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Vibratory Plate

DPU 100-70

Operator's Manual



Manufacturer

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Translation of the original operator's manual in German



**WACKER
NEUSON**

1 Foreword

This operator's manual contains information and procedures for the safe operation and maintenance of your Wacker Neuson machine. In the interest of your own safety and to prevent accidents, you should carefully read through the safety information, familiarize yourself with it and observe it at all times.

This operator's manual is not a manual for extensive maintenance and repair work. Such work should be carried out by Wacker Neuson service or authorized specialists.

The safety of the operator was one of the most important aspects taken into consideration when this machine was designed. Nevertheless, improper use or incorrect maintenance can pose a risk. Please operate and maintain your Wacker Neuson machine in accordance with the instructions in this operator's manual. Your reward will be troublefree operation and a high degree of availability.

Defective machine parts must be replaced immediately!

Please contact your Wacker Neuson representative if you have any questions concerning operation or maintenance.

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We expressly reserve the right to make technical modifications – even without special notice – which aim at further improving our machines or their safety standards.

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2 Safety

2.1 Principle

State of the art

This machine has been constructed with state-of-the-art technology according to the recognized rules of safety. Nevertheless, when used improperly, dangers to the life and limb of the operator or to third persons or damage to the machine or other materials cannot be excluded.

Proper use

The machine must only be used for the following purposes:

- Compaction of soils.

The machine may not be used for the following purposes:

- Compaction of intensely cohesive soils.
- Compaction of frozen soils.
- Compaction of hard, non-compactable soils.
- Compaction of soils that are not capable of bearing a load.
- Compaction of asphalt.
- Shaking in of paving stones.

Its proper use also includes the observance of all instructions contained in this operator's manual as well as complying with the required service and maintenance instructions.

Any other use is regarded as improper. Any damage resulting from improper use will void the warranty and the liability on behalf of the manufacturer. The operator assumes full responsibility.

Structural modifications

Never attempt to modify the machine without the written permission of the manufacturer. To do so will endanger your safety and the safety of other people! In addition, this will void the warranty and the liability on behalf of the manufacturer.

Especially the following are cases of structural modifications:

- Opening the machine and the permanent removal of components from Wacker Neuson.
- Installing new components which are not from Wacker Neuson and not equivalent to the original parts in design and quality.
- Installation of accessories which are not from Wacker Neuson.

It is no problem to install spare parts from Wacker Neuson.

It is no problem to install accessories that are available in the Wacker Neuson product range of your machine. Please refer to the installation regulations in this operator's manual.

Requirements for operation

The ability to operate the machine safely requires:

- Proper transport, storage and setup.
- Careful operation.
- Careful service and maintenance.

Operation

Operate the machine only as intended and only when in proper working condition.

Operate the machine in a safety-conscious manner with all safety devices attached and enabled. Do not modify or disable any safety devices.

Before starting operation, check that all control and safety devices are functioning properly.

Never operate the machine in a potentially explosive environment.

Supervision

Never leave the machine running unattended!

Maintenance

Regular maintenance work is required in order for the machine to operate properly and reliably over time. Failure to perform adequate maintenance reduces the safety of the machine.

- Strictly observe the prescribed maintenance intervals.
- Do not use the machine if it requires maintenance or repairs.

Malfunctions

If you detect a malfunction, you must shut down and secure the machine immediately.

Eliminate the malfunctions that impair safety immediately!

Have damaged or defective components replaced immediately!

For further information, refer to chapter *Troubleshooting*.

Spare parts, accessories

Use only spare parts from Wacker Neuson or such that are equivalent to the original parts in design and quality.

Only use accessories from Wacker Neuson.

Non-compliance will exempt the manufacturer from all liability.



Exclusion of liability

Wacker Neuson will refuse to accept liability for injuries to persons or for damage to materials in the following cases:

- Structural modifications.
- Improper use.
- Failure to comply with this operator's manual.
- Improper handling.
- Using of spare parts which are not from Wacker Neuson and not equivalent to the original parts in design and quality.
- Using of accessories which are not from Wacker Neuson.

Operator's manual

Always keep the operator's manual near the machine or near the worksite for quick reference.

If you have misplaced the operator's manual or require an additional copy, contact your Wacker Neuson representative or download the operator's manual from the Internet (www.wackerneuson.com).

Always hand over this operator's manual to other operators or to the future owner of the machine.

Country-specific regulations

Observe the country-specific regulations, standards and guidelines in reference to accident prevention and environmental safety, for example those pertaining to hazardous materials and wearing protective gear.

Complement the operator's manual with additional instructions taking into account the operational, regulatory, national or generally applicable safety guidelines.

Operator's controls

Always keep the operator's controls of the machine dry, clean and free of oil or grease.

Operating elements such as ON/OFF switch, gas handles etc. may not be locked, manipulated or changed without authorization.

Cleaning

Always keep the machine clean and be sure to clean it each time you have finished using it.

Do not use gasoline or solvents. Danger of explosion!

Do not use high pressure washers. Permeating water can damage the machine. When electrical equipment is present, this can pose a serious injury risk from electric shocks.

Checking for signs of damage

Inspect the machine when it is switched off for any signs of damage at least once per work shift.

Do not operate the machine if there is visible damage or defects.

Have any damage or defects eliminated immediately.

2.2 Qualification of the operating personnel**Operator qualifications**

Only trained personnel are permitted to start and operate the machine. The following rules also apply:

- You are at least 18 years of age.
- You are physically and mentally fit.
- You have received instruction on how to independently operate the machine.
- You have received instruction in the proper use of the machine.
- You are familiar with required safety devices.
- You are authorized to start machines and systems in accordance with the standards governing safety.
- Your company or the operator has assigned you to work independently with this machine.

Incorrect operation

Incorrect operation or misuse by untrained personnel can endanger the health and safety of the operator or third persons and also cause machine and material damage.

Operating company responsibilities

The operating company must make the operator's manual available to the operator and ensure that the operator has read and understood it.

