HORN TECALEMIT

Operating Manual

CE

Draught cart, pneumatic

The operating manual is always to be read before commissioning the equipment. No warranty claim will be granted for faults and damage to the equipment arising from insufficient knowledge of the operating manual.

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Exclusion of liability

No warranty claim will be granted for faults and damage to the equipment or to persons arising from insufficient knowledge of the operating manual.

Technical changes reserved.

The German operating manual is the original operating manual. Operating manuals in other languages have been translated from the original operating manual.

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1 Safety instructions

The device is a state of the art piece of equipment and has been constructed according to recognised safety specifications. It is nevertheless possible that use of the device will present hazards to the operator or to third parties, or may damage the device or other property. It is therefore essential to act in accordance with these safety instructions, and in particular with those sections identified as warnings.

Warning notices and symbols

In the operating manual, the following signs are used for highlighting important information.

Special information for economical use of the equipment.

Special information or "dos and don'ts" for damage prevention.

Information or “dos and don'ts” for the prevention of damage to persons or equipment.

Appropriate use

The device may only be used if it is in perfect condition, and then only for its intended purpose, in compliance with all safety regulations, with an awareness of the potential risks, and according to the operating manual. Any faults that may impair the safety must be rectified immediately.

The device and its components are only to be used for handling the liquids listed and the purpose described. Using the machine for any other purpose would constitute inappropriate use. The manufacturer is not responsible for any loss arising as a result of this, the risk for this is borne only by the operating company.

Organisational measures

This operating manual should always be kept readily available at the site of operation! Each person concerned with the assembly, commissioning, maintenance and operation of the equipment must have read and understood the entire operating manual. It is essential that the type plate and the warning notices attached to the device are observed, and are maintained in a fully readable condition.

Qualified personnel

The operating, maintenance and assembly personnel must be appropriately qualified for their work. The areas of responsibility, competences and supervision of the personnel must be precisely regulated by the operating company. If the personnel do not have the required knowledge, they must be trained and instructed. The operating company must also ensure that the contents of the operating manual are properly understood by the personnel.

Waters protection

⚠ The device has been designed to handle water hazardous substances. The regulations of the water resources act (WHG = German Water Resources Act) and the ordinance on installations for handling of substances hazardous to water (VawS in Germany) must be adhered to.

Of particular importance is § 19g German Water Resources Act (WHG), which prescribes that facilities to handle water endangering substances are designed, installed, set up, maintained and operated in such a way that pollution or any other sustainable change in the characteristics of water bodies does not occur. The operating company of such a facility is obliged according to § 19i German Water Resources Act (WHG) to continuously monitor his facility for adherence to the above requirements at the location of installation. According to WHG § 19i, only specialist companies certified to §19l WHG may carry out work on systems for water hazardous liquids.

Compressed air

⚠ Only persons with special knowledge and experience with pneumatic systems may carry out work on pneumatic parts and equipment. Prior to any inspection, maintenance or repair work, ensure that the equipment is not under pressure. All lines, hoses and screw joints should regularly be checked for leaks and external damage. Any damage must be rectified immediately.

Hydraulics

⚠ Only persons with special knowledge and experience with hydraulic systems may carry out work on hydraulic parts and equipment. All lines, hoses and screw joints should regularly be checked for leaks and visible external damage. Any damage must be rectified immediately. Any oil spurting out can cause injuries and fire.

The relevant safety regulations for the product must be followed when handling oils, greases or other chemical substances!

Servicing and maintenance

⚠ According to the statutory regulations only specialist companies certified to §19l WHG may carry out work on systems for water hazardous liquids. No alterations, extensions, or conversions of the device with potential impact upon safety are permitted without prior consent of the manufacturer. Spare parts must comply with the technical requirements specified by the manufacturer. This is always assured if genuine spare parts are used.

Electric power

⚠ Work on the electrical equipment may only be carried out by a qualified electrician or by trained persons under the guidance and supervision of a qualified electrician according to electro-technical guidelines. Machine or system components, on which inspection, maintenance or repair work is to be carried out must be de-energised.

2 Technical description

2.1 Product Description

Draught cart, pneumatic

The draught cart is a navigable, pneumatically operated device for the extraction of waste engine and gearbox oil from motor vehicles. The unit can also be used for the extraction of other non-aggressive fluids classed below and in dangerous goods class AIII (German VbF).

