

Operator Manual & Parts List

MAJOR CYCLONE HEAVY DUTY MOWER

MJ30-560 after HR20617

MJ30-420 after HR20617

MJ30-350 after HR20617

MJ31-300

MJ31-280

MJ31-250

MJ31-200



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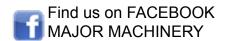
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Disclaimer

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.

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MJ30-350 Wing Roller

MJ30-350 Wing Guard

MJ30-350/420 Body Assembly

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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.

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declares in sole responsibility that the product:

CYCLONE HEAVY DUTY 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).
- 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 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 Aspects

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.

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.

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:	MAJOR EQUIPMENT INTLLTD	CE
Serial No:	BALLYHAUNIS, CO MAYO. FRELAND TEL +353 (0) 9496 30572 EMAIL: info@major-equipmont.com	MAJOR
Date of Purchase:	MAJOR EQUIPMENT LTD (UK) MAJOR IND. ESTATE. HEYSHAM. LANGS, LAD 3JJ, UK. TEL. +44 (0) 1524 85501	
Dealer Name:	EMAIL ukinfo@major-equipment.com	Moderations
Dealer Telephone:	MAJOR EQUIPMENT INTL LTD POSTBUS 29, NL-7700 AA DEDEMSVAART, NEDERLAND TEL + 31 (6) 5389 19665 EMAIL euindolfmajor-equipment.com	Year of transfer for Groups

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 with. 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.

Product Specifications

Model	MJ30-560	MJ30-420	MJ30-350	MJ31-300	MJ31-280	MJ31-250	MJ31-200
Overall Width	5.82m (19' 1")	4.43m (14' 6")	3.65m (12')	3.1m	3m	2.65m (8'9")	2.1m (7')
Cut Width	5.6m (18' 4.5")	4.22m (13'10")	3.5m (11' 5")	2.86m	2.79m	2.5m (8' 1")	2m (6' 5")
Transport Width	2.54m (8' 4")	2.67m (8' 9")	2.67m (8'9 ")	3.1m	3m	2.65m (8'9")	
No. of Blades	32	24	20	12	16	16	12
No. of Rotors	8	6	5	3	4	4	3
Power (HP)	100-150	100-150	70-120	70-120	60-110	50-100	50-100
PTO (rpm)	1000	1000	1000	1000	1000	540-1000 1000 (FM)	540 1000 (FM)
Blade Speed	77.5m/s	77.5m/s	77.5m/s	74m/s	75m/s	75m/s	77.5m/s
Cutting Height	55-170mm	55-170mm	55-170mm	20-250mm	20-250mm	20-250mm	20-250mm
Weight (kg)	1700	1265	1120	890	945	785	600

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.

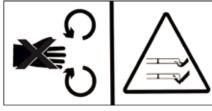
The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol



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



To avoid injury, read the manual



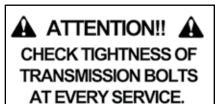
Rotating blade hazard

PTO TUBES MUST BE GREASED EVERY 10 HOURS

Grease PTO tubes

CHECK TIGHTNESS **OF TRANSMISSION BOLTS AFTER FIRST** 8 HOURS OF WORK

Check bolts



Check the tightness of the transmission

MAX PTO INPUT 540 RPM

MAX PTO INPUT 900 RPM

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

<u>ATTENTION!</u> Do not engage drive while in transport position

Maximum PTO input



PTO entanglement hazard - keep clear of PTO drives.



High oil pressure hazard





Moving parts

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 rpm the value can reach 97dBA. Higher rate of PTO input will result in 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.

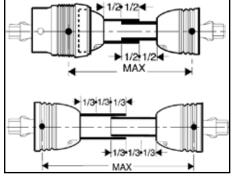
The tractor PTO shaft length may be altered to suit the individual tractor model. When the machine is in operation, the PTO shaft should have a minimum 1/3 engagement as shown in the diagrams. After the machine has been hitched to the tractor, it should be checked in various positions that the drive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

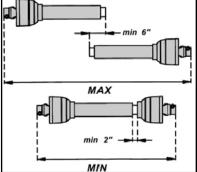
If the PTO shaft is too long, it should be shortened in the following way:

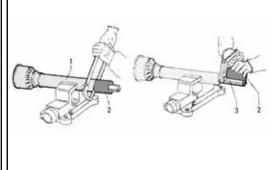
- Set the machine at a minimum distance from the tractor, then brake the tractor and switch off the engine.
- Separate the two halves of the PTO. Insert the female part into the tractor PTO and the male part into the machine PTO, checking that the position is correct by means of the fixing pins.
- Line 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.



Do not use the shaft cone as a step







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 MUST NOT EXCEED 30 km/hr (18 MPH)

General safety instructions

Precautions to be taken while working with the machine:

- 1. Do not operate the machine when you are tired;
- 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.

Operating the Machine

Inspections before Use

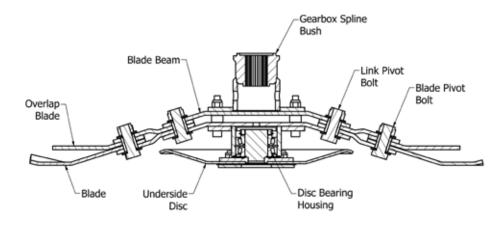


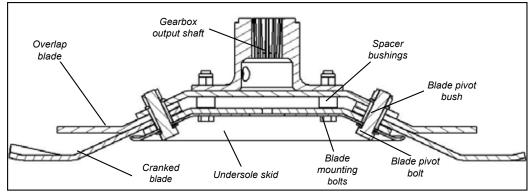
Always disengage PTO, Switch off tractor engine and engage the parking brake before making adjustments to the machine.

1. With the whole machine as level as possible, check the oil level in the Primary Gearbox, top up as required with SAE EP90 gear oil through the oil filler plug indicated. The correct level is at the oil level plug indicated. Check the oil level in the Rotor Gearboxes and top up as required with SAE EP 90 gear oil through the oil filler plugs indicated. The correct level is at the oil level plug indicated



- 2. Grease the PTO shaft universal joints, drive shaft bearing and carrying arm pivots.
- 3. Replace worn blades with new ones.
- 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 retaining screws after the first and second hours of work.
- 7. Ensure safety guards and flaps are in place at all times where fitted.
- 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.

Key to Main Parts 6 3 2 11 10 8 12 1 Body 2 Transmission cover 3 A-Frame 4 Gearbox PTO cover 5 Rear roller 6 Strap/Chain 7 Roller height indicator 8 8 Skid 9 Rubber skirt 10 Guards

A-Frame buffer stop

11

12 13 Wing

Blade

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. NVER ALLOW ANYONE TO STAND BETWEEN THE TRACTOR AND THE MACHINE.

- 1. Reverse the tractor. Ensure the tractor parking brake is applied.
- 2. Connect the machine to the tractor,
- 3. Before connecting the PTO shaft to the tractor, check for length as previously described in this manual.
- 4. Ensure shear-bolt safery device is fitted on the machine PTO shaft and not the tractor PTO, as shown on the PTO shaft guarding.
- 5. Ensure PTO check chains are anchored to prevent PTO guarding from rotating.
- 6. Connect the hydraulic hoses to the appropriate connection.

Transport Position

- 1. Check machine is hitched to the tractor as described. Ensure the tractor parking brake is applied
- 2. Ensure rotors are not turning then transform the machine into transport position by hydraulic control
- 3. Lift the body clear from the ground with the tractor 3 point linkage

Mowing Position

- 1. This Cyclone mower is designed to operate at a RPM rate provided in the Specification section of this booklet. Always operate on level ground when connecting / disconnecting the implement. This will prevent dangerous movement.
- 2. Never allow anyone to stand between the tractor and the topper. Ensure the machine is hitched correctly to the tractor as previously described
- 3. Lower main cutting deck to the desired cutting height and lock the tractor lower link arms in position. The front mini skid acts as a bottom out skid only, with the weight of the machine held by the tractor linkage & the castor wheels.
- 4. Lower the wings into mowing position by hydraulic control & relocated the wing locks into flotation position.
- 5. Start up the tractor PTO at a low RPM.
- 6. Build up to operating speed, select a suitable forward gear & proceed to cut grass.

Operating the Machine/Mowing



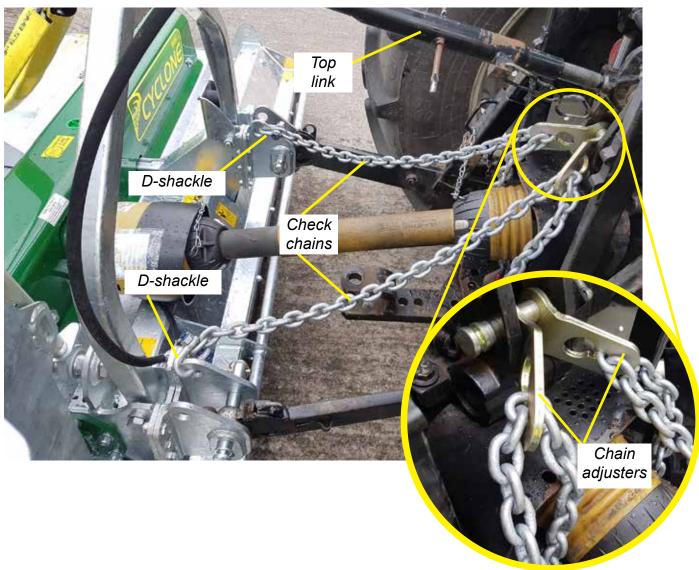
Never place limbs under the machine while rotors are turning. Rotors can remain turning for up to 1 minute after disengaging PTO. Ensure drawbar ram is fully extended before operating PTO. This MAJOR machine is designed to operate at RPM rate provided in the Specification section of this manual.

- 1. Ensure the machine is hitched correctly to the tractor as previously described.
- 2. Ensure cutting decks are lowered to the ground.
- 3. Start up the tractor PTO at a low RPM.
- 4. Build up to operating speed, select a suitable forward gear & proceed to cut grass.

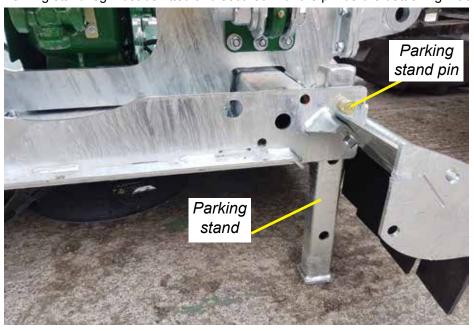
Additional adjustments

Check chains are supplied with MJ30-350/420/560 and must be fitted to ensure the stability of the machine. Ensure that chains are fitted as shown below. These chains can also be fitted on other model if required.

- Install chain adjusters on or beside the top link on the tractor
- · Attach chains to the machine via D-chakles.
- Adjust the length as necessary by using chain adjuster to suit your tractor.



Parking stand leg must be fitted and secured with the pin before detaching machine from the tractor.



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

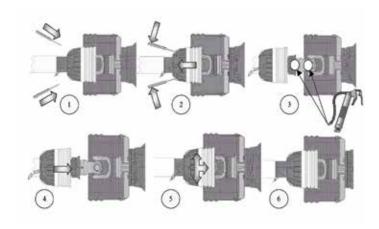
If emergency operations are required whilst the machine is connected to the tractor, switch off the engine, engage the parking brake and disengage the PTO.

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

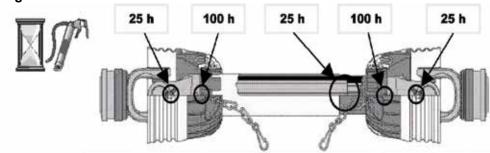
PTO Shaft Maintenance

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



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 MAJOR replacement shear bolts. M8X50 BZP -8.8)
- 4. Slide yoke shield securely in place Fit PTO shaft with the shearbolt end connected to the Topper 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 tightenes after mowing at the following intervals:

1st 50 Acres

1st 100 Acres

1st 250 Acres

And every 250 acres thereafter.

Roller

Check tightness of stub axles nuts at every service

Spinning Undersole Disk

The Disk should be able spin freely. Slight side-to-side rocking motion is allowed. Check and adjust the Disk at the following intervals:

1st 50 Acres,

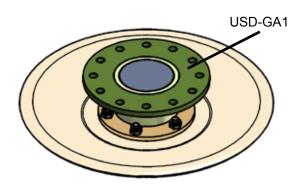
1st 100 Acres,

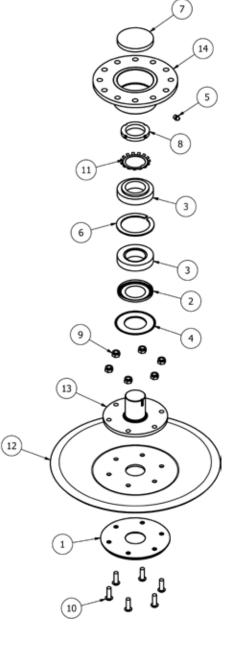
1st 250 Acres

And every 250 acres thereafter.

In order to adjust the disk please do the following:

- Remove the assembled Spinning Undersole Disk (USD-GA1) from the machine;
- · Remove seal (Item 7);
- Tighten up the lock nut (Item 8) if required;
- · Place the seal back in position;
- Bolt the assembled unit (USD-GA1) back to the machine.



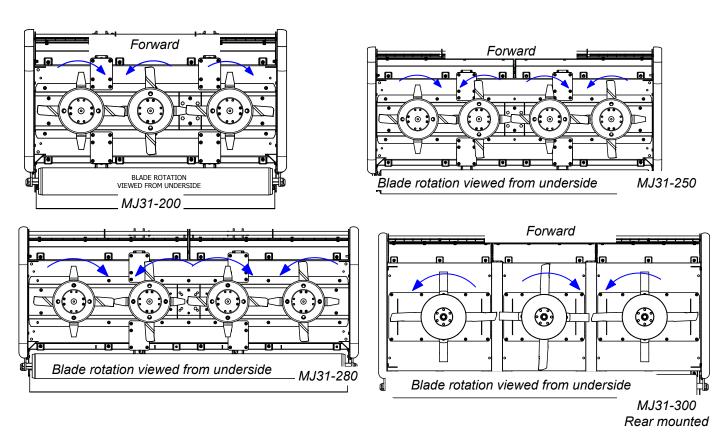


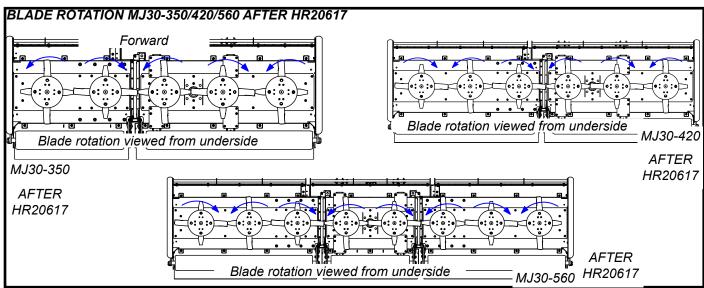
Blades Replacement

Check blades on a regular basis for wear. Replace any damaged or worn parts immediately.

Blade Rotation

Note:: ENSURE BLADE ROTATION AND TIMING IS CORRECT AFTER SERVICING TRANSMISSION.





