

GIZMOW

FORMULA

Operator's Manual




CONGRATULATIONS on the purchase of your Gizmow Mower. This product has been carefully designed, tested and manufactured to give you a maximum amount of dependability and years of trouble-free operation. If any additional information is needed contact your authorised Gizmow dealer or distributor. If you need to order parts, please give them the model number and serial number as well as the part number and quantities needed.

MODEL NUMBER _____

SERIAL NUMBER _____

Engine Serial Number _____



E10700501

EUROPE- SERIES 1 YEAR OF MFG SERIALIZED NUMBER

GIZMOW
2072 McDonald Ave. New Albany, IN 47150-1027, USA
SERIAL # E10700501
Model # FE6127DI

LWA 105dB **CE**

800 KG 16.5 KW @ 2700

FE6127DI

POWER UNIT TYPE (FORMULA - EUROPE) DECK SIZE ENGINE TYPE ENGINE HP



1. OPERATOR'S MANUAL

This manual contains assembly, operating, maintenance, adjustment, and safety instructions for your Gizmo mower.

BEFORE OPERATING YOUR MOWER, CAREFULLY READ THIS MANUAL IN ITS ENTIRETY.

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

If additional information is needed, or should you require trained mechanic service, contact your authorized Gizmo equipment dealer or distributor.

All Gizmo equipment dealers and distributors are kept informed of the latest methods of servicing and are equipped to provide prompt and efficient service in the field or at their service stations. They carry ample stock of service parts or can secure them promptly for you from the factory.

All Gizmo parts are thoroughly tested and inspected before leaving the factory, however, attention is required on your part if you are to obtain the fullest measure of satisfaction and performance from your mower.

Parts Quick Reference

Part Number	Description	Quantity
H18218	Blade - Right-hand	2
H18219	Blade - Left-hand	1
H15228	Bolt - Blade	2
H15241	Bolt - Blade - R.H. spindle	1
H15229	Washer - Blade bolt	3
H18177	Spindle - Assembly - Left and centre	2
H18055	Spindle - Assembly - Right hand side	1
H18191	Belt - Deck drive belt	1
H18228	Belt - Right-hand blade	1
H18227	Belt - Gearbox	1
H18100	Belt - Hydro	1
H18035	Wheel - Anti-scalp	4
H13145	Wheel - Caster	2
H18031	Relay	8
H18118	Filter - Hydro	1
820314	Filter - Engine oil	1
820311	Filter- Fuel	1
2508301-S	Filter - Air primary	1
2508304-S	Filter - Air safety	1

**EC DECLARATION OF CONFORMITY
DECLARATION CE DE CONFORMITE
EG-KONFORMITÄTSERKLÄRUNG**



Manufacturer's Name: Gizmow Inc

Manufacturer's Address: 2072 McDonald Avenue,
New Albany
Indiana USA
47151-1027

Declares that this product: Gizmow Formula - F2761DI-EU

Description of Equipment: **Lawnmower**

This machine complies with the essential health & safety requirements relating to design and construction of machinery in accordance with EC directive 98/37/EC and conforms to the outdoor noise directive 200/14/EC-ANNEX VI Procedure 2 – and also complies with electromagnetic compatibility according to EC directive 89/336/CEE.

Measured Sound Power Level: **104 dB L_{wa}**

Guaranteed Sound Power Level: **105 dB L_{wa}**

Mower Cutting Width: **1.55m**

Contact Details for Manufacturers: Gizmow (Europe) Limited
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Notified Body : AV Technology Limited
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Place of Declaration: Regent House
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United Kingdom

Signed

Christopher R Gibson
C R Gibson
Director

Date: **1st August 2007**



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1.



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 lettering / Red background. Indicates an imminently hazardous situation, which, if not avoided, **WILL** result in death or serious injury.

WARNING: Black lettering / Orange background. Indicates a potentially hazardous situation, which, if not avoided, **COULD** result in death or serious injury.

CAUTION: Black lettering / Yellow background. Indicates a potentially hazardous situation, which, if not avoided, **MAY** result in minor or moderate injury.

1.2 TRAINING

1.2.1 Regard the Gizmo mower as a piece of power equipment and teach this to all who operate this unit.

1.2.2 Read the instructions carefully. Familiarise yourself with the controls and the proper use of the equipment. If the operator(s) or mechanic(s) can not read English it is the owners responsibility to explain this material to them.

1.2.3 Do not allow operation of this machine by untrained personnel. Never allow children, teenagers, or people unfamiliar with these instructions to use the mower. Local regulations may restrict the age of the operator.

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 Gizmo (Europe) Ltd.

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 85 dBA at the operators ear when in operation.



WHAT CAN HAPPEN

Exposure to sound levels of 85 dBA 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 substantial 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 the operator or bystanders.



DANGER

POTENTIAL HAZARD

Engine exhaust contains carbon monoxide, which is an odourless 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.



DANGER

POTENTIAL HAZARD

In certain conditions fuel is extremely flammable and highly explosive.

WHAT CAN HAPPEN

A fire or explosion from fuel can burn you, others, and cause property damage.

HOW TO AVOID THE HAZARD

DO NOT smoke while refuelling, and stay away from an open flame or where fumes may be ignited by a spark.

Refuel only outdoors.

Store fuel 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 the level rises above a level that is 13 mm below the bottom of the filler neck to allow for 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 vapours have dissipated.

Do not operate without an exhaust system in place and in proper working condition.



1.4 OPERATION

Although hazard control and accident prevention are partially dependent upon the design and configuration of the equipment, these factors are also dependent upon the awareness, concern, prudence, and proper training of all of the personnel involved in the operation, transport, maintenance, and storage of the equipment. It is essential that all Operator Safety Mechanisms be connected and in operating condition prior to use for mowing or transporting the machine.



DANGER

POTENTIAL HAZARD

Operating engine parts, especially the muffler, become 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 land.



WARNING

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, jewellery, 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 **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.



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 roll-overs, which may result in serious injury, death or drowning.

HOW TO AVOID THE HAZARD

Do not mow slopes when grass is wet.

Do not mow near cliff edges or near water.

Do not mow slopes greater than 15 degrees. A thorough risk assessment should be carried out by a competent person before travelling or mowing on a slope.

Reduce speed and use extreme caution on slopes.

Avoid sudden turns or rapid speed changes.

Use a walk behind mower and/or a hand trimmer near cliff edges, ditches, steep banks or water. These areas can be dangerous. Always mow across the slope not up and down a slope. Mow across an incline and never mow an incline that is too steep for balance and control.

Progressively greater care is needed as the slope increases.

Always avoid sudden starting or stopping on a slope. If tyres 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.

Remove or mark obstacles such as rocks, tree limbs, etc. from the mowing area. Tall grass can and does hide obstacles.

Use extreme care with grass catchers or attachments. These will change the stability of the machine and can cause loss of control.

Follow the manufacturers recommendations for wheel weights or counterweights to improve stability.

1.4.5 Use **EXTREME** caution when backing up. LOOK BEHIND YOU!

1.4.6 **Stop** the blades when crossing surfaces other than grass and 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 settings or overspeed 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 moving parts to stop, and remove key:

- Before checking, cleaning or working on the mower.
- After striking a foreign object (inspect the 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 refuelling.
- Before dumping the grass catcher.

1.4.13 Before stopping the engine, place the throttle control midway between the slow and fast positions. Allow the engine to run a minimum of 15 seconds; then stop the engine.

1.4.14 The fuel system is provided with a 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 on the trailer, to and from the job site.
- Whenever parked inside a building.

1.4.15 This mower was designed for use by one operator only. Keep all others away from mower during operation.

1.4.16 **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.

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

1.4.18 Do Not operate the mower under the influence of alcohol or drugs.

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

1.4.20 If jump starting is required:

- a. Connect the positive (+) power cable from the positive post on the booster battery to the positive terminal post on the starter solenoid switch (this post has the positive battery cable attached to it).
- b. Connect the negative or ground cable (-) from the negative post on the booster battery to any engine deck ground, preferably the engine block as far away from the battery as possible.
- c. Start the machine.
- d. Disconnect battery cables in the reverse order after starting.

1.5 MAINTENANCE AND STORAGE

1.5.1 For engine maintenance, follow the engine manufacturers recommendations precisely as stated in the engine manual.

1.5.2 Disconnect the battery cable from the negative battery post when the unit will be allowed to sit for more than 30 days without use.

1.5.3 Allowing batteries to stand for an extended period of time without recharging them will result in reduced performance and service life. To preserve optimum battery performance and life, recharge batteries 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.

1.5.4 Keep engine, engine area, and hydraulic pump 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.

1.5.5 Store fuel in a container specifically designed for this purpose in a cool, dry place.

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

1.5.7 Diesel 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.

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

1.5.9 Check all bolts frequently to maintain proper tightness.

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

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

1.5.12 All replacement parts must be the same as or equivalent to the parts supplied as original equipment.



WARNING

POTENTIAL HAZARD

Hydraulic fluid escaping under pressure can penetrate skin and cause injury.

WHAT CAN HAPPEN

Fluid accidentally injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

HOW TO AVOID THE HAZARD

Make sure all hydraulic fluid hoses and lines are in good condition and all hydraulic connections and fittings are tight before applying pressure to hydraulic system.

Keep body and hands away from pinhole leaks or nozzles that eject high pressure hydraulic fluid.

Use cardboard or paper, not your hands, to find hydraulic leaks.

Safely relieve all pressure in the hydraulic system by placing the control pedals in neutral and shutting off the engine before performing any work on the hydraulic system.

1.6 SAFETY SIGNS

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

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

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

1.6.4 New safety signs may be obtained from your authorised Gizmo (Europe) Ltd. equipment dealer, distributor or from Gizmo Inc.

1.6.5 Safety signs may be affixed by peeling off the backing to expose the adhesive



H18235 Warning decal – located on rear footstep plate and on plate on right-hand side of seat.



H18236 Warning decal – located on rear footstep plate and on plate on right-hand side of seat.



H18237 Warning decal - Danger of thrown objects. Keep bystanders at a safe distance. Located on both sides of mower deck.



H18238 Warning decal - Rotating blades. Keep feet and hands away from mower deck. Located on both sides of mower deck.



