

- Use of parts that are not authorized or approved by STIHL may cause serious or fatal injury or property damage.
 - STIHL recommends that only identical STIHL replacement parts be used for repair or maintenance.
- To reduce the risk of short circuit and fire:
 - Keep the battery guides free of foreign matter. Clean as necessary with a dry cloth or soft, dry brush.
- Improper storage can result in unauthorized use, damage to the pole pruner and battery, and an increased risk of fire, electric shock and other personal injury or property damage.
 - Remove the battery from the pole pruner before storing.
 - Never store the pole pruner or charger with the battery inserted.
 - Store the pole pruner and battery indoors in a dry, secure place that cannot be accessed by children or other unauthorized users.
 - Never store the battery in the pole pruner, in the charger, in a metal container or in a container with metal objects (e.g., paper clips, nails, coins, keys).

10 Before Starting Work

10.1 Preparing the Pole Pruner for Operation

Before starting work:

- ▶ Fully charge the battery, 11.
- ▶ Installing the pole pruner (HTA 86), 14.1.
- ▶ Mount the guide bar and saw chain, 14.3.1.
- ▶ Tension the chain, 14.4.
- ▶ Fill the chain oil tank, 14.5.2.
- ▶ Check the controls for proper function and condition, 17.1.
- ▶ Check the chain oil flow rate, 17.2.

- ▶ Adjust the length of the drive tube, 18.1.
- ▶ Put on and adjust the shoulder strap, 18.2.

11 Charging the Battery

11.1 Setting up the Charger

WARNING

Read and follow the safety precautions on the battery and charger and all warnings and instructions that accompany those products. To reduce the risk of short circuit, which could lead to electric shock, fire and explosion, make sure the charger and its components are dry and not damaged; operate the charger indoors at an appropriate ambient temperature.

WARNING

A typical household electric circuit is between 15 and 20 amps. A single STIHL AL 500 charger draws approximately 4.8 amps. A single AL 300 charger draws approximately 4.4 amps. To reduce the risk of fire from overloading an electrical circuit:

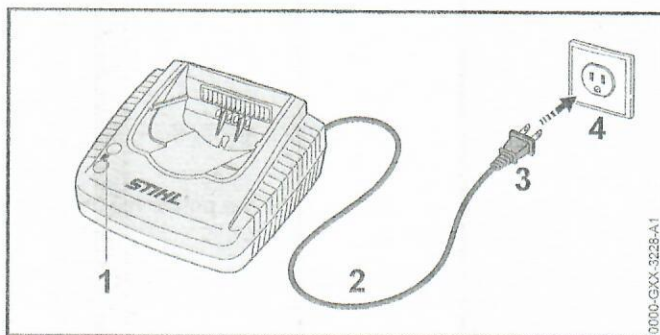
- ▶ Ensure the electrical system is rated to withstand the expected electrical draw before charging your battery.
- ▶ Charge multiple batteries one at a time or on separate circuits, unless you know your circuit can handle the total expected draw from multiple chargers.

WARNING

Since the charger heats up during the charging process, do not operate the charger on a combustible surface or in a location where combustible gases, liquids, vapors, dusts or other materials and substances are present.

Stihl
HTA 86
Battery Pole Pruner

To set up the charger:



- Insert the plug (3) into a properly installed electrical outlet (4) matching the voltage and electrical frequency stated on the charger's rating plate.

The charger runs a self-test immediately after it is plugged in. The charger LED (1) will glow green for about 1 second, then it will glow red briefly before going out. Once the LED goes out, the self-test is complete and the charger is ready to charge the battery.

- Position the power supply cord (2) so that it will not be stepped on, tripped over, come in contact with sharp objects or moving parts or otherwise be subjected to damage or stress.

11.2 Charging

WARNING

STIHL batteries contain safety features and devices which, if damaged, may allow the battery to generate heat, rupture, leak, ignite or explode. Never charge a malfunctioning, damaged, cracked, leaking or deformed battery, or use a charger that has been damaged. Never insert a wet battery or battery adapter. Never use a wet charger. Follow all product-specific warnings and instructions accompanying your battery and charger.

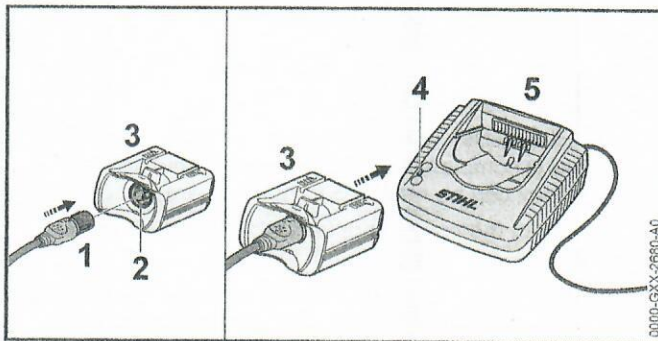
A battery is not fully charged when it ships from the factory. STIHL recommends that you fully charge the battery before using it the first time.

