

Operators Manual & Parts List

CS PRO

MJ65-150

MJ65-150-2R



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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.

Contents

Introduction

Thank you	1
Safety Aspects	1
Intended use	1
Register Your Product and Warranty Online	1
Tractor Requirements	2

Safety

Hazards associated with operating Grass Cutting Machinery	2
Operating Safely	3
Workstation	4
Regulations for use of the transmission	4
PTO Shaft Safety	4
Driving Safely on Public Roads	5
Inspections before Use	6
Starting Regulations	6

Product Identification

Machine Serial Numbers	7
Product Specifications	7
EEC certificate of conformity for machines	8
Machine Safety Labels	9
Key to Main Parts	10
Blade Rotation	11
Blade system	12
Drive-line gearboxes	12

Operating the Machine

Attaching machine to the Tractor	13
Transport Position	13
Roller and skid setup	14
Operating the Machine/Mowing	14
Roller and Castor wheels adjustment	14

Maintenance

Machine storage	15
PTO Shaft Maintenance	15
Transmission Bolts	16
Roller <i>(if applicable)</i>	16
Replacement of wear parts	16
Clearing out a blockage	16
Wing shafts alignment <i>(if applicable)</i>	16
Troubleshooting	17
Lubrication schedule	19

Spare parts - MJ65

MJ65-150 General Assembly	20
MJ65-150 - Parts List	22
MJ65-150FM (Front mount model)	23
MJ65-150FM - Parts List	23
Wheel assembly (RM2-CW-GA01) (MJ35/MJ61/MJ65FM models)	24
MJ65-150-2R (2 Roller Model)	25
PTO shafts - MJ65	25
785-BLD-L Blade assembly	26
785-BLD-R Blade assembly	26
XBLD-KIT3	26

Introduction

Thank you

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

Safety Aspects

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. Only competent and skilled persons who have fully read and understood this operator's manual are allowed to operate this 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.

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. Should any questions arise regarding the information given in this booklet, please contact your local MAJOR dealer or MAJOR.

The operator is solely responsible for the safe use and maintenance of the machine. The machine must only be operated by a competent and skilled person. Setting up and adjustment must only be carried by the operator. Do not let a third party person to adjust or modify the machine in any way.

Intended use

This machine is a grass cutting machine and designed for cutting grass. Moreover, it must only be used with a suitable tractor (see "Product Specifications" section of this booklet) and driven by an adequate drive-line of the tractor PTO. All other use is strictly prohibited. Major will not be held responsible for any loss or damage caused due to a misuse of the machine.

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.

This machine is warranted for 12 months. No warranty is given where the machine is being used as a hire machine. Warranty is against faulty workmanship or parts.

Warranty covers parts only. All parts must be returned to the manufacturer. No warranty can be considered unless parts are returned. All replacement parts will be supplied on a chargeable basis until warranty has been accepted.

Tractor Requirements



Attaching the machine to the tractor will influence the stability and manoeuvrability of the tractor. Please consult your tractor manual for limitations on weight and towing ability of the tractor.

It is the operator's responsibility to ensure that the tractor is suitable for the machine. Always consult your tractor's manual for any further information required.

Recommended Horse Power requirements for the particular models are provided in the "Product Specification" section of this booklet. Using excessive power can affect the quality of cut and/or may damage the machine.

Tractors which are not suitable for the operation can sustain damage due to the weight and power requirements of the machine. Always observe the weight of machine provided in the "Product Specification" section of this booklet, compare this with the guidelines from the tractor manual and ensure that the tractor can lift the machine safely.

The machine is designed to be attached by means of a 2/3 point linkage connection or can be trailed (specific models). The position of the machine can be adjusted by manual or hydraulic top link.

Winged models require at least one hydraulic spool with 1/2" female quick release connection for a single acting ram/rams.

Road light kit requires a 12V 7 pin socket.

Safety

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



Hazards associated with operating Grass Cutting Machinery

Shear Hazard

Shear hazards are created when the edges of two objects move toward or next to each other closely enough to cut relatively soft material. This can include the parts of the machine under hydraulic control when operating from transport to mowing position. Note, the wing units are designed to float independently of the centre deck & are free to move within operating limits.

Crush Hazard

Bystanders can be injured when machine is lowered into mowing position. Winged machines have crush points around the hinge areas & between the wing & main body. Always use transport locking bars when not in use (winged models only).

Rotating Blade Hazard

All persons are at risk if they place their hands or feet under the machine when it is raised from the ground when the blades are in motion.

Pinch Hazard

Pinch points are created when two objects move together, with at least one of them moving in a circle. This hazard is common in power transmission devices such as Belt Drives, Gear Drives & Rollers. Ensure all guarding is present.

Wrap Hazard

Any exposed, rotating machine component is a potential wrap point. Injuries usually occur when loose clothing or long hair catch on and wrap around rotating parts such as PTO shafts or Drive shafts on the machine. Ensure all guarding is present.

Free-wheeling parts Hazard

The heavier a revolving part is, the longer it will continue to rotate after power is shut off. This characteristic is called 'free-wheeling.' Blades, and various other components, drive shafts etc., will continue to move after power is shut off - often for several minutes. Injuries occur when:

- Operators shut off equipment, and attempt to clean or adjust a machine before components have completely stopped moving.
- Shear bolt protection device in PTO shaft shears & the mowing parts are still spinning but the primary PTO shaft is stationary. Operator awareness is the key to safety around freewheeling parts. Never raise the machine while the blades are still rotating.

Thrown objects Hazard

Machines throw material as a natural part of doing their job. Foreign objects, such as stones, sticks and other debris, may be taken into this equipment and expelled at tremendous speed. These objects are contained by the sides of the machine and by the rear/front rollers / guards / chain guards / rubber skirts depending on model of your machine. Ensure bystanders are clear from the machine & cannot be hit with debris expelled from the machine. Bystanders or animals in the path of thrown objects could be seriously injured. Never operate machine with decks raised from the ground as this makes the front/rear protection redundant.

Hydraulic Hazard (if applicable)

Hydraulic systems store considerable energy. Careless servicing, adjustment, or replacement of parts can result in serious injury. High pressure blasts of hydraulic oil can injure eyes or other body parts. The following precautions are crucial:

- Make certain the hydraulic pump is turned off.
- Lower attached equipment to the ground.
- Confirm that load pressure is off the system.

A pinhole leak in an hydraulic hose is a serious hazard. A leak may not be visible, and the only sign may be a few drops of fluid. Never inspect hydraulic hoses with your hands, because a fine jet of hydraulic fluid can pierce the skin.

Slips, Trips and Falls Hazard

Slips and falls often result from:

1. Slippery footing on the ground
2. Cluttered steps and work platforms.

The potential for slips and falls can be greatly reduced by using good judgement and practicing good housekeeping on and around equipment.

Noise Hazard

Please note that the machine is normally used outdoors and that the position of the operator is seated in the driving seat of the tractor. It is advisable to consult the prescriptions listed in tractor operator and maintenance manuals.

The acoustic pressure at a distance of 2.6m from the centre of the machine and at a height of 2.0m, with the implement operating in a no load condition can reach 90 dBA. In a loaded condition & a PTO rate of 540 (1000) RPM the value can reach 97dBA. Higher rate of PTO input will result in higher noise levels. Always wear hearing protection.

Operating Safely

This MAJOR machine is designed to operate at a PTO rate which is stated in the Product Specifications part of this booklet. Ensure tractor PTO output is set at a correct RPM rate. This MAJOR machine must only be used for purposes outlined in the Intended Use section of this booklet. 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 ROTOR(S) ARE TURNING. ROTOR(S) CAN REMAIN TURNING FOR UP TO 1 MINUTE AFTER DISENGAGING PTO.

Workstation

The operator must remain seated while working the machine. If the machine is a winged unit and the wings need to be raised/lowered the operator must not leave the tractor. Always ensure the PTO has been turned off and the parking brake applied before leaving the tractor cab 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 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 booklet, 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.

