27

BAD BOY MOWERS



REBEL

ZERO-TURN MOWER

OWNER'S OPERATOR SERVICE MANUAL

For additional information, please see us at

www.badboycountry.com

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PN 088-7012-27

REV A

Disclaimer

This document is based on information available at the time of its publication. While efforts have been made to ensure accuracy, the information contained herein does not purport to cover all details or variations, nor to provide for every possible contingency in connection with installation, operation, or maintenance. Features may be described herein which are not present in all systems. Bad Boy Mowers, LLC assumes no obligation to notify holders of this document of any changes made subsequently.

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Read and Understand



Read and follow all instructions and safety precautions in this manual and all other manuals for products associated with this machine as well as in all on-product warning decals. Failure to do so could result in serious injury or death, or property damage. Contact your Bad Boy Mowers, LLC dealer if any of your manuals are missing or illegible or you have questions.

Preface

This manual is intended for use with the following mower models.

BRBSD54ZT740	BRBSD61ZT740	BRB54EVO781	BRB61EVO820	BRB72EVO820
BRB54FX850	BRB61FX850	BRB6135KA	BRB7235KA	BRBA61385KA
BRBC54EVO781	BRBC61EVO820	BRBC72EVO820	BRBX61385KA	BRBX72385KA
BRBX6140EVG	BRBX7240EVG			

Revision History

Issue	Date	Reasons For Change
Rev A	10/30/26	Model Year change over

BASIC INFORMATION 1-1

Machine Information 1-1
Model and Serial Number 1-1
QR Code 1-1
Parts and Service 1-1
Warranty 1-1
Warranty Registration 1-1
Evaporative Emission Control Warranty Statement 1-1
Specifications 1-3
Torque Specifications 1-5

SAFETY 2-1

Safety Symbols 2-1
Machine Safety Guidelines 2-1
Machine Decals 2-1
Personal Protection Equipment (PPE) 2-3
Hearing Protection 2-3
Eye Protection 2-3
Foot Protection 2-3
Hand Protection 2-3
Clothing 2-3
General Operation 2-3
Roll-Over Protection Structure (ROPS) 2-4
Safety Interlock System 2-5
Fueling 2-5
Slope Operation and Guide 2-5
Children 2-6
Service 2-7
Environmental 2-7
Battery 2-8
Towing 2-8
Transporting 2-8
Storage Safety 2-8

CONTROLS 3-1

Machine Overview 3-1
Analog Control Panel 3-2
Digital Control Panel 3-3
Display Overview 3-4
Main Screen 3-4
Service Reminders 3-5
Brightness 3-6
System Information 3-6
Display Mode 3-6
Language Selection 3-7

PRE-OPERATION 4-1

Fuel 4-1
Fuel Shutoff 4-1
Fueling 4-1
Drive Arms 4-1
Height 4-2
Distance 4-2
Seat 4-2
Distance Adjustment 4-2
Suspension Adjustment 4-2
Foot Pedal 4-3
Pedal Distance 4-3
Pedal Side 4-3
Pedal Height 4-4
ROPS 4-4
Inspection 4-5
Folding ROPS Down 4-5
Raising ROPS to Operating Position 4-6
Deck Height 4-7
Safety Interlock System 4-7

OPERATION 5-1

Starting the Machine 5-1
Drive Arms 5-2
PTO Switch 5-3
Troubleshooting 5-4
Starting / No-Start 5-4
Engine Issues 5-5
Cutting Quality 5-6
Blades Will Not Engage 5-7
Drive and Steering Issues 5-8
Electrical Issues 5-8
Excessive Vibration or Unusual Noise 5-9
Choosing the Right Blade 5-10
Storage 5-10
Battery 5-10

MAINTENANCE 6-1

Maintenance Schedule 6-1
Debris Removal 6-2
Hydrostatic System 6-3
Engine Oil 6-3
Blades 6-3
Battery 6-3
Maintenance Log 6-5

SERVICE 7-1

Commonly Used Parts 7-1
Blades 7-1
Belts and Filters 7-1

Engine Filters and Spark Plug 7-1
Oils 7-2
Service Schedule 7-2
Hydrostatic System 7-3
Fluids 7-3
Volume and Level 7-3
Checking the Fluid Level 7-3
Changing Hydrostatic Fluid 7-3
Purging Procedures 7-4
Transaxle Bypass 7-5
Tracking Adjustment 7-6
Pump Belt Adjustment 7-6
Engine 7-7
Engine Oil 7-7
Engine Oil Filter 7-8
Fuel Filter 7-8
Air Cleaner 7-9
Spark Plug 7-9
Park Adjustment 7-10
Electrical System 7-10
Fuses 7-10
Relay-Controlled Interlocks 7-10
Starter Signal Solenoid 7-10
Battery 7-10
Wheels 7-11
Front Caster 7-11
Wheel Lugs 7-12
Lubrication 7-12
Cutting Deck 7-13
Deck Belt Removal 7-13
Deck Belt Installation 7-14
Deck Belt Tension Adjustment 7-14
Leveling the Deck 7-15
Blade Removal 7-16
Decals 7-16

TRANSPORTING 8-1
Loading 8-1
Unloading 8-1
Moving Inoperable Machine 8-2

LIMITED WARRANTY 9-1

SECTION 1 BASIC INFORMATION

Machine Information

Congratulations on the purchase of your new Bad Boy Rebel, engineered and built to deliver a superior cut every time! The purpose of this manual is to assist operators in maintaining and operating the 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 and Serial Number

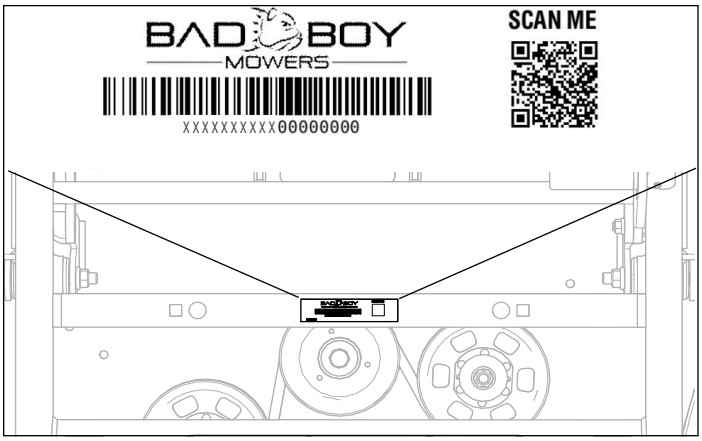


Figure 1: Serial Label Under Floor Board

Your machine model and serial numbers are printed on the decal located underneath the seat and under the floor board. The entire alphanumeric code is your serial number. To find your model number, leave the last eight digits off of the serial number. Record the serial number information here to have it ready when ordering parts.

Serial Number: _____

Date of Purchase:_____

Dealer Information:_____

QR Code

Scan the QR code located on your machine's serial number decal using your smartphone camera to access your MyBadBoy owner portal.

Once your machine is registered, your MyBadBoy portal gives you access to the following resources:

- Owner information
- Dealer information
- Operator's manual
- Mr. Know It All — troubleshooting, FAQs, and best practices
- Maintenance information
- Shop Bad Boy

Parts and Service

Bad Boy recommends using genuine Bad Boy replacement parts on your mower. Replacement parts are available through your local Bad Boy dealer or at www.badboycountry.com. When ordering parts, please have your model and serial number ready as recorded above.

Routine service such as changing fluids and replacing filters and belts can be performed following the "Service Schedule". For all other service and repairs, contact your authorized Bad Boy dealer.

All warranty repair and service must be handled through your authorized Bad Boy dealer. To locate the nearest dealer, go to www.badboycountry.com and click on "FIND A DEALER."

Warranty

Warranty Registration

The warranty registration must be completed within 30 days of purchase to validate your warranty. As a new equipment owner, it is your responsibility to ensure warranty registration is completed.

Purchased through an authorized Bad Boy dealer: Warranty registration should be completed by your selling dealer at the time of delivery. Please confirm registration has been completed with your dealer by scanning your QR code on the serial number decal.

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 2027 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

OUR 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 2027 model year 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 Mowers 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

Specifications

The following specifications apply to all configurations unless otherwise noted. Specifications that vary by cutting width are listed separately. Use the table at the end of this section to identify your unit's cutting width, engine, and transaxle based on your model number.

Length	92 in	Towing Capacity	500 lbs
Cutting Height	1 - 5 in	Towing Capacity @ 5 degree incline	440 lbs
Fuel Capacity	13 gal	Tongue Weight	75 lbs
Deck Metal Thickness	1/4 in		

	Cutting Width (in)	Weight (lbs)	Height, ROPS Down (in)	Height, ROPS Up (in)	Chute Up (in)	Chute Down (in)
Rebel SD	54	1,257	50	76.2	56.5	68.5
	61	1,382	50	76.2	63.5	75.5
Rebel	54	1,257	50	76.2	56.5	68.5
	61	1,382	50	76.2	63.5	75.5
	72	1,419	50	76.2	74.5	86.5
Rebel X	61	1,494	50	75.6	63.5	75.5
	72	1,531	50	75.6	74.5	86.5

Tires

Front Tire Size	13x6.50-6	
Rear Tire Size	Rebel, Rebel SD - 24x12-12	Rebel X - 24” VPO
Front Tire Pressure	N/A	
Rear Tire Pressure	12 psi	

Model	SKU	Cutting Width	Engine	Transaxle
Rebel SD	BRBSD54ZT740	54 in	Rehlko Confidant ZT740	
	BRBSD61ZT740	61 in	Rehlko Confidant ZT740	
Rebel	BRB54EVO781	54 in	Kawasaki EVO781 EFI	4400
	BRB61EVO820	61 in	Kawasaki EVO820 EFI	
	BRB72EVO820	72 in	Kawasaki EVO820 EFI	
	BRB54FX850	54 in	Kawasaki FX850	
	BRB61FX850	61 in	Kawasaki FX850	
	BRB6135KA	61 in	Kawasaki FX1000	
	BRB7235KA	72 in	Kawasaki FX1000	
	BRBA61385KA	61 in	Kawasaki FX1000 EFI	
	BRBC54EVO781	54 in	Kawasaki EVO781 EFI	
	BRBC61EVO820	61 in	Kawasaki EVO820 EFI	
	BRBC72EVO820	72 in	Kawasaki EVO820 EFI	
Rebel X	BRBX61385KA	61 in	Kawasaki FX1000-EFI	5400
	BRBX72385KA	72 in	Kawasaki FX1000-EFI	
	BRBX6140EVG	61 in	Vanguard 40HP	
	BRBX7240EVG	72 in	Vanguard 40HP	

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

SECTION 2 SAFETY

Safety Symbols

Hazard alerts in this manual are used to alert operators, bystanders, and service personnel to hazardous operating and maintenance practices. Each hazard alert contains a hazard-alert symbol and a signal word that identifies the severity of the hazard if the warning is not followed.

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 or anyone under the age of 16 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 could be 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 purpose.

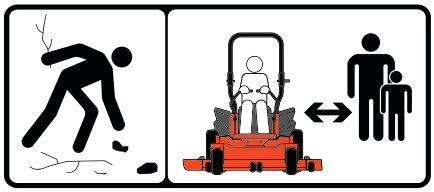
Decal, Main Safety
PN: 091-3152-00



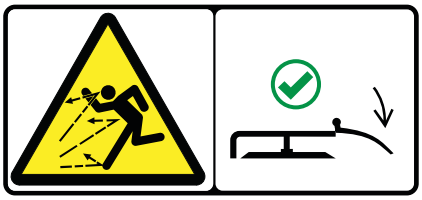


- Read operators manual before use of the machine.
- Do not operate the machine without being trained.

- Wear proper eye and ear protection when operating the machine.



- Remove objects in mowing area prior to operating the machine.
- Keep safe operating distance from people, animals, objects, and buildings.
- Stop machine when children or others are near.



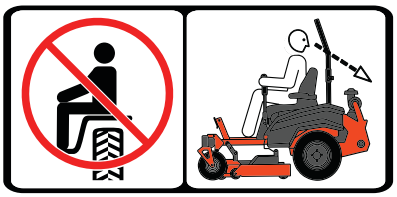
Thrown Objects Hazard

- Keep discharge chute down and in place while operating to avoid objects being thrown from the machine.
- Do not mow without discharge chute in place.



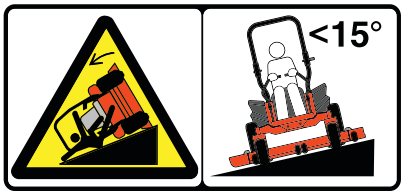
Amputation Hazard

- Keep hands and feet away from rotating parts.
- Do not operate unless all guards are in place.



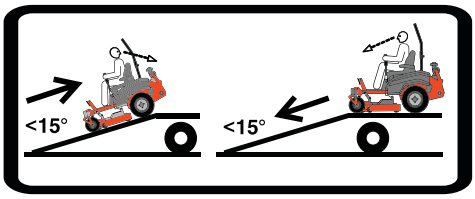
Operation Hazard

- Do not carry passengers, especially children. They may fall off or return for another ride when you are not expecting it.
- Look down, behind, and to the side while backing up.



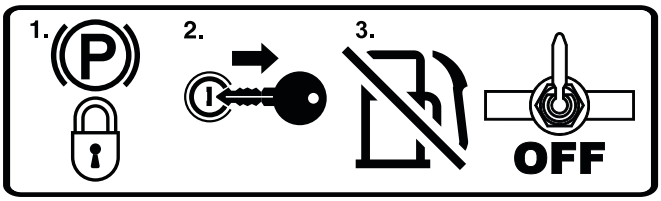
Roll-over Hazard

- Operating on slopes and wet grass can cause instability issues resulting in loss of control and possible rollover.
- Do not operates on slopes over 15 degrees.
- Reduce speed and use extreme caution on slopes.



Transporting Hazard

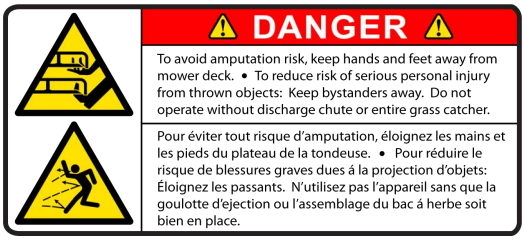
- Do not operate on any loading surface/ramp exceeding 15 degrees.
- Never use individual ramps to load or unload the machine.
- Raise deck to highest height before loading.



Shut Down Procedures

- Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
- Turn the fuel shutoff valve to the OFF position.

Decal, Cutting Deck Safety
PN: 091-3034-00



Decal, California Prop 65
PN: 091-0027-00



Personal Protection Equipment (PPE)

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

Hearing Protection



Always wear hearing protection, such as earplugs or earmuffs with a noise reduction rating (NRR) of 25 dB or higher, when operating the machine. Prolonged exposure to loud noise can cause permanent hearing impairment or loss of hearing.

Eye Protection



Always wear safety glasses, goggles, or a face shield that meets ANSI Z87.1 standards when operating or servicing the machine. Flying debris, dust, and other hazards can cause serious eye injury or permanent vision loss.

Foot Protection



Always wear sturdy, closed-toe footwear with slip-resistant soles when operating or servicing the machine. Never operate the machine while barefoot or wearing sandals, open-toed shoes, or loose footwear. The rotating blades and other moving components can cause severe foot and ankle injuries.

Hand Protection



Always wear heavy-duty work gloves when handling blades or performing service and maintenance on the machine. Blade edges are extremely sharp and can cause serious lacerations even when the machine is not running.

Clothing

Wear close-fitting clothing when operating or servicing the machine. Loose clothing, drawstrings, or dangling accessories can become entangled in moving parts. Do not wear jewelry while operating or servicing the machine.

General Operation

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.
- Only allow responsible adults who are familiar with the instructions to operate this machine. Never allow anyone under the age of 16 to operate this machine.
- Do not operate the machine while under the influence of alcohol or drugs.
- Smartphones should not be used while operating the machine.
- Always wear eye protection when operating or servicing the machine.
- Always wear ear protection, such as earplugs, while mowing.
- Clear the area of objects such as rocks, wire, toys, etc., which could be thrown by the blades.
- Keep the entire machine free of grass, leaves, or other debris buildup. 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.
- Use only genuine Bad Boy ignition keys. Replacement keys are available from an authorized Bad Boy dealer.
- Always operate the machine in daylight or with good visibility.
- Never operate the machine during lightning or electrical storms. If lightning is observed or thunder is heard, stop operation immediately, disengage the blades, engage the parking brake, remove the ignition key, and move to a safe, enclosed structure.
- Never carry passengers.
- Always remain seated while operating the machine. If the machine is equipped with roll-over protection structure (ROPS), always buckle your seat belt.
- Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- 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.
- Always maintain a safe distance from people and pets just prior to and during operation. Stop the machine if anyone enters the area.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.
- Never operate the machine without the discharge chute, grass catcher, or other safety devices correctly in place and functioning properly.
- Be alert of surroundings. Watch for rocks, stumps, mounds, depressions, and low hanging limbs or objects that could be potentially hazardous while mowing.
- 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.
- Slow down before turning.
- Watch for traffic when operating near or crossing roadways.
- Always disengage blades, place drive arms 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.
- 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.
- Use extra care when loading or unloading the machine onto a trailer or truck.
- 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.

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 decrease the fatality rate in roll-over instances.

This machine is equipped with a Roll-Over Protection Structure (ROPS). When used correctly with the seat belt properly fastened, the ROPS significantly reduces the risk of serious injury or death in a roll-over event.

⚠WARNING

Always operate this machine with the ROPS in the fully upright and locked position and the seat belt securely fastened. Failure to do so could result in serious injury or death.

- Always keep the ROPS in the raised, locked position when clearance permits.
- Be aware that the ROPS extends above the operator's head. The machine and operator may clear an obstruction that the ROPS will not.
- Lower the ROPS only when absolutely necessary to clear an overhead obstruction (e.g., low-hanging limbs, building doorways, signage). Raise it again as soon as clearance permits.
- There is no rollover protection when the ROPS is in the down position.
- Do not wear the seat belt when the ROPS is in the down position.
- Drive slowly and carefully when operating with the ROPS lowered.

Safety Interlock System

⚠WARNING

Never attempt to bypass, disable, or modify the safety interlock system or any of its components. An incomplete or modified safety interlock system can result in serious injury or death.

The machine is equipped with a safety interlock system (SIS) that prevents unintended starting and shuts off the engine if the operator leaves the operating position. If any interlock fails to operate as described, do not operate the machine. Contact your authorized Bad Boy dealer for service.

Test the SIS before every use and after any service that disconnects or bypasses an interlock component. See Safety Interlock System Test in the Pre-Operation chapter.

If the seat switch was bypassed during service, reconnect it and test the SIS before operating the mower.

Fueling

⚠WARNING

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

- Ensure to use the proper fuel for your machine. Do not use fuel containing more than 10% ethanol.
- Extinguish all cigarettes, cigars, pipes, and all other sources of ignition.
- Keep the machine free of grass clippings, leaves, and other debris that can accumulate around the engine, exhaust, and fuel system components and create a fire hazard.
- Never remove the fuel cap or add fuel with the engine running or while the engine is hot. Allow the engine to cool for a minimum of 5 minutes (longer on exceptionally hot days >95°F) before refueling.
- Never fuel the machine indoors or in enclosed spaces.
- Remove equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel equipment with a portable container, rather than from a fuel dispenser nozzle.
- Use only an approved fuel container.
- Never fill fuel containers inside a machine or on a truck or trailer bed with a plastic liner. Static electricity can ignite fuel vapors. Always place fuel containers on the ground away from the machine before filling.
- Wipe up all fuel spills with a cloth or rag and dispose of properly. Remove and properly dispose of any rags, cloths, or debris saturated with fuel or oil, as these materials are a fire hazard.
- If fuel is spilled on or near the machine, do not attempt to start the engine. Move away from the spill area and avoid all sources of ignition until the fuel vapors have fully dissipated. Wipe up all spilled fuel before resuming operation.
- Securely replace and tighten the cap once the machine has been refueled.
- Store fuel out of reach of children.
- Store fuel in an approved fuel container and in a well-ventilated area.
- Allow the machine to cool completely before storing. Do not store the machine immediately after operation while engine and exhaust components are still hot.
- Do not store the machine or fuel container near an open flame, spark, or pilot light, such as those found on a water heater, furnace, or other appliance.

Slope Operation and Guide

⚠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.

- Avoid operating your machine on slopes with these thresholds
  - 5 degrees transverse (across the slope)
  - 10 degrees uphill
  - 15 degrees downhill

  Towing is not recommended at any grade greater than 5 degrees.

