

Publication 1070
October 2023
Part No. 24215.70

McCONNEL

Z350 ZERO TURN MOWER 35HP 60" Cut (Builds 4035500/4035501)

Operator 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 <https://my.mcconnel.com> 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. <input type="text"/>
Dealer Name:	
Dealer Address:	
Customer Name:	
Date of Warranty Registration:/...../..... Dealer Signature:	

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 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 McConnell 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. McConnell 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 McConnell 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 McConnell 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 McConnell 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 McConnell 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 McConnell Ltd Service Dealer, within 30 days of the date of repair.*
- 2.05. *Following examination of the claim and parts, McConnell Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by McConnell 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 McConnell Ltd. is final.*

3. LIMITATION OF LIABILITY

- 3.01. *McConnell 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. *McConnell Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.*
- 3.03. *Except as provided herein, McConnell 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



For Safety and Performance...

ALWAYS READ THE BOOK FIRST



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In line with our policy of constant improvement this publication may be periodically updated. To ensure you have access to the latest version of this manual please visit the manuals library on our website where an up-to-date version can be referenced online or downloaded.

To access manuals use the QR code opposite or the web address below;
<https://www.mcconnel.com/support/parts-and-operators-manual/>

TO THE OWNER/OPERATOR

This Operator's Manual is an integral part of the safe operation of this Zero Turn Mower and must be maintained with the machine at all times. A manual holder is provided on the Mower where this manual can be properly stored. If you lose or damage this manual a replacement manual can be obtained from an authorised McConnel Dealer or by downloading the manual from the McConnel website using the following link or via the QR Code below:

<https://www.mcconnel.com/support/parts-and-operators-manual/>



BEFORE YOU START! READ, UNDERSTAND, and FOLLOW the information provided in this manual carefully to learn how to operate and service your Zero Turn Mower properly. Failure to do so could result in personal injury to you and/or bystanders. All Zero Turn Mowers with moving parts are potentially hazardous. Every effort has been made to ensure that the Zero Turn Mower is safe, but operators must avoid engaging in unsafe practices and follow the written instructions provided. The manufacturer has designed this Zero Turn Mower to be used with all its safety equipment properly attached to minimise the chance of accidents.

SAFETY FIRST. Completely read and understand the safety section of this manual before operating this equipment. Do not allow anyone to operate this equipment who has not fully read and understood this manual. Contact your Dealer to explain any instructions that you do not fully understand.

The care you give your Zero Turn Mower will greatly determine your satisfaction with its performance and its service life. Carefully read and follow the instructions in this manual to provide you with a thorough understanding of your new Zero Turn Mower and its intended use and service requirements.

All references made in this manual to right, left, front, rear, top or bottom are as viewed facing the direction of forward travel with the Zero Turn Mower.

Replacement Parts information is located in a separate Parts Manual. All parts are made and tested to exacting specifications, non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce Zero Turn Mower performance, void warranties, and present a safety hazard. For economy and safety only use genuine McConnel Zero Turn Mower parts.

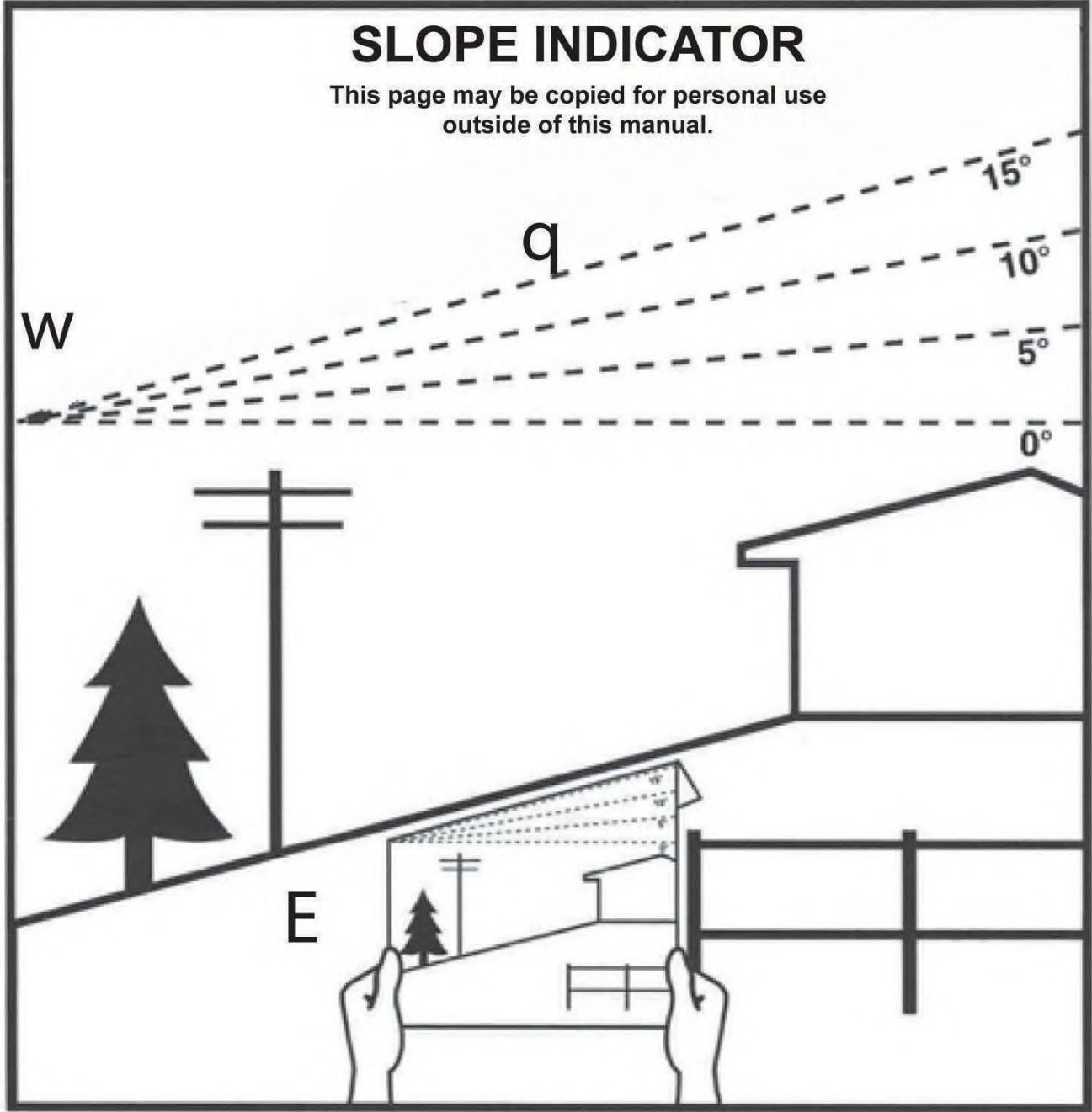
For future reference record your product and dealer details in the box provided below.

MACHINE & DEALER INFORMATION

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



Operating of this Zero Turn Mower on a Slope Exceeding 15 Degrees is unsafe and can cause upset or loss of traction resulting in serious injury or death.



- q Fold along the dashed line to measure the slope being checked.
- W Align this edge with a vertical reference point, a tree, building, power pole, etc.
- e Shows example of how to compare the slope with the folded edge.

DEALER PRE-DELIVERY CHECKLIST

Dealer has reviewed this Zero Turn Mower and certifies the following:

- Checked that the Safety Decals are in place on the mower and in good readable condition.
- Check that the Operator's Manual and all other applicable manuals are included with the equipment.
- Checked fuel tanks, lines, and caps and verified that no fuel leaks were present.
- Checked oil levels, lubrication points for proper level, lubrication and fluid leaks.
- Checked all safety items for installation and proper operation including protective shields, guard, grass deflectors. etc.
- Tested the Interlock System in accordance with the Operators Manual.
- Tested the Parking Brake and Service Brake (dynamic braking through the traction circuit) in accordance with the Operator's Manual.
- Check cutting height adjustment front to rear, belts adjustment, and proper raising operation.
- Check installation of deflector, blades, axles, and all bolts, pins and nuts for proper torque.
- Checked tyres and wheels for proper cold air pressure lug nuts for correct torque. Checked grease, height adjustment, and pre-load on wheels and bearings.
- Verified that seat properly locks into place.

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SAFETY SECTION

SAFETY

SAFETY MESSAGES

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. 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. Read and understand these Safety Messages before assembling, operating, or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all....remember safety is up to YOU. Only YOU can prevent death or serious injury from unsafe practices.



Indicates a hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates a hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates a hazardous situation that, if not avoided, MAY result in MINOR OR MODERATE INJURY.



Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments, or the environment.



Indicates information considered important, but not hazard-related, (e.g. messages relating to property damage).

NOTE: Identifies points of particular interest for more efficient and convenient operation or repair. READ, UNDERSTAND, and FOLLOW the following Safety Messages.

Death or serious injury may occur unless care is taken to follow the warnings and instructions stated in this Manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use good common sense to avoid hazards.



Pictographs are used throughout this manual to help bring your visual attention to safety issues.

SAFETY HAZARD	SAFETY AVOIDANCE	SAFETY PREVENTION
<p>Pictograph surrounded by a triangle indicates a Safety Hazard that must be avoided.</p> <p><i>Example:</i></p>  <p>Equipment contacting overhead electrical lines</p>	<p>Pictograph in a circle with blue or black background, by itself or inside a box, indicates an avoidance procedure or action that should be followed to prevent injuries.</p> <p><i>Example:</i></p>  <p>Wear safety footwear.</p>  <p>Always shut off engine and remove key before working on equipment.</p>	<p>A circle with a slash through it indicates an action that is prohibited.</p> <p><i>Example:</i></p>  <p>No Smoking</p>

SAFETY

IMPORTANT SAFETY CONSIDERATIONS AND PRECAUTIONS

In addition to the design and configuration of Zero Turn Mower, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel in the operation, transport, maintenance and storage of Zero Turn Mower. Lack of attention to safety can result in accident, personal injury, reduction of efficiency, and worst of all...loss of life. Watch for safety hazards and correct deficiencies promptly. Use the following safety precautions as a general guide to safe operations when using this Zero Turn Mower. Additional safety precautions are used throughout this manual for specific operating and maintenance procedures. Read this manual and review the safety precautions often until you know the limitations.

OBSERVING AND ABIDING WITH THE FOLLOWING SAFETY INSTRUCTIONS WILL HELP TO ENSURE THE SAFETY OF THE USER AND ANY OTHER PERSONS, ANIMALS AND PROPERTY.

SAFETY INSTRUCTIONS AND RECOMMENDATIONS

PEOPLE WHO OPERATE, SERVICE, OR ARE OTHERWISE ASSOCIATED with the Zero Turning Riding Mower should be trained in proper use and warned of its dangers. Before operating, adjusting, or servicing the Zero Turning Riding Mower they should read and understand this entire manual and the engine manual.

The following listing contains safety information specific to McConnel Zero Turn Mowers and other safety information that you must know and follow. This Zero Turn Mower is capable of amputating hands and feet, and of throwing objects. Always follow all safety instructions to avoid serious injury or death.

This Zero Turn Mower is designed for cutting and recycling grass, or, when equipped with a grass bagger, for catching cut grass. Any use for purposes other than these could prove dangerous to the user and bystanders.

SAFETY

OPERATOR SAFETY

				
Read and understand Operator's Manual	Always wear safety glasses marked with ANSI Z87	Wear Safety Shoes	Never use Drugs or Alcohol when operating equipment	Wear Hearing Protection

⚠ WARNING TO AVOID DEATH OR SERIOUS INJURY DO THE FOLLOWING:

- Read and understand the Zero Turn Mower and Engine Operator's Manuals before operating the Zero Turn Mower.
- Always wear safety goggles or safety glasses with side shields (marked with ANSI Z87) when operating this Zero Turn Mower.
- Always wear sturdy, rough-soled work shoes and close-fitting trousers and shirts. never operate Zero Turn Mower in bare feet, sandals, trainers or open toe shoes.
- Always wear long trousers and safety shoes with slip-resistant soles when operating this Zero Turn Mower. Do not wear shorts or any type of loose fitting clothing as they may get tangled in moving parts.
- Remove jewellery and tie back long hair to prevent entanglement in moving parts.
- Always wear adequate ear protection, such as earplugs. Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Do not wear radios or music headphones while operating this Zero Turn Mower. Safe operation requires your full attention.
- Do not operate the Zero Turn Mower if you are fatigued, sick, or while under the influence of alcohol or drugs, if you are pregnant or less than 18 years old.
- Poor posture or operating the Zero Turn Mower for extended periods of time may lead to fatigue or injury, resulting in loss of Zero Turn Mower control. Occasionally, stop the Zero Turn Mower and get off the seat to stretch and relax.

- Never step or stand on the Zero Turn Mower housing; stand only on the tread areas on the deck.
- Data indicates that operators, age 60 years and above, are involved in a large percentage of riding Zero Turn Mower-related injuries. These operators should evaluate their ability to operate the Zero Turn Mower safely enough to protect themselves and others from serious injury.

Mower Operation Safety

- Always secure the ROPS in the raised position and buckle the seat belt before starting Zero Turn Mower.
- Never leave a running Zero Turn Mower unattended.
- Before leaving the operator's seat for any reason, including unclogging the chute:
 - Always stop on level ground.
 - Disengage the Zero Turn Mower clutch.
 - Place the steering control levers in the park brake position.
 - Stop the engine
 - Wait for the engine and all moving parts to come to a complete stop







GROUND SPEED WHEN MOWING

- NORMAL SPEED range is between 2 to 5mph.
- ADJUST MOWING SPEED for terrain conditions and grass type, density and cut height.
- REDUCE MOWING SPEED when near steep slopes, ditches, drop-offs, overhead obstructions, power lines and to avoid debris and foreign objects.
- WHEN FEASIBLE, do not operate Zero Turn Mower when grass is wet or slippery.

SAFETY

SAFETY

ACCIDENT PATTERNS TO AVOID

					
Hand Foot Hazard	Zero Turn Mower Thrown Object Hazard	Crushing Injury From Roll Over	Crushing Injury From Run Over	Child Run Over Hazard	Fuel and Fire Hazard

1. **CONTACT WITH THE ROTATING BLADE** - This accident usually happens when the operator is clearing the discharge chute of grass, (especially when the grass is wet), or when the operator adjusts the Zero Turn Mower without turning it off.

⚠ WARNING Before leaving the operator's seat for any reason, Stop the engine and wait for the blades to completely stop. See additional safety instructions in the Mower Blade Contact Safety section.

2. **ZERO TURN MOWER THROWN OBJECTS** - Sticks, rocks, wires, and other objects can be propelled out through the discharge chute or from under the Zero Turn Mower housing. Bystanders are particularly vulnerable

⚠ WARNING Inspect area before mowing and remove or mark foreign solid objects, be alert and never let the Zero Turn Mower blades contact any solid objects. See additional safety instructions in the Thrown Object Safety section.

3. **GRASS DISCHARGE CHUTE** - The Zero Turn Mower shall not be operated without the grass discharge chute in its lowered position.

⚠ WARNING Never operate the Zero Turn Mower with the discharge shoot missing, damaged or folded up. See additional safety instructions in the Thrown Object Safety section.

4. **OVERTURNING** - This can happen when riding Zero Turn Mowers are used on slopes, embankments or hills. The operator can sustain crushing injuries during from the Zero Turn Mower rolling on top of operator.

⚠ WARNING The Rollover-Protection System (ROPS) is an integral and effective safety device. Keep the ROPS in the raised and locked position and use the seat belt when operating the machine. See additional safety instructions in

the Operating on Slopes section.

5. **ZERO TURN MOWER RUNNING OVER THE VICTIM** - This usually happens when a Zero Turn Mower is driven in reverse. The accident victims are most often young children whom, unseen by the operator of the Zero Turn Mower, were in the area being mowed.

⚠ WARNING Disengage power to Zero Turn Mower before backing up. Never allow children in area when mowing. Look behind Zero Turn Mower before backing up. See additional safety instructions in the Operating Safety section.

6. **CHILD SAFETY** - Tragic accidents can occur if the user is not alert to the presence of children. Children are often attracted to the Zero Turn Mower and the mowing activity.

⚠ WARNING Do not allow children to ride on or operate Zero Turn Mower. Never allow children in area when mowing. Never assume that children will remain where you last saw them. See additional safety instructions in the Children Safety section.

7. **FUEL AND GRASS FIRES** - A fire or explosion from petrol can burn you and others and can damage property

⚠ WARNING To avoid personal injury or property damage, use extreme care when handling fuel. Petrol is extremely flammable and the vapours are explosive. Keep Zero Turn Mower clean of grass and debris. When operating in dry areas install spark arrestor. See additional safety instructions in the Fuel and Fire Safety section.

SAFETY

MOWER BLADE CONTACT HAZARDS

		
Do not put fingers underneath mower	Do not put foot underneath Zero Turn Mower deck	Stop Tractor Remove Key Read Manual




⚠ WARNING KEEP AWAY FROM ROTATING BLADES TO AVOID DEATH OR SERIOUS INJURY FROM :

- AVOID CONTACT WITH MOVING PARTS. Keep hands and feet from under zero turn mowing deck and away from blades at all times. Turn engine (motor) off if you must unclog the chute.
- Never leave the Zero Turn Mower unattended with engine running. Always wait for all moving parts and all sounds to stop before leaving operator's seat. Always set the parking brake on an unattended Zero Turn Mower.
- Stop on level ground, disengage drives, engage the parking brake. shut off the engine before leaving the operator's position for any reason, including emptying the catchers or unclogging the chute.
- Turn off the Zero Turn Mower blades when not mowing.
- Always keep safety shields and covers in place, except for servicing.
- Never operate the Zero Turn Mower with the floor plate pulley cover removed.
- Start the engine only from the operator's position.
- Always remain seated while operating the Zero Turn Mower.
- Always keep clear of the Zero Turn Mower blades and attachments during their operation.
- Never put hands or feet under any part of the Zero Turn Mower while it is running.

SAFETY

SAFETY

THROWN OBJECT SAFETY

			
Mower Thrown Objects Hazard	Raised Zero Turn Mower Objects Thrown	Inspect Area remove foreign objects	Do not let blades contact solid objects

WARNING ZERO TURN MOWER CAN THROW OBJECTS 100 FEET OR MORE UNDER ADVERSE CONDITIONS.

TO AVOID DEATH OR SERIOUS INJURY TO OPERATOR OR BYSTANDERS FROM THROWN OBJECTS:

- KEEP bystanders 100 feet away
- **STOP MOWING IF PASSERSBY ARE WITHIN 100 FEET UNLESS:**
 - All THROWN OBJECT SHIELDING including, Discharge chute, Zero Turn Mower deck bands and Skid Rollers in place and in good condition when mowing.
 - Zero Turn Mower deck is adjusted to be close and parallel to ground without exposing blades
 - MOWING AREA has been inspected and foreign materials and debris have been removed.
 - PASSERSBY are inside enclosed vehicle.

KNOW AREA YOU ARE TO MOW. Watch for hidden dangers such as rocks, roots, sticks, holes, bumps, and drop-offs, etc.

INSPECT AREA FOR POTENTIAL THROWN OBJECTS BEFORE MOWING:

- REMOVE debris, rocks, wire, cable, metal objects and other foreign material from area. Wire, cable, rope, chains and metal objects can be thrown or swing outside Zero Turn Mower deck with great velocity:
 1. **MARK** objects that cannot be removed.
 2. **AVOID** these objects when mowing.
 3. **NEVER ALLOW BLADES to CONTACT SOLID OBJECTS** like wire, rocks, post, curbs, or ground while mowing.

HIGH GRASS and WEED AREA INSPECTION:

- **INSPECT** area before mowing for and REMOVE any hidden large debris.
- **MOW** at Intermediate height.
- **INSPECT** and remove remaining debris.
- **MOW** at final height.

NEVER DIRECT discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator.

DO NOT OPERATE with Discharge chute folded up, missing, damaged or removed.

DO NOT mow in standing water **TO AVOID** possible **BLADE FAILURE.**

AVOID MOWING in reverse:

DO NOT ENGAGE with Zero Turn Mower deck in transport position.

ALWAYS DISENGAGE ZERO TURN MOWER BLADES and wait for them to stop before crossing gravel drives, walkways or roads.

Zero Turn Mower OPERATION:

Zero Turn Mower THROWN OBJECT SHIELDING:

- **KEEP** all thrown object shielding including, Discharge chute, Deck bands and Skid Roller in place and in good condition when mowing.
- **DO NOT** exceed Zero Turn Mower's rated Cutting Capacity or cut non-vegetative material.

ZERO TURN MOWER SHOULD BE STOPPED AND INSPECTED FOR DAMAGE after striking a foreign object and the damage should be repaired before restarting and operating the Zero Turn Mower.





1. **BLADES CAN FAIL** from impact and objects can be thrown with great velocity.
2. **INSPECT** and **REPLACE** any damaged blades.
3. **CHECK** blade carrier and **REPLACE** if damaged.

Stop immediately and check for damage or loose parts if Zero Turn Mower should start vibrating.

1. **STOP ZERO TURN MOWER** and kill ENGINE.
2. **INSPECT** Zero Turn Mower for vibration source.
3. **REPLACE** any damaged parts and bent or damaged BLADES.

