

Operating Instructions
Diesel forklift truck

Linde Material Handling

H14D, H16D, H18D, H20-600D, H20D

391 807 1001 EN – 02/2007

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The roof windscreen wiper is in continuous mode. The front windscreen wiper is in intermittent mode.

Switch on the wiper/washer system

- Switch on the appropriate windscreen wiper.
- In addition, push the operating lever (1) in as far as it will go.

The preselected wiper/washer system is switched on as long as the lever is pressed.

Heating, air conditioning

Switch on heating

- Turn switch (3).

The blower is switched on to any of three air flow settings.

Operating elements

- Rotary knob (1) for setting the vent positions for windscreen defrosting - positions for windscreen defrosting - footwell ventilation
- Rotary knob (2) for temperature control
- Rotary switch (3) for setting blower
- Interior air vents (4)



Windscreen defrosting

- For maximum windscreen defrosting set the
- rotary knob (2) to the end position on the right
- Turn rotary knob (1) to the windscreen defrosting position (max. position on the left)
- rotary switch (3) to setting level 3
- interior air vents (4) to open, louvres forwards.

For standard heating operation the following rules apply:

- Select the temperature using the rotary knob (2) (end position on the left → cold / end position on the right → hot)
- Use the blower switch (3) (setting level 1 to 3), air distribution vent (rotary knob (1)) and

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Inspection and maintenance overview

Inspection and maintenance every 3,000 operating hours or every 2 years

- Change feed / pressure / suction filter and breather of hydraulic system
- Change ribbed V-belt
- Change safety cartridge of air filter
- Check tilt cylinder bearing for wear
- Check drive axle bearing for wear
- Hydraulic pump on engine: check fastening
- Change toothed belt and tension pulley (at latest after 5 years)
- Check slide guides on sideshift for wear
- Check fork arm adjustment device for wear and tear

Inspection and maintenance every 6000 hours or every 3 years

- Renew the hydraulic oil

Inspection and maintenance every 9000 hours or every 4 years

- Change the coolant pump
- Change the coolant G12

Inspection and maintenance data

No	Units	Devices / fuels	Fill quantity / Setting values
1	Engine	Engine oil	approx. 4.5 l
2	Fuel tank	Diesel	approx. 36.5 l
3	Cooling system	Coolant additive / drinking water	with heater/air conditioning: approx. 8.0 l
			without heater / air conditioner: approx. 8.0 l
4	Hydraulic system	Hydraulic oil	Standard mast lift height to 5410 mm Duplex mast: all stroke heights. Triplex mast: stroke height of 4775 mm or less. approx. 13.0 l
			Standard mast: stroke height of 5510 mm or higher. Triplex mast lift height 4925-7475 mm approx. 16.5 l

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Hydraulic system: Check oil level

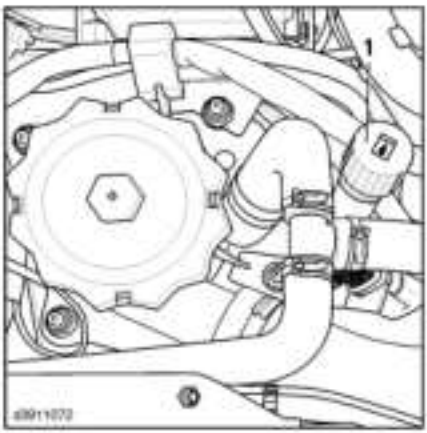
ENVIRONMENT NOTE

Take note of information about working materials.

NOTE

Oil specifications: see Recommendations for working materials

- Fully lower fork carriage.
- Unscrew the breather (1) with the oil dipstick on the left-hand side of the vehicle.



NOTE

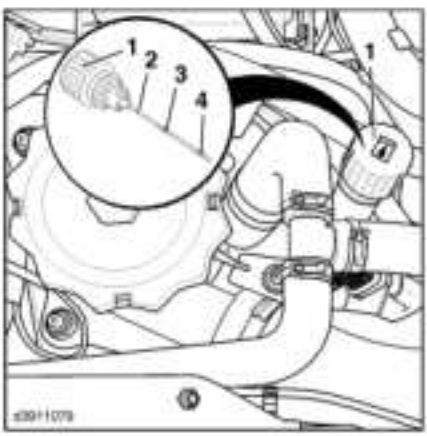
Tank under low pressure. A small amount of air will escape.

