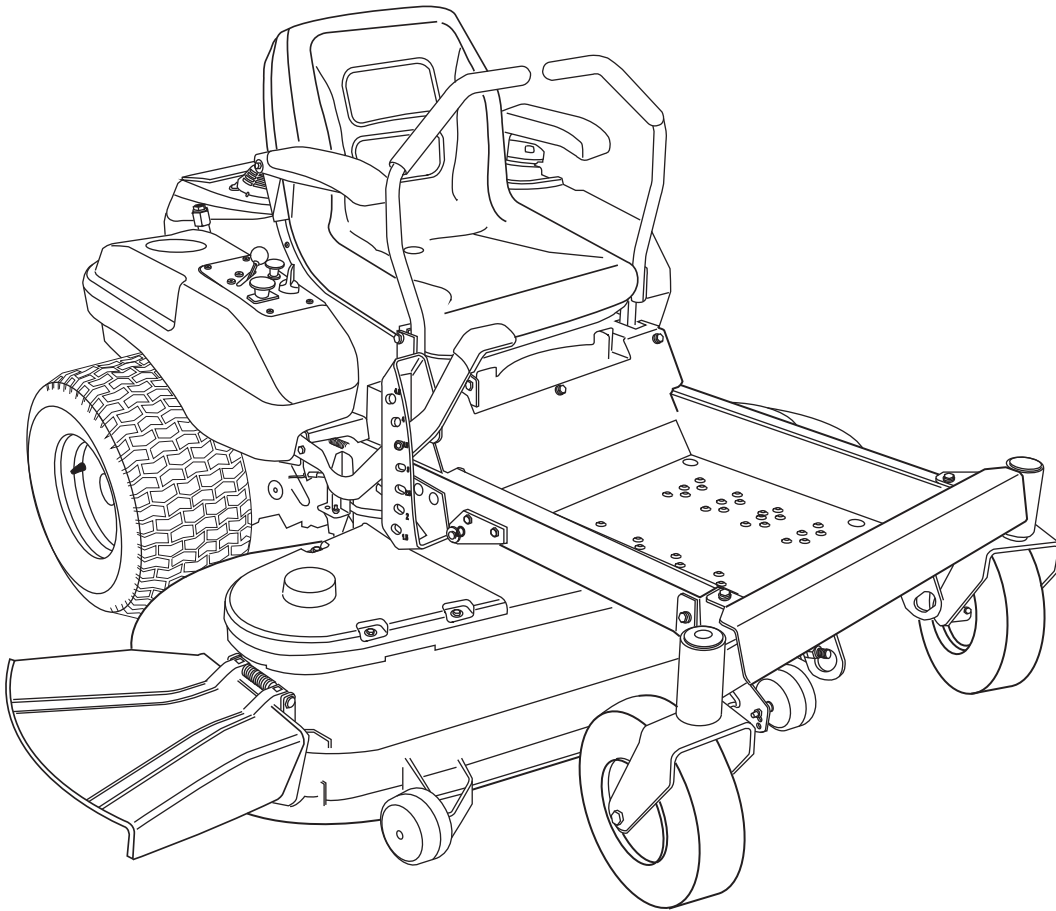




**DIRTY HAND
TOOLS**

60" Zero-Turn Mower



MODELS # 103408 & # 104368

Operation Manual



This safety alert symbol identifies important safety messages in this manual. Failure to follow this important safety information may result in serious injury or death.

Part # 104514 Rev A

Designed & Engineered in Colorado, USA



Assembled with Foreign & Domestic Components

For Service or Questions

Call 1-877-487-8275

720-287-5182

www.dirtyhandtools.com

Dirty Hand Tools® is a brand of



FrictionlessWorld

1100 W 120th Ave, Suite 600
Westminster, CO 80234 • 720-287-5182

Table of Contents

Important Safety Information

Intended Use	4
Personal Protective Equipment	4
General Safety	5
Safety Decals	6

Unpacking & Assembly

Attaching the Seat.....	7
Attaching the Motion Control Levers	7
Attaching the Battery Cables	8

Overview of Components.....9

Operating Precautions.....10

Filling with Gasoline	11
-----------------------------	----

Operation.....12

Operation Console	12
Motion Control Levers	13
Mowing.....	14
Mowing Tips.....	15
Cutting Height Adjustment.....	15
Deck Leveling	16
Moving the Mower	17

Maintenance.....18

Motion Control Levers Adjustment.....	20
Caster Pivot Bearing Adjustment.....	21
Brake Cable Adjustment	21
Engine Maintenance	19

Troubleshooting.....21

Warranty & Specifications Back Cover

Important Safety Information



WARNING

WARNING: Read and thoroughly understand all instructions and safety information before assembling or operating the Zero-Turn Mower. Failure to do so may cause serious injury or death. Do not allow anyone to operate this mower who has not read this manual. As with all power equipment, a mower can be dangerous if assembled or used improperly. Do not operate this mower if you have doubts or questions concerning safe operation.

Call our customer service department at **720-287-5182**, **1-877-487-8275**, or visit www.dirtyhandtools.com if you have any questions or concerns about the safe operation of this equipment.



DANGER

Intended Use

Do not use the mower for any purpose other than for which it was designed. Any other use is unauthorized and may result in serious injury or death.

Personal Protective Equipment

When operating this mower it is essential that you wear safety gear including goggles or safety glasses, steel-toed shoes and tight fitting gloves (no loose cuffs or draw strings). Always wear ear plugs or sound deafening headphones to protect against hearing loss when operating this mower. Always wear sturdy footwear. Never wear sandals, sneakers or open shoes, and never operate the mower with bare feet. Do not wear loose clothing that might get caught in moving parts.



