

**Hustler® Zeon
Owner's Manual**



HUSTLER®
TURF EQUIPMENT

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P.O. Box 7000

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Hesston, Kansas

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67062-2097

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GENERAL INFORMATION

This manual applies to the following Hustler® equipment lines:

Hustler® Zeon

To the new owner

The purpose of this manual is to assist owners and operators in maintaining and operating the Hustler® Zeon mower. Please read it carefully; information and instructions furnished can help you achieve years of dependable performance.

It is the **owner's responsibility** to make certain that the operators and mechanics read and understand this manual and all decals before operating this machine. It is also the **owner's responsibility** to make certain that the operators and mechanics are qualified and physically able individuals, properly trained in the operation of this equipment. All operator and mechanics must become familiar with the safe operation of the equipment, operator controls and safety signs.

Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.

IMPORTANT: For more detailed maintenance and adjustment information refer to the proper parts manual for your machine. Refer to the *Product Literature* section of this manual for ordering information.

The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

Using this manual

General operation, adjustment and maintenance guidance is outlined for both the experienced and novice Hustler® user. Operating conditions vary considerably and cannot all be addressed individually. Through experience, however, operators should find no difficulty in developing good operating skills suitable to most conditions.

Directions used in this manual, for example RIGHT or LEFT, refer to directions when seated on the mower facing forward, unless otherwise stated.

Photographs and illustrations used were current at the time of printing, but subsequent production changes may cause your machine to vary slightly in detail. Hustler® Turf Equipment

reserves the right to redesign and change the machine as deemed necessary, without notification. If a change has been made to your machine which is not reflected in this owner's manual, or the parts manual, see your Hustler® dealer for current information and parts.

Warranty registration

The Dealer must register the unit on-line at www.Hustlerdealer.com or by filling out the Warranty registration form, provided in the owner's packet, to validate your warranty protection. As the new equipment owner, you are expected to see that this is done at the time of delivery.

If using the Warranty registration form it **MUST** be completed and signed by the authorized dealer and original purchaser.

Be sure to register the mower plus each attachment that displays a model and serial identification number plate with Hustler® Turf Equipment.

IMPORTANT: Any unauthorized modification, alteration, or use of non-approved attachments voids the warranty and releases Hustler® Turf Equipment from any liability arising from subsequent use of this equipment.

Model and serial number

Mower model number and serial number are found on the serial identification plate, located on the right side of the height adjusting plate.

These numbers are required on the Warranty Registration form. They will also assure you of the correct service parts when replacement becomes necessary.

Parts and service

Use original Hustler® replacement parts only. These parts are available through your local Hustler® dealer. To obtain prompt, efficient service, always provide the following information when ordering parts:

1. Correct part description.
2. Correct model number.
3. Correct serial number.

All warranty repair and service must be handled through an authorized Hustler® dealer. Arrangements should be made through your local service center.

HUSTLER® ZEON TRACTORS & DECKS
HUSTLER TURF CONSUMER PRODUCT
THREE YEAR LIMITED WARRANTY FOR CONSUMER USE
ONE YEAR LIMITED WARRANTY FOR COMMERCIAL USE

WHAT IS COVERED BY THIS WARRANTY

Hustler Turf Equipment, makes the following warranty to the original purchaser only:

- a. Hustler Turf Consumer Products used for normal **residential purposes*** are warranted for **three (3) years from date of delivery** on all materials and workmanship.

If the Purchaser discovers within this warranty period (three years from date of delivery) a defect in materials or workmanship:

- He must promptly notify Hustler Turf Equipment, or an authorized dealer, in writing of the defect. In no event shall such notification be received by Hustler Turf Equipment, or an authorized dealer later than thirty-seven (37) months from date of delivery.
- Within a reasonable time after such notification, Hustler Turf Equipment, will correct any defect in material or workmanship on the Hustler Turf Equipment, by repairing or replacing part(s) with either new or used replacement parts.
- Such repair, including parts and labor shall be at the expense of Hustler Turf Equipment, and,
- **The batteries** are covered by a four (4) year pro-rated limited warranty to the original owner (**consumer**) only.

1st year — 100%
2nd year — 75%
3rd year — 50%
4th year — 25%

NOTE: Failure to properly maintain batteries and keep them fully charged will reduce battery life and will void battery warranty.

* **Normal residential purpose means use of product on same lot as your home.** Use at more than one location is considered commercial use, and then the commercial use warranty would apply.

- b. **Commercial use:** Hustler Turf Consumer Products used for commercial and institutional use are warranted for **one (1) year from date of delivery** on all materials and workmanship.

If the Purchaser discovers within this warranty period a defect in materials or workmanship:

- He must promptly notify Hustler Turf Equipment, or an authorized dealer, in writing of the defect. In no event shall such notification be received by Hustler Turf Equipment, or an authorized dealer later than thirteen (13) months from date of delivery.
- Within a reasonable time after such notification, Hustler Turf Equipment, will correct any defect in material or workmanship on the Hustler Turf Equipment, by repairing or replacing part(s) with either new or used replacement parts.

- Such repair, including parts and labor shall be at the expense of Hustler Turf Equipment, and,
- **The batteries** are covered by a two (2) year pro-rated limited warranty to the original owner (**commercial**) only.

1st year — 100%
2nd year — 50%

NOTE: Failure to properly maintain batteries and keep them fully charged will reduce battery life and will void battery warranty.

- c. **Rental use:** Hustler® Zeon mowers used in rental applications are **not** covered by warranty. This also includes no warranty on the batteries.

WHO MUST PERFORM THE WARRANTY SERVICE

All warranty service will be performed by dealers authorized by Hustler Turf Equipment. **Service calls and/or transportation expense** of the product to and from the authorized dealer, for warranty work, will be paid by the owner of the product. For warranty service contact an authorized dealer.

WHAT IS NOT COVERED BY THIS WARRANTY

Hustler Turf Equipment, does not warranty:

- Some product, components or parts not manufactured by Hustler Turf Equipment
- Repairs made by unauthorized persons
- Damage caused by use of the Hustler Turf Equipment for purposes other than those for which it was designed
- Damages caused by disasters such as fire, flood, wind, and lightning
- Damages caused by neglect, abuse, abnormal use, improper or unreasonable use, accident, negligence, misuse or foam filled/solid filled tires
- Repairs or replacement resulting from the use of unauthorized parts, accessories or attachments
- Repairs or replacement as the result if any alterations or modifications, in the determination of Hustler Turf Equipment, which adversely affects the operation, performance or durability of the equipment.
- Hustler Turf Equipment which has the serial number removed or made illegible
- Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow the product's owner's manual operating, maintenance and adjustment instructions or other operational instructions provided by Hustler Turf Equipment.
- Normal maintenance parts and service including, but not limited to, lubricants, tune-up parts, blades, blade sharpening, bearings, brake or steering adjustments

DISCLAIMER OF WARRANTY

The foregoing warranties are in lieu of all other warranties, expressed or implied, including but not limited to the implied

warranties of merchantability and fitness for a particular purpose. However, if the Hustler Turf Equipment is purchased as a consumer product, any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this limited warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

LIMITATION OF REMEDIES

In no case shall Hustler Turf Equipment, be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

Such damages include, but are not limited to:

- Loss of profits
- Loss of savings or revenue
- Loss of use of Hustler Turf Equipment or any associated equipment
- Cost of capital
- Cost of any substitute equipment, facilities, services or downtime
- The claims of third parties including customers, and injury to property

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

TIME LIMIT

Any action for breach of warranty must be commenced within thirty-seven (37) months following delivery of the goods in a **residential** application.

Any action for breach of warranty must be commenced within thirteen (13) months following delivery of the goods in a **commercial** application.

NO OTHER WARRANTIES

Unless modified in writing, signed by both parties, and approved by the President of Hustler Turf Equipment, this

agreement is understood to be the complete and exclusive agreement between the parties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement. No employee of Hustler Turf Equipment, or any other party is authorized to make any warranty in addition to those made in this agreement.

ALLOCATION OF RISKS

This agreement allocates the risks of product failure between Hustler Turf Equipment, and the purchaser. This allocation is recognized by both parties and is reflected in the price of the goods.

OWNER'S RESPONSIBILITY

You must maintain your Hustler Turf Consumer Product following the maintenance procedures described in your owner's manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

This machine like any other powered equipment is potentially dangerous unless properly operated. Any operator **must** be cautious and keep safety in mind at all times. Any operator, prior to using the Hustler Turf Equipment, should thoroughly familiarize himself with the owner's manual regarding operation and safety of the machine, as well as all safety warnings on the machine itself.

WARRANTY REGISTRATION

1. **Dealers must** register the unit on-line at www.Hustlerdealer.com or by filling out the Warranty registration form, provided in the owner's packet. If using the Warranty registration form it **MUST** be completed and signed by the authorized dealer and original purchaser.
2. For validation, the completed Warranty registration form **MUST** be forwarded to Hustler Turf Equipment, within ten (10) days following date of purchase.
3. The date of purchase constitutes delivery.

SAFETY PRECAUTIONS



This safety alert symbol is used to call attention to a message intended to provide a reasonable degree of PERSONAL SAFETY for operators and other persons during the normal operation and servicing of this equipment.

DANGER – denotes immediate hazards which WILL result in severe personal injury or death.

WARNING – denotes a hazard or unsafe practice which COULD result in severe personal injury or death.

This manual uses two other words to highlight information. **IMPORTANT** calls attention to special mechanical information and **NOTE:** emphasizes general information worthy of special attention.

All operators and mechanics should read this manual and be instructed about safe operating and maintenance procedures. If the operators or mechanics cannot read and understand English, it is the owner's responsibility to explain this material to them.

This machine meets or exceeds the B-71.1-2003 specifications of the American National Standards Institute, in effect at the time of production. However, improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert ▲ symbol, which means DANGER or WARNING - "personal

safety instructions." Failure to comply with the instructions may result in personal injury or death.

Incorrect usage of this machine may result in severe injury. Personnel operating and maintaining it should be trained in the proper use and should read the manuals completely and thoroughly before attempting to set-up, operate, adjust, or service this machine.

It is the **owner's responsibility** to make certain that the operators and mechanics read and understand this manual and all decals before operating this machine. It is also the **owner's responsibility** to make certain that the operators and mechanics are qualified and physically able individuals, properly trained in the operation of this equipment. All operators and mechanics must become familiar with the safe operation of the equipment, operator controls and safety signs.

Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.

The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

The owner should also ensure that the operator/mechanic know that they are responsible for their own safety as well as the safety of other persons within the vicinity. **Remember**, the operator is responsible for accidents or hazards occurring to other people or their property.

Safety and Instruction Decals

▲ Specific safety warning decals are located on the equipment near the immediate areas of potential hazards. These decals should not be removed or obliterated. Replace them if they become non-readable.

The following illustrations show the various decals that are located on the machine. A brief explanation, for those requiring one, is shown to help the operator understand the meanings of these decals.



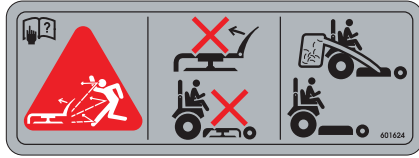
- Read Owner's Manual and Safety Warning Decals before attempting to operate this machine.



DANGER: Rotating blades!

Part Number 602578

- Keep shields and covers in place while machine is in operation
- Keep hands, feet and clothing away from rotating blades



WARNING: Thrown objects!
Part Number 601624

- Never operate the mower deck with side deflector damaged, altered, removed or in raised position, except when the entire grass catcher attachment or mulching system is being used.



Part Number 601892

WARNING:
Thrown objects!

- Always maintain a safe distance from people and pets when mowing.
- Always stop machine if someone enters the area.
- Inspect area to be mowed for hazards such as rocks, metal objects and other debris which may be thrown or entangled by mower blades. Remove these objects before mowing.



Part Number 601635

Read Owner's Manual and decals before attempting to operate this machine.

WARNING: This structure's protective capability may be impaired by structural damage, overturn, or alteration. If any of these conditions occur, this structure must be replaced.



WARNING: Roll over!

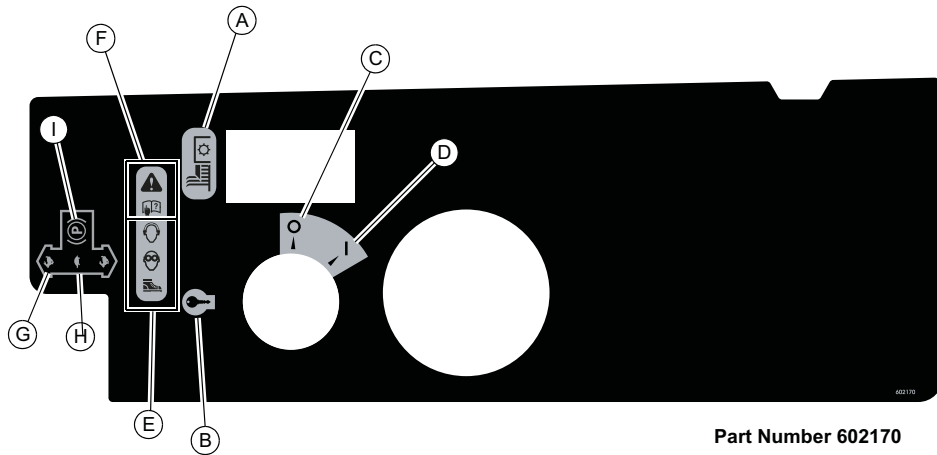
- Avoid crushing, use seat belt.
- Do not jump if machine tips.
- To minimize chance of injury or death from rollover; keep ROPS in the raised and locked position and use the seat belt.
- Do not remove ROPS



- Never operate machine on a slope with the ROPS folded down (lowered position).
- There is no roll over protection when the ROPS is in the lowered position.
- Lower the ROPS only when absolutely necessary. Drive slowly and carefully. Raise the ROPS as soon as clearance permits.
- Read and follow slopes operation instructions and warnings.
- Do not wear seat belt when the ROPS is in the lowered position.