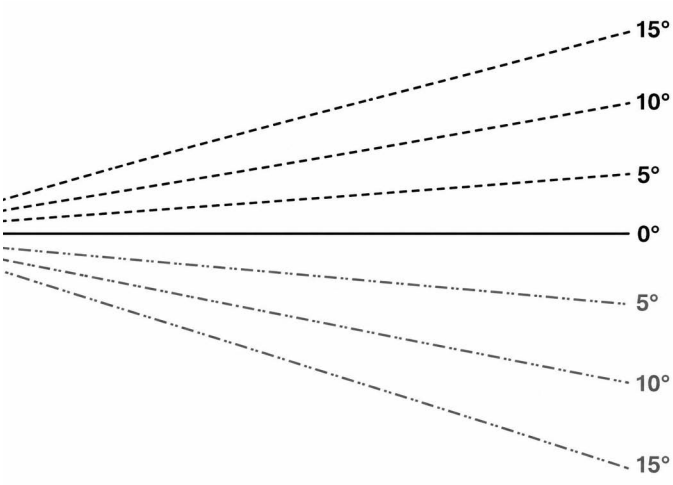


Figure 1: Guide to Determine Slope

To verify the slope, line the 0 degree mark in Figure 1: with a horizontal surface. Sight across the slope. If the slope is beyond the 15 degree line, the slope is too steep to operate safely. Slope can also be calculated using a smartphone built in level or inclinometer tool. This must be done with the machine powered off.

- 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.
- Avoid sudden blade engagement, which can shift weight and affect stability.
- 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 attachments; they can affect the stability of the machine.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not mow near drop-offs, ditches, or embankments, especially after rain as the drop-off edges can become extremely weak. The machine could suddenly and dangerously rollover if a tire goes over the edge of a drop-off.
- Be aware of what is located at the bottom of slopes. For example: rocks, water, cliffs, and roadways.

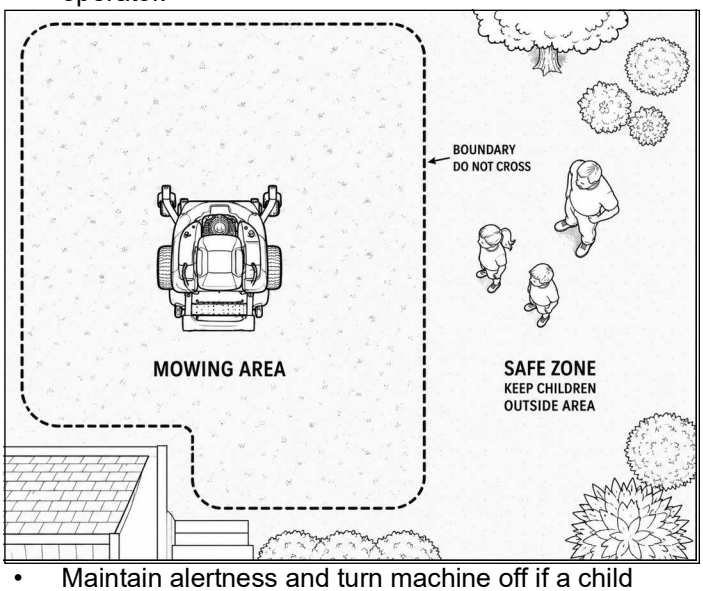
Children

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.

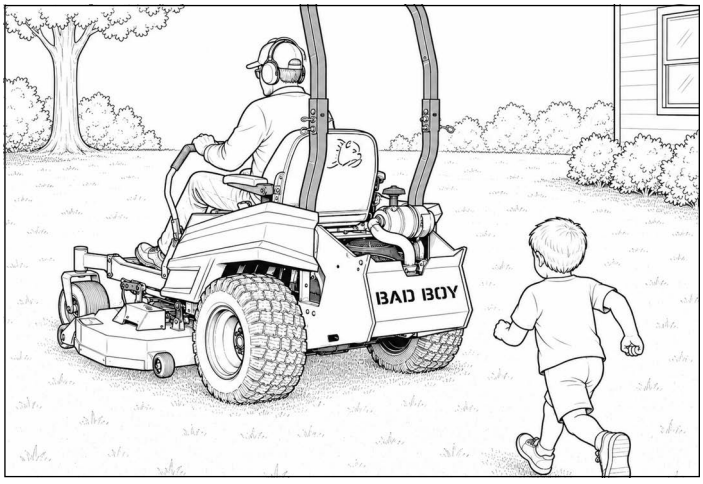
⚠WARNING

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.

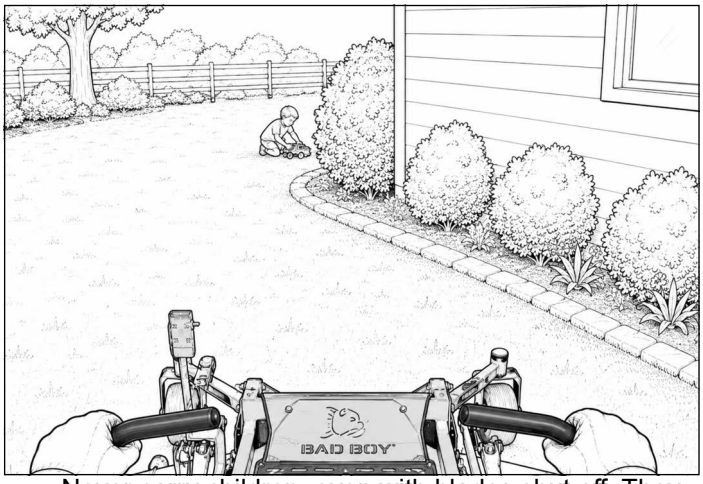
- Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator.



- Maintain alertness and turn machine off if a child enters the area.
- Before and while backing up, look behind and down for small children.



- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.



- Never carry children, even with blades shut off. They may fall off and be seriously injured or interfere with safe machine operation.



- Never allow children to operate the machine. The minimum age to operate this machine is 16 years old. It is the owner's responsibility to ensure that anyone who has permission to use this machine meets this requirement and has received proper training.
- Never leave the key in the ignition, especially around children.

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.

- Park the machine on level ground.
- Never allow untrained personnel to service the machine.
- Understand service procedures before doing work.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition. Never operate a poorly maintained machine.
- Always have the fuel shutoff valve in the OFF position when servicing the machine.
- Use only certified jack stands rated for at least 2,000 lb (907 kg), and always use them in pairs.
- Check the discharge guard frequently. Replace with manufacturer's recommended parts when necessary.
- Never interfere with the intended function of a safety device or reduce the protection provided by a safety device. Check their proper operation regularly.
- Do not touch hot areas of the machine.
- Never make any adjustments or repairs with the engine running unless specifically instructed to do so.
- Machine blades are sharp. Wrap the blade or wear gloves before servicing them.
- Never apply heat to straighten or weld a damaged or cracked blade.
- Check parking brake operation frequently. Adjust and service the brake as required.
- 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.
- The seat must be moved fully rearward before accessing items under the seat pan.
- The loss of hydrostatic drive line power may result in the loss of hydrostatic braking capability.
- Some cleaning solvents are flammable. Use only approved cleaning materials: Do not use explosive or flammable liquids to clean the equipment.
- To avoid possible fire, do not use cleaning solvents in an area where a source of ignition may be present.
- Clean up oil or fuel spillage and remove any fuel-soaked debris.

Environmental

- 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.
- Discard used cleaning material in the appropriate containers according to local, state, and federal regulations.

Battery

⚠WARNING

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

- Contact with battery acid can cause serious burns to skin and eyes. Wear ANSI Z87.1-approved eye and face protection and appropriate hand protection when working on or near the battery.
- Batteries produce flammable and explosive hydrogen gas at all times, and especially during charging. Keep the battery away from open flames, sparks, and other ignition sources at all times.
- Never charge the battery in an enclosed, unventilated space.
- Never lean over the battery while charging, testing, or jump-starting.
- When jump starting the machine, connect the negative cable to the engine block last — never directly to the battery. Once the machine has started, disconnect the negative cable from the engine block first.
- Inspect battery terminals and cables for corrosion, cracks, or damage before storing the machine for an extended period. Do not store the machine with damaged battery components. Refer to the Service chapter for battery inspection and service procedures.
- Disconnect the battery before storing the machine for an extended period to prevent parasitic drain and potential electrical hazards. Refer to the Service chapter for the correct disconnection procedure.

Towing

⚠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 specifications.
- 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.

Transporting

⚠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.

- Never engage the blades while loading or unloading the machine.
- Never use individual ramps to load or unload the machine. Always use a full-width ramp or trailer gate.
- Never tow the machine onto a trailer. Always use a winch to load the machine for transporting.
- Do not operate on any loading surface/ramp exceeding 15 degrees.
- Never accelerate or decelerate suddenly while loading or unloading the machine on a trailer.
- Always ensure the mode of transportation is suitable to bear the weight of the machine.
- Always use straps rated at a minimum of 1.5 times the weight of the machine when securing the machine for transport.

⚠CAUTION

Improper preparation before loading can result in loss of machine control or damage. Failure to follow these cautions could cause injury or equipment damage.

- Always raise the ROPS to the raised and locked position before loading or unloading the machine.
- Always set the deck to maximum height before loading or unloading the machine.
- Always engage the parking brake before loading or unloading the machine.
- Always rotate the fuel shutoff valve to the OFF position when transporting the machine.
- In wet conditions, tires may spin during loading or unloading. Wait for dry conditions before loading or unloading if necessary.
- Always allow the engine and exhaust to cool completely before parking the machine inside an enclosed space.

Storage Safety

⚠WARNING

Failure to follow these storage safety practices can result in serious injury, death, or property damage.

- Do not park or store the machine near open flame or source of ignition, such as a water heater or furnace.
- Never store the machine with fuel in the tank inside a building where ignition sources are present, such as a garage, shed, or basement. Fuel vapors can travel to an ignition source and cause a fire or explosion.
- Allow the engine to cool completely before storing the machine in any enclosed space. Hot engine and exhaust components can ignite surrounding materials.
- Always engage the parking brake, disengage the blades, and remove the ignition key before leaving the machine unattended during short-term storage or parking.
- Never leave the ignition key in the machine during storage. Remove the key and store it in a secure location out of reach of children and unauthorized users.
- Store the machine on a flat, stable surface to prevent unintended movement.
- Do not store the machine on a slope.
- Keep the machine and storage area clear of grass clippings, leaves, and other debris that can accumulate around hot engine components and create a fire hazard.

LONG TERM STORAGE

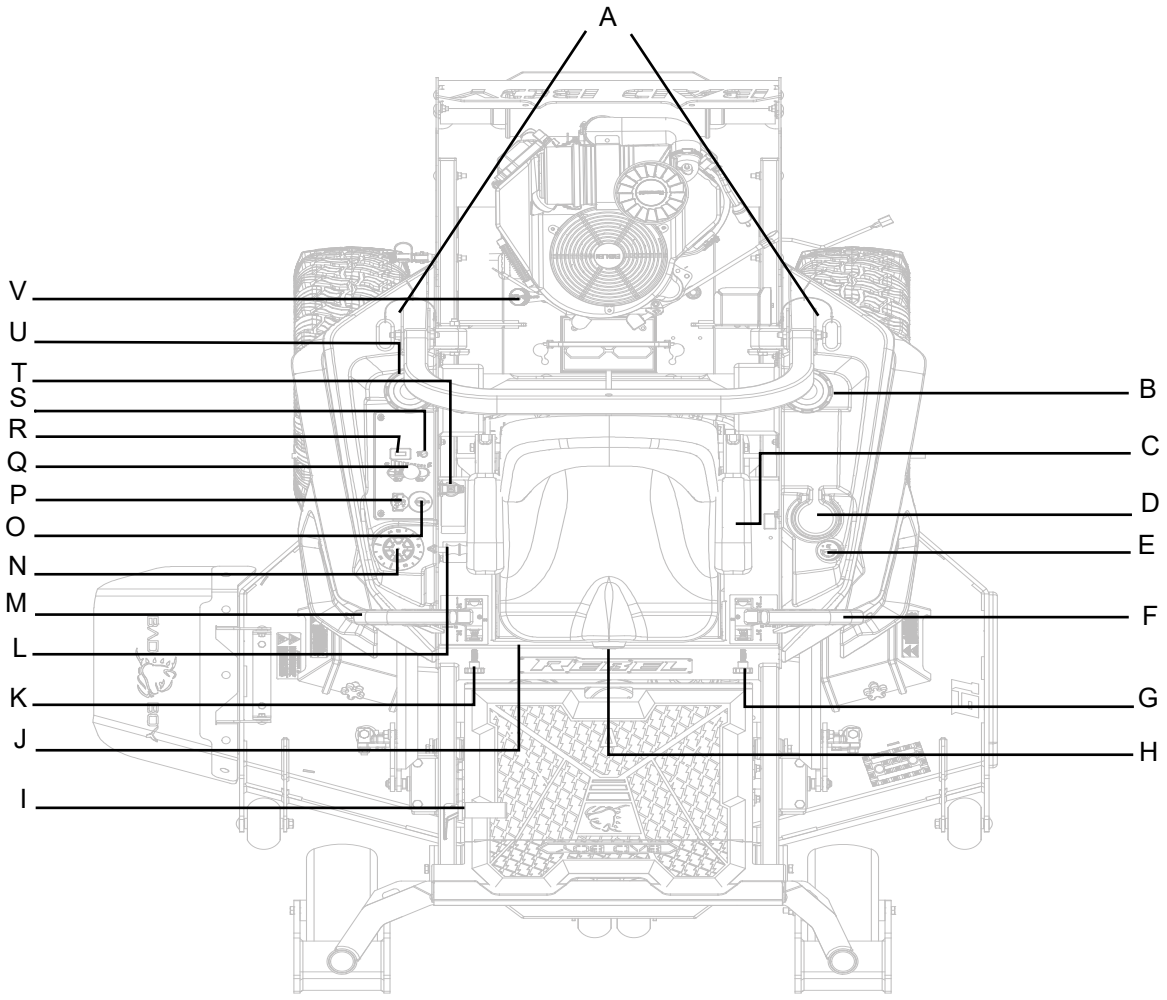
- Before storing the machine for an extended period, remove all attachments, lower the cutting deck to its lowest position, and clean all grass, dirt, and debris from the machine. Accumulated debris can retain moisture and accelerate corrosion, or create a fire hazard when the machine is returned to service.
- Refer to the Maintenance section of this manual for fuel system, battery, and fluid preparation procedures required before long-term storage.

INDOOR VS OUTDOOR STORAGE

- Whenever possible, store the machine indoors in a clean, dry location protected from the elements. Exposure to moisture accelerates corrosion of mechanical and electrical components.
- If outdoor storage is necessary, cover the machine with a breathable, weatherproof cover to protect it from moisture and debris. Do not use a non-breathable cover, as trapped moisture can accelerate corrosion.
- Do not store the machine where water can pool around or beneath it.

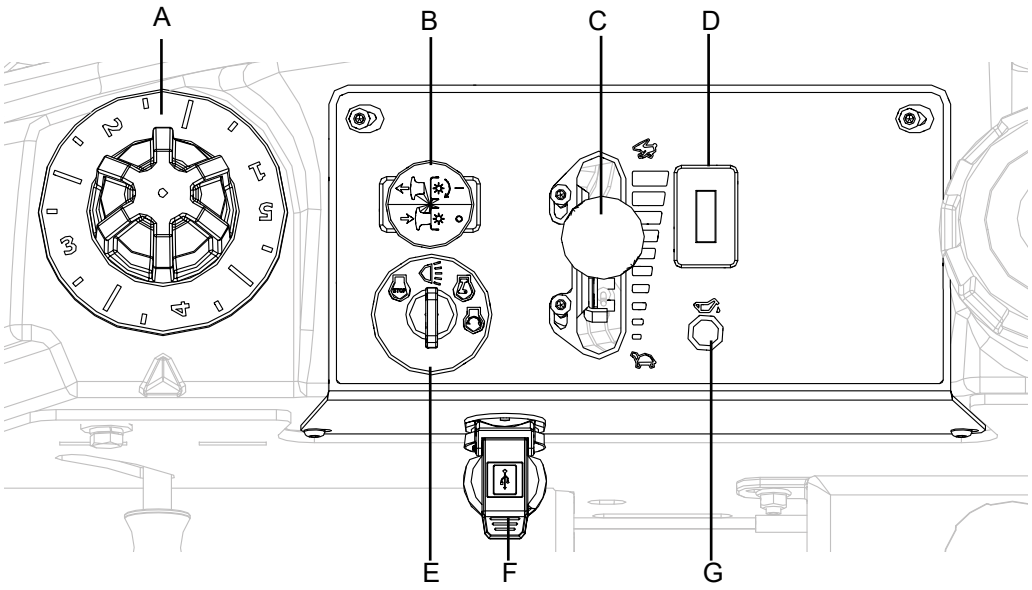
SECTION 3 CONTROLS

Machine Overview



A	ROPS	L	Deck Travel Lock
B	Gas Tank, Left	M	Drive Arm, Right
C	Choke/MIL Light (if equipped with EFI engine)	N	Deck Height
D	Cup Holder	O	Ignition
E	Fuel Gauge	P	PTO
F	Drive Arm, Left	Q	Throttle
G	Speed Limiting Knob, Left	R	Tachometer
H	Suspension Seat Adjustment	S	Oil Light
I	Foot Pedal	T	USB Port
J	Seat Adjustment	U	Gas Tank, Right
K	Speed Limiting Knob, Right	V	Engine Oil Fill and Dipstick

Analog Control Panel



Deck Height

A Adjusts the cutting height of the deck from 1 to 5 inches.

PTO

B Provides power to the blades. Pull up on the knob to engage the blades. Push the knob down to disengage the blades.

Throttle

C Controls engine speed. Move the lever towards the front of the machine to increase engine rpm, towards the rear of the machine to decrease engine rpm.

Hours/Tachometer

D A dual-function display that shows current engine RPM during operation and tracks cumulative engine run time, in increments up to 9,999.9 total hours.

Ignition

E Four positions include OFF, LIGHTS, RUN and START.

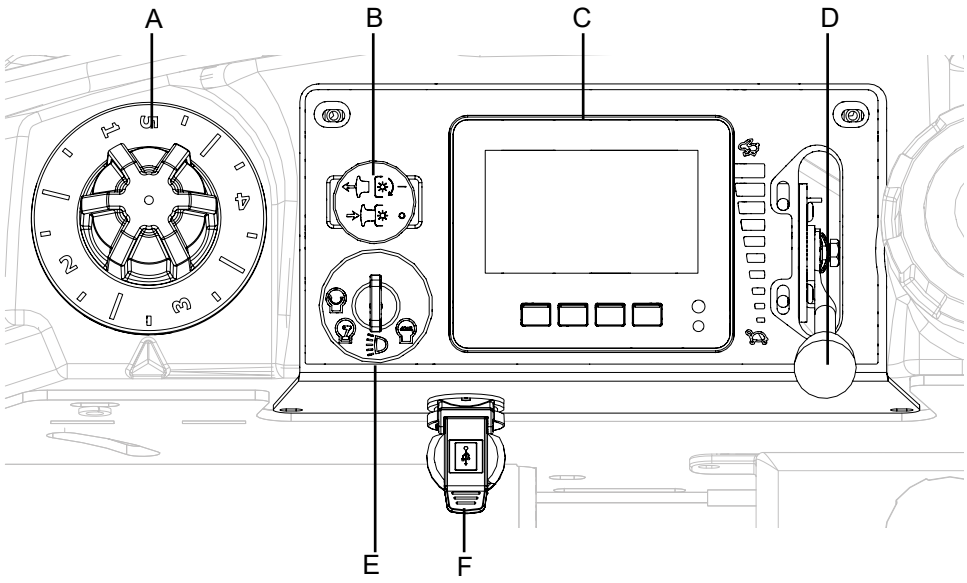
USB

F Allows for digital devices to be charged while in operation.

Oil Light

G Indicator light when oil is low and requires immediate attention.

Digital Control Panel



Deck Height

A Adjusts the cutting height of the deck from 1 to 5 inches.

PTO

B Provides power to the blades. Pull up on the knob to engage the blades. Push the knob down to disengage the blades.

Digital Display

C Displays operating information and service reminders, including countdowns for upcoming maintenance such as engine oil and filter changes, hydraulic oil and filter changes, air filter and pre-cleaner replacement, and mower greasing.

Throttle

D Controls engine speed. Move the lever towards the front of the machine to increase engine rpm, towards the rear of the machine to decrease engine rpm.

Ignition

E Four positions include OFF, LIGHTS, RUN and START.

