26

BAD BOY MOWERS



ZT ELITE MODELS

ZERO-TURN MOWER

OWNER'S OPERATOR SERVICE MANUAL

For additional information, please see us at

www.badboycountry.com

©2025 10-25

Rev B: 10-28-2025

Page Intentionally Blank

Basic Information

Machine Information 1-1
Model/Serial Number 1-1
Parts/Service 1-1
Warranty 1-1
Warranty Registration 1-1
Evaporative Emission Control Warranty Statement 1-1
California Evaporative Emission Control Warranty Statement 1-2
Manual Applies to the Following Equipment 1-3
Machine Specifications 1-3
Machine Dimensions and Cutting Specifications 1-3
Torque Specifications 1-4
Commonly Used Items and Part Numbers 1-6

Safety

Safety Symbols 2-1
Machine Safety Guidelines 2-1
Machine Decals 2-1
Personal Protective Equipment (PPE) 2-2
Operation Safety 2-2
General Operation Safety 2-2
Slope Operation Safety 2-2
Children Safety 2-3
Service Safety 2-3
General Service 2-3
Towing 2-4
Battery 2-4
Safe Handling of Gasoline 2-4
Environmental Precautions 2-5
Safety Interlock System 2-5
Roll-Over Protection Structure (ROPS) 2-5

Controls

Console Controls 3-1

Operation

Machine Operation 4-1
Control Lever Arms 4-2
Using Control Lever Arms 4-2
Adjusting Control Lever Arms 4-2
Seat Adjustment 4-3
Setting Deck Height 4-3
Engaging PTO Switch 4-3
Fuel 4-4
Adding Fuel 4-4
Fuel Shutoff Valve 4-4

Maintenance

Maintenance Intervals 5-1
Daily Maintenance and Inspections 5-3
Daily Inspections 5-3
Equipment Lubrication 5-3

Cleaning the Machine 5-3
Mower Blades 5-4
Mower Blade Sharpening 5-4
Battery 5-5
Battery Maintenance 5-5
Maintenance Log 5-6

Service

Hydrostatic System 6-1
External Maintenance 6-1
Procedures 6-1
Fluids 6-1
Fluid Volume and Level 6-2
Fluid Change Procedure 6-2
Purging Procedures 6-3
Transaxle Bypass 6-4
Tracking Adjustment 6-4
Drive Belt Adjustment 6-4
Engine Oil 6-5
Changing Engine Oil and Oil Filter 6-5
Fuel Filter 6-5
Changing Fuel Filter 6-5
Air Cleaner 6-6
Changing Air Cleaner 6-6
Spark Plug 6-7
Changing Spark Plugs 6-7
Checking Spark Plug Gap 6-7
Electrical System 6-7
Fuses 6-7
Battery 6-8
Battery Removal 6-9
Wiring Diagram 6-10
Caster and Wheel 6-11
Wheel Lugs 6-11
Grease Locations 6-11
Cutting Deck 6-12
Deck Belt Removal 6-12
Deck Belt Installation 6-13
Deck Belt Tension Adjustment 6-13
Leveling the Deck 6-14
Mower Blade Removal 6-14

Transporting

Loading and Unloading 7-1
Securing the Machine 7-1
Moving Inoperable Machine 7-2

Storage

Storage Procedure 8-1

FAQ

FAQ 9-1

How to Choose the Right Blade

Choose the Right Blade 10-1

Mowing Tips

Tips 11-1
Bag or Mulch 11-2

Limited Warranty

Limited Warranty 12-1

Page Intentionally Blank

Section 1 Basic Information

Machine Information

Congratulations on the purchase of your new Bad Boy mower! The purpose of this manual is to assist operators in maintaining and operating their machine. The information and instructions in this manual can help you enjoy many years of performance from your new Bad Boy. Also, check out our website to learn more about the Bad Boy family at www.badboycountry.com.

Model/Serial Number

Your machine model and serial numbers are printed on a decal located underneath the seat. The entire alphanumeric code is your serial number. To find your model number, leave the last eight digits off of the serial number. When the time comes, these numbers are necessary for ordering parts.

Parts/Service

Bad Boy recommends using Bad Boy replacement parts on your machine. Replacement parts are available through your local Bad Boy Mowers dealer. Remember to have the following information close when ordering parts:

- Part number
- Serial number

All warranty repair and service must be handled through your authorized Bad Boy dealer. To locate the nearest dealer, go to the website listed above and click on “FIND A DEALER”.

Warranty

Warranty Registration

The Warranty Registration form must be completed within 30 days to validate your warranty. As a new equipment owner, it is your responsibility to ensure the registration form is completed by the selling dealer at time of delivery. Warranty registration should be completed by the selling dealership using the on-line registration site. The warranty is nontransferable.

Evaporative Emission Control Warranty Statement

Federal Evaporative Emission Control Warranty: Your Warranty Rights and Obligations, the Environmental Protection Agency (EPA), and Bad Boy Mowers LLC are pleased to explain the evaporative emission control system's warranty on your 2026 equipment. New equipment that uses spark ignition engines for off-road use must meet stringent anti-smog standards. The evaporative emission control system on your equipment is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of 40 CFR 1060. The evaporative emission control system is free from defects in materials and workmanship that may keep it from meeting said requirements. Bad Boy Mowers LLC must warrant the evaporative mission control system on your equipment for 2 years provided there has been no abuse, neglect, or improper maintenance. If an evaporative emission control system component does fail in a manner that would cause the equipment to no longer meet the requirements of 40 CFR 1060 within the first 2 years, Bad Boy Mowers LLC will replace the defective component. Your evaporative emission control system may include parts such as fuel tanks, fuel lines, carbon canisters, fuel caps, valves, vapor hoses, clamps, or connectors.

CALIFORNIA EVAPORATIVE EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Bad Boy Mowers, LLC is pleased to explain the evaporative emission control system's warranty on your 2026 zero-turn mower. In California, new equipment that uses large spark-ignited engines less than or equal to 1.0 liters must be designed, built, and equipped to meet the State's stringent anti-smog standards. Bad Boy Mowers, LLC must warrant the evaporative emission control system on your mower for the period listed below provided there has been no abuse, neglect or improper maintenance of your equipment.

Your evaporative emission control system may include parts such as: carburetors, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated components.

MANUFACTURER'S WARRANTY COVERAGE:

This evaporative emission control system is warranted for two years. If any evaporative emission-related part on your equipment is defective, the part will be repaired or replaced by Bad Boy Mowers, LLC.

OWNER'S WARRANTY RESPONSIBILITIES:

As the mower owner, you are responsible for performance of the required maintenance listed in your owner's manual. Bad Boy recommends that you retain all receipts covering maintenance on your mower, but Bad Boy cannot deny warranty solely for the lack of receipts.

As the mower owner, you should however be aware that Bad Boy may deny you warranty coverage if your mower or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.

You are responsible for presenting your mower to a Bad Boy distribution center or service center as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact:

Bad Boy Mowers, LLC

102 Industrial Drive

Batesville, AR 72501

866-622-3269

warranty@badboycountry.com

Your Bad Boy Mower evaporative emission control system includes the following parts:

- Fuel Tank
- Fuel Cap
- Fuel Lines
- Fuel Line Fittings
- Clamps
- Control Cables
- Control Linkages
- Vent Lines
- Carbon Canister

Manual Applies to the Following Equipment

Model	SKU	Deck Width	Transaxle	Engine	Front Tire	Rear Tire
Elite	BZS48KT726	48 in	3100	Kohler KT726	13x6.5-6 12 psi (83 kPa)	22x10-10 12 psi (83 kPa)
Elite	BZS54KT726	54 in	3100	Kohler KT726	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)
Elite	BZS60KT726	60 in	3100	Kohler KT726	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)
Elite	BZS48FR730	48 in	3100	Kawasaki FR730	13x6.5-6 12 psi (83 kPa)	22x10-10 12 psi (83 kPa)
Elite	BZS54FR730	54 in	3100	Kawasaki FR730	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)
Elite	BZS60FR730	60 in	3100	Kawasaki FR730	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)
Elite	BZS54CXI27	54 in	3100	Briggs CXI27	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)
Elite	BZS60CXI27	60 in	3100	Briggs CXI27	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)
Elite	BZSM60FR730	60 in	3100	Kawasaki FR730	13x6.5-6 12 psi (83 kPa)	22x11-10 12 psi (83 kPa)

Machine Specifications

Machine Dimensions and Cutting Specifications

SKU	Weight Full of Fuel (lbs)	Cutting Width (in)	Height No ROPS (in)	Length (in)	Chute Up Width (in)	Chute Down Width (in)	Cutting Height (in)
BZS48KT726	812	48	46	74.5	54	61	1.5-4.5
BZS54KT726	839	54	46	74.5	58	67	1.5-4.5
BZS60KT726	865	60	46	74.5	64	73	1.5-4.5
BZS48FR730	812	48	46	74.5	54	61	1.5-4.5
BZS54FR730	839	54	46	74.5	58	67	1.5-4.5
BZS60FR730	865	60	46	74.5	64	73	1.5-4.5
BZS54CXI27	839	54	46	74.5	58	67	1.5-4.5
BZS60CXI27	865	60	46	74.5	64	73	1.5-4.5
BZSM60FR730	865	60	46	74.5	64	73	1.5-4.5

Torque Specifications

SAE Bolt Torque

Torque estimates based on clamp load (75% of proof strength) as specified in SAE J429 and ASME 574.

Diameter and Thread Pitch	 SAE Grade 5		 SAE Grade 8		 Socket Head Cap Screw	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
1/4-20	101 in•lb 11.4 N•m	76 in•lb 8.6 N•m	143 in•lb 16.2 N•m	107 in•lb 12.1 N•m	168 in•lb 19 N•m	120 in•lb 13.6 N•m
1/4-28	116 in•lb 13.1 N•m	87 in•lb 9.8 N•m	147 in•lb 16.6 N•m	123 in•lb 13.9 N•m	192 in•lb 21.7 N•m	144 in•lb 16.3 N•m
5/16-18	209 in•lb 23.6 N•m	157 in•lb 17.7 N•m	295 in•lb 33.3 N•m	221 in•lb 25 N•m	348 in•lb 39.3 N•m	264 in•lb 29.8 N•m
5/16-24	231 in•lb 26.1 N•m	174 in•lb 19.7 N•m	327 in•lb 36.9 N•m	245 in•lb 27.7 N•m	384 in•lb 43.4 N•m	288 in•lb 32.5 N•m
3/8-16	372 in•lb 42 N•m	276 in•lb 31.2 N•m	44 ft•lb 59.7 N•m	33 ft•lb 44.7 N•m	51 ft•lb 69.1 N•m	38 ft•lb 51.5 N•m
3/8-24	420 in•lb 47.5 N•m	312 in•lb 35.3 N•m	49 ft•lb 66.4 N•m	37 ft•lb 50.2 N•m	58 ft•lb 78.6 N•m	43 ft•lb 58.3 N•m
7/16-14	49 ft•lb 66.4 N•m	37 ft•lb 50.2 N•m	70 ft•lb 94.9 N•m	52 ft•lb 70.5 N•m	81 ft•lb 109.8 N•m	61 ft•lb 82.7 N•m
7/16-20	55 ft•lb 74.6 N•m	41 ft•lb 55.6 N•m	78 ft•lb 105.8 N•m	58 ft•lb 78.6 N•m	91 ft•lb 123.4 N•m	68 ft•lb 92.2 N•m
1/2-13	75 ft•lb 101.7 N•m	57 ft•lb 77.3 N•m	106 ft•lb 143.7 N•m	80 ft•lb 108.5 N•m	124 ft•lb 168.1 N•m	93 ft•lb 126.1 N•m
1/2-20	85 ft•lb 115.2 N•m	64 ft•lb 86.8 N•m	120 ft•lb 162.7 N•m	90 ft•lb 122 N•m	140 ft•lb 189.8 N•m	105 ft•lb 142.4 N•m
5/8-11	150 ft•lb 203.4 N•m	113 ft•lb 153.2 N•m	212 ft•lb 287.4 N•m	159 ft•lb 215.6 N•m	238 ft•lb 322.7 N•m	179 ft•lb 242.7 N•m
5/8-18	170 ft•lb 230.5 N•m	127 ft•lb 172.2 N•m	240 ft•lb 325.4 N•m	180 ft•lb 224 N•m	270 ft•lb 366.1 N•m	202 ft•lb 273.9 N•m
3/4-10	267 ft•lb 362 N•m	200 ft•lb 271.2 N•m	376 ft•lb 509.8 N•m	282 ft•lb 382.3 N•m	423 ft•lb 573.5 N•m	317 ft•lb 429.8 N•m
3/4-16	297 ft•lb 402.7 N•m	223 ft•lb 302.3 N•m	420 ft•lb 569.4 N•m	315 ft•lb 427.1 N•m	472 ft•lb 640 N•m	354 ft•lb 480 N•m
7/8-9	429 ft•lb 581.6 N•m	322 ft•lb 436.6 N•m	606 ft•lb 821.6 N•m	455 ft•lb 616.9 N•m	682 ft•lb 924.7 N•m	511 ft•lb 692.8 N•m
7/8-14	474 ft•lb 642.7 N•m	355 ft•lb 481.3 N•m	669 ft•lb 907 N•m	502 ft•lb 680.6 N•m	752 ft•lb 1019.6 N•m	564 ft•lb 791.8 N•m

Metric Bolt Torque

Torque estimates based on clamp load (75% of proof strength) as specified in ISO-898-1.

Size and Thread Pitch	 Class 8.8		 Class 10.9		 12.9 Socket Head Cap Screw	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
M5 X 0.80	54 in•lb 6.1 N•m	41 in•lb 4.6 N•m	78 in•lb 8.8 N•m	59 in•lb 6.7 N•m	91 in•lb 10.3 N•m	68 in•lb 7.7 N•m
M6 X 1.00	92 in•lb 10.4 N•m	69 in•lb 7.8 N•m	133 in•lb 15 N•m	99 in•lb 11.2 N•m	156 in•lb 17.6 N•m	116 in•lb 13.1 N•m
M7 X 1.00	156 in•lb 17.6 N•m	116 in•lb 13.1 N•m	222 in•lb 25.1 N•m	167 in•lb 18.9 N•m	260 in•lb 29.4 N•m	195 in•lb 22 N•m
M8 X 1.25	225 in•lb 25.4 N•m	169 in•lb 19.1 N•m	333 in•lb 37.6 N•m	242 in•lb 31.3 N•m	377 in•lb 42.6 N•m	284 in•lb 32.1 N•m
M10 X 1.50	37 ft•lb 50.2 N•m	28 ft•lb 38 N•m	53 ft•lb 71.9 N•m	40 ft•lb 54.2 N•m	62 ft•lb 84.1 N•m	47 ft•lb 63.7 N•m
M12 X 1.75	65 ft•lb 88.1 N•m	49 ft•lb 66.4 N•m	93 ft•lb 126.1 N•m	69 ft•lb 93.6 N•m	108 ft•lb 146.4 N•m	81 ft•lb 109.8 N•m
M14 X 2.00	104 ft•lb 141 N•m	78 ft•lb 105.8 N•m	148 ft•lb 200.7 N•m	111 ft•lb 150.5 N•m	173 ft•lb 234.6 N•m	130 ft•lb 176.3 N•m
M16 X 2.00	161 ft•lb 218.3 N•m	121 ft•lb 164.1 N•m	230 ft•lb 311.8 N•m	172 ft•lb 233.2 N•m	269 ft•lb 364.7 N•m	202 ft•lb 273.9 N•m
M18 X 2.50	222 ft•lb 301 N•m	167 ft•lb 226.4 N•m	318 ft•lb 431.2 N•m	238 ft•lb 322.7 N•m	372 ft•lb 504.4 N•m	279 ft•lb 378.3 N•m
M20 X 2.50	314 ft•lb 425.7 N•m	235 ft•lb 318.6 N•m	449 ft•lb 608.8 N•m	337 ft•lb 456.9 N•m	525 ft•lb 711.8 N•m	394 ft•lb 534.2 N•m
M22 X 2.50	428 ft•lb 580.3 N•m	321 ft•lb 435.2 N•m	613 ft•lb 831.1 N•m	460 ft•lb 623.7 N•m	716 ft•lb 970.8 N•m	537 ft•lb 728.1 N•m
M24 X 3.00	543 ft•lb 736.2 N•m	407 ft•lb 551.8 N•m	776 ft•lb 1052.1 N•m	582 ft•lb 789.1 N•m	908 ft•lb 1231.1 N•m	681 ft•lb 923.3 N•m

Commonly Used Items and Part Numbers

Item	Part Number	Part Number	Part Number
48 in ZT Blade	Hi-Lift Fusion 038-5350-00	Gator Blade 038-5000-00	Wave Blade 038-4825-00
54 in ZT Blade	Hi-Lift Fusion 038-0001-00	Gator Blade 038-0003-00	Wave Blade 038-5220-00
60 in ZT Blade	Hi-Lift Fusion 038-6060-00	Gator Blade 038-6003-00	Wave Blade 038-6016-00
ZT Hydraulic Filter	063-1050-00		
48 in ZT Deck Belt	041-1470-00		
54 in ZT Deck Belt	041-1560-00		
60 in ZT Deck Belt	041-1650-00		
ZT Pump Belt	041-6400-00		
Fuel Filter	Kohler 063-5001-00	Kawasaki 063-6000-00	Briggs 063-6000-00
Oil Filter	Kohler 063-5004-00	Kawasaki 063-2096-00	Briggs 063-8018-00
Air Filter	Kohler 015-2026-02 Pre cleaner 015-2026-03	Kawasaki 041-4000-00 Pre-cleaner 063-2097-00	Briggs 063-1000-00 Pre-cleaner 063-3003-00
Spark Plug	Kohler 015-8000-00	Kawasaki 015-8001-00	Briggs 015-8000-00
Engine Oil	10W-30 Engine Oil (Bad Boy Synthetic Blend Engine Oil Recommended) For more information, see engine manual. 085-6015-00		
Transaxle Oil	20W-50 Hydrostatic Oil (Bad Boy Hydrostatic Oil Recommended) 085-6000-00		

Section 2 Safety

Safety Symbols

Hazard alerts in this manual are used to alert operators, job supervisors, maintenance staff, and job-site workers to hazardous operating practices and maintenance procedures. Hazard alerts used throughout this manual contain a hazard-alert symbol and a signal word. They identify the hazard's degree of consequence if the message is ignored.

