Chainsaw Assembly and Owner's Manual

WARNING! Read this manual before operating your Cheetah trimmer.

IMPORTANT NOTES

Please read the following

Thank you for purchasing your Cheetah chainsaw. Cheetah prides itself in the quality and performance of all its products. This instruction manual will aid in the assembly, safe operation and maintenance of your chainsaw.

Please read the following warnings to ensure safety and the long life of your product.

A chainsaw is a dangerous product in the hands of an untrained, or careless operator.

Cheetah strongly recommends that the operator undertakes suitable training in the safe use of chain saws prior to using this product.

SAFETY MARKINGS AND SYMBOLS

Warning!

Read the directions for use before operating the machine.

Wear safety goggles, a helmet and ear protection.

Wear sturdy, nonslip footwear.

Wear safety gloves.

Protect the machine from rain and damp.

Be careful of objects being thrown out!

Keep all bystanders at least 20M from machine when operating

Always switch off the machine and pull off the spark plug boot

Read the directions before carrying out any maintenance work.

Caution ! kick-back may occur.

Aways use two hands when operating the chainsaw.

Tool continues to run some seconds after switching off engine.

CAUTION: Hot machine parts. Keep your distance.

Requires Chain Bar Oil

Use Caution tape where possible to maintain a safe working environment

This instruction manual has been written in accordance with standard

EN ISO 11681:2011 Chapter 5 - Information for use.

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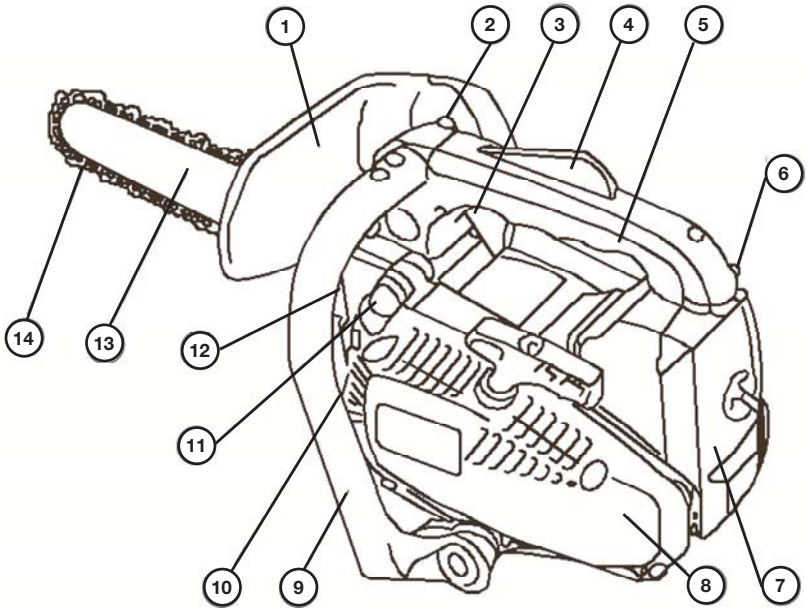
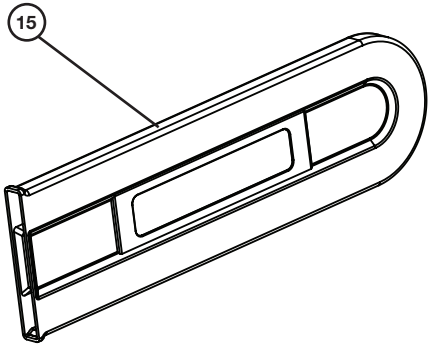
Do not operate the Cheetah chainsaw before reading all safety, assembly & operating sections of the manual.

MACHINE LAYOUT & SUPPLIED ITEMS





SAFETY FEATURES

Chainsaw Safety Features

Do not operate the Cheetah Chainsaw before reading the entire chainsaw Instruction manual.

The operator must check that all safety features are fitted correctly & in good working condition before operating the chainsaw.

Chain brake

- Designed to stop the chain in the event of kick-back and must be used when starting the product & during transportation.

Reduced Kick-back Chain & Guide Bar

- These bar & chain combinations have been designed to ease chain cutter movement over the guide bar nose & reduce the amount of contact area on the front nose, thereby reducing the kickback reaction. The best method to reduce kickback is through the correct use of the chainsaw by the user.

Chain Catcher

- This is a device to intercept a broken or derailed chain & deflect it under the bar cover housing. The chain catcher should be replaced once damaged, usually after 1 use of the safety mechanism.

Anti Vibration

- The anti-vibration system is designed to absorb vibration created by the engine & chain operation. It is made up of several springs & rubber mounts. Excessive vibration can cause nerve & circulation damage. Cheetah recommend the additional use of anti-vibration gloves to further increase the reduction of vibration.

Handle Guards

- Designed to protect both hands. The chain brake guard protects the left hand & also serves to activate the chain brake. The rear handle guard protects the right hand while cutting but also in the event a chain breaks or derails.

Ignition Switch

- Located within reach of the rear hand, it is designed to stop the product quickly in the case of an emergency.

Presence Control Trigger

- fitted to the top of the rear handle, this prevents the accidental engagement of the throttle. The throttle can only be activated after the presence control trigger is activated.

Chain & Bar Cover

- When the product is not in use, during storage & transportation the bar cover MUST be fitted to the product.

*** Refer to pages (4) & (5) for location of the safety features.**

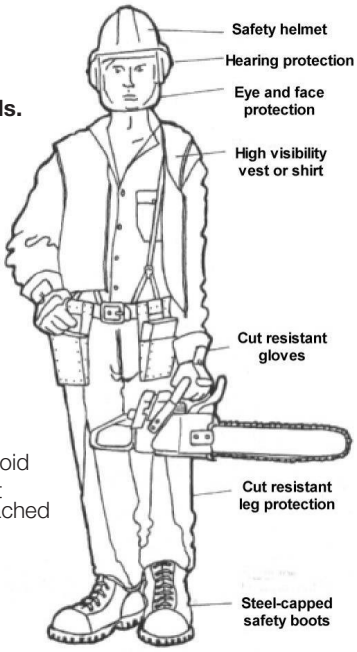
SAFETY FEATURES

Personal Protective Equipment

All personal protective equipment (PPE) must conform to the relevant AS/NZS standards.

The operator must check that all personal protective equipment (PPE) is fitted correctly, in safe working order & conforms with the relevant AS/NZS standard.

All mandatory personal protective equipment must be worn at all times while operating the equipment, Cheetah recommends using all the personal protective equipment shown below.



Safety Helmet (AS/NZS 1801)

- Must be replaced if cracked, damaged or past expiry date. Avoid damage caused by attaching stickers, storing in direct sunlight and contact with solvents. A Legionnaire-style flap can be attached to protect the back of the neck.
- Safety helmet must always be worn during operation.

