TMG INDUSTRIAL®

TMG-GZM42
PRODUCTMANUAL
v.2026.06.05

Zero-Turn Riding Mower



⚠ WARNING



Please read and understand the product manual completely before assembly
- Check the parts list to make sure all parts are received.
- Wear safety goggles or other protective gear while assembling.
- Do not return products to dealers, who are not equipped to handle returns.

Missing parts or have questions on assembly?
Email: cs@tmgindustrial.com
Or visit: tmgindustrial.com

CONTENTS

Chapter 1: Safety Rules..... 3

Chapter 2: Maintenance and Repair..... 8

Chapter 3: Safety and Operating Labels..... 10

Chapter 4: Identification Code Information..... 13

Chapter 5: Pre-Operation Preparation..... 14

Chapter 6: Operation..... 16

Chapter 7: Disassembly and Assembly of Grass Cutting Blade Disc..... 25

Chapter 8 Maintenance Interval..... 26

Chapter 9: Cleaning the Lawn Mower Cutter Disc, Inspecting/Replacing the Lawn Mower Cutter Disc..... 27

Chapter 10: Clean Batteries and Cables..... 29

Chapter 11: Height Adjustment of Lawn Mower Cutter Disc..... 31

Chapter 12: Replacement of Traveling and Drive Belt of Cutter Disc..... 33

Chapter 13: Engine Maintenance and Care..... 35

Chapter 14: Troubleshooting of Lawn Mower..... 46

CHAPTER 1: SAFETY RULES



Read and strictly follow all safety rules below. Violation may result in loss of equipment control, serious personal injury or death to you or bystanders, and property or equipment damage.

The mower deck can cause severe cutting injuries and projectile hazards.

Text marked with a triangular warning symbol (⚠) contains important cautions or warnings that must be followed.

1.1. General Operation

1. 1. 1.Before starting, read, understand, and follow all instructions in the manual and on the equipment.

1. 1. 11. Exercise extreme caution when loading or unloading the equipment onto or from a trailer/truck

.

1. 1. 12. Always wear eye protection while operating the equipment.

1. 1.13. Disengage the blades (PTO) when not mowing. Shut off the engine and wait for all moving parts to come to a complete stop before cleaning the machine, removing the grass catcher, or clearing the discharge guard.

1. 1. 14.Follow the manufacturer’s recommendations regarding wheel weights and balance.

1. 1.15. The operator is responsible for any accidents involving other persons or their property.

1. 1.16. All operators must receive and complete professional hands-on training.

1. 1.17. Wear sturdy footwear and long pants at all times. Operating the equipment barefoot or in sandals is strictly prohibited.

1. 1.18. Visually inspect the blades and blade

1. 1.2. Keep hands and feet away from moving parts or under the machine. Always stay clear of the discharge opening.

1. 1.3. Never discharge material toward people. Avoid discharging material toward walls or obstacles, as it may ricochet and strike the operator. Turn off the blades when crossing gravel surfaces.

1. 1.4. Slow down before turning.

1. 1.5. Ensure no other persons are in the area before mowing; if someone enters during mowing, stop the machine immediately.

1. 1.6. Passengers are strictly prohibited.

1. 1.7. Unless absolutely necessary, do not reverse while mowing. Before and during reverse, always look down and backward.

1. 1.8. Only responsible adults familiar with

the operating instructions may operate this equipment (local regulations may restrict operator age).

1. 1.9. Never operate the machine without installing the grass catcher, discharge guard (deflector), or other safety devices and ensuring they are functioning properly.

1. 1.10. Clear the work area of stones, toys, wires, and other objects that could be picked up and thrown by the blades.

1. 1.19. Disengage attachments before refueling, removing accessories, or making adjustments (unless the adjustment can be performed from the operator’ s seat).

1. 1.20. Before leaving the operator’ s position for any reason, always engage the parking brake (if equipped), disengage the blades (PTO), shut off the engine, and remove the key.

1. 1.21. Never leave the equipment unattended while it is running. Before dismounting, always disengage the blades (PTO), engage the parking brake, shut off the engine, and remove the key.

1. 1.22. Data shows that operators aged 60 and above account for a higher proportion of injuries related to powered equipment. Such operators should assess their ability to safely operate the machine to protect themselves and others from harm.hardware before each use to ensure they are complete, undamaged, and securely fastened. Replace any worn or damaged parts.

1. 1.23. To reduce fire risk, keep the equipment free of grass, leaves, and excessive oil buildup. Never park or stop the machine near dry leaves, grass, or other flammable materials.

1. 1.24. Operate the machine only during daylight or with adequate artificial lighting.

1. 1.25. Never operate the equipment under the influence of alcohol or drugs.

1. 1.26. When working near or crossing roads, watch for traffic.

1.2. Transportation and Storage

1.2. 1. When transporting the equipment with an open trailer, ensure the equipment faces the direction of travel (forward); if placed backward, airflow may cause damage.

1.2.2. After transportation or storage, when refueling the equipment, adhere to safe refueling and fuel handling protocols.

1.2.4. Whether storing short-term or long-term, follow the engine manual's storage preparation instructions.

1.2.5. Before reactivating the equipment, follow the engine manual's correct startup procedure.

1.2.3. Never store the equipment (with fuel) in a poorly ventilated enclosed space; fuel vapor may diffuse to ignition sources (e.g., furnaces, electric water heaters) causing explosions; simultaneously, fuel vapor is toxic to humans and animals.

1.2.6. Prohibit storing the equipment or fuel containers in rooms with open flames or igniting lights (e.g .,water heaters); wait for the equipment to cool completely before storage.

1.3. Slope Operation

- Slopes are a leading cause of loss of control and rollover accidents, which can result in serious injury or death. Exercise extreme caution when operating on any slope. Never operate on a slope if you cannot back up the incline or if you feel uneasy while on it.
- When walk-behind or ride-on machines skid on a slope, braking will not restore control. Primary causes of loss of control include insufficient tire-to-ground traction, excessive speed, improper braking, using an inappropriate machine type for the task, lack of awareness of ground conditions, incorrect hitch connection, and uneven weight distribution.

1.3. 1.Cut grass horizontally, never vertically.

1.3.2.Watch for holes, ruts, or bumps. Rough terrain can cause the machine to overturn. Tall grass may hide obstacles.

1.3.3.Use a low gear; avoid stopping or shifting on slopes.

1.3.4.Never mow wet grass. Tires may lose traction.

1.3.5.Never reverse when going downhill.

1.3.6.Avoid starting, stopping, or turning on slopes. If tires lose traction (e.g., the machine begins to slide downhill), disengage the blades (PTO) and slowly drive straight off the slope.

1.3.7.Move slowly and steadily when on a slope. Do not make sudden speed changes or turns, as this may cause the machine to overturn.

1.3.8.Exercise extra caution when operating with a grass catcher or other attachments—they may affect machine stability. Never use on steep slopes.

1.3.9.Never attempt to stabilize the machine by placing your foot on the ground (for ride-on mowers) .

1.3.10. Never mow near steep banks, ditches, or embankments. If a wheel hangs over the edge or the edge collapses, the mower can overturn suddenly.

1.3. 11.Never use a grass catcher on steep slopes.

1.3. 12.Do not mow on a slope if you cannot back up the incline.

1.3.13.Consult an authorized dealer/retailer to determine if wheel weights or counterweights are recommended to improve stability.

1.3. 14.Remove rocks, branches, and other obstacles.

1.3.15.Maintain a slow speed. Even with functioning brakes, tires may lose grip on slopes.

1.3.16. Unless necessary, avoid turning on slopes; if turning is required, do so slowly and uphill. Never turn while moving downhill.

1.4. Safe Operation Practices for Towed Equipment (Ride-On Machines)

1.4. 1.Use only equipment with a dedicated towing hook for towing operations, and never attach towing devices to any point other than the designated hook location.

1.4.2.Strictly follow the manufacturer's recommendations regarding weight limits and slope towing procedures; refer to the "Connection of Trailers" section in the "Operation" chapter for details.

1.4.3.Never allow children or other personnel to ride on or stand on the towing equipment.

1.4.4.When operating on a slope, the weight of the towing equipment may cause loss of traction, leading to loss of control.

1.4.5.Reduce speed while driving and allow for a longer braking distance.

1.4.6.Do not coast downhill in neutral gear.

warning

- Do not operate on slopes exceeding 17.6% (10°), defined as a vertical rise of 3.5 feet (106 cm) over a horizontal distance of 20 feet (607 cm).
- Select a low gear before ascending a slope.
- Exercise extra caution when operating on slopes with a rear-mounted grass catcher.
- Cut grass horizontally, never vertically; change direction carefully and never start or stop on a slope.

1.5.Children

An operator's failure to notice the presence of a child can lead to tragic accidents. Children are often attracted to machinery and mowing activities. Never assume a child will remain where you

last saw them.

1.5. 1. Keep children away from mowing areas and under the close supervision of responsible adults.

1.5.2. Stop the machine immediately if a child enters the work zone.

1.5.3. Check behind for young children before and during reverse operations.

1.5.4. Never allow children to ride on the machine even when blades are stopped; they may fall, suffer serious injuries, or interfere with safe operation. A child who has previously ridden on the machine may suddenly reappear in the mowing area and be run over or struck during reversing.

1.5.5. Prohibit children from operating the machine.1.5.6. Exercise extra caution near blind spots, bushes, trees, or other obstacles that may block the view.

1.6.Emission

1.6.1.Theengineexhaustofthisproductcontainscertainchemicalsknowntocausecancer,birth defects, orotherreproductiveharmatcertainexposurelevels.

1.6.2.Pleaserefertotheengineemissionlabelforinformationon"emissiondurabilityperiod"and "airindex".

CHAPTER 2: MAINTENANCE AND REPAIR

2.1. Gasoline Safety Procedures

2. 1.1. Completely extinguish all cigarettes, cigars, pipes, and other ignition sources.

2. 1.2. Use only certified gasoline containers.

2. 1.3. Never open the fuel tank cap or refuel while the engine is running; allow the engine to cool completely before refueling.

2. 1.4. Never refuel machinery indoors.

2. 1.5. Never store machinery or fuel containers near open flames, sparks, or pilot lights (e.g., water heaters or other appliances).

2. 1.6. Never transport fuel containers inside a vehicle or in truck beds with plastic liners; place containers on the ground away from vehicles during refueling.

2. 1.7. For gasoline-powered equipment on towed trucks or trailers, refuel only after unloading and placing it on the ground; if not feasible, use portable containers instead of direct pump refueling.

2. 1.8. Keep the fuel nozzle in contact with the tank or container opening throughout refueling; never use the nozzle' s latch lock.

2. 1.9. Immediately change clothing soaked or contaminated with fuel.

2. 1.10. Never overfill the fuel tank. After refueling, securely close and tighten the fuel cap.

2. 1.11. Handle gasoline and other fuels with extreme caution; they are flammable and their vapors can be explosive.

2. 1.12. If a fuel leak occurs, do not start the engine—move the machine away from the leak and all ignition sources until vapors fully dissipate.

2. 1.13. Drain fuel tanks only in outdoor areas.

2. 1.14. Always tightly secure fuel tank caps and container lids.

2. 1.15. Replace damaged mufflers promptly.

2. 1.16. Maintain or replace safety labels and operating instructions as necessary.• •

2. 1.17. Use only factory-authorized replacement parts for repairs.

2. 1.18. Follow original factory specifications strictly for all adjustments.

2. 1.19. Major maintenance and repairs must be performed by authorized service providers.

2. 1.20. Unless professionally trained, do not attempt major repairs; improper operation may lead to equipment failure, safety risks, and void the manufacturer' s warranty.

