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# STRIPE MOWER

Tractor Mounted Rotary Mowers 2.2M & 2.6M Models

**Operator & Parts Manual** 







# **IMPORTANT**

# VERIFICATION OF WARRANTY REGISTRATION



# **Dealer Warranty Information & Registration Verification**

It is imperative that the selling dealer registers this machine with McConnel Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines; log onto <a href="https://my.mcconnel.com">https://my.mcconnel.com</a> and select 'Machine Registration' which can be found in the 'Warranty' section of the site. Confirm to the customer that the machine has been registered by completing the verification form below.

Registration Verification	Serial No.		
Dealer Name:			
Dealer Address:			
Customer Name:			
Date of Warranty Registration:/ Dealer Sign	ature:		

### **Note to Customer / Owner**

Please ensure the section above has been completed and signed by the dealer to verify your machine has been registered with McConnel Limited.

IMPORTANT: During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – refer to torque settings chart below. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machine's general maintenance procedure.

CAUTION: DO NOT OVER TORQUE HYDRAULIC FITTINGS AND HOSES

### **Torque Settings for Hydraulic Fittings**

Hydraulic Hose Ends			
BSP	Setting	Metric	
1/4"	18 Nm	19 mm	
3/8"	31 Nm	22 mm	
1/2"	49 Nm	27 mm	
5/8"	60 Nm	30 mm	
3/4"	80 Nm	32 mm	
1"	125 Nm	41 mm	
1.1/4"	190 Nm	50 mm	
1.1/2"	250 Nm	55 mm	
2"	420 Nm	70 mm	

Port Ada	Port Adaptors with Bonded Seals			
BSP	Setting	Metric		
1/4"	34 Nm	19 mm		
3/8"	47 Nm	22 mm		
1/2"	102 Nm	27 mm		
5/8"	122 Nm	30 mm		
3/4"	149 Nm	32 mm		
1"	203 Nm	41 mm		
1.1/4"	305 Nm	50 mm		
1.1/2"	305 Nm	55 mm		
2"	400 Nm	70 mm		

# **WARRANTY POLICY**

## WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with McConnel Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

#### 1. LIMITED WARRANTIES

- 1.01. All mounted machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.
  - All Self Propelled Machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months or 1500 hours. Engine warranty will be specific to the Manufacturer of that unit.
- 1.02. All spare parts supplied by McConnel Ltd and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.
- 1.03. The warranty offered by McConnel Ltd is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.
- 1.04. This warranty does not extend to any product from which McConnel Ltd's serial number plate has been removed or altered.
- 1.05. The warranty policy is valid for machines registered in line with the terms and conditions detailed and on the basis that the machines do not extend a period of 24 months or greater since their original purchase date, that is the original invoice date from McConnel Limited.

  Machines that are held in stock for more than 24 months cannot be registered for warranty.
- 1.06. This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.
- 1.07. Temporary repairs and consequential loss i.e. oil, downtime and associated parts are specifically excluded from the warranty.
- 1.08. Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.
- 1.09. Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which McConnel Ltd cannot be held liable, and may have safety implications.
- 1.10. If in exceptional circumstances a non McConnel Ltd part is used to effect a repair, warranty reimbursement will be at no more than McConnel Ltd's standard dealer cost for the genuine part.

- 1.11. Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of McConnel Ltd.
- 1.12. For machine warranty periods in excess of 12 months the following additional exclusions shall apply:
- 1.12.1. Hoses, exposed pipes and hydraulic tank breathers.
- 1.12.2. Filters.
- 1.12.3. Rubber mountings.
- 1.12.4. External electric wiring.
- 1.12.5. Bearings and seals
- 1.12.6. External Cables, Linkages
- 1.12.7. Loose/Corroded Connections, Light Units, LED's
- 1.12.8. Comfort items such as Operator Seat, Ventilation, Audio Equipment
- 1.13. All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.
- 1.14. Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.

NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. McConnel Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.

#### 2. REMEDIES AND PROCEDURES

- 2.01. The warranty is not effective unless the Selling Dealer registers the machine, via the McConnel web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.
- 2.02. Any fault must be reported to an authorised McConnel Ltd dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which McConnel Ltd cannot be held liable.
- 2.03. Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by McConnel Ltd. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.
- 2.04. All claims must be submitted, by an authorised McConnel Ltd Service Dealer, within 30 days of the date of repair.
- 2.05. Following examination of the claim and parts, McConnel Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by McConnel Ltd and appropriate labour and mileage allowances if applicable.
- 2.06. The submission of a claim is not a guarantee of payment.
- 2.07. Any decision reached by McConnel Ltd. is final.

#### 3. LIMITATION OF LIABILITY

- 3.01. McConnel Ltd disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.
- 3.02. McConnel Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.
- 3.03. Except as provided herein, McConnel Ltd shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.
- 3.04. No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.

#### 4. MISCELLANEOUS

- 4.01. McConnel Ltd may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.02. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.03. Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.

McConnel Limited

#### **ROTARY MOWER INSPECTION AND MAINTENANCE**

A daily equipment inspection of the tractor and mower should be conducted before the equipment is used. You may use the inspection sheets to assist with these daily inspections. Any damaged or missing guards should be repaired or replaced before operating the mower. Failure to repair the damaged shield can result in objects being thrown from the mower and possibly hitting the operator or bystander.

# **Inspect the Mower for Safe Operating Condition**

- Make sure the driveline guards and shielding are in place and in good repair.
- Inspect the chain guards, flexible and/or solid defector thrown object shielding to assure that they are in place on the front and rear of the mower deck and in good repair. Repair or replace any damaged or missing thrown object shields.
- Remove all debris and cut material from the deck and around the gearboxes.
- Ensure the mower cutting height is set high enough to reduce the possibility of the mower blades contacting the ground. Actual height will be dependent on the ground conditions. Increase the height when working in rough or undulating conditions.
- Inspect for broken, chipped, bent, missing, or severely worn blades. Replace damaged blades before operating the mower. Ensure the blade retaining bolts and fasteners are secure and tight.
- Lubricate the driveline universal joints and telescoping members daily.
- Inspect the wheel lug bolt/nuts to assure that they are tight.
- If mower is equipped with pneumatic tires, make sure they have the required air pressure.
- Inspect for worn or damaged decals and safety instructions. Replace unreadable, damaged or missing safety decals.
- Follow the operator's manual(s) inspection and maintenance instructions for lubricating parts, and keeping thrown object shielding, driveline guards, rotating parts shields, mower blades and decals in good repair.

### **Inspect the Tractor for Safe Operating Condition:**

- Inspect the controls, lights, SMVs (Slow Moving Vehicle sign), seat belts, and ROPS to assure that they are in place and in good working order.
- Be sure the tires, wheels, lug bolts/nuts are in good condition.
- Make sure the tractor brakes and steering are in proper operating condition.
- Follow the operator's manual(s) inspection and maintenance procedures for keeping the tractor in good and safe condition before operating.

The inspection sheet on the following page should be kept in this book as a record. A second sheet is included for you to cut out and photocopy or the inspection sheets can be down loaded from our web site at;

http://www.mcconnel.com/support/aftersales/default.aspx?nav=After Sales



# **MOUNTED ROTARY MOWER PRE-OPERATION Inspection**

Mower ID	Date:	Shift:

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Before conducting the inspection, make sure the tractor engine is off, the key removed, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up.

