

Operator's Manual



WORLDLAWN[®]

Commercial WY42/48 Mower



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 WY42/WY48 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 ordered through our sales department. If additional information is needed, contact our sales department or a dealer. Always give the model number and serial number.

This product passed U.S. EPA Certification in 2011.

To improve the quality, performance, and security of our products, we may make changes to our products. Sorry for the inconvenience if you find the products in hand a bit different from the manual.

WARNING

POTENTIAL HAZARD

- 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

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

WARNING

POTENTIAL HAZARD

- 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

- 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 appears above information which alerts you to unsafe actions or situations and will be followed 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 and teach this information to all who operate this unit.

1.2.2 Read the instructions carefully. Familiarize yourself with the controls and the proper use of the equipment.

1.2.3 Do not allow operation of this machine by untrained personnel. Never allow children, teenagers, or anyone unfamiliar with operation of this machine to use the mower.

1.2.4 Avoid mowing while people, especially children, or pets, are nearby. Keep in mind 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.


POTENTIAL HAZARD · This machine produces sound levels in excess of 85 dBA 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.

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

1.3.3 While mowing, always wear adequate 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.


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.


<p>POTENTIAL HAZARD</p> <ul style="list-style-type: none"> · In certain conditions gasoline is extremely flammable and highly explosive.
<p>WHAT CAN HAPPEN</p> <ul style="list-style-type: none"> · A fire or explosion from gasoline can burn you, others, and cause property damage.
<p>HOW TO AVOID THE HAZARD</p> <ul style="list-style-type: none"> · Do not smoke while refueling. 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 until fuel vapors have dissipated. · Do not operate without entire exhaust system in place and in proper working condition.


<p>POTENTIAL HAZARD</p> <ul style="list-style-type: none"> · In certain conditions gasoline is extremely flammable and highly explosive.
<p>WHAT CAN HAPPEN</p> <ul style="list-style-type: none"> · A static charge can ignite gasoline vapors. A fire or explosion from gasoline can burn you, others, and cause property damage.
<p>HOW TO AVOID THE HAZARD</p> <ul style="list-style-type: none"> · Purchase and store gasoline only in an approved container. · Always place gasoline containers on the ground

<ul style="list-style-type: none"> 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 tires 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.
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<p>POTENTIAL HAZARD</p> <ul style="list-style-type: none"> · Gasoline vapor can collect inside enclosed trailers and may be ignited by electrical sparks or hot engine/exhaust components.
<p>WHAT CAN HAPPEN</p> <ul style="list-style-type: none"> · Explosion and fire may occur resulting in property damage, personal injury, and/or death.
<p>HOW TO AVOID THE HAZARD</p> <ul style="list-style-type: none"> · 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 in 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 proper operating condition prior to use for mowing.

 WARNING
POTENTIAL HAZARD
· Operating engine parts, especially the muffler, becomes extremely hot.
WHAT CAN HAPPEN
· Severe burns can occur on contact. · 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 in working order a spark arrester before using equipment on forest-covered, grass-covered, or brush-covered unimproved land.

 WARNING
POTENTIALHAZARD
· 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, keeping 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 mower caution 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.

 DANGER
POTENTIAL HAZARD
· 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
· Do not mow on slopes when grass is wet. · Do not mow near drop-offs or near water. · Do not mow on slopes greater than 15 degrees. · Reduce speed and use extreme caution on slopes. · Avoid sudden turns or rapid speed changes.

- 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 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 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 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.



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

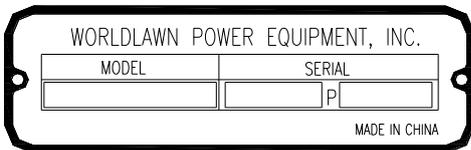
Worldlawn Power Equipment, Inc.

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.

