

Publication 474 (Issue 2)  
April 2005  
Part No. 41570.74  
Revision: 02.03.12



# PT6 & PT9

## PASTURE TOPPERS

Models 2007 onwards

Operation & 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 go to the McConnel Limited web site at [www.mcconnel.com](http://www.mcconnel.com), log onto 'Dealer Inside' and select the 'Machine Registration button' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the McConnel Service Department on 01584 875848.

#### Registration Verification

Dealer Name: .....
Dealer Address: .....
Customer Name: .....
Date of Warranty Registration: ...../...../..... Dealer Signature: .....

#### NOTE TO CUSTOMER / OWNER

*Please ensure that the above section above has been completed and signed by the selling dealer to verify that 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 machines general maintenance procedure.

#### 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 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 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.*
- 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. *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.*
- 1.06. *Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.*
- 1.07. *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.*
- 1.08. *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.*
- 1.09. *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.*
- 1.10. *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.*
- 1.11. *For machine warranty periods in excess of 12 months the following additional exclusions shall apply:*
  - 1.11.1. *Hoses, exposed pipes and hydraulic tank breathers.*
  - 1.11.2. *Filters.*
  - 1.11.3. *Rubber mountings.*
  - 1.11.4. *External electric wiring.*
  - 1.11.5. *Bearings and seals.*

- 1.12. *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.*
- 1.13. *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 Ltd 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.*

**E.C MACHINERY DIRECTIVE**  
**98/37/EC**

**CE DECLARATION OF CONFORMITY**

*We hereby certify that the machinery stipulated below complies with all the relevant provisions of the EC Machinery Directive and the National Laws and Regulations adopting this Directive.*

**Machine Description**.... Mounted In-Line Toppers  
**Make/ Model** .....PT6, PT8 & PT9

Manufacturer: LSM Engineering LTD  
Address: Ballymacken, Portlaoise, Co. Laois. (IRELAND)

Is in conformity with the following other Directives and Standards;

***Directive 98/37/EC – Machinery Directive***  
***Directive 93/9 EEC – “CE Marking Directive”***

Harmonized Standards applied;

**EN 292 pt1:1991 - Safety of Machinery - Basic concepts, general principles for design**  
**EN 292 pt2:1991 - Safety of Machinery - Technical Principles and specifications**  
**EN 60204-1:1993 - Safety of Machinery - Electrical equipment of machines**  
**EN 1050:1996 - Safety of Machinery - Principle of Risk Assessment**

**Signed** *Noel Graham*  
**Date** **January 2007**  
**Name** **Noel Graham**  
**Position** **Production Manager**

*We reserve the right to make changes or improvements at any time without incurring any obligation to make such changes on products sold previously.*

## **ROTARY MOWER INSPECTION AND MAINTENANCE**

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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 deflector 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 downloaded 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: \_\_\_\_\_

## WARNING



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: \_\_\_\_\_

## WARNING



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 OPERATE an UNSAFE TRACTOR or MOWER**



# MOUNTED ROTARY MOWER PRE-OPERATION Inspection

Mower ID \_\_\_\_\_ Date: \_\_\_\_\_ Shift: \_\_\_\_\_

## WARNING



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: \_\_\_\_\_

## WARNING



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 OPERATE an UNSAFE TRACTOR or MOWER**



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## INTRODUCTION

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### **McCONNEL PT SERIES MOWERS - Medium Duty Pasture Toppers**

Although designed primarily for the 'topping' of agri pastures the machines may also be used for 'topping' sports grounds and local council areas. These machines should never be used for topping set-aside.

Our machines are designed with care and built with quality materials by skilled workers. Proper assembly, maintenance and operating practices, as described in this manual, will help the owner/operator get years of satisfactory service from the machine.

The purpose of this manual is to familiarise the owner/operator with the machine, and offer guidance to ensure it is operated both safely and correctly for its designated task.

The parts section is designed to familiarise the owner/operator with replaceable parts on the machine - this section provides exploded assembly drawings of the machines components, illustrating each piece and identifying its part number.

Careful use, timely service and the fitting of genuine parts will save extensive repairs and costly downtime. The operation and maintenance sections of the manual train the owner/operator how to work the machine correctly and attend to appropriate maintenance tasks. The trouble shooting guide helps diagnose difficulties with the machine and offer solutions to any problems.

Safety is of primary importance to the owner/operator and to the manufacturer. The first section of this manual includes a list of safety messages that, if followed, will help protect the operator and bystanders from injury or death. Many of these messages will be repeated throughout the manual. The owner/operator/dealer should know these messages before attempting assembly or maintenance and to be aware of the hazards associated with the operation of this machine during assembly, use, and maintenance.



## FEATURES

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### **PT6 Model**

- Three point linkage mounted.
- Working width of 1.8m.
- Cutting height from 24mm to 114mm.
- 540-RPM PTO Shaft drive.
- Shear pin protection.
- Single rotor.
- Semi-Offset cutting position.
- Easy height adjustment.

### **PT9 Model**

- Three point linkage mounted.
- Working width of 2.75m.
- Cutting height from 24mm to 114mm.
- 540-RPM PTO Shaft drive.
- Shear pin protection.
- Twin rotors.
- Easy height adjustment.



## SPECIFICATIONS

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<b>Description</b>	<b>PT6 Model</b>	<b>PT9 Model</b>
Cutting Width	<i>1.8m (6ft.)</i>	<i>2.75m (9ft.)</i>
HP Requirement	<i>35HP</i>	<i>45HP</i>
Weight	<i>290kg</i>	<i>509kg</i>
Attachment	<i>3-Point Linkage</i>	<i>3-Point Linkage</i>
Cutting Height	<i>24 – 114mm</i>	<i>24 – 114mm</i>
Cutting capacity ( <i>Max. diameter of material to cut</i> )	<i>30mm</i>	<i>30mm</i>
Overall Width	<i>2.0m</i>	<i>2.94m</i>
Overall Length	<i>2.0m</i>	<i>1.89m</i>
PTO Speed	<i>540RPM</i>	<i>540RPM</i>
Protection	<i>Shear Bolt</i>	<i>Shear Bolt</i>
Blade Carriers	<i>1</i>	<i>2</i>
No. of Rotors	<i>1</i>	<i>2</i>
Blade Tip Speed	<i>4500m/min</i>	<i>4620m/min</i>
Blade Overlap	<i>n/a</i>	<i>50mm</i>
Skids	<i>2</i>	<i>2</i>

# SAFETY

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There are obvious and potential hazards in the operation of this mower. REMEMBER! This machine may often be operated in brush of up to ½" (12mm) diameter. The blades of this mower can propel objects for a great distance at very high speeds. Serious injury or even death may occur unless care is taken to ensure the safety of the operator, bystanders or passersby in the area.

## KEEP CLEAR

Before attempting to operate this machine the owner and the operator should read, understand and heed the following information. Serious injury or death may occur if the safety advice given here is ignored. In addition to this safety advice, good 'common sense' will go a long way towards avoiding hazardous situations and reduce the risk of danger.

### DANGER



Rotary mowers are capable under adverse conditions of throwing objects great distances (100 yards or more) and causing serious injury or death.

**STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS (91 metres) unless:**

- Front and rear deflectors, chain guards or bands are fitted and are in good workable condition.
- Mower sections or wings are running close to, and parallel to, the ground without exposed blades.
- Passersby are outside the existing thrown-object zone.
- All areas have been thoroughly inspected and foreign materials such as rocks, cans, glass and general 'risk' debris have been removed.

NOTE: Where grass and weeds are high enough to obscure debris that could be struck by the blades, the area should be inspected and debris removed, mowed at an intermediate height, and re-inspected closely to remove any remaining debris and mowed again at the desired final height. *(In addition to the safety aspect of this procedure it will also reduce wear and tear on the mower drivetrain, spread cut materials better, eliminate 'streaking' and make the final cut more uniform).*

### DANGER



All guards, bands, deflectors, driveline shields and gearbox shields should be used and maintained in good working condition at all times. They should be carefully inspected daily for missing or broken cable, chain links, shields or guards. Missing, broken or worn items must be replaced before attempting to use the machine to reduce the possibility of injury from thrown objects or entanglement.

### WARNING



Extreme care should be taken when operating near loose objects such as gravel, rocks, wire and other debris. Foreign objects should be removed from the work site or avoided to prevent machine damage and/or bodily injury or even death.

### DANGER



The rotating parts of this machine have been designed and tested for rugged use. However, they could fail upon impact with heavy solid objects such as steel guardrails and concrete abutments. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injuries, or even death, never allow the cutting blades to contact such objects.

**WARNING** The operator and all support personnel should wear 'hard hats', 'safety shoes' and 'safety glasses' at all times for protection from injury by falling objects and items thrown by the machine.



**DANGER** Operate the mower only with a tractor equipped with an approved 'roll over protection system (ROPS). Always wear your seat belt. Serious injury or even death could result from falling off the tractor – particularly during a turnover when the operator could be pinned under the ROPS or the tractor.



**WARNING** Before leaving the tractor seat always engage the brake and/or set the tractor transmission in parking gear. Disengage the PTO, stop the engine, remove the key and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never mount or dismount a moving tractor. Operate the tractor controls from the tractor seat only.



**WARNING** Many varied objects such as wire, cable, rope or chains can become entangled in the operating parts of mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous. Inspect the cutting area for any such objects and remove prior to mowing. Never allow the cutting blades to contact such items.



**DANGER** Be particularly careful in transport. Turn curves or go up hills only at a low speed and at a gradual steering angle. Ensure that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces.



**WARNING** Ensure that all necessary signs are correctly displayed, and clearly visible, when working or transporting on or near a public highway. (*Contact your Local Highway Authority to ensure you are fully conversant with your responsibilities on this subject*). Use flashing warning lights when working or transporting on or near a public highway to indicate to other road users a potential hazard. Always abide by local traffic regulations.



**WARNING** Ensure all moving parts of the machine are regularly inspected for wear and replaced with authorised service parts if an excessive amount of wear is present. Always use shear bolts recommended by McConnel.



**WARNING** Ensure the machine is regularly inspected for loose fasteners, worn or broken parts and loose or leaky fittings. Ensure all pins are fitted with cotter pins and washers. Serious injury can result from failure to maintain this machine in good working order.



**DANGER** Never leave the machine in the raised transport position – the machine could fall inadvertently and cause injury or death to anyone who might be under the machine.



**DANGER** Never clean or adjust PTO driven equipment with the tractor engine running. Kill the engine and pocket the key before attempting any maintenance on the machine.



**DANGER** Never allow riders on either the tractor or the mower - falling off can kill.



**DANGER** Never allow children to operate, ride on, or come close to the mower or the tractor.



**DANGER** Never work under the mower deck, framework or any raised component unless the mower has been securely supported and blocked using suitable substantial items to prevent sudden or inadvertent falling which could cause serious injury or even death.



**WARNING** Never operate the tractor and mower until you have read, and fully understood, the operation manual and are conversant with all the safety instructions stated here. Ensure you read all safety messages found on both the tractor and the mower.