ANSI/ISO signal words are used to warn of potentially hazardous situations that may lead to damage, personal injury, or even death. Hazard alerts in this manual and on the machine use signal words or illustrations to indicate the potential level of hazard.

The following hazard alerts are used in this manual:

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury. Notice signs are typically used for activities that result in property damage.

Machine Safety Guidelines

⚠ WARNING

Untrained people or failure to follow instructions can result in serious injury or death. Read all instructions before operating.

Never allow untrained people to operate this machine. It is the owner's responsibility to get training and see to it that anyone who has permission to use your machine receives the proper training.

⚠ WARNING

Flying debris from machine deck can cause serious injury or death to bystanders and can damage property. Never operate with missing or damaged chute.

Do not mow around people. The factory discharge chute is designed to deflect debris downward, but it is possible for debris to be thrown in a way that can cause damage to people or property. Seek additional training when possible to learn more about safety techniques and practices.

⚠ DANGER

Contact with rotating cutting blades can cause serious injury or death. Never put hands, feet, or objects near blades when engine is running.

This machine is capable of amputating hands and feet and throwing objects. Failure to observe safety instructions could result in serious injury or death.

Machine Decals

All safety decals on the machine must remain in place, intact, and visible. Make sure to have a good understanding of the decals prior to operating the machine. Become familiar with all decal locations and their purposes.

IMPORTANT: Decals should remain in the proper locations when being replaced.

Personal Protective Equipment (PPE)

Make sure all personal protective equipment (PPE) is in good working condition before use.

Hearing Protection

Wear a hearing protective device to protect against loud noises. Continued exposure to loud noise can cause hearing impairment or loss of hearing.

Eye Protection

Always wear appropriate eye protection when working in environments where there is a risk of flying debris, dust, or other hazards. Consistent exposure to these risks without proper protection can lead to eye injuries, irritation, or permanent vision loss.

Operation Safety

General Operation Safety

⚠WARNING

Failure to follow these general safety operation practices below can result in serious injury or death.

- **Read, understand, and follow all instructions on the machine and in the manual before starting.**
- **Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.**
- **Always remain seated while operating the machine. If the machine is equipped with roll-over protection structure (ROPS), always buckle your seat belt.**
- **Only allow responsible adults who are familiar with the instructions to operate this machine.**
- **Clear the area of objects such as rocks, wire, toys, etc., which could be thrown by the blades.**
- **Always maintain a safe distance from people and pets just prior to and during operation. Stop the machine if anyone enters the area.**
- **Never carry passengers.**
- **Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.**
- **Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction as material may ricochet back toward the operator. Stop the blades when crossing gravel surfaces.**
- **Never operate the machine without the discharge chute, grass catcher, or other safety devices correctly in place and functioning properly.**
- **Slow down before turning.**
- **Always disengage blades, place steering controls in neutral, engage parking brake, and remove ignition key when leaving operator's seat. Never leave a running machine unattended. Disengage blades when not mowing.**
- **Shut off engine, allow all moving parts to come to a complete stop, and allow to cool before performing any of the following actions: cleaning or inspecting the machine for damage, removing the grass catcher, or unclogging the discharge guard.**
- **Always operate the machine in daylight or with adequate working lights.**
- **Do not operate the machine while under the influence of alcohol or drugs.**
- **Watch for traffic when operating near or crossing roadways.**
- **Always wear eye protection when operating or servicing the machine.**
- **Always wear ear protection, such as earplugs, while mowing.**
- **Use extra care when loading or unloading the machine onto a trailer or truck.**
- **Be alert of surroundings. Watch for rocks, stumps, mounds, depressions, and low hanging limbs or objects that could be potentially hazardous while mowing.**
- **Data indicates that operators 60 years of age and above are involved in a large percentage of riding machine related injuries. These operators should periodically evaluate their ability to operate the riding machine safely enough to protect themselves and others from serious injury.**
- **Prevent fires by keeping deck, engine, and exhaust areas clear of grass clippings and other debris. Do not back or park the machine over, or immediately adjacent to, flammable materials.**

Slope Operation Safety

Slopes are a significant factor related to loss of control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution. If you cannot back up the slope or you feel uneasy on it, do not mow it. Avoid operating your machine on hills of over 5 degrees if mowing transverse to the slope, on a slope of over 10 degrees when driving uphill, or 15 degrees when driving downhill.

⚠WARNING

Operating on slopes and wet grass can cause instability issues resulting in loss of control and possible rollover. Failure to follow these warnings could cause serious injury or death.

- **Watch for holes, ruts, bumps, rocks, or other hidden objects that tall grass can obscure. Uneven terrain could overturn the machine.**
- **Choose a low ground speed when operating the machine on a slope.**
- **Do not mow on wet grass, the tires may lose traction.**
- **Do not attempt to coast down a slope in the neutral position.**
- **Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly, straight down the slope.**
- **Keep all movement on slopes slow and gradual. Sudden changes in speed or direction could cause the machine to roll over.**
- **Use extra care while operating the machine with grass catchers or other attachments; they can affect the stability of the machine. Do not use on steep slopes.**
- **Do not try to stabilize the machine by putting your foot on the ground.**
- **Do not mow near drop-offs, ditches, or embankments. The machine could suddenly and dangerously rollover if a tire goes over the edge of a drop-off. Drop-off edges can become extremely weak after rain while appearing deceptively sound.**
- **Be aware of what is located at the bottom of slopes. For example: rocks, water, cliffs, and roadways.**

Children Safety

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

⚠WARNING

Never allow children to ride on or operate the machine. Be sure the area is clear of bystanders, pets, and especially children. Failure to follow these warnings could cause serious injury or death.

- **Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator.**
- **Maintain alertness and turn machine off if a child enters the area.**
- **Before and while backing up, look behind and down for small children.**
- **Never carry children, even with blades shut off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.**
- **Never allow children to operate the machine.**
- **Never leave the key in the ignition, especially around children.**
- **Use extreme care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.**

Service Safety

General Service

⚠WARNING

Do not run the engine indoors or in an enclosed space where carbon monoxide fumes can collect. Failure to follow these warnings could cause serious injury or death.

- **Never operate the machine in a closed area where dangerous carbon monoxide fumes can collect.**
- **Keep all nuts and bolts tight to be sure the equipment is in safe working condition. Never operate a poorly maintained machine.**
- **Do not touch hot areas of the machine.**
- **Never interfere with the intended function of a safety device or reduce the protection provided by a safety device. Check their proper operation regularly.**
- **Keep the entire machine free of grass, leaves, or other debris buildup. Clean up oil or fuel spillage and remove any fuel-soaked debris. Failure to do so can affect the safety and functionality of the machine, as well as increase the danger of a fire due to contact with the hot surfaces of the machine.**
- **Allow machine to cool before storing.**
- **If you strike something with the machine, turn the machine and blades off, engage the parking brake, and inspect the machine for damage. Repair machine before resuming if necessary.**

- **Never make any adjustments or repairs with the engine running.**
- **Check grass catcher components and the discharge guard frequently. Replace with manufacturer's recommended parts when necessary.**
- **Machine blades are sharp. Wrap the blade or wear gloves before servicing them.**
- **Check parking brake operation frequently. Adjust and service the brake as required.**
- **Maintain or replace safety and instruction labels as necessary.**
- **Do not attempt to mount a tire without the proper equipment and experience to perform the job.**
- **Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.**
- **Park the machine on level ground. Never allow untrained personnel to service the machine. Understand service procedures before doing work.**
- **Mower deck, frame, and engine compartment should remain free of debris to prevent premature part failures or fire hazards.**

Towing

Maximum towing capacity: 300 lb (136 kg)

Maximum towing capacity at 5 degree slope (any orientation): 260 lb (118 kg)

Towing is not recommended and cautioned against at any grade that is greater than 5 degrees.

Max tongue weight:
50 lb (22 kg)

⚠WARNING

Never exceed the recommended tow capacity. Failure to follow these warnings could cause serious injury or death.

- **Tow only with a machine that has a hitch specifically designed for towing. Do not attach towed equipment except at the hitch point.**
- **Follow towing recommendations provided.**
- **Never allow children or others in, on, or around towed equipment.**
- **On slopes, the weight of the towed equipment may cause loss of traction or instability.**
- **Travel slowly and allow extra distance to stop.**

Battery

⚠WARNING

Batteries contain acid and produce flammable and explosive gases. Failure to follow these safety precautions can cause serious injury or death.

- **Batteries contain acid that burns eyes and skin on contact. Wear protective clothing, safety goggles, and rubber gloves when working with batteries.**
- **In case of acid contact, wash the area immediately with water. In case of eye contact, wash eye with clean, cool water for at least 5 minutes and get prompt medical attention.**
- **Batteries make and contain flammable and explosive gas. Keep battery away from open flames, sparks, and lighted tobacco.**

For jump start, connect negative cable to the machine engine last (never at the battery). After jump start, remove negative connection at the engine first.

Safe Handling of Gasoline

⚠WARNING

Use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Failure to follow these warnings could cause serious injury or death.

- **Extinguish all cigarettes, cigars, pipes, and all other sources of ignition.**
- **Use only an approved gasoline container.**
- **Never remove gas cap or add fuel with the engine running.**
- **Allow engine to cool for a minimum of 5 minutes (longer on exceptionally hot days >95°F) before refueling.**
- **Never fuel the machine indoors.**
- **Do not store the machine near open flame or source of ignition, such as a water heater or furnace.**
- **Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.**
- **Never fill gasoline containers inside a machine or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your machine before filling.**

- **Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.**
- **If fuel is spilled on clothing, change clothing immediately.**
- **Never overfill fuel tank. The fuel tank is full when the gasoline level reaches the bottom of the fill tube. Do not over-fill. Overfilling can reduce the effectiveness of fuel tank safety mechanisms.**

Environmental Precautions

If not disposed of correctly, oils can contaminate and pollute soil, groundwater, streams, and rivers. Used oil and filters can be recycled to aid in the conservation of natural resources and help the environment. Adhere to all regulations when disposing of oil, fuel, filters, batteries, used parts, and other potentially harmful items.

Safety Interlock System

⚠WARNING

Do not tamper with or bypass safety interlock. Keep all guards, shields, and interlock safety devices in proper working order. Failure to follow this warning could cause serious injury or death.

Your Bad Boy machine is equipped with a safety interlock system. This system is designed to prevent property damage and severe injury or death to the operator and bystanders. These interlocks are essential and must be tested before each use. To test the interlock system, follow the steps below.

NOTE: *Unless otherwise noted, the operator must be seated properly on the machine during these tests. Additionally, the machine should be at operating temperature during this test.*

1. With the parking brake engaged, place the lever arms in the inward position. Attempt to start the machine with the power take-off (PTO) switch in the OFF position. The engine should not start. Continue test.
2. On a level surface, disengage the parking brake and place the lever arms in the outward position. Attempt to start the machine with the PTO switch in the OFF position. The engine should not start. Continue test.
3. Engage the parking brake and leave the lever arms in the outward position. Put the PTO switch in the ON position. Again, attempt to start the machine; the engine should not start. Continue test.
4. Start the engine, as stated in the Machine Operation Section. Disengage the parking brake and very slowly begin to rise from the seat. The engine should stop. If the seat has been relieved of body weight and the engine has not stopped, there is a fault within the interlock system. End the test. If the safety interlock system does not operate as described above, an authorized service dealer must repair this safety system immediately. The machine is unsafe to operate in this condition.

Roll-Over Protection Structure (ROPS)

This machine is not equipped with ROPS from the factory. If ROPS is added as an option, It is vital that the rules below are adhered to. ROPS, when used correctly, dramatically decreases the fatality rate in roll-over instances.

⚠WARNING

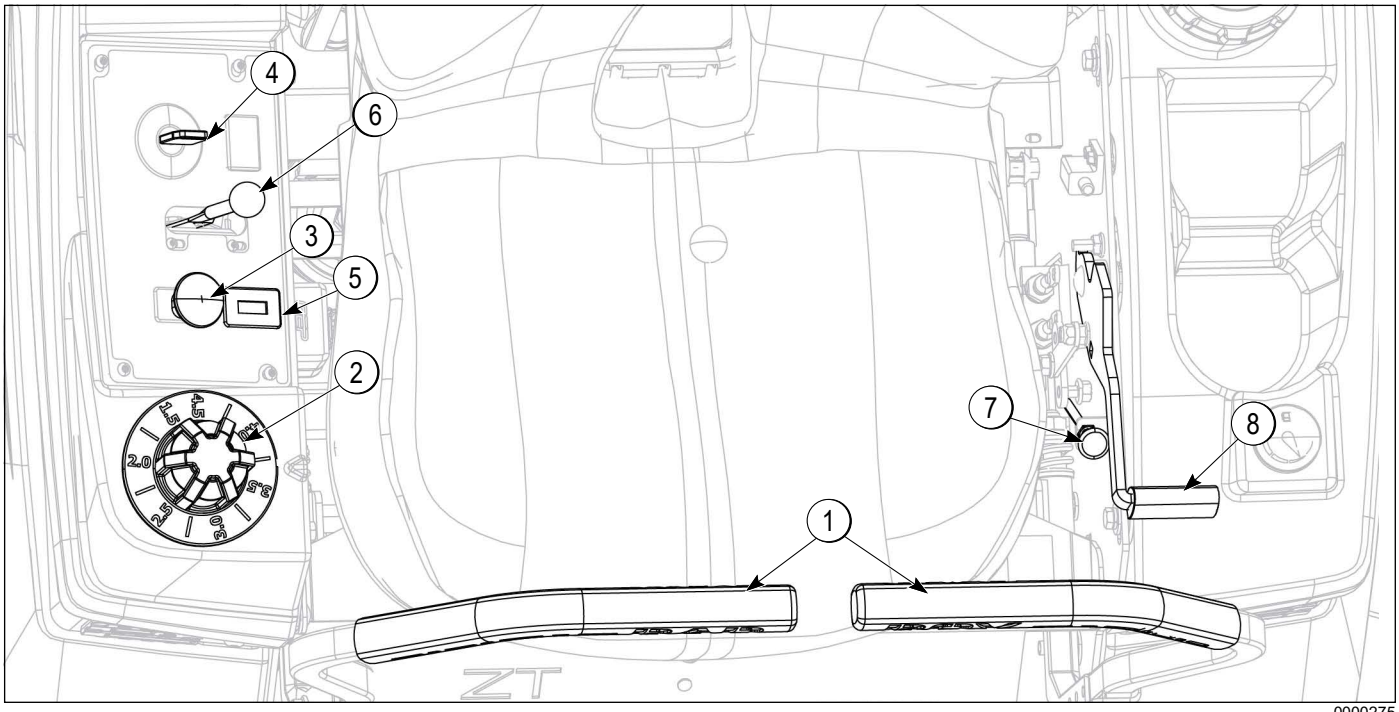
ROPS must be in good working order in the raised position with the seat belt securely fastened. Failure to follow these warnings could cause serious injury or death.

