

Operator's manual

Gasoline demolition breakers

BH

23, 55, 65



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Errors excepted.

The machine on the cover may have special equipment (options).



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Original operator's manual



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1 Preface

This operator's manual contains important information and procedures for the safe, proper and economic operation of this Wacker Neuson machine. Carefully reading, understanding and observing is an aid to avoiding hazards, repair costs and downtime, and therefore to increasing the availability and service life of the machine.

This operator's manual is not a manual for extensive maintenance or repair work. Such work should be carried out by Wacker Neuson service or by technically trained personnel. The Wacker Neuson machine should be operated and maintained in accordance with this operator's manual. An improper operation or improper maintenance can pose dangers. Therefore, the operator's manual should be constantly available at the location of the machine.

Defective machine parts must be exchanged immediately!

If you have any questions concerning the operation or maintenance, a Wacker Neuson contact person is always available.

2 Introduction

2.1 Using the manual

This manual is to be considered part of the machine and should be carefully stored during the entire service life of the machine. This manual shall be transferred to subsequent owners or users of the machine.

2.2 Storage location of the manual

This manual is part of the machine and must be kept in the immediate vicinity of the machine and made accessible to staff at all times.

If this manual is lost, or if a second copy is required, there are two options to obtain a replacement:

- Download from the Internet: www.wackerneuson.com
- Contact your Wacker Neuson contact partner.

2.3 Accident prevention regulations

In addition to the notes and safety instructions in this manual, the local accident prevention regulations as well as the national health and safety regulations apply.

2.4 More information

This manual applies to various machine types from one product series. For this reason, some figures may vary slightly in appearance from the machine purchased. Depending on the model, there may be descriptions of components that are not included in the standard package.

The information contained in this manual is based on machines manufactured up to the time of printing. Wacker Neuson reserves the right to change this information.

The manufacturer shall immediately include any modifications or additions in this manual.

2.5 Target group

Individuals working with this machine must be regularly trained on the dangers of handling the machine.

This manual is intended for the following people:

Operating personnel:

These individuals have been trained on the machine and informed about the possible dangers in the event of improper conduct.

Technically trained personnel:

These people have professional training as well as additional knowledge and experience. They are able to assess the tasks assigned to them and recognize possible dangers.

2.6 Explanation of symbols

This manual contains specially emphasized safety instructions in the following categories: **DANGER**, **WARNING**, **CAUTION** and **NOTICE**.

Before performing any work on or with this machine, the notes and safety instructions must be read and understood. All notes and safety instructions in this manual must be passed on to the maintenance, repair, and transport personnel.



DANGER

This combination of symbol and signal word indicates a hazardous situation that will lead to death or serious injury if it is not avoided.



WARNING

This combination of symbol and signal word indicates a hazardous situation that can lead to death or serious injury if it is not avoided.



CAUTION

This combination of symbol and signal word indicates a hazardous situation that can lead to minor injury or damage to the machine if it is not avoided.

NOTICE

Supplementary information.

2.7 Wacker Neuson Contact partner

Depending on the country, the Wacker Neuson contact partner is a Wacker Neuson service department, a Wacker Neuson subsidiary, or a Wacker Neuson dealer.

On the Internet at www.wackerneuson.com.

2.8 Disclaimer

For the following violations, Wacker Neuson dismisses any liability for personal injury or material damage:

- Failure to follow this manual.
- Unintended use.
- Deployment of untrained personnel.
- Using non-approved spare parts and accessories.
- Improper handling.
- Structural modifications of any kind.
- Failure to observe the "General Terms and Conditions" (GT&Cs).

2.9 Product identification of the machine**Data of the nameplate**

The nameplate contains information that uniquely identifies this machine. This information is required for ordering spare parts and when inquiring about technical issues.

- Enter information about the machine in the following table:

Designation	Your information
Group and model	
Year of manufacture	
Machine number	
Version no.	
Item number	

3 Safety

3.1 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.

3.2 Proper use

The machine must only be used for the following purposes:

- Breaking off concrete and asphalt and soil that is full of boulders.
- Breaking off concrete, masonry and other construction materials, untouched and frozen ground.
- Scarifying roads and concrete, asphalt, tar and wooden and stone paving.
- Cutting clay, loam, peat and salts.
- Breaking up compacted soils.
- Ramming in posts, probes and grounding rods.
- To tamp sleepers in track construction.

The machine may only be used with tools that are intended for use with the machine and the material being worked on.

The machine may not be used for the following purposes:

- Working on hazardous materials such as asbestos.

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.

3.3 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. They can be found on the Internet under www.wackerneuson.com.

Do not drill into the housing, e.g. to install signs. Water could penetrate the housing and damage the machine.

3.4 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.

Maintenance

Regular maintenance 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 *Malfunctions*.

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.

3.5 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.

3.6 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.

3.7 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.

3.8 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.

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.

Supervision

Never leave the machine running unattended!

3.9 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 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.

3.10 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.

3.11 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.

3.11.1 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.
- Face protection.
- Eye protection.
- Breathing protection in the case of dusty ambient air.

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.

3.12 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.

Emptying the tank

Wacker Neuson recommends that the fuel tank be emptied and the carburetor run dry prior to transporting it. Fuel could run out, e.g. if the machine is tilted.

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

Transporting the machine

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

Lifting the machine

A falling machine can cause serious injuries.

The machine has no lifting or lashing points.

When lifting the machine, secure it in a closed transport container or similar in order to prevent it from toppling, falling or slipping away.

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.

3.13 Operating safety

3.13.1 Explosible environment

Never operate the machine in a potentially explosive environment.

3.13.2 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-carrying 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.

3.13.3 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.
- Material becoming separated, dropping down or ejected. Make sure that you do not put other persons in danger.
- Pay maximum attention in the vicinity of drops or slopes. Risk of falling.
- Maintain a sufficient distance from flammable materials.

3.13.4 Checks before starting work

Check the following points before beginning work:

- Condition of tools.
- Machine settings.

3.13.5 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 described in the operator's manual.

**Vertical stability**

Always make sure that you stand firmly when working with the machine. This applies particularly when working on scaffoldings, ladders, uneven or slippery floors etc.

Caution with hot parts

Do not touch any hot parts such as tools, tool holders, mufflers or guide cylinders during operation or for a short period afterwards. These parts can become very hot and can cause severe burns.

Caution with movable parts

Keep your hands, feet and loose clothing away from moving or rotating machine parts.

Caution with toxic materials

Some materials may contain toxic chemicals which are released during demolition. Therefore personal protective equipment must be worn to prevent inhalation of and skin contact with work dust.

Do not direct towards people

Do not direct the machine towards people in the vicinity during operation. The tool might be flung out and cause serious injuries.

No persons endangered

Be sure that no persons are endangered by flying or falling materials. Always work very attentively, and anticipate potential hazards.

3.13.6 Switching off the machine

Switch off the engine in the following situations:

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

Before storing the machine, wait until it has completely stopped running.

