CHAPMAN

TS600

Instructions
EN

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Introduction

THIS MANUAL MUST BE HANDED TO THE OPERATOR BEFORE USE. THE OPERATOR MUST UNDERSTAND FULLY THE CONTENT OF THIS HANDBOOK BEFORE USING THE MACHINE FOR THE FIRST TIME. OF THE IMPLEMENT IS RESOLD, THIS MANUAL MUST ACCOMPANY THE MACHINE.

NOTE: The information contained in this manual is correct at the time of going to press. However, in the course of development, changes in specification are inevitable. Should you find the information given differs from your machine, please contact Chapman Machinery Ltd direct for advice. Use only Chapman Genuine Service Parts on Chapman Machinery and Machines.

HSE Information

The safe use of all-terrain vehicles (ATVs) & Side by Sides (UTVs) in agriculture and forestry must be adhered to at all times with machinery attached or not. The HSE information, AIS Sheet 33, gives advice on the safe use of ATVs/UTVs. It covers the two main types used in off-road working in agriculture and forestry. The Full HSE information sheet can be found here or using the QR Code to the right https://www.hse.gov.uk/pubns/ais33.pdf and must be read prior to any ATV/UTV use.

REMEMBER - GET PROPERLY TRAINED AND ALWAYS WEAR HEAD PROTECTION

Important Safety Information

Always read this manual before fitting or operating the machine – whenever any doubt exists contact your dealer or the Chapman Machinery Service Department for advice and assistance.

- Do not operate this equipment unless you have studied this manual in full
- Only use this machine for its designated task - improper use is both highly dangerous and damaging to machine components
- Both operators & maintenance fitters should be familiar with the machine and fully aware of dangers surrounding improper use or incorrect repairs
- Before starting, carry out a visual check on both machine & towing vehicle regards functionality, road safety & accident prevention rules
- Even when using the machine correctly, foreign objects such as stones may be thrown a considerable distance. It is imperative that only the operator is within the 50m working envelope, wearing suitable PPE. If working near roads, buildings, children or animals provision must be made for containment of ejected material or alternatively sufficient warning signs / notices placed around the working area.
- The condition of blades and of machine guards must be checked before beginning the day's work. Worn or damaged blades must be replaced before you use the machine.
- During checks or repairs, ensure the machine cannot be started by other persons by mistake
- Never wear loose clothing which could get caught in rotating equipment
- Never carry passengers on the towing vehicle
- Never approach the machine until the rotors have stopped rotating
- Do not stand near the machine when operating
- Damaged or missing safety decals must be replaced immediately

Transportation Safety

- When transporting, especially over rough ground, reduce speed to prevent damage to machine.
- Ensure the machine is securely attached to the towing vehicle
- This implement is not road legal. DO NOT operate on public highways without applicable notices, signage and cordoning as per local regulations.
- Never transport the machine with the rotor running, even for small distances.

Operating Safety

- If wires, ropes or chains should become entangled in one of the rotors stop immediately to prevent damage or dangerous situations; stop the rotor and the towing machine, take out the starting key or safety cut-out. Put working gloves on; clear the rotor with the aid of pliers or shears. Do not try to disentangle.
- Pay special attention when working with the machine not to touch fixed objects such as road-drain, walls, shafts, kerbs, guard rails, tracks etc. This could cause breakage of the blades, which could be thrown out of the machine at very high speed.
- Do not use the machine when excessive vibration is experienced, as this may cause breakage and serious damage - find the cause of the vibration and eliminate it before using the machine again.

Description

The TS600 Trailed Strimmer is a towed mowing attachment design for cutting along fencelines, roadways and margins, being attached via a 50mm ball coupling or (optional) pin hitch coupling to the towing vehicle. The TS600 has two cutter heads which can rotate about a central pivot, on an arm which can also deflect rearwards. This allows cutting along and around fence posts and the likes with ease.

The TS600 has a cutting width between 400-750mm (depending on the orientation of the cutting heads) and is available with a Honda GXV390 13hp engine, either recoil start or electric start (optional). Each rotating head features a steel guard ring, and is fitted with either 4 strimmer cords (TS600 Model); or 2 steel cutting blades (TS600 Pro Model).

