Spearhead

R Series Compact Flail Mowers

R130 & R150

Edition 1.0 – **August** 2011
Part No. 8999046

HANDBOOK & PARTS MANUAL

Spearhead

R Series Compact Flail Mowers R130 & R150

Handbook & Parts Manual

Please ensure that this manual is handed to the operator before using the machine for the first time. The operator must fully understand the contents of this manual before using this machine.
(If the machine is resold the Manual must be given to the new owner.)

Important Note

The information contained in this manual is correct at the time of publication. However, in the course of constant development, changes in specification are inevitable. Should you find the information given in this book different to the machine it relates to please contact the “After Sales Department” for advice.

Spearhead Machinery
Green View
Salford Priors
Evesham
Worcestershire
WR11 8SW
Tel: 01789 491860
Fax: 01789 778683
www.spearheadmachinery.com
enquiries@spearheadmachinery.com

CE Declaration of Conformity, Conforming to EU Machinery Directive 2006/42/EC

We, Spearhead Machinery Ltd, Green View, Salford Priors, Evesham, Worcestershire, WR11 8SW hereby declare that:

Product .....

Product Code.....

Serial No.....

Type.....

Manufactured by: Alamo Manufacturing Services (UK) Limited, Station Road, Salford Priors, Evesham, Worcestershire, WR11 8SW

Complies with the required provisions of the Machinery Directive 2006/42/EC. The Machinery Directive is supported by the following harmonized standards:

- BS EN ISO 14121-1 (2007) Safety of Machinery – Risk Assessment, Part 1: Principles Part 2: Practical Guide and Examples of Methods.
- BS EN ISO 12100-1 (2010) Safety of Machinery – Part 1: Basic Terminology and Methodology Part 2: Technical Principles.
- BS EN 349 (1993) + A1 (2008) Safety of Machinery – Minimum Distances to avoid the Entrapment of Human Body Parts.
- BS EN 953 (1998) Safety of Machinery – Guards General Requirements for the Design and Construction of Fixed and Movable Guards.
- BS EN 982 (1996) + A1 (2008) Safety Requirements for Fluid Power Systems and their Components. Hydraulics.

The EC Declaration only applies if the machine stated above is used in accordance with the operating instructions.

Signed

(On behalf of Spearhead Machinery Ltd)

Status General Manager

Date .....

Contents

General Information

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

Use only Spearhead Genuine Service Parts on Spearhead Equipment & Machines

DEFINITIONS – The following definitions apply throughout this manual:

WARNING
An operating procedure, technique etc., which – can result in personal injury or loss of life if not observed carefully.

CAUTION
An operating procedure, technique etc., which – can result in damage to either machine or equipment if not observed carefully.

NOTE
An operating procedure, technique etc., which – is considered essential to emphasis.

LEFT & RIGHT HAND
This term is applicable to the machine when attached to the tractor and is viewed from the rear – this also applies to tractor references.

Machine Description & Purpose of Use

The Compact R130 & R150 series of machines are '3-point linkage' tractor mounted flail mowers designed primarily for the mulching of grasses, brambles, small bushes, branches, vines, and general crop residues. Their tough construction and working widths of 1.3 and 1.5m make them ideal for general maintenance use on compact tractors in green areas, vineyards, orchards, verges, and all areas where operating space is at a premium.

These machines should 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 damaging to components and is therefore not advisable.

Machine Identification

Each machine is fitted with an identification plate with the following information:

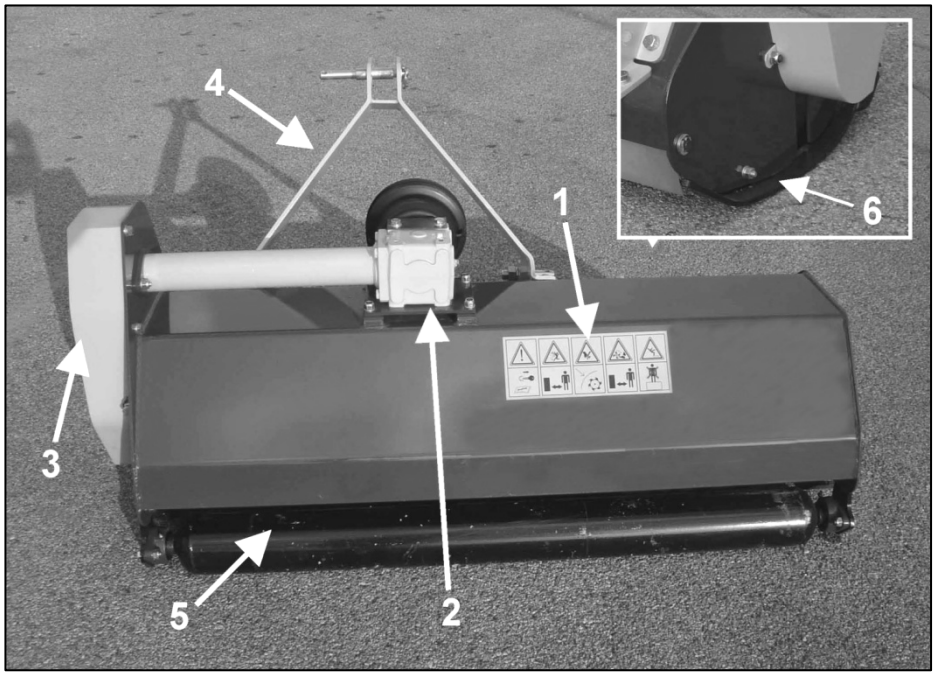
1. Machine (Part Number)
2. Machine Serial No.
3. Machine Weight

When ordering spares or replacement parts from your local dealer it is important to quote both Part Number and Serial Number as stated on the identification plate so the machine and model can be quickly and correctly identified.

Technical Data

Component Identification

1. **Frame**
2. **Gearbox**
3. **Belt Drive**
4. **3-Point Linkage**
5. **Rear Roller**
6. **Skid**



Technical Specifications

SPECIFICATION	COMPACT R130	COMPACT R150
Working Width *(mm)*	*1290mm*	*1450mm*
Tractor Power Requirement *(kW / HP)*	*23-27 / 30-35*	*27-30 / 35-40*
PTO Speed *(RPM)*	*540*	*540*
Hammer Blades *(No.)*	*18*	*20*
Y-Blades *(No.)*	*36*	*40*
Machine Weight *(kg)*	*183*	*205*
Offset Capability *(mm)*	*150*	*150*
Linkage *(Type)*	*3-Point (Cat. I)*	*3-Point (Cat. I)*
Machine Width *(mm)*	*1450*	*1600*
Machine Length *(mm)*	*800*	*800*
Machine Height *(mm)*	*800*	*800*

Optional Equipment

The following options are available on these machines:

- **Front Linkage**
- **Hammer Flails**
- **Y-Blade Flails**

The cutting capability of the each particular type of flail will be dependant on the sort and hardness of the material being cut, but in general the following cutting thicknesses apply:

Y-Blade Flails – *for materials up to a maximum of 30mm diameter.*
Hammer Flails – *for materials up to a maximum of 45mm diameter.*

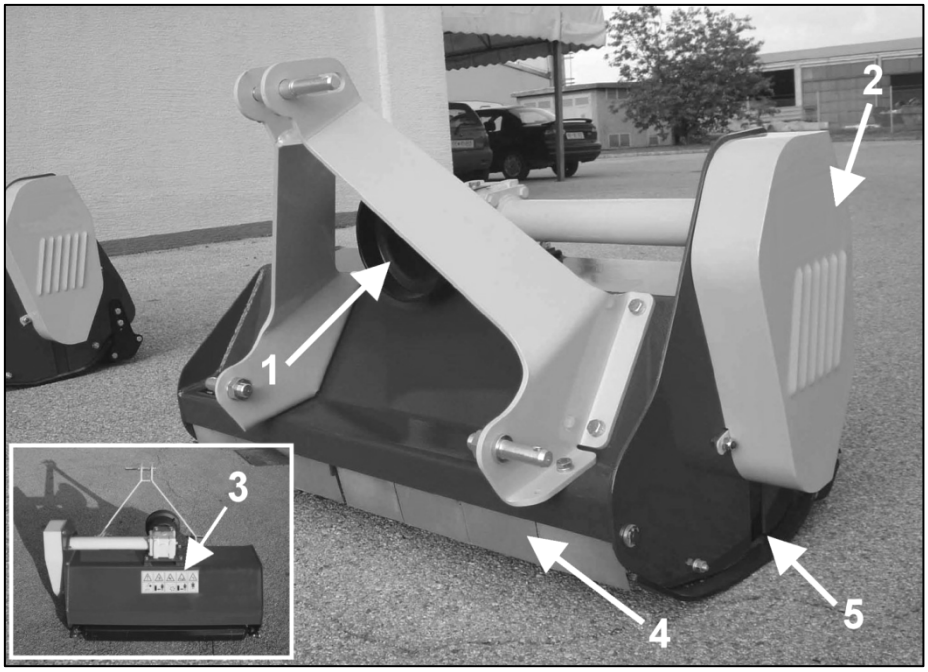
Noise Level

The sound level of this machine, as measured at the operator's ear, is within the range of 70 to 90 dB when the rear window of the tractor is open. We recommend that ear protectors are worn and the tractor windows kept closed at all times when operating this machine.

Safety Features

Location Of Machine Safety Features

1. PTO Shaft Shield
2. **Drive Belt Guard**
3. **Safety Decals**
4. **Protection Flaps**
5. **Side Skids**



Safety Information

General safety rules:

- ▲ Always read and follow the instructions for the use and maintenance of the machine before carrying out any work operations or servicing tasks.
- ▲ Improper use of the machine is both highly dangerous to persons and damaging to the machine components – only use the machine for its designated task.
- ▲ Both operators and maintenance engineers should be familiar with the machine and fully aware of dangers surrounding improper use or incorrect repairs.
- ▲ Before starting, checks to both tractor and machine must be carried out as regards: functionality, road safety, accident prevention rules.
- ▲ Even when using the machine correctly, stones or other objects may be thrown a long distance. Therefore nobody must stand within the danger area. Special attention must be paid when working near roads or buildings.
- ▲ Use tractor's fitted with safety cabs.
- ▲ The condition of flails and of machine guards must be checked before beginning the daily work - they must be replaced if damaged or missing before you use the machine.
- ▲ During checks or repairs, make sure nobody could start the machine by mistake.
- ▲ Never wear loose or fluttering clothes.
- ▲ Never carry passengers on the tractor.
- ▲ Never carry passengers on the machine.
- ▲ Never connect the power takeoff with the engine running.
- ▲ Never approach the machine until the rotor has completely stopped.
- ▲ Do not enter the working zone of the PTO shaft. It is dangerous to approach the rotating parts of a machine.
- ▲ Keep the PTO shaft guard in good condition.
- ▲ Before starting, check the surrounding area for the likely presence of children and/or animals.
- ▲ Do not stand near the machine when it is operating.
- ▲ The PTO shaft must be assembled and disassembled only with the engine stopped and the starting key removed.
- ▲ Before connecting the power takeoff, check that the speed and the rotational direction correspond to those of the machine.
- ▲ Immediately replace missing or damaged safety decals.

▲ Before leaving the tractor with the machine attached, proceed as follows:

1. Disconnect the power takeoff.
2. Put the machine steadily on the ground using the tractor's hydraulic lift.
3. Apply the hand brake and, if the ground is steeply sloping, wedge the tractor.
4. Remove the starting key.

Transportation Safety

▲ In transport, reduce speed, especially on bumpy roads, the weight of the machine may render driving difficult and damage the machine itself.

▲ Ensure the levers that operate the hydraulic lift are locked, to avoid the lowering of the machine during transport.

▲ When driving on public roads, respect all road rules in force.

▲ Never transport the machine with the rotor running, even for short distances.

Operating Safety

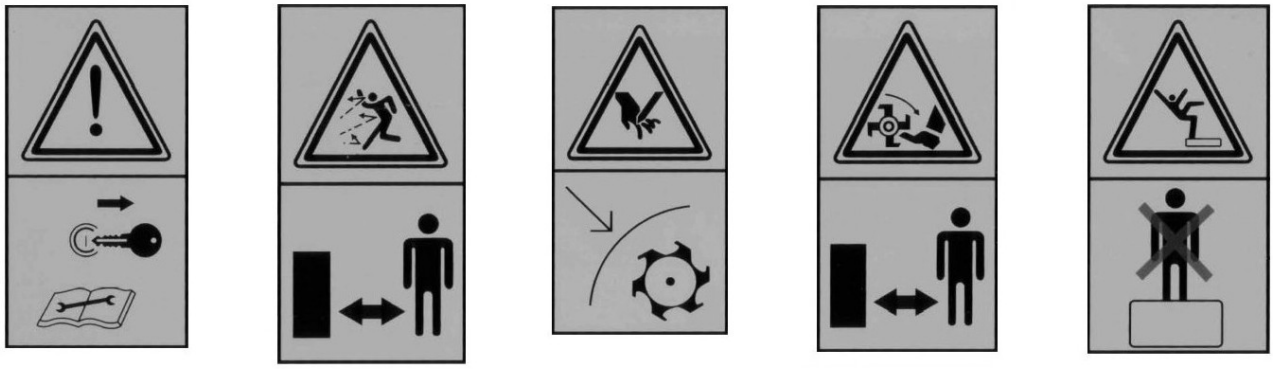
▲ Pay special attention when working with the machine not to contact fixed objects such as road drain, walls, shafts, kerbs, guard rails, tracks etc. This could cause the breakage of the flails, which would be thrown out of the machine at very high speed.

▲ If wires, ropes or chains should become entangled in the rotor stop immediately to prevent damage or dangerous situations; stop the rotor and the tractor, take out the starting key. Put working gloves on; clear the rotor with the aid of pliers or shears. Do not try to disentangle by inverting the rotational direction of the rotor.

▲ 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.

Although the information given here covers a wide range of safety subjects, it is impossible to predict every eventuality that can occur under differing circumstances whilst operating this machine. No advice given here can replace 'good common sense' and 'total awareness' at all times, but will go a long way towards the safe use of your Spearhead machine.

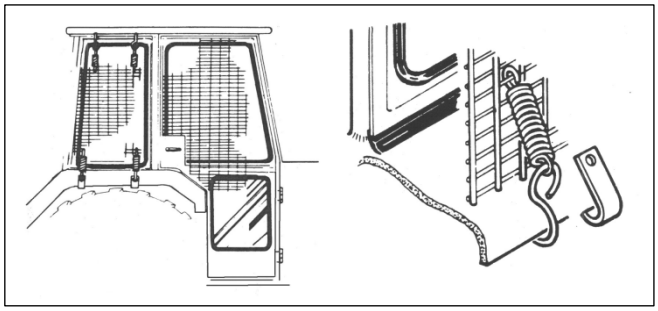
Safety Decals



1. 2. 3. 4. 5.

1. Always switch machine off, remove starting key and read instruction manual before performing service or maintenance work on the machine.
2. Keep a safe distance from the machine at all times - risk from projection of objects.
3. Risk of hand injury – always ensure all guard are fitted and in place when machine is operating.
4. Risk of feet injury – keep at a safe distance from the machine when it is operating.
5. Never stand or ride on the machine.

Vehicle / Tractor Preparation



We recommend vehicles are fitted with cabs using 'safety glass' windows and protective guarding when used with our machines.
Fit Operator Guard (part no. OPT0603) using the hooks provided. Shape the mesh to cover all vulnerable areas.
Remember the driver must be looking through mesh and/or polycarbonate glazing when viewing the machine in all positions - unless the vehicle/ cab manufacturer can demonstrate that the penetration resistance is equivalent to, or higher than, that provided by mesh/polycarbonate glazing. If the tractor has a roll bar only, a frame must be made to carry both mesh and polycarbonate glazing. The operator should also use personal protective equipment to reduce the risk of serious injury such as; eye protection (mesh visor to EN1731 or safety glasses to EN166), hearing protection to EN352, safety helmet to EN297, gloves, filter mask and high visibility clothing.

Vehicle Ballast

It is imperative when attaching 'third-party' equipment to a vehicle that the maximum possible stability of the machine and vehicle combination is achieved – this can be accomplished by the utilisation of 'ballast' in order to counter-balance the additional equipment added.
Front weights may be required for rear mounted machines to place 15% of total outfit weight on the front axle for stable transport on the road and to reduce 'crabbing' due to the drag of the cutting unit when working on the ground.
Where a machine works to the side of the tractor rear weights may be required to maintain a reasonable amount of rear axle load on the opposing wheel.

All factors must be addressed in order to match the type and nature of the equipment added to the circumstances under which it will be used - factors that effect stability are:

- Centre of gravity of the tractor/machine combination.
- Geometric conditions, e.g. position of the cutting head and ballast.
- Weight, track width and wheelbase of the tractor.
- Acceleration, braking, turning and the relative position of the cutting unit during these operations.
- Ground conditions, e.g. slope, grip, load capability of the soil/surface.
- Rigidity of implement mounting.

Suggestions to increase stability:

- Increasing rear wheel track - *a vehicle with a wider wheel track is more stable.*
- Ballasting the wheel; it is preferable to use external weights but liquid can be added to around 75% of the tyre volume – water with anti-freeze or the heavier Calcium Chloride alternative can be used.
- Addition of weights – care should be taken in selecting the location of the weights to ensure they are added to a position that offers the greatest advantage.
- Front axle locking, check with tractor manufacturer.

The advice above is offered as a guide for stability only and is not a guide to vehicle strength. It is therefore recommended that you consult your vehicle manufacturer or local dealer to obtain specific advice on this subject, additionally advice should be sought from a tyre specialist with regard to tyre pressures and ratings suitable for the type and nature of the machine you intend to fit.

Attaching The Machine To The Tractor

Attachment of the machine to the tractor should always be performed on a firm level site.

Before attachment always ensure:

- The machine is in good condition.
- All safety guards are in good working condition and correctly fitted.
- All flails are correctly fitted and undamaged.
- Lubrication points are well greased and the gearbox oil level is correct.
- Drive belts are tensioned correctly.
- The tractor PTO rpm and direction of rotation correspond to that of the machine.

Attachment Of The Mower

Drive the tractor 'squarely' up to the machine.

Position the tractors lower linkage at a height where it is approximately in line with the lower linkage points (A) on the machine – *refer to photo below.*

Drive tractor slowly towards the machine until the lower linkage points correspond.

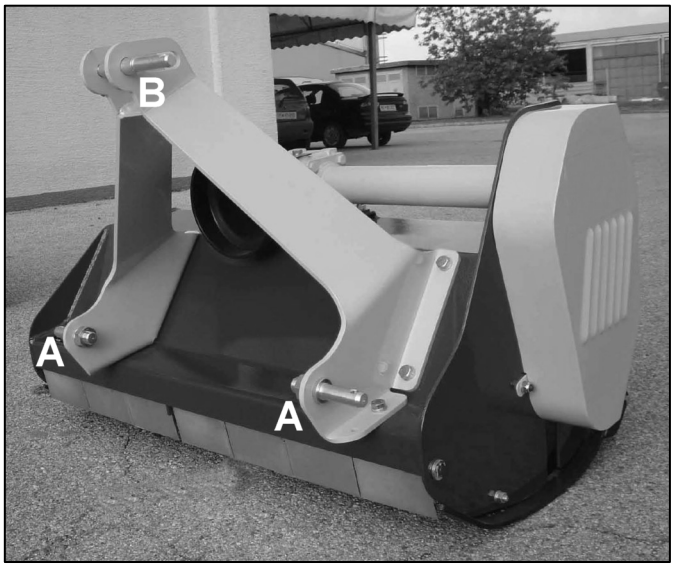
Fit linkage pins and secure with spring clips.

Fit top link to upper linkage point (B).

Raise the machine slightly on the tractors hydraulics – adjust top link to bring the machine into the perpendicular position.

Fit check chains and/or stabilisers to tractor lower links to centralise and secure the machine in position.

Fit PTO Shaft and attach torque chains – *refer to following page for details of shaft measurement.*



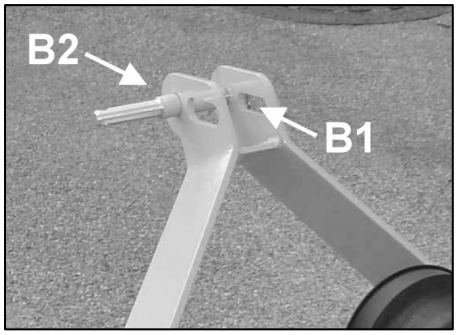
Machine attachment points ►

Top Linkage

The machines top linkage point (B) has two working modes; floating and fixed – *refer to photo below.*

Floating position (B1) should always be used when working on hilly or uneven terrain to protect the machine and linkage from damage.

Fixed position (B2) may be used when working on even level terrain such as playing fields and other similar areas that present a lower degree of stress on the linkage.



Top linkage working positions ►

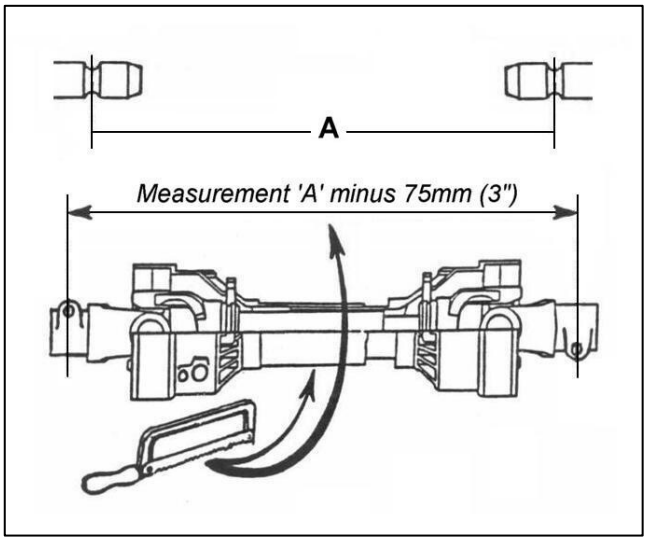
WARNING:
Always use top linkage floating position (B1) when working on hilly, sloping or undulating terrain.

PTO Shaft

PTO Shaft Measurement

Measure the PTO shaft and cut to the dimension shown – the finished length of the PTO shaft should be 75mm (3”) less than the measured distance ‘**A**’ - between tractor shaft and gearbox stub shaft - to enable fitting.

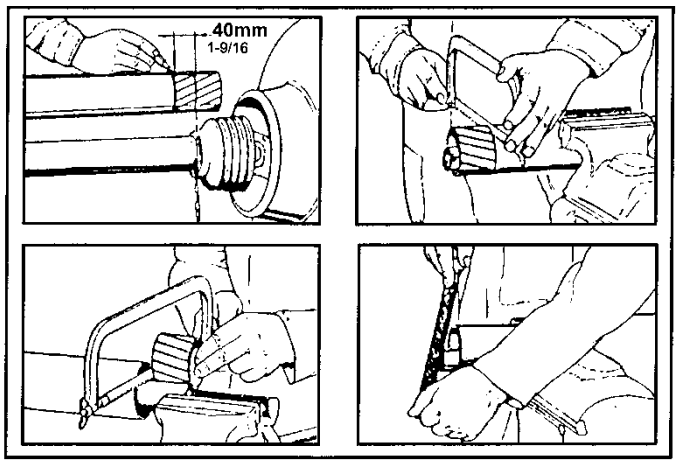
NOTE: *For subsequent use with different tractors measure again, there must be a minimum shaft overlap of 150mm (6”).*

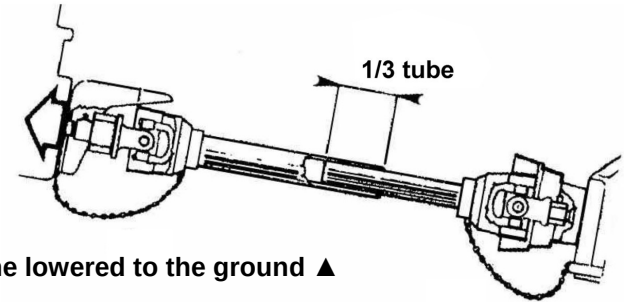


Fit PTO in position and attach the torque chains to a convenient location to prevent the shaft guards from rotating.

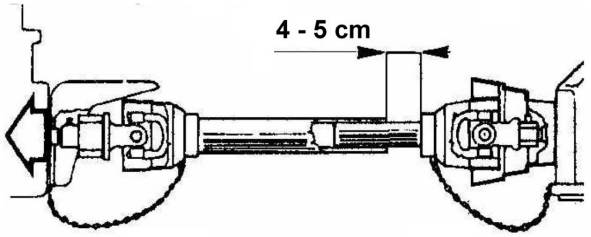
PTO Shaft Length Adjustment

1. Shorten outer plastic tube to 40mm less than the shortest envisaged shaft length.
2. Remove the marked tube.
3. Remove same length from inner plastic tube and metal shaft profiles (inner and outer).
4. De-burr all edges and remove ‘swarf’ to ensure smooth operation.

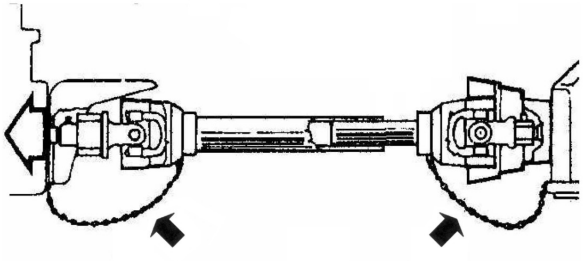




Approximate overlap length of PTO shaft with machine lowered to the ground ▲



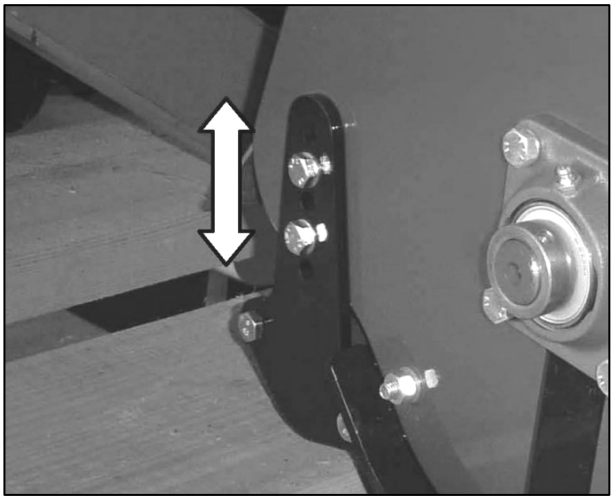
Approximate gap length of PTO protection tube with machine in working position ▲



Fit torque chains to shaft guards to prevent rotation ►

Setting Up & Adjustment

The height of cut is dependent on working conditions and volume of material. The cutting height can be regulated with the hydraulic system on the tractor and/or rear roller adjustment – *see photo opposite*.
The minimum height of cut should be between 1 – 3cm.

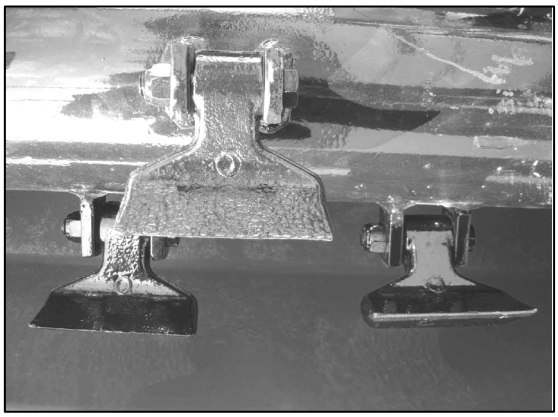


NOTE: The machine must always run on the rear roller not the side skids – side skids are a protection feature and in normal working conditions remain clear of the ground.

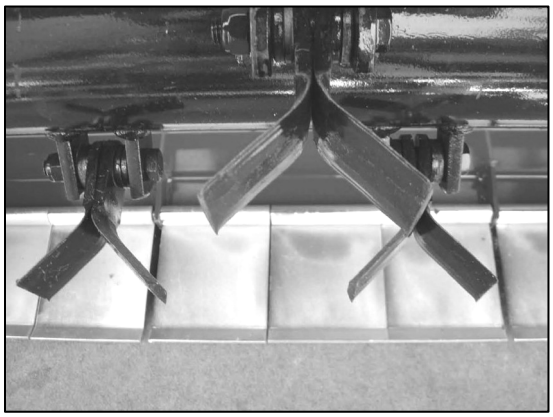
Do not allow the rotor flails to contact the ground - set roller height to allow a minimum flail to ground clearance of 1 to 3cm.

Flails

As standard, the machine is equipped with Hammer type flails, but as an option can be fitted with Y-blade flails. The hammer type flails are more suited to harder working with the ability to cut materials up to 45mm *(1¾")* diameter. Y-blade flails can cut up to 30mm *(1¼")* diameter material – *these figures are under normal use and may differ depending on the type and nature of the material being cut.*
The design of the mower is such that during work the rotor unit cuts the material and projects it upwards into the frame, as the material falls back into the rotor it is cut again several times until it is small enough to be discharged from the rear of the machine.



Hammer Flails



Y-Blade Flails

The rotor unit should be inspected on a daily basis prior to work to check for damaged or missing flails – *always replace damaged or missing flails immediately*. Flail bolts should be checked for tightness on a regular basis and re-tightened as required before attempting to use the machine.

WARNING: Checking of rotor components should only be carried out with tractors engine switched off, starting key removed and the PTO shaft disconnected. Always 'prop up' the machine using suitable supports before attempting to inspect or work on components underneath it.

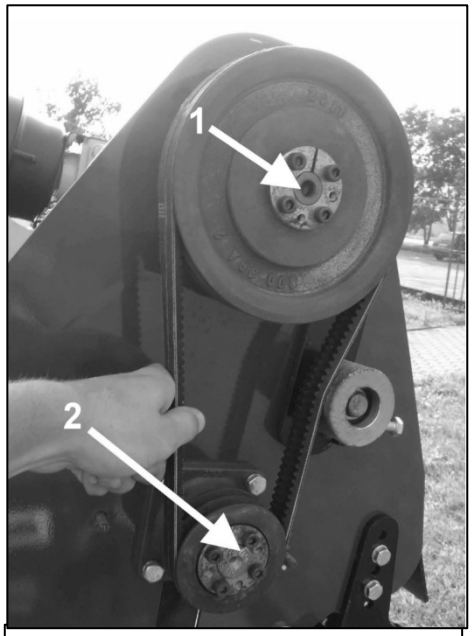
Drive Belts

Belt Tension

It is important for both optimal machine performance and long lasting belt life that the belts are correctly tensioned at all times. Tension is correct when a force of 10 kg exerted on the belts at their mid-point between the upper and lower pulleys deviates the belts by 15mm.

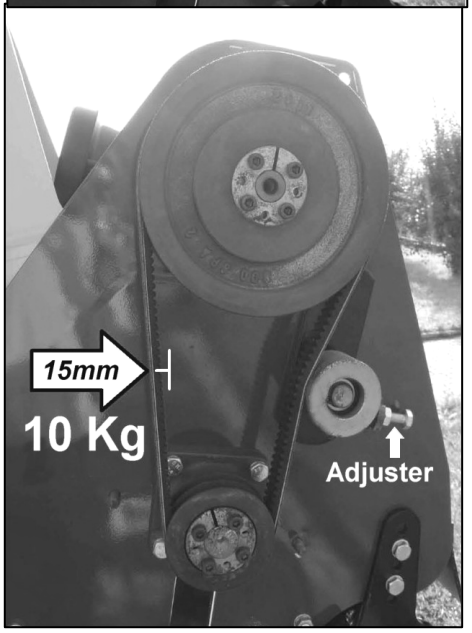
After an initial first 2 hours of work check belt tension and taper locks *(indicated 1 & 2 in the photo opposite)* and tighten if required.

If the belts require tensioning follow the procedure stated below.

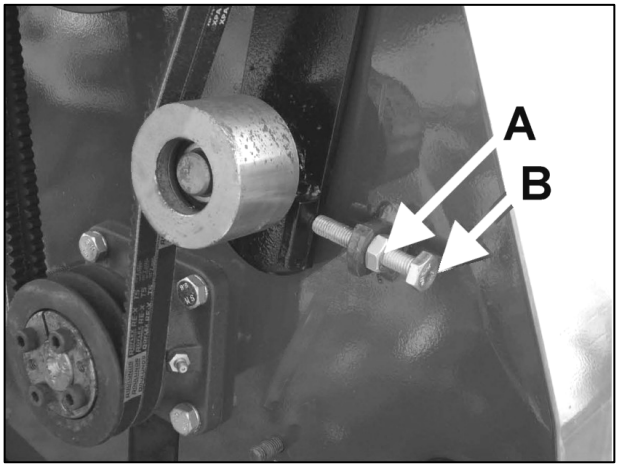


Belt Adjustment

Adjustment of the belt tension is performed by loosening the adjuster locking nut and turning the adjuster bolt to increase or decrease the pressure of the tensioner pulley on the belts until belt deviation matches the required measurement – *see photo opposite.* Belt tensioning should be performed when the belts are cold.



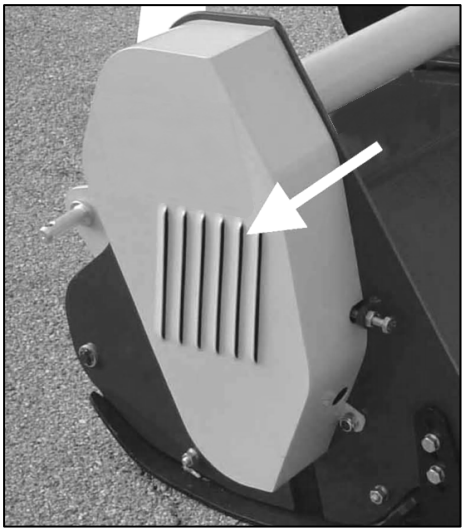
Belt tension and adjuster location



A – Adjuster locknut B – Adjuster bolt

No other adjustment or maintenance is required on the belt tensioning system other than routine inspection and general cleaning of components when inspecting belt wear.

WARNING: Checking of belts and drive components should only be carried out with tractors engine switched off, starting key removed and the PTO shaft disconnected. Never attempt to run the machine with the belt guard removed.



Refit belt guarding before running the machine ►

Pre-Operational Checks

Before commencing work with the machine the following checks should be performed:

- Make a visual inspection of the machine to ensure it is in good operational condition.
- Check all safety guarding is in position and in full working order.
- Check rotor for missing or damaged flails and replace if required.
- Check all greasing points are well lubricated.
- Check gearbox oil level.
- Check belt tension and adjust if required.
- Check PTO speed and direction match that of the machine.

Operation

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. It is advisable that all 'first time' operators practice using the machine in a clear safe area prior to work in order to familiarise themselves with its operation.

After the initial first 1 hour of work with a new machine, nuts and bolts should be checked for tightness and the drive belts inspected and re-tensioned if required – *refer to belt section for details.*

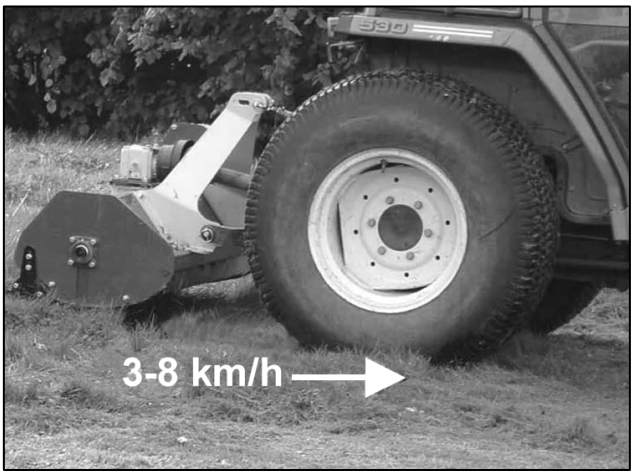
Prior to starting work the area should be checked for dangerous objects such as large stones, wood, wire, glass etc. – hazardous objects should be removed from the area prior to operation with the machine. The location of unmovable or natural hazards should be noted, or if necessary 'marked', to indicate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

Starting Work

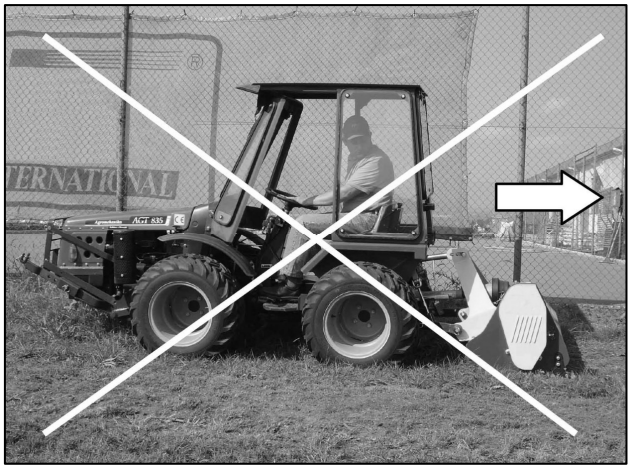
With the machine switched off, lower it into a position approximately 10cm above the ground, start the machine and allow it to build up to the correct working speed before gently lowering the it onto the ground - the machine is now in its work position and forward travel can begin.

Forward Speed

The forward working speed will depend 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).*



Optimal forward working speed 3-8 km/h



Raise the machine before turning or reversing

Reversing & Turning

When reversing or turning the unit the machine must always be lifted clear of the ground to avoid damage.

Transport

The following must be observed at all times when transporting the machine:

- Machine must always be switched off.
- Machine must be raised.
- Speed must be kept to a minimum especially on bumpy roads or terrain.
- Always abide with local laws and road regulations.
- Be aware of the machines width.

Detachment & Storage

Detaching The Machine

- Removal of the machine should be performed on a firm level site. The procedure for detachment is as follows:
- Gently lower the machine fully to the ground.
- Switch off the tractor and remove its starting key.
- Remove the PTO driveshaft.
- ‘Chock’ the rear roller to prevent movement of the machine during the detachment procedure and whilst in storage.
- Remove the top link and both pins from the lower attachment points.
- Carefully and slowly drive the tractor clear of the machine.
- Clean and lubricate the machine in preparation for next use.

Storage

For extended periods of storage it is advisable that the machine be kept in a clean dry environment protected from the elements to avoid risk of corrosion. The machine should be thoroughly cleaned and lubricated prior to storage. At this point it is good practice to check the machine for worn or damaged components - any parts that require replacing should be ordered and fitted at the earliest opportunity so the machine is fully prepared for the next seasons work.

Maintenance

All maintenance, cleaning and repair operations must be performed with the machine firmly lowered to the ground and detached from the tractor or with the PTO disconnected, engine switched off and starting key removed. For any repairs or maintenance that requires access from underneath, the machine should be firmly and safely raised and propped using suitable purpose designed supports capable of bearing the machines full weight. Care should be adopted at all times when working with or under a raised machine.

Maintenance Tasks

The following preventative maintenance tasks should be performed at the timescales stated to both maximise efficiency and prolong the working life of the machine.

After first 1 hour of work - new machine or machine fitted with new belts.

- ✓ Check all nuts and bolt for tightness – *retighten if required.*
- ✓ Check belt tension and taper lock tightness – adjust / tighten if required *(refer to belt section for details of adjustment).*

After every 8 hours of work

- ✓ Check all nuts and bolt for tightness – *retighten if required.*
- ✓ Check belt tension and adjust if required – *refer to belt section for details of adjustment.*
- ✓ Check wear and condition of flails – *replacing missing, or damaged flails immediately.*
- ✓ Check condition of safety guards – *repair or replace if not performing their function.*
- ✓ Lubricate grease points – *see below for locations of the machines grease points.*
- ✓ Check gearbox oil level – *top up if required.*
- ✓ Check rotor – *remove foreign objects that may be fouling or lodged in the rotor.*
- ✓ Check frame and 3-point hitch – *ensure all components are in a safe working condition.*

After every 100 hours

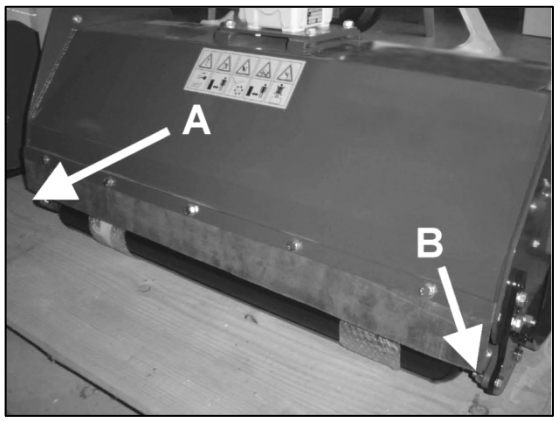
- ✓ Grease PTO driveshaft – *separate telescopic drive and apply grease to internal shaft.*

Every 12 months

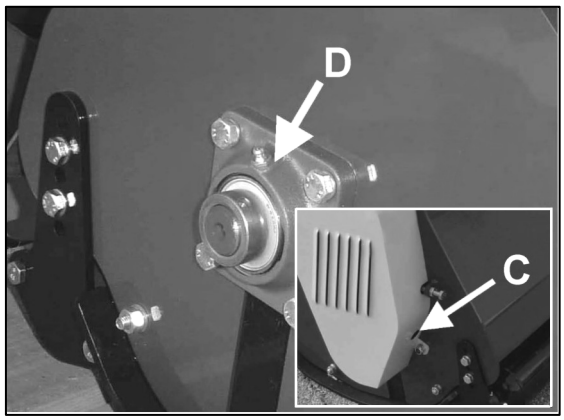
- ✓ Change gearbox oil

Grease Points

Lubricate the points indicated below using type LIS 3 grease.



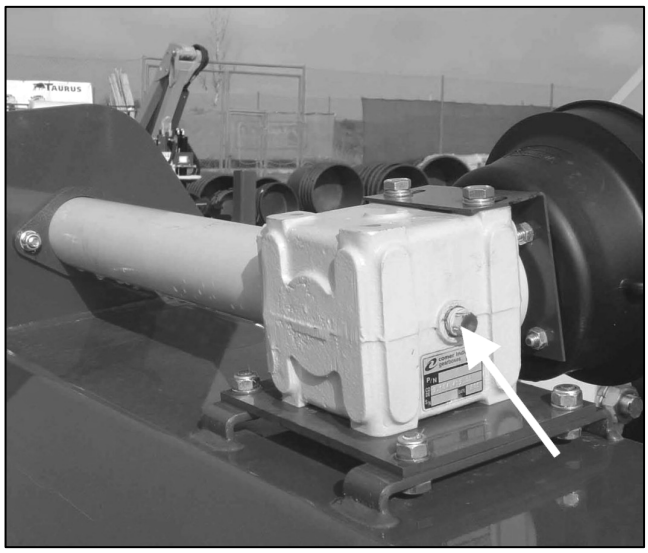
A. Rear Roller L/H Bearing
B. Rear Roller R/H Bearing



C. Rotor Shaft L/H Bearing
D. Rotor Shaft R/H Bearing

Gearbox Lubrication

The photo opposite shows the lubrication access point for the gearbox – this access point is used for both filling and lubricant level checking.
Lubricant level should be checked on a daily basis during work and topped up only if required.
Checking the level is by removal of the plug – lubricant should be inline with the bottom of the aperture. 'Topping up' the lubricant is performed via the same aperture to a point where the oil starts to 'dribble' out. Replace and tighten the plugs before using the machine.
Gearbox oil should be replaced annually.



Location of gearbox lubricant access plug

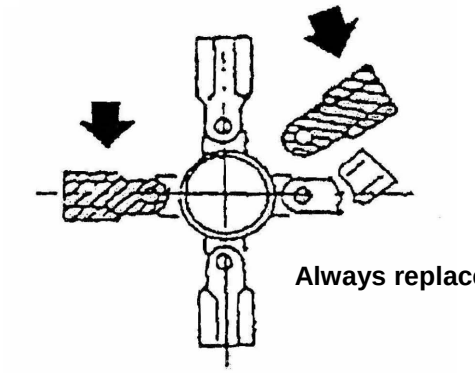
Gearbox Capacity & Lubricant Type

0.8 Litre SAE90

Flail Replacement

The rotor and flails should be inspected for wear or damage on a regular basis – missing, damaged or worn flails should be replaced immediately. When replacing a flail the diametrically opposite flail should also be replaced at the same time in order to maintain rotor balance.

DANGER: Machine and tractor should be switched off and the starting key removed at all times when inspecting or maintaining the machine – Never work on a machine that is switch on and running.



Always replace flails in opposing pairs

Rotor Vibration

If vibration of the rotor is experienced the machine should be stopped immediately – this is often a sign that a flail is either missing or severely damaged, if this is the case do not use the machine until the problem has been rectified. If vibration continues, or occurs for no apparent reason, the rotor must be checked and, if necessary, rebalanced before using the machine again. Contact your local dealer for further advice or assistance on this subject.

Troubleshooting

PROBLEM	POSSIBLE CAUSES	REMEDIES
Irregular Cut	Worn, bent or broken flails	*Replace flails*
	RPM too low	*Increase RPM*
	Machine not level to the ground	*Correct mounting on tractor*
	Clogged material caused by excessive forward speed	*Reduce forward speed*
Noise	Loose bolts	*Check and tighten bolts*
	Damaged components	*Repair or replace*
Noisy gearbox	Lack of lubrication	*Top up oil to correct level*
	Worn gears	*Replace worn components*
	Worn bearings	*Replace worn components*
Vibration	Broken, worn or missing flails	*Replace flails*
	Rotor out of balance	*Balance or replace rotor*
	Worn rotor bearings	*Replace rotor bearings*
Excessive backlash in joints	Worn pins	*Replace pins*
Tight bearings	Bearings dirty or ungreased	*Clean and grease*
	Violent lowering down of machine	*Lower machine gently*
Belts overheating	Belts slipping on pulleys	*Tension belts*
	Flails contacting the ground	*Raise cutting height*
	Working speed too high	*Reduce working speed*

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

The Spearhead Warranty

Spearhead warrants that the Spearhead machine referred to in the Warranty Registration Form will be free from defects in materials and workmanship for a period of 12 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 12 months from the date of sale please contact your original Spearhead dealer, or Spearhead's Service Department. Any part found to be defective during this period will be replaced or repaired, at Spearhead's discretion, by the dealer or a Spearhead Service Engineer.

Spearhead Warranty Conditions

1. The Warranty Registration Form must be completed and returned to Spearhead 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 Spearhead's instructions (oral or written, including all instructions and recommendation made in the Operator's Manual) or alteration or repair of the machinery without Spearhead's 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 Spearhead, for which the Buyer shall only be entitled to the benefit of any such warranty or guarantee given by the manufacturer to Spearhead. Only genuine Spearhead replacement parts will be allowable for warranty claims.

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

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

9. All warranty claims must be submitted to Spearhead on Spearhead Warranty Claim Forms within 30 days of completion of warranty work.

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

Spearhead Warranty

Extended Warranty

As an extension to the 12-month warranty set out above, Spearhead will provide an additional 12-month warranty cover subject to the Spearhead Warranty Conditions above and the Extended Warranty Conditions below.

Extended Warranty Conditions

1. The extended warranty applies to hydraulic pumps, motors, valves and gearboxes only. It does not apply to other parts, to consumables such as lubricants, seals or filters or to labour charges.

2. The machinery must have had an annual service carried out by an Authorized Spearhead Dealer or a Spearhead Service Engineer within 1 month of the first anniversary of the date of sale and the Service Report form must have been completed and stamped by the servicing dealer or Spearhead Service Engineer and sent to Spearhead within 14 days after the first annual service.

3. The extended warranty does not cover costs of transportation of the machinery to or from the dealer or Spearhead or the call out costs or traveling expenses of on-site visits

Transfer of Warranty

The Spearhead warranty may be transferred to a subsequent owner of the machinery (for use within the UK) for the balance of the warranty period subject to all of the warranty conditions and provided that the Change of Owner form is completed and sent to Spearhead within 14 days of change of ownership.

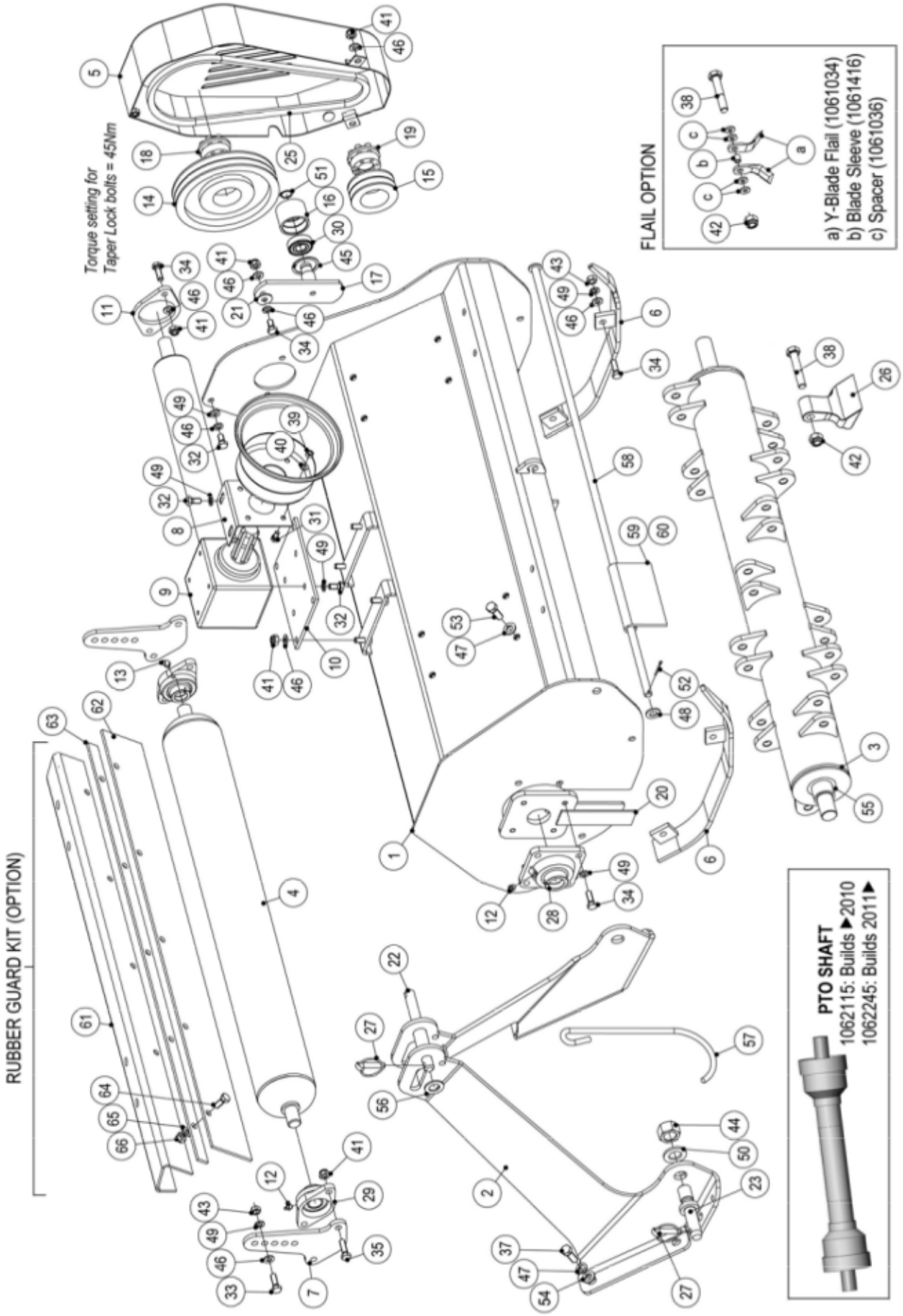
Spearhead reserves the right to make alterations and improvements to any machinery without notification and without obligation to do so.

Spearhead

Compact Fail Mowers

R130 & R150

Parts Manual


Torque setting for
Taper Lock bolts = 45Nm
FLAIL OPTION
a) Y-Blade Flail (1061034)
b) Blade Sleeve (1061416)
c) Spacer (1061036)
RUBBER GUARD KIT (OPTION)
PTO SHAFT
1062115: Builds ▶2010
1062245: Builds 2011▶

ITEM NO.	PART NO.	DESCRIPTION.	QUANTITY.	
			130	150
1	1061585	FRAME – R130	1	-
	1061586	FRAME – R150	-	1
2	1061001	LINKAGE	1	1
3	1061587	ROTOR – R130 (c/w HAMMER FLAILS)	1	-
	1061588	ROTOR – R130 (c/w Y-BLADE FLAILS)	1	-
	1061589	ROTOR – R150 (c/w HAMMER FLAILS)	-	1
	1061590	ROTOR – R150 (c/w Y-BLADE FLAILS)	-	1
4	1061003	REAR ROLLER – R130	1	-
	1061591	REAR ROLLER – R150	-	1
5	1061038	BELT SHIELD	1	-
	1061592	BELT SHIELD	-	1
6	1061004	SKID – L/H	1	1
	1061005	SKID – R/H	1	1
7	1061006	REAR ROLLER BRACKET	2	2
8	1061007	PTO SHIELD BRACKET	1	1
9	1061008	GEARBOX L5A - 530	1	-
	1061593	GEARBOX L5A – 530 LH	1	-
	1061594	GEARBOX 530 – 1000RPM	1	-
	1061595	GEARBOX 530 – 1000RPM LH	1	-
	1061596	GEARBOX L5A - 615	-	1
	1061597	GEARBOX 615 – 1000RPM	-	1
	1061598	GEARBOX 615 – 1000RPM LH	-	1
10	1061599	GEARBOX PLATE	1	1
11	1061009	GEARBOX FLANGE	1	1
12	1061554	GREASE NIPPLE	2	2
13	1061558	GREASE NIPPLE (ANGLED)	1	1
14	1061602	PULLEY 200/55-3	1	1
15	1061604	PULLEY 90/55-3	1	1
16	1061605	STRAIN PULLEY	1	1
17	1061606	STRAINER HOLDER	1	1
18	1061017	TAPER LOCK (Torque Setting = 45Nm)	1	1
19	1061018	TAPER LOCK (Torque Setting = 45Nm)	1	1
20	1061019	ROTOR SHAFT FLANGE	2	2
21	1061607	WASHER	1	1
22	1061245	PIN	1	1
23	1061022	PIN	2	2
24	1061608	PTO SHIELD	1	1
25	1061609	BELT	3	3
26	1061033	HAMMER FLAIL (Standard)	18	20
	1061034	a) Y-BLADE FLAIL (Option)	36	40
	1061416	b) BLADE SLEEVE (Required for Y Flail fitment)	18	20
	1061036	c) SPACER (Required for Y Flail fitment)	72	80
27	1061097	PIN	3	3
28	1061610	BEARING & CASING	2	2
29	1061611	BEARING & CASING	2	2
30	1061040	BEARING	1	1
31	9313034	BOLT	4	4

ITEM NO.	PART NO.	DESCRIPTION.	QUANTITY.	
			130	150
32	9213045	BOLT	7	7
33	9213055	BOLT	4	4
34	9213065	BOLT	15	15
35	9213075	BOLT	4	4
36	9213125	BOLT	1	1
37	9313076	BOLT	6	6
38	1061132	BOLT	18	20
39	9143004	NUT	4	4
40	9100104	WASHER	4	4
41	9163005	LOCKNUT	13	13
42	1061042	LOCKNUT	18	20
43	9143005	NUT	9	9
44	9117009	NUT	2	2
45	1061026	SLIDE PC INT	1	1
46	9100105	WASHER	22	22
47	9100106	WASHER	12	12
48	05.281.14	WASHER	2	2
49	9100205	SPRING WASHER	23	23
50	1061583	SPRING WASHER	2	2
51	1061027	SLIDE PC INT	1	1
52	1061077	SPLIT PIN	1	1
53	1061584	BOLT	6	6
54	9100206	SPRING WASHER	6	6
55	1061614	BEARING CUP	1	1
56	9100108	WASHER	1	1
57	1061551	HOOK FOR PTO SHAFT	1	1
58	1061012	FLAP BAR – R130	1	-
	1061600	FLAP BAR – R150	-	1
59	1061010	FLAP 140	7	10
60	1061011	FLAP 150	2	-

1061612 RUBBER GUARD KIT – R130 (OPTION)
1061613 RUBBER GUARD KIT – R150 (OPTION)

ITEM NO.	PART NO.	DESCRIPTION.	QUANTITY.	
			130	150
61	1061406	ATTACHMENT BAR – R130	1	-
	1061407	ATTACHMENT BAR – R150	-	1
62	1061615	RUBBER GUARD – R130	1	-
	1061616	RUBBER GUARD – R150	-	1
63	1061617	GUARD BAR – R130	1	-
	1061618	GUARD BAR – R150	-	1
64	9213055	BOLT	6	6
65	9100105	WASHER	6	6
66	9143005	LOCKNUT	6	6

Spearhead Machinery Ltd
Green View
Salford Priors
Evesham
Worcestershire
WR11 8SW
Tel: 01789 491860
Fax: 01789 778683
www.spearheadmachinery.com
enquiries@spearheadmachinery.com