

BOMAG

FAYAT GROUP

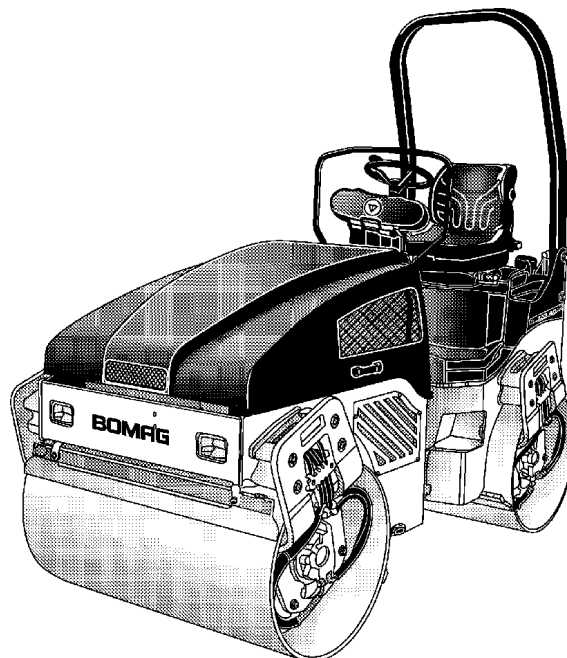
Operating instructions Maintenance instructions

Original operating instructions

BW 100 AD-4 / BW 120 AD-4 / BW 125 AD-4

BW 100 AC-4 / BW 120 AC-4 / BW 125 AC-4

S/N 101 880 06 > / S/N 101 880 16 > / S/N 101 880 08 > / S/N 101 880 14 > / S/N 101 880 10 >
S/N 101 880 07 > / S/N 101 880 17 > / S/N 101 880 09 > / S/N 101 880 15 > / S/N 101 880 11 >



Tandem Vibratory Roller

Combination Roller

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Technical Data

1		BW 100 AD-4	BW 120 AD-4	BW 125 AD-4
Travel characteristics				
Working speed with vibration	km/h	0 – 6.5	0 – 6.5	0 – 6.5
Travel speed	km/h	0 – 12	0 – 12	0 – 12
Max. gradability without/with vibration (soil dependent)	%	40/30	40/30	40/30
Drive				
Engine manufacturer		Kubota	Kubota	Kubota
Type		D 1703-M-EU34	D 1703-M-EU34	D 1703-M-EU34
Cooling		Water	Water	Water
Number of cylinders		3	3	3
Rated power ISO 9249	kW	24.3	24.3	24.3
Rated power SAE J 1349	hp	32.6	32.6	32.6
Rated speed	min ⁻¹	2600	2600	2600
Fixed engine speed 1	min ⁻¹	2400	2400	2400
Fixed engine speed 2	min ⁻¹	2600	2600	2600
Electrical equipment	V	12	12	12
Brake				
Service brake		hydrost.	hydrost.	hydrost.
Parking brake		hydro-mech.	hydro-mech.	hydro-mech.
Steering				
Type of steering		Oscill.-articul.	Oscill.-articul.	Oscill.-articul.
Steering operation		hydrost.	hydrost.	hydrost.
Steering/oscillation angle	+/- °	30/7	30/7	30/7
Exciter system				
Vibrating drum		front + rear	front + rear	front + rear
Drive system		hydrost.	hydrost.	hydrost.
Frequency 1/2	Hz	70/55	70/55	60/50
Amplitude	mm	0.50	0.51	0.40
Centrifugal force 1/2	kN	37/23	45/28	41/29
Water sprinkler system				
Type		Gravity feed	Gravity feed	Gravity feed
Filling capacities				
Fuel (diesel)	l	approx. 40	approx. 40	approx. 40
Water tank capacity	l	approx. 220	approx. 220	approx. 220
Hydraulic oil	l	approx. 28	approx. 32	approx. 32
Engine oil	l	approx. 6,5	approx. 6,5	approx. 6,5

1 The right for technical modifications remains reserved

2 Optional equipment

Safety regulations

Before mounting the machine check whether:

- persons or obstructions are beside or under the machine
- the machine is free of oily and combustible material
- all grips, steps and platforms are free of grease, oils, fuel, dirt, snow and ice
- engine hood is closed and locked

Use steps and grips to mount the machine.

