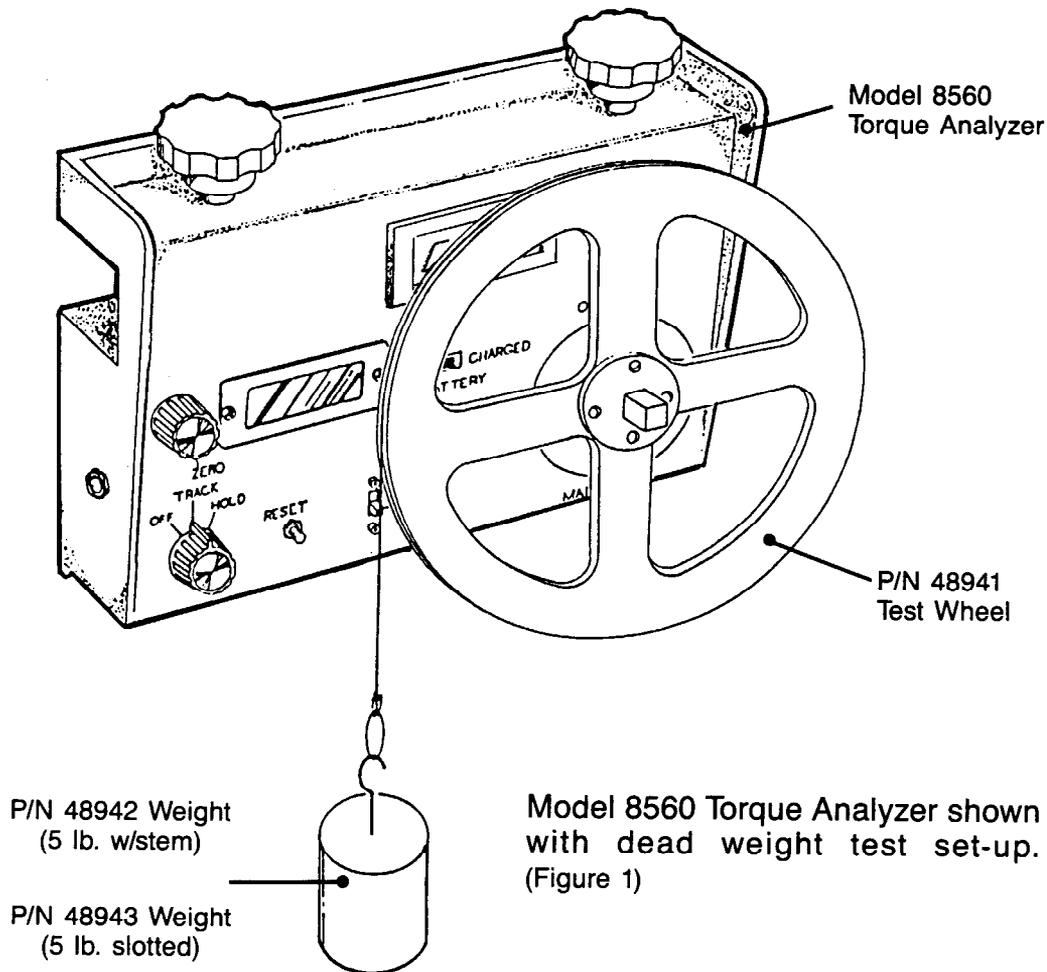


Calibration Instructions

ARO Model 8560 Electronic Torque Analyzer



GENERAL

Controlling the accuracy of the torque setting of hand-held torque tools is the first step in a quality torque control program. Periodic measurement and calibration will ensure high precision. Use a suitable dead weight test set to check the calibration of your ARO 8560 Torque Analyzer.

CALIBRATION

- Step 1.** Attach a tester securely to a work surface so that the axis of tool rotation is parallel to the ground.
- Step 2.** Turn the POWER/MODE switch to TRACK and make sure the battery has sufficient charge. (Recharge if necessary.)
NOTE: To ensure an accurate battery reading, check the BATTERY STATUS METER five (5) minutes after the unit has been turned on.
- Step 3.** Select the appropriate measurement units (lbf. in or cNm).
- Step 4.** Attach a 4.0" radius wheel (ARO part no. 48941) to the INPUT DRIVE (Figure 1).
- Step 5.** Gently hang a 25 lb. of weight on the wire cable of the wheel in the appropriate direction (clockwise or counterclockwise for a few seconds. Remove the weight.
- Step 6.** Turn the ZERO KNOB until 000 or 00.0 just appears. Note the dial position.
- Step 7.** Turn the ZERO KNOB in the same direction until 000 just changes to 001. Note the dial position.
- Step 8.** Return the dial halfway between the two positions previously noted.

WEIGHT	lbf.in			cNm		
	-limit	exact	+limit	-limit	exact	+limit
5 lb	19.8	20.0	20.2	224	226	228
10 lb.	39.7	40.0	40.3	449	452	455
15 lb	59.6	60.0	60.4	673	678	682
20 lb	79.5	80.0	80.5	898	904	909
25 lb	99.4	100.0	100.6	1123	1130	1136

Table 1. Acceptable torque readings using a 4.0" radius wheel:

LIMITS WERE DETERMINED USING BASIC ACCURACY OF:

±0.5% of reading ±1 digit for 10-25 lb. weights

±1% of reading ±1 digit for 5 lb. weight

Step 9. Once the unit is "zeroed," gently hang a 25 lb. weight on the wheel. Note the display reading.

Step 10. If the reading is within the acceptable tolerance (Table 1), continue the calibration procedure with the 5, 10, 15, and 20 lb. weights.

If the reading is not within tolerance, readjust the span potentiometer inside the unit. (It is the only potentiometer visible on the 3" X 3.5" PCB.) Once the reading is in tolerance, continue the calibration procedure with the 5, 10, 15, and 20 lb. weights.

Calibration is now complete. Do Step 11 only if you will be using the tester to measure in both clockwise and counterclockwise directions.

Step 11. If both clockwise and counterclockwise measurements are to be made with the same calibration settings, modify calibration as follows:

11.1 Do Steps 5-9 in clockwise direction. Note the display readings.

11.2 Repeat Steps 5-9 in the counterclockwise direction. Note the readings.

11.3 If both readings for the 25 lb. weight are within the acceptable range, continue the calibration procedure in the counterclockwise direction. Repeat in the clockwise direction.

NOTE: Remember to preload and re-zero the unit before testing in another direction.
11.4 If one or both of the readings is out of acceptable limits and the difference between them is less than 1.2 lbf.in (13 cN.m), keep the 25 lb. weight on the wheel and adjust the span potentiometer inside the unit. Adjust until the higher reading is as far above "exact" (see Table 1) as the lower reading is below "exact."

NOTE: If the difference between the clockwise and counterclockwise directions is greater than 1.2 lbf.in (13 cN.m) return the unit to The Aro Corporation for calibration.

CARE

1. The ARO 8560 Torque Analyzer is a precision measuring instrument. Handle with care at all times.
2. DO NOT store in humidity above 85%.
3. DO NOT operate a power tool on the tester without some kind of adapter between the tool and the tester.
4. Keep the exterior clean and dry.
5. DO NOT drop.

SERVICE

If the analyzer is difficult to calibrate or needs frequent calibration, return to The Aro Corporation for calibration or repair.



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