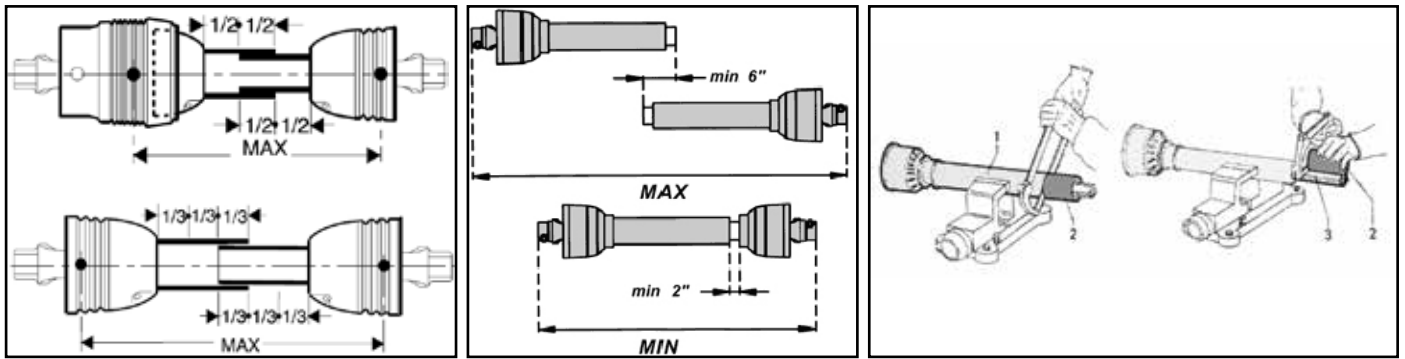
PTO Shaft Safety

Maximum PTO input is specified in the Product Specifications section of this booklet. 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.



Driving Safely on Public Roads

Check the local Highway Code regulations before driving the tractor on public highways with an implement attached. 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.

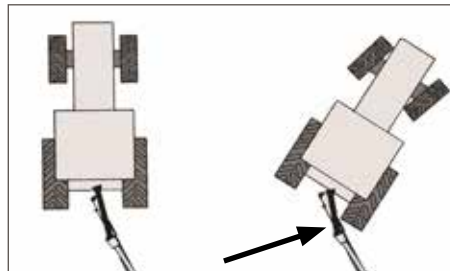
Bystanders must not be allowed to lean against or climb onto the machine during transport or while working. Do not allow bystanders to ride on the machine.



Maximum transport speed of the implement is limited to 25-30km/h depending on the model of the machine (observe safety labels on the machine).

Trailed Machines only (if applicable)

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



General safety instructions

Precautions to be taken while working with the machine:

1. Do not operate the machine when you are tired or under the influence of alcohol or any other intoxicant;
2. Before starting mowing, 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 turning parts 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 machine, please contact the manufacturer or the dealer.

Inspections before Use



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

1. With the whole machine as level as possible, check the oil level in all gearboxes. Top up if required through the oil filler plug. The correct level is at the oil level plug.
2. Grease all lubrication points as outlined in the Maintenance section of this booklet.
3. Check parts for wear.
4. Check the blade mounting bolts are tight.
5. Ensure the gearbox shaft nuts are tight and retained in place by split pin.
6. Check tightness of all nuts, bolts and pins.
7. Ensure safety guards and flaps are in place at all times where fitted. If these become worn or missing, replace them immediately with new ones.
8. Due to the corrosive nature of grass when cut, wash down the machine when finished mowing, especially when the machine is being stored for a long period of time.

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.

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. Model and Serial number can be found on the Serial Plate located on the machine.

We suggest that you record your machine details below:

Model No:	_____
Serial No:	_____
Date of Purchase:	_____
Dealer Name:	_____
Dealer Telephone:	_____



Product Specifications

The machine is propelled by using a 6 spline 1-3/8" PTO shaft (provided with the machine).

Model	MJ65-150	MJ65-150FM
Overall Width	1566mm	1566mm
Cut Width	1435mm	1435mm
Transport Width	1566mm	1566mm
No. of Blades	8	8
No. of Rotors	2	2
Power (HP)	25-40	25-40
PTO (rpm)	540	1000
Blade Speed	82m/s	79m/s
Cutting Height	25-75mm	25-75mm
Weight (kg)	340kg	360kg

EEC certificate of conformity for machines

(conforming to Directive 2006/42/EC)

Name of Manufacturer: Major Equipment Ltd
Address: Coolnaha, Ballyhaunis, Co. Mayo, Rep of Ireland

Tel. +353949630572
Fax +353949630788

declares in sole responsibility that the product:

Machine description and function: Rotary mower with vertical axes cutting heads which cuts grass so it can be subsequently picked up.

Model: MJ65 (CS Pro)


Type: _____

Serial number: _____

Technical file compiled by: Alex Kolchanov (c/o Major Equipment Ltd)

- **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 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.

I hereby 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.

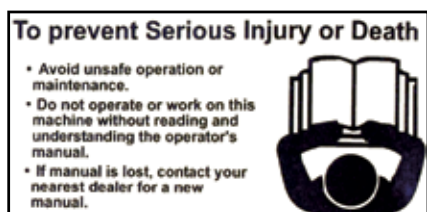
Signed: 
Date: 14/11/2018
Name: John Murphy
Position: Managing Director

Place: Coolnaha, Ballyhaunis, Co. Mayo, Rep of Ireland

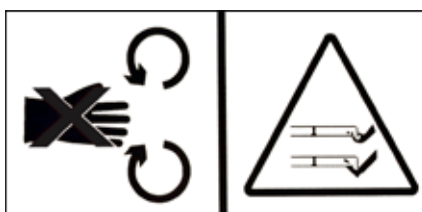
Machine Safety Labels

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.



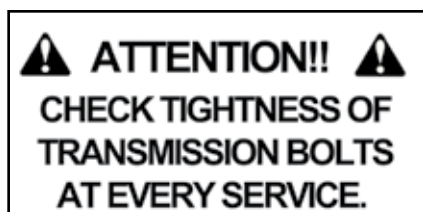
To avoid injury, read the manual



Rotating blade hazard



PTO entanglement hazard - keep clear of PTO drives.



