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INTRODUCTION

Thank you for choosing this Timberwolf brushwood chipper. 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 the Timberwolf TW13/75G and TW18/100G. 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 2 to 14. Ensure that all operators are **adequately trained** for operating this machine, especially with regard to **safe working practices**.

Timberwolf's policy of constantly improving their products may involve major or minor changes to the chippers or their accessories. Timberwolf 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 there may be, in some cases, minor discrepancies between the actual chipper and the text in this manual.

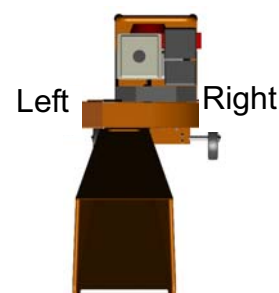
The manual should be considered a permanent part of the machine and should remain with it if the machine is resold.

NOTE: For the purpose of this manual 'left' and 'right' of the machine are as shown, with the operator standing looking into the feed funnel.

Where section headings are shown in black text, the information applies to all models.

Where section headings are shown in blue text, the information applies to **13/75G** models only.

Where section headings are shown in red text, the information applies to **18/100G** models only.



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.



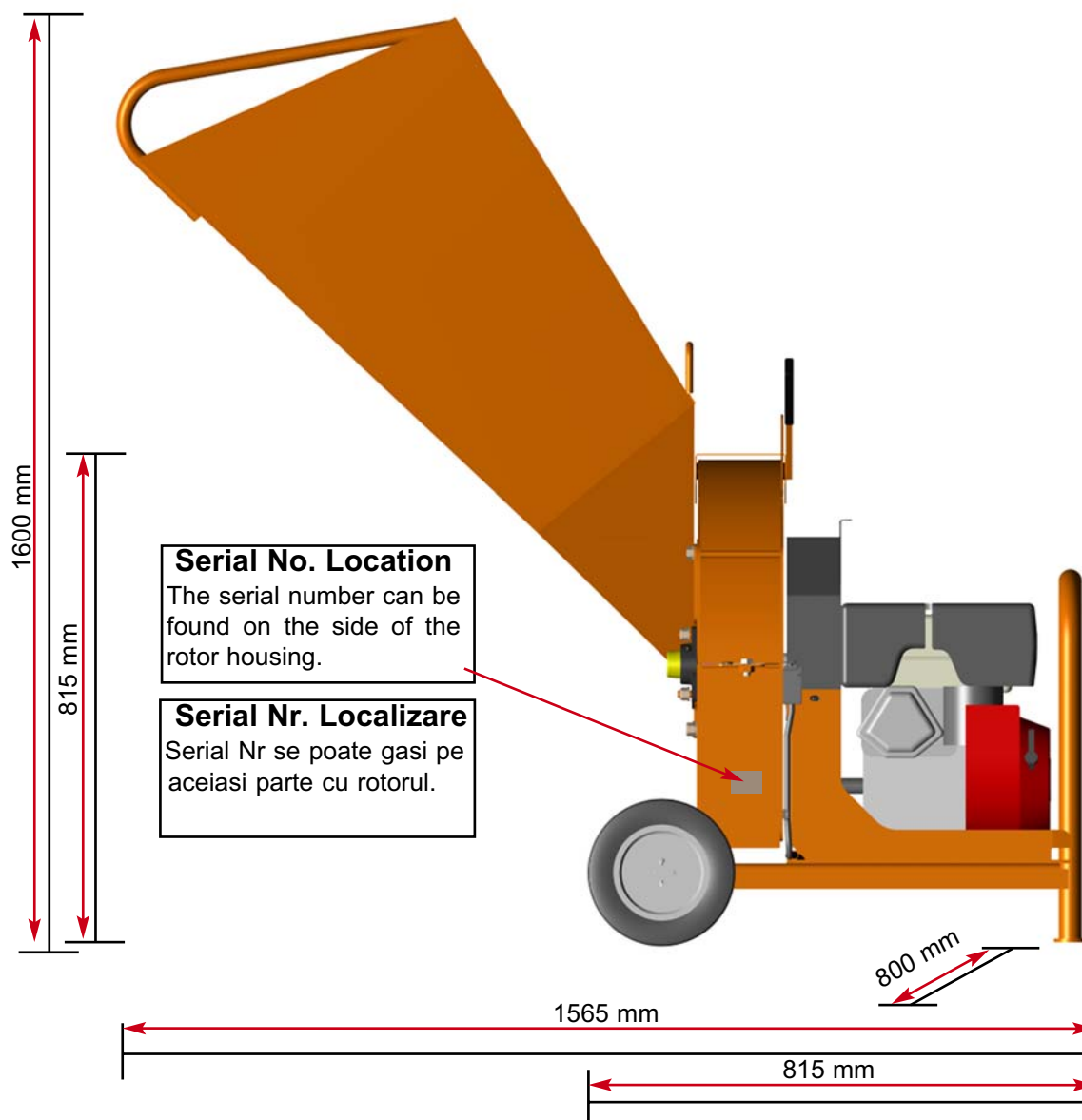
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**ELKOPLAST
ROMANIA****TW 13/75G****2**

PURPOSE OF MACHINE

The Timberwolf TW 13/75G brushwood chipper is designed to chip solid wood material up to 75 mm in diameter. It is capable of chipping over 0.75 tonnes of brushwood per hour.

DIMENSIONS / DIMENSIUNI



TIMBERWOLF TW 13/75G SPECIFICATION

Engine type	<i>Honda 4 stroke OHV</i>	Type of feed	<i>Gravity</i>
Maximum power	<i>9.6kW (13hp)</i>	Maximum diameter material	<i>75 mm (3")</i>
Cooling method	<i>Air cooled</i>	Fuel capacity	<i>6.5 litres</i>
Overall weight	<i>188kg</i>	Material processing capacity	<i>0.75 tonnes/hr</i>
Starting method	<i>Recoil</i>	Fuel type	<i>Unleaded petrol</i>

TIMBERWOLF TW 13/75G SPECIFICATIE

Motor	<i>Honda OHV</i>	Modul de alimentare	<i>Gravitatie</i>
Putere maxima	<i>9.6kW (13cp)</i>	Diametrul maxim al materialului	<i>75 mm (3")</i>
Metoda de racire	<i>Racire cu aer</i>	Capacitatea de combustibil	<i>6.5 litri</i>
Greutate	<i>188kg</i>	Capacitatea de prelucrare	<i>0.75 tone/ora</i>
Metoda de pornire	<i>Recul</i>	Combustibil	<i>benzina fara plumb</i>

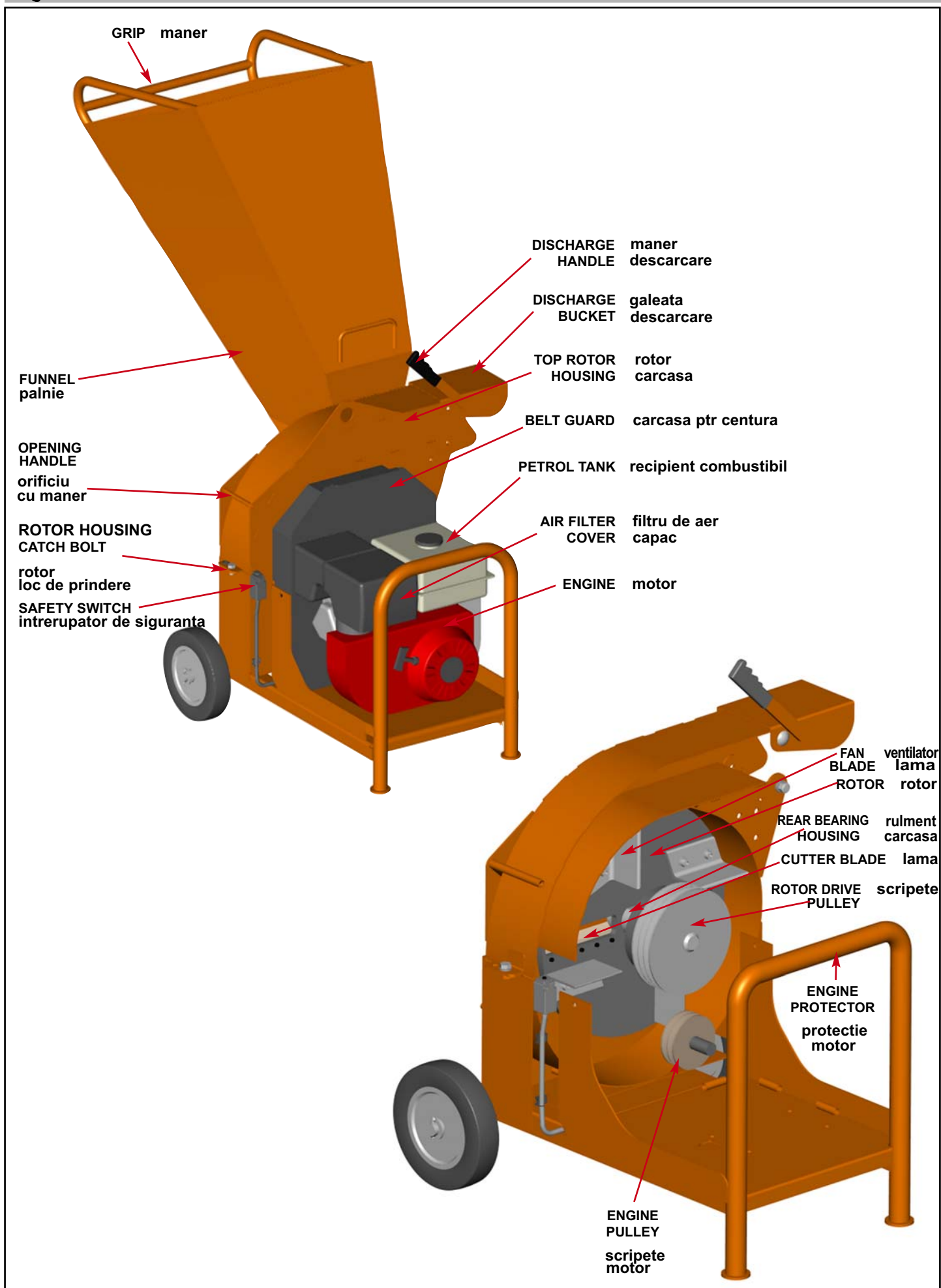


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ELKOPLAST
ROMANIA

TW 13/75G PARTS LOCATOR 3

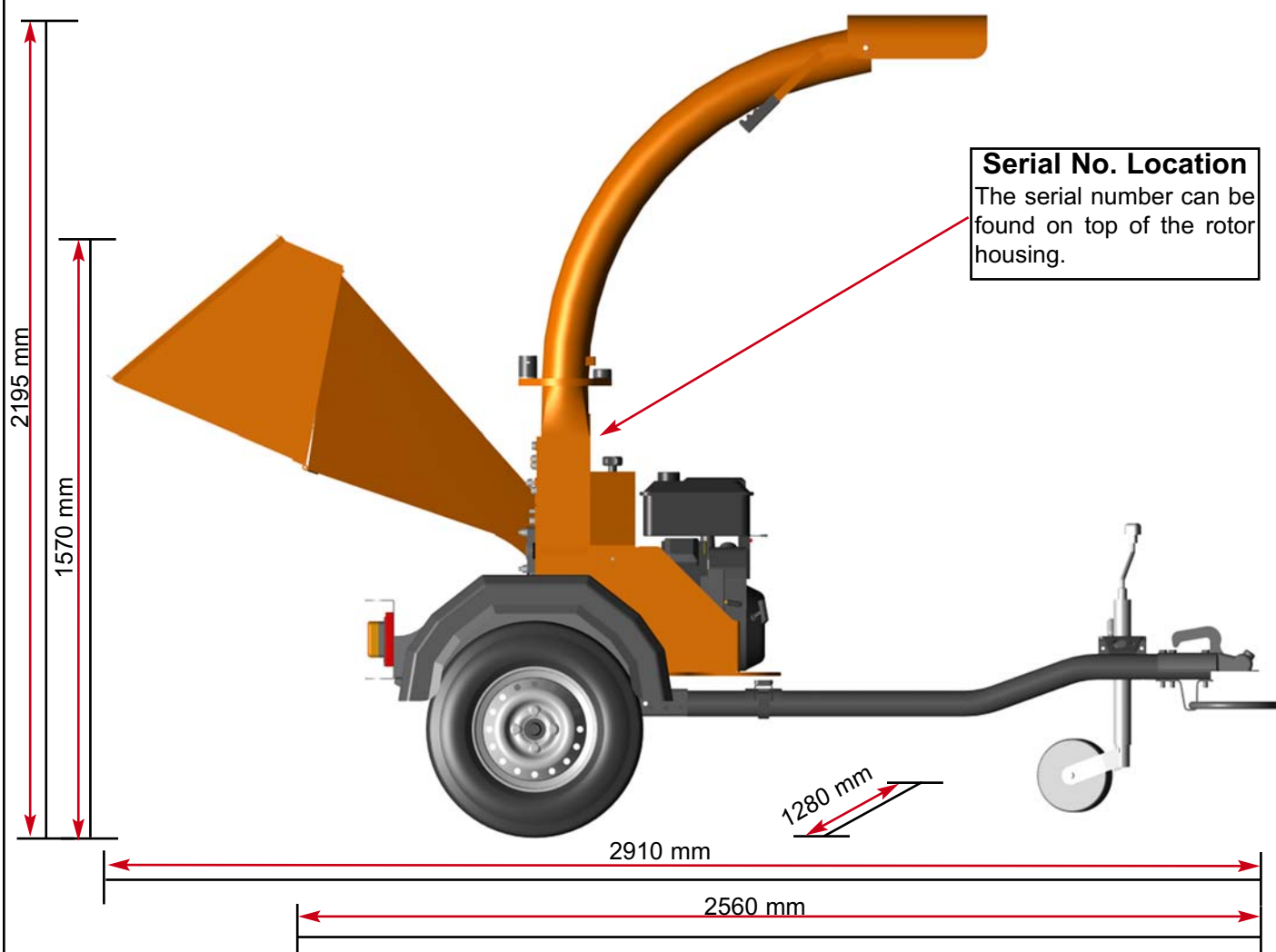




PURPOSE OF MACHINE

The Timberwolf 18/100G brushwood chipper is designed to chip solid wood material up to 100 mm in diameter. It is capable of chipping over 1.5 tonne of brushwood per hour.