Item	Condition at start of shift	Specific Comments if not O.K.
The Operator's Manual is in the Canister on the mower		
All Warning Decals are in place, clean and legible		
The mower decks are clear of cut grass and debris		
Chain Guards/Deflectors are in place & in good condition		
Driveline/Gearbox shields/guards are in good condition		
Driveline clutches are in good condition, not frozen		
Driveline telescoping members & u-joints are lubricated		
Driveline yokes are securely attached to tractor & mower		
Gearbox mounting bolts are tight		
Blade carrier retaining nut is tight		
Blades are not chipped, cracked, bent or worn out		
Blade bolts are tight		
Side skirts and skids are in good condition		
There are no holes or cracks in the machine deck		
Wheel nuts are tight		
All linkage mounting pins are securely fastened		
Lift height is restricted to prevent PTO hitting the deck		

Operators Signature:		
	DO NOT OPERATE an UNSAFE TRACTOR or MOWER	



# **TRACTOR PRE-OPERATION Inspection**

Power Arm ID	Date:	Shift:

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Before conducting the inspection, make sure the tractor engine is off, the key is removed all rotation has stopped and the tractor is in park with the parking brake engaged. Any implement attached to the tractor is firmly on the ground.

Item	Condition at start of shift	Specific Comments if not O.K.
The flashing lights function properly.		
All lights are clean and working correctly		
All cab windows are clean and wipers working correctly		
The SMV sign, where required, is clean and visible.		
The tyres are in good condition with correct pressure.		
The wheel nuts are tight.		
The tractor brakes are in good condition.		
The steering linkage is in good condition.		
There are no visible oil leaks.		
The hydraulic controls function properly.		
The ROPS or ROPS cab is in good condition.		
The seatbelt is in place and in good condition.		
The 3-point hitch is in good condition.		
The drawbar/pick up hook is secure & in good condition		
The PTO master shield is in place.		
The engine oil level is full.		
The brake fluid level is full.		
The power steering fluid level is full.		
The fuel level is adequate.		
The engine coolant fluid level is full.		
The radiator & oil cooler are free of debris.		
The air filter is in good condition		

Operators Signature:		
	DO NOT OBERATE OF LINEARE TRACTOR OF MOWER	
	DO NOT OPERATE an UNSAFE TRACTOR or MOWER	



# **MOUNTED ROTARY MOWER PRE-OPERATION Inspection**

Mower ID	Date:	Shift:

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Chain Guards/Deflectors are in place & in good condition		
Driveline/Gearbox shields/guards are in good condition		
Driveline clutches are in good condition, not frozen		
Driveline telescoping members & u-joints are lubricated		
Driveline yokes are securely attached to tractor & mower		
Gearbox mounting bolts are tight		
Blade carrier retaining nut is tight		
Blades are not chipped, cracked, bent or worn out		
Blade bolts are tight		
Side skirts and skids are in good condition		
There are no holes or cracks in the machine deck		
Wheel nuts are tight		
All linkage mounting pins are securely fastened		
Lift height is restricted to prevent PTO hitting the deck		

Operators Signature:		
	DO NOT OPERATE an UNSAFE TRACTOR or MOWER	



# **TRACTOR PRE-OPERATION Inspection**

Power Arm ID	Date:	Shift:

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The wheel nuts are tight.		
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There are no visible oil leaks.		
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The seatbelt is in place and in good condition.		
The 3-point hitch is in good condition.		
The drawbar/pick up hook is secure & in good condition		
The PTO master shield is in place.		
The engine oil level is full.		
The brake fluid level is full.		
The power steering fluid level is full.		
The fuel level is adequate.		
The engine coolant fluid level is full.		
The radiator & oil cooler are free of debris.		
The air filter is in good condition		

Operators Signature: _		
	DO NOT OPERATE an UNSAFE TRACTOR or MOWER	

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Always read this manual before fitting or operating the machine – whenever any doubt exists contact your dealer or the McConnel Service Department for advice and assistance.

## **Use only McConnel Genuine Service Parts on McConnel Equipment and Machines**

DEFINITIONS – The following definitions apply throughout this manual:

# **WARNING**

An operating procedure, technique etc., which – can result in personal injury or loss of life if not observed carefully.

# **CAUTION**

An operating procedure, technique etc., which – can result in damage to either machine or equipment if not observed carefully.

### NOTE

An operating procedure, technique etc., which – is considered essential to emphasis.

### LEFT AND RIGHT HAND

This term is applicable to the machine when attached to the tractor and is viewed from the rear – this also applies to tractor references.

# MACHINE & DEALER INFORMATION

Record the Serial Number of your machine on this page and always quote this number when ordering parts. Whenever information concerning the machine is requested remember also to state the make and model of tractor to which the machine is fitted.		
Machine Serial Number:	Installation Date:	
Machine Model details:		
Dealer Name:		
Dealer Address:		
Dealer Telephone No:		
Dealer Email Address:		

# MACHINE DESCRIPTION & PURPOSE OF USE

The Stripe Mower is a tractor mounted/trailed triple rotor mower primarily designed for the cutting of grass material in fine turf environments.

It's tough construction and working widths of 2.2 or 2.6 metres makes it the ideal machine for high performance maintenance work on green areas such as playing fields, recreation areas and camp sites etc. where a quality finish is required.

This machine should only be used to perform the tasks for which it was designed – use of the machine for any other function is both dangerous to persons and damaging to components.

# MACHINE IDENTIFICATION

Each machine is fitted with an identification plate with the following information:

- 1. Machine (Part Number)
- 2. Machine Serial No.
- 3. Machine Weight

When ordering spares or replacement parts from your local dealer it is important to quote both Part Number and Serial Number as stated on the identification plate so the machine and model can be quickly and correctly identified.



**Machine Identification Plate** 

# TECHNICAL SPECIFICATIONS

SPECIFICATION	220 Model	260 Model
Working Width	2180mm	2580mm
Transport Width	2300mm	2700mm
Cutting Height	20 – 150mm	20 – 150mm
Power Requirement	40HP	50HP
PTO Speed	540RPM	540RPM
Number of Rotors	3	3
Blade Length	730mm	880mm
Rotor Speed (Max.)	1700RPM	1700RPM
Linkage Type	3-Point (Cat.II)	3-Point (Cat.II)
Machine Weight	535kg	570kg

#### **Noise Level**

For all models, the sound pressure produced at normal operating speed amounts to 95 dB(A), measured at a height of 1.60m and at a distance of 1m from the machine.

## General safety rules:

- ▲ Always read and follow the instructions for the use and maintenance of the machine before carrying out any work operations or servicing tasks.
- ▲ Improper use of the machine is both highly dangerous to persons and damaging to the machine components only use the machine for its designated task.
- ▲ Both operators and the maintenance fitters should be familiar with the machine and fully aware of dangers surrounding improper use or incorrect repairs.
- ▲ Before starting, checks to both tractor and machine must be carried out as regards: functionality, road safety, accident prevention rules.
- ▲ Even when using the machine correctly, stones or other objects may be thrown a long distance. Therefore nobody must stand within the danger area. Special attention must be paid when working near roads, buildings or vehicles.
- ▲ Use tractor's fitted with safety cabs.
- ▲ The condition of blades and machine guards must be checked before beginning the daily work; they must be replaced if damaged or missing before you use the machine.
- ▲ During checks or repairs, make sure nobody could start the machine by mistake.
- ▲ Never wear loose or fluttering clothes when operating machinery.
- ▲ Never carry passengers on the tractor.
- ▲ Never carry passengers on the machine.
- ▲ Never connect the power takeoff with the engine running.
- ▲ Never approach the machine until the rotors have completely stopped.
- ▲ Do not enter the working zone of the PTO shaft. It is dangerous to approach the rotating parts of a machine.
- ▲ Keep the PTO shaft guard in good condition.
- ▲ Before starting, check the surrounding area for the likely presence of persons and/or animals.
- ▲ Do not stand or allow others to stand near the machine when it is operating.
- ▲ The PTO shaft must be assembled and disassembled only with the engine stopped and the starting key removed.
- ▲ Before connecting the power takeoff, check that the speed and the rotational direction correspond to those of the machine.
- ▲ Immediately replace missing or damaged safety decals.
- ▲ Before leaving the tractor with the machine attached, proceed as follows:
  - 1. Disconnect the power takeoff,
  - 2. Put the machine steadily on the ground using the tractor's hydraulic lift.
  - 3. Apply the hand brake and, if the ground is steeply sloping, wedge the tractor.
  - 4. Remove the starting key.

