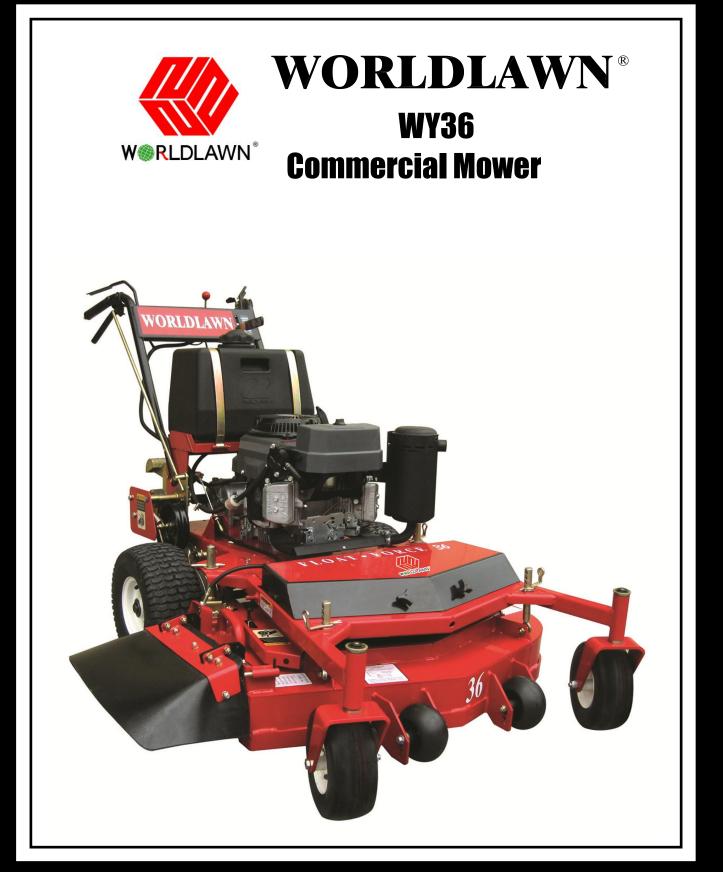
# **Operator's Manual**



Worldlawn Power Equipment, Inc. Industrial Park 2415 Ashland Ave. Beatrice, NE 68310 Toll Free Number: 1-800-267-4255



# OPERATOR'S MANUAL

This manual contains assembly, operating, maintenance, adjustment, and safety instructions for your WY36 lawnmower.

#### Before operating your mower, read this manual in its entirety carefully.

By following the operating, maintenance, adjustment, and safety instructions, you will prolong the life of your mower, maintain its maximum efficiency, and promote safe operation.

Keep this mower Owner's Manual when lent or transferred.

If this mower Operator's Manual becomes lost, damaged, or illegible, replace it immediately; replacements may be downloaded from our website (<u>www.worldlawnpowerequip.com</u>) or ordered from our sales department. If additional information is needed, contact our sales department or a dealer. Always be ready to provide the model number and serial number.

# 🚺 WARN I NG

#### POTENTIAL HAZARD

 $\cdot This product is a piece of power equipment.$ 

#### WHAT CAN HAPPEN

•Failure to follow safe operating practices can result in serious operator injury or even death.

#### HOW TO AVOID THE HAZARD

 $\cdot$  Keep all shields, guards, and safety devices (especially the grass discharge system) in place and in proper working condition.

 $\cdot$  Stop machine and wait for all moving parts to stop, remove spark plug wires or remove key before adjusting, servicing, or performing maintenance.

· If mower deck becomes clogged, stop machine and wait for all moving parts to stop. Remove spark plug wire or remove key before cleaning blockage.

·Keep hands, feet, and clothing away from power driven parts.

·Keep others off mower.

A WARN ING

#### POTENTIAL HAZARD

 $\cdot$  Gasoline is harmful or fatal if swallowed. Long-term exposure of vapor causes cancer in laboratory animals.

#### WHAT CAN HAPPEN

·Failure to use caution may cause serious injury or illness.

#### HOW TO AVOID THE HAZARD

 $\cdot Avoid prolonged breathing of vapor.$ 

·Keep face away from nozzle and gas tank opening.

- ·Keep away from eyes and skin.
- •Never siphon by mouth.



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# **1. SAFETY**

# **1.1 SAFETY ALERT SYMBOL**

This SAFETY ALERT SYMBOL is used both in this manual and on the machine to identify important safety messages which must be followed to avoid accidents. This symbol means:

#### **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

The safety alert symbol above alerts you to unsafe actions or situations by the word DANGER, WARNING, or CAUTION.

#### DANGER

White letters on red background.

Failure to observe the safety instructions could result in death or serious injury.

WARNING Black letters on orange background.

Failure to observe the safety instructions could result in death or serious injury.

CAUTION Black letters on yellow background.

Failure to observe the safety instructions may result in slight or serious injury.

# **1.2 TRAINING**

1.2.1 Regard the mower as a piece of power equipment. The operator needs to be trained before operating this unit.

1.2.2 Read the instructions carefully. Be thoroughly familiar with controls and the proper use of the equipment.

1.2.3 Never allow children, teenagers, or adults to operate the equipment without proper instruction.

1.2.4 Keep everyone, especially children and pets, away from the area of operation. Remember that the operator or user is responsible for accidents or hazards occurring to other people or their property.

#### **1.3 PREPARATION**

1.3.1 Evaluate the terrain to determine what

accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by

#### Worldlawn Power Equipment, Inc.

1.3.2 The use of personal protective equipment, such as (but not limited to) protection for the eyes, ears, feet, and head is recommended.

# CAUTION

#### POTENTIAL HAZARD

•This machine produces sound levels in excess of 85dBA at the operator's ear when in operation.

#### WHAT CAN HAPPEN

·Exposure to sound levels of 85dBA or above for extended periods of time can cause hearing loss.

#### HOW TO AVOID THE HAZARD

· Wear hearing protection when operating this machine.

1.3.3 While mowing, always wear ample footwear and long trousers. Do not operate equipment when barefoot or when wearing open sandals.

1.3.4 Thoroughly inspect the area where the equipment is to be used and remove all stones, sticks, wires, bones, and other foreign objects which may damage the equipment or cause personal injury to operator or bystanders.

# WARN I NG

#### POTENTIAL HAZARD

·Engine exhaust contains carbon monoxide, which is an odorless deadly poison.

#### WHAT CAN HAPPEN

·Carbon monoxide can kill you.