SAFETY

USE ROPS & SEATBELTS FOR OPERATING ON SLOPES SAFETY

			
Tip Over Hazard	ROPS must be in raised position	Always wear seatbelt	NO Riders

WARNING AVOID DEATH OR SERIOUS INJURY FROM FALLING OFF ZERO TURN MOWER, ROLLOVER AND CRUSHING BY ROLLING Zero Turn Mower

Use the Rollover-Protection System (ROPS)

- The ROPS is an integral and effective safety device.
- Keep ROPS in the raised and locked position.
- ALWAYS BUCKLE UP seat belt when operating Zero Turn Mower.
- ONLY OPERATE Zero Turn Mower while seated in the operator's seat.
- Never attempt to start the Zero Turn Mower unless seated in the Operator's Seat with the Seat Belt securely fasten. Unintended movement could cause serious injury.
- ONLY mount or dismount when Zero Turn Mower and moving parts are stopped.
- NEVER ALLOW RIDERS on Zero Turn Mower.
- Do Not operate the Zero Turn Mower under influence of drugs or alcohol.
- Lower the ROPS temporarily only when absolutely necessary. Do not wear the seat belt when the ROPS is folded down.
- Do Not lower the ROPS to mow under a tree limb. Cut the limb off or use alternative mower to mow under tree.
- Be aware there is no rollover protection when the ROPS is in the down position.
- Be certain that the seat belt can be released quickly in the event of an emergency.
- Check the area to be mowed and never fold down the ROPS in areas where there are slopes, drop offs or water.





- Keep the ROPS in safe operating condition by periodically thoroughly inspecting for damage and keeping all mounting fasteners tight.
- Replace a damaged ROPS. Do not repair or revise.
- Do Not remove the ROPS.

Slopes are a major factor in loss-of-control and tip-over accidents, which can result in death or serious injury. All slopes require extra caution. If you cannot reverse the Zero Turn Mower up the slope or if you feel uneasy on the slope; do not mow it. REMINDER: Whenever possible AVOID HILLS AND SLOPES

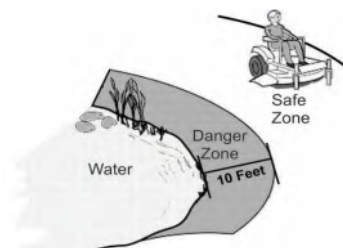
- DO NOT mow slopes greater than 15 degrees.
- See front section of operator's manual to determine the approximate slope angle of the area to be mowed.
- DO NOT mow slopes when grass is wet, slippery conditions affect steering and reduce traction and braking.
- Drive slower on slopes, Keep all movement on slopes slow and gradual.
- Do not try to stabilize the Zero Turn Mower by putting your foot on the ground. If the Zero Turn Mower's tyres lose traction when operating on slopes, disengage the blades, place the steering control levers in the park brake position, stop the engine, and get help.
- Turn on the most level part of the slope.
- Be aware that loss of traction may occur going downhill. Weight transfer to the front wheels may cause drive wheels to slip and cause loss of braking and steering.

SAFETY

USE ROPS & SEATBELTS FOR OPERATING ON SLOPES SAFETY(CONT.)

			
Tip Over Hazard	ROPS must be in raised position	Always wear seatbelt	NO Riders

- Progressively greater care is needed as the slope increases.
- Use **EXTREME** caution when mowing and/or turning across slopes as loss of traction and/or tip-over could occur. The operator is responsible for safe operation.
- If any sign of loss of traction is detected drive the Zero Turn Mower off of the slope slowly, using extreme caution. Wait until the condition that caused the problem is resolved before attempting to operate on the slope again. Terrain conditions can affect traction resulting in possible loss of control of the Zero Turn Mower. Some of the conditions to be aware of are:
 - Wet terrain
 - Depressions in the ground; i.e. holes, ruts, wash-outs.
 - Mounds of dirt.
 - Soil type; i.e. sand, loose dirt, gravel, clay.
 - Grass type, density, and height.
 - Extremely dry conditions of grass.
 - Tyre pressure.
- Watch for ditches, holes, rocks, dips and rises, which change the operating angle. Keep away from drop-offs and steep banks. Tall grass can hide obstacles. Remove obstacles such as rocks, tree limbs, etc.
- Use caution near drop-offs, ditches, or embankments. The Zero Turn Mower could suddenly turn over if a wheel goes over the edge of a cliff or ditch, or if an edge caves in.
- Mow a safe distance (minimum of 10 feet) away from drop-offs, retaining walls, drainage ditches, embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away.







- Use a 'walk behind' mower and/or a hand trimmer near drop-offs, ditches, steep banks or water. This area can be dangerous.
- Avoid mowing uphill - Zero Turn Mower may tip backwards. Always avoid sudden starting or stopping on a slope.
- If tyres lose traction, disengage the Zero Turn Mower blades and manoeuvre slowly across the slope.
- Check carefully for overhead clearances (i.e. branches, doorways, and electrical wires) before driving under objects and do not contact them.
- Slow down and use extra care on hillsides. Be sure to travel side to side on hillsides. Turf conditions can affect the stability of the Zero Turn Mower. Use caution while operating near drop-offs.
- These are just a few examples of situations when caution must be used when operating on a slope. There are many other possibilities too numerous to mention. Just remember to always exercise extreme caution when operating on any slope.
- The ROPS may minimize chance of injury or death from rollover. The seat belt must be fastened while operating a Zero Turn Mower equipped with a ROPS in the raised and secured position. Both retaining pins and lock pins must be installed. Failure to use a seat belt with ROPS may result in serious injury in the event of a roll over.

SAFETY

SAFETY

RUN OVER HAZARDS

			
Run Over Hazard	ROPS must be in raised position	Always wear seatbelt	NO Riders

⚠ WARNING TO AVOID DEATH OR SERIOUS INJURY FROM ZERO TURN MOWER RUN OVER, AND CRUSHING BY ZERO TURN MOWER:

- **OPERATE IN DAYLIGHT** or with lights that gives at least 100 yards clear visibility.
- **BE ABLE TO SEE** and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects
- Keep **ROPS** in the raised and locked position.
- **ALWAYS BUCKLE UP** seat belt when operating Zero Turn Mower.
- **DISENGAGE POWER TO Zero Turn Mower BEFORE BACKING UP.** Do not mow in reverse unless absolutely necessary and then only after turning around and observing the entire area behind the Zero Turn Mower. Go slowly. Most "running over victim" accidents occur in reverse.
- **BEGINNING OPERATORS SHOULD LEARN HOW TO STEER** the Zero Turn Riding Mower before attempting to mow. Start with slow engine speed and drive without the blades engaged in open area until comfortable with the Zero Turn Mower.
- **KNOW HOW TO STOP QUICKLY.** Know the location and operation of every control, especially how to brake and how to disengage the Zero Turn Mower blades.

- **NEVER ALLOW RIDERS**
- **BE SURE THE AREA IS CLEAR** of other people before mowing. Stop Zero Turn Mower if anyone enters the area.
- Always be aware of what is behind the Zero Turn Mower before backing up. Never mow in reverse. Always look down and behind before and while backing up.
- Slow down before turning.
- Never attempt high speed manoeuvring, especially in crowded or congested areas.
- Always maintain a safe distance from people and pets when mowing. Always stop Zero Turn Mower if someone enters the area.
- Use care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.

INSECT INFESTATION

- **DO NOT** operate in areas where bees or insects may attack unless you **WEAR PROTECTIVE CLOTHING.**

LIGHTNING STORMS

- Never operate the Zero Turn Mower when there is a risk for lightning. Lightning can cause severe injury or death.

SAFETY

CHILD SAFETY

			
Run Over Hazard	Back Over Hazard	Never Allow Child As A Rider	Never Allow Children To Operate Mower

⚠ WARNING AVOID DEATH OR SERIOUS INJURY TO CHILDREN FROM Zero Turn Mower RUN OVER, AND CRUSHING BY Zero Turn Mower.

- Keep children pets and bystanders away from an operating Zero Turn Mower.
- Never allow riders on Zero Turn Mower
- DO NOT ALLOW CHILDREN TO OPERATE ZERO TURN MOWER.
- Do not operate the Zero Turn Mower when children or others are in the area.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the Zero Turn Mower and the mowing activity. Never assume that children will remain where you last saw them.

- Never leave the Zero Turn Mower unattended with engine running, especially with children present.
- Children or bystanders may be injured if they attempt to move or to operate the Zero Turn Mower while it is unattended. Always disengage

the Zero Turn Mower deck clutch, place the control levers in park brake position, and stop the engine when leaving the operator's seat.

- Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
- Be alert and turn the Zero Turn Mower off if children enter the area.
- Before and while backing, look behind and down for small children.
- Never carry children, even with the blades off. They may fall off and be seriously injured or interfere with safe Zero Turn Mower operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the Zero Turn Mower.
- Never allow children or others in or on towed equipment.
- Use care when approaching blind corners, shrubs, trees, the end of a fence or other objects that may obscure vision.
- ALWAYS TURN ENGINE OFF before leaving Zero Turn Mower to prevent children and inexperienced operators from starting the engine.

SAFETY

SAFETY

FUEL & FIRE SAFETY

		
Fuel Fire and Explosion Hazards	Strike and explosion Hazard Blades Contacting Utility or Gas Lines	Do not operate near fires. Keep Zero Turn Mower deck clear of debris

NOTICE OF REQUIREMENT OF SPARK ARRESTER MUFFLER

This equipment may create sparks that can start fires around dry vegetation. California Public Resources Code Section 4442.6 provides that it is unlawful to use or operate an internal combustion engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrester maintained in effective working order. A spark arrester is a device constructed of non-flammable materials specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service. Other states or federal areas may have similar laws. The Operator Should Contact Local Fire Agencies For Laws or Regulations Relating to Fire Prevention Requirements.

THIS ZERO TURN MOWER DOES NOT COME WITH A SPARK ARRESTER. YOU SHOULD CONTACT YOUR AUTHORIZED DEALER FOR THE PURCHASE OF A SPARK ARRESTER.

Inspect spark arrester daily; replace every 500 hours or as needed.

⚠ WARNING TO AVOID DEATH OR SERIOUS INJURY FROM ELECTRICAL CONTACT WHEN WORKING AROUND ELECTRICAL POWER LINES, GAS LINES AND UTILITY LINES

- INSPECT mowing area for overhead or underground electrical power lines, obstructions, gas lines, cables and Utility, Municipal, or other type structure.
- KEEP Zero Turn Mower at a 10 feet or greater distance from all power lines and utility lines and obstructions.
- DO NOT allow Zero Turn Mower to contact with any Utility, Municipal, or type of structures and obstructions.

Fire Prevention

- Clean flammable material from Zero Turn Mower. Prevent fires by keeping the engine compartment, top of the deck, exhaust area, battery, fuel line, fuel tank and operator's station clean of accumulated trash, grass clippings, and other debris.
- Do not drive into or mow over burning grass or materials.
- Always clean up spilled fuel and oil.
- Prevent fires by keeping the engine and exhaust areas clear of grass clippings and other debris. Do not back Zero Turn Mower into flammable materials.
- Allow the Zero Turn Mower, especially the engine, to cool before storing inside a building.

SAFETY

FUEL & FIRE SAFETY (CONTINUED)

		
Fuel Fire and Explosion Hazards	Strike and explosion Hazard Blades Contacting Utility or Gas Lines	Do not operate near fires. Keep Zero Turn Mower deck clear of debris


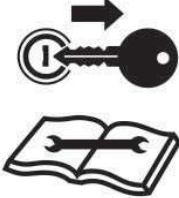
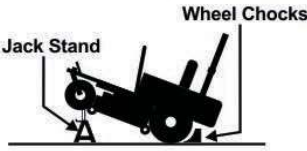

Fuel Handling Precautions

- To avoid personal injury or property damage, use extreme care when handling gasoline. Petrol is extremely flammable and the vapours are explosive.
- A fire or explosion from gasoline can burn you and others and can damage property.
- Observe all usual gasoline handling precautions:
- Do not smoke while refuelling. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- NEVER REFUEL a Zero Turn Mower INDOORS.
- Do not remove fuel cap or fill tank with engine running or while engine is hot. Clean up any fuel spills.
- If fuel is spilled, do not attempt to start the engine but move the Zero Turn Mower away from the area of spillage and avoid creating any source of ignition until fuel vapours have dissipated.
- Keep fuel away from open flame or spark and store Zero Turn Mower away from open flame or spark or pilot light such as on a water heater or appliances.
- Refuel outdoors. Never refuel or drain the fuel from the Zero Turn Mower indoors.
- Never attempt to start the engine when there is a strong odour of petrol fumes present. Locate and correct the cause.
- Store fuel in an approved container and keep it out of the reach of children. Never buy more than a 30-day supply of fuel.
- Do not fill fuel containers inside a vehicle or on a truck or trailer bed with interior carpets or plastic truck bed liners. Always place fuel containers on the ground away from your vehicle before filling.
- When practical, remove the Zero Turn Mower from the truck or trailer and refuel the Zero Turn Mower with its wheels on the ground. If this is not possible, then refuel Zero Turn Mower on the truck or trailer using a portable container and not a fuel dispenser nozzle. If a fuel dispenser nozzle must be used, keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fuelling is complete. Do not use a nozzle lock-open device.
- Never use petrol for cleaning parts.
- Avoid prolonged breathing of vapours
- Long-term exposure to vapours can cause serious injury and illness.
- Keep petrol away from eyes and skin.
- Keep face away from nozzle and fuel tank or fuel container opening.
- If fuel is spilled on clothing, change clothing immediately.
- Do not overfill the fuel tank. Replace the fuel cap and tighten securely.

SAFETY

SAFETY

MAINTENANCE SERVICE AND STORAGE SAFETY

			
<p>Periodically inspect all moving parts, and tighten all fasteners</p>	<p>Stop engine remove key before conducting maintenance</p>	<p>Use jack stands to support zero turn mower before servicing. Use wheel chocks to keep from rolling back. Engage parking brake.</p>	<p>Inspect Blades for damage or cracks</p>

⚠ WARNING AVOID DEATH OR SERIOUS INJURY FROM COMPONENT FAILURE BY KEEPING ZERO TURN MOWER IN GOOD OPERATING CONDITION BY PERFORMING PROPER SERVICE, REPAIRS AND MAINTENANCE.

BEFORE PERFORMING SERVICE, REPAIRS AND MAINTENANCE ON THE Zero Turn Mower:

SECURE EQUIPMENT FOR SERVICE

BLOCK OUT POTENTIAL ENERGY HAZARDS; Rotating Parts, Raised Components, Hydraulic Pressure.

- Disengage drives, set the parking brake, stop the engine, or disconnect spark-plug wire. Wait for all movement to stop before adjusting, cleaning, or repairing. Let engine cool and disconnect the spark plugs so the engine cannot start by accident.
- PLACE Zero Turn Mower on ground or securely block up raised Zero Turn Mower.
- Use jack stands to support components when required. Use wheel chocks to keep unit from rolling back.
- Do not run an engine in an enclosed area.


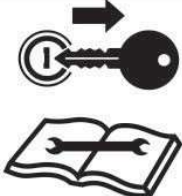
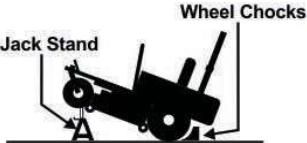

- Disconnect the battery or remove the spark-plug wire before making any repairs. Disconnect the negative terminal first and the positive terminal last. Connect the positive terminal first and negative last.

WEAR SAFETY GLASSES with side shields (marked ANSI Z87), PROTECTIVE GLOVES and follow SAFETY PROCEDURES when performing service, repairs and maintenance on the Zero Turn Mower:

- Always WEAR protective GLOVES when handling chemicals or worn component with sharp edges.
- AVOID CONTACT with hot hydraulic oil tanks, pumps, motors, valves and hose connection surfaces.
- STOP any Zero Turn Mower movements and SHUT-OFF MOWER engine before doing any work procedures.
- DO NOT change any factory-set hydraulic calibrations to avoid component or Zero Turn Mower failures.
- DO NOT modify or alter Zero Turn Mower, functions or components.
- DO NOT WELD or repair rotating Zero Turn Mower components. These may cause vibrations and component failures being thrown from Zero Turn Mower.
- DO NOT change the engine governor setting or over speed the engine.

SAFETY

MAINTENANCE SERVICE AND STORAGE SAFETY (CONTINUED)

			
<p>Periodically inspect all moving parts, and tighten all fasteners</p>	<p>Stop engine remove key before conducting maintenance</p>	<p>Use jack stands to support zero turn mower before servicing. Use wheel chocks to keep from rolling back. Engage parking brake.</p>	<p>Inspect Blades for damage or cracks</p>

PERFORM SERVICE, REPAIRS, LUBRICATION AND MAINTENANCE OUTLINED IN ZERO TURN MOWER MAINTENANCE SECTION:

- Clean grass and debris from the cutting unit, drives, exhaust, and engine to help prevent fires.
- Carefully release pressure from components with stored energy.
- **INSPECT** for loose fasteners, worn or broken parts, leaky or loose fittings, missing or broken cotter keys and washers on pins, and all moving parts for wear.
- **REPLACE** any worn or broken parts with authorised service parts.
- **LUBRICATE** unit as specified by lubrication schedule.
- **NEVER** lubricate, adjust or remove material while it is running or in motion.
- **TORQUE** all bolts and nuts as specified.

BLADE INSPECTION:

- Use care when checking the blades. Wrap the blade(s) or wear thickly padded gloves, and use caution when servicing them. Only replace blades; do not straighten or weld them.
- **REPLACE** bent, damage, cracked or broken blades immediately with new blades.
- **AVOID** blade failures and thrown broken blades. **DO NOT** straighten, weld, or weld hard-facing blades.

SAFETY SHIELDS, GUARDS AND SAFETY DEVICES INSPECTION:

- **KEEP** all Deflector Chute, Integral Shields, Side Skirts and Anti Scalp Rollers in place and in good condition.
- **REPLACE** any missing, broken or worn safety shields, guards and safety devices.

If any of the safety switches become inoperable, have them repaired immediately.

SAFETY

SAFETY

HIGH PRESSURE OIL LEAK



High pressure oil penetrating skin



High pressure oil eroding skin



Using cardboard to check for oil leaks

⚠ DANGER TO AVOID DEATH OR SERIOUS INJURY FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENETRATING SKIN:

- **DO NOT OPERATE** equipment with oil or fuel leaks.
- **KEEP** all hydraulic hoses, lines and connections in **GOOD CONDITION** and **TIGHT** before applying system pressure.
- **RELIEVE HYDRAULIC PRESSURE** before disconnecting lines or working on the system.
- **REMOVE** and replace hose if you suspect it leaks. Have dealer test it for leaks.





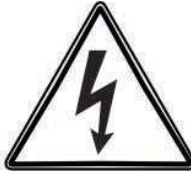

HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE.

WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:

- **ALWAYS WEAR** safety glasses with side shields (marked with ANSI Z87) and impenetrable gloves.
- **USE** paper or cardboard to search for leaks.
- **DO NOT USE** hands or body parts to search for leak.
- **KEEP** hands and body **AWAY** from pin holes and nozzles ejecting hydraulic fluid.
- Injected Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury.

SAFETY

BATTERY SERVICE PRECAUTIONS

					
Always wear eye protection when servicing battery.	No Smoking No Open Flame near battery when charging.	Hydrogen gas inside battery may cause an explosion if exposed to a spark or flame.	Charge batteries in a ventilated area away from sparks and flames.	Metal tools can short between battery terminals and metal mower parts.	Avoid skin and clothing contact with battery acid.

⚠ WARNING Battery posts, terminals, and related accessories contain lead compounds, wash hands after handling.

- Charge batteries in a well-ventilated open area, away from sparks and flames. Unplug charger before connecting or disconnecting from battery. Wear protective clothing and use insulated tools.
- Avoid skin and clothing contact with battery acid.
- Do not drink the battery electrolyte.
- Always wear eye protection when checking the battery. Acid can cause serious injury to skin and eyes. If contact occurs, flush area with clean water and call a physician immediately. Acid will also damage clothing.
- Do not allow open flame near the battery when charging.
- Hydrogen gas forms inside the battery. This gas is both toxic and flammable and may cause an explosion if exposed to flame. Always disconnect the negative (black) battery cable(s) before disconnecting the positive (red) cable(s). Always connect the positive (red) battery cable(s) before connecting the negative (black) cable(s).
- Do not overfill the battery.
- Electrolyte may overflow and damage paint, wiring or structure. When cleaning the battery, use soap and water. Be careful not to get soap and water into the battery. Clean the battery terminals with a solution of four parts water and one part baking soda when they become corroded.
- Shorts caused by battery terminals or metal tools touching metal mower components can cause sparks. Sparks can cause a battery gas explosion which will result in personal injury.
- Prevent the battery terminals from touching any metal mower parts when removing or installing the battery.
- Do not allow metal tools to short between the battery terminals and metal mower parts.
- Incorrect battery cable routing could cause damage to the mower and battery cables. This can cause sparks which can cause a battery gas explosion which will result in personal injury
- Always disconnect the negative (black) battery cable(s) before disconnecting the positive (red) cable(s).
- Always connect the positive (red) battery cable(s)

SAFETY

SAFETY

DRIVING AND TRANSPORTING ON PUBLIC ROADS

Check applicable road traffic regulations before transporting on public roads. If the Zero Turn Mower is transported, you must always use approved fastening equipment and ensure that the Zero Turn Mower is well anchored. DO NOT operate this Zero Turn Mower on public roads.

- Always observe traffic laws while driving mower from one location to another. Watch for traffic when operating near or crossing roadways.
- WATCH OUT FOR TRAFFIC near roadways and when crossing roads.
- THIS ZERO TURN MOWER IS NOT MEANT FOR HIGHWAY OR STREET USE. It is not a recreational vehicle and it should not be operated as such.