# **Transportation Safety**

- ▲ In transport, reduce speed, especially on bumpy roads, the weight of the machine may render driving difficult and/or damage the machine.
- ▲ Ensure the levers that operate the hydraulic lift are locked, to avoid the lowering of the machine during transport.
- ▲ When driving on public roads, respect all road rules in force.
- ▲ Never transport the machine with the rotors running, even for short distances.

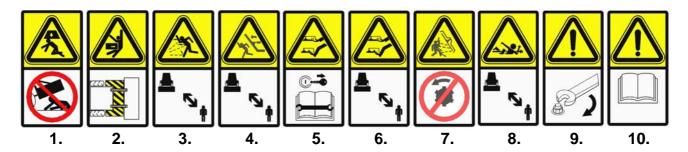
## **Operating Safety**

- ▲ Pay special attention when working with the machine not to touch fixed objects such as drains, walls, shafts, kerbs, guard rails, tracks etc. This could cause the breakage of parts which would be thrown out of the machine at very high speed.
- ▲ If wires, ropes or chains should become entangled in the rotor stop immediately to prevent damage or dangerous situations; stop the rotor and the tractor, take out the starting key. Put working gloves on; clear the rotor with the aid of pliers or shears. Do not try to disentangle by inverting the rotational direction of the rotor.
- ▲ Do not use the machine when excessive vibration is experienced, as this may cause breakage and serious damage find the cause of the vibration and eliminate it before using the machine again.
- ▲ Wear ear protection when operating machinery at noise levels exceeding 85 dB(A).

#### PTO Shaft

- ▲ Only use a PTO shaft specified by the machine manufacturer.
- ▲ Protecting tubes and guards on the PTO shaft must be correctly fixed and in good condition.
- ▲ Ensure the correct specified overlapping of universal joint shaft halves and protecting tubes (refer to shaft manufacturer handbook).
- ▲ Coupling and uncoupled of the universal joint shaft must only be performed when the tractor engine has been stopped and the ignition key has been removed.
- ▲ Secure both universal joint shaft guards with torque chains to prevent them from turning with the shaft.
- ▲ Before starting the PTO shaft, ensure that the speed and direction of rotation corresponds to the machine being driven. RPM stated for the machine must <u>never</u> be exceeded.
- ▲ Never switch the PTO shaft on when the engine is not running.
- ▲ Always keep clear of a rotating PTO shaft.
- ▲ Always switch the PTO shaft off when the angles of the universal joints threaten to become too great.
- ▲ Place the uncoupled PTO shaft into the holder provided for that purpose on the three-point linkage.

Although the information given here covers a wide range of safety subjects, it is impossible to predict every eventuality that can occur under differing circumstances whilst operating this machine. No advice given here can replace 'good common sense' and 'total awareness' at all times, but will go a long way towards the safe use of your McConnel machine.



- 1. Danger; do not work under a raised or unsupported machine.
- 2. Danger zone, keep clear; risk from crushing.
- 3. Keep clear of working machine; risk from projection of objects.
- 4. Keep a safe distance from the machine at all times; risk from raised machine.
- 5. Always switch machine off, remove starting key and read instruction manual before performing service or maintenance work on the machine.
- 6. Risk of hand or feet injuries; always ensure all machine safety guards are in place when the machine is running.
- 7. Danger; disengage PTO when performing service or maintenance work on the machine.
- 8. Keep a safe distance from the machine at all times; risk of entanglement.
- 9. Ensure nuts and bolts are kept tight.
- 10. Read the manual first before attempting to operate or service the machine.

#### **Information Decals**



PTO Speed & Direction



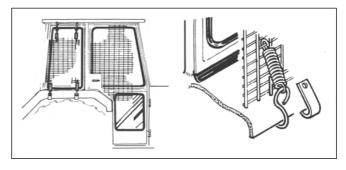
**Lubrication Point & Frequency** 

# **VEHICLE / TRACTOR PREPARATION**

We recommend vehicles are fitted with cabs using 'safety glass' windows and protective guarding when used with our machines.

Fit Operator Guard (Part No. 7313324) using the hooks provided. Shape the mesh to cover all vulnerable areas.

Remember the driver must be looking through mesh and/or polycarbonate



glazing when viewing the machine in all positions - unless the vehicle/ cab manufacturer can demonstrate that the penetration resistance is equivalent to, or higher than, that provided by mesh/polycarbonate glazing. If the tractor has a roll bar only, a frame must be made to carry both mesh and polycarbonate glazing. The operator should also use personal protective equipment to reduce the risk of serious injury such as; eye protection (mesh visor to EN1731 or safety glasses to EN166), hearing protection to EN352, safety helmet to EN297, gloves, filter mask and high visibility clothing.

#### **Vehicle Ballast**

It is imperative when attaching 'third-party' equipment to a vehicle that the maximum possible stability of the machine and vehicle combination is achieved – this can be accomplished by the utilisation of 'ballast' in order to counter-balance the additional equipment added.

Front weights may be required for rear mounted machines to place 15% of total outfit weight on the front axle for stable transport on the road and to reduce 'crabbing' due to the drag of the cutting unit when working on the ground.

Where a machine works to the side of the tractor rear weights may be required to maintain a reasonable amount of rear axle load on the opposing wheel.

All factors must be addressed in order to match the type and nature of the equipment added to the circumstances under which it will be used - factors that effect stability are:

- Centre of gravity of the tractor/machine combination.
- Geometric conditions, e.g. position of the cutting head and ballast.
- Weight, track width and wheelbase of the tractor.
- Acceleration, braking, turning and the relative position of the cutting unit during these
  operations.
- Ground conditions, e.g. slope, grip, load capability of the soil/surface.
- Rigidity of implement mounting.

### Suggestions to increase stability:

- Increasing rear wheel track a vehicle with a wider wheel track is more stable.
- Ballasting the wheel; it is preferable to use external weights but liquid can be added to around 75% of the tyre volume – water with anti-freeze or the heavier Calcium Chloride alternative can be used.
- Addition of weights care should be taken in selecting the location of the weights to ensure they are added to a position that offers the greatest advantage.
- Front axle locking, check with tractor manufacturer.

The advice above is offered as a guide for stability only and is not a guide to vehicle strength. It is therefore recommended that you consult your vehicle manufacturer or local dealer to obtain specific advice on this subject, additionally advice should be sought from a tyre specialist with regard to tyre pressures and ratings suitable for the type and nature of the machine you intend to fit.



#### WARNING!

Attachment of machine to tractor should always be performed on a firm level site. Keep onlookers and bystanders at a safe distance from both machine and tractor at all times during the attachment procedure.

#### **Attachment to Tractor**

Carefully drive the tractor squarely and centrally up to the machine with the tractor's lower linkage positioned at the same height as the machines lower attachment points.

Attach the tractors lower linkage points to the machines lower attachment points and secure with the linkage pins and security pins provided.

Fit the lift support cable between its attachment plate on the back of the machine and the rear facing connection point on the upper lift frame; secure cable with a shackle connection at the rear and a linkage pin on the upper frame.

Fit and adjust the top link between the tractor and the machine upper attachment point.

Fit check chains and/or stabiliser bars to reduce lateral movement of the machine during transport.

Fit PTO Shaft and attach torque chains to a suitable location. See below for details of PTO measurement and shaft length adjustment.