2. 1.21. Exercise extreme caution when operating multi-blade mowers; rotating one blade may

cause others to turn simultaneously.

2. 1.22. Never adjust the engine governor settings or allow the engine to overspeed; excessive speed increases the risk of personal injury.

2. 1.23. Before clearing blockages, performing maintenance, after striking an object, or if abnormal vibration occurs, disengage the attachment drive, shut off the engine, remove the key, and disconnect the spark plug wire. After impact, inspect the machine for damage and make repairs before restarting.

2. 1.24. Keep hands away from moving parts (e.g., hydraulic pump cooling fan, typically located on top of the drive axle housing) while the machine is in operation.

2. 1.25. Warning: Energy storage device. Improper release of the spring can result in serious personal injury. Spring removal must be performed by authorized technicians only.

2.2. Maintenance and Repair

2.2.1.Never operate equipment in enclosed spaces to prevent carbon monoxide buildup.

2.2.2.Keep all nuts and bolts (especially blade attachment bolts) securely tightened to maintain equipment in good condition.

2.2.3.Never modify safety devices; inspect their operation regularly and perform necessary repairs immediately if malfunction is detected.

2.2.4.Keep the equipment clean—remove grass clippings, leaves, and debris; clean oil or fuel spills and remove all fuel-soaked materials. Allow the machine to cool completely before storage.

2.2.5.Stop the engine immediately if an object is struck; inspect for damage and repair as needed before restarting.

2.2.6.Never perform any adjustments or maintenance while the engine is running.

2.2.7.Inspect the grass catcher assembly and discharge guard regularly; replace parts as recommended by the manufacturer.

2.2.8.Mower blades are extremely sharp. Exercise extreme caution when servicing—cover the blade or wear gloves.

2.2.9.Frequently check the braking system and perform adjustments or maintenance as required.

2.2.10.Maintain or replace safety labels and operating instructions as necessary.

2.2.11.Never remove the fuel filter while the engine is hot to avoid ignition of leaking gasoline. Do not overstretch fuel line clamps; ensure clamps are securely fastened after installation.

2.2.12.Never use gasoline containing methanol, ethanol exceeding 10%, gasoline additives, or white gas, as they may cause engine or fuel system damage.

CHAPTER 3: SAFETY AND OPERATING LABELS

- This equipment is designed and manufactured to provide industry-leading levels of safety and reliability in outdoor power equipment.
- While reading this manual and safety instructions provides the foundational knowledge for safe and efficient operation, we have also affixed multiple safety labels on the equipment to continuously remind you of these critical messages during use.
- Always read and follow all DANGER, WARNING, CAUTION, and instructional messages on the riding mower. Failure to comply may result in personal injury. These messages are essential–they are about your safety. Below are explanations of the safety labels on the equipment.
- Replace any label that is missing or damaged immediately.
- These labels are easy to apply and provide ongoing visual reminders to you and other users, promoting adherence to necessary safety practices for safe and efficient operation.



Rotating Blades —Never insert hands or feet under the mower while the engine is running. Projectile Hazard —Clear the work area of all objects that could be thrown by the blades before mowing.

Do Not Operate Without Safety Guards —The deflector, discharge shield, or grass catcher must be installed before use.



Danger:Rotating Blades



3.1. Warning —Please read the operator manual.

3.2. Warning — Before maintenance or servicing, read the operating instructions; move the motion control lever to park (brake) position, remove the ignition key, and disconnect the spark plug wires.

3.3. Cutting/Limb Separation Risk (Rotating Blades) and Entanglement Risk (Drive Belt) —Keep away from moving parts and ensure all guards and shields are installed.

3.4. Projectile Hazard —Keep bystanders at a safe distance, clear the work area of debris, and ensure the deflector is installed.

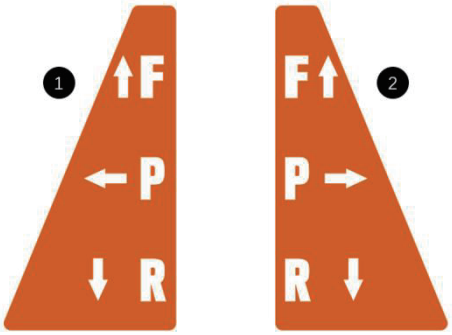
3.5. Warning —Do not use segmented ramps; use complete ramps when transporting machinery.

3.6. Traction/Control Loss Risk (Slope Operations) —On slopes, if traction or control is lost,

disconnect the PTO switch and slowly exit the slope.

3.7. Bystander Crushing/Limb Separation Risk (Reverse Operation) — Prohibit passenger transport; monitor rear and underside environments during reverse.

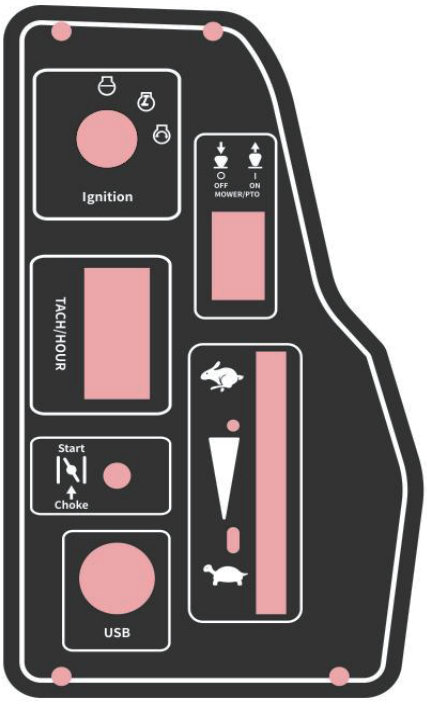
3.8. Tip-over Risk —Do not mow on slopes exceeding 15° ; avoid sudden sharp turns during slope operations.



Operational direction



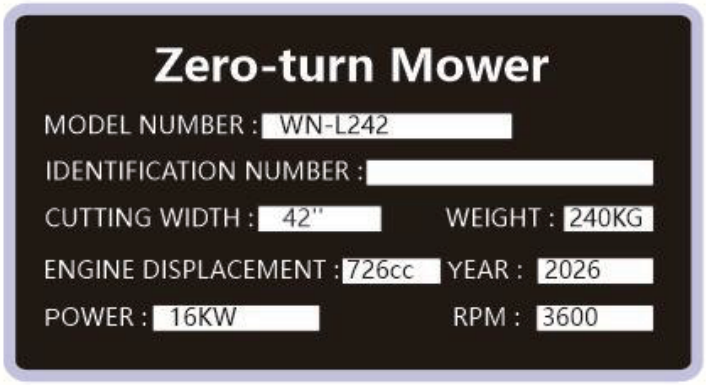
Cutting height adjustment



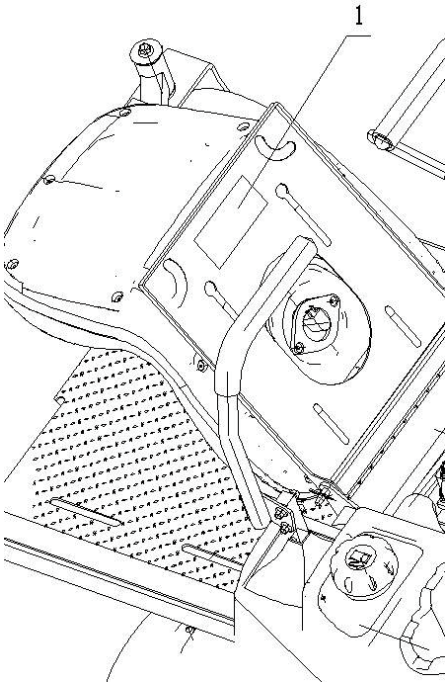
Control panel label

CHAPTER 4: IDENTIFICATION CODE INFORMATION

- When contacting the service center to request part replacement, service, or information, you must provide the following identification codes.
- Please record your model/name, manufacturer identification code, and engine serial number in the designated space for easy access.



- Identification Code label is located under the seat. Flip the seat forward to access the identification code label.



- For inquiries about the product, please contact the after-sales service personnel for maintenance and support.

CHAPTER 5: PRE-OPERATION PREPARATION

5.1. Read the Operation Manual



Read the operation manual

Read and strictly follow all instructions in the manual. Proper operation, performance specifications, and safety information for the equipment are contained in this important document.

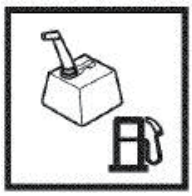
5.2. Always Check the Oil Level



Always check the engine oil level

Your mower's engine comes pre-filled with oil for the break-in period. Always check the oil level before starting the engine.

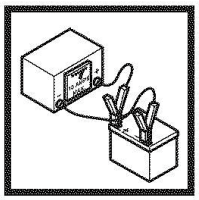
5.3. Add Fresh Gasoline



Refuel the tank

Use fuel within 30 days of refueling to prevent degradation or contamination. Use a fuel stabilizer to extend fuel life, and always store fuel in an approved, sealed plastic container. Fuel that has degraded due to prolonged storage is not covered under warranty.

5.4. Battery Charging

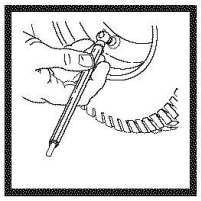


Lift the seat to access the battery.

During the first month of equipment use, charge the battery for 1 hour, following the instructions on the battery label (stop after every 6–10 hours of charging). For full details, refer to the "Battery Charging" section in the "Maintenance and Adjustments" chapter.

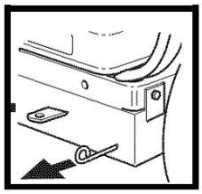
5.5.Check Tyre Pressure

Adjust the tyre pressure to the specified value (pressure may be reduced when used solely for transportation purposes).



Maintain proper tyre pressure to ensure adequate traction. Rear tyre pressure: 10–12 psi, Front tyre pressure: 18–20 psi.

5.6. Move the Equipment out of the Crate



Move the equipment out of the crate following the steps below.

5.6. 1. Pull both transmission release levers to the "PARK" position (located behind the fenders).

5.6.2. Cut the six steel straps securing the unit to the pallet.

5.6.3. Move the ground speed control lever to the "DRIVE" position.

5.6.4. Adjust the cutting height to the highest setting.

5.6.5. Fold the cardboard shipping base and place it under the front wheels.

5.6.6. Push the unit forward to roll it off the shipping carton.

5.6.7. Return the transmission release levers to the "DRIVE" position (push levers back).

5.7. Start the Engine



Mower Starting Procedure

5.7.1. Sit on the operator seat, place the ground speed control lever at the "PARK " position, and ensure the yellow PTO switch is off.

5.7.2. Adjust the engine throttle control lever to the "FAST" position.

5.7.3. Set the choke to "CLOSED." Note: When the engine is hot, do not close the choke–set it to "OPEN" instead.

5.7.4. Insert the key into the ignition switch and rotate it to the "START" position to start engine operation.

5.7.5. After the engine starts, gradually move the choke to the "OPEN" position. Allow the engine to idle for at least one minute before engaging the PTO or operating the equipment to ensure
proper warm-up.

