

Operator Manual & Parts List

MAJOR RANGE OF

FLAIL MOWERS

MJ22-100, MJ22-140 & MJ22-180

MJ24-230 & MJ24-280

MJ26-230 & MJ26-280



Head Office

Major Equipment Intl. Ltd. Ballyhaunis, Co. Mayo, Ireland.

Tel.: +353 (0) 9496 30572 Fax: +353 (0) 9496 30788

Email: info@major-equipment.com

UK Office

Major Equipment Ltd. Major Industrial Estate, Middleton Rd., Heysham, Lancs. LA3 3JJ

Tel.: +44 (0) 1524 850 501 Fax: +44 (0) 1524 850 502

Email: ukinfo@major-equipment.com

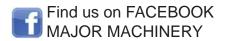
NETHERLANDS & GERMANY OFFICE

Major Equipment Intl. Ltd. Postbus 29, NL-7700 AA, Dedemsvaart, Nederland.

Tel: +31 (0) 6389 19585

Email: euinfo@major-equipment.com

Web: www.major-equipment.com





Disclaimer

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)

Company: Major Equipment Ltd.

Address: Coolnaha,

Ballyhaunis, Co. Mayo, Ireland.

Tel. +353949630572 Fax +353949630788

declares in sole responsibility that the product:

FLAIL MOWER

When properly installed, maintained and used only for it's 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).

Managing Director

- EN ISO 14121-1: 2007 "Safety of machinery. Principles for risk assessment".
- EN 745 Agricultural Machinery Rotary Mowers and Flail Mowers Safety.
- **EN ISO 13857** Safety of machinery: Safety distances to prevent hazard zones being reached by upper and lower limbs.
- 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, EN292, EN 704

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 : _____ 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

We suggest that you record your machine details below:

Machine Serial Numbers

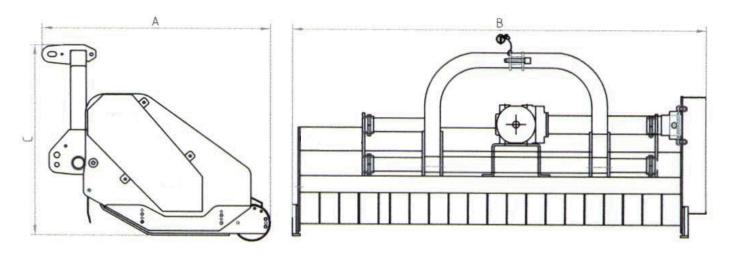
If you need to contact MAJOR or your MAJOR dealer for information on servicing or spare parts, always provide the product model and serial numbers.

| , | , |
|-------------------|---|
| Model No: | |
| Serial No: | |
| Date of Purchase: | |
| Dealer Name: | |
| Dealer Telephone: | |

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.

Product Specifications



| Model | MJ22-100 | MJ22-140 | MJ22-180 | MJ24-230 | MJ24-280 | MJ26-230 | MJ26-280 |
|---------------------|----------|----------|----------|----------|----------|----------|----------|
| Working width (mm) | 930 | 1330 | 1780 | 2245 | 2740 | 2245 | 2740 |
| A (mm) | 858 | 858 | 858 | 1156 | 1156 | 1200 | 1200 |
| B (mm) | 1070 | 1470 | 1920 | 2472 | 2967 | 2560 | 3030 |
| C (mm) | 798 | 798 | 798 | 970 | 970 | 1060 | 1060 |
| Weight (kg) | 220 | 260 | 300 | 685 | 800 | 690 | 810 |
| PTO (RPM) | 540 | 540 | 540 | 540 | 540 | 540 | 540 |
| Required power (HP) | 20-30 | 35-45 | 55-60 | 70-80 | 90-100 | 70-80 | 90-100 |
| No. of Blades | 28 | 40 | 52 | 52 | 60 | 52 | 60 |
| No. of Hammers | 14 | 20 | 26 | 26 | 30 | 26 | 30 |

Safety

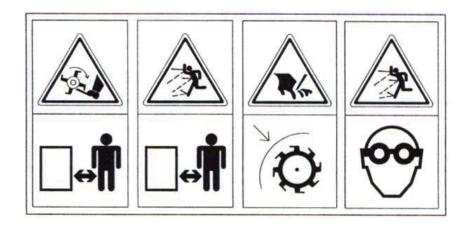
Machine Safety Labels

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

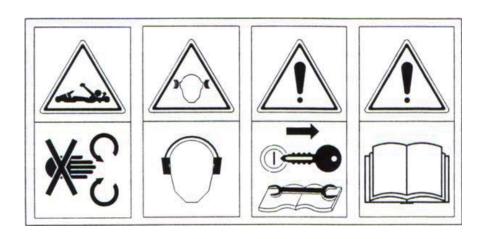


On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

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.







Safe Operation

The MAJOR Shredder is designed to operate at 540 RPM. Ensure tractor PTO output is set at 540 RPM. The MAJOR Shredder must only be used for cutting grass. Moreover, 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.



NEVER PLACE LIMBS UNDER THE MACHINE WHILE ROTORS ARE TURNING. ROTORS CAN REMAIN TURNING FOR UP TO 1 MINUTE AFTER DISENGAGING PTO.

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 to the gearboxes is 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 form 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

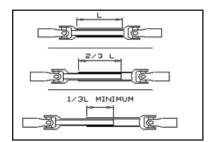
MAX PTO INPUT 540 R.P.M. Contact your nearest dealer or a specialised retail outlet if the PTO must be replaced with a longer one, since this must belong to the same power category and possess the same characteristics. An unsuitable PTO could easily break.

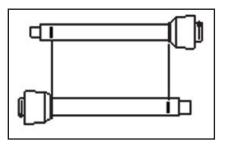
The tractor PTO shaft length may be altered to suit the individual tractor model. When the machine is in operation, the PTO shaft should have a minimum 1/3 engagement as shown in the diagrams. After the topper has been hitched to the tractor, it should be checked in various positions that the drive line 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.

