

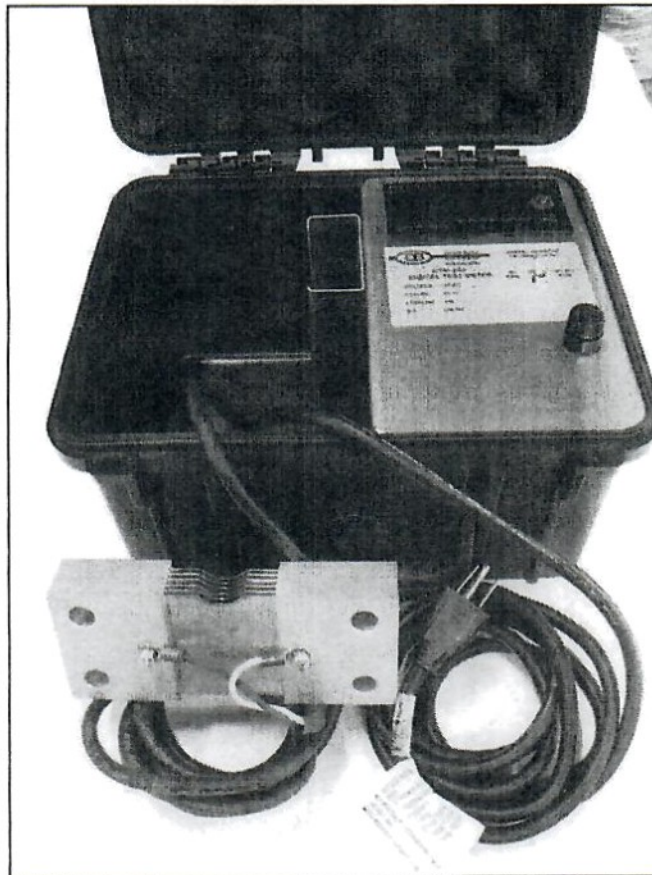


Gould-Bass

A Total Concept Company

Pomona, California

Model DTM-25A Digital Ammeter Calibration Kit



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800-900-9097 / info@NDTUnlimited.com
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SECTION I INTRODUCTION

1.1 GENERAL

- 1.1.1 The Gould-Bass Model DTM-25A Test Meter is a portable measuring device which may be used to test the accuracy of a the current meter which is installed in a wet horizontal magnetic particle bench, portable, or a magnetizing power supply.

1.2 SUPPLIES AND ACCESSORIES

- 1.2.1 All supplies and accessories required for operating the Gould-Bass Model DTM-25A Test Meter are furnished with the meter, and listed in Table 1-2. The line plug is not provided on the 230 volt units.

1.3 SAFETY CONSIDERATIONS

- 1.3.1 This operator's manual contains cautions and warnings alerting the user to hazardous operating and service conditions. This information is flagged by **CAUTION** or **WARNING** headings throughout, where applicable. To ensure the safety of operating and service personnel, these instructions must be read, understood and followed.

1.4 TECHNICAL DATA

- 1.4.1 Table 1-1 lists the technical specifications for the components of the Gould-Bass DTM-25A Test Meter.

TABLE 1-1 TECHNICAL DATA

1. **PRIMARY POWER CORD:** UL/CSA Listed, Type SJO, 3-Conductor, 18 A.W.G.
A molded-on grounded 115v type plug is provided.
For 230v operation the 115v plug can be cut off for attachment of customer supplied 230v plug.
The grounding conductor is secured to the metal enclosure.
2. **SECONDARY SIGNAL CORD:** UL/CSA Listed, Type SJO, Two Conductor, 18 A.W.G.
3. **DIGITAL METER:** Part No.9M1005
4. **AC-DC SHUNT:** Part No.9M5066= 1000A/50mv
5. **SELECTOR SWITCH:** Part No.9S4032
6. **Accuracy is 2.5 %.**

Electrical Ratings

115/230 VAC

50/60 HZ

0.25 AMP

TABLE 1-2

Items and Accessories Furnished with the Test Meter:

<u>Quantity</u>	<u>Description</u>	<u>Part No.</u>
1	Operators Manual	
1	Shunt = 1000A/50mv	9M5066

Available Replacement Parts:

115v AC Plug	9E0017
Digital Meter	9M1005
AC-DC Shunt	9M5066
Switch 3 position	9S4032
Fuse Holder	9E9324
Fuse 1/4 A-250v-3AG	9E9030

SECTION II INSTALLATION

2.1 GENERAL

2.1.1 This section contains information and instructions for the installation and shipping of the Gould-Bass Model DTM-25A Test Meter. Included are unpacking and inspection procedures, warranty, shipping, power source requirements, installation and care.

2.2 UNPACKING AND INSPECTION

2.2.1 Examine the shipping carton for obvious signs of damage. Inspect the meter for possible damage incurred during shipment. If damage is noted, notify the carrier and supplier and do not attempt further use of the meter. If the meter appears to be in good condition, read the Operators Manual in its entirety. Become familiar with the meter as instructed in the manual, then proceed to check the electrical performance as soon as possible. Also, check that all items are included with the meter (Table 1-2).

2.3 LIMITED WARRANTY

2.3.1 For assistance of any kind, including help with a meter under warranty, please contact Gould-Bass Co., Inc. or your nearest Gould-Bass Distributor for instructions. Please have available full details of any difficulty and include the Model Number, Serial Number, and date of purchase. Service date or shipping instructions will be given to you promptly and, if an estimate of charges for non-warranty work is required, a charge estimate will be given. This charge will not be exceeded without prior written approval.

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2.4 SHIPPING

- 2.4.1 Pack the meter carefully and ship it insured and prepaid to the proper destination using the original box in which it was shipped.

2.5 POWER SOURCE REQUIREMENTS

- 2.5.1 The Model DTM-25A Test Meter is operated for connection to a standard single phase, grounded, 115VAC or 230VAC, 50/60 line. (230v plug not provided)

2.6 CARE

CAUTION

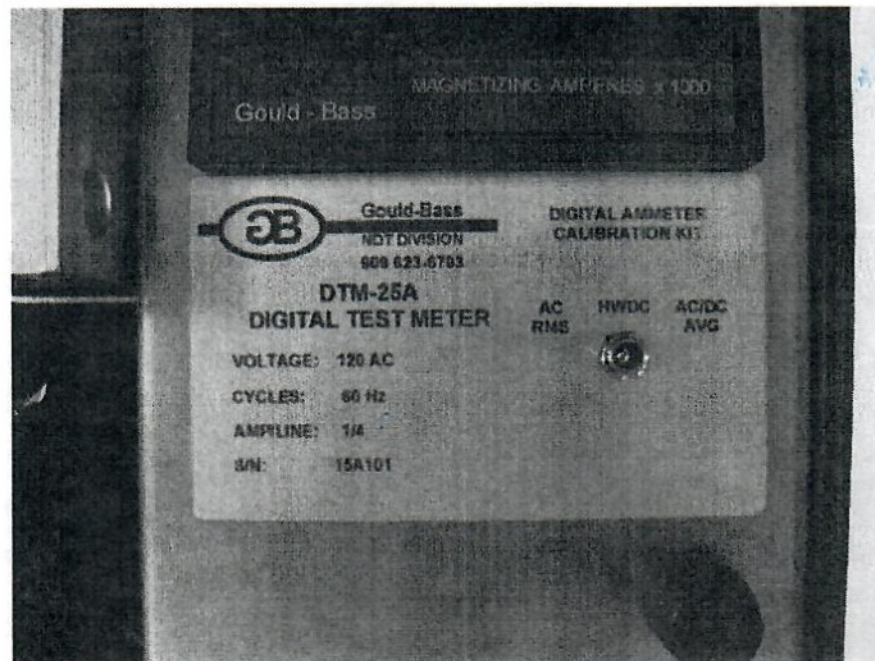
DO NOT ATTEMPT TO CLEAN THIS METER WITH THE POWER CORD CONNECTED TO THE SOURCE OF ELECTRICAL POWER.