These machines should however only be used to perform tasks for which they were designed - use of the machine for any other function may be both dangerous to persons, and potentially damaging to components. Use of the machine beyond the stated usage may invalidate any applicable warranty, as well as being in breach of applicable safety regulations.

Intended Use

The TS600 Range is designed for managing vegetation only on field, verges, wasteland etc. Any uses other than those for which the implement is intended, (for example stump-grinding or lifting) will automatically exempt Chapman and/or the implement supplier form liability in respect of ensuring damage. Such cases of improper use will thus be entirely at the user's own risk.

Although the TS600 range are manufactured to exacting tolerances, fluctuations and interruptions in operation rate may still occur during use. Chapman accept no liability for consequential losses as a result. Likewise, Chapman cannot be held liable for any consequential losses or damages resulting from incorrect use of the machine. Use of the machine beyond the stated usage may invalidate any applicable warranty, as well as being potential in breach of applicable safety regulations.

Required Personal Protective Equipment (PPE)

When using the TS600 the operator must be wearing safety footwear, gloves and have full body coverage in a suitable material (eg. Cotton overalls), in addition to either;

A. A full face helmet with visor or safety glasses & ear defenders [if using on an open cab vehicle such as an ATV]
B. Safety glasses [if using on a closed-cab vehicle such as a UTV with the doors / windows shut]

SUITABLE PPE (AS SPECIFIED ABOVE) MUST BE WORN AT ALL TIMES WHEN OPERATING THIS EQUIPMENT!

Technical Information

Component Identification

1) Engine
2) Cutting Heads
3) Main Drive Belt Guard
4) Head Drive Belt Guards
5) Remote Throttle
6) Cutting Height Adjuster
7) Drawbar Offset
8) Hitch

NOTE: The TS600 is fitted with a combined throttle / choke / stop cable. This provides the emergency stop function should it be required and should be located within reach of the operator during

normal use. For towing vehicles where this is not possible, provision should be made for a remote emergency stop wired into the engine stop circuit.

COMBINED THROTTLE / CHOKE / STOP CONTROL MUST BE WITHIN REACH OF THE OPERATOR DURING NORMAL OPERATION!

ENSURE CONTROL EQUIPMENT IS SECURELY ATTACHED TO THE TOWING VEHICLE BEFORE USE

CHECK OPERATION OF EMERGENCY STOP CONTROL BEFORE COMMENCING WORK

Noise Levels

The sound pressure level when measured from the operator's seat with an **enclosed cab vehicle** and the mower at full speed is **67dB(A).**
The sound pressure level when measured from the operator's seat with an **open cab vehicle** and the mower at full speed is **91dB(A).**

Measurements were taken with a randomly selected modern UTV & ATV (enclosed cab & open cab vehicle respectively), and specific site measurements with a dedicated TS600 / towing vehicle combination may need to be taken at the operator's cost depending on local risk assessment requirements. If being towed by an open-cab ATV it is essential that ear defenders or a suitable helmet is worn at all times, along with suitable full body coverage (eg. overalls). If being towed behind a closed-cab UTV, then the cab should remain closed during use to maintain noise levels within acceptable limits. It is the operator's responsibility to ensure that noise levels experienced by the operator are within legal limits.

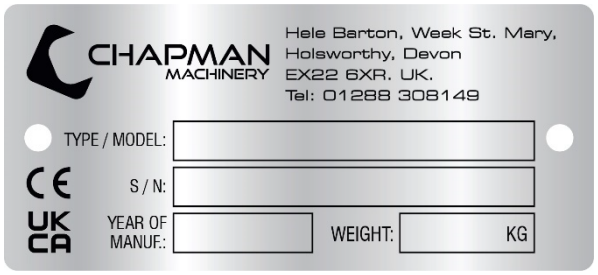
EAR DEFENDERS OR EQUIVALENT HEARING PROTECTION DEVICES SHOULD BE WORN AT ALL TIMES WHEN OPERATING WITH AN OPEN-CAB VEHICLE (EG. AN ATV)

Identification

Each machine is fitted with a serial plate (shown below) which details the following:

1. **Model**
2. **Date of Manufacture (DOM)**
3. **Serial Number**
4. **Mass**

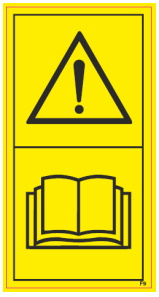
When enquiring regarding spares or additional equipment, ensure you have this information to hand.