Check tightness of the transmission bolts

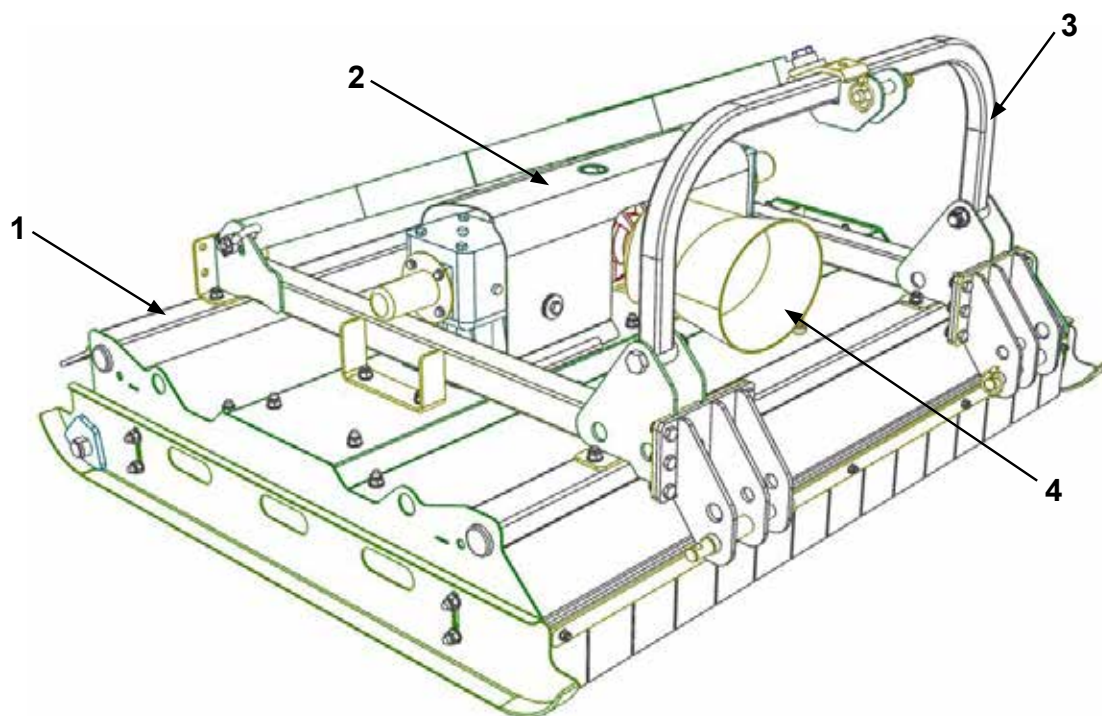


Grease points

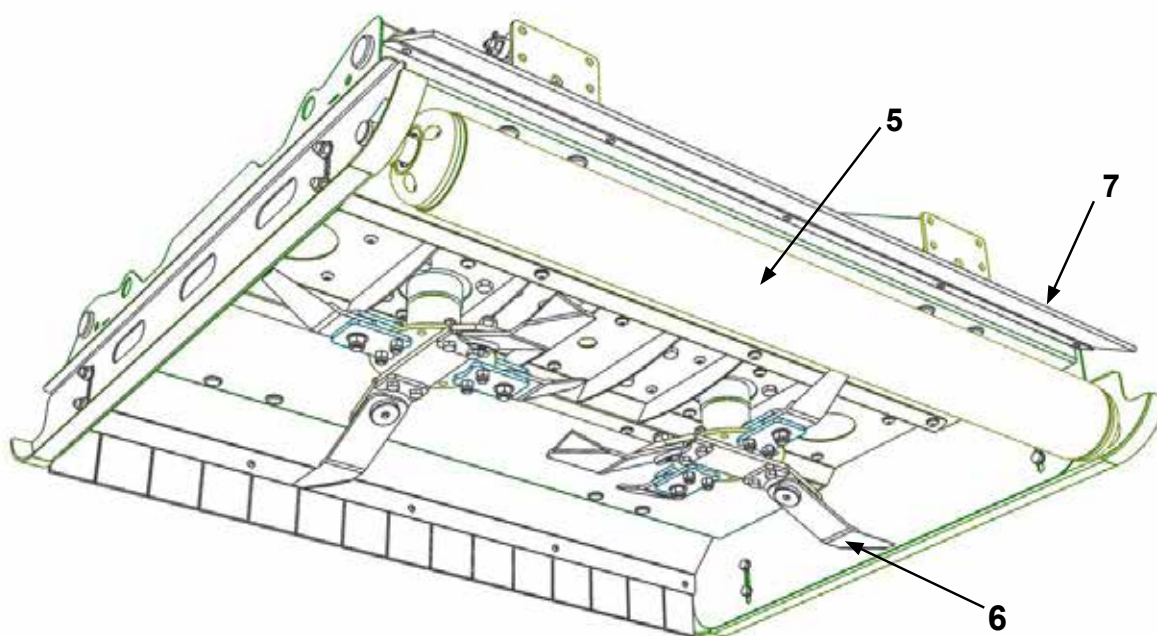
MAX PTO INPUT 540 RPM	MAX PTO INPUT 1000 RPM
⊗ MAX. DREHZAHL 540 U/MIN ⊗ MAX. TOERENTAL 540 TPM ⊗ MAX. PRISE DE FORCE 540 TOURS/MIN	⊗ MAX. DREHZAHL 1000 U/MIN ⊗ MAX. TOERENTAL 1000 TPM ⊗ MAX. PRISE DE FORCE 1000 TOURS/MIN

Maximum PTO input

Key to Main Parts

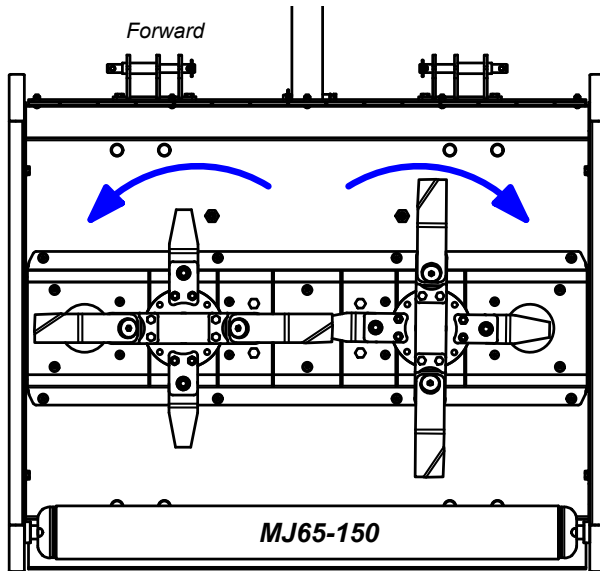


1	Body
2	Drivetrain cover
3	A-Frame
4	Gearbox PTO cover
5	Rear roller
6	Blade
7	Rubber deflector



Blade Rotation

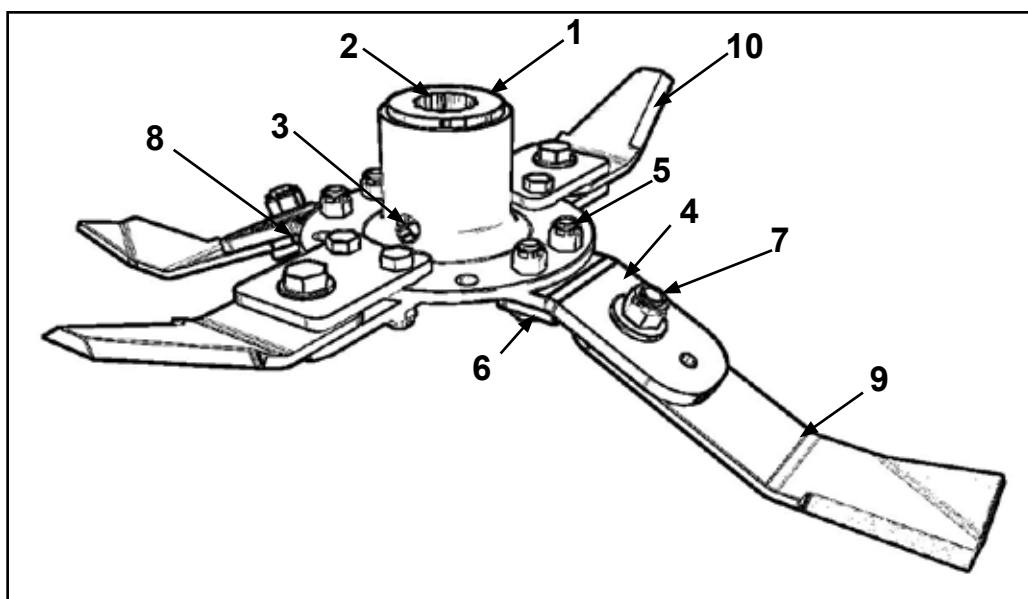
Blade rotation viewed from underside



Blade system

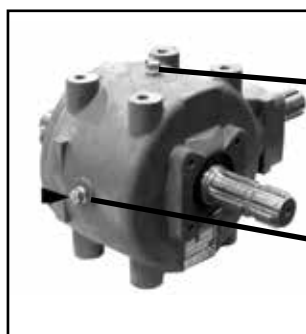
Full breakdown of the blade assembly is provided in the Spare Parts section of this booklet

1 Blade mount	7 Blade pivot bolt
2 Gearbox output shaft	8 Blade pivot bush
3 Gearbox split pin	9 Blade
4 Blade back	10 Overlap Blade
5 Blade back bolt	
6 Blade back spacer	



Drive-line gearboxes

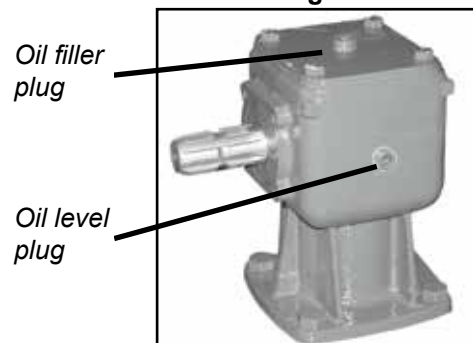
Primary gearbox



Oil filler
plug

Oil level
plug

Rotor gearbox



Oil filler
plug

Oil level
plug

Operating the Machine

Attaching machine 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.

Three Point Linkage Models

1. Adjust both lift arms of the tractor until they are level in relation to each other.
2. Hitch the lower linkage arms to the Machine and connect the top link and PTO shaft. Ensure that the locking pins are secure.
3. With the Machine lowered in its operating position, adjust the top link until the strap is slack, allowing the Machine to produce a uniform finish in varying ground conditions.
4. Check the PTO shaft for length as described previously. Connect the PTO shaft. Ensure PTO check chains are anchored to prevent PTO guarding from rotating.
5. Connect the hydraulic hoses to the appropriate connections (selected models only).

