

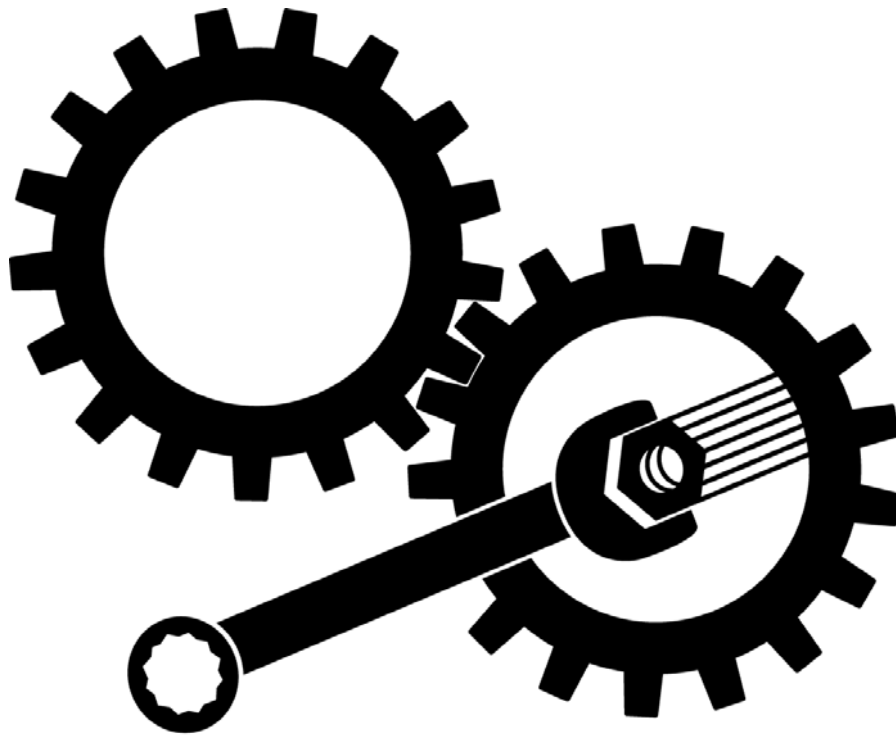


# 915 ZOOM EZT & IZT

## Service Manual

Models 915055, 057, 059, 065, 067, 501, 502

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# SECTION 1 - INTRODUCTION

## 1.1 THE MANUAL

The purpose of this manual is to provide complete instructions for service, maintenance, disassembly, repair, and installation of the mechanical components for the 915 ZT.

Dealer trained service personnel should use this manual as a supplement to and reminder of the training sessions conducted by the company.

Read all information for servicing a part or system before repair work is started to avoid needless disassembly.

### Operation

Before operation of the unit, carefully and completely read manuals supplied with the unit. The contents will provide you with an understanding of safety instructions and controls during normal operation and maintenance.

### Safety Messages

For your safety and the safety of others always read, understand, and follow all DANGER, WARNING, and CAUTION messages found in manuals and on safety decals.

### Directional Reference

All reference to left, right, front, or rear are given from the operator in the operator position and facing the direction of forward travel.

## 1.2 SERVICE AND REPLACEMENT PARTS

When ordering publications, replacement parts, or making service inquiries, know the Model and Serial numbers of your unit and engine.

Numbers are located on the product registration form in the unit literature package. They are printed on a serial number label, located on the frame of your unit.

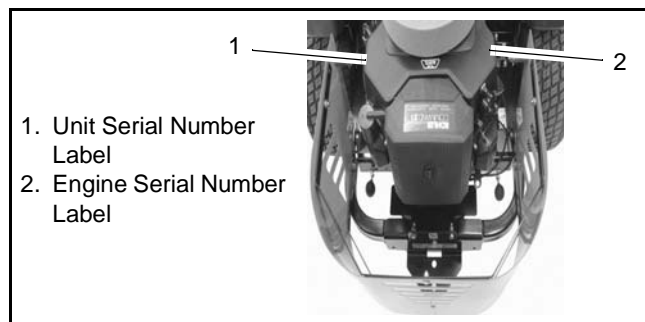


Figure 1

## 1.3 PRODUCT REGISTRATION

A warranty registration card must be filled out, signed, and returned at time of purchase. This card activates

the warranty. Claims meeting requirements during limited warranty period will be honored.

## 1.4 UNAUTHORIZED REPLACEMENT PARTS

Use only Ariens replacement parts. The replacement of any part on this vehicle with anything other than a Ariens authorized replacement part may adversely affect the performance, durability, or safety of this unit and may void the warranty. Ariens disclaims liability for any claims or damages, whether warranty, property damage, personal injury, or death arising out of the use of unauthorized replacement parts.

## 1.5 DISCLAIMER

Ariens reserves the right to discontinue, make changes to, and add improvements upon its products at any time without public notice or obligation. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your unit.

## 1.6 TECHNICAL SERVICE COMMUNICATIONS

Ariens Technical Service communicates information to the field using Service Letters, Service Bulletins, Product Notices, and Campaigns. Each communication signifies a type of information and priority. The dealer is responsible to carry out the directive provided in the communication. The types of communication are:

**Service Letter** - General technical information for the dealer. Technical information on how to service the product and product improvements.

**Service Bulletin** - Notification to update products to resolve certain issues or a notification of a policy change.

**Product Notices** - Notification of limited product issue located in a certain region. This is a limited distribution to only those who received the product involved.

**Campaigns** - Notification of a safety related issue. All products must be updated and are tracked by the factory until all units are corrected.

## SECTION 2 - SAFETY



**WARNING:** This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the safety instructions in the manuals and on decals could result in serious injury or death.

Slopes are a major factor related to loss-of-control and tip-over accidents. Operation on all slopes requires extra caution.

Tragic accidents can occur if the operator is not alert to the presence of children. Never assume that children will remain where you last saw them.

Gasoline is extremely flammable and the vapors are explosive, handle with care.

Disengage attachment, stop unit and engine, remove key, engage parking brake, and allow moving parts to stop before leaving operator's position.

### 2.1 SAFETY ALERTS



Look for these symbols to point out important safety precautions. They mean:



**Attention!**  
**Personal Safety Is Involved!**  
**Become Alert!**  
**Obey The Message!**

The safety alert symbol is used in decals and with this manual. Understand the safety message. It contains important information about personal safety on or near the unit.



**DANGER: IMMINENTLY HAZARDOUS SITUATION!** If not avoided, WILL RESULT in death or serious injury.



**WARNING: POTENTIALLY HAZARDOUS SITUATION!** If not avoided, COULD RESULT in death or serious injury.



**CAUTION: POTENTIALLY HAZARDOUS SITUATION!** If not avoided, MAY RESULT in minor or moderate injury. It may also be used to alert against unsafe practices.

### 2.2 NOTATIONS

**NOTE:** General reference information for proper operation and maintenance practices.

**IMPORTANT:** Specific procedures or information required to prevent damage to unit or attachment.

### 2.3 EQUIPMENT SAFETY

ALWAYS replace missing or damaged Safety Decals.

#### 1. Caution!

- Maximum tongue weight: 30 lbs.
- Maximum trailer weight: 300 lbs.
- Do not use hitch with bagger attached.
- Do not use on steep hills or slopes.
- Do not park on hills when trailer is attached.
- Do not use with any ground engaging equipment.

#### 2. Danger!

Avoid injury - Stay clear of rotating parts.

#### 3. Danger!

Always keep feet and hands away from rotating parts.

Always stand clear of discharge area. Do not direct discharge toward other people.

Keep people away from unit while operating.

Shut off engine, remove key, and read manual before you adjust or repair unit.

NO STEP! Always keep feet away from rotating parts.

#### 4. Warning!

Always stand clear of discharge area.

Do not operate mower unless bagger is attached or guards are in operating position.

#### 5. Danger! To Avoid Serious Injury or Death

Read the operator's manual.

Keep children and others away from unit while operating.

Never direct discharge toward other people. Thrown objects can cause injury.

Look down and behind before and while backing. Never carry children.

Go up and down slopes, not across.

DO NOT operate on slopes over 10°.

- If machine stops going uphill, stop blade and back down slowly.
- Avoid sudden turns.
- Keep safety devices (guards, shields switches, etc.) in place and working.
- Check interlock system per manual before use.

- Understand location and function of all controls.
  - Never allow operation by untrained persons.
  - Disengage PTO, stop unit and engine, set parking brake and remove key before making any inspections, repairs, etc.
6. Hot Surfaces!  
DO NOT touch parts which are hot from operation. ALWAYS allow parts to cool.
7. Caution  
No smoking.  
Fill fuel tanks to 2-1/2 in. (6.35 cm) below bottom of filler neck.
- Never fill fuel tank when engine is running, hot or unit is indoors. Never overfill fuel tank.
  - Replace fuel cap securely and clean up spilled fuel.

## 2.4 SAFETY RULES

If unit is to be used by someone other than original purchaser; loaned, rented or sold, ALWAYS provide this manual and any needed safety training before operation. Only the user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property. Read, understand, and follow all safety practices in Owner/Operator Manual before assembling, using or working on this mower. ALWAYS remove key from ignition and wire from spark plug before assembly, or working on this unit.

Inspect unit before each use for: missing or damaged decals and shields, correctly operating safety interlock system, and deterioration of grass catchers. Replace or repair as needed.

ALWAYS check overhead and side clearances carefully before operation. ALWAYS be aware of traffic when crossing or operating along streets or curbs. Keep children, people, and pets away. Be alert and shut off unit if anyone enters work area. Keep children under watchful care of a responsible adult.

NEVER allow children to operate or play on or near unit.

Keep area of operation clear of all toys, and debris. Thrown objects can cause injury.

Stay alert for hidden hazards, holes and ruts. Avoid uneven or rough terrain. DO NOT operate near drop-offs, ditches, or embankments. Unit can suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.

Dust, fog, etc. can reduce vision and cause an accident. Operate unit only when there is good visibility and light.

Data indicates that operators, age 60 and above, are involved in larger percentage of riding mower related injuries. These operators should evaluate their ability to

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

Only trained adults may operate unit. Training includes being familiar with controls and actual operation.

NEVER operate unit after or during the use of medications, drugs or alcohol.

NEVER allow anyone to operate this unit when their alertness or coordination is impaired.

Wear adequate safety gear, sturdy shoes and protective gloves.

DO NOT wear loose clothing or jewelry and tie back hair that may get caught in rotating parts. Protect eyes, face and head from objects that may be thrown from unit. Wear appropriate hearing protection. Always wear safety goggles or safety glasses with side shields when operating mower.

Avoid sharp edges. Sharp edges can cut. Moving parts can cut off fingers or a hand. ALWAYS keep hands and feet away from all rotating parts during operation. Rotating parts can cut off body parts.

ALWAYS keep hands away from all pinch points.

Start and operate unit only when seated in operator's position. Steering control levers must be in neutral, PTO disengaged and parking brake set when starting engine. ALWAYS keep body and hands away from pin holes or nozzles which eject hydraulic fluid under pressure.

DO NOT touch unit parts which might be hot from operation. Allow parts to cool before attempting to maintain, adjust or service.

NEVER place your hands or any part of your body or clothing inside or near any moving part while unit is running.

NEVER direct discharge towards persons or property. Thrown objects may ricochet back towards operator. ALWAYS stand clear of the discharge area.

ALWAYS disengage attachment, stop unit and engine, remove key, engine parking brake, and allow moving parts to stop before leaving operator's position.

Use extreme caution on gravel surfaces.

Disengage PTO when attachment is not in use and when crossing gravel surfaces.

DO NOT operate unit if safety interlock system is damaged or disabled. Check safety interlock before each use.

ALWAYS remove key to prevent unauthorized use.

DO NOT operate at too fast a rate. Slow down before turning.

Stop engine before removing grass catcher or unclogging chute.

SO NOT mow on wet grass. Reduced traction could cause sliding.

DO NOT try to stabilize the machine by putting your foot on the ground.

Know the weight of loads. Limit loads to those you can safely control and the unit can safely handle.

ALWAYS keep protective structures, guards and panels in good repair, in place and securely fastened.

Do not operate without either entire grass catcher or the discharge guard in place.

DO NOT operate in reverse unless absolutely necessary. ALWAYS look down and behind before and while backing; especially for children.

Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability when using attachments.

NEVER carry passengers-especially children-even with blades off.

Use extra care when approaching blind corners or objects that may obscure vision of hidden obstacles and children.

If you cannot back up a slope or you feel uneasy on it, do not mow it.

Mow up and down slopes, not across them.

Use slow speed on any slope. Tires may lose traction on slopes even though the brakes are functioning properly.

Keep all movements on the slope slow and gradual. DO NOT make sudden changes in speed or direction.

Use extra care while operating machines with grass catcher or other attachments. They can affect stability of the machine.

Avoid starting, stopping, or turning on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.

DO NOT operate on slopes over 10°.

DO NOT park on slopes unless necessary. If unit is parked on a slope, ALWAYS chock or block wheels and set parking brake.

DO NOT disengage or bypass transmission and coast downhill.

Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.

Follow the manufacturer's recommendations for weight limits for towed equipment and towing slopes.

NEVER allow children or others in or on towed equipment.

On slopes, the weight of the towed equipment may cause loss of traction and loss of control. Travel slowly and allow extra distance to stop. Use extra care when loading or unloading unit onto trailer or truck.

Secure unit chassis to transport vehicle.

NEVER secure from rods or linkages that could be damaged.

DO NOT transport machine while engine is running.

ALWAYS turn off power to attachment and shut off fuel when transporting unit.

Keep unit free of grass clippings, leaves and other debris. Clean up oil or fuel spills.

This product is equipped with an internal combustion type engine. DO NOT use unit on or near any unimproved, forest-covered or brush-covered land unless exhaust system is equipped with a spark arrester meeting applicable local, state or federal laws. A spark arrester, if it is used, must be maintained in effective working order by operator.

Fuel is highly flammable and its vapors are explosive. Handle with care. Use an approved fuel container.

NO smoking. NO sparks, NO flames.

ALWAYS allow engine to cool before servicing.

NEVER fill fuel tank when engine is running or hot from operation.

NEVER fill or drain fuel tank indoors.

NEVER overfill fuel tank.

Replace fuel cap securely and clean up spilled fuel.

NEVER fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.

When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.

Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

If fuel is spilled on clothing, change clothing immediately.

Avoid Electric Shock. Objects contacting both battery terminals at the same time may result in injury and unit damage. DO NOT reverse battery connections.

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

NO flames, NO sparks, NO smoking near battery.

ALWAYS wear safety glasses and protective gear near battery. Use insulated tools.

DO NOT TIP battery beyond a 45° angle in any direction.

ALWAYS keep batteries out of reach of children.

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

Reverse connections may result in sparks which can cause serious injury. Always connect positive (+) lead

of charger to positive (+) terminal, and negative (-) lead to negative (-) terminal.

ALWAYS disconnect negative (-) cable FIRST and positive (+) cable SECOND. ALWAYS connect positive (+) cable FIRST, and negative (-) cable SECOND.

A frozen battery can explode and result in death or serious injury. DO NOT charge or jump start a battery containing frozen fluid. Thaw the battery before putting on a charger or jump starting.

ALWAYS keep protective structures, guards, and panels in good repair, in place and securely fastened. NEVER modify or remove safety devices.

DO NOT change engine governor settings or over-speed engine.

Fumes from engine exhaust can cause injury or death. DO NOT run engine in an enclosed area. Always provide good ventilation.

ALWAYS maintain unit in safe operating condition. Damaged or worn out muffler can cause fire or explosion.

Stop and inspect equipment if you strike an object or if there is an unusual vibration. Repair, if necessary, before restarting. Never make adjustments or repairs with the engine running.

Mower blades are sharp and can cut you. Wrap the blade(s) or wear gloves, and use extra caution when servicing them. NEVER weld or straighten mower blades.

Rotation of one blade may cause rotation of the other blades.

Check brake operation frequently. Adjust and service as required.

Keep all hardware properly tightened.

Stored energy in springs can cause injury.

Maintain or replace safety and instruction labels, as necessary.

Never store the machine or fuel container inside a building where there is an open flame, such as a water heater.

Shut off fuel (if provided) and allow engine to cool completely before storing in closed area or covering unit.

Clean grass and debris from unit, especially from around muffler and engine, to help prevent fires.

For extended storage, clean unit thoroughly. See Engine Manual for proper storage.

Use only attachments or accessories designed for your unit.

Check attachment components frequently. If worn or damaged, replace with manufacturer's recommended parts.

## SECTION 3 - SPECIFICATIONS

Model Number	915065	915502	915067	915055	915501	915057	915059
<b>Model</b>	1540	1540	1740	1944	1844	2148	2352
<b>Engine</b>							
Type	Single Cylinder Kohler	Twin Cylinder Kawasaki	Single Cylinder Kohler	Twin Cylinder Kohler	Twin Cylinder Kawasaki	Twin Cylinder Kohler	
Engine Power – HP (kW) at Governed RPM	15 (11.2)	15 (11.2)	16 (11.9)	19 (14.2)	18 (13.4)	21 (15.7)	23 (17.2)
Max Governed RPM	3375	2700	3375	3250	2550	3250	
<b>Speed</b>							
Forward Max. – m.p.h (km/h)	6.0 (9.7)		6.5 (10.5)				
Reverse Max. – m.p.h (km/h)	3.0 (4.8)						
<b>Turning Radius</b>	Zero						
<b>Brakes</b>	Internal Transmission						
<b>Electrical</b>							
Starter	Electric						
Battery	12 Volt Maintenance Free						
PTO (Power Take-Off)	Electric Clutch/Brake						
<b>Fuel</b>							
Fuel Type	Refer to Engine Manual						
Fuel Tank Capacity – gal. (L)	8 (30.3)						
<b>Transmission</b>	Hydrostatic Drive						
<b>Size and Weight</b>							
Length – in. (cm)	76 (193)						
Width – in. (cm)	55.5 (141)			59 (150)		63 (160)	66 (168)
Weight – lbs (kg)	616 (279)		660 (299)	687 (312)		714 (324)	740 (336)
Height – in. (cm)	40 (102)		43 (109)				
<b>Tires</b>							
Front Tire Size – in. (cm)	11 x 4 (27.9 x 10.2)						
Rear Tire Size – in. (cm)	18 x 8.5 (45.7 x 21.6)			18 x 9.5 (45.7 x 24.1)			
Front Tire Pressure – psi (kPa)	46 (317)						
Rear Tire Pressure – psi (kPa)	10 (69)			12 (83)			
<b>Mower Deck</b>							
Cutting Height – in. (cm)	1-1/2 - 4-1/2 (3.81 - 11.4)						
Cutting width – in. (cm)	40 (102)			44 (112)		48 (122)	52 (132)
<b>Max. Towing Capacity – lbs (kg)</b>	300 (136)						
<b>Max. Tongue Weight – lbs (kg)</b>	30 (13.6)						



## SECTION 4 - GENERAL MAINTENANCE & ADJUSTMENTS

### 4.1 CONTROLS AND FEATURES

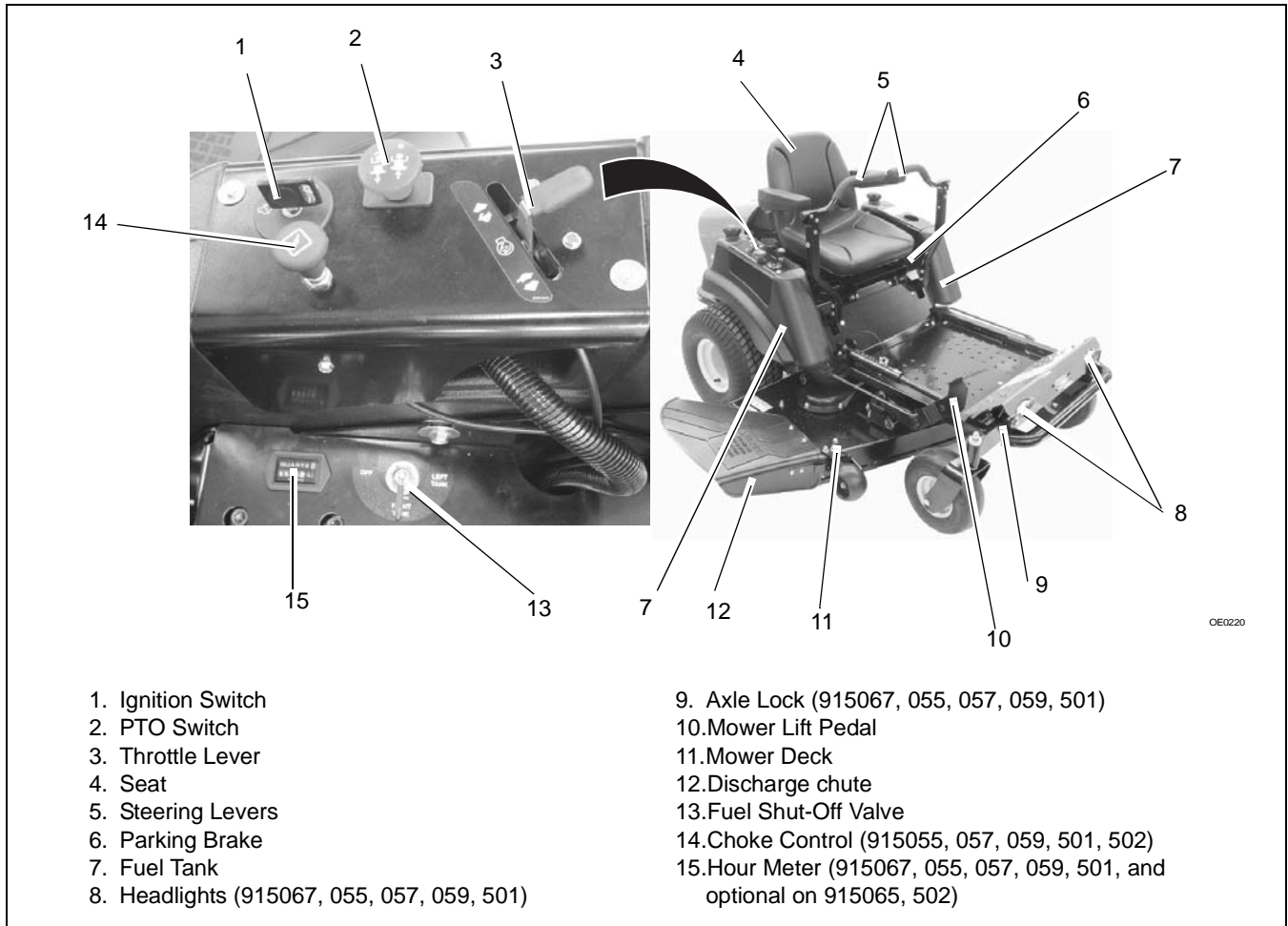


Figure 2

## 4.2 MOVING UNIT MANUALLY



**WARNING:** DO NOT disengage or bypass transmission and coast downhill.

Disengage (2) transmission bypass levers to drive unit and engage (1) transmission bypass levers to push unit manually (Figure 3).

