

# OPERATOR'S MANUAL



## PNEUTORQUE® PTM & PTME SERIES STALL TOOLS



# CONTENTS

<b>Part Numbers Covered By This Manual</b>	<b>2</b>
<b>Safety</b>	<b>3</b>
General Safety Rules	3
Projectile Hazards	3
Entanglement Hazards	3
Operating Hazards	3
Repetitive Motions Hazards	4
Accessory Hazards	4
Workplace Hazards	4
Dust and Fume Hazards	4
Noise Hazards	5
Vibration Hazards	5
Additional Safety Instructions for Pneumatic Power Tools	5
PTM Specific Safety Instructions	6
Markings on Tool	6
<b>Introduction</b>	<b>7</b>
Parts Included	7
Accessories	8
<b>Features and Functions</b>	<b>9</b>
<b>Set Up Instructions</b>	<b>10</b>
PneuTorque® Hanger	10
Connecting Air Supply	10
Air Lubrication	11
Torque Reaction	11
Clockwise/Counter Clockwise Operation	14
Setting Torque to Tighten Fastener	14
<b>Operating Instructions</b>	<b>15</b>
Tightening	15
Releasing	16
Dual Trigger Tools	17
<b>Maintenance</b>	<b>18</b>
Air Lubrication	18
Gearbox	18
Silencer	18
Drive Square	19
Calibration	19
Cleaning	19
Disposal	19
<b>Specifications</b>	<b>20</b>
<b>Declaration of Conformity</b>	<b>22</b>
<b>Trouble Shooting</b>	<b>23</b>
<b>Glossary of Terms</b>	<b>23</b>

# PART NUMBERS COVERED BY THIS MANUAL

This manual covers the setup and use of Norbar PneuTorque® PTM and PTME stall tools.

Part Number	Model	Direction	Maximum Torque
18100.F06	PTM-52-500-F	Forward (Clockwise) only	500 N·m
18100.B06	PTM-52-500-B	Bi-directional	
18101.F06	PTM-52-800-F	Forward (Clockwise) only	800 N·m
18101.B06	PTM-52-800-B	Bi-directional	
18102.F06	PTM-72-1000-F	Forward (Clockwise) only	1000 N·m
18102.B06	PTM-72-1000-B	Bi-directional	
18103.F08	PTM-72-1350-F	Forward (Clockwise) only	1350 N·m
18103.B08	PTM-72-1350-B	Bi-directional	
18104.F08	PTM-72-2000-F	Forward (Clockwise) only	2000 N·m
18104.B08	PTM-72-2000-B	Bi-directional	
180296.F08	PTM-80-2700-F	Forward (Clockwise) only	2700 N·m
180296.B08	PTM-80-2700-B	Bi-directional	
18159.F08	PTM-92-4000-F	Forward (Clockwise) only	4000 N·m
18159.B08	PTM-92-4000-B	Bi-directional	
18159.F12	PTM-92-4000-F	Forward (Clockwise) only	
18159.B12	PTM-92-4000-B	Bi-directional	
18108.F12	PTM-119-4500-F	Forward (Clockwise) only	4500 N·m
18108.B12	PTM-119-4500-B	Bi-directional	
18109.F12	PTM-119-6000-F	Forward (Clockwise) only	6000 N·m
18109.B12	PTM-119-6000-B	Bi-directional	
18140.F06	PTME-72-1000-F	Forward (Clockwise) only	1000 N·m
18140.B06	PTME-72-1000-B	Bi-directional	
18141.F08	PTME-72-2000-F	Forward (Clockwise) only	2000 N·m
18141.B08	PTME-72-2000-B	Bi-directional	

**NOTE:** The main PTM and PTME models are listed above. Other PTM and PTME stall tools with minor variances are also covered.

Description of Options:

Part Number Option	Description
****.F**	Forward (Clockwise) only
****.B**	Bi-directional (Clockwise and Counter Clockwise)
****.*06	3/4" A/F drive square size
****.*08	1" A/F drive square drive
****.*12	1 1/2" A/F drive square drive
****.B**.DTM	PneuTorque® with Dual Trigger Module
****.B**.RA	PneuTorque® with Right Angle Gearbox

Model Option	Description
PTM-**-***-*	PneuTorque® Twin Motor
PTME-**-***-*	PneuTorque® Twin Motor fixed nose extension
PTM*-52-***-*	52mm diameter gear box
PTM*-72-***-*	72mm diameter gear box
PTM*-80-***-*	80mm diameter gear box
PTM*-92-***-*	92mm diameter gear box
PTM*-119-***-*	119mm diameter gearbox
PTM*-**-1000-*	Maximum torque in N·m

# SAFETY

**IMPORTANT: THIS OPERATOR'S MANUAL SHOULD BE KEPT FOR FUTURE REFERENCE.**

## General Safety Rules:

- For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool for threaded fasteners. Failure to do so can result in serious bodily injury.
- Only qualified and trained operators should install, adjust or use the assembly power tool for threaded fasteners.
- Do not modify this assembly power tool for threaded fasteners. Modifications can reduce the effectiveness of safety measures and increase the risks to the operator.
- Do not discard the safety instructions; give them to the operator.
- Do not use the assembly power tool for threaded fasteners if it has been damaged.
- Tools shall be inspected periodically to verify that the ratings and markings required are legibly marked on the tool. The employer/user shall contact the manufacturer to obtain replacement marking labels when necessary.

## Projectile Hazards:

- Failure of the workpiece, of accessories or even of the tool itself can generate high-velocity projectiles.
- Always wear impact-resistant eye protection during the operation of the assembly power tool for threaded fasteners. The grade of protection required should be assessed for each use.
- Ensure that the workpiece is securely fixed.