Work recommendations

Please observe the recommendations below:

- Work only if you are in a good physical condition.
- Work attentively, particularly as you finish.
- Do not operate the machine when you are tired.
- Carry out all work calmly, circumspectly and carefully.
- Never operate the machine under the influence of alcohol, drugs or medication. This can impair your vision, reactions and your judgment.
- Work in a manner that does not endanger others.
- Ensure that no persons or animals are within the danger zone.



2.3 Protective gear

Work clothing

Clothing should be appropriate, i.e. should be close-fitting but not restrict your movement.

When on construction sites, do not wear long hair loosely, loose clothing or jewelry including rings. These objects can easily get caught or be drawn in by moving machine parts.

Only wear clothing made of material that is not easily flammable.

Personal protective gear

Wear personal protective gear to avoid injuries or health hazards:

- Non-skid, hard-toed shoes.
- Work gloves made of durable material.
- Overalls made of durable material.
- Hard hat.
- Ear protection.

Ear protection

This machine generates noise that exceeds the country-specific permissible noise levels (individual rating level). It may therefore be necessary to wear ear protection. You can find the exact value in the chapter *Technical Data*.

When wearing ear protection while working, you must pay attention and exercise caution because your hearing is limited, e.g. in case someone screams or a signal tone sounds.

Wacker Neuson recommends that you always wear ear protection.

2.4 Transport

Switching off the machine

Before you transport the machine, it must be switched off, and the engine must be given sufficient time to cool down.

Center pole in transport position

Before commencing transport, move the center pole to the transport position. Let the center pole latch into its lock.

Observing hazardous materials regulations

Observe the national safety guidelines and the hazardous materials regulations that apply to the respective means of transportation.

Lifting

When lifting the machine, observe the following instructions:

- Designate a skilled person to guide you for the lifting procedure.
- You must be able to see or hear this person.
- Use only suitable and certified hoisting gear, lifting tackle and load-bearing equipment with sufficient lifting capacities.
- Only use the attachment points described in the operator's manual.
- Attach the machine securely to the hoisting gear.
- Ensure that no one is nearby or under the machine.
- Do not climb onto the machine.

Loading the machine

Loading ramps must be able to bear the load and be in a stable position.

Make sure that no one can be endangered if the machine slips away or tips over or if machine parts suddenly move upward or downward.

Put the operating controls and moving parts in their transport position.

Secure the machine with load-securing straps so that it cannot tip over, fall down or slide away. Only use the attachment points described in the operator's manual.

Transport vehicle

Use only suitable transport vehicles with sufficient load-carrying capacity and suitable tie-down lugs.

Transporting the machine

Secure the machine on the transport device against tilting, falling or slipping.

Only use the lashing points listed in the operating instructions.

Also observe the country-specific regulations, standards and guidelines.

Restarting

Machines, machine parts, accessories or tools that were detached for transport purposes must be re-mounted and fastened before restarting.

Only operate in accordance with the operating instructions.

2.5 Operating safety

Explosible environment

Never operate the machine in a potentially explosive environment.



Work environment

Familiarize yourself with your work environment before you start work. This includes e.g. the following items:

- Obstacles in the work and traffic area.
- Load-bearing capacity of the ground.
- The measures needed to cordon off the construction site from public traffic in particular.
- The measures needed to secure walls and ceilings.
- Options available in the event of an accident.

Safety in the work area

When working with the machine especially pay attention to the following points:

- Electric lines or pipes in work area.
- Gas lines or water lines in the work area.

Starting the machine

Observe the safety information and warning notices located on the machine and in the operator's manual.

Never attempt to start a machine that requires maintenance or repairs.

Start the machine as directed in the operator's manual.

Vertical stability

Always ensure that the machine is vertically stable and cannot tip over, roll or slide away.

Proper operator position

Do not leave the proper operator position while operating the machine.

The proper operator position is behind the center pole of the machine.

Leaving the danger area

Injury may be caused by moving machines or flying materials.

Ensure that other persons observe a minimum safety distance of 2 m from the machine.

Caution with movable parts

Keep your hands, feet and loose clothing away from moving or rotating machine parts. Parts of your body being pulled in or crushed can cause serious injuries.

Switching off the machine

Switch off the engine in the following situations:

- Before breaks.
- If you are not using the machine.

Store the machine in such a way that it cannot tilt, fall or slip.

Storage location

After operation, allow the machine to cool and then store it in a sealed-off, clean and dry location protected against frost and inaccessible to children.

Not using starter sprays

Highly flammable starter sprays pose a fire hazard.

Do not use any starter sprays.

Starter sprays are highly flammable and can cause backfiring and engine damage.

Vibrations

When manually operated machines are intensively used, long-term damage caused by vibrations cannot be precluded.

Observe the relevant legal instructions and guidelines to minimize vibration stress.

Details on vibration stress associated with the machine can be found in the chapter *Technical Data*.

2.6 Safety during the operation of vibratory plates

Belt guard

Never operate the machine without a belt guard!

Exposed belts and belt pulleys are dangerous and can cause serious injuries if they pull in any part of your body or if parts are ejected.

Danger of falling over

Operate the machine so that it cannot tip over or fall down from bordered areas, edges and steps.

Load-carrying capacity of the ground

Keep in mind that the load-carrying capacity of the earth to be compressed or bed can be greatly reduced by the effects of vibration, for example near slopes.

Avoiding crushing

When operating the machine, pay particular attention to avoid being squeezed between the machine and an obstacle. Always look in the direction of travel!



Compacting on slopes

The following points must be observed if you plan to compact inclined surfaces (slopes, escarpments):

- Always stand above the machine on a slope.
- Start at the bottom of a slope (slopes that can be easily managed in an upward direction can be safely traveled in a downward direction also).
- Never stand in a position where the machine could possibly fall. A slipping or tipping machine can cause serious injuries.

Not exceeding the maximum tilt position

- Do not exceed the maximum tilt position (see chapter *Technical Data*).
- Only operate the machine at maximum tilt for short periods of time.

If you exceed the maximum tilt, the engine lubrication system will fail and thus inevitably damage important engine parts.

