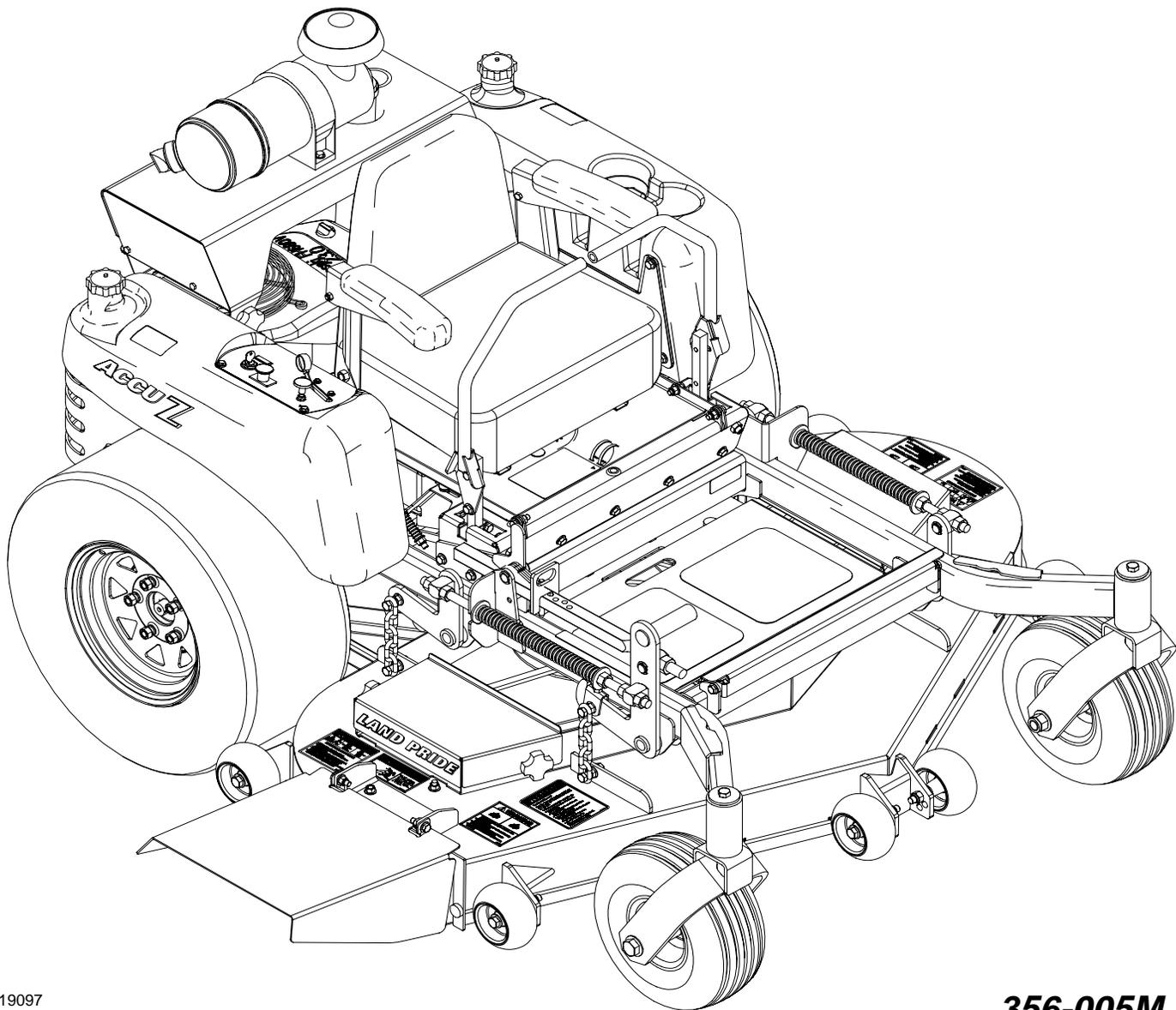


# Accu-Z<sup>®</sup>

Z52<sup>®</sup>, Z60<sup>®</sup> & Z72<sup>®</sup> Zero Turning Radius Mowers

*AGCUZ*



19097

## 356-005M Operator's Manual



Read the Operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!



© Copyright 2003 Printed 03/11/03

Cover photo may show optional equipment not supplied with standard unit.

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Printed in the United States of America.

## Important Safety Information

**These are common practices that may or may not be applicable to the products described in this manual.**

### Be Aware of Signal Words

A signal word designates a degree or level of hazard seriousness. The signal words are:

#### **⚠ DANGER!**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

#### **⚠ WARNING!**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

#### **⚠ CAUTION!**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



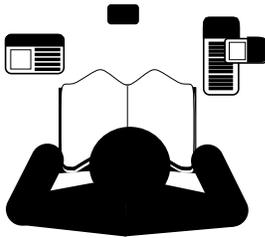
### Keep Riders Off Machinery

- ▲ Riders obstruct the operator's view, they could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.



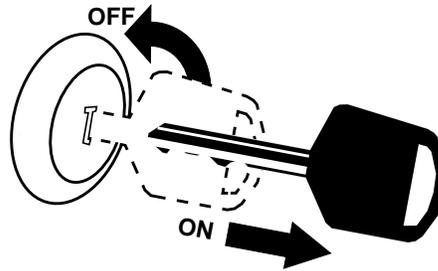
### For Your Protection

- ▲ Thoroughly read and understand the "Safety Label" section, read all instructions noted on them.



### Shutdown and Storage

- ▲ Put mower in park, turn off engine, and remove the key.
- ▲ Store in an area where children normally do not play.



## Important Safety Information

**These are common practices that may or may not be applicable to the products described in this manual.**

### Practice Safe Maintenance

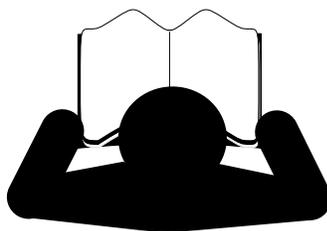
- ▲ Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- ▲ Do not grease or oil while in operation.
- ▲ Inspect all parts. Make sure parts are in good condition & installed properly.
- ▲ Remove buildup of grease, oil or debris.
- ▲ Remove all tools and unused parts before operation.



### Safety at All Times

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them.

- ▲ Operator should be familiar with all functions of the unit.
- ▲ Operate mower from the driver's seat only.
- ▲ Do not leave mower unattended with engine running.
- ▲ Dismounting from a moving mower could cause serious injury or death.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Wear snug fitting clothing to avoid entanglement with moving parts.
- ▲ Make sure all persons are clear of working area.

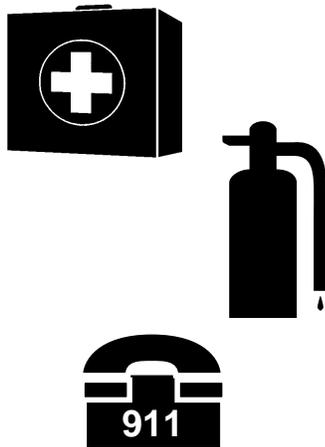


## Important Safety Information

**These are common practices that may or may not be applicable to the products described in this manual.**

### Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.



### Wear Protective Equipment

- ▲ Protective clothing and equipment should be worn.
- ▲ Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating equipment safely requires the full attention of the operator. Avoid wearing radio headphones while operating machinery.



### Avoid High Pressure Fluids Hazard

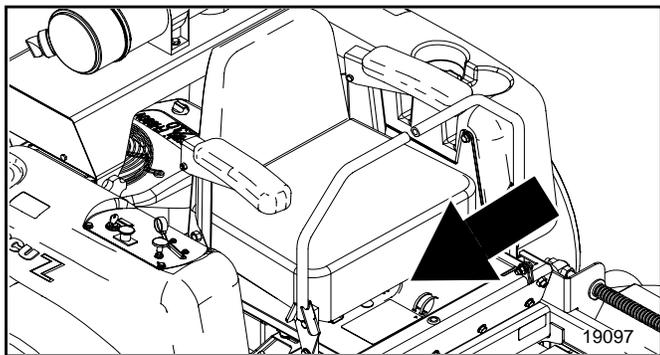
- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines.
- ▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



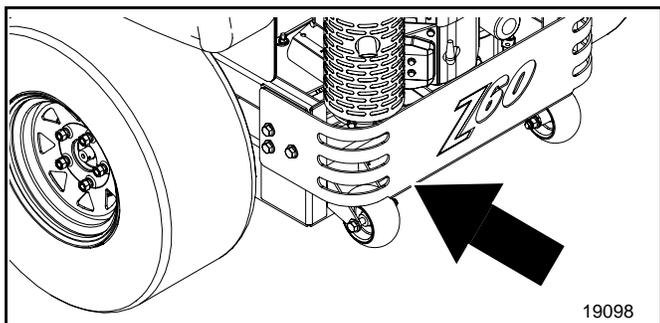
## Safety Labels

1. Your mower comes equipped with all safety labels in place. They were designed to help you safely operate your mower. Read and follow their directions.
2. Keep all safety labels clean and legible.
3. Replace all damaged or missing labels. To order new labels go to your Land Pride dealer.
4. Some new equipment installed during repair require safety labels to be affixed to the replaced component as specified by Land Pride. When ordering new components make sure the correct safety labels are included in the request. To order new labels go to your Land Pride dealer.
5. Refer to this section for proper label placement. To install new labels:
  - a. Clean the area the label is to be placed.
  - b. Spray soapy water on the surface where the label is to be placed.
  - c. Peel backing from label. Press firmly onto the surface.
  - d. Squeeze out air bubbles with the edge of a credit card.

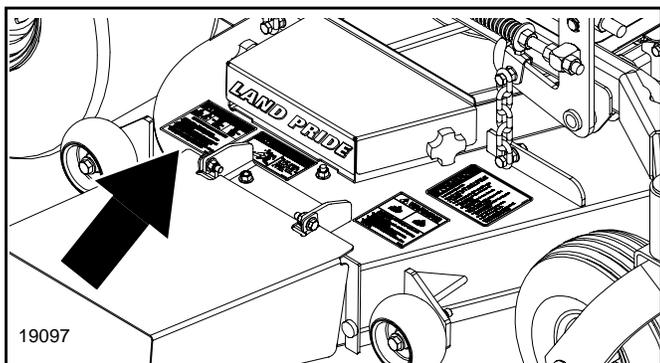
**Important Safety Information**



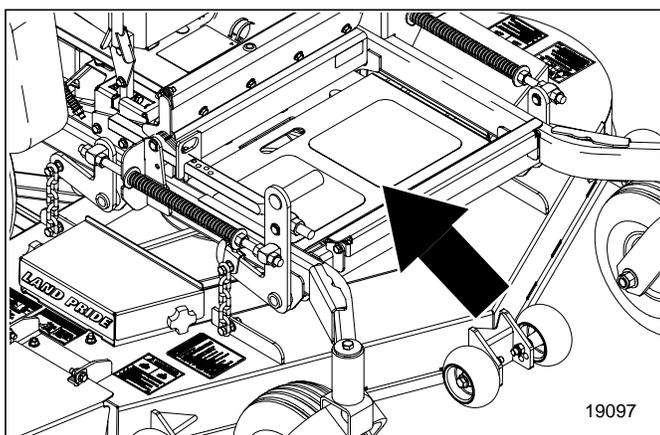
**838-303C**  
 Danger: Battery  
 (Beneath Seat)



**838-305C**  
 Warning: Rollover Hazard (Beneath Bumper on Back of Frame)

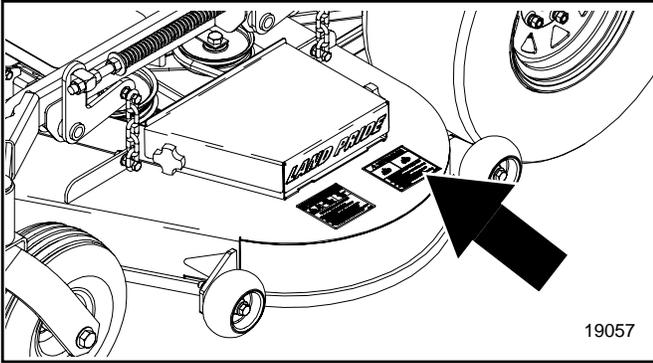


**838-306C**  
 Warning: Do not operate without deflector



**818-543C**  
 Danger: Guard is missing  
 (Beneath foot pan on mower deck)

**Important Safety Information**



**! WARNING**

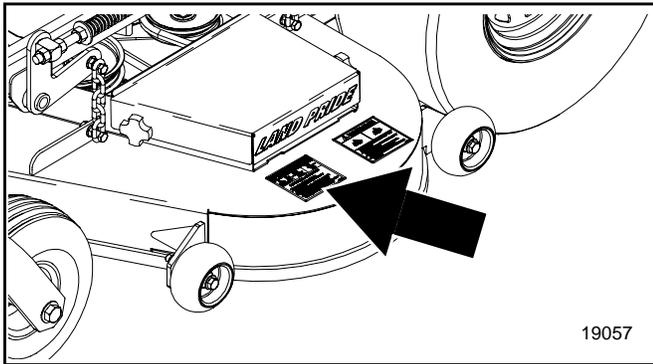
To prevent serious injury or death from moving parts:

- Keep hand, feet, hair and clothing away from moving parts.
- Disconnect and lockout power source before adjusting and servicing.
- Do not stand or climb on machine when operating.

SW404

**838-307C**

Warning: Moving Parts (Both Sides)



**! WARNING**

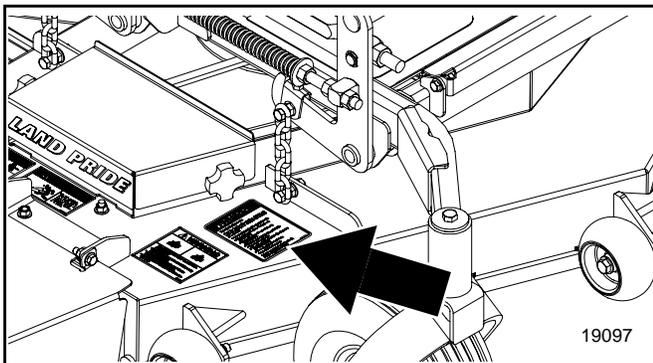
**ROTATING BLADE HAZARD**

- Keep Away - Rotating Blades
- To prevent serious injury or death from thrown object:
- Do not operate with deflectors removed.
- Do not point discharge toward people, animals or buildings when operating.
- Do not place hands or feet under deck when operating or when engine is running.

SW900

**838-308C**

Warning: Rotating Blade Hazard (Both Sides)



**! WARNING**

To prevent serious injury or death:

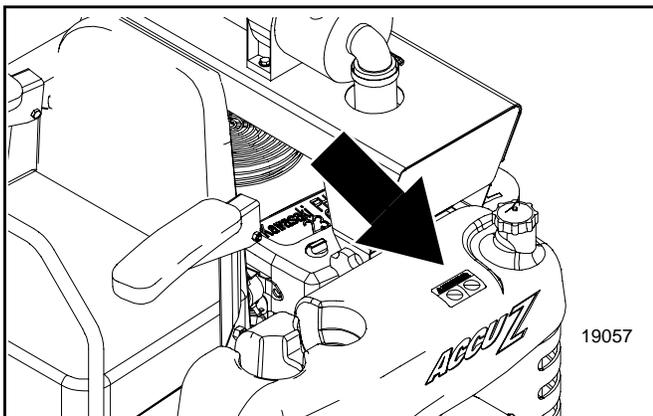
*Si no lee ingles, pida ayuda a alguien que si lo lee para que le traduzca las medidas de seguridad.*

- Read and understand Operator's manual before using.
- Always maintain a safe distance from people and pets when mowing.
- Do not permit riders on the mower. Never carry child on tractor seat.
- Operate with guards installed and in good condition.
- Keep away from moving parts.
- Stop engine, set brake and wait for all moving parts to stop before dismounting.
- Do not allow children to operate mower.
- Clean debris from mowing area.
- Support securely before working beneath unit.
- Review safety instructions annually.

838-310C

**838-310C**

Warning: General



**! WARNING!**

**838-399C**

Warning: Fuel Imbedded in Fuel Tank

## Introduction

Land Pride welcomes you to the growing family of new product owners.

This mower has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from the machine.

### Application

The Accu-Z Razor<sup>®</sup> mowers from Land Pride are compact in size and ideal for homeowner and commercial grass maintenance. The Accu-Z is a true zero-turn mower: When mowing alongside a building or landscaping, the Accu-Z turns within its own width, allowing you to turn away and not hit anything with the rear end. This makes it the perfect choice for cemeteries, parks, recreational areas, sports fields and schools where obstacles are prevalent. An optional Vacuum Bagger, Mulching Kit and Control Lever Extensions are also available. See “**Features and Benefits**”, “**Section 6**” for additional information.

### Using This Manual

- This Operator’s Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
- The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.
- To order a new Operator or Parts Manual contact your authorized dealer. Manuals can also be downloaded, free-of-charge from our website at [www.landpride.com](http://www.landpride.com) or printed by your dealer from the Land Pride Service & Support Center CD-Rom.

#### Terminology:

“Right” or “Left” as used in this manual is determined by facing the direction the machine will operate while in use unless otherwise stated.

#### Definitions:

**NOTE:** A special point of information that the operator must be aware of before continuing.

**IMPORTANT:** A special point of information related to its preceding topic. Land Pride’s intention is that this information should be read and noted before continuing.

### Owner Assistance

The Warranty Registration card should be filled out by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

If customer service or repair parts are required contact a Land Pride dealer. A dealer has trained personnel, repair parts and equipment needed to service the implement.

The parts on your Accu-Z Mower have been specially designed and should only be replaced with genuine Land Pride parts. Therefore, should your Accu-Z require replacement parts go to your Land Pride Dealer.

#### IMPORTANT:

For parts and service for your engine contact your nearest dealer or Call Customer Service Hotline.

#### Honda Engine Information:

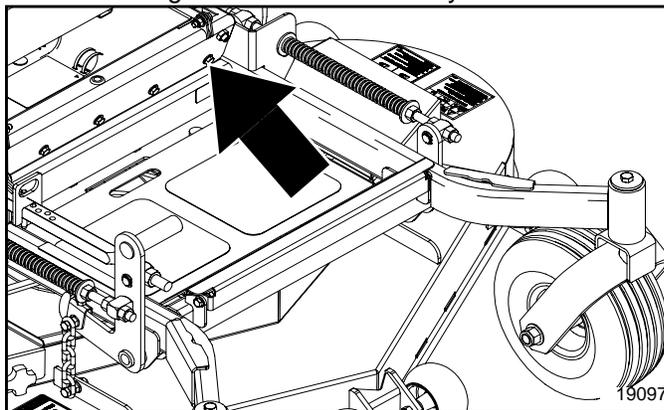
Service Manual: P/N 61ZJ410Z  
 Owner’s Manual: P/N 31ZJ4620  
 Service Hotline: 1-770-497-6400

#### Kawasaki Engine Information:

Service Manual: P/N 99924-2045-02  
 Owner’s Manual: P/N 99920-2145-02  
 Service Hotline: 1-800-433-5640

### Serial Number

Refer to the Figure 1 for the location of your serial number.



**Serial Number Location**

**Figure 1**

### Further Assistance

Your dealer wants you to be satisfied with your new mower. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership service manager making sure he is aware of any problems you may have and that he has had the opportunity to assist you.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the problem and request assistance.
3. For further assistance write or E-mail to:

#### Land Pride

#### Service Department

P.O. Box 5060  
 Salina, KS 674022-5060

E-mail address

[lp servicedept@landpride.com](mailto:lp servicedept@landpride.com)

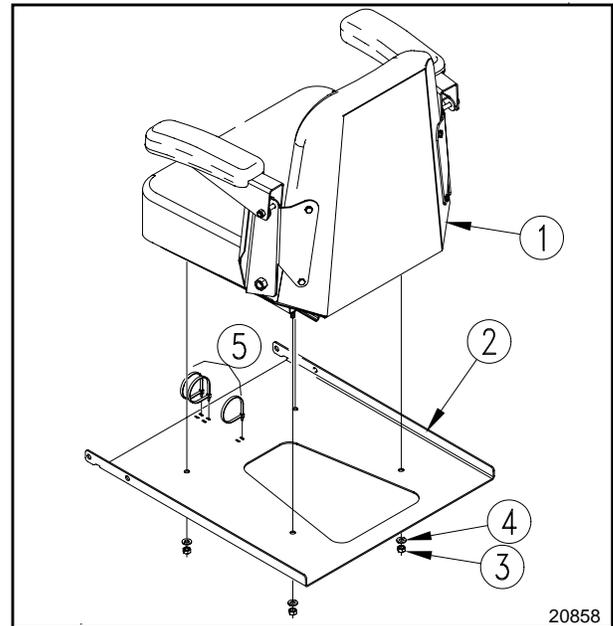
## Section 1 Assembly and Set-Up

### Control Lever and Seat Assembly

The seat is removed for ease in shipping and the control lever's upper bolts and flat washers are removed and the levers are rotated down.

#### Refer to Figure 1-1:

1. Install the standard seat (#1) (or the optional suspension seat) to the seat pan (#2) using four 5/16" nuts (#3) and four 5/16" flat washers (#4).
2. Connect the switch wires on the mower with the switch wires on the seat. Secure the switch wires to the seat pan (#2) using three wire ties (#5).
3. Flip the seat over into the operating position and rotate the control levers up until the holes line up and replace the bolts and flat washers.

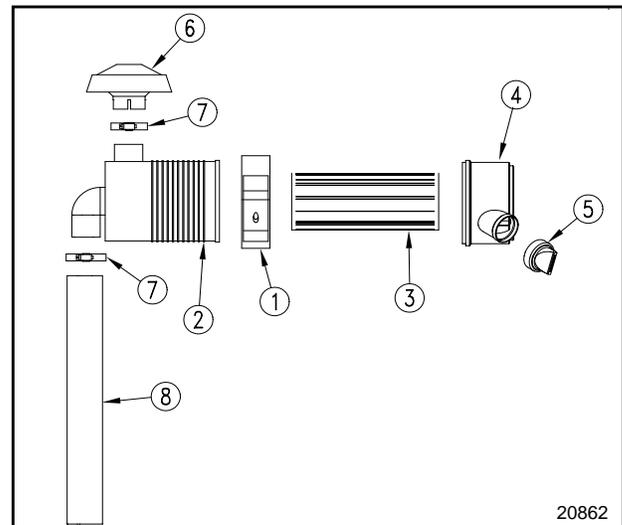


Seat Assembly  
Figure 1-1

### Remote Air Cleaner Assembly

#### Refer to Figure 1-2:

1. Slide air cleaner clamp (#1) over air cleaner housing (#2), position the clamp so the bolt holes are facing down (away from the intake) and the notches on the clamp fit in the notches on the housing.
2. Insert air cleaner element (#3) inside air cleaner housing (#2) and attach housing end (#4) (with the arrows pointing up). Place rubber grommet (#5) over opening in housing end (#4).
3. Attach air cleaner intake cap (#6) to the air cleaner housing (#2) using a hose clamp (#7).
4. Attach air cleaner hose (#8) to the air cleaner (#2) using a hose clamp (#7).