## Entanglement Hazards:

- Entanglement hazards can result in choking, scalping and/or lacerations if loose clothing, personal jewellery, neckware, hair or gloves are not kept away from the tool and accessories.
- Inappropriate gloves can become entangled with the rotating drive, causing severed or broken fingers.
- Rotating drive sockets and drive extensions can easily entangle rubber-coated or metal-reinforced gloves.
- Do not wear loose-fitting gloves or gloves with cut or frayed fingers.
- Never hold the drive, socket or drive extension.
- Keep hands away from rotating drives.

## Operating Hazards:

- The use of the tool can expose the operator's hands to hazards including crushing, impacts, cuts and abrasions and heat. Wear suitable gloves to protect hands.
- These tools require the use of a suitable reaction which presents a crushing hazard. Ensure to follow the set up instructions in this manual.
- Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
- Hold the tool correctly; be ready to counteract normal or sudden movements and have both hands available.

- Maintain a balanced body position and secure footing.
- Release the trigger in the case of an interruption of the energy supply.
- Use only lubricants recommended by the manufacturer.
- Do not use in confined spaces and beware of crushing hands between tool and workpiece.

### Repetitive Motions Hazards:

- When using a power tool for threaded fasteners, the operator can experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.
- While using an assembly power tool for threaded fasteners, the operator should adopt a comfortable posture whilst maintaining secure footing and avoiding awkward or off-balanced postures. The operator should change posture during extended tasks, which can help avoid discomfort and fatigue.
- If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warning signs should not be ignored. The operator should tell the employer and consult a qualified health professional.

### Accessory Hazards:

- Disconnect the assembly power tool for threaded fasteners from the energy supply before changing the tool or accessory.
- Use only sizes and types of accessories and consumables that are recommended by the assembly power tool for threaded fasteners manufacturer; do not use other types or sizes of accessories and consumables.

### Workplace Hazards:

- Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by the use of the tool and also of trip hazards caused by the air line or hydraulic hose.
- Proceed with care in unfamiliar surroundings. Hidden hazards, such as electricity or other utility lines, can exist.
- The assembly power tool for threaded fasteners is not intended for use in potentially explosive atmospheres and is not insulated against coming into contact with electrical power.
- Make sure there are no electrical cables, gas pipes, etc., that can cause a hazard if damaged by use of the tool.

### Dust and Fume Hazards:

- Dust and fumes generated when using assembly power tools for threaded fasteners can cause ill health (for example, cancer, birth defects, asthma and/or dermatitis); risk assessment and implementation of appropriate controls for these hazards are essential.
- Risk assessment should include dust created by the use of the tool and the potential for disturbing existing dust.
- Direct the exhaust so as to minimize disturbance of dust in a dust-filled environment.
- Where dust or fumes are created, the priority shall be to control them at the point of emission.
- All integral features or accessories for the collection, extraction or suppression of airborne dust or fumes should be correctly used and maintained in accordance with the manufacturer's instructions.
- Use respiratory protection in accordance with employer's instructions and as required by occupational health and safety regulations.

## Noise Hazards:

- Unprotected exposure to high noise levels can cause permanent, disabling, hearing loss and other problems, such as tinnitus (ringing, buzzing, whistling or humming in the ears). Therefore a risk assessment and implementation of appropriate controls for these hazards are essential.
- Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpieces from “ringing”.
- Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations.
- Operate and maintain the assembly power tool for threaded fasteners as recommended in the instruction handbook, to prevent an unnecessary increase in noise levels.
- If the assembly power tool for threaded fasteners has a silencer, always ensure it is in place and in good working order when the assembly power tool for threaded fasteners is operating.
- Select, maintain and replace the consumable/tool as recommended in the instruction handbook, to prevent an unnecessary increase in noise.

## Vibration Hazards:

- Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
- Wear warm clothing when working in cold conditions and keep your hands warm and dry.
- If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the assembly power tool for threaded fasteners, tell your employer and consult a physician.
- Operate and maintain the assembly power tool for threaded fasteners as recommended in the instruction handbook, to prevent an unnecessary increase in vibration levels.
- Do not use worn or ill-fitting sockets or extensions, as this is likely to cause an increase in vibration.
- Select, maintain and replace the consumable/tool as recommended in the instruction handbook, to prevent an unnecessary increase in vibration levels.
- Support the weight of the tool in a stand, tensioner or balancer, if possible.
- Hold the tool with a light but safe grip, taking account of the required hand reaction forces, because the risk from vibration is generally greater when the grip force is higher.

## Additional Safety Instructions for Pneumatic Power Tools:



- Air under pressure can cause severe injury:
  - Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs;
  - Never direct air at yourself or anyone else.
- Whipping hoses can cause severe injury. Always check for damaged or loose hoses and fittings.
- Cold air shall be directed away from the hands.
- Air lines with safe disconnect couplings, as supplied, are recommended. Whenever universal twist couplings (claw couplings) are used, lock pins shall be installed and whipcheck safety cables shall be used to safeguard against possible hose-to-tool and hose-to-hose connection failure.
- Do not exceed the maximum air pressure stated on the tool.

- For torque-control and continuous-rotation tools, the air pressure has a safety critical effect on performance. Therefore, requirements for length and diameter of the hose shall be specified.
- Never carry an air tool by the hose.

## PTM Specific Safety Instructions:

- This tool is intended for use with threaded fasteners. Other uses within the limits of the tool may be appropriate. Please contact Norbar for guidance.
- The user (or the user's employer) shall assess the specific risks that can be present as a result of each use. This Operator's Manual contains sufficient information for the end user to be able to perform an initial risk assessment.
- Unexpected direction of drive square movement can cause a hazardous situation.
- Isolate the tool from all energy sources before changing or adjusting the drive square or socket.