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

3.13.7 Storage

Set the machine down or store it securely so that it cannot tilt, fall down 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.

3.14 Safety during the operation of hand machines**Safe working with hand machines**

Secure loose workpieces with suitable methods.

While working, as a rule hold the machine on the provided handles with both hands.

While working, hold the machine in such a way that hand injuries are avoided when hitting hard objects.

Setting the hand machine down properly

Set the machine down carefully. Do not drop the machine to the floor or from greater heights. Dropping the machine can cause injuries to other persons or the machine itself can be damaged.

Safe working with the hammer

Keep the tool holder closed during operation.

3.15 Safety during the operation of combustion engines**3.15.1 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.

3.15.2 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.

3.15.3 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 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.

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.

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!

3.15.4 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.

3.15.5 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.

3.16 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.

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.

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.

Cleaning the zerk fitting

Wipe the zerk fitting with a clean cloth after the lubrication of the machine. There is a danger of electrocution if there is excessive grease on the zerk fitting.

3.17 Safety devices


WARNING

Danger of injury due to open moving parts.

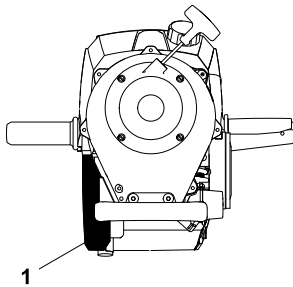
- Only operate the machine with properly installed and functioning safety devices.
- Do not modify or remove safety devices.


WARNING

Hot exhaust.

Touching it can cause burns.

- Only operate the machine with properly installed safety devices.
- Do not modify or remove safety devices.



Item	Designation
1	Burn protector

Burn protector








The burn protector the operator against emitted heat.

4 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.



Item	Label	Description
1		Smoking and open flames are prohibited. Danger of fire.
2		Wear personal protective gear to avoid injuries or health hazards: <ul style="list-style-type: none"> ■ Ear protection. ■ Eye protection. Read the operator's manual.
3		OFF switch.
4		Caution. Warning of hot surface.
5		Guaranteed sound power level.
6	US machines 	Warning.
7	US machines 	Danger.

5 Structure and function

5.1 Scope of delivery

The scope of delivery includes:

- Machine.
- Operator's manual.

5.2 Application

Use the machine only as intended, see chapter *Safety, Proper use*.

5.3 Functional description

Principle

The machine is a demolition hammer with a pneumatic percussion system.

It is driven by a gasoline engine.

The rotary movement of the drive engine is converted into a stroke movement via a centrifugal clutch, a single-stage spur gear unit, and a crank mechanism.

The piston is moved forwards and backwards by the crank gear, this compresses the air (forward movement) or generates a partial vacuum (backward movement). Due to change in pressure the percussion piston is moved forward and backwards (air cushion percussion system) and hits the tool.

The hood and operator's controls are decoupled from the percussion system by a spring system. This spring system keeps vibrations away from the operator's body if he for example presses his body against the hood while working.

5.4 Variants

The following different versions were specified in the technical data for the device types:

rs – Integrated shut-off device

The machine has an integrated shut-off device for connecting to an external remote cut-off.

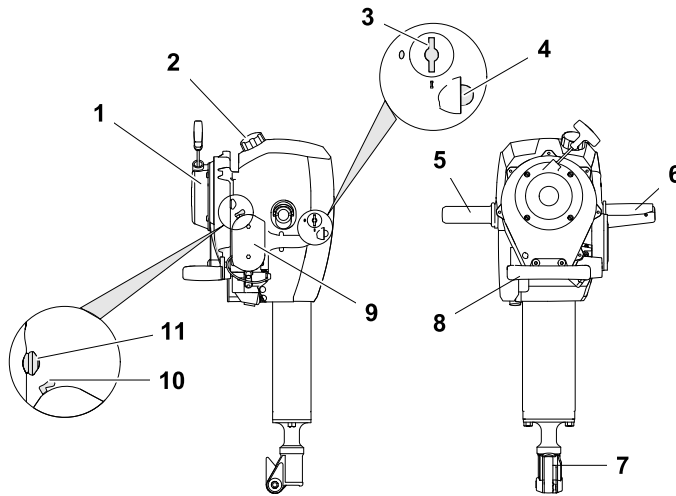
Via the remote cut-off, you can switch off several machines from a central location. This is for the safety of the operators, e.g. in track construction work.

If you wish to use your machine with a remote cut-off, please contact your Wacker Neuson representative.

rw

The machine is especially designed for use in track construction.

6 Components and operator's controls



Item	Designation	Item	Designation
1	Recoil starter	7	Tool holder
2	Fuel cap	8	Supplementary handle
3	Fuel tap	9	Air cleaner
4	Fuel pump	10	Choke
5	Handle	11	OFF switch
6	Gas handle		

Recoil starter

The recoil starter starts the engine.

In certain operating situations, e.g. when ramming in posts and grounding rods, it can be advantageous to change the traction direction of the recoil starter, i.e. the position of the recoil starter should be different to the standard position. In such cases, consult the Service Department of your Wacker Neuson representative.

Gas handle

The gas handle has several positions:

- Idle position
 - Gas handle in its original position, not pressed.
 - Engine running at idle speed.
 - Percussion system disengaged and does not strike.
- Working position
 - The machine is pressed against the material when the gas handle is pressed.
 - Engine running at maximum speed.
 - Percussion system engaged and strikes.
- Machine raised
 - Machine is raised from the material when the gas handle has been pressed.
 - Engine speed limited at high speed.
 - Percussion system engaged, but does not strike.

Tool holder

The tool holder is used to hold the tool.

Supplementary handle

The supplementary handle simplifies working in a tilted position.

Wacker Neuson recommends to carry the machine using the supplementary handle.

Fuel tap

The fuel tap opens or closes the fuel supply.

OFF switch

The Off switch deactivates the machine.

Choke

When the engine is cold or hot, also activate the choke in order to enrich the fuel-air mixture.

Fuel pump

The fuel pump is used to fill the fuel lines and the carburetor after the machine has not been used for a while. The integrated return pipe prevents too much fuel from entering the carburetor as a result of excessive pumping.

7 Transport



WARNING

Improper handling can result in injury or serious material damage.

- Read and follow all safety instructions of this operator's manual, see chapter *Safety*.
-



WARNING

Danger of fire and explosions by fuel.

Any fuel that escapes can ignite and cause severe burns.

- Lift and move the machine in the upright position.
-

Performing preparations

1. Switch off the engine.
2. Remove tool.
3. Lean the machine upright against a solid object and secure it to prevent it from toppling over.
Wacker Neuson recommends to hang the machine on the truck.
4. Let machine cool off.

Emptying the fuel system

NOTICE

The fuel cap has a pressure relief and vacuum valve through which fuel can escape when it is warm (e.g. in direct sunlight).

The fuel system must be empty during transport in order to prevent fuel from escaping through the pressure relief valve.