Air Cleaner Assembly  
Figure 1-2

#### Refer To Figure 1-3:

5. Remove plastic cap from carburetor intake.



### CAUTION!

Be careful to not allow any foreign material into the carburetor while performing this assembly.



Carburetor Intake  
Figure 1-3

## Section 1 Assembly and Set-Up

### Refer to Figure 1-4:

6. Insert the air cleaner hose through the hole in the air cleaner hood and slide hose end over the carburetor intake.
7. Secure air cleaner to the air cleaner hood with two 5/16" bolts, four 5/16" flat washers and two 5/16" nuts.
8. Secure hose to the carburetor intake with hose clamp.

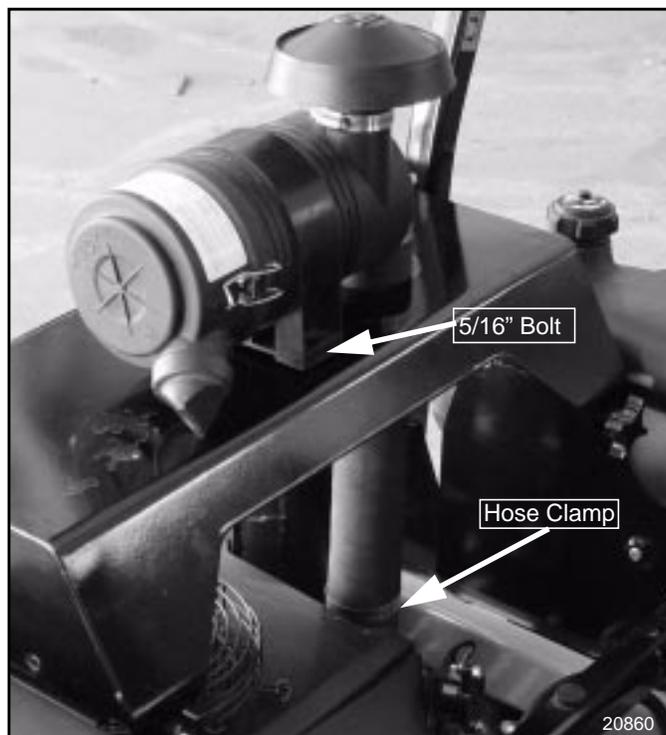


Figure 1-4  
Air Cleaner

## Optional Equipment Assemblies

### Remote Air Cleaner Assembly

#### Refer to Figure 1-2 page 7:

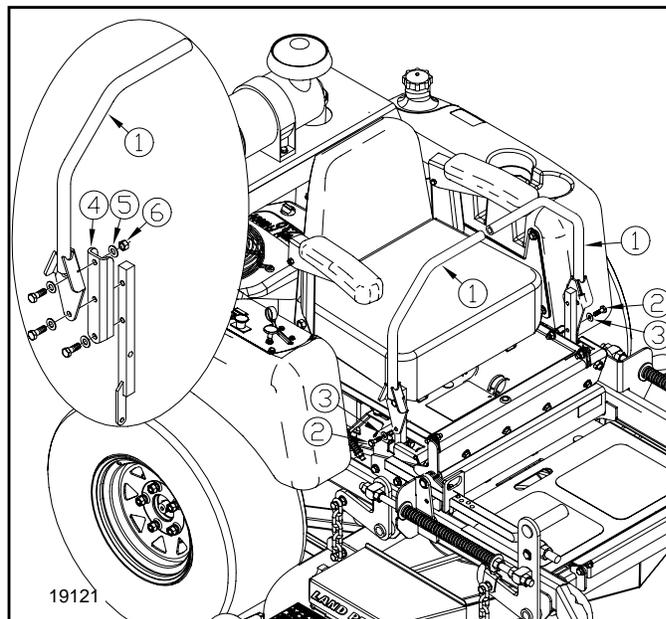
The remote air cleaner is standard equipment on mowers with Serial No. 364548 and above.

However, it may be purchased as an option on mowers with Serial No. 364547 and below.

### Control Lever Extensions

#### Refer to Figure 1-5:

1. Install the Extensions (#4) as shown.



Control Lever Assembly  
Figure 1-5

## Section 1 Assembly and Set-Up

### Accu-Vac Assembly

Refer to Figure 1-9 on page 12

Land Pride offers as an option an Accu-Vac Collection System designed to collect mower clippings into two 30 gallon rubber containers mounted on the back of the mower.

NOTE: Accu-Vac Collection System cannot be mounted on Accu-Z mowers manufactured with Honda engines. Use only with Kawasaki engines.

#### WARNING!

Do not operate Accu-Vac System without remote air cleaner set-up or engine damage may occur.

#### WARNING!

Do not operate mower without deflector chute or Accu-Vac in place.

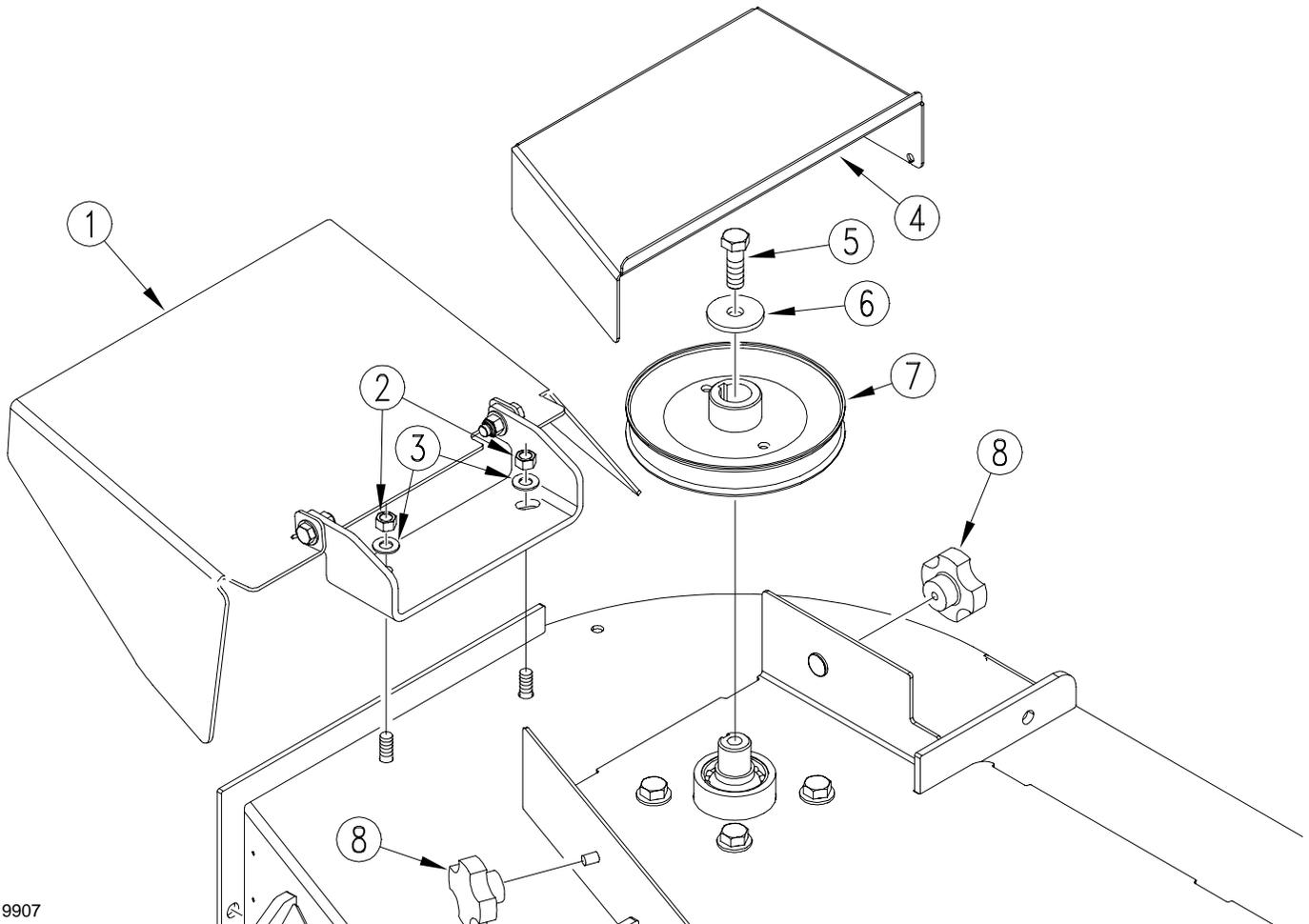
### Mower Deck Preparation

Refer to Figure 1-6:

Park the Accu-Z mower on a flat surface. Shut off the ignition switch and remove the key from the switch. Disconnect the negative battery cable.

Before the Accu-Vac can be installed, the right side pulley cover (4) and discharge chute assembly (1) must be removed. Loosen the tensioner for the blade belt and remove pulley (7). Parts 2, 3, 6 and 8 will be used to assemble Accu-Vac.

NOTE: Retain all other parts as they will be re-installed when the Accu-Vac is removed.



19907

Chute, Pulley and Pulley Cover Removal  
Figure 1-6

## Section 1 Assembly and Set-Up

### Blower, Pulley and Pulley Cover Assembly

Refer to Figure 1-7:

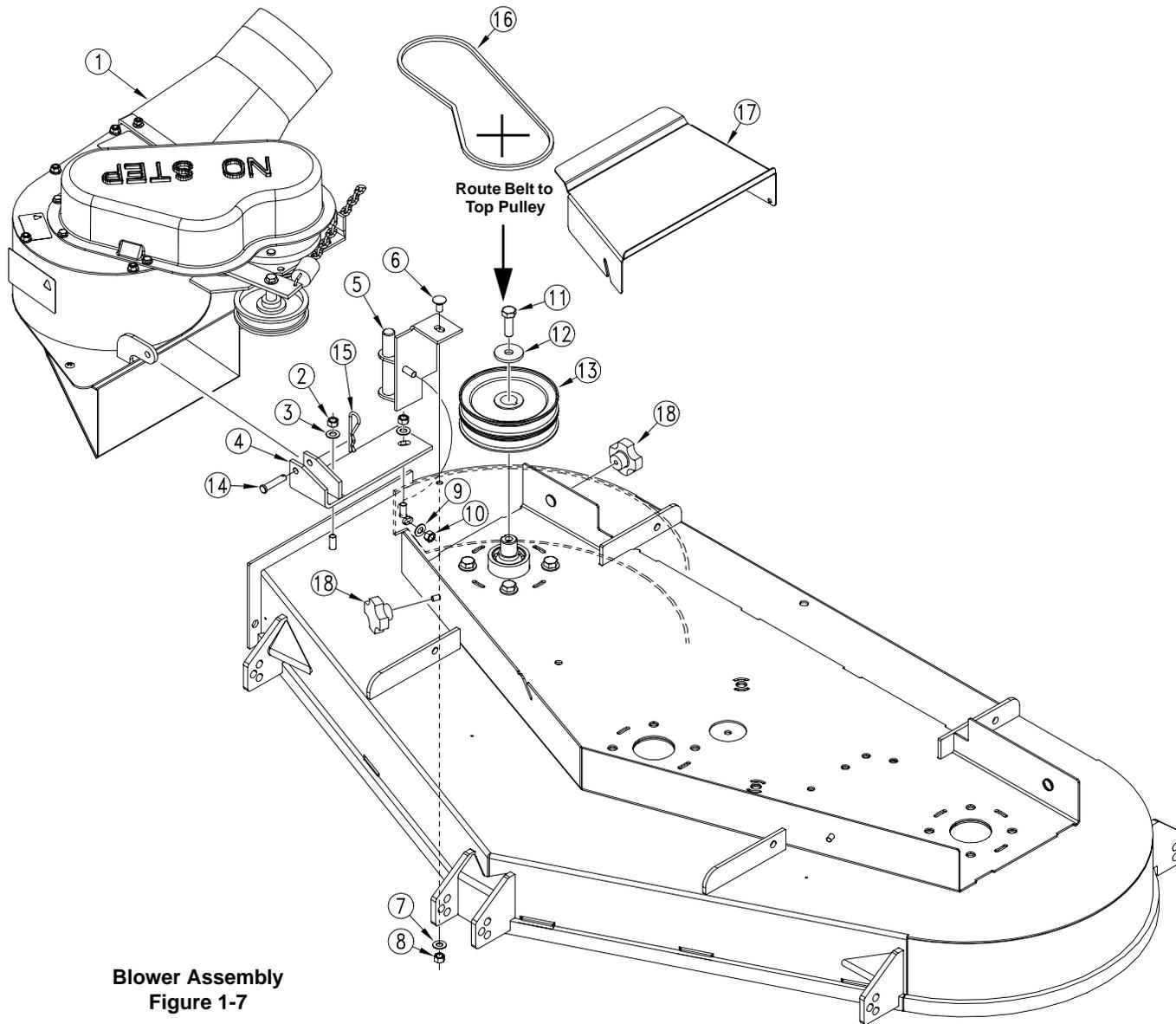
1. Install double pulley (#13) with the bolt (#11) and existing flat washer (#12) Torque bolt 65 - 75 lbs.
2. Reinstall blade drive belt on lower groove of pulley (13).
3. Assemble bracket (#4) where the chute bracket was assembled using the existing hardware (#2) and (#3).
4. Assemble blower pivot (#5) with carriage bolt (#6) and existing hardware (#7), (#8), (#9) and (#10).
5. Install blower (#1) on blower pivot and swing blower around and secure to bracket with pin (#14) and hair pin cotter (#15).

6. Install blower belt (#16) to double pulley and route it as shown. (Belt must be on top pulley)



**Blower Belt**

7. Assemble pulley cover (#17) using existing knobs (#18).



**Blower Assembly  
Figure 1-7**

## Section 1 Assembly and Set-Up

### Bagger Assembly

Refer to Figure 1-8:

NOTE: Accu-Vac Collection System cannot be mounted on Accu-Z mowers manufactured with Honda engines. Use only with Kawasaki engines.

1. Remove and retain rear bumper bolts (#3) and flat washers (#4). Do not remove bumper.
2. Assemble left bracket (#1) and right bracket (#2) through the same slots using the bolts and flat washers retained from the bumper.



### CAUTION!

Muffler can cause burning. Muffler should be cool before proceeding.

3. Position muffler deflector (#5) on existing muffler exhaust so that deflector is pointing away from the plastic containers. Mark for hole through deflector (#5) and drill hole for screw using a #26 (.147) drill bit.
4. Install muffler deflector to existing exhaust and fasten with screw (#6) through hole in deflector and drilled hole.

#### Important

Damage will occur if:

Failure to install and/or adjust muffler exhaust deflector, will result in damage to either grass catcher container or mower.

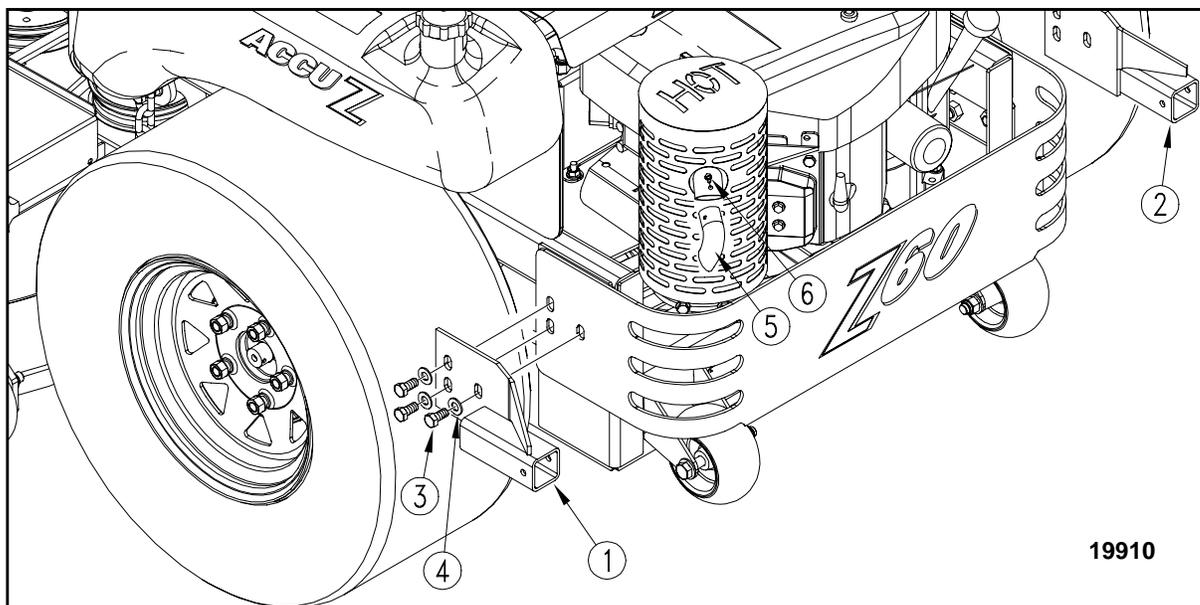
With engine cool:

Install the muffler exhaust deflector onto current muffler exhaust pipe.

Swivel deflector around so the exhaust is porting away from both unit and bagger. Start mower and check air flow out of deflector. Make sure hot exhaust air is not diverted onto unit or bagger. Exhaust should be diverted out to side.

Mark muffler exhaust pipe using hole in diverter.

Drill muffler exhaust pipe using #26 (.147) drill bit.



Bagger Brackets and Muffler Deflector Assembly

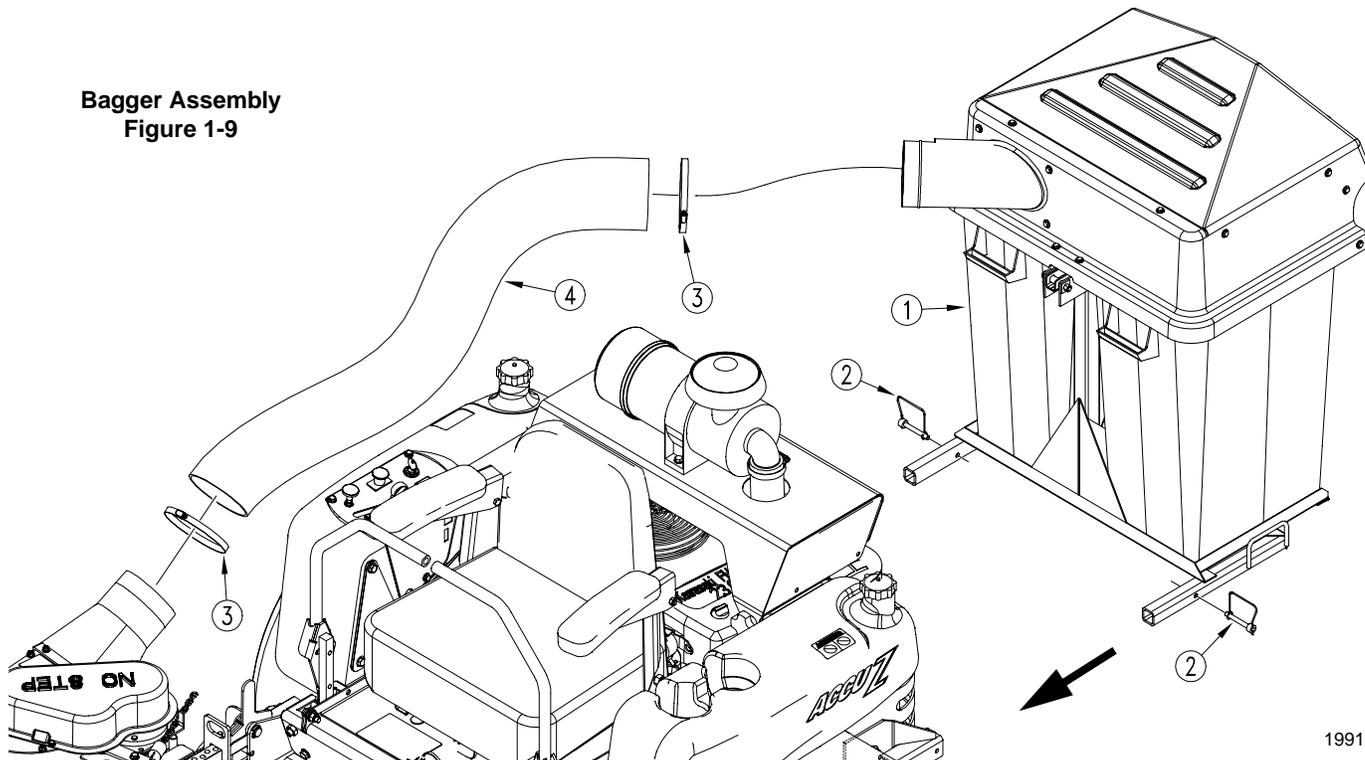
Figure 1-8

## Section 1 Assembly and Set-Up

5. Install bagger (#1) through brackets and secure with pins (#2).
6. Assemble clamps (#3) on the ends of the bagger tube (#4) and slide the tube over the bagger inlet and the blower as shown in Figure 1-9 and tighten clamps.

**NOTE:** Lubricant can be used when installing tube to bagger so the tube will slide over bagger inlet easier.

**Bagger Assembly**  
Figure 1-9

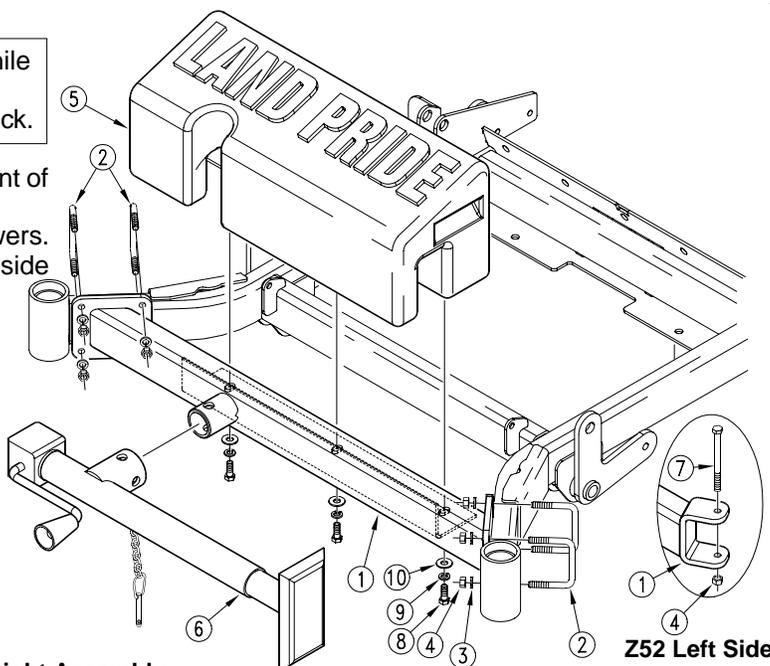


19911

### Front Lift and Weight Assembly (For Blade Service or Replacement)

**IMPORTANT:** Do not use jack to support mower while working under the deck. Chock back wheels and securely block unit up before working under the deck.

