

Spearhead

MULTICUT 160 & 200



4th Edition – August 2016
Part No. 8999008

HANDBOOK & PARTS MANUAL

Spearhead

Multicut 160 & 200

Handbook & Parts Book

4th Edition – August 2016

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

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Spearhead Multicut 160 & 200

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:

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			PORT ADAPTORS WITH BONDED SEALS		
BSP	Setting	Metric	BSP	Setting	Metric
1/4"	18 Nm	19 mm	1/4"	34 Nm	19 mm
3/8"	31 Nm	22 mm	3/8"	47 Nm	22 mm
1/2"	49 Nm	27 mm	1/2"	102 Nm	27 mm
5/8"	60 Nm	30 mm	5/8"	122 Nm	30 mm
3/4"	80 Nm	32 mm	3/4"	149 Nm	32 mm
1"	125 Nm	41 mm	1"	203 Nm	41 mm
1.1/4"	190 Nm	50 mm	1.1/4"	305 Nm	50 mm
1.1/2"	250 Nm	55 mm	1.1/2"	305 Nm	55 mm
2"	420 Nm	70 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.

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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 Multicut 160 & 200

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

.....

Spearhead Multicut 160 & 200

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Important Safety

- Never operate the machine with other people present, as it is possible for debris, including stones, to be discharged from the front and rear of the main deck.
- Always ensure all safety guards are in place and all tractor windows are closed.
- Never allow an inexperienced person to operate the machine without supervision.
- Never allow children to play on or around the machine at any time.
- Never attempt any maintenance or adjustment without first disengaging the PTO, lowering to the ground, stopping the tractor engine and applying the tractor parking brake.
- Before leaving the tractor cab always ensure that the machine is firmly on the ground, and the rotor has stopped spinning
- Never stop the engine with the PTO engaged.
- Always check that all guards are properly fitted, check there are no damage or loose parts. Particular attention should be given to the flails to ensure they are not damaged, cracked or missing.
- Never operate with damaged blades.
- Always operate PTO at recommended speed.
- Always inspect work area for wire, steel posts, large stones and other dangerous materials and remove before starting work.
- Never operate with wire around rotor. Stop immediately.
- Never attempt to use the machine for any purpose other than that it was designed for.
- Ensure that all warning labels are always visible and that they are not damaged, defaced or missing.
- Never transport with the PTO engaged.
- When parking up always lower to the ground.
- Where applicable, check condition of tyres and that wheel nuts are tight.
- During transport, ensure linkage stabilisers are fully tightened and observe public highway regulations.

Spearhead Multicut 160 & 200

Safety Stickers



Warning
Stay clear of mower blades.



Warning
Shut off engine and remove key.



Warning
Keep a safe distance when the machine is running.



Warning
Beware of escaping fluid.



Warning
Do not remove/open guard.



Warning
Carefully read operator's manual before handling this machine. Observe instructions and safety rules when operating.



Warning
Beware of overhead electrical power line.



Warning
Check all nuts are tight every 8 hours.

Spearhead Multicut 160 & 200

Introduction

The Spearhead Multi-Cut 160 and 200 are very robust high capacity Rotary Cutters which are easy to operate and maintain. To ensure trouble-free operation this manual should be carefully studied.

Safety First

Do not start the machine until you fully understand operation and safety precaution requirements. Always ensure the operators are proficient with the operation of this type of this machine.

Tractor Requirements

- Spearhead strongly recommends 75hp-plus tractor with **CATEGORY 2** rear linkage.
- Ensure there is sufficient weight on front wheels of the tractor for safe transport and stability.
- PTO must be independent live drive to enable continuous PTO drive even when tractor clutch is pressed down.
- Before hitching, ensure position control is selected. Do not attempt to hitch in draft control.
- Check chains and stabilizers must be in good working order to hold the machine firmly. Do not operate without checking that chains and stabilizers are tight.
- Spearhead particularly recommend 'turn buckle' type check chains
- Set linkage lift rods to an equal length.

Spearhead Multicut 160 & 200

Attaching To The Tractor

Determining The Correct Length PTO Shaft

To determine the correct length of the driveline, it is advisable to hook the machine to the tractor and place the machine in order for it be at a minimum distance between the power takeoffs.

Install the two uncoupled and unprotected semi-shafts to their respective PTOs.

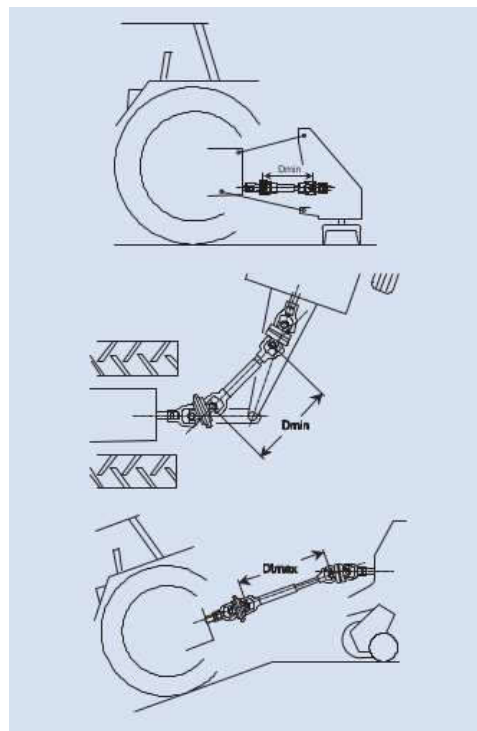
At this point, verify any interference of the outer tube with the yoke inner tube and establish how much the outer tube needs to be shortened.

Towed Machines

In towed machines, the minimum distance D_{min} between the joints occurs during steering.

Verify that, in the condition of maximum extension, which generally occurs when the machine is aligned, the coupling between the two tubes is sufficient.

When determining the minimum and maximum lengths and during subsequent verifications, it is important to bear in mind that ground subsidence may cause further reduction and increase of the distance between the PTOs.



Bondioli & Pavesi does not recommend modifications to its products. If the driveline needs to be shortened, proceed as described below. If you are unsure of the procedure, or need additional assistance, please contact your local implement dealer or qualified service centre.



1. Remove shielding.
2. Shorten drive tubes by required length. In normal conditions, telescoping tubes must always overlap by at least a $\frac{1}{2}$ of their length. During manoeuvres, when the driveline is not rotating, the telescopic tubes must have a suitable overlap to maintain the tubes aligned and allow them to slide properly

If the driveline is fitted with a single chain restraint system (splined inner tube), the tubes can be shortened by a limited amount (normally no more than 70mm) to avoid eliminating the splined ring connecting the two shield tubes.

If the driveline is fitted with a greasing system incorporated in the inner drive tubes, the tubes can be shortened by a limited amount to avoid damage to the lubrication system. Carefully measure and shorten each drive tube equally.

Spearhead Multicut 160 & 200



3. Carefully deburr the ends of the tubes with a file and remove any chippings from the tubes



4. Shorten shield tubes one at a time by cutting the same length that was cut from the drive tubes. If the driveline is equipped with Single Chain Restraint System, shortening the driveline will involve removal of the plastic ring which connects the shield tubes. If it is necessary to remove this collar, ADD A RETAINING CHAIN TO THE TRACTOR SIDE OF THE DRIVELINE SHIELD.



5. Grease the internal drive tube. Reassemble the shield on the driveshaft.

ATTENTION: SFT drivelines with 4-tooth profiles must be reinstalled in such a way that the grease fittings on the cross kit bearings are aligned.



6. Check the length of the driveshaft at the minimum and maximum positions of the machine. Telescoping tubes must always overlap by at least a $\frac{1}{2}$ of their length. During manoeuvres, when the driveline is not rotating, the telescopic tubes must have a suitable overlap to maintain the tubes aligned and allow them to slide properly.

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Attaching To The Tractor

Fit the machine to the tractor in the standard way, ensuring the correct match of linkage (category 2). Check that the top link is in good order and threads are well lubricated. Use stabilisers to take any free movement out of lower link arms.

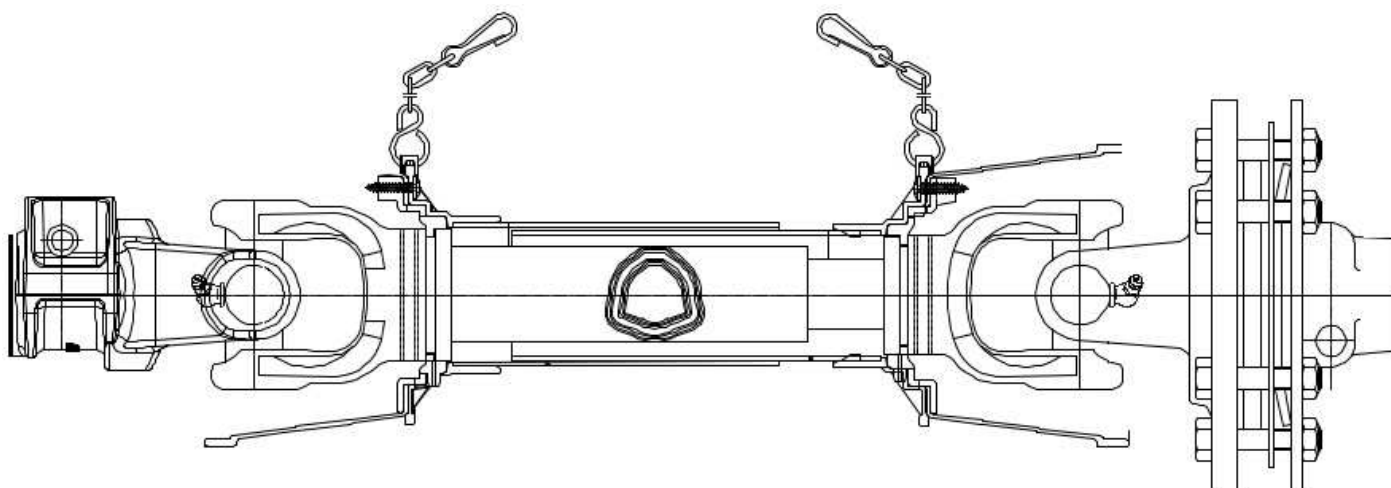
Before fitting the machine to the tractor linkage you should ensure there is sufficient front weight to ensure the front wheels are always in contact with the ground. This is most important for safe transport and stability when turning on slopes.

Before fitting the PTO for the first time, it may be necessary to adjust the length. There should be maximum engagement of the sliding tubes without bottoming at the shortest operation position. To check, first connect the mower to the tractor. Pull the PTO shaft apart and connect to the tractor PTO output shaft and the gearbox input shaft. Hold the half shafts next to each other in the shortest working position. Then using the procedure on pages 11 and 12 shorten and prepare the shaft to the required length.

To fit the PTO to the machine, first remove bolt and tapered pin from the slip clutch yoke and push onto splined shaft of gearbox ensuring it is fully engaged before refitting retaining bolt/pin.

To fit the PTO, first clean and grease press pins on the yoke and simultaneously push the PTO drive shaft onto PTO shaft of the tractor until pins engage.

The PTO shaft is fitted with a non-rotating safety guard. It should be secured to the machine and tractor with the two retaining chains provided.



Spearhead Multicut 160 & 200

Setting Up & Adjustment

Height



Cutting height adjustment is achieved by raising or lowering the wheel. Lowering the wheel produces a longer cut, raising the wheel leaves a shorter cut. Always set machine level front to rear and side to side.

