

ECHO CS-310-16

ECHO CS-310-16 Chainsaw Instruction Manual

30.5 cc Gas Chainsaw with 16-inch Bar and Chain

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1. Setup

Proper assembly and preparation are crucial for safe and efficient operation of your ECHO CS-310-16 Chainsaw. Always refer to the detailed instructions in the printed owner's manual for complete guidance.

1.1 Unboxing and Initial Inspection

- Carefully remove all components from the packaging.
- Verify that all parts listed in the owner's manual are present and undamaged.
- Familiarize yourself with the chainsaw's controls and safety features before proceeding.



Figure 1: Front view of the ECHO CS-310-16 Chainsaw. This image displays the overall design, including the engine housing, front handle, and the 16-inch bar and chain.

1.2 Bar and Chain Assembly

1. Ensure the engine is off and the chain brake is engaged.
2. Remove the chain cover nuts and the chain cover.
3. Mount the guide bar onto the studs.
4. Carefully place the saw chain around the clutch drum and into the guide bar groove. Ensure the cutting edges of the chain are facing the correct direction.
5. Replace the chain cover and hand-tighten the nuts. Do not fully tighten yet.
6. Adjust chain tension as described in the Maintenance section.

1.3 Fuel and Chain Oil Preparation

The ECHO CS-310-16 requires a specific fuel mixture and chain lubricant for optimal performance and longevity.

- **Fuel Mixture:** Use fresh, unleaded gasoline mixed with ECHO-approved 2-stroke engine oil at the specified ratio (typically 50:1, but always confirm with your owner's manual). Mix thoroughly in a separate, approved fuel container.

- **Chain Oil:** Fill the chain oil tank with high-quality bar and chain oil. This lubricates the chain and guide bar during operation.



Figure 2: Rear view of the ECHO CS-310-16 Chainsaw. This angle highlights the fuel and oil caps, which are essential for proper preparation before use.

2. Operating Instructions

Always wear appropriate personal protective equipment (PPE) including a helmet, eye protection, hearing protection, gloves, and chainsaw protective trousers/chaps. Ensure a clear work area free of bystanders and obstacles.

2.1 Starting the Chainsaw

1. Place the chainsaw on a firm, flat surface.
2. Engage the chain brake.
3. Push the primer bulb several times until fuel is visible.
4. Set the choke to the "FULL CHOKE" position.
5. Pull the starter rope firmly and steadily until the engine "pops" or attempts to start (usually 1-3 pulls).
6. Move the choke to the "HALF CHOKE" or "RUN" position (refer to your specific model's instructions).
7. Pull the starter rope again until the engine starts.
8. Once started, let the engine warm up for a few moments, then disengage the chain brake before cutting.

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Video 1: General guide on how to start a gas chainsaw. While this video features a different model (NEOTEC US), the starting principles are similar to the ECHO CS-310-16. Always consult your specific owner's manual for precise instructions.

2.2 Basic Cutting Techniques

- **Felling:** For cutting down trees, plan your escape route and make a directional notch cut followed by a felling cut.
- **Limbing:** Remove branches from a fallen tree. Work from the base of the tree towards the top, cutting smaller branches first.
- **Bucking:** Cut a fallen tree into sections. Be aware of tension and compression in the wood to avoid pinching the bar or kickback.

- Always maintain a firm grip with both hands and keep your body balanced.



Figure 3: Side view of the ECHO CS-310-16 Chainsaw, illustrating the ergonomic design for handling during operation. Note the position of the rear handle and the chain brake lever.

3. Maintenance

Regular maintenance ensures the longevity and safe operation of your chainsaw. Perform these checks and tasks before and after each use.

3.1 Daily Checks

- Check chain tension: The chain should be snug against the guide bar but still able to be pulled around by hand.
- Inspect the chain for sharpness and damage. Sharpen or replace as needed.
- Verify chain oil level and ensure the oiler is functioning.
- Clean the air filter and cooling fins.
- Check all nuts, bolts, and screws for tightness.



Figure 4: Close-up view of the ECHO CS-310-16 engine housing and chain brake mechanism. Regular cleaning of the air filter (located under the cover) and inspection of the chain brake are vital for performance and safety.

3.2 Guide Bar Maintenance

- Clean the guide bar groove to remove sawdust and debris.
- Check for burrs on the guide bar rails. File them smooth if present.
- Inspect the nose sprocket for wear and ensure it spins freely.
- Flip the guide bar periodically to ensure even wear.

3.3 Long-Term Storage

- Drain all fuel from the tank and run the engine until it stops to clear the carburetor.
- Drain the chain oil tank.
- Clean the entire chainsaw thoroughly.
- Remove the spark plug, add a small amount of 2-stroke oil to the cylinder, and pull the starter rope a few times to distribute the oil. Reinstall the spark plug.
- Store the chainsaw in a dry, well-ventilated area, away from heat sources and out of reach of children.

4. Troubleshooting

This section addresses common issues you might encounter with your ECHO CS-310-16 Chainsaw. For more complex problems, consult a qualified service technician.

4.1 Engine Won't Start

- **No Fuel/Incorrect Mixture:** Ensure the fuel tank has fresh, correctly mixed fuel.
- **Choke Setting:** Verify the choke is set correctly for starting (full choke for cold start, half choke after initial "pop").
- **Spark Plug:** Check the spark plug for fouling or damage. Clean or replace if necessary.
- **Flooded Engine:** If the engine is flooded (too much fuel), remove the spark plug, pull the starter rope several times to clear the cylinder, and then reinstall the plug and attempt to start with the choke off.

4.2 Chain Not Cutting Effectively

- **Dull Chain:** The most common cause. Sharpen or replace the chain.

- **Incorrect Chain Tension:** A loose or overly tight chain can affect cutting performance. Adjust tension.
- **Insufficient Chain Oil:** Ensure the chain oil tank is full and the oiler is working. A dry chain will not cut well and can cause damage.
- **Worn Guide Bar:** Check the guide bar for wear, burrs, or a worn nose sprocket. Replace if severely worn.

4.3 Engine Lacks Power

- **Dirty Air Filter:** A clogged air filter restricts airflow. Clean or replace it.
- **Incorrect Fuel Mixture:** An improper fuel-to-oil ratio can lead to poor performance.
- **Spark Arrestor:** A clogged spark arrestor screen in the muffler can reduce engine power. Clean it regularly.

5. Specifications

Key technical specifications for the ECHO CS-310-16 Chainsaw:

Feature	Detail
Brand	ECHO
Model	CS-310-16
Power Source	Gas Powered
Engine Displacement	30.5 cc
Horsepower	5.3 Horsepower
Bar Length	16 Inches
Item Weight	8.8 pounds (4 Kilograms)
Product Dimensions	39.5"L x 11.5"W x 12.2"H
UPC	743184010303
ASIN	B0799PYMFS

6. Warranty & Support

For detailed warranty information, please refer to the warranty card included with your ECHO CS-310-16 Chainsaw or visit the official ECHO website. Keep your proof of purchase for any warranty claims.

For technical support, parts, or service, please contact ECHO customer service or an authorized ECHO service dealer. You can find contact information and dealer locations on the official ECHO website.

Manufacturer: ECHO