Implement Decals

If your implement does not contain all of the decals shown below, please contact your equipment supplier for replacement decals before use.

Note: All decals must be present and visible. It is imperative that these are replaced if damaged to prevent potential harm to users.

CAUTION - Read operators manual before handling this machine. Observe in structions and safety rules when operating		WARNING - Entanglement Hazard. Keep hands away from rotating components	
WARNING - Rotating blades. Maintain sensible working distance from machine and keep hands and feet clear of blades		WARNING - risk of flying objects. Keep a safe distance from machine at all times	

Attachment

Before Attaching the Machine

Before attachment, ALWAYS ensure the following:

- All safety guards & decals are in good working order and correctly fitted
- All blades are correctly fitted, undamaged, and not worn to excess
- Lubrication points have been lubricated as per scheduled maintenance period
- The engine oil level is correct & has been maintained as per the handbook
- Drive belt(s) are in good working order
- The tyres are free of damage and inflated to the correct pressure (0.35-0.55 Bar [5-8psi])

Attaching the Machine

NOTE: This machine is designed to attach to the towing vehicle through a 50mm diameter ball hitch or pin hitch.

1. Reverse the towing vehicle up to the machine.
2. Attach the machine onto the towing vehicle's coupling using either the auto-lock coupling or suitable pin hitch. Ensure the hitch is securely attached to the towing vehicle
3. Attach the emergency stop control box to the towing vehicle, in a secure location within easy reach by the operator.
4. With the engine OFF, adjust the working height to a suitable level by turning the height adjuster at the front left of the machine.
5. Level the machine to suit the drawbar & cutting height. This is achieved by twisting the link connector fitted to the drawbar. When on level ground, the top face of the mower deck (where the engine ismounted) should be approximately parallel to the ground.

Operation

NOTE: Ensure that the operator is suitably qualified to use a machine of this nature and that they have fully read and understood this manual - they should be aware of all safety aspects relating to the safe use of the machine.

Prior to starting work the area to be cut should be checked for dangerous objects such as large stones, wood, wire, glass etc. – hazardous objects should be removed from the area prior to operation with the machine. The location of unmovable or natural hazards such as drain covers should be noted, or if necessary 'marked', to indicate to the operator that the area should either be avoided or additional caution adopted whilst working around the hazard.

Operating Envelope

The TS600 has a working envelope of 50m. This is the area that debris may be thrown when working, and should be kept clear of bystanders and animals.

Due to the nature of this machine, it is imperative that bystanders are kept clear of the 50m working envelope – if the working area is near or within public areas, ensure suitable preventative measure are in place to keep bystanders / general public at least 50m away from the machine.

On most ground with vegetation, cut material can only be thrown a short distance, for example 10m from the machine. However particular care must be taken when crossing roads, pathways or verges, as the hard surface allows foreign objects such as stones to be thrown much further, and hence the 50m working envelope.

Operating Limits

Minimum / Maximum Ambient Temperature	-15°C / +40°C
Minimum / Maximum Altitude	0 meters / 1500 meters *
Maximum Inclination	20° in any direction
Maximum Speed	8km/h (5mph)

DO NOT OPERATE BEYOND OPERATING LIMITS, DAMAGE TO MACHINERY OR INJURY TO OPERATOR MAY OCCUR.