CAUTION

YOUR ZERO-TURN MOWER IS EQUIPPED WITH A SAFETY CONTROL SWITCH WHICH PERMITS OPERATION ONLY WITH AN OPERATOR SEATED.

Do Not attempt to override this important safety feature. Read the entire Operation Manual before using this equipment!



**DIRTY HAND
TOOLS**

Important Safety Information

General Safety

Failure to follow warnings, cautions, assembly and operation instructions in the Operation Manual may result in serious injury or death.



DANGER

READ THE OPERATION MANUAL BEFORE OPERATION.

- **Do not** permit children to operate this equipment at any time.
- **Do not** permit others that have not read and understood the complete Operation Manual to operate this equipment.
- Keep all people and pets a minimum of 10 feet away from the work area when operating the zero-turn mower.
- **Do not** operate the mower when under the influence of alcohol, drugs or medication.
- **Do not** allow a person who is tired or otherwise impaired or not completely alert to operate the mower



DANGER

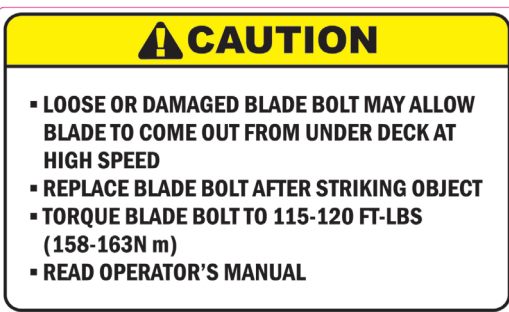
CAREFULLY INSPECT THE AREA TO BE MOWED AND REMOVE ALL FOREIGN OBJECTS.

- Do not mow on an incline greater than 15°.
- 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.
- Handle fuel with care; it is highly flammable. Use an approved fuel container. **Never add fuel to a running engine or hot engine.**
- Fill fuel tank outdoors with extreme care. **Never fill fuel tank indoors.**
- Replace gasoline cap securely and clean up spilled fuel before restarting.
- Never attempt to make any adjustments while the engine is running.

Important Safety Information

Safety Decals

Safety labels on the zero-turn mower are to remind you of important information while you are operating the unit. Make sure all safety warning decals are attached and in readable condition. Replace missing or defaced decals. Contact Dirty Hand Tools at 1-877-487-8275 for replacement decals.



Unpacking & Assembly

Remove Mower Components from Crate

Open container and remove the mower seat assembly, motion control levers, and all packing materials. Disassemble the front side of the crate and push the mower onto a stable, flat surface.

Attaching the Seat

Remove the seat assembly from the crate and four hex bolts, four flat washers, and four spring washers from the hardware included. Install four bolts through flat washers, spring washers, and into the four holes in the seat bracket and thread them into the four threaded holes in the bottom of the seat and tighten.

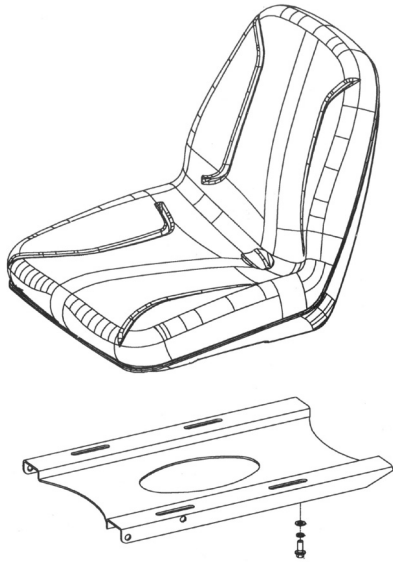


Figure 1

Attaching the Motion Control Levers

Remove the control levers from the crate and four M8×25 bolts, four 8mm flat washers, and four 8mm spring washers from the hardware included.

1. Place the right control lever to the outside of the control arm shaft, insert the bolts into the holes with flat washers and spring washers and tighten them (*see Figure 2*).
2. Install the left control lever in the same way.

NOTE: There are two lever height options available. Place the levers in the first and the third hole (from the top) to increase height of the levers or in the first and the third hole (from the bottom) to decrease the height of the levers.

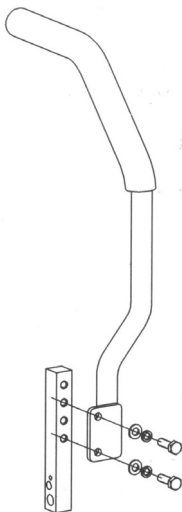


Figure 2

3. If the levers do not align with each other, when in the neutral position, loosen the hardware and make the appropriate adjustment by sliding the lever forward or backward until properly aligned and tighten hardware.
4. If the ends of the levers hit against each other while in the drive position, make adjustments by moving the levers outward to the neutral lock position and carefully bending them outward. Move them back to the drive position and check for clearance, repeat if necessary.

Unpacking & Assembly

Attaching the Battery Cables

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.

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



DANGER

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 connections without proper training.
- If battery acid comes in contact with skin or eyes, flush with water and call a physician immediately.

Battery Maintenance

Check battery charge monthly.