H18239 Warning decal - Do not perform any maintenance work before reading and understanding the contents of the Operator Instruction Book. Located on both sides of mower deck.



1.





2. SPECIFICATIONS

2.1 MODEL NUMBER: F6127DI-EU

2.2 ENGINE: Briggs & Stratton Vanguard D950

2.2.1 Engine Specifications: See Your Engine Owners Manual

2.2.2 RPM: Full Speed: 2750 RPM (No Load) Idle: 1000 RPM

2.3 FUEL SYSTEM

2.3.1 Capacity: 9.75 gal. (37 litres)

2.3.2 Type of Fuel: Diesel

2.3.3 Fuel Filter: 820311

2.3.4 Fuel Shut-Off Valve: 1/4-turn increments (OFF, right-hand tank, left-hand tank)

2.4 ELECTRICAL SYSTEM

2.4.1 Charging System: Alternator - 28VAC output.

2.4.2 Charging Capacity: 14 amps with charge indicator circuit.

2.4.3 Battery Type: BCI Group U1 - 45Ah

2.4.4 Battery Voltage: 12 Volt

2.4.5 Polarity: Negative Ground

2.4.6 Starter Motor: Reduction gear type - 12V, 1.0 kW.

2.4.7 Pre-Heating System: 3 glowplugs - 11V, 9.5A - on for ~5 seconds.

2.4.8 Fuses: Two 20-amp blade type

2.4.9 Safety Interlock System: **PTO** must be **disengaged**, **brake engaged**, and **foot pedals in neutral position** (neutral lock) **to start engine**. Operator must be in seat **when PTO is engaged, brake is disengaged** or engine will stop. To proceed forward the brake must be disengaged or the interlock system will stop the engine.

2.5 OPERATOR CONTROLS

2.5.1 Steering and Motion Control:

Steering wheel controls the direction the mower moves including going into zero turn.

Two separate foot pedals control the direction and speed of travel. The one on the left-hand side of the operator is reverse marked ↓ and controls the reverse speed. The further the pedal is depressed the faster the mower will move in a reverse direction. The pedal on the right-hand side of the operator position is for forward travel as well as zero turns. It is marked as ↑. The further the forward pedal is depressed the faster the mower will move in a forward direction.

2.5.2 PTO Switch: Engages electric clutch (to drive belt) which engages mower blades.

2.5.3 Parking Brake Lever: Engages parking brake.

2.5.4 Horn – located on the side of the control panel is a horn button – depress to sound the horn. This will only work when the key is in the 'ON' position.



2.6 SEAT

- 2.6.1 Type: Standard seat: high back, foam padded (internal spring suspension).
- 2.6.2 Mounting: Seat is hinged to tilt up for access to hydraulic pumps, control cables and other components. This can be held in tilted position with the prop rod. Adjustable fore and aft seat track. Seat is also adjustable in position on the seat plate. 3 sets of hole positions are provided.
- 2.6.3 Armrests: Padded flip-up armrests with height adjustment.
- 2.6.4 Seat Safety Switch: Incorporated into the safety interlock system.

2.7 HYDROSTATIC GROUND DRIVE SYSTEM

- 2.7.1 Hydrostatic Pumps: Two Hydro Gear 16cc variable displacement piston pumps.
- 2.7.2 Wheel Motors: Two Danfoss wheel drive motors with 1 1/4" tapered shafts.
- 2.7.3 Hydraulic Oil Type: Synthetic Mobil 1 15W-50.
- 2.7.4 Hydraulic Oil Capacity: 2.84 litres.
- 2.7.5 Hydraulic Filter: Replaceable cartridge type - P/N H18118: 10 micron
- 2.7.6 Speeds: 0 to 10.0 m.p.h. (16 kph) forward, 0 to 5.0 m.p.h. (5 kph) reverse.
- 2.7.7 Drive wheel release valves (located on the hydraulic pumps) allow machine to be moved when the engine is not running.

2.8 TYRES AND WHEELS

2.8.1 Tyres:	Size	Qty	Tread	Ply	Inflation
Drive Tyres	24-12-12	2	AT101	4	16 psi (1.1 bar)
Front Tyres	13-500-6	2	Smooth	4	25 psi (1.6 bar)

2.9 CUTTING DECK

- 2.9.1 Cutting Width:
61" DECK – 61"
- 2.9.2 Discharge: Rear or mulch.
- 2.9.3 Blade Size:
61" deck – (3) 21" blades
- 2.9.4 Blade Spindles: cast aluminium spindle with 1 inch (25.4mm) I.D. bearings.
- 2.9.5 Deck Drive: Electric clutch mounted on horizontal engine shaft. Blades are driven by two B section belts (w/self-tensioning idler) direct from the engine.
- 2.9.6 Deck: Full floating deck is attached to main frame. Deck design allows for mulching or rear discharge.
- 2.9.7 Cutting Height Adjustment: a spring assisted lever to raise & lower the cutting deck. A pin is used to adjust the cutting height between 1 inch (25mm) to 5 inch (125mm) in 1/2 inch (13mm) increments. The position is shown on an indicator located to the operators right above the rear of the deck. All adjustments can be made while the operator remains seated. The cutting height may be increased and additional 3/4 of inch (19mm) upwards (for a max cut height of 5 3/4 inch (145mm) by moving the three 1/4 inch (6mm) spacers between the blade and the spindle to above the spindle.
- 2.9.8 Mulching Kit: Optional.



2.10 DIMENSIONS

- 2.10.1 Overall Width:
w/61" Deck 63 ¼" (161 cm)
- 2.10.2 Overall Length: 80" (203 cm)
- 2.10.3 Overall Height: 47" (119 cm)
- 2.10.4 Tread Width: (centre to centre of tyres)
 - Drive Wheels 41 ½" (105 cm)
 - Front Casters 33 ½" (85 cm)
- 2.10.5 Wheel Base: 50 ¼" (128 cm)
- 2.10.6 Weight:
w/61" Deck 1760 lbs (800 kg)

2.11 TORQUE REQUIREMENTS

Bolt Location	Torque
Cutter Housing Spindle Nut	70-80 ft-lbs. (95-108Nm)
Blade Mounting Bolt	70-80 ft-lbs. (95-108Nm)
Engine Deck/Front Frame Mount Bolts	30-35 ft-lbs. (41-48Nm)
Anti-Scalp Roller Bolts	40-45 ft-lbs. (54-61Nm)
Engine Mounting Bolts	25-30 ft-lbs. (34-41Nm)
Wheel Motor Mounting Bolts	72-77 ft-lbs. (98-105Nm)
Wheel Hub Slotted Nut	minimum 150 ft-lbs. (205Nm)
Wheel Lug Nuts	90-95 ft-lbs. (120-130Nm)

2.12 NOISE & VIBRATION

- 2.12.1 Guaranteed Sound Power Level 105 dBa
- 2.12.2 Noise at Operator's Ear 90 dBa
- 2.12.3 Hand/Arm Vibration <2.5 m/s²
- 2.12.4 Whole Body Vibration 1.5 m/s²

Specifications





3. ASSEMBLY INSTRUCTIONS

3.1 UNCRATE MOWER

3.2 SERVICE BATTERY.



WARNING: *Battery posts, terminals, and related accessories contain lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash your hands and any other body parts that come in contact with the battery.*

The machine is shipped with a filled lead acid battery.

3.2.1 The battery is located beside the engine on the left side of the machine. It has been disconnected for shipment.



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. Make sure venting path of battery is always open once battery is filled with acid.

3.2.2 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.

IMPORTANT: *Make sure the negative battery cables are disconnected 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 (see chart below for recommended charger settings).*



WARNING

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 accidentally engage causing personal injury.

HOW TO AVOID THE HAZARD

Be sure ignition switch is in the OFF position before charging the battery.

3.2.3 Connect the negative battery cables.

Assembly Instructions



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



3.3 CHECK TYRE PRESSURE.

3.3.1 Check tyre pressure in caster and drive tyres. Proper inflation pressure for front tyres is 25 psi (1.6 bar). Proper inflation for drive tyres is 16 psi (1.1 bar). Adjust if necessary.

3.4 SERVICE ENGINE

Refer to Engine Owners Manual.

3.5 SERVICE HYDRAULIC OIL

The machine is shipped with hydraulic oil in the reservoir. Run the machine for approximately 15 minutes to allow any extra air to purge out of the hydraulic system. Check hydraulic reservoir and if necessary fill the reservoir to the appropriate level with Mobil 1 15W-50 synthetic motor oil. Replace hydraulic reservoir cap and tighten until snug. Do not over tighten.

NOTE: There are two lines on the dipstick. The oil level varies with the temperature of the oil. The top line on the dipstick level shows the level of oil when it is at 225F (107C) - HOT. The bottom line on the dipstick shows the level of the oil when it is at 75F (24C) - COLD. Fill to the appropriate level depending upon the temperature of the oil in the machine. If the oil is at room temperature (about 75 F (24C)), fill only to the COLD level.



4. OPERATION INSTRUCTIONS

4.1 CONTROLS

4.1.1 Familiarise yourself with all controls before operating the mower.

4.1.2 Steering wheel

Controls the direction of travel. Turning it to the left will result in turning left. Turning the steering wheel right will result in the machine turning to the right.

4.1.3 Forward pedal

Located on the right side of the operators foot well area is the forward pedal. Marked ↑, this pedal controls the speed of forward travel as well as the speed of any zero turn. The further the pedal is depressed, the faster the machine will travel.



4.1.4 Reverse pedal

Located on the left side of the operator's foot well area is the reverse pedal - marked ↓. The reverse pedal does **NOT** allow zero turns – these are done with the forward pedal only.

4.



CAUTION

POTENTIAL HAZARD

Machine can spin very rapidly by depressing the forward pedal and turning the steering wheel far to one side.

WHAT CAN HAPPEN

Operator may lose control of the machine, which may cause damage to the machine or injury.

HOW TO AVOID THE HAZARD

Use caution when making turns.

Slow the machine down before making sharp turns.

4.1.5 Tracking Adjustment

Located under the seat on each pump control link. This adjustment is covered in the maintenance section.

Operation



4.1.6 PTO Engagement Switch:

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.