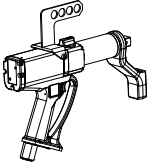
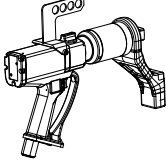
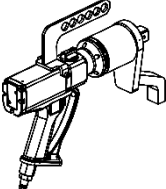
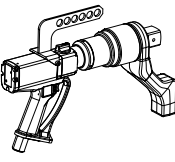
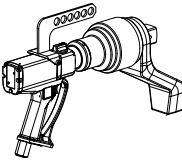
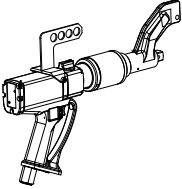
## Markings on Tool

Pictograms on Tool	Meaning
	Read and understand Operator's Manual.
	Unexpected tool movement due to reaction forces or breakage of drive square or reaction bar may cause injuries. There is a risk of crushing between the reaction bar and work piece. Keep hands away from reaction bar. Keep hands away from tool output.

# INTRODUCTION

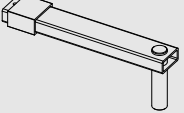
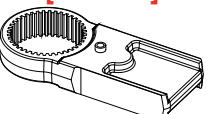
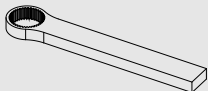
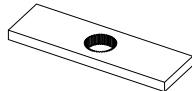
The PneuTorque® PTM & PTME tools are air driven power tools designed for applying torque to threaded fasteners. There are models to cover torque capacities of 500 N·m to 2000 N·m. The tools use an external air pressure regulator (included in a Lubro Control Unit) to set the air pressure that controls the stall torque.

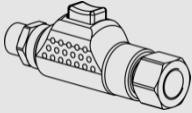
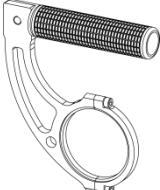
## Parts Included

Description	Part Number					
	PTM-52	PTM-72	PTM-80	PTM-92	PTM-119	PTME-72
Visual Difference						
PneuTorque® Power Tool	18100.** 18101.**	18102.** 18103.** 18104.**	180296.**	18159.**	18108.** 18109.**	18140.** 18141.** 18149.**
Cranked Reaction Bar	18646	18494	19289	18936	18961	-
Reaction Bar Retaining Circlip	26588	26486	26486	26486	26482	-
Hanger	18747	18747	18971	18971	18971	18747
Operator's Manual (with air pressure graph & language CD [if required])	34321	34321	34321	34321	34321	34321



## Accessories

Description	Part Number					
	PTM-52	PTM-72	PTM-80	PTM-92	PTM-119	PTME-72
Air Coupling Socket for Hose	28933	28933	28933	28933	28933	28933
Lubro Control Unit	16074	16074	16074	16074	16074	16074
3/4" Drive Square (fixing screw)	18544 (25351.30)	18779 (25352.45)	-	-	-	-
1" Drive Square (fixing screw)	18545 (25351.30)	18492 (25352.45)	19431 (25352.40)	18934 (25352.60)	-	-
1 1/2" Drive Square (fixing screw)	-	-	-	18935 (25352.60)	18959 (25352.80)	-
3/4" Drive Shaft (fixing pin)	-	-	-	-	-	77112.2 (26287)
1" Drive Shaft (fixing pin)	-	-	-	-	-	18802 (26287)
Reaction Plate [NOTE 1] 	18298	18298	-	-	-	-
Reaction Adaptor [NOTE 1] 	18558	18290	-	-	-	-
Single-Sided Reaction Plate 	18576	18292	-	18979	16687	-
Double-Sided Reaction Plate 	18590	18293	-	18980	18981	-
Silencer	18591	18591	18591	18591	18591	18591
6" Blade Nose Extension	(3/4") 18594.006	(1") 18755.006	-	-	-	-
9" Blade Nose Extension	(3/4") 18594.009	(1") 18755.009	-	-	-	-
12" Blade Nose Extension	(3/4") 18594.012	(1") 18755.012	-	-	-	-
9" Nose Extension for Truck & Bus Wheels	-	(3/4") 19087.009 (1") 19089.009	-	-	-	-
12" Nose Extension for Truck & Bus Wheels	-	(3/4") 19087.012 (1") 19089.012	-	-	-	-

Description	Part Number					
	PTM-52	PTM-72	PTM-80	PTM-92	PTM-119	PTME-72
Dual Trigger Module 	19286	19286	19286	19286	19286	19286
Lifting Handle 	-	19363	19448	19363	19363	19363

**NOTE 1:** Requires both the 'Reaction Bar' and 'Reaction Adaptor' to be used together.

## FEATURES AND FUNCTIONS

### Twin Motor

The tools use two motors; one to quickly run-down the fastener and the other to achieve final torque.

### Trigger

The trigger controls the flow of air. The more the trigger is pressed the more air flows into the tool. This allows for slow positioning of socket and reaction bar. Once positioning is complete, the trigger must be fully pressed for correct torque application.

### Clockwise/Counter-Clockwise Selector

Tools fitted with this option can be used for tightening counter-clockwise threaded fasteners and for releasing clockwise threaded fasteners.

### Reaction Bar

The reaction bar ensures all reaction forces are contained, so that torque reaction is not passed back to the operator. Several reaction bar styles are available, including the PTME / Nose Extension reaction where tool access is restricted including applications on wheel nuts on heavy vehicles.

### Non-Impacting

Low vibration levels make these tools comfortable and safe for the operator to use. In addition there is less damage to the tool, socket and threaded assembly.