USB Port

F Allows for digital devices to be charged while in operation.

Display Overview

The digital display shows engine and mower information and gives access to service reminders and display settings. Four buttons below the screen control the display. The symbol above each button shows its function on the current screen: left arrow, down arrow, up arrow, and right arrow.

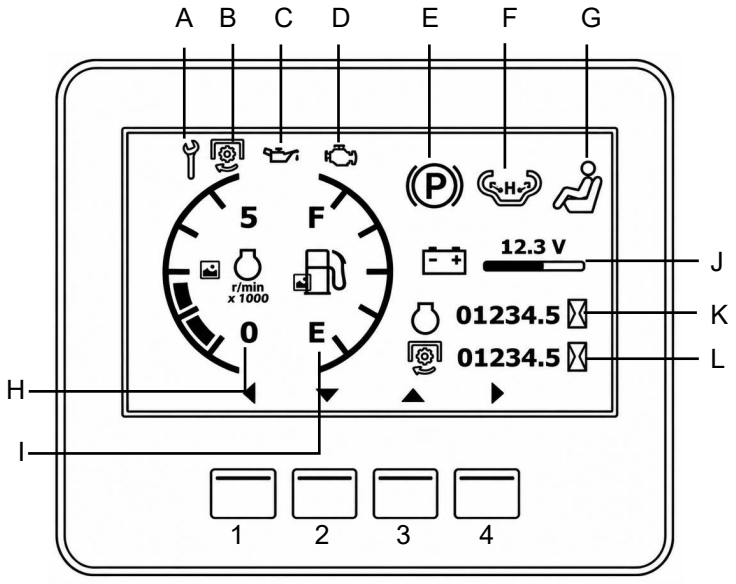
The display has the following screens:

Screen	Purpose
Splash	Shows the Bad Boy Mowers logo for 2 seconds when the display powers on.
Main	Shows engine speed, fuel level, battery voltage, hour meters, and indicator icons.
Service Reminders	Shows the hours remaining until each scheduled maintenance item is due.
PIN Entry	Requires a PIN before a service reminder can be reset.
Brightness	Adjusts the screen brightness.
System Information	Shows the display hardware part number and software version.
Display Mode	Switches the screen between day mode and night mode.
Language Selection	Switches the display language between English and French.

Main Screen

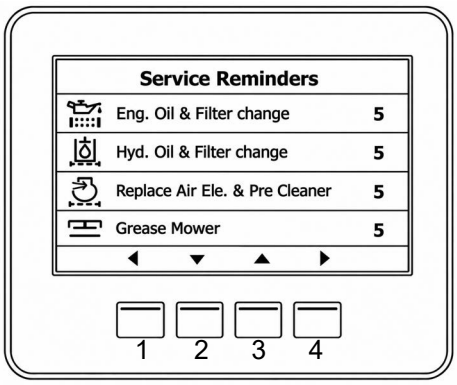
The Main Screen appears after the splash screen and is the screen used during operation. 12 different checks on the mower ensure proper functionality and are described below.

- Press the left arrow button (1) to go to the Language Selection screen.
- Press the right arrow button (4) to go to the Service Reminders screen.
- The down (2) and up (3) arrow buttons have no function on this screen.



A	**Service Warning** Lights yellow when scheduled maintenance is due.
B	**PTO Engagement** Lights yellow when the PTO is engaged and the blades are turning. The icon is not shown when the PTO is off.
C	**Engine Oil Pressure** Indicator light when oil is low and requires immediate attention.
D	**MIL Light** Malfunction indicator light indicates when there is a malfunction in the electronic fuel injection system and requires immediate attention. Available on EFI models only.
E	**Parking Brake** A green (P) symbol means the parking brake is engaged. A red (!) symbol means the parking brake is not engaged.
F	**Drive Arm Neutral Engagement** Green means both drive arms are in the park position. Red means one or both drive arms are out of park.
G	**Operator Presence** Green when the operator is in the operating position. Red when the operating position is empty.
H	**Tachometer** Shows engine speed from 0 to 5,000 RPM. Multiply the number on the gauge by 1,000.
I	**Fuel Gauge** Shows the fuel level from F (full) to E (empty). The bar turns yellow when the fuel level drops to 1/4 tank.
J	**Battery Voltage** Shows battery voltage as a number and a bar. The bar is green when voltage is above 10.5 V and red when it is 10.5 V or lower.
K	**Engine Hours** Total hours the engine has run.
L	**PTO Hours** Total hours the PTO has been engaged.

Service Reminders



The Service Reminders screen shows the hours remaining until each scheduled maintenance item is due:

- Engine oil and filter change
- Hydraulic oil and filter change
- Air filter element and pre-cleaner replacement
- Mower greasing

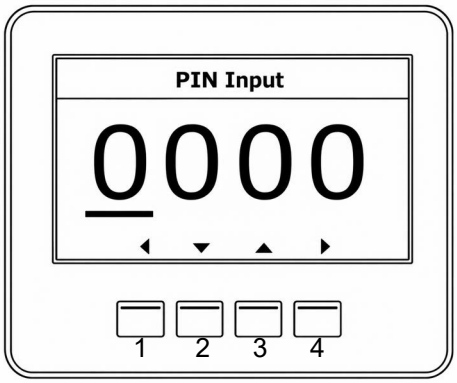
When an item reaches 0 hours, its hours flash on this screen and the yellow service warning appears on the upper left of the Main Screen. After completing the maintenance, reset that item to start the countdown to the next service.

- Press the left arrow button (1) to return to the Main Screen.
- Press the right arrow button (4) when Service Reminders is highlighted to go to the Brightness screen.

Resetting a Service Reminder

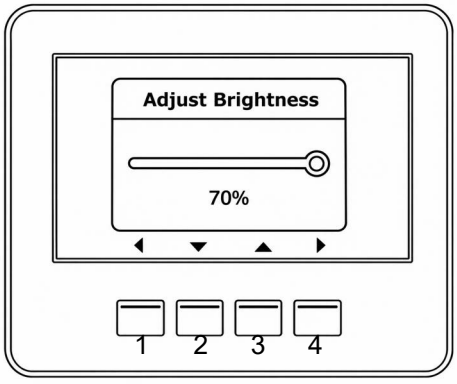
Note: The PIN is set to be 1234 and cannot be changed.

4. On the Service Reminders screen, press the down (2) or up (3) arrow button to highlight the item to reset.
5. Press the right arrow button (4). The PIN Entry screen appears.



6. Enter the PIN 1234:
   - Press the down (2) or up (3) arrow button to change the digit.
   - Press the right arrow button (4) to move to the next digit. Press the left arrow button (1) to go back a digit.
7. After entering the fourth digit, press the right arrow button (4).
   - If the PIN is correct, the popup screen asks for confirmation of reset.
   - If it is incorrect, the popup screen asks you to enter the PIN again.
8. Press the right arrow button (4) to confirm the reset. The hours for that service reminder reset to the full service interval.

Brightness

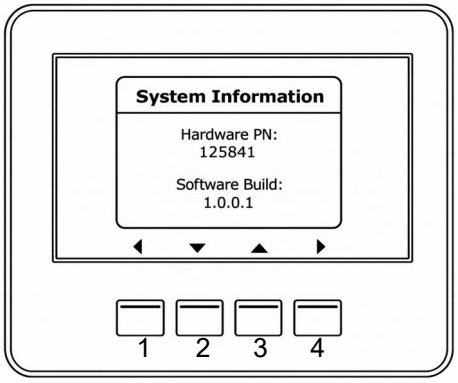


The Brightness screen adjusts how bright the display is. The current setting is shown as a percentage.

- Press the up arrow button (3) to increase brightness or the down arrow button (2) to decrease it. Each press changes the brightness by 10 percent, from a minimum of 10 percent to a maximum of 100 percent.
- Press the left arrow button (1) to return to the Service Reminders screen.
- Press the right arrow button (4) to go to the System Information screen.

The brightness setting is saved when you leave this screen and stays the same each time the mower is started.

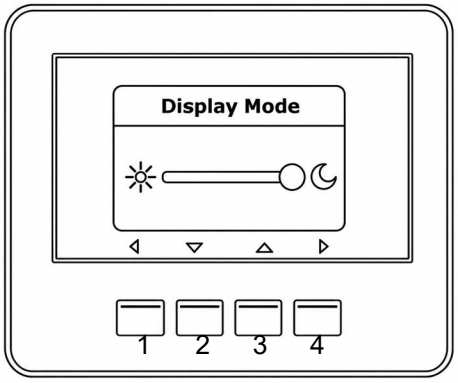
System Information



The System Information screen shows the display hardware part number and software version. Your dealer may ask for this information when servicing the display.

- Press the left arrow button (1) to return to the Brightness screen.
- Press the right arrow button (4) to go to the Display Mode screen.

Display Mode

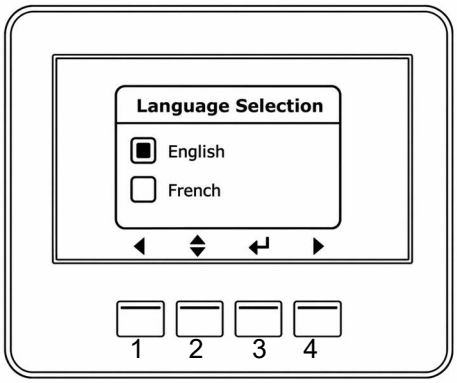


The Display Mode screen switches the display between day mode and night mode. Day mode uses a light background for easier reading in bright sunlight. Night mode uses a dark background to reduce glare in low light.

- Press the down (2) or up (3) arrow button to switch between day mode and night mode.
- Press the left arrow button (1) to return to the System Information screen.

- Press the right arrow button (4) to return to the Language Selection screen.

Language Selection



The Language Selection screen sets the display language to English or French. On this screen, the two center buttons change function: one switches between languages and the other selects the highlighted language.

- Press the up (2) or down (3) button to highlight English or French.
- Press the enter button to select the highlighted language. The display saves the selection.
- Press the left arrow button (1) to return to the Display Mode screen.
- Press the right arrow button (4) to return to the Main Screen.

SECTION 4 PRE-OPERATION

Fuel

Use fresh, clean fuel with an octane rating of 87 or higher. Only fuels with an ethanol content of 10% or less are approved for use. Use of fuel with an ethanol content greater than 10%, including E-15, can result in premature engine failure and will void the warranty.

Fuel Shutoff

The fuel shutoff valve controls fuel flow from the tank to the engine. Closing the valve when the engine is not in use prevents fuel from reaching the engine, reducing the risk of fire or fuel leak. Always close the fuel shutoff valve after each use and before performing service, storage, or transport.

⚠CAUTION

Failure to close the fuel shutoff valve when the engine is not in use can result in fuel leaks and fire hazard.

1. Locate the fuel shutoff valve.
2. Rotate the valve clockwise to the open (ON) position or counterclockwise to the closed (OFF) position.

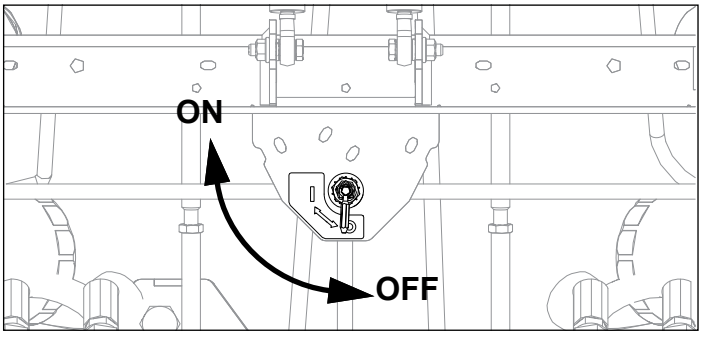


Figure 1: Fuel Shutoff Valve

Fueling

⚠CAUTION

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.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Allow the engine to cool before adding fuel.
4. Remove the fuel cap by rotating it counterclockwise.

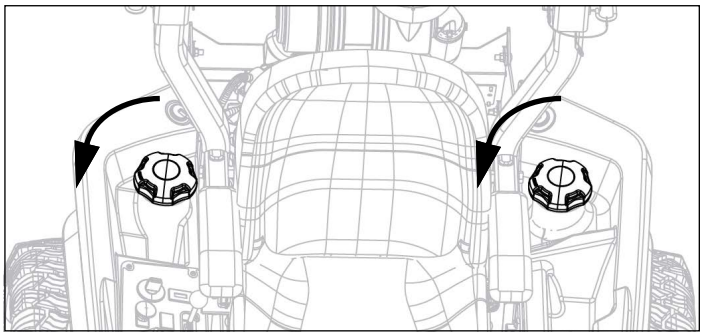


Figure 2: Dual Fuel Tanks

5. Begin filling.
6. Stop fueling when the fuel level reaches the bottom of the filler neck.
7. Install the fuel cap and rotate it clockwise until tight.
8. Repeat for the second tank.

Drive Arms

The drive arms can be adjusted to one of three height positions and closer or further from the seat to accommodate operator preference and comfort. Adjust both arms to the same height or distance position to ensure consistent and balanced control response.

⚠CAUTION

Before adjusting the drive arms, ensure the mower is off and both drive arms are in the neutral/park position. Adjusting the drive arms while the mower is running could result in unexpected movement and injury.

Height

1. Place both drive arms in the neutral/park position.
2. Remove the two 3/8”-16 serrated-flange hex head screws (1) securing the drive arm to the bracket on one side.

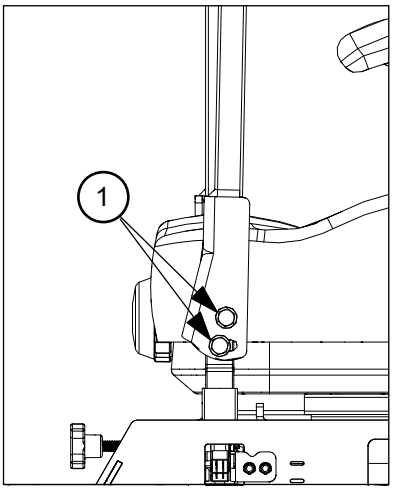


Figure 3: Drive Arm Height Adjustment

3. Reposition the drive arm to the desired height by aligning the arm with the appropriate hole position on the bracket.
4. Reinstall the two screws and torque to 31 ft-lbs.
5. Repeat on the opposite drive arm.
6. Confirm both drive arms are set to the same height position before operating.

Distance

1. Place both drive arms in the neutral/park position.
2. Loosen the bottom 3/8”-16 serrated-flange hex head screw (1).

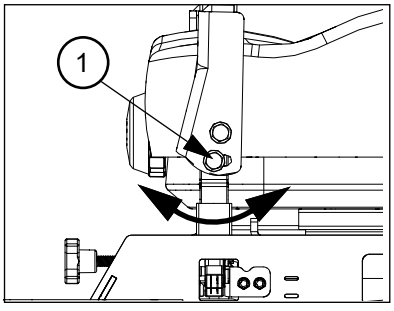


Figure 4: Drive Arm Distance Adjustment

3. Move the drive arm to the desired position and tighten the screw.
4. Repeat on the opposite drive arm.
5. Confirm both drive arms are set to the same distance before operating.

Seat

Distance Adjustment

Adjust the seat position before operating to ensure comfortable reach to the drive arms and operator controls. Always confirm the seat is locked in position before starting the mower.

⚠CAUTION

Ensure the mower is off and the drive arms are in the neutral/park position before adjusting the seat. An unsecured seat could shift during operation and result in loss of control.

1. Locate the seat adjustment handle underneath the right side of the seat.
2. Push the seat adjustment handle down and inward.

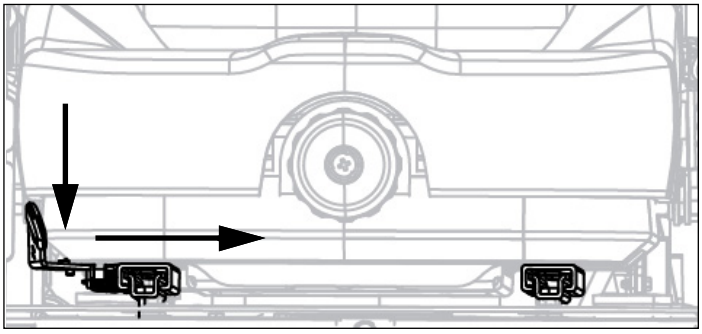


Figure 5: Suspension Seat Distance Adjustment

3. Slide the seat forward or rearward to the desired position
4. Release the handle and confirm the seat is locked in position before operating.

Suspension Adjustment

Note: The Rebel SD does not come with a suspension seat option.

The seat suspension can be adjusted to match the operator's weight for optimal ride comfort.

⚠CAUTION

Set the suspension to the correct weight range before operating. Incorrect suspension settings can reduce operator comfort and control.

1. Locate the suspension adjustment dial on the center of the seat.

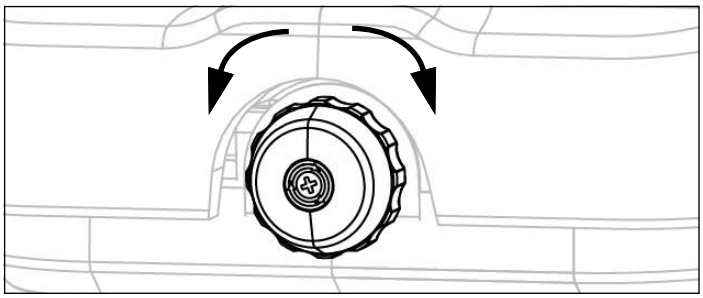


Figure 6: Seat Suspension Dial

2. Turn the dial clockwise or counterclockwise to align with the operator's weight in lbs or kg.
3. Confirm the dial is set to the correct weight range before operating.

Note: The suspension adjustment dial has a weight range of 100 to 280 lbs / 45 to 125 kg. Do not exceed the maximum weight rating.

Foot Pedal

The knurled pedal can be adjusted three ways to accommodate operator preference: the height of the pedal on the foot lift upright lever, the forward/back distance between the pedal and the operator, and the left/right side placement of the pedal.

Pedal Distance

4. Using a 9/16" socket, remove the two 3/8-16 flange locknuts (1) attaching the foot pedal to the front actuator (2).

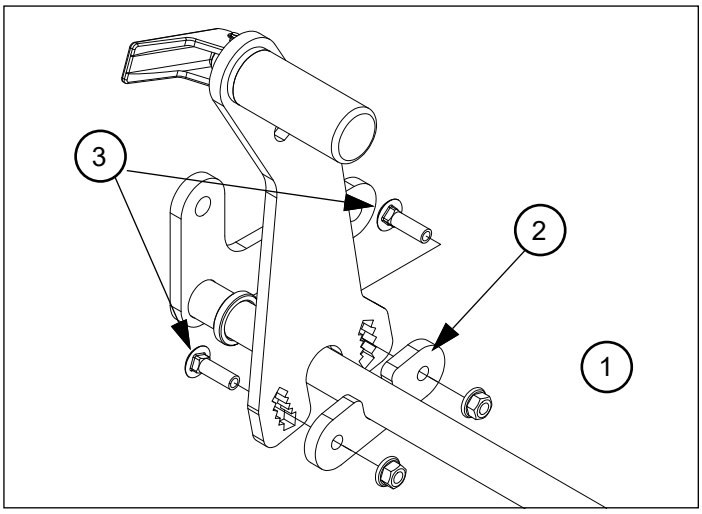


Figure 7: Pedal Assembly, Right Side

5. Remove the two 3/16-8 x 1 carriage bolts (3).
6. Align the foot pedal to the desired drill-out position.
7. Insert the 3/16-8 x 1 carriage bolts (3) through the new position.
8. Install and tighten the 3/8-16 flange locknuts (1) using the 9/16" socket.

Pedal Side

NOTE: Installing the foot pedal on the left side of the machine requires two 3/8-16 x 1-3/4 in carriage bolts (part number 018-0009-00), available from an authorized Bad Boy dealer.