Daily Checks

Before use each day, and with the engine switched off and keys removed, the following checks should be undertaken;

- **Blades** - With the engine switched off and keys removed, the condition of the blades should be checked. Any damaged or missing blades should be replaced immediately.
- **Engine** - Fluid levels should be checked daily before use and topped-up as necessary. Ensure the air intake and screen grid are clear of debris. Ensure engine is in good order and maintained as per engine manufacturer schedule.
- **Bearings** - Ensure bearings are in good order and greased as per the maintenance schedule.
- **Belts** - Ensure belts are in good order, free of debris, dirt and grease and do not have signs of damage e.g. cracking, frayed edges, uneven wear.
- **Fuel** - Ensure fuel is clean and free of dirt / debris. If applicable, check condition of fuel filter.
- **Hitch** - Check condition of swivel hitch, and ensure this is attached securely to towing vehicle.
- **Tyres** - Ensure tyres are free from damage and inflated to the correct working pressure for the conditions

Tyres

Tyres should be maintained at the pressure shown below:
16x6.5x8" Wanda Turf 0.35-0.55 Bar [5-8psi]

When replacing tyres ensure the same size and load rating are used. Punctures should be inspected and repaired by a suitably qualified distributor – not all punctures can be repaired and in some cases the tyre may need to be replaced.

Wheel Nuts

Wheel nuts should be checked daily for tightness and if required torqued to 65Nm.

Storage

Store under cover in a dry, ventilated area. Store away from direct sunlight, sources of excess heat or cold, and protected from windblown rain or areas of excessive humidity.

Any servicing and maintenance should be undertaken prior to storage, and any worn components replaced. Furthermore it is recommended that a suitable fuel stabilizing treatment be added to the fuel tank and the engine run on idle for 3 minutes to allow it to run through the entire fuel system before extended storage.

NOTE: Fuel should be treated with a suitable fuel stabilizer before extended storage!

Washing

Regular washing with water and mild detergent will prolong the life of the machine and components. This is particularly important if the machine is used on salt-treated roads, in coastal areas, is heavily soiled or is used in the vicinity of corrosive substances such as fertiliser. In these cases the machine should be thoroughly washed down after use and allowed to dry naturally.

If heavy soiling is experienced, washing intervals should be reduced accordingly. Likewise if salts or aggressive chemicals are encountered, the washing interval should re reduced accordingly to a maximum interval of 3 months.

If using a pressure washer, care should be taken to avoid panel edges and electrical components at close range or for extended periods. Any damage that may result from the use of high pressure water should be immediately rectified to ensure continued serviceability.

Additives intended to brighten aluminium, generally containing phosphoric acid, should not be used as they will damage the zinc plated components. Traffic film remover should not be used.

Paint Maintenance

The steelwork and chassis on the TS600 is manufactured from various grades of steel, which is fully shot blasted to SA2.5 surface roughness, prior to application of polyester powder applied paint to a mean DFT (Dry Film Thickness) of 100 microns.

In order to maintain the coating design life of 10 years it is imperative that;
- The machine is stored in the recommended manner
- The machine is washed as per the schedule (or more frequently if heavily soiled)
- Any damage is inspected and repaired on at least an annual basis.

Any scratches or damage which breaks the protective paint barrier and exposes the underlying base material need to be repaired.