#### **PTO Shaft Measurement**

Measure the PTO shaft and cut to the dimension shown – the finished length of the PTO shaft should be 75mm (3") less than the measured distance 'A' - between tractor shaft and gearbox stub shaft - to enable fitting.

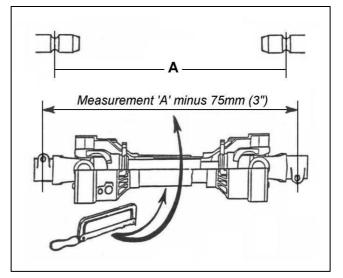
#### NOTE:

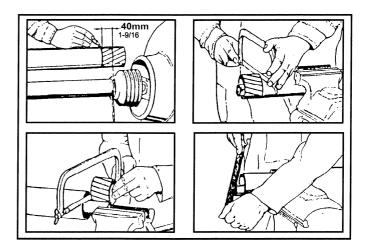
For subsequent use with different tractors measure again, there must be a minimum shaft overlap of 150mm (6").

Fit PTO in position and attach the torque chains to a convenient location to prevent the shaft guards from rotating.

# **PTO Shaft Length Adjustment**

- 1. Shorten outer plastic tube to 40mm less than the shortest envisaged shaft length.
- 2. Remove the marked tube.
- 3. Remove same length from inner plastic tube and metal shaft profiles (inner and outer).
- 4. De-burr all edges and remove 'swarf' to ensure smooth operation.





# **Cutting Height**

Depending on the specification of the particular machine, the cutting height will be regulated either by the skids or by the rollers.

On machines without rollers the height at which the skids are mounted on the machine will determine the machine's cutting height; the higher the mounting position - the lower the cut, and vice-versa.



On machines equipped with rollers, the cutting height is determined by the roller height positions; the higher the rollers – the higher the cut, and vice-versa.

When setting the height of the rollers all four roller brackets must be set to an identical height to ensure the machine works parallel to the ground.

For maximum safety when mowing at a greater cutting height the skids on these builds should be placed into their lowest possible position.



# **Adjusting the Cutting Height**



WARNING! Disengage PTO, switch off engine and remove starting key before making height adjustments. Ensure both machine and roller/skid assemblies are safely and independently supported at all times during the adjustment procedure.

#### **Pre-Operational Checks**

Before commencing work with the machine the following checks should be performed;

- Make a visual inspection of the machine to ensure it is in good operational condition.
- Check all safety guarding is in position and in full working order.
- Check blades are undamaged and in good working condition.
- Check all greasing points are well lubricated.
- Check gearbox oil level.
- Check belt condition and tension.
- Check PTO speed and direction match that of the machine.

#### **Operation**

Ensure that the operator is suitably qualified to use a machine of this nature and that they have fully read and understood this manual - they should be aware of all safety aspects relating to the safe use of the machine. It is advisable that all 'first time' operators practice using the machine in a clear safe area prior to work in order to familiarise themselves with its operation.

After the initial first hour of work with a new machine, nuts and bolts should be checked for tightness and the drive belts inspected and re-tensioned if required – refer to belt section for details.

Prior to starting work the area should be checked for dangerous objects such as large stones, wood, wire, glass etc. – hazardous objects should be removed from the area prior to operation with the machine. The location of unmovable or natural hazards should be noted, or if necessary 'marked', to indicate to the operator that the area should either be avoided or additional caution adopted whilst working around the hazard.

# **Working Procedure**

- Adjust the machines to set the required cutting height.
- Loosen check chains and/or stabilizer (if applicable) so the mower has a degree of sideways movement behind the tractor during work.
- Set sufficient slack in the lift cable to allow the machine to follow ground contours.
- Start tractor and raise mower before engaging PTO; always engage PTO at low engine RPM to avoid damage to gearbox and belts.
- Allow mower to achieve working speed before gently lowering it into work and beginning forward travel; on models without rollers, lower the machine to a work position where it remains slightly supported by the tractor's lifting device.
- Work at a speed to suit the materials being cut; optimum speed range is in the region of 3 to 8 km/h (2-6 mph).
- After a short distance mowing, check that the grass is being cut to the desired height.

# **Reversing & Turning**

When reversing or turning the unit the machine must always be lifted clear of the ground to avoid damage.

#### **Transport**

The following must be observed at all times when transporting the machine:

- Machine must be switched off.
- Set lift cable so it is supporting the rear of the machine.
- Tighten check chains and/or stabiliser bars to reduce lateral movement.
- Raise machine to a suitable position for transportation.
- Keep speed to a minimum, especially on bumpy roads or terrain.
- Always abide with local laws and road regulations.
- Be aware of the machines width and length especially when navigating turns.

# **DETACHMENT & STORAGE**

## **Detaching the machine from the tractor**

Removal of the machine should be performed on a firm level site; the procedure for detachment is as follows:

- Gently lower the machine fully to the ground.
- Switch off the tractor and remove its starting key.
- Remove the PTO shaft from tractor end and store it on the support bracket provided.
- Where applicable, chock rollers to prevent risk of machine movement during the detachment procedure or whilst in storage.
- Remove the top link and detach lower attachment points.
- Carefully and slowly drive the tractor clear of the machine.
- Clean and lubricate the machine in preparation for next use.

## Storage

For extended periods of storage it is advisable that the machine be kept in a clean dry environment protected from the elements to avoid risk of corrosion. The machine should be thoroughly cleaned and lubricated prior to storage. At this point it is good practice to check the machine for worn or damaged components - any parts that require replacing should be ordered and fitted at the earliest opportunity so the machine is fully prepared for the next seasons work.

## **MAINTENANCE**

All maintenance, cleaning and repair operations must be performed with the machine firmly lowered to the ground and detached from the tractor or with the PTO disconnected, engine switched off, and starting key removed. For any repairs or maintenance that requires access from underneath; the machine should be firmly and safely raised and propped using suitable purpose designed supports capable of bearing the machines full weight. Care should be adopted at all times when working with or under a raised machine.

#### **Maintenance Tasks**

The following preventative maintenance tasks should be performed at the timescales stated to both maximise efficiency and prolong the working life of the machine.

#### After an initial 1 hour of work - new machine or machine fitted with new belts.

- ✓ Check all nuts and bolt for tightness retighten if required.
- ✓ Check belt tension and adjust if required refer to belt section for details.

#### After an initial 40 hours of work - new machine.

✓ Change gearbox oil.

## After every 8 hours of work

- ✓ Check all nuts and bolts for tightness retighten if required.
- ✓ Check belt tension and adjust if required refer to belt section for details.
- ✓ Check wear and condition of blades replace any damaged blades immediately.
- ✓ Check condition of safety guards repair or replace if not performing their function.
- ✓ Lubricate grease points see below for locations of grease points.
- ✓ Check gearbox oil level top up if required.
- ✓ Check rotor remove foreign objects that may be fouling or lodged in the rotor.
- ✓ Check frame and 3-point hitch ensure components are in a safe working condition.
- ✓ Check condition of steel lifting cable replace if showing signs of damage or fraying.

#### After every 100 hours

✓ Grease PTO driveshaft – separate telescopic drive and apply grease to internal shaft.

### **Every 12 months**

✓ Change gearbox oil

#### **Grease Points**

Lubricate all grease points on a daily basis using premium quality multipurpose lithium grease.

Under extremely heavy conditions lubrication of the rotor bearings grease points can be increased to several times per day to expel any foreign matter that can penetrate the housing.



Rotor Bearing Grease Point



Roller End Bearing Grease Point

#### **Gearbox Lubrication**

On new machines the gearbox oil should be changed after the first 40 hours work and thereafter on a yearly basis.

Check the oil level on a daily basis prior to work and top up if required.