#### HOW TO AVOID THE HAZARD

· Do not run engine indoors or in a small confined area where dangerous carbon monoxide fumes can collect.



# 

#### POTENTIAL HAZARD

 $\cdot$  In certain conditions gasoline is extremely flammable and highly explosive.

#### WHAT CAN HAPPEN

 $\cdot$  A fire or explosion from gasoline can burn you, others, and cause property damage.

#### HOW TO AVOID THE HAZARD

- •Do not smoke while refueling, and stay away from an open flame or where gasoline fumes may be ignited by a spark.
- ·Refuel only outdoors.
- •Store gasoline in an approved container and keep it out of the reach of children.
- •Add fuel before starting the engine. Never remove the cap of the fuel tank or add fuel when engine is running or when the engine is hot.
- •Never fill the fuel tank so that gasoline level rises above a level that is 3/8"(10mm) below the bottom of the filler neck to allow for gasoline expansion and prevent fuel spillage.
- ·If fuel is spilled, **DO NOT** attempt to start the engine. Move away from the area of the spill and avoid creating any source of ignition of the fuel until vapors have dissipated.
- •Do not operate without entire exhaust system in place and in proper working condition.

# 

#### POTENTIAL HAZARD

• In certain conditions gasoline is extremely flammable and highly explosive.

#### WHAT CAN HAPPEN

• A static charge can ignite gasoline vapors. A fire or explosion from gasoline can burn you, others, and cause property damage.

# HOW TO AVOID THE HAZARD

- Purchase and store gasoline only in an approved container.
- ·Always place gasoline containers on the ground

away from your vehicle while filling.

•Do not fill gasoline containers inside a vehicle or on a truck or trailer bed, because interior carpets or plastic truck bed liners may insulate the container and slow the loss of any static charge.

- •When practical, remove gas-powered equipment from the truck or trailer and refuel the equipment with its wheels on the ground.
- •If this is not possible, then refuel such equipment on a truck or trailer from a portable container, rather than from a gasoline dispenser nozzle.

•If a gasoline dispenser nozzle must be used, keep the nozzle in contact with rim of the fuel tank or container opening at all times until fueling is complete.

# A WARNING

# POTENTIAL HAZARD

•Gasoline vapor can collect inside enclosed trailers and may be ignited by electrical sparks or hot engine/exhaust components.

#### WHAT CAN HAPPEN

• Explosion and fire may occur, resulting in property damage, personal injury, and/or death.

#### HOW TO AVOID THE HAZARD

•Provide adequate ventilation of any enclosed trailer to prevent build up of gasoline vapors, especially at floor level.

•Refuel only outdoors, never inside an enclosed trailer.

•Be sure all fuel tanks and gasoline storage containers have proper caps installed to prevent spillage and minimize vapor escaping into the trailer.

•Do not place any equipment that is leaking gasoline into an enclosed trailer.

# **1.4 OPERATION**

Although hazard control and accident prevention partially are dependent upon the design and configuration of the equipment, these factors are also



dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance, and the storage of the equipment. It is essential that all Operator Safety Mechanisms be connected and in operating condition prior to use for mowing.

# WARNING

#### POTENTAL HAZARD

• Operating engine parts, especially the muffler, become extremely hot.

#### WHAT CAN HAPPEN

- ·Severe burns can occur on contact.
- $\cdot$  Debris, such as leaves, grass, brush, etc. can catch fire.

#### HOW TO AVOID THE HAZARD

- Allow engine parts, especially the muffler, to cool before touching.
- Remove accumulated debris from muffler and engine area.

•Install and maintain a spark arrester in working order before using equipment on forest-covered, grass-covered, or brush-covered unimproved land.

# A WARN ING

#### POTENTIAL HAZARD

• Hands, feet, hair, clothing, or accessories can become entangled in rotating parts.

#### WHAT CAN HAPPEN

• Contact with rotating parts can cause traumatic amputation or severe lacerations.

# HOW TO AVOID THE HAZARD

- Do not operate the machine without guards, shields, and safety devices in place and working properly.
- Keep hands, feet, hair, jewelry, or clothing away from rotating parts.

**1.4.1** Give complete, undivided attention to the job at hand.

**1.4.2** Mow only in daylight or good artificial light; keep away from holes and hidden hazards. **NEVER** carry passengers. **DO NOT** operate the mower when

children or others are in the area!

**1.4.3** When feasible, avoid operating the equipment in wet grass.

**1.4.4** Use extreme caution when mowing and/or turning on slopes as loss of traction and/or tip-over could occur. The operator is responsible for safe operation on slopes.

# A DANGER

#### POTENTIAL HAZARD

 $\cdot$  Mowing on wet grass or steep slopes can cause sliding and loss of control.

#### WHAT CAN HAPPEN

• Wheels dropping over edges, ditches, steep banks, or water can cause rollovers, which may result in serious injury, death, or drowning.

#### HOW TO AVOID THE HAZARD

- $\cdot Do not mow on slopes when grass is wet.$
- $\cdot Do$  not mow near drop-offs or near water.
- $\cdot Do$  not mow on slopes greater than 15 degrees.
- •Reduce speed and use extreme caution on slopes.

#### $\cdot Avoid$ sudden turns or rapid speed changes.

- Use a hand trimmer only near drop-offs, ditches, steep banks, or water. This area can be dangerous, see Figure 1.
- Progressively greater care is needed as the slope increases.
- Always avoid sudden starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly off the slope.
- Avoid sudden starts when mowing uphill. Mower may tip backwards.
- 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.
- Watch for ditches, holes, rocks, dips, and rises that change the operating angle, as rough terrain could overturn the machine.
- Use extreme care with grass catchers or attachments. These can change the stability of the machine and cause loss of control.



1.4.5 Use caution when backing up.

#### LOOK BEHIND YOU!!

**1.4.6** Stop the blades when transporting the mower to and from the area to be mowed.

**1.4.7** Never operate the mower with defective guards, shields, or covers. Always have safety shields, guards, switches, and other devices in place and in proper working condition.

**1.4.8** DO NOT change the engine governor setting or overspend the engine. Operating an engine at excessive speed may increase the hazard of personal injury.

1.4.9 Disengage PTO before starting engine.

**1.4.10** Start the engine carefully with feet well away from the blades.

**1.4.11** Keep hands, feet, and clothing away from rotating parts while the mower is being operated.

**1.4.12** Stop engine, wait for all mowing parts to stop, and remove key:

- Before checking, cleaning, or working on the mower.
- After striking a foreign object (inspect mower for damage and make repairs before restarting and operating the mower).
- Before clearing blockages.
- Whenever you leave the mower.