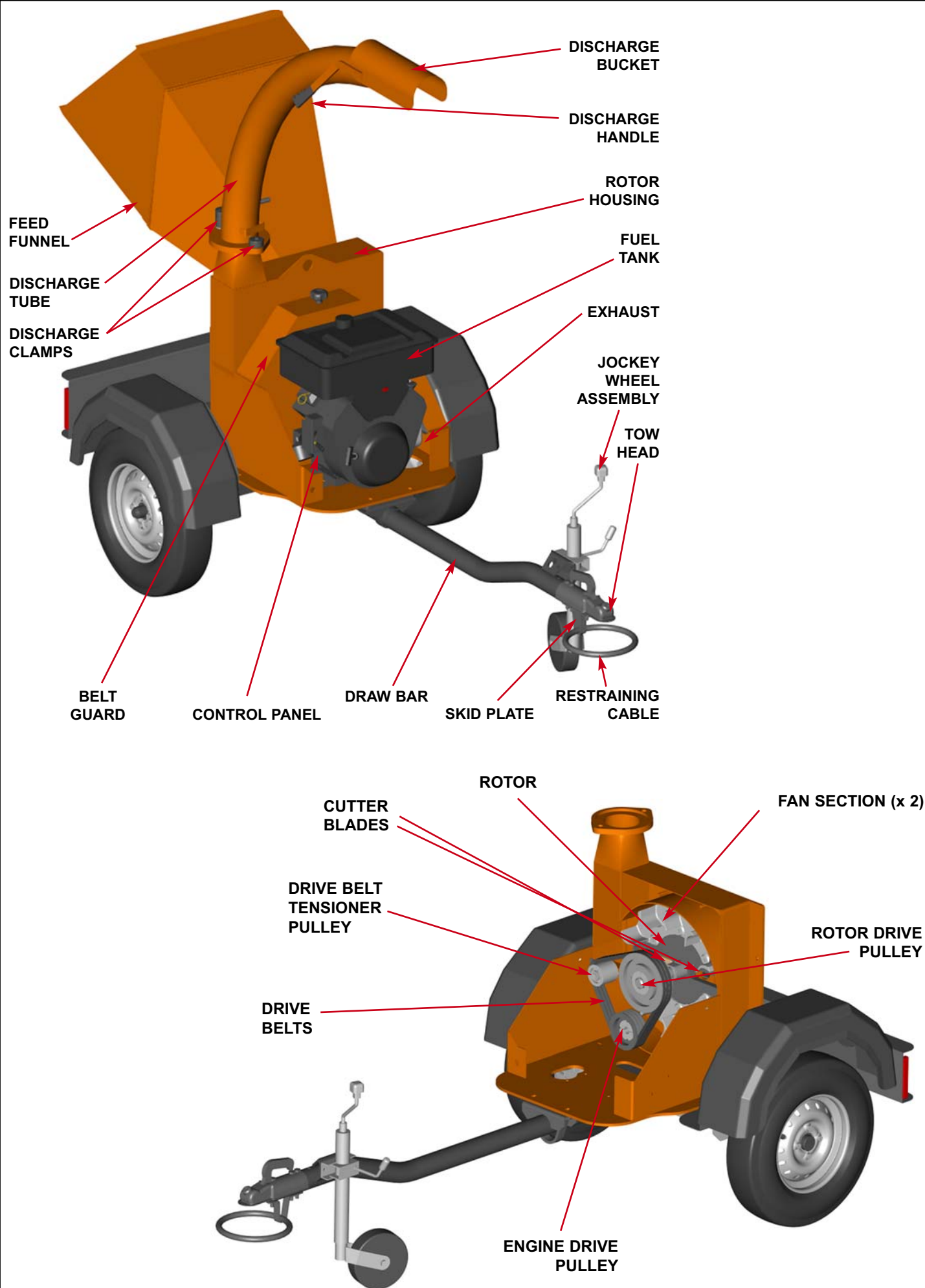
DIMENSIONS



TIMBERWOLF TW 18/100G SPECIFICATION

Engine type	<i>Briggs & Stratton 4 stroke OHV</i>
Maximum power	<i>13.4kW (18hp)</i>
Cooling method	<i>Air cooled</i>
Overall weight	<i>375kg</i>
Starting method	<i>Recoil</i>
Blade bolt torque	<i>22lbft - 30 Nm</i>
General M10 bolt torque	<i>34lbft - 46Nm</i>
General M12 bolt torque	<i>60lbft - 81Nm</i>

Type of feed	<i>Gravity</i>
Maximum diameter material	<i>100 mm (4")</i>
Material processing capacity	<i>1.5 tonnes/hr</i>
Fuel capacity	<i>8.5 litres</i>
Fuel type	<i>Unleaded petrol</i>
Oil Capacity	<i>1.4 litres</i>
Oil Type	<i>SAE10W-30</i>





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 mesh visor and recommended ear defenders to the appropriate specifications.



Close fitting heavy-duty non-snag clothing.



Work gloves with elasticated wrist.



Face mask if appropriate.



Steel toe cap 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.
- **ALWAYS** work on the side of the machine furthest from any local danger, e.g. not road side.



GENERAL SAFETY MATTERS



DO'S AND DON'TS



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

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

ALWAYS check the machine is well supported and cannot move.

ALWAYS operate the chipper with the engine set to maximum speed when chipping.

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 operate the chipper in a well ventilated area - exhaust fumes are dangerous.

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

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

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.



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 while machine is running.

DO NOT use the chipper inside buildings.



NOISE TEST - TW 13/75G

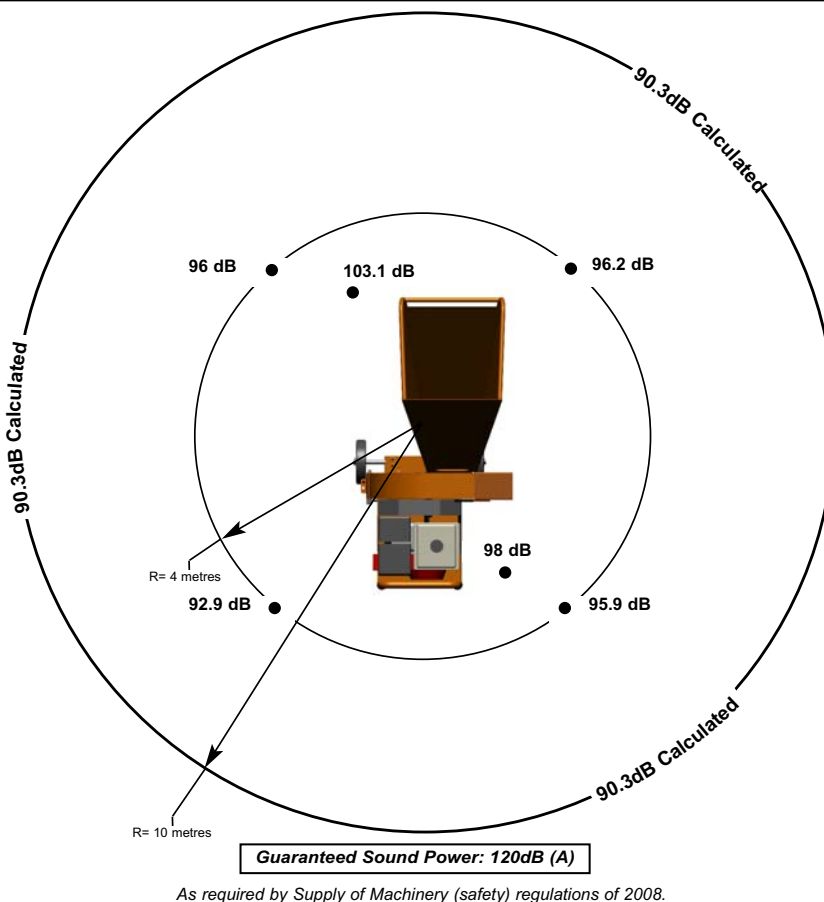
MACHINE:

TW 13/75G

NOTES:

Tested Chipping 40 mm
x 40 mm Corsican Pine
1.5m in length

Noise levels above 80dB (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.



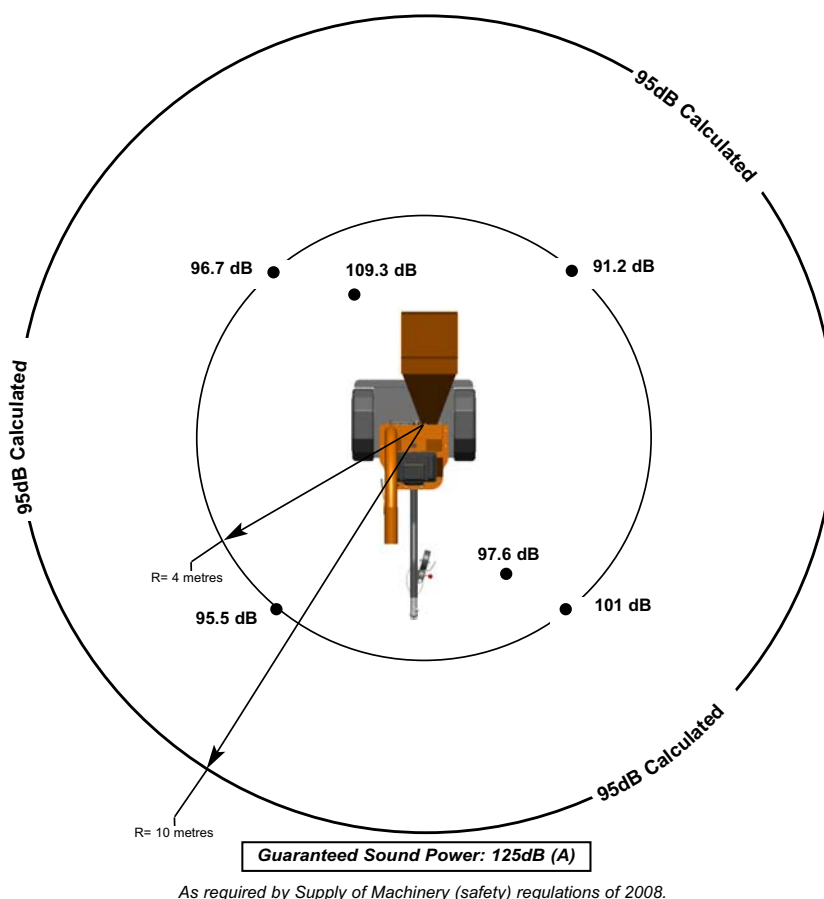
NOISE TEST - TW 18/100G

MACHINE:

TW 18/100G

NOTES:

Tested Chipping 50 mm
x 50 mm Corsican Pine
1.5m in length





SAFE TRANSPORTATION

- **THE** TW 13/75G chipper may be transported as a unit or with the feed funnel removed.
- **TAKE** care when loading the TW 13/75G as it is 183 kg in weight.
- **STRAP** the chipper down firmly before beginning a journey (do not use feed funnel handles to strap down machine).
- **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 13/75G 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 6 - 8 which contain important health and safety information and advice.

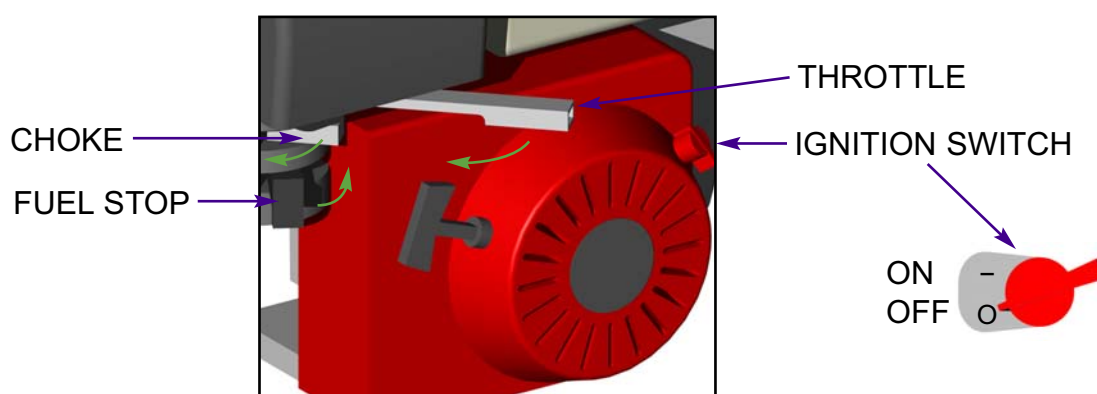
OPERATOR'S PERSONAL PROTECTIVE EQUIPMENT REQUIRED

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

See page 6 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 13/75G 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).



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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 to idle and allow to run for one minute.
- **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 page 3.

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 75 mm 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.



SAFE TRANSPORTATION

- **WHEN** towing a chipper the maximum speed limit is 60 mph.
- **ON** rough or bumpy road surfaces reduce speed accordingly to protect your machine from unnecessary vibration.
- **WHEN** towing off road be aware of objects that may catch the chipper undergear.
- **WHEN** towing off road ensure inclination is not excessive.
- **AVOID** excessively pot holed ground.
- **WHEN** reversing the chipper the short wheel base will react quickly to steering.
- **ALWAYS** check the discharge is tight before moving.
- **KEEP** tyre pressures inflated to 1.8 bar or 26 psi.
- **CHECK** wheel nuts are tightened to 90Nm or 65 lbs ft.
- **CLEAR** loose chippings and debris from the machine before departing.
- **ENSURE** the feed funnel is closed and the catch is properly engaged before departing.

HITCHING ONTO THE TOW BALL

- **CHECK** the ball head is well greased.
- **WIND** jockey wheel assembly anticlockwise until the tow head is above the height of the ball hitch on the vehicle.
- **REVERSE** the vehicle so the ball hitch is directly below the tow head.
- **ATTACH** the breakaway cable / secondary coupling to a strong point on the vehicle, not the ball hitch.
- **GRASP** handle on tow head and push back catch with thumb.
- **WIND** the jockey wheel assembly clockwise, to lower the tow head onto the ball hitch.
- **RELEASE** handle and continue to wind jockey wheel clockwise. The tow head should snap into place on the ball hitch. If it doesn't, repeat previous 2 steps.
- **WIND** jockey wheel up until fully retracted and the jockey wheel frame is seated in its notch on the stem. The chipper weight should be fully on the vehicle.
- **RELEASE** the jockey wheel clamp and slide the jockey wheel assembly fully up.
- **TIGHTEN** clamp on the jockey wheel assembly.
- **CONNECT** electrical plug to socket on rear of towing vehicle and check operation of all the trailer and vehicle lights.
- **THE** chipper is now properly attached to the vehicle.

UNHITCHING THE CHIPPER

- **ENSURE** the chipper will not roll away after being disconnected from the vehicle.
- **DISCONNECT** the electrical cable from the vehicle socket.
- **RELEASE** breakaway cable / secondary coupling.
- **RELEASE** the jockey wheel assembly clamp.
- **LOWER** the jockey wheel assembly fully.
- **RETIGHTEN** the jockey wheel assembly clamp.
- **WIND** the jockey wheel assembly anticlockwise until it starts to take the weight of the chipper.
- **GRASP** the handle and release the catch with your thumb.
- **CONTINUE** to wind the jockey wheel anticlockwise. This should lift the tow head clear of the ball hitch.
- **DRIVE** the vehicle clear of the chipper.
- **WIND** the jockey wheel assembly to a suitable point where the chipper is level.
- **THE** chipper is now fully detached from the vehicle.



DELIVERY

All Timberwolf 18/100G 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 6 - 8 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.
- **HEAVY-DUTY** work gloves with elasticated wrist.
- **CLOSE - FITTING** heavy-duty non-snag clothing.
- **SAFETY** footwear.
- **FACE MASK** (if appropriate).

See page 6 for more detailed information.

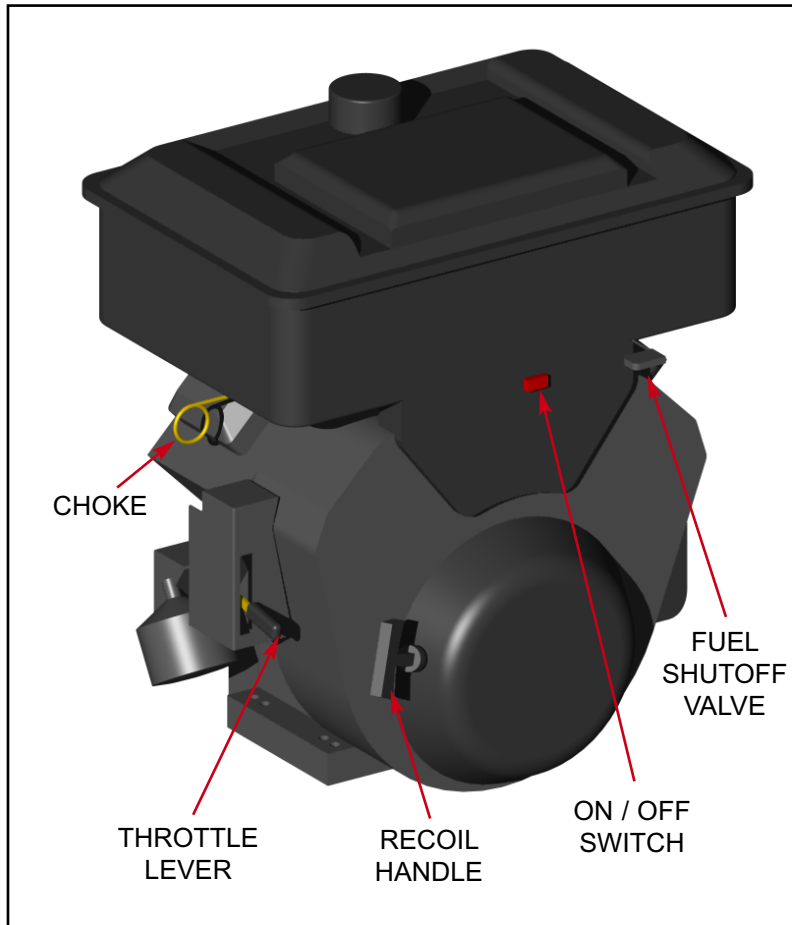
ENGINE CONTROLS

The engine speed is controlled by the vertically adjustable lever shown in diagram below. With the throttle lever in the *FAST* position the machine is ready to chip. It **MUST** be pushed up as far as possible to achieve a suitable working speed.

If no wood is to be chipped for a few minutes the throttle should be returned to the idle position.

STARTING THE ENGINE

- Open fuel shutoff valve.
- Pull choke handle out to "choke" position.
- Move throttle lever to "fast". Always operate engine with throttle in "fast".
- Push "on/off" rocker switch to "on" position.
- Grasp recoil rope handle. Pull slowly until resistance is felt, then pull rapidly to start engine and avoid kickback.
- Allow engine to warm up. In warm weather temperatures or recently operated conditions, move choke handle slowly in towards the run position. In cold weather, allow engine to run smoothly before each change. Operate with choke in "Run".