Check the effects of vibration

Compacting work in the vicinity of buildings can lead to structural damage. For this reason you must always check the possible effects of vibrations on surrounding buildings in the run-up to work.

You must take the following points into special consideration when evaluating the effects of vibration:

- Vibration behavior, sensitivity and resonance frequency of surrounding buildings.
- Distance of the buildings from the vibrationsite (= worksite).
- Condition of the soil.

You may need to carry out measurements to determine the vibration speed.

You must also comply with the relevant guidelines and regulations, particularly DIN 4150-3.

The foundation must also have sufficient load-bearing capacity to withstand the compaction energy. In case of doubt involve a soil mechanics specialist in the evaluation.

Wacker Neuson is not liable for any structural damage.

2.7 Safety during the operation of combustion engines

Checking for signs of damage

Check the engine while switched off for leaks and cracks in the fuel line, tank and fuel cap at least once per work shift.

Do not operate the machine if there is visible damage or defects.

Have any damage or defects eliminated immediately.

Dangers during operation

Combustion engines can be dangerous, particularly during operation and when refueling.

Read and follow all safety instructions. Otherwise there is a risk of personal injury and/or damage to property!

Do not start the engine near spilt fuel or if you smell fuel – this may cause an explosion!

- Remove the machine from such areas.
- Remove the spilt fuel immediately!

Not changing the engine speed

Do not change the preset engine speed, as this may cause engine damage.

Preventing fires

Open flames and smoking are strictly prohibited in the immediate vicinity of the machine.

Make sure that waste, such as paper, dry leaves or grass do not accumulate around the exhaust muffler. The waste materials may ignite.

Safety precautions when refueling

Please observe the following safety-relevant instructions when refueling:

- Do not refuel near open flames.
- Do not smoke.
- Turn off the engine before refueling and allow it to cool down.
- Refuel in a well-ventilated environment.
- Wear fuel-proof protective gloves and, if there is the possibility of spraying, protective goggles and clothing.
- Do not inhale fuel vapors.
- Avoid skin and eye contact with fuel.
- For refueling, use clean tools such as a hopper.
- Do not spill fuel, especially onto hot parts.
- Remove any spilt fuel immediately.
- Use the correct fuel grade.
- Do not mix fuel with other liquids.
- Fill the tank only up to the maximum marking. If there is no Maximum marking, do not fill up the tank completely.
- Lock the fuel cap securely after refueling.



Operation in closed rooms

In closed or partially closed rooms such as tunnels, drifts or deep trenches, ensure sufficient ventilation and extraction by, for example, providing a powerful exhaust air fan.

Danger of poisoning! Do not inhale exhaust fumes. They contain toxic carbon monoxide that can lead to unconsciousness or death.

Caution with hot parts

Do not touch any hot parts such as the engine block or exhaust muffler during operation or directly afterwards. These parts can become very hot and cause severe burns.

Cleaning the engine

Clean the engine when it is cool to remove any dirt.

Do not use gasoline or solvents. Danger of explosion!

Notes on the EPA engine

Caution

This machine is equipped with an EPA-certified engine.

Modifying the motor speed influences the EPA certification and emission. The motor may only be set by a skilled technician.

For more detailed information, contact your nearest motor or Wacker Neuson representative.

Health hazard due to exhaust fumes

Warning

The engine's exhaust fumes contain chemicals which are known to the State of California to cause cancer, congenital defects or other reproductive anomalies.

2.8 Safety during the operation of hydraulic machines

Hydraulic oil

Hydraulic oil is harmful to health.

Wear safety glasses and safety gloves when handling hydraulic oil.

Avoid direct skin contact with hydraulic oil. Remove hydraulic oil from the skin immediately with soap and water.

Make sure that no hydraulic oil comes gets in the eyes or on the body. See a physician immediately if hydraulic oil gets into the eyes or is swallowed.

Do not eat and drink while handling hydraulic oil.

Make sure to have extreme cleanliness. Contamination of the hydraulic oil with dirt or water can cause premature wear or failure of the machine.

Dispose of left over and spilled hydraulic oil according to the applicable regulations for environmental protection.

2.9 Maintenance

Maintenance work

Service and maintenance work must only be carried out to the extent described in these operating instructions. All other procedures must be performed by your Wacker Neuson representative.

For further information, refer to chapter *Maintenance*.

Switching off the engine

Before carrying out care or maintenance work, switch off the engine and allow it to cool down.

For gasoline powered engines, you must pull off the spark plug cap.

Disconnecting the battery

For machines with electric starter, you must disconnect the battery before working on the electronic parts.

Using only a Wacker Neuson battery

Use only Wacker Neuson batteries to replace defective batteries, see chapter *Technical Data*.

Only the Wacker Neuson battery is vibration resistant and thus suitable for the high vibratory stresses.



Working on the battery

Always take the following safety measures when working with the battery:

- No fire, sparks, or smoking while working with batteries.
- Batteries contain corrosive acid. Use acid-proof protective gloves and protective goggles when working with batteries.
- Avoid short circuits due to improper connection or bypassing with tools.
- Disconnect the negative terminal first when disconnecting the battery.
- Connect the positive terminal first when connecting the battery.
- Re-fasten terminal covers after connecting the battery.

Assembling safety devices

If it was necessary to dismantle safety devices, they must be reassembled and checked immediately after completing maintenance work.

Always tighten loosened screw connections, complying with prescribed starting torque.

Handling operating fluids safely

Observe the following points when handling operating fluids, e.g. fuels, oils, greases, coolants etc.:

- Always wear personal safety clothing.
- Avoid skin and eye contact with operating fluids.
- Do not inhale or swallow operating fluids.
- In particular, avoid contact with hot operating fluids. Burn and scalding hazard.
- Dispose of replaced or spilled operating fluids according to the applicable regulations for environmental protection.
- If operating fluids escape from the machine, cease operation of the machine and have it repaired immediately by your Wacker Neuson representative.

