

ISO 1500 TORQUE WRENCH LOADER WITH 90° ROTATION



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SAFETY

- The ISO 1500 is heavy. Take care when installing.
- Ensure the operating area is capable of taking the weight of the ISO 1500.
- Trapping hazard - Keep hand and loose clothing away from the torque wrench during use.
- To avoid damage to the torque wrench under test do not exceed the wrench set torque value.
- To avoid damage to the transducer do not exceed the maximum capacity.
- Never exceed the maximum torque capacity of the ISO 1500 (1500 N·m / 1100 lbf·ft).
- Do not operate without a torque measurement system connected and working.
- The ISO 1500 is designed for testing torque tools, do not use for other purposes.

INTRODUCTION

The Norbar ISO 1500 Torque Wrench Loader is designed to test torque wrenches up to a maximum capacity of 1500 N·m or 1100 lbf·ft.

With 90° rotation wrenches can be tested in both the horizontal and vertical planes, so allowing for a more accurate simulation of how the tool is actually used in the field.

To measure the applied torque a torque transducer coupled to an appropriate measurement instrument are required.

This manual covers 60300 only.

Parts Included

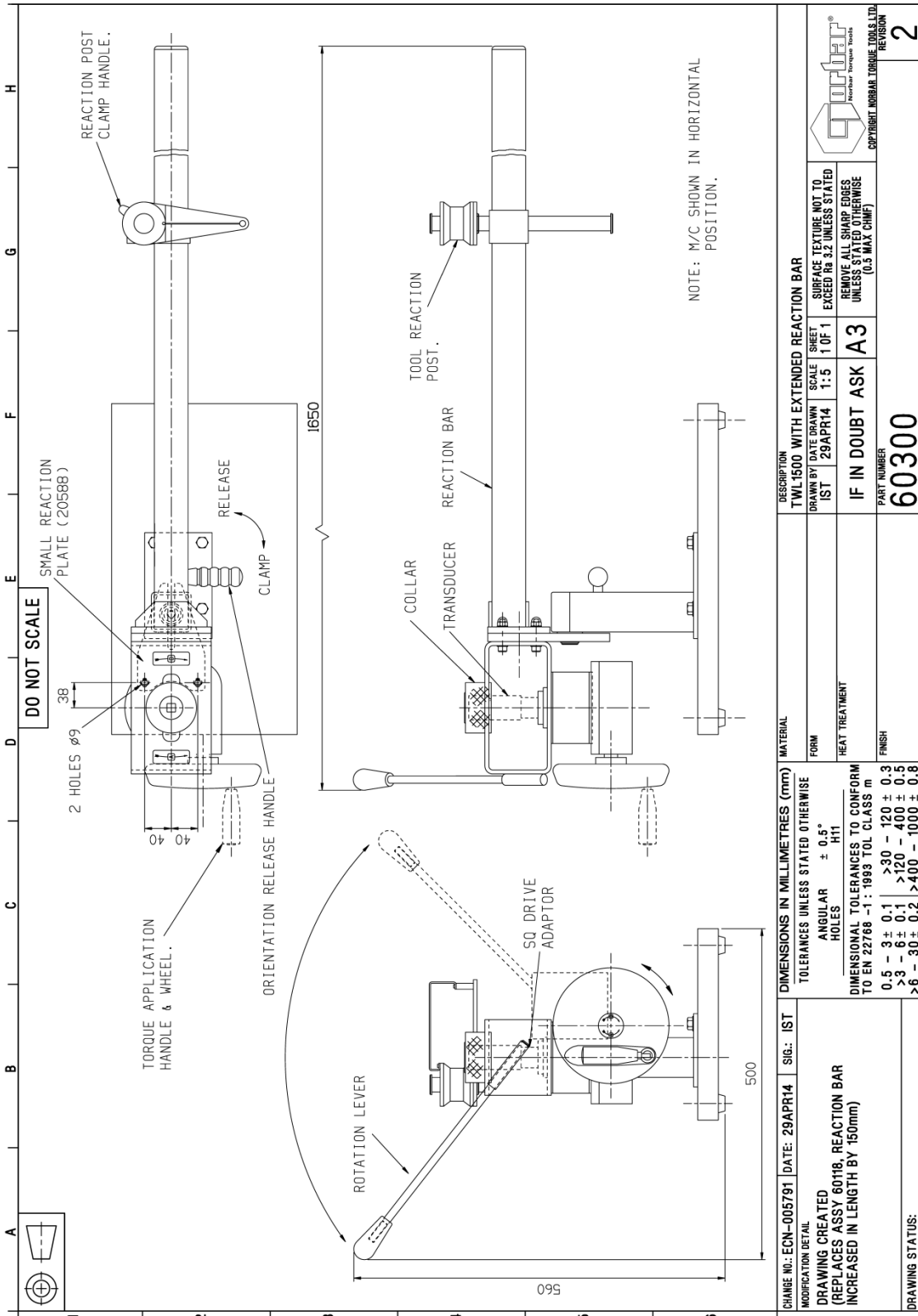
Parts Included	Part Number	Quantity
ISO 1500 with 90 degree rotation	60300	1
Rotating lever with fixings	-	1
Reaction post	-	1
Adaptor 1" to 3/4"	29613	1
Adaptor 1" to 1/2"	20587	1
Adaptor 1" to 3/8"	20586	1
Adaptor 1" to 1/4"	20585	1
Transducer collar small	20584	1
Transducer collar large	20583	1
Operators Manual	34126	1