The wheel acts a 'middle skid', therefore it should be set to take equal weight to the skids. When set properly this should prevent scalping.

Machine Protection

To prevent gearbox damage the PTO is fitted with a slip clutch. When cutting in conditions where solid objects are likely to be found it is recommended that the operator reduces the engine revs to allow the blades to pivot more easily when striking solid objects, and proceed with caution.

The clutch settings should not be altered without reference to the Spearhead Service Department. Never over-tighten the pressure springs on the slip clutches, this could result in severe damage to the gearbox and drive lines, as well as infringing the warranty. (The correct length of the spring is 29mm).

SPLINE CLUTCH
(for 5770079 Shaft)

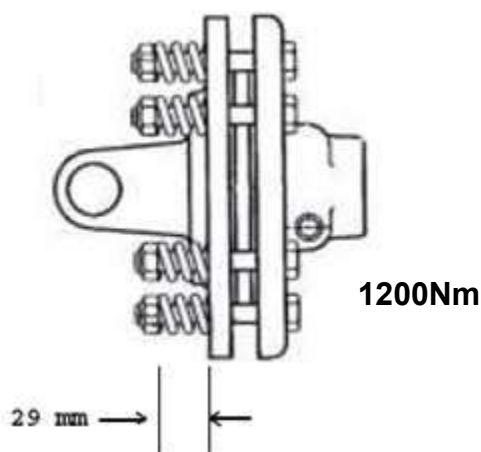
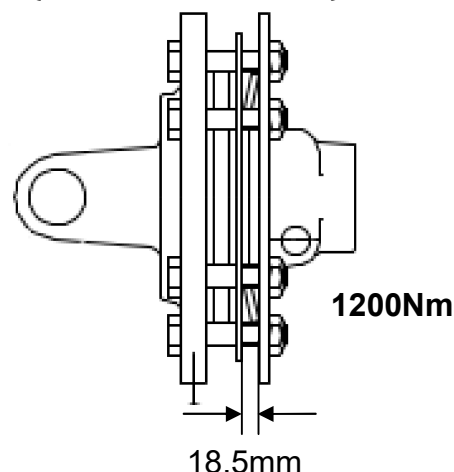


PLATE CLUTCH
(for 5770587 Shaft)



Important

If the machine has been laid up for any length of time, there is a risk of the clutch plates resting and seizing together. Never operate the machine in this condition as there will be no protection to the drive line and gearboxes against shock loading. Refer to after storage (page 14).

Spearhead Multicut 160 & 200

Operation

Engage the PTO only when the tractor engine is at low revs to prevent shock damage to the machine. Slowly increase the engine revs to achieve the standard 540rpm PTO speed. *If at any time serious vibration occurs, stop the engine immediately and check that no blades are missing* - following all safety precautions. The cause must be found and rectified immediately or other components may be affected.

When in work, lower the machine to the ground carrying all its weight on the skids/wheel, allowing the machine to follow the contours of the ground and ensuring there is sufficient slack in the wire ropes. Select a sensible forward speed bearing in mind the density of growth, the terrain, and the available horsepower, taking extra care when turning, particularly on slopes.

When turning, it is not necessary to lift the machine off the ground but instead allow sufficient room to turn in a large radius. The machine only needs to be raised when turning in a tight corner or reversing over dense undergrowth or when operating on the front linkage.

The machine is fitted with, as standard, 3 high lift blades complete with fin, to aid spreading/mulching.

Transportation

Please observe Public Highway Regulations concerning the towing of implements, and securely attach a registration and lighting board. Take care to slow when travelling over rough ground and avoid bouncing machine on linkage causing unnecessary strain.

Spearhead Multicut 160 & 200

Safety First

- Never leave the tractor seat without first disengaging the PTO and stopping the engine.
- Ensure all rotating parts have stopped turning.
- Never attempt any repairs, maintenance, service or any other checks with the machine carried on the tractor hydraulics.
- Always fully lower to the ground, or securely prop the machine on substantial servicing stands.
- Always replace all guards and retaining chains after servicing/maintenance is completed.



IMPORTANT

On delivery of your machine check that the dealer has completed the P.D.I. form ensure the warranty registration form is completed and returned.

It is imperative that the following checks are carried out in order not to invalidate your warranty; these are carried out **before the first operation, after the first hour, then after 4 hours**. These checks are:

- Wheel nuts and tyre pressure (50psi)
- Gearbox bolts
- Blade bolts are fully tightened and in particular the castle headed nut on the blade rotor
- Retaining bolts on the drive shaft
- Grease all points
- After the first 50 hours drain and replace the gearbox oil. Replace with EP90 Gear oil
- It is your responsibility to maintain, to ensure a long reliable working life

Torque Settings

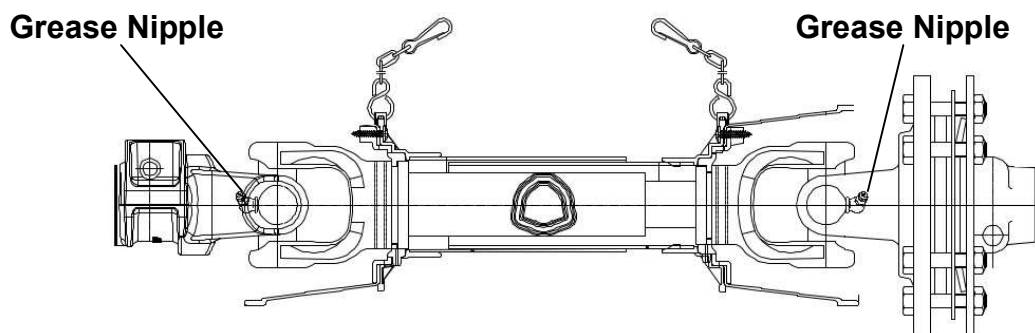
The Torque figures given below are recommended maximum settings only.

Size:	Tensile strength:	Description:	Torque setting: Nm
M16	8.8	Gearbox bolts	280
M16	8.8	Blade carriers	280
M24	8.8	Blade bolts	950

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Daily/Every 8 hours

- Grease all grease points, on PTO.
- Check condition of blades and blade bushes and ensure all retaining bolts are fully tight.
- Check gearbox oil, replenish with 'EP90' gear oil as necessary to the correct level line on the dipstick provided with each gearbox.
- Dismantle and clean PTO sliding surfaces and re-grease. Grease universal joints.



Every 20 hours

- Grease PTO inner tube and push pins

Regularly

- Check there is no wrapping of string, plastic, grass or other debris between rotor boss and blades.
- Inspect gearbox seals for leaks.
- Regularly check the rotor boss retaining castle nut for tightness (part no.5771409). First remove the split pin, select the correct size socket in 3/4" drive and fully tighten the nut.
- When replacing the split pin, do not slacken the nut to align the hole, always tighten.
- Failure to regularly check this nut will result in serious wear to hub, which is expensive to repair.
- It is most important that all gearbox and blade bolts are regularly checked to be very tight. **When the machine is new there will be a 'bedding in' period where very frequent checking is important.**

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Blades

Caution! When carrying out maintenance work on or near the blades be careful of free-swinging blades over-centring and falling. It is recommended that protective headgear, gloves and goggles are worn.

The blades can be re-sharpened by grinding the cutting edges and care must be taken that the blades are of the same weight and length after grinding. Do not over heat when grinding, as this will affect the hardness of the blades.

All the blades are free swinging and swivel on hardened steel bushes, which are easily replaced. When replacing blades, it is important that blades are replaced in sets, in order to retain balance of the rotor. Bushes must be replaced when new blades are to be fitted.

Bushes must be replaced when new blades are to be fitted.

If the blades are showing any signs of severe wear, damage or cracking, they must be replaced immediately. Never attempt to weld the blades; this will make them very brittle thus extremely dangerous. Do not take risks with the cutting blades - if in doubt, replace.

Note – The slip clutch is there to protect the drive train. If the blades strike a large obstacle they may get damaged or break, so avoid these conditions.

Optional Chain Kit

This is available for use in stony conditions for scrub clearance but is not suitable for thick material.

Skids

When operating on abrasive soils, particularly in stubbles and similar conditions with thin ground cover, excessive skid wear may be expected. To provide extra protection and to prolong life of the skids, special hard facing rods are available.

If working in wet and muddy conditions, ensure that debris is not allowed to build up on the deck.



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Storage

Before storing away, thoroughly wash the machine removing all traces of grass and dirt. Great care must be taken when washing with high-pressure hoses, do not hold the water jet close to the paintwork. Use steam cleaners with caution, be sure to remove all detergents to avoid any discolouring or damage to paint.

Grease all grease points until fresh grease shows. Store PTO shaft in a dry place.

After Storage

Disassemble the slip clutch and with an emery cloth remove all traces of rust on the metal clutch plates. Check condition on the friction plates, if there is any sign of over hearing, wear or cracking, replace with new. Do not attempt to use the machine with damaged slip clutch plates.

Assemble the clutch and tighten the bolts to achieve a spring length of 29mm. Do not over tighten or the clutch will not work.

Check condition of the tyre (where applicable) and then follow the maintenance procedure covered in the servicing part of this manual. Pay particular attention to the condition of the guards and blades.

Remember the 1000 and 2000 Swipe is designed to withstand the most rigorous conditions and, with a little care and attention, will give many years of trouble free service.

So as not to invalidate the warranty and to avoid problems, use only genuine parts and make sure the machine is not driven at a speed in excess of 540rpm on the PTO.

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Parts List

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

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Spearhead Multicut 160 & 200

Ordering Parts

When ordering parts please refer to your parts list to help your dealer with your order.

- Part number and quantity
- Description
- Machine model number
- Serial number of the machine
- Delivery instructions (e.g. next day).

Delivery is normally via carrier direct to your dealer. Please check with your dealer for stock availability and arrangement of dispatch. Ensure you or your dealer has sufficient cover for parts requirement outside factory hours.

When ordering your seal kits please quote both codes stamped on the base of the cylinder.

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 advise.