- Always pull from the tractor hitch.
- Do not attach chains or ropes to the ROPS for pulling purposes, as the machine can tip backwards.



- A. Mower blade engage/disengage switch
- B. Ignition switch - insert key
- C. OFF
- D. ON
- E. Wear ear protection, eye protection and safety shoes when operating this equipment.
- F. Read Operator's Manual before attempting to operate this machine. Read Operator's Manual before attempting to service this machine.
- G. Fast
- H. Slow
- I. Park brake



Part Number 602177

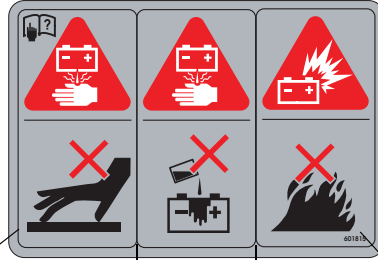


- Any maintenance operation that requires the removal of safety covers must be performed by a trained service technician.

Part Number 601981

		WARNING: Read Owner's Manual and decals before attempting to operate this machine.
		WARNING: Roll over!
		<ul style="list-style-type: none"> Mow a safe distance (minimum of 10 feet) away from drop-offs, retaining walls, drainage ditches, embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away.
		WARNING: Back over!
		<ul style="list-style-type: none"> Do not carry passengers Always stop machine if someone enters the area.
		<ul style="list-style-type: none"> Always be aware of what is behind the machine before backing up. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.
		WARNING: Roll over!
		<ul style="list-style-type: none"> Slow down before turning.
		<ul style="list-style-type: none"> Do not operate on slopes greater than 15 degrees. Keep all movement on slopes slow and gradual. Never make sudden changes in speed and direction.
		<ul style="list-style-type: none"> Do not mow on slopes above a retaining wall or drop-off.
		WARNING: Ejection!
		<ul style="list-style-type: none"> Do not operate on slopes greater than 15 degrees. Keep all movement on slow and gradual when going up or down slopes.
		<ul style="list-style-type: none"> Do not remove or modify stabilizer wheels or injury can result.
		WARNING: Loss of traction/control on slopes!
		<ul style="list-style-type: none"> Shut off blades.
		<ul style="list-style-type: none"> Back slowly down the slope when loss of traction occurs.

Part Number 601815



DANGER: Battery Hazards!


































- Avoid skin contact with battery acid.

- 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.
- 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.

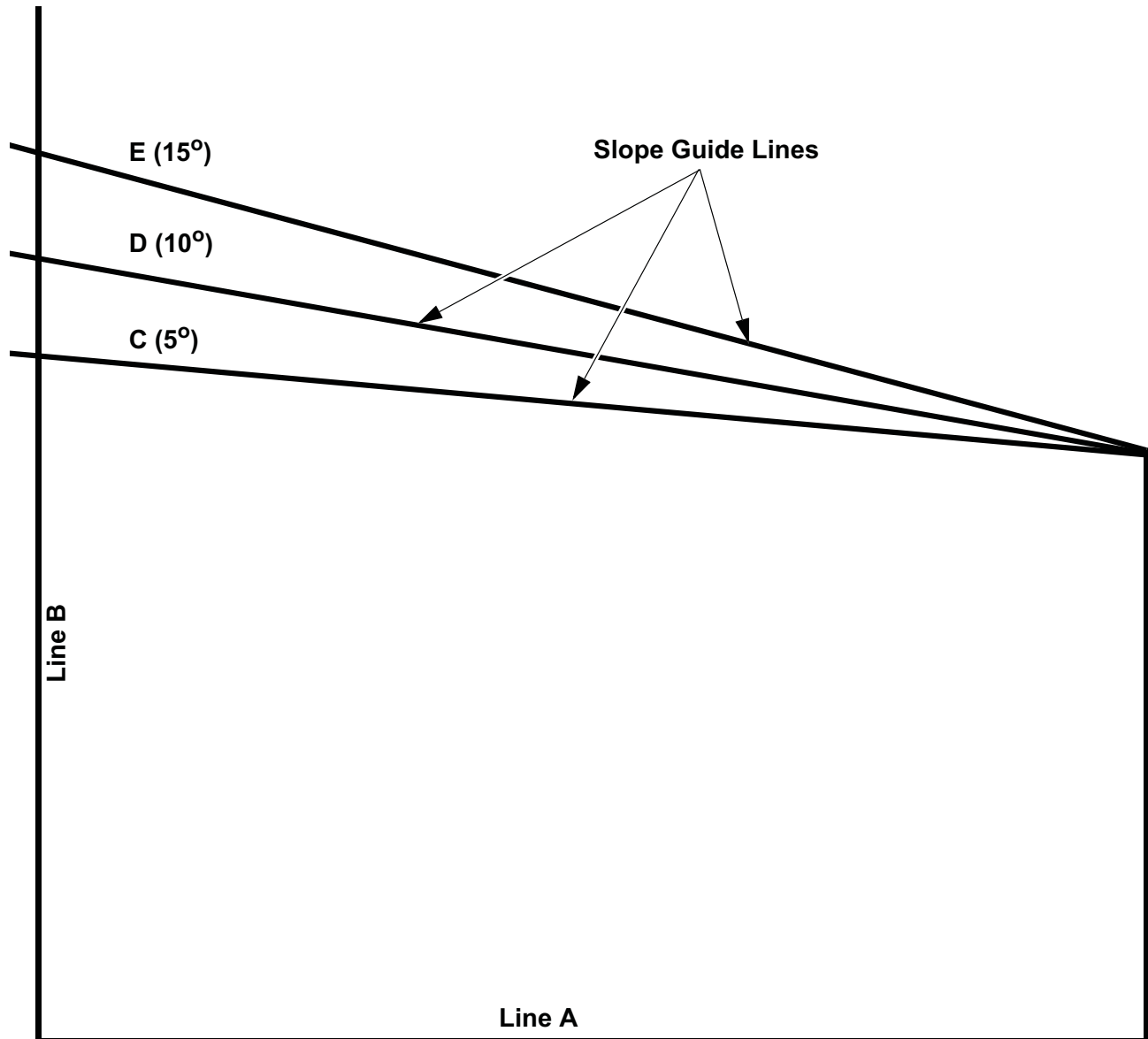
INTERNATIONAL SYMBOLS

As a guide to the operation of your tractor, various international symbols have been used on instruments and controls. These symbols are depicted and described below.

	Hours Recorded	N	Neutral		Battery
	Engine Water Temperature		Diesel Fuel		Power Take-off (ON)
	Air Filter		Glow		Power Take-off (OFF)
	Engine Oil Pressure		Engine Stop		Slow
	Full Time AWD		Engine Oil		Fast
	Auto AWD		Engine Start		Control Lever Hold
	Continuously Variable		Parking Brake		Attachment (Raised)
	Increase		Lock		Attachment (Lowered)
	Decrease		Release Lock		Remote Cylinder (Retracted)
	Fuel Level		Differential Lock		Remote Cylinder (Extended)
	High Range		Volume Empty		Volume Full
	Low Range				

SLOPE GUIDE

Use this diagram when determining the degree of slope to be mowed.



1. Hold this sheet of paper in front of you. Make sure that Line A is horizontal.
2. Align Line B with a vertical surface such as pole, tree or building.
3. Fold the paper along the slope guide lines (C, D or E).
4. Align the closest slope guide line with the ground slope. This will give you a close estimation of the ground slope.

OPERATION

Safe Operating Practices

This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions to avoid serious injury or death.

Operation

- ▲ Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by the manufacturer.
- ▲ Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. Keep unit free of grass clippings, leaves and other debris. **DO NOT** spray with water to clean unit. Do not use, solvents, hard cleaners or abrasives. Use only compressed air. Wear adequate eye and hearing protection when cleaning the unit.
- ▲ Never leave a running machine unattended. Always stop on level ground, disengage deck clutch, place steering control levers in park brake position, turn key to off position and remove key before leaving operator's seat for any reason including emptying the catcher or unclogging the chute.
- ▲ Always remain seated while operating machine.
- ▲ Always keep safety shields and covers in place.
- ▲ Always maintain a safe distance from people and pets when mowing. Always stop machine if someone enters the area.
- ▲ Avoid injury. With key in ON position, mower blades can engage when deck clutch switch is engaged, even if drive motors are not turning. Keep area clear of bystanders when engaging deck clutch.
- ▲ Always operate machine in daylight or with adequate working lights.
- ▲ Follow daily and weekly checklists, making sure electrical connections are secured and bolts are tightened.
- ▲ Always observe traffic laws while driving machine from one location to another. Watch for traffic when operating near or crossing roadways.
- ▲ Always be alert for hazards such as rocks, metal objects and other debris which may be thrown or entangled by mower blades. Watch out for holes or deep depressions.
- ▲ Inspect area to be mowed for hazards such as rocks, metal objects and other debris which may be thrown or entangled by mower blades. Remove these objects before mowing.
- ▲ Always inspect machine for damage after striking a foreign object. If damage is found, repair machine immediately. Be sure to stop on level ground, disengage deck clutch, place steering control levers in park brake position, turn key to OFF position and remove key when leaving operator's seat to inspect damage.
- ▲ Always wear adequate ear protection, such as earplugs, when operating this equipment as prolonged exposure to uncomfortable or loud noises can cause impairment or loss of hearing. Do not wear radios or music headphones while operating the machinery. Safe operation requires your full attention.
- ▲ Do not operate the equipment while wearing sandals, tennis shoes, sneakers, shorts or any type of loose fitting clothing. Long hair, loose clothing or jewelry may get tangled in moving parts. Always wear long pants, safety glasses, ear protection and safety shoes when operating this machine.
- ▲ Always wear safety goggles or safety glasses with side shields when operating the mower.
- ▲ Always be aware of what is behind the machine before backing up. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.
- ▲ Never push forward suddenly on your steering control levers while the machine is in rearward motion because machine may tip backwards.
- ▲ Never pull back suddenly on your steering control levers while the machine is in forward motion.
- ▲ When moving in reverse, push forward slowly on steering control levers and avoid sudden movement. Rapid movement of the steering control levers in either direction could result in a reaction of the machine that can cause serious injury.
- ▲ Never operate a poorly maintained machine.
- ▲ Never attempt high speed maneuvering, especially in crowded, congested areas or on slopes.
- ▲ Never allow persons to operate this machine without proper instruction or allow children to operate machine. Allow only responsible adults who have read and understand these instructions to operate this machine.
- ▲ Never put hands or feet under any part of the machine while it is running.
- ▲ Never carry passengers.
- ▲ Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Always disengage the blades and wait for them to stop before crossing gravel drives, walks or roads.
- ▲ Always keep clear of the mower blades and attachments during their operation.
- ▲ Turn off blades when not mowing.
- ▲ Slow down before turning.
- ▲ Turn the key to the OFF position before removing the grass catcher or unclogging the discharge chute. Never clear the discharge chute with the machine running. Turn the key to the OFF position, disengage deck clutch, place steering control levers in park brake position and be sure the blades have stopped before cleaning. Use a stick to clear a plugged discharge area. **Never use your hand!**
- ▲ Do not operate the machine while under the influence of alcohol or drugs.
- ▲ Exercise caution when loading or unloading the machine onto a trailer or truck.
- ▲ Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to

operate the mower safely enough to protect themselves and others from serious injury.

- ▲ Follow the manufacturer's recommendation for wheel weights or counterweights.
- ▲ If any attachment or additional weight is mounted on the rear of the unit, any rapid movement of the steering control levers in either direction could result in a reaction of the machine that can cause serious injury.
- ▲ **Clean flammable material from machine. Prevent fires by keeping battery compartment, deck and operator's station clean of accumulated trash, grass clippings, and other debris.**

Using a ramp

- ▲ Use extreme caution when loading and unloading a unit onto a truck or trailer with a ramp.
- ▲ Use only a single, full width ramp; do not use individual ramps for each side of the unit. Having a full width ramp provides a surface for the mower frame to contact if the unit starts to tip backwards. It also reduces the risk of a wheel going off and the machine tipping over.
- ▲ Do not exceed a 15 degree angle between the ramp and the ground or between the ramp and the trailer or truck.
- ▲ When on a ramp avoid sudden acceleration

Slope operation

Slopes are a major factor in loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it; do not mow it. REMINDER: Only operate on slopes of 15 degrees or less.

- ▲ Use extreme caution when operating on slopes.
 - Be extremely careful changing directions on a slope. Slow down.
 - Do not operate where the machine could slip or tip.
 - Turn slowly
 - Turn on the most level part of the slope
 - To maximize traction, it is better to turn the front of the machine uphill, rather than downhill. **If drive tires lose traction, steering control is lost which could cause serious injury or death.**
 - If it becomes necessary to turn downhill, turn slowly and gradually.
- ▲ Do not remove or modify the stabilizer wheels.
- ▲ Watch for holes, ruts, bumps, rocks or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- ▲ Remove obstacles such as rocks, tree limbs, etc.
- ▲ Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction.
- ▲ Avoid starting and stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.
- ▲ Mow a safe distance (minimum of 10 feet, 3.05 meters) away from drop-offs, retaining walls, drainage ditches, embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away. This will reduce the risk of the machine suddenly rolling over causing serious injury or death.

- ▲ Use a walk behind, push mower or hand-held trimmer on slopes and near drop-offs, retaining walls, drainage ditches, embankments and water to avoid machine roll-over and serious injury or death.
- ▲ Do not mow on wet grass. Reduced traction could cause sliding and loss of steering control.
- ▲ Do not tow on slopes. The weight of the towed equipment may cause loss of traction and control.
- ▲ Do not try to stabilize the machine by putting your foot on the ground.
- ▲ If the mower's tires lose traction when operating on slopes, disengage the deck clutch, place the steering control levers in the park brake position, turn the key to the OFF position and get help.
- ▲ Never make sudden starts, stops, turns, or reverse direction, especially when maneuvering on slopes. The steering is designed for sensitive response. Rapid movement of the steering control levers in either direction could result in a reaction of the machine that can cause serious injury.
- ▲ Never stop suddenly while backing down slopes. This action may result in a reaction of the machine that can cause serious physical injury.
- ▲ The Hustler® mower is capable of operating horizontally (traverse) on moderate slopes. When operating on slopes up to 15 degrees, be aware of any conditions that may cause the mower drive tires to lose traction resulting in a possible loss of control of the machine. An operator should not operate on a slope until he is thoroughly familiar with the equipment.

