Vibrating plate

BPU

2540W, 3050W
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.

All rights reserved, especially reproduction and distribution rights.
Copyright 2010 Wacker Neuson SE

No part of this publication may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without the expressed written permission of Wacker Neuson.

Any type of reproduction, distribution or storage on data media of any type and form not authorized by Wacker Neuson represents an infringement of copyright and will be prosecuted.

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

2. Transport to the worksite

3. Recommendations for compacting

4. Operation
   4.1 Start preparation
   4.2 Starting the engine
   4.3 Operating in the forward and reverse direction
   4.4 Turn off the engine

5. Maintenance
   5.1 Maintenance schedule
   5.2 Checking engine oil level
   5.3 Changing the engine oil
   5.4 Cleaning the air filter / replacing the air filter inserts
   5.5 Checking / cleaning / replacing the spark plug
   5.6 Checking exciter V-belt
   5.7 Changing exciter V-belt
   5.8 Checking / filling hydraulic oil level
   5.9 Checking exciter oil level
   5.10 Changing exciter oil

6. Malfunction
   6.1 Forward travel speed too low
   6.2 Reverse travel speed too low
   6.3 No forward movement
   6.4 Loss of hydraulic oil
   6.5 Engine will not start
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.
- Compaction of asphalt.
- Shaking in of paving stones.

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.

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

Integrated driving mechanism
Machines with integrated driving mechanism must not be set down or stored on the transport device. The driving mechanism is only intended for transport.

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.

Shutting off the fuel tap

When the machine stops, shut off the fuel tap.

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.
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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1    | ![Label 1] | If the machine falls, it can cause severe crushing injuries.  
       |       | - 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. |
| 2    | ![Label 2] | Wear personal protective gear to avoid injuries or health hazards:  
       |       | - Ear protection.  
       |       | Read the operator's manual before start-up. |
| 3    | ![Label 3] | Start-Stop. |
Improper handling can cause serious damage to the engine.

- When using the integrated wheels, always turn off the engine.
- If the engine is running, engine lubrication cannot be assured in the transport position. There is also a danger that oil may leak out of the engine crankcase breather.

If the machine falls, it can cause severe crushing injuries.

- Do not lift the machine by the guide handle or the center pole.

Guaranteed sound power level.

Danger of fire.
Smoking and open flames are prohibited.

Warning of hot surface.

Warning.

Caution.

Danger.
## Technical data

### Machine

<table>
<thead>
<tr>
<th>Designation</th>
<th>Unit</th>
<th>BPU 2540W</th>
<th>BPU 3050W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item no.</td>
<td></td>
<td>0008954</td>
<td>0008955</td>
</tr>
<tr>
<td>Length x width x height (guide handle in transport position)</td>
<td>mm (ft)</td>
<td>733.5 x 400 x 1163 (2.4 x 1.3 x 3.8)</td>
<td>733.5 x 500 x 1175 (2.4 x 1.6 x 3.8)</td>
</tr>
<tr>
<td>Operating weight</td>
<td>kg (lb)</td>
<td>144 (317)</td>
<td>160 (353)</td>
</tr>
<tr>
<td>Advance and reverse travel</td>
<td>m/min (ft/min)</td>
<td></td>
<td>21 (69)</td>
</tr>
<tr>
<td>Area capacity</td>
<td>m²/h (ft²/h)</td>
<td>504 (5425)</td>
<td>630 (6781)</td>
</tr>
<tr>
<td>Maximum permissible tilt</td>
<td>°</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Sound pressure level L_{PA} at operator's station *</td>
<td>dB(A)</td>
<td>89</td>
<td>93</td>
</tr>
<tr>
<td>Measured sound power level L_{WA}</td>
<td>dB(A)</td>
<td>104</td>
<td>105</td>
</tr>
<tr>
<td>Guaranteed sound power level L_{WA}</td>
<td>dB(A)</td>
<td>105</td>
<td>108</td>
</tr>
<tr>
<td>Total vibration value of the acceleration a_{HV}**</td>
<td>m/s² (ft/s²)</td>
<td>1.9 (6.2)</td>
<td>2.8 (9.2)</td>
</tr>
<tr>
<td>Uncertainty K</td>
<td>m/s² (ft/s²)</td>
<td></td>
<td>1.0 (3.2)</td>
</tr>
</tbody>
</table>

