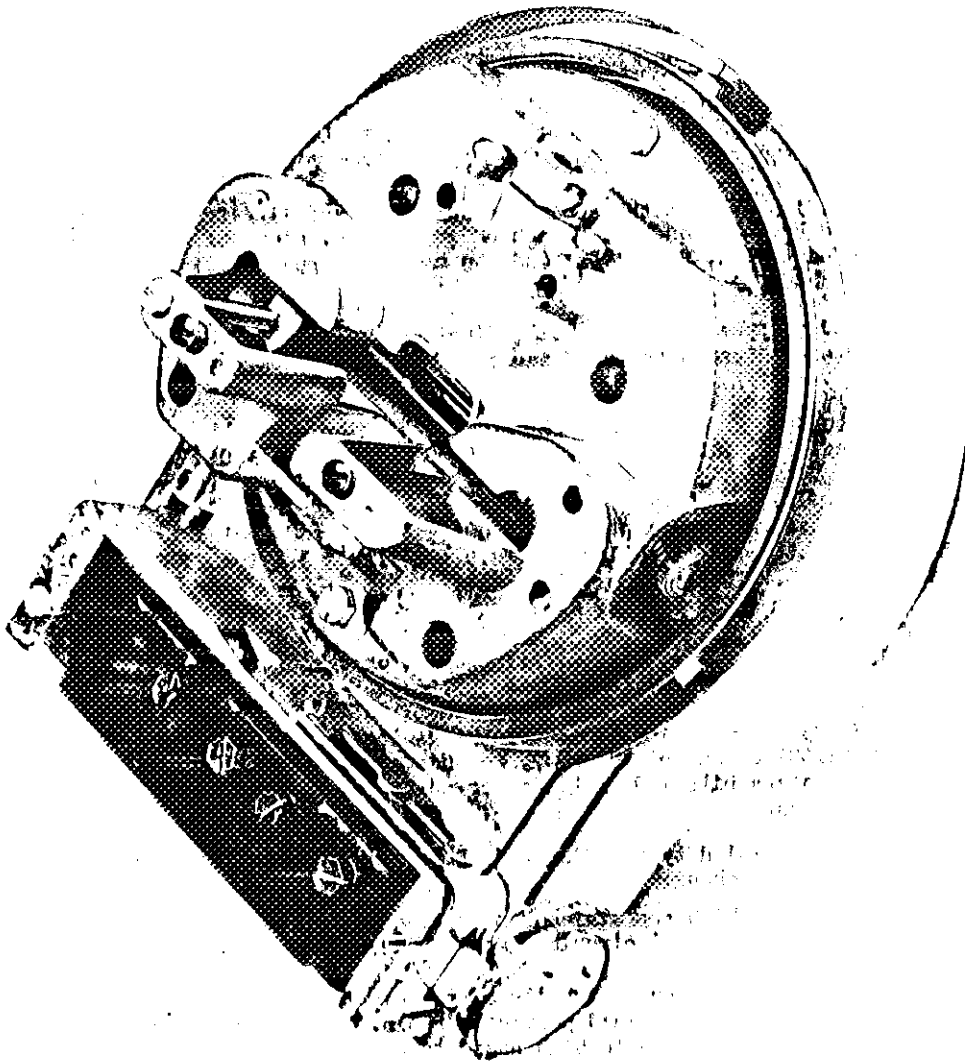
// The 115/230V 2/3-Wire marking indicates the 2-wire/3-wire meter approved under Circular SD-EA.307 of August 19, 1957, now has approval with magnetic suspension of the disc. Meters with 120V ratings, or multiples thereof, are also approved for all capacities.

Modifications: The modified types "D2S" and "D2A" single-phase watthour meters incorporate the following changes:-

1. The changes for which approval has been granted in the past without a 'modification-of-type-approval' circular, as it was considered that the changes were of immaterial nature:
 - (a) The insulation of current coils of the electromagnets was changed to butyl rubber instead of moulded polyester resin. This change was made to obtain an improved tolerance to high humidity and temperature conditions.
 - (b) Minor changes in the design of the two disconnects on the socket-type meter.
 - (c) The shape of the sealing clip on "A"-base meters has been changed to prevent access to the working parts of the meter, as was previously possible under certain conditions of dimensional tolerance.

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CANADIAN WESTINGHOUSE TYPE "D2A" SINGLE-PHASE WATTHOUR METER



(d) The disc is provided with two additional holes, .125 inch in diameter, .50 inch from the center of the disc at 90 degrees to the anti-creep holes. This is to provide holes of a size that will more readily accept the beam of light of a photoelectric meter tester.

(e) New method (brazed joint) of joining the voltage terminal and the voltage lead was introduced to improve the reliability of the joint.

2. The main modification consists of removal of the damping magnet from the right-hand side of the disc and changes to shape and material of the remaining (one only) damping magnet on the left side.

In addition, the full load adjustment consists of a steel screw rotatably mounted in the frame and held (locked) in position by a stainless steel wire spring. This screw, operated by a screwdriver, provides the full load adjustment. The original adjustment incorporated spring-loaded magnetic wedge adjustable by hand or a screwdriver.

The outlined modifications have not appreciably changed the performance characteristics of the meters and they are not easily detectable in the appearance of the meters. The modified version will supersede the presently-approved types, but the type designations will remain unchanged.

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