# **Gearbox Oil Level Checking**

Checking the gearbox oil level is by removal of the drain/level plug; oil should be inline with the bottom of this aperture. Top up the lubricant via the filler plug to a point where the oil starts to drip out of drain/level plug aperture. Replace and tighten both plugs before using the machine. Gearbox oil should be replaced annually.

**Gearbox Capacity & Lubricant Type** 0.9 Litre – Gear Oil SAE 90 API GL4



**Gearbox Plug Identification** 

# **Gearbox Oil Replacement**

Draining of the gearbox in situ requires the machine to raised vertically backwards to allow the oil to be drained from the drain/level plug. In order to perform this procedure suitable overhead lifting equipment capable of supporting the machines weight will be required to ensure the machine is raised and supported safely whilst the work is being carried out.



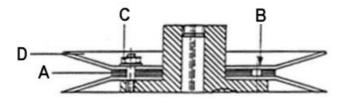
WARNING! Ensure suitable overhead lifting equipment is used to raise and support the machine when draining the gearbox. Keep onlookers and bystanders at a safe distance at all times.

The procedure is as follows;

- Raise the support the machine vertically backwards.
- Carefully remove the drain/level plug and collect the oil in a suitable container.
- When oil has been fully drained, carefully lower the machine back to its horizontal position.
- Remove the breather/filler plug and carefully fill with oil to a point where it starts to drip out of drain/level plug aperture.
- Refit and tighten both plugs.

## V-belt Tensioning and Replacement

The V-belts are tensioned at the driven V-belt pulleys by removing one or more adjusting plates (**A**) and then refitting the plate(s) on top of the pulley (**B**).



The procedure is as follows;

- Remove the four nuts (C) on V-belt pulley (D).
- Remove the V-belt from the adjusting plates.
- Remove one or more adjusting plates (depending on the degree of belt slackness).
- Refit the V-belt again around the remaining adjusting plates proceed with care to avoid pinching your fingers.
- Fit the upper pulley half and secure in position with the four nuts.

Note: tighten the nuts only when they are at the position indicated in the illustration opposite; rotate the pulley a quarter turn each time and tighten each nut in this same position ▶

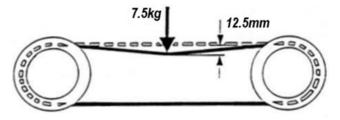


When completed, check the V-belt for tension - repeat the above procedure again if further adjustment is required.

#### **Belt Tension**

Correct belt tension is 12.5mm deflection under 7.5kg pressure.

Measurement of belt deflection should be taken at the mid-point between pulleys.



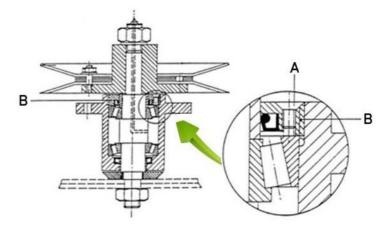
NOTE: On new machines V-belt tension must be checked after the initial first hour of work.

# **Bearing Housing Readjustment**

The conical bearings in the bearing houses will occasionally require readjustment; this will be necessary when play can be felt on the blade shaft (when the V-belts are slackened).

The procedure for readjustment is as follows;

- Remove the V-belts and the V-belt pulleys & boss.
- Loosen the countersunk screw (A) from the adjusting ring.
- Tighten the adjusting ring (B) until play on the blade shaft no longer exists (left-handed screw thread).
- Turn the adjusting ring (B) a further one centimetre before replacing and tightening the countersunk screw (A).
- Refit the V-belt pulley and the V-belts.



#### **Blades**

The machines cutting blades should be checked for signs of wear or damage on a regular basis; excessively worn or damaged blades must be replaced immediately.

All blades rotate in the same direction which is anti-clockwise when viewed from above.

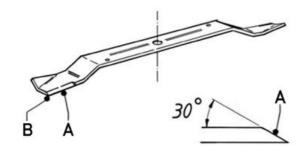
#### **Blade Removal**

Ensure the machine is safely supported at all times when attempting to remove the blades. **Note: blade fixing nuts have a left-handed thread.** 

# **Blade Sharpening**

When the blades become blunt and are no longer producing a clean cut they can be sharpened by grinding. Blades are designed to have a cutting edge of 30° with a 'square' blade corner which increases the cutting effect; therefore when sharpening blades it is important to retain the correct blade profile to ensure the machine cuts efficiently.

The cutting edges of all blades must be sharpened equally to retain rotor balance.



- A) Blade Cutting Edge (30° cutting angle)
- **B)** Blade Corner (must be square not rounded)



WARNING! When grinding blades suitable safety wear including safety glasses, gloves and mask must be worn. Keep all persons at a safe distance when grinding blades.

## **Rotor Vibration**

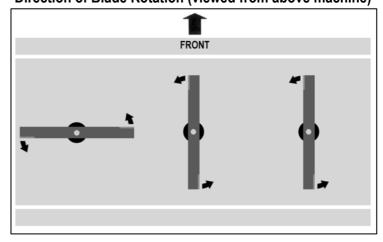
If vibration is experienced the machine should be stopped immediately; this is often a sign that a blade is either missing or severely damaged, if this is the case do not use the machine until the problem has been rectified. If vibration continues, or occurs for no apparent reason the machine must be fully checked, contact your local dealer for further advice or assistance on this subject.

#### **Tightening Torques**

All bolt fixings must be tightened according to the table below unless otherwise stated in the manual or parts list.

Thread	Torque Setting
M8	24 Nm
M10	49 Nm
M12	84 Nm
M14	133 Nm
M16	205 Nm
M18	290 Nm
M20	410 Nm

Direction of Blade Rotation (viewed from above machine)

