

Operator Manual & Parts List

MAJOR SIDE SPREADER

750SP



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While every effort has been made in the production of this manual to ensure that the information contained herein is full and correct, Major assumes no responsibility for errors or omissions.

Major reserves the right to modify the machinery and the technical data contained within the manual without prior notice.

Further to this, Major assumes no liability for any damages which may result from the use of the information contained within this manual.

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EEC certificate of conformity for machines

(conforming to Directive 98/37/EEC)

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declares in sole responsibility that the product:

SIDE SPREADER

When properly installed, maintained and used only for its intended purpose, complies with all the essential Health & Safety requirements of:

- **THE SUPPLY OF MACHINERY (SAFETY) REGULATIONS 2008.**
- **S.I. No. 299 of 2007**, Safety, Health and Welfare at Work (General Application) Regulations 2007 **(Ireland)**.
- **Health & Safety at Work, etc. Act 1974 (c.37) (UK).**
- **EN ISO 14121-1: 2007** 'Safety of machinery. Principles for risk assessment'.
- **EN ISO 13857** - Safety of machinery: Safety distances to prevent hazard zones being reached by upper and lower limbs.

I certify on behalf of Major Equipment Int. Ltd., that this machine when properly installed and operated correctly, complies with all the essential Health & Safety requirements of all legislation referred to above.

Signature :



Managing Director

Date 12/01/2012

Introduction

Thank you

We appreciate having you as a customer and wish you many years of safe and satisfied use of your machine.

Using Your Operator's Manual

This manual is an important part of your machine and should remain with the machine when you buy it.

Reading your operator's manual will help you and others avoid personal injury or damage to the machine. Information given in this manual will provide the operator with the safest and most effective use of the machine.

Sections in your operator's manual are placed in a specific order to help you understand all the safety messages so you can operate this machine safely. You can also use this manual to answer any specific operating or servicing questions.

Safety Issues

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

Product Identification

Machine Serial Numbers

If you need to contact MAJOR or your MAJOR dealer for information on servicing or spare parts, always provide the product model and serial numbers.

We suggest that you record your machine details below:

Model No: _____

Serial No: _____

Date of Purchase: _____

Dealer Name: _____

Dealer Telephone: _____

Product Specifications

MODEL	750SP1
Capacity	1261 Gallons 5734 Litres
OA Length (Hitch to tank end)	4.5m
OA Width (Tyre dependant)	2.3m
OA Height (Add tractor hitch)	2.25m
Weight (Empty)	1655 Kg
Weight (Full)	4835 Kg

Register Your Product and Warranty Online

To register your product through the Internet, simply go to the Support section on www.major-equipment.com. Completing the information, either online or with the product warranty card, will ensure the customer that their product receives all post sales service and important product information.

Safety

Machine Safety Labels

The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards.

On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol.



To prevent Serious Injury or Death

- Avoid unsafe operation or maintenance.
- Do not operate or work on this machine without reading and understanding the operator's manual.
- If manual is lost, contact your nearest dealer for a new manual.



To avoid injury, read the manual

⚠ ATTENTION!! ⚠

CHECK TIGHTNESS OF TRANSMISSION BOLTS AT EVERY SERVICE.

Check transmission bolts

CHECK WHEEL NUTS DAILY
TYRE PRESSURE
2 BAR

Check wheel nuts and tyre pressure

WARNING

CHECK WHEEL BEARINGS AFTER THE FIRST 100 HOURS WORK AND TIGHTEN IF NECESSARY

SEE MANUAL FOR SERVICE INTERVAL

Check the wheel bearings

⚠ WARNING



DO NOT GO NEAR LEAKS

- High pressure oil easily punctures skin causing serious injury, gangrene or death.
- If injured, seek emergency medical help, immediate surgery is required to remove oil.
- Do not use finger or skin to check for leaks.
- Lower load or relieve hydraulic pressure before loosening fittings.

High oil pressure hazard



PTO entanglement hazard - keep clear of PTO drives.