4.1.7 Cold Start

Turn the ignition key clockwise to position | and hold for approximately 5 seconds until the pre-heat light goes out. Turn key clockwise again to START position until the engine starts.

If the engine does not start after 10 seconds, stop, wait one minute and repeat the procedure above.



4.1.8 Throttle Control

Throttle is used to control engine speed. Moving throttle lever upward will increase engine speed and moving throttle lever downward will decrease engine speed.



4.1.9 Park Brake Lever

Located on left side of the machine. The brake lever engages a parking brake on the drive wheels. Pull the lever up and rearward to engage the brake. Push the lever forward and down to disengage the brake. The unit must be tied down and brake engaged when transporting.





4.1.10 Ignition Switch

The ignition switch is used to start and stop the engine. The switch has four positions OFF, ON, HEAT and START. Insert the key into switch and rotate clockwise to the ON position. Rotate clockwise to the next position to HEAT until the light goes out and rotate clockwise to engage the starter (key must be held against spring pressure in this position).

Brake must be engaged, both foot pedals in the neutral position, and PTO switch OFF to start engine.



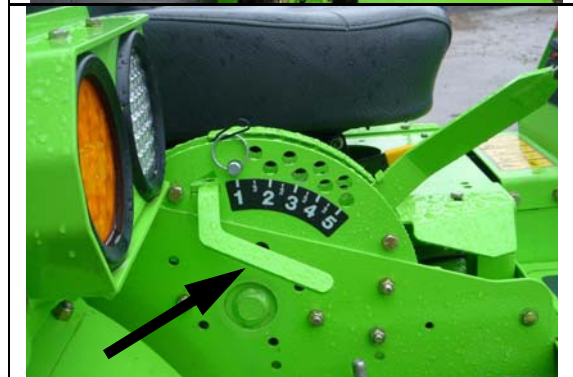
4.1.11 Deck Raise Lever

Push the lever forward until it locks to raise the deck.



4.1.12 Deck Lower Lever

To lower the deck pull the lever. The deck will lower to the selected height of cut.



4.1.13 Set the Height of Cut

Insert the pin into the correct hole for the desired height of cut.

IMPORTANT: Do not operate the mower at an indicated height of cut less than 1. This leads to early blade and belt wear.



Operation



4.1.14 Hour Meter

Located on the control panel. The hour meter records the hours that the start switch is in the 'ON' position.



4.1.15 Fuel Shut-Off Valve

Located on the right-hand side of the machine. 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 job site, and when parked inside a building.

The valve has three positions, each position made in 1/4 turn increments. Valve handle pointed at engine is the OFF position. Rotate valve handle 1/4 turn right (from Off position) for fuel flow from the right tank. Rotate valve handle 1/4 turn left (from Off position) for fuel flow from the left tank.



4.1.16 Drive Wheel Release Valves

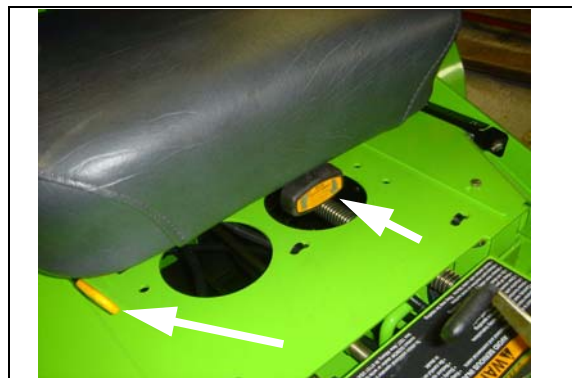
Located on the right front corner of the hydrostatic pumps. Drive wheel release valves release the hydrostatic drive system to allow the machine to be pushed without the engine running. Unlock seat latch and tilt the seat up to gain access to pumps. With a 7/16" wrench, turn both valves one turn counter-clockwise to release drive system.

Turn clockwise to reset system. DO NOT over tighten. DO NOT tow machine.

4.2 SEAT

4.2.1 The seat can be adjusted forwards and backwards by moving lever to the right and the seat can then be moved.

To adjust the seat suspension rotate the knob clockwise to make the suspension firmer. To reduce the suspension rotate the knob counter clockwise.






4.2.2 The seat arm rests can be raised and lowered by rotating the knob. Rotate clockwise to raise the arms and counter clockwise to lower them.



4.3 SEAT BELT

The Gizmo Formula is fitted with a seat belt. The seat belt **MUST** be fastened whenever the Roll Bar is in the raised position. The seat belt is of the auto-retracting type. Pull the seat belt across your waist and push onto the clip on the right-hand side of the seat.

 **WARNING: NEVER wear a seat belt when the Roll Bar is NOT in the raised position.**


4.3.1 To release the seat belt pull the clip away from the seat and return the belt to its position on the left-hand side of the machine.



4.4 ROLL BAR

If fitted the Roll Bar should always be in the raised position.

The roll bar may be folded down to allow access into areas of restricted height.

 **WARNING: When the roll bar is folded it does not provide any protection in the event of a roll over and should not be considered as a roll over protection structure.**



4.

Operation



To lower the Roll Bar for transport or to pass under obstacles first remove the 'R' pin. The large pins can now be removed from each side. The Roll Bar can be gently lowered and the pins refitted.



4.5 PRE-START

4.5.1 Fill fuel tank(s). **Do Not** overfill fuel tank. Never fill the fuel tank so that the fuel level rises above a level that is at least 25 mm (1") below the bottom of the filler neck to allow for fuel expansion and prevent fuel spillage.

4.5.2 Make sure you understand the controls, their locations, their functions, and their safety requirements.

4.5.3 Refer to Maintenance, Section 5, and perform all the necessary inspection and maintenance steps.

4.6 MOWING

4.6.1 Open the fuel shut-off valve.

4.6.2 Starting Engine

Brake must be engaged, the PTO switch disengaged, and the foot pedals in the neutral position.

On a cold engine, place the throttle midway between the SLOW and FAST positions. Turn ignition switch to the HEAT position and hold until the pre-heat light goes out. Turn switch to the START position. Release the switch as soon as the engine starts.

IMPORTANT: *DO NOT crank the engine continuously for more than ten (10) seconds at a time. If the engine does not start, allow at least 60 seconds for the engine to cool down between starting attempts. Failure to follow these guidelines can burn out the starter motor.*

On a warm engine, place the throttle midway between the SLOW and FAST positions and turn switch to the START position. Release the switch as soon as the engine starts.

4.6.3 Engaging PTO



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.



DANGER

POTENTIAL HAZARD

An uncovered discharge opening will allow objects to be thrown in an operators or bystanders 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 removed or altered unless there is a mulch kit in place.

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

IMPORTANT: *Operator must be in seat before the PTO can be engaged and the Park Brake MUST be dis-engaged.*

Set throttle to half throttle position. Pull outward on the blade switch to the ROTATE position. Accelerate to full throttle to begin mowing.

IMPORTANT: *Never mow below 25mm (1in). This causes premature belt & blade wear and increases the likelihood of striking foreign objects.*

4.6.4 Stopping PTO

Set the throttle to the midway position. Push in on the switch to the STOP position stopping the PTO.

4.6.5 Stopping Engine

Bring unit to a complete stop. Disengage the PTO, move feet away from pedals so they do not contact the pedals and engage parking brake.

Before stopping the engine, place the throttle control midway between the slow and fast positions. Allow the engine to run a minimum of 15 seconds; then stop the engine.

Rotate ignition switch to OFF position. Remove the key to prevent children or other unauthorised persons from starting engine.

Close fuel shut-off valve when machine will not be used for a few days, when transporting, and when the unit is parked inside a building.

4.7 TRANSPORTING

4.7.1 Transporting a Unit

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. Use the strapping down points provided. Be sure that the trailer or truck has all necessary lighting and marking as required by law.





Secure the trailer with a safety chain.



WARNING

POTENTIAL HAZARD

Loading a unit on a trailer or truck increases the possibility of backward tip-over.

WHAT CAN HAPPEN

Backward tip-over of the unit could cause serious injury or death.

HOW TO AVOID THE HAZARD

Use extreme caution when operating a unit on a ramp.

A single, full width ramp is recommended.

If individual ramps must be used, use enough ramps to create an unbroken ramp surface wider than the unit.

DO NOT exceed a 18 degree angle between ramp and ground or between ramp and trailer or truck.

Avoid sudden acceleration while driving unit up a ramp to avoid tipping backward.

Avoid sudden deceleration while backing unit down a ramp to avoid tipping backward.

4.7.2 Loading a Unit

Use extreme caution when loading units on trailers or trucks. One full width ramp that is wide enough to extend beyond the rear tyres is recommended instead of the individual ramps for each side. The lower rear section of the 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 18 degrees. A steeper angle can cause mower deck components to get caught as the unit moves from ramp to trailer or truck. Steeper angles may also cause the unit to tip backward. If loading on or near a slope, position the trailer or truck so it is on the down side of the slope and the ramp extends up the slope. This will minimize the ramp angle. The trailer or truck should be as level as possible.

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 manoeuvres can cause the unit to tip backward.



5. MAINTENANCE & ADJUSTMENTS



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 before you do **any** maintenance.



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

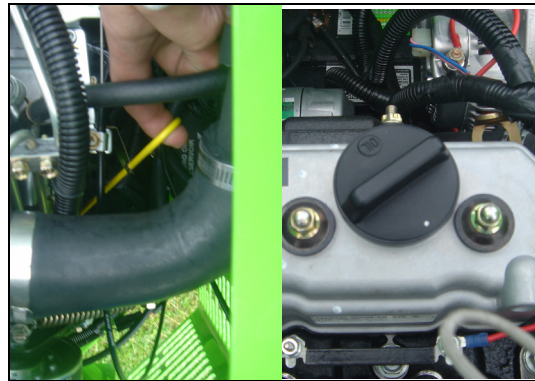
Allow the engine to cool completely before any servicing or making any repairs around the engine or hydraulic area.

5.1 PERIODIC MAINTENANCE

5.1.1 Check engine oil level

Service Interval: Daily

- a. Stop engine, wait for all moving parts to stop and make sure unit is on a level surface.
- b. Check with engine cold.
- c. Clean area around dipstick. Remove dipstick and wipe oil off. Re-insert the dipstick. Do not screw into place. Remove the dipstick and read the oil level.
- d. If the oil level is low, wipe off the area around the oil fill cap, remove cap, and fill to the FULL mark on the dipstick. Use oil as specified in the Engine Owners 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.