1. Remove any dirt around the fuel cap.
2. Unscrew and remove fuel cap.
3. Pump the fuel out into a suitable container or tank, e.g. with a suction pump.
4. Position the fuel cap and tighten it.
5. Start the engine and let it idle until the fuel in the carburetor is used up and the engine stops.

Transporting the machine

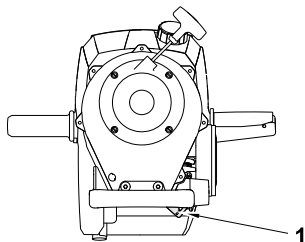
1. Lift machine with the supplementary handle.
2. Place the machine on or into a suitable means of transport.
3. Secure the machine against falling over and down or sliding.

NOTICE

Wacker Neuson recommends to use the truck for the transport on the construction site, refer to chapter *Accessories*.

8 Initial start up

Rendering the machine functional



Item	Designation
1	Spark plug cap

Place the spark plug cap onto the spark plug.

9 Use and operation



WARNING

Improper handling can result in injury or serious material damage.

- Read and follow all safety instructions of this operator's manual, see chapter *Safety*.

9.1 Prior to starting the machine

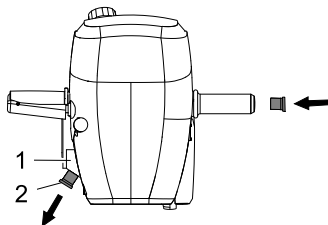
Checking the machine

Check the following points before beginning work:

- Damage to the machine and to all components.
 - If the machine is damaged, do not start the machine. Have any damage or defects eliminated immediately.
- Fuel level, see chapter *Maintenance*.
- Air cleaner, see chapter *Maintenance*.
- Recoil starter, see chapter *Maintenance*.

9.2 Adjusting the machine

Machine with integrated shut-off device – RS (optional)



Item	Designation	Item	Designation
1	Shorting plug	3	Handle
2	Shorting plug		

The machine only works when either the plug of the remote cut-off or the shorting plug is plugged in at the connection socket of the integrated shut-off device.

9.3 Operation with remote cut-off

If you wish to operate the machine via an external remote cut-off:

1. Remove the shorting plug from the connection socket.
2. Plug the shorting plug into the handle opposite so that it does not get lost.
 - The machine is now ready for operation with the remote cut-off. For further information, see the remote cut-off operator's manual.

9.4 Operation without remote cut-off

If you wish to operate the machine without an external remote cut-off:

1. Remove the shorting plug from the handle opposite.
2. Plug the shorting plug into the connection socket.
 - The machine is now ready for operation with the remote cut-off.

9.5 Changing tools

NOTICE

General notes

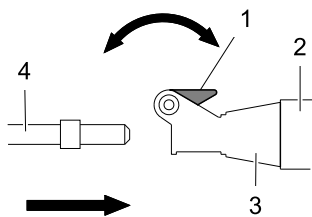
You can change the tool without additional tools.

Notes on using tools

Only use tools with the following properties:

- The tool must be suitable for the tool holder.
- The tool end must be undamaged.
- The tool must be sufficiently sharp to avoid impact damage.
- The tool must be suitable for the intended application.

Inserting tool



Item	Designation	Item	Designation
1	Handle	3	Tool holder
2	Guide cylinder	4	Tool

1. Clean tool end.
2. Swivel out handle on the tool holder.
3. Turn the tool into the position which is most suitable for the intended work.
4. Push tool into the tool holder as far as it will go.
5. Press the handle on the tool holder.
6. Check to see if the tool is locked by pulling on the tool.

Removing tool



CAUTION

Risk of burn injury from a hot tool and guide cylinder.

- Touch the tool only if you are wearing protective gloves.

1. Swivel out handle on the tool holder.
2. Remove tool from the tool holder.
3. Press the handle on the tool holder.

9.6 Starting up

NOTICE

- When working, use the weight of the hammers.
- Pressing forcefully against the material to be worked on does not improve the machine's performance.
- Press the machine against the material to be worked as follows:
 - Press with sufficient strength that the machine noticeably locks into place.
 - Apply somewhat less pressure as soon as you feel the lower stop.

NOTICE
Notes for operation below freezing point

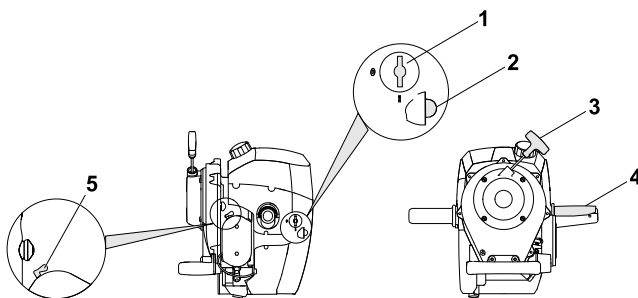
The cold grease in the percussion system may increase the resistance to such an extent that the centrifugal clutch slips.

- Allow the machine to warm up at low engine speed (do not press the gas handle) to prevent the centrifugal clutch from premature wear.
-

9.6.1 Starting the engine

NOTICE

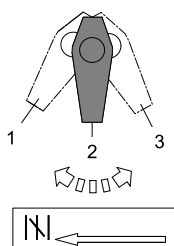
When starting the engine, move to a position at least 3 m (9.8 ft) from the fueling area.



Item	Designation	Item	Designation
1	Fuel tap	4	Throttle lever
2	Fuel pump	5	Choke
3	Starter rope		

Performing preparations

1. Put the machine into an upright position and hold it with one hand.
2. Open the fuel tap.



Item	Designation	Item	Designation
1	Choke active	3	Choke inactive
2	Choke halfway position		

3. Cold motor: Activate choke.
 - Warm engine: Deactivate choke.
 - Hot engine: Activate choke.
4. Press the fuel pump bellows repeatedly until the bellows is completely filled with fuel.

Starting the engine

NOTICE

Improper handling can damage the machine.

- Do not pull the starter rope as far as it can go.
 - Let starter rope slowly roll back in.
-



CAUTION

Incorrect handling during starting can result in minor injuries.

- Do not pull the starter rope until sufficient space is available and nobody is in the immediate vicinity.
-

1. Press down the gas handle (full throttle position).
2. Pull out the starter rope slowly until compression resistance can be felt and then let it slowly roll back in again.
3. Pull the starter rope firmly, but not suddenly (several times if necessary).
4. Let starter rope slowly roll back in.
5. Deactivate the choke when you hear the engine's first ignition.
6. Pull the starter rope with force, but not suddenly (several times, if necessary) until the engine starts.
7. Let starter rope slowly roll back in.
8. Release the gas handle (idle position).
9. Allow the engine to warm up.

9.7 Operating the machine

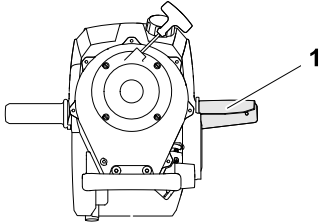
Processing material



WARNING

Injuries from insufficiently guided or uncontrolled machine.

