

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

For additional information, please see us at  
**[www.badboymowers.com](http://www.badboymowers.com)**

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## This manual applies to the following equipment:

### Bad Boy Diesel Series

Diesel Compact 6100 61" 1100cc 3-Cylinder Diesel

## COMMONLY USED ITEMS AND PART NUMBERS

|                           |  |                            |                           |
|---------------------------|--|----------------------------|---------------------------|
| 61"<br>Blade              | Hi-Lift Fusion<br>038-6080-00  | Gator Blade<br>038-6081-00 | Wave Blade<br>038-6091-00 |
| Deck<br>Belt              | 041-0236-00  |                            |                           |
| Pump<br>Belt              | 041-5048-00  |                            |                           |
| CATERPILLAR<br>Oil Filter | 063-2010-00  |                            |                           |
| Air<br>Filter             | Outer<br>063-2050-00   | Inner<br>063-2060-00       |                           |
| Fuel<br>Filter            | 063-2011-00  |                            |                           |
| Moto<br>Oil               | 15W-40 (Reference Owner's Manual)                                      |                            |                           |
| Hydraulic<br>Filters      | 063-8014-00  |                            |                           |
| Hydraulic<br>Oil          | 20W-50 Motor Oil (2 Qts. per side) Bad Boy Hydrostatic Oil Recommended |                            |                           |

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## 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 15W-40 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.



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## 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.

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## 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.



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## 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.





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## 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

| Maintenance  | Interval |                             |                |                              |                 |                 | Section                   |
|--|----------|-----------------------------|----------------|------------------------------|-----------------|-----------------|---------------------------|
|  | Daily    | Every 50 hours or annually* | First 75 hours | Every 100 hours or annually* | Every 250 hours | Every 500 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                 |
| Check cooling system coolant   | •        |                             |                |                              |                 |                 | Section 3                 |
| Engine air cleaner inspection  | •        |                             |                |                              |                 |                 | Section 3                 |
| Fuel system primary filter/water separator inspection                        | •        |                             |                |                              |                 |                 | Section 3                 |
| Initial change of hydraulic oil and filter                                   |          | •                           |                |                              |                 |                 | Section 1                 |
| Grease mower   |          |                             | •              |                              |                 |                 | Section 5                 |
| Tighten nuts and screws  |          |                             | •              |                              |                 |                 | Section 5                 |
| Fuel tank water and sediment drain   |          |                             |                | •                            |                 |                 |                           |
| Cooling system coolant sample <small>Dealer</small>                          |          |                             |                |                              | •               |                 |                           |
| Engine oil sample <small>** Dealer</small>                                   |          |                             |                |                              | •               |                 |                           |
| Replace air element and pre-cleaner◇   |          |                             |                |                              | •               |                 | Section 3                 |
| Change hydraulic oil and filter  |          |                             |                |                              | •               |                 | Section 1                 |
| Engine oil and filter change   |          |                             |                |                              | •               |                 | Section 3                 |
| Replace fuel filter◇   |          |                             |                |                              | •               |                 | Section 3                 |
| Cooling system supplemental coolant additive- test/add <small>Dealer</small> |          |                             |                |                              |                 | •               |                           |
| Radiator - clean   |          |                             |                |                              |                 | •               | Section 3                 |

\*Maintenance by hour or annually, whichever comes first

\*\*Maintenance by hour or every six months, whichever comes first

◇ Check air and fuel filter more often in dusty conditions

Dealer Get maintenance performed at a registered dealership+A1



## Maintenance Log

|              |               |                   |
|--------------|---------------|-------------------|
| <i>Date:</i> | <i>Hours:</i> | <i>Performed:</i> |
| <i>Date:</i> | <i>Hours:</i> | <i>Performed</i>  |
| <i>Date:</i> | <i>Hours:</i> | <i>Performed:</i> |
| <i>Date:</i> | <i>Hours:</i> | <i>Performed</i>  |
| <i>Date:</i> | <i>Hours:</i> | <i>Performed</i>  |
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| <i>Date:</i> | <i>Hours:</i> | <i>Performed:</i> |

## **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.



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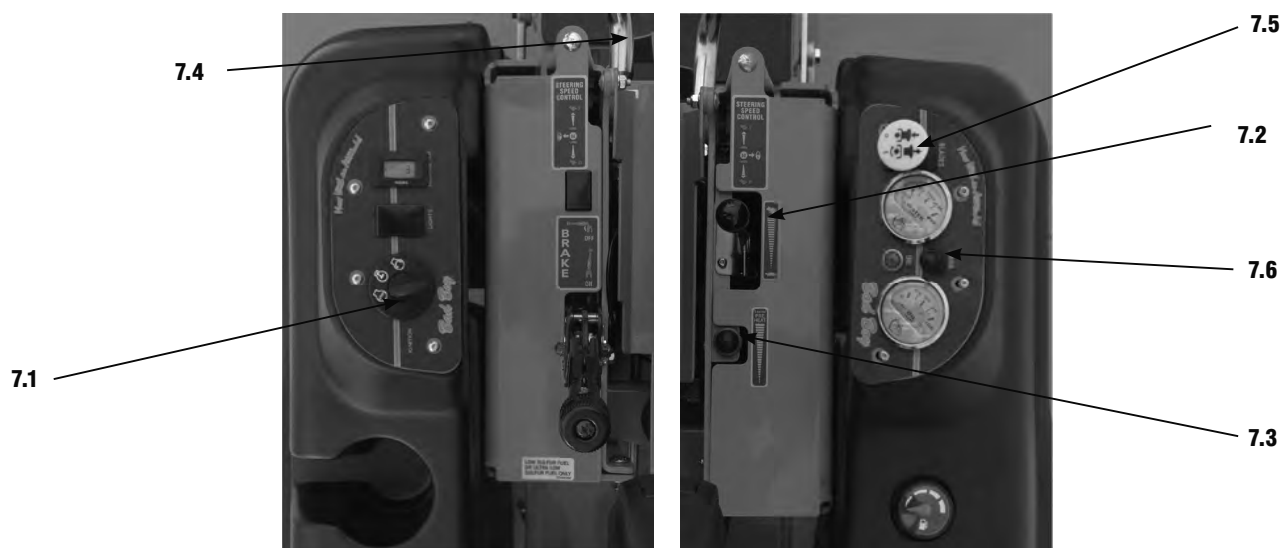
## SECTION 6: TROUBLESHOOTING

- 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 1/4" deck weighs approximately 250 pounds which is only 25% of working capability.

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## 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.





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## 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.

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## 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.

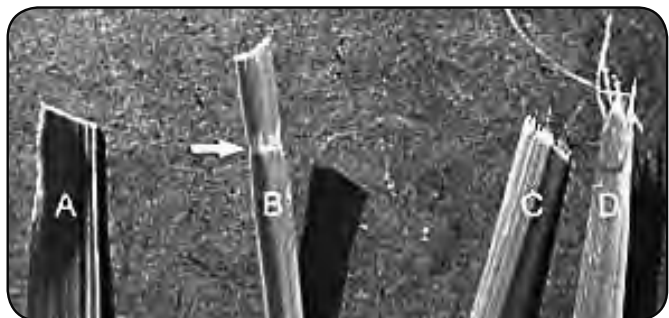
It is true there are many other styles of blades available. But since we don’t manufacture or recommend using these other aftermarket styles, we will leave them out of this discussion. Should you want more information on special application or aftermarket blades, you should contact the companies that 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.

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## 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.

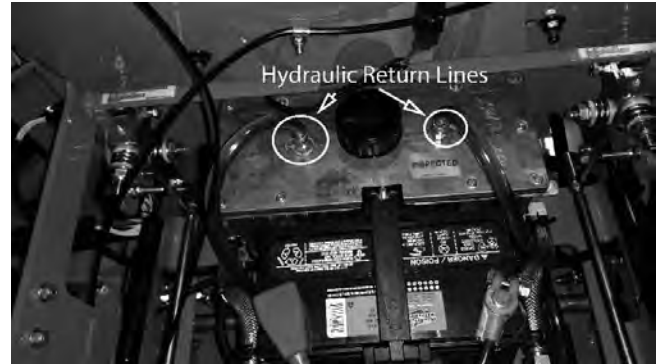
If you have a compost pile, then you may want to bag your clippings occasionally to add much needed green-matter to the compost pile. Make sure it is mixed thoroughly with brown matter to avoid a strong ammonia odor. **DO NOT COMPOST CLIPPINGS** after applying any weed control or weed-feed type product. Before adding clippings to the compost pile wait at least 3 mowings after these products have been applied.



# SERVICE SECTION

## SECTION 1: HYDROSTATIC SYSTEM

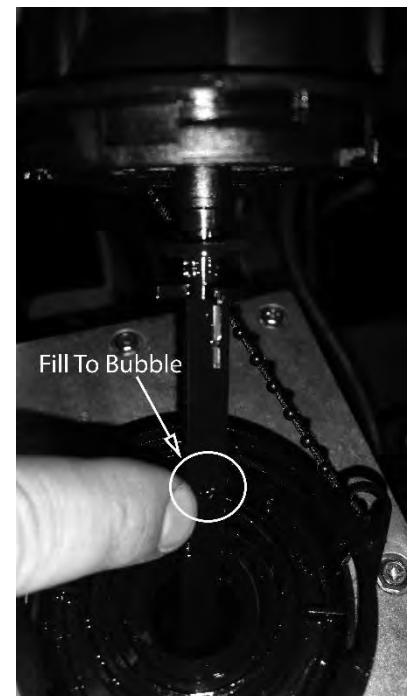
The hydraulic reservoir tank on the Diesel 1500cc model is located under the seat. There is a dipstick that indicates the current hydraulic oil level. Use only 20W-50 motor oil in this tank. Conventional or synthetic oil may be used. Bad Boy Hydrostatic Oil is recommend. Bad Boy recommends that the hydraulic oil and filters be changed within the first 50 hours of use; then at intervals of 250 usage hours. Use only Bad Boy replacement filters. Use of any other filters may result in damage to the hydraulic system and void the warranty. Each side requires approximately two quarts of oil to refill the system.



THE FOLLOWING MAINTENACE IS TO BE PERFORMED ON A LEVEL SURFACE.

Changing your hydraulic oil and filters

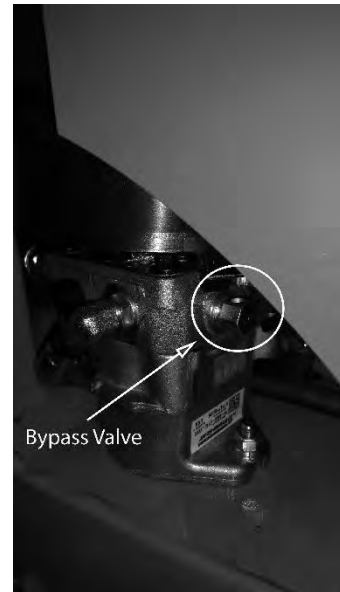
- 1) Place an oil drain pan under the engine plate and place the hydraulic return lines that goes into the hydraulic reservoir tank into the oil pan. Remove the caps from the hydraulic reservoir tank.
- 2) Start the engine in order to cycle out the old hydraulic oil.
- 3) When you see air bubbles in the hydraulic lines immediately shut off the mower. Keep in mind that only 75-80% of the hydraulic oil can be changed at a time.
- 4) Place rags under the hydraulic filters. Turn the hydraulic filters counter clockwise to remove.
- 5) Fill the new hydraulic oil filters with 20W-50 motor oil. Only use Bad Boy replacement filters.
- 6) Place the hydraulic return lines back onto the hydraulic reservoir tank. Fill the hydraulic reservoir tank until the oil level reaches the bubble on the dipstick. Be careful not to overfill the hydraulic reservoir tank.
- 7) Proceed to the purge procedure below.



## Purging Procedure

Due to the effects air has on the efficiency in hydrostatic drive applications, it is critical that the air is purged from the system. These purge procedures should be implemented any time a hydrostatic system has been opened to facilitate maintenance or any additional oil has been added to the system.

- 1) Lift the rear tires of the mower off of the ground and chock your front tires so they do not move.
- 2) With the bypass valve open and the engine running, slowly move the directional drive arms in the forward and reverse directions (5 to 6 times), as air is purged from the unit, the oil level will drop.
- 3) With the bypass valve closed and the engine running, slowly move the directional drive arms in the forward and reverse directions (5 to 6 times). Check the oil level, and add oil as required after stopping the engine.
- 4) It may be necessary to repeat steps 2 and 3 until all the air is completely purged from the system. When the transaxle moves forward and reverse at normal speed purging is complete.



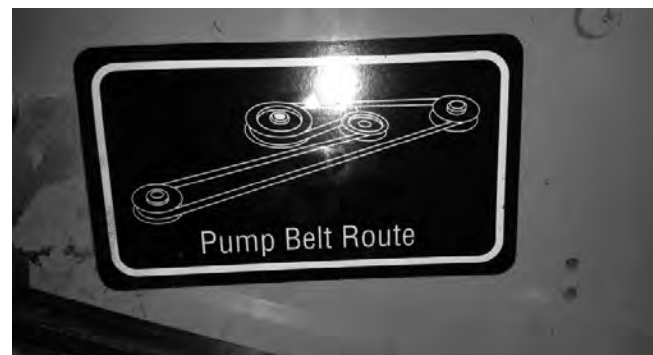
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## SECTION 2: DRIVE BELT

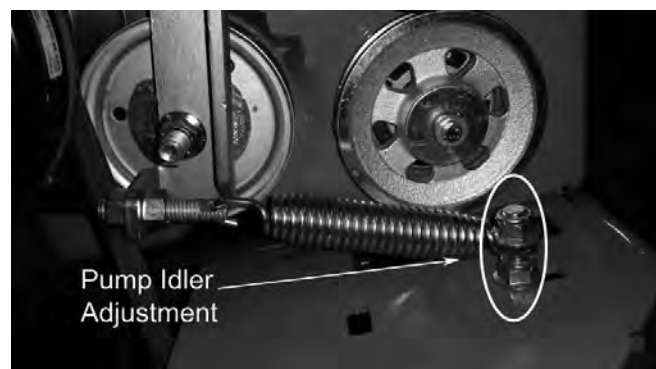
Shown on the right is the tensioner for your pump belt. Adjusting this will either increase or decrease tension on the belt. Use a  $\frac{3}{4}$ " wrench to loosen the jam nuts and either tighten for more belt tension or loosen for less belt tension.



The belt tension should be set to 70-75 lbs.