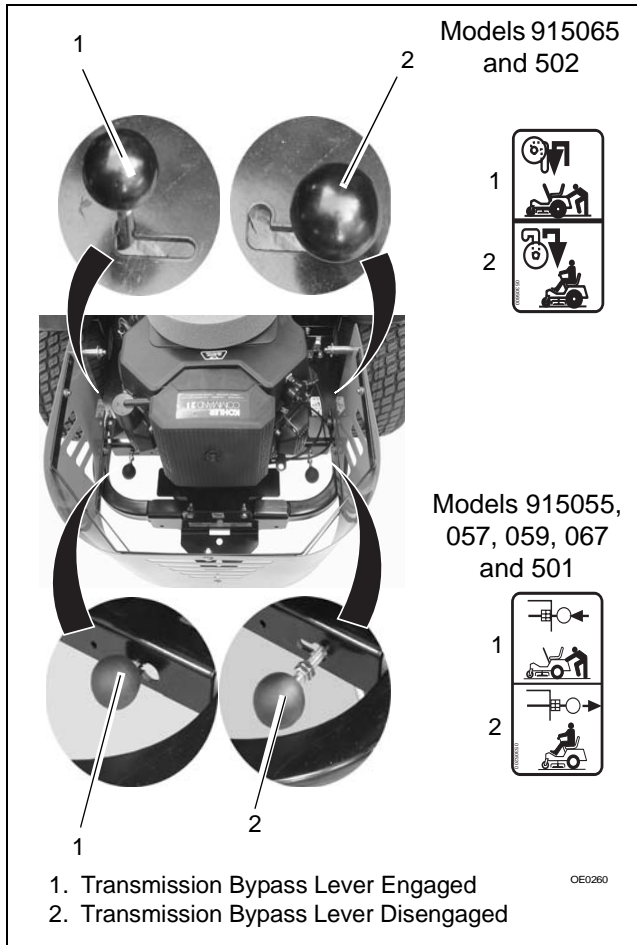


Figure 3

## 4.3 FILLING FUEL TANKS



**WARNING:** Fuel is highly flammable and its vapors are explosive. Handle with care.

NO smoking, NO sparks, NO flames.

Refer to Engine Manual for proper fuel.

To add fuel to the fuel tank:

1. ALWAYS place unit in open or well ventilated area.
2. Stop engine and allow to cool for two minutes.
3. Clean the fuel cap and the area around the fuel cap to prevent dirt from entering the fuel tank.



1. Fuel Cap

OE0180

Figure 4

4. Remove the cap from the fuel tank.
5. Fill the fuel tank with the proper grade of fuel as recommended by the engine manufacturer. Do not spill any fuel.
6. Fill fuel tanks to 2-1/2 in. (6.35 cm) below bottom of filler neck.
7. Replace the cap on the fuel tank and tighten.
8. ALWAYS clean up any spilled fuel before starting the engine.

## 4.4 GENERAL LUBRICATION

Each front caster has a grease fitting.

All grease fittings should be greased at 25-hour intervals. Clean and inspect parts and replace as required.

1. Clean the fittings before attaching the grease gun.
2. Use Stens Mix Hi-Temp grease (a moly-lithium grease) or equivalent. Add grease until it appears at the ends of the bearing or ends of the shaft.
3. Check all parts for wear and damage.
4. Every 25 hours apply motor oil to all pin connections, pivots points and areas where sliding occurs.



**CAUTION:** Before performing any service or adjustments:

- Turn PTO switch "OFF".
- Park mower on a hard, flat, level surface.
- Set parking brake.
- Turn ignition switch "OFF" and remove key.
- Wait for blades and all moving parts to stop.

## 4.5 AXLE LOCKS

(915067, 055, 057, 059, 501) (Figure 5)

**NOTE:** The unit comes shipped with the front axle in the lockout position.

If a pivoting front axle is needed: Remove axle lock hardware from lockout position and install axle lock hardware in pivoting position on both sides of front axle.

**NOTE:** To lock front axle, install axle lock hardware in the lockout position on both sides of the axle.

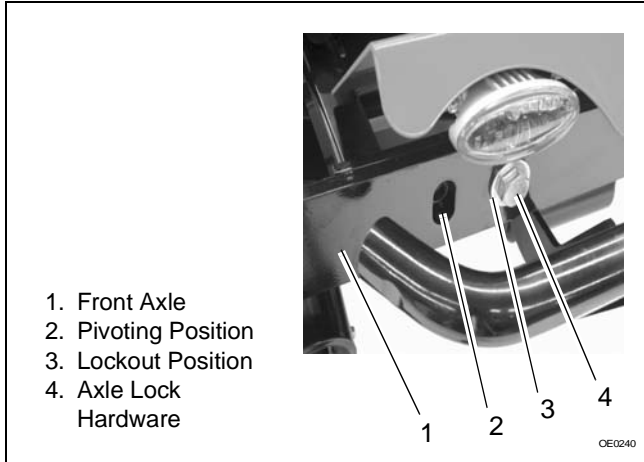


Figure 5

## 4.6 REMOVING MOWER DECK

**Remove (Figure 6)**

1. Remove PTO belt from electric clutch (see *Replacing PTO Belt*).

**NOTE:** Perform steps 2 and 3 for the right and left sides of unit.

2. Remove guide arm from front mount bracket.

3. Remove rear lift link, rear trunnion, front lift link, and front trunnion from mower deck and mower lift.

4. Slide mower deck out from under unit.

**Install (Figure 6)**

1. Slide mower deck under unit.

**NOTE:** Perform steps 2 and 3 for the right and left sides of unit.

2. Install rear lift link, rear trunnion, front lift link, and front trunnion on mower deck and mower lift.

3. Install guide arm on front mount bracket.

4. Install PTO belt on electric clutch (see *Replacing PTO Belt*).

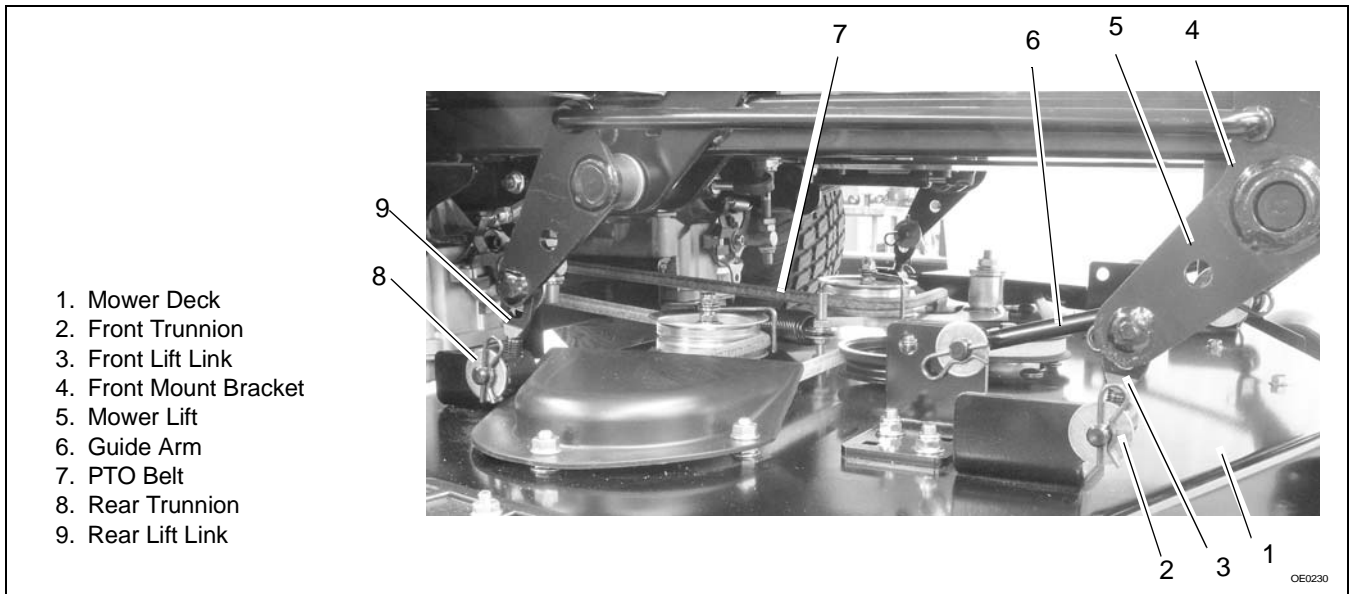


Figure 6

## 4.7 LEVELING AND ADJUSTING PITCH OF MOWER DECK

Adjust on a level surface, with the tires inflated to the correct air pressure.

### Level Mower Deck

1. Install adjustment pin in the fourth adjustment hole (Figure 7).

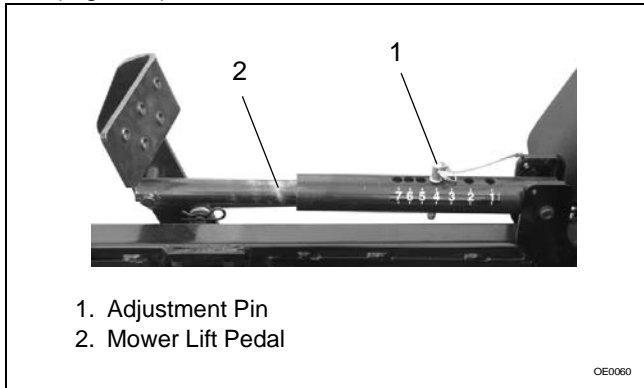


Figure 7

2. Rotate the right and left mower blades until the ends of both mower blades are facing rearward (Figure 8).

**NOTE:** The rear blade cutting height should be 2-7/8 to 3 in. (7.3 to 7.6 cm) from rear edge of mower blades to the ground on both blades (Figure 8).

**IMPORTANT:** The distance from rear edge of mower blades to the ground **MUST NOT** exceed 3 in. (7.6 cm) (Figure 8).

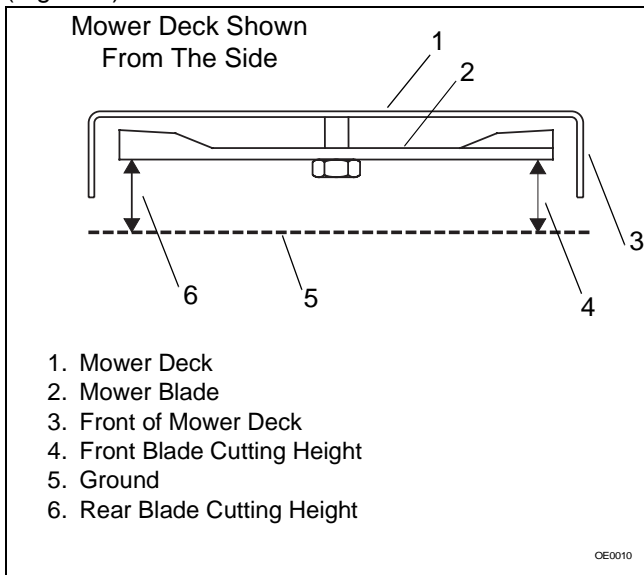


Figure 8

3. Measure from rear edge of mower blades to the ground.
4. Perform steps 5 through 7 if the measurement is too high to too low on either side of mower deck.
5. Remove rear lift link and rear trunnion from mower deck and mower lift.

- TO RAISE the mower deck, turn rear trunnion clockwise several turns.
  - TO LOWER the mower deck, turn rear trunnion counterclockwise several turns.
6. Install rear trunnion and rear lift link on mower deck and mower lift.
  7. Check that the mower deck is level:  
Rotate right and left mower blades to face side-to-side.  
Measure outer edge of mower blades to ground. Measurement must be within 1/4 inch (6.35 mm).
    - If mower deck is not level, repeat steps 5 and 6.
    - If mower deck is level, record the distance from rear edge of mower blades to the ground and then adjust pitch of mower deck.

### Adjust Pitch of Mower Deck

**IMPORTANT:** The mower blade end used to level the mower deck must be used to adjust the pitch of the mower deck.

1. Rotate the right and left mower blades 90 degrees until the end of the mower blade that was used to level the mower deck is facing forward (Figure 8).

**NOTE:** The front blade cutting height should be 1/16 - 1/4 inch (1.59 - 6.35 mm) lower than the rear blade cutting height.

2. Measure from front edge of right and left mower blades to the ground.
3. Subtract front blade cutting height measurement from rear blade cutting height measurement.
4. Perform steps 5 through 7 if the front blade cutting height is too high or too low on either side on either side of mower deck.
5. Remove front lift link and front trunnion from mower deck and mower lift (Figure 6).
  - TO RAISE the mower deck, turn front trunnion clockwise several turns.
  - TO LOWER the mower deck, turn front trunnion counterclockwise several turns.
6. Install front trunnion and front lift link on mower deck and mower lift.
7. Check mower deck pitch.
  - If mower deck pitch is not correct, repeat steps 2 through 6.
  - If mower deck pitch is correct, the adjustment is complete.

## 4.8 ADJUSTING ANTI-SCALP ROLLER

**NOTE:** The anti-scalp rollers are intended to prevent lawn scalping, not to control cutting height. All anti-scalp rollers should be set at the same height.

See Figure 9 for anti-scalp locations on models 915067, 055, 057, 059, 501. See Figure 10 for anti-scalp locations on model 915065 and 502.

There are two positions:

- Highest Position: Use to disable anti-scalp feature.
- Lowest Position: Use for all cutting positions.

In the lowest position the anti-scalp rollers will touch the ground.

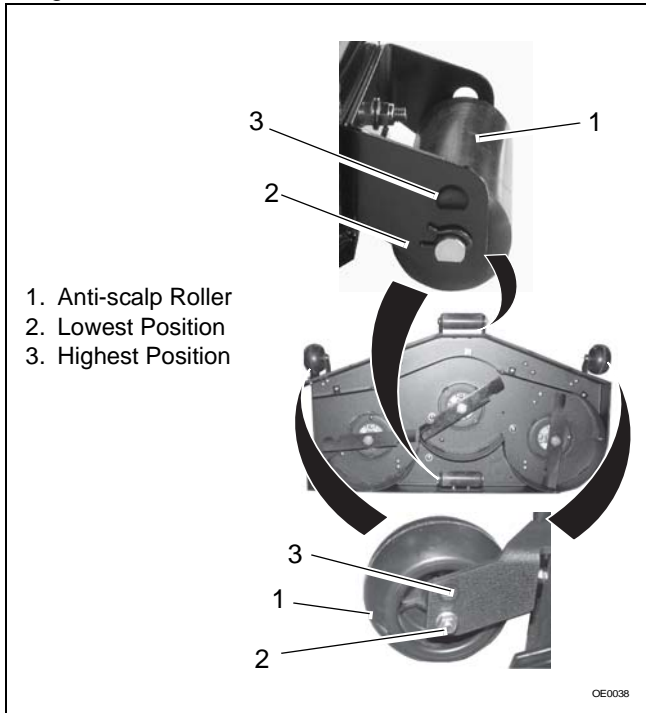


Figure 9

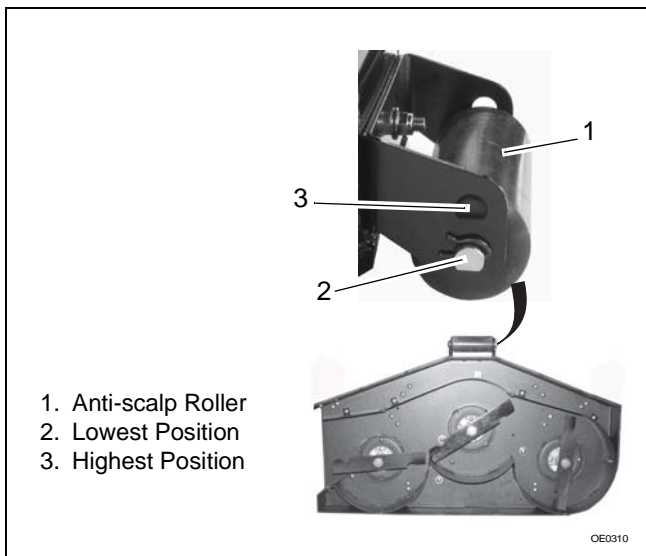


Figure 10

## 4.9 HYDROSTATIC TRANSMISSION NEUTRAL ADJUSTMENT

1. Shut off engine and engage the parking brake.



**CAUTION:** PREVENT personal injury! ALWAYS MAKE CERTAIN that jack(s) or blocks used are stable, strong and will support the weight of the unit.

2. Position rear wheels off the ground. Be careful to secure the unit to the lift or position the unit to face a wall for safety. Disconnect the rods from the handlebars to the linkage.
3. Pull the pin that holds the locking arm to the brake rod then release the locking arm and disengage it from the gear.
4. Engage seat switch and start the engine. The drive wheels should not be rotating. If the wheels are not driven to rotate, proceed to Steering Control Neutral Adjustment.

To adjust the neutral setting for no wheel rotation Model EZT 915065 and 502:

5. Use a hex wrench to loosen the locking bolt (Figure 11) until the linkage can be rotated by hand.
6. With the engine running and the drive wheels off the ground, rotate the linkage in either direction. The correct linkage position is when the wheel is not being driven (under power).
7. Hold the linkage in place and tighten the locking bolt.
8. Shut off engine and reconnect steering rods.
9. Reconnect parking brake pin. Check parking brake linkage for proper movement.

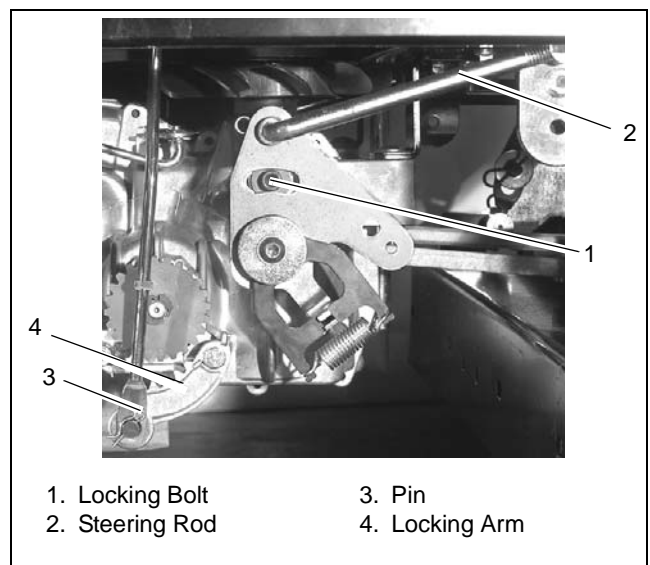


Figure 11

To adjust the neutral setting for no wheel rotation  
Model IZT 915055, 057, 059, 067, 501:

1. Use a hex wrench to loosen the locking bolt (Figure 12).
2. With the engine running and the drive wheels off the ground rotate the linkage in either direction. The correct linkage position is when the wheel is not being driven (under power).
3. Hold the linkage in place and tighten the locking bolt.
4. Shut off engine.
5. To reconnect the steering rod it should be positioned through the hole in the trunnion. Two jam nuts are above and one nyloc nut is below the trunnion.
6. Without moving the transmission linkage turn the first jam nut towards the trunnion until it makes contact.
7. The nyloc nut is turned toward the trunnion until tight.
8. Move the second jam nut to contact the first jam nut and tighten together.
9. Reconnect parking brake pin.

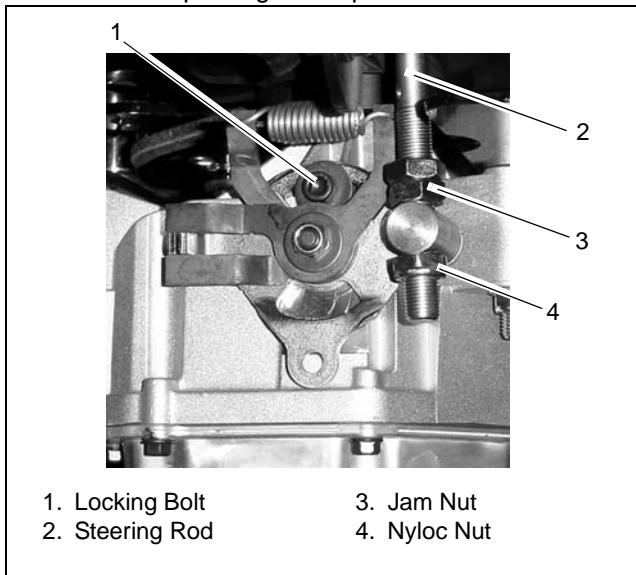


Figure 12

#### 4.10 ADJUSTING THE UNIT TO TRACK STRAIGHT

Model EZT 915065, 502 with serial numbers above 10,000

(Figure 13)

**IMPORTANT:** The unit should track within 2 feet (0.61 m) of a straight line for 30 feet (9.14 m).

The travel of the steering levers may need adjustment if:

- The unit turns to the right or left when both steering levers are pushed as far forward as possible.

- The unit turns to the right or left when both steering levers are pulled back as far rearward as possible.

**NOTE:** The side the unit turns toward indicates that the wheel on that side is turning slower than the other wheel. Either the wheel that is turning faster needs to slow down or the wheel that is turning slower needs to be sped up to allow the unit to travel in a straight line.

See steering section for illustrations.

1. Determine which way the unit turns.
2. Tip seat forward

**NOTE:** The forward travel adjustment bolt adjusts forward travel of the steering lever. The rear travel adjustment bolt adjusts the rearward travel of the steering lever.

3. Adjust speed by:

- Turning adjustment bolt clockwise to decrease steering lever travel.
- Turning adjustment bolt counterclockwise to increase steering lever travel.

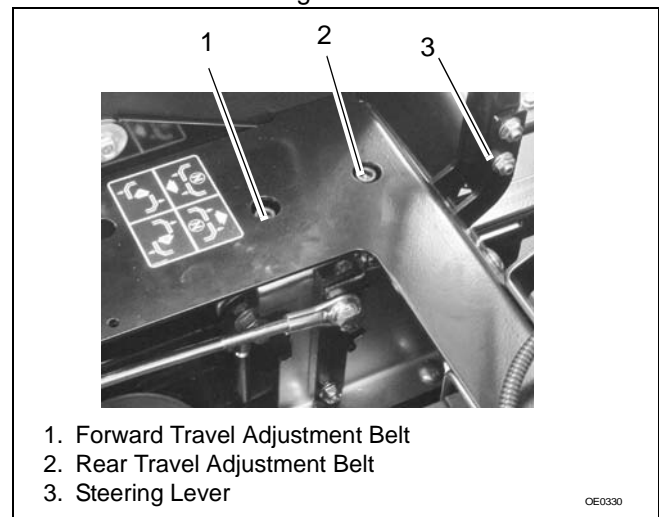


Figure 13

Model EZT 915065, 502 with serial numbers below 10,000:

1. Determine which way the unit turns.
2. Move handlebars to neutral position. Handlebars should line-up with each other. To adjust handlebar position; loosen mounting bolts, realign and tighten bolts.
3. Locate the stop bolts for handlebar travel.
4. Make a length adjustment of the stop bolt to either shorten the stroke of the handlebar on the outside of the turn, or lengthen the stroke of the handlebar on the inside of the turn.

Model IZT 915055, 057, 059, 067, 501 with serial numbers below 10,000:

1. Determine which way the unit turns.
2. Adjust steering levers to match. Note each steering lever can be positioned further forward or further backward.



- Move levers to neutral position.
  - Loosen mounting hardware.
  - Position steering levers.
  - Tighten mounting hardware.
3. Adjust height of steering levers. There is a low and a high position for steering levers.
    - Remove mounting hardware and place steering levers in the low or high position.
    - Tighten mounting hardware.  
The forward or backward full travel of the steering levers is controlled by the position of the dampener.
  4. Locate the dampener. The mounting hole in the frame should be slotted.
  5. Slide adjustment bolt to the back of the machine to speed the side up (inside of turn). Slide adjustment bolt forward to slow down this side of the machine (outside of turn).
  6. Adjust as needed. The steering lever neutral position may need adjustment.

Model IZT 915055, 057, 059, 067, 501 with serial numbers above 10,000

**IMPORTANT:** The unit should track within 2 feet (0.61 m) of a straight line for 30 feet (9.14 m).

The travel of the steering levers may need adjustment if:

- The unit turns to the right or left when both steering levers are pushed as far forward as possible.
- The unit turns to the right or left when both steering levers are pulled back as far rearward as possible.

**NOTE:** The side the unit turns toward indicates that the wheel on that side is turning slower than the other wheel. Either the wheel that is turning faster needs to slow down or the wheel that is turning slower needs to be sped up to allow the unit to travel in a straight line.

See steering section for illustrations.

1. Determine which way the unit turns.
2. Tip seat forward

**NOTE:** The forward travel adjustment bolt adjusts forward travel of the steering lever. The rear travel adjustment bolt adjusts the rearward travel of the steering lever.

3. Adjust speed by:
  - Turning adjustment bolt clockwise to decrease steering lever travel.
4. Turning adjustment bolt counterclockwise to increase steering lever travel.