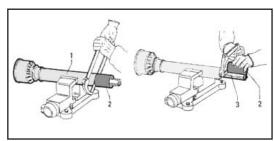
If the PTO shaft is too long, it should be shortened in the following way:

- 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 topper 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 30 km/hr (18 MPH)

General safety instructions

Please read carefully this section in order to avoid accidents:

- 1) Besides reading the operators manual, it is necessary to follow the general instructions relevant to safety, as prescribed by the Country Laws for the users of the agricultural machines.
- 2) Follow the instructions given by the stickers on the machines, especially the stickers relevant to safety.
- 3) Operate the machine only if it lies on the ground and it is parallel to it.
- 4) Never exceed the rpm indicated on the machine(540 rpm).
- 5) Fasten the shaft cover by means of the chains to avoid the rotation of the cover of the shaft.
- 6) Lower the machine to the ground before you operate it and check that nobody is in the working area of the machine.
- 7) Before beginning working, make sure that all the safety devices are correctly fitted and efficient before working.
- 8) Be careful when you work on stony fields and make sure that nobody stands close the working machine.
- 9) Before any maintenance, make sure that all the rotating devices are still and turn off the engine of the tractor, remove the key and apply handbrake.
- 10) During the transport on the roads, please observe the Highway Code Rules.
- 11) Be careful when connecting and disconnecting the machine.
- 12) Before leaving the tractor, stop the machine and lower it down on the ground. Turn off the engine of the tractor, remove the engine key and apply handbrake.
- 13) Before connecting or disconnecting the machine with the 3 point linkage lock the hydraulic raising device of the tractor to avoid it being activated.
- 14) Check the maximum allowed weights for the 3 point linkage connection.
- 15) The assembly and disassembly of the shaft shall be done only if the PTO is disconnected.
- 16) Before switching on the PTO make sure that the power and the rotation of the PTO of the tractor are suitable for the machine.
- 17) Never connect the PTO when the engine is turned on.
- 18) Before connecting the PTO make sure that nobody stands in the working area.
- 19) Nobody shall stand close the PTO when it is connected.
- 20) Before approaching the machine, check that it is completely still and that the engine of the tractor is turned off and the PTO is disconnected.
- 21) Periodically check the correct tightening of the screws and nuts, if necessary tighten them.
- 22) When the machine is raised for maintenance, make sure that the machine is safely and suitably supported. If repairs are necessary, please ask to the authorised workshops.
- 23) Dispose of lubricants respecting the laws which protect the environment.

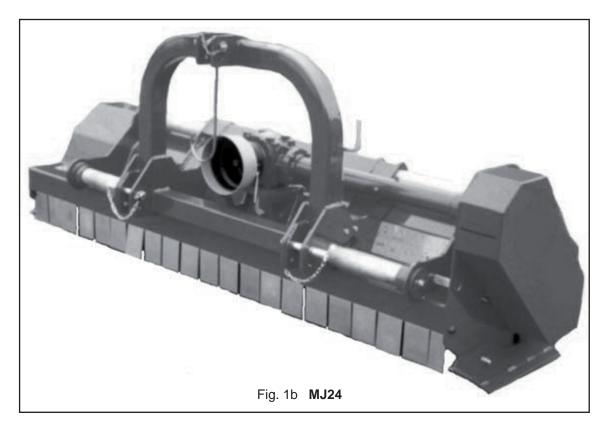
General description of the machine

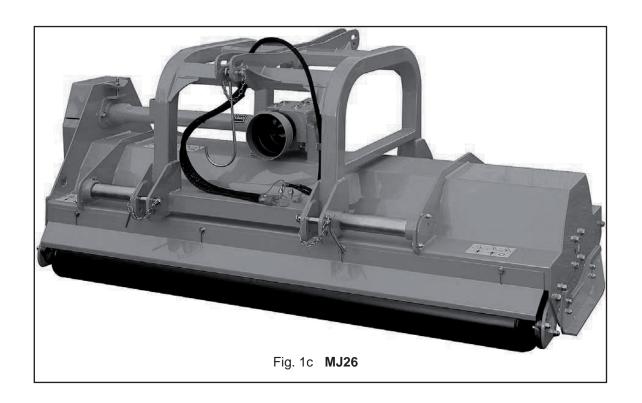
The shredder mainly consists of a steel frame which is the support for all the other components of the machine; it is designed to guarantee a perfect chopping of the product without having to use excessive power and complying with safety regulations.

The machine is designed to be installed on the rear part of the tractor. The machine must be connected to the tractor by using a 3 point linkage connection. The displacement of the connecting device could be manual or mechanical.

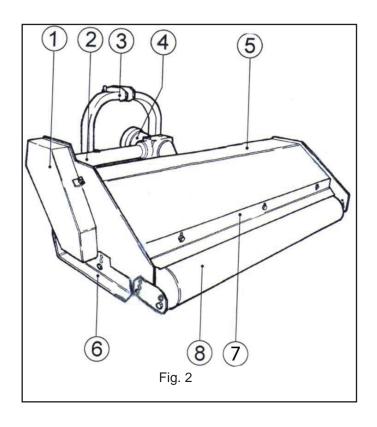
Inside the main body there is a rotor which is supported by two high resistance bearings and it is operated by transmission belts. The rotor is dynamically balanced to obtain a correct rotation with no vibrations. The rotor is equipped with a blades or hammers, which assure the perfect chopping of the product and good ventilation.







| 1 | Transmission guard |
|--------|--------------------|
| 2 | Gear box |
| 3 | 3 point linkage |
| 4 | PTO connection |
| | |
| 5 | Frame |
| 5 6 | Frame Skid |
| | |



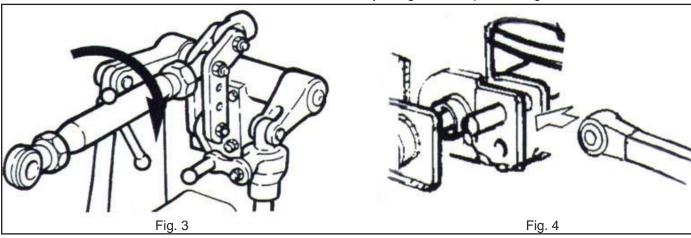
Operating the Machine

Installation of the machine

As the connecting arms of the tractors have different lengths, check the suitable position of the machine when connected with the tractor by lengthening or shortening the upper connection arm of the tractor (Fig. 3). If necessary, shorten the shaft following the instructions in this manual.

The connection of the tractor to the machine shall be done as described in Fig. 4.

The shredder models 160 - 180 - 200 - 230 can be connected to the tractors by using CAT II 3 point linkage connection. The models 250 - 280 - 300 can be connected to the tractors by using CAT III 3 point linkage connection.



Please follow the instructions below when connecting the shredder to the tractor:

- 1) Put the raising bars inside the connections of the shredder.
- 2) Insert the raising bars in the pins of the shredder and lock them with the suitable connection pins.
- 3) Insert the shaft and check that it is correctly locked.
- 4) Lock the bars of the raising devices with the suitable chains and tighteners.
- 5) Connect the machine by using the 3 point linkage connection and check that the machine lies parallel to the ground.
- 6) Connect hydraulics.
- 7) Check that the tractor has the suitable power to assure the correct operation of the machine and the correct control while working or during the transport on the road.

Transport position

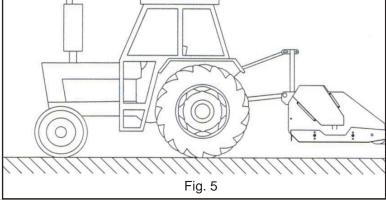
During the transport and any time the machine shall be raised, the raising device shall be adjusted to assure that the machine is 35cm over the ground (see Fig. 5).



Before raising the machine wait until the transmission and the rotor are completely still



During the transport of the shredder the PTO shaft must be disconnected.



