1 Multi-function display
2 Rotary switch for flashing beacon*
3 Rotary switch for lighting (StVZO)*
4 Rotary switch for hazard light system*
5 Rotary switch for direction indicators left/right*
6 Rotary switch for working head lights*
7 Rotary switch vibration high/low frequency

* Optional equipment

8 Rotary switch for speed range selection
9 Push button for warning horn
10 Emergency stop push button
11 Ignition switch (at the side)
12 Push button for vibration
13 Travel lever
14 Throttle lever
15 Locking plate for throttle lever

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4.1 General notes

Please read section 3 Indicators and Control Elements thoroughly before operating the machine if you are not yet fully familiar with the indicators and control elements of the machine.

All indicators and control elements are described in detail in this chapter.

4.2 Tests before taking into operation

The following inspections must be carried out before each working day or before a longer working period.

⚠ Danger

Danger of accident!

Please observe strictly the safety regulations in chapter 2 of this instruction manual!

- Park the machine on ground as level as possible.

Check:

- fuel tank and fuel lines for leaks
- screw joints for tight fit
- function of steering
- machine for cleanliness, damage
- presence of the appropriate operating and maintenance instructions
- check whether the machine has been properly serviced.

i Note

For a description of the following tasks refer to the chapter "maintenance every 10 operating hours".

- Engine oil level

i Note

In hydraulic systems filled with Panolin HLP Synth. 46 always use the same oil to top up. With other ester based oils consult the lubrication oil service of the respective oil manufacturer.

- Check the hydraulic oil level, top up if necessary.

⚠ Danger

Fire hazard!

Do not refuel in closed rooms.

- Check the fuel level, top up if necessary.
- Check water separator in fuel system, drain if necessary.

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5.1 General notes on maintenance

When performing maintenance work always comply with the appropriate safety regulations.

Thorough maintenance of the machine guarantees far longer safe functioning of the machine and prolongs the lifetime of important components. The effort needed for this work is only little compared with the problems that may arise when not observing this rule.

The terms right/left correspond with travel direction forward.

- Always clean machine and engine thoroughly before starting maintenance work.
- For maintenance work stand the machine on level ground.
- Perform maintenance work only with the engine shut down.
- Relieve hydraulic pressures before working on hydraulic lines.
- Before working on electric parts of the machine disconnect the battery and cover it with insulation material.
- When working in the area of the articulated joint attach the articulation lock (transport lock).

Environment

During maintenance work catch all oils and fuels and do not let them seep into the ground or into the sewage system. Dispose of oils, coolant and fuels environmentally.

Notes on the fuel system

The lifetime of the diesel engine depends to a great extent on the cleanliness of the fuel.

- Keep fuel free of contaminants and water, since this will damage the injection elements of the engine.
- Drums with inside zinc lining are not suitable to store fuel.
- The fuel drum must rest for a longer period of time before drawing off fuel.
- Do not let the hose stir up the slurry at the bottom of the drum.
- Do not draw off fuel from near the bottom of the drum.
- The rest in the drum is not suitable for the engine and should only be used for cleaning purposes.

Notes on the performance of the engine

On diesel engines both combustion air and fuel injection quantities are thoroughly adapted to each other and determine power, temperature level and exhaust gas quality of the engine.

If your engine has to work permanently in "thin air" (at higher altitudes) and under full load, you should consult the customer service of BOMAG or the customer service of the engine manufacturer.

Notes on the hydraulic system

During maintenance work on the hydraulic system cleanliness is of major importance. Make sure that no dirt or other contaminating substances can enter into the system. Small particles can produce flutes in valves, cause pumps to seize, clog nozzles and pilot bores, thereby making expensive repairs inevitable.

- If, during the daily inspection of the oil level the hydraulic oil level is found to have dropped, check all lines, hoses and components for leaks.
- Seal external leaks immediately. If necessary inform the responsible customer service.
- Do not store drums with hydraulic oil outdoors, or at least under a cover. Water can be drawn in through the bunghole when the weather changes.
- Always use the filling and filtering unit (BOMAG part-no. 007 610 01) to fill the hydraulic system. This unit is fitted with a fine filter to clean the hydraulic oil, thereby prolonging the lifetime of the filter.
- Clean fittings, filler covers and the area around such parts before disassembly to avoid entering of dirt.
- Do not leave the tank opening unnecessarily open, but cover it so that nothing can fall in.