#### 4.11 ADJUSTING THE PARKING BRAKE

When properly adjusted the parking brake will lock the linkage on both drives and activate the safety switch (Figure 14).

The drive units should be properly adjusted for neutral.

Engage the parking brake handle. The brake rod should be positioned to lock the drive. The safety switch should be disengaged.

To adjust the linkage:

Move the adjusting nut (Figure 15) clockwise/ counterclockwise as needed to properly position the brake rod.

**NOTE:** The safety switch can be loosened for minor adjustments.

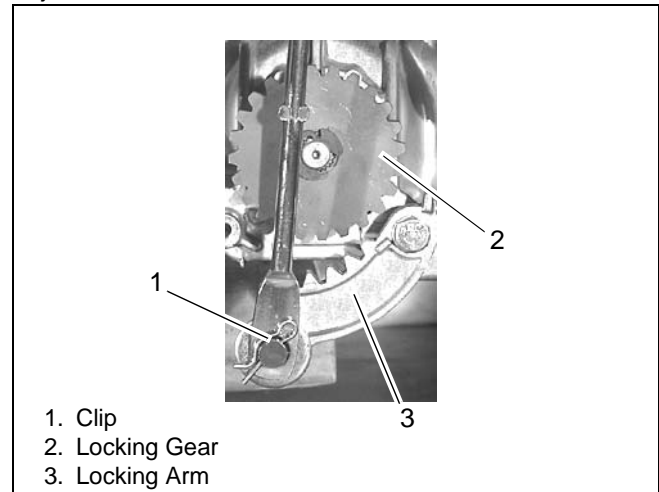


Figure 14

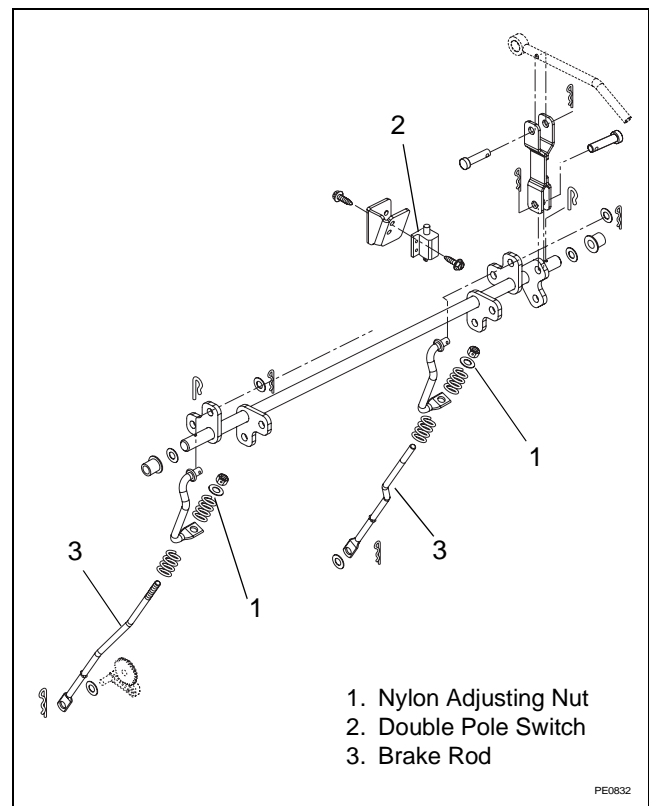


Figure 15

## SECTION 5 - ENGINE

### 5.1 ENGINE TROUBLESHOOTING

The following troubleshooting chart is to be used to isolate engine problems and give possible causes and corrective action responses.

The troubleshooting key is generic and can be used for several types of engines. Use only those possible causes and corrective actions that apply to the unit.

TROUBLE	POSSIBLE CAUSES (Refer to Key Below)	CORRECTIVE ACTION
Black Exhaust	1, 20, 22, 25, 29, 31, 32, 33	repair or replace
Blue/White Exhaust	4, 20, 25, 31, 33, 34	repair or replace
Difficult Starting	1, 5, 7, 8, 9, 10, 20, 21, 22, 29, 31, 32, 33	repair or replace
Erratic Running	1, 7, 8, 9, 10, 20, 21, 23, 26, 29, 33, 59, 62	repair or replace
Excessive Fuel Consumption	1, 20, 22, 23, 25, 29, 31, 32, 33	repair or replace
Excessive Crankcase Pressure	25, 31, 33, 34, 45, 55	repair or replace
High Oil Pressure	4, 41	repair or replace
Knocking	22, 26, 29, 31, 33, 36, 46, 59	repair or replace
Loss of Power or System	1, 8, 10, 20, 21, 22, 23, 25, 26, 31, 32, 33	repair or replace
Low Cranking Power	2, 3, 4, 11	repair or replace
Low Oil Pressure	4, 36, 37, 39	repair or replace
Misfiring	10, 20, 25, 26, 28, 29, 32	repair or replace
Overheating	1, 19, 25,	repair or replace
Poor Compression	25, 28, 29, 31, 32, 33, 34, 59,	repair or replace
Starts and Stops	1, 6, 10, 62	repair or replace see electrical systems see engine service manual
Vibration	20, 23, 25, 26, 29, 33, 45, 49	repair or replace
Will Not Crank	2, 11, 45	charge battery or replace
Will Not Start	1, 10, 62	repair or replace see electrical systems see engine service manual

TROUBLESHOOTING KEY					
1	Restriction in air cleaner	22	Incorrect grade of fuel	43	Faulty suction pipe
2	Bad electrical connection	23	Sticking throttle/restricted movement	44	Choked oil filter
3	Faulty starter motor	24	Exhaust pipe restriction	45	Bad solenoid switch
4	Incorrect grade of lubricating oil	25	Leaking cylinder head gasket	46	Incorrect piston height
5	Low cranking speed	26	Overheating	47	Damaged fan
6	Fuel tank empty	27	Cold running	48	Faulty engine mounting
7	Controls not in correct operation position	28	Incorrect tappet adjustment	49	Incorrectly aligned flywheel and/or flywheel housing
8	Blocked fuel feed line	29	Sticking valves	50	Faulty thermostat
9	Faulty fuel lift pump	30	Incorrect high pressure pipes	51	Restriction in water jacket
10	Choked fuel filter	31	Worn cylinder bores	52	Loose fan belt
11	Battery capacity low	32	Pitted valves and seats	53	Choked radiator
12	Air in fuel system	33	Broken, worn or sticking piston ring(s)	54	Faulty water pump
13	Faulty fuel injection pump	34	Worn valve stems and guides	55	Choked breather pipe
14	Faulty fuel injectors or incorrect type	35	Restriction in air cleaner	56	Damaged valve stem oil deflector (if fitted)
15	Incorrect use of cold start equipment	36	Worn or damaged bearings	57	Coolant level too low
16	Faulty cold start equipment	37	Insufficient oil in sump	58	Blocked sump strainer
17	Broken fuel injection pump drive	38	Bad/defective oil temperature switch	59	Broken valve spring
18	Incorrect fuel pump timing	39	Oil pump worn	60	Exhaust or vacuum pipe leak
19	Incorrect valve timing	40	Pressure relief valve sticking open	61	Bad or defective water temperature switch
20	Poor compression	41	Pressure relief valve sticking closed	62	Bad spark plug(s)
21	Blocked fuel tank vent	42	Broken relief valve spring		



## 5.2 CHECKING ENGINE OIL

Check the engine oil daily prior to use.

**IMPORTANT:** Never operate the engine with the oil below the low mark on the dipstick.

See the Engine Manual for oil specifications and oil filter service instructions.

To check oil level:

1. Move the unit to level location.
2. Clean around the dipstick and filler tube to prevent dirt from entering the engine.
3. Remove the dipstick and wipe off the oil on the dipstick.
4. Put the dipstick back into the engine, tighten in place, and remove again.
5. When the dipstick is removed, note the oil level. Oil should be between the full and add mark.
6. Replace dipstick.
7. If required, add oil. Do not overfill.
8. Clean up any spillage that may have occurred.

## 5.3 CHANGING OIL



**WARNING:** Do NOT touch parts which are hot. Allow parts to cool before servicing.

Engine muffler and other parts will be hot if unit has been running.

1. Engine oil should be changed after the first five hours of operation and every 25 hours there after.
2. Move the unit to a level and well ventilated area and set the parking brake.
3. If the engine is cold, let the unit run for five minutes.
4. When the engine is warm, stop the engine.
5. Clean the area around the dipstick and drain hose.
6. Put an open container that will hold one gallon of oil under the drain hose.
7. Open the drain valve.
8. Allow the engine oil to drain completely into the one gallon container. Remove container and contents for future recycling as required.
9. Close the oil drain valve.
10. If used, remove the oil filter.
11. Clean the oil filter port and install a new oil filter according to the instructions on the oil filter. Fill with new oil to the "full" mark on the dipstick.
12. Start and run the engine for one minute. Stop the engine and recheck the oil level and add as necessary.
13. Check for leakage at the drain plug and oil filter if used. Tighten the fittings as necessary if leakage occurs.

14. Release the parking brake.
15. Return the unit into service.

## 5.4 CHECKING ENGINE COOLING

**IMPORTANT:** To prevent severe damage to the engine, proper cooling will need to be maintained.

1. Check the air intake screen on the engine each day.
2. The air intake screen must be kept clean. Remove any grass, dirt, or debris that may have accumulated.
3. Check the engine cooling yearly.

## 5.5 CLEANING THE AIR CLEANER

1. Check the air cleaner element every day.
2. Clean the air cleaner precleaner every 25 hours. See your Engine Manual for instructions.
3. Apply oil and reinstall over the paper air filter element.
4. Wipe out the air cleaner cover to remove any dirt build up in the cover.
5. Reinstall the cover over the air cleaner prior to operating the engine. See your Engine Manual.

## 5.6 CHANGING THE AIR CLEANER ELEMENT

Replace the air cleaner element when clogged or every 100 hours. Do not attempt to clean. See your Engine Manual for instructions.

## 5.7 INSPECT MUFFLER/SPARK ARRESTER

Inspect muffler and (if equipped) spark arrester. Replace muffler if corroded, as it could create a fire hazard and/or damage.

## 5.8 REPLACE SPARK PLUGS

Spark plug type and gap setting are shown in *Specifications*. See Engine Manual for detailed instructions.

## 5.9 ENGINE REMOVAL

1. Remove deck.
2. Remove the hood.
3. Remove the negative cable from the battery.
4. Remove the main drive belt from the engine sheave by releasing the idler tension spring.
5. Remove the throttle and choke control from the engine.
6. Remove the electrical wiring from the engine (charge lead, starter cable, fuel solenoid lead, and magneto kill wire).

7. Remove fuel line from engine first. Drain fuel from line back into fuel tank.
8. Remove the electric clutch and the anti-rotation bolt.
9. Remove the engine bolts.
10. Lift engine out of the unit and off the frame with a hoist (engine).
11. Service, overhaul, or replace engine as required.
12. If replacing engine with a new engine, the following items will have to be removed (if used) from the old engine. These items will not be included with a new engine:
  - Engine sheave and key
  - Mounting hardware
  - Engine wiring harness.

## 5.10 ENGINE INSTALLATION

1. Check the engine base and unit frame for damage before installing the engine.
2. Place the throttle and choke controls, fuel line, and electrical wires out of the way prior to installing the engine.
3. Once the engine is bolted onto the frame, install the exhaust system and then tighten the mounting hardware.
4. Install the engine sheave, belts, springs, electrical wiring, throttle, and choke controls.
5. Install the negative battery cable onto the battery.
6. Install the fuel line.
7. Fill engine with 10-30 above 32°F (0°C) or 5W30 below 32°F (0°C).
8. Install the engine cover, then test operation and function of the engine.



**WARNING:** AVOID EXHAUST FUMES! DO NOT run engine in an enclosed area. ALWAYS provide good ventilation and wait until hazard has been removed.

9. Check the fluid levels as follows:
  - a) Start the engine and allow it to reach to operating temperature. DO NOT operate engine for more than two minutes.
  - b) Shut the engine off, wait for engine to cool, and be sure the engine oil level is between the full and add marks on the dipstick. If it is below the add mark, add recommended oil. DO NOT overfill.

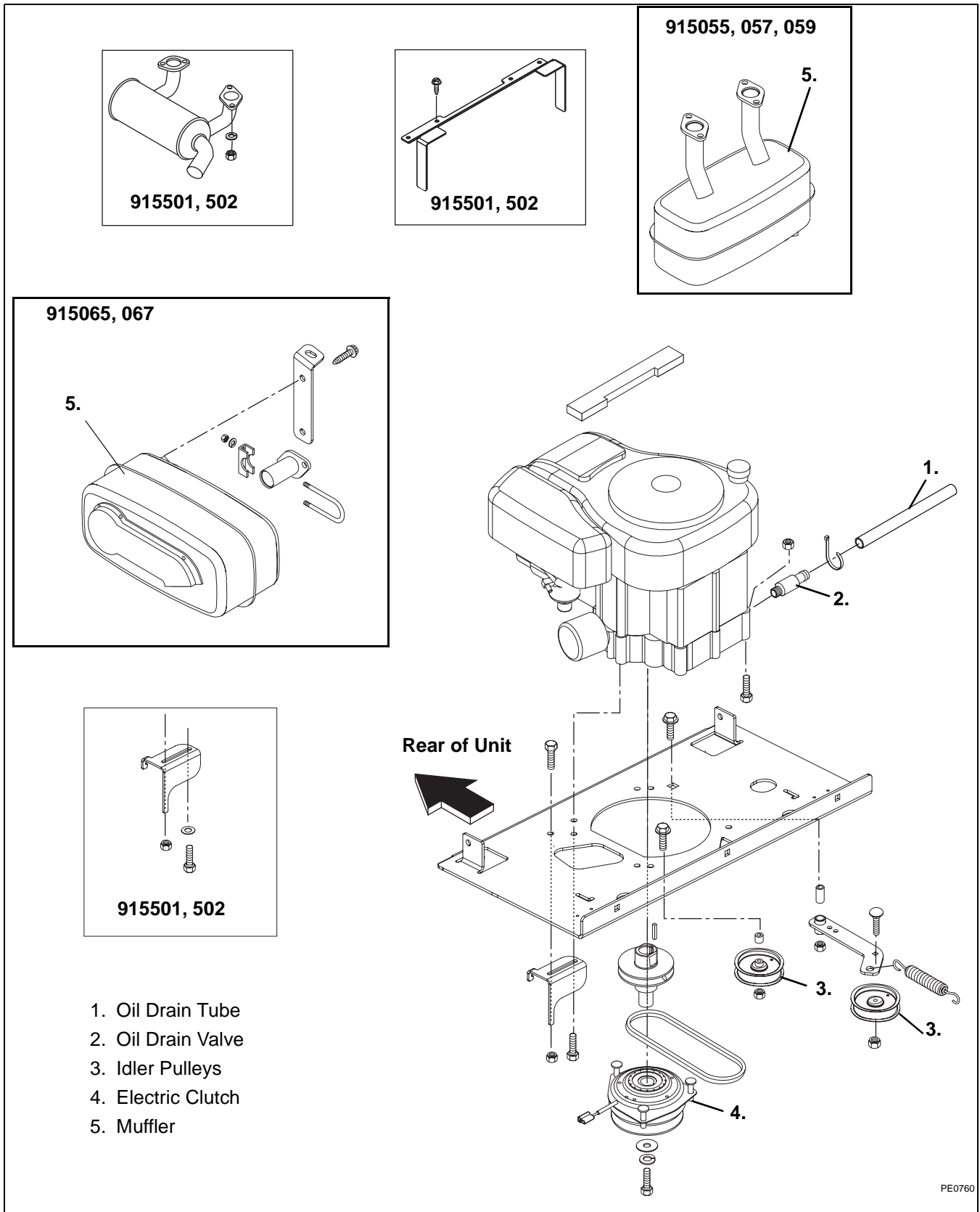


Figure 16

## SECTION 6 - MOWER DECK

### 6.1 REPLACING PTO BELT

#### Remove (Figure 17)

1. Lower mower deck to the ground.
2. Remove belt covers from mower deck.

**CAUTION:** Use care when releasing idler spring tension. Keep body parts well away from idler when performing this operation.

3. Hook a puller into idler hole and pull idler arm towards outside of unit until tension is removed from PTO belt.

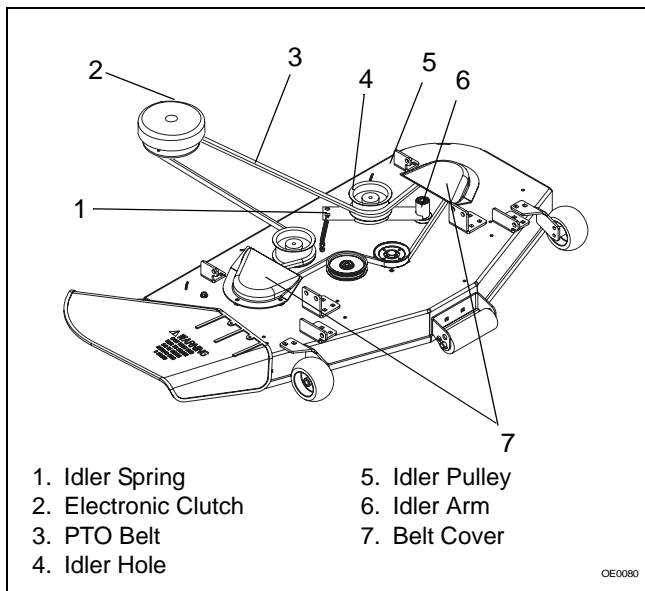


Figure 17

4. Remove PTO belt from left mower deck pulley.
5. Slowly release idler arm until tension is removed from idler spring.
6. Remove PTO belt from mower deck and electric clutch.

#### Install (Figure 17)

**NOTE:** Do not install PTO belt on left mower deck pulley in step 1.

1. Install PTO belt on electric clutch and mower deck.
2. Hook a puller into idler hole and pull idler arm towards outside of unit until PTO belt can be routed around left mower deck pulley.
3. Slowly release idler arm until idler pulley rests firmly against PTO belt.
4. Install belt covers on mower deck.

### 6.2 REPLACING MOWER BLADE

#### Remove (Figure 18)

**CAUTION:** Mower blades are sharp and can cut you. Wrap the blades or wear gloves, and use extra caution when servicing them

1. Block mower blades to prevent rotation.
2. Remove mounting hardware and mower blades from mower deck.

#### Install (Figure 18)

1. Install mower blades on mower deck with mounting hardware.
2. Torque 5/8-inch hex bolt to 80 to 120 lbf-ft (108 to 163 Nm).

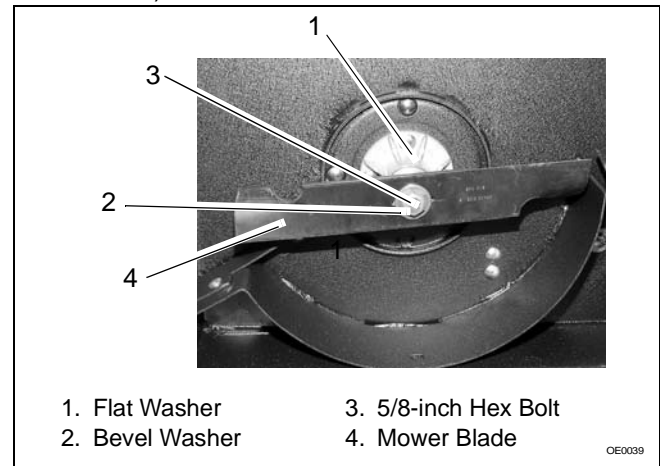


Figure 18

### 6.3 SHARPENING MOWER BLADE

**CAUTION:** DO NOT sharpen mower blade while on unit. An unbalanced mower blade will cause excessive vibration and eventual damage to unit. Check mower blade balance prior to reinstalling mower blades. NEVER weld or straighten mower blades.

1. Remove mower blade from unit (see *Replacing Mower Blade*).

Ariens recommends having mower blades sharpened by a professional.

Discard mower blade if (Figure 19):

- More than 1/2 in. (1.27 cm) of metal is removed.
- The air lift erosion area is eroded.
- The mower blade is bent or broken.

Do not change angle of cutting edge or round the corner at the end of mower blade.

2. Sharpen mower blade by removing an equal amount of material from each end of the mower blade.
3. Check mower blade balance by sliding mower blade on an unthreaded bolt. If blade is balanced, it should remain in a horizontal position. If either end of mower blade moves downward, sharpen the heavy end until mower blade is balanced.
4. Install mower blade on unit (see *Replacing Mower Blade*).

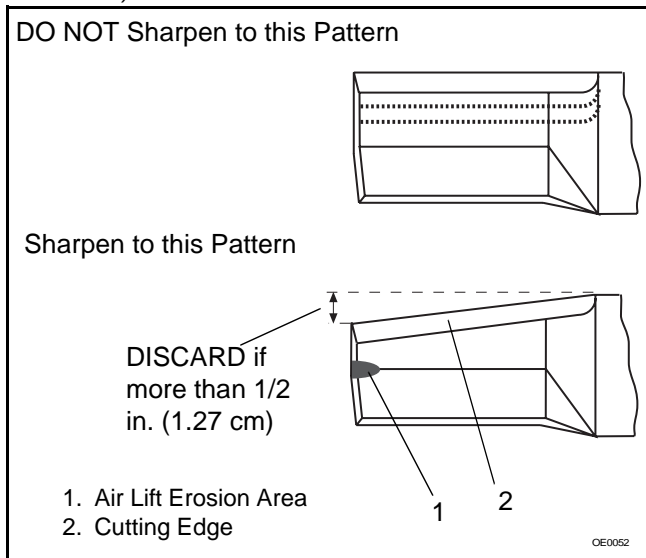


Figure 19

## SECTION 7 - DRIVE TRAIN

### 7.1 HYDRO TRANSMISSION TROUBLESHOOTING

The following troubleshooting chart is to be used to isolate hydro transmission problems and give possible causes and corrective action responses.

The troubleshooting key is generic and can be used for several types of transmissions. Use only those possible causes and corrective actions that apply to the unit.

