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> EBERTH 6.5 HP 4-Stroke Gasoline Engine User Manual (Model GW3-ER196-6.5-V19)

## EBERTH GW3-ER196-6.5-V19

# EBERTH 6.5 HP 4-Stroke Gasoline Engine User Manual

Model: GW3-ER196-6.5-V19

## 1. INTRODUCTION

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This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your EBERTH 6.5 HP 4-stroke gasoline engine, model GW3-ER196-6.5-V19. Please read these instructions carefully before using the engine to ensure proper function and to prevent injury or damage. Keep this manual in a safe place for future reference.



*Image 1.1: Front view of the EBERTH 6.5 HP 4-stroke gasoline engine.*

## 2. SAFETY INSTRUCTIONS

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Always prioritize safety when operating or maintaining the engine. Failure to follow these instructions can result in serious injury or property damage.

- **Read the Manual:** Understand all instructions and warnings before operation.
- **Ventilation:** Operate the engine in a well-ventilated area. Engine exhaust contains carbon monoxide, a colorless, odorless, and deadly gas.
- **Fuel Safety:** Gasoline is highly flammable. Refuel in a well-ventilated area with the engine off and cool. Do not smoke or allow open flames near the engine or fuel. Store fuel in approved containers.
- **Hot Surfaces:** The engine and exhaust system become very hot during operation and remain hot for some time after shutdown. Avoid contact to prevent burns.
- **Moving Parts:** Keep hands, feet, and clothing away from rotating parts such as the flywheel and shaft.
- **Eye Protection:** Always wear appropriate eye protection when working with the engine.
- **Children and Pets:** Keep children and pets away from the engine, especially during operation.
- **Emergency Stop:** Familiarize yourself with the engine's stop switch and how to quickly shut down the engine in an emergency.

## 3. PACKAGE CONTENTS

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Upon unpacking, verify that all components are present and undamaged:

- EBERTH 6.5 HP Gasoline Engine
- User Manual (this document)
- Operating Tool Kit (for basic maintenance and setup)

If any items are missing or damaged, please contact EBERTH customer support.

## 4. SETUP AND INSTALLATION

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### 4.1 Initial Inspection

Before installation, inspect the engine for any visible damage from shipping. Ensure all fasteners are tight.

### 4.2 Adding Engine Oil

The engine is shipped without oil. It is crucial to add the correct type and amount of engine oil before first use. The engine features a low oil sensor that will shut down the engine if the oil level is insufficient.

1. Place the engine on a level surface.
2. Locate the oil filler cap/dipstick.
3. Unscrew and remove the dipstick, wipe it clean.
4. Add recommended 4-stroke engine oil (e.g., SAE 10W-30) slowly until the oil level reaches the upper mark on the dipstick when reinserted (not screwed in).
5. Securely replace the dipstick.