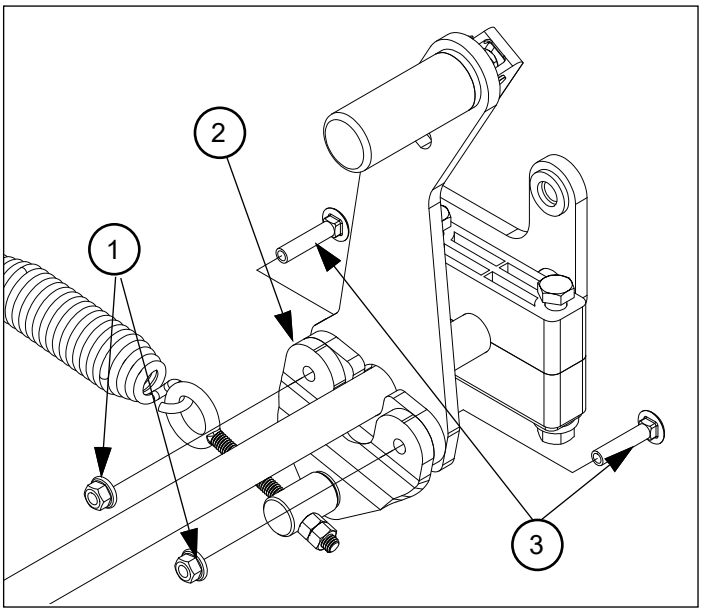


Figure 8: Pedal Assembly, Left Side

1. Using a 9/16" socket, remove the two 3/8-16 flange locknuts (1) attaching the foot pedal to the front actuator (2).
2. Remove the two carriage bolts (3)
   - 3/16-8 x 1 if installed on the right side
   - 3/8-16 x 1-3/4 if installed on the left side.
3. Rotate the cam-over handle (4) to release the knurled pedal (5) from the upright lever (6).

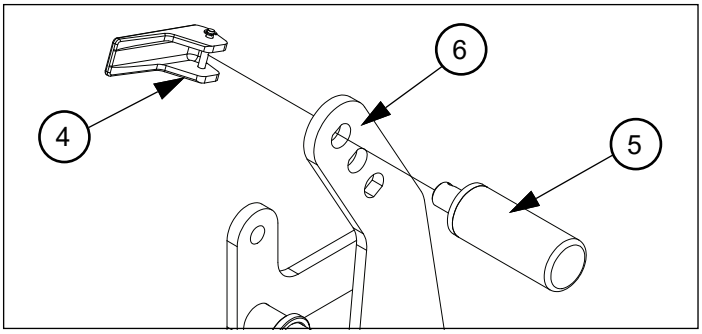


Figure 9:

4. Move the knurled pedal (5) to the opposite side of the upright lever (6).
5. Install the cam-over handle (4) to secure the knurled pedal to the upright lever.
6. Place the upright level (6) on the opposite side of the front actuator (2).
7. Insert the two carriage bolts (3)
   - 3/16-8 x 1 if installing on the right side
   - 3/8-16 x 1-3/4 if installing on the left side.
8. Install and tighten the 3/8-16 flange locknuts (1) using the 9/16" socket.

Pedal Height

The knurled pedal is mounted to the foot pedal lever with a cam pin and can be repositioned along the lever to accommodate operator preference. Note that in the lowest position, the knurled pedal and the cam pin must be rotated so that the flat on the knurled pedal aligns with the flat on the hole in the lever.

1. Rotate the cam-over handle (1) to release the knurled pedal (2) from the upright lever (3).

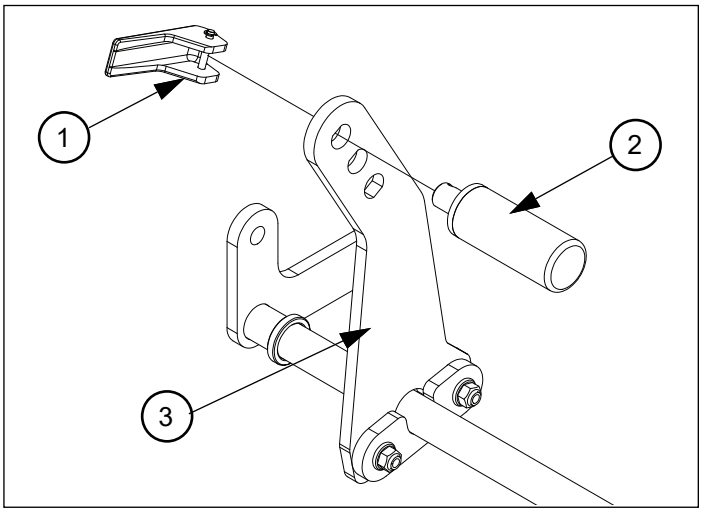


Figure 10: Pedal Assembly

2. Remove the knurled pedal and reposition it at the desired hole, aligning the flat side on each part.
3. Install the cam-over handle to secure the knurled pedal to the upright lever.

ROPS

The machine is equipped with a two-post foldable ROPS designed to protect the operator in the event of a rollover. The ROPS and seatbelt must be used together to provide effective protection.

⚠WARNING

Always operate the mower with the ROPS in the fully upright and locked position and the seatbelt fastened. The ROPS provides no rollover protection when folded down. Failure to use both the ROPS and seatbelt together could result in serious injury or death.

Inspection

Before each use, inspect the ROPS as follows:

- Verify both quick-release pins are fully inserted through the hoop top and each leg at the lower pivot points.
- Confirm both cotter pins are fully seated and bent outward to prevent the quick-release pins from backing out.

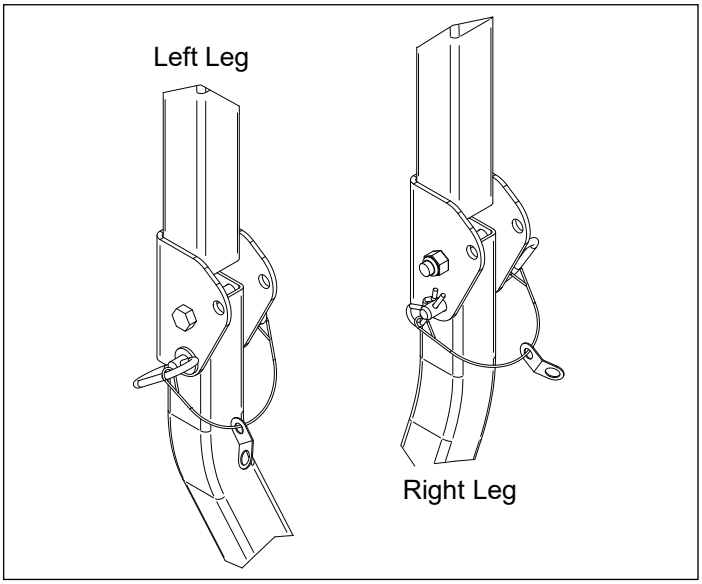


Figure 11: Right and Left ROPS Legs

- Confirm the hoop top is upright, level, and sits evenly on both legs.

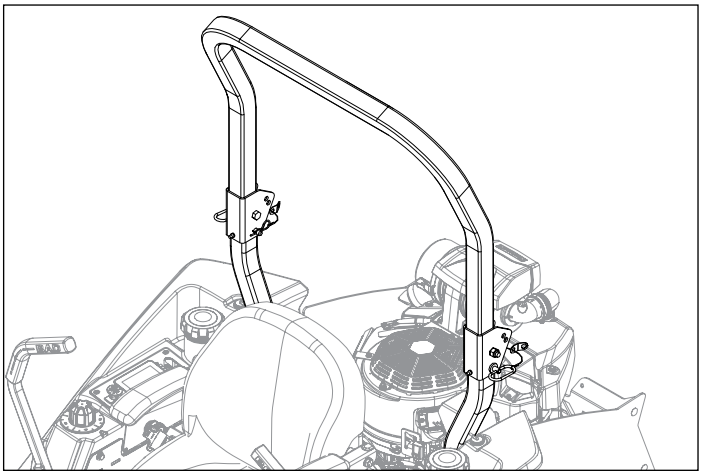


Figure 12: ROPS in Upright Position

- Inspect all mount bolts and pivot bolts for looseness or visible damage. Mount bolts must be torqued to 75 ft-lbs if any looseness is found. Do not operate the mower until proper torque is restored.
- Inspect the seatbelt for cuts, fraying, or damage to the buckle. Do not operate if the seatbelt is damaged — replace before use.

Folding ROPS Down

⚠WARNING

Never operate the mower with the ROPS folded down. Folding is permitted for low-clearance storage or transport only. Always raise and lock the ROPS before returning the mower to service.

The ROPS may only be folded down for low-clearance situations such as storage or transport through a confined space.

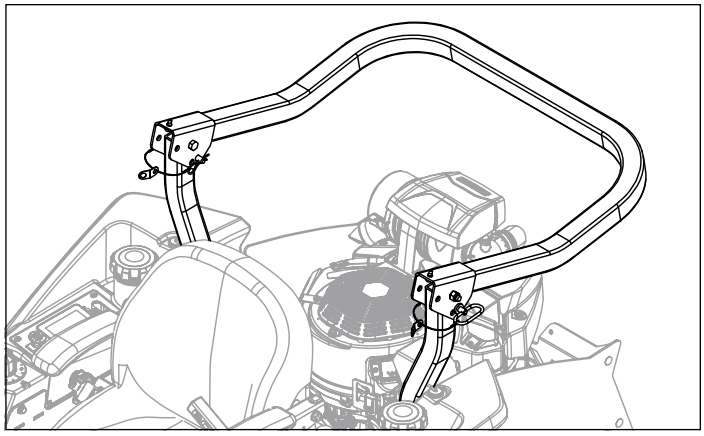


Figure 13: ROPS Folded Down

1. Remove both cotter pins (1) from the quick-release pins (2).
2. Remove both quick-release pins (2) from the lower pivot points (3).
3. Fold the hoop top rearward until fully lowered.

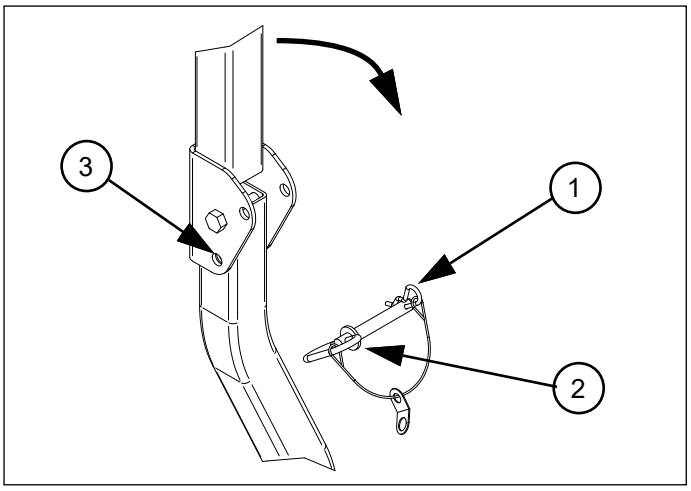


Figure 14: Remove quick-release pin

4. Install each quick-release pin (2) into the hole (4) and install then the cotter pin (1) to prevent the hoop top from resting on the legs.

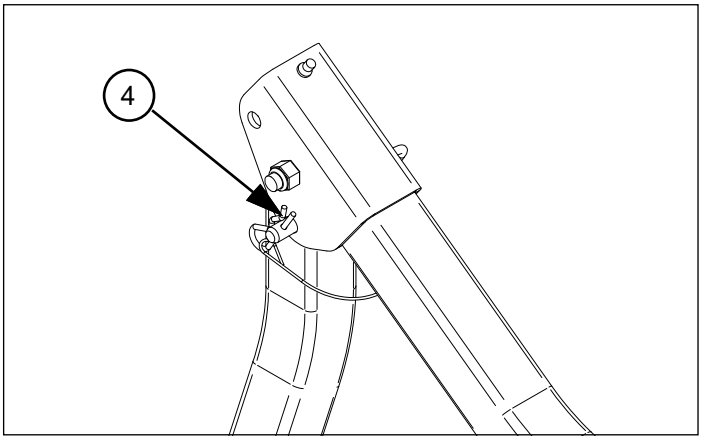


Figure 15: Quick-Release Pin Installed, Left Leg

Raising ROPS to Operating Position

1. Raise the hoop top to the fully upright position.
2. Reinstall both quick-release pins through the lower pivot points of the hoop top and legs.
3. Secure both cotter pins to the ends of the quick-release pins and bend to lock.
4. Confirm the hoop top is level and seated evenly on both legs before operating.

Deck Height

The cutting deck can be adjusted from 1 - 5 inches in 1/4 inch increments to achieve the desired cutting height before operating. Always adjust deck height while the mower is off and the blades are disengaged.

⚠CAUTION

Always disengage the blades and turn the mower off before adjusting the deck height. Never adjust the cutting height while the blades are engaged.

1. Disengage the blades and turn the mower off.
2. Locate the deck height adjustment dial on the control panel to the right of the seat.
3. Press the foot pedal to raise the deck.
4. Turn the dial to the desired cutting height.
5. Slowly release foot pedal to confirm the cutting height.

Safety Interlock System

⚠WARNING

Do not tamper with or bypass the safety interlocks. Failure to follow this warning could cause serious injury or death.

The machine is equipped with a safety interlock system (SIS) that must be tested before every use and after any service that disconnects or bypasses an interlock component. The SIS prevents the engine from starting unless specific operating conditions are met. After the machine starts successfully, a separate test verifies that the engine shuts off when the operator leaves the operating position after one of the two operating conditions changes. If any one of the safety interlocks does not function as described, do not operate the machine. Contact your authorized Bad Boy Mowers dealer for service.

Drive Arms — The machine will not start unless the drive arms are in the PARK position.

PTO Switch — The machine will not start unless the PTO switch is in the OFF position.

Operator Presence — The engine will shut off if the operator leaves the operating position after one of the two operating conditions changes: drive arms in the NOT PARK position or the PTO is ON.

Sit in the operator position and try to start the engine under each condition below. The engine should not start.

Test 1

Drive Arms	Not Park	FAIL
PTO	OFF	

Test 2

Drive Arms	Park	FAIL
PTO	ON	

Operator Presence Test

⚠CAUTION

Test must be performed on a flat surface. Taking the drive arms out of park while on a slope could cause unexpected movement.

1. Sit in the operating position on the mower.
2. Start the engine with the drive arms in park and the PTO off.



Drive Arms in Park



PTO Off

3. Take the drive arms out of park or engage the PTO to ON.
4. Slowly rise from the operating position. The engine should stop.

If the engine does not stop, do not operate the machine. Contact your authorized Bad Boy Mowers dealer for service.

SECTION 5 OPERATION

⚠WARNING

Failure to follow the operating instructions in this manual and the safety instructions in the Safety chapter can result in serious injury or death. Read General Operation Safety in the Safety chapter before operating the machine.

Starting the Machine

NOTE: Take time to become familiar with the location and function of all controls before operating. Start at reduced speed until comfortable with how the machine responds.

1. Confirm the area around and beneath the machine is free of bystanders, pets, and obstructions.
2. Turn the fuel shutoff valve clockwise to the ON position.

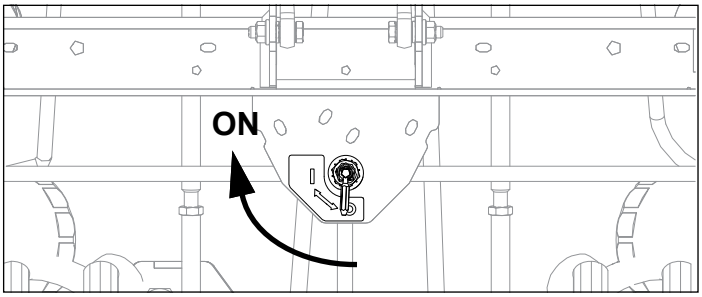


Figure 1: Fuel Shutoff Valve ON

3. Set the parking brake.
4. Confirm the PTO switch is in the OFF position.

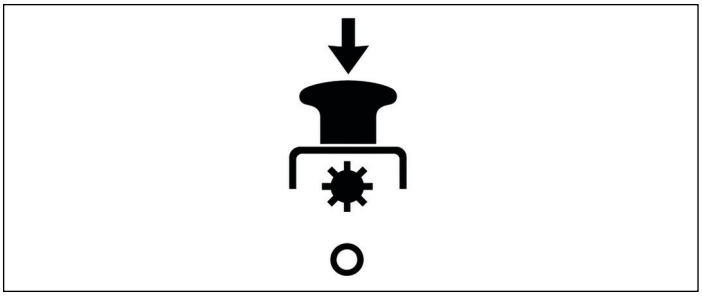


Figure 2: PTO OFF

5. Confirm the ROPS is upright and fasten the seatbelt.

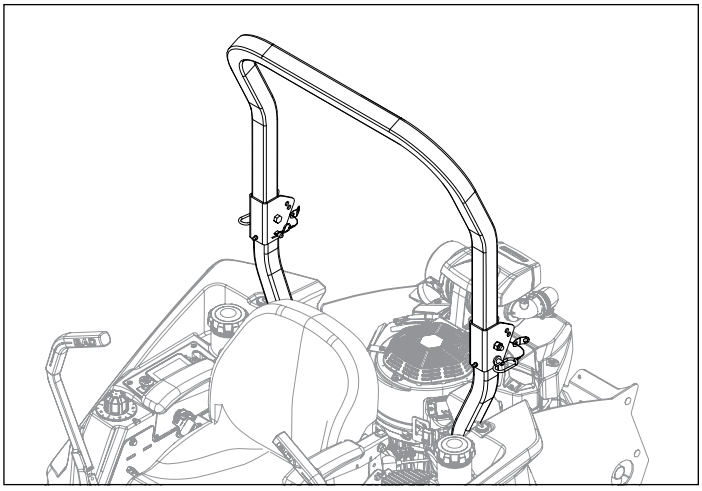


Figure 3: ROPS Upright

6. If the engine has not run recently, pull the choke knob to engage the choke. **NOTE**: Engine configurations equipped with EFI do not require this step.

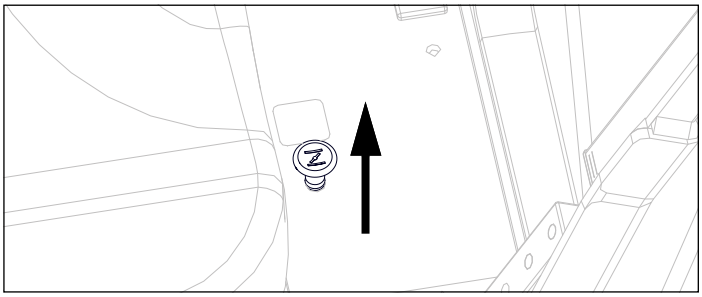


Figure 4: Engage the Choke

7. Set the throttle between the half and full throttle positions.

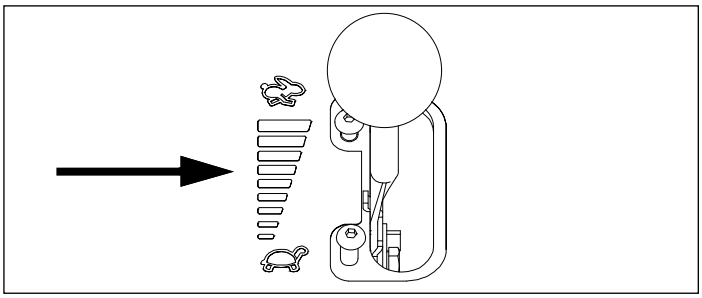


Figure 5: Throttle Half Way

8. Turn the key to the start position and hold until the engine starts, then release.

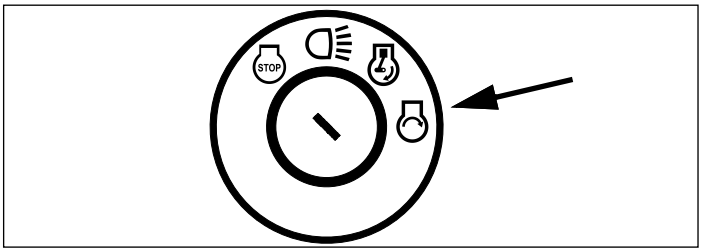


Figure 6: Turn the Key to Start

9. Once the engine is running, push the choke knob in to disengage the choke. **NOTE**: Engine configurations equipped with EFI do not require this step.