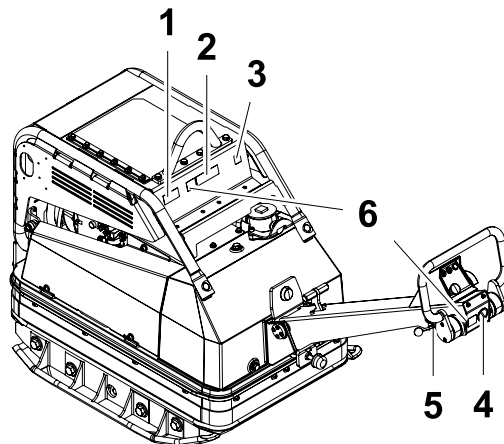


2.10 Safety and information labels



Your machine has adhesive labels containing the most important instructions and safety information.

- Make sure that all the labels are kept legible.
- Replace any missing or illegible labels.

The item numbers for the labels are in the parts book.



Pos.	Label	Description
1		Wear personal protective gear to avoid injuries or health hazards: <ul style="list-style-type: none"> ■ Ear protection. Read the operator's manual before start-up.
2		If the machine falls, it can cause severe crushing injuries. <ul style="list-style-type: none"> ► Only lift the machine with certified hoist and lifting tackle (safety load hook). ► Do not lift the machine with the excavator shovel by the central suspension. ► Do not lift the machine with a forklift by the central suspension.
3		Guaranteed sound power level.
4		If the machine falls, it can cause severe crushing injuries. <ul style="list-style-type: none"> ► Do not lift the machine by the guide handle or the center pole.

Pos.	Label	Description
5		Start-Stop.
6	US machines 	Warning

Technical Data

1. Technical Data

	DPU 100-70
Item no.	0610320
Operating weight kg::	750
Travel speed / reverse speed without extension plates m/min: with extension plates m/min:	30 28
Compacted area without extension plates m ² /h: with extension plates m ² /h:	1289 1462
Power transmission	From the drive engine via gear pump and gear motor onto exciter, from where the centrifugal forces generated transmit directly to the base plate
Exciter	
Vibrations min ⁻¹ (Hz):	3360 (56)
Centrifugal force kN:	100
Oil	Fuchs Titan Unic 10W40 MC (SAE 10W40)
Oil quantity l:	1,5
Drive motor	
Air cooled twin cylinder diesel engine	
Piston displacement cm ³ :	954
Rated power * kW:	12,8
Rated speed min ⁻¹	2700
Operating power kW:	10,1
Operating speed min ⁻¹	2874
Fuel	Diesel
Fuel consumption l/h:	3,2
Tank capacity l:	7,5
Oil	Fuchs Titan Unic 10W40 MC (SAE 10W40)
Oil quantity l:	2,5

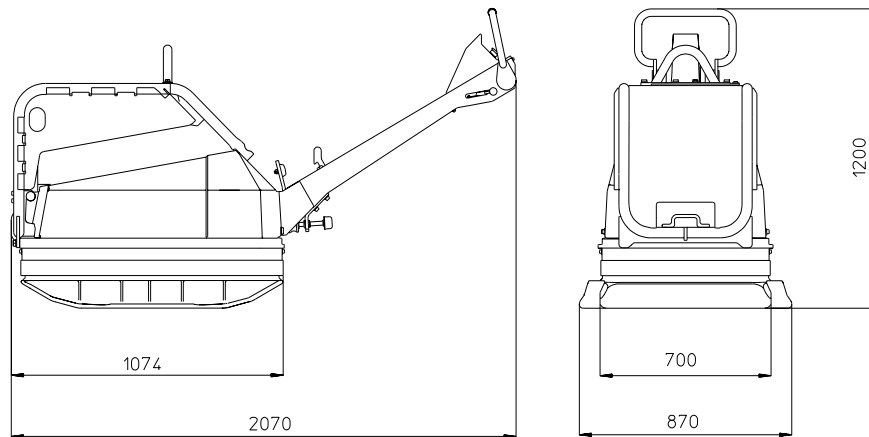
Technical Data

	DPU 100-70	
Electrical system		
Battery		Special Wacker Neuson battery for vibro plates, 12 V - 55 Ah
Alternator		Three-phase current generator
Charging voltage	V:	14
D.C.	V:	12
Hydraulic		
Hydraulic oil		Fuchs Renolin MR 520
Tank capacity	l:	40
Sound pressure level at operator's station	L _{PA} :	95 dB(A)
Total vibration value of the acceleration ahv **	m/s ² :	< 5,0
Uncertainty K	m/s ²	1,0
* In accordance with the installed useful outlet power according to Directive 2000/14/EG. ** Determined according to DIN EN ISO 5349.		

Description

2. Description

2.1 Dimensions



2.2 Recommendations on compaction

2.2.1 Ground conditions

The max. compaction depth depends on several factors relating to the ground condition, such as moisture, grain distribution etc, it is therefore not possible to specify exact values.

Recommendation: In each case determine the max. compaction depth with compaction tests and soil samples.

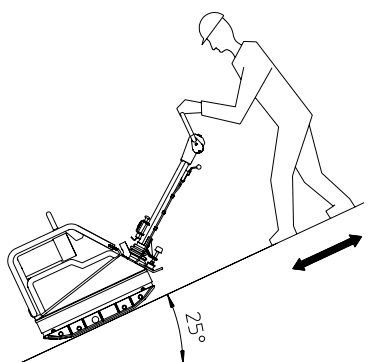
2.2.2 Compaction on slopes

The following points are to be observed when compacting on sloped surfaces (slopes, embankments):

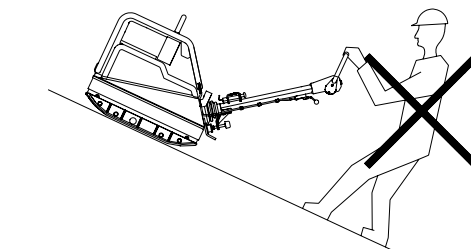
- * Only approach gradients from the bottom (a gradient which can be easily overcome upwards, can also be compacted downwards without any risk).
- * The operator must never stand in the direction of descent.
- * The max. gradient of 25° must not be exceeded.