**WARNING** Ensure you maintain all safety decals in good readable condition. If a decal should for any reason become illegible order a replacement immediately before permitting the machine to be used.



**DANGER** Never run a tractor engine in a closed building without adequate ventilation. The exhaust fumes can be hazardous to your health.



**DANGER** Ensure that a PTO shield is installed when using PTO-driven equipment and always replace the PTO shield if damaged.



**CAUTION** PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without mowers attached can often be noisy enough to cause permanent or partial hearing loss. We recommend that hearing protection be worn at all times when the noise level experienced in the operator's position exceeds 80db. Noise in excess of 85db on a long-term basis can cause permanent total hearing loss. Where the tractor is fitted with a 'quiet cab' it is recommended that the windows are kept closed at all times whilst operating this machine.



In addition to the safety messages stated here the machine is fitted with warning decals that are designed to bring to the attention of the operator the potential dangers that exist whilst using the machine. However, these cannot replace correct proper training and total awareness of all the dangers involved in using a machine of this type, and the nature of the work it does. **BE ALERT, PAY ATTENTION – SOMEONE'S LIFE MAY BE AT STAKE!**

WHEN THIS SYMBOL IS DISPLAYED:

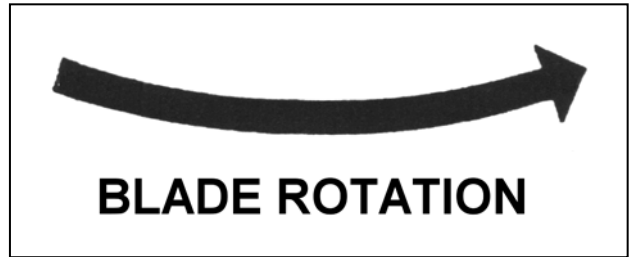


- **BE ALERT**
- **PAY ATTENTION**
- **SOMEONE'S LIFE IS AT STAKE**

MACHINE DECALS



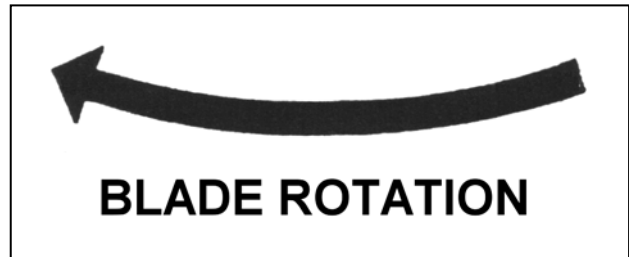
1. Part Number 09.811.04



2. Part Number D137



4. Part Number D132



3. Part Number D138



5. Part Number 09.821.29



6. Part Number 09.821.30



Part Number 09.810.02



7. Part Number 09.821.34



9. Part Number 41.094.05



11. Part Number 1290527



12. Part Number 1290832



Part Number 1290833

## TRACTOR REQUIREMENTS

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The PT mowers will attach to most tractors with Cat. II & Cat. II Quick Hitch.

The machines require a tractor with 540RPM PTO and a minimum 35HP for PT6 models and 45HP for PT9 models.

Adequate front-end weights should be fitted - *at least 20% of the tractor's weight must be on the front tyres when the mower is lifted to provide adequate traction for safe steering under good conditions.*

## TRACTOR PREPARATION

---

### Ballast

#### **WARNING**



**Do not operate with less than 20% of the tractor's gross un-ballasted mass on the front wheels with the mower in the transport position.**

### Wheel Spacing

The wheel spacing on the tractor should be increased when working on inclines or rough ground to reduce the possibility of tipping.

### Stabiliser Bars or Sway Blocks

Use stabiliser bars or sway blocks to prevent side sway of the mower.

### Draft Links

The linkage to the lower draft links should be set in the 'float' position, allowing the unit to follow the contour of the terrain.

### Tractor Drawbar

Shorten or remove the tractor drawbar so it does not interfere with the up and down movements of the mower.

#### **WARNING**



**Do not get, or allow others, between the tractor and the mower when the engine is running. Always 'kill' the engine, apply handbrake, engage tractor in gear, and pocket the key before attempting to work between tractor and machine.**

## TRACTOR ATTACHMENT

- Back the tractor up to the mower so that the lower draft arms are in alignment with the mower lower lift pins.
- Stop engine, lock the brakes or place the tractor in park.
- Connect the tractor and stabiliser bars to the lower lift pins.
- Adjust the top link so it will pin to the top holes in the A-frame.
- Attach webbing support strap at its mid-point through the A-frame shackle and attach ends to each rear corner shackle.

## DRIVELINE ATTACHMENT

Before starting assembly of the driveline ensure that all paint, dirt and grease are removed from the gearbox shaft. To ease assembly apply a light coat of grease to splines prior to fitting.

### WARNING

Do not assemble a driveline without a shield.

### Driveline Length Check Procedure

#### WARNING



A loose shaft could slip off and result in personal injury or damage to the mower. When attaching PTO yoke to tractor PTO shaft, it is important that the spring-activated locking collar slides freely and locking balls are seated in the groove on the PTO shaft.

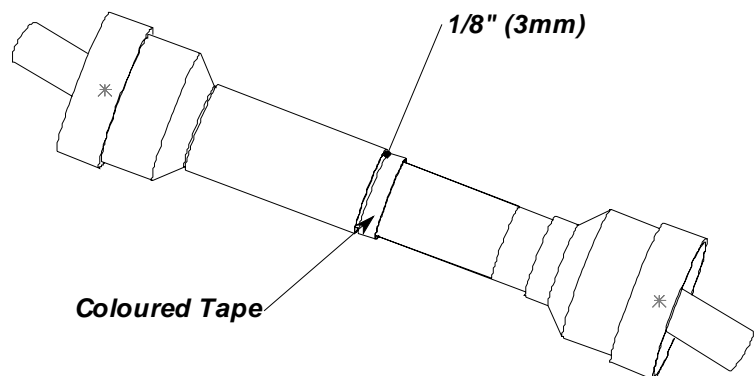
#### WARNING



Before operating the mower, check to ensure the driveline will not 'bottom out' or become disengaged. ALWAYS use Shear Bolts recommended by McConnel.

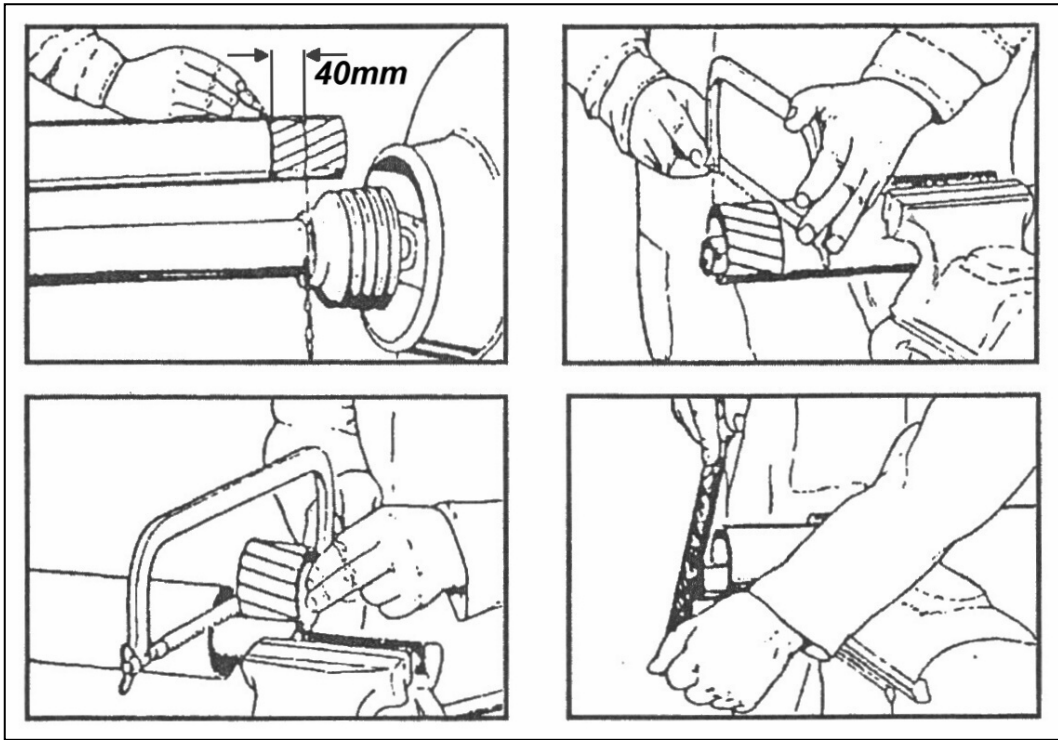
- Set parking brake, kill engine, remove and pocket the key.
- Disengage the driveline from the tractor PTO shaft.
- Slide the driveline together until it 'bottoms out' solidly.
- Apply coloured tape to the inner shield  $\frac{1}{8}$ " (3mm) from the end of the outer shield (see diagram opposite).

#### Driveline in maximum compressed position





- Re-attach the driveline to the PTO shaft; ensuring balls are correctly seated in the groove on shaft.
- Raise mower to full transport height or until driveline just touches deck at front. If distance between coloured tape and outer shield is  $1\frac{5}{8}$ " (40mm) or less, drive tubes should be shortened (see diagram below).
- Always maintain  $1\frac{5}{8}$ " (40mm) clearance when operating in the shortest working position. Shorten inner and outer guard tubes equally. Shorten inner and outer sliding profiles by the same amount that the shield tubes were shortened. Round off all sharp edges and remove burrs. Grease sliding profiles (see diagram below).



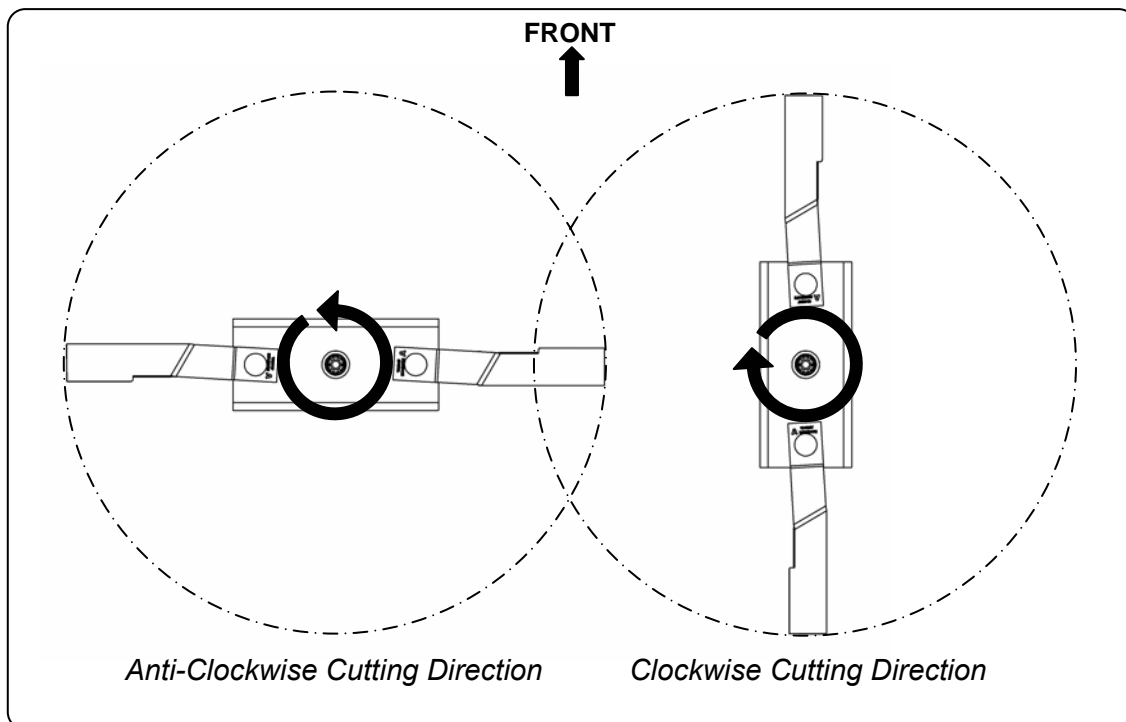
- Lower mower to lowest position possible. Check distance from coloured tape to end of outer shield tube. Driveline tube engagement must always exceed 12" (300mm). If not consult your dealer to obtain a longer driveline.