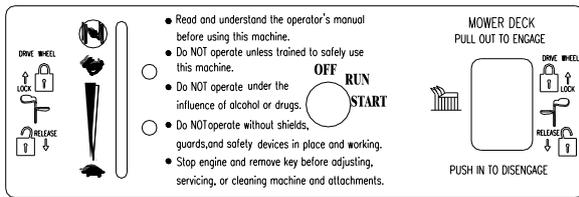
1.6.6 Familiarize yourself with the following safety decals and instruction labels. They are critical to the safe operation of your machine.



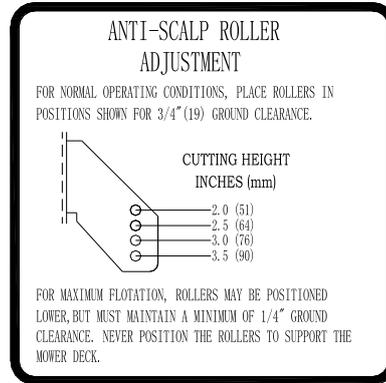
Location 1: On Top of Mower Deck Belt Shields, Left and Right Sides



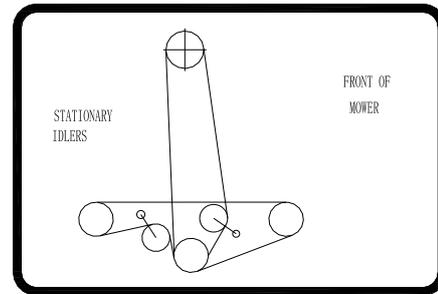
Location 2: On the panel of the engine frame



Location 3: On the console (Electric)



Location 4: On the Mower Deck



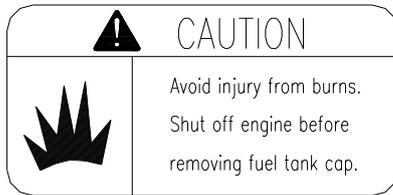
Location 5: On the Mower Deck



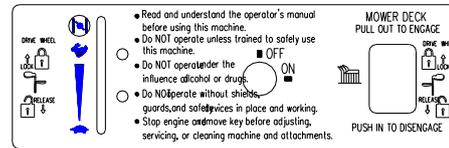
Location 6: On the Mower Deck



Location 7: Gear Lever on the engine frame



Location 8: On the Fuel Tank



Location 13: On the Console (Recoil)



Location 9: Top Front of RH Mower Deck (WY48)



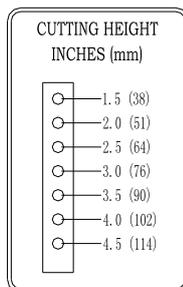
Location 14: Rear of Engine Frame



Location 10: Top Front of RH Mower Deck (WY42)



Location 15: On the Mower Deck



Location 11: On the Mower Deck



Location 16: Rear of Console



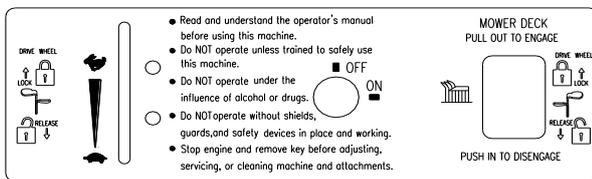
Location 12: Top Front of Console



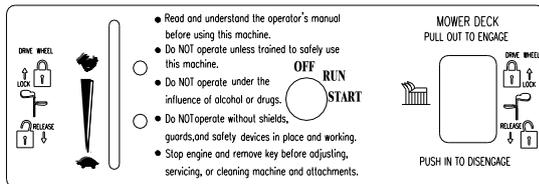
Location 17: Top Front of Belt Cover (WY48)



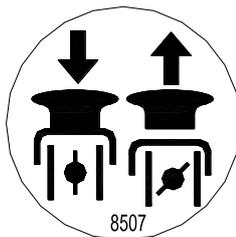
Location 18: Top Front of Belt Cover (WY42)



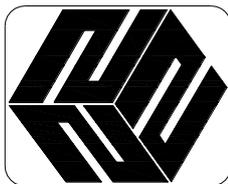
Location 19: On the Console Panel (for Kawasaki FS recoil series)



