

WALK-BEHIND MODEL **ZERO-TURN MOWER** **OWNER'S, SERVICE & PARTS MANUAL**

For additional information, please see us at
www.badboymowers.com

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TABLE OF CONTENTS

Basic Information	Section 1	Page 4
Bad Boy Safety Guidelines.....	Section 2	Page 5
Operation	Section 3	Page 9
Maintenance.....	Section 4	Page 10
Storage and Transportation.....	Section 5	Page 10
Troubleshooting and FAQ	Section 6	Page 12
Controls.....	Section 7	Page 13
Moving In-operable Mower.....	Section 8	Page 14
Instrumentation	Section 9	Page 14
Mower Blade Maintenance.....	Section 10	Page 15
Greasing Bearings.....	Section 11	Page 15
How To Choose the Right Blade		Page 16
Mowing Tips		Page 17
Service Section		Page 18
Parts Section.....		Page 30
Limited Warranty		Page 41



THIS MANUAL APPLIES TO THE FOLLOWING EQUIPMENT:

BAD BOY WALK-BEHIND SERIES

WALK-BEHIND 3100 36" FS541V 603CC Kawasaki

WALK-BEHIND 3100 48" FS541V 603CC Kawasaki

COMMONLY USED ITEMS AND PART NUMBERS

36" WALK-BEHIND Blade	Hi-Lift Fusion 038-0001-00	Gator Blade 038-0003-00	Wave Blade 038-5220-00
48" WALK-BEHIND Blade	Hi-Lift Fusion 038-5350-00	Gator Blade 038-5000-00	Wave Blade 038-4825-00
36" WALK-BEHIND Deck Belt	041-5200-00		
48" WALK-BEHIND Deck Belt	041-1560-00		
WALK-BEHIND Pump Belt	041-6500-00		
Fuel Filter	063-6000-00		
Spark Plug	015-8001-00		
Air Filter	063-2097-00		
Oil Filter	063-8017-00		
Motor Oil	10W-30 Motor Oil - Bad Boy Synthetic Blend Motor Oil Recommended. 085-6015-00		
Hydraulic Oil	20W-50 Motor Oil - Bad Boy Hydrostatic Oil Recommended (Approximately 2.5 Quarts/Transaxle) 085-6000-00		



SECTION 1: BASIC INFORMATION

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

- 1.1 All Bad Boy engines use 10W-30 engine oil. For maximum protection, Bad Boy synthetic blend engine oil is recommended.
- 1.2 All Bad Boy hydraulic systems use 20W-50 engine oil (Conventional or Synthetic). Bad Boy Hydrostatic oil is recommended.
- 1.3 All Bad Boy Mowers use hi-temp multi-purpose grease. NLGI No. 2 for the grease fittings.
- 1.4 WALK-BEHIND models have 12 psi in both front and rear tires.
- 1.5 Most Kohler engines hold approximately two (2) quarts of motor oil. Be careful not to over fill engine oil. Refer to engine's service manual.

WARRANTY REGISTRATION

The Warranty Registration form must be completed within 30 days to validate your warranty. As the new equipment owner, you are expected to see that the form is completed and forwarded to Bad Boy Inc. at time of delivery. Warranty is nontransferable. **Warranty registration should be completed by the selling dealership using the on-line registration site.**

MODEL/SERIAL NUMBER

Your WALK-BEHIND model serial numbers are found on the SIN plate underneath the seat. These numbers can assist you in the ordering of new parts when replacements become necessary.

PARTS/SERVICE

Only Bad Boy replacement parts are to be used on your mower. Replacement parts are available through your local Bad Boy Mowers Dealer. Remember to always provide the following information when ordering parts:

1. Correct part number
2. Correct serial number

All warranty repair and service must be handled through your authorized Bad Boy Mowers Dealer. To locate the nearest dealer, go to our website and click on Locate a Dealer.

EVAPORATIVE EMISSION CONTROL WARRANTY STATEMENT

Federal Evaporative Emission Control Warranty: Your Warranty Rights and Obligations

The Environmental Protection Agency (EPA), and Bad Boy Inc. are pleased to explain the evaporative emission control system's warranty on your 2018 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 Inc. must warrant the evaporative emission control system on your equipment for two 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 two years Bad Boy Inc. 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 connector



SECTION 2: MOWER SAFETY GUIDELINES

Never allow untrained people to operate this machine. It is the owner's responsibility to get training and see to it that anyone who has permission to use your machine receives the proper training. 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. **This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.**

GENERAL OPERATION

- 2.1 Read, understand, and follow all instructions on the machine and in the manual before starting.
- 2.2 Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- 2.3 Always remain seated while operating the machine. If the machine is equipped with Roll Over Protection (ROPs), always buckle your seat belt.
- 2.4 Only allow responsible adults who are familiar with the instructions to operate this machine.
- 2.5 Clear the area of objects such as rocks, wire, toys etc., which could be thrown by the blades
- 2.6 Always maintain a safe distance from people and pets just prior to, and during, operation. Stop the machine if anyone enters the area.
- 2.7 Never carry passengers.
- 2.8 Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- 2.9 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.
- 2.10 Never operate the machine without the discharge chute, grass catcher, or other safety devices correctly in place and functioning properly.
- 2.11 Slow down before turning.
- 2.12 Always disengage blades, place steering controls in neutral, engage parking brake, and remove ignition key when leaving operators seat. Never leave a running machine unattended.
- 2.13 Disengage blades when not mowing. Shut off engine and wait for all parts to come to a complete stop before cleaning the machine, inspecting the machine for damage, removing the grass catcher, or unclogging the discharge guard.
- 2.14 Always operate machine in daylight or with adequate working lights.
- 2.15 Do not operate the machine while under the influence of alcohol or drugs.
- 2.16 Watch for traffic when operating near or crossing roadways.
- 2.17 Always wear eye protection when operating or servicing the machine.
- 2.18 Always wear ear protection, such as earplugs, while mowing.
- 2.19 Use extra care when loading or unloading the machine into a trailer or truck.
- 2.20 Be alert of surroundings. Watch for rocks, stumps, mounds, depressions, and low hanging limbs or objects that could be potentially hazardous while mowing.
- 2.21 Data indicates that operators 60 years of age and above are involved in a large percentage of riding mower related injuries. These operators should periodically evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.



SLOPE OPERATION

Slopes are a major factor related to loss of control and tip over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution. If you cannot back up the slope, or you feel uneasy on it, do not mow it.

- 2.22 Mow up and down slopes, not across.
- 2.23 Watch for holes, ruts, bumps, rocks, or other hidden objects that tall grass can obscure. Uneven terrain could overturn the machine.
- 2.24 Choose a low ground speed when operating the machine on a slope.
- 2.25 Do not mow on wet grass, the tires may lose traction.
- 2.26 Do not attempt to coast down a slope in the neutral position.
- 2.27 Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly, straight down the slope.
- 2.28 Keep all movement on slopes slow and gradual. Sudden changes in speed or direction could cause the machine to roll over.
- 2.29 Use extra care while operating machine with grass catchers or other attachments: they can affect the stability of the machine. Do not use on steep slopes.
- 2.30 Do not try to stabilize the machine by putting your foot on the ground.
- 2.31 Do not mow near drop offs, ditches or embankments. The machine could suddenly roll over if a wheel goes over the edge or the edge caves in.
- 2.32 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.

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



TOWING

- 2.40 Tow only with a machine that has a hitch specifically designed for towing. Do not attach towed equipment except at the hitch point.
- 2.41 Follow the manufacturer's recommendation for weight limits for towed equipment and towing on slopes.
- 2.42 Never allow children or others in or on towed equipment.
- 2.43 On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
- 2.44 Travel slowly and allow extra distance to stop.

SERVICE

SAFE HANDLING OF GASOLINE

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

- 2.45 Extinguish all cigarettes, cigars, pipes, and all other sources of ignition.
- 2.46 Use only an approved gasoline container.
- 2.47 Never remove gas cap or add fuel with the engine running.
- 2.48 Allow engine to cool before refueling.
- 2.49 Never fuel the machine indoors.
- 2.50 Do not store machine near open flame or source of ignition, such as a water heater or furnace.
- 2.51 Remove gas powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- 2.52 Never fill gasoline containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- 2.53 Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until the fueling is complete. Do not use a nozzle lock-open device.
- 2.54 If fuel is spilled on clothing, change clothing immediately.
- 2.55 Never overfill fuel tank. Replace gas cap and tighten securely. **Tank is full when level reaches bottom of fill tube.**

GENERAL SERVICE

- 2.56 Never operate machine in a closed area where dangerous carbon monoxide fumes can collect.
- 2.57 Keep all nuts and bolts tight to be sure the equipment is in safe working condition. Never operate a poorly maintained machine.
- 2.58 Do not touch hot areas of the machine.
- 2.59 Never interfere with the intended function of a safety device or reduce the protection provided by a safety device. Check their proper operation regularly.



- 2.60 Keep the entire machine free of grass, leaves, or other debris build up. Clean up oil or fuel spillage and remove any fuel soaked debris. Failure to do so can affect the safety and functionality of the machine, as well as increase the danger of a fire due to contact with the hot surfaces of the machine.
- 2.61 Allow machine to cool before storing.
- 2.62 If you strike something with the mower, turn the mower and blades off, engage the parking brake, and inspect the machine for damage. Repair, if necessary, before resuming.
- 2.63 Never make any adjustments or repairs with the engine running.
- 2.64 Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- 2.65 Mower blades are sharp. Wrap the blade or wear gloves before servicing them.
- 2.66 Check parking brake operation frequently. Adjust and service as required.
- 2.67 Maintain or replace safety and instruction labels, as necessary.
- 2.68 Do not attempt to mount a tire without the proper equipment and experience to perform the job.
- 2.69 Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.
- 2.70 Park machine on level ground. Never allow untrained personnel to service machine. Understand service procedure before doing work.
- 2.71 Mower deck, frame, and engine compartment should remain free of debris to prevent premature parts failures or fire hazards.

SAFETY INTERLOCK SYSTEM

Your Bad Boy mower is equipped with a safety interlock system. This system is designed to prevent serious injury or death to the operator and other people or property damage. The system consists of an operator presence switch in the seat, the parking brake, drive lever neutral position, the mower blade engagement switch, and the ignition switch. These interlocks are vitally important and must be tested frequently. Following are instructions to test these very important safety precautions. **Note: the operator must be seated properly on the machine during these tests and the engine should have been previously allowed to warm to operating temperature.**

- 2.72 With the parking brake engaged, bring lever arms to their inward position Attempt to start the machine with the blade actuator in off position. The engine should not start.
- 2.73 On a level surface, disengage the parking brake and place lever arms to their outward position. Then, attempt to start the machine with the blade actuator in off position. The engine should not start.
- 2.74 Engage parking brake and leave lever arms in outward position. Put blade actuator in the on position, then attempt to start the machine. The engine should not start.
- 2.75 Next, start the engine as stated in the Mower Operation Section. Disengage parking brake and, Very Slowly, begin to rise from the seat. The engine should stop.

If any of these tests fail to produce the results indicated and the problem cannot be identified, contact your Bad Boy Mower dealer or the support contacts in the rear of this manual.

ROLL OVER PROTECTION STRUCTURES (ROPS)

This machine is not equipped with ROPS from the factory. If ROPS are 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.

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



SECTION 3: MOWER OPERATION

Never operate the machine with faulty equipment. Always be alert of sudden changes in landscape, as the mower will react differently on slopes or embankments than it will on flat surfaces. Never operate the mower with the discharge chute open. Do not cross terrain, other than grass, with blades turning. This could cause damage to property or bystanders.

- 3.1 Ensure parking brake is engaged.
- 3.2 Put PTO switch in the OFF position.
- 3.3 If machine has not been started recently, engage the choke.
- 3.4 Make sure nothing is under or around machine.
- 3.5 Place key in ignition and turn.
- 3.6 Once machine is started, disengage the choke.
- 3.7 Increase RPM by sliding the throttle to fast position.
- 3.8 Owners must become familiar with the controls before operating a zero-turn radius vehicle.
- 3.10 Start slowly and build your skill level. Have ample practice before using the machine at full capabilities.
- 3.11 Be comfortable with machine before engaging blades. Know what each component controls before using machine.
- 3.12 Your mower will perform differently on an incline /decline. Be cautious, slow down, and do not make any sudden jerking movements with control arms. The machine could lose traction on a decline or tip backwards on an incline.
- 3.12 Once you become comfortable with your Bad Boy Mower you will notice your overall mowing time will decrease.