TROUBLE	POSSIBLE CAUSES (Refer to Key Below)	CORRECTIVE ACTION
Axles Will Not Turn	1, 7, 8, 12, 16, 18, 28, 32, 38, 42	repair or replace
Difficult Starting	1, 6, 7, 8, 12, 16, 25, 26, 28, 38, 42	repair or replace
Erratic Running	1, 4, 6, 7, 8, 12, 18, 25, 26, 28, 42, 55	repair or replace
Jerky When Starting	1, 4, 7, 8, 12, 18, 28, 38	
Jumps Out of Gear	N/A	repair or replace
Knocking	4, 8, 12, 18, 28, 37, 42	repair or replace
Loss of Power or System	4, 12, 18, 28, 37, 42	
Noisy	4, 12, 18, 26, 28, 32, 37, 42	repair or replace
Oil Leakage	4, 22, 51, 16	repair or replace
Operates Hot	4, 16, 28, 32, 35, 42	
Operates in One Direction Only	1, 8, 12, 30, 46	
Pump Failure	4, 12, 37	repair or replace
Speed Loss Under Load	1, 6, 11, 28, 37, 51	repair or replace
Speed Loss Under Load	1, 4, 7, 12, 18, 28, 26	repair or replace
Will Not Drive	1, 7, 8, 18, 28, 37, 38, 48	
Will Not Shift		repair or replace

TROUBLESHOOTING KEY					
1	Inspect control linkage	22	Inspect hoses and lines for wear	43	Burrs on gearing
2	Inspect acceleration valves	23	Inspect implement relief valve	44	Gears improperly installed
3	Inspect charge check valves	24	Inspect charge pump	47	Shifting washer in backwards
4	Incorrect grade of lubricating oil	25	Bad transmission pump	48	Shifter/Brake shaft keyways damaged
5	Low cranking speed	26	Overheating	49	Unit clutch not disengaging
6	Controls not in correct operation position	27	Cold running	50	Shifter stop assembled backwards
7	Belts are missing, too tight, loose or glazed	28	Bad transmission motor	51	Improper fit of case to cover
8	Overload of vehicle	29	Check system pressure	52	Dowel pins not installed
9	Replacement parts damaged	30	Shift rod grooves worn	53	Differential bevel gears broken
10	Replacement parts improperly installed	31	Reverse chain broken	54	Spring in shifter weak or broken
11	Improperly torqued attaching screws	32	Damaged cooling fan	55	Worn or stripped gear teeth
12	Air in hydraulic system	33	Inspect auxiliary relief valve		
13	Broken shifter stop	34	Inspect cooling fan		
14	Inspect charge check valves	35	Inspect transmission cooling fins		
15	Inspect acceleration valves	36	Worn or damaged bearings		
16	Check oil level-gear box sump or reservoir	37	Metallic pieces or foreign objects in unit		
17	Inspect heat exchanger	38	Inspect for loosely mounted components		
18	Inspect by-pass valve	39	Steering column loose or binding		
19	Inspect charge pressure	40	Pressure relief valve sticking open		
20	Inspect inlet filter	41	Pressure relief sticking closed		
21	Inspect charge relief valve	42	Broken relief valve spring		

**Model EZT 915065, 502**

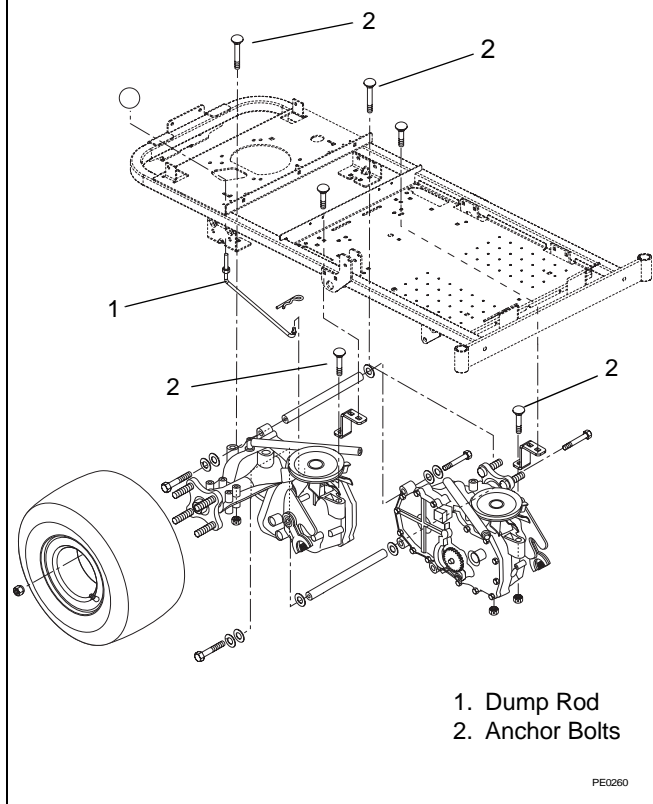


Figure 20

## 7.2 HYDRO-GEAR FLUID RECOMMENDATIONS

The fluids used in Hydro-Gear transaxles have been carefully selected, and only equivalent or better products should be used.

Typically, an engine oil with a minimum rating of 55 sus at 210°F and an API classification of SH/CD is recommended. A 20W-50 engine oil has been selected for use by the factory.

## 7.3 HYDRO-GEAR TRANSMISSION REMOVAL

1. Place the unit on a flat surface and remove the negative lead from the battery and the spark plug lead from the spark plug.
2. Remove key and spark plug wire.
3. Raise and block the unit frame on jack stands behind the transaxle in the frame.
4. Remove the rear wheels by removing the lug nuts holding the wheels to the axle hub.
5. Release the transmission belt tension spring and remove the transmission belt from the input sheave on top of the transaxles.
6. Release the parking brake.
7. At the end of each brace rod (Figure 21) remove the hairpin and pull the rods away from the transmission.
8. At the end of each steering link, (Figure 20 and Figure 21) remove the hairpin and pull the links away from the transmission.
9. Remove the dump rod from the transmission.
10. Do not remove or loosen the hardware on the transaxle sub-frame at this point.
11. Support the transaxles with a floor jack from the rear of the tractor.
12. Remove the two right and left front anchor bolts holding the transaxle to the tractor frame and remove the two rear anchor bolts from the left and right side holding the transaxle to the units frame and lower jack.
13. With the transaxle assembly removed from the units frame, place the axle assembly on a flat work surface.

**Model IZT 915055, 057, 059, 067, 501**

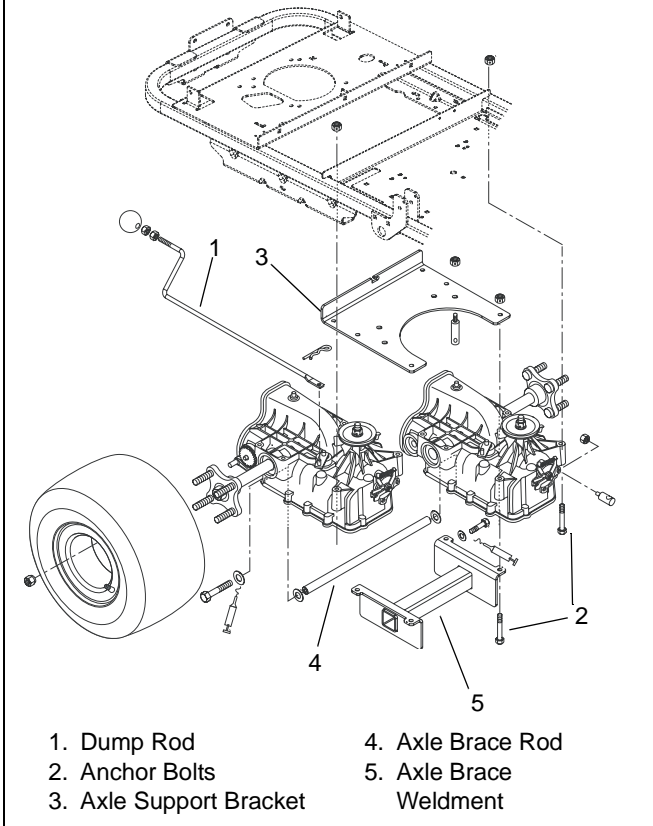


Figure 21

## 7.4 REPLACING HYDROSTATIC BELT

### Remove (Figure 22)

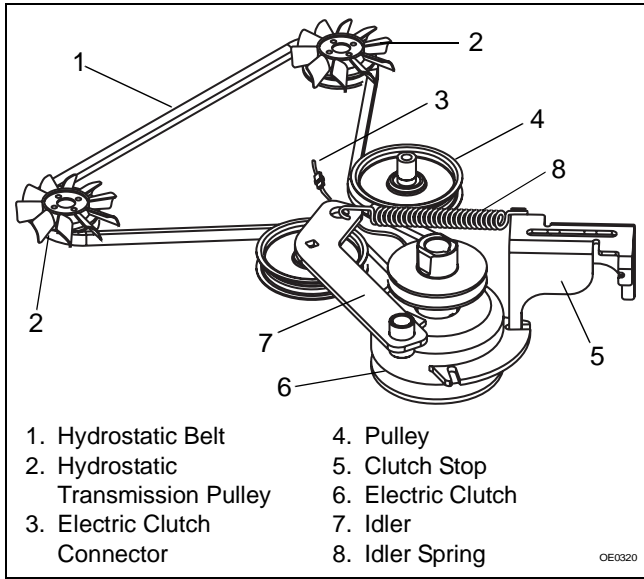


Figure 22

1. Remove PTO belt (see *Replacing PTO Belt*).
2. Disconnect electric clutch connector.
3. Remove clutch stop.



**CAUTION:** Use care when releasing idler spring tension. Keep body parts well away from idler when performing this operation.

4. Disconnect idler spring.
5. Remove hydrostatic belt from hydrostatic transmission pulleys, pulley, electric clutch, and idler.

### Install (Figure 22)

1. Install hydrostatic belt on idler, electric clutch, pulley, and hydrostatic transmission pulleys.
2. Connect idler spring.
3. Install clutch stop.
4. Connect electric clutch connector.
5. Install PTO belt (see *Replacing PTO Belt*).



## SECTION 8 - LIFT SYSTEM

### 8.1 LIFT SYSTEM

Refer to Figure 25 for the lift system.

The mower pan lift system is a manual lift system controlled by the operator.

#### Mower Lift Pedal

Raises and lowers mower deck, Figure 23

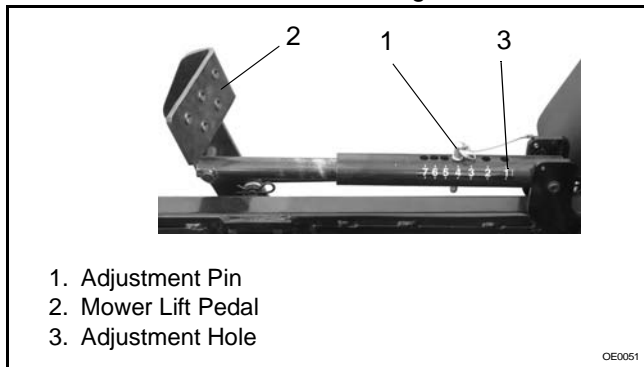


Figure 23

**NOTE:** The adjustment pin is used to set the height of the mower deck. See *Specifications* for cutting height dimensions.



Figure 24

Press mower lift pedal and install adjustment pin in the desired adjustment hole.

### 8.2 LIFT SYSTEM REMOVAL

Remove the mower deck from the unit prior to lift system removal.

The lift system is held in place with retaining rings and a nyloc nut (Figure 25).

To remove the lift system components:

1. Remove the pins that hold the lift rods to the elements.
2. Remove the retaining rings on the rear weldments. Remove the weldments.
3. Unscrew the flange nut and remove the two front weldments.

Inspect all the bushings for wear and replace as needed.

Lubricate all pivot points with a high quality grease and reassemble.

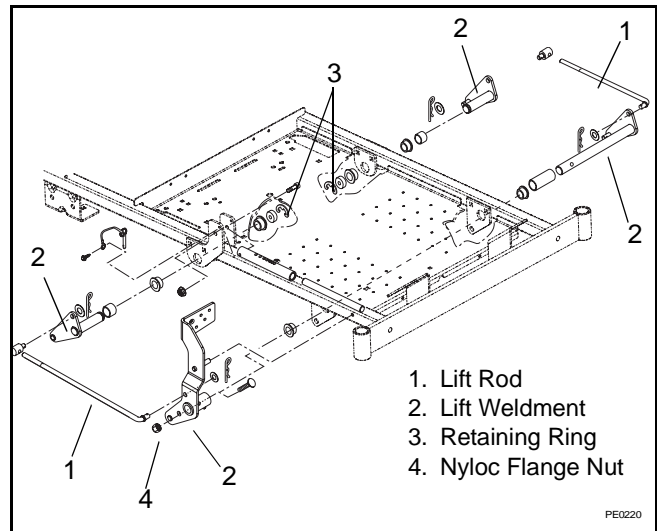


Figure 25

## SECTION 9 - STEERING

### 9.1 STEERING CONTROLS

#### Serial numbers 10,000 and above:

Refer to Figure 26 thru Figure 27 for Steering.

The steering controls should remain in the neutral position unless moved by the operator. When in the neutral position the brake rod will lock the transmissions to prevent movement.

When the handlebars are moved the link will shift the transmissions into forward or reverse.

The steering mechanism can be taken apart for inspection and lubrication.

To remove the weldments:

1. Remove the link to the transmission.
2. Remove the handlebar and control arm.
3. Unscrew the flange nut that holds the weldment onto the spacer and bearing.
4. Remove remaining hardware and slide weldment off.

Inspect spacers bearings and pivot points for wear. Repair or replace all worn parts. Lubricate with a high quality grease and reassemble.

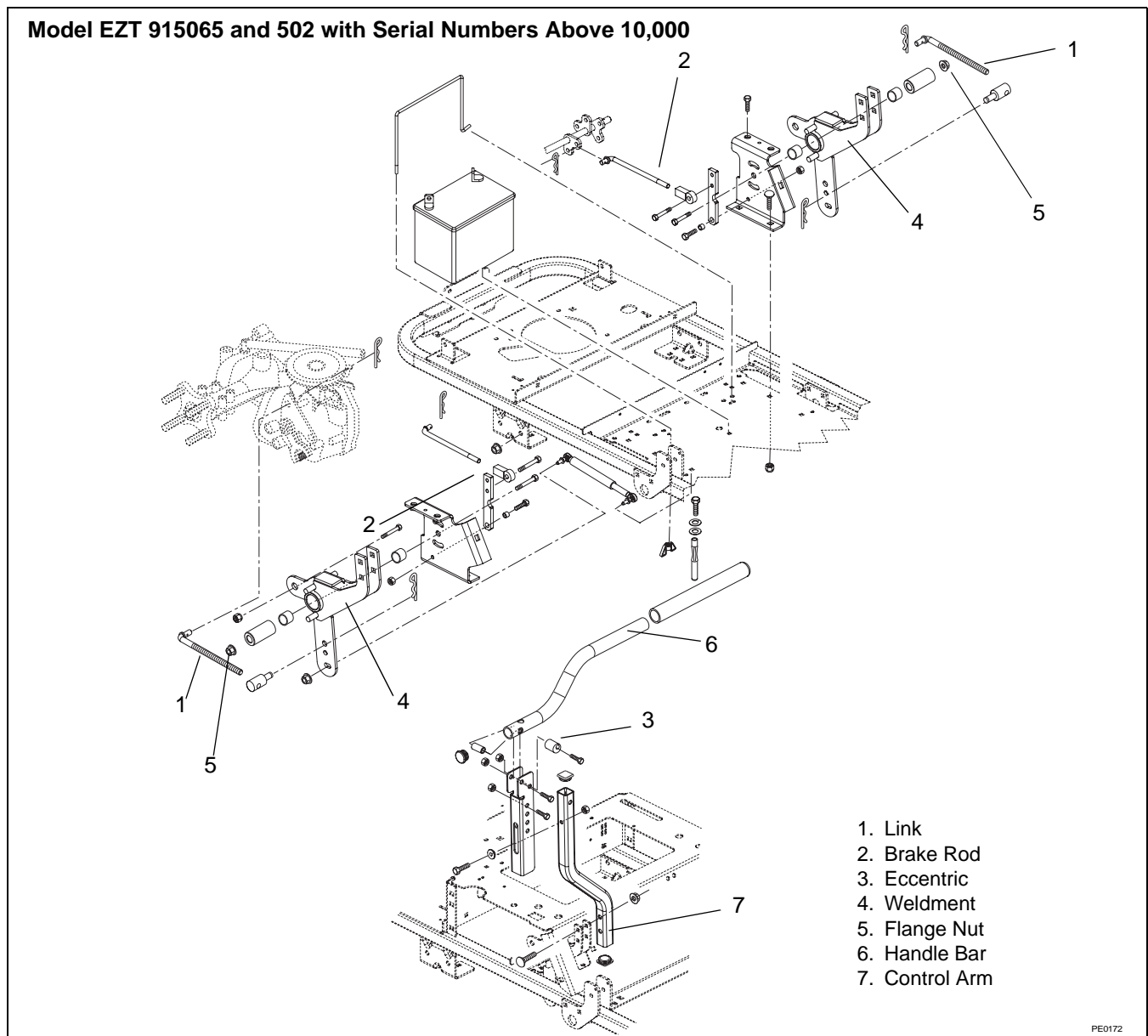


Figure 26

**Model IZT 915055, 057, 059, 067, 501 with Serial Numbers Above 10,000**

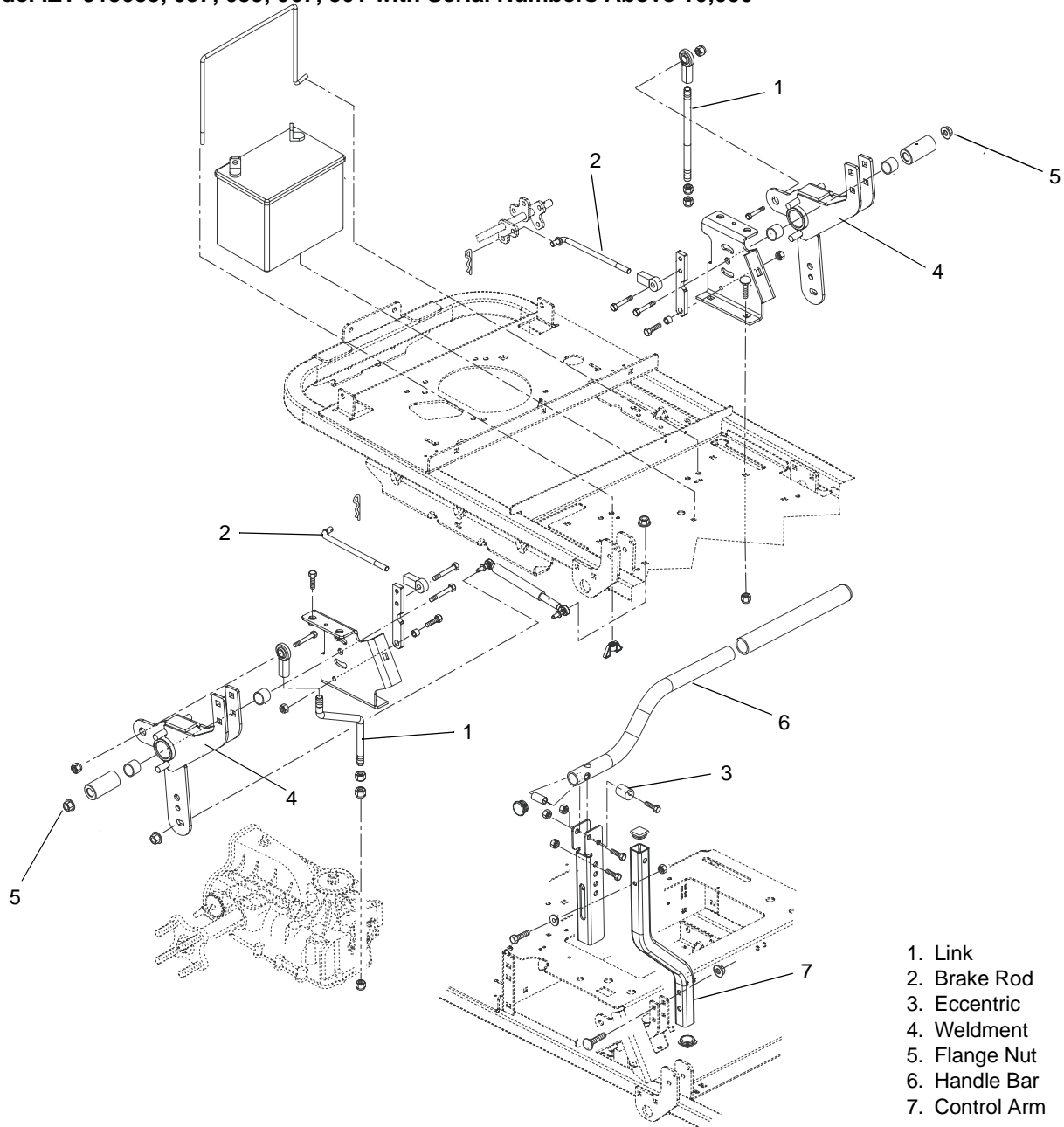


Figure 27

**Serial numbers below 10,000:**

Refer to Figure 28 and Figure 30 for Steering.

The steering controls will swing outward when in neutral. In the outward position, each handlebar will contact a switch. The switches must be engaged to start the engine.

When the handlebars are moved inward and forward the link will shift the transmissions forward.

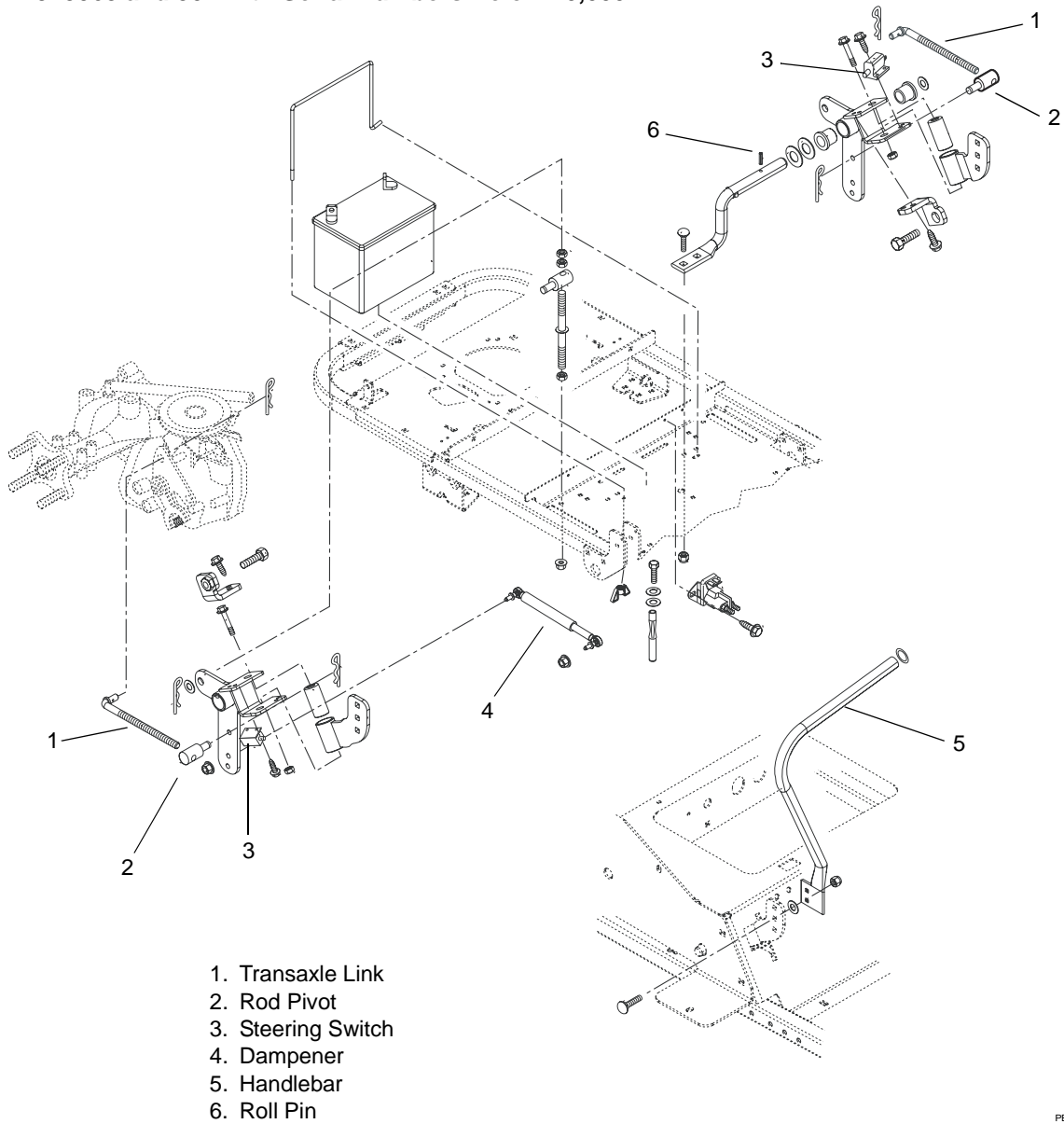
The steering mechanism can be taken apart for inspection and lubrication.

To remove the weldments:

1. Remove the roll pin that holds the weldment on the rod.
2. Remove the link to the transmission.
3. Remove the link to the parking brake locking arm.
4. Slide the weldment off.

Inspect spacers bearings and pivot points for wear. Repair or replace all worn parts. Lubricate with a high quality grease and reassemble.