Operating Safely

1. Read and familiarize yourself with this manual.
2. Read section headed MAINTENANCE.
3. This machine is to be used only for purposes described in this manual.
4. The warning signs and safety labels should be adhered to and replaced if lost.
5. Keep all nuts, bolts and screws tight and ensure that the machine is regularly lubricated to keep in a safe working condition.
6. Maintenance must be carried out when the tractor engine is stopped and park brake applied and ignition key removed.
7. When parking tractor or leaving unattended, disengage the PTO shaft, apply parking brake and remove ignition key.
8. Keep all PTO guards, transmission and chain guards in position while in operation.
9. When fitting the PTO shaft, check PTO spring pins in yoke end are properly engaged in the slots.
10. PTO guards should be kept in a good condition and well lubricated by greasing properly (See section headed Maintenance)

This machine is designed to operate at 540 RPM. Ensure tractor PTO output is set at 540 RPM. It must only be used with a suitable tractor (see product specifications) and driven by an adequate drive-line by the tractor PTO. All other use is strictly prohibited.

Users should become thoroughly familiar with the contents of this manual before using, servicing and mounting the implement to the tractor and all other pertinent operations. Never wear jewellery, loose clothing such as ties, scarves, belts, unbuttoned jackets or dungarees with open zips which could become caught up in moving parts.

Always wear approved garments complying with accident prevention provisions such as non-slip shoes, ear muffs, goggles and gauntlets. Wear a jacket with reflecting stickers if the implement is used near public highways.

Consult your retailer, the Labour Health Service or your nearest equivalent authority for the information about the current safety provisions and specific regulations with in order to ensure personal safety.



ALWAYS DISENGAGE PTO, SWITCH OFF THE TRACTOR ENGINE AND ENGAGE THE PARKING BRAKE BEFORE MAKING ADJUSTMENT TO THE MACHINE.

Workstation

The operator must remain seated while working the machine. When the wings need to be raised and lowered the operator must leave the tractor. Always ensure the PTO has been turned off and the parking brake applied before leaving the tractor cab. The operator must always apply the parking brake, and turn off the engine before leaving machine or carrying out maintenance.



NEVER OPERATE THE HYDRAULICS WITH THE TRACTOR SWITCHED OFF

Regulations for use of the transmission



The transmission protected throughout the machine by both PTO shafts and bolt down covers. All guarding should be kept efficient and in good condition. If the condition is poor, the guarding should be renewed before the implement is used.

UNLESS IT IS CORRECTLY PROTECTED THE TRANSMISSION COULD CAUSE DEATH SINCE IT CAN CATCH ON PARTS OF THE BODY OR CLOTHING

Ensure retaining chains are correctly anchored on all PTO shafts, preventing them from turning. Ensure drive line can turn easily within the shield. Keep spline grooves clean and greased so that PTO shaft can connect easily. Besides being described in this manual, the method by which the PTO shaft is connected to the tractor must be checked out with the instructions in the tractor manufacturer's manual.

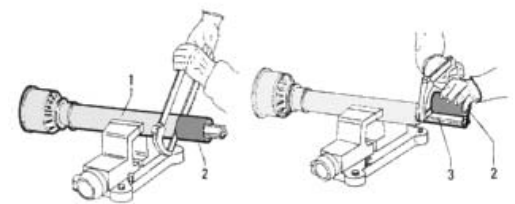
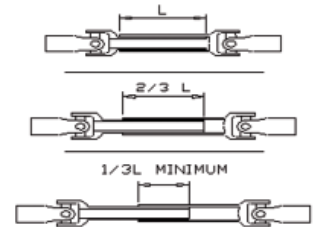
PTO Shaft Safety

MAX PTO INPUT 540 R.P.M. Contact your nearest dealer or a specialised retail outlet if the PTO must be replaced with a longer one, since this must belong to the same power category and possess the same characteristics. An unsuitable PTO could easily break.

The tractor PTO shaft length may be altered to suit the individual tractor model. When the machine is in operation, the PTO shaft should have a minimum 1/3 engagement as shown in the diagrams. After the machine has been hitched to the tractor, it should be checked in various positions that the drive line is the correct length. If the PTO is too short and tends to slip out of place, it must be replaced with a longer one.

If the PTO shaft is too long, it should be shortened in the following way:

- Set the machine at a minimum distance from the tractor, then brake the tractor and switch off the engine.
- Separate the two halves of the PTO. Insert the female part into the tractor PTO and the male part into the machine PTO, checking that the position is correct by means of the fixing pins.
- Line up the two halves of the PTO together, keeping them parallel.
- Using a felt tip pen, match mark the place where the two halves must be shortened as shown.
- First cut shield "1" and use part "2" as a reference to cut the splined shaft.
- Proceed in the same way for the second half.
- Trim and chamfer the two cut ends of the PTO and clean off all swarf and shavings.
- Grease the two profiles and join the two halves of the PTO together.
- Mount the PTO shaft and check that its length is correct as before.



