



MODEL CN-09
 INDICATOR - TOTALIZER CALIBRATION UNIT
 OPERATING INSTRUCTIONS

INSTRUCTIONS FOR CALIBRATION OF MODEL CN-06-2 INDICATOR-TOTALIZER

- 1). Install desired dial and totalizer change gears.
- 2). The B-(driven) gear attached to the bottom of the indicator must be removed (using a 1/16" hex. allen wrench) so that the 20 tooth gear with the short hub (supplied) can be mounted to the indicator drive shaft. The 20 tooth gear with the long hub (supplied) should be mounted on the CN-09 drive shaft (using a 1/16" hex. allen wrench). Adjust the gear on the CN-09 drive shaft so that the top face of the gear is 1/8" below the top surface of the CN-09 meter head. Position the 20 tooth gear with the short hub on the indicator drive shaft so that the face of the gear is 1/8" below the bottom of the indicator.
- 3). Place the indicator-totalizer on the CN-09 meter head with the indicator gear positioned on the side of the head with the gear clearance cutout. Set the CN-09 calibration unit to 10% by pulling out on the selector knob and sliding the position arrow to 10%. Be sure the selector pin is locked into place. Slide the indicator toward the center of the CN-09 meter head until the unit stops because of full gear mesh. Now slide the unit back 1/64". The indicator must be held in place while it is being calibrated. Switch on the indicator calibration unit in the forward position.
- 4). Locate the hairspring regulator set screw (see drawing for location). Loosen the set screw in the spring mounting block (using a .062 hex. allen wrench) and carefully rotate the spring and mounting block until the indicator shows 10% of full scale (see the percentage chart to determine 10% of scale for your indicator). Do not tighten set screw yet.
- 5). Set the CN-09 calibration unit to 75% by pulling out on the selector knob and sliding the position arrow to 75%. Locate the set screw in the hub on the magnetic flux adjusting plate (see drawing for location). Loosen the set screw in the flux adjusting plate hub and carefully turn the flux adjusting plate until the indicator shows 75% of full scale (see the percentage chart to determine 75% of scale for your indicator). Do not tighten set screw yet.
- 6). Set the CN-09 calibration unit to 10% and check the indicator reading. If the indicator has changed from the correct 10% of scale then the zero spring must be carefully adjusted so that the indicator shows 10% and the flux adjusting plate must also be reset to show 75% of scale. After the indicator is set so that the 10% and 75% readings are correct, then tighten the set screws in the hairspring regulator and the flux adjusting plate hub.
- 7). Set the CN-09 to 10%, 25%, 50%, 75%, and 100% ranges and check the indicator (see the percentage chart to determine the correct scale for your indicator) to be sure that it is linear through the entire range. If the indicator is not linear or you cannot calibrate the indicator then the indicator should be sent back to the factory (see your meter service manual for returning the indicator to the factory).
- 8). Set the CN-09 to 100% and time the totalizer sweep hand for one revolution. This time should match up to the time listed on the test record.

INDICATOR SCALE	PERCENT OF SCALE				
	10%	25%	50%	75%	100%
0-3	.30	.75	1.5	2.25	3.0
0-4	.40	1.0	2.0	3.0	4.0
0-5	.50	1.25	2.5	3.75	5.0
0-6	.60	1.5	3.0	4.5	6.0
0-8	.80	2.0	4.0	6.0	8.0
0-10	1.0	2.5	5.0	7.5	10.0
0-12	1.2	3.0	6.0	9.0	12.0
0-15	1.5	3.75	7.5	11.25	15.0
0-20	2.0	5.0	10.0	15.0	20.0
0-25	2.5	6.25	12.5	18.75	25.0
0-30	3.0	7.5	15.0	22.5	30.0
0-35	3.5	8.75	17.5	26.25	35.0
0-40	4.0	10.0	20.0	30.0	40.0
0-50	5.0	12.5	25.0	37.5	50.0
0-60	6.0	15.0	30.0	45.0	60.0
0-80	8.0	20.0	40.0	60.0	80.0
0-100	10.0	25.0	50.0	75.0	100.0
0-200	20.0	50.0	100.0	150.0	200.0