Stop the engine and wait for all moving parts to stop:

- Before refueling.
- Before dumping the grass catcher.

**1.4.13** The fuel system is provided with a shut-off valve. CLOSE VALVE:

- When the machine will not be used for a few days.
- During transport to and from the job.
- When parked inside a building.
- To remove the fuel tank.

**1.4.14** This mower was designed for one operator only. Keep all others away from mower during operation.

**1.4.15** DO NOT mow with the discharge deflector raised, removed, or altered unless there is a grass collection system or mulch kit in place and working properly.

**1.4.16** Be aware of the mower discharge and direct discharge away from others.

**1.4.17** DO NOT operate the mower under the influence of alcohol and/or drugs.

**1.4.18** Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

#### **1.5 MAINTENANCE AND STORAGE**

**1.5.1** For engine maintenance, follow the engine manufacturer's recommendations precisely as stated in the engine manual.

**1.5.2** Keep engine and engine-area, free from accumulation of grass, leaves, excessive grease or oil and other debris, which can accumulate in these areas. These materials can become combustible and may result in a fire.

**1.5.3** Store fuel in a container specifically designed for this purpose and in a cool, dry place.

**1.5.4** Keep the mower and fuel container in locked storage to prevent children from playing or tampering with them.

**1.5.5** Gasoline powered equipment or fuel containers should not be stored in a basement or any enclosed area where open pilot lights or heat appliances are present.

**1.5.6** Maximum mowing results and safety can only be achieved if the mower is properly maintained and operated correctly.

**1.5.7** Check all bolts frequently to maintain proper tightness.

**1.5.8** Keep all guards, shields, and safety devices in place and in safe working condition.

**1.5.9** Frequently check for worn or deteriorating components that could create a hazard.

**1.5.10** All replacement parts must be the same as or equivalent to the parts supplied on the original equipment.

#### **1.6 SAFETY DECALS**

**1.6.1** Keep all safety decals legible. Remove all grease, dirt, and debris from safety decals and instructional labels.



**1.6.2** Safety decals must be replaced if they are missing or illegible.

**1.6.3** When new components are installed, be sure that current safety decals are affixed to the replaced components.

**1.6.4** New safety decals may be obtained from your authorized equipment dealer or distributor or from

# Worldlawn Power Equipment, Inc.

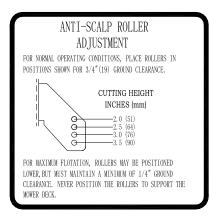
**1.6.5** Safety decals may be affixed by peeling off the backing to expose the adhesive surface. Apply only to clean, dry surface. Smooth to remove any air bubbles.

**1.6.6** Familiarize yourself with the following safety decals and instruction labels. They are critical to the safe operation of your machine.

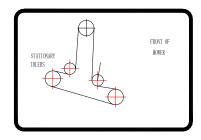
#### Decals and their locations are as follows:



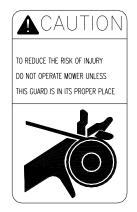
1. On the Panel of Rear Frame



2. On the Mower Deck



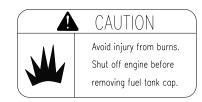
3. On the Mower Deck



4. On the Mower Deck



5. Gear Lever on the Engine Frame

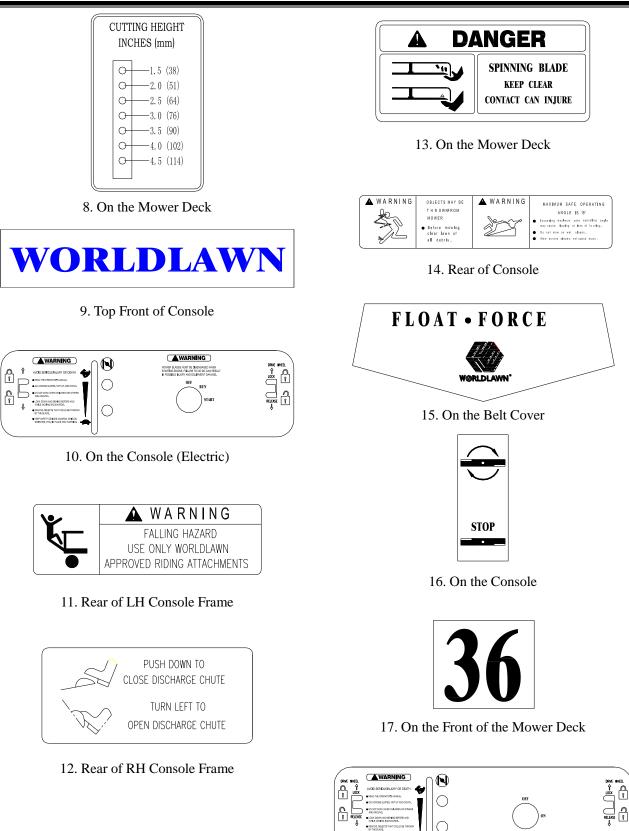


6. On the Fuel Tank



7. RH side of Mower Deck Frame

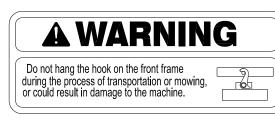




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18. On the Console (Recoil)





19. On the Left Side of Front Frame Support



20. On the Right Side of Front Frame Support

EMISSION CONTROL INFORMATION JIANGSU WORLD PLANT-PROTECTING MACHINERY CO.,LTD THIS EQUIPMENT MEETS U.S. EPA EVAP STANDARDS EQUIPMENT FAMILY NAME:BJWPPNHEQ001

21. On the Rear Frame

# 2. SPECIFICATIONS

# 2.1 Model Number:

WY3615KHE	WY3615KW	WY3615KWE
WY3613KW	WY3613KWE	WY3617KWE
WY3613HD	WY3613HDE	WY3616KW
WY3616KWE		

# 2.2 Engine:

and Engine		
MODEL	ENGINE	STARTER
WY3615KHE	CV15 Electric	Kohler
WY3613KW	FH381V Recoil	Kawasaki
WY3613KWE	FH381V Electric	Kawasaki
WY3615KW	FH430V Recoil	Kawasaki
WY3615KWE	FH430V Electric	Kawasaki
WY3617KWE	FH541V Electric	Kawasaki
WY3613HD	GXV390 Recoil	Honda
WY3613HDE	GXV390 Electric	Honda
WY3616KW	FS481 Recoil	Kawasaki
WY3616KWE	FS481 Electric	Kawasaki

# 2.3 Frame Assembly

- Front Frame: Rectangle tube 1.5"×1.18"×.16"
- Thickness (Steel plate of engine frame): .16".
- Fuel Tank: 5 gallon seamless polyethylene, removable
- Drive Wheel: 13.0×6.50-6 two-ply pneumatic tubeless.
- Caster Wheel: 9×3.5, smooth, needle bearing pneumatic tubeless.

