



DIESEL 1100cc MODEL **ZERO-TURN MOWER** **OWNER'S, SERVICE & PARTS MANUAL**

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

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This manual applies to the following equipment:

Bad Boy Diesel Series

Diesel Compact 6100 61" 1100cc 3-Cylindar Diesel

COMMONLY USED ITEMS AND PART NUMBERS

61" Blade	Hi-Lift Fusion 038-6080-00	Gator Blade 038-6081-00	Wave Blade 038-6091-00
Deck Belt	61" 041-0236-000		
Drive Pump Belt	61" 041-5048-00		
CATERPILLAR Oil Filter	CAT 1100cc 063-2010-00		
Air Filter	CAT 1100cc: INNER 063-2060-00	CAT 1100cc: OUTER 063-2050-00	
Motor Oil	15w-40 (Reference Owner's Manual)		
Hydro Oil	20W-50 Motor Oil (8 quarts) Bad Boy Hydrostatic Oil Recommended.		

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 Diesel engines use 15W40 engine oil. Conventional or Synthetic may be used.
Refer to the engine's service manual.
- 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 Outlaw models have 12 psi in both front and rear tires.
- 1.5 Most Briggs, Kohler, Kawasaki, and Vanguard engines hold approximately two (2) quarts of motor oil.
Be careful not to over fill engine oil. Refer to the 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 non transferable. **Warranty registration should be completed by the selling dealership using the on-line registration site.**

Model/Serial Number

Your Outlaw model serial numbers are found on the SIN plate underneath seat. Also, 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 Mower 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.



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 the 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 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 DIESEL

To avoid personal injury or property damage, use extreme care in handling diesel.

- 2.45 Extinguish all cigarettes, cigars, pipes, and all other sources of ignition.
- 2.46 Use only an approved diesel container.
- 2.47 Never remove fuel 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 diesel 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 fuel dispenser nozzle.
- 2.52 Never fill diesel 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 fuel cap and tighten securely. **Fuel 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.

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- 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.

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.**

- 2.71 With the parking brake engaged, bring lever arms to their inward position, then attempt to start the machine (the blade actuator should be in off position); the engine should not start.
- 2.72 On a level surface, disengage the parking brake and place lever arms to their outward position, then attempt to start the machine (the blade actuator should be in off position); the engine should not start.
- 2.73 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.
- 2.74 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)

If your machine is equipped with ROPS, it is of utmost importance they are used properly. ROPS, when used correctly, dramatically decrease the fatality rate in instances when the machine overturns.

- 2.75 Periodically ensure the bolts that attach the ROPS to the machine are securely fastened.
- 2.76 Always operated the machine with the ROPS secured in the upright position.
- 2.77 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.
- 2.78 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.
- 2.79 Always wear the provided seat belt when ROPS are utilized. Failure to use the seat belt severely handicaps the safety benefits of the ROPS.
- 2.80 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 Place parking brake in up position
- 3.2 Drive arms must be in the “open” position. While sitting on the machine, each arm is positioned away from the operator, to the right and left. Drive arms will lock into place and must be in this position to start machine.
- 3.3 Put PTO switch in the OFF position.
- 3.4 If your machine has been equipped with a ROPS (Roll Over Protection System) then you must fasten seatbelt.
- 3.5 If machine has not been started recently, engage the choke.
- 3.6 Make sure nothing is under or around machine.
- 3.7 Place key in ignition and turn.
- 3.8 Once machine is started, disengage the choke.
- 3.9 Increase RPM by sliding the throttle to fast position, toward the rabbit.
- 3.10 Owners must become familiar with the controls before operating a zero-turn radius vehicle.
- 3.11 Start slowly and build your skill level. Have ample practice before using the machine at full capabilities.
- 3.12 Be comfortable with machine before engaging blades. Know what each component controls before using machine.
- 3.13 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.
- 3.14 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

***Check each and provide maintenance when needed.*

DAILY

- 4.1 Check Engine Oil
- 4.2 Check Engine Air Filter
- 4.3 Tire Pressure and Wheel Lug Nuts
- 4.4 Inspect Blades

Within FIRST five hours of usage, change engine oil and filter

EVERY 30 HOURS OF USAGE

- 4.5 Grease Machine

EVERY 50 HOURS OF USAGE

- 4.6 Change Engine Oil and Filters

Change filters once a year if under 50 hours

Check air and fuel filters more often in dry, dusty conditions

Within FIRST 50 hours of usage, change hydraulic oil and filters

EVERY 250 HOURS OF USAGE

- 4.7 Change Hydraulic Fluid and Filters
- 4.8 Refer to manufacturer manual for specific information on maintenance schedules.

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.
- 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.

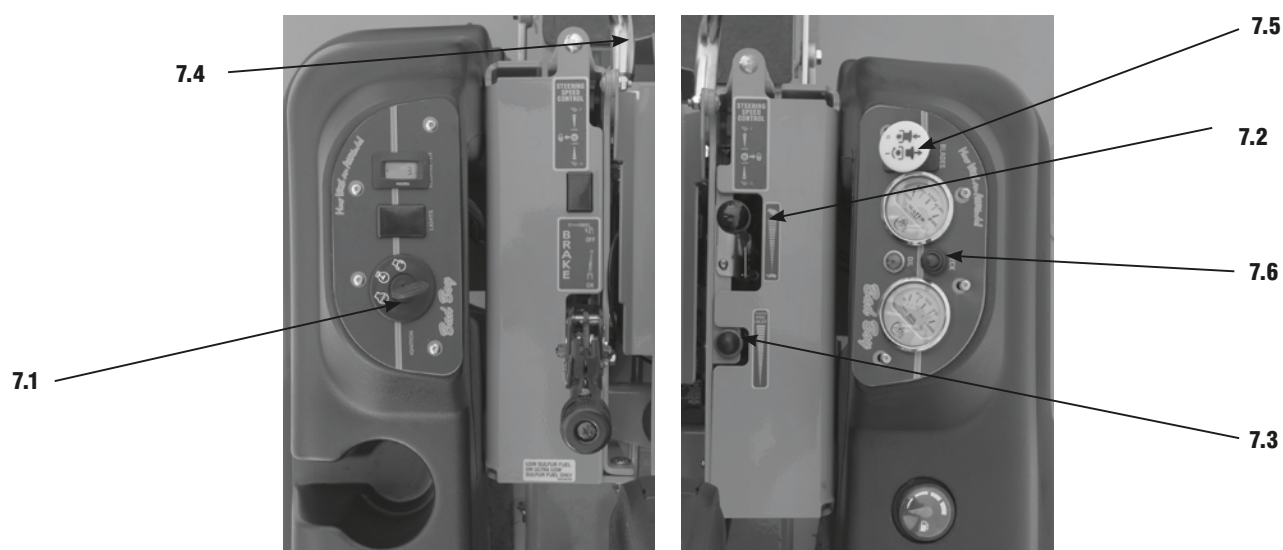


SECTION 6: TROUBLESHOOTING

- 6.1 **Q:** *How do I prevent an uneven cutting pattern and increase the quality of cut?*
- 6.1 **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?*
- 6.2 **A:** Check battery charge and connection (grounds), check your fuel (make sure fuel is less than 30 days old and contains no water), 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?*
- 6.3 **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.
- 6.4 **Q:** *What type of fuel is recommended for my mower?*
- 6.4 **A:** We recommend that you use a name brand fuel to ensure quality. Use only Ultra Low Sulfur Diesel Fuel.
- 6.5 **Q:** *Do you offer touch-up paint for your mowers?*
- 6.5 **A:** Touch-up paint is available. Contact your local dealer for more information.
- 6.6 **Q:** *How durable is the electric deck lift?*
- 6.6 **A:** The actuator which controls the deck height is designed for moving loads of up to 1000 pounds and has a static holding capability which exceeds 3,000 pounds. Our ¼" deck weighs approximately 250 pounds which is only 25% of working capability. If deck lift will not operate, check fuse located underneath operator console (15amp).

SECTION 7: CONTROLS

- 7.1 **Ignition Switch**—Bad Boy mowers have a three position ignition switch: off, run, and start. With key inserted, rotate it clockwise to START position and release key when engine starts. Switch will automatically return to the RUN position.
- 7.2 **Throttle Control**—A cable is connected to the engine throttle for controlling engine speed. Move lever forward to increase engine rpm, move lever backward to decrease engine rpm.
- 7.3 **Pre-Heat Button**—Before starting engine push to pre-heat for easier starting.
- 7.4 **Control Levers**—These levers control the mower's speed, direction, and neutral lock. These levers are used to steer, accelerate, decelerate and change direction. (Drive Arms)
- 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 **Deck Lift Control**—The deck lift switch is used to raise and lower the deck. Pull the switch backwards to raise the deck and push the switch forward to lower the deck.





SECTION 8: MOVING INOPERABLE MOWER

- 8.1 Do not tow machine. Use a winch to load on a trailer for transporting.
- 8.2 **ATTENTION:** RETURN BYPASS VALVES TO OPERATING POSITION BEFORE RUNNING MOWER FOLLOWING REPAIRS.
- 8.3 If it is necessary to move mower when the engine is inoperable, the hydraulic drive pumps are equipped with bypass valves. Before moving the mower, turn the bypass valves counterclockwise one-half to one revolution. The valve stems on each pump are located near the top and are identified as a hex stud.
- 8.4 Your Bad Boy Mower Weighs: **DIESEL SERIES: 1607 lbs**
**** Weights fluctuate with the addition of accessories.*
- 8.5 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.
- 8.6 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**—Registers Hour increments up to 9,999.9 total hours. This meter records the cumulative time the engine is running.
- 9.2 **Oil Light**—Alerts the operator that there is a low oil pressure situation inside the engine.
- 9.3 **Check Engine Light**—Alerts the operator that the ECM has detected an issue with the engine.

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: GREASING THE BEARINGS

- 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: NGLI grade #2 multi-purpose gun grease. Grease the front caster pivots.
- 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 in fittings until grease begins to seep out of the bearings. 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.*

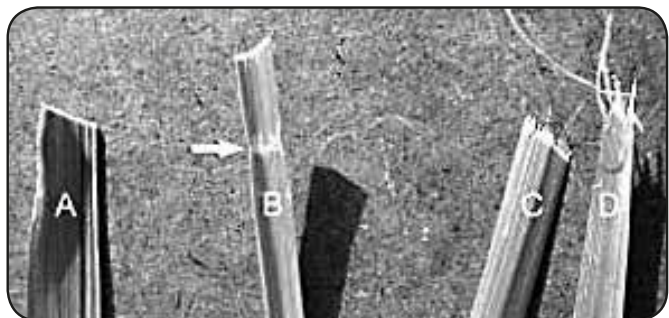
The type of blade installed on a new mower is a decision the retailer makes for each model of mower, based on the expected needs of most customers. If you’re unsure of which blade is on a particular model, inspect the blade. Blades have part numbers stamped into them. Then compare these part numbers 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 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 diesel.
- 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 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 it's 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

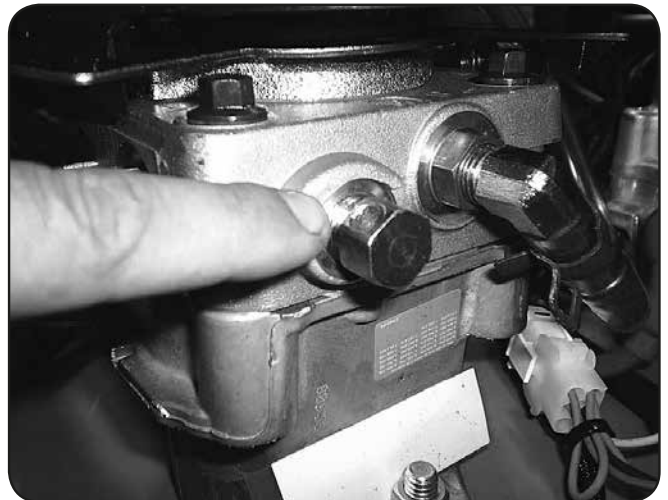
SECTION 1: HYDROSTATIC SYSTEM

To change hydro oil on Diesel models, remove oil return lines from top of hydro tank and place them in a disposable oil container. Start and run mower until oil level is reduced to about 2" of oil remaining in the tank. Do not allow air to enter the oil lines in the bottom of the tank. Keep in mind that only about 75% of the hydro oil can be changed at a time. Use only 20w-50 motor oil in the hydro system (Conventional or synthetic oil may be used). Bad Boy recommends that the hydro oil and filters be changed within the first 50 hours of use; then at intervals of 250 usage hours. Each side requires approximately four quarts of oil to refill the system.