⚠ **The draught cart must not be operated with flammable and/or explosive fluids of the dangerous goods class AI, AII and B (German VbF). Fluids of the dangerous goods class AIII may not be used in operation if heated beyond their flashpoint. In this case there is danger of explosion!**

The standard design of the device consists of a firm undercarriage with 2 driving and 2 steering castors with locks. An 80 liter tank with an overfill-display made of stainless steel is firmly mounted on the frame. The pneumatic pump integrated in the device can be used for extraction as well as draining the device. The changeover switch is located on the pump. The start button and a vacuum gauge to control the extraction process are located on the control panel.

The extraction of the oil from the engines is effected with a suction probe or extraction adapter. The extracted oil is conveyed into the firmly mounted 80 liter tank. The tank is drained with a draining hose with a stop valve.

2.2 Technical data

Pump	Pneumatic double membrane pump	Empty weight	approx. 60 kg
		Volume conveyed	20 l/min*
Transmission ratio	1:1	Pressure reducer valve	7 bar
Conveyance pressure max.	7bar	Overfill display	approx. 60 Liter
width x height x depth	910x520x880	Viscosity max.	5000 mm^2/s
		Operating temperature	max. 50°C

* depending on viscosity

2.3 Accessories

			Item no.
Connection adapter with insertion pin DN 20 for direct drainage			**043711691**
Fast coupling G ¾“ for mounting into a waste oil main			**027184402**
Fast coupling G 2½“ for mounting on a waste oil collecting tank			**043549452**
Air hose with hose coupling			**029030631**
Suction probes			
Rigid	∅5 mm	645 mm	**027027011**
Flexible	∅5,4 mm	676 mm	**027027051**
Flexible	∅5,4 mm	950 mm	**027027141**
Rigid	∅6 mm	645 mm	**027027021**
Flexible	∅8 mm	700 mm	**027027072**
MB/ VA Adapter			**027028011**

3 Operation

3.1 Extraction

The draught cart is delivered fully mounted and is ready for operation as soon as it is connected to a compressed air supply.

☛ **Use exclusively dry and non-lubricated air.**

Select an appropriate suction probe / extraction adapter and connect to the fast coupling of the suction hose. Insert the suction probe in the dip stick pipe into the deepest point of the oil sump. When extracting with an adapter, fix it directly onto the dip stick pipe. Press the start button, the extraction process begins. The pointer deflection of the vacuum gauge indicates the vacuum generated by the pump.

When the extraction process is completed (decreasing vacuum), the pump automatically shuts off. Check whether the oil has been completely extracted with the dip stick, if not repeat the extraction process. Place the suction probe in the quiver, and release the suction hose.

⚠ **Disconnect the device from the compressed air supply during breaks!**

3.2 Adjustment of the Pilot Valve

The adjustment of the pilot valve determines the vacuum value at which the extraction process is automatically terminated. The adjustment of the valve does not affect the extraction capacity (vacuum).

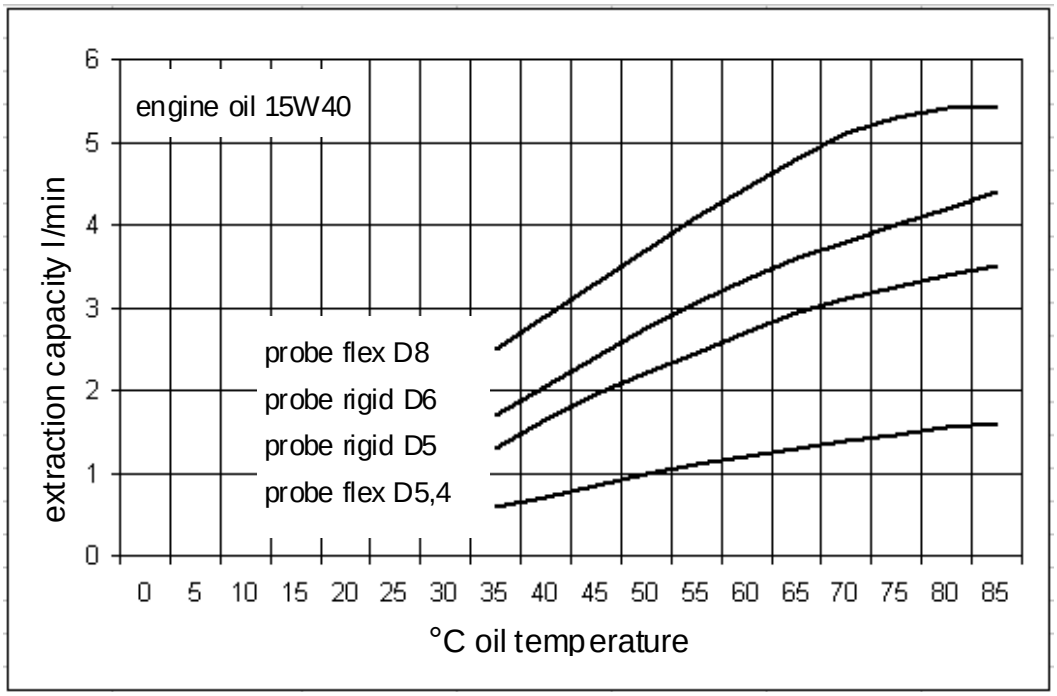
Adjustment	For oil temperature	for suction probe
HOT	> 80° C	Ø5,4 and Ø8
WARM (Standard)	60° – 80° C	Ø8
COLD	< 60° C	Ø5,4