5.7.6. After preheating, set the ground speed control lever to the "PUSH" position when mowing.

5.7.7. For detailed driving instructions, refer to the "Operation" chapter of the manual.

CHAPTER6:OPERATION

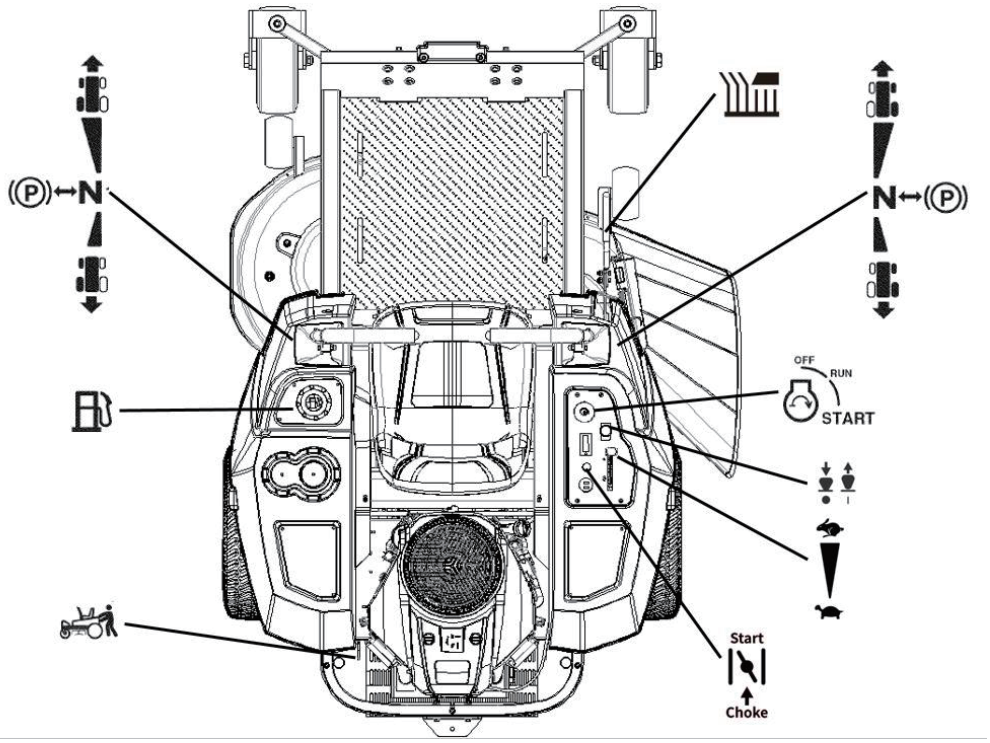


Figure 1

6.1. Control Function

This section briefly describes the functions of each control component. Starting, stopping, driving, and mowing operations require specific combinations of these controls. Read this section thoroughly to understand the correct control combinations and operation sequences for different tasks. (See Figure 1)

Travel speed lever / parking brake

These levers control the travel speed and parking brake of the riding machine:Left lever: Controls drive and braking for the left rear wheel Right lever: Controls drive and braking for the right rear wheel

Parking brake lock

- Push the lever away from the operator' s outer thigh to engage the parking brake (PARK position); pull the lever toward the inner thigh to shift into drive (DRIVE position).
- travel speed control: push the travel speed lever forward from the drive position to increase forward wheel speed; pull the lever backward to increase reverse wheel speed. The greater the pushing force, the faster the drive wheel rotates.
- Refer to the "Driving Practice" chapter for steering operation instructions.



Throttle control

The throttle controls engine speed.

●Set the throttle to the maximum (FAST) position when mowing.

●Pull the throttle lever back to reduce engine speed to idle (SLOW position).



Choke

●Cold Start: Close the choke (CLOSED).

●After Starting: Once the engine has started, open the choke (OPEN).

●Hot Start: When the engine is warm, it may not be necessary to close the choke; simply leave the choke in the open position.

●Operation: Push down to close the choke; pull up on the control cable to open it.



Cutting height adjustment

●Turn the handle clockwise to raise the cutting deck; turn it counterclockwise to lower the cutting deck.



Ignition Switch (used to start and stop the engine, with three positions).

●OFF• •Stop the engine and disconnect the electrical system.

●RUN• Allow the engine to run and keep the electrical system powered.

●START• Power the crankshaft to start the engine.

⚠**Warning:** After the engine stops, do not leave the ignition switch in the RUN position, as this may drain the battery.



Instrument

●The instrument records the total operating hours of the engine and displays the engine speed.

⚠**Warning:** The instrument will only record operating hours when the key is in the RUN position and the engine is running.



PTO switch

PTO (Power Take-Off) switch controls the engagement of the mower deck clutch.

●Flip the switch upward: engage the mower blades.

●Press the switch down: disengage the mower blades.

⚠**Warning:** The PTO switch will only operate when the operator is securely seated.



Transmission release lever

The transmission release lever disengages the drivetrain, allowing the equipment to be pushed manually. For detailed operation, refer to the "Manual Movement of Equipment" section.



Fuel tank cap

- Turn counterclockwise to remove the fuel tank cap.

6.2. Routine Operation Safety

- Before operating a ride-on mower, thoroughly read all content in the Safety and Operation sections.
- Familiarize yourself with the location of all controls and the method for shutting down the machine.
- Practice operating in an open area to become accustomed to equipment handling.

⚠**Warning:** Do not attempt to operate this equipment if you have not fully understood the function of any control, or have not read the Control Functions section. Never operate the machine before becoming familiar with the location and function of all controls.

6.3. Pre-start inspection

- Check that the crankcase oil is filled to the full mark on the dipstick.
- Refuel the tank with fresh gasoline.

6.4. Fuel Usage Recommendations

Routine Operation: Use only unleaded gasoline with a pump octane rating of 87 or higher. Up to 10% ethanol by volume• Gasohol (90% unleaded gasoline) is acceptable as fuel.Unleaded gasoline blended with up to 15% methyl tertiary butyl ether (MTBE) is also approved.Do not use any other gasoline/alcohol or gasoline/ether blends. Add fuel stabilizer only, do not use any other fuel additives.

6.5. Storage Precautions

⚠ **Warning** : Alcohol-blended fuels (such as gasohol or fuels using ethanol/methanol) absorb moisture, which can lead to phase separation and the formation of acidic substances during storage.Acidic fuel can damage the engine's fuel system during storage.To prevent engine damage, always use a fuel stabilizer, especially before storing for 30 days or longer. Use fresh fuel when preparing for the next season. For more information, refer to the "Storage" section. Never use engine or carburetor cleaning products in the fuel tank, as this may cause permanent damage to the tank.

6.6. Refueling Procedure

6.6.1. Remove the fuel tank cap (as shown in Figure 2).

6.6.2. Refuel the tank, but do not overfill—leave space for fuel expansion.

6.6.3. Install the fuel tank cap and tighten it by hand.

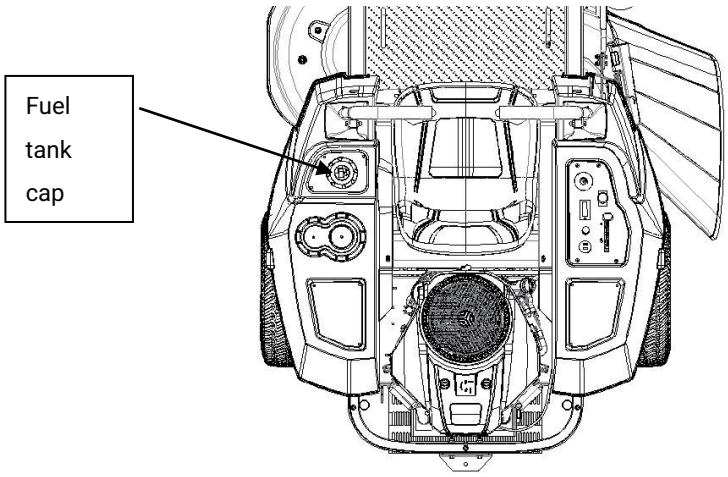


Figure 2

⚠ **Warning**: **No passengers allowed**

● Always engage the parking brake, disengage the power take-off (PTO), stop the engine, and remove the key before leaving the operator's seat.

● Keep the engine, riding machine, and mower deck free of grass clippings, leaves, and excess grease to reduce fire risk. Never store dry leaves, grass clippings, or flammable materials on or near the machine.

● Gasoline is highly flammable and must be handled with caution.

● Never refuel while the engine is hot or immediately after shutdown.

● Open flames, smoking, and spark-producing operations are strictly prohibited in the work area.

● Avoid overfilling the fuel tank and wipe up any spilled fuel immediately.

⚠ **Warning: Slope Operation**

● Do not operate on slopes exceeding 17.6% (10°). This slope gradient is defined as a vertical rise of 3.5 feet (106 cm) over a horizontal distance of 20 feet (607 cm).

● Select a low gear before driving onto a slope.

● Exercise extreme caution when operating on slopes with a rear-mounted grass catcher

installed.

- Mow across the slope–never up and down. Turn carefully and never start or stop on a slope.

⚠ **Warning: Transportation**

Do not use two separate ramps to load this zero-turn riding machine onto a trailer or truck.Use a single ramp that is at least 1 foot wider than the machine' s rear wheels.If not, the wheels may slip off the ramp or the machine may overturn during zero-radius turns, resulting in injury to the operator or bystanders. (See Figure 3)



Figure3

6.7. Driving Practice (Basic Operation)

⚠ **Warning**: Do not operate on slopes exceeding 17.6% (10°); refer to the "Slope Operation" section in the safety chapter for details. Zero-turn ride-on mowers handle fundamentally differently from conventional four-wheel vehicles–the drive wheels are also the steering wheels. If you cannot drive the machine on a slope, you cannot steer it on a slope. Operating zero-turn equipment on inclines requires extreme caution.

- Zero-turn equipment has highly responsive control levers, and mastering smooth, efficient forward, reverse, and turning maneuvers requires practice.

● Practice the following operations to familiarize yourself with the acceleration, driving, and steering characteristics of the equipment before starting to mow — this is essential for maximizing the performance of a zero-turn mower.

● Find a flat, open grassy area (with sufficient space for maneuvering) and clear the area of obstacles, people, and animals before starting. Set the throttle to medium speed during practice (full throttle is required when mowing), and turn slowly to prevent tire slippage and lawn damage.

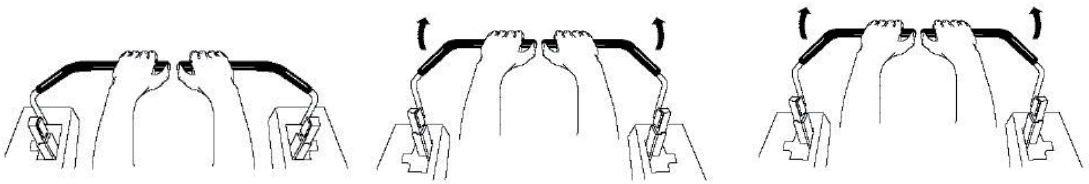
● Start with smooth driving maneuvers – practice turning right first, then gradually move on to mastering forward, backward, and steering operations.

⚠ **Warning**: Avoid reverse mowing unless absolutely necessary. Before and during reverse operation, be sure to look down and check behind you.

6.8. Smooth Driving

The control levers of a zero-turn machine are highly responsive. The best way to control the machine's speed has three steps (as shown in Figure 4).

1. Step 1: Place both hands steadily on the control levers.
2. Step 2: To move forward, smoothly push the levers forward with your palms.
3. Step 3: To accelerate, push the levers further forward; to decelerate smoothly, gradually pull the levers back toward the neutral position.



Step 1 Step 2 Step 3

Figure 4

6.9. Practice Driving Forward

Start from the neutral position and push both speed control levers forward evenly and smoothly (as shown in Figure 5). Repeat the exercise after decelerating.