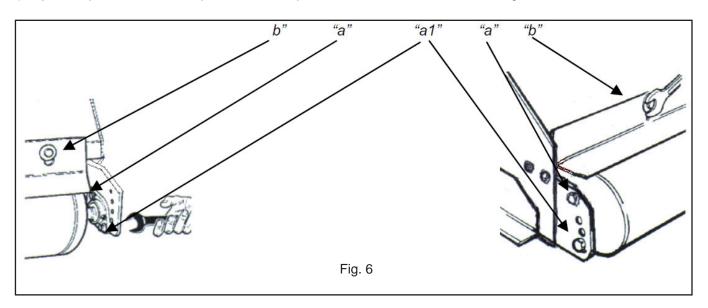
Position of the machine on the ground

Before starting working, check the position of the blades respect to the ground. If the blades touch the ground, adjust the levelling and support roller and the side skids.

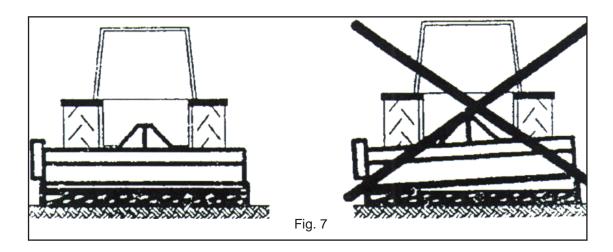
Adjustment of the levelling and supporting roller

To adjust the levelling and supporting roller, please proceed as follows (Fig. 6):

- 1) Loosen the locking screws "a", positioned at the ends of the levelling roller;
- 2) Remove the locking screws "a1";
- 3) Loosen the screws "b" of the scraper;
- 4) Adjust the height of the roller and check that the roller is parallel to the ground;
- 5) Reach the correct position, insert and tighten the screws "a1";
- 6) Adjust the position of the scraper in order it is placed 2mm far from the roller and tighten the screws.



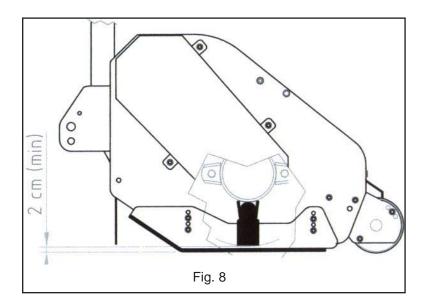
Before making any adjustments to the machine, turn off the tractor engine, remove the key and apply the handbrake. Make sure that the machine is parallel to the ground (Fig. 7).

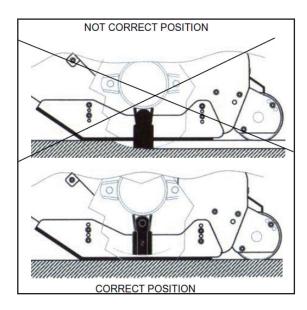


Adjustment of the skids

Adjust the position of the skids to avoid hammers or blades hitting the ground (see Fig. 8). The correct adjustment ensures that blades or hammers do not touch the ground even if it is not regular. If the above mentioned indications are not followed the blades or hammers can wear quickly and the transmission belts can be damaged.

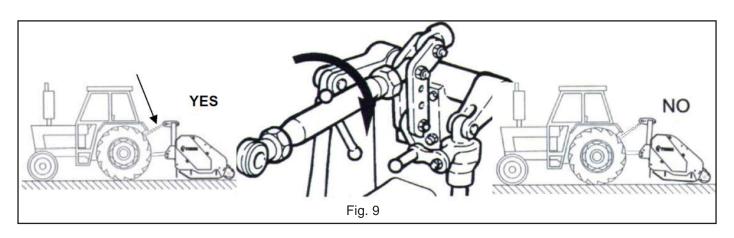
- 1) Remove the locking screws of the skids (see Fig. 8).
- 2) Adjust the height of the skids to reach the lower point of the blades and hammers.
- 3) When the correct position is reached, fasten the screws.
- 4) Check that the skids are at the same height of the frame of the machine.





Adjustment of the 3 point linkage

The machine shall be perfectly parallel to the ground to obtain a correct chopping of the product. The adjustment shall be done by operating the top link (see Fig. 9).

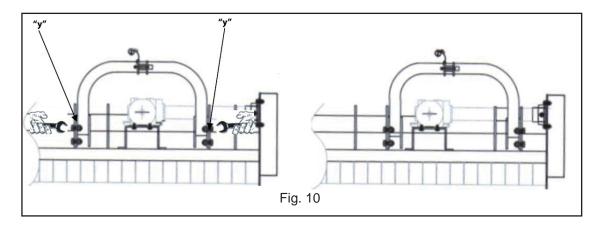


Working position and adjustment

The shredder is fitted with a MOBILE or MOVABLE 3 point linkage connection with 3 configurations:

- 1) Version with 2 position connection, fixed with screws and nuts;
- 2) Version with movement screw with manual progressive operation;
- 3) Version with hydraulic movement operated by a hydraulic cylinder powered by the tractor. The tractor operates the cylinder by means of the lever of the hydraulic distributor.

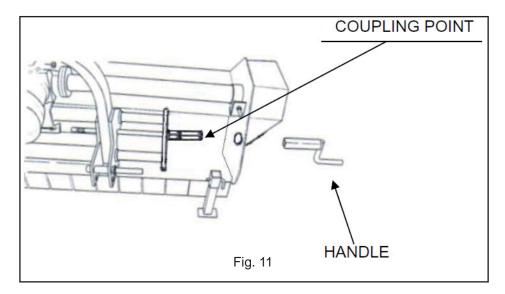
To move the connection frame remove the screws "y", move the linkage frame to the alternative position and lock screws "y" carefully (see Fig. 10).



Movable screw connection (manually operated)

When moving the shredder by means of the manually operated screw, please operate as follows:

- insert the handle into the coupling point (see Fig. 11)
- rotate the handle to obtain the required displacement.



Hydraulic movable connection

The hydraulic displacement guarantees the best performance of the three versions of the side displacement of the shredder.

In order to adjust the position of linkage frame please follow the instructions below:

- 1) Turn off the engine discharge the pressure trapped inside the system by moving the two distributor operating levers in the two directions;
- 2) Connect the hydraulic pipes of the shredder into the couplings of the tractor;
- 3) Turn on the engine of the tractor;
- 4) Use the operating lever of the hydraulic device to move the machine.

Precautions to be taken while working with the shredder

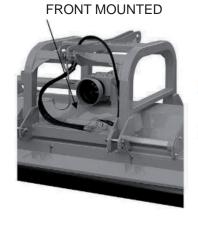
- 1) Do not operate the shredder when you are tired;
- 2) Before starting shredding, make sure that the area is clear of people or animals.
- 3) Before starting adjusting the machine, it is mandatory to disconnect the PTO, to turn off the engine of the tractor, apply handbrake and wait for the shredder to become still and placed on the ground.
- 4) It is mandatory to read all the safety requirements and the operator's manual of the machine.
- 5) If you are not sure how to use the shredder, please contact the manufacturer of the machine.