### Replaceable Drive Square

To avoid internal damage to the tool (especially due to torque overload), the output drive square has been designed to shear first. PneuTorque® tools are fitted with a drive square that can easily be replaced; alternative drive square sizes are also available.

## Hanger

The hanger can be used to suspend the PneuTorque® from a balancer.

## Quick Tool Coupling

Air couplings supplied to allow quick tool connection and disconnection from the air hose.

## SET UP INSTRUCTIONS

The PneuTorque® set up covers the following items:

1. PneuTorque® Hanger
2. Connecting Air Supply
3. Air Lubrication
4. Torque Reaction
5. Clockwise / Counter-Clockwise Operation
6. Setting torque to tighten fastener

Please complete the set up in the order shown.

### PneuTorque® Hanger

The PneuTorque® hanger (Figure 1-E) is designed to be used with a suitable balancer to provided comfortable tool use. If not required the hanger can be removed.

### Connecting Air Supply



**WARNING: TO AVOID HAZARD FROM WHIPPING AIR HOSES MAKE ALL CONNECTIONS TO THE TOOL BEFORE TURNING ON THE AIR SUPPLY.**

Make sure all hoses are clean, in good condition and free from dirt / water.

Connect the tool air inlet hose (Figure 1-A) to the outlet side of the lubro control unit (Figure 1-B) (not supplied), observing air flow direction arrows.

**TIP: On tools supplied with quick air couplings, fit the coupling plug to the tool inlet and the coupling socket to air hose.**

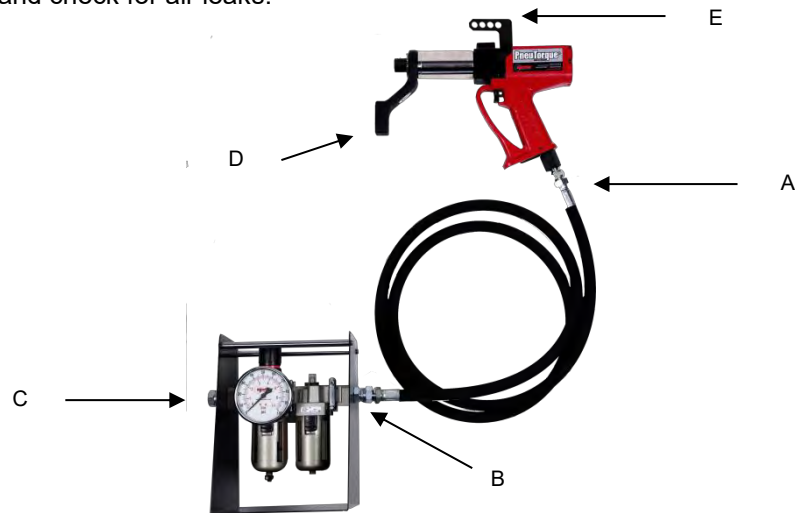
**To connect, push couplings together.**

**To disconnect, pull back lock on socket coupling.**



Connect the inlet side of the lubro control unit (Figure 1-B) to the air supply (Figure 1-C) using a minimum hose size of 1/2" bore (12mm). Avoid using 1/2" bore hoses of longer than 5 meters from the supply to the pressure regulator unit as this will reduce the performance of the tool.

Turn on air supply and check for air leaks.



**FIGURE 1 – Connections**

## Air Lubrication

The tool must be used with oil lubrication in the supplied air. This is achieved by using a Lubro Control Unit (not supplied).

Set the air lubrication:


- Fill Lubro Control Unit with hydraulic oil (Fuchs Silkair VG22, Shell Tellus S2 VX15 or equivalent good quality hydraulic oil).
- Ensure the tool drive is free to rotate.
- Run the tool by pressing the trigger.
- Adjust Lubro Control Unit to supply 6 drops of oil per minute.
- Release trigger.

See Lubro Control Unit Operator's Manual for more details.

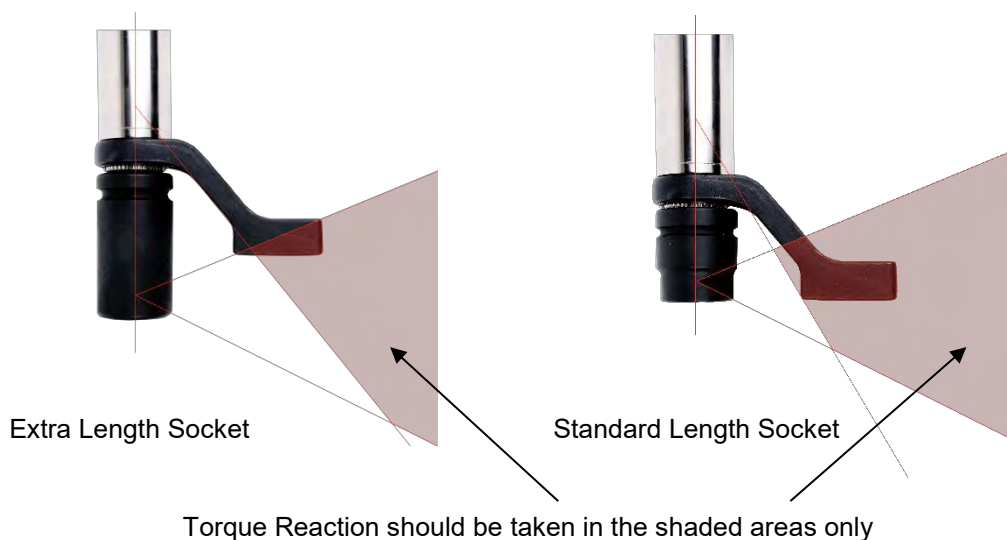
## Torque Reaction

The reaction bar ensures all reaction forces are contained, so torque reaction is not passed back to the operator. Several reaction bar styles are available.