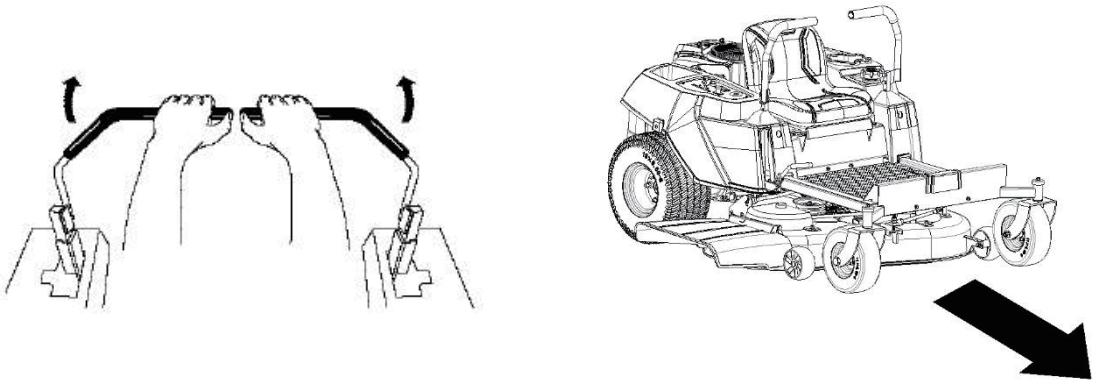


Figure 5

6.10. Practice Reverse Driving

- Look down and observe behind, then pull both control levers uniformly and smoothly from the neutral position backward. Decelerate and repeat the exercise. (As shown in Figure 6)

Attention• Practice reversing for a few minutes before attempting to back up close to an object. The steering characteristics when reversing a zero-turn machine are the same as when moving forward, and driving straight backward requires practice to master.

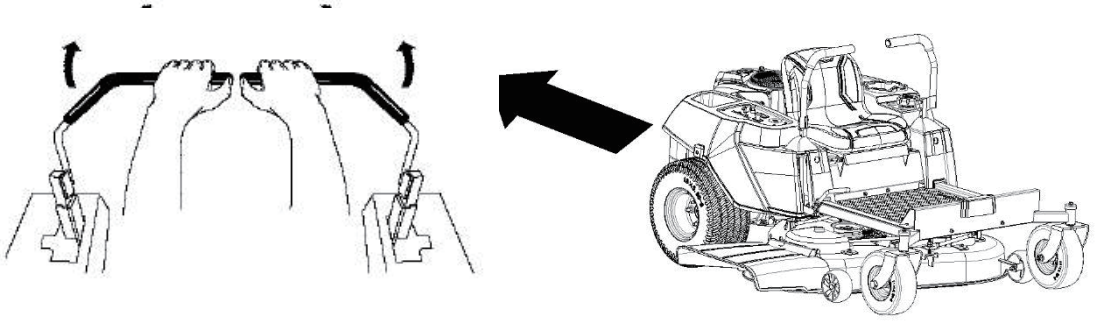


Figure 6

6.11. Turning Practice

Corner turning practice

- During the forward motion, slowly pull one of the control lever back to the neutral position.

Repeat the practice multiple times before mowing.

For example, when making a right turn (Figure 7), pull the right control lever back to the neutral position while driving forward to achieve rightward steering.

Note: To prevent tire tread damage to the lawn during rotation, it' s best to keep both wheels at least slightly moving forward at all times.

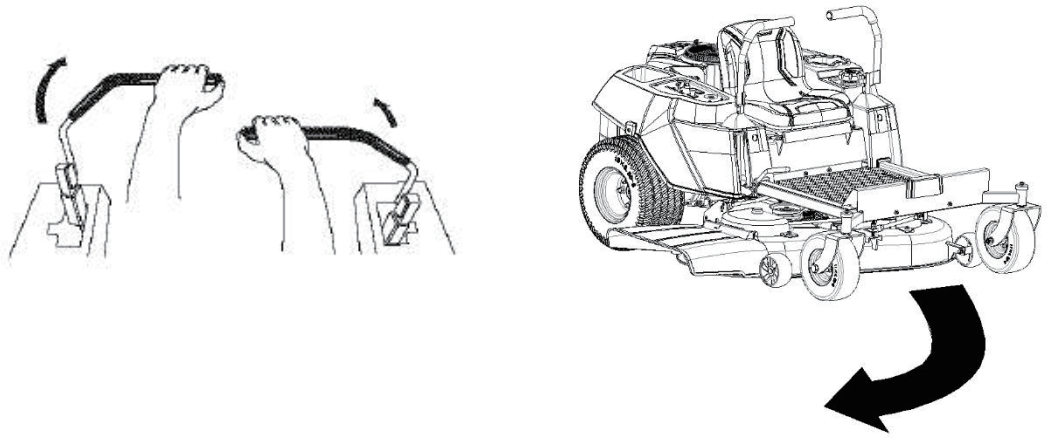


Figure 7

Zero-turn practice

- "Zero-turn" refers to turning in place. Operating method: Starting from the neutral position, push one control lever forward while pulling the other control lever backward (as shown in Figure 8). Repeat the practice multiple times.

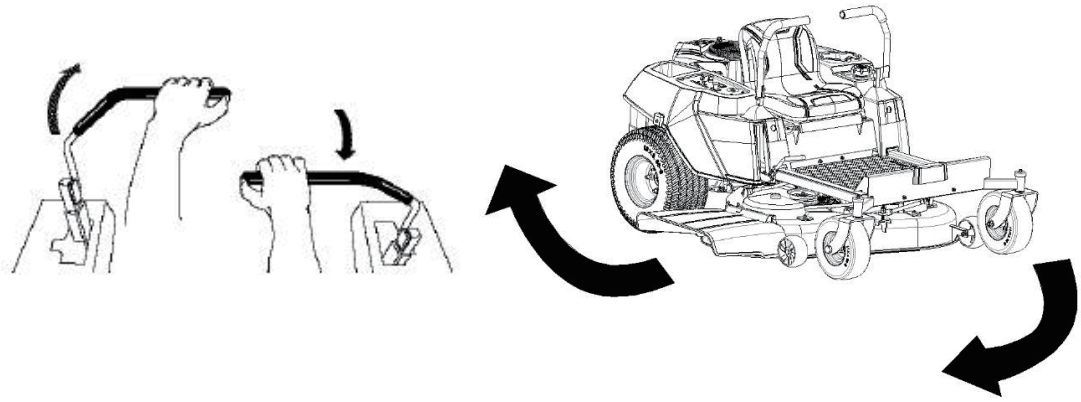


Figure 8

6.12. Advanced Driving: Zero-Turn U-Turn at Path End

The zero-turn capability allows the mower to turn in place at the end of path, so you can make a U-turn without stopping for a Y-turn.

Example: taking a right turn at the end of the path (Figure 9)

6. 12.1. Slow down at the path end.

6. 12.2. Push the left control lever slightly forward, then pull the right control lever back to neutral position first, followed by a slight backward pull.

6. 12.3. Resume mowing forward.

This technique will turn the mower to the right and slightly cover the just-mowed row, preventing missed grass from being cut if you were to reverse.

Tip: The more you practice, the more tips you'll learn to make mowing easier.

Remember: The more you practice, the more skilled you become at control!

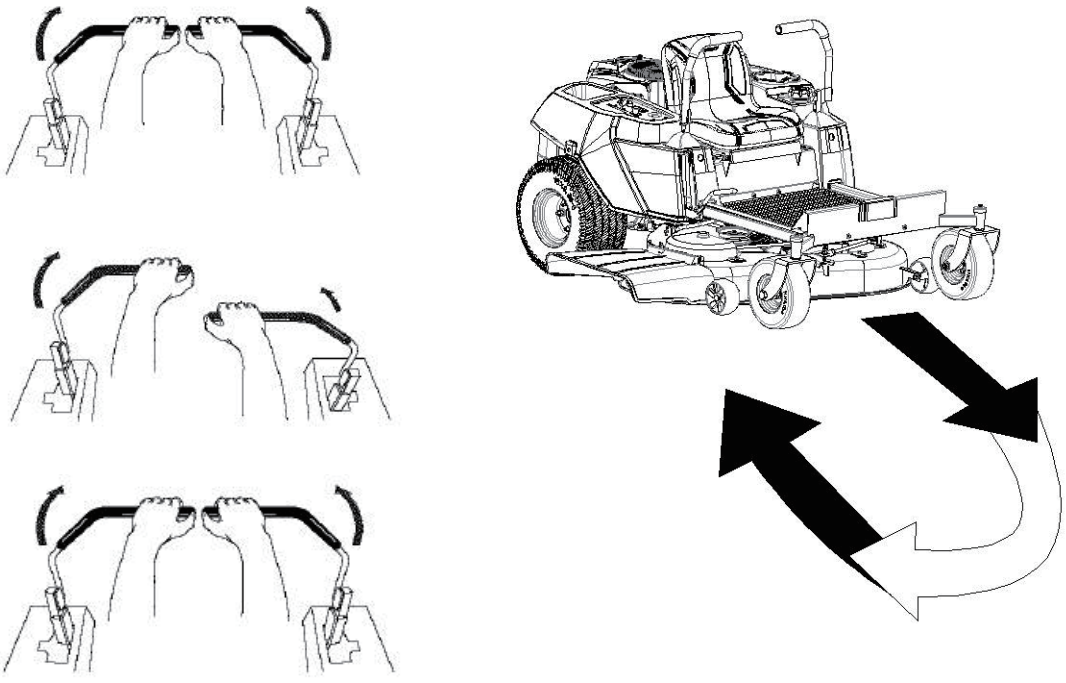


Figure 9

CHAPTER 7: DISASSEMBLY AND ASSEMBLY OF GRASS CUTTING BLADE DISC

⚠ **Warning**: Before removing or installing the grass cutting blade disc, always engage the parking brake, disengage the PTO, shut off the engine, remove the key, and wait for all moving parts to come to a complete stop.

Note: Please perform this operation on a hard, level surface (such as a concrete floor).

7.1. Disassembling the Lawn Mower Cutter Disc

7. 1. 1. Turn off the PTO, set the control lever to PARK position, turn off the ignition switch, and remove the key. Wait until all components have stopped moving.

7. 1.2. Tilt the front wheel forward.

7. 1.3. Pull the grass cutting height adjustment lever (A in Figure 10) to set the blade disc to the lowest cutting height.

7. 1.4. Release the tension spring of the lawn mower cutter disc belt (D in Figure 10), loosen the drive belt, and remove it from the engine pulley.

7. 1.5. Remove the rear pull rod and R-pin (B and C in Figure 10), then lift the lawn mower to disengage it from the cutter disc assembly bracket.

7. 1.6. Slide out the lawn mower cutter disc from under the right side of the device.

7.2. Installing the Lawn Mower Cutter Disc

7.2. 1. Tilt the front wheel forward.

7.2.2. Pull the grass cutting height adjustment lever (A in Figure 10) to set the blade disc to the lowest cutting height.

7.2.3. Slide the lawn mower cutter disc from under the right side of the device, then move backward to position the rear pull rod along the frame ramp.

7.2.4. Attach the rear pull rod and front pull rod of the lawn mower (B and C in Figure 10) to the cutter disc bracket and frame, and secure them with R-pins.

7.2.5. Operate the lawn mower cutter disc belt to release the tension spring (Figure 10, D), then loosen the drive belt tension. After attaching the belt to the pulley below the engine (Figure 10, E), secure the tension spring to the grass cutter disc bracket (Figure 10, D).