Repair Procedure

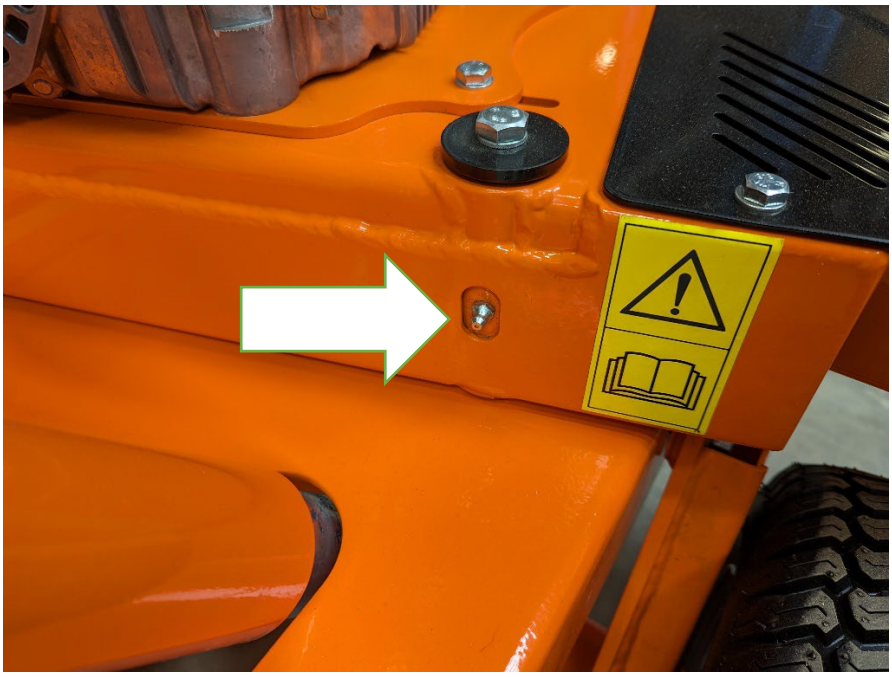
1. Thoroughly clean the affected area by washing with a mild detergent. Allow to dry fully.
2. If solvents are required to be used to remove marks, ensure only isopropyl alcohol is used. Solvents containing esters, ketones or chlorinated solvents will damage the paint.
3. If required abrading may be done using a 400 grit rubbing down paper over the affected area. If paint has been chipped edges need to be feathered to ensure consistent paint adhesion.
4. Remove any dust from rubbing down, applying a light single pack aerosol applied primer paint (cellulose based) if the affected area is more than 50mm across.
5. Once prepared and primed (if necessary), apply 3 lights coats of single pack aerosol applied paint (cellulose based) in colour RAL2004 (Pure Orange) or RAL9005 (Jet Black) allowing to dry naturally between coats. Isocynate-based two pack polyurethane paint can be used although this is generally not practical unless for large areas – for most minor repairs single pack cellulose paint is preferable.

Grease Point Location

Lubricate the following grease points using an NLGI 2 viscosity grease suitable for the expected temperature range in line with the maintenance schedule.

Rotors

Main Arm Pivot



Offsetting

If required the drawbar on the TS600 can be offset to the left or right or folded for storage. The machine is offset by unscrewing the T-bar, moving the drawbar to the desired location, and the T-bar replaced in a suitable hole. The T-bar must be tightened firmly to prevent movement of the drawbar and should be checked periodically for tightness.

THE DRAWBAR ANGLE SHOULD ONLY BE CHANGED WITH THE ENGINE OF BOTH MOWER AND TOWING VEHICLE SWITCHED OFF

Starting Work

After ensuring all daily checks have been undertaken (see above), and with the engine throttle on idle setting start the engine by turning the ignition key (if applicable) or pulling the recoil starter cord. Depending on the ambient temperature and engine temperature, choke may be required. Once the engine is running and choke off, engage drive by increasing the engine throttle to maximum.

RUN AT MAXIMUM THROTTLE AT ALL TIMES WHEN CUTTING

Forward Speed

The forward working speed will depend greatly on the working conditions and nature of the material being cut. Optimal speed will be in the region of 3-8 km/h (2-5 mph).

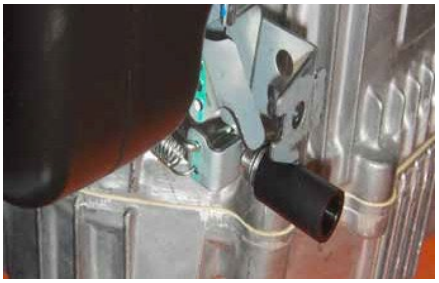
Throttle Adjustment

Should you have trouble starting or stopping your mower, if, for example, the throttle cable has become bent or damaged, you may need to adjust the throttle as follows; **(Required: 1 Philips head screwdriver)**

1. Locate the throttle cable retaining bracket at the front of the engine, loosen as shown using a Philips head screwdriver