*Avoid operating your mower on side hills of over 5 degrees,
inclines of over 10 degrees,
and declines of over 15 degrees.*



SECTION 4: MOWER MAINTENANCE

Maintenance	Interval					Section
	Daily	First 5 Hours	Every 50 Hours or Annually*	Every 100 Hours or Annually*	Every 250 Hours	
Check and add engine oil	●					Section 3
Check all belts for proper alignment	●					Section 2 (Pump) 6 (Deck)
Check tire pressure and wheel lug nuts	●					Section 5
Check battery terminal connections	●					Section 4
Check condition of blades	●					Section 6
Check for fuel and oil leakage	●					Section 3
Initial oil change		●				Section 3
Tighten nuts and screws			●			
Change engine oil and filter			●			Section 3
Initial change of hydraulic oil and filter			●			Section 1
Grease mower				●		Section 5
Replace air element and pre-cleaner♦				●		Section 3
Replace fuel filter♦				●		Section 3
Clean or replace spark plugs and set gap				●		Section 3
Change hydraulic oil and filter					●	Section 1
Clean combustion chamber ^{Dealer}					●	
Check and adjust valve clearance ^{Dealer}					●	
Clean and lap valve seating surface ^{Dealer}					●	

*Maintenance by hour or annually whichever comes first

♦Check air and fuel filter more often in dusty conditions

^{Dealer}Get maintenance performed at a registered dealership

SECTION 5: MOWER STORAGE & TRANSPORTATION

- 5.1 Keep machine from collecting debris by storing in a covered area while not in use.
- 5.2 Fuel can harm your machine if left for more than 30 days without changing, especially if the fuel contains ethanol. Never use fuel with more than 10% ethanol by volume. E-15 is not permitted.
- 5.3 Disconnect the negative battery cable when machine will be stored for more than 30 days.
- 5.4 Always secure machine properly when transporting machine.
- 5.5 Do not load machine on trailer with blades engaged.
- 5.6 Do not use ramps to load the machine.
- 5.7 Make sure Parking Brake is in "up" position.
- 5.8 In wet conditions tires may spin while loading / unloading. If necessary, wait for dry conditions before loading/unloading.
- 5.9 Make sure mode of transportation is suitable to bear the weight of mower.
- 5.10 Deck height should be set at maximum before attempting to load.
- 5.11 Secure mower with at least two straps capable of securing weight of mower.



SECTION 6: TROUBLESHOOTING

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

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

6.2 **Q: *What should I do if my mower won't start?***

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

6.3 **Q: *What should I do if the blades won't engage?***

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

6.4 **Q: *What type of fuel is recommended for my mower?***

A: We recommend that you use a name brand fuel to ensure quality. Use fuel with an octane rating near 87. Higher octane fuels offer no benefit. Only fuels with an ethanol content of 10% or less may be used. By law, E-15 fuel is not permitted. Usage of E-15 will result in premature engine failure.

6.5 **Q: *Do you offer touch-up paint for your mowers?***

A: Touch-up paint is available. Contact your local dealer for more information.

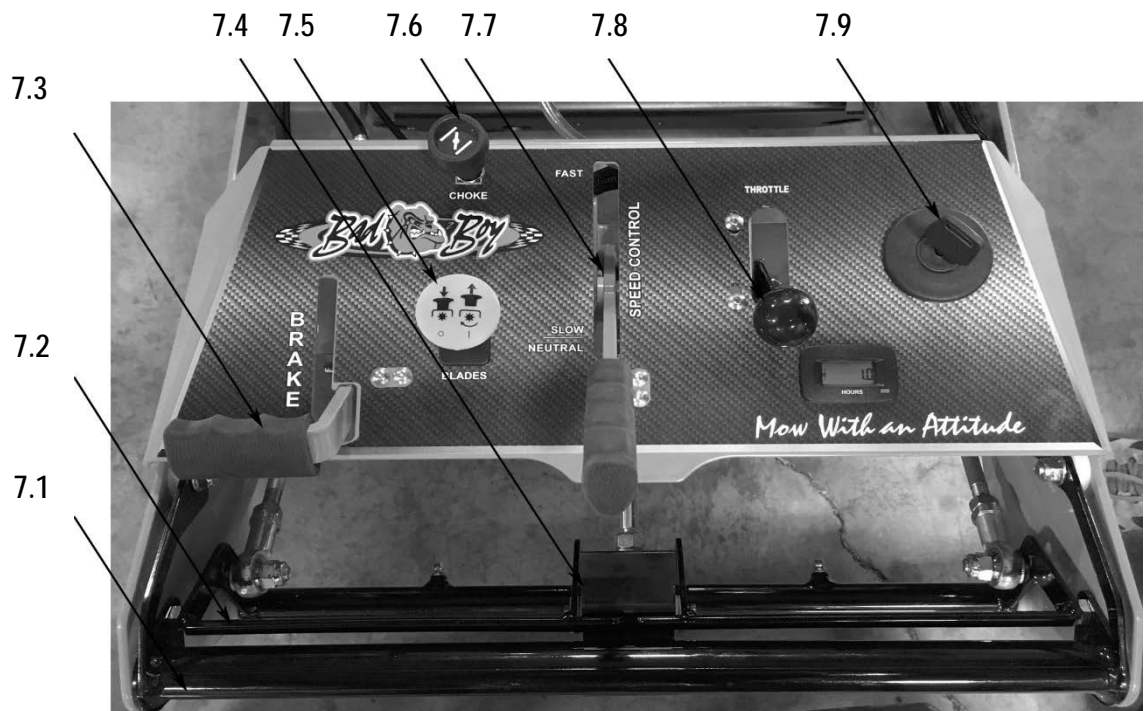
6.6 **Q: *How do I clean my mower?***

A: It is recommended that you use an air hose or blower to remove dust and debris from the mower, 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 mower, ensure 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



SECTION 7: CONTROLS

- 7.1 **Rider Presence Lever:** Once brake is disengaged and/or mower is NOT in neutral, the rider presence lever will allow your mower to be fully operational. Releasing the rider presence lever will kill the engine.
- 7.2 **Control Lever:** These levers control the mower's speed, direction, and neutral lock. These levers are used to steer, accelerate, decelerate, and change direction.
- 7.3 **Parking Break:** To engage the parking brake, pull the handle towards and to the right of the operator until the brake is in lock position. To disengage, slowly move brake to the right and away from the operator to its forward most position.
- 7.4 **Neutral Lock:** To engage the neutral lock, fully depress the control levers and push down on the neutral lock. You must first do this in order to start your mower. To disengage, fully depress control levers while pressing down on the front of the neutral lock with your index fingers. This will engage the control levers allowing full mower operation.
- 7.5 **Blade Engage Switch:** This switch engages the blades. Pull the switch up to engage the blades and push the switch down to disengage the blades.
- 7.6 **Choke Control:** A cable is linked to manually operate the engine choke. When the lever is in the down position the choke is in the off (run) position. When the lever is pulled up, the choke is in the on (start) position. Do not operate the machine in the on (start) position. The choke lever on the driver's left side near the blade engage switch.
- 7.7 **Speed Control:** The speed control lever is used to set the desired speed of your walk behind mower. Pulling the speed control lever towards the operator will slow your mower, while pushing the lever away from the operator causes acceleration of your walk behind mower.
- 7.8 **Throttle Control:** a cable is connected to the engine throttle for controlling engine speed. Move lever forward to increase engine RPM, move lever toward operator to decrease RPM.
- 7.9 **Key Switch:** Bad Boy WALK-BEHIND mowers have two position key switch: off and on. With key inserted, rotate it clockwise to on position. Your WALKBEHIND mower is now ready to be started.





SECTION 8: MOVING INOPERABLE MOWER

- 8.1 Do not tow machine. Use a winch to load on a trailer for transporting.

- 8.2 WALK-BEHIND Models are equipped with two neutral engage/disengage arms, protruding from the front of the transaxles. By pulling the arms out, the mower can be put in a neutral position. Return the arms to the "forward position" for normal operation.

Your Bad Boy Mower Weighs: **OUTLAW WALK-BEHIND SERIES: 590 lbs.**

****Weights fluctuate with the addition of accessories.*

- 8.3 As you can see by the weights of the machines, you shouldn't ever try to push or pull a Bad Boy Mower by hand. This could cause serious bodily injury.

- 8.4 Hopefully, you'll never need to use this section of the manual. However, if you do, use extreme caution when moving machine!

SECTION 9: INSTRUMENTATION

- 9.1 **Electronic Hour Meter:** Displays total operating hours (0.1 hour increments, up to 9,999.9 hours), resettable timers, oil change reminders (5 hour break-in reminder followed by 50 hour interval reminders), air filter cleaning reminder, and RPM gauge. Press button to cycle between functions. To reset a timer, depress and hold button for 2 seconds.



SECTION 10: MOWER BLADE MAINTENANCE

- 10.1 Check mower blades after each use. This is essential for maintaining well-groomed turf. Keep the blades sharp. If a dull blade is used for cutting, the grass will tear rather than cut. This could damage the grass leaving a brown frayed top on the grass within a few hours. A dull blade will also require more power from the engine.
- 10.2 NEVER attempt to straighten a bent blade by heating. NEVER attempt to weld a cracked blade. The blades can break and cause serious injury or death.
- 10.3 NEVER work with blades while engine is running or deck clutch is engaged.
- 10.4 ALWAYS place deck clutch in DISENGAGE position while performing maintenance.
- 10.5 Use blocks when you MUST work under mower.
- 10.6 ALWAYS wear thick gloves when handling blades.
- 10.7 ALWAYS check for blade damage if mower strikes rock, branch, or other objects that could potentially damage the blade.

***(REMEMBER: NEVER CHECK BLADE WHILE ENGINE IS ON!
NEVER CHECK BLADES WHILE BLADES ARE ENGAGED!)***

SECTION 11: EQUIPMENT LUBRICATION

- 11.1 Park the machine on a level surface and disengage the blade control switch.
- 11.2 Move the motion control levers outward to the neutral position, engage parking brake, stop the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
- 11.3 Grease Type: NLGI grade #2 multi-purpose gun grease.
- 11.4 Clean the grease fittings with a cloth. Scrape any paint off the front of the fitting(s).
- 11.5 Connect a grease gun to each fitting. Pump grease into the fitting until grease seepage is observed. Be mindful of over-pressurization. Do not force the lever arm if there is strong back pressure as this can lead to reduced life of the component(s). Wipe up excess grease.
- 11.6 Refer to service manual section for grease fitting locations.



HOW TO CHOOSE THE RIGHT BLADE

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

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

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

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

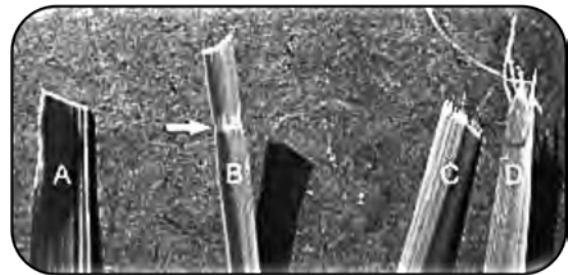
The type of blade installed on a new mower is a decision the retailer makes for each model of mower, based on the expected needs of most customers. If you're unsure of which blade is on a particular model, inspect the blade. Blades have part numbers stamped into them. Then compare these part numbers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

It is true there are many other styles of blades available. But since we don't manufacture or recommend using these other aftermarket styles, we will leave them out of this discussion. Should you want more information on special application or aftermarket blades, you should contact the companies that make these products. NOTE: Customers using non-OEM blades do so at their own risk. The use of unapproved (non-OEM) blades may void any or all of the mower and engine factory warranties.

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

MOWING TIPS:

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



TO BAG OR TO MULCH?

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



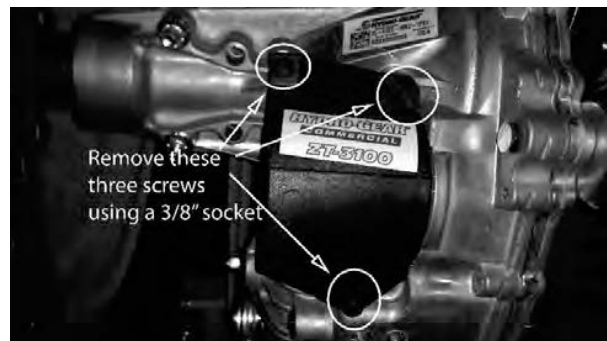
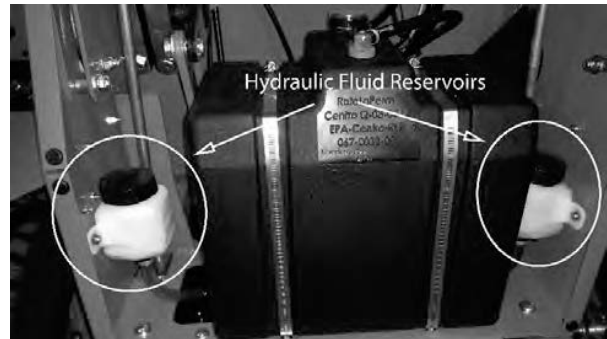
SERVICE SECTION

SECTION 1: HYDROSTATIC SYSTEM

The hydraulic fluid reservoirs are accessed by raising the seat forward. Notice the "full cold" line at the bottom of the tank. Use only 20W-50 motor oil in this tank. (Bad Boy Hydrostatic oil is recommended)

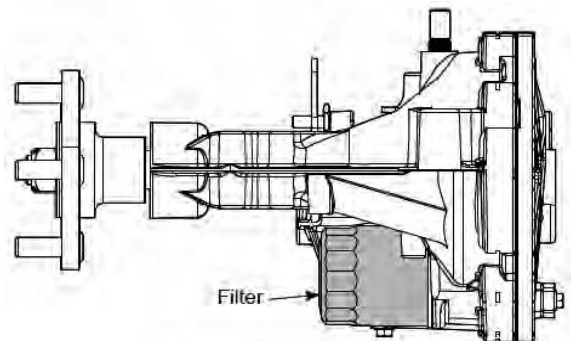
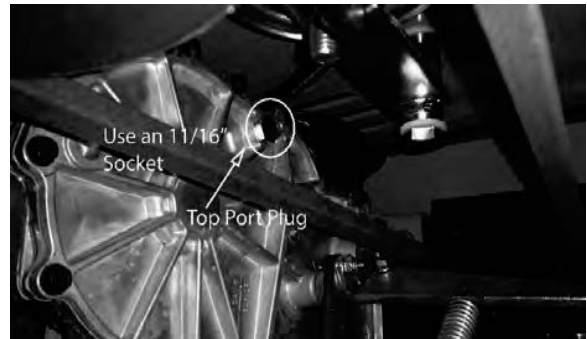
CHANGING YOUR HYDRAULIC OIL AND FILTER

1. Remove the caps from the hydraulic fluid reservoirs and get an oil drain pan. Lifting the mower from the rear will make access to the transaxles easier and allow you to purge the air from the transaxles.
2. Remove the three 1/4" filter guard screws and filter guard from the ZT-3100 Transaxle. Clean any loose debris from around the perimeter of the filter.
3. Place the oil drain pan under the oil filter and **remove the filter**. The oil filter serves as the drain for the transaxle.
4. After the oil has drained, wipe the filter base surface off and apply a film of new oil to the gasket of the new replacement filter.
5. Install the new filter by hand, turn 3/4 to one full turn after the filter gasket contacts the filter base surface.
6. Re-install the filter guard with three 1/4" screws. Torque screws to 65 in. lbs. (7.3 Nm) each.
7. Repeat steps 1-6 on the opposite side transaxle drive.
8. Drain old oil filters of all free-flowing oil prior to disposal. Place used oil in appropriate containers and deliver to an approved recycling collection facility.
9. Remove the top port plug from the left side and right-side transaxles prior to filling with oil. This will allow the transaxles to vent during oil fill and prevent any air lock within the transaxles.

