

Safety Instructions & Operator's Manual for  
**SNAPPER**<sup>®</sup>

**MID MOUNT Z-RIDER  
 ZERO TURNING  
 HYDRO DRIVE  
 SERIES 0**



<b>MODELS</b>
NZM19480KVV
NZM21520KVV

**MODEL NUMBER EXPLANATION**

N	Z	M	19	48	0	KVV
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MODEL DESIGNATION ————  
 DRIVE SYSTEM TYPE ————  
 MOWER ORIENTATION ————  
 ENGINE HP ————

ENGINE TYPE ————  
 SERIES DESIGNATION ————  
 MOWER DECK SIZE ————

**POWER UNIT**

N – Model Designation	19.0 – Engine Horse Power	0 – Series Designation	KW – Kawasaki Engine V – Over Head Valve
Z – Zero Turning – Hydro Drive	21.0 -- Engine Horse Power		
M – Mid Mount Mower	48 – 48" Mower Width		
	52 – 52" Mower Width		

Thank you for buying a SNAPPER Product! Before operating your machine, read this manual carefully and pay particular attention to the "IMPORTANT SAFETY INSTRUCTIONS" on Pages 2 - 4. Remember that all power equipment can be dangerous if used improperly. Also keep in mind that SAFETY requires careful use in accordance with the operating instructions and common sense!