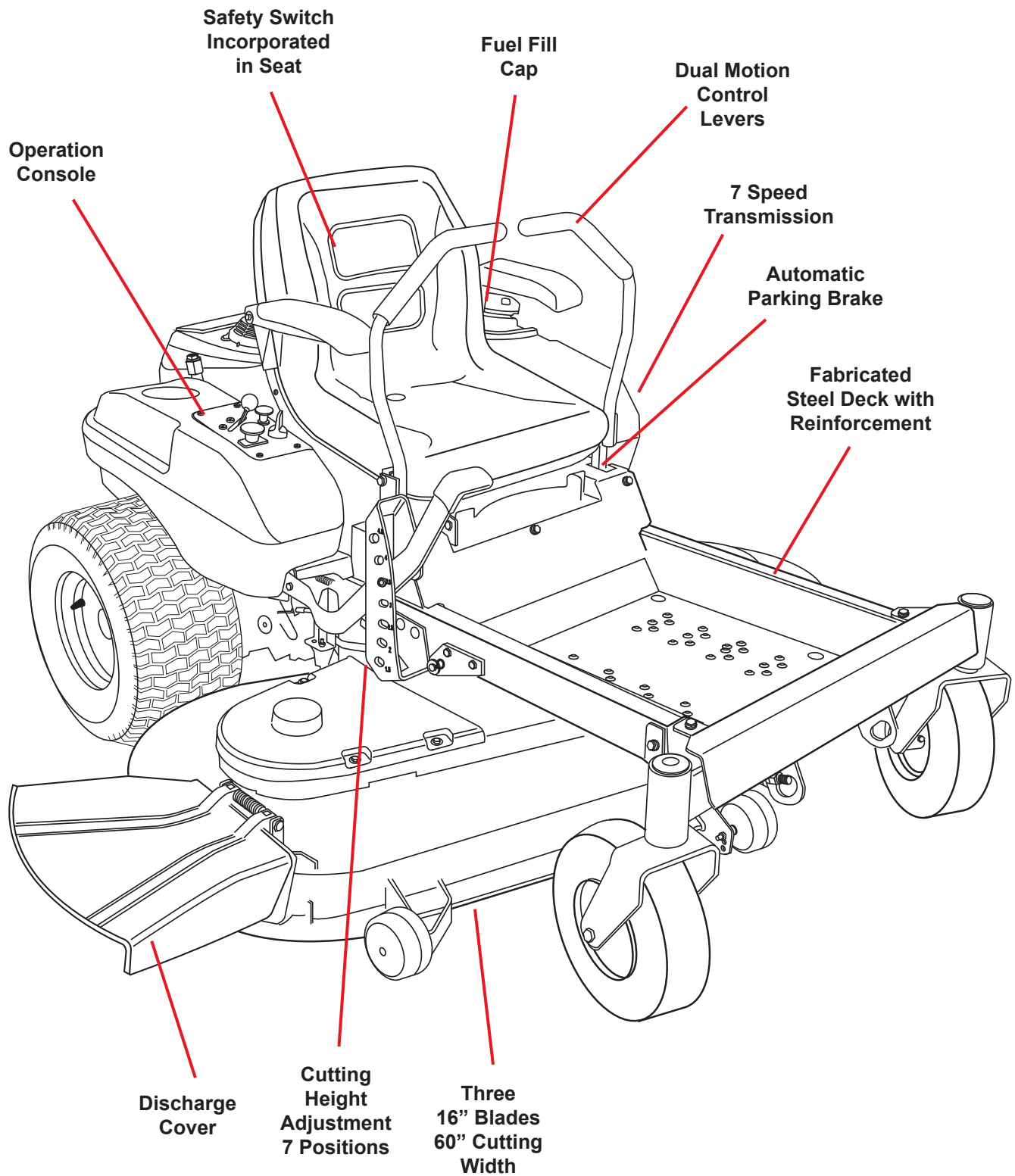
Allowing batteries to stand for an extended period without recharging them will result in reduced performance and service life. To preserve optimum battery performance recharge battery in storage when the open circuit voltage drops to 12.4 Volts.

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

Check the voltage of the battery with a digital voltmeter. Locate the voltage reading 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 12.6 Volts or greater.

Voltage Reading	Percent Charge	Maximum Charger Settings	Charging Interval
12.6 or more	100%	16Volts/7 amps	No charge needed
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%	14.4 Volts/4 amps	2 Hours
11.7 - 12.0	0 - 25%	14.4 Volts/4 amps	3 Hours
11.7 or less	0%	14.4 Volts/2 amps	6 Hours or more

Overview of Components



Operating Precautions



CAUTION

READ, UNDERSTAND AND FOLLOW ALL OF THE PRECAUTIONS BELOW.

- **Never** operate the mower without safety shields, discharge cover, other guards and switches in place and in good working order.
- **Keep hands, feet, and clothing away from rotating parts. Keep clear of mower blades at all times.**
- **Use extreme caution** when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- Use a walk behind mower or a hand trimmer near drop-offs, ditches, steep banks, or water. These areas can be dangerous for the zero-turn mower's width and weight.
- **Engine muffler will be hot** from operation. Do not touch until cool.
- **Do not** run the engine indoors; exhaust fumes are deadly.
- **Do not** operate on slopes greater than 15°.
- 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.
- **Never** operate the machine at high speeds on slippery surfaces.
- Look behind and use care when backing.
- **Never** operate the mower without good visibility or adequate light.
- 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.
- 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.
- **Take precautions when leaving the machine unattended.** Disengage all control levers, stop the engine, wait for all moving parts to stop, and make certain guards and shields are in place.
- **Shut off the engine when leaving the operating position** for any reason. Wait for all moving parts to stop. Detach the spark plug before performing any maintenance or clearing of debris.



WARNING

Operation of any mower can result in foreign objects being thrown.
Always wear safety glasses during operation.



DIRTY HAND
TOOLS

Preparation for Operation

Pre-Start Inspection

1. Make sure safety shields are in place and nuts & bolts are secure.
2. Check fuel supply. Fill the fuel tank no closer than 1 inch from top of tank to provide space for expansion.
3. Inspect air cleaner. Clean or replace as needed.
4. Be sure spark plug wire is attached and is tightened securely.
5. Examine underneath and around engine for oil or fuel leaks.
6. Inspect fuel hoses for tightness and fuel seepage.
7. Look for signs of engine damage.
8. Remove excessive debris from muffler area and recoil starter.

