



# Operator's Manual

# Wet Screed P 35A





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#### Manufacturer

Wacker Neuson Production Americas LLC

N92W15000 Anthony Avenue

Menomonee Falls, WI 53051 U.S.A.

Tel: (262) 255-0500 · Fax: (262) 255-0550 · Tel: (800) 770-0957

www.wackerneuson.com

#### Original instructions

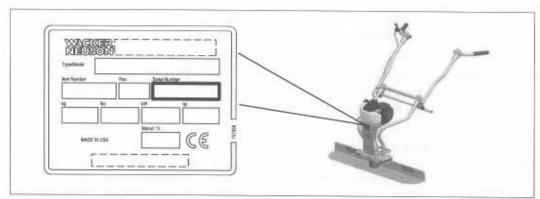
This Operator's Manual presents the original instructions. The original language of this Operator's Manual is American English.

#### Foreword

SAVE THESE INSTRUCTIONS—This manual contains important instructions for the machine models below. These instructions have been written expressly by Wacker Neuson Production Americas LLC and must be followed during installation, operation, and maintenance of the machines.

#### Machines covered in this manual

Machine	Item Number	
P 35A	0620956, 0620957, 0620958	



wc gr010231

#### Machine identification

A nameplate listing the model number, item number, revision number, and serial number is attached to this machine. The location of the nameplate is shown above.

# Serial number (S/N)

For future reference, record the serial number in the space provided below. You will need the serial number when requesting parts or service for this machine.

Serial Number:

# Machine documentation

- From this point forward in this documentation, Wacker Neuson Production Americas LLC will be referred to as Wacker Neuson.
- Keep a copy of the Operator's Manual with the machine at all times.
- Use the separate Parts Book supplied with the machine to order replacement parts.
- Refer to the separate Repair Manual for detailed instructions on servicing and repairing the machine.
- If you are missing any of these documents, please contact Wacker Neuson to order a replacement or visit www.wackerneuson.com.
- When ordering parts or requesting service information, be prepared to provide the machine model number, item number, revision number, and serial number.

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## 1 Safety Information

## 1.1 Signal Words Used in this Manual

This manual contains DANGER, WARNING, CAUTION, NOTICE, and NOTE signal words which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.



This is the safety alert symbol. It is used to alert you to potential personal hazards.

Doey all safety messages that follow this symbol.



#### DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

To avoid death or serious injury from this type of hazard, obey all safety messages that follow this signal word.



#### WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

To avoid possible death or serious injury from this type of hazard, obey all safety messages that follow this signal word.



#### CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

To avoid possible minor or moderate injury from this type of hazard, obey all safety messages that follow this signal word.

**NOTICE:** Used without the safety alert symbol, NOTICE indicates a situation which, if not avoided, could result in property damage.

Note: A Note contains additional information important to a procedure.

## 1.2 Machine Description and Intended Use

This machine is a vibratory concrete screed. The Wacker Neuson Wet Screed consists of a gasoline engine, a fuel tank, a metal blade, an eccentric weight positioned at the center of the metal blade, and a control handle. The gasoline engine spins the eccentric weight through a drive shaft, producing vibrations that travel the length of the metal blade. The operator uses the control handle to pull the machine across uncured concrete.

This machine is intended to be used for striking off uncured concrete slabs with or without the support of grade stakes or forms.

This machine has been designed and built strictly for the intended use described above. Using the machine for any other purpose could permanently damage the machine or seriously injure the operator or other persons in the area. Machine damage caused by misuse is not covered under warranty.

The following are some examples of misuse:

- Using the machine as a ladder, support, or work surface
- Using the machine to carry or transport passengers or equipment
- Engaging the screed when not on uncured concrete
- Operating the machine on non-compactable surfaces, such as asphalt or cured concrete
- Operating the machine outside of factory specifications
- Operating the machine in a manner inconsistent with all warnings found on the machine and in the Operator's Manual

This machine has been designed and built in accordance with the latest global safety standards. It has been carefully engineered to eliminate hazards as far as practicable and to increase operator safety through protective guards and labeling. However, some risks may remain even after protective measures have been taken. They are called residual risks. On this machine, they may include exposure to:

- · Heat, noise, exhaust, and carbon monoxide from the engine
- Chemical burns from the curing concrete
- Fire hazards from improper refueling techniques
- Fuel and its fumes, fuel spillage from improper lifting technique
- Personal injury from improper lifting techniques or operating techniques
- Excessive vibration by holding the blade

To protect yourself and others, make sure you thoroughly read and understand the safety information presented in this manual before operating the machine.