#### 2.4 Drive System

- Type: Belt drive with twin power belts for increased friction to pulley surface.
- Transmissions: Peerless 5-speed transmission, Model #700-079
- Steering/Travel Control: Clutch/brake fingertip steering, key lock switch.
- Brakes: 6" brake drum, band brake, one on each wheel.
- Safety Group: Hand actuated operator presence system with blade clutch and transmission interlock to engine kills.
- Forward Speed Range: 0 to 4.7mph(0-7.6km/h)
- Reverse Speed Range: 0 to 2.0mph(0-3.2km/h)

# 2.5 Cutting Deck

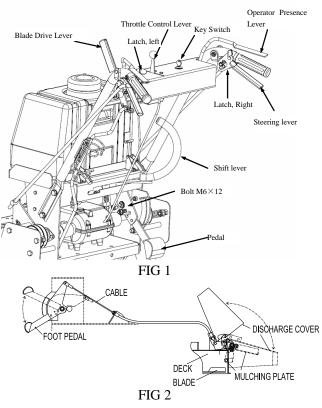
- Type: Floating deck, out-front design with anti-scalp rollers
- True Cutting Width: 36" (904.4cm)
- Blade engagement: Mechanical
- Cutting Height Adjustment: Manual adjustment 1.5" (3.8cm) to 4.5" (11.43cm) in 0.5" (1.27cm) increments. When adjusting the cutting height, hang the deck by the two hooks on the front frame; then insert the pin into the proper hole. Hang the deck on the hooks of the front frame only when adjusting the cutting height. Don't hang it on the frame during transportation and mowing or it could result in damage to the machine.
- Cutting Blades: 0.2"(5mm) thick, two 18"(45.7cm) blades.
- Cutting Deck Belts: B-section.



#### 2.6 Operator Controls (See FIG 1)

- Key switch: Located on the control panel. Recoil starter has two positions. Turning to "on" starts the engine; turning to "off" stops the engine. Electronic ignition model has three positions. When starting, turn to "start" position; then remove your hand.
- Throttle Control: Located on the control panel. Throttle is used to control engine speed. Moving throttle lever forward will increase engine speed and moving throttle lever to the rear will decrease engine speed.
- Blade Drive Lever: Push the mower blade drive lever forward to the engage position. Pull the mower blade drive lever backward to the disengage position to stop the blades.
- Hand actuated operator presence lever: When in normal operation, compress the operator presence lever. When released, engine will kill.
- Steering Brake Levers: While squeezing the steering lever handles with both hands, release right and left neutral latches; then release right and left steering levers to move forward. When the steering levers are released, the mower will travel straight forward. To make a right turn, squeeze the RH steering lever. To turn left, squeeze the LH steering lever. Squeeze both steering levers, lock right and left neutral latches, and the mower will stop.
- Neutral Latches: Located on bottom of the handles. They are used to lock the steering brake levers when stopping.
- Gear shift lever: It is used to control the speed.
- Foot Pedal: Compress the pedal to the lowest position; the discharge chute will rotate up, mulching plate will be closed, and the mower will be in the mulching mode. Tap the pedal to the left; the mower will attain its highest position automatically, the discharge chute will be down, mulching plate will be open, and the mower will be in the discharge mode.
- Fuel shut-off valve: The fuel shut-off valve is

used to shut off the fuel when the machine will not be used for a few days, during transport to and from the jobsite, and when parked inside a building, see FIG 6.



#### 2.7 Accessories:

a) Grass catcher assembly (WY36-NGC): 100L, see FIG 3

b) Mulching Blade and Mulch Baffle (AS36006):

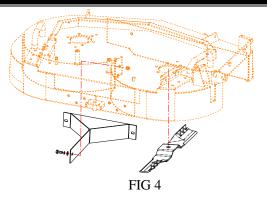
See FIG 4

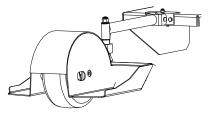
c) Sulky: See FIG 5













# 2.8 Approximate Dimensions:

2.8.1 Width:

Discharge chute down 46.6in (118cm) Discharge chute up 39.3in (100cm) 2.8.2 Overall Length: 71.6in (182.0cm) 2.8.3 Overall Height: 41.7in (108cm) 2.8.4 Curb Weight: 450lbs (205Kg)

#### **2.9 Torque Requirements**

- Cutter Housing Spindle Nut: 140-145ft-lb (190-197N-m)
- Blade Mounting Bolt: 115-120ft-lb(156-163N-m)
- Engine Deck/Front Frame Mount Bolts: 41-52ft-lb(55-70N-m)

# **3. ASSEMBLY INSTRUCTIONS**

# 3.1 Open Crate

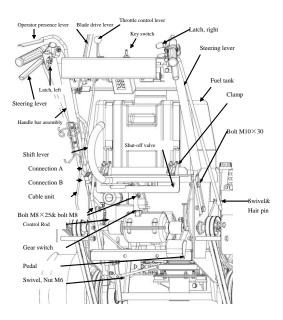
Open crate. Remove the loose parts (i.e., operator's manual, etc) from crate. Remove unit from crate; check there are no loose parts left.

#### **3.2 Initial Instructions**

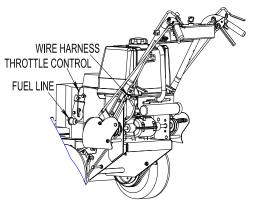
- Attach the handle with four M10×30 Hex Hd Bolts and four M10 Nuts on each side as show in FIG 6
- Each of the control rods must be connected.

Follow the instructions to properly adjust each of the controls as shown in FIG 6.