Filling with Gasoline

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 engine oil to gasoline. DO NOT overfill fuel tank.

- Always fill the tank with the engine off and cool.
- Always check the fuel level before operation.
- Allow the engine to cool for at least two minutes before removing the fuel cap.
- Do not fill with fuel indoors or near any source of combustion.
- Do not smoke when fueling or operating the mower.

Fuel Shut-Off Valve is located on the bottom of left fuel tank. 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.



WARNING

The transmission case has grease installed at the factory.

Operation

Operation Console

PTO Engagement Switch must be pulled out to the ROTATE position to engage the blades. Switch is pushed in to the STOP position to stop the blades.

Choke Control is used to aid in starting a cold engine. Pull the choke switch up (on) to start a cold engine. DO NOT run a warm engine with choke in the up (on) position.

Throttle Control is used to control engine speed. Moving throttle lever forward will increase engine speed and moving throttle lever back will decrease engine speed.

Ignition Switch is used to start and stop the engine. The switch has three positions OFF, ON, and START. Insert the key into switch and rotate clockwise to the ON position. Rotate clockwise to the next position to engage the starter (key must be held against spring pressure in this position) release the key when the engine starts.

Starting the Engine

Brake must be engaged, motion control levers out (neutral lock position), and PTO switch OFF to start engine. (It is not necessary for the operator to be in the seat to start the engine.)

1. For a cold engine, place the throttle midway between the SLOW and FAST positions and pull choke switch up to the on position.
2. Rotate the ignition switch to the START position. Let switch return to ON position as soon as engine starts.
3. After starting a cold engine, gradually press the choke switch downwards to the off position as the engine warms up.
4. On a warm engine, place the throttle midway between the SLOW and FAST positions and push the choke switch downwards the off position.

NOTE: DO NOT crank the engine continuously for more than 10 seconds at a time. If the engine does not start, allow a 60 second cool-down period between starting attempts. Failure to follow these guidelines can burn out the starter.

Stopping the Engine

Turn ignition switch to STOP, wait for all mowing parts to stop, and remove key.

- Stop the engine before clearing debris or blockages, cleaning, after striking a foreign object, before inspecting or performing any maintenance on the mower.

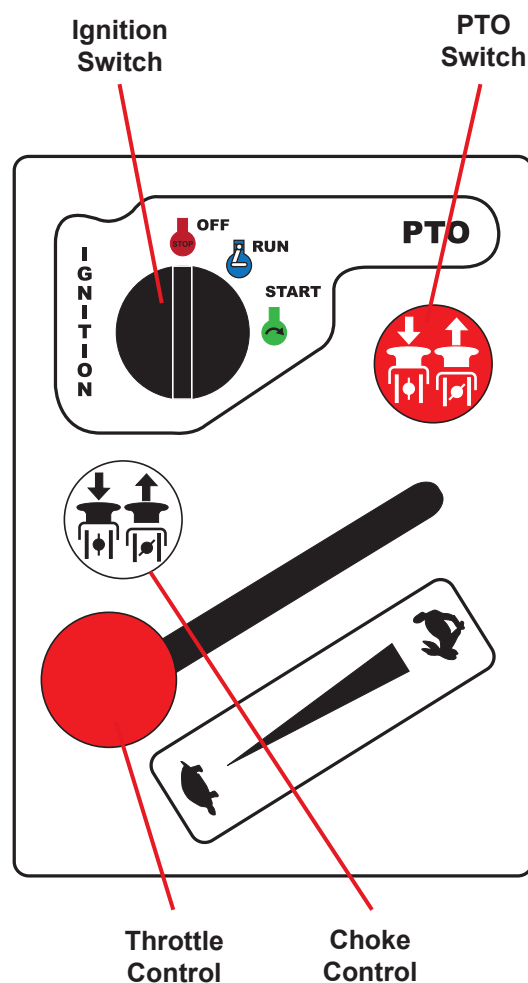


Figure 3

Operation

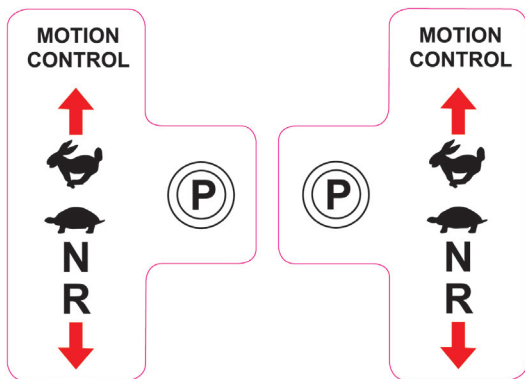
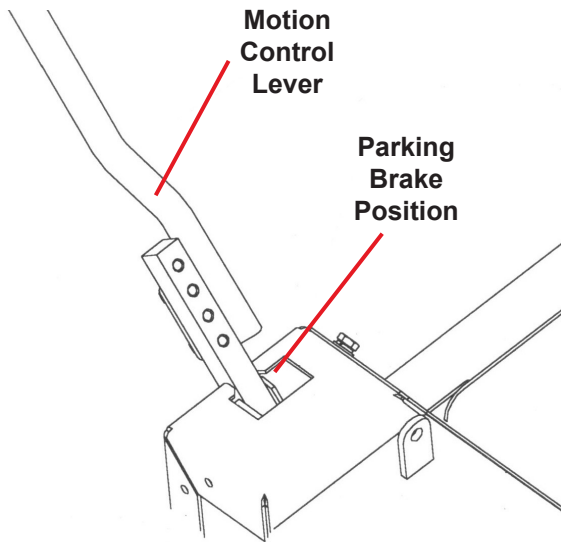


Figure 4

Motion Control Levers: Located on either side of the mower. The left lever controls the left hydrostatic transaxle and controls the left rear drive wheel to go forward and backward. The right lever controls the right hydrostatic transaxle and controls the right rear drive wheel to go forward and backward.