## OPERATION

The safe operation of this machine is the responsibility of the operator who should be familiar with the machine, the tractor, and all safety practices associated with this type of mower, before attempting to start operation.

Before operating your rotary mower ensure it is properly lubricated and thoroughly inspected. The time and effort required to regularly lubricate and maintain the mower is minimal, but necessary, to provide long life and trouble free operation of your machine – *refer to maintenance section for details.*

These mowers are designed primarily for medium duty grassland topping, the PT6 model is equipped with a single set of updraft blades mounted on a rotating blade carrier; the cutting direction of which is clockwise when viewed from below. The PT9 model is equipped with two sets of updraft blades mounted on blade carriers rotating in opposing directions; the blade carriers are timed at 90° to each other – *see diagram below.*



**PT9 Cutting Blades - Rotation & Timing Diagram (viewed from below).**

### Cutting Speed

Correct ground speed for cutting will depend upon the height, type and density of the material being cut, but normally it will be in the range of 2–5 mph (3-8 km/h). Tall dense material should be cut at a low speed while thin medium height material can be cut at a faster ground speed; with practice and experience the operator will be able to judge conditions and materials and select the optimum forward speed to achieve efficient mowing.

Always operate the PTO at the recommended RPM when cutting; this is necessary to maintain the correct blade speed to produce a clean cut.

Under certain conditions tractor tyres may roll some grasses down and prevent them from being cut at the same height as the surrounding area. When this occurs, reduce the tractor ground speed, but maintain PTO rpm. The lower speed will permit grasses to, at least, partially rebound and be cut. Taking a partial cut and/or reversing the direction of travel may also produce a cleaner cut.

Always stop mowing when people are passing by and keep bystanders at a safe distance away from risk of danger.

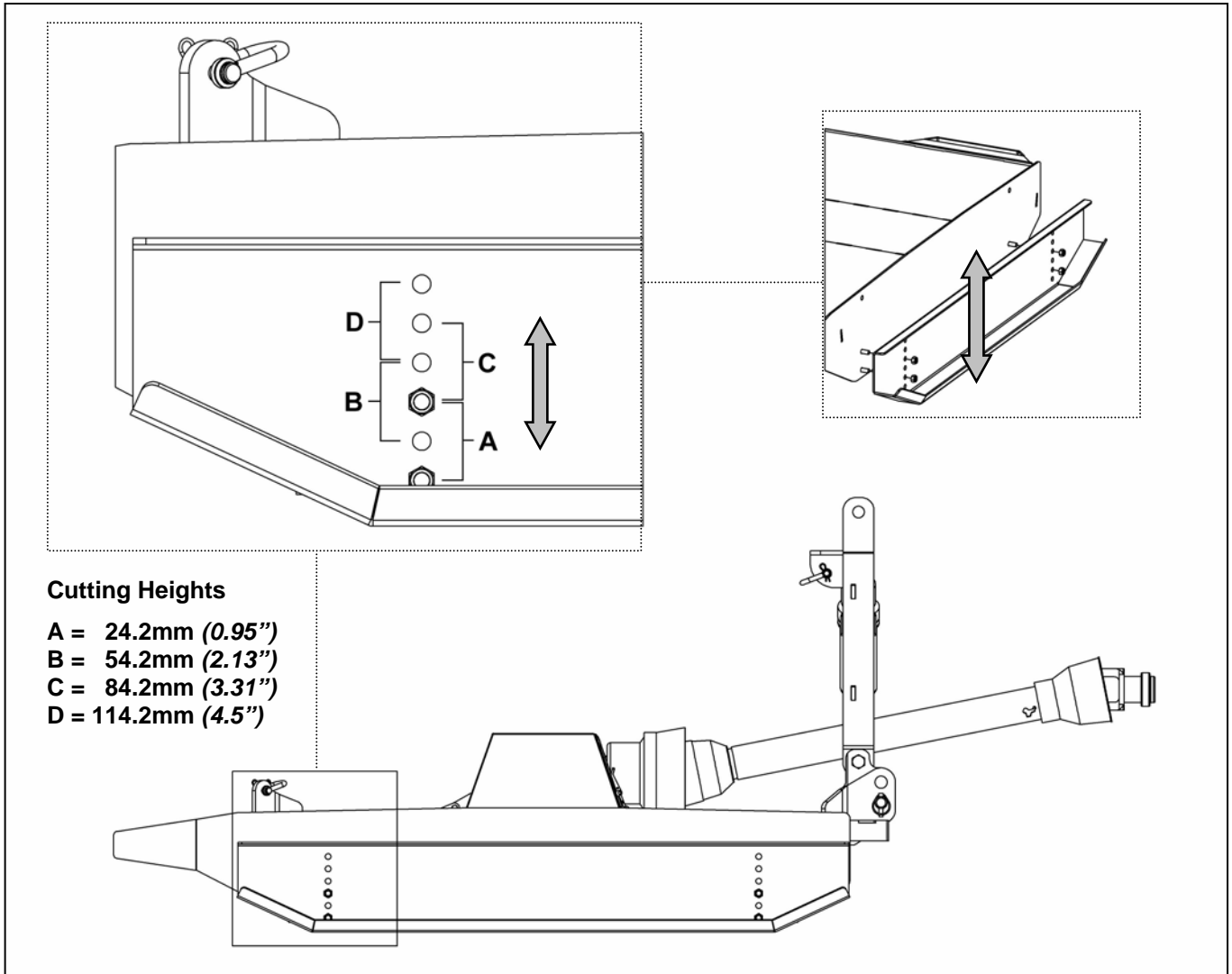
## Cutting Height

The cutting height of the mower is determined by the position at which the side skids are mounted on the machine – height adjustment is made by selecting higher or lower pairs of holes in the skids through which to attach the mounting bolts.

It is advisable to increase topping height by an extra 25mm (1") to avoid 'grounding' of the machine when cutting on uneven terrain.

Each side skid is fixed into position with 4 nuts and bolts (2 front & 2 rear) and may be mounted at four different cutting heights from 17.7mm to 107.7mm.

The diagram below shows the skid height adjustment positions where 'A' is the minimum cutting height and 'D' is the maximum.



## Cutting Height Adjustment

**WARNING:** As adjustment to the cutting height requires initial removal of the skids it is vital that both machine and tractor are switched off, the unit parked on firm level ground and safely supported or 'blocked' before attempting this procedure – ensure when refitting the skids that matching sets of holes front and back and side to side are selected so that the mower remains parallel to the ground.

**IMPORTANT:** To avoid damage to the machine re-torque all bolts after the first 10 hours of initial operation – thereafter all bolts should be checked at regular intervals and re-tightened if required. The required torque setting for the blade carrier retaining nut on the gearbox lower shaft is 450 ft. lbs (610 Nm).

## Starting & Stopping the Machine

Power for operating the Mower is supplied from tractor PTO. Refer to your Tractor Manual for instructions regarding engaging and disengaging of the PTO.

ALWAYS engage the PTO at low engine rpm and gradually build up the speed; sudden starts at high RPM can cause the shear bolt to shear.

ALWAYS operate at the recommended PTO speed.

LEARN how to stop the Tractor and Mower quickly and safely in case of emergency.

**IMPORTANT:** Stop the Mower and Tractor immediately upon striking an obstruction. Inspect the Mower for damage and repair before resuming operation. **DO NOT DISENGAGE PTO WHEN ENGINE IS AT FULL PTO RPM** – always idle engine before disengaging the PTO.

### WARNING



**Avoid personal injury. When attempting to stop a tractor that does not have live PTO, the momentum created by the blade carrier of a rotary mower can cause the tractor to be pushed forward. DO NOT operate this Mower unless tractor has live or independent PTO.**

To commence operation, reduce engine speed and engage the tractor PTO. Before starting to cut, gradually increase the engine speed to develop full PTO speed.

Enter the area to be cut with the mower operating at PTO speed and, if it becomes necessary to temporarily regulate engine speed during operation, increase or decrease the throttle gradually.

## Work Site Checks & Procedures

### WARNING



**To avoid risk of personal injury or damage to the machine it is good practice to inspect the work area prior to operation – take time to pick up rocks, bottles, wire etc. and any other hazardous debris you may find in order to avoid them coming into contact with the working machine. The blade tip speed of these machines is well in excess of 4000m/min and therefore has the potential to hit movable objects long distances at high speed.**

### WARNING



**Note the position of non-removable hazards and dangers so that they can be avoided during operation.**

Extremely tall grass should be cut twice. Raise the Mower and cut twice to the desired height. Cut the second time to the desired height at 90 degrees to the first pass.

Remember that sharp blades will produce a cleaner cut and will use less power.

Before cutting, analyze the area to determine the best cutting procedure. Consider the height and type of material as well as the terrain type i.e. hilly, level, or rough.

## DETACHMENT OF THE MACHINE

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- Lower the Mower to the ground and park the Tractor with brakes on, kill the engine, remove and pocket the key.
- Wait until the PTO has stopped rotating before dismounting the Tractor.
- Disconnect the Driveline from the Tractor PTO.
- Disconnect the Top Link and the Lower Lift Links from the Mower.
- Always reinstall the Master Shield over the Tractor PTO shaft - this shield should always remain in place and should only be removed to enable the connection or disconnection of the Driveline.

Removal of the machine should always be performed on a firm level site.

### **Machine Storage**

Inspect the machine prior to storage for any signs of wear or damage. Repair or replace any parts that are worn or damaged in order that the machine is prepared and ready for work when next needed. Storage of the machine should ideally be in a clean dry environment safely sited where it is protected from the elements. Clean and lubricate the machine prior to storage.