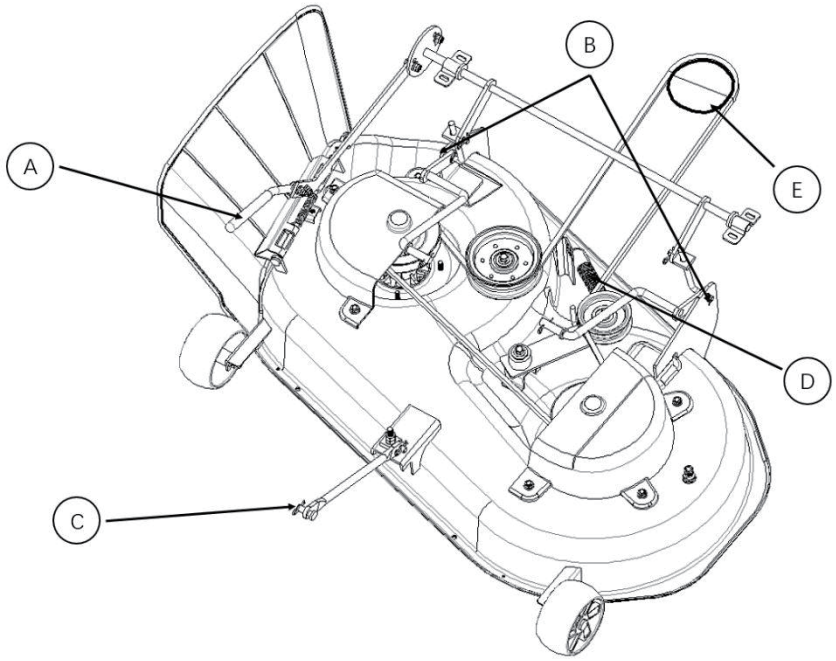


Figure 10

CHAPTER 8:MAINTENANCE INTERVAL

Maintenance Plan

The following is the routine maintenance plan for lawn mower.

Maintenanceit ems	Before each use	Spring and Autumn	8 hour	25 hour	100 hours	200 hours	Annually
Clean debris from the machine and enginecompar tment	●						
Clean debrisfrom the engine cooling area and air filter			●				
Check tire pressure				●			
Lubricate the machine andmower				●			

Clean the lawn mower cutter disc andinspect/ replace the blades				●			
Clean battery and cable					●		
Check themachine safety system		●					●
Check andadjust the PTO clutch					●	●	

CHAPTER 9: CLEANING THE LAWN MOWER CUTTER DISC,INSPECTING/REPLACING THE LAWN MOWER CUTTER DISC

9.1. Maintenance Interval: Every 25 Hours or as Needed

⚠Safety Warning:

9.1.1. To ensure personal safety, never touch sharp mower blades with bare hands. Improper operation may result in serious injury.

9.1.2. To ensure personal safety, the blade fixing bolt must be sequentially installed with a hex spline washer and a spring washer, and securely tightened. Tighten the blade fixing bolt to a torque of 45-55 ft. lbs. (61-75 N·m).

9.2. Operational Procedures

9.2.1. Disassembling the lawn mower cutter disc (see the "Disassembling the lawn mower cutter disc" section in the chapter 7 for details).

9.2.2. Refer to Figure 11 to disassemble the blade: Use a wooden block to hold the blade in place to prevent rotation, then loosen it by turning it counterclockwise.

9.2.3. Disassemble the blade fixing bolts (D in Figure 12), spring washers (C in Figure 12),

hexagonal washers (B in Figure 12), and the blade in sequence.

9.2.4. Clean the underside of the lawn mower cutter disc.

9.2.5. Inspect the blade for notches or blunt edges: Use a file to sharpen the blade to a sharp edge; if the blade is damaged, please replace it.

9.2.6. Check blade balance: Insert the blade center hole into a nail with lubricating oil. A properly balanced blade will remain level; if unbalanced, continue grinding the heavier side until balance is achieved.

9.2.7. Refer to Figure 12 to reinstall the blade's lifting wing (E) facing upward toward the lawn mower cutter disc.

9.2.8. Install the hexagonal washer (Figure 12B), spring washer (Figure 12C), and blade fixing bolt (Figure 12D) in sequence: Use a wooden block to hold the blade and prevent rotation, then tighten the bolt clockwise to a torque of 45-55 ft. lbs. (61-75 N·m).

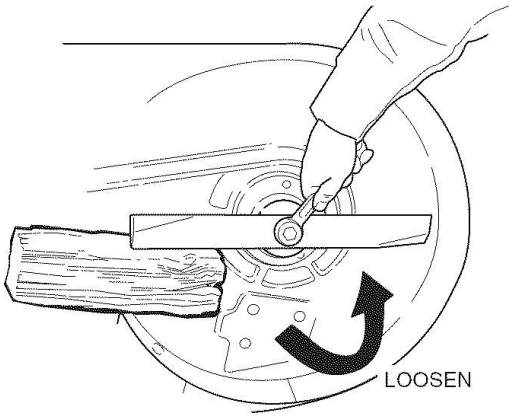


Figure 11

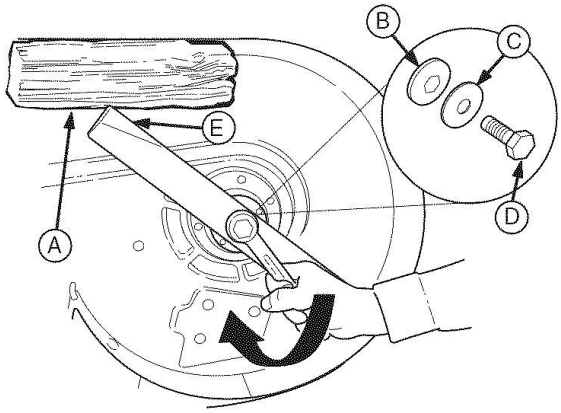


Figure 12

CHAPTER 10: CLEAN BATTERIES AND CABLES

10.1. Maintenance Interval: Every 100 Hours

⚠ Safety Warning:

- Handle batteries with extreme caution to prevent electrolyte leakage. Keep away from open flames and sparks.
- When disassembling or installing the battery cable, disconnect the negative cable first and reconnect it last.
- If the sequence is incorrect, the positive terminal may be shorted to the vehicle frame by the tool, creating a hazard.
- When handling batteries, always wear safety goggles and protective gloves.

10.2. Operational Procedures

10.2.1. First disconnect the negative cable of the battery (B in Figure 13), then disconnect the positive cable (A in Figure 13).

10.2.2. Remove the rubber retaining strap and take out the battery.

10.2.3. Clean the battery and battery compartment using a baking soda solution.

10.2.4. Use a wire brush to polish the battery terminals and cable connectors until they are glossy.

10.2.5. Reinstall the battery and secure it with rubber straps.

10.2.6. Reconnect the cables: First connect the positive cable (A in Figure 13), then connect the negative cable (B in Figure 13).

10.2.7. Apply petroleum grease or non-conductive lubricating grease on cable joints and battery terminals.

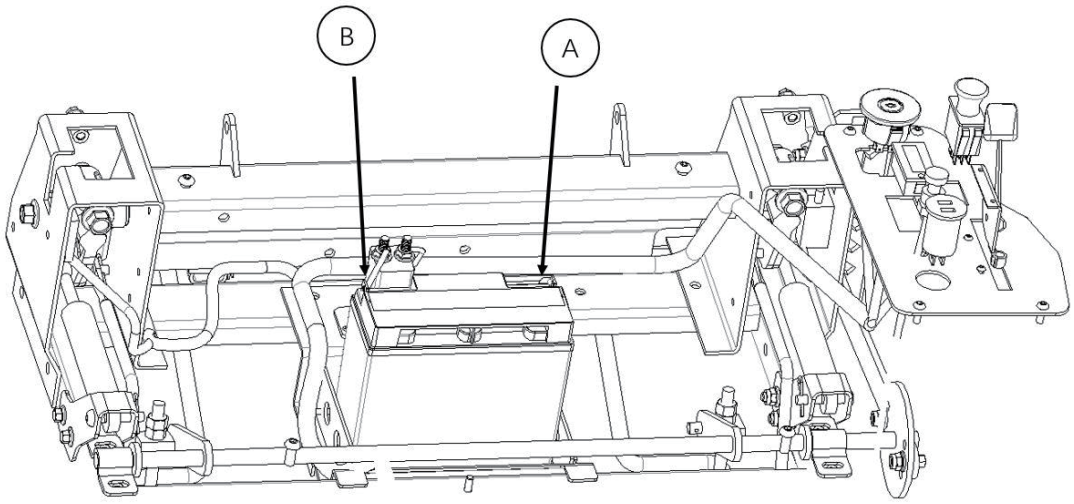


Figure 13

10.3. Inspection of Machine Safety Systems

Maintenance interval: every 100 hours, in spring and autumn, or after storage for 30 days or more

- This machine is equipped with safety interlock switches to ensure operational safety. It is strictly prohibited to attempt operation after removing any switches or tampering with safety devices. Regular functional inspections are required.

10.4. Operational Safety Inspection

Test 1 —The engine should fail to start (meeting either condition):

- The PTO switch is on, the control lever is not in PARK position, or the operator has left the seat.

Test 2 —The engine should be able to start (both conditions must be met):

- The PTO switch is in the off position and the control lever is set to PARK position. Test 3 —The engine should automatically shut off (if either condition is met):
- The operator stands up and leaves the seat while the PTO is on, or the operator stands up and leaves the seat while the control lever is in the N (Drive) position, or the left control lever is moved out of PARK (right control lever remains in PARK), or both control levers

are simultaneously shifted from PARK to N (method to prevent engine shut off). Test 4 —Blade brake inspection:

● After the PTO switch is turned off, the lawn mower blade and drive belt must come to a complete stop within 5 seconds.

Note: After the engine shuts off, you must turn off the PTO switch and lock the control lever in PARK position before restarting the engine.

⚠ **Final warning**

If the machine fails any safety test, operation is strictly prohibited and contact after-sales immediately for repair. Under no circumstances should the protective function of the safety interlock system be deactivated.

CHAPTER 11: HEIGHT ADJUSTMENT OF LAWN MOWER CUTTER DISC

⚠ **Warning before operation**

Before inspecting the lawn mower, turn off the PTO and engine, wait for all moving parts to stop, remove the ignition key, disconnect the spark plug wires, and secure them away from the spark plugs.

11.1. Left-Right Horizontal Adjustment

The uneven cutting surface may result from an inclined cutter head or uneven tire pressure.

11.2. Operational Procedures

11.2.1. Park the lawn mower on a flat and smooth surface (e.g., concrete ground) with the front wheels facing forward, turn off the engine, set the control lever to PARK position, and wait for the components to stop rotating.

11.2.2. Inspect the blades for bending and replace it if necessary.

11.2.3. Check tire pressure (refer to the tire pressure inspection section).

11.2.4. Set the cutting height to the middle position and adjust the blade so that it faces left

and right.

11.2.5. Measure the distance from the tip of the outer blade to the ground: If the difference between both sides is more than 1/8 inch (3mm), proceed to step 6; if the difference is less than 1/8 inch (3mm), perform front-to-back horizontal adjustment directly.

11.2.6. Rotate the locking nut (as shown in Figure 14A) to raise/lower the left and right sides of the cutter disc. Adjust the locking nut at the front pull rod (as shown in Figure 14B) to fix the angle of the cutter head tilt. After leveling the cutter disc, tighten the locking nut.