- **Periodically ensure the bolts that attach the ROPS to the machine are securely fastened.**
- **Always operate the machine with the ROPS secured in the upright position.**
- **If the surrounding environment (e.g. low-lying limbs, signage, etc.) makes it impossible to mow with the ROPS upright, lower the ROPS at the hinge point, mow the area, then immediately secure the ROPS upright.**
- **An upright ROPS is taller than the operator's head. Be aware of this and your surrounding environment, as referenced above. The machine and operator may clear low lying items, but the ROPS may not.**
- **Always wear the provided seat belt when a ROPS is utilized. Failure to use the seat belt severely handicaps the safety benefits of the ROPS.**
- **In the event of a roll-over, replace the ROPS before resuming use of the machine.**

Page Intentionally Blank

Section 3 Controls

Console Controls



0000275

Figure 3-1

Item	Part	Description
1	Control Levers	These levers control the machine's speed, direction, and neutral lock. These levers are used to steer, accelerate, decelerate, and change direction.
2	Deck Height Control	The deck height dial is used to set the cut height of the deck.
3	PTO Switch	This switch engages the blades. Pull the switch up to engage the blades, push the switch down to disengage the blades.
4	Ignition Switch	Bad Boy machines have a four-position ignition switch: OFF, LIGHTS, ON, and START. With key inserted, rotate it clockwise to START position and release key when engine starts. Switch will automatically return to the RUN position.
5	Electronic Hour Meter	Registers hour increments up to 9,999.9 total hours. Displays and records the cumulative engine run time as well as the current RPM of the engine.
6	Throttle Control	A cable is connected to the engine throttle for controlling engine speed. Move lever forward to increase engine RPM, move lever backward to decrease engine RPM.
7	Choke Control	The choke control, located to the operator's left, is a 'push-pull' type. When the choke knob is pushed in, the choke is in the OFF (run) position. When the choke is pulled out, it is in the ON (start) position. Do not operate the machine in the ON (start) position.
8	Parking Brake	The parking brake is used to hold the machine in place.

Page Intentionally Blank

Section 4 Operation

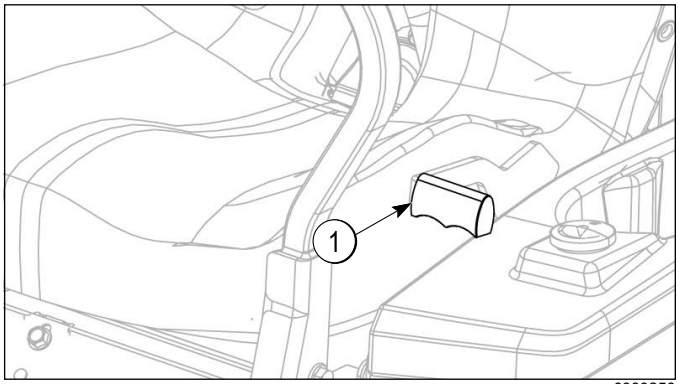
Machine Operation

⚠WARNING

Failure to follow these machine operation instructions can cause serious injury or death.

- **Read, understand, and follow all instructions on the machine and in the manual before starting.**
- **Never operate the machine with faulty equipment.**
- **Always be alert of sudden changes in landscape; as the machine will react differently on slopes or embankments than it will on flat surfaces.**
- **Never operate the machine with the discharge chute up.**
- **Do not cross terrain (other than grass) with blades turning, as this could cause damage to property or bystanders.**
- **Avoid operating your machine on hills of over 5 degrees if mowing transverse to the slope, on a slope of over 10 degrees when driving up hill, or 15 degrees when driving downhill.**

1. Owners must become familiar with the controls before operating a zero-turn radius machine. Start slowly and build your skill level. Have ample practice before using the machine at full capabilities.
2. Make sure nothing is under or around the machine.
3. Verify that the parking brake (1) is in the ON position. The parking brake should always be in the ON position when the machine is not in use.

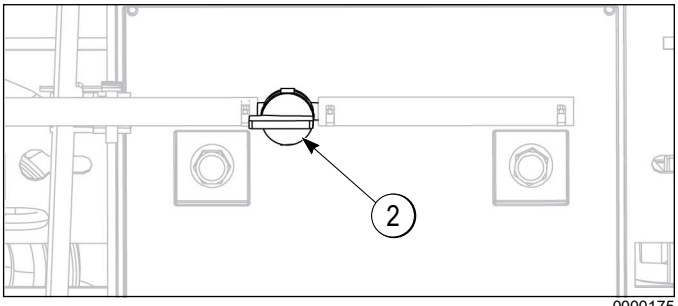


0000250

Figure 4-1

4. Rotate the fuel shutoff valve (2) to the open (on) position as shown in Figure 4-2.

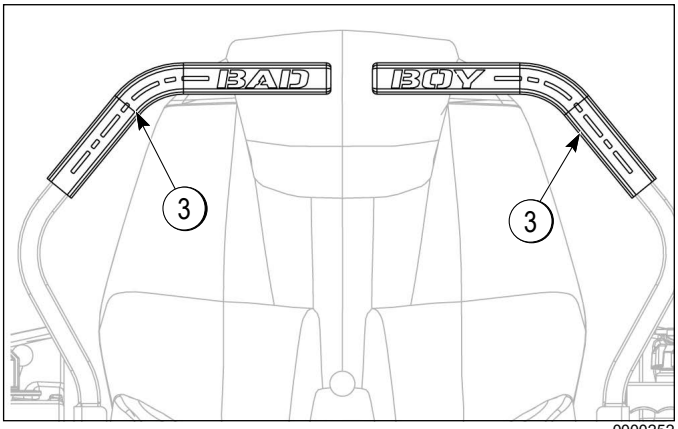
NOTE: *The fuel shutoff valve should always be placed in the OFF position when machine is not in use.*



0000175

Figure 4-2

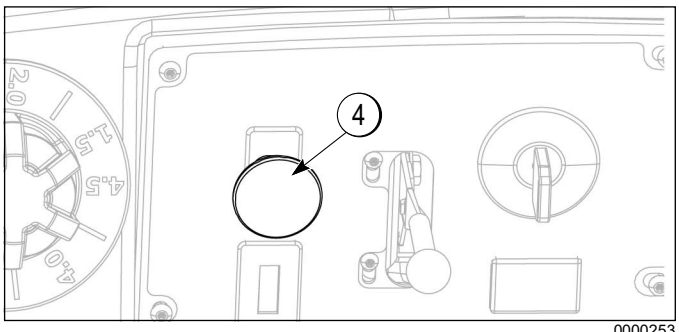
5. Control arms (3) must be in the OPEN position. While sitting on the machine, each arm is positioned away from the operator to the left and right. Control arms will lock into place and must be in this position to start the machine.



0000252

Figure 4-3

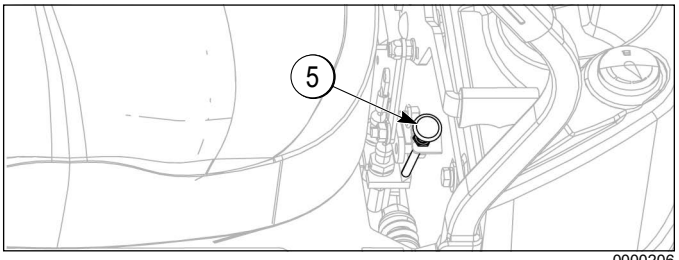
6. Verify the PTO switch (4) is pressed down in the OFF position.



0000253

Figure 4-4

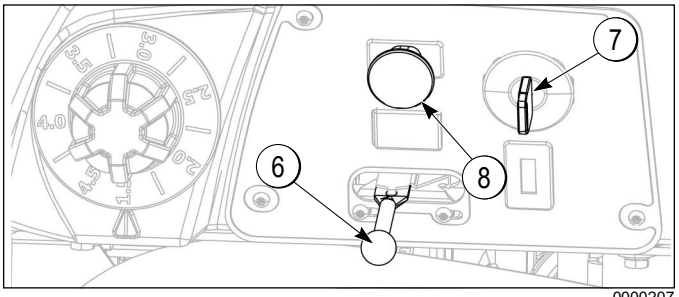
7. If the machine has not been started recently, pull out the choke knob (5) to engage the choke.



0000206

Figure 4-5

8. Position the throttle control (6) between half and full throttle.
9. Place the key (7) in the ignition. Turn and hold the key in the start position, once the machine is started release the key.
10. Once the machine is started, disengage the choke.
11. Increase engine by moving the throttle control lever to fast position.
12. Always engage PTO switch (8) at full throttle.



0000207

Figure 4-6

⚠WARNING

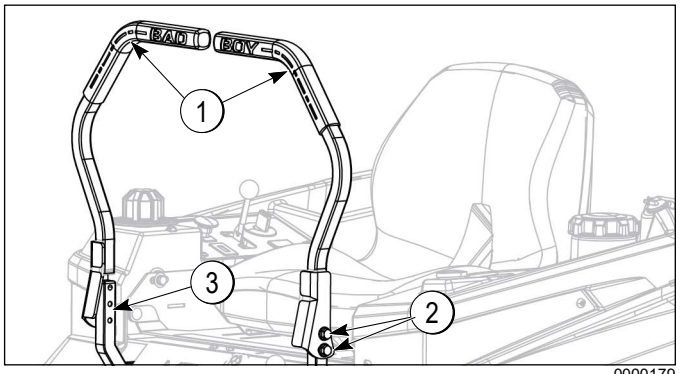
Your machine will perform differently on an incline/decline. Be cautious, slow down, and do not make any sudden jerking movements with control arms. The machine could lose traction on a decline or tip backwards on an incline.

Control Lever Arms

Using Control Lever Arms

The control lever arms (1) move your machine in all directions.

- Forward: Bring both control arms together to release neutral lock and push them forward.
- Backward: Bring both control arms together and pull towards you to move backward.
- Left: While leaving the left control arm in central position, push the right control arm forward to turn left.
- Right: While leaving the right control arm in central position, push the left control arm forward to turn right.



0000179

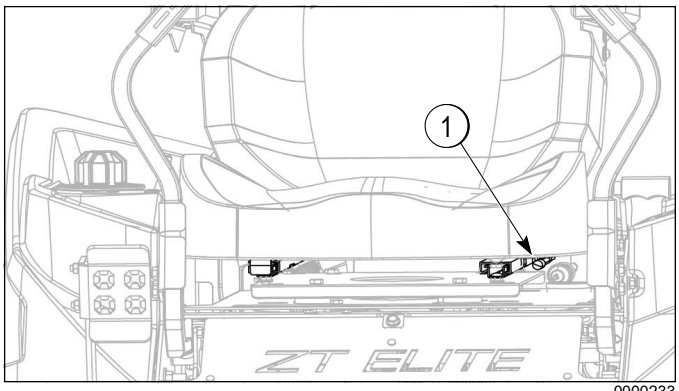
Figure 4-7

Adjusting Control Lever Arms

Remove the two bolts (2) that secure control arm to the control bar. Raise or lower arm to the desired position. Align holes on the control bars (3). Install fasteners and tighten securely.

Seat Adjustment

Push seat adjustment handle (1) down and in towards the seat. Slide seat forward or backward to desired position. Release handle and ensure seat is locked in position.



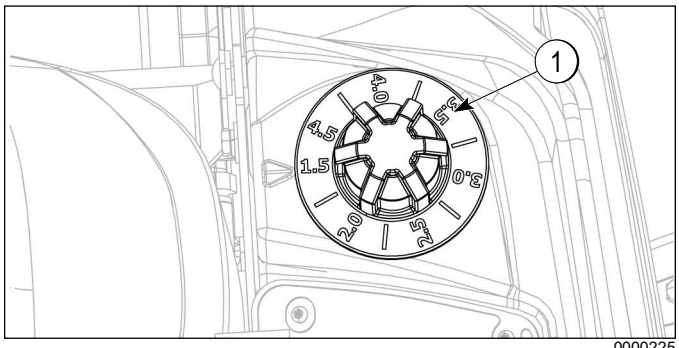
0000233

Figure 4-8

Setting Deck Height

If your machine is equipped with a foot pedal:

1. Press foot pedal to raise the deck.
2. Select the desired deck height with the deck height control dial (1).
3. Slowly release foot pedal.



0000225

Figure 4-9

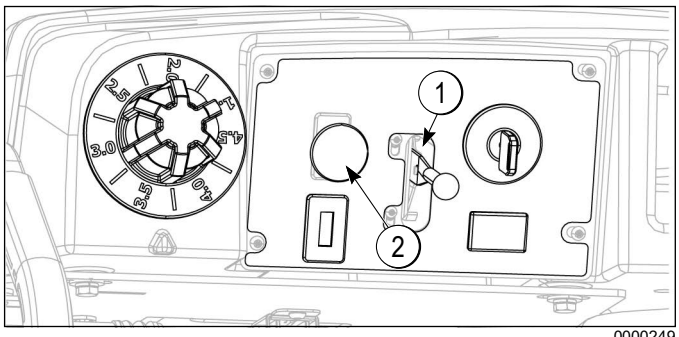
Engaging PTO Switch

⚠WARNING

Never put hands, feet, or objects into or under machine when engine is running. Failure to follow these warnings could cause serious injury or death.

- **Rotating machine blades can cause serious injury or death.**
- **Contact with moving parts or flying objects will cause serious injury or death.**
- **Keep bystanders away from mower deck.**
- **Never operate mower deck with damaged or missing shields or chutes.**

1. Verify the discharge chute is down and the area is clear of bystanders.
2. While seated in the operator seat, start the engine.
3. Increase RPM by moving the throttle control lever (1) to the fast throttle position.
4. Pull up on the PTO switch (2) to engage the cutting deck.
5. To disengage the PTO switch, push down on the PTO switch.



0000249

Figure 4-10

Fuel

Brand name fuel is recommended for quality assurance. Use fuel with an octane rating near 87. Higher octane fuels offer no benefit. Only fuels with an ethanol content of 10% or less may be used. E-15 fuel is not permitted and is illegal. The usage of E-15 will result in premature engine failure.

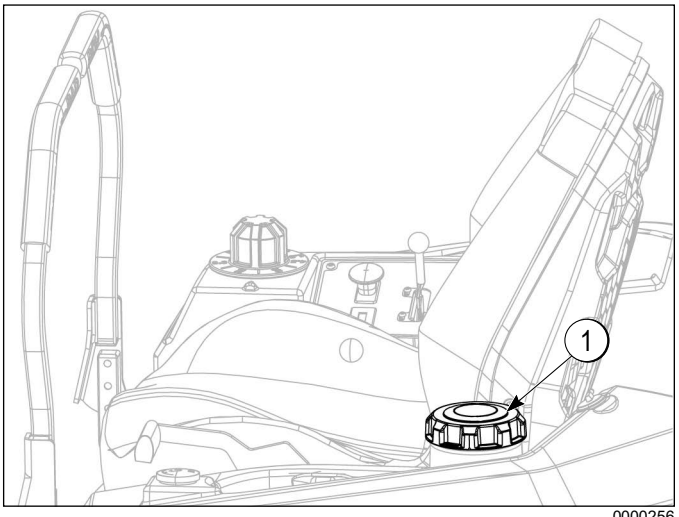
Adding Fuel

⚠WARNING

Improper fuel handling can cause an explosion or fire. Failure to follow these warnings could cause serious injury or death.

- **Always handle fuel with care.**
- **Stop the engine and allow to cool before fueling.**
- **Add fuel outdoors or in a well-ventilated area.**
- **Do not allow smoking, open flames, or sparks near the area when fueling.**
- **Do not overfill the fuel tank.**
- **Use a funnel if necessary to avoid spills.**
- **If fuel is spilled on clothing or skin, wash off immediately with soap and water.**
- **Do not start engine if fuel is spilled.**
- **Store fuel out of reach of children.**
- **Store fuel in an approved fuel container and in a well-ventilated area.**

1. Shut the engine off and allow it to cool before adding fuel.
2. Remove the fuel cap (1) by rotating it counterclockwise.



