

ATV TOW-BEHIND FINISH MOWER



⚠ WARNING



- Please read and understand the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly
- Do not return the product to dealer. They are not equipped to handle your requests.

Missing parts or have questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

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Introduction

Congratulations on your investment in quality. Thank you for purchasing TMG ATV finishing mower. We have worked to ensure that the mower meets the highest standards for usability and durability. With proper care, your ATV finishing mower will provide many years of service.

NOTE: Please read this entire manual before installation and use. Manufacturer reserves the right to change, alter or improve the product and this document at any time without prior notice.

Registration, Service And Maintenance Logo

Record the model number and serial number in the space provided for easy reference.

See Figure 1

Always provide model and serial number when ordering parts and in all correspondences with your local dealer.

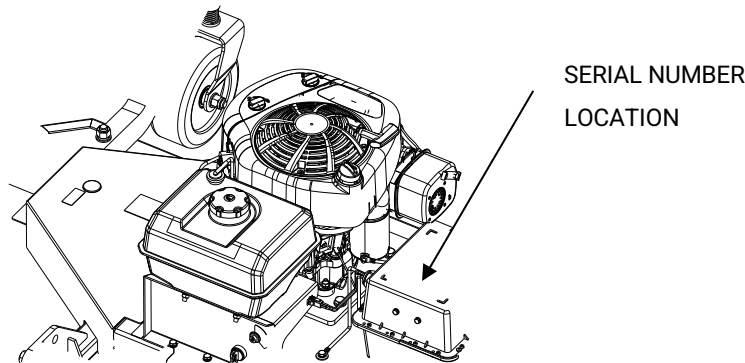


Figure 1: Serial Number

This instruction book contains information for the ATV Finishing Mower. Read and keep this book for future reference.

This book contains important information on **SAFETY, ASSEMBLY, OPERATION, and MAINTENANCE**. The owner must be certain that all the product information is included with the unit. This information also includes the **INSTRUCTION BOOKS**.

We reserve the right to Change, Modify, Discontinue, or improve this product without notice or obligation to the purchaser.

This manual was written to the descriptions and specifications current at time of printing.

Warnings And Safety Precautions

Owner's Responsibility

Accurate assembly and safe and effective use of the mower is the owner's responsibility.

1. Read and follow all safety instructions.
2. Carefully follow all assembly instructions.
3. Maintain the machine according to directions and schedule included in this operator's manual.
4. Ensure that anyone who uses the mower is familiar with this manual, all controls and safety precautions.
5. Ensure this manual is stored with the machine and all operators are aware of its location.

Special Messages

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

NOTE: General information is given throughout the manual that may help the operator in the operation or service of the machine.

Important Safety Precautions

Please read this section carefully.

Operate the mower according to the safety instructions and recommendations outlined here and inserted throughout the text. Anyone who uses this mower must read the instructions and be familiar with the controls.



This symbol points out important safety instructions which if not followed could endanger your personal safety.

Read and follow all instructions in this manual before attempting to operate this equipment.

Do not allow children to operate this mower. Keep small children away from the area being mowed. Do not allow adults to operate the mower without proper instruction.



WARNING

WARNING INDICATES A HAZARD WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY AND/OR PROPERTY DAMAGE.



CAUTION

CAUTION INDICATES YOUR EQUIPMENT CAN BE DAMAGED IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.



IMPORTANT

INDICATES HELPFUL INFORMATION PROPER ASSEMBY, OPERATION, MAINTANCE OF YOUR EQUIPMENT.

You must read, understand and comply with all safety and operating instructions in this manual before attempting to setup and operate your machine.

Failure to comply with all safety and operating instructions can result in loss of machine control, serious personal injury to you and/or bystanders, and risk of equipment and property damage. The triangle in the text signifies important CAUTIONS or WARNINGS which must be followed.

General Safety Rules

1. Read, understand, and follow all instructions of the machine. Be thoroughly familiar with the controls and the proper use of the mower before starting.
2. Familiarize yourself with all of the safety and operating decals on this equipment and on any of its attachments or accessories.
3. Do not put hands or feet near or under rotating parts.
4. Only allow responsible individuals, who are familiar with the instructions, to operate the mower.
5. Thoroughly inspect the area where the machine is to be used and remove all foreign objects. Your equipment can propel small objects at high speed causing personal injury or property damage. Stay away from breakable objects, such as house windows, automobile, greenhouses, etc.
6. Keep the area of operation clear of all persons, particularly small children, and pets.
7. Wear appropriate clothing such as a long-sleeved shirt or jacket. Also wear long trousers or slacks. Do not wear shorts.
8. Do not wear loose clothing or jewelry. They can get caught in moving parts.
9. Always wear safety goggles or safety glasses with side shields when operating mower to protect your eyes from foreign objects which can be thrown from the unit.
10. Always wear work gloves and sturdy footwear. Wear footwear that will improve footing on slippery surfaces. Leather work shoes or short boots work well for most people. These will protect the operator's ankles and shins from small sticks, splinters, and other debris.
11. It is advisable to wear protective headgear to prevent the possibility of being struck by small flying particles, or being struck by low hanging branches, twigs, or other objects which may be unnoticed by the operator.
12. Do not operate the mower without proper guards or other safety protective devices in place.
13. Use this equipment for its intended purpose only.
14. See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
15. Operate only in daylight or good artificial light.

16. Do not operate product when fatigued or under the influence of alcohol, drugs or other medication which can cause drowsiness or affect your ability to operate this machine safely.
17. Never operate mower in wet grass. Always be sure of your vehicle's traction; keep a steady pace and do not exceed the recommended maximum speed in this manual.
18. Before each use, inspect the throttle control lever. Make sure that it is free and not damaged. Also check its linkage running to the carburetor for kinks, loose fittings, and obstructions.
19. Stop the rotating mower head when crossing gravel drives, walks, or roads. Wait for the cutting blades to stop rotating.
20. Watch for traffic when operating near, or when crossing roads.
21. Stop the engine (motor) whenever you leave the equipment, before cleaning, repairing or inspecting the unit, be sure the mower and all moving parts have stopped. Let the engine cool, disconnect the starting wire harness plug and remove the ignition key.
22. If the equipment should start to vibrate abnormally, stop the engine (motor), disconnect the starting wire harness plug and remove the ignition key. Check immediately for cause. Vibration is generally a warning of trouble.
23. After striking a foreign object, stop the engine (motor). Disconnect the starting wire harness plug and remove the ignition key. Inspect the mower for damage. If damaged, repair before starting and operating the mower.
24. Never leave the mower unattended when the engine is running. Disconnect the starting wire harness plug and remove the ignition key.
25. Regularly inspect the mower. Make sure parts are not bent, damaged or loose.
26. Allow muffler and engine areas to cool before touching.
27. Never operate or have engine running without having mower attached to suitable tow vehicle.
28. Prolonged exposure to noise and vibration from gasoline engine powered equipment should be avoided. Take intermittent breaks and/or wear ear protection from engine noise.
29. Check local regulations for age restrictions on use of this machine.
30. If the noise or vibrations of the machine increase, stop immediately and perform an inspection.
31. The fuel used in this machine is considered extremely flammable and should be handled with care. When storing extra fuel be sure that it is in an appropriate container and away from any fire hazards.

Slope Operation

Slopes are a major factor related to slip-and-fall or roll-over accidents which can result in severe injury. All slopes require extra caution. If you feel uneasy on a slope, do not mow it. Do mow up and down; never across the face of slopes. Do not mow excessively steep slopes (maximum 20 degrees) or areas where the ground is very rough. Exercise extreme caution when changing direction on slopes.

Remove objects such as rocks, tree limbs, etc.

Watch for holes, ruts, or bumps. Tall grass can hide obstacles.

IMPORTANT NOTES:

Do not mow near drop-offs, ditches, or embankments. The towing vehicle could lose traction or balance.

Do not mow excessively steep slopes.