NOTE: To begin movement (forward or backward), the operator must be in the seat. When the levers are centered in the T-slot, the drive system is in the neutral position. With levers moved all the way towards the operator, the drive system is in the parking brake position (*see Figure 4*).

By moving both levers an equal amount forward or back from the neutral position, the machine can be moved forward or backward in a straight line.

Movement of the left lever forward will cause the left drive wheel to rotate in a forward direction.

Movement of the right lever forward will cause the right drive wheel to rotate in a forward direction.

To stop forward travel, pull the lever back to the neutral position.

To turn left while moving forward, move the left lever back toward neutral to slow the left drive wheel.

To turn right while moving forward, move the right lever back toward neutral to slow the right drive wheel.

To make a zero turn to the left, pull the left lever back beyond neutral while holding the right lever slightly ahead of neutral.

To make a zero turn to the right, pull the right lever back beyond neutral while holding the left lever slightly ahead of neutral.

Pulling the levers back from the neutral position will cause the respective drive wheels to rotate in a reverse direction (when tension can be felt when moving into reverse from neutral).

To turn to the left while backing, move the left lever forward toward neutral.

To turn to the right while backing, move the right lever forward toward neutral.

Operation



WARNING

When going forward, if you rapidly pull the motion control levers to the middle T-slot position and push them out, it may cause the parking brake to lock.

- If the parking brake is locked, it may cause the machine not to move when trying to go forward again or rotate at high speed.
- Operator may lose control of the machine, which may cause damage to the machine or injury.
- To go forward, pull the motion control levers to the middle position until the machine stops, then push the motion control levers to the parking brake position.
- When the parking brake is locked, pull the motion control levers to the reverse position slowly, then the locked parking brake device will be released.

Mowing

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

NOTE: Operator must be in seat before the PTO can be engaged.

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

Stopping PTO: Bring unit to a full stop. Move motion control levers to the neutral lock position and engage parking brake. Set the throttle to the “midway” position, push in on the switch to the STOP position and stop the PTO.

Operation

Mowing Tips

For best cutting appearance, be sure to slightly overlap the mower into the previously cut area. This helps reduce the load on the engine and reduce the chance of plugging the discharge area.

If the grass is allowed to grow longer than normal or if it contains a high degree of moisture, raise the cutting height higher than usual and cut the grass at this setting for a first pass then cut again using the lower normal height setting. For best results, if possible, always try to cut grass when it is dry.

Cutting Height Adjustment



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

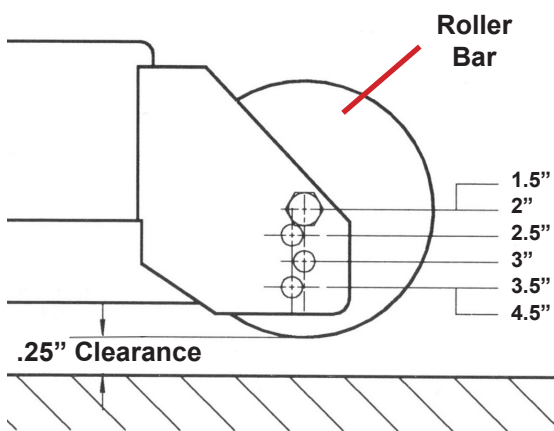


Figure 5

1. Pull the height-adjustment handle inward. Keep the pin (which is located in the middle of height-adjustment handle) off the height-adjustment plate.
2. Pull handle inward and push or pull the height adjustment handle and insert the limiting pin in the middle of handle into the proper hole in accordance to the height of cut desired.
3. Adjust anti-scalp rollers for normal operating conditions. Stop engine, wait for all moving parts to stop, and remove key. Place rollers in one of the positions for desired cutting height (*see Figure 5*).

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.

Operation

Deck Leveling

For best cutting appearance, be sure to that the deck is level. An uneven deck will result in uneven grass cutting height.

1. Place the mower on a flat surface.
2. Stop the engine, wait for all moving parts to stop, and remove key.
3. Check tire pressure in drive tires. Proper inflation pressure for the drive tires is 12psi. It is important for both left and right tires to be of equal inflation for proper deck level.
4. Check tire pressure in caster tires. Proper inflation pressure for the caster tires is 25psi. It is important for both left and right tires to be of equal inflation for proper deck level.
5. *See Figure 6.* Position A is located in middle front of the mower deck. Position B is located behind the mower deck on each side.
6. Reduce the mower deck to the position 1-1/2" (38mm). Adjust the M10 nut with wrench on both sides. Ensure position B is 150±2mm away from ground.
7. Adjust the M14 nut with wrench. Ensure position A is 144±2mm away from ground.

NOTE: When above adjustments have been made, the front of the deck will be slightly lower than the rear of the deck, approximately 1/4" (6mm).