Do not operate on slopes greater than 15 degrees.

Refer to Slope Guide, page 2-7, when determining the degree of slope to be mowed.

It is strongly recommended that the operator drive the machine off of the slope, using extreme caution, if any sign of loss of traction is detected. Wait until the condition that caused the problem is resolved before attempting to operate on the slope again.

Terrain conditions can affect traction resulting in possible loss of control of the machine. Some of the conditions to be aware of are:

1. Wet terrain
2. Depressions in the ground; i.e. holes, ruts, washouts
3. Mounds of dirt
4. Soil type; i.e. sand, loose dirt, gravel, clay
5. Grass type, density, and height
6. Extremely dry conditions of grass
7. Tire pressure

The attachments mounted to the mower will also affect the way it handles on a slope. Be aware that each attachment's characteristics vary.

Another consideration is to always mow a safe distance (minimum of 10 feet 3.05 meters) away from drop-offs, retaining walls, drainage ditches, embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away and always be aware of what is located at the bottom of the slope. This will reduce the risk of the machine suddenly rolling over causing serious injury or death.

Extreme caution should be used when there is a hazard located at the bottom of the slope. Some examples are:

1. Water; i.e. lake, river
2. Cliffs, retaining walls
3. Roads, highways
4. Buildings
5. Rocks

These are just a few examples of situations when caution must be used when operating on a slope. There are many other possibilities too numerous to mention. Just remember to always exercise extreme caution when operating on any slope.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.

- ▲ Never leave machine unattended with key in switch, especially with children present.
- ▲ Children or bystanders may be injured if they move or attempt to operate the machine while it is unattended.

Always disengage deck clutch, place steering control levers in park brake position, turn key to OFF position and remove key when leaving operator's seat.

- ▲ Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
- ▲ Be alert and turn the machine off if children enter the area.
- ▲ Before and while backing, look behind and down for small children.
- ▲ Never carry children, even with the blades off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- ▲ Never allow children to operate the machine.
- ▲ Use care when approaching blind corners, shrubs, trees, the end of a fence or other objects that may obscure vision.
- ▲ Never allow children or others in or on towed equipment.

Control Panel

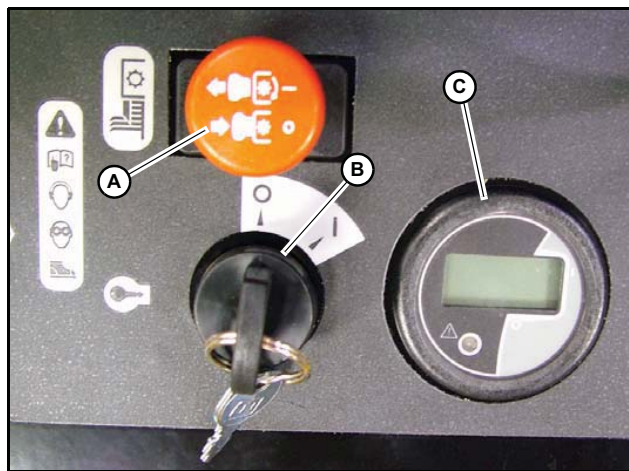
- A. Deck clutch switch (Fig. 3-1)** — this switch engages the deck motors. Pull the switch up to engage and push switch down to disengage the motors.

IMPORTANT: Never engage deck motors when the deck is under load. Motors or deck could be damaged.

- B. Ignition switch (Fig. 3-1)** — a two position switch: OFF and ON. With key inserted, rotate it clockwise to the ON position; release key.

When **READY** shows on the Digital Display the traction drive system is activated and ready to operate.

- C. Digital display (Fig. 3-1)** — This display shows important electrical system information. Refer to the *Electrical* section for complete information.



A. Deck clutch switch	C. Digital display
B. Ignition switch	

Fig. 3-1

Controls

- A. Steering control levers (Fig. 3-2 & Fig. 3-3)** — these levers control the mower's speed, direction, stopping, neutral lock, and park brake. Levers are used to steer, accelerate, decelerate, stop and change direction. When the control levers are in the park brake position (Fig. 3-3) the mower will not move when the drive system is operating



WARNING: The parking brake may not hold the machine if parked on a slope. Block or chock the machine when parked on a slope

- B. Deck lift pedal (Fig. 3-4)** — 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.

Safety start interlock system

The machine is equipped with a safety start interlock system consisting of the park 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 drive system and deck motors when the operator is unseated for any reason while the mower is operating. 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 steering control levers in the park brake position.



Fig. 3-2



Fig. 3-3



Fig. 3-4

3. Start the traction drive system.
4. With the deck clutch switch up and/or the steering control levers in neutral, slowly raise off of the seat. The

following code should appear on the Digital Display:

02A44

The traction drive system is disabled and the park brake will engage. The deck drive system should stop.

5. If the deck drive system fails to stop when the deck clutch switch is up or one or both of the steering control levers are in neutral and the operator is off the seat, check the function of the seat switch. If the seat switch is not operating properly (**is not opening or closing**) and if the cause can not be determined, contact your Hustler® 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 machine without properly functioning seat safety switch.

Traction drive system starting

The mower's safety start interlock system is also designed to protect the operator and others from accidental injury due to unintentional traction drive system starting. The traction drive system will not engage until:

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



WARNING: The safety interlock system must not be disconnected or bypassed. Doing so could cause the machine to operate unexpectedly resulting in personal injury.

NOTE: The operator's seat is equipped with a separate safety switch. If for any reason the operator should become unseated when the steering control levers are not in the park brake position (park brake switches are disengaged) or the deck clutch switch is engaged the traction drive system will stop.

The following steps are the correct procedures for starting the traction drive system. If difficulty is encountered, contact the Hustler® Dealer in your area.

1. Before starting the mower each day, perform daily pre-operation checking. (See "Safety start interlock system" on page 3-3.)
2. Make sure the steering control levers are in the park brake position and deck clutch switch is disengaged. Only start the traction drive system from the operator's position.
3. Insert key in switch and rotate clockwise to ON position to activate starting sequence. Release key and wait for starting sequence to end (indicated by the following message shown on the digital display).

FEA04

4. Perform test to make sure safety start interlock system is operating properly. (See "Safety start interlock system" on page 3-3.).
5. When stopping the traction drive system, place the steering control levers in the park brake position,

disengage the deck clutch, and rotate key counter-clockwise to the OFF position. Remove the key from switch before leaving the machine.

Stopping the traction drive system

Use the following procedure to shut off the traction drive system after operating the equipment.

1. Place the steering control levers in the park brake position.
2. Disengage the deck clutch.
3. **Rotate key counter-clockwise to the OFF position. Remove the key from switch before leaving the machine.**

Moving mower with non-functioning traction drive system



WARNING: Always disconnect batteries when transporting unit.

If it becomes necessary to move the machine when the traction drive system is inoperative, contact local Hustler® dealer.

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

When transporting on another vehicle, the mower must be secured.

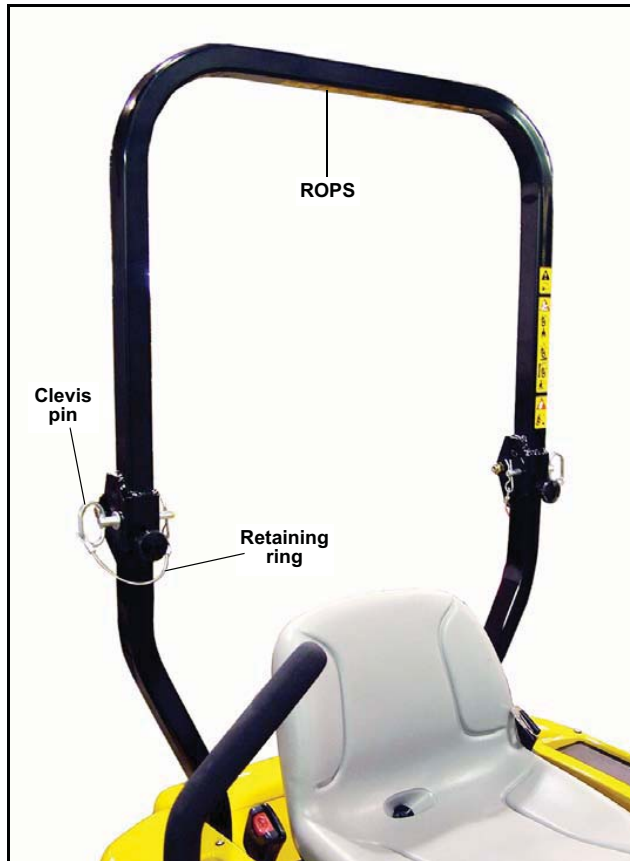


Fig. 3-5

ROPS

(Roll Over Protective Structure)

A Roll Over Protective Structure (ROPS) and seat belt are provided with the equipment. Fig. 3-5 Do not remove the ROPS or seat belt. ROPS when used with seat belt is effective in reducing injuries during unit overturn accidents. Overturning the unit without ROPS can result in serious injury or death.

NOTE: Inspect the ROPS after the first 20 hours of operation. Following the initial inspection, check the ROPS after every 500 hours of operation or every six months, whichever comes first.

1. Check the torque of the ROPS mounting bolts. Tighten the bolts to the correct torques as shown below if necessary. Fig. 3-6
2. Inspect the operator's seat and the mounting parts for the seat belt. Tighten the bolts to the correct torque as shown below if necessary and replace parts that show wear or damage.

Torque values are given below:

	Ft.-lbs.	Nm
Hustler® Zeon ROPS mounting bolts . . .	85	115
Seat belt mounting hardware	48	65

The two-post ROPS can be pivoted down by removing the right and left retaining rings and pulling out on the clevis pins so that the machine can operate under low hanging tree limbs or other obstructions. **Do not** wear the seat belt when the ROPS is in the lowered position. **Use the ROPS in the "folded" position only when it is absolutely necessary.**

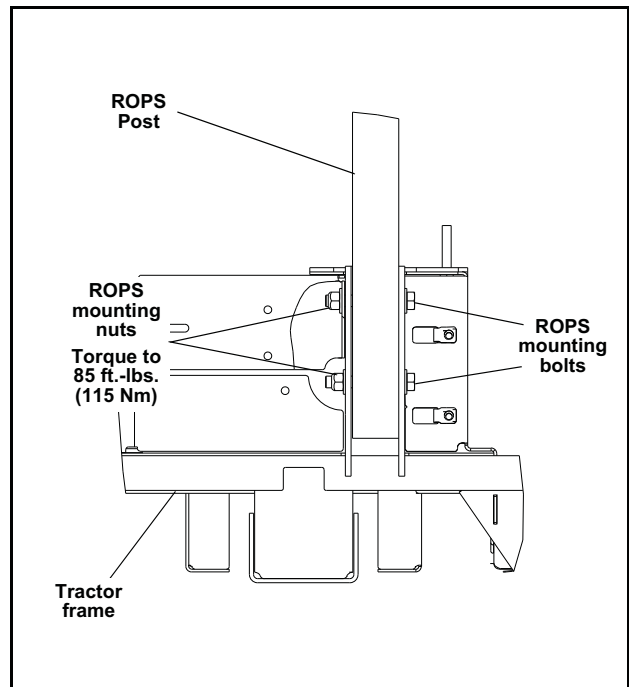


Fig. 3-6



WARNING: Make sure seat pan is securely bolted down prior to each use to prevent seat from moving/tilting in the event of mower tipping or rollover.

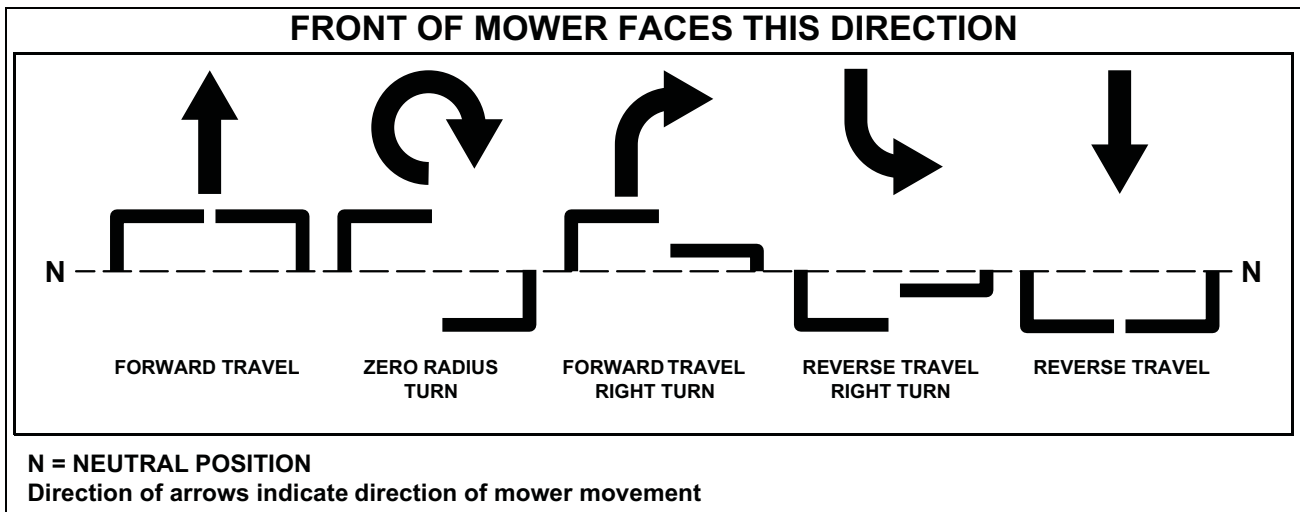


Fig. 3-7



WARNING: Do not operate the mower with the ROPS folded (lowered position) as a standard operating mode. A folded ROPS does not provide rollover protection.