- Always hold machine with both hands and stand firmly.



Item	Designation
1	Gas handle

1. Hold the machine firmly with both hands.
2. Place the tool into position on the material.
3. Press down the gas handle.
4. With both hands, press the machine against the material to be processed.

NOTICE

Press with sufficient strength that you feel the machine's spring system, but not the lower stop.

5. When the material has been processed, lift and adjust the machine.

NOTICE

Proceed as follows if the tool gets stuck in the material:

- Open the tool holder and remove the tool.
- Continue working with another tool.

- When the machine is lifted and the gas handle is pressed, the engine continues to run at a high speed, while the percussion system remains engaged.
- When the tool has no resistance, the percussion system goes over to idle operation and no longer impacts.

NOTICE

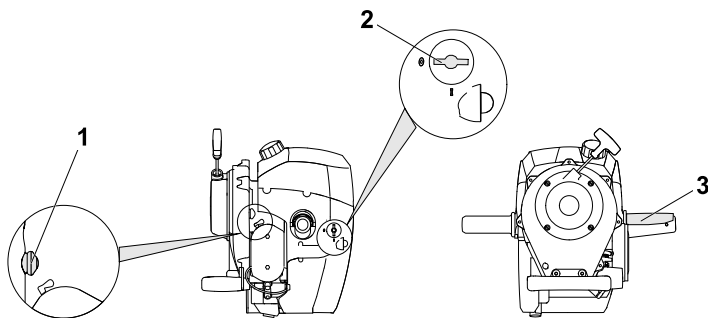
Note for breaking off edges

Pay attention to the following points when breaking off edges:

- Vertical stability.

9.8 Decommissioning

Switching off the machine



Item	Designation	Item	Designation
1	OFF switch	3	Gas handle
2	Fuel tap		

1. Release the gas handle.
2. Keep the off switch pressed until the machine has come to a complete standstill.
3. Close the fuel tap.
4. Set down the machine in such a way that it cannot tilt, fall or slip.

10 Maintenance


WARNING

Improper handling can result in injury or serious material damage.

- Read and follow all safety instructions of this operator's manual, see chapter *Safety*.


WARNING

Danger of poisoning by exhaust fumes.

Exhaust fumes contain toxic carbon monoxide that can lead to unconsciousness or death.

- Carry out maintenance work only when the engine is off.

10.1 Open Source Statement

You may choose any qualified repair shop or person to maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall and all other services paid for by Wacker Neuson must be performed at an authorized Wacker Neuson service center. You are responsible for presenting your spark ignited off-road engine equipment to a Wacker Neuson service center as soon as a warrantable condition exists. Wacker Neuson may require some equipment services, not related to the engine or emissions control system, to be performed at a Wacker Neuson authorized service center as identified in the maintenance instructions below.

10.2 Maintenance schedule

Task	Daily before operation	Every 20 hrs.	Every 40 hrs.	Monthly	Annually
Visual inspection of all parts for damage.	■				
Clean the machine. ■ Ventilation slots. ■ Air cleaner.	■				
Check the fuel: ■ Fuel tank fill level. ■ Fuel tank for leaks. ■ Lines for leaks.	■				
Check the tool ends and cutting edges – if required, sharpen, reforge or replace.	■				
BH 23, BH 55 Lubricate the machine.		■			
BH 55rw, BH 65 Lubricate the machine.			■		
Clean spark plug – change, if necessary.				■	
Check tool holder for wear – have it changed, if necessary.*				■	
Have the fuel filter replaced.*					■

* Have these tasks carried out by the service department of your Wacker Neuson contact person.

10.3 Maintenance work

Working in the workshop

Perform maintenance work in a workshop on a workbench. This has the following benefits:

- Protection of the machine of contamination on the construction site.
- A level and clean work surface makes work easier.
- There is a better overview over small parts and they are not lost as easily.

10.3.1 Cleaning machine

Clean the machine after use.

1. Clean the ventilation slots with a suitable tool.
2. Wipe the housing with a damp and clean cloth.

10.3.2 Topping up with fuel



WARNING

Danger of fire and explosions by fuel and fuel vapors.

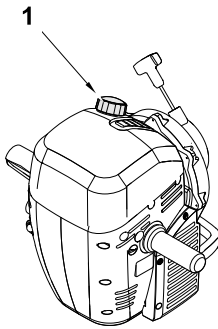
- Do not smoke.
- Do not refuel near open flames.
- Turn off the engine before refueling and allow it to cool down.



WARNING

Health hazard due to fuel.

- Refuel in a well-ventilated environment.
- Do not inhale fuel vapors.
- Avoid skin and eye contact with fuel.



Item	Designation
1	Fuel cap

Performing preparations

1. Switch off the engine.
2. Lean the machine upright against a solid object and secure it to prevent it from toppling over or alternatively, lay it on its back.

Wacker Neuson recommends to hang the machine on the truck.

3. Let machine cool off.

Topping up with fuel

1. Remove any dirt around the fuel cap.
2. Slowly unscrew and remove fuel cap.

NOTICE

Slowly unscrew the fuel cap so that any overpressure can slowly escape.

3. Use a clean funnel to replenish fuel.
 - See chapter *Technical data* for the fuel specification.
See chapter *Technical data* for the fuel mixing table.
4. Position the fuel cap and tighten it.

10.3.3 Checking/cleaning air cleaner

Performing preparations

1. Switch off the engine.
2. Lean the machine upright against a solid object and secure it to prevent it from toppling over.
Wacker Neuson recommends to hang the machine on the truck.
3. Let machine cool off.

Removing the air cleaner cartridge

1. Remove any dirt around the air cleaner cap.
2. Unscrew and remove all nuts of the air cleaner cap.
3. Remove the air cleaner cap.
4. Remove air cleaner cartridge.

Checking/cleaning air cleaner cartridge

- Tap out air cleaner cartridge and blow out from inside to outside with compressed air.

NOTICE

When tapping, make sure that the air cleaner cartridge is not damaged.

- If the dust can no longer be removed, change the air cleaner cartridge.

Installing air cleaner cartridge

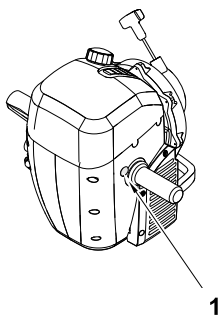
1. Insert air cleaner cartridge.
2. Replace air cleaner cap.
3. Tighten all nuts of the air cleaner cap securely.

NOTICE

Operating the engine without air cleaner can cause rapid engine wear.

- Do not run the engine without an air cleaner or air cleaner cap.
-

10.3.4 Lubricating the machine



Item	Designation
1	Zerk fitting

1. Remove any dirt around the zerk fitting.
2. Place filled manual grease gun onto the zerk fitting and operate approx. 20 times.