Transport Position



Before raising the machine wait until the transmission and the blades are completely still. During the transport of the machine it is recommended that the PTO shaft is disconnected.

1. Check machine is hitched to the tractor as described. Ensure the tractor parking brake is applied
2. Ensure moving parts become still then transform the machine into transport position by hydraulic control
3. During the transport and any time the machine shall be raised, the raising device shall be adjusted to assure that the machine is at least 250mm over the ground.



Operating the Machine/Mowing



Never place limbs under the machine while rotors are turning. Rotors can remain turning for up to 1 minute after disengaging PTO.



While operating this machine the PTO input rate should not exceed the RPM stated in the Product Specifications section of this booklet. Always operate on level ground when connecting/disconnecting the implement. This will prevent dangerous movement.



Never allow anyone to stand between the tractor and the machine. Ensure the machine is attached correctly to the tractor as previously described. Always start up the tractor PTO at a low RPM. Build up to operating speed, select a suitable forward gear & proceed to cut grass.

1. Hitch the machine as outlined in the previous section. Ensure bystanders are clear from the machine & cannot be hit with debris expelled from the machine.
2. Check PTO shaft is fully engaged on tractor PTO splines.
3. Lower the machine by hydraulic control to the ground or use tractor linkage controls.
4. Start up the tractor PTO at a low RPM.
5. Build up to operating speed, select a suitable forward gear & proceed to cut grass.

Roller and Castor wheels adjustment

In order to achieve desired cutting height, castor wheels and roller should be adjusted.

Castor wheels (optional)

To adjust the height of front wheels lift up the machine and:

1. Unscrew and remove Bolt **A**;
2. Slide down the Castor Yoke **B** and remove it;
3. Depending on the desired cutting height place Spacers **C** above or below Castor Arm **D**.
4. When adjustment is complete, relocate Castor Yoke **B** and secure it with Bolt **A**.
5. Repeat this procedure for the other wheel.

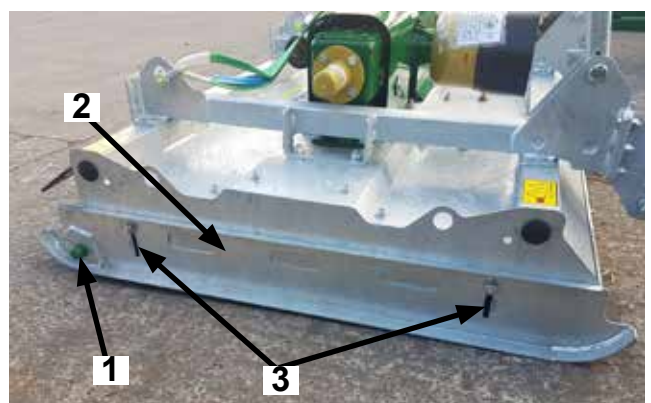
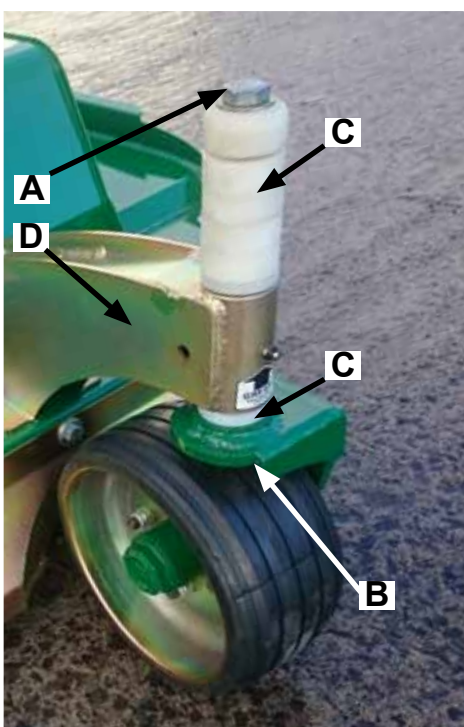
Roller and skid setup



Always perform the adjustments on a level ground with the PTO disconnected.

Roller and skids must not become detached from the machine.

Skid height can be changed by locating the skid in different skid adjustment slots.



1	Roller
2	Skid
3	Skid adjustment slots

Maintenance

In order to keep your Major machine in a good working order it is necessary to conduct maintenance on a regular basis. Only competent and skilled persons who have fully read and understood this operator's manual are allowed to carry out maintenance on this machine. It is important to replace worn parts immediately with genuine Major spare parts. These parts are manufactured to the same specification as the machine and will provide the best result. Genuine Major spares can be obtained from MAJOR or your local MAJOR dealer.

All maintenance checks and operations must be carried on a firm level ground. The machine must always be disconnected from the tractor before any cleaning, lubricating and servicing operations can be carried out. If works must be carried out under the machine, ensure that the props, jacks, stands, hoists or cranes are capable of supporting the machine securely.

If emergency operations are required whilst the machine is connected to the tractor, switch off the engine of the tractor, remove the key from the ignition, engage the parking brake and disengage the PTO. An example of such emergency situation is the complete blockage of the machine in the field. To clear out the blockage follow the safety steps described above and clear out the blockage. Ensure there are no ropes, twines or wires wrapped around the rotors.

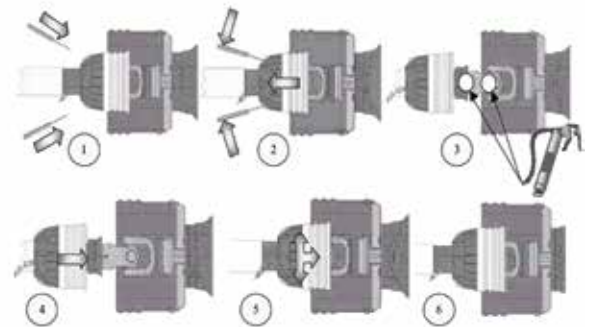
Machine storage

To prolong the life of your machine it is recommended to store it in a dry environment. Prior to parking the machine for storage, wash the machine thoroughly, especially underneath, and ensure that there is no grass or debris left on the machine. Lubricate all pivot points with EP2 type grease. Check for oil leaks and fix these if required. Any parts of the machine with damaged paint/galvanised surface must be painted.

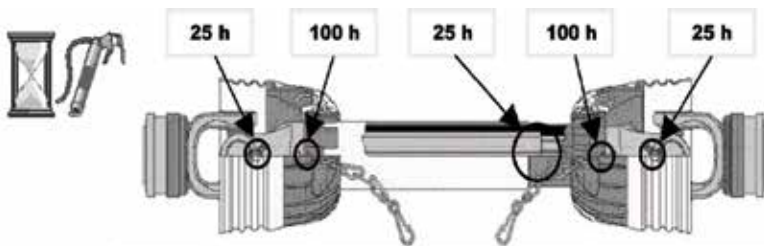
PTO Shaft Maintenance

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 Greasing Intervals

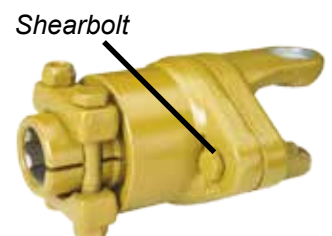


Shearbolt Replacement (if applicable)

1. Slide yoke shield back.
2. Drive out sheared bolt with hammer and punch.
3. Align holes and install new shear bolt. (Use only genuine replacement shear bolts)
4. Slide yoke shield securely in place



Always fit PTO shaft with the shearbolt/slip-clutch end connected to the machine as directed on the PTO guarding.



Transmission Bolts

All nuts and bolts in the transmission including Rubber couplings, Star Drives, PTO Shafts and Gearboxes should be checked for tightness after mowing at the following intervals:

1st 50 Acres

1st 100 Acres

1st 250 Acres

And every 250 acres thereafter.

Roller (if applicable)

Check the condition of the roller end (stub axle) at the end of every season. Roller shaft (stub) must be able to rotate freely and without excessive play. If necessary, remove the roller assembly and adjust the tightness of the bearings.

Replacement of wear parts

Blades, blade backs, blade bushing, blade bolts and nuts must be checked on a regular basis for wear and deflection. MAJOR recommends to visually check the blade assemblies every 40 hours of operation. This interval may change depending on the operational conditions.