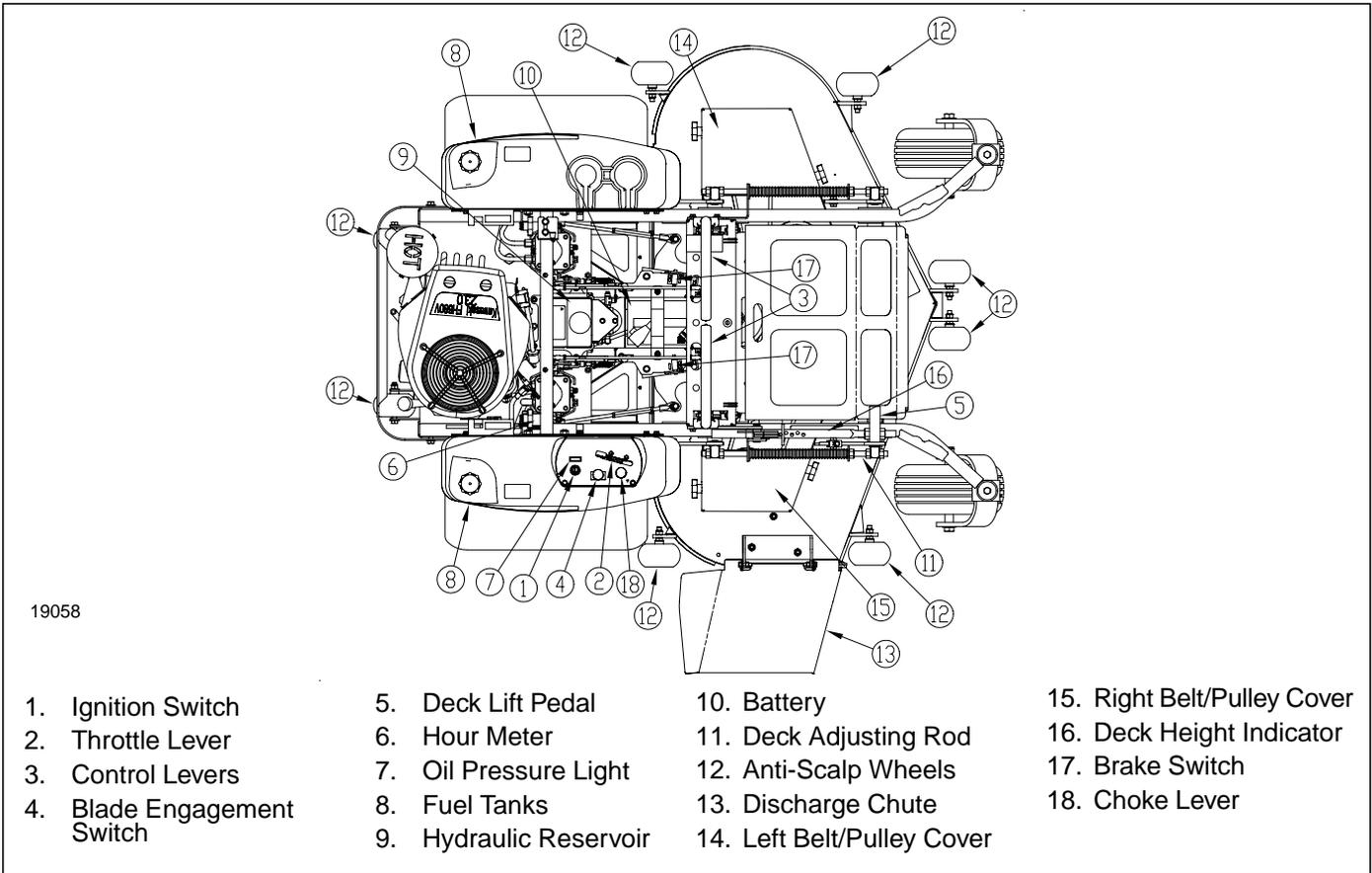
1. The front weight bracket (#1) will mount to the front of the mower frame with the four u-bolts (#2) lock washers (#3) and nuts (#4) on the Z60 & Z72 mowers. The Z52 mounts with two u-bolts (#2) on the right side and one bolt (#7) and nut (#4) on the left side of frame as shown in Figure 1-10.
2. Fill the weight (#5) with sand and secure to weight bracket with bolts (#8), lock washers (#9) and flat washers (#10).
3. Assemble jack (#6) to the jack mount on the weight bracket.



**Front Lift and Weight Assembly**  
Figure 1-10

19909

**Section 2 Operation**



**Accu Z Controls**  
**Figure 2-1**

**Controls**

For general location of the controls described in this section, refer to Figure 2-1.

**Ignition Switch**

**Refer to Figure 2-2:**

A three position switch: off, run, and start. With key inserted, rotate it clockwise to START position; release key when engine starts, and switch will automatically return to the RUN position.

**Throttle Control**

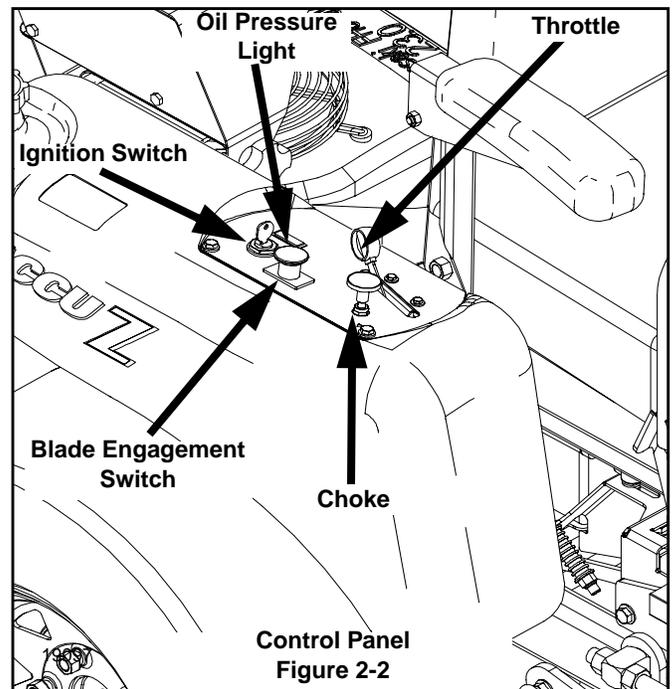
Refer to Figure 2-2:

A cable is linked to engine throttle for controlling engine speed. Move lever forward to increase engine rpm, move lever rearward to decrease engine rpm.

**Choke Control**

**Refer to Figure 2-2:**

A cable is linked to manually operate the engine choke. When the lever is in the down position, the choke is in the off (run) position. When the lever is pulled up, the choke is in the on (start) position. **DO NOT** operate the machine in the on (start) position.

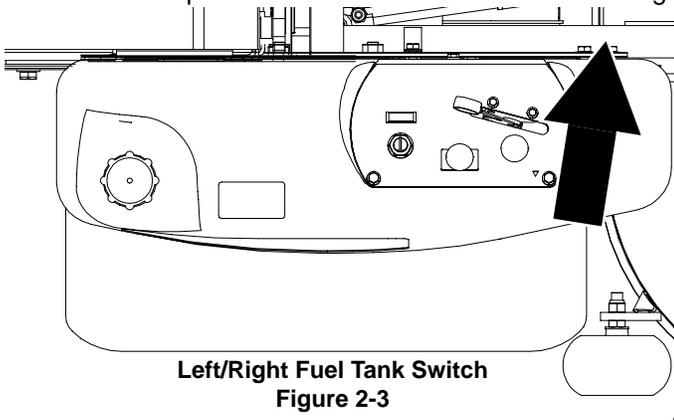


## Section 2 Operation

### Left/Right Fuel Tank Valve

Refer to Figure 2-3:

The mower is equipped with a Left/Right Fuel Tank Valve that will determine which fuel tank the mower is operating from. It is not important which fuel tank the mower is using.



### Blade Engagement Switch

Refer to Figure 2-2:

This switch engages the deck blades. Pull the switch up to engage and push switch down to disengage the clutch.

**IMPORTANT:** Never engage clutch with engine running at high rpm or when the deck is under load. Clutch, belts or deck could be damaged.

### Control Levers

Parking Brake

The Parking Brakes are applied by moving the control levers from the Neutral Position (Figure 2-5) to an outward position (Refer to Figure 2-4). Each rear wheel brake operates independently of the other.

## WARNING!

*In the event of a system failure while mowing, engage both parking brakes to stop or slow mower. Refer to Figure 2-4.*



Refer to Figure 2-5:

These levers control the mower's speed, direction, neutral lock and park brake. Levers are used to steer, accelerate, brake and change direction. The mower will not move when the engine is on, drive pumps are operating and the control levers are in the park brake position (out) Figure 2-4.

### Control Levers



## WARNING!

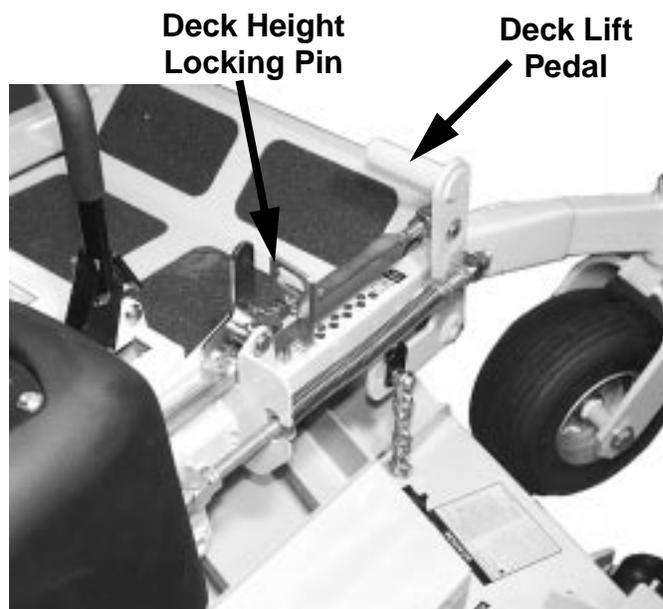
*The parking brake is not designed to hold the mower on steep slopes.*

### Deck Lift Pedal

Refer to Figure 2-6:

The deck lift pedal is used to raise or lower the deck. Push on the pedal to raise the deck and then place the deck height locking pin into the desired cutting height hole.

Push the deck lift pedal to raise the deck when going over obstructions.



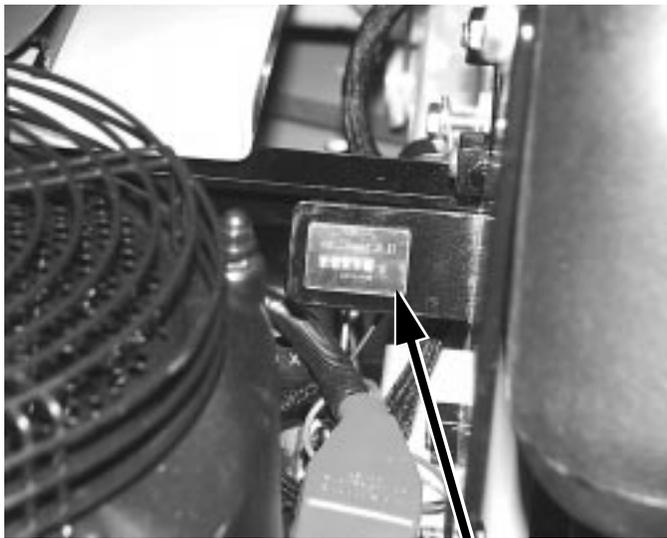
## Section 2 Operation

### Instrumentation

#### Electronic Hour Meter

##### Refer to Figure 2-7:

Registers 1/10 hour increments up to 9,999.9 total hours. Connected to the ignition switch, the meter records the accumulative time while the ignition key is switched to the RUN position and the operator is on the seat.



19062

Hour Meter  
Figure 2-7

Hour Meter

#### Oil Pressure Light

##### Refer to Figure 2-2:

This light comes on when the ignition switch is placed in the RUN position and stays lit until the engine is running and a safe oil pressure is developed. If light comes on during operation, shut engine off immediately and locate and correct the problem.

### Safety Start Interlock System

The mower is equipped with a safety start interlock system consisting of the brake switches, seat switch, and deck clutch switch. Check mower safety start interlock system daily, prior to operation. This system is an important mower safety feature. It should be repaired immediately if it malfunctions. The machine incorporates a separate seat switch which will stop the mower engine when the operator is unseated for any reason while the mower is moving or the deck clutch is engaged. This is a safety feature designed to prevent runaway or accidental entanglement. To inspect the system:

1. The operator must be on the seat when testing the seat switch.
2. Set both control levers in the park brake position.
3. Start the engine and allow it to warm up to operating temperature.
4. With the deck clutch switch down and the control levers in the park brake position, slowly raise off of the seat. The engine should continue to run.

5. With the deck clutch switch up and/or the control levers in the neutral position, slowly raise off of the seat. The engine should stop within two seconds.
6. If the engine fails to stop when the deck clutch switch is up or one or both of the control levers is in and the operator is off the seat, check the function of the seat switch. If the seat switch is not operating properly and if the cause can not be determined, replace the seat switch.

If the problem can not be located, contact your Land Pride Dealer.



#### WARNING!

The safety interlock system should always function per steps 4 and 5. If it does not function properly, it should be corrected immediately. Do not operate the mower without a properly functioning seat safety switch.



#### WARNING!

The safety interlock system must not be disconnected or bypassed.

**NOTE:** The operator's seat is equipped with a separate safety switch. If for any reason the operator should become unseated when the neutral switches are disengaged or the deck clutch switch is engaged the engine will stop.

### Engine Starting

The Accu Z safety start interlock system is also designed to protect the operator and others from accidental injury due to unintentional engine starting. The engine starting motor will not engage until:

- A. Control levers are in the brake position.
- B. Deck clutch switch is in the down (OFF) position.

The following steps are the correct procedures for starting the engine. If difficulty is encountered, contact the Land Pride Dealer in your area.

1. Before starting mower each day, perform daily pre-operation checking.
2. Make sure the control levers are in the brake position and deck clutch switch is disengaged.
3. Set throttle at approximately 1/2 open position.

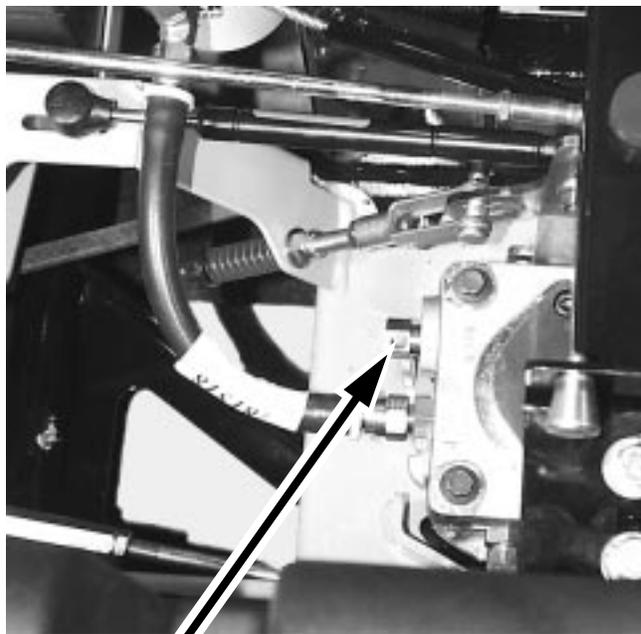
**NOTE:** Use choke position when engine is cold, or if warm engine fails to start within 5 seconds of cranking. Avoid flooding and operate engine without choking as soon as possible.

4. Insert key in ignition switch and rotate full clockwise to engage starting motor. Release key when engine starts.

**Section 2 Operation**

**IMPORTANT:** The engine starter should not be operated for periods longer than 30 seconds at a time. An interval of at least two minutes should be allowed between such cranking periods to protect the starter from overheating and burn-out.

5. Perform test to make sure safety start interlock system is operating properly. Refer to Safety start interlock system section.
6. As soon as engine begins to run, check to make certain the oil warning light is off. If not, stop engine immediately and check for the cause.
7. Allow the engine to idle a few minutes before advancing the throttle and/or engaging the deck clutch.
8. Before stopping the engine, place the control levers in the brake position, disengage the deck clutch, and throttle back to low idle for a couple of minutes; then rotate ignition key counter-clockwise to the OFF position. Remove the key from switch before leaving the seat.



**Bypass Valve**

**Bypass Valve Figure 2-8**

**! WARNING!**

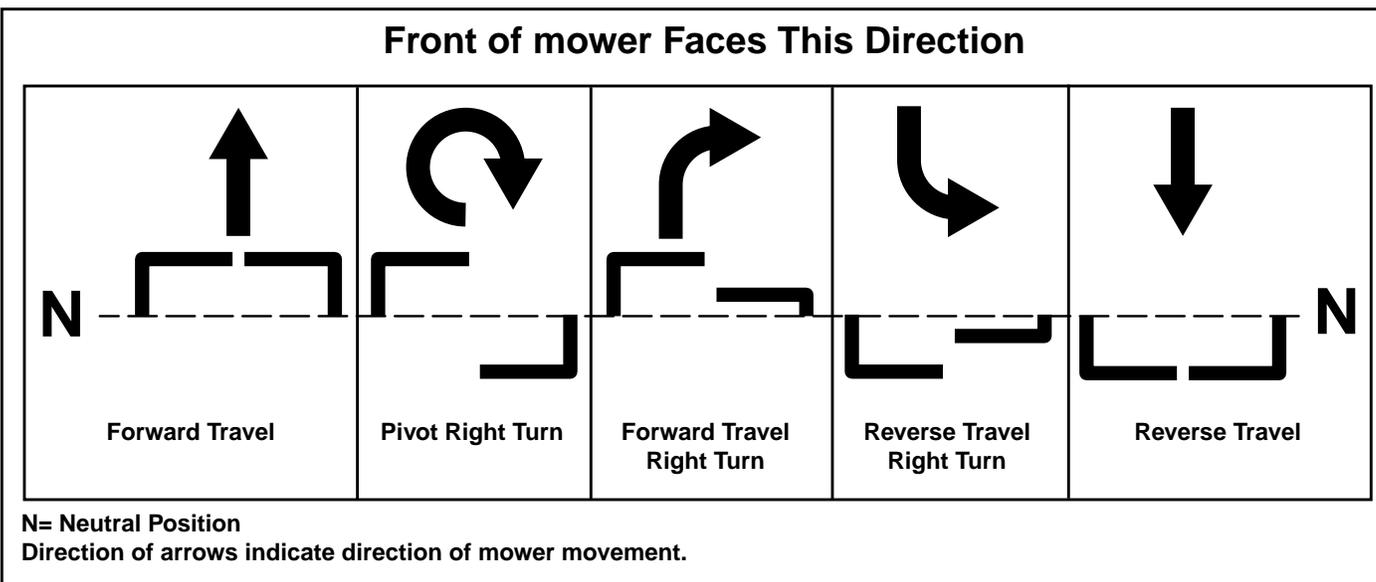
*Never leave the machine unattended with key in ignition switch.*

**Moving Mower with Stalled Engine**

If it becomes necessary to move the mower when the engine is inoperative, the hydraulic pumps are equipped with bypass valves. Before moving the unit, turn bypass valves counter clockwise one-half to one revolution. The valve stems on each hydraulic pump are located near the top and are identified as a hex stud. Refer to Figure 2-8.

Do not tow the machine. Move it by hand or use a winch to load on a trailer for transporting.

**IMPORTANT:** Always make certain the two bypass valves are returned to their operating position before running the mower following repairs.



**Steering Figure 2-9**

## Section 2 Operation

### Driving the Mower

#### **DANGER!**

*Never make sudden stops or reverse direction, especially when going down a slope. The steering is designed for sensitive response. Rapid movement of the control levers in either direction could result in a reaction of the mower that can cause serious injury.*

#### Steering

##### **Refer to Figure 2-9:**

After starting engine, engage the control levers and steer as follows:

To Go Forward:

Push control levers forward an equal distance.

To Go in Reverse:

Pull control levers rearward an equal distance.

To Turn Left:

Move the right control lever farther forward from neutral than the left control lever.

To Turn Right:

Move the left control lever farther forward from neutral than the right control lever.

To Pivot Turn:

Move one control lever forward and the other control lever back of neutral, this will allow the drive wheels to counter-rotate.

#### To Stop or Decrease Speed

#### **WARNING!**

*In the event of a system failure while mowing, engage both parking brakes to stop or slow mower. Refer to Figure 2-4.*

Move control levers to neutral. When going forward pull back gently on control levers. When going in reverse push forward gently on control levers.

#### **DANGER!**

*When going in reverse push forward gently on control levers and avoid sudden movement. Any sudden movement could cause the front of the mower to come off of the ground resulting in possible loss of control.*

#### To Increase Speed

Increase control levers equal distance from neutral. The farther forward control levers are from neutral, the faster mower will travel forward. The farther back control levers are from neutral, the faster mower will go in reverse.

### Operating Suggestions

#### **DANGER!**

*Prior to operating the mower the operator should be thoroughly familiar with the proper use and operation of the equipment, should read the manual completely and thoroughly, and should have attempted slow moving maneuvers to become familiar with the operation of the equipment before attempting normal speed operation. An inexperienced operator should not mow on slopes or on uneven terrain.*

#### **WARNING!**

*The mower's control levers are very responsive: Easy does it! For smooth operation, move lever slowly, avoid sudden movement. Skill and ease of operation come with practice and experience.*

Inexperienced operators may have a tendency to over-steer and lose control. Slow-moving practice maneuvers are recommended to become familiar with these characteristics before attempting normal speed operation.

#### **WARNING!**

*Sharp depressions or raised obstacles (such as gutters or curbs) should not be directly approached at high speed in an attempt to jump them as the operator could be thrown from the equipment. Approach at a slow speed and angle one drive wheel at the obstruction. Continue at an angle until the wheel clears and then pivot the opposite wheel around.*

When turning on soft wet turf, keep both wheels rolling either forward or backward. Pivoting on one stopped wheel can damage turf. This is especially important when mowing.