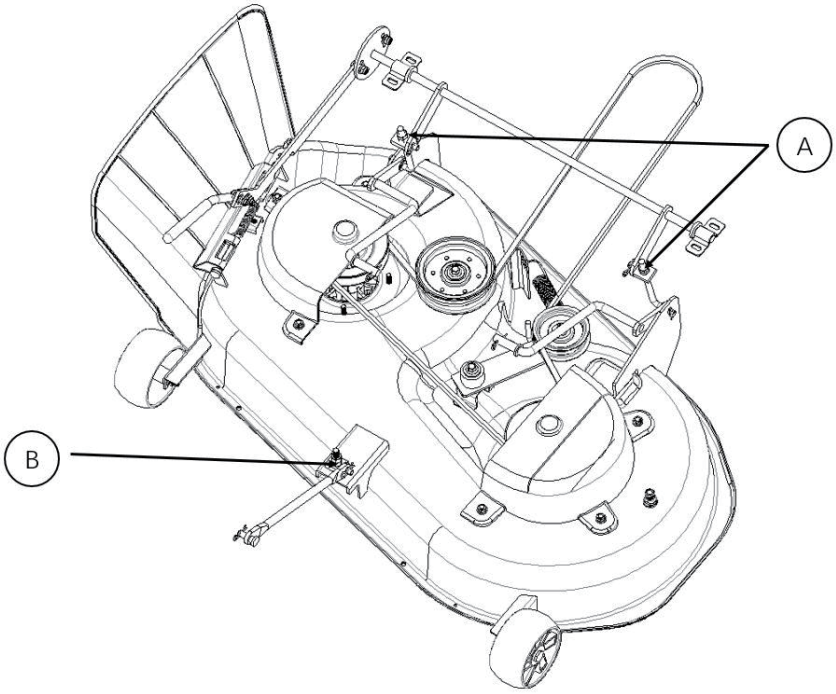


Figure 14

CHAPTER 12: REPLACEMENT OF TRAVELING AND DRIVE BELT OF CUTTER DISC

12.1. Replacement of the Cutter Disc Drive Belt

Operating steps

12.1.1. Remove the protective covers for the left and right pulleys (as shown in Figures 15A and 15B).

12.1.2. Loosen the cutter disc tension spring (as shown in Figure 15C), then remove the cutter disc drive belt (as shown in Figure 15D) from the electromagnetic clutch (as shown in Figure 15F).

12.1.3. Loosen the hex-head bolt on the belt anti-disengagement bracket (as shown in Figure 15E) to remove the cutter disc drive belt.

12.1.4. Install the new cutter disc drive belt as shown in Figure 15, and finally attach the cutter disc tension spring to the lowest snap-fit position.

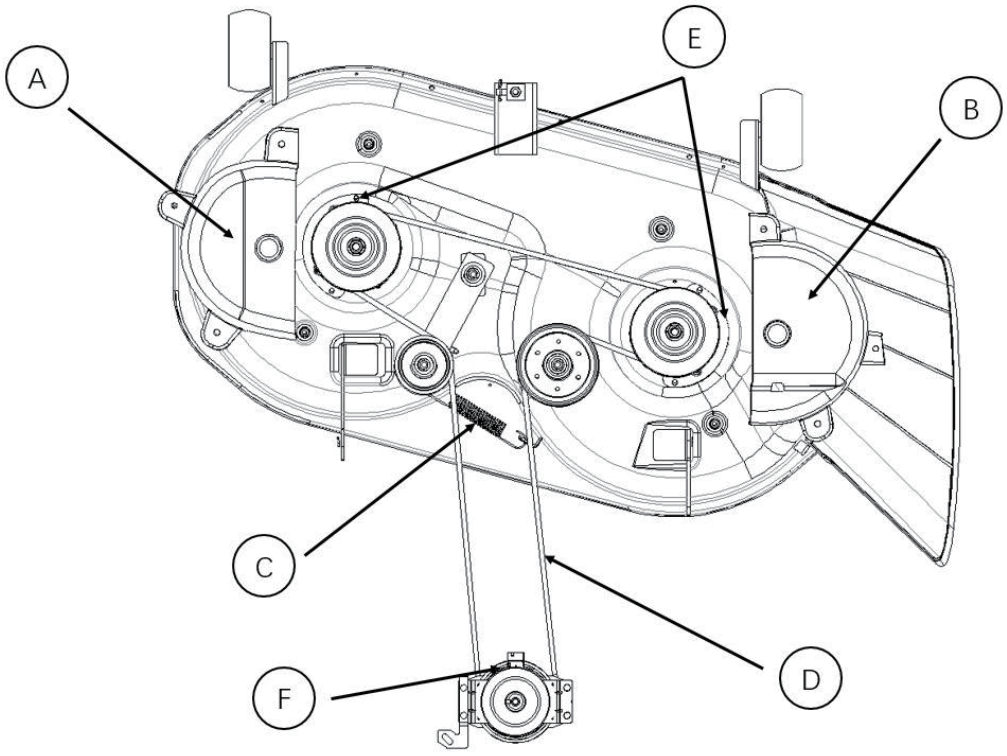


Figure 15

12.2. Replacement of Walking Transmission Belt

Operating steps

12.2.1. Remove the walking tension spring (as shown in Figure 16A) from the pressure relief rod bracket and release the tension.

12.2.2. Loosen the walking transmission belt (as shown in Figure 16B), then remove the belt directly from each pulley.

12.2.3. Install the new walking drive belt onto the pulleys (as shown in Figure 16).

12.2.4. Finally, attach the walking tension spring to the rightmost hole on the relief rod bracket for secure fixation.

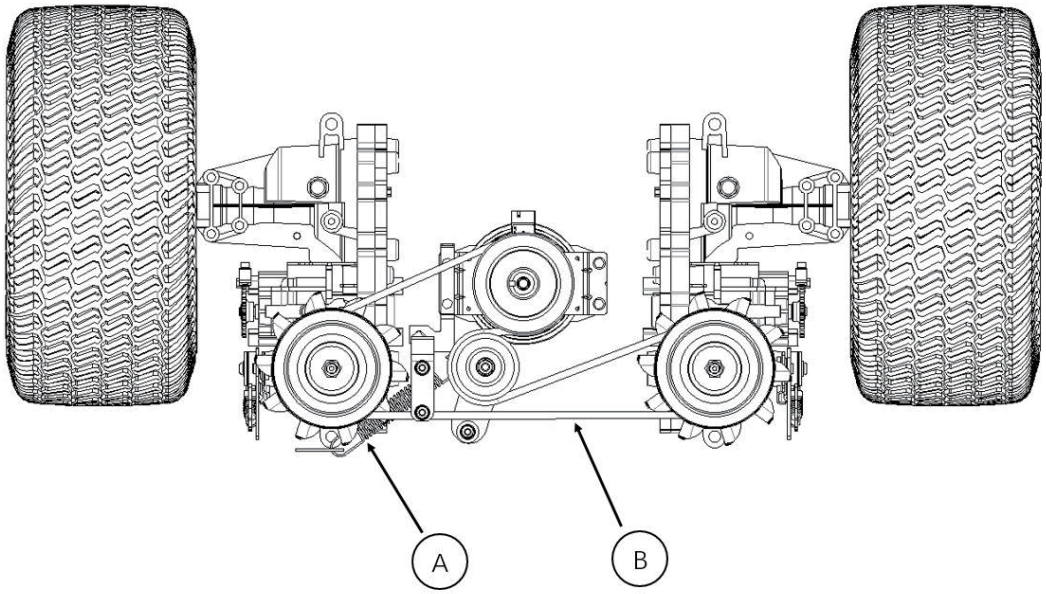


Figure 16

CHAPTER 13: ENGINE MAINTENANCE AND CARE

13.1. Component Name

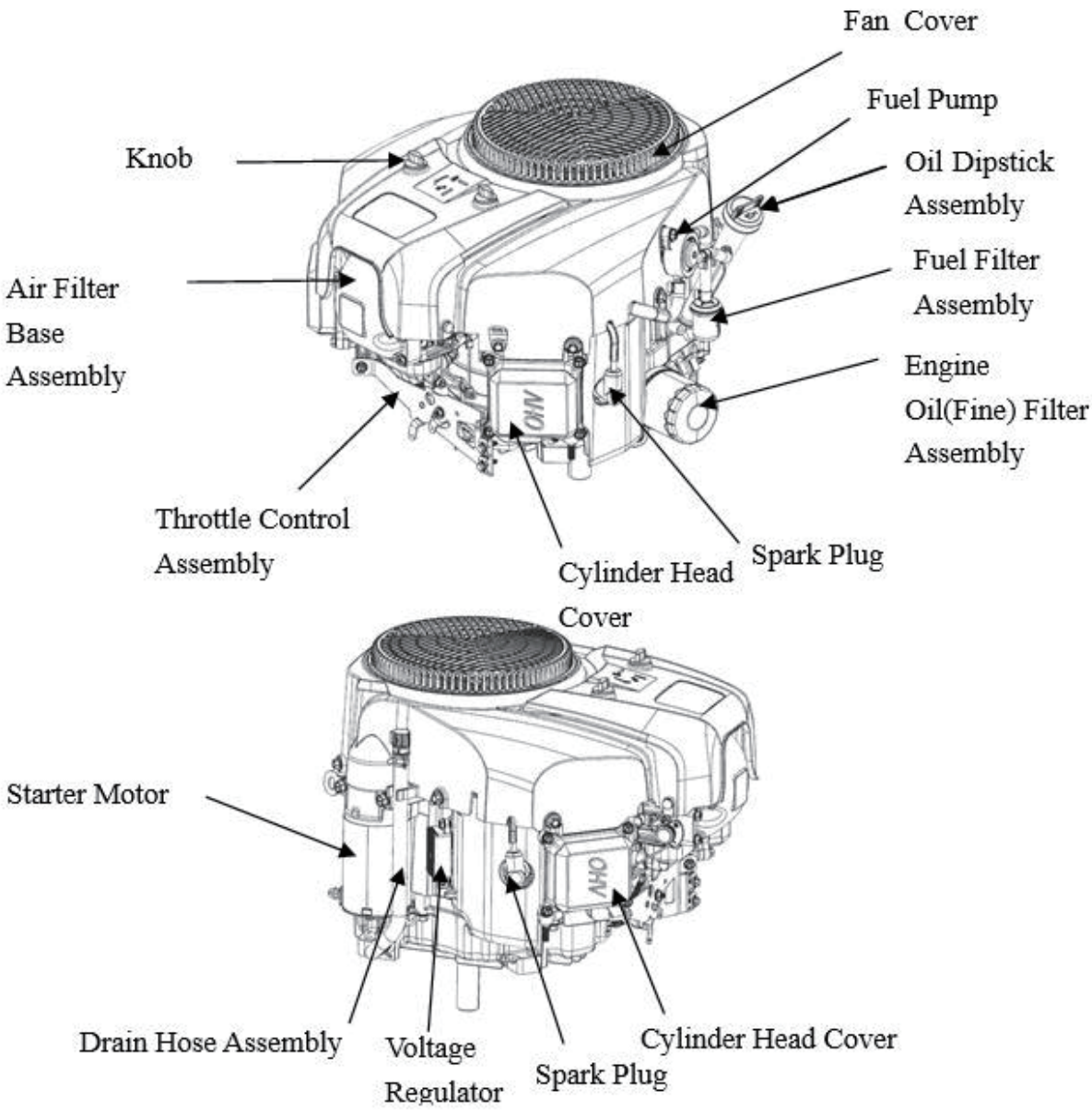


Figure 17

13.2. Routine Inspection

- Observe and confirm there are no leaks of engine oil or gasoline.
- Observe and confirm there are no signs of damage.
- Check the position of all covers and lids, as well as the tightening status of bolts, nuts,and screws.