**SNAPPER**<sup>®</sup> McDonough, GA., 30253 U.S.A.

# Section 1 - FAMILIARIZATION

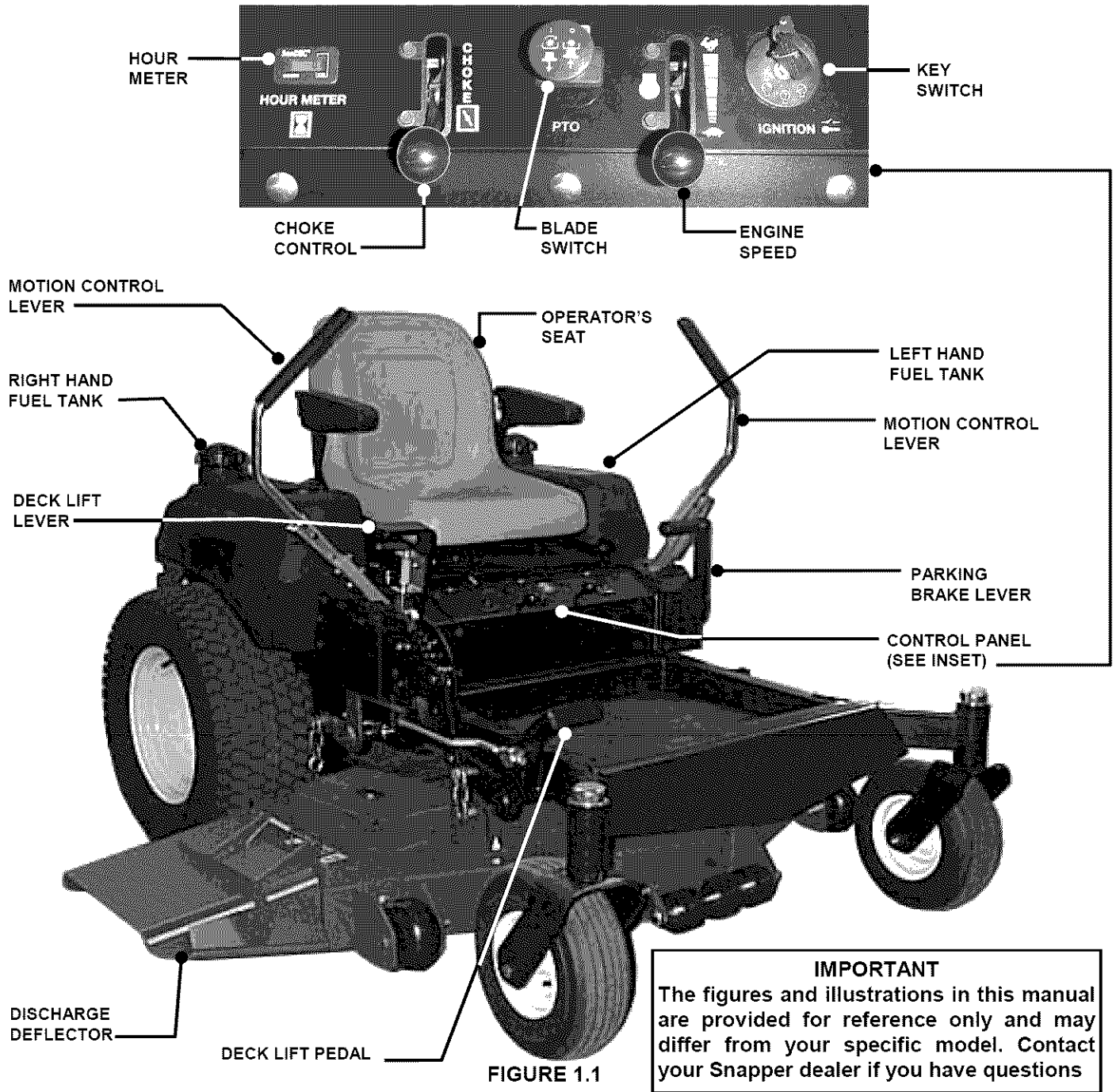


FIGURE 1.1

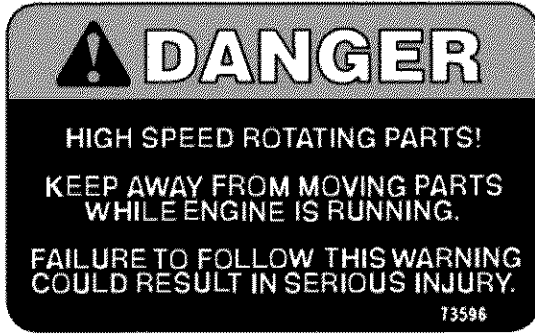
## 1.1 INTRODUCTION

This manual has been prepared for the operator's of the SNAPPER MID MOUNT Z-RIDER. Its purpose, aside from recommending standard operating procedures and routine service requirements, is to promote SAFETY through the use of accepted operating practices. Read, Understand and Follow the IMPORTANT SAFETY INSTRUCTIONS on Pages 2 thru 4 of this manual and All SAFETY messages on the MID MOUNT Z-RIDER and its attachments before operating. SNAPPER recommends returning the MID MOUNT Z-RIDER to an authorized SNAPPER dealer annually for inspection and addition of any new devices which might upgrade the safety of the mower.

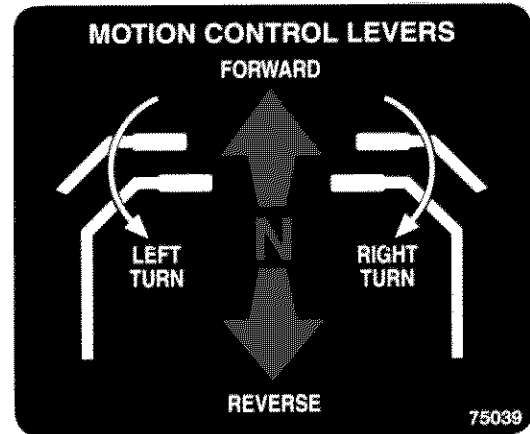
## 1.2 NOMENCLATURE

The nomenclature information above, Figure 1.1, shows the essential parts of the SNAPPER MID MOUNT Z-RIDER. It is recommended that all operators of this equipment become thoroughly familiar with the controls, components, and operation of this machine before operating. Specific details involving the engine are found in the separate engine owner's manual. Study these manuals before operating and keep both handy for future reference. For the nearest SNAPPER dealer in your area, check the yellow pages under the heading LAWN MOWERS. For engine parts and service, look for the engine manufacturer's dealers under the heading, ENGINES - gasoline.