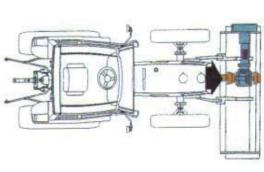


While operating the machine do not exceed the speed of 10 km/h

Front mounted MJ26 connection







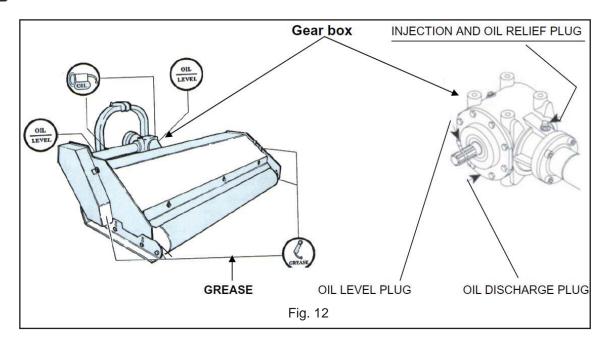
Maintenance

Any time you perform maintenance the following instructions are mandatory:

- Disconnect the PTO
- Put the machine down onto the ground
- Never stand behind the machine when the tractor is running.
- 1) With the whole machine as level as possible, check the oil level in the Primary Gearbox, top up as required with SAE EP90 gear oil through the oil filler plug indicated (Fig. 12).
- 2) After every 50 working hours, grease through grease nipples the supports of the rotor.
- 3) After every 50 working hours, grease through grease nipples the supports of the rear rotor.
- 4) After every 90 working hours, the machine shall be checked by the authorised workshops. The complete machine and the safety protections shall be checked.



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

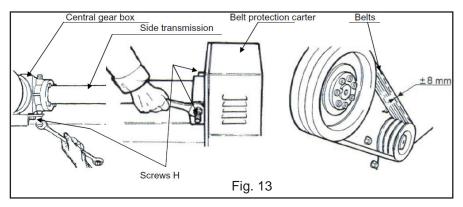


Adjustment and replacement of the belts

The belts shall be checked and adjusted after the first 5 working hours. The next check of the belt tension shall be done after every 50 working hours.

Operations for the removal and adjustment of the belts:

- 1) Remove the guard which protects the belts;
- 2) Loosen the locking bolts which lock the gear box and the side transmission (screws H).
- 3) The belts must be removed one by one and be replaced by a new kit.
- 4) Check the tension of the belts at the central point; apply a force of about 9kg at the centre to obtain a deviation of about 8mm (see Fig. 13).
- 5) Tighten the locking screws of the gear box checking that the axis is parallel to the machine. If the transmission is not parallel to the machine, the belts wear out quickly.
- 6) Correctly assemble the transmission and fasten the guard to protect the belts.



Replacement of the blades and hammers

After every 100 working hours, check the condition of blades or hammers. If some blades or hammers are worn or broken or missing, the complete blade or hammer kit shall be replaced. If only some blades or hammers are replaced, the others could unbalance the rotor during the operation of the shredder and high vibrations could arise and damage the machine or the rotor.

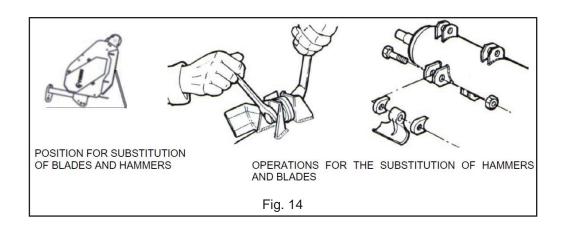
IT IS VERY IMPORTANT TO CHECK ALSO IF THE SCREWS ARE WORN, IF THEY ARE WORN IT IS MANDATORY THAT THEY ARE SUBSTITUTED BY MANUFACTURER'S ORIGINAL SCREWS.



Do not replace the blades or the hammers by rising the shredder by means of the tractor: it is extremely dangerous for your and other people's safety.

In order to change blades or hammers, please follow the instructions below:

- 1) Disconnect the machine from the tractor.
- 2) Turn the machine on the side on a perfectly plain ground.
- 3) Replace the blades and hammers as shown in the assembly Fig. 14. Carefully tighten the screws.
- 4) When the blades or hammers are replaced, carefully lower the machine.



P.T.O. Maintenance

The machine must always be disconnected form the tractor before any cleaning, lubricating and servicing operations can be carried out. Maintenance must be carried out by qualified personnel

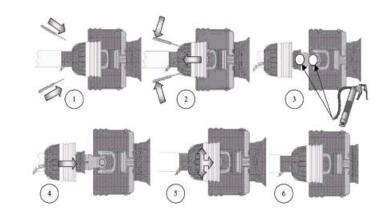
If emergency operations are required whilst the machine is connected to the tractor, switch off the engine, engage the parking brake and disengage the PTO.