(Diesel Models)

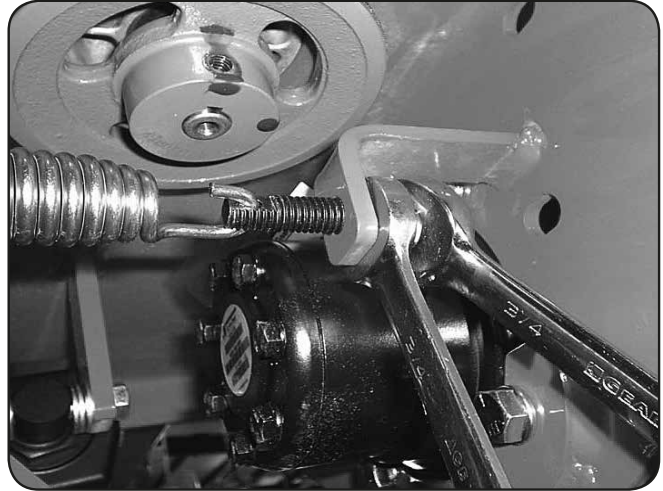
Change hydro oil filters by unscrewing them from the filter head. Fill new filters with 20w-50 motor oil before installing. Use only Bad Boy replacement filters. Use of any other filters will result in damage to the hydro system and void the warranty.

Once the system is refilled with oil, lift rear of mower until tires are off the ground; then chock the front caster tires. Loosen the bypass valve bolt (pictured) by one-half to three-quarters of a turn. Next, with the bypass valves open, slowly move the drive arms forward and rearward. Keep away from the rear tires: they will be rotating and present a safety hazard. After the drive arms have been pushed forward and rearward five times, turn the engine off and close the pumps' bypass valves. Check the oil level in each hydro reservoir after the first 15 minutes of subsequent usage; it may be necessary to add more oil to the reservoirs.

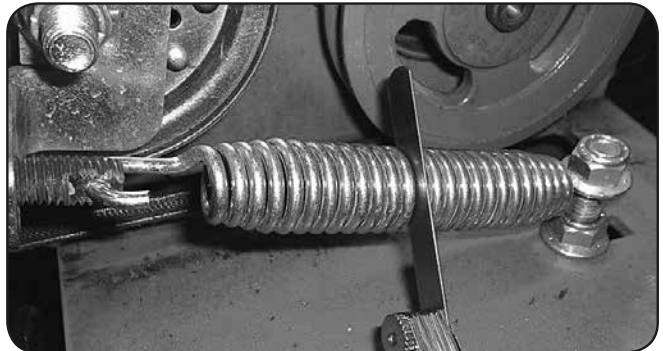


SECTION 2: DRIVE BELT

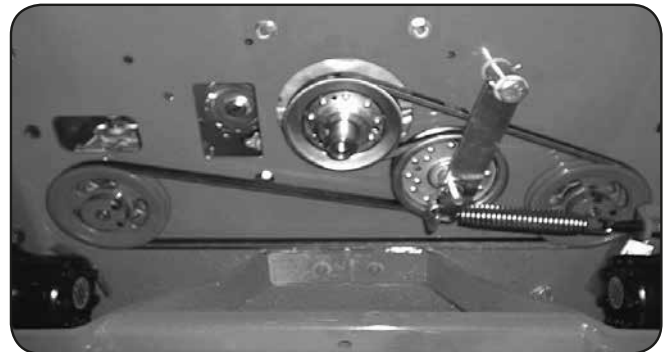
Shown above is a typical pump belt tensioner for Outlaw models.



Factory setting is about .030" (about the thickness of a credit card) between coils as shown.

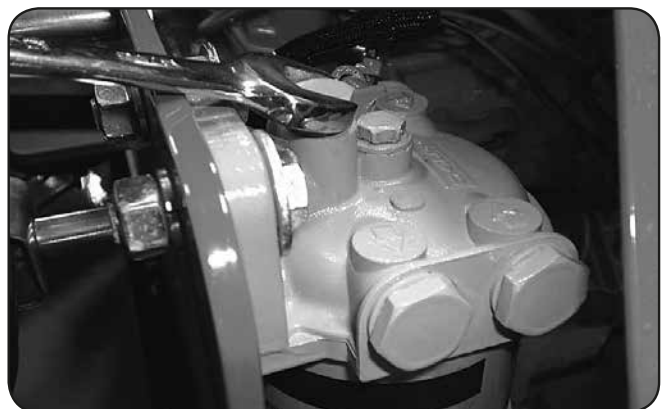


Shown to the right is a typical pump belt layout for most models.



SECTION 3: ENGINE

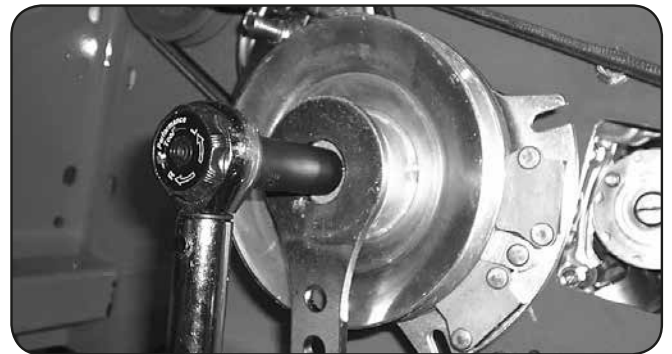
When servicing the fuel system on the CAT Diesel, it is necessary to purge the air from the system by loosening the 9/16" bolt on top of the fuel filter and pumping the fuel bulb (located underneath the radiator) until air bubbles are no longer visible.



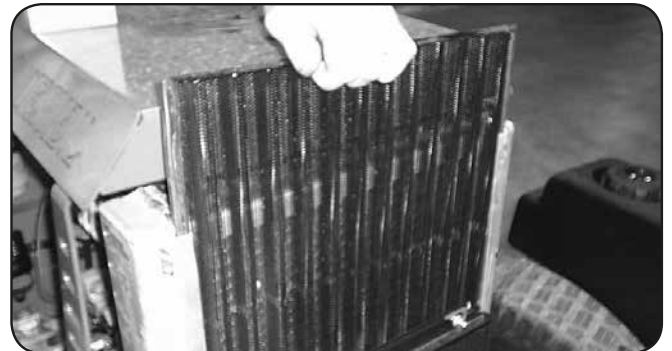
Remove and inspect air cleaner weekly. (More often in dusty conditions). Do not blow filter out with air pressure, this will cause the filter to be filled with tiny holes that will allow dirt to enter. Instead, tap filter on side to remove any debris. Replace at least once a year, more often in dusty conditions.



Torque the clutch bolt to 50 ft. lbs. on all models. Retorque at every oil change.



Keep radiator screen clean and free of debris on liquid cooled models. Check screen hourly during dry conditions. Slide radiator screen up to remove.



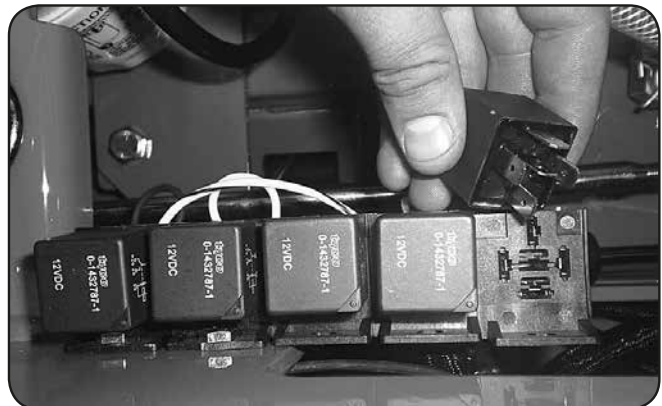
SECTION 4: ELECTRICAL SYSTEM

On most larger commercial engines (27 hp and up), the 25 amp main fuse is located about 3" from the starter on the engine. (shown in first image on right). On smaller commercial and light duty commercial mowers, the 25 amp main fuse is located just behind the battery connected to the starter solenoid. (Shown in second image on right).



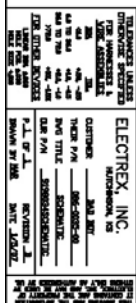
Always check the condition of the wiring harness ground cable. Ensure that the ground is connected, clean, and tight. On most models, the ground wire is connected to the negative side of the battery.

Check the condition and connection of the relays located under the seat. Ensure that they are clean and connected. Make sure that wire terminal ends have not been pushed out of the relay block.



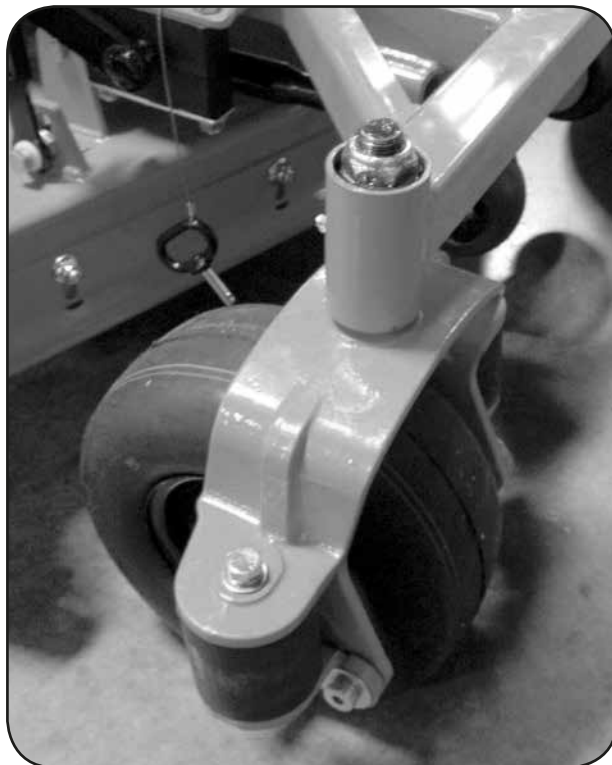
On most models, the red wire coming out of the engine is the charging wire from the alternator. Check for 13.6—14.2 volts DC at this wire with engine at full throttle.





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.



There is one grease fitting in each front wheel and one in each front caster bearing housing. Grease at every engine oil change.

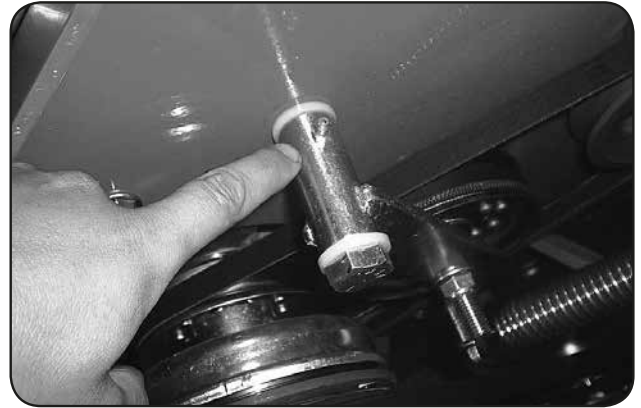




The pump belt tensioner is located under the engine and has a grease fitting at its pivot point. Grease at every engine oil change.

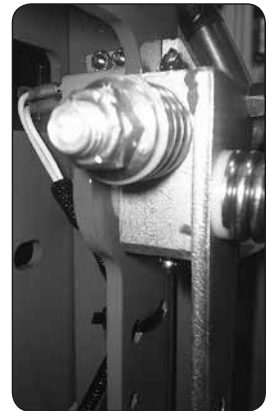
The deck belt tensioner is located at the rear of the deck and has a grease fitting on its pivot point. Grease at every engine oil change.

The control arm blocks have grease fittings located on the top of each block. Grease one time a year.



SECTION 6: CUTTING DECK

Deck belt removal: (1) Remove ignition key. (2) Slide the tension adjustment bolt to its most rearward position in order to provide the lowest belt tension possible. (3) Raise the deck to its highest position. (4) Remove either the right or left blade pulley cover. (5) 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. For optimal cutting performance, the blade enclosure should be level from right to left and have a slight forward tilt downward. To ensure proper deck orientation, perform the following steps: (1) Move the mower onto a flat surface such as a concrete pad. (2) Ensure all tires are inflated to the recommended pressure. (3) Measure the distance from the ground surface to the bottom of the blade enclosure (as indicated in the photograph) at each of the four corners. The rear corners should be equal in ground clearance as should the forward corners. The forward corners should be approximately 1/8" lower than the rear corners. If adjustment becomes necessary, perform the actions described below in order to return the mower to its optimum cutting state. The deck brackets (pictured, 4 total) are the principal means for deck reorientation. Begin the adjustment by leveling the deck; both front to back and left to right. This is accomplished by shifting the position (upward/downward) of the deck brackets within the vertical slots located on their respective deck tabs. Once the deck is parallel with ground, the proper forward tilt must be obtained. This can be achieved by re-adjusting the forward or rearward deck bracket pair. If necessary, the two turnbuckles may be used for slight position refinements.