Peak mowing performance is maintained when the throttle is set at full rpm. This gives maximum power to the drive wheels and deck when needed. Use the control levers to control ground speed rather than engine rpm.

#### **WARNING!**

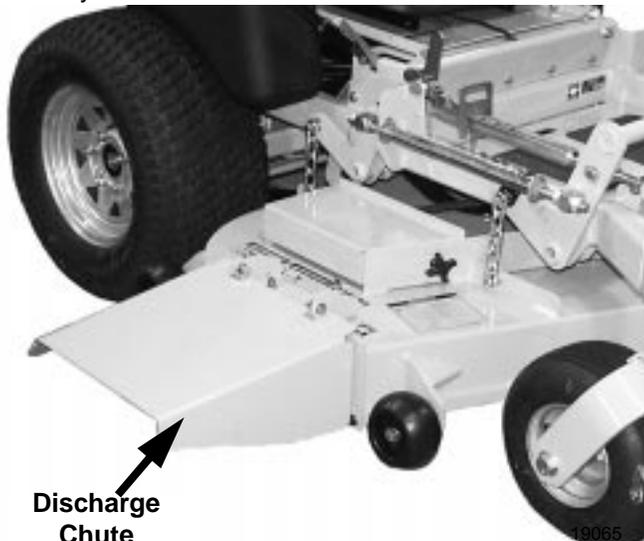
*Do not operate the equipment while wearing sandals, tennis shoes, sneakers, shorts or any type of loose fitting clothing. Always wear long pants, safety glasses and safety shoes when operating this machine.*

**Keep blades sharp.** Many professional mowing companies have additional sets of blades and change blades twice a day: once in the morning and again at noon. Many problems with incorrect cutting patterns are due to dull blades or blades which have been sharpened incorrectly. Information on sharpening blades is listed in this manual's maintenance section. In addition, most communities have individuals or companies which specialize in sharpening mower blades. Blade sharpness should be checked daily.

## Section 2 Operation

**Use high blade speed.** Your Accu Z is designed to operate at full throttle. The throttle setting directly controls blade speed. The highest blade speed generally gives the best cut.

**Direct grass discharge to right, away from unmown area.** Select a mowing pattern that directs grass discharge towards the outside, not towards center, of mowing area. Generally, this means using a pattern utilizing left turns because side discharge is to right. Refer to Figure 2-10. In any case, avoid throwing grass discharge onto unmowed area because grass is then mowed twice. Mowing twice puts an unnecessary load on the unit and reduces mowing efficiency.



Discharge Chute  
Figure 2-10

### **! WARNING!**

*Never direct discharge of material from mower deck towards bystanders.*

### **! WARNING!**

*Never operate the mower deck with discharge chute removed or in raised position.*

### **! WARNING!**

*Always check area to be mowed for rocks and other debris before mowing.*

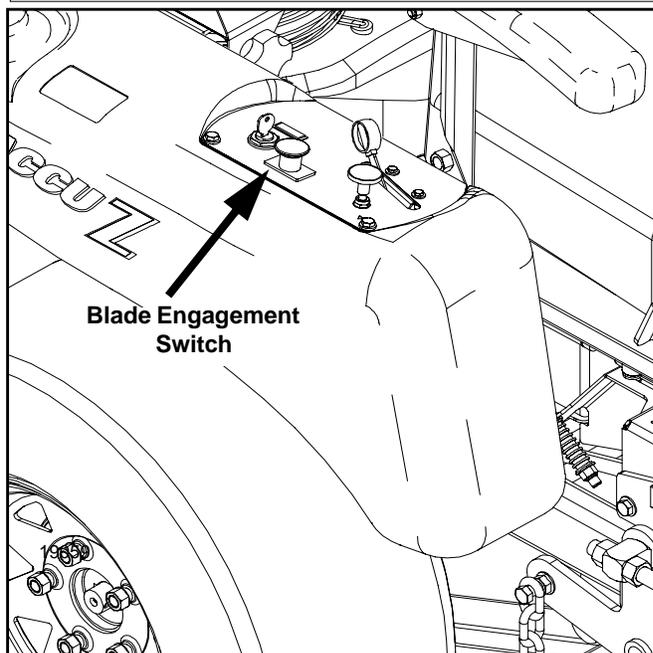
## Mower Deck Operation

### **! DANGER!**

*Never attempt to make any adjustments to the mower deck while the engine is running or with the blade engagement switch engaged. Mower blades cannot be seen and are located very close to deck housing. Fingers and toes can be cut off instantly.*

With the engine running, engage the blade engagement switch (Refer to Figure 2-11) and advance engine throttle to full rpm.

**NOTE:** Engaging the blade engagement switch at high engine rpm or when under heavy load (in tall grass for example) can cause belts to slip, resulting in premature wear or possible damage.



Blade Engagement Switch  
Figure 2-11

## Section 2 Operation

---

### Operating Instructions

After thoroughly familiarizing yourself with the Operator's Manual and completing the Operator's Checklist, you are almost ready to begin mowing.

Approach the mower from the front and make sure the steering levers are spread fully apart in parking brake position. Stand just to the outside rear of the left front anti-scalp wheel and grab the left side steering lever for support. Taking care not to step on the mower deck, step up onto the operator's platform and comfortably seat yourself. With both steering levers still wide apart, reach for the throttle and choke control to your right side.

Position the throttle control at half throttle and pull the choke to the "up/on" position. Insert your ignition key and rotate the ignition key clockwise until you hear the engine begin to start. Release the ignition key and push the choke to "down/off" position. Allow the engine to warm up momentarily. If your mower has just been running and the engine is already warm, using the choke is usually not necessary.

With the engine at half throttle, reach forward and bring both steering levers equally together in the neutral position just in front of you. It's now time to test your steering skills. Gently push both steering levers equally forward. The farther forward you push the levers, the faster you will go. Pull back equally and you will slow down, coming to a stop when you reach the neutral position. Now slowly pull the levers back toward your body past neutral position. The mower will reverse direction and increase in speed as you pull further back.

If you push one lever forward and pull one lever back the mower will do a zero turn in the direction of the steering lever closest to your body. Now take a few moments in a safe area to practice maneuvering and steering your mower with the engine still at half throttle. Gradually increase your throttle speed until you feel totally confident of your mower steering and handling ability around obstacles and in tight areas.

It's now time to cut the grass. You should have already removed any obstacles from the lawn that you do not want run over. With your mower at half throttle, place your right foot on the deck lift pedal and release and lower the deck to your preset cutting height. With your right hand, pull up on the cutting blade engagement knob and increase the engine speed to full throttle. You may now begin mowing.

When you are done mowing or just want to take a break, make sure you do all of the following. Park on level ground, disengage the cutting blade, throttle back, leave the steering levers in wide-open parking brake position, turn the engine off, remove the key, and step carefully off the left front corner of the operator's platform.

If your mower is equipped with the Accu-Vac Collection System and you need to empty the clipping containers, it is not necessary to shut the engine off. You must, however, disengage the cutting blade and spread the steering levers into parking brake position before you dismount or the unit will shut off automatically when you lift off of the seat. Simply reverse this process when you are ready to continue mowing.

## Section 3 Adjustments

### **WARNING!**

Unless specifically required, **DO NOT** have engine running when servicing or making adjustments to the mower. Place control levers in the park brake position and remove ignition switch key. Repairs or maintenance requiring engine power should be performed by trained personnel only. To prevent carbon monoxide poisoning, be sure proper ventilation is available when engine must be operated in an enclosed area. Read and observe safety warnings in front of manual.

Your Accu Z was adjusted before it left the factory and was checked during pre-delivery setup. However, after start-up and continued use, a certain amount of break-in wear will cause some adjustments to change.

Remain alert for unusual noises, they could be signaling a problem. Visually inspect the machine for any abnormal wear or damage. A good time to detect potential problems is while performing scheduled maintenance service. Correcting the problem as quickly as possible is the best insurance.

### **WARNING!**

Keep your machine clean and remove heavy deposits of trash and clippings, they can cause engine fires and hydraulic overheating as well as excessive belt wear.

Clear away heavy build-up of grease, oil and dirt, especially in the area of reservoir and oil and engine combustion air; minute dust particles are abrasive to close-tolerance engine and hydraulic assemblies.

Some repairs require the assistance of a trained service mechanic and should not be attempted by unskilled personnel. Consult your Land Pride service center when assistance is needed.

## Torque Values

### **WARNING!**

Particular attention must be given to tightening the drive wheel lug nuts and wheel motor nuts. Failure to correctly torque these items may result in the loss of a wheel, which can cause serious damage or personal injury.

Refer to “**Torque Values**” on page 32.

It is recommended that the following be checked after the first 2 hours of initial operation, initially and every 50 hours following removal for repair or replacement.

Wheel lug nuts

Wheel motor nut

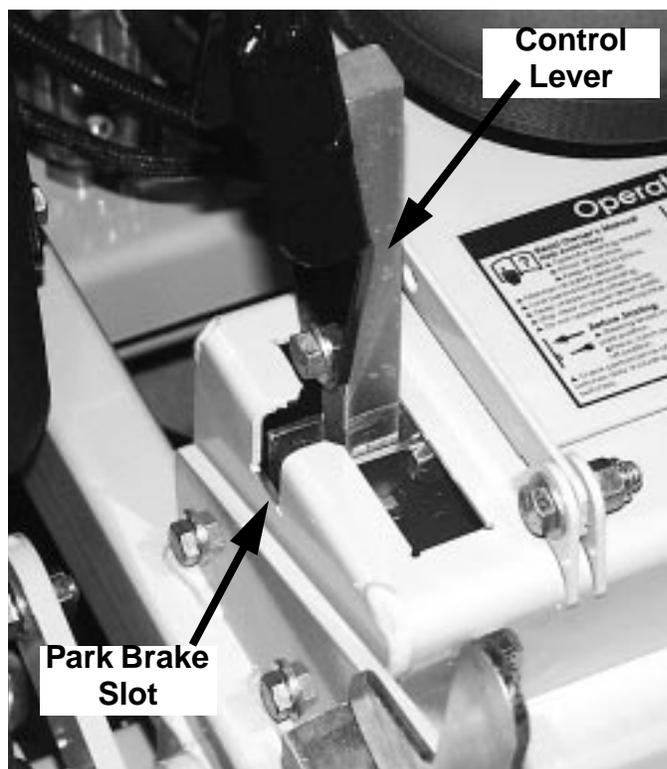
Blade spindle bolts (top and bottom)

For engine torque values, see engine owner’s manual.

## Steering Linkage

The neutral adjustment for the control levers in the neutral position is discussed in this section.

The steering has been factory adjusted to eliminate creeping when the control levers are in the neutral position (Refer to Figure 3-1).



19078

**Control Lever In Neutral Position**  
**Figure 3-1**

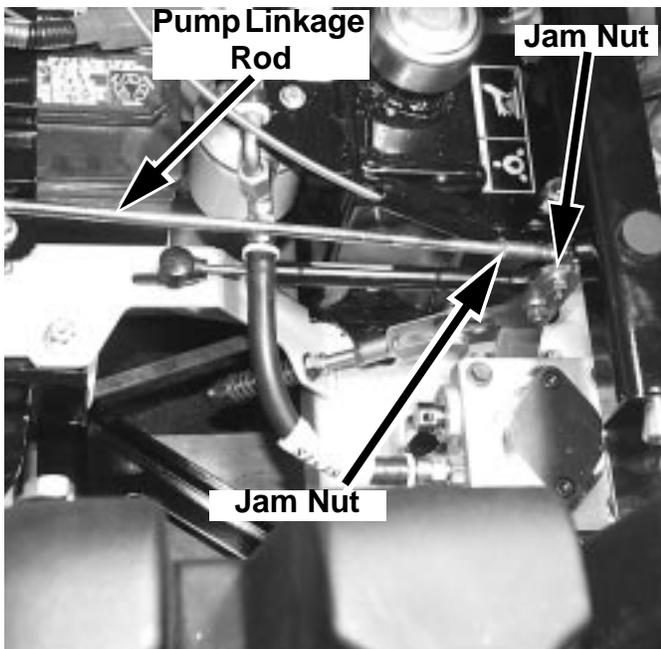
However, should the mower begin to creep, adjustments can be made as outlined on the following page.

## Section 3 Adjustments

### Control Lever Neutral Adjustment

Before considering any adjustment, check the tire air pressure and make certain hydraulic system oil is at operating temperature. Unequal tire pressure will cause the mower to drift to one side. Refer to “**Tire Inflation Chart**” on page 44.

Fine adjustment to the steering is made with the adjustable pump linkage rods located between the control lever and pump arms. Refer to Figure 3-2.



Fine Adjustments to Steering  
Figure 3-2

Neutral is properly adjusted when the control levers are in the neutral position and the drive wheels are not turning.

If the mower creeps in the neutral position the control linkage may be adjusted as follows:

1. Raise and block the mower up so the drive wheels are off of the floor.



### WARNING!

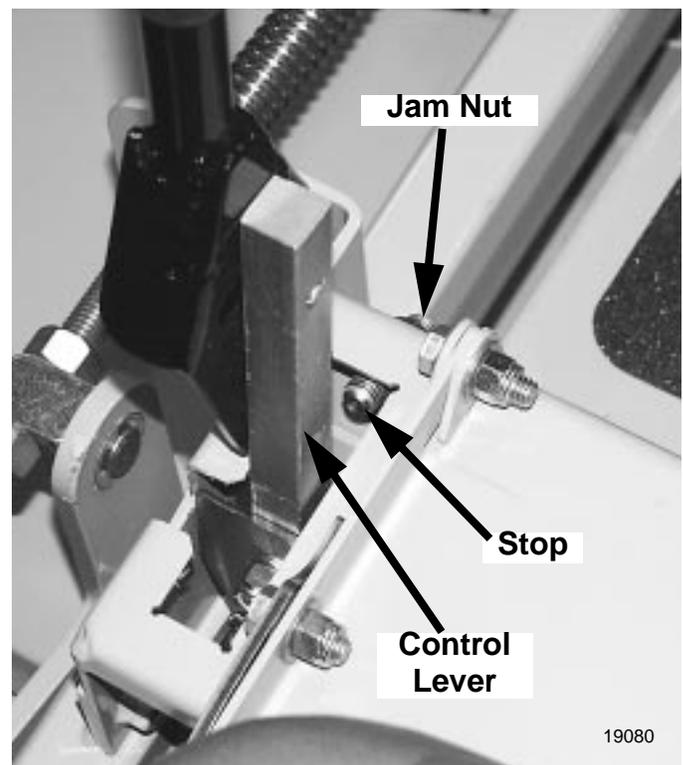
*Make certain mower is secure when it is raised and placed on the jack stands. The jack stands should not allow the mower to move when the engine is running and the drive wheels are rotating. Use only certified jack stands.*

2. Position the control levers in the neutral position. Disengage the deck clutch.
3. Start the engine and observe which way the wheels are rotating.

4. If wheel(s) are rotating forward, loosen the jam nuts on the pump linkage rods and rotate the rod to lengthen the steering control linkage until the wheel(s) come to a stop. Refer to Figure 3-2. Repeat for the opposite side if necessary.

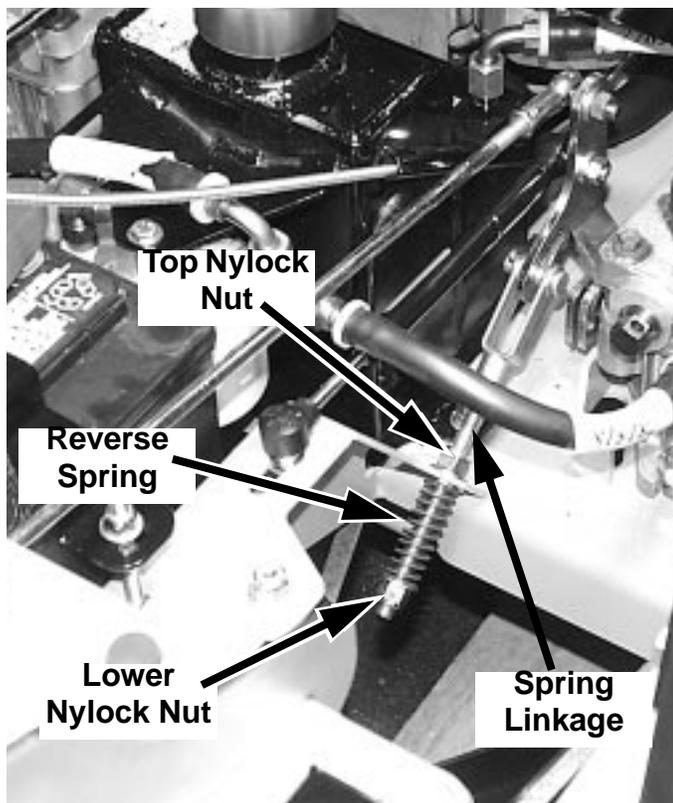
NOTE: The left linkage controls the right hydraulic pump and the right linkage controls the left hydraulic pump.

5. If wheel(s) are rotating in reverse then loosen the jam nuts on the pump linkage rods and rotate the rod to shorten the steering control linkage until the wheel(s) come to a stop. Refer to Figure 3-2. Repeat for the opposite side if necessary.
6. When both wheels remain in neutral, tighten the jam nuts to lock the turnbuckle in place.
7. Test again by moving the control levers forward and backward before returning them to the neutral position. If the tires are in neutral, the unit is now ready for operation.
8. After adjusting for neutral it may be necessary to re-adjust the reverse spring and/or the control lever stop Refer to Figure 3-3 and Figure 3-4.



Control Lever Stop  
Figure 3-3

## Section 3 Adjustments



Reverse Spring  
Figure 3-4

19081

### Control Lever Stops

The control lever stops (Figure 3-3) are designed to do two things: First, and most important, they must keep the pumps from bottoming out internally. Second, the stops may be adjusted to help drive straight when the control levers are pushed forward against the stops.

To keep the pumps from bottoming out internally use the following procedure:

1. To make the first adjustment the mower engine must NOT be running.
2. Check to make sure the control levers are against the stops before the pumps are bottomed out internally. To do this, gently and slowly move the control levers forward and feel if there is some resistance on the pump lever before the control levers hit the stops. Check one side at a time. If you sense that the pump

arms are stopping the forward motion of the control arms, loosen the jam nut on the adjustable stop of the corresponding side and turn the stop (set screw) inward to stop the control levers slightly before the pump bottoms out. Lock in place when the adjustment is correct by re-tightening the jam nut.

3. Do this for each side.

To adjust the stops for driving straight when control levers are against the stops during operation:

Determine which drive tire is rotating too fast when both control levers are against the stops. Then stop the mower and loosen the lock nut on the side which is rotating too fast and turn the stop (set screw) inward to stop the control lever sooner. Tighten the lock nut on the stop and test again. Repeat this procedure until unit drives straight.

NOTE: Since this is a hydrostatic drive, variables such as temperature of oil, efficiency of pumps and motors, tire pressure etc., may effect the consistency of the ability to rely on the stops to drive straight without the operator making minor steering adjustments with the control arms.

### Reverse Spring Adjustment

Refer to Figure 3-4:

The reverse spring is designed to bring the control levers to the neutral position after they are released from the reverse position.

To adjust:

1. Make certain the control lever neutral adjustment is correct. If not, refer to Steering Linkage section.
2. When control lever is in the reverse position the spring should force the control lever to return to neutral after the lever is released.
3. Adjust the top nylock nut on the spring linkage until the control lever returns to the neutral position from the reverse position properly. Tightening the nylock nut will cause the control lever to travel forward less before stopping. Loosening the nylock nut will allow the control lever to travel farther forward.
4. Check the length of the reverse spring when the control lever is in the neutral position. This dimension should be 1 7/8". If it is not, adjust the lower nylock nut until the dimension is achieved.
5. Repeat for other side.

## Section 3 Adjustments

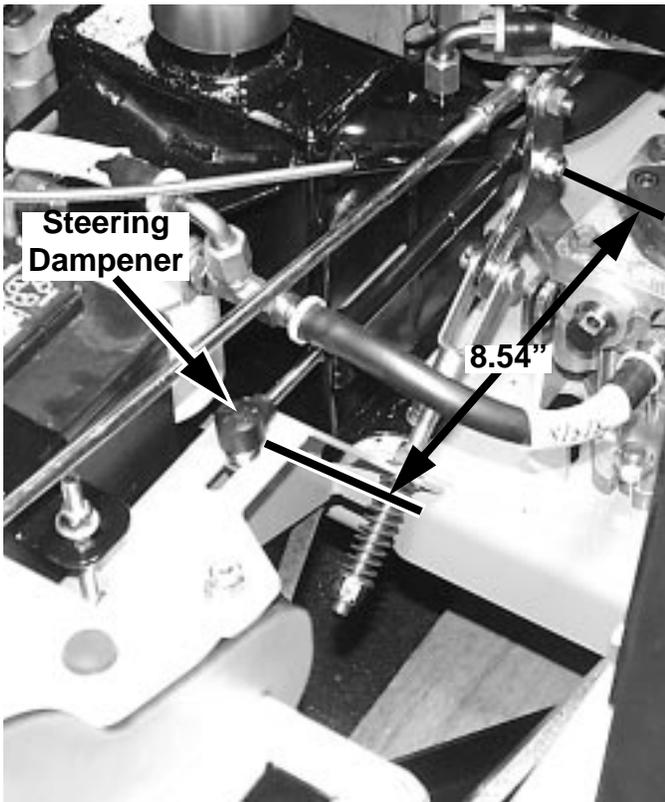
### Steering Dampener

Refer to Figure 3-5:

The steering dampeners are incorporated into the unit to provide some resistance when the control levers are moving forward or rearward. To set the steering dampeners in the correct operating position follow these steps:

1. Place the control lever in the neutral position.
2. Check the center distance from the dampeners front mounting hole to the rear mounting hole. This dimension should be 8 9/16". If it is not, loosen the front attaching bolt and slide the dampener in the mounting slot until this dimension is attained. Re-tighten front attaching bolt.

NOTE: The dampener must not bottom out when the pump lever is fully stroked in either direction.



