

TIMBERWOLF

TW13/75PG

INSTRUCTION MANUAL



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INTRODUCTION

Thank you for choosing this Entec/Timberwolf brushwood chipper. Entec/Timberwolf chippers are designed to give safe and dependable service if operated according to the instructions.

Before using your new chipper, please take time to read this manual which contains IMPORTANT HEALTH AND SAFETY INFORMATION and explains the chipper controls - failure to do so could result in :

- personal injury
- equipment damage
- damage to property
- a member of the general public becoming injured

This manual covers the operation and maintenance of both the Timberwolf TW 13/75PG. All information in this manual is based on the latest product information available at the time.

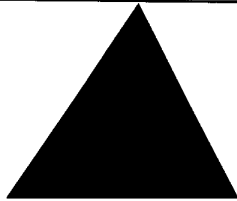
All the information you need to operate the machine safely and effectively is contained within pages 3 to 10. Ensure that all operators are **adequately trained** for operating this machine especially with regard to **safe working practices**.

Entec's policy of constantly improving their products may involve major or minor changes to the chippers or their accessories. Entec Industries reserves the right to make changes at any time without notice and without incurring any obligation.

Due to improvements in design and performance during production, in some cases there may be minor discrepancies between the actual chipper and the text in this manual.

The manual should be considered a permanent part of the machine and should remain with it if the machine is resold.

Always follow safe operating and maintenance practices



CAUTION or WARNING

Be aware of this symbol and where shown carefully follow the instructions

This caution symbol indicates important safety messages in this manual. When you see this symbol be alert to the possibility of injury to yourself or others, and carefully read the message that follows.