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

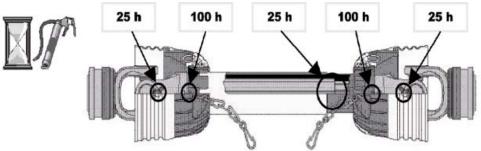
PTO Shaft Maintenance

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



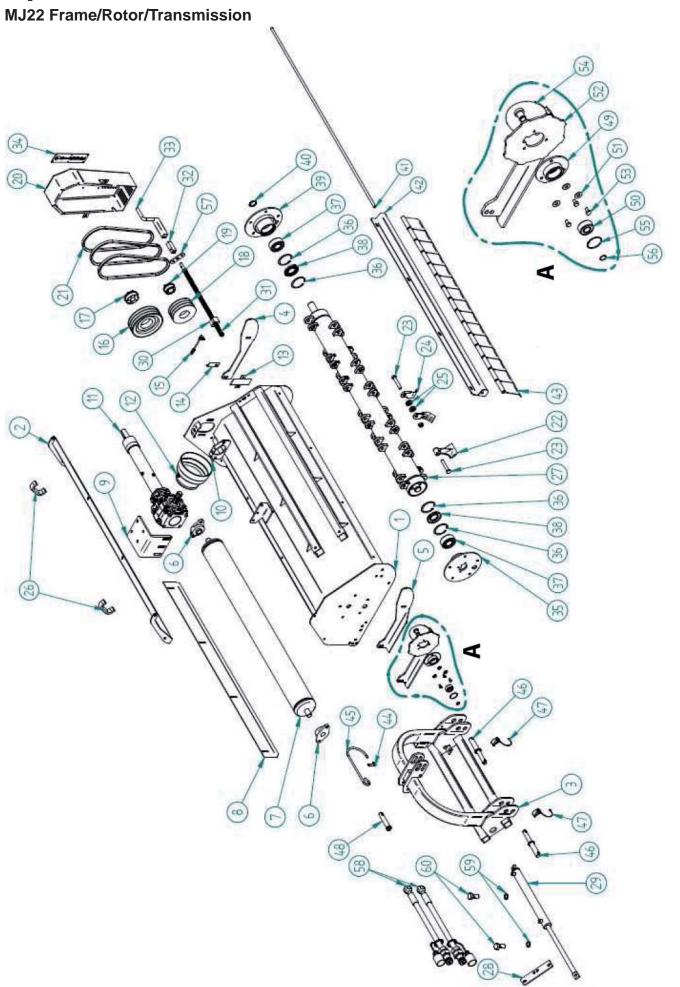
PTO Guard Greasing Intervals



Troubleshooting

| Fault | Cause | Remedy |
|---|--|--|
| | Carrier RPM too low | Use correct PTO speed |
| Leaves a strock of upout or | Ground speed too fast | Reduce ground speed by shifting to a lower gear |
| Leaves a streak of uncut or partially cut grass | Possible build-up materials under shredder | Clean the machine |
| | Blades mounted incorrectly (cutting edge against direction rotation) | Change blades so that cutting edge is facing correct rotation. |
| Material discharges from machine unevenly; bunches of material along with swath | Material too high and too much material | Reduce ground speed but maintain tractor PTO or make two passes over material. Raise mower for the first pass and lower to desired height for the second and cut a 90 degree angle to first pass |
| Coorboy overbooting | Low on lubricant | Fill to proper level |
| Gearbox overheating | Improper type lubricant | Replace with proper lubricant |
| | Machine too low | Raise the machine |
| Flails are scalping the ground | Field is ridged | Cut field at a different angle |
| giodila | Field is too wet | Stop and wait until it is dried |
| Shredder will not cut. | Shear bolt sheared | Install new shear bolt |
| | Cutting in sandy conditions | Increase cutting height |
| Flails wear too fast | Cutting in rocky conditions | Increase cutting height |
| | Flails hitting ground | Increase cutting height |
| | Advancing into grass too rapidly | Reduce forward travel speed |
| | Hitting ground | Raise the machine |
| Machine seems to require | Worn or dull flails | Sharpen or replace flails |
| excessive power | Tractor not large enough | Use larger horsepower tractor |
| | Belts are torn | Replace belts |
| | Check gearbox bolts | Tighten if loose |
| | Wires around the rotor | Clean the rotor |
| | Flails broken | Replace flails in sets |
| Excessive vibration | New flail or bolts matched with worn flails or bolts | Replace blades or bolts in sets |
| | Damage to the rotor or the driveline of the shredder | Phase the driveline. Verify the balance of the rotor of the machine by authorised workshop. |
| | Worn bearing | Replace bearings |
| | Worn bearing | Replace bearings |
| | Low oil in gearbox | Check level and add oil |
| | Loose Parts | Check all bolts are fully tightened |
| | Wrong PTO rpm rate | Check PTO rate & adjust as necessary |
| Noisy machine | Rotors bent / broken | Replace bent or missing blades |
| | | Check PTO shafts are aligned correctly |
| | Bent PTO shaft | Check output shaft on gearboxs are not bent |
| | Solit 1 to Ghait | Check driveline between gearbox and pulley is aligned. |
| | Damaged oil seal | Replace seal |
| | Bent shaft | Replace oil seal and shaft |
| | Shaft rough in oil seal area | Replace or repair shaft |
| | Oil seal installed incorrectly | Replace seal |
| Gearbox leaking | Oil seal not sealing in the housing | Replace seal or use a sealant on outside diameter of seal |
| | Oil level too high | Drain oil to proper level |
| | Hole in gearbox | Replace the gearbox |
| | Gasket damaged | Replace gasket |
| | Bolts loose | Tighten bolts |