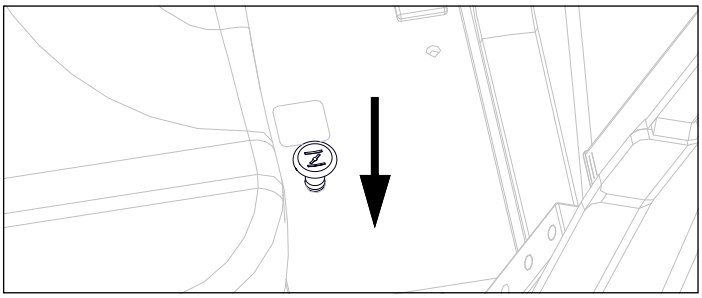


Figure 7: Disengage the Choke

10. Increase the throttle to the fast position.

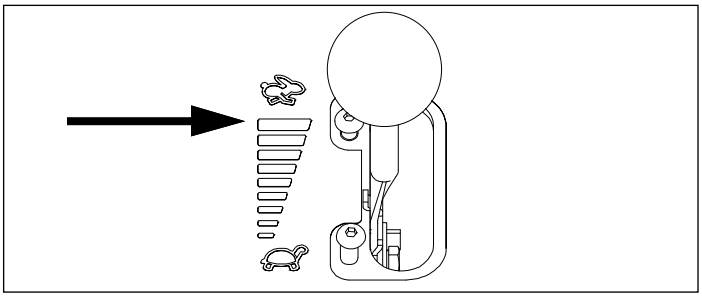


Figure 8: Throttle in Fast Position

11. Engage the PTO switch.

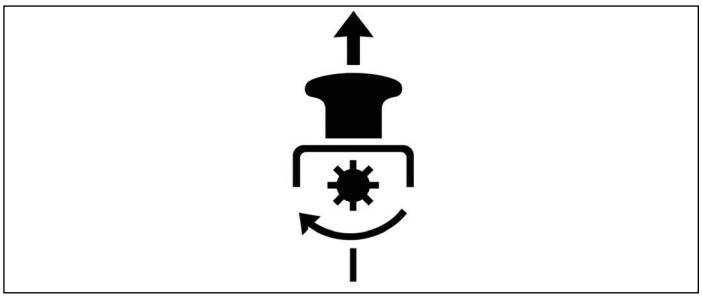


Figure 9: PTO ON

Drive Arms

The mower is steered and driven with two drive arms, one for each rear drive wheel. Each drive arm controls the speed and direction of its wheel independently. Moving both drive arms together drives the mower forward or in reverse, and moving them by different amounts turns the mower. The farther a drive arm is moved from neutral, the faster its wheel turns. Move the drive arms slowly and smoothly until comfortable with how the mower responds.

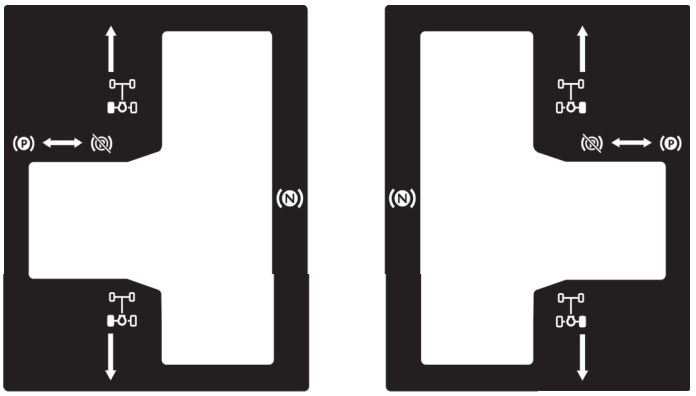


Figure 10: Left and Right Drive Arm Decals

Park
From neutral, both drive arms moved outward into the park position. The engine can be started only with both drive arms in park.

Neutral
Both drive arms centered between forward and reverse and moved inward from park. The mower does not move.

Forward
Push both drive arms forward evenly. The farther the drive arms are pushed, the faster the mower travels.

Reverse
Pull both drive arms rearward evenly. The farther the drive arms are pulled, the faster the mower travels.

Left Turn
Push the right drive arm farther forward than the left. The farther apart the drive arms are, the sharper the turn.

Right Turn
Push the left drive arm farther forward than the right. The farther apart the drive arms are, the sharper the turn.

Zero Turn
Push one drive arm forward and pull the other rearward. The mower turns in place.

Turns in Reverse
When moving in reverse, pull the left drive arm farther rearward to turn left and the right drive arm farther rearward to turn right.

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.

1. Verify the discharge chute is down and the area is clear of bystanders.
2. Follow steps to start machine.
3. Increase RPM by moving the throttle control lever to the fast throttle position. The throttle must be in fast mode for the PTO to be engaged.

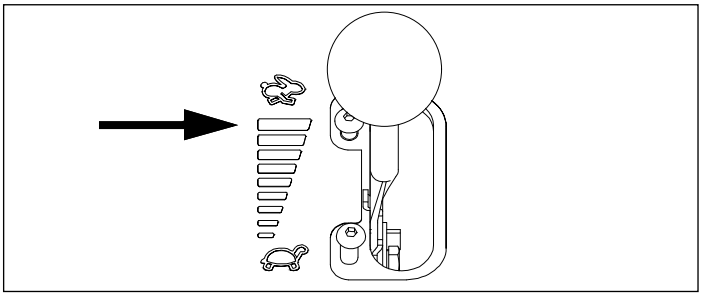


Figure 11: Throttle in Fast Position

4. Pull up on the PTO switch to engage the blades.

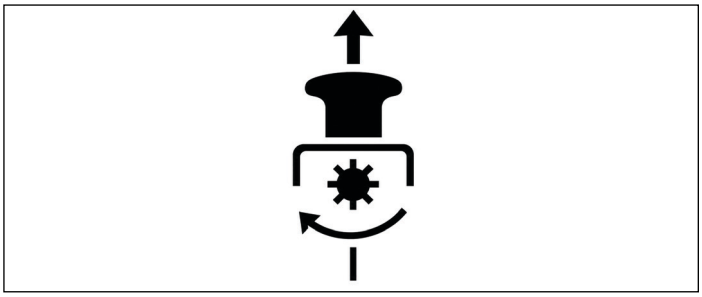


Figure 12: PTO ON

5. To disengage the blades, push down on the PTO switch.

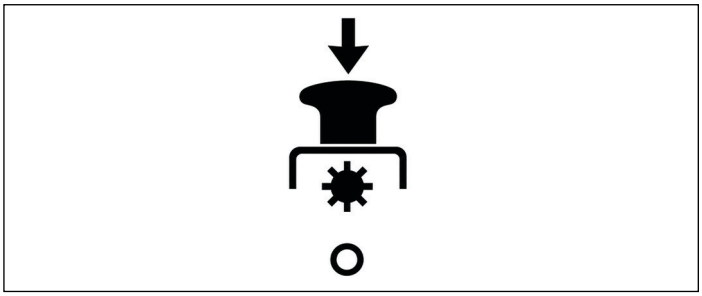


Figure 13: PTO OFF

Troubleshooting

Starting / No-Start

Problem	Cause	Solution
Machine will not start	Battery discharged or corroded terminals	Charge battery. Clean and tighten terminal connections. Replace battery if it will not hold a charge.
	Fuel tank empty or fuel older than 30 days	Fill tank with fresh fuel. Do not use fuel containing more than 10% ethanol. Drain and replace fuel that is older than 30 days or shows signs of contamination or water.
	Spark plug fouled, damaged, or wire disconnected	Inspect spark plug condition. Replace if fouled or electrode is worn. Ensure spark plug wire is firmly seated on the plug terminal.
	Air filter dirty or clogged	Inspect air filter element. Clean or replace as needed. A restricted air filter reduces airflow and prevents starting. See the Maintenance chapter for air filter service intervals.
	Main fuse blown	Check the 25-amp main fuse. Replace with a fuse of the same amperage only. Do not substitute a higher-rated fuse. Locate and correct the underlying cause before returning the machine to service.
	Damaged wiring or bare/loose connections	Visually inspect all visible wiring and connectors for damage, corrosion, or loose connections. Do not operate the machine with damaged wiring. Contact your authorized Bad Boy dealer for electrical diagnosis.
	Fuel shutoff valve in OFF position	Turn the fuel shutoff valve to the ON position before starting.

Engine Issues

Problem	Cause	Solution
Engine runs rough or surges	Stale or contaminated fuel	Drain fuel system and refill with fresh fuel. Do not use fuel older than 30 days or fuel containing more than 10% ethanol.
	Dirty or clogged air filter	Inspect and clean or replace the air filter element. See the Maintenance chapter for air filter service intervals.
	Spark plug fouled or worn	Inspect and replace spark plug as needed.
	EFI Malfunction Indicator Light (MIL) illuminated	Do not continue operating. The MIL indicates a fault in the electronic fuel injection system. Contact your authorized Bad Boy dealer for diagnosis.
Engine overheats or shuts off under load	Cooling fins or air intake screen obstructed	Stop the engine and allow to cool. Inspect and clean all cooling fins and air intake screens. Remove accumulated grass, debris, or dirt.
	Engine oil level low	Check oil level on a level surface with the engine off. Add oil as needed. Do not overfill.
	Operating in conditions that exceed the machine's rated capacity	Reduce ground speed or mowing width to reduce engine load. Ensure the engine is operating at full throttle during mowing.
Engine shuts off unexpectedly during operation	Operator presence switch activated	The machine is equipped with an operator presence system. Remain properly seated during operation.
	Fuel tank empty	Refuel the machine. Check fuel level before each use.
	Low oil pressure shutdown	Allow engine to cool. Check oil level and add oil as needed. Do not restart until oil level is correct. If the engine shuts down repeatedly for low oil pressure, contact your authorized Bad Boy dealer.

Cutting Quality

Problem	Cause	Solution
Uneven cutting pattern or poor quality of cut	Tire pressure uneven or incorrect	Check and adjust tire pressure in all tires to the specified pressure. Uneven tire pressure causes the deck to ride unevenly. See the Specifications section for correct tire pressure.
	Blades dull or damaged	Inspect blades for wear, nicks, or damage. Sharpen or replace blades. Blades should be inspected and sharpened at least once per season or more frequently in abrasive conditions.
	Blades not tightened to specification	Inspect blade hardware and torque blade bolts to specification.
	Deck belt worn, loose, or damaged	Inspect the deck drive belt for wear, cracking, or glazing. Replace if damaged.
	Deck belt tension incorrect	Check and adjust deck belt tension.
	Deck not level	Check and adjust deck level.
	Grass and debris buildup on the underside of the deck	Engage the parking brake, shut off the engine, remove the ignition key, and turn the fuel shutoff valve to the OFF position. Clean the underside of the deck thoroughly. Regular cleaning prevents buildup that interferes with blade performance and airflow.
	Engine not at full throttle during mowing	Always operate at full throttle when mowing. Reduced throttle results in lower blade tip speed and poor cut quality.
	Ground speed too fast for conditions	Reduce ground speed, especially in tall, thick, or wet grass. Allow the blades to fully process material before advancing.
Scalping; deck cutting into ground	Cutting height set too low for terrain	Raise the cutting height. On uneven terrain, raise the cutting height to prevent the deck from contacting high spots.
	Deck not level — one side lower than the other	Level the cutting deck.

Problem	Cause	Solution
Material discharging unevenly or clumping in path	Grass wet or too tall and dense	Allow grass to dry before mowing. Raise the cutting height for the first pass, then lower to the desired height and make a second pass perpendicular to the first.
	Ground speed too fast for material density	Reduce ground speed to allow blades to fully process material before it exits the discharge chute.
	Discharge chute blocked or damaged	Stop the machine. Engage the parking brake, shut off the engine, remove the ignition key, and turn the fuel shutoff valve to the OFF position. Clear any blockage from the discharge chute. Inspect the chute for damage and replace if needed.

Blades Will Not Engage

Problem	Cause	Solution
Blades will not engage when blade switch is activated	Operator presence switch not engaged	Ensure operator is properly seated. The blade engagement circuit is disabled when the operator presence switch is not activated.
	Operator presence switch connector loose or disconnected	Check the connector at the bottom of the seat. Ensure the connector is fully seated.
	Blade switch connector loose or disconnected	Check the connector on the underside of the blade engagement switch. Ensure the plug is fully seated and locked.
	PTO fuse blown	Check the 10-amp PTO fuse located under the operator console. Replace with a fuse of the same amperage only. Do not substitute a higher-rated fuse. Identify and correct the cause of the overload before returning to service.
	Deck belt broken or off pulleys	Stop the machine. Engage the parking brake, shut off the engine, remove the ignition key, and turn the fuel shutoff valve to the OFF position. Inspect the deck belt. Replace if broken.

Drive and Steering Issues

Problem	Cause	Solution
Machine pulls or drifts to one side	Drive tracking out of adjustment	Perform a tracking adjustment. See the Service section.
	Mower creeps with drive arms in neutral	Perform a return to neutral adjustment. See the Service section.
	Tire pressure uneven between left and right sides	Check and equalize tire pressure on both drive tires.
Machine will not move in forward or reverse	Parking brake engaged	Disengage the parking brake before attempting to drive.
	Neutral bypass engaged for towing	Disengage the neutral bypass valve(s) before operating under power.
	Hydrostatic drive system low on fluid	Check hydraulic fluid level. Add fluid as needed using only the fluid type specified in the Service section.
	Drive belt broken or off pulleys	Inspect the drive belt for breakage or displacement. Replace or reinstall as needed.
Drive arms not braking properly	Drive arms linkage out of adjustment	Inspect drive arms linkage for proper adjustment.
	Speed limiting knob set too far in	Adjust the speed limiting knob as needed to equalize forward travel speed on both sides.

Electrical Issues

Problem	Cause	Solution
Battery drains quickly or will not hold a charge	Battery at end of service life	Test battery under load. Replace battery if it will not hold a charge. See Battery Safety for battery handling precautions.
	Battery terminals corroded	Clean battery terminals and cable ends. Apply terminal protector spray after cleaning.
	Machine stored for extended period without battery maintenance	Charge battery fully before returning to service. For storage periods exceeding 30 days, disconnect the negative battery cable.
No electrical power; dash/ display does not illuminate	Main fuse blown	Check the 25-amp main fuse. Replace with a fuse of the same amperage only. If the fuse blows again immediately, contact your authorized Bad Boy dealer for electrical diagnosis.
	Battery cable loose or disconnected	Inspect battery cable connections. Ensure both positive and negative cables are tight and corrosion-free.

Problem	Cause	Solution
EFI Malfunction Indicator Light (MIL) illuminated	Fault detected in the electronic fuel injection system	Do not continue operating. Contact your authorized Bad Boy dealer for diagnosis. Do not attempt to clear or ignore fault codes; operating with an active fault code may result in engine damage.
Hour meter or display not functioning	Loose connector or blown fuse	Check fuse for display circuit. Inspect display connector for secure seating.

Excessive Vibration or Unusual Noise

Problem	Cause	Solution
Excessive vibration during operation	Blade bent, cracked, or missing	Stop the machine immediately. Engage the parking brake, shut off the engine, remove the ignition key, and turn the fuel shutoff valve to the OFF position. Never operate with a damaged or missing blade.
	Blade hardware loose	Stop the machine immediately. Inspect and torque all blade bolts to specification.
	Blade spindle bearing worn or damaged	Stop the machine. Contact your authorized Bad Boy dealer for spindle bearing inspection and replacement.
	Foreign object lodged in cutting deck	Stop the machine immediately. Engage the parking brake, shut off the engine, remove the ignition key, and turn the fuel shutoff valve to the OFF position. Wait for all moving parts to stop completely before inspecting. Remove the object carefully.
	Deck belt worn or damaged	Inspect the deck belt for wear, cracking, fraying, or glazing. Replace if needed.
Unusual noise during operation	Foreign object struck or lodged in cutting deck	Stop the machine immediately. Engage the parking brake, shut off the engine, remove the ignition key, and turn the fuel shutoff valve to the OFF position. Wait for all moving parts to stop completely before inspecting the deck area.
	Blade bolt loose	Stop the machine. Inspect and torque blade hardware to specification.
	Hydrostatic drive making grinding or whining noise	Check hydraulic fluid level. If the noise persists after confirming fluid level is correct, contact your authorized Bad Boy dealer.
	Engine making unusual noise	Stop the machine and allow to cool. Check oil level. Do not restart if oil level is correct and the noise persists. Contact your authorized Bad Boy dealer for engine diagnosis.

Choosing the Right Blade

⚠WARNING

The use of blades that are not Bad Boy blades can result in blade failure. Blade failure during operation can cause serious injury or death.

NOTICE

The use of unapproved blades may void any or all warranty for both machine and engine.

There are two basic styles of mowing blade used on Bad Boy mowers.

Standard blades cut and discharge clippings out from the deck, onto the lawn or into a collection system. Also called "2-in-1" (discharging and bagging) or "high-lift" blades, for the higher airflow they create.

Mulching blades have a more curved surface with extra cutting edges to break clippings down further before they settle into the lawn. Also called "3-in-1" (mulching, discharging, and bagging) or "all-purpose" blades. Because mulching blades recirculate airflow, they discharge clippings less efficiently than a standard blade. If cutting or discharge performance suffers with a mulching blade, switch to a standard blade. To mulch with a standard blade, use a mulching kit (mulching blades plus a plug that closes the discharge opening).

The blade installed at the factory is selected for the expected use of each model. To identify which blade is on your machine, compare the part number stamped on the blade to your Operator's Manual or Parts List.

Bad Boy does not recommend aftermarket blades. Contact the blade manufacturer directly for questions about special application or aftermarket blades.

Storage

⚠WARNING

Gasoline is extremely flammable and can be explosive under certain conditions. Drain fuel before storing the machine for extended periods. Drain fuel in a well-ventilated area away from any source of flame or sparks, including appliances with a pilot light. Store fuel in an approved container in a safe location. Failure to follow this warning could result in serious injury or death.

⚠WARNING

Gasoline is a toxic substance. Dispose of gasoline properly. Contact your local authorities for approved disposal methods.

NOTICE

Change the engine oil before returning the machine to service after a period of storage.

The machine should be stored in a dry, protected location to prevent weather related damage. Perform the following before storing the machine for 30 days or longer:

1. Add fuel stabilizer to the fuel tanks and run the engine for 5 minutes.
2. Drain the fuel tank completely. Refer to the engine manufacturer's manual for the location and procedure for draining fuel from the carburetor.
3. After draining the fuel tanks, run the engine at low idle until it stalls.
4. Clean the entire machine, including the deck and engine compartment.
5. Remove the spark plugs and pour approximately 1–2 mL (1/2 teaspoon) of engine oil into each spark plug hole. Turn the engine over a few times, then slowly turn it until you feel compression and leave it in that position. This seals air inside the cylinder and helps prevent internal rust.
6. Install the spark plugs.
7. Wipe down the machine with an oily cloth to prevent rust.
8. Remove the battery. Store in a cool, dry place above freezing temperatures.

Battery

- Ensure the battery is fully charged before storing the machine. Never store the battery in a discharged condition.
- If the machine will not be used for 30 days or longer, inspect the battery every 4–6 weeks and recharge as necessary. Do not allow battery voltage to drop below 12.2 volts.

SECTION 6 MAINTENANCE

Maintenance Schedule

⚠WARNING

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.

NOTICE

Maintenance should be performed when the machine is on a flat, firm, and level surface with the parking brake engaged, engine shut off, ignition key removed, and the fuel shutoff valve OFF.

Refer to the legend below to locate detailed instructions for each maintenance item.

X = No dedicated instructions, self-explanatory check M = Maintenance chapter S = Service chapter O = Engine manual

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Maintenance	Every Use	First 8 Hours	Monthly
Check and add engine oil	M		
Check the engine for oil leaks	X		
Check all belts for proper alignment	X		
Check wheel condition and lug nuts	M		
Check for fuel leaks	X		
Check air element(s)	O		
Check for worn or missing safety decals	M		
Check all guards, shields, chutes, and hardware	X		
Check the drive arms	X		
Check for debris on the cutting deck and engine compartment	X		
Check condition of blades	M		
Check battery terminal connections	M		

Maintenance	Every Use	First 8 Hours	Monthly
Check Safety Interlock System	M		
Check seat belt condition and mounting hardware	X		
Check for loose or missing ROPS hardware	M		
Check that grease points have been recently greased	M		
Check transaxle for leaks	X		
Check operator presence controls	M		
Check for loose nuts and bolts	X		
Check muffler and exhaust system	X		
Clean the machine	X		
Initial oil change		O	
Verify the machine travels straight on a flat, level surface			S
Inspect the machine drive belt, idler pulley(s), and idler spring(s)			X
Inspect the machine control linkage to the directional drive arm on the transaxle			X
Ensure that the drive arm is securely fastened to the trunnion arm of the transaxle			X
Inspect the bypass mechanism on the transaxle and the machine linkage to ensure that both actuate and release fully			X
Check the hydrostatic system oil level			X
Check transaxle for leaks			X

Debris Removal

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 mower 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.

Hydrostatic System

⚠WARNING

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

⚠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.

Regular maintenance of the hydrostatic system should include:

- Ensure the current application does not exceed the machine load rating.
- Check oil level. More information can be found in Service - Hydrostatic System.
- 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 hydraulic motor.
- Inspect the machine control linkage to the directional control arm on the hydrostatic system. Also, ensure that the control arm is securely fastened to the trunnion arm of the hydrostatic system.
- Inspect the bypass mechanism on the hydrostatic system and the machine linkage to ensure that both actuate and release fully.