- Attach the foot pedal to the console frame with  $M6 \times 12$  bolt and washer. See FIG 6
- Put the fuel tank into the position and lock it as shown in FIG 6.
- The Throttle Cable must be attached to engine according to the Engine Operator's Manual. Fuel Tank line connects to the line of engine. SeeFIG7
- Electric, connect connection A to connection B on the handle bar. Recoil, connect the wiring harness connection to engine flame-out wiring harness and neutral switch. See FIG6 and FIG7.









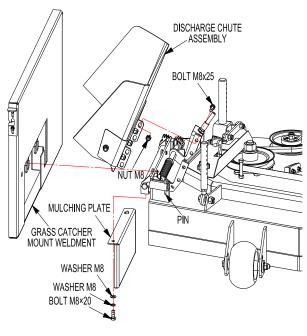


#### 3.3 Service Engine

**Engine is shipped without oil.** Fill to the appropriate level with SAE10W-30 or 10W-40.

#### **3.4 Grass Catcher Assembly**

When the mower is assembled with a Kohler engine, compress the foot pedal down, the mulching plate will close. Remove the 4 M8×25 bolts attached to the discharge chute assembly and 1 M8×20 bolt attached to the mulching plate. Remove chute assembly and mulching plate. Attach the grass catcher mount weldment to the pin on the mower deck, rotate the pin 90 degrees, insert it into the hole on the grass catcher mount weldment. When assembling the grass catcher on other models, you only need to remove the mulching plate, not the discharge chute. (FIG 8)



#### FIG 8

# 4. OPERATION INSTRUCTIONS

Read these instructions carefully before operating the mower.

#### 4.1 PRE-START

• Fill fuel tanks. For best results use only clean,

fresh, regular grade, unleaded gasoline with an octane rating of 87 or higher. Regular grade leaded gasoline may also be used; however, combustion chamber and cylinder head will require more frequent service. See Engine Owner's Manual. Do not add oil to gasoline. Do not overfill fuel tank.

- Open the fuel tank shut-off valve.
- Make sure you understand the controls, their locations, their functions, their safety requirements, and how to stop quickly.
- Refer to Maintenance, Section 5, and perform all necessary inspection and maintenance steps.
- Check tire pressure in drive wheels. Proper inflation pressure for tires is 20psi(140kpa).
- Check tire pressure in caster wheels. Proper inflation pressure for tires is 20psi(140kpa).

#### **4.2 Starting Engine**

Recoil start; turn the key switch to the "on" position. Electric start; turn the key switch to "Start" position. The blade drive lever must be disengaged. The transmission must be in neutral. Operator presence levers must be released.

On a cold engine, place the throttle midway between the "SLOW" and "FAST" positions and push choke lever forward to the "ON" position. Turn ignition switch to the "start" position. Release the switch as soon as the engine starts.

#### 4.3 Mowing

- Push the mower blade drive lever forward to engage position. The blades will rotate at high speed.
- Be sure that all persons are clear of mower deck and discharge area before engaging PTO.

IMPORTANT: Set throttle to "midway" position. Push the mower blade drive lever forward to engage position. Accelerate to full throttle to begin mowing. Stop the blade: pull the mower blade drive lever backward to disengage position to stop the blades.



# A DANGER

#### POTENTIAL HAZARD

• The rotating blades under the mower deck are dangerous.

#### WHAT CAN HAPPEN

• Blade contact can cause serious injury or kill you.

#### HOW TO AVOID THE HAZARD

• DO NOT put hands or feet under the mower or mower deck when the blades are engaged.

# A DANGER

#### POTENTIAL HAZARD

• An uncovered discharge opening will allow objects to be thrown in an operator's or bystander's direction. Also, contact with the blade could occur.

#### WHAT CAN HAPPEN

• Thrown objects or blade contact can cause serious injury or death.

#### HOW TO AVOID THE HAZARD

• Never operate the mower with the discharge deflector raised, removed, or altered unless there is a grass collection system or mulch kit in place and working properly.

#### 4.4 Moving Operation

- Lock the steering levers (LH and RH) and move gear shift control to select your speed.
- While squeezing the steering lever handles with both hands, release right and left neutral latches; then release right and left steering levers to move forward. When the steering levers are released, the mower will travel straight forward. To make a right turn, squeeze the RH steering lever. To turn left, squeeze the LH steering lever. Squeeze both steering levers, lock right and left neutral latches, and the mower will stop.

# 4.5 Stopping engine: Bring unit to a full stop.

Move the blade drive lever backwards to disengage position to stop the blades. FIG 5.

Move right and left neutral latches to the neutral lock position to engage parking brake. Rotate key switch to the "OFF" position. Remove the key to prevent children or other unauthorized persons from starting the engine. Close fuel shut-off valve when the machine will not be used for a few days, transporting, and when the unit is parked inside a building.

# 5. MAINTENANCE&ADJUSTMENTS

# A WARNING

#### POTENTIAL HAZARD

• While maintenance or adjustments are being made, someone could start the engine.

#### WHAT CAN HAPPEN

• Accidental starting of the engine could seriously injure you or other bystanders.

#### HOW TO AVOID THE HAZARD

• Remove the key from the ignition switch and pull the wire off the spark plug before you do any maintenance. Also push the wire aside so it does not accidentally contact the spark plug.

# A WARNING

#### POTENTIAL HAZARD

• The engine can become very hot.

#### WHAT CAN HAPPEN

• Touching a hot engine can cause severe burns.

#### HOW TO AVOID THE HAZARD

• Allow the engine to cool completely before servicing or making repairs around the engine area.

#### **5.1 PERIODIC MAINTENANCE**

**5.1.1** Check the engine oil level: Service Interval: Daily

- Make sure unit is on a level surface.
- Stop engine, wait for all moving parts to stop. Check oil with engine cold.
- Clean area around dipstick. Remove dipstick and wipe oil off. Reinsert the dipstick. Do not screw



into place. Remove the dipstick and read the oil level.

 If the oil level is low, add oil to bring the oil level up to the "FULL" mark on the dipstick. Use oil as specified in the Engine Owner's Manual. DO NOT overfill.

IMPORTANT: DO NOT operate the engine with the oil level below the "LOW" or "ADD" mark on the dipstick or over the "FULL" mark.

**5.1.2** Clean engine air cooling system:

Service Interval: Daily or more often in dry conditions

# I CAUTION

#### POTENTIAL HAZARD

• Excessive debris can cause the engine and hydraulic system to overheat.

#### WHAT CAN HAPPEN

• Excessive debris around the engine cooling air intake and inside of the pump compartment can create a fire hazard.