Do not mow on wet grass. Reduced traction could cause slipping or roll-over. Wet piles of grass can also cause fire due to spontaneous combustion.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower and the mowing activity. Never assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under the watchful care of a responsible adult that is not performing mower operation.
2. Be alert and turn mower off if children enter the area.
3. Before and while moving backwards, look behind and down for small children.
4. Never allow children to operate the mower or be a passenger on the tow vehicle.

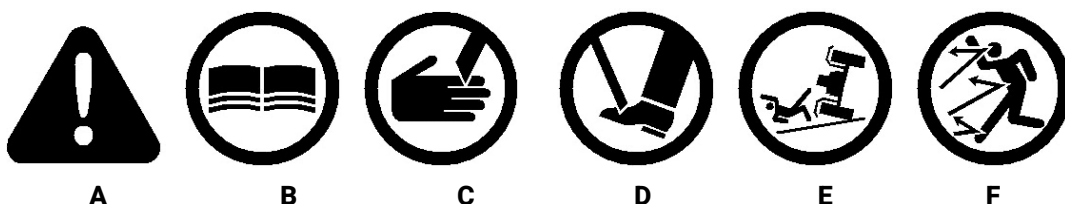
5. Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

Service

1. Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
2. Use only an approved container.
3. Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke while refueling.
4. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors or near appliances with pilot lights, heaters, or other ignition sources. Replace fuel cap securely. If fuel is spilled, do not start the engine but move product and fuel container from area. Clean up spilled fuel and allow to evaporate.
5. Never store the machine or fuel container inside where there is an open flame (such as a water heater), or other ignition source.
6. If the fuel has to be drained, this should be done outdoors. The drained fuel should be stored in a container specifically designed for fuel storage or it should be disposed of carefully and according to local regulations.
7. Engines give off carbon monoxide, an odorless, colorless, poison gas. Breathing carbon monoxide can cause nausea, fainting or death. Always start and run engine outdoors. Do not start or run engine in an enclosed area, even if doors or windows are open.
8. Never make adjustments or repairs with the engine (motor) running. disconnect the starting wire harness plug and remove the ignition key. Always wear eye protection when you make adjustments or repairs.
9. Check the mower head and engine mounting bolts at frequent intervals for proper tightness.
10. Keep all nuts and bolts tight and keep equipment in good condition. Check mounting hardware on mower prior to each use.
11. Never tamper with safety devices. Check their proper operation regularly.
12. When servicing or repairing the mower, do not tip the machine over or up unless specifically instructed to do so in this manual. Service and repair procedures can be done with the mower in an upright position. Some procedures will be easier if the machine is lifted on a raised platform or working surface.
13. To reduce fire hazard, keep mower free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage. Allow mower to cool before storing.
14. Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
15. Always disconnect starting wire harness plug and remove the ignition key before cleaning, repairing, or adjusting.
16. Do not change the engine governor setting or over-speed the engine.
17. Clean and replace safety and instruction decals as necessary.
18. To guard against engine over-heating, always have engine debris filter mounted and clean.
19. Inspect cooling fins on engine.
20. Inspect mower before storage. When not in use, disconnect starting wire harness plug, remove ignition key and store indoors in a dry place locked or otherwise inaccessible to children.
21. Use only original equipment or authorized replacement parts.
22. Always follow the manufacturer's instructions on operation of the tow vehicle.

Safety Decals And Warnings

Pictured below are safety and hazard symbols on the unit or in this manual. Before you operate your unit, learn and understand the purpose for each symbol.



Hazard Symbols and Meanings

A: Warning!

B: Read Owner's Manual Before Operating Machine.

C: Keep Hands Clear, Contact Can Injure.

D: Keep Feet Clear, Contact Can Injure.

E: Go Up And Down Slopes, Not Across Slopes Sideways.

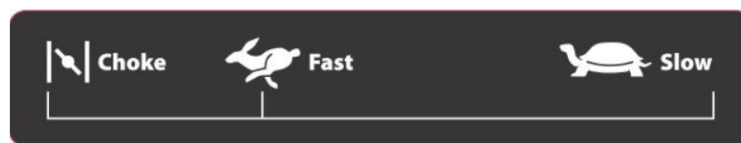
F: Remove Objects That Could Be Thrown By The Blade.

Should any of the safety labels become unreadable because of being worn, faded, or otherwise damaged during the use of your mower, please use the part number information provided to order a replacement label.



Control And Operating Symbols

Pictured below are control and operating symbols on the unit or in this manual. Before you operate you unit, learn and understand the purpose for each symbol.



Decal: Throttle And Blade Speed Control

Features

Read this owner's manual and safety rules before operating your mower. Take time to compare the following illustration with the mower to familiarize yourself with the product and its controls. See Figure 2

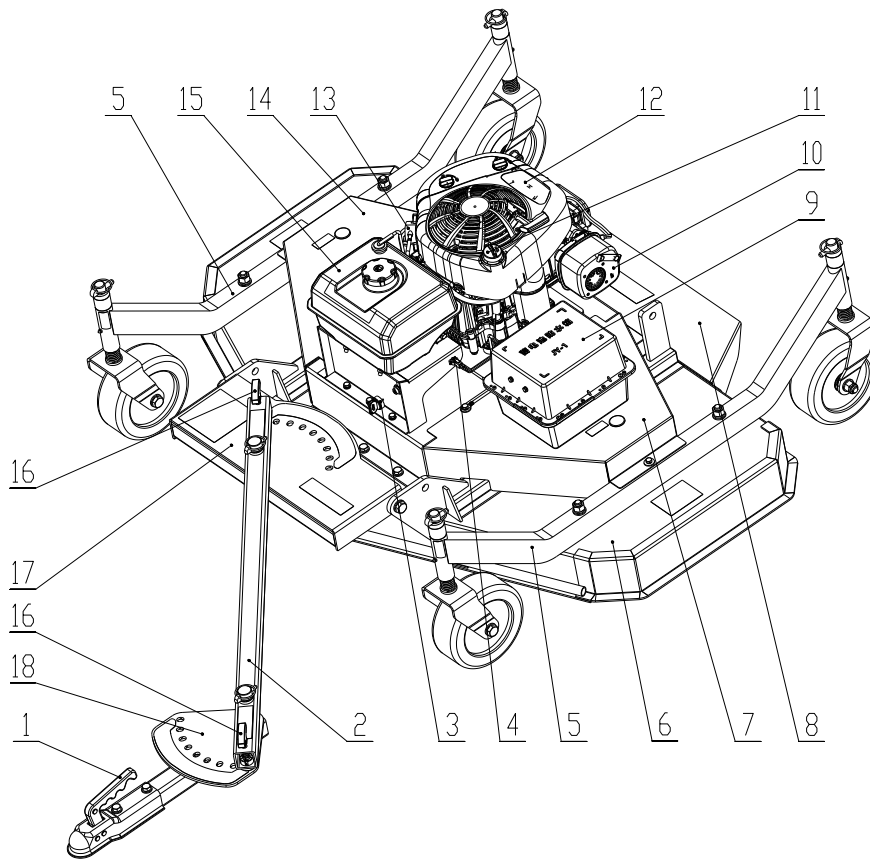


Figure 2: ATV Finishing Mower Features

Item	Description	Item	Description
1	Hitch-Ball Couplers	10	Exhaust Muffler
2	Tower-Bar Assembly	11	Oil Fill Port
3	Key Start Ignition	12	344CC Electric
4	Starting Wire Harness Plug	13	Fuel Pump
5	Wheel Frame Mount Assembly	14	Pulley Cover - L
6	Mower Deck Group	15	2 Gallon Fuel
7	Pulley Cover - R	16	Tow Bar Locking
8	Discharge Guide	17	Deck Mount
9	Battery Box	18	High Mount

Table 1: ATV Finishing Mower Features List



WARNING

Use the correct personal protection. Wear safety glasses or face shields while assembling or operating the mower.

Be careful of sharp edges. The cutter blade assembly can rotate as the engine starts. Wear gloves when handling the cutter blades.

Disconnect starting wire harness plug and remove ignition key before doing any assembly or maintenance to the mower.

Two men lift required. Do not try to lift alone.