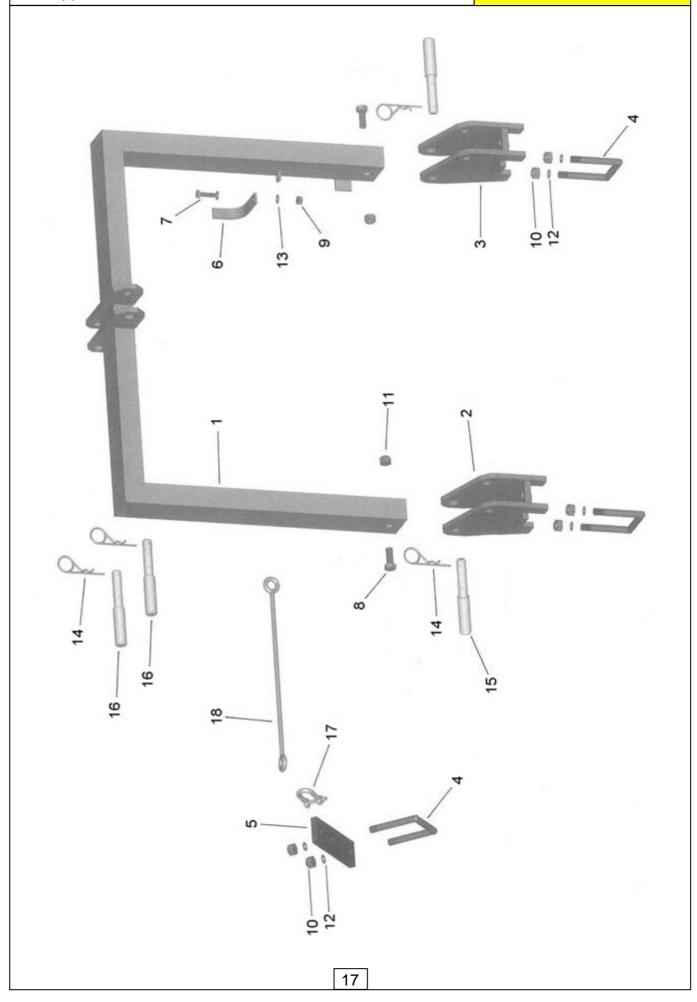


# STRIPE MOWER Models 220 & 260 Parts Section

# 3-POINT LINKAGE MODULE

Module(s): 1029702





# 3-POINT LINKAGE MODULE

Module(s): 1029702

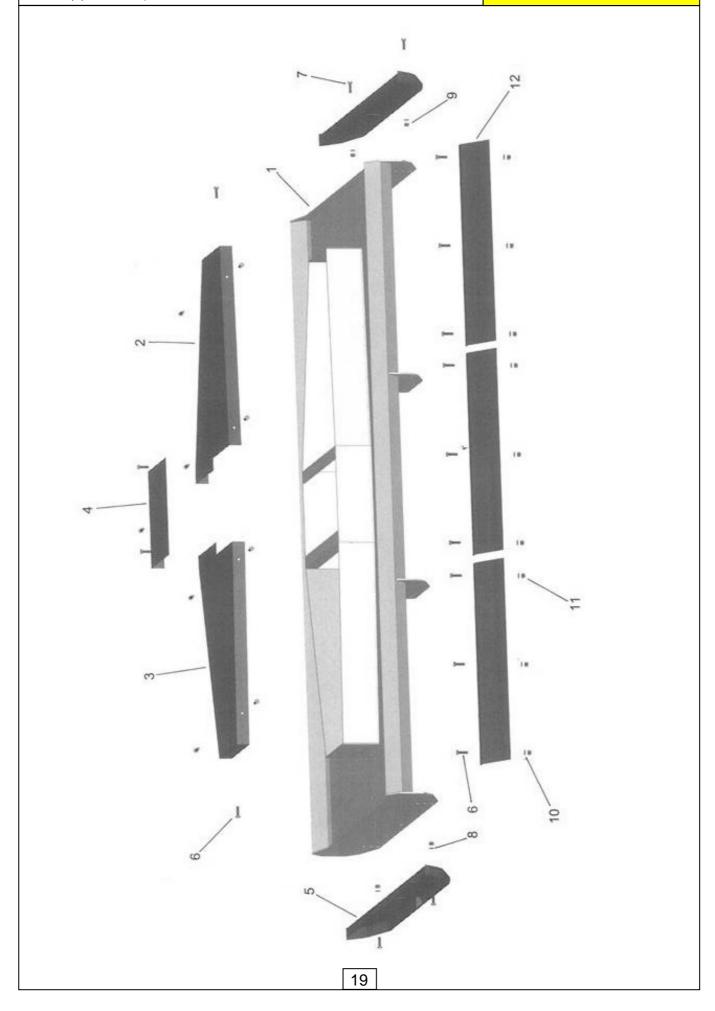


REF.	QTY.	PART NO. 1029702	DESCRIPTION 3-POINT LINKAGE MODULE
1	1	1029001	3-POINT LINKAGE
2	1	1029002	COUPLE JAW LH
3	1	1029003	COUPLE JAW RH
4	3	1029004	U-BOLT
5	1	1029005	PLATE
6	1	1029006	PTO BRACKET
7	1	9213055	BOLT
8	2	9213228	BOLT
9	1	9163005	LOCK NUT
10	6	9163007	LOCK NUT
11	2	9163008	LOCK NUT
12	6	0100106	WASHER
13	4	9100205	SPRING WASHER
14	4	1029007	SPRING PIN
15	2	1029008	LINK PIN
16	2	1029009	TOP LINK PIN
17	1	1029010	SHACKLE
18	1	1029011	STEEL CABLE - Stripe 220
	1	1029012	STEEL CABLE - Stripe 260

# MAIN FRAME MODULES

Module(s): 1029703, 1029704

# **McCONNEL**



## MAIN FRAME MODULES

Module(s): 1029703, 1029704

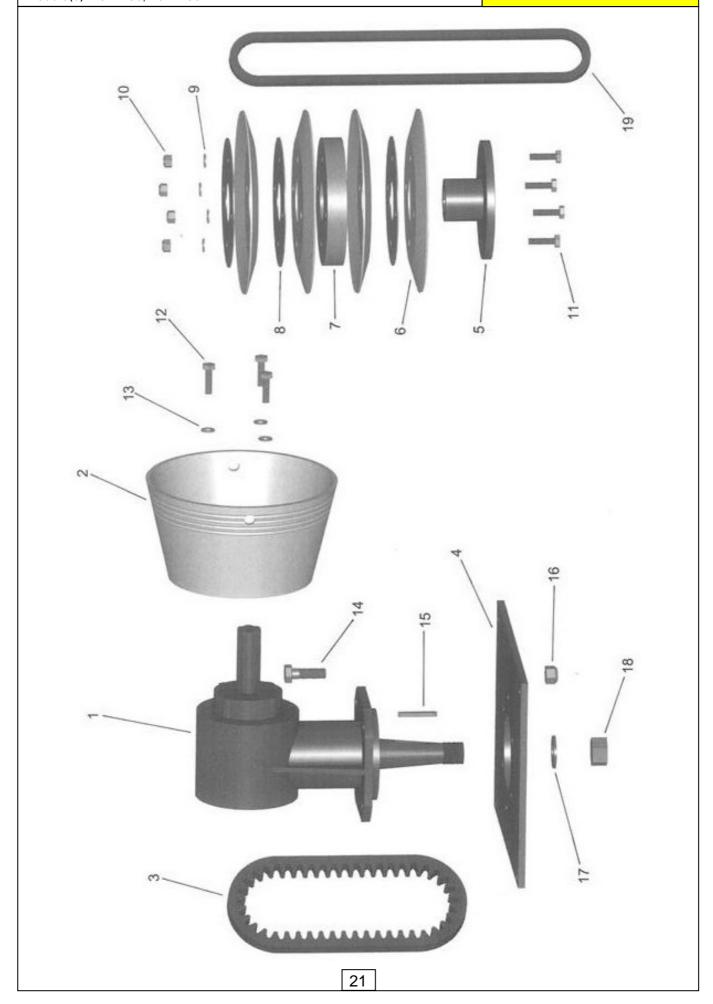


REF.	QTY.	PART NO. 1029703 1029704	DESCRIPTION  MAIN FRAME MODULE - Stripe 220  MAIN FRAME MODULE - Stripe 260
1	1	1029013	FRAME - Stripe 220
	1	1029014	FRAME - Stripe 260
2	1	1029015	V-BELT LH COVER - Stripe 220
	1	1029016	V-BELT LH COVER - Stripe 260
3	1	1029017	V-BELT RH COVER - Stripe 220
	1	1029018	V-BELT RH COVER - Stripe 260
4	1	1029019	V-BELT CENTER COVER
5	2	1029020	SKID
6	22	9213055	BOLT
7	18	9313067	BOLT
8	4	0100106	WASHER
9	4	9163007	LOCK NUT
10	18	9100105	WASHER
11	18	9163005	LOCK NUT
12	6	1029021	GRASS DEFLECTOR - Stripe 220
	6	1029022	GRASS DEFLECTOR - Stripe 260