Operate the charger only indoors, in dry rooms and within an ambient temperature range of 41 °F to 104 °F (5 °C to 40 °C).

The battery heats up during operation of the power tool. If a hot battery is connected to the charger, it may be necessary for it to cool down before charging starts. The charging process begins only after the battery has cooled down sufficiently.

Charging time depends on a number of factors, including battery condition and the ambient temperature. For a complete list of approximate charging times, see www.stihl.com/charging-times.

To charge an AR battery:



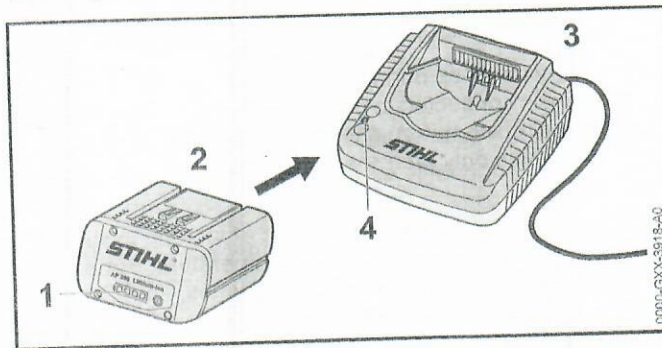
- Push the plug of the connecting cord (1) into the socket (2) of the AP Adapter (3) until it stops.
- Push the AP Adapter into the charger (5) until it stops. The LED on the **charger** (4) glows green when the battery is charging.

The LEDs on the **AR battery** glow green and show the state of charge.

When the LEDs on the battery turn off, the charging process is complete and the charger will shut itself off. The AP Adapter can be removed from the charger.

- Disconnect the power supply cord from the electrical outlet when the charger is not in use for extended periods of time.
- Charge STIHL AR backpack batteries only with genuine STIHL AL 300 or AL 500 series chargers.

To charge an AP battery:



- Push the battery (2) into the charger (3) until it stops. The LED on the charger glows green when the battery is charging.

The LEDs (1) on the AP battery glow green and show the state of charge.

When the LEDs on the battery go out, the charging process is complete and the charger will shut itself off. The AP battery can be removed from the charger.

- Disconnect the power supply cord from the electrical outlet when the charger is not in use.
- Charge STIHL AP series batteries only with genuine STIHL AL 101, AL 300 or AL 500 series chargers.

12 LED Diagnostics and Acoustic Signals

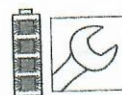
12.1 STIHL AP Battery

12.1.1 Battery Status

Four LEDs show the status of the battery. These LEDs can glow or flash green or red.



If one LED glows red continuously: the battery is either too hot or too cold. Allow the battery to warm up or cool down gradually at an ambient temperature of about 50 °F to 68 °F (10 °C to 20 °C).



If all 4 LEDs flash red: the battery has a malfunction and must be replaced. Do not attempt to charge, use or store the battery.

12.1.2 Power Tool Status

The same LEDs on the battery will indicate the status of the power tool.

If three LEDs glow red continuously: the power tool is too hot. Allow the motor to cool down.

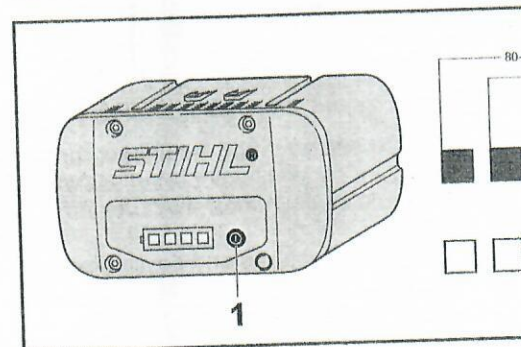
If three LEDs flash red when you activate the trigger: the power tool has an electrical malfunction. Do not use the power tool. Have it checked by an authorized servicing dealer before use or storage.

For troubleshooting information, see 24.

12.1.3 Charge Status

The LEDs on the battery also show the battery's charge.

To determine the battery's state of charge:

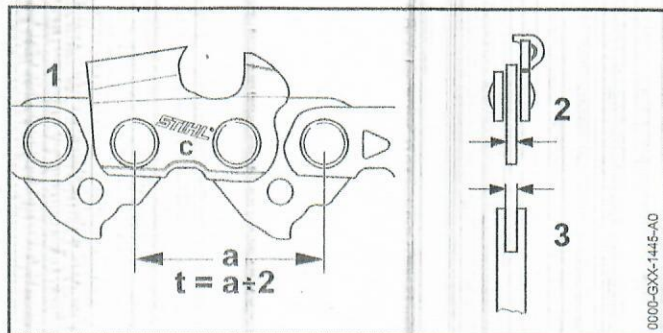


- Press the button (1) on the battery. The LEDs on the battery will glow or flash green for 5 seconds and indicate the state of charge (see illustration).