Hearing Protection (AS/NZS 1270)

- Either ear plugs or ear muffs. Be aware the ear plugs and some cheap ear muffs may not provide sufficient protection when using larger saws. Check with your dealer for correct level of protection required for your saw.
- Hearing protection must always be worn during operation of the chainsaw.

Eye & Face Protection (AS/NZS 1336 & 1337)

- Preferably non-scratch and non-fogging. Can be either clear / mesh visor & glasses to be worn underneath face shield.
- Eye protection must always be worn during operation & maintenance of the chainsaw.

High Visibility Vest / Shirt (AS/NZS 4602)

- Some vests are also available with cut resistant fabric for added protection.
- Recommended that high visibility be worn during operation & transportation of chainsaw.

Cut Resistant Gloves (N/A)

- Should be a snug fit and of a hard wearing, protective fabric. Some gloves have a gel which helps reduce vibration.
- Recommended that gloves be worn during operation & maintenance of the chainsaw.

Cut Resistant Leg Protection (AS/NZS 4453)

- The cut resistant layers cannot be repaired and the garment should be replaced if it has been cut. The effectiveness of the cut resistant layers maybe reduced overtime by the absorption of oil when used regularly.
- Although not mandatory Cheetah highly recommends the use of "chaps" cut resistant leg protection during operation of the chainsaw.

Steel Capped Safety Boots (AS/NZS 2210)

- Should be non-slip & lace-up for better ankle support. Some safety boots have cut resistant material within the boot.
- Safety boots must be worn during operation, maintenance & transportation of the chainsaw.

SAFETY FEATURES

Safety Instructions

Do not operate the Cheetah chainsaw before reading all safety, assembly & operating sections of the manual.

Operator Safety

- Always wear the necessary safety equipment, as listed on page (7), in Personal Protective Equipment.
- Do not wear loose clothing, jewellery, short pants, sandals or go barefoot. Secure hair so it is above shoulder length.
- Do not operate the unit if you are tired, ill or under the influence of alcohol, drugs or medication.
- Ensure you have a safe & professional attitude towards the chainsaw operation & the job at hand.
- Ensure adequate hazard & risk management has be performed, as listed on page (10), in Hazard - Risk Management.
- If unsure of the correct chainsaw operation, do **NOT** operate, seek training on safe operation of the chainsaw by a trained professional or an accredited training provider.

Unit Safety

- Inspect the entire unit and cutting head before each use to ensure it is in safe working condition.
- Inspect chain & bar tension before operating the unit.
- Ensure that all guards are properly attached & in safe working condition.
- Do not use the unit if it is running erratically. Have it serviced promptly.
- Keep handles free of oil and fuel.
- Learn how to stop the engine quickly in an emergency.
- Stop the engine when the unit is unattended, even for a moment.
- Never allow children or unauthorised persons to operate the unit.
- Do not leave the unit on dry cuttings when it is Hot, as a risk of fire is present.
- Do not cover muffler or restrict airflow to muffler.

Fuel Safety

- Use a container approved for fuel and a funnel to avoid spillage.
- Mix and pour fuel outdoors where there are no sparks or flames.
- Frequently check for fuel leaks and clean carbon deposits from the muffler at exhaust outlet.
- Do not smoke or allow smoking near fuel, or near the unit, or while using the unit.
- Add fuel before starting the unit.
- Never remove the fuel tank cap while the engine is running or hot, allow to cool before refuelling.
- Never allow the unit to run out of fuel before refuelling as it may damage the engine.
- Move at least three metres away from the fuelling site before starting the engine.
- Wipe all traces of spilt fuel on the unit before starting the engine.
- Change your clothes before starting the unit if fuel has been spilt on them

SAFETY FEATURES

Safety Instructions

Starting Safety

- Start the engine with feet well away from the chain & bar, using the correct starting techniques as listed on page (18)
- Always perform pre-start checks before attempting to start the chainsaw.
- Ensure chain brake is engaged before attempting to start the chainsaw.
- Ensure that the area of starting and operation is clear of sticks, stones, glass, nails, wire, string and debris, which could be thrown by the cutting head.

Cutting Safety

- Use only in good visibility and favourable weather conditions.
- Keep children, animals and bystanders outside the 20 metre hazard zone. Stop the engine immediately if approached.
- Always use correct cutting techniques, as listed on page (20), Cutting Techniques.
- Reduce kick-back by keeping clear of front nose quadrant while performing cuts.
- Keep the engine to the right of your body, holding the unit with both hands to avoid injury during kick-back.
- Keep a firm footing and balance. Do not over reach.
- Keep the chain & bar below shoulder level and do not raise the engine above your waist. The chain & bar can come dangerously close to your body.
- Never cut above your shoulders.
- Keep your body away from the cutting head and muffler when the unit is running.
- Do not strike objects that may cause harm or damage to the unit.

Maintenance Safety

- Stop the engine and disconnect the spark plug before clearing blockages, checking or working on the unit.
- Stop the engine, disconnect the spark plug and inspect the unit if it begins to vibrate abnormally or if it strikes a foreign object.
- Stop the engine, disconnect the spark plug and inspect the unit before tensioning the chain & bar.
- Use only genuine Cheetah chain & bar or recommended Oregon chain & bar.
- Use only genuine Cheetah replacement parts.
- Ensure chain & bar are correctly sharpened & tensioned to reduce the chances of kick-back.

Transporting and Storage

- Always place bar cover over chain & bar before handling & transportation.
- Use correct carrying method with the engine stopped, the muffler away from your body.
- Allow the engine to cool, empty the fuel tank and secure the unit before storing or transporting in a vehicle.
- Empty the fuel tank after each use and before storing the unit.
- Store the unit and fuel well away from sparks or open flames, from water heaters, electric motors, switches or furnaces, etc.
- Store the unit out of reach of children and unauthorised persons.
- Secure the chainsaw adequately to ensuring it can't move during transportation.

SAFETY FEATURES

Risk Management

Risk Management

- Operating a chainsaw brings risk with it that the operator must be aware of, in order to minimize the possibility of accidents or injury. It is vital that you carry out a risk assessment before each job you intend on using a chainsaw.
- Risk management is a process of identifying hazards in the intended work environment & taking steps to eliminate or minimise the hazards to a safe, manageable level.
- There are four basic steps to risk assessment:
  - Step 1. Identify Hazards
  - Step 2. Assess Risk
  - Step 3. Control Risk
  - Step 4. Check Risk Controls

Basic Risk Assessment template

Risk Assessment		
Step 1	Identify Hazards	What is the hazard
Step 2	Assess Risks	What could happen & why
Step 3	Control Risks	How to minimise risk - implement
Step 4	Check Risk Controls	Assess control measures

Develop a Professional Attitude

Develop a Professional Attitude

It is essential the chainsaw operator has developed a safe & professional attitude when operating, transporting & maintaining the chainsaw. To apply a safe & professional attitude towards all aspects of chainsaw use, the following should be followed:

- Forward planning & risk management
- Always putting safety first
- Work at a smooth steady pace
- Concentrate at all times
- Have a break to reduce fatigue
- Use sound, low risk techniques
- Make sure chainsaw is always well maintained

SAFETY FEATURES

Hazards

The following safety precautions must be strictly observed to avoid the risk of damage or personal injury.

