OPERATOR'S MANUAL

Norbar Torque Tools

LUBRO CONTROL UNIT

Part Number 34362 | Issue 3 | Original Instructions (English)

CONTENTS

Safety	**2**
Introduction	**3**
Parts Included	3
Spare Parts	3
Features and Functions	**4**
Set up Instructions	**5**
Preparation	5
Hose Connection	6
Operating Instructions	**7**
Before Use	7
Daily Checks	7
Set Outlet Pressure	7
Lubricator Flow	7
Maintenance	**8**
General	8
Repair	8
Lubricator Filling and Bowl Replacement	8
Draining Condensate	8
Filter Element Replacement and Filter Bowl Replacement	9
Pressure Gauge	10
Cleaning	10
Disposal	10
Specification	**11**
Trouble shooting	**11**

SAFETY

IMPORTANT: DO NOT OPERATE THIS PRODUCT BEFORE READING THESE INSTRUCTIONS. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR DAMAGE.

This product is intended for controlling the air pressure to pneumatic tools.
Any other use is not recommended.

Compressed air can be dangerous for those unfamiliar with it.
Only trained and experienced personnel should setup, operate and maintain pneumatically operated equipment.

Only connect to clean dry air supply.

To avoid hazard from whipping air hoses make all connections before turning on the air supply.

Ensure any connected tool is ‘OFF’ to prevent potential movement.

Not following proper maintenance procedures could cause the product to malfunction and could lead to damage to the equipment.

Before filling or maintaining this product, all compressed air should be exhausted.

If equipment is to be removed, first switch off air and electrical supplies and exhaust all residual compressed air in the system.

Do not make any modifications to the product.

Do not take the product apart, except where specified in the Maintenance section.

Keep this manual available for reference.

INTRODUCTION

The Lubro Control Unit is designed to control the air pressure delivered to pneumatic tools and to add lubrication. In addition, the unit removes excess saturated water and solid foreign particles that could damage the connected tool.

Part numbers covered by this manual: Lubro Control Unit 16074.

Parts Included

	Description				
	Lubro Control Unit	Hose 3m	½" BSP M/M Adaptor	½" BSP Seal	Operators Manual
Picture					
Part Number	16074	28911	28946	28906	34362

NOTE: A 6 metre long Hose (Part Number 28912) is available as an optional accessory.

Spare Parts

	Description					
	Pressure Gauge	Filter Element	Filter Bowl	Lubricator Bowl	½" BSP Swivel Adaptor	Adjuster Knob
Picture						
Part Number	28913	28914	28939	28940	28905	19376

FEATURES AND FUNCTIONS

- Adjustable pressure control for pneumatic tools.
- Ability to supply controlled oil feed for lubrication of connected tool.
- Bowl to remove excess saturated water that could damage the connected tool.
- 5µm filter element to remove solid foreign particles that could damage the connected tool.
- Input pressure up to 145 psi / 10 bar.
- Output pressure from 7.25 psi / 0.5 bar to 100 psi / 6.9 bar