Replace any damaged or worn parts immediately, failure to do so can result in blade breakages and can cause damage to the equipment or injuries to the operator and others nearby.

Blunt blades must be sharpened or replaced, failure to do so will result in a poor quality cut and excessive use of power from your tractor.



If the machine is equipped with wheels, wheel nuts must be checked daily. Air pressure within pneumatic tyres must be maintained at 2 Bar. Solid wheels must be checked for wear and damage and if necessary replaced immediately.



ENSURE BLADE ROTATION AND TIMING IS CORRECT AFTER SERVICING TRANSMISSION.



Pay attention when servicing or detaching components from the machine. Subassemblies and parts e.g. blade assemblies, gearboxes, rollers, guards, skids, wheels etc. can weigh up to 100 kilograms individually and must be supported adequately before fully detaching from the machine.

Clearing out a blockage



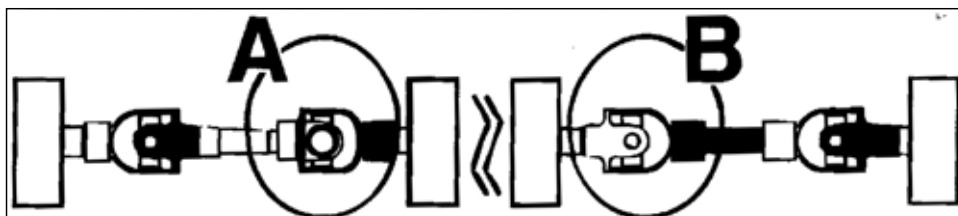
Always wear appropriate PPE when clearing out blockages.

If blockage of blades occurs proceed as follows:

1. Set the machine into transport position (including the top links);
2. Park the tractor on level ground, switch off the engine and remove the key from the ignition;
3. Apply a handbrake and disconnect the PTO shaft;
4. Using a pressure washer clear out the excess material built up around the blades. If the pressure washer is not available use your hand to remove the grass from around the blades, bearing in mind that there might be wires wrapped up around the rotors.

Wing shafts alignment (if applicable)

Ensure that after servicing the transmission, the wing pto shaft yokes are correctly aligned as shown in the diagram below – winged models only. If the shaft journals are fitted incorrectly the damage will only occur when the wings are raised into transport position.



Troubleshooting

Fault	Cause	Remedy
Machine is getting blocked	Material too high or too much material	Reduce the ground speed but maintain required rpm from the PTO input
	Grass is too wet	Stop and wait until grass is dried
	Worn or dull blades	Sharpen or replace blades
Leaves a streak of uncut or partially cut grass	Blades dull or bent	Sharpen or replace blades
	Carrier RPM too low	Use correct PTO speed
	Field conditions are so wet that the tractor tyre is pushing grass into mud	Too wet to mow. Stop operation and wait until grass is drier
	Ground speed too fast	Reduce ground speed by shifting to a lower gear
	Possible build-up materials under mower	Clean mower
	Blades mounted incorrectly (cutting edge against direction rotation)	Change blades so that cutting edge is facing correct rotation.
Material discharges from mower unevenly; bunches of material along with swath	Material too high and/or too much material	Reduce ground speed but maintain the recommended RPM at 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
Gearbox overheating	Low on lubricant	Fill to proper level
	Improper type lubricant	Replace with proper lubricant
	Excessive grass / debris build-up around gearbox	Remove grass, etc from machine
Blade/bullets is scalping ground	Mower too low	Raise mower-reset wheels
	Field is ridged	Cut field at a different angle
	Field is too wet	Stop and wait until it is dried
Mower will not cut.	Shear bolt sheared	Install new shear bolt
Blades/bullets wear too fast	Cutting in sandy conditions	Increase cutting height
	Cutting in rocky conditions	Increase cutting height
	Blades hitting ground	Increase cutting height
Mower seems to require excessive power	Advancing into grass too rapidly	Reduce forward travel speed
	Hitting ground	Raise mower and reset wheels
	Worn or dull blades	Sharpen or replace blades
	Tractor not large enough	Use larger horsepower tractor
Excessive vibration	Check gearbox bolts	Tighten if loose
	Check for loose nuts on blades	Tighten if loose
	Blade broken	Replace blades, in set
	New blade or bolts matched with worn blade or bolts	Replace blades or bolts in sets
	Drivelines not phased correctly. Implement and tractor yokes must be in line	Phase the driveline. Replace if necessary
Noisy machine	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
	Rotors bent / broken	Replace bent or missing blades
	Bent PTO shaft	Check PTO shafts are aligned correctly
		Check output shaft on gearboxes are not bent
		Check driveline between gearboxes is aligned.

Gearbox leaking	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
	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

Lubrication schedule

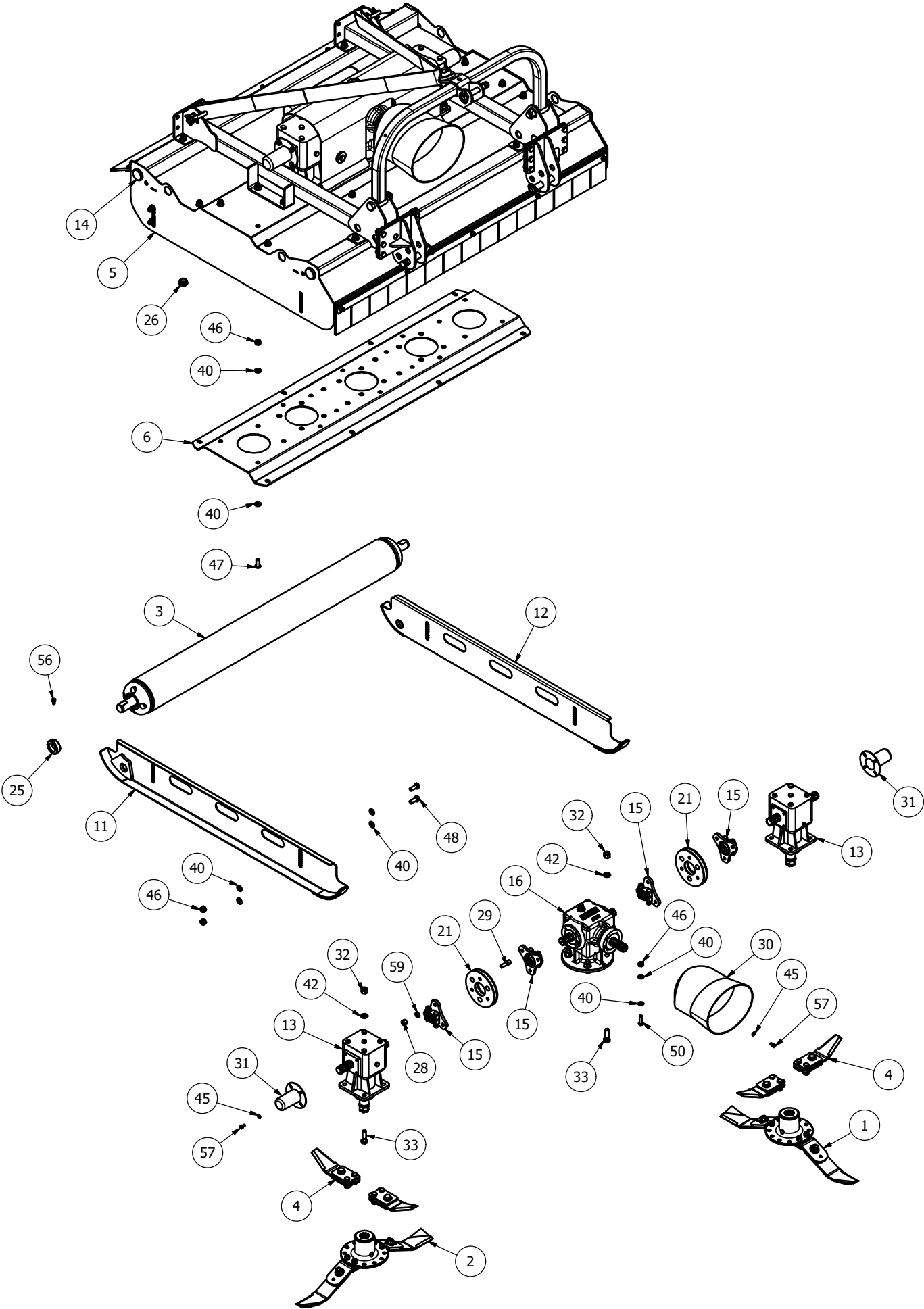
Use EP2 type grease or equivalent.