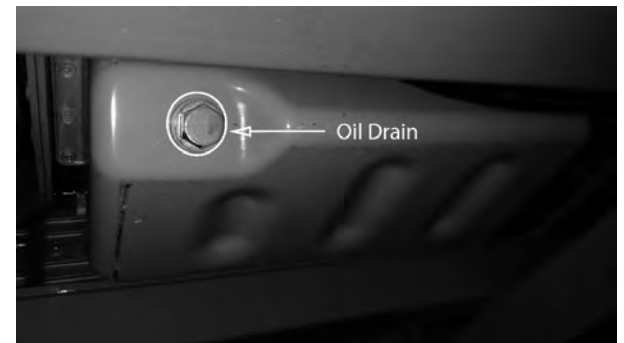
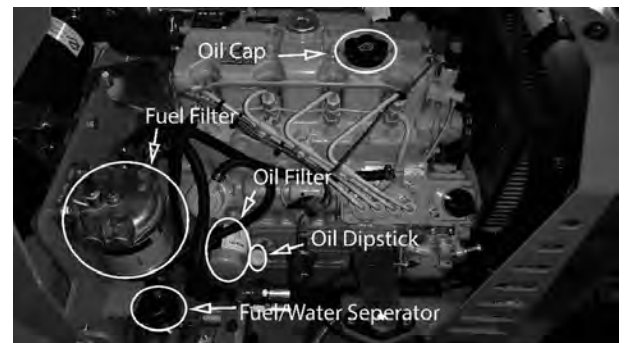
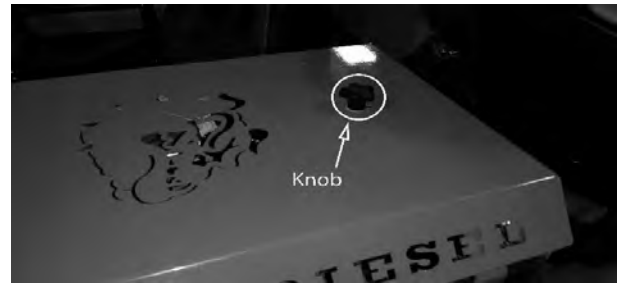


Use a belt tension gauge to ensure the proper tension. Your dealer or service center will have a belt tension gauge or you can buy one (Part Number 041-9999-00).



## SECTION 3: ENGINE

On the right is an overview of the CAT 1100cc Diesel Engine. To access the engine remove the knob on top of the engine cover plate. The oil drain plug is located on the bottom of the engine. Bad Boy recommends that the oil and filter be changed at intervals of 250 usage hours or yearly, whichever occurs first. The oil capacity is approximately 4.64 quarts. Cat Diesel Engine Oil 15W-40 is recommended for maximum protection.

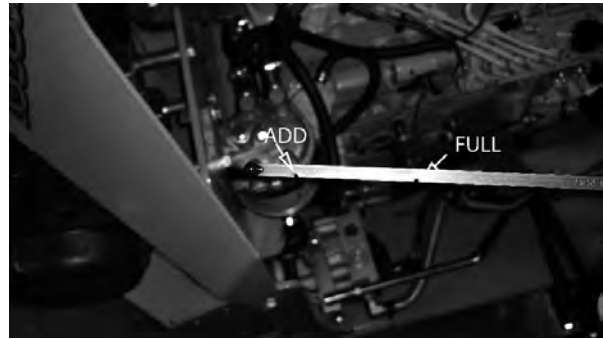


### 3.1 Changing your engine oil and oil filter

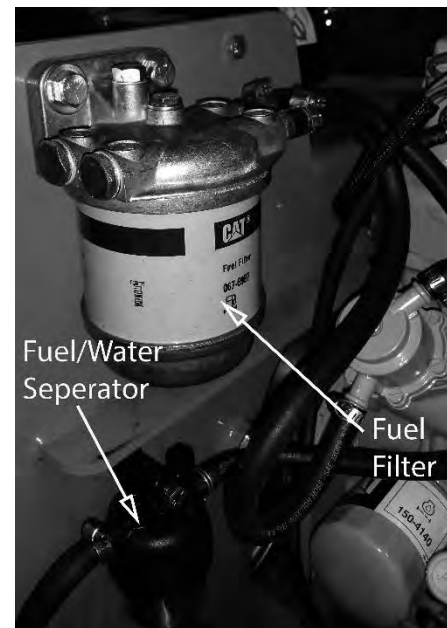
- 1) After the engine has been run at the normal operating temperature, stop the engine.
- 2) Remove the oil drain plug located underneath the engine. Allow the oil to drain into a drain pan. After the oil has drained, the oil drain plug should be cleaned and installed.
- 3) Remove the oil filter with a chain wrench.
- 4) Check the oil filter for any metal debris that may indicate engine wear.
- 5) Clean the sealing surface of the cylinder block.
- 6) Apply clean engine oil to the new oil filter seals.
- 7) Install the oil filter. Tighten the oil filter until the oil filter seal contacts the cylinder block. Do not overtighten the oil filter.
- 8) Remove the oil filler cap. Fill the crankcase with approximately 5.91 quarts of oil. When refilling be careful not to overfill the crankcase.
- 9) Start the engine and run the engine at "LOW IDLE" for two minutes. Perform this procedure in order to ensure that the lubrication system has oil and that the oil filters are filled. Inspect the oil filter for leaks.



- 10) Stop the engine and allow the oil to drain back to the sump for a minimum of ten minutes.
- 11) Remove the oil level gauge in order to check the oil level. Maintain the oil level between the “ADD” and “FULL” marks on the oil level gauge.

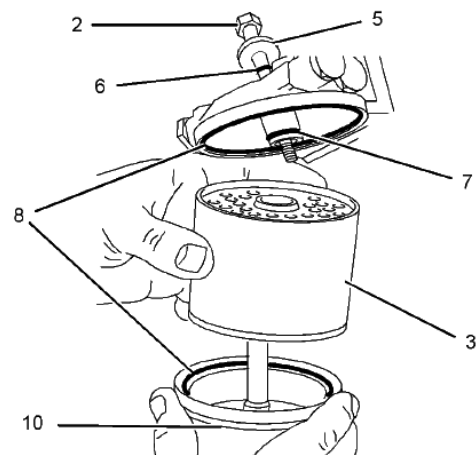


When servicing the fuel system on the CAT Diesel, it is necessary to purge the air from the system by loosening the 9/16” bolt on top of the fuel filter and pumping the fuel bulb (located underneath the radiator) until air bubbles are no longer visible.



### 3.2 Changing your fuel filter

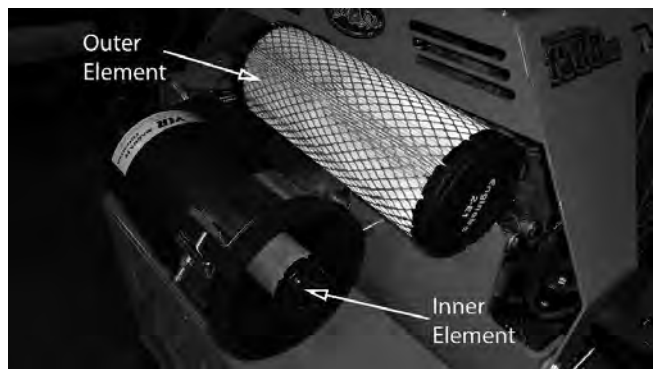
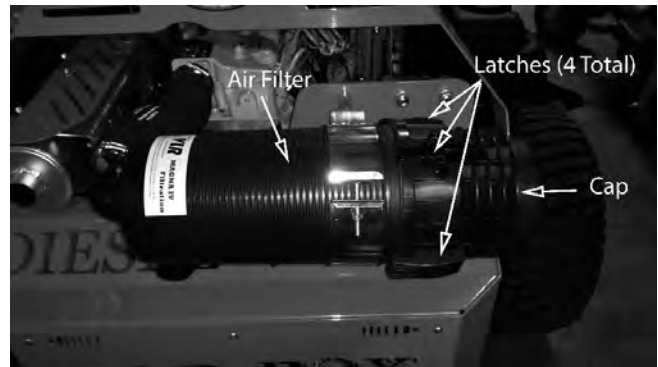
- 1) Your CAT 1100cc Diesel has two fuel system filters. The first is a filter/water separator.
- 2) Open the drain on the bottom of the filter/water separator. Catch the draining fluid in a suitable container. Dispose of the drained fluid correctly.
- 3) Close drain.
- 4) The second fuel filter is a canister located above the fuel/water separator.
- 5) Close the fuel supply valve.
- 6) Clean the outside of the fuel filter assembly.
- 7) Remove the setscrew.
- 8) Remove the canister. Ensure that any fluid is drained into a suitable container.
- 9) Assemble the following items: seals (8), seal (7), canister (3), and bowl (10). Place washer (5) and seal (6) on setscrew (2).
- 10) Fasten the assembly to the fuel filter base with setscrew (2).
- 11) The fuel system will need to be primed after the new filter is installed. Refer to the Priming section. Make this! What priming do ours have?



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.

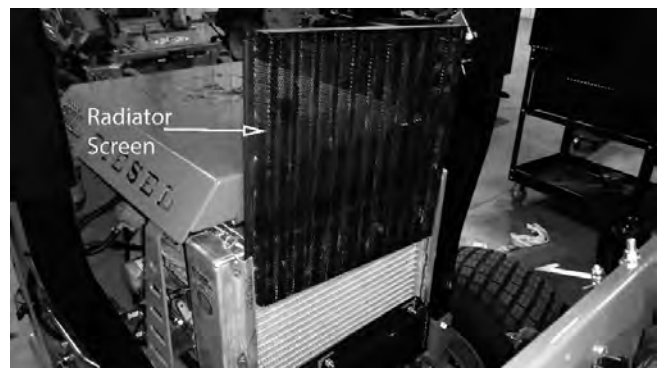
### 3.3 Changing the air cleaner

- 1) The air filter is located on the back of the mower. Unlatch the four latches that hold the cap onto the filter housing.
- 2) Remove the outer air element and inspect it. If it is dirty it might be necessary to use low air pressure to clean it out (30psi or less). Higher air pressure can damage the pleats.
- 3) Clean or replace both the inner and outer air elements.
- 4) Reattach the cap onto the filter housing.



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.





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## SECTION 4: ELECTRICAL SYSTEM

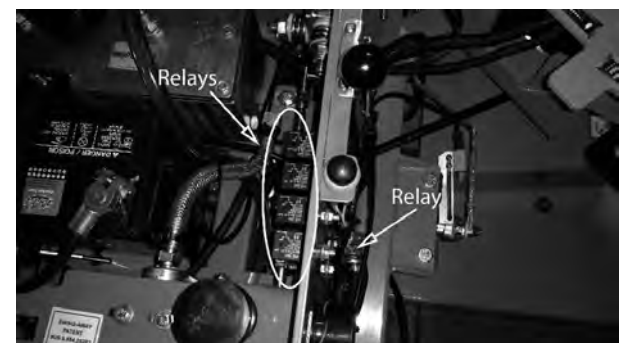
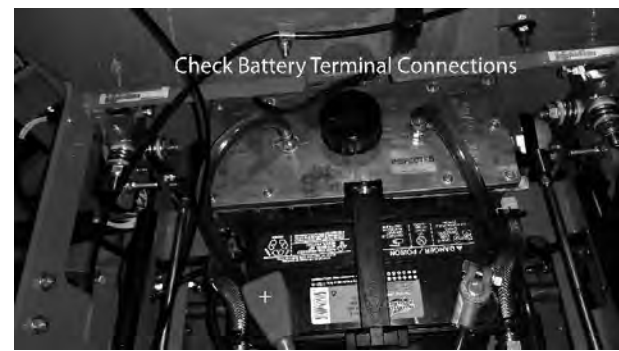
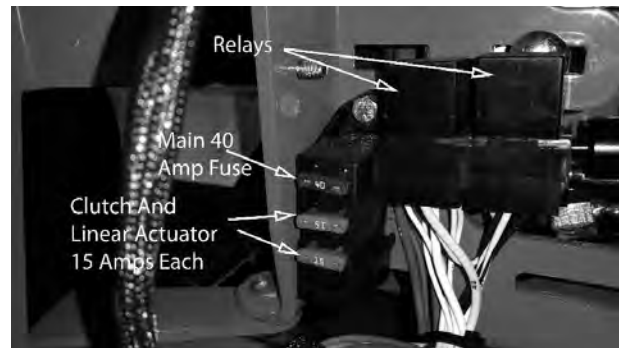
The fuses on the 1100cc Diesel are located behind the left swing away tank. The top 40 amp fuse is the main fuse and the two 15 amp fuses are for the linear actuator and for the clutch.

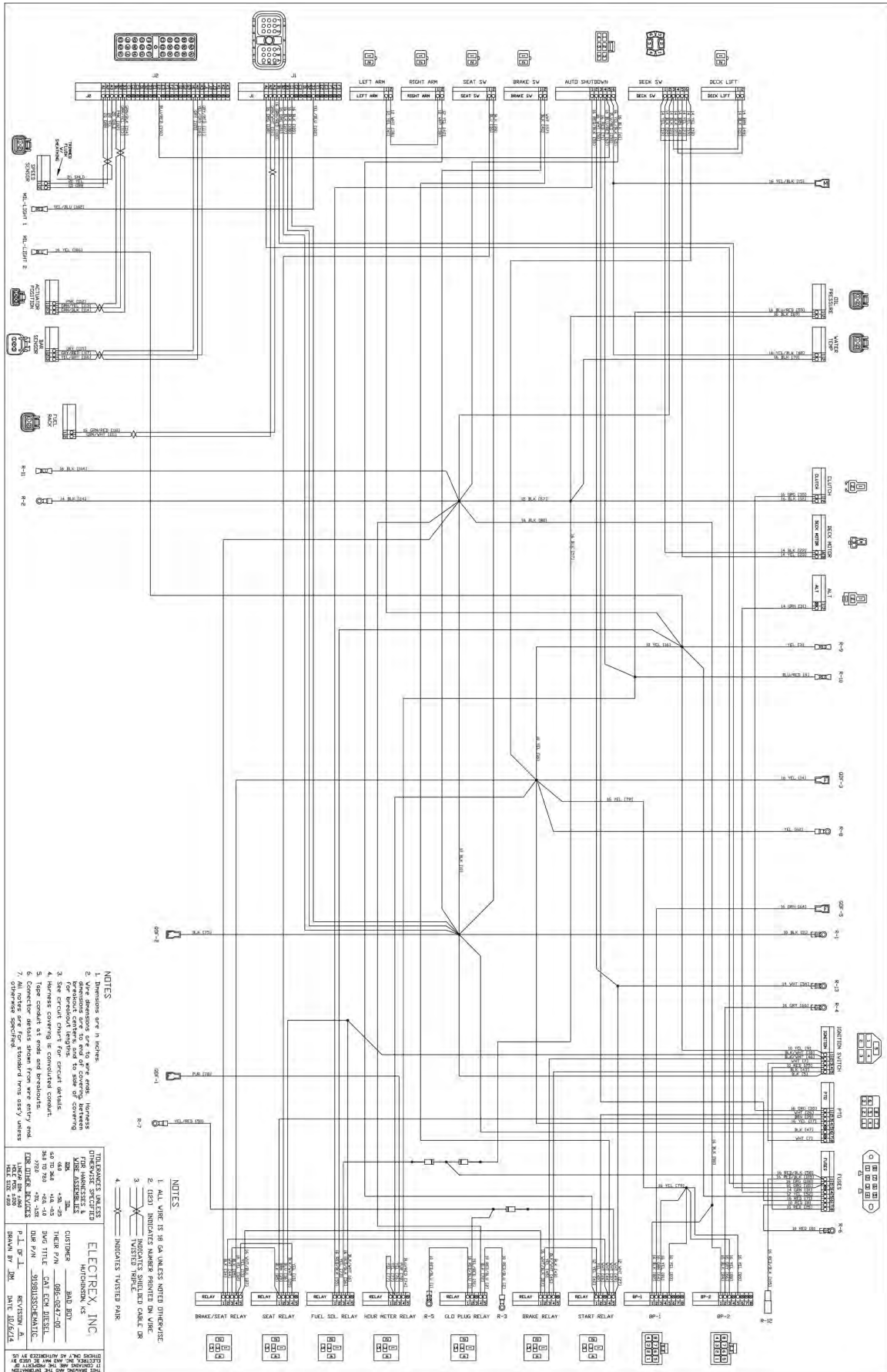
Always check the condition of the wiring harness ground cable. Ensure that the ground is connected, clean, and tight. On most models, the ground wire is connected to the negative side of the battery.