Greasing Schedule

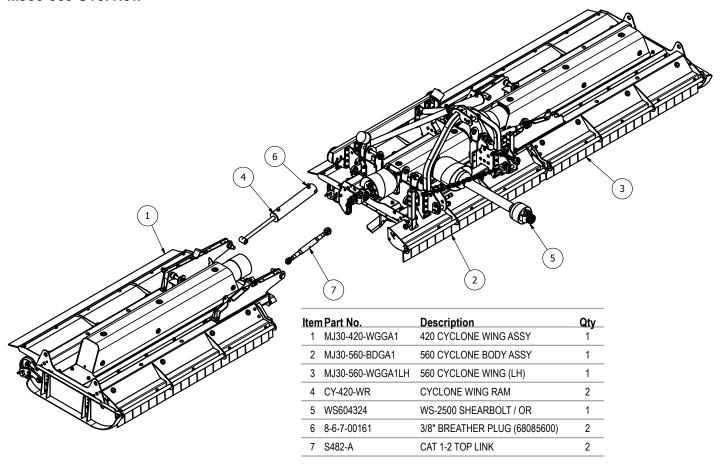
	Initially	8 hours	40 hours
All PTO Shaft Yoke Ends	•	•	
PTO tubes		•	
Wing eye pivot (0/2/4)	•		•
Spinning undersole disk (0/3)	•		•
Hydraulic Ram (0/1/2)	•		•
Roller stub axles (2/4/6)	•		•

Trouble Shooting

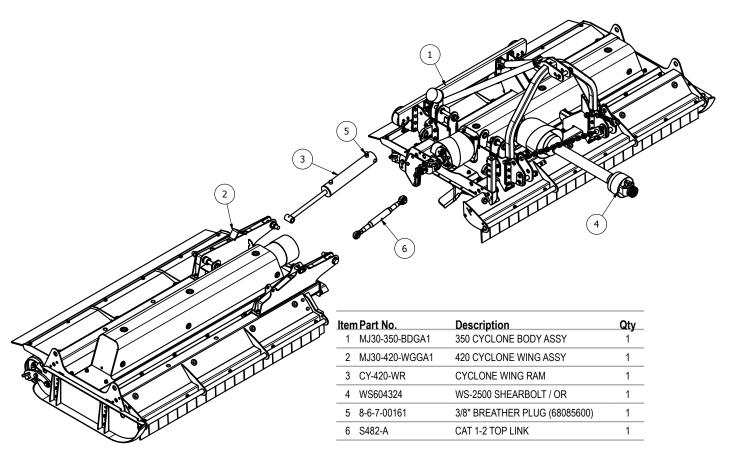
Fault	Cause	Remedy
	Blades dull or bent	Replace blades
	Carrier RPM too low	Use correct PTO speed
Leaves a streak of uncut or	Field conditions are so wet that the tractor tyre is pushing grass into mud	Too wet to mow. Stop operation and wait until it is drier
partially cut grass	Ground speed too fast	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 too much material	Reduce ground speed but maintain 540rpm 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
	Low on lubricant	Fill to proper level
Gearbox overheating	Improper type lubricant	Replace with proper lubricant
	Excessive grass / debris build-up around gearbox	Remove grass, etc from machine
	Mower too low	Raise mower-reset wheels
Blade/bullets is scalping ground	Field is ridged	Cut field at a different angle
g. 30110	Field is too wet	Stop and wait until it is dried
Mower will not cut.	Shear bolt sheared	Install new shear bolt
	Cutting in sandy conditions	Increase cutting height
Blades/bullets wear too fast	Cutting in rocky conditions	Increase cutting height
	Blades hitting ground	Increase cutting height
	Advancing into grass too rapidly	Reduce forward travel speed
Mower seems to require	Hitting ground	Raise mower and reset wheels
excessive power	Worn or dull blades	Sharpen or replace blades
	Tractor not large enough	Use larger horsepower tractor
	Check gearbox bolts	Tighten if loose
	Check for loose nuts on blades	Tighten if loose
Excessive vibration	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
	Worn bearing	Replace bearings
	Low oil in gearbox	Check level and add oil
	Loose Parts	Check all bolts are fully tightened
Noisy machine	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
		Check driveline between gearboxes 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 - CYCLONE mowers Cyclone Mower MJ30-560/420/350, MJ31-300, MJ31-280/250/200

MJ30-560 Overview

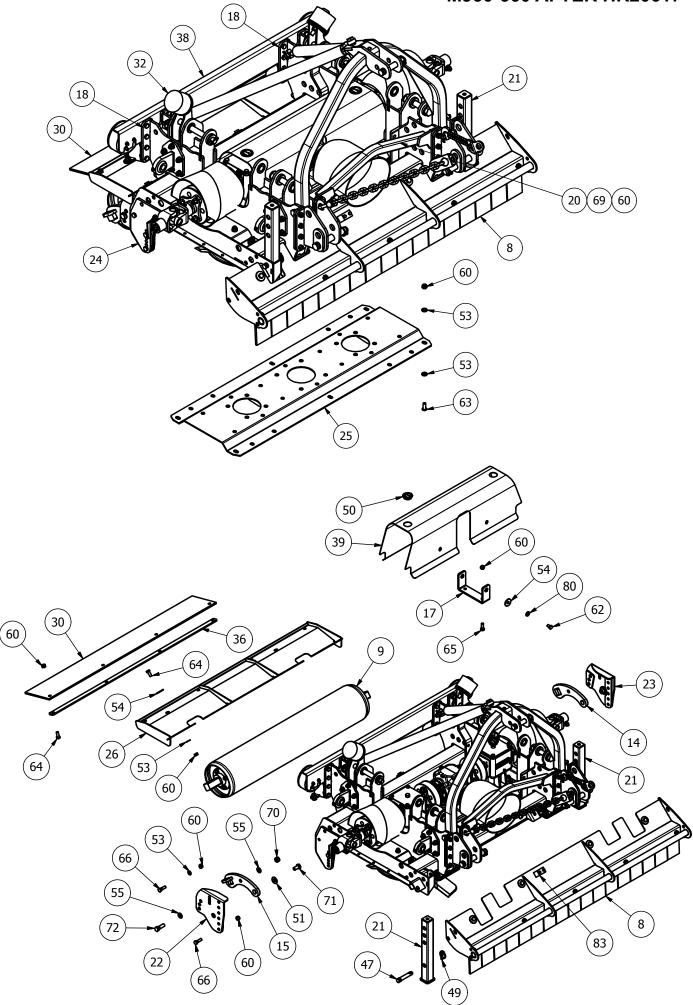


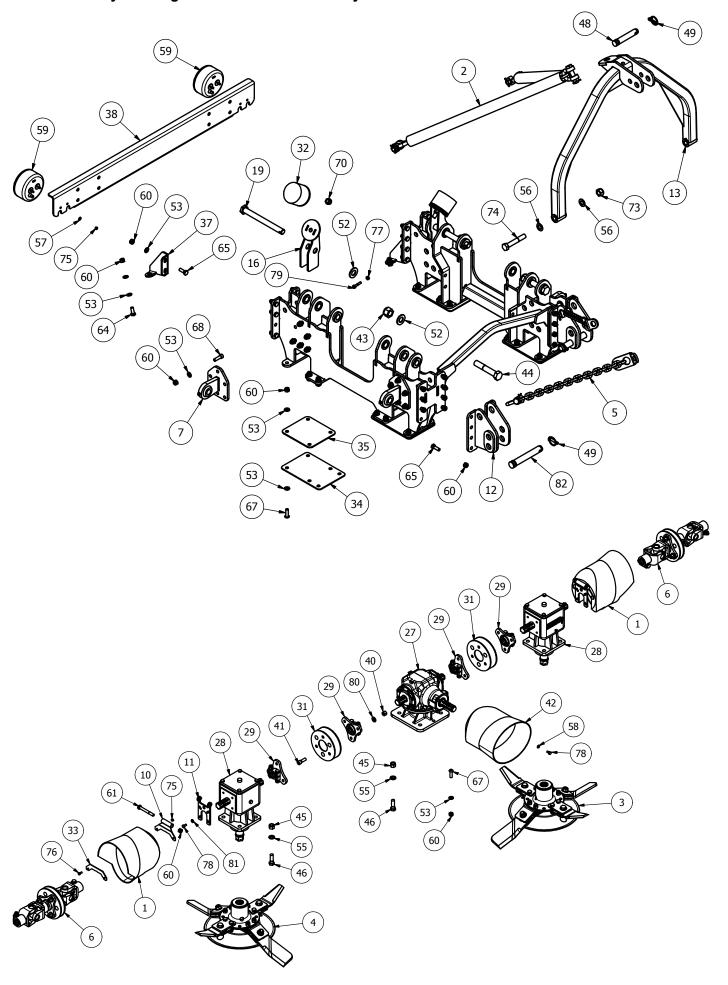
MJ30-420 Overview



MJ30-560 Body - General Assembly

MJ30-560 AFTER HR20617



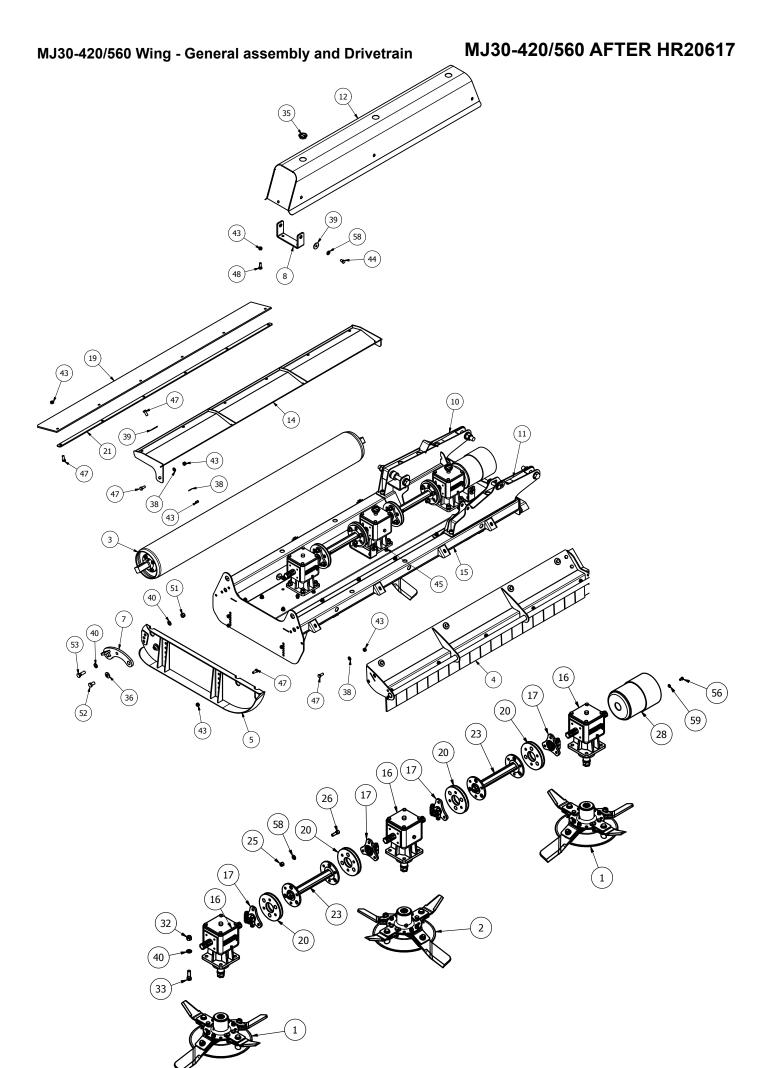


MJ30-560 AFTER HR20617

MJ30-560 Body - Parts list

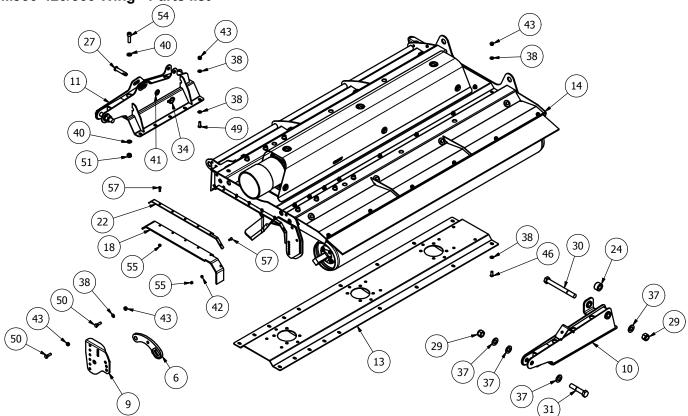
Item 1	1 Part No. 11RM-C16	Description MODIFIED OVAL GUARD	Qty 2
$\frac{1}{2}$	2500CM-STRP01	2500 CHAIN SLING	1
3	755-DCBLDHTX-L		1
3 4	755-DCBLDHTX-L	755 BLADE (Anti_Clk)	1
		755 BLADE (CIk) CHECK CHAIN ASSY	2
5	CYC-CCHN01 CYC-WDR01	WING DRIVE ASSY	2
6			
7	MJ30-350-PVE01	WING PIVOT EYE	4
8	MJ30-560-GRD20	560 BODY GUARD	1
9	MJ30-560-ROLB01	560 BODY ROLLER	1
10		COVER PIVOT	2
11	11RM-C11	COVER PIVOT	2
	2800CM-LK	LOWER LINK MOUNT	2
	3000T-AF-01	3000T A-FRAME	1
	3000T-RPV01	ROLLER ADJUSTER	1
_	3000T-RPV01-H	ROLLER ADJUSTER	1
	MJ30-350-BF01	BUFFER STAND	2
_17	MJ30-350-CVR20	GUARD BASE MOUNT	2
18	MJ30-350-LK01	LINKAGE/WING MOUNT	2
19	MJ30-350-LK30	PIVOT PIN	2
20	MJ30-350-LK40	LINKAGE TIE	1
21	MJ30-350-SD01	PARK STAND	2
22	MJ30-350-SKR01	CYCLONE REAR SKID	1
23	MJ30-350-SKR01H	REAR SKID	1
24	MJ30-560-BD01	560 CYCLONE BODY	1
25	MJ30-560-GRB01	TROUGH REINF' PANEL	1
26	MJ30-560-GRD01	BODY REAR GUARD	1
27	266.207	TF26A 'T' RATIO 1:1.47	1
28	MJ40T11	6 SPLINE 'T' BOX RATIO 1:1	2
29	CM25-DRV	6 SPLINE STAR DRIVE	4
30	MJ30-350-GRD35	REAR RUBBER FLAP	1
31	MJRC-113	113 PCD RUBBER COUPLING	2
32	MOT75	DIA 100x75 BUFFER	2
33	11RM-C14	COVER MOUNT	2
34	2500CM-LK03	LINKAGE TIE	4
_	2500CM-LK09	UNDERSIDE SHIM	4
_	MJ30-350-GRD36	REAR RUBBER CLAMP	1
_	MJ30-350-GRD05	REAR GUARD SUPPORT	2
	MJ30-350-LK20	LINKAGE BRACE	1
_	MJ30-560-CVR02	560 BODY COVER	1
	12HEX109	1/2F HEX 10.9	12
-10	12x112FSKS	1/2"x1 1/2" FINE SKT HEAD 12.9	12

42	190.000.545	PTO GUARD (EXTENDED OVAL)	1
43	1F	1" FINE NYLOC NUT	2
44	1x512FBZP	1"x5 1/2" FINE BOLT	2
45	5/8F	5/8" FINE NYLOC NUT	12
46	58x2FBZP	5/8"x2" FINE BOLT	12
47	73	CAT 1 PIN DIA 19x76mm	2
48	81	CAT 2 PIN DIA 25.4x110mm	1
49	AN099/10	LINCH PIN DIA 9.5	5
50	CP176-181MG1	45mm INSERT	2
51	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
52	FW1	DIA 1" FLAT WASHER	4
53	FWM12	M12 FLAT WASHER	114
54	FWM12XL	M12 FLAT WASHER (EX-LARGE)	7
55	FWM16	M16 FLAT WASHER	16
56	FWM20	M20 FLAT WASHER	6
57	FWM6	M6 FLAT WASHER	4
58	FWM8	M8 FLAT WASHER	4
59	LA6002AR	LED REAR LIGHT (12/24 V)	2
60	M12	M12 NYLOC NUT	112
61	M12x100BZP	M12x100 BOLT	2
62	M12x20SZP	M12x20 SET BOLT	4
63	M12x30SKBH	M12x30 SKT BUTTON HEAD 10.9	14
64	M12x30SZP	M12x30 SET BOLT	9
65	M12x35BZP	M12x35 BOLT	28
66	M12x40BZP	M12x40 BOLT	5
67	M12x40SKBH	M12x40 SKT BUTTON HEAD 10.9	26
68	M12x40SKS	M12x40 SOCKET HEAD SCREW	24
69	M12x50BZP	M12x50 BOLT	4
70	M16	M16 NYLOC NUT	4
71	M16x30SZP	M16x30 SET BOLT	2
72	M16x50BZP	M16x50 BOLT	2
73	M20	M20 NYLOC NUT	2
74	M20x120BZP	M20x120 BOLT	2
75	M6	M6 NYLOC NUT	8
76	M6x16SZP	M6x16 SET BOLT	4
77	M8	M8 NYLOC NUT	2
78	M8x16SZP	M8x16 SET BOLT	12
79	M8x40BZP	M8x40 BOLT	2
80	NL12SP	M12 SP NORDLOCK	16
81	NL8SP	M8 SP NORDLOCK	8
82	S112	CAT 2 PIN DIA 28.5x159mm	2
83	SP220-SIN	WELD CLAMP 20 ODx3/8" ID	3