0000256

Figure 4-11

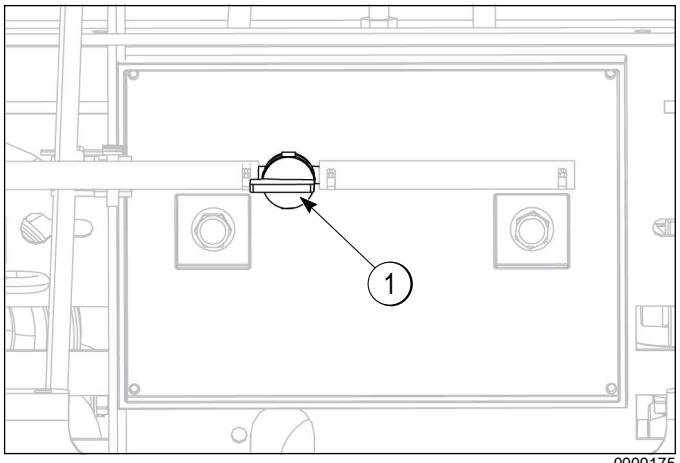
3. Use good quality fuel and begin filling.
4. Stop fueling when the fuel level reaches bottom of the filler neck.
5. Install the fuel cap and turn it clockwise until it is tight.

Fuel Shutoff Valve

1. Locate the fuel shutoff valve (1).

2. Rotate valve clockwise to the open (on) position. Rotate valve counterclockwise to the closed (off) position.

NOTE: *Fuel shutoff valve shown is in the open (on) position.*



0000175

Figure 4-12

Section 5 Maintenance

Maintenance Intervals

Maintenance	Interval						
	Daily	First 8 Hours	Every 50 Hours or Annually[1]	Every 100 Hours or Annually[1]	Every 250 Hours	Every 400 Hours	Chapter
Check and add engine oil	•						Chapter 6, "Engine Oil"
Check all belts for proper alignment	•						Chapter 6, "Cutting Deck"
Check tire pressure and wheel lug nuts	•						Chapter 6, "Caster and Wheel"
Check battery terminal connections	•						Chapter 6, "Electrical System"
Check condition of blades	•						Chapter 5, "Mower Blades"
Check for fuel and oil leakage	•						Chapter 5, "Daily Maintenance and Inspections"
Check deck and engine compartment for debris and clean as necessary	•						
Check air filters	•						Chapter 6, "Air Cleaner"
Initial oil change		•					Chapter 6, "Changing Engine Oil and Oil Filter"
Tighten nuts and screws			•				
Change engine oil and filter			•				Chapter 6, "Changing Engine Oil and Oil Filter"

Maintenance	Interval						
	Daily	First 8 Hours	Every 50 Hours or Annually[1]	Every 100 Hours or Annually[1]	Every 250 Hours	Every 400 Hours	Chapter
Initial change of hydraulic oil and filter				•			Chapter 6, "Hydrostatic System"
Grease machine				•			Chapter 5, "Equipment Lubrication"
Replace air element and pre-cleaner[2]				•			Chapter 6, "Air Cleaner"
Replace fuel filter[2]				•			Chapter 6, ""
Clean or replace spark plugs and set gap				•			Chapter 6, "Spark Plug"
Clean combustion chamber[3]					•		
Check and adjust valve clearance[3]					•		
Clean and lap valve seating surface[3]					•		
Change hydraulic oil and filter						•	Chapter 6, "Hydrostatic System"

1 Maintenance by hour or annually, whichever comes first.
2 Check air and fuel filter more often in dusty conditions.
3 Have maintenance performed at a registered dealership.

Daily Maintenance and Inspections

Machine maintenance must be done at regular intervals. Failure to do so will result in excessively worn parts and early failures. Use the maintenance intervals as a guide for correct maintenance of the machine. See “Maintenance Intervals” on page 5-1.

Daily Inspections

1. Check for worn or missing safety decals. Replace decals as necessary.
2. Check that all guards, shields, chutes, and hardware are intact and functioning as they should. Repair or replace parts as necessary.
3. Check the control lever arms and verify they are functioning as they should. Repair or replace arms as necessary.
4. Check the air intake screen on the engine. Clean or service the screen as necessary.
5. Check the engine oil. Add oil as necessary.
6. Check the engine for oil leaks and remove any debris. Service engine as necessary.
7. Check the machine for fuel leaks. Service machine as necessary.
8. Check for debris on the cutting deck and engine muffler. Remove any debris found.
9. Check that all grease points have been recently greased. Grease fittings as required.
10. Check the transaxle for leaks. Service transaxle as necessary.
11. Check to make sure the operator presence controls are functioning as they should. Replace controls as necessary.
12. Check mowing area and remove any objects that could be discharged from the machine deck.

Equipment Lubrication

⚠WARNING

Never service or maintain machine with engine running. Failure to follow safety precautions can cause serious injury or death.

1. Park the machine on a level surface and disengage the PTO switch.
2. Move the motion control levers outward to the neutral position, engage parking brake, stop the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.

NOTE: *Grease Type: NGLI grade #2 multi-purpose gun grease.*

3. For more information, see “Grease Locations” on page 6-11.
4. Clean the grease fittings with a cloth. Scrape any dirt/debris off the front face of the fitting(s).
5. Connect a grease gun to each fitting. Pump grease into the fitting until grease seepage is observed. Be mindful of over-pressurization. Do not force the grease into the component if excessive back pressure is felt; as this can lead to reduced life of the component(s). Wipe up excess grease.

Cleaning the Machine

It is recommended that you use an air hose or blower to remove dust and debris from the machine to ensure there is not a buildup of grass on the machine deck and engine compartment, which could become a fire hazard. If you must wash the machine, ensure that you run the engine to operating temp to dry water and engage the blades to spin off any standing water on the pulleys. Avoid spraying water onto electrical components and bearings to prevent premature failure of these parts.

Mower Blades

DANGER

Failure to follow these machine blade safety precautions can cause serious injury or death.

- **NEVER work with blades while engine is running or PTO clutch is engaged.**
- **Use approved lifting equipment when working underneath your machine.**
- **NEVER attempt to straighten a damaged blade with heat.**
- **NEVER attempt to weld a cracked blade.**
- **ALWAYS wear thick gloves when handling blades.**
- **ALWAYS check for blade damage if machine strikes a rock, branch, or other objects that could potentially damage the blade.**
- **Keep clear of rotating blades.**
- **Failure to replace a worn or damaged blade creates a major safety hazard as well as possible machine damage.**

1. Check machine blades after each use. This is essential for maintaining well-groomed turf.
2. Keep the blades sharp. If a dull blade is used for cutting, the grass will tear rather than cut. This could damage the grass, leaving a brown frayed top on the grass within a few hours. A dull blade will also require more power from the engine.

Mower Blade Sharpening

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Remove the machine blade. See “Mower Blade Removal” on page 6-15.

NOTICE

Bad Boy recommends that blade sharpening be performed by a professional.

The blade (1) on the top was utilized long after replacement was required. In addition to a decline in cut quality, using worn blades causes increased wear on machine components.

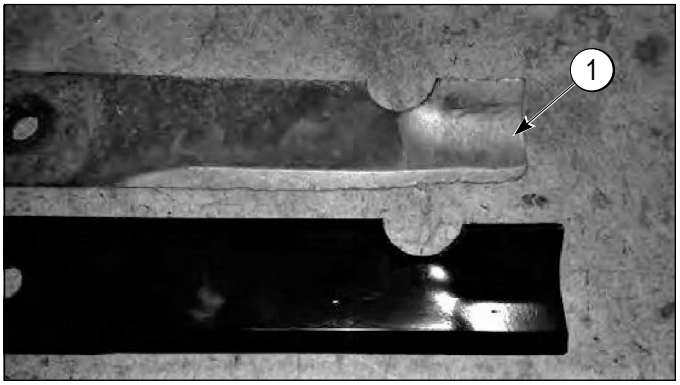


Figure 5-1

Battery

⚠WARNING

Batteries contain acid and produce flammable and explosive gases. Failure to follow these safety precautions can cause serious injury or death.

- **Batteries contain acid that burns eyes and skin on contact. Wear protective clothing, safety goggles, and rubber gloves when working with batteries.**
- **In case of acid contact, wash the area immediately with water. In case of eye contact, wash eye with clean, cool water for at least 5 minutes and get prompt medical attention.**
- **Batteries make and contain flammable and explosive gas. Keep battery away from open flames, sparks, and lighted tobacco.**
- **For jump start, connect negative cable to the machine engine last (never at the battery). After jump start, remove negative connection at the engine first.**

Battery Maintenance

1. Keep the battery terminals clean and connections tight.
2. Clean corroded battery terminals with sodium bicarbonate (baking soda) and water mixture.
3. Terminal grease or a corrosion inhibitor applied to the terminals prevents corrosion.
4. When possible, run the machine for 15 minutes to allow the battery to recharge from the battery drain caused by start up.
5. Maintain and monitor the battery charge level during non-usage or storage.
6. Check the battery charge level every 30 days on machines in storage or non-use.
7. Use a battery charger instead of the machine charging system to charge a discharged battery.

Maintenance Log

Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**
Date:	**Hours:**	**Performed:**

Hydrostatic System

Maintenance

⚠WARNING

Never service or maintain machine with engine running. Failure to follow this warning could cause serious injury or death.

Regular maintenance of the transaxle should include the following:

1. Check the Machine Operator's Manual for the recommended load ratings. Ensure that the current application does not exceed load rating.
2. Check oil level in accordance with “Fluid Volume and Level” on page 6-2.

⚠WARNING

Moving belts and parts can cause serious injury. Never inspect or service machine while engine is running or with protective guards removed. Failure to follow this warning could cause serious injury or death.

3. Inspect the machine drive belt, idler pulley(s), and idler spring(s). Ensure that no belt slippage can occur. Slippage can cause low input speed to the transaxle.
4. Inspect the machine control linkage to the directional control arm on the transaxle. Also ensure that the control arm is securely fastened to the trunnion arm of the transaxle.
5. Inspect the bypass mechanism on the transaxle and the machine linkage to ensure that both actuate and release fully.

Procedures

Some of the service procedures presented on the following pages can be performed while the transaxle is mounted on the machine. Any repair procedures as mentioned in the repair section of this manual must be performed after the unit has been removed from the machine.

1. Use of components for purpose of repair other than Genuine Hydro-Gear parts must be pre-‘authorized in writing by Hydro-Gear to be eligible for warranty consideration. Use of non-genuine Hydro-Gear parts could damage the product or cause it to not operate properly or fail prematurely.
2. Repairs or installation by personnel other than as authorized by Hydro-Gear must be pre-authorized by Hydro-Gear in writing to be eligible for warranty consideration.
3. Hydro-Gear does not provide warranty coverage for defects or damages caused by the use of unauthorized parts or service.

Fluids

NOTICE

All fluids should be handled and disposed of according to local, state, and federal regulations.

The fluids used in Hydro-Gear products have been carefully selected, and only equivalent or better products should be substituted.

Typically, an engine oil with a minimum rating of 9.0 cSt (55 SUS) at 230°F (110°C) and an API classification of SL is recommended. A 20W-50 engine oil has been selected for use by the factory and is recommended for normal operating procedures.

Fluid Volume and Level

Fluid volume information is provided in the table below. Total system volume will depend on expansion tank size, hose length and transaxle volume. Certain situations may require additional fluid to be added or even replaced.

Purging will be required if oil has been changed. For more information, see "Purging Procedures" on page 6-3.

NOTE: *The oil volume figure shown does not include what is in the expansion tank hose or the expansion tank. That will have to be determined by the machine manufacturer/end user due to varying hose sizes/lengths and expansion tank sizes.*

Fluid Description		
20W-50 Hydrostatic Oil		
ZT-2800/ZT-3100/ZT-3200/ZT-3400		
Correct oil volume is determined by characters 7 and 13 of the model number. (Z*-****-X***-***X*)		
CHAR 7	CHAR 13	Oil Volume
3,4,5,6 7,8,A,E	L,R,X	70.3 oz - 2079 ml
9,8,D,K S,T,U,W	L,R,X	71.9 oz - 2126 ml
	T	56.6 oz - 1496 ml

Fluid Change Procedure

NOTICE

All fluids should be handled and disposed of according to local, state, and federal regulations.

This transaxle is designed with an external filter for ease of maintenance. To ensure constant fluid quality levels and longer life, an initial oil and filter change at 75-100 hours and then every 400 hours thereafter is recommended.

1. The following procedure can be performed with the transaxles installed in the machine, and with the machine on level ground. Apply the bypass valve for each transaxle and lock the machine parking brake.
2. Remove the three 1/4 in filter guard screws (5) and filter guard (4). Clean any loose debris from around the perimeter of the filter. See Figure 6-1 and Figure 6-2.

NOTE: *Before draining oil, ensure the oil that will be removed is at ambient temperature. Units equipped with an internal expansion tank will retain oil that has expanded due to an increase in temperature and may result in an overfill and over expansion when refilled.*

3. Place an oil drain pan beneath the oil filter (3). Remove the oil filter (3) from the transaxle.

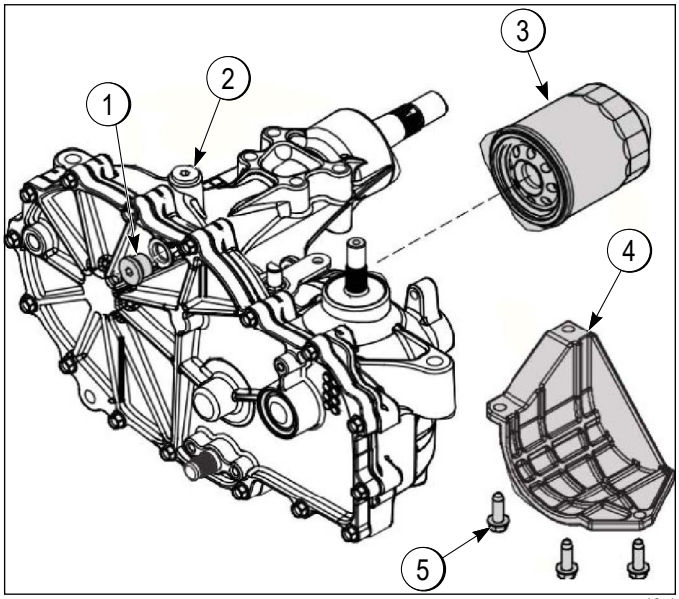
NOTE: *A drain pan 12 in (30 cm) in diameter and 8 qt (7.6 L) capacity is optimal.*

4. After the oil has drained, wipe the filter base surface off and apply a film of new oil to the gasket of the new replacement filter (Hydro-Gear part number 52114 or equivalent).
5. Install the new filter by hand, turning 3/4 to 1 full turn after the filter gasket contacts the filter base surface.
6. Install the filter guard (4) with three 1/4 in screws (5). Tighten screws to 65 in-lb (7.3 N•m) each.
7. Repeat steps 1-5 on the opposite side transaxle drive.
8. Drain old oil filters of all free-flowing oil prior to disposal. Place used oil in appropriate containers and deliver to an approved recycling collection facility.
9. Remove the top port plug (1) from the left side and right side transaxles prior to filling with oil. This will allow the transaxles to vent during oil fill.
10. Remove the cap from the transaxles expansion tank located on the machine frame.

NOTE: *For units that do not have an external expansion tank, remove the fill port plug (2) on the top of the housing. See* Figure 6-1.

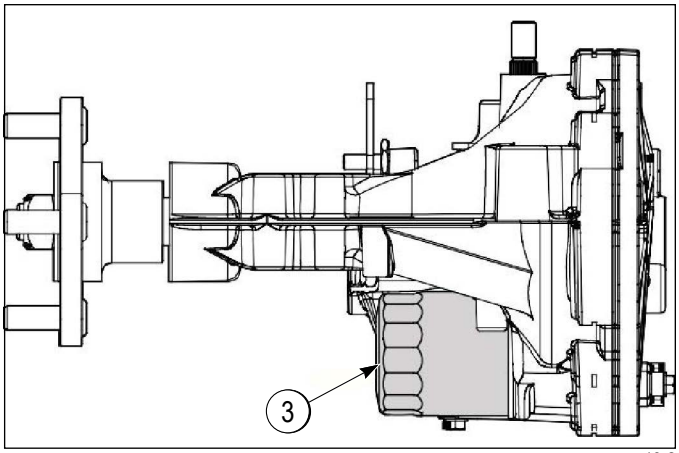
11. Fill with 20W-50 motor oil until oil just appears at the bottom of each transaxle top port (1) (approximately 2 qt per transaxle, 4 qt total). Install the top port plug (1) into each transaxle as the oil level reaches this port. Install and tighten the top port plugs to 120 in-lb (20.3 N•m).