Location 20: On the Console Panel (for Kawasaki FS electric series)



Location 21: On the Button of Throttle (for Kawasaki FS series)



Location 22: On the fuel tank

EMISSION CONTROL INFORMATION
 JIANGSU WORLD PLANT-PROTECTING MACHINERY CO.,LTD
 THIS EQUIPMENT MEETS U.S. EPA EVAP STANDARDS
 EQUIPMENT FAMILY NAME:BJWPPNHEQ002

Location 23: On the Rear Frame

2. SPECIFICATIONS

2.1 Model Number:

WY4215KHE, WY4215KW, WY4215KWE
 WY4216KWE, WY4216KW, WY4218KWE
 WY4218KW, WY4818KHE, WY4817KW
 WY4817KWE, WY4818KW, WY4818KWE

2.2 Engine:

Model	Engine Model	Producer
WY4215KHE	CV15 Electric	Kohler
WY4215KW	FH430V Recoil	Kawasaki
WY4215KWE	FH430V Electric	Kawasaki
WY4216KWE	FS481V Electric	Kawasaki
WY4216KW	FS481V Recoil	Kawasaki
WY4218KW	FS541V Recoil	Kawasaki
WY4218KWE	FS541V Electric	Kawasaki
WY4818KHE	CV493 Electric	Kohler
WY4817KW	FH541 Recoil	Kawasaki
WY4817KWE	FH541 Electric	Kawasaki
WY4818KW	FS541V Recoil	Kawasaki
WY4818KWE	FS541V Electric	Kawasaki

2.3 Frame Assembly

- Front Frame: Rectangle tube 40×40×4mm
- Thickness: 5mm steel.
- 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.
- Transmission: 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 control the start or stop of engine.
- 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:
WY42=42.0"(106.7cm)
WY48=48.0"(121.9cm)
- Blade engagement: electromagnetic clutch with control panel switch.
- Cutting Height Adjustment: Manual adjustment 1.5"(3.8cm) to 4.5"(11.43cm) in 0.5"(1.27cm) increments.
- Cutting Blades: 5mm thick, WY42=three 14.5"(36.8cm) blades.
WY48=three 16.5"(41.9cm) 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. Turn to "on" to start the engine; turning to "off" stops the engine. Electronic ignition model has three positions. When starting, turn to "start" position, and 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.
- PTO Engagement Switch: PTO engagement switch is used to control blades engagement and stopping. Pull switch out to engage the blades. Push switch in to stop the blades.
- Hand actuated operator presence lever: During normal operation, the operator presence lever must be squeezed, if not, 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 the steering levers and 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 traveling speed.
- 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.

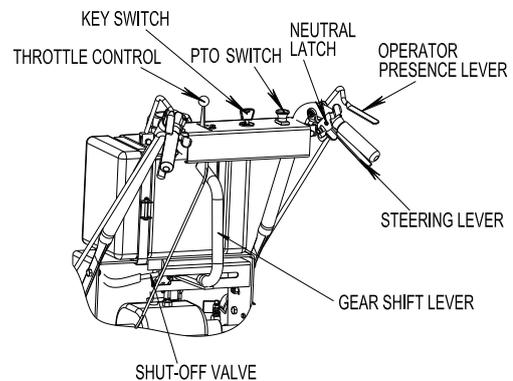


FIG 1

2.7 Accessories:

- a) Grass catcher: 100L, see FIG 2
- b) Mulching Blade and Grass Board: see FIG 3
- c) Platform: see FIG 4

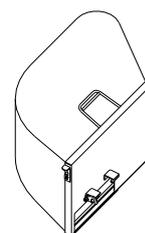


FIG 2

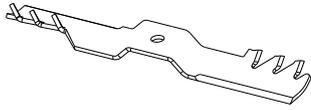


FIG 3

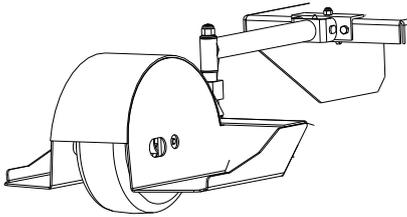


FIG 4

2.8 Approximate Dimensions:

2.8.1 Width:

Model	Without Mower Deck	Discharge Chute Cover Up	Discharge Chute Cover Down
WY42	36.2in (92cm)	43.8in (110cm)	53.1in (135cm)
WY48	36.9in (94cm)	49.2in (125cm)	59in (150cm)