MJ30-420/560 AFTER HR20617

MJ30-420/560 Wing - Parts list

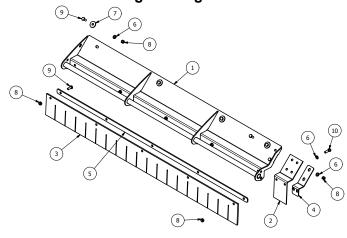


MJ30-420/560 Wing - Parts list

lten	n Part No.	Description	Qty
_1	755-DCBLDHTX-L	755 BLADE (Anti_Clk)	2
_2	755-DCBLDHTX-R	755 BLADE (Clk)	1
3	MJ30-350-ROLB01	350 BODY ROLLER	1
4	MJ30-420-GRD50	420 WING GUARD	1
5	2500CM-SKDR	2500CM R/HAND SKID	1
6	3000T-RPV01	ROLLER ADJUSTER	1
7	3000T-RPV01-H	ROLLER ADJUSTER	1
8	MJ30-350-CVR20	GUARD BASE MOUNT	3
9	MJ30-350-SKR01H	REAR SKID	1
10	MJ30-350-WA01H	WING ARM	1
11	MJ30-350-WA20	WING ARM (LINKAGE)	1
12	MJ30-420-CVR10	420 WING COVER	1
13	MJ30-420-GRB20	TROUGH REINF' PANEL	1
14	MJ30-420-GRD30	WING REAR GUARD	1
15	MJ30-420-WG01	420 WING	1
16	MJ40T11	6 SPLINE 'T' BOX RATIO 1:1	3
17	DRV-6S-52DC	6 SPLINE 50mm DRIVE	4
18	MJ30-350-GRD41H	WING RUBBER	1
19	MJ30-420-GRD35	REAR RUBBER FLAP	1
20	MJRC-23	113 PCD COUPLING 4mm PLT	4
21	MJ30-420-GRD36	REAR RUBBER CLAMP	1
22	MJ30-350-GRD40	WING CLAMP	1
23	DRV-RC-SWT410	MJ70-410 DRIVE	2
24	MJ30-350-WA11	RAM SPACER	1
25	12HEX109	1/2F HEX 10.9	24
26	12x112FSKS	1/2"x1 1/2" FINE SKT HEAD 12.9	24
27	15012	CAT 1 PIN DIA 19x76mm	1
28	190760	GUARD (COVER 760/BASE 661)	1
29	1F	1" FINE NYLOC NUT	3
30	1x10FBZP	1"x10" FINE BOLT	1

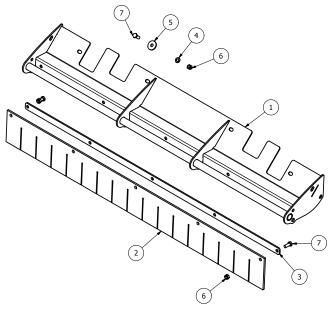
31	1x5FBZP	1"x5" FINE BOLT	2
32	5/8F	5/8" FINE NYLOC NUT	12
33	58x2FBZP	5/8"x2" FINE BOLT	12
34	AN099/10	LINCH PIN DIA 9.5	1
35	CP176-181MG1	45mm INSERT	3
36	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
37	FW1	DIA 1" FLAT WASHER	7
38	FWM12	M12 FLAT WASHER	47
39	FWM12XL	M12 FLAT WASHER (EX-LARGE)	10
40	FWM16	M16 FLAT WASHER	32
41	FWM20	M20 FLAT WASHER	1
42	FWM8	M8 FLAT WASHER	2
43	M12	M12 NYLOC NUT	51
44	M12x20SZP	M12x20 SET BOLT	6
45	M12x25SZP	M12x25 SET BOLT	6
46	M12x30SKBH	M12x30 SKT BUTTON HEAD 10.9	10
47	M12x30SZP	M12x30 SET BOLT	16
48	M12x35BZP	M12x35 BOLT	6
49	M12x35SKBH	M12x35 SKT BUTTON HEAD 10.9	10
50	M12x40BZP	M12x40 BOLT	3
51	M16	M16 NYLOC NUT	10
52	M16x30SZP	M16x30 SET BOLT	2
53	M16x50BZP	M16x50 BOLT	2
54	M16x55SKZP129	M16x55 SOCKET HEAD 12.9	8
55	M8	M8 NYLOC NUT	7
56	M8x16SZP	M8x16 SET BOLT	4
57	M8x25BZP	M8x25 BOLT	7
58	NL12SP	M12 SP NORDLOCK	30
59	NL8SP	M8 SP NORDLOCK	4

MJ30-420/560 Wing - Frontguard



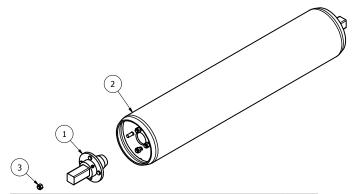
Iten	Part No.	Description	Qty
1	MJ30-420-GRD51	FLAP GUARD MOUNT	1
2	MJ30-350-GRD56	WING RUBBER FLAP	1
3	MJ30-420-GRD60	GUARD RUBBER (WING)	1
4	MJ30-350-GRD57	WING GUARD PLATE	1
5	MJ30-420-GRD61	WING RUBBER CLAMP	1
6	FWM12	M12 FLAT WASHER	7
7	FWM12XL	M12 FLAT WASHER (EX-LARGE)	4
8	M12	M12 NYLOC NUT	11
9	M12x30SZP	M12x30 SET BOLT	10
10	M12x40R7P	M12x40 BOLT	1

MJ30-560 Body - Frontguard



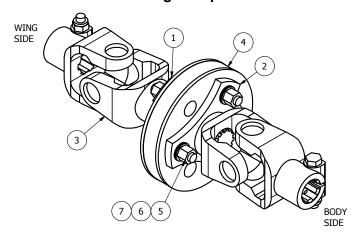
	n Part No.	Description	Qty
_1	MJ30-560-GRD21	FLAP GUARD MOUNT	1
2	MJ30-560-GRD60	GUARD RUBBER (WING)	1
3	MJ30-560-GRD61	BODY RUBBER CLAMP	1
4	FWM12	M12 FLAT WASHER	4
5	FWM12XL	M12 FLAT WASHER EX-LARGE	4
6	M12	M12 NYLOC NUT	9
7	M12x30SZP	M12x30 SET BOLT	9

MJ30-560 Body - Roller



Iten	n Part No.	Description	Qty
1	3000T-ROL07	3000T ROLLER AXLE STUB	2
2	MJ30-560-ROLB02	560 BODY ROLLER	1
3	22204	M12 WHEEL NUT	8

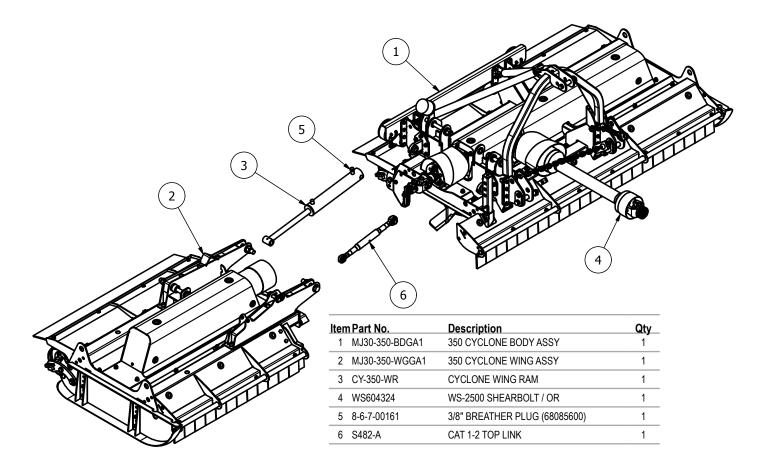
MJ30-350/420/560 Wing PTO parts

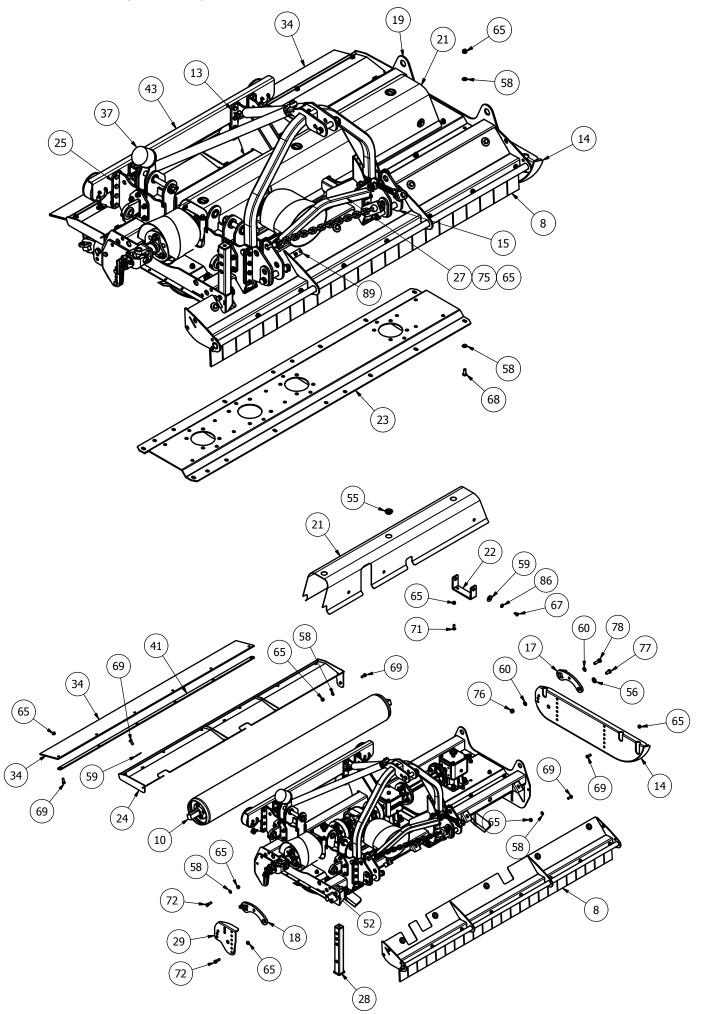


YOKE ENDS <u>MUST</u> BE ALIGNED AS SHOWN.

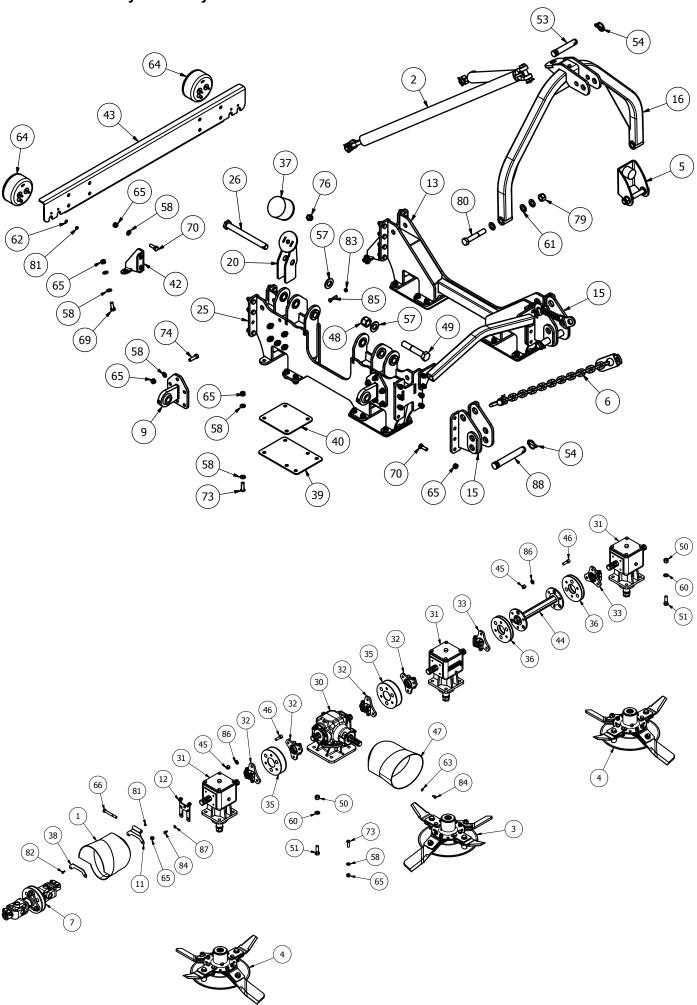
Item Part No.		Description	Qty	
1	CYC-WDR10	SPLINE BUSH DRIVE	1	
2	CYC-WDR20	SPLINE YOKE DRIVE	1	
3	CYC-WDR30	Z12 SHAFT YOKE	1	
4	MJRC-23-5	113 PCD COUPLING 5mm PLT	1	
5	12HEX109	1/2F HEX 10.9	6	
6	12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9	6	
7	NL12SP	M12 SP NORDLOCK	6	