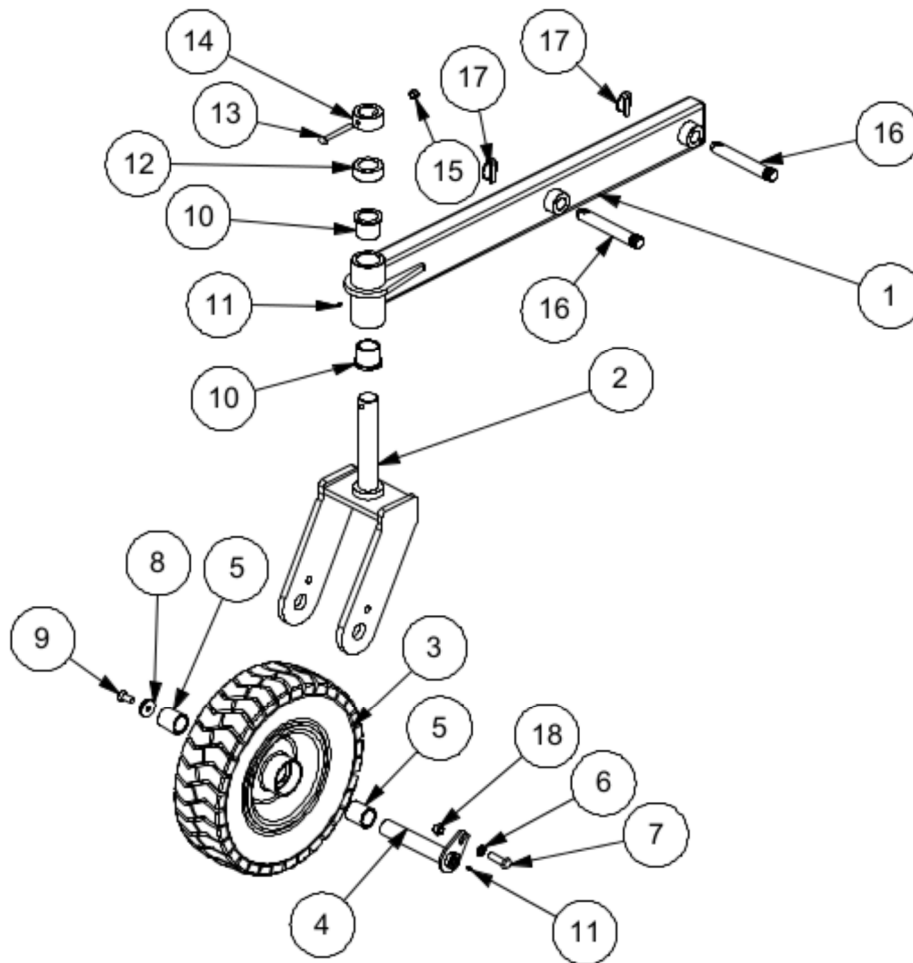
Key:

(LH) = Left hand
(RH) = *Right hand*

Spearhead Multicut 160 & 200

SI80020.01

Multicut 160/200 Rear Wheel Assembly

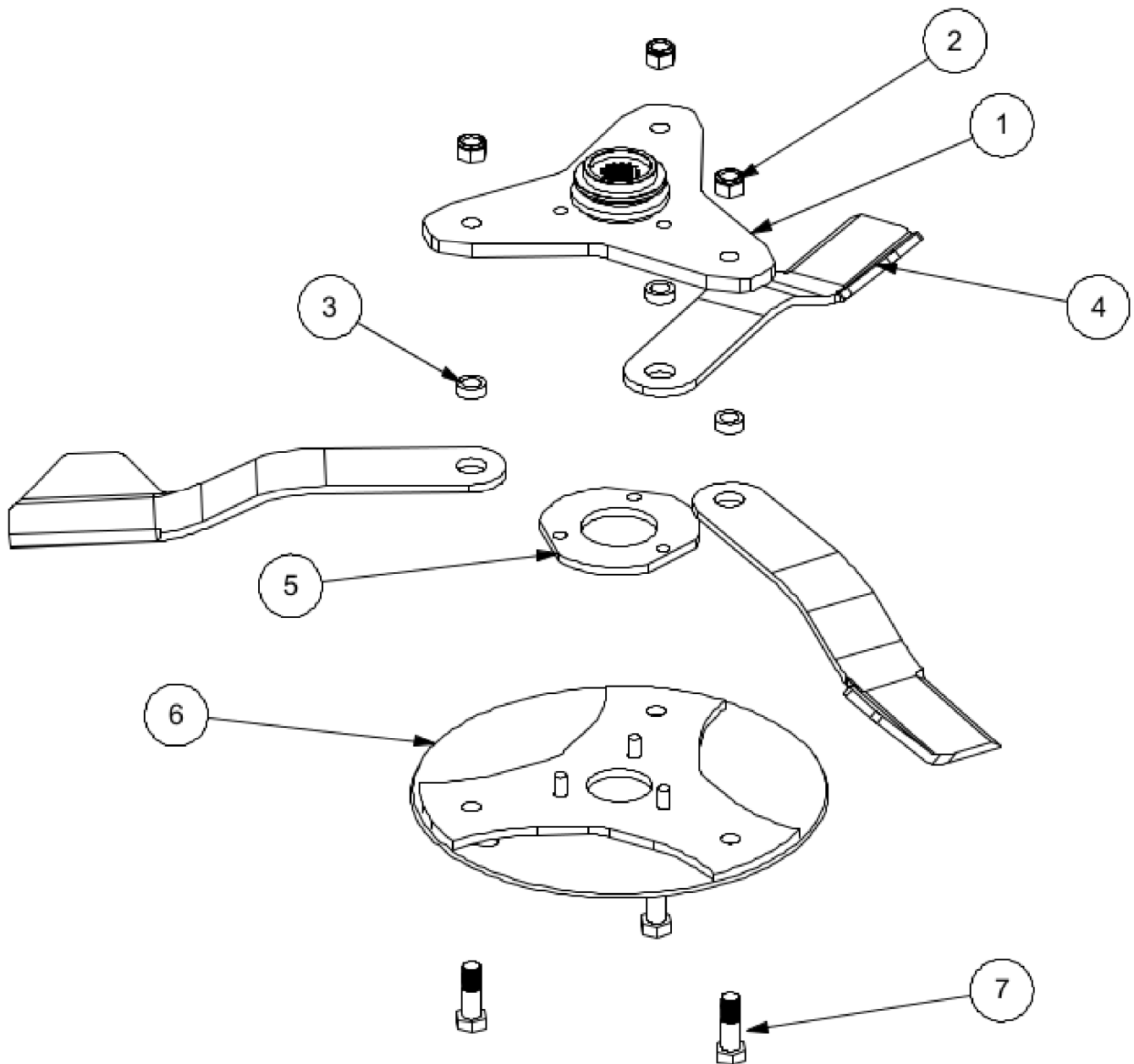


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	1770401A	SWIPE WHEEL ARM	1
2	1770399A	SWIPE WHEEL YOKE	1
3	6770680	SWIPE WHEEL ASSEMBLY	1
4	1560130	PEAR PIN	1
5	1560131	SWIPE WHEEL YOKE SPACER BUSH	2
6	2770436	FLAT WASHER	1
7	2770397	SETSCREW	1
8	1777209	WASHER	1
9	2770506	SKT CSK SCREW	1
10	4600127-A	FLANGE BUSH	2
11	2770467	M6 STRAIGHT GREASE NIPPLE	2
12	1777524	SPACER BUSH SWIPE WHEEL KIT	1
13	2770411	BOLT	1
14	1777700	3000 4W TOP WHEEL BUSH	1
15	2770412	NYLOCK NUT	1
16	6310235	CAT 2 TOP LINK PIN	2
17	6310206	LYNCH PIN	2
18	2770417	NYLOCK NUT	1

Spearhead Multicut 160 & 200

SI80020.02

Multicut 160 Blade Carrier Assembly

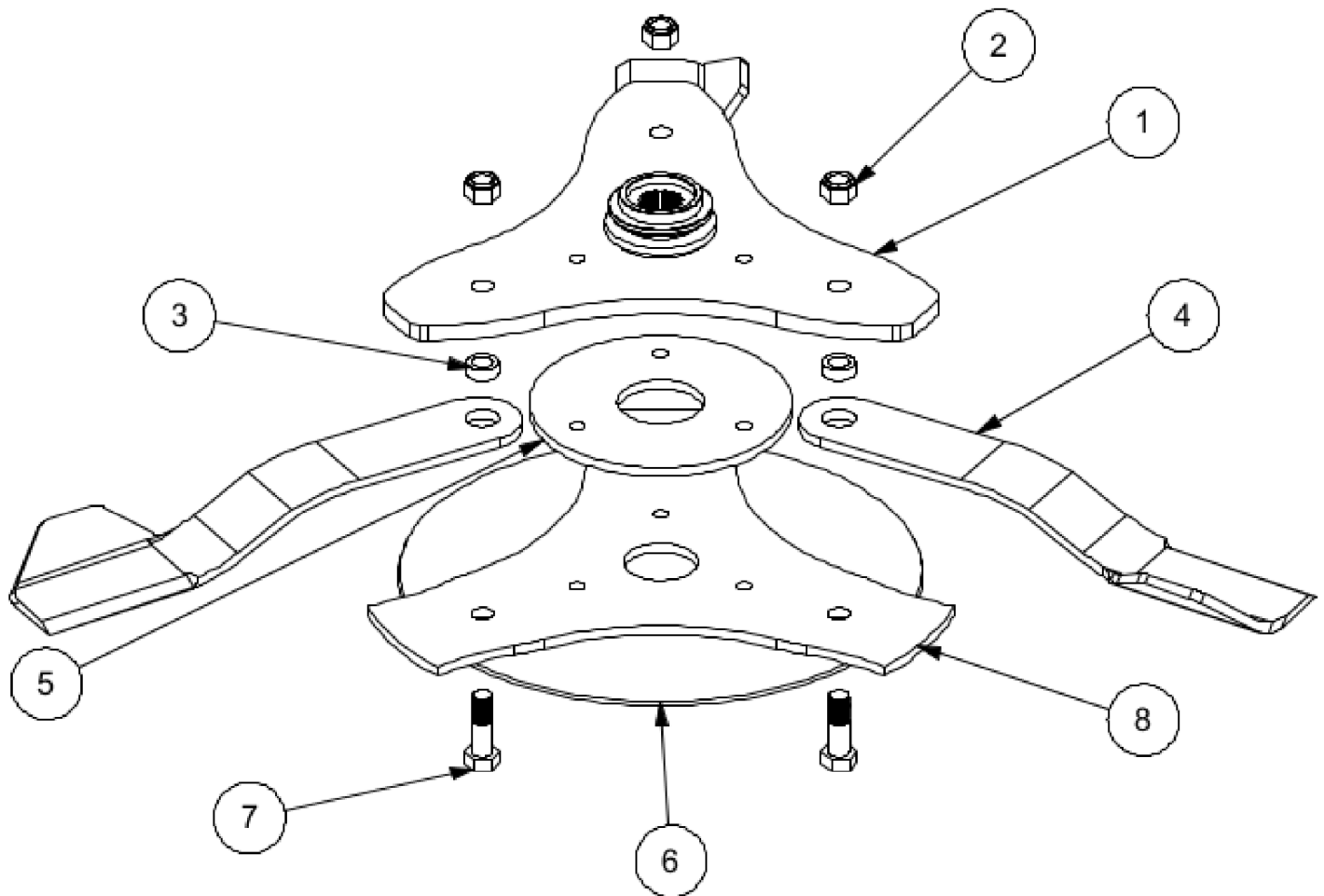


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	1770602-3	BLADE CARRIER	1
2	2770414	NYLOCK NUT	3
3	7770707	BLADE BUSH	3
4	7770700	BLADE	3
5	1770604-3	BLADE CARRIER SPACER	1
6	1770630	ANTI-SCALP BLADE PLATE	1
7	2770413	BLADE BOLT	3