2.8.2 Overall Length:

- WY42=72.8" (185.0cm)
- WY48=74.6" (189.5cm)

2.8.3 Overall Height:

- WY42=41" (105.0cm)
- WY48=41" (105.0cm)

2.8.4 Track:

- Drive Wheel: 20.8"(78.3cm)
- Caster Wheel: 31.5"(80cm)

2.8.5 Wheelbase:

- WY42=33.3" (84.5cm)
- WY48=35" (89cm)

2.8.6 Curb Weight:

- WY42 = 440lbs(200kg)
- WY48 = 470lbs(214kg)

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 Mounting Bolts: 40-52ft-lb(55-70N-m)
- Anti-Scalp Roller Bolts: 40-45ft-lb(54-61N-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 and check there are no loose parts left.

3.2 Initial Instructions

- Attach the handle with four M10 x 30 Hex Hd Bolts and Locknuts as shown in FIG 5.
- Each of the control rods must be connected. Follow the instructions to properly adjust each of the controls as shown in FIG 5.
- Route the Throttle Cable next to Transmission and attach to engine according to Engine Operators Manual. Fuel Tank line connects to the fuel line of engine (the position of Fuel Filter and Throttle Cable Attachment are a bit different on different models of Engines.) The wiring harness and tool kit must be connected as in FIG 6.
- Discharge Chute: Loosen two M8 nuts attaching discharge chute. Lower the discharge chute into position. Retighten nuts until chute is snug but can pivot freely. (See FIG 7)
- Place the fuel tank according to FIG 5 and lock the fuel tank latch.

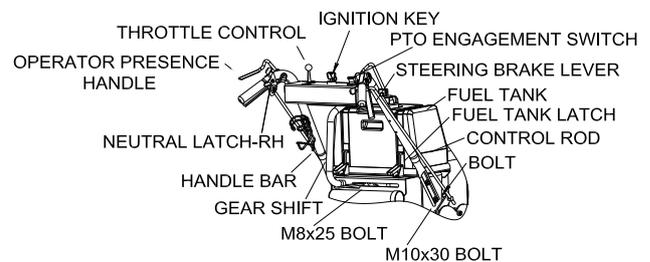


FIG 5

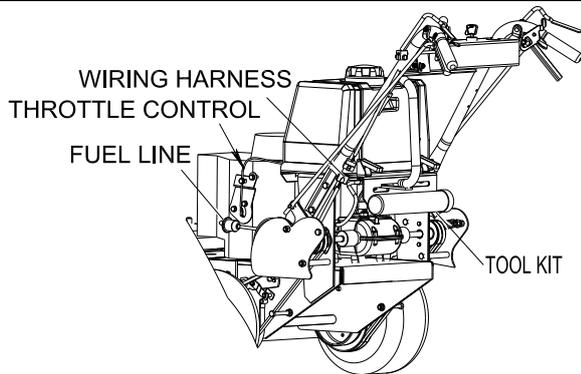


FIG 6

3.3 Service Engine

Engine is shipped with oil. Fill to the appropriate level with SAE10W-30 or 10W-40.

4. OPERATION INSTRUCTIONS

Read the instructions carefully before operating the mower.