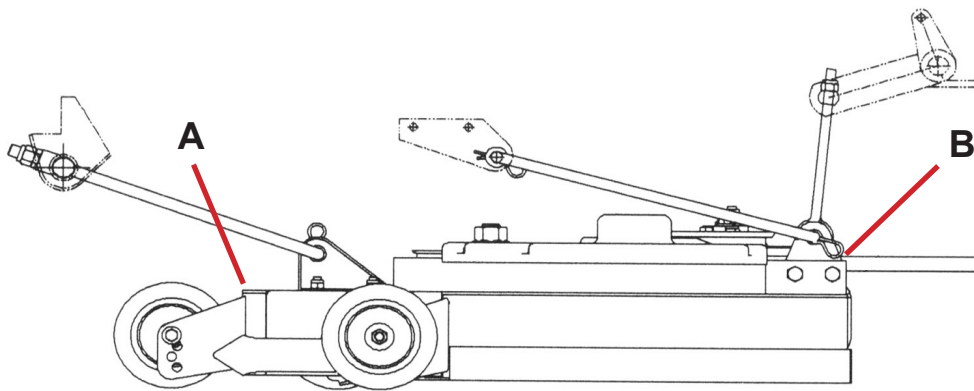


Figure 6

Operation

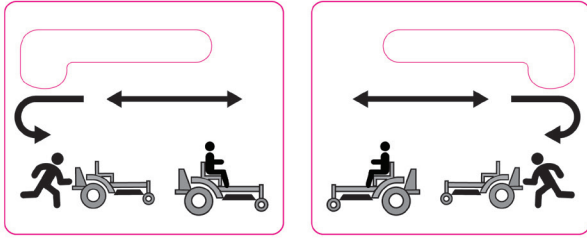


Figure 7

Moving the Mower

Drive Wheel Neutral Lever: Located on both sides of the rear of the frame (see Figure 7). The Neutral Lever is used to control the relief valve of the hydrostatic transaxle. It releases the oil pressure, allowing the machine to be pushed without the engine running.

Transporting the Mower

Use a heavy-duty trailer or truck to transport the machine. Lock brake and block wheels. Securely fasten the machine to the trailer or truck with straps, chains, cable, or ropes. Be sure that the trailer or truck has all necessary lighting and marking as required by law.

Use extreme caution when loading units on trailers or trucks. One full width ramp that is wide enough to extend beyond the rear tire is recommended instead of individual ramps for each side of the unit. The lower rear section of the tractor frame extends back between the rear wheels and serves as a stop for tipping backward. Having a full width ramp provides a surface for the frame members to contact if the unit starts to tip backward. If it is not possible to use one full width ramp, use enough individual ramps to simulate a full width continuous ramp.

Ramp should be long enough so that the angles between the ramp and the ground and the ramp and the trailer or truck do not exceed 15°.

DO NOT attempt to turn the unit while on the ramp, you may lose control and drive off the side. Avoid sudden acceleration when driving up a ramp and sudden deceleration when backing down a ramp. Both maneuvers can cause the unit to tip backward.

Maintenance



**BEFORE PERFORMING ANY MAINTENANCE
PROCEDURE STOP THE ENGINE, WAIT FIVE (5)
MINUTES TO ALLOW ALL PARTS TO COOL.**

**Disconnect the spark plug wire,
keeping it away from the spark plug.**

Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual and the engine manufacturer's owner's manual for maintenance procedures.

Maintenance Checklist

Maintenance Procedure	Before Each Use	Every 50 Hours of Use	Every 100 Hours of Use
Check engine oil level	X		
Clean engine exterior, cooling fins and remove debris.	X		
Check tightness of all fittings including nuts and bolts.	X		
Remove grass clippings from under deck	X		
Check tire pressure in drive tires and caster tires	X		
Check the drive belts for wear, remove left and right belt shields for access		X	
Lubricate brake handle pivot, caster wheel hubs, caster pivots, height adjustment shaft bearing and drive belt idler arm with light oil or spray lubricant		X	
Change the engine oil and replace the oil filter every other oil change	After the first 5 hours of operation		X
Check the engine air cleaner filter and replace if dirty or damaged		X	
Replace spark plug			X

Maintenance



WARNING

**Turn off engine and detach spark plug wire.
Engine must be cool before performing any maintenance.**

1. Make sure unit is on a level surface, stop engine, and wait for all moving parts to stop. Check with engine cold.
2. 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.
3. 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.



WARNING

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

4. Clean engine cooling system daily or more often in dry conditions. Clean all debris from rotating engine air intake screen and from around engine shrouding.
5. Clean grass build-up from under deck. Raise deck to the highest position. Lift the front of unit and support unit using jack stands or equivalent support. Clean out any grass build-up from underside of deck and in discharge chute.
6. Check mower blades by lifting deck and secure in raised position with jack stands or equivalent support. Inspect blades and sharpen or replace as required. Re-install the blades by placing a block of wood between the front or rear baffles and the blade (*see Figure 8*), then torque the blade bolts to 115-120ft-lbs. Be sure the spring disk washer cone is installed toward the bolt head.



WARNING

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.

Do not lubricate the threads of connecting bolts.

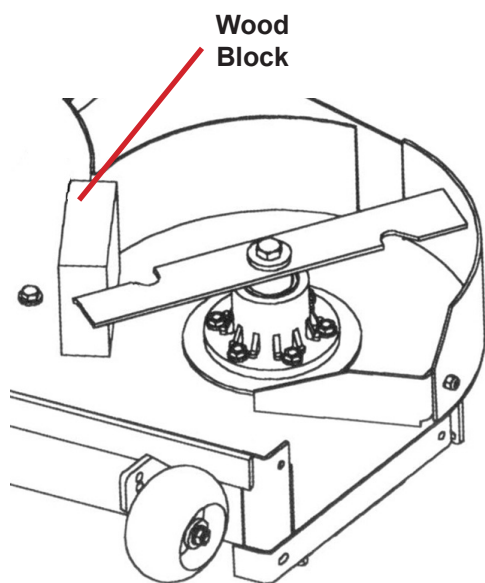


Figure 8



WARNING

**Do not rely solely on mechanical or hydraulic jacks for support.
Use adequate jack stands or equivalent support.**

Motion Control Lever Linkage Adjustment.