Assembly

Tools Required:

1. 1/2" Ratchet Wrench with sleeve
2. Spanner
3. Side cutter or Industrial Scissors
4. Safety Goggles and Gloves
5. ATV/UTV

Remove The Mower from The Shipping Crate

1. Remove any loose parts or packaging, from the crate. See Figure 3
2. Raise the cutter deck to ensure that the wheel frame mount assembly is installed with enough height.
3. Remove any additional packaging material and inspect the mower.
4. Assemble the wheel frame mount assembly on the mower deck group using included hardware.
5. Fix the left and right pulley covers together with the wheel frame mount assembly.
6. Assemble the discharge guide on the mower deck group using included hardware.
7. Assemble wheel bracket on the wheel frame as well as spacers.

Note: Refer to the illustrated parts breakdown for part identification and location.



CAUTION

Engine does not contain oil or gasoline when shipped from the factory. You must service the engine before operation. Follow the engine manufacturer's instructions for the type of gasoline and oil to use.

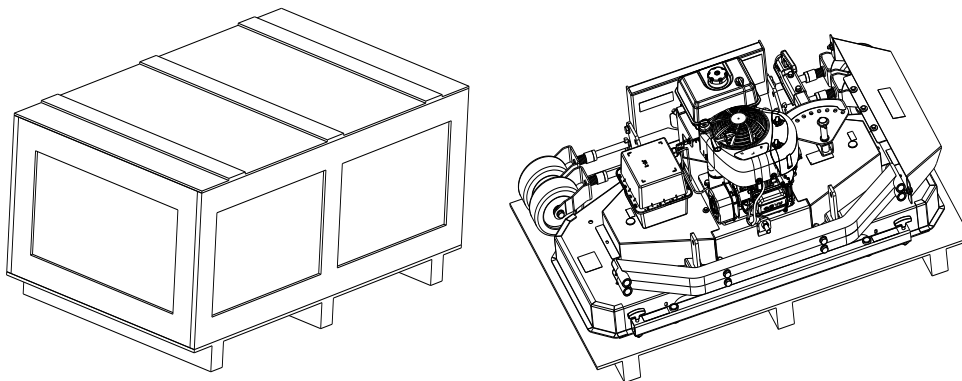


Figure 3: Your New Mower as It Is Shipped to You



WARNING

Use the correct personal protection. Gasoline and engine oil are hazardous to you health.

Always use a safety approved gasoline container.

Do not smoke when adding gasoline to the engine.

Do not fill with gasoline when inside an enclosure. Always move outdoors where fuel vapors will not collect.

The engine and muffler can be very hot and cause burns. Before you add gasoline, stop the engine. Let the engine cool for several minutes.

Engine Preparation

See the engine manufacturer's instructions for the type of gasoline and oil to use. Before you use the unit, read the information on safety, operation, maintenance, and storage.

Fill Crankcase with Oil

See Page 16 of this manual for oil fill instructions.

Fill Fuel Tank with Gasoline

See the engine manufacturer's instructions for the type of gasoline to use.

Battery Preparation

The ATV finishing mower is supplied with a 12 volt maintenance free lead acid battery. When the battery is properly maintained and charged, it will provide years of dependable service.

The ATV finishing mower is shipped with the starting wire harness plug disconnected. This is to prevent battery discharge while in shipping. Connect the plug before use and charge the battery if necessary.



WARNING

Use the correct personal protection. Battery contains sulfuric acid and is corrosive. You must wear safety goggles and gloves when servicing the battery.

Do not drop the battery. Battery is heavy and can cause damage to equipment or cause personal injury if dropped.

Use the correct charger and always inspect the battery and terminals for damage or wear. Replace any damaged or worn items.

Do not lift or carry the battery by the terminals or cables. Do not short circuit the battery terminals. Damage to the battery or fire can occur. Serious injury or death can result.

Operation

How to Start The Mower

1. Make sure the starting wire harness plug is plugged in. See Figure 2
2. Make sure the battery is grounded.
3. For cold starts, put the throttle control lever to the CHOKE position.



WARNING

Make sure you read and understand the operators manual before attempting to operate this machine. Know how to quickly shut down the mower and tow vehicle before attempting to operate this machine.

Be careful around moving parts. The mower head will continue to rotate for several seconds after the engine has stopped.

Do not attempt to crank or start the engine before it has been properly serviced with the recommended oil. This may result in an engine failure.

Do not modify, remove, cut, bend, or weld the parts of the mower or the shield guards. Modification of your machine will void your warranty and can cause property damage, serious injury and/or death.

Always be aware of the mower position. The mower can be towed at an offset and may not always be directly behind the tow vehicle.

If during operation the mower makes unusual noises or vibrations, shut off the tow vehicle then shut off the ATV finishing mower engine. Wait for the engine and mower parts to cool. Disconnect the starting wire harness plug and remove ignition key before inspecting the mower.

Inspect mower for loose, worn, damaged, or missing hardware. Repair or replace any damaged parts before operation of the mower. Always use approved replacement parts and hardware.

Clear all obstructions from the mower deck, air filter, and exhaust muffler areas.

Mower blades are sharp. Make sure you wrap the blades or use gloves when servicing.

Do not allow people or pets to ride on the mower when running or stopped.

Shut down the ATV finishing mower engine and use extreme caution when crossing driveways, sidewalks, or road ways. Be alert for traffic and hidden road hazards.

Never leave tow vehicle or mower running unattended. Make sure to shut down the tow vehicle per manufacturers instructions.

Set the parking brake and remove the key. Shut down the ATV finishing mower engine and remove ignition key .

Shut off engine before adjusting deck height. Keep hands and feet from under the deck. Make sure blades are stopped. The mower is heavy and could cause injury.

Do not place hands or feet under deck of mower when engine is running or blades are turning.

Failure to follow warnings can result in serious injury or death.

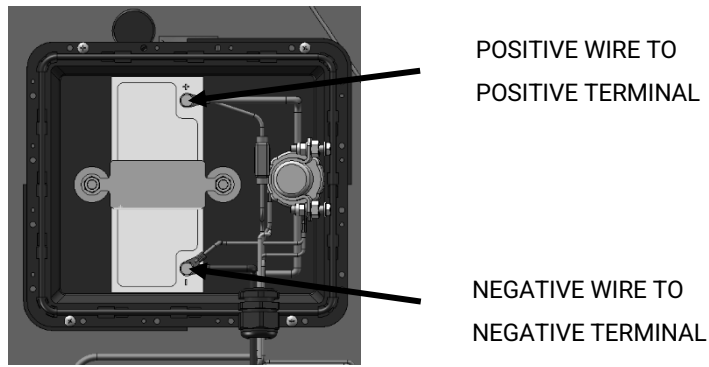


Figure 4: Battery Wire Routing

NOTE: If starting a warm engine, place the throttle control lever to the RUN position

4. Turn the key switch to the RUN position and then to the START position for no more than 5 seconds. Repeat up to 3 times until the engine starts. (if engine fails to start after 3 attempts, refer to Trouble Shooting Guide). When the engine starts, release the key to the RUN position.
5. Slowly adjust the throttle to the RUN position as the engine warms up. For best performance, operate the engine with the throttle in the Run position.

How to Stop The Mower

1. Move the throttle control to the IDLE position.
2. Turn the key to the STOP position. Always remove the key for safety.

NOTE: Do not use the CHOKE position to stop the engine. Engine back fire can occur and can cause engine damage.