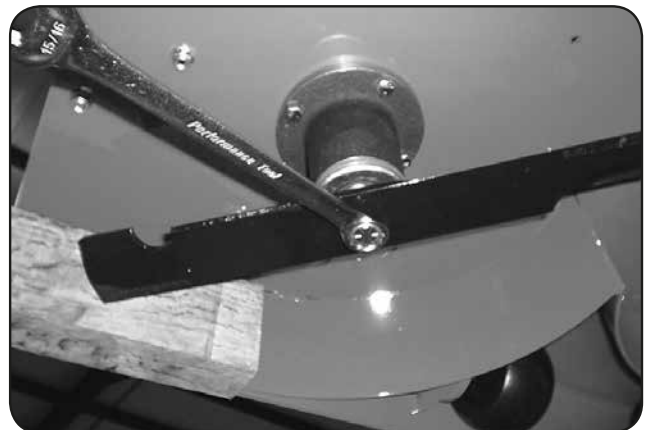
The deck spring tension is critical. If the tension is too much, it will cause the spring to break. If too loose, the belt can jump off or slip on the pulleys and cause a cut quality issue. With the deck up, the spring coil gap should be about .025" - .030" (about the thickness of a credit card). Spring tension adjustments can be made by sliding the bolt shown above forward or backward in the slot of the deck. Belt tension should be 50- 55 lbs with the deck at its highest setting.

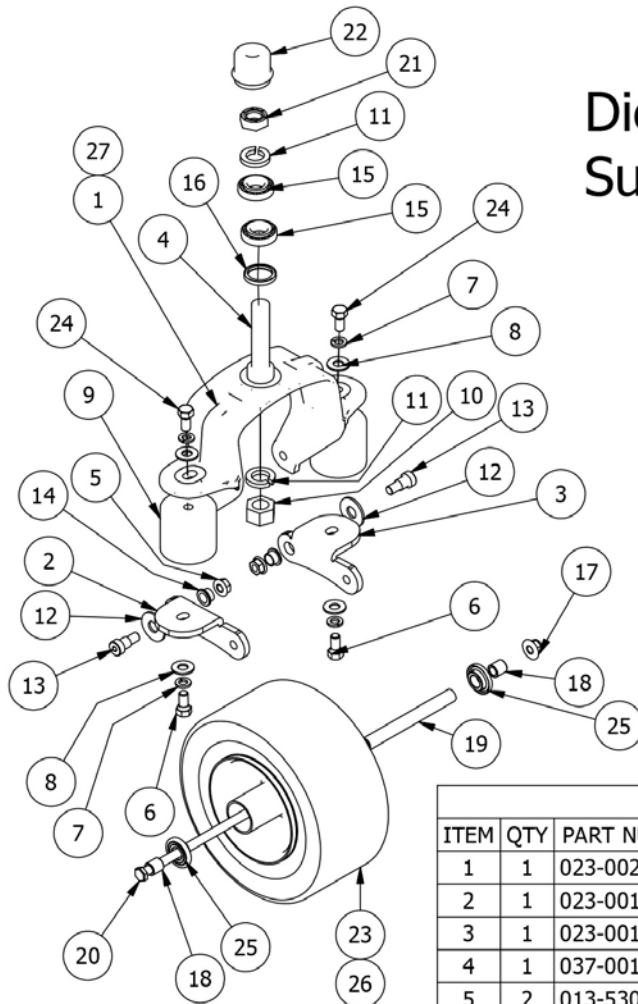


The blade in the foreground (see photo) was utilized long after replacement was required. In addition to a decline in cut quality, failure to replace a worn or damaged blade creates a major safety hazard. Bad Boy recommends that blade sharpening be performed by a professional.



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. **Bolts used have right-handed threads.** Re-torque the blade bolts to 90-110 lbs. The blade spindles contain a sealed ball bearing in the top and bottom of the spindle. The bearings are replaceable for a more cost effective repair.

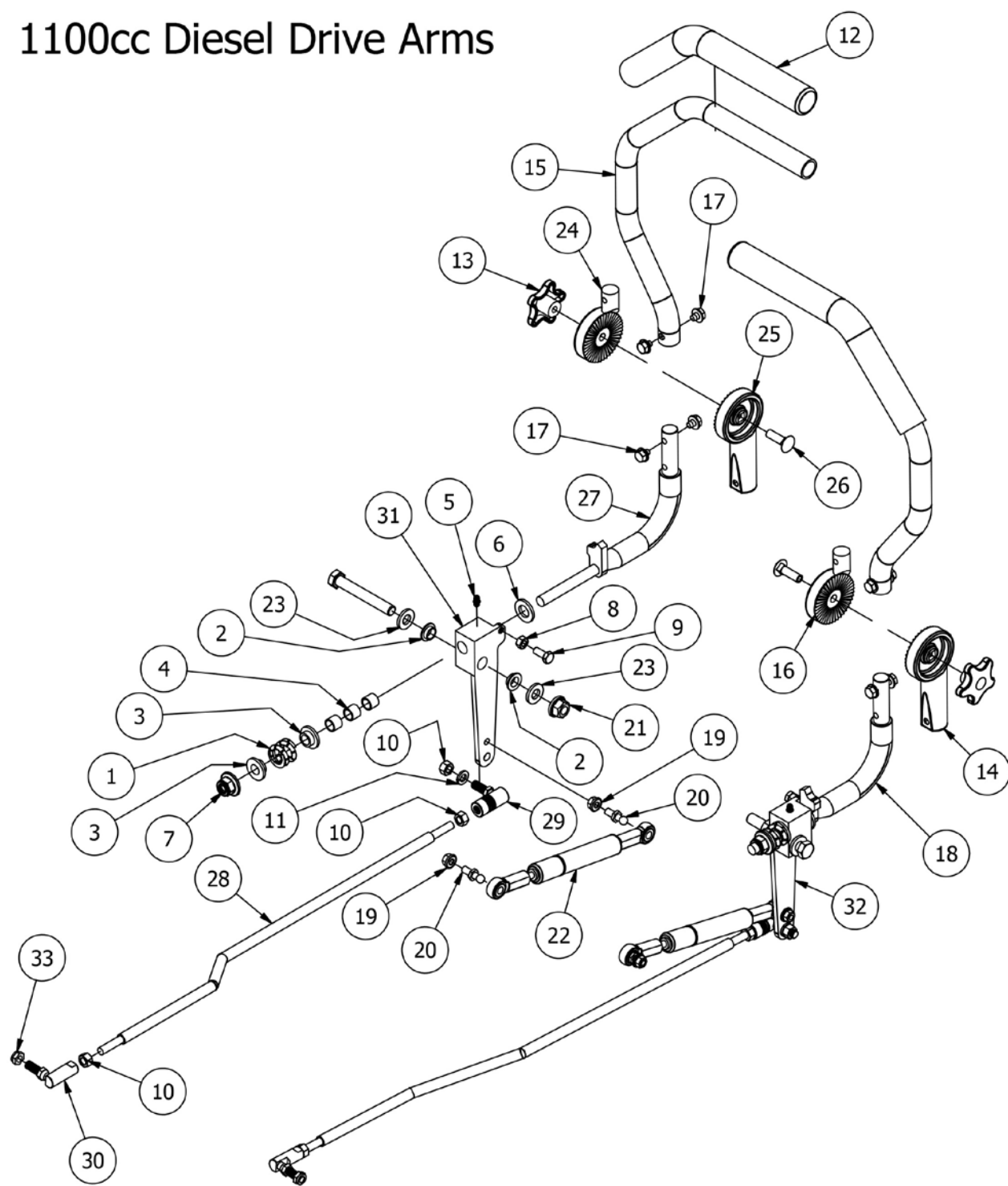




Diesel CAT Suspension Fork Assembly

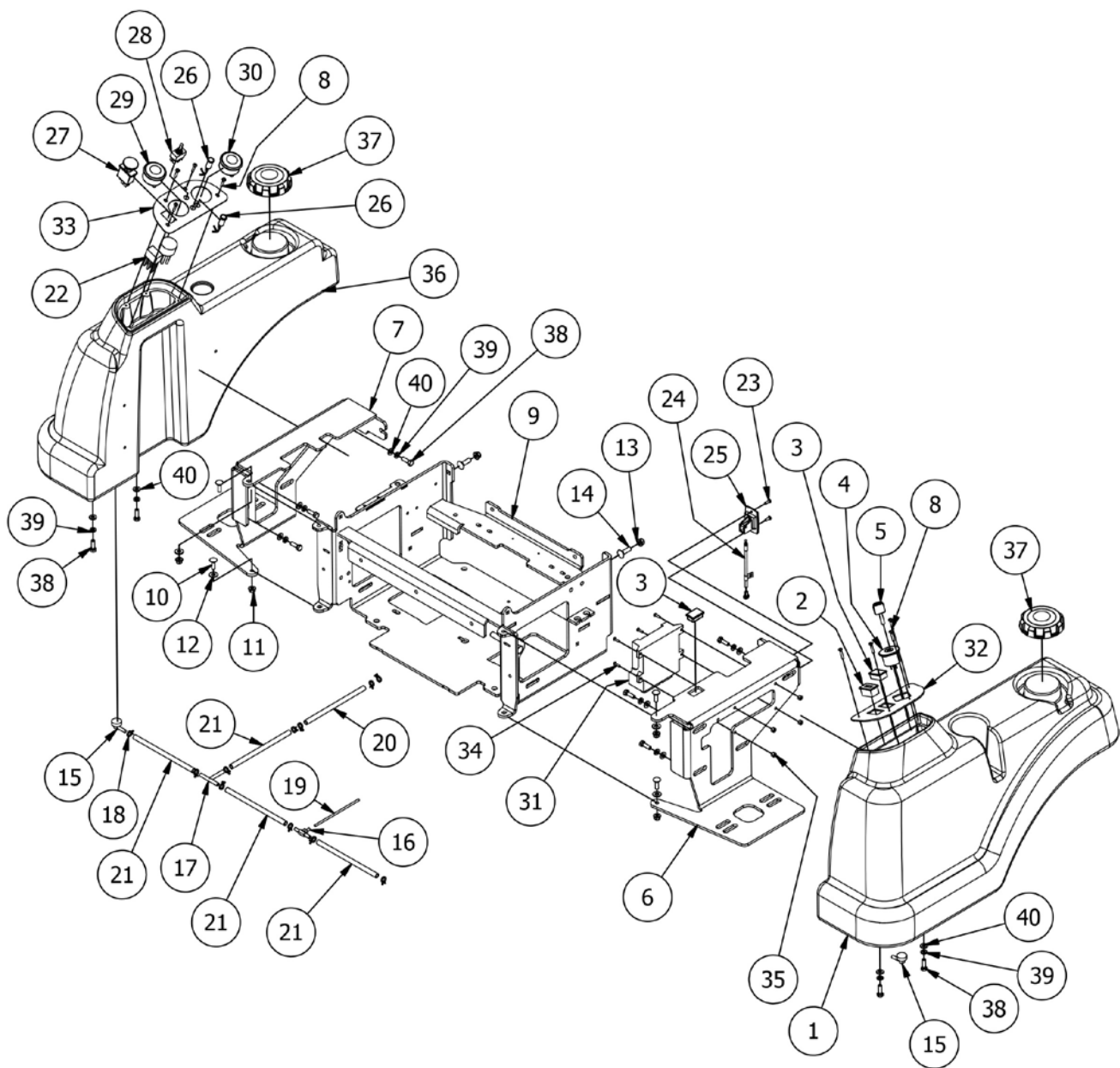
Suspension Fork Assembly				
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	023-0020-00	Suspension Fork Top/Side Combo	
2	1	023-0012-00	Suspension Fork - Bottom Left	
3	1	023-0013-00	Suspension Fork - Bottom Right	
4	1	037-0010-00	Front Suspension Fork Spindle	
5	2	013-5300-00	1/2" Flange Nut	
6	2	018-2030-00	1/2" x 1" Hex Bolt	
7	4	019-5007-00	1/2" Lock Washer	
8	4	019-5702-00	1/2" Washer (Grade 8)	
9	2	032-9002-00	Vibration Mount- Red Dot	
10	1	013-6016-00	1" Fine Thread Nut	
11	2	019-3000-00	1" Lock Washer	
12	2	019-5038-00	5/8" Flat Washer	
13	2	018-3001-00	5/8" x 5/8" Shoulder Bolt	
14	2	032-5052-00	Bronze Bushing - SF - 2024-8	
15	2	010-7001-00	Bearing	
16	1	012-7003-00	Seal	
17	1	013-8050-00	1/2-13 Nylon Flange Nut-Orange	
18	2	025-5203-00	3/4 OD x 1/2 ID x 3 1/4 Length	
19	1	025-5202-00	Front Wheel Spanner	
20	1	018-3002-00	1/2" x 10" Bolt	
21	1	013-9004-00	1" Fine Thread 1/2 Nut	
22	1	014-7005-00	Dust Cover	
23	1	022-3070-00	13 x 6.50 - No-Flat Large Bore Orange front Assembly	
24	2	018-2080-00	1/2" x 1-1/4" Gr5 Hex Bolt (Coarse)	
25	2	022-7010-00	1-3/4" Bearing-Large Bore Front Rim	
26	1	022-1050-00	13 x 6.50 - Reliance No-Flat	
27	1	023-7915-98	Suspension Fork Assembly	