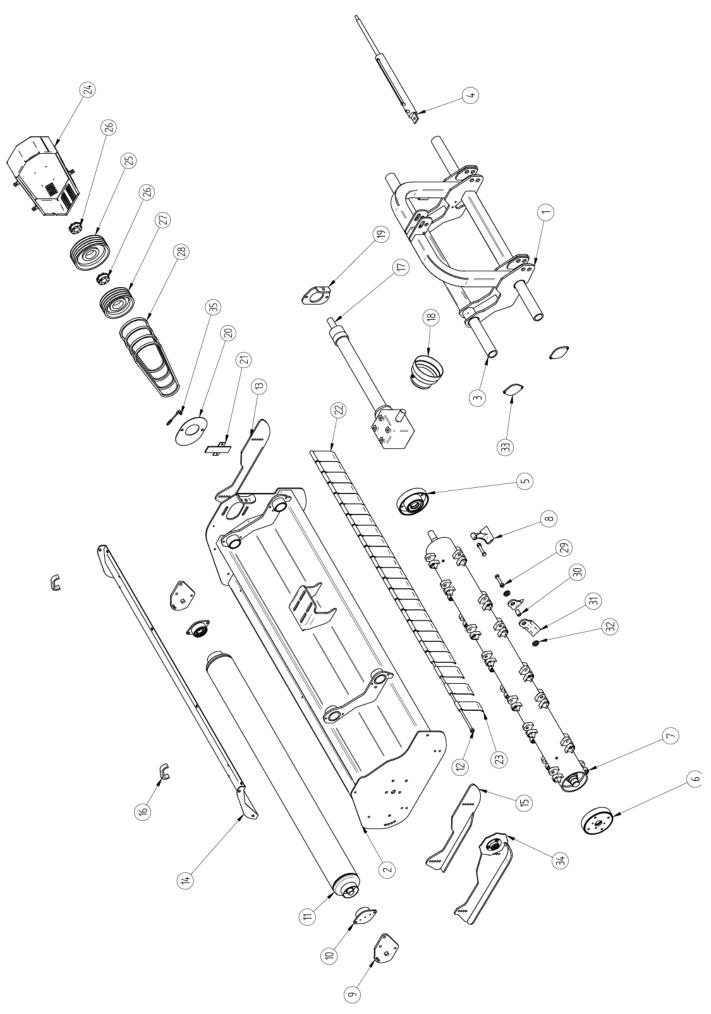
Spare Parts



MJ22 Frame/Rotor/Transmission

| WJZ | z Frame/Rot | or/ rransmission | | | | | |
|------|--------------|---------------------------------|-----|------|--------------|----------------------------|-----|
| Item | Part No. | Description | Qty | Item | Part No. | Description | Qty |
| 1 | 1014035103 | BODY MJ22-140 | 1 | 26 | 1600000119 | HANDLE | 2 |
| 1 | 1016035103 | BODY MJ22-160 | 1 | 27 | 1014005210 | ROTOR MJ22-140 | 1 |
| 1 | 1018035103 | BODY MJ22-180 | 1 | 27 | 1016005210 | ROTOR MJ22-160 | 1 |
| 2 | 1014005101 | REAR COVER MJ22-140 | 1 | 27 | 1018005210 | ROTOR MJ22-180 | 1 |
| 2 | 1016005101 | REAR COVER MJ22-160 | 1 | 28 | 1000000110 | LOCKING PLATE | 1 |
| 2 | 1018005101 | REAR COVER MJ22-180 | 1 | 29 | 1000030803 | HYDRAULIC RAM | 1 |
| 3 | 1000035701 | LINKAGE FRAME | 1 | 30 | 0000020704 | BUSH 40x40x38 | 1 |
| 4 | 1000000506 | LEFT SKID | 1 | 31 | 0000020701 | ROD L=630 | 1 |
| 5 | 1000000504 | RIGHT SKID | 1 | 32 | 0000020703 | BUSH 25x25x80 | 1 |
| 6 | 1000000404 | ROLLER BEARING ASSEMBLY | 2 | 33 | 0000020705 | HANDLE L=142 | 1 |
| 7 | 1014005401 | ROLLER MJ22-140 | 1 | 34 | 0000000604 | BELT VENTILATION | 1 |
| 7 | 1016005401 | ROLLER MJ22-160 | 1 | 35 | 0000005201 | ROTOR BEARING FLANGE RIGHT | 1 |
| 7 | 1018005401 | ROLLER MJ22-180 | 1 | 36 | 000000206 | CIRCLIP 190 | 4 |
| 8 | 1014000402 | SCRAPER MJ22-140 | 1 | 37 | 0000000218 | BEARING 2308 | 2 |
| 8 | 1016000402 | SCRAPER MJ22-160 | 1 | 38 | 0000000208 | SEAL 50x90x10 | 2 |
| 8 | 1018000402 | SCRAPER MJ22-180 | 1 | 39 | 0000005202 | ROTOR BEARING FLANGE LEFT | 1 |
| 9 | 1010000303 | GEARBOX PLATE | 1 | 40 | 0000000207 | SEAL 40x47x4 | 1 |
| 10 | 1000000301 | SUPPORT PALTE | 1 | 41 | 0014000602 | GUARD SUPPORT BAR MJ22-140 | 1 |
| 11 | 0000000301 | GEARBOX ASSEMBLY | 1 | 41 | 0016000602 | GUARD SUPPORT BAR MJ22-160 | 1 |
| 12 | 0000000613 | PTO COVER | 1 | 41 | 0018000602 | GUARD SUPPORT BAR MJ22-180 | 1 |
| 13 | 0000005602 | LOCKING PLATE | 1 | 42 | 1014005602 | PROTECTION MOUNT MJ22-140 | 1 |
| 14 | 0000000211 | PLATE | 1 | 42 | 1016005602 | PROTECTION MOUNT MJ22-160 | 1 |
| 15 | 1000005201 | GREASE KIT | 1 | 42 | 1018005602 | PROTECTION MOUNT MJ22-180 | 1 |
| 16 | 000000305 | PULLEY SPB 200/3-80 | 1 | 43 | 1000000603 | GUARD 100MM MJ22-140 | 13 |
| 16 | 000000307 | PULLEY SPB 200/4-80 (MJ22-180) | 1 | 43 | 1000000603 | GUARD 100MM MJ22-160 | 15 |
| 17 | 000000302 | LOCKING BUSH 35/80 | 1 | 43 | 1000000603 | GUARD 100MM MJ22-180 | 15 |
| 18 | 000000306 | PULLEY SPB 150/3-65 | 1 | 43 | 1000000604 | GUARD 80MM MJ22-180 | 3 |
| 18 | 0000000308 | PULLEY SPB 150/4-65 (MJ22-180) | 1 | 44 | 000000704 | HOOK | 1 |
| 19 | 000000303 | LOCKING BUSH 40/65 | 1 | 45 | 000000705 | PTO HANGER | 1 |
| 20 | 0000005601 | BELT PROTECTION | 1 | 46 | 0000000701 | PIN | 2 |
| 21 | 000000304 | BELTS B 46 (17 x 1175) | 3 | 47 | 000000706 | LINCHPIN | 2 |
| 21 | 000000304 | BELTS B 46 (17 x 1175) MJ22-180 | 4 | 48 | 000000703 | PIN | 1 |
| 22 | 0000000272_1 | FLAIL MJ22-140 | 20 | 49 | 0000005505 | BEARING FLANGE | 1 |
| 22 | 0000000272_1 | FLAIL MJ22-160 | 22 | 50 | 000000520 | BEARING 3204-B-2RSR | 1 |
| 22 | 0000000272_1 | FLAIL MJ22-180 | 26 | 51 | FWM8 | WASHERM8 | 3 |
| 23 | 0000000275 | BOLT & NUT M16 MJ22-140 | 20 | 52 | 0000000505_1 | PLATE | 1 |
| 23 | 0000000275 | BOLT & NUT M16 MJ22-160 | 22 | 53 | M8X14BZP | BOLT M8x14 | 3 |
| 23 | 0000000275 | BOLT & NUT M16 MJ22-180 | 26 | 54 | 1000005501_1 | SKID | 1 |
| 24 | 0000000270 | FLAIL 40 x 10 MJ22-140 | 40 | 55 | 0000000521 | CIRCLIP 047 | 1 |
| 24 | 0000000270 | FLAIL 40 x 10 MJ22-160 | 44 | 56 | 000000522 | CIRCLIP O20 | 1 |
| 24 | 0000000270 | FLAIL 40 x 10 MJ22-180 | 52 | 57 | 10000000700 | BAR BRACKET | 1 |
| 25 | 0000000274 | SPACER MJ22-140 | 40 | 58 | 1000030802 | HYDRAULIC KIT | 1 |
| 25 | 0000000274 | SPACER MJ22-160 | 44 | | EDOW14 | 1/4 DOWDY WASHER | 2 |
| 25 | 0000000274 | SPACER MJ22-180 | 52 | | 1/4B | 1/4 BANJO BOLT | 2 |
| | | | | - • | | | - |

