B STRAND DYNAMOMETER
DESCRIPTION AND MAINTENANCE

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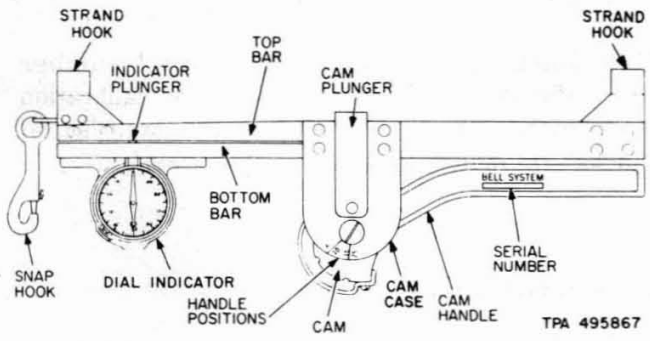

Fig. 1—B Strand Dynamometer

1. GENERAL

1.01 This section covers the description and maintenance of the B Strand Dynamometer, a tool used to measure the tension of 6M, 6.6M, 10M, and 16M suspension strand. The tension of 25M suspension strand can also be measured if the dynamometer is calibrated for that size strand.

1.02 This section is reissued to include information on the B Strand Dynamometer which may be used with 6.6M strand in addition to the other strand sizes. Information on the 3-notch cam version of the strand dynamometer is deleted from this issue.

1.03 The use of the B Strand Dynamometer is covered in Section 627-240-200.

2. DESCRIPTION

2.01 The B Strand Dynamometer deflects the strand out of line and measures the force tending to restore the strand to a straight line. The amount of restoring force is indicated by a pointer on the dynamometer dial. The strand tension is then determined by referring to the calibration chart inside the lid of the carrying case. (See Section 627-240-200.)

2.02 The B Strand Dynamometer (Fig. 1) is the current model in use. It has a two-position cam handle, one position for 6M, 6.6M, and 10M strand, and the other for 16M strand.

2.03 The superseded Strand Dynamometer (AT-6896) is identical to the B Strand Dynamometer except that it was not originally calibrated for 6.6M strand. Units in the field may be calibrated for 6.6M strand by returning to the service center in accordance with local procedure.

2.04 The tension of 25M strand can be measured with the dynamometer by using the 16M handle position if the tool has been calibrated for that strand size. Do not measure tensions in 25M strand with cable in place; these tensions usually exceed 10,000 pounds.

2.05 The B Strand Dynamometer consists of the following components:

(a) Strand hooks

(b) Cam handle

(c) Cam

(d) Cam plunger

(e) Top bar

(f) Bottom bar

(g) Indicator dial

(h) Markings for cam handle positions

(i) Snap hook

(j) Indicator plunger.

2.06 The B Strand Dynamometer is furnished in a metal carrying case which also contains a thermometer and a calibration chart.

2.07 Each dynamometer has a serial number stamped on the cam handle. The calibration chart in the carrying case bears the same serial number; ***no other chart should be used.***

3. MAINTENANCE

3.01 The B Strand Dynamometer is a delicate instrument and should be treated accordingly. The following precautions should be observed when handling the dynamometer:

(a) Avoid dropping or jarring.

(b) Raise and lower the dynamometer with a handline.

(c) Do not place the dynamometer in dirt or sand.

(d) Keep dirt, oil, grease, etc, away from the indicator plunger.

(e) Keep the dynamometer in its carrying case and do not place it in a case containing a calibration chart bearing a serial number different from that of the dynamometer.

(f) Do not use the dynamometer on strand sizes for which it is not calibrated.

(g) Do not measure strand tensions exceeding 10,000 pounds.

LUBRICATION

3.02 The following parts should be lubricated periodically with a light grade of oil; no other parts should be oiled:

(1) The pins about which the cam handle revolves.

(2) The bearing surfaces at the sides of the cam plunger. ***Do not oil the indicator plunger.***

(3) Wipe the dynamometer occasionally with an oily cloth. In damp or rainy weather wipe the dynamometer with an oily cloth after each use.

4. ZERO READING

4.01 If the indicator dial pointer remains more than two small division marks away from zero, the dynamometer must be returned for repair in accordance with local instructions.

4.02 The zero reading is checked as follows:

(1) Place the dynamometer strand hooks.

(2) With the dynamometer hanging from the strand and the cam handle in a horizontal position, the dial pointer should be within two small division marks above or below zero, as shown in Fig. 2.

(3) If the pointer is more than two small division marks above or below zero, move the cam handle between the proper handle position and the horizontal position several times.

(4) If the pointer still remains more than two small division marks from zero, check for and remove any dirt or other substance between the indicator plunger and the top bar. Recheck the zero reading.

(5) If after performing (3) and (4), the pointer remains more than two small division marks from zero, do not use the dynamometer.

5. REPAIR AND RECALIBRATION

5.01 No attempt to disassemble or adjust the indicator should be made. If a dynamometer requires repair or recalibration, return it in its carrying case in accordance with local procedures.

5.02 If the strand dynamometer is not calibrated for use with 6.6M strand and this calibration is desired, return it in its carrying case in accordance with local procedures.

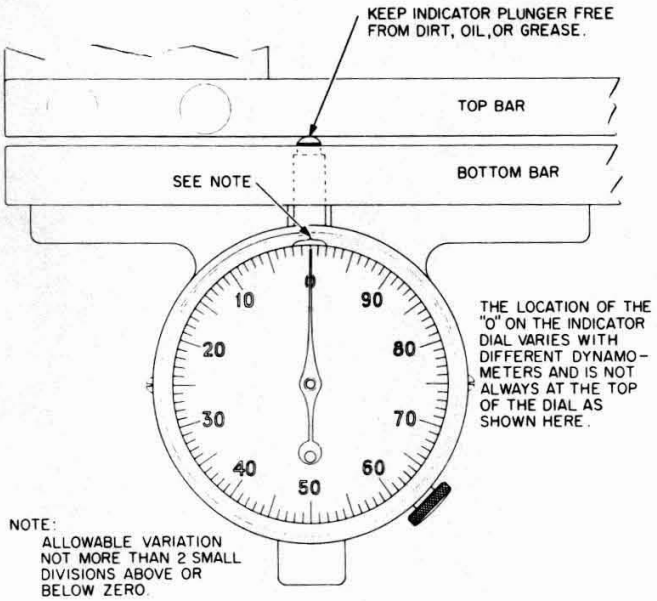

Fig. 2—B Strand Dynamometer Zero Reading