1100cc Diesel Drive Arms





Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	034-8025-00	Drive Lever Spring
2	4	032-5055-00	Bushing for 2012 Drive Arms
3	4	019-8027-00	.515 ID Nylon Shoulder Washer
4	6	032-8024-00	.507 ID Nylon Bushing
5	2	024-6034-00	1/4" Press in Grease Fitting
6	2	019-6017-00	.635 ID Plastic Washer
7	2	013-8050-00	1/2-13 Nylon Flange Nut-Orange
8	2	013-8043-00	5/16" Nut
9	2	018-8063-00	5/16" x 3/4" Hex Bolt
10	6	013-6051-00	3/8" Fine Threaded Jam Nut
11	2	019-5037-00	3/8" Lock Washer
12	2	069-4010-00	Black Steering Grip
13	2	045-5000-00	Black Knob for Adjustable Steering Arm
14	1	031-9015-70	Lower Adjuster - Steering Arm- Right
15	2	031-9010-00	Upper Tube-Adjustable Steering
16	1	031-9016-70	Upper Adjust Steering Arm- Right
17	8	018-2020-00	5/16-18 1/2 HWH Bolt-Steering
18	1	031-9025-70	Steering Arm Elbow - Right
19	4	013-9002-00	5/16" Flange Nut
20	4	018-2050-00	10mm Damper Ball Stud-Steering
21	2	013-0085-00	1/2-13 Hex Flange (GR.G) ZC
22	2	087-8080-00	Steering Damper
23	4	019-7000-00	.505x1x .125 Oil Impregnated washer
24	1	031-9017-70	Upper adjuster-Steering Arm- Left
25	1	031-9014-70	Lower Adjuster - Steering Arm- Left
26	2	018-5043-00	3/8" x 1 1/4" Carriage Bolt
27	1	031-9020-70	Steering Arm Elbow - Right
28	2	035-6060-00	1100cc Diesel Push Rod
29	2	099-2009-00	Quick Release Ball Joint
30	2	099-6046-00	3/8-24 Ball Joint
31	1	027-8819-00	Drive Arm Lever Housing (Left)
32	1	027-8820-00	Drive Arm Lever Housing Right
33	2	018-4011-00	3/8-24 Nylon Insert jam locknut



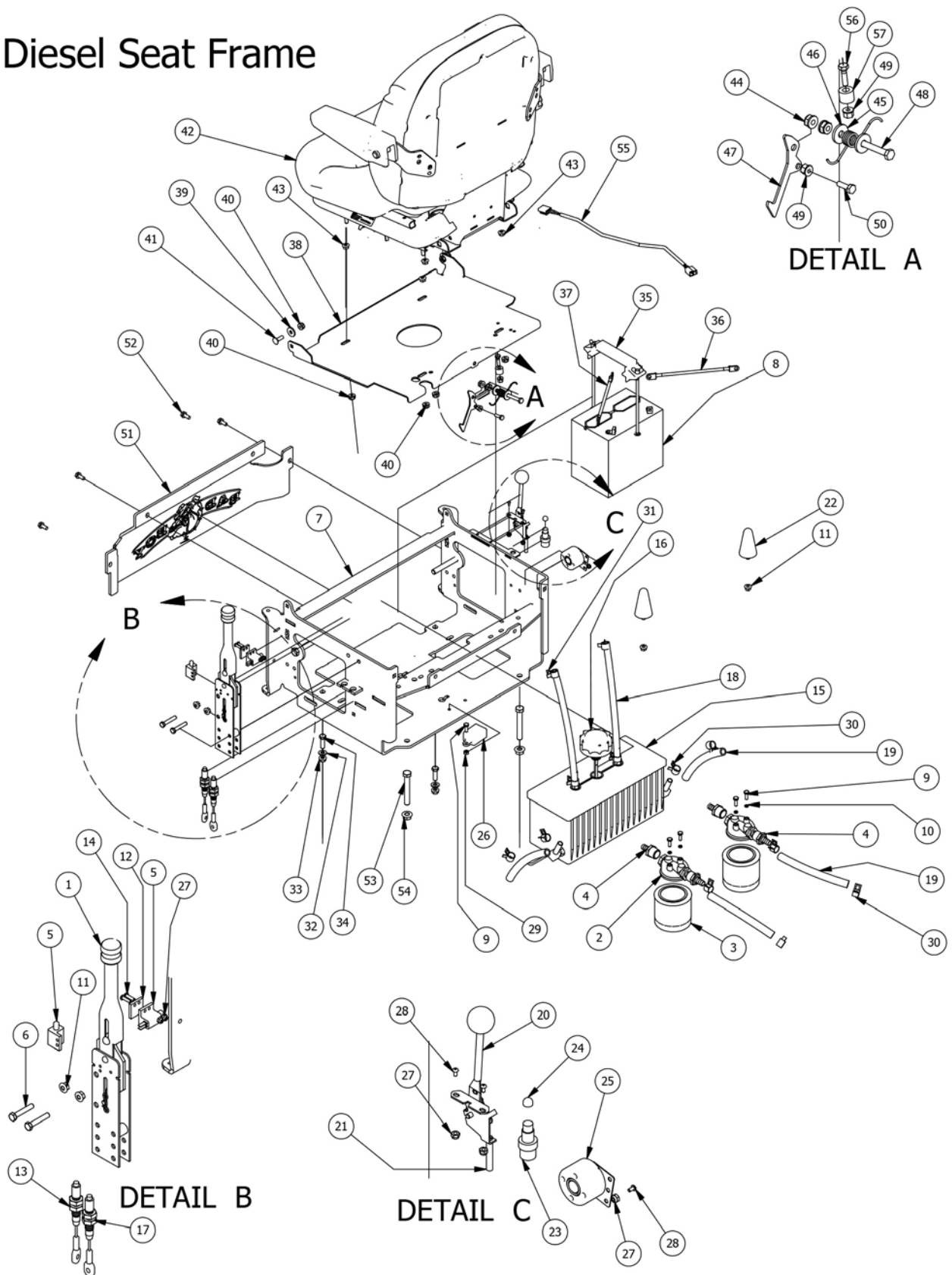


Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	067-3000-00	Left Fuel Tank with Fender
2	1	083-4013-00	Tachometer
3	2	018-1040-00	Light Plug
4	1	077-8076-00	Ignition Switch
5	1	042-9000-00	Ignition Key
6	1	031-2010-00	Tank Supports-Left
7	1	031-2011-00	Tank Support- Right
8	8	018-2015-00	10-32 x 1 Button Head Bolt
9	1	080-6010-00	Diesel Seat Frame
10	4	018-8065-00	5/16" x 1" Carriage Bolt
11	4	013-9002-00	5/16" Flange Nut
12	4	019-6042-00	.360 ID Plastic Washer
13	2	013-5202-00	3/8" Nylock Flange Nut
14	2	018-5043-00	3/8" x 1 1/4" Carriage Bolt
15	2	067-6055-00	Fuel Tank Hose Nipple w/ Filter
16	1	073-2000-00	Brass fuel line T
17	1	073-8068-00	fuel line T
18	11	072-8069-00	1/4 fuel clamp
19	1	051-8068-00	3/16 Fuel Line
20	1	051-8075-00	5/16" fuel line hose
21	4	051-8067-00	1/4" fuel line hose
22	1	086-0247-00	Wiring Harness
23	2	018-9000-00	3/16 Rivet
24	1	064-0047-00	2015 Seat Latch Cable
25	1	064-0046-00	2015 Seat Latch Toggle
26	2	089-1000-00	Oil Light
27	1	056-8058-00	PTO Engager
28	1	078-8077-00	Deck Lift Joystick
29	1	086-7001-00	2" Water Temperature Gauge
30	1	086-7000-00	2" Oil Pressure Gauge
31	1	015-4010-00	ECM for 1100cc Diesel
32	1	079-3402-00	Control Panel (Left)
33	1	079-3406-00	1100cc Diesel Control Panel
34	4	018-5200-00	10-24 X 5/8 BS C/S 18-8 SS
35	4	013-5019-00	10-24 Nylon Insert Locknut
36	1	067-3001-00	Right Fuel Tank with Fender
37	2	066-8090-00	Diesel Fuel Cap -3.5 inch Neck
38	10	018-2007-00	5/16" x 1" Bolt
39	10	019-8051-00	5/16" Lock Washer
40	10	019-8044-00	5/16" Flat Washer



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	070-5580-00	Outlaw Diesel Frame 2012
2	1	079-3110-00	Outlaw Floor Panel
3	1	081-2008-00	Foot Assist Floor Mat
4	11	040-6080-00	Ratchet Fastener
5	1	018-8064-00	1/4" x 5/8" BS C/S 18-8 SS
6	1	064-2006-00	Floor board Cable W/ Swivel Ends
7	3	013-8049-00	5/16" Flange Nut Zinc W/Serrations
8	2	018-8065-00	5/16" x 1" Carriage Bolt
9	2	019-6042-00	.360 ID Plastic Washer
10	8	030-3050-00	#10 x 1/2" Self Taping Screw
11	8	029-4010-00	Button Bumper
12	1	028-6030-00	2015 Outlaw Act Bar Assembly (Front)
13	1	028-6040-00	2015 Outlaw Act Bar Assembly (Rear)
14	11	013-8050-00	1/2-13 Nylon Flange Nut-Orange
15	2	032-3000-00	Bushing- SF-1620-4
16	2	018-0008-00	1/2 x 1-1/2 Carriage Bolt
17	4	017-9000-00	Two Piece Pillow Block (Male)
18	4	017-9050-00	Two Piece Pillow Block (Female)
19	4	017-9025-00	Two Piece Pillow Block Strap
20	8	018-5019-00	1/2" x 4" Bolt (Grade 8)
21	3	025-5203-00	3/4 OD x 1/2 ID x 3/4 Length
22	4	018-0009-00	3/8 x 1 3/4 Carriage Bolt
23	1	040-4000-00	Deck height lever pin
24	4	013-5202-00	3/8" Nylock Flange Nut
25	1	031-0100-00	Outlaw Deck Lever Lock
26	1	026-2100-00	Outlaw Height Indicator Plate (Outer)
27	5	019-2003-00	.390 x .750 x .062 Nylon Washer
28	1	026-0013-00	Outlaw Deck Lift Pedal
29	1	040-5000-00	Pull Pin
30	1	030-0010-00	5/16-18 x1 Thumb Screw Zinc
31	3	013-9002-00	5/16" Flange Nut
32	1	013-7018-00	1/2" Hex Nut
33	1	087-6100-00	250lb Gas Spring
34	2	018-2050-00	10mm Damper Ball Stud-Steering
35	1	028-6055-00	Outlaw Linkage Bar Susp Frame
36	1	035-7033-00	Actuator
37	1	018-0022-00	1/2-13x2 Grade 8 Hex Bolt
38	1	019-5702-00	1/2" Washer (Grade 8)
39	1	018-4010-00	1/2" Nylock Nut (1/2 Jam)
40	1	018-7016-00	1/2" x 3" Hex Bolt
41	1	025-7036-00	1/2 x 1/2 Spacer
42	2	019-8054-00	.505 Nylon Spacer
43	2	018-8052-00	1/4" x 3/4" Hex Bolt
44	2	013-9001-00	1/4-20 Hex Flange Nuts Zinc w/Serrations
45	1	089-3050-00	2 X 3 ROPS Fits All 2012 Diesel Models
46	4	018-7050-00	1/2" x 4 1/2" Bolt
47	4	013-0005-00	1/2" Center Lock Nut
48	1	015-4000-00	Electric Fuel Pump
49	2	029-7037-00	14" Rubber Bumper
50	4	019-7040-00	1/4" Flat Washer
51	4	030-7039-00	1/4" x 1 1/2" Self Tapping Screw
52	1	030-7040-00	1/4 x 1 Hex Head tek screw