Before starting the machine check whether:

- the machine shows any obvious faults
- all guards and safety elements are in place
- steering, brakes, control elements, light system and warning horn work correctly
- the seat is correctly adjusted
- mirrors (if present) are clean and correctly adjusted.

Do not start the machine with defective gauges, control lights or control elements.

Do not take any loose objects with you or fasten them to the machine.

On machines with roll over protection system you must always wear your seat belt!

Starting

Start and operate the machine only from the driver's seat.

For starting set all control levers to 'neutral position'.

Do not use any starting aids like start pilot or ether.

After starting check all gauges and control lights.

Starting with jump wires

Connect plus to plus and minus to minus (ground cable) – always connect the ground strap last and disconnect it first! A wrong connection will cause severe damage in the electric system.

Do not start the engine by shorting the electric terminals on the starter motor, because the machine may start to drive immediately.

Starting and operation of the machine in closed rooms and trenches

Exhaust gases are highly dangerous! Always ensure an adequate supply of fresh air when starting and operating in closed rooms and trenches!

Driving the machine

Persons in the danger area

Before taking up work, also after breaks, you should always convince yourself that the danger zone is free of persons or obstructions, especially when driving in reverse.

Give warning signals, if necessary. Stop work immediately if persons remain in the danger zone, despite the warning.

Do not step or stand in the articulation area of the machine when the engine is running. Danger of squashing!

Driving

Always wear the seat belt when driving.

Do not drive on bases with insufficient load bearing capacity.

Do not drive on ice and snow.

In events of emergency and in case of danger actuate the emergency stop switch immediately. Do not use the emergency stop switch as service brake.

Restart the machine only after the danger that caused the actuation of the emergency stop switch has been eliminated.

If the engine oil pressure control light lights up stop the engine immediately.

If the machine has contacted high-voltage power lines:

- do not leave the operator's stand
- warn others from coming close to or touching the machine
- if possible drive the machine out of the danger zone
- have the power switched off

Operate the machine only from the operator's stand.

Keep the cabin doors closed.

Do not adjust the driver's seat while driving.

Do not climb onto or off the machine while the machine is driving.

Change the travel direction only at standstill.

Do not use the machine to transport persons.

4 Indicators and Controls

Indicators and Controls

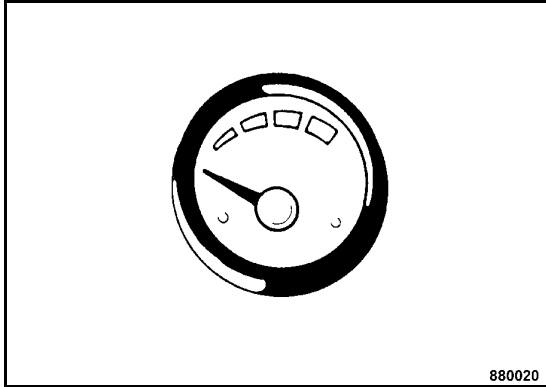


Fig. 42

No. 20 = Water level gauge

shows the water level inside the water tank.

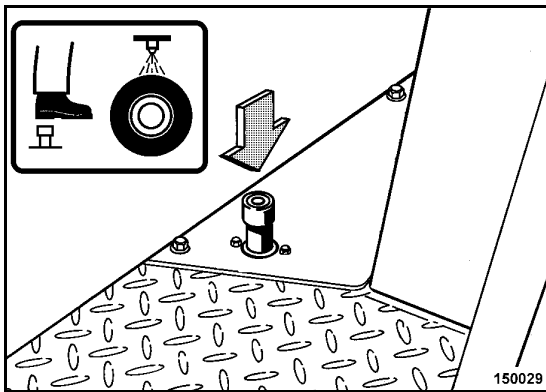


Fig. 43

No. 21 = Foot switch for tire sprinkler system (only AC)