For example:

If four green LEDs glow continuously: full charge

If one green LED is flashing: less than 20 %



- The pitch (t) of the chain (1), must match the pitch of the chain sprocket.
- The drive link gauge (2) of the chain must match the groove width of the guide bar (3).

14.3 Mounting and Removing the Guide Bar and Chain

14.3.1 Mounting the Guide Bar and Chain

WARNING

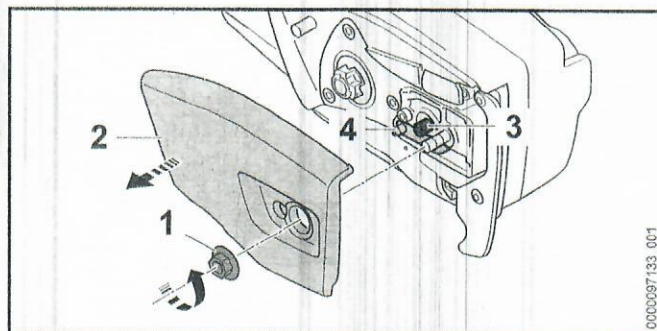
Make sure the battery is removed before starting assembly. Never operate your pole pruner without a properly mounted guide bar and chain,  6.5. Use only guide bar and chain combinations expressly recommended or approved by STIHL,  6.4.

WARNING

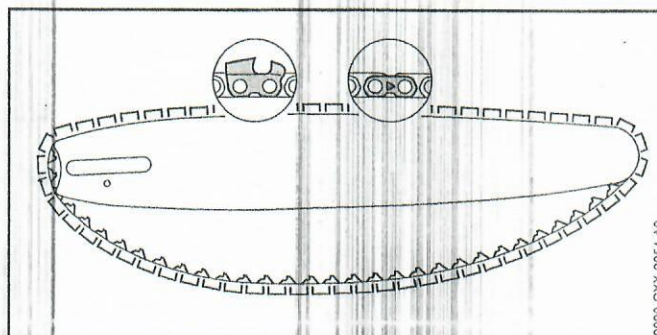
The chain has many sharp cutters. If they contact your flesh, they will cut you, even if the chain is not moving,  6.4. Always wear heavy-duty work gloves when mounting or otherwise handling the chain,  6.3.

To mount the guide bar and chain:

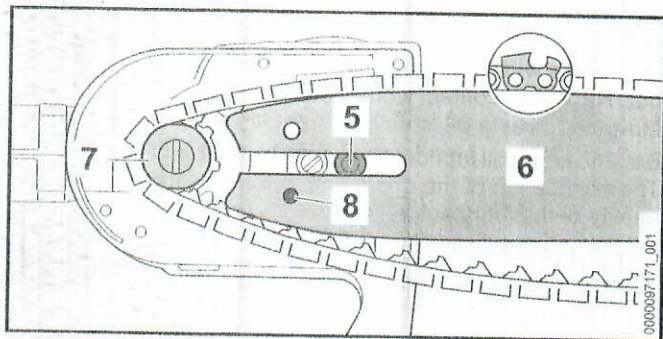
- ▶ Switch off the pole pruner,  16.2.
- ▶ Remove the battery,  15.2.



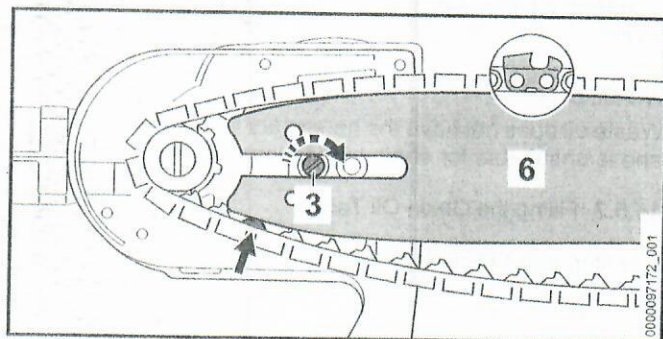
- ▶ Turn the nut (1) counterclockwise until the chain sprocket cover (2) can be removed.
- ▶ Remove the chain sprocket cover.
- ▶ Turn the side chain tensioner (3) counter-clockwise until the tensioning gear (4) sits flush against the housing.



- ▶ Position the chain in the groove of the guide bar, starting at the tip.
- ▶ Make sure that the cutters in the groove on the top side of the guide bar face the tip of the bar. STIHL chains are manufactured with arrows on the tie straps to help the operator determine the proper direction of the chain. Arrows on the tie straps on the top of the bar must point toward the bar tip.



- ▶ Point the guide bar tip away from the chain sprocket (7).
- ▶ Place the chain around the chain sprocket.
- ▶ Slide the guide bar (6) over the collar screw (5). The head of the collar screw must protrude into the oblong hole.
- ▶ Fit the pin of the tensioning gear in the hole (8) of the guide bar.