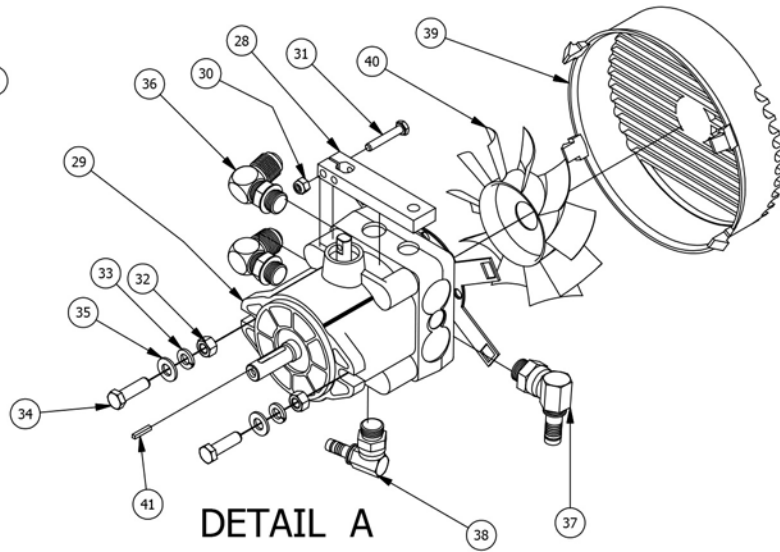
Diesel Seat Frame



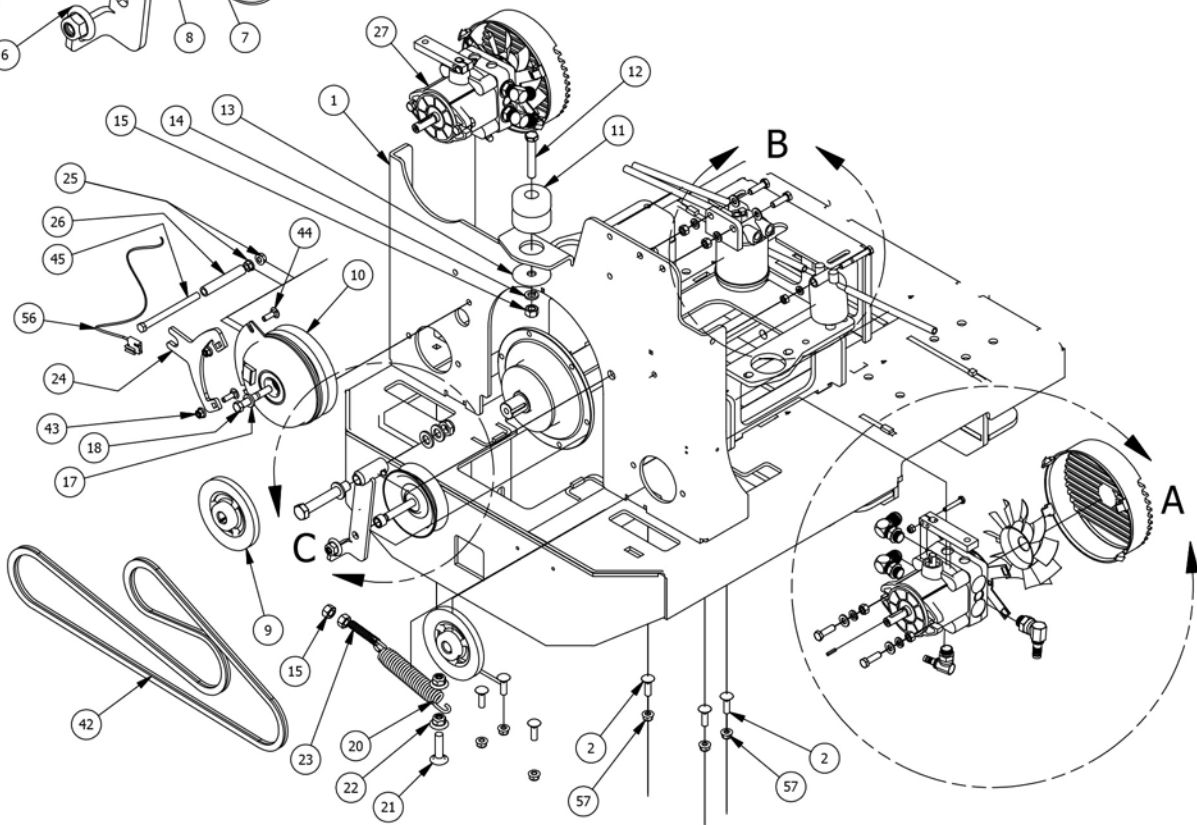


Diesel Seat Frame			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	069-8054-00	Hand Brake Assembly
2	2	062-8013-00	Filter Head
3	2	063-8014-00	Hydraulic filter
4	4	024-5050-00	Filter Head Fitting
5	3	77-8073-00	Switch
6	2	018-8059-00	5/16" x 1 3/4" Hex Bolt
7	1	080-7000-00	2007 Diesel Seat Frame
8	1	068-8050-00	Battery - Diesel Models - I51
9	5	018-8052-00	1/4" x 3/4" Hex Bolt
10	5	019-4008-00	1/4" Lock Washer
11	4	013-9002-00	5/16" Flange Nut w/Serrations
12	2	025-6041-00	Switch Block Plastic
13	1	064-8055-00	Short Brake Cable
14	4	018-8056-00	1024 x 1" Allenhead Bolt
15	1	067-2010-00	Aluminum Hydraulic Tank
16	1	066-8050-00	Hydraulic Tank Cap
17	1	064-8056-00	Long Brake Cable
18	2	051-8063-00	3/8" x 32" Clear Hose
19	4	051-8064-00	1/2" x 9 1/4" Braided Hose
20	1	055-8018-00	Throttle - Diesel
21	1	055-8018-75	Diesel Throttle Cable Only
22	2	034-1000-00	Spring Cushion
23	1	077-6000-00	Momentary Start Switch
24	1	014-6000-00	Start Switch Boot - Diesel
25	1	021-8059-00	Heat Warning Piezo Buzzer
26	1	015-0015-00	Auto Shut Down for Cat Diesels
27	7	013-5019-00	#10 Nylock Nut
28	3	018-5200-00	1024 X 5/8" Buttonhead Bolt
29	1	013-8039-00	1/4" Hex Nut
30	8	072-8066-00	1/2 Hose Clamp
31	4	072-8065-00	3/8 hose clamp
32	4	019-5029-00	3/8" Flat Washer
33	2	013-5201-00	3/8" Flange Nut
34	2	018-5040-00	3/8" x 1 1/4" Hex Bolt
35	1	043-8929-00	Battery Hold Down
36	1	064-4001-00	Black Battery Cable - Diesel
37	1	064-4000-00	Red Battery Cable - Diesel
38	1	026-2006-00	2006 Seat Plate
39	2	019-6042-00	.360 ID Plastic Washer
40	6	013-8049-00	5/16-18 Nylon Flange Nut
41	2	018-8065-00	5/16" x 1" Carriage Bolt
42	1	071-4050-00	Grammer Suspension Seat
43	4	013-9002-00	5/16" Flange Nut
44	2	013-8049-00	5/16-18 Nylon Flange Nut
45	1	034-1075-00	Torsion Spring for Seat latch
46	2	019-6042-00	.360 ID Plastic Washer
47	1	031-0200-00	Seat Latch Lever
48	1	018-0012-00	5/16-18 X 2 Hex C/S (GR.5) ZC
49	1	013-2050-00	1/4-20 Nylon Insert flange Nut
50	1	018-4702-00	1/4-20 x 1-1/4 GR 5 Hex Bolt
51	1	014-2009-00	Cooler Cover
52	4	030-7042-00	5/16 x 3/4 washer head type F screw
53	2	018-2018-00	1/2 x 3 1/2 Flange Bolt Grade 8
54	2	013-5300-00	1/2" Flange Nut
55	1	036-5300-00	Seat Switch Adapter
56	1	018-4007-00	1/4-20 x 1 GR 5 hex bolt zinc
57	1	025-2000-00	.380x.735x.470 Nylon Spacer