MJ30-350 General Assembly





MJ30-350/420 AFTER HR20617



MJ30-350/420 AFTER HR20617

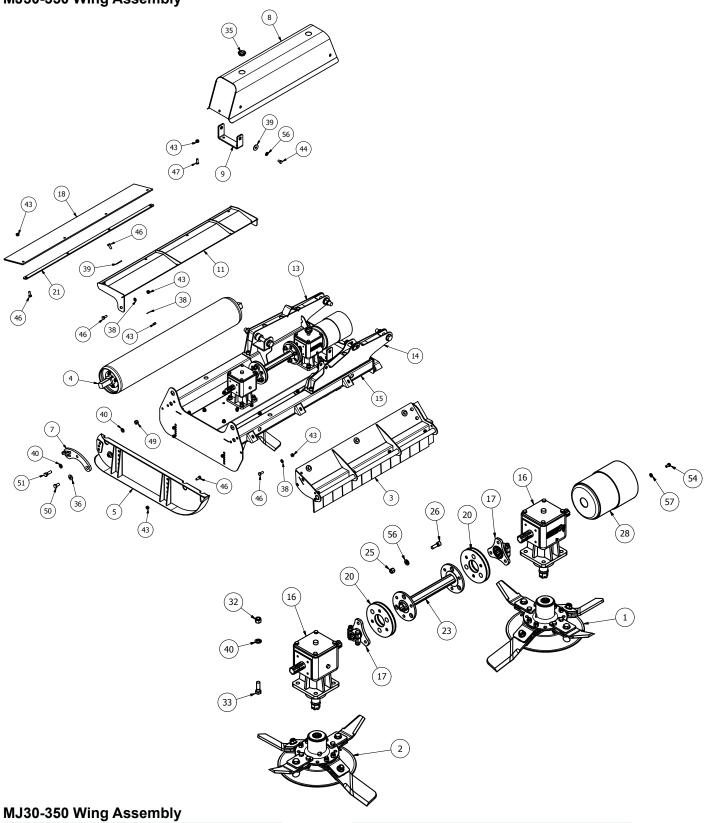
MJ30-350/420 Body Assembly

Part No.	Description	Qty
11RM-C16	MODIFIED OVAL GUARD	1
2500CM-STRP01	2500 CHAIN SLING	1
755-DCBLDHTX-L	755 BLADE (Anti_Clk)	1
755-DCBLDHTX-R	· , , , , , , , , , , , , , , , , , , ,	2
	. ,	1
	-	2
		1
		1
		2
		1
		1
		1
		1
		1
		2
		1
		1
		1
		1
MJ30-350-BF01	BUFFER STAND	1
MJ30-350-CVR01	350 BODY COVER	1
MJ30-350-CVR20	GUARD BASE MOUNT	3
MJ30-350-GRB01	TROUGH REINF' PANEL	1
MJ30-350-GRD01	BODY REAR GUARD	1
MJ30-350-LK01	LINKAGE/WING MOUNT	1
MJ30-350-LK30	PIVOT PIN	1
MJ30-350-LK40	LINKAGE TIE	1
MJ30-350-SD01	PARK STAND	1
MJ30-350-SKR01	CYCLONE REAR SKID	1
266.207	TF26A 'T' RATIO 1:1.47	1
MJ40T11	6 SPLINE 'T' BOX RATIO 1:1	3
CM25-DRV		4
DRV-6S-52DC		2
		1
		2
		2
		1
		1
		4
		4
		•
		1
		2
		1
		1
		24
12x112FSKS	1/2"x1 1/2" FINE SKT HD 12.9 PTO GUARD (EXTENDED	24 1
190.000 545	•	
190.000.545	OVAL)	
1F	OVAL) 1" FINE NYLOC NUT	1
	OVAL)	
	Part No. 11RM-C16 2500CM-STRP01 755-DCBLDHTX-L 755-DCBLDHTX-R AFB-GA1 CYC-CCHN01 CYC-WDR01 MJ30-350-GRD20 MJ30-350-ROLB01 11RM-C10 11RM-C11 2500CM-LK20 2500CM-SKDL 2800CM-LK 3000T-RPV01 3000T-RPV01 MJ30-350-BP01 MJ30-350-BP01 MJ30-350-BP01 MJ30-350-GRD01 MJ30-350-GRD01 MJ30-350-GRD01 MJ30-350-GRD01 MJ30-350-GRD01 MJ30-350-LK40 MJ30-350-LK40 MJ30-350-SKR01 266.207 MJ40T11 CM25-DRV DRV-6S-52DC MJ30-350-GRD11 MJRC-23 MOT75 11RM-C14 2500CM-LK09 MJ30-350-GRD05 MJ30-350-GRD05 MJ30-350-GRD05 MJ30-350-GRD05 MJ30-350-GRD01	11RM-C16 MODIFIED OVAL GUARD 2500CM-STRP01 2500 CHAIN SLING 755-DCBLDHTX-L 755 BLADE (Anti_Cik) 755-DCBLDHTX-R 755 BLADE (Cik) AFB-GA1 A' FRAME BUFFER CYC-CCHN01 CHECK CHAIN ASSY CYC-WDR01 WING DRIVE ASSY MJ30-350-GRD20 350 BODY GUARD MJ30-350-PVE01 WING PIVOT EYE MJ30-350-ROLB01 350 BODY ROLLER 11RM-C10 COVER PIVOT 11RM-C11 COVER PIVOT 2500CM-LK20 LINKAGE MOUNT 2500CM-LK20 LINKAGE MOUNT 2500CM-LK20 LINKAGE MOUNT 2500CM-LK20 LINKAGE MOUNT 2800CM-LK LOWER LINK MOUNT 3000T-AF-01 3000T A-FRAME 3000T-RPV01-H ROLLER ADJUSTER MJ30-350-BD01 350 CYCLONE BODY MJ30-350-BD01 350 BODY COVER MJ30-350-BD01 350 BODY COVER MJ30-350-CVR20 GUARD BASE MOUNT MJ30-350-GRD01 BODY REAR GUARD MJ30-350-LK40 LINKAGE TIE

	73	CAT 1 PIN DIA 19x76mm	1
53		CAT 2 PIN DIA 25.4x110mm	
54	AN099/10	LINCH PIN DIA 9.5	4
55	CP176-181MG1	45mm INSERT	3
56	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
57	FW1	DIA 1" FLAT WASHER	2
58	FWM12	M12 FLAT WASHER	118
59	FWM12XL	M12 FLAT WASHER (EX- LARGE)	11
60	FWM16	M16 FLAT WASHER	20
61	FWM20	M20 FLAT WASHER	5
62	FWM6	M6 FLAT WASHER	4
63	FWM8	M8 FLAT WASHER	4
64	LA6002AR	LED REAR LIGHT (12/24 V)	2
65	M12	M12 NYLOC NUT	115
66	M12x100BZP	M12x100 BOLT	1
67	M12x20SZP	M12x20 SET BOLT	6
68	M12x30SKBH	M12x30 SOCKET BUTTON HEAD 10.9	20
69	M12x30SZP	M12x30 SET BOLT	19
70	M12x35BZP	M12x35 BOLT	24
71	M12x35SKBH	M12x35 SOCKET BUTTON HEAD 10.9	6
72	M12x40BZP	M12x40 BOLT	3
73	M12x40SKBH	M12x40 SKT BUTTON HD 10.9	26
74	M12x40SKS	M12x40 SOCKET HEAD SCREW	12
75	M12x50BZP	M12x50 BOLT	4
76	M16	M16 NYLOC NUT	3
77	M16x30SZP	M16x30 SET BOLT	2
78	M16x50BZP	M16x50 BOLT	2
79	M20	M20 NYLOC NUT	1
80	M20x120BZP	M20x120 BOLT	1
81	M6	M6 NYLOC NUT	6
82	M6x16SZP	M6x16 SET BOLT	2
83	M8	M8 NYLOC NUT	1
84	M8x16SZP	M8x16 SET BOLT	8
85	M8x40BZP	M8x40 BOLT	1
	NL12SP	M12 SP NORDLOCK	30
86	1121201		
86 87		M8 SP NORDLOCK	4
87		M8 SP NORDLOCK CAT 2 PIN DIA 28.5x159mm	2

MJ30-350 AFTER HR20617



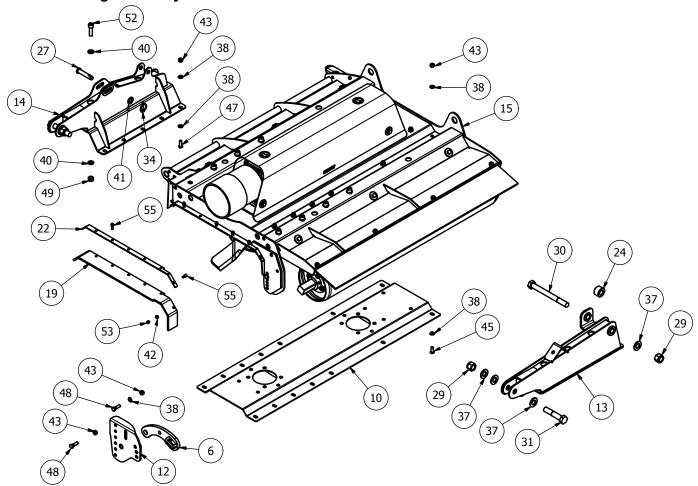


Part No.	Description	Qty
755-DCBLDHTX-L	755 BLADE (Anti_Clk)	1
755-DCBLDHTX-R	755 BLADE (Clk)	1
MJ30-350-GRD50	350 WING GUARD	1
MJ30-350-ROLW0	1350 WING ROLLER	1
2500CM-SKDR	2500CM R/HAND SKID	1
3000T-RPV01	ROLLER ADJUSTER	1
3000T-RPV01-H	ROLLER ADJUSTER	1
MJ30-350-CVR10	350 WING COVER	1
	755-DCBLDHTX-L 755-DCBLDHTX-R MJ30-350-GRD50 MJ30-350-ROLW0 2500CM-SKDR 3000T-RPV01 3000T-RPV01-H	755-DCBLDHTX-L 755 BLADE (Anti_Clk) 755-DCBLDHTX-R 755 BLADE (Clk) MJ30-350-GRD50 350 WING GUARD MJ30-350-ROLW01350 WING ROLLER 2500CM-SKDR 2500CM R/HAND SKID 3000T-RPV01 ROLLER ADJUSTER 3000T-RPV01-H ROLLER ADJUSTER

9 MJ30-350-CVR20	GUARD BASE MOUNT	2
10 MJ30-350-GRB20	TROUGH REINF' PANEL	1
11 MJ30-350-GRD30	WING REAR GUARD	1
12 MJ30-350-SKR01F	REAR SKID	1
13 MJ30-350-WA01H	WING ARM	1
14 MJ30-350-WA20	WING ARM (LINKAGE)	1
15 MJ30-350-WG01	350 WING	1
16 MJ40T11	6 SPLINE 'T' BOX RATIO 1:1	2
17 DRV-6S-52DC	6 SPLINE 50mm DRIVE	2

MJ30-350 AFTER HR20617

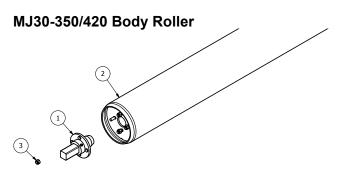
MJ30-350 Wing Assembly



MJ30-350 Wing Assembly

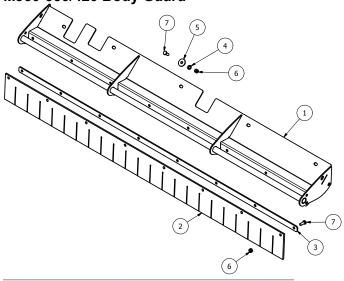
18 MJ30-350-GRD35	REAR RUBBER FLAP	1
19 MJ30-350- GRD41H	WING RUBBER	1
20 MJRC-23	113 PCD COUPLING 4mm PLT	2
21 MJ30-350-GRD36	REAR RUBBER CLAMP	1
22 MJ30-350-GRD40	WING CLAMP	1
23 DRV-RC-SWT410	MJ70-410 DRIVE	1
24 MJ30-350-WA11	RAM SPACER	1
25 12HEX109	1/2F HEX 10.9	12
26 12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9	12
27 15012	CAT 1 PIN DIA 19x76mm	1
28 190760	GUARD (COVER 760/ BASE 661)	1
29 1F	1" FINE NYLOC NUT	3
30 1x10FBZP	1"x10" FINE BOLT	1
31 1x5FBZP	1"x5" FINE BOLT	2
32 5/8F	5/8" FINE NYLOC NUT	8
33 58x2FBZP	5/8"x2" FINE BOLT	8
34 AN099/10	LINCH PIN DIA 9.5	1
35 CP176-181MG1	45mm INSERT	2
36 CW39174	DISC SPRING 39x17x4 (YELLOW)	2
37 FW1	DIA 1" FLAT WASHER	7
38 FWM12	M12 FLAT WASHER	38
39 FWM12XL	M12 FLAT WASHER (EX- LARGE)	7

40 FWM16	M16 FLAT WASHER	28
41 FWM20	M20 FLAT WASHER	1
42 FWM8	M8 FLAT WASHER	2
43 M12	M12 NYLOC NUT	40
44 M12x20SZP	M12x20 SET BOLT	4
45 M12x30SKBH	M12x30 SOCKET BUTTON HEAD 10.9	10
46 M12x30SZP	M12x30 SET BOLT	13
47 M12x35SKBH	M12x35 SOCKET BUTTON HEAD 10.9	14
48 M12x40BZP	M12x40 BOLT	3
49 M16	M16 NYLOC NUT	10
50 M16x30SZP	M16x30 SET BOLT	2
51 M16x50BZP	M16x50 BOLT	2
52 M16x55SKZP129	M16x55 SOCKET HEAD 12.9	8
53 M8	M8 NYLOC NUT	7
54 M8x16SZP	M8x16 SET BOLT	4
55 M8x25BZP	M8x25 BOLT	7
56 NL12SP	M12 SP NORDLOCK	16
57 NL8SP	M8 SP NORDLOCK	4



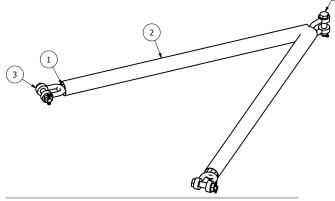
Iten	n Part No.	Description	Qty
1	3000T-ROL07	3000T ROLLER AXLE STUB	2
2	MJ30-350-ROLB02	350 BODY ROLLER	1
3	22204	M12 WHEEL NUT	8

MJ30-350/420 Body Guard



Item Part No. Description		
MJ30-350-GRD21	FLAP GUARD MOUNT	1
MJ30-350-GRD14	GUARD RUBBER (BODY)	1
MJ30-350-GRD13	BODY RUBBER CLAMP	1
FWM12	M12 FLAT WASHER	5
FWM12XL	M12 FLAT WASHER (EX- LARGE)	5
M12	M12 NYLOC NUT	13
M12x30SZP	M12x30 SET BOLT	13
	MJ30-350-GRD21 MJ30-350-GRD14 MJ30-350-GRD13 FWM12 FWM12XL M12	MJ30-350-GRD21 FLAP GUARD MOUNT MJ30-350-GRD14 GUARD RUBBER (BODY) MJ30-350-GRD13 BODY RUBBER CLAMP FWM12 M12 FLAT WASHER FWM12XL M12 FLAT WASHER (EXLARGE) M12 NYLOC NUT

MJ30-350/420/560 Chain Strap

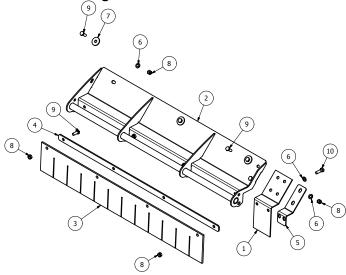


Item Part No.		Description	Qty
1	2500CM-STRP03	11mm LONG LINK CHAIN	2
2	2500CM-STRP02	COVER	2
3	DSR-5-8	5/8" RATED 'D' SHACKLE	3

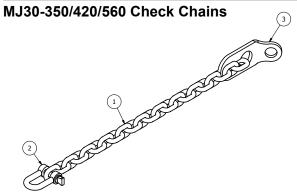
MJ30-350 Wing Roller

Item Part No.		Description	Qty
1	3000T-ROL07	3000T ROLLER AXLE STUB	2
2	MJ30-350-ROLW02	350 WING ROLLER	1
3	22204	M12 WHEEL NUT	8

MJ30-350 Wing Guard

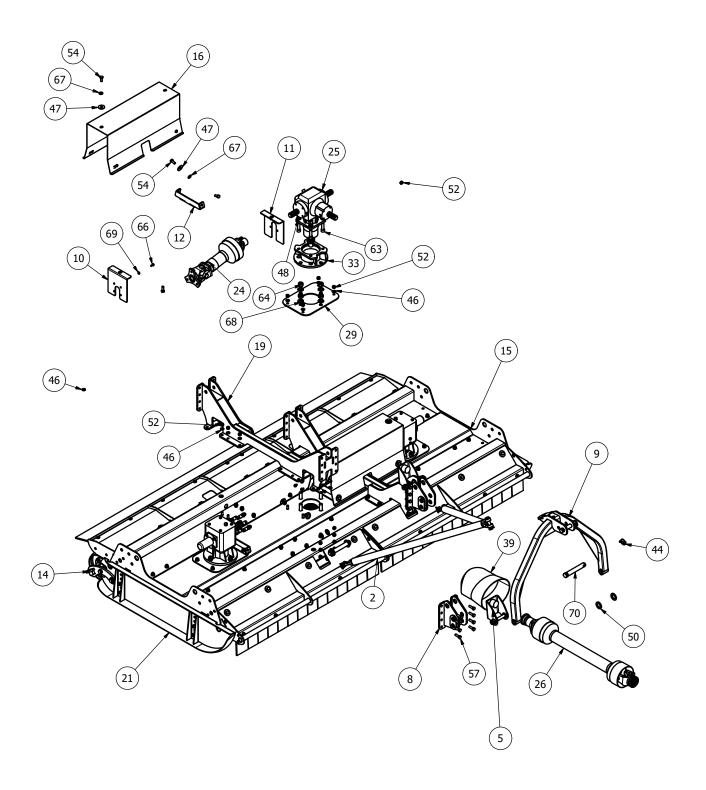


Item	Part No.	Description	Qty
1	MJ30-350-GRD56	WING RUBBER FLAP	1
2	MJ30-350-GRD51	FLAP GUARD MOUNT	1
3	MJ30-350-GRD16	GUARD RUBBER (WING)	1
4	MJ30-350-GRD17	WING RUBBER CLAMP	1
5	MJ30-350-GRD57	WING GUARD PLATE	1
6	FWM12	M12 FLAT WASHER	6
7	FWM12XL	M12 FLAT WASHER (X-LRG)	3
8	M12	M12 NYLOC NUT	9
9	M12x30SZP	M12x30 SET BOLT	8
10	M12x40BZP	M12x40 BOLT	1

