

Echo CS-310

Echo CS-310 Gas Chain Saw User Manual

Model: CS-310 | Brand: Echo

INTRODUCTION

This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your Echo CS-310 Gas Chain Saw. Please read this manual thoroughly before operating the saw to ensure proper use and to prevent injury or damage.

The Echo CS-310 is a powerful and reliable 14-inch bar gas chain saw designed for various cutting tasks, featuring a 30.5cc engine, automatic chain oiler, and anti-vibration handle for user comfort and control.

SAFETY INFORMATION

WARNING: Improper use of this chain saw can result in serious injury or death. Always follow all safety precautions.

- Always wear appropriate personal protective equipment (PPE), including a helmet, eye protection, hearing protection, gloves, and protective legwear.
- Ensure the work area is clear of bystanders, especially children and pets.
- Inspect the chain saw before each use for loose parts, damage, or wear.
- Never operate the chain saw when fatigued, under the influence of alcohol, drugs, or medication.
- Be aware of kickback and how to avoid it.
- Handle fuel with extreme care. Refuel in a well-ventilated area with the engine off and cool.

COMPONENTS OVERVIEW

Familiarize yourself with the main components of your Echo CS-310 chain saw:



Figure 1: Front view of the Echo CS-310 Gas Chain Saw, showing the bar, chain, and engine housing.



Figure 2: Side view of the Echo CS-310 Gas Chain Saw, highlighting the purge pump and controls.

- **Bar:** The guide for the cutting chain.
- **Chain:** The cutting tool with sharp teeth.
- **Engine Housing:** Contains the engine and internal components.
- **Front Handle:** For gripping and control during operation.
- **Rear Handle:** Contains the throttle trigger and safety lock-out.
- **Chain Brake:** Safety mechanism to stop the chain quickly.
- **Fuel Tank Cap:** For filling the fuel tank.
- **Oil Tank Cap:** For filling the chain oil tank.
- **Purge Pump:** Primes the carburetor with fuel for easier starting.

1. Unpacking

Carefully remove all components from the packaging. Verify that all parts listed in the packing list are present and undamaged. Retain the packaging for future storage or transport.

2. Fuel and Oil Mixture

The Echo CS-310 uses a 2-stroke engine and requires a specific fuel mixture. Use fresh, unleaded gasoline with an octane rating of 89 or higher, mixed with high-quality 2-stroke engine oil at a **50:1 ratio** (2.6 fl. oz. of oil per gallon of gasoline). Do not use E-gas (ethanol contaminated gas) as it can cause issues with small engines.

- Mix fuel in a clean, approved fuel container.
- Shake the mixture thoroughly before filling the fuel tank.
- Fill the chain oil tank with good quality bar and chain oil. The automatic oiler requires a constant supply of oil. Check the oil level frequently, ideally with every fuel refill.

3. Bar and Chain Installation

Refer to the detailed instructions in your manual for proper installation of the guide bar and saw chain. Ensure the chain is correctly tensioned; it should be snug but still able to be pulled around the bar by hand.

OPERATING INSTRUCTIONS

1. Starting the Engine

Cold Start:

1. Place the chain saw on a firm, flat surface.
2. Engage the chain brake.
3. Move the choke lever to the FULL CHOKE position.
4. Press the purge pump bulb 5-7 times until fuel is visible in the return line.
5. Pull the starter handle firmly and steadily until the engine "pops" or attempts to start (usually 3-5 pulls).
6. Move the choke lever to the HALF CHOKE position.
7. Pull the starter handle again until the engine starts.
8. Once the engine runs, disengage the choke by briefly pressing the throttle trigger.
9. Allow the engine to warm up for a few moments before disengaging the chain brake and beginning work.

Warm Start:

1. Engage the chain brake.
2. Move the choke lever to the OFF position.
3. Pull the starter handle until the engine starts.

2. Cutting Techniques

Always maintain a firm grip on both handles. Stand with good balance and footing. Plan your cuts to avoid kickback and ensure the tree or limb falls in the desired direction. Start cutting with the chain brake engaged, then disengage it just before making the cut.