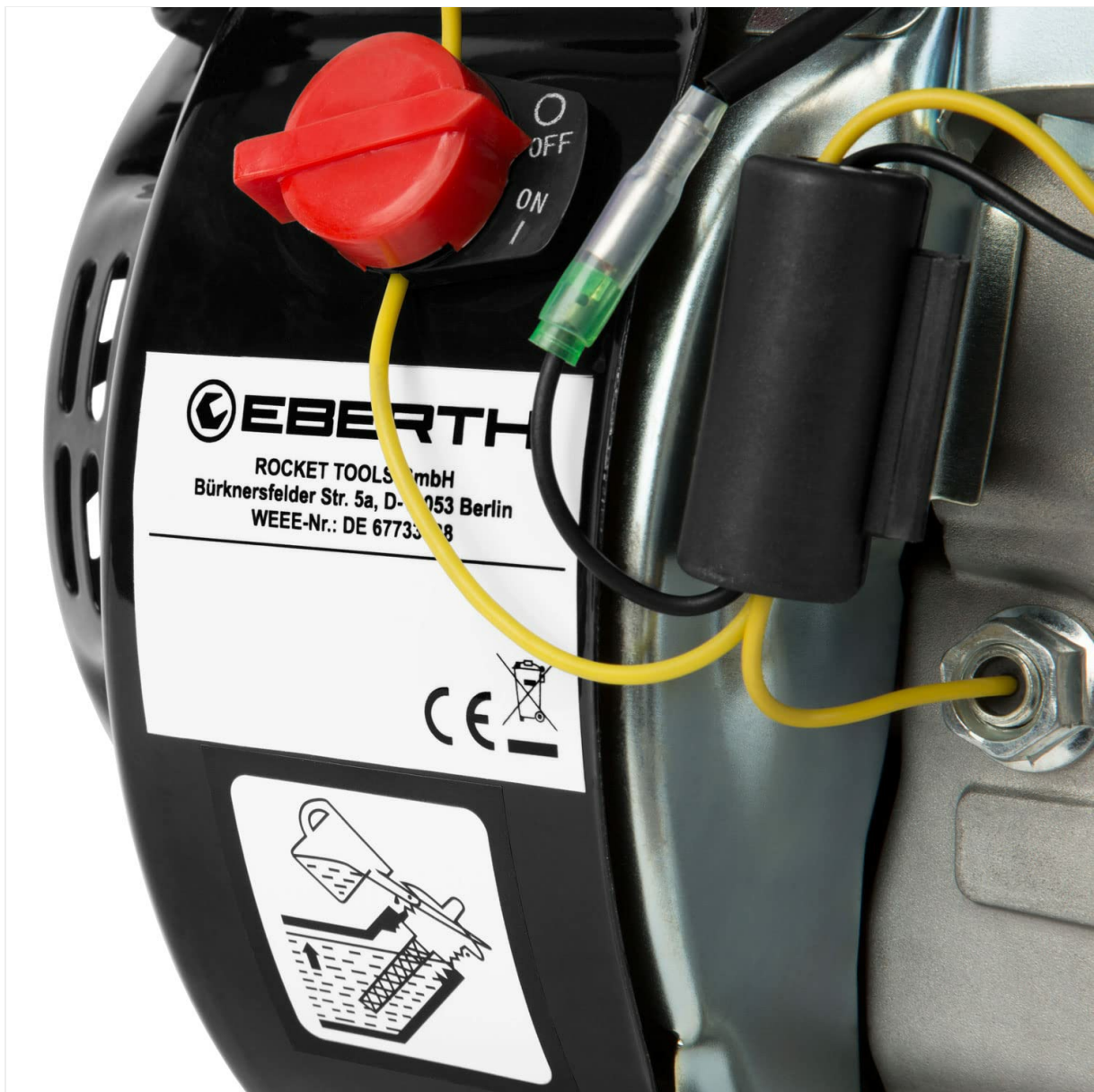


Image 4.1: Checking the engine oil level using the dipstick.

### 4.3 Adding Fuel

Use only fresh, unleaded gasoline. The fuel tank capacity is 3.6 liters.

1. Ensure the engine is off and cool.
2. Open the fuel tank cap.
3. Carefully pour unleaded gasoline into the tank, avoiding overfilling. Leave some space for fuel expansion.
4. Securely replace the fuel tank cap.