NOTE: *For units that do not have an external expansion tank, replace the fill port plug (2) on the top of the housing (see Figure 6-1), tighten to 120 in-lb (20.3 N•m), and proceed to the purge procedure.*



13-1

Figure 6-1



13-2

Figure 6-2

12. Continue to fill the transaxles through the expansion tank until the “Full Cold” line is reached on the hydro-gear expansion tank (for more information see Machine Owner's Manual for specific volumes).
13. Install the expansion tank cap by hand. Be careful to not overtighten.
14. Proceed to the purge procedure.

Purging Procedures

Due to the effects air has on efficiency in hydrostatic drive applications, it is critical that it is purged from the system.

Air creates inefficiency because its compression and expansion rate is higher than that of the oil approved for use in hydrostatic drive systems.

These purge procedures should be implemented any time a hydrostatic system has been opened to facilitate maintenance or the oil has been changed.

The resulting symptoms in hydrostatic systems may be:

- Noisy operation.
- Lack of power or drive after short term operation.
- High operation temperature and excessive expansion of oil.

Before starting, make sure the transaxle is at the proper oil level. If it is not, fill to the specifications outlined in this manual.

⚠WARNING

Use an appropriate lifting device and jackstands to support machine. Failure to follow this warning could cause the machine to move or fall, causing serious injury or death.

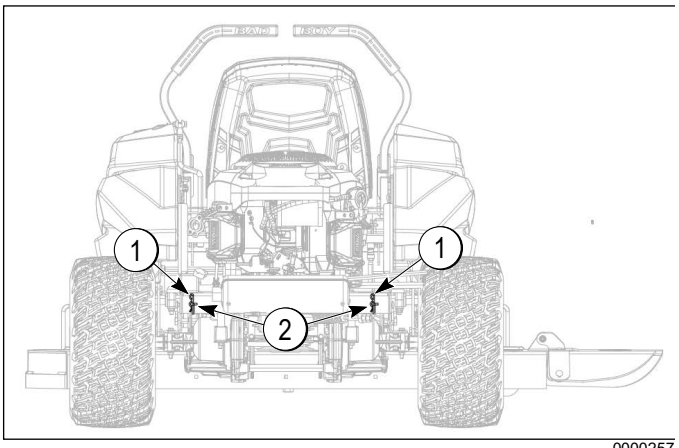
The following procedures are best performed with the machine’s drive wheels off the ground. Then repeated under normal operating conditions. If this is not possible, then the procedure should be performed in an open area free of any objects or bystanders.

1. Lift and support the machine so the drive wheels are off the ground.
2. Disengage the brake if activated.
3. With the bypass valve open and the engine running, slowly move the directional control arms in both forward and reverse directions (5 or 6 times).
4. With the bypass valve closed and the engine running, slowly move the directional control arms in both forward and reverse directions (5 to 6 times). Check the oil level, and add oil as required after stopping the engine.
5. It may be necessary to repeat steps 3 and 4 until all the air is completely purged from the system.
6. When the transaxle operates at normal noise levels and moves smoothly forward and reverse at normal speeds, then the transaxle is considered purged.

Transaxle Bypass

The transaxle bypass rods (1) are located at the rear of the machine shown in Figure 6-3. The transaxle bypass rods serve as a neutral for moving the machine while the engine is not running.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Pull the rods out and lock them into place using the cotter pins (2), to activate the bypass.

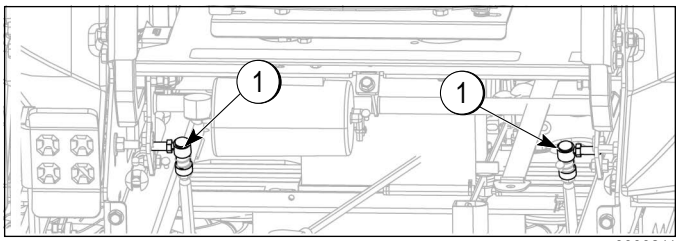


0000257

Figure 6-3

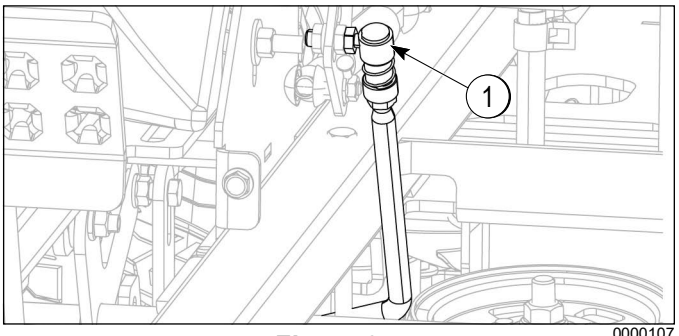
Tracking Adjustment

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. To adjust the tracking on the machine, change the length of the pushrods by screwing the swivel joint (1) in or out on the ends of both of the rods.
3. Shortening the overall length of the rod slows the transaxle down. Lengthening the rod will increase the speed of the transaxle.



0000211

Figure 6-4



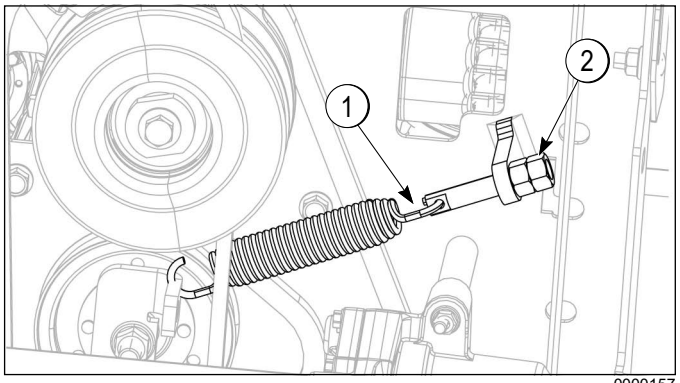
0000107

Figure 6-5

Drive Belt Adjustment

Pump belt spring tensioner (1) is shown in Figure 6-6.

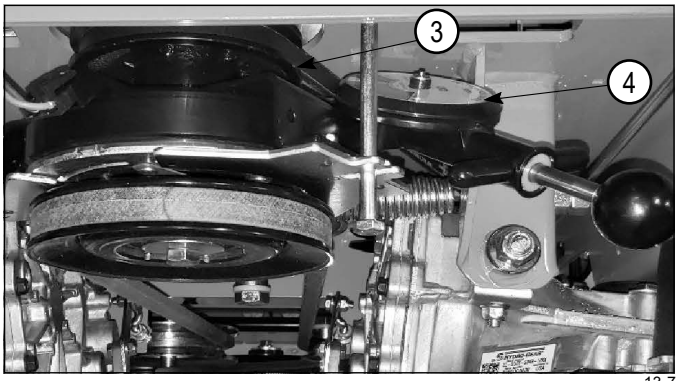
1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Using a 3/4 in wrench, loosen the top jam nut (2). Tighten the adjustment nut to increase the belt tension. Once desired drive belt tension is achieved, tighten the jam nut securely.



0000157

Figure 6-6

3. The tension should be adjusted so that there is between 60–65 lb (27–30 kg) of tension on the belt (3). Recheck belt tension after 30 minutes.
4. Check belt tension with a belt tension gauge (4) (Part Number 041-9999-00) as shown in Figure 6-7.



13-7

Figure 6-7

Engine Oil

⚠WARNING

Always clean up spilled flammable fluids or oil. Keep flammable liquids away from heat, flames, sparks, and lighted tobacco. Failure to follow this warning could cause serious injury or death.

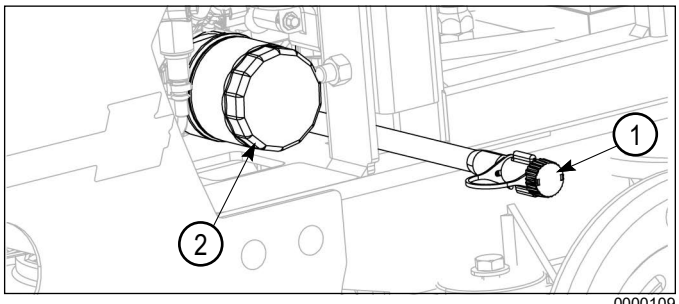
This machine has an oil drain hose installed on the engine to allow for easier oil changes. For more information, see “Maintenance Intervals” on page 5-1 for the oil change interval and the engine service manual for oil quantity. Bad Boy 10W-30 synthetic blend engine oil is recommended for maximum protection.

Changing Engine Oil and Oil Filter

NOTICE

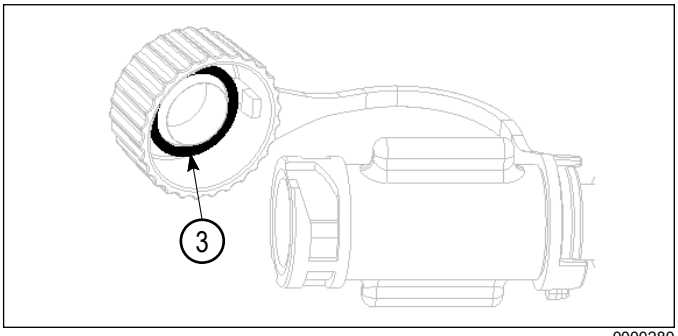
All fluids should be handled and disposed of according to local, state, and federal regulations.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Remove oil dipstick and remove the oil drain cap (1). Allow oil to completely drain. (Make sure to have an oil pan ready to capture old oil.) Properly dispose of the old oil.
3. Clean area around the oil filter. Place a container under the oil filter (2) to capture any oil and remove filter. Install the oil drain cap and tighten. **Ensure oil drain cap has the O-ring when reinstalling the cap (3).**
4. Place new filter in shallow pan with open end up. Fill with new oil until oil reaches the bottom of the threads. Allow 2 minutes for oil to be absorbed by filter material.
5. Apply a thin film of clean oil to rubber gasket on new filter.



0000109

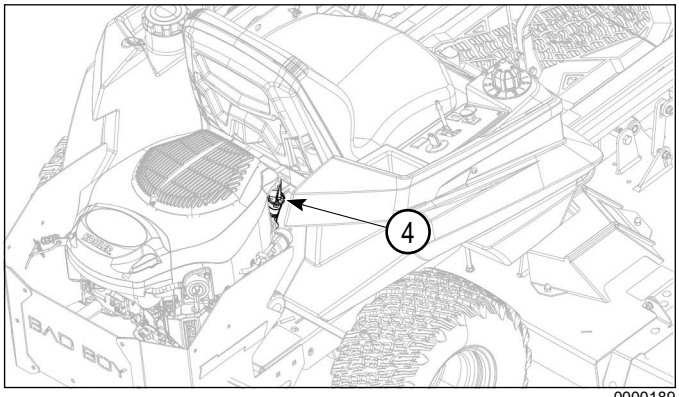
Figure 6-8



0000280

Figure 6-9

6. Clean oil filter mounting surface and refer to instruction on oil filter for proper installation.
7. Add engine oil (4). For more information see “Fluids and Capacities” on page 1-3.



0000189

Figure 6-10

8. For more information, see the engine service manual for oil quantity. Level should reach top of indicator on dipstick.
9. Install the engine oil dipstick and tighten securely.
10. Check engine oil level. The engine oil level should reach the top of the indicator on dipstick.
11. Start engine and check for oil leaks. Stop engine and recheck oil level.
12. Dispose of used oil and filter in accordance with local ordinances.

Fuel Filter

⚠WARNING

Always clean up spilled flammable fluids or oil. Keep flammable liquids away from heat, flames, sparks, and lighted tobacco. Failure to follow this warning could cause serious injury or death.

The fuel filter is located in the fuel line. For more information, see “Maintenance Intervals” on page 5-1 for the recommended replacement interval for the fuel filter. Prior to the removal of the old filter, note the direction of fuel flow as indicated on the filter. Always use new fuel line clips.

Changing Fuel Filter

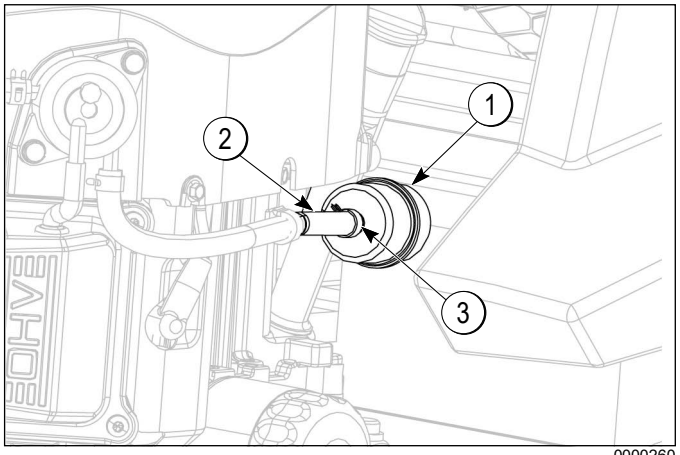
⚠WARNING

Gasoline is extremely flammable and the vapors are explosive. Perform service in a well-ventilated area or outdoors. Failure to follow this warning could cause serious injury or death.

NOTICE

All fluids should be handled and disposed of according to local, state, and federal regulations.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Locate the fuel filter (1) and note the direction of fuel flow (2).
3. Clamp the fuel line on both sides of the fuel filter using fuel line clamps (3).
4. Turn fuel shutoff valve to the OFF position. See “Fuel Shutoff Valve” on page 4-4.
5. Remove the fuel line clips (3) from each side of the fuel filter and remove the fuel filter.
6. Install the new fuel filter in the same direction as the old and install new fuel line clips into place.
7. Remove fuel line clamps (referenced in step 3) and turn fuel shutoff valve to the ON position.
8. Clean area of any spilled fuel.



0000260

Figure 6-11

Air Cleaner

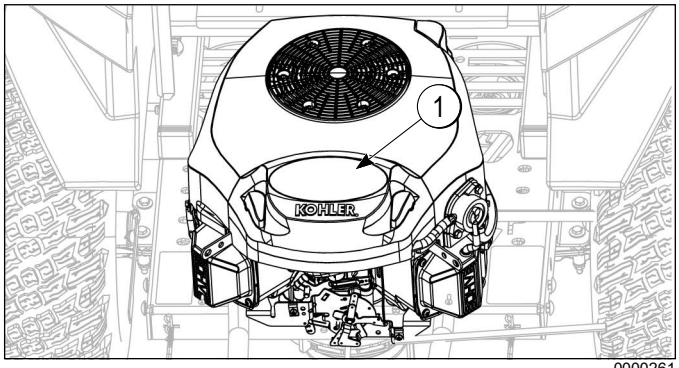
It is very important that the air cleaner element is inspected prior to each use. Remove the element and tap its sides in order to remove debris. Do not blow the filter out using compressed air. Doing so will greatly reduce the air cleaner’s effectiveness. For more information, see “Maintenance” on page 5-1 for the recommended replacement interval of the air cleaner. Adhering to these practices will help prevent loss of power and premature engine failure.

Changing Air Cleaner

⚠WARNING

Shut off engine, allow all moving parts to come to a complete stop, and allow to cool before performing service. Failure to follow this warning can cause serious injury or death.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Locate the air filter and remove the air filter cover (1).
3. Remove the paper element and pre-cleaner (if applicable).
4. Install paper element and install pre-cleaner onto new paper element.
5. Install paper element onto engine and install air filter cover.



0000261

Figure 6-12

Spark Plug

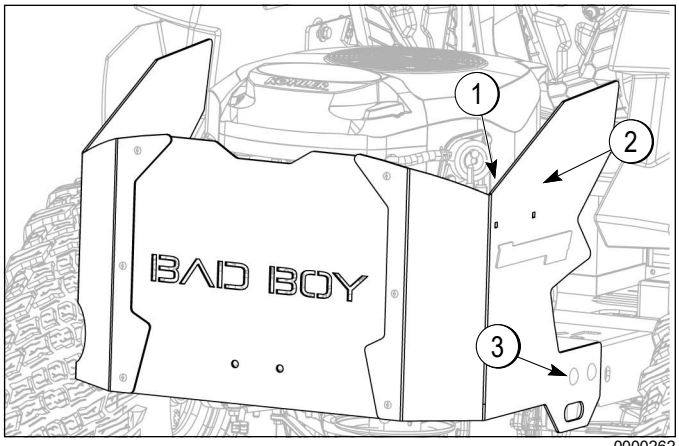
Changing Spark Plugs

For more information, see the engine Owner's Manual for spark plug locations.

⚠WARNING

Shut off engine, allow all moving parts to come to a complete stop, and allow to cool before performing service. Failure to follow warning can cause serious injury or death.