A tilt in excess of this angle could lead to a stopping of the engine due to the automatic low oil shut-off system. A restarting of the engine can only take place after the valve lever at the oil filter housing has been actuated once.



Right !

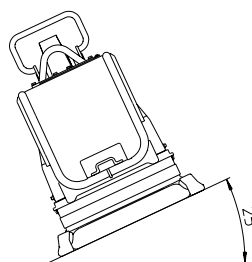
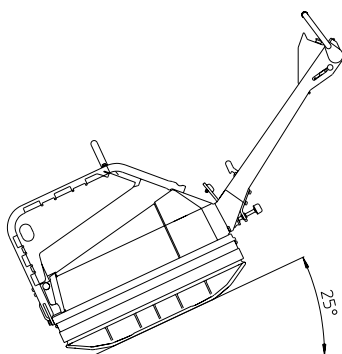


Wrong!

2.3 Compaction without extension plates

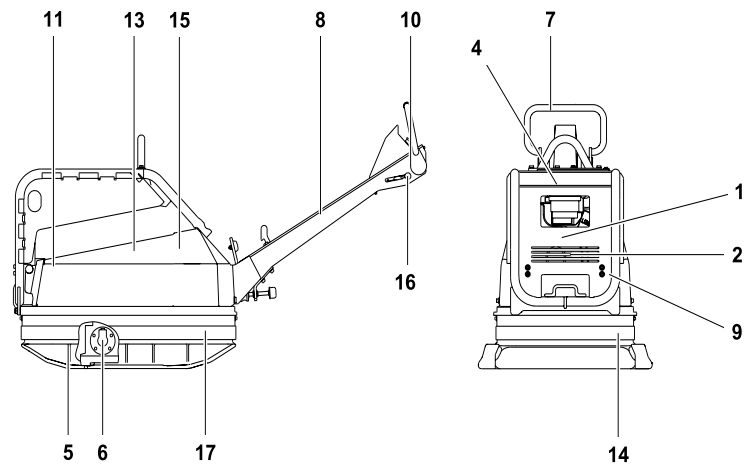
If the vibration plates is used without extension plates, screw set of protective screws (8 pes) into the threaded boreholes situated in the lower mass, in order to avoid threads from being damaged.

2.4 Max. admissible inclination

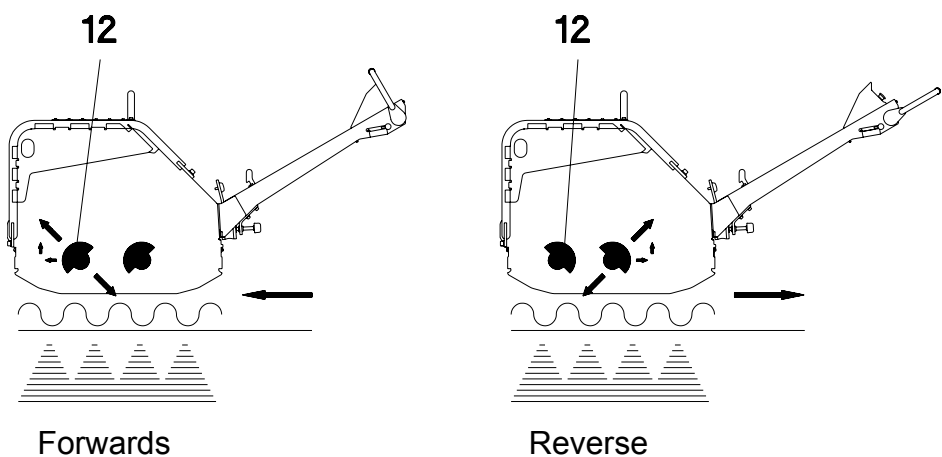


Description

2.5 Description of function



- 2.5.1 The vibration required for compaction is generated via the exciter (6) which is firmly connected to the base plate (5). The exciter (6) has been designed as a centrally mounted exciter with single plane (directional) oscillations. This principle allows for the changing over of the direction of the oscillations by changing the relative position of the eccentric weights (12). Said principle also makes it possible to pass from forward travel to reverse travel motion.

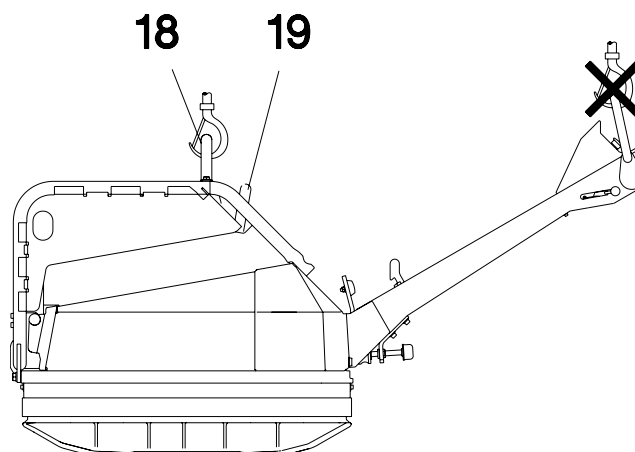


- 2.5.2 This procedure is hydraulically controlled by way of the operating control handle (7) situated at the upper end of the center pole (8) and an electrically operated disable switch (9), which receives a switch signal from a roll touch switch (10) placed at the center pole head. An oil flow governor valve (15) supplies the steering line with a partial oil flow.

- 2.5.3 The exciter (6) is driven by an hydraulic motor (14). The oil flow required for the motor (14) comes from the pump (13), which in turn is driven by the drive engine (1). The oil cooler (2) cools the hydraulic oil.
- 2.5.4 The rpm's of the drive engine (1) can be adjusted by way of the remote throttle lever (16) (normally in the full throttle position).
- 2.5.5 The upper mass (11) and the base plate (5) are connected to each other by way of 4 vibration damping shock mounts (17). The damping effect reduces to a high degree the vibrations being transmitted from the base plate (5) to the upper mass (11), thereby protecting the engine and simultaneously providing for an easy maneuverability of the machine by the operator.