SET UP INSTRUCTIONS

Preparation

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

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

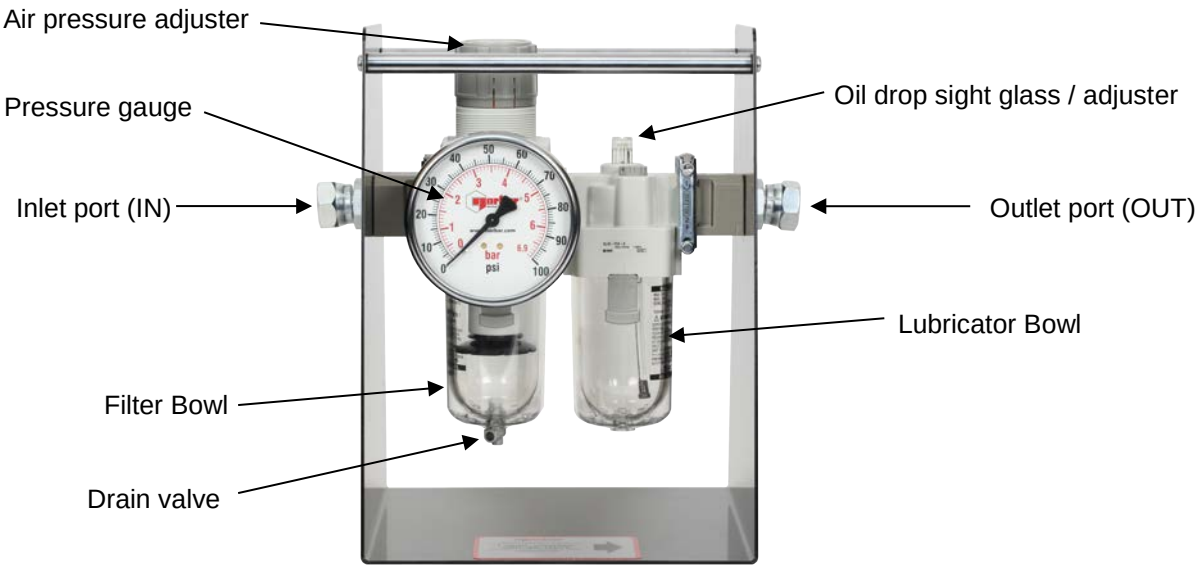

FIGURE 1 – Features

Recommended Installation Considerations:

- Follow any applicable regulations and standards, e.g.:
  "ISO 4414:1998 Pneumatic fluid power – General rules relating to systems"
- Install near an air isolation valve.
- Keep enough space around the unit for safe operation and maintenance.
- Install vertically to allow all features to operate as intended.
- Do not use in a place subject to heavy vibrations and/or shocks.
- Use flexible hoses to reduce any load or vibration being passed to the unit.
- Keep hose length and the number of fittings / connectors to a minimum.
- Handle with care to avoid damage to the precision components.
- Do not expose the product to direct sunlight for an extended period of time.
- Do not mount the product in locations where it is exposed to radiant heat.
- Ensure installation area is within temperature limits.
- Where a reduction in water vapour content is required, an air dryer should be considered.
- Ensure inlet air pressure does not exceed 145 psi / 10 bar / 1.0MPa.
- Fill lubricator bowl before installation (see Maintenance section, page 8).

Hose Connection

Ensure all hoses are clean and free from any foreign material.

TIP: When using thread sealing tape start 1.5 to 2 threads from the end of the thread to ensure potential loose tape cannot enter the air supply.

1. Connect the tool air hose to the outlet port on the right hand side.
   Use a minimum hose size of ½" (12mm) bore.
   Tighten to 28-30 N·m. Do not over tighten as threads have a taper fitting.

TIP: To connect the air inlet hose to a ½" bore hose use a ½" BSP Male/Male connector. A pair of spanners will be required to perform this task (22mm ($^{7}/_{8}$") A/F and 24mm ($^{15}/_{16}$") A/F open-ended spanners).

   Connect the hose to the tool. Refer to your tool instructions for guidance on making this connection.

2. Connect the inlet port on the left hand side to the air supply.
   Use a minimum hose size of ½" (12mm) bore.
   Tighten to 28-30 N·m. Do not over tighten as threads have a taper fitting.

3. Before applying air ensure complete air system is connected.
   Ensure any connected tool is 'OFF' to prevent potential movement.

4. Apply air supply.

5. Check for leaks.

OPERATING INSTRUCTIONS

Before Use

Ensure the Lubro Control Unit has been connected and set up correctly.

Ensure the inlet air pressure is present.

Daily Checks

Ensure lubricator bowl has sufficient oil. Do not drop below "**MIN. OIL LEVEL**".

Ensure filter bowl is below "**MAX. DRAIN LEVEL**".

Ensure lubrication flow is correct.