The shaft must not reach the end of the tube or project from this. Ensure the PTO does not bottom when turning

Driving Safely on Public Roads

Check the local Highway Code regulations before driving the tractor on public highways with a towed implement. Check the reflectors, hazard flashers and/or projecting load indicators are installed when required and efficient. These indicators must be installed correctly and easily seen by the drivers of other vehicles.

Bystanders must not be allowed to lean against or climb onto the machine during transport or while working. Do not allow bystanders to ride on the machine.

MAXIMUM TRANSPORT SPEED MUST NOT EXCEED 20 MPH (33 km/hr approx (UK)

Operating the Machine

Inspections before Use

Always disengage PTO, Switch off tractor engine and engage the parking brake before making adjustment to the machine.

1. Check the wheels nuts before use.
2. Check the tyre pressure
3. Check tightness of all nuts, bolts and retaining screws after the first and second hours of work.
4. Ensure safety guards and flaps are in place at all times where fitted.

Starting Regulations

Always check that any imminently dangerous conditions have been eliminated before using the machine. Ensure all guarding is present & the operator is fully aware of the operations of the machine

Always ensure the pins lock the PTO shaft yoke ends onto the spline shafts on both the tractor and the implement. An unlocked shaft could slip out of position, causing notable mechanical damage and serious injury to both operator and bystanders.

Hitching to the Tractor



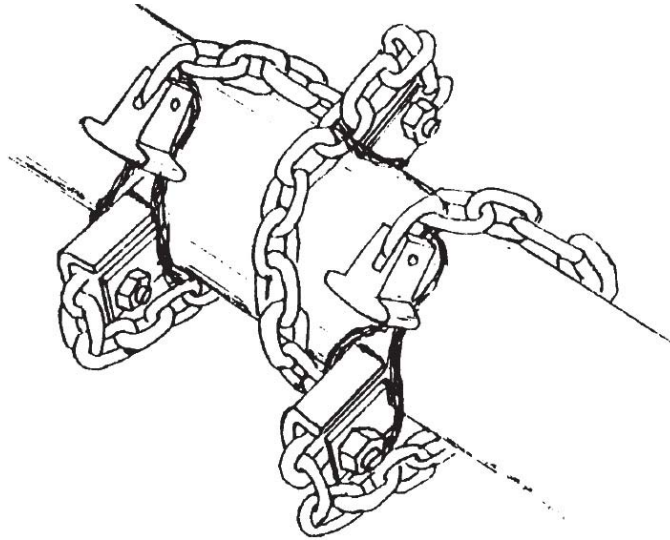
ALWAYS OPERATE ON LEVEL GROUND WHEN HITCHING/UNHITCHING THE IMPLEMENT. THIS WILL PREVENT DANGEROUS MOVEMENT. NEVER ALLOW ANYONE TO STAND BETWEEN THE TRACTOR AND THE MACHINE.

The MAJOR Muck-Out chassis connection point is designed for both pick-up hook and drawbar. Read all items of section headed SAFETY INSTRUCTIONS and especially items 1 and 2 (attaching Muck-Out).

Operating the Machine

1. Read all items of sections SAFETY INSTRUCTIONS and MAINTENANCE.
2. Different types of manure require different settings of the flail chain. NOTE: Flail tube must be balanced at all times. Any work carried out on one chain must be repeated on the chain on the opposite side of the flail tube.

Manure Type	Chain Setting
Consolidate Cow Manure	All flail chains should be used.
Hen Manure	Alternative pairs of flail chains to be secured with wire.
Slurry	All the flail chains except the last 4 or 6 in the rear of the drum to be secured with wire to the flail tube or removed. See Fig.1 below.