NOTICE

Only use special lubricants for lubricating, see chapter *Technical Data*.

3. Wipe the area around the zerk fitting with a clean cloth.

10.3.5 Checking/cleaning/replacing spark plug



CAUTION

Touching a hot spark plug can cause burns.

- Only remove the spark plug when the engine has cooled down.

Performing preparations

1. Switch off the engine.
2. Let machine cool off.

Removing the spark plug

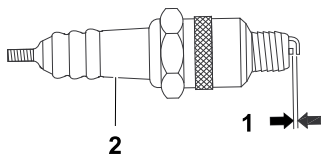
1. Clean around the spark plug thoroughly.
2. Pull off the spark plug cap from the spark plug.

NOTICE

Do not pull the spark plug cap off the spark plug by the ignition cable.

3. Loosen and unscrew the spark plug with a spark plug wrench.

Checking/cleaning the spark plug



Item	Designation	Item	Designation
1	Spark plug air gap	2	Isolator

1. Check the isolator – if damaged, replace the spark plug.
2. Clean the electrodes with a wire brush.
3. Measure the spark plug gap with a feeler gauge – if necessary, correct it by bending the lateral electrode.
4. See the chapter *Technical data* for the spark plug and electrode gap.
5. Check the spark plug gasket – if damaged, replace the spark plug.

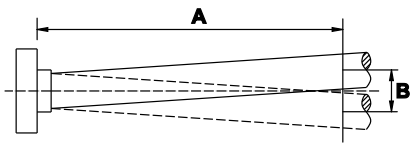
Installing the spark plug

1. First screw in the spark plug manually then tighten it with a spark plug wrench.
Torque 22 Nm (16 lbf ft).
2. Place the spark plug cap onto the spark plug.

NOTICE

A spark plug that is too loose or too tight can damage the engine.

- Tighten the spark plugs with the specified torque.

10.3.6 Checking the tool holder for wear


Item	Value	Item	Value
A	200 mm (0.66 ft)	B	Max. 6 mm (0.02 ft)

1. Insert the tool.

NOTICE

Use a new tool to measure only the wear of the tool holder and not the wear of the tool.

2. Measure the tool play 200 mm (0.66 ft) from insertion point.
Play may not exceed 6 mm (0.05 ft).
 - If the play exceeds 6 mm, the tool holder must be replaced.

11 Malfunctions

Potential faults, their causes and remedies can be found in the following table.

Notify your Wacker Neuson contact in case of malfunctions you cannot or may not remedy yourself.

Malfunction	Cause	Remedy
Engine does not start.	Fuel tap is closed.	Open the fuel tap.
	Fuel tank is empty.	Top up with fuel.
	Fuel line is clogged.	Have the fuel line cleaned.*
	Fuel filter is clogged.	Have the fuel filter replaced.*
	Carburetor is clogged.	Have the carburetor cleaned.*
	Air cleaner is clogged.	Clean air cleaner.
	Spark plug cap is defective.	Have the machine repaired.*
	Spark plug is defective.	Change the spark plug.
	Spark plug is loose.	Tighten the spark plug.
	Spark plug gap is set incorrectly.	Set the spark plug gap.
	The connection socket of the remote cut-off is empty.	Connect remote cut-off.
		Insert shorting plug.
	Remote cut-off is not functioning properly.	Check remote cut-off according to the manufacturer's instructions.
Engine shuts off right after starting.	Fuel tank is empty.	Top up with fuel.
	Fuel filter is clogged.	Have the fuel filter replaced.*
	Air cleaner is dirty.	Clean or replace air cleaner.
Engine has low performance.	Air cleaner is dirty.	Clean or replace air cleaner.
Recoil starter defective.	Starter rope jammed.	Have the starter rope replaced.*
	Starter rope torn off.	
* Have these tasks carried out by the service department of your Wacker Neuson contact person.		

12 Storage



WARNING

Danger of fire and explosions by fuel.
Any fuel that escapes can ignite and cause severe burns.

- Lift and move the machine in the upright position.

If the machine will not operated for a while, e.g. during the winter, do the following:

12.0.1 Performing preparations

1. Switch off the engine.
2. Remove tool.
3. Lean the machine upright against a solid object and secure it to prevent it from toppling over.
Wacker Neuson recommends to hang the machine on the truck.
4. Let machine cool off.

12.0.2 Emptying the fuel system

The gasoline in the fuel partially evaporates during long-term storage. The two-cycle oil in the fuel does not evaporate. After long-term storage the mixture ratio of gasoline to two-cycle oil is no longer correct. For this reason, the fuel system must be empty for long-term storage.

1. Remove any dirt around the fuel cap.
2. Unscrew and remove fuel cap.
3. Pump the fuel out into a suitable container or tank, e.g. with a suction pump.
4. Position the fuel cap and tighten it.
5. Start the engine and let it idle until the fuel in the carburetor is used up and the engine stops.

12.0.3 Storing the machine

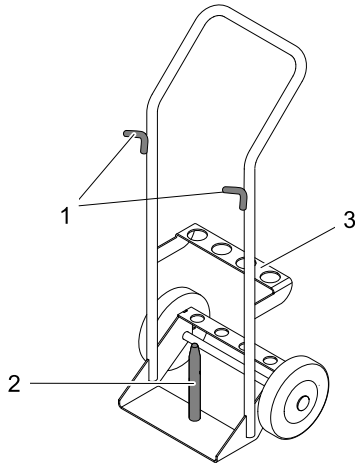
1. Clean the machine.
2. Oil areas such as the tool holder and the handle, where there is a risk of rusting.
3. Store the machine in a dry place.

13 Accessories

There is a wide range of accessories available for the machine.

For more information on the individual accessories, visit the following website: www.wackerneuson.com.

13.1 Truck



Item	Designation	Item	Designation
1	Hanging device	3	Tool holder
2	Guide rod		

13.1.1 Proper use

The truck must only be used for the transport of Wacker Neuson large hammers and the required tools.

The truck must not be used for the following:

- Transporting people.
- Transporting other machines except Wacker Neuson large hammers.

The truck must not be attached to vehicles.

Placing hammer on the truck



CAUTION

Insufficient stability of the truck.

Injury or damage caused by the truck tipping over or rolling off when the hammer is placed on it.

- Place truck on a level surface.
- Secure truck against rolling off and tipping over.

1. Switch off the machine.
2. Remove tool from the tool holder.
3. Clean the truck's guide rod.
4. Insert hammer with the tool holder on the guide rod and rest on the handles of the truck.
5. Insert tool in the tool holder.