Prior to using the chainsaw, clear the operating area of objects which may be thrown up by the cutting mechanism.

Do not start or operate the unit inside a closed room or building. Breathing exhaust fumes can kill.

Be careful when operating the unit on slippery ground or overgrown terrain. Be attentive for concealed hazards, such as ditches, tree stumps and roots.

Maintain a solid footing and balance while operating the unit. Cut only on level ground. Never cut above shoulder height.

Do not touch the cutting area while in motion or while engine is running. When handling the chain for assembly or maintenance tasks, always wear protective gloves.

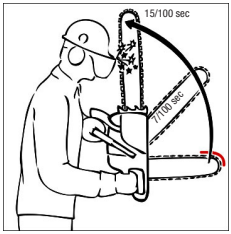
Bystanders must be at least 20 metres away during operation of the unit. Switch the unit off immediately if approached.

Be careful when turning or swinging the unit. Look before turning or changing direction.

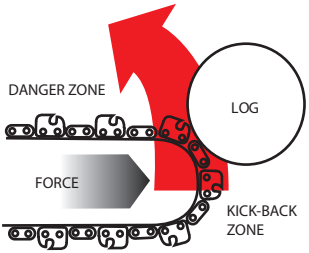
Do not cut metals, glass, ceramics, plastics, ropes, wire, cables, string, etc as it may damage or kick-back may occur. Only use on wood materials.

Beware of kick-back & understand prevention techniques to reduce risk of injury if kick-back takes place.

Petrol is flammable. Avoid smoking, exposing to a naked flame or spark near the fuel. Make sure to stop the engine and allow to cool before refuelling the unit.



The kick-back happens so quickly that you will not be able to react in time to avoid serious injury, even if the chain brake works !



ASSEMBLY PROCEDURES

Fitting the Bar & Chain

Chain and bar has very sharp edge's. Use cut resistant gloves when ever handling the chain and bar.

Always disconnect the spark plug before any maintenance is performed on the chainsaw.

Fitting the Bar and Chain

1. Disconnect spark plug to ensure the unit can not start.
2. Disengage chain brake - pull chain brake guard towards the rear handle.
3. Unscrew & remove the two bar tensioner cover nuts.
4. Fit the bar over the two studs, then push the bar back towards the drive sprocket.
5. Fit the chain to the bar.
   - Ensure chain cutting edge is in the correct direction.
   - Begin by placing chain over drive sprocket, ensuring drive link is correctly engaged onto drive sprocket teeth.
   - Run chain along top of bar, engaging drive links into guide bar rails over the bar nose
   - Once the chain is correctly engaged pull the bar forward ensuring all drive links engage into the bar guide rails.
6. Adjust the tensioning screw to align with the drive rod with the drive holes on the bar.
7. Fit tensioner cover, ensuring studs & drive rods align correctly. Push cover firmly against unit.
8. Screw both bar tensioner cover nuts by hand while holding the tensioner cover firmly against unit.
9. Adjust the tension of the chain - turn clockwise until the slack in the chain is taken up.
10. Screw both bar tensioner cover nuts using the tool provided.
11. Check to ensure the bar & chain are fitted correctly.
    - Check the chain cutting edge is facing the correct way.
    - Check the chain is correctly tensioned, adjust if needed.

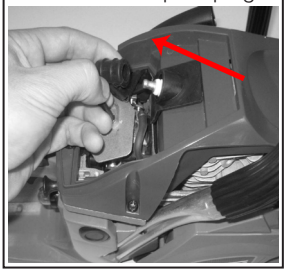
      (refer to page 14 for bar tensioning techniques)
    - Check bar tensioner nuts are correctly fastened.

*** Use Page (13) in conjunction with steps shown above.**

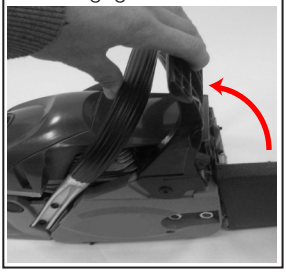
ASSEMBLY PROCEDURES

Fitting the Bar & Chain

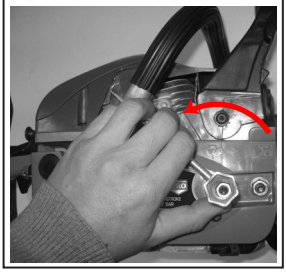
1. Disconnect spark plug



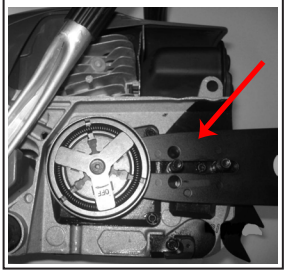
2. Disengage chain brake



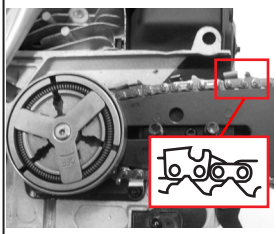
3. Remove tensioner nuts



4. Fit bar to unit



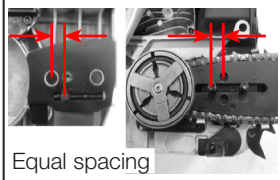
5. Fit chain to bar & -



- sprocket Chain direction

6. Adjust Tension rod

- rod & bar hole to align

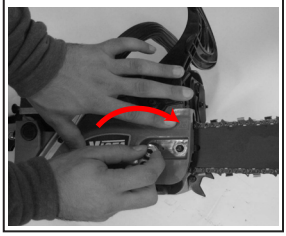


Equal spacing

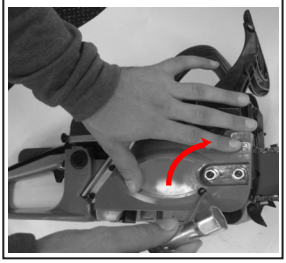
to ensure correct fitment

7.Fit cover & press firmly

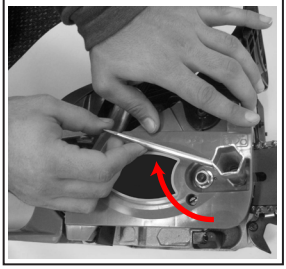
8.Screw on nuts clockwise



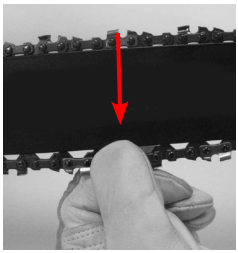
9.Adjust tension clockwise



10.Tighten nuts clockwise



11.Perform double checks



Always place bar cover over bar & chain when unit is not is use.