WARNING: Always wear your seat belt unless the ROPS is folded down. In this case, the seat belt should never be worn.



WARNING: To minimize chance of injury or death from rollover:
Keep ROPS in the raised and locked position and use the seat belt.

Never operate machine on a slope with the ROPS folded down (lowered position).

There is no roll over protection when the ROPS is in the lowered position.

Lower the ROPS only when absolutely necessary. Drive slowly and carefully. Raise the ROPS as soon as clearance permits. Read and follow slope operation instructions and warnings.

Do not wear seat belt when the ROPS is in the lowered position.



WARNING: Always pull from the tractor hitch. Do not attach chains or ropes to the ROPS for pulling purposes, as the machine can tip backwards.

Always fasten seat belt during operation of the machine (mower equipped with ROPS in “raised/up” position).

Inspect the area to be mowed for proper overhead clearance (tree limbs, guy wires, doorways, etc)

Do not contact any overhead object with the ROPS. Inspect the seat belt system (all seat, seat belt parts, seat pan and seat pan latch) daily prior to mowing for signs of any damage. These parts should be replaced if any parts indicate signs of:

1. cuts
2. fraying
3. extreme or unusual wear

4. significant discoloration due to UV exposure
5. dirt or stiffness
6. abrasion to the seat belt webbing
7. damage to the buckle, latch plate or hardware.
8. or any other problem

If the seat belt is to be cleaned, use soap and water. Do not use carbon tetrachloride, naphtha, etc., as these will weaken the webbing. For the same reason, do not bleach or dye the webbing. Replace seat belt if worn or damaged.

Possible damage to the ROPS

If the unit has rolled over or the ROPS has been in some other type of accident (such as hitting an overhead object during transport), the ROPS must be replaced to retain the best protection.

Following an accident, check the ROPS, the operator’s seat, and the seat belt and seat belt mountings for possible damage. Before operating the machine, replace all damaged parts.

IMPORTANT: Do not attempt to weld or straighten the ROPS.



WARNING: If the ROPS is removed or replaced, make sure that the proper hardware is used and the recommended torque values are applied to the attaching bolts.



WARNING: The ROPS structure’s protective capability may be impaired by structural damage, overturn or alteration. Do not remove or alter any of the ROPS parts. Do not attempt to weld or straighten ROPS. Failure to adhere to these instructions could result in severe injury or death.

Driving the mower



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



WARNING: Make sure seat pan is securely bolted down prior to each use to prevent seat from moving/tilting in the event of mower tipping or rollover.

After starting the traction drive system, engage the steering control levers and steer as follows:

To go forward, push steering control levers forward an equal distance (Fig. 3-7).

To go in reverse, pull steering control levers rearward an equal distance (Fig. 3-7).

To turn left, move the right steering control lever farther forward from neutral than the left steering control lever. (Fig. 3-7)

To turn right, move the left steering control lever farther forward from neutral than the right steering control lever. (Fig. 3-7)

Zero radius turn, move one steering control lever forward and the other steering control lever back of neutral. This will allow the drive wheels to counter-rotate. (Fig. 3-7)

To stop or decrease speed, move steering control levers to neutral. When going forward pull back gently on steering control levers. When going in reverse push forward gently on steering control levers.

For an emergency stop, there are two methods that can be used in an emergency situation.

1. When traveling forward or rearward, place the steering control levers in the park brake position immediately. When moving in the rearward direction push forward gently on steering 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 causing serious injury or death.
2. Turn the ignition key to the OFF position. This will shut down the traction drive system and the deck drive system.

To make a three point turn to the right, move the left steering control lever farther forward from neutral than the right steering control lever and start the turn. Next, pull back on the steering control levers until they are past neutral and the machine starts to go rearward. Pull right steering control lever farther rearward from neutral than the left steering control lever until the rear of the machine has pivoted around. Then, push the steering control levers forward until they are both past neutral and the machine starts to go forward. Push the left steering control lever farther forward from neutral than the right steering control lever and finish the turn. (Fig. 3-8)



WARNING: Always be aware of what is behind the machine before backing up. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.

IMPORTANT: Rapid movement of steering control levers is not recommended as damage to the electric system components may occur.

To increase speed, increase steering control lever's distance from neutral. The farther forward steering control levers are from neutral, the faster the machine will travel forward. The farther back steering control levers are from neutral, the faster the machine 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: If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately and turn key to the OFF position. Inspect the machine and involve your Hustler® dealer to resolve the problem before continuing to operate.



WARNING: The unit's steering 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. The machine can spin very rapidly. Use caution when making turns and slow down before making sharp turns.

Inexperienced operators may have a tendency to oversteer 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.

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.**



DANGER: Never work with blades while key is in the ignition switch. Always place deck clutch switch in the **disengaged** position, place steering control levers in the park brake position and turn key to the OFF position and remove key from switch. Block up mower when you **must** work under it. Wear gloves when handling blades. **Always check for blade damage** if mower strikes a rock, a branch or another foreign object during mowing!

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**. 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.

When mowing a lawn for the first time cut grass slightly longer than normal to avoid scalping uneven terrain. When possible, it is best to use the cutting height that was used in the past. When cutting grass taller than six inches, you may want to mow the lawn twice to achieve a better quality of cut.

During normal mowing cut only about 1/3 of the grass blade. Cutting more than that is not recommended unless grass is sparse or it is the end of the mowing season.

Alternate mowing direction to keep the grass growing straight and better dispersion of the clippings.

Remember, grass grows at different rates at different time of the year. Mow more often in the early spring to maintain the same cutting height. As the growth rate slows in mid summer, mow less frequently. If you cannot mow at a regular interval, mow at a high cutting height; then mow again two days later at a lower cutting height.

Raise the cutting height of the mower if the cutting width of the mower is wider than the previous mower. This ensures that uneven turf is not cut too short.

Raise the cutting height of the mower if the grass is slightly taller than normal or if it contains a high degree of moisture. Then mow it again with the cutting height set lower.

If the machine's forward motion must be stopped while mowing, a clump of grass clippings may drop onto your lawn. To avoid this, move onto a previously cut area with the blades engaged.



WARNING: Never direct discharge of material from mower deck towards bystanders. Do not operate the mower without either the discharge chute or the entire grass collection system in place. Fig. 3-9

Mower deck operation



DANGER: Never attempt to make any adjustments to the mower deck while the traction drive system is on or with the deck clutch engaged. Mower blades cannot be seen and are located very close to deck housing. Fingers and toes can be cut off instantly.

With the traction drive system on, raise the blades so that they

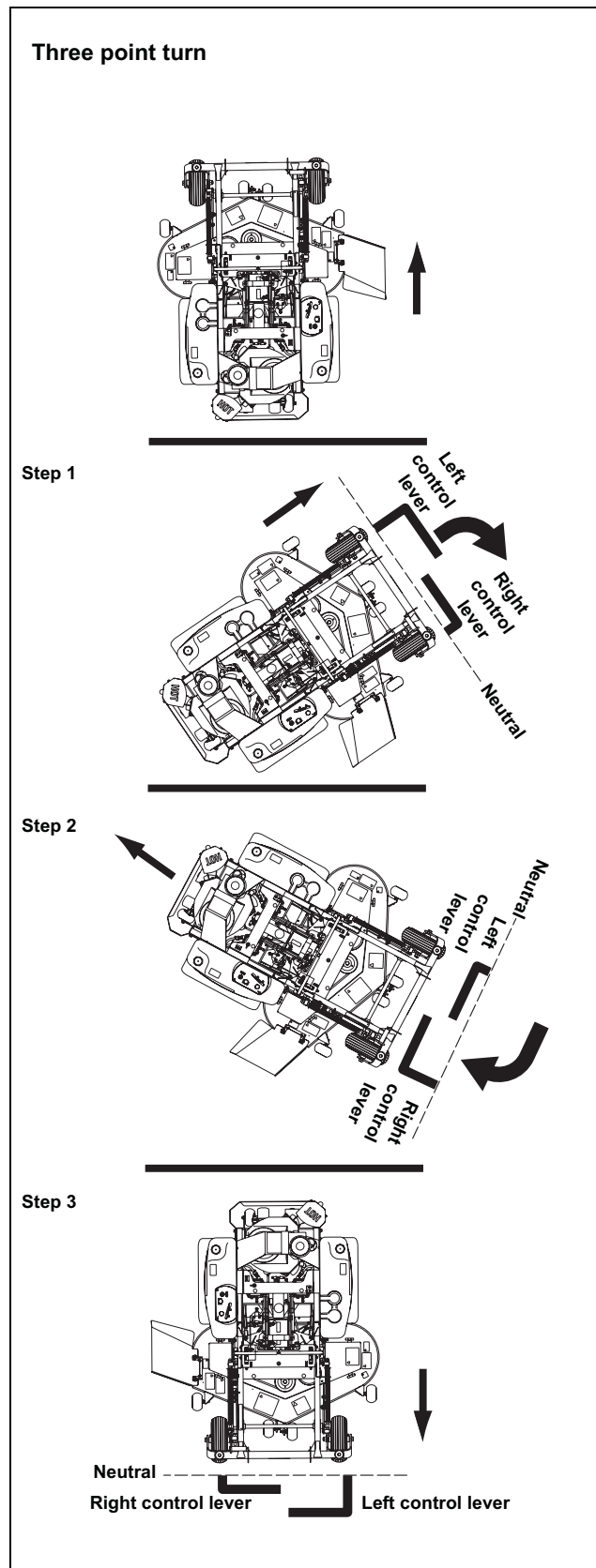


Fig. 3-8



Fig. 3-9

are out of the grass and engage the deck clutch switch (Fig. 3-2).

Deck cutting height adjustment

Deck height is adjustable from 1" - 3-1/2" (3.81 cm - 8.89 cm) in 1/4" (.64 cm) increments. The deck can also be adjusted to a 4" or 4-1/2" (10.16 cm or 11.43 cm) cutting height.

Step on the deck lift pedal and latch the transport lever in the deck transport position. Pull the adjusting pin out of the hole that it is in and insert it into the desired cutting height hole. Step on the deck lift pedal to release the transport lever. Fig. 3-10

Step on the deck lift pedal and raise the deck to its highest position and latch the transport lever in place when transporting the unit. Fig. 3-10.

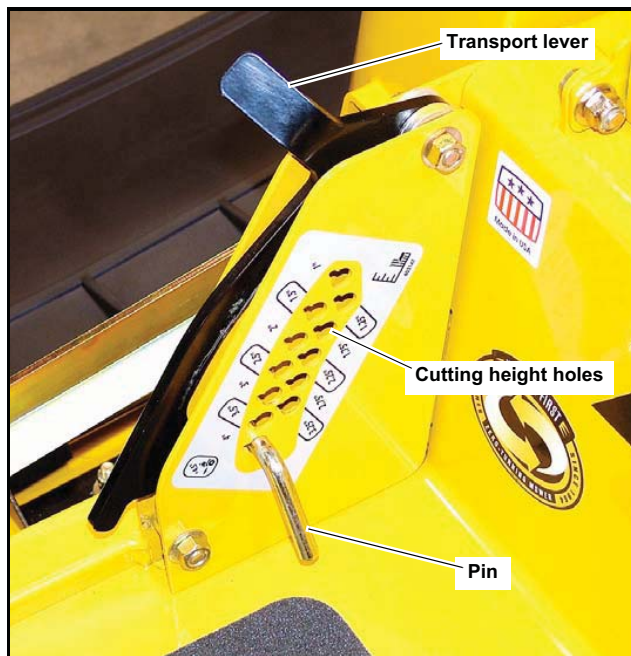


Fig. 3-10

Anti-scalp wheels

Anti-scalp wheel kits are standard on Hustler® Zeon units.

These anti-scalp wheels are designed to minimize scalping when mowing on rough uneven terrain.

After setting the cutting height, adjust the anti-scalp wheels so they extend below the deck but **do not contact the ground**. They should always be at least 1/4" to 3/4" (6.35mm to 19.05mm) below the deck. With the unit sitting on a flat level surface, the wheel position can be adjusted up or down as needed from 3/4" to 1-3/4" (19.05mm to 44.45mm) below the blade surface. Move the wheels up or down, in 1/2" (12.70mm) increments, using the different axle mount holes in the wheel mount bracket. Fig. 3-11

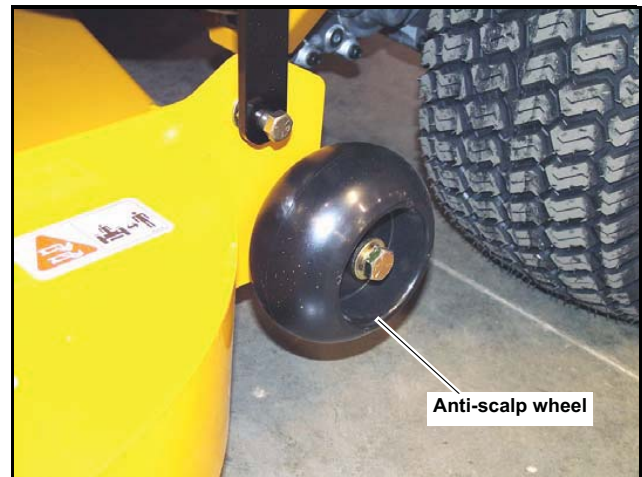


Fig. 3-11

MAINTENANCE & ADJUSTMENTS

Safe Servicing Practices

This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions to avoid serious injury or death.