1. Adjustment must be made with the drive wheels turning. Raise the frame and block so that drive wheels rotate freely.
2. Remove the electric circuit of the seat safety switch under the seat. Install a jumper wire to the end of the harness connector temporarily.
3. Run the unit at least 5 minutes with the drive levers at full forward speed to bring hydraulic system oil up to operating temperature.
4. Start engine. Brake must be engaged and motion control levers out to start engine. Operator does not have to be in the seat because the jumper wire is being used. Run engine at full throttle.

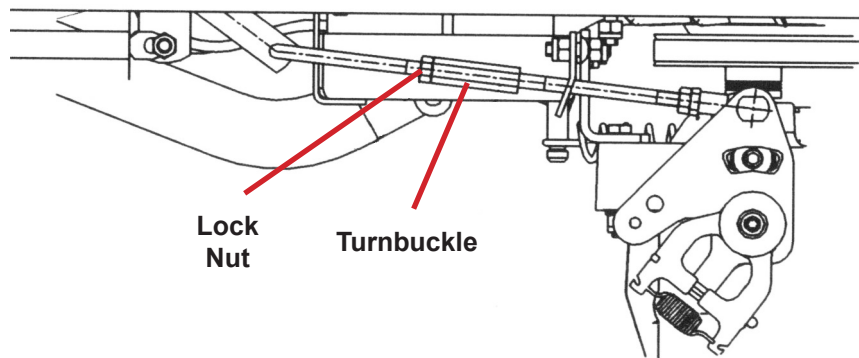


Figure 9

NOTE: The motion control lever needs to be in neutral position while making any necessary adjustments. The left lever controls the left rear drive wheel, while the right lever controls the right rear drive wheel.

5. Place the left motion control lever to the neutral position. Loosen the lock nut on the lever. Rotate the turnbuckle in the middle of the lever to adjust the length of left hydrostatic transaxle in proper way until the wheel stops. Pull the lever slightly when it's in the neutral position. The motion control lever will rebound to the neutral position by the reaction power of a spring. The wheels will stop running or turn back slightly. After doing this, tighten the lock nut (*see Figure 9*).
6. Repeat method to adjust length of right motion control lever.
7. Plug in the seat switch.

Maintenance

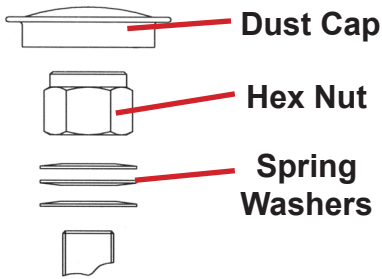


Figure 10

Caster Pivot Bearing Adjustment

Remove dust cap from caster and tighten nylon nut with torque of 37ft-lbs. (50N-m). Rotate or spin the yoke by hand. It should only turn 1 revolution or once around if the torque is correct. If disassembled, make sure the spring washers are reinstalled as shown (*see Figure 10*). The caster wheels should be checked in the same manner.

Brake Cable Adjustment

1. Place the mower on a flat surface.
2. To adjust the parking brake cable loosen nut to adjust at point A (*see Figure 11*).

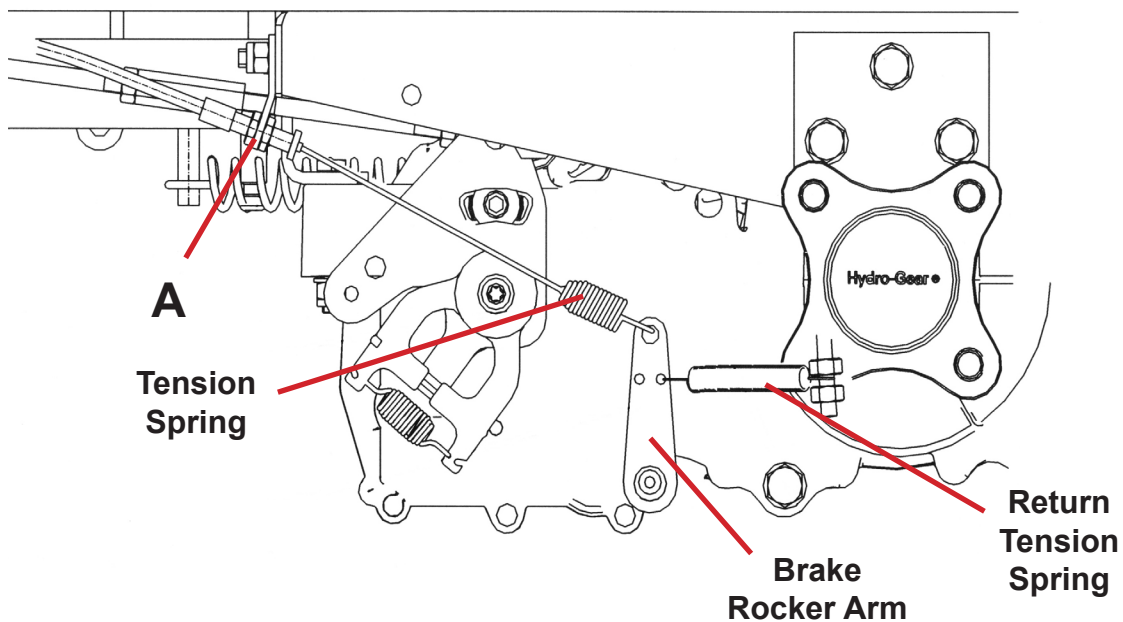


Figure 11

Adjust Throttle Lever Tension

1. Stop engine wait for all moving parts to stop, and remove key.
2. Tension in throttle lever can be adjusted by adjusting the tightness of the lever pivot bolt, which is located under the console.