Accessories

Accessories Available	Part Number
Norbar torque measurement system.	Consult Norbar
Kit to motorise ISO 1500	60194
Reaction Plate for small torque wrenches. (Wrench length 100mm to 204mm at handle loading point).	20606

FEATURES AND FUNCTIONS

- Allows torque wrenches to be calibrated or tested in accordance with ISO 6789:2003, BS EN 26789:2003 and American military standard GGG-W-686.
- Allows vertical & horizontal torque wrench testing.
- Also available with 3000 N·m capacity, see ISO 3000 N·m (Part number 20505).
- For part identification see drawing below:



CHANGE NO.: ECN-005791	DATE: 29APR14	SIG.: IST	DESCRIPTION
MODIFICATION DETAIL			TWL1500 WITH EXTENDED REACTION BAR
DRAWING CREATED (REPLACES ASSY 6018, REACTION BAR INCREASED IN LENGTH BY 150mm)			DRAWN BY: 29APR14 SCALE: 1:5 SHEET: 1 OF 1
DIMENSIONS IN MILLIMETRES (mm) TOLERANCES UNLESS STATED OTHERWISE			SURFACE TEXTURE NOT TO EXCEED Ra 3.2 UNLESS STATED REMOVE ALL SHARP EDGES UNLESS STATED OTHERWISE (0.5 MAX CHMF)
ANGULAR HOLES $\pm 0.5^\circ$ H11			IF IN DOUBT ASK A3
DIMENSIONAL TOLERANCES TO CONFORM TO EN 22768 -1 : 1993 TOL CLASS m			PART NUMBER
0.5 - 3 \pm 0.1 > 30 - 120 \pm 0.3 > 3 - 6 \pm 0.1 > 120 - 400 \pm 0.5 > 6 - 30 \pm 0.2 > 400 - 1000 \pm 0.8			60300
DRAWING STATUS:			REVISION
			2

INSTALLATION

NOTE: If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Items Required

Norbar torque transducer to suit capacity of test with suitable torque display instrument.

Location

Ensure location can cope with weight of loader.

Locate ISO 1500 on a level surface at a comfortable working height.

Rotating Lever

Slide “Rotating lever” from the back and secure with the 2 circlips provided (see drawing on page 3).

Tool Reaction Post

Slide “Tool reaction post” on to the reaction bar.

Horizontal and Vertical Operation

The loader is shipped in the horizontal mounting position.

To change to the vertical position push the “ORIENTATION RELEASE HANDLE” (see drawing on page 3) to “RELEASE” position.

Pull the “ROTATING LEVER” to rotate the ISO 1500 90 degrees.

Pull the “ORIENTATION RELEASE HANDLE” to “CLAMP” position.

Check the ISO 1500 is clamped in position.

The loader is ready for vertical use.

IMPORTANT: ALWAYS ENSURE THE “ORIENTATION RELEASE HANDLE” IS LOCKED BEFORE LOADING.

NOTE: When rotating the ISO 1500 ensure the transducer lead is not caught up in the mechanism.

