

Desoutter

Portable Torque Meter

DTM 201

OPERATING/SERVICING INSTRUCTIONS

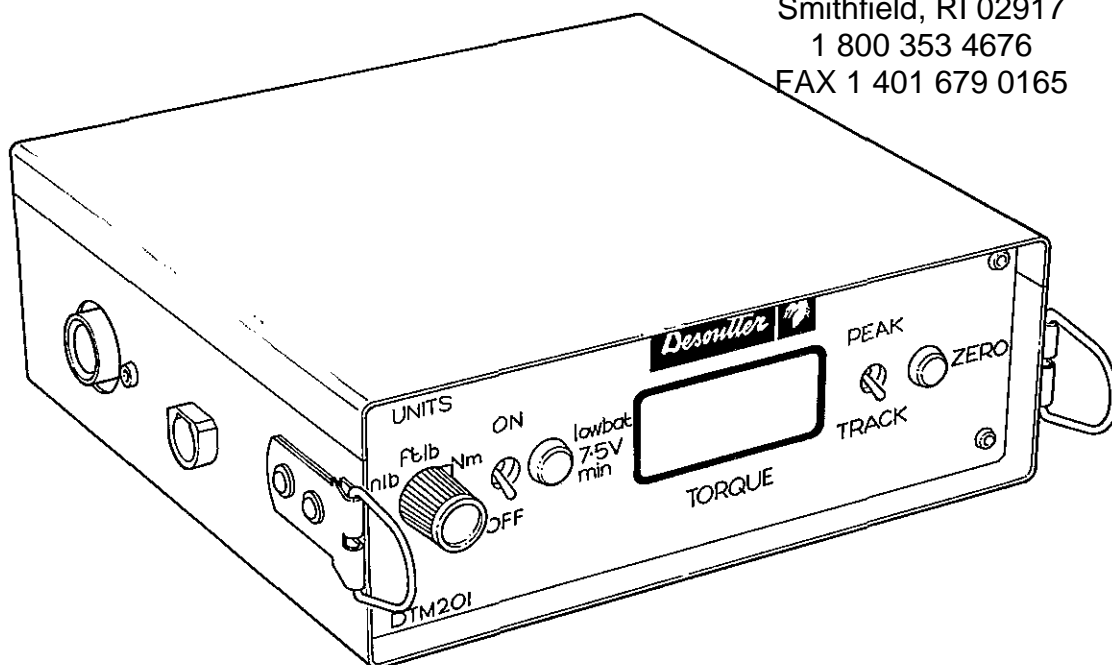
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INTRODUCTION

The tightening of fasteners involves applying a turning force "TORQUE", which in turn through the action of the thread form, creates a clamping force or TENSION across the joint.

To ensure the correct force exists across the joint it is necessary to measure the torque applied. Too little torque on the fastener may allow premature "loosening" and subsequent fretting with risk of fatigue failure. Excessive torque could lead to tensile failure in the fastener or the shearing of the thread during tightening.

The DTM 201 is a compact portable torque measurement unit designed for this purpose and ideally suited for use with Power Tool - Screwdrivers and Nutrunners.

It is specifically designed to operate with the Desoutter range of Rotary torque transducers to support screwdrivers and nutrunners for measurement of the dynamic torque applied to fasteners.

With the Desoutter range of Static torque transducers connected it is designed for setting the performance level of screwdrivers and nutrunners.

GENERAL

The DTM 201 is designed to accept any type of stress gauge transducer providing the transducers have a sensitivity rating of 1.47 mV/V for 1-10-100 or 1000Nm.

The sensitivity of 1.47 mV/V/100 has been chosen to correspond to transducers calibrated in Lbf.Ft. will read the measurement in either Nm. or Ft.Lb. as selected.

Automatic switching of the decimal point as a function of the Desoutter transducer used will be a hundredth, tenth or the Nm/Ft.Lb/In.Lb of resolution for the torque reading displayed by the unit.

Example: 10.00 Nm. Transducer Pt.Nos.92072, 92102
 100.0 Nm. Transducer Pt.Nos.92092, 92132

SPECIFIC

The digital torque measurement unit is supplied with carrying strap Part No. 92922; but without cable, transducer or battery charger.