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#### **IMPORTANT:**

*This machine must only be used to perform tasks for which it was designed; never use this machine for anything other than its designated task or for tasks beyond its capability.*

*Warranty for breakdowns will not be allowed if the machine has been misused in any way – this includes; overloading by the operator, operating without due care, use of non-genuine parts, lack of daily and/or regular maintenance, failure to remove, observe, or avoid obstacles whilst working. This machine will not be covered by warranty if 'hired out' or operated by third parties.*

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## WARNING



Always disengage the PTO before raising the Mower for transporting or making adjustments.

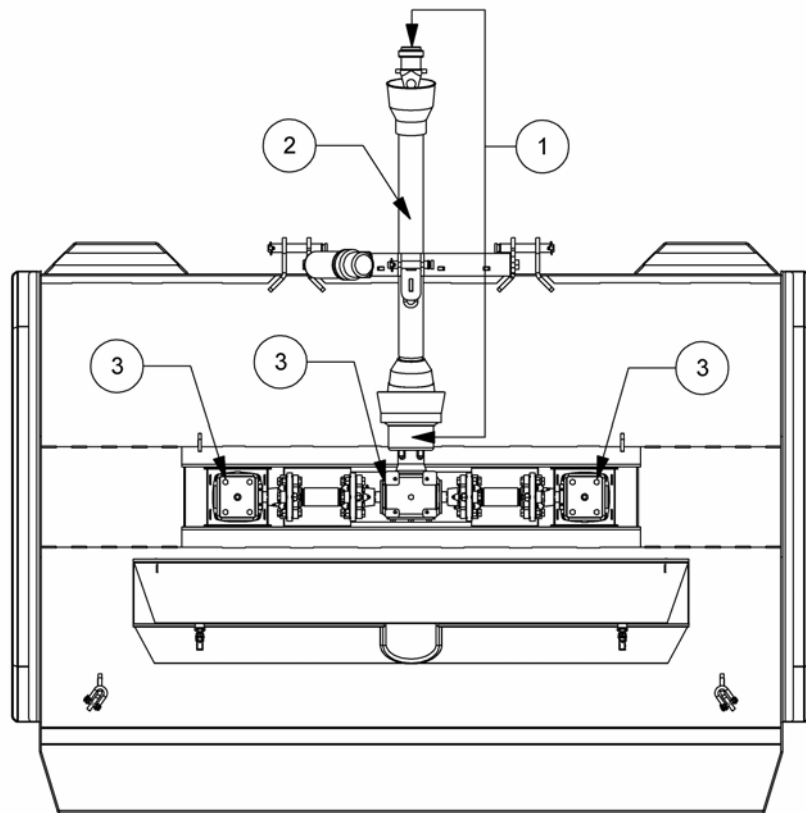
Do not allow excess grease to collect on or around the machines parts, particularly when operating in sandy areas.

## Lubrication Points

The illustration below shows the location of the machines lubrication points and the frequency at which these points should be lubricated under normal working conditions, severe or unusual conditions may require more frequent lubrication. Use SAE multi-purpose lithium type grease for all greasing locations indicated ensuring the fitting is thoroughly cleaned before applying lubricant to avoid contamination by dirt or grit.

### Lubrication Points

- 1. U-Joints**  
Every 8 hours of work  
See *driveline lubrication*.
- 2. Telescoping**  
Every 16 hours of work  
See *driveline lubrication*.
- 3. Gearbox**  
Check level daily  
See *gearbox lubrication*.



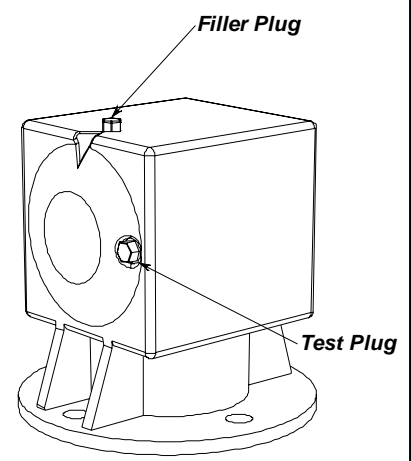
## Gearbox Lubrication

The gearbox will be filled with lubricant to the test plug level prior to shipment, however, as a precaution you should check the oil level at the test plug before operating the machine and frequently thereafter. *Check daily during normal use.*

The gearbox should not require additional lubricant unless the box is cracked or a seal is leaking. It is recommended that the oil level plug be removed every 8 to 10 hours of normal operation and oil added until it runs out of the Test Plug hole.

*The test plug is located on the rear of the gearbox and the filler plug is located on the top of the gearbox.*

### Gearbox Plug Locations



Recommended lubricants for the Gearbox are: Exxon – Spartan EP220, Mobil HD 80W90, or equivalent. Required lubricant is a SAE 90 or SAE 80W90 with EP additives for extreme pressure and temperature with a API-GI-5 Service rating.

NOTE: Overfilling the gearbox will result in pressure build up and cause oil seals to leak.

ATTENTION: If gearbox suddenly starts making an unusual noise the machine must be stopped immediately and the gearbox checked for leaks and refilled if required.

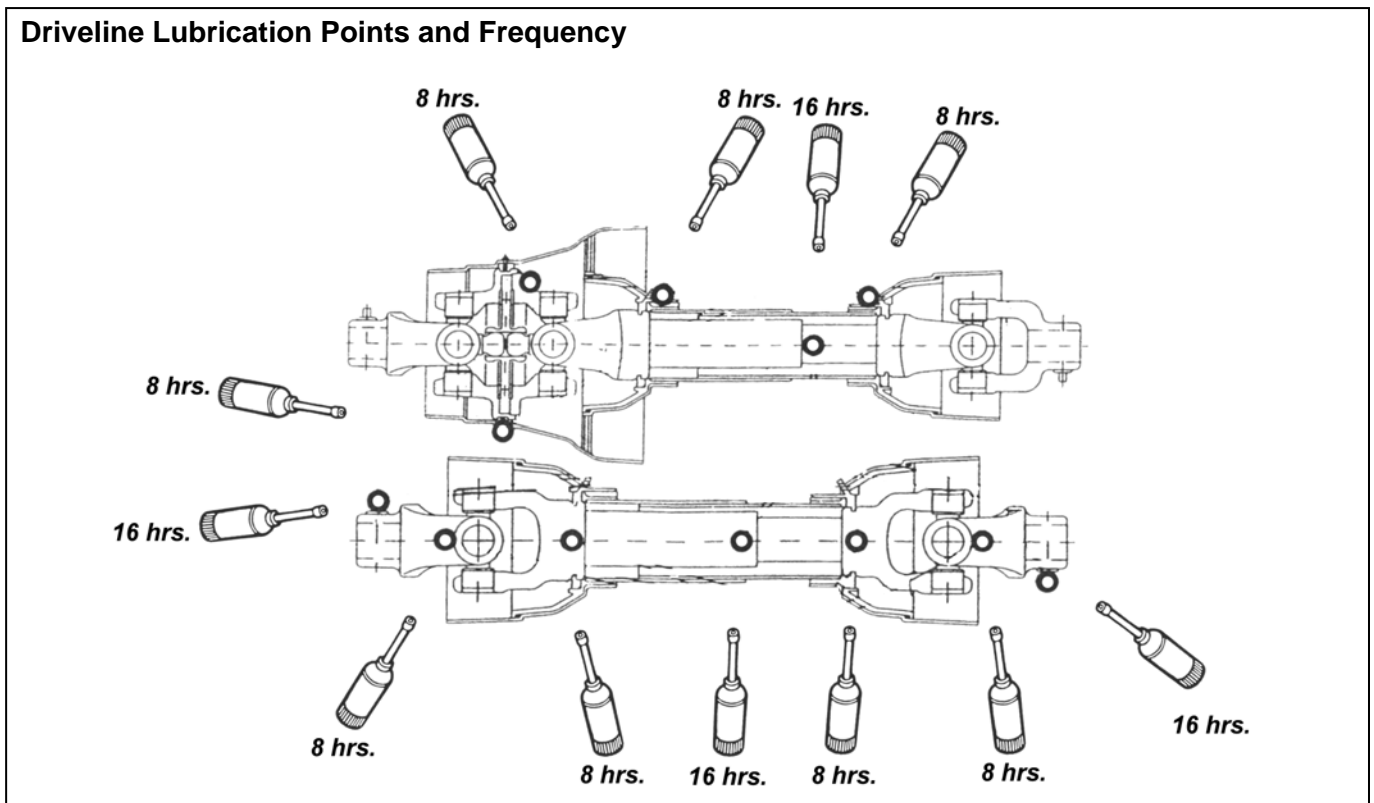
### Driveline Lubrication

Grease Fittings are located on the cross assembly of each U-Joint and on the telescoping tubes.

Grease the U-Joint after every 8 hours of use. *Do not force grease through the needle cup assemblies.*

Grease the telescoping tubes after every 16 hours of use.

On some PTO to hitch connections it may be necessary to cut a hole in the shields to facilitate alignment of the grease fittings for lubrication. Lubricate the shield bearings every 8 hours - see diagram below and refer to the information sheet shipped with the PTO shaft.



## Driveline Shield Removal

The driveline integral shields should not become dented or otherwise damaged. The integral shield assembly has a nylon bearing at each end, which should turn freely, and will require lubricating after every 8 hours of use. To remove the integral shields for replacement or repair, turn the three nylon bolts through a ¼ turn in the shield slots of the cone and tube and remove them. Slip the shield cone assembly off the inner section of the driveline and install the new or repaired shield on the driveline. Place the split nylon bearing over the driveline housing against the yoke and in the bearing groove. Install shield over the housing so the nylon bearing fits into the shield bearing retainer. Align a slot in the shield cone with one of the slots in the shield. Put one of the nylon bolts back in through the aligned slot and turn until it is perpendicular to the slots. Replace the other two nylon bolts.

### CAUTION



Ensure that the driveline integral shields are free to telescope and rotate around the driveline without binding.

### WARNING



When attaching PTO yoke to tractor PTO shaft, it is important that the spring-activated locking collar slides freely and that the locking balls are seated in the groove on the PTO shaft. A loose shaft could slip off and result in personal injury or damage to your machine.

## Blade Servicing

Blades should always be inspected prior to work each time you use the Mower to ensure they are in good working condition and correctly installed. Replace any Blade that is bent, excessively nicked, worn or otherwise damaged. Small nicks can be ground out when sharpening. If a Blade requires replacing, it is recommended that they be replaced in pairs in order to maintain balance.

**IMPORTANT:** When sharpening blades, grind each blade by the same amount to maintain balance. The difference in blade weights should not exceed 1 ounce (*28gms*). Unbalanced blades will cause excessive vibration, which can damage gearbox bearings. Vibration may also cause structural cracks in the Mower housing.

### WARNING

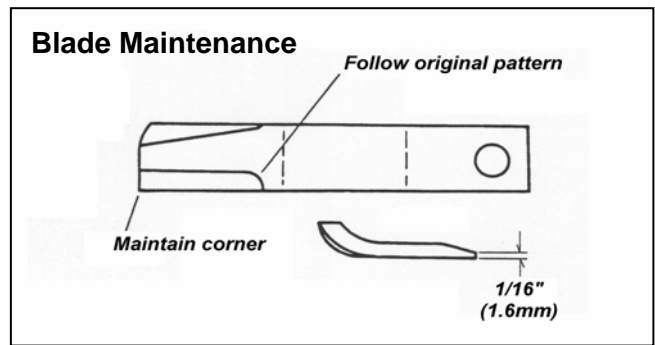


Use only Original Equipment Blades on this Mower. They are made of special-heat treated alloy steel. Substitute Blades may not meet the specifications required for this Mower and may fail in a hazardous manner that could cause injury.