Check the condition and connection of the relays. Two relays are located behind the left swing away tank and the other 5 are located behind the right swing away tank. 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.

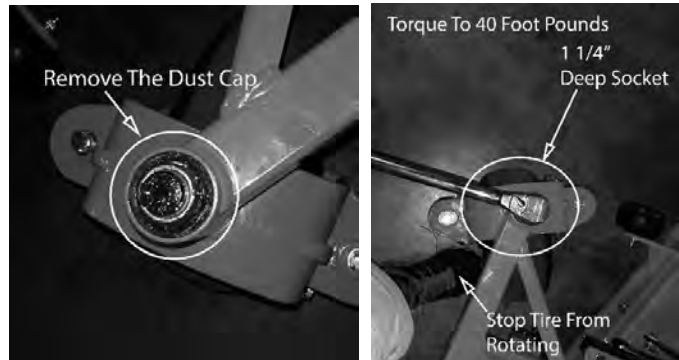
The linear actuator is the mechanism that raises and lowers the deck. If it ever starts to make noise when raising and lowering the deck you might find it necessary to tighten the nuts and bolts on the front and rear of the actuator. Be careful not to overtighten these as you can damage the actuator. Also if your actuator ever stops working make sure to check the main fuse or the linear actuator fuse





## SECTION 5: FRAME

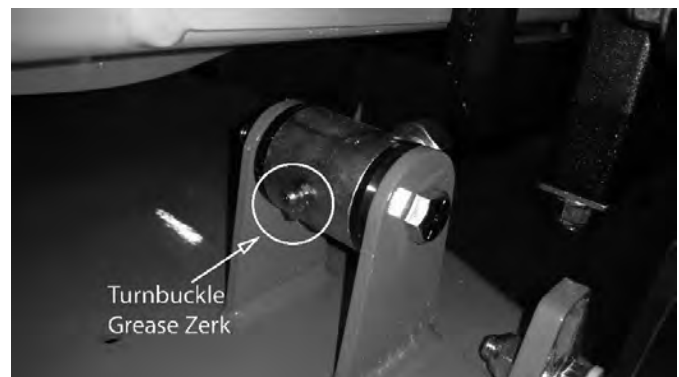
The front fork nuts require a torque of 40ft-lbs. First remove the dust cap. While applying this torque, turn the fork itself to ensure no damage is done to the bearing. This operation is only necessary if a repair requires it.



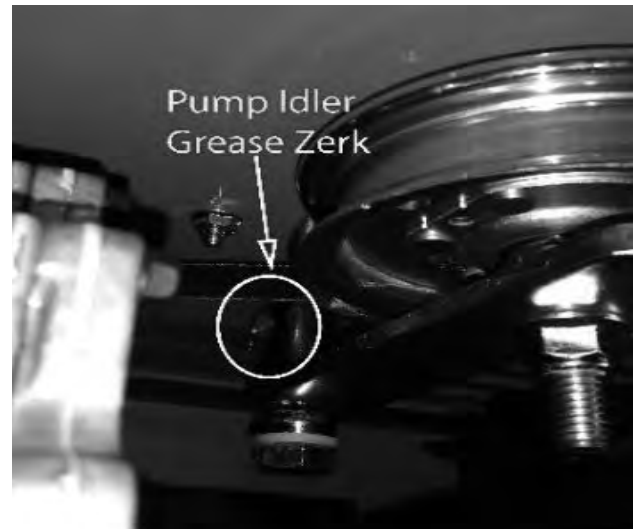
Torque rear wheel lugs to 65-75 ft. lbs. Re-torque at every oil change and check at every mowing.



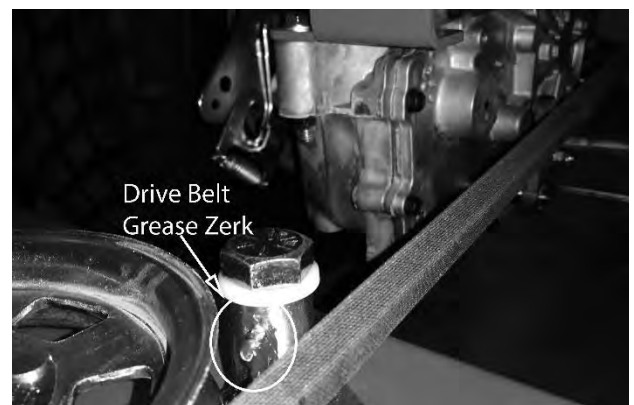
There are two grease zerks located on each of the two turnbuckles (4 Total). Grease at every oil change.



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



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.



If the T-Handle stops working open the swing away tank and check to see if the collar is still in the bracket. If not place the collar back into the T-Handle.



## SECTION 6: CUTTING DECK

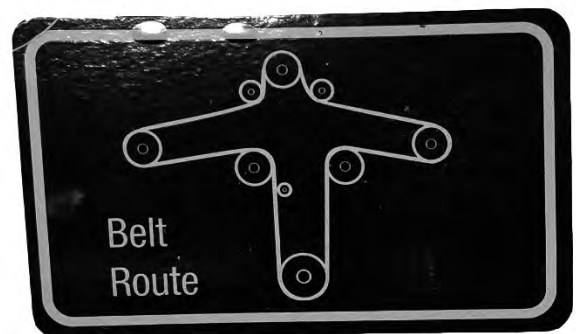
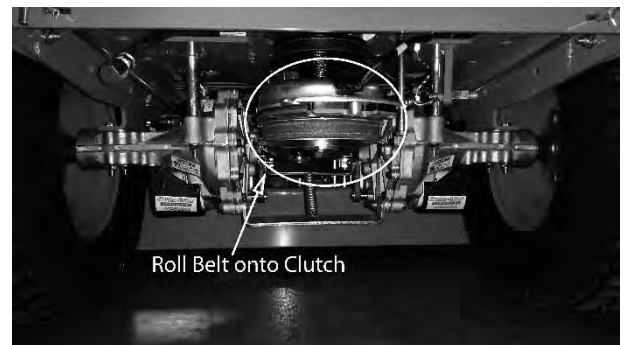
### Deck belt removal

- 1) Remove ignition key.
- 2) Raise the deck to its highest position.
- 3) Remove the right pulley 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.



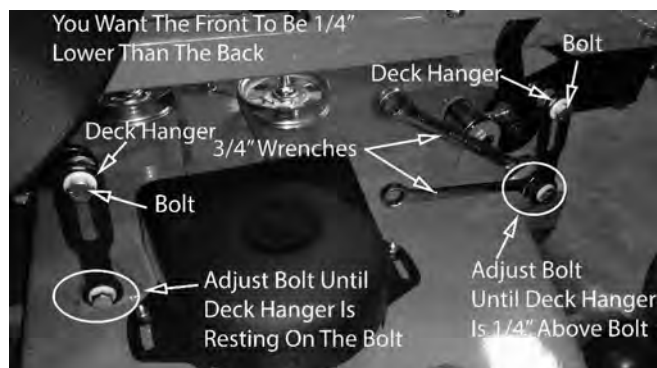
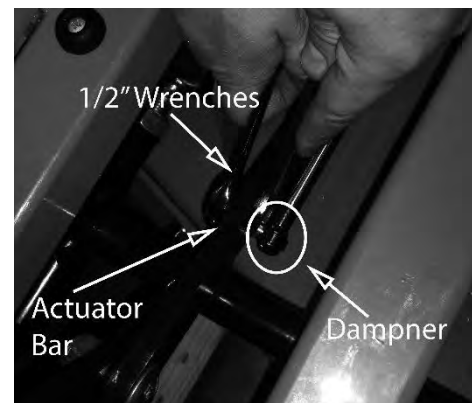
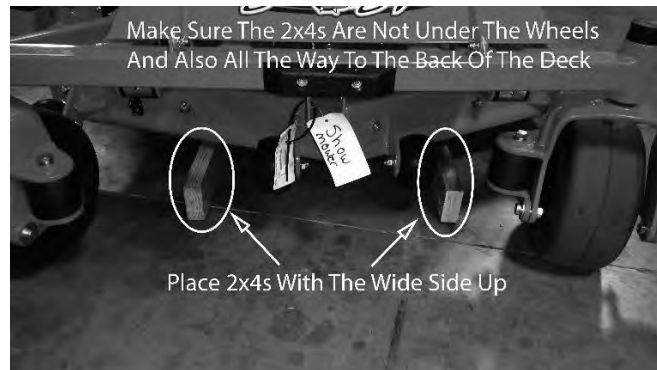
### Deck belt installation:

- 1) Follow steps 1 and 2 from the deck removal section.
- 2) Take off both pulley covers and route the belt by following the belt route sticker. The easiest way to finish running the belt is routing the belt through the deck pulleys and carefully slipping the belt onto the clutch in the rear of the engine.
- 3) Verify that the belt is routed properly as improper routing can damage the spindles as well as the engine.



## Leveling the Deck

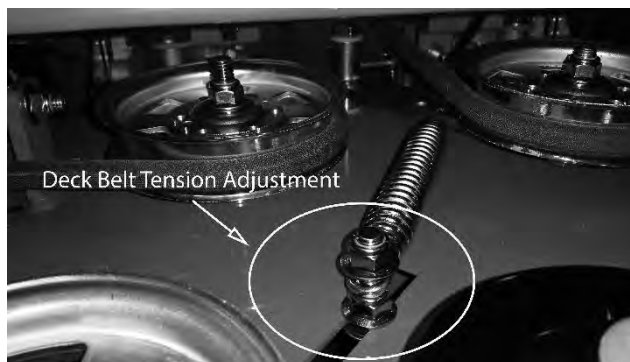
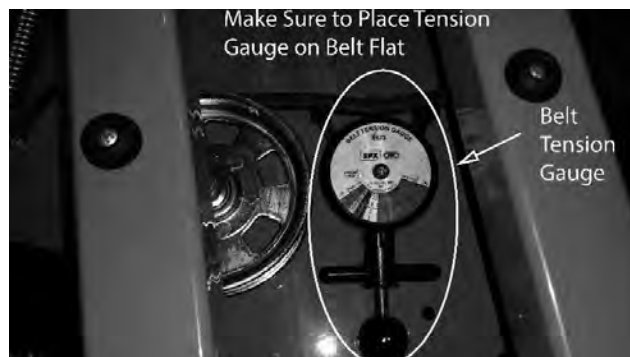
- 1) Start on a flat level surface and set the air pressure in all four tires to 12 psi.
- 2) Get two 2x4s and make sure that the wider sides are similar length.
- 3) Take off the foot pedal and raise the floor plate.
- 4) Lower the deck onto the 2x4s and pin the deck into its top available height. Remove the dampener that attaches to the actuator bar using two  $\frac{1}{2}$ " wrenches.
- 5) Now ensure that the deck is level left to right and has a pitch down of  $\frac{1}{4}$ " from the back to the front. This can be done by adjusting the tabs on the deck.
- 6) Loosen the bolts on the back of the deck using two  $\frac{3}{4}$ " wrenches until the deck hanger is resting against the bolt.
- 7) Adjust the front deck hanger until there is  $\frac{1}{4}$ " gap between the deck hanger and the bolt that it rests on.
- 8) Reattach the dampener to the actuator bar.
- 9) Place the floorplate down and place the foot pedal back on and you should be ready to mow.



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.

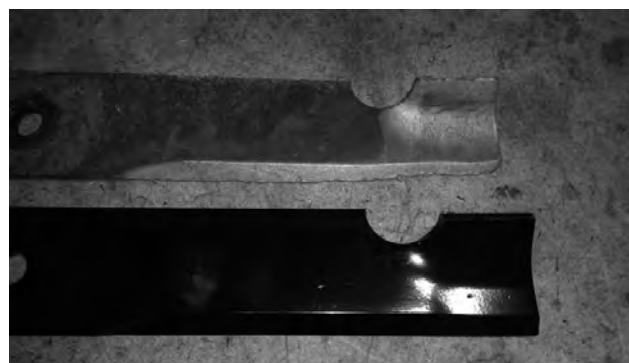
Spring tension adjustments can be made by sliding the bolt shown above forward or backward in the slot of the deck. Belt tension should be 50-55 lbs. with the deck at its lowest setting.

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 (Part Number 041-9999-00).