Hauling

- Use care when loading or unloading the Zero Turn Mower into a trailer or a truck.
- Use full-width ramps for loading Zero Turn Mower into a trailer or a truck.
- Tie the Zero Turn Mower down securely using straps, chains, cable, or ropes. Both front and rear straps should be directed down and outward from the Zero Turn Mower.

Using A Ramp

- Exercise extreme caution when loading and unloading a Zero Turn Mower onto a truck or trailer with a ramp.
- Use only a single, full width ramp; do not use individual ramps for each side of the unit. Having a full width ramp provides a surface for the Zero Turn Mower frame to contact if the unit starts to tip backwards. It also reduces the risk of a wheel going off and the Zero Turn Mower tipping over.
- Do not exceed a 15 degree angle between the ramp and the ground or between the ramp and the trailer or truck.
- Avoid sudden acceleration when on a ramp.

SAFETY

PARTS INFORMATION

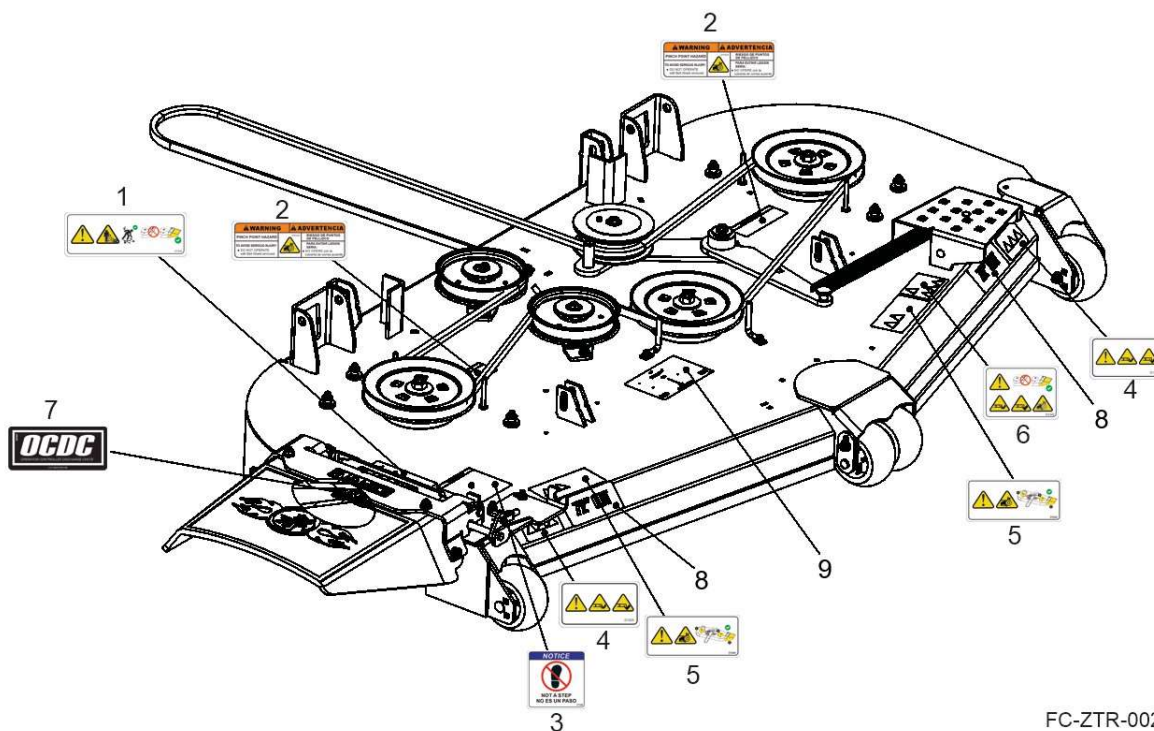
The Zero Turn Mower use balanced and matched parts for blade components and bearings. These parts are made and tested to McConnell specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce Zero Turn Mower performance, void warranties, and present a safety hazard. Use genuine McConnell mower parts for economy and safety.

FOR GENUINE PARTS CONTACT YOUR McCONNEL DEALER

SAFETY

SAFETY

DECAL LOCATION - MOWER DECK



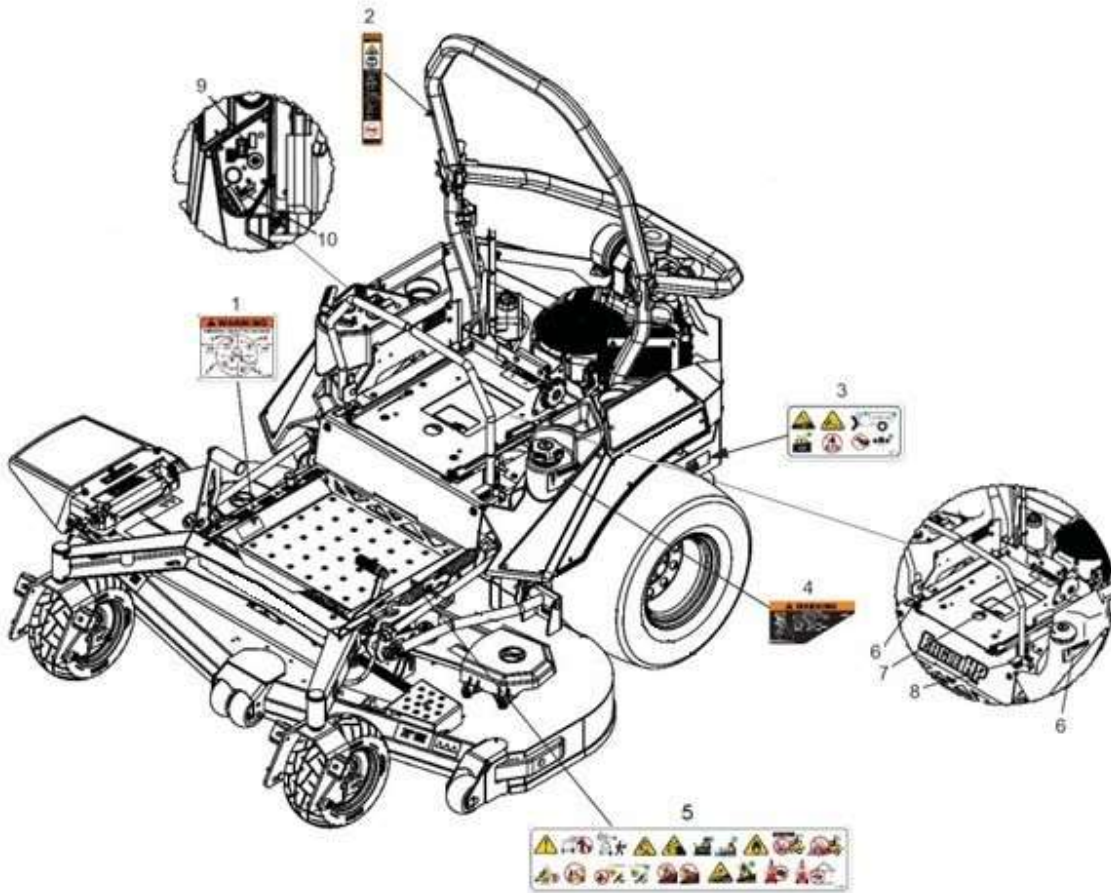
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ITEM	PART NO.	QTY	TYPE	DESCRIPTION
1.	D1043	1	WARNING	Thrown Object Hazard
2.	D1016	2	WARNING	Pinch Point Hazard
3.	D1026	1	NOTICE	Not a Step
4.	D1025	2	WARNING	Keep Away - Blade Rotation Hazard
5.	D1044	2	WARNING	Keep Guards in Place
6.	D1042	1	WARNING	Do Not Remove Shields
7.	800987	1	INSTRUCT	Operator Controlled Discharge Chute
8.	65409	2	LOGO	60" Cut
9.	800959	1	INSTRUCT	Belt Route

SAFETY

SAFETY

DECAL LOCATION - POWER UNIT

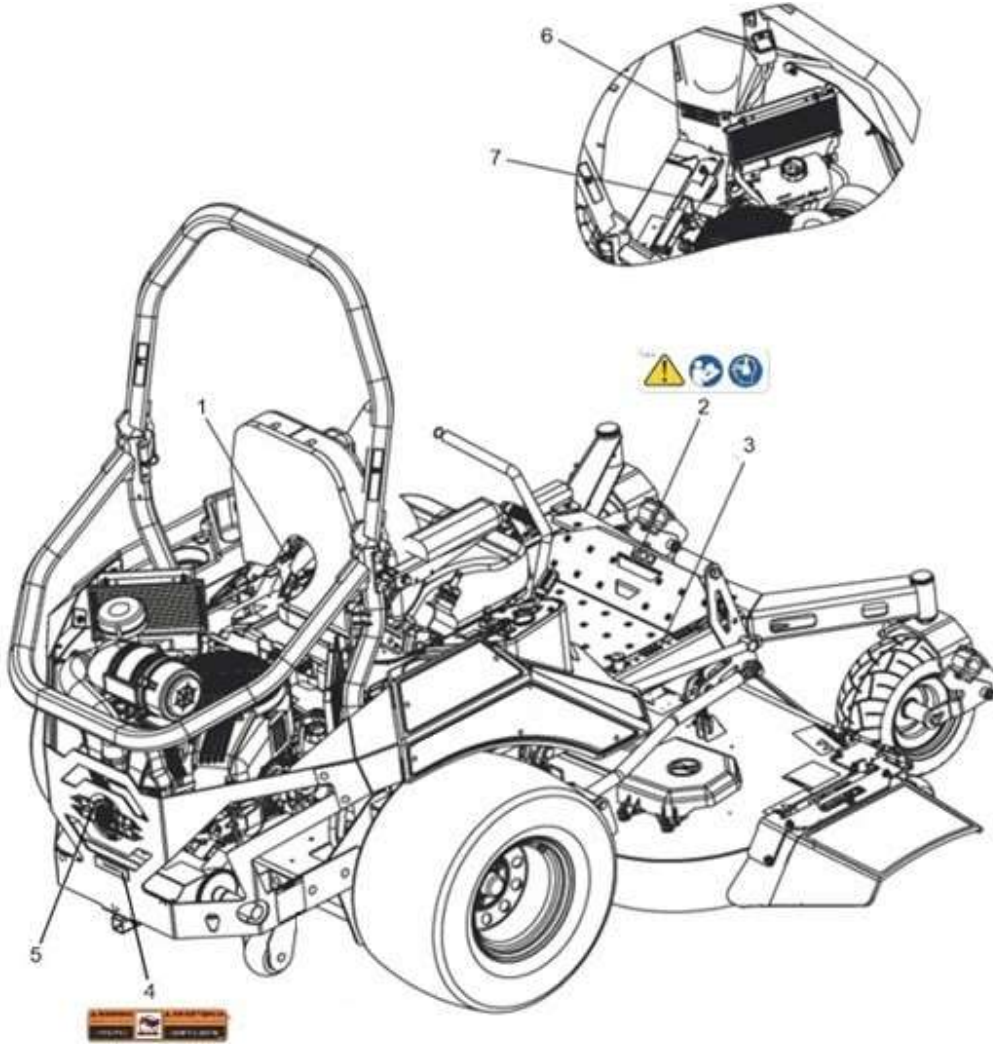


ITEM	PART NO.	QTY	TYPE	DESCRIPTION
1.	D1061	1	WARNING	Thrown Objects Hazard
2.	D1029	1	WARNING	Crushing Hazard - Use ROPS/Seatbelt
3.	D1015	1	WARNING	Towing Hazard
4.	D1062	1	WARNING	Risk of Fire - Do Not Overfill Fuel
5.	700661	1	SERIAL PLT	Serial Number Plate
6.	D1073	1	WARNING	Multi-Hazard
7.	800842	1	INSTRUCT	Steering RH Throttle & Direction
8.	675030	1	INSTRUCT	Seat Latch
9.	800843	1	INSTRUCT	Steering LH Throttle & Direction
10.	DC4C0120	1	INSTRUCT	2 - Speed HP
11.	800846	1	INSTRUCT	Throttle Speed
12.	800845	1	INSTRUCT	Parking Brake

SAFETY

DECAL LOCATION - POWER UNIT

SAFETY



ITEM	PART NO.	QTY	TYPE	DESCRIPTION
1.	800845	1	INSTRUCT	Parking Brake
2.	D1021	1	WARNING	Read Operation Manual
3.	800975	1	INSTRUCT	Height Adjustment
4.	D1028	1	WARNING	Hot Surface Hazard
5.	800976	1	INSTRUCT	Operator Controlled Discharge Chute
6.	4421276	1	INSTRUCT	EPA EVAP Emissions
7.	800986	1	INSTRUCT	Fuel Valve

SAFETY

MOWER DECALS



⚠ WARNING **AVOID TIP-OVER/ROLL-OVER INJURY** - Do not operate machine on a slope greater than 15° (25%). Do not mow up or down slopes, only mow across slopes that are less than 15 degrees (25%). Use low speeds and avoid sudden turns on slopes. Stay at least 10 feet (3 meters) from drop-offs, ditches, embankments or the edge of water.

⚠ WARNING **AVOID FIRES** - Your tractor is designed to cut normal residential grass of a height no more than 10" (25cm). Do not attempt to mow through unusually tall, dry grass (e.g., pasture) or piles of dry leaves. Allow a tractor to cool at least five minutes before fuelling or storing inside an enclosed garage or storage shed.

⚠ WARNING **AVOID CHILD BACKOVER/RUNOVER/BLADE INJURY** - To avoid back-over accidents, always look behind and down for small children. Never carry children, even with the blade(s) shut off. Keep bystanders, children and pets inside during operation under the watchful care of a responsible adult other than the operator. Stop tractor if anyone enters the area.

⚠ WARNING **READ OPERATOR'S MANUAL - WEAR HEARING PROTECTION**
Read, understand and follow all the safety rules and instructions in the manual(s) and on the machine before attempting to operate this tractor. Failure to comply with this information may result in personal injury or death. Keep this manual in a safe location for future and regular reference.



SAFETY

⚠️ WARNING

AVOID THROWN OBJECTS INJURY

Keep helpers at least 75' (23 meters) from machine during operation. Remove all stones, sticks, wire, bones, toys, and other foreign objects which could be picked up and thrown by the blade(s). Do not operate the tractor without the discharge cover or entire grass catcher in its proper place



⚠️ WARNING

AVOID TOWING RELATED INJURY

Do not tow a load that exceeds 250 lbs (113 kg) rolling weight and never exceed 50 lbs (22kg) tongue weight. Never allow children or others in or on towed equipment. Do not tow on slopes greater than 5 degrees (9%). On slopes, the weight of the towed equipment may cause loss of traction, loss of control and/or loss of the ability to stop. Travel slowly and allow extra distance to stop.



⚠️ WARNING

AVOID AMPUTATION INJURY -

Do not put hands or feet near or under the cutting deck. Contact with the blade(s) can amputate hands and feet.



⚠️ WARNING

AVOID AMPUTATION INJURY -

Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade(s) can amputate hands and feet. Ensure that all safety devices (guards, shields, switches, etc.) are in place and working. Belt and/or blade spindle contact can crush or injury body parts

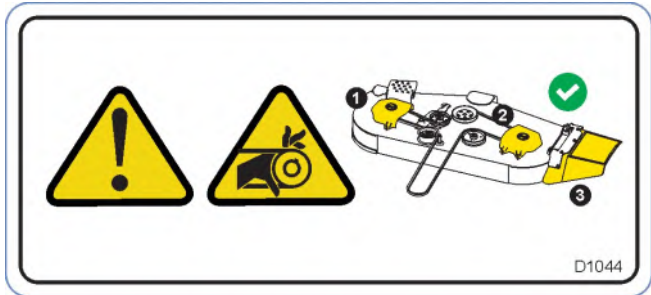


SAFETY

⚠️ WARNING

AVOID AMPUTATION INJURY -

Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade(s) can amputate hands and feet. Ensure that all safety devices (guards, shields, switches, etc.) are in place and working. Belt and/or blade spindle contact can crush or injury body parts



⚠️ WARNING		⚠️ ADVERTENCIA	
PINCH POINT HAZARD	 D1016	RIESGO DE PUNTOS DE PELLIZCO	PARA EVITAR LESION SERIA: <ul style="list-style-type: none"> • NO OPERE con la cubierta de correa ausente.
TO AVOID SERIOUS INJURY: <ul style="list-style-type: none"> • DO NOT OPERATE with Belt Shield removed. 			

NOTICE



**NOT A STEP
NO ES UN PASO**

D1026

⚠️ WARNING		⚠️ ADVERTENCIA
Risk of serious burns		Riesgo de quemaduras graves
Hot Surface		Superficie caliente

D1028

SAFETY

SAFETY

SAFETY

WARNING

AVOID CRUSHING



- Never operate on steep slopes greater than 15°
- Keep Rollover Protective Structure fully extended
- Do not jump if machine tips
- Wear seat belt

When structure must be down:

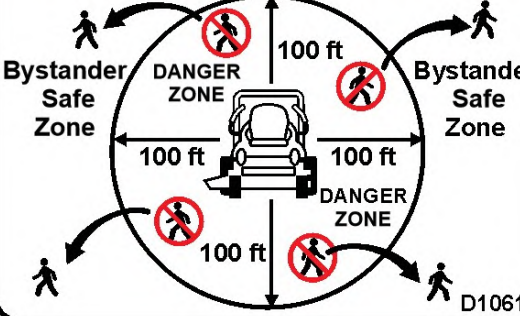
- DO NOT use seat belt
- Drive with extra care



D1029

WARNING

THROWN OBJECTS HAZARD



D1061

WARNING

Risk of Fire



To avoid the risk of fire from fuel spillage that can result in death or serious injuries:

- Do not overfill fuel tank.
- Do not fill above the maximum fill line on the fuel tank.

D1062



INTRODUCTION SECTION

INTRODUCTION

The Z350 Zero Turn Mower has been carefully designed with care and built with quality materials by skilled workers to give maximum service with minimum down time. This manual is provided to give you the necessary operating and maintenance instructions for keeping your mower in top operating condition. Careful use and timely service will save extensive repairs and costly downtime. Please read this manual thoroughly. Understand what each control is for and how to use it.

No shielding is 100% effective in preventing thrown objects. The possibility of injury and property damage from this hazard can be substantially reduce by selecting proper shielding, maintaining the mower and shielding in good operational condition, inspecting the area for foreign debris before mowing and operating the mower at a minimum cutting height. Keep unprotected persons at a minimum distance of 100 feet from the mower at all times during operation.

Safety is of primary importance to the owner/operator and to the manufacturer. Observe all safety precautions displayed on the machine and noted throughout the manual for safe operation of implement. If any assistance or additional information is needed, contact your authorised McConnel dealer. The owner/operator/dealer should know and understand the Safety Messages before assembly and be aware of the hazards of operating this cutter during assembly, use, and maintenance. The Safety Alert Symbol combined with a Signal Word, as seen below, is intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this machine.

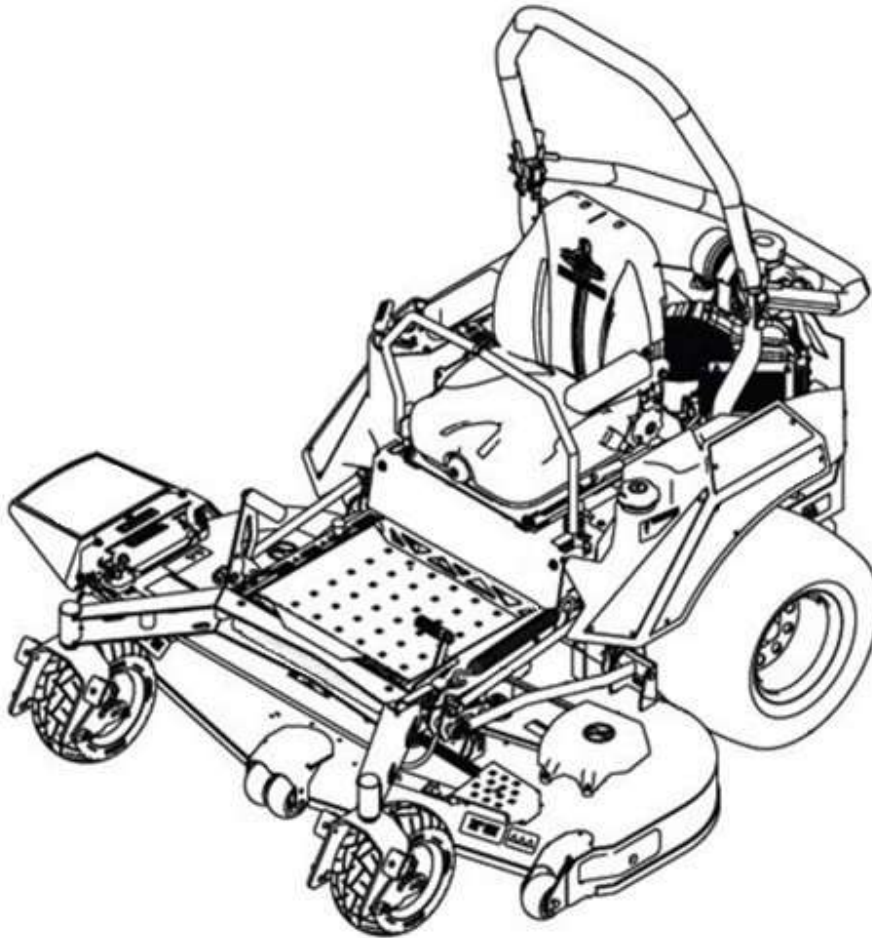
⚠ DANGER Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.