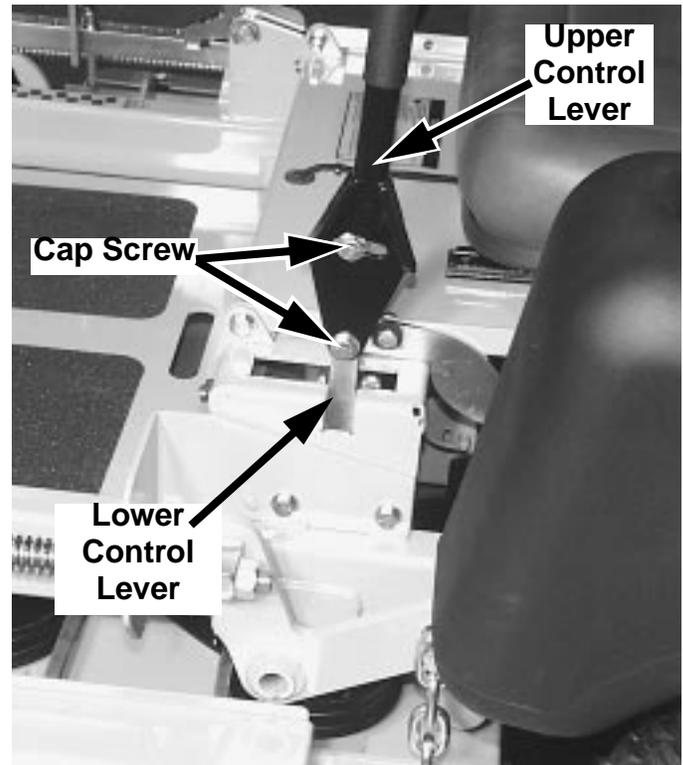
Steering Dampener Adjustment  
Figure 3-5

19081

### Control Lever Adjustment

The control levers can be adjusted for operator comfort. By loosening the cap screws that attach the upper control lever to the lower lever (Fig. 5-6), the upper control lever can be pivoted to fit the operator's personal preference.

The control levers should be adjusted so that they align with each other when in the neutral position.



Control Lever Adjustment  
Figure 3-6

19082

### Park Brake Adjustment

Occasionally check the park brakes and adjustment using the following method:

1. Position the control levers in the neutral position. Disengage the deck clutch.

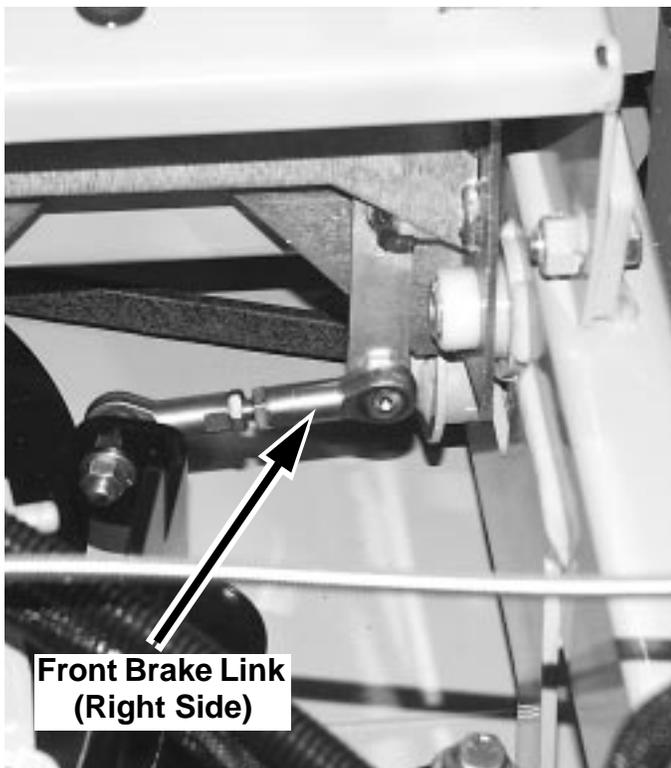


#### WARNING!

Make certain mower is secure when it is raised and placed on the jack stands. The jack stands should not allow the mower to move when the engine is running and the drive wheels are rotating. Use only certified jack stands.

NOTE: The front brake link is not adjustable. Refer to Figure 3-7.

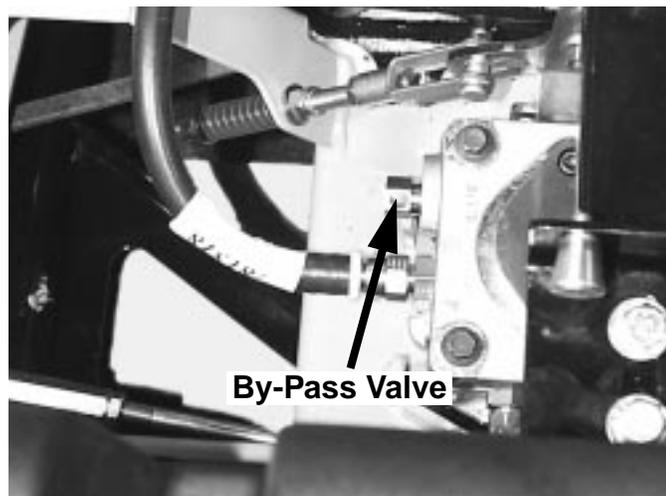
**Section 3 Adjustments**



**Front Brake Link  
(Right Side)**

**Front Brake Link** 19083  
**Figure 3-7**

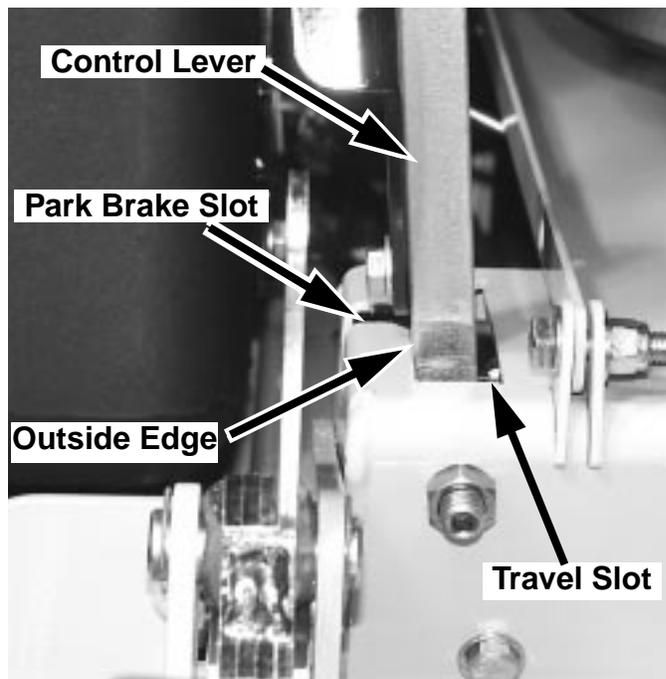
2. Raise and block the mower up so the drive wheels are off of the floor.
3. Open the hydraulic pump's bypass valve (Refer to Figure 3-8) on the side that is being adjusted, by turning bypass valve counter clockwise one-half to one revolution. The valve stems on each hydraulic pump are located near the top and are identified as a hex stud.



**By-Pass Valve**

**By-Pass Valve**  
**Figure 3-8**

4. Rotate the tire. The tire should rotate. Remember hydraulic oil resistance will prevent the tire from rotating freely even with the bypass valves open. There should be no resistance from the brakes at this point.
5. Move the control lever to where it is touching the outside edge of the lever's travel slot. Refer to Figure 3-9.



**Control Lever**

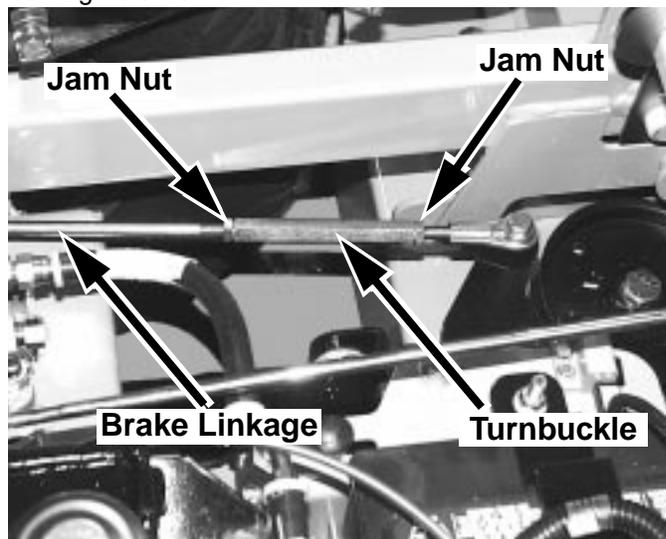
**Park Brake Slot**

**Outside Edge**

**Travel Slot**

**Control Lever Touching Edge** 19084  
**Figure 3-9**

6. Rotate the tire. If the brake is adjusted properly the tire will still rotate but friction will start to become noticeable here. However, if no brake resistance is noticed, the brake needs adjusted as follows:
7. Loosen the brake linkage jam nuts. Refer to Figure 3-10.



**Jam Nut**

**Jam Nut**

**Brake Linkage**

**Turnbuckle**

**Loosen Brake Linkage Jam Nut** 19085  
**Figure 3-10**

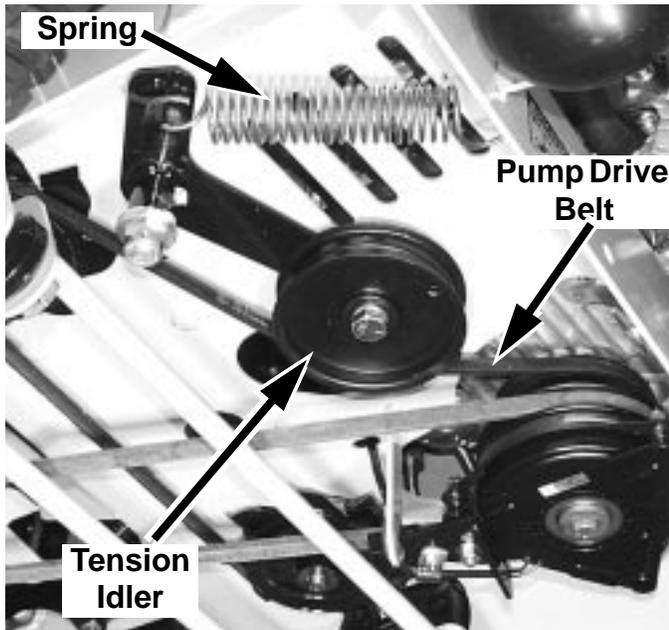
### Section 3 Adjustments

8. Rotate the tire and at the same time rotate the turnbuckle to shorten the length of the brake linkage to increase the brake pressure. When you feel the brake begin to engage, stop adjusting the turnbuckle. Retighten the jam nuts on the turnbuckle.
9. Place the control lever in the park brake slot. Refer to Figure 3-9. The tire should not rotate when the control lever is in the park brake position.
10. Place the control lever in the neutral position. The tire should rotate freely.
11. Close the hydraulic pump's bypass valve.
12. Repeat steps 3 thru 11 for the other side.
13. Remove from the jack stands and lower the unit. It is now ready to operate.

### Hydraulic Pump Belt Adjustment

Refer to Figure 3-11.

The pump drive belt tension remains constant by means of a tension idler and spring. There is no tension adjustment of this belt.



Pump Belt Adjustment  
Figure 3-11  
19086

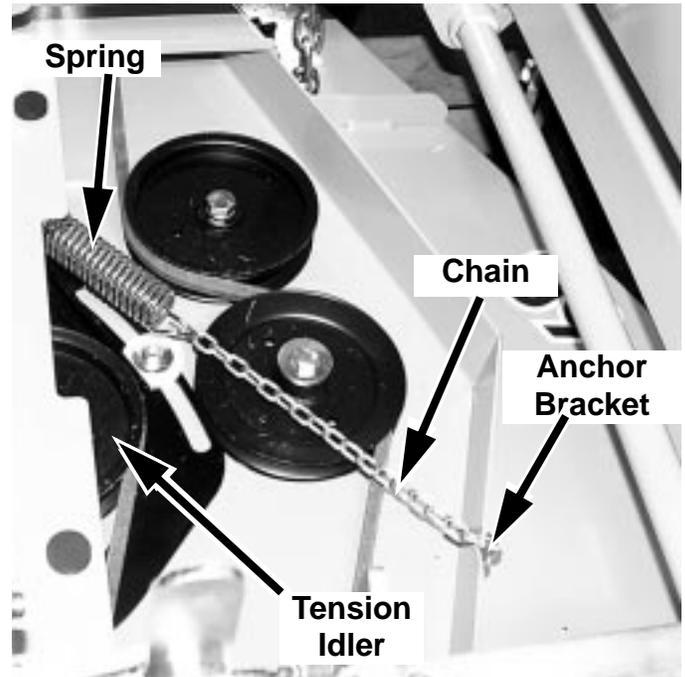
### Deck Drive Belt Adjustment

Refer to Figure 3-12:

The spindle belt tension remains constant by means of a tension idler and spring.

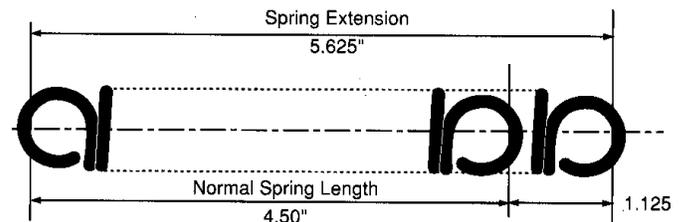
The spring tension should be such that the belt does not slip under normal operating load conditions, assuming the belt is not excessively worn or damaged. As belt stretches and wears in, adjustment may become necessary. To increase belt tension, move the spring chain one (or more)

link(s) at the anchor bracket (Figure 3-12). Installed spring length should be 9" + or - 3/8" originally with adjustments of 5/8" per chain link.



Drive Belt Adjustment  
Figure 3-12  
19087

**IMPORTANT:** Do not over tension the spring to compensate for a badly worn belt or pulley.



Spring Tension  
Figure 3-13  
19091

### Engine RPM Setting

The Accu Z is designed so that the engine will run at 3600 rpm static pump load only. At this speed the hydraulic pumps are running at their maximum rated speed.

### Deck Leveling and Height Adjustment

The mower deck has three areas that may need to be checked and adjusted periodically. Before considering any mower deck leveling adjustments, check that the tire air pressure is within the specified range.

## Section 3 Adjustments

### Deck Level Adjustments

Leveling the deck must be done in the following manner and order:

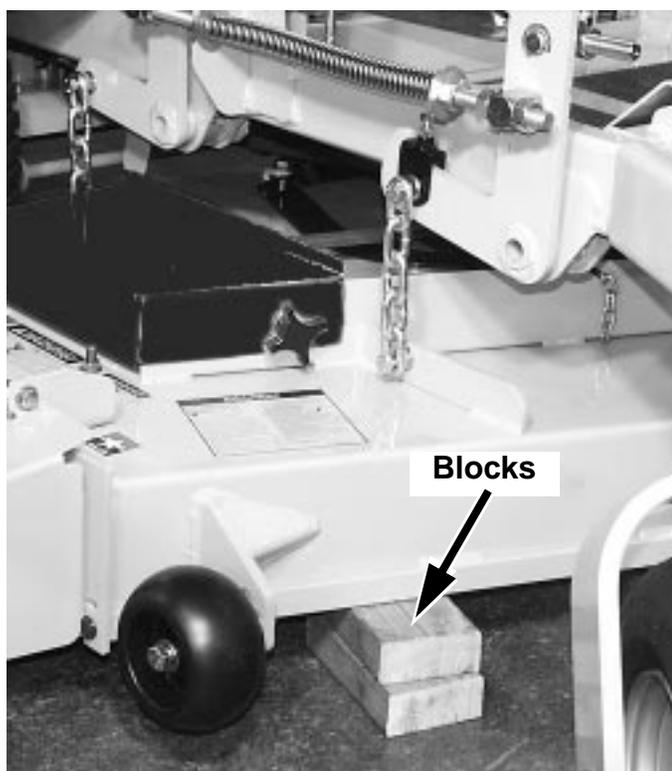
1. Check tire pressures to make certain they are properly inflated before starting to level deck. See "Tire Inflation Chart" page 44.

### **WARNING!**

*Stop engine. Make sure deck clutch switch is in the down (OFF) position. Place control levers in the brake position before leaving machine.*

2. Park the unit on a flat surface.
3. Raise deck and place 3" of blocking under all 4 corners of the deck. This will set the cutting height at 3". Refer to Figure 3-14.

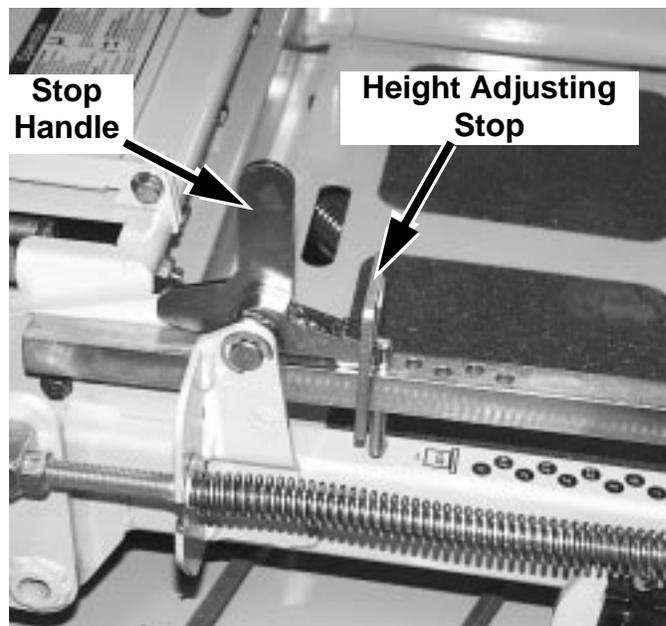
NOTE: Back of deck will automatically be set 1/4" higher.



Blocking up Deck  
Figure 3-14

19088

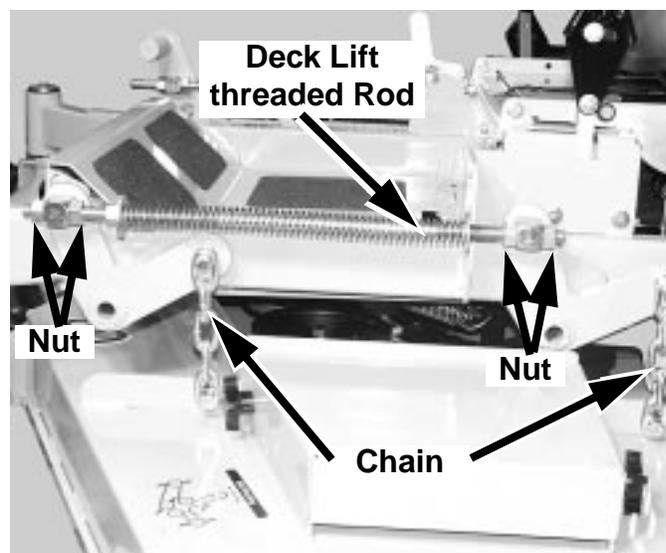
4. Set cutting height at 3" on the height indicator by placing the height adjusting stop in the 3" hole, and turning the height stop so that the flat side is against the stop handle. Refer to Figure Figure 3-15.



Cutting Height  
Figure 3-15

19089

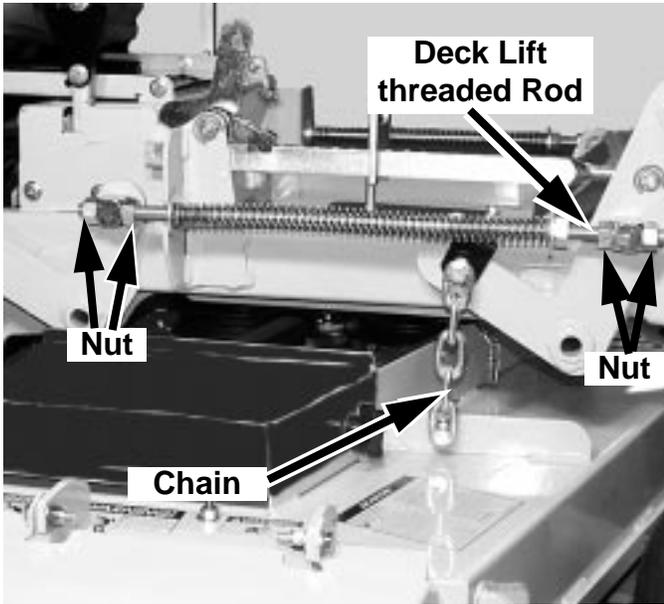
5. Clamp the height adjusting stop against the stop handle (Figure 3-15). This will assure that the height will not move during the setting process. Otherwise, spring pressure from the deck lift springs will tend to pull the stop away from the handle.
6. Refer to Figure 3-16, Figure 3-17 & Figure 3-18. Loosen all nuts on the deck lift threaded rods, and the hardware on the adjuster (on the right front), until all the deck lift chains are loose, and the deck is sitting tightly on all four blocks.