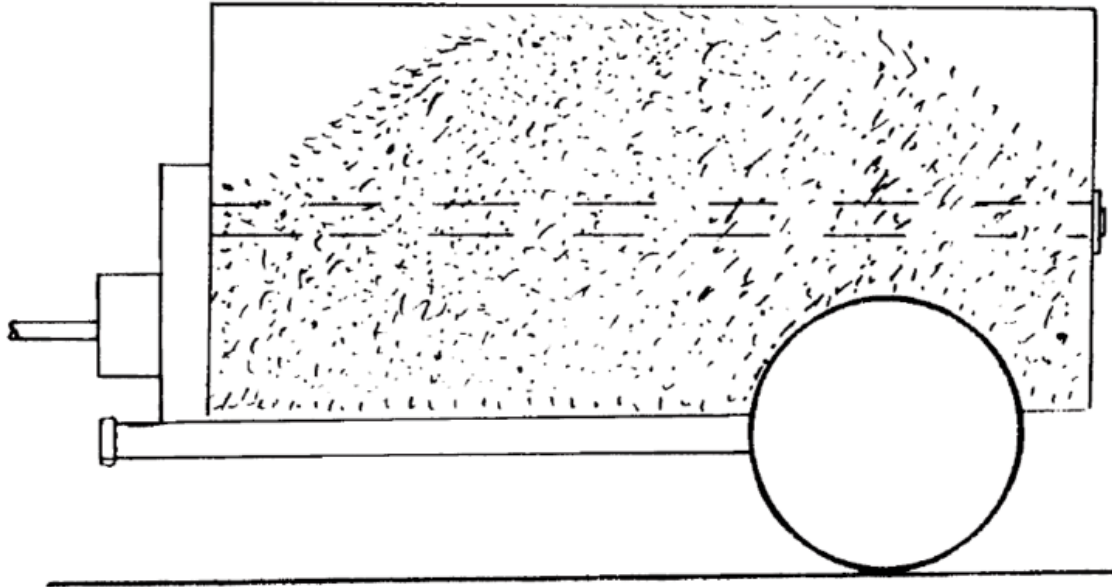


3. Different types of manure also require different tractor and tube R.P.M. and different tractor M.P.H.

Manure Type	Tractor M.P.H.	Tube R.P.M.
Consolidate Cow Manure (Heavy)	Slow	Fast
Hen Manure (Light)	Fast	Slow
Slurry (Liquid)	Fast	Fast

4. Different types of manure also require loading techniques.

a. Consolidate Cow Manure flails are slightly covered then: Fill the drum behind the flail tubes firstly at the ends. When the end flails are slightly covered then fill towards the centre of the drum. When flail tube level is reached, slowly rotate the flail tube. This will settle manure and wrap chains around flail tube resulting in less power requirements in an initial commencing of spreading. Following this fill the centre of the drum to the hinge point of top cover. (See Fig. 2). NOTE: The end flails should not be covered with manure. If the same tractor is being used for loading and spreading, before driving off, engage the drive to the P.T.O. shaft and slowly rotate the flail tube until the chains wrap around it before the load settles during transit.



- b. Hen Manure: Read item 3 (b) of OPERATING INSTRUCTIONS. Load the manure in the drum heaping up in the middle.
- c. Slurry: Read item 3 (c) of OPERATING INSTRUCTIONS. Care should be taken not to over fill drum to avoid spillage onto the highway during transit.

Maintenance

The machine must always be disconnected from the tractor before any cleaning, lubricating and servicing operations can be carried out.

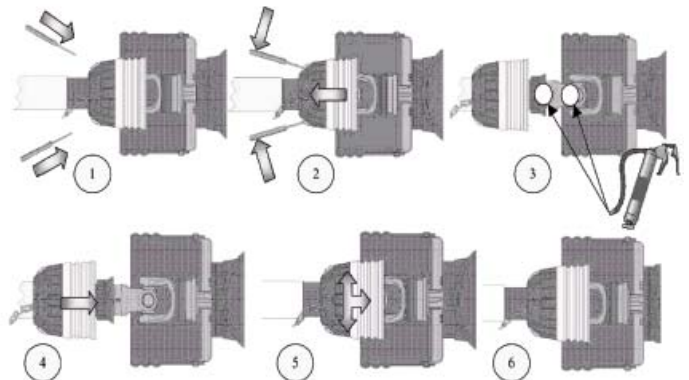
If emergency operations are required whilst the machine is connected to the tractor, switch off the engine, engage the parking brake and disengage the PTO.

Good, regular maintenance and correct use are if the machine is to remain safe and long lasting.