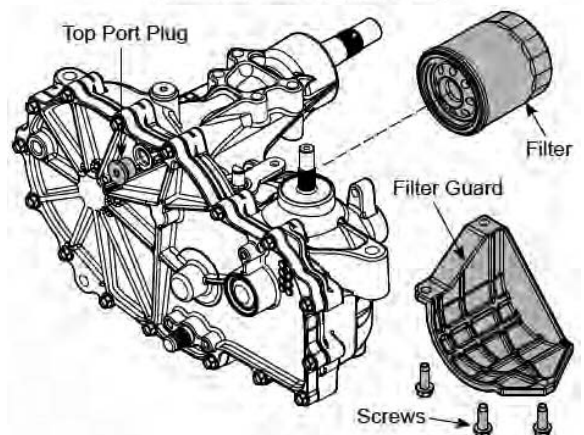


CHANGING YOUR HYDRAULIC OIL AND FILTER (CONTINUED)

10. Fill with 20W-50 motor oil (Bad Boy Hydrostatic oil is recommended) through the hydraulic fluid reservoirs until it just appears at the bottom of each transaxle's top port (approximately 2 quarts per transaxle, 4 quarts total). Install the top port plug into each transaxle as the oil level reaches this port.
11. Install and torque the top port plugs to 180 in. lbs. (20.3 Nm).
12. Continue to fill the transaxle through the hydraulic fluid reservoirs until the "Full Cold" line is reached on the hydraulic fluid reservoirs.
13. Re-install the caps on the hydraulic fluid reservoirs.
14. Now we need to purge the air from the transaxle. With your mowers tires off the ground disengage the brake and start the engine.
15. Pull the neutral bypass levers which are located on each side of the muffler. Then slowly move the drive arms in the forward and reverse direction 5 to 6 times.
16. Push the neutral bypass levers back into place. Move the drive arms forward and backward 5 to 6 times slowly. Check the oil level and add oil as required after stopping the engine.
17. It may be necessary to repeat steps 15 and 16 until all the air is completely purged from the system. When the transaxle operates at normal noise levels and moves smoothly forward and reverse at normal speeds, then the transaxle is considered purged.



(Guard Removed For Visual Clarity)





The neutral rods also allow you to disengage the transaxles and move the mower without the engine running.



SECTION 2: DRIVE BELT

Shown on the right is a typical pump belt tensioner for your model mower. This is how you can adjust the pump belt tension on your mower. There are two jam nuts on an all thread that need to be adjusted in order to change the tension in the spring.

Use a $\frac{3}{4}$ " wrench and a deep socket in order to loosen the two nuts. Tighten the outside nut if more belt tension is desired and loosen the outside nut if less belt tension is desired.



The pump belt tension should be set between 60-65 lbs. This should be measured with a belt tension gauge. Your dealer or service center will have a belt tension gauge or you can buy one from the Bad Boy Parts Department by calling 866-622-3269 and asking for the Parts Department (Part Number 041-9999-00).



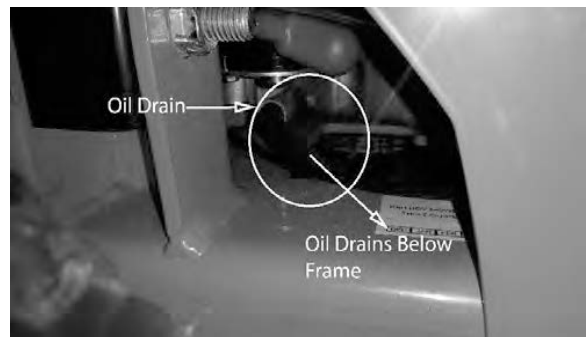
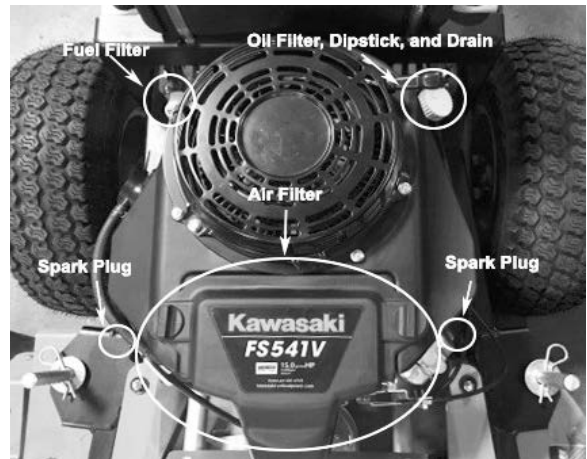
SECTION 3: ENGINE

KAWASAKI FS541V

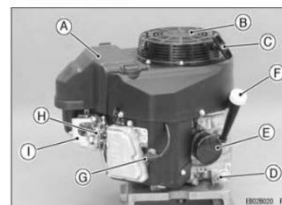
This machine has an oil drain hose installed on the engine to allow for easier oil changes. Bad Boy recommends that the oil and filter be changed after the initial 8 hrs. of use, and at intervals of 50 usage hours or yearly, whichever occurs first after that. The oil capacity is 2 quarts. Bad Boy 10W-30 synthetic blend engine oil is recommended for maximum protection.

CHANGING YOUR ENGINE OIL AND OIL FILTER

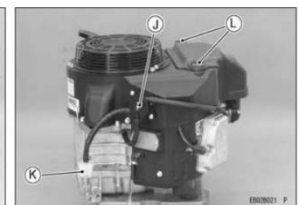
1. Remove oil dipstick and open oil drain. Allow oil to completely drain. (Make sure to have an oil pan ready to capture old oil and properly dispose old oil.)
2. The oil filter is located on the right side of the engine. Clean area around oil filter. Place a container under the oil filter to capture any oil and remove filter. Wipe off mounting surface and reinstall drain plug. Torque to 10 ft.*lbs.
3. Place new filter in shallow pan with open end up. Fill with new oil until oil reaches the bottom of the threads. Allow two minutes for oil to be absorbed by filter material.
4. Apply a thin film of clean oil to rubber gasket on new filter.
5. Refer to instruction on oil filter for proper installation.
6. Fill crankcase with approximately 2 quarts of new oil. Level should reach top of indicator on dipstick.
7. Reinstall oil filter dipstick and tighten securely.
8. Start engine; check for oil leaks. Stop Engine; correct oil leaks. Recheck oil level.
9. Dispose of used oil and filter in accordance with local ordinances.



Parts Location



A. Air Cleaner (inside A)
 B. Recoil Starter
 C. Recoil Starter Grip
 D. Oil Drain Plug
 E. Oil Filter
 F. Oil Gauge/Filler Cap
 G. Spark Plugs/Spark Plug Caps
 H. Control Panel
 I. Carburetor



J. Fuel Pump
 K. Fuel Filter
 L. Nuts

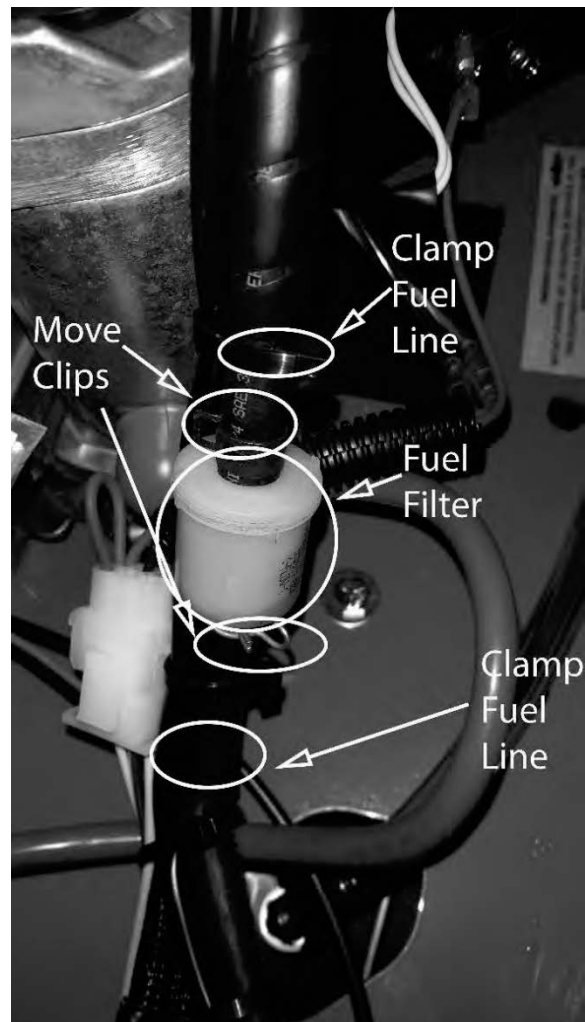


KAWASAKI FS541V (CONTINUED)

The fuel filter is located in the fuel line, on the left side of the engine, by the starter motor. Replace the filter yearly. Prior to the removal of the old filter, note the direction of fuel flow as indicated on the filter. Have towels readily available in order to quickly remove any fuel leakage. Always use new hose clamps and ensure the security of the new filter by lightly pulling on each hose. Always perform maintenance outdoors or in a well-ventilated area. Do not smoke or allow any open flames in the vicinity of any maintenance activities.

CHANGING YOUR FUEL FILTER

1. Locate your fuel filter and mark the direction it is facing.
2. Clamp each side of the fuel filter to minimize and gas spills.
3. Remove the clips from each side of the fuel filter and remove the fuel filter.
4. Place the new fuel filter in the same direction as the old and place clips back into place and remove clamps.

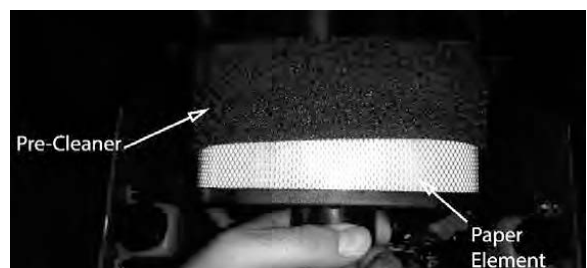
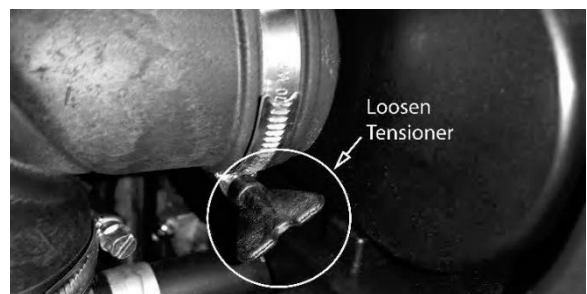


KAWASAKI FS541V (CONTINUED)

The air cleaner is the engine's only defense against damaging foreign particles. It is very important that the air cleaner element is inspected prior to each use. Remove the element and tap its sides in order to remove debris. Do not blow the filter out using compressed air. Doing so will greatly reduce the air cleaner's effectiveness. Replace yearly, more often in dusty environments. Adhering to these practices will help prevent loss of power and premature engine failure.

CHANGING THE AIR CLEANER

1. Unlock the air cleaner cover and remove to access the air cleaner.
2. Remove the paper element and precleaner.
3. Replace or wash precleaner in warm water with detergent. Rinse and allow to air dry.
4. Lightly oil precleaner with new engine oil; squeeze out excess oil.
5. Replace paper element and place precleaner onto new paper element.
6. Install onto base, replace cover, and lock into place.





KAWASAKI FS541V (CONTINUED)

CHANGING THE SPARK PLUGS AND CHECKING THE SPARK PLUG GAP

1. Remove the wire on the spark plug and use a 13/16" socket to remove the spark plug.



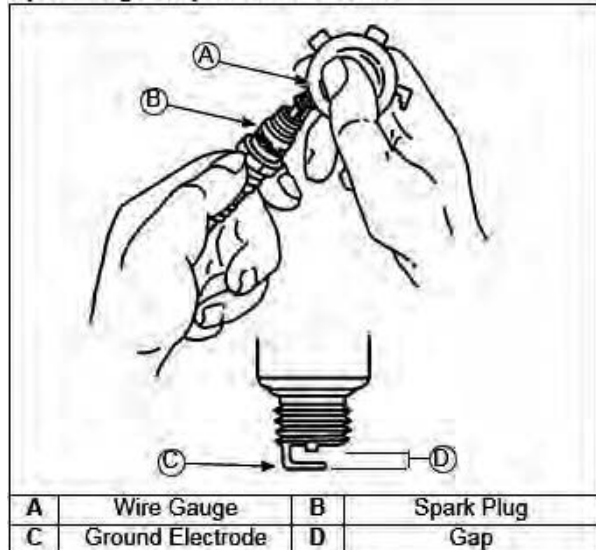
2. Check the gap on the spark plug to verify that it is 0.03 in using a feeler gauge.