- ▶ Direct the drive links into the groove of the guide bar (6, arrow) while turning the side chain tensioner (3) clockwise until it stops.
The guide bar and chain must be firmly and securely mounted on the pole pruner.
- ▶ Fit the sprocket cover on the pole pruner so that it is flush with the housing.
- ▶ Turn the nut clockwise until the chain sprocket cover is firmly attached to the pole pruner.

14.3.2 Removing the Guide Bar and Chain

- ▶ Unscrew the nut securing the chain sprocket cover.

- ▶ Remove the chain sprocket cover.
- ▶ Turn the side chain tensioner counterclockwise until it stops and the chain is loose.
- ▶ Remove the guide bar and chain.

NOTICE

The top and bottom of the guide bar are symmetrical, and the bar may be mounted with the printing facing up or down. Flipping the guide bar each time the chain is sharpened or changed will help reduce uneven wear and improve its service life.

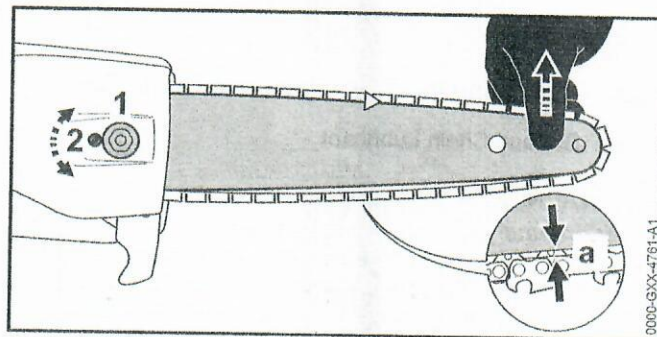
14.4 Tensioning the Chain

⚠ WARNING

To reduce the risk of severe personal injury from chain derailment, check chain tension frequently, 6.5. At operating temperatures, the chain stretches and sags. New chain tends to stretch more than used chain. Tension the chain so that the drive links cannot come out of the groove on the underside of the guide bar.

To properly tension the chain:

- ▶ Switch off the pole pruner, 16.2.
- ▶ Remove the battery, 15.2.



- ▶ Loosen the nut (1).
- ▶ Lift the guide bar tip.

- ▶ Turn the side chain tensioner (2) clockwise to tighten the chain.
The chain is properly adjusted when the distance between the underside of the guide bar and the chain (a) is between 0.04 in. (1 mm) and 0.08 in. (2 mm) and can still be pulled easily along the bar by hand. Always wear gloves when handling the chain.
- ▶ If the chain cannot be moved along the guide bar, it is too tight.
 - Reduce the tension by turning the side chain tensioner counterclockwise until the chain can move freely along the guide bar.
 - Ensure that the drive links remain in the groove and that the distance between the underside of the guide bar and the chain (a) is between 0.04 in. (1 mm) and 0.08 in. (2 mm).
- ▶ Once the chain is properly tensioned, lift the guide bar tip and tighten the nut to secure the chain sprocket cover.
- ▶ Finally, ensure that the distance between the underside of the guide bar and the chain (a) is between 0.04 in. (1 mm) and 0.08 in. (2 mm).

NOTICE

Always release tension on the chain after finishing work. The chain contracts as it cools down. If it is not slackened, it can damage the drive shaft and bearings. Properly re-tension the chain before using the pole pruner again.

14.5 Lubricating the Saw Chain and Guide Bar

14.5.1 Bar and Chain Lubricant

WARNING

Never operate your pole pruner without bar and chain lubrication. If the chain runs dry, the cutting attachment will be damaged beyond repair within a very short time. A damaged chain may break, resulting in severe or fatal personal injury. Always check chain lubrication and the oil level in the tank before starting work and periodically during work.

WARNING

Never use waste oil to lubricate your saw chain and guide bar. Repeated contact with waste oil can cause skin cancer. Moreover, waste oil is environmentally harmful.

Bar and chain oil lubricates and cools the rotating saw chain. The service life of the chain and guide bar depends on the quality of the lubricant. It is therefore essential to use only a specially formulated chain lubricant.

- ▶ For automatic and reliable lubrication of the chain and guide bar, use only an environmentally compatible quality chain and bar lubricant. STIHL recommends using rapidly biodegradable STIHL BioPlus.

NOTICE

Biodegradable chain oil must be resistant to aging, since it will otherwise quickly turn to resin. This results in hard deposits that are difficult to remove, especially in the area of the chain drive and chain. It may even cause the oil pump to seize.