13.3. Engine Oil Inspection

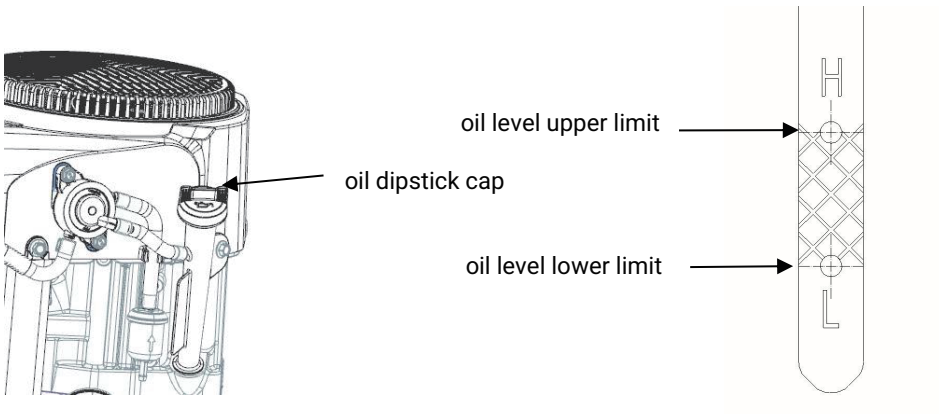
Note

● After shutdown, position the engine horizontally and inspect the engine oil. Use oil that meets the required specifications–10W-30 oil is suggested. Remove the oil dipstick from the oil filler port and wipe it clean.

13.3.1. Insert the oil dipstick, tighten the dipstick cap, and check the oil level.

13.3.2. If the engine oil level is too low, add the recommended oil and not more than the upper limit.

13.3.3. After adding engine oil, be sure to tighten the oil dipstick cap.



13.4. Fuel Inspection

It is recommended to use unleaded gasoline with an octane number greater than or equal to 90 or ethanol gasoline that meets low-temperature requirements.

Note: Do not use aged or contaminated gasoline. Prevent dust, impurities, or water from entering the fuel tank.

13.5. Engine Starting

13.5.1. Turn on the fuel switch.

13.5.2. Control of air blocking valve:

When starting the engine from a cold engine, place the choke valve in the "closed" position. If the engine is hot, the throttle valve may not be closed when starting. During normal operation, the air blocking valve should be placed in the "air blocking valve open" position.

13.5.3.Electric starting

● Using 12V, it is recommended to use batteries with a capacity of over 18AH. Connect the positive wire to the terminal of the starting relay, and at the same time, connect the negative wire to the engine mounting screw, base screw, or other points connected to the engine. Please refer to the explanation in Chapter 11 (Circuit Diagram) for details.

● Firstly, turn the engine switch to the ON position. Then turn the key to the STRAT position and keep it there until the engine starts.

● If the engine cannot be started within 5 seconds, please release the key and wait for 10 seconds before starting the engine again.

Attention: If the starting time exceeds 5 seconds, it may cause the starter motor to overheat and be damaged.

After the engine starts, release the key to return it to the ON or RUN position.

Due to the extremely high starting current, if the starting motor cannot rotate during startup, do not keep the engine switch in the starting position, otherwise the current may burn out the coils ofthe starting motor.

Maintenance schedule

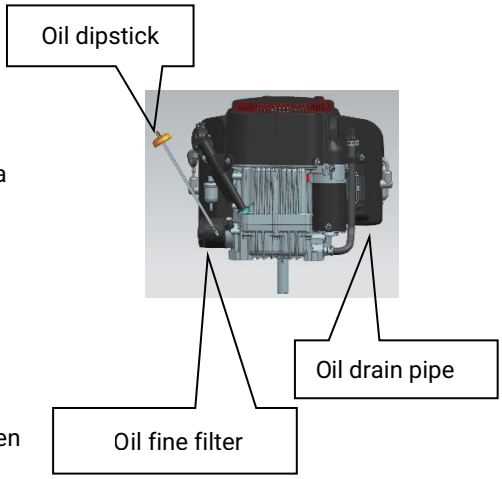
Maintenance schedule		Every time use	The first month or 50 hours	Every 3 months or 50 hours	every 6 months or 50 hours	every year or 100 hours	every 2 years or 200 hours	300 hours
engine oil	Check the oil level	•						
	replace		•			•		
Air filter element	confirm	•						
	cleanup			•(1)				
	replace					•		
Oil fine filter	replace					•(2)		
fuel filter	replace					•		
spark plug	clean up					•		
	replace							•
valve clearance	Re adjust						•(2)	
Cylinder head	wash							•(2)
Oiltube	replace	Every 2 years (2)						

(1) The filter element should be cleaned more frequently when used in dusty environments.

(2) It should be carried out by a designated after-sales service provider. Unless you have the appropriate tools and professional skills.

113.6. Oil Inspection and Replacement

Warming up the engine before draining the oil can ensure quick operation And drain the engine oil cleanly.



13.6.1. Clean the area around the oil dipstick cover and drain bolt, and remove the oil dipstick cover;

13.6.2. Use the following method to drain the engine oil into a suitable container:

a.Remove the oil drain pipe from the air deflector clip

b.Unscrew the connector from the top of the oil drain pipe

c.Let the engine oil flow into a suitable container

d. After draining the engine oil, install the drain bolt and tighten it.

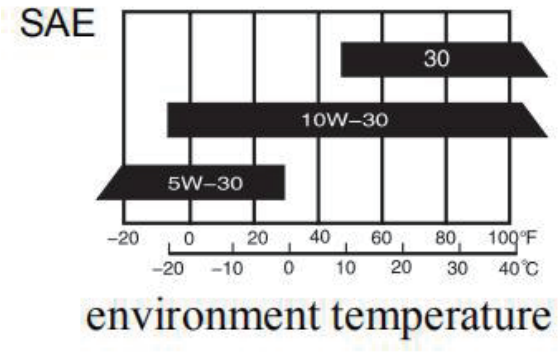
13.6.3. Add new oil from the oil filling port and confirm the oil level The oil level is between the upper and lower limits of the oil dipstick.

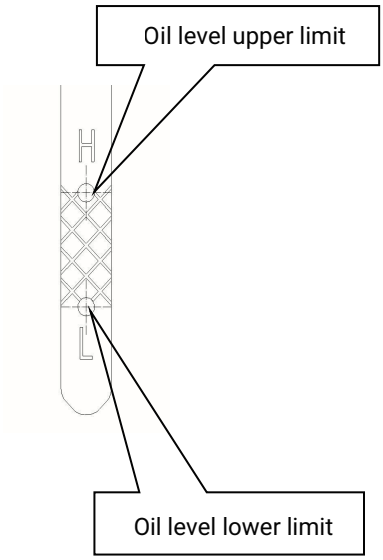
Engine oil capacity:

NV730FE : 2.0 L

- Use high cleanliness, high-quality four stroke engine oil that meets or exceeds American standards and is certified for high cleanliness, high-quality four stroke engine oil.
- Recommend using the following engine oils, API service categories: SG, SF, SH, SJ, or SL
- SAE 10W-30 is recommended for general use and full temperature range use. If the temperature changes in your area are within the temperature range corresponding to a certain brand of oil in the chart, you can use this brand of oil.

Choose viscosity based on the ambient temperature as follows:

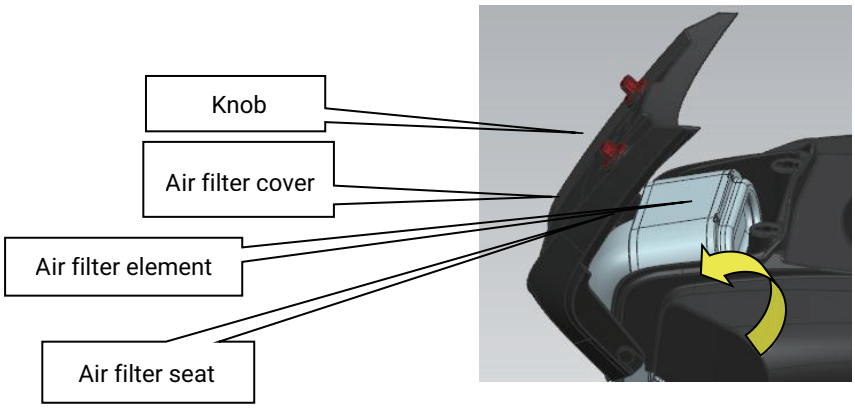




Warning Waste engine oil can pollute the environment. Please dispose of used engine oil and oil containers in a way that is suitable for the environment. We suggest that you pack it in a sealed container and send it to a local recycling center or service station for recycling. Remember not to throw it into the trash can, or dump it on the ground or in a ditch.

13.7. Replacement and Maintenance of Air Filter Element

13.7.1. Release the knob, open the air filter coverand lift it slightly from behind the air filtere lement to remove it;



13.7.2. Clean the foam filter element: gently squeeze the foam filter element in warm soapy water and then rinse it to let it dry naturally.

13.7.3. Clean the paper filter: Gently tap the filter a few times, and then use compressed air with a pressure not exceeding 200kPa from the inside to the outside

Blow air. Never use brushes or other tools to brush paper filter cartridges, as this can easily block their ventilation channels.

13.7.4. Clean the dirt inside and outside the air filter seat and cover. Be careful not to let dirt enter the pipes leading to the carburetor.

13.7.5. Install the air filter element in the reverse order of disassembly

13.7.6. Cover the air filter cover and tighten the knob

Warning Using damaged air filter cartridges or using the engine without an air filter cartridge can allow dust to enter the engine, leading to rapid engine wear. This type of wear and tear is not covered by the warranty.

13.8. Spark Plug Replacement and Maintenance

We recommend using F7RTC/RN9YC/BPR6ES, but other equivalent spark plugs can also be used.

Warning The wrong type of spark plug may damage the engine.

13.8.1. Remove the spark plug cap and clean the dirt around

the spark plug area;

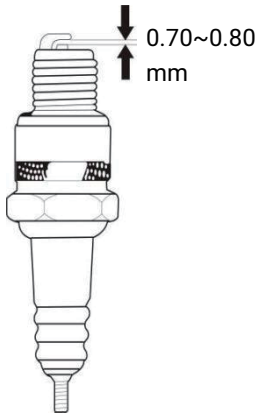
13.8.2. Use a spark plug socket to remove the spark plug

13.8.3. Check spark plugs: Check for excessive wear or deposition of electrodes

Object; Check for cracks or fissures on the insulating porcelain.

If you are interested in

If you have any questions about the condition of the spark plug, please replace it.



13.8.4. Use a feeler gauge to measure the electrode gap. Adjust the gap to 0.7~0.8mm by carefully bending the grounding electrode

13.8.5. Install spark plug: To prevent thread misalignment, please manually screw the spark plug into 3-8 threads. After the spark plug is seated, use a spark plug socket wrench to tighten and tighten the washer.

If reinstalling a used spark plug, tighten it by 1/8-1/4 turn after the spark plug is seated. If installing a new spark plug, tighten it by 1/2 turn after the spark plug is seated.

13.8.6. Install the spark plug cap onto the spark plug.

Warning

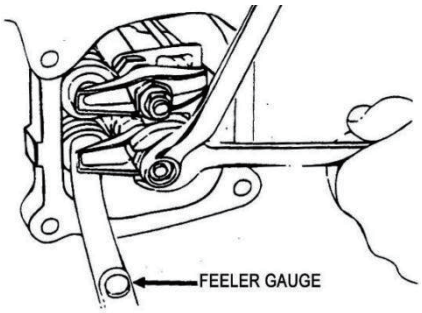
Loose spark plugs may leak heat and damage the engine. Overtightening spark plugs can

damage the threads in the engine cylinder head.

13.9.Valve Clearance Adjustment

Warning Valve clearance adjustment must be performed when the engine is cooling down.