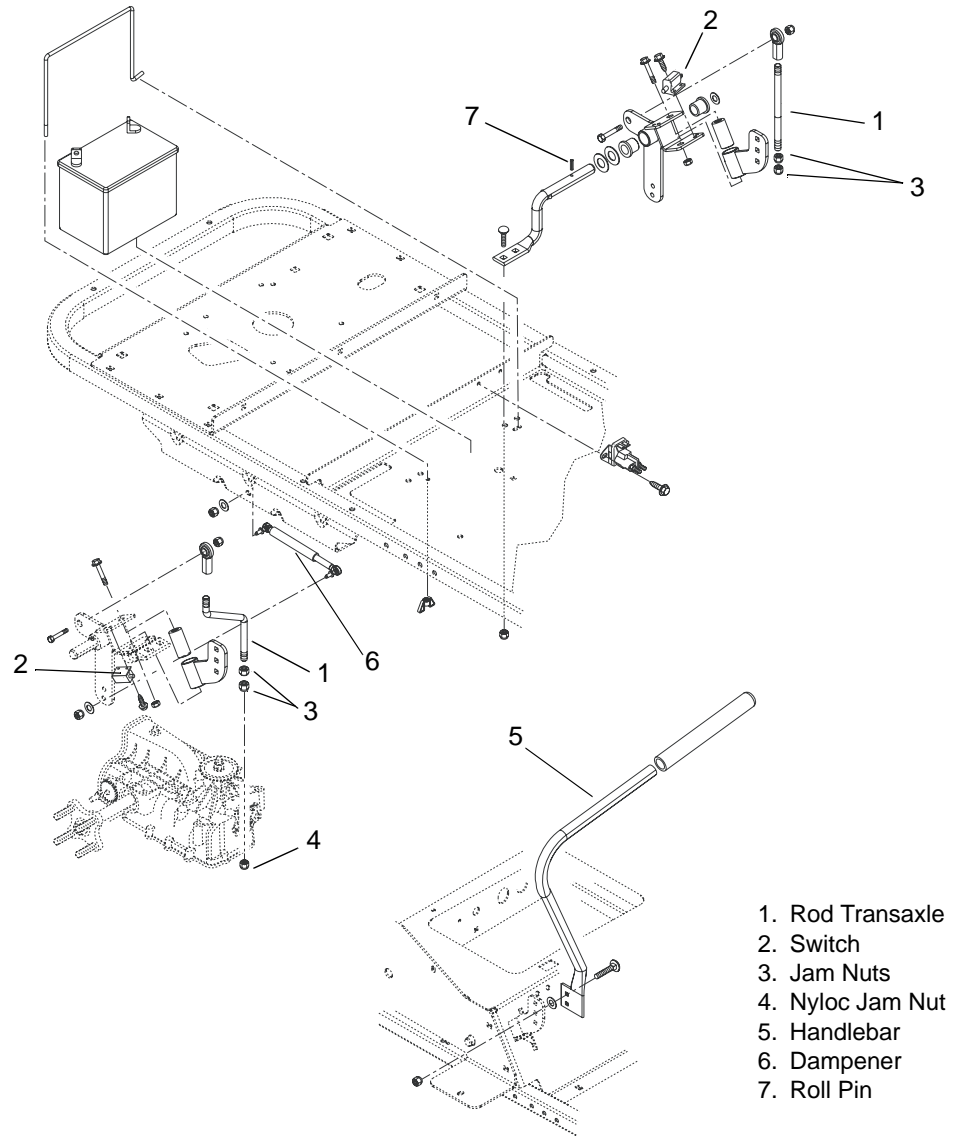
Model EZT 915065 and 502 with Serial Numbers Below 10,000



PE0170

Figure 28

Model IZT 915055, 057, 059, 067, 501 with Serial Numbers Below 10,000



- 1. Rod Transaxle
- 2. Switch
- 3. Jam Nuts
- 4. Nyloc Jam Nut
- 5. Handlebar
- 6. Dampener
- 7. Roll Pin

PE0172

Figure 29

## 9.2 ADJUSTING STEERING LEVER HEIGHT FOR SERIAL NUMBERS ABOVE 10,000 ONLY

(Figure 30)

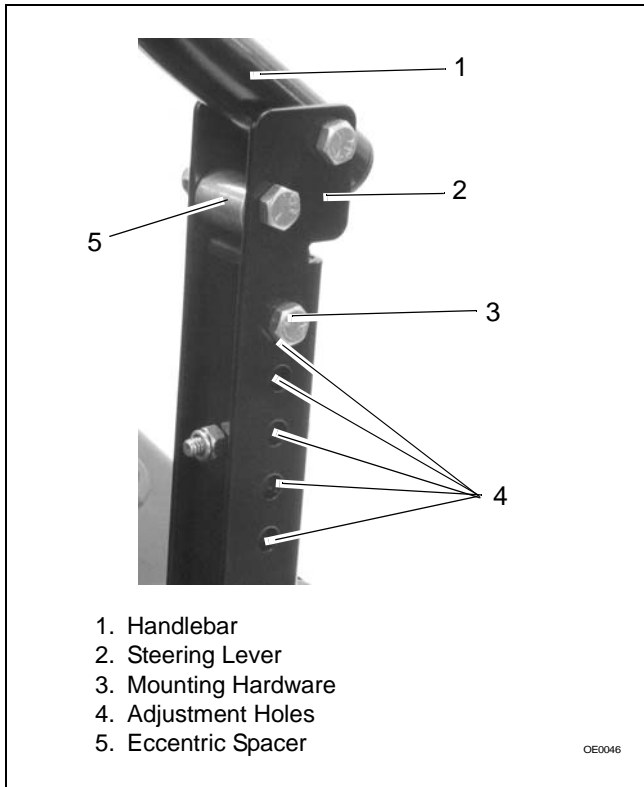


Figure 30

**NOTE:** Perform steps 1 and 2 for both steering levers.

1. Remove mounting hardware and move handlebar up or down until the steering levers are at the appropriate height.
2. Install mounting hardware.

**NOTE:** Align handlebars by adjusting eccentric spacer until the height of handlebars are the same.

Models with serial numbers below 10,000 have a series of holes that line up to insert bolts with nuts. Choose the combination that is most appropriate.

## SECTION 10 - FUEL SYSTEM

### 10.1 FUEL SYSTEM TROUBLESHOOTING

The following troubleshooting chart is to be used to isolate fuel system problems and give possible causes are corrective action responses

The troubleshooting key is generic and can be used for several types of transmissions. Use only those possible causes and corrective actions that apply to the unit.

TROUBLE	POSSIBLE CAUSES (Refer to Key Below)	CORRECTIVE ACTION
Hard Starting	1, 3, 4, 6, 11, 12, 14, 16, 17, 18	clean, repair or replace
Fuel Leak at Carburetor	5, 7, 17	repair or replace
Engine Floods	5, 15, 17	repair or replace
Will not idle	1, 2, 3, 6	repair or replace
Rich idle	1, 6, 14	repair or replace
idles with Needle Closed	14	repair or replace
Hunts Erratic Idle	2, 3, 6, 7, 12, 13, 14, 15, 18	repair or replace
Idles Fast Lean	2, 3, 7	repair or replace
Will Not Accelerate	1, 6, 11, 12, 14, 15, 16	repair or replace
Over Rich Acceleration	1, 15	repair or replace
Hesitates	2, 6, 11, 12, 16	repair or replace
Will Not Run at High Speed	1, 11, 12, 14, 16	repair or replace
Low Power	1, 3, 11, 14, 15, 16, 17, 18	repair or replace
Hunts at High Speed	3, 6, 7, 12, 14, 15, 16, 18	repair or replace
Runs With Needle Closed	14	repair or replace
Engine Overspeeds	2, 3, 7, 14	repair or replace

#### TROUBLESHOOTING KEY

- |    |                                    |
|----|------------------------------------|
| 1  | Plugged Air Filter                 |
| 2  | Leaky Carburetor Gasket            |
| 3  | Throttle or Choke Shaft Worn       |
| 4  | Choke Not Functioning Properly     |
| 5  | Plugged Atmospheric Vent           |
| 6  | Air Bleed Restricted               |
| 7  | Damaged or Leaky "O" Rings         |
| 8  | Damaged Diaphragm                  |
| 9  | Stuck or Dirty Ball Check          |
| 10 | Diaphragm Upside Down              |
| 11 | Plugged Tank or Vent               |
| 12 | Fuel Pick-up Restricted            |
| 13 | Idler Port Restricted              |
| 14 | Damaged Adjustment Needle and Seat |
| 15 | Incorrect Float Height             |
| 16 | Main Nozzle Restricted             |
| 17 | Dirty, Stuck Needle and Seat       |
| 18 | Fuel Inlet Plugged                 |

## 10.2 FUEL PUMP

The impulse style fuel pump is the most commonly used fuel pump. Impulse fuel pumps may either be mounted externally onto the carburetor fuel inlet or remotely mounted. These pumps are connected in the fuel line between the fuel supply and the carburetor or directly to the fuel inlet.

Impulse fuel pumps are operated by crankcase impulses created by the up and down movement of the piston. A hose called a pulse line connects the fuel pump diaphragm chamber and transmits the impulses to the pump diaphragm. The impulses actuate the diaphragm and the flap valves to lift the fuel from the fuel tank to the carburetor.

## 10.3 FUEL SYSTEM CONTAMINATION

Any time fuel contamination is found in the fuel system (dirt, water algae, etc.) replace the fuel, fuel filter and flush the fuel lines. Remove the carburetor bowl and clean. Replace all items that cannot be cleaned. Reassemble the fuel system and check for proper operation.

## 10.4 FUEL TANK

The fuel tank is made of composite material for long life without breaking down from the additive used in today's blended fuels.

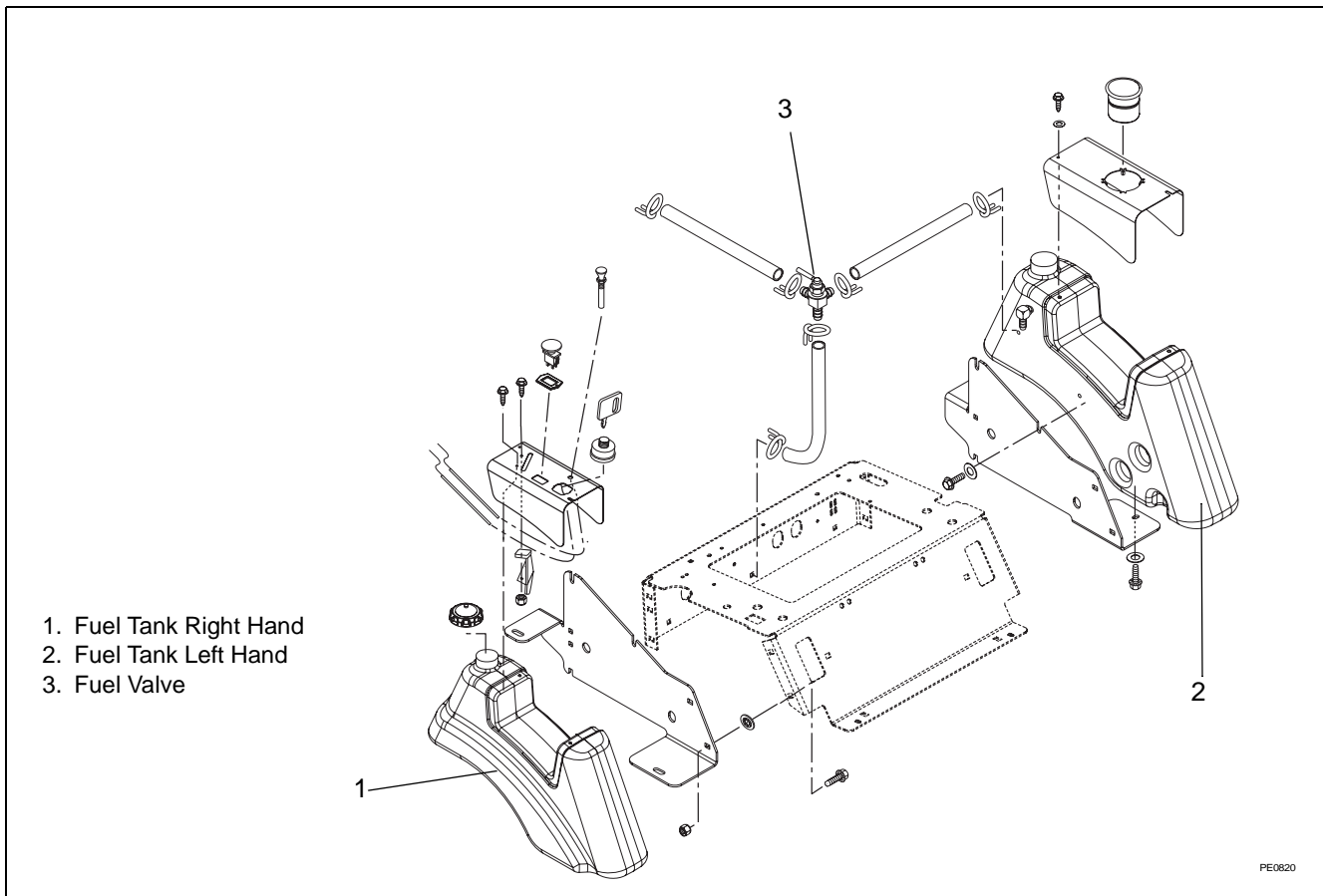


Figure 31

## 10.5 FUEL TANK REMOVAL

To remove the gas tanks (Figure 31):

1. Disconnect the negative terminal from the battery.
2. Lift the seat to gain access to the mounting screws.
3. Turn off the fuel valve. Drain the fuel from both tanks.



**WARNING:** Fuel vapors are explosive and flammable. Keep fuel in proper containers and clean up any spills immediately. Handle fuel in well ventilated areas.

4. Remove gas line from tank.
5. Remove the console from each tank.
6. Unscrew bolt from bottom of tank.  
Each gas tank has a top bolt that rests in a slot. This bolt does not need to be removed.
7. Loosen the top bolt and slide the tank up to remove.

Assemble in reverse order.



## SECTION 11 - ELECTRICAL

### 11.1 TOOLS

There are some specialized tools and test equipment that are needed for electrical repair work. A brief description of these follows.

**Long or needle nose pliers** - used to connect or bend wires and connectors in close quarters.

**Diagonal cutters** - used to cut wires or trim connections.

**Wire stripper/crimping tool** - available separately or as a combination tool. Used to strip insulation from wires of various sizes, crimp terminals and connector or wires.

**Soldering gun or soldering iron** - used to solder all splices and connections to terminals, connector, etc. A soldering gun is faster and more convenient than waiting for a soldering iron to heat.

**Multimeter** - analog or digital, to measure voltage, amperage and ohms.

**Tachometer** - used to measure engine speed.

Required to properly test alternator and charging circuits where output is dependent upon engine speed.

**Heat gun** - used to shrink insulated tubing in place. Used to replace electrical tape or insulated sleeving. To use, place a piece of shrink tubing over a wire joint, heat with the heat gun, until it shrinks slightly around the joint.

**Supplies** - electrical tape, rosin core solder (never use acid or acid core solder on electrical joints), an assortment of various size terminals, connectors, insulated or heat shrink tubing (for use on joints and connections), and an assortment of automotive type wire (in several colors).

Ariens Company recommends that all work be done in a professional manner. The use of the tubing to cover joints and the soldering of connections contribute to a professional looking job. In addition to a pleasing appearance, repairs made in this manner are more likely to withstand vibration. (The weakest points in an electrical system are the joints where wires are attached.)

Replace all defective components with Ariens replacement parts only. Engine parts, such as rectifiers or alternator components should be secured through the nearest engine service center.

Ariens Company does not recommend attempting to repair electrical components. Most do not lend themselves to repair and you would have more money invested in "time of repair" than the part would cost and the results may not be as good.

### 11.2 ELECTRICAL MEASUREMENTS

In many electrical circuits, there is some visible effect which indicates that the circuit is functioning properly. A switch is turned "ON" and a lamp lights. A key is turned, a starter motor runs and cranks the engine. If the lamp does not light, or the starter motor does not run, some means of measuring voltage, current flow, resistance and continuity is needed, (continuity means there is a complete electrical path through the circuit or component.)

To know exactly what conditions exist in an electrical circuit requires AC and DC voltmeter, AC and DC ammeter, and an ohmmeter.

#### Multimeter

A single combination meter that does all of these things is available. Such a meter is called a multimeter or volt-ohm-multitester (VOM). Meters of this kind are available in many forms and all change functions and ranges with switches, or by plugging test leads into different jacks. Multimeters are available in two basic types, analog and digital.

#### Analog Meters

Analog Meters have a needle that moves across a scale to give a reading. The longer the scale, the easier it is to read and more accurate the reading will be. A jeweled movement is used in this type of meter is more likely to be damaged through rough handling (except for overloaded protected meters) or by measuring high values that exceed the range set on the meter than a digital meter. They provide excellent service for the money as long as they are used with care.

#### Digital Meters

Digital Meters do not have a movement and are therefore more rugged. The reading shows up directly on a display window of some type. Since they read direct, no skill in reading the scale is required, nor is it necessary to set the range. The meter switches the ranges automatically. One has only to select the function DC volts, AC ampere, ohms, etc., connect the test leads, and the reading is shown on the display. Because of the internal circuitry and the lack of a movement, these meters are not likely to be damaged by overloads. In the discussions that follow, either type of meter may be used. Test procedures are the same. It is best to learn proper procedures, even though some meters may be more forgiving of mistakes. Where differences in use may occur, they will be covered in the discussion.

## Voltage Measurement

There are two basic rules to be remembered when using a voltmeter. A voltmeter measures the voltage difference between the test leads and the voltmeter is always connected across the circuit under test.

## Current Measurement

The two rules to remember when measuring current with an ammeter are; an ammeter measures the current that flows through the meter, and to measure current an ammeter must be connected into the circuit. The latter rule means that the circuit must be opened, and the ammeter wired into it. Because this procedure is usually difficult, an ammeter is seldom used for troubleshooting.

## Resistance Measurement

An Ohmmeter is used to make resistance measurements and to check continuity through wires and electrical components.

There is one rule to keep in mind when using an ohmmeter. The ohmmeter has a self contained battery and requires no electrical power. Using the ohmmeter on a circuit that has power applied may result in damage to the meter.

**IMPORTANT:** Disconnect the equipment battery when making Ohmmeter test or damage to the Ohmmeter may result.

**IMPORTANT:** An ohmmeter reads the resistance of whatever component is connected between the test leads. It can be used to check wires, coils, light bulbs, or any item that conducts current.

## 11.3 BATTERY

**NOTE:** Unit comes equipped with a maintenance-free battery that requires no regular maintenance except cleaning the terminals.



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

## Battery Removal and Installation

### Remove (Figure 32)

1. Tip seat forward.
2. Disconnect negative (-) cable first, then positive (+) cable.
3. Remove battery hold-down bracket and battery from unit.

### Install

1. Install battery on the unit with battery hold-down bracket.

2. Connect positive (+) cable first, then negative (-) cable.
3. Apply petroleum jelly or dielectric grease to battery cable ends and terminals.
4. Tip seat back.

## Cleaning Battery and Battery Cables

1. Tip seat forward.
2. Disconnect negative (-) cable first, then positive (+) cable.
3. Clean battery cable ends, negative (-) terminal, and positive (+) terminal with a wire brush and rinse with a weak baking soda solution.
4. Connect positive (+) cable first, then negative (-) cable.
5. Apply petroleum jelly or dielectric grease to battery cable ends and terminals.
6. Tip seat back.

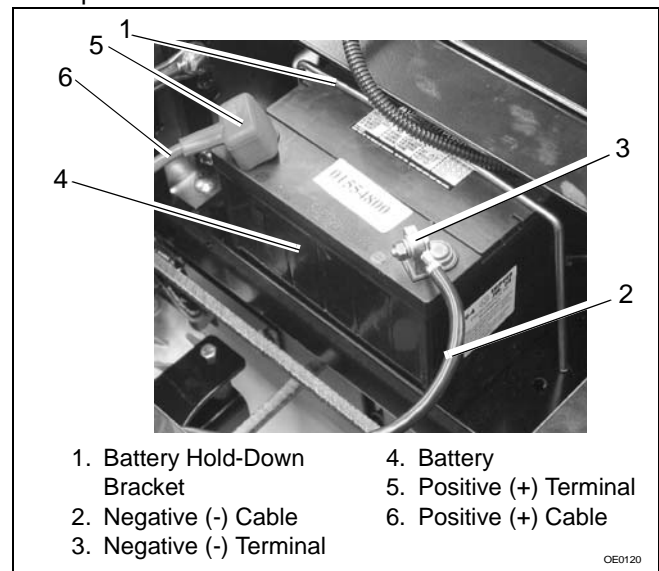


Figure 32

## Charging The Battery



**WARNING:** FROZEN BATTERIES CAN EXPLODE and result in death or serious injury. DO NOT charge a frozen battery. Let the battery thaw before charging.

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!

**IMPORTANT:** DO NOT fast charge. Charging at a high rate will damage or destroy battery.

**IMPORTANT:** ALWAYS follow information provided on battery and battery charger. Contact battery and battery charger manufacturers for detailed instructions.

1. Remove battery from unit (see *Battery Removal and Installation*).
2. Place battery in a well-ventilated area.
3. Connect positive (+) lead of charger to positive (+) terminal, and negative (-) lead of charger to negative (-) terminal.
4. Charge battery according to battery charger and battery manufacturers' instructions.
5. Install battery on unit (see *Battery Removal and Installation*).

### **Jump-Starting**

Ariens does not recommend jump-starting your unit. Jump-starting can damage engine and electrical system components. See your Engine Manual for more detailed information.

## **11.4 SWITCHES**

Switches either open a circuit to stop current flow or close and allow current to flow through.

A normally open (N.O.) switch prevents current flow until the switch is actuated, completing the circuit and allowing current to flow through it. An example is a light switch - the lights are off until the switch is actuated and the lights go on.

A normally closed (N.C.) switch allows current to flow until the switch is actuated, breaking the circuit and stopping current flow through it. An example is an ignition switch that grounds the magneto when in the off position (completing the circuit) but opens the circuit when in the ON position allowing the engine to operate.

Switches are selected with regard to Current rating (contacts must be of sufficient size to carry the required current), Voltage rating (switches insulated for specific voltages), Case or housing (switches that are exposed to moisture and must be sealed to prevent moisture from entering), and Actuating type (push, pull, rotary, momentary contact, or micro switches).

**NOTE:** Check that the connections to the switches are secure and that a switch is being activated properly before performing electrical test on switches. (Safety switches on speed selector and clutch levers may be out of adjustment and not activating.)

**IMPORTANT:** When checking switches, remove them from their respective circuit by disconnecting the wires from the switch at the connector(s). Damage could result to the meter or machine components if switches are left in.

### **Normally Open Switch**

To test a normally open switch (key, headlight, safety, or seat) connect the ohmmeter across the switch terminals. Meter should indicate open circuit (infinite

resistance). Activate the switch. The ohmmeter should read up scale to zero resistance (Close Circuit). This indicates the switch is operating properly. Also check from each terminal to the switch case (if case is metal). Reading should show infinite resistance indicating no short to ground.

Variation from test results described indicates a defective switch.

### **Normally Closed Switch**

To test a normally closed switch connect the ohmmeter across the switch terminals. Meter should indicate a closed circuit (zero resistance). Activate the switch and the meter should move to open circuit (infinite resistance). Check from each terminal to ground (switch case). Meter should show open circuit (infinite resistance).

Variation from test results described indicates a defective switch.

### **Ignition Switch**

**NOTE:** Refer to the wiring diagram of the unit involved to determine switch functions and test using the methods described.

The ignition switch incorporates a number of functions, although not all functions are used on all equipment. The switch has four positions: OFF, RUN with Lights, RUN, and a momentary contact START position. Use an ohmmeter to check the continuity of the switch in each position.

## 11.5 SOLENOID AND RELAYS

Solenoid and relays are both magnetically operated devices. Both devices operate on the principle that passing a current of electricity through a coil of wire will create a magnetic field strong enough to attract a piece of iron or steel. Each device uses this principle in a slightly different manner.