STOPPING THE ENGINE

- Move throttle lever to “slow”
- Push “on/off” rocker switch position to “off” position.
- Close fuel shutoff valve.

For more detailed information refer to the Engine Owner's Manual

DAILY CHECKS BEFORE STARTING

- **LOCATE** the machine on firm level ground.
- **CHECK** machine is well supported and cannot move.
- **CHECK** prop stand is lowered and secure.
- **CHECK** all guards are fitted and secure.
- **CHECK** the discharge unit is in place and fastened securely.
- **CHECK** discharge tube is pointing in a safe direction.
- **CHECK** the feed funnel to ensure no objects are inside.
- **CHECK** feed table is in up position - to prevent people reaching cutting blades.
- **CHECK** controls as described below.
- **CHECK** (visually) for fluid leaks.
- **CHECK** fuel and hydraulic oil levels.

For parts location see diagrams on page 5.

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 100 mm 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 while 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 13/75G is fitted with one blade 177 mm (7") long, the 18/100G is fitted with 2 blades. The blades are 42 mm 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:

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.



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.



For the 13/75G

- **STOP** the engine and remove the spark plug lead.
- **REMOVE** the M12 screw that retains the top rotor housing and lift rotor housing open.
- **WEARING** gloves, reach into the rotor housing and scoop out the debris causing the blockage. It is not necessary to remove all the debris, just the majority.
- **CLOSE** the rotor housing and clamp down tightly. Reconnect spark plug lead.
- **RESTART** the engine and increase to full speed.
- **ALLOW** machine time to clear excess chips still remaining in rotor housing before you continue feeding brushwood. Feed in a small piece of wood while watching to make sure that it comes out of the discharge. If this does not clear it, repeat the process and carefully inspect the discharge tube to find any obstruction.

For the 18/100G

- **STOP** the engine and remove the ignition keys.
- **REMOVE** the discharge tube. Check that it is clear.
- **WEARING** gloves, reach into the rotor housing and scoop out the majority of the debris causing the blockage.
- **REPLACE** the discharge tube.
- **RESTART** the engine and increase to full speed.
- **ALLOW** machine time to clear excess chips still remaining in rotor housing before you continue feeding brushwood. Feed in a small piece of wood while watching to make sure that it comes out of the discharge. If this does not clear it, repeat the process and carefully inspect the discharge tube to find any obstruction.



 **THE FOLLOWING PAGES DETAIL ONLY
BASIC MAINTENANCE GUIDELINES SPECIFIC
TO YOUR CHIPPER.** 

THIS IS NOT A WORKSHOP MANUAL.

THE FOLLOWING GUIDELINES ARE NOT EXHAUSTIVE AND DO NOT EXTEND TO GENERALLY ACCEPTED STANDARDS OF ENGINEERING/MECHANICAL MAINTENANCE THAT SHOULD BE APPLIED TO ANY PIECE OF MECHANICAL EQUIPMENT AND THE CHASSIS TO WHICH IT IS MOUNTED.

AUTHORISED TIMBERWOLF SERVICE AGENTS ARE FULLY TRAINED IN ALL ASPECTS OF TOTAL SERVICE AND MAINTENANCE OF TIMBERWOLF WOODCHIPPERS. YOU ARE STRONGLY ADVISED TO TAKE YOUR CHIPPER TO AN AUTHORISED AGENT FOR ALL BUT THE MOST ROUTINE MAINTENANCE AND CHECKS.

TIMBERWOLF ACCEPTS NO RESPONSIBILITY FOR THE FAILURE OF THE OWNER/USER OF TIMBERWOLF CHIPPERS TO RECOGNISE GENERALLY ACCEPTED STANDARDS OF ENGINEERING/MECHANICAL MAINTENANCE AND APPLY THEM THROUGHOUT THE MACHINE.

**THE FAILURE TO APPLY GENERALLY ACCEPTED
STANDARDS OF MAINTENANCE, OR THE PERFORMANCE
OF INAPPROPRIATE MAINTENANCE, MAY INVALIDATE
WARRANTY IN WHOLE OR IN PART.**

 **PLEASE REFER TO YOUR AUTHORISED
TIMBERWOLF SERVICE AGENT FOR
SERVICE AND MAINTENANCE.** 



SERVICE INSTRUCTIONS 16

SPARES

Only fit genuine Timberwolf 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.

ENGINE SERVICING

Ensure servicing is performed in accordance with the Engine Manufacturer's Handbook.

ENGINE MANUFACTURER'S HANDBOOK

Refer to your Engine Manufacturer's Handbook for detailed instructions on the following:

- Changing the fuel filter.
- Changing the engine oil.
- Checking the engine oil.
- Changing the engine oil filter.

SAFE MAINTENANCE

ALWAYS IMMOBILISE THE CHIPPER OR TRACTOR ENGINE BEFORE UNDERTAKING ANY MAINTENANCE WORK ON THE CHIPPER BY REMOVING THE KEY OR SPARK PLUG LEAD.

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

COPPER EASE SAFETY INFORMATION

Product name: Copper Ease.

Copper Ease contains no hazardous ingredients at or above regulatory disclosure limits, however, safety precautions should be taken when handling (use of oil-resistant gloves and safety glasses are recommended - respiratory protection is not required). Avoid direct contact with the substance and store in a cool, well ventilated area avoiding sources of ignition, strong oxidising agents and strong acids. Dispose of as normal industrial waste (be aware of the possible existence of regional or national regulations regarding disposal), do not discharge into drains or rivers.

In case of fire: in combustion the product emits toxic fumes, extinguish with alcohol or polymer foam, carbon dioxide or dry chemical powder. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

FIRST AID

Skin contact: there may be mild irritation at the site of contact, wash immediately with plenty of soap and water.

Eye contact: there may be irritation and redness, bathe the eye with running water for 15 minutes.

Ingestion: there may be irritation of the throat, do not induce vomiting, wash out mouth with water.

A safety data sheet for this product can be obtained by writing to the manufacturer at the following address: Comma Oil and Chemicals Ltd., Deering Way, Gravesend, Kent DA12 2QX. Tel: 01474 564311, Fax: 01474 333000.



SERVICE SCHEDULE

WARNING



Always immobilise the machine by stopping the engine and removing the spark plug lead before undertaking any maintenance work.

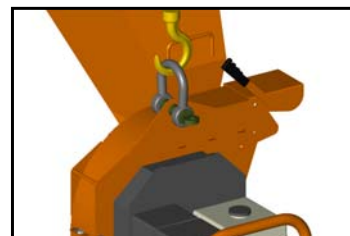


SERVICE SCHEDULE	Daily Check	25 Hours	50 Hours	500 Hours
Check engine oil - top up if necessary (10W-30).	✓			
Check for engine oil leaks.	✓			
Check fuel level.	✓			
Check feed funnel and belt guard are securely fitted.	✓			
Clean engine air intake.	✓			
Check air filter element.	✓			
Check blade condition.	✓			
Check for tightness all nuts, bolts and fastenings making sure nothing has worked loose.		✓		
Check tension of main drive belts (and tension if necessary).		✓		
Check cutting anvil.			✓	
Grease front rotor bearing.			✓	
Check for loose electrical wiring.				✓
Renew oil filter.] REFER TO YOUR ENGINE SUPPLIERS MANUAL			
Replace spark plugs.				
Check valve clearances.				
Clean air filter.				
Clean sediment cup.				
Clean fuel tank and strainer.				
Check fuel line.				

NOTE: Your Timberwolf woodchipper is covered by a full 12 months parts and labour warranty. Subject to correct maintenance and proper machine usage, the bearings are guaranteed for 12 months regardless of hours worked by the machine. In conditions of 'heavy usage' - i.e. in excess of 500 hours per year - it is recommended that the bearings are changed annually to ensure that the machine retains optimum working performance.

SAFE LIFTING OF THE CHIPPER

The lifting eye is designed to lift the machine's weight only. Do not use hoist hook directly on the lifting eye, use a correctly rated safety shackle. Inspect the lifting eye prior to each use - DO NOT USE IF DAMAGED.

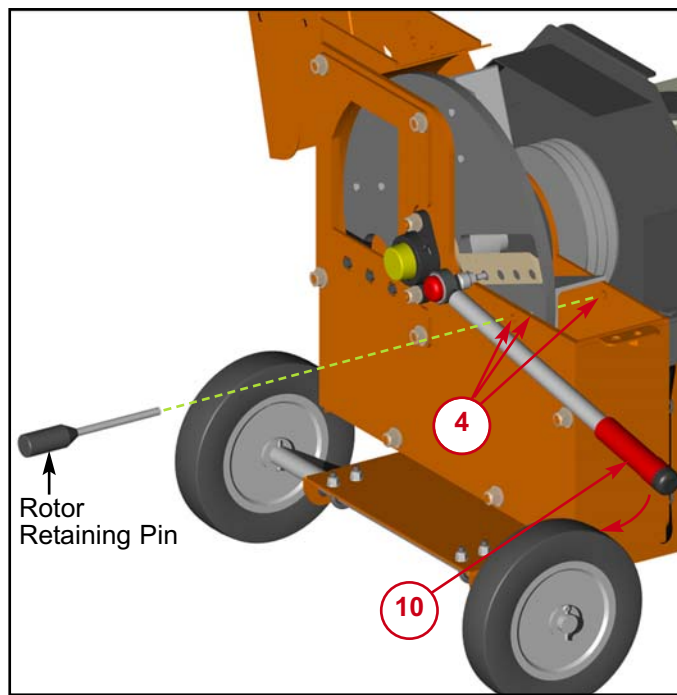
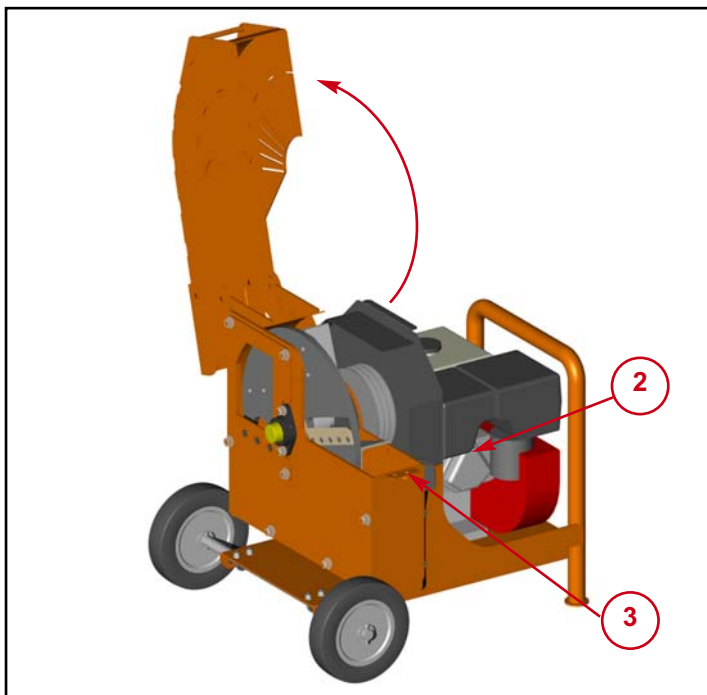




CHANGE BLADES

WARNING

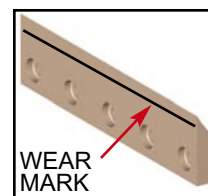
Wear riggers gloves for the blade changing operation.



1. Turn engine off, as per instructions on page 13.
2. Pull the plug cap from the spark plug.
3. Remove the M12 screw that retains the top rotor housing using a 19 mm spanner.
4. Turn the rotor by hand using the fan blades so that holes (4) are aligned and insert the 2496F Rotor Retaining Pin (supplied in tool kit).
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.
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 screws being replaced are not damaged. If so, these should be renewed.
9. Apply a thin layer of copper grease to the entire screw thread.
10. **Retighten the screws to 29Nm (22lb/ft)**
This torque setting is vitally important to ensure your bolts come out at a later date. Timberwolf recommend you purchase a torque wrench for this and other jobs on the chipper.
11. Remove Rotor Retaining Pin.
12. Close rotor housing and replace retaining screw.
13. 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.





CHECK FITTINGS

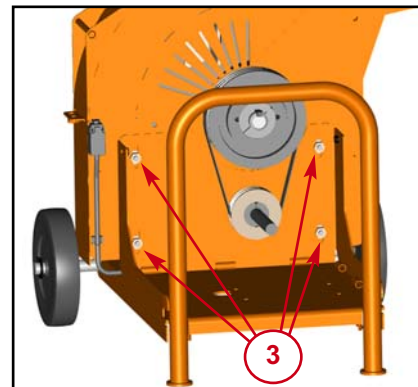
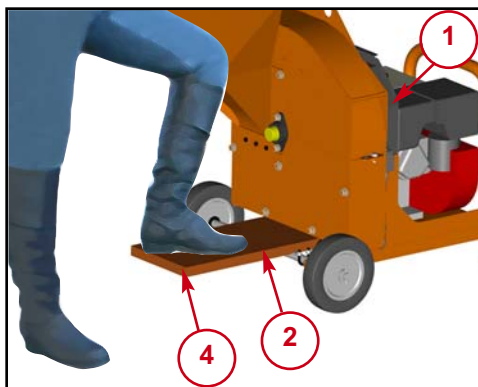
The Timberwolf TW 13/75G is subject to large vibrations during the normal course of operation. Consequently there is always a possibility that nuts and bolts will work themselves loose. It is important that periodic checks are made to ensure the security of all fasteners. Fasteners should be tightened using a torque wrench to the required torque (see below). **Uncalibrated torque wrenches can be inaccurate by as much as 25%. It is therefore essential that a calibrated torque wrench is used to achieve the tightening torques listed below.**

	Size	Pitch	Head	Torque lbft	Torque Nm
Rotor Housing Clamp	M12	Standard	19 mm Hex	60	80
Blade Bolts	M8	Standard	T40 Torq	22	29
Funnel Retaining Nuts	M12	Standard	19 mm Hex	60	80
General	M8	Standard	13 mm Hex	17	23
General	M10	Standard	17 mm Hex	34	46
General	M12	Standard	19 mm Hex	60	80

TENSION DRIVE BELTS

NOTE: There will normally be a rapid drop in tension during run-in period for new belts. When new belts are fitted, check the tension every 2 - 3 hours and adjust until the tension remains constant.

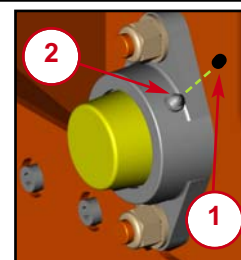
Belt failures due to lack of correct tensioning will not be covered under your Timberwolf warranty.



1. Remove the belt guard.
2. Insert a piece of wood approximately 25mm x 150mm x 1200mm (1"x 6"x 48") in the gap as shown.
3. Loosen the four Nyloc nuts located behind the engine.
4. With the chipper firmly supported use the piece of wood to lever the rotor housing upwards.
5. For instructions on checking belt tension & correct belt tension values, please refer to the Timberwolf V-Belt Tensioning Data Table (pg 27).
6. As the belts become taught retighten the four Nyloc nuts.
7. Replace the belt guard.
8. Remove the piece of wood.

GREASING ROTOR BEARINGS

1. Remove rubber cap from front bearing housing grease nipple.
2. Apply 1 pump of grease to bearing.
3. Replace cap.



ANVIL CHANGING

The anvil is an important component in maintaining a consistent machine performance. Inspect it through an open rotor housing. A measure of the wear is how sharp the edge is. If it has become seriously rounded then it is appropriate to change it.

Turning or replacing the anvil should be carried out by a Timberwolf dealer.

**SERVICE SCHEDULE****WARNING**

Always immobilise the machine by stopping the engine and removing the spark plug lead before undertaking any maintenance work.



SERVICE SCHEDULE	Daily Check	25 Hours	50 Hours	100 Hours	250 Hours
Check engine oil - top up if necessary (10W-30).	✓				
Check fuel level.	✓				
Check feed funnel, access cover, belt guard and discharge unit are securely fitted.	✓				
Check tyre pressure is 1.8 Bar (26 psi).	✓				
Check funnel flange and front face.		✓			
Check for tightness front and rear bearing retaining nuts.		✓			
Check for tightness spindle screw in centre of front bearing.		✓			
Check for tightness engine mount bolts.		✓			
Check tension of main drive belts (and tension if necessary).		✓			
Clean air filter foam pre cleaner.		✓			
Check machine to ensure nothing has worked loose.		✓			
Change blades if necessary.		✓			
Check wheel nuts are tight.		✓			
Check all bolts retaining chipper to chassis.		✓			
Repeat 25 hour service.			✓		
Change oil.			✓		
Repeat 25 & 50 hour service.				✓	
Replace oil filter.				✓	
Inspect air filter - replace if necessary.				✓	
Repeat 25 & 50 hour service.					✓
Change spark plugs.					✓

NOTE: Your Timberwolf woodchipper is covered by a full 12 months parts and labour warranty. Subject to correct maintenance and proper machine usage, the bearings are guaranteed for 12 months regardless of hours worked by the machine. In conditions of 'heavy usage' - i.e. in excess of 500 hours per year - it is recommended that the bearings are changed annually to ensure that the machine retains optimum working performance.