Fit reaction bar as detailed below:

Tool Type	Reaction Bar Type	Fitting Instructions
PTM	Cranked reaction bar (standard)	Fit reaction bar / plate (Figure 1-D) over the drive square to engage reaction splines Secure with circlip supplied
	Single sided reaction plate (option)	
	Double sided reaction plate (option)	
	Nose Extension (option)	Fit as instructions supplied with nose extension 
PTME	Nose Extension (standard)	Factory fitted, not removable

It is essential the reaction bar rests squarely against a solid object or surface adjacent to the fastener to be tightened. The contact area must be within the shaded area of Figure 2, with the contact area as large as possible.



**FIGURE 2 – Safe Reaction Window**



**WARNING: CARE MUST BE TAKEN TO ENSURE THAT THE REACTION BAR IS ONLY USED WITHIN THE LIMITATIONS SHOWN IN FIGURE 2.**

For special applications or where extra deep sockets must be used the standard bar may be extended but only within the limitations shown on Figure 2. Alternative reaction bars are available, see page 5.

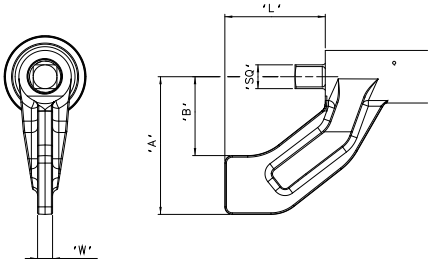


**WARNING: FAILURE TO OBSERVE THE LIMITATIONS SHOWN IN FIGURE 2 WHEN MODIFYING STANDARD REACTION BARS MAY RESULT IN PREMATURE WEAR OR DAMAGE TO THE TOOL.**





Standard drive square extensions MUST NOT be used as these will cause serious damage to the tool output drive. A range of nose extensions is available for applications where access is restricted. These are designed to support the final drive correctly.

The dimensions of the standard reaction bars is shown in the following table:

Reaction Bars (Standard)	Tool	'L'	'A'	'B'	'W'	'SQ'
	PTM-52	60	131	71	35	3/4"
	PTM-72	75	165	91	48	1"
	PTM-80	75.5	167	115	30	1"
	PTM-92	98.5	205	115	50	1" 1 1/2"
	PTM-119	127	199	65	55	1 1/2"

Reaction Bars (PTME)	Tool	'L'	'A'	'B'	'W'	'SQ'
	PTME-72 (1000 N·m)	80.5	110	63	12	3/4"
	PTME-72 (2000 N·m)	51.5	110	62	16	1"

When the PneuTorque® is in operation the reaction bar rotates in the opposite direction to the output drive square and must be allowed to rest squarely against a solid object or surface adjacent to the fastener to be tightened. (See Figure 3).

PneuTorque® Type	Torque Reaction	
	Clockwise	Counter-Clockwise (Bi-Directional Tools Only)
Example of PTM tool	 <p><b>FIGURE 3(a)</b></p>	 <p><b>FIGURE 3(b)</b></p>
Example of PTM tool with nose extension for truck & bus wheel option	 <p><b>FIGURE 3(c)</b></p>	 <p><b>FIGURE 3(d)</b></p>



**WARNING:** ALWAYS KEEP HANDS CLEAR OF THE REACTION BAR WHEN THE TOOL IS IN USE OR SERIOUS INJURY MAY RESULT.



## Clockwise/Counter-Clockwise Operation

Set clockwise / counter-clockwise as required.

**NOTE:** This setting only applies to bi-directional tools.



**FIGURE 4(a) – Clockwise**  
(Arrow towards drive square)

**FIGURE 4(b) – Counter - Clockwise**  
(Arrow away from drive square)



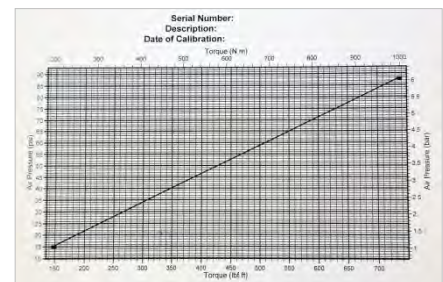
**WARNING:** FAILURE TO FULLY ENGAGE THE CLOCKWISE/COUNTER-CLOCKWISE OPERATION SELECTOR WILL RESULT IN DAMAGE TO THIS PART OF THE GEARBOX.

## Setting Torque to Tighten Fastener

The torque created by the PneuTorque® depends on the air pressure setting. All tools are supplied with an Air Pressure Graph that gives the air pressure required to produce the correct torque output.

Set the torque output as follows:-

1. Use the Air Pressure Graph (supplied) to find the air pressure to achieve the required torque.
2. With the tool running, adjust the Lubro Control Unit until the correct air pressure is shown on the gauge.



**IMPORTANT:** THE WRENCH MUST BE FREE RUNNING WHILE ADJUSTING THE AIR PRESSURE TO GIVE THE CORRECT SETTING.

**IMPORTANT:** CHECK THAT THE LUBRO CONTROL UNIT IS SUPPLYING APPROXIMATELY SIX DROPS OF OIL PER MINUTE WHILE THE TOOL IS FREE RUNNING.