DETAIL B



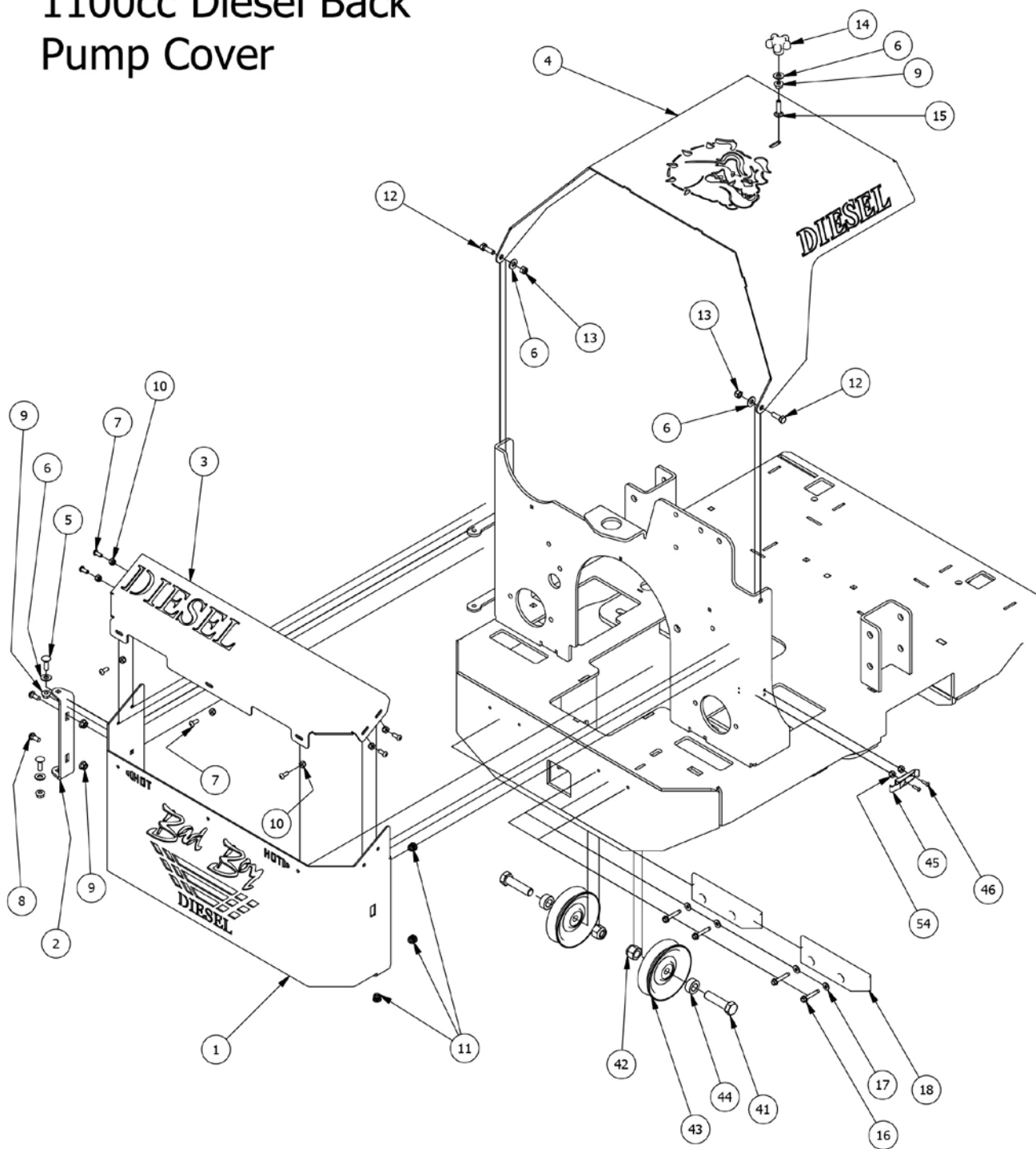
DETAIL A



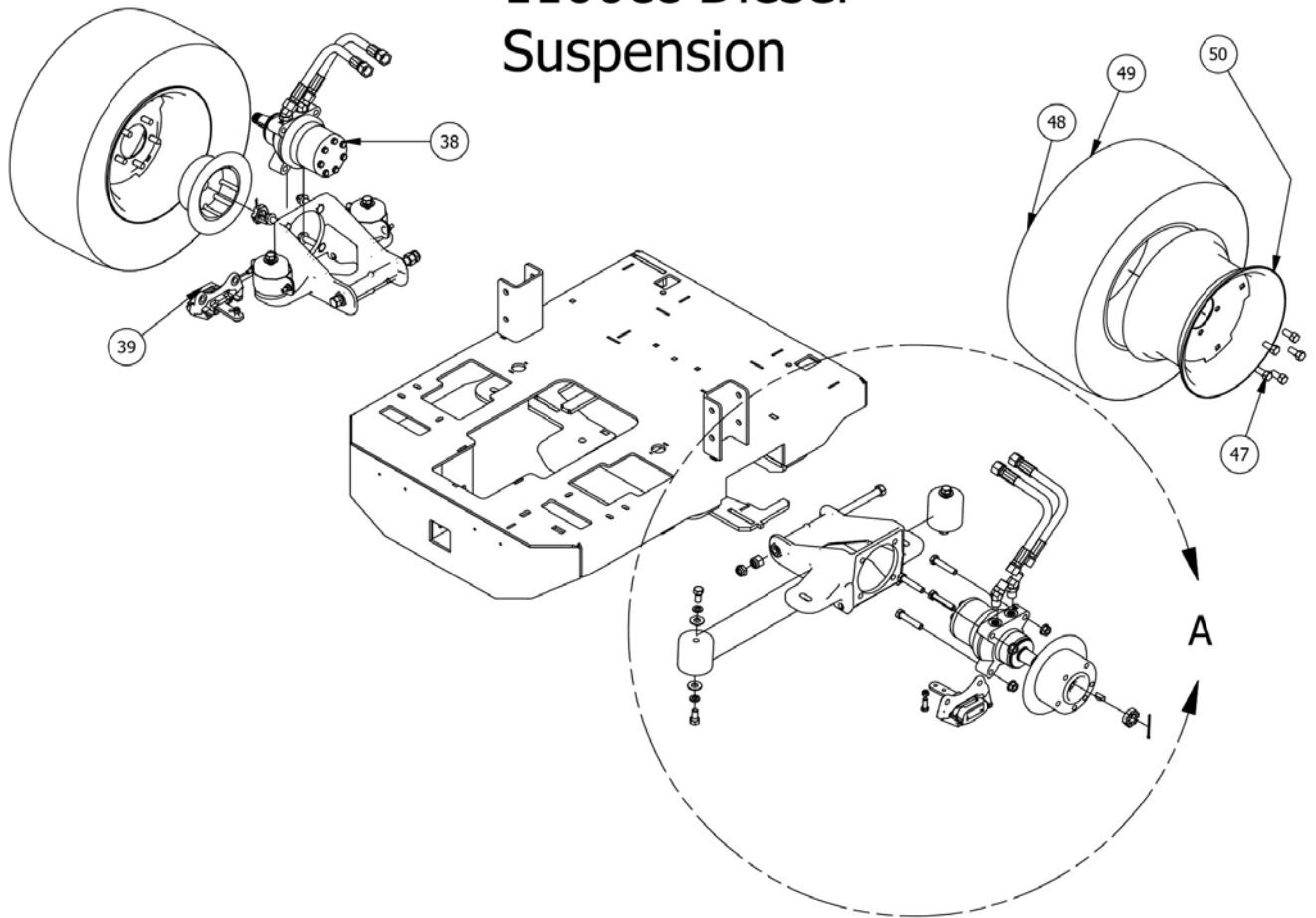


Diesel Pump Plate Assembly			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	026-8030-00	Pump Plate Diesel
2	6	018-5043-00	3/8" x 1 1/4" Carriage Bolt
3	1	024-6034-00	1/4" Drive in Grease Fitting
4	1	033-6001-00	4 3/4" Idler Pulley
5	1	039-5950-00	Pump Idler Bracket only for 61" Deck
6	1	013-8050-00	1/2-13 Nylon Flange Nut-Orange
7	1	018-7016-00	1/2" x 3" Hex Bolt
8	1	025-7036-00	1/2 x 1/2 Spacer
9	2	033-5011-00	5" Pump Pulley
10	1	070-5040-00	Clutch Assembly for Diesel
11	1	032-4000-00	Armor Plated Mount-Rear Mount
12	1	018-7016-00	1/2" x 3" Hex Bolt
13	1	032-4051-00	Snubbing Washer
14	1	019-5007-00	1/2" Lock Washer
15	3	013-7018-00	1/2" Hex Nut
16	1	013-5301-00	5/8" Nylock (1/2 Jam)
17	1	019-8053-00	7/16" Lock Washer
18	1	018-5401-00	7/16" x 2 3/4" Fine Thread Bolt
19	3	019-6017-00	.630 ID x 1.122 OD x .142 THK Plastic Washer
20	1	034-2009-00	Deck Idler Spring
21	1	018-1050-00	1/2 x 2" Carriage Bolt
22	2	013-8050-00	1/2-13 Nylon Flange Nut-Orange
23	1	018-2004-00	1/2-13 x 2-1/2 All Thd Stud
24	1	057-5910-00	Diesel PTO Engager Holder
25	2	013-5201-00	3/8" Flange Nut
26	1	051-8076-00	3/8 hose 4" long
27	1	050-5500-00	PR Pump W/Fan Left -1100cc Diesel
28	2	031-5923-00	Pump Arm
29	1	050-5501-00	PR Pump with Fan and Cover Right - 1100cc Diesel
30	2	013-8073-00	1/4" Nylock Nut
31	2	018-5005-00	1/4" x 1 1/2" Bolt
32	4	013-6014-00	3/8" Hex Nut
33	4	019-5037-00	3/8" Lock Washer
34	4	018-6012-00	3/8" x 1 1/2" Hex Bolt
35	4	019-5029-00	3/8" Flat Washer
36	4	024-2060-00	6801-LL-8-8 Fitting - Compact Diesel
37	2	024-5002-00	90 Degree Fitting 1/2" x 3/4" 4601-8-8
38	2	024-5206-00	90 Degree Fitting 3/8" X 9/16"- 4601-6-6
39	1	014-5500-00	Fan Guard 7" Fits Compact Diesel Only
40	1	015-9998-00	Hydro Fan Diesel 28hp Only
41	1	042-5012-00	5mm x 1.25" Key
42	1	041-5048-00	Pump Belt 28Hp Diesel
43	2	013-9002-00	5/16" Flange Nut
44	2	018-8065-00	5/16" x 1" Carriage Bolt
45	1	018-7055-00	3/8-16 x 5 Hex Bolt - Grade 5
46	1	018-5311-00	5/8" x 4" Hex Bolt 61" Deck only
47	1	063-2011-00	Fuel Filter
48	2	018-5040-00	3/8" x 1 1/4" Hex Bolt
49	2	013-6014-00	3/8" Hex Nut
50	2	019-5037-00	3/8" Lock Washer
51	1	015-0007-00	Caterpillar Fuel Bowl Kit
52	1	018-5344-00	5/16" x 2 1/2" Bolt
53	1	013-8043-00	5/16" Nut
54	1	019-8051-00	5/16" Lock Washer
55	4	051-8075-00	5/16" fuel line hose
56	1	070-2000-00	Clutch Pigtail
57	6	013-5202-00	3/8" Nylock Flange Nut
58	1	039-5946-98	Pump Idler Assembly Components 3,4,5,6,7,8, only for 61" Deck

1100cc Diesel Back Pump Cover



1100cc Diesel Suspension

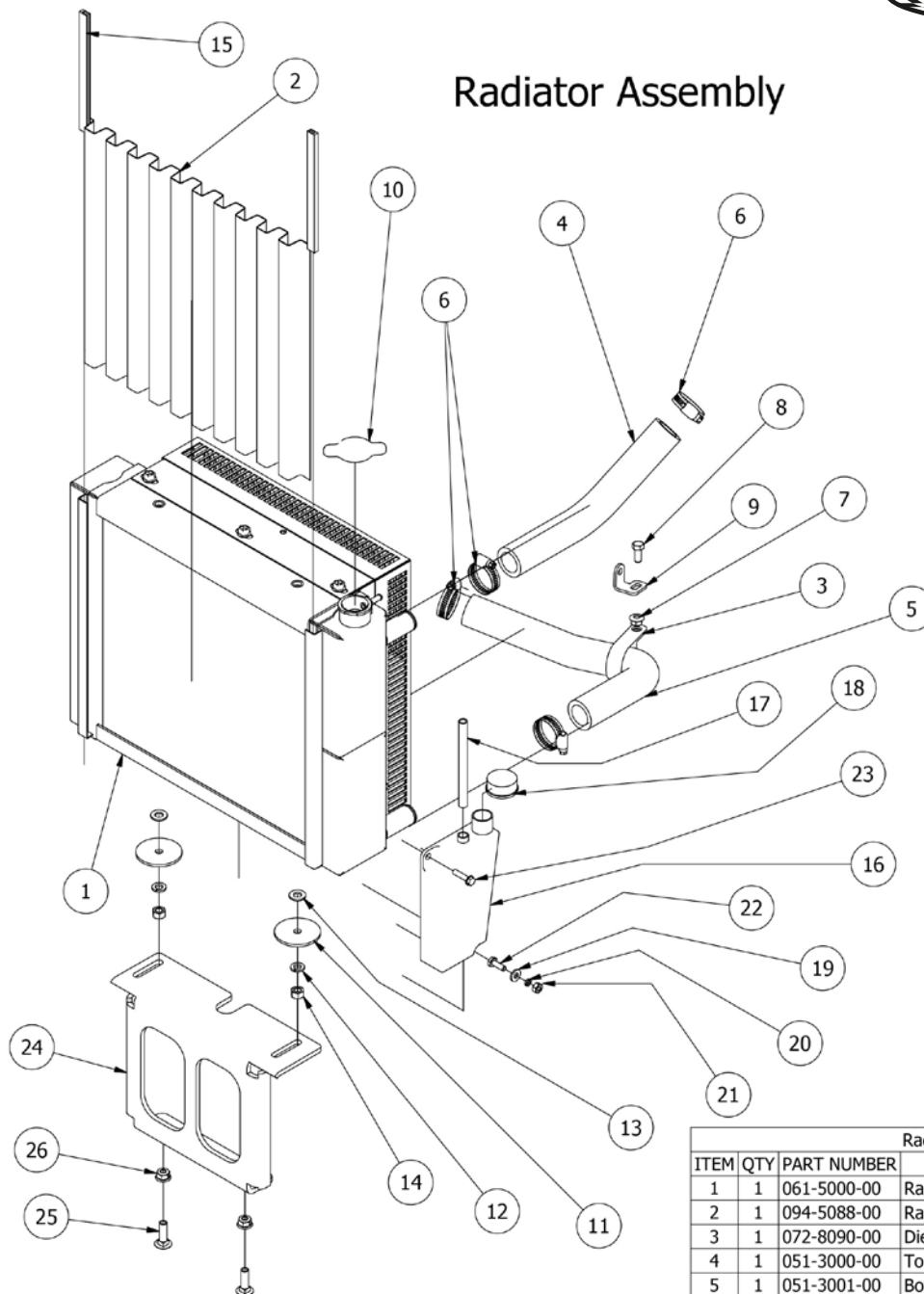


DETAIL A

Diesel Suspension & Back Pump Cover Assemblies			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	014-5920-00	Diesel Back Pump Cover 2008 Bottom
2	1	039-0070-00	Back Cover Hinge Bracket
3	1	014-5921-00	Diesel Back Pump Cover 2008 Top
4	1	059-8020-00	Diesel Hood 3 Cyl
5	2	018-8065-00	5/16" x 1" Carriage Bolt
6	5	019-6042-00	.360 ID Plastic Washer
7	7	018-8064-00	1/4" x 5/8" BS C/S 18-8 SS
8	2	018-8062-00	5/16-18x3/4 carriage bolt
9	5	013-9002-00	5/16" Flange Nut
10	9	013-8073-00	1/4 Nylock Nut
11	3	014-3010-00	5/8 Round Insert
12	2	018-2007-00	5/16" x 1" Bolt
13	2	013-8047-00	5/16-18 Nylock Insert Locknut
14	1	045-6043-00	5/16" Knob
15	1	018-4703-00	5/16" x 1 1/4" Carriage Bolt
16	4	030-7039-00	1/4" x 1 1/2" Self Tapping Screw
17	4	019-7040-00	1/4" Flat Washer
18	2	029-7038-00	8" Rubber Bumper
19	2	018-2051-00	5/8"x10" Hex Bolt (Grade8)
20	2	013-5301-00	5/8" Nylock (1/2 Jam)
21	8	019-5702-00	1/2" Washer (Grade 8)
22	8	019-5007-00	1/2" Lock Washer
23	4	018-2030-00	1/2" x 1" Hex Bolt
24	2	013-7021-00	5/8 Std NC Nylock Nut
25	1	070-8000-00	60 Suspension kit Wheel Motor
26	4	032-8999-00	Vibration Mount-Green Dot
27	2	020-7022-00	1/8x2-1/4 cotter pin Zinc
28	2	042-7041-00	Woodruff Key
29	2	013-7050-00	1" Castle Nut for Wheel Motor
30	8	013-5300-00	1/2" Flange Nut
31	8	018-6036-00	1/2" x 2 1/2" Hex Bolt
32	2	013-8047-00	5/16-18 Nylock Insert Locknut
33	1	015-4600-00	18cc Parker Wheel Motor- Right
34	4	024-2050-00	45 Degree Wheel Motor Fitting -6802-10-10
35	1	092-7000-00	XP/AOS Right Brake Caliper
36	2	092-5201-00	Brake Disk
37	2	018-6049-00	3/8" x 1" Hex Bolt
38	1	015-4601-00	18cc Parker Wheel Motor- Left
39	1	092-7001-00	XP/AOS Left Brake Caliper
40	4	051-2080-00	26" Hose Assembly with Adaptors
41	2	018-6059-00	5/8" x 2 1/2" Gr5 Hex Bolt (Coarse)
42	2	013-7021-00	5/8 Std NC Nylock Nut
43	2	033-7025-00	5 V Idler Pulley - BCVI- 81
44	2	025-7020-00	5/8" x 1" Collar W/One Set Screw
45	1	052-3000-00	Steel Pump Cover Latch
46	2	018-5200-00	10-24 X 5/8 BS C/S 18-8 SS
47	10	018-7033-00	1/2-20 x 1-1/2 Lug Bolts Zinc
48	2	022-7031-00	26 x 12.00 - 12 Tire and Orange Wheel Assembly
49	1	022-7032-00	26 x 12.00 - 12 Tire
50	1	022-7034-00	12 x 10.5 Wheel AOS Rear
51	4	018-2080-00	1/2-13 1-1/4 Hex bolt
52	4	051-6085-00	26" Hose Only
53	8	032-6033-00	Brass Bushing
54	2	013-5019-00	10-24 Nylock Locknut