MJ24 Frame/Rotor/Transmission

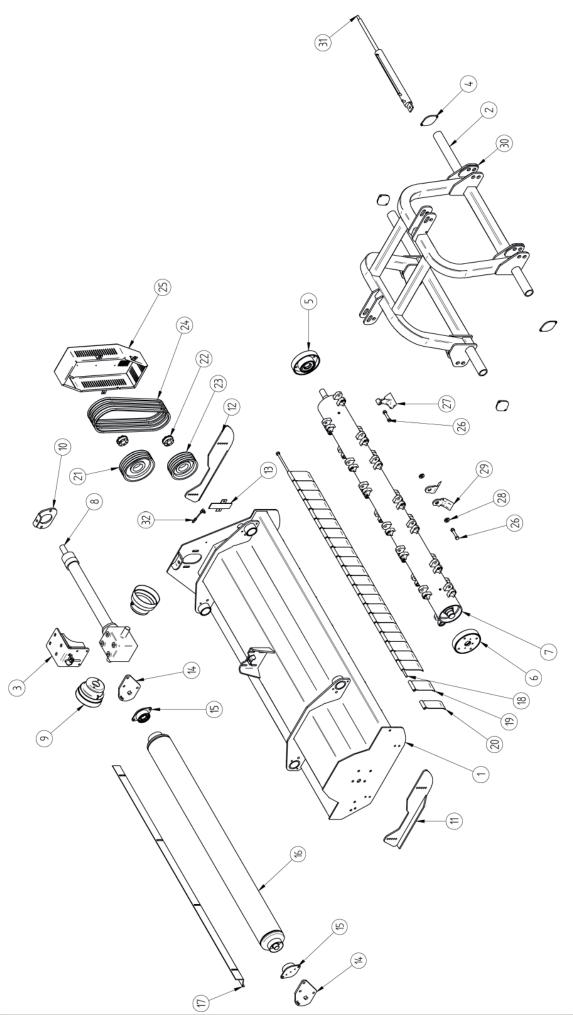


MJ24 Frame/Rotor/Transmission

| Item | Part No. | Description | Qty | Item | Part No. | Description | Qty |
|------|--------------|----------------------------|-----|------|--------------|--------------------------|-----|
| 1 | 3000035701 | HDRAULIC LINKAGE | 1 | 18 | 0000000613 | PTO COVER | 1 |
| 2 | 3023005102 | FRAME MJ24-230 | 1 | 19 | 3000000301 | DRIVESHAFT SUPPORT PLATE | 1 |
| 2 | 3028005102 | FRAME MJ24-280 | 1 | 20 | 3000000604 | SUPPORT PALTE | 1 |
| 3 | 3000003706 | LINKAGE MOUNT TUBE | 2 | 21 | 3000005602 | LOCKING PLATE | 1 |
| 4 | 3000030801 | HYDRAULIC RAM | 1 | 22 | 0600000601_1 | GUARD 100MM | - |
| 5 | 3000005206 | ROTOR BEARING (LEFT) * | 1 | 23 | 0600000602_1 | GUARD 80MM | - |
| 6 | 3000005205 | ROTOR BEARING (RIGHT) * | 1 | 23 | 0600000604 | GUARD 90MM | - |
| 7 | 3028005202 | ROTOR MJ24-280 | 1 | 23 | 0600000603_1 | GUARD 60MM | - |
| 8 | 0000000273_1 | FLAIL MJ24-230 | 52 | 24 | 3000005601 | BELT COVER | 1 |
| 8 | 0000000273_1 | FLAIL MJ24-280 | 60 | 25 | 0000000326 | PULLEY SPB 250/4-80 | 1 |
| 9 | 3000000401 | ROLLER SUPPORT PLATE | 2 | 26 | 0000000317 | LOCKING BUSH 40/80 | 2 |
| 10 | 3000005403 | ROLLER BEARING * | 2 | 27 | 000000327 | PULLEY SPB 212/4-80 | 1 |
| 11 | 3023005403 | ROLLER MJ24-230 | 1 | 28 | 0000000331 | BELTS B 62 | 4 |
| 11 | 3028005403 | ROLLER MJ24-280 | 1 | 29 | 0000000275 | BOLT & NUT M16 MJ24-230 | 52 |
| 12 | 3023005601 | GUARD SUPPORT BAR MJ24-230 | 1 | 29 | 0000000275 | BOLT & NUT M16 MJ24-280 | 60 |
| 12 | 3028005601 | GUARD SUPPORT BAR MJ24-280 | 1 | 30 | 3000000213 | FLAIL BUSH MJ24-230 | 52 |
| 13 | 3000005503 | SKID (LEFT) | 1 | 30 | 3000000213 | FLAIL BUSH MJ24-280 | 60 |
| 14 | 3023005103 | REAR COVER MJ24-230 | 1 | 31 | 0000000278 | FLAIL 60X10 MJ24-230 | 104 |
| 14 | 3028005103 | REAR COVER MJ24-280 | 1 | 31 | 0000000278 | FLAIL 60X10 MJ24-280 | 120 |
| 15 | 3000005504 | SKID (RIGHT) | 1 | 32 | 0000000712 | SPACER MJ24-230 | 104 |
| 16 | 1600000119 | HANDLE | 2 | 32 | 0000000712 | SPACER MJ24-280 | 120 |
| 17 | 0000005303 | GEARBOX COMPLETE MJ24-230 | 1 | 33 | 3000000112 | COVER PLATE | 4 |
| 17 | 0000005306 | GEARBOX COMPLETE MJ24-280 | 1 | 34 | 3000005505 | SKID ASSEMBLY * | 1 |
| | | | | 35 | 3000005210 | GREASE KIT | 1 |