## OPERATING INSTRUCTIONS



**WARNING: KEEP HANDS CLEAR OF THE REACTION BAR.**



**WARNING: WHEN USING THIS TOOL IT MUST BE SUPPORTED AT ALL TIMES IN ORDER TO PREVENT UNEXPECTED RELEASE IN THE EVENT OF FASTENER OR COMPONENT FAILURE.**

### Tightening

1. Fit PneuTorque® with the correct size impact or high quality socket to suit fastener.

**TIP: For added safety it is recommended to secure the socket to the square drive. This is often achieved using a pin and O ring, see socket manufacturer for guidance.**

2. Ensure the Clockwise/Counter-clockwise selector is correctly set (if fitted).
3. Rotate the handle into a convenient position relative to the reaction bar. Fit the tool onto the fastener to be tightened with the reaction bar adjacent to the reaction point. See Figure 5.
4. Adopt a suitable posture to counteract normal or unexpected movement of the tool due to reaction forces.
5. Squeeze the trigger partially to bring the reaction bar into contact with the reaction point.
6. Fully press trigger and keep fully pressed until tool stalls then release trigger. If the trigger is not fully pressed full torque will not be applied to the fastener.
7. Remove the tool from the fastener.



**FIGURE 5**



## Releasing

**NOTE:** Only for bi-directional tools.

1. Fit the PneuTorque® with the correct size impact or high quality socket to suit the fastener to be released.

**TIP:** For added safety it is recommended to secure the socket to the square drive. This is often achieved using a pin and O ring, see socket manufacturer for guidance.

2. Ensure the clockwise/counter-clockwise selector is correctly set.
3. Rotate the handle into a convenient position relative to the reaction bar. Fit the tool onto the fastener to be released with the reaction bar adjacent to the reaction point. See Figure 6.
4. Adopt a suitable posture to counteract normal or unexpected movement of the tool due to reaction forces.
5. Squeeze the trigger partially to bring the reaction bar into contact with the reaction point.
6. Fully press trigger and keep fully pressed until threaded fastener releases.

**TIP:** If unable to release the fastener, increase the air pressure to the tool. Do not exceed the maximum air pressure for the tool.



**WARNING:** EXCEEDING THE MAXIMUM AIR PRESSURE WILL CAUSE OVERLOADING AND MAY LEAD TO SERIOUS DAMAGE.



**WARNING:** CHANGING THE AIR PRESSURE AFTER SETTING THE PRESSURE REGULATOR WILL CHANGE THE STALL TORQUE VALUE.



FIGURE 6

## Dual Trigger Tools

Tools purchased with a Dual Trigger Module (DTM) pre-fitted are identified with the part number suffix .DTM

Tools purchased with a DTM pre-fitted are calibrated at Norbar with the DTM in place. This is because the DTM itself creates a pressure drop which would alter any previously determined calibration data.



**WARNING: IF A TOOL IS PURCHASED WITH A DTM FITTED (AS A DTM TOOL) AND THE USER WANTS TO REMOVE THE MODULE AND USE THE TOOL WITHOUT IT, A NEW CALIBRATION IS REQUIRED. IN THIS SCENARIO CONTACT NORBAR OR YOUR NORBAR DISTRIBUTOR.**

With the DTM fitted the tool will not operate unless both the trigger on the DTM and the tool trigger are pressed simultaneously.

As with the tool trigger, the DTM trigger must be fully pressed so as not to affect the air flow, pressure, and ultimately the torque output.



**FIGURE 7 – Dual Trigger Module**

# MAINTENANCE

For optimum performance and safety, regular tool maintenance is required. The user maintenance is limited to the replacement of the drive square and the silencer. Any other maintenance or repairs should be carried out by Norbar or a Norbar distributor. Maintenance intervals will depend on the tool usage and the environment in which it is being used. The maximum recommended maintenance and recalibration interval is 12 months.

**TIP:** Steps the user can take to reduce the amount of maintenance required include:

1. Use the tool in a clean environment.
2. Use an air compressor fitted with a dryer.
3. Ensure the Lubro Control Unit has sufficient hydraulic oil.
4. Ensure the Lubro Control Unit delivers hydraulic oil at the correct rate.
5. Ensure the Lubro Control Unit is regularly maintained, see product manual.
6. Maintain the correct torque reaction.

## Air Lubrication

Add Fuchs Silkair VG22, Shell Tellus S2 VX15 or equivalent good quality hydraulic oil to the Lubro Control Unit.

## Gearbox

Under normal operating conditions it is not necessary to re-grease the gearbox. The gearbox contains Lubcon Turmogrease Li 802 EP or equivalent good quality grease.

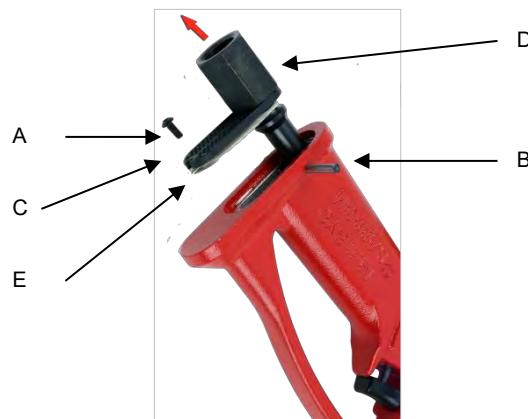
## Silencer

The silencer (part number 18591) must be changed every 12 months. This may be more frequent for high tool usage or dirty environments.

**TIP:** Change silencer with tool upside down, as shown, to ensure internal parts (spring and valve) are kept in place.

1. Remove M4 screw (A) (part number 25381.10) using a 2.5mm hexagon key.
2. Remove pin (B) (part number 26284) using a pin punch.
3. Pull out air inlet tube (D) with base plate & silencer.
4. Remove silencer (E) from air inlet tube.
5. Fit new silencer (part number 18591) over air inlet tube.
6. Fit air inlet tube assembly (C, D & E) into handle against spring resistance.
7. Fit pin (B) with a hammer.
8. Fit screw (A) and torque to 0.5 N·m. Do not over tighten this screw as it is likely to break the base plate moulding.