* According to DIN EN ISO 11201

** Determined according to DIN EN ISO 5349.
### Drive motor

<table>
<thead>
<tr>
<th>Designation</th>
<th>Unit</th>
<th>BPU 2540W</th>
<th>BPU 3050W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td></td>
<td>Wacker</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td>WM 170</td>
<td>WM 270</td>
</tr>
<tr>
<td>Combustion method</td>
<td></td>
<td>4-cycle</td>
<td></td>
</tr>
<tr>
<td>Engine type</td>
<td></td>
<td>Gasoline engine</td>
<td></td>
</tr>
<tr>
<td>Cooling</td>
<td></td>
<td>Air cooling</td>
<td></td>
</tr>
<tr>
<td>Engine displacement</td>
<td>cm³ (in³)</td>
<td>169 (10)</td>
<td>265 (16)</td>
</tr>
<tr>
<td>Cylinder</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Rated output*</td>
<td>kW</td>
<td>2.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Engine speed</td>
<td>rpm</td>
<td>2,800</td>
<td></td>
</tr>
<tr>
<td>Fuel type</td>
<td></td>
<td>Regular gasolino, lead-free (91 oktane)</td>
<td></td>
</tr>
<tr>
<td>Fuel consumption</td>
<td>l/h (qt/h)</td>
<td>0,8 (0,84)</td>
<td>1,1 (1,16)</td>
</tr>
<tr>
<td>Tank capacity</td>
<td>l (qt)</td>
<td>3,6 (3.80)</td>
<td>6,1 (6.44)</td>
</tr>
<tr>
<td>Oil specification</td>
<td></td>
<td>Fuchs Titan Unic 10W40 MC (SAE 10W40)</td>
<td></td>
</tr>
<tr>
<td>Oil quantity max.</td>
<td>l (qt)</td>
<td>0,6 (0,63)</td>
<td>1,0 (1,06)</td>
</tr>
<tr>
<td>Oil quantity min.</td>
<td>l (qt)</td>
<td>0,5 (0,53)</td>
<td>0,9 (0,95)</td>
</tr>
<tr>
<td>Spark plug</td>
<td></td>
<td>NGK BPR2HS</td>
<td></td>
</tr>
<tr>
<td>Spark plug air gap</td>
<td>mm (in)</td>
<td>0,7-0,8 (0.027-0.031)</td>
<td></td>
</tr>
</tbody>
</table>

* Equivalent to the installed power output in accordance with the directive 2000/14/EC.

### Exciter

<table>
<thead>
<tr>
<th>Designation</th>
<th>Unit</th>
<th>BPU 2540W</th>
<th>BPU 3050W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibrations</td>
<td>rpm (Hz)</td>
<td>5,400 (90)</td>
<td></td>
</tr>
<tr>
<td>Centrifugal force</td>
<td>kN</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Oil specification</td>
<td></td>
<td>Fuchs Titan Unic 10W40 MC (SAE 10W40)</td>
<td></td>
</tr>
<tr>
<td>Oil quantity</td>
<td>l (qt)</td>
<td>0.6 (0.63)</td>
<td></td>
</tr>
</tbody>
</table>
Hydraulic

<table>
<thead>
<tr>
<th>Designation</th>
<th>Unit</th>
<th>BPU 2540W</th>
<th>BPU 3050W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil specification</td>
<td></td>
<td>Fuchs Renolin MR 520</td>
<td></td>
</tr>
<tr>
<td>Oil quantity</td>
<td>l (qt)</td>
<td>0.4 (0.42)</td>
<td></td>
</tr>
</tbody>
</table>
1. Description

1.1 Functional description

The vibration required for compaction is generated by the exciter (5) that is permanently attached to the base plate (4). The exciter is designed as a central vibrator with directional vibrations. This principle allows you to change the direction of vibration by simply turning the eccentric weights (13). This makes a gradual transition possible between the vibration states: moving forward, moving in reverse and in a stationary position. This procedure is hydraulically controlled with the control handle (7) on the guide handle head (8).

When hydraulic oil is lost the machine operates in the reverse direction (danger of crushing).