Service

- ▲ Unless specifically required, **DO NOT** have traction drive system running when servicing or making adjustments to the machine. Park the machine on level ground. Place steering control levers in the park brake position, disengage deck clutch, lower deck, rotate key to OFF position and remove key from switch before doing any maintenance. Wait for all movement to stop before adjusting, cleaning or repairing. Repairs or maintenance requiring power should be performed by trained maintenance personnel only. Read and observe safety warnings in front of manual.
- ▲ Remove key, disconnect batteries and read owner's manual before adjusting or repairing unit.
- ▲ Before working on or under the deck, make certain traction drive and deck drive systems cannot be accidentally started. Turn key to OFF position, remove key from switch and disconnect the negative (black) battery cable from batteries for maximum safety. Repairs or maintenance requiring power should be performed by trained maintenance personnel only.
- ▲ Use a stick or similar instrument to clean under the mower making sure that no part of the body, especially arms and hands are under mower.
- ▲ Keep your machine clean and remove any deposits of trash and clippings, which can cause fires and overheating. Allow machine to cool before storing.
- ▲ **Clean flammable material from machine. Prevent fires by keeping battery compartment, deck and operator's station clean of accumulated trash, grass clippings, and other debris.**
- ▲ Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. Do not spray unit with water. Do not use, solvents, hard cleaners or abrasives. Use only compressed air.
- ▲ Always wear adequate eye protection when servicing the batteries, or when grinding mower blades and removing accumulated debris.
- ▲ Never attempt to make any adjustments or repairs to the mower's drive system, mower deck or any attachment while the traction drive system is running or deck clutch is engaged. Repairs or maintenance requiring power should be performed by trained maintenance personnel only.
- ▲ Never work under the machine or attachment unless it is safely supported with jack stands. Make certain machine is secure when it is raised and placed on the jack stands. The jack stands should not allow the machine to move when the traction drive system is running and the drive wheels are rotating. **Use only certified jack stands.** Use only appropriate jack stands, with a minimum weight rating of 2000 pounds (907.2 kg) to block the unit up. Use in pairs only. Follow the instructions supplied with the vehicle stands.
- ▲ Do not touch hot parts of machine.
- ▲ Keep nuts and bolts tight, especially the blade attachment bolts. Keep equipment in good working condition.
- ▲ Never tamper with safety devices. Check their proper operation regularly.
- ▲ Turn the key to the OFF position before removing the grass catcher or unclogging the discharge chute. Never clear the discharge chute with the machine running. Turn the key to the OFF position and be sure the blades have stopped before cleaning. Use a stick to clear a plugged discharge area. **Never use your hand!**
- ▲ Stop unit, and allow blades to stop before unclogging chute.
- ▲ Grass collection system components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- ▲ Exercise caution when working under the deck as the mower blades are extremely sharp. Wear gloves and use extra caution when servicing them.
- ▲ Use only genuine Hustler® replacement parts to ensure that original standards are maintained
- ▲ Always remove key and disconnect negative (black) battery cable from batteries before working on this unit.
- ▲ Always disconnect batteries when transporting unit.
- ▲ Keep unit free of grass clippings, leaves and other debris. **DO NOT** spray with water to clean unit. Use only compressed air. Wear adequate eye and hearing protection when cleaning the unit.
- ▲ Always wear safety glasses and protective gear near battery. Use insulated tools.

Introduction

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. For more detailed information order the correct parts manual for your unit. Refer to the *Product Literature* section of this manual.

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.

Daily inspect mower for grass clippings and wire and string tangles. The underside of the mower deck may 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, using jack stands or blocks, 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 Hustler® service center when assistance is needed.

Torque values



WARNING: Particular attention must be given to tightening the drive wheel lug nuts and blade spindle bolts. 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 are given below:

	Ft-lbs.	Nm
Wheel (lug) nuts.....	65-75.....	88.14-101.7
Blade spindle bolt bottom	50	67.8

Lug nuts only - It is recommended that these be checked after the first 2 hours of operation, initially, every 100 hours and following removal for repair or replacement.

For all other torques refer to the various mower parts manuals for standard torque chart. See the *Product Literature* section of this manual for ordering information.

Tires

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

Drive wheels	8-12 psi (55-83 KPa)
Gauge wheels	8-12 psi (55-83 KPa)

Only pneumatic tires are approved for use on Hustler® Turf Consumer Equipment. Warranty claims will be denied on any mower equipped with non-pneumatic tires.

Lubrication

Use SAE multi-purpose grease.

Electrical system

This mower operates on a 48 volt electrical system.

Refer to the *Electrical* section of this manual for detailed information.

Seat adjustment

The seat can be adjusted forward and rearward by removing the lock nut from the seat latch bolt and pivoting the seat platform up and forward. Then loosen the four cap screws on the underneath side of the operator's platform. Position the seat where you have the best control of the machine and are the most comfortable and then tighten the cap screws. Fig. 4-1



WARNING: Make sure seat pan is securely bolted down prior to each use to prevent seat from moving/tilting in the event of mower tipping or rollover.

Steering control lever adjustment

The steering control levers can be adjusted for operator comfort. By loosening the cap screws that attaches the upper control lever to the lower lever (Fig. 4-2), the upper control lever can be pivoted to fit the operator's personal preference.

The steering control levers should be adjusted so that they



Fig. 4-1

align with each other when in the neutral position.

Mower blade maintenance

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.

Replace any blade which is bent, cracked or broken.



WARNING: 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. Replace worn or damaged blades.



DANGER: Never work with blades while key is in the ignition switch. Always place deck clutch switch in the disengaged position, place steering control levers in the park brake position, turn key to OFF position, remove key from switch and disconnect the negative (black) battery cable from the batteries. Block up mower when you must work under it. Wear gloves when handling blades. Always check for blade damage if mower strikes a rock, branch or other foreign objects during mowing!



WARNING: Always wear adequate eye protection when grinding mower blades.

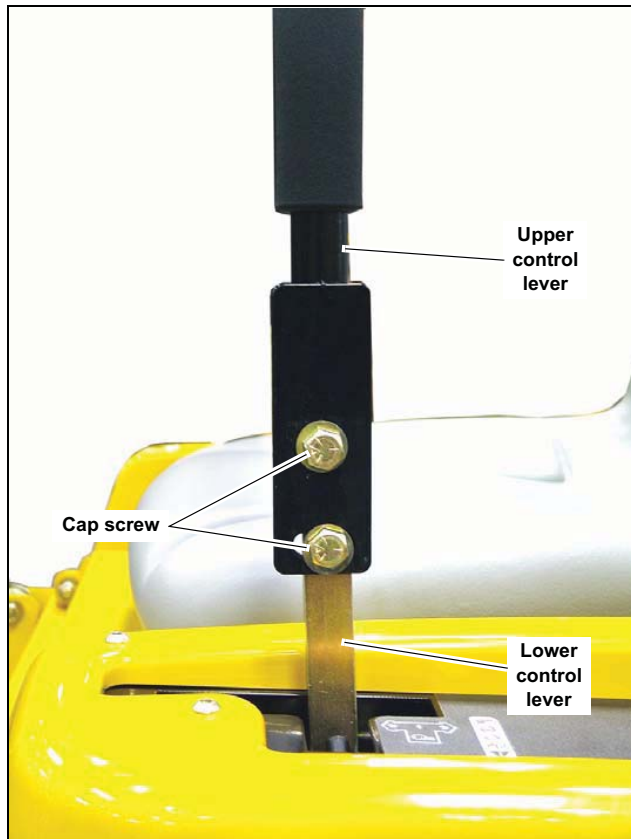


Fig. 4-2

Always place deck clutch switch in the **disengaged position**, place steering control levers in the park brake position and turn key to OFF position and remove key from switch. Block up mower when you **must** work under it. Wear gloves when handling blades. **Always check for blade damage** if mower strikes a rock, branch or other foreign objects during mowing!

Mower blade removal

Use a 3/4" wrench or socket to remove the 1/2" cap screw holding the blade to the motor shaft from underneath. It may be necessary to use a 1-1/4" wrench to keep the blade adapter from turning while removing blade cap screw. Fig. 4-6

NOTE: The blade adapter will come off when the blade cap screw is removed.

Sharpen the blades on a grinder following pattern as shown (Fig. 4-3). Touch-up sharpening can be done with a file.

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 (Fig. 4-4 and Fig. 4-5). Replace any distorted blade.

Mower blade installation

Do not re-use spindle bolts which have stripped, worn or undercut threads.

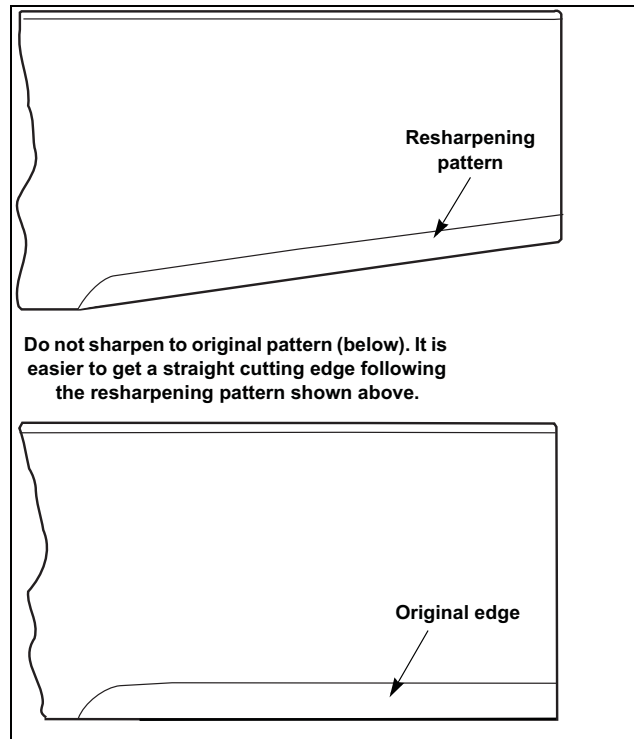


Fig. 4-3

Make sure that the blade adapter is seated properly on the blade motor shaft before tightening the blade cap screw. Use a 3/4" socket with a torque wrench to re-attach the blade to the motor shaft from underneath. It will be necessary to use a 1-1/4" wrench to keep the blade adapter from turning. Torque cap screws on motor shafts to 50 foot-pounds (67.8 Nm) when reinstalling blades. Fig. 4-6

IMPORTANT: The blade sail (curved part) must be pointing upward toward the inside of the deck to ensure proper cutting.

IMPORTANT: 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.



WARNING: Mower blades are sharp and can cut. Wear gloves and use extra caution when servicing them.

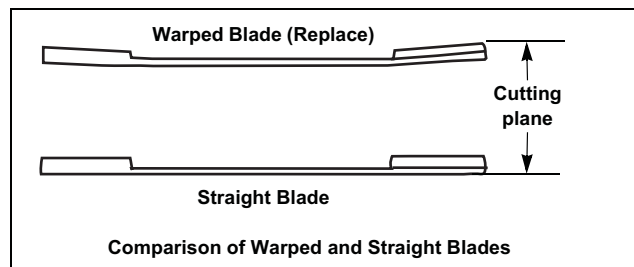


Fig. 4-4

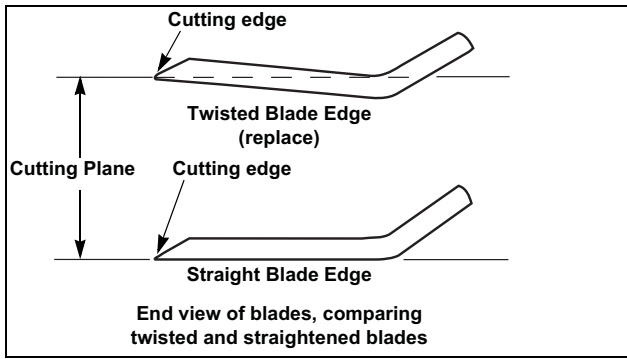


Fig. 4-5

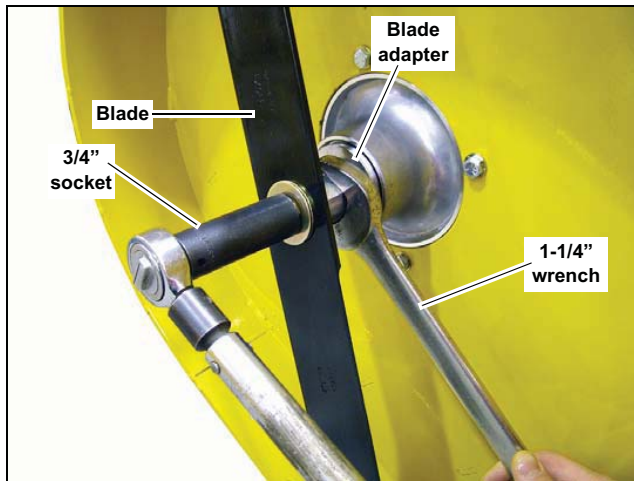


Fig. 4-6

Hustler® Zeon
Maintenance Schedule
Refer to Fig. 4-7

SERVICE AT INTERVALS INDICATED	MONTHLY OR 40 HOURS	ANNUALLY OR 100 HOURS
Verify safety start interlock system	Prior to each use	
Visually inspect unit for loose hardware and/or damaged parts	Prior to each use	
Visually inspect tires	Prior to each use	
Blades - sharpen & securely fastened	Prior to each use	
Discharge chute - securely in place & in lowest position	Prior to each use	
Charge batteries	After each use	
Clean machine	Daily	
Grease gauge wheel bearings	X	
Check battery connections	X	
Check tire pressure with a gauge	X	
Grease deck height pivots		X
Grease deck lift pedal pivot		X
Tighten lug nuts on wheels (1)		X
Check ROPS mounting hardware (3)		X
Check battery water level (2)	Every 30 charging cycles	