**TIP:** When refitting air inlet tube assembly into handle care should be taken to ensure correct alignment between air inlet tube and spring. It may be easier to fit the spring into air inlet tube first and secure with a small amount of grease.



**FIGURE 8 – Silencer Replacement**

## Drive Square

To avoid internal damage (especially due to torque overload), the output drive square has been designed to shear first. This saves major internal damage and allows easy square removal. For drive square part numbers see page 5.



**FIGURE 9** – Square Drive Replacement

To replace drive square:

1. Remove the air supply.
2. Support tool in a horizontal position.
3. Remove the screw or spring pin, then remove drive square.  
If the square has sheared it may be necessary to use pliers to remove the broken parts.
4. Fit new drive square.
5. Fit new screw and tighten between 4 N·m to 5 N·m (for PTM52) or 8 N·m to 9 N·m (for PTM72/80/92/119) or insert new spring pin.
6. Connect air supply.

**TIP:** If the drive square fails continually then seek advice from Norbar or a Norbar distributor.

## Calibration

To maintain the PneuTorque® accuracy it is recommended the tool is recalibrated at least every 12 months. Contact Norbar or a Norbar distributor for more information.

## Cleaning

Keep the tool in a clean condition to aid safety. Do not use abrasives or solvent based cleaners.

## Disposal

Recycling Considerations:

Component	Material
Handle	Aluminium Case / Steel Internals
Gearbox (Clockwise / Counter-Clockwise)	Aluminium Case / Steel Internals
Gearbox (52mm / 72mm / 80mm / 92mm / 119mm)	Steel with Nickel Plated Case / Steel Internals
Reaction Bar	PTM-52 is Steel / PTM-72 is Aluminium

## SPECIFICATIONS

Part Number	Torque		Tool Speed
	Minimum	Maximum	
18100.***	100 N·m (74 lbf·ft)	500 N·m (370 lbf·ft)	224 rev/min
18101.***	160 N·m (118 lbf·ft)	800 N·m (590 lbf·ft)	148 rev/min
18102.*** / 18140.*** / 18162.***	200 N·m (147 lbf·ft)	1000 N·m (738 lbf·ft)	122 rev/min
18103.*** / 18163.***	270 N·m (200 lbf·ft)	1350 N·m (1000 lbf·ft)	86 rev/min
18104.*** / 18141.**	400 N·m (295 lbf·ft)	2000 N·m (1475 lbf·ft)	58 rev/min
180296.***	540 N·m (400 lbf·ft)	2700 N·m (2000 lbf·ft)	40 rev/min
18159.***	800 N·m (590 lbf·ft)	4000 N·m (2950 lbf·ft)	32 rev/min
18108.***	900 N·m (660 lbf·ft)	4500 N·m (3300 lbf·ft)	23 rev/min
18109.***	1200 N·m (885 lbf·ft)	6000 N·m (4425 lbf·ft)	15.5 rev/min

Part Number	Dimensions (mm)					Tool Weight (kg)		Reaction Weight (kg)
	H	W	R	L				
				****.F**	****.B**	****.F**	****.B**	
18100.***	318	82	60	284	333	3.8	4.1	0.85
18101.***	318	82	60	284	333	3.8	4.1	0.85
18102.***	318	85.7	75	316	365	5.8	6.1	0.7
18103.***	318	85.7	75	316	365	5.8	6.1	0.7
18104.***	318	85.7	75	349	398	6.2	6.5	0.7
180296.***	318	82	79.5	365.6	414.6	7.2	7.5	1.4
18159.***	318	92	98.5	375	424	8.2	8.5	1.35
18108.***	318	119	127	407	456	13	13.3	2.1
18109.***	318	119	127	407	456	13	13.3	2.1
18140.***	318	82	51.5	435	484	6.9	7.2	-
18141.***	318	82	51.5	457	506	7.4	7.7	-
18162.***	318	82	82	-	532	-	9.4	-
18163.***	318	82	82	-	532	-	9.5	-