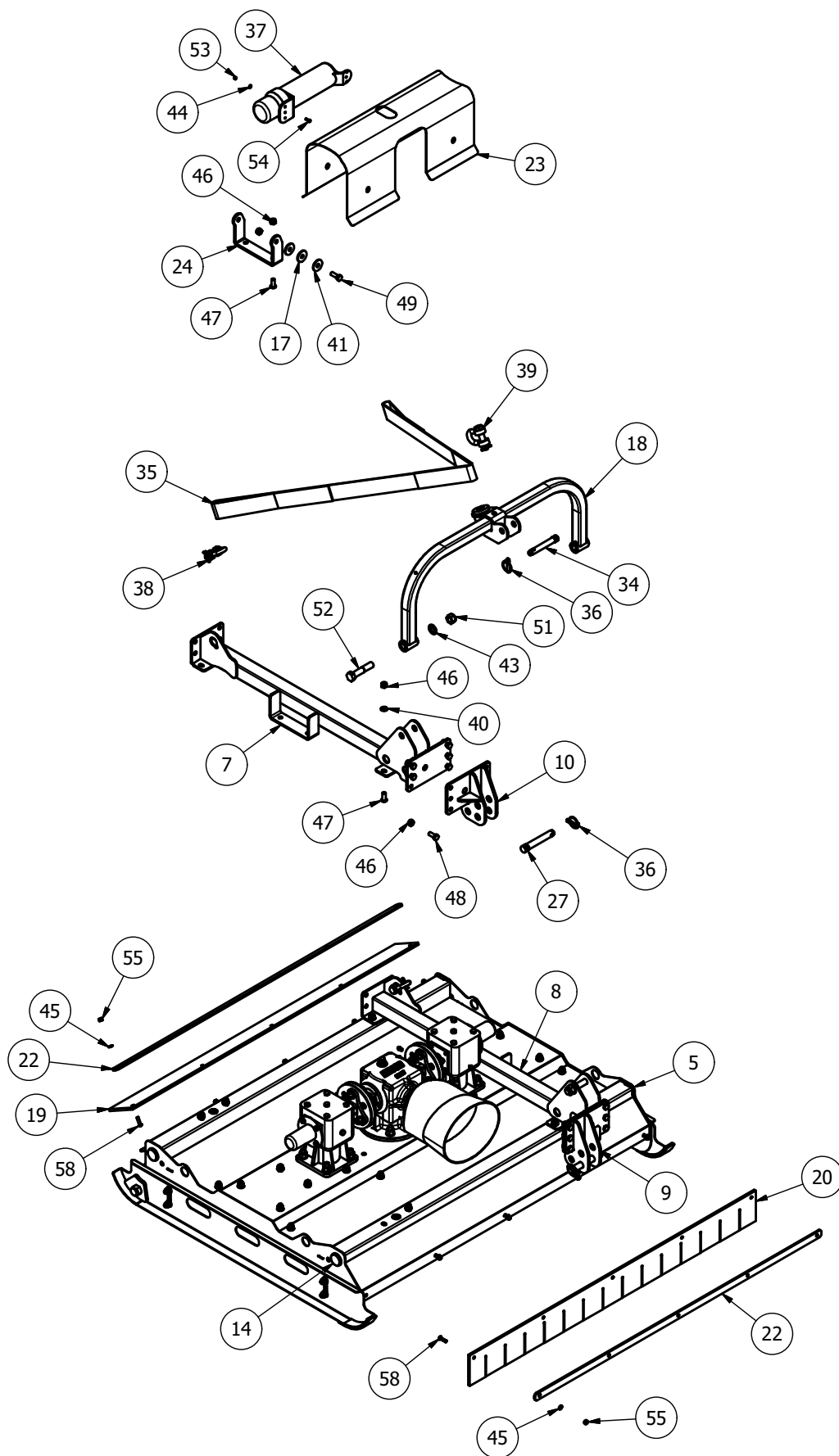
Use oil which conforms to 85W/140 standards.

	Grease points	Initially	25 hours	40 hours	80 hours	400 hours
All PTO Shaft Yoke Ends		●	●			
PTO tubes		●			●	
Roller	2/4			●		
Castor wheel pivot	0/2				●	
Castor wheel axle	0/2				●	
Check oil levels in the gearboxes					●	
Replace oil in gearboxes						●