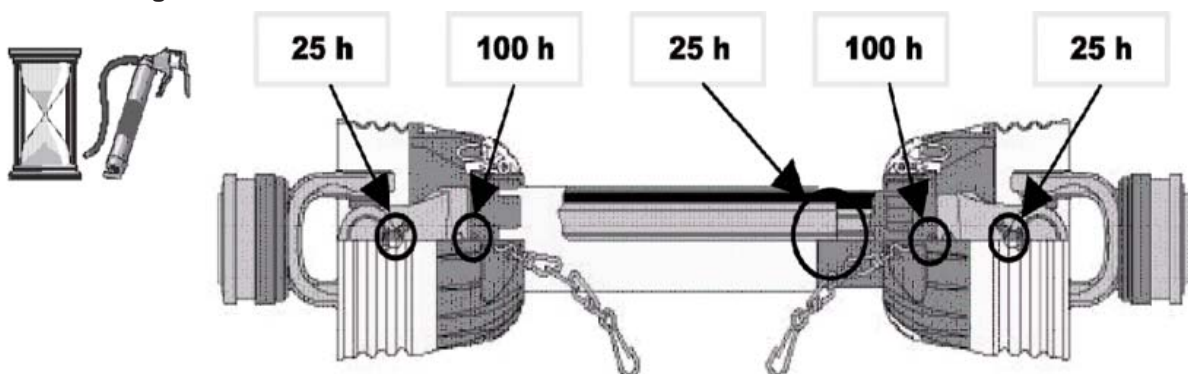
PTO Shaft Maintenance

Guard Removal and Yoke End Greasing

1. Prise back locking tabs
2. Pull back PTO Guard
3. Grease points as shown
4. Push Guard into position
5. Click into place
6. Tie check chain



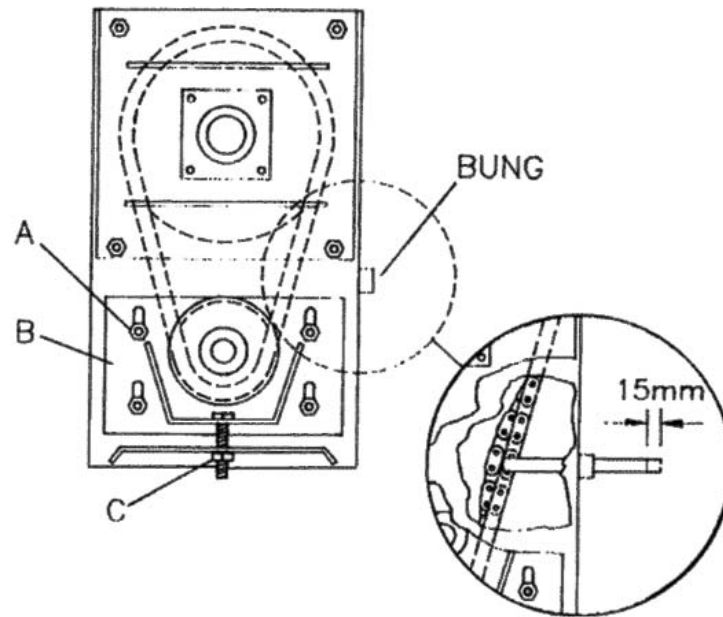
PTO Guard Greasing Intervals



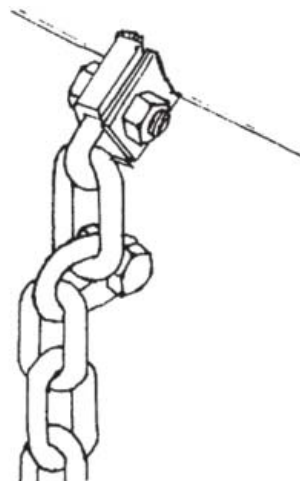
Maintenance Schedule

1. Grease universal joint drive shaft, bearing housing, Rotor Bearings, Road Wheel Hub Bearings, daily and on delivery.
2. Lubricate Lid Hinge and Lid Operating lever, monthly.
3. Check all nuts and bolts are tight, weekly and on delivery. Drive chain tension to be checked monthly as follows: (See fig. 3)
 - a. Slacken nuts "A"
 - b. Allow Plate "B" to hang free which will supply sufficient tension to drive chain by means of its own weight. Tension chain using adjuster "C" until chain is taut as shown in Fig. 3a
 - c. Re-tighten bolts "A".

Rod should be able to push chain approx. 15mm ensuring chain is not strained after adjustment.