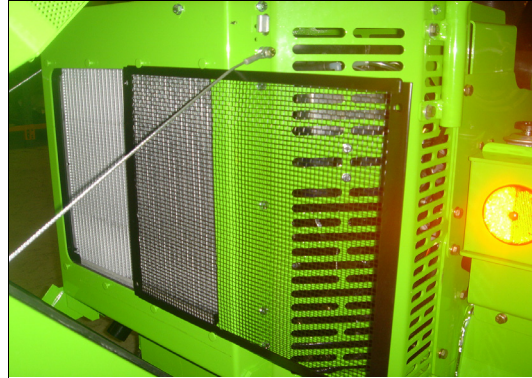
Maintenance & Adjustment



5.1.2 Clean radiator screen.

Service Interval: Daily or more often in dry conditions.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Undo clamps securing radiator cover.
- c. Remove radiator screen.
- d. Clean all debris from radiator screen and refit.



WARNING

POTENTIAL HAZARD

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

WHAT CAN HAPPEN

Excessive debris around the radiator 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, radiator and hydraulic pumps daily.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Clean all debris from radiator screen and from around engine shroud.

5.1.3 Check battery charge

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 batteries 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 storing 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 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.

IMPORTANT: *Make sure the negative battery cables are disconnected 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.*

5.1.4 Clean grass build-up under deck.

Service Interval: Daily

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Raise deck to the transport (5" (12.7cm) cutting height) position. Lift the front of unit and support unit using jack stands or equivalent support.
- c. Clean out any grass build-up from underside of deck and in discharge chute.



CAUTION

POTENTIAL HAZARD

Raising the mower deck for service or maintenance relying solely on mechanical or hydraulic jacks could be dangerous.

WHAT CAN HAPPEN

The mechanical or hydraulic jacks may not be enough support or may malfunction allowing the unit to fall, which could cause injury.

HOW TO AVOID THE HAZARD

DO NOT rely solely on mechanical or hydraulic jacks for support. Use adequate jack stands or equivalent support.

5.1.5 Check mower blades

Service Interval: Daily

- a. Stop engine, wait for all moving parts to stop, remove key and disconnect spark plug wires.
- b. Lift deck and secure in raised position as stated in Section 5.1.4.
- c. Inspect blades and sharpen or replace as required.
- d. 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 75-80 ft. lbs (95-108Nm).



CAUTION

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

Replace the blade bolt after striking any foreign object. Use only the following replacement parts:

- Blade bolt..... P/N H15228
- Blade bolt - right-hand spindle P/N H15241
- Blade bolt washer P/N H15229

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

Torque the blade bolt to 75-80 ft. lbs (95-108Nm).

5.1.6 Check safety interlock system

Service Interval: Daily

Maintenance & Adjustment



- a. Check starting circuit. Starter should crank with parking brake engaged, PTO disengaged and foot pedals in the neutral position. The operator does not need to be in the seat to start the engine.
- b. Try to start with operator in seat, parking brake disengaged, PTO disengaged and foot pedals in the neutral position - starter must not crank.
- c. Try to start with operator in seat, parking brake engaged, PTO engaged and foot pedals in the neutral position - starter must not crank.
- d. Try to start with operator in seat, parking brake engaged, PTO disengaged, and the forward pedal depressed, starter must not crank, repeat again with the reverse pedal depressed, starter must not crank.
- e. Check kill circuits. Run engine at one-third throttle, disengage parking brake and raise off of seat (but do not get off of machine) engine must stop.

Run engine at one-third throttle, brake NOT engaged, engage PTO and raise off of seat (but do not get off of machine), engine must stop.

NOTE: *If machine does not pass any of these tests, do not operate.*

Contact your authorised GIZMOW SERVICE DEALER.

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

5.1.7 Check for loose hardware

Service Interval: Daily

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

5.1.8 Service air cleaner

Service Interval: Daily

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Undo clips and remove air filter cover.

- c. Remove filter element, clean and refit.



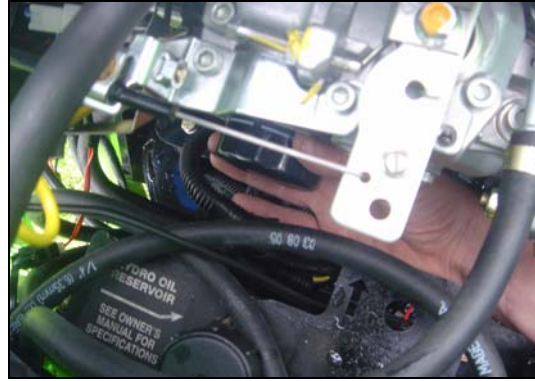
Maintenance & Adjustment



5.1.9 Change engine oil.

NOTE: Change oil and filter after first fifty (50) hrs. of operation. Follow engine manufacturers recommendations for future oil changes.

- a. Oil drain valve is located on right hand side of the engine. Place a pan under the machine to catch oil and open valve. Allow oil to drain then close valve.
- b. Replace the oil filter as per the Engine Owners Manual. 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.
- c. 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.
- d. Start the engine and check for leaks. Stop engine and re check oil level.



5.1.10 Check hydraulic oil level

Service Interval: 50 hrs.

- a. Stop engine and wait for all moving parts to stop.
- b. Clean area around hydraulic reservoir cap and remove cap.
- c. Oil level should be to the first line on the dipstick when cold (check with dipstick screwed onto the tank and remove to check). If not add oil. Use only Mobil 1 15W-50 synthetic motor oil. Replace hydraulic reservoir cap and tighten until snug. Do not over tighten.

NOTE: There are two lines on the dipstick. The oil level varies with the temperature of the oil. The top line on the dipstick level shows the level of oil when it is at 225F (107C) - HOT. The bottom line on the dipstick shows the level of the oil when it is at 75F (24C) - COLD. Fill to the appropriate level depending upon the temperature of the oil in the machine. If the oil is at room temperature (about 75 F (24C)), fill only to the COLD level.



5.1.11 Check tyre pressures

Service Interval: 40 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Check tyre pressure in all four tyres.
- c. Inflate front tyres to 25 psi (1.6 bar).
- d. Inflate drive tyres to 16 psi (1.1 bar).

5.1.12 Check condition of belts

Service Interval: Initially at 4 hours – thereafter every 40 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Check behind engine to check gearbox drive belt. Check in front of engine to check hydro drive belt.
- c. Remove left and right belt shields on deck and lift up floor pans to inspect the deck drive belts.
- d. See Sections 5.2.3, 5.2.4 and 5.2.5, for belt adjustment.

5.1.13 Lubricate grease fittings

Service Interval: Refer to chart.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Lubricate fittings with one to two pumps of NGLI grade #2 multi-purpose gun grease.

Maintenance & Adjustment



Refer to the following chart for fitting locations and lubrication schedule.

Grease Point Location	Initial Pumps	No. of Grease Points	Service Interval
Front wheel hubs	2	2	8 hours
Front wheel pivots	2	2	8 hours
Rear height adjust pivots	1	2	40 hours
Deck idler pivots	1	2	40 hours
Hydro idler pivot	1	1	40 hours
Gearbox idler pivot	1	1	40 hours
Deck spindles	2	3	40 hours
Universal joint	1	1	200 hours



5.



5.1.14 Lubricate control box cross shafts (3)

Service Interval: 160 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Open right-hand and left-hand foot covers.
- c. Lubricate the three stainless steel cross shafts rod with spray type lubricant or light oil.

5.1.15 Lubricate pump control bushings

Service Interval: 160 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Unlock seat latch and tilt seat up. Hold in place with the prop rod.
- c. Lubricate bronze bushings on the main centre pump pivot and the ones on the outside of the pumps with a spray type lubricant or light oil.

5.1.16 Lubricate steering wheel bronze bushings

Service Interval: 160 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Remove side cover on the control box.
- c. Lubricate bronze bushings on the steering wheel shafts with a spray type lubricant or light oil.

5.1.17 Lubricate steering wheel chain

Service Interval: 160 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Remove side cover on the control box.
- c. Lubricate the chain between the two steering wheel shafts with a spray type lubricant or light oil.

5.1.18 Lubricate front steering chains

- a. Service Interval: 160 hrs.
- b. Stop engine, wait for all moving parts to stop, and remove key.
- c. Open right-hand and left-hand foot covers.
- d. Lubricate the chain between the two front steering wheel shafts with a spray type lubricant or light oil.

5.1.19 Lubricate cam followers

Service Interval: 160 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Remove side cover on the control box.
- c. Lubricate the bronze bushings on the two cam follower pivots with a spray type lubricant or light oil.



Maintenance & Adjustment

5.1.20 Remove radiator screen and clean.

Service Interval: 80 hrs.

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Inspect the radiator screen. Clean any debris from the screen. If debris is present behind the screen, you will have to remove it and clean. Also clean dust, dirt and oil from external surfaces of engine, which can cause improper cooling.
- c. Make sure the radiator screen is properly reinstalled. Operating the engine without this will cause engine damage due to overheating.

5.1.21 Change fuel filter

Service Interval: As Required

- a. A fuel filter is installed between the fuel tanks and the engine. Replace when necessary. Use part number 820311.



5.1.22 Change hydraulic system filter

Service Interval: After First 25 hrs.

Then every 400 hours or yearly whichever comes first.

NOTE: Use only Gizmo Part No. H18118

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Locate filter under right side of the frame.
- c. Carefully clean area around filter. It is very important that no dirt or contamination enter the hydraulic system.
- d. Unscrew filter to remove and allow oil to drain from reservoir.



IMPORTANT: Before reinstalling new filter, fill it with Mobil 1 15W-50 and apply a thin coat of oil on the surface of the rubber seal.

- e. Turn the filter clockwise until rubber seal contacts the filter adapter then tighten the filter an additional 2/3 to 3/4 turn.
- f. Fill reservoir as stated in Section 5.1.10.
- g. Raise the rear of machine up and support with jack stands (or equivalent support) just high enough to allow drive wheels to turn freely.
- h. Start the engine and move throttle control ahead to full throttle position. Depress the forward pedal to full speed and run for several minutes. Shut down machine and re check oil level. Add as needed.