## 1.3 Operating Safety

# Operator training

Before operating the machine:

- Read and understand the operating instructions contained in all manuals delivered with the machine.
- Familiarize yourself with the location and proper use of all controls and safety devices.
- Contact Wacker Neuson for additional training if necessary.

When operating this machine:

 Do not allow improperly trained people to operate the machine. People operating the machine must be familiar with the potential risks and hazards associated with it.

#### Operator qualifications

Only trained personnel are permitted to start, operate, and shut down the machine. They also must meet the following qualifications:

- have received instruction on how to properly use the machine
- are familiar with required safety devices

The machine must not be accessed or operated by:

- children
- people impaired by alcohol or drugs

# Application area

Be aware of the application area.

- Keep unauthorized personnel, children, and pets away from the machine.
- Remain aware of changing positions and the movement of other equipment and personnel in the application area/job site.

Be aware of the application area.

 Do not operate the machine in areas that contain flammable objects, fuels, or products that produce flammable vapors.

#### Safety devices, controls, and attachments

Only operate the machine when:

- All safety devices and guards are in place and in working order.
- All controls operate correctly.
- The machine is set up correctly according to the instructions in the Operator's Manual.
- The machine is clean.
- The machine's labels are legible.

To ensure safe operation of the machine:

- Do not operate the machine if any safety devices or guards are missing or inoperative.
- Do not modify or defeat the safety devices.
- Only use accessories or attachments that are approved by Wacker Neuson.

# Safety Information

#### Safe operating practices

When operating this machine:

 Remain aware of the machine's moving parts. Keep hands, feet, and loose clothing away from the machine's moving parts.

When operating this machine:

- Do not operate a machine in need of repair.
- Do not consume the operating fluids used in this machine. Depending on your machine model, these operating fluids may include water, wetting agents, fuel (gasoline, diesel, kerosene, propane, or natural gas), oil, coolant, hydraulic fluid, heat transfer fluid (propylene glycol with additives), battery acid, or grease.

#### Personal Protective Equipment (PPE)

Wear the following Personal Protective Equipment (PPE) while operating this machine:

- Close-fitting work clothes that do not hinder movement
- Safety glasses with side shields
- Hearing protection
- Safety-toed footwear

#### After Use

- Stop the engine when the machine is not being operated.
- Close the fuel valve, if equipped, when machine is not being operated.
- Ensure that the machine will not tip over, roll, slide, or fall when not being operated.
- Store the machine in a clean, dry location out of the reach of children.

## 1.4 Service Safety

# Service training

Before servicing or maintaining the machine:

- Read and understand the instructions contained in all manuals delivered with the machine.
- Familiarize yourself with the location and proper use of all controls and safety devices.
- Only trained personnel shall troubleshoot or repair problems occurring with the machine.
- Contact Wacker Neuson for additional training if necessary.

When servicing or maintaining this machine:

Do not allow improperly trained people to service or maintain the machine.
 Personnel servicing or maintaining the machine must be familiar with the associated potential risks and hazards.

#### Precautions

Follow the precautions below when servicing or maintaining the machine.

- Read and understand the service procedures before performing any service to the machine.
- All adjustments and repairs must be completed before operation. Do not operate the machine with a known problem or deficiency.
- All repairs and adjustments shall be completed by a qualified technician.
- Turn off the machine before performing maintenance or making repairs.

#### Machine modifications

When servicing or maintaining the machine:

Use only accessories/attachments that are approved by Wacker Neuson.

When servicing or maintaining the machine:

- Do not defeat safety devices.
- Do not modify the machine without the express written approval of Wacker Neuson.