4. With continual use it is possible that the flail chain could stretch until the flail heads hit the side of the drum. To prevent this happening, shorten the flail chain by inserting a M10 x 25 bolt and self-locking nut, through a chain by approx. 18mm. an alternative method is to remove two links. (See Figure 4)

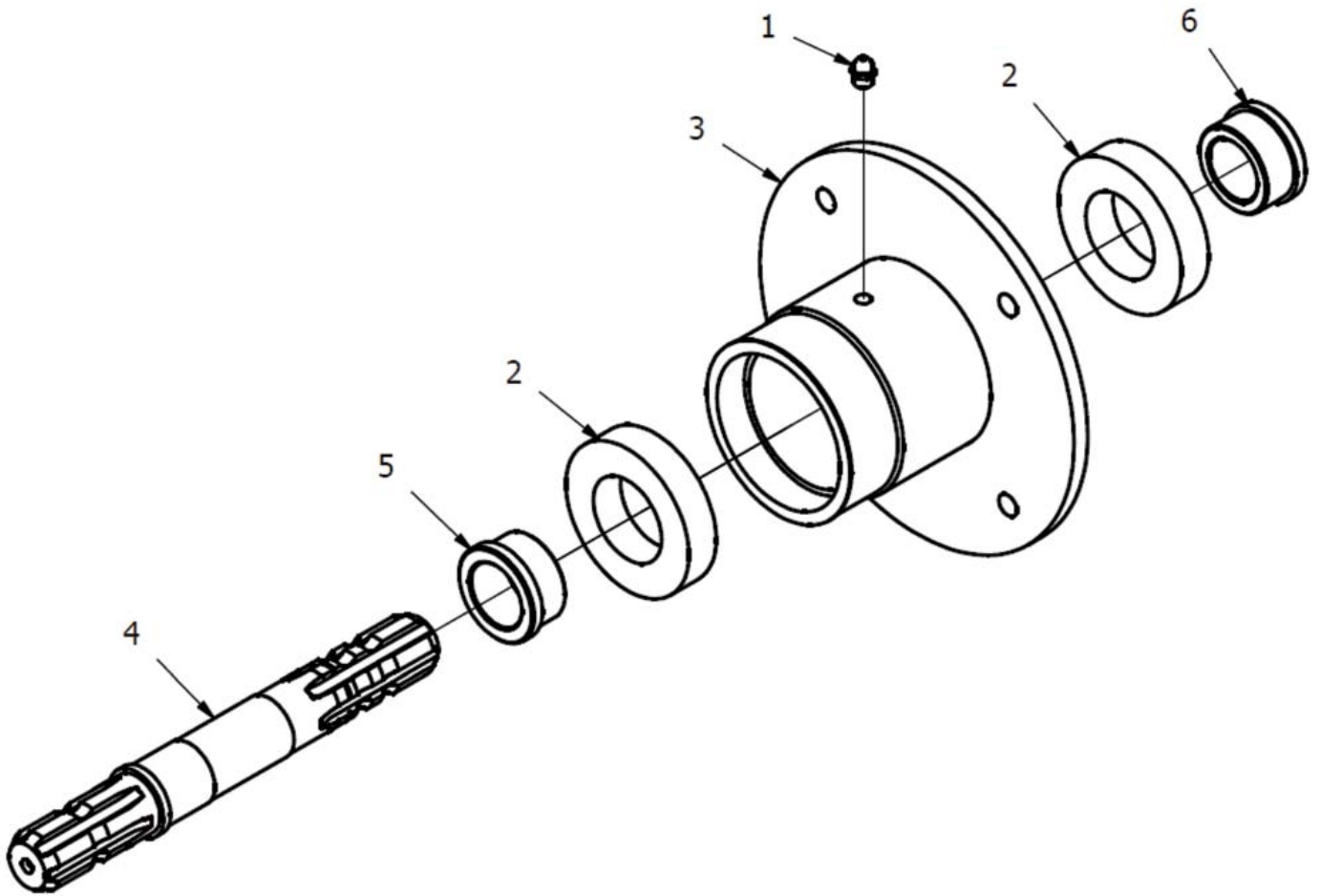


To prolong the life and maintain the efficiency of the rotor (Flail tube), the flail chains must balance. Any work carried out on one chain must be repeated on the flail chain opposite the rotor to maintain the equilibrium of the rotor. Premature flailing of the bearings can result if the rotor is used for long periods in an out of balance state.