NOTICE

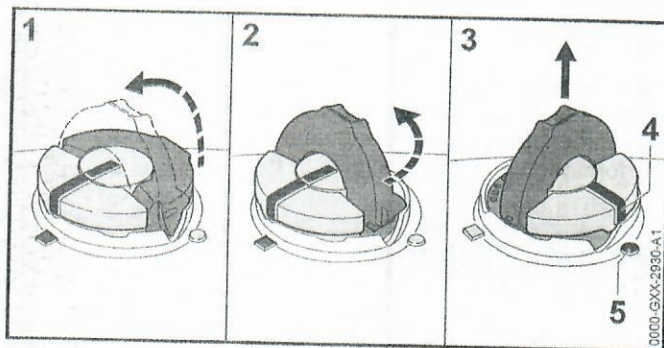
Waste oil does not have the necessary lubricating properties and is unsuitable for chain lubrication.

14.5.2 Filling the Chain Oil Tank

Opening and Filling the Chain Oil Tank

To fill the chain oil tank:

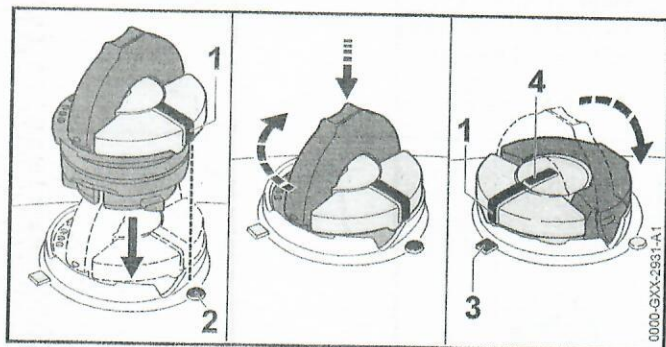
- ▶ Switch off the pole pruner,  16.2.
- ▶ Remove the battery,  15.2.
- ▶ Position the pole pruner on a level surface with the oil filler cap facing upwards.
- ▶ Clean the area around the oil filler cap with a slightly dampened cloth.



- Flip up the grip and press the cap down firmly (1).
- Turn the cap slowly counter-clockwise (2) to the open position (3). In the open position, the exterior positioning mark (4) on the cap will line up with the symbol (5) on the chain oil tank housing
- Remove the cap and fill the tank with bar and chain oil.
- Take care not to spill bar and chain oil while refilling the tank.
- Do not overfill the tank. Leave approximately 0.5 in. (13 mm) of air space.

Closing

To close the tank:



- Raise the grip on the top of the cap until it is upright at a 90° angle. Insert the cap in the chain oil tank opening with the exterior positioning mark (1) lined up with the open symbol (2) on the chain oil tank housing.

- Using the grip, press the cap down firmly while turning it clockwise to the closed position (approximately 1/4 turn). In the closed position, the interior (4) and exterior (1) positioning marks will align with the closed symbol (3) on the chain oil tank housing.
- Fold the grip flush with the top of the cap and check for tightness.
- If the grip does not lie completely flush with the cap or the detent on the grip does not fit in the corresponding recess in the tank opening, or if the cap is loose, the cap is not properly seated and you must repeat the above steps.

15 Inserting and Removing the Battery

15.1 Inserting the Battery

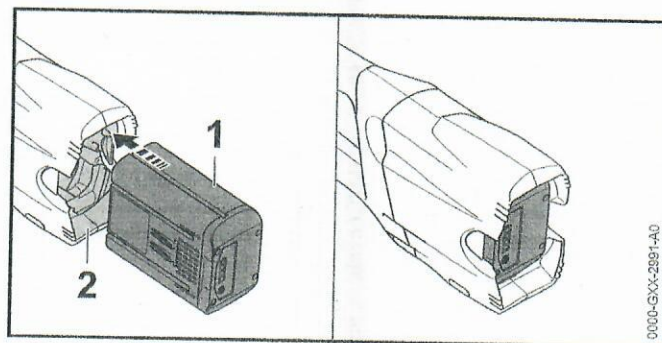
⚠ WARNING

Never use a malfunctioning, damaged, cracked, leaking or deformed battery,  8. Use and store the battery only within an ambient temperature range of 14 °F to 122 °F (- 10 °C to 50 °C),  8.

⚠ WARNING

To reduce the risk of unintended activation, never store the battery in the pole pruner,  8.

To insert the battery:



- Place the pole pruner on a level surface.

- ▶ Insert the battery (1) into the battery compartment (2) until it stops.
The battery is properly inserted when you hear an audible click. In this position, there is electrical contact between the battery and the pole pruner.

Since a new battery is not fully charged, STIHL recommends that you fully charge the battery before using it the first time,  11.