**Relay** - A basic relay consists of a coil of wire wound around a soft iron (magnetic) core. When current is passed through the coil, the core is magnetized and pulls down on a magnetic lever. The lever in turn is attached to several switch contacts which open or close other electrical circuits. In this fashion, a small current can control one or more larger electrical currents and actuate several other devices. In most cases a relay contact moves only a fraction of an inch and the magnetic pull is small.

**Solenoid** - A basic solenoid consists of a coil of wire wound around a hollow tube. A magnetic core slides inside the tube. When current is passed through the coil, the core is pulled into the solenoid with considerable force. With proper design, a solenoid can exert considerable force over a distance of several inches. A solenoid can therefore pull a lever, close a heavy contact, or perform other jobs that require a straight line pull.

If a relay or solenoid fails to operate, the cause may be either electrical or mechanical.

To check electrically, connect a voltmeter across the coil of the device and activate the circuit that operates the relay or solenoid. If the meter indicates no voltage is applied, the cause is in the control circuit.

If the meter indicates proper voltage across the coil but the device does not function, remove the power, disconnect the wiring and check the continuity of the coil with an ohmmeter. The meter should indicate resistance, in the order of 3 to 5 ohms, if the coil is intact. A high resistance indicates an open coil and a defective device.

There are also a number of mechanical problems that may cause the problem.

The starter solenoid in the Ariens equipment is a sealed unit used to actuate the starter motor on the engines. These solenoids may have three or four connections. The two large connections carry high current to operate the starter motor. The small connections are connected to the coil and carry the control current.

To check the solenoid, disconnect the cables to the starter motor, turn the ignition switch to the start position, and listen for the solenoid to snap inside contacts closed.

If no snap is heard, check across the coils with a voltmeter. The voltage should read 12 volts with the ignition switch in the start position. If no voltage appears, the defect is in the start circuit.

If the voltage is correct, turn off the power and check continuity of the coil with an ohmmeter. If the coil is open, the solenoid is defective and must be replaced.

If the coil has the proper voltage applied, and the continuity check indicates the coil is intact, the solenoid plunger is stuck or the contacts are welded shut and the solenoid must be replaced.

If the solenoid snaps shut, but the starter does not operate, check across the large contacts with an ohmmeter. If there is no continuity when the solenoid snaps shut, the contacts are defective and the solenoid must be replaced.

## 11.6 LIGHTING CIRCUITS

Lighting circuits are simple circuits and easiest to trouble shoot in most equipment. They consist of the lights connected in parallel; a normally open switch, a protective fuse and a source of power (battery or engine alternator).

If only one light is out, check the connector, apply 12VDC to connectors to determine if bulb works.

If all the lights are out, check the fuse for continuity (high resistance indicates a defective or blown fuse). Refer to *Fuses*. If the fuse is blown, check for a short in the wiring and correct before replacing the fuse.

If the fuse and lamps are good, check the circuit with an AC/DC voltmeter.

## 11.7 FUSES

Fuses are connected in electrical circuits to protect the circuits from damage due to overload or short circuits. Fuses are a "weak link" in the circuit. They contain a metal link designed to melt when a certain current value is exceeded thus opening or disconnecting the wiring. Once a fuse blows or melts it must be discarded and replaced with a new fuse of the same value.

Since the function of the fuse is to protect the circuit, NEVER attempt to defect the protective device by bridging or replacing with a device of a higher current rating.

Electrical testing of these devices is simple. Since the device either conducts current (and is therefore functioning) or the device is open and is therefore defective. Use an ohmmeter to check for continuity.

## 11.8 DIODES AND RECTIFIERS

Diodes are solid state, semiconductor devices. They contain no moving parts and conduct current better in one direction than the other.

Diodes allow current to flow through one circuit without "backing up" into another. In engine alternator circuits, a diode is used to convert current which flows back and forth (AC) in a circuit to current which flows only in one direction (DC). A device which converts alternating

current to a direct current is called a RECTIFIER. A diode is one type of rectifier.

To check a diode, isolate it from the circuit by disconnecting one end. With a multimeter set on the lowest ohms scale setting, measure the resistance in one direction, reverse the test leads, and measure in the other direction. Readings should be high in one direction and low in the other. (If the readings are low in both directions, the diode is shorted, and if the readings are high, the diode is open.) If the readings are the same in both directions, the diode is defective and must be replaced.

**IMPORTANT:** Diodes are marked to indicate polarity (a band on one end, an arrow on the side, or they fit on a holder only one way).

### Rectifiers

A battery is charged through the use of an alternator located in or on the engine. A charging circuit contains a rectifier because alternators produce alternating current (AC) and batteries require direct current (DC) for charging.

The rectifier may be built into the engine or it may be an external part. It may also contain a regulator to prevent overcharging the battery. (Servicing of rectifiers built into the engine should be done by an approved engine manufacturer's service center. Such a service center has access to the information and parts required to test and repair or replace engine components, including rectifiers and regulators.)

Units that contain both a rectifier and regulator are tested in a working circuit to make sure the regulator portion of the device is operating.

## 11.9 ELECTRIC CLUTCH

The electric clutch is used to turn on and off the attachment used on the unit by use of a switch. The clutch is also designed so that a brake is applied to the output shaft when the clutch is disengaged (off).

The field coil is mounted to a bearing support and does not rotate. The rotor is attached to the power output shaft and rotates around the field assembly. The armature is attached to the output pulley. The armature assembly is held close to the rotor by the brake assembly. The clutch is engaged by applying current to the coil connection. This results in a current flowing through the coil, magnetizing the coil pulling the armature onto the rotor with sufficient force to hold the two pieces together, effectively connecting the output and the input shafts together. Pulling the armature against the rotor pulls it away from the brake, releasing the brake.

### Engine Electrical Components

Engine servicing and repair should be referred to local engine manufacturer service centers that have the service information and parts available to properly

service the engine. Ariens dealers should be able to test engines and engine components to pinpoint troubles and narrow them down to properly advise the engine serviceman.

**IMPORTANT:** Check the serial number on the unit. The serial number will indicate which of the following sections apply.

## 11.10 ELECTRICAL FOR SERIAL NUMBERS ABOVE 10,000

### Safety Interlock System

**WARNING:** Safety Interlock failure and improper operation of unit can result in death or serious injury. Check system before each use to make sure it is functioning properly.

Perform the following tests to ensure the safety interlock system is working properly.

Test	Steering Lever	PTO	Engine
1	Neutral Position	Off	Starts
2	Neutral Position	On	Doesn't Start
4*+	Out of Neutral Position	Off	Shuts Off
5*+	Neutral Position	On	Shuts Off
* Test with engine running. + Operator lifts off seat.			

Initial check out: Make sure that all switches are in their proper position for starting: (A) PTO off. (B) transaxle in neutral position. (C) operator on the seat. If there is no battery voltage to start the engine, use the following steps to determine the problem.

#### STEP 1

Check out the battery. Use a voltmeter to check for proper voltage. Replace the battery if necessary and/or charge to proper level. Refer to *Battery*.

#### STEP 2

Use a voltmeter to make sure you have battery voltage to terminal B on the back side of the ignition switch in the off position. If you don't have battery voltage to terminal B check the battery connection and the fuse in the red lead.

#### STEP 3

With the ignition switch in the "run" position, check to see if the battery voltage is being transferred from terminal B to terminal L. Terminal L on the ignition switch supplies battery voltage to the back of the PTO switch on the purple lead and on to the neutral switch on the red/green lead. Then to terminal 86 on the start relay.

For models with serial numbers above 10,000 when the ignition switch is in the run position and with the steering switch in the neutral (engaged), position power is supplied to terminal 86 of the start relay and to terminal 30 of the PTO relay. Engaging the seat switch starts the hour meter and energizes the start relay. The start relay when energized provides a ground to the PTO relay. Now engaging the PTO switch will engage the PTO clutch.

**STEP 4**

With ignition switch in the start position, battery voltage is transferred from terminal B to S. Terminal S transfers battery voltage through the PTO switch (disengaged) the neutral switch (engaged) and to the starter solenoid relay which powers the starter solenoid.

PTO clutch check out: Remove the wiring harness PTO clutch leads from the clutch. With a multimeter check the clutch coil for resistance to see if the coil is good.

The clutch used should have a coil resistance according to the table below. If the coil is bad there will be no resistance or it will be higher.

Part Number	Ohms (± 5%)
00191700	2.84
03643100	3.68
04915400	2.45

Ignition switch check out: Battery voltage check in the "off" position, check for voltage at terminal B. It should not be present on terminals A, S, L.

With the ignition switch in the "run/light" position, check for battery voltage at terminal B, A, L, Y. It should not be present at terminal S.

With the ignition switch in the "run" position, check for battery voltage at terminals B and L.

With the ignition switch in the "start" position, check for battery voltage at terminals B, L, S.

PTO switch check out: The PTO switch is a push/pull switch with normal open and closed contacts. Power transfer should be checked with a voltmeter. The switch contacts should be checked with an ohm meter with the wire harness plug removed. The light switch is similar to the PTO switch with only one set of contacts.

Diode check out: Diodes are checked with an ohm meter set on the diode check, and should only pass voltage in one direction. If it passes voltage in both directions or not at all the diode is bad and needs to be replaced.

Measurements For Models With Serial Numbers Above 10,000			
Key Switch	Off	Run	Start
B	11.50-13.00 Volts	11.50-13.00 Volts	11.50-13.00 Volts
A		11.50-13.00 Volts	11.50-13.00 Volts
S			11.50-13.00 Volts
L		11.50-13.00 Volts	11.50-13.00 Volts

Contact resistance is 0.1-0.3 ohms when correct.

Seat Switch	Off	Run	Start
Red/Yellow		Connected to Ground through test switch	
Black	Connected to Ground		

Normally open contacts manually activated. contact resistance is 0.1-0.3 ohms when correct.

PTO Switch		Off	Run	Start
Brown				11.50-13.00 Volts
Purple			11.50-13.00 Volts	11.50-13.00 Volts
Red/Green			11.50-13.00 Volts	11.50-13.00 Volts
Brown/Yellow				11.50-13.00 Volts

2 sets of contacts, one normally open, one normally closed. Contact resistance is 0.1-0.3 ohms when correct.

Neutral Switch		Off	Run	Start
Brown/Yellow				11.50-13.00 Volts
Red/Green			11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. Contact Resistance is 0.1-0.3 ohms when correct.

PTO Relay		Off	Run	Start
Green/White	86		11.50-13.00 Volts(A)	11.50-13.00 Volts(A)
Black/White	85		Connected to ground when start relay energized	
Purple/White	87		11.50-13.00 Volts	11.50-13.00 Volts
	87A		Not Used	Not Used
Purple	30		11.50-13.00 Volts	11.50-13.00 Volts

Pins 85-86 coil resistance 87-100 ohms. pins 30-87 normally open. Pins 30-87A normally open. Contact resistance is 0.1-0.3 ohms when correct.

(A) When PTO switch is on.

Start Relay		Off	Run	Start
Red/Yellow	86		11.50-13.00 Volts(A)	11.50-13.00 Volts(A)
Black	85	Connected to Ground		
Black/White	87			
White/Black	87A	Connected to Ignition Module		
Black	30	Connected to Ground		

Pins 85-86 coil resistance 87-100 ohms. pins 30-87 normally open. Pins 30-87A normally closed. Contact resistance is 0.1-0.3 ohms when correct.

(A) With neutral switch engaged and PTO switch off.

<b>Starter Solenoid Relay</b>		<b>Off</b>	<b>Run</b>	<b>Start</b>
Brown/Yellow	86			11.50-13.00 Volts
Small Black	85	Connected to Ground		
Large Red (Battery)	30	11.50-13.00 Volts	11.50-13.00 Volts	11.50-13.00 Volts
Brown/White				11.50-13.00 Volts

Normally open contacts (big terminals) coil resistance 3.0-5.0 ohms. Contact resistance is 0.1-0.3 ohms when correct. Electrically activated.

<b>PTO Clutch</b>		<b>Off</b>	<b>Run</b>	<b>Start</b>
Purple/white				
Black		Connected To Ground		

Coil Resistance check clutch specifications.



## 11.11 ELECTRICAL SYSTEM

Model 915055, 057, 059, 065, 067, 501, 502 for Serial Numbers above 10,000

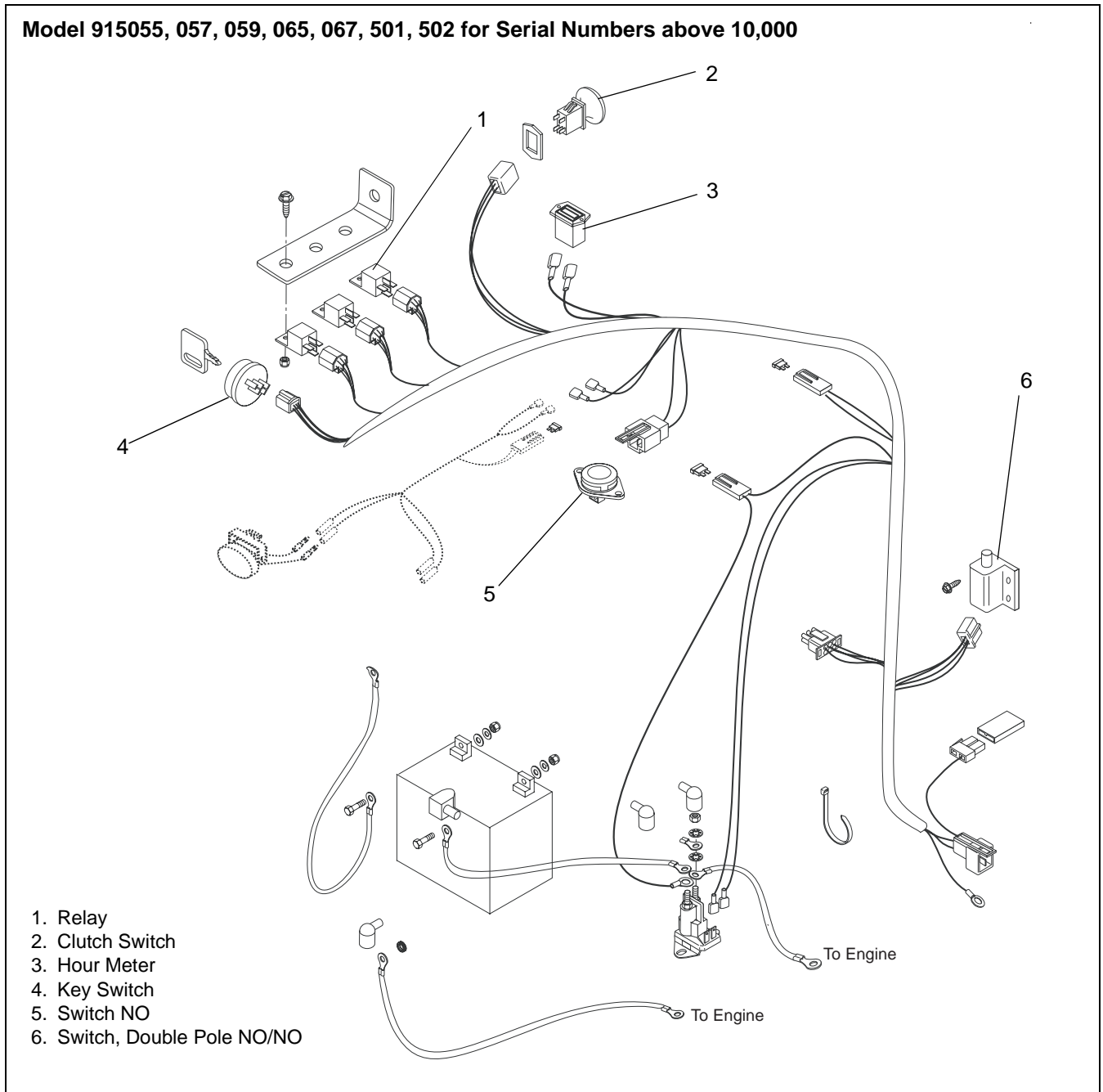
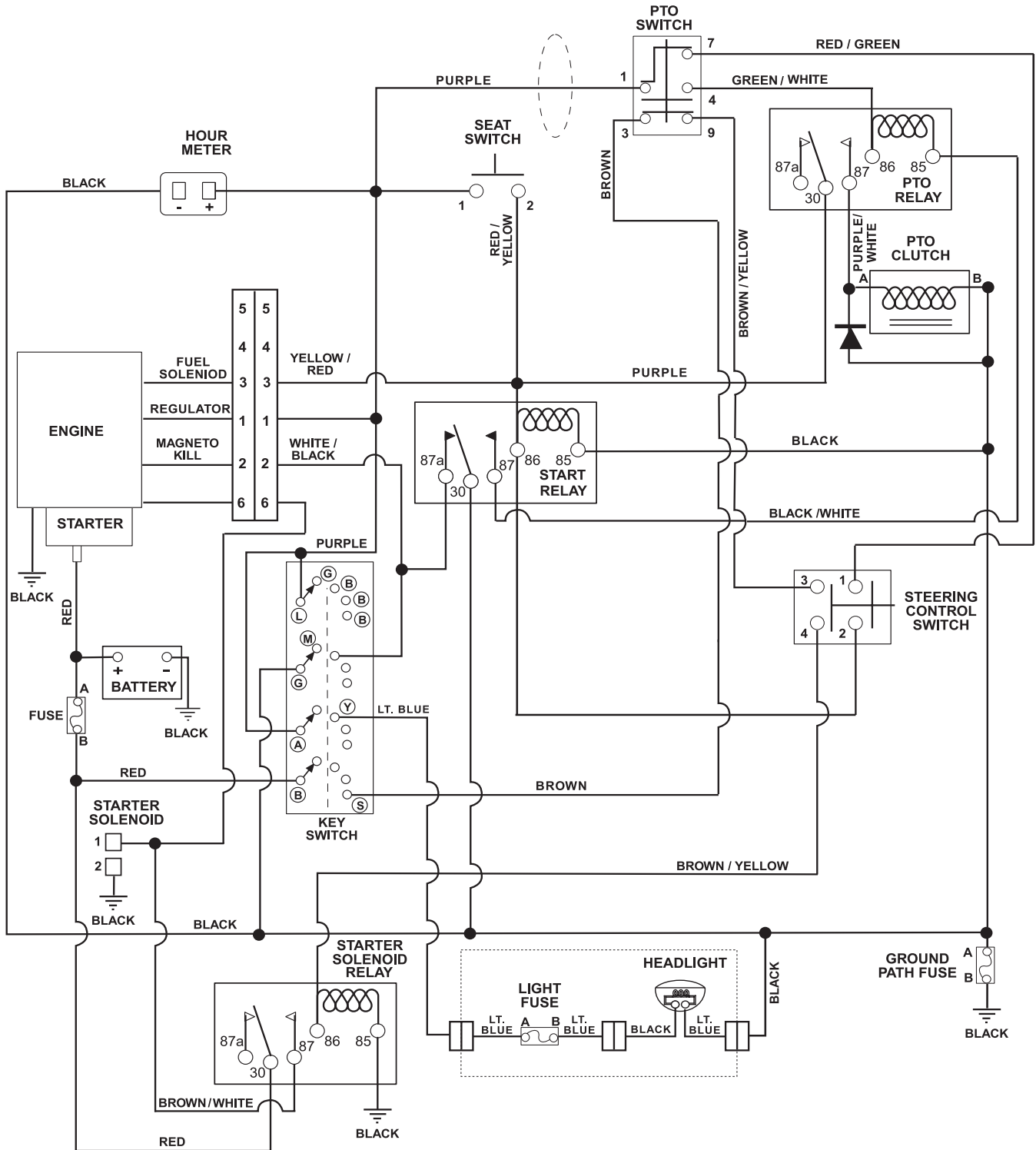


Figure 33

# 11.12 WIRING DIAGRAMS

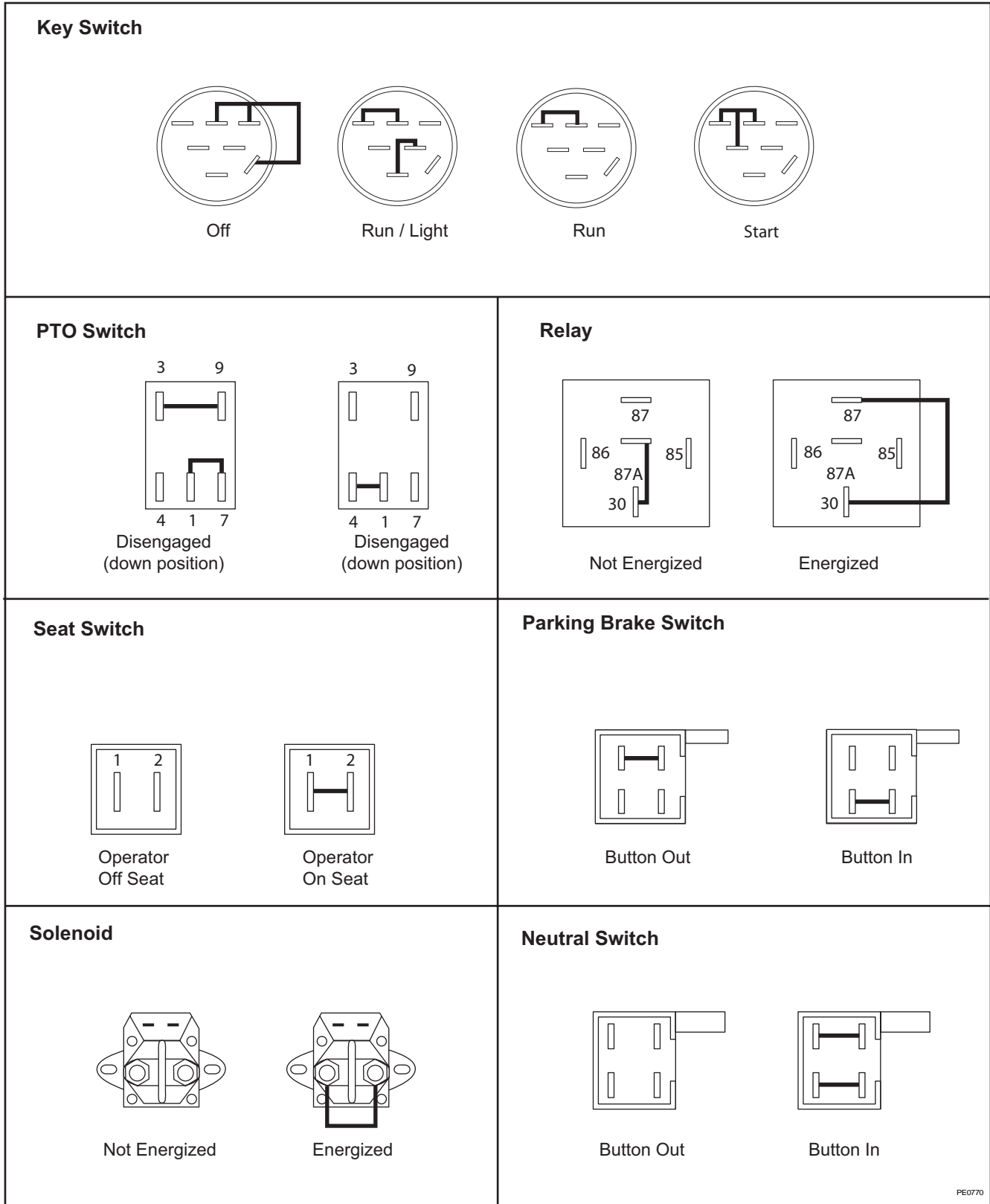
Model 915055, 057, 059, 065, 067, 501, 502 for Serial Numbers Above 10,000



# 11.13 CONTINUITY DIAGRAM

## For Serial Numbers Above 10,000

The diagrams below show the various states of connection for electrical components.  
 The solid lines on switches show continuity.  
 NOTE: All switches are viewed from the rear.



