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› Poulan PL3816 16-inch 38cc 2-Cycle Gas Chainsaw User Manual

Poulan 967084701

Poulan PL3816 Gas Chainsaw User Manual

Model: 967084701

16 in. 38cc 2-Cycle Gas Chainsaw

1. INTRODUCTION

The Poulan PL3816 is a powerful and versatile 16-inch gas-powered chainsaw designed for cutting firewood and trimming tree limbs around your property. Equipped with a 38cc 2-cycle engine, it offers efficient performance for various outdoor tasks. This manual provides detailed instructions to ensure safe operation, proper maintenance, and extended product life.

Key features include OxyPower technology for reduced emissions and fuel consumption, a Super Clean filtering system for longer air filter life, an automatic gear-driven oiler, and a reduced vibration handle for user comfort.



Figure 1.1: Front-side view of the Poulan PL3816 Chainsaw, showcasing the bar, chain, and engine housing.

2. SAFETY INFORMATION

Operating a chainsaw can be dangerous if proper safety precautions are not followed. Always read and understand all safety warnings and instructions before use. Failure to do so can result in serious injury or death.

2.1 Personal Protective Equipment (PPE)

- **Head Protection:** Wear a safety helmet with a face shield or safety glasses.
- **Hearing Protection:** Use earplugs or earmuffs.
- **Hand Protection:** Wear heavy-duty work gloves.
- **Leg Protection:** Wear chainsaw protective chaps or trousers.
- **Foot Protection:** Wear steel-toed safety boots with good grip.

2.2 General Safety Rules

- Never operate the chainsaw when fatigued, ill, or under the influence of alcohol or drugs.
- Keep children, bystanders, and animals at least 50 feet (15 meters) away from the work area.
- Inspect the chainsaw before each use for loose parts, damage, or leaks.
- Ensure the chain brake is functional.
- Always hold the chainsaw firmly with both hands.
- Be aware of kickback and how to avoid it.
- Do not operate in poor lighting conditions or wet weather.

3. COMPONENTS OVERVIEW

Familiarize yourself with the various parts of your Poulan PL3816 chainsaw to ensure safe and effective operation.



Figure 3.1: Top-down view of the chainsaw, highlighting the top handle, chain brake, and engine cover.

- **Front Handle:** For stable two-hand grip.
- **Rear Handle:** Contains the throttle trigger and throttle trigger lockout.
- **Chain Brake/Front Hand Guard:** Protects the hand and stops the chain in case of kickback.
- **Guide Bar:** Supports and guides the saw chain.
- **Saw Chain:** The cutting tool.

- **Chain Catcher:** Helps prevent the chain from striking the operator if it breaks or derails.
- **Muffler:** Reduces engine noise and directs exhaust gases.
- **Starter Rope Handle:** Used to start the engine.
- **Fuel Tank Cap:** For filling the fuel tank.
- **Oil Tank Cap:** For filling the chain oil tank.
- **Primer Bulb:** Draws fuel into the carburetor for easier starting.
- **Choke Control:** Used for cold starting.

4. SETUP

4.1 Assembly

1. Carefully remove all components from the packaging.
2. Attach the guide bar to the chainsaw body, ensuring it aligns with the mounting studs.
3. Place the saw chain around the sprocket and guide bar, ensuring the cutting edges face the correct direction.
4. Install the clutch cover and secure it with the bar nuts, leaving them slightly loose for chain tensioning.

4.2 Fuel and Chain Oil

The PL3816 uses a 2-cycle engine and requires a specific fuel mixture. Always use fresh, unleaded gasoline mixed with a high-quality 2-cycle engine oil at the ratio specified in your engine's instructions (typically 50:1 or 40:1). Do not use automotive oil.

- Fill the fuel tank with the correct fuel mixture.
- Fill the chain oil tank with high-quality bar and chain oil. Never use waste oil or motor oil.

4.3 Chain Tensioning

Proper chain tension is crucial for safe operation and chain life. The chain should be snug against the guide bar, but still able to be pulled around by hand. There should be no sag on the underside of the bar.

1. Loosen the bar nuts on the clutch cover.
2. Adjust the chain tensioning screw until the chain is properly tensioned.
3. While holding the guide bar tip up, tighten the bar nuts securely.
4. Recheck chain tension after tightening.