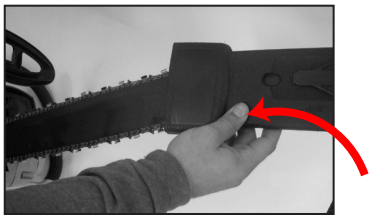
Chain and bar has very sharp edge's. Use cut resistant gloves when ever handling the chain and bar.

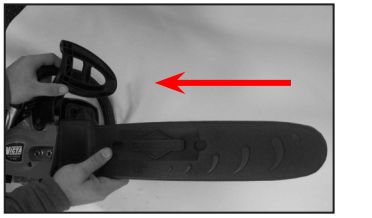
ASSEMBLY PROCEDURES

Fitting The Bar Cover

Fitting the Bar Cover

- Start at a slight angle from the front of the bar and chain.
- Slowly slide the bar cover over the front of the bar and chain.
- You may feel some resistants from the two retainer tabs, these are meant to be tight to ensure minimal rattling of bar cover during transportation.
- Once the first retainer tab is over the chain you can turn the bar cover parallel to the bar a begin to slide the cover over the bar and chain.
- The second retainer tab is not as tight as the first so it should slide over the chain with minimal force.
- Now push the bar cover firmly against the front of the engine. Avoid the spiked bumper which is on the inner side of bar and may cause injury if touched.





Avoid the spiked bumper on the inner side of the bar, it is sharp and may cause injury.

Setting Chain Tension

Setting Chain Tension

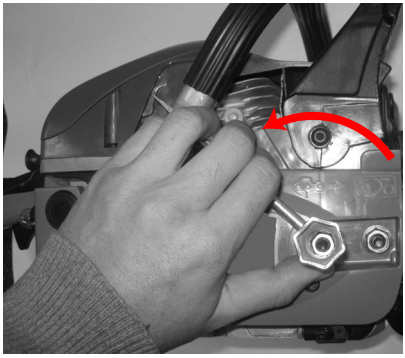
1. Loosen both tensioner housing nuts using the tool provided.
   - Maximum 1/4 turn ensuring housing is still firm against bar & chain.
2. Adjust tension of the bar & chain.
   - Turn clockwise to increase tension while lifting front nose of bar upward.
3. Check the tension of the chain & bar.
   - Firmly pull chain away from bar (5-7mm using 0.9Kg of force) half way along bar.
   - Drive link should not lift out of bar guide rails.
   - Drive link should be approximately 1/2 exposed from bar guide rail for correct tension.
4. Tighten both tensioner housing nuts using tool provided.
   - Nuts to be firmly tightened to ensure they do not rattle loose during operation.

*** Use Page (15) in conjunction with steps shown above.**

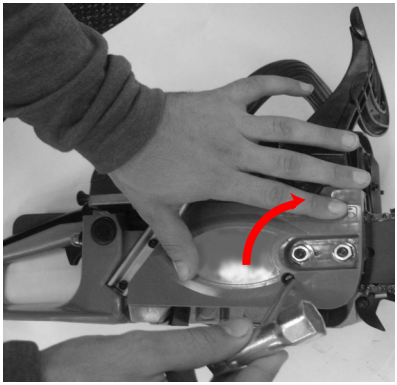
ASSEMBLY PROCEDURES

Setting Chain Tension

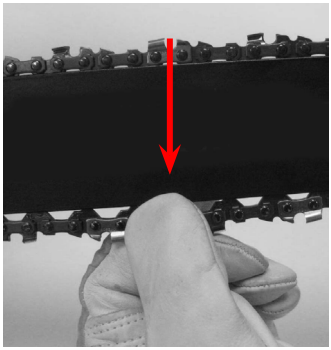
1. Loosen nuts - max 1/4 turn anti-clockwise



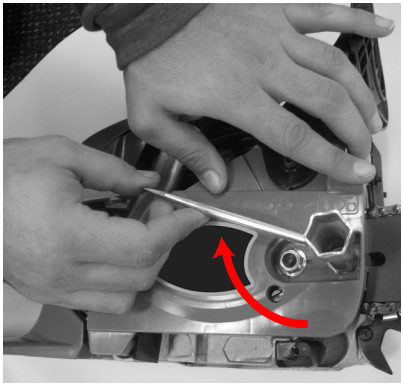
2. Adjust tension - clockwise



3. Check chain tension



4. Tighten nuts - clockwise



Chain and bar has very sharp edge's. Use cut resistant gloves when ever handling the chain and bar.

Always disconnect the spark plug before any maintenance is performed on the chainsaw.

A new chain will need to be tensioned more frequently then a well used chain. Consistent checks will need to be performed on tension to ensure adequate tension is retained.

OPERATIONAL INSTRUCTIONS

Before Starting Machine

Check the position & operation of controls to ensure you are comfortable before you start using the machine. Triggers, starter cord and grip position should provide smooth operation, balance and comfort before starting the machine. Check that all screws are securely fastened and also check all the safety devices.

Always use correct cutting techniques when using the unit.

Check the machine for the following before each use:

- That there are no leaks in the fuel and lubrication systems.
- That the cutting unit and all safety devices are in perfect condition
- That all screws are securely fastened
- The unit is clean, free from oil and grease.

Fuel and Oil

Recommended fuels

- Use only a mixture of normal unleaded petrol and 2-stroke engine oil. Mix the fuel mixture as indicated on the fuel mixing table on page (15)
- Start the machine at least 3 metres away from the refuelling site to avoid the possible risk of fire.
- Do not smoke whilst refuelling or working with the machine.
- Do not use the chainsaw near inflammable liquids or gases. This could result in an explosion and/or fire.
- Pour the correct quantities of petrol and 2-stroke oil into a container. Then shake the container well before adding the fuel to the unit.

NOTE: Product may need to be reprimed if it has run out of fuel.

- **Cheetah recommends the use of Cheetah Formula V 2-stroke oil at 50:1 fuel to oil ratio only.**
- **The use of other oils and or ratios will affect the engine lubrication, which may cause engine damage and void engine manufacturer's warranty.**
- **Do not use a fuel mixture which has been kept for longer than 90 days, it may damage the unit.**
- **Only use containers designed and approved for the purpose to transport and store fuel.**

OPERATIONAL INSTRUCTIONS

Fuel and Oil

Petrol (unleaded)	2-stroke oil
5 litre	100 ml (Only for Cheetah Formula V 2-stroke Oil)
Mixing procedure: 50 parts unleaded petrol to 1 part 2-stroke oil	

USE Clean fresh "Regular Unleaded Fuel"
Fuel with up to 10% ethanol can be used

Chain Lubrication

Use only a high quality chain lubrication oil.

Every time you use or refuel the chainsaw check the oil levels & add oil accordingly.