Cutter Deck Height Adjustment

To adjust the cutting height:

1. Raise the cutter deck to ensure that all wheel brackets can be removed easily after release the safety lock pin.
2. Through the combination of spacers with different height to get the mowing height you need. See Figure 5

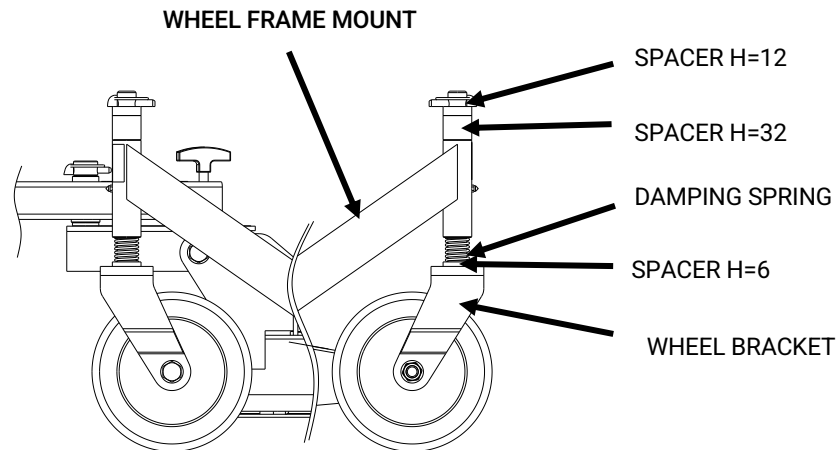


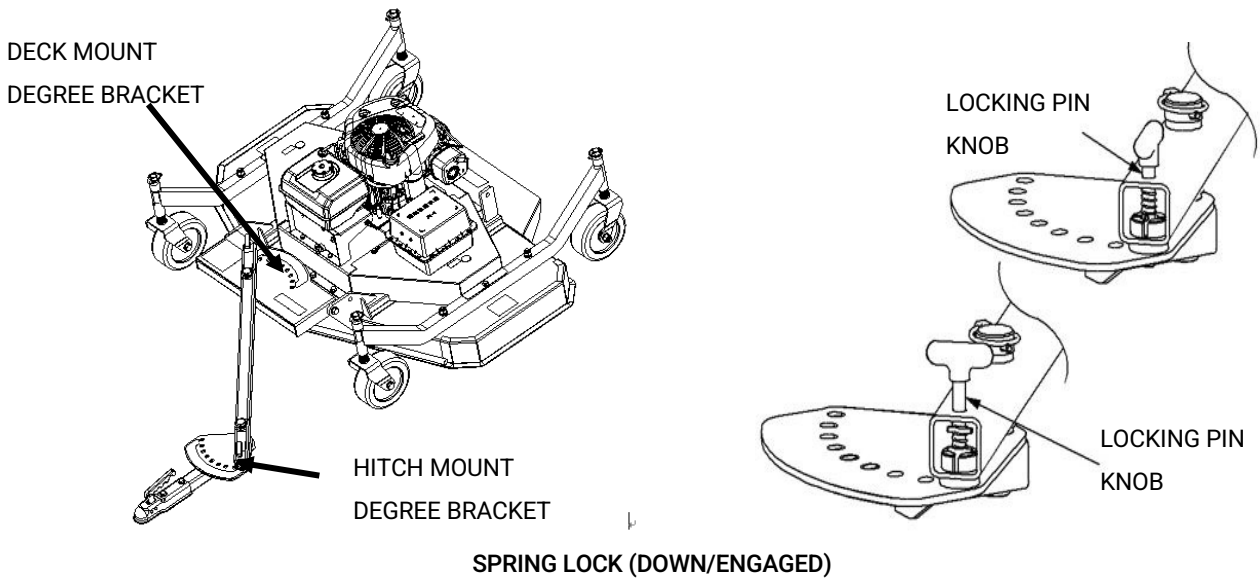
Figure 5: Cutter Deck Height Adjustment

NOTE: Make sure all wheel height adjustments are same, otherwise it will lead to uneven mowing. Adjust the gap distance between wheel frame mount and wheel bracket to get your mowing height. Cutting height is between 0.6 to 3 inches.

Tow Bar Offset Adjustment

1. Offset the tow bar deck mount degree bracket and tow bar hitch degree brackets as followings:
 - a. Lift the spring loaded tow bar locking pin knob and turn 90 degrees to lock in the up/disengaged position. See Figure 6
 - b. Position the tow bar at the desired numbered offset hole on the deck mount degree bracket. **See Figure 7 and Table 2**
 - c. Lift the spring loaded tow bar locking pin knob and turn 90 degrees to lock in the down/engaged position. Make sure the pin engages completely.
2. Repeat step 1 a.-c. to adjust the hitch degree plate.

NOTE: Make sure both the hitch and deck mount degree brackets are indexed into the same numbered hole.



SPRING LOCK (DOWN/ENGAGED)

Figure 6: Tow Bar Offset Adjustment

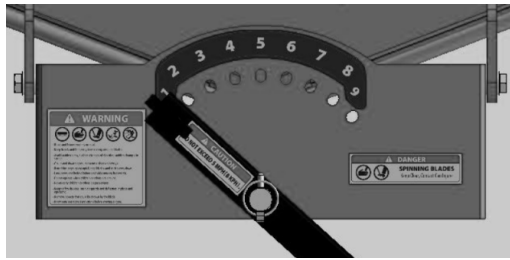


Figure 7: Tow Bar Offset Position Guide



WARNING

Do not leave mower unattended while engine or tow vehicle is running. Set the tow vehicle parking brake, shut off the tow vehicle. Shut off the ATV finishing mower engine. Wait for the mower blades to stop rotating.

Never run the engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

Keep hands, feet, hair and loose clothing away from the mower and any moving parts on the engine.

Do not touch the muffler or surrounding areas. Temperatures may exceed 150 degrees Fahrenheit.

Debris such as sticks, gravel or rocks can be thrown with sufficient force to cause personal injury or property damage.

Check the tow vehicle owners manual to determine the towing capacity on slopes and hills. Use extreme caution when operating the mower hilly, uneven, or wet terrain. Make sure you follow recommendations so you do not tip the mower over.

Never use the mower on slopes greater than 20 degrees.

For better control on slopes, mow up and down and never across the slope.

Position	Offset (inch)
1	24.5 LEFT
2	19.5 LEFT
3	13.5 LEFT
4	7.0 LEFT
5	0
6	7.0 RIGHT
7	13.5 RIGHT
8	19.5 RIGHT
9	24.5 RIGHT

Table 2: Tow Bar Offset Guide

Mower Tips

1. Never operate outside of tow vehicle recommendations.
2. If the weeds or grass are tall and thick, operate the mower at a slower towing speed.
3. Frequently clean the underside of the mower to remove any grass build up. See the "Maintenance, Service and Storage" section for details.
4. Do not mow on excessively steep slopes. Never use the mower on slopes greater than 20 degrees using any type of tow vehicle. Do not mow on slopes when the ground is slippery or wet. Mow up and down the face of the slope, not across.
5. Do not operate tow vehicle over 5 mph on flat terrain, or 4 mph on rough terrain while towing the mower.
6. Do not use a commercial or non-commercial automobile, truck, sport utility vehicle (SUV) or motorcycle, to tow the ATV Finishing Mower. These vehicles make it difficult to see and control the mower. Use of these tow vehicle types will void the warranty.

Tow Vehicle Recommendations

We recommend a tow vehicle be either two or four wheel drive. Some suitable suggestions are listed below:

1. Compact or Sub-compact tractor
2. Utility Vehicle (UTV)
3. All-Terrain Vehicle (ATV)
4. Lawn/Garden Tractor (17 HP and above and weighing at least 500 lbs.)
5. Riding lawn mowers with engines under 17 HP and weighing less than 500 lbs. are not suitable for use on slopes greater than 5 degrees.

NOTE: Do not operate the tow vehicle outside of the manufacturers recommended operating instructions or conditions. Lawn and garden tractors work best as tow vehicles when the cutting deck is removed.

Maintenance, Service And Storage

How to Change Engine Oil

Be sure the engine is not operating and is located on a level surface before checking or refilling oil. Engine should be warm for easy removal of oil.

1. Disconnect the starting wire harness plug and remove key from ignition.
2. Position machine on flat, level surface.
3. Open fill port and prop dipstick. See Figure 8
4. Remove drain plug from the engine or extension tube which you configures separately.
5. Empty oil into a suitable oil container and dispose of oil properly per local regulations.
6. Reinsert drain plug to its original position and fill engine with appropriate oil to the top marking on the dipstick. Do not overfill. For proper oil capacity and specification, see the engine manufacturer's instructions. See Figure 9
7. Reinsert dipstick and tighten.