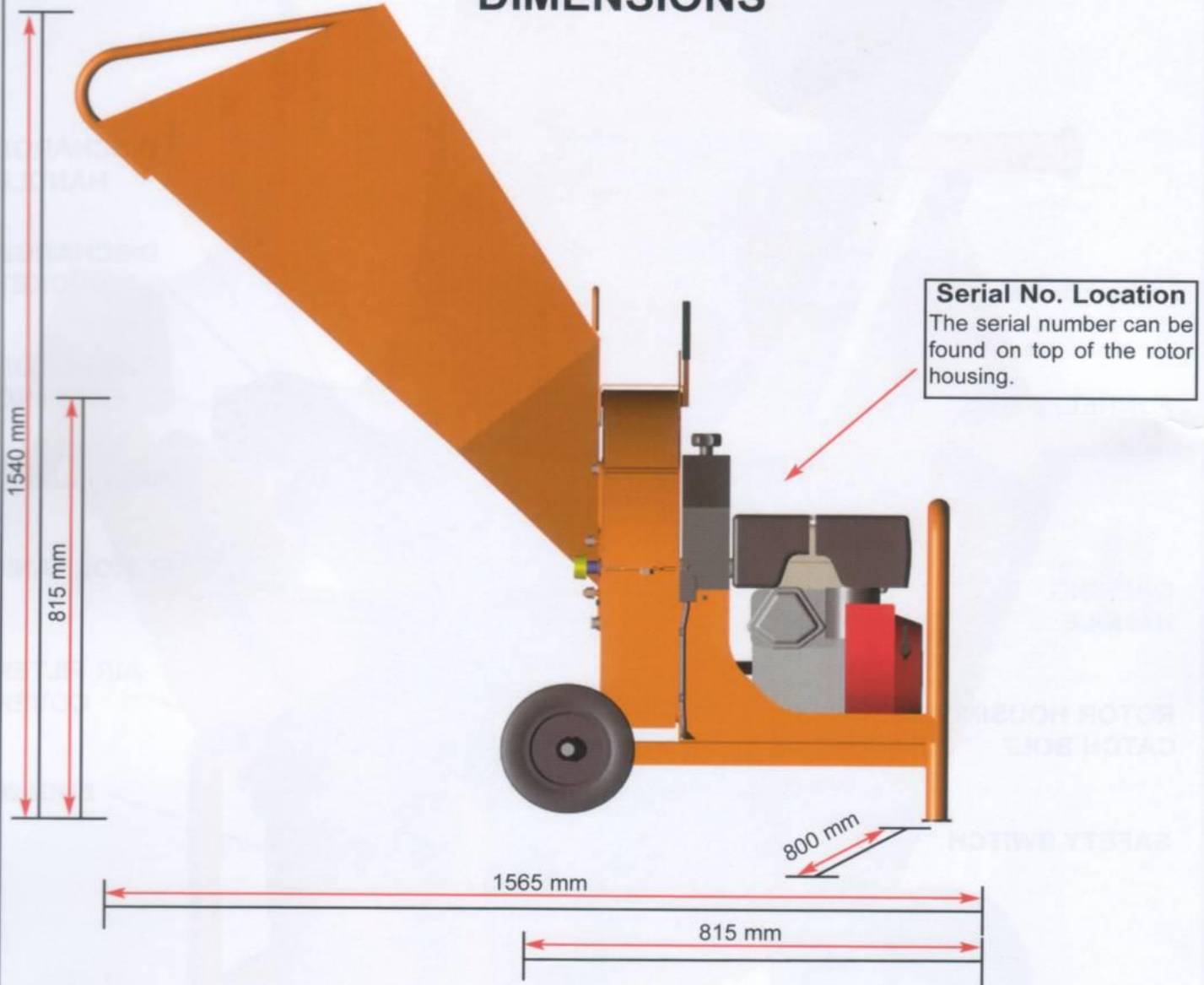


PURPOSE OF MACHINE

The Timberwolf TW 13/75PG brushwood chippers are designed to chip solid wood material up to 75mm in diameter. The maximum cross-section hardwood for continuous feed is 3200 sq. mm. They are capable of chipping over 0.75 tonnes of brushwood per hour.

fig 1.

DIMENSIONS



Timberwolf TW 13/75PG

| | | | |
|-----------------|--------------------|------------------------------|-----------------|
| Engine Type | Honda 4 stroke OHV | Type of Feed | Gravity |
| Maximum Power | 9.6 KW (13 HP) | Maximum Diameter Material | 75 mm |
| Cooling Method | Air Cooled | Fuel Capacity | 6.5 litres |
| Overall Weight | 183 kilos | Material Processing Capacity | 0.75 tonnes/hr |
| Starting Method | Recoil | Fuel Type | Unleaded Petrol |



WARNING



The Chipper will feed material through on its own. To do this, it relies on sharp blades on the chipper rotor. To keep the blades sharp, only feed the machine with clean brushwood. **DO NOT** put muddy / dirty wood, roots, potted plants, bricks, stones or metal into the chipper.



OPERATOR'S PERSONAL PROTECTIVE EQUIPMENT REQUIRED



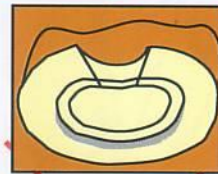
Chainsaw safety helmet fitted with visor and recommended ear defenders to the appropriate specifications



Close fitting heavy-duty non-snag clothing



Loose fit, Heavy-duty gloves.



Face mask if appropriate.



Safety Boots



DO NOT wear rings, bracelets, watches, jewellery or any other items that could be caught in the material and draw you into the chipper.

BASIC WOODCHIPPING SAFETY

The operator should be aware of the following points:

- **MAINTAIN A SAFETY EXCLUSION ZONE** around the chipper of at least 10 metres for the general public or employees without adequate protection. - Use hazard tape to identify this working area and keep it clear from debris build up. Chips should be ejected away from any area the general public have access to.
- **HAZARDOUS MATERIAL** - Some species of trees and bushes are poisonous. The chipping action can produce vapour, spray and dust that can irritate the skin. This may lead to respiratory problems or even cause serious poisoning. Check the material to be chipped before you start. Avoid confined spaces and use a facemask if necessary.
- **BE AWARE** when the chipper is processing material that is an awkward shape. The material can move from side to side in the funnel with great force. If the material extends beyond the funnel the brush may push you to one side causing danger. Badly twisted brush should be trimmed before being chipped to avoid thrashing in the feed funnel.
- **BE AWARE** that the chipper can eject chips out of the feed funnel with considerable force. Always wear full head and face protection.



GENERAL SAFETY MATTERS



DO'S AND DONT'S



ALWAYS stop the chipper engine before making any adjustments, refuelling, or cleaning.

ALWAYS check machine has stopped rotating and remove chipper ignition key before maintenance of any kind, or whenever the machine is to be left unattended.

ALWAYS check machine is well supported and cannot move.

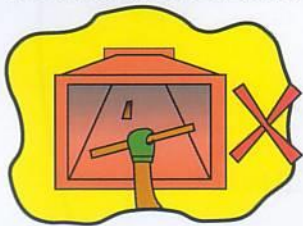
ALWAYS run with the engine set to maximum speed.