3.3 Extraction Capacity

The extraction capacity of the device depends upon the characteristics of the medium and the selected suction probe:

- Whenever possible extract oil at operating temperature.
- Select the suction probe (adapter) with the largest possible profile.

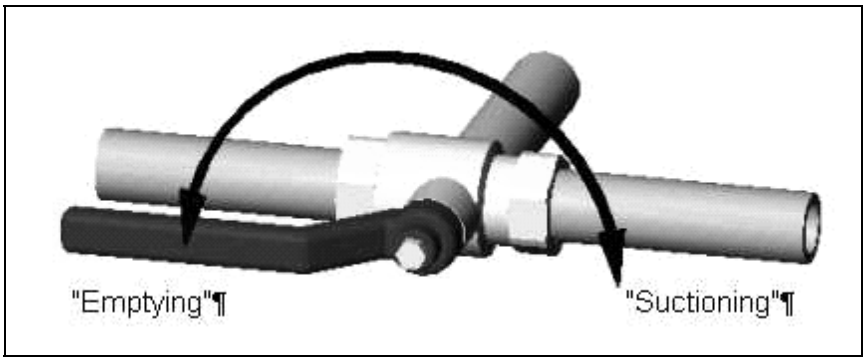
The diagram represents standard values of the extraction capacity.



3.4 Draining the Tank

When the red signal pin on the overfill display appears, the tank must be drained. The current extraction process can be completed (remaining volume approx. 20 liters).

Open the door of the device and take out the draining hose. Hold the end part in an appropriate waste oil tank. Turn the handle of the ball valve to the draining position (left). Connect the suction main to the insertion pin located in the filter panel on the tank. Start the extraction process as described in the chapter operation, the draining process begins. The pump automatically shuts off when the draining process is completed.



! **By turning the handle back to the extraction position (right), the drauht cart is ready for operation.**

To drain the device without using compressed air, a drain plug is located on the base of the tank.

4 Fault display

4.1 What to do if.....?

.... the device shuts off although the oil is not completely extracted?
- The start valve shuts off prematurely with decreasing vacuum – change the setting of the valve (clockwise rotation).

.... the device does not shut off although the oil is completely extracted.
- The start valve shuts off too late with decreasing vacuum – change the setting of the valve (anti clockwise rotation).

.... the extraction power is insufficient.
- The suction main has a leak – seal it.
- The suction probe / the extraction adapter is soiled or damaged – clean or replace it.
- The o-seals of the extraction adapter are damaged – replace them.

5 Maintenance

5.1 Cleaning the system

The tank and the pump are to be rinsed with diesel fuel at regular intervals (at least once a year). This is done by carrying out the extraction process as described in the chapter “operation” with diesel fuel.

Clean the device only with cold or warm water. Avoid strong detergents and soaps. If using a water hose, do not direct water streams onto the paintwork. Do not use steam or similar agents.

5.2 Suction probes / Adapters

The suction probes / adapters are to be checked for dirt or damage regularly, and if necessary cleaned or replaced.

5.3 Filter

The filter of the water separator is to be emptied and cleaned regularly. Check the setting of the pressure reducer valve. The intact seal of the valve will guarantee the maximum value adjusted by the plant (7 bar).

6 Service

The Draught cart was developed with the aim of enabling operation with the minimum maintenance costs. This can be achieved if you operate this device according of this operating manual. However, if you should require further assistance, please contact the Horn service department:

7 Declaration of Conformity

DEUTSCHE TECALEMIT

Declaration of conformity

in the sense of the EC machinery directive 89/392/EWG, Annex II A

We herewith declare that the construction type

Designation:	**Draught cart, pneumatic**
Machine type:	**oil suction device, mobile, pneumatic**
Item No.:	**1.38 69 50.4**

For technical data see type specification plate and technical documentation.

in the form as delivered by us complies with the following applicable regulations:

- Machinery directive, version 98/37/EEC

Applied harmonised standards,
in particular

EN 292 T1 and T2 **EN 60204 T1**

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