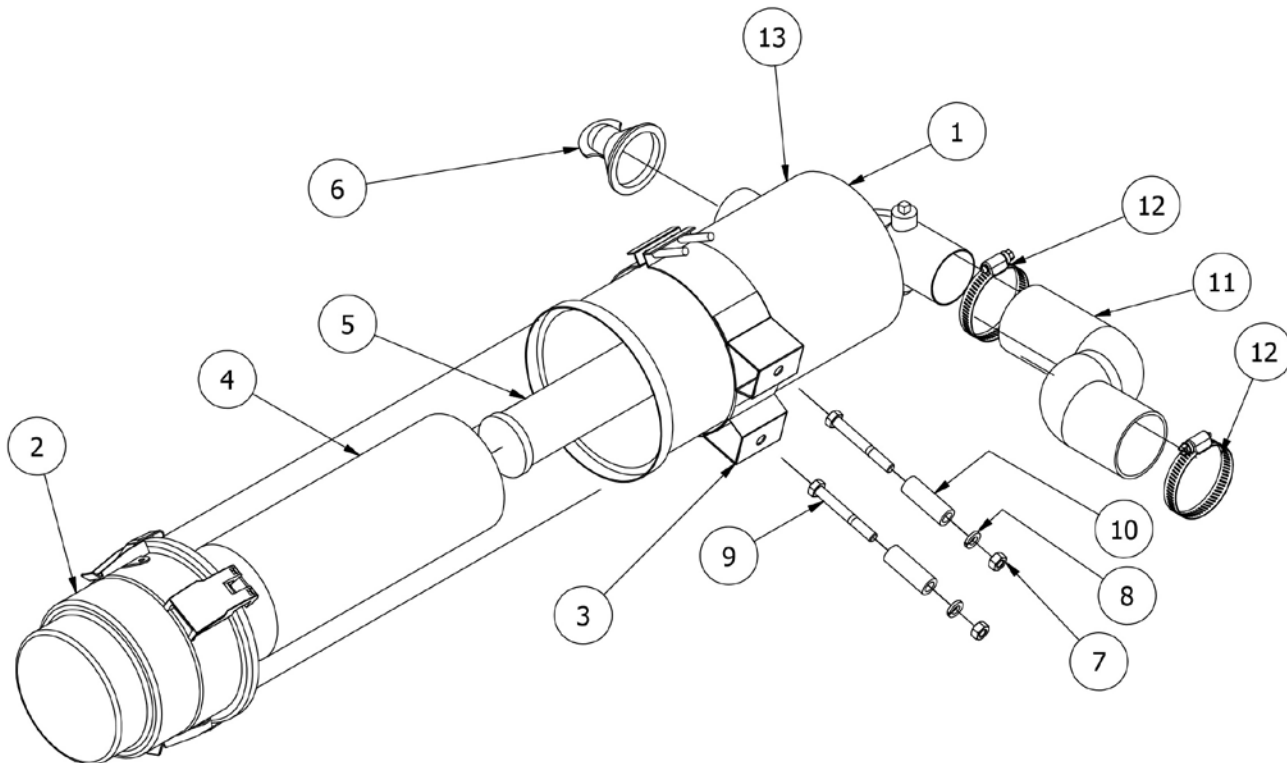


Radiator Assembly



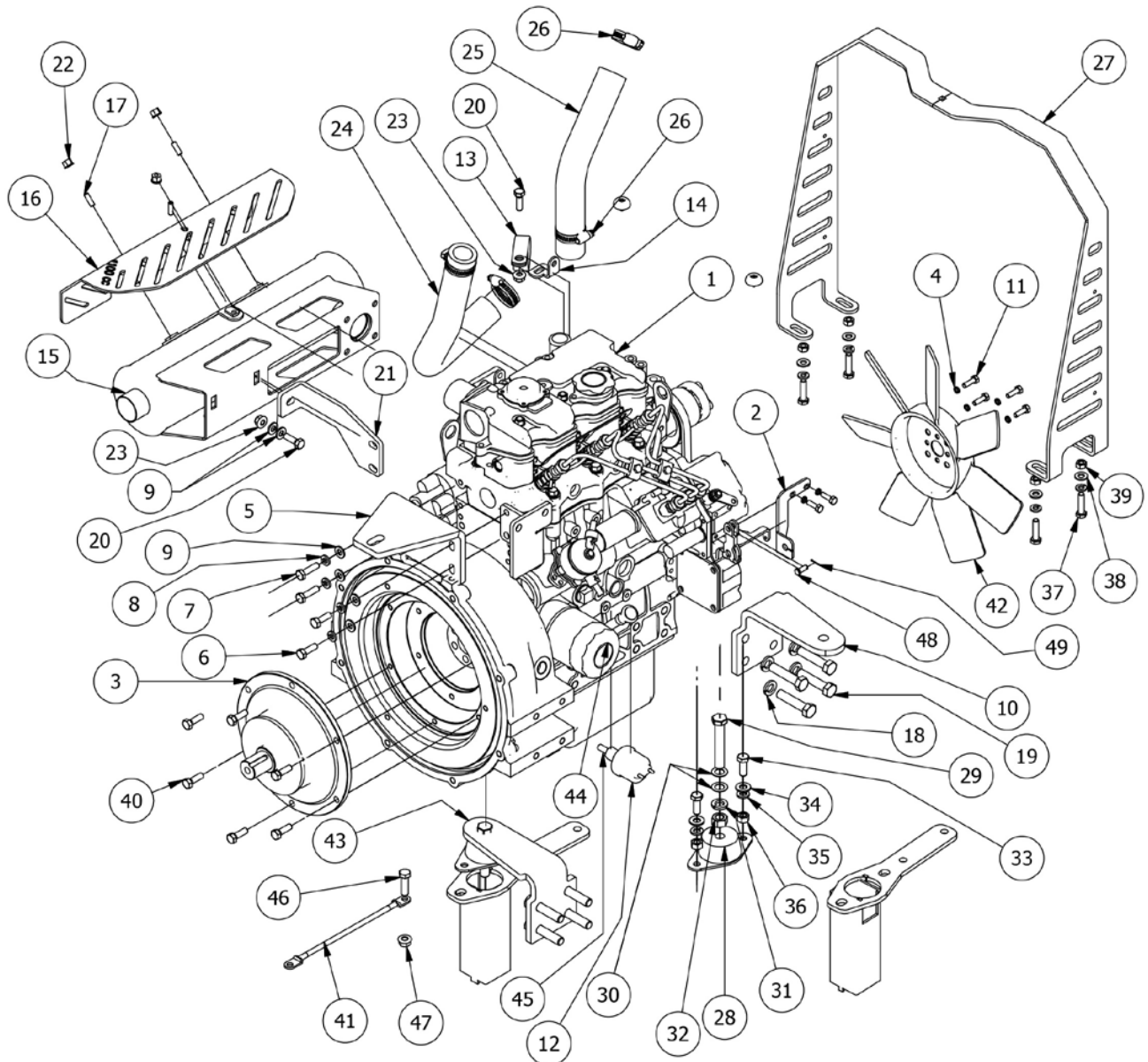
Radiator Assembly			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	061-5000-00	Radiator- Diesel
2	1	094-5088-00	Radiator Screen-Diesel
3	1	072-8090-00	Diesel Clamp 1 3/4" Vinyl
4	1	051-3000-00	Top Radiator Hose for Diesel
5	1	051-3001-00	Bottom Radiator Hose for Diesel
6	4	072-2003-00	1 1/8" Hose Clamp
7	1	013-8049-00	5/16" Nylock Flange Nut
8	1	018-6083-00	5/16" x 3/4" Hex Bolt
9	1	039-1015-00	Diesel Radiator Hose Clamp Bracket
10	1	015-0104-00	Radiator cap
11	2	019-5050-00	3/8 x 2-1/4 OD Fibre Washer
12	2	019-5037-00	3/8" Lock Washer
13	2	019-5029-00	3/8" Flat Washer
14	2	013-6014-00	3/8" Hex Nut
15	2	084-4015-00	Rubber Trim
16	1	015-0111-00	overflow Reservoir- 28/35Hp Diesel
17	1	051-8069-00	5/16 Clear Hose
18	1	066-8075-00	Reservoir Tank Cap-Overflow
19	1	019-7040-00	1/4" Flat Washer
20	1	019-4008-00	1/4" Lock Washer
21	1	013-8039-00	1/4" Hex Nut
22	1	018-8052-00	1/4" x 3/4" Hex Bolt
23	1	030-7040-00	1/4 x 1 Hex Head tek screw
24	1	201-8010-00	Compact Diesel Radiator Support (bolt on)
25	2	018-5043-00	3/8" x 1 1/4" Carriage Bolt
26	2	013-5202-00	3/8" Nylock Flange Nut

Diesel Air filter Assembly



Diesel Air Filter Assembly			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	088-1018-00	Canister for All Diesel Models
2	1	088-1017-00	Enginaire Air canister cap
3	1	088-1019-00	Mounting Bracket For Diesel Air Filter
4	1	063-2050-00	Diesel Air Filter- Outer
5	1	063-2060-00	Diesel Air Filter- Inner
6	1	088-1020-00	Debris Plug-Enginaire Filter
7	2	013-8043-00	5/16" Nut
8	2	019-8051-00	5/16" Lock Washer
9	2	018-5344-00	5/16" x 2 1/2" Bolt
10	2	025-8000-00	.378 x .625x 1.750 Spacer Zinc
11	1	051-3002-00	Air Intake Hose-Diesel Air Filter Canister
12	2	072-2002-00	2-1/2" Hose Clamp
13	1	088-1010-50	Enginaire Canister VLR-Complete Assembly

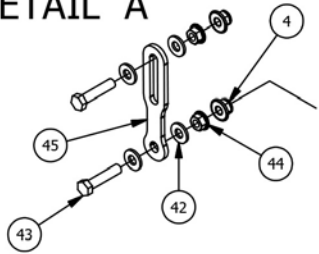
1100cc CAT Diesel Engine



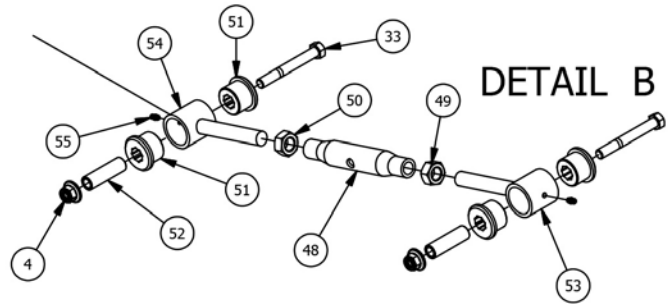
1100cc CAT Diesel Engine			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	015-0001-00	1100cc CAT Diesel Engine
2	1	039-1010-00	Diesel Throttle Bracket (4 Tier)
3	1	017-3000-00	Stub Shaft
4	6	019-4008-00	1/4" Lock Washer
5	1	201-8005-00	Air Cleaner Support Diesel
6	2	018-2001-00	M8 x 1.25 x 25mm Hex Head Bolt
7	2	018-5320-00	M8 x 1.25 x 30mm Hex Head Bolt
8	10	019-8051-00	5/16" Lock Washer
9	6	019-8044-00	5/16" Flat Washer
10	1	201-8008-00	Diesel Motor Side Support Right
11	6	018-2000-00	6mm x 20mm Bolt
12	1	086-7004-00	Pressure sender-2012 Gauge and up
13	1	072-8090-00	Diesel Clamp 1 3/4" Vinyl
14	1	039-1015-00	Diesel Radiator Hose Clamp Bracket
15	1	015-0010-00	28/35hp Caterpillar Muffler
16	1	043-1010-00	Diesel Muffler Guard (28hp)
17	3	030-8000-00	1/4" x 3/4" Set Screw
18	8	019-5007-00	1/2" Lock Washer
19	8	018-6022-00	12mm Bolt- Diesel
20	8	018-2007-00	5/16" x 1" Bolt
21	1	203-8000-00	Muffler Brace Diesel
22	3	013-2050-00	1/4-20 Nylon Insert flange Nut
23	2	013-9002-00	5/16" Flange Nut
24	1	051-3001-00	Bottom Radiator Hose for Diesel
25	1	051-3000-00	Top Radiator Hose for Diesel
26	4	072-2003-00	1 1/8" Hose Clamp
27	1	201-8001-00	Hood Holder Diesel
28	2	032-4050-00	Rubber Isolator
29	2	018-7016-00	1/2" x 3" Hex Bolt
30	4	019-5010-00	1/2" Brass Washer
31	2	019-5007-00	1/2" Lock Washer
32	2	013-7018-00	1/2" Hex Nut
33	2	018-6049-00	3/8" x 1" Hex Bolt
34	3	019-5029-00	3/8" Flat Washer
35	3	019-5037-00	3/8" Lock Washer
36	3	013-6014-00	3/8" Hex Nut
37	4	018-5025-00	5/16" x 1 1/4" Hex Bolt
38	4	019-8044-00	5/16" Flat Washer
39	4	013-8043-00	5/16" Nut
40	6	018-0016-00	5/16-18 X 1 Button Head Bolt
41	1	086-0005-00	Starer To Chassis Cable - Diesel
42	1	015-6050-00	Engine Fan - Diesel
43	1	201-8009-00	Diesel Side Motor Mount Left
44	1	063-2010-00	CAT Oil Filter
45	1	019-2050-00	Brass Washer For Weld On Hinge
46	2	018-6012-00	3/8" x 1 1/2" Hex Bolt
47	1	013-5201-00	3/8" Flange Nut
48	1	044-2006-00	1/4-5/8 Clevis Pin
49	1	020-2000-00	3/32 X 1/2 Cotter-pin