2. Set the throttle to FULL CHOKE, as shown below

3. With the throttle at full choke, pull the plastic part of the cable upwards, and tighten the retaining bracket when the choke lever just touches the plastic topped adjuster screw. Test for correct start / stop operation



Machine Disposal

Disposal of this machine and any of its component parts must be performed in a responsible and inoffensive manner respecting all current laws relating to this subject. Materials forming this machine that must undergo differentiated division and disposal are: Steel, Mineral Oil, Rubber &

Plastic

Maintenance

All maintenance, cleaning and repair operations must be performed with the machine suitably supported, the engine switched off (and cool), and the ignition keys removed. **NOTE: For commercial use, log hours of operation in a maintenance booklet to ensure proper maintenance intervals and continued service.**

Maintenance Schedule

After 1 hour of work

- Physically check all nuts and bolt for tightness – retighten if required.
- Check belt tension and taper lock tightness – adjust / tighten if required

Every 8 hours or daily

- Visually inspect nuts and bolt for tightness – retighten if required.
- Visually inspect belt condition and replace if necessary
- Physically check wear and condition of blades – replacing missing, excessively worn or damaged blades immediately.
- Check condition of safety guards – repair or replace if not performing their function.
- Apply grease to the two main rotor bearings, the main spindle bearing and the arm pivot bearing.

After every 100 hours (or annually, whichever occurs first), in addition to the above

- Physically check belt condition - replace if required
- Check axle bearing condition - replace or lubricate as required
- Check main rotor bearings condition - replace as required
- Check condition of battery & connections (if applicable)
- Check condition of fuel lines & replace if damaged or perished
- Check condition of battery cables - replace if worn (if applicable)
- Check clutch operation (disengage at idle, engage at approx. 30% throttle)

Blade Condition & Replacement

Over time, the blades on your machine will wear, and performance will deteriorate. It is important that the blades are kept in good condition to ensure a long service life and to prevent premature wear. Blades should be replaced when either; 20mm has worn off the end of the blade; the blade has become blunt or damaged; blades are missing. When replacing blades visually inspect the head unit for damage, and rectify if necessary. Head assemblies can be replaced quickly and easily if required

Blades are replaced as follows:

1. With the engine switched off, rotate the upper portion of the head assembly anti-clockwise and lift. The upper portion of the head assembly will located in the raised position.
2. Remove and replace the blades as required
3. Rotate the upper portion of the head assembly clockwise. The head assembly will spring closed and the blades will be located fully.
4. Ensure the head assembly is fully closed before continuing work.

Troubleshooting

Problem	Possible Causes	Remedies
Irregular Cut	Worn, bent or broken blades	Inspect & replace damaged blades
	RPM too low	Increase engine revs
	Machine not level to the ground	Check & adjust tyre pressures
	Clogged material caused by excessive forward speed	Reduce forward speed
Excessive Machine Noise	Unbalanced Rotor(s)	Check blades & replace any damaged. If vibration persists, see “vibration” below
	Loose bolts	Check bolts & tighten as necessary
	Damaged components	Repair or replace
Excessive Engine Noise	Worn muffler	Repair or replace
	Engine problems	Consult authorised dealer or Chapman Machinery service centre
Excessive Belt Noise	Belts slipping	Adjust belt tensioner
	Belts worn	Replace belts
Vibration	Worn, bent or broken blades	Inspect and replace as necessary
	Cutting head out of balance	Replace head
	Worn rotor bearings	Replace rotor bearings
Excessive movement of drawbar	Worn drawbarpins	Replace drawbar pins
	Loose drawbar hand screws	Tighten hand screws
Bearings tight or overheating	Bearings dirty or ungreased	Clean & grease bearings
	Bearings worn to excess	Replace bearings
Belts Overheating	Belts slipping on pulleys	Tension belts
	Blades contacting the ground	Raise cutting height
	Working speed too high	Reduce forward speed

Warranty

The Chapman Warranty

Chapman Machinery Ltd (herein ‘Chapman’ or ‘Chapman Machinery’) warrants that the machine referred to in the Warranty Registration Form will be free from manufacturing defects for a period of 24 months from the date of sale. This warranty does not affect your statutory rights, but merely adds to them. Should you have a problem within 24 months from the date of sale please contact your original dealer, or Chapman Machinery’s Service Department.

