

*TB 9-5120-204-24

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR TORQUE WRENCH WEINSCHEL, MODEL 2098-5065

Headquarters, Department of the Army, Washington, DC
22 August 2007

Distribution Statement A: Approved for public release; distribution is unlimited.

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also send in your comments electronically to our E-mail address: 2028@redstone.army.mil or by fax 256-842-6546/DSN 788-6546. For the World Wide Web use: <https://amcom2028.redstone.army.mil>. Instructions for sending an electronic 2028 can be found at the back of this manual.

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*This bulletin supersedes TB 9-5120-204-35, dated 22 April 1988.

**SECTION I
IDENTIFICATION AND DESCRIPTION**

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Torque Wrench Weinschel, Model 2098-5065. The manufacturer’s manual was used as the prime data source in compiling these instructions. The equipment being calibrated will be referred to as the TI (test instrument) throughout this bulletin.

a. Model Variations. None

b. Time and Technique. The time required for this calibration is approximately 1 hour, using the physical technique.

2. Forms, Records, and Reports.

a. Forms, records, and reports required for calibration personnel at all levels are prescribed by TB 750-25.

b. Adjustments to be reported are designated (R) at the end of the sentence in which they appear. When adjustments are in tables the (R) follows the designated adjustment. Report only those adjustments made and designated with (R).

3. Calibration Description. TI parameters and performance specifications which pertain to this calibration are listed in table 1.

Table 1. Calibration Description

Test instrument parameters	Performance specifications
Torque	Range: 7 to 10 in-lbs Accuracy: ± 4%

**SECTION II
EQUIPMENT REQUIREMENTS**

4. Equipment Required. Table 2 identifies the specific equipment to be used in this calibration procedure. This equipment is issued with Secondary Transfer Calibration Standards Set AN/GSM-286; AN/GSM-287; AN/GSM-421; or AN/GSM-705. Alternate items may be used by the calibrating activity. The items selected must be verified to perform satisfactorily prior to use and must bear evidence of current calibration. The equipment must meet or exceed the minimum use specifications listed in table 2. The accuracies listed in table 2 provide a four-to-one ratio between the standard and TI. Where the four-to-one ratio cannot be met, the actual accuracy of the equipment selected is shown in parenthesis.

5. Accessories Required. The accessories required for this calibration are common usage accessories, issued as indicated in paragraph 4 above, and are not listed in this calibration procedure.

Table 2. Minimum Specifications of Equipment Required

Common name	Minimum use specifications	Manufacturer and model (part number)
TORQUE TESTER	Range: 0 to 160 in-oz Accuracy: ±1.0% applied torque	AWS3002 (MIS-45850)

SECTION III CALIBRATION PROCESS

6. Preliminary Instructions

a. The instructions outlined in paragraphs 6 and 7 are preparatory to the calibration process. Personnel should become familiar with the entire bulletin before beginning the calibration.

b. Items of equipment used in this procedure are referenced within the text by common name as listed in table 2.

c. Unless otherwise specified, verify the result of each test and, whenever the test requirement is not met, take corrective action before continuing with the calibration. Adjustments required to calibrate the TI are included in this procedure. Additional maintenance information is contained in the manufacturer's manual for this TI.

d. Unless otherwise specified, all controls and control settings refer to the TI.

7. Equipment Setup

a. Remove TI from case.

b. Visually check TI for damage.

c. Remove any dirt or grime that may have accumulated around mechanism by using stiff, clean brush and wiping with clean cloth.

d. Secure holding fixture or torque adapter to a stable, rigid work surface.

e. Allow equipment to stabilize at ambient temperature.

NOTE

This procedure normally covers calibration in cw direction. A ccw calibration can be accomplished by reversing directions outlined in each performance check. Torque wrenches will be calibrated by applying increasing torque only in the clockwise direction, unless ccw direction is specifically requested by owner/user.

f. Connect torque tester to a 115 V ac power source. Set power switch to **ON** and allow unit to warm-up for 30 minutes.

g. Exercise TI as described in (1) through (5) below:

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- (1) Attach TI to torque tester, using adapters as required.
- (2) Slowly apply torque to TI and torque tester in a cw direction until audible "click" is heard. (Do not over-torque torque tester).
- (3) Slowly release torque until only tare torque of TI is applied.
- (4) Repeat (2) and (3) above two more times.
- (5) Remove TI from torque tester.

8. Torque

a. Performance Check

- (1) Note torque value setting on handle of TI. If no value is stamped on handle, use value in table 1.
- (2) Insert TI in torque tester, using adapters as required. Insert in horizontal position.
- (3) Gradually apply perpendicular force on handle of TI until audible "click" is heard. (Do not over-torque torque tester). Note indication on torque tester.
- (4) Slowly release torque until only tare torque of TI is applied.
- (5) Repeat (3) and (4) above two more times.
- (6) Compute average reading of indications in (3) and (5) above. If average reading is not within $\pm 4\%$ of torque value noted in (1) above, perform **b** below.

b. Adjustments. Adjust in accordance with manufacturer's instruction manual.

9. Final Procedure

- a.** Deenergize and disconnect all equipment.
- b.** Annotate and affix DA label/form in accordance with TB 750-25.

By Order of the Secretary of the Army:

Official:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

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Instructions for Submitting an Electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however, only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" whomever@redstone.army.mil
To: <2028@redstone.army.mil

Subject: DA Form 2028

1. **From:** Joe Smith
2. **Unit:** home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 19-OCT-93
8. **Pub no:** 55-2840-229-23
9. **Pub Title:** TM
10. **Publication Date:** 04-JUL-85
11. **Change Number:** 7
12. **Submitter Rank:** MSG
13. **Submitter FName:** Joe
14. **Submitter MName:** T
15. **Submitter LName:** Smith
16. **Submitter Phone:** 123-123-1234
17. **Problem:** 1
18. **Page:** 2
19. **Paragraph:** 3
20. **Line:** 4
21. **NSN:** 5
22. **Reference:** 6
23. **Figure:** 7
24. **Table:** 8
25. **Item:** 9
26. **Total:** 123
27. **Text**

This is the text for the problem below line 27.