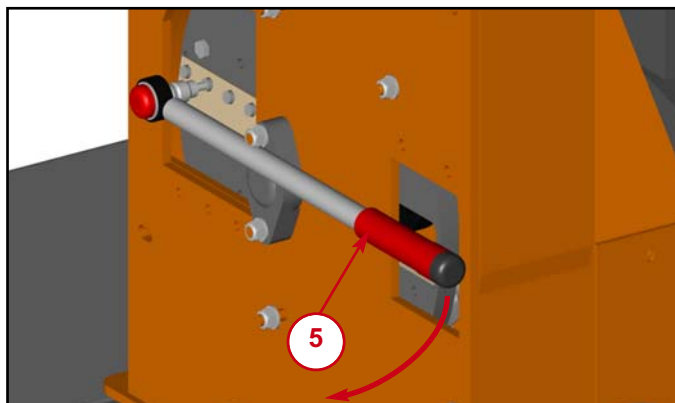
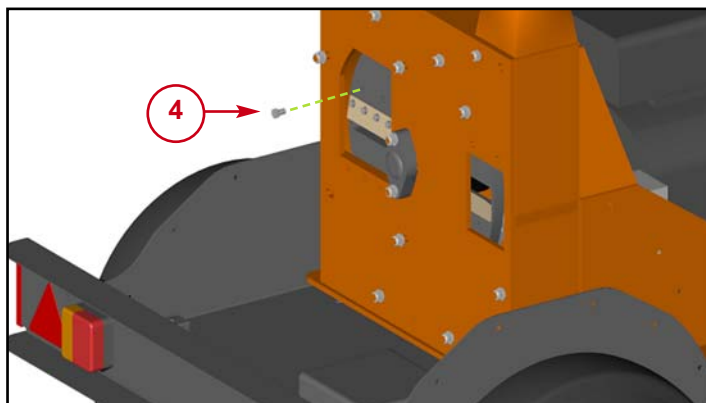


CHANGE BLADES



WARNING

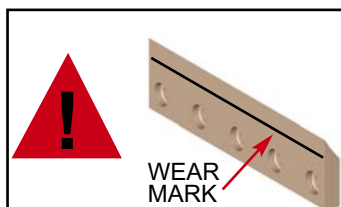
Wear riggers gloves for the blade changing operation.



1. Turn the chipper off and remove the spark plug lead.
2. Remove the feed funnel.
3. Remove blade access cover.
4. Insert M10 screw into rotor to stop it turning.
5. Using the Torx fitting provided loosen the blade screws.
6. Remove the blade carefully.
7. **Before fitting a new blade ensure the seating surface on the rotor is spotlessly**

clean. This is necessary to ensure the blade is always held firm. Damage to the rotor may be caused if this is not checked.

8. Apply a small amount of copper grease to the blade screws.
9. **Using a torque wrench tighten the blade screws to 29 Nm (22 lb/ft).**
10. Remove the M10 screw securing the rotor.
11. Re-install blade access cover.
12. Re-install the feed funnel.



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.

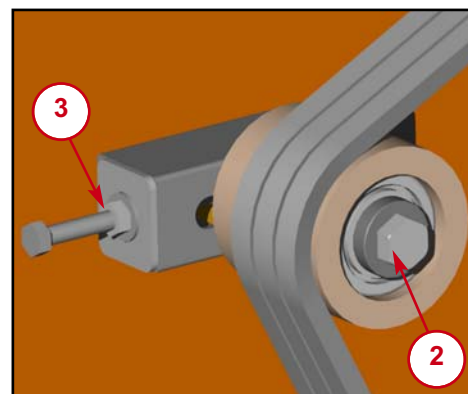


TENSION DRIVE BELTS

NOTE: There will normally be a rapid drop in tension during run-in period for new belts. When new belts are fitted, check the tension every 2 - 3 hours and adjust until the tension remains constant.

Belt failures due to lack of correct tensioning will not be covered under your Timberwolf warranty.

1. Remove belt guard.
2. Loosen bolt in centre of tensioner pulley with a 19 mm spanner so that pulley is able to slide with minimal wobble.
3. Turn nut in end of tensioner pulley slider until correct belt tension is achieved. For instructions on checking belt tension & correct belt tension values, please refer to the Timberwolf V-Belt Tensioning Data Table (pg 29).
4. Re-tighten bolt in centre of tensioner pulley.
5. Re-install belt guard.
6. Run machine and test, recheck belt tension.
7. **NOTE:** Slack drive belts will cause poor performance and belt / pulley wear.





SAFE LIFTING OF THE CHIPPER

The lifting eye is designed to lift the machine's weight only. Do not use hoist hook directly on the lifting eye, use a correctly rated safety shackle. Inspect the lifting eye prior to each use - DO NOT USE IF DAMAGED.



CHECK FITTINGS

The Timberwolf TW 18/100G is subject to large vibrations during the normal course of operation. Consequently there is always a possibility that nuts and bolts will work themselves loose. It is important that periodic checks are made to ensure the security of all fasteners. Fasteners should be tightened using a torque wrench to the required torque (see below). ***Uncalibrated torque wrenches can be inaccurate by as much as 25%. It is therefore essential that a calibrated torque wrench is used to achieve the tightening torques listed below.***

	Size	Pitch	Head	Torque lb/ft	Torque Nm
Blade Bolts	M8	Standard	T40 Torq	22	29
Funnel Retaining Nuts	M12	Standard	19 mm Hex	60	80
General	M8	Standard	13 mm Hex	17	23
General	M10	Standard	17 mm Hex	34	46
General	M12	Standard	19 mm Hex	60	80

blank



ENVIRONMENTAL MANUFACTURING LLP 12 MONTH CHIPPER WARRANTY

WARRANTY PERIOD

The warranty period for the woodchipper commences on the date of sale to the first end user and continues for a period of 12 months. This guarantee is to the first end user only and is not transferable except when an authorised Timberwolf Dealer has a woodchipper registered with Environmental Manufacturing LLP as a hire chipper or long term demonstrator – in these situations they are duly authorised to transfer any remaining warranty period to their first end user. Any warranty offered by the Timberwolf Dealer beyond the original 12 month period will be wholly covered by said Dealer.

LIABILITY

Our obligation under this warranty is limited to repair at Environmental Manufacturing LLP premises or at our option an Environmental Manufacturing LLP approved Timberwolf dealer. No liability will be accepted for special, indirect, incidental, or consequential loss or damages of any kind.

WARRANTY STATEMENT

Environmental Manufacturing LLP warrants to the first end user that;

- Your woodchipper shall be designed, built and equipped, at the point of sale, to meet all current applicable regulations.
- Your chipper shall be free from manufacturing defects both in materials and workmanship in normal service for the period mentioned above.

Warranty will not apply to a failure where normal use has exhausted the life of a component.

Engine units are covered independently by their respective manufacturer warranties.

OWNERS WARRANTY RESPONSIBILITIES

As the owner of an Environmental Manufacturing LLP woodchipper you are responsible for the following;

- Operation of the woodchipper in accordance with the Environmental Manufacturing LLP instruction manual.
- Performance of the required maintenance listed in your Environmental Manufacturing LLP instruction manual.
- In the event of a failure the Environmental Manufacturing LLP authorised Timberwolf dealer is to be notified within 10 days of failure and the equipment is to be made available for unmolested inspection by the dealer technician.

WARRANTY RESTRICTIONS

The Environmental Manufacturing LLP warranty is restricted to the first end user only and is not transferable except when an authorised Timberwolf Dealer has a woodchipper registered with Environmental Manufacturing LLP as a hire chipper or long term demonstrator – in these situations they are duly authorised to transfer any remaining warranty period to their first end user.

The Environmental Manufacturing LLP warranty may be invalidated if any of the following apply;

- The failed parts or assembly is interfered with in any way.
- Normal maintenance has not been performed.
- Incorrect reassembly of components.
- The machine has undergone modifications not approved in writing by Environmental Manufacturing LLP.
- In the case of tractor driven equipment, use has been on an unapproved tractor.
- Conditions of use can be deemed abnormal.
- The machine has been used to perform tasks contrary to those stated in the Environmental Manufacturing LLP instruction manual.

WARRANTY SERVICE

To obtain warranty service please contact your nearest Environmental Manufacturing LLP approved Timberwolf dealer. To obtain details of the nearest facility please contact Environmental Manufacturing LLP at the address on the front of this manual.

These warranty terms are in addition to and not in substitution for and do not affect any right and remedies which an owner might have under statute or at common law against the seller of the goods under the contract by which the owner acquired the goods.



Environmental Manufacturing LLP

Entec House,
Tomo Industrial Estate,
Stowmarket,
Suffolk IP14 5AY
Tel: 01449 765800 Fax: 01449 765801

E C Declaration of Conformity



Environmental Manufacturing LLP as the designer and manufacturer, certifies that the machine stipulated below complies with all the relevant provisions of the:


Machinery Directive; 2006/42/EC (& other relevant directives)

and the National Laws and Regulations adopting these directives.

Designer/Manufacturer : Environmental Manufacturing LLP
Description of Machinery : Self-powered portable machine intended to chip up tree waste prior to disposal.
Model : TW 13/75G
Serial No. Serial Manufacture

BSI Transposed Harmonised Standards applied: (including parts/clauses of):

BS EN 12100-1: 2003 Safety of Machinery- Basic concepts, BS EN 13857-1: 2008 Safety of Machinery-Safety distances to danger zones, BS EN 60204-1: 1998 Safe electrical practices, BS EN 13732-1:2006 Safety of Machinery - Temperatures of touchable surfaces, BS EN 13849-1: 2008 - Safety of Machinery - Safety related parts of control systems, BS EN 982: 1996 - Safety of Machinery - Hydraulics, BS EN 1088: 1995 - Safety of Machinery - Interlocking devices, BS EN 13525: 2005 - Forestry Machinery - Wood chippers - Safety.

"Responsible" Person empowered to sign:  Mr. Jeff Haines
Position in Company: Technical Director

Date: 1st December 2009

Environmental Manufacturing LLP

Entec House,
Tomo Industrial Estate,
Stowmarket,
Suffolk IP14 5AY
Tel: 01449 765800 Fax: 01449 765801

E C Declaration of Conformity



Environmental Manufacturing LLP as the designer and manufacturer, certifies that the machine stipulated below complies with all the relevant provisions of the:


Machinery Directive; 2006/42/EC (& other relevant directives)

and the National Laws and Regulations adopting these directives.

Designer/Manufacturer : Environmental Manufacturing LLP
Description of Machinery : Self-powered portable machine intended to chip up tree waste prior to disposal.
Model : TW 18/100G
Serial No. Serial Manufacture

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"Responsible" Person empowered to sign:  Mr. Jeff Haines
Position in Company: Technical Director

Date: 1st December 2009





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**ELKOPLAST
ROMANIA**

IDENTIFICATION PLATE 25

IDENTIFICATION PLATE

	ENVIRONMENTAL MANUFACTURING LLP STOWMARKET, SUFFOLK IP14 5AY UK		
MODEL	<input type="text"/>		
SERIAL NO.	<input type="text"/>		
CARR. TYP/SN.	<input type="text"/>	GROSS WEIGHT	<input type="text"/>
NOM. POWER	<input type="text"/>	DATE	<input type="text"/>

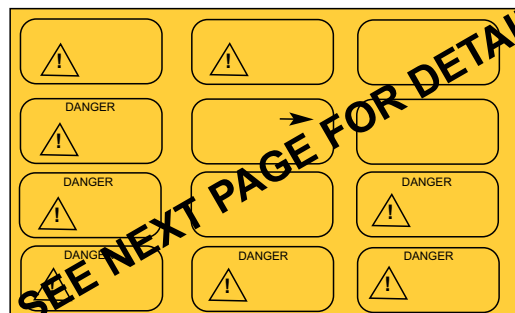


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DECALS

26



616

617

670

671

TIMBERWOLF

x 2



OPERATING INSTRUCTIONS

READ THE INSTRUCTION MANUAL.

THE INSTRUCTION MANUAL WITH THIS MACHINE CONTAINS IMPORTANT OPERATING, MAINTENANCE AND HEALTH AND SAFETY INFORMATION.

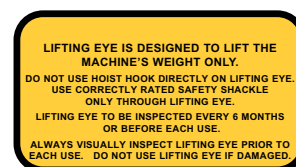
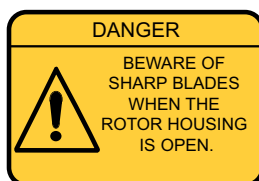
FAILURE TO FOLLOW THE INFORMATION CONTAINED IN THE INSTRUCTION MANUAL MAY LEAD TO DEATH OR SERIOUS INJURY.

1136

1363

1522

1662

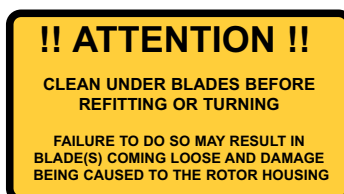


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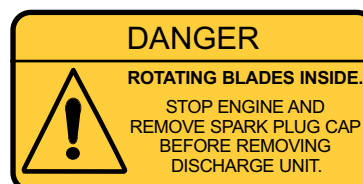
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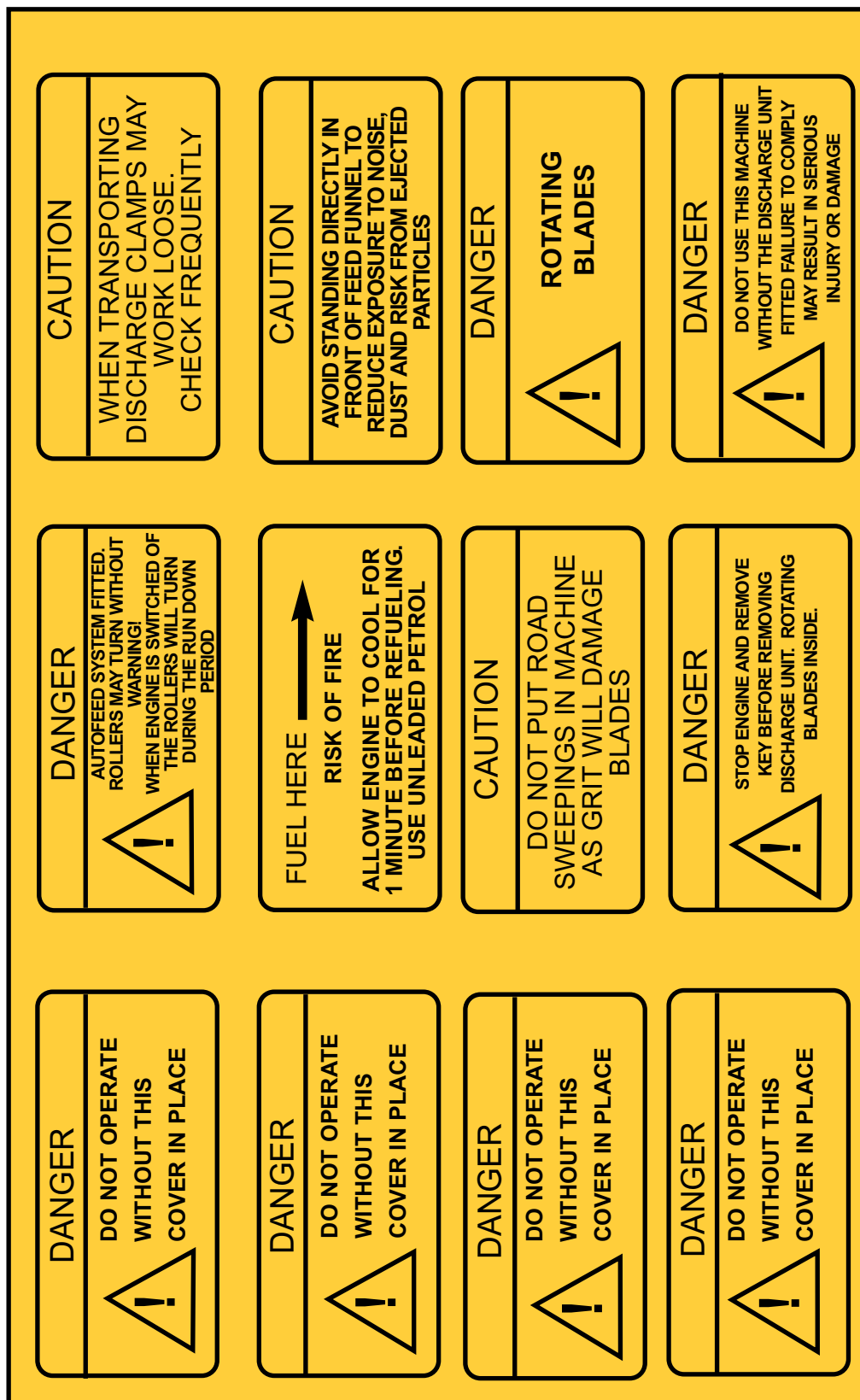
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**ELKOPLAST
ROMANIA**

DECALS

27

671 - these individual decals are supplied as a set, they may not all apply to your machine.