- Wipe oil dipstick with a clean cloth.

NOTE

There are 2 markings ("1" and "2") on the oil dipstick (2). These apply to the various types of lift mast and stroke heights.

- Only check the marking which applies to your truck.



Marking "1"(4)

- Standard mast with stroke height of 5410 mm or less.
- Duplex mast: all stroke heights.
- Triplex mast with stroke height of 4775 mm or less.

Marking "2"(3)

- Standard mast with stroke height of 5510 mm or higher.
- Triplex mast with stroke height between 4825 and 7475 mm.

- Screw the refit breather with oil dipstick completely in and then unscrew it again.

The oil level should be on the dipstick between the marking for the stroke height in question.

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Malfunctions, causes, remedies (hydraulic equipment)

Abnormal noises.	
Possible cause	Correction
Clogged suction filter.	Replace the filter.
Leaks in the suction pipe line, oil foaming.	Seal the pipe line. Check the hydraulic oil level, top up as necessary.
Hydraulic pump or motor damage, defective seals, causing air to be drawn in.	Have the hydraulic power unit checked by your authorised dealer.
Incorrect oil viscosity, insufficient oil in the tank or hydraulic pump.	Change the hydraulic oil; ensure the oil has the specified viscosity. Top up hydraulic oil.

No pressure or insufficient pressure in the system.	
Possible cause	Correction
Suction line damaged, noisy.	Change the hydraulic oil, top up the hydraulic oil.
Defective pump, loss of pressure, pressure valves fail to close, valve seat damaged.	Contact your authorised dealer.
Pipe line broken or leaking.	Replace pipe line or seal it.
Oil too thin, causing excessive leakage losses.	Change the hydraulic oil; ensure the oil has the specified viscosity.
Oil temperature indicator lights up.	Check hydraulic oil level, clean hydraulic oil cooler.

Oil pressure fluctuations.	
Possible cause	Correction
Causes as for abnormal noises.	See under abnormal noises.
Pressure relief valve or feed pressure valves jamming.	Please contact your authorised dealer.
Lift and tilt cylinders exhibit chafe points.	Please contact your authorised dealer.
Lift mast does not extend fully, or leans back somewhat.	Top up hydraulic oil. Bleed the cylinders.

No flow or insufficient flow.	
Possible cause	Correction
Clogged filters (if noises also occur at the same time).	Clean the filter or replace it.
Defective pump, loss of pressure, pressure valves fail to close, valve seat damaged.	Contact your authorised dealer.
Pipe line broken or leaking.	Replace pipe line or seal it.

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Duplex lift mast (in mm)					
Lift	h 3	H 14/16/18/20	3125	3826	--
Overall heights retracted with specified free lift	h 1	H 14/16/18/20	2121	2471	--
Overall height extended	h 4	H 14/16/18/20	3727	4427	--
Free lifting	h 2	H 14/16/18/20	1518	1868	--

Triplex lift mast (in mm)					
Lift	h 3	H 14/16/18/20	4625	5475	--
Overall heights retracted with specified free lift	h 1	H 14/16/18/20	2121	2471	--
Overall height extended	h 4	H 14/16/18/20	5227	6077	--
Free lifting	h 2	H 14/16/18/20	1518	1781	--

Other lift heights on request

Vibration characteristic values for bodily vibrations

The values were determined according to EN 13059 using trucks with standard equipment according to the data sheet (driving over test course with humps).

Specified vibration characteristic according to EN 12096			
Measured vibration characteristic	$a_{hv,ZS}$	=	0.7 m/s^2
Insecurity	K	=	0.2 m/s^2

Specified vibration characteristic for hand-arm vibrations	
Vibration characteristic	< 2.5 m/s^2

NOTE

The vibration characteristic for bodily vibrations cannot be used to determine the actual load level of vibrations during operation. This depends on the operating conditions (state of pathway, method of operation etc.) and should therefore be determined on site, where appropriate. It is mandatory to specify the hand-arm vibrations even where the values do not indicate any hazard, as in this case.

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