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

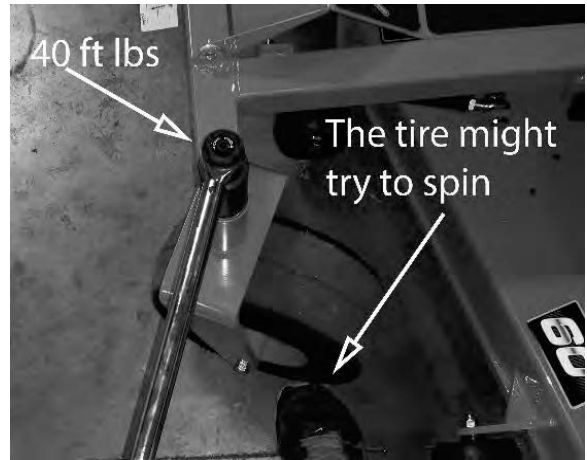
4. Install the plug into cylinder head and torque to 16 ft.*lbs. Be careful not to overtighten the spark plug.

Spark Plug Component and Details



SECTION 5: FRAME

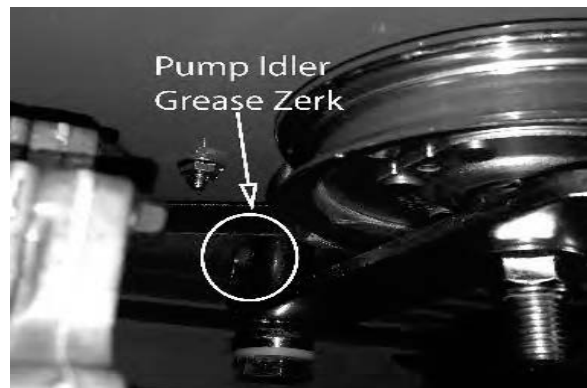
The front fork nuts require a torque of 40ft-lbs. While applying this torque, turn the fork itself to ensure no damage is done to the bearing. This operation is only necessary if a repair requires it.



Torque rear wheel lugs to 65-75 ft. lbs. Re-torque at every oil change and check at every mowing.



The front forks each have a grease zerk. The actuator bar has two grease zerks and should be greased at every oil change.



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

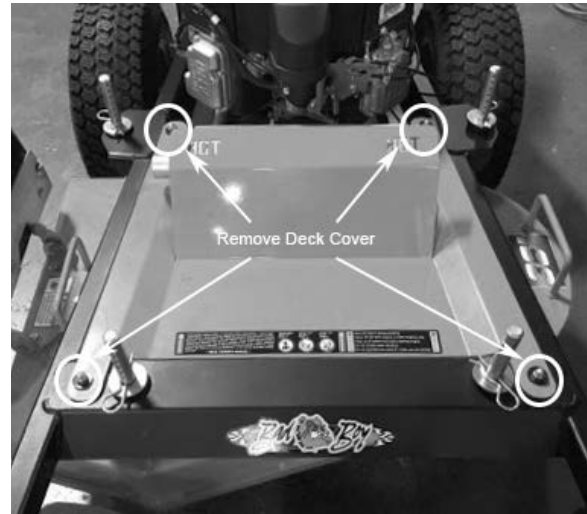




SECTION 6: CUTTING DECK

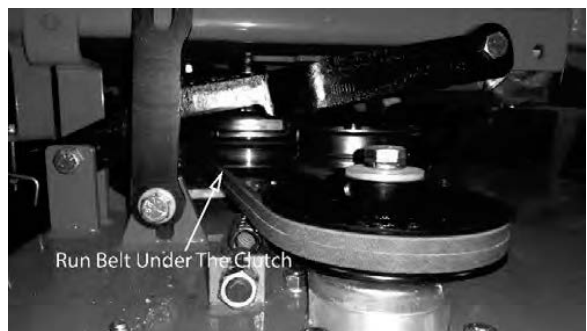
DECK BELT REMOVAL

1. Use proper safety precaution when performing procedures.
2. Raise the deck to its highest position.
3. Remove the deck cover.
4. While lifting up on the belt (as shown in the photograph), rotate the pulley until the belt is free of the pulley. Exercise caution while performing this step as fingers can easily become caught between the belt and pulley.



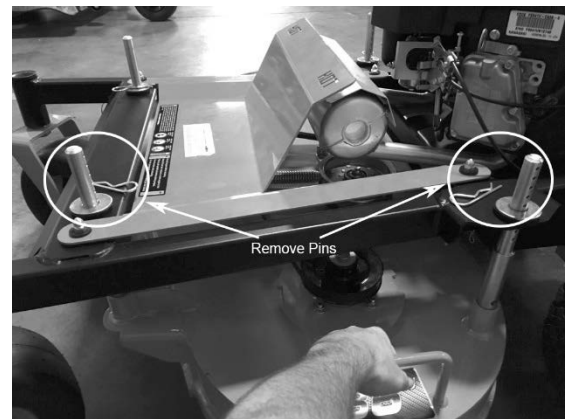
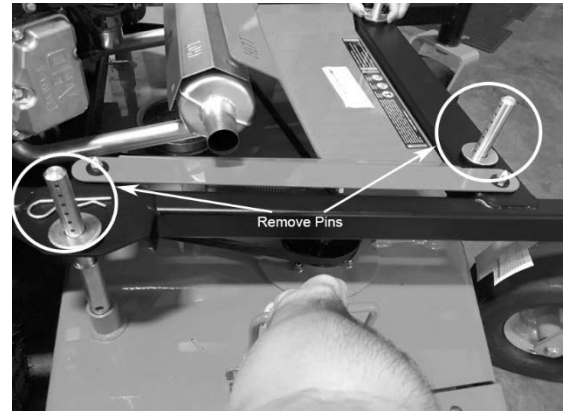
DECK BELT INSTALLATION

1. Use proper safety precaution when performing procedures.
2. Take off deck covers and route the belt by following the belt route sticker.
3. Verify that the belt is routed properly as improper routing can damage the spindles as well as the engine.



LEVELING THE DECK

1. Make sure that each tire is at 12PSI.
2. Remove pins from deck height adjustment rods and raise or lower deck to desired height by using the handles located on each side of the deck.
3. Once the desired deck height is achieved, replace the pins back in the deck height adjustment rods making sure that all four pins have the same number of empty holes above and below.
4. Verify that the deck is level. A 1/4" pitch is built into the deck.

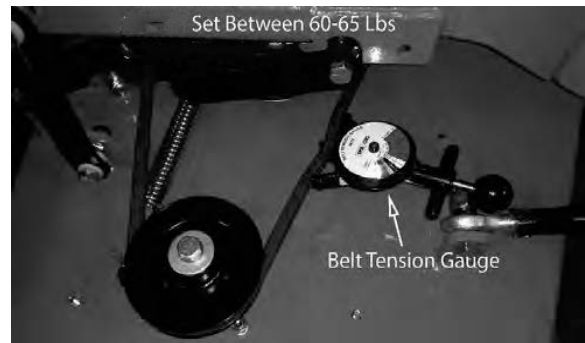




The deck spring tension is critical. If the tension is too high, premature failure of the deck belt and blade spindles can occur. If the tension is too low, the belt can 'jump off' or slip on the pulleys. This results in reduced cut quality and early belt failure.

Spring tension adjustments can be made by sliding the bolt shown above forward or backward in the slot of the deck. Belt tension should be 60-65 lbs. with the deck at its lowest setting.

Use a belt tension gauge to ensure the proper tension. Your dealer or service center will have a belt tension gauge or you can buy one from the Bad Boy Parts Department by calling 866-622-3269 and asking for the Parts Department (Part Number 041-9999-00).



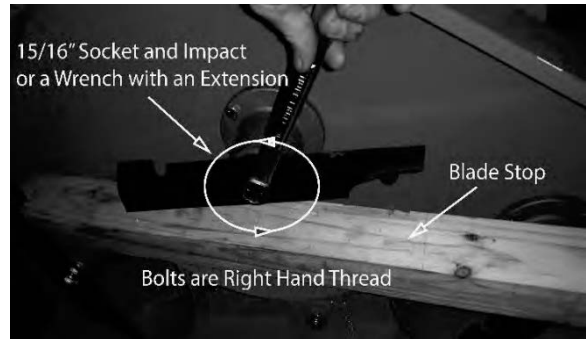
BLADE SHARPENING

The blade on the top (see photo) was utilized long after replacement was required. In addition to a decline in cut quality, failure to replace a worn or damaged blade creates a major safety hazard. Bad Boy recommends that blade sharpening be performed by a professional.



BLADE REMOVAL

To change blades, it may be easier to use a piece of wood to keep the blade from turning so that the bolt can be loosened. Use a 15/16" socket and impact Drill, or a wrench and an extension to gain more leverage. You might need to put a 3/4" wrench on top of the pulley bolt to keep the blade from spinning. Bolts used have right-handed threads.



Re-torque the blade bolts to 90-110 lbs.

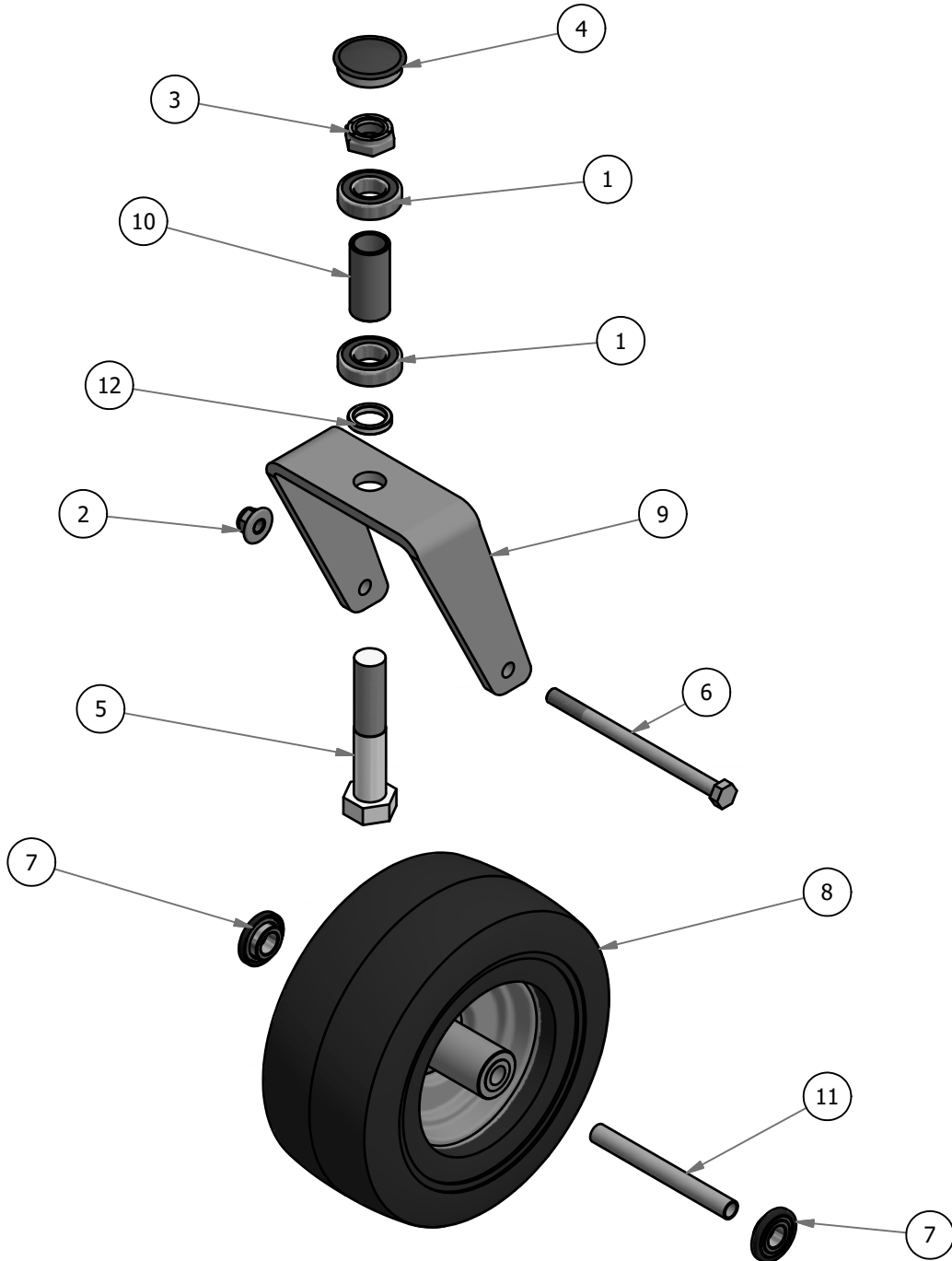
The blade spindles contain a sealed ball bearing inside the top and bottom of the spindle. The bearings are replaceable for a more cost-effective repair.





