



# ISO 1500 TORQUE WRENCH LOADER WITH 90° ROTATION

OPERATORS HANDBOOK (PART NO. 34126)  
ISSUE 4

Original Instructions





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## 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.

### MODELS COVERED BY THIS HANDBOOK :- \_\_\_\_\_

This handbook covers 60118 only.

### SAFETY WARNINGS :- \_\_\_\_\_



- 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.

### PARTS INCLUDED :- \_\_\_\_\_

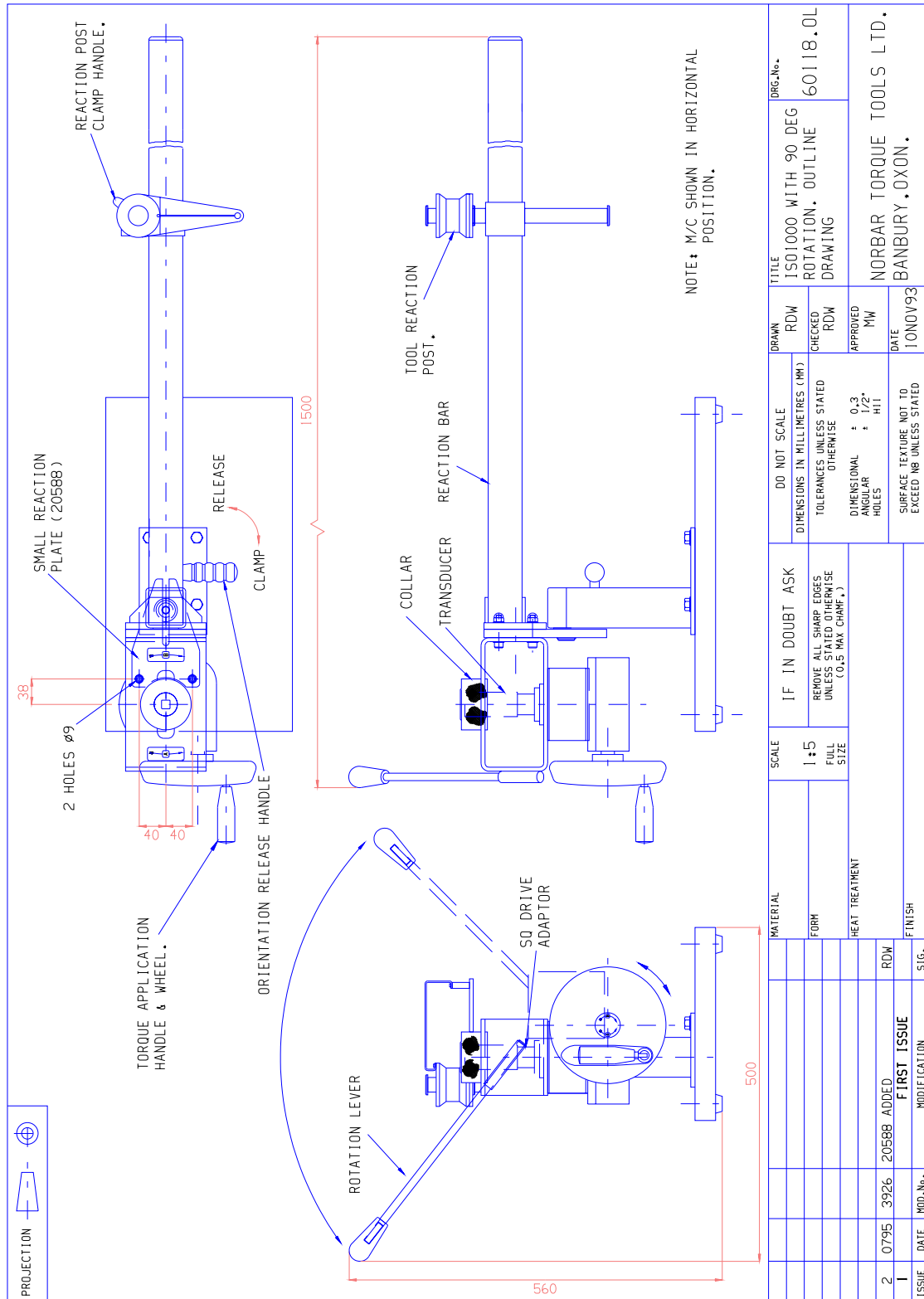
Parts included	Part Number	Quantity
ISO 1500 with 90 degree rotation	60118	1
Rotating lever with fixings	-	1
Reaction post	-	1
Adaptor 1" to 3/4"	29613	1
Adaptor 1" to 1/2"	20587	1
Adaptor 1" to 3/8"	20586	1
Adaptor 1" to 1/4"	20585	1
Transducer collar small	20584	1
Transducer collar large	20583	1
Operators Handbook	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 180mm).	20588