Outlaw 61" Deck

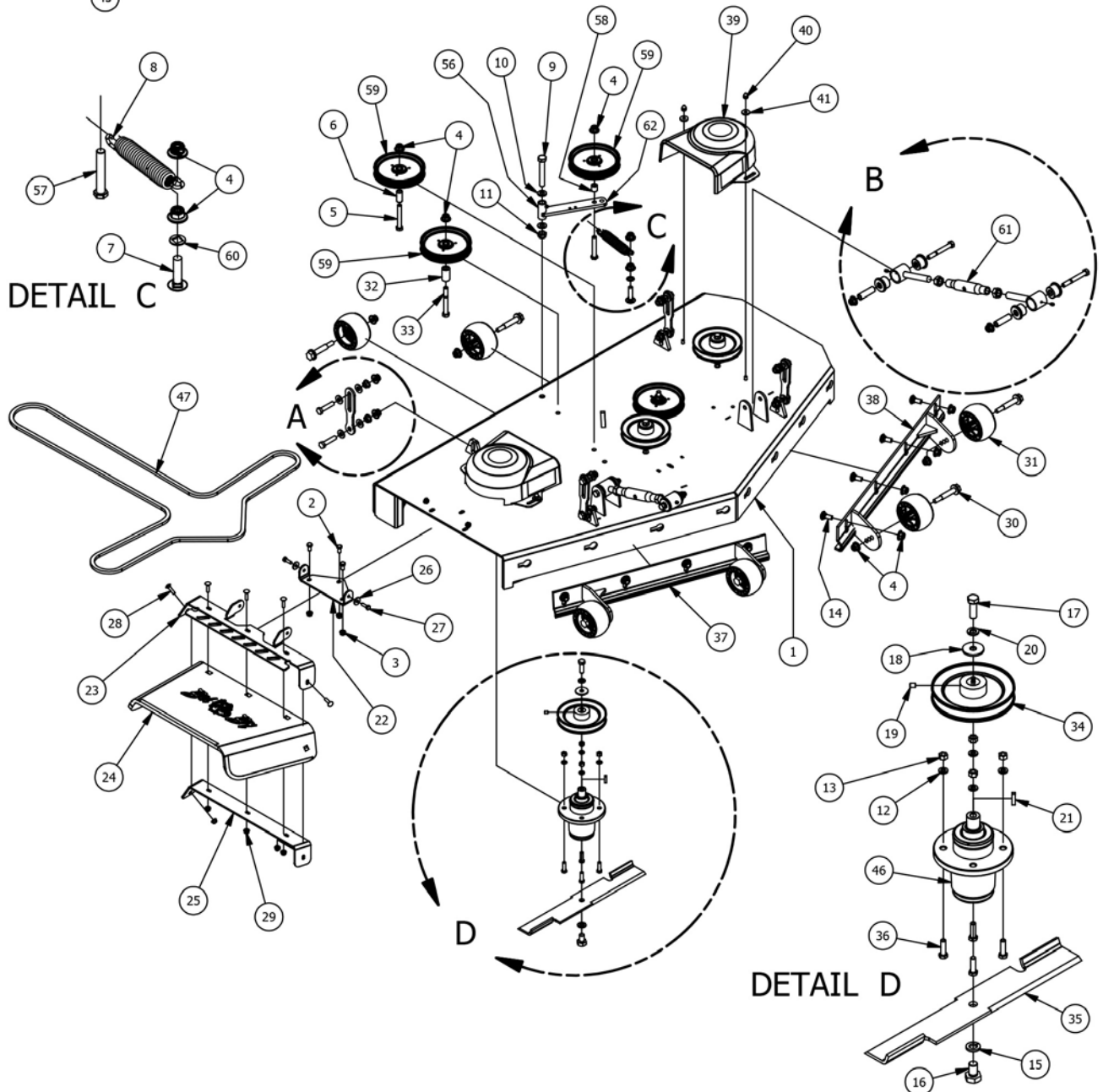
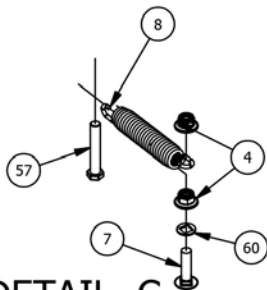
DETAIL A



DETAIL B



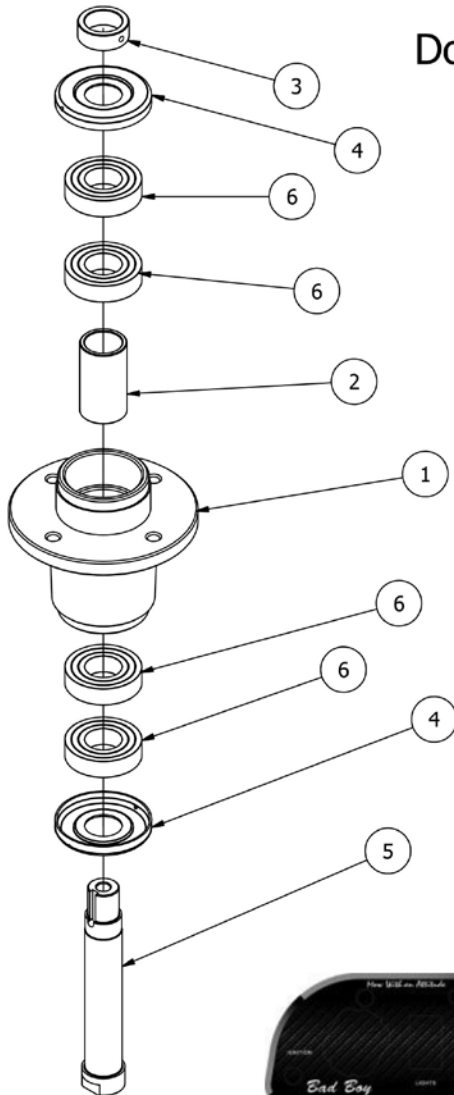
DETAIL C



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	060-6150-00	2015 61" Deck
2	3	018-5250-00	3/8" x 3/4" Hex Bolt
3	3	013-5201-00	3/8" Flange Nut
4	32	013-8050-00	1/2-13 Nylon Flange Nut-Orange
5	2	018-2018-00	1/2 x 3 1/2 Flange Bolt Grade 8
6	2	025-5338-00	.502 ID X .75 OD X 1.500 Leng
7	1	018-1050-00	1/2 x 2" Carriage Bolt
8	1	034-2020-00	2015 Deck Idler Spring Outlaws
9	1	018-5311-00	5/8" x 4" Hex Bolt
10	2	019-6017-00	.635 ID Plastic Washer
11	1	013-5301-00	5/8-11 Nylon Insert Jam Half Nut
12	12	019-5037-00	3/8 Lockwasher Zinc
13	12	013-6014-00	3/8-16 Hex Nuts Zinc
14	8	018-3003-00	1/2" x 1 1/4 Carriage Bolt
15	3	019-4807-00	5/8" Lock Washer
16	3	018-6020-00	5/8" x 1 1/2" Gr8 Hex Bolt (Fine)
17	3	018-6019-00	1/2"-20 x 1 1/2 - Grade 5 Fine Thread Bolt
18	3	019-6020-00	1/2 Belleville Washer
19	3	030-0050-00	5/16 Set Screw
20	3	019-5007-00	1/2" Lock Washer
21	3	042-6030-00	1/4" x 1" Key
22	1	206-6017-00	Discharge Chute Hanger (deck mounted)
23	1	039-4864-00	60" Discharge Chute Upper Hanger
24	1	210-6005-00	Rubber Discharge Chute
25	1	039-4863-00	60" Discharge Lower Bracket
26	2	019-6042-00	.360 ID Plastic Washer
27	2	018-2007-00	5/16" x 1" Bolt
28	5	018-4703-00	5/16" x 1 1/4" Carriage Bolt
29	7	013-8049-00	5/16" Flange Nut Zinc W/Serrations
30	6	018-0010-00	Deck Wheel Bolt
31	6	022-1000-00	Anti-Scalp Rollers
32	1	025-5339-00	1 3/4" Pulley Spacer
33	5	018-5019-00	1/2" x 4" Bolt (Grade 8)
34	3	033-6004-00	6 1/4" Drive Pulley
35	3	038-6080-00	61 inch Fusion Blade
36	12	018-5040-00	3/8" x 1 1/4" Hex Bolt
37	1	060-6220-00	61 Deck Adjustable Front (Right)
38	1	060-6210-00	61 Deck Adjustable Front (Left)
39	2	014-5000-00	Pulley Cover
40	4	013-0004-00	Acorn nut-pulley Cover
41	4	019-6050-00	.360 ID Plastic Washer-Black
42	16	019-8054-00	.505 Nylon Spacer
43	8	018-6037-00	1/2-13X 2-1/4 GR Hex Bolts
44	8	013-5300-00	1/2" Flange Nut
45	4	039-2125-00	Deck_Hanging_Tab
46	3	037-4000-50	OUTLAW SPINDLE ASSEMBLY
47	1	041-0226-00	B226 Belt for 1100cc Diesel
48	2	048-7020-00	Body
49	2	013-0008-00	3/4-10 Left-Handed Hex Nuts Zinc
50	2	013-0007-00	3/4-10 Hex Nuts Zinc
51	8	032-2000-00	Bushing
52	4	032-2001-00	Sleeve
53	2	048-7022-00	Turn Left-Handed
54	2	048-7021-00	Right-Handed End
55	5	024-6034-00	1/4" Press in Grease Fitting
56	1	039-6945-00	Deck Idler
57	1	018-7016-00	1/2-13 x GR 5 Hex Bolt Zinc
58	1	025-5203-00	3/4 OD x 1/2 ID x 3/4 Length
59	4	033-7201-00	5-3/4 Idler Pulley
60	1	019-0007-00	.517 Square Hole Round Washer
61	1	048-7000-00	Turnbuckle Assembly
62	1	039-6945-98	Deck Idler Assembly - Includes parts: 4,10,59,60,61



037-4000-50 Double Bearing Spindle



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	037-4001-00	4000 Series Spindle Housing
2	1	037-4002-00	4000 Series Spindle Spacer
3	1	037-9050-00	Locking Collar w/ 1/4"-20 Set Screw
4	2	037-8002-00	Spindle Dust Cap
5	1	037-6026-00	ZT-AOS Spindle Shaft
6	4	037-6023-00	Bearing - 6206



091-2061-00
Diesel Control Panel
Decal Left



091-3061-00
Diesel Instrument Panel
Decal Right



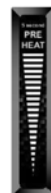
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1100cc Decal



091-5402-00
Cat Powered Decal



091-1104-00
Throttle



091-2063-00
Preheat Decal



091-1101-00
Brake Decal



091-1102-00
Speed Control
Left



091-1103-00
Speed Control
Right



091-0902-00
Logo Decal - Floorboard



091-1105-00
Outlaw Deck Height Decal



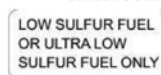
091-2001-00
Bad Boy Oval Logo Decal



091-0919-00
ArmorTek Decal



091-3300-00
Caution Decal - Front Grill



091-2050-00
Low Sulfur Decal



091-3060-00
Swing-Away Patent Decal



091-8000-00
EZ Ride Patent Decal



091-0917-00
61" Decal



091-3017-00
Pump Belt Route Decal



091-3309-00
Deck Belt Route Decal



091-3015-00
Hydraulic Tank



091-3012-00
Danger Decal - Spindle/Discharge

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