press = Sprinkler system switched on
release = Sprinkler system switched off

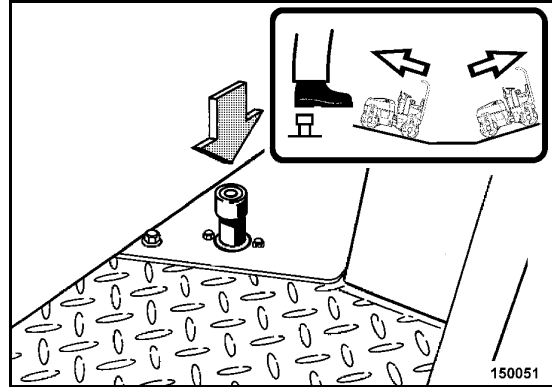


Fig. 44

Foot switch for flow divider¹ (only AD)

press = flow divider switched on
release = flow divider switched off

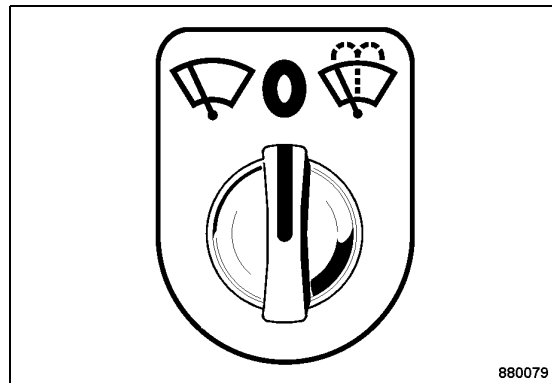


Fig. 45

No. 22 = Rotary switch/button for windscreen wiper/washer²

Position "left" = The windscreen wiper is switched on
Position "middle" = The windscreen wiper is switched off
Position "right" (button) = The windscreen wiper/washer is switched on

1 Optional equipment
2 Optional equipment

Operation

5.7 Driving the machine

⚠ Danger

Danger of accident!

Wet and loose soils considerably reduce the ground adhesion of the machine on inclinations and slopes.

Soil conditions and weather influences impair the climbing ability of the machine.

Do not drive up and down inclinations which exceed the maximum gradability of the machine (see chapter "technical data").

Driving across slopes should therefore be strictly avoided, because of the high risk of tipping over and the related risk of severe or even fatal accidents.

You should therefore always drive straight up or down a slope.

For rollers with a drum width of 1 m or less there is a considerable risk of tipping over near edges (e.g. curbstones, embankments, trenches, potholes) when driving over these edges.

Do not drive without wearing your seat belt.

Always give way to loaded transport vehicles!

Before starting to drive make sure that the drive range is absolutely safe.

Drive and operate the machine only from the driver's seat.

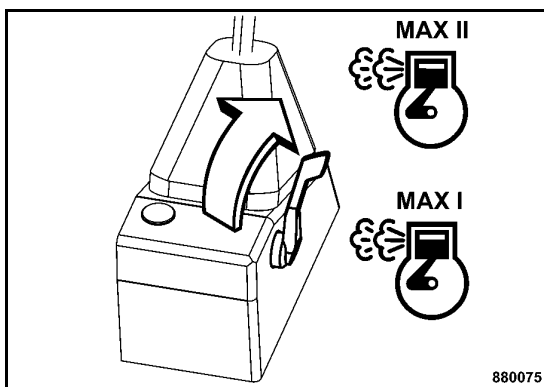


Fig. 62

- Set the throttle lever (Fig. 62) to full load position "Max I" or "MAX II".

⚠ Caution

During operation the throttle lever always remains locked in one of the full load positions. Control the travel speed with the travel lever.

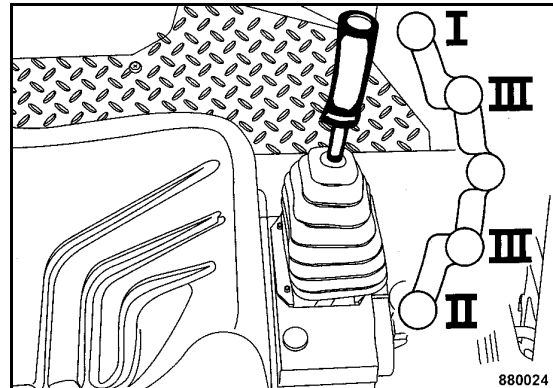


Fig. 63

⚠ Caution

Do not operate jerkily!