5. OPERATING INSTRUCTIONS

5.1 Starting the Engine (Cold Start)

1. Place the chainsaw on a firm, flat surface.
2. Engage the chain brake by pushing the front hand guard forward.
3. Push the primer bulb 6-10 times until fuel is visible in the return line.
4. Pull the choke control out to the full choke position.
5. Hold the chainsaw firmly with one hand on the front handle and place your foot on the rear handle.
6. Pull the starter rope handle slowly until resistance is felt, then pull quickly and firmly until the engine fires (usually 1-3 pulls).
7. Once the engine fires, push the choke control in halfway (half-choke position).
8. Pull the starter rope again until the engine starts and runs.
9. Once the engine is running, push the choke control fully in. Allow the engine to warm up for a few seconds before disengaging the chain brake.

5.2 Cutting Techniques

Always maintain a firm grip with both hands. Plan your cuts to avoid kickback and ensure the stability of the material being cut.

- **Felling:** For cutting down trees, follow proper felling procedures including escape routes and notch cuts.
- **Limbing:** Remove branches from a fallen tree. Work from the base towards the top, supporting the branch to prevent pinching.
- **Bucking:** Cutting a fallen tree into sections. Use a sawhorse or elevate the log to prevent the chain from hitting the ground.

5.3 Stopping the Engine

To stop the engine, release the throttle trigger and push the stop switch to the 'OFF' position. Engage the chain brake immediately after stopping.

6. MAINTENANCE

Regular maintenance is essential for the longevity and safe operation of your chainsaw. Always ensure the engine is off and cool before performing any maintenance.

6.1 Daily Maintenance

- Check chain tension.
- Check chain sharpness.
- Check chain oil level.
- Clean the air filter (Super Clean filtering system helps extend life).
- Clean the guide bar groove and oil holes.
- Inspect the chain brake for proper function.

6.2 Periodic Maintenance

- **Spark Plug:** Inspect and clean or replace as needed (every 25 operating hours).
- **Fuel Filter:** Inspect and replace if clogged (every 50 operating hours).

- **Muffler:** Clean carbon deposits from the muffler and exhaust port.
- **Chain Sharpening:** Sharpen the chain regularly using a round file of the correct diameter.



Figure 6.1: Side view of the chainsaw, indicating the location of the engine and air filter cover for maintenance access.

6.3 Storage

For long-term storage (30 days or more):

1. Drain all fuel from the tank and run the engine until it stops to clear the carburetor.
2. Drain the chain oil tank.
3. Clean the entire chainsaw thoroughly.
4. Remove the spark plug and pour a teaspoon of 2-cycle oil into the cylinder. Pull the starter rope a few times to distribute the oil, then reinstall the spark plug.
5. Store in a clean, dry, well-ventilated area, away from sources of ignition and out of reach of children.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Engine will not start	No fuel; incorrect starting procedure; fouled spark plug; clogged fuel filter.	Fill fuel tank; follow cold start procedure; clean/replace spark plug; replace fuel filter.
Engine starts but dies	Incorrect choke setting; stale fuel; air filter clogged.	Adjust choke; use fresh fuel; clean air filter.
Chain not oiling	No chain oil; clogged oil passages; damaged oil pump.	Fill oil tank; clean oil passages and guide bar groove; consult service center.
Chain dull or cutting poorly	Dull chain; incorrect chain tension.	Sharpen or replace chain; adjust chain tension.

If problems persist after attempting these solutions, please contact an authorized service center.

8. SPECIFICATIONS

- **Model:** PL3816
- **Item Model Number:** 967084701

- **Engine Displacement:** 38cc
- **Engine Type:** 2-Cycle Gas
- **Guide Bar Length:** 16 inches
- **Power Source:** Gas Powered
- **Horsepower:** 3.5 hp
- **Item Weight:** 12 Pounds
- **Product Dimensions:** 16"L x 12"W x 12"H
- **Manufacturer:** Partner
- **UPC:** 024761039154

9. WARRANTY AND SUPPORT

For specific warranty information, please refer to the warranty card included with your product packaging or visit the official Poulan website. Keep your proof of purchase for warranty claims.

For technical support, replacement parts, or service, please contact Poulan customer service or an authorized service dealer. Contact information can typically be found on the manufacturer's website or in your product documentation.

You can also visit the [Poulan Store on Amazon](#) for more product information and accessories.

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