## Blade Sharpening

Always sharpen both blades at the same time to maintain balance. Follow the original sharpening pattern (see diagram below) and always sharpen blades by grinding. DO NOT heat and 'pound out' edge or sharpen the blade to a razor edge, but leave a 1/16" (1.6mm) blunt edge. Do not sharpen the back side of the blade.



### WARNING



Avoid personal injury. Always block the Mower up to prevent it from falling when servicing the blades and/or carrier.

## Blade Removal

To remove blades for sharpening or replacement; remove the cover plate on the deck of the mower near the gearbox and remove the locknut from the blade bolt. NOTE: *Inspect locknut after removal and replace if threads are damaged. Always replace locknut when replacing blade bolt.*

When installing or replacing blades ALWAYS check the blade bolt pivot diameter for wear and replace if it is worn more than 1/4" (6mm) at any point. Install blade bolts with 'unworn' portion of blade bearing area towards centre of carrier. Tighten locknut to 350 ft-lb. (475Nm).

### WARNING



Avoid personal injury. Blade and/or blade carrier removal should only be done with the tractor engine shut off, key removed, in neutral, parking brake on, with the PTO disengaged and the mower securely blocked in the raised position.

## Blade Carrier Removal

Remove cotter pin and loosen locknut on gearbox shaft; *do not remove the nut until the blade carrier is loosened.* Use a suitable 2-jaw gear puller to draw the carrier off the tapered gearbox shaft. If gear puller is not available a long bar can be utilized by inserting it through the blade bolt access hole with the end against rotor bar. Strike opposite end of bar with a sledgehammer. Rotate blade carrier through 180° and repeat the process.

## Blade Carrier Installation

Clean the splines on both the blade carrier and the output shaft. Position carrier on the gearbox output shaft and install special washer and nut.

Tighten nut holding blade carrier to minimum 450 ft-lb. (610Nm) strike the carrier near the hub several times with a heavy hammer to seat the hub. Use a suitable spacer over the nut to prevent damage to the nut and its thread. Retighten the nut to 450 ft-lb. (610Nm). Install cotter pin and spread its ends.

IMPORTANT: Always rechecks gearbox output shaft slotted blade carrier retaining nut torque after a few hours of operation.

### WARNING



Avoid personal injury. Do not attempt to work under the mower without suitable support blocks under the frame.

## TROUBLESHOOTING - General

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
<b>Not cutting cleanly</b>	<p>Blades dull.</p> <p>Blade rotation incorrect.</p> <p>Using straight blades.</p> <p>Carrier rpm too low.</p> <p>Mower not levelled.</p> <p>Tyres flattening grass.</p> <p>Ground speed too fast.</p> <p>Blades locked back.</p> <p>Blades riding up due to Blade bolt wear.</p> <p>Blades bent up.</p>	<p><i>Sharpen or replace blades.</i></p> <p><i>Use correct blade carrier.</i></p> <p><i>Use fan blades in grass.</i></p> <p><i>Increase PTO to recommended rpm</i></p> <p><i>Adjust machine level.</i></p> <p><i>Increase tyre spread to 90" (2.25m).</i></p> <p><i>Reduce ground speed.</i></p> <p><i>Free blades.</i></p> <p><i>Replace blade bolts.</i></p> <p><i>Replace blades.</i></p>
<b>Breaking blade bolts</b>	<p>Operating with loose blade bolts.</p> <p>Worn blade bolt.</p>	<p><i>Tighten blade bolts to 350 ft lb. (475 Nm) – R/H threads.</i></p> <p><i>Replace bolt.</i></p>
<b>Cutting too high</b>	<p>Blades bent up.</p> <p>Blade carrier bent.</p> <p>Blades on upside down.</p>	<p><i>Replace blades.</i></p> <p><i>Straighten or replace blade carrier.</i></p> <p><i>Turn blades right side up and tighten.</i></p>
<b>Machine vibration</b>	<p>Blade locked back.</p> <p>Drivelines not phased.</p> <p>Blade broken.</p> <p>Blade carrier bent.</p> <p>Blade hub not properly seated on shaft.</p> <p>New blade matched with worn blade.</p>	<p><i>Loosen locked blade.</i></p> <p><i>Replace driveline.</i></p> <p><i>Replace blades in sets.</i></p> <p><i>Repair or replace carrier.</i></p> <p><i>Remove hub, check for wear and replace or seat properly - tighten hub bolts to 450 ft lb. (610Nm).</i></p> <p><i>Replace blades in sets.</i></p>
<b>Mower windrowing</b>	<p>Cutting heavy material.</p>	<p><i>Raise mower and reduce groundspeed.</i></p>
<b>Rapid blade wear</b>	<p>Cutting in sandy or rocky conditions.</p> <p>Blades too soft.</p>	<p><i>Increase cutting height.</i></p> <p><i>Replace blades with hardened high-quality blades from the manufacturer.</i></p>
<b>Blade bolts working loose</b>	<p>Bolts not tightened.</p> <p>Bolt hole elongated or oversized.</p> <p>Locknut worn out.</p>	<p><i>Tighten bolts to 350 ft lb. (475 Nm.)</i></p> <p><i>Replace blade carrier.</i></p> <p><i>Replace locknut.</i></p>

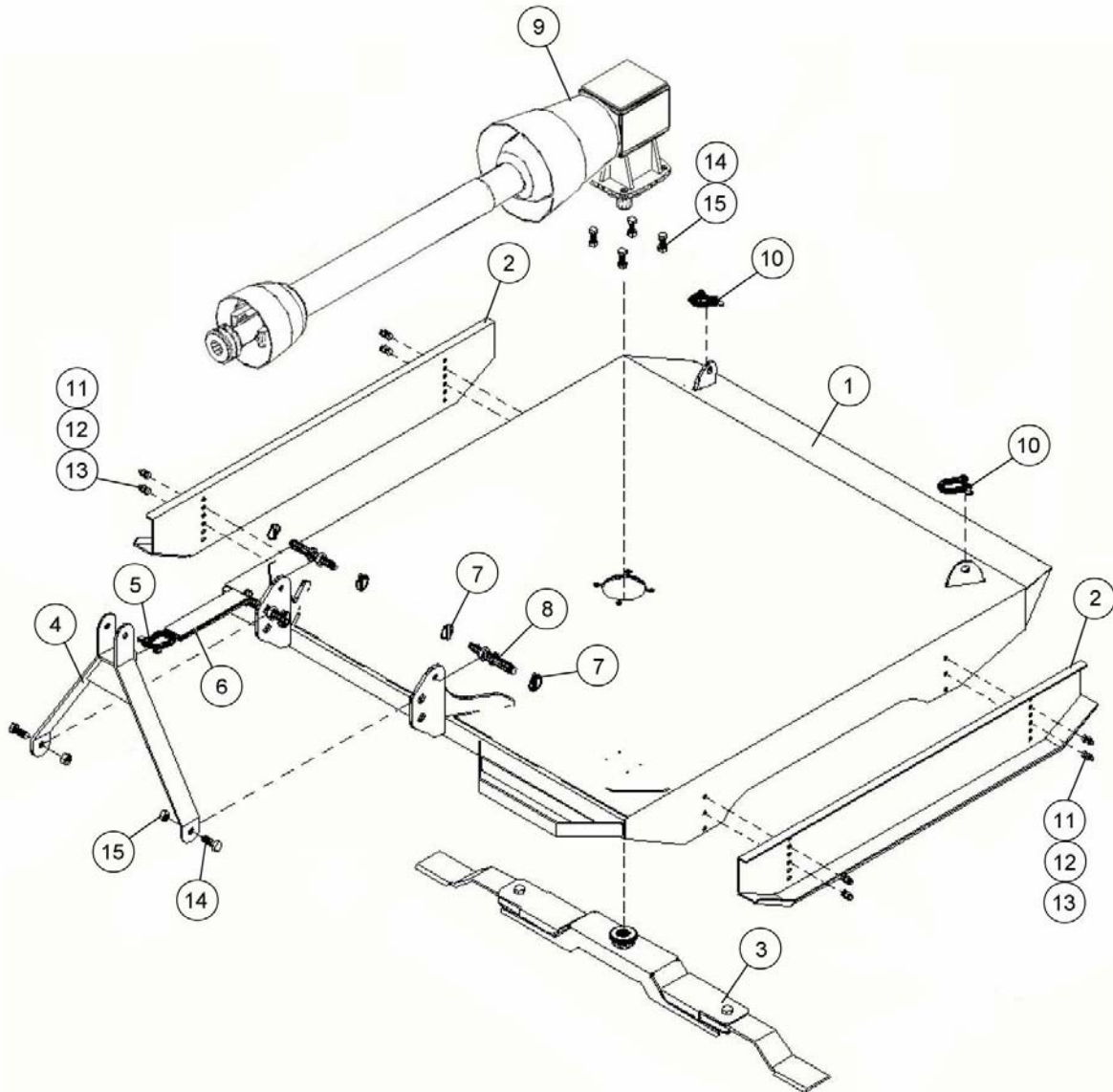
## TROUBLESHOOTING – PTO Shafts

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
<b>Broken cross or cups</b>	Load too high for joint.	<i>Use protective device with joint. Check joint angles and phasing. Slow down or raise mower.</i>
<b>End galling of cross and cups</b>	Speed too high during turns.	<i>Reduce PTO speed.</i>
<b>Needle rollers have brinelled into cup and cross</b>	Load too high for joint.	<i>Check for small joint angles. Check joint angles and phasing.</i>
<b>Shaft or tube twisted</b>	Over-loaded.	<i>Replace part and then slow down or raise mower. Use protective device.</i>
<b>Tube broken in welded seam</b>	Over-loaded.	<i>Replace part.</i>
<b>Yoke broken at ear tip</b>	Over-loaded.	<i>Replace part.</i>
<b>Driveline integral shields rattling or not turning freely</b>	Integral shields deformed. Nylon bearing worn.	<i>Replace shield. Replace nylon bearing.</i>