Transport to work site

3. Transport to work site



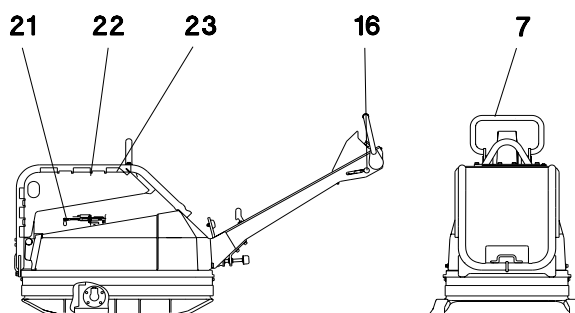
Conditions:

- * To transport the vibration plate, only use suitable lifting equipment with a minimum load-bearing capacity of 800 kg.
- * Always switch off engine before transporting the machine!
- * Only attach suitable tackle at the central lifting point (18) provided. The central lifting point is located exactly above the centre of gravity of the machine. The central lifting point can be displaced rearwards (19), given an application in which the height of the machine is of importance (torque wrench setting = 85 Nm).
- * Be sure to tie down the machine at the appropriate points during transportation on transport vehicles.

Note: Also observe the regulations in the “safety instructions”.

4. Operation

4.1 Starting



4.1.1 Conditions:

Engine oil:

Check oil level with dipstick (21), top off with oil (see Technical Data) through filler neck (22) if necessary.

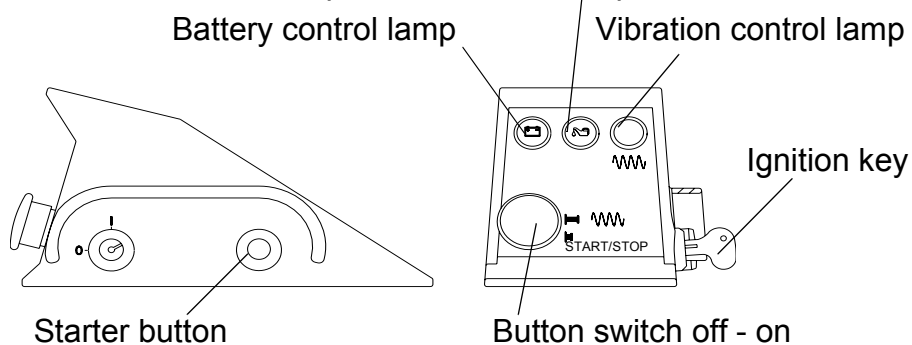
Fuel:

Maintain absolute cleanliness when filling diesel fuel into the fuel filler neck (23). Impurities in the fuel can cause breakdowns in the injection system and premature clogging of the fuel filter.

Air filter:

Clean cyclone and air filter when in the presence of a lot of dust.

4.1.2 Start the engine once the above conditions have been complied: Oil pressure control lamp



1. Turn throttle control lever (16) to full engine speed position.
2. Press push-button switch to start position.
3. Turn ignition key to position „I“ and then push starter button as long as it takes to start the engine.
4. Turn throttle control lever (16) back to engine idle position and then let engine warm up at that speed for approx. 7 minutes.

Operation

4.2 Forward and reverse motion

1. Push throttle control lever (16) to full rpm's position.
2. The vibration is connected by pulling the press button switch out of the start position.
3. The travel direction is defined by way of the operating control handle (7).
4. The vibratory plate will automatically travel forwards (away from the operator) if the operating control handle (7) is released (dead man's handle).

4.3 Switching off

1. Push down press button switch from vibration position to stop position. The control lamp will extinguish.
2. Move throttle lever (16) all the way to the stop position.
3. Turn the ignition key to the stop position and pull off once engine has stopped turning. The control lamp will turn off.

5. Maintenance

5.1 Maintenance schedule

Component	Maintenance work	Maintenance interval
Air filter	Check cyclone and oil bath air filter - change oil and clean cyclone if necessary.	daily
Oil cooler	Check whether the fins on the oil cooler are dirty. Clean the oil cooler with water jet (minimum distance 20 cm) if required. No high pressure cleaner.	
Drive engine	Check oil level, if nec. top up oil.	
	First oil change.	25 hours
Centre pole height setting, transport lock	Regrease.	weekly
Hydraulics	Check oil level, top up if necessary.	monthly
Exciter	Oil change.	every 250 h, or latest every 6 months
Drive engine	Oil change, change oil filter.	every 250 h
	Keep cooling fins free of dirt, clean dry.	
Battery	Check acid level, if nec. top up with distilled water.	
Valve clearance	Check, set to 0,1 mm when engine is cold.	
Hydraulics	First oil change.	500 hours
Fuel filter	Replace the fuel filter between the fuel pump and the fuel tank.*	every 500 h
Hydraulic fluid filter	Change hydraulic fluid filter.	
Hydraulics	Oil change.	every 1000 h

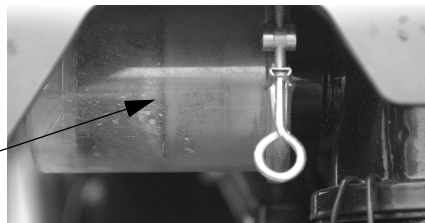
*. The second fuel filter between the fuel pump and the fuel injection system is maintenance-free.

Maintenance

5.2 Oil bath air cleaner

Examination of dirt accumulation within the transparent preliminary filter (cyclone); Remove clamp if cleaning is necessary, then off the cyclone and tap clean..