Spearhead Multicut 160 & 200

SI80020.03

Multicut 200 Blade Carrier Assembly

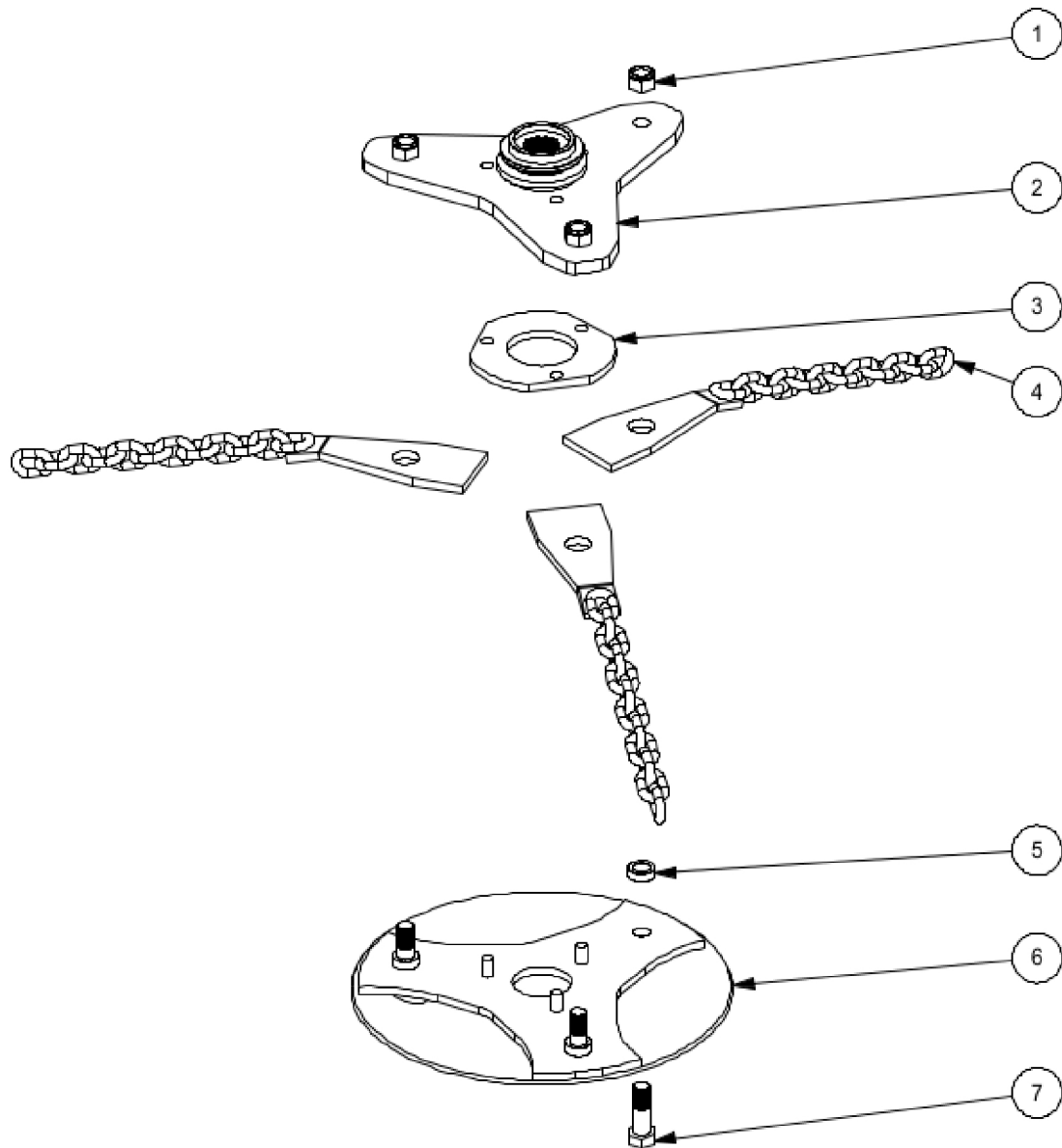


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	1770220	BLADE CARRIER	1
2	2770414	NYLOCK NUT	3
3	7770707	BLADE BUSH	3
4	7770718	BLADE	3
5	1770222	BLADE CARRIER SPACER	1
6	7770728	ANTI-SCALP BLADE PLATE	1
7	2770413	BLADE BOLT	3
8	1770221	LOWER BLADE PLATE	1

Spearhead Multicut 160 & 200

SI80020.15

Multicut 160 Chain Assembly

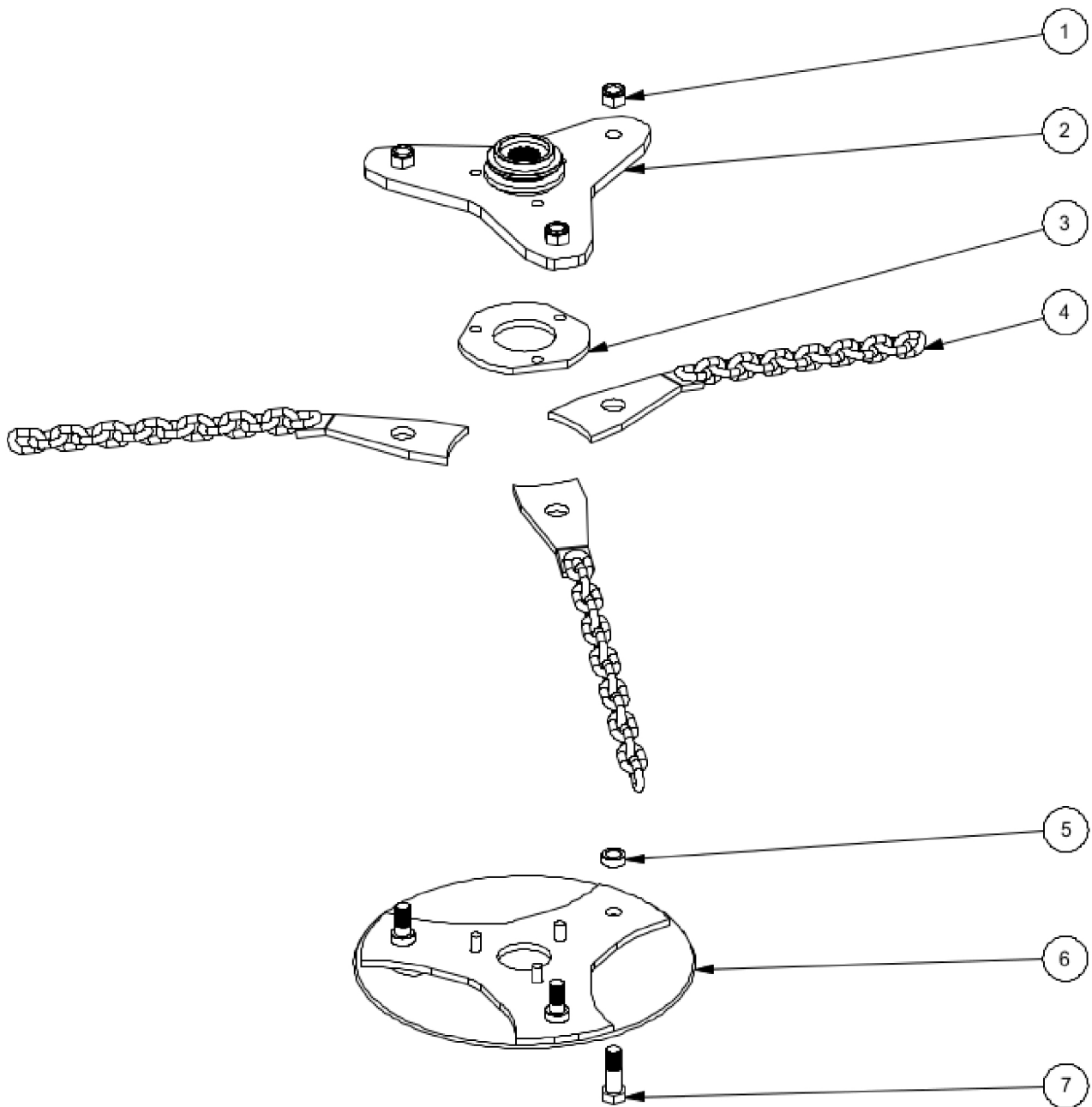


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	2770414	NYLOCK NUT	3
2	1770602-3A	BLADE CARRIER	1
3	1770604	CARRIER SPACER	1
4	7770582	MULTICUT 160 CHAIN ASSEMBLY	3
5	7770707	BUSH	3
6	1770630	ANTI-SCALP DISH	1
7	2770413	BLADE BOLT	3

Spearhead Multicut 160 & 200

SI80020.24

Multicut 200 Chain Assembly

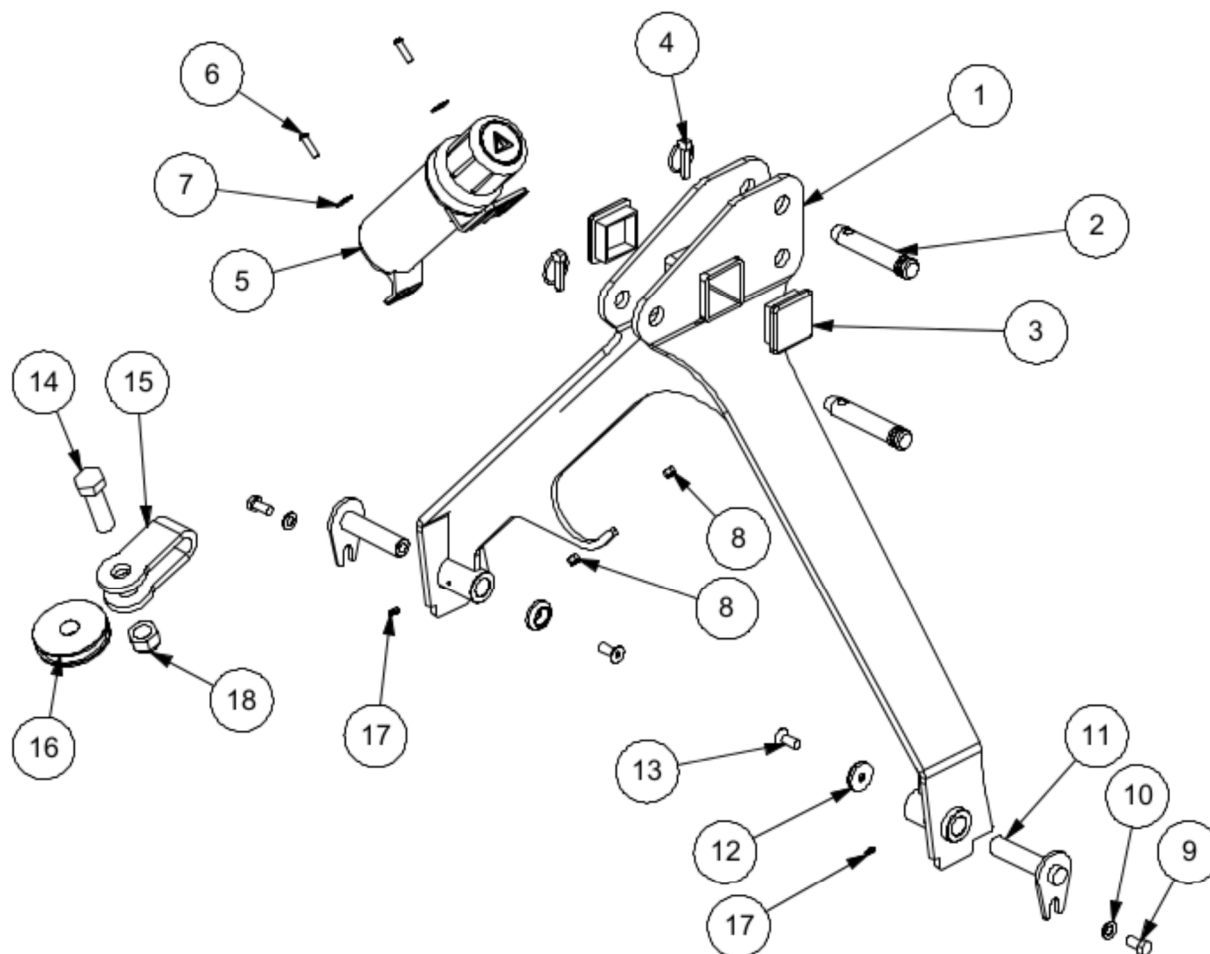


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	2770414	NYLOCK NUT	3
2	1770602-3A	BLADE CARRIER	1
3	1770604	CARRIER SPACER	1
4	7770584	MULTICUT 200 CHAIN ASSEMBLY	3
5	7770707	BUSH	3
6	1770630	ANTI-SCALP DISH	1
7	2770413	BLADE BOLT	3