#### Replacing parts and labels

- Replace worn or damaged components.
- Replace all missing and hard-to-read labels.
- When replacing electrical components, use components that are identical in rating and performance to the original components.
- When replacement parts are required for this machine, use only Wacker Neuson replacement parts or those parts equivalent to the original in all types of specifications, such as physical dimensions, type, strength, and material.

#### Cleaning

When cleaning and servicing the machine:

- Keep the machine clean and free of debris such as leaves, paper, cartons, etc.
- Keep the labels legible.

When cleaning the machine:

- Do not clean the machine while it is running.
- Never use gasoline or other types of fuels or flammable solvents to clean the machine. Fumes from fuels and solvents can become explosive.



## Safety Information

Personal Protective Equipment (PPE) Wear the following Personal Protective Equipment (PPE) while servicing or maintaining this machine:

- Close-fitting work clothes that do not hinder movement
- Safety glasses with side shields
- Hearing protection
- Safety-toed footwear

In addition, before servicing or maintaining the machine:

- Tie back long hair.
- Remove all jewelry (including rings).

#### Safe service practices

- Do not crank a flooded engine with the spark plug removed on gasolinepowered engines. Fuel trapped in the cylinder will squirt out the spark plug opening.
- Do not test for spark on gasoline-powered engines if the engine is flooded or the smell of gasoline is present. A stray spark could ignite the fumes.
- Handle blades carefully. The blades can develop sharp edges which can cause serious cuts.

## 1.5 Operator Safety while Using Internal Combustion Engines



#### WARNING

Internal combustion engines present special hazards during operation and fueling. Failure to follow the warnings and safety standards could result in severe injury or death.

Read and follow the warning instructions in the engine owner's manual and the safety guidelines below.



#### DANGER

Exhaust gas from the engine contains carbon monoxide, a deadly poison. Exposure to carbon monoxide can kill you in minutes.

NEVER operate the machine inside an enclosed area, such as a tunnel, unless adequate ventilation is provided through such items as exhaust fans or hoses.

#### Operating safety

When running the engine:

- Keep the area around exhaust pipe free of flammable materials.
- Check the fuel lines and the fuel tank for leaks and cracks before starting the engine. Do not run the machine if fuel leaks are present or the fuel lines are loose.

When running the engine:

- Do not smoke while operating the machine.
- Do not run the engine near sparks or open flames.
- Do not touch the engine or muffler while the engine is running or immediately after it has been turned off.
- Do not operate a machine when its fuel cap is loose or missing.
- Do not start the engine if fuel has spilled or a fuel odor is present. Move the machine away from the spill and wipe the machine dry before starting.

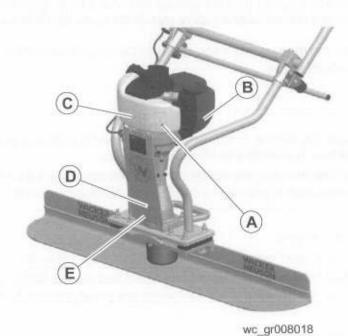
#### Refueling safety

When refueling the engine:

- Clean up any spilled fuel immediately.
- Refill the fuel tank in a well-ventilated area.
- Reinstall the fuel tank cap after refueling.
- Do not smoke.
- Do not refuel a hot or running engine.
- Do not refuel the engine near sparks or open flames.
- Use suitable tools for refueling (for example, a fuel hose or funnel).
- Do not refuel if the machine is positioned in a truck fitted with a plastic bed liner. Static electricity can ignite the fuel or fuel vapors.

## 2 Labels

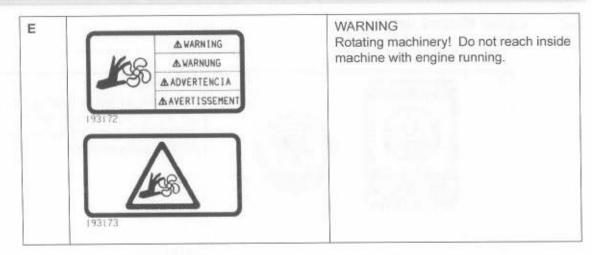
## 2.1 Label Locations



WACKER NEUSON

# 2.2 Label Meanings

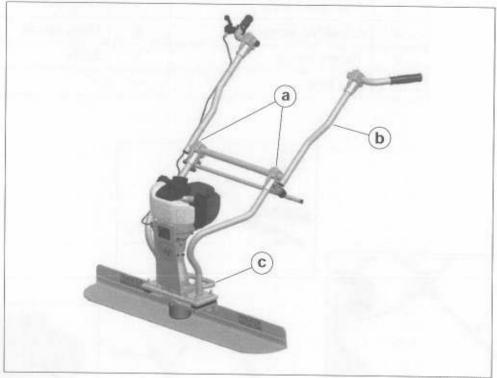
Α	A WARNING  A WARNING  A ADVERTISSEMENT  118085	WARNING To reduce the risk of hearing loss and eye injury, always wear hearing protection and eye protection when operating this machine.
В	A WARNING A WARNING A ACASTICACIA 115415	WARNING Hot surface
С	A DANGER  A GEFAHR  A PELIGRO A DANGER  DITRIA	DANGER Asphyxiation hazard  Engines emit carbon monoxide.  Do not run the machine indoors or in an enclosed area unless adequate ventilation, through such items as exhaust fans or hoses, is provided.  Read the Operator's Manual. No sparks, flames, or burning objects near the machine. Stop the engine before refueling.
D	U.S. PAT NOS: 7052204, 7175365 OTHER U.S. AND FOREIGN PATENTS PENDING	This machine may be covered by one or more patents.



## 3 Lifting and Transporting

To lift and transport the machine:

 Loosen the screws (a) and fold down the upper guide handle (b). Tighten the screws to hold the upper guide handle in position.



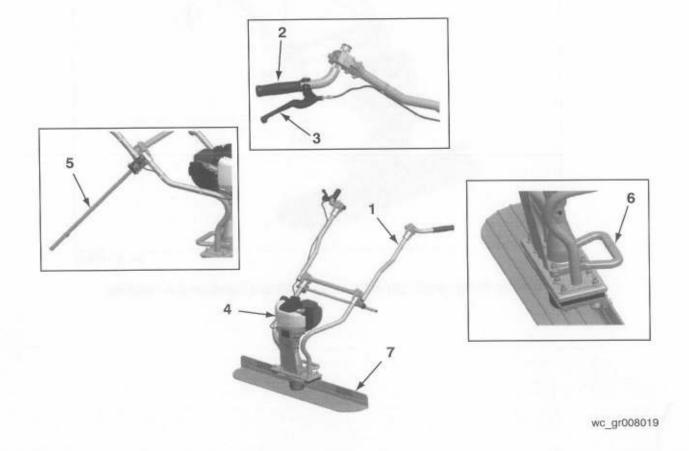
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2. Use the lifting handle (c) at the base to lift and transport the machine.

# 4 Operation

# 4.1 Control / Component Locations

Ref	Description	Ref	Description
1	Adjustable handle	5	Kickstand
2	Adjustable handle grips	6	Lifting handle
3	Throttle control	7	Blade
4	Fuel tank	-	_



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## Operation

## 4.2 Preparing the Machine for First Use

- Make sure all loose packaging materials have been removed from the machine.
- Check the machine and its components for damage. If there is visible damage, do not operate the machine! Contact your Wacker Neuson dealer immediately for assistance.
- Take inventory of all items included with the machine and verify that all loose components and fasteners are accounted for.
- 4. Attach component parts not already attached.
- Add fluids as needed and applicable, including fuel, engine oil, and battery acid.
- 6. Move the machine to its operating location.

## 4.3 Position of the Operator

Safe and efficient use of this machine is the operator's responsibility. Full control of the machine is not possible unless the operator maintains the proper working position at all times.

While operating this machine, the operator must:

- stand between the handles, facing the engine
- grasp the adjustable handle grips with both hands, using the fingers of the right hand to squeeze the throttle control
- walk backwards while pulling the screed across the wet concrete

### 4.4 Recommended Fuel

The engine requires regular grade unleaded gasoline. Use only fresh, clean gasoline. Gasoline containing water or dirt will damage the fuel system. Consult the engine owner's manual for complete fuel specifications.

#### 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 and provinces require this information to be posted on the fuel pump.

The following is the Wacker Neuson approved percentage 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.

## 4.5 Before Starting

Read and understand safety and operating instructions at beginning of this manual.

#### Check:

- Oil level in engine
- Fuel level
- Condition of air cleaner
- Tightness of external fasteners
- Condition of fuel lines

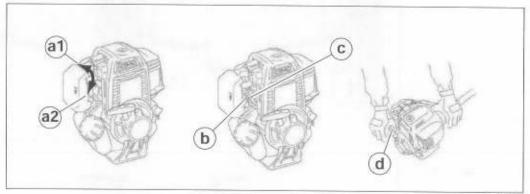
Adjust handles for operator's comfort



Make sure all hardware is tightened before use and be aware of pinch points during handle adjustments.

## 4.6 Starting

- Move the choke lever to the closed position (a1).
   Note: If engine is hot, set choke to open position (a2).
- 2. Turn engine switch to "ON".
- 3. Press the priming bulb (b) repeatedly until fuel can be seen in the clear plastic fuel-return tube (c).
- 4. Pull the starter grip (d).
- 5. Open choke as engine warms (a2).
- 6. Open throttle to operate.



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## 4.7 Stopping

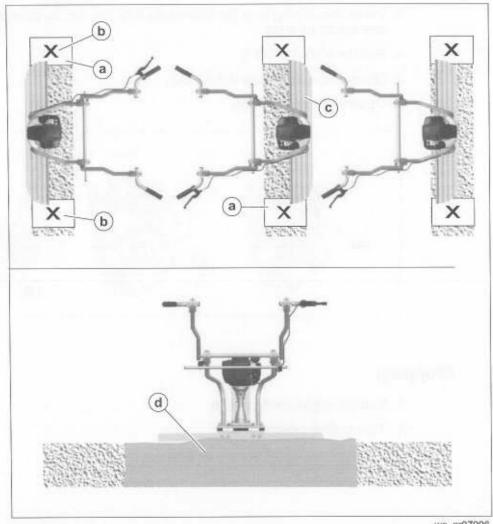
- 1. Reduce engine RPM to idle.
- 2. Turn engine switch to "OFF".

#### 4.8 Operation

Procedure

Follow the procedure below to perform a typical screeding of concrete.

1. Establish wet pads for wet screed guidance. Place wet pads (a) in strips no less than 0.6m (2.0 ft) wide.



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Note: Hand tools such as magnesium floats are used in conjunction with a laser receiver, transit level, or grade stakes to establish the proper elevation of the pads.

- 2. Use a float to strike off or build up the level of the fresh concrete to the desired grade. This is usually marked with an "X" (b) to signal the screed operator that grade has been established. A minimum of two areas should be marked per length of screed blade used to strike the entire pad.
- 3. Place the blade on the pad and strike-off perpendicular to the strip axis (c). Use the marked pads as elevation guides.
- 4. Place concrete between the strips (d) and use them as "wet forms" for the rest of the placement. Strike-off at this point will be parallel to the axis of the initial wet pads of concrete.

This procedure continues on the next page.

Continued from the previous page.

Note: Screeding MUST be complete before any excess moisture or bleed water is present on the surface, and before the strips have taken an initial set.

- Start the engine and move the throttle forward one-half to three-quarters. This increases the engine speed to approximately 6000–7000 rpm which is appropriate for most screeding applications.
- Pull the screed across the concrete to perform the strike-off. A creamy liquid should form around the edges of the screed blade as the concrete is leveled.

**NOTICE:** Operating the screed at continuous full throttle is not recommended. Prolonged operation of the engine at high speed creates excessive vibration that cannot be absorbed by the concrete. This can result in:

- increased machine vibration
- increased handle vibration
- premature failure of the power unit
- · premature failure of the exciter
- accelerated drive shaft wear

To prolong screed life, use the lowest possible throttle and exciter settings that produce an acceptable surface finish. The proper engine speed for a given exciter setting will produce a smooth concrete surface and limit vibration transmitted to the machine and handles.

## Troubleshooting

Follow the recommendations below if a creamy liquid does not appear while striking off the concrete.

- Increase engine speed slightly.
- Increase the exciter setting one position at a time to properly vibrate the concrete. See Exciter Adjustment.