- **Felling:** For cutting down trees. Requires careful planning of escape routes and hinge creation.
- **Limbing:** Removing branches from a fallen tree. Work from the base towards the top, supporting the log to prevent pinching.
- **Bucking:** Cutting a fallen log into smaller sections. Be aware of tension and compression in the wood.

3. Stopping the Engine

To stop the engine, release the throttle trigger and move the ignition switch to the "STOP" position. Engage the chain brake immediately after stopping the engine.

MAINTENANCE

Regular maintenance is crucial for the longevity and safe operation of your chain saw.

1. Chain Sharpening

A sharp chain is essential for efficient and safe cutting. Sharpen the chain regularly using a round file of the correct diameter (refer to your chain's specifications) or have it professionally sharpened. A dull chain will produce fine sawdust instead of chips and require more force to cut.

2. Bar Maintenance

Clean the guide bar groove and oil holes regularly. Flip the bar periodically to ensure even wear. Check for burrs on the bar rails and file them smooth if present.

3. Air Filter Cleaning

Clean the air filter frequently, especially when working in dusty conditions. A clogged air filter can reduce engine performance and increase fuel consumption. Wash foam filters with warm, soapy water, rinse, and allow to dry completely before reinstallation. Paper filters should be replaced if heavily soiled.

4. Spark Plug Inspection

Inspect the spark plug periodically for wear, carbon buildup, or damage. Clean or replace as necessary. Ensure the electrode gap is set correctly.

5. General Cleaning and Storage

After each use, clean the chain saw thoroughly, removing sawdust, debris, and oil residue. For long-term storage, drain the fuel tank and run the engine until it stops to clear the carburetor. Store the chain saw in a dry, secure location, away from children and flammable materials.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Engine won't start	No fuel, incorrect starting procedure, fouled spark plug, clogged fuel filter.	Check fuel level and mixture. Follow starting instructions carefully. Clean/replace spark plug. Replace fuel filter.
Engine runs poorly/lacks power	Dirty air filter, dull chain, incorrect fuel mixture, carburetor issues.	Clean air filter. Sharpen or replace chain. Ensure correct fuel/oil ratio. Consult service center for carburetor.
Chain not oiling	Empty oil tank, clogged oil passages, damaged oil pump.	Refill oil tank. Clean oil holes and bar groove. Consult service center for oil pump.

Problem	Possible Cause	Solution
Chain brake not engaging/disengaging	Debris in mechanism, worn parts.	Clean mechanism. If issue persists, seek professional service.

SPECIFICATIONS

- **Model:** CS-310
- **Brand:** Echo
- **Fuel Type:** Gas
- **Bar Length:** 14 Inches
- **Engine Displacement:** 30.5cc
- **Horsepower:** 5.3 hp
- **Fuel Tank Capacity:** 8.5 oz.
- **Automatic Chain Oiler:** Yes
- **Anti-Vibration Handle:** Yes
- **Item Weight:** 8.1 Pounds
- **Product Dimensions:** 24"L x 15"W x 15"H
- **UPC:** 743184992814, 743184993446

WARRANTY AND SUPPORT


For warranty information, service, or technical support, please refer to the official Echo website or contact an authorized Echo service center. Keep your purchase receipt as proof of purchase for warranty claims.






Important Note: Items classified as hazardous materials or that use flammable liquids or gases are NON-RETURNABLE. Contact the manufacturer directly for service and warranty information regarding such products.