⚠ WARNING Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

⚠ CAUTION Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

Important Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

INTRODUCTION



Z350 Side Discharge model used for illustration

The McCone Z350 Zero Turn Mower provides the ultimate mowing experience with superior value, advanced operator controls, commercial grade components, and unmatched performance.

Our optional foot-operated OCDC (operator-controlled discharge chute) allows you to keep your hands on the steering levels while closing the discharge chute on the fly.

These units have proven power, equipped with the industry preferred Kawasaki Cyclonic engines for trusted reliability and performance.

With a cutting width of 60", the Z350 deck features a deep 7 gauge shell to handle more volume when tackling tough grass. Decks available in 2 options: Rear Discharge (Build 4035500) & Side Discharge (Build 4035501).

The Hydro Gear ZT5400 2 -Speed series transmissions deliver super smooth steering up to 18 miles per hour in a reliable and efficient drivetrain.

You gain ultimate comfort from full suspension with a padded design and ISO mounted platform.

INTRODUCTION

ENGINE SPECIFICATIONS

Description	Specification
Make	Kawasaki
Model	FX1000V
Type	4 Stroke, air cooled, V-Twin, OHV
Number of Cylinders	2
Bore & Stroke	3.5 in. (8.9 cm) x 3.15 in. (8.0 cm)
Total Displacement	61 in ³ (0.999 l)
Intake System	Naturally Aspirated
Gross Intermittent Power	35 hp / 26.1 kW) @ 3600 RPM
Compression Ratio	8.4:1
Maximum Speed	3650 ± 100 rpm (No Load)
Low Idle	1550 ± 100 rpm (No Load)
Rotation	Clockwise viewed at flywheel
Fuel System	2 Barrel Float Feed Carburettor
Fuel	87 Octane Petrol Maximum 10% Ethanol
Ignition System	Two magnetos triggered by flywheel magnets
Spark Plug	NGK BPR4ES
Spark Plug Gap	0.030 inch (0.76 mm)
Engine Oil (API Class)	SF, SG, SH, SJ or SL
Oil Pan Capacity	2.6 Litre / 0.5 Gallon
Starter	12 Volt Solenoid Shift Electric Starter
Alternator	12 Volt, 20 Amp
Dry Weight	138 lb. (62.6 kg)
Dimensions (Length x Width x Height)	20 x 19.6 x 25 in. / 50.8 x 49.7 x 63.5 cm

INTRODUCTION

MOWER SPECIFICATIONS

Description	Specification
Battery	12V, 350CCA
Service Brake	Dynamic braking through the traction circuit
Parking Brake	Hand lever connected to drum brakes on wheel motor
Fuel Tank	37.8 Litre / 8.3 Gallons
Steering	Hand lever speed and direction controls for left and right rear wheel
Traction Drive	Belt driven dual hydrostatic drive axles, 16 cc pump with 218 cc motor
Cutting Unit Drive	Belt Drive with electric clutch
Ground Speed	0-18 mph (0-28.97 kph)
Reverse Speed	0-18 mph (0-28.97 kph)
Cutting Performance	Up to 6.7 acres/hr @14mph (2.71 hectares/hr @ 22.53 km/hr)

CUTTING UNIT SPECIFICATIONS

Description	Specification
Blade Length	20.5 inch (52.07 cm)
Number of Blades	3
Height of Cut	1 to 5 in. (2.5 to 12.7 cm) in 1/4in (0.6 cm) increments
Height of Cut Adjustment	A foot lever raise and lower, 17 preset height settings
Blade Tip Speed	18,506 ft/min (5,640 m/min) @ 3600RPM engine speed

BELT SPECIFICATION

Traction Belt	A-Section, Raw Edge
Blade Belt	B-Section, Wrapped

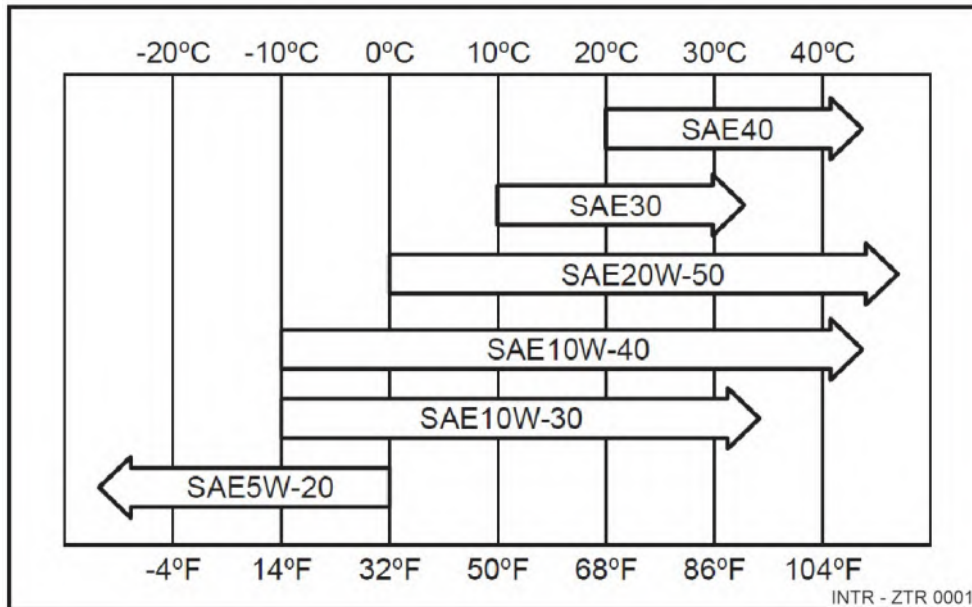
INTRODUCTION

INTRODUCTION

RECOMMENDED LUBRICANTS

Engine Oil

Kawasaki FX850V / FX921 / FX1000V Engine: API Classification Grades SF, SG, SH, SJ or SL



Drive Axle Fluid: The standard drive system fluid is 20W-50 API SL

Grease: Texaco Starplex 2EP Moly (NLGI Grade 2 EP Lithium Complex Grease containing Molybdenum Disulfide) or equivalent.

OPTIONAL EQUIPMENT

- Striping Kit
- Actuator Deck Lift
- Mulcher Kits
- Discharge Enhancement Kits
- Hitch
- Headlight Kit
- Counterweight
- Step Assist
- Slope Indicator
- Handle Assist
- Deck Height Reinforcement
- Springer Fork
- OCDK

INTRODUCTION

DIMENSIONS AND WEIGHTS

Description	Specification
A - Width of Cut	60" / 1524 mm
B - Maximum Width	77" / 1956 mm
C - Height (ROPS Up)	78.5" / 1994 mm
D - Height (ROPS Folded)	55.25" / 1404 mm
E - Total Length (ROPS Up)	88.5" / 2248 mm
F - Total Length (ROPS Folded)	88.5" / 2248 mm
G - Wheel Base	52.5" / 1334 mm
H - Front Wheel Track	40.4" / 1026 mm
J - Rear Wheel Track	46" / 1168 mm
Weight of Unit:	1478 lbs / 217 kg

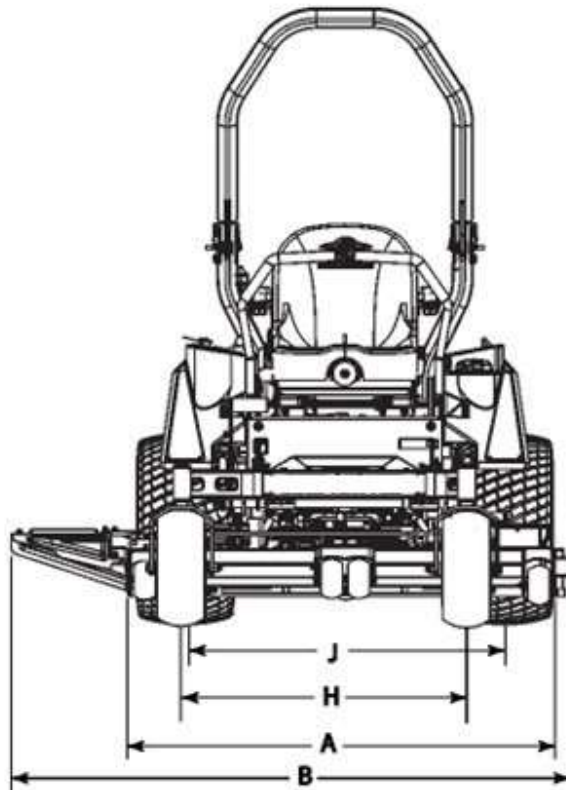
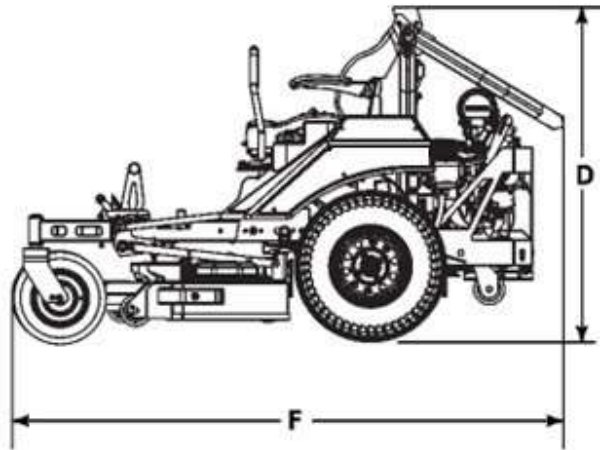
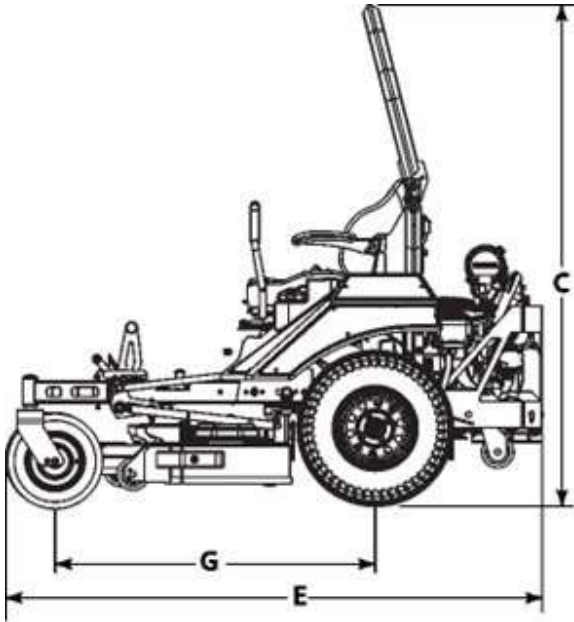
TYRE SPECIFICATIONS

Front Wheel			Rear Wheel		
Tyre Size	Type	Tyre Pressure	Tyre Size	Type	Tyre Pressure
15 x 6 - 8	-	12-15 psi (0.83-1.03 BAR)	25 x 12-12	Turf	8-10 psi (0.55-0.69 BAR)

INTRODUCTION

Z350 Side Discharge model illustrated

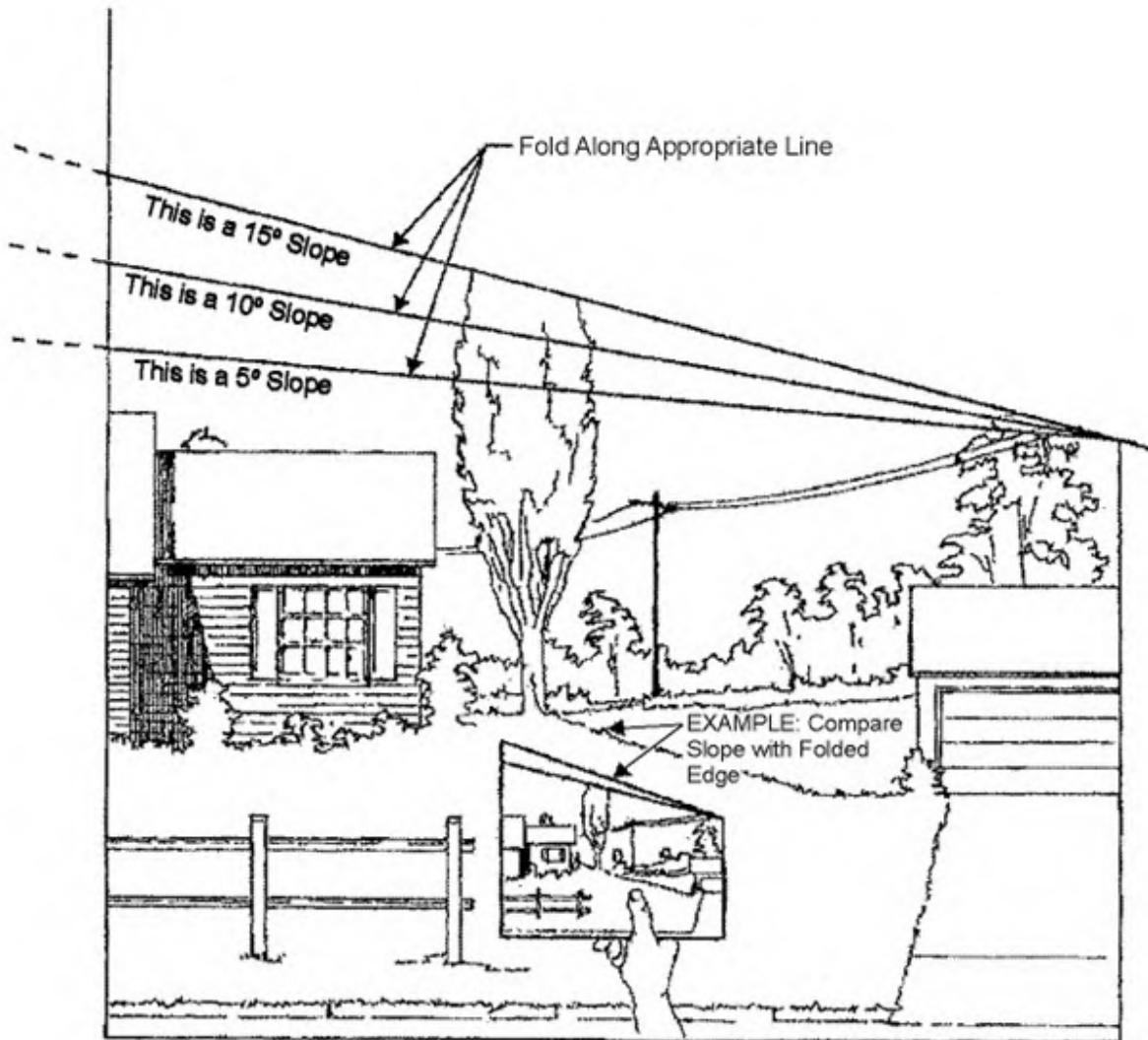
INTRODUCTION



INTRODUCTION

SLOPE ANGLE GUIDE

ALIGN THIS EDGE WITH A VERTICAL SURFACE
(TREE, BUILDING, FENCE POST, POLE, ETC.)



INTRODUCTION


ATTENTION OWNER/OPERATOR

BEFORE OPERATING THIS MACHINE:

- Carefully read the Operator's Manual, completely understand all Safety Messages and instructions and know how to operate the machine correctly.
- Ensure the Verification of Warranty Registration form at the front of this manual has been completed by the Dealer.

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 <https://my.mcconnel.com> 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. <input style="width: 100px;" type="text"/>
Dealer Name:		
Dealer Address:		
Customer Name:		
Date of Warranty Registration:/...../..... Dealer Signature:		

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

Hydraulic Hose Ends			Port Adaptors with Bonded Seals		
BSP	Setting	Metric	BSP	Setting	Metric
1/4"	18 Nm	19 mm	1/4"	34 Nm	19 mm
3/8"	31 Nm	22 mm	3/8"	47 Nm	22 mm
1/2"	49 Nm	27 mm	1/2"	102 Nm	27 mm
5/8"	60 Nm	30 mm	5/8"	122 Nm	30 mm
3/4"	80 Nm	32 mm	3/4"	149 Nm	32 mm
1"	125 Nm	41 mm	1"	203 Nm	41 mm
1.1/4"	190 Nm	50 mm	1.1/4"	305 Nm	50 mm
1.1/2"	250 Nm	55 mm	1.1/2"	305 Nm	55 mm
2"	420 Nm	70 mm	2"	400 Nm	70 mm

ASSEMBLY SECTION

ASSEMBLY

DEALER SETUP INSTRUCTIONS

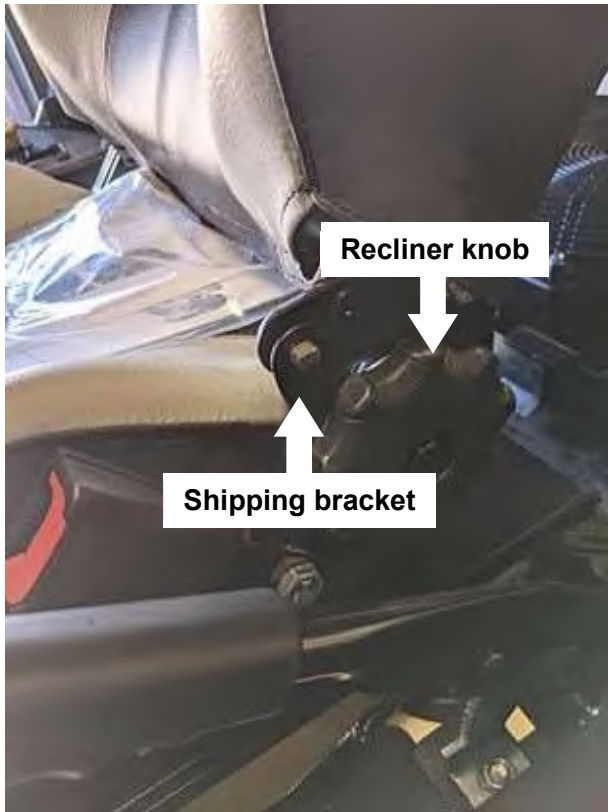
⚠ CAUTION Always use personal protection devices such as eye and ear protectors during assembly.

BATTERY

Attach the positive lead to the battery. Additional wire tie straps are shipped to secure the wiring harness as needed.

Items to check:

- Check oil level in the engine (See Engine Manual).
- Check the fluid level in the hydrostatic oil reservoir.
- Check tightness of all fasteners, including bolts, lug nuts, and setscrews.
- Inflate rear tyre pressure to **8 - 10 psi** and front tyre pressure to **12 - 15 psi**.
- Carefully remove the recliner knob to expose seat position shipment bracket (see below). Remove the shipping bracket while being careful to not let seat back fall rearward onto the engine and/or the oil coolers.
- Rotate seat back into upright position and insert clevis pin and hair pin clip provided with unit (see below).
- Reinstall recliner knob.



OPERATION SECTION

OPERATION

ZERO TURN MOWER OPERATION INSTRUCTIONS

Zero Turn Riding Mowers are manufactured with quality material by skilled workers. The mowers are intended for use on lawns and other frequently maintained areas where a smooth, even cut is desired and superior manoeuvrability is needed. The mower is equipped with protective deflectors to prevent objects being thrown from the mower by the blades, however, no shielding is 100% effective. All shields, guards, and deflectors equipped on the unit must be maintained on the mower in good operational condition.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the mower, or a thrown object. Do not operate the mower if passersby, pets, livestock, or property are directly in front or to the rear of the unit.

This section of the Operator's Manual is designed to familiarise, instruct, and educate safe and proper mower use to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a zero turn mower. Some pictures may show shields removed for purposes of clarity. **NEVER OPERATE** this mower without all shields in place and in good operational condition. The operator must be familiar with the mower operation and all associated safety practices before operating the mower. Proper operation of the mower, as detailed in this manual, will help ensure years of safe and satisfactory use of the mower.

IMPORTANT: Check blade retaining bolt torque after 10 hours of operation. Retighten blade bolt to proper torque.

READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL BEFORE ATTEMPTING TO USE THE MOWER

If you do not understand any of the instructions, contact your local authorised dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the machine.



READ, UNDERSTAND, and FOLLOW the following Safety Messages. Death or serious injury may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards.

OPERATION

1. OPERATOR REQUIREMENTS

Safe operation of the mower is the responsibility of a qualified operator. A qualified operator has read and understands the Operator Manuals and is experienced in mower operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the mower. If any part of the operation and safe use of this equipment is not completely understood, consult an authorised dealer for a complete explanation.

If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

PERSONAL PROTECTIVE EQUIPMENT (PPE)

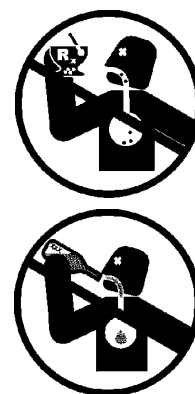
- Always Wear Safety Glasses with side shields (marked with ANSI Z87)
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Filter Mask (depends on operating conditions)



Before beginning operation, clear work area of any objects that may be picked up and thrown by mower. Check for ditches, stumps, holes or other obstacles that could upset power unit or damage mower. Tall grass can hide obstacles. Always push steering levers apart, set parking brake, disengage PTO, turn off engine, and allow blades to come to a complete stop before leaving operator's seat.

⚠ DANGER

DO NOT use drugs or alcohol immediately before or while operating the machine. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the machine, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol.