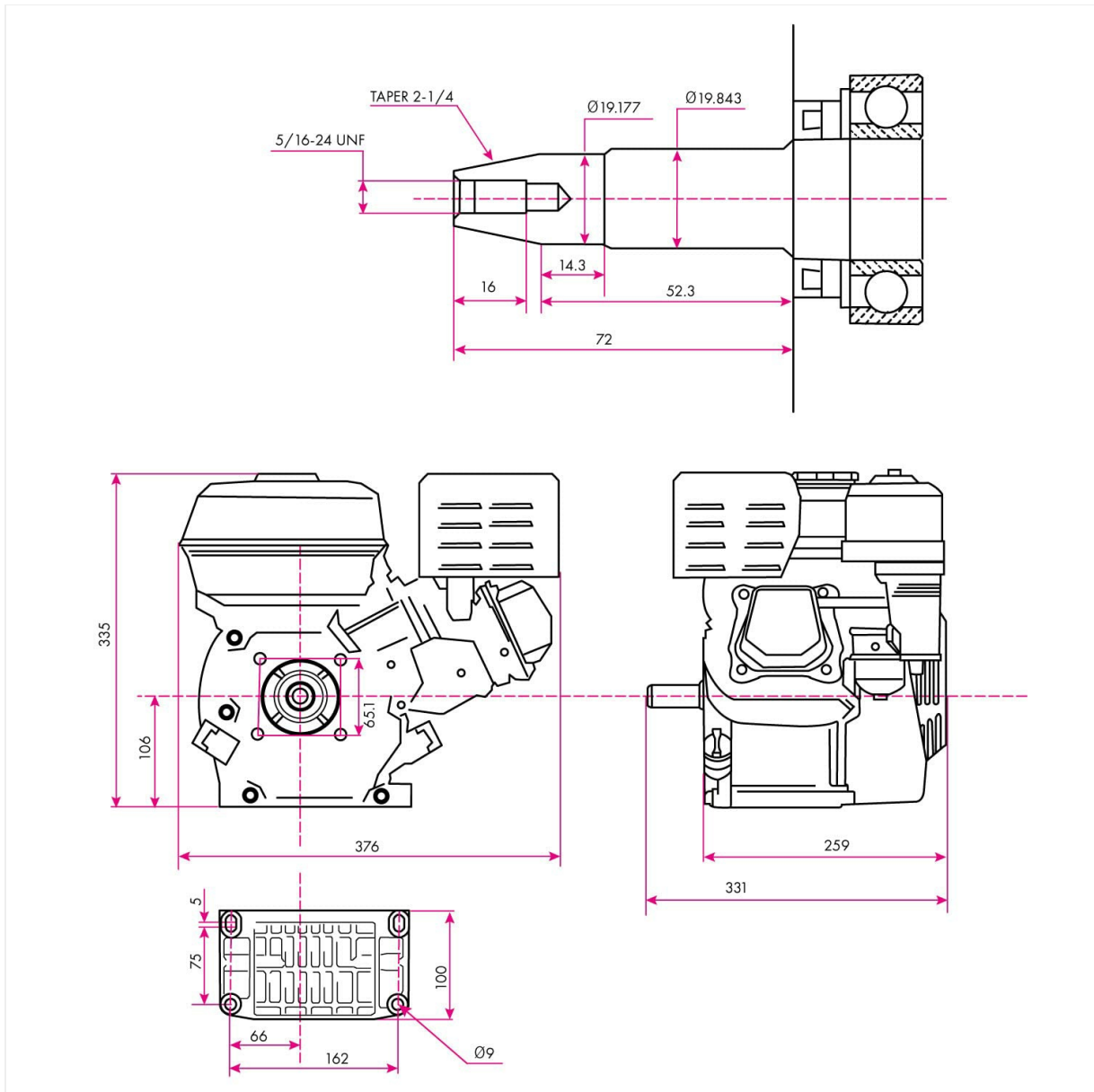


Image 4.2: Refueling the engine with unleaded gasoline.

#### 4.4 Engine Mounting

The engine features a 19.00 mm conical shaft, designed for integration into various machines such as go-karts, lawnmowers, tillers, and power generators. Refer to the engine's technical drawing for precise dimensions and mounting points to ensure compatibility with your application.



Image 4.3: Technical drawing illustrating engine dimensions and conical shaft specifications.



*Image 4.4: Detail of the 19.00 mm conical shaft.*

## 5. OPERATION

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### 5.1 Starting the Engine (Pull Start)

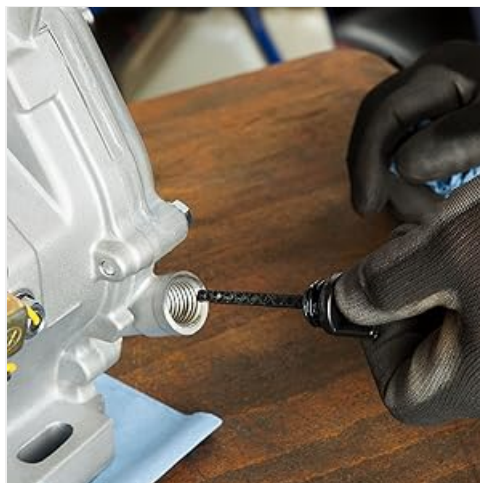
1. Ensure the engine is on a stable, level surface.
2. Move the fuel valve to the 'ON' position.
3. If the engine is cold, move the choke lever to the 'CLOSED' position. If warm, set to 'OPEN'.
4. Move the throttle lever slightly to the 'FAST' position.
5. Grasp the starter grip firmly and pull slowly until resistance is felt, then pull quickly and smoothly to start the engine. Do not let the rope snap back.
6. Once the engine starts, gradually move the choke lever to the 'OPEN' position.
7. Adjust the throttle to the desired operating speed.