15.2 Removing the Battery

WARNING

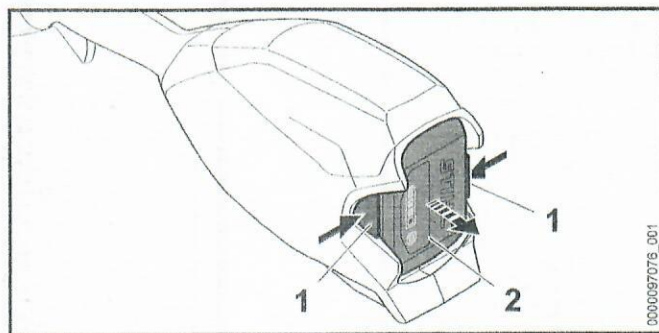
To reduce the risk of severe personal injury from unintended activation, always remove the battery before assembling, transporting, adjusting, cleaning, servicing, maintaining or storing the pole pruner, and any other time it is not in use.

WARNING

Use care when ejecting the battery to prevent it from falling and causing personal injury or property damage.

To remove the battery:

- ▶ Release the trigger switch.
- ▶ Place the pole pruner on a level surface.



- ▶ Compress the locking levers (1) to eject the battery (2) from the battery compartment.

NOTICE

Avoid exposing the battery to excessive heat or prolonged periods of direct sunlight. Use or storage outside the recommended ambient temperature range can reduce the performance and/or service life of the battery.

16 Switching the Pole Pruner On and Off

16.1 Switching On

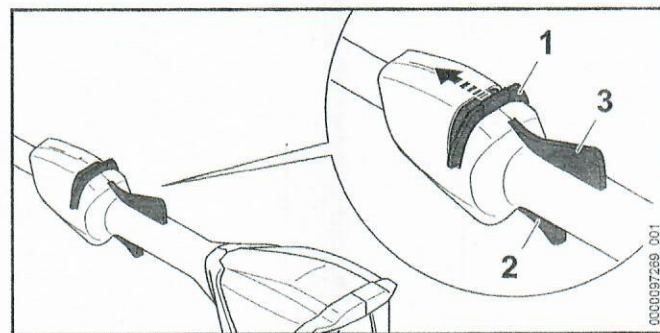
WARNING

Never operate your pole pruner if it is modified, damaged, improperly adjusted or maintained, not completely and securely assembled or not functioning properly,  6.4. To reduce the risk of personal injury, always wear proper clothing and protective apparel, including proper eye protection, when operating your pole pruner,  6.3.

Before switching on:

- ▶ Make sure other persons are out of the general work area.
- ▶ Make sure you have a secure and firm footing.
- ▶ Stand upright.
- ▶ Always hold and operate the pole pruner with one hand firmly on the control handle and with the other hand firmly on the front handle.

To switch the pole pruner on:



- ▶ Unlock the retaining latch (1) by pushing it forward with your thumb. Hold it in this unlocked position.
- ▶ While holding the retaining latch, squeeze the trigger switch (2) with your index finger. The saw chain will start rotating.

The motor will not switch on unless the retaining latch is pushed forward and the trigger switch is pressed at the same time. Once the trigger switch is activated, you may release the retaining latch. Holding the Ergo-Lever (3) down keeps the trigger switch unlocked.

If you release the trigger switch and Ergo-Lever, you have to unlock the tool again with the retaining latch.

16.2 Switching Off

WARNING

The saw chain will continue to rotate for a short while after the trigger switch is released. To avoid serious or fatal injury, avoid contact with the moving saw chain. To reduce the risk of personal injury from unintended activation or unauthorized use, switch off the motor, ensure the chain has stopped and remove the battery before transporting the pole pruner or putting it down.

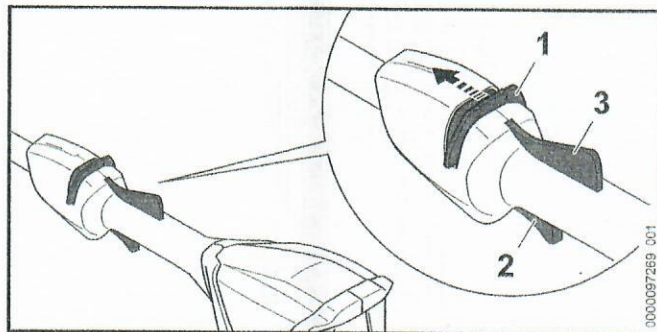
To switch the pole pruner off:

- ▶ Release the trigger switch and Ergo-Lever so that the trigger switch springs back to the locked position. In the locked position, activation of the trigger switch is once again blocked by the retaining latch.

17 Checking the Pole Pruner

17.1 Testing the Controls

Before starting work, confirm that the retaining latch (1), trigger switch (2) and the Ergo-Lever (3) are undamaged and functioning properly.



Retaining Latch (1), Trigger Switch (2) and Ergo-Lever (3)

WARNING

To reduce the risk of serious or fatal injuries, keep hands, feet and other parts of the body away from the chain. Do not touch the saw chain while the battery is inserted. Never touch moving chain with your hand or any part of your body,  6.5.2. Keep bystanders at least 50 ft. (15 m) out of the area while testing the controls.