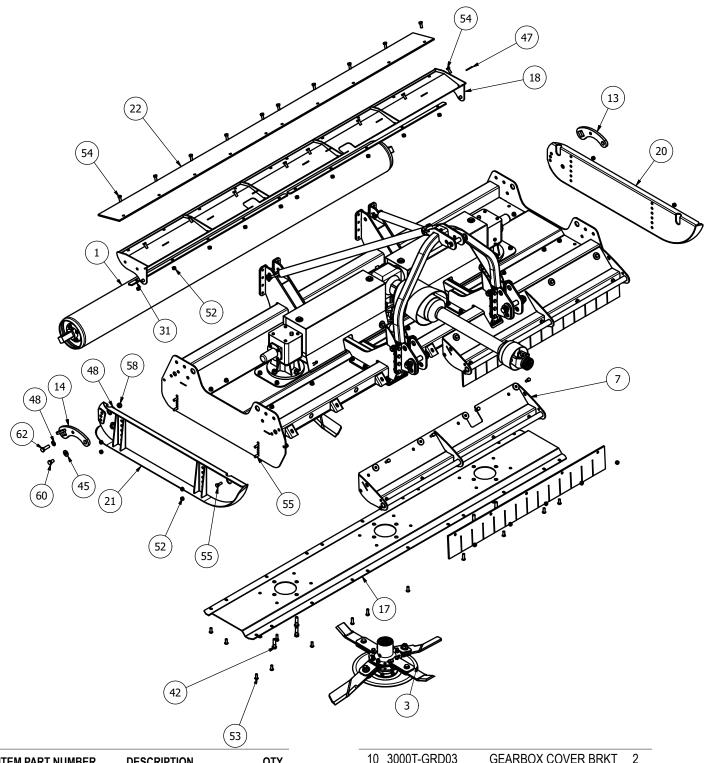


Item Part No.		Description	Qty
1	SS-CHAIN	3/8" CHAIN STRAP	1
2	NT29A	1/2" 'D' SHACKLE	1
3	7SS-CHA2	CHAIN ADJUSTER	1

MJ31-300

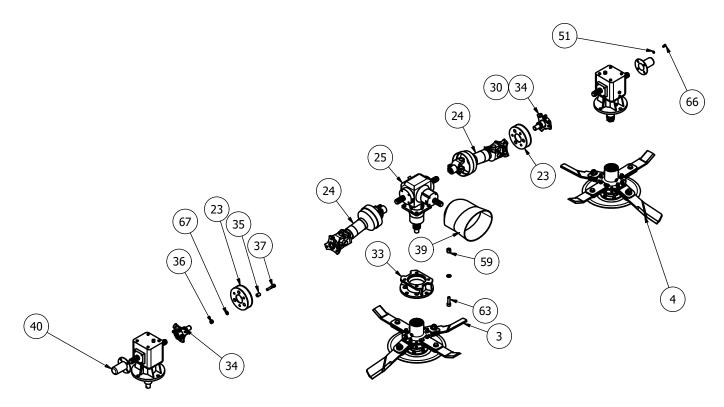


NOTE: Rear mounted machine shown



ITEN	N PART NUMBER	DESCRIPTION	QTY
1	3000T-ROL01	3000T ROLLER	1
2	3000T-STRP01	3000T CHAIN SLING	1
3	985-DCBLDHTX-L	985 DISC HEAVY BLADE Anti-Clk	1
4	985-DCBLDHTX-R	985 DISC HEAVY BLADE Clk	2
5	AFB-GA1	A' FRAME BUFFER	2
6	MJ30-301-GRD- FLPL	301 CYC FLAP GUARD	1
7	MJ30-301-GRD- FLPR	301 CYC FLAP GUARD	1
8	2800CM-LK	LOWER LINK MOUNT	2
9	3000T-AF-01	3000T A-FRAME	1

10 3000T-GRD03 GEARBOX COVER BRKT 2 2 11 3000T-GRD04 GEARBOX COVER BRKT CTR 2 12 3000T-GRD15 GUARD BASE MOUNT 4 4 13 3000T-RPV01 ROLLER ADJUSTER 1 1 14 3000T-RPV01-H ROLLER ADJUSTER 1 1 15 MJ30-301-BD01 MJ30-301 BODY 1 1 16 MJ30-301-CVR01 GEARBOX COVER 2 2
11 3000T-GRD04 CTR 2 12 3000T-GRD15 GUARD BASE MOUNT 4 13 3000T-RPV01 ROLLER ADJUSTER 1 14 3000T-RPV01-H ROLLER ADJUSTER 1 15 MJ30-301-BD01 MJ30-301 BODY 1 16 MJ30-301-CVR01 GEARBOX COVER 2
13 3000T-RPV01 ROLLER ADJUSTER 1 14 3000T-RPV01-H ROLLER ADJUSTER 1 15 MJ30-301-BD01 MJ30-301 BODY 1 16 MJ30-301-CVR01 GEARBOX COVER 2
14 3000T-RPV01-H ROLLER ADJUSTER 1 15 MJ30-301-BD01 MJ30-301 BODY 1 16 MJ30-301-CVR01 GEARBOX COVER 2
15 MJ30-301-BD01 MJ30-301 BODY 1 16 MJ30-301-CVR01 GEARBOX COVER 2
16 MJ30-301-CVR01 GEARBOX COVER 2
LINIDEDOIDE TOOLIGIL
17 MJ30-301-GBR01 UNDERSIDE TROUGH CENTRAL
18 MJ30-301-GRD01 ROLLER GUARD 1
19 MJ30-301-LK01 MAIN ARMS 2
20 MJ30-301-SKD01 SKID 1



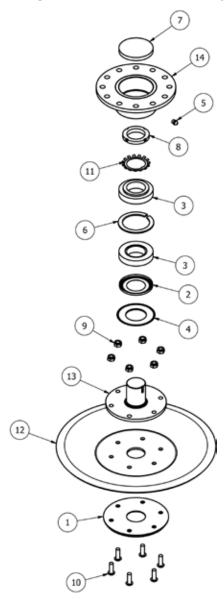


		>	
21	MJ30-301-SKH	SKID	1
22	MJ30-301-GRD02	REAR RUBBER FLAP	1
23	MJRC-113	113 PCD RUBBER COUPLING	2
24	T50-12WA	12000 WING PTO SHAFT	2
25	TF-26A266205	1.47 - 1.47 'T' THRU BOX	1
26	V600810ENC12RB	2 V60 SHEARBOLT / OR	1
27	2500CM-LK03	LINKAGE TIE	4
28	3000T-BD14	TROUGH REINF'	2
29	3000T-BD15	CENTER TROUGH REINF'	1
30	CY-320-GBLK01	GBOX LOCK	4
31	MJ30-301-GRD- FLP03	GUARD RUBBER CLAMP	2
32	MJ30-301-LK04	LINKAGE TIE	4
33	3000T-GBM01	CENTER BOX MOUNT	1
34	DRV-6S-135	WING STAR DRIVE 6 SPL	2
35	MJRC-114	COUPLING BUSHING	12
36	12HEX109	1/2F HEX 10.9	12
37	12x212FSKS	1/2"x2 1/2" FINE SOCKET HEAD 12.9	12
38	140881	6 SPLINE 'T' BOX RATIO 1.1	2
39	190.000.545	PTO GUARD (EXTENDED OVAL)	1
40	190592	PTO HAT	2
41	5/8F	5/8" FINE NYLOC NUT	8
42	58x214FBZP	5/8"x2 1/4" FINE BOLT	8
43	81	CAT 2 PIN DIA 25.4x110mm	1
44	AN099/10	LINCH PIN DIA 9.5	3

45	CW39174	DISC SPRING 39x17x4 (YELLOW)	2
46	FWM12	M12 FLAT WASHER	125
47	FWM12XL	M12 FLAT WASHER (EX- LARGE)	28
48	FWM16	M16 FLAT WASHER	28
49	FWM20	M20 FLAT WASHER	4
50	FWM30	M30 FLAT WASHER	4
51	FWM8	M8 FLAT WASHER	12
52	M12	M12 NYLOC NUT	120
53	M12x30SKBH	M12x30 SOCKET BUTTON HEAD 10.9	14
54	M12x30SZP	M12x30 SET BOLT	38
55	M12x35BZP	M12x35 BOLT	24
56	M12x40SKBH	M12x40 SOCKET BUTTON HEAD 10.9	32
57	M12x40SZP	M12x40 SET BOLT	16
58	M16	M16 NYLOC NUT	8
59	M16HEX109	M16 10.9 LONG NUT	4
60	M16x25SZP	M16x25 SET BOLT	2
61	M16x40SZP	M16x40 SET BOLT	6
62	M16x50SZP	M16x50 SET BOLT	2
63	M16x55SKZP129	M16x55 SOCKET HEAD 12.9	4
64	M20	M20 NYLOC NUT	4
65	M20x60SZP109	M20x60 SET BOLT 10.9	4
66	M8x16SZP	M8x16 SET BOLT	28
67	NL12SP	M12 SP NORDLOCK	24
68	NL20SP	M20 SP NORDLOCK	4
69	NL8SP	M8 SP NORDLOCK	16
70	S112	CAT 2 PIN DIA 28.5x159mm	2

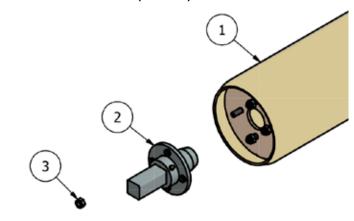
MJ31-300 Subassemblies

- Spinnig Undersole Disk Assembly



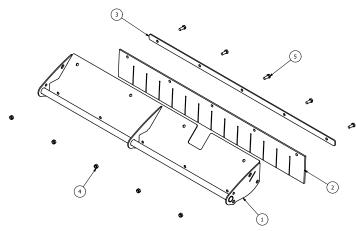
Item	Part No.	Description	Qty
1	USD-015	BOLT PROTECTOR	1
2	30210-AV	NILOS RING 90x50	1
3	30210A	TAPER BRG 90x50x21.75	2
4	5411001	DIA 55xDIA100.5mm WIPE SEAL	1
5	820	GREASE NIPPLE 1/8" STR	1
6	AGC3	DIA 90 INT CIRCLIP	1
7	DK90-10	DUST CAP 90x10	1
8	KM10	M50x1.5P LOCK NUT	1
9	M10	M10 NYLOC NUT	6
10	M10x30SKBH	M10x30 SK BUTTON HEAD 12.9	6
11	MB10	DIA 50mm LOCK TAB	1
12	USD-002	UNDERSOLE SAUCER	1
13	USD-003	BEARING SHAFT FAB	1
14	USD-010	BEARING HOUSING	1

3000T-ROL01 - Roller (220mm)



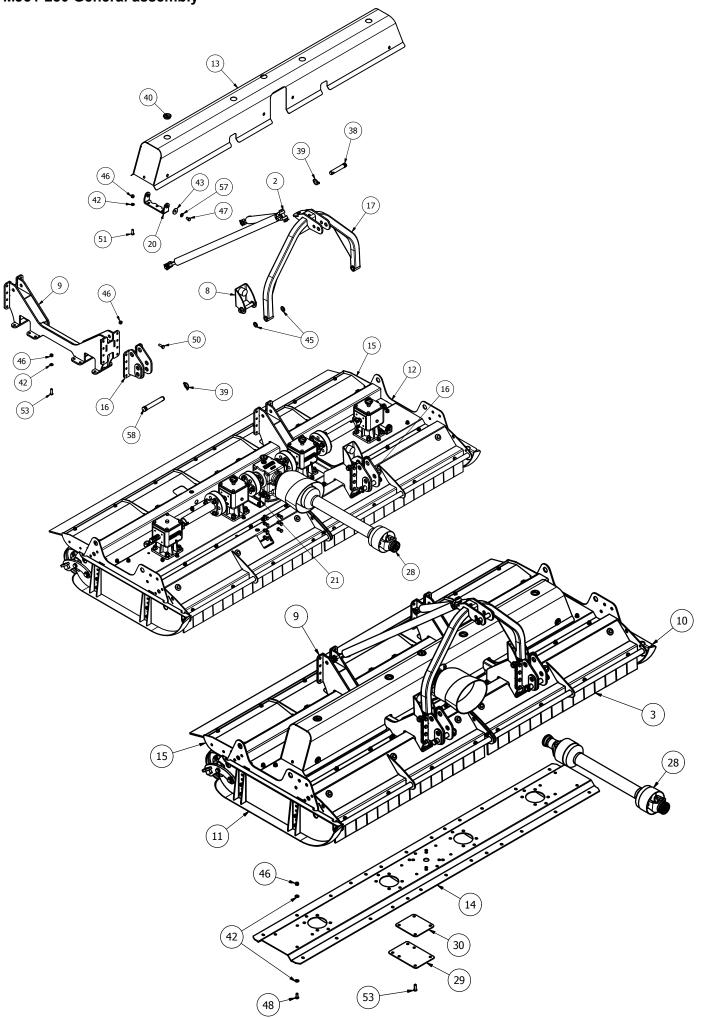
Item	Part No.	Description	Qty
1	3000T-ROL02	3000T ROLLER (220mm)	1
2	3000T-ROL05	3000T ROLLER AXLE STUB	2
3	M12	M12 NYLOC NUT	8

MJ31-300 Front guard

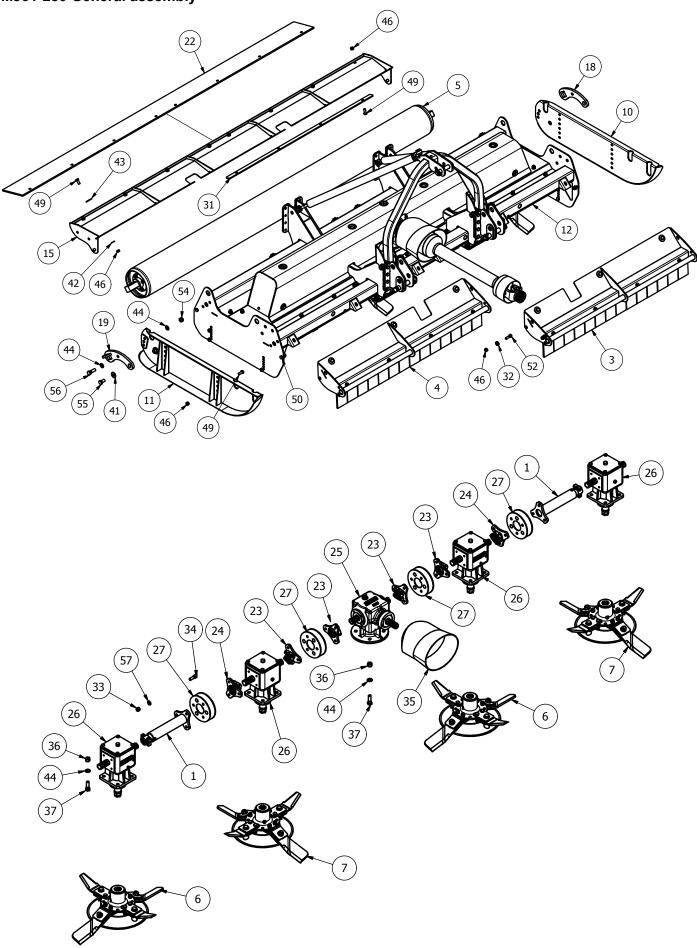


Item	Part No.	Description	Qty
1	MJ30-301-GRD-FLR	FLAP GUARD MOUNT	1
1	MJ30-301-GRD-FLPL	FLAP GUARD MOUNT	1
2	MJ30-301-GRD-FLP04	GUARD RUBBER	1
3	MJ30-301-GRD-FLP03	GUARD RUBBER CLAMP	1
4	M12	M12 NYLOC NUT	5
5	M12x30SZP	M12x30 SET BOLT	5