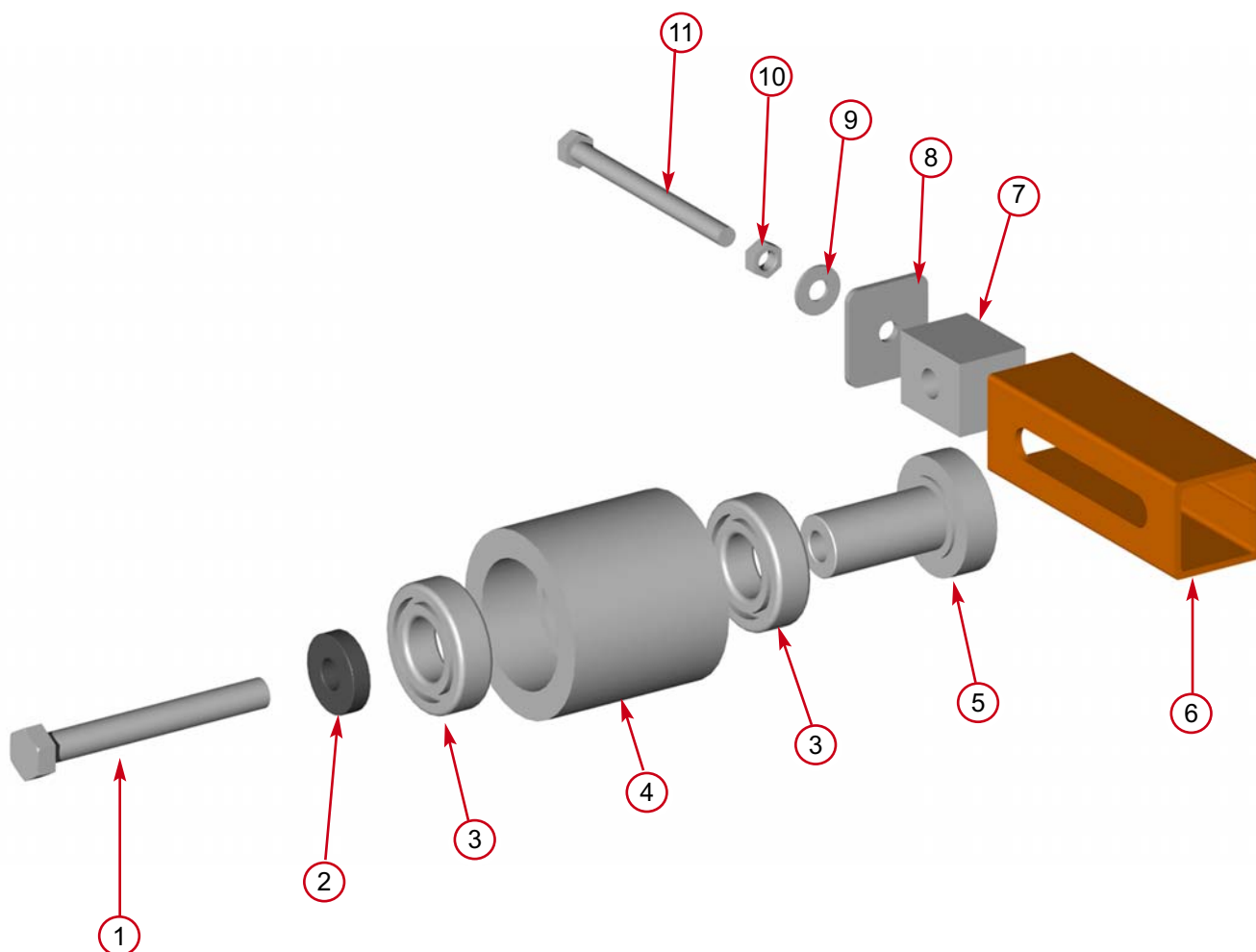
TIMBERWOLF

GRAVITY MACHINE

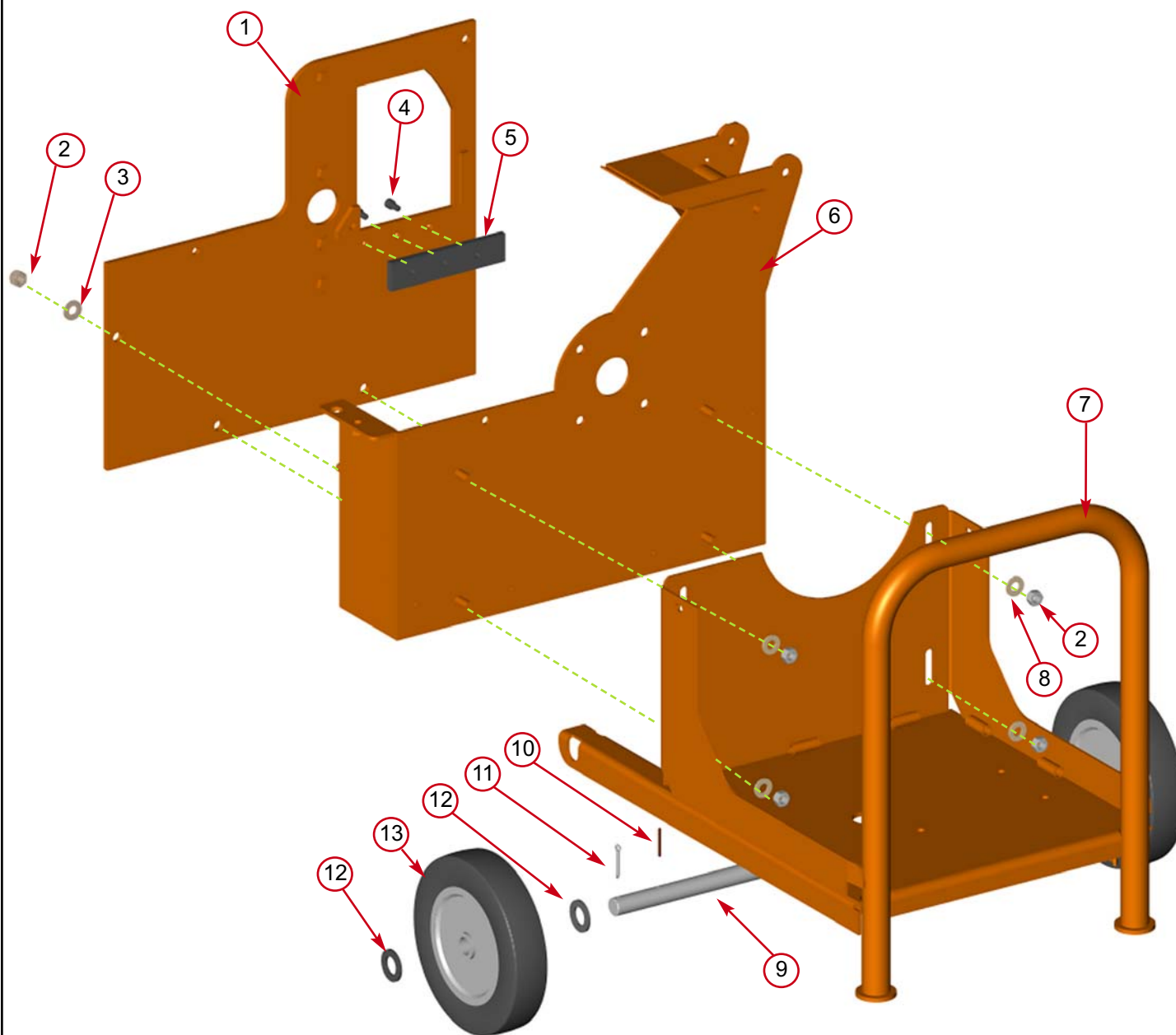
PARTS LISTS

The following illustrations are for parts identification only. The removal or fitting of these parts may cause a hazard and should only be carried out by trained personnel.

	<i>Page No.</i>
BELT TENSIONER - 18/100G	29
CHASSIS / ROTOR HOUSING - 13/75G	30
CHASSIS - 18/100G	31
DECALS	26 & 27
DISCHARGE - 18/100G	32
DRIVE TRAIN/ENGINE - 13/75G	33
DRIVE TRAIN - 18/100G	34
ENGINE - 18/100G	35
FUNNEL / DISCHARGE - 13/75G	36
FUNNEL / GUARDS - 18/100G	37
ROTOR - 13/75G	38
ROTOR - 18/100G	39
ROTOR HOUSING - 18/100G	40
V- BELT TENSIONING TABLE	41



Item	Part No	Part Name	Q'ty
1	2988	M8/90 Bolt	1
2	0415	Heavy Washer	1
3	0491	Bearing 6205	2
4	0411M	Pulley	1
5	0472M	Pulley Boss	1
6	<i>N/A to purchase</i>	Slider	1
7	0469MS	Slider Block	1
8	1342PS	End Plate	1
9	<i>made in production</i>	Washer	1
10	0476	Plain M8 Nut	1
11	2988	M8/90 Bolt	1



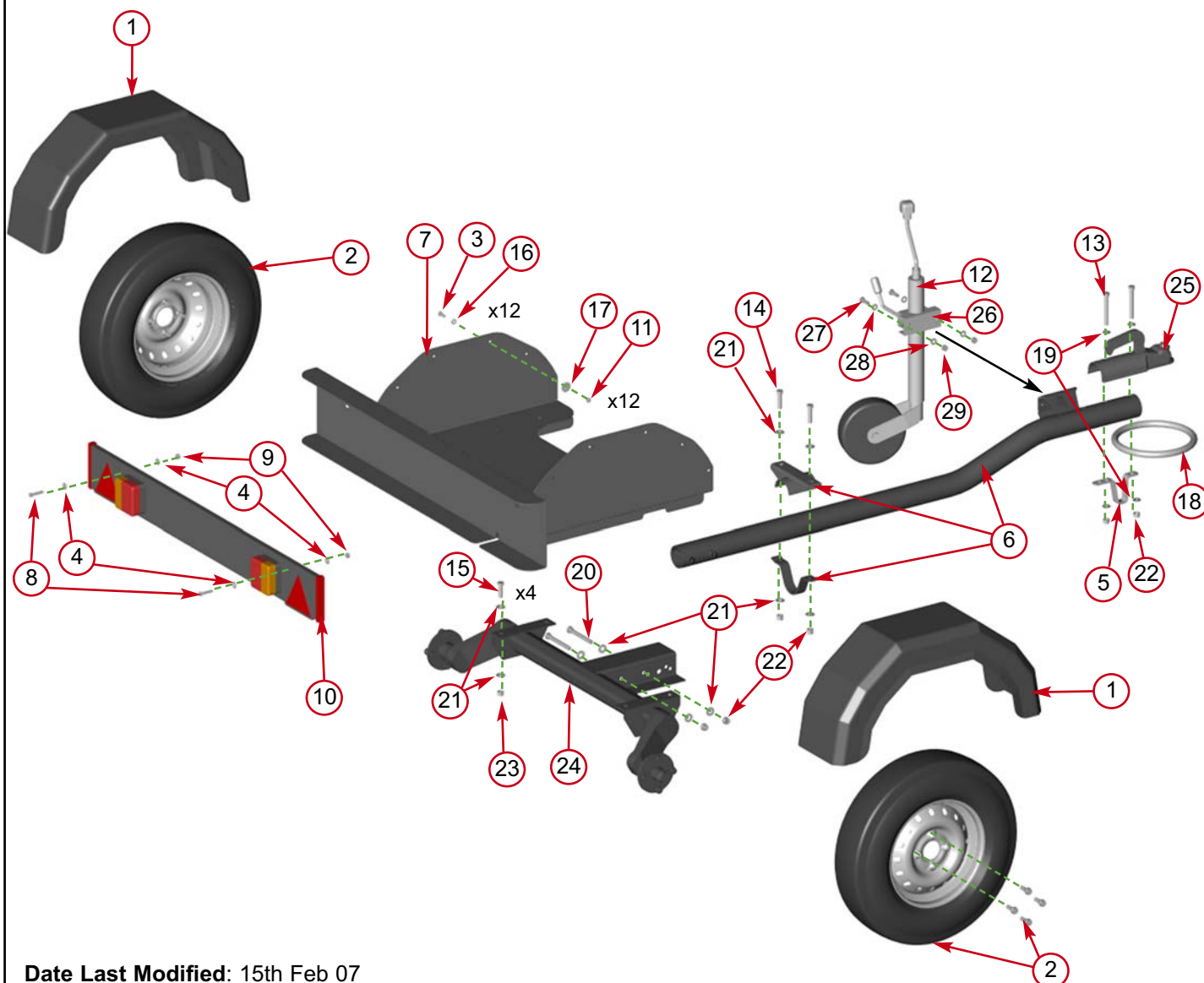
Item	Part No	Part Name	Q'ty
1	1567FO	Front Plate	1
2	0644	M12 P Nyloc Nut	4
3	0702	M12 A Washer	3
4	0345	Capheads	3
5	0105MH	Gravity Anvil	1
6	18452FO	Main Rotor Housing	1
7	2475FO	Chassis	1
8	0704	M12 C Washer	4
9	2476MS	Axle	1
10	0068M	Roll Pin	4
11	0528	Split Pin	2
12	0707	M24 A Washer	4
13	2478	Wheel	2



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**ELKOPLAST
ROMANIA**

CHASSIS - 18/100G

31

Date Last Modified: 15th Feb 07

Item	Part No	Part Name	Q'ty
1	0048	Mudguard	2
2	0200	Wheel	2
3	0346	M8/20 Bolt	12
4	0712	M8 C Washer	4
5	17611	Skid Plate	1
6	17517	Swan Neck Drawbar	1
7	4235FB	Chassis	1
8	0352	M8/40 Bolt	2
9	0479	M8 P Nyloc Nut	2
10	0445	Light Board	1
11	0481	M8 T Nyloc Nut	16
12	17478	Jockey Wheel	1
13	0313	M12/100 Bolt	2
14	0356	M12/50 Bolt	2
15	0431	M12/40 Bolt	4