The drive motor (1) attached to the upper mass (3) powers the exciter (5). The torque is transferred non-positively by the centrifugal clutch (9) and the exciter V-belt (10).
When the motor speed is low, the centrifugal clutch (9) interrupts the power flow to the exciter (5) which allows the drive motor (1) to idle properly. The speed of the drive motor can be continuously varied using the throttle regulation lever (6).

The upper mass (3) and the base plate (4) are connected to each other via 4 vibration-damping rubber metal shockmounts (11). This damping prevents very high frequencies from being transferred to the upper mass (3). This maintains proper functioning of the drive motor (1) despite a high compaction capacity.
2. Transport to the worksite

Requirements:

* When transporting the vibrating plate compactor, use only suitable hoisting gear with a minimum load-bearing capacity of 200 kg.
* Always turn off the motor during transportation!
* Vertically set guide handle head and lock into place.
* Fasten suitable lifting tackle to the central suspension (15) provided.
* If you transport the vibrating plate compactor on the cargo area of a vehicle, strap it down securely at the protective frame (14).

When using the integrated driving mechanism, you must turn off the engine. If the engine is running, engine lubrication cannot be ensured in the transport position. This can cause serious engine damage. There is also a danger that oil may leak out of the engine crankcase breather.

Note: Also observe the regulations in the chapter Safety information.
Recommendations for compacting

3. Recommendations for compacting

3.0.1 Condition of the ground

The maximum layer thickness depends on several factors such as the condition of the ground/soil, the moisture, grading etc. This is why it is not always possible to make precise recommendations.

Recommendation: In certain cases, determine the maximum layer thickness by conducting compacting tests and taking ground samples.

3.0.2 Compacting on a slope

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

* Start at the bottom of a slope (slopes that can also be easily managed in an upward direction can be safely travelled in a downward direction).
* The operator must never stand with their back facing the bottom.
* Do not exceed maximum tilt of 20°.

Working on slopes that exceed this tilt will cause the engine lubrication system to fail and thus inevitably damage parts of the engine.

Incorrect !

Correct !
4. Operation

4.1 Start preparation

Before you start the engine, check the following:

- Fuel level – the tank should be at least half full.
- Motor oil level.
- Air filter.
- Fuel lines for leaks.
- External screw connections for tightness.

4.2 Starting the engine

- Open the fuel tap (a1).
- Cold start: Close the choke (d2).
  Warm start: Open the choke (d1).

Note: The engine is hand warm or hotter with warm start.

- Set the engine switch to "ON" (b2).
- Push the throttle lever to the left (c2).
- Pull out the starter rope (e) until compression resistance can be felt and then let it roll back in again.
- Pull the starter rope with force, but not suddenly.
  The engine starts.
- Let starter rope slowly roll back in.
- Open the choke while the engine is warming up.
- Open the throttle lever completely for operation (c1).
Operation

4.3 Operating in the forward and reverse direction

▶ Press the control handle in the direction of travel.

Note: The forward and reverse speed can be continuously varied.

4.4 Turn off the engine

▶ Push the throttle lever to the right to idle operation (c3).
▶ Set the engine switch to "OFF" (b1).
▶ Close the fuel tap (a2).
## 5. Maintenance

### 5.1 Maintenance schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Daily before operation</th>
<th>After the first 20 hours</th>
<th>Monthly or every 100 hours</th>
<th>Annually or every 300 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check air filter:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Damage.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tightness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Filter element - clean or replace, if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check the tank seal for leaks - change, if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check fuel tank:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fuel level.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Leaks.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Lines for leaks.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Check the tank seal for leaks - change, if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check engine oil level.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change engine oil.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that gas control moves freely - oil gas control or lubricate engine rods, if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check and clean the spark plug.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replace the spark plug.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check V-belt - change if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check exciter oil - fill if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change exciter oil.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check hydraulic oil - fill if necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relubricate guide handle head:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Transport retainer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Spindle for guide handle height setting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that the fastening screws are tight:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Protective frame.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Central suspension.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust silencer - remove combustion residue from spark catcher filter.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2 Checking engine oil level

- Place the machine upright on a flat surface.
- Remove any dirt around the oil level dipstick.
- Remove the oil level dipstick (1) and wipe it with a clean, lint-free cloth.
- Screw the oil level dipstick all the way back in and pull it out again.
- Check: The motor oil level must be between the lower and upper marks.
- If necessary, pour new engine oil into the opening (2) until the upper mark is reached on the oil level dipstick (see chapter Technical data for oil type).
- Screw in the oil level dipstick and tighten it by hand.