To test the controls:

- ▶ Remove the battery.
- ▶ Attempt to depress the trigger switch.
If the trigger switch can be depressed without first unlocking the retaining latch, take the pole pruner to an authorized STIHL servicing dealer to be repaired before use.
- ▶ Press down on the Ergo-Lever. Make sure it moves freely and springs back into place when released.

- ▶ Unlock the retaining latch by pushing it forward.
When you release the retaining latch it should return to the locked position.
- ▶ Unlock the retaining latch and depress the Ergo-Lever at the same time to keep the retaining latch unlocked.
When you release the retaining latch, it should remain unlocked as long as you hold down the Ergo-Lever.
- ▶ Release the retaining latch and Ergo-Lever.
- ▶ Insert the battery.
- ▶ Hold the pole pruner firmly with one hand on the control handle and with the other hand firmly on the front handle.
While pushing the retaining latch forward, squeeze the trigger switch with your index finger.
The pole pruner should switch on. If it does not, take the pole pruner to an authorized STIHL servicing dealer to be repaired before use.
- ▶ Release the trigger switch.
The pole pruner should switch off.

If the pole pruner does not switch off after you release the trigger switch, remove the battery and take the pole pruner to an authorized STIHL servicing dealer to be repaired before use.

17.2 Testing Chain Lubrication

WARNING

Never operate your pole pruner without bar and chain lubrication. If the chain runs dry, the cutting attachment will be damaged beyond repair within a very short time. A damaged chain may break, resulting in severe or fatal personal injury. Always check chain lubrication and the oil level in the tank before starting work and periodically during work.

To confirm that the chain oil is flowing properly:

- ▶ Insert the battery,  15.1.
- ▶ Point the guide bar toward a bright surface.

- ▶ Switch on the pole pruner,  16.1.
The chain should throw off a small amount of oil.
If the chain oil cannot be seen, check the oil level and refill the tank as necessary.
- ▶ Test the chain lubrication again.
- ▶ If chain lubrication oil is still not visible, the lubrication mechanism is not functioning. Take the pole pruner to an authorized STIHL servicing dealer to be repaired before use.

18 During Operation

18.1 Adjusting the Length of the Drive Tube (HTA 86 only)

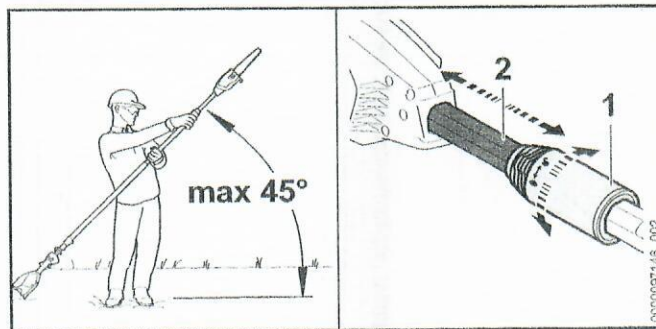
WARNING

To reduce the risk of injury from loss of control, ensure that the drive tube is properly adjusted and engaged in the locked position before starting work.

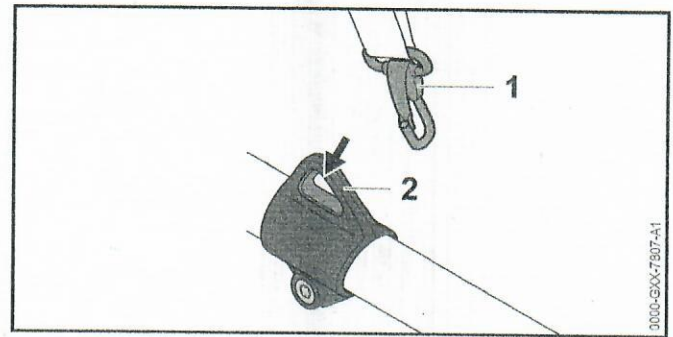
The length of the drive tube can be adjusted to suit the height and reach of the operator.

To adjust the length of the drive tube:

- ▶ Switch off the pole pruner,  16.2.
- ▶ Remove the battery,  15.2.
- ▶ Hold the drive tube firmly.



- ▶ Hold the pole pruner no more than 45° from the horizontal plane (see illustration).
- ▶ Unlock the drive tube (2) by turning the clamping nut (1) a half turn in the direction .
- ▶ Adjust the drive tube length by sliding it into the desired position.
- ▶ Lock the drive tube by turning the clamping nut in the direction  and tightening it.
- ▶ Confirm that the drive tube is fixed in place.
- ▶ If the drive tube still can be moved: Lock the drive tube by turning the clamping nut in the direction  and tightening it until the drive tube is fixed in place.