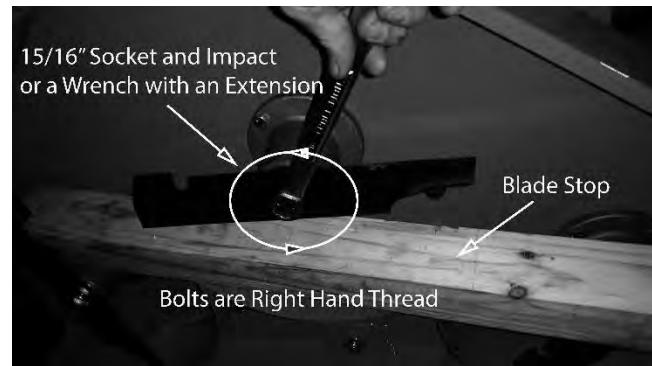
#### Blade Sharpening:

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.**

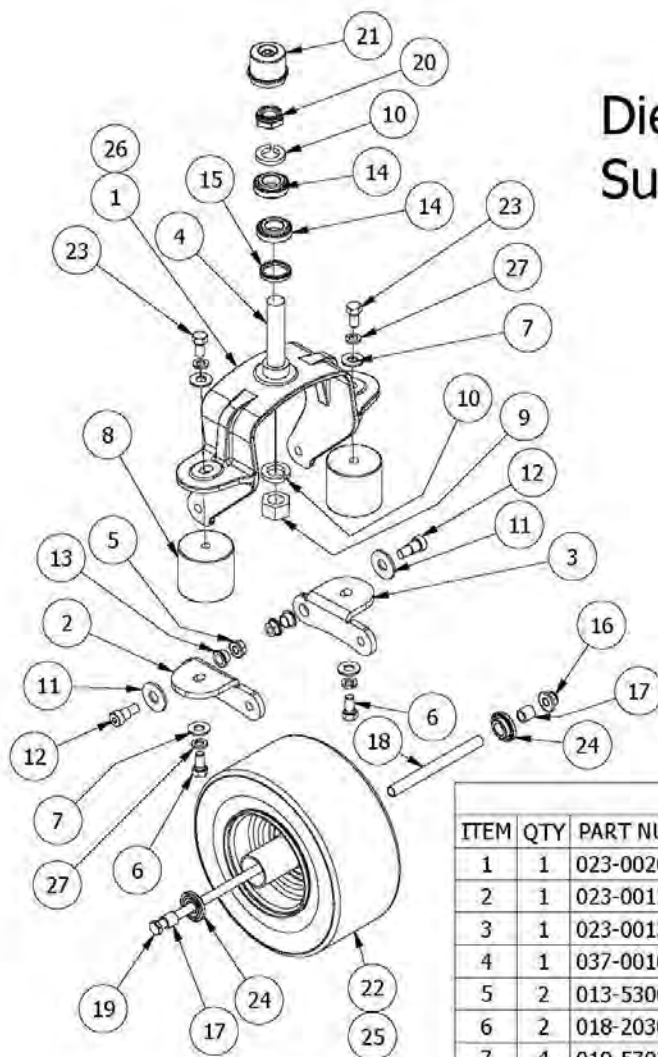


Re-torque the blade bolts to 90-110 lbs.



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.

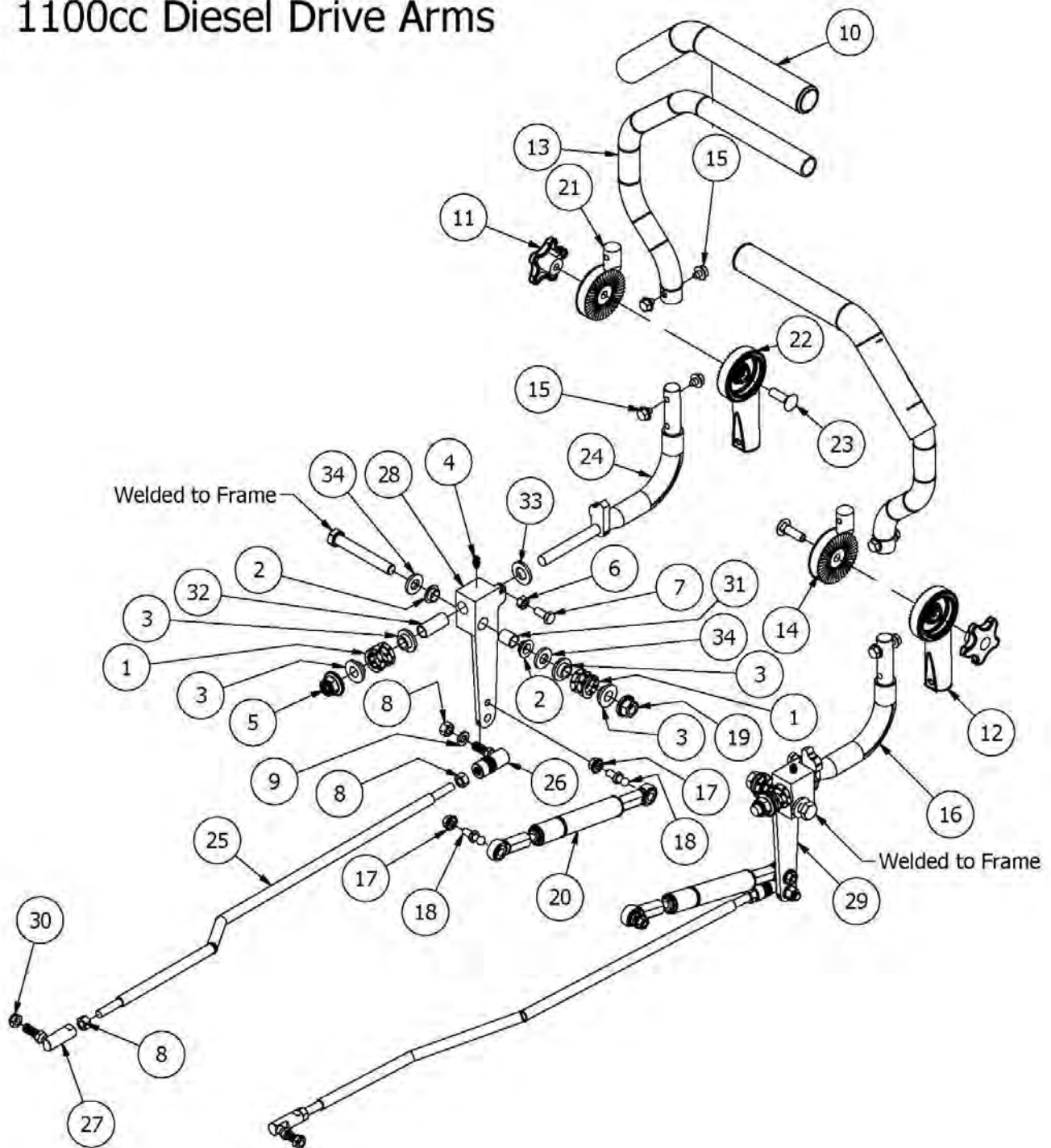




## Diesel CAT Suspension Fork Assembly

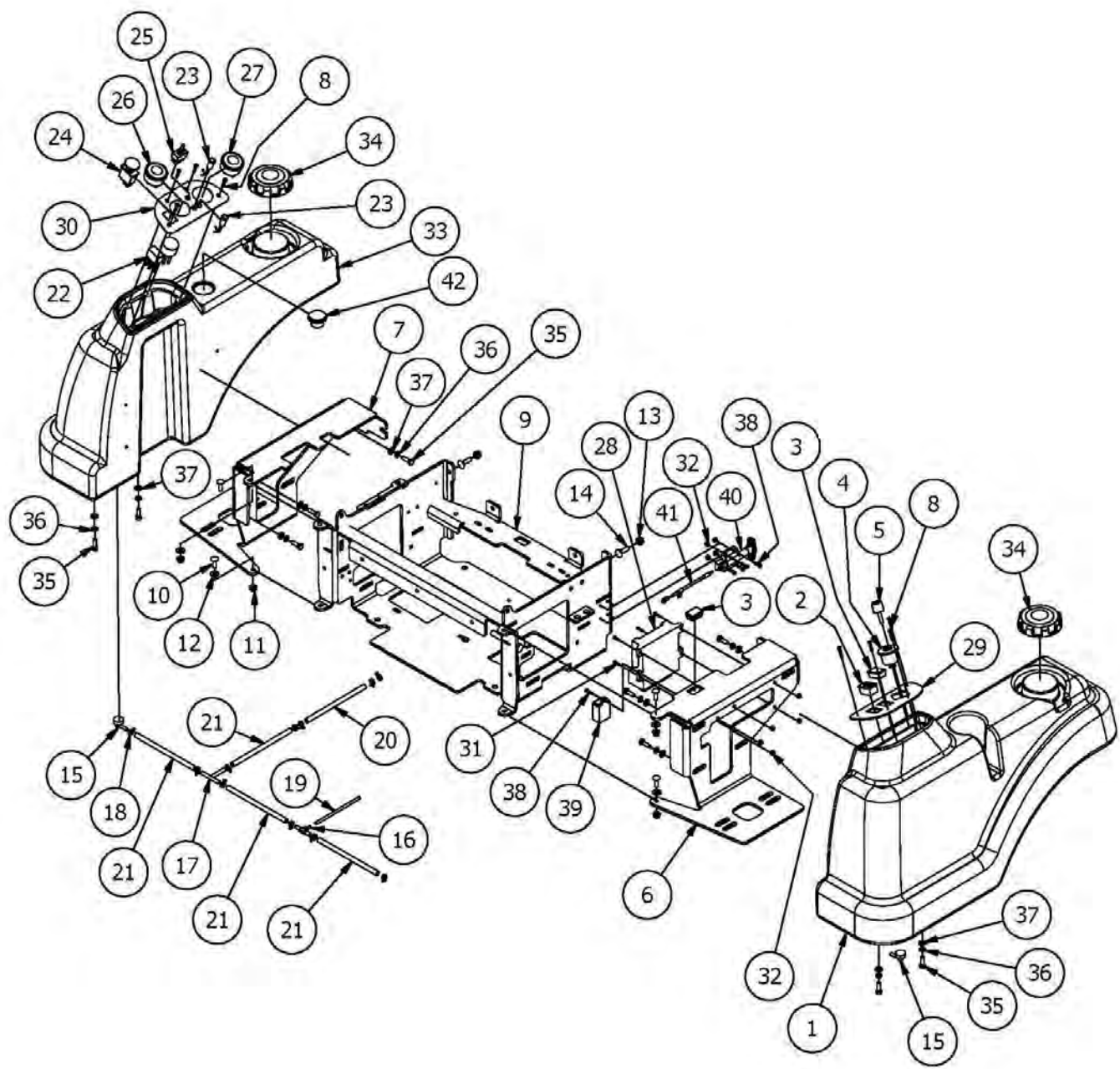
| Suspension Fork Assembly |     |             |  |  |
|--------------------------|-----|-------------|--|--|
| ITEM                     | QTY | PART NUMBER | DESCRIPTION  |  |
| 1                        | 1   | 023-0020-00 | Suspension Fork Top/Side Combo                       |  |
| 2             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

# 1100cc Diesel Drive Arms



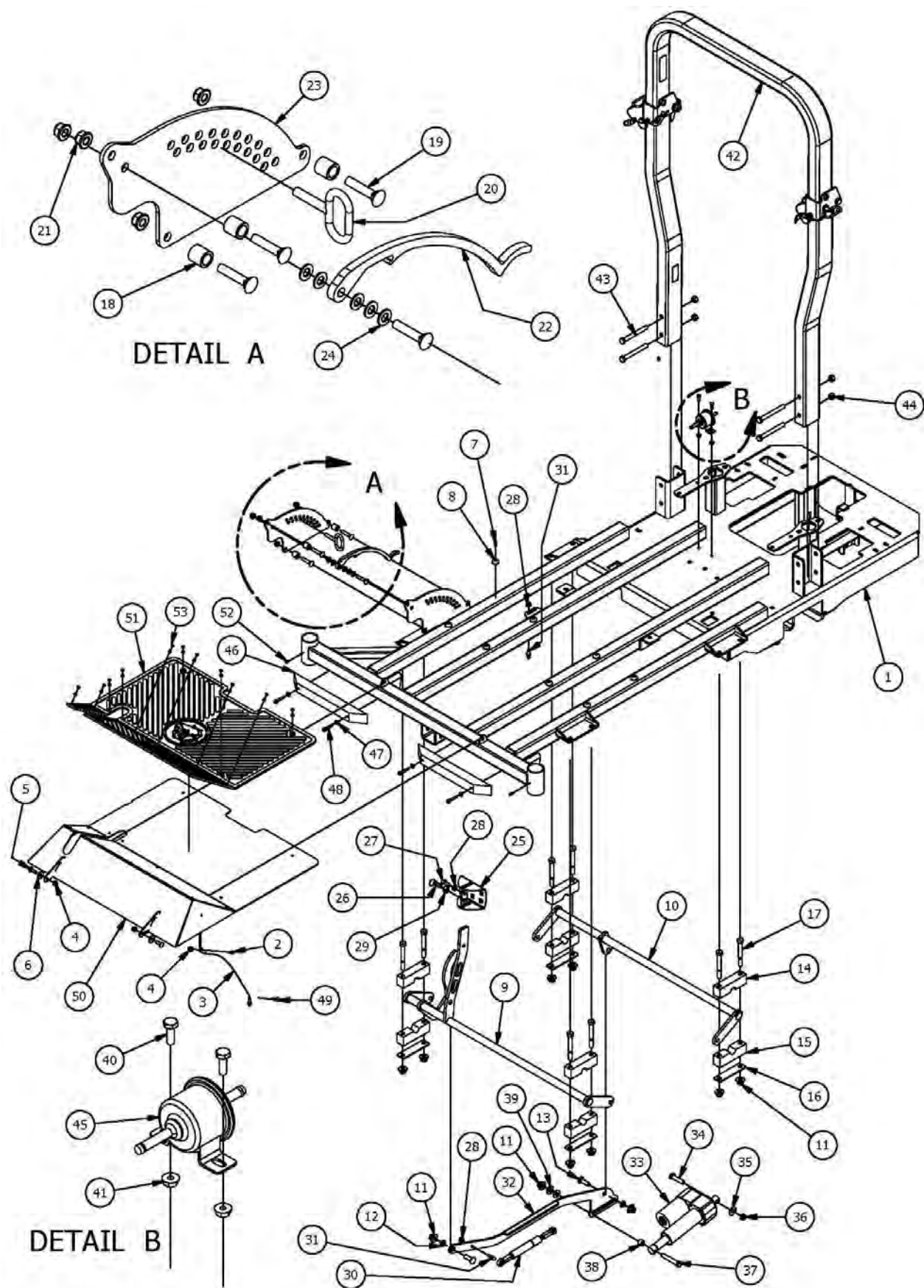


| Parts List |     |             |  |
|------------|-----|-------------|--|
| ITEM       | QTY | PART NUMBER | DESCRIPTION                            |
| 1          | 4   | 034-8025-00 | Drive Lever Spring                     |
| 2          | 4   | 032-5055-00 | Bushing for 2012 Drive Arms            |
| 3          | 8   | 019-8027-00 | .515 ID Nylon Shoulder Washer          |
| 4          | 2   | 024-6034-00 | 1/4" Press in Grease Fitting           |
| 5          | 2   | 013-8050-00 | 1/2-13 Nylon Flange Nut                |
| 6          | 2   | 013-8043-00 | 5/16" Nut                              |
| 7          | 2   | 018-8063-00 | 5/16" x 3/4" Hex Bolt                  |
| 8          | 6   | 013-6051-00 | 3/8" Fine Threaded Jam Nut             |
| 9          | 2   | 019-5037-00 | 3/8" Lock Washer                       |
| 10         | 2   | 069-4010-00 | Black Steering Grip                    |
| 11         | 2   | 045-5000-00 | Black Knob for Adjustable Steering Arm |
| 12         | 1   | 031-9015-70 | Lower Adjuster - Steering Arm- Right   |
| 13         | 2   | 031-9010-00 | Upper Tube-Adjustable Steering         |
| 14         | 1   | 031-9016-70 | Upper Adjust Steering Arm- Right       |
| 15         | 8   | 018-2020-00 | 5/16-18 1/2 HWH Bolt-Steering          |
| 16         | 1   | 031-9025-70 | Steering Arm Elbow - Right             |
| 17         | 4   | 013-9002-00 | 5/16" Flange Nut                       |
| 18         | 4   | 018-2050-00 | 10mm Damper Ball Stud-Steering         |
| 19         | 2   | 013-0085-00 | 1/2-13 Hex Flange Nut ZC               |
| 20         | 2   | 087-8080-00 | Steering Damper                        |
| 21         | 1   | 031-9017-70 | Upper adjuster-Steering Arm- Left      |
| 22         | 1   | 031-9014-70 | Lower Adjuster - Steering Arm- Left    |
| 23         | 2   | 018-5043-00 | 3/8" x 1 1/4" Carriage Bolt            |
| 24         | 1   | 031-9020-70 | Steering Arm Elbow - Left              |
| 25         | 2   | 035-6060-00 | 1100cc Diesel Push Rod                 |
| 26         | 2   | 099-2009-00 | Quick Release Ball Joint               |
| 27         | 2   | 099-6046-00 | 3/8-24 Ball Joint                      |
| 28         | 1   | 027-8819-00 | Drive Arm Lever Housing (Left)         |
| 29         | 1   | 027-8820-00 | Drive Arm Lever Housing Right          |
| 30         | 2   | 018-4011-00 | 3/8-24 Nylon Insert jam locknut        |
| 31         | 2   | 032-1010-00 | Drive Arm Block Insert-short           |
| 32         | 2   | 032-1020-00 | Drive Arm Block Insert-long            |
| 33         | 2   | 019-6017-00 | .630 ID Plastic Washer                 |
| 34         | 4   | 019-7000-00 | .505x1x .125 Oil Impregnated washer    |