Spare parts - MJ65

MJ65-150 General Assembly





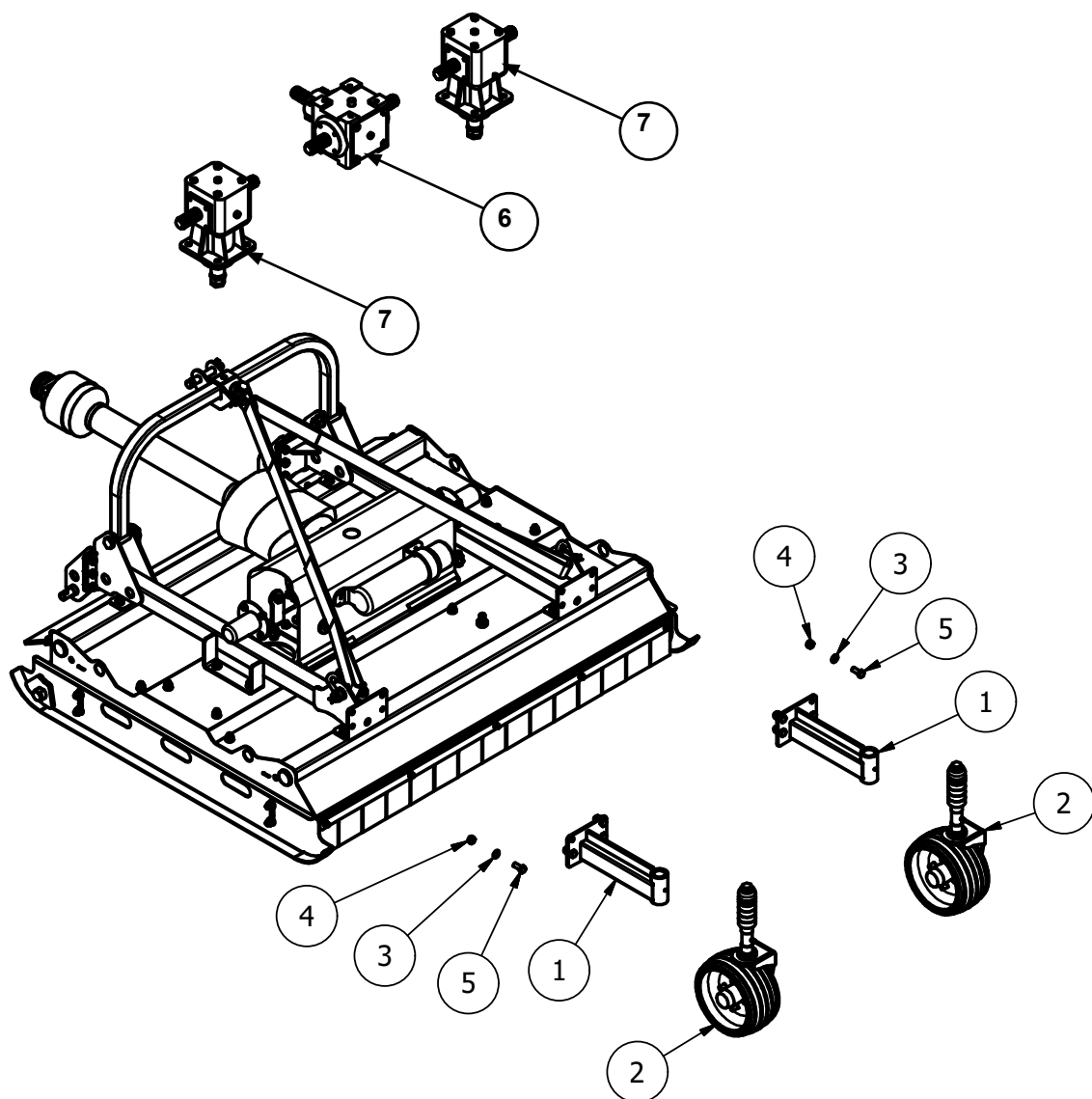
MJ65-150 - Parts List

Item	Part No.	Description	Qty
1*	785-BLD-L	785mm BLADE Anti-Clk	1
2*	785-BLD-R	785mm BLADE Clk	1
3	MJ65-150-ROL01	150 CSPRO ROLLER	1
4	XBLD-KIT3	SWIFT OVERLAP BLADES	2
5	MJ65-150-BD01	150 BODY	1
6	MJ65-150-GBR01	UNDERSIDE TROUGH	1
7	MJ65-150-LK01	LINKAGE MOUNT (RH)	1
8	MJ65-150-LK20	LINKAGE MOUNT (LH)	1
9	MJ65-150-LK30	LINK PIN MOUNT	1
10	MJ65-150-LK35	LINK PIN MOUNT	1
11	MJ65-150-SK01	SKID (RH)	1
12	MJ65-150-SK20	SKID (LH)	1
11/12	MJ65-150-SK30	SKID for 2 rollers model	2
13*	LF205TH-S	6 SPLINE 'T' BOX (205.874) 1.92	2
14	5582	DIA 38.3-42mm INSERT	4
15	CM25-DRV	6 SPLINE STAR DRIVE	4
16*	JJ.03499	6 SPLINE 'T' BOX 1:1.9 (03499)	1
17	MJ40-270-RW01	RUBBER WASHER	8
18	MJ65-150-AF01	CAT 1 A FRAME	1
19	MJ65-150-DF01	RUBBER FLAP	1
20	MJ65-150-DF02	GUARD RUBBER	1
21	MJRC-23-40	23mm COUPLING 40 SHORE	2
22	MJ65-150-CV01	RUBBER CLAMP	2
23	MJ65-150-CV02	GEARBOX COVER	1
24	SW2-550-CV21	GUARD BASE MOUNT	2
25	RM-RSN3	SHAFT COLLAR DIA 35	2
26	111044	DIA 26-30mm INSERT	8
27	11360	CAT 1 LOWER PIN DIA 22x116mm	2
28	12HEX109	1/2F HEX 10.9	12
29	12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9	12

30	190.000.545	PTO GUARD (EXTENDED OVAL)	1
31	190592	PTO HAT	2
32	5/8F	5/8" FINE NYLOC NUT	12
33	58x2FBZP	5/8"x2" FINE BOLT	12
34	74	CAT 1 PIN DIA 19x102mm	1
35	8400STR	8400RM MKII STRAP (2130mm)	1
36	AN099/10	LINCH PIN DIA 9.5	3
37	DH-10404	DOCUMENT HOLDER 350x85	1
38	DSR-1-2	1/2" RATED 'D' SHACKLE	2
39	DSR-5-8	5/8" RATED 'D' SHACKLE	1
40	FWM12	M12 FLAT WASHER	64
41	FWM12XL	M12 FLAT WASHER (EX-LARGE)	4
42	FWM16	M16 FLAT WASHER	12
43	FWM20	M20 FLAT WASHER	2
44	FWM5	M5 FLAT WASHER	4
45	FWM8	M8 FLAT WASHER	22
46	M12	M12 NYLOC NUT	58
47	M12x30SKBH	M12x30 SOCKET BUTTON HEAD 10.9	32
48	M12x30SZP	M12x30 SET BOLT	20
49	M12x35BZP	M12x35 BOLT	4
50	M12x40SKBH	M12x40 SOCKET BUTTON HEAD 10.9	2
51	M20	M20 NYLOC NUT	2
52	M20x100BZP	M20x100 BOLT	2
53	M5	M5 NYLOC NUT	4
54	M5x16SZP	M5x16 SET BOLT	4
55	M8	M8 NYLOC NUT	10
56	M8x12SKS	M8x12mm SOCKET HEAD 12.9	2
57	M8x16SZP	M8x16 SET BOLT	12
58	M8x30SKBH	M8x30 SOCKET BUTTON HEAD 10.9	10
59	NL12SP	M12 SP NORDLOCK	12

* - further breakdown provided

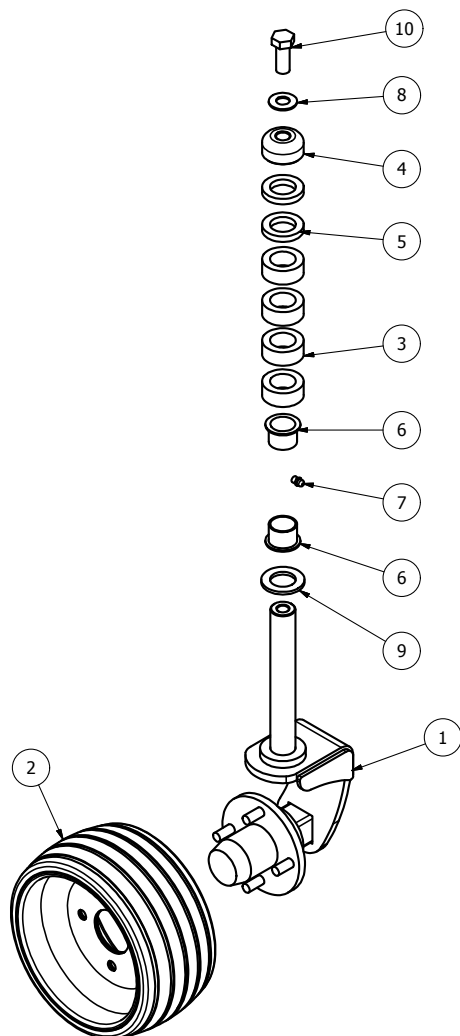
MJ65-150FM (Front mount model)



MJ65-150FM - Parts List

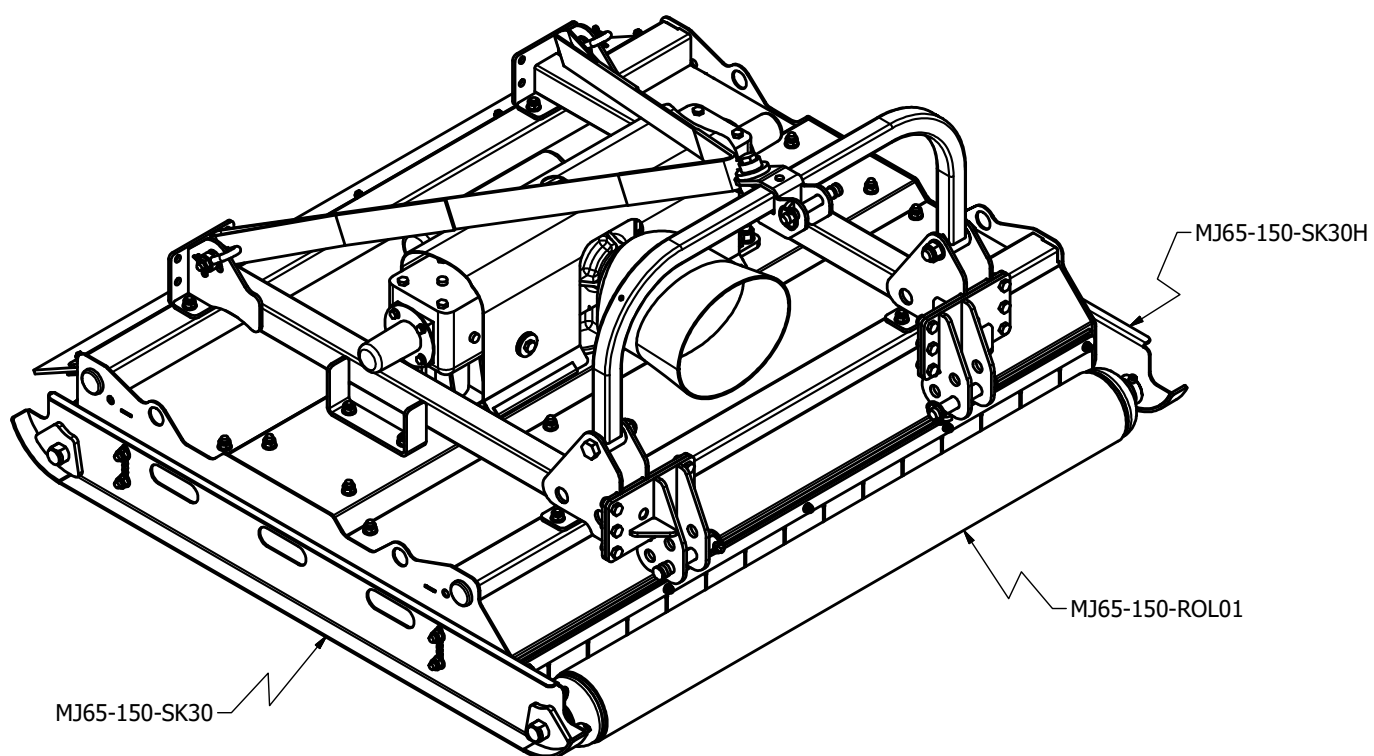
Item	Part No.	Description	Qty
1	MJ65-150-CW01	SMALL CYCLONE CASTOR	2
2	RM2-CW-GA01	MAJOR CASTOR WHEEL	2
3	FWM12	M12 FLAT WASHER	8
4	M12	M12 NYLOC NUT	8
5	M12x30SZP	M12x30 SET BOLT	8
6			1
7	LF205TH-S	6 SP 'T' BOX 1.92 (205.874-S) SHORT	2