PARTS SECTION: Front Fork Assembly

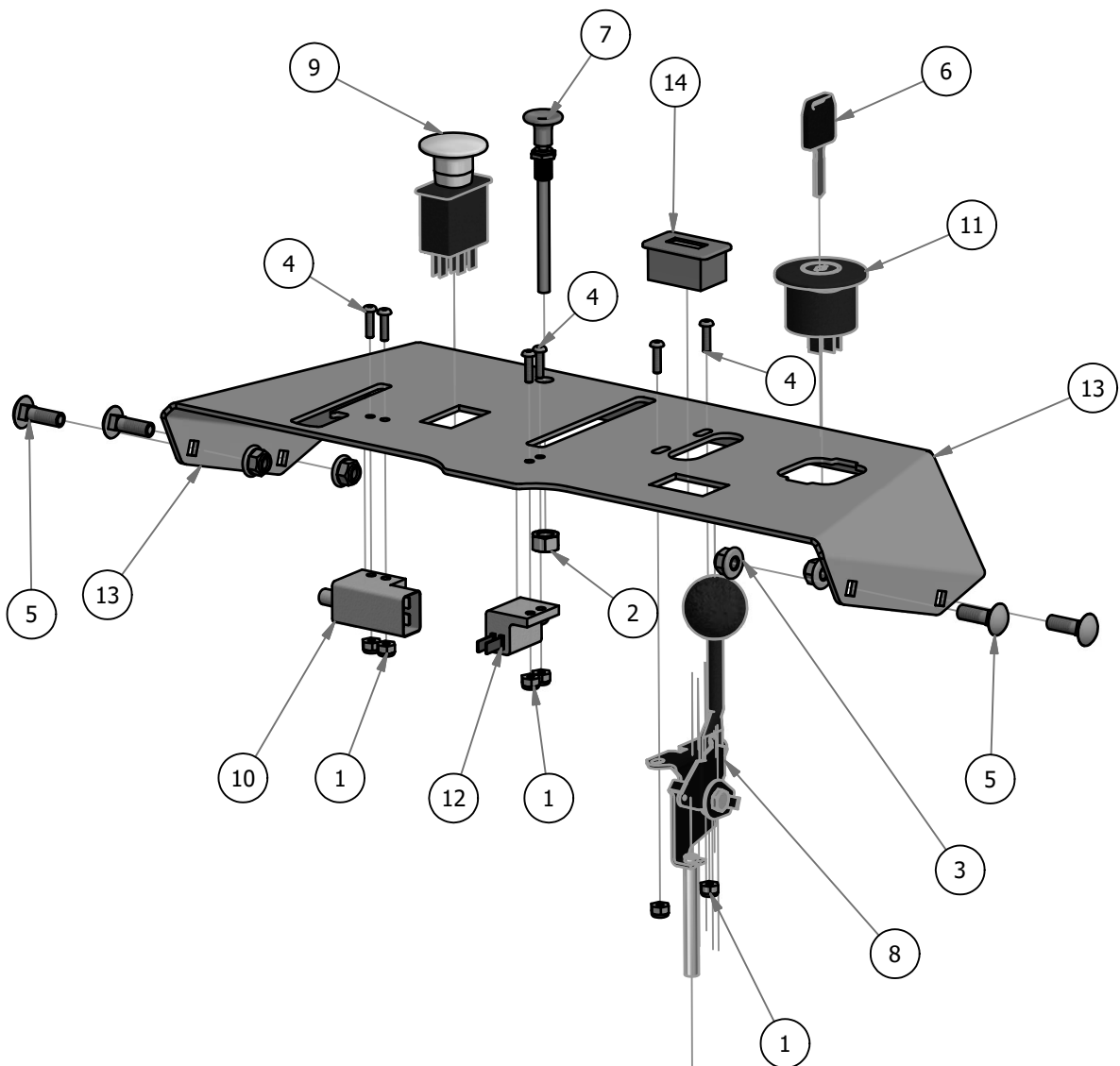
Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	010-1050-00	Caster Bearing 2016 - 1641 Bearing	7	2	022-7009-00	Wheel Bearing
2	1	013-8050-00	1/2-13 Nylon Flange Nut	8	1	022-8049-00	11x6-5 front tire & wheel assembly
3	1	013-9004-00	1" Fine Thread Nut	9	1	023-0002-00	2017 MZ Front fork
4	1	014-2025-00	2017 Bearing Cover	10	1	025-0003-00	2016 Front Bearing Spacer
5	1	018-0005-00	1-14 x 5 Hex Bolt Grade 8 Zinc Yellow	11	1	025-0008-00	Front Wheel Spanner
6	1	018-0035-00	1/2 -13 x 7.5 Hex Bolt Grade 5	12	1	058-1000-00	1" x .25" Spacer



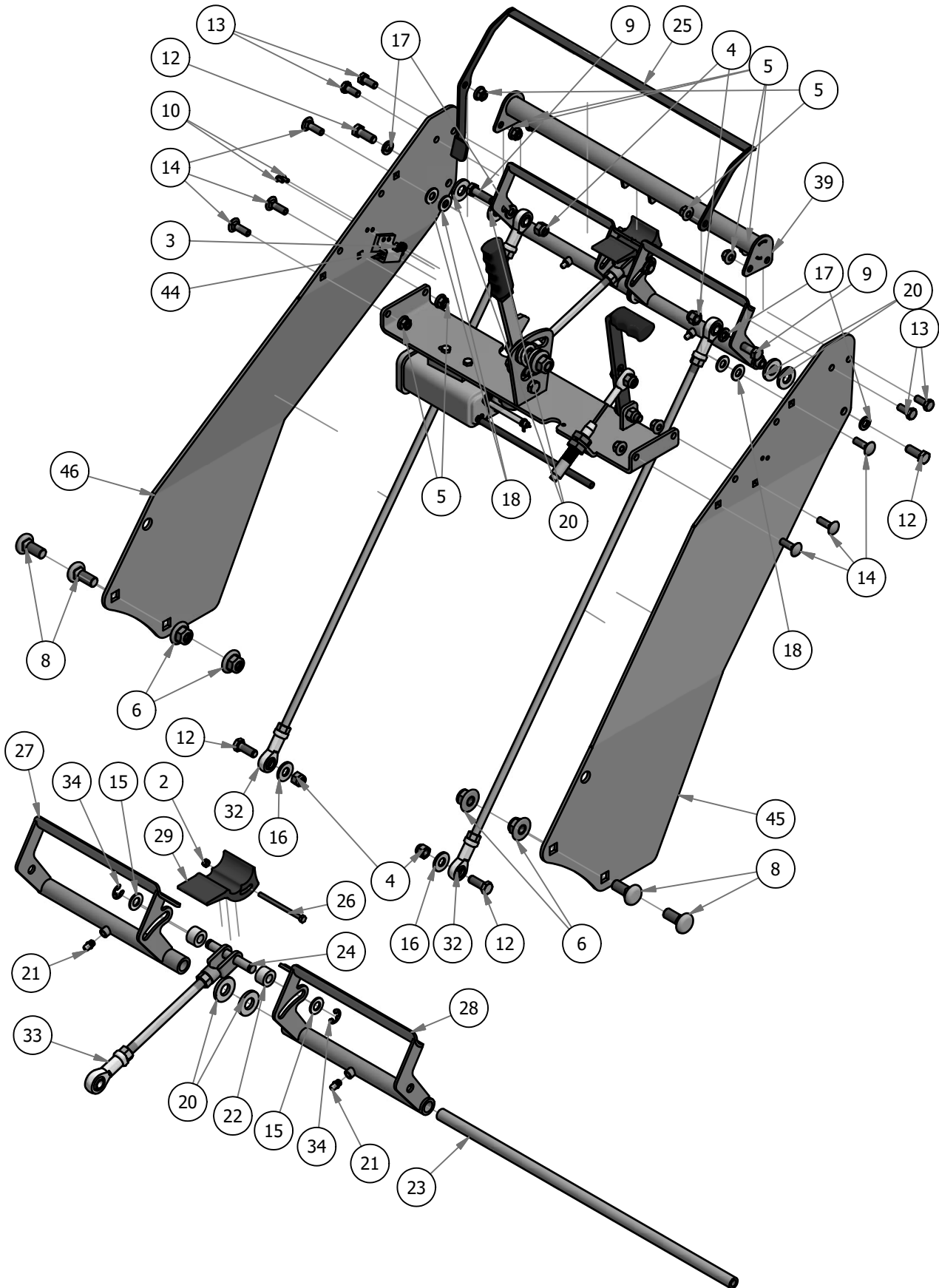


PARTS SECTION: Instrument Panel

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	6	013-5019-00	10-24 Nylon Insert Locknut Zinc Orange Nylon	8	1	055-8020-00	Throttle Lever Assembly
2	1	013-6051-00	3/8" Fine Threaded Jam Nut	9	1	056-8058-00	PTO Engager
3	4	013-8049-00	5/16" Nylon Flange Nut	10	1	077-0001-00	Brake switch 4 prong
4	6	018-5200-00	10-24 X 5/8 BS Button Head Bolt	11	1	077-0003-00	Ignition Switch
5	4	018-8065-00	5/16" x 1" Carriage Bolt	12	1	077-5300-00	Deck Stop Switch
6	1	042-9000-00	Ignition Key	13	1	079-0036-00	Walk Control Panel
7	1	054-8017-00	Choke	14	1	083-4013-00	Tachometer



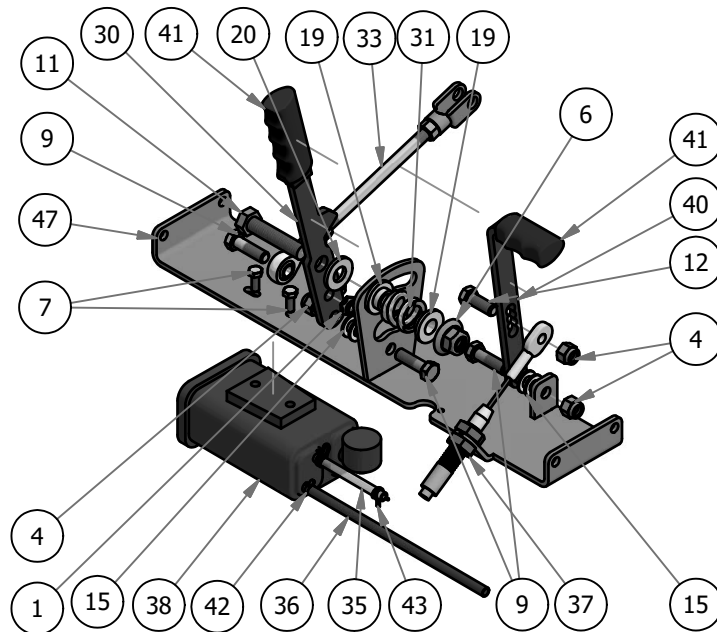
PARTS SECTION: Podium





PARTS SECTION: Podium (Cont.)