Set Outlet Pressure

Refer to connected tool for required outlet pressure.

WARNING: DO NOT SET THE PRESSURE ABOVE THE MAXIMUM INDICATED ON THE PRESSURE GAUGE.

NOTE: Make adjustments by hand, the use of tools may damage the adjuster.

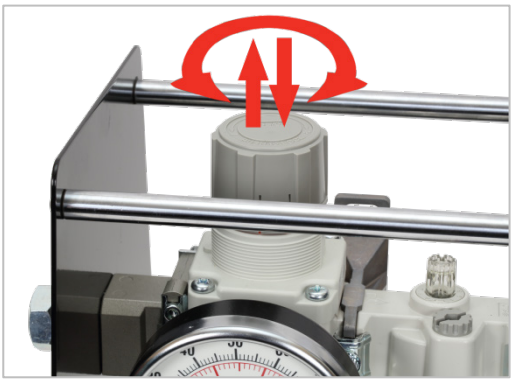

FIGURE 2 – Outlet Adjustment

Lift the air pressure adjuster to unlock.

Rotate adjuster clockwise to increase outlet pressure.

Rotate adjuster counter-clockwise to decrease outlet pressure.

NOTE: To allow for tool air consumption the tool MUST be operating whilst adjustment is being made.

Adjust until the desired outlet pressure is indicated on the pressure gauge.

Push the air pressure adjuster down to lock in position.

Check outlet pressure regularly to ensure it is still accurate.

Lubricator Flow

Many air tools are designed to operate with a small amount of oil in the air flow; the Lubro Control Unit has the facility to allow this.

Refer to air tool manual for required flow rate.

Run the tool to draw air flow.

Count the number of oil drops per minute in the oil sight glass.

Turn sight glass clockwise to decrease oil flow.

Turn sight glass counter clockwise to increase oil flow.

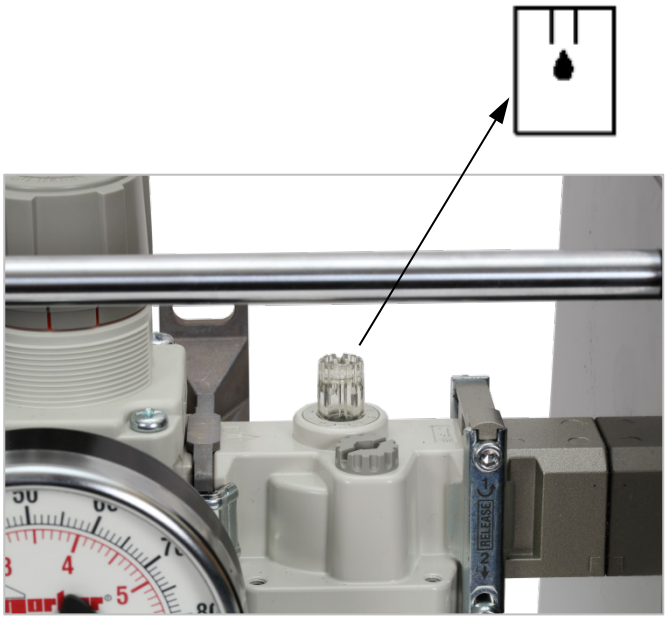

FIGURE 3 – Lubricator Flow

MAINTENANCE

WARNING: ALWAYS COMPLETE MAINTENANCE TASKS ON A CLEAN WORK AREA. ALWAYS WEAR SUITABLE GLOVES AND EYE PROTECTION.

WARNING: COMPRESSED AIR CAN BE DANGEROUS. SETUP, MAINTENANCE AND REPAIR OF PNEUMATIC SYSTEMS MUST BE PERFORMED BY QUALIFIED PERSONNEL ONLY.

BEFORE MAINTENANCE ENSURE ALL AIR IS EXHAUSTED AND ALL ELECTRICAL POWER IS OFF.