ALWAYS check (visually) for fluid leaks.

ALWAYS take regular breaks. Wearing personal protective equipment for long periods can be tiring and hot.

ALWAYS keep hands, feet and clothing out of feed opening, discharge and moving parts.

ALWAYS use the next piece of material or a push stick to push in short pieces. Under no circumstances should you reach into the funnel.



ALWAYS keep the operating area clear of people, animals and children.

ALWAYS keep the operating area clear from debris build up.

ALWAYS keep clear of the chip discharge tube. Foreign objects may be ejected with great force.

ALWAYS ensure protective guarding is in place before commencing work. Failure to do so may result in personal injury or loss of life.

ALWAYS use chipper in a well ventilated area - exhaust fumes are dangerous.

DO NOT use chipper unless available light is sufficient to see clearly.

DO NOT use or attempt to start the chipper without the feed funnel, belt guard, guards and discharge unit securely in place.

DO NOT start the chipper running unless properly guarded.

DO NOT stand directly in front of the feed funnel when using the chipper. Stand to one side.

DO NOT allow -



BRICKS



STRING



CLOTH



PLASTIC



STONES



METAL



GLASS



RUBBER



ROOTS



BEDDING PLANTS

- to enter the machine, as damage is likely.

DO NOT smoke when refuelling. Petrol is explosive!



DO NOT let anyone who has not received instruction operate the machine.

DO NOT climb on the machine at any time.

DO NOT handle material that is partially engaged in the machine.

DO NOT touch any exposed wiring whilst machine is running.