OPERATION

2. MOWER REQUIREMENT

2.1 ROPS and Seat Belt

The zero turn mower must be equipped with a Roll-Over-Protective-Structure (ROPS) and seat belt to protect the operator from falling off the mower, especially during a roll over where the driver could be crushed and killed. Only operate the mower with the ROPS in the raised position and seat belt fastened. Mower models not equipped with a ROPS and seat belt should have these life saving features installed by an authorised dealer.

3. GETTING ON AND OFF THE MOWER

Before getting onto the mower, the operator must read and completely understand the implement and mower operator manual. If any part of either manual is not completely understood, consult an authorised dealer for a complete explanation.

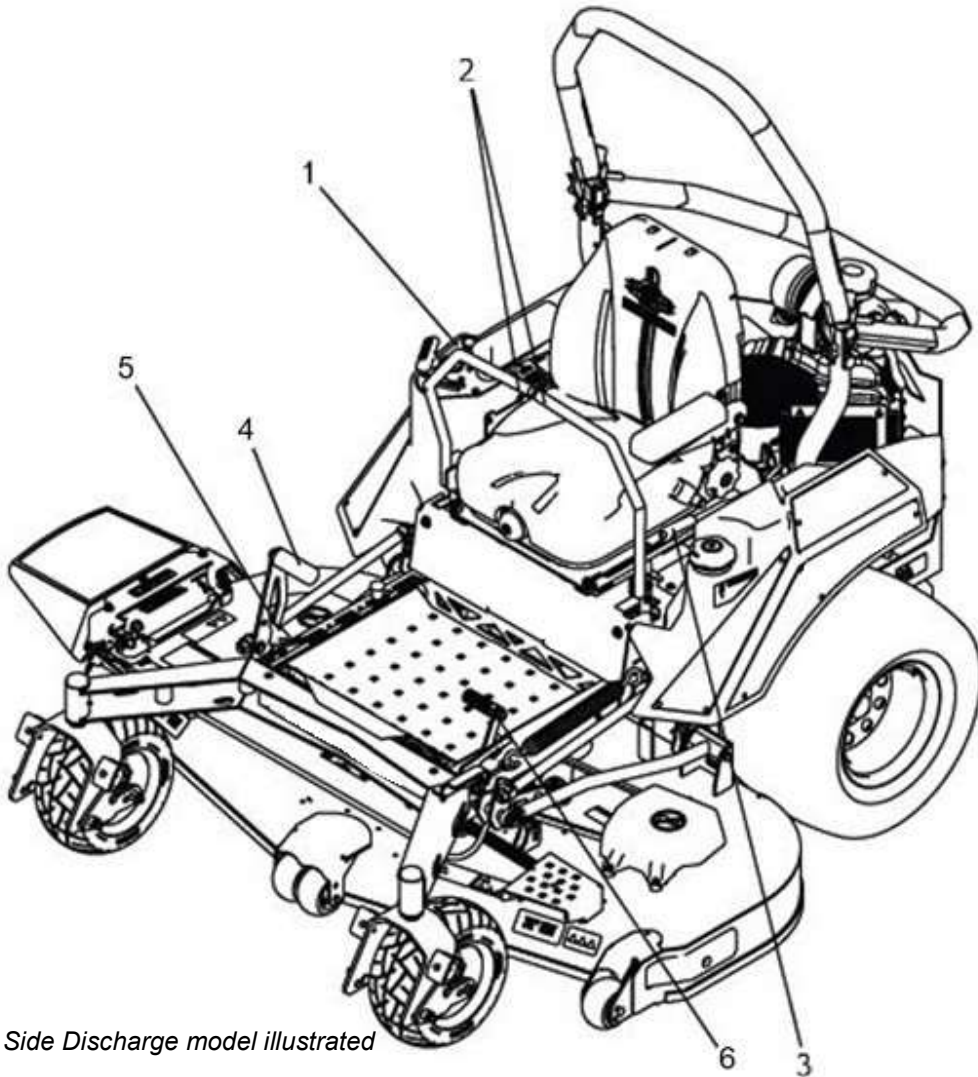
⚠ DANGER Never run the mower engine in a closed building or without adequate ventilation. Fumes from the exhaust can be hazardous to your health.

⚠ DANGER Start mower only when properly seated in the mower seat. Mower can only be started when operator is seated in the mower seat with the seat belt fastened and the control handles in neutral position. Starting a tractor in gear can result in injury or death.

OPERATION

4. CONTROLS

4.1 Mower Controls

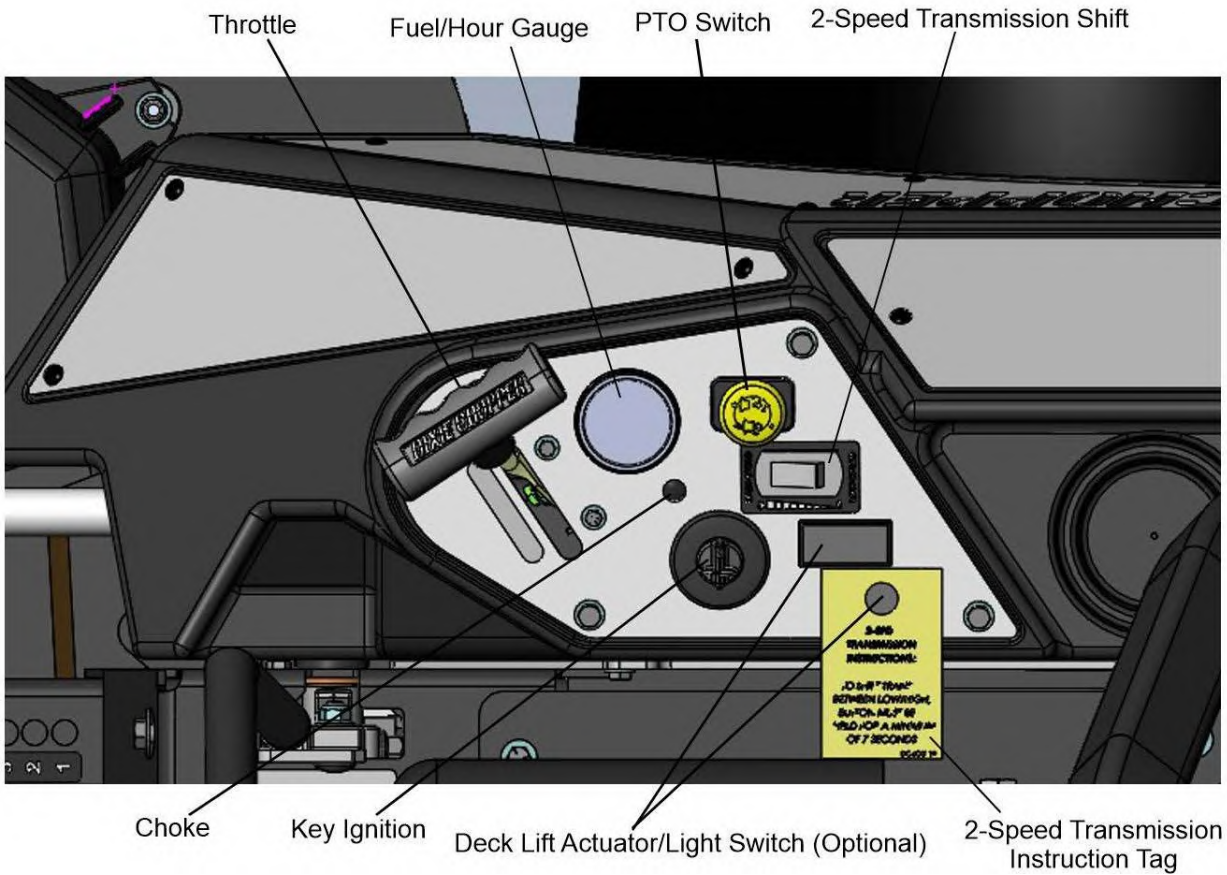


Z350 Side Discharge model illustrated

1. **Control Panel** - Ignition Switch, PTO Switch, Combination Gauge, Throttle Lever, and Choke Control.
2. **Steering Control Levers** - Right and left control levers control separate drive axles for each rear wheel.
3. **Parking Brake Lever** - This lever engages the rear drive axle brakes to prevent movement of the mower.
4. **Cutting Unit (HOC) Pedal** - The cutting unit height of cut (HOC) pedal lifts and lowers the cutting unit.
5. **Lift Stop Lever** - This lever is used to hold the cutting unit in the fully raised position.
6. **Operator Controlled Discharge Chute (OCDC) Lever (if equipped)** - This lever opens and closes the discharge chute on models with a side discharge deck.

OPERATION

4.2 Control Panel



NOTE: Control panel for your Zero Turn may vary slightly.

OPERATION

4.3 Ignition Switch

The ignition switch has three positions, OFF, RUN and START.



OPERATION

4.4 PTO Switch

The PTO switch uses a 2-position knob type switch to engage and to disengage the cutting unit. The PTO switch must be in the OFF (down) position to start the engine.

Pull on the red knob to move the switch to the ON position. When the PTO switch is in the ON position the cutting unit is engaged.

Always mow with the throttle lever in the fast position.



4.5 Combination Gauge

The combination gauge shows the hours of operation, fuel level and engine speed.

The hour meter and engine speed is displayed in the centre of the gauge. The hours of operation is shown when the ignition switch is in the RUN position and the engine is not started. Once the engine starts, the engine speed is shown on the gauge.

The fuel gauge is above the hour meter/engine speed in the centre of the gauge. The fuel gauge shows the level of fuel in the tank. Do not allow the tank to become empty while you operate the mower.



4.6 Throttle Lever

The throttle lever controls the engine speed. Always operate the mower at full throttle during normal operation.



OPERATION

4.7 Choke Control

When you start a cold engine, pull the choke control to the choke position. Slowly push the choke lever to the RUN position when the engine becomes warm.

Pull on the red knob to move the switch to the ON position. When the PTO switch is in the ON position, the cutting unit is engaged.

NOTE: The choke control is not necessary to start a warm engine.

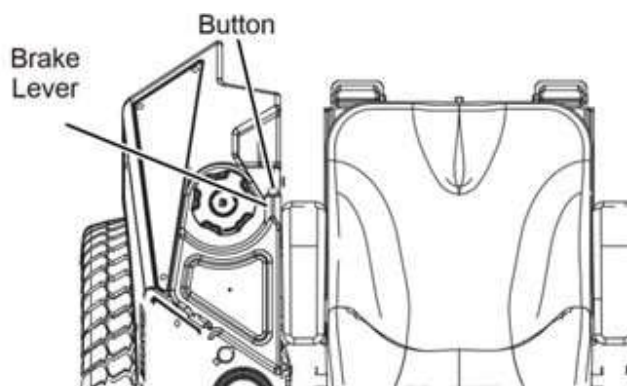


4.8 Parking Brake

The parking brake lever engages the rear drive axle brakes to prevent movement of the mower.

When the steering control levers are in the neutral position, push the button in and pull the parking brake lever up to the engaged position to engage the parking brake. Push the button in and push the parking brake lever down to the disengaged position to disengage the parking brake.

The steering control levers must be in the neutral position, the PTO switch must be in the OFF (down) position and the parking brake engaged to start the mower.



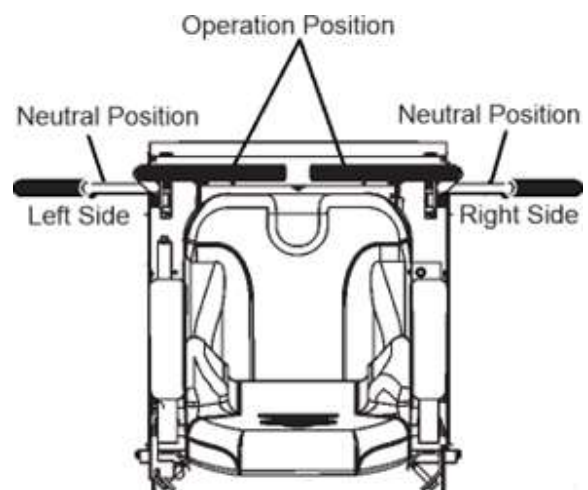
4.9 Steering Control Levers

⚠ DANGER To prevent personal death or personal injury, do not quickly move the steering control levers or suddenly start and stop the mower. You must use more caution when you turn the mower or when you operate on slopes.

The mower has separate drive axles for each rear wheel. The right-side control lever controls the operation of the right-side drive axle. The left-side control lever controls the operation of the left-side drive axle. See section for operation of the steering control levers.

To put the steering control levers in the neutral position, move the steering control levers toward the left and right sides.

The steering control levers must be in the neutral position, the PTO switch must be in the OFF (down) position and the parking brake engaged to start the mower.



OPERATION

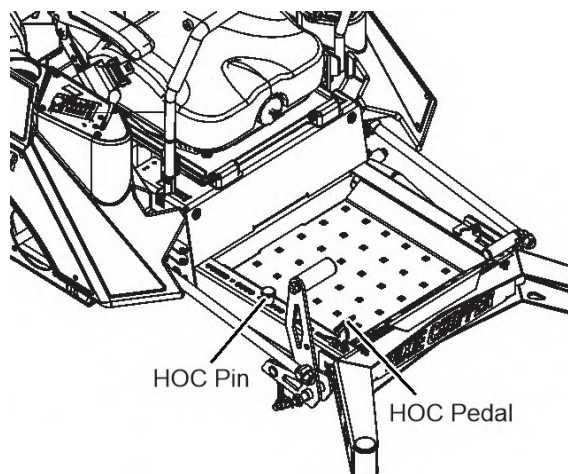
4.10 Cutting Unit HOC Pedal

The cutting unit height of cut (HOC) pedal lifts and lowers the cutting unit.

Install the HOC pin in the correct position for the cutting height. To lower the cutting unit, press the pedal down, push the lift stop lever forward and slowly allow the pedal to lower until the HOC mechanism touches the HOC pin. See the HOC plate position chart.

NOTE: To prevent damage to the HOC mechanism or the cutting unit, slowly allow the pedal to lift until the HOC mechanism touches the pin. Do not allow the cutting unit to drop from the lifted position against the HOC pin.

To lift the cutting unit, fully push the HOC pedal. Release the lift pedal.



4.11 Lift Stop Lever

The lift stop lever is used to hold the cutting unit in the fully raised position.

To lift the cutting unit, fully push the HOC pedal. Release the lift pedal. The lift stop pedal will hold the cutting unit in the fully raised position.

To lower the cutting unit, push on the pedal to release the pressure on the lift stop lever forward. When the cutting unit is lowered, the HOC mechanism will contact the HOC pin.

⚠ DANGER

The operator must be careful of person and objects near the mower. Do not release the cut grass in the direction of persons or allow persons near the mower while in operation.

Never operate a mower with the discharge chute removed. The cutting unit can discharge objects for long distances with the discharge chute removed. Remember that the operator and/or owner are responsible for accidents or hazards that occur to other persons or their property.

OPERATION

4.12 Operator Controlled Discharge Chute (OCDC)

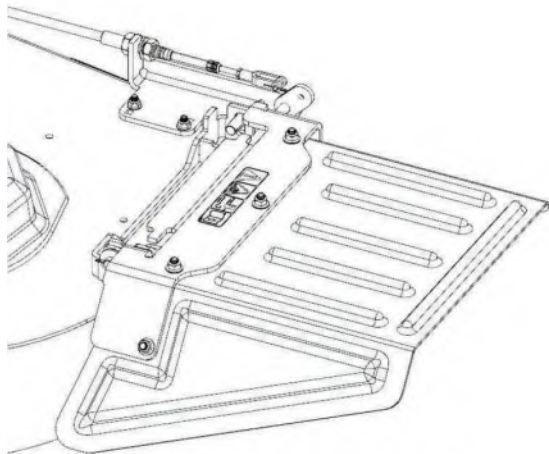
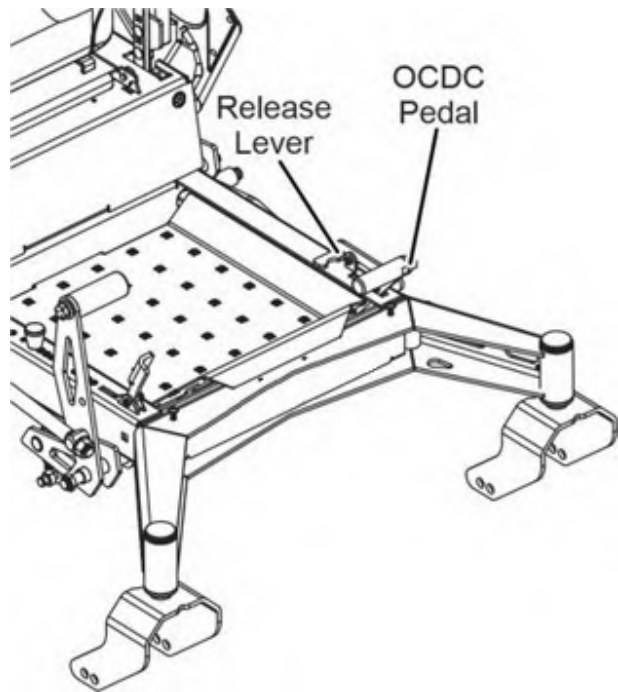
SIDE DISCHARGE MODELS ONLY

If equipped, the operator controlled discharge chute (OCDC), pedal opens and closes the discharge chute. When you mow around flower beds or edges of paths, the discharge chute can be closed to limit the discharge. Never mow with the discharge deflector removed.

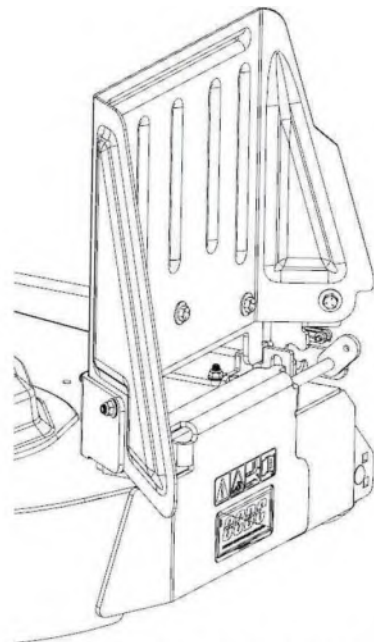
The OCDC discharge pedal will keep the chute in the fully open or fully closed position.

To close the OCDC chute, put foot on the OCDC pedal, fully depress the pedal until the lock engages in the forward position to lock the OCDC in the closed position.

The OCDC is normally open. If the OCDC is locked closed then you need to put your foot on the OCDC pedal, fully depress the pedal while placing your heel on the release lever to release it so that the OCDC pedal can come back to the standard open position.



Chute deflector must be in down position during operation.



Chute deflector up position is for transportation purpose only.

OPERATION

OPERATION

5. INTERLOCK SYSTEM

The Interlock System prevents the engine to start unless the steering control levers are in the NEUTRAL position, the parking brake is engaged, and the PTO switch is in the OFF (Down) position. The system stops the engine if the operator leaves the seat with the PTO switch in the ON position, steering control levers out of the NEUTRAL position the parking brake disengaged.

⚠ WARNING Do not operate the equipment with the Interlock System disconnected or the system does not operate correctly. Do not disconnect or prevent the operation of any switch.

- The engine does not start during test 1
- The engine does start during tests 2, 3, and 4
- The engine continues to run during test 5 and 6

Refer to the chart below for each test and follow the check marks across the chart. Turn OFF the engine between each test.

TEST 1: The test shows the normal engine start procedure. The operator is in the seat, parking brake is engaged, the steering control levers are in the NEUTRAL position and the PTO switch is in the OFF (down) position. The engine will start.

TEST 2: The engine MUST NOT start if the PTO switch is in the ON position.

TEST 3: The engine MUST NOT start if the parking brake is disengaged.

TEST 4: The engine MUST NOT start if the steering control lever(s) is out of the NEUTRAL position.

TEST 5: Start the engine with the normal procedure. Turn on the PTO switch and lift your weight off the seat. The engine MUST STOP. The cutting unit BLADES MUST NOT ROTATE after seven (7) seconds.

TEST 6: Start the engine with the normal procedure. Disengage the parking brake and lift your weight off the seat. The engine MUST STOP. The cutting unit BLADES MUST NOT ROTATE after (7) seconds.

Test	Operator Seated		PTO Switch Off		Parking Brake Engaged		Steering Control Levers in Neutral		Engine Starts	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1	X		X		X		X		X	
2	X			X	X		X			X
3	X		X			X	X			X
4	X		X		X		X			X
5	X	*	X	*	X		X		*	
6	X	*	X		X	*	X		*	

* Start the engine with the normal procedure, move position of the switch and lift your weight off the seat. The engine **must stop immediately** and the cutting unit **blades must not rotate** after seven (7) seconds.

OPERATION

6. MOWER PRE-OPERATION INSPECTION

Before each mower use, a complete inspection and service is required to ensure the mower is in a good and safe working condition. Damaged and/or broken parts should be repaired and/or replaced immediately.

To ensure the mower is ready for operation, conduct the following;

6.1 Pre-Operation Checklist

1. Make sure fuel tank is full. Use regular unleaded fuel, see engine manual for more details.

⚠ WARNING Avoid Serious Injury or Death: Petrol is extremely flammable and explosive under certain conditions.