14 Technical data

14.1 BH 23, BH55

Designation	Unit	BH 23 27x80 CN	BH55 27x80	BH55 25x108	BH55 28x152	BH55 28x160
Item no.		5100010066	5100004026	5100004027	5100004028	5100004029
Percussion rate	1/mm	1,300	1,300	1,300	1,300	1,300
Single stroke energy	J	55	55	55	55	55
Length (without tool)	mm (in)	777 (30.6)	777 (30.6)	791 (31.1)	833 (32.8)	833 (32.8)
Width	mm (in)	492 (19.4)	492 (19.4)	492 (19.4)	492 (19.4)	492 (19.4)
Depth	mm (in)	346 (13.6)	346 (13.6)	346 (13.6)	346 (13.6)	346 (13.6)
Weight	kg (lb)	23.8 (52.6)	24.0 (52.9)	23.9 (52.7)	25.0 (55.1)	25.0 (55.1)
Tool holder		ø27x80	ø27x80	hex 25x108	hex 28x152	hex 28x160
Rated output	kW	1.6	1.6	1.6	1.6	1.6
Rated speed *	rpm	4,250	4,250	4,250	4,250	4,250
Standard		ISO 3046-1				
Special lubricating grease		Gadus S3 V220C 2 Retinax LX2	Gadus S3 V220C 2			
Fuel consumption	l/h (gph us)	0.9 (0.2)	0.9 (0.2)	0.9 (0.2)	0.9 (0.2)	0.9 (0.2)
Tank capacity	l (gal us)	1.8 (0.5)	1.8 (0.5)	1.8 (0.5)	1.8 (0.5)	1.8 (0.5)
Storage temperature range	°C (°F)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)
Operating temperature range	°C (°F)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)
Sound pressure level L _{pA}	dB(A)	101	101	101	101	101
Standard		DIN EN ISO 11201				
Sound power level L _{WA} measured	dB(A)	108	108	108	108	108
guaranteed	dB(A)	109	109	109	109	109
Standard		2000/14/EC				
Vibration total value a _{hv}	m/s ² (ft/s ²)	8.3 (27.2)	8.3 (27.2)	8.3 (27.2)	8.3 (27.2)	8.3 (27.2)
Standard		DIN EN ISO 28927				
Uncertainty of measurement of vibration total value a _{hv}	m/s ² (ft/s ²)	3.0 (9.8)	3.0 (9.8)	3.0 (9.8)	3.0 (9.8)	3.0 (9.8)
* The actual operating speed depends on numerous operating parameters and can differ from the nominal speed.						

14.2 BH55rw

Designation	Unit	BH55rw 27x80	BH55rw 25x108	BH55rw 28x152
Item no.		5100004038	5100004039	5100004040
Percussion rate	1/mm	1,350	1,350	1,350
Single stroke energy	J	55	55	55
Length (without tool)	mm (in)	842 (33.1)	852 (33.5)	898 (35.4)
Width	mm (in)	492 (19.4)	492 (19.4)	492 (19.4)
Depth	mm (in)	346 (13.6)	346 (13.6)	346 (13.6)
Weight	kg (lb)	25.2 (55.6)	25.2 (55.6)	25,9 (57.1)
Tool holder		ø27x80	hex 25x108	hex 28x152
Rated output	kW	1.6	1.6	1.6
Rated speed *	rpm	4,500	4,500	4,500
Standard		ISO 3046-1		
Special lubricating grease		Gadus S3 V220C 2		
Fuel consumption	l/h (gph us)	0.9 (0.2)	0.9 (0.2)	0.9 (0.2)
Tank capacity	l (gal us)	1.8 (0.5)	1.8 (0.5)	1.8 (0.5)
Storage temperature range	°C (°F)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)
Operating temperature range	°C (°F)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)
Sound pressure level L_{pA}	dB(A)	101	101	101
Standard		DIN EN ISO 11201		
Sound power level L_{WA} measured	dB(A)	108	108	108
guaranteed	dB(A)	109	109	109
Standard		2000/14/EC		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	4.5 (14.8)	4.5 (14.8)	4.5 (14.8)
Standard		DIN EN ISO 28927		
Uncertainty of measurement of vibration total value a_{hv}	m/s^2 (ft/s^2)	3.0 (9.8)	3.0 (9.8)	3.0 (9.8)
* The actual operating speed depends on numerous operating parameters and can differ from the nominal speed.				



Designation	Unit	BH55rw 28x160	BH55rw 32x160	BH55rw rs 27x80
Item no.		5100004041	5100004042	5100004043
Percussion rate	1/mm	1,350	1,350	1,350
Single stroke energy	J	55	55	55
Length (without tool)	mm (in)	898 (35.4)	898 (35.4)	842 (33.1)
Width	mm (in)	492 (19.4)	492 (19.4)	492 (19.4)
Depth	mm (in)	346 (13.6)	346 (13.6)	346 (13.6)
Weight	kg (lb)	25.9 (57.1)	25.9 (57.1)	25.2 (55.6)
Tool holder		hex 28x160	hex 32x160	ø27x80
Rated output	kW	1.6	1.6	1.6
Rated speed *	rpm	4,500	4,500	4,500
Standard		ISO 3046-1		
Special lubricating grease		Gadus S3 V220C 2		
Fuel consumption	l/h (gph us)	0.9 (0.2)	0.9 (0.2)	0.9 (0.2)
Tank capacity	l (gal us)	1.8 (0.5)	1.8 (0.5)	1.8 (0.5)
Storage temperature range	°C (°F)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)
Operating temperature range	°C (°F)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)
Sound pressure level L_{pA}	dB(A)	101	101	101
Standard		DIN EN ISO 11201		
Sound power level L_{WA} measured	dB(A)	108	108	108
guaranteed	dB(A)	109	109	109
Standard		2000/14/EC		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	4.5 (14.8)	4.5 (14.8)	4.5 (14.8)
Standard		DIN EN ISO 28927		
Uncertainty of measurement of vibration total value a_{hv}	m/s^2 (ft/s^2)	3.0 (9.8)	3.0 (9.8)	3.0 (9.8)

* The actual operating speed depends on numerous operating parameters and can differ from the nominal speed.

14.3 BH65

Designation	Unit	BH65 27x80	BH65 25x108	BH65 28x152
Item no.		5100004032	5100004033	5100004034
Percussion rate	1/mm	1,250	1,250	1,250
Single stroke energy	J	65	65	65
Length (without tool)	mm (in)	848 (33.4)	858 (33.8)	905 (35.6)
Width	mm (in)	492 (19.4)	492 (19.4)	492 (19.4)
Depth	mm (in)	346 (13.6)	346 (13.6)	346 (13.6)
Weight	kg (lb)	25.2 (55.6)	25.2 (55.6)	25.9 (57.1)
Tool holder		∅27x80	hex 25x108	hex 28x152
Rated output	kW	1.7	1.7	1.7
Rated speed *	rpm	4,100	4,100	4,100
Standard		ISO 3046-1		
Special lubricating grease		Gadus S3 V220C 2		
Fuel consumption	l/h (gph us)	1.1 (0.3)	1.1 (0.3)	1.1 (0.3)
Tank capacity	l (gal us)	1.8 (0.5)	1.8 (0.5)	1.8 (0.5)
Storage temperature range	°C (°F)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)
Operating temperature range	°C (°F)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)
Sound pressure level L_{pA}	dB(A)	101	101	101
Standard		DIN EN ISO 11201		
Sound power level L_{WA} measured	dB(A)	108	108	108
guaranteed	dB(A)	109	109	109
Standard		2000/14/EC		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	4.6 (15.1)	4.6 (15.1)	4.6 (15.1)
Standard		DIN EN ISO 28927		
Uncertainty of measurement of vibration total value a_{hv}	m/s^2 (ft/s^2)	3.0 (9.8)	3.0 (9.8)	3.0 (9.8)
* The actual operating speed depends on numerous operating parameters and can differ from the nominal speed.				