^{* -} Further breakdown available

MJ26 Frame/Rotor/Transmission

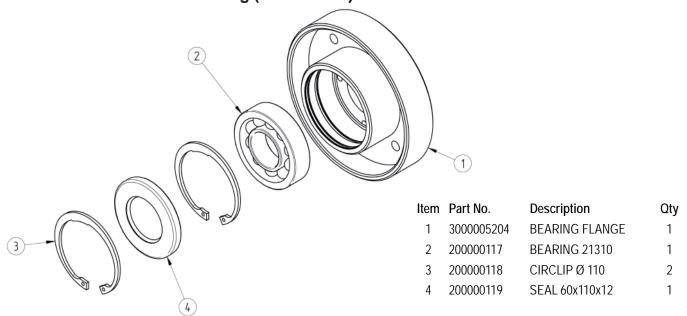


MJ26 Frame/Rotor/Transmission

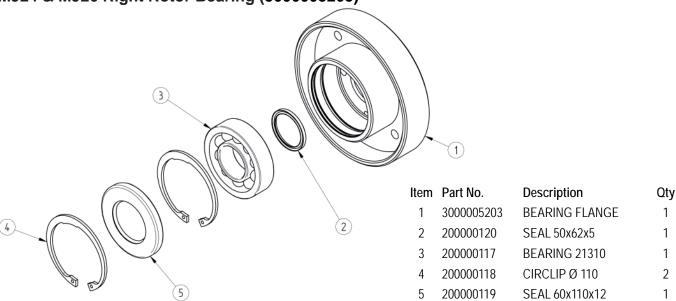
| Item | Part No. | Description | Qty |
|------|--------------|----------------------------|-----|
| 1 | 2323035102 | BODY MJ26-230 | 1 |
| 1 | 2328035102 | BODY MJ26-280 | 1 |
| 2 | 3000003706 | LINKAGE MOUNT TUBE | 2 |
| 3 | 2300005301 | GEARBOX PLATE | 1 |
| 4 | 3000000112 | COVER PLATE | 4 |
| 5 | 3000005206 | ROTOR BEARING (LEFT) | 1 |
| 6 | 3000005205 | ROTOR BEARING (RIGHT) | 1 |
| 7 | 3023005202 | ROTOR MJ26-230 | 1 |
| 7 | 3028005202 | ROTOR MJ26-280 | 1 |
| 8 | 0000005308 | GEARBOX COMPLETE MJ26-230 | 1 |
| 8 | 0000005311 | GEARBOX COMPLETE MJ26-280 | 1 |
| 9 | 0000000613 | PRO COVER | 2 |
| 10 | 3000000301 | DRIVESHAFT SUPPORT PLATE | 1 |
| 11 | 3000005504 | SKID (RIGHT) | 1 |
| 12 | 3000005503 | SKID (LEFT) | 1 |
| 13 | 3000005602 | LOCKING PLATE | 1 |
| 14 | 3000000401 | ROLLER SUPPORT | 2 |
| 15 | 3000005403 | ROLLER BEARING * | 2 |
| 16 | 3023005403 | ROLLER MJ26-230 | 1 |
| 16 | 3028005403 | ROLLER MJ26-280 | 1 |
| 17 | 3023000401 | SCRAPER MJ26-230 | 1 |
| 17 | 3028000401 | SCRAPER MJ26-280 | 1 |
| 18 | 3023005601 | GUARD SUPPORT BAR MJ26-230 | 1 |
| 18 | 3028005601 | GUARD SUPPORT BAR MJ26-280 | 1 |
| 19 | 0600000601_1 | GUARD 100MM | - |
| 20 | 0600000602_1 | GUARD 80MM | - |
| 20 | 0600000604 | GUARD 90MM | - |
| 20 | 0600000603_1 | GUARD 60MM | - |
| 21 | 0000000326 | PULLEY SPB 250/4-80 | 1 |
| 22 | 0000000317 | LOCKING BUSH 40/80 | 2 |
| 23 | 0000000327 | PULLEY SPB 212/4-80 | 1 |
| 24 | 000000330 | BELTS D 62 | 4 |
| 25 | 2300005601 | BELT COVER | 1 |
| 26 | 000000275 | BOLT & NUT M16 MJ26-230 | 52 |
| 26 | 000000275 | BOLT & NUT M16 MJ26-280 | 60 |
| 27 | 0000000273_1 | FLAIL MJ26-230 | 52 |
| 27 | 0000000273_1 | FLAIL MJ26-280 | 60 |
| 28 | 0000000712 | SPACER MJ26-230 | 104 |
| 28 | 0000000712 | SPACER MJ26-280 | 120 |
| 29 | 000000278 | FLAIL 60X10 MJ26-230 | 104 |
| 29 | 000000278 | FLAIL 60X10 MJ26-280 | 120 |
| 30 | 2300035704 | HYDRAULIC LINKAGE | 1 |
| 31 | 3000030801 | HYDRAULIC RAM | 1 |
| 32 | 3000005210 | GREASE KIT | 1 |

^{* -} Further breakdown available

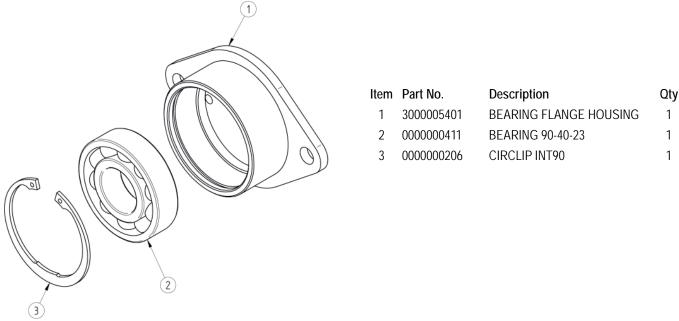
MJ24 & MJ26 Left Rotor Bearing (3000005206)



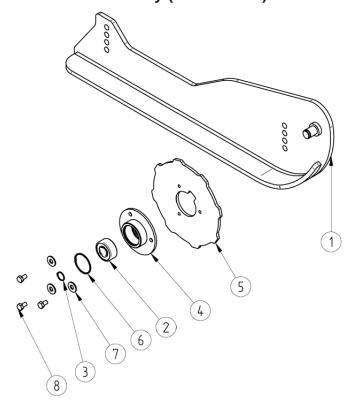
MJ24 & MJ26 Right Rotor Bearing (3000005205)



MJ24 & MJ26 Roller Bearing (3000005403)



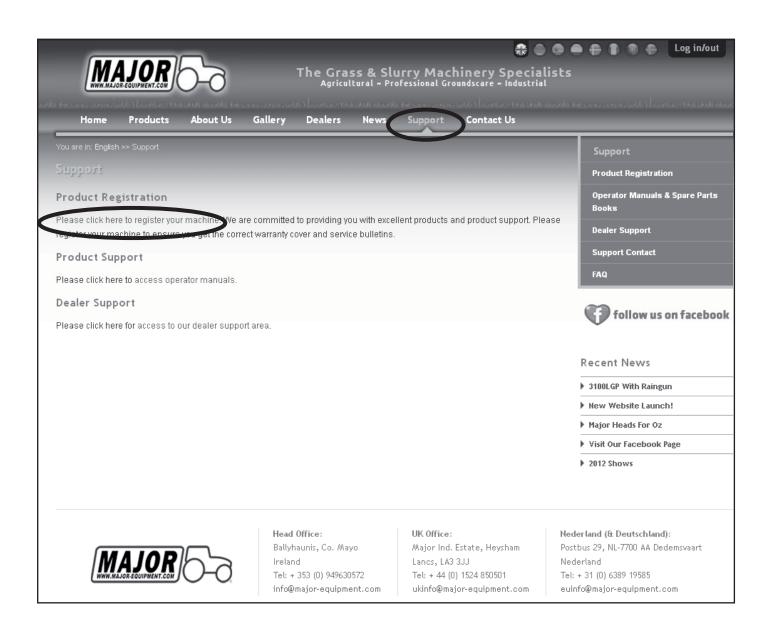
MJ24 Skid Assembly (3000005505)



| Item | Part No. | Description | Qty |
|------|-------------|---------------------|-----|
| 1 | 3000005506 | SKID | 1 |
| 2 | 000000520 | BEARING 3204-B-2RSR | 1 |
| 3 | 000000522 | CIRCLIP Ø20 | 1 |
| 4 | 0000005505 | FLANGE | 1 |
| 5 | 000000505_1 | PLATE | 1 |
| 6 | 000000521 | CIRCLIP Ø47 | 1 |
| 7 | FWM8 | WASHER M8 | 3 |
| 8 | M8x14 | BOLT M8 x 14 | 3 |

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.





HEAD OFFICE
Major Equipment Intl Ltd
Ballyhaunis, Co Mayo
Ireland
Tel: +353 (0) 9496 30572

UK OFFICE
Major Equipment Ltd
Major Ind. Estate, Heysham,
Lancs, LA3 3JJ, UK
Tel: +44 (0) 1524 850501

Netherlands & Germany OFFICE Major Equipment Intl Ltd Postbus 29, NL-7700 AA Dedemsvaart, Nederland

Tel: +31 (0) 6389 19585