| Parts List |     |             |  |
|------------|-----|-------------|--|
| ITEM       | QTY | PART NUMBER | DESCRIPTION                                  |
| 1          | 1   | 067-3000-00 | Left Fuel Tank with Fender                   |
| 2          | 1   | 083-4014-00 | Hour Meter                                   |
| 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 Hose 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   | 089-1000-00 | Oil Light                                    |
| 24         | 1   | 056-8058-00 | PTO Engager                                  |
| 25         | 1   | 078-8077-00 | Deck Lift Joystick                           |
| 26         | 1   | 086-7001-00 | 2" Water Temperature Gauge                   |
| 27         | 1   | 086-7000-00 | 2" Oil Pressure Gauge                        |
| 28         | 1   | 015-4010-00 | ECM for 1100cc Diesel                        |
| 29         | 1   | 079-3402-00 | Control Panel (Left)                         |
| 30         | 1   | 079-3406-00 | 1100cc Diesel Control Panel                  |
| 31         | 4   | 018-5200-00 | 10-24 X 5/8 BS Button Head Bolt              |
| 32         | 9   | 013-5019-00 | 10-24 Nylon Insert Locknut Zinc Orange Nylon |
| 33         | 1   | 067-3001-00 | Right Fuel Tank with Fender                  |
| 34         | 2   | 066-8090-00 | Diesel Fuel Cap - 3.5" Neck                  |
| 35         | 10  | 018-2007-00 | 5/16" x 1" Bolt                              |
| 36         | 10  | 019-8051-00 | 5/16" Lock Washer                            |
| 37         | 10  | 019-8044-00 | 5/16" Flat Washer                            |
| 38         | 5   | 018-8058-00 | 10-24 x 1 BS C/S 18-8 SS                     |
| 39         | 1   | 015-0015-00 | Auto Shut Down for Cat Diesels               |
| 40         | 1   | 039-2016-00 | 2016 T Handle Release                        |
| 41         | 1   | 064-0002-00 | 2015 Seat Latch Cable                        |
| 42         | 1   | 067-4025-00 | Fuel Gauge and Grommet                       |

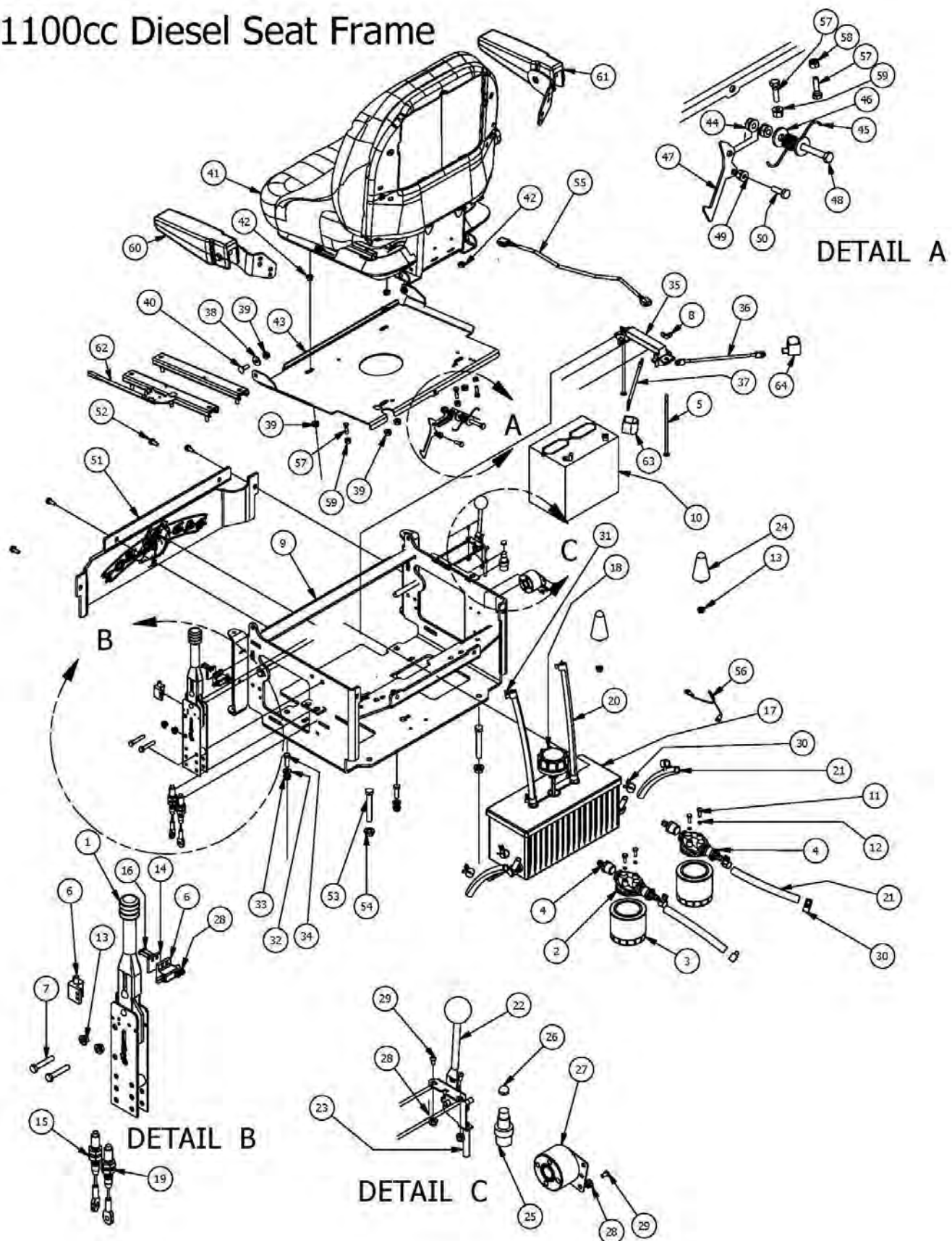






| Parts List |     |             |  |
|------------|-----|-------------|--|
| ITEM       | QTY | PART NUMBER | DESCRIPTION                              |
| 1          | 1   | 070-5580-00 | Outlaw Diesel Frame 2012                 |
| 2          | 1   | 018-8064-00 | 1/4" x 5/8" BS C/S 18-8 SS               |
| 3          | 1   | 064-2006-00 | Floor board Cable W/ Swivel Ends         |
| 4          | 3   | 013-8049-00 | 5/16" Nylock Flange Nut Zinc             |
| 5          | 2   | 018-8065-00 | 5/16" x 1" Carriage Bolt                 |
| 6          | 2   | 019-6042-00 | .360 ID Plastic Washer                   |
| 7          | 8   | 030-3050-00 | #10 x 1/2" Self Tapping Screw            |
| 8          | 8   | 029-4010-00 | Button Bumper                            |
| 9          | 1   | 028-6030-00 | 2015 Outlaw Act Bar Assembly (Front)     |
| 10         | 1   | 028-6040-00 | 2015 Outlaw Act Bar Assembly (Rear)      |
| 11         | 11  | 013-8050-00 | 1/2-13 Nylon Flange Nut                  |
| 12         | 2   | 032-3000-00 | Bushing- SF-1620-4                       |
| 13         | 2   | 018-0008-00 | 1/2 x 1-1/2 Carriage Bolt                |
| 14         | 4   | 017-9000-00 | Two Piece Pillow Block (Male)            |
| 15         | 4   | 017-9050-00 | Two Piece Pillow Block (Female)          |
| 16         | 4   | 017-9025-00 | Two Piece Pillow Block Strap             |
| 17         | 8   | 018-5019-00 | 1/2" x 4" Bolt (Grade 8)                 |
| 18         | 3   | 025-5203-00 | Spacer 3/4 OD x 1/2 ID x 3 1/4 Length    |
| 19         | 4   | 018-0009-00 | 3/8 x 1 3/4 Carriage Bolt                |
| 20         | 1   | 040-4000-00 | Deck height lever pin                    |
| 21         | 4   | 013-5202-00 | 3/8" Nylock Flange Nut                   |
| 22         | 1   | 031-0100-00 | Outlaw Deck Lever Lock                   |
| 23         | 1   | 026-2100-00 | Outlaw Height Indicator Plate (Outer)    |
| 24         | 5   | 019-2003-00 | .390 x .750 x .062 Nylon Washer          |
| 25         | 1   | 026-0013-00 | Outlaw Deck Lift Pedal                   |
| 26         | 1   | 040-5000-00 | Pull Pin                                 |
| 27         | 1   | 030-0010-00 | 5/16-18 x1 Thumb Screw Zinc              |
| 28         | 3   | 013-9002-00 | 5/16" Flange Nut                         |
| 29         | 1   | 013-7018-00 | 1/2" Hex Nut                             |
| 30         | 1   | 087-6100-00 | 250lb Gas Spring                         |
| 31         | 2   | 018-2050-00 | 10mm Damper Ball Stud-Steering           |
| 32         | 1   | 028-6055-00 | Outlaw Linkage Bar Susp Frame            |
| 33         | 1   | 035-7033-00 | Actuator                                 |
| 34         | 1   | 018-0022-00 | 1/2-13x2 Grade 8 Hex Bolt                |
| 35         | 1   | 019-5702-00 | 1/2" Washer (Grade 8)                    |
| 36         | 1   | 018-4010-00 | 1/2" Nylock Nut (1/2 Jam)                |
| 37         | 1   | 018-7016-00 | 1/2" x 3" Hex Bolt                       |
| 38         | 1   | 025-7036-00 | 1/2 x 1/2 Spacer                         |
| 39         | 2   | 019-8054-00 | .505 Nylon Spacer                        |
| 40         | 2   | 018-8052-00 | 1/4" x 3/4" Hex Bolt                     |
| 41         | 2   | 013-9001-00 | 1/4-20 Hex Flange Nuts Zinc w/Serrations |
| 42         | 1   | 089-0003-00 | 2014 & Newer Diesel 2x3 Folding ROPS     |
| 43         | 4   | 018-7050-00 | 1/2" x 4 1/2" Bolt                       |
| 44         | 4   | 013-0005-00 | 1/2" Center Lock Nut                     |
| 45         | 1   | 015-4000-00 | Electric Fuel Pump                       |
| 46         | 2   | 029-7037-00 | 14" Rubber Bumper                        |
| 47         | 4   | 019-7040-00 | 1/4" Flat Washer                         |
| 48         | 4   | 030-7039-00 | 1/4" x 1 1/2" Self Tapping Screw         |
| 49         | 1   | 030-7040-00 | 1/4 x 1 Hex Head tek screw               |
| 50         | 1   | 079-3130-00 | 2016 Outlaw Floor Panel                  |
| 51         | 1   | 081-2050-00 | 2016 Outlaw Floor Mat                    |
| 52         | 3   | 024-6034-00 | 1/4" Press in Grease Fitting             |
| 53         | 24  | 040-6090-00 | Ratchet Fastener-2016 Floorboard         |

# 1100cc Diesel Seat Frame



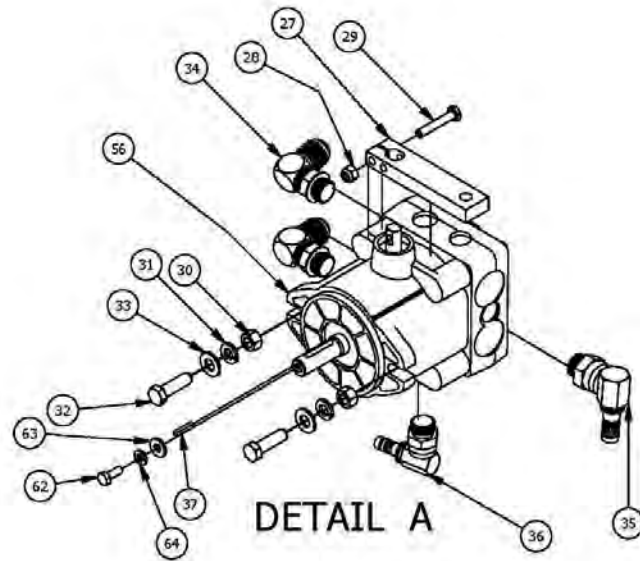
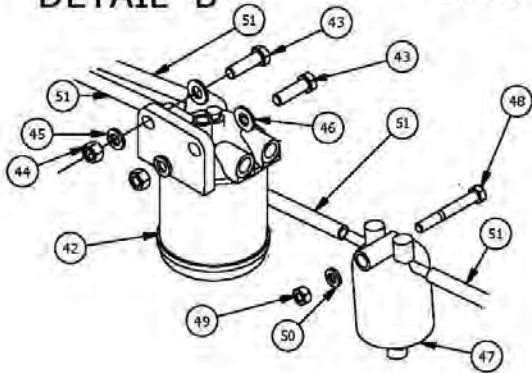