Spearhead Multicut 160 & 200

SI80020.05

Multicut 160/200 Headstock Assembly

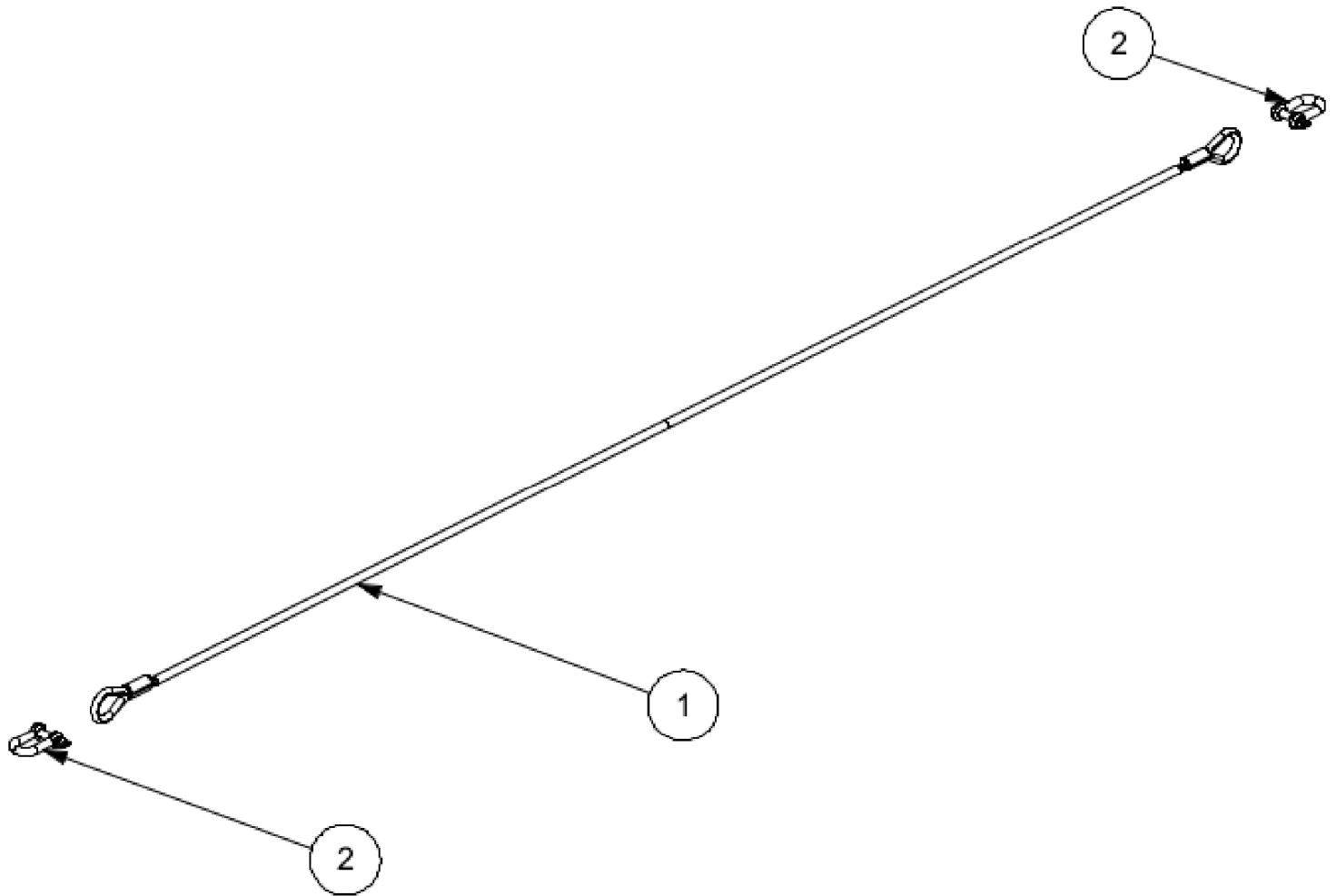


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	1800049	HEADSTOCK	1
2	6310203	CAT 2 TOP LINK PIN LONG	2
3	8777518	SQUARE PLASTIC INSERT	2
4	6310206	LYNCH PIN 11mm	2
5	46505.01	DOCUMENTS HOLDER	1
6	2770368	SKT BUTTON SCREW	2
7	2770244	WASHER	2
8	2770416	NYLOCK NUT	2
9	2770484	BOLT	2
10	2770436	WASHER	2
11	1777761	PEAR PIN	2
12	1777209	RETAINING WASHER	2
13	2770506	SKT CSK SCREW	2
14	2770413	BOLT	1
15	1560120	HEADSTOCK PULLEY BRACKET	1
16	1560121	HEADSTOCK PULLEY	1
17	2770467	GREASE NIPPLE	2
18	2770414	NYLOCK NUT	1

Spearhead Multicut 160 & 200

S180020.06

Multicut 160 Wire Rope Assembly

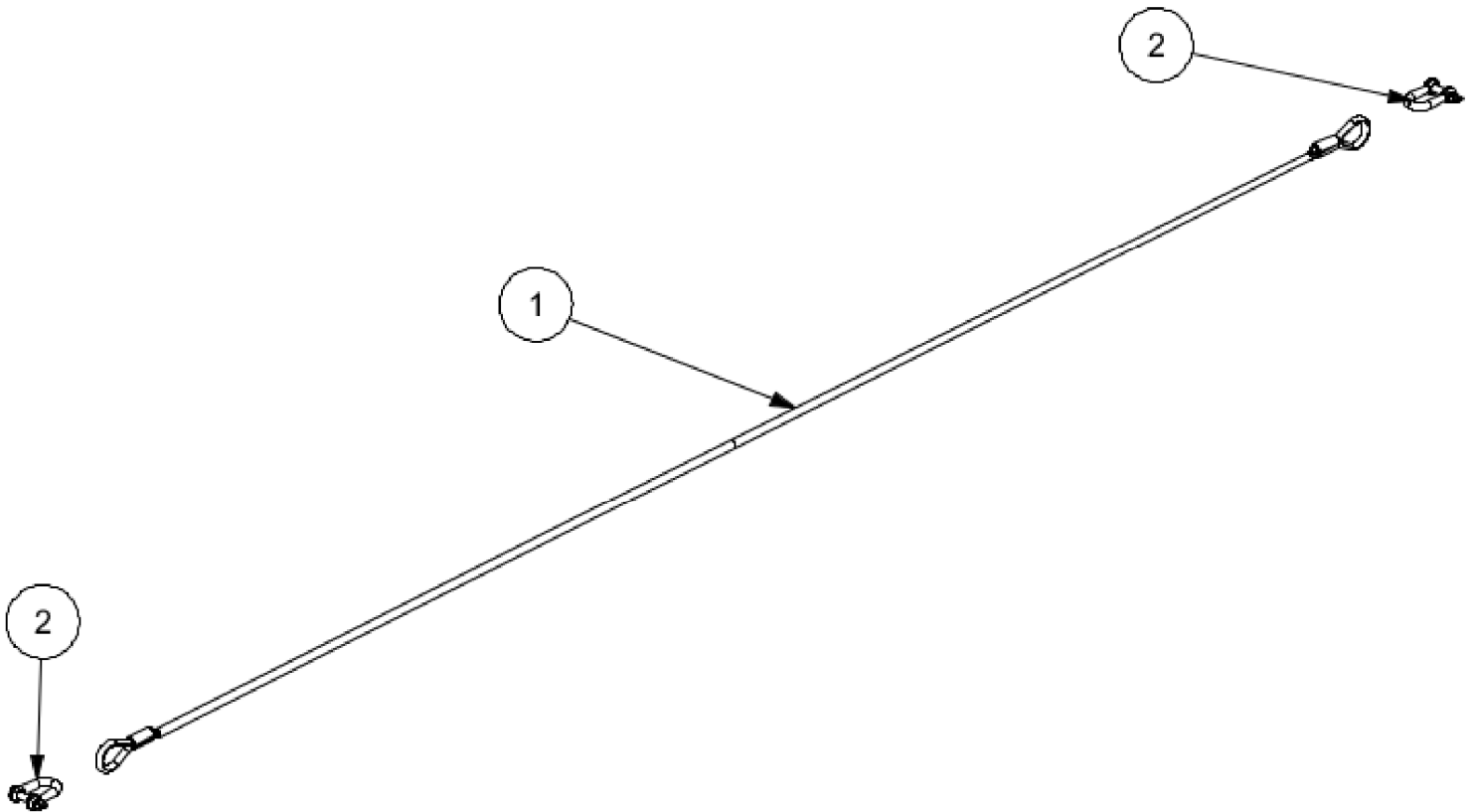


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	6770922	WIRE ROPE	1
2	6777575	SHACKLE	2