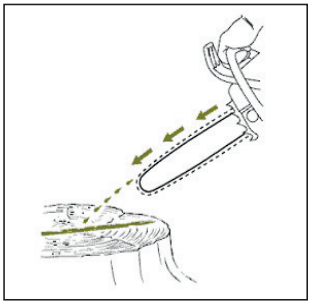
Checking the lubrication before and during cutting

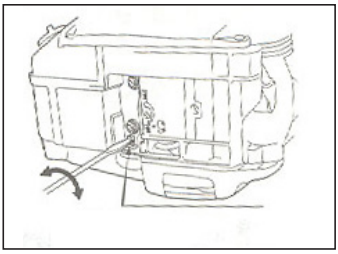
Refer to page 18 Starting Instructions for starting instructions before checking the bar & chain lubrication flow.

- Position the bar nose over a light background (tree stump) and run the engine at ..... half throttle.

- Make sure it throws out an increasing trace of oil as shown in the picture below.

Be careful not to allow the tip of the bar to contact any surface as kick back may occur.





NOTE: Oil Tank capacity is 260mL

Never operate the chainsaw without ensuring adequate lubrication is available. Operating with no lubrication could cause catastrophic failure of the unit.

OPERATIONAL INSTRUCTIONS

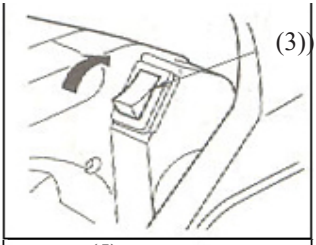
Quick Start Guide

Review the entire manual before using the chainsaw.

Ensuring all safety & operational instructions have been fully understood.

The following is a quick start guide ONLY. Additional information is needed for safe use of the chainsaw.

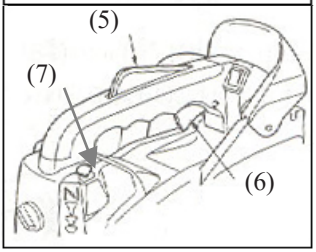
STARTING ENGINE



1) Fill fuel and chain oil tanks respectively,and tighten the caps securely.

2) Put the switch to “I” position.

3) Pull out the choke knob to the second-stage position. The choke will close and the throttle lever will then be set

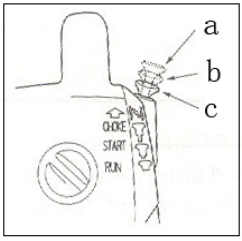


NOTE:

- When restarting immediately after stopping the engine, leave the chock knob at the first-stage position.
- Once the chock knob has been pulled out,it will not return to the operating position even if you press down on it with your finger. When you wish to return the choke to the operating position, pull out the throttle lever instead.

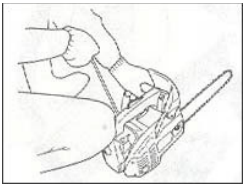
4) While holding the saw unit securely on the ground, pull he starter rope vigorously in the starting position.

WARNING: Do not start the engine while hanging the chain saw with a hand. The saw chain may touch your body. It’s very dangerous.



5) When engine has ignited first, push in the choke knob to first-stage position and pull the starter again to start the engine.

6) Allow the engine to warm up with the throttle lever pulled slightly. At once pulling throttle level out, the choke knob is automatically returned to the operating position.



OPERATIONAL INSTRUCTIONS

Adjusting Carburetor

The carburetor on your unit has been factory adjusted, but may require fine turning due to change in operating conditions.

Before adjusting the carburetor, make sure that provided air/fuel filters are clean and fresh, and the fuel properly mixed

When adjusting, take the following steps.

1. Stop engine and screw in both H and L needles until they stop. Never force .Then set them back the initial number of turns as show below.

   H needle: 5/4+-1/4

   L needle: 5/4+-1/4

2. Start engine and allow it to warm up at half-throttle.

3. Turn L needle slowly clockwise to find a position where Idling speed is maximum, then set the needle back a quarter(1/4) turn counterclockwise.

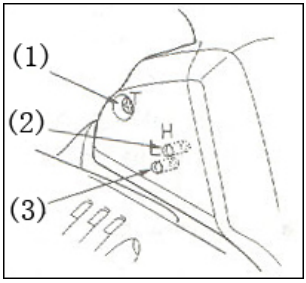
4. Turn idle adjusting screw (T) counterclockwise so that saw chain does not turn. If idling speed is too slow, turn the screw clockwise.

5. Make a test cut and adjust the H needle for best cutting power, not for maximum speed.

   1) L needle

   2) H needle

   3) Idle adjusting screw



Brake

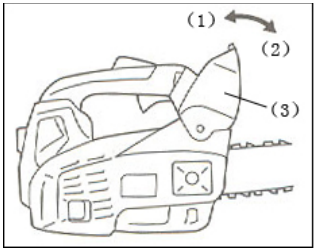
Pull the brake lever to the left handle direction to release the brake until you hear a sound.

Otherwise,push forward will brake the machine.

1) Brake Handle

2) Release

3) Brake



If the engine brakes in high speed, the clutch will be hot,and it will cause damage to machine.

When it brakes during operation, release the throttle lever immediately to allow the engine to idle.

Cheetah recommends only a trained service technician should attempt to adjust the carburettor

OPERATIONAL INSTRUCTIONS

Stopping Instructions

Stopping the Unit

1. Release the throttle lever to allow the engine to idle for a approximately 30 seconds.
2. To 'STOP' the chainsaw flick the toggle switch down to the 'STOP' position as shown below.
3. In the case of an emergency go straight to instruction No.2 - flick the toggle switch down immediately.

If unit is running erratically or vibrating excessively - stop unit immediately.

Learn how to stop the engine quickly in an emergency.

Stop the engine when the unit is unattended, even for a moment.

In case of an emergency flick the toggle switch immediately to the 'STOP' position.

Cutting Techniques

Cutting Techniques Overview

Generally only the upper and lower edges of the guide bar and the lower quadrant of the guide bar nose should be used when cutting. Contact with the tip of the bar should be avoided, this will lessen the chance of kick-back.

The chainsaw will perform best when not placed under undue pressure, with the engine operating at maximum power output, not necessarily maximum rpm.

Control of the chainsaw must be maintained by having a firm two-handed grip, keeping the engine close to the body, keeping a secure footing and a well balanced stance.

The chainsaw should never be operated above shoulder height.

Always apply the chain brake when not cutting. If not in use the chain brake and bar cover should be fitted.

All work must be carried out in a calm, safe manner with the work area assessed to be safe.

Cutting techniques can be broken up into three basic techniques (1) limbing, (2) ripping, (3) felling. The Cheetah chainsaw is only designed for the use in (2) ripping, (3) limbing. Ensure the chainsaw is only used for these purposes, failure to do so will void the warranty and could cause harm to yourself or others.