## TROUBLESHOOTING – Gearboxes

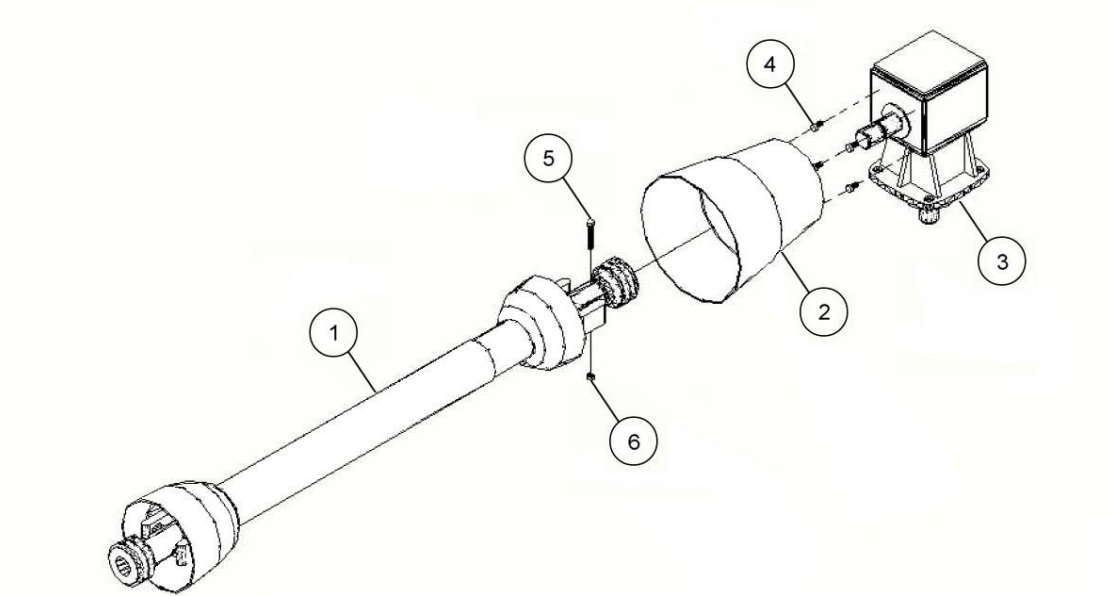
<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
<b>Noisy gearbox</b>	Improper backlash. Rough gears. Worn bearings.	<i>Refer to your dealer. Run in or change gears. Replace bearings.</i>
<b>Oil blowing out of vent plug</b>	Flat bottomed Vent Plug or shallow cavity Plug. Oil level too high.	<i>Replace with proper vent plug, cavity in oil plug should be approximately <math>\frac{5}{8}</math>" (16mm). Lower oil level to plug.</i>
<b>Gearbox leaking</b>	Damaged oil seal. No oil seal. Oil too light. Bent shaft. Oil seal race rough. Oil seal installed incorrectly. Oil seal not sealing in housing. Bearings loose. Vent plug stopped up. Oil level too high. Gasket damaged. Bolts loose.	<i>Replace seal. Install oil seal. Use EP90. Replace oil seal and shaft. Replace shaft or repair race.  Replace seal. Replace seal or use sealant.  Adjust bearings. Open vent plug. Drain oil to correct level. Replace gasket. Tighten bolts.</i>

PARTS MANUAL  
**PT6 & PT9**  
PASTURE TOPPERS



Module(s): 1096730

REF.	QTY.	PART No.	DESCRIPTION
		<b>1096730</b>	<b>PT6 TOPPER ASSEMBLY</b>
1	1	1096270	MAIN BODY
2	2	1096267	ADJUSTABLE SKID
3	1	1096330	BLADE CARRIER ASSEMBLY
4	1	1096268	A-FRAME
5	1	1096254	BOW SHACKLE
6	2	1096266	SLING
7	4	0431217	LYNCH PIN
8	2	1096322	LOWER LINK PIN - CAT I/II
9	1	1096331	DRIVE ASSEMBLY (COMPLETE)
10	2	ELA0027	D SHACKLE
11	8	9213066	BOLT
12	8	9143006	LOCKNUT
13	8	9100106	WASHER
14	6	9213107	BOLT
15	6	9143007	LOCKNUT

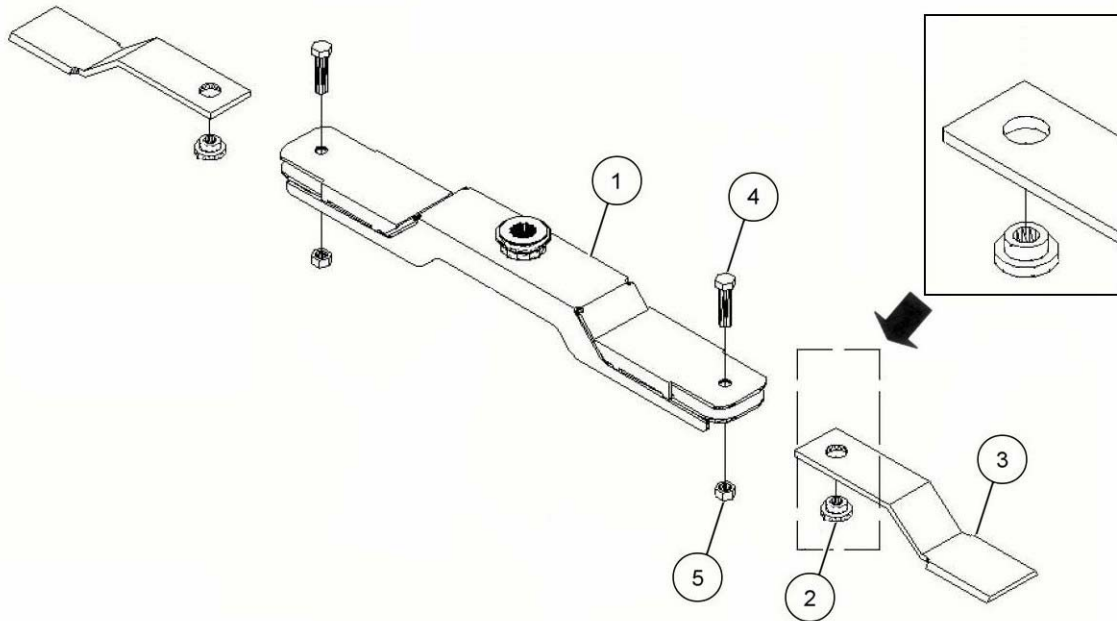


REF.	QTY.	PART No.	DESCRIPTION
		<b>1096331</b>	<b>PT6 DRIVE ASSEMBLY</b>
1	1	21040.05	DRIVE SHAFT c/w SHEARBOLT
2	1	21238.01	CONE
3	1	1096300	GEARBOX
4	4	1061090	BOLT
5	1	9200063	SHEAR BOLT
6	1	9113004	NUT

# PT6 BLADE CARRIER ASSEMBLY

**McCONEL**

Module(s): 1096330



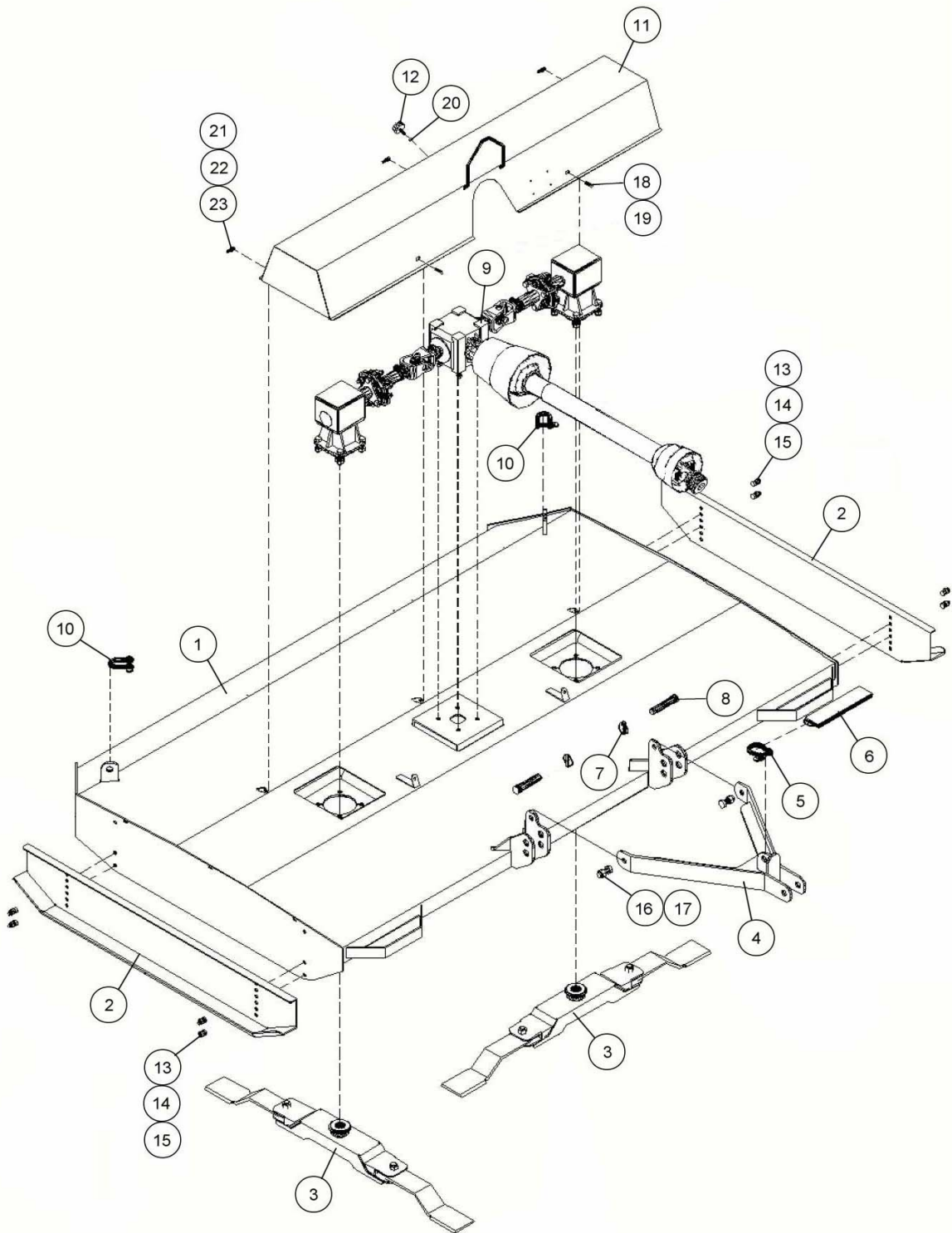
REF.	QTY.	PART No.	DESCRIPTION
		<b>1096330</b>	<b>PT6 BLADE CARRIER ASSEMBLY</b>
1	1	1096302	BLADE CARRIER
2	2	1096305	BUSH
3	2	1096304	BLADE
4	2	1096306	BOLT
5	2	1096333	LOCKNUT