Spearhead Multicut 160 & 200

SI80020.07

Multicut 200 Wire Rope Assembly

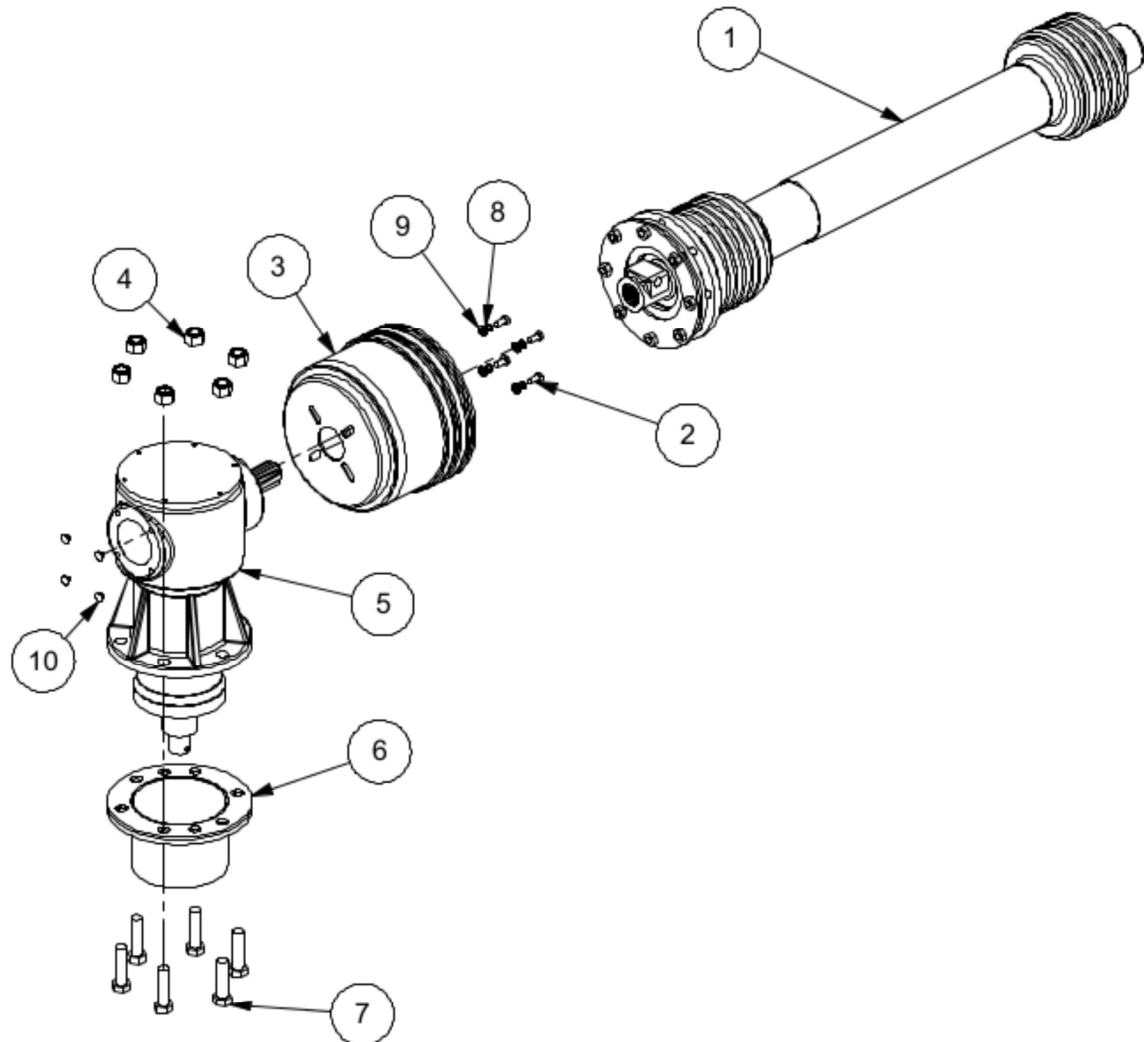


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	6770928	WIRE ROPE	1
2	6777575	SHACKLE	2

Spearhead Multicut 160 & 200

S180020.08

Multicut 160 Driveline & Gearbox Assembly

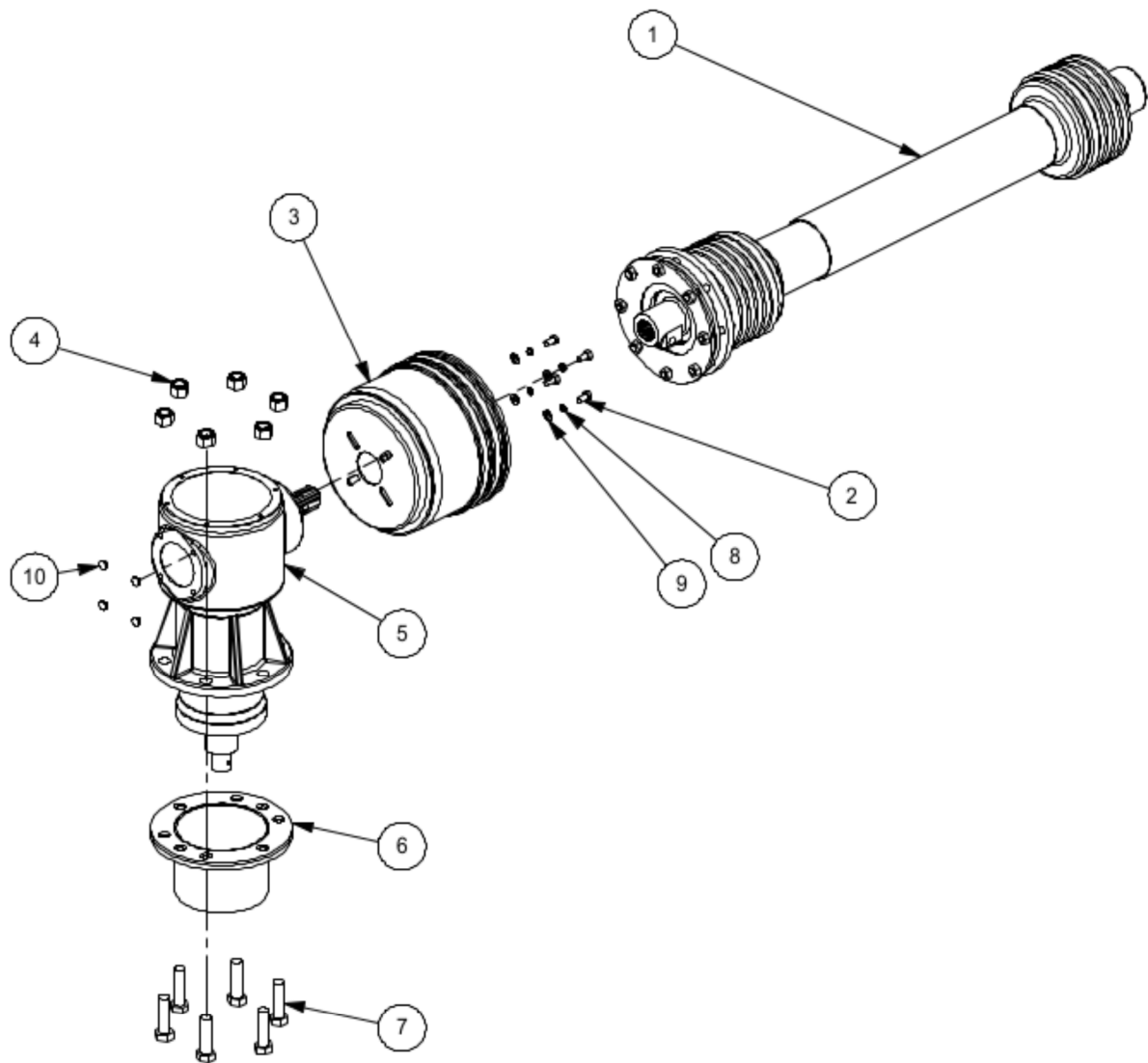


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	5770079 (being replaced by 5770587)	PTO SHAFT	1
2	2770431	BOLT	4
3	5770129	GUARD CONE	1
4	2770447	NYLOCK NUT	6
5	5770004	GEARBOX	1
6	1770620	SHIELD	1
7	2770423	BOLT	6
8	2770433	SPRING WASHER	4
9	2770432	FLAT WASHER	4
10	42964.01	PLASTIC PLUG	4

Spearhead Multicut 160 & 200

S180020.09

Multicut 200 Driveline & Gearbox Assembly

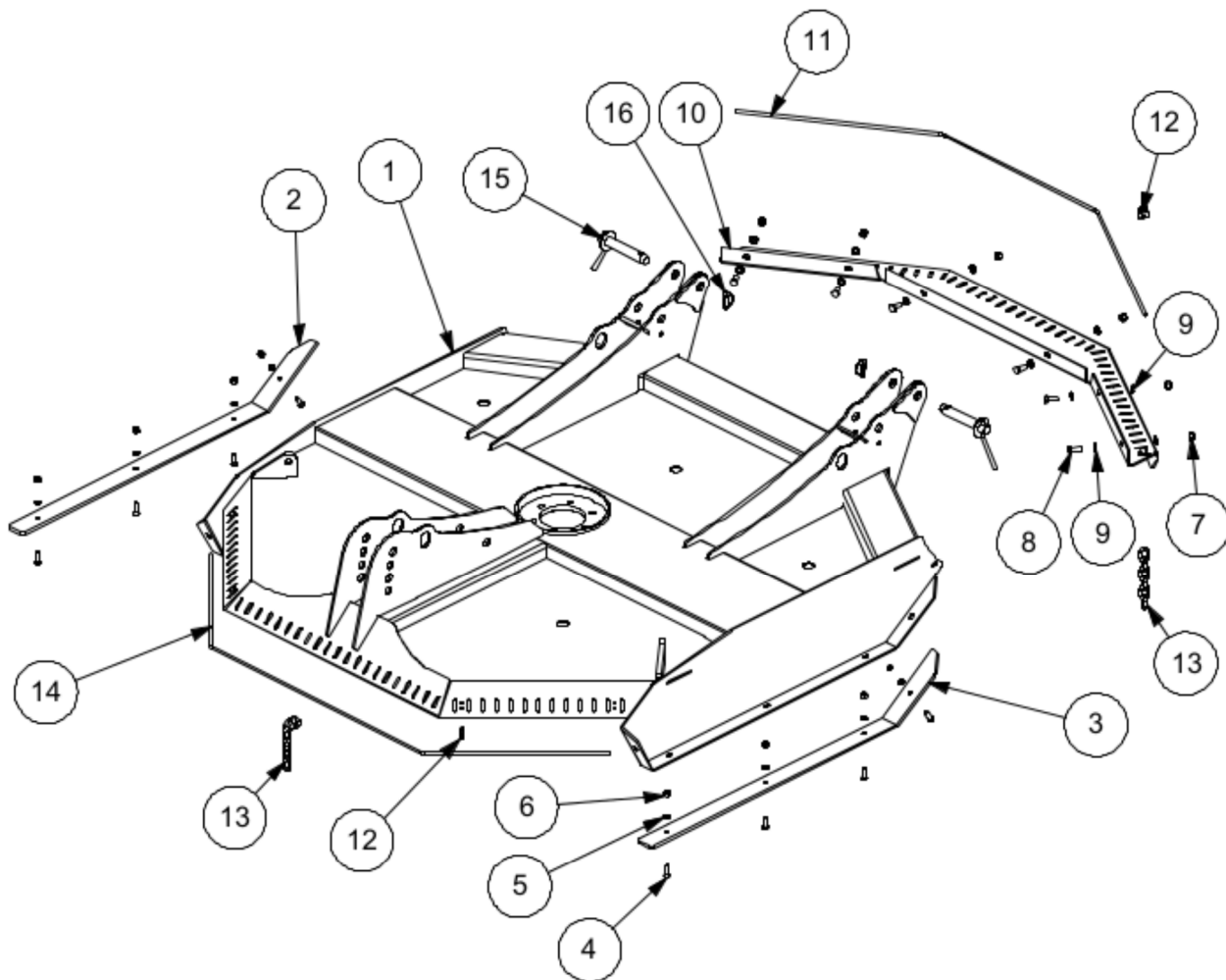


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	5770079 (being replaced by 5770587)	PTO SHAFT	1
2	2770431	PTO CONE BOLT	4
3	5770129	PTO GUARD CONE	1
4	2770447	NYLOCK NUT	6
5	5770002	GEARBOX	1
6	1770620	SHIELD	1
7	2770423	BOLT	6
8	2770433	SPRING WASHER	4
9	2770432	FLAT WASHER	4
10	42964.01	PLASTIC PLUG	4