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Related Documents - CS-310

	<p>ECHO Chain Saw Service Manual CS-440EVL, CS-510EVL, CS-550EVL, CS-660EVL</p> <p>Comprehensive service manual for ECHO chain saw models CS-440EVL, CS-510EVL, CS-550EVL, and CS-660EVL, providing detailed specifications, technical data, service limits, and torque specifications for maintenance and repair.</p>
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 <p>The image shows the cover of the ECHO CS-590 Chainsaw Parts Catalog. It features the ECHO logo at the top, followed by the title 'PARTS CATALOG LISTA DE PIEZAS CS-590 Chainsaw CS-590 Motohacha'. Below the title is a small image of the chainsaw. The cover lists various parts and their corresponding numbers in both English and Spanish. At the bottom, it says 'ECHO Incorporated' and 'ECHO Corporation, 10000 W. 10th Ave., Denver, CO 80231'.</p>	<p>ECHO CS-590 Chainsaw Parts Catalog</p> <p>Comprehensive parts catalog for the ECHO CS-590 Chainsaw, detailing all components, part numbers, and accessory options for model years C69015001001 through C69015999999. Includes diagrams and specifications.</p>
 <p>The image shows the cover of the ECHO CS-271T Chainsaw Parts Catalog. It features the ECHO logo at the top, followed by the title 'PARTS CATALOG LISTA DE PIEZAS CS-271T Chainsaw CS-271T Motohacha'. Below the title is a small image of the chainsaw. The cover lists various parts and their corresponding numbers in both English and Spanish. At the bottom, it says 'ECHO Incorporated' and 'ECHO Corporation, 10000 W. 10th Ave., Denver, CO 80231'.</p>	<p>ECHO CS-271T Chainsaw Parts Catalog</p> <p>Comprehensive parts catalog for the ECHO CS-271T Chainsaw, detailing all components, part numbers, and descriptions in both English and Spanish. Includes optional accessories and safety equipment.</p>
 <p>The image shows the cover of the ECHO CS-361P Chainsaw Parts Catalog. It features the ECHO logo at the top, followed by the title 'PARTS CATALOG LISTA DE PIEZAS CS-361P Chainsaw CS-361P Motohacha'. Below the title is a small image of the chainsaw. The cover lists various parts and their corresponding numbers in both English and Spanish. At the bottom, it says 'ECHO Incorporated' and 'ECHO Corporation, 10000 W. 10th Ave., Denver, CO 80231'.</p>	<p>ECHO CS-361P Chainsaw Parts Catalog</p> <p>Comprehensive parts catalog for the ECHO CS-361P Chainsaw, detailing all components with part numbers, descriptions, and diagrams. Includes optional accessories, safety equipment, and technical specifications.</p>
 <p>The image shows the cover of the ECHO CS-4510 Chainsaw Parts Catalog and Accessories. It features the ECHO logo at the top, followed by the title 'PARTS CATALOG LISTA DE PIEZAS CS-4510 Chainsaw CS-4510 Motohacha'. Below the title is a small image of the chainsaw. The cover lists various parts and their corresponding numbers in both English and Spanish. At the bottom, it says 'ECHO Incorporated' and 'ECHO Corporation, 10000 W. 10th Ave., Denver, CO 80231'.</p>	<p>ECHO CS-4510 Chainsaw Parts Catalog and Accessories</p> <p>Comprehensive parts catalog for the ECHO CS-4510 Chainsaw, listing all components, optional accessories, and safety equipment with part numbers and descriptions in English and Spanish. Includes diagrams and technical specifications for various assemblies.</p>
 <p>The image shows the cover of the ECHO CS-3510 Chain Saw Parts Catalog. It features the ECHO logo at the top, followed by the title 'PARTS CATALOG LISTA DE PIEZAS CS-3510 Chain Saw CS-3510 Motohacha'. Below the title is a small image of the chainsaw. The cover lists various parts and their corresponding numbers in both English and Spanish. At the bottom, it says 'ECHO Incorporated' and 'ECHO Corporation, 10000 W. 10th Ave., Denver, CO 80231'.</p>	<p>ECHO CS-3510 Chain Saw Parts Catalog</p> <p>Comprehensive parts catalog for the ECHO CS-3510 Chain Saw, listing all components, part numbers, and diagrams for identification and replacement. Includes detailed information on engine, carburetor, fuel system, ignition, starter, and other assemblies.</p>