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6.2 Engine

Faults	Possible cause	Remedy
The engine does not start	Starter defective or pinion not engaging	Have examined by a specialist
	Fuel tank empty	Fill and bleed the tank
	Temperature below starting limit	Use winter fuel and engine oil acc. to the ambient temperature.
	Fuel filter clogged, in winter due to paraffin separation.	Change the filter. use winter fuel
	Fuel lines leaking	Check all line connections for leakages and tighten the fittings.
	Battery discharged or not connected	Tighten the pole clamps, check the cable connections
	Injection valves or injection pump defective	Have examined by a specialist
The engine starts poorly and works irregularly with poor power	Battery power too low, battery clamps loose or oxidized, causing the starter to turn too slowly	Have the battery checked, clean the terminal clamps, tighten them and cover them with acid free grease
	Especially during winter: the use of too viscous engine oil	Use engine oil suitable for the ambient temperature
	Fuel supply restricted, in winter fuel system clogged due to paraffin separation	Change the fuel filter. Check the line connections for leaks and tighten the fittings. Use winter fuel in the cold season.
	Incorrect valve clearance	Adjust the valve clearance
	Injection valve defective	Have examined by a specialist
	Injection lines leaking	Check the lines for leakages
	Turbo charger defective	Have examined by a specialist
	Dry air filter dirty	clean, replace if necessary
	Excessive play in the throttle cable	Adjust the throttle cable, change it if necessary

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General

This BOMAG machine is built in accordance with the latest technical standard and the valid technical rules and regulations. There is, however, a risk of danger for persons and property if:

- the machine is used for purposes other than those it is intended for
- the machine is operated by untrained personnel
- the machine is modified or converted in an unprofessional way
- the applicable safety regulations are not observed.

Each person involved in operation, maintenance and repair of the machine must therefore read and apply these safety regulations. This should be confirmed by obtaining the signatures of the customer, if necessary.

Furthermore the following regulations and instructions are obviously also valid:

- applicable accident prevention instructions
- generally acknowledged safety and road traffic regulations
- country specific safety regulations. It is the duty of the operator to know and observe these regulations. This applies also for local regulations and the regulations for various types of manual work. If the recommendations in this manual differ from the regulations valid in your country, you must strictly observe the regulations in your country.

Intended use

This machine must only be used for:

- compaction of bituminous materials, e.g. road surface layers. (AC and AD machines only)
- medium and heavy compaction tasks in earth work (road sub-bases)
- This machine must only be operated with fully functional safety equipment.
- The machine should be checked by an expert once every year.

Unintended use

Dangers may, however, arise from the machine if it is used by untrained personnel in an unprofessional way or if it is used for purposes other than those mentioned in these instructions.

Do not work with vibration on hard concrete, on a cured concrete layer or heavily frozen ground.

Starting and operation of the machine in an explosive environment is prohibited.

Who is allowed to work with the machine?

The machine must only be operated by trained and authorized persons which are at least 18 years of age. The responsibilities for the operation of the machine must be clearly specified and complied with.

Persons under the influence of alcohol, medication or drugs must not operate, service or repair the machine.

Maintenance and repair tasks require specific knowledge and must therefore only be carried out by trained and qualified personnel.

Conversions and alterations to the machine

Unauthorized conversions to the machine are prohibited for safety reasons.

Original parts and accessories have been specially designed for this machine. We wish to make expressly clear that we have not tested or authorized any original parts or special equipment not supplied by us. The installation and/or use of such products can impair the active and/or passive driving safety. The manufacturer expressly excludes any liability for damage resulting from the use of non-original parts or accessories.

Safety notes in the operating and maintenance instructions:

⚠ Danger

Sections marked like this point out possible dangers for persons.

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Please fill in

. . . . . .

Machine type (Fig. 1)

. . . . . .

Serial-number (Fig. 1 and 2)

. . . . . .

Engine type (Fig. 3)

. . . . . .

Engine number (Fig. 3)

i Note

Supplement the above data together with the commissioning protocol.

During commissioning our organisation will instruct you in the operation and maintenance of the machine.

Please observe strictly the safety regulations and all notes on risks and dangers!