#### HOW TO AVOID THE HAZARD

• Clean all debris from around the engine and hydraulic pumps daily.

- a) Stop engine, wait for all moving parts to stop, and remove the key.
- b) Clean all debris from rotating engine air intake screen and from around engine shrouding.

#### **5.1.3** Clean grass build-up from under deck.

Service Interval: Daily

- Stop engine, wait for all moving parts to stop, and remove key.
- Clean out any grass build-up from the underside of deck and in discharge chute.

**5.1.4** Check mower blades.

Service Interval: Daily

- Stop engine, wait for all moving parts to stop, and remove the key.
- Lift deck.
- Inspect blades and sharpen or replace as required.
- Re-install the blades (if they were removed) by placing a block of wood between the front or rear baffles and the blade; then torque the blade bolts

to 115-120ft-lbs (156-163N-M). Be sure the spring disk washer cone is installed toward the bolt head. (See FIG 9).

DO NOT USE WRENCH HERE FOR BLADE INSTALLATION MAINTAIN TORQUE ON THIS NUT 140-145FT-LBS (190-197N-M)

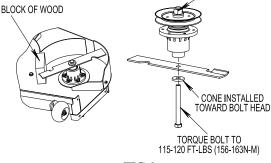


FIG 9



#### POTENTIAL HAZARD

• Operating a mower deck with loose or weakened blade bolts can be dangerous.

#### WHAT CAN HAPPEN

• A loose or weakened blade could allow a blade rotating at a high speed to come out from under the deck, causing serious injury or property damage.

#### HOW TO AVOID THE HAZARD

• DO NOT lubricate the threads of the bolt or spindle before assembly.

Torque the blade bolt to 115-120ft-lbs (156-163N-M).

**5.1.5** Check safety interlock system.

Service Interval: Daily

• Check starting circuit.

Starter should not start with blade drive lever engaged. When the blade drive lever is disengaged, the transmission is in neutral, and key switch is in the "on" position (recoil), the engine can start.

• Check kill circuit.

Run engine and release the operator presence lever, while engaging blade drive lever or shifting gear shift lever from neutral to selected speed. Engine must stop after approximately 1/2 second has elapsed.

NOTE: If machine does not pass any of these tests, do not operate. Contact your authorized WORLDLAWN POWER EQUIPMENT SERVICE DEALER. It is



essential that operator safety mechanisms be connected and in proper operating condition prior to use for mowing.

**5.1.6** Check for loose hardware.

Service Interval: Daily

- Stop engine, wait for all moving parts to stop, and remove key.
- Visually inspect machine for any loose hardware or any other possible problem. Tighten hardware or correct the problem before operating.

#### **5.1.7** Service air cleaner.

Service Interval: 50 hrs

Check more often under severe conditions. See engine manual for additional information.

- Stop engine, wait for all moving parts to stop, and remove the key.
- Loosen retaining clips and remove air cleaner compartment cover.
- Remove paper element. Check the condition of the paper element. Replace if dirty, bent or damaged.
- Do NOT wash or use pressurized air to clean paper element or inner element.

5.1.8 Change engine oil.

Service Interval: 100 hrs

NOTE: Change oil and filter after first five (5) hrs. of operation.

- Stop engine, wait for all moving parts to stop, and remove key.
- Drain oil while engine is warm from operation.
- Replace the oil filter every other oil change. Clean around oil filter and unscrew filter to remove. Before reinstalling new filter, apply a thin coating of oil on the surface of the rubber seal. Turn filter clockwise until rubber seal contacts the filter adapter; then tighten filter an additional 2/3 to 3/4 turn.
- Clean around oil fill cap and remove cap. Fill to specified capacity and replace cap. Use oil recommended in engine owner's manual. DO NOT overfill.
- Start the engine and check for leaks. Stop engine

and recheck oil level.

**5.1.9** Check tire pressure:

Service Interval: 40hrs

Stop engine, wait for all moving parts to stop, and remove key.

- Check tire pressure in drive tires.
- Inflate drive tires to 20psi (140kPa).
- Check tire pressure in caster tires.
- Inflate caster tires to 20psi (140kPa).

**5.1.10** Check condition of belts:

Service Interval: 40hrs

- Stop engine, wait for all moving parts to stop, and remove key.
- Check belts under engine deck.
- Remove left and right belt shields on deck and lift out floor pan to inspect belts.
- See Sections 5.2.2 and 5.2.3, for belt adjustment.

**5.1.11** Lubricate grease fittings:

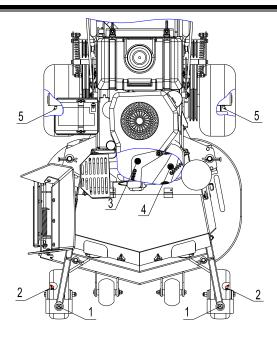
• Service Interval: Refer to chart

Stop engine, wait for all moving parts to stop, and remove key. See the FIG 10.

#### LUBRICATION CHART

FITTING	FITTING	SERVICE
LOCATIONS	TIMES	INTERVAL
1	1	50hrs
2	1	100hrs
3	1	50hrs
4	1	50hrs
5	1	100hrs







#### **5.2 ADJUSTMENTS**

IMPORTANT: Disengage the blade drive lever, shut off engine, wait for all moving parts to stop, and remove key before servicing, cleaning, or making adjustments to the unit.

#### **5.2.1** Cutting Height Adjustment.

• Stop machine and move drive levers out to neutral lock position.

NOTE: When changing cutting height positions, always come to a complete stop and disengage the blade drive lever.

- Refer to decal on deck lift plate for cutting height adjustments. When adjusting the cutting height, hang the deck by the two hooks on the front frame; then insert the pin into the proper hole. Hang the deck on the hooks of the front frame only when adjusting the cutting height. Don't hang it on the frame during transportation and mowing or it could result in damage to the machine.
- Adjust anti-scalp rollers for Normal Operating Conditions.

Stop engine, wait for all moving parts to stop,

and remove key. Rollers will maintain 3/4 in. (19mm) clearance to the ground to minimize gouging and roller wear or damage. For Maximum Deck Flotation, place rollers one hole position lower. Rollers should maintain 1/4 in. (6.4mm) minimum clearance to ground. Do not adjust rollers to support the deck. Be sure bolt is tightened properly or loss of anti-scalp roller may result.