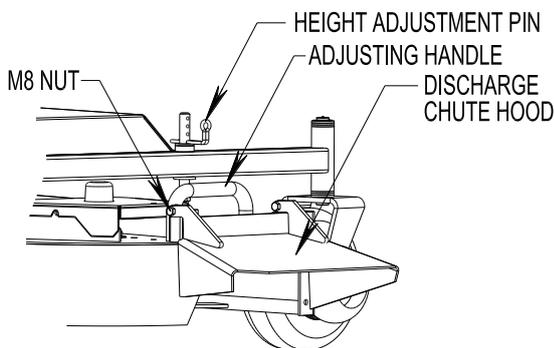


FIG 7

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

The PTO switch must be disengaged and the transmission must be in neutral. Operator presence levers must be released.

On a cold engine, 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

- The PTO clutch push-pull switch engages the cutting blades. Be sure that all people are clear of mower deck and discharge area before engaging PTO.

NOTE: Set throttle to "midway" position. Pull outward on the switch to the "ROTATE" position. Accelerate to full throttle to begin mowing.

- Stopping PTO: Set the throttle to the "midway" position and push in on the switch to the "STOP" position, stopping the PTO.



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

- Squeeze the LH and RH steering levers, lock neutral latches, and move gear shift control to desired speed.
- Squeeze the LH and RH steering levers, unlock latches, and release the steering levers. The mower should move forward.



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.

- To turn right, squeeze the RH steering lever. To turn left, squeeze the LH steering lever.

4.5 Stopping Engine: Bring unit to a full

stop. Disengage the PTO and move steering levers to the neutral lock position to engage parking brake. Rotate ignition switch to "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



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.



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 service 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, and wait for all moving parts to stop.
- Check 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 Cooling System:

Service Interval: Daily or more often in dry conditions.


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 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. 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 8)

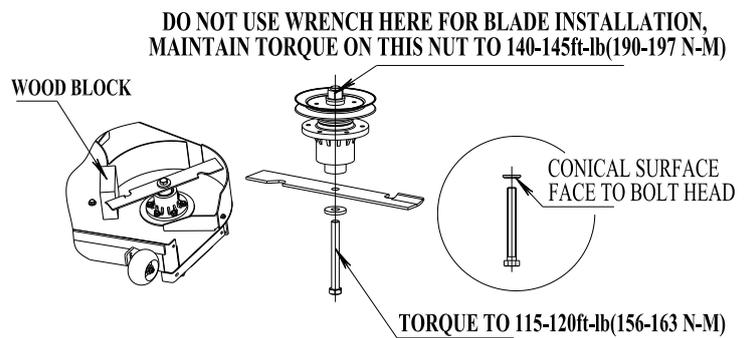


FIG 8


POTENTIAL HAZARD · Operating a mower deck with loose or weakened blade bolts can be dangerous.
WHAT CAN HAPPEN · A loose or weakened blade bolt 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 (156-163 N-M).

5.1.5 Check Safety Interlock System.

Service Interval: Daily

- Check starting circuit.

Starter should crank with PTO Disengaged, the transmission in neutral, and the ignition switch in the "on" position.

- Check kill circuit.

Run engine and release the operator presence levers. Engine should stop after approximately 3 seconds.

NOTE: If machine does not pass any of these tests, do not operate. Contact your authorized WORL DLAWN 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.

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) hours 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 all the belts.
- Remove top belt cover and left and right belt shields on deck 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 9)

LUBRICATION CHART

FITTING LOCATIONS	NO. OF PUMPS	SERVICE INTERVAL
1	1	50hrs
2	1	100hrs
3	1	50hrs
4	1	200hrs

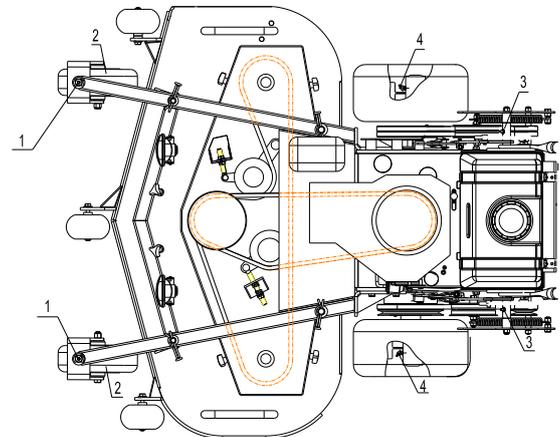


FIG 9

5.2 Adjustments

IMPORTANT: Disengage PTO, 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 engine, wait for all moving parts to stop, and remove key.
- Disengage PTO.