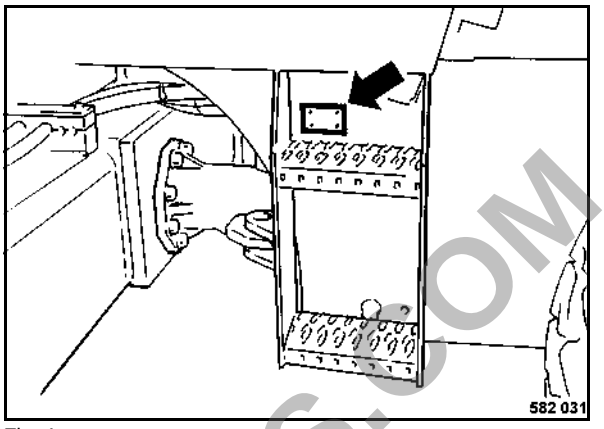


Fig. 1

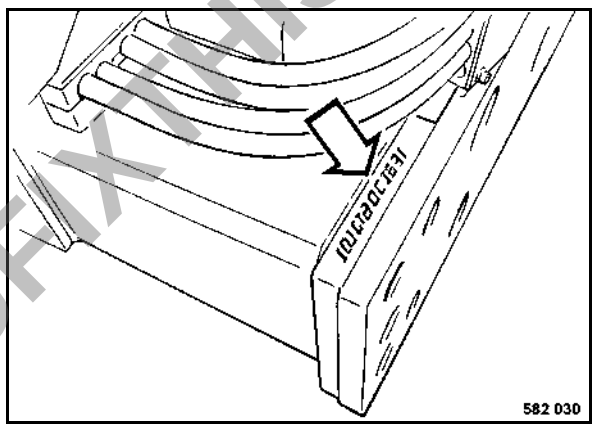


Fig. 2

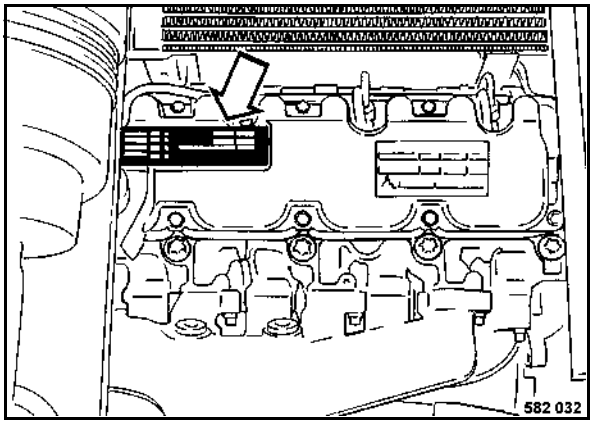


Fig. 3

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When using fuels with a sulphur content of more than 0.5% to 1% or under ambient temperatures below -10 °C the oil change intervals specified in the table must be halved. For fuels with a sulphur content of more than 1% you should consult the responsible service agency.

Fuels

Quality

You should only use commercially available brand diesel fuel with a sulphur content below 0.5% and ensure strict cleanliness when filling in. A higher sulphur content has a negative effect on the oil change intervals. Use only winter-grade diesel fuel under low ambient temperatures. The fuel level should always be topped up in due time so that the fuel tank is never run dry, as otherwise filter and injection lines need to be bled.

When using fuels with a Cetan number < 49 poor starting and white smoke can be expected, in particular in connection with low ambient temperatures.

The following fuel specifications are permitted: DIN/EN 590; DIN 51 601; Nato Codes: F-54, F-75; BS 2869: A1 and A2; ASTM D 975-78: 1-D and 2-D.

- DIN/EN 590
- BS 2869
- ASTM D 975-78: 1-D and 2-D.
- Nato Codes: F-54, F-34, F44 und XF63

Winter fuel

⚠ Danger

Diesel fuels must never be mixed with gasoline.

For winter operation use only winter diesel fuel, to avoid clogging because of paraffin separation. At very low temperatures disturbing paraffin separation can also be expected when using winter diesel fuel.

In most cases a sufficient cold resistance can also be achieved by adding flow enhancing fuel additives. Consult the engine manufacturer.

Operation with rape seed oil methyl ester (RME „Bio Diesel“)

Due to the extreme quality differences of RMEW-fuels available on the market, which are caused by the non-existence of a standardization, BOMAG does generally not approve any RME-fuels. If this is neglected the warranty will become null and void!

However, if you still intend to operate the machine with RME-fuels you should observe the following information:

- Reduced engine power (approx. 7%), higher fuel consumption.
- The quality of RME-fuel should be in compliance with DIN draft 51606.
- Avoid longer periods of standstill (formation of resin, corrosion in injection system)
- RME-fuel can damage the paint finish of the machine.
- Fuel dilution of engine oil, therefore shortening of oil change intervals to half.
- Rubber parts, such as leak fuel return lines, seats will be damaged in the long run and need to be replaced on a regular basis or should be replaced by parts made of fluorinated rubber. However, fluorinated rubber is not resistant against normal diesel fuel.
- If the fuel filter is clogged the filter change intervals must be shortened accordingly.

Hydraulic oil

The hydraulic system is operated with hydraulic oil HV 46 (ISO) with a kinematic viscosity of 46 mm^2/s at 40°C. For topping up or for oil changes use only high-quality hydraulic oil, type HVLP according to DIN 51524, part 3, or hydraulic oils type HV according to ISO 6743/3. The viscosity index (VI) should be at least 150 (observe information of manufacturer).

Bio-degradable hydraulic oil

On request the hydraulic system can also be filled with ester based biodegradable hydraulic oil (Panolin HLP Synth. 46). The biologically quickly degradable hydraulic oil meets all demands of a mineral oil based hydraulic oil according to DIN 51524.

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