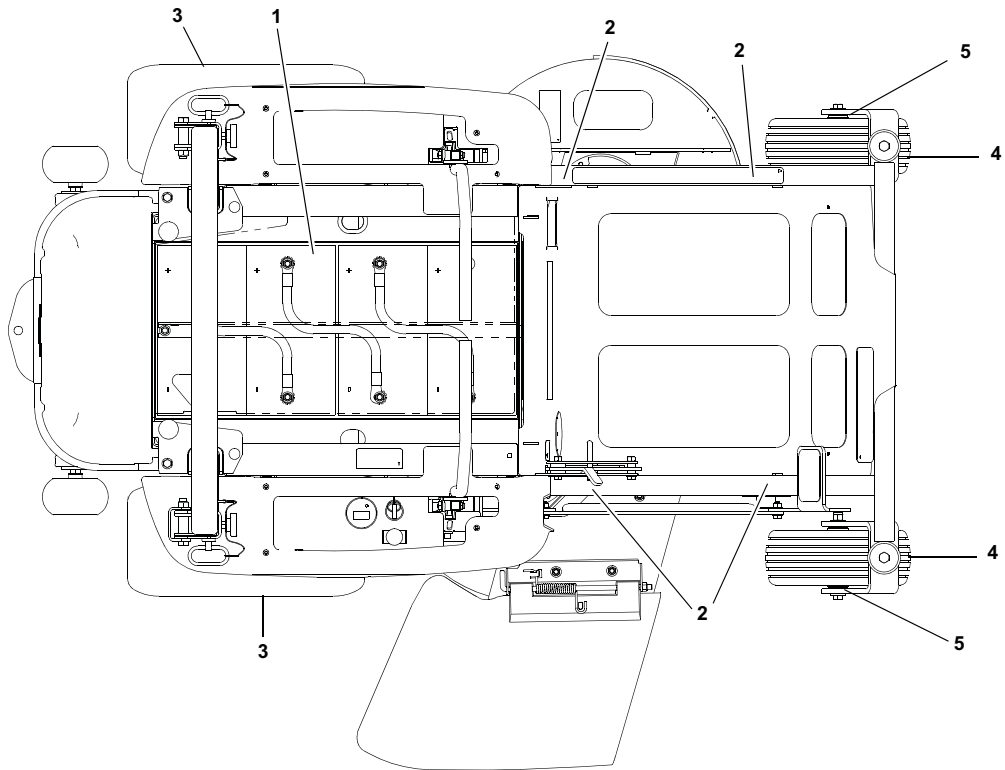
NOTES:

1. Torque initially and after first 2 hours of operation.
2. Refer to *Electrical* section of this manual for more detailed information.
3. Inspect ROPS after the first 20 hours of operation and then after every 100 hours of operation or yearly whichever comes first.

NOTE: After completing maintenance cycle (100 hours), repeat cycle.

Hustler® Zeon
Maintenance Locator Chart

Top View



- 1. Batteries
- 2. Deck Lift Pivot Zerks (4)
- 3. Drive Tire
- 4. Front Gauge Wheel Tires
- 5. Front Gauge Wheel Zerks (2)

Fig. 4-7

ELECTRICAL SYSTEM

Electrical System Safety

- ▲ Remove key, disconnect the negative (black) battery cable from batteries and read owner's manual before adjusting or repairing unit.
- ▲ Always remove key and disconnect the negative (black) battery cable from batteries before working on this unit.
- ▲ Always disconnect the negative (black) battery cable from batteries when transporting unit.
- ▲ Keep unit free of grass clippings, leaves and other debris. DO NOT spray water to clean unit. Use only compressed air. Wear adequate eye and hearing protection when cleaning the unit.
- ▲ Always wear safety glasses and protective gear near battery. Use insulated tools.
- ▲ Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. Do not spray unit with water. Do not use, solvents, hard cleaners or abrasives. Use only compressed air.
- ▲ Avoid injury. With key in ON position mower blade can engage when deck clutch switch is engaged, even if drive motor is not turning. Keep area clear of bystanders when engaging clutch switch.
- ▲ All maintenance and storage areas should be properly ventilated in accordance with applicable fire codes and ordinances to avoid fire hazards. **Proper ventilation is required to remove hydrogen gas from the area during battery charging.**
The amount of hydrogen gas emitted depends on several factors such as; battery charger output rate, battery charge time and battery condition. Because of the highly volatile nature of hydrogen gas and its propensity to rise and accumulate at the ceiling in pockets, a minimum of 5 air changes per hour is recommended. Consult applicable fire and safety codes for the specific ventilation levels requirement, as well as requirements for the use of explosion proof electrical apparatus.
- ▲ Never allow flames, sparks or smoking near batteries.
- ▲ Keep batteries out of reach of children.
- ▲ Always keep protective shields, covers and guards in place and securely fastened. If they become damaged, repair or replace immediately. **Never modify or remove safety devices.**

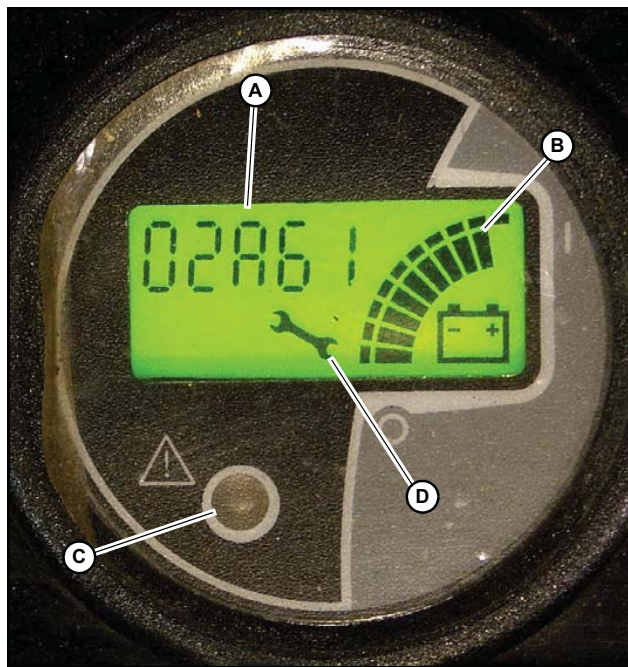
Electrical System Information

The Hustler® Zeon mower is powered by a 48 volt electrical system. It consists of the following components:

1. Traction controller (2)
2. Deck controller (1)
3. Deck Motor (2)
4. Contactor (1)
5. Accelerator - right (1)
6. Accelerator - left (1)
7. Digital display (1)
8. Integrated electric transaxle (2)
9. 12 volt rechargeable battery (4)

Component Maintenance

IMPORTANT: Maintenance for the various electrical components found on the Hustler® Zeon should only be performed by a Hustler® Zeon trained technician.



A. Code	C. Indicator light
B. Battery charge level	D. Service indicator symbol

Fig. 5-1

Digital Display

The function of the digital display, located on the control panel, is to provide electrical system information to the operator. It gives detailed information in the form of operating codes and system troubleshooting codes. It also provides battery charge status by way of a LED battery level indicator.

Battery Charge Level Indicator

When the key is in the ON position the charge indicator LED will light, indicating the relative charge remaining in the batteries. When the batteries are fully charged LED 10 or 9 will be lit. Fig. 5-1

During operation the lit LED will change, moving down the indicator scale as the batteries discharge.

When battery charge is nearly depleted LED 1 and 2 will flash alternately.

NOTE: The battery level indicator will reset once the batteries have been fully charged.

IMPORTANT: When battery voltage becomes low, the mower blades will stop, although the drive motors will continue to run. When the batteries discharge to this point they require recharging. **The unit should immediately be returned to the battery charging area and the unit connected to the battery charger.** The traction drive will continue to operate for a short

time after the deck shuts down. As system power continues to drop, unit will reduce to half speed and then shut down.



WARNING: Do not attempt to cross roads or rail-ways with low battery levels.

Service Indicator Light / Service Indicator Symbol

The service indicator light will begin to blink when an error code has been detected. Fig. 5-1

The service indicator symbol will be displayed when the machine requires servicing. Fig. 5-1

Codes

The digital display provides the codes that are generated by the different components of the system. Fig. 5-1

There are two types of codes:

1. Startup codes

The startup codes are shown when the key switch is activated to begin the machine startup sequence.

2. Troubleshooting codes

The troubleshooting codes are shown on the digital display when a problem is detected within the electrical operating system.

Some of these codes can be readily resolved by the operator and the rest will require service from your Hustler Dealer.

The following table shows both Startup and Troubleshooting Codes. The Troubleshooting Codes shown are the only ones that can be resolved by the operator.

Digital Display Codes	
DIGITAL DASH DISPLAY CODE	DESCRIPTION
READY	(READY) Key is in the ON position and the mower is ready to operate
CUT	(CUT) Mower deck is operating
02A27	Right side Symptom: Reduced drive speed or no drive Cause: High temperature in traction controller Suggested remedy: Shut machine off and allow traction controller to cool. If problem persists, contact your Hustler® Dealer.
04A27	Left side Symptom: Reduced drive speed or no drive Cause: High temperature in traction controller Suggested remedy: Shut machine off and allow traction controller to cool. If problem persists, contact your Hustler® Dealer.
02A28	Right side Symptom: Reduced drive speed or no drive Cause: High temperature in motor Suggested remedy: Shut machine off and allow motor to cool. If problem persists, contact your Hustler® Dealer.
04A28	Left side Symptom: Reduced drive speed or no drive Cause: High temperature in motor Suggested remedy: Shut machine off and allow motor to cool. If problem persists, contact your Hustler® Dealer.
02A29	Right side Symptom: Reduced drive speed or no drive Cause: Battery low, not charged or won't hold charge Suggested remedy: Recharge battery. If problem persists, contact your Hustler® Dealer.

Digital Display Codes	
04A29	Left side Symptom: Reduced drive speed or no drive Cause: Battery low, not charged or won't hold charge Suggested remedy: Recharge battery. If problem persists, contact your Hustler® Dealer.
02A42	Symptom: Loss of deck operation Cause: Low battery. Suggested remedy: Charge batteries.
02A44	Symptom: Loss of traction drive. Cause: Operator left seat while machine was moving. Suggested remedy: Operator must return to seat and stroke steering control levers to the neutral position. Machine will begin to move when steering control levers are stroked out of neutral.
02A48	Symptom: Machine will not move after battery charge. Cause: Incorrect or Improperly charged battery. Suggested remedy: Charge or replace batteries.
02A54	Symptom: Loss of deck drive while sitting stationary Cause: Mowing blade engagement will time out as a power saving feature if the machine sits idle for an extended period of time. Suggested remedy: Cycle the ignition key and restart deck.
02A61	Symptom: Machine will not move Cause: Operator not in seat during start sequence. Suggested remedy: Operator must be on the seat and cycle through the start sequence again.
02A62	Symptom: Machine will not move Cause: Forward or reverse engaged during start sequence. Suggested remedy: Place steering control levers in park brake position and cycle through the start sequence again.
02A63	Symptom: Machine will not move Cause: Deck clutch switch is engaged during start sequence. Suggested remedy: Disengage deck clutch switch and cycle through the start sequence again.
02A65	Right Side Symptom: Machine will not move Cause: Brake not engaged during start sequence. Suggested remedy: Place steering control levers in park brake position and cycle through the start sequence again.
04A65	Left Side Symptom: Machine will not move Cause: Brake not engaged during start sequence. Suggested remedy: Place steering control levers in park brake position and cycle through the start sequence again.
Any codes that are not shown in the above table will require servicing by your Hustler® Dealer.	

Battery Charging Port

The battery charging port is located on the kick panel, next to the operator's left leg. Fig. 5-2

Battery Charger

A Hustler approved battery charger is provided with the

Hustler® Zeon.

Do not attempt to charge batteries with a charger not designed for use with this product

Save these instructions — This manual contains important safety and operating instructions for the battery charger provided with this machine.

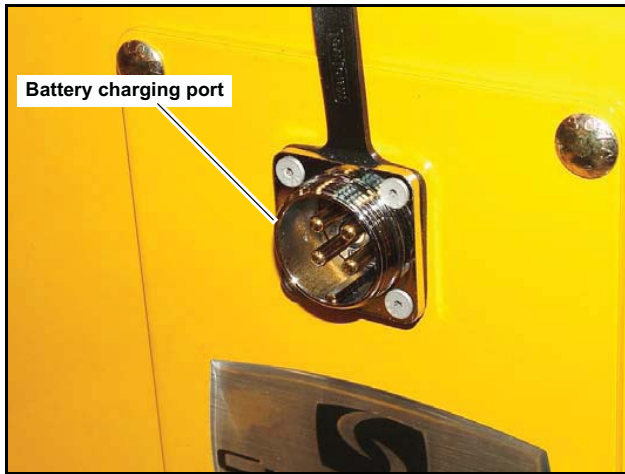


Fig. 5-2

Before using the battery charger, read and understand all instructions in this manual and on the battery charger instruction sheet. Read and understand all decals on the mower, on the battery charger and on the batteries.



WARNING: Indoor use only with proper ventilation.



WARNING: Charge only 48 V maximum 135 Ah Lead-acid type rechargeable batteries. Other types of batteries may burst causing serious personal injury and damage.



DANGER: Risk of electrical shock. Do not touch uninsulated portion of output connector or uninsulated battery terminal.

Power supply cord — Use only UL and CSA Listed detachable power supply cord, 18 AWG, three conductors, cord rated VW-1, 221°F (105°C), cord external length minimum 6 ft. (1.8 m). One end terminates in a molded-on attachment plug with a 15 A, 125 V connector which mates with the Zeon™ battery charging port.

Flexible Cord Type	Maximum Length, feet (meters)
At least as serviceable as SP-2, SPE-2, SPT-2, SV, SVE, SVT	10 (3)
At least as serviceable as S, SE, SO, SP-3, SPT-3, ST, STO, SJ,SJE, SJO, SJT, SJTO	Not specified

There are three lights located on the rear of the charger; red, green and amber. These lights will indicate the status of the charging operation.

1. Red — Ready to charge
2. Green — Fully charged
3. Amber — Charging
4. Blinking Amber — Battery failure
5. Blinking Green, Amber — Charger overheated

For detailed battery information contact your Hustler® Dealer.