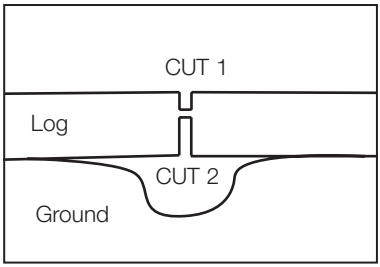
Cutting Techniques

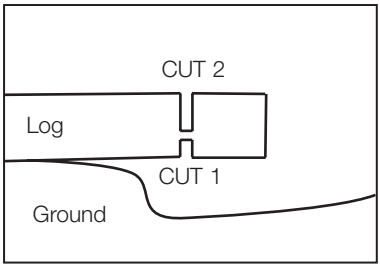
Cutting Under Tension Techniques

Always make cuts in the correct sequence. Otherwise the chainsaw may be pinched and a kick back may occur.

1. First cut at the compression side, approximately 1/3 way through or until compression is released.

2. Second cut is on the tension side, ensuring the cut is in line with the first cut or on the side away from where the material will fall or move. (Refer to the diagrams below)





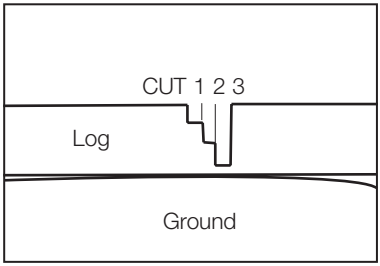
Ground Cutting Techniques

Always make cuts in the correct sequence. Otherwise the chainsaw may be pinched and a kick back may occur.

1. First cut is a shallow cut to create clearance for the second and third cuts to follow.

2. Second cut is approximately twice the depth of the first cut or until or just before the clearance is reduced by compression of the log.

3. Cuts are to continue progressively along the log until you have reached the bottom of the log, taking care not to allow the space to be reduced too much will result in pinching of the chainsaw. Do not make contact with the earth as it will cause significant damage to the chain, bar and sprocket.



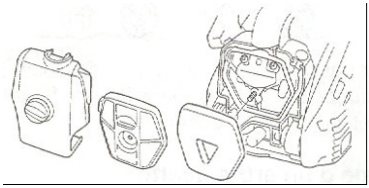
Beware of log rolling, falling or moving unpredictably. Ensure the log is secured &/or you have a clear working area in case a quick escape is needed.

If you are unsure of how to safely use the chainsaw it is recommended you seek professional training.

MAINTENANCE & CARE

Air Filter

Cleaning the Air Filter



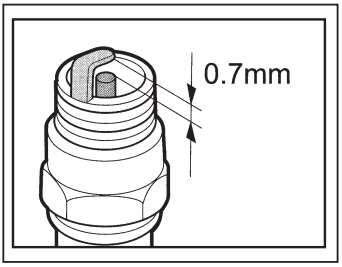
1. Remove air filter cover to locate the air filter.
   - Remove air filter from unit.
2. To clean the air filter lightly tap the edge of the air filter against a hard surface, if a more vigorous clean is needed then:
   - Separate the two halves using the screwdriver provided to open the two halves as shown below.
   - Clean both halves with petrol and a brush.
   - Allow to dry, then reassemble the two halves by pressing them together.
3. If damaged replace with air filter.

Spark Plug

Your chainsaw should be fitted with a CHAMPION spark plug OR equivalent. (Champion - RCJ7Y)

Spark plug gap = (0.7 mm).

Tighten the spark plug with a torque of 12-15 Nm.



Removing / Replacing the Spark Plug

1. Remove air filter cover
2. Unplug spark plug boot from spark plug
3. Unscrew spark plug using the spanner provided. Turn anti-clockwise
4. Replace with a new spark plug turning clockwise - torque to 12-15 Nm.

Sharpening Chain

Sharpening Essentials

It is essential that the chainsaw chain is kept sharp. A correctly sharpened chain will cut much more effectively with minimal force required.

Never use a dull or damaged chainsaw chain as this may lead to increased physical injuries, increased vibration levels, unsatisfactory cutting results and increased wear to the unit.

Sharpen frequently rather than a lot at once. The aim of sharpening the chain is to hone the edge rather then remove excessive amounts of material to create a new cutting edge.

Before sharpening the chain make sure it is well secured and there is no chance of the unit starting - remove the shark plug before performing any maintenance on the chainsaw.

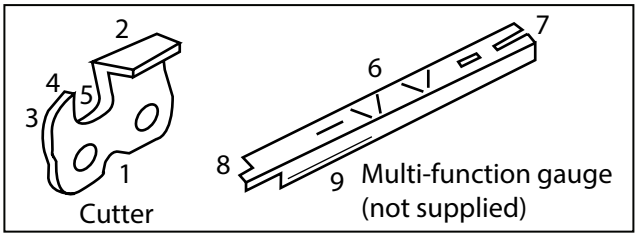
It is important that the correct file size and file guide is used to sharpen the chain, failure to do so may result in increased physical injuries, increased vibration levels, unsatisfactory cutting results and increased wear to the unit.

*** Chain 0.325"x 18" use a 3/16" round file to sharpen the chain.**

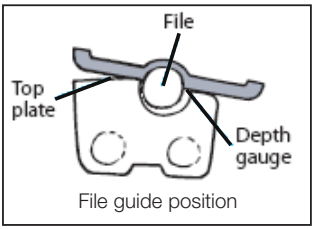
Chain selection

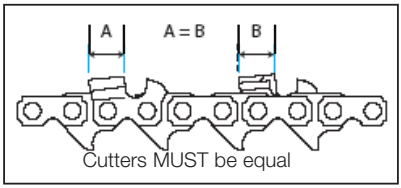
- BPX is a Micro Chisel cutter, more forgiving in 'rough' cutting conditions, ideal for firewood and general purpose usage.

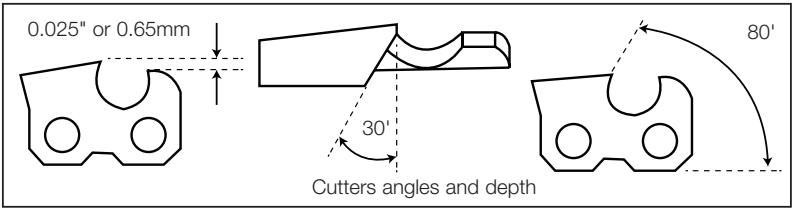
- LPX is a Full Chisel cutter, considerably faster cutting, aimed at the professional user.