Additional Equipment:

Cable - Part No. 92062

Transducer

			Rotary	Static
10	Nm	Part Nos.	92072	92102
50	Nm	Part Nos.	92082	92122
100	Nm	Part Nos.	92092	92132

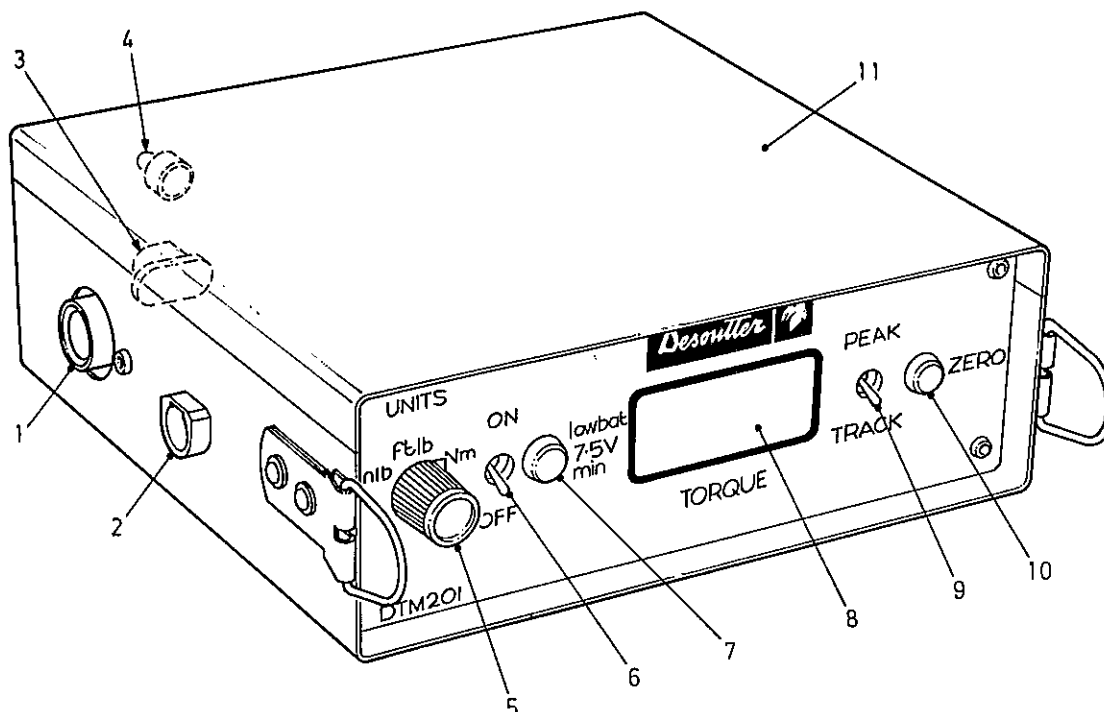
Battery Charger

230 V AC - Part No. 92042

115 V AC - Part No. 92052

ELECTRICAL AND ELECTRONIC SPECIFICATION

Power Supply	:	Ni-Cad rechargeable 9.6V battery pack.
Display	:	Liquid crystal 7 segment display on 2000 points (3.5 digits).
Full Scale Reading	:	
Accuracy	:	0.05%
Operating Modes	:	Track - Instantaneous display of torque value. Peak - Memory of maximum value reached.
Sensitivity	:	Fixed 1.47 mV/V.
Zero	:	Push-button with automatic zero correction.
Analogue Output	:	0 - 2V, 150 ohms.



CONTROLS AND FUNCTIONS

- | | | | |
|-----|----------------------|---|---|
| 1) | Transducer Input | - | A Souriau 851-02E106S50, 6 pin female socket. |
| 2) | Output | - | A two conductor phone jack supplies a nominal 2V signal for an external recorder. Load impedance must be > 150 ohms. |
| 3) | Charger Input | - | Plug the Desoutter battery charger into this socket. |
| 4) | Charge Light | - | This lamp is lit when the battery is being charged. |
| 5) | Torque Selector | - | Rotating three position switch for selection of torque display in Nm, In.lb, Ft.lb. |
| 6) | ON/OFF Switch | - | Used to turn the DTM 201 on and off. |
| 7) | Battery Check | - | To check the charge of the battery press button, display (7) indicates the value of the battery voltage. Below 7.2 V recharge batteries. |
| | | | Note: When not in use the unit should always be placed on charge. |
| 8) | Display | - | A 3.5 digit LCD panel meter. |
| 9) | Mode Selector Switch | - | Selects the mode of operation TRACK: The transducer output is monitored continuously in the TRACK mode. Simply apply the torque and view the output on the display.
PEAK: The peak reading of a transducer is recorded and displayed when using the PEAK mode. |
| 10) | Reset Button | - | The depression of the button will clear the display. |