5. Continued use of the spreader will cause the flail chain to wear and these must be replaced when the diameter of any part of the links is less than 8mm. When replacing the chain always re-new the bolt and nut.

Item	Part No	Description	Qty
1	11T-AX	1100 BRAKED AXLE	1
2	75MS-BGA	750 SPREADER BODY	1
3	75MS-HH01	HOSE HANGER	1
4	ASA10016Z	Major Primary Sprocket	1
5	7SP-DP (3722170)	DRAIN PLATE	1
6	GS75MO/3	SPREADER LID (750)	1
7	GS81 (7SP-L2)	LID HINGE	3
8	750/R	ROTOR (750)	1
9	7SP-ROT5	BRG SPACER BLOCK	2
10	7SP-ROT8	REAR BRG CAP	1
11	7SP-SB2	SPROCKET BOX LID	1
12	7SP-SB5	BOTTOM HOUSING PLATE	2
13	9SP-PTOP	PTO COVER CLAMP	1
14	GS40A	INPUT HOUSING ASSY	1
15	GS75	STARTER FLAIL	4
16	GS76	MUCK SPREADER RAM	1
17	MG165F1	STD TANKER HANDBRAKE	1
18	TMBRRL	TIMBER RAIL	1
20	15X225NR	DIA 1800x790mm	2
21	190.000.545	PTO GUARD (OVAL)	1
22	ASA10036Z	1 1/4" SIMPLEX 36T SPRKT	1
23	FCH1215	750 MS FLAIL CHAIN	28
24	FWM12	M12 FLAT WASHER	8
25	FWM16	M16 FLAT WASHER	4
26	GS44C	750 MS DRIVE CHAIN	1
27	LC2700	TRIANGLE REFLECTOR	2
28	LC360	LAMP	2
29	M10	M10 NYLOC NUT	3
30	M10x65CBN	M10x65 CUP HEAD	3
31	M12	M12 NYLOC NUT	56
32	M12x100BZP	M12x100 BOLT	5
33	M12x30SZP	M12x30 SET BOLT	20
34	M12x50BZP	M12x50 BOLT	28
35	M12x50SZP	M12x50 SET BOLT	1
36	M12x70BZP	M12x70 BOLT	1
37	M16	M16 NYLOC NUT	28
38	M16x40SZP	M16x40 SET BOLT	16
39	M16x50BZP	M16x50 BOLT	4
40	M16x75BZP	M16x75 BOLT	8
41	M20HEX	M20 PLAIN NUT	1
42	M20x120SZP	M20x120 SET BOLT	1
43	QV70S	BRAKE RAM SPRING	1
44	UCF211-32CPT	FLANGE BRG	2
45	V600860ENC12C12	COLLAR-COLLAR PTO	1
46	QV70	STD TANKER BRAKE RAM	1
47	MO1 (GS 1001)	ROTOR STUB	1
48	75SP-SB3	BRG FRONT PLATE	1
49	7SP-ROT6	BEARING END CAP	1
50	7SP-ROT7	BRG SHIM PLATE	1
51	7SP-SB4 (GS45)	BRG HOUSE MOUNT	1
52	FP44	FLAIL CHAIN PLATE	28
53	TA LGPLITL (2TKS-L)	LGP LIGHT BRACKET (LH)	1
54	TA LGPLITR (2TKS-R)	LGP LIGHT BRACKET (RH)	1
55	12x134FSKS	1/2"x1 3/4" FINE SOCKET HEAD 12.9	7

Side Spreader - Input Housing



Item	Part No	Description	Qty
1	820	GREASE NIPPLE 1/8" STR	1
2	6210 RS	90x50x20 DEEP GROOVE	2
3	GS40	INPUT BRG HOUSING (GS 40)	1
4	GS46	DIA 1 3/8" 6 SPLINE SHAFT	1
5	GS46A	INPUT LARGE BUSH	1
6	GS47	INPUT SMALL BUSH (GS47)	1

Warranty: This machine is guaranteed for 12 months. No warranty is given where the machine is being used as a hire machine. Warranty is against faulty workmanship or parts, with the exception of components not of MAJOR'S manufacture or design, i.e. hydraulic components, universally jointed shafts, chains and tyres, etc., which are subject to the original manufacturers conditions. To register your machine for warranty, please go to the support section of our website www.major-equipment.com and enter your details.

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