General

Perform periodic checks for lubricator bowl level, the filter bowl level and amount of dirt in the filter bowl. Also check on the general condition of all hoses and features looking for cracks and leaks.
Replace / fix any faults found.

Repair

Repairs not specified in this manual should be carried out at Norbar or by a Norbar approved agent.

Lubricator Filling and Bowl Replacement

The lubricator bowl is located on the right of the Lubro Control Unit.

Step	Procedure
1. Exhaust all air.	See WARNINGS at start of section. Read warning on the lubricator bowl.
2. Remove bowl.	Pull down lock. Turn through 45° (left or right) then pull bowl out. Replace bowl if damaged.
3. Fill.	Fill to "**MAX. OIL LEVEL**" with specified oil. Use FUCHS SILKAIR VG22 or SHELL TELLUS S2 VX15.
4. Replace bowl.	Align marking on lubricator bowl and assembly. Insert lubricator bowl into assembly and rotate 45° (left or right) until the lock is up.

FIGURE 4 – Lubricator Bowl Replacement

Draining Condensate

The filter bowl collects condensate from the air supply.
The amount of condensate depends on the air consumption.
Drain the filter bowl before the level reaches "**MAX. DRAIN LEVEL**".

Step	Procedure
1. Exhaust all air.	See WARNINGS at start of section. Read warning on the filter bowl.
2. Drain condensate.	Place waste receptacle under filter bowl. Press drain valve to release condensate.

FIGURE 5 – Draining Condensate

Filter Element Replacement and Filter Bowl Replacement

The life of the filter element depends on product usage and air supply quality. Under typical usage with a clean air supply replace the filter element every 2 years. If the outlet pressure is low or the flow is restricted check the condition of the filter.

The filter element is Part Number 28914.

The filter element is within the filter bowl.