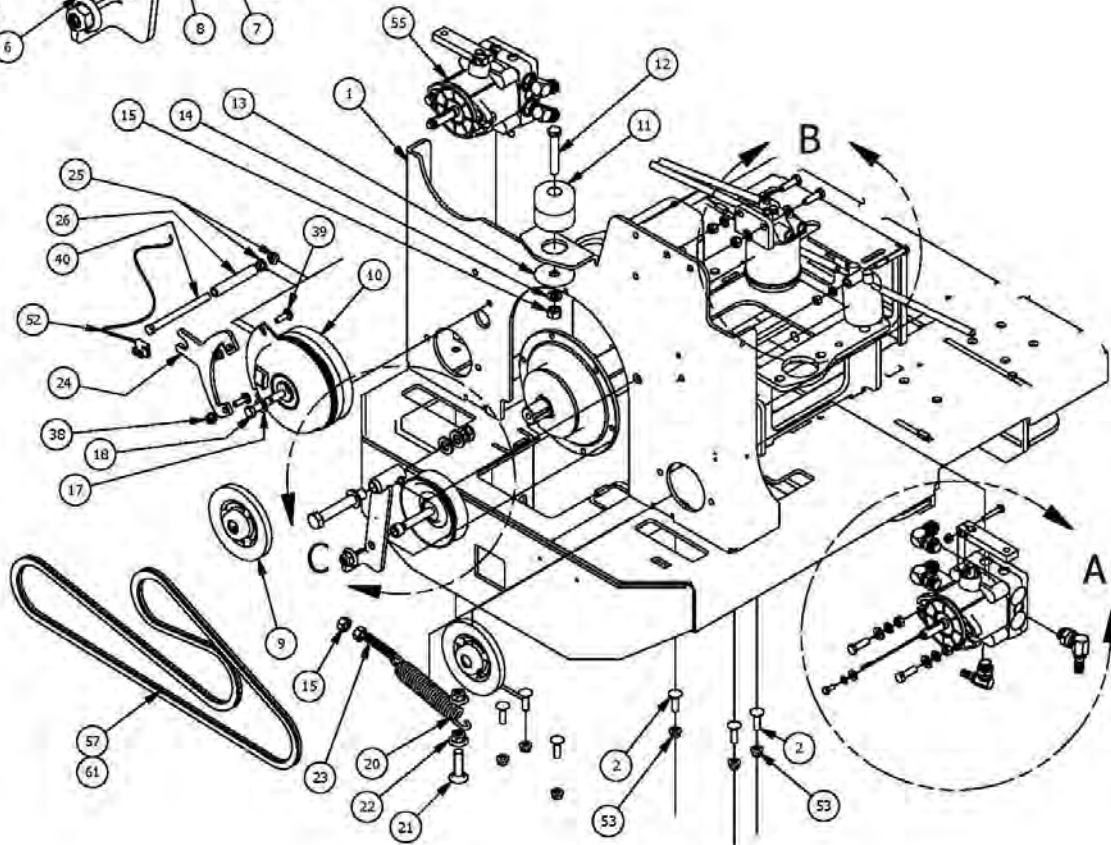
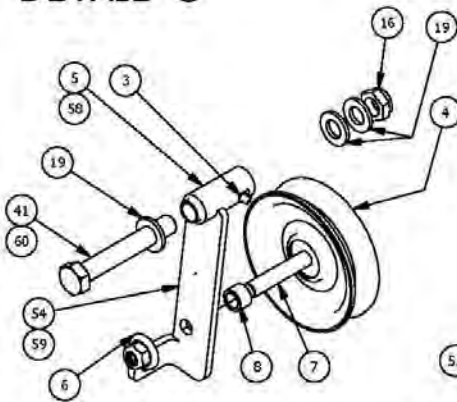
| Diesel Seat Frame |     |             |                                      |
|-------------------|-----|-------------|--------------------------------------|
| ITEM              | QTY | PART NUMBER | DESCRIPTION                          |
| 1                 | 1   | 069-8054-00 | Hand Brake Assembly                  |
| 2                 | 2   | 062-8013-00 | Filter Head                          |
| 3                 | 2   | 063-8014-00 | Hydraulic filter                     |
| 4                 | 4   | 024-5050-00 | Filter Head Fitting                  |
| 5                 | 2   | 018-8051-00 | 1/4-20 X 9 Carriage Bolt             |
| 6                 | 3   | 077-8073-00 | Switch                               |
| 7                 | 2   | 018-8059-00 | 5/16" x 1 3/4" Hex Bolt              |
| 8                 | 2   | 013-8051-00 | 1/4" Wing Nut                        |
| 9                 | 1   | 080-7000-00 | 2007 Diesel Seat Frame               |
| 10                | 1   | 068-8050-00 | Battery - Diesel Models - IS1        |
| 11                | 4   | 018-8052-00 | 1/4" x 3/4" Hex Bolt                 |
| 12                | 5   | 019-4008-00 | 1/4" Lock Washer                     |
| 13                | 4   | 013-9002-00 | 5/16" Flange Nut w/Serrations        |
| 14                | 2   | 025-6041-00 | Switch Block Plastic                 |
| 15                | 1   | 064-8055-00 | Short Brake Cable                    |
| 16                | 4   | 018-8056-00 | 1024 x 1" Allenhead Bolt             |
| 17                | 1   | 067-2010-00 | Aluminum Hydraulic Tank              |
| 18                | 1   | 066-8050-00 | Hydraulic Tank Cap                   |
| 19                | 1   | 064-8056-00 | Long Brake Cable                     |
| 20                | 2   | 051-8063-00 | 3/8" x 32" Clear Hose                |
| 21                | 4   | 051-8064-00 | 1/2" x 9 1/4" Braided Hose           |
| 22                | 1   | 055-8018-00 | Throttle - Diesel                    |
| 23                | 1   | 055-8018-75 | Diesel Throttle Cable Only           |
| 24                | 2   | 034-1000-00 | Spring Cushion                       |
| 25                | 1   | 077-6000-00 | Momentary Start Switch               |
| 26                | 1   | 014-6000-00 | Start Switch Boot - Diesel           |
| 27                | 1   | 021-8059-00 | Heat Warning Piezo Buzzer            |
| 28                | 7   | 013-5019-00 | #10 Nylock Nut                       |
| 29                | 3   | 018-5200-00 | 1024 X 5/8" Buttonhead Bolt          |
| 30                | 8   | 072-8066-00 | 1/2 Hose Clamp                       |
| 31                | 4   | 072-8065-00 | 3/8 hose clamp                       |
| 32                | 2   | 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   | 043-0929-00 | Battery Hold Down                    |
| 36                | 1   | 064-4001-00 | Black Battery Cable - Diesel         |
| 37                | 1   | 064-4000-00 | Red Battery Cable - Diesel           |
| 38                | 2   | 019-6042-00 | .360 ID Plastic Washer               |
| 39                | 6   | 013-8049-00 | 5/16-18 Nylon Flange Nut             |
| 40                | 2   | 018-8065-00 | 5/16" x 1" Carriage Bolt             |
| 41                | 1   | 071-4055-00 | Grammer Suspension Seat w/ Seat Belt |
| 42                | 4   | 013-9002-00 | 5/16" Flange Nut                     |
| 43                | 1   | 026-2006-00 | Seat Plate                           |
| 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   | 064-8081-00 | Seat Cable                           |
| 57                | 3   | 018-4007-00 | 1/4-20 x 1 GR 5 hex bolt zinc        |
| 58                | 1   | 013-8073-00 | 1/4 Nylock Nut                       |
| 59                | 2   | 013-2050-00 | 1/4-20 Nylon Insert flange Nut       |
| 60                | 1   | 071-4051-00 | Left Armrest Kit for Grammer Seat    |
| 61                | 1   | 071-4052-00 | Right Armrest Kit for Grammer Seat   |
| 62                | 1   | 071-4054-00 | Rails for Grammer Seat (Pair)        |
| 63                | 1   | 103-5300-00 | Red Boot                             |
| 64                | 1   | 103-5400-00 | Black Boot For Ground Cable          |

# Diesel Pump Plate Assembly

DETAIL B



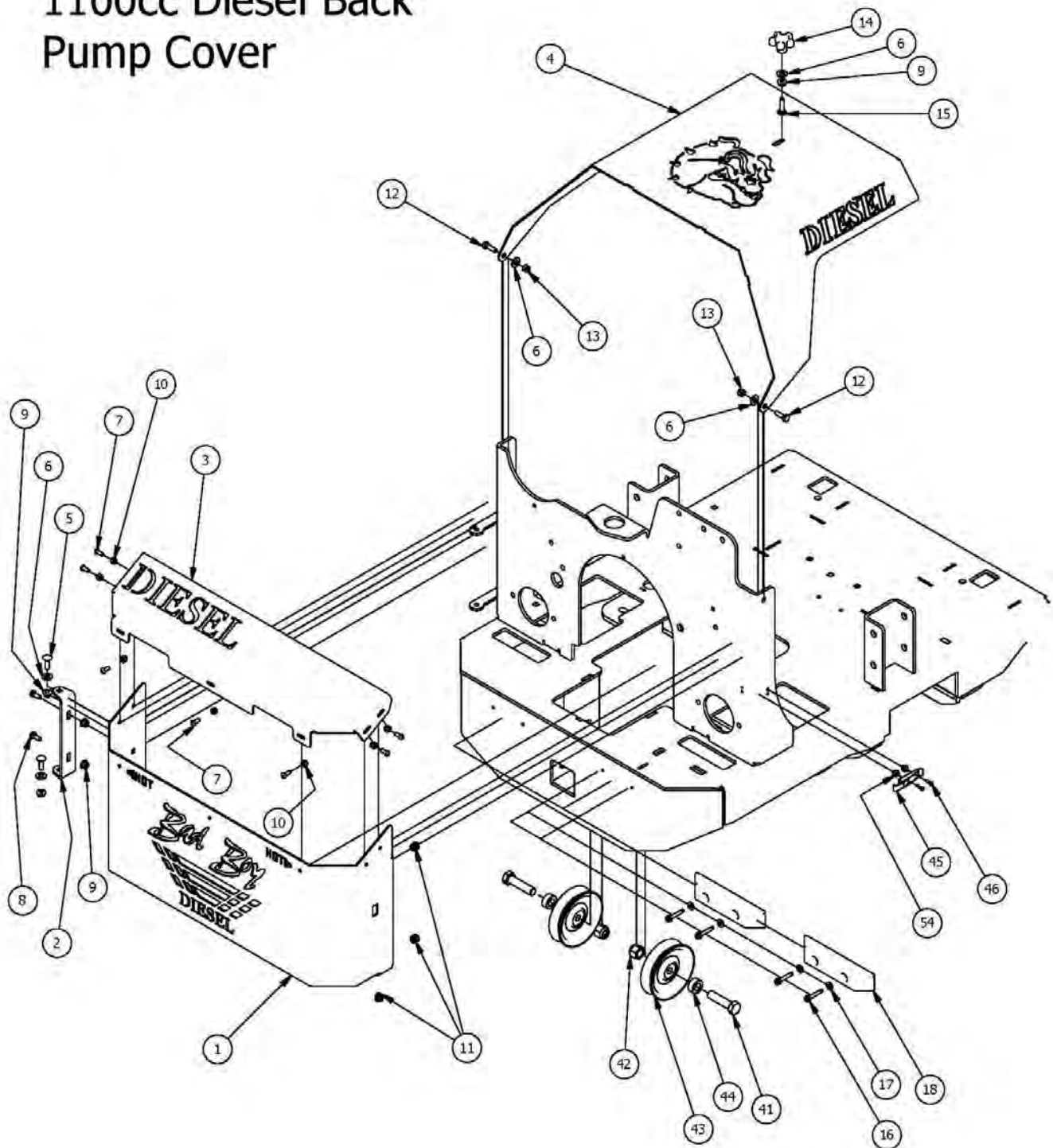
DETAIL C



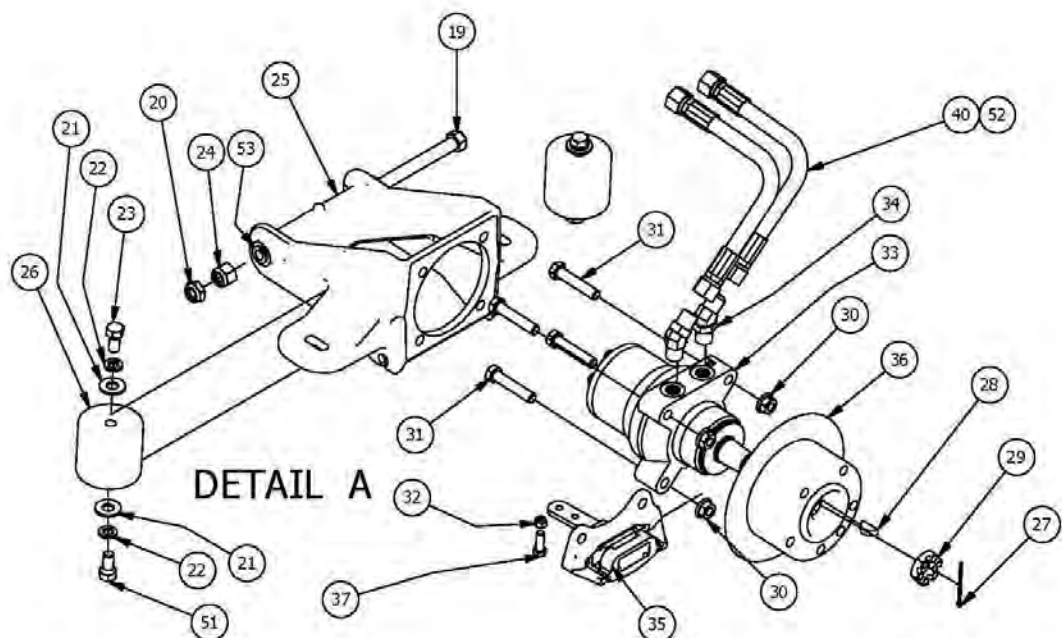
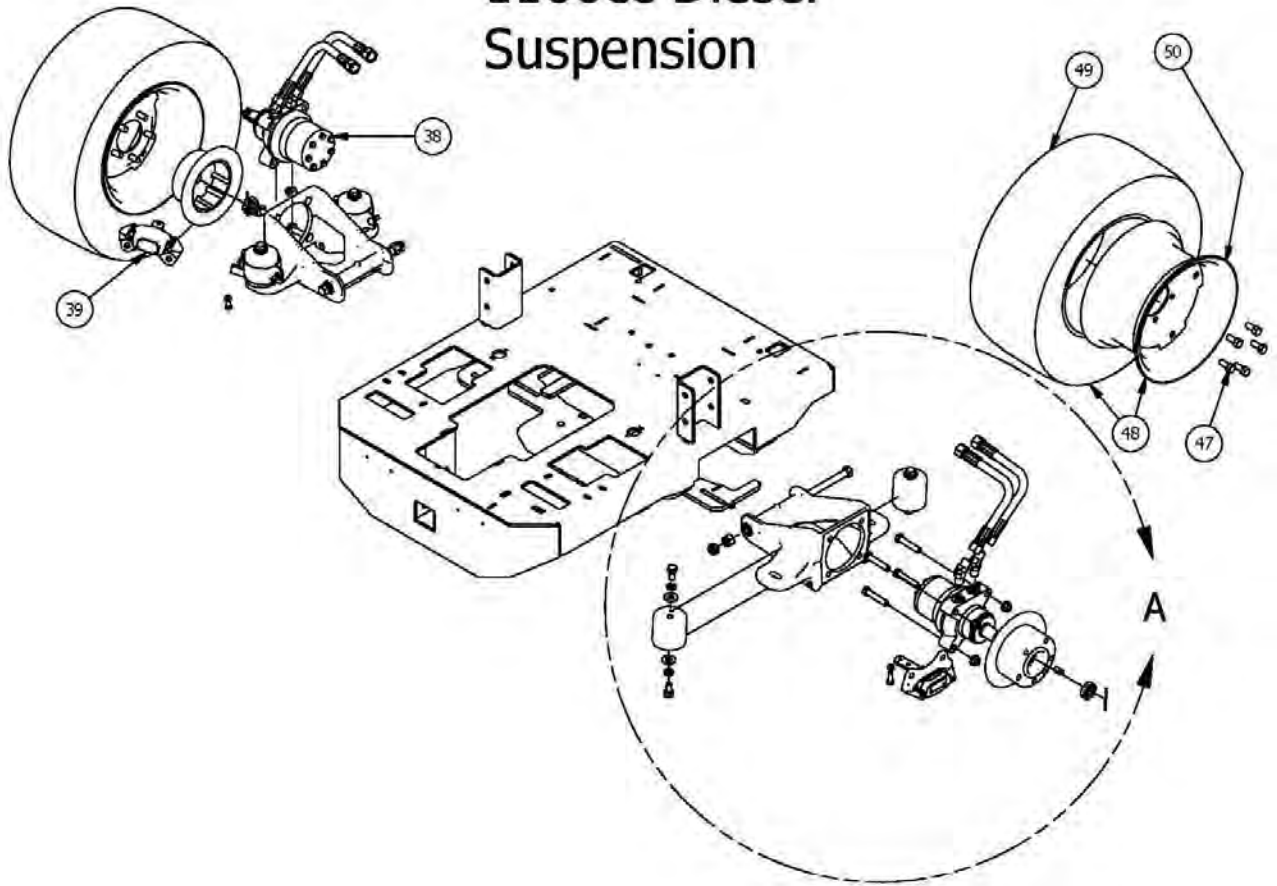