Spearhead Multicut 160 & 200

SI80020.10

Multicut 160 Deck Assembly

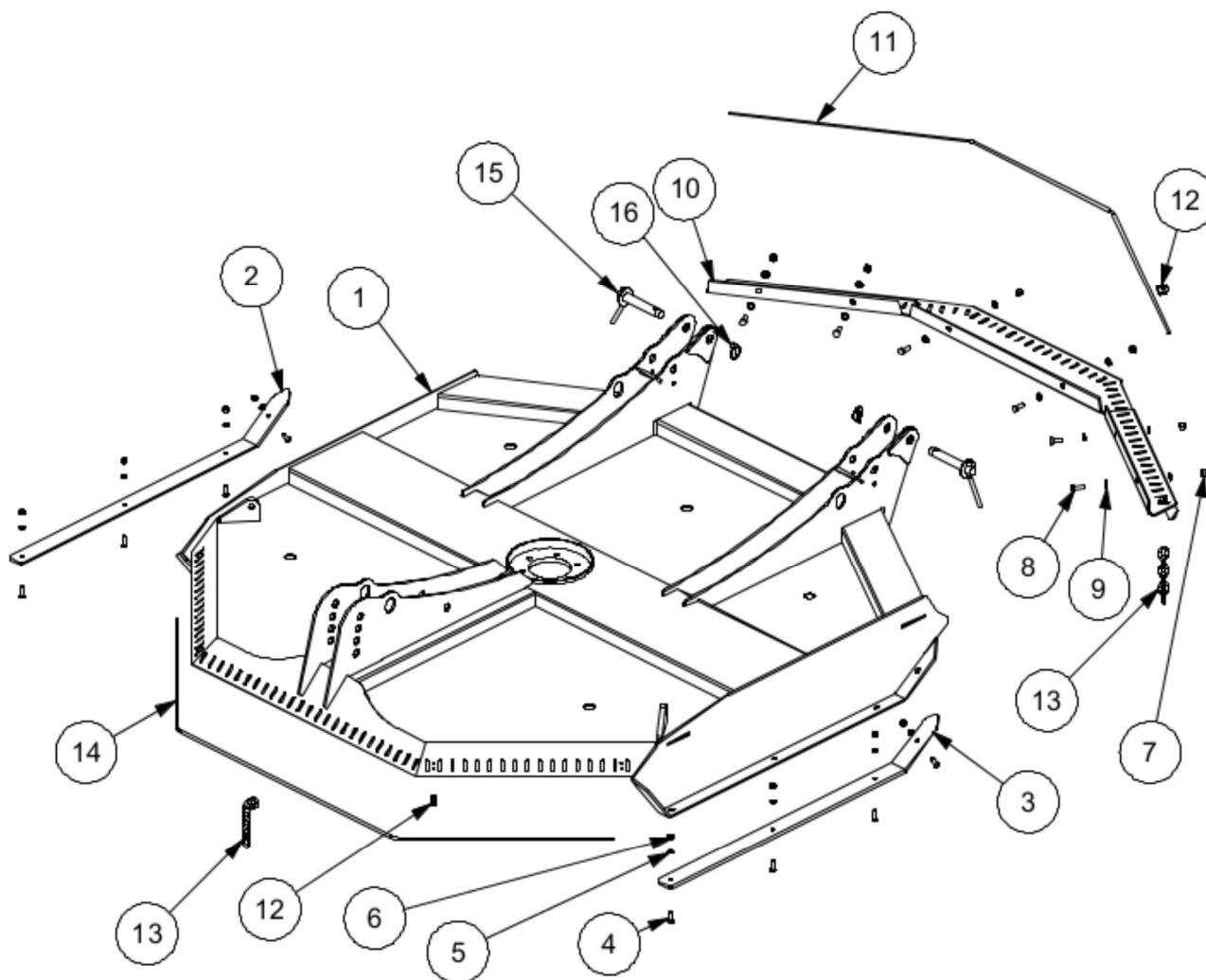


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	1560100B	DECK	1
2	1770685A	LH SKID	1
3	1770685AR	RH SKID	1
4	2770509	CSK SCREW	8
5	2770434	WASHER	8
6	2770412	NYLOCK NUT	8
7	2770417	NYLOCK NUT	6
8	2770420	BOLT	6
9	2770436	WASHER	12
10	1560106A	FRONT SKIRT BRACKET	1
11	6770908	FRONT WIRE ROPE	1
12	6770907	WIRE GRIP	6
13	8770621	CHAIN	94
14	6770905	REAR WIRE ROPE	1
15	6310208	CAT 2 CRANKED PIN	2
16	6310206	LYNCH PIN	2

Spearhead Multicut 160 & 200

SI80020.II

Multicut 200 Deck Assembly

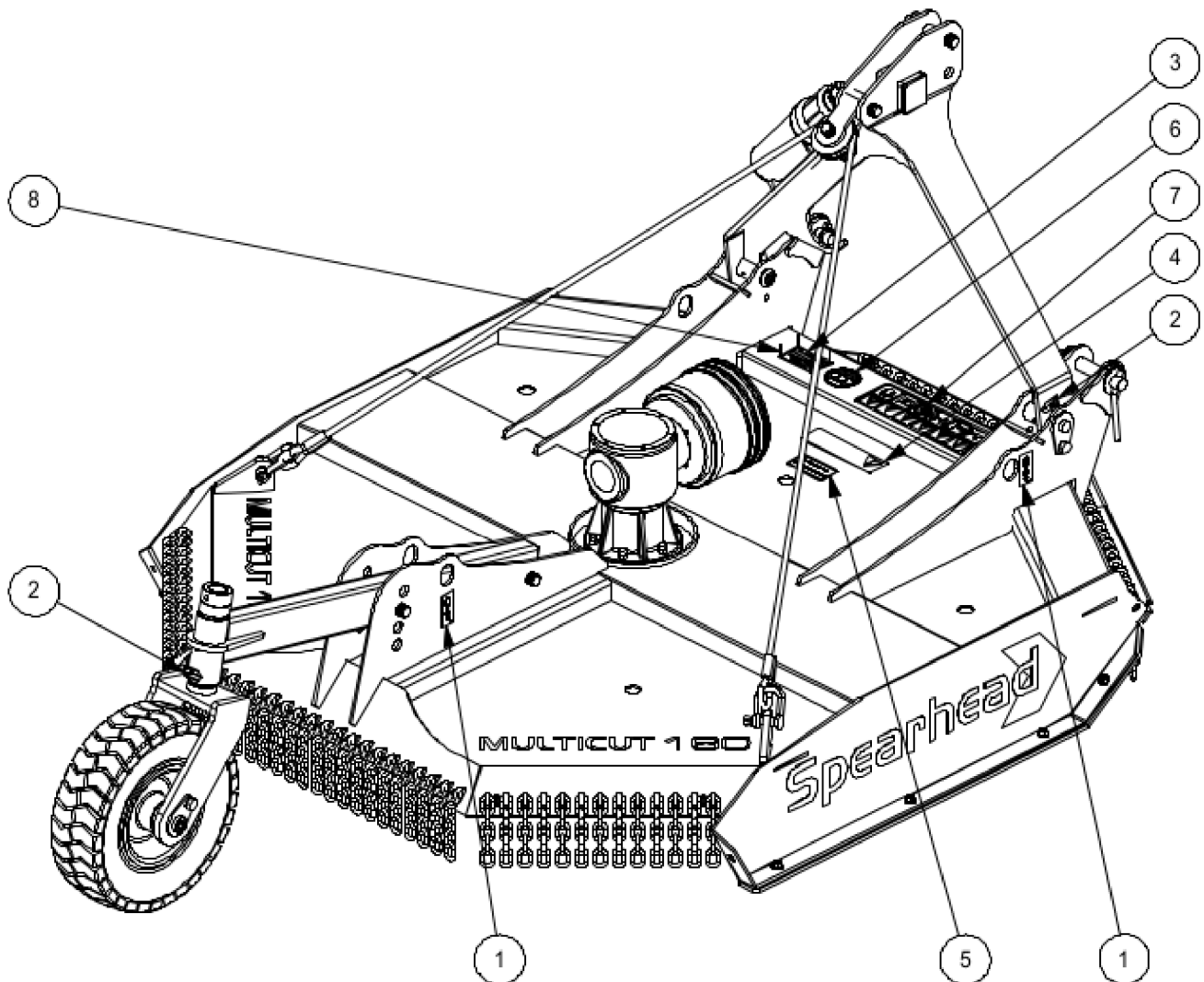


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	1770202R	DECK	1
2	1770204A	LH SKID	1
3	1770204AR	RH SKID	1
4	2770509	CSK SCREW	8
5	2770434	WASHER	8
6	2770412	NYLOCK NUT	8
7	2770417	NYLOCK NUT	6
8	2770420	BOLT	6
9	2770436	WASHER	12
10	1770227	FRONT SKIRT BRACKET	1
11	6770923	FRONT WIRE ROPE	1
12	6770907	WIRE GRIP	6
13	8770621	CHAIN	114
14	6770919	REAR WIRE ROPE	1
15	6310208	CAT 2 CRANKED PIN	2
16	6310206	LYNCH PIN	2

Spearhead Multicut 160 & 200

SI80020.19

Multicut 160/200 Engineering Decals

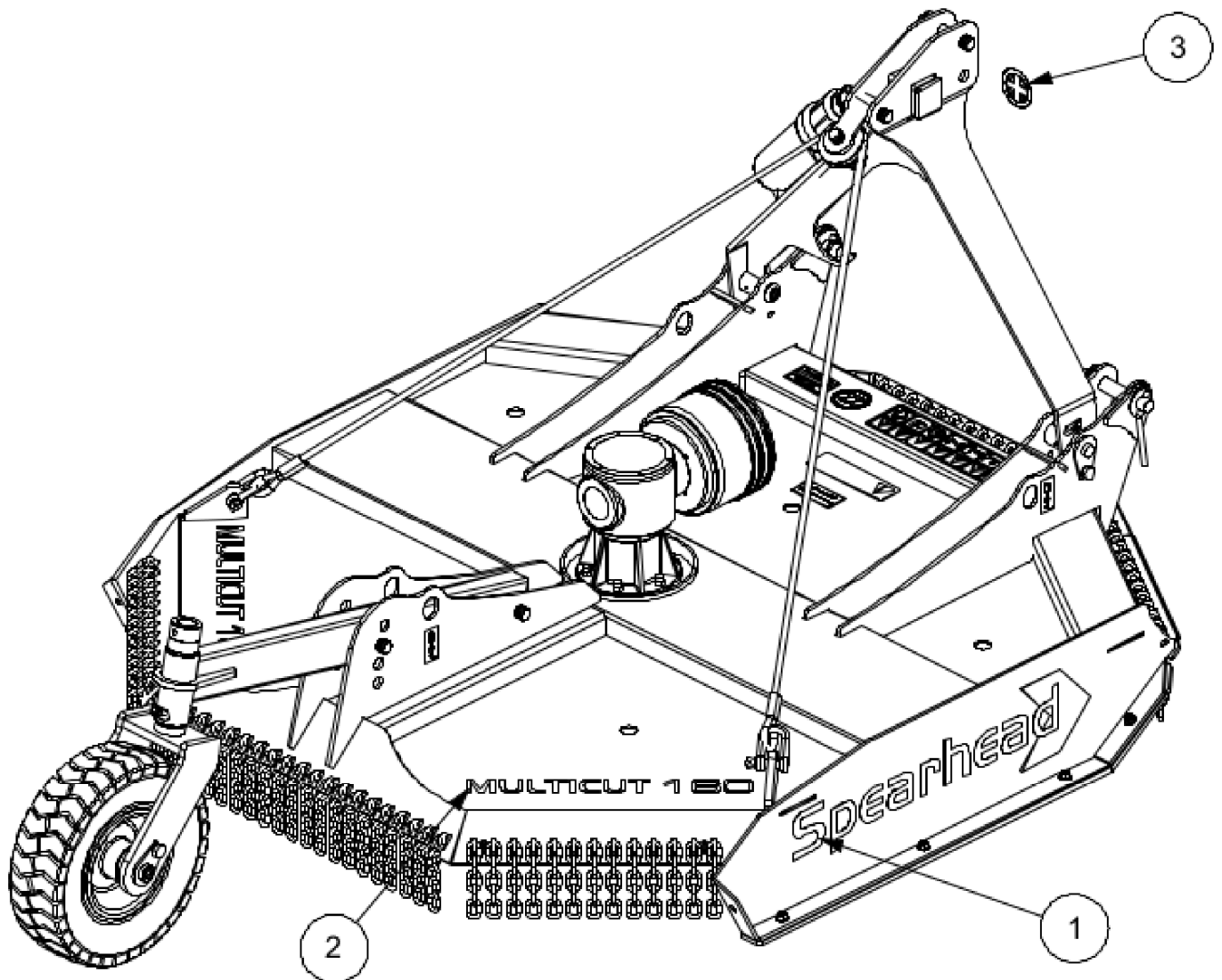


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	8770342	LIFT POINT	4
2	8770322	GREASE POINT	3
3	8770330	SERIAL PLATE	1
4	8770346	CHAINS IN TENSION	1
5	8770305	PTO SPEED 540 RPM	1
6	8770604	INSPECTION DECAL	1
7	8770617	ROTARY, LINKAGE SAFETY DECAL	1
8	7103230	POP RIVET	4