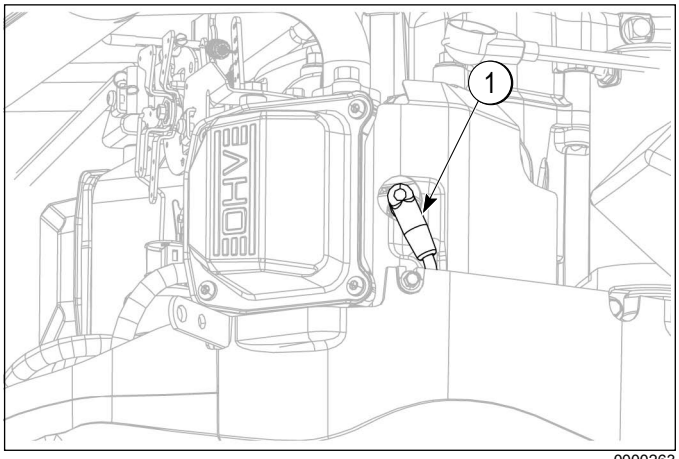
1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. In order to access the spark plugs (1), it is recommended to remove the rear engine cover (2). This can be accomplished by removing the four (two on each side of the rear engine cover) carriage bolts (3) using a 1/2 in ratcheting wrench.



0000262

Figure 6-13

3. Remove the spark plug wire (1) and use an appropriate socket to remove the spark plug.



0000263

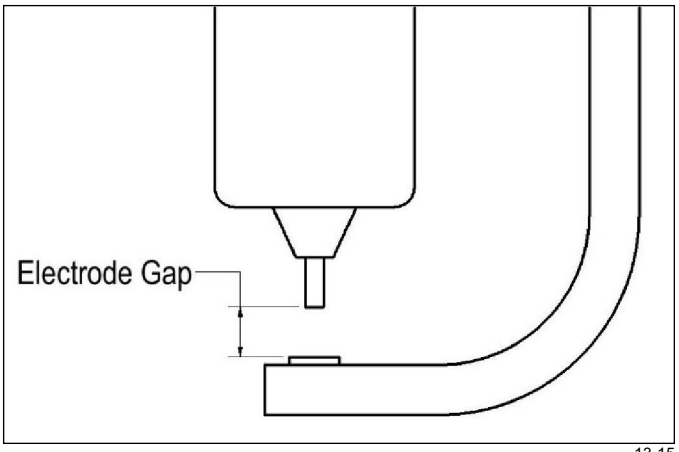
Figure 6-14

4. If the spark plug is worn, overheated, wet, or carbon-fouled, replace the spark plug.

5. Install the plug into cylinder head and tighten to the recommended specifications in the engine service manual. Be careful not to overtighten the spark plug.

Checking Spark Plug Gap

1. Remove the spark plugs from the engine. See “Changing Spark Plugs” on page 6-7.
2. If the spark plug is worn, overheated, wet, or carbon-fouled, replace the spark plug.
3. Check the gap of the spark plug by using a feeler gauge and set gap to the recommended value, for more information see the engine service manual.



13-15

Figure 6-15

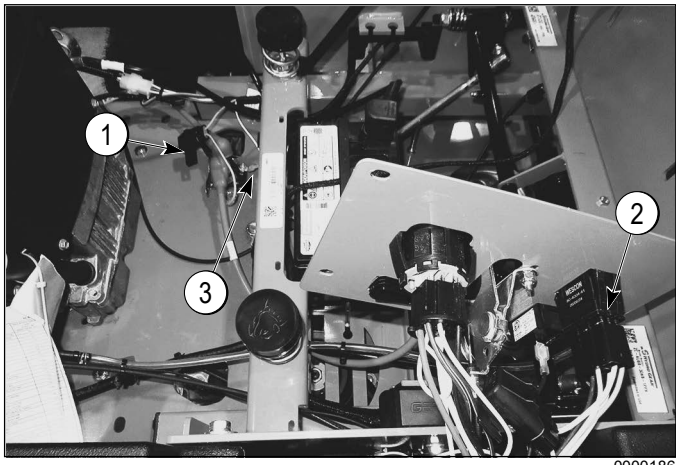
Electrical System

IMPORTANT: Check electrical wires and connections for signs of damage or corrosion. Battery terminals need to be clean and tight. Repair or replace any wires or connections that are damaged, loose, corroded, or frayed.

Fuses

A blown fuse usually indicates a problem within the electrical system or an electrical component. Never replace a fuse with one of a higher amperage rating or bypass a fuse in any way. Doing so creates a significant fire hazard and can cause severe damage to the machine's electrical components. If a fuse is repeatedly blowing, contact your Bad Boy dealer.

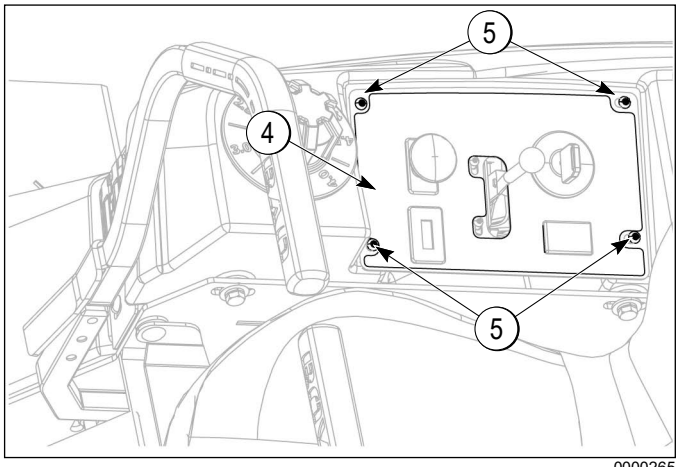
This machine is equipped with two protective fuses: a 25-amp main fuse (2) and a 10-amp power take-off (PTO) fuse (1) (blade engagement). The main fuse is located by the starter solenoid (3) and the PTO fuse is located just underneath the control panel.



0000186

Figure 6-16

In order to access the PTO fuse, take off the control panel (4) by removing four control panel screws (5) using a 1/8 in hex bit.



0000265

Figure 6-17

Battery

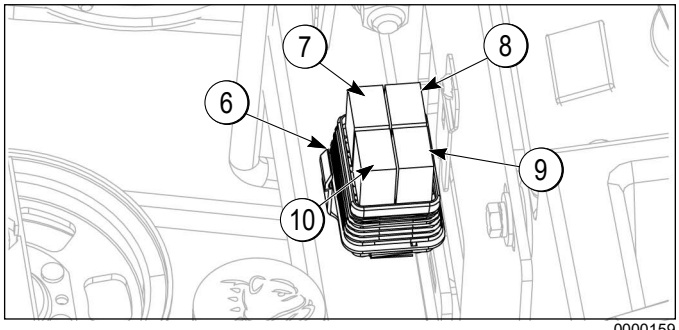
IMPORTANT: Check all wiring, components, and connections for damage. Battery terminals need to be kept clean and tight. Repair or replace any damaged or loose parts.

Battery voltage should be between 13.6–14.5 volts DC with engine at full throttle.

Battery voltage should be 12 volts DC minimum with engine off.

If you are having issues starting the machine, make sure the signal wire is connected to the starter solenoid.

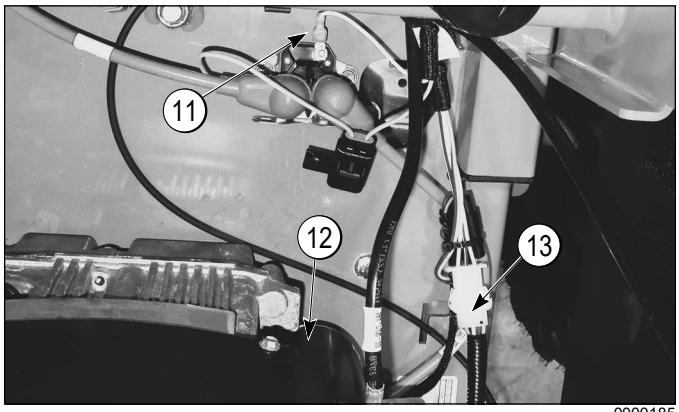
See Figure 6-18 and Figure 6-19 for typical layout of electrical components.



0000159

Figure 6-18

Item	Description
6	Relay Box
7	Starter Relay
8	Magneto Relay
9	Run Relay
10	Fuel Relay



0000185

Figure 6-19

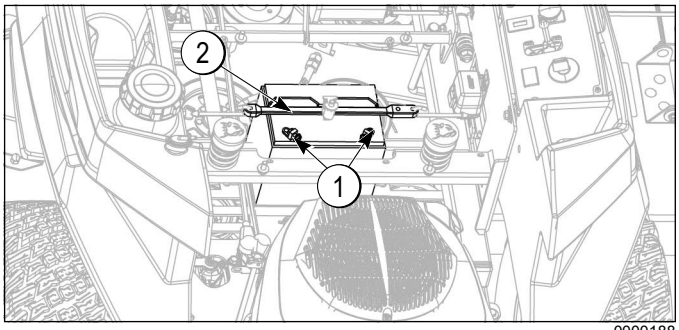
Item	Description
11	Starter Solenoid Signal
12	Starter
13	Engine Adapter

Battery Removal

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Raise the seat.

⚠CAUTION

Prevent electrical arcing. When disconnecting battery cables, always disconnect the negative battery cable first. Failure to follow this caution could result in machine damage or personal injury.



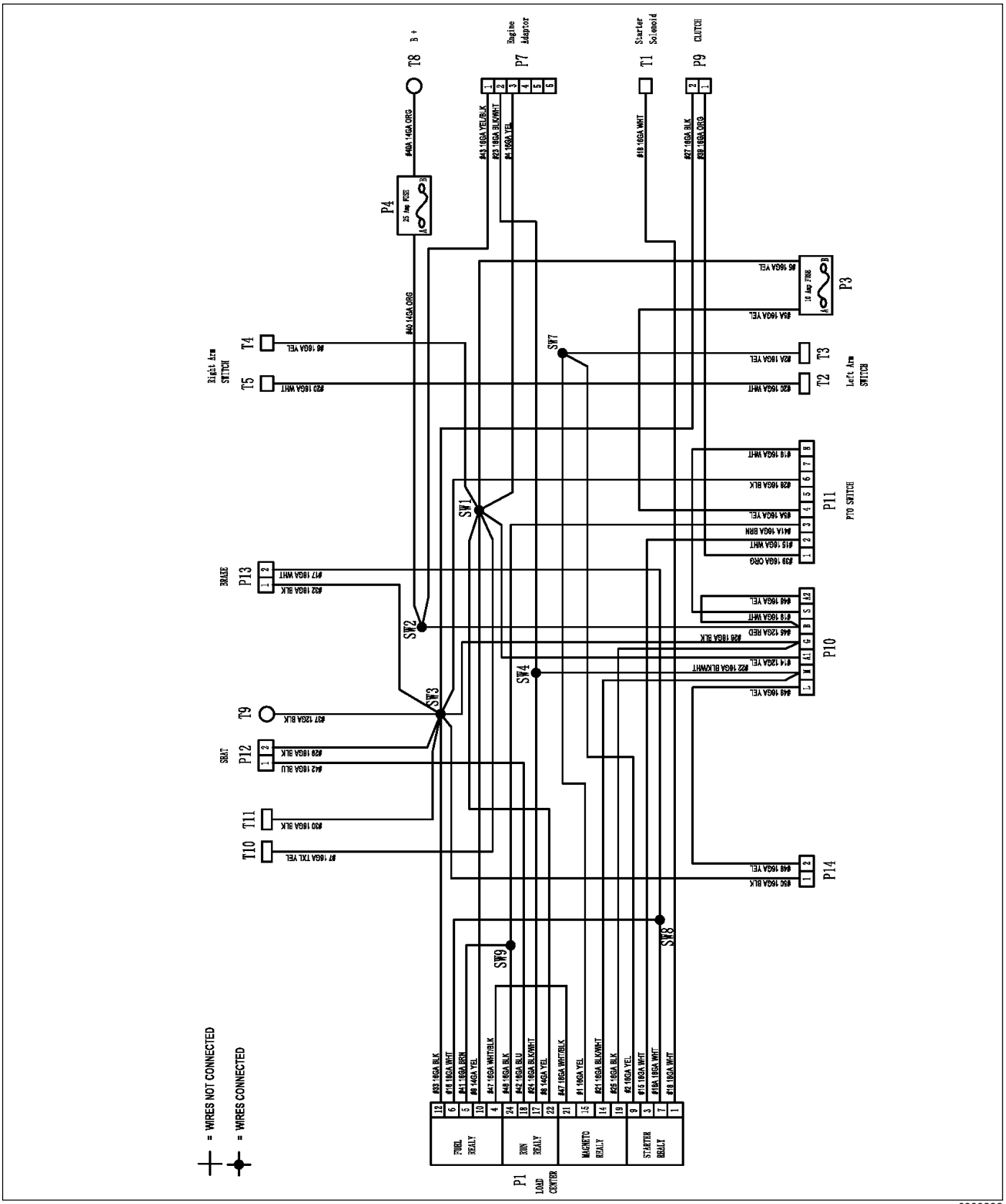
0000188

Figure 6-20

3. Disconnect the negative and positive battery cables (1).
4. Remove rubber battery strap (2) from machine frame.

Wiring Diagram

NOTE: *For a larger version of the diagram below, please visit badboycountry.com and click the Parts Manual section.*

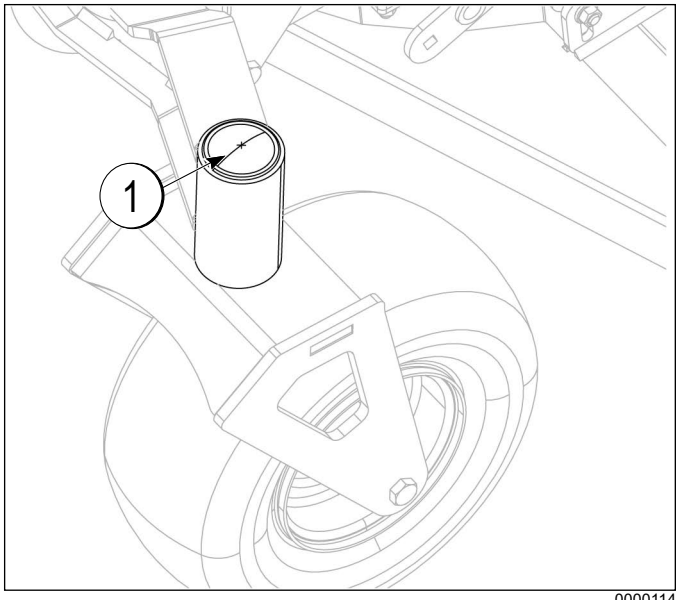


0000232

Figure 6-21

Caster and Wheel

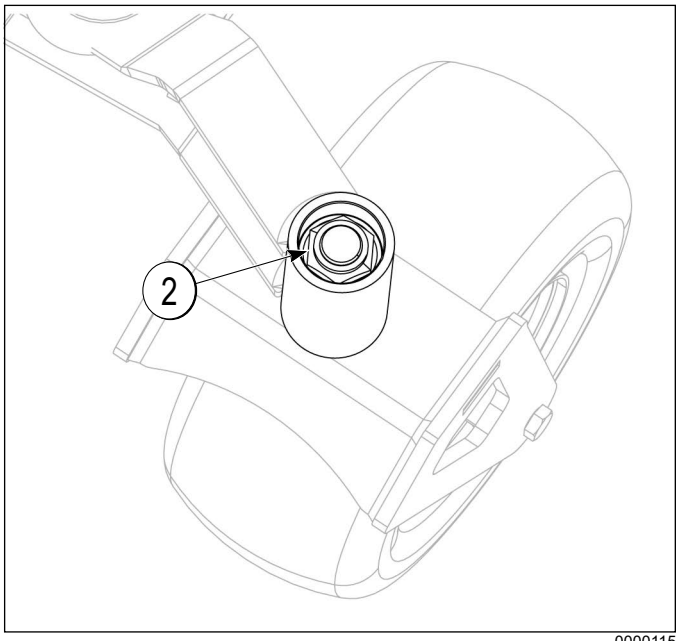
1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. To access the recessed front fork nuts, remove the dust cap (1) by prying gently using a flat-head screwdriver.