Designation	Unit	BH65 28x160	BH65 32x160
Item no.		5100004035	5100004036
Percussion rate	1/mm	1,250	1,250
Single stroke energy	J	65	65
Length (without tool)	mm (in)	905 (35.6)	905 (35.6)
Width	mm (in)	492 (19.4)	492 (19.4)
Depth	mm (in)	346 (13.6)	346 (13.6)
Weight	kg (lb)	25.9 (57.1)	25.9 (57.1)
Tool holder		hex 28x160	hex 32x160
Rated output	kW	1.7	1.7
Rated speed *	rpm	4,100	4,100
Standard		ISO 3046-1	
Special lubricating grease		Gadus S3 V220C 2	
Fuel consumption	l/h (gph us)	1.1 (0.3)	1.1 (0.3)
Tank capacity	l (gal us)	1.8 (0.5)	1.8 (0.5)
Storage temperature range	°C (°F)	-30 – +50 (-22.0 – +122.0)	-30 – +50 (-22.0 – +122.0)
Operating temperature range	°C (°F)	-10 – +40 (-14.0 – +104.0)	-10 – +40 (-14.0 – +104.0)
Sound pressure level L_{pA}	dB(A)	101	101
Standard		DIN EN ISO 11201	
Sound power level L_{WA} measured	dB(A)	108	108
guaranteed	dB(A)	109	109
Standard		2000/14/EC	
Vibration total value a_{hv}	m/s^2 (ft/s^2)	4.6 (15.1)	4.6 (15.1)
Standard		DIN EN ISO 28927	
Uncertainty of measurement of vibration total value a_{hv}	m/s^2 (ft/s^2)	3.0 (9.8)	3.0 (9.8)
* The actual operating speed depends on numerous operating parameters and can differ from the nominal speed.			

14.3.1 Combustion engine

Designation		
Manufacturer		Wacker Neuson
Engine type		WM 80
Combustion method		Two-cycle
Cooling		Air cooling
Cylinder		1
Engine displacement	cm ³ (in ³)	80 (4.9)
Fuel type		Öl / Ottokraftstoff Gemisch, Öl / Alkylatkraftstoff Gemisch
Mixture preparation		Carburetor
Fuel mixture ratio		1:50 (1:100)
Oil specification		JASO FD, JASO FC, ISO-L EGD, ISO-L EGC
Upper idling speed	rpm	2,000
Type of spark plug		Bosch WR7AC Champion RL86C
Spark plug air gap	mm (in)	0.5 (0.02)
Starter type		Recoil starter

15 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.

15.1 Emission Control System Background Information

Introduction

Wacker Neuson spark-ignited engines/equipment must conform with applicable Environmental Protection Agency (EPA) emissions regulations. There are two types of emissions that fall under these regulations: 1) exhaust, and 2) evaporative. These regulations require that manufacturers warrant the emission control systems for defects in materials and workmanship.

Furthermore, EPA regulations require all manufacturers to furnish written instructions describing how to operate and maintain the engines/equipment including the emission control systems. This information is provided with all Wacker Neuson engines/equipment at the time of purchase.

Exhaust Emissions

The combustion process produces carbon monoxide, oxides of nitrogen, and hydrocarbons. Control of hydrocarbons and oxides of nitrogen is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

Wacker Neuson utilizes lean carburetor settings and other systems to reduce the emissions of carbon monoxide, oxides of nitrogen, and hydrocarbons.

Evaporative Emissions

Evaporative emissions are fuel emissions and generally include emissions that result from permeation of fuel through the fuel-system materials or from ventilation of the fuel system.

Wacker Neuson utilizes low-permeation fuel lines and fuel tanks where applicable to reduce evaporative emissions.

Problems that may affect Emissions

If any of the following symptoms arise, have the engine/equipment inspected and repaired by a Wacker Neuson dealer/service center.

- Hard starting or stalling after starting
- Rough idling
- Misfiring or backfiring under load
- Afterburning (backfiring)
- Presence of black exhaust smoke during operation
- High fuel consumption

Tampering and Altering

Tampering with or altering the emission control system may increase emissions beyond the legal limit. If evidence of tampering is found, Wacker Neuson may deny a warranty claim. Among those acts that constitute tampering are:

- Removing or altering of any part of the air intake, fuel, or exhaust systems.
- Altering or defeating the speed-adjusting mechanism causing the engine to operate outside its design parameters.

15.2 Limited Defect Warranty for Wacker Neuson Emission Control Systems

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

Wacker Neuson Sales Americas, LLC, N92 W15000 Anthony Avenue, Menomonee Falls, WI 53051, (hereinafter "Wacker Neuson") warrants to the initial retail purchaser, and each subsequent owner, that this engine/equipment, including all parts of its exhaust and evaporative emissions control systems, have been designed, built, and equipped to conform at the time of initial sale to all applicable emission regulations of the U.S. Environmental Protection Agency (EPA), and that the engine/equipment is free



of defects in materials and workmanship which would cause this engine/ equipment to fail to conform to EPA regulations during its warranty period. Provided there has been no abuse, neglect or improper maintenance of your SORE SSIE or engine powered equipment.

Wacker Neuson is also liable for damages to other engine/equipment components caused by a failure of any warranted parts during the warranty period.

Limited Defect Warranty Period for Wacker Neuson Emission Control Systems

The warranty period for this engine /equipment begins on the date of sale to the initial purchaser and continues for a minimum of two (2) years. For the warranty terms for your specific engine/equipment, visit wackerneuson.com.

Any implied warranties are limited to the duration of this written warranty.

What is covered

Wacker Neuson recommends the use of genuine Wacker Neuson parts, or the equivalent, whenever maintenance is performed. The use of replacement parts not equivalent to the original parts may impair the effectiveness of the engine/ equipment emission controls systems. Furthermore, if a defective non-authorized replacement part or non-equivalent replacement part is used in the repair or maintenance of the engine/equipment, and an authorized Wacker Neuson dealer/service center determines it is defective or causes a failure of a warranted part, the claim for repair of the engine/equipment may be denied. If the part in question is not related to the reason the engine/equipment requires repair, the claim will not be denied.

For the components listed in the following table, an authorized Wacker Neuson dealer/service center will, at no cost to you, make the necessary diagnosis, repair, or replacement necessary to ensure that the engine/equipment complies with the applicable EPA regulations during the warranty period. All defective parts replaced under this warranty become property of Wacker Neuson.