- Refuel in a well-ventilated area with engine stopped.
 - Do NOT smoke or allow flames or sparks in the refuelling area or where fuel is being stored.
 - Do NOT overfill fuel tank. After refuelling, make certain the tank cap is closed properly and securely.
 - Be careful NOT to spill fuel when refuelling. Fuel vapor or spilled fuel may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
 - Keep Out of the Reach of Children.
2. Do NOT mix oil with petrol.
 3. Do not use white, high test or premium petrol. Do not use de-icers, carburettor cleaners or other such additives.
 4. Check the crankcase oil level. Make sure the engine is off. The mower should be parked on a level area. Do not overfill. (See your engine manual for more detailed instructions.)
 5. Check battery fluid level.
 6. Inspect V-Belts.
 7. Check tyre pressure (Use low pressure gauge)
Rear Drive Tyres: 15 psi (*Rear tyres may be inflated to 12 psi if additional ride comfort is desired*).
Front Tyres: 8-10 psi.
 8. Make sure underside of mower deck is free of grass.
 9. Make sure mower blades are sharp and secured tightly.
 10. Clean the air intake screen on the engine if necessary.
 11. Perform any other maintenance as it becomes necessary. (See "Maintenance" Section.)
 12. Check parking brake operation by disengaging hydrostatic trans-axles (freewheeling position), and placing the brake lever in the "ON" position. Attempt to 'rock' tractor by hand. Both drive wheels should be locked. When the brake handle is in the "OFF" position, both drive wheels should turn freely. If there is a problem in either position, refer to adjustment procedure in the Maintenance Section.

⚠ WARNING Engine Exhaust Gases contain poisonous Carbon Monoxide.

- Never run engine in a closed building or confined area.
- Avoid inhaling exhaust gases.

OPERATION



Zero Turn Mower PRE-OPERATION Inspection

Mower ID# _____ Model: _____

Date: _____ Shift: _____

This page can be copied for use outside of the manual.

⚠ WARNING

Before conducting the inspection, make sure the mower engine is OFF, all rotation has stopped and the mower is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely supported and all hydraulic pressure has been relieved.

OPERATION

Item	Confirmation of check	Specific Comments if not OK
Check engine has been serviced.		
Check battery fluid level.		
Low oil pressure light is cleared for operation.		
Operator interlock switches checked for operation.		
Blades are not broken, bent or cracked.		
All fittings lubricated.		
Hydraulic reservoir filled to appropriate level with oil.		
All shields in place and in good condition.		
ROPS is installed.		
Retractable seat belt functions properly.		
All fasteners torqued to specifications in Torque Chart.		
All decals in place and readable.		
Overall condition good (i.e. paint, welds).		
Parking brake checked and adjusted, if necessary.		
Steering checked and adjusted, if necessary.		
Check tyre pressures.		
Check fuel level.		
Operator manual is stored on the machine.		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE MOWER

OPERATION

6.2 Preparing to Drive the Zero Turn Mower

1. ENSURE FUEL LINE VALVE is set to OPEN.
2. MOVE CONTROL LEVERS TO neutral "OUT" position by pushing each one straight sideways.
3. SET PARKING BRAKE. Pull rearward to set.
4. DISENGAGE MOWER BLADE CLUTCH by moving clutch switch to "OFF" (down) position.
5. SET ENGINE CHOKE CONTROL for cold starts to full position.
6. SET ENGINE THROTTLE TO 1/2 throttle.
7. TURN IGNITION KEY to "START" position and release to "RUN" as soon as engine starts.

NOTE: Prolonged cranking will damage starter motor and shorten the battery life. Wheels should NOT rotate. If one or both drive wheels are turning, perform procedures under "Motion Control Adjustment" for side(s) that wheel turns.

8. ADJUST ENGINE THROTTLE AND CHOKE for desired engine smoothness and speed.

NOTE: When mowing, always run engine at full throttle.

9. RELEASE PARKING BRAKE. Push brake lever forward to release.

CAUTION If the operator is inexperienced with the zero turn mower lever steering/speed control, they should follow these recommendations:

- Disengage the mower blades.
- Go very slowly until thoroughly familiar with the machine.
- Keep away from fences, buildings, and other obstructions.
- While becoming familiar with the machine move the controls levers smoothly and slowly.
- Practice until operation is smooth and efficient.

6.3 PTO RPM and Ground Speed

Ground speed for mowing will depend upon the height, type, and density of vegetation to be cut. Recommended speed for efficient mower performance is between 2 and 3 mph. Operate the mower at its full speed to maintain blade speed for a clean cut.

6.4 Operating the Mower

WARNING Mow only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never mow in darkness or foggy conditions where you cannot clearly see at least 100 feet (30 m) in front and to the sides of the tractor and mower. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see these type of items discontinue mowing.

WARNING Avoid mowing in reverse direction when possible. Check to make sure there are no persons behind the mower and use extreme care when manoeuvring in reverse. Mow only at a slow ground speed where you can safely operate and control the mower. Never mow an area that you have not inspected and removed debris or foreign material.

OPERATION

6.5 Mowing Recommendations

1. Keep mower blades sharp.
2. Make sure deck is clean.

⚠ WARNING To avoid serious injury from blade contact, power must be OFF to clean mower deck.

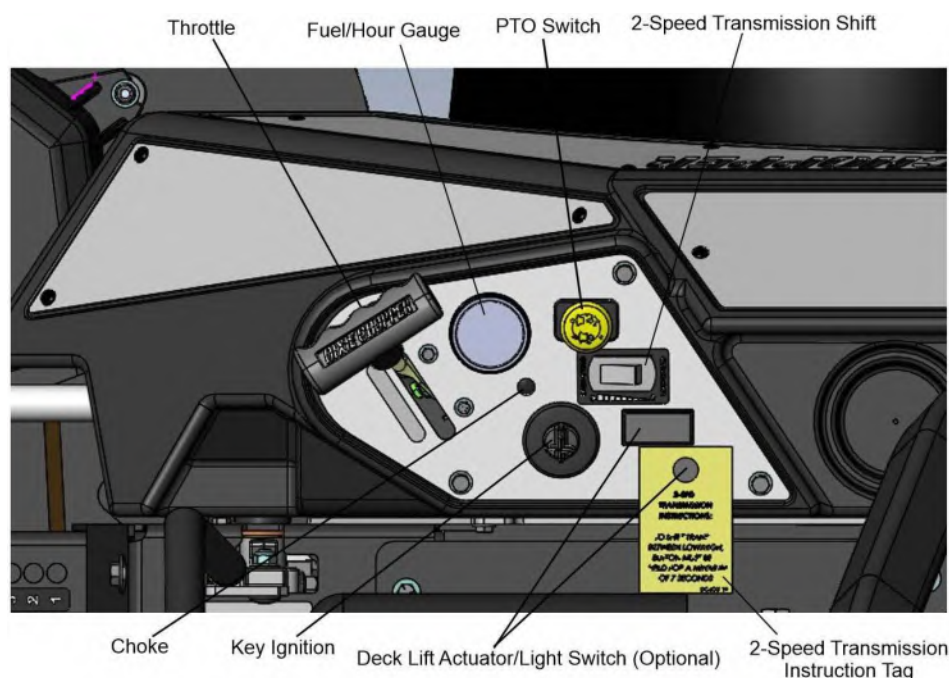
⚠ DANGER Keep hands and feet away from underneath mower to avoid serious injury or death.

⚠ WARNING Rotary mowers can discharge objects at high speeds. To avoid serious injuries or death:

- Operate only with side bands in good repair.
- Keep Children, Pets, and Bystanders away from the work area.
- Do not operate mower in the vicinity of other persons.

7. STARTING THE ENGINE

Start the engine with the operator in the seat, steering controls levers in the Neutral position, the PTO switch in the OFF position and the parking brake engaged.



Set the throttle lever to half throttle.

If the engine is cold, move the choke to the choke position.

Turn the ignition switch to the START position. Release the key when the engine starts. Allow 20 seconds between start tries to allow the starter motor to become cool.

NOTE: Do not hold the ignition switch in the START position for more than 5 seconds.

When the engine starts, move the choke to the RUN position. Allow the engine to warm up before operating engine at full throttle.

OPERATION

8. TO STOP THE ENGINE

To stop and park the mower in normal conditions:

1. Turn the PTO switch to the OFF position. Drive the mower to a flat and level area to park the mower.
2. Put the steering control levers in the Neutral position.
3. Lower the cutting unit to the ground. Engage the parking brake.
4. Turn the ignition switch to the OFF position and remove the key before you leave the mower.

NOTE: If an emergency occurs and you must park the mower in the area of operation, follow the guidelines set by the grounds manager. If the mower is parked on a slope, chock or block the wheels.

9. OPERATING THE ZERO TURN MOWER

THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE MOWER AND ALL CONTROLS BEFORE ATTEMPTING TO OPERATE. The operator must read and understand the Safety and Operation Sections of the mower operator's manual. This manual must be read and explained to any operator who cannot read. Never allow someone to operate the mower without complete operating instructions.

Before starting any operation, the operator must become familiar with the area to be worked in and any obstacles and hazards contained within to ensure safety to the operator, bystanders, and equipment. Special attention should be paid to foreign debris, rough terrain, steep slopes, ditches, and passersby and animals in the area

⚠️ WARNING

Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before mowing. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop mowing immediately if blades strike a foreign object. Repair all damage and make certain rotor or blade carrier is balanced before resuming mowing.



⚠️ WARNING

Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items.

9.1 Bystander/Passerby Precautions

If a bystander comes within 100 feet of the tractor while the mower is being operated, stop the tractor at once, idle the engine and disengage the PTO. Do not engage the PTO again until all bystanders are well past the 100 feet distance.

9.2 Engaging the Power Take Off (PTO)

Before engaging the PTO, make certain that the area is clear of bystanders and passersby. The implement must be completely lowered and the deck positioned at a safe operating height.

⚠️ WARNING

Do not put hands or feet under mower decks. Blade Contact can result in death or serious injury. Stay away until all motion has stopped and the decks are securely blocked up.



OPERATION

10. DRIVING THE MOWER

Read and follow all safety instructions contained in this manual when you operate the mower. When you operate in the reverse direction, look behind you to make sure you have a clear path. Do no mow in reverse.

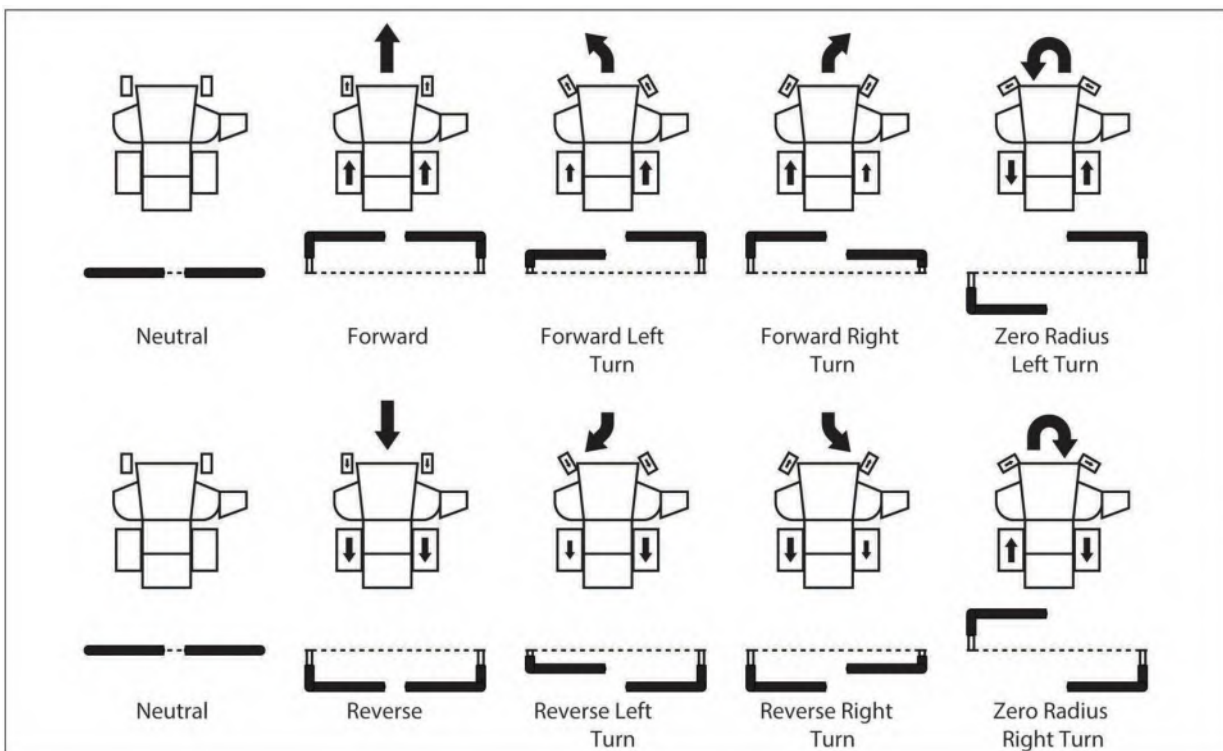
Slowly and equally push both the right-side and left-side control levers forward to drive the mower in the forward direction. The more the levers are pressed the more the forward speed is increased.

⚠ DANGER To prevent personal injury or death, do not quickly move the steering Control levers or suddenly start and stop the mower. You must use extra caution when you turn the mower or when you operate on slopes.

Slowly and equally pull both the right-side and left-side control levers toward you to drive the mower in the reverse direction. The more the levers are pulled the more the reverse speed is increased. Press the levers against the reverse stop for the maximum reverse speed.

To turn the mower to the left, push the right-side drive lever more than the left-side drive lever. The greater the difference in lever position, the sharper the mower will turn. To do a zero radius left turn, press the right-side lever forward and pull the left-side lever toward you.

To turn the mower to the right, push the left-side drive lever more than the right-side drive lever. The greater the difference in lever position, the sharper the mower will turn. To do a zero radius right turn, press the left-side lever forward and pull the right-side lever toward you.



OPERATION

10.1 Setting Forward Speed Limit Screws

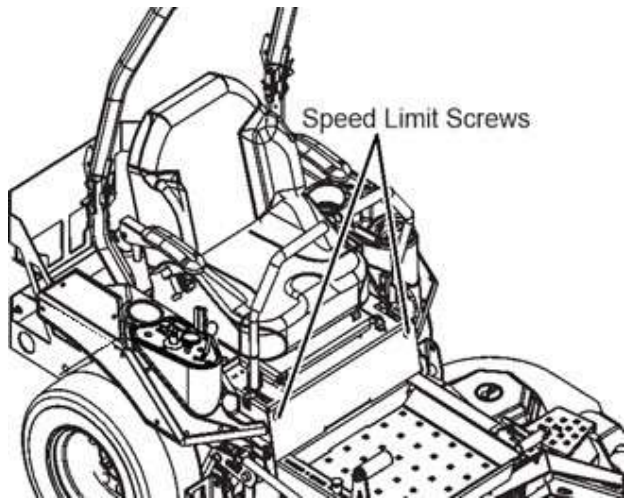
The cutting quality is improved at speeds lower than the full transport speed of the mower. The local turf condition may require a different speed.

To adjust the forward speed, adjust the speed limit screws at the front of the seat support. Turn the screws to the right-side to decrease the forward speed. Turn the screws toward the left side to increase the forward speed.

Make certain the speed limit screws on both sides of the mower are set to the same adjustment.

Test drive the mower. If the mower steers to the right or left when both steering control levers are pushed all the way forward, tracking adjustments may be required.

- If the mower steers to the right, adjust the speed limit screw on the left side of the mower to decrease the left drive axle speed.
- If the mower steers to the left, adjust the speed limit screw on the right side of the mower to decrease the right drive axle speed.



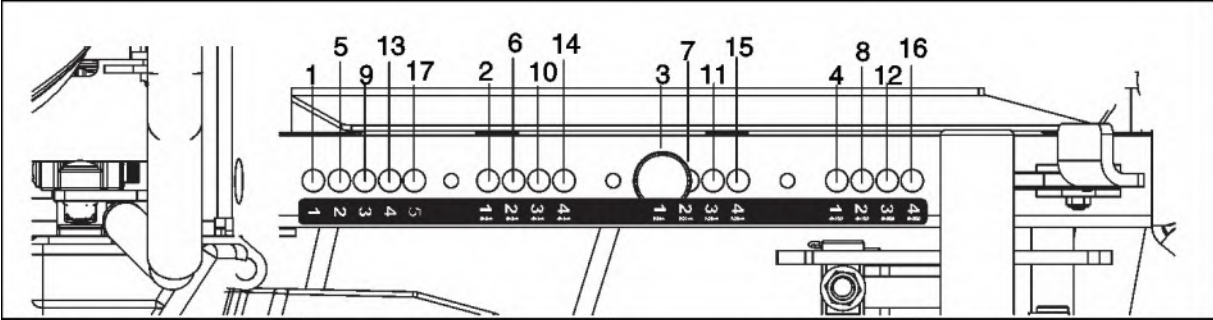
OPERATION

11. MOWING

11.1 Height of Cut

The height of cut is determined by the position of the HOC pin, engage the parking brake, stop the engine and remove the key before you change the HOC. Fully lift the deck until it is held with the lift stop lever.

Use the chart to find the correct cutting height pin location for the necessary HOC.



Hole	HOC	Hole	HOC
1	1 Inch (2.5 cm)	10	3-1/4 Inch (8.3 cm)
2	1-1/4 Inch (3.2 cm)	11	3-1/2 Inch (8.9 cm)
3	1-1/2 Inch (3.8 cm)	12	3-3/4 Inch (9.5 cm)
4	1-3/4 Inch (4.4 cm)	13	4 Inch (10.2 cm)
5	2 Inch (5.1 cm)	14	4-1/4 Inch (10.8 cm)
6	2-1/4 Inch (5.7 cm)	15	4-1/2 Inch (11.4 cm)
7	2-1/2 Inch (6.4 cm)	16	4-3/4 Inch (12.1 cm)
8	2-3/4 Inch (7.0 cm)	17	5 Inch (12.7 cm)
9	3 Inch (7.6 cm)		

Ops-2838

⚠ WARNING To prevent injuries, when the blades rotate, keep your hands, feet and clothing away from the cutting unit.

NEVER use your hands to clean the cutting unit. Use a brush to remove grass from the blades. The blades can be sharp and can cause injury.

To Mow:

1. Put the PTO switch in the ON position. The blades will start turning.
2. Lower the cutting unit.
3. Push the steering control levers forward to drive the mower. Never mow in the reverse direction.
4. Slow down when you turn the mower on slopes.

OPERATION

11.2 Mowing on Slopes

⚠ DANGER Operate by mowing **across** a slope that is no greater than 15 degrees. Failure to observe this is unsafe and can cause tipping or loss of traction resulting in death or serious injury.

Refer to the Slope Indicator page in the front of this manual to determine if a slope or hill is too DANGEROUS to operate this Zero Turn Mower!

Refer to the **SAFETY SECTION: Using ROPS and Seat Belts for Operating on Slopes Safely.**

⚠ CAUTION To avoid tip-over, drive across slopes, not up and down. If machine stops going uphill, stop blades and back down slowly.

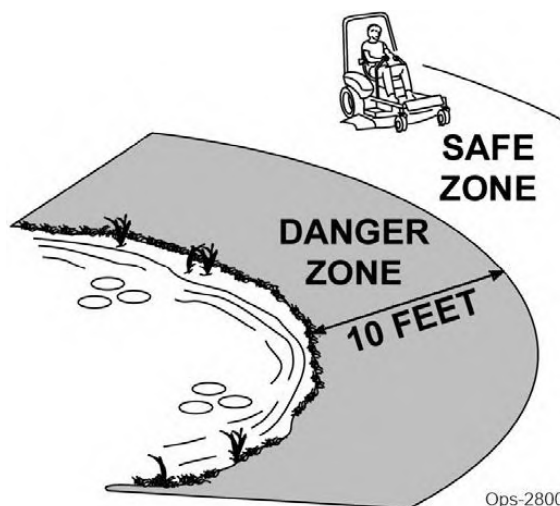
The mower is made to have good traction and to have good balance. Operate the mower with caution when you drive on a slope. If you drive on wet grass the traction is decreased which can cause sliding and result in loss of control.

1. Reduce speed to slowest speed possible before starting up or down hills.
2. Avoid stopping or changing speed on hills.
3. If you must stop, place the steering levers in the neutral lock position and engage parking brake.
4. To restart movement, release the parking brake. Move the steering levers out of Neutral Lock position and push forward equally to regain forward motion.
5. Make turn slowly if operator must turn on a slope or hill.

11.3 Mowing Near Water, Ditches, and Embankments

⚠ DANGER Operating this Zero Turn Mower near water where drop offs are present is unsafe. Wheels dropping over the edge can cause rollover or loss of traction resulting in death or serious injury by drowning.

- Watch for ditches, holes, rocks, dips and rises that can change the operating angle. Keep away from drop offs and steep banks. Tall grass can hide these obstacles.
- Use caution near drop offs, ditches, or embankments. The Zero Turn Mower can suddenly turn over if a wheel goes over an edge of a ditch, drop off, embankment, or an edge caves in.
- Mow at a safe distance from water's edge (Ponds or Lakes). A danger of 10 feet should be observed.



OPERATION

12. TRANSPORTING THE ZERO TURN MOWER

- Make sure all conditions and item being towed are safe for towing and allow for the operator to maintain control of the mower. Never tow on slopes, wet ground, or unstable surfaces. The total towed weight must not exceed 250 lbs., the tongue weight must not exceed 25 lbs. and slope can only be a maximum of 5 degrees.
- Only attach towed equipment at the approved hitch point.
- Never allow children or others to ride in or on towed equipment.
- Stopping distance increases with speed and weight of load being towed. Travel slowly and allow extra time and distance to stop.
- Do not turn sharply when towing. Use additional caution when turning or operating under adverse surface conditions. Use care when reversing.