| Diesel Pump Plate Assembly |     |             |  |
|----------------------------|-----|-------------|--|
| ITEM                       | QTY | PART NUMBER | DESCRIPTION  |
| 1                          | 1   | 026-8030-00 | Pump Plate Diesel  |
| 2                          | 6   | 018-5043-00 | 3/8" x 1 1/4" Carriage Bolt  |
| 3                          | 1   | 024-3050-00 | 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   | 057-5910-10 | Diesel PTO Engager Holder  |
| 25                         | 2   | 013-5201-00 | 3/8" Flange Nut  |
| 26                         | 1   | 051-8076-00 | 3/8 hose 4" long   |
| 27                         | 2   | 031-5923-00 | Pump Arm   |
| 28                         | 2   | 013-8073-00 | 1/4" Nylock Nut  |
| 29                         | 2   | 018-5005-00 | 1/4" x 1 1/2" Bolt   |
| 30                         | 4   | 013-6014-00 | 3/8" Hex Nut   |
| 31                         | 4   | 019-5037-00 | 3/8" Lock Washer   |
| 32                         | 4   | 018-6012-00 | 3/8" x 1 1/2" Hex Bolt   |
| 33                         | 4   | 019-5029-00 | 3/8" Flat Washer   |
| 34                         | 4   | 024-2080-00 | 90 Degree Adaptor 6801-L-8-8 Fitting                                     |
| 35                         | 2   | 024-5002-00 | 90 Degree Fitting 1/2" x 3/4" 4601-8-8                                   |
| 36                         | 2   | 024-5206-00 | 90 Degree Fitting 3/8" X 9/16"- 4601-6-6                                 |
| 37                         | 2   | 042-5012-00 | 5mm x 1.25" Key  |
| 38                         | 2   | 013-9002-00 | 5/16" Flange Nut   |
| 39                         | 2   | 018-8065-00 | 5/16" x 1" Carriage Bolt   |
| 40                         | 1   | 018-7055-00 | 3/8-16 x 5 Hex Bolt - Grade 5  |
| 41                         | 1   | 018-5311-00 | 5/8" x 4" Hex Bolt 61" Deck only   |
| 42                         | 1   | 063-2011-00 | Fuel Filter  |
| 43                         | 2   | 018-5040-00 | 3/8" x 1 1/4" Hex Bolt   |
| 44                         | 2   | 013-6014-00 | 3/8" Hex Nut   |
| 45                         | 2   | 019-5037-00 | 3/8" Lock Washer   |
| 46                         | 2   | 019-5029-00 | 3/8" Flat Washer   |
| 47                         | 1   | 015-0007-00 | Caterpillar Fuel Bowl Kit  |
| 48                         | 1   | 018-5344-00 | 5/16" x 2 1/2" Bolt  |
| 49                         | 1   | 013-8043-00 | 5/16" Nut  |
| 50                         | 1   | 019-8051-00 | 5/16" Lock Washer  |
| 51                         | 4   | 051-8075-00 | 5/16" fuel line hose   |
| 52                         | 1   | 070-2000-00 | Clutch Pigtail   |
| 53                         | 6   | 013-5202-00 | 3/8" Nylock Flange Nut   |
| 54                         | 1   | 039-5946-98 | Pump Idler Assembly Components 3,4,5,6,7,8, only for 61" Deck            |
| 55                         | 1   | 050-5308-00 | Left Pump 16cc - AOS Diesel 35Hp Diesel                                  |
| 56                         | 1   | 050-5407-00 | Right Pump 16cc - AOS Diesel 35Hp Diesel                                 |
| 57                         | 1   | 041-8411-00 | Pump Belt for 72" Deck   |
| 58                         | 1   | 039-5945-00 | Diesel Pump Idler only on 72" Deck                                       |
| 59                         | 1   | 039-5945-98 | Diesel Pump Idler Assembly Components 3,4,5,6,7,8,9,10 only for 72" Deck |
| 60                         | 1   | 018-6016-00 | 5/8 x 5 1/2 Bolt only for 72" Deck                                       |
| 61                         | 1   | 041-5048-00 | Pump Belt for 61" Deck   |
| 62                         | 2   | 018-0024-00 | M6-1.0 X 16MM Hex Bolt   |
| 63                         | 2   | 019-7040-00 | 1/4" Flat Washer   |
| 64                         | 2   | 019-4008-00 | 1/4" Lock Washer   |

# 1100cc Diesel Back Pump Cover



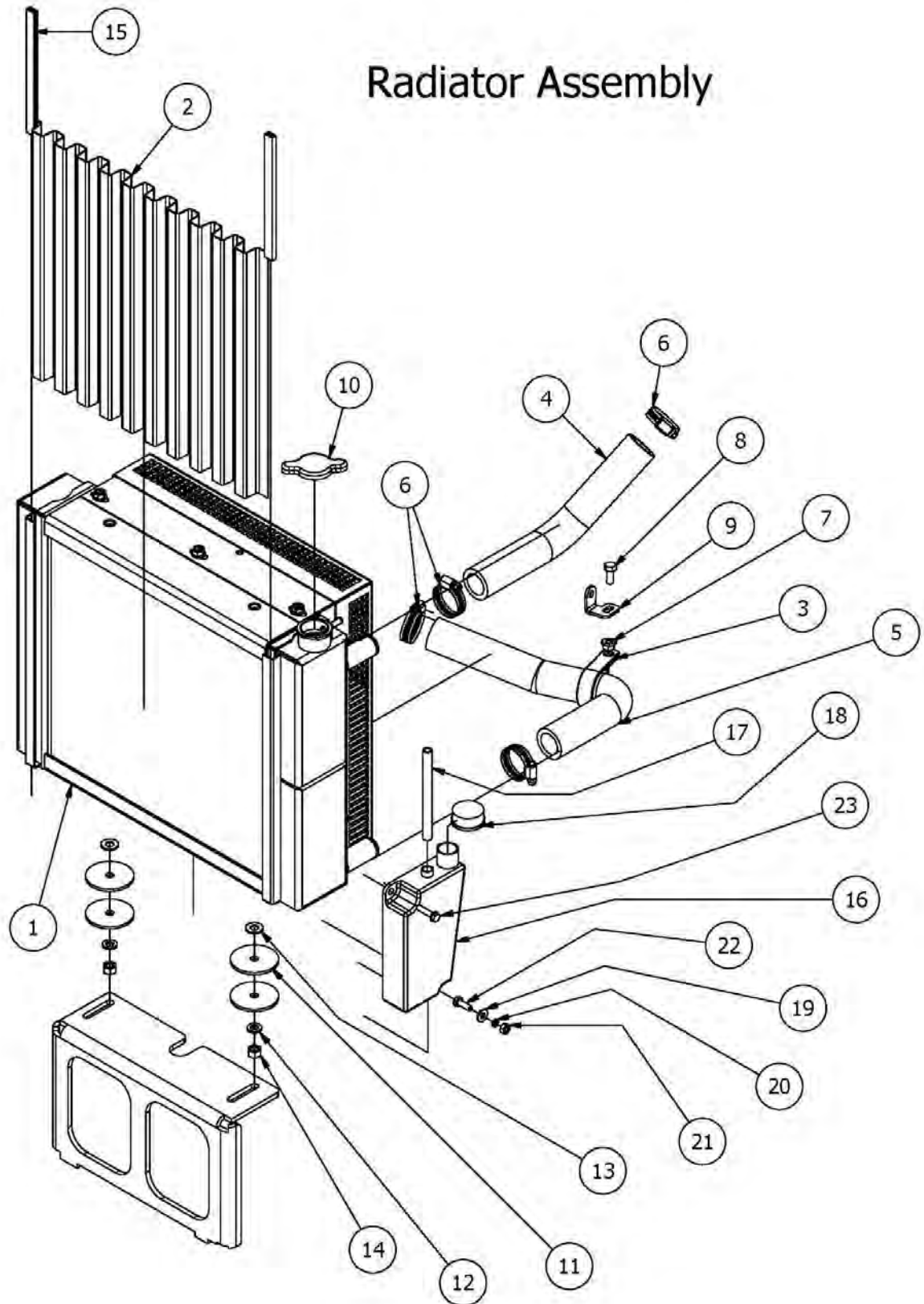
# 1100cc Diesel Suspension



| 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   | 7   | 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-Blue 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" Grade 5 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 Button Head Bolt                |
| 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   | 2   | 022-7032-00 | 26 x 12.00 - 12 Tire                           |
| 50   | 2   | 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   | 4   | 032-6033-00 | Brass Bushing                                  |
| 54   | 2   | 013-5019-00 | 10-24 Nylock Locknut                           |



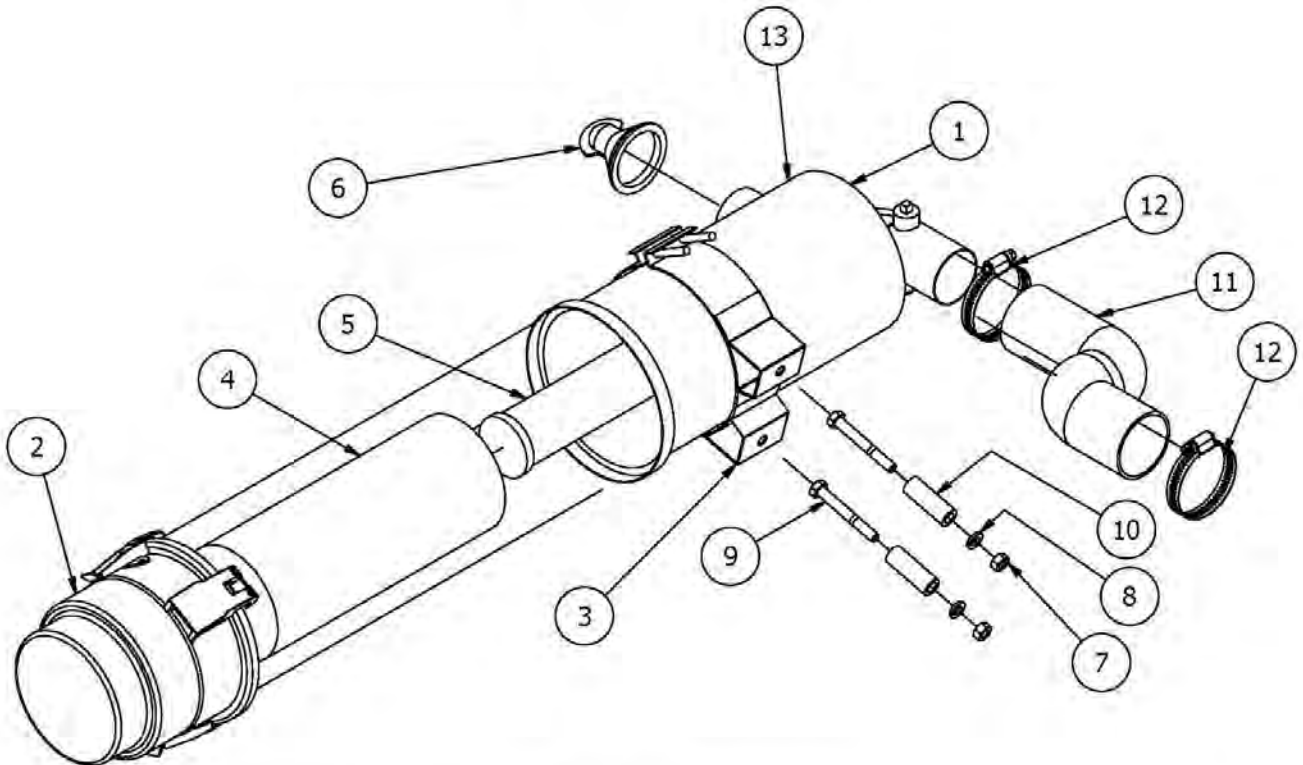
## Radiator Assembly



| 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" Nylon Flange Nut             |
| 8                 | 1   | 018-2007-00 | 5/16" x 1" Hex Bolt                |
| 9                 | 1   | 039-1015-00 | Diesel Radiator Hose Clamp Bracket |
| 10                | 1   | 015-0104-00 | Radiator cap                       |
| 11                | 4   | 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         |