## 4.9 Exciter Adjustment

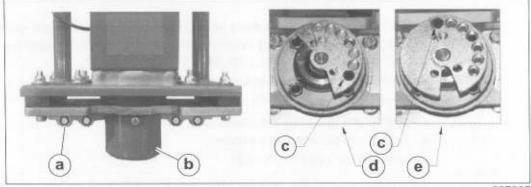
#### Overview

Proper operation of the screed produces a creamy liquid around the blade during strike-off. If a creamy liquid does not form at the standard throttle range of one-half to three-quarters speed (6000–7000 rpm), or with slight speed increases, then adjust the exciter.

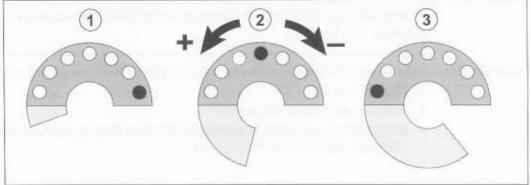
#### Procedure

Follow the procedure below to adjust the exciter.

1. Remove the 4 screws (a) mounting the blade to the power unit.



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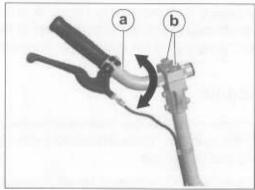
- 2. Remove the 3 screws mounting the eccentric housing (b).
- Using a 1/4-inch Allen wrench, loosen the screw (c) holding the adjustable eccentric weight in place.
- The screed eccentric is preset at the factory to Position 2 as shown. Rotate the exciter to the right for less vibration, or to the left for more vibration.

**Note:** The maximum vibration exciter setting is Position 1. The minimum exciter vibration setting is Position 3.

5. Reassemble components and tighten all hardware.

## 4.10 Adjusting the Handle Height

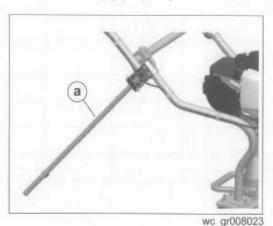
For maximum comfort and user control of the wet screed during operation, the handlebar (a) can be rotated up or down to suit the operator's preference. Loosen the screws (b) and raise or lower the handlebar as desired. Tighten the screws when the handles are in the desired position.



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## 4.11 Kickstand

The kickstand (a) props up the screed when it is not in use.



## 4.12 Emergency Shutdown Procedure

#### Procedure

If a breakdown or accident occurs while the machine is operating, follow the procedure below:

- Stop the engine.
- 2. Close the fuel valve.
- 3. Remove the machine from the job site using correct lifting techniques.
- 4. Clean concrete from the blade and the machine.
- 5. Contact the rental yard or machine owner for further instructions.

### 5 Maintenance

## 5.1 Maintaining the Emission Control System

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 a dealer/service center authorized by Wacker Neuson. The use of service parts that are not equivalent in performance and durability to authorized parts may impair the effectiveness of the emission control system and may have a bearing on the outcome of a warranty claim.

## 5.2 Periodic Maintenance Schedule

The table below lists basic engine maintenance. Tasks designated with check marks may be performed by the operator. Tasks designated with square bullet points require special training and equipment.

Refer to the engine manufacturer's owner's manual for additional information.

	Daily before starting	After first 10 hours	50 hours	100 hours
Check fuel level.	1	1717		
Check engine oil level.	1			
Inspect air filter. Replace as needed.	1			
Change engine oil.		=		
Clean air cleaner.				
Clean sediment cup.				
Check and clean spark plug.				

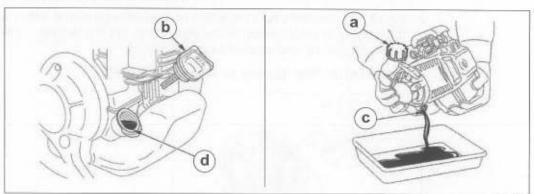
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## 5.3 Engine Oil

- 1. Drain oil while the engine is still warm.
- Turn the engine 90° so the fuel tank is facing downward. Check that the fuel tank cap (a) is tightened.
- 3. Remove the oil fill plug (b) and drain the oil into a container by tipping the engine toward the oil filler neck (c).