12.1 Towing the Mower

If the mower has a problem and cannot drive to the service area, open the bypass valve and load the mower on a trailer. Be careful when you load or unload the mower on a trailer. Trailer must be wider than the mower and suitable to carry the weight of the mower. Use a full-width ramp to load or unload the mower on a trailer.

If a trailer is not available, tow the mower at a slow speed for short distances.

Important When towing the mower do not drive more than 2 mph (3.2 km/hr). It is recommended that you do not tow the mower for long distances.

Be careful when you load or unload the mower on the trailer. To prevent the mower from moving or shifting use straps, chains, cables or ropes to fasten the mower to the trailer. Make sure that all latches are correctly fastened. Engage the parking brake.

If the trailer is moved on the highway, inflate the tyres to the maximum pressure stated on the tyre before you fasten the mower to the trailer. Decrease the tyre pressure after the mower is removed from the trailer.

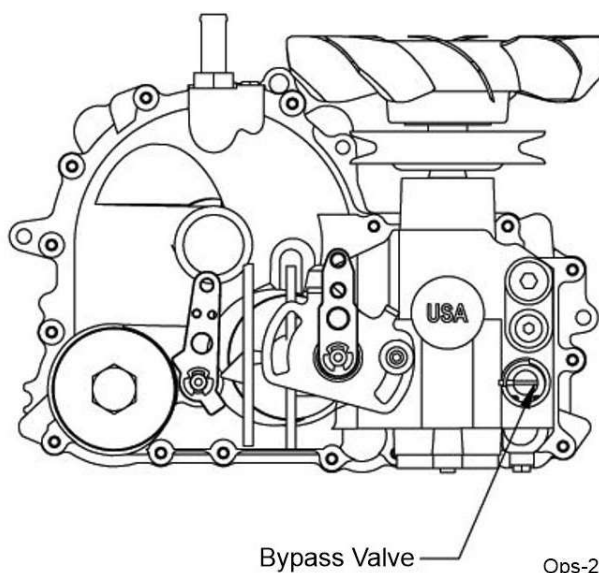
Open the bypass valve on both drive axles before you tow the mower. The bypass valve lets the mower be moved without the engine started and to prevent possible damage to drive axle components.

The bypass valve is found on the front side of the left and right drive axles. To open the valve, turn the lever 90° in the direction indicated by the arrow.

Before towing, disengage the parking brake and make sure the cutting unit is lifted.

When the mower gets to the service area, engage the parking brake and close the bypass valves.

If a trailer is not available, tow the mower at a slow speed for short distances.



OPERATION

13. TROUBLESHOOTING GUIDE

The problem solution chart lists basic problems that can occur during start and operation of the mower. For complete information about the hydraulic and electrical systems, contact your McConnel Dealer.

Problem	Possible Cause	Remedy
Engine Will Not Start	Parking brake disengaged, PTO switch ON or steering levers out of neutral position.	Check Interlock System and start-up procedure.
	Battery low on charge or defective.	Inspect condition of battery and battery connections.
	Fuel tank empty or dirty.	Fill with fresh fuel. Change Fuel filter.
	Fuse Blown.	Replace fuse.
	Relay(s) defective.	Test and replace relay.
Engine Hard to Start or Runs Poorly	Fuel level low, fuel or fuel filter dirty	Fill with fresh fuel. Change fuel filter.
Engine Stops	Fuel tank empty.	Fill with fresh fuel and bleed fuel lines.
	Interlocks not set before leaving the operator's position.	Put steering levers in neutral position, engage parking brake and set PTO Switch to OFF.
Engine Overheating	Air intake restricted.	Clean engine cooling air intake and fins.
Battery Not Holding Charge	Loose or corroded battery terminals.	Inspect and clean terminals.
	Low electrolyte.	Refill to correct level.
	Charging system defective.	See engine manual.
Cutting Unit Does Not Cut Evenly	Deck not level.	Check that decks are level. Check and adjust cutting height.
	Engine speed too slow.	Check engine speed with throttle in its fast position.
	Mow speed not adjusted for conditions.	Adjust mow speed for best cut.

See Engine Manual for Engine Adjustments.

MAINTENANCE SECTION

MAINTENANCE

PARTS INFORMATION

PARTS INFORMATION

Zero Turn mowers use balanced and matched system components for blade carriers, blades, cutter shafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to McConnell specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce mower performance, void warranties, and present a safety hazard. Use genuine McConnell mower parts for economy and safety.

CONTACT YOUR McCONNEL DEALER FOR GENUINE PARTS

Before operating your mower, make sure it is properly lubricated and thoroughly inspected. Only a minimum of time and effort is required to regularly lubricate and maintain this machine to provide long life and trouble free operation.



WARNING Before you clean, adjust or repair this equipment, push PTO switch to the OFF position, lower the cutting unit, engage the parking brake, stop the engine and remove the key.

Make sure the mower is parked on a solid and level surface. Never work on a mower that is lifted only by a jack. Always use jack stands.

A qualified technician must always do adjustments and maintenance. If the correct adjustments cannot be made, contact your McConnell Dealer.

Inspect the equipment according to the maintenance schedule and keep complete records.

1. Keep the equipment clean.
2. Keep all moving parts correctly adjusted and lubricated.
3. Replace worn or damaged parts before you operate the mower.
4. Keep all fluids at the correct level.
5. Keep all shields in position and all fixings tight.
6. Keep the tyres correctly inflated.

When you make the adjustments or repairs, do not wear jewellery or loose fitting clothing.

Refer to the illustration in the Parts Manual for the removal and assembly of parts.

When discarding hazardous materials (batteries, lubricants, fuel, anti-freeze etc.), comply with the rules and regulations in force in your area. Contact your Local Authority for advice on this subject.

MAINTENANCE

MAINTENANCE SCHEDULE

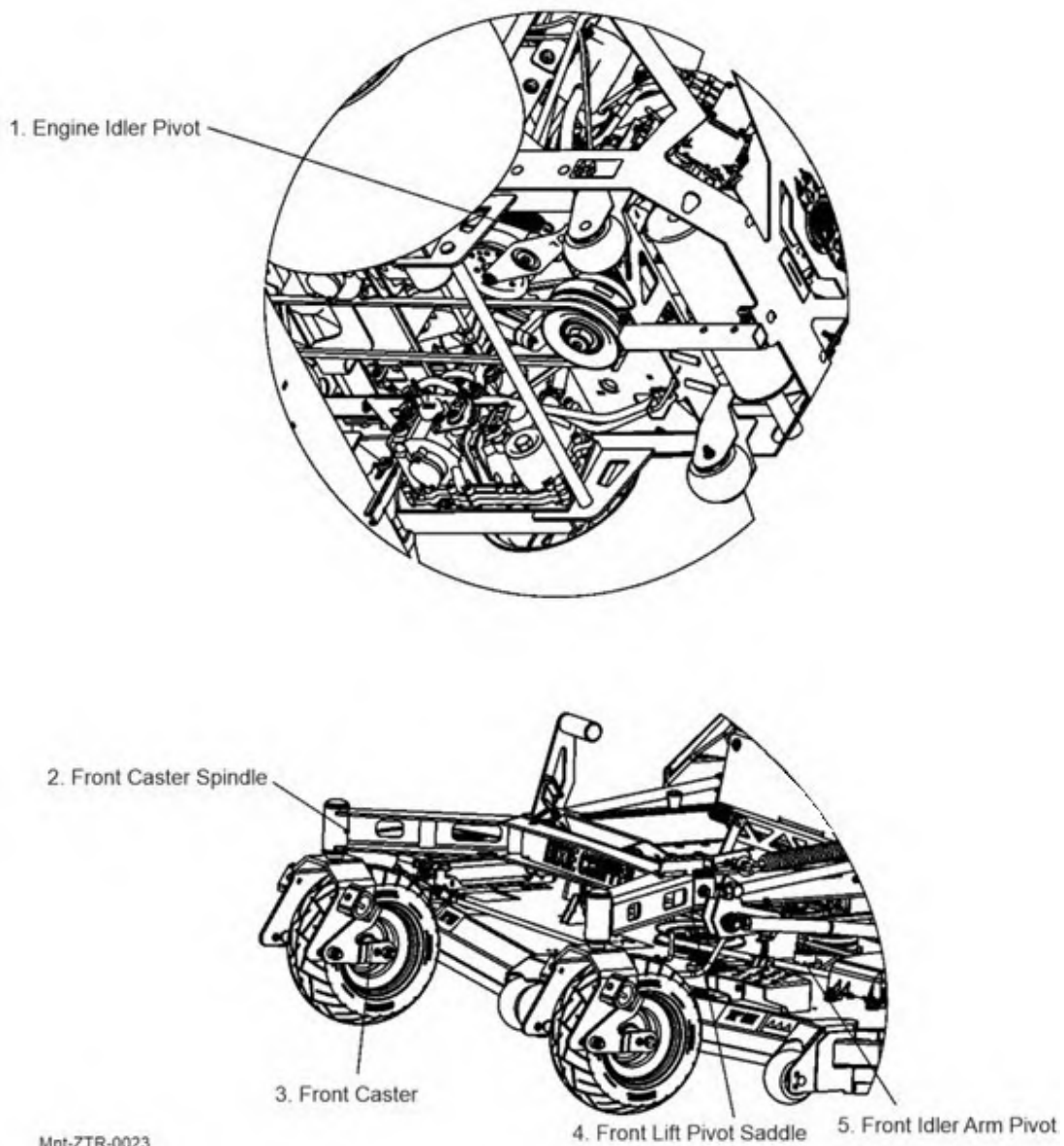
MOWER SERVICE INTERVAL CHART	
Interval	Service Task
First 8 Hours	Inspect electrical wiring. Check engine oil. Clean area around muffler and controls.
Daily (10 Hours)	Check safety interlock system. Check engine oil level. Clean engine oil cooler. Check drive axle oil. Clean area around muffler and controls.
Every 25 Hours	Clean air filter foam pre-cleaner (if equipped).
Weekly (50 Hours)	Check fuel lines and fittings. Inspect parking brake and steering control lever linkage. Inspect deck and drive belts. Check for loose components. Lubricate grease fittings.
First 100 Hours	Replace drive axle filter and fluid.
Bi-Weekly (100 Hours)	Clean and re-gap spark plugs. Clean engine oil cooler fins and cylinder cooling fins. Check engine exhaust system. Replace engine oil and filter.
Monthly (200 Hours)	Check electric wiring. Replace primary air filter element. Clean secondary air filter element.
300 Hours	Clean combustion chamber. Check and adjust valve clearance. Clean and lap valve seating surfaces.
400 Hours	Replace fuel filter. Replace drive axle filter and fluid.
Yearly (500 Hours)	Replace secondary filter element. Replace spark plugs.

MAINTENANCE

MAINTENANCE

LUBRICATION

Grease Fitting Locations



Mnt-ZTR-0023

1. Engine Idler Pivot
2. Front Caster Spindle (2 Fittings)
3. Front Caster (2 Fittings)
4. Front Lift Pivot Saddle (2 Fittings)
5. Front Idler Arm Pivot

MAINTENANCE

Fluid Requirements

Component	Quantity	Type
Engine Oil with Filter	1.83 Quarts (2.08 L)	Varies depending on air temperature
Drive Axle with Filters and Coolers	Approximately 3.0 Quarts (3.4 L) each drive axle	
Fuel	6.9 Gallons (38.7 L)	87 Octane Petrol Max. 10% Ethanol

ENGINE

Important

The mower includes a separate Engine Manual prepared by the engine manufacturer. Read the Engine Manual and know the operation and maintenance of the engine. When you follow the engine manufacturer instructions, you will make sure the maximum service life of the engine. Replacement engine manuals are available from the engine manufacturer.

Operation and maintenance during the first 5 hours of a new engine can make a difference to the performance and life of the engine.

During the first 8 hours of operation, the following is recommended;

- Allow the engine to reach a temperature of at least 140°F (60° C) before operation at full load.
- Check the engine oil level two times a day. Higher than normal oil use can occur during the first 5 hours.
- Change the engine oil and oil filter after the first 8 hours of operation.
- Refer to the Engine manual for specified maintenance intervals.

Important

The mower operates and cuts correctly at the preset governor setting. Do not change the engine governor setting or over speed the engine.

MAINTENANCE

Engine Oil

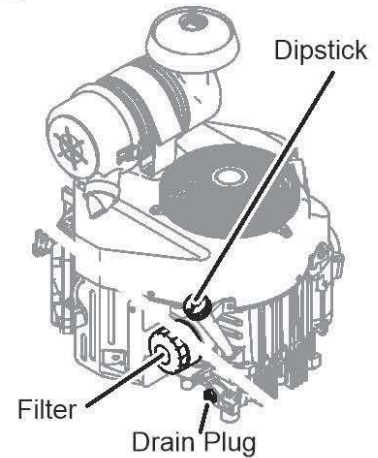
Check engine oil level

Check the engine oil level before you start the engine or at least five minutes after you stop the engine.

1. Park the mower on a level surface.
2. The dipstick is found on the front corner of the engine behind the seat. Remove the dipstick. Clean the dipstick with a cloth and replace in position.
3. Remove the dipstick and check the oil level. The oil level must be between the two level indicators on the dipstick.



Kawasaki Engine



Change Engine Oil and Filter

Refer to the Engine Manual for any specific requirements for changing the oil and filter.

1. Start the engine to increase the temperature, then stop the engine.
2. Place a container capable of holding one gallon under the engine.
3. Remove the oil drain plug and allow the engine oil to drain into a container.
4. Remove the oil filter.
5. Let the engine oil flow into a container.
6. Clean the filter area on the engine.
7. Apply a thin layer of oil to the gasket on new filter. Install the oil filter.
8. Tighten the filter until the gasket contacts the oil filter adapter, then tighten an additional 1/2 to 3/4 turn. Only use your hand to tighten the filter.
9. Replace the oil drain plug and fill the engine with the correct quantity and grade of oil through the dipstick tube.
10. Start the engine and check around the oil filter gasket for leaks.
11. Stop the engine and check the engine oil level.

CAUTION

The engine oil can damage your skin. Use gloves when you use engine oil. If engine oil touches your skin, clean the area immediately. The used engine oil must be disposed of in a responsible manner - if required, contact your Local Authority for advice on this subject.

MAINTENANCE

Engine Air Filter

Do not remove the filter to inspect the air cleaner. Removal of the filter increases the risk of dust and other particles entering the engine.

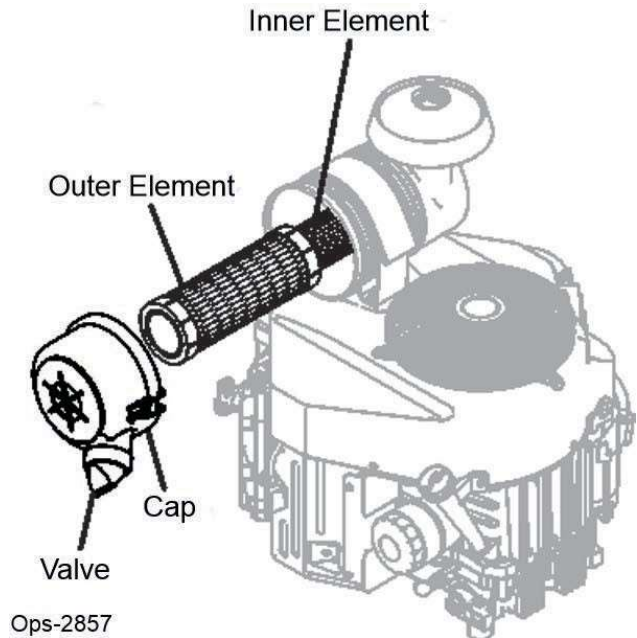
Refer to the Maintenance Chart for air filter service and replacement.

When service is needed, first clean the outside of the filter housing, then remove the outer element. Only remove the inner element if replacement is needed

Clean the inside of the filter housing, Make sure dust and other particles do not get into the engine inlet hose.

Inspect the new elements. Do not use a damaged element and never use an incorrect element.

Engine - Assemble the inner and outer filter elements. Make sure the elements seat correctly. Assemble the cap to the filter housing. Make sure the cap seals around the filter. The dust valve on the cap must be at the bottom of the filter. Fasten the cap with the two clips.



Engine Exhaust

WARNING

The exhaust fumes contain carbon monoxide. The carbon monoxide in the exhaust fumes can increase to dangerous levels. To protect you from carbon monoxide poisoning, inspect the complete exhaust system every month and replace damaged components immediately. Never operate the engine without suitable ventilation.

The temperature of the exhaust components can be greater than 300° (149° C). To prevent burns, do not touch a hot exhaust system.

If you sense a change in the colour or sound of the exhaust, stop the engine immediately. Identify the problem and have the system repaired.

Torque all exhaust manifold fittings equally. Tighten or replace the exhaust clamps.

MAINTENANCE

FUEL

⚠ CAUTION

Petrol is flammable. Use caution when you add fuel to the mower. Only use an approved container. The spout on the container must fit inside the fuel filler neck. Never use containers that are not approved to store or transfer fuel.

⚠ WARNING

Refuel the mower before you start the engine. Never remove the fuel cap or add fuel to the mower when the engine is in operation or when the engine is hot.

Refuel outdoors only and do not smoke whilst you are adding fuel.

If fuel spills do not try to start the engine until fuel vapours have dispersed, do not allow sparks, open flame or other types of ignition near the fuel spillage.

Never keep fuel containers near an open flame or any device that can cause the ignition of fuel or fuel vapours.

Always replace the fuel tank cap and container cap immediately after adding fuel.

Only fill the fuel tank to the bottom of the filler neck.

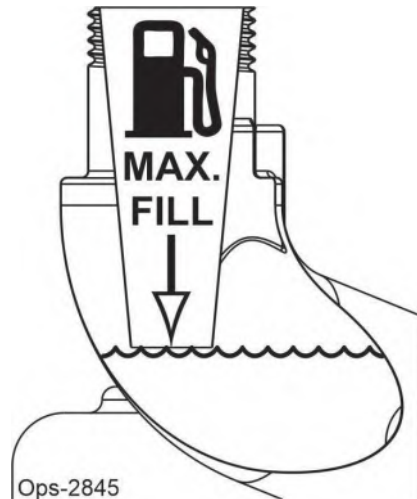
Do not use premium petrol or an oil-petrol mixture. Use clean, fresh, regular unleaded gasoline, 87 octane minimum. When using blended fuel, do not use a blend with more than 10% ethanol. Under no circumstances should you use a blend with methanol. Refer to the engine's operator manual for fuel recommendations when using blended fuel.

NOTE: E15, E20 and E85 blended fuels are NOT approved and should not be used. Effects of old, stale or contaminated fuel are not covered under the warranty.

Check fuel hoses and clamps every 50 hours. Replace fuel hoses and clamps at first indication of wear or damage.

Store fuel in accordance with your Local Authority regulations or as instructed by your fuel supplier.

Never allow the tank to become empty.



MAINTENANCE

BATTERY

Charging the Battery

⚠ WARNING Charge the battery in an area with good airflow. The battery can release hydrogen gas that is explosive. To prevent an explosion, keep any device that can cause sparks or flames away from the battery.

When the battery charger is turned on, to prevent injury, stay away from the battery. A battery that is damaged can cause an explosion.

Read the battery charger manual for specified instructions on the operation of the charger. Do not charge the battery with the ignition switch in the ON position. Always disconnect the negative battery cable when charging the battery.

When possible, remove the battery from the mower before you charge the battery. If the battery is not sealed, check and make sure the level of the electrolyte is above the plates in all of the cells.

Make sure the battery charger is turned OFF, then connect the battery charger to the battery terminals as specified in the battery charger manual.

Always turn OFF the battery charger before you disconnect the battery charger from the battery terminals.

Servicing the Battery

Before you service the battery, make sure the ignition switch is in the OFF position and the key is removed.

⚠ CAUTION When you service the battery, always use the tools with insulation, wear protective glasses and protective clothing.

Discard used batteries as advised by your Local Authority.

⚠ WARNING The battery contains corrosive acid. Prevent contact with the battery acid. Always wash your hands after you service or handle a battery.

⚠ WARNING The battery post, battery terminals and certain related accessories contain lead and lead compounds, wear protective gloves, glasses and clothing when handling these items.

Tighten the battery cables on the battery terminals. To prevent corrosion, apply a layer of silicone dielectric grease to battery terminals and ends of cables. Keep the vent caps and battery terminal covers in position.

Before you do any welding operation on the mower, always disconnect the battery cables from the battery.

Confirm battery polarity before connecting or disconnecting the battery cables.

When you install the battery, always connect the positive (RED) battery cable before the negative (BLACK) battery cable.

When removing the battery, always disconnect the negative (BLACK) battery cable before the positive (RED) battery cable.

Jump-Starting the Mower

1. Before you try to 'jump-start' the mower, check the condition of the drained battery.
2. Connect the positive (+) battery terminal of the charged battery to positive battery terminal of the drained battery.
3. Connect the negative (-) battery terminal of the charged battery to frame of vehicle with the drained battery.

⚠ WARNING The battery can release hydrogen gas that is explosive. To decrease the risk of an explosion, prevent sparks near the battery. Always connect the negative jumper cable to the frame of the mower with the drained battery.

4. When the cables are connected start the engine on the vehicle with the good battery, then start the mower.

MAINTENANCE

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Fluid Change Procedure

This trans-axle is designed with a serviceable filter. To ensure constant fluid quality levels and longer life, an initial oil and filter change at 100 hours is recommended. Subsequent changes are recommended at 400 hour intervals minimum, or yearly, whichever comes first.