WARNING

Before you inspect, clean or service the mower, stop the engine. Make sure that all moving parts have stopped. Disconnect the starting wire harness plug and remove the key from the ignition.

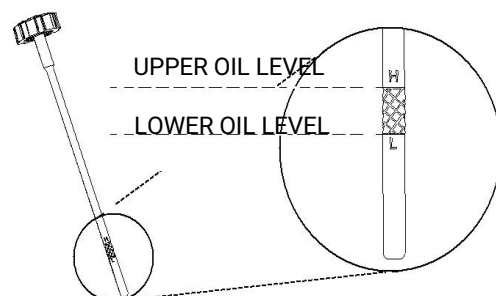
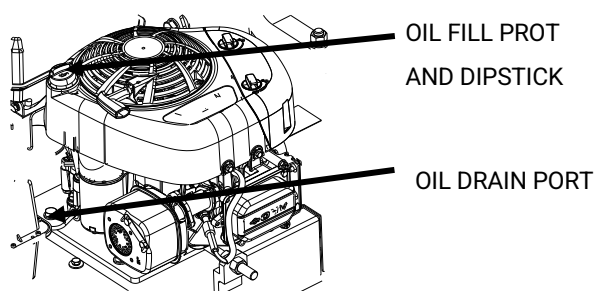


Figure 8: Oil Dipstick Location

Figure 9: Dipstick and Oil Levels

How to Tension and Replace Belt

The belt tension has been preset on the mower. It should be checked after the initial 20-30 minutes of operation, and with each usage thereafter. If the belt need tightened or replaced, follow these instructions carefully.

1. Disconnect the starting wire harness plug and remove key from ignition.
2. Position machine on flat, level surface.
3. Open fill port and prop dipstick. See Figure 8
4. Remove drain plug from the engine or extension tube which you configures separately.
5. Empty oil into a suitable oil container and dispose of oil properly per local regulations.
6. Reinsert drain plug to its original position and fill engine with appropriate oil to the top marking on the dipstick. Do not overfill. For proper oil capacity and specification, see the engine manufacturer's instructions. See Figure 9
7. Reinsert dipstick and tighten.
 - a. Disconnect the starting wire harness plug and remove key from the ignition.
 - b. Remove the pulley cover L&R.
 - c. Check belt tension.
 - d. Loosen bolts and nuts on the position adjusting plate and throttle control lever if adjustment or replacement is necessary.
 - e. Loosen the innermost hex. Nut M16 and tighten the outermost hex. Nut M16 to tension belt, and the retighten the innermost hex. Nut M16 to lock engine position. This way is suitable for belt adjustment.
 - f. Loosen the outermost hex. Nut M16, push engine to loose belt and replace with new belts. Tighten the outermost hex. Nut M16 to tension belt, and the retighten the innermost hex. Nut M16 to lock engine position. This way is suitable for belt replacement.
 - g. Retighten bolt and nuts on the position adjusting plate.
 - h. Put the throttle control lever to the CHOKE position, and then retighten bolts and nuts.
 - i. Reinstall the pulley cover L&R.
 - j. Connect the starting wire harness plug before operating your mower.

Maintenance Schedule

NOTE: Maintenance, replacement or repair of the emissions control devices and systems may be performed by any non-road engine repair establishment or individuals. However, items must be serviced by an authorized dealer to obtain "no charge" emissions control service. Good maintenance is essential to help reduce air pollution and for safe, economical and trouble-free operation.

Service Records	Before Each Use	Every 25 Hours	As Noted
Check Engine Oil Level	x		
Check Mower Blades	x		
Engine/Machine Cleaning	x		1
Check Nuts And Bolts	x		
Check Belt Tension	x		
Check Spark Plug		x	
Change Engine Oil		x	
Service Air Filter		x	
Lubricate Cutter Head Assembly and Wheel frame mount (See Figure 5 & Figure10)		x	2

NOTE 1 – Clean daily if used in extremely dusty or dirty conditions.

NOTE 2 – Change more often if used in extremely dusty or dirty conditions

General Recommendations

The warranty on this mower does not cover items that have been subjected to operator abuse or negligence. To receive full value

from the warranty, the operator must maintain the mower as instructed in this manual.

Some adjustments must be made periodically to properly maintain your mower. All adjustments in the "Service and Adjustments" section of this manual must be checked at least once each season.

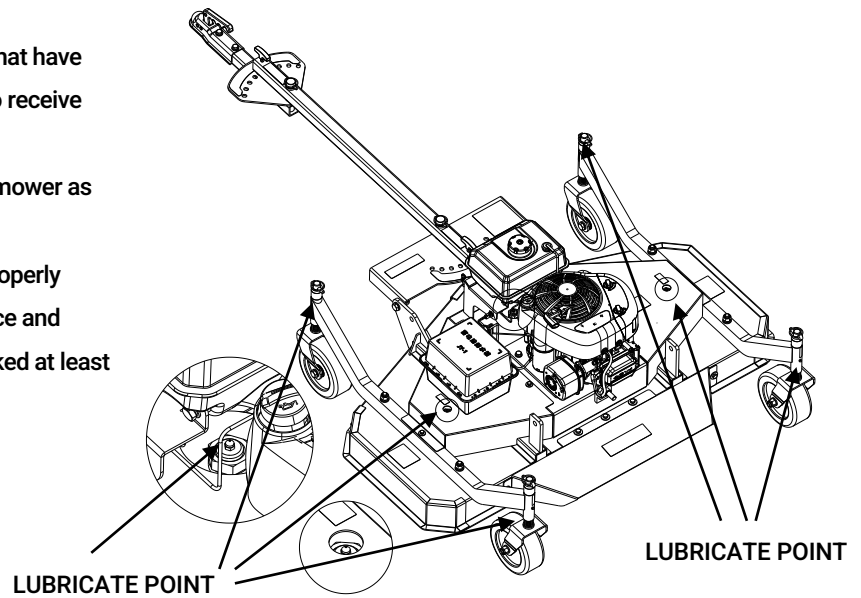


Figure 10: Cutter Head And Wheel Frame Mount Assy. Lubrication Location

Storage

When the mower is put in storage for thirty days or more, follow the steps below to make sure the mower is in good condition the following season.

Mower:

Completely Clean the Mower:

Store the mower in a building that is well-ventilated.

NOTE: A yearly check-up or tune-up at an authorized service dealer will ensure that the mower will provide maximum performance for the next season.

Engine:

IMPORTANT NOTE: It is important to prevent gum deposits from forming in fuel system parts such as the carburetor, fuel filter, fuel hose, and tank during storage. Also, using alcohol blended fuels (called gasohol, ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

1. Drain all gasoline from the fuel tank. Let the engine run until it is out of gasoline. If you do not want to remove gasoline, add a fuel stabilizer to any gasoline left in the tank. A fuel stabilizer will minimize the formation of gum deposits and acids. If the tank is almost empty, mix the fuel stabilizer with fresh gasoline in a separate container and add the mixture to the tank. Always follow the instructions on the stabilizer container. Run the engine at least ten minutes after stabilizer is added to allow the mixture to reach the carburetor.
2. Drain the oil from a warm engine. Fill the engine crankcase with new oil.
3. Remove the spark plug from the cylinder. Pour one ounce of oil into the cylinder. Slowly pull the recoil starter handle so that the oil will protect the cylinder. Install a new spark plug in the cylinder.
4. Completely clean the mower, including dirt and debris from the cylinder cooling fins and the engine housing.
5. Fully charge battery. After complete charge, disconnect the charging wire from the engine.
6. When not in use, disconnect the starting wire harness plug, remove key from ignition and store in a well-ventilated area inaccessible to children.



WARNING

Do not remove gasoline while inside a building, near a fire, or while you smoke. Gasoline fumes can cause an explosion or a fire.

Troubleshooting & Repair

The guide will help you pinpoint the causes of common problems and identify remedies.

Most repairs will be minor, and easily fixed by following the suggestions in the troubleshooting guide in this section.

For more complicated repairs, you may want to rely on an authorized service center. A parts breakdown is located toward the end of this manual.

Troubleshooting Guide

Trouble	Cause	Correction
Engine does not start	Starting wire harness plug disconnected	Connect starting wire harness plug
	Engine not primed	Prime engine
	Defective or incorrectly gapped spark plug	Inspect or replace spark plug
	Fuel tank empty	Add fuel
	Dirty carburetor or fuel line	Clean carburetor or fuel line
	Dirty air filter	Replace air filter
	Carburetor out of adjustment	For carburetor adjustment, take the unit to an authorized service center
	Engine flooded	Wait several minutes before starting
	Throttle control lever in incorrect position	Move throttle lever to FAST or RUN position
	Stale gasoline	Drain old gasoline and add fresh gas
	Defective throttle control lever or wire	Inspect lever and wire. Replace if damaged or defective
	Defective ignition	Inspect ignition and replace if damaged or defective
	Battery has no charge	Inspect the fuse in the rubber protective box of the charging wire and replace if damaged. Charge and replace if dead, damaged, or defective
Engine runs poorly	Bad spark plug	Replace spark plug
	Dirty air filter	Replace air filter
	Carburetor out of adjustment	For carburetor adjustment, take the unit to an authorized service center
	Stale gasoline	Drain old gasoline and add fresh gas
	Engine cooling system clogged	Clean debris screen and engine cooling fins
Engine overheats	Engine cooling system clogged	Clean debris screen and engine cooling fins
	Carburetor out of adjustment	For carburetor adjustment, take the unit to an authorized service center
	Oil level is low	Add oil
Engine will not stop running	Ignition failed	Inspect and replace damaged parts
	Wire disconnected from ignition	Inspect, repair or replace damaged parts
Poor Mower performance	Cutter Blades Dull	Sharpen mower cutter blades
Mower vibrates	Loose nuts or bolts	Check all bolts and nuts, including engine bolts
	Broken mower head	Replace broken part

NOTE: Please see the engine manual for a full troubleshooting guide for any engine issues.

Specifications & Capacities

Model	TMG-AFN48	TMG-AFN60
Cutting Width	48"	60"
Cutting Height	0.6"-3"(1.5-8cm)	0.6"-3"(1.5-8cm)
Max Cutting Speed	5 MPH	5 MPH
Blade Length	16" (41cm)	20" (51cm)
Blades No.	3	3
Engine	Briggs & Stratton PowerBuilt™ Series 344cc, 11.5 HP	
Product Weight	495lb (225kg)	528lb (240kg)
Shipping Weight	616lb (280kg)	660lb (300kg)
Packaging Size	53"x41"x29"	65"x41"x29"

Appendix

Warranty

TMG warrants to the original purchaser that this product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit and Driveline: One-year.

Blades and Belts: Considered wear items.

This warranty is limited to the replacement of any defective part by manufacturer and the installation by the dealer of any such replacement part, and does not cover common wear items such as blades, belts, tines, etc. TMG reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This warranty does not apply to any part or product which in TMG's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. TMG reserves the right to make changes in materials or design of the product at any time without notices.

This warranty shall not be interpreted to render TMG liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, TMG shall not be liable for damages resulting from any cause beyond its reasonable control. This warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason. No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

Bolt Torque

The tables shown below give correct torque values for various bolts and cap screws. Tighten all bolts to the torques specified unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter	Bolt Torque					
	SAE 2		SAE 5		SAE 8	
	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	200	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650

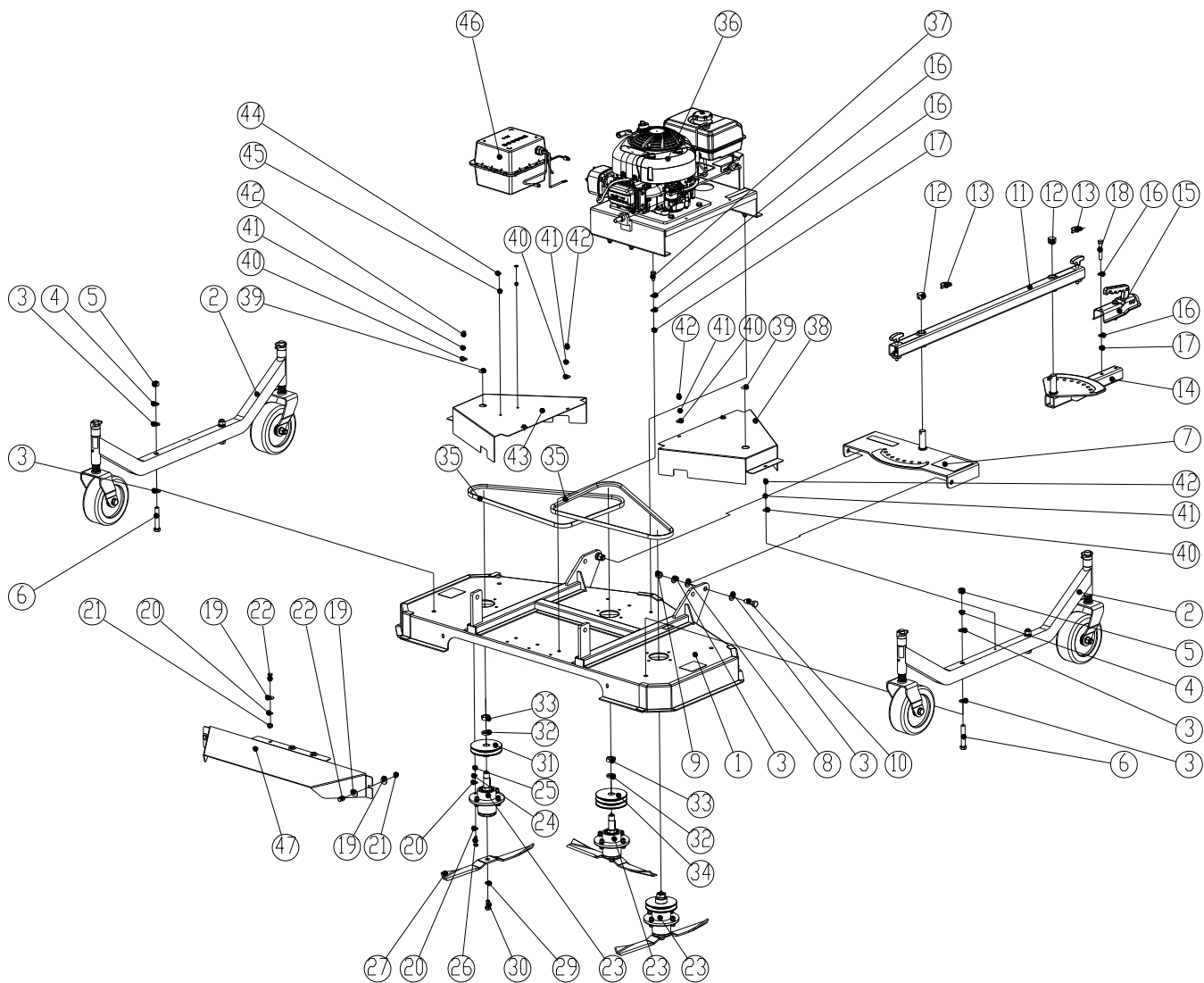
METRIC TORQUE SPECIFICATIONS

Bolt Diameter	Bolt Torque			
	8.8		10.9	
	N.m	lb-ft	N.m	lb-ft
M3	0.5	0.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	744
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710

Torque figures indicated above are valid for non-greased or non-oiled threads and heads otherwise specified. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