MJ31-280 General assembly



MJ31-280 General assembly

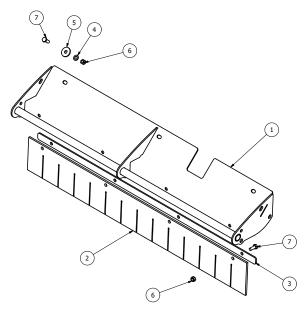


MJ31-280 Parts

Item	Part No.	Description	Qty
1	15GM-WDT	DRIVE TUBE (355mm)	2
2	2500CM-STRP01	2500 CHAIN SLING	1
3	280-CYC-GRD-FLPL	280 CYC FLAP GUARD	1
4	280-CYC-GRD-FLPR	280 CYC FLAP GUARD	1
5	2800CM-ROL01	280 CYCLONE ROLLER	1
6	755-DCBLDHTX-L	755 BLADE (Anti_Clk)	2
7	755-DCBLDHTX-R	755 BLADE (Clk)	2
8	AFB-GA1	A' FRAME BUFFER	2
9	2500CM-LK20	LINKAGE MOUNT	2
10	2500CM-SKDL	2500T L/HAND SKID	1
11	2500CM-SKDR	2500CM R/HAND SKID	1
12	2800CM-B4R10	280 CYCLONE BODY	1
13	2800CM-CVR2	GEARBOX COVER	1
14	2800CM-GR	TROUGH REINFORCER PANEL	1
15	2800CM-GRD01	ROLLER GUARD	1
16	2800CM-LK	LOWER LINK MOUNT	2
17	3000T-AF-01	3000T A-FRAME	1
18	3000T-RPV01	ROLLER ADJUSTER	1
19	3000T-RPV01-H	ROLLER ADJUSTER	1
20	8400RM-CV14	GUARD BASE MOUNT	2
21	8400RM-CV20	GUARD BASE MOUNT	2
22	2800CM-GRD20	REAR RUBBER FLAP	1
23	CM25-DRV	6 SPLINE STAR DRIVE	4
24	DRV-6S-52DC	6 SPLINE 50mm DRIVE	2
25	GB.03512	6 SPLINE 'T' BOX 1:1	1
26	MJ40T (347801)	6 SPLINE 'T' BOX RATIO 1.47	4
27	MJRC-113	1.47 113 PCD RUBBER COUPLING	4
28	V600810ENC12RB2	V60 SHEARBOLT / OR	1
29	2500CM-LK03	LINKAGE TIE	4
30	2500CM-LK09	UNDERSIDE SHIM	4

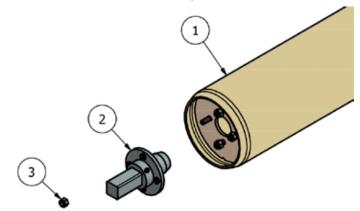
	GUARD RUBBER	
31 2800CM-GRD-FLP03	CLAMP	2
32 8SM9-3	BLADE BACK SPACER	2
33 12HEX109	1/2F HEX 10.9	24
34 12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9 PTO GUARD	24
35 190.000.545	(EXTENDED OVAL)	1
36 5/8F	5/8" FINE NYLOC NUT	20
37 58x2FBZP	5/8"x2" FINE BOLT	20
38 81	CAT 2 PIN DIA 25.4x110mm	1
39 AN099/10	LINCH PIN DIA 9.5	3
40 CP176-181MG1	45mm INSERT	5
41 CW39174	DISC SPRING 39x17x4 (YELLOW)	2
42 FWM12	M12 FLAT WASHER	112
43 FWM12XL	M12 FLAT WASHER (EX- LARGE)	14
44 FWM16	M16 FLAT WASHER	24
45 FWM20	M20 FLAT WASHER	4
46 M12	M12 NYLOC NUT	108
47 M12x20SZP	M12x20 SET BOLT	8
48 M12x30SKBH	M12x30 SOCKET BUTTON HEAD 10.9	30
49 M12x30SZP	M12x30 SET BOLT	24
50 M12x35BZP	M12x35 BOLT	18
51 M12x35SKBH	M12x35 SOCKET BUTTON HEAD 10.9	10
52 M12x40BZP	M12x40 BOLT	2
53 M12x40SKBH	M12x40 SOCKET BUTTON HEAD 10.9	24
54 M16	M16 NYLOC NUT	2
55 M16x30SZP	M16x30 SET BOLT	2
56 M16x50BZP	M16x50 BOLT	2
57 NL12SP	M12 SP NORDLOCK	32
58 S112	CAT 2 PIN DIA 28.5x159mm	2

MJ31-280 - Front Guard Assembly



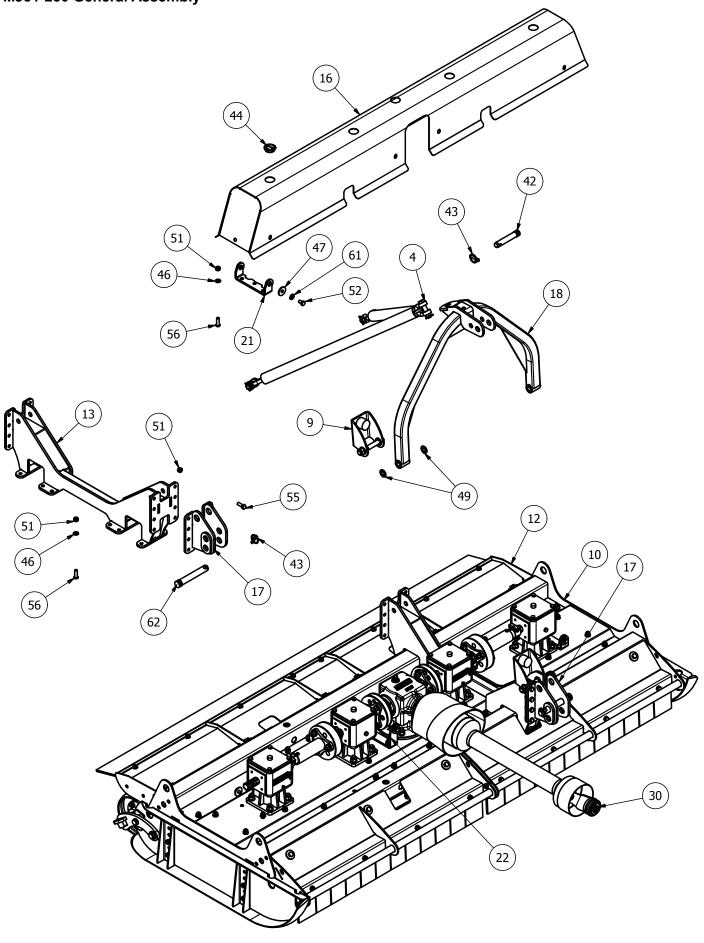
lten	n Part No.	Description	Qty
1	2800CM-GRD-FLR	FLAP GUARD MOUNT	1
2	280-CYC-GRD-FLP04	FRONT GUARD RUBBER	1
3	2800CM-GRD-FLP03	GUARD RUBBER CLAMP	1
4	FWM12	M12 FLAT WASHER	3
5	FWM12XL	M12 FLAT WASHER (EX-LARGE)	3
6	M12	M12 NYLOC NUT	7
7	M12x30SZP	M12x30 SET BOLT	7

MJ31-280 - Roller Assembly

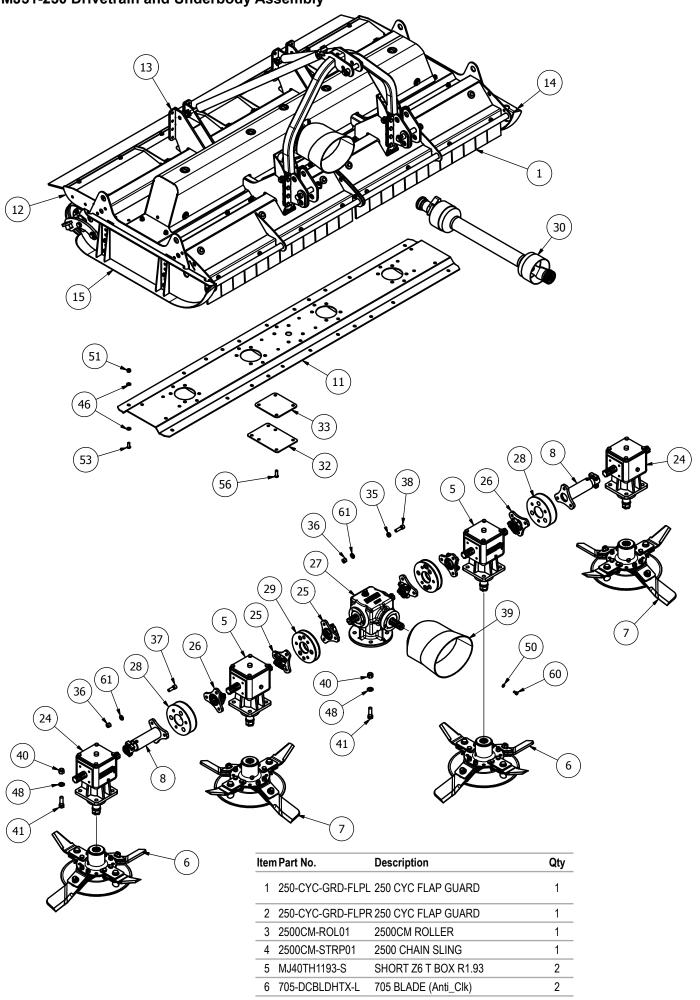


Item Part No.	Description	Qty
1 2800CM-ROL02	2800CM ROLLER	1
2 3000T-ROL07	3000T ROLLER AXLE STUB	2
3 22204	M12 WHEEL NUT	8

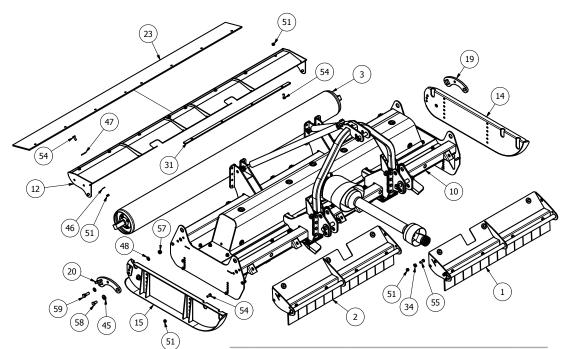
MJ31-250 General Assembly



MJ31-250 Drivetrain and Underbody Assembly



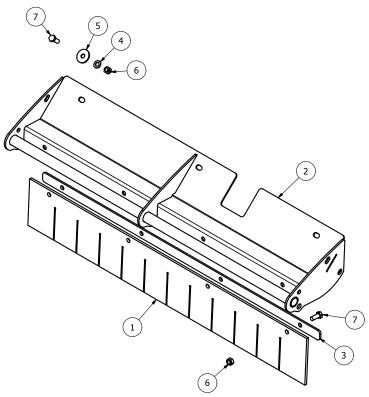
MJ31-250 Parts List



			(
7	705-DCBLDHTX-R	705 BLADE (CIk)	2
8	909GT-DRV	DRIVE TUBE (242mm)	2
9	AFB-GA1	A' FRAME BUFFER	2
10	2500CM-B4R10	250 CYCLONE BODY	1
11	2500CM-GR	TROUGH REINFORCER PANEL	1
12	2500CM-GRD01	ROLLER GUARD	1
13	2500CM-LK20	LINKAGE MOUNT	2
14	2500CM-SKDL	2500T L/HAND SKID	1
15	2500CM-SKDR	2500CM R/HAND SKID	1
16	250CYC-CVR01	GEARBOX COVER	1
17	2800CM-LK	LOWER LINK MOUNT	2
18	3000T-AF-01	3000T A-FRAME	1
19	3000T-RPV01	ROLLER ADJUSTER	1
20	3000T-RPV01-H	ROLLER ADJUSTER	1
21	8400RM-CV14	GUARD BASE MOUNT	2
22	8400RM-CV20	GUARD BASE MOUNT	2
23	2500CM-GRD20	REAR RUBBER FLAP	1
24	MJ40TH1193	6 SPLINE 'T' BOX RATIO 1.93	2
25	CM25-DRV	6 SPLINE STAR DRIVE	4
26	DRV-6S-52DC	6 SPLINE 50mm DRIVE	2
27	GB.03512	6 SPLINE 'T' BOX 1:1	1
28	MJRC-113	113 PCD RUBBER COUPLING	2
29	MJRC-33	COUPLING 33mm (PINNED)	2
30	V600810ENC12RB2	V60 SHEARBOLT / OR	1
31	2500CM-GRD-FLP03	GUARD RUBBER CLAMP	2
32	2500CM-LK03	LINKAGE TIE	4
33	2500CM-LK09	UNDERSIDE SHIM	4
34	8SM9-3	BLADE BACK SPACER	2
35	MJRC-115	COUPLING BUSHING	12
36	12HEX109	1/2F HEX 10.9	24

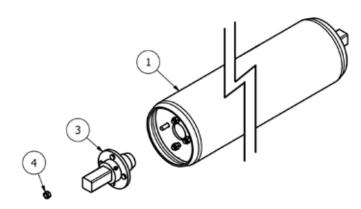
37 12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9	12
38 12x134FSKS	1/2"x1 3/4" FINE SOCKET HEAD 12.9	12
39 190.000.545	PTO GUARD (EXTENDED OVAL)	1
40 5/8F	5/8" FINE NYLOC NUT	20
41 58x2FBZP	5/8"x2" FINE BOLT	20
42 81	CAT 2 PIN DIA 25.4x110mm	1
43 AN099/10	LINCH PIN DIA 9.5	3
44 CP176-181MG1	45mm INSERT	5
45 CW39174	DISC SPRING 39x17x4 (YELLOW)	2
46 FWM12	M12 FLAT WASHER	102
47 FWM12XL	M12 FLAT WASHER (EX-LARGE)	14
48 FWM16	M16 FLAT WASHER	24
49 FWM20	M20 FLAT WASHER	4
50 FWM8	M8 FLAT WASHER	4
51 M12	M12 NYLOC NUT	103
52 M12x20SZP	M12x20 SET BOLT	8
53 M12x30SKBH	M12x30 SKT BUTTON HEAD 10.9	26
54 M12x30SZP	M12x30 SET BOLT	24
55 M12x35BZP	M12x35 BOLT	20
56 M12x40SKBH	M12x40 SKT BUTTON HEAD 10.9	34
57 M16	M16 NYLOC NUT	2
58 M16x30SZP	M16x30 SET BOLT	2
59 M16x50BZP	M16x50 BOLT	2
60 M8x30SZP	M8x30 SET BOLT	4
61 NL12SP	M12 SP NORDLOCK	32
	WIZ OF NURDLOCK	32
62 S112	CAT 2 PIN DIA 28.5x159mm	2

MJ31-250 Guards (2500CM-GRD-FLPR and 2500CM-GRD-FLPL)