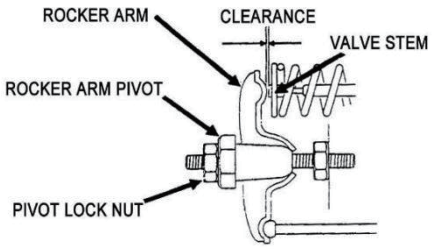
13.9.1. Remove the cylinder head bolts, cylinder head cover, and sealing gasket; Set the piston at the top dead center of the compression stroke (with both valves fully closed).



13.9.2. Insert a feeler gauge between the rocker arm and the valve to measure the valve clearance.

Valve clearance: intake valve clearance 0.1~0.15 mm

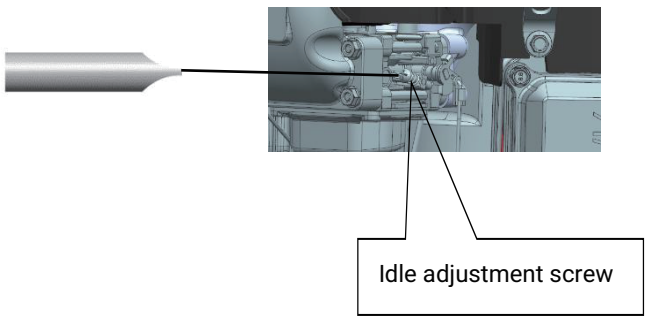
Exhaust valve clearance 0.15~0.2 mm.



13.9.3.When adjusting the valve clearance, fix the rocker arm adjustment nut and loosen the valve lock nut, and rotate the rocker arm adjustment nut to obtain the specified valve clearance; After the adjustment is completed, fix the rocker arm adjustment nut and tighten the valve lock nut; Recheck the gap and adjust it if necessary.

13.9.4. Assemble the cylinder head cover.

13.10. Idle Speed Adjustment



13.10.1. Start the engine and preheat it;

13.10.2. In the low idle state, turn the idle adjustment screw on the carburetor to adjust the engine idle speed;

Rotate the idle adjustment screw to the right to increase the idle speed, otherwise the speed will decrease

Recommended idle speed: 1800 ± 200 rpm

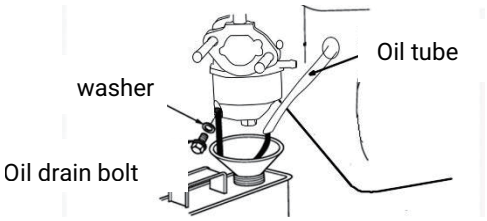
13.11. Engine Storage

After the engine is stopped, it should be cooled for at least half an hour before cleaning. Clean all external surfaces, repair damaged paint, and apply a thin layer of rust proof oil to other areas that may rust.

Attention: Water under high pressure can enter the air filter and muffler, and even enter the cylinder along the air passage, causing corrosion and damage. Splashing water on a hot engine can cause damage. Therefore, cleaning must be carried out after the engine has cooled down.

13.11.1. Release the fuel from the fuel system:

- Place a suitable container under the carburetor and use a funnel to prevent fuel from splashing out.
- Remove the fuel drain bolt of the carburetor and ensure that the fuel switch is in the ON position.



13.11.2.After the fuel is drained, immediately install the drain bolt and tighten it.

13.11.3. Change the engine oil.

13.11.4. Remove the spark plug and pour a tablespoon (5-10 milliliters) of clean engine oil into the cylinder. The crankshaft rotates several times, causing the oil to disperse and distribute inside the cylinder head.

13.11.5. Reinstall the spark plug.

13.11.6. Cover the engine hood with a dust-proof jacket and place it in a ventilated and dry area.

Warning: The storage time of gasoline in the fuel tank and carburetor depends on the added components of gasoline, the ambient temperature of storage, and whether the fuel tank is full. When the fuel tank is not full, the oxygen in the tank will accelerate the deterioration rate of the fuel. Gasoline stored in the tank for a long time will oxidize and deteriorate. Deteriorated gasoline is difficult to start the engine and can produce gum to block the fuel system. Therefore, if the engine is not used for more than a month, please drain the fuel to prevent fuel deterioration in the fuel system and carburetor components.If fuel system or engine performance failures are caused by improper storage, they are not covered by the warranty.

13.12.Troubleshooting

13. 12. 1. Difficulty starting

Fault				Cause	Troubleshooting
Normal cylindr pressue	Normal ignition	Abnormal fuel system	The oil circuit is not smooth	The fuel tank is empty or the oil switch is not turned on	Add fuel and turn on thefuel switch
				The vent hole of the fuel tankcap is blocked	Dredge
				Oil switch blockage	Wash
				Improper adjustment or blockage of the mainmeasuring hole	Re adjust, clean, blow through
				Needle valve or float stuck	Repair or replace
			Smooth oil circuit	The fuel is too dirty or has deteriorated	Replace fuel and clean carburetor
				There is water in the fuel	Replace fuel and clean carburetor
				Excessive fuel in the cylinder	Drain oil and dry spark plugs
				The fuel grade is incorrect	Add fuel of specified grade
	Normal fuel system	Poor ignition	Defective spark plug	Carbon deposition and dirtyelectrodes	Remove carbon depositsand dirt
				Insulation damage	Replace spark plug
				Severe electrode erosion	Replace spark plug
				The spark plug gap is incorrect	Adjust the gap
			No sparks	High voltage line damage	Replace the high-voltageline
				The ignition coil is damaged	Replace the ignition coil
				Insufficient magnetic fieldstrength	Magnetize or replace
Abnormal cylinder pressure	Normal fuel system	Normal ignition	Spark plug is normal	The wear of the piston ring exceeds the limit or is broken	Replace
				Piston ring bonding	Remove carbon deposits
				Spark plug without washer or not tightened	Install gaskets or tighten them
				Leakage at the joint surface of the cylinder block andcylinder head	Replace the cylinder gasket
				The valve seal is not tightenough	Grind or replace

13.12.2.Insufficient power

Fault	Cause		Troubleshooting
When increasing the throttle, the speed increases slowly, and in severe cases, the speed decreases or stalls	Ignition system	The ignition time is incorrect	Replace the ignition coil
	Fuel system	Air mixed in the oil circuit	Expel air
		Improper adjustment of the main measuring hole	Re adjust
		Needle valve hole and main measuring hole are blocked	Clean and blow through
		Oil switch blockage	Clean or replace damaged parts
		Combustion chamber carbon deposition	Remove carbon deposits
	Intake system	Air filter blockage	Clean up
		Air leakage in the intake system	Repair or replace
	Poor compression	Wear of pistons, cylinders, and piston rings	replace
		Leakage at the joint surface of the cylinder body and cylinder head	Replace the cylinder gasket
		The valve clearance is incorrect	Re adjust
		The valve seal is not tight enough	Grind or replace

13.12.3.Sudden stall

Fault	Cause		Troubleshooting
Sudden shutdown during operation	Fuel system	Fuel depletion	Add fuel and unclog
		Carburetor blockage	Check the oil circuit and clear it
		Oil leakage of carburetor float	Repair the float
		Needle valve stuck	Repair needle valve
	Ignition system	Spark plug breakdown, carbon deposition short circuit	Replace spark plug
		Spark plug electrode detachment	Replace spark plug
		High voltage line detachment	Repair or replace
		Ignition coil breakdown	Replace
	Other	Severe cylinder pulling or valve detachment	Repair or replace damaged parts

13.12.4.Engine overheating

Fault	Cause	Troubleshooting
Engine overheating	The ignition time is incorrect	Replace the ignition coil
	Insufficient engine oil	Add enough engine oil
	Exhaust pipe blockage	Clean the exhaust pipe
	Air leakage from the air guide cover	Repair the damaged area
	There are debris blocking the air duct	Clean the heat sink
	The cooling fan is broken	Replace
	Piston ring failure leads to air leakage between cylinder and crankcase	Replace worn parts
	The gasoline engine speed is too high	Repair the speed controlsystem or replace the speed control teeth
	The crankshaft bearing is burnt out	Replace or repair

13.12.5.Abnormal noise

Fault	Cause	Troubleshooting
knocking sound	Wear of pistons and piston rings	Replace worn parts
	Wear of connecting rod, piston pinand pin hole	Replace worn parts
	Wear of crankshaft bearings	Replace or repair
	Piston ring fracture	Replace the piston ring
Explosive and metallic sound	Excessive carbon deposition in the combustion chamber	remove carbon deposits
	The gap between the spark plug electrodes is too small	Adjust the electrode gap
	Severe oil accumulation in gasoline engine	Check the carburetor
	The fuel grade is incorrect	Replace fuel
	Gasoline engine overheating	Refer to the overheating fault column
Other abnormal noises	Incorrect adjustment of valve clearance	Adjust the valve clearance again
	Loose connection between flywheeland crankshaft	Replace the connection key and reinstall it

CHAPTER14:TROUBLESHOOTING OF LAWN MOWER

14.1. Malfunction During Walking

Fault	Cause	Troubleshooting
The engine is running, but the lawn mower is not moving	1. The control lever is in the push position 2. The drive belt slips 3. Belt breakage 4. The parking brake is not fully released	1. Move the control lever to N gear 2. Clean or replace the belt as needed 3. Replace the belt 4. Contact after-sales service
Poor steering/handling of lawn mower	Improper tire pressure	Check tire pressure
The lawn mower has deviatedto one side	Driving speed not adjusted	Turn the hydraulic control rod nuts on both sides of the hydraulic rear axle (to the marked center position)
Loose steering linkage	Loose steering linkage	Check and tighten all loose joints

14.2. Malfunction During Operation

Fault	Cause	Troubleshooting
Uneven mowing	1.Uneven/improper tire pressure 2. The cutterhead is not leveled correctly 3. Driving too fast4. Blunt blade	1. Refer to the maintenance section to check the air pressure 2. Refer to "Knife Disk Adjustment" for leveling 3. Reduce the driving speed 4. Polish or replace the blade (refer to maintenance section). The grass cutting marks are rough
Rough grass cutting marks	1. The engine speed is too low 2. Driving too fast 3. Blunt blade 4. Drive belt slippage (oil stains/wear) 5. The blade is not fixed on the blade shaft	1. Always adjust the throttle to the maximum when mowing grass 2. Reduce the driving speed 3. Polish or replace the blade 4. Clean or replace the belt as needed 5. Refer to the maintenance section for checking/replacing lawn mower blades

The engine is prone to stalling when engaging the PTO (power output)	1. The engine speed is too low 2. Driving too fast 3. The cutting height is set too low	1. Always adjust the throttle to the maximum when mowing grass 2. Reduce the driving speed 3. Adjust the height to the maximum when mowing for the first time
Excessive vibration of lawn mower	1. Grass accumulation on the lower side of the cutterhead 2. The grass outlet is blocked by grass debris 3. Loose blade bolt 4. Blade/blade shaft/pulley bending5. Blade imbalance	1. Remove the cutterhead and clean the bottom 2. Straw the cut area to avoid blockage 3. Tighten to 45-55 foot pounds (61-75 Newton meters) 4. Check and replace bent parts 5. Replace or balance the blade
The lawn mower drive beltslips or cannot be driven	1. The idler spring is broken or not installed correctly 2. The lawn mower drive belt is broken 3. Improper adjustment of PTO clutch	1. Repair or replace as needed 2. Replace the drive belt 3. Adjust the PTO clutch (refer to maintenance section)

WARRANTY INFORMATION:

Please refer to our website for detailed warranty conditions and coverage.

For the most up-to-date and comprehensive warranty information, visit **www.tmgindustrial.com**