Engine Oil

Check the engine oil with every use before starting the engine. A shortage of engine oil may cause serious damage to the engine such as seizure.

Bad Boy recommends using a 10W-30 Bad Boy synthetic blend.

NOTE: Refer to the engine service manual shipped with your machine for additional information on checking the engine oil.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Clean the area around the oil dipstick before removing it.
4. Remove the oil dipstick and wipe it with a clean cloth.
5. Insert the oil dipstick into the tube.
6. Remove the oil dipstick to check the oil level. The oil level should reach the upper indicator mark on the dipstick.
7. If the level is low, slowly add oil until it reaches the upper indicator mark. Recheck the level with the dipstick. Do not overfill.
8. Install and tighten the oil dipstick.

Blades

⚠CAUTION

Mower blades are sharp and can cause injury. Wear thick gloves when handling blades. Keep hands and feet clear of rotating blades. Use approved lifting equipment when working beneath the machine.

Inspect the blades before each use.

- A dull blade tears grass instead of cutting it, leaving a frayed, browning edge within hours and increasing load on the engine.
- If the machine strikes a rock, branch, or other object, stop and check the blades for damage before resuming operation.
- Replace a worn, cracked, or damaged blade immediately. Continued use creates a safety hazard and can damage other machine components.

NOTE: For best results, blades should be sharpened and serviced by a qualified professional.

Battery

⚠WARNING

Batteries contain acid and produce flammable and explosive hydrogen and oxygen gases at all times, even when the machine is not in use. Failure to follow this warning could result in serious injury or death.

- Inspect the battery terminals and cable connections. Terminals should be clean and free of corrosion, and cable connections should be tight.
- Clean corroded terminals with a solution of baking soda and water. Use a wire brush to remove heavy corrosion, then rinse and dry the area.
- Do not allow battery voltage to drop below 12.2 volts while the battery is installed in the machine.
- Inspect the battery every 4–6 weeks during periods of storage or non-use. Charge as necessary with a

battery charger. Never use the machine's 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
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SECTION 7 SERVICE

Commonly Used Parts

This section lists part numbers for items most frequently replaced during routine maintenance, grouped by cutting width or engine as applicable.

Blades

Deck Size	Hi-Lift Fusion	Gator Blade	Wave Blade
54 in	038-0001-00	038-0003-00	038-5220-00
61 in	038-6080-00	038-6081-00	038-6090-00
72 in	038-7230-00	038-5400-00	038-7215-00

Belts and Filters

Item	Part Number
Hydraulic Filter	063-1070-00
54 in Deck Belt	041-0259-00
61 in Deck Belt	041-0260-00
72 in Deck Belt	041-0261-00
Pump Belt	041-8050-00

Engine Filters and Spark Plug

Item	Kawasaki	Rehlko	Vanguard
Fuel Filter	063-6000-00	063-5001-00	063-6000-00
Oil Filter	063-8017-00	063-5400-00	063-8018-00
Air Filter	063-8019-00 - Outer Filter 063-8020-00 - Inner Filter	063-5005-00 (Pre-cleaner) 063-5006-00	063-8019-00 - Outer Filter 063-8020-00 - Inner Filter
Spark Plug	015-8001-00	015-8000-00	015-8000-00

Oils

Oil	Type	Part Number
Engine	10W-30 (Bad Boy Synthetic Blend Recommended)	085-1030-00
Transaxle	20W-50 Hydrostatic Oil (Bad Boy Hydrostatic Oil Recommended)	085-6000-00

Service Schedule

⚠WARNING

Machine service must be done at regular intervals. Failure to do so will result in excessively worn parts and early failures. Use the service intervals as a guide for correct service of the machine.

Refer to the legend below to locate detailed instructions for each service item.

S = Service chapter O = Engine manual

Service	First 8 Hours	Every 50 Hours or Annually	Every 100 Hours or Annually	Every 250 Hours
Initial oil change	S			
Torque wheel lugs		S		
Change engine oil			S/O	
Replace engine oil filter			S/O	
Initial hydraulic oil and filter change			S	
Grease machine			S	
Replace air element and pre-cleaner			S/O	
Replace fuel filter			S/O	
Clean or replace spark plug(s) and set gap			S/O	
Change hydraulic oil and replace filter				S

Hydrostatic System

All of the following service procedures can be performed while the transaxle is mounted on the machine.

Fluids

NOTICE

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

The fluids used in the hydrostatic system 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 20W50 engine oil has been selected for use by the factory and is recommended for normal operating procedures.

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. More information can be found in the purging procedures.

NOTE: The oil volume figure shown does not include what is in the expansion tank hose or the expansion tank.

Fluid Description		
20W-50 Hydrostatic Oil		
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

Checking the Fluid Level

Check the fluid level in both hydraulic tanks every month.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Move the seat fully rearward.
3. Turn the fuel shutoff valve to the OFF position.
4. Allow the fluid to cool to ambient temperature.
5. Lift the seat pan up to access the hydraulic tank.
6. Clean any loose debris from around the hydraulic tank cap.
7. Check the level of the fluid in the hydraulic tank. If needed, add 20W-50 oil to bring the level to the “Fill Cold” line. Do not overfill.
8. Install the hydraulic tank cap by hand. Do not overtighten.
9. Repeat steps 6 through 8 on the opposite side.

Changing Hydrostatic Fluid

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 250 hours thereafter is recommended.

The following procedure can be performed with the transaxle installed in the machine, and with the machine on level ground. Apply the bypass valve for each transaxle and lock the machine parking brake.

Before draining oil, ensure the oil that will be removed is at ambient temperature before doing so. 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.

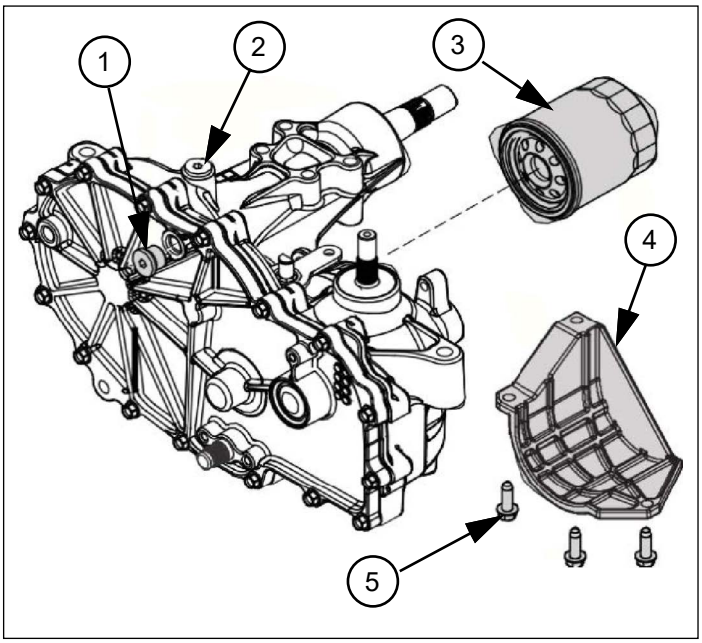


Figure 1: Filter and Filter Guard

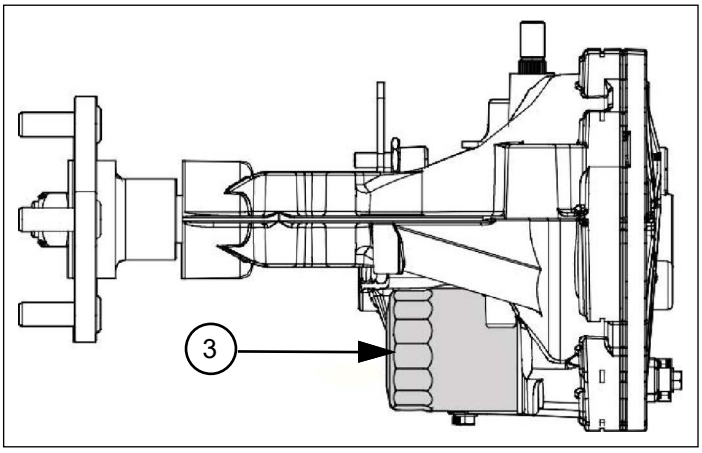


Figure 2: Filter Location

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Move the seat fully rearward.
3. Turn the fuel shutoff valve to the OFF position.
4. Lift the seat pan up to access the filter.
5. Remove the three 1/4 in filter guard screws (5) and filter guard (4).
6. Clean any loose debris from around the perimeter of the filter.
7. Place an oil drain pan beneath the oil filter (3). A drain pan 12 in (30 cm) in diameter and 8 qt (7.6L) capacity is optimal.
8. Remove the oil filter (3) from the transaxle.
9. 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.
10. Install the new filter by hand, turning 3/4 to 1 full turn after the filter gasket contacts the filter base surface.
11. Install the filter guard (4) with three 1/4 in screws (5). Torque screws to 65 in-lb (7.3 N•m) each.
12. Repeat steps 5-11 on the opposite side transaxle drive.
13. 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.
14. 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.
15. Remove the cap from the hydraulic tank located on the machine frame.
16. Fill with 20W-50 motor oil until oil just appears at the bottom of each transaxle top port plug (1) (approximately 2 qt. per transaxle, 4 qt. total).
17. Install the top port plug (1) into each transaxle as the oil level reaches this port.
18. Install and torque the top port plugs to 120 in-lb (20.3 N•m).
19. Continue to fill the transaxle through the expansion tank until the “Full Cold” line is reached on the expansion tank.
20. Reinstall the expansion tank cap by hand. Be careful to not overtighten.
21. Proceed to the purging procedure.

Purging Procedures

Air in a hydrostatic system reduces efficiency because air compresses and expands more than oil. Purge the system any time it has been opened for maintenance or repair, or when oil has been added.

Air in the system may cause:

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

Before starting, make sure the fluid in both hydraulic tanks are at the proper level. This procedure is best done with the drive wheels raised off the ground, then repeat it 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.

⚠WARNING

Never unless it is raised at the designated lift points and supported on a certified jack stand rated for at least 2,000 lb (907 kg). Follow the instructions supplied with the jack stand.

1. Place wheel chocks in front of and behind the front tires.
2. Lift the rear of the mower at the lift points and set it on the jack stand. Make sure both rear tires are off the ground and can spin freely.
3. Locate the two transaxle bypass valves (1) behind the seat.

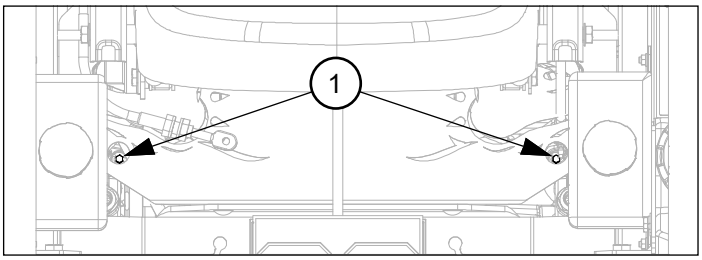


Figure 3: Location of Transaxle Bypass Valves

4. Using a 5/16 socket, turn the bolts a quarter of a turn clockwise to activate bypass.

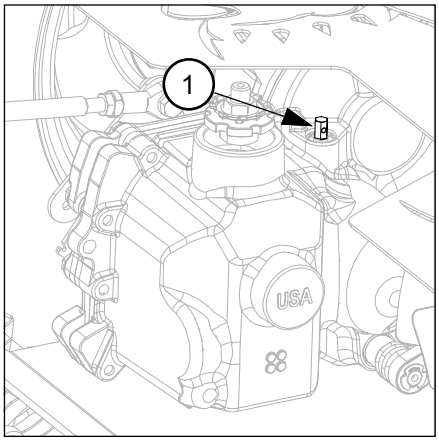


Figure 4: Transaxle Bypass Rods, Rear Bumper Removed

5. From the operating position, start the engine and set the throttle to full throttle.
6. Disengage the parking brake.
7. Slowly move both drive arms forward and reverse 5 to 6 times. The fluid level in each hydraulic tank will drop as air is purged.
8. Engage the parking brake, shut off the engine, and remove the ignition key.
9. Close both bypass valves by turning them fully clockwise.
10. Repeat steps 4 through 8.
11. Check the fluid level in both hydraulic tanks and add oil as needed.
12. Repeat steps 10 and 11 until the wheels turn forward and reverse at normal speed and the fluid level in both hydraulic tanks stay constant.
13. Lower the machine to the ground.
14. Repeat the purging procedure under normal operating conditions in an open area free of objects and bystanders.

Transaxle Bypass

The transaxle bypass valves are located at the top of the transaxles. These bypass valves serve as a neutral.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Move the seat fully rearward and lift the seatpan.
4. Locate the two transaxle bypass valves underneath the seat (1).

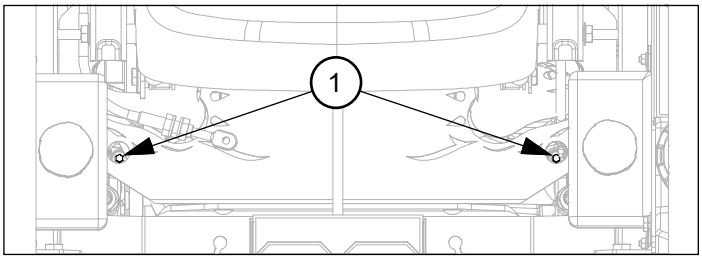


Figure 5: Transaxle Bypass Valves, Rebel and Rebel SD

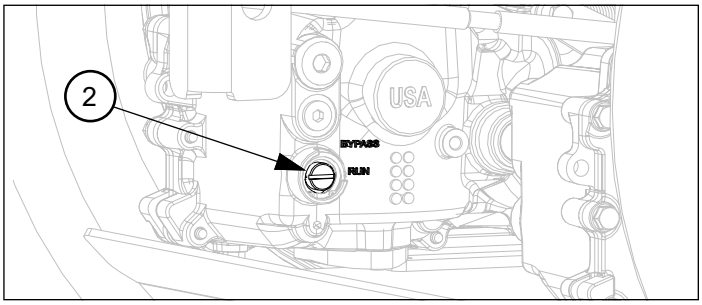


Figure 6: Transaxle Bypass Valve, Rebel X, Right Side

5. To activate the bypass
   - Rebel SD and Rebel: Using a 5/16 size socket, turn the bolt a quarter of a turn clockwise.
   - Rebel X: Using a flat head screw driver, turn the valve counterclockwise to “BYPASS”.

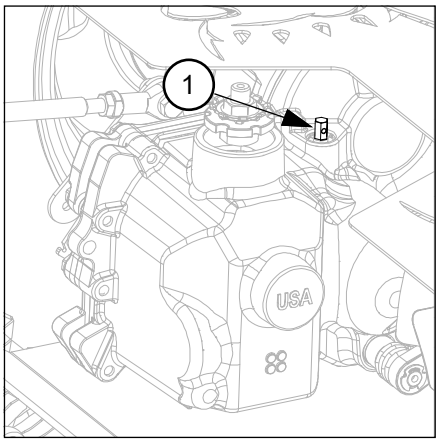


Figure 7: Bypass Valve, Rebel SD and Rebel, Right Side

6. Repeat for the second side.
7. To return to normal operation
   - Rebel SD and Rebel: turn both bolts a quarter of a turn counterclockwise.
   - Rebel X: turn both valves clockwise to “RUN”.

Tracking Adjustment

The mower is equipped with a hydrostatic transaxle tracking adjustment. Tracking refers to the ability of the mower to travel in a straight line at full forward speed without steering correction. If the mower pulls or drifts to one side during operation, a tracking adjustment is necessary. Before making any adjustments, verify that the tires have been inflated to the proper pressure.

The adjustment method depends on whether the drive arms return to neutral correctly:

- If the mower creeps forward or backward when the drive arms are in neutral, the neutral position is out of adjustment. Adjust the push rods first by following the steps for the neutral adjustment.
- If the return to neutral is correct, adjust tracking using the speed limiting knobs at the front of the mower by following the steps below.

Adjustments should be made to the faster side first. If the mower pulls to the right, adjust the left speed limiting knob. If the mower pulls to the left, adjust the right speed limiting knob.

1. Drive the machine to a flat, firm, and level surface.
2. Disengage the blades.
3. Set the throttle to full.
4. Push both drive arms fully forward and drive the mower in a straight line. Note which direction the mower pulls.
5. Stop the mower and engage the parking brake.
6. Turn the speed limiting knob on the faster side clockwise a 1/4 turn to reduce speed on that side.
7. Release the parking brake and repeat step 4.
8. If the mower continues to pull to one side, repeat steps 5 through 7 until the mower travels in a straight line.

Pump Belt Adjustment

Over time, the pump belt may stretch or loosen, affecting the performance and responsiveness of the machine. Proper pump belt tension ensures smooth and consistent power transfer to the hydrostatic drive system. If the machine is not responding consistently or the belt appears loose, inspect and adjust the belt tension as needed.

A belt tension gauge provides an accurate reading of the tension.



Figure 8: Belt Tension Gauge

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Using a 3/4 in wrench, loosen the top nut (1).

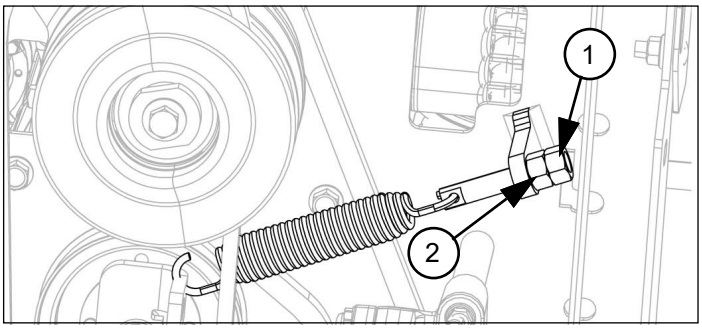


Figure 9: Pump Belt Spring Tensioner

4. Turn the bottom nut (2) clockwise to increase belt tension or counterclockwise to decrease belt tension.
5. Once the desired tension is achieved, tighten the top nut (1) securely.
6. The tension should be adjusted so that there is 60 lb (27 kg) of tension on the belt. Recheck belt tension after 10 minutes.

Engine

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.

An oil drain is installed on the engine to simplify the oil change process. Use Bad Boy 10W-30 synthetic blend engine oil for maximum protection. Bad Boy recommends changing the engine oil and inspecting the oil filter at the intervals specified in the Service Intervals table.

NOTE: Refer to the engine service manual shipped with your machine for additional information on changing the engine oil and replacing the engine oil filter.

⚠WARNING

Hot oil can cause serious burns. Allow the engine to cool before performing this procedure.

NOTICE

Dispose of used oil in accordance with local, state, and federal regulations.

1. Run the engine to warm.
2. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
3. Turn the fuel shutoff valve to the OFF position.
4. Place an oil collection container beneath the oil drain (1).
5. Remove the cap from the oil drain (1) and direct the hose downward to drain the oil completely.

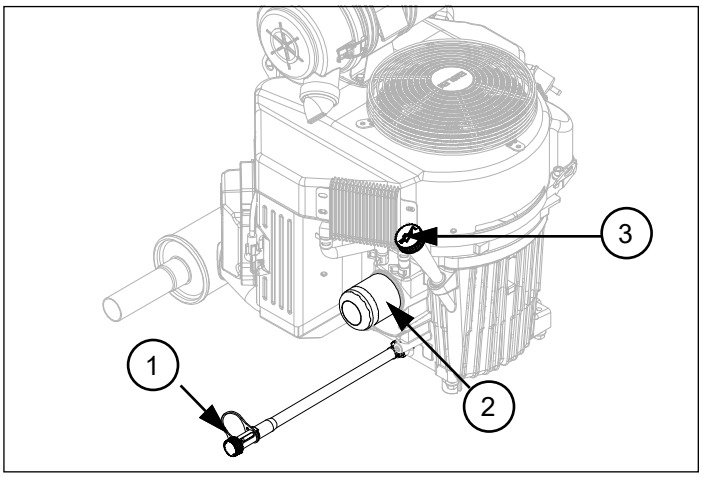


Figure 10: Oil Drain, Oil Filter, and Oil Location

6. Reinstall the cap on the oil drain (1) securely. If the oil filter (2) is due for replacement, see "Engine Oil Filter" on page 8 before proceeding.
7. Remove the oil dipstick (3) and add new 10W-30 synthetic blend engine oil.
8. Check the oil level. The oil level should reach the upper indicator mark on the dipstick.