- 2.6.1 **CLEANING:** Immediately clean all spilled materials from the meter and wipe dry. If necessary, moisten a cloth with soap and water and wipe dry.
- 2.6.2 **ENVIRONMENT:** Whenever possible, avoid exposure or usage in areas which are subject to temperature and humidity extremes, vibration or mechanical shock, dust or corrosive fumes or strong electrical or electromagnetic interference.
- 2.6.3 **STORAGE:** When not in use, the meter should be stored in a location free from temperature extremes, dust, corrosive fumes and mechanical vibration and shock.

SECTION III COMPONENTS

3.1 GENERAL

- 3.1.1 All operating controls and components are described in Table 1-1. Become familiar with each item prior to operating the meter for the first time.



SECTION IV OPERATION

4.1 GENERAL

WARNING

BEFORE PROCEEDING WITH THE OPERATING OF THE MODEL DTM-25A TEST METER, REVIEW THE WARNINGS AT THE BEGINNING OF THIS MANUAL CONCERNING THE POTENTIAL ELECTRICAL SHOCK AND TEMPERATURE HAZARDS.

- 4.1.1 This section of the manual contains information required to use and operate the Model DTM-25A Test Meter.

4.2 SAFETY PRECAUTIONS

- 4.2.1 The Model DTM-25A Test Meter is designed to be used by personnel qualified to recognize potentially hazardous electrical equipment operating conditions and trained in safety precautions required to avoid possible injury. They should also be familiar with temperature hazards, and trained to minimize such exposure.
- 4.2.2 The Model DTM-25A Test Meter shunts can become hot. Care should be taken to avoid burn hazards and damage to the shunt.

4.3 DESCRIPTION OF OPERATION

- 4.3.1 Plug the primary power cord into the correct electrical line supply.
- 4.3.2 The secondary signal cord is provided with ring end lugs for connection to the provided shunt.

- 4.3.4 On front panel of the test meter select proper type of current being measured:
R.M.S. = AC Current. RMS Sensing
HWDC = Halfwave DC
AVG. = Average Sensing AC or FWDC
- Current.
- 4.3.5 Connect shunt to current source:
a. For wet horizontal mag. machines clamp the shunt between the headstock and tailstock.
b. For magnetic particle machines with cable, or buss bar outputs, connect shunt in the cable circuit assuring that all current flow is passing through the shunt.
- 4.3.6 Activate magnetizing current output. The test meter will display and hold the current reading until a further magnetizing shot is activated.
- CAUTION: To prevent overheating the shunt, allow a cool down time between current shots.
- 4.3.7 The test meter display must be multiplied by a factor of 1000 to obtain actual current level.
e.g.: A display of 1.23 on the test meter equals a current level of 1,230 amps.
- 4.3.8 The shunt should be placed back in its holder and the cords in the compartment prior to closing the lid of the DTM-25A.

SECTION VI

SERVICING INSTRUCTIONS

6.1 GENERAL

- 6.1.1 The Model DTM-25A is carefully designed and constructed with high quality components. By providing reasonable care and following the instructions in this manual, the user can expect a long and useful service life with only routine calibration checks.

WARNING

TO AVOID ELECTRICAL SHOCK, DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED WITHIN THESE INSTRUCTIONS. SERVICING SHOULD BE RESTRICTED TO CLEANING PERIODICALLY, THE TIME INTERVAL DEPENDING ON USAGE.

6.2 TROUBLESHOOTING

Follow these procedures before sending the test meter to Gould-Bass for servicing.

- 6.2.1 If the test meter does not yield satisfactory readings:
- a). Check the line voltage. It should be 115VAC to 230VAC.
 - b). Check that the test meter is plugged in.
 - c). Ensure that the environment in which the test meter is being operated is within specification.
 - d). Check that secondary cable is firmly attached to a shunt.
 - e). Check for proper selector switch setting.
 - f). Try the test meter on another magnetic particle bench, if available.
 - g). Compare the DTM-25A reading with another DTM-25A, if available.

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- 4.3.3 Connect secondary signal cord to the shunt: