

Spearhead

AGRICUT 180, 240 & 270



Edition 2.0 - February 2016
Part No. 8999069

HANDBOOK & PARTS MANUAL

IMPORTANT

VERIFICATION OF WARRANTY REGISTRATION



DEALER WARRANTY INFORMATION & REGISTRATION VERIFICATION

It is imperative that the selling dealer registers this machine with Spearhead Machinery Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines go to the Spearhead Machinery Limited web site at www.spearheadmachinery.com, log onto 'Dealer Inside' and select the 'Machine Registration button' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the Spearhead Service Department on 01789 491867.

Registration Verification

Dealer Name:			
Dealer Address:			
Customer Name:			
Date of Warranty Registration:	/	/	Dealer Signature: <input type="text"/>

NOTE TO CUSTOMER / OWNER

Please ensure that the above section has been completed and signed by the selling dealer to verify that your machine has been registered with Spearhead Machinery Limited.

IMPORTANT: During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – refer to torque settings chart below. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machines general maintenance procedure.

CAUTION: DO NOT OVER TORQUE HYDRAULIC FITTINGS AND HOSES

TORQUE SETTINGS FOR HYDRAULIC FITTINGS

HYDRAULIC HOSE ENDS		
BSP	Setting	Metric
1/4"	18 Nm	19 mm
3/8"	31 Nm	22 mm
1/2"	49 Nm	27 mm
5/8"	60 Nm	30 mm
3/4"	80 Nm	32 mm
1"	125 Nm	41 mm
1.1/4"	190 Nm	50 mm
1.1/2"	250 Nm	55 mm
2"	420 Nm	70 mm

PORT ADAPTORS WITH BONDED SEALS		
BSP	Setting	Metric
1/4"	34 Nm	19 mm
3/8"	47 Nm	22 mm
1/2"	102 Nm	27 mm
5/8"	122 Nm	30 mm
3/4"	149 Nm	32 mm
1"	203 Nm	41 mm
1.1/4"	305 Nm	50 mm
1.1/2"	305 Nm	55 mm
2"	400 Nm	70 mm

WARRANTY POLICY

WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with Spearhead Machinery Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

1. LIMITED WARRANTIES

- 1.01. All machines supplied by Spearhead Machinery Limited are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.
- 1.02. All spare parts supplied by Spearhead Machinery Limited are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months.
- 1.03. The manufacturer will replace or repair for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined.
- 1.04. This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, flails, bushes, belts, flap kits, skids, shields, guards, wear pads or pneumatic tyres.
- 1.05. Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.
- 1.06. Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.
- 1.07. Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which Spearhead Machinery Ltd cannot be held liable, and may have safety implications.
- 1.08. Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of Spearhead Machinery Ltd.
- 1.09. For machine warranty periods in excess of 12 months the following additional exclusions shall apply:
 - 1.09.1. Hoses, external seals, exposed pipes and hydraulic tank breathers.
 - 1.09.2. Filters
 - 1.09.3. Rubber mountings
 - 1.09.4. External electric wiring.
 - 1.09.5. Labour and mileage costs.
- 1.10. All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.

NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. Spearhead Machinery Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.

Spearhead AGRICUT 180, 240 & 270

2. REMEDIES AND PROCEDURES

- 2.01. The warranty is not effective unless the Selling Dealer registers the machine, via the Spearhead Machinery web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.
- 2.02. Any fault must be reported to an authorised Spearhead Machinery dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which Spearhead Machinery Ltd cannot be held liable.
- 2.03. Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by Spearhead Machinery Ltd.
- 2.04. All claims must be submitted, by an authorised Spearhead Machinery Service Dealer, within 30 days of the date of repair.
- 2.05. Following examination of the claim and parts the manufacturer will pay, at their discretion, for any valid claim the cost of any parts and an appropriate labour allowance if applicable.
- 2.06. The submission of a claim is not a guarantee of payment.
- 2.07. Any decision reached by Spearhead Machinery Ltd is final.

3. LIMITATION OF LIABILITY

- 3.01. The manufacturer disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.
- 3.02. The manufacturer makes no warranty as to the design, capability, capacity or suitability for use of the goods.
- 3.03. Except as provided herein, the manufacturer shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.
- 3.04. No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.

4. MISCELLANEOUS

- 4.01. The manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.02. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.03. Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.

Spearhead AGRICUT 180, 240 & 270

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) + AI (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) + AI (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

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Spearhead AGRICUT 180, 240 & 270

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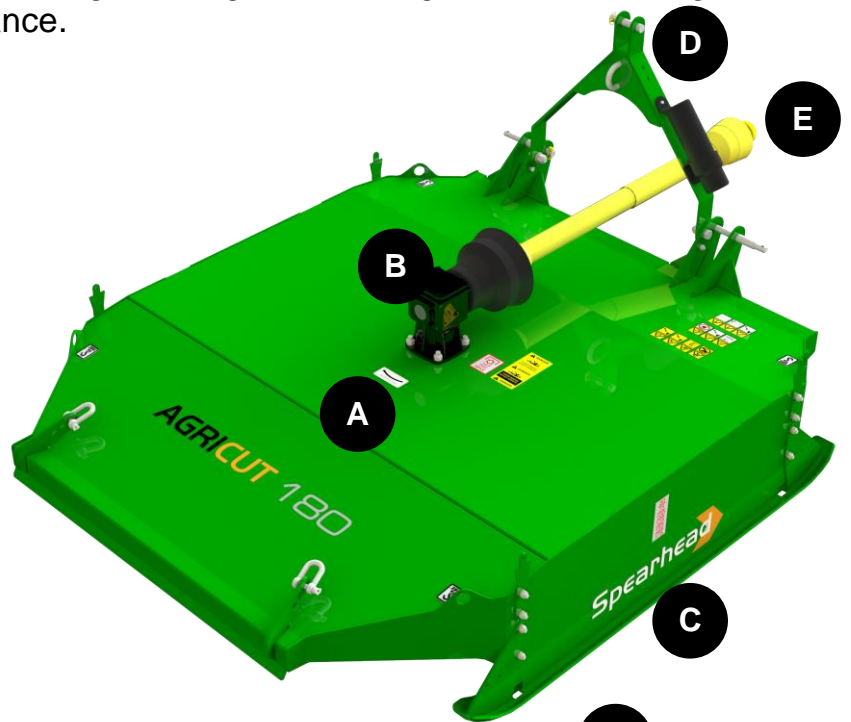
Introduction

Spearhead Agricut 180, 240 and 270 series machines are primarily designed for the topping of grass pasture land after grazing, or for weed and thistle control on agricultural land. The machines are not designed for grass mowing, or for the cutting of set-aside, or brush/woodland clearance.

Model & Components Identification

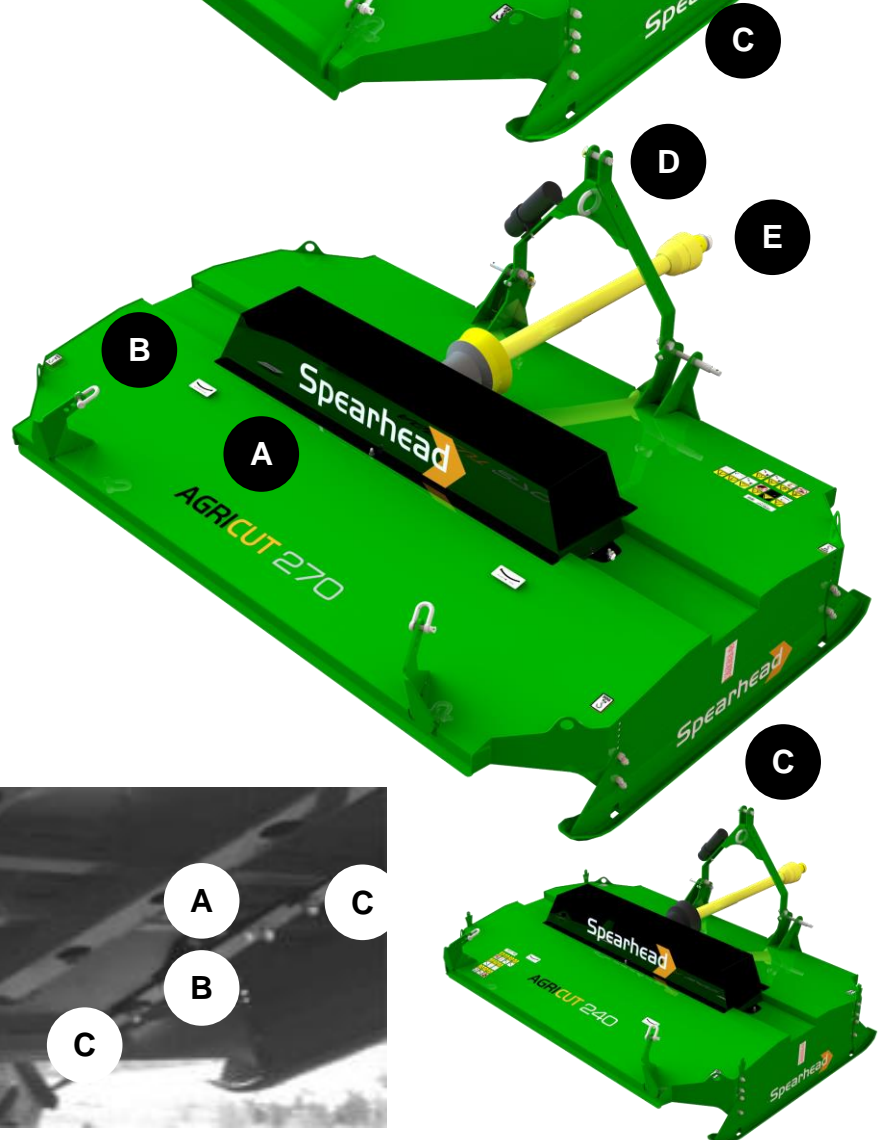
Agricut 180 Model >

- a) Machine Body/Deck
- b) Gearbox
- c) Skid
- d) Headstock
- e) PTO Shaft
- f) Transport Straps
(not shown in photo)



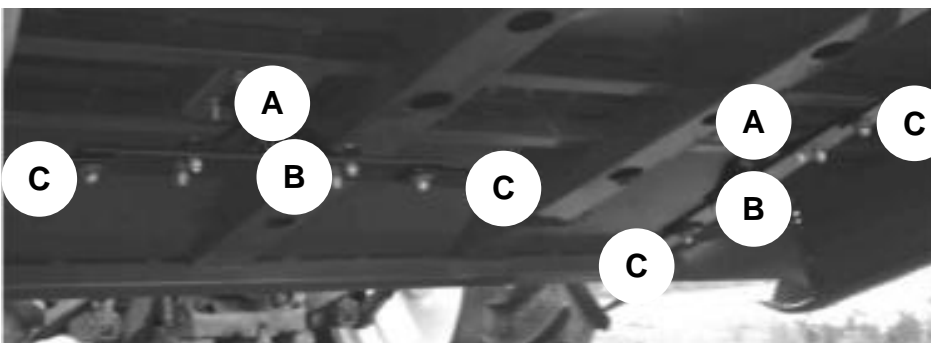
Agricut 240 & 270 Model >

- a) Machine Body/Deck
- b) Top Cover
- c) Skid
- d) Headstock
- e) PTO Shaft
- f) Transport Straps
(not shown in photo)



Blade Unit Components

- a) Rotor Hub
- b) Blade Carrier
- c) Blades
(Photo shows Agricut 270 model)



Spearhead AGRICUT 180, 240 & 270

Features

Agricut 180 Model

- Working width of 1.80m
- Three position bolt on headstock
- Inline cutting positions
- Deep cranked free swinging blades
- 540 RPM PTO Shaft drive
- Shear bolt protection
- Over-run protection on PTO
- Single rotor
- Side skids
- Easily adjustable cutting height
- Lower link floatation

Agricut 240 and 270 Models

- Working width of 2.40m (240) and 2.70m (270)
- Three position bolt on headstock
- Inline cutting positions
- Deep cranked free swinging blades
- 540 RPM PTO Shaft drive
- Shear bolt protection
- Over-run protection on PTO
- Twin rotor
- Side skids
- Easily adjustable cutting height
- Lower link floatation

Spearhead AGRICUT 180, 240 & 270

Specifications

Description	Agricut 180 Model	Agricut 240 Model	Agricut 270 Model
Cutting Width	1800mm	2400mm	2700mm
Overall Width	1970mm	2683mm	2971mm
Power Requirements (at PTO)	22kW (30hp)	22kW (30hp)	22kW (30hp)
Linkage Mounting	Cat 1 & 2	Cat 1 & 2	Cat 1 & 2
Offset Capability	No	No	No
PTO Speed (RPM)	540	540	540
Number of Rotors	1	2	2
Number of Blade Carriers	1	2	2
Number of Blades	2	4	4
Number of Skids	2	2	2
Cutting Height	30-150mm	30-150mm	30-150mm
Weight (kg)	290kg	TBC	430kg
<i>Note: All weights, dimensions and power requirements are approximate and are for guidance purposes only</i>			

Safety

There are obvious and potential hazards in the operation of this mower. The blades of this mower can propel objects for a great distance at very high speeds. Serious injury or even death may occur unless care is taken to ensure the safety of the operator, bystanders or passersby in the area.

KEEP CLEAR

Before attempting to operate this machine the owner and the operator should read, understand and heed the following information. Serious injury or death may occur if the safety advice given here is ignored. In addition to this safety advice, good 'common sense' will go a long way towards avoiding hazardous situations and reduce the risk of danger.



DANGER

Rotary mowers are capable under adverse conditions of throwing objects great distances (100 yards or more) and causing serious injury or death.

STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS (91 metres) unless:

- Front and rear deflectors, chain guards or bands are fitted and are in good working condition.
- Mower sections or wings are running close to, and parallel to, the ground without exposed blades.
- Passersby are outside the existing thrown-object zone.
- All areas have been thoroughly inspected and foreign materials such as rocks, cans, glass and general 'risk' debris have been removed.

NOTE: Where grass and weeds are high enough to obscure debris that could be struck by the blades, the area should be inspected and debris removed, mowed at an intermediate height, and re-inspected closely to remove and mowed again at the desired final height. *(In addition to the safety aspect of this procedure it will also reduce wear and tear on the mower drive-train, spread cut materials better, eliminate 'streaking' and make the final cut more uniform.)*



DANGER

All guards, bands, deflectors, driveline shields and gearbox shields should be used and maintained in good working condition at all times. They should be carefully inspected daily for missing or broken cable, chain links, shields or guards. Missing, broken or worn items must be replaced before attempting to use the machine to reduce the possibility of injury from thrown objects or entanglement.

Spearhead AGRICUT 180, 240 & 270

WARNING



Extreme care should be taken when operating near loose objects such as gravel, rocks, wire and other debris. Foreign objects should be removed from the work site or avoided to prevent machine damage and/or bodily injury or even death.

DANGER



The rotating parts of this machine have been designed and tested for rugged use. However, they could fail upon impact with heavy solid objects such as steel guardrails and concrete abutments. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injuries, or even death, never allow the cutting blades to contact such objects.

WARNING



The operator and all support personnel should wear 'hard hats', 'safety shoes' and 'safety glasses' at all times for protection from injury by falling objects and items thrown by the machine.

DANGER



Operate the mower only with a tractor equipped with an approved 'roll over protection system (ROPS). Always wear your seat belt. Serious injury or even death could result from falling off the tractor – particularly during a turnover when the operator could be pinned under the ROPS or the tractor.

WARNING



Before leaving the tractor seat always engage the brake and/or set the tractor transmission in parking gear. Disengage the PTO, stop the engine, remove the key and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never mount or dismount a moving tractor. Operate the tractor controls from the tractor seat only.

WARNING



Many varied objects such as wire, cable, rope or chains can become entangled in the operating parts of mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous. Inspect the cutting area for any such objects and remove prior to mowing. Never allow the cutting blades to contact such items.

DANGER



Be particularly careful in transport. Turn curves or go up hills only at a low speed and at a gradual steering angle. Ensure that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces.

Spearhead AGRICUT 180, 240 & 270

WARNING



Ensure that all necessary signs are correctly displayed, and clearly visible, when working or transporting on or near a public highway. (*Contact your Local Highway Authority to ensure you are fully conversant with your responsibilities on this subject*). Use flashing warning lights when working or transporting on or near a public highway to indicate to other road users a potential hazard. Always abide by local traffic regulations.

WARNING



Ensure all moving parts of the machine are regularly inspected for wear and replaced with authorised service parts if an excessive amount of wear is present.

Always use shear bolts recommended by Spearhead.

WARNING



Ensure the machine is regularly inspected for loose fasteners, worn or broken parts and loose or leaky fittings. Ensure all pins are fitted with cotter pins and washers. Serious injury can result from failure to maintain this machine in good working order.

DANGER



Never leave the machine in the raised transport position – the machine could fail inadvertently and cause injury or death to anyone who might be under the machine.

DANGER



Never clean or adjust PTO driven equipment with the tractor engine running. Kill the engine and pocket the key before attempting any maintenance on the machine.

DANGER



Never allow riders on either the tractor or the mower – falling can kill.

DANGER



Never allow children to operate, ride on, or come close to the mower or the tractor.

DANGER



Never work under the mower deck, framework or raised component unless the mower has been securely supported and blocked using suitable substantial items to prevent sudden or inadvertent falling which could cause serious injury or even death.

WARNING



Never operate the tractor and mower until you have read, and fully understood the operation manual and are conversant with all the safety instructions stated here. Ensure you read all safety messages found on both the tractor and the mower.

Spearhead AGRICUT 180, 240 & 270

WARNING



Ensure you maintain all safety decals in good readable condition. If a decal should for any reason become illegible order a replacement immediately before permitting the machine to be used.

DANGER



Never run a tractor engine in a closed building with adequate ventilation. The exhaust fumes can be hazardous to your health.

DANGER



Ensure that a PTO shield is installed when using PTO-driven equipment and always replace the PTO shield if damaged.

CAUTION



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractor with or without mowers attached can often be noisy enough to cause permanent or partial hearing loss. We recommend that hearing protection be worn at all times when the noise level experienced in the operator's position exceeds 80db. Noise in excess of 85db on a long-term basis can cause permanent total hearing loss. Where the tractor is fitted with a 'quiet cab' it is recommended that the windows are kept close at all times whilst operating this machine.

In addition to the safety messages stated here the machine is fitted with warning decals that are designed to bring to the attention of the operator the potential dangers that exist whilst using the machine. However, these cannot replace the correct proper training and total awareness of all the dangers involved in using a machine of this type, and the nature of work it does. **BE ALERT, PAY ATTENTION – SOMEONE'S LIFE MAY BE AT STAKE!**

WHEN THIS SYMBOL IS DISPLAYED:



- **BE ALERT**
- **PAY ATTENTION**
- **SOMEONE'S LIFE IS AT STAKE**

Safety and Instructional Decals Identification



Read and Comply with Operator's Manual

Read and understand the Operator's Manual before attaching and operating this machine.



Unsupported Machine

Do not work under the machine at any time with the machine unsupported. Make the correct safety supports are put in place beforehand.



Keep Out Zone

Keep out of the way of moving components of the tractor and the machine at all times whilst in operation. Result in serious injury or even death may occur unless care is taken. Bystanders must keep a safe distance when the machine is being used.



Debris - Keep a Safe Distance from the Machine

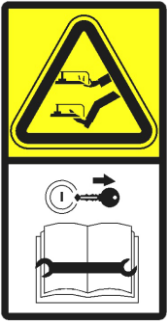
Danger of flying objects when machine is working. Bystanders must keep a safe distance when the machine is being used.



Falling Wing

Beware of falling wing of machine whilst in operation. Bystanders must keep a safe distance when the machine is being used.

Spearhead AGRICUT 180, 240 & 270



Stop Tractor and before Unblocking the Machine

When the machine becomes blocked, stop the tractor before unblocking the machine and consult the Operator's Manual.



Beware of Rotating Blades

Danger of cutting or severing of limbs under covered rotating parts. Do not reach or probe under the machine when it is driven by the tractor.



Raised Wing Danger

Danger from rotating blades and flying objects whilst the machine is in operation. Bystanders must keep a safe distance.



Shaft Entanglement

Whilst the PTO shaft is in operation, keep a safe distance from the machine and this area.



Keep Nuts Tight

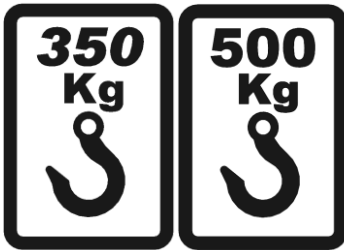
Keep machine nuts tight. Tightening should be taken at least every 8 hours.

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Guard Missing

Do not operate the machine at any time if the operating guards are either missing. If damaged a replacement must be sourced before using the machine.



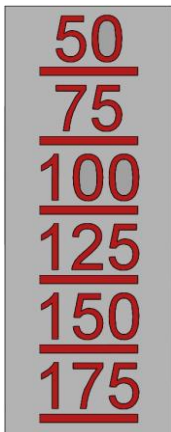
Machine Lifting Points

When lifting the machine with other than approved tractor attachment points, use the marked lifting points for safe and balanced lifting.



Input PTO Speed

The rated PTO speed for this machine is 540rpm. For optimum performance, the machine should be driven at this speed. Under no circumstances should this speed be exceeded.



Cutting Height

Decals are placed on both sides of the machine to aid setting the correct cutting height.



Blade Rotation Clockwise

Blades on the machine rotate clockwise.



Blade Rotation Anticlockwise (Agricut 240 & 270)

Blades on the machine rotate anticlockwise.



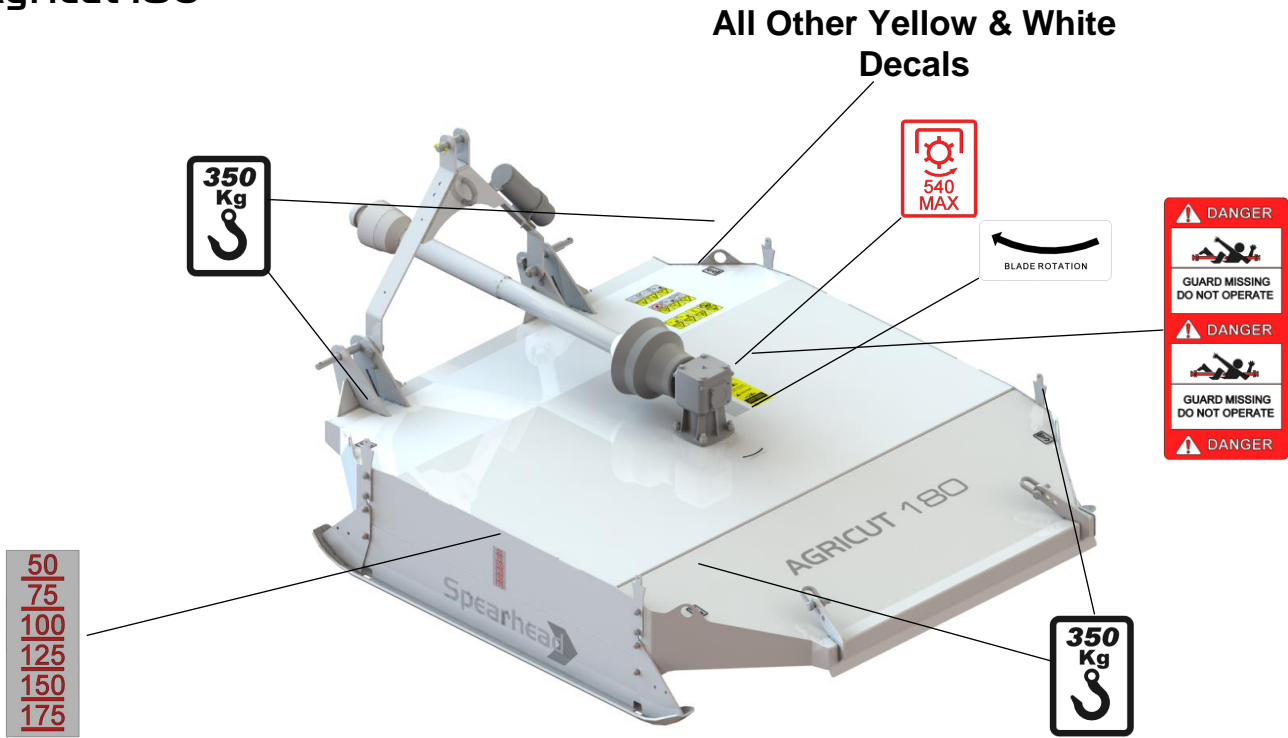
Timing Blades (Agricut 240 & 270)

It is important to time the blades perpendicular to each other to allow for correct machine operation.

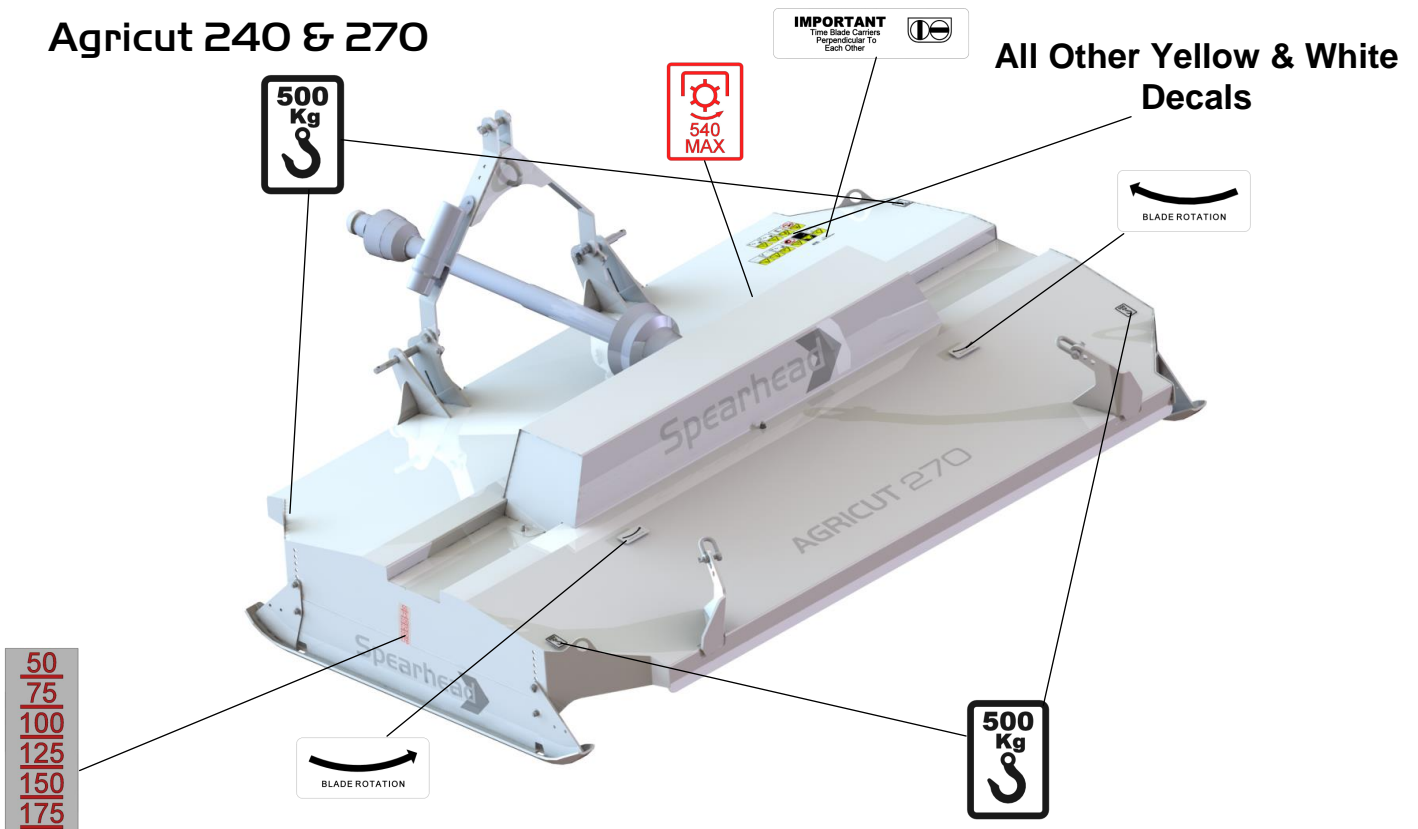
Spearhead AGRICUT 180, 240 & 270

Location of Safety and Instructional Decals

Agricut 180



Agricut 240 & 270



Spearhead AGRICUT 180, 240 & 270

Tractor Requirements

WARNING



The tractor must have adequate weight and capacity to lift and carry the machine. Local legislation governing this ratio must be observed. The correct ratio between the tractor and machine ensures correct braking functions and manoeuvrability. An incorrect ratio between tractor and machine can be dangerous.

AGRICUT Models

AGRICUT machines are connected to the tractor on the 3 point hitch, and will accept either CAT 1 or CAT 2 linkages. The tractor must also be equipped with a levelling box. If the tractor is fitted with a swinging drawbar, this should be set in its shortest mode or removed completely. The tractor should be equipped with a six-splined PTO and revolve at 540 rpm.



(Agricut 180 shown)

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Tractor Preparation

Ensure that all operators have read and thoroughly understood all the safety procedures. For further information refer to the relevant sections of this manual.

When connecting the machine to a tractor there is a risk of personal injury. Failure to follow the safety instructions could result in serious injuries to either yourself or others. Therefore, when connecting the machine and the tractor you should:

- Make sure the tractor cannot roll.
- Make sure that the tractor and the machine have compatible category attachments.
- Use the hydraulic three point linkage slowly and carefully.
- When carrying out an attachment you must make sure that the machine is placed on a firm and level surface.

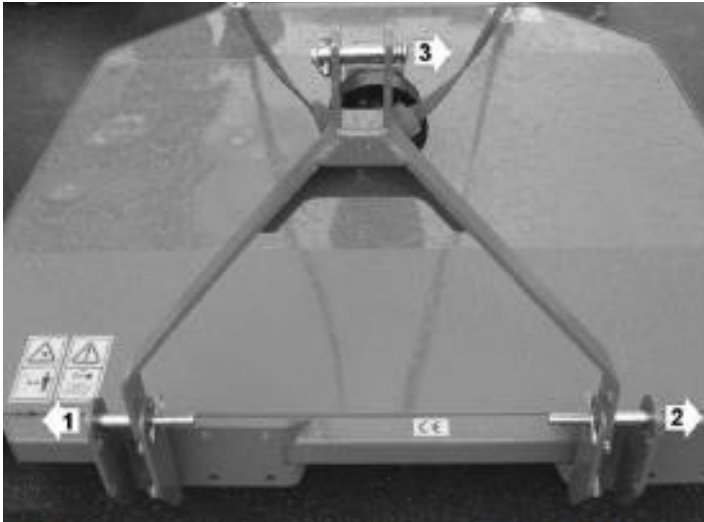


Remove tractor drawbar or position it to one side so it does not foul on the PTO shaft

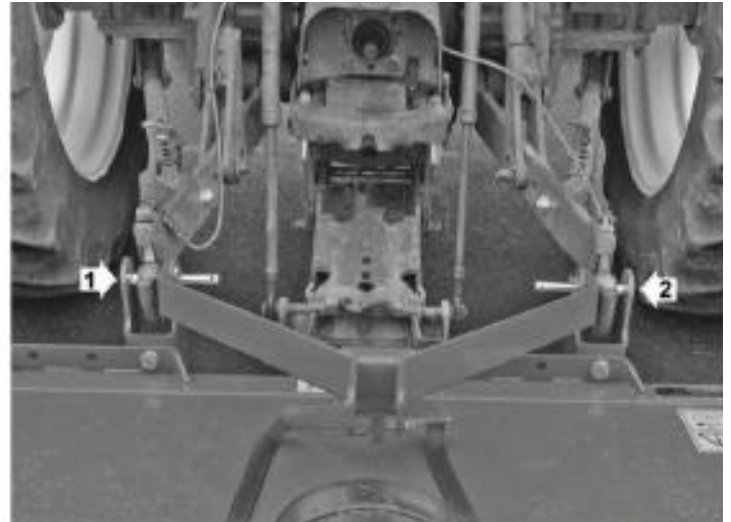
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Attaching the Machine

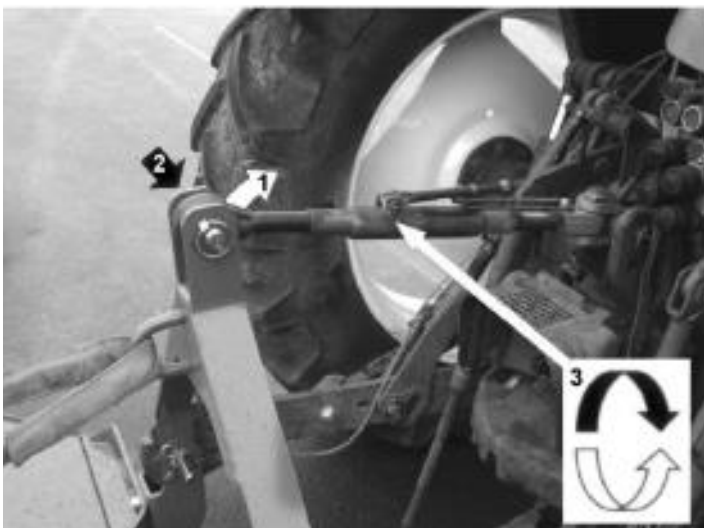
Attachment of the machine should be performed on a firm level site – the procedure for attachment is as follows;



Support the 'A' frame and remove the 3 link pins before reversing the tractor up to the machine – adjust lift arm height to align with the pin holes on the machine.



Turn off the tractor, apply parking brake and remove the starting key. Attach lower lift arms and 'A' frame to the machine using the Cat I/II pins supplied.



Raise 'A' frame into the position shown and fit the top link. Adjust the length of the link to remove any slack and to tension the transport strap, without lifting the rear of the machine off the ground.

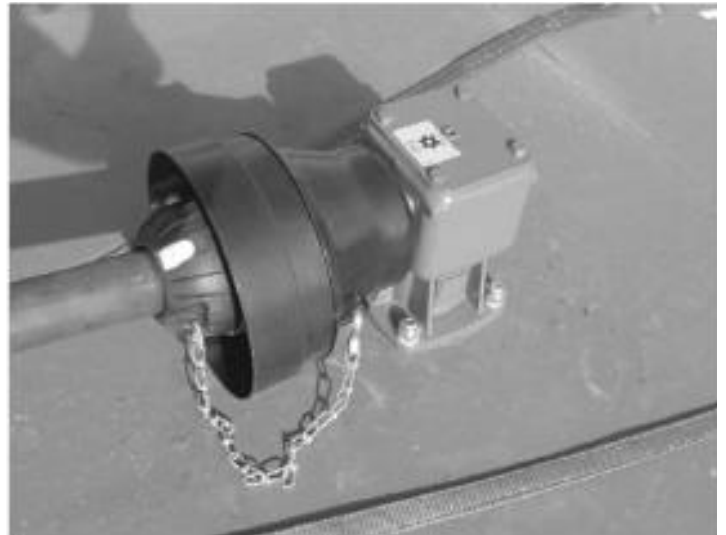


Start the tractor and raise the machine on the lift arms until the gearbox PTO shaft of the machine and the tractor PTO are at their shortest distance apart. Turn off the tractor, apply parking brake and remove the starter key.

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Adjust the tractor stabiliser chains/bars to remove any lateral movement when the machine is in the raised position.

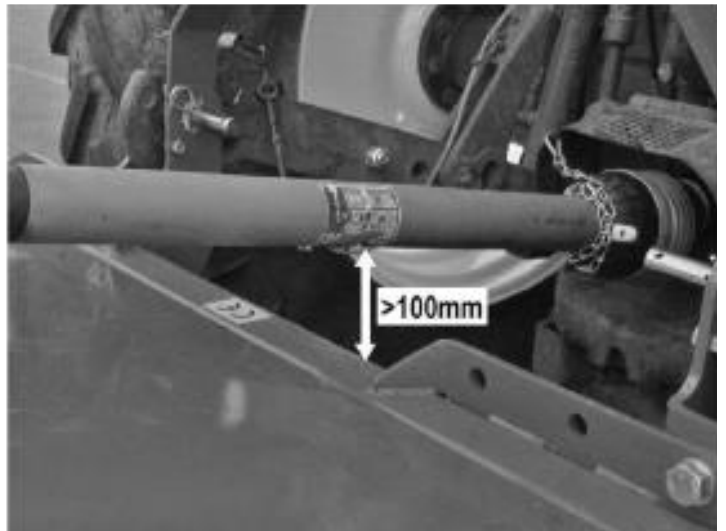


Connect the end of the PTO shaft that has the shear bolt to the machine's gearbox. Secure the PTO guard retaining chain to a suitable location on the machine.



Connect the other end of the PTO shaft to the tractor's PTO drive. Secure the PTO guard retaining chain to a suitable location on the tractor.

NOTE: On initial installation the PTO shaft length may need adjusting to suit this particular application; refer to *PTO driveshaft installation page for details of the procedure.*



With the PTO shaft correctly connected, raise the machine to a safe transport position. Ensure clearance of at least 100mm between the underside of the shaft and the body of the machine whilst in the transport position. Lock the 'lift arm stop' in this position.

Check that there is no lateral movement on the machine when it is in the raised position; adjust the stabiliser chains/bars if required.

Spearhead AGRICUT 180, 240 & 270

CAUTION



Raising the tractor lift arms too high may cause damage to the PTO shaft if the tractor was to drive over any bumps and the machine was to bounce on the lift arms.

WARNING



Read all the safety instructions carefully before driving on the public road and always comply with the local law concerning lights, warning and safety signs. The driver and/or the owner of the machine have the responsibility of complying with the local Road Traffic Acts.

Always ensure tractor manoeuvrability is not adversely affected by any attached machinery; the steering axle of the tractor should be loaded with at least 20% of the tractor's dead weight. Carry of passengers on the machine is strictly prohibited.

Spearhead AGRICUT 180, 240 & 270

PTO Driveshaft Installation

The PTO driveshaft attaches between the tractor and the machine gearbox to transfer the power required to run and operate the machine – it is important to achieve the correct shaft length to avoid risk of it ‘bottoming out’ when raising or lowering the machine. The procedure for measuring and cutting the shaft is as follows;

Measuring the PTO Shaft

With the machine attached to the tractor in the working position measure the horizontal distance ‘A’ from the tractor’s PTO to the input shaft on the machines gearbox and subtract 75mm (3”) – *this figure is the required shaft length.*

Place the fully closed PTO shaft on the ground and measure its overall length, if the shaft is shorter than the required length you can use it without the need to shorten – *proving it allows for a minimum 150mm (6”) overlap when fitted.*

If the shaft is longer subtract the required shaft length plus an additional 75mm (3”) – *the resulting figure is the excess length that will need to be removed from each half of the shaft.*

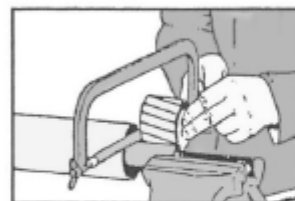
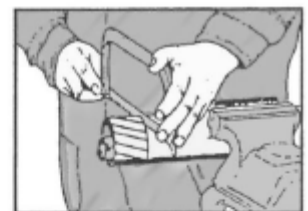
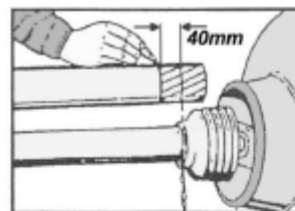
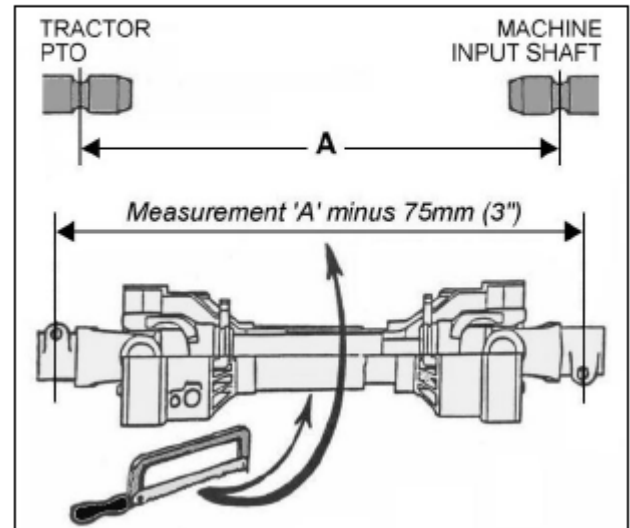
Cutting the PTO Shaft

Separate the two halves and using the measurement obtained above shorten both the plastic guarding and the inner steel profile tubes of each shaft by this same amount. De-burr the cut tubes with a file to remove rough or sharp edges and thoroughly clean to remove the swarf before greasing, assembling and fitting the shaft.

NOTE: For subsequent use with different tractors the shaft should be measured again to check suitability – *there must be a minimum shaft overlap of 150mm (6”).*

PTO Maintenance

To increase the working life of the PTO shaft it should be periodically checked, cleaned and lubricated – *refer to the manufacturer’s manual provided with the shaft for further details on this subject.*



Machine Dis-connection and Storage

Disconnecting the Machine

Disconnection of the machine is the reversal of the attachment procedure – refer to the attachment sections for details.

WARNING



There is an increased risk of injury when disconnecting the machine from the tractor. Before attempting to disconnect the machine, make sure that:

- The machine is placed on a firm and level surface.
- The tractor cannot roll after being disconnected.
- The tractor has stopped, the parking brake is applied and the starter key is removed.
- The machine has come to a complete stop before commencing work.
- Bystanders are kept at a safe distance from the machine and tractor.
- Before leaving the machine ensure it is left in a safe condition.
- Do not allow children to play on or near the machine, even when it is disconnected; there are moveable components on the machine that can risk injury.

Machine Storage

At the end of the season the machine should be readied for winter storage. The storage location is ideally in a dry well ventilated building that will offer the machine protection from the elements. Before placing the machine into storage the following tasks should be performed;

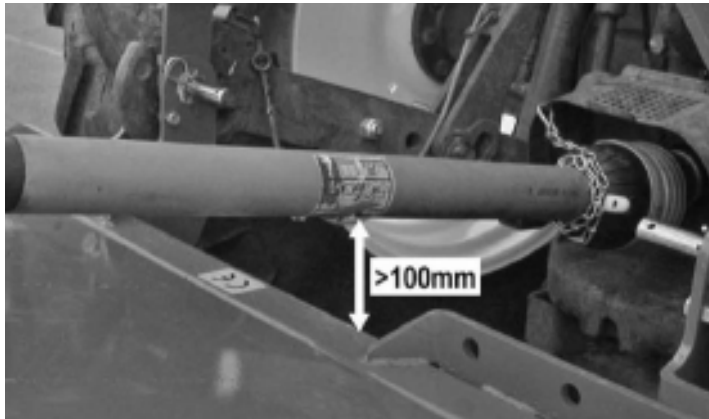
- Clean the machine thoroughly.
- Check that the machine's safety equipment is not worn or damaged – replace if required.
- Check and lubricate the PTO shaft and store it in a safe dry environment to avoid risk of damage or corrosion.
- Repair or replace any damaged components.
- Check and tighten all bolts.
- Lubricate the machine following the lubrication program.
- Repair any paint damage and replace any missing decals.

When storing or parking the machine always ensure it is left in a safe position without risk of harm or injury to persons or animals, if necessary use suitable props or blocks to support the machine.

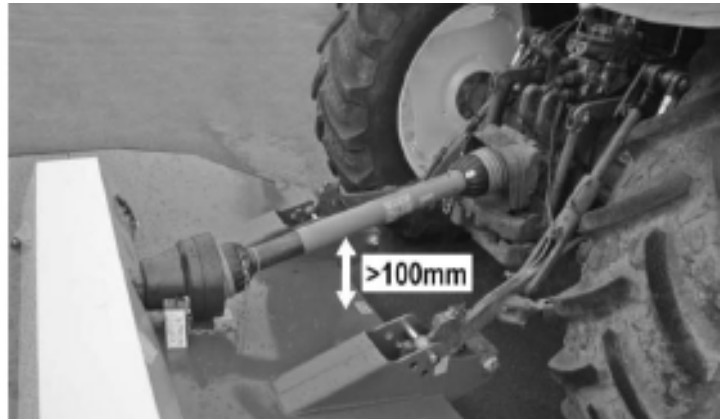
Spearhead AGRICUT 180, 240 & 270

Transporting the Machine

For transportation between work sites the machine should be raised to a suitable carrying height and the tractors 'lift arm stops' locked at that position; ensure a minimum distance of 100mm is retained between the underside of the PTO shaft and the body of the machine – see photos below.



Agricut 180 – PTO shaft clearance required for transport



Agricut 270 – PTO shaft clearance required for transport

CAUTION



Raising the tractor lift arms too high may cause damage to the PTO shaft if the tractor was to drive over any bumps and the machine was to bounce on the lift arms.

WARNING



Read all the safety instructions carefully before driving on the public road and always comply with the local law concerning lights, warning and safety signs. The driver and/or the owner of the machine have the responsibility of complying with the local Road Traffic Acts.

Always ensure tractor manoeuvrability is not adversely affected by any attached machinery; the steering axle of the tractor should be loaded with at least 20% of the tractor's dead weight. Carry of passengers on the machine is strictly prohibited.

Before Driving on Public Roads

The machine should be raised on the lift arms to the transport position and the following check made:

- Is the machine correctly coupled with all securing pins and clips in position?
- Does the machine have any loose or unsecured parts?
- Are the tractor's lights, indicators and beacon working correctly and are they all clearly visible?
- Are there any bystanders or children in the immediate area? If so, ask them to clear the area before moving off.

Driving on Public Roads

- Check the area around the machine before you start. Be aware of children in the danger area of the machine.
- Do not exceed 30 km/h.
- Adjust the speed according to the road conditions.
- Avoid sudden sideways movement with the machine attached.
- Make sure that steering and braking ability are not compromised.
- Take care when turning corners as the machine may swing out into the path of other road users.

'Running Up' the Machine

Before Use

WARNING



Ensure that all operators have read and thoroughly understood all the safety procedures. For further information refer to the relevant sections of this manual.

Running the Machine for the First Time

WARNING



Ensure that the machine and the PTO shaft have been correctly connected to the tractor as stated in the 'machine attachment sections' of the manual.

WARNING



Select a safe open area in which to 'run-up' and check the machine. Ensure there are no children, bystanders or animals in the immediate area when the machine is run for the first time.

After the machine has been attached to the tractor for the first time, it should be tested to ensure it operates correctly before putting it to work. Use the following procedure when running the machine for the first time.

1. Lower the machine so the skids are resting on the ground and the machine is level.
2. With the tractor at low revs, gently engage the PTO until the machine is running.
3. Carefully increase the PTO speed to 540 rpm.
4. Check that the machine runs smoothly and without vibration.
5. Raise the machine to the transport position.
6. Check again that the machine runs smoothly and without vibration.
7. Lower the machine to ground level again.
8. Gently reduce the tractor revs to idle, and disengage the PTO.
9. Apply the parking brake and stop the tractor.

If any faults are identified, refer to the 'Troubleshooting Guide'. If a solution is still not found consult your local Spearhead Dealer or assistance.

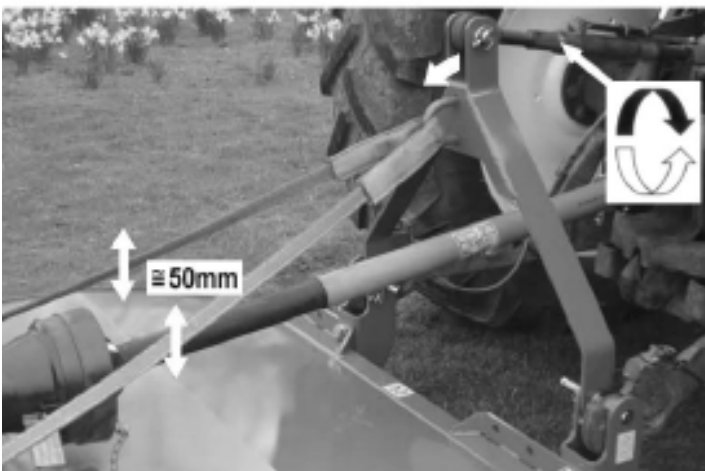
Spearhead AGRICUT 180, 240 & 270

Machine Operation

Operating the Machine

Upon arrival at the location to be topped, lower the machine fully so that both skids are sat on the ground.

- Lift the machine so it clears the ground by approximately 100mm then gently engage the PTO and run at tick-over speed.
- Lower the machine to the ground, and increase the PTO speed to 540 rpm.
- Select a forward speed that is suitable for the ground conditions and the type of material to be cut.
- Check the machine is 'floating' correctly.
NOTE: When turning at headlands, lift the machine so the skids just clear the ground. This will reduce field damage in wet conditions.
- If the stubble height is not correct, adjust the skid height accordingly – refer to 'Machine Setting and Adjustments'.



< Adjust the top link to slacken off the transport strap (approximately 50mm play).

Spearhead AGRICUT 180, 240 & 270

Stopping the Machine

When stopping the machine, use the following procedure:

- Reduce forward speed and bring the tractor to a halt.
- Keep the machine lowered onto the ground.
- Reduce engine revs to idle speed, and disengage to PTO.
- When the rotor has stopped turning, raise the machine to the transport.

Machine Settings & Adjustments

WARNING



Before working on any component of an attached machine, ensure that the tractor engine is turned off and the starter key removed to prevent anyone else from starting the tractor whilst it is being worked on.

WARNING: Always 'park up' on a suitable firm, level surface with the parking brake applied, and ensure the machine has come to a complete stop before adjusting or setting the machine.

WARNING: Before attempting to access the underside of the machine, ensure it is adequately and safely supported. Do not rely on the tractor's hydraulics. Use safety supports that have a minimum Safe Working Load (SWL) of 1.5 tonnes.

Cutting Height Adjustment

The height of the pasture topper can be adjusted to cut at heights from 30mm to 150mm. This is achieved by moving the bolt-on skids at each side of the machine to the desired height position – *see photo below*.



WARNING



Request assistance when removing and replacing the skids, they are heavy and may cause injury.

Spearhead AGRICUT 180, 240 & 270

To adjust the cutting height:

- Raise the machine on the tractor lift arms and support it on suitable safety supports.
- Remove the nuts, bolts and washers securing the skid to the machine.
- Reposition the skid to the new desired position; use the cutting height decals on the side of the machine (indicated in the photo above) as a guide.
- Fit and tighten all nuts and bolts securely, see 'Torque Settings'.
- Repeat the process for the other skid, ensuring that both skids are at the same height setting.
- Raise the machine on the lift arms and remove the safety supports.

Re-try the machine and re-adjust the skid height if the cutting height is still not suitable.

Shear Bolt Protection

The PTO shaft is fitted with a shear bolt overload protection to prevent damage to the machine if an obstacle is encountered during operation. The shear bolt is located at the machine end of the PTO shaft.



Shear bolt location >

The procedure below should be followed when replacing or inspecting the shear bolt.

Inspecting and/or Replacing the Shear Bolt

- Disengage the PTO.
- Park up and lower the machine on a firm level site.
- Switch off the tractor, apply the parking brake and remove the starting key.
- Release the PTO guard restraining chains and disconnected the PTO shaft from the tractor end first, and then from the machine; this will now give access to the shear bolt for inspection and replacement.
- Inspect the machine, shaft and work area for possible causes of failure. Check that the blades rotate freely and are not fouling on the body.
- Remove any bolt remains from the universal joint, and replace the shear bolt with the correct grade replacement. Tighten the bolt to the correct torque setting.
- Re-connect the shaft to the machine and then to the tractor and attach the guard restraining chains.
- Re-start the machine using the same procedure as for 'Running the Machine for the First Time' to check that it operates correctly.

Only use the same size and grade of shear bolt as originally supplied with the machine – refer to the parts manual for genuine replacements.

NOTE: Four spare shear bolts and nuts are supplied with the machine; there are to be found on the top of the 'A' frame assembly.

Cleaning the Machine

WARNING



Always pay attention to the area and environment when carrying out any cleaning work: this will reduce the risk of injury to you and others.

Before cleaning: Check the area around the machine for hazardous or loose material.

Cleaning Procedure

- Lower the machine to the ground.
- Apply the parking brake and stop the tractor.
- Remove the starter key from the tractor.
- Disconnect the PTO shaft.
- If the machine needs to be raised for cleaning ensure it is safely and suitably supported.
- Always wear Personal Protective Equipment (PPE).
- Wear the correct protective gear for body and face when cleaning the machine, this will protect you from dirt and oil splashes. Insufficient protection of body and face can lead to severe skin and eye injuries.

Cleaning Agents

CAUTION



Some cleaning products contain chemicals that are hazardous to the environment. Always take precautions to prevent spillage of fluids while cleaning.

CAUTION



Only use pH neutral cleaning agents when cleaning the machine. pH neutral cleaning agents give your machine maximum protection. Cleaning agents with either high or low pH values can be corrosive on plastic, rubber and varnished surfaces.

CAUTION



High pressure cleaning equipment may be used to clean the machine but must be used with care to avoid risk of damaging paintwork and decals. Areas around the bearings should be cleaned using gentle squirts of water.

After cleaning allow the machine to dry off completely and lubricate it fully before using it for work or placing it into storage.

Spearhead AGRICUT 180, 240 & 270

Maintenance

Regular Maintenance

Regular maintenance carried out at the intervals specified in the maintenance chart below will ensure that the machine operates correctly and safely and minimise operational down time. See following page for maintenance safety before attempting to work on the machine.

After 1 hour of Use (New Machine)

- Check all gearbox mounting bolts for tightness – tighten if required.
- Check mounting bolts on blade carrier(s) – tighten if required.
- Check headstock mounting bolts for tightness – tighten if required.

After 10 hours of Use (New Machine)

- Check gearbox oil level(S) – top up if required.
- Check blades for damage.
- Check blade bushes for wear.
- Check headstock mounting bolts for tightness – tighten if required.

Maintenance Schedule

MACHINE COMPONENT	MAINTENANCE INTERVAL			
	Weekly	Fortnightly	Monthly	Annually
PTO Shaft				
Inspect and lubricate -refer to manufacturer's manual	✓			✓
Centre Gearboxes				
Check mounting bolts – tighten if required	✓			✓
Check oil level – top up if required		✓		✓
Replace oil – drain and refill				✓
Outer Gearboxes (where applicable)				
Check mounting bolts – tighten if required	✓			✓
Check oil level – top up if required		✓		✓
Replace oil – drain and refill				✓
Blade Carrier				
Check mounting bolts – tighten if required	✓			✓
Blades				
Check for damage or wear	✓			✓
Check bushes for wear			✓	✓
Headstock (where applicable)				
Check mounting bolts – tighten if required		✓		✓
Flexible Coupling (where applicable)				
Check for cracks and damage	✓			✓
Fasteners				
Check tightness and condition of fasteners and fittings			✓	✓

Power Take Off (PTO) Shaft

Refer to the PTO Shaft Manufacturer's instructions for adjusting or servicing this component; the instruction booklet will be attached to the new shaft on delivery of the machine.

Maintenance Safety

WARNING



Before attempting to access the underside of the machine, ensure it is adequately and safely supported. Do not rely on the tractor's hydraulics. Use safety supports that have a minimum Safe Working Load (SWL) of 1.5 tonnes.

WARNING



Repair and maintenance work should only be performed if you have the necessary professional knowledge, the proper tools and comply with the following guidance:

- Always park the machine on a suitable firm, level surface with the parking brake applied.
- Ensure the tractor engine is turned off and the starter key removed to prevent anyone else from starting the tractor while it is being worked on.
- Disconnect the PTO shaft.
- Never work between the tractor and the machine if the machine has not been secured.
- Always use original spare parts on the machine.

Lubricating Oil Precautions

Avoid excessive skin contact with used oil. Used oil contains potentially harmful contaminants which may cause skin cancer or other serious skin disorders. Avoid excessive skin contact with used lubricating oils and always adhere to the health protection precautions.

- Avoid prolonged and repeated contact with oils, particularly used engine oils.
- Wear protective clothing, including impervious gloves where practicable.
- Avoid contaminating clothes with oil (particularly those next to the skin). Overalls must be cleaned regularly. Discard heavily soiled clothing or oil impregnated footwear.
- First aid treatment should be obtained immediately for open cuts and wound
- Apply barrier creams before each work period, to help lubricating oil from contaminating the skin.
- Use moisturisers after cleaning; preparations containing lanolin help replace the skin's natural oils which have been removed.
- If skin disorders develop, obtain medical advice without delay.
- Wear eye protection (e.g. goggles or a face shield) if there is risk of eye contamination. Eye wash facilities should be provided in close vicinity of the work area.

NOTE: Used oil must be collected in a suitable container and delivered to a registered disposal company, where the oil will be processed according to the governing regulations.

Spearhead AGRICUT 180, 240 & 270

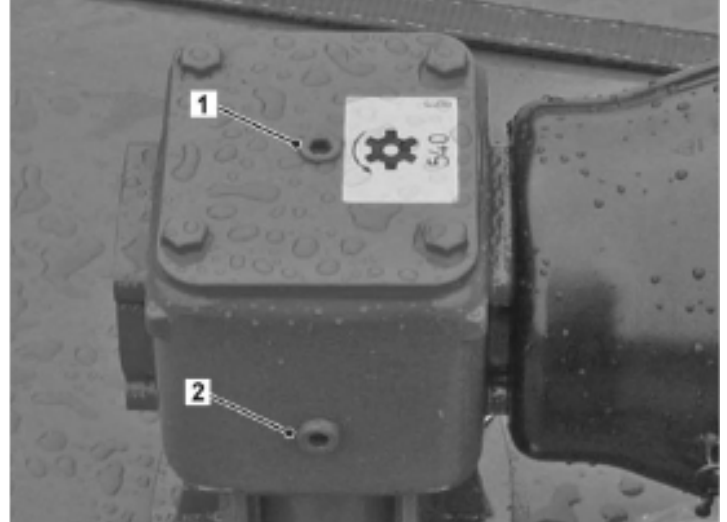
Gearbox Maintenance – AGRICUT 180 Models

Gearbox Mounting Bolts

Check the gearbox mounting nuts and bolts at the intervals stated in the maintenance schedule and retighten if required. Locations of the mounting nuts and bolts are indicated in the photo below left.



Gearbox mounting nuts and bolts location



1) Oil Filler Plug 2) Oil Level Plug

Oil Level

Check the gearbox oil level at the intervals stated in the maintenance schedule; ensure the machine is lowered to the ground and located on a firm level site to perform this task.

Checking the oil level in the gearbox is by removal of the Oil Level Plug, indicated '1' in the photo above right, the level is correct when the oil is up to the bottom of the level plug orifice. If the gearbox required 'topping up' add oil via the filler plug indicated '1' in the photo until it starts to seep from the level plug orifice; replace both plugs securely to complete the task.

Gearbox oil levels must be checked on a fortnightly basis during the season and the oil completely drained and replaced annually.

Draining & Refilling

To drain oil from the gearbox it is necessary to remove the gearbox from the machine. Remove both the filler and the level plugs and invert the gearbox over a suitable container to allow the oil to drain completely. Replace the gearbox on the machine before refilling to the level stated above. *Refer to recommended lubricants page for gearbox oil specifications.*

Spearhead AGRICUT 180, 240 & 270

Gearbox & Couplings Maintenance – AGRICUT 240 & 270

The AGRICUT 240 and 270 machines are fitted with 3 gearboxes, a single central gearbox and two outer gearboxes; these are housed beneath the top cover of the machine.

Access to the gearboxes is by unhooking the two bonnet catches on the front of the cover and tilting it rearwards on its hinges.

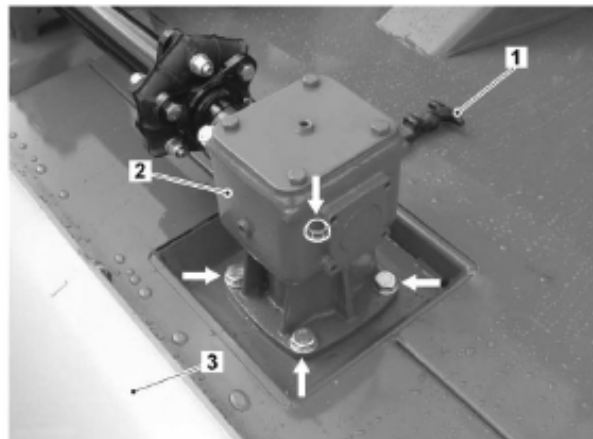
Gearboxes Mounting Bolts

Check the mounting nuts and bolts of all 3 gearboxes at the intervals stated in the maintenance schedule and retighten if required.

Locations of the mounting nuts and bolts are indicated in the photos below.



Centre Gearbox Mounting Bolts Location

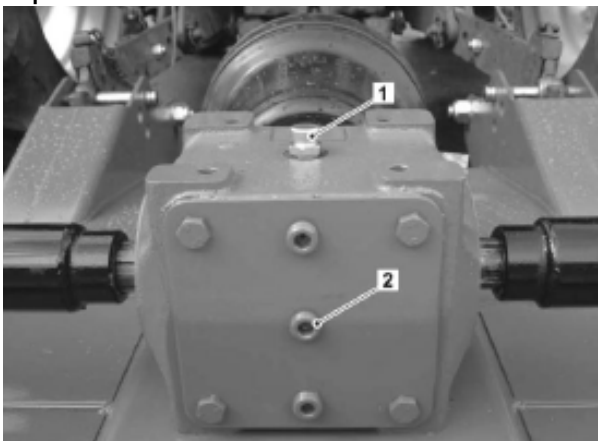


Outer Gearbox Mounting Bolts Location (RH shown)
1) Bonnet Catch 2) Gearbox (RH) 3) Top Cover

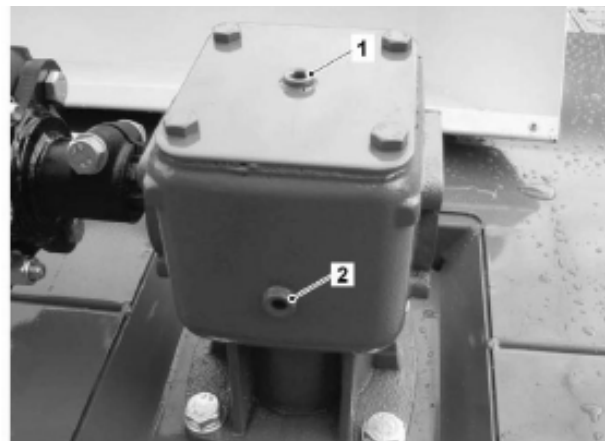
Oil Level

Check the gearboxes oil levels at the intervals stated in the maintenance schedule; ensure the machine is lowered to the ground and located on a firm level site to perform this task.

Checking the oil level in the gearboxes is by removal of the Oil Level Plug, indicated '2' in the photos below, the level is correct when the oil is up to the bottom of the level plug orifice. If the gearbox requires 'topping up' add oil via the filler plug indicated '1' in the photos until it starts to seep from the level plug orifice; replace both plugs securely to complete the task.



Centre Gearbox Plug Locations
1) Oil Filler Plug 2) Oil Level Plug



Outer Gearbox Plug Locations (RH shown)
1) Oil Filler Plug 2) Oil Level Plug

Spearhead AGRICUT 180, 240 & 270

Gearbox oil levels must be checked on a fortnightly basis during the season and the oil completely drained and replaced annually.

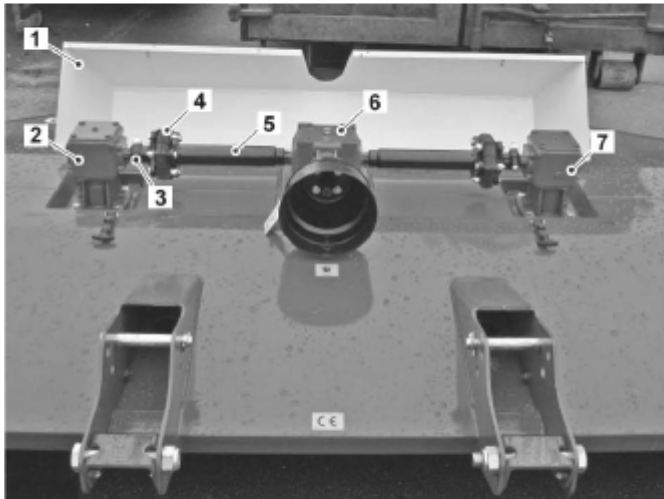
Draining & Refilling

To drain oil from any of the gearboxes it is necessary to first remove it from the machine – *refer to removal procedure below.*

With the relevant gearbox off the machine, remove both the filler and the level plugs and invert the gearbox over a suitable container to allow the oil to drain completely.

Replace the gearbox on the machine before refilling to the level stated previously.

Refer to recommended lubricants page for gearbox oil specifications.



- 1) Top Cover
- 2) RH Outer Gearbox
- 3) Short Driveshaft Clamping Bolt
- 4) Flexible Coupling
- 5) Long Driveshaft
- 6) Centre Gearbox
- 7) LH Outer Gearbox

Gearbox Removal Procedure

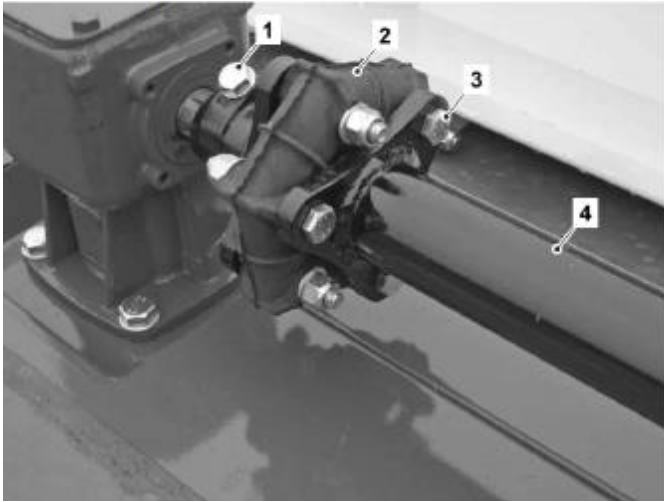
- Remove the six flexible coupling mounting bolts.
- Remove the relevant short driveshaft clamping bolt.
- Slide the long driveshaft towards the central gearbox.
- Slide the short driveshaft towards the relevant outer gearbox.
- Remove the flexible coupling and both driveshaft and store them safely.
- Lift and support the machine on safety supports.
- With assistance, support the blade carrier, remove the split pin and rotor castle nut and remove the rotor from the splined gearbox outer shaft – refer to the illustration on the 'Blade Carrier' page of this maintenance section.
- With assistance, remove the four nuts and mounting bolts securing the gearbox to the machine.
- Carefully remove the gearbox

Gearboxes Replacement

Replacement of the gearboxes is a reversal of the removal procedure – *ensure mounting bolts and castle nuts are tightened as specified in the 'Specific Torque Settings' chart.*

Spearhead AGRICUT 180, 240 & 270

Flexible Couplings



- 1) Shorter driveshaft clamp bolt (2 off)
- 2) Flexible coupling (2 off)
- 3) Flexible coupling mounting bolts (12 off)
- 4) Long driveshaft (2 off)

Check each flexible coupling for damage and cracks. Replace if any damage is found. Check the tightness of the short driveshaft clamping bolt and coupling mounting bolts to the correct torque. Repeat with the other drive coupling. Refer to 'Specific Torque Settings' chart.

WARNING



Ensure that the opposite blade carriers and blades are at 90° to each other after any maintenance that requires removing or replacing drive couplings.

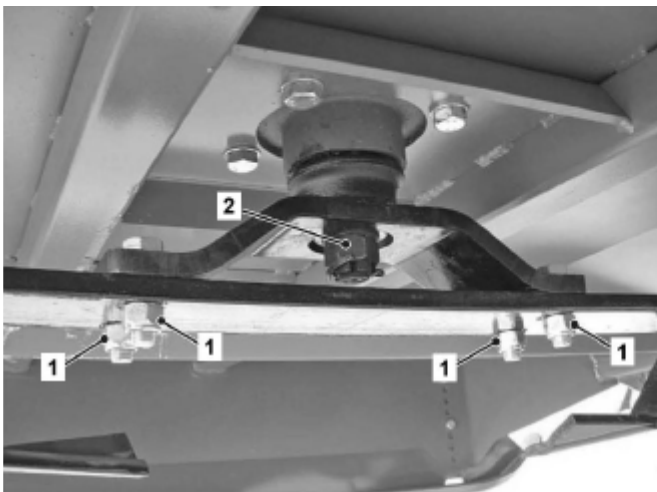
Spearhead AGRICUT 180, 240 & 270

Blade Carrier & Blade Maintenance

Ensure that the machine is safely supported using suitable lifting and support equipment before attempting to work beneath a machine – never use or rely on the tractor's hydraulic system to support the machine.

Blade Carrier Removal

- Lift and support the machine on safety supports.
- With assistance, support the blade carrier, remove the split pin and rotor castle nut and remove the rotor from the splined gearbox output shaft. Refer to photo below.
- With assistance, remove the four nuts and mounting bolts securing the gearbox to the machine.
- Remove the gearbox.



- 1) Blade Carrier mounting bolts and nuts
- 2) Rotor hub castle nut

Blade Carrier Replacement

Replacement is the reverse of removal procedure stated above – *tighten the mounting bolts and castle nut as specified in 'Specific Torque Settings' chart.*

Blade Carrier Maintenance

Check the rotor hub for slack. Some settlement may occur after the first hours of working. Re-tighten the castle nut one quarter of a turn at a time, and back off until the split pin can be fitted. Repeat until the slackness is removed. Check the blade carrier mounting bolts for tightness – *Refer to 'Specific Torque Settings' chart.*

Spearhead AGRICUT 180, 240 & 270

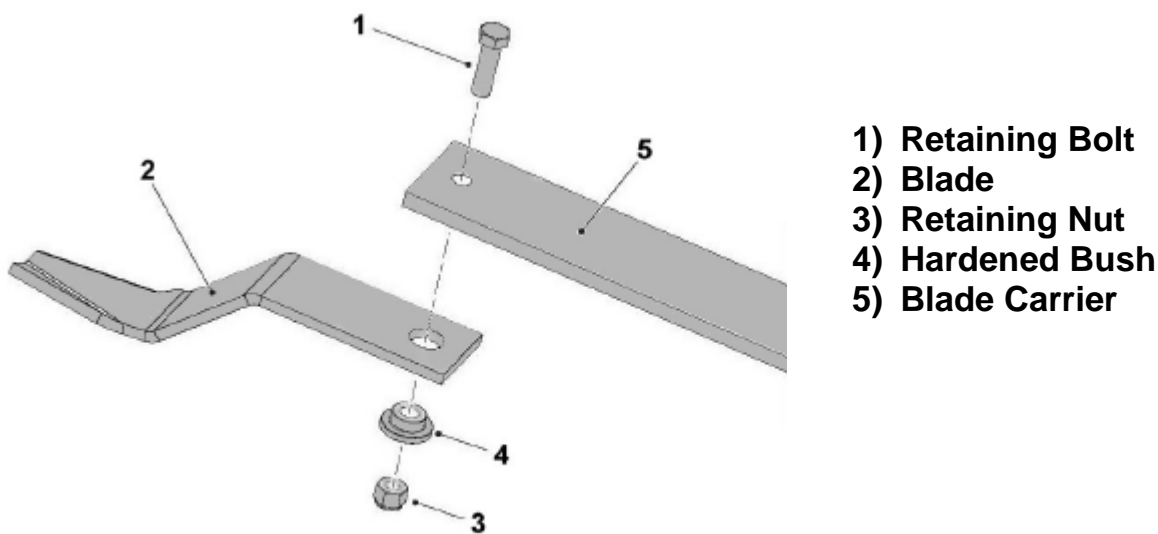
Blades & Bushes

The cutting blades are mounted in hardened bushes and are free-swinging to reduce shock load and damage to the transmission.

Blades and blade bushes should be inspected for wear/damage the intervals stated in the maintenance schedule.

Replace blades that are bent, excessively nicked, damaged, or when they are worn beyond the shape of their original profile. Always replace blades immediately when their level of wear or damage causes rotor vibration; continued use of the machine in this condition could cause damage to the gearbox and/or drive components. Blades must always be replaced in opposing pairs to retain rotor balance.

Replace bushes and blade fixings immediately should excessive signs of wear or damage be detected.



Ensure that the machine is safely supported using suitable lifting and support equipment before attempting to work beneath a machine – never use or rely on the tractor’s hydraulic system to support the machine.

Blade & Blade Bush Removal

Remove the retaining bolt and nut and dismantle the blade and bush.

Blade and/or Blade Bush Replacement

Replace the blade and/or the bush and reassemble to the carrier with a new nut and bolt. Tighten the retaining bolt and nut bolt as specific in ‘Specific Torque Settings’ chart.

NOTE: On Twin Rotor machines the cutting blades on the left and right blade carriers are not interchangeable.

Spearhead AGRICUT 180, 240 & 270

Lubricants

Supplier	Gearbox (es)	Grease Nipples	Roller Chains
BP	Energear Hypro 80W-90 EP	Energear L2M	Penetrating Oil
Castrol	Multitrax 80W/140 EPX 80W/90 EPX 85W/140	Castrol MS 3	Chain Grease
STAT Oil	Gearway G4 80W-90	MP Grease (Moly)	Super oil for Chain Saws
Q8	Q8 T 55 80W/90	Q8 Rembrandt Moly S2	Q8 Giotto/Q8 Wagner 220
Mobil Oil	Mobilube HD 80W/90	Mobilgrease Special	Mobilvactra No.2
Shell	Spirax HD 80W/90	Retinax A	Malleus HDX
Texaco	Gearbox EP-C 9-W/90	Molytex 2 Molytex EP 2	Way Lubricant
OK	OK Gearoil GL 5 80W/90	OK Molygrease	OK Compound 2
Hydro	Hypoid Gearoil 80W/90	Moly D Grease	Moly Chain Wheel Grease

Torque Settings

AGRICUT 180 Specific Torque Settings

Fastener	Torque Setting (Nm)
PTO Shaft Shearbolt	26
Gearbox Mounting Bolts	225
Blade Carrier Bolts	225
Cutting Blade Bolts	225
Rotor Hub Castle Nut	<i>Refer to blade carrier page</i>

AGRICUT 240 & 270 Specific Torque Settings

Fastener	Torque Setting (Nm)
PTO Shaft Shearbolt	26
Outer Gearbox Mounting Bolts	225
Centre Gearbox Mounting Bolts	90
Blade Carrier Bolts	225
Cutting Blade Bolts	225
Rotor Hub Castle Nut	<i>Refer to blade carrier page</i>

General Torque Settings

Thread Diameter	Nm +10% -0
5mm	6
6mm	10
8mm	26
10mm	52
12mm	90
14mm	144
16mm	225
20mm	436
22mm	594

Spearhead AGRICUT 180, 240 & 270

Trouble Shooting Guide

The charts below are intended to help in diagnosing and rectifying any problems with your machine. If the problem persists, please consult your supplier or contact our local dealer for advice.

AGRICUT 180 Machine Troubleshooting Chart

Fault	Possible Cause	Remedy
Shear bolt failure on start up	Tractor revs too high	Reduce revs to idle before engaging PTO
Shear bolt failure on start up	Incorrect shear bolt	Check the shear bolt is the correct grade and size
Shear-bolt failure in operation	Obstacle encountered	Inspect ground for stones, stumps, etc. before replacing with the correct grade of bolt
Excessive vibration	Broken or missing blade	Check blades and replace with new if necessary
Uneven stubble	Travelling too fast	Reduce forward speed
Ragged stubble	Blunt blades	Replace blades
Scalping ground	Skids set too low	Reset skid height
Excessive ground marking	Topper not following ground contours correctly	Check transport strap and adjust top link if necessary
Uncut material	Heavy crop	Reduce forward speed, or cut twice

AGRICUT 240 & 270 Machine Troubleshooting Chart

Fault	Possible Cause	Remedy
Shear bolt failure on start up	Tractor revs too high	Reduce revs to idle before engaging PTO
Shear bolt failure on start up	Incorrect shear bolt	Check the shear bolt is the correct grade and size
Shear-bolt failure in operation	Obstacle encountered	Inspect ground for stones, stumps, etc. before replacing with the correct grade of bolt
Excessive vibration	Broken or missing blade	Check blades and replace with new if necessary
Clashing Blades	Incorrect Blade Timing	Check the blade timing is 90° out of phase and correct if necessary
Uneven stubble	Travelling too fast	Reduce forward speed
Ragged stubble	Blunt blades	Replace blades
Scalping ground	Skids set too low	Reset skid height
Excessive ground marking	Topper not following ground contours correctly	Check transport strap and adjust top link if necessary
Uncut material	Heavy crop	Reduce forward speed, or cut twice

Spearhead AGRICUT 180, 240 & 270

Ordering Parts

When ordering parts, please refer to your parts list to help your dealer with your order. Please provide the following information:

Model Number

Part Number and quantity

Description

Serial number of machine

Delivery instructions (e.g. next day)

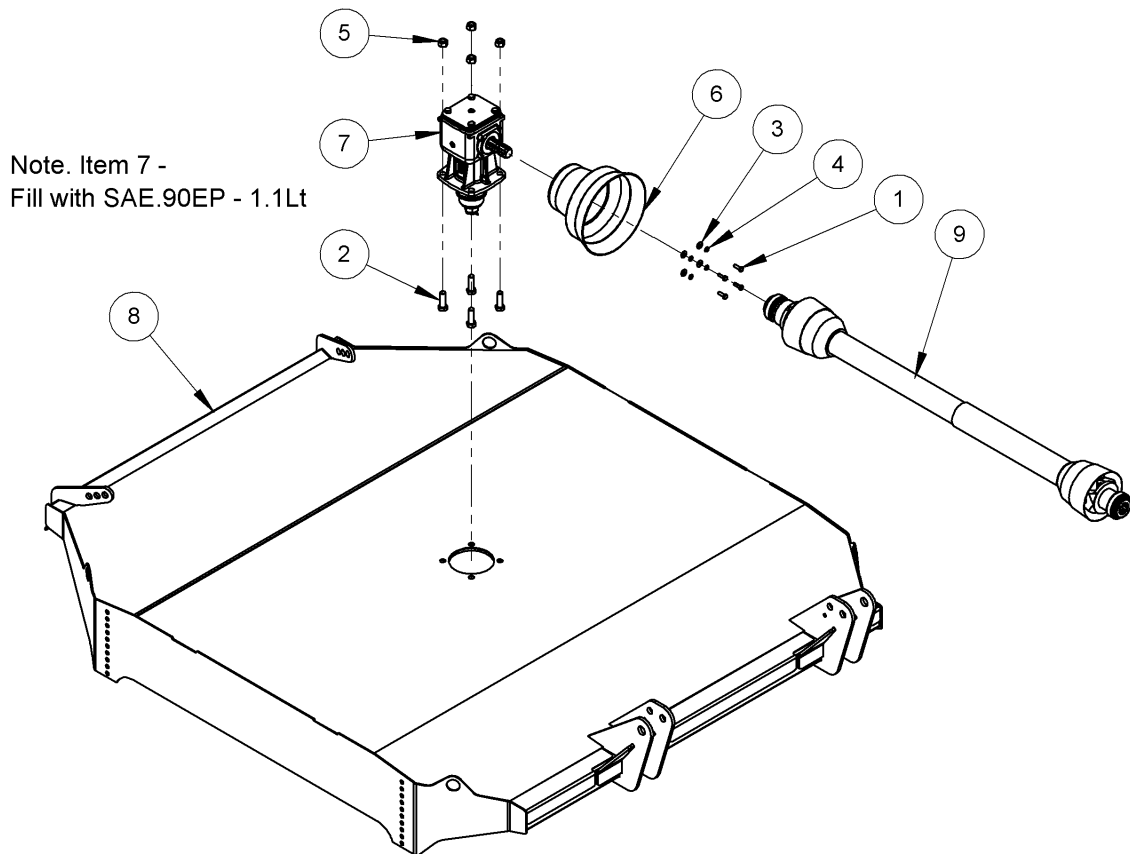
Delivery is normally via carrier direct to your dealer.

Services there are currently available are Next Day, with the additional option of before 9.00am, 10.30am or Noon.

Carriers also offer a 2-3 day service for heavier items. For light and small parts, these can be posted first or second-class mail.

Spearhead AGRICUT 180, 240 & 270

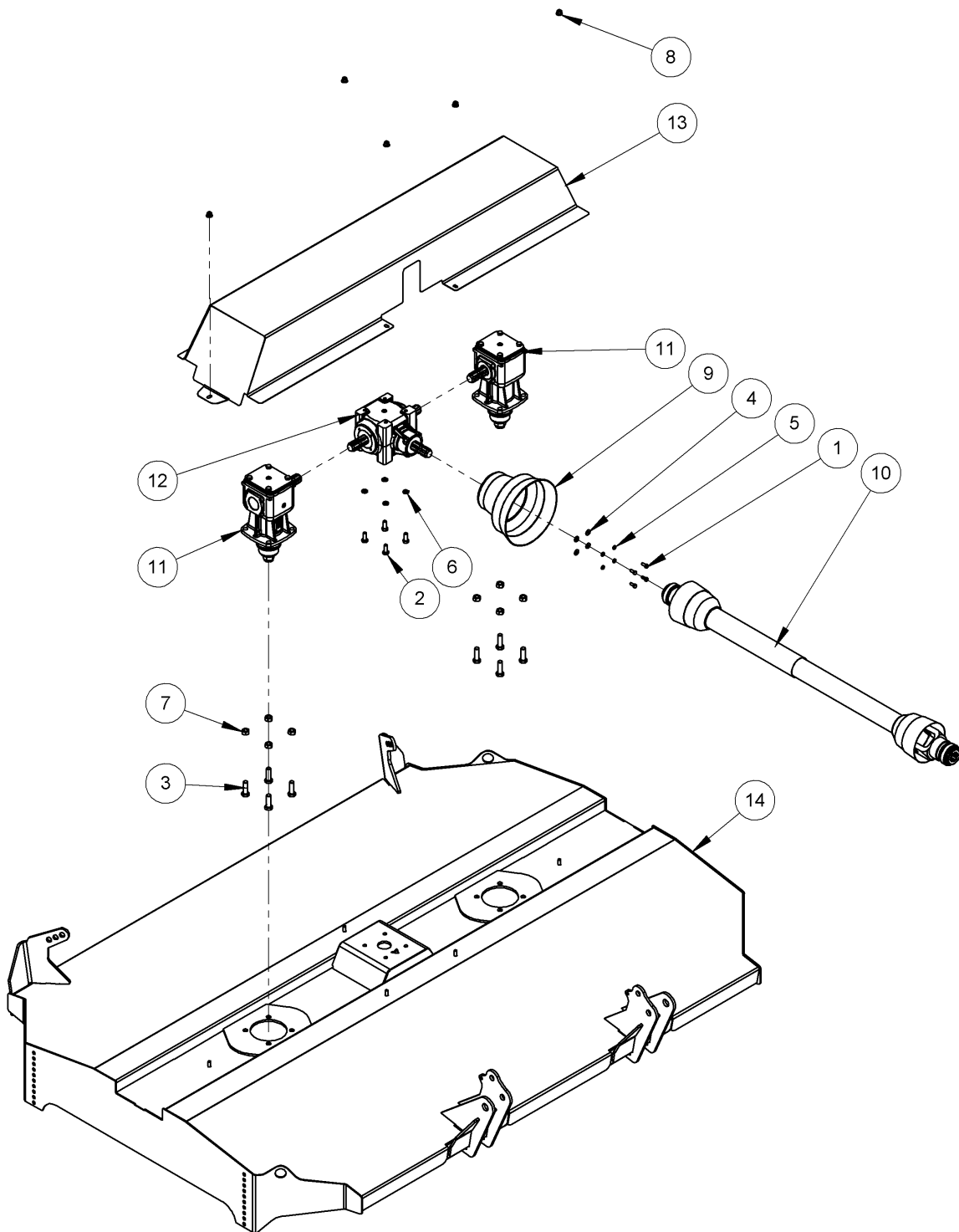
77.743.IB – DRIVE & DECK ASSEMBLY – AGRICUT 180



REF.	PART No.	DESCRIPTION	QTY.
1	05.264.02	SETSCREW M8 X 25MM PLATED	4
2	05.264.37	SETSCREW M16 X 50MM PLATED	4
3	05.281.01	FLAT WASHER 8MM PLATED	4
4	05.282.01	SPRING WASHER 8MM PLATED	4
5	05.287.04	SELF-LOCKING NUT M16 PLATED	4
6	08.548.14	PTO GUARD	1
7	48262.03	GEARBOX 90 DEGREE	1
8	48750.03	DECK 1800 V3	1
9	T7063	PTO SHAFT TYPE AX4	1

Spearhead AGRICUT 180, 240 & 270

77.746.01 – DRIVE & DECK ASSEMBLY – AGRICUT 240



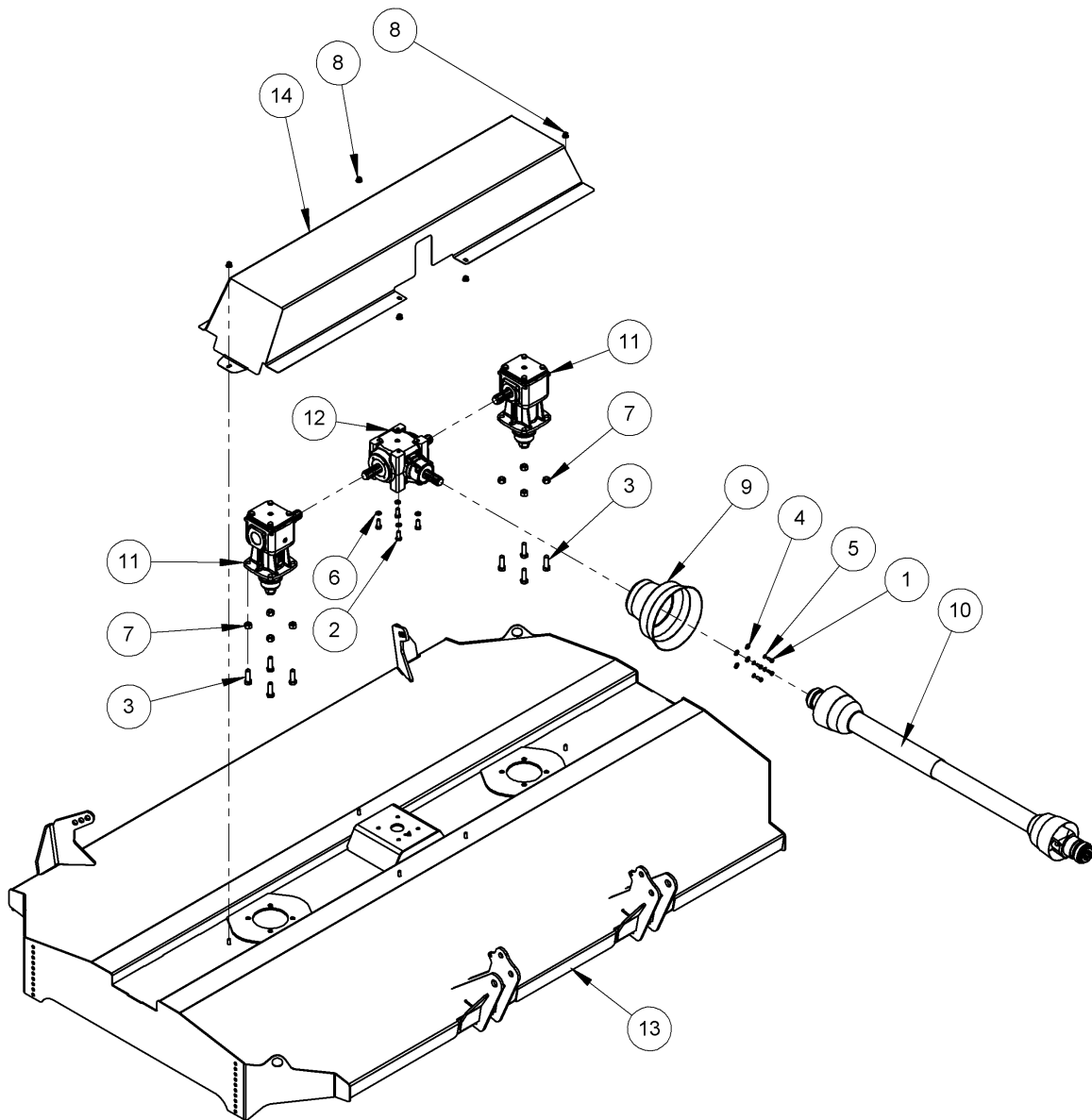
Spearhead AGRICUT 180, 240 & 270

77.746.01 – DRIVE & DECK ASSEMBLY – AGRICUT 240

REF.	PART No.	DESCRIPTION	QTY.
1	05.264.01	SETSCREW M8 X 20MM PLATED	4
2	05.264.23	SETSCREW M12 X 30MM PLATED	4
3	05.264.37	SETSCREW M16 X 50MM PLATED	8
4	05.281.01	FLAT WASHER 8MM PLATED	4
5	05.282.01	SPRING WASHER 8MM PLATED	4
6	05.282.03	SPRING WASHER 12MM PLATED	4
7	05.286.04	NUT M16 PLATED	8
8	05.287.21	M10 S.LOCK FLANGE NUT	5
9	08.548.14	PTO GUARD	1
10	21040.03	PTO SHAFT T50 SHEAR B& O/RUN	1
11	48262.05	GEARBOX 90 DEGREE	2
12	48262.06	GEARBOX TEE	1
13	48764.02	DRIVE GUARD - 2700	1
14	48795.01	DECK – 2400 INLINE	1

Spearhead AGRICUT 180, 240 & 270

77.744.I3 – DRIVE & DECK ASSEMBLY – AGRICUT 270



NOTE. ITEM 11 - TO BE FILLED WITH 1.1 Lt OF SAE.90EP OIL
NOTE. ITEM 12 - TO BE FILLED WITH 1.2 Lt OF SAE.90EP OIL

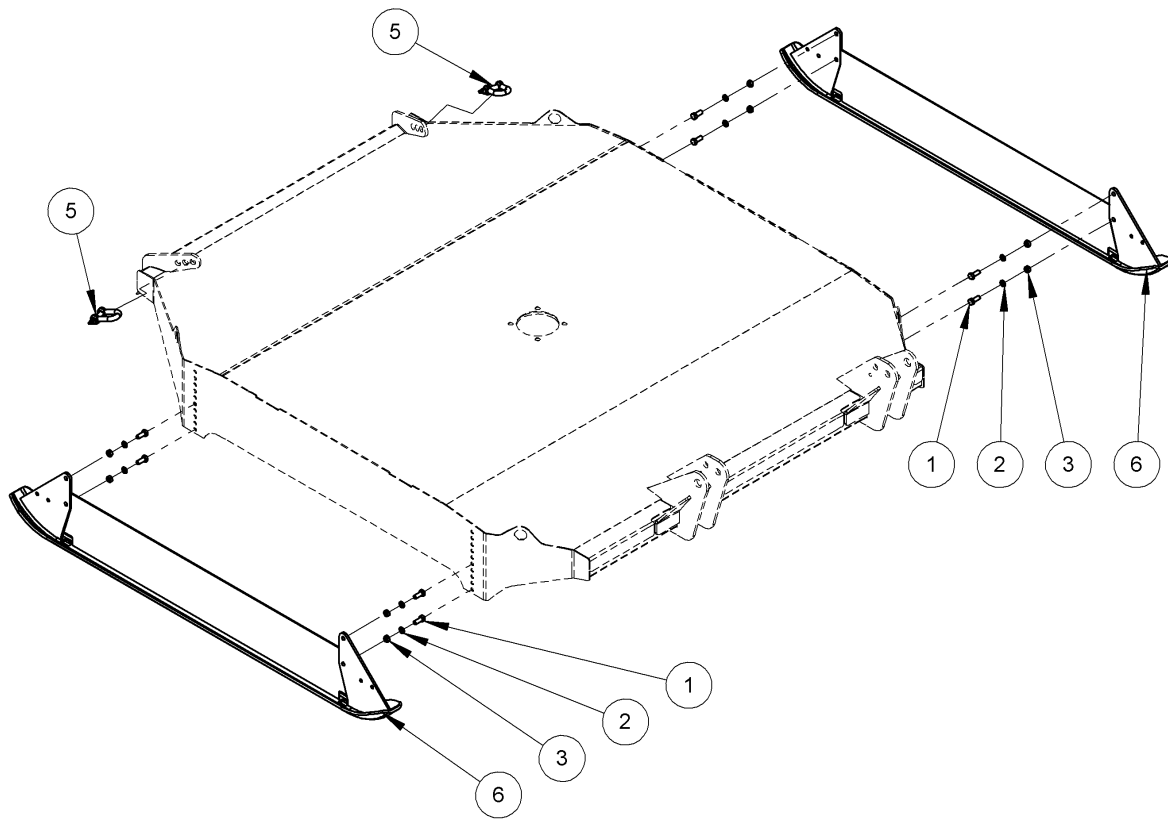
Spearhead AGRICUT 180, 240 & 270

77.744.IB – DRIVE & DECK ASSEMBLY – AGRICUT 270

REF.	PART No.	DESCRIPTION	QTY.
1	05.264.01	SETSCREW M8 X 20MM PLATED	4
2	05.264.23	SETSCREW M12 X 30MM PLATED	4
3	05.264.37	SETSCREW M16 X 50MM PLATED	8
4	05.281.01	FLAT WASHER 8MM PLATED	4
5	05.282.01	SPRING WASHER 8MM PLATED	4
6	05.282.03	SPRING WASHER 12MM PLATED	4
7	05.287.04	SELF-LOCKING NUT M16 PLATED	8
8	05.287.21	M10 S.LOCK FLANGE NUT	5
9	08.548.14	PTO GUARD	1
10	21040.03	PTO SHAFT T50 SHEAR B& O/RUN	1
11	48262.05	GEARBOX 90 DEGREE	2
12	48262.06	GEARBOX TEE	1
13	48760.03	DECK - 2700	1
14	48764.02	DRIVE GUARD - 2700	1

Spearhead AGRICUT 180, 240 & 270

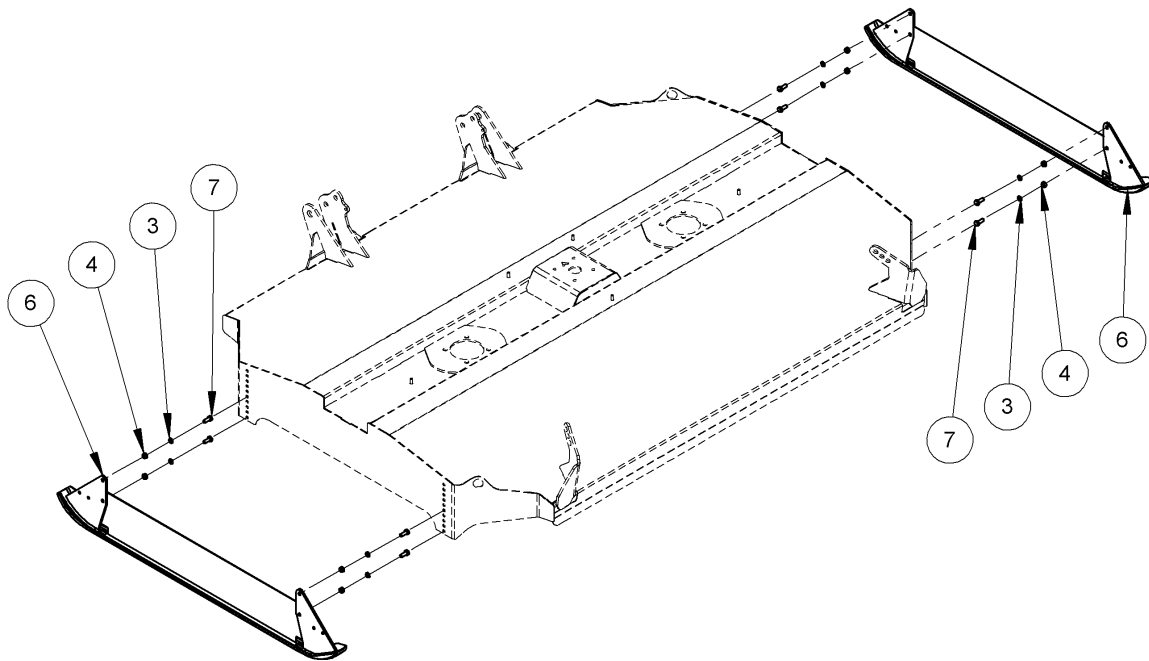
77.743.15 – SKID ASSEMBLY – AGRICUT 180



REF.	PART No.	DESCRIPTION	QTY.
1	05.264.23	SETSCREW M12 X 30MM PLATED	8
2	05.282.03	SPRING WASHER 12MM PLATED	8
3	05.287.03	SELF-LOCKING NUT M12 PLATED	8
5	6777575	D SHACKLE – 16MM	2
6	48753.03	SKID - 1800	2

Spearhead AGRICUT 180, 240 & 270

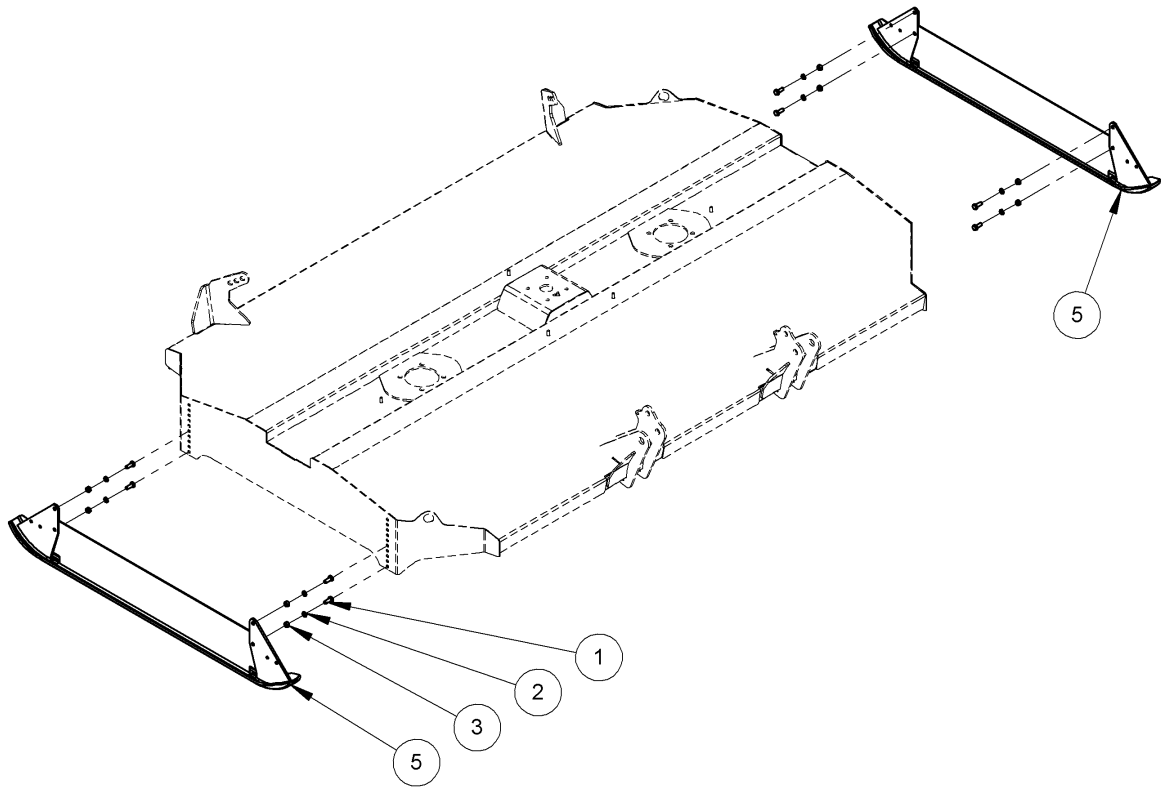
77.746.03 – SKID ASSEMBLY – AGRICUT 240



REF.	PART No.	DESCRIPTION	QTY.
3	05.282.03	SPRING WASHER 12MM PLATED	8
4	05.286.03	NUT M12 PLATED	8
6	48763.03	SKID 2400/2700	2
7	05.264.23	SETSCREW M12 X 30MM PLATED	

Spearhead AGRICUT 180, 240 & 270

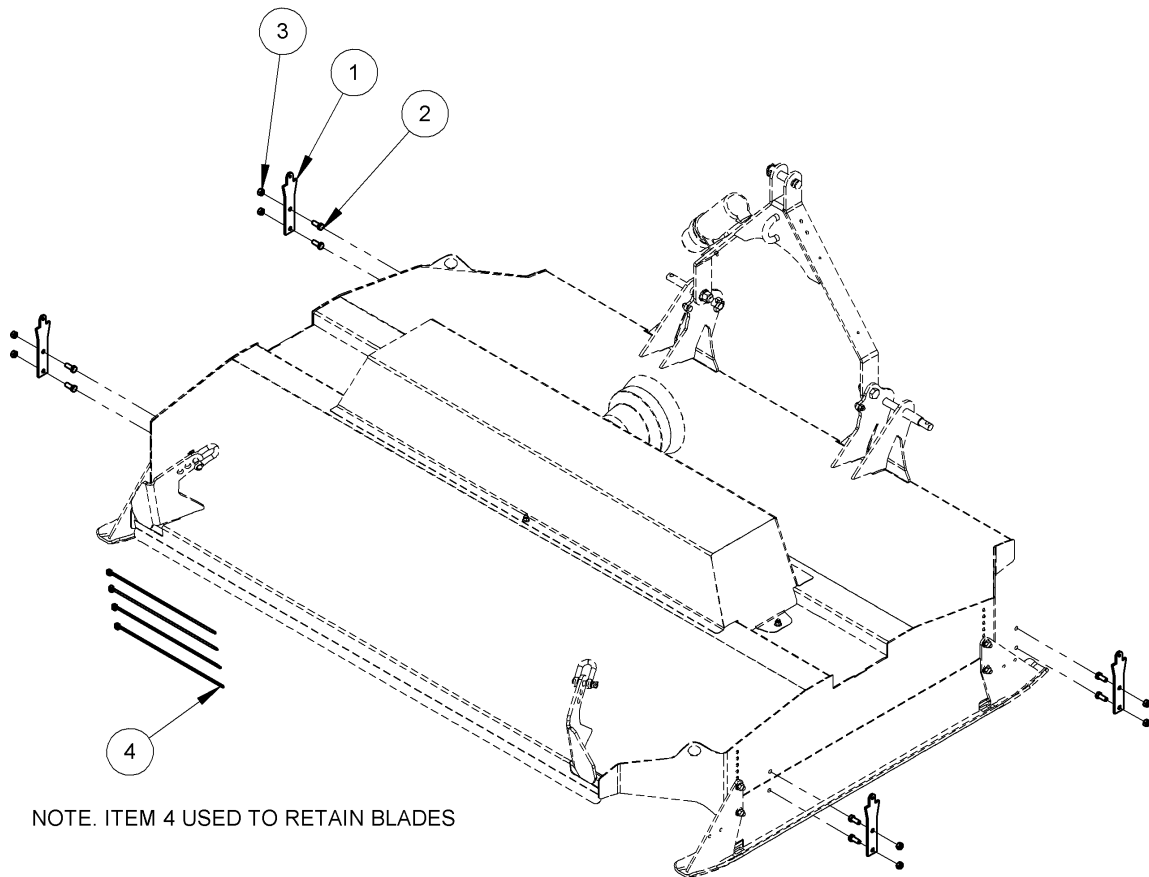
77.744.I9 – SKID ASSEMBLY – AGRICUT 270



REF.	PART No.	DESCRIPTION	QTY.
1	05.264.23	SETSCREW M12 X 30MM PLATED	8
2	05.282.03	SPRING WASHER 12MM PLATED	8
3	05.286.03	NUT M12 PLATED	8
6	48763.03	SKID - 2700	2

Spearhead AGRICUT 180, 240 & 270

77.746.05 – SHIPPING KIT – AGRICUT 240

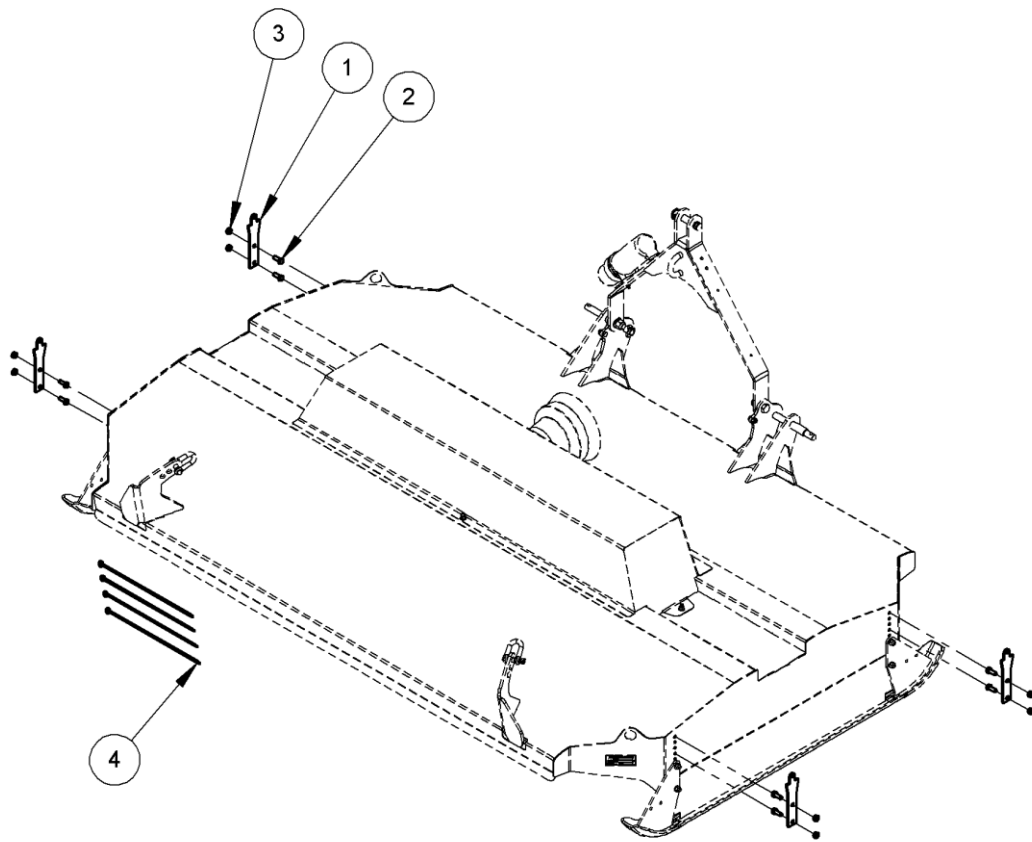


NOTE. ITEM 4 USED TO RETAIN BLADES

REF.	PART No.	DESCRIPTION	QTY.
1	48757.32	TRANSPORT LEG	4
2	05.264.23	SETSCREW M12 X 30MM PLATED	8
3	05.286.03	NUT M12 PLATED	8
4	06.023.01	HOSE TIE	

Spearhead AGRICUT 180, 240 & 270

77.744.I8 – SHIPPING KIT – AGRICUT 270

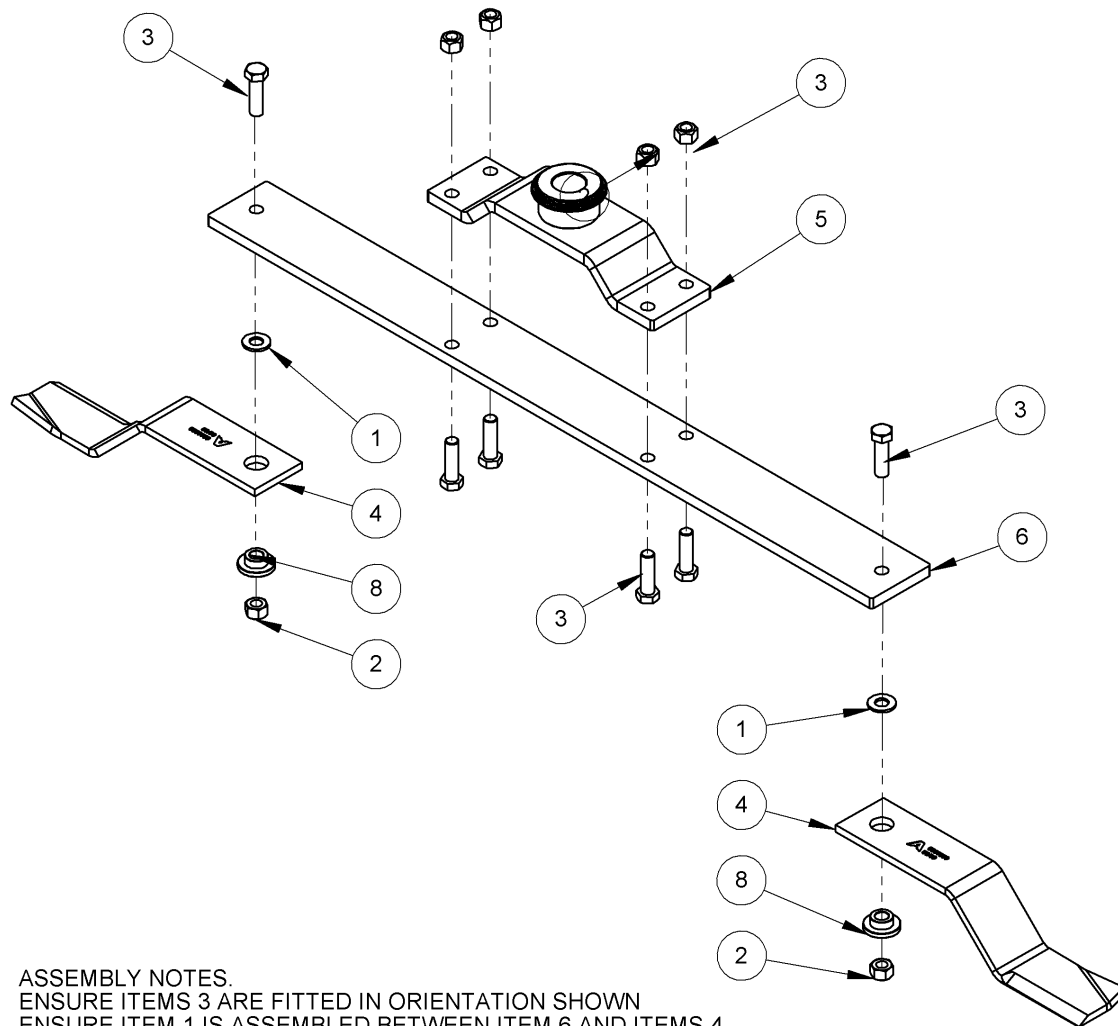


NOTE. ITEM 4 USED TO RETAIN BLADES

REF.	PART No.	DESCRIPTION	QTY.
1	05.264.23	SETSCREW M12 X 30MM PLATED	8
2	05.286.03	NUT M12 PLATED	8
3	06.023.01	HOSE TIE	4
4	48757.32	TRANSPORT LEG	4

Spearhead AGRICUT 180, 240 & 270

77.743.I2 – BLADE & HUB ASSEMBLY – AGRICUT 180

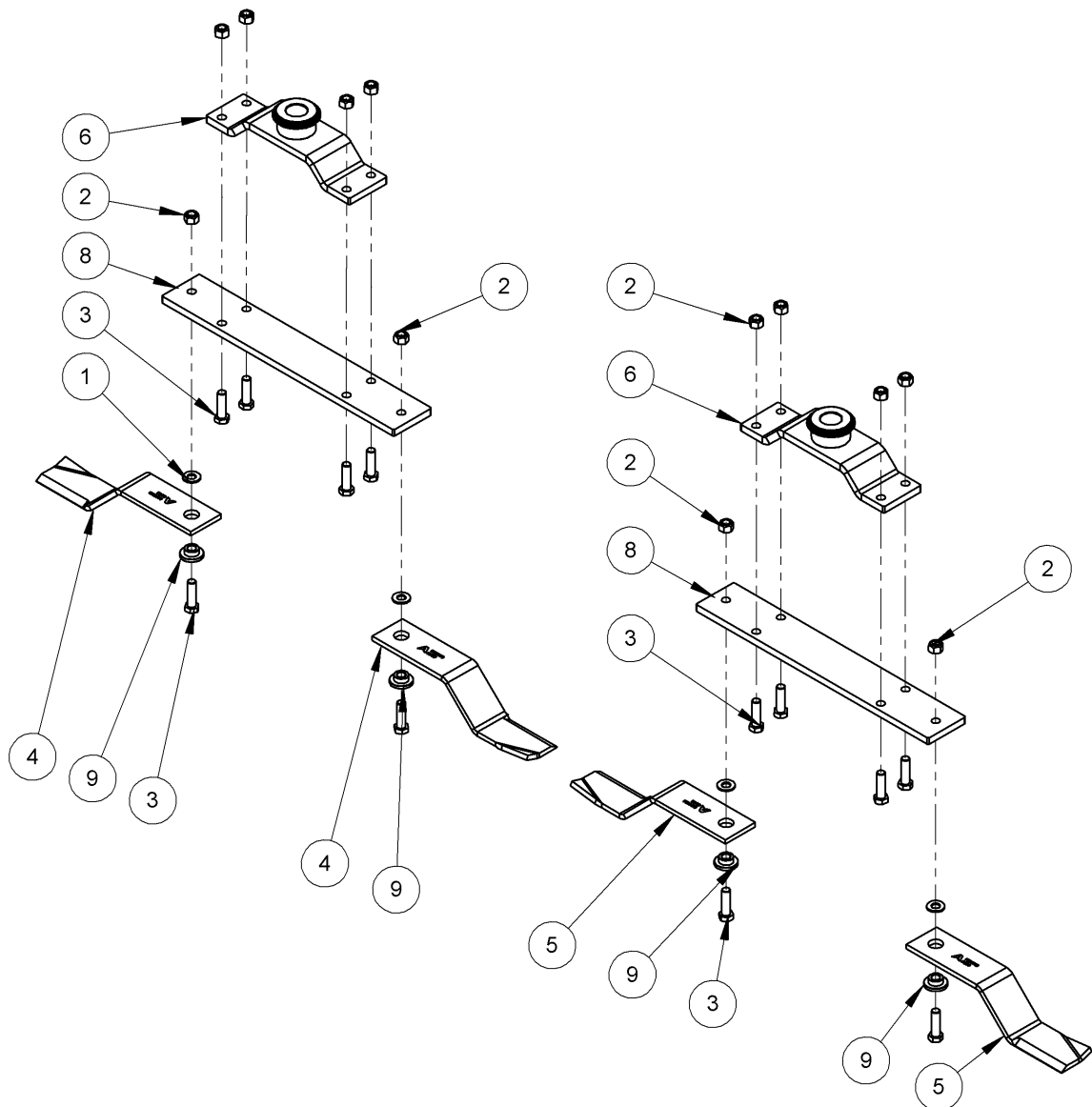


ASSEMBLY NOTES.
 ENSURE ITEMS 3 ARE FITTED IN ORIENTATION SHOWN
 ENSURE ITEM 1 IS ASSEMBLED BETWEEN ITEM 6 AND ITEMS 4

REF.	PART No.	DESCRIPTION	QTY.
1	05.281.04	FLAT WASHER 16MM PLATED	2
2	05.287.04	SELF-LOCKING NUT M16 PLATED	6
3	05.291.36	BOLT M16 X 55 PLATED	6
4	47050.06	TOPPER BLADE RH	2
5	47050.07	ROTOR HUB - PAINTED	1
6	47050.08	BLADE CARRIER - 1800	1
8	47050.12	BUSH – BLADE *P*	2

Spearhead AGRICUT 180, 240 & 270

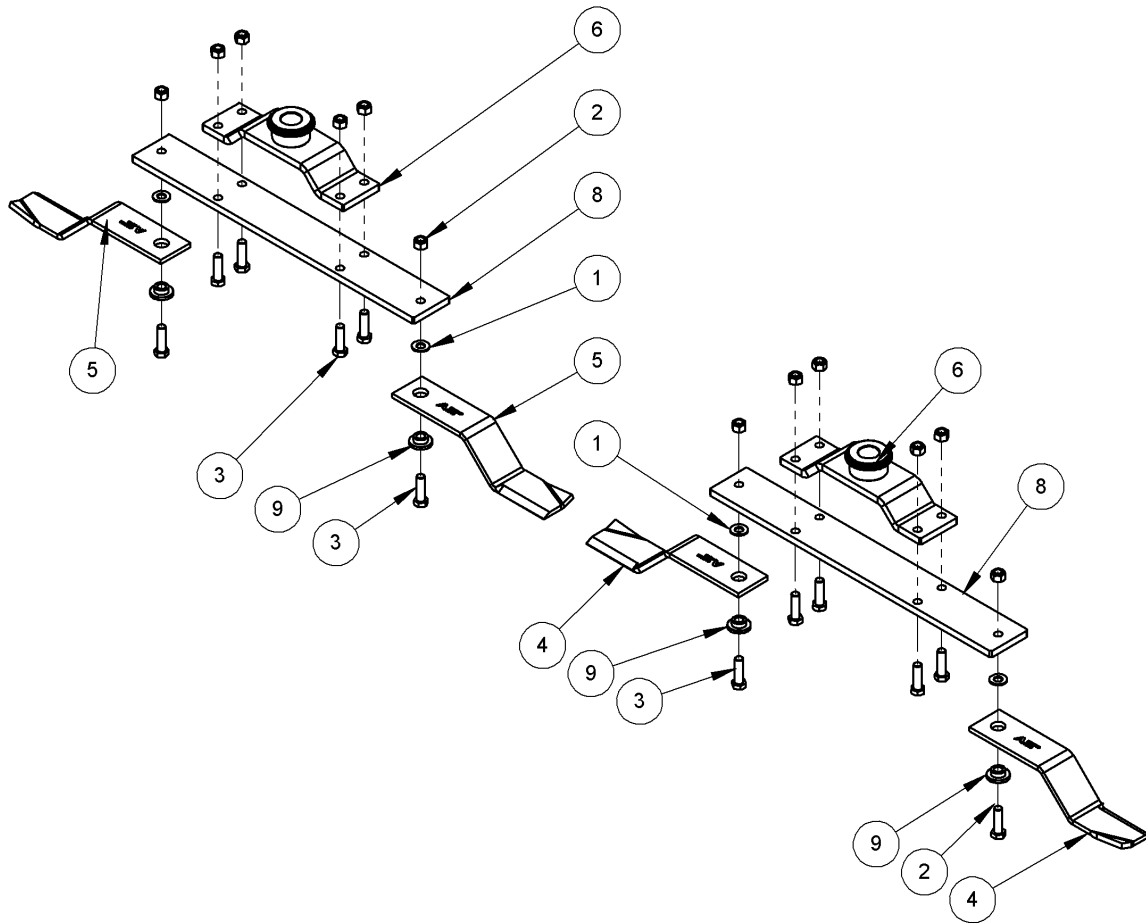
77.745.17 – BLADE & HUB ASSEMBLY – AGRICUT 240



REF.	PART No.	DESCRIPTION	QTY.
1	05.281.04	FLAT WASHER 16MM PLATED	4
2	05.287.04	SELF-LOCKING NUT M16 PLATED	12
3	05.291.36	BOLT M16 X 55 PLATED	12
4	47050.05	TOPPER BLADE LH	2
5	47050.06	TOPPER BLADE RH	2
6	47050.07	ROTOR HUB - PAINTED	2
8	47050.11	BLADE CARRIER - 2400	2
9	47050.12	BUSH – BLADE *P*	4

Spearhead AGRICUT 180, 240 & 270

77.744.II – BLADE & HUB ASSEMBLY – AGRICUT 270

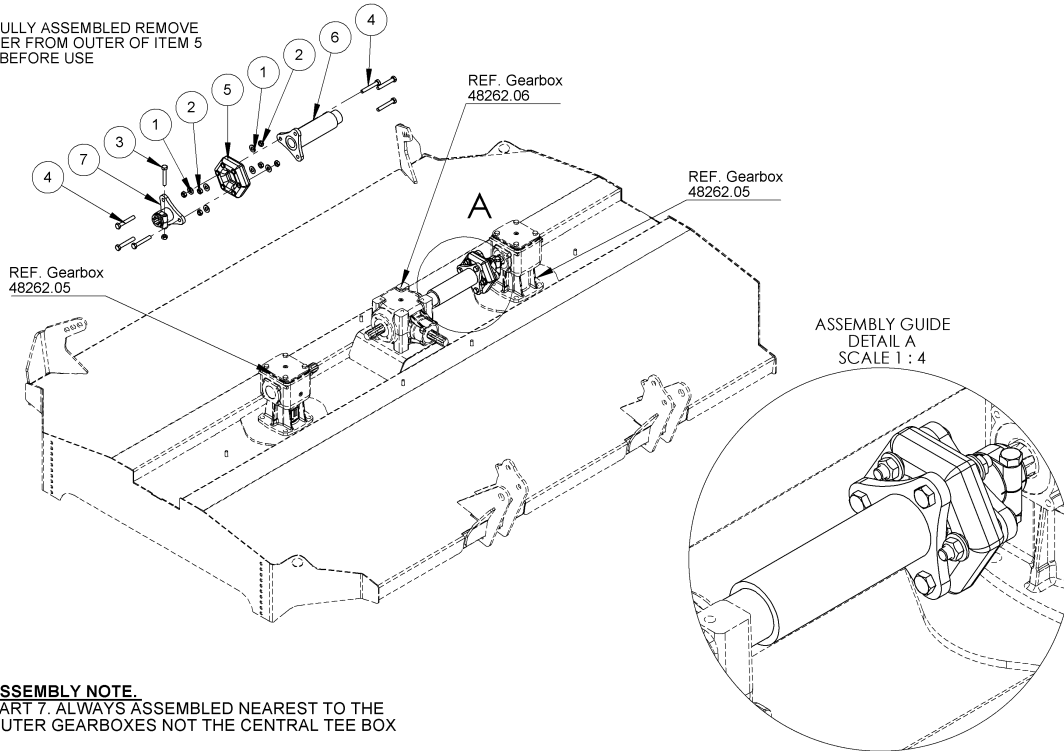


REF.	PART No.	DESCRIPTION	QTY.
1	05.281.04	FLAT WASHER 16MM PLATED	4
2	05.287.04	SELF-LOCKING NUT M16 PLATED	12
3	05.291.36	BOLT M16 X 55 PLATED	12
4	47050.05	TOPPER BLADE LH	2
5	47050.06	TOPPER BLADE RH	2
6	47050.07	ROTOR HUB - PAINTED	2
8	47050.10	BLADE – CARRIER 2700	2
9	47050.12	BUSH – BLADE *P*	4

Spearhead AGRICUT 180, 240 & 270

77.746.07 – DRIVELINE ASSEMBLY – AGRICUT 240

NOTE. ONCE FULLY ASSEMBLED REMOVE METAL RETAINER FROM OUTER OF ITEM 5 BEFORE USE

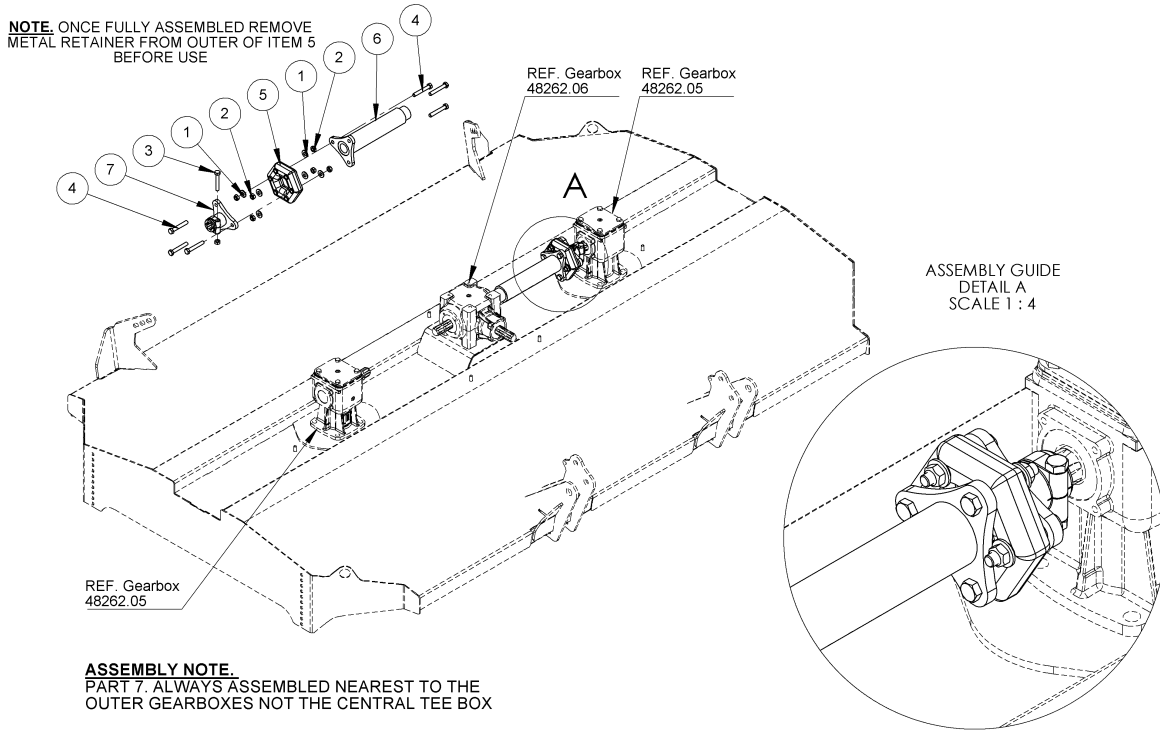


ASSEMBLY NOTE.
PART 7. ALWAYS ASSEMBLED NEAREST TO THE OUTER GEARBOXES NOT THE CENTRAL TEE BOX

REF.	PART No.	DESCRIPTION	QTY.
1	05.281.03	FLAT WASHER 12MM PLATED	12
2	05.287.03	SELF-LOCKING NUT M12 PLATED	14
3	05.291.30	BOLT M12 X 75MM PLATED	2
4	05.291.21	BOLT M12 X 80MM PLATED	12
5	1096287	COUPLING FOR A PT9	2
6	48262.18	SHAFT – 245 MM LONG	2
7	48262.17	SPLINED HUB ASSY	2

Spearhead AGRICUT 180, 240 & 270

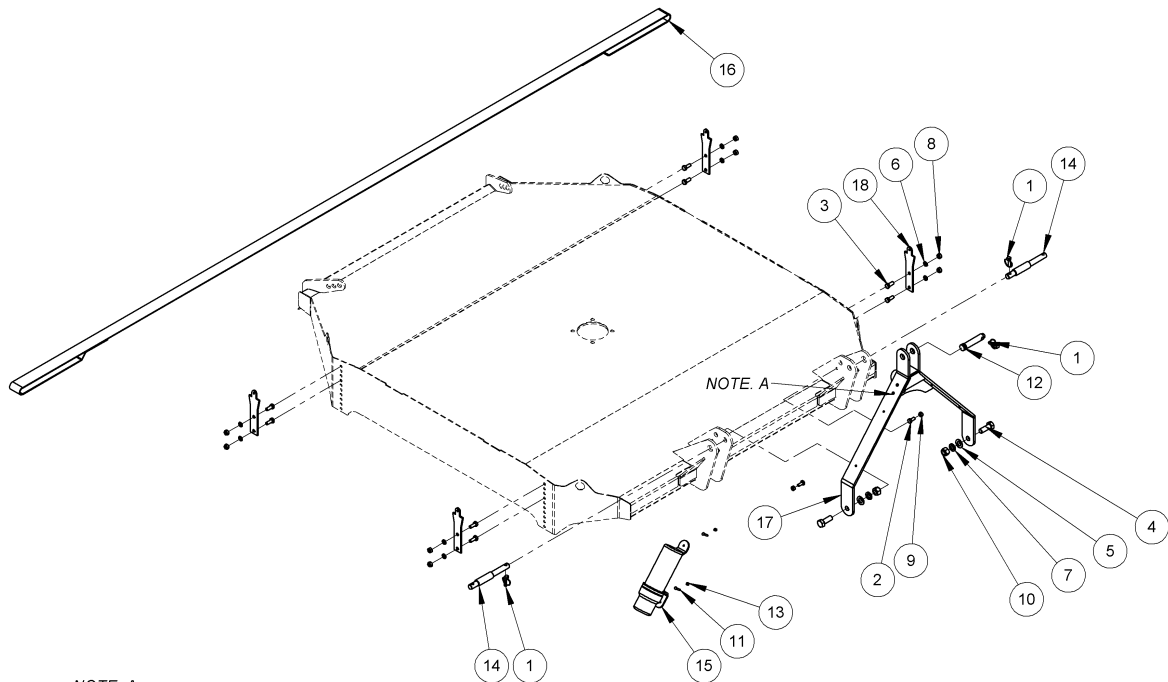
77.744.20 – DRIVELINE ASSEMBLY – AGRICUT 270



REF.	PART No.	DESCRIPTION	QTY.
1	05.281.03	FLAT WASHER 12MM PLATED	12
2	05.287.03	SELF-LOCKING NUT M12 PLATED	14
3	05.291.30	BOLT M12 X 75MM PLATED	2
4	05.291.21	BOLT M12 X 80MM PLATED	12
5	1096287	COUPLING FOR A PT9	2
6	48262.15	SHAFT – 330 MM LONG	2
7	48262.17	SPLINED HUB ASSY	2

Spearhead AGRICUT 180, 240 & 270

77.743.I4 – A-FRAME & STRAP ASSEMBLY – AGRICUT 180

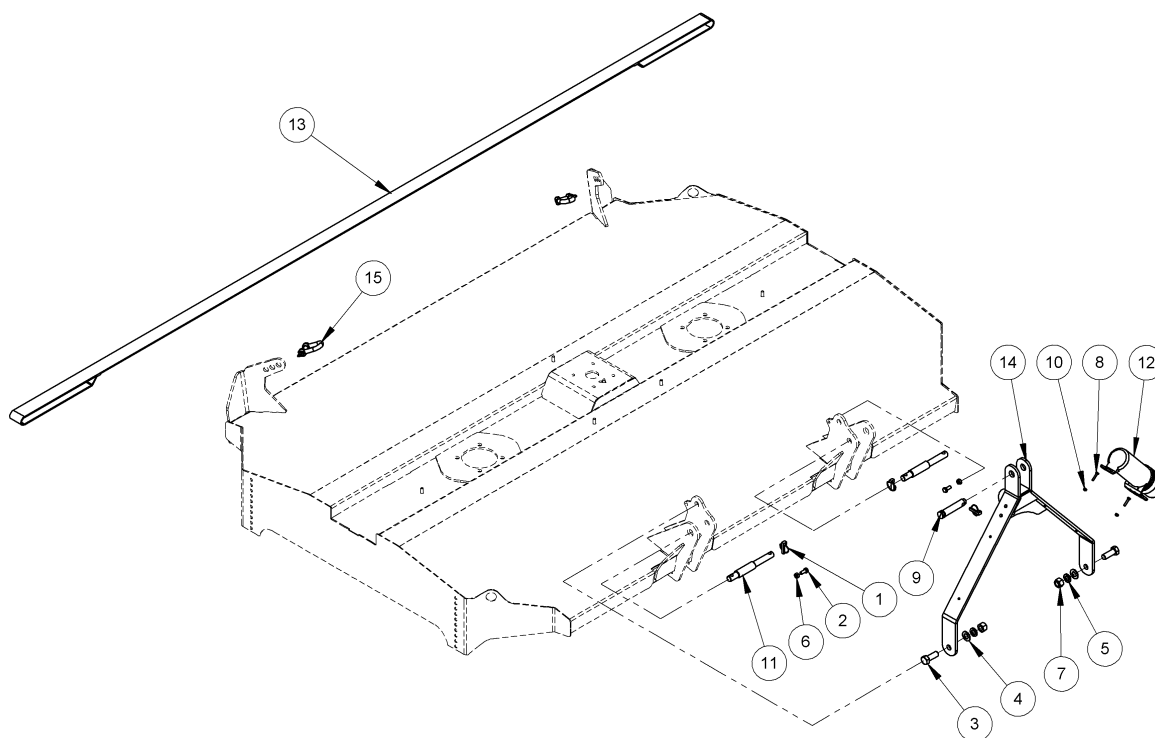


NOTE A
STORAGE HOLES FOR PTO SHAFT SHEAR BOLTS
SUPPLIED WITH PTO SHAFT ASSEMBLY

REF.	PART No.	DESCRIPTION	QTY.
1	00.372.01	LINCH PIN	3
2	05.264.12	SETSCREW M10 X 25MM PLATED	2
3	05.264.23	SETSCREW M12 X 30MM PLATED	8
4	05.264.48	SETSCREW M20 X 55MM PLATED	2
5	05.281.05	FLAT WASHER 20MM PLATED	2
6	05.282.03	SPRING WASHER 12MM PLATED	8
7	05.282.05	SPRING WASHER 20MM PLATED	2
8	05.286.03	NUT M12 PLATED	8
9	05.287.02	SELF-LOCKING NUT M10 PLATED	2
10	05.287.05	SELF-LOCKING NUT M20 PLATED	2
11	05.839.04	SETSCREW M6 X 30MM PLATED	2
12	212.030	PIN 25.4 X 97	1
13	30.070.64	NUT NYLOC M6.Z/P.	2
14	42930.05	LOWER LINK PIN (CAT.1 / 2)	2
15	46505.01	LITERATURE HOLDER PLASTIC	1
16	48750.10	STRAP – 4000MM 2 TONNE	1
17	48752.02	A-FRAME	1
18	48757.32	TRANSPORT LEG	4

Spearhead AGRICUT 180, 240 & 270

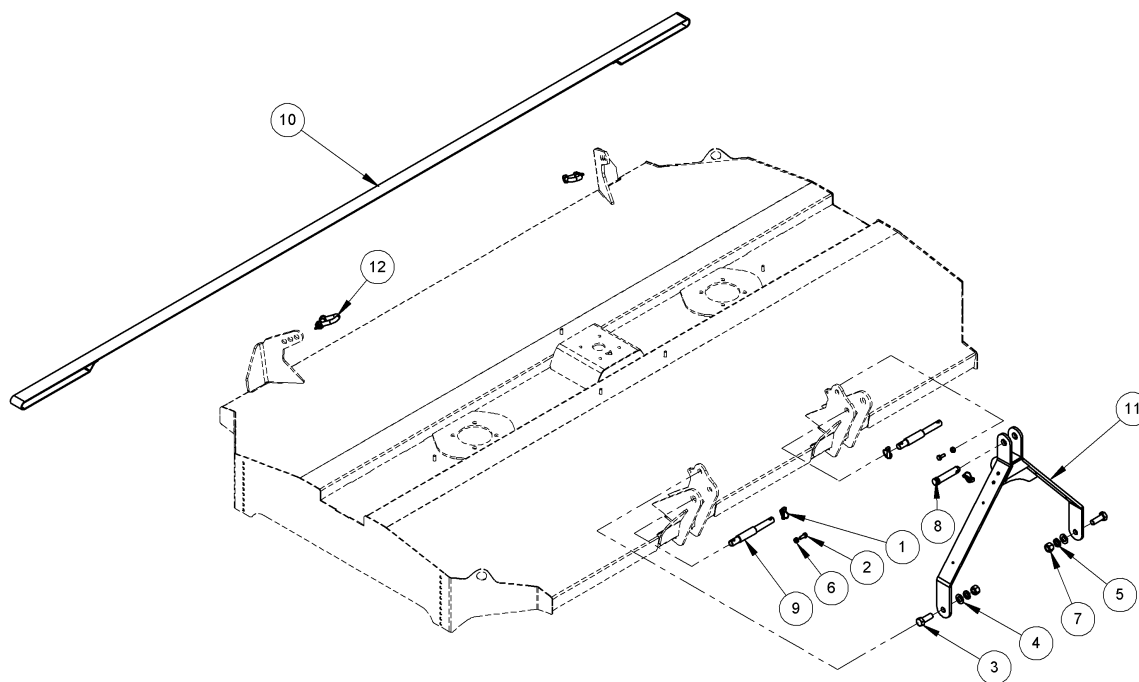
77.746.02 – A-FRAME & PIN ASSEMBLY – AGRICUT 240



REF.	PART No.	DESCRIPTION	QTY.
1	00.372.01	LINCH PIN	3
2	05.264.12	SETSCREW M10 X 25MM PLATED	2
3	05.264.48	SETSCREW M20 X 55MM PLATED	2
4	05.281.05	FLAT WASHER 20MM PLATED	2
5	05.282.05	SPRING WASHER 20MM PLATED	2
6	05.287.02	SELF-LOCKING NUT M10 PLATED	2
7	05.287.05	SELF-LOCKING NUT M20 PLATED	2
8	05.839.04	SETSCREW M6 X 30MM PLATED	2
9	212.030	PIN 25.4 x 97	1
10	30.070.64	NUT NYLOC M6.Z/P.	2
11	42930.05	LOWER LINK PIN (CAT. 1 / 2)	2
12	46505.01	LITERATURE HOLDER PLASTIC	1
13	48750.11	STRAP – 3725.0MM	1
14	48752.02	A-FRAME	1
15	6777575	D SHACKLE – 16MM	2

Spearhead AGRICUT 180, 240 & 270

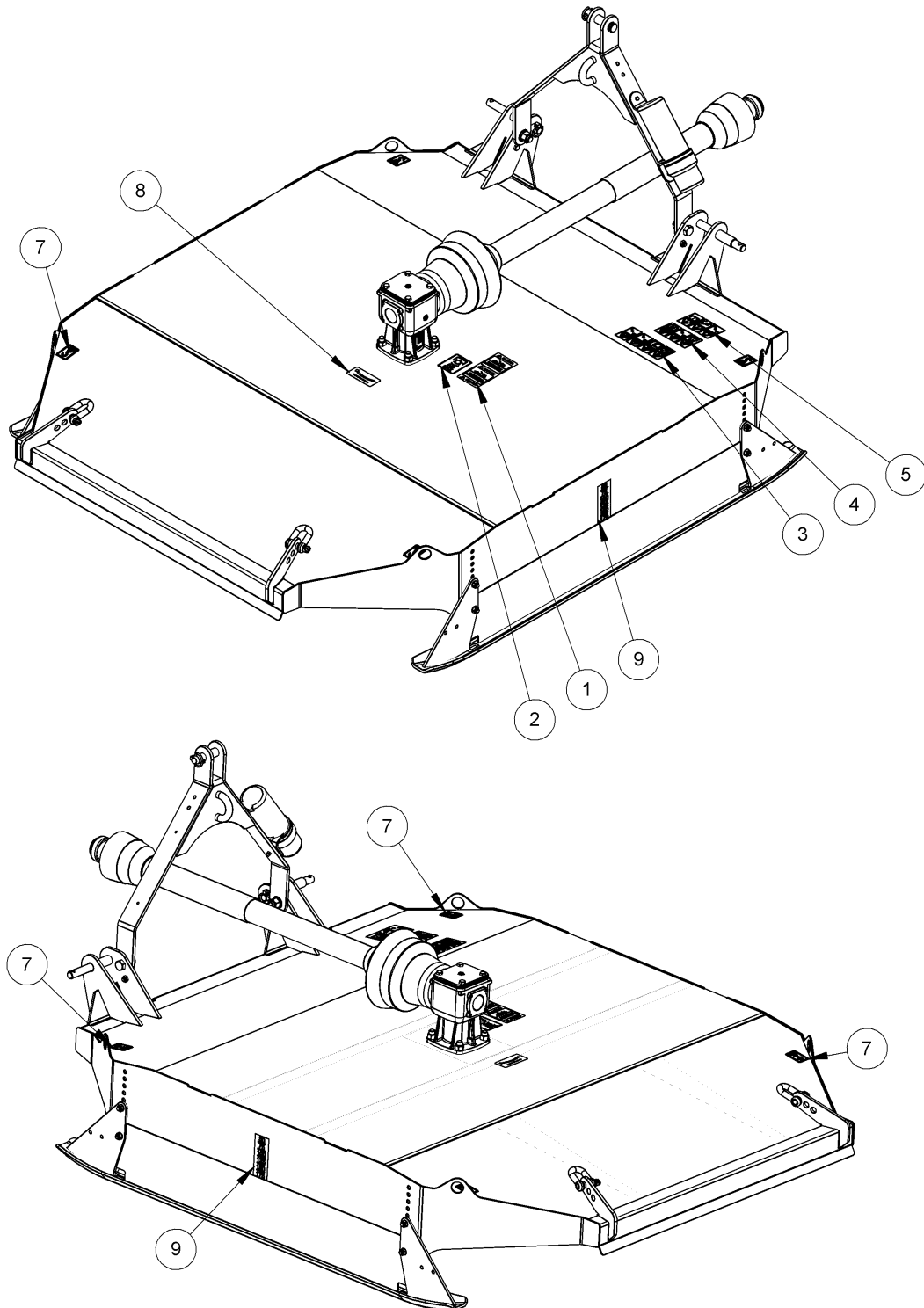
77.744.I5 – A-FRAME & PIN ASSEMBLY – AGRICUT 270



REF.	PART No.	DESCRIPTION	QTY.
1	00.372.01	LINCH PIN	3
2	05.264.12	SETSCREW M10 X 25MM PLATED	2
3	05.264.48	SETSCREW M20 X 55MM PLATED	2
4	05.281.05	FLAT WASHER 20MM PLATED	2
5	05.282.05	SPRING WASHER 20MM PLATED	2
6	05.287.02	SELF-LOCKING NUT M10 PLATED	2
7	05.287.05	SELF-LOCKING NUT M20 PLATED	2
8	212.030	PIN 25.4 x 97	1
9	42930.05	LOWER LINK PIN (CAT. 1 / 2)	2
10	48750.11	STRAP – 3725.0 MM	1
11	48752.02	A-FRAME	1
12	6777575	D SHACKLE – 16 mm	2

Spearhead AGRICUT 180, 240 & 270

77.743.I7 – ENGINEERING DECALS – AGRICUT 180



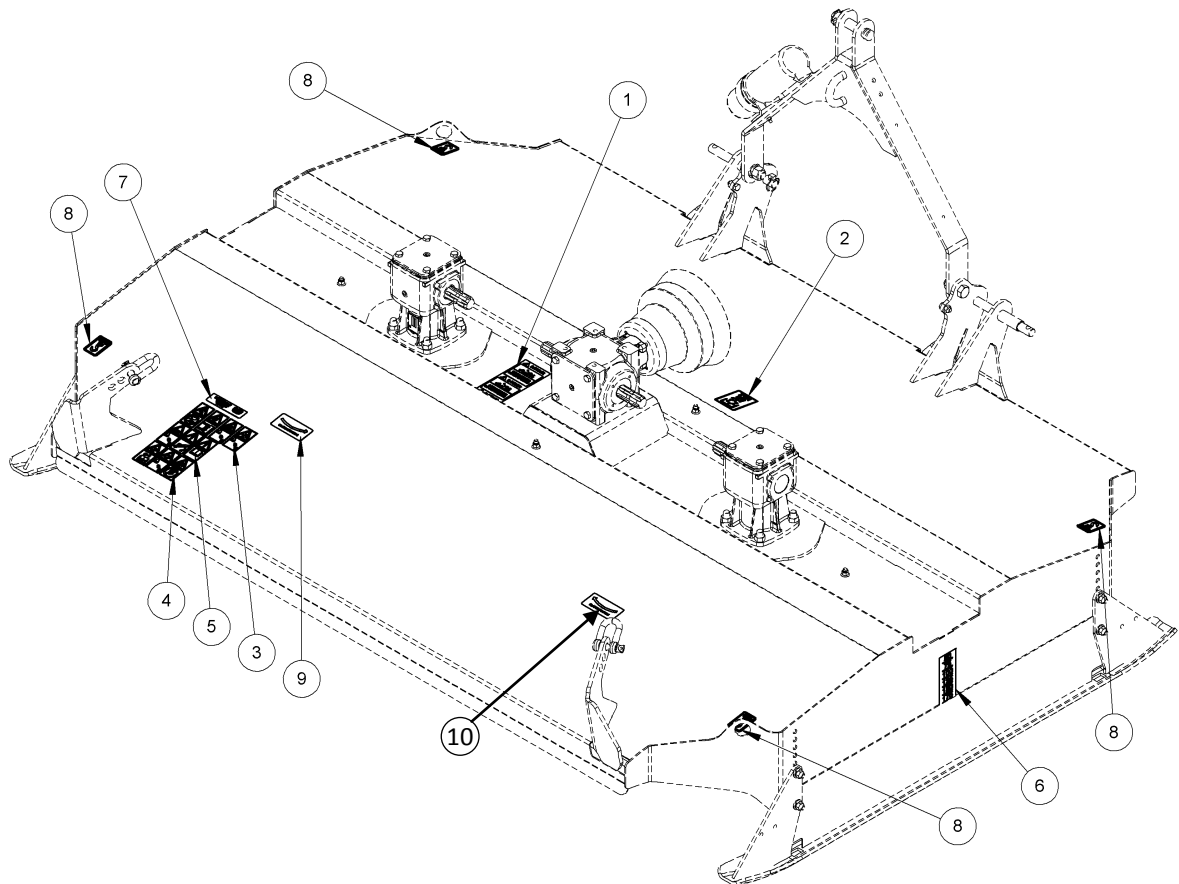
Spearhead AGRICUT 180, 240 & 270

77.743.I7 – ENGINEERING DECALS – AGRICUT 180

REF.	PART No.	DESCRIPTION	QTY.
1	00756004	DECAL – DRIVELINE MISSING	1
2	09.811.04	DECAL – MAX PTO SPEED 540 ACW	1
3	09.821.29	COMBINED EURODECAL FOR	1
4	09.821.30	COMBINED EURODECAL UNBLOCK	1
5	09.821.34	DECALS-EURO DECAL MINIATURISED	1
7	09.843.02	DECAL – LIFT POINT 350 KG	4
8	D138	DECAL – CW BLADE ROTATION	1
9	09.821.55	DECAL – CUTTING HEIGHT	2

Spearhead AGRICUT 180, 240 & 270

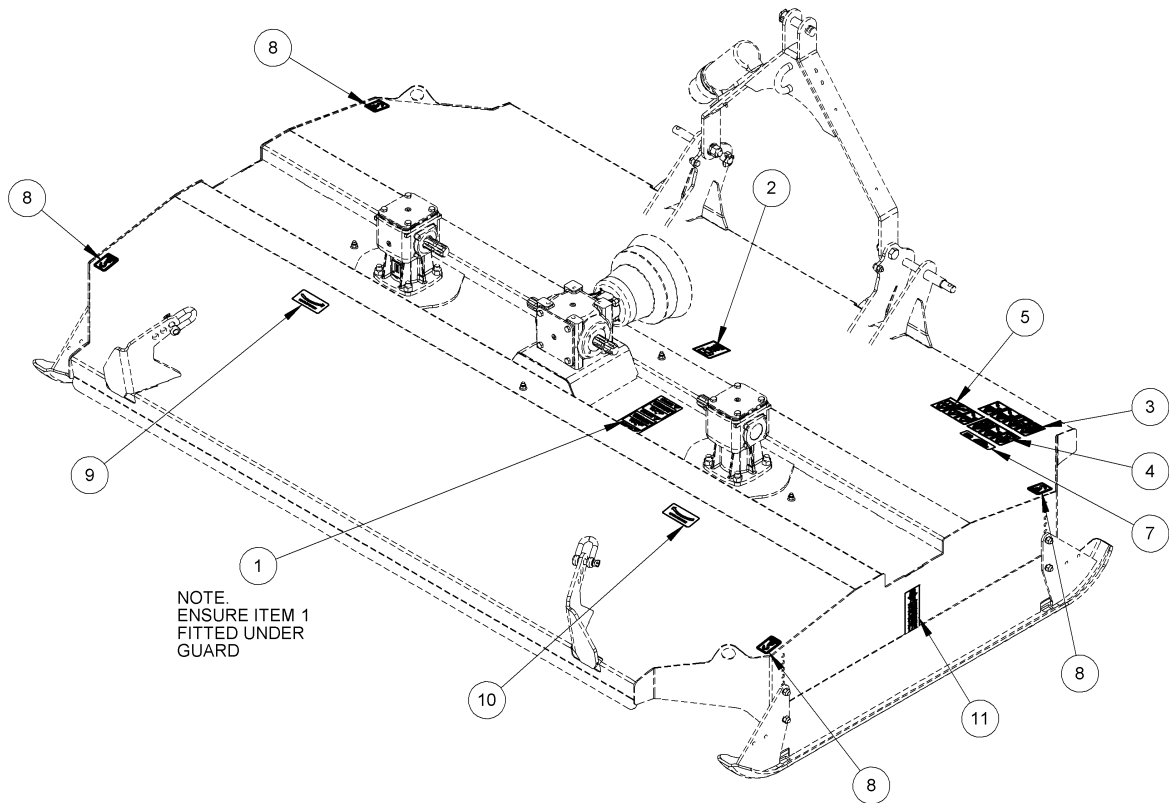
77.746.06 – ENGINEERING DECALS – AGRICUT 240



REF.	PART No.	DESCRIPTION	QTY.
1	00756004	DECAL-DRIVELINE MISSING	1
2	09.811.04	DECAL – MAX PTO SPEED 540 ACW	1
3	09.821.29	COMBINED EURODECAL FOR	1
4	09.821.30	COMBINED EURODECAL UNBLOCK	1
5	09.821.34	DECALS-EURO DECAL MINIATURISED	1
6	09.821.55	DECAL – CUTTING HEIGHT	2
7	09.821.51	DECAL – BLADE ANGLE	1
8	09.843.03	DECAL – LIFT POINT 500 KG	4
9	D137	DECAL – CCW BLADE ROTATION	1
10	D138	DECAL – CW BLADE ROTATION	1

Spearhead AGRICUT 180, 240 & 270

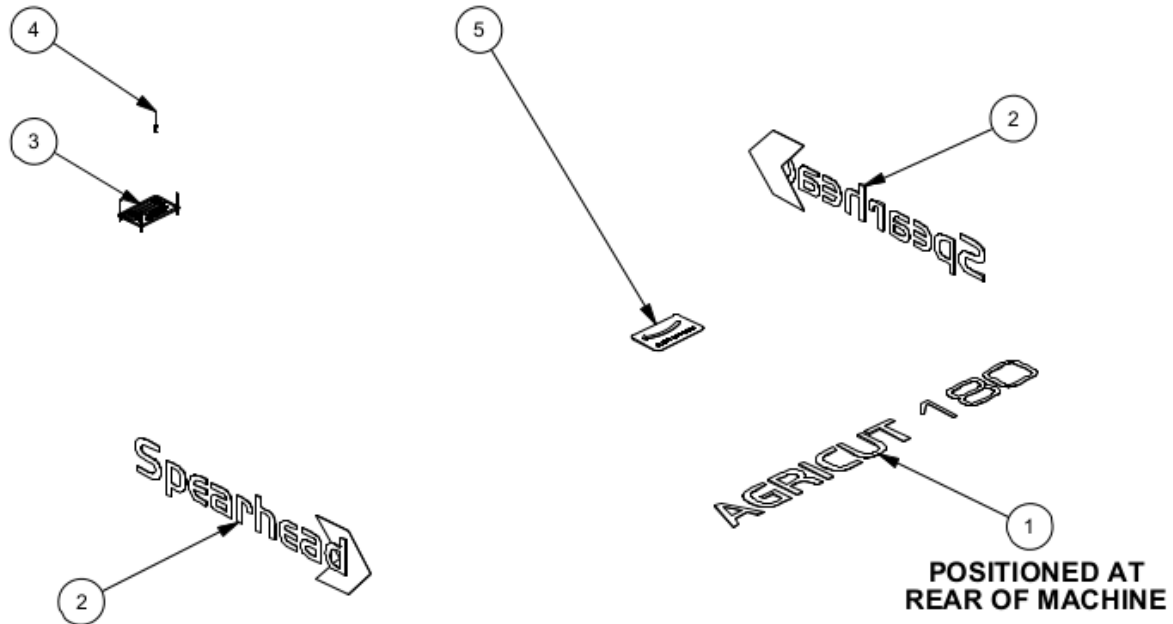
77.744.17 – ENGINEERING DECALS – AGRICUT 270



REF.	PART No.	DESCRIPTION	QTY.
1	00756004	DECAL-DRIVELINE MISSING	1
2	09.811.04	DECAL – MAX PTO SPEED 540 ACW	1
3	09.821.29	COMBINED EURODECAL FOR	1
4	09.821.30	COMBINED EURODECAL UNBLOCK	1
5	09.821.34	DECALS-EURO DECAL MINIATURISED	1
7	09.821.51	DECAL – BLADE ANGLE	1
8	09.843.03	DECAL – LIFT POINT 500 KG	4
9	D137	DECAL – CCW BLADE ROTATION	1
10	D138	DECAL – CW BLADE ROTATION	1
11	09.821.55	DECAL – CUTTING HEIGHT	2

Spearhead AGRICUT 180, 240 & 270

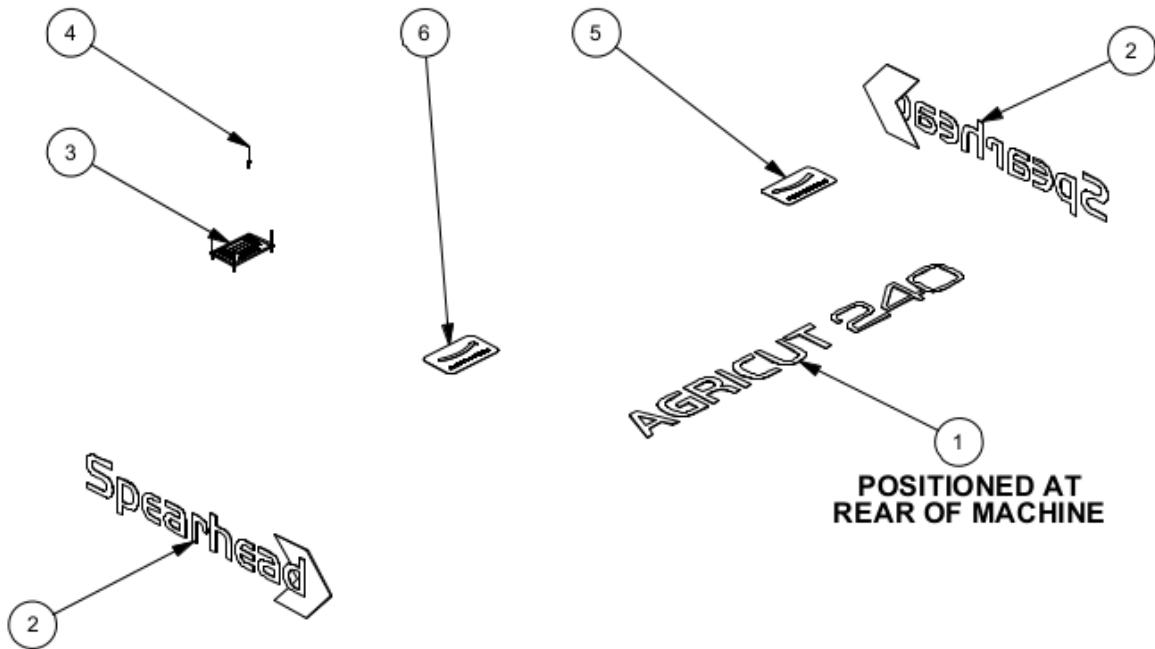
S180057.01 - SPEARHEAD MARKETING DECAL KIT – AGRICUT 180



REF.	PART No.	DESCRIPTION	QTY.
1	7103230	1/8" POP RIVET *BI*	4
2	8770330	SERIAL NUMBER PLATE	1
3	8770373	SPEARHEAD – 615mm LONG	2
4	8770487	AGRICUT 180 DECAL	1
5	D138	DECAL - CW BLADE ROTATION	1

Spearhead AGRICUT 180, 240 & 270

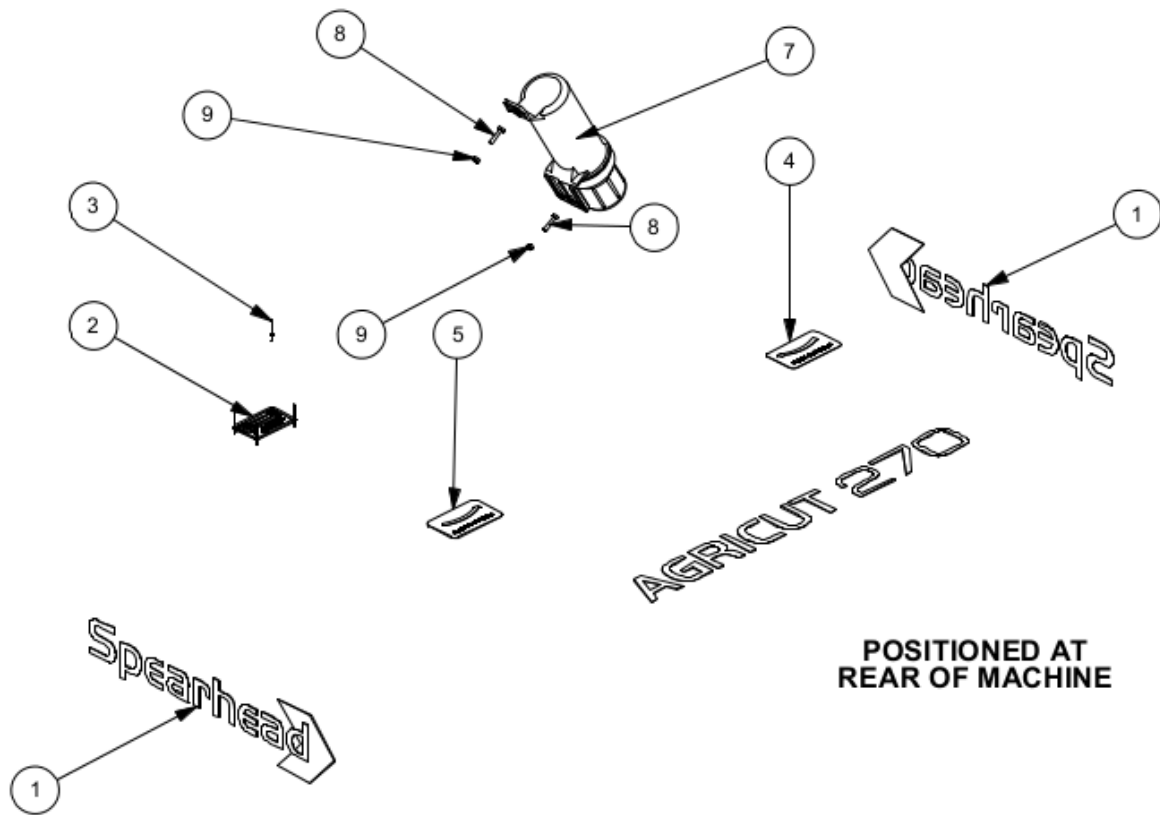
SI80057.02 – SPEARHEAD MARKETING DECAL KIT – AGRICUT 240



REF.	PART No.	DESCRIPTION	QTY.
1	7103230	1/8" POP RIVET *BI*	4
2	8770330	SERIAL NUMBER PLATE	1
3	8770373	SPEARHEAD – 615mm LONG	2
4	8770486	AGRICUT 240-OS DECAL	1
5	D137	DECAL – CCW BLADE ROTATION	1
6	D138	DECAL – CW BLADE ROTATION	1

Spearhead AGRICUT 180, 240 & 270

SI80057.03 – SPEARHEAD MARKETING DECAL KIT – AGRICUT 270



REF.	PART No.	DESCRIPTION	QTY.
1	8770373	8770373	2
2	8770330	SERIAL NO. PLATE	1
3	7103230	1-8" POP RIVET	4
4	D138	DECAL – CW BLADE ROTATION	1
5	D137	DECAL – CCW BLADE ROTATION	1
7	46505.01	DOCUMENT HOLDER	1
8	05.834.04	BOLT	2
9	30.070.64	NYLOCK NUT	2

Spearhead AGRICUT 180, 240 & 270

Notes

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