# PT9 TOPPER ASSEMBLY

Module(s): 1096731

# McCONEL

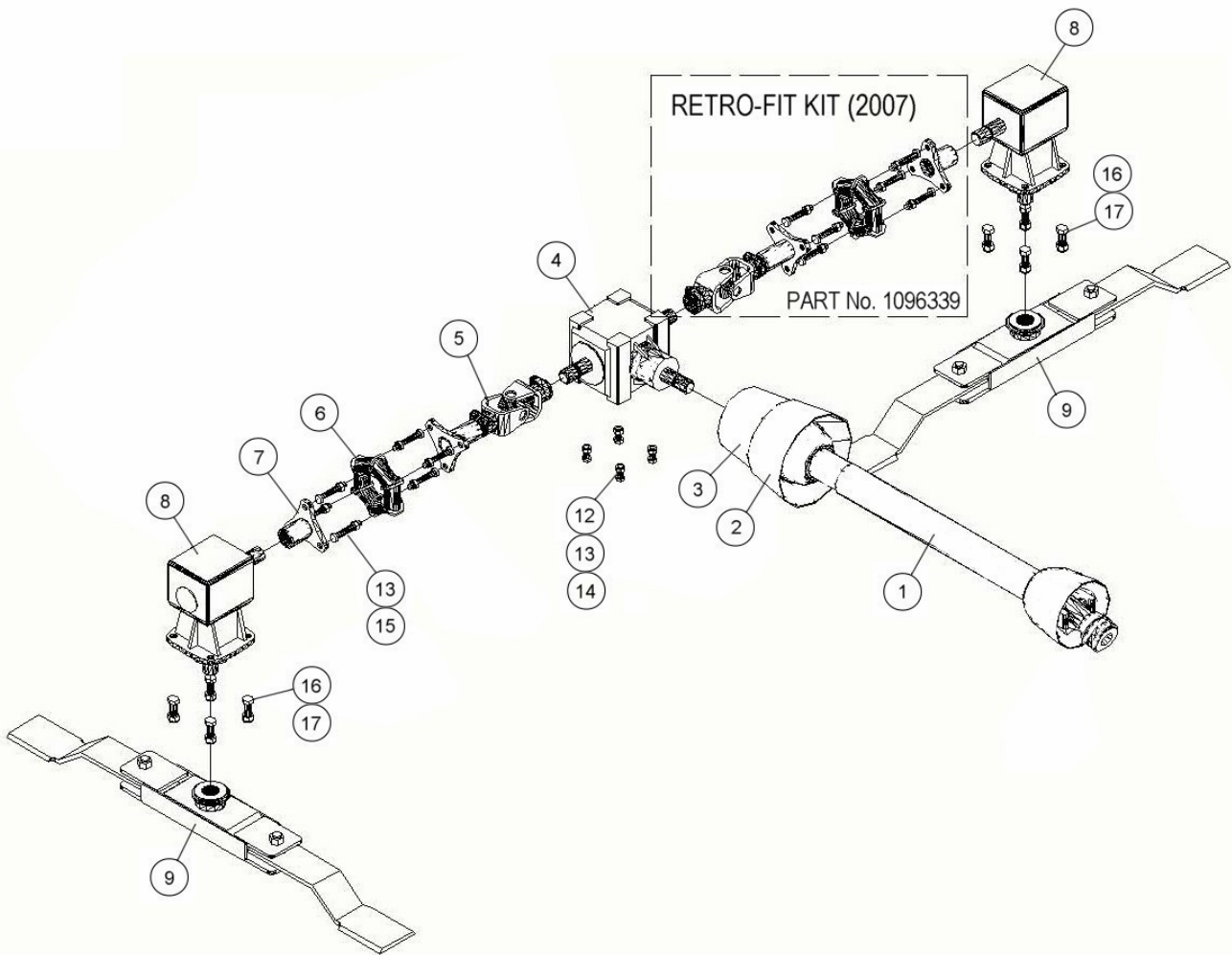


## PT9 TOPPER ASSEMBLY

**McCONNEL**

Module(s): 1096731

REF.	QTY.	PART No.	DESCRIPTION
		<b>1096731</b>	<b>PT9 TOPPER ASSEMBLY</b>
1	1	1096251	MAIN BODY
2	2	1096252	ADJUSTABLE SKID
3	2	1096334	BLADE CARRIER ASSEMBLY
4	1	1096253	A-FRAME
5	1	1096254	BOW SHACKLE
6	2	1096314	SLING
7	2	0431217	LYNCH PIN
8	2	1096315	LOWER LINK PIN - CAT II
9	1	1096335	DRIVE ASSEMBLY (COMPLETE)
10	2	ELA0027	D SHACKLE
11	1	1096255	MAIN GUARD
12	1	1096336	RUBBER STOP
13	8	9213066	BOLT
14	8	9143006	LOCKNUT
15	8	9100106	WASHER
16	2	9213108	BOLT
17	2	9143008	LOCKNUT
18	2	9213065	BOLT
19	2	9100105	WASHER
20	1	9143005	LOCKNUT
21	3	9213064	BOLT
22	3	9100104	WASHER
23	3	9143004	LOCKNUT

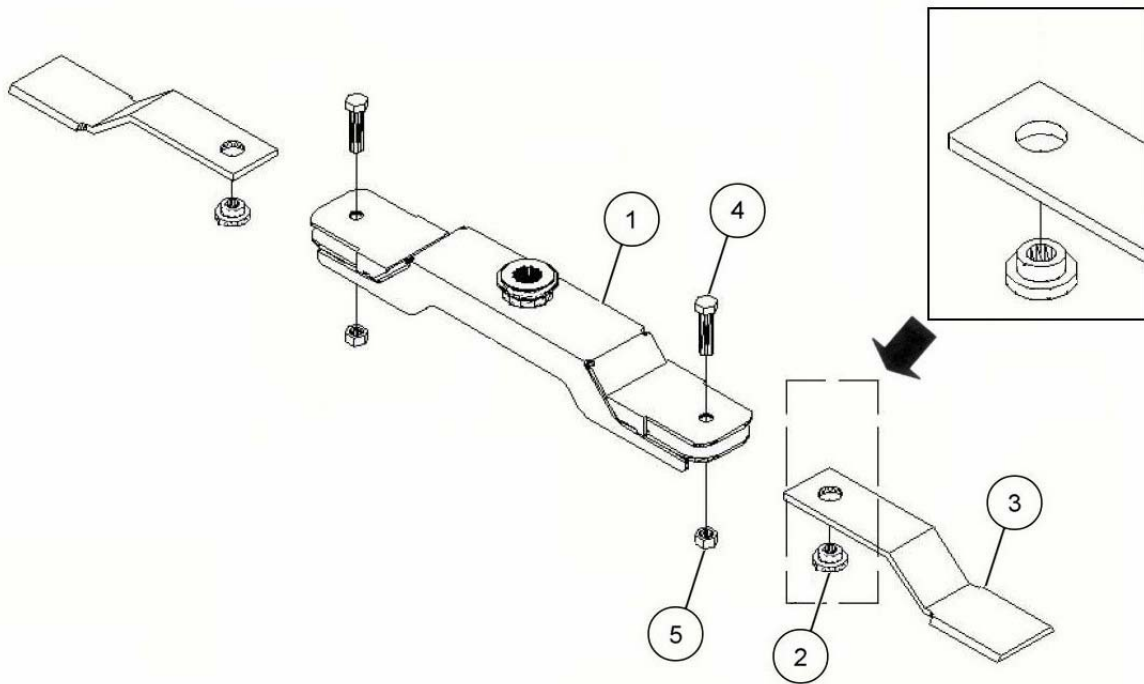


REF.	QTY.	PART No.	DESCRIPTION
		<b>1096335</b>	<b>PT9 DRIVE ASSEMBLY</b>
1	1	21040.06	DRIVE SHAFT (OVER RUN) c/w SHEARBOLT
2	1	1096337	CONE EXTENSION
3	1	21238.01	CONE
4	1	21459.01	T GEARBOX
5	2	21457.02	FLEXIBLE DRIVE SHAFT
6	2	1096287	RUBBER COUPLER
7	2	1096338	STAR DRIVE SHAFT
8	2	21459.02	RIGHT ANGLE GEARBOX
9	2	1096334	BLADE CARRIER ASSEMBLY (2007)
10	4	9213158	BOLT
11	4	9143008	LOCKNUT
12	4	9213066	BOLT
13	16	9143006	LOCKNUT
14	4	9100106	WASHER
15	12	9213166	BOLT
16	8	9213107	BOLT
17	8	9143007	LOCKNUT
		<b>1096339</b>	<b>RETRO-FIT KIT (2007)</b>

# PT9 BLADE CARRIER ASSEMBLY

**McCONNEL**

Module(s): 1096334

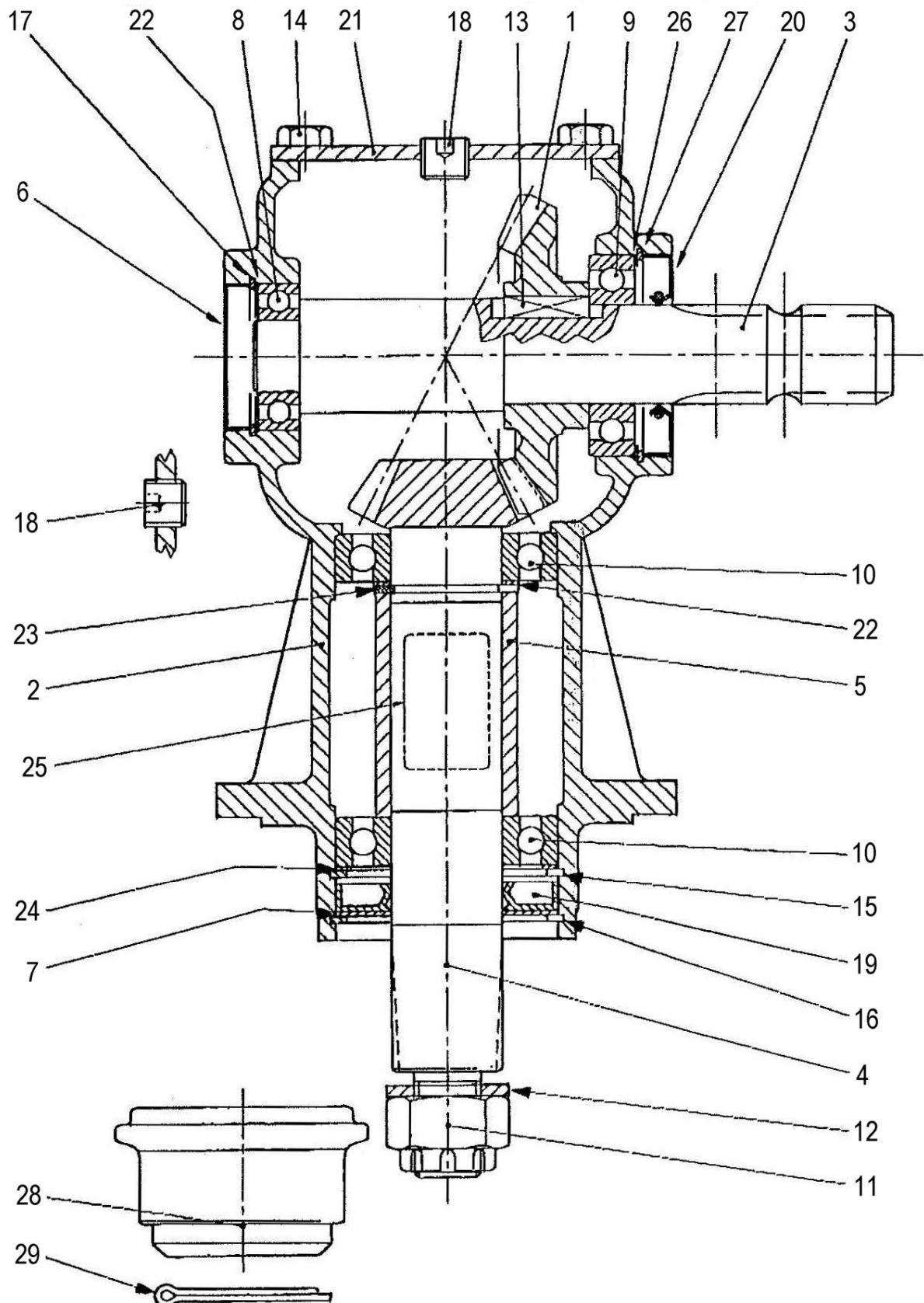


REF.	QTY.	PART No.	DESCRIPTION
		<b>1096334</b>	<b>PT9 BLADE CARRIER ASSEMBLY</b>
1	2	1096325	BLADE CARRIER
2	4	1096303	BUSH
3	4	1096304	BLADE
4	4	9213168	BOLT
5	4	1096333	LOCKNUT