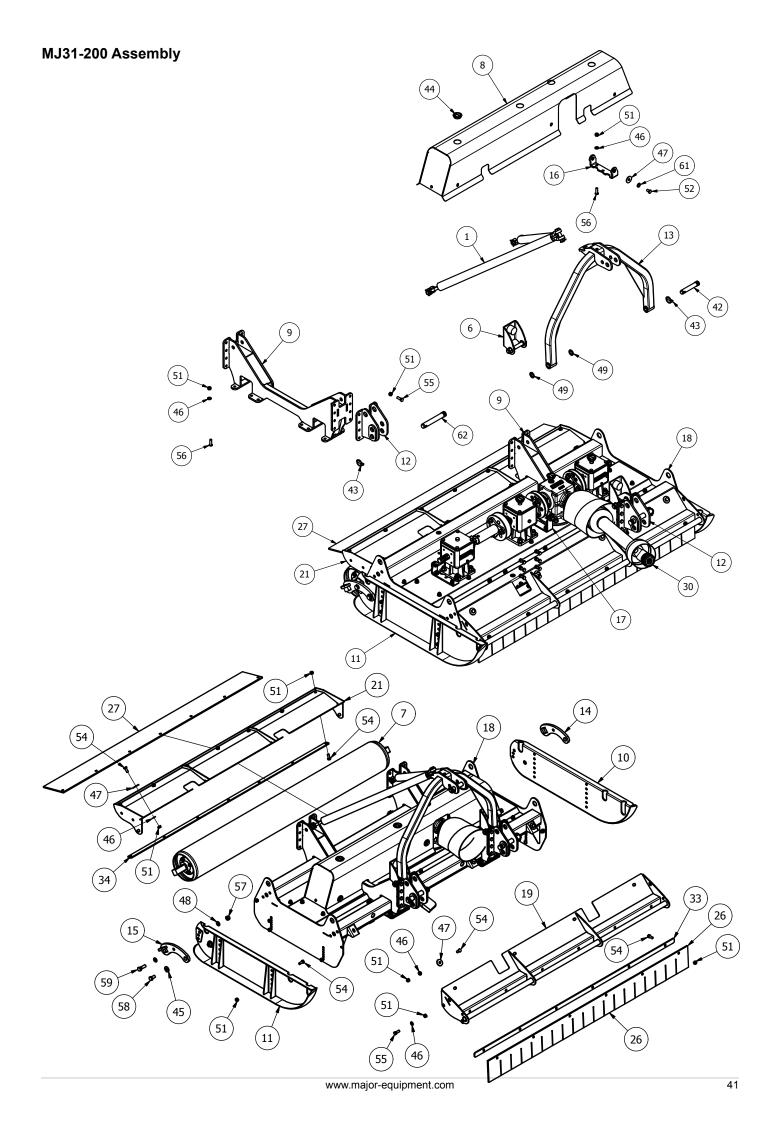


Item	Part No.	Description	Qty
1	250-CYC-GRD- FLP04	GUARD RUBBER	1
2	2500CM-GRD- FLR	FLAP GUARD MOUNT RIGHT	1
2	2500CM-GRD- FLL	FLAP GUARD MOUNT LEFT	1
3	2500CM-GRD- FLP03	GUARD RUBBER CLAMP	1
4	FWM12	M12 FLAT WASHER	3
5	FWM12XL	M12 FLAT WASHER (EX-LARGE)	3
6	M12	M12 NYLOC NUT	7
7	M12x30SZP	M12x30 SET BOLT	7

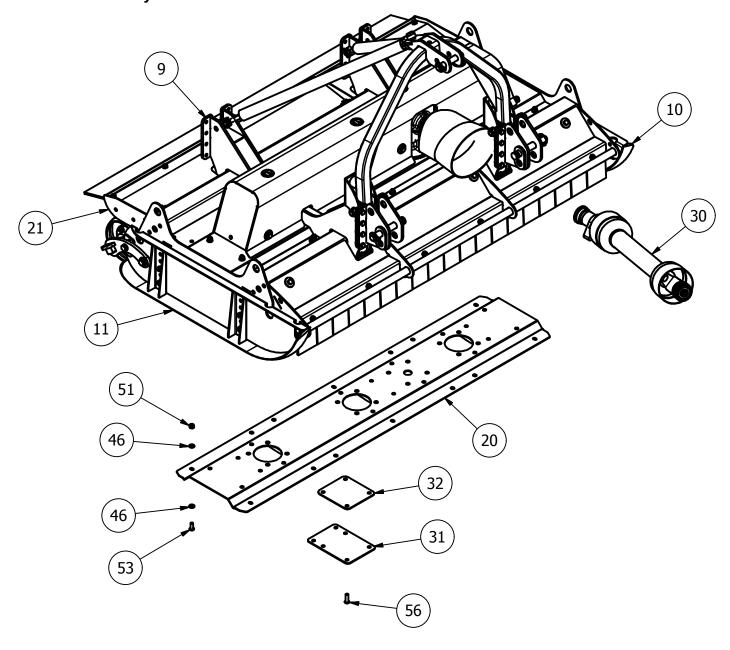
MJ31-250 Roller (2500CM-ROL01)



Item	Part No.	Description	Qty
1	2500CM-ROL02	2500CM ROLLER	1
3	3000T-ROL07	3000T ROLLER AXLE STUB	2
4	M12	M12 NYLOC NUT	8



MJ31-200 Assembly

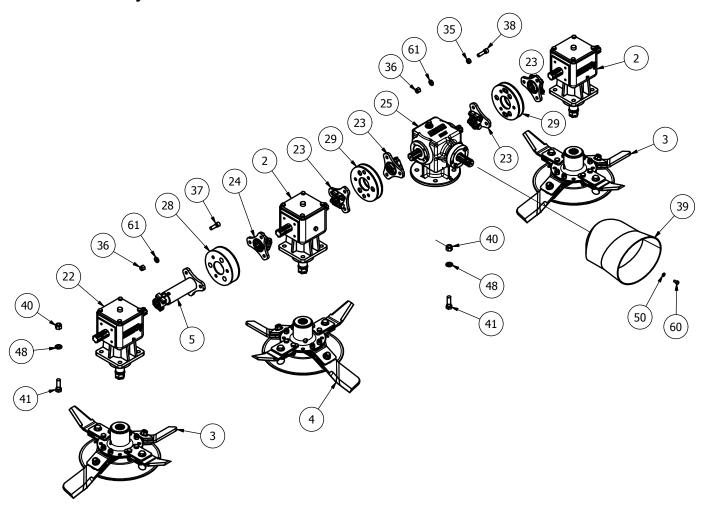


MJ31-200 Parts List

Item Part No.		Description	Qty
1	2500CM-STRP01	2500 CHAIN SLING	1
2	MJ40TH1193-S	SHORT Z6 T BOX R1.93	2
3	705-DCBLDHTX-L	705 BLADE (Anti_Clk)	2
4	705-DCBLDHTX-R	705 BLADE (CIk)	1
5	909GT-DRV	DRIVE TUBE (242mm)	1
6	AFB-GA1	A' FRAME BUFFER	2
7	MJ30-200-ROL01	200 CYCLONE ROLLER	1
8	200CYC-CVR01	GEARBOX COVER (REAR)	1
9	2500CM-LK20	LINKAGE MOUNT	2
10	2500CM-SKDL	2500T L/HAND SKID	1
11	2500CM-SKDR	2500CM R/HAND SKID	1
12	2800CM-LK	LOWER LINK MOUNT	2
13	3000T-AF-01	3000T A-FRAME	1
14	3000T-RPV01	ROLLER ADJUSTER	1
15	3000T-RPV01-H	ROLLER ADJUSTER	1

16	8400RM-CV14	GUARD BASE MOUNT	2
17	8400RM-CV20	GUARD BASE MOUNT	1
18	MJ30-20B10	200 CYCLONE BODY	1
19	MJ30-20FGD-A	FLAP GUARD MOUNT	1
20	MJ30-20GR	TROUGH REINF' PANEL	1
21	MJ30-20RGD	REAR GUARD	1
22	MJ40TH1193	6 SPLINE 'T' BOX RATIO 1.93	1
23	CM25-DRV	6 SPLINE STAR DRIVE	4
24	DRV-6S-52DC	6 SPLINE 50mm DRIVE	1
25	GB.03499	6 SPLINE 'T' BOX 1:1.9	1
26	MJ30-20FGD-FLP06	GUARD RUBBER	1
27	MJ30-20RGDR	REAR RUBBER FLAP	1
28	MJRC-113	113 PCD RUBBER COUPLING	1
29	MJRC-33	COUPLING 33mm (PINNED)	2
30	V600810ENC12RB2	V60 SHEARBOLT / OR	1

MJ31-200 Assembly

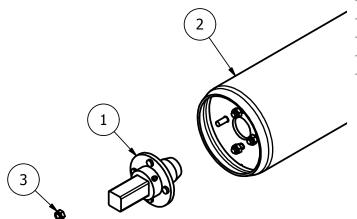


MJ31-200 Parts List (continued)

31 2500CM-LK03	LINKAGE TIE	4
32 2500CM-LK09	UNDERSIDE SHIM	4
33 MJ30-20FGD-FLP03	GUARD RUBBER CLAMP	1
34 MJ30-20RGD03	REAR RUBBER CLAMP	1
35 MJRC-115	COUPLING BUSHING	12
36 12HEX109	1/2F HEX 10.9	18
37 12x112FSKS	1/2"x1 1/2" FINE SOCKET HEAD 12.9	6
38 12x134FSKS	1/2"x1 3/4" FINE SOCKET HEAD 12.9	12
39 190.000.545	PTO GUARD (EXTENDED OVAL)	1
40 5/8F	5/8" FINE NYLOC NUT	16
41 58x2FBZP	5/8"x2" FINE BOLT	16
42 81	CAT 2 PIN DIA 25.4x110mm	1
43 AN099/10	LINCH PIN DIA 9.5	3
44 CP176-181MG1	45mm INSERT	4
45 CW39174	DISC SPRING 39x17x4	2
46 FWM12	M12 FLAT WASHER	83
47 FWM12XL	M12 FLAT WASHER (EX-LARGE)	14
48 FWM16	M16 FLAT WASHER	20
49 FWM20	M20 FLAT WASHER	4
50 FWM8	M8 FLAT WASHER	4

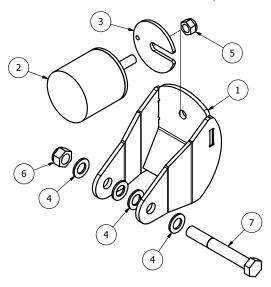
51 M12	M12 NYLOC NUT	98
52 M12x20SZP	M12x20 SET BOLT	6
53 M12x30SKBH	M12x30 SOCKET BUTTON HEAD 10.9	16
54 M12x30SZP	M12x30 SET BOLT	31
55 M12x35BZP	M12x35 BOLT	18
56 M12x40SKBH	M12x40 SKT BUTTON HEAD 10.9	32
57 M16	M16 NYLOC NUT	2
58 M16x30SZP	M16x30 SET BOLT	2
59 M16x50BZP	M16x50 BOLT	2
60 M8x30SZP	M8x30 SET BOLT	4
61 NL12SP	M12 SP NORDLOCK	24
62 S112	CAT 2 PIN DIA 28.5x159mm	2

MJ3-200 Roller (MJ30-200-ROL01)



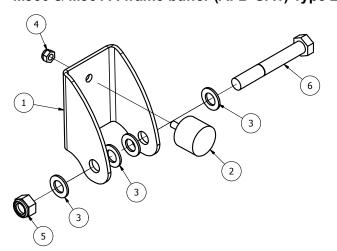
Item Part No. Description		Qty	
1	3000T-ROL07	3000T ROLLER AXLE STUB	2
2	MJ30-200-ROL02	2000 CYCLONE ROLLER	1
3	M12	M12 NYLOC NUT	8

MJ30 & MJ31 A-frame buffer (3000T-AFBGA) Type 1



Item	Part No.	Description	Qty
1	3000T-AFB01	BUFFER MOUNT	1
2	MOT10	DIA 100x100 BUFFER	1
3	8T19	BUFFER SPACER	1
4	FWM20	M20 FLAT WASHER	4
5	M16	M16 NYLOC NUT	1
6	M20	M20 NYLOC NUT	1
7	M20x150BZP	M20x150 BOLT	1

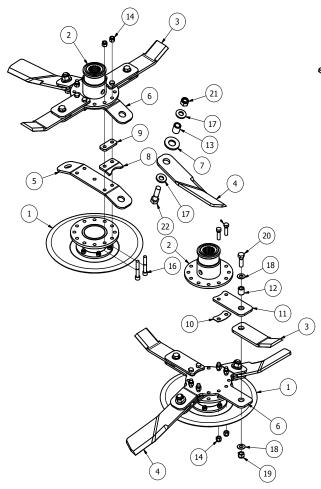
MJ30 & MJ31 A-frame buffer (AFB-GA1) Type 2



ltem	Part No.	Description	Qty
1	AFB-MP	BUFFER MOUNT PLATE	1
2	53005802	DIA 50x40xM10 BUFFER	1
3	FWM20	M20 FLAT WASHER	4
4	M10	M10 NYLOC NUT	1
5	M20	M20 NYLOC NUT	1
6	M20x140BZP	M20x140 BOLT	1
7	M20x150BZP	M20x150 BOLT	1

985-DCBLDHTX-L (MJ31-300)

985-DCBLDHTX-R (MJ31-300)



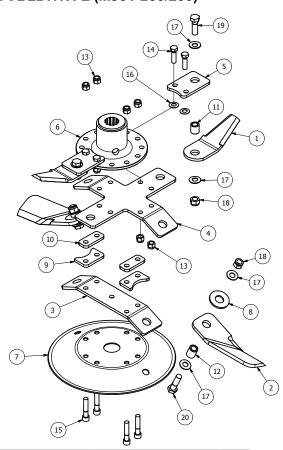
1 USD-GA1 UNDERSOLE DISC ASSY 1 2 909GT-BM01 909GT BLADE MOUNT 1 3 BLD-25025-01 BLADE 250xDia 25 2 4 BLD-37030T-10AC Twist Blade 370xDia 30 (Anti_CIk) 2 5 BLDB-330-175 BLADE BACK (330 CTR 17.5 deg) 1 6 BLDB-330-175 BLADE BACK (345 CTR 17.5 deg) 1 7 BLD-26030H-WSR6 HEAVY BLADE WASHER (DIA 31) 2 8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDB-345-17-SP015 SPACER PLATE 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW4521	ITEM	PART NUMBER	DESCRIPTION	QTY
3 BLD-25025-01 BLADE 250xDia 25 2 4 BLD-37030T-10AC Twist Blade 370xDia 30 (Anti_CIk) 2 5 BLDB-330-175 BLADE BACK (330 CTR 17.5 deg) 1 6 BLDBX-345-17 CROSS BLADE BACK (345 CTR 17.5 deg) 1 7 BLD-26030H-WSR6 HEAVY BLADE WASHER (DIA 31) 2 8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2"FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19	1	USD-GA1	UNDERSOLE DISC ASSY	1
4 BLD-37030T-10AC Twist Blade 370xDia 30 (Anti_CIk) 2 5 BLDB-330-175 BLADE BACK (330 CTR 17.5 deg) 1 6 BLDBX-345-17 CROSS BLADE BACK (345 CTR 17.5 deg) 1 7 BLD-26030H-WSR6 HEAVY BLADE WASHER (DIA 31) 2 8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16	2	909GT-BM01	909GT BLADE MOUNT	1
5 BLDB-330-175 BLADE BACK (330 CTR 17.5 deg) 1 6 BLDBX-345-17 CROSS BLADE BACK (345 CTR 17.5 deg) 1 7 BLD-26030H-WSR6 HEAVY BLADE WASHER (DIA 31) 2 8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC	3	BLD-25025-01	BLADE 250xDia 25	2
6 BLDBX-345-17 CROSS BLADE BACK (345 CTR 17.5 deg) 1 7 BLD-26030H-WSR6 HEAVY BLADE WASHER (DIA 31) 2 8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	4	BLD-37030T-10AC	Twist Blade 370xDia 30 (Anti_Clk)	2
6 BLDBX-345-17 17.5 deg) 1 7 BLD-26030H-WSR6 HEAVY BLADE WASHER (DIA 31) 2 8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	5	BLDB-330-175	BLADE BACK (330 CTR 17.5 deg)	1
8 BLDB-3000-STP1 BLADE STOP SPACER 2 9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	6	BLDBX-345-17	•	1
9 BLDB-315-25-SY2SP08 8mm SPACER 2 10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	7	BLD-26030H-WSR6	HEAVY BLADE WASHER (DIA 31)	2
10 BLDB-345-17-SP015 SPACER PLATE 2 11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	8	BLDB-3000-STP1	BLADE STOP SPACER	2
11 BLDBXT-345-25 OVERLAP MOUNT 2 12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	9	BLDB-315-25-SY2SP08	8mm SPACER	2
12 BB25-16-26 BLADE BUSH 2 13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2"FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	10	BLDB-345-17-SP015	SPACER PLATE	2
13 BB30-20-34 BLADE BUSH 2 14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	11	BLDBXT-345-25	OVERLAP MOUNT	2
14 1/2F 1/2" FINE NYLOC NUT 8 15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	12	BB25-16-26	BLADE BUSH	2
15 12x134FBZP 1/2"x1 3/4" FINE BOLT 4 16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	13	BB30-20-34	BLADE BUSH	2
16 12x3FSKS 1/2"x3" FINE SOCKET HEAD 12.9 4 17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	14	1/2F	1/2" FINE NYLOC NUT	8
17 CW45215 DISC SPRING 45x21x5 (YELLOW) 4 18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	15	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
18 DSW34 DISC SPRING 34x16.3 x2 4 19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	16	12x3FSKS	1/2"x3" FINE SOCKET HEAD 12.9	4
19 M16 M16 NYLOC NUT 2 20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	17	CW45215	DISC SPRING 45x21x5 (YELLOW)	4
20 M16x50BZP M16x50 BOLT 2 21 M20 M20 NYLOC NUT 2	18	DSW34	DISC SPRING 34x16.3 x2	4
21 M20 M20 NYLOC NUT 2	19	M16	M16 NYLOC NUT	2
	20	M16x50BZP	M16x50 BOLT	2
22 M20x70BZP M20x70 BOLT 2	21	M20	M20 NYLOC NUT	2
	22	M20x70BZP	M20x70 BOLT	2