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

- Insert height adjustment pins into holes corresponding to desired cutting height. See decal on deck lift plate. (See FIG 7)
- Adjust anti-scalp rollers for Normal Operating Conditions.

Stop engine, wait for all moving parts to stop, and remove key. Rollers should maintain 3/4 in. (19mm) clearance to the ground to minimize gouging and roller wear or damage. For Maximum Deck Flotation, rollers may be positioned lower, but must maintain 1/4 in. (6.4mm) minimum clearance to ground. Never position the rollers to support the deck. Be sure bolt is tightened properly or loss of anti-scalp roller may result. (See FIG10)

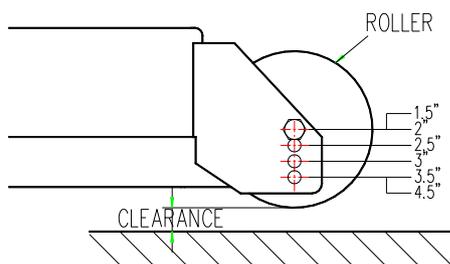


FIG 10

5.2.2 Blade Drive Belt Adjustments

Remove the belt cover. Adjust the mower deck belt using a belt tension gauge. Engage 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 M12 nut. (See FIG 11)

WARNING: Stop engine, wait for all moving parts to stop, and remove key before removing belt cover.

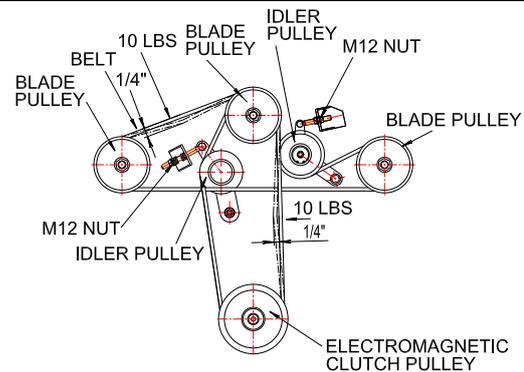


FIG 11

5.2.3 Transmission Drive Belt

The transmission drive belt is on the underside of the engine frame weldment. Adjust the belt so that the belt moves 1/4" with 10 pounds of pressure. Adjust the tension by moving transmission drive idler pulley, then tighten all the nuts. (See FIG 12)

WARNING: Shut off engine and disconnect the spark plug wire before adjusting the belt.

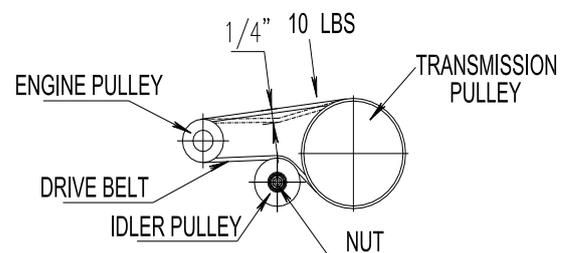


FIG 12

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
- Adjusting brake lever:
Move the steering lever into the lock position. Tighten nut 1 downward slightly; then tighten nut 2 to compress the spring and increase braking. Tighten nut 1 again; maintain a 1mm clearance to the swivel. (See FIG 13)