Maintenance & Adjustment



5.1.23 Wheel hub - slotted nut torque specification

When tightening the slotted nut on the wheel motor tapered shaft:

- a. Torque the slotted nut to 175 ft. lbs. (240Nm)
- b. Further tighten the nut until the next set of slots line up with the cross hole in the shaft.
- c. Replace cotter pin.



IMPORTANT: Both the wheel hub and the tapered shaft must be clean and dry before assembly.

5.2 ADJUSTMENTS

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

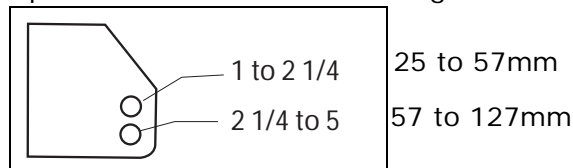
5.2.1 Cutting Height Indicator Adjustment.

- a. Stop machine and set parking brake. Shut off engine and remove the key.
- b. Push the lever forwards to raise the deck to the full height of 5 inches (125mm).
- c. Check the height shown on the indicator on the right side of the machine. If it is not at 5 inches (125mm) loosen the two 5/16" bolts/nuts to adjust. Re tighten the bolts after adjustment.



5.2.2 Anti-scalp wheel adjustment

- a. Stop machine and set parking brake. Shut off engine and remove the key.
- b. Position the anti scalp wheels as shown for the height of cut to be used.



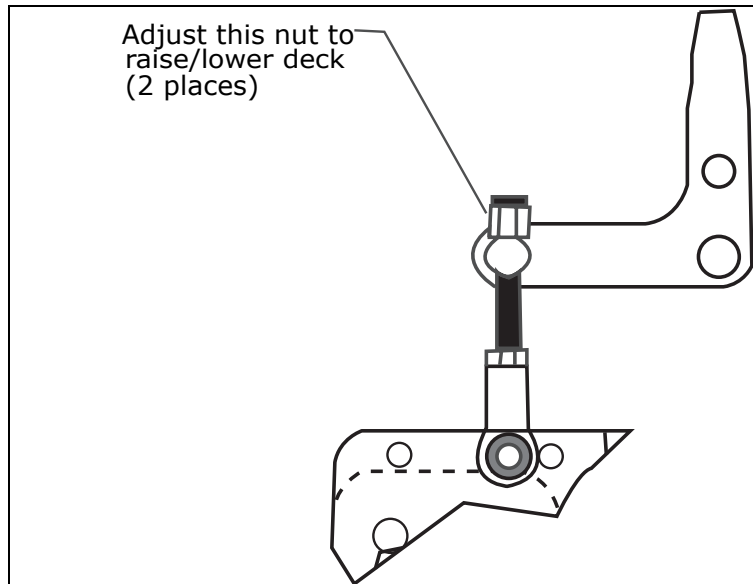
Maintenance & Adjustment



5.2.3 Deck Leveling

- a. Position mower on a flat surface.
- b. Stop engine, wait for all moving parts to stop, and remove key.
- c. Check tyre pressure of all four (4) tyres. If needed, adjust to 16 psi (1bar).
- d. Raise the deck to the 3 position as indicated on the height of cut indicator.
- e. Position the blade so it points right to left. Measure the distance to the ground. This is the height of cut. It should measure 3 inches (75mm). If it does move on to the next step.

If the height is not 3 inches (75mm), the adjustment rods will have to be adjusted either up or down until the height is at 3 inches (75mm). Adjust both so that the deck is level in this step.

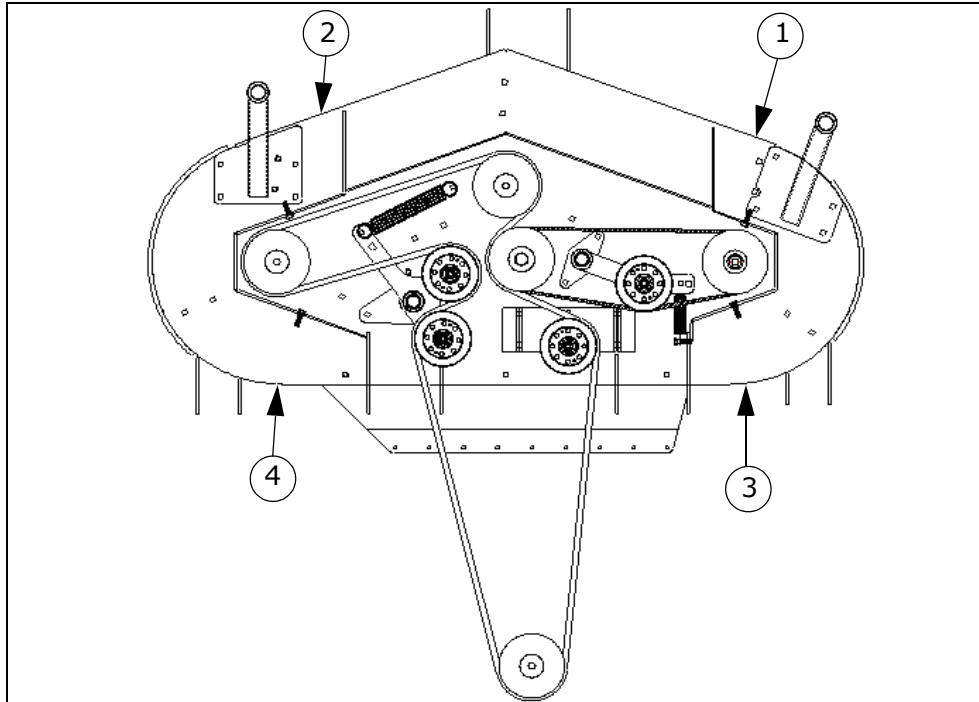


- f. Measure from the top of the deck to the ground using a straight edge or tape measure at points 1 and 2 as indicated below.

Maintenance & Adjustment



The initial measurements should be about the same. If not adjust as per step E.



- g.* Now adjust the front of the deck so that the front dimension at point 1 is 1.5 to 6 mm lower than the dimension at point 2. (this is measured from the top of the deck to the ground).

Next using the straight edge or tape measure, match the dimensions measured at point 1 to point 3 and match point 2 to point 4. Adjust the nut as needed on each adjuster.

5.2.4 Pump Drive Belt Tension

Tighten the nut on the compression spring so that it requires 5 kg of force to deflect the belt 13 mm between the LH pulley and the engine pulley.

5.2.5 Deck Belt Tension.

Self-tensioning - No adjustment necessary.

5.2.6 Gearbox Drive belt Tension

Self-tensioning - No adjustment necessary.

5.2.7 Park Brake Adjustment

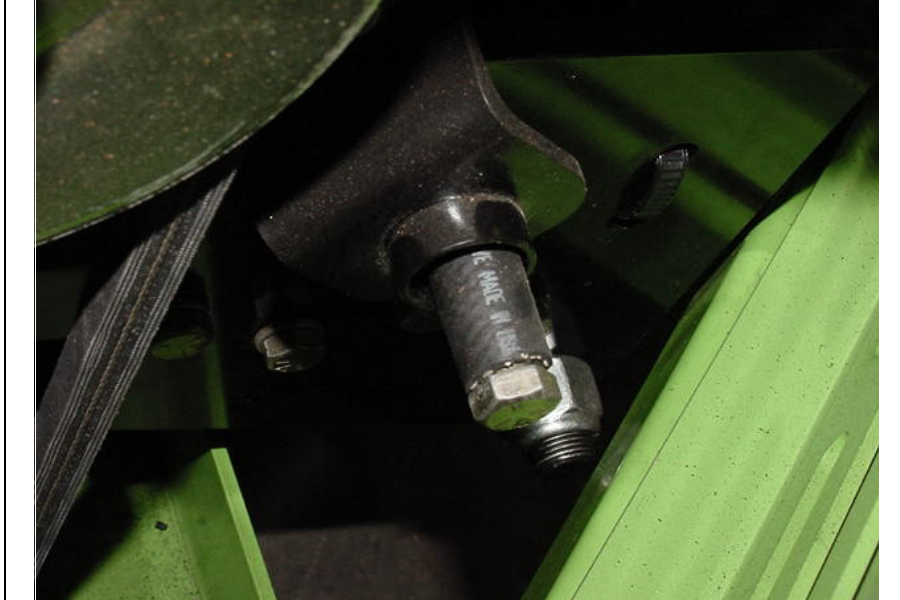
- a.* Stop engine, wait for all moving parts to stop, and remove key.
- b.* Disengage the park brake.
- c.* Loosen the adjusting screw on the knob. Tighten or loosen the adjustment as needed. Check to make sure that the lever will still engage before tightening the adjustment screw.

Maintenance & Adjustment



5.2.8 Electric Clutch Adjustment

No adjustment necessary to clutch. You must adjust the 'play' in the clutch stop when reinstalling. Loosen the two bolts/nuts that hold the anti-rotation plate on the clutch and position so that the tube is centred on the rubber bolt stop. Tighten the two bolt/nuts and check to make sure that this will allow the clutch to rotate slightly.



5.

5.2.9 Neutral adjustment



CAUTION

POTENTIAL HAZARD

Engine must be running and drive wheels must be turning so motion control adjustment can be performed.

WHAT CAN HAPPEN

Contact with moving parts or hot surfaces may cause personal injury.

HOW TO AVOID THE HAZARD

Keep fingers, hands, and clothing clear of rotating components and hot surfaces.



CAUTION

POTENTIAL HAZARD

Raising the mower deck or rear of the unit for service or maintenance relying solely on mechanical or hydraulic jacks could be dangerous.

WHAT CAN HAPPEN

The mechanical or hydraulic jacks may not be enough support or may malfunction allowing the unit to fall, which could cause injury.

Maintenance & Adjustment



HOW TO AVOID THE HAZARD

DO NOT rely solely on mechanical or hydraulic jacks for support. Use adequate jack stands or equivalent support.