5.3 Changing the engine oil

**Note:** The work area should be covered with a waterproof sheet to protect the floor (protection of the environment).

- Place the machine upright on a flat surface.
- Bring the engine to a hand warm temperature, either by letting it cool down or running it until it is warm.
Maintenance

- Switch off the engine.
- Remove any dirt around oil level dipstick (1) and secure oil drain hose (near 3).
- Place a sufficiently large container under the oil drain plug to catch the used oil.
- Remove the oil level dipstick and wipe it with a clean, lint-free cloth.
- For oil drainage, release oil drain hose and let the used oil drain out completely.

**Note:** Avoid spilling oil. Remove any spilled oil immediately.

- Refasten oil drain hose.
- Pour new engine oil into the opening (2) until the upper mark is reached on the oil level dipstick.
  
  In doing so, screw the oil level dipstick all the way back in and pull it out again repeatedly.
  
  See the chapter *Technical data* for oil quantity and oil type.

**Note:** Avoid spilling oil. Remove any spilled oil immediately.

- Screw in the oil level dipstick and tighten it by hand.

**Note:** Dispose of the used oil in accordance with the applicable regulations.
5.4 Cleaning the air filter / replacing the air filter inserts

The air filter is equipped with two air filter inserts.

**WARNING**
Danger of fire and explosions
if the wrong cleaning agent is used.
Do not use gasoline or any other solvents to clean components.

**Note:** The air filter must be cleaned every day if conditions are adverse, dry, and dusty.
Replace the air filter cartridges if it is no longer possible to remove the dirt.

- Unscrew the wing nut (1) and remove the cap (2).
- Clean the filter bracket around the air filter cartridges (with compressed air).
- Unscrew the inner wing nut (3) and remove air filter cartridges.
- Carefully remove the foam insert (4) from the paper insert (5).
- Check both parts for damage. Replace any damaged parts.
- Wash the foam insert with warm water and a mild soap solution. Rinse with clear water. Let it dry.
- Clean the paper insert by knocking it gently and clean it with compressed air from the inside to the outside.
- Reassemble it in reverse order or with new inserts. Tighten the wing nuts by hand.

**CAUTION**
Operating the engine without air filter can cause rapid engine wear.
Do not run the engine without an air filter.
5.5 Checking / cleaning / replacing the spark plug

WARNING
Hot exhaust!
Touching it can cause burns.
Only remove the spark plug when the engine has cooled down.

- Remove the spark plug connector.
- Remove the spark plug with a spark plug wrench.
- Clean the electrodes with a wire brush.
- Check the isolator (2) – if damaged, replace the spark plug.
- Check and adjust the electrode gap (1) – see chapter Technical data for the gap.
- Insert the spark plug and tighten it with a torque wrench.

<table>
<thead>
<tr>
<th>Torque [Nm]</th>
<th>Spark plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>New spark plug</td>
</tr>
<tr>
<td>25</td>
<td>Used spark plug</td>
</tr>
</tbody>
</table>

CAUTION
A loose spark plug can damage the engine.
Always tighten the spark plug.
5.6 Checking exciter V-belt

- Remove V-belt protector.
- Check exciter V-belt for signs of damage. Replace damaged exciter V-belts.
- Check tension.
- Screw the V-belt protector back on and use a torque wrench to tighten it to 10 Nm.

5.7 Changing exciter V-belt

- Remove V-belt protector.
- Remove 3 screws on engine V-belt disc.
- Remove outer half of V-belt disc.
- Change exciter V-belt.
- Press the V-belt downward into the exciter box and thread the V-belt pulley.

Note: Attach the V-belt within both roll pins.
- Attach clutch drum and tighten with 3 screws to 10 Nm.

Note: Turn the clutch drum in the process to avoid pinching the V-belt.
- Remount V-belt protector. Tighten screws with a torque wrench to 10 Nm.