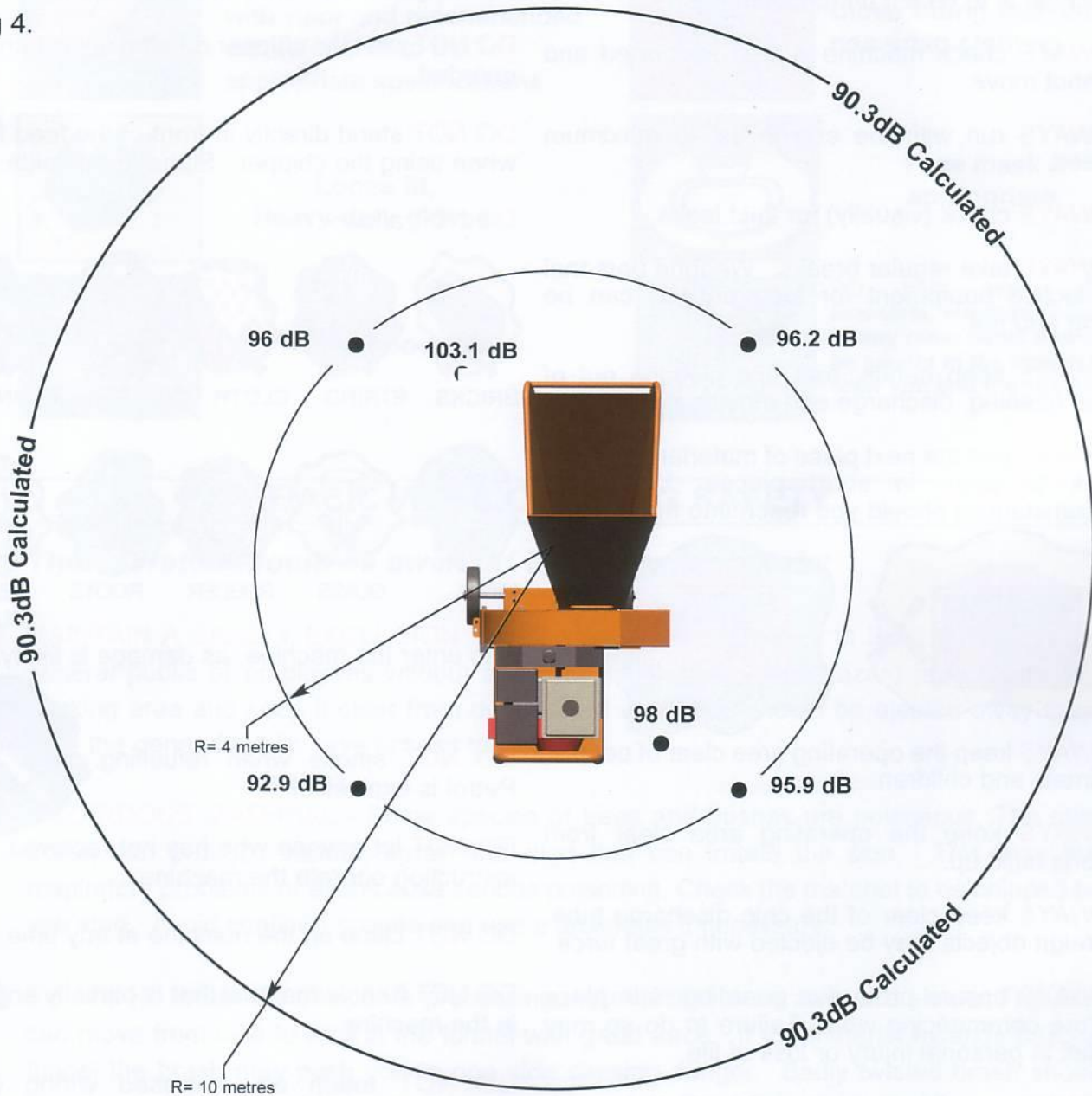


NOISE TEST

| | |
|-----------------|---|
| MACHINE: | TW 13/75PG |
| NOTES: | TESTED CHIPPING 40MM X 40MM CORSICAN PINE 1.5M IN LENGTH |

Noise levels above 90dB (A) will be experienced at the working position. Wear ear protection at all times to prevent possible damage to hearing. All persons within a 4 metre radius must also wear good quality ear protection.

fig 4.



Guaranteed Sound Power: 120dB (A)

As required by Annex III of Directive 2000/14/EC "Noise Emission in the environment by equipment for use outdoors".



SAFE TRANSPORTATION

- **THE** TW 13/75PG chipper may be transported as a unit or with the feed funnel removed.
- **TAKE** care when loading the TW 13/75PG as it is 183 Kg in weight.
- **STRAP** the chipper down firmly before beginning a journey.
- **ENSURE** no debris or water is trapped in the rotor housing that may spill during transit.
- **TURN** the fuel valve OFF and keep the engine upright.

DELIVERY

All Timberwolf TW 13/75PG machines have a full pre - delivery inspection before leaving the factory and are ready to use. Read and understand this instruction manual before attempting to operate the Chipper. In particular, read pages 5 -7 which contain important health and safety information and advice.

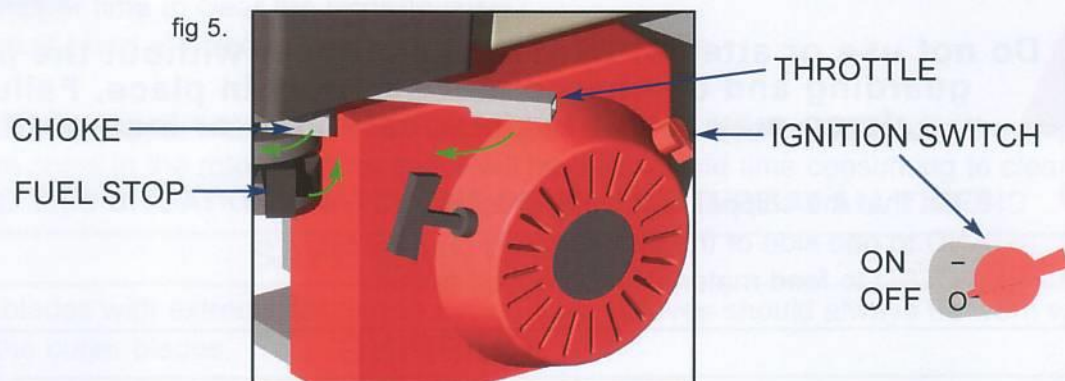
OPERATOR'S PERSONAL PROTECTIVE EQUIPMENT REQUIRED

- **CHAINSAW** safety helmet fitted with visor and recommended ear defenders to an appropriate specification.
- **CLOSE - FITTING** heavy-duty non-snag clothing.
- **SAFETY** footwear.
- **FACE MASK** (if appropriate).
- **HEAVY-DUTY** gloves.

See page 5 for more detailed information.

MANUAL CONTROLS

There are four controls on the Honda GX 390 K1 that are required for daily usage of the TW 13/75PG chipper.



Please refer to the Honda engine manual for instructions of how to start and control the GX390 engine. The chipper does not have any manual controls for normal operation.

EMERGENCY STOPPING

Turn the ignition switch to the 'O' position (as shown above).