**Note:** In the interests of environmental protection, place a plastic sheet and a container under the machine to collect any liquid which drains off. Dispose of this liquid in accordance with environmental protection legislation.

- Fill the engine crankcase with recommended oil up to the level of the plug opening (d). See Technical Data for oil quantity and type.
- 5. Install the oil filler plug (b).



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#### WARNING

Most used oil contains small amounts of materials that can cause cancer and other health problems if inhaled, ingested, or left in contact with skin for prolonged periods of time.

- Take steps to avoid inhaling or ingesting used engine oil.
- Wash skin thoroughly after exposure to used engine oil.

## 5.4 Air Cleaner

The engine is equipped with a single element air cleaner. Service air cleaner frequently to prevent carburetor malfunction.

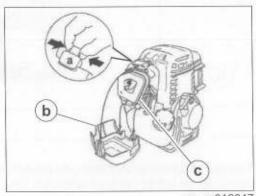
NOTICE: Do not run engine without air cleaner. Severe engine damage will occur.



Do not use gasoline or other types of low flash point solvents for cleaning the air cleaner. A fire or explosion could result.

#### To service:

- Press the latch (a) on the side of the air cleaner cover (b), and remove the cover.
- 2. Check the filter (c) to be sure it is in good condition. Replace damaged filters.
- Wash filter element (c) in solution of mild detergent and warm water. Rinse thoroughly in clean water. Allow element to dry thoroughly. Soak element in clean engine oil and squeeze out excess oil.
- 4. Re-install the filter (c) and air cleaner cover (b).



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## Maintenance

## 5.5 Spark Plug

Clean or replace the spark plug as needed to ensure proper operation. Refer to your engine owner's manual.

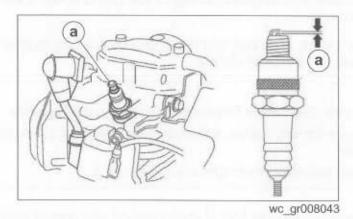


The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Do not touch the muffler while it is hot.

WARNING Note: Refer to section "Technical Data" for the recommended spark plug type and the electrode gap setting.

- 1. Remove the spark plug and inspect it.
- 2. Replace the spark plug if the insulator is cracked or chipped.
- 3. Clean the spark plug electrodes with a wire brush.
- 4. Set the electrode gap (a).
- 5. Tighten the spark plug securely.

NOTICE: A loose spark plug can become very hot and may cause engine damage.



## 5.6 Cleaning the Machine

 Remove any excess concrete with a high pressure washer. Be sure to remove any concrete buildup on the underside of the blades.

Note: When pressure washing the machine, avoid using harsh chemicals and only use moderate water pressure (500–1000 psi).

- Avoid direct pressure to the following components:
- Engine
- Hoses
- Labels



Do not use a hammer or wire brush to remove concrete from the screed.

## 5.7 Long-Term Storage

Prepare the machine for long-term storage if you intend to take it out of service for more than 30 days.

 Change engine oil, drain fuel, and follow procedures described in the engine owner's manual for engine storage.



#### WARNING

Fire/burn hazards. Gasoline is flammable and can ignite or explode.

- Keep all open flames, sparks, and cigarettes away from the machine while draining fuel.
- Do not drain fuel while the engine is running or hot.

Note: Dispose of drained fuel and oil in accordance with current environmental protection regulations.

- Clean the entire power unit and engine.
- Check the machine for loose or missing fasteners. Tighten or replace as needed.
- 4. Cover the entire machine and store in a clean, dry area.

## 5.8 Troubleshooting

If engine doesn't start, check that:

- Engine switch is in the "ON" position.
- Fuel tank has fuel.
- Choke lever is in correct position. Choke should be closed when starting a cold engine.
- Spark plug is in good condition.
- Spark plug cap is tight.
- Engine oil level is adequate.