1 off	MJ31-300

		4 (19)	
ITEM	PART NUMBER	DESCRIPTION	QTY
1	USD-GA1	UNDERSOLE DISC ASSY	1
2	909GT-BM01	909GT BLADE MOUNT	1
3	BLD-25025-01	BLADE 250xDia 25	2
4	BLD-37030T-10AC	Twist Blade 370xDia 30 (Clk)	2
5	BLDB-330-175	BLADE BACK (330 CTR 17.5 deg)	1
6	BLDBX-345-17	CROSS BLADE BACK (345 CTR 17.5 deg)	1
7	BLD-26030H-WSR6	HEAVY BLADE WASHER (DIA 31)	2
8	BLDB-3000-STP1	BLADE STOP SPACER	2
9	BLDB-315-25-SY2SP08	8mm SPACER	2
10	BLDB-345-17-SP015	SPACER PLATE	2
11	BLDBXT-345-25	OVERLAP MOUNT	2
12	BB25-16-26	BLADE BUSH	2
13	BB30-20-34	BLADE BUSH	2
14	1/2F	1/2" FINE NYLOC NUT	8
15	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
16	12x3FSKS	1/2"x3" FINE SOCKET HEAD 12.9	4
17	CW45215	DISC SPRING 45x21x5 (YELLOW)	4
18	DSW34	DISC SPRING 34x16.3 x2	4
19	M16	M16 NYLOC NUT	2
20	M16x50BZP	M16x50 BOLT	2
21	M20	M20 NYLOC NUT	2
22	M20x70BZP	M20x70 BOLT	2

2 off	MJ31-300

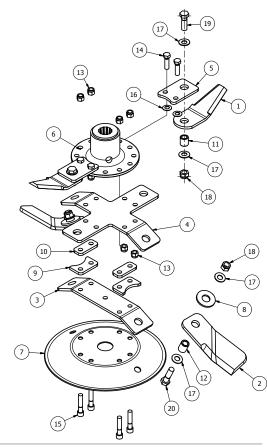
705-DCBLDHTX-L (MJ31-250/200)



ITEM	PART NUMBER	DESCRIPTION	QTY
1	BLD-25025-OVL	OVERLAP FOR BLADE 250xDia 25	2
2	BLD-25025T-10AC	Twist Blade 250xDia 25 (Anti_Clk)	2
3	BLDB-294-25	BLADE BACK (294 CTR 25 deg)	1
4	BLDBX-315-25	CROSS BLADE BACK (315 CTR 25 deg)	1
5	BLDBXT-315-30	OVERLAPPER MOUNT	2
6	DF-BMP	J205 G/BOX BLADE MOUNT	1
7	DISC-315-25	DISC (315 BLADE 25 deg)	1
8	BLD-25025H-WSR	5xDIA 26 BLADE WASHER	2
9	BLDB-315-25-SY-STP1	BLADE STOP SPACER	2
10	BLDB-315-25-SY2SP08	8mm SPACER	2
11	BB25-16-26	BLADE BUSH	2
12	BB25-16-32	BLADE BUSH	2
13	1/2F	1/2" FINE NYLOC NUT	8
14	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
15	12x212FSKS	1/2"x2 1/2" FINE SOCKET HEAD 12.9	4
16	D281421	DISC SPRING 28x14.2x1.0	4
17	DSW34	DISC SPRING 34x16.3 x2	8
18	M16	M16 NYLOC NUT	4
19	M16x50BZP	M16x50 BOLT	2
20	M16x60BZP	M16x60 BOLT	2

2 off	MJ31-250	& MJ30-250	
2 off	MJ31-200	& MJ30-200	

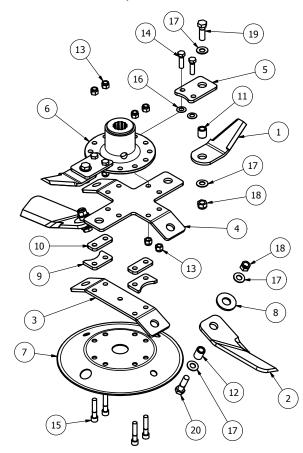
705-DCBLDHTX-R (MJ31-250/200)



ITEN	I PART NUMBER	DESCRIPTION	QTY
1	BLD-25025-OVL	OVERLAP FOR BLADE 250xDia 25	2
2	BLD-25025T-10C	Twist Blade 250xDia 25 (Clk)	2
3	BLDB-294-25	BLADE BACK (294 CTR 25 deg)	1
4	BLDBX-315-25	CROSS BLADE BACK (315 CTR 25 deg)	1
5	BLDBXT-315-30	OVERLAPPER MOUNT	2
6	DF-BMP	J205 G/BOX BLADE MOUNT	1
7	DISC-315-25	DISC (315 BLADE 25 deg)	1
8	BLD-25025H-WSR	5xDIA 26 BLADE WASHER	2
9	BLDB-315-25-SY-STF	P1 BLADE STOP SPACER	2
10	BLDB-315-25- SY2SP08	8mm SPACER	2
11	BB25-16-26	BLADE BUSH	2
12	BB25-16-32	BLADE BUSH	2
13	1/2F	1/2" FINE NYLOC NUT	8
14	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
15	12x212FSKS	1/2"x2 1/2" FINE SOCKET HEAD 12.9	4
16	D281421	DISC SPRING 28x14.2x1.0	4
17	DSW34	DISC SPRING 34x16.3 x2	8
18	M16	M16 NYLOC NUT	4
19	M16x50BZP	M16x50 BOLT	2
20	M16x60BZP	M16x60 BOLT	2

2 off	MJ31-250	& MJ30-250	
1 off	MJ31-200	& MJ30-200	

755-DCBLDHTX-L (MJ30-560/420/350 & MJ31-280) 755-DCBLDHTX-R (MJ30-560/420/350 & MJ31-280)



ITEM	PART NUMBER	DESCRIPTION	QTY
1	BLD-25025-OVL	OVERLAP FOR BLADE 250xDia 25	2
2	BLD-27025T-10AC	Twist Blade 270xDia 25 (Anti_Clk)	2
3	BLDB-294-25	BLADE BACK (294 CTR 25 deg)	1
4	BLDBX-315-25	CROSS BLADE BACK (315 CTR 25 deg)	1
5	BLDBXT-315-30	OVERLAPPER MOUNT	2
6	DF-BMP	J205 G/BOX BLADE MOUNT	1
7	DISC-315-25	DISC (315 BLADE 25 deg)	1
8	BLD-25025H-WSR	5xDIA 26 BLADE WASHER	2
9	BLDB-315-25-SY-STP1	BLADE STOP SPACER	2
10	BLDB-315-25-SY2SP08	8mm SPACER	2
11	BB25-16-26	BLADE BUSH	2
12	BB25-16-32	BLADE BUSH	2
13	1/2F	1/2" FINE NYLOC NUT	8
14	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
15	12x212FSKS	1/2"x2 1/2" FINE SOCKET HEAD 12.9	4
16	D281421	DISC SPRING 28x14.2x1.0	4
17	DSW34	DISC SPRING 34x16.3x2	8
18	M16	M16 NYLOC NUT	4
19	M16x50BZP	M16x50 BOLT	2
20	M16x60BZP	M16x60 BOLT	2

MJ30-560

MJ30-420

MJ30-350 MJ30-350

MJ31-280

After HR20617

& MJ30-280

Before HR20617

4 off

3 off

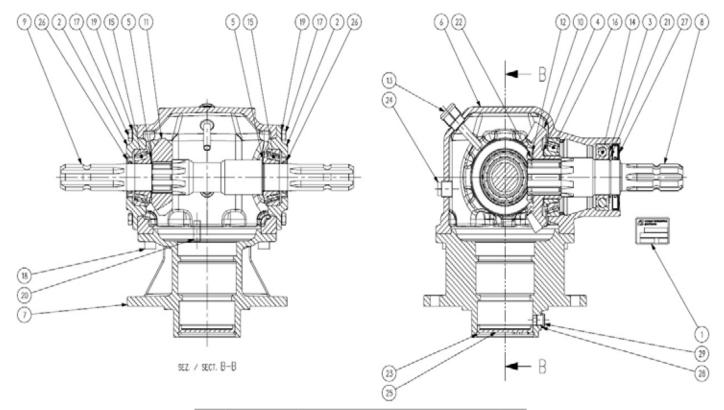
2 off

 $\frac{3 \text{ off}}{2 \text{ off}}$

		7	<u>(19)</u>
(13)	(14)		5
(6)	16		1
		•	11)
			17)
		4	18
10		(13)	18
(3)		<u></u>	6 —(17)
7)			8
15)		20 17	12) 2

ITEM	PART NUMBER	DESCRIPTION	QTY
1	BLD-25025-OVL	OVERLAP FOR BLADE 250xDia 25	2
2	BLD-27025T-10C	Twist Blade 270xDia 25 (Clk)	2
3	BLDB-294-25	BLADE BACK (294 CTR 25 deg)	1
4	BLDBX-315-25	CROSS BLADE BACK (315 CTR 25 deg)	1
5	BLDBXT-315-30	OVERLAPPER MOUNT	2
6	DF-BMP	J205 G/BOX BLADE MOUNT	1
7	DISC-315-25	DISC (315 BLADE 25 deg)	1
8	BLD-25025H-WSR	5xDIA 26 BLADE WASHER	2
9	BLDB-315-25-SY-STP1	BLADE STOP SPACER	2
10	BLDB-315-25-SY2SP08	8mm SPACER	2
11	BB25-16-26	BLADE BUSH	2
12	BB25-16-32	BLADE BUSH	2
13	1/2F	1/2" FINE NYLOC NUT	8
14	12x134FBZP	1/2"x1 3/4" FINE BOLT	4
15	12x212FSKS	1/2"x2 1/2" FINE SOCKET HEAD 12.9	4
16	D281421	DISC SPRING 28x14.2x1.0	4
17	DSW34	DISC SPRING 34x16.3x2	8
18	M16	M16 NYLOC NUT	4
19	M16x50BZP	M16x50 BOLT	2
20	M16x60BZP	M16x60 BOLT	2

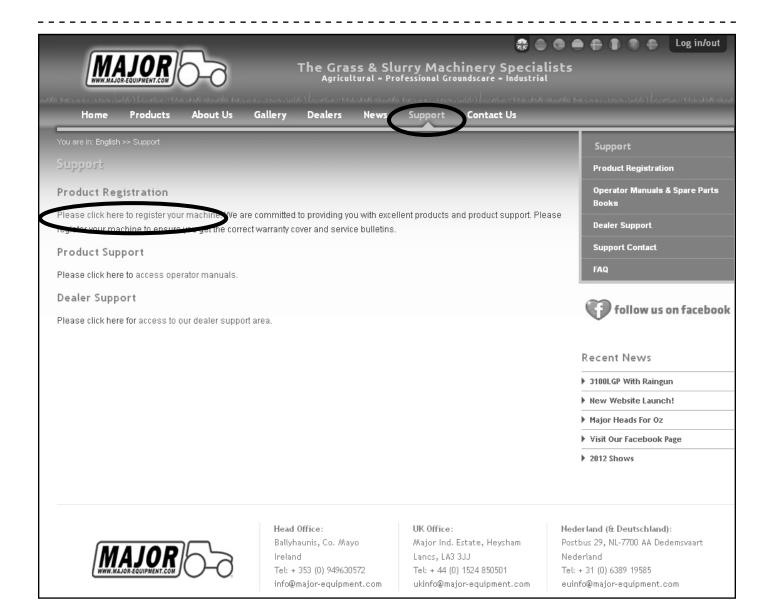
4 off	MJ30-560	
3 off	MJ30-420	
3 off	MJ30-350	After HR20617
2 off	MJ30-350	Before HR20617
2 off	MJ31-280	& MJ30-280



Item	Part No	Description	Qty
1	0.124.7101.00	PLATE "COMER"	1
2	0.248.1350.00	COVER	2
3	0.252.7500.00	SHIM KIT 45.3x65.3	1
4	0.257.7500.00	SHIM 55.3x67.7	1
5	0.259.7500.00	SHIM KIT 35.3x48.0	2
6	0.266.0300.00	CASING	1
7	0.266.1704.00	EXTENSION	1
8	0.266.2004.00	SHAFT 1"3/8 Z6	1
9	0.266.3206.00	SHAFT	1
10	0.266.5003.00	CROWN WHEEL Z22 M6,3	1
11	0.266.6015.00	PINION Z15 M6,3	1
12	0.350.7500.00	SHIM KIT 46.3x65.3	1
13	0.814.7102.00	OIL FILLER PLUG	1
14	8.0.1.00345	BALL BEARING 6209	1
15	8.0.9.00127	TAPERED ROLLER BEARING 32207	2
16	8.0.9.00174	TAPER ROLLER BEARING 30211	1
17	8.1.1.00083	HHB BOLT M8x20 UNI5739 8.8	16
18	8.1.2.01641	HSHC SCREW UNI5931 M10x25 12.9 DCRT320	8
19	8.3.7.00140	SPRING WASHER 8,4X13X1,2	16
20	8.4.5.01036	SPRING PIN 10X26 D7343	2
21	8.5.1.00200	SNAP RING 45 UNI7435	1
22	8.5.1.00260	SNAP RING 46 UNI7435	1
23	8.5.2.00030	SNAP RING HOLE 80 UNI7437/DIN472	1
24	8.6.5.00203	PLUG 1/2"GAS	1
25	8.7.0.00790	CAP 80X10	1
26	8.7.1.00624	DOUBLE LIP SEAL 35X52 X7	2
27	8.7.1.02348	DUST LIP OIL SEAL 45X85X10	1
28	9440.316.300	COPPER WASHER 13,4X19X1,5 (1/4G)	1
29	9510.051.501	MAGNETIC PLUG 1/4 GAS DIN908	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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