Troubleshooting



WARNING

**BEFORE PERFORMING ANY MAINTENANCE
PROCEDURE STOP THE ENGINE, WAIT FIVE (5)
MINUTES TO ALLOW ALL PARTS TO COOL.**

**Disconnect the spark plug wire,
keeping it away from the spark plug.**

PROBLEM	SOLUTION
The engine will not start.	<ul style="list-style-type: none">• Check that the battery is fully charged.• Check that the PTO switch is disengaged.• Check that the parking brake is set and motion control levers are moved out (neutral lock position).• Check that the fuel valve is open.• Check that the throttle control is midway between the SLOW and FAST positions, and the choke is in the ON position for a cold engine or the OFF position for a warm engine.• Check for proper attachment of the spark plug wire.• Check that the engine has the right amount of clean oil.• Use only fresh, clean, unleaded gas. If the gas is old, change it. Use a fuel stabilizer if you keep gas longer than one month.• Check the fuel filter (if equipped) to see if it is clear. Place a can under the fuel filter and remove the fuel line from the engine side of the filter. If gas flows freely, it is OK.• Check that the air filter is clean. If it is dirty, change it following the procedure in the engine Owner's Manual.• Make sure that the spark plug is clean. If the spark plug is dirty or cracked, change it. If it is oily, leave it out, hold a rag over the spark plug hole and pull the recoil cord several times to blow out any oil in the cylinder, then wipe off the spark plug and reinsert it.• 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 and reconnect.• Check for loose or corroded battery connection.• If the engine still will not start, visit our web site at www.dirtyhandtools.com or call 1-877-487-8275 for assistance.

Troubleshooting

PROBLEM	SOLUTION
Mower pulls to the left or to the right.	<ul style="list-style-type: none"> • Check air pressure in tires and inflate to recommended psi. • Check the motion control lever adjustments.
Excessive mower vibration.	<ul style="list-style-type: none"> • Check blade mounting bolts for tightness. • Check cutting blades for sharpness and straightness. Bent blades or excessively worn blades may cause vibration. • Check drive belt for wear, replace if needed.
Drive belt wears out quickly.	<ul style="list-style-type: none"> • Check belt pulleys, replace if bent or worn. • Incorrect belt installed. Install correct belt.
Drive belt slips.	<ul style="list-style-type: none"> • Idler pulley spring broken or unattached. Replace as necessary. • Belt excessively worn, replace belt.
Mower does not engage.	<ul style="list-style-type: none"> • Electrical shortage. Locate and replace damaged wiring. • Battery voltage too low. Charge battery.
Mower cuts unevenly.	<ul style="list-style-type: none"> • Check the air pressure in drive tires is 12psi. • Check that the air pressure in caster tires is 25psi. • Check deck support lever. • Check deck leveling (See Deck Leveling, page 16) • Check blades tip to tip for straightness. Replace damaged or warped blades as needed. • Adjust the cutting height for grass that is high, mowing with the height adjusted higher than normal for a first pass. Then lower the deck height and mow a second pass. • Grass is excessively wet. Wait to mow grass when dry.
Mower cuts with streaks of long grass.	<ul style="list-style-type: none"> • Blades are not sharp. • Engine speed is too slow. Mow with full throttle. • Deck is plugged with grass underneath.
Mower cuts leaving bald spots (scalping).	<ul style="list-style-type: none"> • Deck height is too low. • Tire pressure is too low or uneven.
Mower cuts with jagged or stepped areas.	<ul style="list-style-type: none"> • Deck is unlevel. (See Deck Leveling, page 16) • Blades are damaged or installed improperly. • Deck is plugged with grass underneath.

Warranty & Specifications

IMPORTANT NOTICE

We, the manufacturer, reserve the right to change the product and/or specifications in this manual without notification. The manual is for information usage only and the pictures and drawings depicted herein are for reference only.

Warranty Repair and Service

Do not return this product to the store for warranty issues or repair. Call our customer service department at **720-287-5182, 1-877-487-8275**, or visit www.dirtyhandtools.com for the location of the nearest service center.

Record the information below for future reference.

Model No. _____

Serial No. _____

Date of Purchase _____

Place of Purchase _____

Specifications

SKU/Part No.	103408	104368
Description	60" Zero Turn Mower	60" Zero Turn Mower
Engine	Kawasaki FR691V-Twin, 23HP* EPA/CARB Approved	Briggs & Stratton, 23HP*, EPA/CARB Approved
Displacement	726cc	656cc
Engine Fuel Capacity	3 gallons	3 gallons
Transmission	Hydro Gear ZT2800	Hydro Gear ZT2800
Speed	_____ 7mph forward max., 3.75mph reverse max. _____	
Blades	Three 16"	Three 16"
Cutting Height	1.5"-4.5" (7 positions)	1.5"-4.5" (7 positions)
Cutting Width	60"	60"
Tires	_____ 18x9.5-8 turf (rear), 11x4.00-5 smooth (front) _____	
Wheel Base	46"	46.3"
Dimensions	72"L x 68.5"W x 39.8" H	72"L x 68.5"W x 39.8" H
Weight	637 Lbs.	637 Lbs.
Warranty	3 Year / 3 Year Limited Warranty	3 Year / 3 Year Limited Warranty

*As rated by engine manufacturer

Dirty Hand Tools® is a brand of
 **FrictionlessWorld**
1100 W 120th Ave., Suite 600
Westminster, CO 80234 • 720-287-5182

For Service or Questions
Call 1-877-487-8275
720-287-5182
www.dirtyhandtools.com