Reaction Plate for Small Torque Wrenches (Optional)

To use small torque wrenches a smaller reaction plate may be required.

Fix using M8 socket cap screws provided with reaction plate.
Tighten to 20 N·m.

Torque Measurement

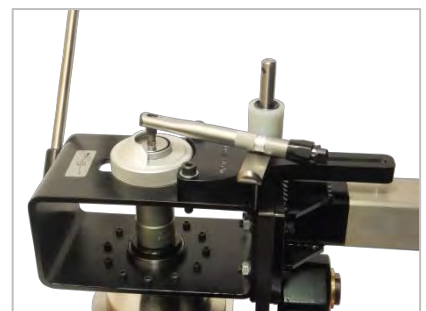
Select the lowest capacity torque transducer to cover the wrench to be tested.

Mount the male square of the transducer into the female square of the gearbox, use adaptors to suit.

Place collar over the transducer and lock by rotating through 90 degrees.

Connect a transducer lead from the transducer to the instrument.

Ensure the instrument functions correctly. (If in doubt see operators manual).



OPERATING INSTRUCTIONS

Locating a Torque Wrench

Select the correct adaptor to place the torque wrench drive into the transducer.

Set the reaction post position on the reaction arm so it is in the middle of the torque wrench handle.



Set the reaction post height to ensure the wrench handle is parallel to the reaction arm.

If the Torque Wrench is too small for the reaction arm use reaction plate option (Part 20606).

The large gear box ratio makes movement in the output drive difficult to detect.
Use the 'A' and 'B' arrows on the hand wheel and gearbox output as an indication.

For clock-wise calibration 'A' indicates direction to apply force & 'B' indicates direction to release force.

TIP: In the case of a ratchet wrench, with push through square drives, it is important to ensure the square is operating on the correct side of the ratchet.

MAINTENANCE

The ISO 1500 is engineered for a long maintenance free life. Under normal operation maintenance is not required.

When cleaned do not use abrasive or solvent based cleaners.

For maintenance and recalibration of the instrument and transducer refer to the manuals.

SPECIFICATIONS

Maximum Output Torque:	1500 N·m / 1100 lbf·ft
Wrench Length (Standard):	Minimum 200mm Maximum 1350mm
Wrench Length (With reaction plate for small torque wrenches):	Minimum 100 Maximum 180
Gear Ratio:	1200:1
Wrench Orientation:	Vertical and Horizontal
Calibration Direction:	Clockwise and Anti-Clockwise
Operating Temperature:	0°C - 50°C
Dimensions (Maximum):	Width 1600mm Height 610mm Depth 370mm
Weight:	31.0 Kg

NOTE: If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment could be impaired.

**NORBAR TORQUE TOOLS LTD**

Beaumont Road, Banbury,
Oxfordshire, OX16 1XJ
UNITED KINGDOM
Tel + 44 (0)1295 270333
Email enquiry@norbar.com

**NORBAR TORQUE TOOLS PTE LTD**

194 Pandan Loop
#07-20 Pantech Business Hub
SINGAPORE 128383
Tel + 65 6841 1371
Email singapore@norbar.com.au

**NORBAR TORQUE TOOLS PTY LTD**

45-47 Raglan Avenue, Edwardstown,
SA 5039
AUSTRALIA
Tel + 61 (0)8 8292 9777
Email enquiry@norbar.com.au

**NORBAR TORQUE TOOLS (SHANGHAI) LTD**

E Building-5F, no. 1618 Yishan Road,
Minhang District, Shanghai
CHINA 201103
Tel + 86 21 6145 0368
Email sales@norbar.com.cn

**NORBAR TORQUE TOOLS INC**

36400 Biltmore Place, Willoughby,
Ohio, 44094
USA
Tel + 1 866 667 2279
Email inquiry@norbar.us

**NORBAR TORQUE TOOLS INDIA PVT. LTD**

Plot No A-168, Khairne Industrial Area,
Thane Belapur Road, Mahape,
Navi Mumbai – 400 709
INDIA
Tel + 91 22 2778 8480
Email enquiry@norbar.in

**NORBAR TORQUE TOOLS (NZ) LTD**

B3/269A Mt Smart Road
Onehunga, Auckland 1061
NEW ZEALAND
Tel + 64 9579 8653
Email nz@norbar.com.au

www.norbar.com