# PT9 OUTER GEARBOX ASSEMBLY

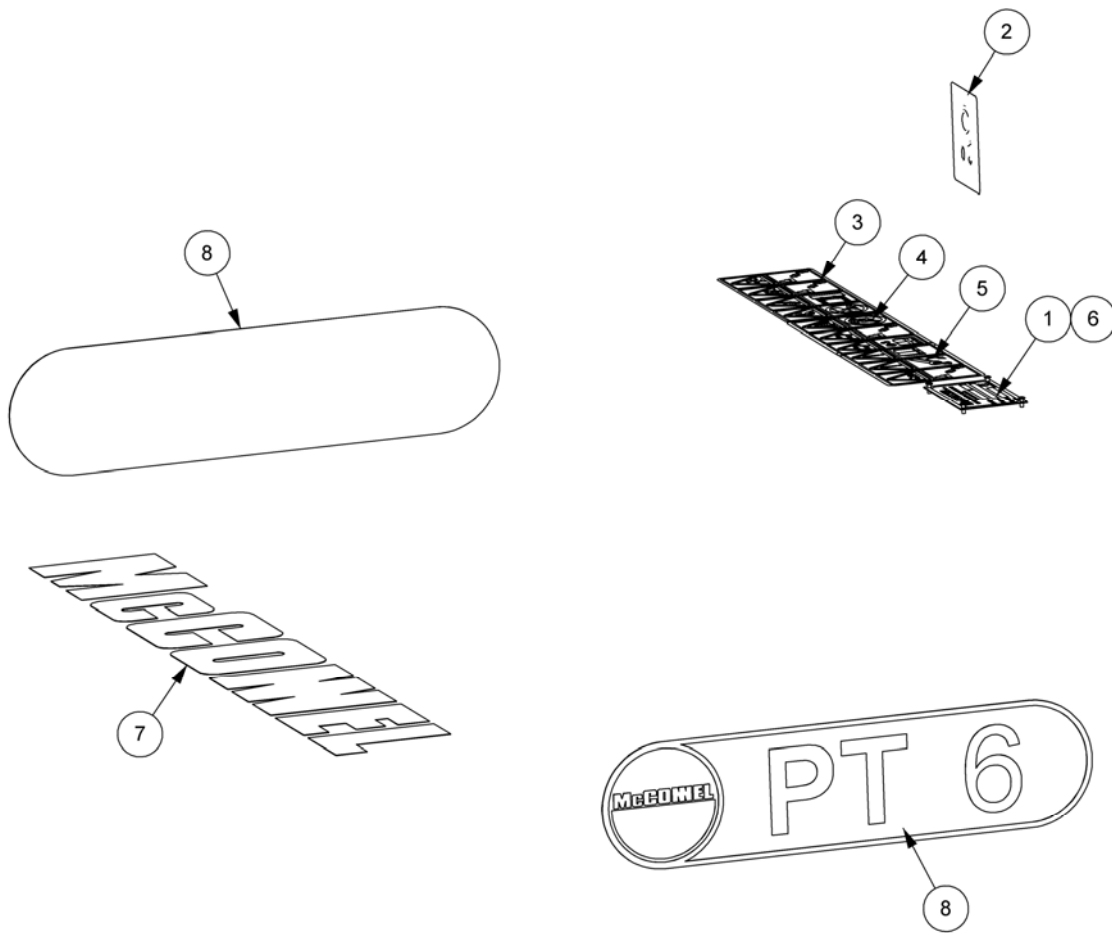
**McCONEL**

Module(s): 21459.02

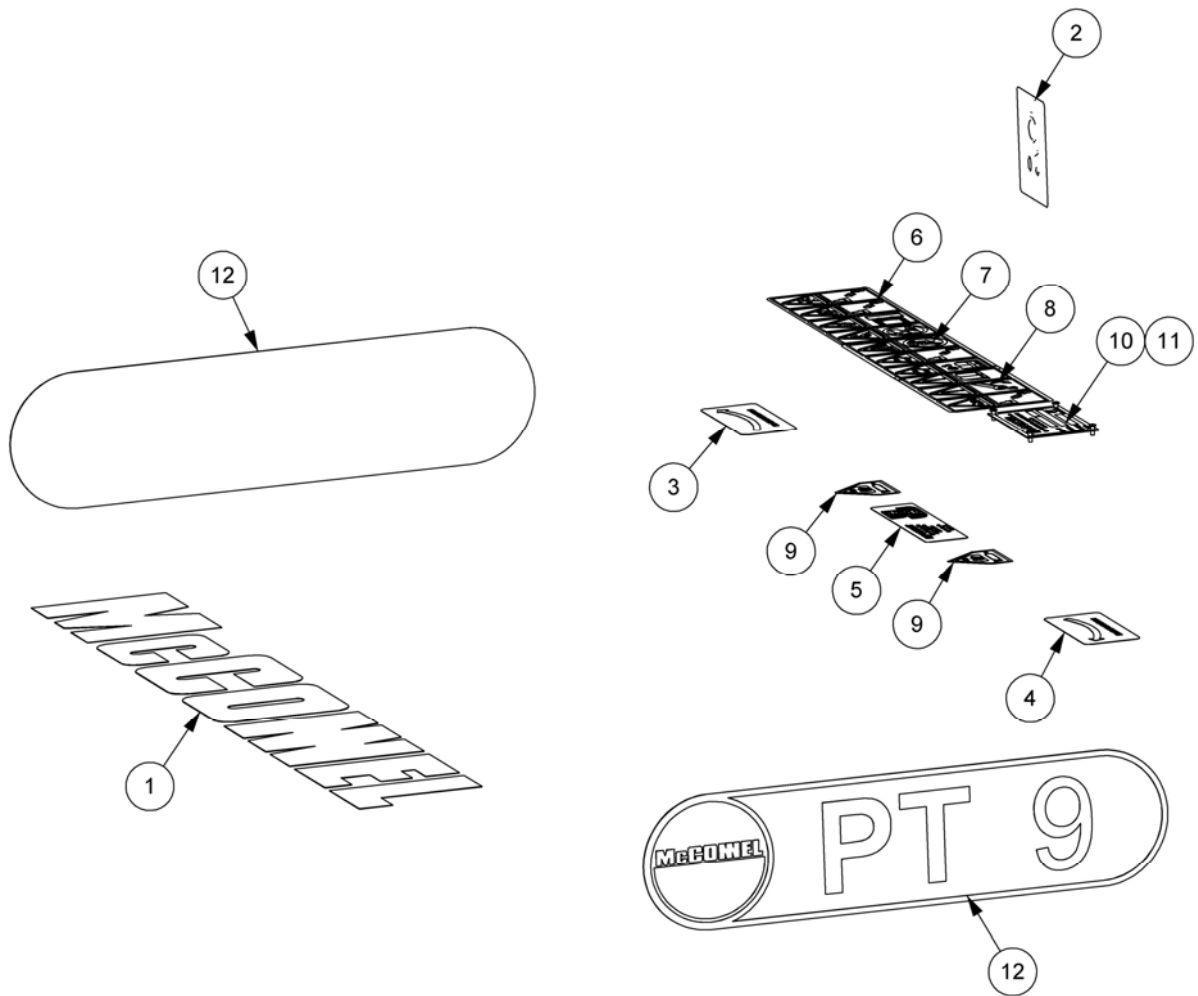


Module(s): 21459.02

REF.	QTY.	PART No.	DESCRIPTION
		<b>21459.02</b>	<b>GEARBOX ASSEMBLY</b>
1	1	21459.23	CROWN GEAR
2	1	21459.41	CASING
3	1	21459.24	INPUT SHAFT
4	1	21459.26	PINION
5	1	21459.27	SPACER
6	1	21459.25	OIL CAP
7	1	21459.42	PROTECTIVE WASHER
8	1	21459.28	BALL BEARING
9	1	21459.29	BALL BEARING
10	2	21459.30	BALL BEARING
11	1	21459.45	CASTLE NUT
12	1	21459.46	BOLT WASHER
13	1	21459.99	PARALLEL KEY
14	4	21459.47	BOLT
15	1	21459.44	SNAP RING
16	1	21459.32	SNAP RING
17	1	21459.33	SNAP RING
18	2	21459.39	PLUG
19	1	21459.22	DUST LIP
20	1	21459.34	OIL SEAL
21	1	21459.48	COVER
22	2	21459.35	SHIM KIT
23	1	21459.36	SNAP RING
24	1	21459.37	SHIM KIT
25	1	21459.49	NAME PLATE
26	1	21459.40	SHIM KIT
27	1	21459.04	SNAP RING
28	1	21459.31A	BUSH
29	1	21459.66	COTTER PIN



REF.	QTY.	PART No.	DESCRIPTION
		<b>1096710K</b>	<b>DECAL KIT - PT6</b>
1	1	41.094.05	SERIAL No. PLATE
2	1	09.811.04	DECAL - 540 MAX ACW
3	1	09.821.29	DECAL - COMBINED EURODECAL
4	1	09.821.30	DECAL - EURODECAL ROTARY
5	1	09.821.34	DECAL - COMBINED EURODECAL
6	4	7103230	POP RIVET
7	1	1290527	DECAL - McCONNEL
8	2	1290832	DECAL - PT6



REF.	QTY.	PART No.	DESCRIPTION
		<b>1096706</b>	<b>DECAL KIT - PT9</b>
1	1	1290527	DECAL - McCONNEL
2	1	09.811.04	DECAL - 540 MAX ACW
3	1	D137	DECAL - CCW BLADE ROTATION
4	1	D138	DECAL - CW BLADE ROTATION
5	1	D132	DECAL - BLADE TIMING
6	1	09.821.29	DECAL - COMBINED EURODECAL
7	1	09.821.30	DECAL - EURODECAL ROTARY
8	1	09.821.34	DECAL - COMBINED EURODECAL
9	2	09.810.02	DECAL - GREASE 40 HRS
10	1	41.094.05	SERIAL No. PLATE
11	4	7103230	POP RIVET
12	2	1290833	DECAL - PT9







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