- a. This adjustment must be made with the drive wheels turning. First raise the frame and block up so that drive wheels can rotate freely.
- b. Disconnect the electrical connection for the seat safety switch, located directly to the left of the seat pivot point. Temporarily install a jumper wire across the terminals in the connector of the wiring harness.
- c. Run the unit at least 5 minutes at full forward speed to bring hydraulic system oil up to operating temperature.
- d. Unhook seat latch and tilt seat forward.
- e. Start engine. Brake must be engaged and foot control pedals in neutral to start engine. Operator does not have to be in the seat because of the jumper wire being used. Run engine at full throttle and release brake.
- f. Check the wheels to see if they have any rotation forward or backward.
- g. If the wheels are rotating in either direction, the neutral position will need to be adjusted.
- h. Start with the right-hand wheel. If it is rotating in a forward direction then the neutral adjustment needs to be turned clockwise (if rotating backwards then the adjustment will need to be turned counter clockwise) on the right-hand pump control arm. Shut off the unit, loosen the adjustment and turn it in or out as needed slightly. Restart unit and check adjustment. Move forward pedal forward and release to verify adjustment. If it is good, shut the unit down and tighten the adjustment. Restart engine and verify. Repeat for the left-hand side.



Maintenance & Adjustment



- i.* Shut off unit. Remove jumper wire from wire harness connector and plug the connector into seat switch. Remove unit from supports.

5.2.10 Neutral Switch Adjustment

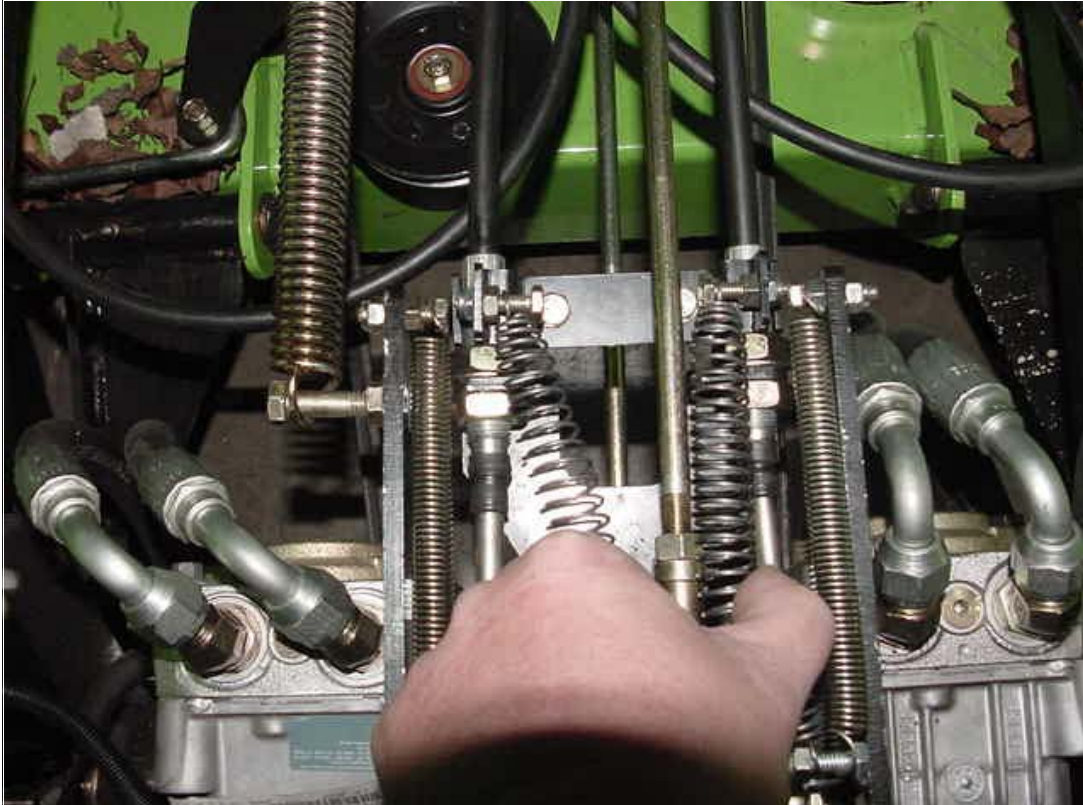
- a.* The two neutral switches are located between the two hydraulic pumps located under the seat. These are non-contact magnetic switches.



- b.* The switches sense neutral and will not allow the machine to start if the machine is not in neutral.
- c.* To adjust the switches you can deform the mount to align with the appropriate pump arm. Loosen the two screws holding each switch (or the magnet located on the pump arm) to align the magnet to the sensor. These should be aligned so that there is no more than 1/8 inch (3mm) gap between the two when the machine is in neutral.

5.2.11 Push-pull cable adjustment

- a.* Set the push-pull cables in the rear of the machine so that **three** full threads protrude through the holder as shown.



- b. Remove the front nose cover, side covers and access panel.
- c. Set the steering so the wheels are pointed straight.

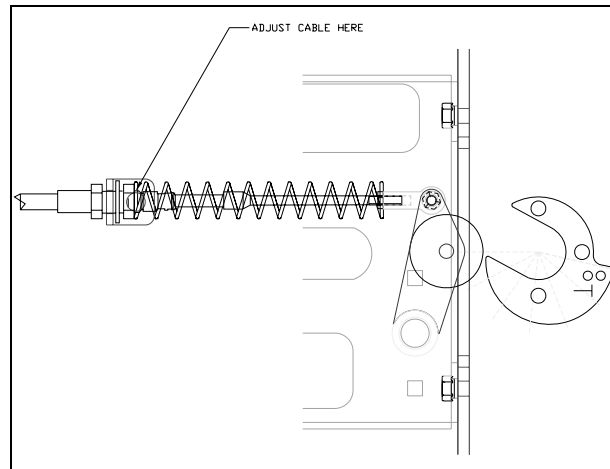
d. Depress the Forward pedal so it is held in the full forward position.

e. Adjust the push-pull cables so that the bearings are close to but not touching the cams for Top and Bottom. There should be 2 mm of clearance between the cam and roller. Top cam adjustment is shown below. The adjustment for the Bottom cam is the same as the top.

f. Turn the wheel all the way to the right until it hits the wheel stop.

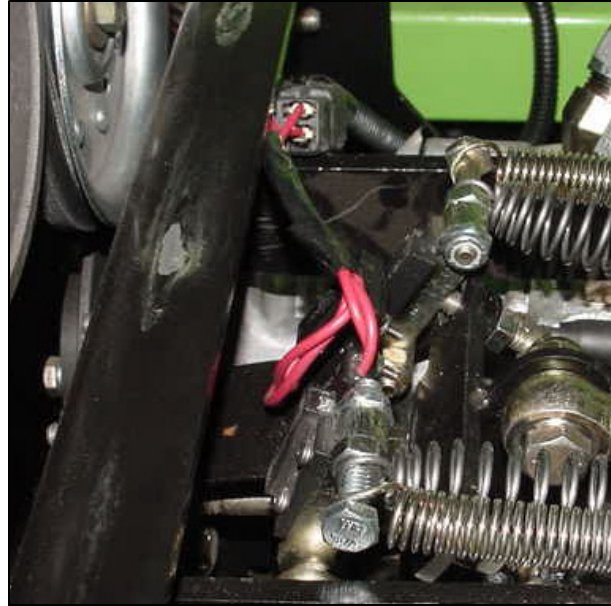
g. Prop the seat up.

h. Slowly depress the forward pedal and watch the two pump arms. These should 'split' meaning one should move forward and one back at the same time with the wheel turned all the way to the right.



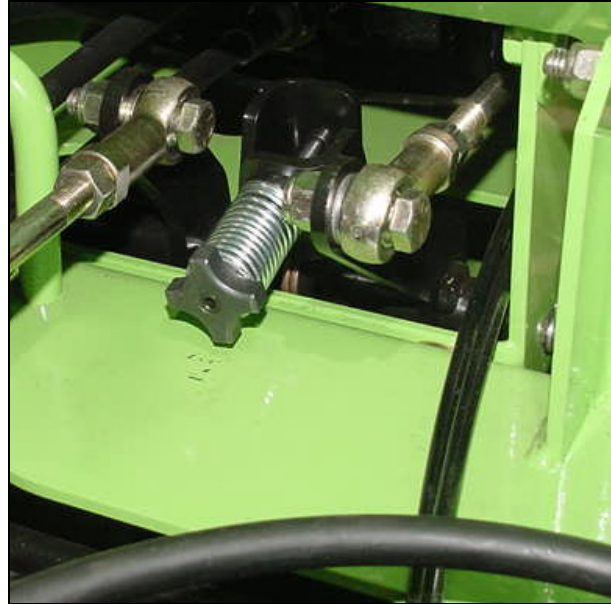


- j.* If they both move forward slightly, before one starts to move back, the knob needs to be turned counter clockwise. Turn it one turn and re test.



- k.* If one moves in reverse before the other moves forward then turn the knob clockwise one turn and retest.

- l.* After you have made the split adjustment, turn the wheel all the way to the left and check the 'split' again to verify the other side. If the 'split' is not occurring at the same time, adjust the cam engagement for the bottom cam (lower push-pull cable) as shown in step 5. Adjust it forward if both pump arms move forward before splitting, adjust it rearward if the one arm moves to the rear before the other arm moves forward.



- m.* Make sure all of the adjustment bolts are tight and replace the covers.
- n.* Check the machine operation around a tree or small circle. If the wheel closest to the tree or circle does not rotate forward sufficiently you will need to adjust the push pull cable at the pump connection. Adjust it so that fewer threads are sticking out and re test. If it is moving forward too rapidly, adjust it so that more threads are sticking out. This controls how aggressive or non aggressive the machine is set.

5.2.12 Forward linkage adjustment

- a.* Stop engine, wait for all moving parts to stop, and remove key.
- b.* The link rod from the pumps to the delay linkage will probably will never need to be adjusted. If it ever does need to be adjusted, set with spring arm set at 90 degrees to bottom surface of control box.
- c.* If this is adjusted you will need to perform section 5.2.10 to ensure the machine is properly adjusted.