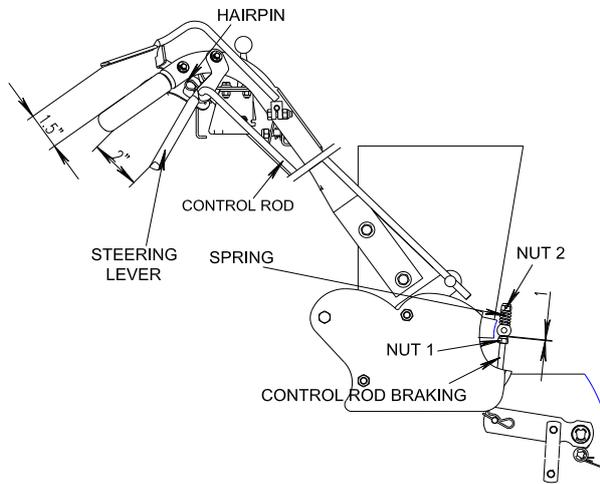


FIG 13

6. TROUBLE SHOOTING

6.1 Mower Pulls Left or Right (W/Levers Fully Forward)

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 PTO is disengaged and the ignition switch is in the "ON" position.
- Check that the spark plug wire is properly connected.
- Make sure the transmission is 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.

ENGINE TROUBLESHOOTING TABLE

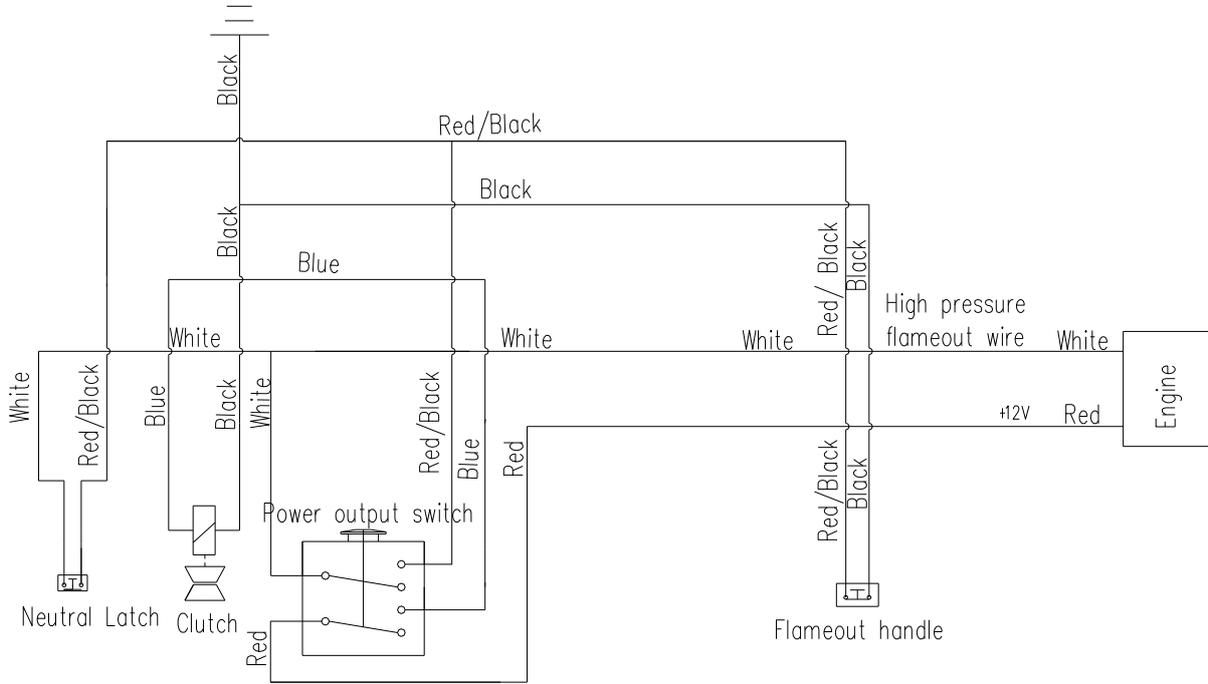
Will not start	1		3	4	5	6	7	
Hard starting	1	2	3	4	5	6	7	
Stops suddenly	1		3	4		6	7	8
Lacks power		2	3	4	5	6	7	8
Operates erratically		2	3	4	5	6	7	
Knock or pings		2				6		
Skin or misfires		2	3	4	5			