Spearhead Multicut 160 & 200

SI80020.21

Multicut 160 Marketing Decals

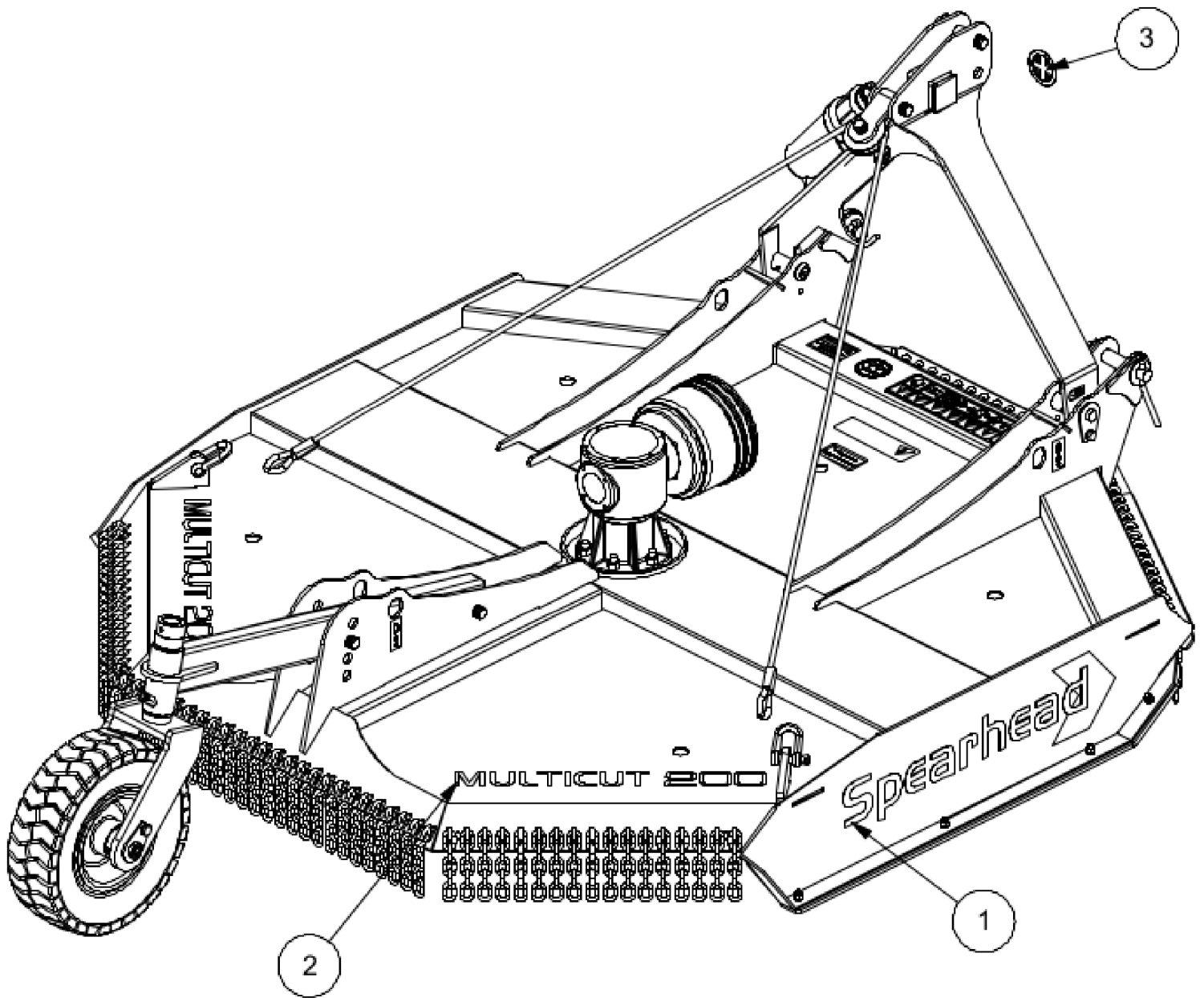


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	8770371	SPEARHEAD DECAL	2
2	8770671	MULTICUT 160 DECAL	2
3	8770307	GREAT BRITAIN DECAL	1

Spearhead Multicut 160 & 200

SI80020.22

Multicut 200 Marketing Decals

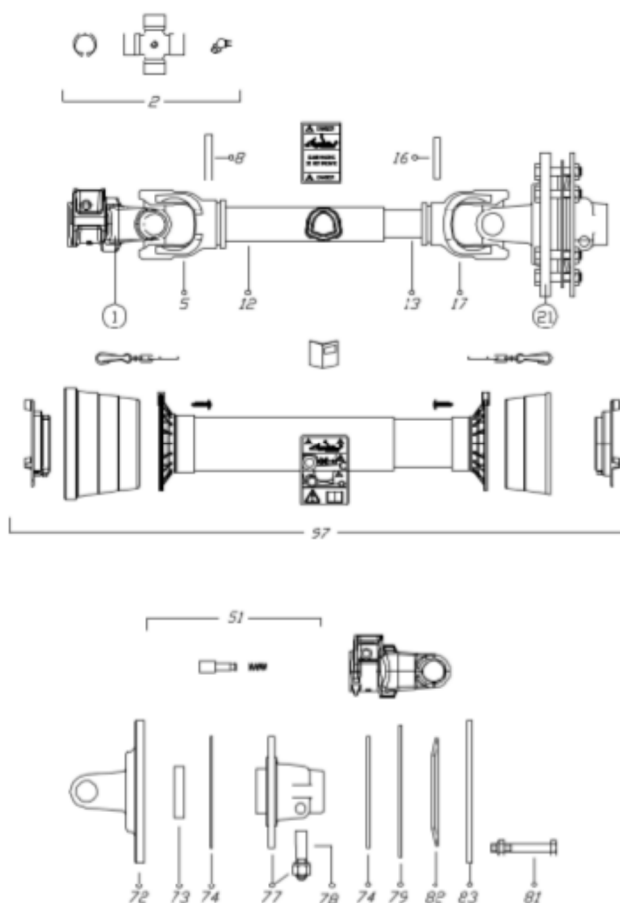


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	8770371	SPEARHEAD DECAL	2
2	8770672	MULTICUT 200 DECAL	2
3	8770307	GREAT BRITAIN DECAL	1

Spearhead Multicut 160 & 200

5770587

Multicut 160/200 Input Shaft Assembly

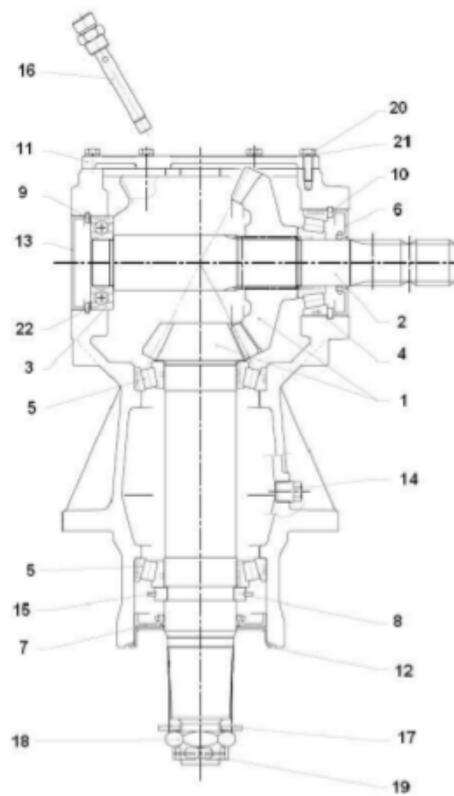


ITEM NO.	PART NO.	DESCRIPTION.	QTY.
1	5770587.01	YOKE	1
2	5770587.02	CROSS JOURNAL ASSEMBLY	2
5	5770587.03	OUTER TUBE YOKE	1
8	5770587.04	PIN	1
12	5770587.05	CARDAN TUBE	1
13	5770587.06	CARDAN TUBE	1
16	5770587.07	FLEXIBLE PIN	1
17	5770587.08	INNER TUBE YOKE	1
21	5770587.09	TORQUE LIMITER	1
51	5770587.10	COMPLETE PUSH BUTTON	1
72	5770587.11	FLANGE YOKE	1
73	5770587.12	BUSH	1
74	5770587.13	LINING	2
77	5770587.14	HUB	1
78	5770587.15	TAPER PIN	1
79	5770587.16	INNER PLATE	1
81	5770587.17	SCREW AND NUT	8
82	5770587.18	SPRING PLATE	1
83	5770587.19	PRESSURE PLATE	1
97	5770587.20	SAFETY GUARD	1

Spearhead Multicut 160 & 200

5770004/5770002

Multicut 160/200 Gearbox Components



ITEM NO	PART NO.	DESCRIPTION.
1	5771418	GEARSET - MULTICUT 160
	5771419	GEARSET - MULTICUT 200
2	5771403R	SHAFT
3	4771600	BEARING
4	4771601	BEARING
5	4771602	BEARING
6	4771124	SEAL
7	4771500	SEAL
8	5771422	COLLET
9	2771600	CIRCLIP
10	2771129	CIRCLIP
11	5771401	GUARD/COVER
12	5771406	GUARD/COVER
13	4771503	SEAL
14	5771415	PLUG
15	2771108	CIRCLIP
16	5771416	DIPSTICK
17	5771410	WASHER
18	5771409	NUT
19	2770477	PIN
20	5771407	BOLT
21	2771408	WASHER
22	5771423	SHIM SET

Spearhead Machinery
Green View
Salford Priors
Evesham
Worcestershire
WR11 8SW

Tel: 01789 491860

Fax: 01789 778683

www.spearheadmachinery.com

enquiries@spearheadmachinery.com