Any part found to be defective during this period will be replaced or repaired, at our discretion, by the dealer or a authorised Service Engineer.

Warranty Conditions

1. The Warranty Registration Form must be completed and returned to Chapman Machinery Ltd within 30 days of the date of sale

2. This warranty does not cover defects arising from fair wear and tear, wilful damage, negligence, misuse, abnormal working conditions, use in competition, failure to follow Chapman Machinery’s instructions (oral or written, including all instructions and recommendation made in the Operator’s Manual) or alteration or repair of the machinery without prior approval.

3. The machinery must have been serviced in accordance with the Operator’s Manual and the Service Log must have been kept up to date and made available to the dealer should service, repair or warranty work be undertaken.

4. This warranty does not cover claims in respect of wearing parts such as blades, flails, paintwork, tyres, belts, hydraulic hoses, bearings, bushes, linkage pins, top links, ball ends unless there is a manufacturing or material defect or the cost of normal servicing items such as oils and lubricants.

5. This warranty does not cover any expenses or losses incurred whilst the machinery is out of use for warranty repairs or parts

replacement.

6. This warranty does not extend to parts, materials or equipment not manufactured by Chapman Machinery, for which the Buyer shall only be entitled to the benefit of any such warranty or guarantee given by themanufacturer to Chapman Machinery. Only genuine replacement parts will be allowable for warranty claims.

7. All parts replaced by Chapman Machinery under warranty become the property of Chapman Machinery and must be returned to Chapman Machinery if so requested. Such parts may only be disposed of after a warranty claim has been accepted and processed by Chapman Machinery.

8. Chapman Machinery is not liable under this warranty for any repairs carried out without Chapman Machinery's written consent or without Chapman Machinery being afforded a reasonable opportunity toinspect the machinery the subject of the warranty claim. Chapman Machinery's written consent must, therefore, be obtained before any repairs are carried out or parts replaced. Use of non-Chapman Machinery parts automatically invalidates the Chapman Warranty. Failed components must not be dismantled except as specifically authorised by Chapman Machinery and dismantling of any components without authorisation from Chapman Machinery will invalidate this warranty.

9. All warranty claims must be submitted to Chapman Machinery on Chapman Machinery Warranty Claim Forms within 30 days of completion of warrantywork.

10. Using the machine implies the knowledge and acceptance of these instructions and the limitations contained in this Manual.

Transfer of Warranty

The Chapman warranty be transferred to a subsequent owner of the machinery (for use within the UK only) for the balance of the warranty period subject to all of the stated warranty conditions and provided that the Change of Owner form is completed and sent to Chapman Machinery within 14 days of change of owner- ship.

Chapman Machinery Ltd retain the right to refuse transfer of warranty.

Chapman Machinery reserves the right to make alterations and improvements to any machinery without notification and without obligation to do so.

DECLARATION OF CONFORMITY

EU: Machinery Directive 2006/42/EC
UK: Supply of Machinery (Safety) Regulations 2008

Manufacturer: Chapman Machinery Ltd, Hele Barton, Week St Mary, Holsworthy, Devon, EX22 6XR, UK

Product(s) covered:	TS600 Trailed Strimmer
Serial Number:	Stated on Accompanying Invoice
Standards and Regulations Used:	Machinery Directive 2006/42/EC Supply of Machinery (Safety) Regulations 2008
Place of Issue:	United Kingdom
Name of Representative:	James Chapman
Position of Representative:	Director
Basis of Conformity Declaration:	Self Declaration by Manufacturer

Declaration:
I declare that as the authorised representative, the above information in relation to the supply / manufacture of this product, is in conformity with the stated standards and other related documents following the provisions of Machinery Directive 2006/42/EC directives [EU] and Supply of Machinery (Safety) Regulations 2008 [UK]

The products described above comply with the essential requirements of the directives specified.

Signed: 

Date: 18/06/2023