- Disengage the travel lever (Fig. 63) out of braking position and move it slowly to the desired travel direction.

Position "I" = max. forward travel without vibration

Position "II" = max. backward travel without vibration

Position "III" = Max. forward/backward travel with vibration

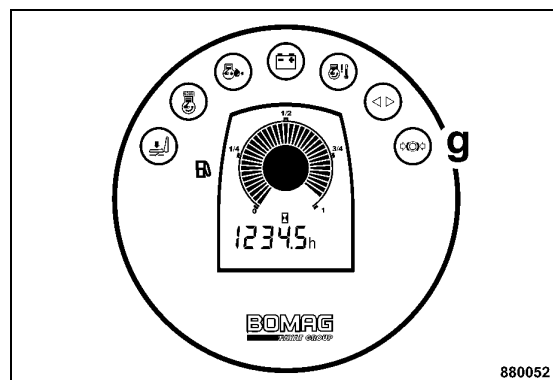


Fig. 64

The parking brake warning light (g) (Fig. 64) in the instrument cluster goes out.

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Operation

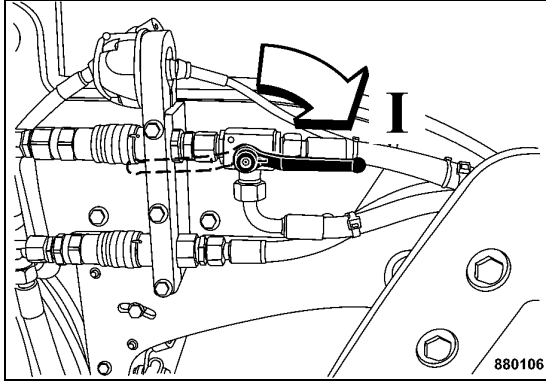


Fig. 91

- Turn the ball valve for the chip spreader to position "I" (Fig. 91).

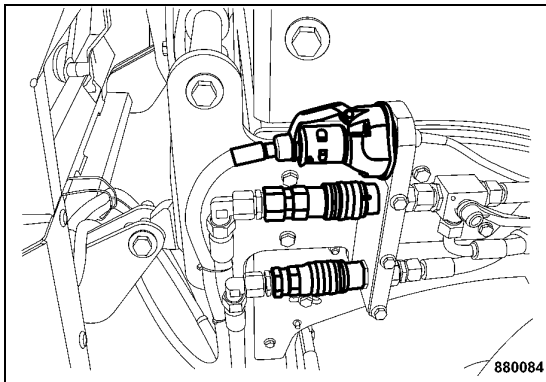


Fig. 92

- Disconnect the chip spreader hydraulically and electrically from the machine (Fig. 92).

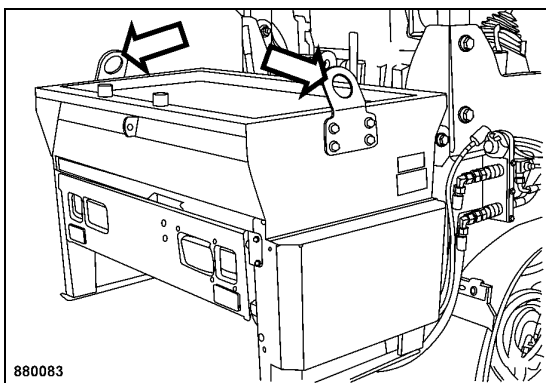


Fig. 93

- Hook the chip spreader to the fastening points (Fig. 93).

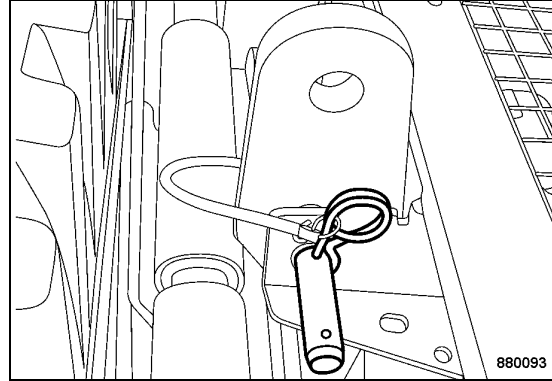


Fig. 94

▲ Danger

Danger of accident!