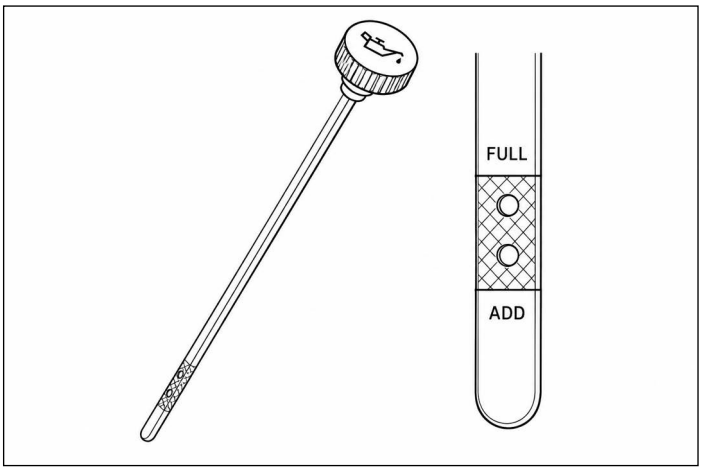


Figure 11: Oil Fill Mark

9. Reinstall the oil dipstick (3) and tighten securely.
10. Turn the fuel shutoff valve to the ON position.
11. Start the engine and check for oil leaks.
12. Shut off the engine and remove the ignition key.
13. Recheck the oil level to make sure it is still close to the upper indicator mark.
14. Dispose of used oil and filter in accordance with local ordinances.

Engine Oil Filter

⚠WARNING

Hot oil can cause serious burns. Allow the engine to cool before performing this procedure.

NOTICE

Dispose of used oil and filter in accordance with local, state, and federal regulations.

1. Position the oil collection container under the oil filter (1).

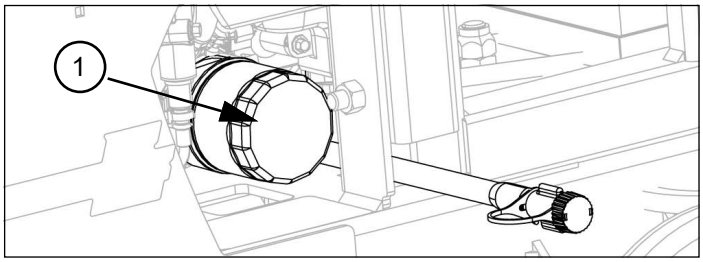


Figure 12: Engine Oil Filter

2. Remove the oil filter (1) and allow any remaining oil to drain completely.
3. Clean the filter mounting surface on the engine.
4. Prepare and install the new oil filter according to the instructions printed on the filter and in the engine service manual.
5. Return to Step 7 in "Engine Oil" on page 7 to complete the procedure.

Fuel Filter

The fuel filter is located in the fuel line. Always use new fuel line clips.

⚠WARNING

Gasoline is extremely flammable and the vapors are explosive. Always clean up spilled fuel immediately. Keep flammable liquids away from heat, flames, sparks, and lighted tobacco. Perform service in a well-ventilated area or outdoors. Failure to follow this warning could cause serious injury or death.

NOTICE

Dispose of used fuel filter in accordance with local, state, and federal regulations.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Locate the fuel filter (1) and note the direction of fuel flow as indicated on the filter.

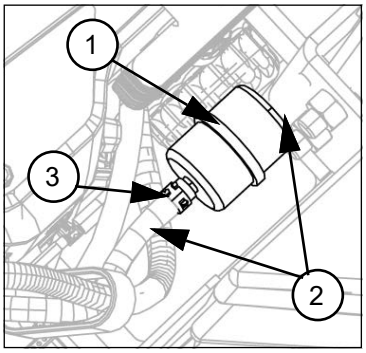


Figure 13: Fuel Filter

4. Clamp the fuel line on both sides of the fuel filter using fuel line clamps (2).
5. Remove the fuel line clips (3) from each side of the fuel filter and remove the fuel filter.

6. Place the new fuel filter in the same direction of fuel flow noted in Step 3.
7. Install new fuel line clips (3) on each side of the fuel filter (1).
8. Remove fuel line clamps (2).
9. Turn the fuel shutoff valve to the ON position.
10. Start the engine to check for fuel leaks.

Air Cleaner

The air cleaner element must be replaced at the interval specified for your engine. Operating the engine with a dirty or damaged air cleaner element can cause loss of power and premature engine failure. Refer to the engine service manual shipped with your machine for recommended replacement interval and additional information specific to your engine.

NOTICE

Do not clean the air cleaner element with compressed air.

⚠CAUTION

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, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Remove the air cleaner cover (1).

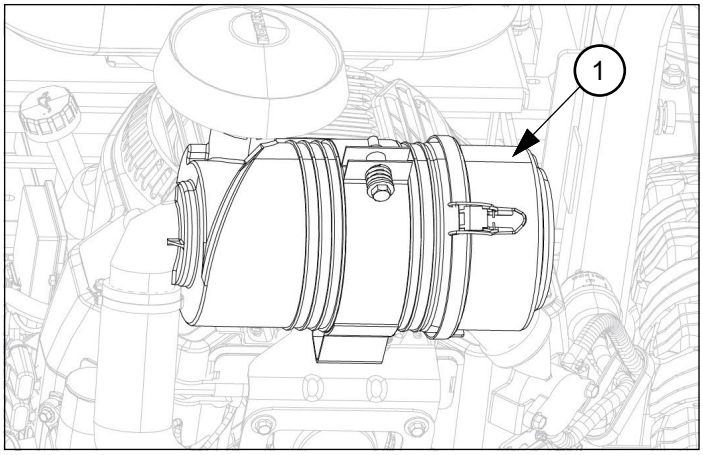


Figure 14: Engine Air Cleaner

4. Remove the pre-cleaner from the air cleaner element (if equipped).
5. Remove the air cleaner element from the air cleaner base.
6. Install the new air cleaner element onto the air cleaner base.
7. Install the pre-cleaner onto the new air cleaner element (if equipped).
8. Reinstall the air cleaner cover (1).

Spark Plug

For each spark plug location, specifications and more information, refer to the engine service manual shipped with your machine.

⚠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, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Loosen the four carriage bolts (two on each side of the rear engine cover) using a 1/2 in. ratcheting wrench, and pivot the rear engine cover down.
4. Disconnect the spark plug wire from the spark plug.

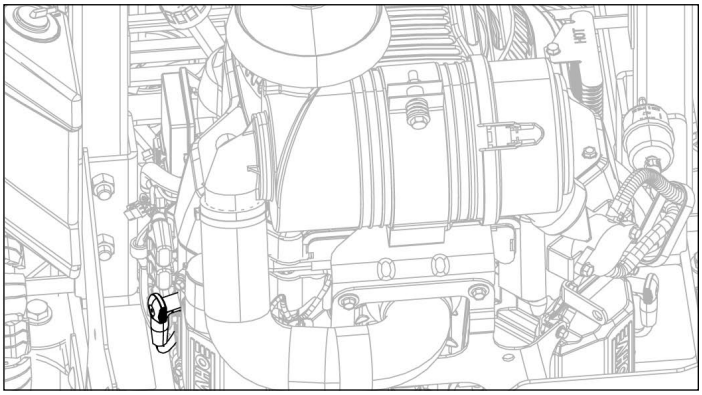


Figure 15: Spark Plug Location

5. Remove the spark plug using a spark plug socket and ratchet.
6. Inspect the electrode for wear, fouling, or damage.
7. Check the gap against the engine manufacturer's specification. See the engine service manual for gap and torque specifications.

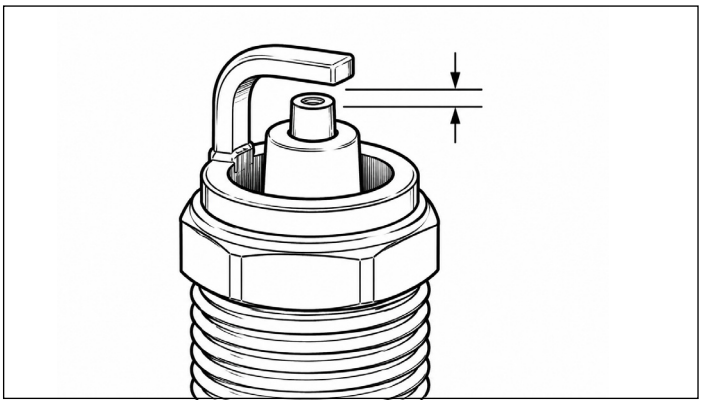


Figure 16: Spark Plug Gap

8. Install the new or gapped spark plug and tighten to the torque specification listed in the engine service manual.
9. Reconnect the spark plug wire.
10. Pivot the rear engine cover up and tighten the four carriage bolts (3) securely.

Park Adjustment

If the mower creeps forward with the drive arms in the park position, the drive system needs adjustment.

⚠WARNING

This procedure should be performed only by trained service personnel. Contact your Bad Boy authorized service dealer.

Electrical System

Inspect all wiring and connectors regularly for chafing, corrosion, or loose fittings. A tight, clean connection at the battery terminals is critical to reliable starting and charging performance. Replace any wire or connector that shows heat discoloration, cracked insulation, or corrosion buildup.

Fuses

One fuse protects this machine's electrical system:

Fuse	Rating	Location
Main fuse	25A	By the starter solenoid

A blown fuse indicates that excess current has occurred within that circuit, typically due to a fault in the electrical system or a connected component. Do not replace a fuse with one of a higher amperage rating, and do not bypass a fuse under any circumstance. Doing so removes circuit protection and creates a risk of fire or permanent damage to the electrical system. If a fuse blows repeatedly, discontinue use and have the circuit diagnosed before continuing operation.

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

Relay-Controlled Interlocks

The load center contains one relay that governs the safety interlocks controlling machine power-on, drive engagement, and clutch activation. A detailed wiring diagram is available at www.badboycountry.com or by contacting your local Bad Boy dealer.

Starter Signal Solenoid

The starter solenoid requires two conditions to engage and crank the engine: full battery voltage present at its large terminals, and a low-current signal present at its control terminal. The signal originates from the starter relay and instructs the solenoid to close its internal contacts, completing the high-current path from the battery to the starter motor.

If the engine fails to crank and battery voltage tests within specification, verify that the signal wire is fully seated at the starter solenoid's control terminal before replacing the solenoid or starter motor.

Battery

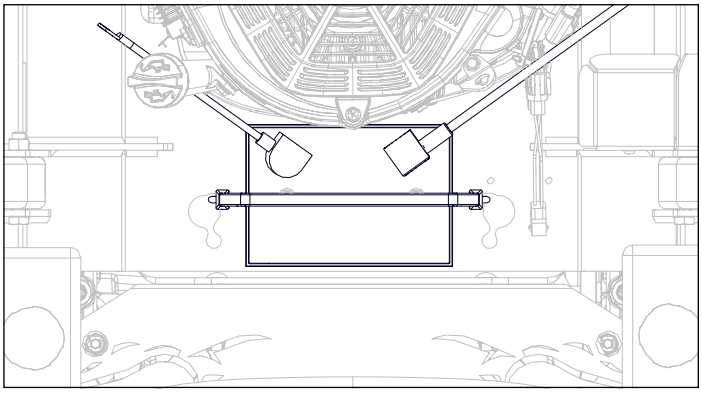


Figure 17: Battery Location

Inspect all wiring, terminals, and connections associated with the battery for damage, corrosion, or looseness prior

to service. Battery terminals must remain clean and tight to ensure reliable starting and charging performance. Replace any wiring or connection exhibiting damage, corrosion, or looseness.

Condition	Voltage
Engine running, full throttle	13.6 - 14.5V DC
Engine off	12V DC minimum

A voltage reading outside these ranges indicates a fault in the charging system or battery condition rather than a wiring fault.

Removal

⚠CAUTION

Disconnect the negative battery cable before the positive battery cable to prevent electrical arcing. Failure to follow this caution could result in machine damage or personal injury.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Disconnect the negative battery cable first to prevent electrical arcing.
4. Disconnect the positive battery cable.
5. Remove the battery strap securing the battery to the machine frame.
6. Lift the battery off the battery tray.

Installation

⚠CAUTION

Connect the positive battery cable before the negative battery cable to prevent electrical arcing. Failure to follow this caution could result in machine damage or personal injury.

1. Position the battery in the battery tray.
2. Place the battery strap over the battery to secure the battery to the machine.
3. Connect the positive battery cable.
4. Connect the negative battery cable.

Wheels

Front Caster

The front caster wheel assembly requires periodic inspection and maintenance to ensure proper operation. Inspect the caster wheels for excessive play or wobble before each use.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Inspect the caster wheel for excessive play, wobble, or unusual noise. If any of these conditions are present, the bearing may need to be replaced.
4. To access the caster fork bolt, remove the dust cap (1) by prying gently around its edges using a flat-head screwdriver.

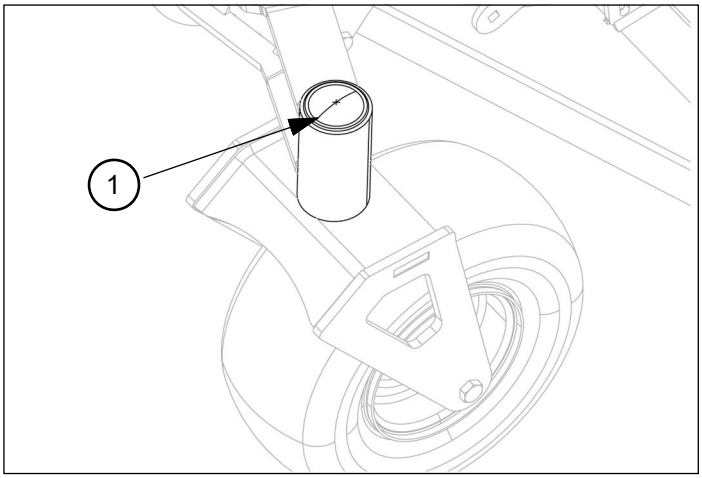


Figure 18: Dust Cap Location

5. Using a 1-7/16 in socket on the caster fork nut (2) and a 1-1/2 in wrench to secure the bolt (3), tighten the caster fork bolt (3) to a torque of 100 ft-lb (135 N·m).

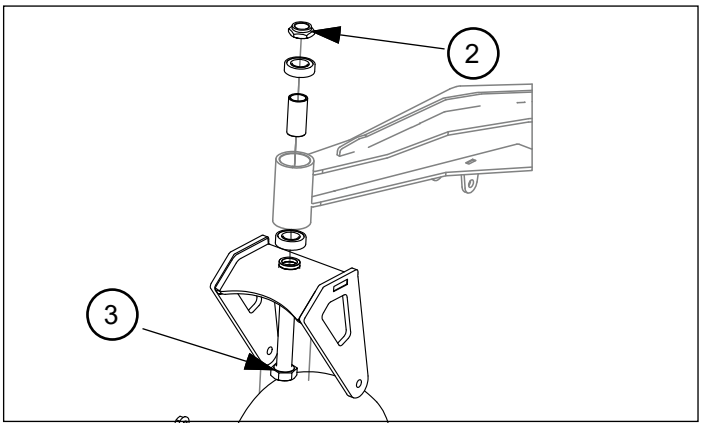


Figure 19: Caster Wheel

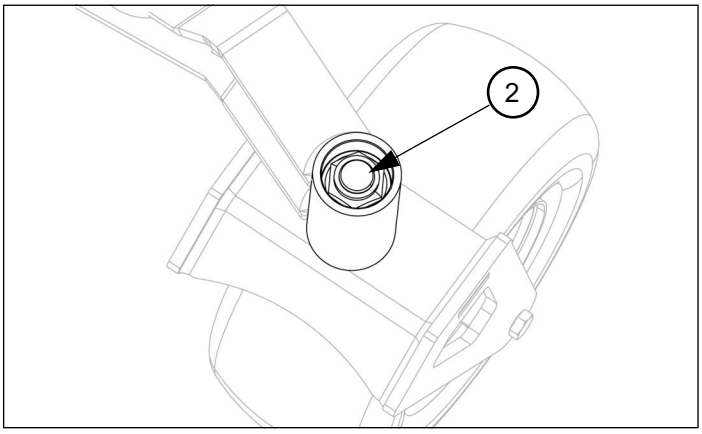


Figure 20: Caster Wheel Bolt

6. Reinstall the dust cap (1) by gently tapping around its edges. Do NOT hit the center of the cap.

Wheel Lugs

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

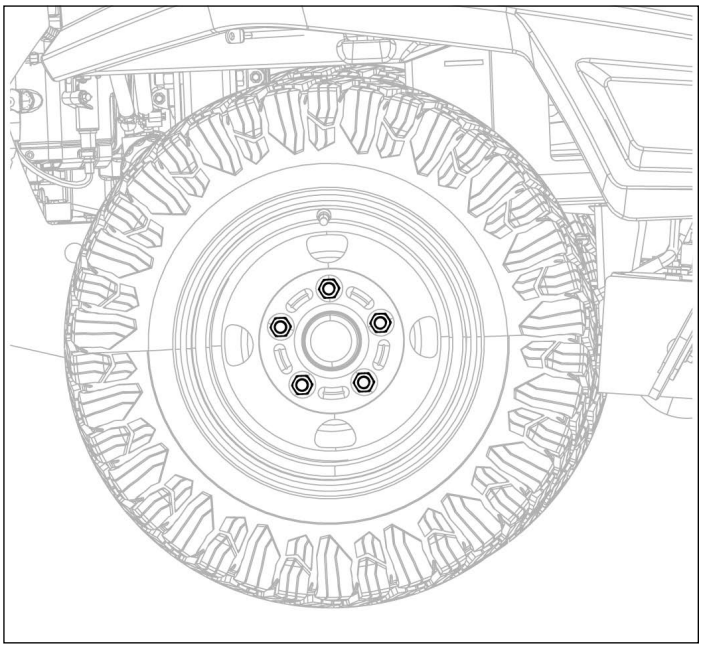


Figure 21: Rear Wheel Lugs

Lubrication

⚠WARNING

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

The machine has the following grease locations and should be greased at every oil change

	Per	Total
Turnbuckles, Left and Right (1)	2	4

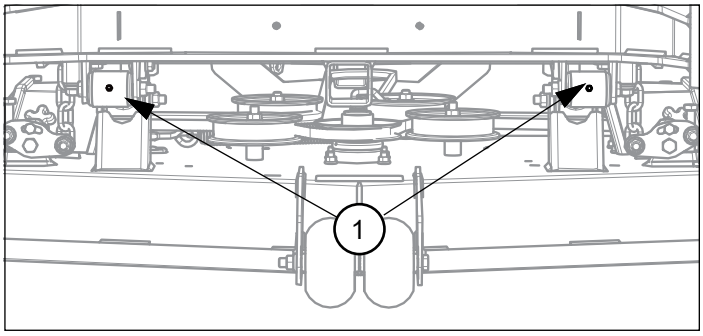


Figure 22: Turnbuckles, Right and Left

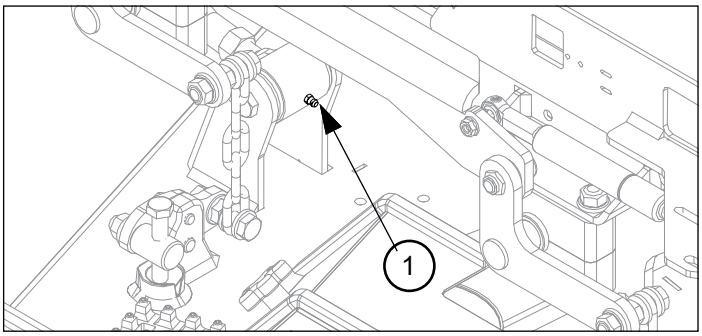


Figure 23: Turnbuckle, Right Lubrication Point

Note: NGLI grade #2 multi-purpose gun grease is recommended.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Clean the grease fittings with a cloth. Scrape any dirt/debris off the front face of the fittings.
4. Connect a grease gun to each fitting.
5. 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).
6. Wipe up any excess grease and dispose of properly.

Cutting Deck

A belt tension gauge provides an accurate reading of the tension.



Figure 24: Belt Tension Gauge

Deck Belt Removal

⚠CAUTION

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

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Raise the deck to the highest position.
4. Remove the pulley covers by loosening the two knobs (1) on each pulley cover.