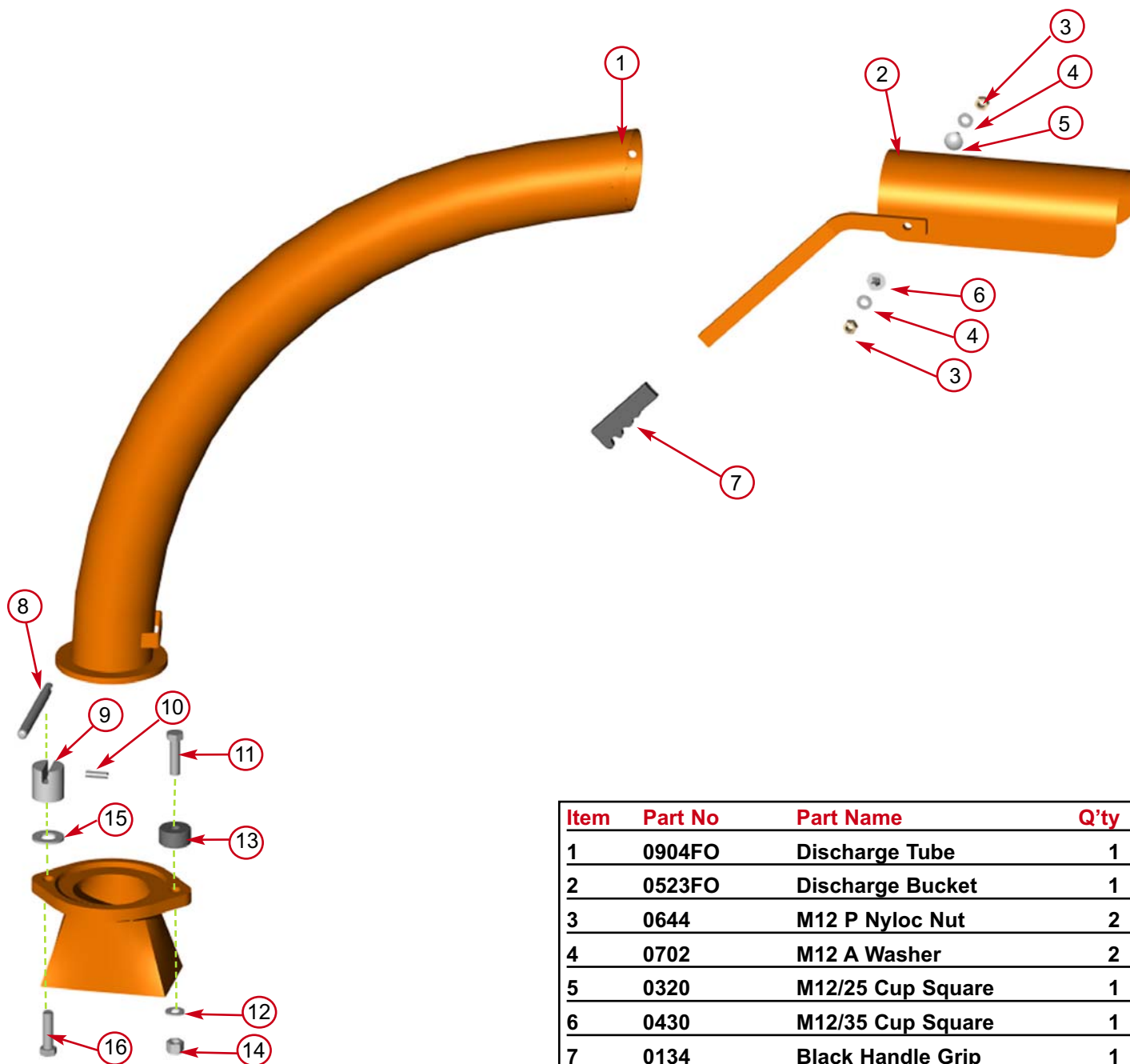
Item	Part No	Part Name	Q'ty
16	0711	M8 A Washer	12
17	0714	M8 Mudguard Washer	12
18	0018	Tow Hitch Safety Cable	1
19	0702	M12 A Washer	4
20	0397	M12/120	2
21	0704	M12 C Washer	16
22	0644	M12 P Nyloc Nut	6
23	0045	M12 T Nyloc Nut	4
24	17516	Axle Unbraked	1
25	17518	Tow Head	1
26	17515	Jockey Wheel Clamp	1
27	0382	M10/30 Bolt	2
28	0701	M10 A Washer	4
29	4345	M10 P Nyloc Nut	2



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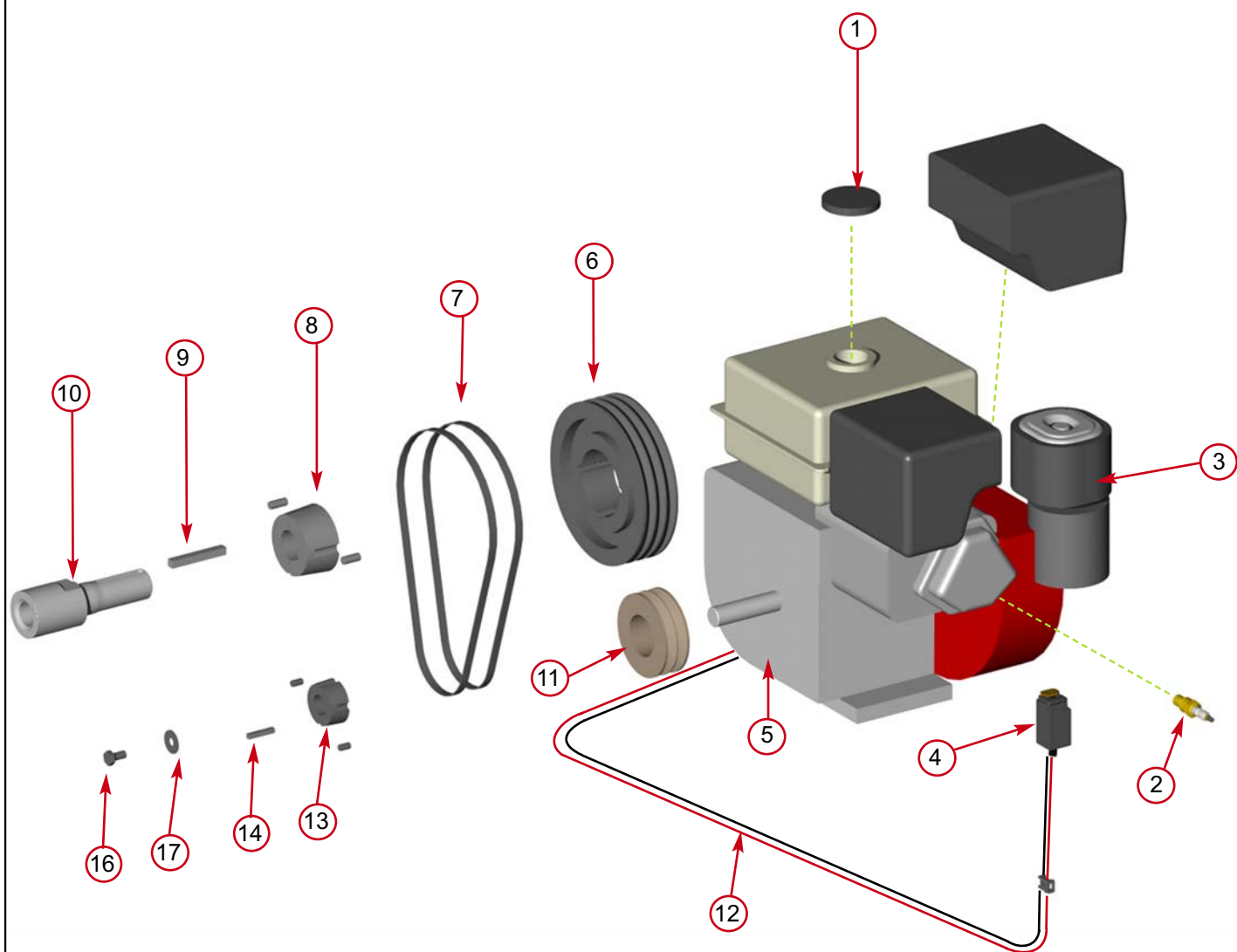
**ELKOPLAST
ROMANIA**

DISCHARGE - 18/100G 32



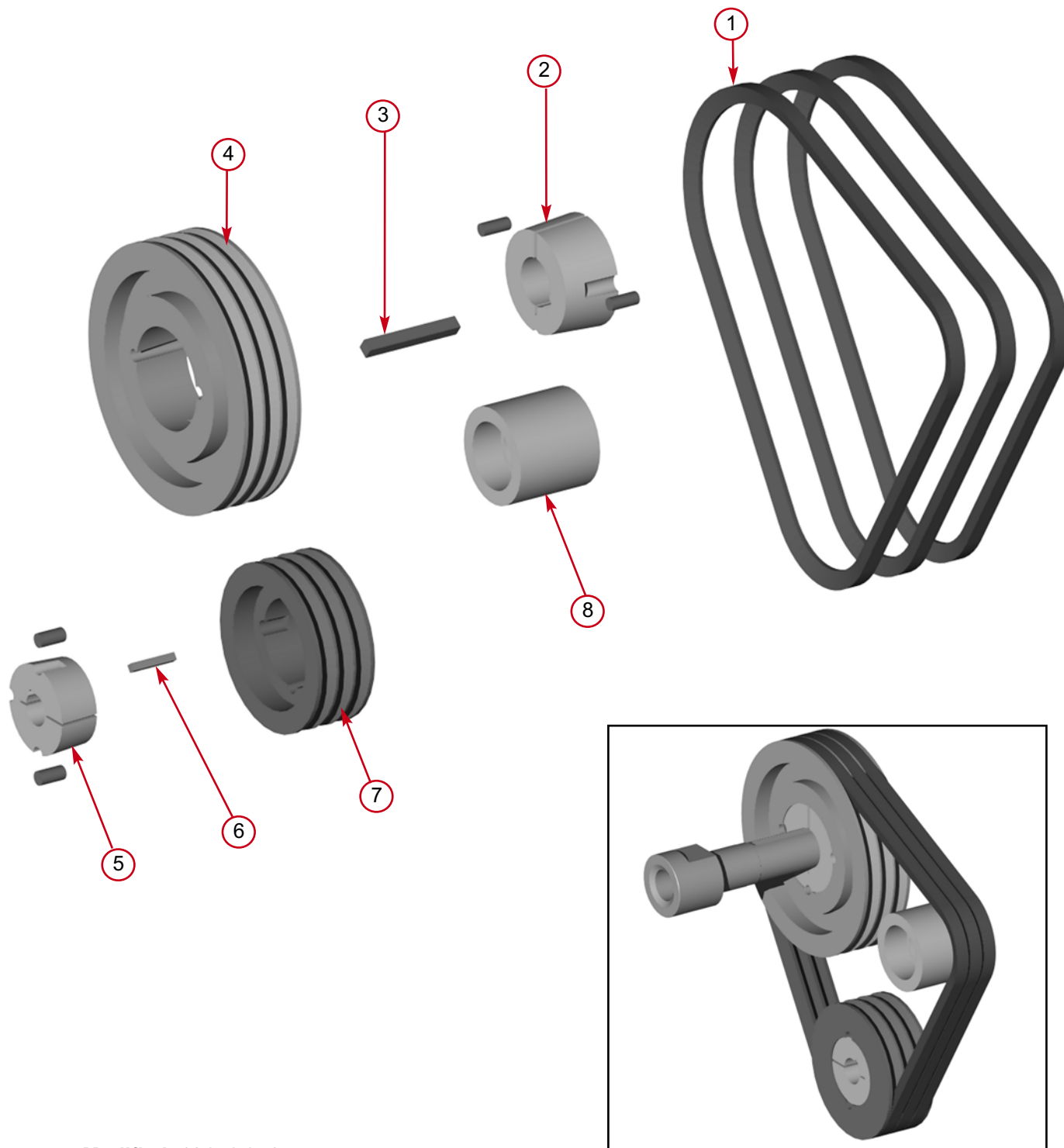
Item	Part No	Part Name	Q'ty
1	0904FO	Discharge Tube	1
2	0523FO	Discharge Bucket	1
3	0644	M12 P Nyloc Nut	2
4	0702	M12 A Washer	2
5	0320	M12/25 Cup Square	1
6	0430	M12/35 Cup Square	1
7	0134	Black Handle Grip	1
8	1649MS	Discharge Clamp Handle	1
9	4109M	M16 Clamp Nut	1
10	4131	Roll Pin	1
11	0434	M16/70 Hex Bolt	1
12	1354	M16 C Washer	1
13	2837MS	Clamp Nut Small	1
14	1511	M16 P Nyloc Nut	1
15	0832	M24 Washer	1
16	0333	M16/60 Hex Bolt	1

Date Last Modified: 19th July 05



Date Last Modified: 28th July 05

Item	Part No	Part Name	Q'ty	Item	Part No	Part Name	Q'ty
1	supp'd with engine	Fuel Cap	1	9	4231	Rotor Shaft Key	1
2	supp'd with engine	Spark Plug	1	10	4280M	Rear Shaft	1
3	supp'd with engine	Air Filter	1	11	1135	Pulley 118-2 SPA	1
4	1348	Safety Switch	1	12	2494	Stop Loom	1
5	1172	Honda Engine	1	13	0405	Bush 1610	1
6	1351	Pulley 200-3 SPA	1	14	0061	Engine Shaft Key	1
7	1533	Belt 900 XPA 2	2	16	17283	Long Socket Head Screw	1
8	0410	Bush 2517	1	17	4344	M10/30 Washer	1



Date Last Modified: 12th July 05

Item	Part No	Part Name	Q'ty
1	17279	Belt Vee SPA 1060	3
2	0410	Taper Lock Bush 2517 38 mm	1
3	0072	Key 10 x 10 x 80	1
4	1351	Pulley 200 x 3 SPA	1

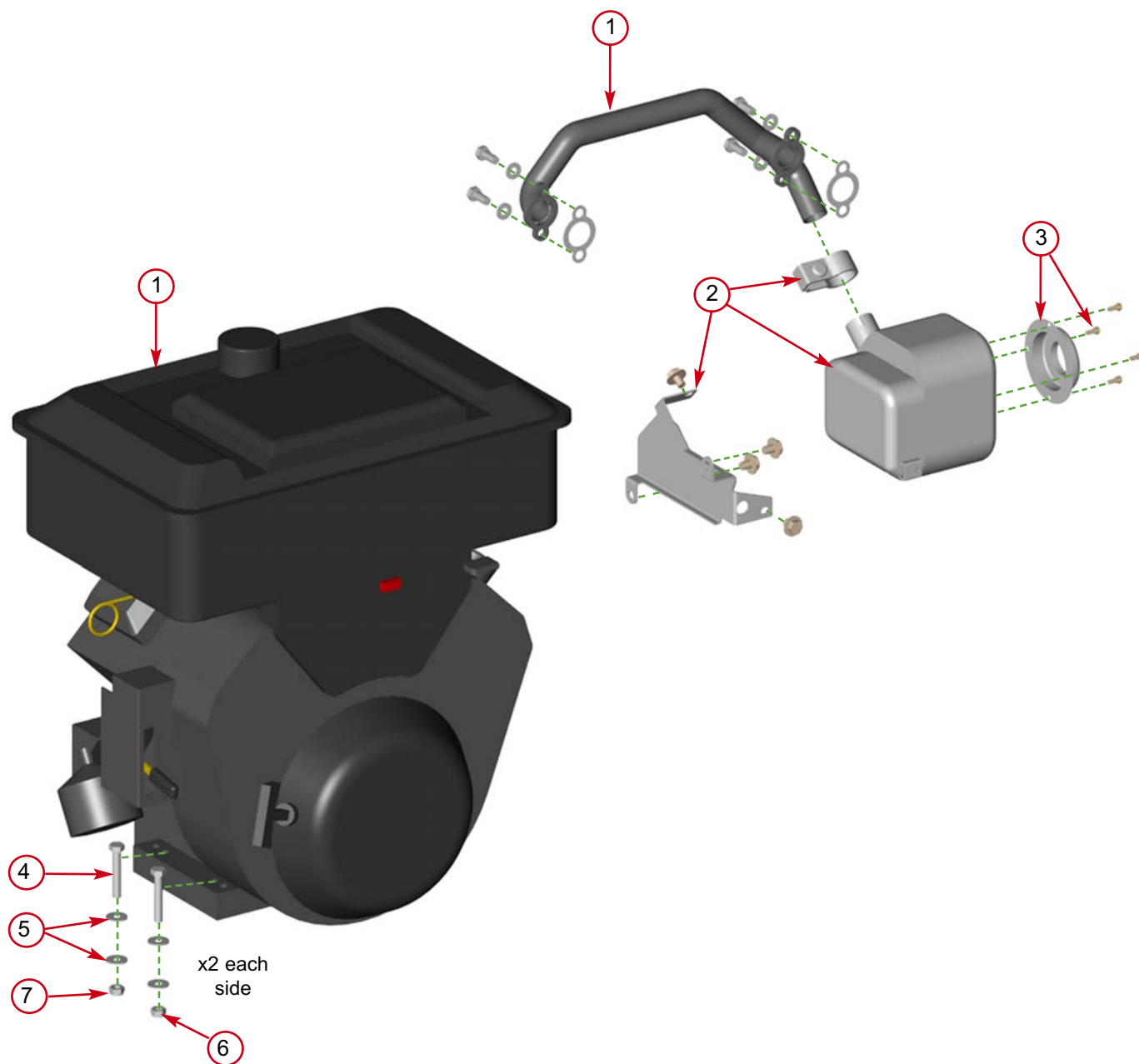
Item	Part No	Part Name	Q'ty
5	0408	Taper Lock Bush 2012 1"	1
6	0061	Key 1/4 x 1/4 x 1/2	1
7	1609	Pulley 125 x 3 SPA	1
8	0411M	Pulley Tension	1



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**ELKOPLAST
ROMANIA**

ENGINE - 18/100G

35

Item	Part No	Part Name	Q'ty
1	4220	Engine	1
2	4221	Muffler Kit	1
3	4279	Muffler Deflector	1
4	0353	M8/50 Bolt	4
5	0712	M8 C Washer	8
6	0481	M8 T Nyloc Nut	2
7	0479	M8 P Nyloc Nut	2

