Wilhelmsen Ships Service
OPTIMISING PERFORMANCE

UNITOR INSTRUCTION MANUAL

60:1 GREASE PUMP FOR 20KG/50KG DRUMS W/ 4M HOSE AND GUN

FOR 20KG DRUM
422 666615

FOR 50KG DRUM
422 711715

MARINE PRODUCTS
MARINE CHEMICALS
SAFETY
MARITIME LOGISTICS
SHIPS AGENCY

GENERAL

Thank you for choosing a high quality pump. The 60:1 grease pump features our unique air motor for quiet and quick serviceability. Recommended for mobile units and piped installations of moderate length, to dispense greases with a viscosity up to NLGI 3. Included with the pump is a 2" bung adapter for mounting the pump on a drum cover.

- A pump's ability to deliver fluid is based on the pressure (bar/psi) and quantity of air supplied to the air- motor and the amount of material discharge (back) pressure to be overcome within the system.
- **Warning!** An explosion can result in the pump when aluminium and zinc parts come in contacts with certain solvents. Never point a control valve at any portion of your body or another person. Accidental discharge of pressure and/or material can result in injury. Read these instruction carefully before installation, operation or service.
- **DO NOT EXCEED MAXIMUM PRESSURE**

Technical data

Pump ratio	60:1
Maximum air pressure (bar)	10 bar
Maximum air pressure (psi)	150 psi
Delivery per minute (@ 7 bar air pressure, 0 back pressure)	1100g/min
Air inlet connection	1/4" BSP
Grease outlet	3/8" BSP
Pump tube length (20 kg)	450mm
Pump tube length (50 kg)	750mm
Total length (20 kg)	700mm
Total length (50 kg)	1000mm
Pump tube diameter	Ø30mm
Noise level at 7 bar	84 dB

General

The air operated pump has two main parts. One double acting air motor driving a single acting high pressure pump mechanism. The grease is fed into the pump tube by the piston on the upward stroke and is pushed out through the check valve on the down stroke.

The relationship between the areas of the air piston and the pump piston decides the pressure ratio. The pressure ratio is 60:1 and the theoretical static pressure when the pump has stopped is 60 times higher than the air pressure.

For ex. if the air pressure is 100 psi will the grease pressure be 60x100= ~6000 psi when the pump is stopped.

The air is exhausted through a sintered brass silencer.

Safety precautions

This is high-pressure equipment; Read carefully and follow these instructions and instruct staff concerned before installation and before start up.

The equipment must not be used for other fluids than grease up to penetration NLGI 3. If any doubt, contact Wilhelmsen Ships Service for additional information. The pump is not suitable for water based material or for use with petrol, solution or other explosive fluids

Check that all accessories/components are suitable for the working pressure of the system.

Do not exceed the maximum air pressure of the pump 1.0 MPa (10 Bar). (145 psi)

The system must be tested to 1.3 times the working pressure before being put into operation. NOTE! Remove all hoses or other components which are not allowed to be exposed for that high pressure.

All test results must be kept and filed together with this manual.

Close and disconnect the air supply and relieve the liquid pressure in the system before any work to the pump or the system is carried out.

Only use genuine manufacturers spare parts. Never use any worn or damaged spare parts.

Avoid holding directly on the high pressurized outlet hose. The high pressure hose can be protected by a separately PVC-hose being slipped over it.

Do not direct outlet valves or any other dispensing valve against the body or any other person as the grease can penetrate the skin or damage the eyes.

Periodically inspect all system components for leakage or damage, especially the hoses which can be worn out due to wear and age. Rectify any defects immediately.

Always turn off the air pressure to the pump when the premises are unattended.

Installation

Remove the protective packing from the pump including plugs in the air inlet and the grease outlet.

Remove the drum adaptor from the pump tube. Mount the adapter into the 2" hole in the drum or pump bracket.