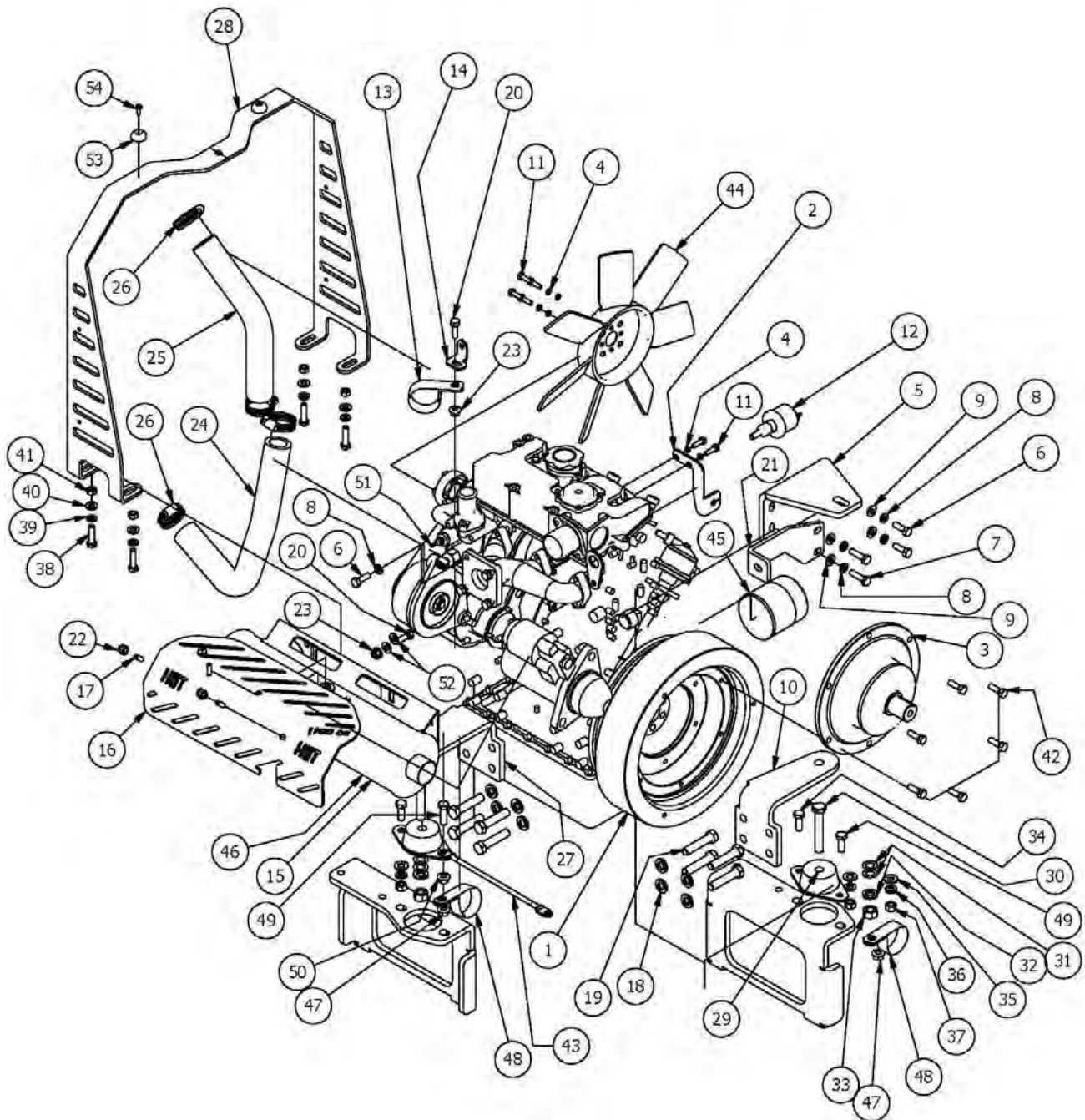


## Diesel Air filter Assembly



| 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   |

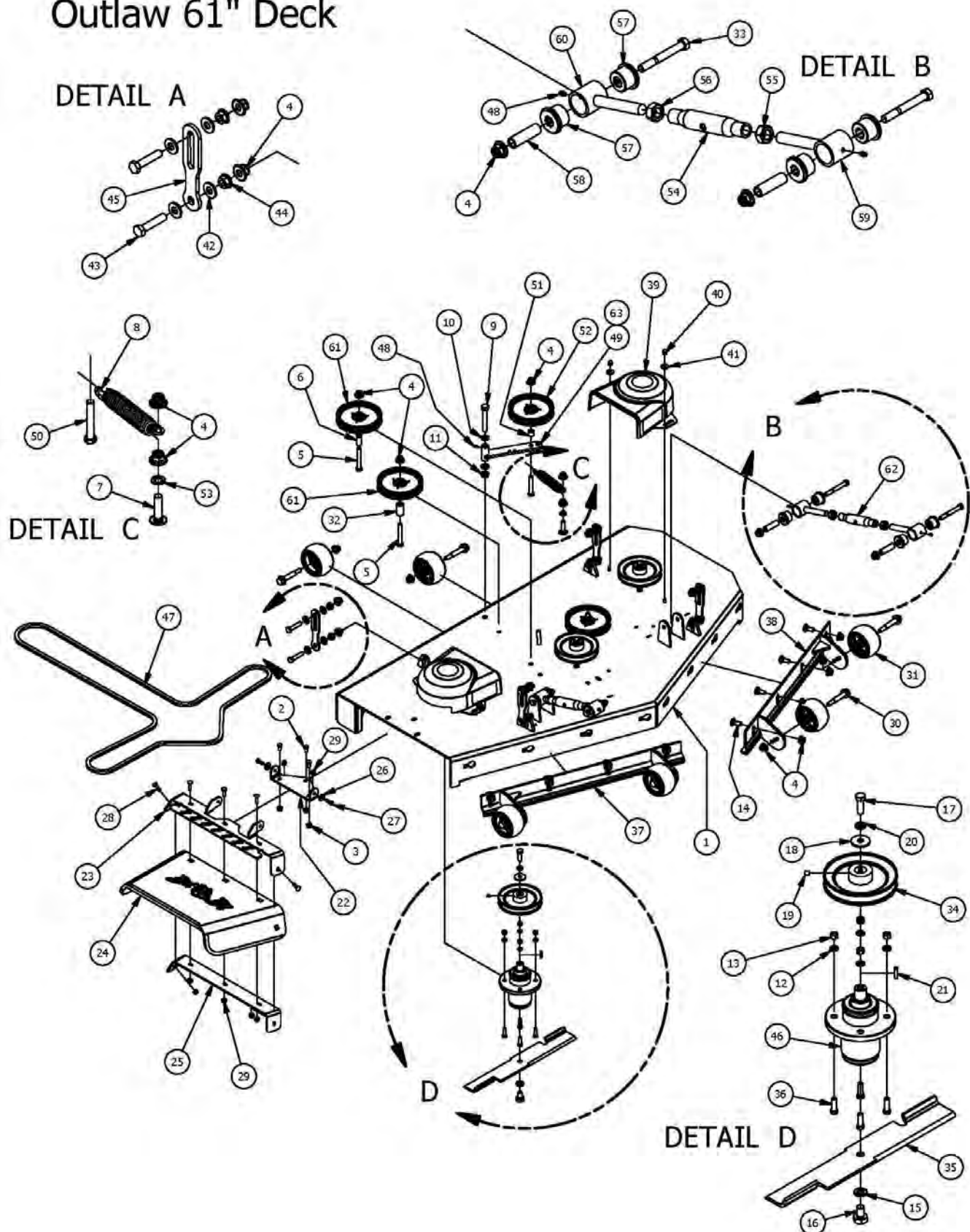
## 1100cc CAT Diesel Engine





| 1100cc 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                    | 6   | 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                    | 8   | 019-8051-00 | 5/16" Lock Washer                       |
| 9                    | 4   | 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 (1100cc)           |
| 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                   | 4   | 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                   | 4   | 013-8049-00 | 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   | 201-8009-00 | Diesel Side Motor Mount (Left)          |
| 28                   | 1   | 201-8001-00 | Hood Holder Diesel                      |
| 29                   | 2   | 032-4050-00 | Rubber Isolator                         |
| 30                   | 2   | 018-7016-00 | 1/2" x 3" Hex Bolt                      |
| 31                   | 4   | 019-5010-00 | 1/2" Brass Washer                       |
| 32                   | 2   | 019-5007-00 | 1/2" Lock Washer                        |
| 33                   | 2   | 013-7018-00 | 1/2" Hex Nut                            |
| 34                   | 3   | 018-6049-00 | 3/8" x 1" Hex Bolt                      |
| 35                   | 3   | 019-5029-00 | 3/8" Flat Washer                        |
| 36                   | 3   | 019-5037-00 | 3/8" Lock Washer                        |
| 37                   | 3   | 013-6014-00 | 3/8" Hex Nut                            |
| 38                   | 4   | 018-5025-00 | 5/16" x 1 1/4" Hex Bolt                 |
| 39                   | 4   | 019-8051-00 | 5/16" Lock Washer                       |
| 40                   | 4   | 019-8044-00 | 5/16" Flat Washer                       |
| 41                   | 4   | 013-8043-00 | 5/16" Nut                               |
| 42                   | 6   | 018-0016-00 | 5/16-18 x 1 Button Head Bolt            |
| 43                   | 1   | 086-0005-00 | Starter to Chassis Cable - Diesel-35 Hp |
| 44                   | 1   | 015-6050-00 | Engine Fan - Diesel                     |
| 45                   | 1   | 063-2010-00 | CAT Oil Filter                          |
| 46                   | 1   | 201-8009-00 | Diesel Side Motor Mount Left            |
| 47                   | 2   | 013-9003-00 | 3/8 Nylock Jam Nut 1/2 Nut              |
| 48                   | 2   | 072-8090-00 | Diesel Clamp 1 3/4" Vinyl               |
| 49                   | 2   | 018-6012-00 | 3/8" x 1 1/2" Hex Bolt                  |
| 50                   | 1   | 013-5201-00 | 3/8" Flange Nut                         |
| 51                   | 1   | 086-7003-00 | Temperature Sender-2012 Gauge           |
| 52                   | 4   | 019-7040-00 | 1/4 USS Flat Washer Zinc                |
| 53                   | 2   | 029-4010-00 | Button Bumper                           |
| 54                   | 2   | 030-3050-00 | #10 x 1/2" Self Tapping Screw           |

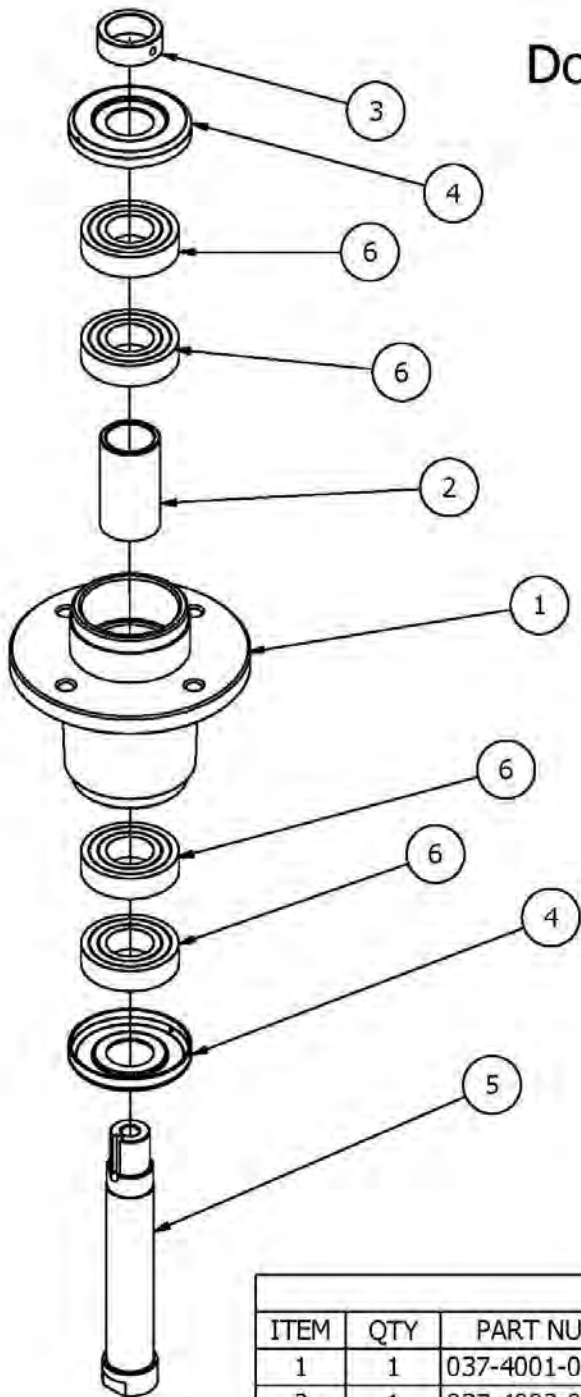
# Outlaw 61" Deck





| 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                             |
| 5          | 3   | 018-2018-00 | 1/2 x 3 1/2 Flange Bolt Grade 8                     |
| 6          | 2   | 025-5338-00 | .502 ID X .750 OD X 1.500 Long Spacer               |
| 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 | .630 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" Grade 8 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" Nylock Flange Nut Zinc                        |
| 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         | 4   | 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 | 8226 Belt for 1100cc Diesel                         |
| 48         | 5   | 024-6034-00 | 1/4" Press in Grease Fitting                        |
| 49         | 1   | 039-6945-00 | Deck Idler  |
| 50         | 1   | 018-7016-00 | 1/2-13 x GR 5 Hex Bolt Zinc                         |
| 51         | 1   | 025-5203-00 | Spacer 3/4 OD x 1/2 ID x 3/4 Length                 |
| 52         | 1   | 033-7201-00 | 5-3/4 Idler Pulley-Don Dye                          |
| 53         | 1   | 019-0007-00 | .517 Square Hole Round Washer                       |
| 54         | 2   | 048-7020-00 | 2015 Outlaw Toplink Body                            |
| 55         | 2   | 013-0008-00 | 3/4-10 Left-Handed Hex Nuts Zinc                    |
| 56         | 2   | 013-0007-00 | 3/4-10 Hex Nuts Zinc                                |
| 57         | 8   | 032-2000-00 | Bushing   |
| 58         | 4   | 032-2001-00 | Sleeve  |
| 59         | 2   | 048-7022-00 | Turn Left-Handed                                    |
| 60         | 2   | 048-7021-00 | Right-Handed End                                    |
| 61         | 3   | 033-7201-25 | 5-3/4 Idler Pulley-Capitol Stampings                |
| 62         | 2   | 048-7000-00 | Turnbuckle Assembly                                 |
| 63         | 1   | 039-6945-98 | Deck Idler Assembly - Includes parts: 4,49,50,51,52 |

## 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



091-5405-00  
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



091-3300-00  
Caution Decal - Front Grill



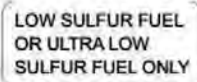
091-1105-00  
Outlaw Deck Height Decal



091-2001-00  
Bad Boy Oval Logo Decal



091-0919-00  
ArmorTek Decal



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



**NOTES:** \_\_\_\_\_





**NOTES:** \_\_\_\_\_

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