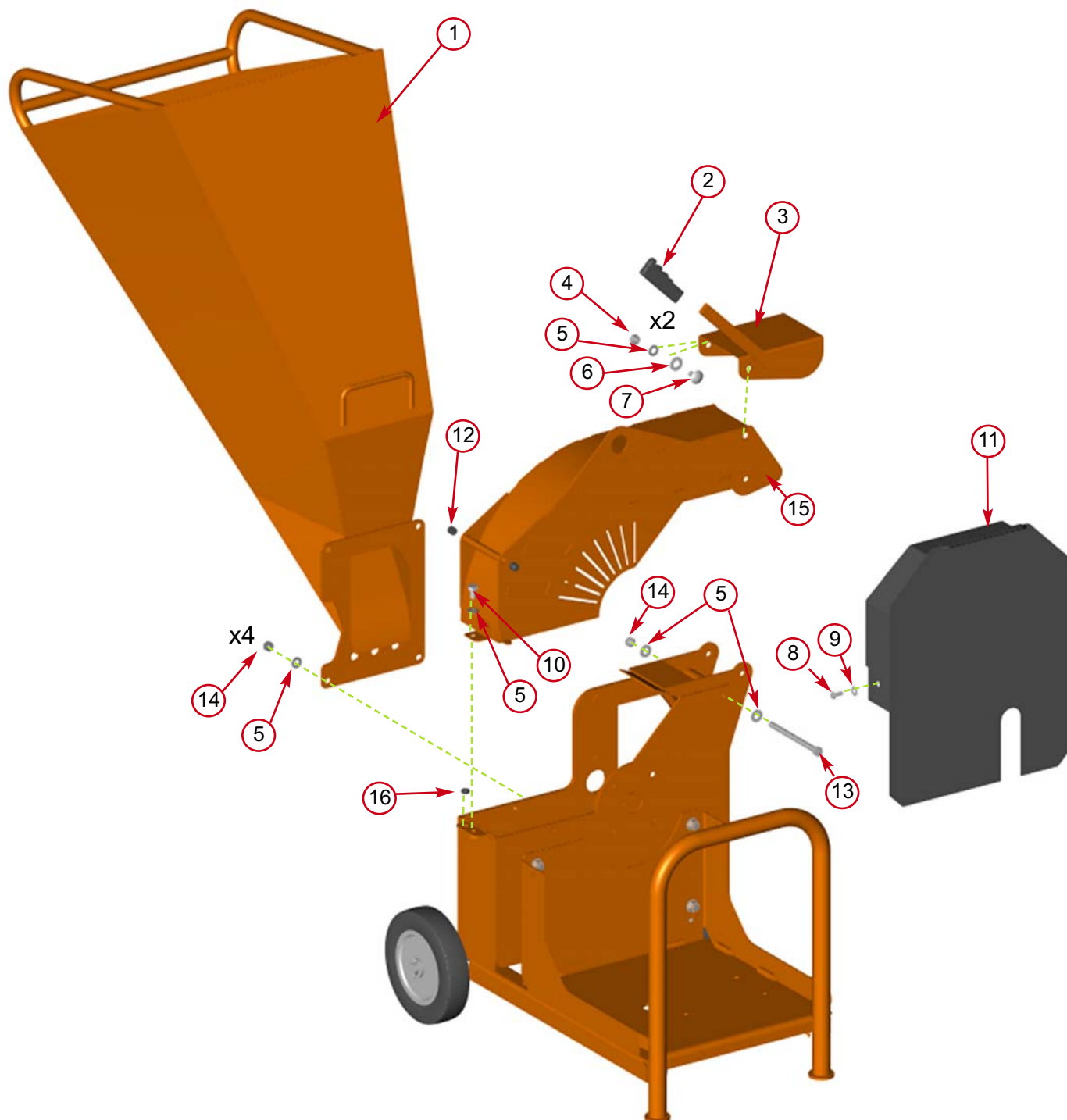
Date Last Modified: 3rd Aug 05



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ROMANIA**

FUNNEL/DISCHARGE - 13/75 36



Date Last Modified: 24th Jan 08

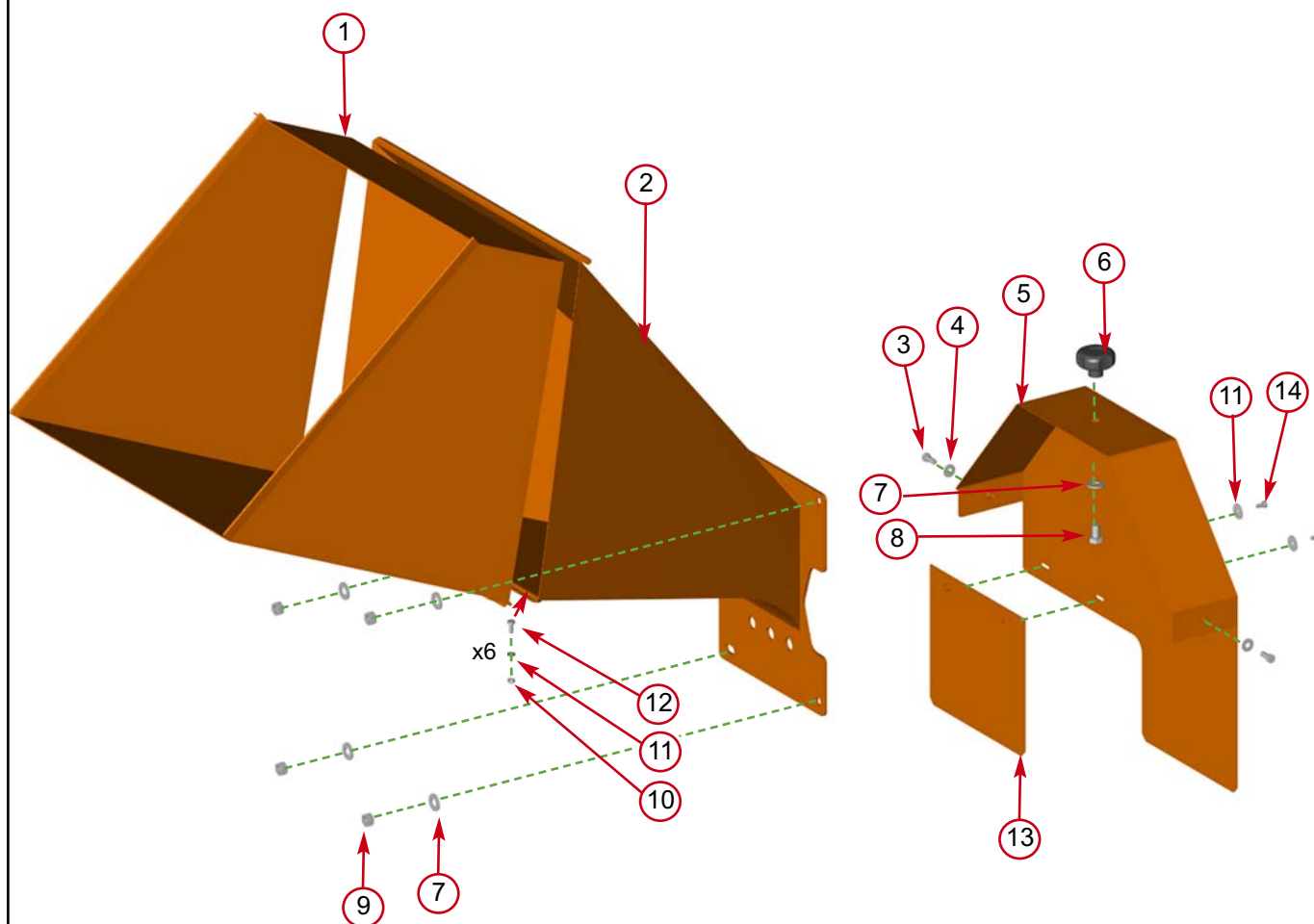
Item	Part No	Part Name	Q'ty	Item	Part No	Part Name	Q'ty
1	1642FO	Funnel	1	9	0712	M8 C Washer	2
2	0134	Plastic Grip	1	10	0318	M12/20 Bolt	1
3	1052FO	Discharge Bucket	1	11	2000FB	Belt Guard	1
4	0045	M12 T Nyloc Nut	2	12	2493	13 mm Plastic Plug	2
5	0702	M12 A Washer	11	13	17336	M12/170 Bolt	1
6	1143	M16 A Washer	2	14	0046	M12 Plain Nut	5
7	0320	M12/25 Cup Square	2	15	18453FO	Discharge	1
8	0346	M8/20 Bolt	2	16	0654	Rubber Grommet	1



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ROMANIA**

FUNNEL/GUARDS - 18/100G 37

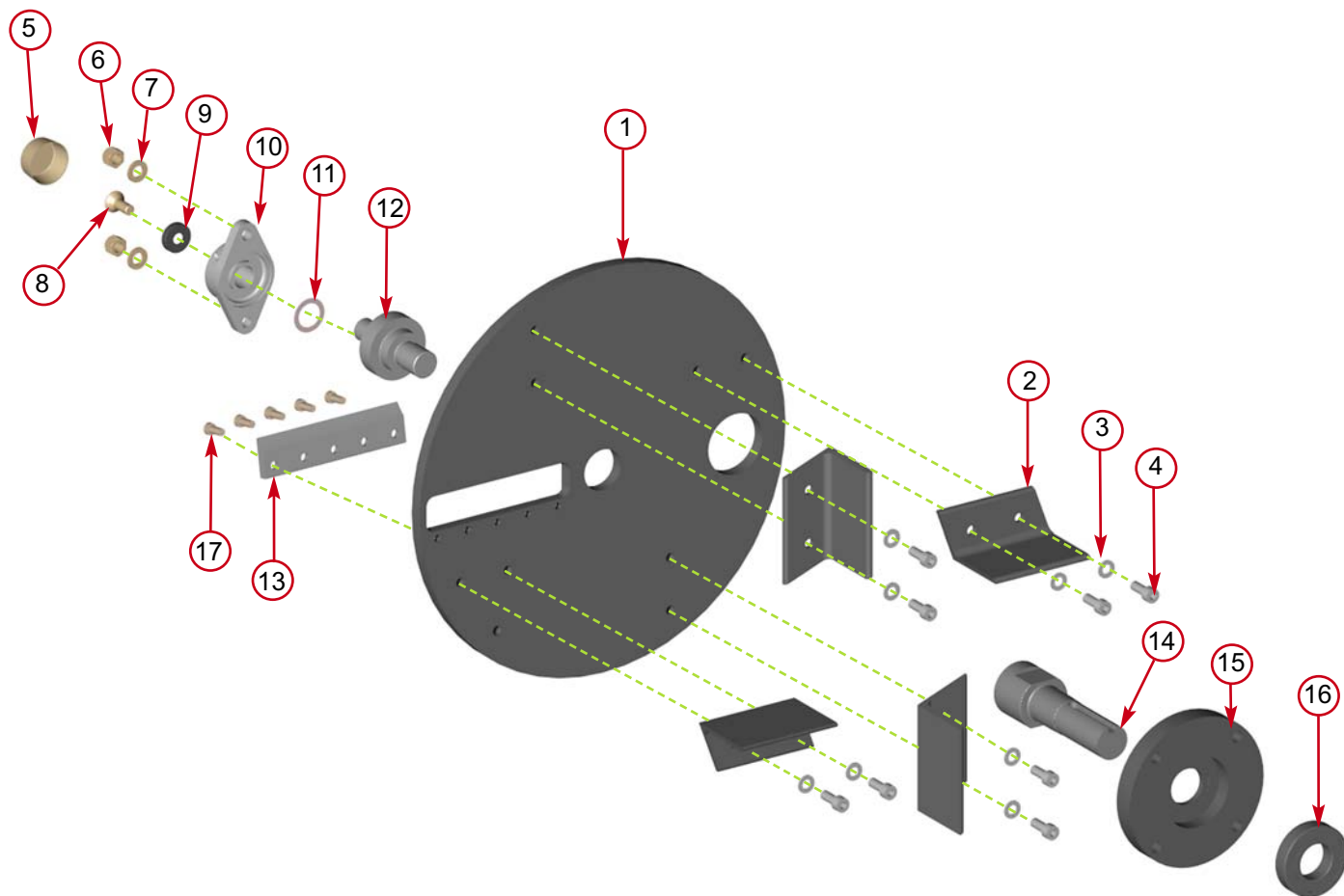


Date Last Modified: 3rd Aug 05

Item	Part No	Part Name	Q'ty	Item	Part No	Part Name	Q'ty
1	0693O	Feed Tray	1	8	0318	M12/20 Bolt	1
2	0691O	Funnel	1	9	0046	M12 Plain Nut	4
3	0346	M8/20 Bolt	4	10	0391	M6 T Nyloc Nut	6
4	0712	M8 C Washer	4	11	0709	M6 C Washer	8
5	0733FO	Belt Guard	1	12	1415	M6/16 Pan Pozi	6
6	0361	Knob	1	13	1070FO	Belt Guard Fill In	1
7	0704	M12 C Washer	5	14	1658	M6/12 Bolt	2



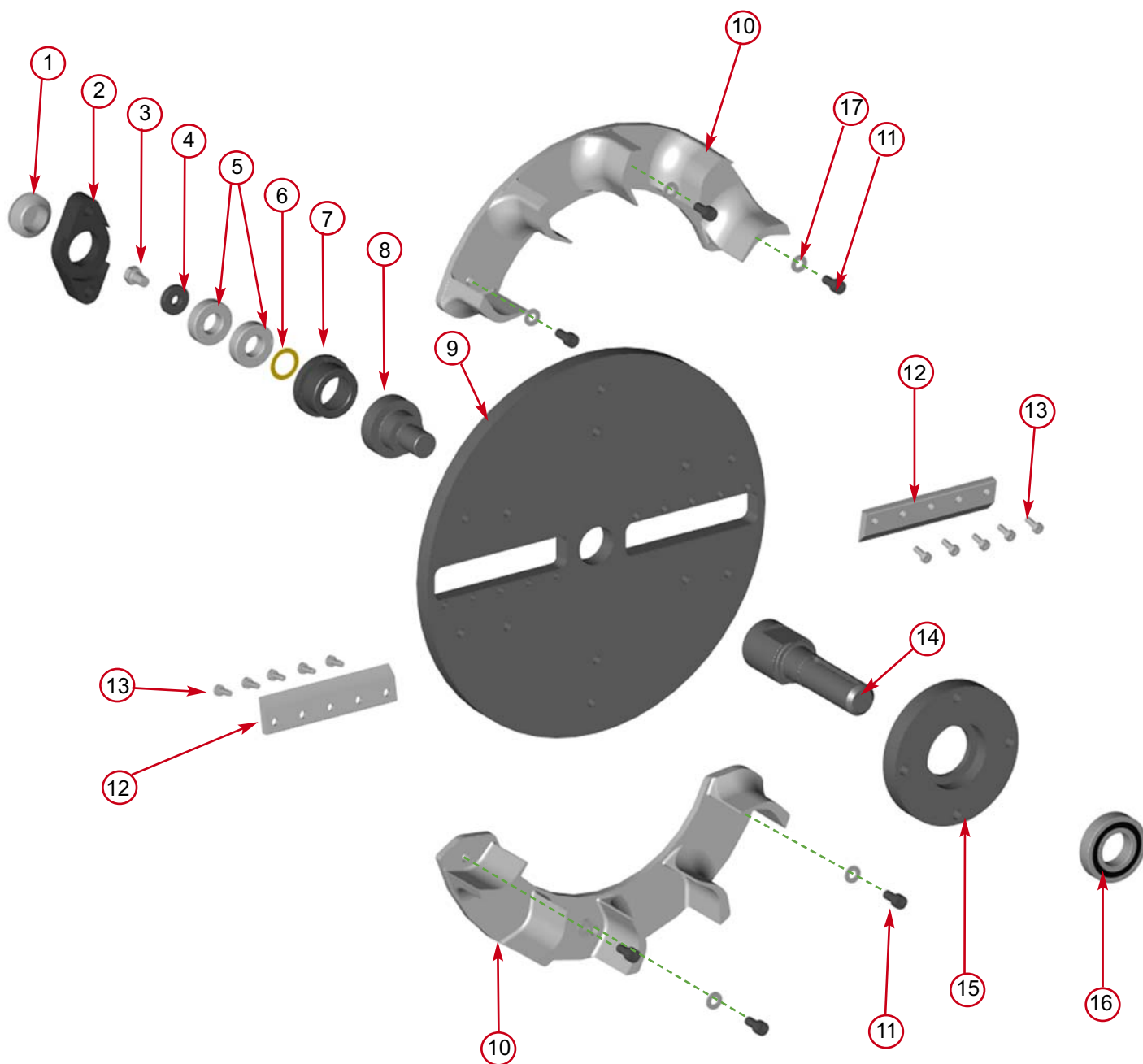
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Date Last Modified: 17th Nov 05

Item	Part No	Part Name	Q'ty
1	17342M	Rotor	1
2	17317F	Fan Blade	4
3	0701	M10 A Washer	8
4	0305	M10/25 Caphead	8
5	0633	Bearing Cap	1
6	0644	M12 P Nyloc Nut	2
7	0702	M12 A Washer	2
8	0428	M12/30 C'sunk Patched	1
9	0713	Heavy C'sunk Washer	1