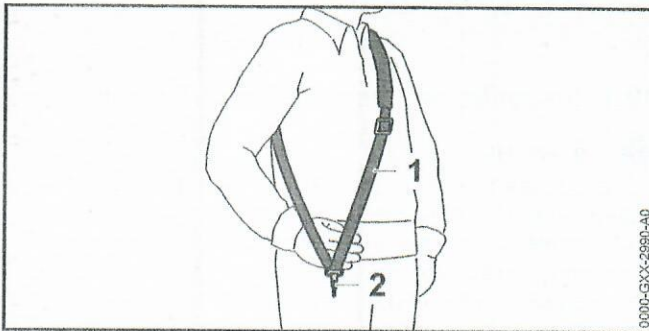


- ▶ Attach the carabiner (1) to the carrying ring (2) on the pole pruner.

18.2 Putting on and Adjusting the Shoulder Strap

To fit and adjust the harness:

- ▶ Switch off the pole pruner,  16.2.
- ▶ Remove the battery,  15.2.
- ▶ Put the shoulder strap over your shoulder.



- ▶ Adjust the length of the shoulder strap (1) so that the carabiner (2) is about a hand's width below the top of your hip.

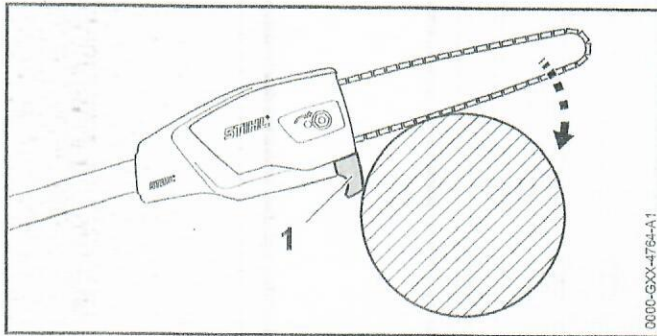
18.3 Limbing

WARNING

To reduce the risk of severe or even fatal injury from falling objects:

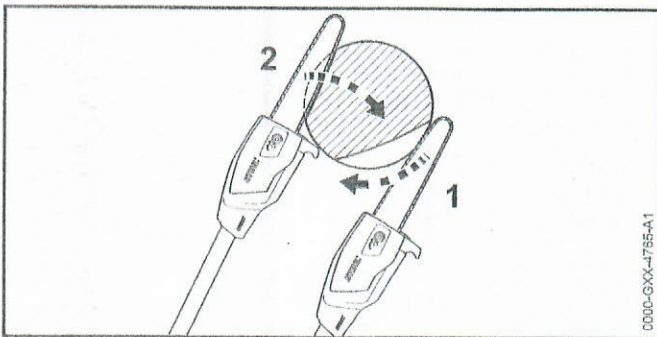
- ▶ Do not cut vertically above your body. Hold the pole pruner at an angle of not more than 60° from the horizontal level. Objects may fall in unexpected directions. Do not stand directly underneath the limb being cut,  6.5.4.
- ▶ Watch for falling limbs. As soon as the limbed branch starts to fall, step aside and keep a sufficient distance away,  6.5.4.
- ▶ To allow branches to free fall, always cut the lower branches first.

Cross-cut



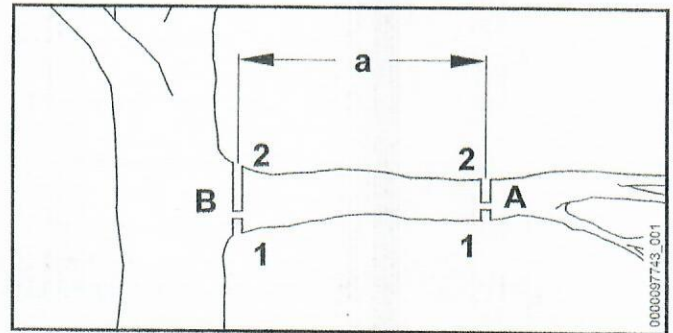
- Position the hook (1) against the branch.
- Cut the branch at full throttle with the bottom side of the guide bar, keeping the tip of the bar free of other limbs, the ground and any leafy materials.

Relieving Cut



- If the limb is under tension: Make a relieving cut (1) on the underside and then perform the cross-cut (2) from the tension side.

Cutting thick branches



- Shorten the branch by performing a relieving cut (1) and then a cross-cut (2) at cutting point (A) at a distance $a = 8$ in. (20 cm) from where the flush-cut will be made (B).
- Carry out the flush-cut, starting with a relieving cut (1) and finishing with a cross-cut (2) at cutting point (B).

19 After Finishing Work

19.1 Preparing for Transportation or Storage

⚠ WARNING

To reduce the risk of personal injury from unintended activation or unauthorized use, switch off the pole pruner and remove the battery before transporting the pole pruner or putting it down. To reduce the risk of injuries from the sharp cutters on the chain, always cover the guide bar with the chain scabbard before transporting or storing the pole pruner.

To prepare the pole pruner for transportation or storage:

- Switch off the pole pruner, 16.2.
- Remove the battery, 15.2.
- For a pole pruner with adjustable shaft, adjust the shaft to its shortest length, 18.1
- Loosen the chain.