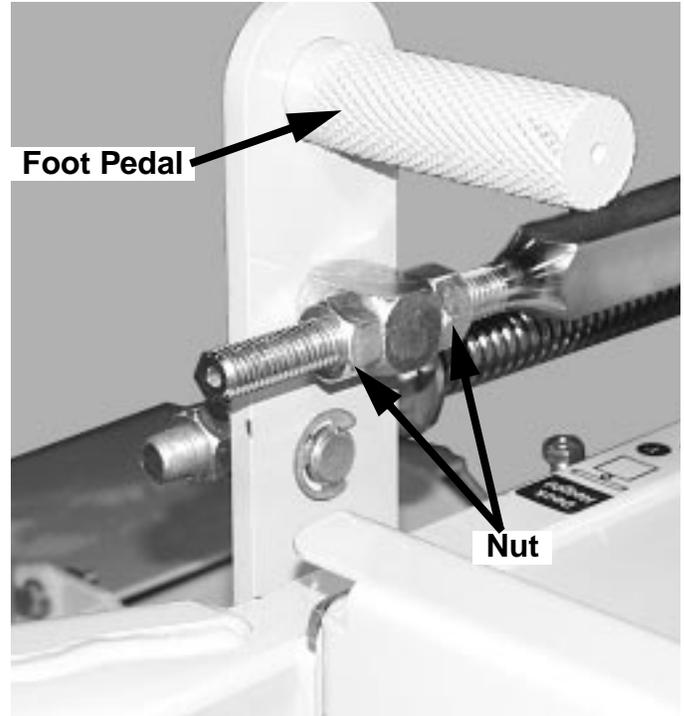
Deck Level Adjustment  
Figure 3-16

19090

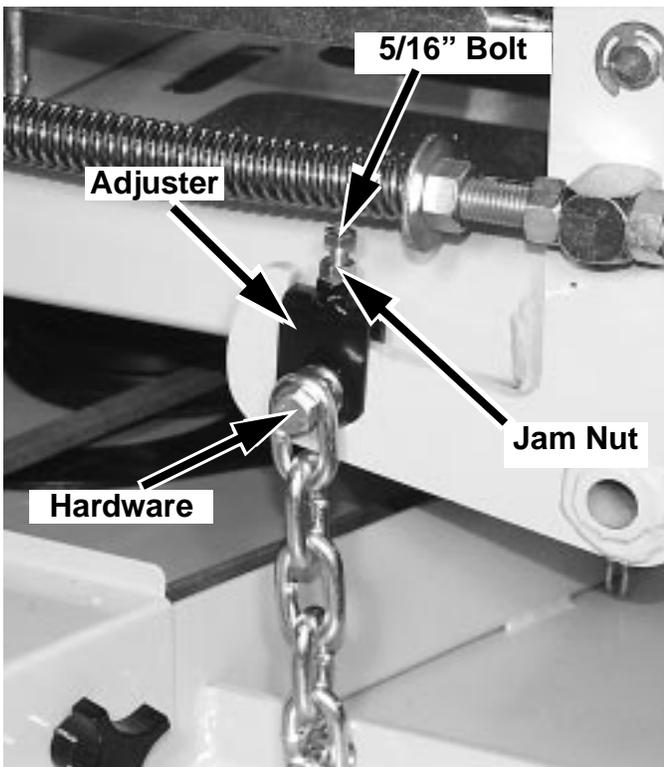
**Section 3 Adjustments**



**Deck Level Adjustment** 19092  
Figure 3-17

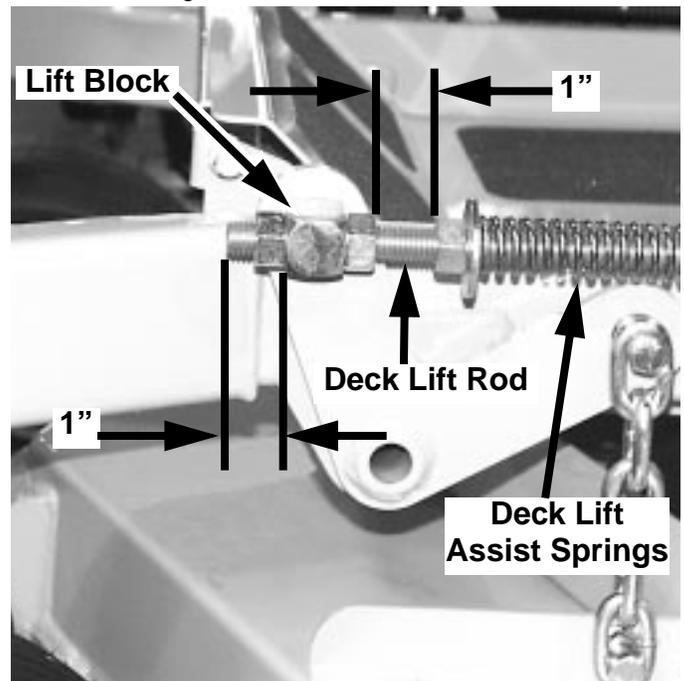


**Deck Level Adjustment Foot Pedal** 19094  
Figure 3-19



**Deck Level Adjustment** 19093  
Figure 3-18

8. Start the leveling process on the left front of the mower.
9. Set the amount of threads protruding on the deck lift rod from the lift block at approximately 1". Refer to Figure 3-20.



**Left Rod Protruding Threads** 19095  
Figure 3-20

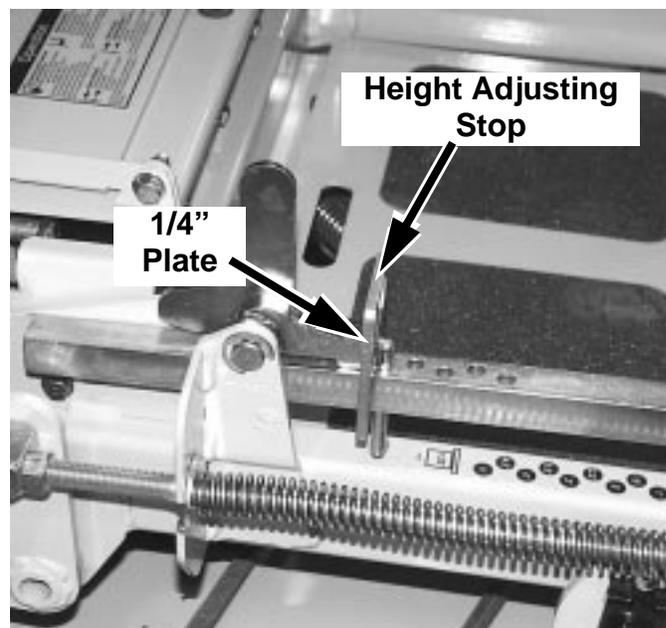
7. Loosen the two nuts on the front of height indicator so that the foot pedal is free. Refer to Figure 3-19.

## Section 3 Adjustments

10. Jam both nuts against the block.
11. Push or pull on the deck lift foot pedal until the chain on the left front just becomes tight, making sure that the deck stays tight against the 3" block.
12. While keeping the chain tight, tighten the nuts against the deck lift block on the height indicator rod. See Figure 3-19.
13. Go to the right front of the mower.
14. Loosen the 5/16" jam nut on the adjuster lift chain (Figure 3-18), and back the adjuster bolt out to allow the adjuster to move up and down freely.
15. Be sure that adjuster is free to move up and down.
16. Tighten the adjuster bolt until the chain just becomes tight, making sure that the deck stays tight against the 3" block.
17. Tighten the adjuster bolt jam nut to prevent the adjuster bolt from moving. See Figure 3-18.
18. Tighten the hardware holding the chain and adjuster onto the deck lift arm.
19. Go to the right rear of the mower.
20. Make sure that there is still slack in the chain. If not, loosen the two nuts on the block holding the threaded rod until there is slack in the deck lift chain. See Figure 3-17.
21. Tighten the appropriate nut until the chain just becomes tight, making sure that the deck stays tight against the 3" block.
22. Tighten the other nut on the opposite side of the block, and jam them tightly together against the block.
23. Go to the left rear of the mower.
24. Make sure that there is still slack in the chain. If not, loosen the two nuts on the block holding the threaded rod until there is slack in the deck lift chain. See Figure 3-16.
25. Tighten the appropriate nut until the chain just becomes tight.
26. Tighten the other nut on the opposite side of the block, and jam them tightly together against the block.
27. Compress the deck lift assist springs so that there is 1" of space between the front nut and on the spring and the rear nut on the deck lift block (Figure 3-20). Typical both sides.
28. When completed, all chains will be tight, and deck cutting height will be set to the deck height indicator.

## Deck Cutting Height Adjustment

Deck height is adjustable from 1" to 5" in 1/4" increments. The holes in the height adjusting bar are spaced at 1/2" intervals. By turning the height adjusting stop around, 1/4" increments can be attained due to the 1/4" plate that is part of the stop. Refer to Figure 3-21.



Deck Cutting Height  
Figure 3-21

19089

**EXAMPLE:** When the height adjusting stop is placed in the 1" hole, with the 1/4" plate facing to the front of the unit, the cutting height is at 1". When the height adjusting stop is placed in the 1" hole, with the 1/4" plate on the operator's side of the hole, the cutting height is at 1 1/4".

When the height adjusting stop is placed in one of the holes, with the 1/4" plate on the operator's side of the hole, the deck height will be set at one of the following: 1 1/4", 1 3/4", 2 1/4", 2 3/4", 3 1/4", 3 3/4", 4 1/4" or 4 3/4".

When the height adjusting stop is placed in one of the holes, with the 1/4" plate facing to the front of the unit, the deck height will be set at one of the following: 1", 1 1/2", 2", 2 1/2", 3", 3 1/2", 4", 4 1/2" or 5".

The notch located at the rear of the right height adjusting bar is to be used when the deck is placed in the transport mode.

### Section 3 Adjustments

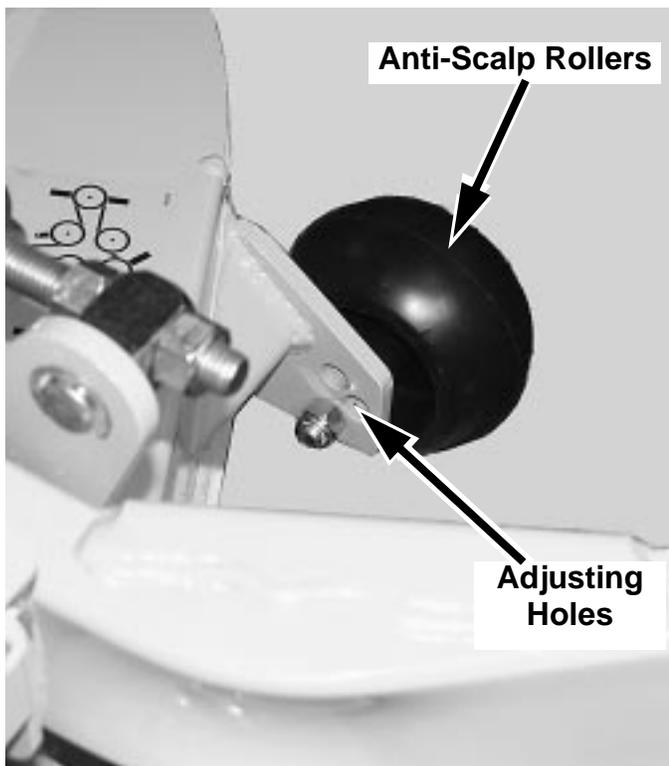
## Anti-Scalp Rollers

Anti-scalp rollers are standard on the Accu Z. These anti-scalp rollers are designed to minimize scalping when mowing on rough uneven terrain.

After setting the cutting height, adjust the front anti-scalp rollers so they extend below the deck but do not contact the ground. They should always be at least 1/4" to 3/4" below the deck. With the unit sitting on a flat level surface, the front wheel position can be adjusted up or down as needed from 3/4" to 1 3/4" below the blade surface. Move the front wheels up or down, in 1/2" increments, using the different axle mount holes in the roller mount bracket. See Figure Figure 3-22.

When adjusting the rear anti-scalp rollers, the roller should be in the lower axle mount hole when the front anti-scalp rollers are in the lower or middle axle mount holes. When the front rollers are in the upper axle mount hole, the rear rollers should be in the upper axle mount hole as well.

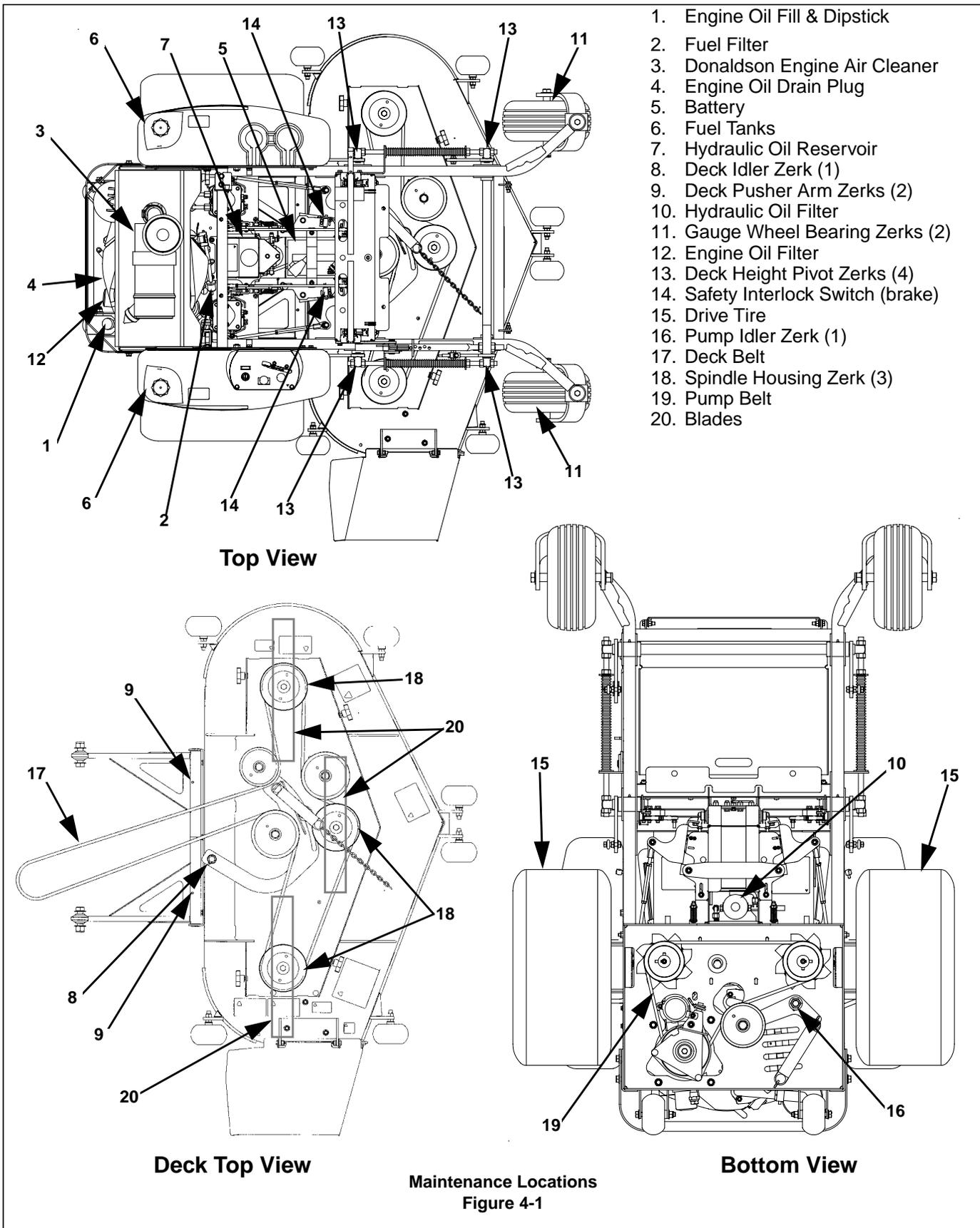
**NOTE:** When the anti-scalp rollers are installed, the minimum cutting height is 1" with the anti-scalp rollers set at 3/4".



Anti-Scalp Roller Adjustment  
Figure 3-22

19096

**Section 4 Maintenance and Lubrication**



**Section 4 Maintenance and Lubrication**

<b>Maintenance Schedule</b>			
<b>Service at Intervals Indicated</b>	<b>Weekly or 50 Hours</b>	<b>Monthly or 100 Hours</b>	<b>Annually or 500 Hours</b>
Verify Safety Start Interlock System		Daily	
Visually Inspect Unit for loose hardware and/or damaged parts		Daily	
Visually Inspect Tires		Daily	
Check Oil Level, Engine (1)		Daily or every 4 hours	
Clean Air Intake Screen		Daily or every 4 hours	
Check Fuel Level		Daily	
Blades - Sharpen & Securely Fastened		Daily	
Discharge Chute - Securely In Place & In Lowest Position		Daily	
Replace Remote Air Cleaner paper element (6)		As needed	
Grease Deck Idler	X		
Grease Deck Pusher Arms	X		
Grease Pump Idler	X		
Grease Deck Height Pivots	X		
Grease Gauge Wheel Bearings	X		
Change Engine Oil & Filter (1) (4)	X		
Clean Cylinder And Head Fins (5)	X		
Check Battery Connections	X		
Check Tire Pressure With A Gauge	X		
Check Hydraulic Oil Level	X		
Clean Engine Exterior (5)	X		
Clean And Re-gap Spark Plugs (5)		X	
Check Pump Belt and Deck Belt for Tension and Condition (7)		X	
Check Fuel And Hydraulic Lines (8)		X	
Check Fuel Valve And Grommet (8)		X	
Change Fuel Filter			X
Clean Or Replace Hydraulic Fill Cap			X
Change Hydraulic Filter And Oil (3)			X
Grease Deck Spindle Housings			X
Replace Spark Plugs			X

NOTES:

1. Initial oil change is after 5 hours of operation. Thereafter, change oil after every 40 hours of operation. Change more often under dusty or dirty conditions and during hot weather periods.
2. Torque initially and after first 2 hours of operation.
3. Perform initial hydraulic filter change after 50 hours (one week) of operation.
4. Change engine oil filter per the engine manufacturer's recommendations. Refer to Engine Owner's Manual.
5. Refer to Engine Owner's Manual.
6. Service more often under dusty or dirty conditions. Use caution when servicing to prevent dust contamination in the engine. **Do not** clean filter element. Replace with a new one.
7. **Inspect every 100 hours** and replace if worn or cracking is noticed. Otherwise, **replace every 1000 hours or 2 years** whichever comes first.
8. Check fuel line hoses, fuel valve and grommet for any cracks or leaks.

## Section 4 Maintenance and Lubrication

NOTE: After completing maintenance cycle (500 hours), repeat cycle.

### Maintenance

#### WARNING!

Unless specifically required, **DO NOT** have engine running when servicing or making adjustments to mower. Place control levers in the neutral position, disengage deck clutch, and remove ignition switch key. Repairs or maintenance requiring engine power should be performed by trained personnel only. To prevent carbon monoxide poisoning, be sure proper ventilation is available when engine must be operated in an enclosed area. Read and observe safety warnings in front of manual.

#### DANGER!

Before working on or under the deck, make certain engine cannot be accidentally started. Shut engine off and remove ignition switch key for maximum safety. Repairs or maintenance requiring engine power should be performed by trained personnel only.

#### DANGER!

Exercise caution when working under the deck as the mower blades are extremely sharp. Wearing gloves is advisable when working around or with the blades.

#### WARNING!

Except when changing or checking belt, always keep belt covers on mower for safety as well as cleanliness.

#### WARNING!

When possible, clean under mower using a stick or similar instrument making sure that no part of the body, especially arms and hands are under mower.

Regular maintenance is the best prevention for costly downtime or expensive, premature repair. The following pages contain suggested maintenance information and schedules which the operator should follow on a routine basis.

Remain alert for unusual noises, they could be signaling a problem. Visually inspect the machine for any abnormal wear or damage. A good time to detect potential problems is while performing scheduled maintenance service. Correcting the problem as quickly as possible is the best insurance.

#### WARNING!

Keep your machine clean and remove any deposits of trash and clippings, which can cause engine fires and hydraulic overheating as well as excessive belt wear.

Clear away heavy build-up of grease, oil and dirt, especially in the engine and hydraulic reservoir area; minute dust particles are abrasive to close-tolerance engine and hydraulic assemblies.

Daily inspect mower for grass clippings and wire and string tangles. The underside of the mower deck will collect a build-up of grass clippings and dirt, especially when grass is wet or has high moisture content. This build-up will harden, restricting blade and air movement and will probably show a poorer quality of cutting. Therefore it should be removed routinely.

To do this it will be necessary to raise and block the deck in the full up position and scrape the build-up from underneath.

Some repairs require the assistance of a trained service mechanic and should not be attempted by unskilled personnel. Consult your Land Pride dealer when assistance is needed.

### Torque Values

#### WARNING!

Particular attention must be given to tightening the drive wheel lug nuts, wheel motor nuts, and blade spindle nuts. Failure to correctly torque these items may result in the loss of a wheel or blade, which can cause serious damage or personal injury.

Torque Values		
	FT - lbs.	Nm
Wheel lug nuts	65 - 75	88.14 - 101.7
Wheel motor nut	350 - 375	474.6 - 508.5
Blade spindle bolts (top and bottom)	65 - 75	88.14 - 101.7

It is recommended that these be checked after the first 2 hours of initial operation and every 50 hours following removal for repair or replacement.

For all other torques refer to “**Torque Values Chart**” page 44.

For engine torque values, see engine owner’s manual.

### Tires

It is important for level mowing that the tires have the same amount of air pressure.

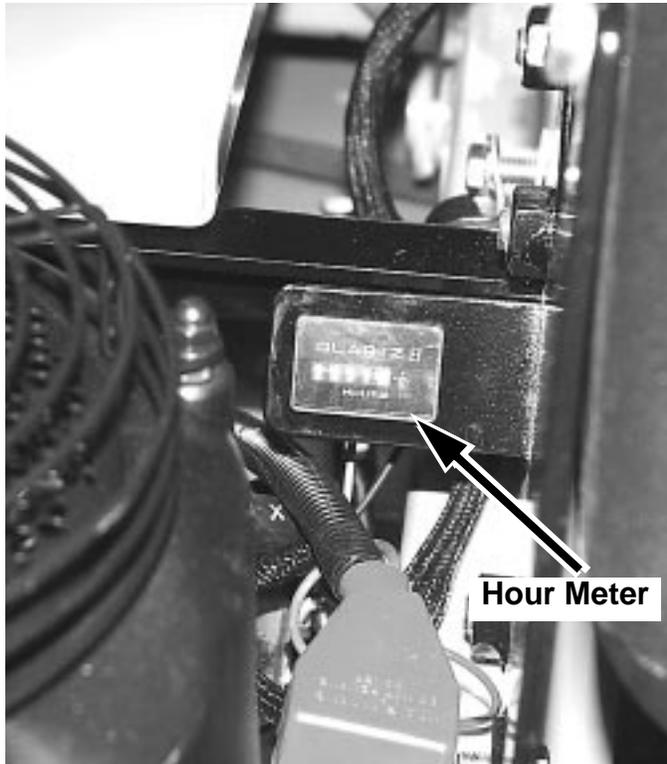
Refer to “**Tire Inflation Chart**” page 44.

Solid fill tires are not recommended for the Accu Z mower. On any machine, with solid filled tires, the warranty claim will be denied.

## Section 4 Maintenance and Lubrication

### Hour Meter

To recognize when your machine needs servicing, check the hour meter and the maintenance schedule. The hour meter shows the number of hours the engine has run and the maintenance schedule lists the service intervals. See Figure 4-2.



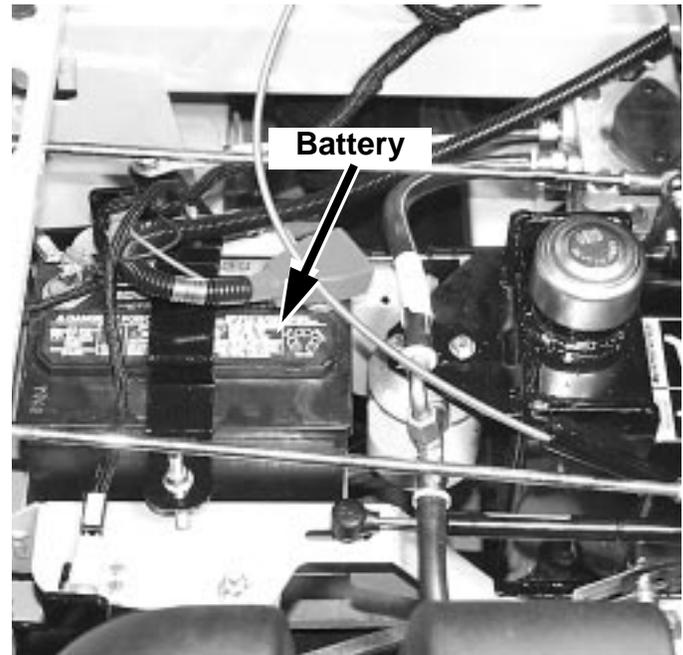
Hour Meter  
Figure 4-2

19062

### Electrical System

The electrical system is a 12 volt, negative ground. Recommended battery size is a garden mower BCI group U1R with 225 or better cranking AMP rating. A maintenance-free battery is recommended. Otherwise, follow battery manufacturer's maintenance, safety, storing and charging specifications.