Wheel assembly (RM2-CW-GA01) (MJ35/MJ61/MJ65FM models)



Item	Part No.	Description	Qty
1	RM2-CWY	CASTOR WHEEL MOUNT	1
2	MJCW-GS-GA	MOULDED RUBBER WHEEL	1
3	RM2-L019	HEIGHT ADJUSTOR NYLON	4
4	RM2-L020	CASTOR TOP	1
5	RM2-L021	1/2 HEIGHT ADJUSTOR NYLON	2
6	3026DU	30x34x26 FLANGE BUSH	2
7	851	GREASE NIPPLE M8x1.25 STR	1
8	DSW34	DISC SPRING 34x16.3 x2	1
9	FWM30	M30 FLAT WASHER	1
10	M16x40SZP	M16x40 SET BOLT	1

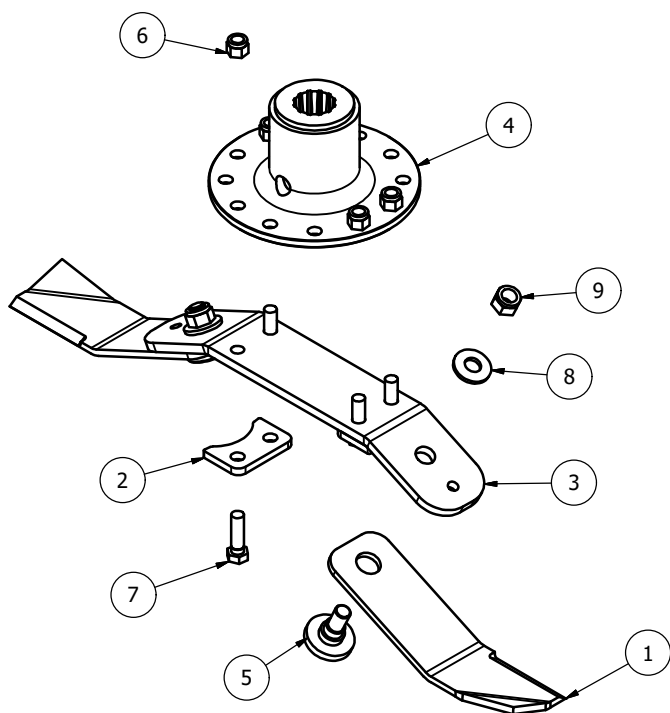
MJ65-150-2R (2 Roller Model)



PTO shafts - MJ65

Item	Part No.	Description	Qty
1	T40BO-1100	T40 PTO shaft (Front and Rear mount)	1

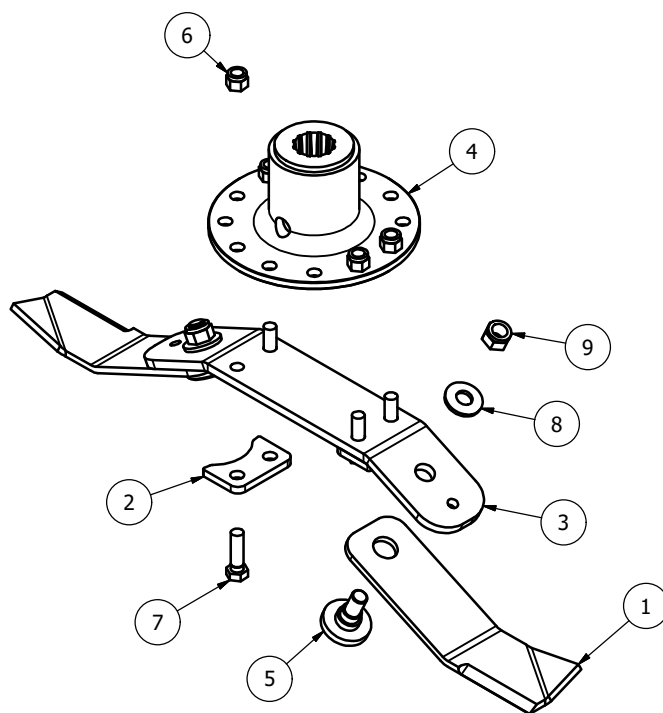
785-BLD-L Blade assembly



Item	Part No.	Description	Qty
1	BLD-28025-AC	BLADE 280xDia 25 (Anti-Clk)	2
2	BLDB-315-25-SY-STP1	BLADE STOP SPACER	2
3	BLDB6-315-25	BLADE BACK (315 CTR 25 deg)	1
4	DF-BMP	J205 G/BOX BLADE MOUNT	1
5	BS-2507-02	THREADED BLADE SUPPORT	2
6	1/2F	1/2" FINE NYLOC NUT	4
7	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
8	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
9	M16	M16 NYLOC NUT	2

1 off - MJ65-150 & MJ65-150FM

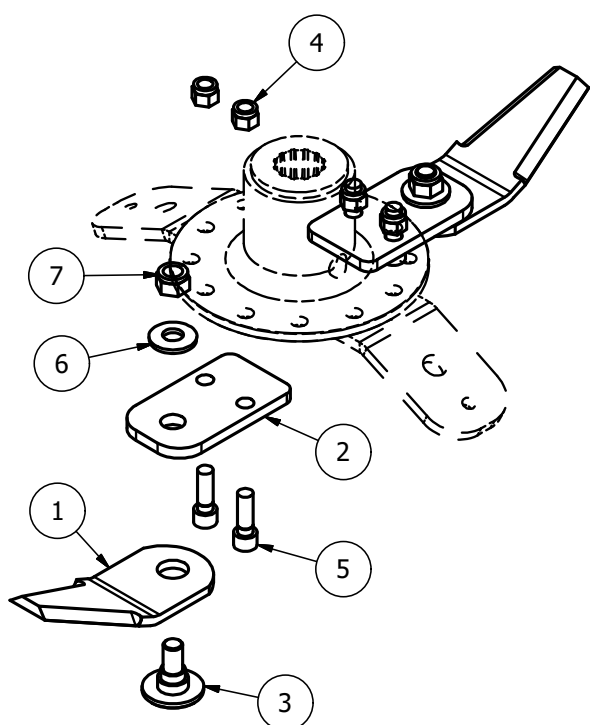
785-BLD-R Blade assembly



Item	Part No.	Description	Qty
1	BLD-28025-C	BLADE 280xDia 25 (Clk)	2
2	BLDB-315-25-SY-STP1	BLADE STOP SPACER	2
3	BLDB6-315-25	BLADE BACK (315 CTR 25 deg)	1
4	DF-BMP	J205 G/BOX BLADE MOUNT	1
5	BS-2507-02	THREADED BLADE SUPPORT	2
6	1/2F	1/2" FINE NYLOC NUT	4
7	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
8	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
9	M16	M16 NYLOC NUT	2

1 off - MJ65-150 & MJ65-150FM

XBLD-KIT3



Item	Part No.	Description	Qty
1	BLD-25025-OVL	OVERLAP FOR BLADE 250xDia 25	2
2	XBLD-BB-06	OVERLAP MOUNT	2
3	BS-2507-03	THREADED BLADE SUPPORT	2
4	1/2F	1/2" FINE NYLOC NUT	4
5	12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9	4
6	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
7	M16	M16 NYLOC NUT	2

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