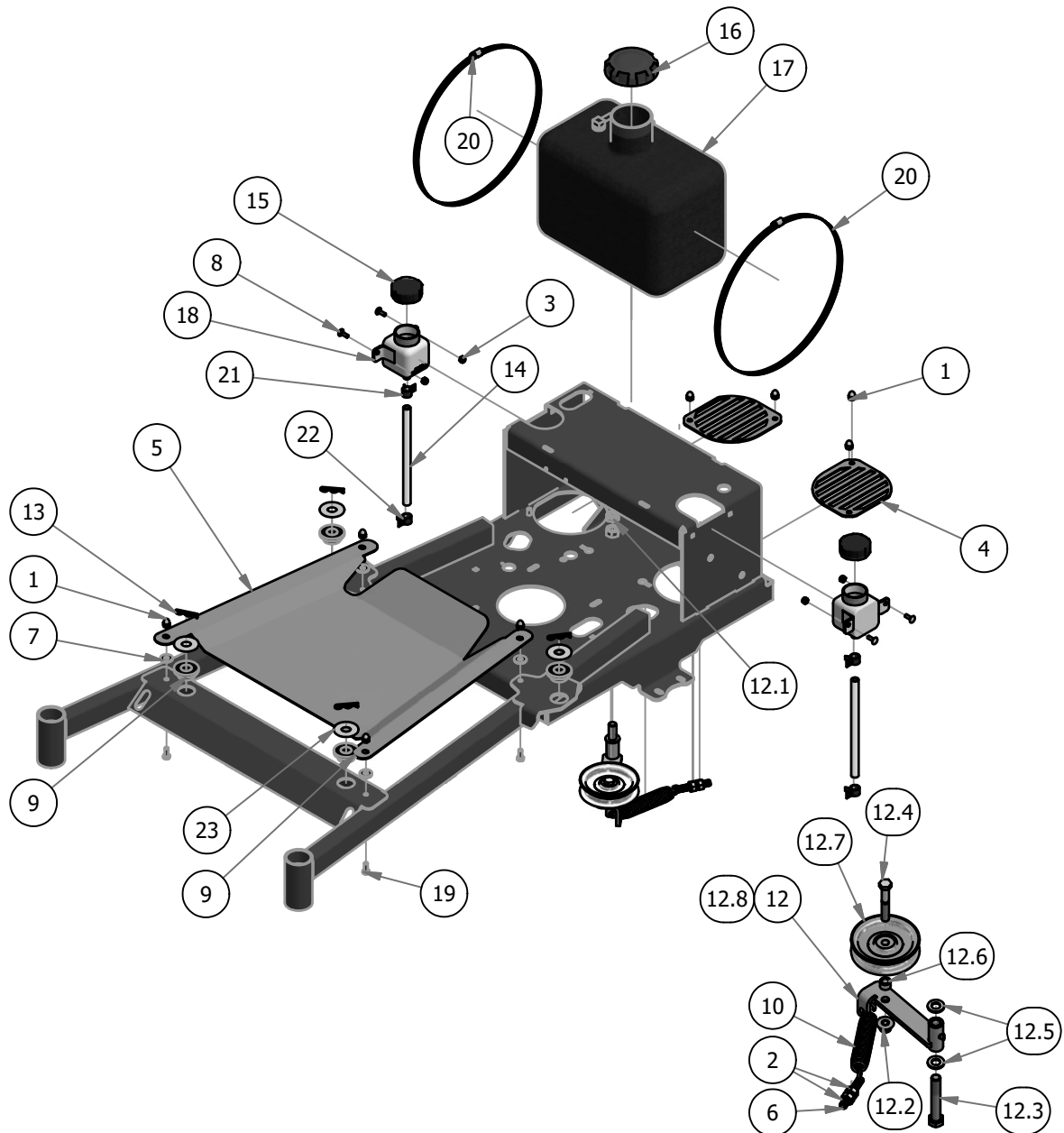
Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	013-0012-00	3/8-16 Centerlock Half Nut	25	1	028-0013-00	Walk Behind Rider Presence
2	1	013-0015-00	8-32 Nylock Nut	26	1	030-0001-00	8-32 x 2 1/2 Hex Machine Screw
3	2	013-5019-00	10-24 Nylon Insert Locknut Zinc Orange Nylon	27	1	031-0021-00	2017 Drive Lever Control - Right
4	7	013-5041-00	3/8 Nylock Nut	28	1	031-0022-00	2017 Drive Lever Control - Left
5	10	013-8049-00	5/16" Nylon Flange Nut	29	1	031-0024-00	2017 Neutral Lock
6	5	013-8050-00	1/2-13 Nylon Flange Nut	30	1	031-0036-00	Speed Control Lever
7	2	018-0024-00	M6-1.0 X 16MM Hex Bolt	31	1	034-8025-00	Drive Lever Spring
8	4	018-3003-00	1/2" x 1 1/4" Carriage Bolt	32	2	035-0001-00	Walk Push Rod Linkage
9	5	018-5040-00	3/8" x 1 1/4" Hex Bolt	33	1	035-0002-98	Walk Speed Control Linkage
10	2	018-5200-00	1024 X 5/8" Buttonhead Bolt	34	2	044-2017-00	E Clip
11	1	018-6037-00	1/2-13X 2-1/4 GR. Hex Bolts	35	2.92	051-2027-00	3/16" Clear Vinyl Tubing
12	5	018-6049-00	3/8" x 1" Hex Bolt	36	1.25	051-8067-00	1/4" Fuel Line Hose
13	4	018-8063-00	5/16" x 3/4" Hex Bolt	37	1	064-3000-00	Brake Cable
14	6	018-8065-00	5/16" x 1" Carriage Bolt	38	1	067-0015-00	Carbon Canister for Magnum/MZ
15	6	019-2003-00	.390 x .750 x .062 Nylon Washer	39	1	069-2017-00	Walk Control Handle
16	2	019-5029-00	3/8" Flat Washer	40	1	069-2020-00	Walk Brake Handle
17	4	019-5037-00	3/8" Lock Washer	41	2	069-7000-00	Rubber Brake Grip-cZT/ZT 2013
18	4	019-6042-00	.360 ID Plastic Washer	42	1	072-8073-00	3/16" Vinyl Hose Clamp
19	2	019-8027-00	.515 ID Nylon Shoulder Washer	43	2	072-8075-00	8.6mm Hose Clamp
20	7	019-8054-00	.505 Nylon Spacer	44	1	077-5300-00	Deck Stop Switch
21	2	024-6034-00	1/4" Drive in Grease Fitting	45	1	079-0030-00	Walk Side Panel - Left
22	2	025-2025-00	tank spacer	46	1	079-0031-00	Walk Side Panel - Right
23	1	028-0009-00	2017 Walk Behind Control Pivot Rod	47	1	201-1170-00	2017 Walker Cross Support Assembly
24	1	028-0012-00	2017 Walk Behind T-Rod				





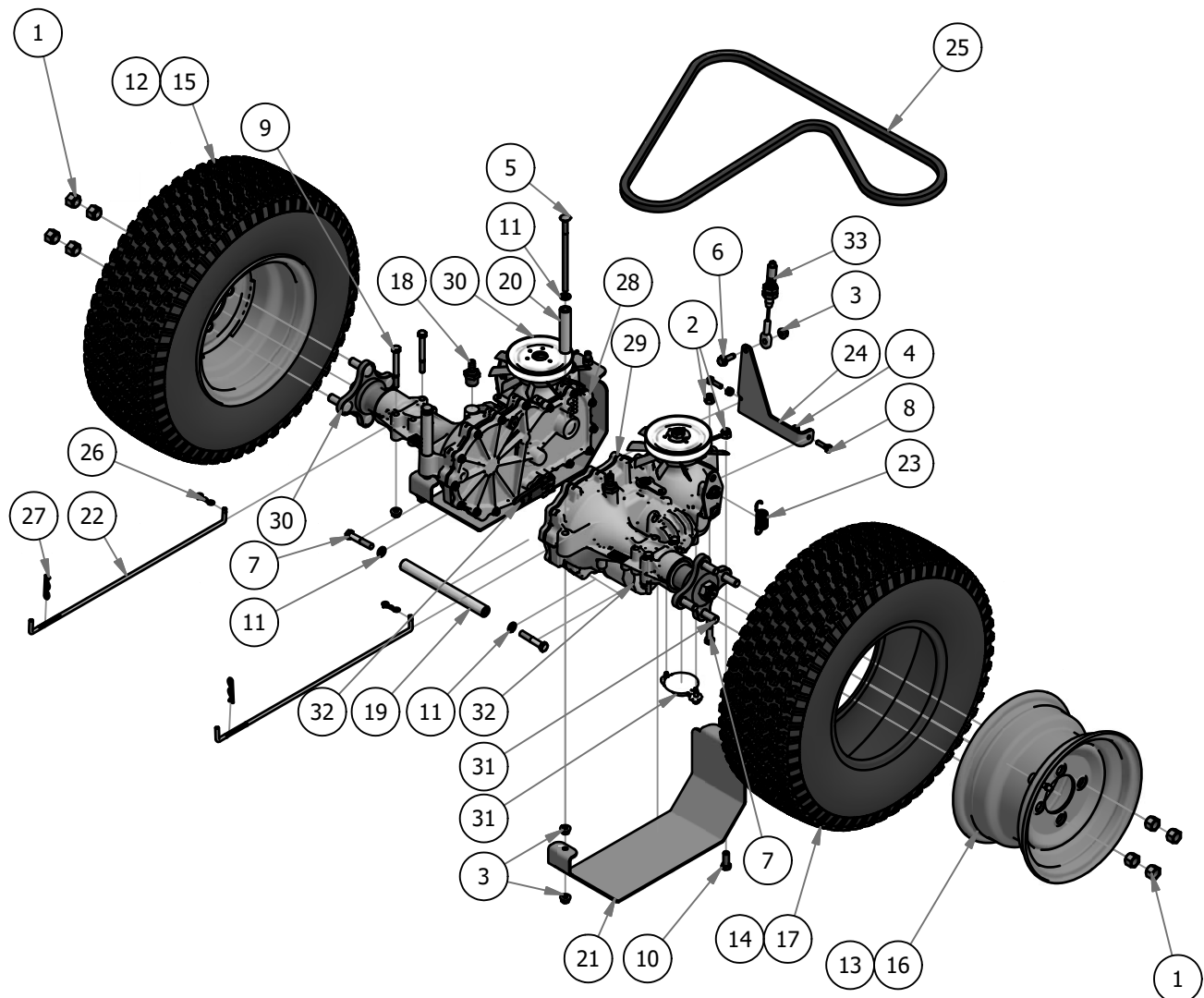
PARTS SECTION: Walk Behind Frame

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	8	013-0004-00	Acorn nut-pulley Cover	12.5	2	019-6017-00	.630 ID Plastic Washer
2	2	013-7018-00	1/2" Hex Nut	12.6	1	025-7036-00	1/2 x 1/2 Spacer
3	4	013-8073-00	1/4 Nylock Nut	12.7	1	033-6001-00	4 3/4" Idler Pulley
4	2	014-3580-00	Bolt on Fan Cover	12.8	1	039-5944-00	Pump Idler Bracket
5	1	014-3590-18	2018 Walk Cover	13	4	040-6060-00	Seat latch pin
6	1	018-2004-50	All Thread-Pump Idler Tensioner	14	2	051-8063-00	3/8" Clear Hose
7	4	019-6050-00	.360 ID Plastic Washer-Black	15	2	066-5050-00	Hydraulic Tank Cap
8	4	019-8040-00	1/4" x 3/4" Carriage Bolt	16	1	066-8083-00	Fuel Cap
9	4	025-0031-00	Deck Hanger Insert	17	1	067-0003-00	5 Gal Black Gas Tank w/gauge
10	1	034-2009-00	2009 Deck/Pump Idler Spring	18	2	067-8090-00	350ml Expansion Tank
12	1	039-5944-01	ZT Pump Idler	19	1	070-5100-00	2017 Walker Frame
12.1	1	013-5301-00	5/8" Nylock (1/2 Jam)	20	2	072-0050-00	Fuel Tank Clamp-Stand On
12.2	1	013-8050-00	1/2-13 Nylon Flange Nut	21	2	072-8065-00	3/8" Hose Clamp
12.3	1	018-5311-00	5/8" x 4" Hex Bolt	22	2	072-8066-00	1/2 Hose Clamp
12.4	1	018-6036-00	1/2 x 2-3/4 Hex Bolt	23	4	319-0002-00	3/4" Flat Washer



PARTS SECTION: TRANSAXLE

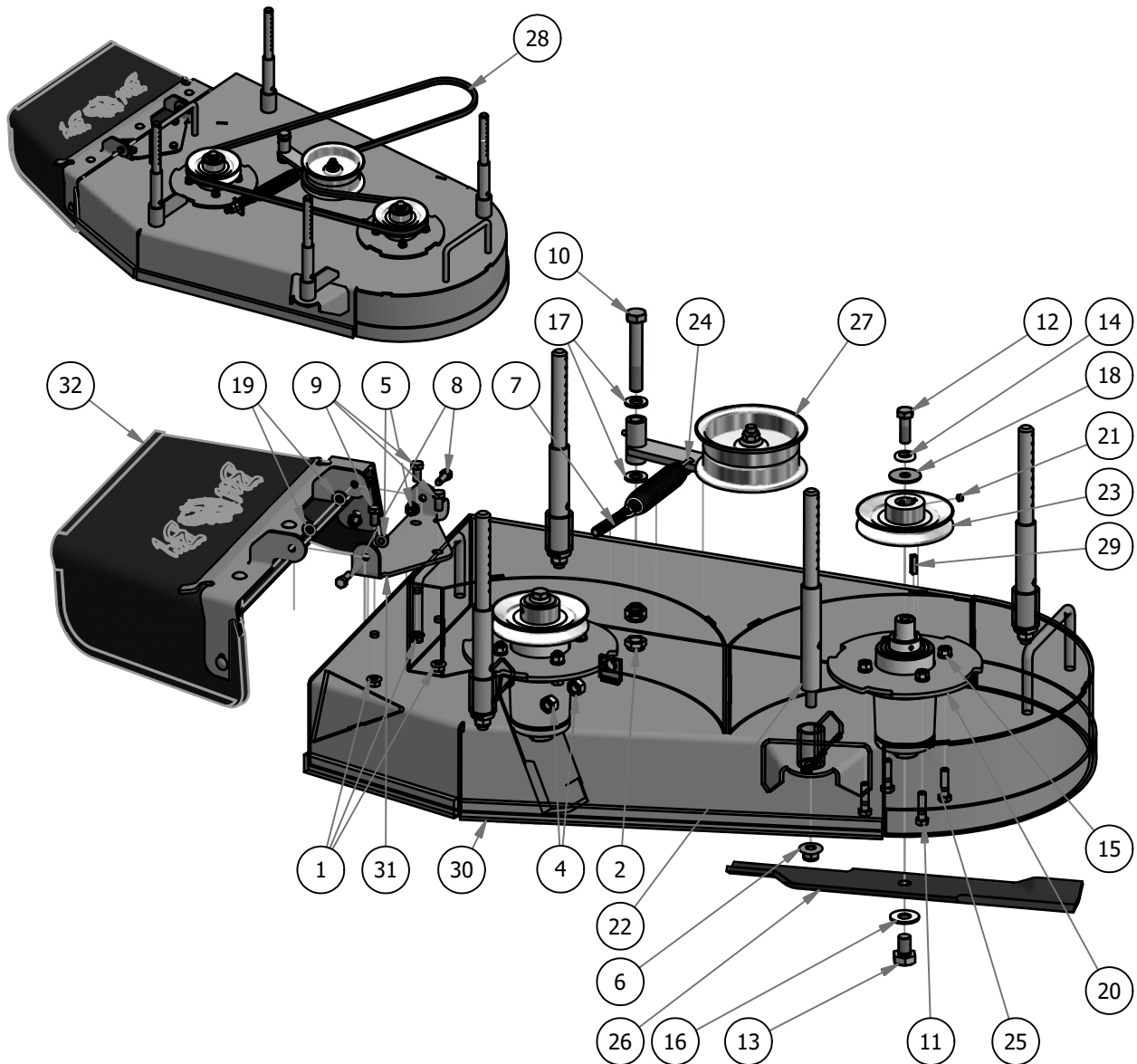
Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	8	013-3000-00	Acorn Lug Nut	19	1	025-0016-00	2017 Transaxle Spacer-MZ
2	4	013-5041-00	3/8 Nylock Nut	20	2	025-0070-00	2017 Transaxle Spacer
3	9	013-8049-00	5/16" Nylon Flange Nut	21	2	026-3440-00	Walk Trans Skid Plate
4	2	013-8073-00	1/4 Nylock Nut	22	2	028-0070-00	Neutral Rod
5	2	018-0056-00	5/16" x 6" Carriage Bolt	23	1	034-9080-00	Transaxle Spring
6	1	018-2007-00	5/16" x 1/2" Flange Bolt	24	1	039-1917-00	Walk Brake Pull Bracket
7	4	018-3000-00	3/8"-16 x 2" Gr 5 Hex Bolt	25	1	041-6500-00	Pump Belt
8	2	018-4007-00	1/4-20 x 1 GR 5 hex bolt zinc	26	2	044-2004-00	Bow Pin
9	4	018-4701-00	5/16" x 3" Hex Bolt	27	2	044-2008-00	Neutral Rod Clip
10	2	018-6049-00	3/8" x 1" Hex Bolt	28	1	050-0003-00	Right Walk-Behind Transaxle
11	6	019-8044-00	5/16" Flat Washer	29	1	050-0004-00	Left Walk-Behind Transaxle
12	2	022-6000-00	20x10.50-8 Rim and Tire Assembly (48" Walk Behind)	31	8	050-2012-00	Transaxle Wheel Studs
13	2	022-6002-00	8" Wheel Only (48" Walk Behind)	31	1	050-2071-00	Charge Plate with O-Ring
14	2	022-6003-00	20x10.50-8 Tire Only (48" Walk Behind)	30	2	050-2075-00	Fan/Pulley Kit
15	2	022-8019-00	22x7-10 Rim and Tire Assembly (36" Walk Behind)	30	2	050-2076-00	Transaxle Hub
16	2	022-8022-00	10" Wheel Only (36" Walk Behind)	32	2	063-1050-00	Filter
17	2	022-8023-00	21x7-10 Tire Only (36" Walk Behind)	33	1	064-3000-00	Brake Cable
18	2	024-1200-00	45 degree fitting	32	2	092-8000-00	Transaxle Brake Lever