Fig. 5-3

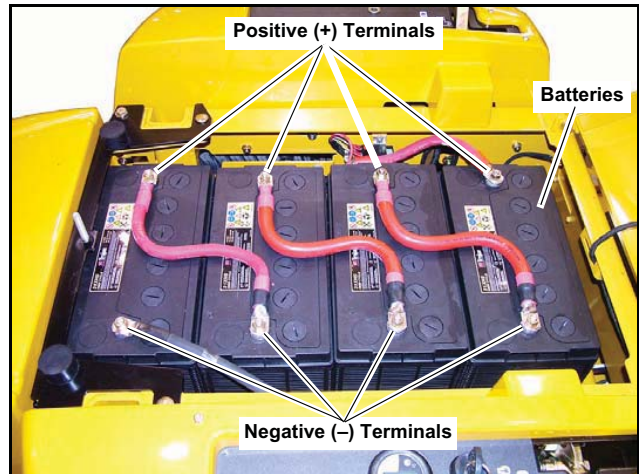


Fig. 5-3

Battery Safety



Battery posts, terminals, and related accessories may contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.



WARNING: Charge batteries in an open well ventilated area, away from spark and flames. Unplug charger before connecting or disconnecting from the charging port. Always wear safety glasses and protective clothing/gear. Use insulated tools.



WARNING: A frozen battery can explode and result in death or serious injury. Do Not charge batteries if frozen. Thaw the batteries before connecting to charger.



WARNING: Avoid skin and clothing 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 drink the battery electrolyte.

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 connection 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. Clean the battery terminals with a solution of four parts water and one part baking soda when they become corroded.



WARNING: Sparks can cause a battery gas explosion which will result in serious personal injury.

Prevent the battery terminals from touching any metal mower parts when removing or installing the battery. Do not allow metal tools to short between the battery terminals and metal mower parts. Use insulated tools. Always keep protective battery cover and rear cover in place.



WARNING: Explosive gases from batteries can cause death or serious injury. Poisonous battery fluid contains sulfuric acid and contact with skin, eyes or clothing can cause severe chemical burns.



WARNING: Follow first aid directions for contact with battery fluid.

External contact: flush with water.

Eyes: Flush with water for at least 15 minutes and get medical attention immediately.

Internal contact: Drink large quantities of water. Follow with Milk of Magnesia, beaten egg or vegetable oil. Get medical attention immediately.

In case of internal contact, **DO NOT** induce vomiting



WARNING: Incorrect battery cable routing could cause damage to the mower and battery cables. This can cause sparks which can cause a battery gas explosion which will result in serious personal injury.

Always **disconnect** the negative (black) battery cable(s) before disconnecting the positive (red) cable(s).

Always **connect** the positive (red) battery cable(s) before connecting the negative (black) cable(s).



WARNING: Always disconnect negative battery (black) cable from batteries when transporting unit.

Battery Connectors

The battery connectors are located under the seat. Always disconnect the main negative battery cable before performing maintenance on the unit. This is the only black battery cable attached to the battery pack. It can be disconnected without removing the battery cover. Fig. 5-4

Battery Maintenance

Your Hustler® Zeon is powered by four lead acid batteries which, when maintained properly, will provide years of useful life. For proper care, adhere to the following instructions:

1. Always charge batteries after each use, regardless of how little used. Batteries must be attached to a plugged in battery charger with the charger power switch ON when the unit is not being used.



WARNING: Charge only with a Hustler approved charger. Do not use battery chargers other than those recommended by Hustler Turf Equipment. Incorrect battery charging will void warranty and can lead to equipment damage, serious injury or death.

2. Check that battery cables are securely tightened to

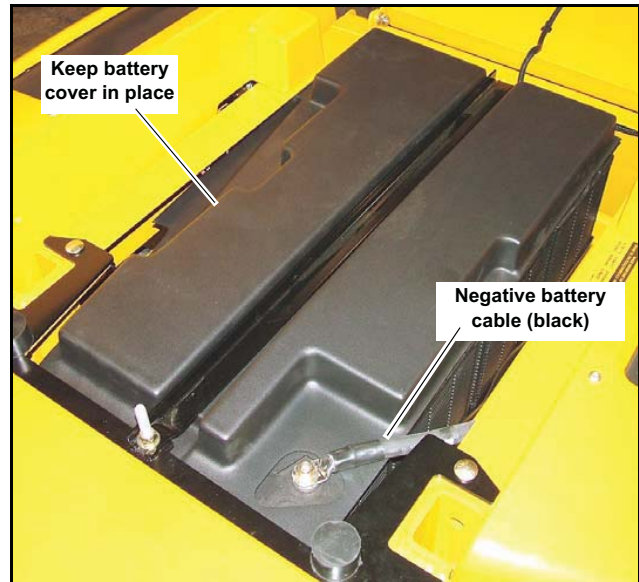


Fig. 5-4

batteries each time you service the battery.

3. Keep grass, dirt and debris from collecting near battery terminals.
4. Batteries are not to remain in a discharged state or damage to the batteries will occur. Lead sulfate deposits will form inside the batteries affecting charging and operation.
5. A discharged battery can freeze if left in conditions under 32 degree F (0 degrees C).
6. Charge batteries indoors in a well ventilated and dry location away from sparks or flames. Never expose charger to rain, vapor or liquid (dry location use only).
7. Charge only lead acid type rechargeable batteries provided with Zeon™.
8. Do not touch uninsulated portion of charger (terminal pins) of output connector.
9. Do not use with defective cords and wires. Replace defective cords and wires immediately.

IMPORTANT: Batteries must be attached to a plugged in battery charger with the charger power switch ON when the unit is not being used. Failure to keep batteries fully charged will reduce battery life and void battery warranty.

Battery Charging

1. Remove the dust cap from the battery charging port on the mower and plug charger into the port. Fig. 5-2
NOTE: Plug will only fit one way into the port. Make sure it is properly aligned before inserting.
2. Plug other end of charger into 110-120 volt household GFCI protected outlet that is rated at 15 amps or higher.
3. Turn charger switch to the ON position. The cooling fan may or may not engage depending on battery charge level.
4. Allow 16 hours for a full battery charge. The green light indicates batteries are Fully Charged. Leaving batteries on charger longer than 16 hours does not harm the batteries. The charger will not overcharge batteries.

5. When ready to use mower again after charging, always turn charger OFF before disconnecting charger from mower. Disconnect charger cord from wall outlet then from the mower.
6. Cover the battery charging port with the dust cap and begin operating mower.
7. If the amber light is blinking, battery failure has occurred. Check to make sure that all battery cables connections are tight. If connections are tight, then one of the batteries may have failed.
8. If the green light is blinking, the charger has overheated. Turn charger OFF and wait 15 minutes before restarting charger. Be sure charger is positioned where air can flow unrestricted into and out of charger.

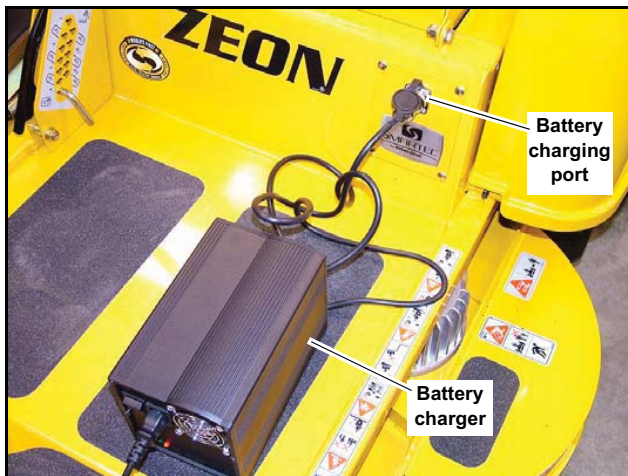


Fig. 5-5

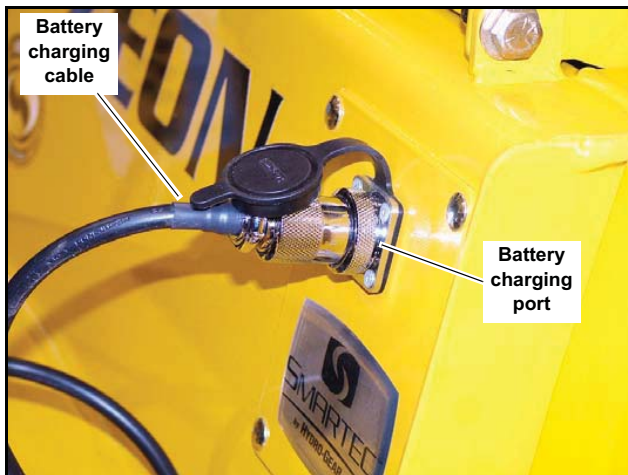


Fig. 5-6

Charging Recommendations:



WARNING: Do not smoke while servicing the batteries.



WARNING: Always wear safety glasses and protective clothing near battery. Use insulated tools.

1. Lead acid batteries do not develop a memory and need

not be fully discharged before recharging.

2. Over the winter season, when mower is not used regularly, the charger can be kept plugged into the mower to maintain a full charge on the batteries. Batteries left uncharged will slowly discharge. Before initial use each spring season, be sure batteries have a full charge before mowing.
3. If charger is not left plugged in, the batteries should be fully charged every 30 days to maintain battery life.
4. When charging, be sure charger cooling fan inlet and outlet are not blocked.

Watering Batteries:

Flooded Batteries need to be checked approximately every 30 charge cycles to be sure there is adequate water in the batteries.

All battery chargers and applications are different. When first using the mower, check your batteries more frequently until a refill pattern has been established.

Please adhere to the following instructions on checking and adding water if necessary:

1. Fully recharge the batteries before checking water level. Water should only be added to fully charged batteries.
2. Disconnect the charger before checking battery water level.
3. Remove the seat hold down nut and raise the seat pan.
4. Disconnect the negative (black) cable from the battery pack. Fig. 5-4
5. Remove the battery hold down and battery cover. Fig. 5-7
6. Clean any dirt or debris from the top of the battery pack.
7. Unscrew the six threaded covers in the top surface of the battery and check that the water level inside completely covers the plates. It may be advisable to shine a flashlight inside the battery for best observation. If plates cannot be seen above the water, then water level is adequate and threaded covers can be screwed back on. Repeat this process on all four batteries.



WARNING: Do not use a lighter, matches or flame to inspect fluid level.

8. If plates can be seen above the water level, then water must be added.
9. Use distilled or deionized water only and always dispense from the water can provided with the Zeon™. The water can ensures the proper level of water is reached while preventing overfilling. Place water can spout down over battery opening and press down to dispense water into the battery. Continue pressing down on water can until you no longer hear water flowing.
10. Repeat this procedure with all battery openings. Then screw caps back onto battery.
11. Repeat steps 7 thru 10 for all of the batteries in the battery pack.
12. Check all battery connections.
13. Re-install the battery cover and battery hold down. Lock in place with battery cover hold down nut.
14. Reconnect negative (black) battery cable. Refer to *Battery Connection* section for more information.
15. Close seat pan and lock in place with seat pan hold down nut.

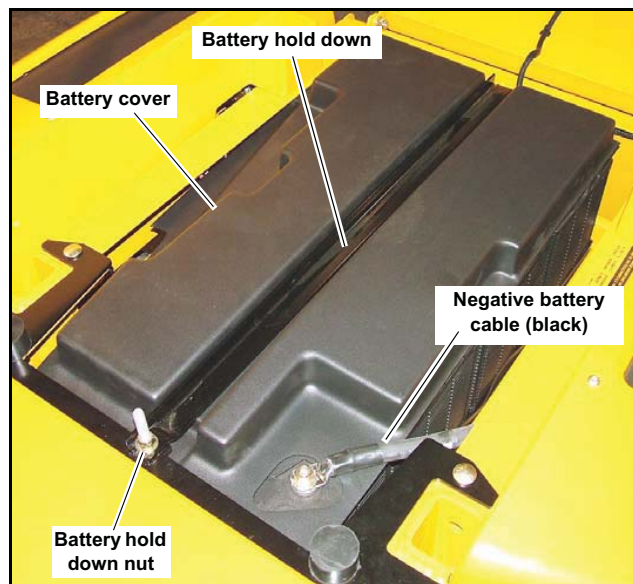


Fig. 5-7

Battery Removal & Installation

It is recommended that battery removal and installation be performed by a trained Hustler® Zeon technician.

However, if battery removal and installation is to be performed by someone other than a trained Hustler® Zeon technician, use the following procedures for safe battery handling.

Disconnecting the Batteries

Always remove the negative (black) battery cable first. The Zeon is designed with the battery electrically isolated from the mower frame. Caution should still be used to prevent tools from touching both a battery terminal and the frame.

Remove the nut that holds the cable to the terminal. Place the cable down in the battery compartment beside the battery pack so that the connector cannot come in contact with a battery terminal.

IMPORTANT: Allow five (5) minutes for the controller capacitors to dissipate their stored energy before you attempt any additional service tasks.

Connecting the Batteries



WARNING: When the negative (black) battery cable is reconnected to the negative battery terminal a spark will flash as energy rushes to the control capacitors. Make sure all battery cell caps (covers) are securely in place and the work area is well ventilated before attempting to connect the cable. Keep fingers back from the contact point as the spark is very hot.

Attach the cable connector to the battery terminal and install mounting hardware per Fig. 5-8. Torque battery terminal nut to 120 in.-lbs. (13.6 Nm). Do not over tighten as this could damage the battery.

Battery Storage

To maximize battery life it is best to fully charge batteries

shortly after each use.

IMPORTANT: If the mower is to be stored for longer than 30 days the batteries should be isolated from the vehicle controls by using the charging adapter that is supplied with the machine. Check the batteries water level and replenish if necessary before storing.

The Hustler® Zeon charger is designed to remain plugged into the vehicle and turned on during storage. If the charger remains on and connected it will automatically maintain the charge level of the battery pack.

All batteries self discharge over time.

If the mower can not remain connected to plugged in and turned on charger then it is required that the battery pack be charged for a minimum of 16 hours every 30 days. Failure to maintain the battery charge level will void the battery warranty.