Item	Part No	Part Name	Q'ty
10	0648	Bearing Front SFT25	1
11	0796	20 thou Shim	As Req'd
12	1061M	Nose Shaft	1
13	071MH	Blade	1
14	4280M	Rear Shaft	1
15	4063MCB	Bearing Housing Rear	1
16	0495	Bearing	1
17	0065	M8/20 Blade Bolt	5



Date Last Modified: 30th Oct 08

Item	Part No	Part Name	Q'ty
1	0959	Plastic Cap	1
2	0884MS	Front Bearing Housing	1
3	0318	M12/20 Hex Set	1
4	0415	Heavy Washer	1
5	0491	Bearing 6205	2
6	0796	20 Thou Shim	As Req'd
7	0883MCB	Bearing Cup	1
8	1611M	Nose Shaft	1
9	1083M	Rotor	1

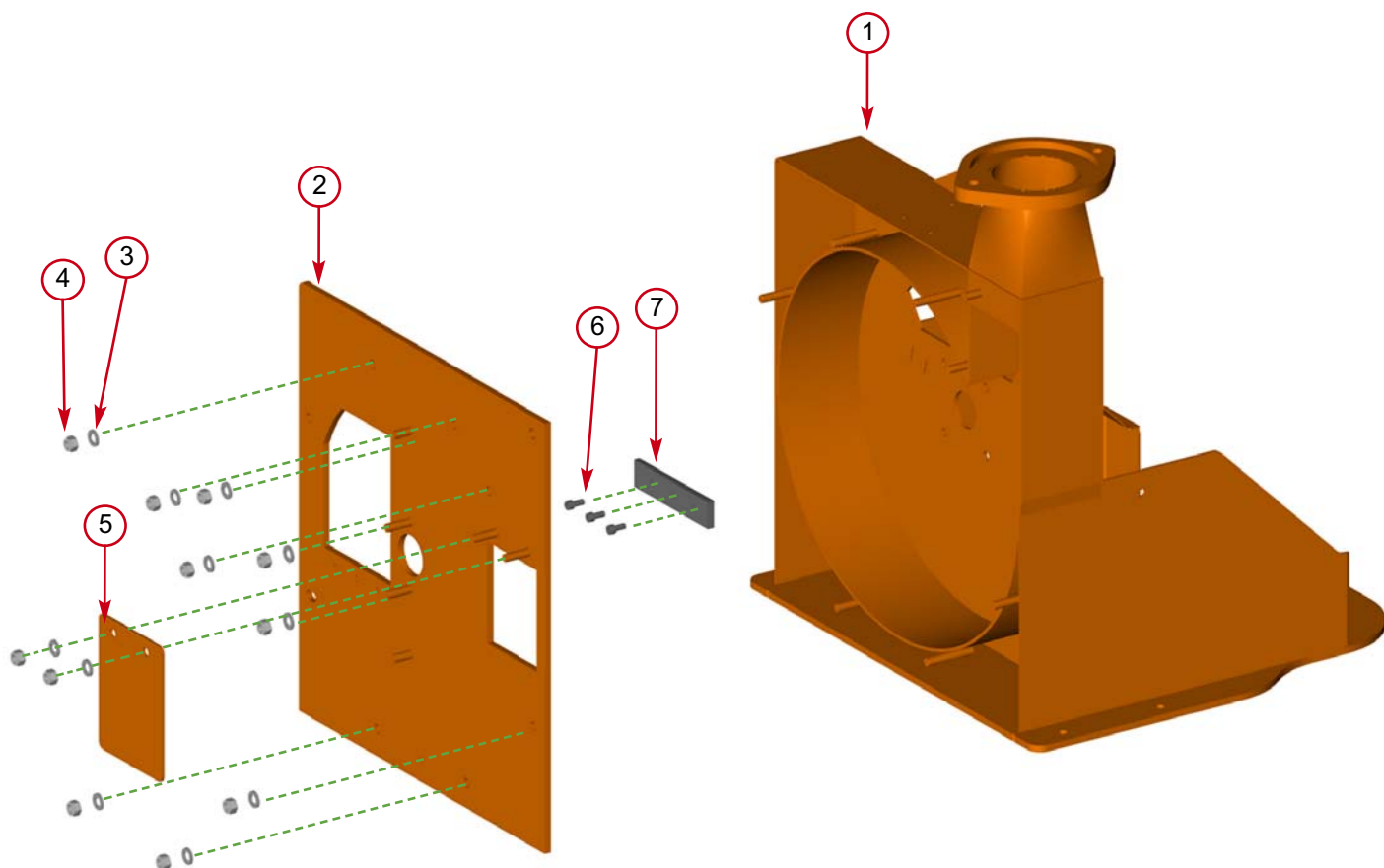
Item	Part No	Part Name	Q'ty
10	1571	Fan Section	2
11	0386	M10/30 Caphead	6
12	0071MH	Blade	2
13	0065	Blade Bolts	10
14	0881M	Rear Shaft	1
15	4063MCB	Rear Bearing Housing	1
16	0495	Bearing 6208	1
17	0781	M10 A Washer	6



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ROMANIA**

ROTOR HOUSING - 18/100G 40



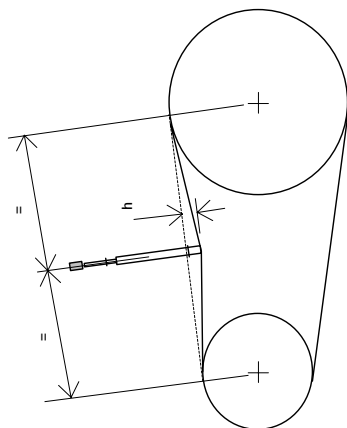
Item	Part No	Part Name	Q'ty
1	18455FO	Rotor Housing	1
2	1096FO	Front Plate	1
3	0702	M12 A Washer	11
4	0045	M12 T Nyloc Nut	11
5	0524O	Access Cover	1
6	0345	M8/18 Socket Caps	3
7	0105MH	Anvil	1

Date Last Modified: 24th Jan 08



V-BELT TENSIONING TABLE 41

TIMBERWOLF V-BELT TENSIONING DATA TABLE



METHOD:

1. SET THE DEFLECTION DISTANCE ON THE LOWER SCALE OF THE TENSION GAUGE SO THAT THE UNDERSIDE OF THE 'O'-RING EQUALS THE 'h' VALUE GIVEN IN THE TABLE BELOW
2. ENSURE THAT THE DEFLECTION FORCE SCALE IS ZERO'D BY PUSHING THE UPPER 'O'-RING ALL THE WAY DOWN
3. PLACE THE TENSION GAUGE IN THE CENTRE OF THE BELT SPAN AS SHOWN IN THE DIAGRAM LEFT
4. PRESS DOWNWARDS ON THE RUBBER BUFFER, DEFLECTING THE BELT UNTIL THE UNDERSIDE OF THE LOWER 'O'-RING IS LEVEL WITH THE BELT BEHIND (USE A STRAIGHT EDGE IF THERE IS ONLY 1 BELT)
5. TAKE THE READING FROM THE DEFLECTION SCALE OF THE TENSION METER (READ AT THE LOWER EDGE OF THE 'O'-RING) & COMPARE THIS VALUE WITH THAT GIVEN IN THE TABLE BELOW
6. TIGHTEN OR LOOSEN BELTS AS REQUIRED FOLLOWING PROCEDURE GIVEN IN THE OPERATOR'S MANUAL

TENSION GAUGES ARE AVAILABLE FROM TIMBERWOLF SPARES, QUOTING PART No. 18091

TIPS ON BELT TIGHTENING:

- A) THERE WILL NORMALLY BE A RAPID DROP IN TENSION DURING THE RUN-IN PERIOD FOR NEW BELTS. WHEN NEW BELTS ARE FITTED, CHECK THE TENSION EVERY 2-3 HOURS & ADJUST UNTIL THE TENSION REMAINS CONSTANT
- B) THE BEST TENSION FOR V-BELT DRIVES IS THE LOWEST TENSION AT WHICH THE BELTS DO NOT SLIP OR RATCHET UNDER THE HIGHEST LOAD CONDITION
- C) TOO MUCH TENSION SHORTENS BELT & BEARING LIFE
- D) TOO LITTLE TENSION WILL AFFECT THE PERFORMANCE OF YOUR MACHINE ESPECIALLY IN RESPECT OF NO-STRESS DEVICES
- E) ENSURE THAT BELT DRIVES ARE KEPT FREE OF ANY FOREIGN MATERIALS
- F) IF A BELT SLIPS - TIGHTEN IT!

TW MODEL No.:		13/7SG	18/100G	125PH	150DH/DHB	150FTR	150VTR	180DH	190FTR	190TDH	190TVGTR	230TR	250DH	PTO100	PTO150	PTO300	S425/S426 SHREDDER
ROTOR BELTS	Belt Mfr / Type	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	Gates Quad Power II	Gates Super HC-MN	Gates Super HC-MN	N/A	Gates Super HC-MN
	Belt Pitch Designation	SPA	SPA	SPA	SPA	SPA	SPA	SPA	SPA	SPA	SPA	SPA	XPB	SPA	SPA		SPB
	Belt Length	900.0	1060.0	1060.0	1060.0	1060.0	1060.0	1232.0	1232.0	1232.0	1232.0	1950.0	3350.0	900.0	900.0		2120.0
	Belt deflection	= h	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	10.0	4.0	4.0		8.0
PUMP BELT	Force reading (Kg)	New belt	3.4 - 3.6	3.1 - 3.3	4.3 - 4.5	4.3 - 4.5	4.3 - 4.5	3.3 - 3.5	3.3 - 3.5	3.9 - 4.1	3.9 - 4.1	3.4 - 3.6	3.5 - 3.7*	3.3 - 3.5	3.8 - 4.0		3.3 - 3.5*
	Used belt		3.0 - 3.2	2.7 - 2.9	3.7 - 4.0	3.7 - 4.0	3.7 - 4.0	2.8 - 3.0	2.8 - 3.0	3.4 - 3.6	3.4 - 3.6	3.0 - 3.2	3.1 - 3.3*	2.9 - 3.0	3.3 - 3.5		2.9 - 3.1*
		Belt Mfr / Type	N/A	N/A	Gates Super HC-MN	Gates Super HC-MN	Gates Super HC-MN	N/A	Gates Super HC-MN	N/A	Gates Super HC-MN	Gates Super HC-MN	N/A	N/A	Gates Super HC-MN	Gates Super HC-MN	N/A
	Belt Pitch Designation			SPA		SPA	SPA		SPA		SPA	SPA			SPA	SPA	
PUMP BELT	Belt Length			950.0		900.0	900.0		925.0		925.0	950.0			950.0	1000.0	
	Belt deflection	= h		4.0		4.0	4.0		4.0		4.0	4.0			4.0	4.0	
	Force reading (Kg)	New belt		1.9 - 2.0		2.3 - 2.4	2.3 - 2.4		2.3 - 2.4		2.3 - 2.4	1.5 - 1.6			2.0 - 2.2	1.9 - 2.0	
		Used belt		1.7 - 1.8		2.0 - 2.1	2.0 - 2.1		2.0 - 2.2		2.0 - 2.2	1.3 - 1.4			1.8 - 2.0	1.7 - 1.8	

* DUE TO THE EXTENDED BELT SPAN LENGTHS ON THE 250DH & S425/S426 SHREDDER, THE FORCE READINGS ARE INCREASED BY 0.5kgf OVER THE DESIGN IQ OUTPUTS



**ELKOPLAST
ROMANIA**

www.elkoplast.ro

Unic importator si distribuitor



TIMBERWOLF®

www.timberwolf-uk.com

13/75G WOODCHIPPER



SAFETY INFORMATION AND BASIC OPERATING INSTRUCTIONS

Safety instructions

1. Before using this chipper, take time to read this safety & users guide completely. **Misuse of this equipment can cause personal injury, equipment damage, damage to property or bodily injury.**
2. Familiarise yourself with the machine prior to use.
3. Do not attempt to start or use this machine if it is damaged. Contact the hire outlet before proceeding.
4. Do not allow minors, or anyone who is unwell or under the influence of drugs or alcohol to use this machine.
5. Petrol is highly flammable. Do not smoke when operating or refuelling.
6. This chipper is designed to chip solid wood material up to 75mm in diameter. Do not feed larger wood or other foreign material into the chipper.
7. Wear appropriate personal protective equipment (PPE). This includes face & eye protection and work gloves with snug cuffs. Noise levels above 85dB(A) will be experienced at the working position. Wear ear protection in compliance with EN352, with a SNR of 15dB or above. The use of a face mask is recommended if working conditions require. Do not wear loose clothing, jewellery or anything that could create a snag hazard.
8. Maintain a safety-exclusion zone around the chipper of at least 10 metres. Stop operations and turn off machine if unauthorised or unprotected individuals breach this zone.
9. Be aware that the chipper can eject chips out of the feed chute with considerable force. Always wear full head and face protection.
10. Only use this chipper in a well-ventilated area.

(Guaranteed Sound Power 120dB (A)).

S.C. Elkoplast Romania S.R.L.-Str. Mercur, Nr.17, 307220 Giroc (la 800 m de Timisoara) Timis - Romania
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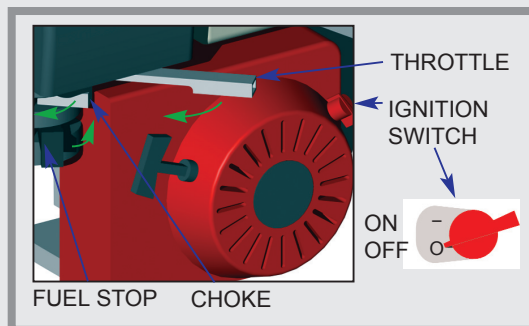
Environmental Manufacturing LLP, Entec House, Tomo Industrial Estate, Stowmarket, Suffolk IP14 5AY
Telephone: 01449 765800 Fax: 01449 765801 Email: info@timberwolf-uk.com www.timberwolf-uk.com

Before starting...

1. Ensure that the exclusion zone is well marked. The use of hazard tape is highly recommended.
2. Locate the machine on firm, level ground.
3. Make sure that all guards are in place.
4. Check the engine oil and top up if required (use grade 10W/30).
5. Check the fuel level. Only clean, uncontaminated, unleaded petrol must be used.
6. Check the infeed chute and clear it of any objects.
7. Adjust the discharge deflector to a safe direction.
8. Wear appropriate safety gear (PPE).
9. Clear the working area of unauthorised/unprotected personnel.

Starting the engine...

1. Open the fuel shutoff.
2. Turn the ignition switch to "ON".
3. Move the throttle lever to 1/3rd of its full travel.
4. Set "CHOKE" to appropriate position (more in cold weather, less in warm weather).
5. Grasp the recoil "T" handle and gently pull until you feel resistance, then pull forcefully to start the engine.
6. When running, move the throttle lever to maximum. Only operate chipper with throttle lever in "full".
7. Turn "CHOKE" off when no longer required.

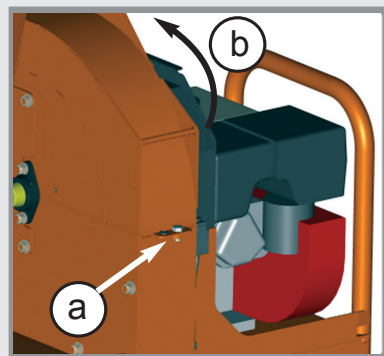


Chipping wood...

1. **BE AWARE** that 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 brash may move towards you causing danger. Badly twisted brash should be trimmed before being chipped to avoid this.
2. Introduce wood gently, being prepared to release it when it engages the cutting blade. The cutting action will pull the wood in on its own.
3. Never reach into the funnel while the machine is running. If material needs to be moved down the funnel, use a push-stick appropriate for the job.
4. Always observe the discharge for exiting wood chippings. REMEMBER... what goes in must come out. If there are no chippings exiting the discharge while chipping wood, a blockage has occurred. You must stop the chipping operation, turn off the machine and clear the blockage. (See "Clearing blockage" section.)

Clearing blockages...

1. Turn the engine off and wait until the rotor runs to a stop.
2. Open the rotor housing by removing the M12 bolt (a).
3. Lift the upper section (b) open, being careful of the sharp cutting blade inside.
4. Wearing gloves, scoop out the debris blocking the machine. Clear the discharge path as well.
5. Close the housing, re-install the M12 bolt, and restart the engine.
6. Continue chipping, observing the discharge for proper operation.



Note:

- The machine must be returned in a clean condition. Cleaning is chargeable at the hire outlet.
- Any damage to the machine is chargeable.

Dealer Stamp