1. Basic tooth body
2. Top plate
3. Depth gauge
4. Side plate cutting edge
5. Top plate cutting edge
6. Filing angles
7. Depth gauge setting gauge
8. Groove cleaner, scle to measure groove depth
9. Side plate angles







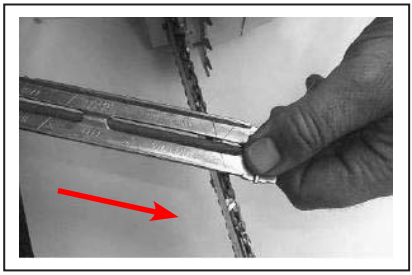
Sharpening Chain

Sharpening the Chain

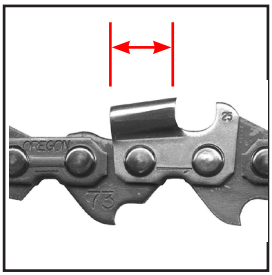
1. Secure chainsaw with the front nose clamped in a vice, either a bench vice or a stump vice. (ensure the spark plug cap has been removed before beginning maintenance)
2. Before beginning the sharpening of the cutting edge find the shortest top length of cutter, all other top lengths will need to match this length.
3. File the shortest cutter until all damage and worn edges are removed. (Always sharpen with a full forward stroke, holding the file clear on the return stroke as the file will only cut on the forward stroke)
4. Continue filing all cutters on the same side to match the first cutter lengths and angles. Once the first side is complete repeat filing on opposing side, while ensuring the same length and angles are maintained across all cutters.
5. After all cutters have been sharpened adjust the depth gauge for each cutter accordingly.

1. Secure chainsaw in a vice

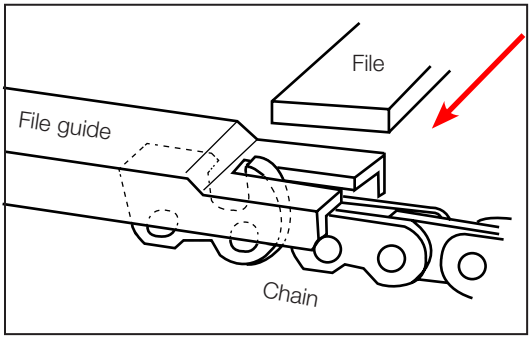
3. & 4. File cutter using gauge to ensure correct angle



2. Find shortest top length of cutter.



5. File depth gauge



always use cut resistant gloves when doing maintenance on the chainsaw.

Bar Maintenance

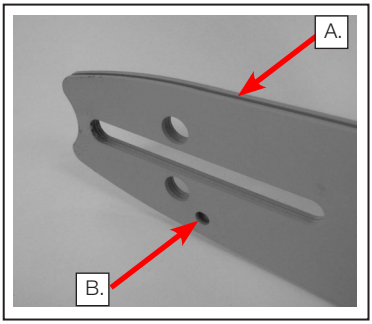
Bar Maintenance Essentials

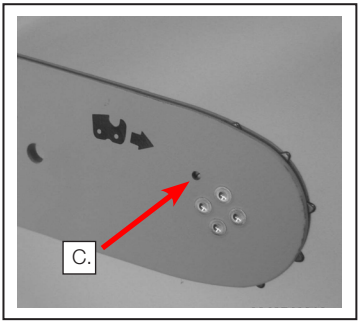
Turn the bar over each time the chain is replaced, this will ensure even wear on both sides of the bar.

Regularly clean the bar guide groove, oil inlet and grease port.

The groove depth must not be less then 6mm of a 16" 3/8" chain - minimum 1mm clearance from the drive link to the guide rail.

Always remove burred edges with a flat file working from the outside in.





(A) Guide bar groove

(B) Oil inlet port

(C) Grease port

Bar Maintenance Guide

1. Remove bar from chainsaw, ensuring spark plug cap is removed before commencing maintenance.
2. Secure bar in a vice.
3. Clean the guide rail groove of the bar ensure you do not damage the guide rails in the process.
4. Clean the oil inlet port and the grease hole.
5. Remove all burrs from the guide rails, working from the outside in.
6. Clean the entire bar using degreaser and a scrubbing brush removing all grease, grime, metal shaving, etc.
7. Check over the bar to ensure all burrs have been removed, the bar is free from grease, grime and metal shaving and both oil and grease holes are clear.
8. Once the chainsaw is assemblied, check the chain and bar are receiving adequate oil.

Always use cut resistant gloves when performing maintenance on the chainsaw.

Sprocket Replacement

Drive Sprocket Essentials

Drive sprockets are exposed to extreme heat and friction which causes extra wear to the sprocket. A worn drive sprocket will damage and weaken the chain beyond repair, which in turn causes loss of power and greater guide bar wear.

Cheetah recommends changing the drive sprocket every time the chain is replaced.

To help avoid drive sprocket problems;

* Ensure replacement sprocket is the correct pitch.
* Keep chain correctly sharpened and tensioned.
* Ensure bearings are adequately lubricated to reduce friction.
* Keep guide bar rails well maintained.
* Ensure a good oil flow over bar and chain.
* Never fit a new chain to an old sprocket, whenever a new chain is fitted a new sprocket should also be fitted.

Replacing the Sprocket

1. Release chain brake to allow clutch to run free from chain brake clamp - ensure spark plug cap is removed before commencing maintenance.
2. Remove bar tension housing - unscrew tension ratchet anti-clockwise.
3. Remove chain and bar from unit.
4. Remove clutch - using a impact drill and specialised 3 pronge socket piece - clockwise.
5. Replace sprocket - ensuring the correct pitch sprocket is used to replace old sprocket. Inspect and replace clutch cup if drive teeth are worn.

Adjusting Chain Tension

Adjust the Chain Tension

1. Loosen tensioner ratchet
   - Maximum 1/2 turn ensuring housing is still firm against bar & chain.
2. Adjust tension of the bar & chain.
   - Rotate adjustment wheel down to increase tension.
3. Check the tension of the chain & bar.
   - Firmly pull chain away from bar (5-7mm using 0.9Kg of force) half way along bar.
   - Drive link should not lift out of bar guide rails.
   - Drive link should be approximately 1/2 exposed from bar guide rail to establish correct tension.
4. Tighten tensioner housing - turn tensioner ratchet clockwise
   - Ratchet to be firmly tightened to ensure it does not rattle loose during operation.

Carburettor Adjustment

Carburettor Essentials

The chainsaw carburettor has been factory adjusted to suit this unit but may require fine tuning due to operating conditions.

Before adjusting the carburettor, make sure the air filter and fuel filters are clean. Also make sure the correct fuel mixture is used. If any of these items need correcting it is recommended to correct these first and check to see if these changes resolve the issue.

The bar and chain must be attached and correctly tensioned before making any changes.

Lubrication Flow Adjustment

Lubrication Flow Essentials

The chainsaw lubrication pump has been factory adjusted to suit this unit but may require fine tuning due to operating conditions.

A high rate of oil flow may reduce wear on the bar, chain and sprocket but it is recommended the flow should not be adjusted unless absolutely necessary.

A reduced rate or no lubrication will cause premature failure of the product which is not covered by the warranty.

All oil holes, ports, bar guide rails should be cleaned and unit checked after cleaning to ensure the adjustment is still needed.

Adjusting the Lubrication Flow

1. Stop the chainsaw and allow the unit to cool.
2. If more lubrication is required turn the adjustment screw anti-clockwise using the small screw driver provided.
   - If less lubrication is required turn the adjustment screw clockwise.
3. Only small (1/4 turn) adjustments should be made each time before testing the chainsaw to check if the adjustment has been sufficient.