# **GEARBOX & DRIVE MODULES**

Module(s): 1029705, 1029706





## **GEARBOX & DRIVE MODULES**

Module(s): 1029705, 1029706

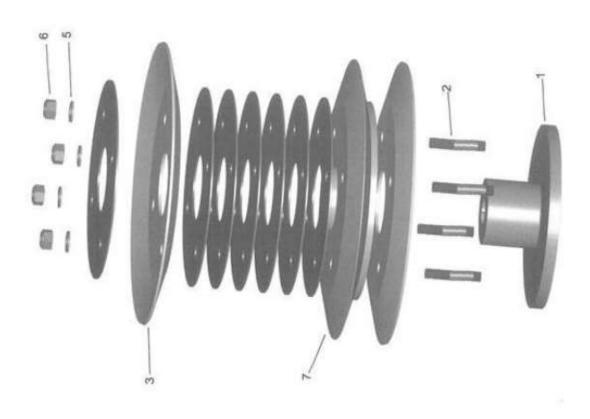


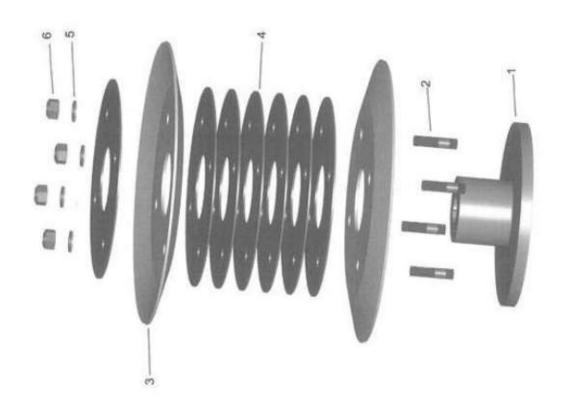
REF.	QTY.	PART NO. 1029705 1029706	GEARBOX & DRIVE MODULE - Stripe 220
1	1	1029023	
2	1	1029024	PTO SHAFT GUARD
3	1	1029025	V-BELT
4	1	1029026	GEARBOX PLATE
5	1	1029027	V-BELT PULLEY
6	4	1029028	DISC
7	1	1029029	ADJUSTING DISC
8	3	1029030	ADJUSTING DISC
9	4	9100105	WASHER
10	4	9163005	LOCK NUT
11	4	9213155	BOLT
12	3	9313034	BOLT
13	3	9100104	WASHER
14	4	9313086	BOLT
15	1	1029031	KEY
16	4	9163006	LOCK NUT
17	1	1029032	WASHER
18	1	1029033	NUT (LEFT-HANDED THREAD)
19	2	1029034	V-BELT - Stripe 220
	2	1029035	V-BELT - Stripe 260

# HUB PULLEY & DOUBLE PULLEY MODULES

Module(s): 1029707, 1029708







## HUB PULLEY & DOUBLE PULLEY MODULES

Module(s): 1029707, 1029708

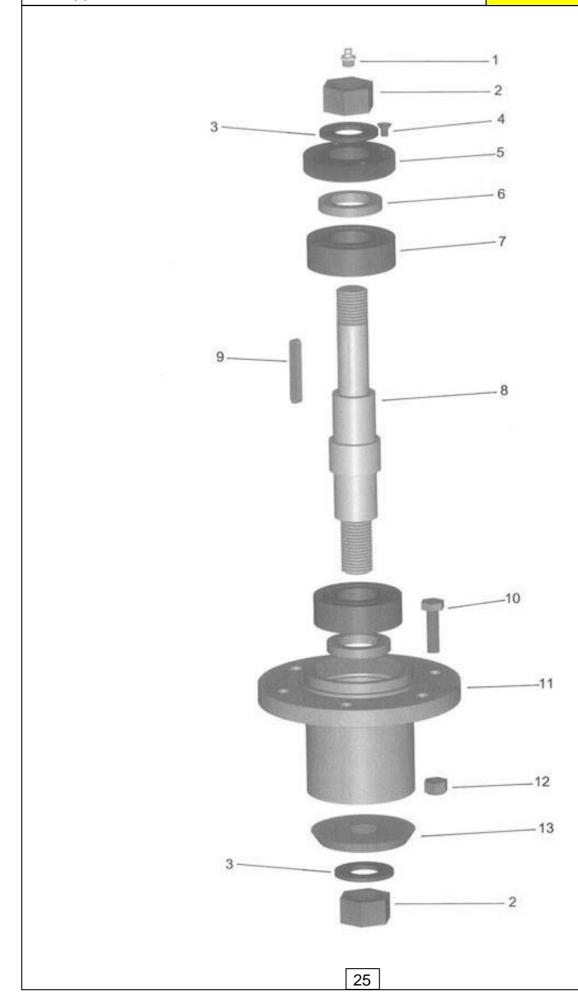


REF.	QTY.	PART NO. 1029707	DESCRIPTION V-BELT HUB PULLEY MODULE
1	1	1029036	BOSS
2	4	1029037	STUD
3	2	1029038	DISC
4	7	1029039	ADJUSTING DISC
5	4	9100105	WASHER
6	4	9163005	NUT
REF.	QTY.	PART NO.	DESCRIPTION
REF.	QTY.	PART NO. 1029708	DESCRIPTION V-BELT DOUBLE PULLEY MODULE
<b>REF.</b> 1	<b>QTY.</b> 1		
		1029708	V-BELT DOUBLE PULLEY MODULE
1	1	<b>1029708</b> 1029036	V-BELT DOUBLE PULLEY MODULE BOSS
1 2	1 4	<b>1029708</b> 1029036 1029037LONG	V-BELT DOUBLE PULLEY MODULE BOSS STUD
1 2 3	1 4 2	<b>1029708</b> 1029036 1029037LONG 1029038	V-BELT DOUBLE PULLEY MODULE BOSS STUD DISC
1 2 3 4	1 4 2 7	<b>1029708</b> 1029036 1029037LONG 1029038 1029039	V-BELT DOUBLE PULLEY MODULE BOSS STUD DISC ADJUSTING DISC

BEARING HOUSING MODULE

Module(s): 1029709



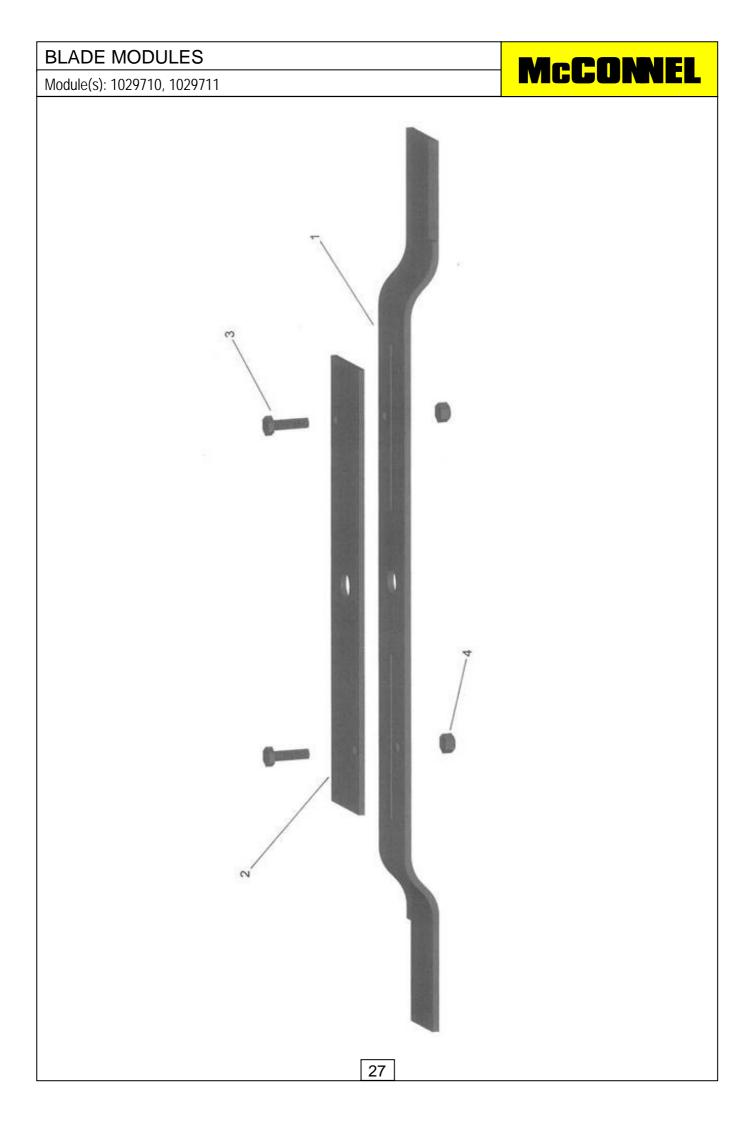


## BEARING HOUSING MODULE

Module(s): 1029709



REF.	QTY.	PART NO. 1029709	DESCRIPTION BEARING HOUSING MODULE
1	1	0901121	GREASE NIPPLE
2	2	1029033	NUT (LEFT-HANDED THREAD)
3	2	1029032	WASHER
4	1	9313013	SOCKET SCREW
5	1	1029041	AJUSTMENT RING
6	2	1029042	SEALING RING
7	2	1029043	TAPERED ROLLER BEARING
8	1	1029044	ROTOR SHAFT
9	1	1029031	KEY
10	6	9213085	BOLT
11	1	1029045	BEARING HOUSING
12	6	9163005	LOCK NUT
13	1	1029046	THRUST PLATE