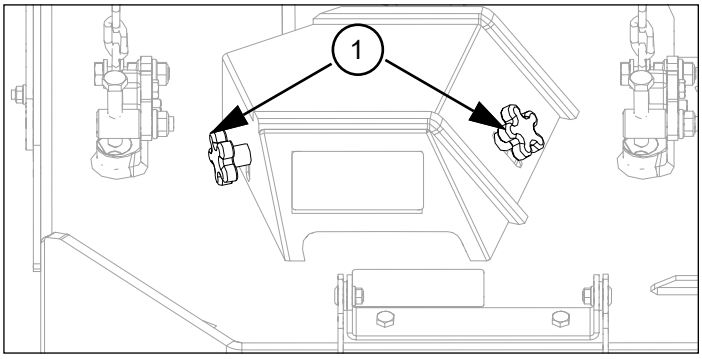


Figure 25: Pulley Cover Location

5. Remove the cotter pin (2) from the eye bolt (3).

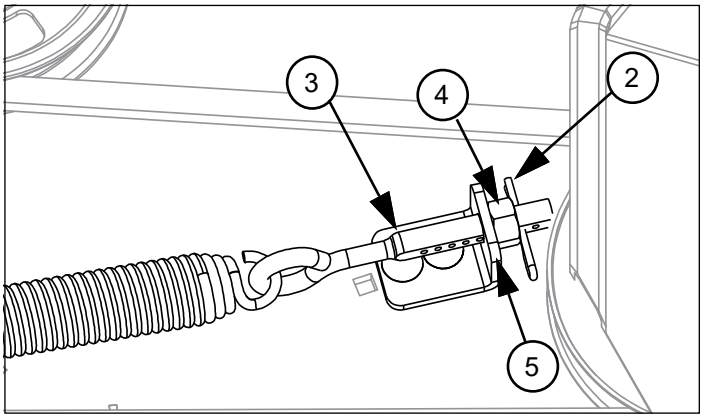


Figure 26: Deck Belt Tensioner

6. Using a 1/2 in. wrench or socket, turn the hex nut (4) away from the eye bolt tab (5) until the spring is slack and the belt is loose.
7. Lift up on the belt (6) and rotate the pulley (7) by hand until the belt clears the pulley groove.

8. Remove the belt from the remaining pulleys.

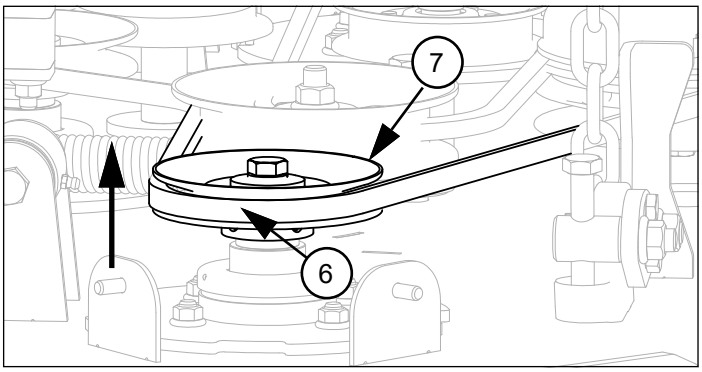


Figure 27: Rotating Belt and Pulley

Deck Belt Installation

⚠CAUTION

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

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

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Raise the deck to the highest position.
4. Remove the pulley covers by loosening the two knobs (1) on each pulley cover.

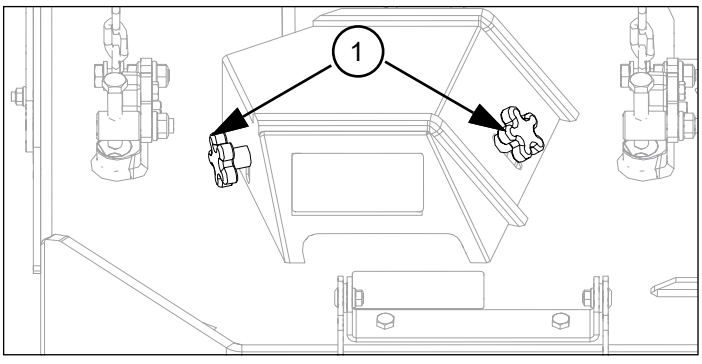


Figure 28: Pulley Cover Location

5. Route the new belt following the belt route decal on the deck. Confirm the belt is seated in all pulley grooves before proceeding.
6. Remove the cotter pin (2) from the eye bolt (3).

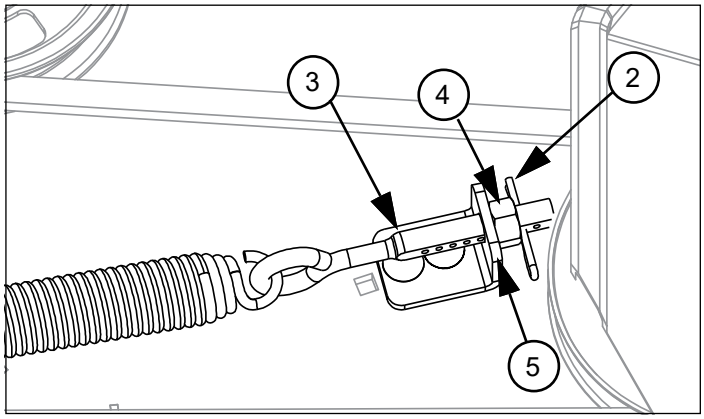


Figure 29: Deck Belt Tensioner

7. Using a 1/2 in. wrench or socket, turn the hex nut (4) away from the eye bolt tab (5) until the until belt tension measures 70–75 lb (32–34 kg) with the deck at its lowest cutting height.
8. Install both pulley covers. Tighten each pulley cover to the deck with the two knobs.

Note: When installing a new belt, recheck the belt tension after 10 minutes of cutting time to make sure the tension is between the desired range.

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, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Remove the cotter pin (1) from the eye bolt (2).

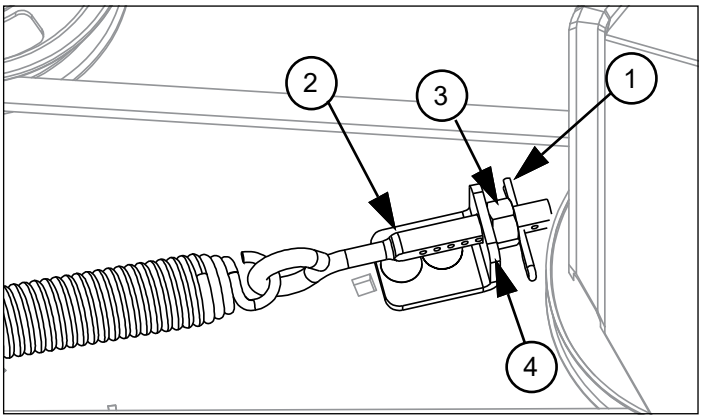


Figure 30: Deck Belt Tensioner

4. Using a 1/2 in. wrench or socket, turn the hex nut (3) away from the eye bolt tab (4) until the until belt tension measures 70–75 lb (32–34 kg) with the deck at its lowest cutting height.

Leveling the Deck

⚠CAUTION

Keep hands and fingers clear of the deck and lift linkage during this procedure. Contact with moving parts can cause serious injury.

Ensure the mower deck is level when there is an uneven cut. The deck should measure 1/4 in higher in the back than in the front from the cutting edge of the blade to the ground for a proper cut.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Turn the fuel shutoff valve to the OFF position.
3. Confirm all tires are inflated to specification.
4. Set the deck height of 4 inches.
5. Lift the chute and rotate the blade so it points front-to-back on the mower.

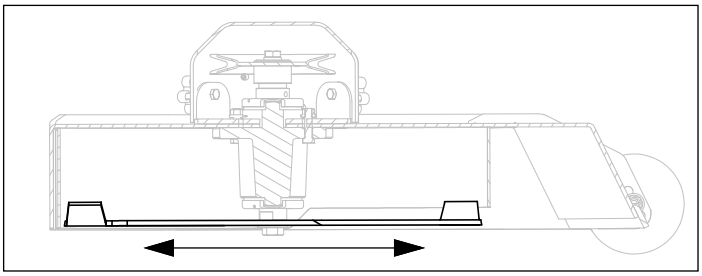


Figure 31: Direction of Blade

6. At each of the four deck levelers, loosen the slide bolt (1) and the leveler mounting bolt (2).

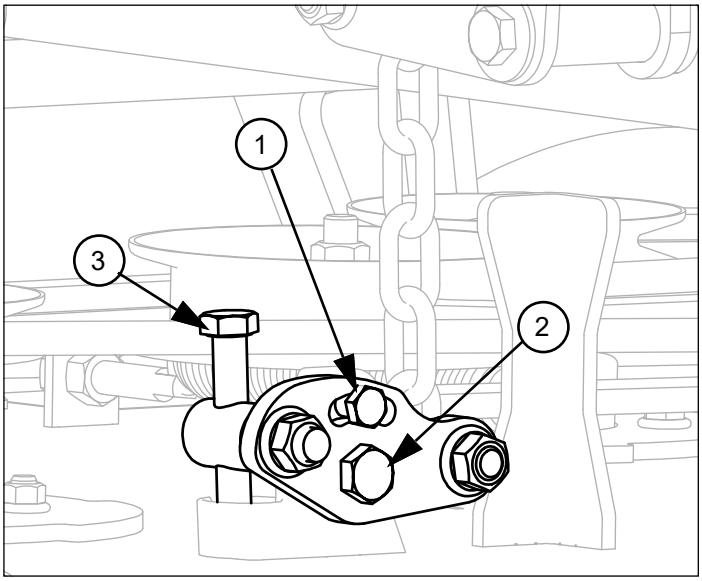


Figure 32: Slide and Leveler Mounting Bolts, Left Rear

7. With the deck height at 4, measure from the front tip of the blade to the ground. Turn the front right leveler adjustment bolt (3) until this distance reaches 4 in.

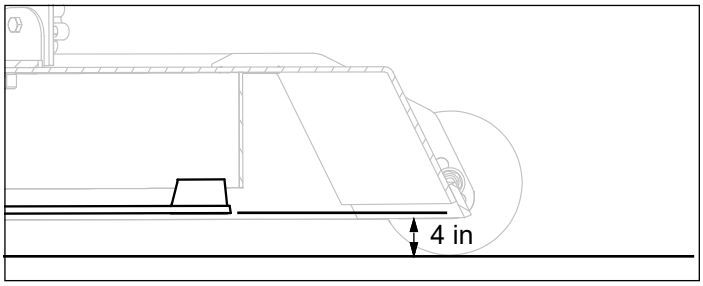


Figure 33: Measurement of Ground to Front Tip of Blade

8. Measure from the back tip of the blade to the ground. Turn the back right leveler adjustment bolt (3) until this distance reaches 4-1/4 in — 1/4 in higher than the front, as required for proper cut.
9. Turn the back left leveler adjustment bolt (3) until the left side measures 1/4 in higher than the left front.
10. Recheck all four against the target blade tips measurements. Readjust any leveler adjustment bolt (3) as needed.
11. Once all four measurements hold correct, tighten the slide bolt (1) and leveler mounting bolt (2) at each leveler.

Blade Removal

⚠WARNING

The use of blades that are not Bad Boy blades can result in blade failure. Blade failure during operation can cause serious injury or death.

NOTICE

The use of unapproved blades may void any or all warranty for both machine and engine.

NOTICE

Use an impact wrench capable of at least 220 ft-lb (298 N•m) output torque to avoid component damage.

⚠CAUTION

Mower blades are sharp and can cause injury. Wear gloves when handling blades.

1. Park the machine on a flat, firm, and level surface. Engage the parking brake, shut off the engine, and remove the ignition key.
2. Raise the cutting deck to the maximum height.
3. Turn the fuel shutoff valve to the OFF position.
4. Disconnect the battery.
5. Place a piece of wood between the blade and the mowing deck to prevent the blade from turning.
6. Using an impact wrench and 15/16 in. socket, remove the blade bolt from the spindle shaft.
   NOTE: The blade bolt has right-handed threads.

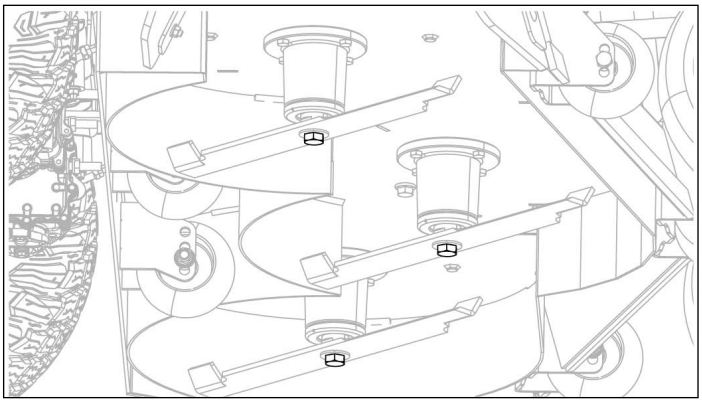


Figure 34: Blade Removal

7. Remove the washer and blade from the spindle shaft.
8. Place the new or sharpened blade onto the spindle shaft with the fin or sail facing upward.
9. Install the washer with the cupped side down then install the blade bolt.
10. Tighten the blade bolt to a torque of 110 ft-lb (149 N•m).
11. Confirm the blade rotates freely and orientation matches the previous blade before returning the machine to service.

Decals

Replace damaged or faded safety decals.

1. Clean the area where the label will be placed with soapy water and clean cloth.
2. Spray soapy water on the area again.
3. Peel backing from the label and press the label against the wet surface.
4. Smooth out any air bubbles using a straight edge like a ruler or credit card to create the adhesion to the machine.

SECTION 8 TRANSPORTING

Before transporting the machine, ensure the transport vehicle is suitable to bear the weight of the machine. Weight will fluctuate with the addition of accessories.

Loading

⚠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.

NOTE: The ROPS must remain in the raised and locked position at all times. If the ROPS was lowered, raise and lock it before loading.

1. Rotate the fuel shutoff valve to the ON position.
2. Set the deck to the maximum height to ensure proper clearance.
3. Start the engine and release the parking brake.
4. Drive the machine onto the trailer in the reverse direction.
5. Center the mower's weight slightly forward of the trailer axles.
6. Engage the parking brake, shut off the engine, and remove the ignition key.
7. Rotate the fuel shutoff valve to the OFF position.

NOTE: Machine securement requirements may vary by state and local regulations. Always comply with all applicable federal, state, and local regulations when transporting this machine on public roads.

8. Attach a strap at the left front (1) and right front of the machine.

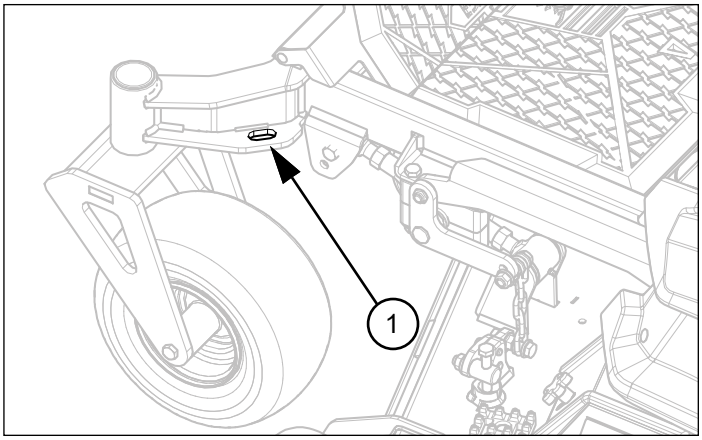


Figure 1: Tie Downs, Left Front

9. Attach a strap at the left rear (2) and right rear of the machine.

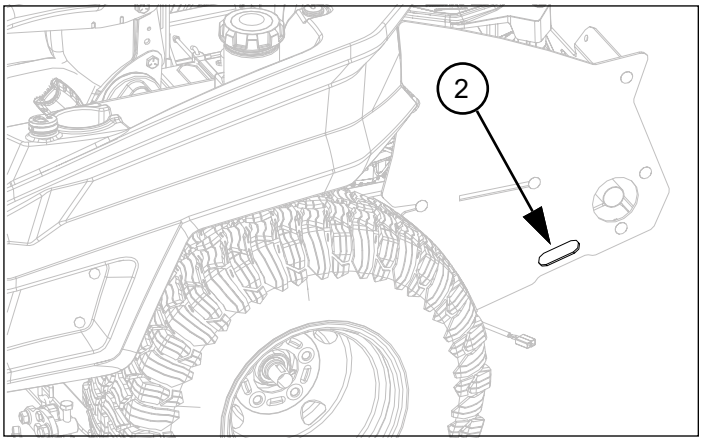


Figure 2: Tie Down, Left Rear

10. Securely fasten all four straps to the truck or trailer.
11. Secure the ends of the straps.

Unloading

NOTE: The ROPS should remain in the raised and locked position from the loading procedure. If the ROPS was lowered during transport, raise and lock it before unloading.

1. Rotate the fuel shutoff valve to the ON position.
2. Set the deck to the maximum height to ensure proper clearance.
3. Start the engine and release the parking brake.

4. Drive the machine forward down the ramps slowly and carefully.
5. Once clear of the ramp, engage the parking brake, shut off the engine, and remove the ignition key.
6. Rotate the fuel shutoff valve to the OFF position.

Moving Inoperable Machine

⚠CAUTION

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

Do not tow the machine onto a trailer. Use a winch to load the machine onto a trailer for transporting.

7. Turn the fuel shutoff valve to the OFF position.
8. Locate the two transaxle bypass valves underneath the seat (1).

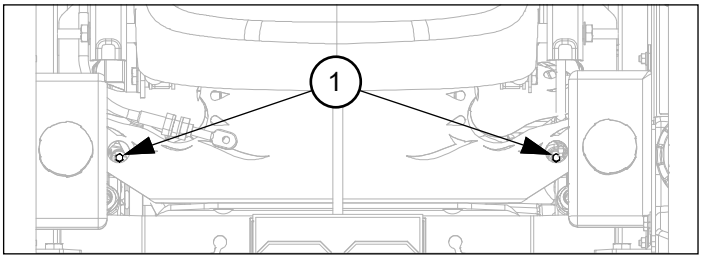


Figure 3: Transaxle Bypass Valves, Rebel and Rebel SD

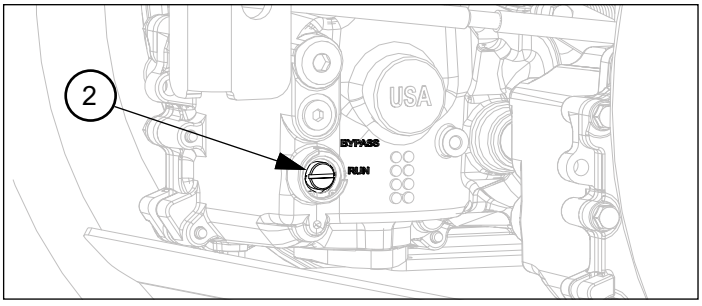


Figure 4: Transaxle Bypass Valve, Rebel X, Left Side

9. To activate the bypass
   - Rebel SD and Rebel: Using a 5/16 size socket, turn the bolt a quarter of a turn clockwise.
   - Rebel X: Using a flat head screw driver, turn the valve counterclockwise to “BYPASS”.

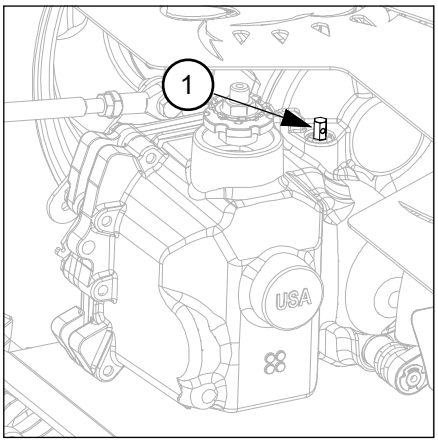


Figure 5: Bypass Valve, Rebel SD and Rebel, Left Side

10. Repeat for the second side.
11. Move the machine with the engine off and the bypass valves in the neutral position. Move only as far as necessary.
12. To return to normal operation
    - Rebel SD and Rebel: Turn both bolts a quarter of a turn counterclockwise.
    - Rebel X: Turn both valves clockwise to “RUN”.

SECTION 9 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** after the date of sale to the original retail purchaser **unless the product is used for rental purposes, in which case this warranty is limited to ninety (90) days.**

- 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 **one (1) year** and at the unit 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.
- Suspension seats are warranted for a period of **six (6) months** against material or workmanship defects.
- Batteries are warranted for **six (6) months** (free replacement) from the retail purchase date against materials or workmanship defects. The battery warranty must be obtained through the battery manufacturer.

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

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

3. HOW TO OBTAIN SERVICE UNDER THIS WARRANTY:

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

B. **Warranty 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 MOWER**. 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, adjustment; (iii) replacement of services, 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, 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 mower 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.

⚠ WARNING

Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.

For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

BAD BOY MOWERS

www.badboycountry.com

Bad Boy, Inc.

102 Industrial Drive

Batesville, Arkansas 72501