Backfires			3	4	5	6		
Overheats			3	4		6		8
High fuel consumption				4	5	6		

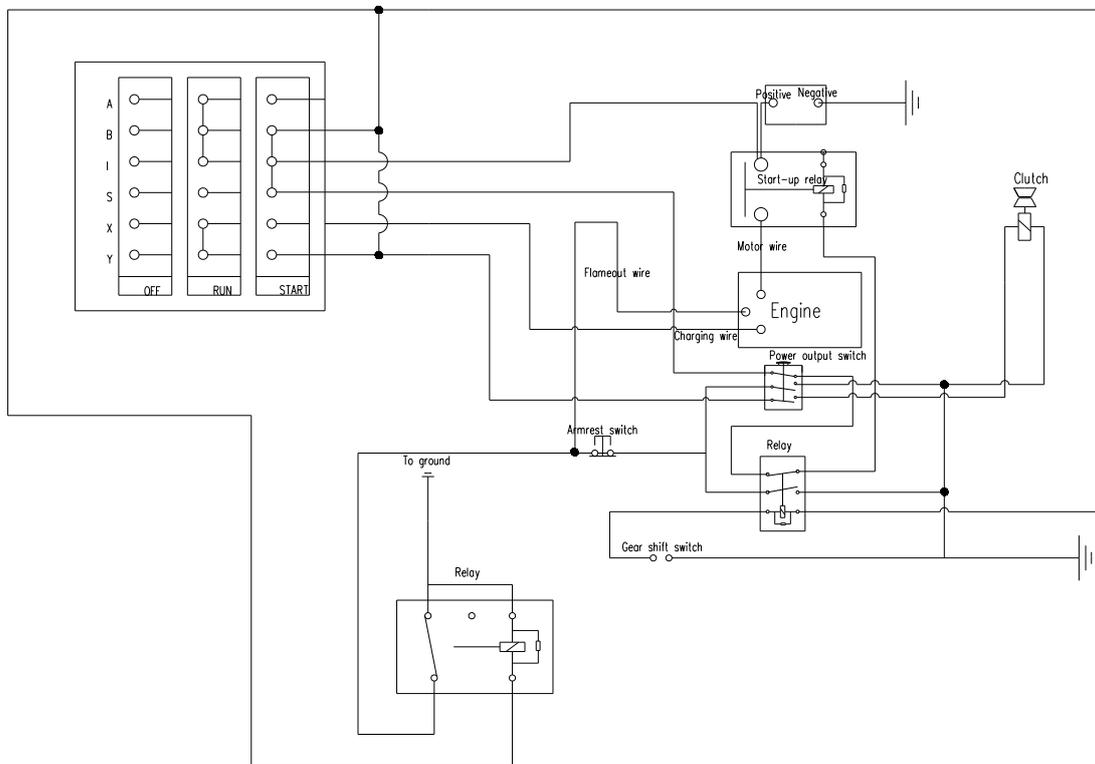
- 1→NO FUEL
- 2→IMPROPER FUEL
- 3→DIRT IN FUEL LINE
- 4→DIRTY AIR FILTER
- 5→FAULTY SPARK PLUG
- 6→ENGINE OVERLOADED
- 7→BLOCKED FUEL FILTER
- 8→INCORRECT OIL LEVEL



7. ELECTRICAL DIAGRAMS



Recoil diagram



Electrical diagram



LIMITED WARRANTY
WORLDLAWN POWER EQUIPMENT, INC
42/48" MOWER

Worldlawn Power Equipment, Inc, ("Worldlawn") warrants that the Worldlawn 42/48" 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 the Mower. It is not transferable. This warranty extends only to those Mowers purchased for private residential and commercial use. A Mower purchased for any other reason, for example as a rental unit, shall have a ninety (90) day warranty under the same terms and conditions as set forth herein.

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 Worldlawn's 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.

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Worldlawn Power Equipment, Inc.

Industrial Park 2415 Ashland Ave. Beatrice, NE 68310

Phone: (402) 228-4255

Fax: (402) 223-4103

www.worldlawnpowerequip.com