5.2.13 Reverse linkage adjustment

Maintenance & Adjustment



- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. First adjust the long rod that runs from under the control box back to the hydraulic pumps.
- c. Push the forward pedal all the way forward and have a helper hold it in position. You should be able to move the long reverse rod back and forth (front to back on the machine). If you cannot, you must undo one end of the rod and lengthen it and re test. Continue to do this until you can move this rod back and forth on the machine.
- d. Next adjust the stop for the reverse pedal. Loosen the stop bolt/nut. Turn this bolt in for more reverse speed and turn it out for less. Re tighten the bolt/nut when done.
- e. Next adjust the short bent rod that runs from the reverse pedal to the bell crank. This will only need to be changed if you cannot achieve the full reverse speed desired. Unbolt both ends of the rod and remove from machine. Loosen the nuts/rod ends and lengthen the distance between the rod ends slightly. Reinstall, tighten and check to see if full reverse speed desired can be obtained. If necessary repeat the procedure.

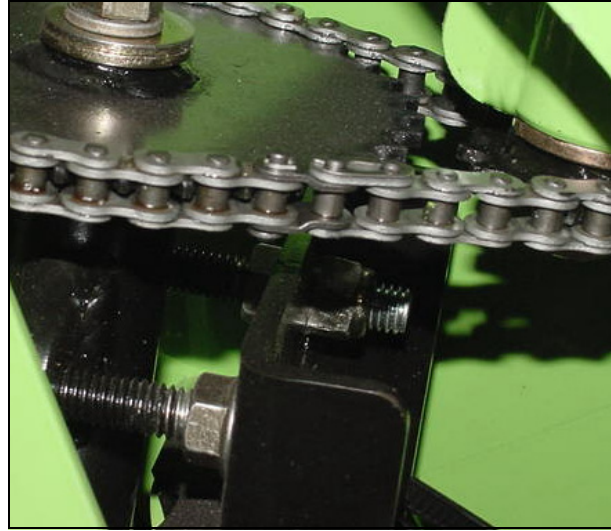




5.3 Steering adjustment

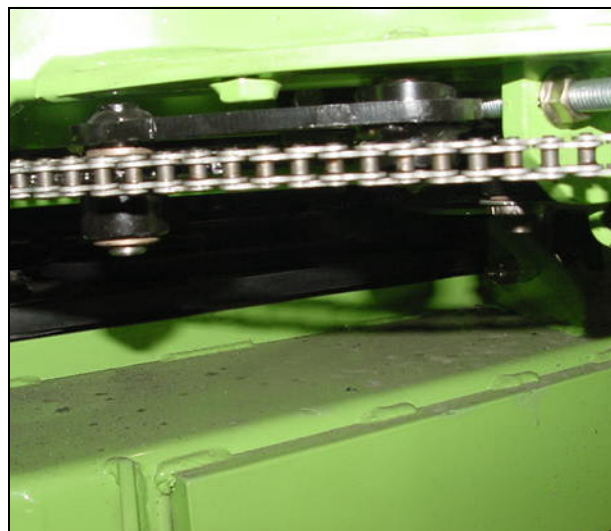
5.3.1 Main steering wheel chain adjustment

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Remove the side covers on the control box.
- c. Loosen the two nuts on either side of the front chain pivot bracket. Tighten the nut on the backside until the chain can move only a little back and forth.
- d. Re tighten the two adjustment nuts and replace the covers.



5.3.2 Front wheel chain adjustment

- a. Stop engine, wait for all moving parts to stop, and remove key.
- b. Tension adjustments - the chain will have some slack in it. This is normal. It should never be adjusted to where it is taunt between the sprockets. Adjust the tension on the backside of the chain first. Loosen the 1/2" nut on the rear adjuster and using a pair of vice grip pliers position it to tension the chain and re tighten. Check the alignment of the chain to make sure it is still running in a straight line from the centre steering input to the front wheels.
- c. Next adjust the tension on the front of the chain. There is an adjustment shown below. Follow the same tensioning guidelines as above.

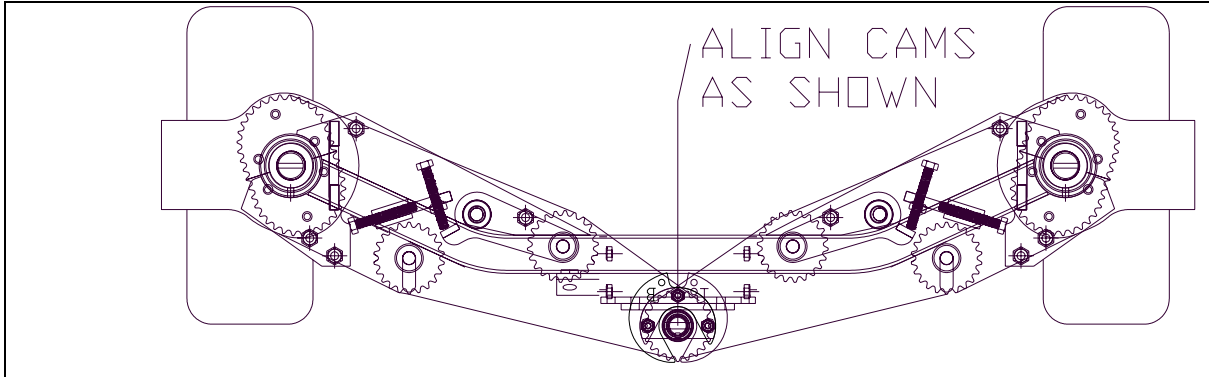


Maintenance & Adjustment



5.3.3 Alignment of the front wheels

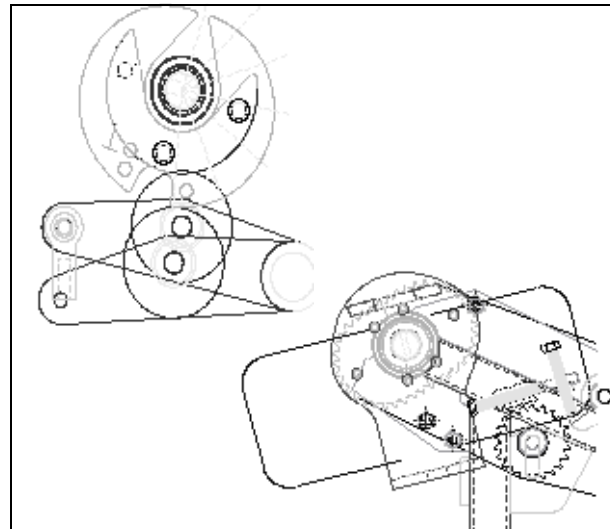
- a. If the front wheels are not positioned properly tracking will be affected. To position the front wheels you will have to remove the front chain covers, nose cover and one or both side covers of the control box.
- b. Remove the chains from one or both front wheels. Position the wheels and cams as shown.



- c. Toe in the front wheels slightly as well. Place the chain from the top sprocket on the centre cam double sprocket to the appropriate wheel and attach with a chain link or half link as needed.
- d. Tension the rear tensioner first. Then the front tensioner. Verify correct position of the centre cam shaft and the wheel. Repeat if necessary until you have a straight or slightly toed in front wheel. Repeat for the other side.

5.3.4 Wheel stop adjustment

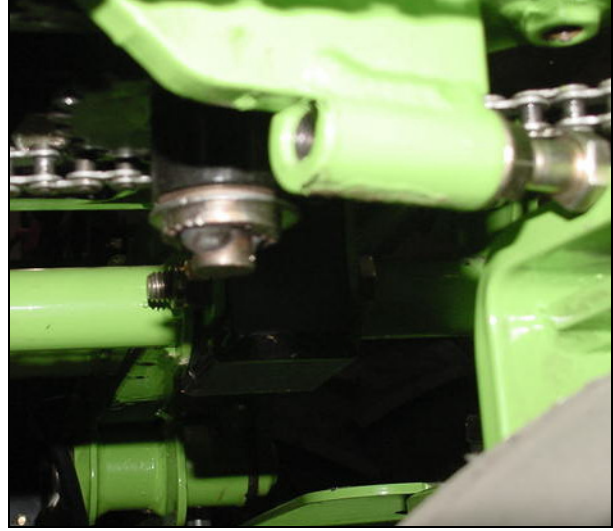
- a. The two stops (one for each wheel) may require adjustment. If the cams are allowed to turn too far during a full turn of the wheel, they will make the machine behave oddly. The machine will not want to do a proper zero turn.
- b. To correct this, turn off machine, remove the key, remove the front and side covers on the control box.
- c. Examine the cams as follows. Depress the forward control and turn the steering wheel all the way to the left. The cams should stop and be positioned as follows.



Maintenance & Adjustment



- d. The left-hand wheel stop will be engaged as shown. If the cam over rotates, it will hit the reverse portion of the cam while in a zero turn and need to be adjusted. With the cam properly positioned to the cam followers, adjust the stop to contact the yoke and retest.



5.

Maintenance & Adjustment





6. WASTE DISPOSAL

6.1 MOTOR OIL DISPOSAL

Engine oil and hydraulic oil are both pollutants to the environment. Dispose of used oil at a certified recycling centre or according to your local regulations.

6.2 BATTERY DISPOSAL



WARNING

POTENTIAL HAZARD

Battery electrolyte contains sulphuric acid, which is poisonous and can cause severe burns

WHAT CAN HAPPEN

Swallowing electrolyte can be fatal or if it touches skin can cause severe burns.

HOW TO AVOID THE HAZARD

Wear safety glasses to shield eyes, and rubber gloves to protect skin and clothing when handling electrolyte.

Do not swallow electrolyte.

Batteries should be stored and disposed of according to local laws.

If a battery is being replaced or if the unit containing the battery is no longer operating and is being scrapped, take the battery to a local certified recycling centre. If no local recycling is available, return the battery to any certified battery reseller.



Waste Disposal





7. TROUBLE SHOOTING

7.1 MOWER PULLS LEFT OR RIGHT.

- a. Refer to 6.2.14 front wheel adjustment.
- b. Check air pressure in tyres; 16 psi (1.1 bar)/drive, 25 psi (1.6 bar)/pneumatic front wheels.