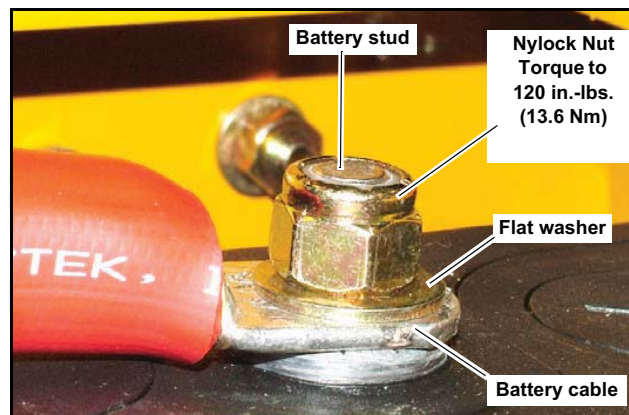


Fig. 5-8

Charging adapter

To connect the charging adapter to the batteries and charging port use the following procedures:

1. Remove the seat pan lock down nut and raise the seat pan.
2. Remove the battery hold down and battery cover. Fig. 5-10
3. Unplug the tractor harness four prong connector from the charging port connector. Fig. 5-10
4. Disconnect the negative (black) battery cable from the negative battery terminal on the rear battery (rear right battery terminal). Fig. 5-10
5. Disconnect the positive (red) battery cable from the positive battery terminal on the front battery (front left battery terminal). Fig. 5-10
6. Connect the charging adapter black wire to the negative battery terminal. Then, connect the red wire to the positive battery terminal. Fig. 5-11
7. Connect the charging adapter to the charger port connector. Fig. 5-12
8. Re-install the battery cover and battery hold down. Fig. 5-11
9. Close seat pan and re-install seat pan hardware.

To disconnect the charging adapter from the batteries and charging port use the following procedures:

1. Remove the seat pan lock down nut and raise the seat

pan.

2. Remove the battery hold down and battery cover. Fig. 5-11
3. Disconnect the charging adapter from the charger port connector. Fig. 5-12
4. Disconnect the charging adapter black wire from the negative battery terminal. Then, disconnect the red wire from the positive battery terminal. Fig. 5-11
5. Connect the tractor harness four prong connector to the charging port connector. Fig. 5-10
6. Check all battery connections. Tighten any loose hardware. Torque battery terminal nuts to 120 in.-lbs. Do not overtighten as this could damage the battery. Fig. 5-8
7. Check battery water level. Service as required.
8. Connect the positive (red) battery cable to the positive battery terminal on the front battery (front left battery terminal). Fig. 5-10
9. Make sure that the connecting hardware is placed on the battery terminal as shown in Fig. 5-8. Torque nut to 120 in.-lbs. Do not overtighten as this could damage the battery.
10. Re-install the battery cover and battery hold down. Fig. 5-10
11. Connect the negative (black) battery cable to the negative battery terminal on the rear battery (rear right battery terminal). Fig. 5-10

Make sure that the connecting hardware is placed on the battery terminal as shown. Torque nut to 120 in.-lbs. Do not overtighten as this could damage the battery. Fig. 5-8



WARNING: When the the negative (black) battery cable is reconnected to the negative battery terminal a spark will flash as energy rushes to the control capacitors. Make sure all battery cell caps (covers) are securely in place and the work area is well ventilated before attempting to connect the cable. Keep fingers back from the contact point as the spark is very hot.

12. Close seat pan and re-install seat pan hardware.



WARNING: Make sure seat pan is securely bolted down prior to each use to prevent seat from moving/tilting in the event of mower tipping or rollover.

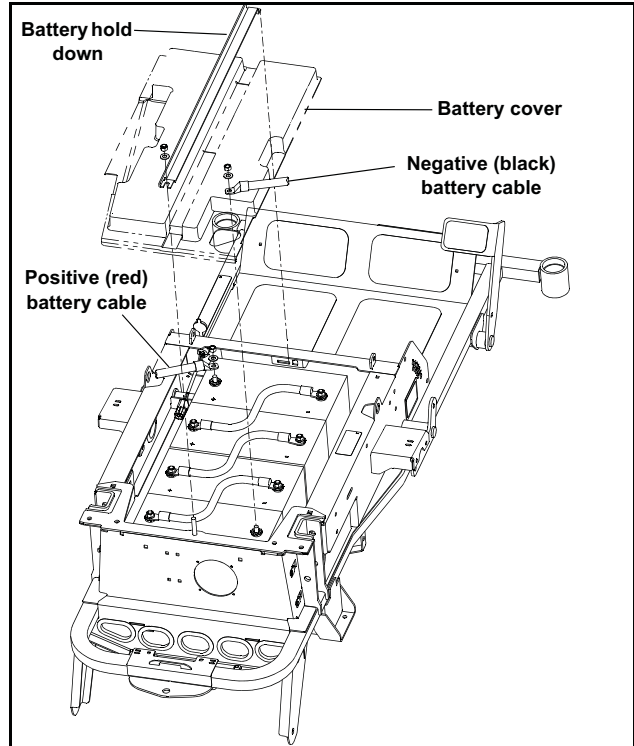


Fig. 5-9

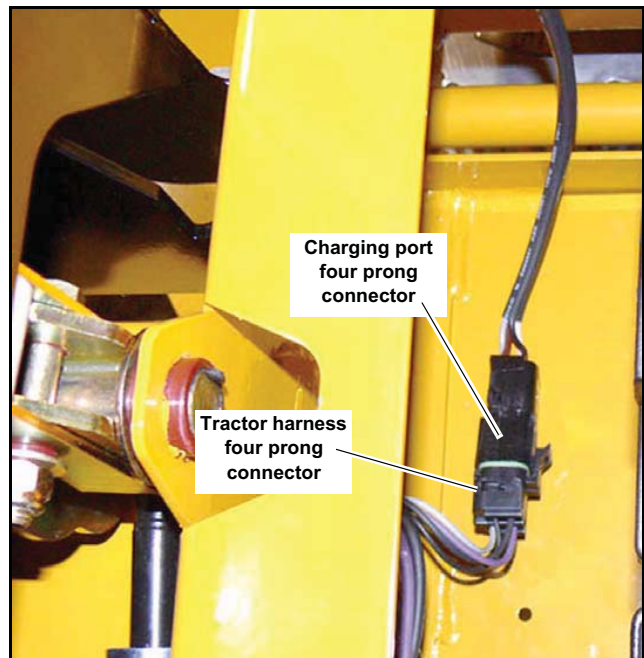


Fig. 5-10

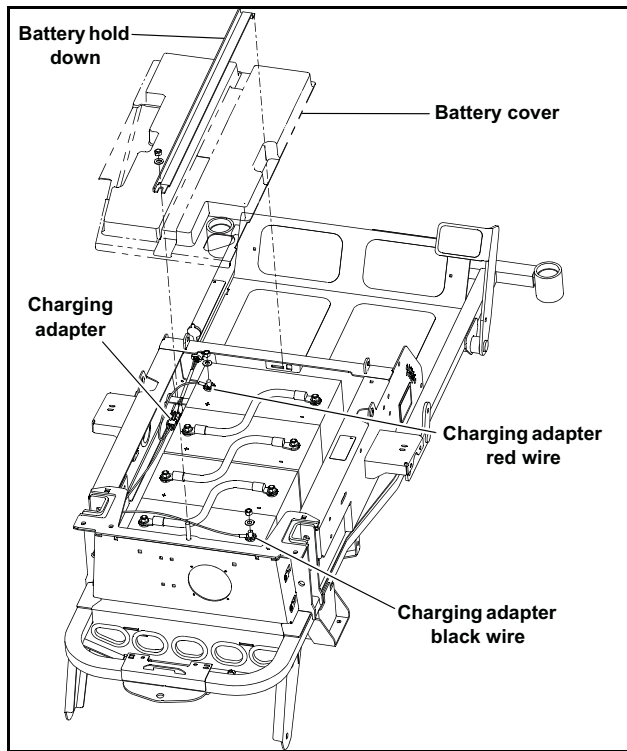


Fig. 5-11

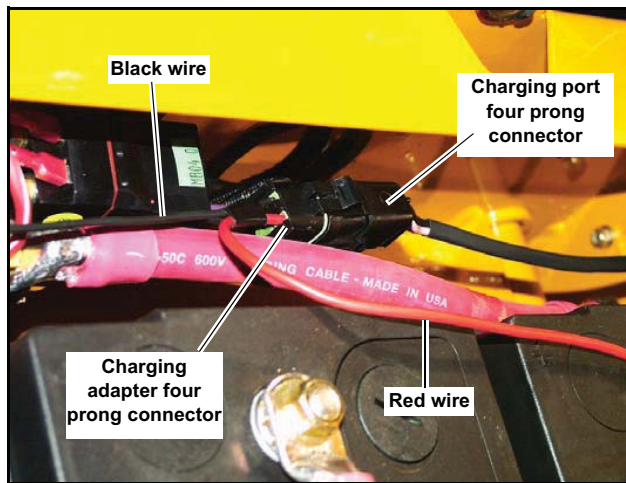


Fig. 5-12

TROUBLESHOOTING

SYMPTOMS	PROBABLE CAUSES	SUGGESTED REMEDIES
If error codes are showing on the digital display	Numerous	Refer to the Digital Display Codes Chart in the <i>Electrical System</i> section
		Contact your Hustler [®] Dealer
There is abnormal vibration	The cutting blade(s) is/are bent or unbalanced	Install new cutting blade(s)
	A blade mounting bolt is loose	Tighten the blade mounting bolt
	Numerous	Contact your Hustler [®] Dealer
Uneven cutting height	The blade(s) are not sharp	Sharpen the blades
	A cutting blade(s) is/are bent	Install new cutting blade(s)
	The deck is not level	Level the deck per the Deck leveling and height adjustment section of the parts manual
	An anti-scalp wheel is not set correctly	Adjust the height of the anti-scalp wheel
	The underside of the deck is dirty	Clean the underside of the deck
	Tires improperly inflated	Adjust air pressure to 8 - 12 psi (55-83 KPa)
	A blade spindle is bent	Contact your Hustler [®] Dealer
Loss of deck operation	If deck control does not provide visible codes to the Digital Display and the deck fails to operate with fully charged batteries	Contact your Hustler [®] dealer

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 from mower. Clean mower and touch up all scrapes with Hustler® spray paint.
IMPORTANT: Wash the machine with a mild detergent and water. Do not pressure wash the machine. Avoid excessive use of water, especially near the control panel.
2. Check thoroughly for any worn or damaged parts that need replacing and order them from your dealer.
3. Thoroughly lubricate machine, according to lubrication instructions.
4. Fully charge and service the batteries.
5. Block machine up so weight is off tires.
6. Do not deflate tires.
7. The mower should be stored in a well ventilated, clean and dry place as the battery charger can not be used in a wet environment. Connect the battery charger to the charger port.
 - a. Always keep the batteries fully charged. Especially important to prevent battery damage when the temperature is below 32°F (0°C).
 - b. Attach the charger adapter to the charging port and the batteries per the *Charging Adapter* section in the *Electrical System* chapter.
 - c. Plug the charger into a proper electrical outlet. Refer to *Battery Charger*, *Battery Charging* and *Charging*

Recommendations sections of the *Electrical System* chapter for more details on using the charger and charging the batteries.

- d. For additional information on battery storage refer to the *Battery Storage* section of the *Electrical System* chapter of this manual.

New season preparation

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

1. Clean machine, removing trash and dirt accumulation.
2. Tighten any bolts that have loosened and make sure all hair pins, cotter pins and clevis pins are in place.
3. Install all safety shields and covers and review safety precautions listed in this manual.
4. Check and inflate tires to 8-12 psi (55-83 KPa).
5. Attach the tractor harness to the charging port and the batteries per the *Charging Adapter* section in the *Electrical System* chapter.
6. Close seat pan and re-install seat pan hardware.



WARNING: Make sure seat pan is securely bolted down prior to each use to prevent seat from moving/tilting in the event of mower tipping or rollover.

PRODUCT LITERATURE

If you would like to view or print a copy of the Hustler® Zeon product manuals go online to www.hustlerturf.com and click on the *MANUALS* button.

INDEX

	PAGE		PAGE
Anti-scalp wheels	3-9	Moving mower	3-5
Battery Charge Level Indicator	5-1	Mower blade installation	4-3
Battery Charger	5-3	Mower blade maintenance	4-2
Battery Charging	5-5	Mower blade removal	4-3
Battery Charging Port	5-3	Mower deck operation	3-8
Battery Connectors	5-5	New season preparation	7-1
Battery Disconnection	5-7	Operating suggestions	3-7
Battery Maintenance	5-5	Operation	3-1
Battery Removal & Installation	5-7	Parts and service	1-1
Battery Safety	5-4	ROPS (Roll Over Protective Structure)	3-5
Charging adapter	5-7	Safe Operating Practices	3-1
Charging Recommendations	5-6	Safe Servicing Practices	4-1
Children	3-3	Safety and Instruction Decals	2-1
Codes	5-2	Safety start interlock system	3-3
Component Maintenance	5-1	Seat adjustment	4-2
Control Panel	3-3	Service	4-1
Controls	3-3	Service Indicator Light / Service Indicator Symbol	5-2
Deck cutting height adjustment	3-9	Slope operation	3-2
Digital Display	5-1	Steering control lever adjustment	4-2
Digital Display Codes	5-2	Stopping the traction drive system	3-5
Driving the mower	3-7	Tires	4-2
Electrical System Safety	5-1	To the new owner	1-1
Electrical system	4-2	Torque values	4-2
Electrical System Information	5-1	Traction drive system starting	3-4
Fail Safe Brake	3-3	Troubleshooting	6-1
Hustler® Zeon Maintenance Locator Chart	4-6	Using a ramp	3-2
Hustler® Zeon Maintenance Schedule	4-5	Using this manual	1-1
Lubrication	4-2	Warranty registration	1-1
Maintenance & Adjustments Introduction	4-1	Watering Batteries	5-6
Model and serial number	1-1		