PARTS SECTION: 36" Deck Assembly

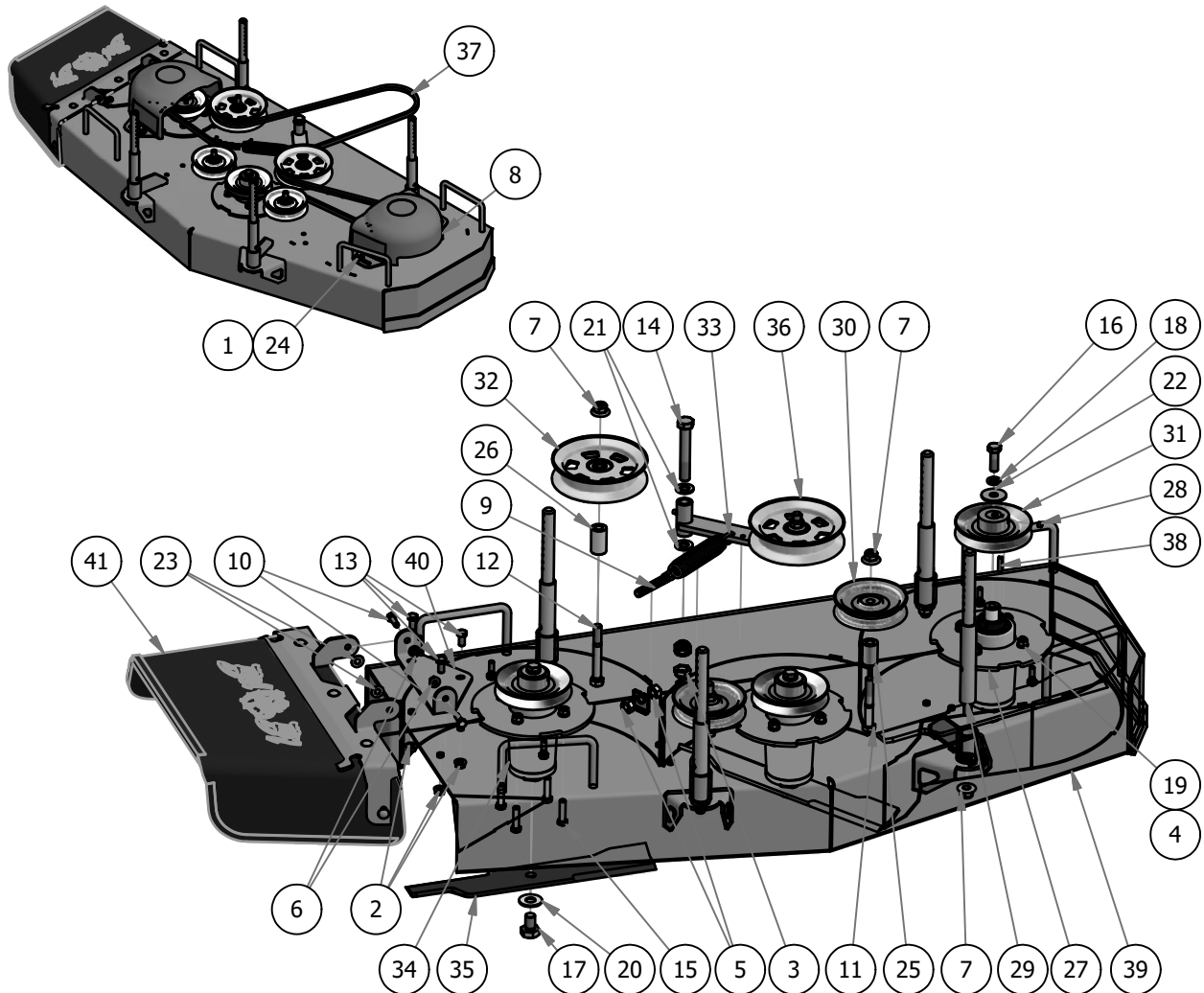
Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	3	013-5201-00	3/8" Flange Nut	17	2	019-6017-00	.630 ID x 1.122 OD x .142 THK Plastic Washer
2	1	013-5301-00	5/8" Nylock (1/2 Jam)	18	2	019-6020-00	1/2" Belleville Washer
3	8	013-6014-00	3/8" Hex Nut	19	2	019-6042-00	.360 ID Plastic Washer
4	2	013-7018-00	1/2" Hex Nut	20	2	026-0025-00	Deck Spindle Support Plate
5	2	013-8049-00	5/16" Nylon Flange Nut	21	2	030-0050-00	5/16 Set Screw
6	4	013-8050-00	1/2-13 Nylon Flange Nut	22	4	031-0023-00	2017 Walk Behind Deck Hanger
7	1	018-2004-50	All Thread-Pump Idler Tensioner	23	2	033-6003-00	5" Spindle Deck Pulley
8	2	018-2007-00	5/16-18 x 1 GR 5 Hex Bolt Zinc	24	1	034-2020-00	Deck Idler Spring
9	3	018-5250-00	3/8" x 3/4" Hex Bolt	25	2	037-6015-50	Spindle Assembly
10	1	018-5311-00	5/8" x 4" Hex Bolt	26	2	038-0001-00	54" Deck Fusion Blade For Outlaw
11	8	018-6012-00	3/8" x 1 1/2" Hex Bolt	27	1	039-6945-05	2017 MZ/ZT Deck Idler Assembly
12	2	018-6019-00	1/2"-20 x 1 1/2" - Grade 5 Fine Thread Bolt	28	1	041-0121-00	36" Walk Behind Deck Belt
13	2	018-6020-00	5/8" x 1 1/2" Grade 8 Hex Bolt (Fine)	29	2	042-6030-00	1/4" x 1" Key
14	2	019-5007-00	1/2" Lock Washer Zinc	30	1	060-3600-00	Walk 36 Deck
15	8	019-5037-00	3/8" Lock Washer	31	1	206-6017-00	Discharge Chute Hanger (deck mounted)
16	2	019-5038-00	5/8" Flat Washer	32	1	210-6005-48	ZT Chute Assembly





PARTS SECTION: 48" Deck Assembly

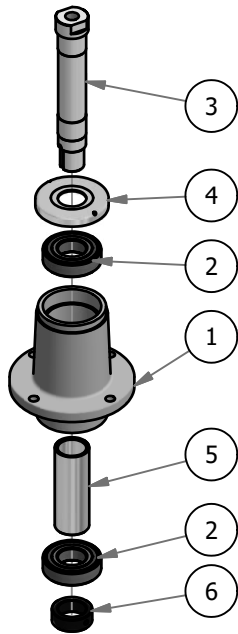
Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	013-0004-00	Acorn nut-pulley Cover	22	3	019-6020-00	1/2" Belleville Washer
2	3	013-5201-00	3/8" Flange Nut	23	2	019-6042-00	.360 ID Plastic Washer
3	1	013-5301-00	5/8" Nylock (1/2 Jam)	24	4	019-6050-00	.360 ID Plastic Washer-Black
4	12	013-6014-00	3/8" Hex Nut	25	2	025-5338-00	Idler Pulley Standoff
5	2	013-7018-00	1/2" Hex Nut	26	1	025-5339-00	1 3/4" Pulley Spacer
6	2	013-8049-00	5/16" Nylon Flange Nut	27	3	026-0025-00	Deck Spindle Support Plate
7	7	013-8050-00	1/2-13 Nylon Flange Nut	28	3	030-0050-00	5/16 Set Screw
8	2	014-4000-00	Pulley Cover	29	4	031-0023-00	2017 Walk Behind Deck Hanger
9	1	018-2004-50	All Thread-Pump Idler Tensioner	30	2	033-6001-00	4 3/4" Idler Pulley
10	2	018-2007-00	5/16-18 x 1 GR 5 Hex Bolt Zinc	31	3	033-6003-00	5" Spindle Deck Pulley
11	2	018-2018-00	1/2 x 3 1/2 Flange Bolt Grade 8	32	1	033-7201-25	5-3/4 Idler Pulley
12	1	018-5019-00	1/2" x 4" Bolt (Grade 8)	33	1	034-2020-00	Deck Idler Spring
13	3	018-5250-00	3/8" x 3/4" Hex Bolt	34	3	037-6015-50	Spindle- Aluminum -2012 ZT
14	1	018-5311-00	5/8" x 4" Hex Bolt	35	3	038-5350-00	16 1/4" Bad Boy Blade
15	12	018-6012-00	3/8 x 1.5" Bolt	36	1	039-6945-17	2017 MZ/ZT Deck Idler Assembly
16	3	018-6019-00	1/2"-20 x 1 1/2 - Grade 5 Fine Thread Bolt	37	1	041-5200-00	B111 Belt
17	3	018-6020-00	5/8" x 1 1/2" Grade 8 Hex Bolt (Fine)	38	3	042-6030-00	1/4" x 1" Key
18	3	019-5007-00	1/2" Lock Washer	39	1	060-3618-00	48" Walk Deck-Welded Shell
19	12	019-5037-00	3/8" Lock Washer	40	1	206-6017-00	Discharge Chute Hanger (deck mounted)
20	3	019-5038-00	5/8" Flat Washer	41	1	210-6005-48	ZT Chute Assembly
21	2	019-6017-00	.630 ID x 1.122 OD x .142 THK Plastic Washer				



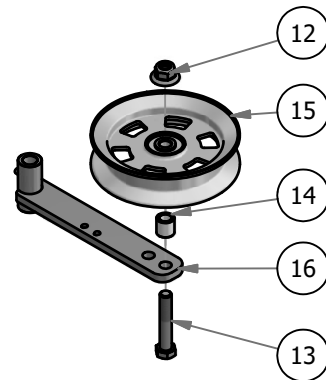


PARTS SECTION: Deck Sub-assemblies

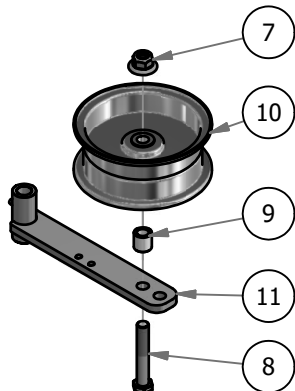
037-6015-50 Parts List				039-6945-17 Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	037-6017-50	Aluminum Spindle Housing -2010	12	1	013-8050-00	1/2-13 Nylon Flange Nut
2	2	037-6023-00	Spindle Bearing, 2004 and up	13	1	018-6036-00	1/2" x 2 3/4" Hex Bolt
3	1	037-6026-00	Short Spindle Shaft w/Locking	14	1	025-5203-00	Spacer 3/4 OD x 1/2 ID x 3/4 Length
4	1	037-8002-00	Dust Cover	15	1	033-8050-00	5" Idler Pulley
5	1	037-8050-00	Tube Spacer for Spindle Shaft	16	1	039-6945-00	Deck Idler
6	1	037-9050-00	Collar Spacer - Top of Spindle	210-6005-48 Parts List			
039-6945-05 Parts List				ITEM	QTY	PART NUMBER	DESCRIPTION
7	1	013-8050-00	1/2-13 Nylon Flange Nut	17	5	013-8049-00	5/16" Nylon Flange Nut
8	1	018-7016-00	1/2-13 x GR 5 Hex Bolt Zinc	18	5	018-4703-00	5/16" x 1 1/4" Carriage Bolt
9	1	025-5203-00	Spacer 3/4 OD x 1/2 ID x 3/4 Length	19	1	039-4870-00	Discharge Upper Chute Bracket
10	1	033-5000-00	5 3/4" Deck Idler Pulley	20	1	039-4871-00	Discharge Lower Chute Bracket
11	1	039-6945-00	Deck Idler	21	1	210-6005-00	Rubber Discharge Chute