STARTING THE ENGINE

- **TURN** the fuel valve to the 'ON' position.
- **MOVE** the choke lever to the 'CLOSE' position. NOTE: Do not use the choke if the engine is warm or the air temperature is high.
- **MOVE** the throttle control lever slightly to the left.
- **TURN** the engine switch to the 'ON' position.
- **PULL** the starter grip lightly until resistance is felt, then pull briskly.
- **CAUTION:** Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.
- **AS** the engine warms up, gradually move the choke lever to the 'OPEN' position.
- **POSITION** the throttle control lever for the desired engine speed.

STOPPING THE ENGINE

- **MOVE** the throttle control lever fully to the right.
- **TURN** the fuel valve to the 'OFF' position.



DAILY CHECKS BEFORE STARTING

- **LOCATE** the machine on firm level ground.
- **CHECK** engine oil level.
- **CHECK** the fuel valve is open.
- **CHECK** all guards are in place.
- **CHECK** the discharge unit is pointing in a safe direction.
- **CHECK** the feed funnel to ensure no objects are inside.

For parts location see diagrams on pages 3 & 4.

STARTING TO CHIP

WARNING

 **Do not use or attempt to start the chipper without the protective guarding and discharge unit securely in place. Failure to do so may result in personal injury or loss of life.** 

- **CHECK** that the chipper is running smoothly.
- **STAND** to one side of the feed funnel.
- **PROCEED** to feed material into the feed funnel.

CHIPPING

Wood up to 75mm in diameter can be fed into the feed funnel. Enter it into the funnel butt end first. Release the material before it engages the rotor. Some pieces of wood may move around significantly whilst being chipped.

The wood will be drawn into the cutting blade quite quickly, be ready for this to happen. Stand well clear.

A piece of wood which is too tough or too large for the chipper will slow the engine down. When this happens it is possible to hold back the branches that are being chipped and allow the engine to regain its speed again.

If a piece of wood gets stuck in the funnel and it cannot be chipped due to its size or shape, it will need to be removed. Trim the branch until it is a suitable shape for the chipper to accept.



BLADE WEAR

The most important part of using a wood chipper is keeping the cutter blades sharp. The TW 13/75PG is fitted with one blade 177mm (7") long. It is 42mm wide when new.

A new blade should chip between 5 and 10 tonnes of material before sharpening. This figure will be drastically reduced by feeding the machine with stony, sandy or muddy material.

As the blade becomes blunt the machine reduces the feed speed. The discharge will stop being so cleanly cut and have more stringy shreds in it. At this point the blade should be sent to a reputable blade sharpening company. The blade can be sharpened several times in its life. A wear mark on the reverse side indicates the safe limit of blade wear. Replace when this line is exceeded.

BLOCKAGES

Always be aware that what you are putting into the chipper must come out. If the chips stop coming out of the discharge but the chipper is taking material in - STOP IMMEDIATELY. Continuing to feed material into a blocked machine may cause damage and will make it difficult to clear.

If the chipper becomes blocked proceed as follows:

- STOP the engine and remove the ignition keys.
- REMOVE the M12 screw that retains the top rotor housing.
- OPEN the top rotor housing.
- WEARING gloves, reach into the rotor housing and scoop out the debris causing the blockage.

WARNING

Do not reach into the rotor housing with unprotected hands. There are sharp blades and any small movement of the rotor may cause serious injury.

- IT is not necessary to remove all the debris, just the majority.
- CLOSE the rotor housing and clamp down tightly.
- RESTART the engine and increase to full speed.
- ALLOW chipper time to clear the rotor housing.
- FEED a small piece of wood in to ensure complete clearance.

NOTE

Continuing to feed the chipper with brushwood once it has become blocked will cause the chipper to compact the chips in the rotor housing and it will be difficult and time consuming to clear.

AVOID THIS SITUATION - WATCH THE DISCHARGE TUBE AT ALL TIMES.

SAFE MAINTENANCE

- HANDLE blades with extreme caution to avoid injury. Gloves should always be worn when handling the cutter blades.
- THE drive belts should be connected while changing blades, as this will restrict sudden movement of the rotor.
- THE major components of this machine are heavy. Lifting equipment must be used for disassembly.
- CLEAN machines are safer and easier to service.

SPARES

Only fit genuine Entec replacement blades, screws and chipper spares. Failure to do so will result in the invalidation of the warranty and may result in damage to the chipper, personal injury or even loss of life.



