

# CS 100 / CS 100 TMP

## OPERATORS MANUAL



**SECTION:****1. Introduction and Purpose****2. Technical Specifications, Dimensions, Noise Level, and Lifting points****3. Safety and Symbols**

- 3.1 Ensure!**
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- 3.6 Symbols**

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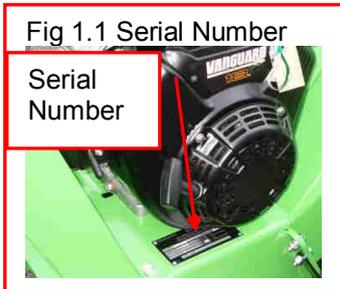
**INTRODUCTION**

This manual explains the proper operation of your machine. Read these instructions thoroughly before operating and maintaining the machine. Failure to do so could result in personal injury or equipment damage. Consult your GreenMech supplier if you do not understand the instructions in this manual.



**CAUTION!** This 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.

We recommend that you keep this manual with the machine in the box provided. Note here the serial number and quote it in any communications. This is important when ordering spares. Remember to include all numbers and letters.



**VIN Number**.....

**Serial Number**.....

**Write in the number!**

This manual covers the following models.

- GM C/S100 Compact Chipper/ Shredder with interchangeable cassettes**
- Optional 14HP or 18HP (electric start) Briggs and Stratton Vanguard engines**
- GM C/S100TM tractor mounted version with gearbox and power take off (pto) shaft instead of engine.**

Accept where otherwise stated alternative paragraphs and illustrations for engine driven and tractor mount versions are marked (a) and (b) respectively.

The information in this manual is correct at the time of publication. However, in the course of development, changes to the machine specification are inevitable. Should you find any information to vary from the machine in your possession please contact your GreenMech dealer for up to date information.

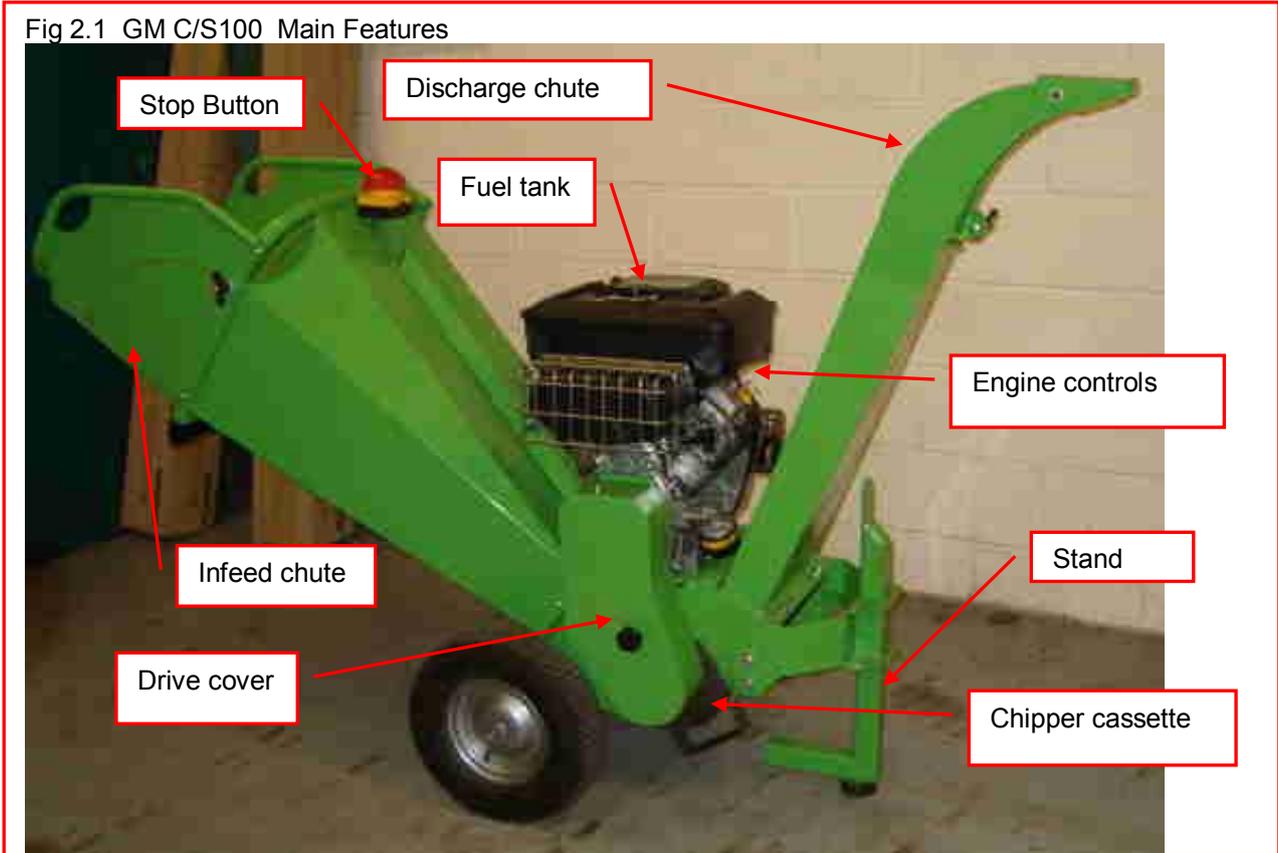
The manual may contain standard and optional features and is not to be used as a machine specification.

**PURPOSE**



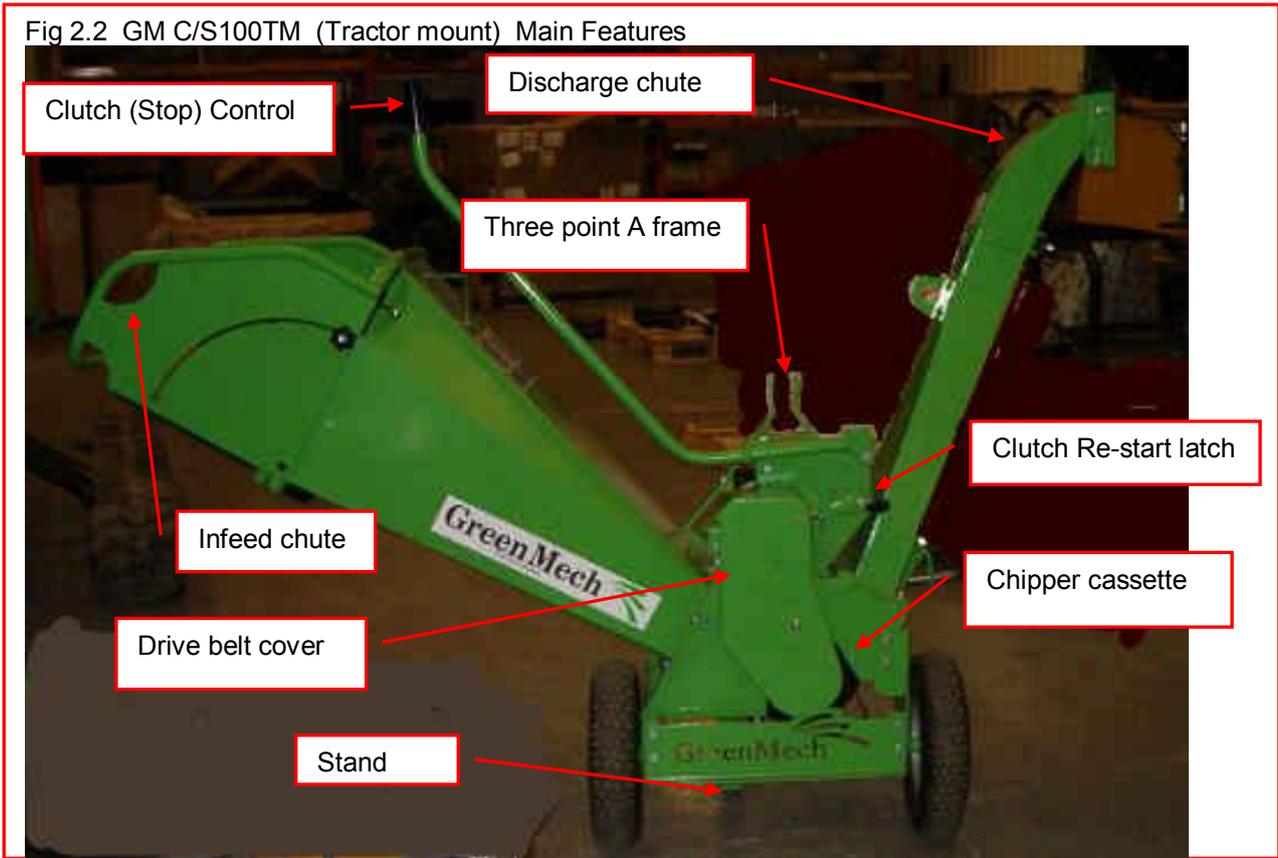
**CAUTION!** This machine is designed solely to chip wood and must not be used for any other purpose. The machine should only be used by trained operators who are familiar with the content of this instruction manual. It is potentially hazardous to fit or use any parts other than genuine GreenMech parts. The company disclaims all liability for the consequences of such use, which in addition voids the machine warranty.

Fig 2.1 GM C/S100 Main Features



<b>TECHNICAL SPECIFICATION GM C/S100-14 / GM C/S100-18</b>	
Chipping Capacity	4 to 6 m <sup>3</sup> cuttings per hr depending on material
Guaranteed wood diameter	80mm (3")
Permitted wood diameter	130mm (5")
Chipping Blades	2 reversible and regrindable blades
Rotor cutting width	310mm
Power Unit	Briggs and Stratton 4 stroke Vanguard V Twin 14hp or 18hp with electric start
Fuel	Petrol 95 octane (unleaded)
Fuel Consumption (continuous)	2.8 lt/hour
Length (Transport)	1725mm
Length (Work)	2183mm
Width	760mm
Height (Transport)	1245mm
Height (Work)	1468mm
Feed Height	840mm
Weight (Empty)	195Kg / 197Kg

Fig 2.2 GM C/S100TM (Tractor mount) Main Features



TECHNICAL SPECIFICATION GM C/S100TM	
Chipping Capacity	4 to 6 m <sup>3</sup> cuttings per hr depending on material
Guaranteed wood diameter	80mm (3")
Permitted wood diameter	130mm (5")
Chipping Blades	2 reversible and regrindable blades
Rotor cutting width	310mm
Power Unit	15 - 30 HP Tractor with 3 pt. linkage and pto drive
Drive Shaft	6 spline 1.3/8" P T O drive from tractor
Support Linkage	3 point linkage Cat. 1 or Cat 2
Length (Transport)	1725mm
Length (Work)	2183mm
Width	760mm
Height (Transport)	1245mm
Height (Work)	1468mm
Feed Height	840mm
Weight (Empty)	195Kg

**CS100 SPECIFICATIONS:**  
 ENGINE: 14HP or 18HP 4-STROKE VANGUARD V-TWIN CRV.  
 EMPTY WEIGHT: CS100-14HP: 195Kg, CS100-18HP: 197Kg  
 DIMENSIONS (HxLxW): 1468 x 1725 x 750mm  
 GUARANTEED WOOD DIAMETER: 80mm  
 PERMITTED WOOD DIAMETER: 130mm  
 PETROL CONSUMPTION (WITH CONTINUOUS CHIPPING): 2.8 L/HOUR

TOLERANCES: MACHINED PARTS ±0.025mm FABRICATED PARTS ±1.0mm	REV: 01	DATE: 01/01/14	BY: J. SMITH	CHECKED: J. SMITH	TOLERANCES: MACHINED PARTS ±0.025mm FABRICATED PARTS ±1.0mm
GreenMech Ltd The Mill Industrial Park Kings Coughton Aicester WORKS: 049 520 741 01789 400044					TITLE: CS100
REV:      MODIFICATION      DRW:      APPD:      DATE					WEIGHT:      Pw: G: H:      CS100      33

**Noise**

Noise levels vary depending on type of material being processed. Also duration of operation is variable. Noise emission tests have been carried out and the guaranteed sound power level is displayed on the CE plate as follows: **Lwa 120dB(A)**

Minimise noise by slowing to idle or stopping the engine whenever chipping is not in progress.

**⚠ CAUTION!** Operators must wear appropriate ear protection. Bystanders must be kept away from proximity of machine.

**Lifting Points**

Ensure infeed chute is folded in and secured for transport. Sling from tubular handles of fixed section of infeed chute and lifting point on discharge chute.

**Drawbar and hitch or three point linkage**

(a) Ring type hitch      (b) tractor three point linkage.

**⚠ CAUTION!** Ensure that the towing vehicle or tractor is correctly suited to the machine weight and (a) drawbar (nose) loading. If necessary check with national vehicle legislation.

**3.1 ENSURE:**

- 3.1.1 All Operators must be fully trained in the use of their machine.  
(*Certificated Operator training courses are available on request.*)
- 3.1.2 The Operators Manual is read and understood.
- 3.1.3 The enclosed HSE guidance notes are read and understood.
- 3.1.4 Appropriate Personal Protective Equipment (PPE) is worn, including non-slag clothing, gloves, eye and hearing protection.
- 3.1.5 The machine is positioned on level ground and the machine must be level with the infeed chute at no less than 600mm (23.62 inches) above ground level (fig 3.4.3).
- 3.1.6 All guards are fitted and in good condition.
- 3.1.7 Blades are in good condition and secure.
- 3.1.8 All blades are sharpened or replaced in "Sets".
- 3.1.9 All fasteners are checked regularly for tightness.
- 3.1.10 Only "WOODEN" materials free of nails etc., are fed into the machine.
- 3.1.11 Correct First Aid Kit including large wound dressing is available on site.
- 3.1.12 Fire extinguisher is available on site.

**3.2 NEVER:**

- 3.2.1 Work on the machine until the chipper disc is stationary and engine has stopped.
- 3.2.2 Operate the machine without protective clothing (Eye protection, Earmuffs, and Gloves), or high visibility clothing when working on roadside.
- 3.2.3 Operate with loose articles of clothing, including loose cuffs on gloves.

- 3.2.4 Work under a raised component without adequate safety support.
- 3.2.5 Operate the machine with untrained personnel or with individuals present who are not involved in the chipping operation.
- 3.2.6 Leave the machine unattended with engine running at full operating speed.

(See section 4)

- 3.2.7 Put any part of your body into the infeed chute while the machine is running.
- 3.2.8 Operate the machine whilst under the influence of alcohol or drugs.
- 3.2.9 Operate inside a building or confined space.
- 3.2.10 Climb on the infeed chute.
- 3.2.11 Impede or obstruct the Stop control.
- 3.2.12 Operate a p.t.o. driven machine disconnected from and unsupported by its power source

**3.3 ALWAYS:**

- 3.3.1 Check machine before starting (see Section 4 Preparation and Section 5.1 Operation: Pre-work checks).
- 3.3.2 Be aware of potential hazards in the work area, i.e. uneven ground, tree roots, trip/slip hazards, obstructions and type of materials being fed into the machine.
- 3.3.3 Feed from the side.
- 3.3.4 Keep clear of discharge area.
- 3.3.5 Have a second trained operator within easy reach of the machine.
- 3.3.6 Maintain strict discipline at all times.
- 3.3.7 Service machine at specified periods. (see Section 6: Routine Maintenance).
- 3.3.8 Note direction of discharge chute and if necessary note the wind direction to prevent debris from being blown into highway or where it could affect members of the public.
- 3.3.9 Remove key before doing any maintenance.

Fig 3.4.1a Stop Button

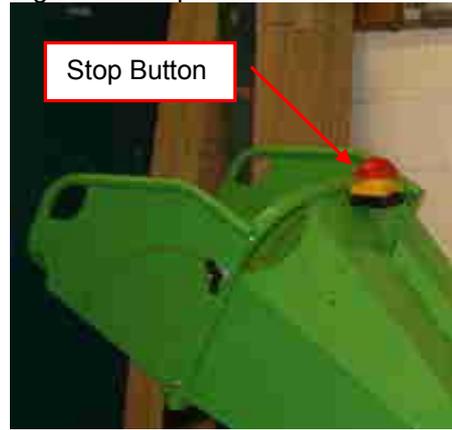


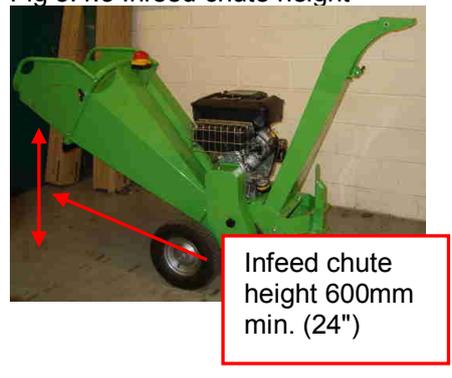
Fig 3.4.2 Engine Stop Switch



Fig 3.4.1b Stop and reset levers



Fig 3.4.3 Infeed chute height



### 3.4 Safety Controls and Switches

#### 3.4.1a Emergency Stop (fig 3.4.1a)

In the event of an emergency, push the STOP button. This will lock in position to stop the engine and machine.

#### 3.4.1b Emergency Stop (fig 3.4.1b)

Identify the tractor p.t.o. and engine Stop controls. In the event of an emergency, stop the p.t.o. or tractor engine. This will stop the machine. Pull the machine clutch STOP lever. This will lock in position to stop the rotor.

3.4.1.1 Once the emergency has been rectified the following sequence should be carried out:

3.4.1.2 Check over machine for any blockages.

3.4.1.3 To reverse the cutter, remove the drive guard and, using a bar through the hole in the cutter spindle, manually turn the cutter to free the obstruction.

3.4.1.4a When clear, pull the stop button out and restart the engine.

3.4.1.4b When clear, release the reset lever latch to re-engage.

### 3.4.2 Engine stop switch

3.4.2.1 To stop the engine, push the cut-off switch to the '0' position. (fig 3.4.2), or (electric start) turn key switch anticlockwise.

**⚠ CAUTION! Do not restart engine until hazard has been removed.**

### 3.5 Control cut-outs (engine drive only)

An engine cut-out is installed under the drive guard to stop and prevent restarting. due to specific events. The drive guard has to be removed first to access the cutter or dismantle the chutes

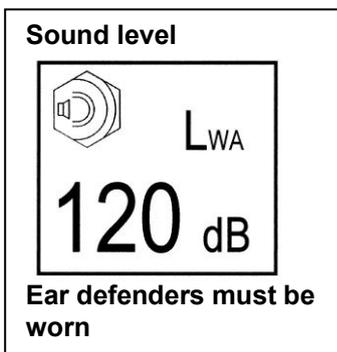
**3.6 SYMBOLS on the MACHINE**

These relate to operator safety, correct use and maintenance of machine. Check that all personnel understand and are familiar with meanings before using the machine.

See engine manual for safety and control symbols on the engine.

**Important Safety symbols**

Take the correct action shown on the display below the stated hazard (see table)



**Important Operating Checks.**

See engine manual.

**Maintenance Information**

See engine manual



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Fig 3.4.1a Stop Button

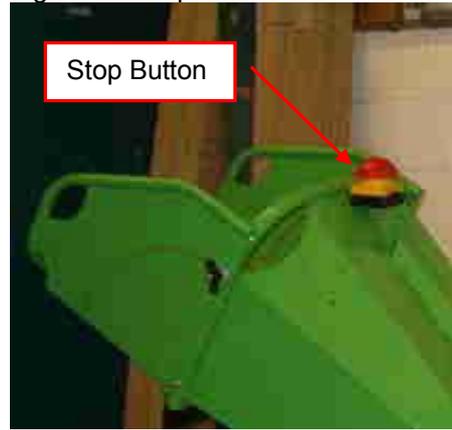


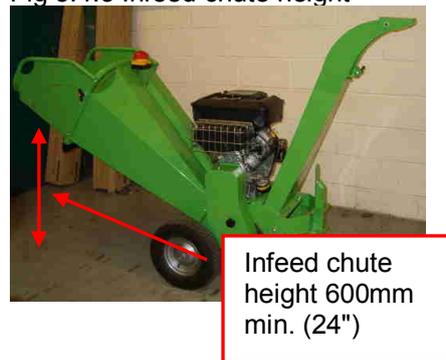
Fig 3.4.2 Engine Stop Switch



Fig 3.4.1b Stop and reset levers



Fig 3.4.3 Infeed chute height



### 3.4 Safety Controls and Switches

#### 3.4.1a Emergency Stop (fig 3.4.1a)

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**Important Safety symbols**

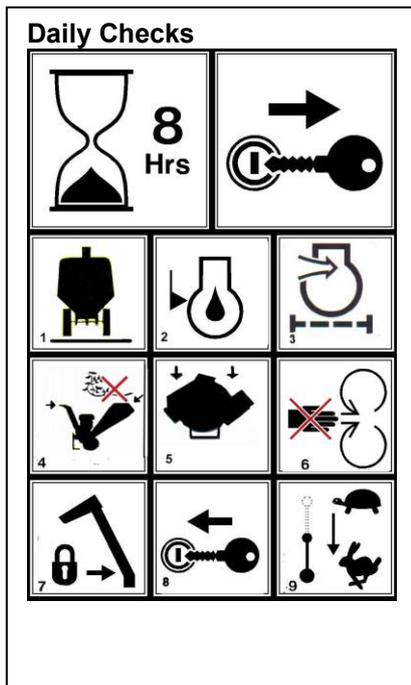
Take the correct action shown on the display below the stated hazard (see table)



<b>Caution!</b>		<b>Do NOT start engine</b>	
<b>Caution!</b>	Beware flying object hazard	Beware noise hazard	<b>Caution!</b>
Read instruction manual	Wear helmet & visor	Wear ear protectors	Keep nuts tight
<b>Machine level -incorrect</b>	Beware flying object hazard	Beware trapping hazard	Beware exposed drives hazard
<b>Machine level -correct</b>	Keep bystanders away	Wear proper clothes	Fit all guards

**Important Operating Checks Notice**

Before use carry out daily the stated checks in the order shown (see table)



<b>Every 8 Hours – Daily checks</b>		<b>Stop Engine</b>
1. Check machine is level	2. Check engine oil level	3. Check engine air filter
4. Check infeed chute is clear of debris	5. Check cutter is clear of debris	6. Check all guards and flaps are in place
7. Lock discharge chute	8 Start Engine	9. Increase from Idle to Run

Important Safety Information

**Caution! Beware of thrown object hazard**



**Action: Keepaway from fast discharge chute**

**Caution! Beware of thrown object hazard**



**Action: Stand to side of infeed chute, NOT in centre.**

**Lift Point**



**Transport Lock**



**Lock this component before moving machine**



**Wear face shield**

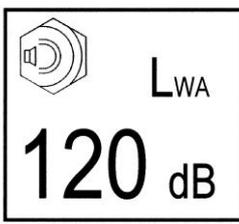


**Wear ear protectors when operating this machine**

**Rotor Stop and Reset Levers**



**Sound level**



**120 dB**

**Ear defenders must be worn**

Maintenance Information

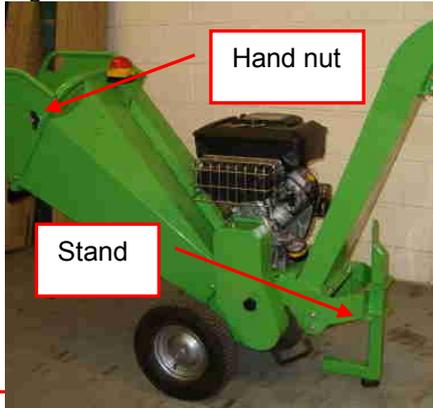
**Grease point**



**40 Hrs**

**40 hours / weekly**

Fig 4.1a Stand and Infeed Chute

**4.1a Initial Fuelling and Parking**

4.1.1a Position the machine on level ground and ensure stand is secure (fig 4.1a).

4.1.2a Fill the fuel tank with petrol.

4.1.3a Check the engine oil level.

4.1.4a Check that the stop button is released.

**4.1b Fitting to tractor**

4.1.1b Remove the top, and lower linkage pins on the chipper (fig 4.1b)

4.1.2b Lower the three-point linkage on the tractor and reverse up to the chipper.

4.1.3b Locate each tractor lower lift arm in the corresponding clevis on the frame and insert each lower linkage pin.

4.1.4b Secure the pins with the clips provided.

4.1.5b Adjust the top link to the correct length and locate the linkage pin through the frame, secure with the clips provided.

4.1.6b Switch off the tractor engine.

4.1.7b Check that the PTO shaft is the correct length for the tractor make and model. See Section 4.4b below

**⚠ CAUTION!** The PTO shaft is equipped with shear bolt protection and this end of the shaft **MUST** be fitted to the tractor PTO shaft. (Pictograms stamped on PTO shaft cover may be incorrect.)

4.1.8b Depress the two spring buttons and slide onto the tractor shaft until the buttons spring out into the correct locations.

4.1.9b Depress the single spring button on the ratchet clutch end and slide onto the chipper gearbox shaft until the button springs out into the correct location.

4.1.10b Ensure that the machine is secure and stable on tractor linkage.

4.1.11b Ensure that p.t.o.shaft guard is secure and restrained from rotation.

Fig 4.1b Tractor mountings and pto

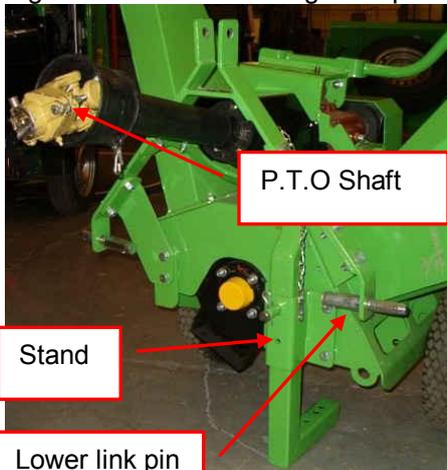


Fig 4.3 Discharge Chute



Alternative position (either side)



#### 4.2 Infeed Chute

4.2.1 Loosen hand nuts (fig 4.1a) and swing the infeed chute extension into work position.

4.2.2 Tighten hand nuts ensuring that nylon spacers pass through holes at ends of slot.

**⚠ CAUTION!** The infeed chute must not be used at less than 600mm from the ground. (fig 3.4.3).

**⚠ CAUTION!** Before transporting, always fold up and secure the infeed chute.

#### 4.3 Discharge Chute (Fig 4.3)

4.3.1 Release the spout clamp, remove and reset the spout in the desired direction and tighten the clamp.

4.3.2 Set the flap at the desired height.

**⚠ CAUTION!** Observe wind direction - avoid danger of discharge blowing towards operator.

#### 4.4 PTO shaft length (Tractor mounted only)

The PTO shaft must overlap by 150mm in longest situation and not bottom out in shortest situation. Always follow instructions supplied with shaft if available.

4.4.1 To shorten PTO, separate each section and refit to machine.

4.4.2 Raise machine on linkage until shortest length is achieved.

4.4.3 Supporting the two sections side by side, mark a point 25mm - 50mm back from where the guard tube meets the joint guard onto the other section. Repeat for the opposite end.

4.4.4 Adjust the tractor linkage to set at longest shaft length.

4.4.5 Check that 150mm minimum overlap of sections is achieved between marks.

4.4.6 Saw off the surplus guard and shaft at each mark and remove cuttings and burrs.

4.4.7 Grease the shaft, reassemble to machine, and test before use.

Fig 5.1.1 Support Stand



Fig 5.1.2a Engine Oil and Fuel

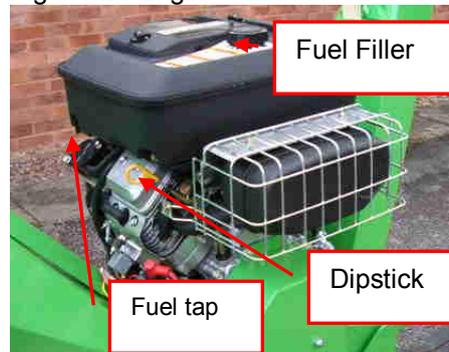
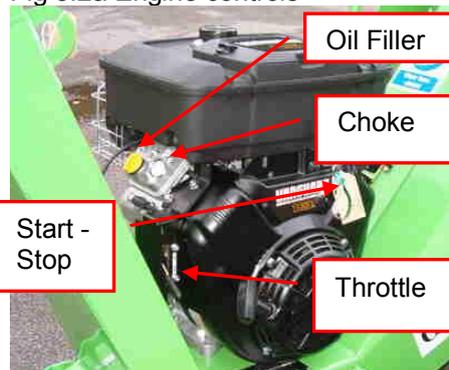


Fig 5.2a Engine controls

**5.1 Pre-Work Checks:**

- 5.1.1 Check machine is stable with support stand lowered with pin in place (fig 5.1.1).
- 5.1.3a Check engine oil level (fig 5.1.2a - See also 6.2 and Engine instruction manual).
- 5.1.4a Check engine air filter. (see Section 6.4)
- 5.1.5 Check fasteners for tightness.
- 5.1.6 Check cutter is free to turn.
- 5.1.6.1 If blocked, remove the drive guard and, using a bar through the hole in the cutter spindle, manually turn the cutter until free of obstruction.
- 5.1.6.2 Check tightness of blade bolts and condition of blades. See 6.7 for cutter blade servicing.
- 5.1.6.3 Remove any loose material.
- 5.1.7 If any bolts are loose, refer to maintenance section for further action.
- 5.1.8 Check discharge chute and flap is in desired position and all clamps are tight. (see Section 4.3)
- 5.1.9 Check infeed chute is folded out.
- 5.1.10 Check infeed rubber flaps are intact.
- 5.1.11 Check work area and erect signs and cone off discharge area if necessary.
- 5.1.12 Check **ALL** safety procedures have been followed.

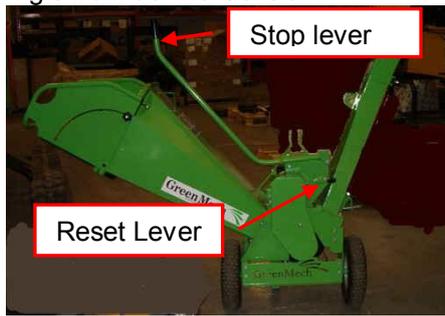
**5.2a Starting Machine:**

- 5.2.1 Check all other personnel are clear of machine.
- 5.2.2a Check that machine stop button is pulled out to start.
- 5.2.3a Turn engine start switch to position I. (fig 5.2a)
- 5.2.4a Open fuel tap by putting the vane to vertical.
- 5.2.5a Set throttle to Slow and pull out choke.
- 5.2.6a Turn key or pull starter cord to start engine.
- 5.2.7a Push choke back in.
- 5.2.8a Set throttle to Fast.

**5.2b Starting Machine:**

- 5.2.1 Check all other personnel are clear of machine.
- 5.2.2b Start tractor and engage pto according to tractor instructions.
- 5.2.3b If rotor not turning, using reset lever (Fig 5.2b), carefully unlatch clutch stop lever to start drive.
- 5.2.4b Increase tractor speed to obtain 540 rev/min at pto shaft.

Fig 5.2b Machine Control



### 5.3a Stopping Machine

5.3.1a Push the red STOP button.

5.3.2a Switch start key to position 0.

5.3.3a Wait for engine and cutter to stop.

### 5.3b Stopping Machine

5.3.1b Pull the clutch (Stop) lever (Fig 5.2b) towards infeed chute to disengage belt drive and stop rotor.

5.3.2b Switch tractor start key to position 0.

5.3.3b Wait for engine and cutter to stop.

5.3.4b To re-start drive simultaneously pull stop lever and unlatch with reset lever.

**⚠ CAUTION!** The cutter may take several seconds to stop due to its inertia.

Fig 5.5 Infeed chute folded in



### 5.4 Operating Hints

5.4.1 Reduce the engine/ tractor throttle to Slow whilst further material is collected for chipping.

5.4.2 Take care when feeding wood into the machine to allow for awkward shapes to “KICK” when contacting the cutter.

**⚠ CAUTION!** Do not adjust discharge chute when chipping is in progress.

**⚠ CAUTION!** A build up of debris risks overheating of the engine and a risk of fire.

**⚠ CAUTION!** Keep working area around the machine clear at all times and check only authorised personnel are present.

### 5.5 Preparing For Transport On Completion Of Work

5.5.1 Check that engine has stopped and cutter is stationary.

5.5.2 Shake the machine and remove surplus material from infeed chute and machine surfaces.

5.5.3 Lift up infeed chute to transport position and secure with hand nuts (fig 5.5) ensuring spacers pass through holes at ends of slots.

**ROUTINE MAINTENANCE SCHEDULE**

Where applicable (a) refers to Engine Driven (b) refers to Tractor Mounted

Note: Belt guard requires either spanner or hexagon key for removal.



**CAUTION!** Always press stop button, switch engine to 0 and check for rotation before carrying out any maintenance.

Action	Section	Page
<b>DAILY</b>		
Check engine oil level (ref: engine manual)	6.2 – 6.3	6-3
Check fuel level	6.2	6-3
Clean air cleaner (Engine driven only)	6.4	6-3
Check drive belt(s)	6.5	6-3
Check p.t.o. shaft and guard (ref: suppliers instructions)		
Check condition of infeed chute rubber flaps	6.6	6-3
Check condition of cutter blades and retaining bolts	6.7	6-4

<b>First 50 hours</b>		
Check drive belt tension	6.5	6-3
Check wheel and tyre condition and pressures	6.9	6-5
Check all mountings	6.11	6-5
Check battery levels (if fitted)	6.12	6-6
Service engine (engine driven only)	Refer to engine manual	
Change gearbox oil (tractor mounted only)	6.13	6-6

<b>Weekly in addition to Daily actions</b>		
Check drive belt tension	6.5	6-3
Steam clean machine	6.8	6-5
Clean air cleaner	6.4	6-3
Check wheel and tyre condition and pressures	6.9	6-5
Grease all bearings and pivots	6.10, 6.1	6-5
Check all mountings	6.11	6-5
Check battery levels (if fitted)	6.12	6-6

<b>250 hours in addition to Daily and Weekly actions</b>		
Check condition of bearings and pivots	6.10	6-5
Service engine (engine driven only)	Refer to engine manual	
Check axle mounting bolts for tightness	6.11	6-5
Check and grease wheel spindles	6.10	6-5

<b>500 hours in addition to Daily and Weekly actions</b>		
Change gearbox oil (tractor mounted only)	6.13	6.6

**ENGINE MAINTENANCE****REFER TO ENGINE MANUAL**

**Tyre Pressure** 1.4 bar (20 lb/in<sup>2</sup>)

Recommended lubricants	Specification
Grease	Complex grease EP2 (high temperature)
Engine	SAE 15W-40 APICD
Gearbox (tractor mounted)	SAE 90 Capacity .5 litres

6.1 Lubrication Points (see 6.14)

Fig 6.1a Lubrication points GM C/S100 Engine Driven

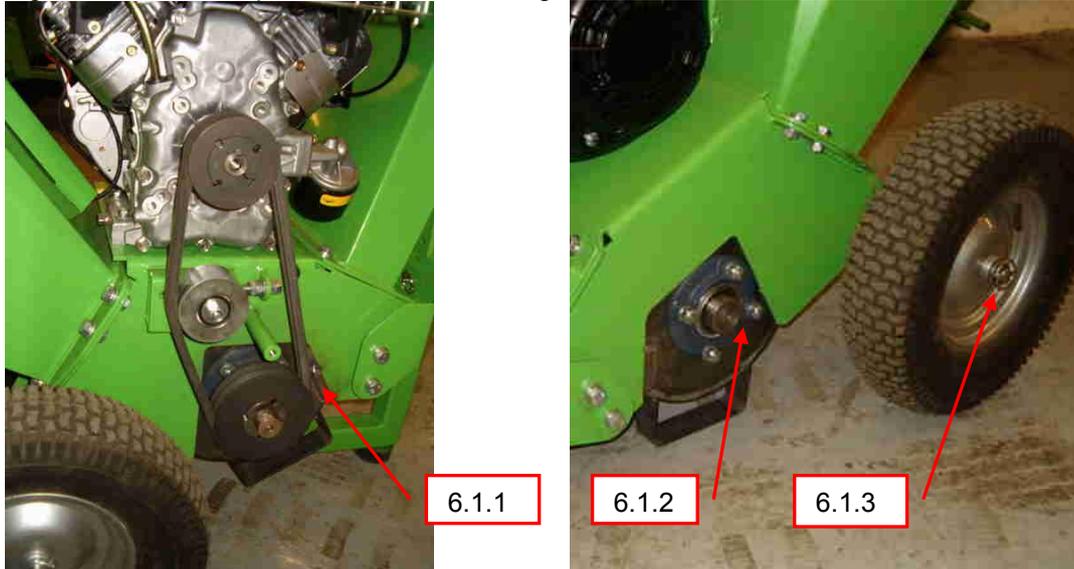
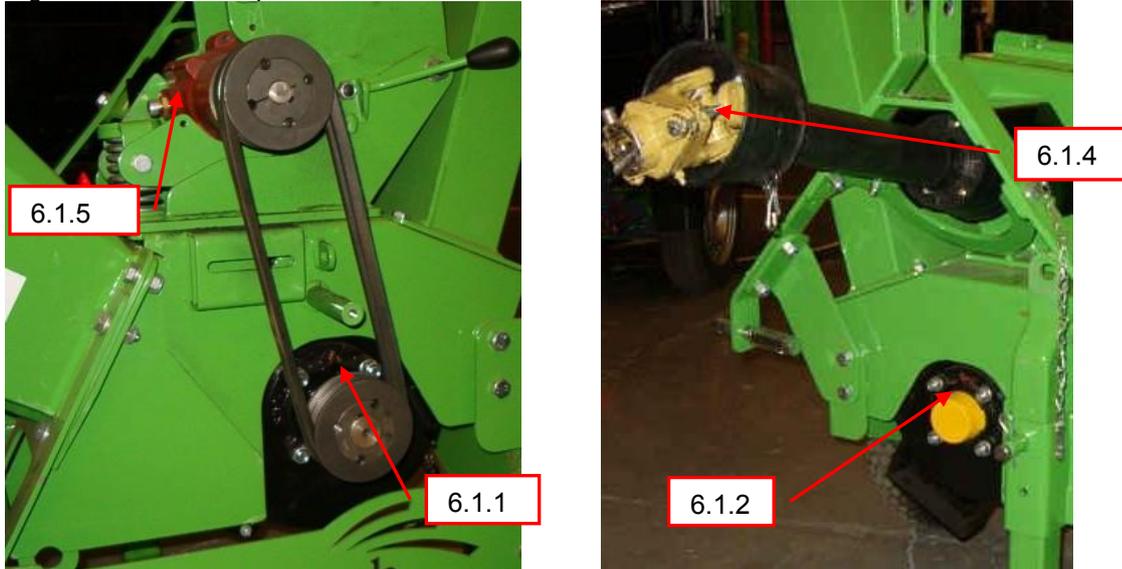


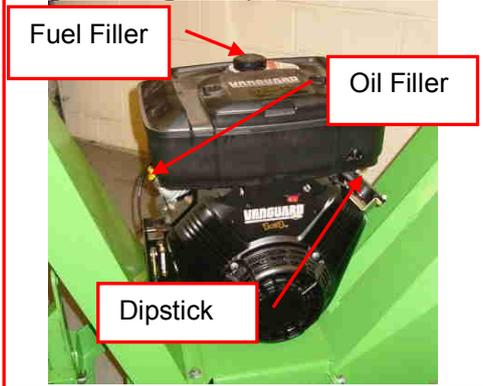
Fig 6.1b Lubrication points GM C/S100TM Tractor Mounted



Grease except where stated

6.1.1	Cutter bearing (remove guard)	1 nipple
6.1.2	Cutter bearing (non-drive end)	1 nipple
6.1.3	Wheel spindles	Remove wheel - smear with grease
6.1.4	p.t.o. shaft - both ends	2 nipples
6.1.5	Gearbox	Check oil level and top-up as required
Note. Do not overgrease bearings as damage to seals may occur.		

Fig. 6.2 Engine Dipstick and Filler

**6.2a Engine Oil**

6.2.1 Check daily (fig 6.2). Refer to engine manual to refill.

**Engine Oil Filter**

Refer to engine manual for replacement.

**6.3a Fuel Level**

6.3.1 Check daily before work and fill as required (fig 6.2).

**!** **CAUTION!** Use clean 4-stroke petrol fuel only. If in doubt, use a funnel with a filter.

Fig. 6.4 Engine Air Cleaner

**6.4a Air Cleaner****Weekly**

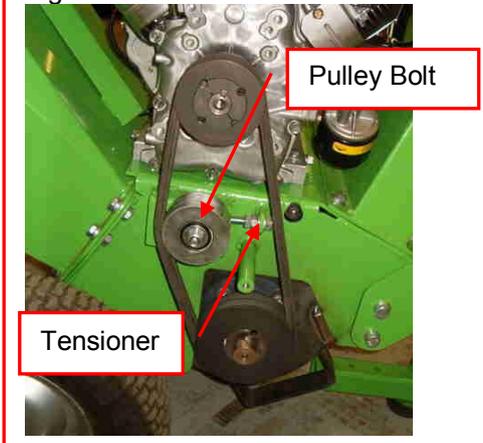
6.4.1 Remove cover (fig 6.4).

6.4.2 Unscrew nut to slide out element and either blow out with air-line or gently tap on smooth ground to release debris.

6.4.3 Replace element and cover.

6.4.4 Ensure hand nuts are secure.

Fig 6.5a Drive Belt

**6.5 Drive Belts (Fig 6.5)**

Check daily, before work.

6.5.1 Remove guard and inspect.

**Tension (not required on tractor mount)**

Desired belt tension is 400N.

6.5.2 Check with tension meter (available as an option.)

6.5.3 Release pulley bolt and adjust locknuts on tensioning screw to set tension.

6.5.4 Tighten pulley bolt.

**Replacement**

6.5.5a Release pulley bolt and slacken tensioning screw to allow belts to be removed.

6.5.5b Pull stop lever to latch, loosen and remove both pulleys to remove belts.

6.5.6 Fit new belts, ensuring they lie snugly in the pulley grooves.

6.5.7 Tension belts, tighten pulley bolts and replace guard securely.

**Note: Re-tension new belts after 5 working hours (engine driven only).**

Fig 6.5b Drive Belt

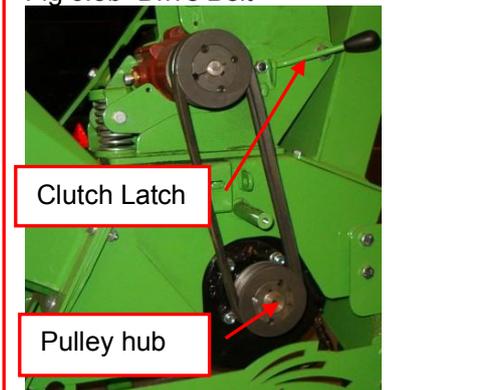
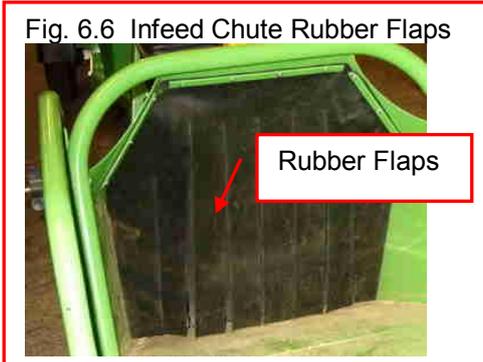


Fig. 6.6 Infeed Chute Rubber Flaps

**6.6 Infeed Chute Flaps (Fig 6.6)**

Two slitted flaps protect the operator from material thrown back up the infeed chute.

6.6.1 Replace flaps if damaged.

**!** **CAUTION!** Do not operate with missing or damaged flaps.

**6.7 Cutter Blade Servicing**

The cutter cassette is removed as a unit to service the cutter blades.

**Cassette removal (a) (fig 6.7.1)**

6.7.1a Check engine is switched off.

6.7.2a Remove drive belts as 6.5 above

6.7.3a Fold the infeed chute in for transport and secure.

6.7.4a Tip machine back onto infeed chute and remove stand.

6.7.5a Tip machine forward to rest on feet of cassette.

6.7.6a Remove 2 front bolts and 2 rear bolts.

6.7.7a Carefully tilt machine back to release cassette and rest machine on infeed chute.

**Cassette removal (b) (fig 6.7.1)**

6.7.1b Disconnect pto shaft.

6.7.2b Remove drive belts as 6.5b above

6.7.3b Raise machine using tractor linkage.

6.7.4b Place stand under cassette.

6.7.5b Lower machine onto cassette stand.

6.7.6b Remove 2 front bolts and 2 rear bolts.

6.7.7b Carefully raise machine to release cassette.

Fig 6.7.1 Cassette Removal

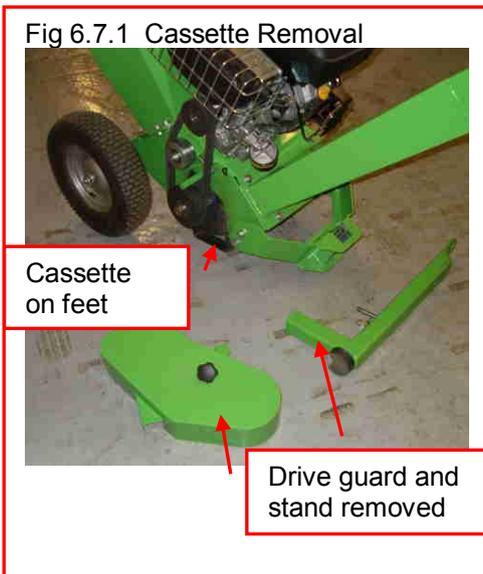
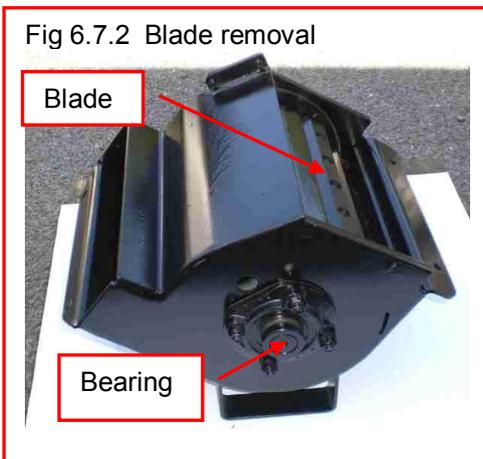


Fig 6.7.2 Blade removal

**Blade servicing (Fig 6.7.2)**

**!** **CAUTION!** Take care. Blades are extremely sharp.

6.7.8 Slacken blades bolts with Torx tool supplied and remove.

6.7.9 Turn blades round and refit to use opposite edge.

6.7.10 Tighten blade bolts to 35Nm.

6.7.11 Check clearance to anvil is 0.5mm.

Note: If blades have been reground the anvil will need readjusting to 0.5mm.

6.7.12 Reassemble cassette and refit to machine by reversing procedure above.

6.7.13 Refit belts as 6.5 above.

6.7.14 Replace and secure drive guard.

**Blade regrinding**

Both edges of each blade must be ground on front at 27° angle and on back 10° angle over 4mm to ensure correct clearances. When less than 48mm minimum width blades may be raised by a suitable shim.



**CAUTION!** Blades must only be sharpened by grinding on a bench grinder. Do not sharpen with hand held equipment. Always sharpen in sets to maintain balance of cutter assembly.

**6.8 Steam Cleaning****weekly and every 250 hours**

6.8.1 Check all covers are fitted and closed

6.8.2 Steam clean machine surfaces.

6.8.3 Clean electrical components with a damp rag, spray with WD40 and then wipe with dry rag.



**CAUTION!** Do not steam clean directly on to electrical components.

**6.9 Tyres and Wheels****50 hours and 250 hours**

6.9.1 Check condition of tyres.

6.9.2 Check pressures and inflate to 1.4bar (20lb/in<sup>2</sup>) pressure as required.

6.9.3 Check wheel nuts are tight.

**6.10 Bearings and Pivots****weekly**

See paragraph 6.1 for routine lubrication.

**250 hours**

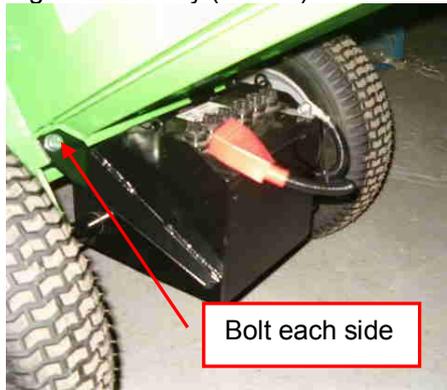
6.10.1 Check rotating components for excessive movement and noise in operation.

6.10.2 Replace as required.

**6.11 Mountings****250 hours**

6.11.1 Check that all mounting bolts are tight.

Fig 6.12 Battery (If fitted)



**6.12 Battery (If fitted) (Fig 6.12)  
First 50 hours and weekly**

6.12.1 Check electrolyte level and top up if required.

**⚠ CAUTION! Gases are explosive. Electrolyte is corrosive. Avoid sparks and spillage.**

6.12.2 Removal of battery

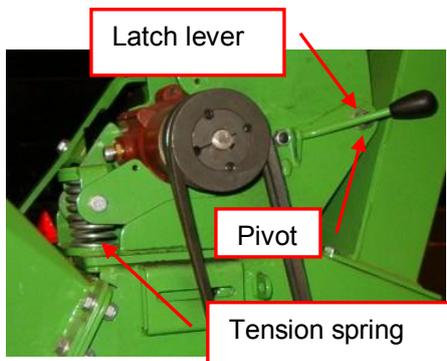
6.12.2.1 First disconnect negative (-) cable (black cap).

6.12.2.2 Disconnect positive (+) cable (red cap).

6.12.2.3 Remove bolts to allow tray to drop and lift out battery.

6.12.2.4 Replace by connecting positive cable before negative.

Fig 6.13 Gearbox



**6.13 Gearbox removal to change oil (tractor mount only Fig 6.13)**

6.13.1 Remove belts as 6.5b above.

6.13.2 Unlatch and release clutch.

6.13.3 Remove tension spring.

6.13.4 Remove pto input cover.

6.13.5 Remove latch lever.

6.13.6 Release 2 pivot bolts.

6.13.7 Lift away gearbox in cradle.

*Gearbox drain plugs??*

**6.14 Fault finding**

Fault	Check	Action	Page
Engine will not start	Stop button	Pull out to release	
	Engine stop switch	push to I - start position	6-3
	Fuel	Fill tank - check tap on	6-3
	Oil pressure	Check Oil level	6-3
	Drive guard	Fit to engage cut-out switch	6-3
Engine not at correct speed	Engine throttle	Check operation	5-1
Cutter not rotating	Blockage	Clear	5-1
	Drive belt tension	Re-tension or replace	6-3
Discharge does not flow	Discharge chute	Check for blockage	5-1
	Cutter unit	Check for blockage	5-1
Unusual noise(s)	Bearings	Check and replace	6-4

**7.1 Storage**

- 7.1.1 Thoroughly clean machine and note any replacement parts required.
- 7.1.2 Carry out 250 hour service if not already done. Refer to Section 6
- 7.1.3 Fit replacement parts when available.
- 7.1.4 Drain fuel (engine driven only)
- 7.1.5 If machine is to be stored for more than 3 months, place on axle stands to remove weight from wheels.

**7.2 Removal from Storage**

- 7.2.1 Check tyre pressures Refer to 6.9
- 7.2.2 Carry out machine preparation as necessary Refer to Section 4

When the machine is finally scrapped, the following items should be disposed of only at authorised waste disposal facilities.

Engine or gearbox oil. Tyres. Rubber components

If in doubt, consult the Local Authority environmental department.

**Safety Guides and Checklist as  
Transcribed from and Advised by  
Arborculture & Forestry Advisory Group  
and Issued as Leaflet 604 by HSE, issued  
04/03**

### INTRODUCTION

This leaflet covers the safe working practices to be followed when operating a wood chipper.

It does not cover a combination of machines working within each other's risk zones (see AFAG leaflet 605 *Mechanical roadside processing*)

You can use this leaflet, along with the manufacturer's handbook, as part of the risk assessment process to help identify the controls to put in place when using a wood chipper.

You must also assess the effect of the site and the weather as well as following this guidance

All operators must have had appropriate training in how to operate the machine and how to carry out the tasks require (see AFAG leaflet 805 *Training and certification*)

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. Use the following PPE
  - A Safety Helmet, complying with EN 397, if identified as required in the risk assessment.
  - Eye Protection (a mesh visor complying with EN1731 or safety glasses to EN166)
  - Hearing protection (complying with EN352) where noise level exceeds 85 dB(A) (see HSE pocket card INDG363 *Protect your hearing or lose it!*)
  - Gloves.

- Safety Boots with good grip and ankle support (complying with EN345-1)
- Non-Snag Outer Clothing appropriate to prevailing weather conditions. High-visibility clothing (complying with EN471) should be worn when the risk assessment identifies that it is needed.

2. Each person should carry a personal first-aid kit including a large wound dressing (see HSE leaflet INDG214 *first aid at work; Your questions answered*).
3. Hand cleaning material such as waterless skin cleanser or soap, water and paper towel should be readily available.

### THE MACHINE

4. Before working with a machine, check it has been properly converted from any transport mode.
5. Ensure guards for dangerous parts (e.g. belts, pulleys, shafts etc) are secure and undamaged.
6. Ensure protective devices, such as the infeed control bar (incorporating the stopping device), are working correctly (see HSE leaflet AI S 38 *Power-fed mobile wood chippers: Operator protection at infeed chutes*).
7. Ensure any lock for the chipping components has been disengaged;
8. Ensure the infeed hopper is clear of any materials.
9. Ensure Noise warning signs are in place.
10. For machines driven by a power take-off (PTO) shaft, before starting ensure:

- The PTO shaft is fitted with a suitable guard complying with EN1152, that encloses the shaft along its full length from tractor to machine.
- The guard is correctly fitted and in effective working order (see AS24(rev) ***Power take-offs and power take-off drive shafts***);
- The PTO speed is suitable for the machine.

### **SELECTING THE WORK AREA**

11. Select as firm a surface as possible and stabilise the machine
12. Ensure ventilation is adequate and any exhaust fumes are vented into open air if working in an enclosed space.
13. Where appropriate, if the chipper is detached from the tow vehicle, apply the handbrake and, if necessary, chock the wheels.
14. On all reasonably foreseeable approaches to the worksite, erect warning and prohibition signs conforming to the Health and Safety (Safety Signs and Signals) Regulations 1996, indicating a hazardous worksite and that unauthorised access is prohibited. In areas of very high public access, a risk assessment may indicate that additional controls (e.g. barrier tape, barriers, extra manning) are required.
15. Ensure all operations near to highways are adequately signed with the appropriate notices as specified in the DTLR Code of Practice ***Safety at street works and road works*** (available from The Stationary Office ISBN 0 11 551958 -0)
16. Ensure that the discharge chute is positioned to prevent chips being blown onto the highway during roadside operations, or in any direction where they

can affect colleagues or members of the public.

17. Position the chipper so that operators do not have to stand on embankments/slopes when feeding material into the machine

### **EMERGENCY PROCEDURES**

18. Ensure a designated and responsible person knows the daily work programme and agree with them a suitable emergency contact procedure. Where reasonably practicable use a mobile phone or radio and pre-arrange call-in system.
19. Ensure the operators can provide the emergency services with enough detail for them to be found in the event of an accident, e.g. the grid reference, the distance from the main road, the type of access (suitable for car/four-wheel drive/emergency service vehicles). In urban areas street names are essential. Know the location details before they are needed in an emergency. (Also see AFAG leaflet 802 ***Emergency planning***)

### **OPERATION**

20. Make sure the cuffs of gloves are close fitting or tucked into you're sleeves to stop them being caught on material as it is fed into the chipper.
21. Set the engine speed (and set the stress control if fitted) to obtain optimum performance.
22. Check that material to be chipped is free from stones, metal and foreign objects.
23. Stand to one side of the infeed rollers to avoid being hit by ejected material.
24. Let material go as soon as it is engaged in the infeed rollers or chipping components.

## Maintenance

25. Use a push stick at least 1.5 metre long, for both short produce and for the last piece of produce to be chipped.
26. Do not put any part of your body (including hands or feet), into the infeed hopper while the machine is running.
27. Always follow the manufactures' instructions for dealing with blockages on the machine.
28. Keep the area of ground in front of the infeed hopper free from debris to prevent any tripping hazard.
29. Remove the engine start key when the machine is left unattended or when undertaking any maintenance.
36. Ensure the machine is carried out in accordance with the manufacture's handbook.
37. Check chipping components and knives each day for damage and wear.
38. Wear gloves when handling knives.
39. Before working on knives, confirm that the engine is switched off, the start key removed, and the chipping component is stationary.
40. Before opening any guard/cover or reaching into the infeed hopper or discharge chutes make sure that the engine is switched off, start key removed and dangerous parts have come to a stand still.

## FUELLING

30. Stop engine and, if necessary allow the machine to cool before refuelling.
31. Petrol vapour is invisible and can flow considerable distances from spillage or fuelling sites. Maintain a safe distance from any source of ignition at all times.
32. Store fuel to avoid vapour ignition from any source such as fires, people smoking or the wood chipper. Select a site shaded from direct sunlight and away from watercourses and drains.
33. Containers must be clearly labelled and have securely fitting caps. Plastic containers must be designed and approved for use with petrol or diesel fuel.
34. Replace the fuel cap securely.
35. Keep fuel from contacting the skin. If fuel gets into the eyes wash out with sterile water immediately and seek medical advise
41. Knives must be changed or reversed if damaged or blunt. Knives must be scrapped when worn to the minimum size specified by the manufacturer.
42. When new/sharpened knives are fitted, ensure that there is the recommended clearance between the knives and the anvil.

## MOVING THE MACHINE

43. Stop the engine and remove the start/stop key.
44. Lock the chipping components.
45. Secure the infeed hopper and the chip discharge chute in the transport position.
46. Check the towing bracket, attach, then lift and secure the jockey wheel.
47. Connect the electrics and the safety chain/s to the towing vehicle.

48. Ensure that the load is secure and that people are in a safe position before moving off.

For further leaflets and reading see HSE web site:

[www.hse.gov.uk](http://www.hse.gov.uk)

### **Further HSE Reading**

Mechanical roadside processing AFAG605

Emergency planning AFAG802

Training and certification AFAG805

First aid at work:

Your questions answered INDG214

Managing health and safety

In forestry INDG294

Protect your hearing or lose it! INDG363

Further reading Continued

Power-fed mobile wood chippers:

Operator protection at infeed chute AIS38

Power take-offs and power take-off  
drive shafts AS24

## **WARRANTY POLICY**

### **PERIOD OF WARRANTY**

**All new machinery is supplied with a 3 year parts and labour warranty from original date of purchase.**

### **LIMITATIONS**

This warranty applies only to manufacturing defect and **does not** cover repairs or costs due to:

1. Normal wear and tear.
2. Routine maintenance or adjustment.
3. Damage caused by improper handling/abuse/misuse or neglect.
4. Lack of or over lubrication
5. Overheating due to lack of maintenance.
6. Damage due to fittings/fasteners becoming loose/detached through lack of maintenance.
7. Damage caused by cleaning with water.
8. Machines serviced or repaired by non-authorized GreenMech dealers.
9. Machines incorrectly assembled or adjusted.
10. Damage caused by improper use of the machine.
11. Items/parts that are not normally covered by the warranty, including but not limited to: Blade and Blade Assemblies - Belts - Filters - Clutch Assemblies - Lubricants - Wheels & Tyres - Axles - Batteries - Bearings - Dampers - Paint
12. Consequential loss, damages or costs.

### **MAINTENANCE**

Maintenance carried out during the warranty period should be carried out as per section 6 of the machine owner's manual and by an authorised GreenMech dealer.

### **ENGINES**

This is covered by the manufacturer of the engine. Please refer to the separate warranty conditions as supplied with the owner's manual.

**All warranty repairs must be carried out by an authorised GreenMech dealer, except for engines, please refer to separate warranty terms supplied with the engine owner's manual.**



GreenMech Ltd. The Mill Industrial Park, Kings Coughton, Alcester, Warwickshire B49 5QG England

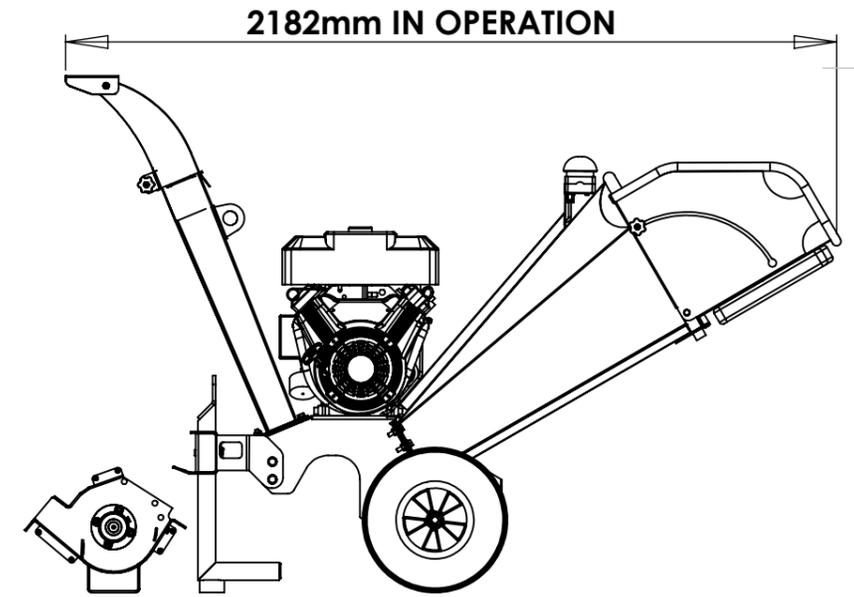
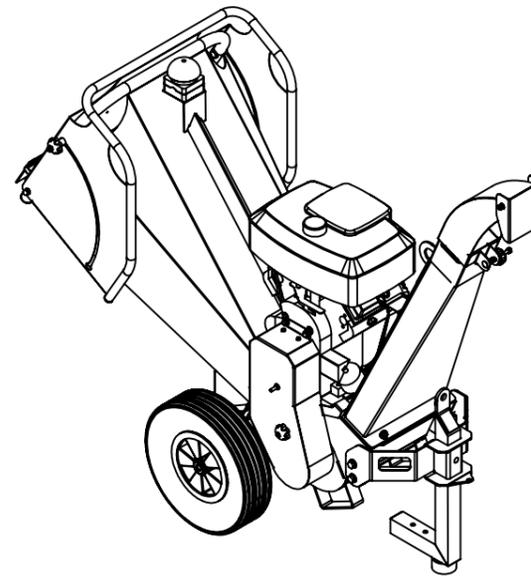
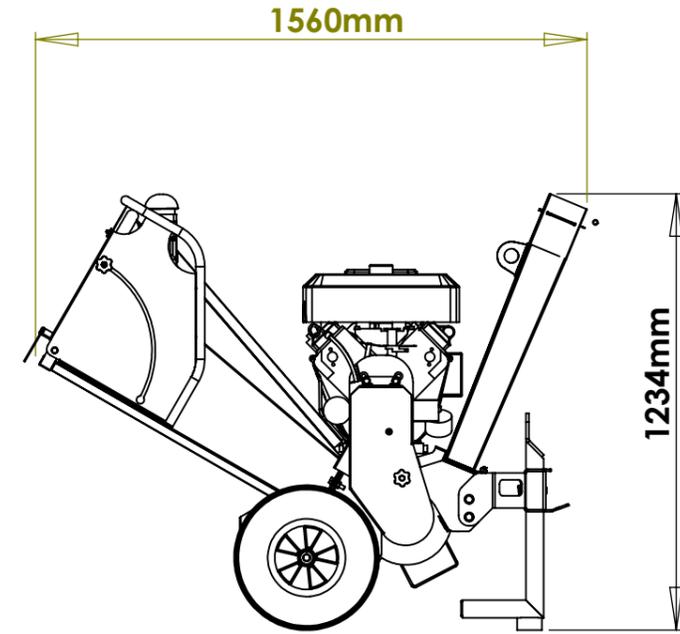
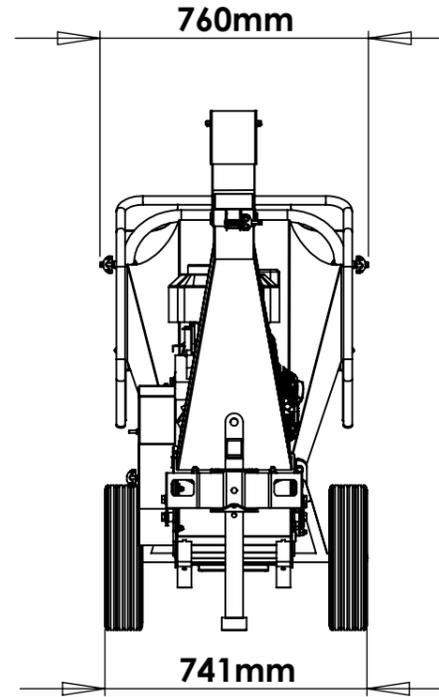
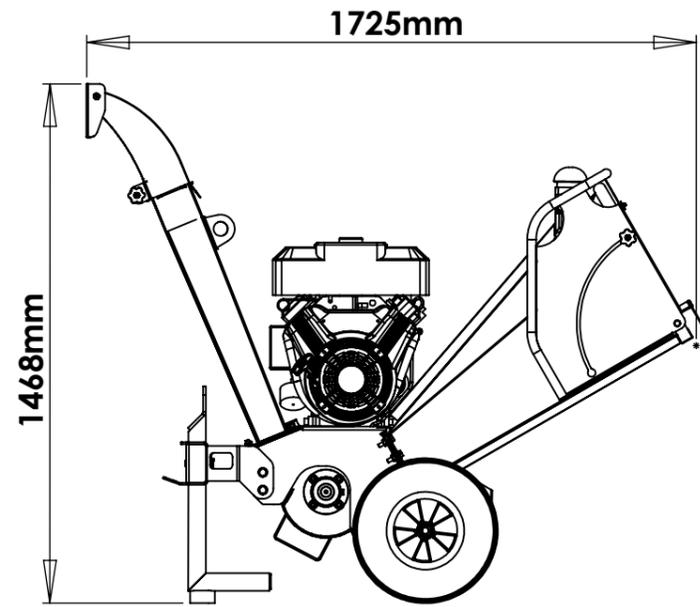
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DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



**CS100 SPECIFICATIONS:**

ENGINE: 14HP or 18HP 4-STROKE VANGUARD V-TWIN OHV

EMPTY WEIGHT- CS100-14HP: 195Kg, CS100-18HP: 197Kg

DIMENSIONS (HxLxW): 1468 x 1725 x 760mm

GUARANTEED WOOD DIAMETER: 80mm

PERMITTED WOOD DIAMETER: 130mm

PETROL CONSUMPTION (WITH CONTINUOUS CHIPPING): 2.8 L/HOUR

**CASSETTE REMOVED**

TOLERANCES: LINEAR: 0.025MM ANGULAR: 0.25°	FINISH:	NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES	TOLERANCES MACHINED PARTS +/- 0.025mm FABRICATED PARTS +/- 1.0mm
		DRAWN	SDS	28.05.09		
		CHK'D APPVD	SDS			
GreenMech Ltd			MATERIAL:		TITLE:	
The Mill Industrial Park Kings Coughton Alcester Warks B49 5QG Tel 01789 400044			WEIGHT:		CS100	
					DWG NO. CS100	
					SCALE:1:20	
					SHEET 3 OF 3	

REV	MODIFICATION	DRN	APPD	DATE
1				
2				
3				

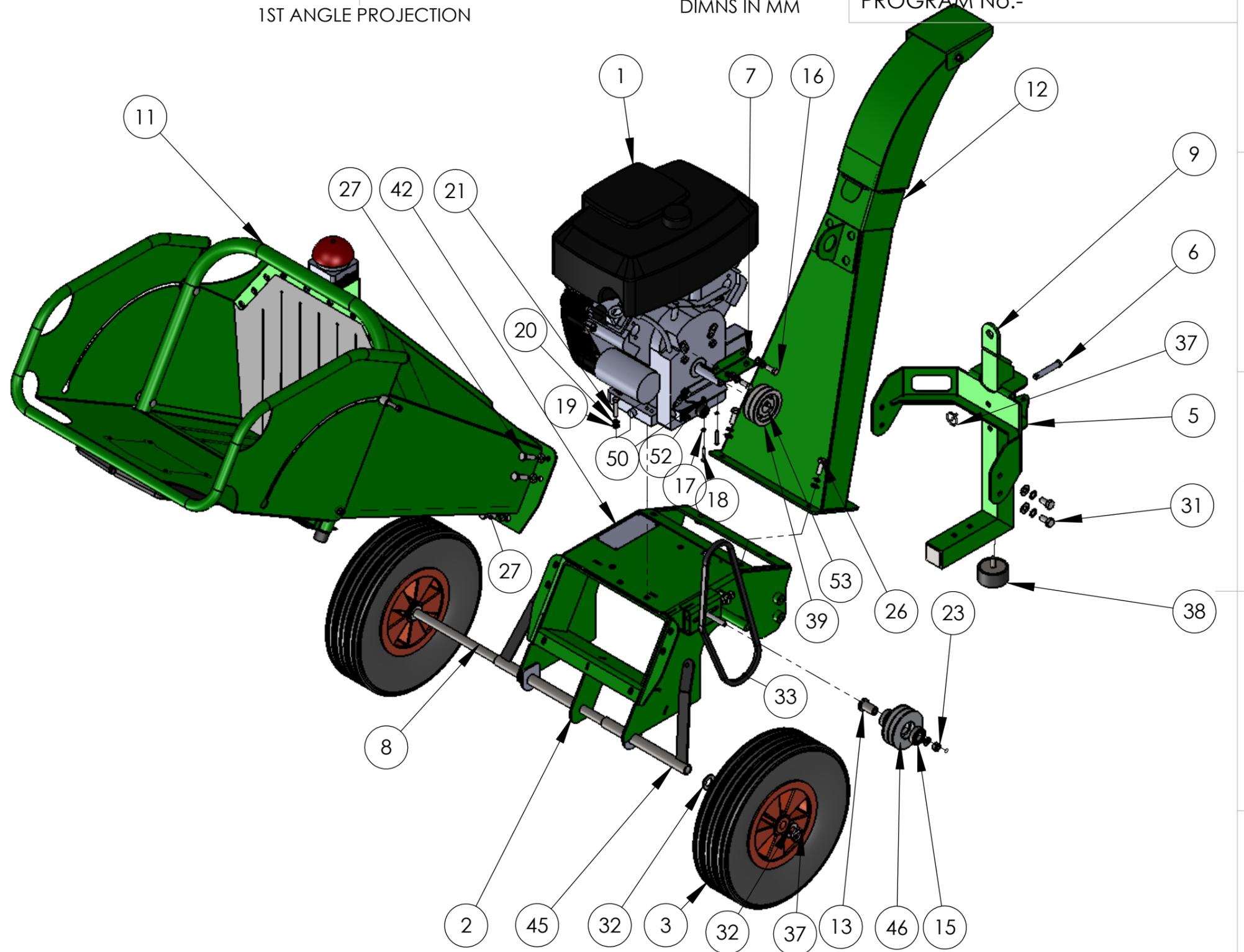
DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	CS100-6-1001 14HP CS100-6-1002 18HP	V-TWIN ENGINE	1
2	CS100-1	CHASSIS FAB	1
3	CS100-1-10	WHEEL	2
4	CS100-1-11	BELT COVER FAB	1
5	CS100-1-18	MOUNT PLATE	1
6	CS100-1-20	MOUNT PIN	1
7	CS100-1-27	COVER MOUNT	1
8	CS100-1-7	WHEEL AXLE	1
9	CS100-1-9	DRAW BAR FAB	1
10	CS100-2	CASSETTE ASSEMBLY	2
11	CS100-4	INFEED ASSEMBLY	1
12	CS100-5	DISCHARGE CHUTE	1
13	CS100-6-4	IDLER BUSH	1
14	910100EB	M10 x 100 EYE BOLT	1
15	CS100-6-7	ROLLER BEARING	2
16	903825UNC	3/8 UNC x 25mm	2
17	90502	M5 WASHER	4
18	90535BH	M5 x 35mm B/HEAD	2
19	90802	M8 WASHER	7
20	90803	M8 spring washer	7
21	90845	M8 x 45mm	4
22	91001=P	M10 plain nut	4
23	91001-NYLOC	M10 NYLOC NUT	11
24	91002	M10 B WASHER	27
25	91003	M10 S/WASHER	15
26	91030	M10 x 30mm	2
27	91030	M10 x 30mm	10
28	91080	M10 x 80mm	1
29	91202	M12 flat washer	4
30	91203	M12 spring washer	4
31	91225	M12 x 25mm	4
32	92002	M20 WASHER	4
33	CS100-6-8	BELT	2
34	C200216	GLAND	2
35	Conduit	Conduit	1
36	Conduit2	Conduit	1
37	EC150021-1	LYNCH PIN	3
38	CS100-6-9	BUMP STOP	1
39	CS100-6-15	PULLEY	1
40	90825	M8 UNPLATED BOLT	1
41	M8 Grip nut		1
42	SN Plate		1
45	CS100-1-8	AXLE TUBE	2
46	CS100-6-19	TENSIONER PULLEY	1
49	CS100-6-20	WASHER	1
50	90501-NYLOC	M5 NYLOC NUT	2
51	9051619	516 UNF	2
52	C200206	MICROSWITCH	1
53	CS100-6-11	TL BUSH	1



TOLERANCES:  
LINEAR: 0.025MM  
ANGULAR: 0.25°

FINISH:

	NAME	SIGNATURE	DATE
DRAWN	SDS		28.05.09
CHK'D			
APPVD	SDS		

DEBUR AND  
BREAK SHARP  
EDGES

TOLERANCES  
MACHINED PARTS +/- 0.025mm  
FABRICATED PARTS +/- 1.0mm

GreenMech Ltd  
The Mill Industrial Park  
Kings Coughton  
Alcester  
Warks B49 5QG Tel 01789 400044

MATERIAL:

TITLE:

CS100

WEIGHT:

DWG NO.

CS100

A3

REV	MODIFICATION	DRN	APPD	DATE
1				
2				
3				

SCALE:1:10

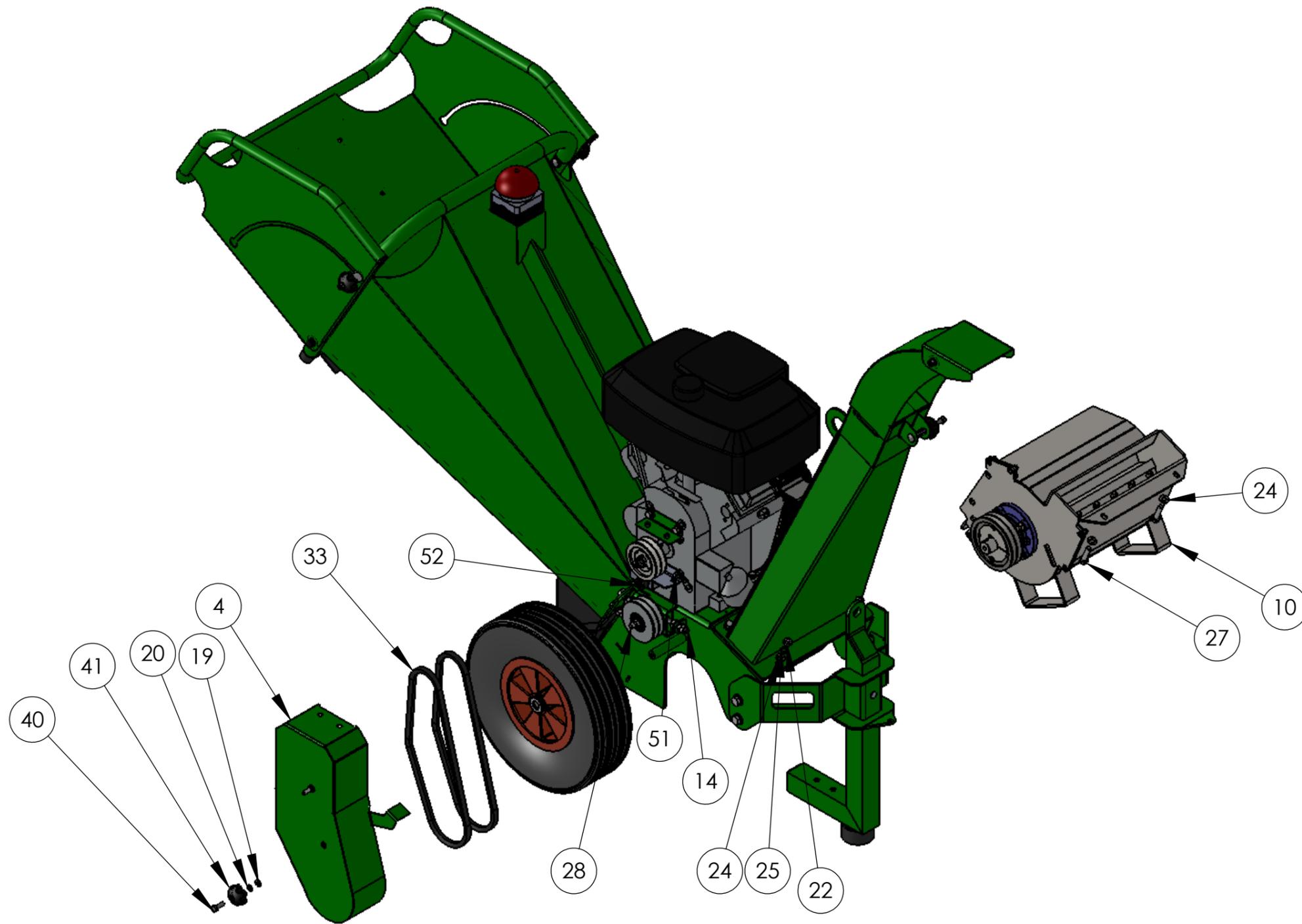
SHEET 1 OF 3

DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

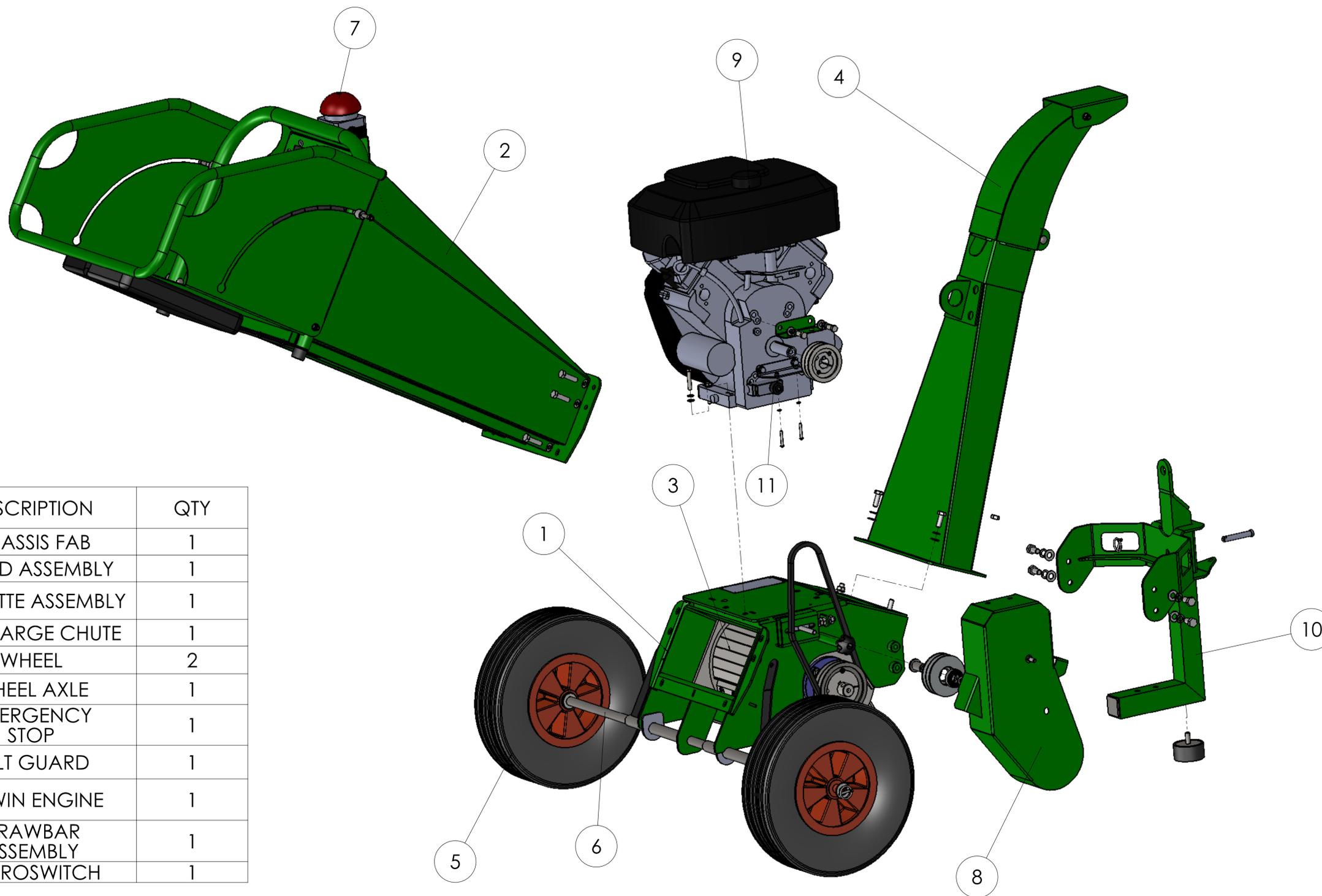
PROGRAM No:-



TOLERANCES: LINEAR: 0.025MM ANGULAR: 0.25°		FINISH:		NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES	TOLERANCES MACHINED PARTS +/- 0.025mm FABRICATED PARTS +/-1.0mm	
DRAWN		SDS				28.05.09			
CHK'D		SDS							
GreenMech Ltd				MATERIAL:		TITLE:		CS100	
The Mill Industrial Park Kings Coughton Alcester Warks B49 5QG Tel 01789 400044						WEIGHT:		DWG NO. CS100	
REV	MODIFICATION	DRN	APPD	DATE	SCALE:1:10		SHEET 2 OF 3		
1		2		3					

A  
B  
C  
D  
E  
F

A  
B  
C  
D  
E  
F



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	CS100-1	CHASSIS FAB	1
2	CS100-4	INFEED ASSEMBLY	1
3	CS100-2	CASSETTE ASSEMBLY	1
4	CS100-5	DISCHARGE CHUTE	1
5	CS100-1-10	WHEEL	2
6	CS100-1-7	WHEEL AXLE	1
7	CS100-6-23	EMERGENCY STOP	1
8	CS100-1-11	BELT GUARD	1
9	CS100-6-1001 14 HP CS100-6-1002 18HP	V-TWIN ENGINE	1
10	CS100-1-9	DRAWBAR ASSEMBLY	1
11	C200206	MICROSWITCH	1

TOLERANCES: LINEAR: 0.025mm ANGULAR: 0.25°	FINISH: xxxxxxxxxxxx	NAME: BGG	SIGNATURE: _____	DATE: XXXXXXXX	DEBUR AND BREAK SHARP EDGES	TOLERANCES MACHINED PARTS +/- 0.025mm FABRICATED PARTS +/- 1.0mm TITLE: <b>CS100</b>
GreenMech Ltd The Mill Industrial Park Kings Coughton Alcester Warks B49 5QG Tel 01789 400044		DRAWN: BGG	CHKD: _____	APPRD: BGG	MATERIAL:	DWG NO: <b>CS100 MAIN</b>
REV		MODIFICATION		DRAWN	APPRD	DATE
8		10		11	12	12
				WEIGHT:		SCALE: 1:20
						SHEET 1 OF 1

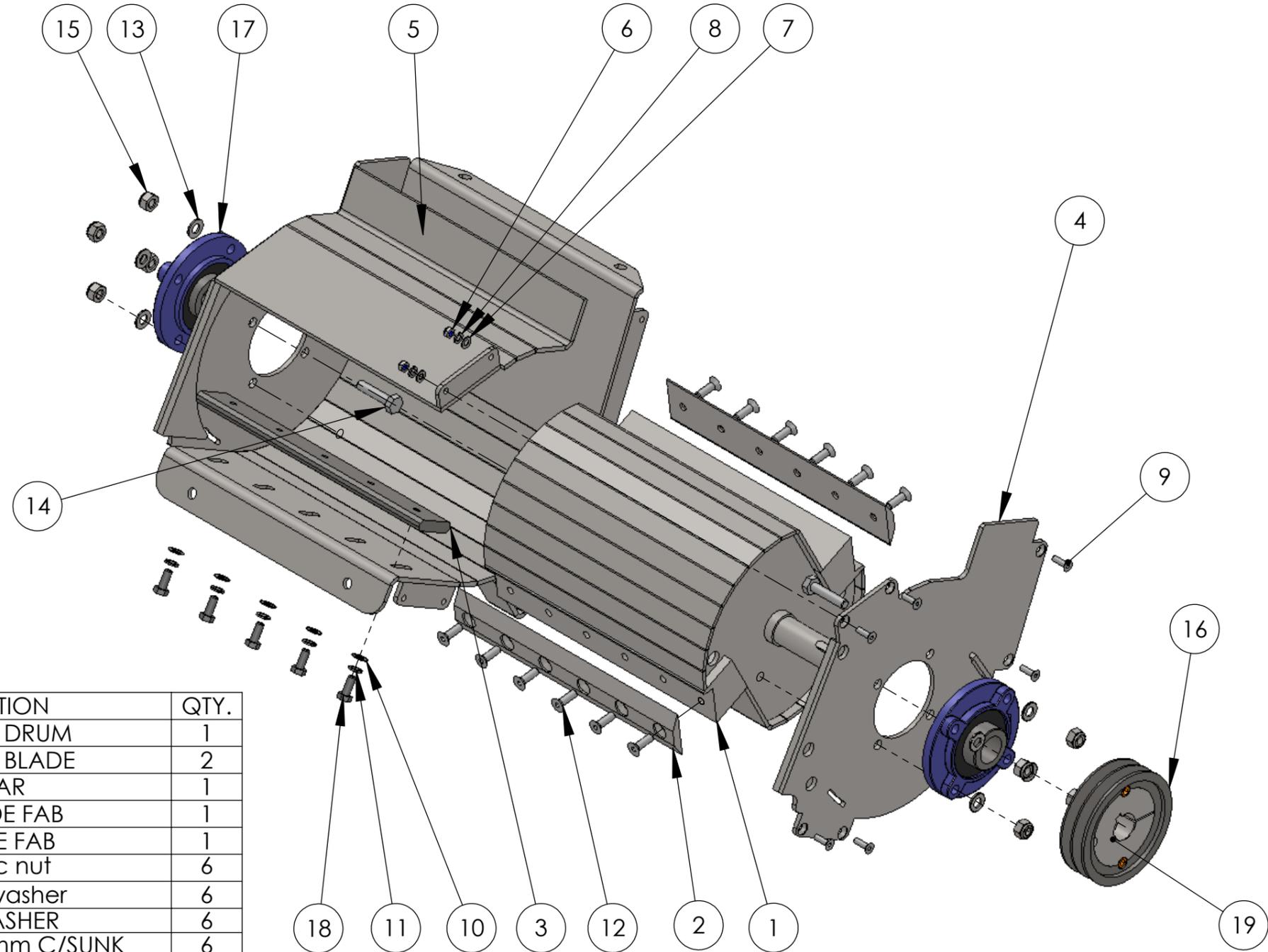
REV	MODIFICATION	DRAWN	APPRD	DATE
8	10	11	12	12

DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	CS100-2-1	CHIPPER DRUM	1
2	CS100-2-6	CHIPPER BLADE	2
3	CS100-2-12	SHEAR BAR	1
4	CS100-2-14	DRIVESIDE FAB	1
5	CS100-2-15	CASSETTE FAB	1
6	90601-Nyloc	M6 Nyloc nut	6
7	90602	M6 flat washer	6
8	90603	M6 S/WASHER	6
9	90620CS	M6 x 20mm C/SUNK	6
10	90802	M8 flat washer	5
11	90803	M8 spring washer	5
12	90825CS	M8 x 25mm C/SUNK	12
13	91002	M10 B WASHER	8
14	91040	M10 x40mm BOLT	8
15	91001-NYLOC	M10 NYLOC NUT	8
16	CS100-6-12	PULLEY	1
17	C180109-1	MFC30	2
18	90820	M8 x 20mm	5
19	CS100-6-13	TL BUSH	

TOLERANCES:  
LINEAR: 0.025MM  
ANGULAR: 0.25°

FINISH:

	NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES
DRAWN	SDS		10.03.2009	
CHK'D				
APPVD	SDS			

TOLERANCES  
MACHINED PARTS +/- 0.025mm  
FABRICATED PARTS +/-1.0mm

GreenMech Ltd  
The Mill Industrial Park  
Kings Coughton  
Alcester  
Warks B49 5QG Tel 01789 400044

MATERIAL:

TITLE:  
**CASSETTE ASSEMBLY**

WEIGHT:

DWG NO. **CS100-2**

REV	MODIFICATION	DRN	APPD	DATE
1				
2				
3				

SCALE:1:5

SHEET 1 OF 1

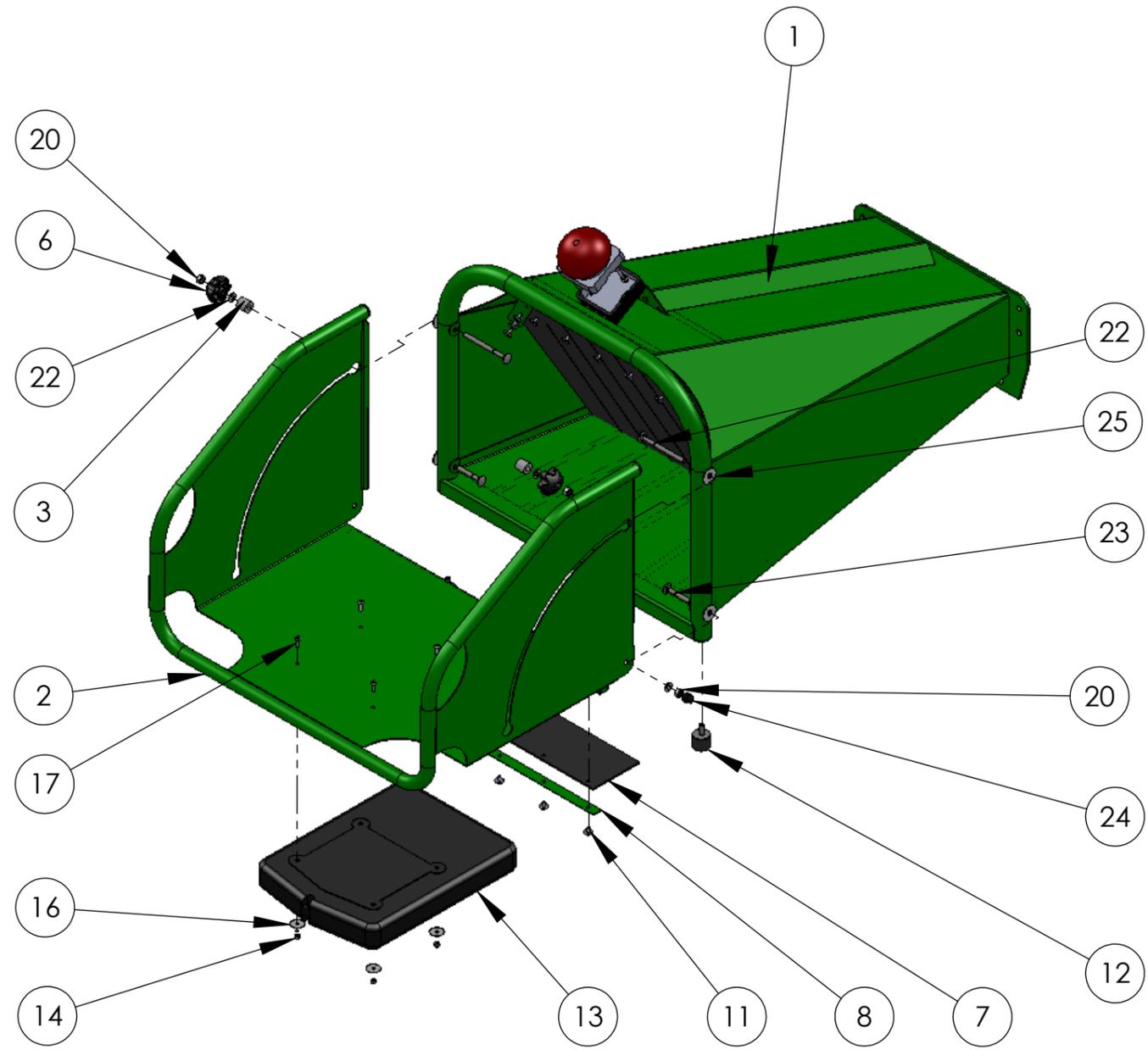
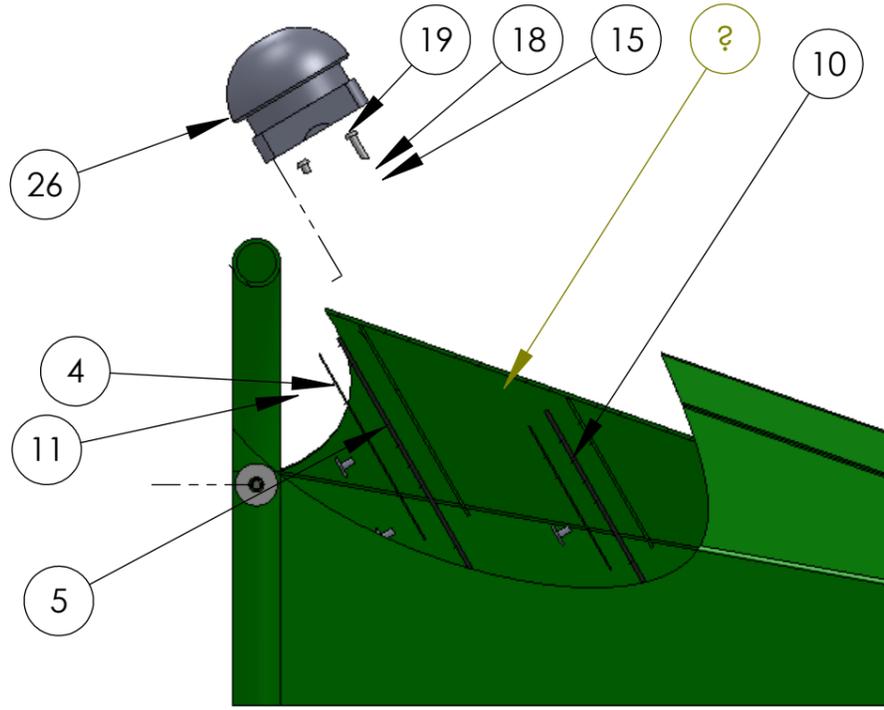
A3

DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	CS100-4-1	INFEED CHUTE FAB	1
2	CS100-4-8	INFEED FLAP FAB	1
3	CS100-4-14	NYLON SPACER	2
4	CS100-4-15	UPPER CURTAIN STRIP	1
5	CS100-4-16	CURTAIN	1
6	CS100-4-17	M8 THUMBNUIT (F)	2
7	CS100-4-19	Rubber Guard	1
8	CS100-4-20	RETAINING STRIP	1
9	CS100-4-24	LOWER CURTAIN STRIP	1
10	CS100-4-25	LOWER CURTAIN	1
11	R51216	RIVET 4.8 x 12mm	24
12	CS100-6-14	BUMPSTOP	2
13	9000-08	DOCUMENT CASE	1
14	90501-Nyloc	M5 NYLOC NUT	4
15	90502	M5 WASHER	2
16	90502-R	M5 x 25mm WASHER	4
17	90516BH	M5 x 16mm B/HEAD	4
18	90503	M5 S/WASHER	2
19	90525BH	M5 x 25mm B/HEAD	2
20	90801-Nyloc	M8 Nyloc nut	4
22	90802	M8 flat washer	4
22	908100CB	M8 x 100mm CARRIAGE	2
23	90855CB	M8 x 55mm CARRIAGE	2
24	CS100-6-15	M8 NUT CAP	2
25	91005-NYLON	M10 NYLON WASHER	4
26	CS100-6-23	KILL SWITCH	1

TOLERANCES:  
LINEAR: 0.025MM  
ANGULAR: 0.25°

FINISH:

NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES
DRAWN SDS		16.03.2009	
CHK'D			
APPVD SDS			

TOLERANCES  
MACHINED PARTS +/- 0.025mm  
FABRICATED PARTS +/-1.0mm

GreenMech Ltd  
The Mill Industrial Park  
Kings Coughton  
Alcester  
Warks B49 5QG Tel 01789 400044

MATERIAL:

TITLE:  
**INFEED ASSEMBLY**

WEIGHT:

DWG NO. **CS100-4**

A3

REV	MODIFICATION	DRN	APPD	DATE
1				
2				
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SCALE:1:10

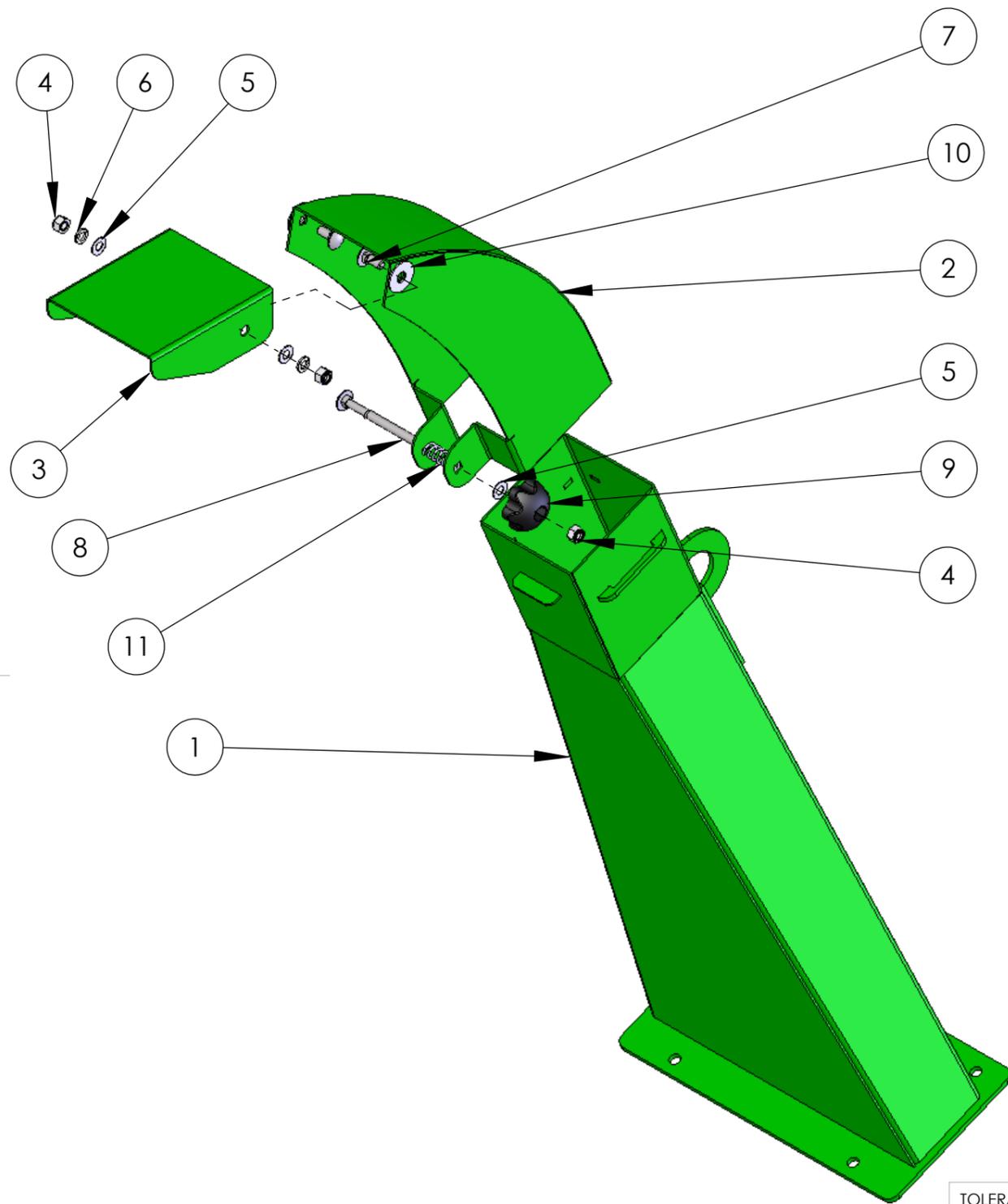
SHEET 1 OF 1

DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	CS100-5-10	DISCHARGE FAB	1
2	CS100-5-5	DISCHARGE END	1
3	CS100-5-7	DISCHARGE FLAP	1
4	90801-Nyloc	M8 Nyloc nut	3
5	90802	M8 flat washer	3
6	90803	M8 spring washer	2
7	90820CB	M8 x 20mm CARRIAGE	2
8	908100CB	M8 x 100mm CARRIAGE	1
9	CS100-4-17	M8 THUMBNUIT (F)	1
10	91005-NYLON	M10 NYLON WASHER	2
11	EC1523-432	SPRING	1

TOLERANCES:  
LINEAR: 0.025MM  
ANGULAR: 0.25°

FINISH:

	NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES
DRAWN	SDS		17.03.2009	
CHK'D				
APPVD	SDS			

TOLERANCES  
MACHINED PARTS +/- 0.025mm  
FABRICATED PARTS +/-1.0mm

GreenMech Ltd  
The Mill Industrial Park  
Kings Coughton  
Alcester  
Warks B49 5QG Tel 01789 400044

MATERIAL:

WEIGHT:

TITLE:  
**DISCHARGE CHUTE**

DWG NO. **CS100-5** A3

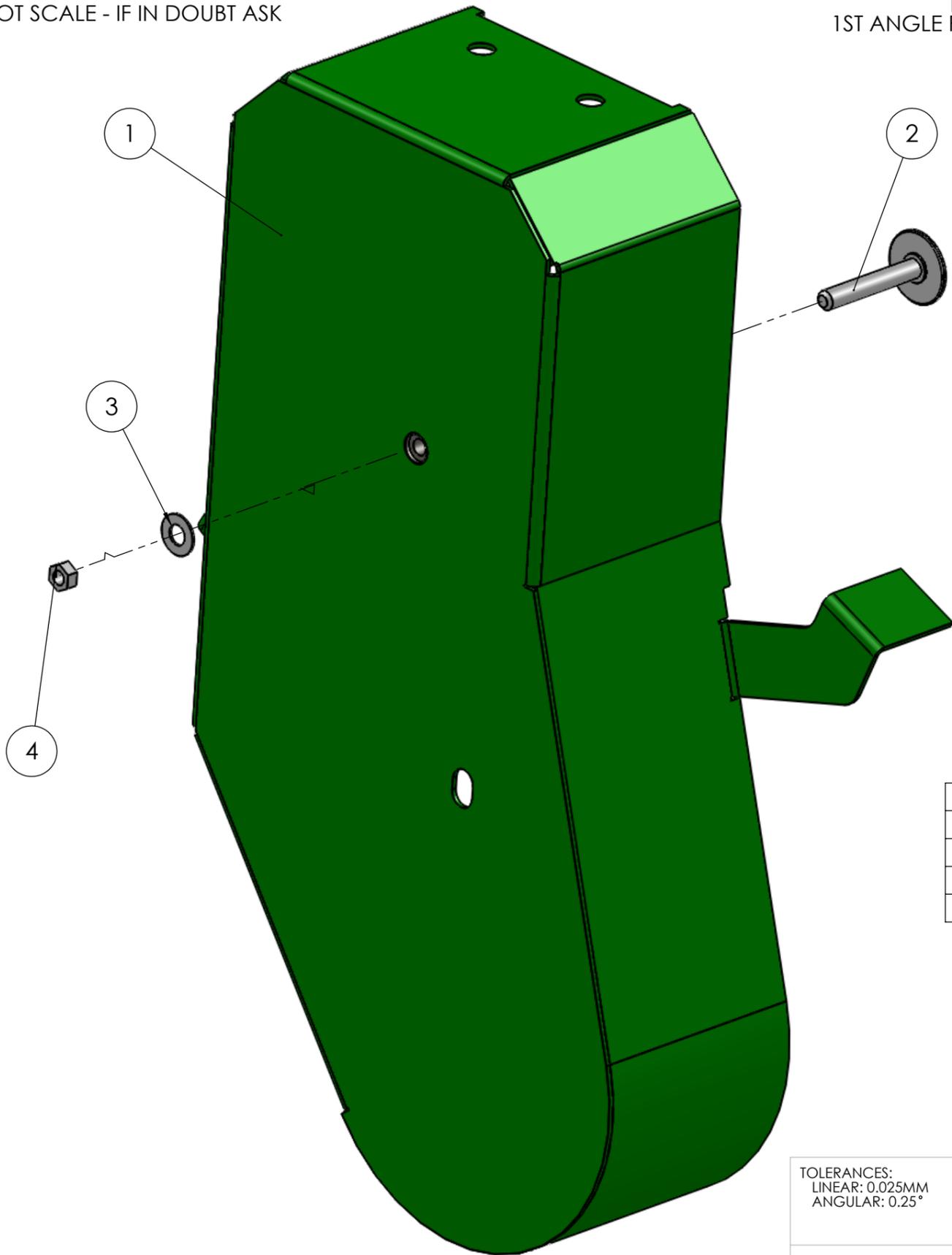
REV	MODIFICATION	DRN	APPD	DATE
1				
2				
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DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



ITEM NO.	PART NUMBER	DESCRIPTION	fab/QTY.
1	CS100-1-11	BELT COVER	1
2	EC130-1-105	M/SWITCH STRIKER	1
3	90803	FLAT WASHER	1
4	90801 P	PLAIN NUT	1

TOLERANCES:  
 LINEAR: 0.025MM  
 ANGULAR: 0.25°

FINISH:

	NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES
DRAWN	BGG		XXXXXXX	
CHK'D				
APPVD	BGG			

TOLERANCES  
 MACHINED PARTS +/- 0.025mm  
 FABRICATED PARTS +/-1.0mm

GreenMech Ltd  
 The Mill Industrial Park  
 Kings Coughton  
 Alcester  
 Works B49 5QG Tel 01789 400044

MATERIAL:

TITLE:

**BELT GUARD**

WEIGHT:

DWG NO.

**CS100-1-11EX**

A3

REV	MODIFICATION	DRN	APPD	DATE
1				
2				
3				

SCALE:1:10

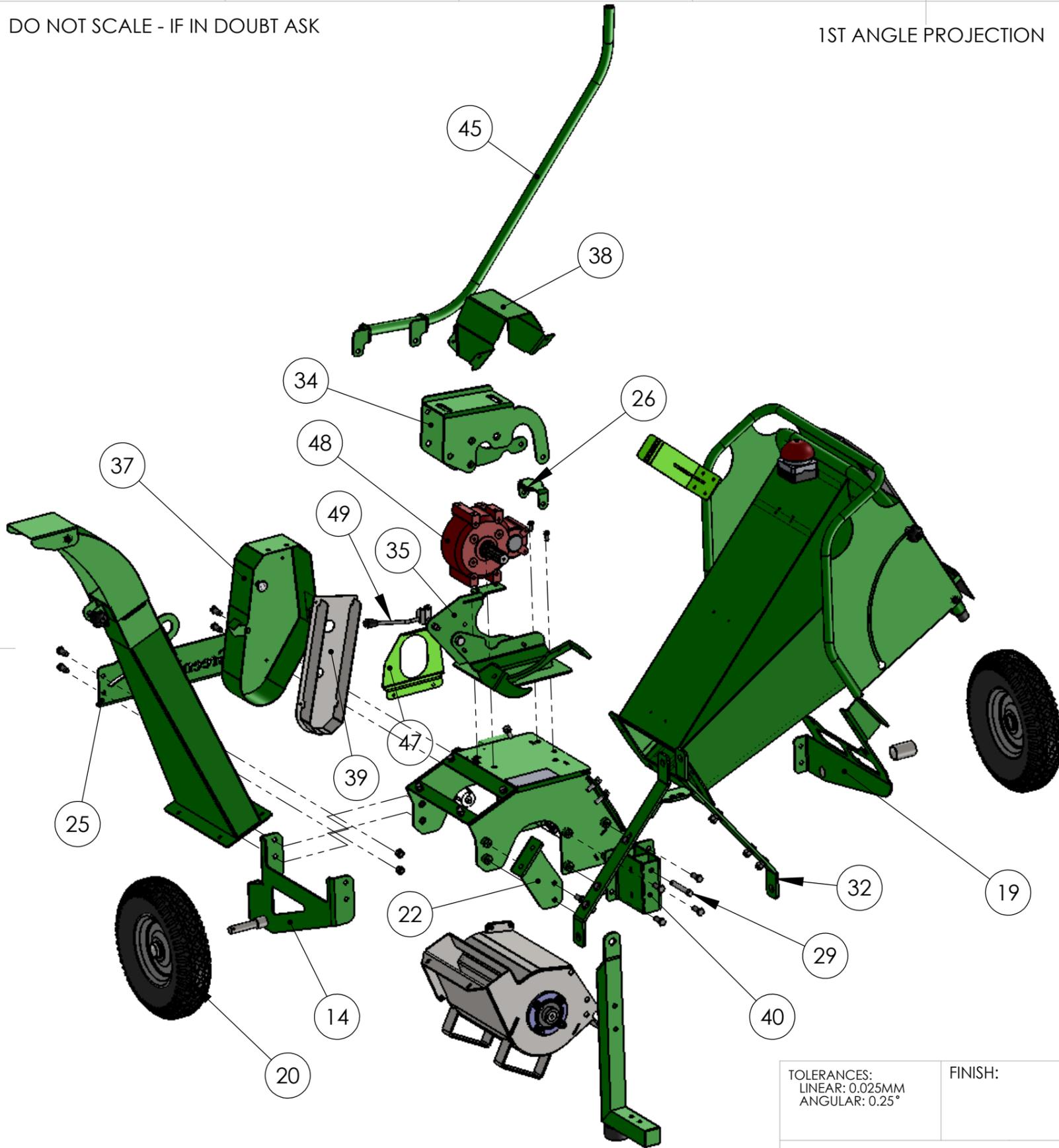
SHEET 1 OF 1

DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
14	CS100-TMP-03	Axle Support (Discharge Side)	1
19	CS100-TMP-02	Axle Support (Infeed Side)	1
20	CS100-1-10	Wheel/Tyre	2
22	CS100-TMP-06	TPL Bracket (Discharge Side)	1
25	CS100-TMP-01	GM Axle Brace Plate	1
26	CS100-TMP-16	UPPER SPRING PAN	1
29	CS100-TMP-24	Middle Leg Locking Pin	1
32	CS100-TMP-07	Three Point Linkage Assembly	1
34	CS100-TMP-14	Pivoting Gearbox Frame	1
35	CS100-TMP-10	Fixed Gearbox Frame	1
37	CS100-1-11	BELT COVER FAB	1
38	CS100-TMP-27	PTO Safety Guard	1
39	CS100-TMP-32	Internal Belt Guide	1
40	CS100-TMP-33	Middle Leg Support	1
45	CS100-TMP-21	Disengagement Handle Fabrication	1
47	CS100-TMP-40	Gearbox Side Hand Guard	1
48	CS100-TMP-30	Gearbox	1
49	CS100-TMP-004	Latch Lever Assembly	1

TOLERANCES:  
LINEAR: 0.025MM  
ANGULAR: 0.25°

FINISH:

	NAME	SIGNATURE	DATE	DEBUR AND BREAK SHARP EDGES
DRAWN	MPG		30/07/10	
CHK'D				
APPVD	BGG			

TOLERANCES  
MACHINED PARTS +/- 0.025mm  
FABRICATED PARTS +/-1.0mm

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Kings Coughton  
Alcester  
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MATERIAL:

TITLE:

CS100

WEIGHT:

DWG NO.

CS100-TMP

A3

REV B	MODIFICATION	DRN	APPD	DATE
1				
2				
3				

SCALE:1:50

SHEET 1 OF 1



  
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The Professionals' Choice

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