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## 11.14 ELECTRICAL FOR SERIAL NUMBERS ABOVE 5,000 AND BELOW 9,999

### Safety Interlock System

**WARNING:** Safety Interlock failure and improper operation of unit can result in death or serious injury. Check system before each use to make sure it is functioning properly.

Perform the following tests to ensure the safety interlock system is working properly. If the unit does not

Test	Steering Levers	PTO	Parking Brake	Engine
1	Neutral Position	Off	Engaged	Starts
2	Neutral Position	On	Engaged	Doesn't Start
3	Neutral Position	Off	Disengaged	Doesn't Start
4*+	Out of Neutral Position	Off	Disengaged	Shuts Off
5*	Neutral Position	On	Engaged	Shuts Off
* Test with engine running. + Operator lifts off seat.				

perform as stated contact your Ariens dealer for repairs.

Initial check out: Make sure that all switches are in their proper position for starting: (A) PTO off. (B) transaxle in neutral position. (C) operator on the seat. If there is no battery voltage to start the engine, use the following steps to determine the problem.

#### STEP 1

Check out the battery. Use a voltmeter to check for proper voltage. Replace the battery if necessary and/or charge to proper level. Refer to *Battery*.

#### STEP 2

Use a voltmeter to make sure you have battery voltage to terminal B on the back side of the ignition switch in the off position. If you don't have battery voltage to terminal B check the battery connection and the fuse in the red lead.

#### STEP 3

With the ignition switch in the "run" position, check to see if the battery voltage is being transferred from terminal B to terminal L. Terminal L on the ignition switch supplies battery voltage to the back of the PTO switch on the purple lead and on to the neutral

switches on the red/green lead. Terminal A also supplies battery voltage to the hour meter.

For models with serial numbers between 5,000 and 9,999 with the key switch in the "run" position, the seat switch "on" and the parking brake "off" power is supplied to terminal 86 of the start relay. Terminal 86 will also have power if the key switch is in "run", the PTO switch is "off" and the steering arms are in the "neutral" position. The engine will start in either case.

The effect this has on operation is that before the PTO switch can be turned "on" or the steering arms can be taken out of neutral it is required that the seat switch is "on" and the parking brake is "off".

The hour meter will run whenever the key switch is in the "run" position.

#### STEP 4

With ignition switch in the "start" position, battery voltage is transferred from terminal B to S. Terminal S transfers battery voltage through the PTO switch (disengaged), the two neutral switches (engaged) and through the parking brake switch (engaged) to the starter solenoid.

PTO clutch check out: Remove the wiring harness PTO clutch leads from the clutch. With a multimeter check the clutch coil for resistance to see if the coil is good.

The clutch used should have a coil resistance according to the table below. If the coil is bad there will be no resistance or it will be higher.

Part Number	Ohms (± 5%)
00191700	2.84
03643100	3.68
04915400	2.45

Ignition switch check out: Battery voltage check in the "off" position, check for voltage at terminal B. It should not be present on terminals A, S, L.

With the ignition switch in the "run/light" position, check for battery voltage at terminal B, A, L, Y. It should not be present at terminal S.

With the ignition switch in the "run" position, check for battery voltage at terminals B and L.

With the ignition switch in the "start" position, check for battery voltage at terminals B, S, L.

PTO switch check out: The PTO switch is a push/pull switch with normal open and closed contacts. Power transfer should be checked with a voltmeter. The switch contacts should be checked with an ohm meter with the wire harness plug removed. The light switch is similar to the PTO switch with only one set of contacts.

Diode check out: Diodes are checked with an ohm meter set on the diode check, and should only pass voltage in one direction. If it passes voltage in both directions or not at all the diode is bad and needs to be replaced.

Key Switch	Off	Run	Start
B	11.50-13.00 Volts	11.50-13.00 Volts	11.50-13.00 Volts
A		11.50-13.00 Volts	11.50-13.00 Volts
S			11.50-13.00 Volts
L		11.50-13.00 Volts	11.50-13.00 Volts

Contact resistance is 0.1-0.3 ohms when correct.

Seat Switch	Off	Run	Start
Red/Yellow		11.50-13.00 Volts	11.50-13.00 Volts
Purple		11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. contact resistance is 0.1-0.3 ohms when correct.

PTO Switch	Off	Run	Start
Brown			11.50-13.00 Volts
Purple/White	Connected to PTO Clutch		
Purple		11.50-13.00 Volts	11.50-13.00 Volts
Red/Green		11.50-13.00 Volts	11.50-13.00 Volts
Brown/Yellow			11.50-13.00 Volts

2 sets of contacts, one normally open, one normally closed. Contact resistance is 0.1-0.3 ohms when correct.

Left Hand Neutral Switch (A)	Off	Run	Start
Brown/Yellow			11.50-13.00 Volts
White		11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. Contact Resistance is 0.1-0.3 ohms when correct.

(A) Measure with steering arms in neutral.

Right Hand Neutral Switch (A)	Off	Run	Start
Red/Green		11.50-13.00 Volts	11.50-13.00 Volts
White		11.50-13.00 Volts	11.50-13.00 Volts
Yellow/Red		11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. Contact Resistance is 0.1-0.3 ohms when correct.

(A) Measure with steering arms in neutral.

Start Relay		Off	Run	Start
Yellow/Red	86		11.50-13.00 Volts	11.50-13.00 Volts(A)
Black	85	Connected to Ground		
Black/White	87		11.50-13.00 Volts	
White/Black	87A	Connected to Ignition Module		
Black	30	Connected to Ground		

Pins 85-86 coil resistance 87-100 ohms. pins 30-87 normally open. Pins 30-87A normally closed. Contact resistance is 0.1-0.3 ohms when correct.

Starter Solenoid	Off	Run	Start
Small Brown/White			11.50-13.00 Volts
Small Black	Connected to Ground		
Large Red (Battery)	11.50-13.00 Volts	11.50-13.00 Volts	11.50-13.00 Volts
Large Red (Starter)			11.50-13.00 Volts

Normally open contacts (big terminals) coil resistance 3.0-5.0 ohms. Contact resistance is 0.1-0.3 ohms when correct. Electrically activated.

PTO Clutch	Off	Run	Start
Purple/white			
Black/White	Connected To Ground When Start Relay is Energized		

Coil Resistance check clutch specifications.

Brake Switch	Off	Run	Start
Yellow/Red		11.50-13.00 Volts	11.50-13.00 Volts
Brown/Yellow (A)			11.50-13.00 Volts

Normally closed contacts mechanically activated. Contact resistance 0.1-0.3 ohms.

(A) With neutral switches closed and PTO switch off.

## 11.15 ELECTRICAL SYSTEM

Model 915055, 057, 059, 065, 067, 501, 502 for Serial Numbers Between 5,000 and 9,999

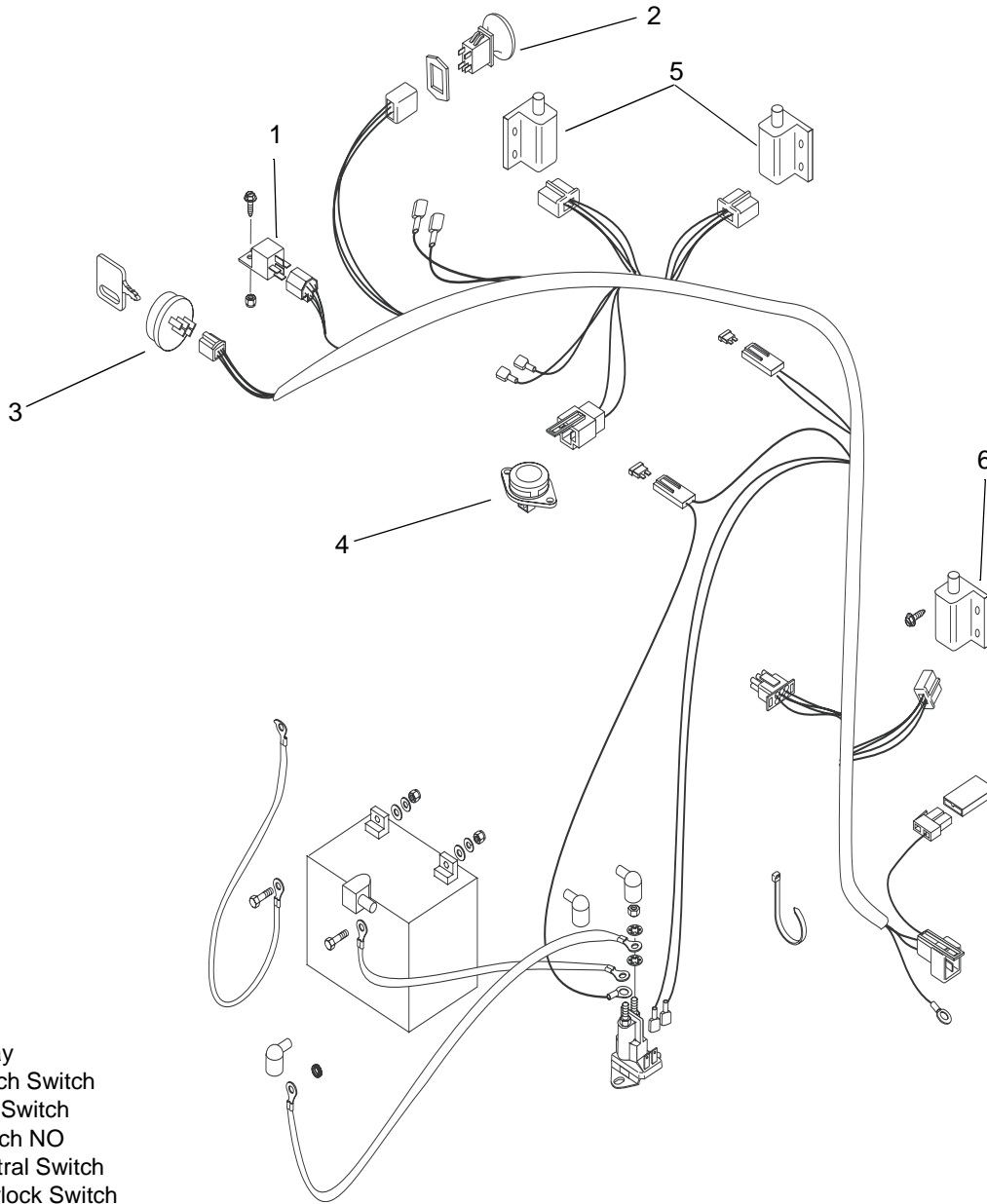
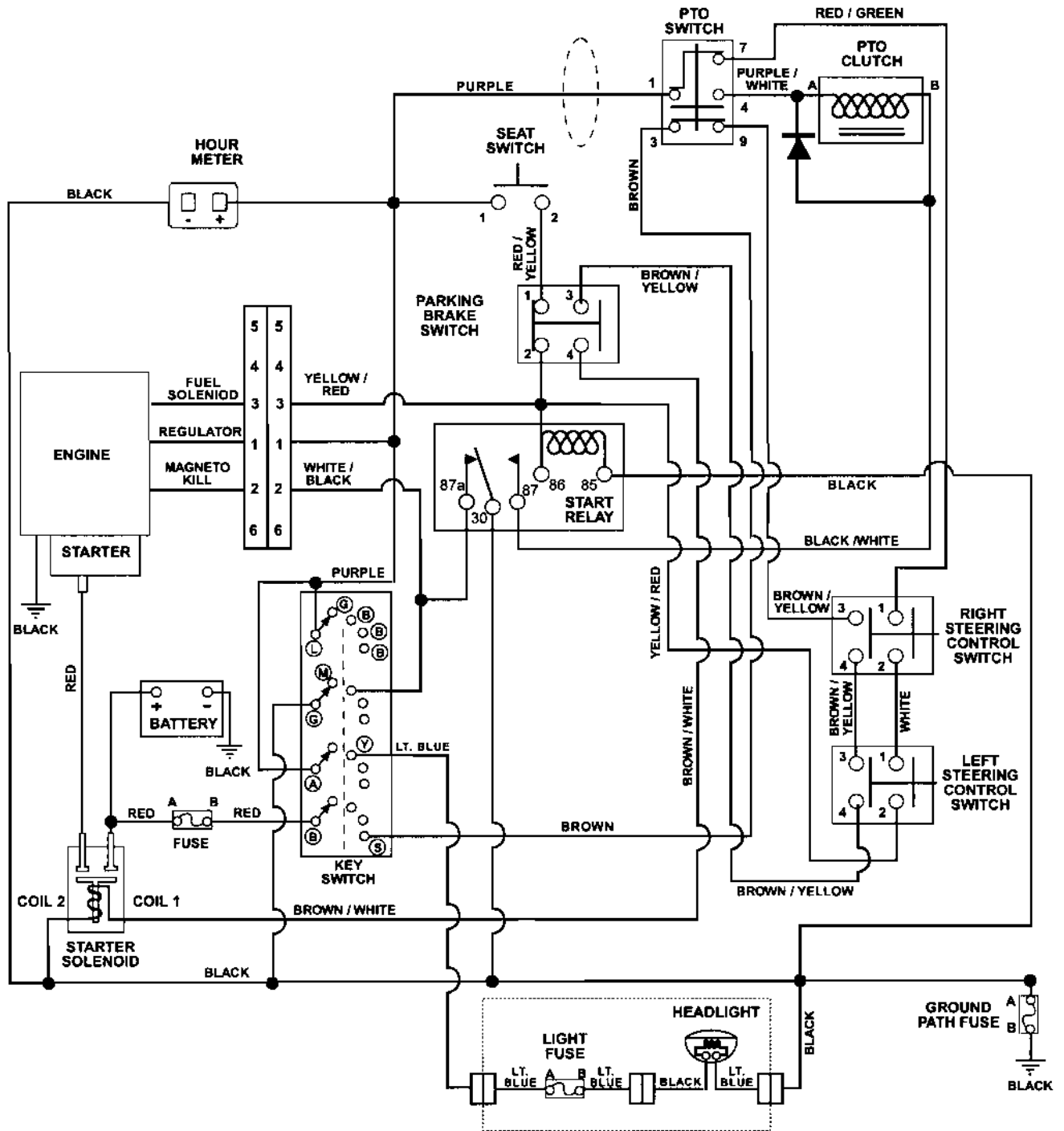


Figure 34

# 11.16 WIRING DIAGRAMS

Model 915055, 057, 059, 065, 067, 501, 502 for Serial Numbers Between 5,000 and 9,999



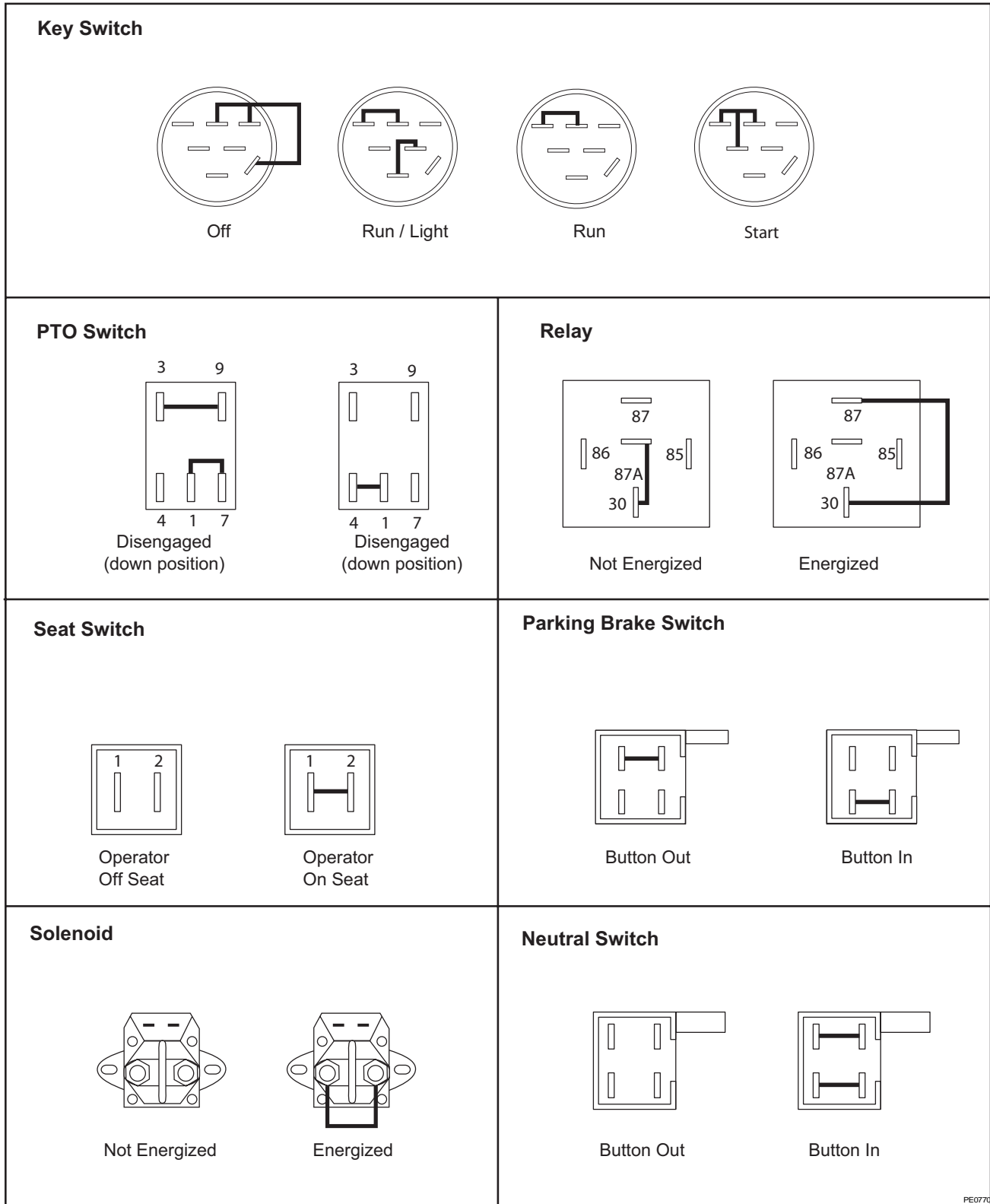
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# 11.17 CONTINUITY DIAGRAM

## For Serial Numbers Between 5,000 and 9,999

The diagrams below show the various states of connection for electrical components.  
 The solid lines on switches show continuity.  
 NOTE: All switches are viewed from the rear.



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## 11.18 ELECTRICAL FOR SERIAL NUMBERS BELOW 5,000

### Safety Interlock System

**WARNING:** Safety Interlock failure and improper operation of unit can result in death or serious injury. Check system before each use to make sure it is functioning properly.

Perform the following tests to ensure the safety interlock system is working properly. If the unit does not perform as stated contact your Ariens dealer for repairs.

Test	Steering Lever	PTO	Parking Brake	Engine
1	Neutral Position	Off	Engaged	Starts
2	Neutral Position	On	Engaged	Doesn't Start
3	Neutral Position	Off	Disengaged	Doesn't Start
4*+	Out of Neutral Position	Off	Disengaged	Shuts Off
5*	Neutral Position	On	Engaged	Shuts Off

\* Test with engine running.  
+ Operator lifts off seat.

Initial check out: Make sure that all switches are in their proper position for starting: (A) PTO off. (B) transaxle in neutral position. (C) operator on the seat. If there is no battery voltage to start the engine, use the following steps to determine the problem.

#### STEP 1

Check out the battery. Use a voltmeter to check for proper voltage. Replace the battery if necessary and/or charge to proper level. Refer to *Battery*.

#### STEP 2

Use a voltmeter to make sure you have battery voltage to terminal B on the back side of the ignition switch in the "off" position. If you don't have battery voltage to terminal B check the battery connection and the fuse in the red lead.

#### STEP 3

With the ignition switch in the "run" position, check to see if the battery voltage is being transferred from terminal B to terminal L. Terminal L on the ignition switch supplies battery voltage to the back of the PTO switch on the purple lead and on to the neutral switches on the red/green lead. Terminal A also supplies battery voltage to the hour meter.

For models with serial numbers below 5,000 with the key switch is in the "run" position, the seat switch "on" and the parking brake "off" power is supplied to terminal 86 of the start relay.

Terminal 86 will also have power if the key switch is in "run", the PTO switch is "off" and the steering arms are in the "neutral" position. The engine will start in either case.

The effect this has on operation is that before the PTO switch can be turned "on" or the steering arms can be taken out of the "neutral" it is required that the seat switch is "on" and the parking brake is "off".

The hour meter will run whenever the key switch is in the "run" position.

#### STEP 4

With ignition switch in the "start" position, battery voltage is transferred from terminal B to S. Terminal S transfers battery voltage through the PTO switch (disengaged), and the two neutral switches (engaged) to the starter solenoid.

PTO clutch check out: Remove the wiring harness PTO clutch leads from the clutch. With a multimeter check the clutch coil for resistance to see if the coil is good.

The clutch used should have a coil resistance of (5.87-7.87) ohms. If the coil is bad the resistance will be higher or not at all.

Ignition switch check out: Battery voltage check in the "off" position, check for voltage at terminal "B". It should not be present on terminals A, S, and L.

With the ignition switch in the "run/light" position, check for battery voltage at terminals A, Y, and L.

With the ignition switch in the "run" position, check for battery voltage at terminal L. It should not be present at terminal A, S, and Y.

With the ignition switch in the "start" position, check for battery voltage at terminals B, A, S and L.

PTO switch check out: The PTO switch is a push/pull switch with normal open and closed contacts. Power transfer should be checked with a voltmeter. The switch contacts should be checked with an ohm meter with the wire harness plug removed. The light switch is similar to the PTO switch with only one set of contacts.

Diode check out: Diodes are checked with an ohm meter set on the diode check, and should only pass voltage in one direction. If it passes voltage in both directions or not at all the diode is bad and needs to be replaced.

Key Switch	Off	Run	Start
B	11.50-13.00 Volts	11.50-13.00 Volts	11.50-13.00 Volts
A		11.50-13.00 Volts	11.50-13.00 Volts
S			11.50-13.00 Volts
L		11.50-13.00 Volts	11.50-13.00 Volts

Contact resistance is 0.1-0.3 ohms when correct.

Seat Switch	Off	Run	Start
Red/Yellow		11.50-13.00 Volts	11.50-13.00 Volts
Purple		11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. contact resistance is 0.1-0.3 ohms when correct.

PTO Switch	Off	Run	Start
Brown			11.50-13.00 Volts
Purple/White	Connected to PTO Clutch		
Purple		11.50-13.00 Volts	11.50-13.00 Volts
Red/Green		11.50-13.00 Volts	11.50-13.00 Volts
Brown/Yellow			11.50-13.00 Volts

2 sets of contacts, one normally open, one normally closed. Contact resistance is 0.1-0.3 ohms when correct.

Left Hand Neutral Switch (A)	Off	Run	Start
Brown/Yellow			11.50-13.00 Volts
White		11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. Contact Resistance is 0.1-0.3 ohms when correct.

(A) Measure with steering arms in neutral.

Right Hand Neutral Switch (A)	Off	Run	Start
Red/Green		11.50-13.00 Volts	11.50-13.00 Volts
White		11.50-13.00 Volts	11.50-13.00 Volts
Yellow/Red		11.50-13.00 Volts	11.50-13.00 Volts

Normally open contacts manually activated. Contact resistance is 0.1-0.3 ohms when correct.

(A) Measure with steering arms in neutral.

Start Relay		Off	Run	Start
Yellow/Red	86		11.50-13.00 Volts	11.50-13.00 Volts
Black	85	Connected to Ground		
Black/White	87		11.50-13.00 Volts	
White/Black	87A	Connected to Ignition Module		
Black	30	Connected to Ground		

Pins 85-86 coil resistance 87-100 ohms. pins 30-87 normally open. Pins 30-87A normally closed. Contact resistance is 0.1-0.3 ohms when correct.