SERVICE INSTRUCTIONS

11

WARNING



ALWAYS IMMOBILISE THE MACHINE BY STOPPING THE ENGINE AND REMOVING THE IGNITION KEY BEFORE UNDERTAKING ANY MAINTENANCE WORK.



| Table 1. Service Schedule | Daily Check | Every 25 Hours | Every 50 Hours | Every 500 Hours |
|--|--|----------------|----------------|-----------------|
| Do jobs below: | | | | |
| Check engine oil - top up if necessary. | ● | | | |
| Check for engine oil leaks. | ● | | | |
| Check fuel level. | ● | | | |
| Check feed funnel and belt guard are securely fitted. | ● | | | |
| Clean engine air intake. | ● | | | |
| Check for tightness all nuts, bolts and fastenings making sure nothing has worked loose. | | ● | | |
| Check and adjust if necessary belt tension. | | ● | | |
| Grease front rotor bearing. | | | ● | |
| Check air filter element. | ● | | | |
| Check blade condition. | ● | | | |
| Check wiring. | | | | ● |
| Check cutting anvil. | | | ● | |
| Renew oil filter. | } Refer to Honda Engine Owner's Manual | | | |
| Replace Spark Plugs. | | | | |
| Check Valve clearances. | | | | |
| Clean air filter. | | | | |
| Replace spark plugs. | | | | |
| Check valve clearance. | | | | |
| Clean air filter element. | | | | |
| Clean sediment cup. | | | | |
| Clean fuel tank and strainer. | | | | |
| Check fuel line. | | | | |

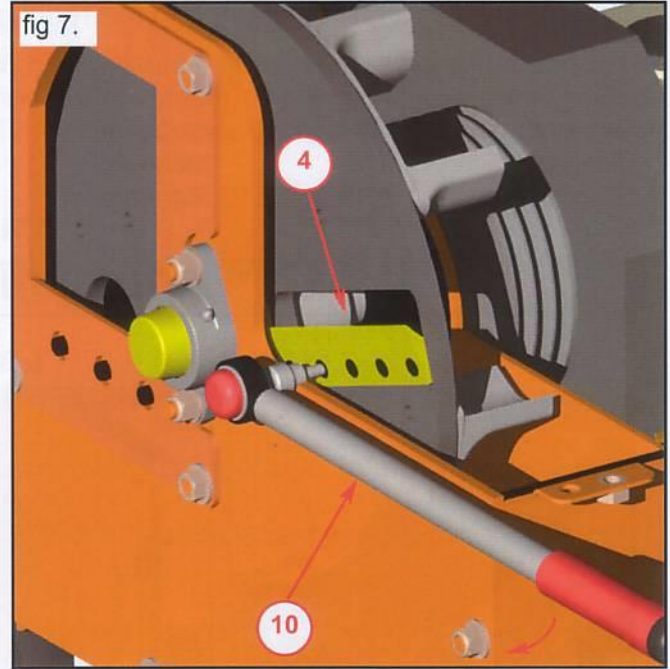
NOTE: Rear Rotor Bearing is sealed for life. No greasing or lubrication is necessary.



CHANGE BLADES

WARNING

Wear riggers gloves for the blade changing operation.



1. Turn off and remove keys.
2. Pull the plug cap from the spark plug.
3. Remove the M12 screw that retains the top rotor housing using a 19mm spanner.
4. Turn the rotor by hand using the drive belts so the blade screws can be seen and accessed.
5. Use a small screw driver to clean out the star socket screws heads retaining the blade.
6. Undo blade screws using the star socket provided. Let the rotor turn until the socket comes to rest on the machine. The screw can then be loosened.
7. **Before fitting replacement blades ensure the blade seat is clean. No material should be allowed to sit between the blade and the rotor.**
8. Check the screws to be replaced are not damaged. Any damaged screws should be replaced.
9. Apply a thin layer of copper grease to the entire screw thread.
10. Retighten the screws to 35Nm (25lbs ft) *This torque setting is vitally important to ensure your bolts come out at a later date and Entec recommend you purchase a torque wrench for this and other jobs on the chipper.*
11. Close rotor housing and replace retaining screw.
12. Refit spark plug cap to spark plug.

WARNING

Always sharpen blades on a regular basis. Failure to do so will cause the machine to under perform and will overload engine and bearings causing machine breakdown. Blades must not be sharpened beyond the wear mark (see diagram). Failure to comply with this could result in machine damage, injury or loss of life.