## 6 Technical Data

## 6.1 Engine

## **Engine Power Rating**

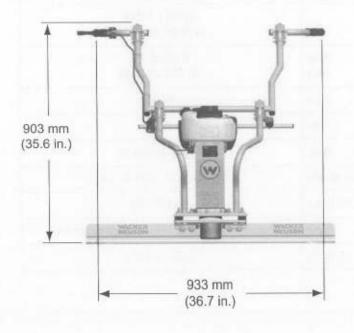
Net power rating per SAE J1349. Actual power output may vary due to conditions of specific use.

		P 35A 0620956, 0620957	P 35A 0620958
	E	Ingine	
Engine type	4-stroke, overhead camshaft, single cylinder		
Engine make		Hono	da
Engine model		GX3	5
Max. rated power @ rated speed	kW (hp)	1.0 (1 @ 7000	
Displacement	cm³ (in³)	35.8 (2.18)	
Spark plug	100	NGK CM5H or NGK CMR5H	
Electrode gap	mm (in.)	0.60-0.70 (0.024-0.028)	
Operating speed (max.)	rpm	8000	
Engine speed (idle)	rpm	3100	
Air cleaner	type	Foam element	
Engine lubrication	oil grade	SAE 10W-30, API SJ or SL	
Engine oil capacity	ml (oz.)	100 (3.38)	
Fuel	type	Regular unleaded	Australian ULP
Fuel tank capacity	L (gal)	0.63 (0.	166)

## 6.2 Blades

Blade Models	Length m (ft)	Width m (in.)	Weight kg (lb)
SB 4F	1.2 (4)	0.12 (4.88)	3.4 (7.6)
SB 15M	1.5 (4-11")	0.12 (4.88)	4.3 (9.5)
SB 6F	1.8 (6)	0.12 (4.88)	5.2 (11.4)
SB 20M	2.0 (6-7")	0.12 (4.88)	5.6 (12.4)
SB 8F	2.4 (8)	0.12 (4.88)	7.5 (15.2)
SB 10F	3.0 (10)	0.12 (4.88)	9.4 (19.0)
SB 12F	3.7 (12)	0.12 (4.88)	10.3 (22.8)
SB 14F	4.3 (14)	0.12 (4.88)	13 (28.5)
SB 16F	4.9 (16)	0.12 (4.88)	14 (30.4)

## 6.3 Dimensions





wc\_gr008044

## 6.4 Sound and Vibration Specifications

# Sound specifications

The required sound specification, Paragraph 1.7.4.2.u of 2006/42/EC Machinery Directive, is:

- the sound pressure level at operator's location (L<sub>pA</sub>): 85 dB(A)
- the guaranteed sound power level (L<sub>WA</sub>): 97 dB(A)

These sound values were determined according to ISO 3744 for the sound power level ( $L_{WA}$ ) and ISO 6081 for the sound pressure level ( $L_{pA}$ ) at the operator's location. Data was collected from a technically comparable machine under laboratory conditions.

# Vibration specifications

The operator of this machine should expect to be exposed to vibration when using the machine within its normally intended function.

ISO 5349 Part 1 Annex F states, "The vibration characteristics of a vibrating tool can be highly variable. It is therefore important that the range of vibration conditions associated with different workpieces, materials, working conditions, methods of use of the tool, and exposure duration patterns be reported."

- The average hand and arm vibration (HAV) value obtained for the entire operating rpm range is 4.7 m/s<sup>2</sup>.
- The maximum hand and arm vibration value obtained within the entire operating rpm range is 6.1 m/s<sup>2</sup>.
- The minimum hand and arm vibration value obtained within the entire operating rpm range is 3.5 m/s<sup>2</sup>.
- Operating the machine in the recommended RPM range of 6000 to 7000 rpm yields an HAV range of 3.5 to 4.7 m/s<sup>2</sup>.

Products are tested for hand/arm vibration level in accordance with ISO 5349 Part 1 and ISO 8662 Part 1. The results are in compliance with the limit and action vibration values (hand/arm and whole body) as specified in European directive 2002/44/EC.

#### HAV Uncertainties

Hand-transmitted vibration was measured per ISO 5349-1. This measurement includes an uncertainty of 1.5 m/s<sup>2</sup>.



## **Emission Control Systems Information and Warranty**

## 7 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.

## 7.1 Emission Control Systems Warranty Statement

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