0000114

Figure 6-22

3. Once dust cap is removed, a 1-7/16 in socket will be needed for the front fork nut (2). Using a 1-1/2 in wrench, secure the bolt (3).
4. Tighten the front fork nuts to a torque of 100 ft-lb (135 N•m).
5. Install the dust cap by gently tapping around its edges. Do NOT hit center of cap.

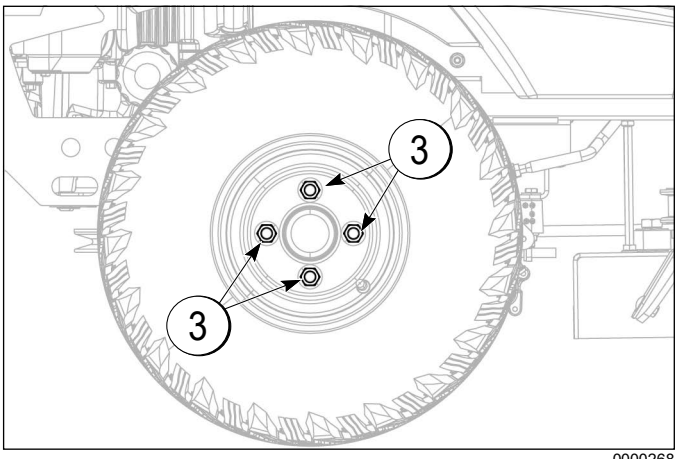


0000115

Figure 6-23

Wheel Lugs

Torque rear wheel lugs (3) to 65–75 ft-lb (88–102 N•m). Retorque at every oil change and before each use.

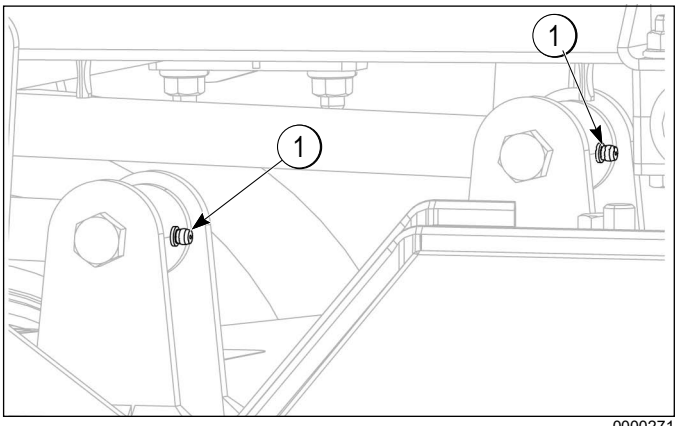


0000268

Figure 6-24

Grease Locations

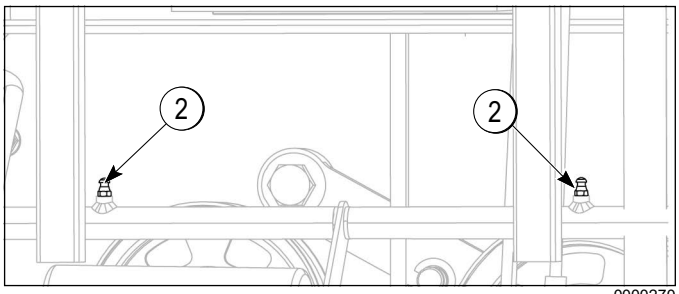
1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. There are two grease fittings (1) located on each of the two turnbuckles (four total). Grease at every oil change.



0000271

Figure 6-25

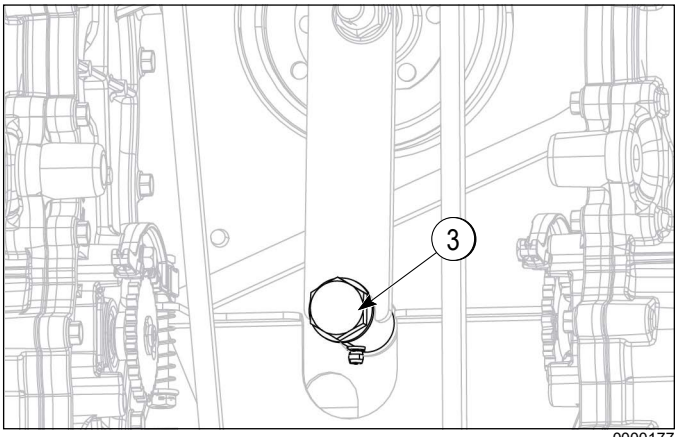
3. The control arm actuators have two grease fittings (2) located on each tube. Grease at every engine oil change.



0000270

Figure 6-26

4. The pump belt tensioner is located under the engine and has a grease fitting (3) at its pivot. Grease at every engine oil change.



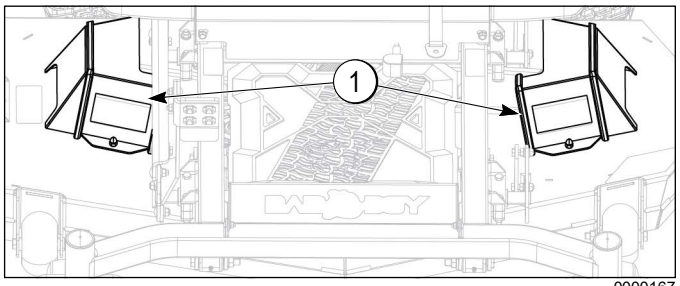
0000177

Figure 6-27

Cutting Deck

Deck Belt Removal

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Remove ignition key.
3. Raise the deck to its highest position.
4. Remove the pulley covers (1).



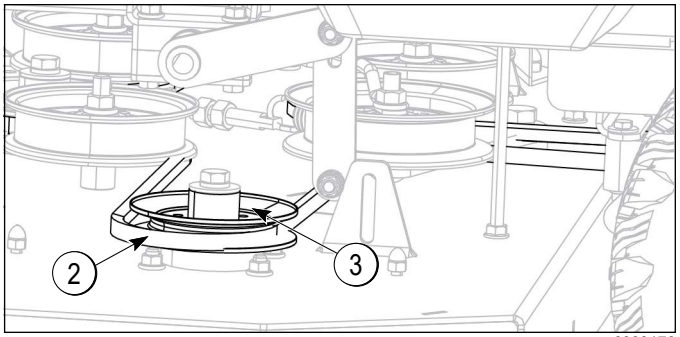
0000167

Figure 6-28

⚠CAUTION

Keep fingers and hands away from belt and pulley pinch points. Failure to follow caution instruction can cause serious injury.

5. Loosen belt tension.
6. While lifting up on the belt (2), carefully rotate the pulley (3) until the belt is free of the pulley.

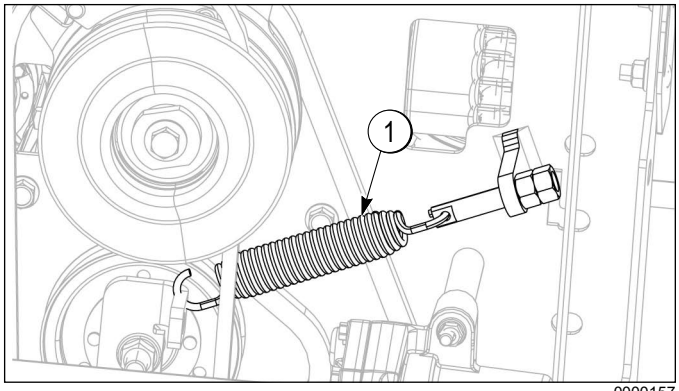


0000176

Figure 6-29

Deck Belt Installation

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Remove ignition key.
3. Raise the deck to its highest position. If needed, loosen the deck belt tensioner (1).



0000157

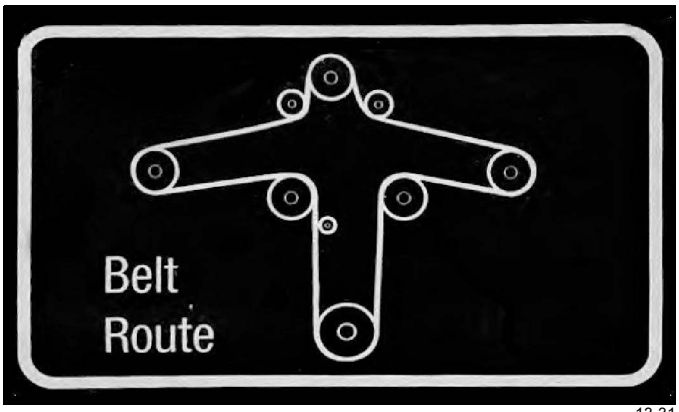
Figure 6-30

IMPORTANT: Improper belt routing can damage the spindles, engine, and increase the potential for personal injury.

⚠CAUTION

Keep fingers and hands away from belt and pulley pinch points. Failure to follow caution instruction can cause serious injury.

4. Remove both pulley covers and route the belt by following the belt route decal. Verify that the belt is routed properly.



13-31

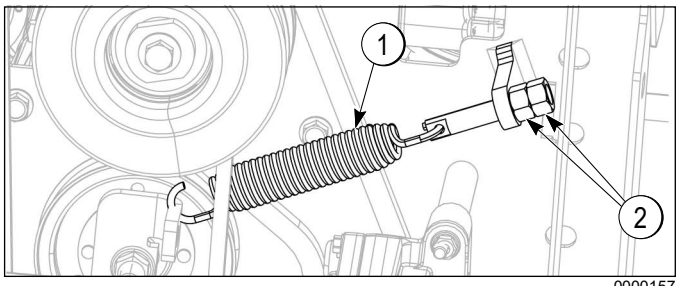
Figure 6-31

5. Check belt tension and adjust if needed. See “Deck Belt Tension Adjustment” on page 6-13.
6. Install both pulley covers.

Deck Belt Tension Adjustment

The deck spring tension is critical. If the tension is too high, premature failure of the deck belt and blade spindles can occur. If the tension is too low, the belt can jump off or slip on the pulleys. This results in reduced cut quality and early belt failure.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Adjustments to the deck belt tensioner (1) are made by using a 3/4 in wrench to adjust the two jam nuts (2).
3. Belt tension should be 70–75 lb (32–34 kg) with the deck at its lowest cutting height.
4. When tensioning a new belt, recheck belt tension after 30 minutes of cutting time.



0000157

Figure 6-32

5. Use a belt tension gauge to ensure the proper tension.

NOTE: *Your dealer or service center will have a belt tension gauge or you can purchase one by calling the Bad Boy Mowers parts department at 866-622-3269 (Part Number 041-9999-00).*

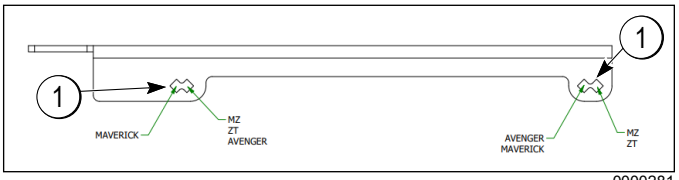


0000178

Figure 6-33

Leveling the Deck

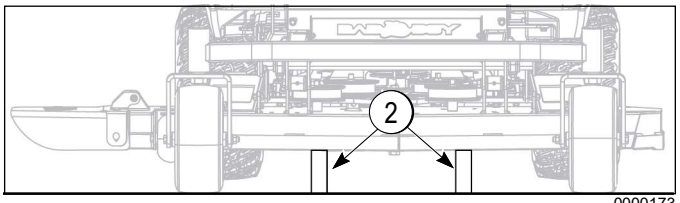
1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. Before leveling the deck, verify linkage bar is secured to actuator bars in the forward set of holes (1).



0000281

Figure 6-34

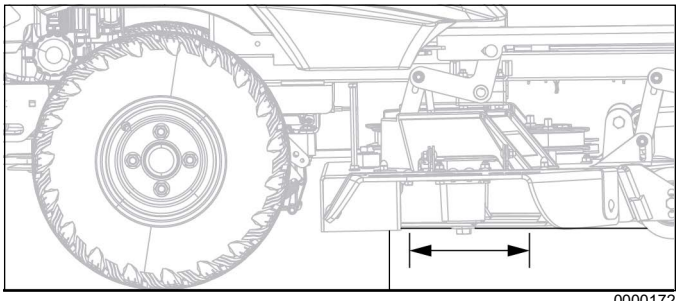
3. Start on a flat, level surface and ensure all four tires are properly inflated (See page 1-2).
4. Using a pair of approximately 3 ft (0.91 m) long 2x4's, stand the boards (2) on edge and slide them under the deck from front to back. Make sure that the deck wheels and blade bolts do not rest on the 2x4's, and the front and back edge of the deck rests on the 2x4's.



0000173

Figure 6-35

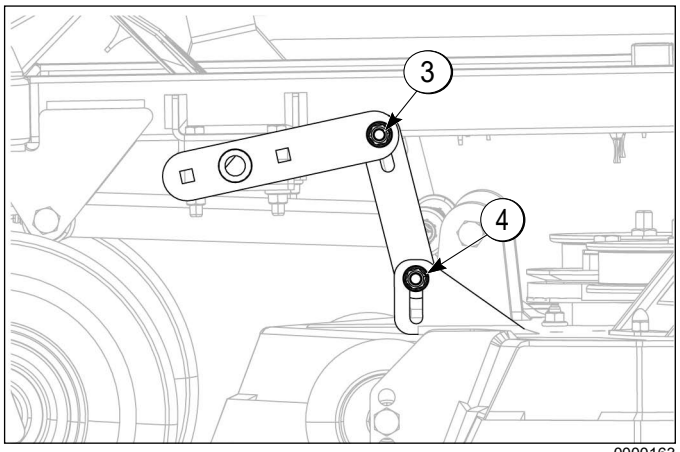
The deck pitch is achieved by measuring from the cutting edge of the blade to the ground. Bad Boy recommends having a 1/4 in pitch down in the front measured from the cutting edge of the blade. Adjustments can be made by adjusting the deck hangers in their slots.



0000172

Figure 6-36

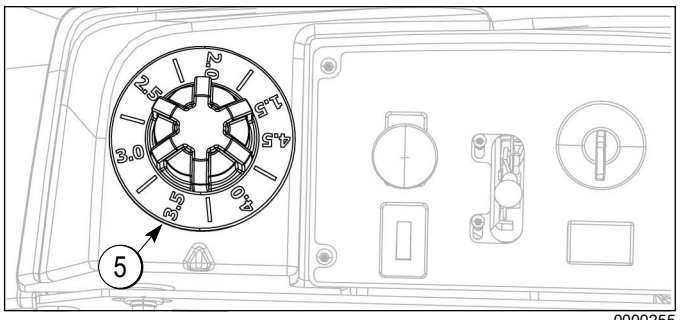
5. Lower the deck down onto the 2x4's using the deck lift pedal.
6. Check that the spindle bolts, blades, and striping kit (if equipped) are not between the deck and 2x4's.
7. The deck should now be approximately 3-1/2 in (8.9 cm) off the ground.
8. Using a pair of 9/16 inch wrenches, loosen all deck hanger bolts (4) on the top of the deck. These are the lower bolts in the slots of the deck. Do not loosen the upper bolts (3) that attach the deck hangers to the actuator lift bars.



0000163

Figure 6-37

9. The deck is now loose from the frame and movement of the lift pedal should only move the hanger bolts up and down in the deck slots.
10. Set the deck dial (5) to the 3.5 position. Tighten all deck hanger bolts in their slots, starting from the rear of the deck then moving to the front.
11. Lift the deck to the highest position. Measure the cutting edge of the blade to ensure that no further adjustments are necessary. The front cutting edge of the blade should be 1/4 inch lower than rear cutting edge of the blade.
12. Remove the 2x4's from the deck.



0000255

Figure 6-38

Mower Blade Removal

NOTE: *The blade bolt has right-handed threads.*

1. Park the machine on a flat, firm, and level surface. Engage the parking brake and turn the engine off.
2. To change blades, place a piece of wood (1) between the blade and mowing deck to keep the blade (2) from turning.
3. Using a 15/16 in socket and impact wrench, remove blade bolt (3) and blade.

NOTE: *Bad Boy recommends an impact wrench capable of an output torque of at least 220 ft-lb (298 N•m). A box wrench and extension can be used, although potential component damage may be increased.*

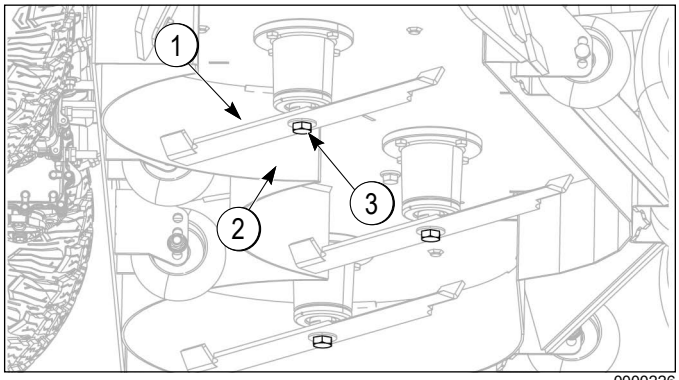


Figure 6-39

4. Installation is the reverse order of removal.
5. Upon installation of blade, tighten blade bolt to a torque of 90–110 ft-lb (122–149 N•m).