Cyklone



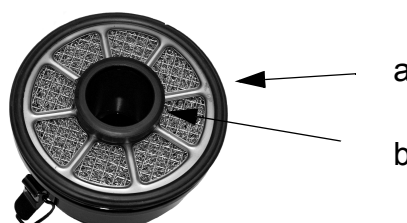
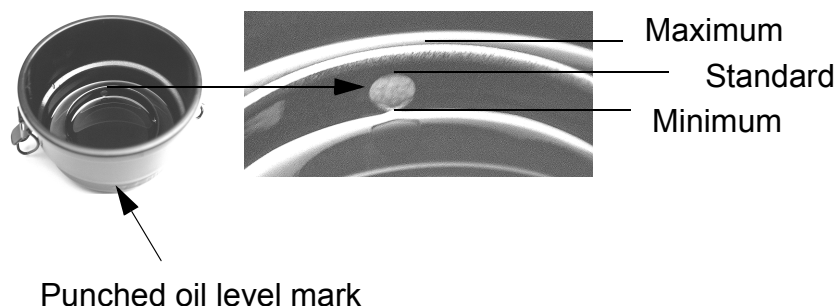
Control and oil quantities:

The cover of the air cleaner must be removed for an oil level check. Open both clamps for this purpose. The oil volume has been defined by the engine manufacturer (0,3 Liter 10W40). For this purpose a stamped marking for the oil level has been included at the cover of the oil bath filter. For all practical purposes it is easier to determine the quantity of oil by way of the borings included in the ring integrated in the cover.

The oil quantities have been defined as follows:

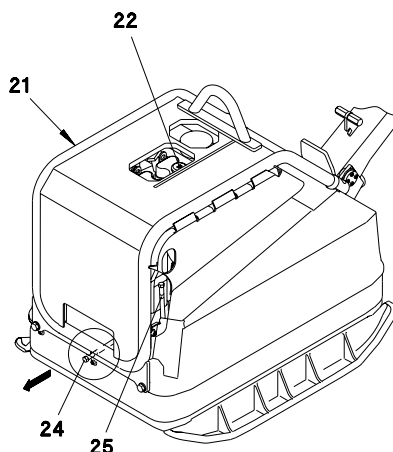
- * Minimum -Oil up to lower edge of boring
- * Standard -Oil up to upper edge of boring
- * Maximum -Oil up to upper edge of ring

Attention: Do not fill oil above maximum mark under any circumstances.



Note: Pay attention when assembling the cover that the gasket (a) and the leathering (b) of the filter's insert are available and in the right position.

5.3 Engine oil level control



The engine must be placed in a horizontal position on a flat surface for the oil level check.

5.3.1 Check engine oil level:

- * Check oil level with oil dipstick (21).
- * Top off with oil (see Technical Data) through filler neck (22) if oil level is too low.

5.3.2 Engine oil replacement:

1. Let engine warm up.
2. Loosen screw (25) at the engine/clamp.
3. Guide hose outwards through the large opening in the protective frame.
4. Fully unscrew drainage screw (24) and fill used oil into an appropriate container.
5. Screw in drain plug (24) and install hose back onto engine.
6. Fill oil (see Technical Data) through filler neck (22).



Take notice: Please pay attention to the corresponding environmental laws when disposing of used engine oil. We recommend you carry the oil in a container to a central collecting point for used oils. Do not pour used engine oil into the garbage nor into the sewer system, waste pipes or even on the ground.

Maintenance

5.4 Battery acid level control

5.4.1 Check battery acid level

1. Open right maintenance cover.
2. Check acid level and top up with distilled water if necessary.
3. Close maintenance cover again.



Be sure to check if the positive pole cover is in the correct position before closing the maintenance cover.

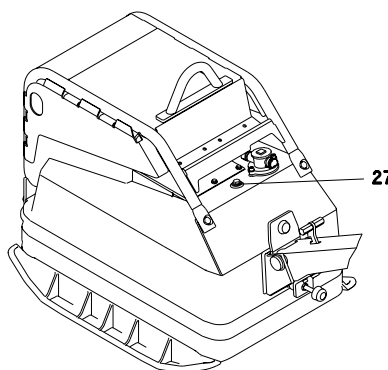
Note: Only replace a defective battery with an original Wacker battery. Conventional batteries are not designed to withstand the high vibration load.

5.4.2 Replace battery

Removal: first disconnect the negative, then the positive pole.

Assembly: first connect the positive, then the negative pole.

5.5 Hydraulic oil level control



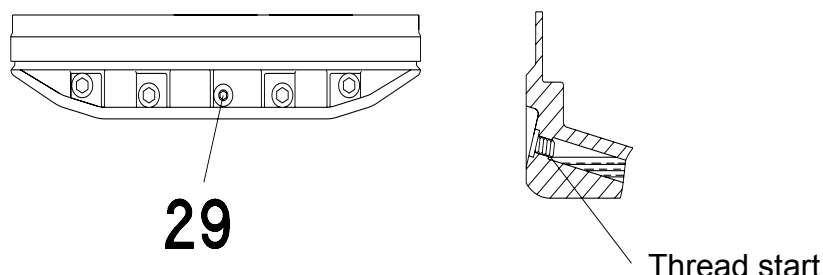
Check oil level:

1. Screw out screwed sealing plug (27).
2. The hydraulic oil level must reach a point 10 cm (3.9") below the upper edge of the screwed neck. Top off with oil (see Technical Data) if necessary.
3. Screw screwed sealing plug (27) back in.

Bleeding the hydraulic system:

Bleeding of the hydraulic line to the exciter will be required after repair/maintenance jobs of the hydraulic circuit for forwards and reverse travel have taken place.

5.6 Exciter oil level control



5.6.1 Check exciter oil level

1. Position vibration plate horizontally.
2. Open filler bore (29).
3. The oil level must reach the start of the thread of the filler bore (29).
4. Top off with oil (see Technical Data) through filler neck (29) if necessary. Use a funnel for this purpose.
5. Close filler bore (29). (Tightening torque 100 Nm)

5.6.2 Exciter oil replacement

1. Remove extension plate if necessary.
2. Open filler bore (29).
3. Tilt vibratory plate on its side; make sure it can't topple over. Hold in tilted position until the exciter oil has been completely drained.
4. Place vibration plate in horizontal position.
5. Top off with oil (see Technical Data) through filler neck (29).
6. Close filler bore (29). (Tightening torque 100 Nm)
7. Install back extension plate if necessary.

Do not pour in too much oil!