## 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 2700 N.m capacity, see ISO 2700 N.m (Part number 20502).
- For part identification see drawing below:



## 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.

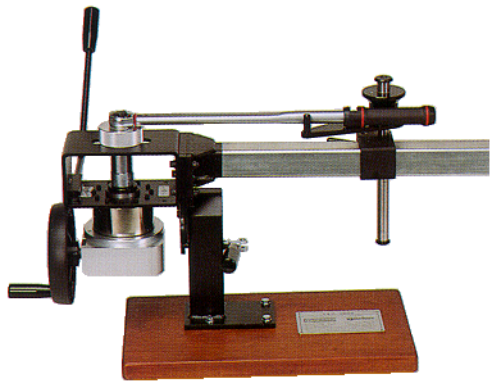
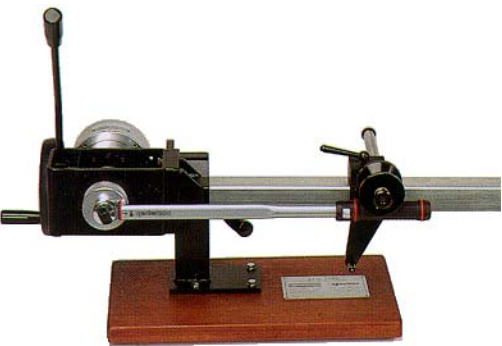
**ROTATING LEVER:** \_\_\_\_\_

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:** \_\_\_\_\_

<p>The loader is shipped in the horizontal mounting position.</p>	
<p>To change to the vertical position push the "ORIENTATION RELEASE HANDLE" (see drawing on page 3) to "RELEASE" position.</p> <p>Pull the "ROTATING LEVER" to rotate the ISO 1500 90 degrees.</p> <p>Pull the "ORIENTATION RELEASE HANDLE" to "CLAMP" position.</p> <p>Check the ISO 1500 is clamped in position.</p> <p>The loader is ready for vertical use.</p>	

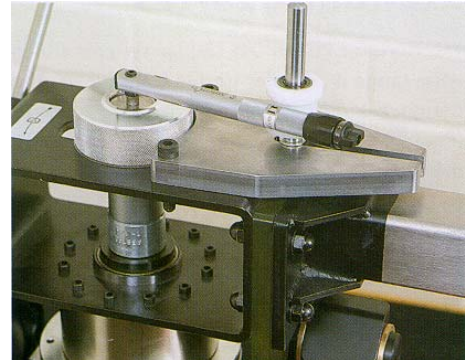
Always ensure the "ORIENTATION RELEASE HANDLE" is locked before loading.

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

**REACTION PLATE FOR SMALL TORQUE WRENCHES (option):** \_\_\_\_\_

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

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

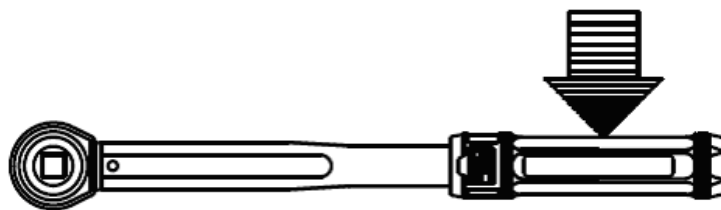
Ensure the instrument functions correctly. (If in doubt see operators handbook).

**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 20588).

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 their handbooks.

## SPECIFICATION

MAXIMUM OUTPUT TORQUE		1500 N.m / 1100 Lbf.ft
WRENCH LENGTH	(standard)	Minimum 200mm Maximum 1350mm
	(with optional reaction plate for small torque wrenches, Part 20588)	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	1600 mm
	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.*