Before pulling out the bolt (Fig. 94) make sure that the chip spreader is mounted correctly.

- Remove the cotter pin and pull out the bolt.
- Lift the chip spreader out of the fastening points on the machine and place it on level and firm ground.

6 Maintenance

Every 10 operating hours

6.6 Check the engine oil level

⚠ Caution

The machine must be in horizontal position. When the engine is warm, shut it down and check the oil level after five minutes. With a cold engine the oil level can be checked immediately.

For quality and quantity of oil refer to the "table of fuels and lubricants".

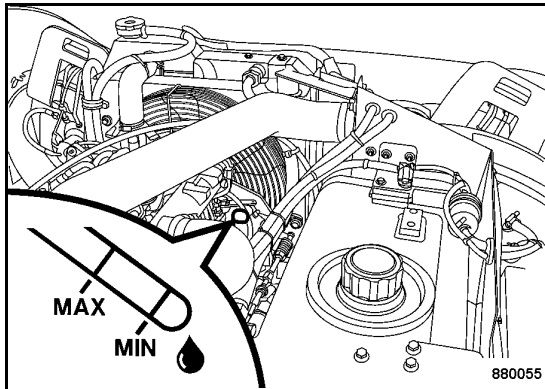


Fig. 119

- Pull the dipstick (Fig. 119) out, wipe it off with a lint-free, clean cloth and reinsert it until it bottoms.
- Pull the dipstick back out.

The oil level must always be between the "MIN"- and "MAX"-marks.

- If the oil level is too low top up oil immediately.
- If the oil level is too high, determine the cause and drain the oil off.

6.7 Checking the fuel level

⚠ Caution

Do not drive the fuel tank dry, as otherwise the fuel system needs to be bled.

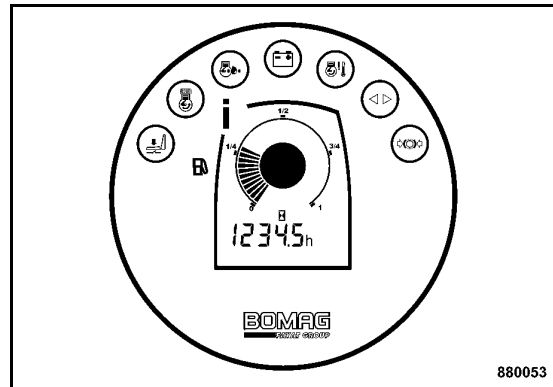


Fig. 120

- Check the fuel level on fuel gauge (i) (Fig. 120) in the instrument cluster.

Refuelling

⚠ Danger

Fire hazard!

When working on the fuel system do not use open fire, do not smoke, do not spill any fuel.

Do not refuel in closed rooms.

Shut down the engine.

⚠ Danger

Health hazard!

Do not inhale any fuel fumes.

⚠ Caution

Contaminated fuel can cause malfunction or even damage of the engine. If necessary, fill in fuel through a funnel with screen.

Monitor the entire refuelling process.

For quality and quantity of fuel refer to the "table of fuels and lubricants".

Every 250 operating hours

6.18 Checking, cleaning, replacing the combustion air filter

⚠ Caution

Perform cleaning, maintenance and repair work only with the engine shut down. Do not start the engine after removing the filter element.

Do not use gasoline or hot fluids to clean the filter element.

After cleaning the filter element must be inspected for damage using a torch.

Air filter elements with damaged paper bellows or seal lips must be replaced in any case.

The main filter element must be replaced after 6 times cleaning, but at the latest after one year, irrespective of the operating hours.

Each cleaning interval must be marked with a cross on the cover of the filter element.

Cleaning does not make sense if the air filter element is covered with a sooty deposit. Use a new filter element.

Incorrectly handled filter elements may become ineffective because of damage (e.g.: cracks) and cause engine damage.

- Open the engine hood.

i Note

Under very dusty conditions you may have to check the filter service indicator every day.