Faults

6. Faults

6.1 Troubleshooting and fault clearance

Faults	Cause	Remedy
Forward or reverse travel too low	Relief pressure forwards/backwards too low.	Set pressure relief valve correctly (only Wacker Neuson personnel).
	Exciter rpm's too low.	Adjust engine speed and check pressure valve (only Wacker Neuson personnel).
Loss of hydraulic oil	Leaks, hydraulic hose defective.	Change defective parts. Note: Bleed system after every dismantling operation.
Oil pressure control lamp does not go off	Low engine oil level.	Top up with oil following markings on dip stick.
	Plugged up oil filter.	Clean or replace oil filter.
Battery-charge warning lamp does not go off	Dynamo defective.	Contact Wacker Neuson service dept.
	Control unit defective.	Replace control unit (on rear of the dynamo).
Engine starts with difficulty	Button switch at control panel is not set to start position.	Set button switch to start position.
	Throttle lever is not in full rpm's position.	Move throttle lever towards machine into full throttle position.
Engine does not start	Ignition lock defective.	Change defective parts.
	Starter defective.	
	Starter button defective.	
	Battery flat.	Charge battery.
	Vibration connected.	Disconnect vibration.

6.2 Starting with external battery etc.

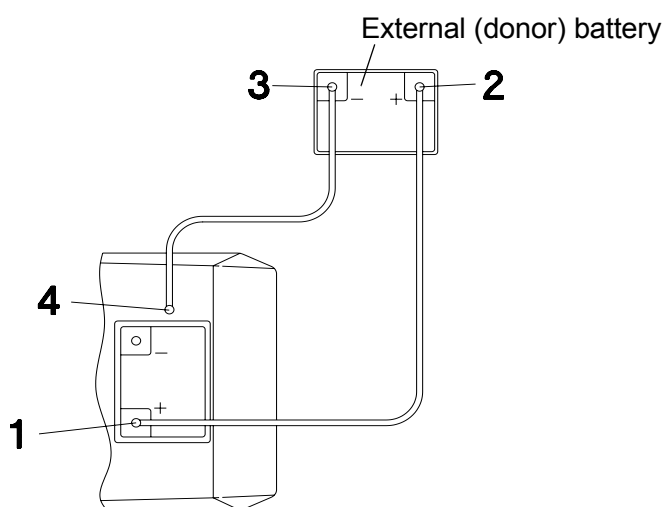
6.2.1 Essential requirements for battery jumper cable:

- * Cable cross-section must be at least 16 mm². (2.5 sq. inches).
- * Clamps must be completely insulated with plastic.



Only connect 12 Volt batteries. The on-board battery will explode if connected to a 24 Volt truck battery!

The use of starter sprays is absolutely forbidden!



6.2.2 Pay close attention to the following connection sequence when jump-starting with an external battery:

1. Connect the red jumper cable with the help of a clamp to the positive pole (1) of the discharged battery.
2. Connect the other clamp of the red jumper cable to the plus pole (2) of the external (donor) battery.
3. Connect the black jumper cable with the help of a clamp to the negative pole (3) of the external battery.
4. Connect the other clamp of the black jumper cable to a grounding point of the machine (4), e.g. to the engine block.

6.2.3 Connect the black jumper cable to the negative pole (3) of the external battery.

6.2.4 Disconnect the clamps in reverse order; first remove the black jumper cable, then the red one.

3 Disposal

3.1 Disposal of batteries

For customers in EU countries

This device contains one or more batteries or rechargeable batteries (hereafter referred to as "batteries"). This battery is subject to the European Directive 2006/66/EC on (waste) batteries, as well as the corresponding national legislation. The battery directive outlines the procedure for handling batteries across the EU.



The battery is labelled with the symbol of a crossed out dustbin shown here. Below this symbol is a list of all the harmful substances it contains, namely "Pb" for lead, "Cd" for cadmium and "Hg" for mercury.

Batteries may not be disposed of with normal household waste. As the end user, only dispose of waste batteries via the manufacturer, the dealer or special collection points for this purpose (legal obligation to return), which is free of charge. Dealers and manufacturers are obliged to accept the return of the batteries and to use them properly or to dispose of them as hazardous waste (legal obligation to accept). You can also return any used batteries you obtained from us free of charge. If you do not return the batteries to one of our branches personally, make sure you have paid sufficient postage for its return. Please also note any information in the sales contract and the general terms and conditions from the point of sales.

The proper disposal of the battery prevents the occurrence of any negative effects on people or the environment, follows the specific procedures for handling harmful substances and enables valuable raw materials to be recycled.

For customers in non-EU countries

This device contains one or more batteries or rechargeable batteries (hereafter referred to as "batteries"). The proper disposal of the battery prevents the occurrence of any negative effects on people or the environment, follows the specific procedures for handling harmful substances and enables valuable raw materials to be recycled. Therefore, we recommend that this battery is disposed of in a separate, environmentally-friendly waste collection and not with normal household waste. In some cases, national legislation stipulates the separate disposal of batteries. Please ensure you dispose of this battery in accordance with the valid regulations in your country.

4 Emission control systems information and warranty

The Emission Control Warranty and associated information is valid only for the U.S.A., its territories, and Canada.

Emission control systems warranty statement

See the *engine owner's manual* for the applicable exhaust and evaporative emission warranty statement.







WACKER NEUSON

EC Declaration of Conformity

Manufacturer

Wacker Neuson SE
Preußenstraße 41, 80809 München

Product

Type		DPU 100-70
Product type		Vibrating plate
Item no.		0008991, 0610320
Installed power output	kW	12,8
Measured sound power level	dB(A)	109
Guaranteed sound power level	dB(A)	109

Conformity assessment procedure acc. to 2000/14/EC, Appendix VIII, 2005/88/EC at following test center:

VDE Prüf- und Zertifizierungsinstitut, Merianstraße 28, 63069 Offenbach/Main

Guidelines and standards

This is to certify that this product meets and complies with the relevant regulations and requirements of the following guidelines and standards:

98/37/EC, from 29.12.2009: 2006/42/EC,
2000/14/EC, 2005/88/EC

Authorized person for technical documents: Axel Häret

Munich, 06.08.2009

Franz Beierlein
Head of product management

Dr. Michael Fischer
Head of Research and Development