Put the pump vertically into the drum and lock the pump so that the outlet comes into the desired position. Set the pump 10-15 mm clear of the bottom of the drum and lock the pump with the adapter.

Connect the grease outlet hose into the outlet of the pump (3/8"

BSP/F). Mount the air quick coupling nipple into the air inlet (1/4"BSP/F) on top of the pump.

Important! If the air pressure in the system is higher than the working pressure of the pump it will be necessary to install an air regulator with gauge into the airline prior to the pump.

A shut-off valve should always be installed into the airline between the air connection hose and the air pipe work.

The pump is pre-lubricated with Silicon grease. It is not necessary to use a lubricator under normal operating conditions. Important! If a lubricator has been used with the pump it is necessary to continue using it. This is because the oil from the lubricator will have washed the silicon grease away. If the lubricator is not continuously used could that result in the pump damage.

Maintenance

For your personal safety disconnect the air motor from the airline and relieve the system pressure before any service is undertaken.

Check the following regularly:

- Air filter: empty and clean out eventually condensate water
- If a lubricator is installed it should always be filled with air tool oil or similar. Mineral based motor oil, SAE 10, can also be used. Synthetic oil or other oils must NOT be used.
- Possible leakage in the connections and couplers.
- All connected hoses for wear or possible damage.

Keep the lubricant and the equipment clean and free from dirt. The dirt will otherwise enter the pump and contaminate the grease and possibly damage the pump. Put the pump in into a clean drum directly or rest the pump on a bracket while changing the drum.

When changing drums it is especially important that the pump tube and bottom valve are kept off the floor and free from dirt.

All dirt entering the grease drum will also enter the pump and either harm or destroy the function of it or can be a disaster for the lubricated machine parts.

Have a spillage container available when unloading or uncoupling the pipe work.

Re-check all the connections in the system for leakage after the first 6-8 hours of operation.

Troubleshooting

Symptom	Possible fault	Solution
Pump stationary, or runs very slowly.	• No or low air pressure. • Faulty or jammed air motor.	• Check the air line valve, regulator and quick coupler. • Try to lubricate the air motor by use a regular oil can and use a regular air tool oil. If that isn't enough continue with Service of air motor chapter. Check seals as required and replace any faulty parts.
	• Blocked air inlet filter.	• Change or clean the air inlet filter.
	• Ice blocking air exhaust.	• Inspect for possible condensated water in air filter or, if the pump has "raced", that there is no leakage in the pipe work.
	• Foreign object jamming the movement of the central bar.	• As above. Check for free movement and for foreign objects in piston valve, feed washer etc.
Pump reciprocating but not delivering.	• No grease or air pocket in grease drum. • Piston valve or seals worn out.	• Check grease level in drum/tank. • Check for foreign objects in piston valve seat. Check seals for wear and damage.
Grease coming out between the pump and tube and air motor.	• Packing between air motor and pump is worn out or damaged.	• See "Service, "Pump mechanism and packings".
Pump is running despite the outlet being closed.	• Packing on the lower piston is worn out or damaged.	• Change worn or damaged parts. See "Service to pump mechanism".
	• Dirt in the bottom valve or in the lower piston	• See "Service to pump mechanism".
	• Dirt or foreign parts in the outlet check valve.	• Open the check valve at the outlet connection and look for dirt which restrict the ball from close correct.
	• Feed washer is loose.	• Check for foreign objects in bottom end the pump tube. A very hard or cold grease can sometimes brake the safety pin. Prior to changing drum, store the drum indoors for at least 5 days to equalize the temperature.

Declaration of conformity

Wilhelmsen Ships Service AS declares by the present certificate that the mentioned machinery is in conformity with the following standards or other normative documents (TÜV S9211282), (DIN 24558 / 10.91), (DIN EN 292 / 2/11.91) and has been declared in conformity with the EC Directive (2006/42/EEC).

Wilhelmsen Ships Service

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Marine products, done better

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