#### **5.2.2** Blade Drive Belt Adjustments

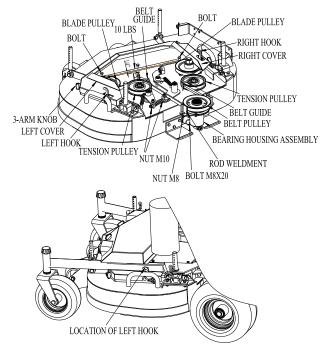


FIG 11

Remove the belt cover. Adjust the mower deck belt using a belt tension gauge. Engage the blade drive lever to tension the mower belt and adjust the belt so that the belt moves 1/4" with 10 pounds of pressure. Adjust the tension by tightening or loosening the nut. See FIG 11.

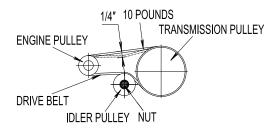
When replacing the blade drive belt, remove the M8 x 20 bolts (attached to the bottom of the bearing housing), then remove the bearing housing from spline shaft, two M8 nuts from bearing housing, and the belt guard weldments. Take the belt out of the belt pulley slot, remove the right and the left side belt covers, loosen the belt hooks and the bolts. Replace the old belt with a new one. Then install all the parts in reverse order. See FIG 11.



WARNING: Be sure engine is off before removing belt cover.

5.2.3 Transmission Drive Belt

Transmission drive belt is on the underside of the engine frame weldment; adjust the belt movement 1/4" with 10 pounds of pressure. Adjust the tension by moving transmission drive idler pulley. See FIG12 WARNING: Shut off engine and disconnect the spark plug wire before adjusting the belt.



#### FIG12

#### 5.2.4 Drive Control Adjustments

- The drive control is a system of interconnected linkages which have steering and braking functions. One steering lever function is neutral latch lock position or neutral latch unlock position. When steering levers are in neutral lock position, the power is disengaged. To brake, squeeze both brake levers and operator presence control rod on the mower.
- Adjusting control rod: Remove hair pin on the top of control rod, pull out the control rod from steering lever, turn the control rod so that the length of two control rods is same, and reinstall all parts in proper order.
- Adjusting brake lever: Loosen or tighten locknut at the bottom of brake lever to adjust the length of the brake lever. See FIG 13

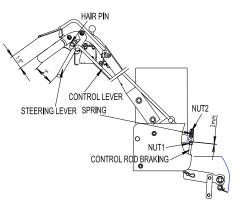


FIG 13

# 6. TROUBLESHOOTING

# 6.1 MOWER PULLS LEFT OR RIGHT (W/LEVERS FULLY COMPRESSED).

Check air pressure in tires; 20psi (140kpa) /drive, 20psi (140kpa) / casters.

#### 6.2 MOWER CUTS UNEVENLY.

- Check air pressure in tires; 20psi (140kpa) /drive, 20psi (140kpa) /casters.
- Check deck leveling
- Check blades tip to tip for straightness

Note: The front of the mower deck will be approximately 1/8"-1/4" lower than the back of the mower deck, this is the "rake" of the deck.

#### **6.3 ENGINE WILL NOT START**

- Make sure there is fuel in the fuel tank and that the fuel valve is open.
- Check that the blade drive lever is disengaged and the key switch is in the "ON" position (Recoil).
- Check that the spark plug wires are properly connected.
- The transmission should be in neutral.
- Check for loose or faulty wiring connections.
- Check for corrosion at all wiring connections. Even minor corrosion may cause a faulty connection. Clean connector terminals thoroughly with electrical contact cleaner, apply dielectric grease and reconnect.



NOTE: After carefully checking the above steps, attempt to start the engine. If it does not start, contact your authorized machine service dealer.

**IMPORTANT:** It is essential that all operator safety mechanisms be connected and in proper operating condition prior to mower use.

When a problem occurs, do not overlook the simple causes. For example, starting problems could be caused by an empty fuel tank.

The following table lists some of the common causes of trouble. Do not attempt to service or replace major items or any items that call for special timing or adjustment procedures. Have this work done by your Engine Service Dealer.

Will not Start	1		3	4	5	6	7	
Hard starting	1	2	3	4	5	6	7	
Stops suddenly	1		3	4		6	7	8
Lacks power		2	3	4	5	6	7	8

#### ENGINE TROUBLESHOOTING TABLE

4→DIRTY AIR FILTER

5→FAULTY SPARK PLUG

6→ENGINE OVERLOADED

# 7. Service Battery

#### **A** WARNING

Battery posts, terminals, and related accessories contain lead compounds; chemicals known to cause cancer and reproductive harm.

The machine is shipped with a filled lead acid battery without protection.

Unhook seat latch and tilt seat to gain access to the battery.

Operates erratically	2	3	4	5	6	7	
Knocks or pings	2				6		
Skin or misfires	2	3	4	5			
Backfires		3	4	5	6		
Overheats		3	4		6		8
High fuel			4	5	6		
consumption							

1→NO FUEL

2→IMPROPER FUEL

3→DIRT IN FUEL LINE

4→DIRTY AIR FILTER

5→FAULTY SPARK PLUG

6→ENGINE OVERLOADED

7→BLOCKED FUEL FILTER

8→INCORRECT OIL LEVEL

#### 🛕 DANGER

#### POTENTIAL HAZARD

Charging the battery may produce explosive gasses. **WHAT CAN HAPPEN** 

Battery gasses can explode causing serious injury.

#### HOW TO AVOID THE HAZARD

Keep sparks, flames, or cigarettes away from battery. Ventilate when charging or using battery in an enclosed space.

#### 7.1 Check Battery

Check the voltage of the battery with a digital voltmeter. Locate the voltage of the battery in the table below and charge the battery for the recommended time interval to bring the charge up to a full charge of 12.6Volts or greater.

**IMPORTANT**: Make sure the negative & positive battery cables are connected correctly and the charger used for charging the battery has an output of 16 volts and 7 amps or less to avoid damaging the battery.



Chart 7.1.1							
Voltage Reading	Percent Charge	Maximum Charger settings	Charging Interval				
12.6 or greater	100%	16Volts/7 amps	No charging Required				
12.4-12.6	75%-100%	16Volts/7 amps	30 Minutes				
12.2-12.4	50%-75%	16Volts/7 amps	1 Hour				
12.0-12.2	25%-50%	14.4Volts/4 amps	2 Hours				
11.7-12.0	0-25%	14.4Volts/4 amps	3 Hours				
11.7 or less	0%	14.4Volts/4 amps	6 Hours or more				

#### **A** CAUTION

#### POTENTIAL HAZARD

If the ignition is in the "ON" position, there is potential for sparks and engagement of components.

