Part No. 7862

LASER®

Air Powered Hydraulic Pump

700 bar

Instructions

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Introduction

This an easy to operate compressed air powered hydraulic pump (700 bar rated), that has a multitude of applications; it can be used with attachments (not included) to repair bodywork, or remove or press-in bushes and bearings, for example with the Laser Tools 7432 Spring Bearing Bush Tool.

Components

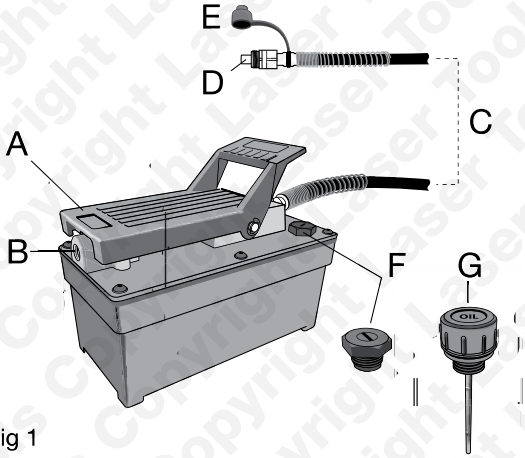

Fig 1

Ref.	Description
A	Operating foot pedal
B	Air inlet port
C	High pressure oil line (1.8m)
D	Hydraulic coupling
E	Hydraulic coupling dust cover
F	Oil reservoir transit cap (non-vented)
G	Oil reservoir vented cap / dipstick

Instructions

Preparation for Use:

Refer to Figure 1: Seal the external pipe connections - compressed air inlet adaptor to air inlet port **(B)** and high pressure oil line **(C)**, with high quality thread sealant or PTFE tape. If using tape, apply carefully, ensuring the first two threads are free of tape, to prevent any tape material entering and contaminating the hydraulic system.

Refer to Figure 2: Remove the plastic oil reservoir transit cap **(F)**; this is a non-vented cap that seals the oil reservoir during transport. Replace the transit cap with the oil reservoir vented cap / dipstick **(G)** which must be in place when using the hydraulic pump.

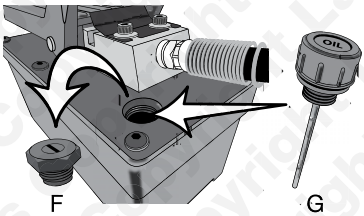

Fig 2

The hydraulic pump has a usable oil capacity of 1.5 litres; the oil level is correct at 12.7mm (1/2") below the vented cap with all cylinders retracted.

If the pump is to be operated on a continuous duty cycle for extended periods it is recommended to install

an automatic air line oiler as close to the hydraulic pump as possible. Set the oiler to feed approximately one drop of oil per minute into the system. Use a high quality air line oil or SAE 10 oil. Otherwise add a few drops of the recommended oil to the air inlet port **(B)** weekly, then operate the pump.

Connect the workshop air supply to the hydraulic pump. Minimum air pressure should be 100psi; the air supply should be filtered, regulated and lubricated.

Refer to Figure 1: Connect the hydraulic coupling **(D)** to the corresponding coupling on the cylinder/attachment. Ensure that both couplings are completely clean so that no dirt can enter the system.

Refer to Figure 3: depressing the foot pedal **(A)** at the air inlet end (marked PUMP) activates the ram on the cylinder/attachment. To activate the ram a small distance, tap the foot pedal until the ram reaches the desired distance. Retracting the ram (releasing the hydraulic pressure) is carried out by depressing the foot pedal **(A)** at the opposite end (marked RELEASE).

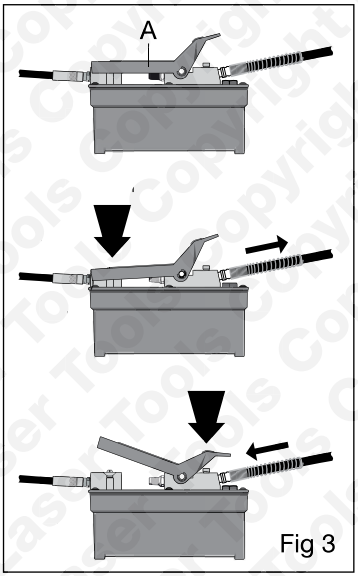

Fig 3

Maintenance:

The greatest single cause of failure in hydraulic pumps is dirt ingress. Keep the pump, hydraulic oil lines, cylinder, attachments and accessories clean and free from oil and dirt. Ensure that any unused couplers or adaptors are sealed with thread protectors, and dust covers.

Filling with oil:

Check the fluid level after every 10 hours of use.
Drain and replenish the recommended hydraulic fluid after approximately 300 hours of use.

Ensure cylinder on cylinder/attachment is fully retracted. Place pump in an upright position with cylinder/attachment lower. Remove oil reservoir filler cap **(G)**. Top up with hydraulic oil only - do not use engine oil or brake fluid. The oil level is correct at 12.7mm (1/2") below the vented cap with all cylinders retracted.

Bleeding air from the system:

After filling, or after prolonged use, air may have accumulated within the hydraulic system. To remove the air, connect to a cylinder/attachment and run the system through several cycles (extending and retracting the cylinder) free of any load. The cylinder/attachment must be at a lower level that the pump to allow air to be released through the pump oil reservoir.

Specifications:

Usable oil capacity:	1500cc
Maximum hydraulic pressure:	700 bar
Output Flow Rate (no load):	
0 bar:	1.3 litres/min
700 bar:	0.24 litres/min
Hydraulic hose length:	1.8m
Air pressure range:	7-11kg/cm^2 (100-156psi)

Safety Warnings - please read

- Always read these instructions carefully before using the tool.
- Wear eye protection and protective gloves.
- Visually inspect all equipment before use for signs of damage or wear and tear. Any defective or suspect equipment should be repaired or replaced before use.
- High-pressure hydraulic equipment can work at extremely high pressure, and careful attention should be paid to working pressures when choosing accessories and attachments.
- Before operating the pump all hose, air line and hydraulic connections must be tightened with proper tools. Do not over-tighten, but connections should be tightened securely and leak-free.
- All cylinders/attachments used must be rated for the same operating pressure (700 bar).
- Ensure the pump has sufficient oil capacity to operate the cylinder/attachment being used.
- DO NOT exceed the rated pressure of the pump or rated capacity of the cylinder/attachment.
- If working on an off centre load, pump with care. If you feel undue resistance, stop and re-adjust the set-up.
- DO NOT rely on the pump valve for positive load holding. If it is required to lock the load in position use mechanical means.
- Disconnect the air supply before breaking any connections in the hydraulic system.
- Never attempt to disconnect couplings while under system pressure.
- Disconnect the air supply if the pump is not in use.
- Regularly inspect and keep the high-pressure hydraulic oil lines in good condition.
- Do not use the pump if there is any evidence of damage to the high-pressure hydraulic oil lines.
- Keep the high-pressure oil lines away from sources of heat.
- Avoid sharp bends and kinks when routing the hydraulic oil lines.
- Keep the tool clean and well-maintained. Store in case when not in use.

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If applicable, the applications database and any instructional information provided has been designed to offer general guidance for a particular tool's use and while all attention is given to the accuracy of the data no project should be attempted without referring first to the manufacturer's technical documentation (workshop or instruction manual) or the use of a recognised authority such as Autodata.

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