The battery is located under the seat. See Figure 4-3.



Battery  
Figure 4-3

19069

### Lubrication

- Grease the front gauge wheel bearings per the Maintenance Schedule. Use SAE multi-purpose grease.
- Grease the four deck lift pivots, located to the side of the operator's footrest per the Maintenance Schedule. Use SAE multi-purpose grease.
- Grease the deck idler per the Maintenance Schedule. Use SAE multi-purpose grease.
- Grease the pump idler per the Maintenance Schedule. Use SAE multi-purpose grease.
- Grease the two deck pusher arm pivots per the Maintenance Schedule. Use SAE multi-purpose grease.
- Grease the blade spindle assemblies per the Maintenance Schedule. Each spindle shaft is equipped with a grease zerk located under the deck. Use no more than one or two ounces of SAE multi-purpose grease, (1 to 2 pumps on an average grease gun). Do not force lubricant into grease zerks. Bearings are sealed and do not require much lubricant.

### WARNING!

*Avoid skin contact with battery acid. Always wear eye protection when checking the battery, acid can cause serious injury to skin and eyes. If contact occurs, flush area with clean water and call physician immediately. Acid will also damage clothing. Do not allow open flame near the battery when charging. Hydrogen gas forms inside the battery. This gas is both toxic and flammable and may cause an explosion if exposed to flame. Always remove the negative ground first and replace it last. Do not overfill battery. Electrolyte may overflow and damage paint, wiring or structure. When cleaning the battery, use soap and water. Be careful not to get soap and water into the battery. Use soda mixed in water to clean corrosion off the terminals.*

Common circuit failures are usually caused by shorting, corroded or dirty terminals, loose connections, defective wire insulation or broken wires. Switches, solenoids and ignition components may also fail, causing a shorted or open circuit.

Before attempting any failure diagnosis of the electrical system, use a test light or voltmeter to check the battery voltage. If the battery voltage is satisfactory, check the

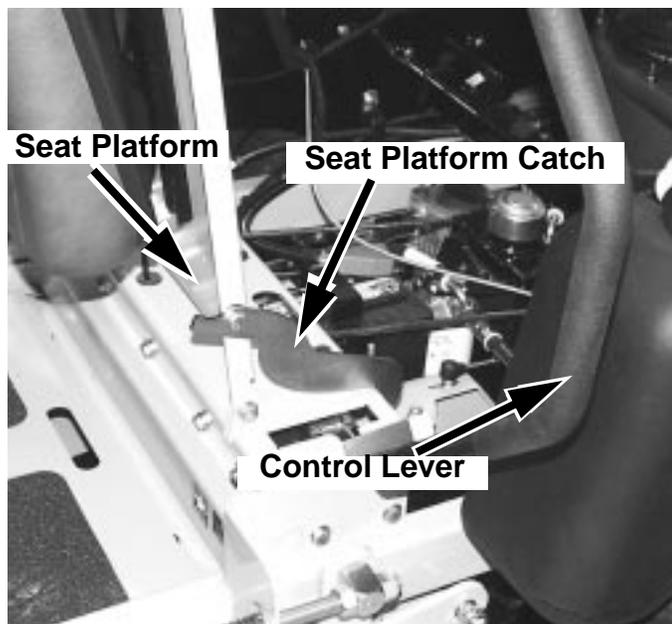
## Section 4 Maintenance and Lubrication

cleanliness and tightness of the terminals and ground connections. A general understanding of electrical servicing and use of basic test equipment is necessary for troubleshooting and repair.

Major overhaul or repair of the starting motor or alternator should be performed by trained technicians only.

### Access to Engine and Hydraulic Pumps

The hydraulic pumps are accessed by lifting the seat platform. The seat platform is hinged at the front. To raise it, release seat latch and tilt seat platform up and forward. The seat platform catch (See Figure 4-4) will prevent the seat from going all the way over. However, if more access is desired under the seat platform, the seat platform catch can be raised allowing the seat to pivot more. Make certain to place the control arms in the park brake position and lift the seat arms before raising the seat.



Access to Engine and Hydraulic Pumps 19070  
Figure 4-4

### **! WARNING!**

Always wear adequate eye protection when servicing the hydraulic system and battery.

### Hydraulic System

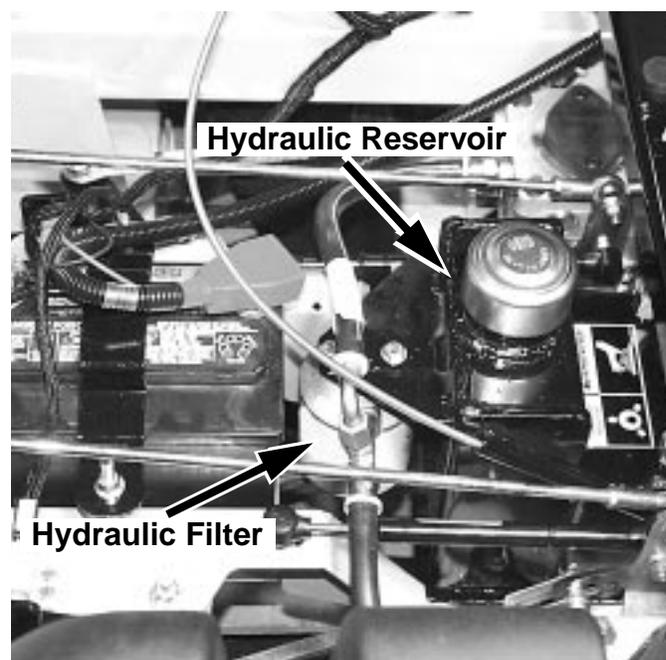
**IMPORTANT:** Never use hydraulic or automatic transmission fluid in this system; use only motor oil as specified. Remember, dirt is the primary enemy of any hydraulic system.

### **! WARNING!**

Hydraulic oil escaping under pressure can penetrate skin. Hydraulic oil may cause infection in a minor cut or opening in

the skin. If exposed to hydraulic fluid, see a doctor at once. Before applying pressure to hydraulic system, make sure all connections are tight and all hoses and lines are in good condition. To find a leak under pressure, use a piece of cardboard or wood, never use your hands. Relieve all pressure in the system before disconnecting or working on hydraulic lines. To relieve pressure, place control levers in park.

The 1.0 U.S. gallon (3.79 liter) hydraulic reservoir is located in front of the engine and under the operator's platform. See Figure 4-5.



Hydraulic Reservoir and Filter 19069  
Figure 4-5

Check oil level in hydraulic system after every 50 hours of operation or weekly, whichever occurs first. Check more often if system appears to be leaking or otherwise malfunctioning.

Fluid level should be 1" from top of reservoir. Use only SAE 10W40 SG, SF/CC, CD service motor oil.

Change hydraulic system filter element (Land Pride P/N 831-030C) (Fig. 4-5) after first 50 hours of mower operation, then replace filter and oil in reservoir every 500 hours thereafter. When changing hydraulic oil use 1/2 unit (approximately 3.5 oz.) of Lubrizol additive (Land Pride P/N 821-041C). This additive, available from your Land Pride dealer, will increase the performance life of the hydraulic system components.

The system filter is located directly in front of the hydraulic reservoir. A standard oil filter wrench is used to change filter, threads are right handed. Use an Accu Z approved filter element only (Land Pride P/N 831-030C).

**IMPORTANT:** Pre-fill the filter element with clean oil, before installing, to prevent drawing air into the system pump.

## Section 4 Maintenance and Lubrication

1. Fill the filter element with clean system oil. Smear a light coating of oil on upper surface of rubber seal.
2. Install the filter element on base. Tighten the oil filter by hand until the filter seal makes contact with the filter head, then tighten an additional 3/4" turn with an oil filter wrench. **DO NOT OVERTIGHTEN.**
3. Start mower engine and let run at approximately 2/3 throttle for a few minutes to work any trapped air out of the system before engaging the steering control lever.
4. Stop the engine and check the filter and connections for leaks.
5. Check the hydraulic reservoir for specified oil level.

Add clean oil as necessary.

Clean or replace hydraulic reservoir cap annually. Cap may be cleaned by dipping in or flushing with cleaning solvent. Follow manufacturer's instructions and warnings for application of solvent type selected.

**NOTE:** The hydraulic pumps are equipped with bypass valves. For more information refer to Operation section, "Moving Mower with Stalled

### Fuel System

#### **WARNING!**

Observe usual fuel handling precautions; do not smoke while refueling, do not fill tank with engine running or while engine is hot, allow engine to cool before storing machine inside a building, keep fuel away from open flame or spark and store machine away from open flame or spark if there is fuel in the tank. Read and observe safety precautions at front of this manual.

The fuel tanks are located in the mower's fenders. (See Figure 4-6) Total capacity for the fuel tanks is 12 U.S. gallons.

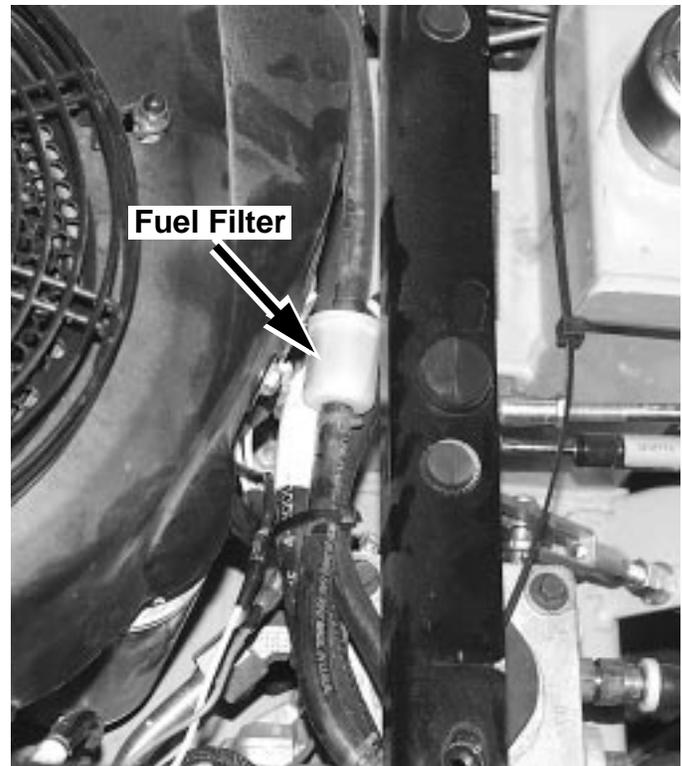


**Fuel Tank**  
Figure 4-6

19071

Use regular unleaded gasoline with an octane rating of 87 or higher.

Refer to Figure 4-7. The fuel filter is installed in the fuel line between fuel tanks and engine fuel pump on the front side of the engine. Replace filter annually or after every 500 hours of operation, whichever occurs first.



**Fuel Filter**  
Figure 4-7

19071

When replacing the fuel filter, check the fuel line hoses for any cracks or leaks. Replace as needed.

### Engine Oil and Filter

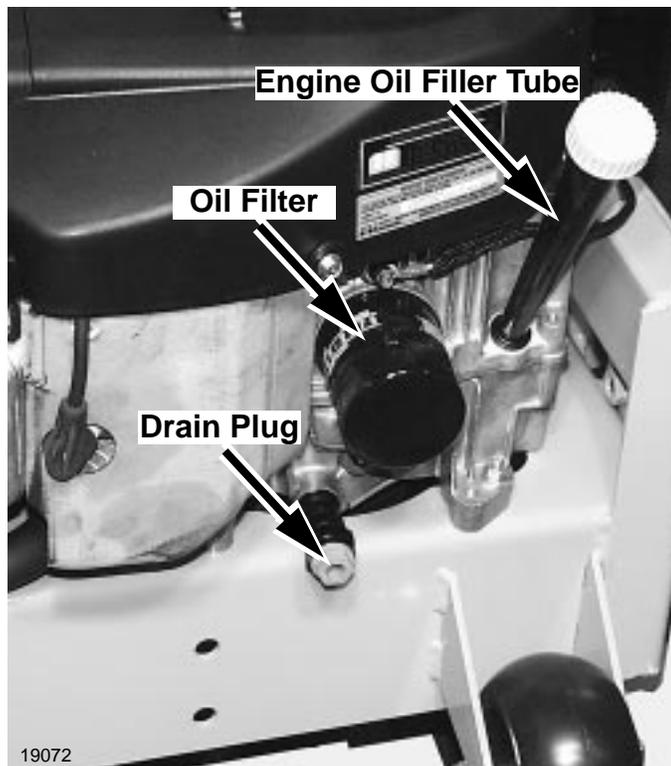
**Refer to Figure 4-8:**

Check engine oil daily and after every 4 hours of operation. Crankcase dipstick and oil filler tube are located at the rear of the machine. Mower must be sitting level when checking oil. Refer to engine manual and maintenance schedule for oil recommendation and capacities.

Change the engine oil and filter after the first 5 hours of operation, per the engine manufacturer's recommendations after that. If mower is being operated in extremely dirty conditions, then it is recommended oil be changed more frequently.

The oil drain and oil filter are located at the rear of the engine.

## Section 4 Maintenance and Lubrication



Kawasaki Engine Shown  
Figure 4-8

### Engine Air Filter

Refer to Figure 4-9

Perform engine air filter maintenance per Maintenance Schedule on page 31.

A specially designed dry filter is standard equipment on the mower and supplies clean combustion air to the engine.

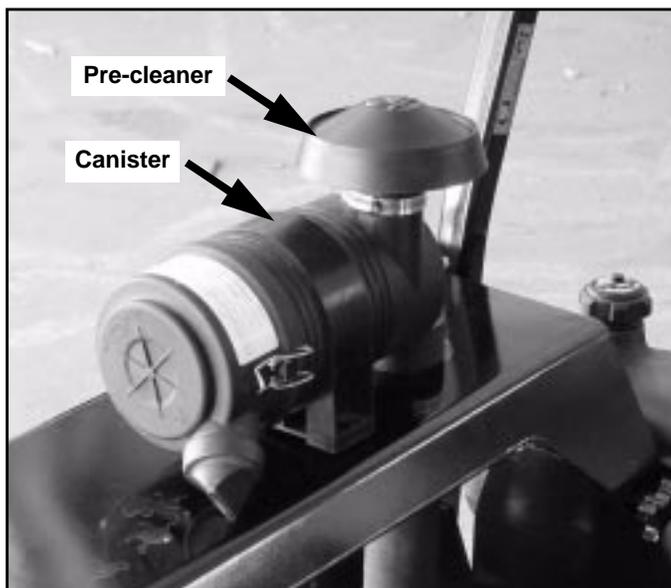


Figure 4-9

Many engine failures can be attributed to improper air cleaner servicing. Ingested dust and dirt will cause cylinder, piston and bearing damage in a few hours. Dusted engines will result from:

1. Over servicing the air filter element.
2. Improper installation of an air filter element.
3. Damaged filter, seals or canister.
4. Incorrect air filter element size and/or use of poorly designed aftermarket air filter elements.

Air cleaner servicing is an inexpensive maintenance check that can prevent costly non-warrantable premature engine damage.

#### Over Servicing

Over servicing occurs when an air filter element is removed for cleaning or replacement before it is necessary. Each time the filter is removed a small amount of dirt and dust could fall in the intake system. This accumulated dirt can cause a dusted engine. It only takes a few grams of ingested dirt over the normal service life of an engine to cause a dusted engine.

**Do not clean element, replace with a new element only.** Cleaning used air filter elements, through improper cleaning procedures, can get dust on the inside of the filter causing dirt ingestion and engine failure.

It is important to note that whenever an air filter element is cleaned by **any method**, the person or company performing the cleaning assumes responsibility for the integrity of the filter from then on. The **Donaldson warranty for air filters expires upon cleaning or servicing in any manner because the condition of the filter after servicing is completely out of their control. Therefore, on a dust ingested engine failure, there will be no warranty consideration if the air filter element has been cleaned or serviced in any manner.**

A partially dirty air filter element works better than a new element. Therefore, a dirty filter element is not bad for the engine unless it is excessively restricting the air flow and engine performance is affected. The reason is simple. The media in the filter must be porous to allow air to pass through it. When dirty air passes through the filter, the dirt plugs some of the holes in the media and actually acts as part of the filter media. When the next round of dirt enters, the first dirt helps filter out even smaller particles making the filter more efficient at stopping dirt from entering the engine. This is referred to as barrier filtration.

Of course, at some point the filter media becomes too clogged to allow air to pass.

The mowing conditions will determine the frequency of air filter element changing.

#### Improper Installation

Dust must not leak past the seals on each end of the air filter element. The filter must be aligned within the canister and properly seated for an effective seal so that no dirt can enter the engine.

## Section 4 Maintenance and Lubrication

### Damaged Filter, Seals or Canister

Never bang or bump the filter element against the tire or any solid object, as dust and dirt particles will be forced through the media causing continual passing of dirt into the engine. Visually inspect the outside of the air cleaner canister periodically for external damage and replace if necessary.

### Incorrect Air Filter Element

Use only the correct Donaldson air filter element, Land Pride part number 839-312C, which is designed to fit the canister properly. Land Pride air filter elements have the correct media composition, filter area, micron size and dimensions. Always use genuine Land Pride filters. Many aftermarket filters have been found to be incompatible with Land Pride's canisters and engines.

The air filter must remain intact to block passage of dirt and foreign particles from entering the engine. Being inclined to disbelieve the need for more expensive air filter elements used on gasoline engines may cause some individuals to opt for a less expensive part.

The filter element must be sufficient size and construction to withstand stresses, caused by rapid cycling of the air volume demanded by the engine, without cracking or tearing under fatigue and pressure (especially diesel engines). Therefore, Land Pride and the engine manufacturers have carefully selected a reliable filter designed to fit the needs of the engines. The filter specified is a Donaldson filter, Land Pride part number 839-312C.

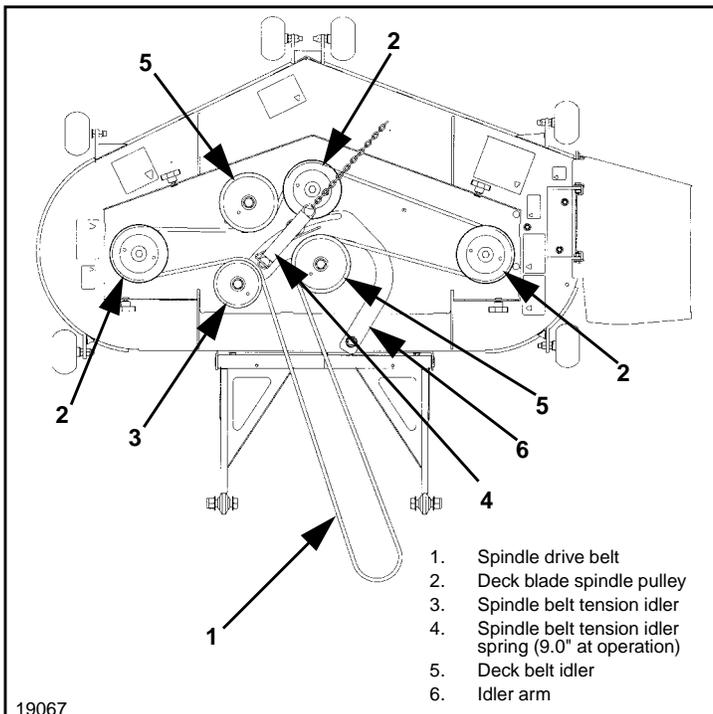
Owners should be reminded that failure to use original equipment replacement parts is an alteration and will not be considered for warranty in the event of engine damage.

### Engine Air Filter Service Procedure

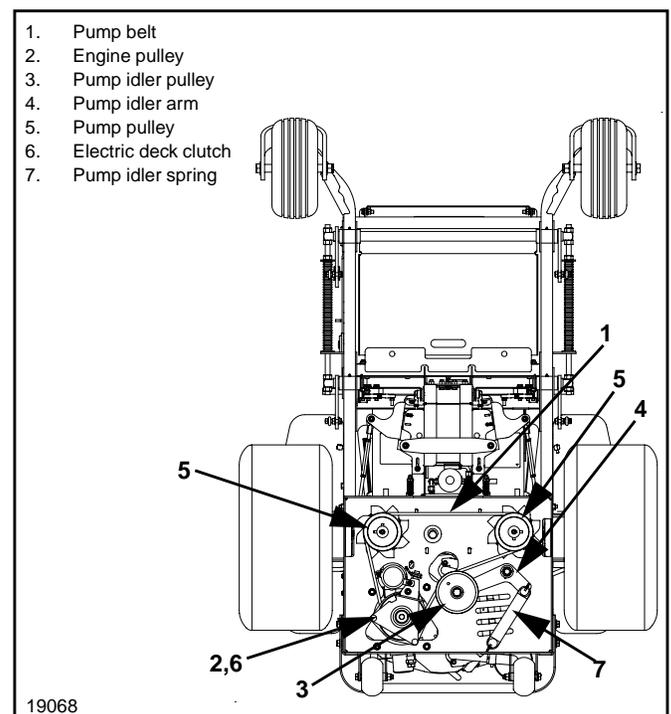
1. Release clamps and remove element. Clean the canister with a damp cloth.
2. Before installing a new element, inspect it by placing a bright light inside and rotate the element slowly, looking for any holes or tears in the paper. Also check gaskets for cuts or tears. Do not attempt to use a damaged element which will allow abrasive particles to enter the engine.
3. Reinstall the dust cup. Make sure it seals all the way around the air cleaner body, then tighten the clamps.
4. Check all fittings and clamps periodically for tightness and inspect hoses for holes or cracks.
5. Periodically check the intake hose for signs of ingested dust. Locate and repair the source of ingested dirt.
6. Never operate a machine without an air filter installed.

### General Engine Maintenance

Detailed instructions and recommendations for break-in and regular maintenance are specified in the Engine Operator's manual. Please refer to this manual for engine servicing, lubricating oil levels with quality and viscosity recommendations, bolt torques, etc. The engine warranty is backed by the engine manufacturer. Special attention should be paid to applicable data which will not be duplicated here.