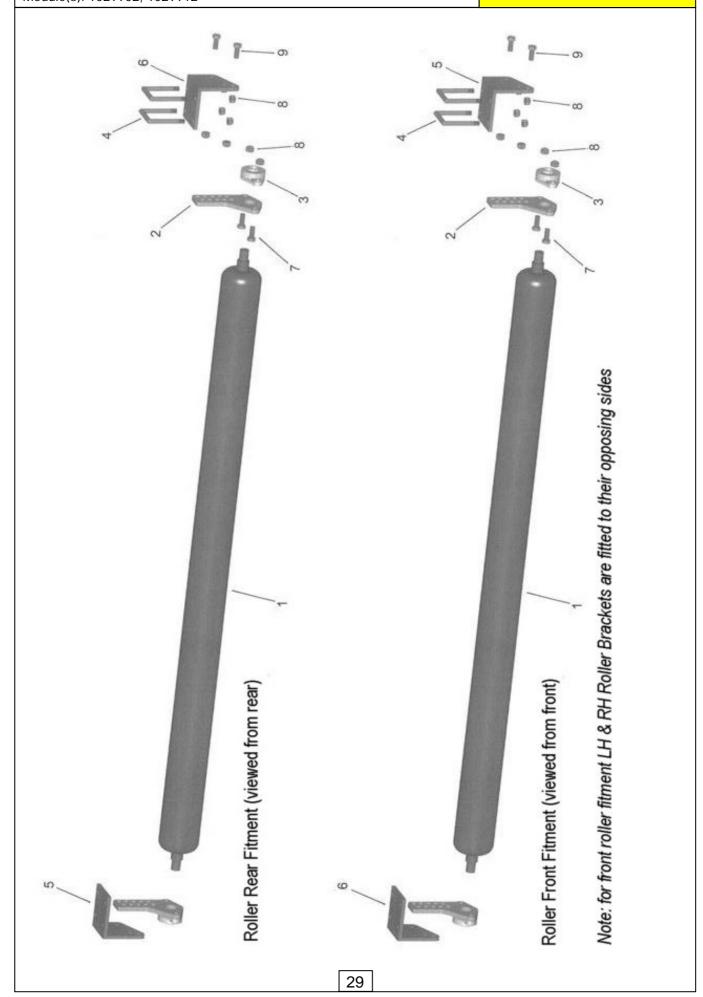


## **BLADE MODULES**

Module(s): 1029710, 1029711



REF.	QTY.	PART NO. 1029710 1029711	DESCRIPTION BLADE MODULE - Stripe 220 BLADE MODULE - Stripe 260
1	3	1029047	BLADE - Stripe 220
	3	1029048	BLADE - Stripe 260
2	3	1029049	BLADE CARRIER - Stripe 220
	3	1029050	BLADE CARRIER - Stripe 260
3	6	9213055	BOLT
4	6	9163005	LOCK NUT

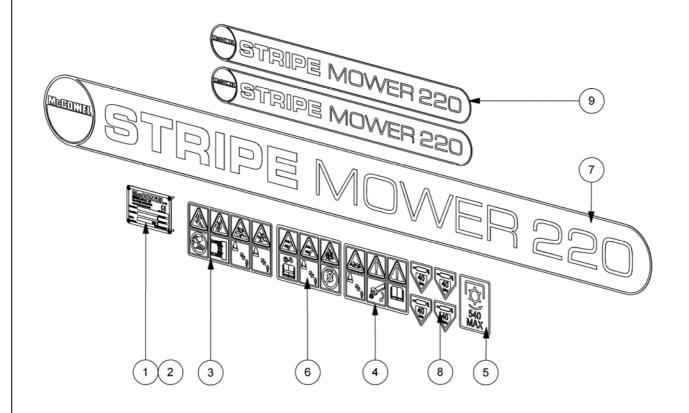


## **ROLLER KITS**

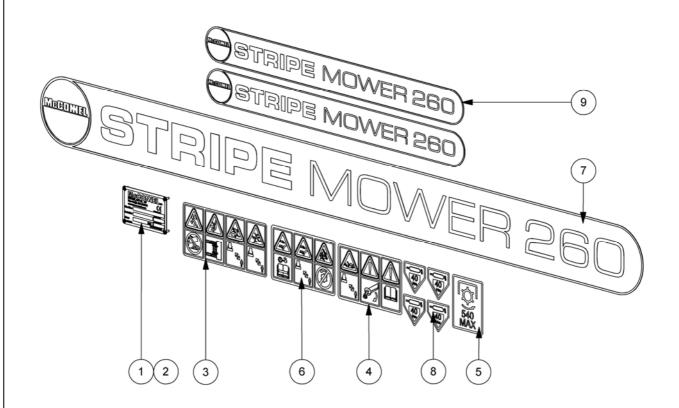
Module(s): 1029902, 1029912



REF.	QTY.	PART NO. 1029902 1029912	DESCRIPTION ROLLER KIT - Stripe 220 ROLLER KIT - Stripe 260
1	2	1029051	ROLLER - <i>Stripe 220</i>
	2	1029052	ROLLER - Stripe 260
2	4	1029053	ROLLER ADJUSTMENT BRACKET
3	4	1029054	BALL BEARING
4	8	1029004	U-BOLT
5	2	1029055	ROLLER BRACKET LH
6	2	1029056	ROLLER BRACKET RH
7	8	9213107	BOLT
8	32	9163007	LOCK NUT
9	8	9313097	BOLT



REF.	QTY.	PART NO.	DESCRIPTION
		1029700	DECAL KIT - Stripe 220
1	1	1335146	SERIAL No. PLATE
2	4	7103230	POP RIVET
3	1	09.821.29	DECAL - COMBINED EURODECAL
4	1	09.821.34	DECAL - COMBINED EURODECAL
5	1	09.811.04	DECAL - 540 MAX ACW
6	1	09.821.30	DECAL - EURODECAL ROTARY
7	1	1291113	DECAL - STRIPE MOWER 220
8	4	09.810.02	DECAL - GREASE 40 HRS
9	2	1291114	DECAL - STRIPE MOWER 220 (SMALL)



REF.	QTY.	PART NO. 1029701	DESCRIPTION DECAL KIT - Stripe 260
1	1	1335146	SERIAL No. PLATE
2	4	7103230	POP RIVET
3	1	09.821.29	DECAL - COMBINED EURODECAL
4	1	09.821.34	DECAL - COMBINED EURODECAL
5	1	09.811.04	DECAL - 540 MAX ACW
6	1	09.821.30	DECAL - EURODECAL ROTARY
7	1	1291111	DECAL - STRIPE MOWER 260
8	4	09.810.02	DECAL - GREASE 40 HRS
9	2	1291112	DECAL - STRIPE MOWER 260 (SMALL)