Image 5.1: View of the engine's pull start mechanism.

## 5.2 Stopping the Engine

1. Move the throttle lever to the 'SLOW' or 'IDLE' position.
2. Move the engine switch to the 'OFF' position.
3. Turn the fuel valve to the 'OFF' position for storage or extended periods of non-use.



## 5.3 Operational Video

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Video 5.3: General overview and operational demonstration of the EBERTH engine.

## 6. MAINTENANCE

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Regular maintenance is essential for the longevity and optimal performance of your EBERTH engine. Always perform maintenance with the engine off and cool.

### 6.1 Engine Oil Check and Change

Check the oil level before each use. Change the engine oil after the first 20 hours of operation, and then every 50-100 hours or at least once a season.

1. Warm up the engine for a few minutes, then shut it off.
2. Place a suitable container under the oil drain plug.
3. Remove the oil filler cap/dipstick and the oil drain plug to allow the oil to drain completely.
4. Reinstall the oil drain plug and tighten it securely.
5. Refill with the recommended amount and type of new engine oil (refer to Section 4.2).
6. Check the oil level with the dipstick and replace the filler cap.

### 6.2 Air Filter Maintenance

Clean the air filter every 25 hours or more frequently in dusty conditions. A dirty air filter reduces engine performance and increases fuel consumption.

1. Remove the air filter cover.
2. Remove the foam filter element.
3. Wash the foam element in warm, soapy water, rinse thoroughly, and allow it to air dry completely.
4. Lightly oil the foam element with engine oil and squeeze out any excess.
5. Reinstall the filter element and cover.



*Image 6.1: Accessing the air filter for maintenance.*

### **6.3 Spark Plug Inspection and Replacement**

Inspect the spark plug every 50 hours. Replace it annually or if it shows signs of wear, fouling, or damage.

1. Remove the spark plug cap.
2. Use a spark plug wrench to remove the spark plug.
3. Inspect the electrode for wear and the insulator for cracks. Clean any carbon deposits with a wire brush.
4. Check the spark plug gap and adjust if necessary (refer to specifications for correct gap).
5. Install the new or cleaned spark plug and tighten it to the recommended torque.
6. Reattach the spark plug cap.



Image 6.2: Cleaning the spark plug.

## 7. TROUBLESHOOTING

This section provides solutions to common operational issues. For problems not listed here, contact EBERTH customer support.

Problem	Possible Cause	Solution
Engine does not start	No fuel Low oil level Choke incorrect Spark plug issue Engine switch OFF	Add fuel Add oil Adjust choke Inspect/clean/replace spark plug Turn engine switch ON
Engine lacks power	Dirty air filter Old/stale fuel Spark plug issue	Clean/replace air filter Drain and refill with fresh fuel Inspect/clean/replace spark plug
Excessive smoke	Too much oil Wrong oil type Engine wear	Drain excess oil Use recommended oil Contact service center

## 8. SPECIFICATIONS

Key technical specifications for the EBERTH 6.5 HP 4-Stroke Gasoline Engine (Model GW3-ER196-6.5-V19):

- **Brand:** EBERTH
- **Model Name:** GW3-ER196-6.5-V19
- **Engine Type:** 4-stroke, Air-cooled, Single Cylinder
- **Displacement:** 196 cc
- **Horsepower:** 6.5 HP (4.8 kW)
- **Max Speed:** 3600 RPM
- **Shaft Type:** Conical, Left-rotating
- **Shaft Diameter:** 19.00 mm
- **Start System:** Pull Start
- **Fuel Type:** Unleaded Gasoline

- **Fuel Tank Capacity:** 3.6 Liters
- **Oil Protection:** Low oil sensor shutdown
- **Material:** Aluminum
- **Product Dimensions:** 33.1 x 37.6 x 33.5 cm
- **Item Weight:** 13 kg

## 9. WARRANTY AND SUPPORT

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EBERTH stands by the quality of its products. For warranty information, spare parts, or technical support, please refer to the contact details provided with your purchase or visit the official EBERTH website. EBERTH maintains a large spare parts warehouse to ensure quick availability and delivery of components.

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*Video 9.1: Additional product features and applications.*