Exhaust Emissions

Systems Covered	Components
Fuel metering system	Carburetor and internal parts.
	Air/fuel ratio feedback system (if applicable).
	Cold start enrichment system (if applicable).
	Regulator assembly (if applicable).
Exhaust system	Catalytic muffler (if applicable).
	Exhaust manifold (if applicable).
Air induction system	Air filter housing.
	Air filter element.*
	Intake manifold (if applicable).
Ignition system	Flywheel magneto.
	Ignition module.
	Electronic controls (if applicable).
	Spark advance/retard system (if applicable).
	Spark plug cap.
	Spark plug.*

Systems Covered	Components
Miscellaneous parts associated with the exhaust emission control system	Tubing.
	Fittings.
	Seals.
	Gaskets.
	Clamps.
* Indicates expendable maintenance items. Warranted only to first scheduled replacement point.	

Evaporative Emissions

Systems Covered	Components
Evaporative control system	Fuel tank (if applicable).
	Fuel tank cap (if applicable).
	Fuel line (if applicable).
	Fuel line fittings (if applicable).
	Clamps (if applicable).
	Carbon canister (if applicable).
	Purge port connector (if applicable).
Miscellaneous parts associated with the evaporative emission control system	Clamps.
	Gaskets.
	Mounting brackets.

What is not covered

- Failures other than those resulting from defects in material or workmanship.
- Any systems or parts which are affected or damaged by owner abuse, tampering, neglect, improper maintenance, misuse, improper fueling, improper storage, accident and/or collision; the incorporation of, or any use of, add-on or modified parts, or unsuitable attachments, or the alteration of any part.
- Incidental or consequential damages such as loss of time or the use of the engine/equipment, or any commercial loss due to the failure of the engine/ equipment.
- Diagnosis and inspection charges that do not result in warranty-eligible service being performed.
- Any non-authorized replacement part, or malfunction of authorized parts due to use of non-authorized parts.
- Any warranted part that is scheduled only for regular inspection in the owner's manual supplied, is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

Owner’s Warranty Responsibility

The engine/equipment owner is responsible for the performance of the required maintenance listed in the Wacker Neuson engine/equipment operator's manual. Wacker Neuson recommends that all receipts covering maintenance on the engine/equipment be retained, but Wacker Neuson cannot deny warranty coverage solely for the lack of receipts or for the failure to ensure the performance of all scheduled maintenance.

Normal maintenance, replacement, or repair of emission control devices and systems may be performed by any repair establishment or individual; however, warranty repairs must be performed by an authorized Wacker Neuson dealer/ service center.

The engine/equipment must be presented to an authorized Wacker Neuson dealer/ service center as soon as a problem exists. Contact Wacker Neuson Product Support Department (1-800-770-0957) or visit wackerneuson.com to find a dealer/ service center in your area, or to answer questions regarding warranty rights and responsibilities.

**How to Make a Claim**

In the event that any emission-related part is found to be defective during the warranty period, you shall notify Wacker Neuson Product Support Department (1-800-770-0957, or technical.support@wackerneuson.com, or wackerneuson.com), and you will be advised of the appropriate dealer/service center where warranty repair can be performed. All repairs qualifying under this limited warranty must be performed by an authorized Wacker Neuson dealer/ service center.

You must take your Wacker Neuson engine/equipment along with proof of original purchase date, at your expense, to the authorized Wacker Neuson dealer/service center during their normal business hours.

For owners located more than 100 miles from an authorized dealer/service center (excluding the states with high-altitude areas as identified in 40 CFR Part 1068, Appendix III), Wacker Neuson will pay for pre-approved shipping costs to and from an authorized Wacker Neuson dealer/service center.

Claims for repair or adjustment found to be caused solely by defects in material or workmanship will not be denied because the engine/equipment was not properly maintained and used.

The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

16 Glossary

16.1 Use of oxygenated fuels

Some conventional gasolines are blended with alcohol. These gasolines are collectively referred to as oxygenated fuels. If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, confirm the fuel's contents. Some states / Provinces require this information to be posted on the fuel pump.

The following are Wacker Neuson approved percentages of oxygenates:

Ethanol - (ethyl or grain alcohol) 10% by volume. You may use gasoline containing up to 10% ethanol by volume (commonly referred to as E10). Gasoline containing more than 10% ethanol (such as E15, E20, or E85) may not be used because it could damage the engine.

If you notice any undesirable operating symptoms, try another service station, or switch to another brand of gasoline.

Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates mentioned above are not covered under warranty.



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BH23
Product type	Demolition breakers
Function of product	Breaking up materials
Item number	5100010066
Weight	23,8 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, D-90431 Nürnberg (NB 0197)

Guidelines and standards

We hereby declare that this product complies with the relevant provisions and requirements of the following directives and standards:

2006/42/EC, 2000/14/EC, 2014/30/EU, EN 55012:2007 +A1:2009, EN ISO 11148-4:2012

Person responsible for technical documents

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen

Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BH55
Product type	Demolition breakers
Function of product	Breaking up materials
Item number	5100004026
Weight	24,0 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

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Person responsible for technical documents

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Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



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Manufacturer

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Product	BH55
Product type	Demolition breakers
Function of product	Breaking up materials
Item number	5100004028, 5100004029
Weight	25,0 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, D-90431 Nürnberg (NB 0197)

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Person responsible for technical documents

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Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



EC Declaration of Conformity

Manufacturer

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Product	BH55
Product type	Demolition breakers
Function of product	Breaking up materials
Item number	5100004027
Weight	23,9 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, D-90431 Nürnberg (NB 0197)

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Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BH55rw
Product type	Demolition breakers
Function of product	Tamping and compaction work in railway construction
Item number	5100004040, 5100004041, 5100004042
Weight	25,9 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, D-90431 Nürnberg (NB 0197)

Guidelines and standards

We hereby declare that this product complies with the relevant provisions and requirements of the following directives and standards:

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Person responsible for technical documents

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen

Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BH55rw
Product type	Demolition breakers
Function of product	Tamping and compaction work in railway construction
Item number	5100004038, 5100004039, 5100004043
Weight	25,2 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

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Person responsible for technical documents

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Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BH65
Product type	Demolition breakers
Function of product	Breaking up materials
Item number	5100004032, 5100004033
Weight	25,2 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, D-90431 Nürnberg (NB 0197)

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Person responsible for technical documents

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Reichertshofen, 28.11.2018

Helmut Bauer
Managing Director



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BH65
Product type	Demolition breakers
Function of product	Breaking up materials
Item number	5100004034, 5100004035, 5100004036
Weight	25,9 kg
Measured sound power level	108 db(A)
Guaranteed sound power level	109 db(A)

Conformity assessment procedure

2000/14/EC, Annex VIII

Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, D-90431 Nürnberg (NB 0197)

Guidelines and standards

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Person responsible for technical documents

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