Part Breakdown List

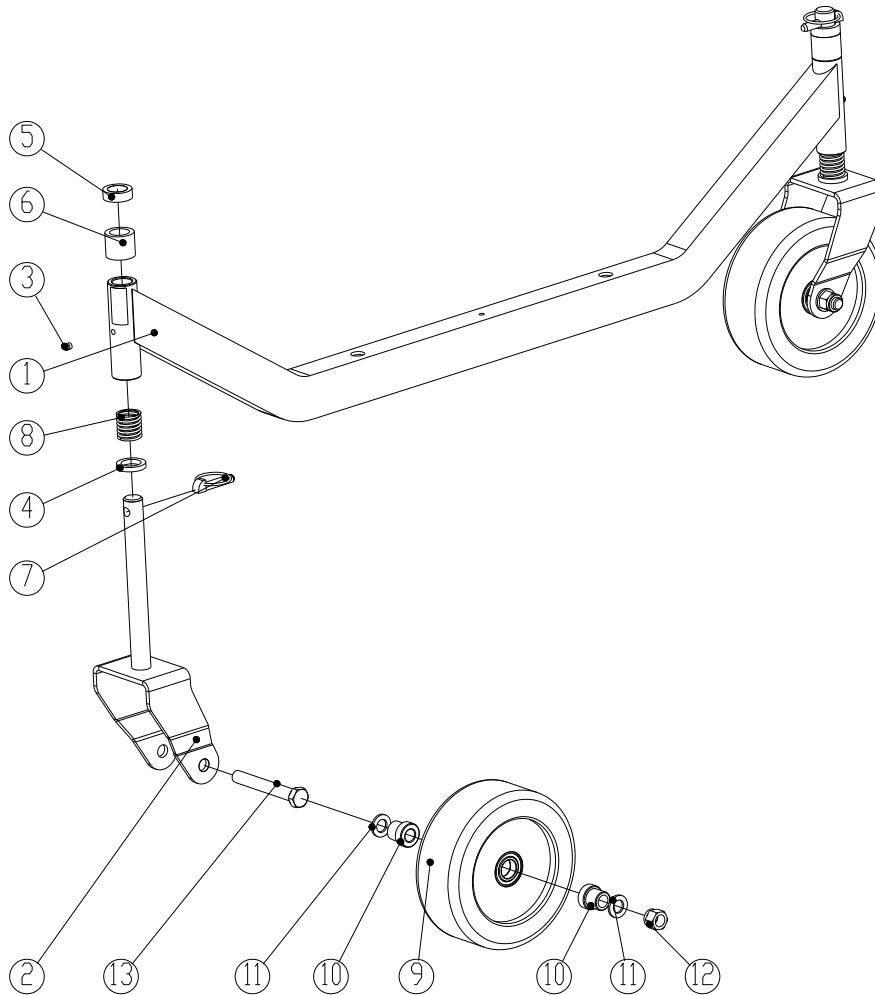
TMG-AFN48/TMG- AFN60 Part Breakdown



PART NO.	REF. NO.	PART DESCRIPTION	QTY.	REMARK
1A	4030200001	Mower deck weldment	1	TMG-AFN48
	4030200002		1	TMG-AFN60
2A		Wheel frame mount assy	2	See Page 21
3A	7040100008	Plain washer 16	4	
4A	7040400008	Spring washer 16	4	
5A	7030100008	Hex. Nut M16	4	
6A	7010200011	Bolt M16x95	4	
7A	4030200008	Deck mount degree bracket	1	
8A	7040500003	Nylon washer 16	2	
9A	7030500008	Locknut M16	2	
10A	7010100034	Bolt M16x50	2	
11A		Tow bar assy	1	See Page 22

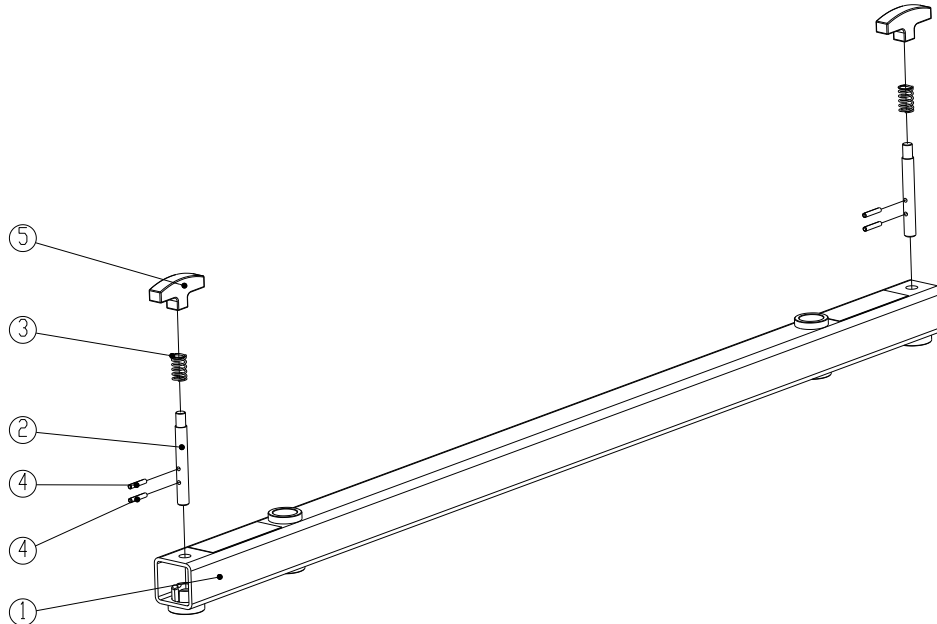
12A	4020000086	Cap shaft mount	2	
13A	4300100003	Safety lock pin	2	
14A	4030200006	Hitch mount degree bracket	1	
15A	4300500002	Hitch-ball couplers	1	
16A	7040100006	Plain washer 12	16	
17A	7030500018	Locknut M12	8	
18A	7010200012	Bolt M12x75	2	
19A	7040300005	Large plain washer 10	7	
20A	7040100005	Plain washer 10	27	
21A	7030500017	Locknut M10	5	
22A	7010100013	Bolt M10x25	5	
23A		Spindle assy	3	See Page 22
24A	7040400005	Spring washer 10	12	
25A	7030100005	Hex. Nut M10	12	
26A	7010100019	Bolt M10x35	12	
27A	4290200009	Blade	3	TMG-AFN48
	4290200010		3	TMG-AFN60
28A		none	/	
29A	7040100013	Plain washer 18	3	
30A	7030800002	Locknut M18x1.5	3	
31A	4050000011	Single sheave pulley	2	
32A	7040400011	Spring washer 24	3	
33A	7030400003	Hex. Nut M24x2 – L thread	3	
34A	4050000012	Driven pulley	1	
35A	4150100013	Belt B1448Li	2	TMG-AFN48
	4150100012	Belt B1626Li	2	TMG-AFN60
36A		Engine mount group	1	See Page 23
37A	7010100004	Bolt M12x30	6	
38A	4010000078	Pulley Cover - L	1	TMG-AFN48
	4010000074		1	TMG-AFN60
39A	4100200021	Rubber plug ϕ 30	2	
40A	7040300004	Large plain washer 8	6	
41A	7040400004	Spring washer 8	6	
42A	7010100007	Bolt M8x20	6	
43A	4010000077	Pulley cover - R	1	TMG-AFN48
	4010000073		1	TMG-AFN60
44A	7040100004	Plain washer 8	2	
45A	7030500016	Locknut M8	2	
46A		Battery box assy.	1	See Page 24
47A	4010000076	Discharge guide	1	TMG-AFN48
	4010000070		1	TMG-AFN60