Cheetah recommends only a trained service technician should attempt to adjust the lubrication flow of the chainsaw.

MAINTENANCE & CARE

Storage

Storage Essentials

In order to keep the chainsaw in good working order during long storage periods it is essential correct storage procedures are followed.

* Drain and clean the fuel tank in a well ventilated area.
* Run the engine until the carburettor is dry - this will help prevent the carburettor diaphram from sticking.
* Remove the chain, bar and tension cover to clean all these areas well using a brush and degreaser - allow the unit to dry before re-assembly.
* Spray the chain and bar with a corrosion inhibiting oil.
* Clean the air filter as described on page (22).
* Once the unit is thoroughly cleaned using a brush, cloth and degreaser, then spray with corrosion inhibiting oil re-assemble the chainsaw ready for its next use.
* Engage the chain brake.
* Place the bar cover over the chain and bar as shown on page (14).
* Store in a secure location, out of reach of children.

Maintenance Chart

Refer to the following chart for routine maintenance.

Features	Requirements	Before Use	After Use	Refuelling	Monthly	Yearly	Damaged / Worn	As Required
Chainsaw	Visual Inspection	*	*	*			*	
Chainsaw	Clean (outer shell)	*	*					*
Chain & Bar	Tension	*		*				
Chain & Bar	Sharpen	*		*			*	
Chain & Bar	Replace						*	
Chain Brake	Replace						*	
Chain Brake Housing	Clean	*						*
Sprocket	Replace						*	
Air Filter	Clean				*			*
Air Filter	Replace						*	*
Spark Plug	Replace					*	*	
Fuel Tank	Clean			*		*		*
Fuel Filter	Replace					*	*	
Oil Tank	Clean			*		*		*
Oil Filter	Replace					*	*	
Carburettor	Adjustment							*
Lubrication Flow	Adjustment							*
Chain Catch	Replace						*	

TROUBLE SHOOTING

Troubleshooting

Problem	Possible Causes	Remedy
Motor starts, runs well but loses power after several cuts. It will pick up again after a brief rest but the condition worsens rapidly.	> Motor overheating due too lean fuel/oil mixture - not enough oil in the 2-stroke mixture	> Tune motor and/or use correct fuel mixture
	> Pre-ignition from the spark plug due to metal particles on plug	> Replace spark plug
Motor starts and runs well but will continue to idle with throttle in idle position. Speed of motor gradually increases until motor is racing at high rpm.	> Leaking fuel pump diaphram gasket allowing petrol to leak through pump impulse channel into crankcase	> Replace gasket, if the fuel pump is warped, replace it
	> Worn throttle valve and shaft	> Replace throttle valve and shaft
Motor runs well but loses power at certain angles.	> Fuel filter not reaching the extremities of the fuel tank	> Untangle fuel line or replace fuel line
Excessive vibration.	> Anti-vibration mounts broken	>Replace mounts and springs
	> Anti-vibration cushions broken	>Replace cushions
	> Depth gauge on chain is too high	>Re-sharpen to correct depth
	> Chain not fitted correctly	>Re-fit the chain
	> Worn sprocket	>Replace the sprocket
	> Chain pitch and sprocket pitch do not match	>Use only the correctly matched chain and sprocket, replace accordingly
	> Loose clutch or loose flywheel	> Tighten accordingly
Excessive heat.	> Motor overheating due too lean fuel/oil mixture - not enough oil in the 2-stroke mixture	> Tune motor and/or use correct fuel mixture
	> Chain is too tight	> Adjust tension accordingly
	> Oil filter / nozzle blocked	> replace filter and/or nozzle
	> Chain on back to front	> Fit chain to correct orientation
	> Chain not correctly sharpened	> Re-sharpen or replace if over-heating of the chain has taken place
Motor will not start.	> No fuel or old fuel in tank	> Replace and refuel
	> Motor flooded	> Allow to purge - leave chainsaw for 10 minutes
	> Faulty spark plug	> Replace spark plug
	> High tension lead damaged	> Replace lead
	> Carburettor incorrectly adjusted	> Adjust correctly
	> No compression	> Refer to your dealer
	> Incorrect starting procedure used	> Refer to user manual for correct starting procedure
	> Air filter blocked	> Clean or replace air filter
	> Fuel filter blocked	> Replace fuel filter
	> Faulty on / off switch	> Replace switch
Motor starts and misses.	> Carburettor incorrectly adjusted	> Adjust correctly
	> Faulty spark plug	> Replace spark plug
	> High tension lead damaged	> Replace lead
	> Faulty on / off switch	> Replace switch
	> Faulty ignition	> Replace ignition

TROUBLE SHOOTING

Troubleshooting

Problem	Possible Causes	Remedy
Motor starts, will not idle but runs at high rpm.	> L Needle not set correctly	> Adjust correctly (page 31)
Motor starts, idles but will not accelerate to full rpm.	> Chain tension is too tight > Fuel filter clogged > Chain drive links jammed by pinched bar groove > Choke valve not opening > L needle or H needle not set correctly (page 31) > Blocked exhaust port	> Adjust correctly > Replace filter > Replace bar, and chain, if damaged > Replace choke valve and shaft > Adjust correctly (page 31) > Clean muffler or replace
Motor starts, idles and appears to run well but lacks power.	> Chain tension is too tight > Jammed chain > Blocked exhaust port > Dirty air filter > Blocked fuel filter > L needle or H needle not set correctly > Rings and/or cylinder worn > Worn or damaged clutch	> Adjust correctly > Free chain and adjust correctly > Clean muffler or replace > Clean or replace air filter > Replace fuel filter > Adjust correctly > To Test: remove starter assembly, turn motor by hand clockwise and anti-clockwise. Higher compression in anti-clockwise indicates worn rings / cylinder - See authorised service techician > Replace clutch
Motor in idle but chain continues move.	> Motor idle adjustment too high > Clutch drum bearing worn > Clutch springs broken > Clutch pads broken or worn	> Adjust correctly > Replace clutch drum > Replace clutch > Replace clutch
Chain chatters. (high vibration while cutting)	> Depth gauge on chain is too high > Badly worn sprocket > Irregularly sharpened cutter > Badly stretched chain (6mm over 30mm - max) > Chain pitch and sprocket pitch do not match	> Re-sharpen to correct depth > Replace sprocket > Re-sharpen correctly > Replace chain >Use only the correctly matched chain and sprocket, replace accordingly
cutting chain pulls and/or wanders to one side	> Guide bar rails worn unevenly > Guide bar width has worn excessively > Incorrectly set depth gauge > Filed angles of cutter are different > Chain tension to loose	> Resharpen or replace if excessive ware has taken place > Replace bar >Re-sharpen to correct depth >Re-sharpen to correct angles > Adjust tension accordingly

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