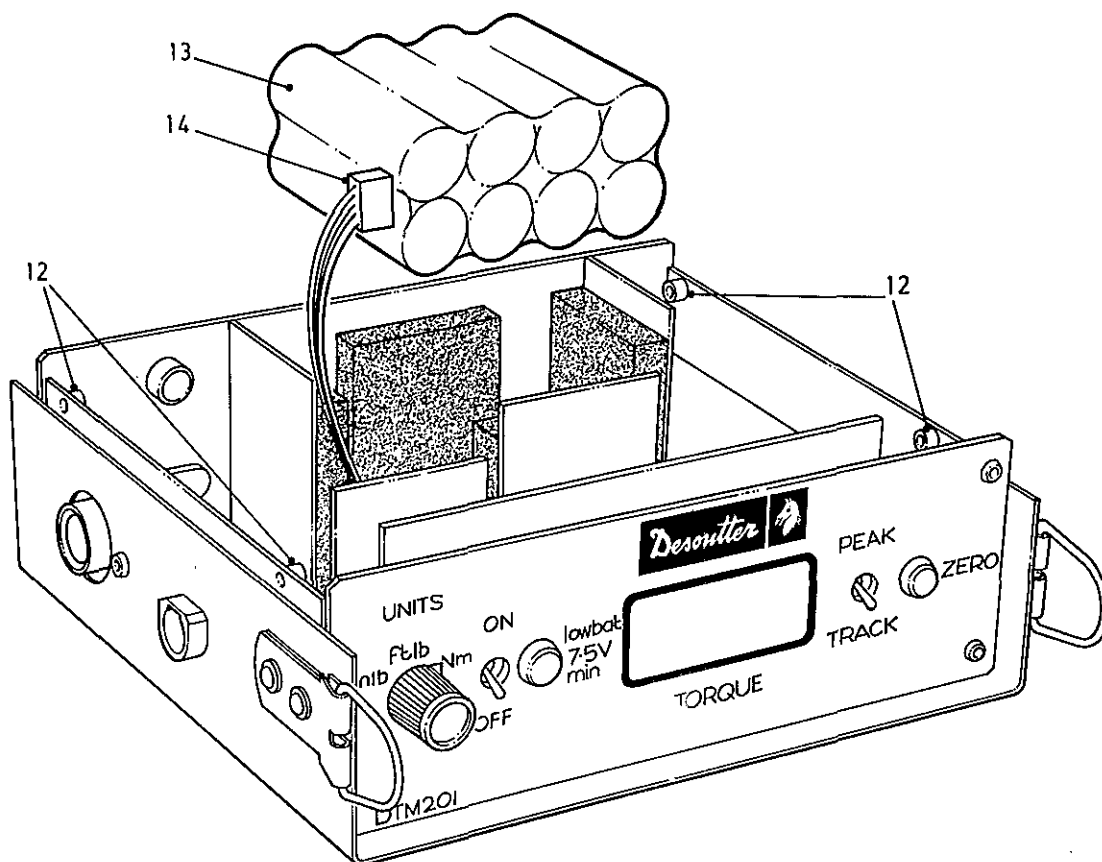
OPERATION

- A) Connect the Transducer to the measurement unit at (1).
- B) Switch the unit ON by operating switch (6).
- C) Check the charge of the batteries by depressing (7), the display (8) indicates the value of the battery voltage.

BELOW 7.2 V RECHARGE BATTERIES.

- D) Select operating mode TRACK/PEAK (9).
- E) Depress (10) to reset display to zero.

THE EQUIPMENT IS NOW READY TO OPERATE



SERVICING

The unit is designed to give trouble free operation, in the case of a malfunction it is recommended that it be returned to Desoutter for rectification.

Replacement of the Re-chargeable battery pack, part no. 92932, may be carried out by the customer in the following manner;

- Remove cover (11) by undoing the four fixing screws at position (12).
- Extract the battery pack (13) and unplug connector (14).

Note: Disposal of battery pack to be in accordance with local safety standards and legislation.

- Re-connect new battery pack.
- Replace cover (11) and tighten screws (12).
- Check battery charge level, see operation instructions.