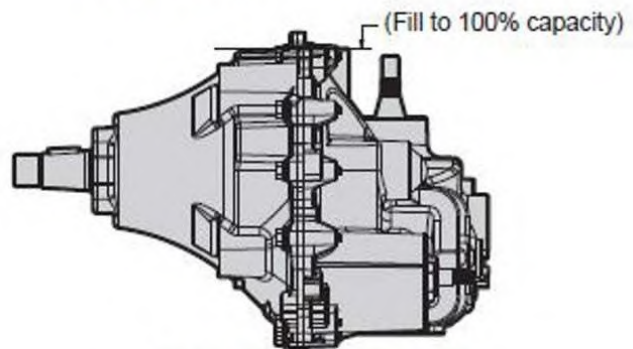
The following procedure can be performed with the trans-axle installed in the vehicle, and the vehicle on level ground. Apply the bypass valve and lock the vehicle parking brake.

1. Place an oil drain pan (12" or more in diameter and 1.75 gallon capacity is optimal) beneath the oil filter. Remove the oil filter cover from the trans-axle to drain the oil. Remove the O-Ring from the cover and discard the O-Ring.
2. After the oil has drained from the trans-axle, remove oil filter from trans-axle housing.
3. Install new filter and new O-Ring onto the filter cover and install the filter cover. Refer to figure Mnt-ZTR-0026. See torque specifications for correct torque.

NOTE: The oil volume figure shown does not include what is in the expansion tank hose or the expansion tank. That will have to be determined by the machine manufacturer/end user due to varying hose sizes/lengths and expansion tank sizes.

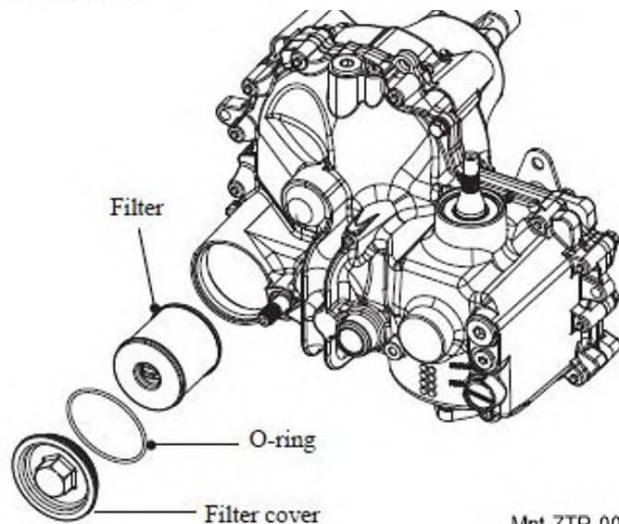
4. Remove the top oil fill vent port plug and fill the trans-axle with new **20W50** motor oil through the expansion tank port/fill port until oil reaches the oil fill vent port.
5. Install top oil fill vent port plug and continue filling the system with oil until the fill line is reached in the expansion tank.
6. Drain old oil filter of all free flowing oil prior to disposal. Place the used oil in an appropriate container and deliver to an approved recycling facility.
7. Proceed to the purge procedure.

Oil Fill Volume



Oil Volume = 4875 - 4925 mL
(164.8 - 166.5 fl. oz.)
(1.287 - 1.301 gal.)

Mnt-ZTR-0025



Mnt-ZTR-0026

MAINTENANCE

TYRES AND WHEELS

Tyres

Keep the tyres correctly inflated to increase tyre life. Inspect the tread wear.

Check the tyre pressure each day, while the tyres are cool. Use an accurate low-pressure tyre gauge.

Keep the rear tyres inflated to 8-10 psi and the front tyres inflated to 12-15 psi.

CAUTION DO NOT try to put a tyre on a rim unless you have the correct training, tools and experience. Incorrect mounting can cause an explosion which can cause injury.

Wheel Mounting Procedure

WARNING Make sure the mower is parked on a solid and level surface. Never work on a mower that is supported only by the jack. Always use jack stands. If only the front or back of the mower is lifted, put chocks in front of or behind the wheels that are not lifted.

- Remove dirt, grease and oil from the stud threads. Do not lubricate threads.
- Put the wheel on the hub. Inspect the wheel to make sure of full contact between surface of wheel and hub.
- Tighten wheel nuts with your fingers, then torque the nuts in a criss-cross order. When possible, tighten nuts in the top position
- Check and torque nuts each day, ensure torque is kept at 65/75 ft.lb. (88-102 Nm).

FOLDING ROPS

A folding Roll Over Protective Structure (ROPS) is installed on this mower. Inspect the ROPS periodically for loose fixings or damage.

CAUTION Keep the ROPS fixings correctly fastened. Do not do welding operations, drill, change or bend the ROPS. Replace damaged ROPS. Do not try to correct a damaged ROPS.

Every 400 hours, inspect the seat, seat belt, ROPS mounting fixtures and ROPS frame for damage. Replace all damaged parts immediately. All replacement parts for the ROPS must be as specified in the Parts Manual.

Check and torque all ROPS fixings every 100 hours.

Only operate the mower with ROPS in the folded position on flat and level surfaces. Do not operate the mower with the ROPS in the folded position on slopes, near steep edges or near water.

NOTE: *There is no roll over protection with the ROPS in the folded position.*

WARNING To prevent injury when you fold the ROPS, use caution to avoid your fingers being crushed between moving and rigid parts of the ROPS.

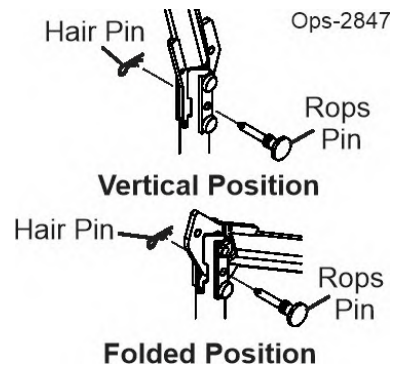
Always wear the seatbelt with the ROPS frame in the vertical and locked position.

Never wear the seatbelt with the ROPS in the folded position.

MAINTENANCE

Folding the ROPS:

- Remove the hair pin and ROPS pin from both side of the ROPS.
- Fold the ROPS toward the back of the mower.
- Assemble the ROPS pin and hair pin to lock the ROPS in the folded position. **NEVER** wear the seat belt with the ROPS in the folded position.



AIR COOLING SYSTEM

The engine on the mower is an air-cooled engine. Dirt and other objects can reduce the air flow and cause the engine to overheat, cause bad performance and decreased engine life.

Important Do not use water to clean the engine. Water can cause contamination in the fuel system. Use a brush or clean cloth to clean the engine

- Use a brush or a dry cloth to clean the air intake area.
- Keep throttle linkage, springs and controls clean.
- Use compressed air to remove debris from the engine oil cooler fins.
- Refer to the Engine manual for additional information.

BLADES

Inspecting Blades

Every 50 hours of operation or when the unit is removed from the mower, carefully inspect the blades to make sure the blades are in good condition. Replace any blade that has bends, grooves or cracks.

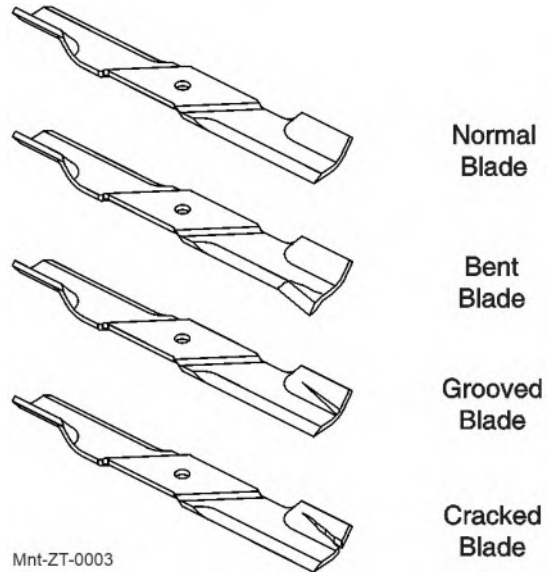
CAUTION Be careful when you check blades to prevent pinching hands and fingers between ends of the blades.

WARNING Never try to correct or repair a damaged blade. Always replace a damaged blade. Bends, grooves or cracks can cause a piece of the blade to come loose and be discharged from the mower. The broken blade pieces can cause injury to persons or property damage.

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A bent blade can have a small crack that can increase and cause a piece of the blade to break. The bent blades can cause vibration and other stress on the mower.

Dust or sand particles can wear a dangerous groove in the blade between the air vanes and the flat part of the blade. The groove can quickly increase in size and allow a piece of the blade to break.



Sharpening Blades

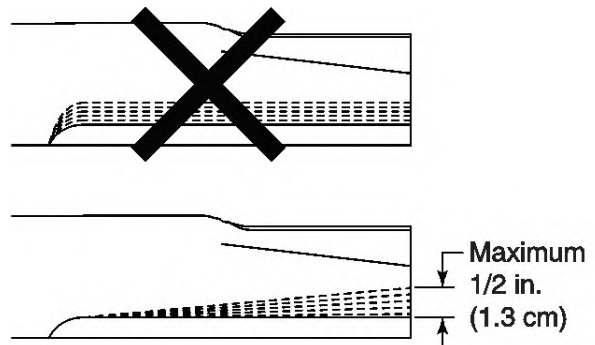
Put a wooden block between the blade and cutting unit housing to prevent blade rotation.

⚠ WARNING

Be careful and wear gloves when you check or service the cutting unit blades. Use a brush to remove grass clippings from the blades. The blades are sharp and can cause injuries. When you remove more than one half inch of material, the blade tip can break and be discharged from the mower. The broken blade pieces can cause injury to persons or property damage.

When you prepare or sharpen the blade, do not follow the original grind pattern, grind new cutting edges at an angle. If the maximum of 1/2" (1.3 cm) blade loss has occurred do not sharpen, replace the blade.

To prevent a blade balance issue, make sure an equal amount of material is removed from both ends of the blades. A blade that is not balanced will cause vibration and can damage the mower. Use a blade balancer to check the blade after you sharpen.



Torque centre blade bolt to 125-135 ft.lb. (169 to 183 Nm).

MAINTENANCE

ELECTRICAL SYSTEM

⚠ CAUTION Always turn the ignition switch to the OFF position and remove the negative (BLACK) battery cable before you inspect or service the electrical system.

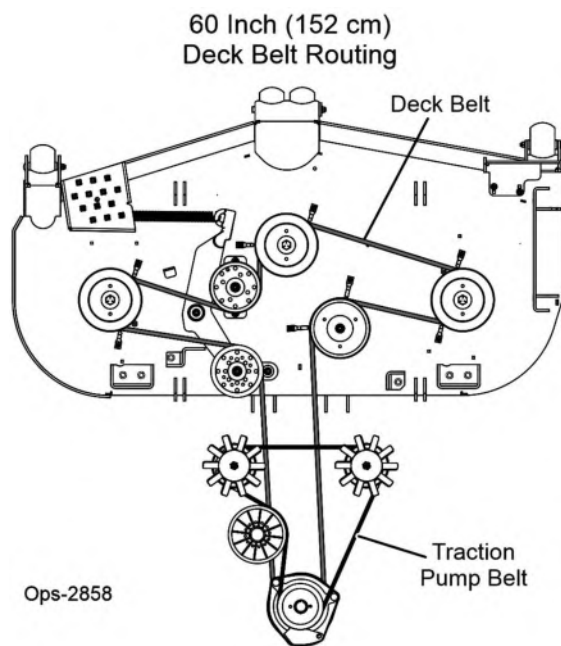
General precautions to decrease electrical problems are:

- Make sure that all the connections are clean and correctly fastened.
- Check the Interlock System and fuses at normal intervals. If the Interlock System does not operate correctly and you cannot correct the problem, contact your McConnel Dealer.
- Keep wiring harnesses away from hot surfaces and moving parts.
- Never disconnect or reconnect the ECU harness connector or any individual components with the ignition switch in the ON position. Disconnecting connectors with the power on can cause damaging voltage spikes through the ECU.
- Check the battery and the charging system.
- Do not wash or pressure spray around electrical connections and components.

BELTS

Replace the belts if they show signs of cuts, tear, burns caused by slipping or excessive wear.

To remove the belts, reduce belt tension by pulling the idler pulley away from the belt. Note the belt routing and remove the belts from the pulleys. The new belt must use the same belt routing



MAINTENANCE

MAINTENANCE





TORQUE SETTINGS GUIDE FOR FASTENERS





The torque values included in these charts are approximate and are for reference only. Use these torque values at your risk. McConnel is not responsible for any loss, claim or damage caused by these charts. **Always use caution with torque values.**

RECOMMENDED TORQUE IN FOOT POUNDS UNLESS OTHERWISE STATED IN THE MANUAL.

NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF fine and UNC coarse threads.

Grade 5 (Inch) and Grade 8.8 (Metric) plated bolts are used unless a note is given. Always check the marks on the head of the bolts for the bolt grade. For tightening plated bolts, use the value given for lubricated.

SIZE	UNITS					SIZE	UNITS				
		Lubricated	Dry	Lubricated	Dry			Lubricated	Dry	Lubricated	Dry
#6-32	in-lb (Nm)	–	20 (2.3)	–	–	7/16-14	ft-lb (Nm)	37 (50.1)	50 (67.8)	53 (71.8)	70 (94.9)
#8-32	in-lb (Nm)	–	24 (2.7)	–	30 (3.4)	7/16-20	ft-lb (Nm)	42 (56.9)	55 (74.6)	59 (80.0)	78 (105)
#10-24	in-lb (Nm)	–	35 (4.0)	–	45 (5.1)	1/2-13	ft-lb (Nm)	57 (77.2)	75 (101)	80 (108)	107 (145)
#10-32	in-lb (Nm)	–	40 (4.5)	–	50 (5.7)	1/2-20	ft-lb (Nm)	64 (86.7)	85 (115)	90 (122)	120 (162)
#12-24	in-lb (Nm)	–	50 (5.7)	–	65 (7.3)	9/16-12	ft-lb (Nm)	82 (111)	109 (148)	115 (156)	154 (209)
1/4-20	in-lb (Nm)	75 (8.4)	100 (11.3)	107 (12.1)	143 (16.1)	9/16-18	ft-lb (Nm)	92 (124)	122 (165)	129 (174)	172 (233)
1/4-28	in-lb (Nm)	85 (9.6)	115 (13.0)	120 (13.5)	163 (18.4)	5/8-11	ft-lb (Nm)	113 (153)	151 (204)	159 (215)	211 (286)
5/16-18	in-lb (Nm)	157 (17.7)	210 (23.7)	220 (24.8)	305 (34.4)	5/8-18	ft-lb (Nm)	128 (173)	170 (230)	180 (244)	240 (325)
5/16-24	in-lb (Nm)	173 (19.5)	230 (26.0)	245 (27.6)	325 (36.7)	3/4-10	ft-lb (Nm)	200 (271)	266 (360)	282 (382)	376 (509)
3/8-16	ft-lb (Nm)	23 (31.1)	31 (42.0)	32 (43.3)	44 (59.6)	3/4-16	ft-lb (Nm)	223 (302)	298 404	315 (427)	420 (569)
3/8-24	ft-lb (Nm)	26 (35.2)	35 (47.4)	37 (50.1)	50 (67.8)	7/8-14	ft-lb (Nm)	355 (481)	473 (641)	500 (678)	668 (905)

SIZE	UNITS									Non Critical Fasteners into Aluminum
		Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	
M4	Nm (in-lb)	–	–	–	–	–	–	3.83 (34)	5.11 (45)	2.0 (18)
M5	Nm (in-lb)	1.80 (16)	2.40 (21)	4.63 (41)	6.18 (54)	6.63 (59)	8.84 (78)	7.75 (68)	10.3 (91)	4.0 (35)
M6	Nm (in-lb)	3.05 (27)	4.07 (36)	7.87 (69)	10.5 (93)	11.3 (102)	15.0 (133)	13.2 (117)	17.6 (156)	6.8 (60)
M8	Nm (in-lb)	7.41 (65)	9.98 (88)	19.1 (69)	25.5 (226)	27.3 (241)	36.5 (323)	32.0 (283)	42.6 (377)	17.0 (150)
M10	Nm (ft-lb)	14.7 (11)	19.6 (14)	37.8 (29)	50.5 (37)	54.1 (40)	72.2 (53)	63.3 (46)	84.4 (62)	33.9 (25)
M12	Nm (ft-lb)	25.6 (19)	34.1 (25)	66.0 (48)	88.0 (65)	94.5 (70)	125 (92)	110 (81)	147 (108)	61.0 (45)
M14	Nm (ft-lb)	40.8 (30)	54.3 (40)	105 (77)	140 (103)	150 (110)	200 (147)	175 (129)	234 (172)	94.9 (70)

Mnt-ZT-0006

MAINTENANCE

CARE AND CLEANING

Clean the mower and cutting units after each use. To prevent damage to the engine do not wash the mower with the engine in operation. When possible, clean the mower with compressed air.

Important

Do not wash any part of the mower that is hot. Do not use high-pressure spray or steam. Use cold water and automotive cleaners.

Do not use a pressure washer to clean the deck. Water can get in and under seals and cause damage to the equipment.

Use Compressed air to clean the engine and the engine oil cooler fins. Do not pressure wash the engine.

Clean the underside of the deck frequently.

Use clean water to wash your equipment.

Important

Use of salt water or drain water is known to cause rust and corrosion of metal parts and can cause damage or failure. This damage is not included by the factory warranty.

Do not spray water on the control panel, ignition switch or other electrical components.

Clean all plastic or rubber parts with a weak soap solution or use commercially available rubber cleaners.

Repair damaged metal surfaces and use touch-up paint. Apply wax to the equipment for maximum paint protection.

CAUTION

To prevent risk of fire, clean grass clippings and dirt from the cutting unit, drives, engine and exhaust components on a regular basis.

WARNING

Never use your hands to clean cutting units. Use a brush to remove grass clippings from the blades. The blades are sharp and can cause injuries.

MAINTENANCE

MOWER STORAGE

General

- Clean the mower and lubricate. Repair and paint damaged or open metal.
- Inspect the mower, tighten all fixings, replace worn or damaged components.
- Clean the tyres and store the mower with the load off the tyres using jack stands. If the mower is not stored on jack stands, check the tyres at regular intervals and add air when needed.
- Keep the mower and all accessories clean, dry and protected from the elements. Never store the mower near an open flame or spark which can cause ignition of the fuel or fuel vapours.

Battery

- Remove, clean and store the battery in the upright position on a non-metal surface in a cool dry location. To prevent increased battery discharge, do not store the battery on a metal surface.
- Check and charge the stored battery every 60 to 90 days.
- Keep the battery in a cool dry location to decrease the self-discharge rate, the temperature must not be more than 80° F (27° C) or less than 20° F (-7° C).

Engine

- Change the engine oil and filter.
- Clean the outside surface of the engine. Paint bare metal or apply a thin layer of rust preventative oil.
- Add a fuel stabilizer to prevent the fuel from becoming stale. See your fuel supplier for instructions. Start the engine. Operate the engine for two minutes to circulate the stabilizer throughout the fuel system.

Cutting Units

- Completely clean the cutting units. Repair and paint any damaged or bare metal surfaces.
- Lubricate all grease fittings and friction points.
- Apply a thin layer of rust preventative oil to the sharpened edges of the blades.

CAUTION

The cutting unit blades can have sharp edges. To prevent injury, wear safety gloves and use caution when you service or hold the blade.

After Storage

- Check and install the battery, charge the battery if necessary.
- Check or service the fuel filter and air cleaner.
- Check the level of engine oil and drive axle fluid.
- Fill the fuel tank with fuel.
- Make sure the tyres are correctly inflated.
- Remove all oil from the blades.
- Start the engine at 1/2 throttle. Allow the engine to become warm and lubricated.

WARNING

Never operate the engine without enough ventilation or in an enclosed area. The carbon monoxide in the exhaust fumes can increase to dangerous levels.

MAINTENANCE

GUIDELINES FOR MACHINE DISPOSAL

During Service Life

The used oil, oil filters and engine coolant are hazardous materials. Follow the recommended procedures for their safe removal.

If a fluid leaks, contain the spill to make sure that the leak does not flow into the ground or drainage system. Follow the local laws to make sure that leaks are controlled safely.

Maintenance procedures in this manual ensure the damage the mower can cause in the local environment is controlled safely.

Take these actions after mower completes its full service life.

End of Service Life

Use these guidelines with applicable Health, Safety and Environmental laws. Always use the approved local waste disposal and agencies for recycled materials.

- Park the mower in a safe, suitable location where necessary lifting equipment can be safely used.
- Use the correct tools and Personal Protective Equipment (PPE) and take instruction from the technical manuals applicable to the mower.
- Remove the following and store correctly prior to disposal:
 1. Batteries
 2. Fuel
 3. Engine Coolant
 4. Oils
- Disassemble the structure of the mower and refer to the technical manuals. Pay attention to parts that have mechanical pressure or tension applied to the part in the mower including springs.
- Separate items that continue to have a service life and store them in a safe location.
- Separate the items that are no longer serviceable into their particular material group. These items should be disposed of via recycling agents that are licenced to handle those materials. Common material types are listed below:
 - Steel
 - Non-ferrous metals
 - Aluminium
 - Brass
 - Copper
 - Plastic Materials
 - Identified
 - Recyclable
 - Non-recyclable
 - Not Identified
 - Rubber
 - Electrical and Electrical Compounds
- Add items that cannot be easily separated into different materials to a "General discarded materials".
- Do not burn discarded or non-recyclable materials, seek disposal advice from your Local Authority.



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