7.1 MOWER CUTS UNEVENLY.

- a. Check air pressure in tyres; 16 psi (1.1 bar)/drive, 25 psi (1.6 bar)/pneumatic front wheels. A more uniform cutting height can be obtained by using higher pressures on rough terrain. A lower tyre pressure will provide more flotation.
- b. Check deck support rods to ensure they all have tension on them.
- c. Check deck levelling (See Adjustments Section 6.2.2.) Note: The front of the mower deck will be approximately 1.5 to 6 mm lower than the back of the mower deck. This is called the rake of the deck.
- d. Check blades tip to tip for straightness (they should be within 3 mm of one another.)
- e. Check blades to make sure that they are sharp, level and complete.

7.1 ENGINE WILL NOT START.

- a. Make sure battery is at a full charge.
- b. Be sure the throttle control is midway between the SLOW and FAST positions.
- c. Make sure there is fuel in the fuel tank and that the fuel valve is properly positioned for the tank you are using.
- d. Be sure the neutral switches are properly adjusted. See Section 6.2.9.
- e. Make sure the parking brake is set, blade clutch (PTO) is in the OFF position and foot pedals are in the neutral position.
- f. Check the two fuses located on the LH side of the machine on the relay panel.
- g. Check that the heater plugs operate correctly.
- h. Check for loose or faulty wiring connections.
- i. Check for corrosion at all wiring connections. Even minor corrosion may cause a faulty connection. Clean connector terminals thoroughly with electrical contact cleaner and apply dielectric grease and reconnect.

NOTE: When disconnecting electrical connectors DO NOT pull on the wires to separate the connectors.

NOTE: After carefully checking the above steps, attempt to start the engine. If it does not start, contact your authorised Gizmow 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.

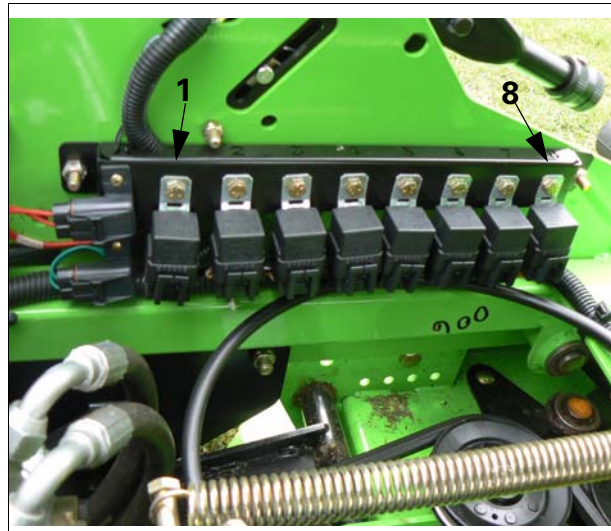


Troubleshooting

7.1.1 Machine Safety Relays

There are eight relays mounted to the left of the operator's position. These are marked 1 through 8. The function of each is on the electrical diagram.

Relay No.	Function
1	Clutch
2	Start/neutral interlock
3	OPC/start interlock
4	OPC/brake interlock 1
5	OPC/brake interlock 2
6	Brake/neutral interlock 1
7	Brake/neutral interlock 2
8	OPC/brake logic
9	Neutral switches
10	Pre-heat timer
11	Glow plug relay
12	Overheat relay
13	Flasher relay
14	Blade switch

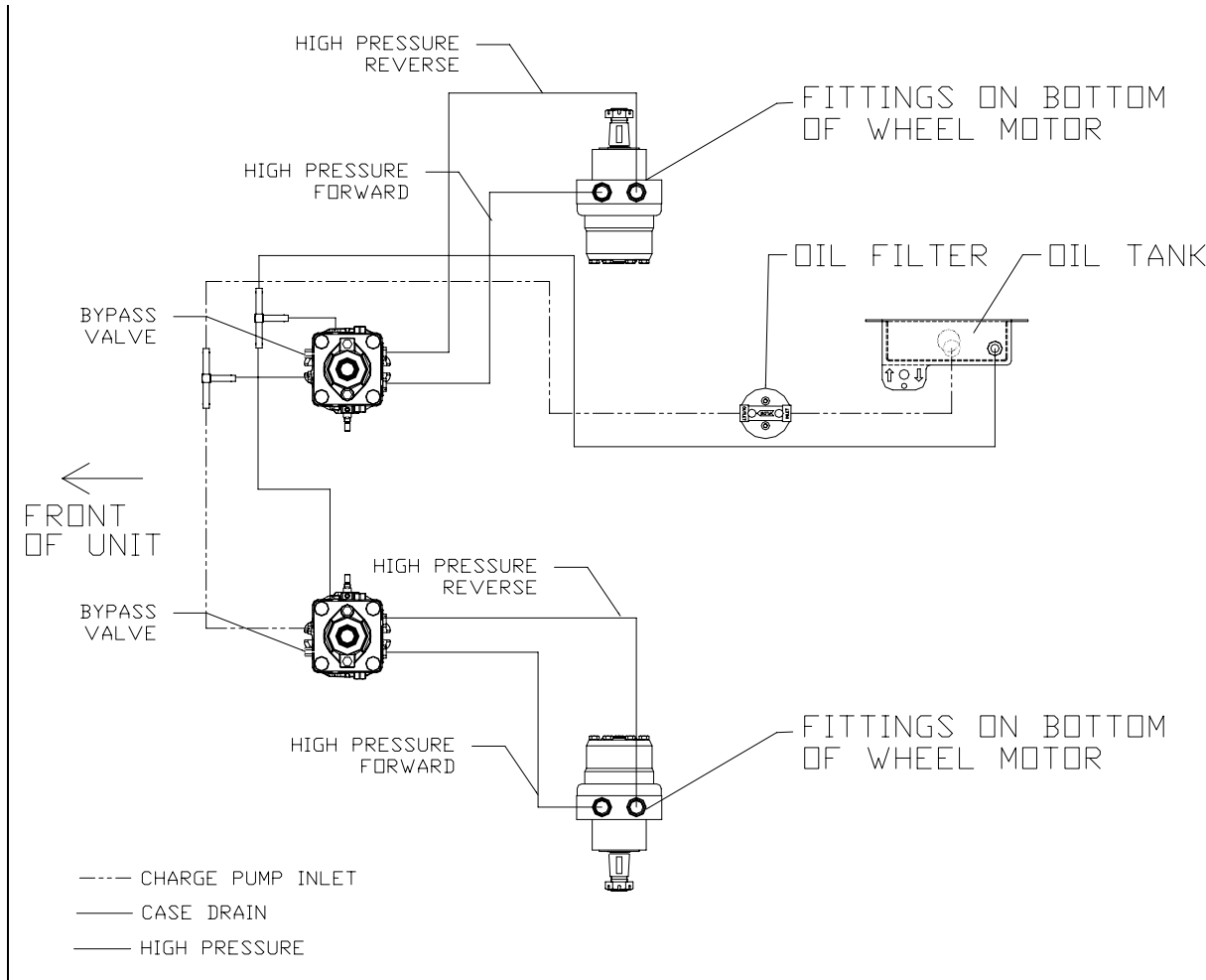


7.





HYDRAULIC DIAGRAM





7. Limited Warranty - Gizmow Products Covered

Gizmow warrants on the terms and conditions herein, that we will repair, replace or adjust any part manufactured by Gizmow and found by us (in the exercise of our reasonable discretion) to be defective in factory materials or workmanship.

This warranty applies to Gizmow equipment sold in Europe. This warranty may not be assigned or transferred. The warranty period commences upon the date of the original retail purchase.

Products - Warranty Period

All Products (except as noted below) 1 year (90 days for rental use)

Frame – 2 years

Belts and Tyres - 90 days

Battery – 90 days

Engine* Warranty is covered by engine manufacturer

*Please refer to the engine manufacturers warranty statement that is included in the literature packet. We are not authorised to handle warranty adjustments on engines.

This warranty only includes the cost of parts and labour.

Items and Conditions Not Covered

IMPORTANT: *This warranty does not cover the following:*

Collection and delivery charges to and from any authorised Gizmow Service Dealer.

Any damage or deterioration due to normal use, wear and tear, or exposure.

Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, and adjustments.

Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.

Any repairs necessary due to use of parts, accessories or supplies, including gasoline, oil or lubricants, incompatible with the equipment or other than as recommended in the operator's manual or other operational instructions provided by Gizmow. All warranty work must be performed by an authorised Gizmow Service Dealer using Gizmow approved replacement parts.

Instructions for Obtaining Warranty Service

1. Contact any Gizmow Service Dealer to arrange service at their dealership.
2. Bring the product and your proof of purchase (sales receipt) to the Gizmow Service Dealer.

If for any reason you are dissatisfied with the Service Dealers analysis or with the assistance provided, contact us at:

Gizmow (Europe) Ltd.
Regents House
Whitewalls Industrial Estate
Colne
BB8 8LJ
United Kingdom

Tel.: +44 (0) 1282 856828

Fax.: +44 (0) 1282 860555

Warranty



Owner's Responsibilities:

The Gizmow equipment, including any defective part, must be returned to an authorised Gizmow service dealer within the warranty period. This warranty extends only to equipment operated under normal conditions. You must properly service and maintain your Gizmow product as described in the operators manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

As a condition to this warranty, customer shall have read the operator's manual and shall have on file with Gizmow the Gizmow product registration.

General Conditions

The sole liability of Gizmow with respect to this warranty shall be repair and replacement as set forth herein. Gizmow shall not have any liability for any other cost, loss or damage, including but not limited to, any incidental or consequential loss or damage. In particular, we shall have no liability or responsibility for:

Expenses related to gasoline, oil or lubricants.

Travel time, overtime, after hours time or other extraordinary repair charges or charge relating to repairs or replacements outside of normal business hours at the place of business of the authorised Gizmow service dealer.

Rental of like or similar replacement equipment during the period of any warranty, repair or replacement work.

Any communication charges or travel charges.

Loss or damage to person or property other than that covered by the terms of this warranty.

Any claims for lost revenue, lost profit or additional cost as a result of a claim of breach of warranty.

Legal fees.

No Claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Gizmow mower.

There are no understandings, agreements, representations, or warranties, express or implied, including but not limited to any regarding the merchantability (that product is fit for ordinary use) or fitness for use (that product is fit for a particular purpose), not specified herein, respecting the equipment which is the subject of this warranty.