Starter Solenoid	Off	Run	Start
Small Brown/White			11.50-13.00 Volts
Small Black	Connected to Ground		
Large Red (Battery)	11.50-13.00 Volts	11.50-13.00 Volts	11.50-13.00 Volts
Large Red (Starter)			11.50-13.00 Volts

Normally open contacts (big terminals) coil resistance 3.0-5.0 ohms. Contact resistance is 0.1-0.3 ohms when correct. Electrically activated.

PTO Clutch	Off	Run	Start
Purple/white			
Black/white	Connected To Ground When Start Relay is Energized		

Coil Resistance check clutch specifications.

Brake Switch	Off	Run	Start
Red/Yellow		11.50-13.00 Volts	11.50-13.00 Volts
Yellow/Red (A)		11.50-13.00 Volts	11.50-13.00 Volts

Normally closed contacts mechanically activated. Contact resistance 0.1-0.3 ohms. Used on models 915013, 014, 015, 106, 306, 307.

(A) With neutral switches closed and PTO switch "off".

## 11.19 ELECTRICAL SYSTEM

Model 915055, 057, 059, 065, 067, 501, 502 for Serial Numbers Below 5,000

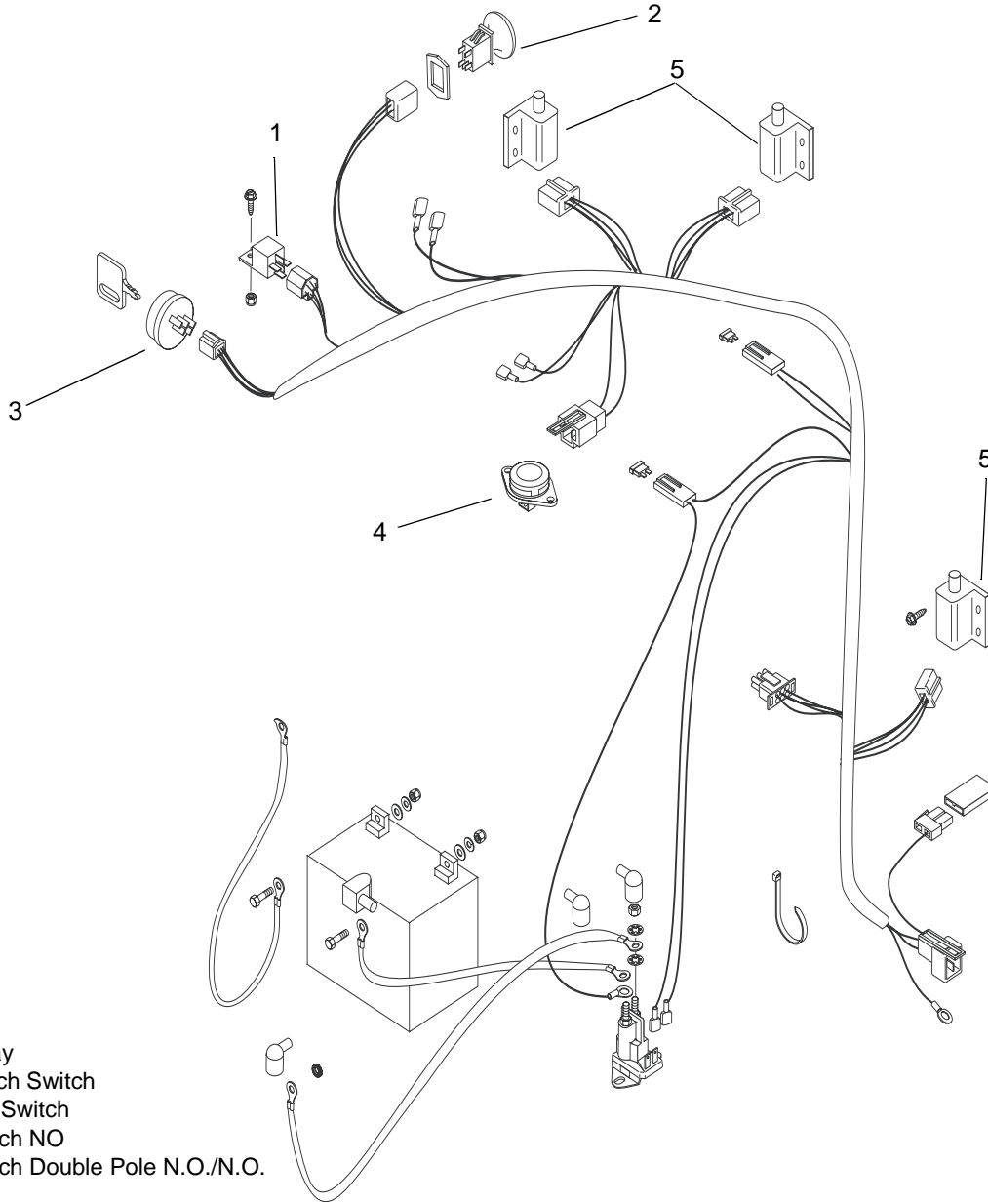
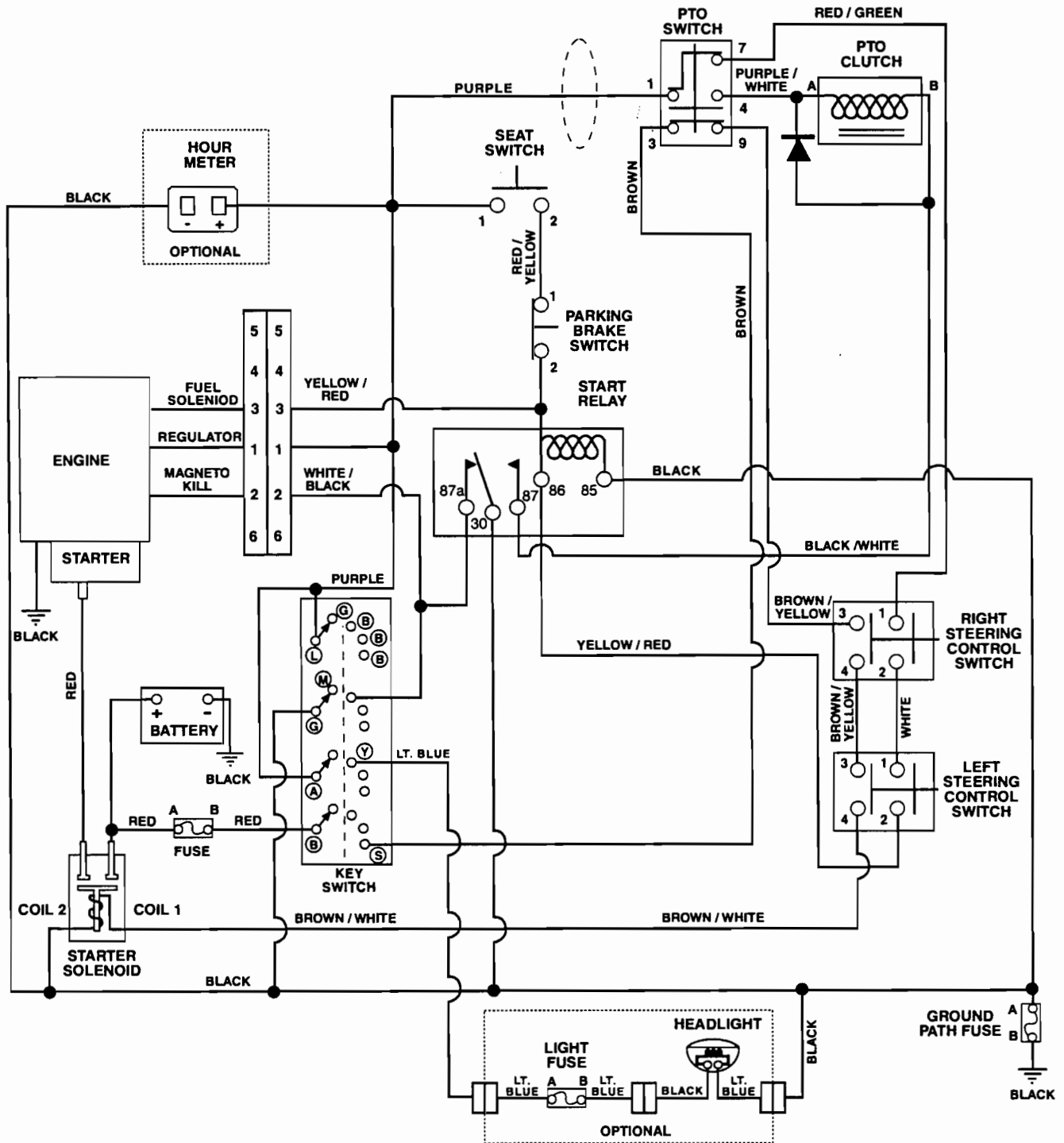


Figure 35

# 11.20 WIRING DIAGRAMS

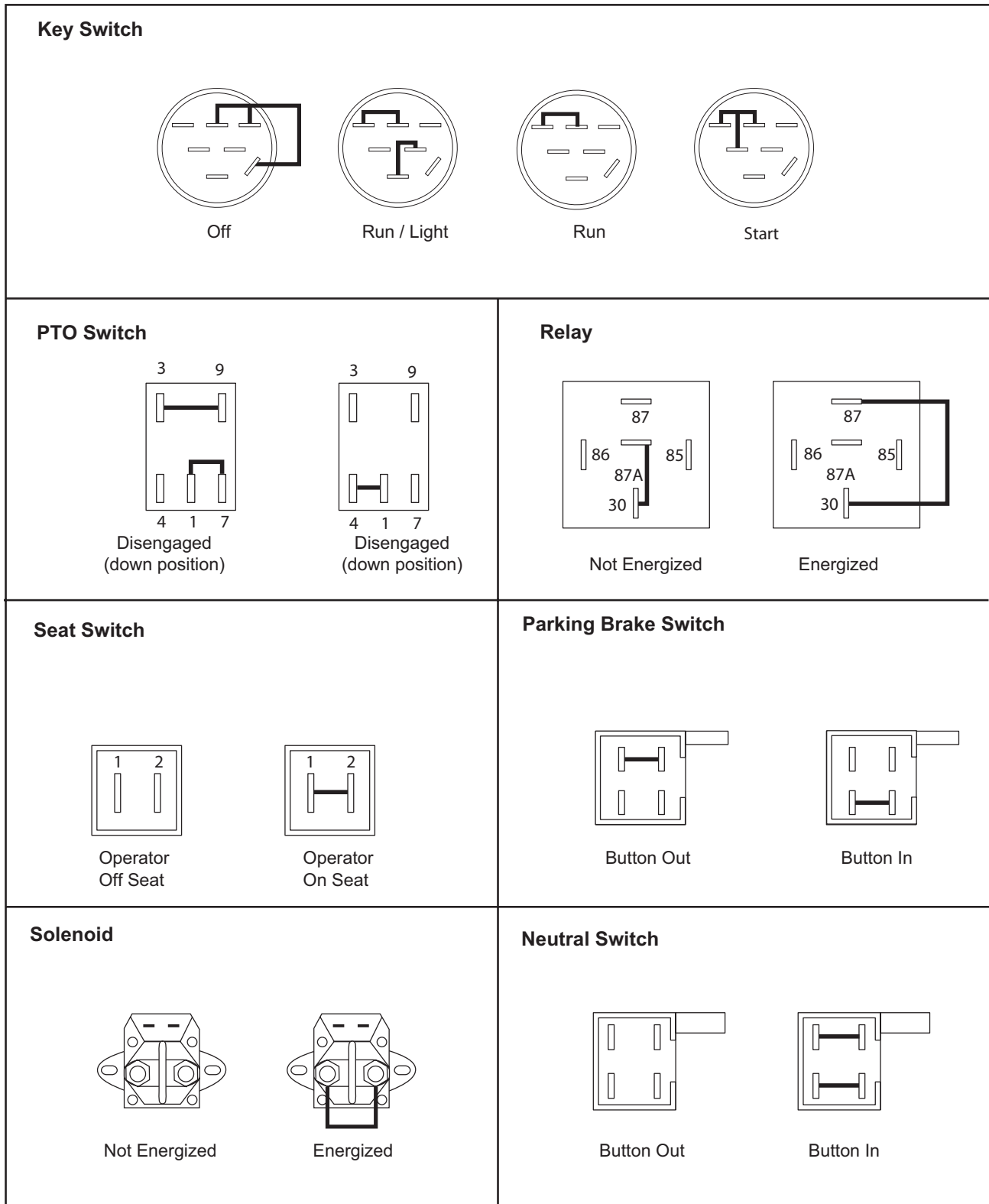
Model 915055, 057, 059, 065, 067, 501, 502 for Serial Numbers Below 5,000



## 11.21 CONTINUITY DIAGRAM

Model 915055, 057, 059, 065, 067, 501, 5025 for Serial Numbers Below

The diagrams below show the various states of connection for electrical components.  
 The solid lines on switches show continuity.  
 NOTE: All switches are viewed from the rear.



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## SECTION 12 - MOWER ATTACHMENT

### 12.1 MOWER SPINDLE REMOVAL

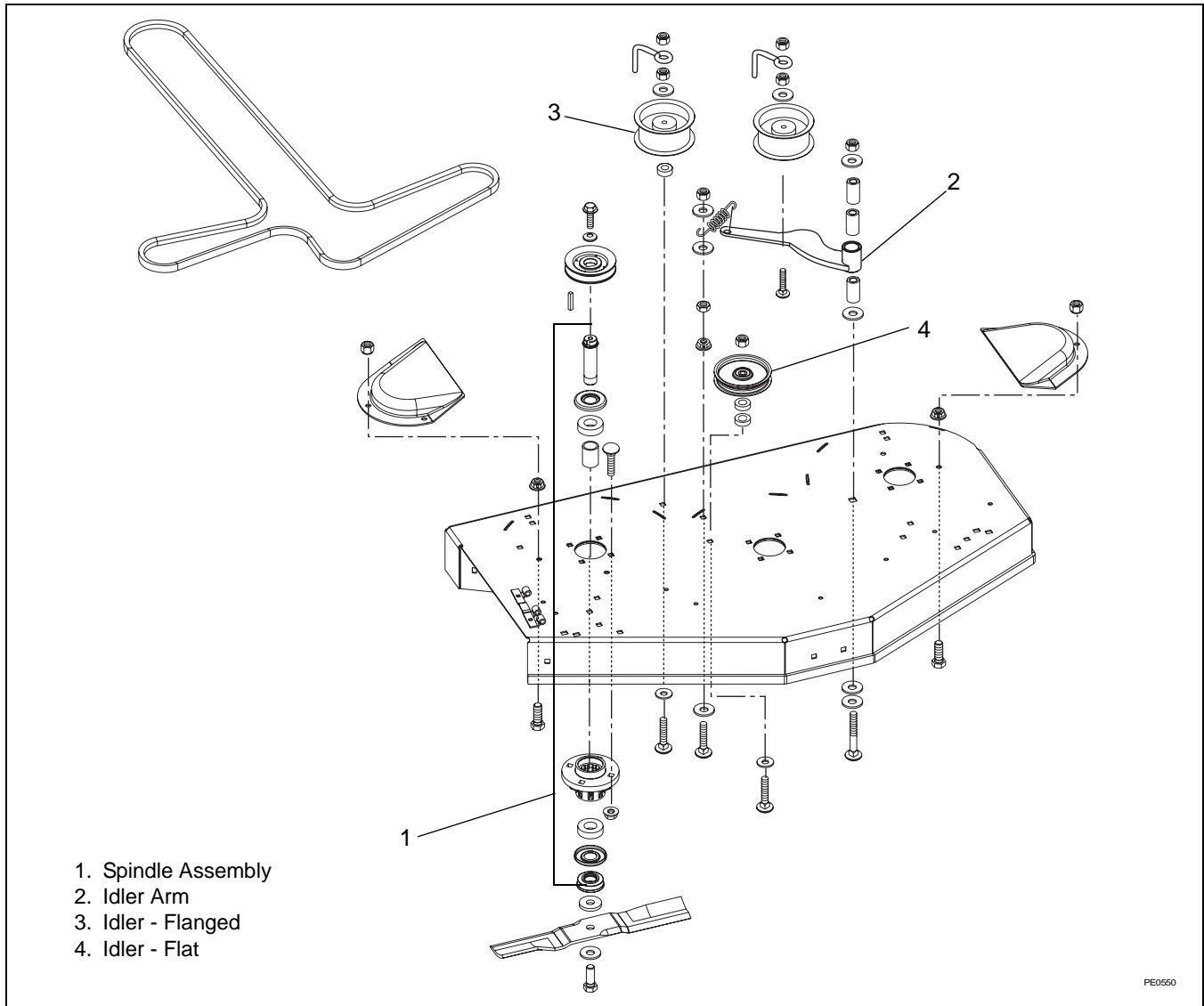


Figure 36

The spindles are assemblies that are replaced when worn. To remove the spindle assemblies:

1. With the mower deck removed from the unit the disassembly of the mower may be performed.
2. Remove the mower spindle covers.
3. Remove the mower deck blades.
4. Reduce belt tension on the belt by removing the idler pulley spring.
5. Remove the spindle sheaves and square key.
6. Remove the mower spindle housings from the mower deck stamping.
7. Assemble in reverse order.



TROUBLESHOOTING		
PROBLEM	PROBABLE CAUSE	CORRECTION
Engine will not crank/start	<ol style="list-style-type: none"> <li>1. Safety interlock system is not engaged or is faulty.</li> <li>2. Fuel tanks empty.</li> <li>3. Fuel shut-off valve closed.</li> <li>4. Discharged battery.</li> <li>5. Poor connection between battery and battery cables.</li> <li>6. Spark plug wire(s) loose or spark plug(s) faulty.</li> <li>7. Faulty electrical system.</li> <li>8. Faulty engine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check safety interlock system (see <i>Safety Interlock System</i>).</li> <li>2. Fill fuel tanks (see <i>Filling Fuel Tanks</i>).</li> <li>3. Open fuel shut-off valve.</li> <li>4. Charge battery (see <i>Charging the Battery</i>).</li> <li>5. Tighten battery cables and/or clean battery and battery cables (see <i>Cleaning Battery and Battery Cables</i>).</li> <li>6. Connect spark plug wire(s) or replace spark plug(s). Refer to Engine Manual for detailed instructions.</li> <li>7. Contact your Ariens Dealer.</li> <li>8. Contact your Ariens Dealer.</li> </ol>
Engine runs rough	<ol style="list-style-type: none"> <li>1. Choke engaged.</li> <li>2. Air filter cartridge plugged.</li> <li>3. Faulty engine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disengage choke.</li> <li>2. Clean or replace air filter cartridge. Refer to Engine Manual for detailed instructions.</li> <li>3. Contact your Ariens Dealer.</li> </ol>
Unit does not move with engine running when using steering levers	<ol style="list-style-type: none"> <li>1. The transmission bypass lever is engaged.</li> <li>2. Faulty hydrostatic belt.</li> <li>3. Faulty transmission.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disengage transmission bypass lever (see <i>Moving Unit Manually</i>).</li> <li>2. Replace hydrostatic belt (see <i>Replacing Hydrostatic Belt</i>).</li> <li>3. Contact your Ariens Dealer.</li> </ol>
PTO or mower blades do not engage or shuts off.	<ol style="list-style-type: none"> <li>1. Operator presence switch not depressed.</li> <li>2. Faulty operator presence switch.</li> <li>3. Electric clutch connector is loose or disconnected.</li> <li>4. Faulty PTO belt.</li> <li>5. Faulty PTO switch, wires, connectors, or clutch.</li> </ol>	<ol style="list-style-type: none"> <li>1. Depress operator presence switch by sitting on seat.</li> <li>2. Contact your Ariens Dealer.</li> <li>3. Connect the electric clutch connector. See <i>Replacing Hydrostatic Belt</i> for the electric clutch connector location.</li> <li>4. Replace PTO belt (see <i>Replacing PTO Belt</i>).</li> <li>5. Contact your Ariens Dealer.</li> </ol>
Engine overheats	<ol style="list-style-type: none"> <li>1. Engine oil level low.</li> <li>2. Cooling system plugged.</li> <li>3. Faulty engine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Add engine oil. Refer to Engine Manual for detailed instructions.</li> <li>2. Clean cooling system. Refer to Engine Manual for detailed instructions.</li> <li>3. Contact your Ariens Dealer.</li> </ol>

TROUBLESHOOTING		
PROBLEM	PROBABLE CAUSE	CORRECTION
Unit moves with engine off and parking brake engaged	<ol style="list-style-type: none"> <li>1. The parking brake needs adjustment.</li> <li>2. Faulty parking brake.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact your Ariens Dealer.</li> <li>2. Contact your Ariens Dealer.</li> </ol>
Hour meter continues to run when engine is not running	<ol style="list-style-type: none"> <li>1. Ignition key is in the run position with engine turned off.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn ignition key to the off position.</li> </ol>
Unit does not travel in a straight line	<ol style="list-style-type: none"> <li>1. Incorrect tire pressure.</li> <li>2. Steering levers need adjustment.</li> <li>3. Hydrostatic transmission and/or linkage needs adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check tire pressure (see <i>Specifications</i>).</li> <li>2. Adjust steering levers (see <i>Forward and Reverse Speed Adjustment</i>).</li> <li>3. Contact your Ariens Dealer.</li> </ol>
Unit creeps with steering levers in neutral position.	<ol style="list-style-type: none"> <li>1. Hydrostatic transmission and/or linkage needs adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact your Ariens Dealer.</li> </ol>
Poor cutting quality	<ol style="list-style-type: none"> <li>1. Mower deck not level or mower pitch is incorrect.</li> <li>2. Dull or faulty mower blades.</li> </ol>	<ol style="list-style-type: none"> <li>1. Level and adjust pitch of mower deck (see <i>Leveling and Adjusting Pitch Of Mower Deck</i>).</li> <li>2. Sharpen mower blades (see <i>Sharpening Mower Blade</i>) or replace mower blades (see <i>Replacing Mower Blade</i>).</li> </ol>

<b>SERVICE PARTS</b>		
<b>BE SURE TO ALWAYS USE GENUINE ARIENS PARTS TO KEEP YOUR UNIT RUNNING LIKE NEW</b>		
<b>PART NO.</b>	<b>QTY</b>	<b>DESCRIPTION</b>
03498400	1	40-inch Mower Blade (915065, 067)
00272800	1	44-inch Mower Blade (915502)
01593900	1	44-inch Mower Blade (915055)
00272900	1	44-inch Mower Blade (915501)
04919100	1	48-inch Mower Blade (915057)
04916400	1	52-inch Mower Blade (915059)
01554800	1	Battery
07221000	1	Hydrostatic Belt (915065, 502)
07241400	1	Hydrostatic Belt (915067, 055, 057, 059, 501)
07241800	1	40-inch PTO Belt (915067)
07200001	1	40-inch PTO Belt (915065, 502)
07241700	1	44-inch PTO Belt (915055, 501)
07241500	1	48-inch PTO Belt (915057)
07241600	1	52-inch PTO Belt (915059)
07242900	1	44-inch PTO Belt (915501)

<b>ACCESSORIES</b>		
<b>SEE YOUR AUTHORIZED ARIENS DEALER TO ADD THESE OPTIONAL ACCESSORIES TO YOUR UNIT.</b>		
<b>PART NO.</b>	<b>QTY</b>	<b>DESCRIPTION</b>
71502900	1	Dump Cart
81501200	1	46-Inch Snow Head (915065, 067, 055, 057, 059)
81501300	1	54-Inch Dozer Blade
71503200	1	48-Inch Aerator
71503300	1	36-Inch Roller
71503400	1	48-Inch Dethatcher
71503500	1	15-Gallon Sprayer
71503600	1	Spreader
71504900	1	Sunshade
71503800	1	48-Inch Lawn Sweeper
81501500	1	Bagger (915065, 067, 055, 057, 059)
71505100	1	Baffle Kit (915065, 067, 055, 057, 059)
71501200	1	Hour Meter Kit (915065, 502)
71504100	1	Light Kit (915065, 502)
71504700	1	Striper Kit (915065, 502)
71505900	1	Anti-Scalp Kit (915065, 502)



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 **WARNING** 

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.