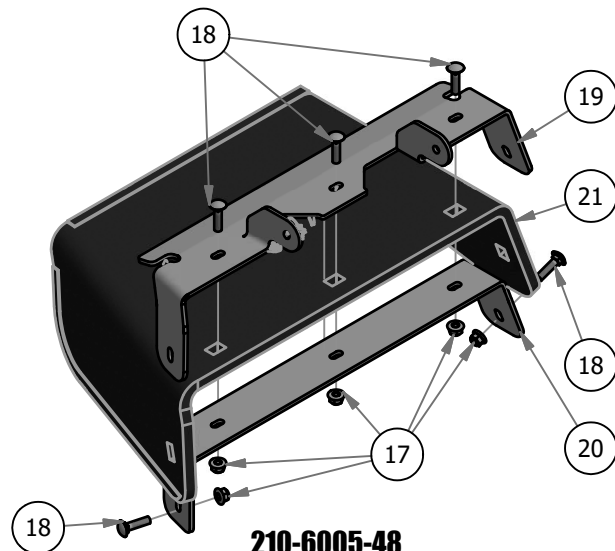
037-6015-50
Spindle- Aluminum -2012 ZT



039-6945-17
2017 MZ/ZT Deck Idler Assembly



039-6945-05
2017 MZ/ZT Deck Idler Assembly

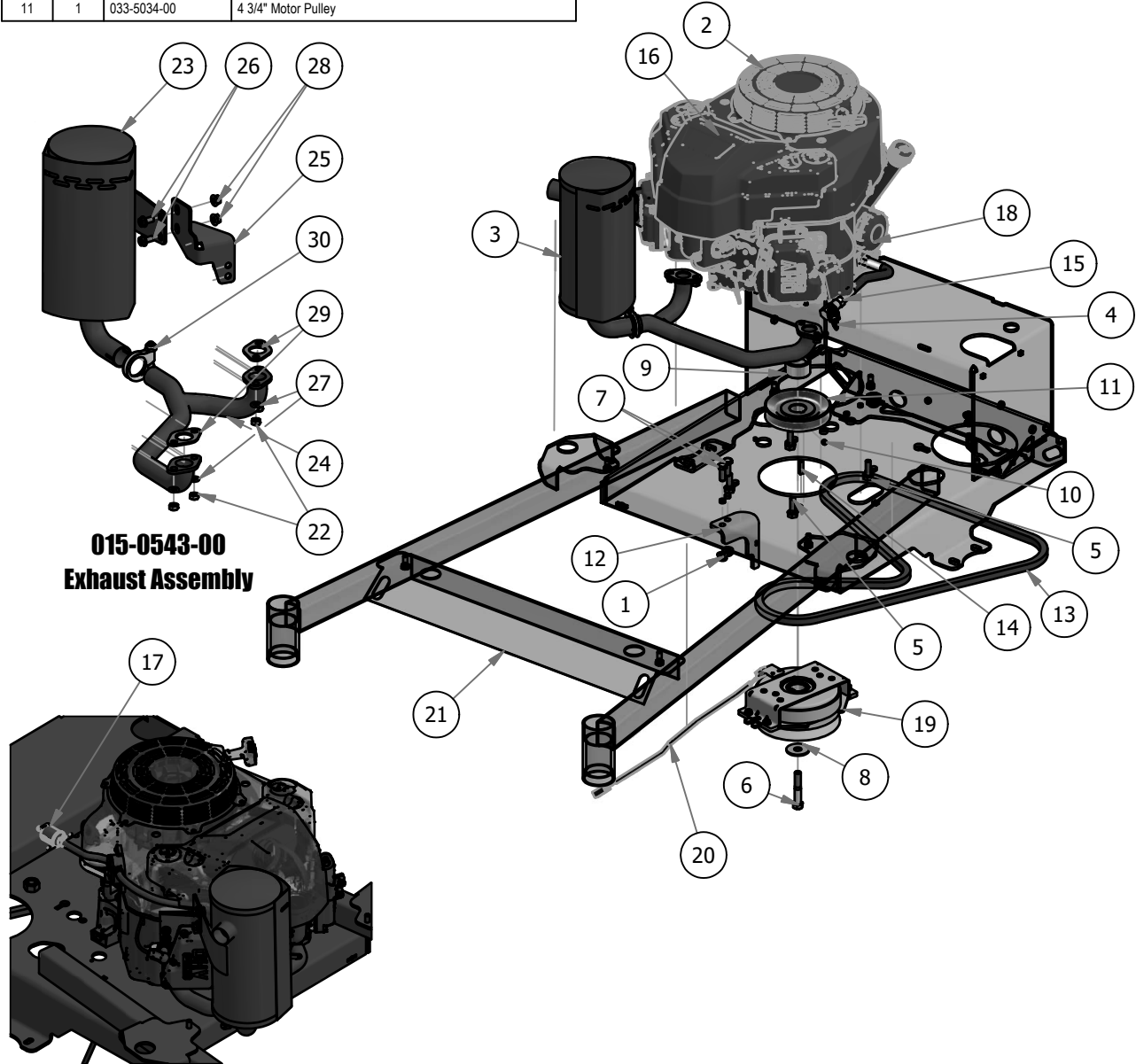


210-6005-48
ZT Chute Assembly



PARTS SECTION: Kawasaki FS541V

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	013-5202-00	3/8" Nylock Flange Nut	12	1	039-1220-00	Warner Clutch A-R Bracket
2	1	015-0541-00	Kawasaki FS541V Pull Start Engine	13	1	041-6500-00	Pump Belt
3	1	015-0543-00	Exhaust Assembly	14	1	042-6030-00	1/4" x 1" Key
4	2	015-8001-00	Spark Plug - Kawasaki	15	1	051-5404-00	Oil drain Hose
5	4	018-1075-00	3/8 x 1 1/8 bolt	16	1	063-2097-00	Air Filter
6	1	018-5450-00	7/16"-20 x 2.5" Hex Bolt Gr. 8	17	1	063-6000-00	Fuel Filter
7	2	018-6049-00	3/8" x 1" Hex Bolt	18	1	063-8017-00	Oil Filter
8	1	019-6020-00	1/2" Belleville Washer	19	1	070-0056-00	Clutch
9	1	025-5032-00	1 1/8 collar spacer	20	1	070-2000-00	Clutch Pigtail
10	1	030-0050-00	5/16 Set Screw	21	1	070-5100-00	2017 Walker Frame
11	1	033-5034-00	4 3/4" Motor Pulley				



015-0543-00
Exhaust Assembly

015-0543-00 Parts List				015-0543-00 Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
22	4	013-0075-00	M8-1.25 Zinc Nut	27	4	015-0543-05	Exhaust Lock Washer
23	1	015-0543-01	MUFFLER	28	2	015-0543-06	Exhaust Nut
24	1	015-0543-02	Exhaust Pipe	29	2	015-0543-07	Exhaust Gasket
25	1	015-0543-03	Exhaust Bracket	30	1	015-0543-08	Exhaust Clamp
26	4	015-0543-04	Exhaust Flange Bolt				



PARTS SECTION: Decals



091-0314-00
FLOORBOARD LOGO DECAL



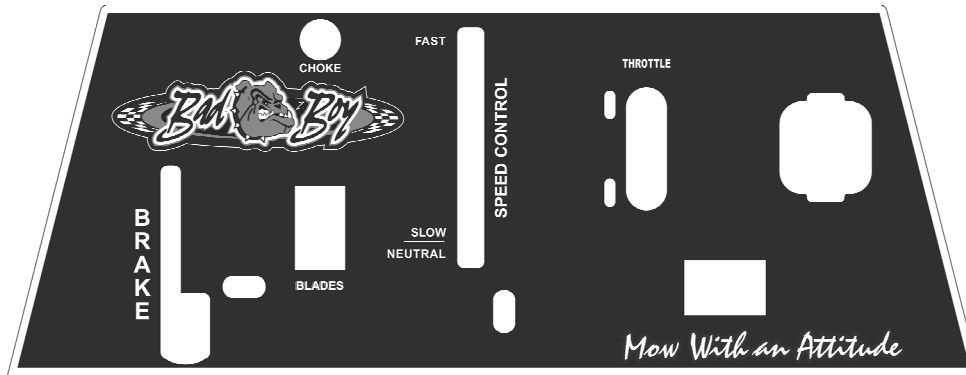
091-3601-18
36" DECK DECAL



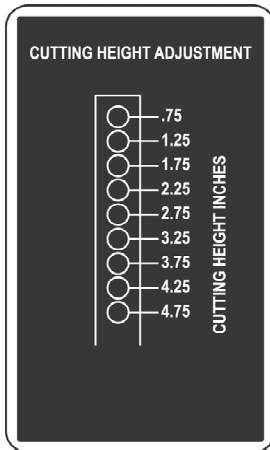
091-0903-18
48" DECK DECAL



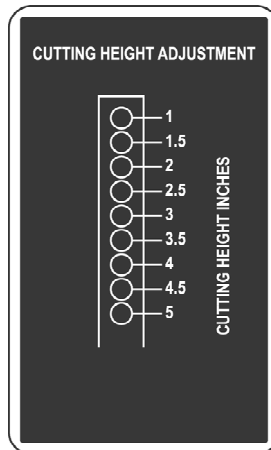
091-0412-18
603cc PODIUM DECAL



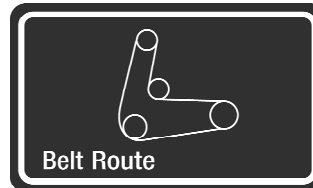
091-0411-18
CONTROL PANEL DECAL



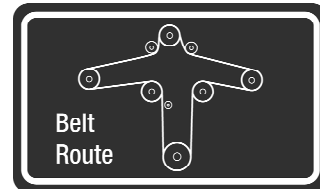
091-0023-00
36" DECK HEIGHT DECAL



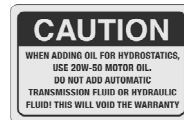
091-0024-00
48" DECK HEIGHT DECAL



091-0418-00
36" DECK BELT ROUTE DECAL



091-3309-00
48" DECK BELT ROUTE DECAL



091-1020-00
CAUTION DECAL



091-3012-00
DANGER DECAL

<p>DANGER</p>	<p>• STOP BLADE & BACK SLOWLY IF MACHINE STOPS GOING UPHILL • NEVER MOW NEAR PEOPLE • NEVER USE WHEN UNDER THE INFLUENCE OF DRUGS OR ALCOHOL • NEVER CARRY PASSENGERS • SET PARKING BRAKE & REMOVE KEY IF LEAVING MACHINE • AVOID SLIPPERY OR STEEP AREAS • AVOID BLADE UNLESS BLADE & ENGINE ARE STOPPED • USE SAFELY, MACHINE IS NOT A TOY • KNOW LOCATION AND FUNCTION OF CONTROLS • REMOVE POTENTIAL THROWN OBJECTS • KEEP SAFETY DEVICES IN PLACE AND WORKING • LOOK BEHIND MACHINE BEFORE BACKING</p>	<p>NEVER MOW SIDE HILL OVER 5°</p>	<p>NEVER MOW UP HILL OVER 10°</p>	<p>NEVER MOW SLOPE OVER 15°</p>	<p>DANGER</p>	<p>Shut off engine before refueling. Never fill fuel tank indoors or when engine is hot. Wipe up all spilled fuel before starting engine. Do not smoke while refueling. Do not operate this machine unless you are trained.</p>	<p>CAUTION</p>
	<p>• READ OWNER'S MANUAL •</p>			<p>091-2150-00 CAUTION/DANGER DECAL</p>			



2018 LIMITED WARRANTY
FOR
BAD BOY COMMERCIAL MOWER
(STAND ON, WALK-BEHIND, DIESEL, OUTLAW, OUTLAW EXTREME, AND OUTLAW XP)

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

Bad Boy, Inc. 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 Inc. for two years 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.

Seats are warranted for a period of (6) months against material or workmanship defects.

At Bad Boy, Inc.'s request, customer will make the defective part available for inspection by Bad Boy, Inc. and/or return the defective part to Bad Boy, Inc., 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 Inc 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, Inc does not assume any warranty obligation, liability or modification for this item, which is covered exclusively by the stated warranty of the respective manufacturers.

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

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

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

G. Replacement of services, 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 dealer where you purchased the mower. Proof of the date of purchase may be required to verify warranty coverage. Warranty repairs must be completed by an authorized Bad Boy center.

B. Warranty claims will not be reviewed or paid unless the warranty registration is received by Bad Boy, Inc. 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, INC. 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, Inc., 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 Inc.; (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, Inc., 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, Inc.; (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, Inc., service dealer or the installation of parts other than genuine Bad Boy, Inc., 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.



NOTES:

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BAD BOY, INC.
102 INDUSTRIAL DRIVE
BATESVILLE, AR 72501
WWW.BADBOYMOWERS.COM

Technical Support: techsupport@badboymowers.com
Warranty:..... warranty@badboymowers.com
Parts: partsdept@badboymowers.com

WARRANTY REGISTRATION

Ensure selling dealership has registered mower within
30 days of purchase to validate warranty.

Please record your serial number, date of purchase and dealership information
for your records.

Serial # _____

Date of Purchase _____

Dealer Information _____



For additional information, please see us at
www.badboymowers.com

Bad Boy, Inc.
102 Industrial Drive
Batesville, Arkansas 72501