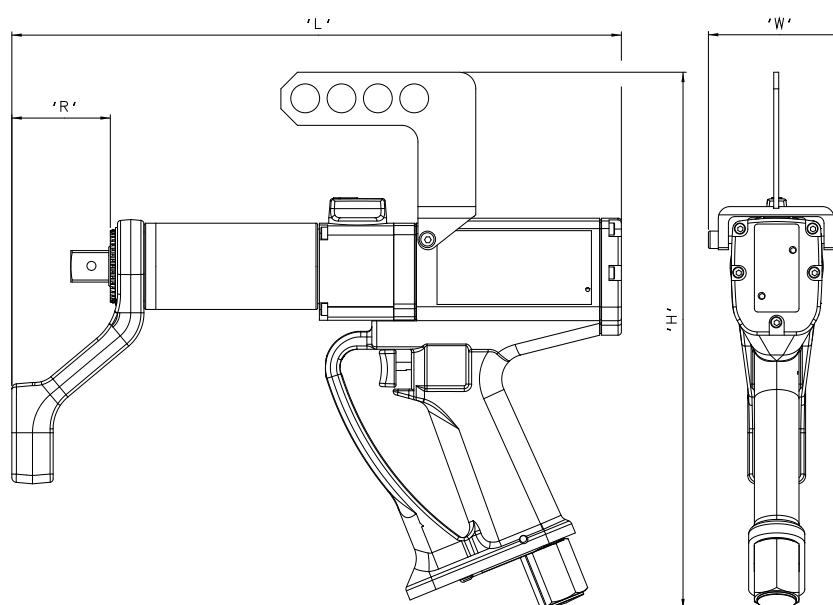


FIGURE 10 – Tool Dimensions

Repeatability:	± 5%
Air Supply:	Maximum pressure 6.3 bar (For maximum output speed).
Lubrication:	Fuchs Silkair VG22 or Shell Tellus S2 VX15 recommended for the Lubro Control Unit.
Temperature Range:	0°C to +50°C (operating). -20°C to +60°C (storage).
Operating Humidity:	85% Relative Humidity @30°C maximum.
Handle Vibration:	< 2.5m/s <sup>2</sup> measured in accordance with ISO 28927-2. Measured tool vibration (ah) = 1.79 m/s <sup>2</sup> with uncertainty (K) = 0.34 m/s <sup>2</sup>
Sound Pressure Level:	The sound pressure level is 84 dB(A) uncertainty K = 3dB, measured in accordance with BS EN ISO 11148-6
Environment:	Store in a clean & dry environment.
Machinery Directive:	In conformance with: BSEN 792-6:2000 Hand-held non-electric power tools. Safety requirements. Assembly power tools for threaded fasteners.

*Due to continuous improvement all specifications are subject to change without prior notice.*

**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**

Wildmere Road | Banbury | Oxfordshire | OX16 3JU | UK  
T +44 (0)1295 270333 | F +44 (0)1295 753643  
E enquiry@norbar.com | www.norbar.com

QA57  
ISSUE 2  
24.1.97

## EU Declaration of Conformity (No 0022)

This declaration of conformity is issued under the sole responsibility of the manufacturer.

**The object of the declaration:**

PneuTorque® PTM, PTME & TrukTorque™ Series Stall Tools.

Model Name(s): PTM-52-\*\*\*\*\_\*  
PTM-72-\*\*\*\*\_\*  
PTM-80-\*\*\*\*\_\*  
PTM-92-\*\*\*\*\_\*  
PTM-119-\*\*\*\*\_\*  
PTME-52-\*\*\*\*\_\*  
PTME-72-\*\*\*\*\_\*  
TrukTorque™



**The object of the declaration described above is in conformity with the relevant union harmonisation legislation:**

Directive 2006/42/EC on Machinery Directive.

**The object of the declaration described above has been designed to comply with the following standards:**

BS EN ISO 11148-6:2012	Hand-held non-electric power tools – Safety requirements. Pt 6: Assembly power tools for threaded fasteners.
------------------------	---

**The basis on which conformity is being declared:**

The technical documentation required to demonstrate that the products meet the requirements of the above Directives has been compiled by the signatory below and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2007.

Signed for and on behalf of Norbar Torque Tools Ltd.

Signed: *T.M. Lester*

Full Name: Trevor Mark Lester B.Eng.

Date: 15th November 2018

Authority: Compliance Engineer

Place: Norbar Torque Tools Ltd., Wildmere Road, Banbury, Oxfordshire. OX16 3JU

United Kingdom | Australia | United States of America  
Singapore | China | India



Registered in England No 380480 | VAT No GB 119 1060 05

## TROUBLE SHOOTING

The following is only a guide, for more complex faults please contact Norbar or a Norbar distributor.

Problem	Likely Solutions
Tool output does not rotate when trigger pressed	Check air supply is functioning and connected Check air pressure setting (at least 1 bar) Check correct setting of direction knob Check both triggers are fully pressed for 'Double Trigger' versions. Output drive square sheared, needs replacing Gear train or air motor is damaged
Drive square is sheared	See maintenance section to replace drive square
Tool does not stall	Fastener sheared or thread stripped Gear train or air motor is damaged

## GLOSSARY OF TERMS

Word or Term	Meaning
A/F	Across Flats
Air Pressure Graph	Graph supplied with all stall tools to show the air pressure setting to produce required torque
Bi-directional	Tool capable of Clockwise and Counter-clockwise square rotation
Calibration Device	Torque measurement system to display peak torque using a joint simulator or test fastener
Fastener	Bolt or stud to be tightened
Lubro Control Unit	Unit to provide filtering and lubrication along with pressure regulation. Not supplied with tool
Nose Extension	A reaction type used where tool access is restricted, typical examples on wheel nuts on heavy vehicles. Available as an option for PTM tools or integral for PTME tools
PneuTorque®	Product name
PTM	PneuTorque® Twin Motor
PTME	PneuTorque® Twin Motor with fixed nose extension
Reaction Bar	Item to counteract applied torque. Also called reaction plate
Stall Tool	Tool will stall due to air pressure set.



**NORBAR TORQUE TOOLS LTD**

Wildmere Road, Banbury,  
Oxfordshire, OX16 3JU  
UNITED KINGDOM  
Tel + 44 (0)1295 270333  
Email [enquiry@norbar.com](mailto:enquiry@norbar.com)

**NORBAR TORQUE TOOLS PTE LTD**

194 Pandan Loop  
#07-20 Pantech Business Hub  
SINGAPORE 128383  
Tel + 65 6841 1371  
Email [enquires@norbar.sg](mailto:enquires@norbar.sg)

**NORBAR TORQUE TOOLS**

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

**NORBAR TORQUE TOOLS (SHANGHAI) LTD**

91 Building- 7F, No. 1122, Qinzhou North Road,  
Xuhui District, Shanghai  
CHINA 201103  
Tel + 86 21 6145 0368  
Email [sales@norbar.com.cn](mailto:sales@norbar.com.cn)

**NORBAR TORQUE TOOLS INC**

36400 Biltmore Place, Willoughby,  
Ohio, 44094  
USA  
Tel + 1 866 667 2279  
Email [inquiry@norbar.us](mailto: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](mailto:enquiry@norbar.in)

**[www.norbar.com](http://www.norbar.com)**