TMG-AFN48/TMG- AFN60 Wheel Frame Mount Assy



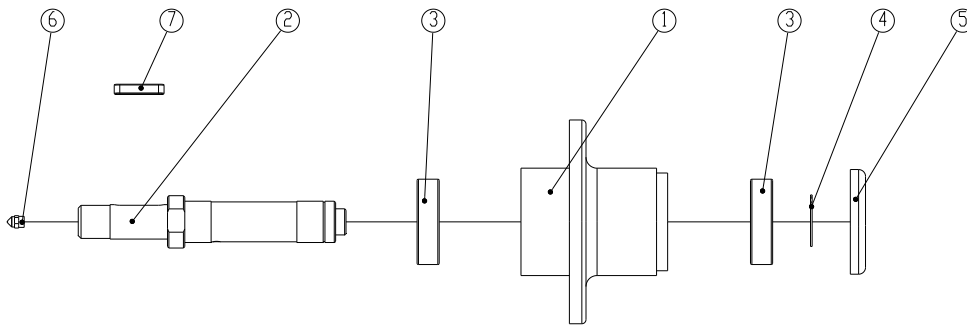
PART NO.	REF. NO.	PART DESCRIPTION	QTY.	REMARK
1B	4030200004	Wheel frame weldment	1	
2B	4030200005	Wheel bracket	2	
3B	4300400002	Grease nipple M8x1	2	
4B	4020000081	Spacer H=6	2	
5B	4020000082	Spacer H=12	2	
6B	4020000083	Spacer H=32	2	
7B	4300100004	Safety lock pin	2	
8B	4320100002	Damping spring	2	
9B	4100700001	Wheel tire Assy.	2	
10B	4020000084	Bushing	4	
11B	7040100008	Plain washer 16	4	
12B	7030500008	Locknut M16	2	
13B	7010200029	Bolt M16x120	2	

TMG-AFN48/TMG- AFN60 Tow Bar Assy



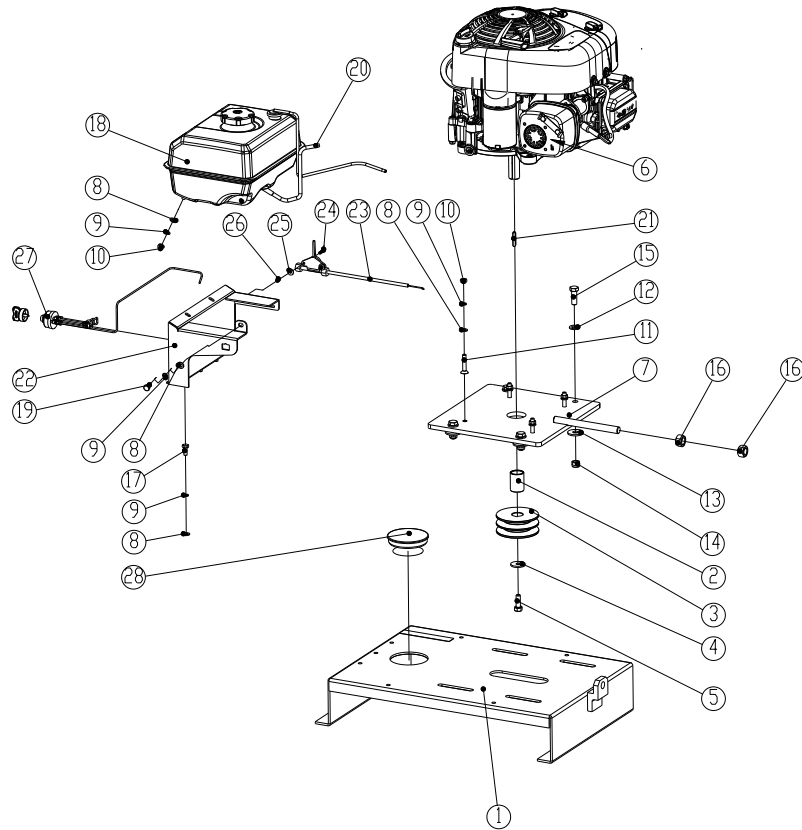
PART NO.	REF. NO.	PART DESCRIPTION	QTY.	REMARK
1C	4030200007	Tow bar weldment	1	
2C	4020000085	Tongue latch pin	2	
3C	4320100003	Compression spring	2	
4C	7100200001	Spring straight pin	4	
5C	4100300002	Knob	2	

TMG-AFN48/TMG- AFN60 Spindle Assy



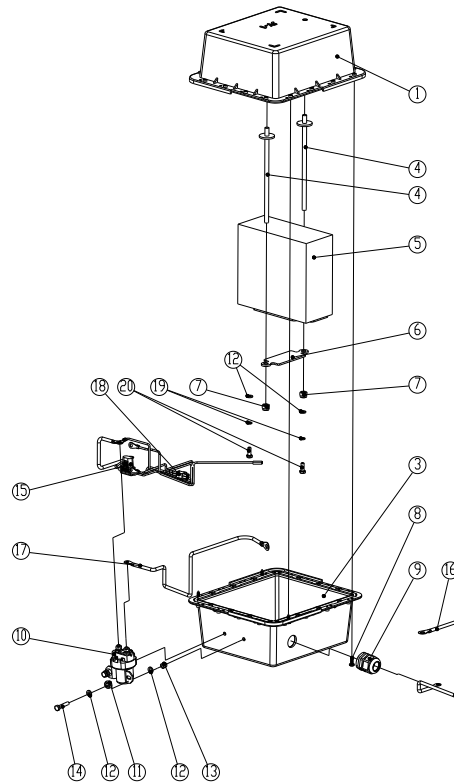
PART NO.	REF. NO.	PART DESCRIPTION	QTY.	REMARK
1D	4020000087	Bearing seat	1	
2D	4020000088	Spindle	1	
3D	7060100007	Bearing 6206 RZ	2	
4D	7090100003	Circlip for shaft ϕ 30	1	
5D	4010000071	Protective cover	1	
6D	4300400002	Grease nipple M8x1	1	
7D	7080100004	Flat key 8x36	1	

TMG-AFN48/TMG- AFN60 Engine Mount Group



PART NO.	REF. NO.	PART DESCRIPTION	QTY.	REMARK
1 E	4030200009	Engine mount bracket	1	
2 E	4020000089	Driven pulley sleeve	1	
3 E	4050000013	Driven pulley	1	
4 E	7040800001	Extra-large plain washer 10	1	
5 E	7010300006	Bolt 7/16-20UNF 2A	1	
6 E	4330100001	B&S EPA Engine 344CC	1	
7 E	4030200010	Position adjusting plate	1	
8 E	7040100004	Plain washer 8	10	
9 E	7040400004	Spring washer 8	10	
10 E	7030100004	Hex. Nut M8	6	
11 E	7020300004	HSCS M8x45	4	
12 E	7040100006	Plain washer 12	4	
13 E	7040300006	Large plain washer 12	4	
14 E	7030500018	Locknut M12	4	
15 E	7010100005	Bolt M12x35	4	
16 E	7030100008	Hex. Nut M16	2	
17 E	7010100006	Bolt M8x20	3	
18 E	4280500001	2 Gallon fuel tank	1	
19 E	7010100017	Bolt M8x16	1	
20 E		EPA fuel line	1	
21 E	7080100003	Flat key 1/4"x36	1	
22 E	4030200023	Fuel tank bracket	1	
23 E	4330200002	Throttle control lever	1	
24 E	7020800001	PFHS M5x20	2	
25 E	7040300002	Large plain washer 5	2	
26 E	7030500014	Locknut M5	2	
27 E	4110100007	Ignition wire harness	1	
28 E	4100200027	Rubber Plug φ91.3	1	

TMG-AFN48/TMG- AFN60 Battery Box Group



PART NO.	REF. NO.	PART DESCRIPTION	QTY.	REMARK
1 F	4100200022	Battery box – bottom	1	
2 F		none	/	
3 F		Battery box – top	1	
4 F	4030200011	Post battery tie down	2	
5 F	4280400001	Battery	1	
6 F	4010000075	Plate battery tie down	1	
7 F	7030500016	Locknut M8	2	
8 F		Phillips tapping screw ST4.8x16	8	
9 F	4120600009	Insulating waterproof sheath φ25	1	
10 F	4120800001	Solenoid wire mount	1	
11 F	7030100004	Hex. Nut M8	2	
12 F	7040100003	Plain washer 6	6	
13 F	7030500015	Locknut M6	2	
14 F	7010100003	Bolt M6x30	2	
15 F	4110100006	Positive wire (combined the charging line)	1	
16 F	4110100004	Negative wire	1	
17 F	4110100005	Starter motor wire	1	
18 F	4110100008	Starting wire harness	1	
19 F	7040400003	Spring washer 6	2	
20 F	7010100036	Bolt M6x16	2	