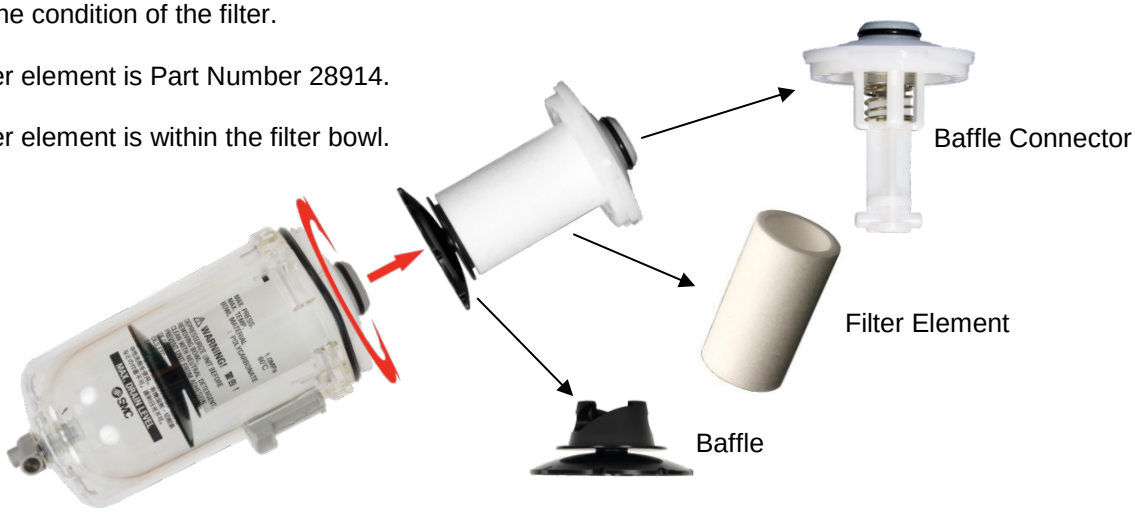

FIGURE 6 – Filter Bowl Components

Step	Procedure
1. Exhaust all air.	See WARNINGS at start of section. Read warning on the bowl.
2. Remove filter bowl.	Pull down bowl lock. Turn through 45° (left or right). Pull bowl out. Replace bowl if damaged.
3. Remove filter element.	Rotate and lift out the baffle connector with filter element and baffle attached. Rotate baffle anti-clockwise by hand. Remove baffle. Remove filter element.
4. Clean filter bowl.	Use natural detergent only
5. Insert new filter element.	Slide the new filter element onto the baffle connector. Place the baffle on the end of the baffle connector and rotate clockwise by hand until part locks. Insert the baffle connector with newly attached components into the filter bowl and rotate until secure.
6. Insert filter bowl.	Align mark on bowl with assembly. Insert bowl. Rotate bowl 45° (left or right) until the lock is up.

FIGURE 7 – Replacing the Filter Element

Pressure Gauge

The gauge is a precision item that must be treated with care. The body of the Lubro Control Unit is fitted with a ⅛”M / ¼”F BSP adaptor for the pressure gauge. If the gauge is damaged replace as follows:

Step	Procedure
1. Exhaust all air.	See WARNINGS at start of section.
2. Remove gauge.	Using a 17mm spanner, hold the adaptor still. Rotate the square brass fitting on the back of the gauge using a 14mm spanner to loosen.
3. Prepare new gauge.	When using thread sealing tape start 1.5 to 2 threads from the end of the thread to ensure potential loose tape cannot enter the air supply.
4. Replace gauge.	Using a 17mm spanner, hold the adaptor still. Rotate the square brass fitting on the back of the gauge using a 14mm spanner to tighten.
5. Apply operating pressure.	Check for proper operation and possible air leaks.

Cleaning

Do not use abrasives or solvent based cleaners.

Disposal

This symbol on the product indicates that it must not be disposed of in the general waste. Please dispose of according to your local recycling laws and regulations.

Contact your distributor or see the Norbar web site (www.norbar.com) for further recycling information.

SPECIFICATIONS

Input port thread:	½" BSP.	
Output port thread:	½" BSP.	
Minimum hose bore:	½".	
Input pressure:	Maximum Proof rating	145 psi / 10 bar / 1.0 MPa. 217 psi / 15 bar / 1.5 MPa.
Output pressure:	Minimum Maximum	7.25 psi / 0.5 bar. 100 psi / 6.9 bar.
Pressure gauge range:	100 psi / 6.9 bar.	
Pressure gauge accuracy:	+/- 2.5% of scale (+/- 2.5 psi for Max 100 psi pressure gauge)	
Filtration:	5µm.	
Drain capacity:	45 cm^3.	
Oil:	FUCHS SILKAIR VG22 or SHELL TELLUS S2 VX15 or equivalent.	
Weight:	Lubro Control Unit Hose 3m	5.0 Kg. 1.5 Kg.
Dimensions:	300 mm high x 260 mm wide x 250 mm deep.	
Environment:	Indoor use within a light industrial environment.	
Ambient and fluid temperature:	-5°C to +60°C (No freezing).	

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

TROUBLE SHOOTING

Tips are located within the manual to help with troubleshooting.
Common problems are listed below:

Problem	Likely Solutions
Air flow reduced.	Filter element is clogged, see Maintenance (page 9) for replacing.
Pressure not regulated.	Check orientation of INLET PORT and OUTLET PORT connections. Possible valve or spring damage; return to Norbar.
Pressure will not return to zero.	Possible valve, spring or "O" ring damage; return to Norbar.
Air leak.	Investigate area of leak. Check for loose part, crack or break of component or foreign matter in system. Always tighten components to correct torque value.
Unit will not drain.	Foreign matter in outlet drain. Clean / replace bowl assembly.
Fluid in outlet hose.	Filter bowl is full; see Maintenance section (page 8) to drain filter bowl. Replace filter element if necessary.
Oil does not drop	Ensure sight glass is turned counter clockwise to increase flow. Ensure air flow is sufficient to allow oil flow. Ensure amount of oil in lubricator bowl is sufficient. Ensure there are no air leaks from the lubricator bowl.

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