Deck Belt Drive Layout  
Figure 4-10



Mower Viewed from Bottom Deck  
Figure 4-11

## Section 4 Maintenance and Lubrication

### Belt Replacement

Refer to Figure 4-10 and Figure 4-11:

Replace belts which show signs of severe cuts, tears, excessive weather checking and cracking or burns caused by slipping. Slight raveling of belt covering does not indicate failure, trim ravelings with a sharp knife.

Inspect the belt pulley grooves and flanges for wear. A new belt, or one in good condition, should never run against the bottom of the groove. Replace the pulley when this is the case, otherwise belt will lose power and slip excessively.

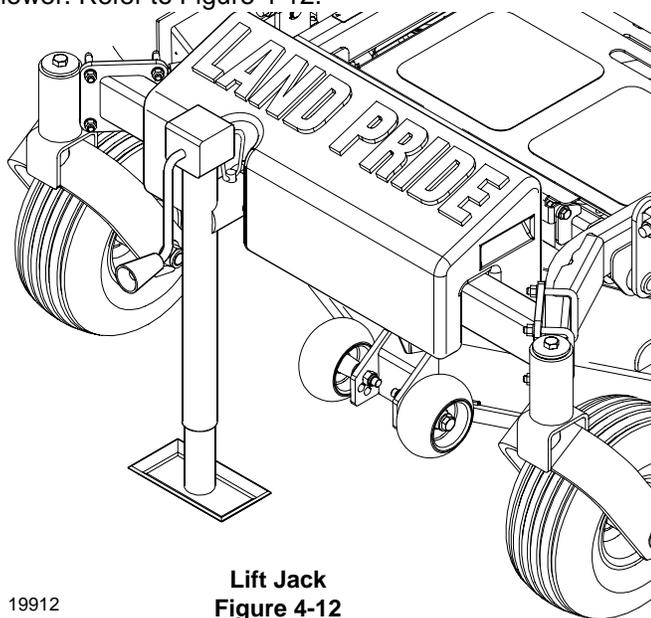
Never pry a belt to get it on a pulley as this will cut or damage the fibers of the belt covering.

Keep oil and grease away from belts, and never use belt dressings. Any of these will destroy the belt composition in a very short time.

### Mower Blade Maintenance

#### Lift Jack Option

For easier blade maintenance a lift jack can be purchased from your Land Pride Dealer and easily assembled to your mower. Refer to Figure 4-12.



Check the mower blades daily, they are the key to power efficiency and well groomed turf. Keep them sharp, a dull blade will tear rather than cut the grass, leaving a brown ragged top on the grass within a few hours. A dull blade also requires more power from the engine.

Replace any blade which is bent, cracked or broken.

Never attempt to straighten a bent blade by heating, or weld a cracked or broken blade as the blade may break and cause serious injury.

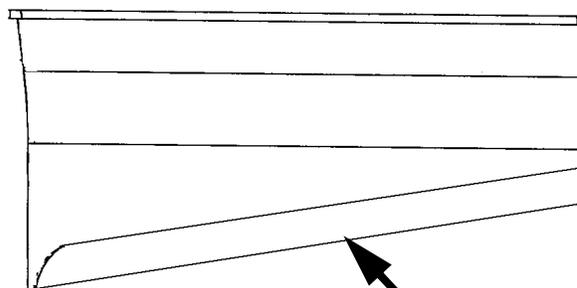
### DANGER!

Never work with blades while engine is running or deck clutch is engaged. Always place deck clutch in the disengaged position, place control levers in park position and turn engine off. Block up mower when you must work under it. Do not use jack as blocks. Jack is for lifting only. Separate blocks must be used prior to servicing under mower. Wear gloves when handling blades. Always check for blade damage if mower strikes rock, branch or other foreign object during mowing!

### Mower Blade Removal

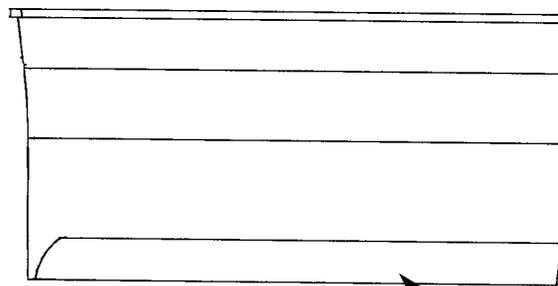
Use a 3/4" wrench to remove the 1/2" cap screw holding blade to spindle saddle from underneath.

Sharpen the blades on a grinder following pattern as shown in Figure 4-13. Touch-up sharpening can be done with a file.



**Resharpening Pattern**

Do not sharpen to original pattern (below).  
It is easier to get a straight cutting edge following the resharpening pattern shown above.



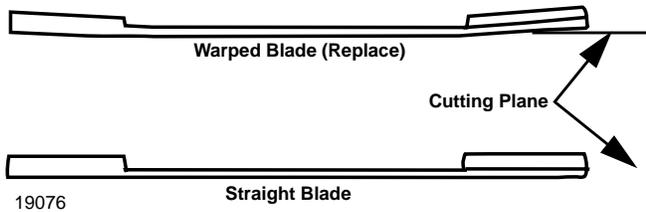
**Blade Resharpening  
Figure 4-13**

**Original Edge**

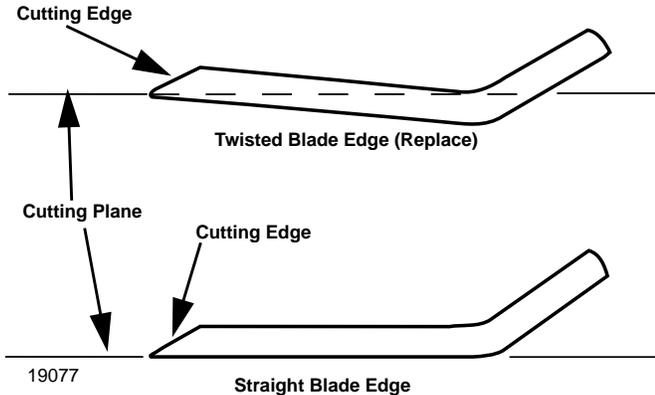
Check the blades for balance following grinding. A commercial balancing tool is available through most hardware supply stores, or balancing can be done by placing the blade on an inverted line punch or 1/2" bolt. Blade should not lean or tilt. Spin the blade slowly, blade should not wobble. If blade is out of balance, true it up before reinstalling.

Lay the blade on a flat surface and check for distortion. Replace any distorted blade. Refer Figure 4-14 and Figure 4-15 on next page.

## Section 4 Maintenance and Lubrication



Comparison of Warped and Straight Blades  
Figure 4-14



End View of Blades, Twisted & Straight Blades  
Figure 4-15

Do not re-use spindle bolts which have stripped, worn or undercut threads. Refer to “**Torque Values Chart**” on page 44 when replacing hardware for proper torque.



### WARNING!

When mounting blades, rotate them after installation to ensure blade tips do not touch each other or sides of the mower.



### WARNING!

Failure to correctly torque the bolt may result in the loss of the blade which can cause serious injury.

## STORAGE

When storing the unit at the end of the mowing season, the following steps should be taken to ensure readiness for the next mowing season.

1. Remove all grass, dirt, and trash. Clean and touch up all scrapes with Land Pride spray paint.
2. Clean paper air filter. Replace if necessary. Wash and re-oil foam pre-cleaner.
3. Check thoroughly for any worn or damaged parts that need replacing and order them from your dealer.
4. Thoroughly lubricate machine, according to lubrication instructions.

5. Check hydraulic oil level. Add oil if necessary. Change oil and filter if not done in last 500 hours. Lubrizol additive is required. Refer to Maintenance section.
6. Block mower up so weight is off tires.

NOTE: Do not deflate tires.

7. Protect battery from freezing temperatures. Occasionally recharging battery during storage will extend battery life.
8. Perform separate engine preparation as listed below.
9. Store mower in a clean, dry place.

## Preparation of Engine for Storage

When engine is to be unused for long periods, proceed as follows:

1. Run engine for a minimum of 15 minutes.
2. Drain oil from crankcase while engine is still warm.
3. Refill with fresh oil of proper viscosity.
4. Drain fuel tank and run the engine until it stops from lack of fuel. Gasoline evaporates if left in carburetor for long periods, forming gum and varnish deposits in carburetor. These deposits will cause engine flooding and loss of power.
5. Remove and replace fuel filter if not done in previous 100 hours.
6. Remove spark plugs and pour a tablespoon of engine oil into each spark plug hole. Install plugs, but do not reconnect plug leads.
7. Crank engine with starter at least a dozen revolutions to distribute oil over cylinder walls and valve mechanism.
8. Clean exterior surface of engine. Spread a light film of oil over any exposed metal surfaces of engine that are subject to corrosion.
9. Clean dirt and chaff from cylinders and fins, blower housing and muffler.
10. Check oil filler cap and fuel tank cap to make certain they are securely in place.

## New Season Preparation

Before starting the mower following post season storage, the following servicing is required:

1. Clean mower, removing trash and dirt accumulation.
2. Check engine oil and hydraulic oil levels.
3. Fill fuel tank with fresh gasoline. Run machine at half speed for 5 minutes, checking operation of steering control levers. Stop engine and check for oil leaks, loose fittings and so forth.
4. Tighten any bolts that have loosened and make sure all hair pins, cotter pins and clevis pins are in place.
5. Install all safety shields and review safety precautions listed in this manual.
6. Check and inflate tires to 8-12 psi.
7. Reconnect spark plug leads to spark plug.

## Section 5 Specifications and Capacities

### Engine Specifications

	Kawasaki	Kawasaki	Honda
<b>Horsepower</b>	23	25	24
<b>No. of Cylinders</b>	2	2	2
<b>Displacement</b>	41.2 cu. in. (675cc)	41.2 cu. in. (675cc)	40.9 cu. in. (670cc)
<b>Compression Ratio</b>	8.1:1	8.1:1	8.3:1
<b>Max Torque</b>	39.8 FT. LBS @ 2400 RPM	41.2 FT. LBS @ 2400 RPM	37.5 FT. LBS @ 2500 RPM
<b>Oil Capacity</b>	2 US quarts	2 US quarts	1.8 US quarts

### General Specifications

	Z52	Z60	Z72
<b>Height</b>	39"		
<b>Length</b>	76"		
<b>Width of Cut</b>	52"	60"	72"
<b>Overall width</b>	64"	65"	82 1/2"
<b>Weight</b>	1,065 lbs.	1,100 lbs.	1,230 lbs.
<b>Drive tires</b>	23 x 9.50 - 12, turf tread	24 x 12.00 - 12, turf tread	24 x 12.00 - 12, turf tread
<b>Front Tires</b>	13 x 6.5 - 6, rib tread		
<b>Tire-to-tire width:</b>	53"		
<b>Starter</b>	12-volt (.8 KW), solenoid shift positive engagement.		
<b>Ignition</b>	Electronic		
<b>Charging System</b>	Kawasaki: 12-volt, 15 amp Honda: 12-volt, 20 amp		
<b>Governor</b>	Mechanical		
<b>Cooling</b>	Kawasaki: Air cooled, Fly-wheel fan Honda: Air cooled, Fly-wheel fan with oil cooler		
<b>Fuel</b>	Unleaded gasoline with octane rating of 87 or higher		
<b>Fuel capacities</b>	12 US GAL		
<b>Fuel Filter</b>	Replaceable, automotive-type		
<b>Traction Drive Type</b>	Dual Hydrostatic Transmission		
<b>Hydraulic Drive oil</b>	10W40 motor oil		
<b>Hydraulic Oil Capacity</b>	1.5 US GAL (7.57 L)		
<b>Hydraulic Pumps</b>	Two Hydro-Gear® BDP10 variable displacement, axial piston type.		
<b>Hydraulic Filter</b>	40 micron, Replaceable spin-on type		
<b>Hydraulic Pump Drive</b>	V-belt drive from engine crankshaft		
<b>Final Drive</b>	Ross MB15 direct-drive high-torque wheel motors for each drive wheel.		
<b>Ground Speed</b>	Forward: 0-11 MPH Reverse: 0-5 MPH		
<b>Steering Type</b>	Twin lever steering provides independent control of each drive wheel.		
<b>Twin Lever Steering Controls</b>	Speed, forward, reverse, brake, and turns.		
<b>Steering Turning Radius</b>	True zero degree. Turns within its own length with counter-rotating independent drive wheels		
<b>Brake Type</b>	Hydrostatic dynamic braking		

## Section 5 Specifications and Capacities

### General Specifications

	Z52	Z60	Z72
<b>Parking</b>	Automotive-style drum brakes. Integral park brakes are automatically engaged when steering levers are placed in neutral.		
<b>Mower Drive</b>	Single V-belt with electric clutch and spring tension idler pulley		
<b>Safety Features</b>	Operator presence system connected to deck and drive clutches. Stabilizer rollers rear of tractor.		
<b>Seat</b>	Standard: Molded-vinyl seat with armrests, forward adjustments, and reverse adjustment.		
	Optional: Molded-vinyl suspension seat with armrests, forward adjustments, Reverse adjustments, and suspension adjustments.		
<b>Cup Holder</b>	Two cup holders molded into the left side fuel tank. Accommodates nearly any cup size.		
<b>Hand Operated Controls</b>	Choke/throttle, ignition switch, electric mower clutch and Integrated parking brakes.		
<b>Indicators</b>	Hour meter Engine warning light.		
<b>Cutting Heights</b>	Foot-operated deck height adjustment. Pin for setting height, transport position. Height adjustment in 1/4" increments from 1" to 5"		
<b>Mowing Blades</b>	Heavy-duty, heat-treated, high-lift steel blades		
	1/4" x 2 3/4" x 17.8"	1/4" x 2 3/4" x 21"	1/4" x 2 3/4" x 24"
<b>Blade Tip Speed</b>	16,647 FPM	18, 30 FPM	18880 FPM
<b>Blade Drive</b>	V-belt drive to all three spindles with spring tension idler pulleys.		
<b>Spindles</b>	Machine ductile housing, 1" diameter high carbon steel shafts and sealed ball bearings. Cast ductile cast iron blade saddles with trash guard.		
<b>Flotation</b>	Suspended mower floats on four spring-assisted chains. 4 anti-scalp wheels are standard.		
<b>Mainframe Construction</b>	1.5" x 3" x 3/16" rectangular steel tubing.		
<b>Drive motor mount</b>	3/16" welded steel		
<b>Caster wheels</b>	Mounted with roller bearings on each wheel.		
<b>Front caster forks</b>	1/2" steel.		
<b>Deck Type</b>	Free-floating mower using three blades with center blade to the front. Mower is suspended at the corners. Includes 6 deck-mounted anti-scalp rollers to improve flotation in rolling and uneven terrain.		
<b>Deck Lift</b>	Foot-operated deck height adjustment. Pin for setting height, transport position.		
<b>Deck Construction</b>	1/8" welded steel. Solid 1" X 3/8" steel bars reinforce impact areas on trim edges. 3/16" x 3/8" in box-section reinforced front edge. Reinforcements welded onto spindle mount areas. Steel deck housing is 5" deep to provide room for high-capacity mowing.		

## ACCESSORIES

### Mulch Kit

Recycles clippings under deck allowing clippings to be cut and recut, then discharged down into the grass. Reduces handling of clippings, improves appearance, and recycles nutrients back into the soil.

### Accu-Vac Collection System

Four blade impeller running off right hand deck spindle, 2 each 30 gallon rubber containers, 8.0 cu/ft. (10 bushel) capacity, 6" reinforced hose, latched hood with gas filled lift support, three pin quick dismount of total unit, 100 lb. weight kit. Adds 1 3/16" width to existing Accu-Z. Adds 24" to rear of Accu-Z. Accu-Vac length: 31", Width: 34", Height: 41 7/8"

### Lift Jack Kit

Easy to mount screw jack to lift mower enough to perform blade removal/installation.

### Weight Kit

100 lb. front weight kit standard with Accu-Vac Collection System.

## Section 6 Features and Benefits

Features	Benefits
<b>52", 60" or 72" Cutting width</b>	Most popular cutting widths for upper homeowner market and entry into light commercial market.
<b>Mid-mount deck design</b>	Mid-mount design puts the deck closer to the operator's line of sight for a more efficient and precise operation.
<b>Compact size</b>	76" in length, is the shortest ZTR on the market. Enhances mowing maneuverability, as well as fitting on trailers or storing more efficiently.
<b>53" Drive tire stance</b>	Narrow width allows for tight turns in corners, yet gives a very stable platform for the operator.
<b>Steering levers</b>	Dual steering levers which control each drive wheel, have a shape and position that is very user friendly, hand and arm fatigue are greatly minimized.
<b>3/16" Deck w/ 3/8" reinforcement</b>	One of the heaviest built decks in the industry for years of rigorous use. Reinforced front edge where most of the punishment happens.
<b>Floating deck design</b>	Deck has a spring assisted chain suspension which offers excellent flotation over uneven terrain.
<b>Deck height adjustment</b>	Height is changed by a spring-loaded foot operated lever and pin. Easy to push and faster than waiting on an electric actuation.
<b>Anti-scalp rollers</b>	Front and four corners to keep scalping to a minimum.
<b>Cutting height</b>	1" to 5" Range in 1/4" increments to cut any type of turf grass.
<b>High blade tip speed</b>	18,700 fpm Assures a good finish cut.
<b>High lift blades</b>	Heavy-duty 1/4" high lift blades are thick to handle the wear, with a high lift design to stand the grass up before cutting.
<b>Mulching kit</b>	A mulching kit is available to recycle clippings and discharge them down into the grass.
<b>1" Blade spindles</b>	1" Blades spindles with sealed ball bearings handle heavy shock loads.
<b>Single belt drive</b>	Single belt design offers easier maintenance over multiple belt designs, less expensive to maintain.
<b>Electric clutch control</b>	Easy and smooth engagement of the mower blade drive system.
<b>Parking Brake &amp; Safety Lockout</b>	Drum brakes and safety lockout are engaged when steering levers are placed in neutral, does not require a separate operation to place in neutral. One less thing to look for if mower does not start
<b>Drive</b>	Each rear drive wheel has a separate hydrostatic pump & direct drive motor.
<b>Electric start</b>	Easily starts with the turn of a key.
<b>Engine hour meter</b>	Helps in determining maintenance schedules and trade-in values.
<b>12 gallon fuel capacity</b>	Less down time.
<b>Easy engine maintenance</b>	Engine is mounted so that all of the maintenance items can be serviced from the rear of the mower vs. the side.
<b>No daily lube points</b>	Blade spindles require grease only once a year. Sealed bearings on front caster wheel forks.
<b>Molded vinyl seat</b>	Molded seat incorporates a high back and armrests to give extra comfort for the long jobs.
<b>Molded-in cup holders</b>	Easy to reach cup holders fit a wide variety of cups, and are in easy access to driver.
<b>Steering lever extensions</b>	For extra comfort for the larger person. Add the extensions to give more leg room.
<b>Floating deck design</b>	Deck has a spring assisted chain suspension which offers excellent flotation over uneven terrain.
<b>Deck height adjustment</b>	Height is changed by a spring-loaded foot operated lever and pin. Easy to push and faster than waiting on an electric actuation.

## Section 7 Troubleshooting

Symptoms	Probable Causes	Suggested Remedies
<b>Starting motor does not crank</b>	Control handles not in park brake position (out) or switch not adjusted	Place control handle in park brake position or re-adjust switch
	Mower clutch switch engaged	Disengage clutch switch
	Weak or dead battery	Recharge or replace
	For additional causes	See engine manual
<b>Engine cranks but does not start</b>	No fuel or line plugged	Fill tank or replace line
	Numerous	See engine manual
<b>Engine: Runs with continuous misfiring or engine runs unevenly or erratically</b>	Numerous	See engine manual
<b>Loss of power or system will not operate in either direction</b>	Restrictions in air cleaner	Service air cleaner
	Hydraulic line blockage	See your dealer
	Internal interference or leakage in wheel motor	See your dealer
	Insufficient hydraulic oil supply	Check level in reservoir Have dealer check hydraulic pump
	Poor compression	See your dealer
	Steering linkage needs adjustment	Adjust linkage
	Air in system	Check filter & fittings
	For additional causes	See engine manual
<b>Overheating</b>	Air intake screen or cleaning fins clogged	Clean screen and fin
	For additional causes	See engine manual
<b>Low oil pressure</b>	Low oil level	Add oil
	Oil diluted or too light	Change oil and check for source of contamination
<b>High oil consumption</b>	Numerous	See your dealer
<b>Mower jerky when starting or operates in one direction only</b>	Steering control linkage needs adjustment	Adjust linkage
	Pump or wheel motors faulty	See your dealer
<b>Hydraulic system operates hot (oil in reservoir smells rancid)</b>	Low hydraulic oil level	Fill reservoir
	Hydraulic pump faulty	See your dealer
<b>Mower creeps when steering control levers are in neutral</b>	Steering linkage needs adjustment	Adjust linkage
<b>Mower circles or veers in one direction</b>	Steering linkage needs adjustment	Adjust linkage
	Wheel motors faulty	See your dealer
	Hydraulic pump faulty	See your dealer
<b>Mower creeps when parking brake engaged</b>	Steering linkage needs adjustment	Adjust steering linkage
	Brakes need adjustment	Adjust parking brakes

**Section 8 Appendix**

**Torque Values Chart for Common Bolt Sizes**

Bolt Size (Inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
													
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi <sup>1</sup>	N · m <sup>2</sup>	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb	mm x pitch <sup>4</sup>	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							

<sup>1</sup> in-tpi = nominal thread dia. in inches-threads per inch  
<sup>2</sup> N · m = newton-meters  
<sup>3</sup> ft-lb= foot pounds  
<sup>4</sup> mm x pitch = nominal thread dia. in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

Tire Inflation Chart	
Tire	Inflation PSI
Drive Wheels	8-12
Gauge Wheels	8-12

## Warranty

**Land Pride** warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall unit: 2 years or 1200 hours limited warranty on parts and labor, whichever comes first.

Engine: 2 years limited warranty through Engine manufacturer.

Hydraulic Wheel Motors and Pumps: 2 years on Parts and Labor.

Front Edge of Mower Deck: Limited warranty against all defects in the deck which results in the front edge of the deck being bent into the blades for the entire length of ownership by the original purchaser.

Frame: Frame breakage through the entire length of ownership by the original purchaser.

Blade Spindle: 3 years or 1200 hours Parts and Labor.

Front Gauge Wheel Yoke Bearings: 3 years or 1200 hours Parts and Labor

Battery: 1 year limited warranty.

Rental Units: Limited warranty on all materials and workmanship for a period of 90 days.

Belts, blades, and tires are considered wear items.

Filters and Plugs are considered maintenance items.

This Warranty is limited to the replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items such as blades, belts, tines, etc. Land Pride reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Any action for breach of warranty must be commenced within 25 months following delivery in non-rented application, and within 120 days following delivery in rented application.

This Warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Land Pride within 30 days from the date of purchase by the end user.



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