Page Intentionally Blank

Section 7 Transporting

Loading and Unloading

⚠WARNING

Loading or unloading a machine greatly increases the chance of the machine losing control and tipping over. Failure to follow these warnings could cause serious injury or death.

- **Use extreme caution when loading and unloading a machine.**
- **Do not load the machine on a trailer while the blades are engaged.**
- **Do not operate on slopes that exceed 15°.**
- **Do not use individual ramps to load the machine.**
- **Do not tow the machine. Use a winch to load on a trailer for transporting.**
- **Deck height should be set at maximum height before attempting to load.**
- **In wet conditions, tires may spin during loading/unloading. If necessary, wait for dry conditions before loading/unloading.**
- **Load the machine onto the trailer by driving in the forward direction.**
- **Never accelerate or decelerate suddenly while loading or unloading the machine on a trailer.**
- **Always secure the machine properly when transporting.**
- **Make sure parking brake is in the engaged position.**
- **Rotate fuel shutoff valve to the OFF position.**
- **Make sure the mode of transportation is suitable to bear the weight of the machine.**
- **Secure machine with four straps capable of securing the weight of the machine.**
- **Always ensure the machine engine and exhaust have cooled before parking inside an enclosure.**
- **Unload the machine off the trailer by backing down.**

Securing the Machine

⚠WARNING

Improper fastening during transportation may lead to machine movement and possible loss of load. Failure to follow this warning could cause serious injury or death.

1. Secure the machine to the truck or trailer using appropriate rated straps. Straps must be rated at 1.5 times the weight of the machine.

NOTE: *ZT Elite series machines weigh approximately 800–880 lb (329–399 kg). Weight will fluctuate with the addition of accessories.*

2. Attach a strap at both the left front and right front of the machine.
3. Attach a strap at both the left rear and right rear of the machine.
4. Securely fasten the machine to the truck or trailer at all four corners.
5. Secure the ends of the straps.

Moving Inoperable Machine

⚠CAUTION

Never try to push or pull the machine by hand. Failure to follow this caution could cause serious bodily injury.

1. ZT Elite models are equipped with two transaxle bypass rods located at the rear of the machine, protruding from the frame and under the muffler.
2. By pulling the rods out, the machine can be put in a neutral position. Return the rods to the forward position for normal operation. For more information on the neutral bypass rods, see “Transaxle Bypass” on page 6-4.
3. The machine can be moved for a short distance with the engine off, the parking brake released, and the transaxle bypass rods in the neutral position.
4. Do not tow the machine onto a trailer. Use a winch to load on a trailer for transporting.

NOTE: *ZT Elite series machines weigh approximately 800–880 lb (329–399 kg). Weight will fluctuate with the addition of accessories.*

Section 8 Storage

Storage Procedure

Fuel can harm the machine if left for more than 30 days without changing, especially if the fuel contains ethanol. Never use fuel with more than 10% ethanol by volume. E-15 is not permitted.

⚠WARNING

Do not store equipment with fuel in tank or carburetor in an enclosure with an open flame. Fuel or vapors may ignite causing an explosion. Failure to follow this warning could cause serious injury or death.

Below is a list of items to perform before extended storage:

1. Thoroughly clean the machine including the machine deck of any debris.
2. Grease the machine.
3. Replace any worn or damaged parts.
4. Store the machine in a dry, protected shelter.
5. Drain all fuel from the fuel tank and lines.
6. Start the engine and run until all of the fuel is used from the carburetor float bowl.
7. While engine is warm, drain the engine oil and fill with the proper weight of oil.
8. Remove the spark plugs and squirt a small amount of engine oil into the cylinders. Turn the engine over a few times to distribute the oil.
9. Remove the battery. Store it in a cool, dry place above freezing temperatures, and charge it periodically during storage.
10. Clean and oil the cutting blades to prevent rust.
11. Make sure parking brake is in the engaged position.

Page Intentionally Blank

FAQ

1. **Q: How do I prevent an uneven cutting pattern and increase the quality of cut?**

   A: Check tire pressure, check blade sharpness (replace blades or sharpen at least once per year or when needed), make sure blades are tightened properly, check spring and belt tension, check the underside of the deck to ensure the machine deck is free of grass buildup and debris, make sure the machine is at full throttle, and vary the mowing pattern each time you cut the grass.

2. **Q: What should I do if the machine will not start?**

   A: Check battery charge and connection (grounds), check the fuel (make sure fuel is less than 30 days old and contains no water), make sure the spark plug is in good condition and spark plug wire is attached, make sure air filter is clean (a dirty filter makes it more difficult for the engine to draw air), check the integrity of the 25-amp main fuse, and check for any bare wires and/or bad connections.

3. **Q: What should I do if the blades will not engage?**

   A: Make sure the safety switch is plugged in on the bottom of the seat. Check the underside of the blade power switch to ensure the plug is secure at the switch. Also, check the PTO fuse underneath operator console (10-amps).

4. **Q: Are the blade bolts right-handed thread?**

   A: Yes. These bolts require counterclockwise rotation to remove.

Page Intentionally Blank

Section 10 How to Choose the Right Blade

Choose the Right Blade

Essentially there are only TWO basic styles of mowing blades used or approved for use on our current products:

1. The standard style of mowing blade is designed for cutting grass and effectively discharging the clippings out from the deck to fall onto the lawn or to be captured in a grass collection system. Standard blades are also referred to as “2-in-1” (discharging and bagging) or “high-lift” blades (because they are designed to create a higher-lifting airflow).
2. Mulching blades generally have a more curved style surface and frequently include extra cutting surfaces along the blade edges. These blades may also come in a “+” design, which is actually two individual blades arranged in a perpendicular fashion to enhance mulching. The “+” blades are usually found on older style machines; newer ones utilize blades with more advanced mulching technology. Mulching blades may also be referred to as “3-in-1” (mulching, discharging, and bagging) or “all-purpose” blades.

Bear in mind that the re-circulating airflow design of 3-in-1 blades make them less efficient at discharging grass clippings than a standard 2-in-1 blade. As with most all-purpose tools, there is some give and take as opposed to using a tool designed for a more specific purpose.

If you are experiencing less-than-desired cutting or discharging performance with a 3-in-1 blade, you may want to check into using a 2-in-1 blade. Conversely, if you are using a 2-in-1 blade and want to mulch clippings, you should see about the availability of mulching blades or a mulching kit.*

The type of blade installed on a new machine is a decision the retailer makes for each model of machine, based on the expected needs of most customers. If you are unsure of which blade is on a particular model, inspect the blade. Blades have part numbers stamped into them. Then compare these part numbers with the unit’s Operator’s Manual or Parts List.

While there are many other blade styles available, Bad Boy cannot recommend the use of aftermarket blades. Should you want more information on special application or aftermarket blades, please contact the companies that manufacture the blade.

NOTE: *Customers that use blades that are not Bad Boy blades are placing themselves at risk. The use of unapproved blades may void any or all warranty for both machine and engine.*

* MULCHING KITS – These generally consist of mulching blades and a mulching plug (which closes off the discharge opening to keep the clippings contained under the deck for recutting) plus any necessary hardware for installation. Please check with your parts distributor regarding the contents of a particular mulching kit.

Page Intentionally Blank

Section 11 Mowing Tips

Tips

- Mow header strips at the ends of the lawn and around flower beds first. Make them wide enough that you can turn the machine around in the already mowed section. Then mow back and forth between these header strips, overlapping each lap by about 1/8 the width of the machine's deck.
- Do not cut the grass too short, particularly for cool season grasses. Higher heights usually provide for a deeper root system, looks better, and is less likely to have weeds invading; particularly crabgrass.
- Do not remove any more than 1/3 of the grass leaf at any one cutting. If circumstances arise that a lawn gets too tall and you just have to lop off a bunch to get caught up, bite the bullet and break it down into several mowings to get caught up with three or so days between cuttings.
- NEVER SCALP YOUR LAWN. Scalping severely damages the root system to such a degree that it may die.
- Avoid mowing when the grass is wet or when it is dark.
- Avoid throwing grass clippings into the street and driveway where they can be washed into the sewer system. After mowing, clean up driveway and walkways.
- When mowing, remove only a 1/3 of the blade with each cutting (except for the first mowing of the season when it's OK to remove more). You can safely leave clippings that will quickly decompose and add nutrients back into the soil. Contrary to popular opinion, grass clippings do not add to thatch buildup. Blades of grass are made up of about 75% water.
- Mow the lawn in a different direction with each mowing, especially with lawns of shorter grass types. Altering the direction ensures a more even cut since grass blades will grow more erect and less likely to develop into a set pattern.
- Keep the machine's blade sharp, which means having it sharpened several times during the mowing season. Keep several blades around so you will always have a sharp one on hand. Sharp blades cut the grass cleanly and help mulch clippings into small pieces, which break down quickly.
- Do not forget to change the machine's oil at least once during the mowing season. For brand new machines, change the oil after about 5 hours of operation during the initial break-in period.
- At the end of the mowing season, use a fuel stabilizer in the remaining gasoline.
- In the spring, do not use the old gas unless you properly used a fuel stabilizer; it can cause a number of problems. Better to use fresh gasoline to begin the new mowing season.
- Grass blade A demonstrates what a grass blade should look like after mowing with a sharp blade.
- Grass blade B demonstrates a grass blade that was injured by a dull machine blade.
- Grass blade C was cut by the machine but indicates that the machine blade is not sharp enough. The shredded white tissue protruding from grass blades C and D is the vascular tissue of the plant.
- Grass blade D has been mowed for quite some time with a dull machine blade.



12-1

Figure 11-1

Bag or Mulch

Grass clippings do not contribute to thatch buildup or increase the chances of disease. If you mow the lawn at the right height, without removing any more than 1/3 of the grass blade, clippings will quickly breakdown without a trace. These clippings contribute additional nitrogen and other nutrients to the soil and supply it with additional organic materials. Clippings from a 1000 sq ft lawn can add as much as 1–2 pounds of nitrogen back into the soil. If you have a compost pile, then you may want to bag the clippings occasionally to add much needed green-matter to the compost pile. Make sure it is mixed thoroughly with brown matter to avoid a strong ammonia odor. **DO NOT COMPOST CLIPPINGS** after applying any weed control or weed-feed type product. Before adding clippings to the compost pile, wait at least three mowings after these products have been applied.

Section 12 Limited Warranty

1. WHAT THIS WARRANTY COVERS, AND FOR HOW LONG:

Bad Boy Mowers, LLC will, at its option, repair or replace, without charge, any part covered by the warranty which is found to be defective in material and/or workmanship for two (2) years or (200) hours* after the date of sale to the original retail purchaser **unless the product is used for rental purposes, in which case there is no warranty**.

The leading edge of the deck shell will be warranted for the entire lifetime of the machine to the original purchaser against defects in materials and workmanship. Labor required to repair or replace the leading edge of the deck shell will be covered by Bad Boy Mowers, LLC for the first year and at the owner's expense during the balance of the lifetime of the machine.

Belts are warranted for a period of ninety (90) days against materials or workmanship defects.

Seats are warranted for a period of two (2) years against material or workmanship defects.

At Bad Boy Mowers, LLC's request, customer will make the defective part available for inspection by Bad Boy Mowers, LLC and/or return the defective part to Bad Boy Mowers, LLC **transportation charges prepaid**.

2. WHAT THIS WARRANTY DOES NOT COVER:

A. This warranty does not cover defects caused by depreciation or damage caused by normal wear, accidents, improper maintenance, improper use or abuse of the product, alterations, or failure to follow the instruction contained in the Owner's Manual for operation and maintenance.

B. The customer shall pay any charges for making service calls and/or for transporting the machine to and from the place where the inspection and/or warranty work is performed. **Bad Boy Mowers LLC will not be responsible for the pickup and delivery of a machine for warranty purposes**.

C. Engines are warranted separately by their respective manufacturer. The available warranties covering this item are furnished with each machine. Bad Boy Mowers, LLC does not assume any warranty obligation, liability, or modification for this item, which is covered exclusively by the stated warranty of the respective manufacturers.

D. Tires, blades, deck anti-scalping wheels, and dust covers are considered to be consumable wear items and are therefore not warranted.

E. Batteries are warranted for 6 months (free replacement) from the retail purchase date against materials or workmanship defects. The battery warranty must be obtained through the battery manufacturer.

F. Normal maintenance services such as oil change, cleaning, lubrication, and adjustments.

G. Replacement of services and items, such as oil, lubricants, spark plugs, belts, rubber hoses, or other items are subject to normal service replacement.

3. HOW TO OBTAIN SERVICE UNDER THIS WARRANTY:

A. Warranty service can be arranged by contacting the dealer where you purchased the machine. Proof of the date of purchase may be required to verify warranty coverage. Warranty repairs must be completed by an authorized Bad Boy center.

B. W**arranty claims will not be reviewed or paid unless the warranty registration is received by Bad Boy Mowers, LLC within 30 days of the retail purchase date**.

C. Warranty claims requiring parts returned will be settled upon return of parts to Bad Boy for inspection.

D. All warranty issues must be handled through an authorized service center or dealership.

4. WARRANTY LIMITATION:

A. **THERE IS NO OTHER EXPRESS WARRANTY. ANY WARRANTY THAT MAY BE IMPLIED FROM THIS PURCHASE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IS HEREBY LIMITED TO THE DURATION OF THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW. ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED**. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

B. **BAD BOY MOWERS, LLC WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES AND/OR EXPENSES IN CONNECTION WITH THE PURCHASE OR USE OF THE MACHINE**. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you.

C. Only the warranty expressed in this limited warranty shall apply and no dealer, distributor, or individual is authorized to amend, modify, or extend this warranty in any way. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by Bad Boy Mowers, LLC and should not be relied on.

D. This warranty extends only to turf equipment operated under normal conditions and properly serviced and maintained. The warranty expressly does not cover (i) any defects, damage, or deterioration due to normal use, wear and tear, or exposure; (ii) normal maintenance services such as oil change, cleaning, lubrication, and adjustment; (iii) replacement of services and items such as oil, lubricants, spark plugs, belts, rubber hoses, or other items subject to normal service replacement; (iv) damage or defects arising out of or relating to misuse, neglect, alteration, negligence, or accident; (v) repair or replacement arising from operation of or use of the turf equipment which is not in accordance with operating instructions as specified in the Operator's Manual or other operational instructions provided by Bad Boy Mowers LLC; (vi) repair or replacement arising as a result of any operation from turf equipment that has been altered or modified so as to, indetermination of Bad Boy Mowers, LLC, adversely affect the operation, performance, or durability of the equipment or that has altered, modified, or affected the turf equipment so as to change the intended use of the product; (vii) repair or replacement necessitated by use of parts, accessories, or supplies, including gasoline, oil, or lubricants that are incompatible with the turf equipment or other than as recommended in the Operator's Manual or other operational instructions provided by Bad Boy Mowers, LLC; (viii) repairs or replacements resulting from parts or accessories which have adversely affected the operation, performance, or durability of the turf equipment; or (ix) damage or defects due to or arising out of repair of turf equipment by person or persons other than an authorized Bad Boy Mowers, LLC service dealer or the installation of parts other than genuine Bad Boy Mowers, LLC recommended parts. **As a condition to this warranty, customer shall have read the Operator's Manual and ensured the machine has been registered within 30 days of purchase.**

E. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

BAD BOY MOWERS, LLC
102 INDUSTRIAL DRIVE
BATESVILLE, AR 72501

WWW.BADBOYCOUNTRY.COM

Technical Support:..... techsupport@badboycountry.com

Warranty:..... warranty@badboycountry.com

Parts:..... partsdept@badboycountry.com

Warranty Registration

Ensure selling dealership has registered machine within 30 days of purchase to validate warranty.
Please record the serial number, date of purchase, and dealership information for your records.

Serial # _____

Date of Purchase _____

Dealer Information _____



BAD BOY MOWERS

www.badboycountry.com

Bad Boy Mowers, LLC
102 Industrial Drive
Batesville, Arkansas 72501