#### WHAT CAN HAPPEN

Sparks could cause an explosion or moving parts could accidently engage causing personal injury.

#### HOW TO AVOID THE HAZARD

 $\cdot$  Be sure ignition switch is in the "OFF" position before charging the battery.

#### 7.2 Connecting the negative battery cables:

**Note:** If the positive cable is also disconnected, connect the positive (red) cable to the positive battery terminal first, then the negative (black) cable to the negative battery terminal. Slip insulator boot over the positive terminal.

**Note**: If time does not permit charging the battery, or if charging equipment is not available, connect the negative battery cables and run the engine

continuously for 20 to 30 minutes to sufficiently charge the battery.

#### **A** CAUTION

Battery contains sulfuric acid. Avoid contact and always shield eyes, face, skin, and clothing from battery. Cigarettes, flames, or sparks could cause battery to explode.

Do not charge or use booster cables or adjust post connection without proper training.

If battery acid comes in contact with skin or eyes, then flush with water and call a physician immediately.

Keep out of reach of children.

#### 7.3 Maintenance Period

Service Interval: Monthly

Allowing batteries to stand for an extended period without recharging them will result in reduced performance and service life. To preserve optimum battery performance and life, recharge them in storage when the open circuit voltage drops to 12 Volts.

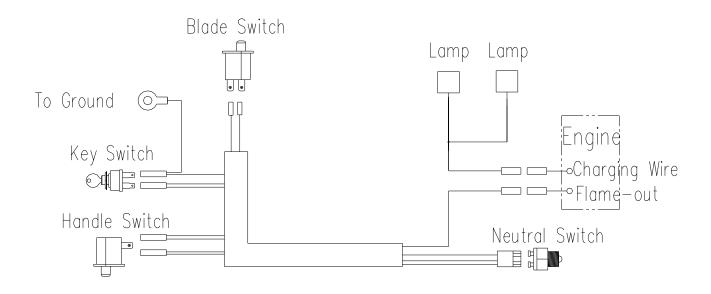
**Note:** To prevent damage due to freezing, battery should be fully charged before putting away for winter storage.

a) Check the voltage of the battery with a digital voltmeter. Locate the voltage reading of the battery in the table (See chart 7.1.1) and charge the batter for the recommended time interval to bring the charge up to a full charge of 12.6 Volts or greater.

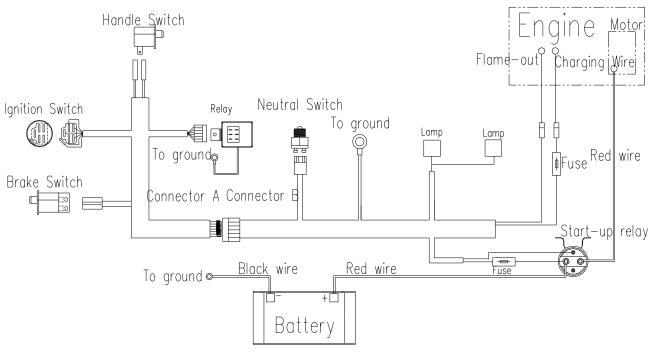
IMPORTANT: Make sure the negative & positive battery cables are connected correctly and the battery charger used for charging the battery has an output of 16 volts and 7 amps or less to avoid damaging the battery.



# 8. ELECTRICAL DIAGRAM



**Recoil Start** 



**Electric Start** 



# LIMITED WARRANTY WORLDLAWN POWER EQUIPMENT, INC 36" MOWER

Worldlawn Power Equipment, Inc, ("Worldlawn") warrants that the worldlawn 36" Mower ("Mower") will be free from defects in material and workmanship for a period of one year commercial from the original date of purchase. During the warranty period, Worldlawn will repair or replace, at its discretion, any Mower or part thereof which is found to be defective in material or workmanship. This warranty specifically excludes wear items, including but not limited to belts, blades, and tires. This warranty also specifically excludes parts covered by another manufacturer's warranty, which parts are covered only by that manufacturer's warranty.

This limited warranty extends only to the original retail purchaser ("Owner") of a Mower. It is not transferable. This warranty extends only to those Mowers purchased for private residential and commercial use. Proof of purchase will be required to substantiate all warranty claims. All warranty work must be performed by an authorized Worldlawn Dealer. Any work done on or to the Mower by anyone other than an authorized Worldlawn Dealer, including the original purchaser, voids all provisions of this warranty except those provisions which limit Worldlawn's liability (as set forth below).

Any Mower or part thereof which, in worldlawn's sole discretion, is deemed defective shall be repaired or replaced, at worldlawns option, without charge for parts or labor. To take advantage of this warranty, the Mower must be returned to an authorized worldlawn Dealer within the warranty period. The cost of delivering the Mower to the authorized Dealer and return delivery shall be the responsibility of the Owner.

Worldlawn's sole responsibility with any claim made under this warranty is limited only to repairing or replacing the mower or a defective part thereof, and no claim of breach of warranty shall be cause for rescission, cancellation, or voiding the contract of sale of the Mower.

This warranty does not extend to any Mower or part thereof which has been misused, neglected, damaged, abused, not properly installed or maintained, altered or which has been operated in any way contrary to the operating instructions as specified in the Owner/Operator Manual. This warranty does not extend to any repair or replacement made necessary by normal use. This warranty does not extend to the engine which is warranted separately by the engine manufacturer.

THE WARRANTY EXPRESSED HEREIN IS IN LIEU OF OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR MERCHANTIBILITY OR FITNESS FOR A PARTICULAR USE, AND IS IN LIEU OF ANY AND ALL OTHER OBLIGATIONS OR LIABILITY ON WORLDLAWN'S PART.

UNDER ANY AND ALL CIRCUMSTANCES, WORLDLAWN'S TOTAL LIABILITY TO OWNER FOR ANY AND ALL CLAIMS, LOSSES, OR DAMAGES, INCLUDING LOSS OF PROFITS, ARISING OUT OF ANY CAUSE WHATSOEVER, WHETHER BASED IN CONTRACT, OTHER NEGLIGENCE, OR TORT. STRICTLIABILITY, BREACH OF WARRANTY, OR OTHERWISE, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE MOWER. IN NO EVENT SHALL WORLDLAWN BE **RESPONSIBLE FOR** SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES.







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