5.8 Checking / filling hydraulic oil level

- Vertically set guide handle head and lock into place.
- Press the control handle in the forward movement position.
- Remove any dirt around the filler hole.
- Open the filler hole (1).
- Check: Oil level must reach upper edge of the gear.
- If necessary, fill with new hydraulic oil through the filler hole up to the upper edge of the gear (see chapter Technical data for oil type).
- Close the filler hole and tighten.

Note: The hydraulic control is self-bleeding.

5.9 Checking exciter oil level

- Place the machine upright on a flat surface.
- Remove any dirt around the filler hole.
- Open filler hole.
- Check: Oil level must reach the start of the thread of the filler hole.
- If necessary, fill exciter oil through the filler hole.
Note: For easier filling, use a funnel.

- Close filler hole and use a torque wrench to tighten it to 100 Nm.

5.10 Changing exciter oil

Note: The work area should be covered with a waterproof sheet to protect the floor (protection of the environment).

- Bring the engine to a hand warm temperature, either by letting it cool down or running it until it is warm.
- Switch off the engine.
- Remove any dirt around the filler hole.

**WARNING**
Danger through overturning.
If the machine overturns, it can cause severe injury such as crushing. Only use suitable and tested hoisting gear and lifting tackle of sufficient lifting capacity. Turn off machine in a stable position.

- Tilt machine slightly and support it.
- Place a sufficiently large container under the oil drain plug to catch the used oil.

Note: Avoid spilling oil. Remove any spilled oil immediately.
- Open oil drain plug.
- Tilt machine and let used oil drain out completely.
- Place the machine upright on a flat surface.
- Fill with new exciter oil through the filler hole to the start of the thread.
  For oil quantity see *Technical Data*.
- Screw the oil drain plug back in and use a torque wrench to tighten it to 100 Nm.

Note: Dispose of the used oil in accordance with the applicable regulations.
Malfunction

6. Malfunction

6.1 Forward travel speed too low

<table>
<thead>
<tr>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive hydraulic oil in the guide handle head.</td>
<td>Add oil to the fill level mark.</td>
</tr>
</tbody>
</table>

6.2 Reverse travel speed too low

<table>
<thead>
<tr>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient hydraulic oil in the guide handle head.</td>
<td>Add hydraulic oil.</td>
</tr>
</tbody>
</table>

6.3 No forward movement

<table>
<thead>
<tr>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical malfunction.</td>
<td>Contact Wacker Neuson Service.</td>
</tr>
</tbody>
</table>

6.4 Loss of hydraulic oil

<table>
<thead>
<tr>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaks, hydraulic hose is defective.</td>
<td>Contact Wacker Neuson Service.</td>
</tr>
</tbody>
</table>
## 6.5 Engine will not start

<table>
<thead>
<tr>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank empty.</td>
<td>Refill with fuel.</td>
</tr>
<tr>
<td>Fuel tap closed.</td>
<td>Open.</td>
</tr>
<tr>
<td>Air filter dirty.</td>
<td>Clean.</td>
</tr>
<tr>
<td>Engine switch set to &quot;OFF&quot;.</td>
<td>Set the engine switch to &quot;ON&quot;.</td>
</tr>
<tr>
<td>Recoil starter defective.</td>
<td>Repair.</td>
</tr>
<tr>
<td>Oil level warning system turned off.</td>
<td>Top off with engine oil.</td>
</tr>
</tbody>
</table>
EC Declaration of Conformity

Manufacturer
Wacker Neuson SE
Preußenstraße 41, 80809 München

Product

<table>
<thead>
<tr>
<th>Type</th>
<th>BPU 2540</th>
<th>BPU 3050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product type</td>
<td></td>
<td>Vibrating plate</td>
</tr>
<tr>
<td>Item no.</td>
<td>0008954</td>
<td>0008955</td>
</tr>
<tr>
<td>Installed power output kW</td>
<td>2.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Measured sound power level  dB(A)</td>
<td>104</td>
<td>105</td>
</tr>
<tr>
<td>Guaranteed sound power level dB(A)</td>
<td>105</td>
<td>108</td>
</tr>
</tbody>
</table>

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,

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