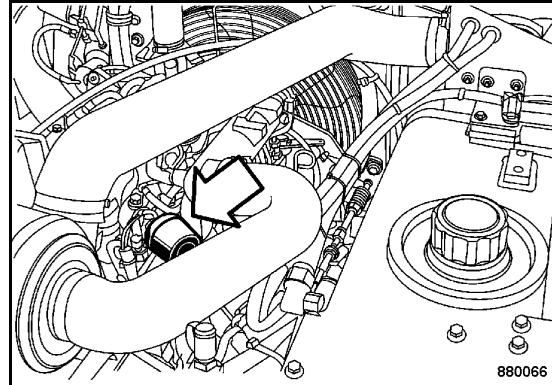


Fig. 139

Service of the dry air filter is due when the red piston of the filter service indicator (Fig. 139) reaches into the transparent window.

⚠ Caution

After cleaning the air filter press the reset button for the red piston on the filter service indicator.

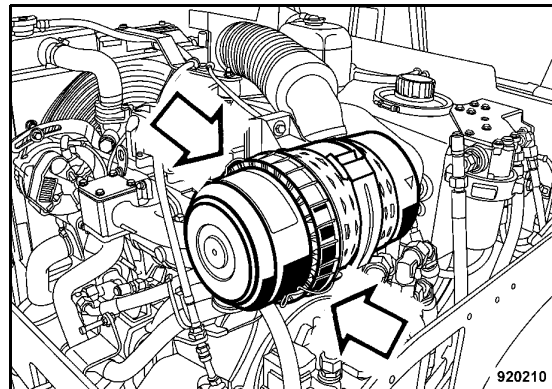


Fig. 140

- Release the locking hook (Fig. 140) and take the filter hood off.
- Clean filter hood and dust discharge valve.

Every 500 operating hours

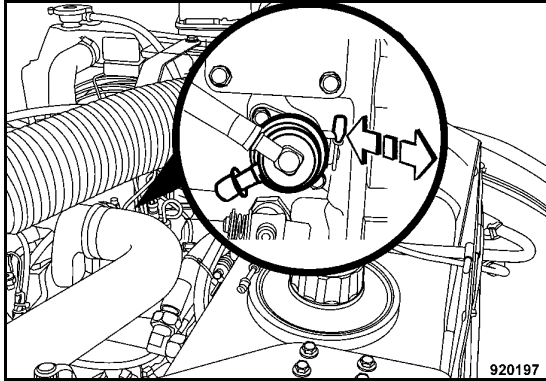


Fig. 158

- Operate the fuel lift pump (Fig. 158) until fuel runs out of the bleeding screw without air bubbles.
- Retighten the bleeding screw.

6.26 Drain the fuel tank sludge

⚠ Danger

Fire hazard!

When working on the fuel system do not use open fire, do not smoke.

Do not spill any fuel.

⚠ Danger

Health hazard!

Do not inhale any fuel fumes.

🌿 Environment

Catch running out fuel, do not let it seep into the ground.

i Note

When performing this work the fuel tank shall only hold max. 5 litres of fuel, pump off if necessary.

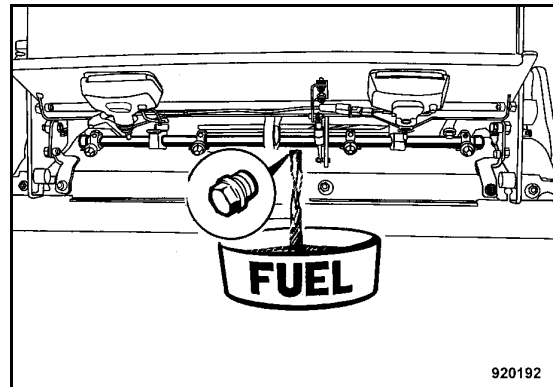


Fig. 159

- Unscrew the plug (Fig. 159) from underneath the fuel tank and let the fuel run out.
- Once all fuel has run out screw the oil drain plug back in with a new seal ring.

Every 3000 operating hours

6.34 Checking the fuel injection pump

i Note

This work must only be performed by authorized service personnel.

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