## Section 2 – SAFETY MESSAGES AND SYMBOLS



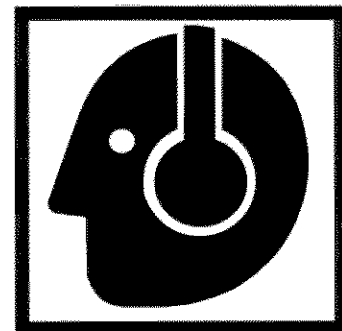
**DANGER ! ROTATING PARTS  
KEEP AWAY FROM MOVING PARTS**



**MOTION CONTROL LEVER OPERATION**



**PARKING BRAKE LEVER OPERATION**



**WEAR HEARING PROTECTION**

**⚠ WARNING**

**TO AVOID SERIOUS INJURY OR DEATH**

- READ OPERATOR'S MANUAL AND OTHER INSTRUCTIONAL MATERIALS PROVIDED.
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- NEVER START BLADES UNLESS PROPERLY SEATED ON MACHINE.
- KEEP SAFETY DEVICES (GUARDS, SHIELDS AND SWITCHES) IN PLACE.
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADES.
- DO NOT MOVE MOTION CONTROL LEVERS RAPIDLY. AVOID SUDDEN TURNS.
- DO NOT OPERATE BLADES IN REVERSE.
- LOOK DOWN AND BEHIND BEFORE AND DURING REVERSE MOVEMENT.
- DO NOT MOW IN ANY AREA WHERE STABILITY AND TRACTION IS IN DOUBT. DO NOT MOW ON SLOPES STEEPER THAN 15°.
- REDUCE SPEED ON SLOPES. GO FORWARD DOWN SLOPES. GO REVERSE UP SLOPES. NEVER TRAVEL ACROSS SLOPES.
- AVOID UPHILL STARTS. IF MACHINE STOPS GOING UPHILL, STOP BLADES AND BACK DOWN SLOWLY.
- DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND. NEVER CARRY CHILDREN DURING OPERATION EVEN WITH BLADES OFF.
- BE SURE ALL MOVING PARTS ARE STATIONARY BEFORE PLACING HANDS AND FEET NEAR BLADES OR SERVICING MACHINE.

**TO START:**

MAKE SURE OPERATOR IS SEATED PROPERLY.  
PLACE MOTION CONTROL LEVERS IN CENTER/NEUTRAL POSITION.  
PULL UP ON BRAKE LEVER TO SET BRAKE.  
PUSH BLADE SWITCH DOWN TO MAKE SURE BLADE IS DISENGAGED.  
SET CHOKE AND THROTTLE.  
TURN KEY TO START ENGINE.

**TO OPERATE:**

ADJUST CHOKE AND THROTTLE.  
PULL BLADE SWITCH UP TO ENGAGE BLADE.  
PUSH PARKING BRAKE LEVER DOWN TO RELEASE BRAKE.  
MOVE MOTION CONTROL LEVERS IN THE DIRECTION OF TRAVEL REQUIRED.  
INCREASE / DECREASE SPEED WITH AMOUNT OF MOTION CONTROL LEVERS TRAVEL FROM CENTER / NEUTRAL POSITION.

**TO STOP:**

MOVE MOTION CONTROL LEVERS TO CENTER / NEUTRAL POSITION.  
PUSH BLADE SWITCH DOWN TO DISENGAGE BLADE.  
PULL UP ON BRAKE LEVER TO SET BRAKE.  
TURN KEY TO OFF POSITION AND REMOVE.  
MAKE SURE ALL MOVEMENT HAS STOPPED BEFORE DISMOUNTING.

75043

**WARNING ! AVOID SERIOUS INJURY OR DEATH  
STARTING, OPERATION & STOPPING OF MACHINE**

# Section 3 - OPERATING INSTRUCTIONS

## 3.1 PRE-START CHECK LIST

Make the following checks and perform the service required before each start-up.

**3.1.1.** Check tires and add or release air as needed to bring pressure to 12 psi in drive tires. Pressure in front caster wheels should be 25 psi.

**3.1.2.** Check guards, deflectors and covers to make sure all are in place and securely tightened.

**3.1.3.** Check engine oil and add oil as needed to bring level up to the FULL mark. Refer to engine owner's manual for oil specifications. See Figure 3.1.

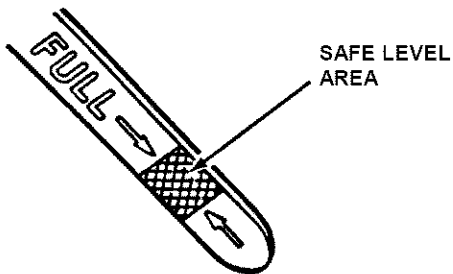
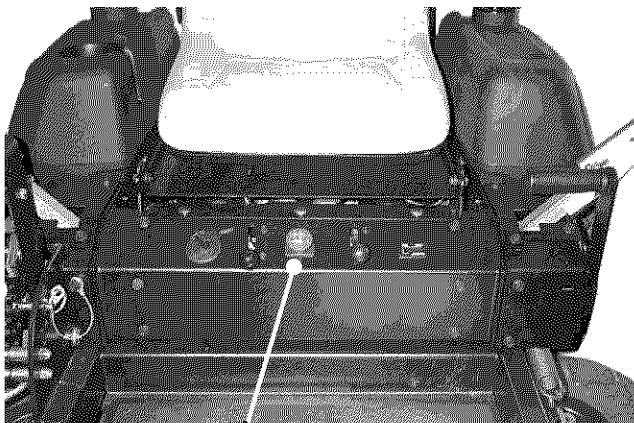


FIGURE 3.1

**3.1.4.** Check Blade Switch to insure it works freely.

1. Pull the Blade Switch up to the "ON" position to engage or turn "ON" the mower blades.

2. Push Blade Switch down to the "OFF" position to disengage or turn "OFF" the blades.



BLADE SWITCH  
FIGURE 3.2

**3.1.5.** Clean exterior surfaces of cutting deck, engine and pumps of any accumulation of dirt, grass, oil, etc. Keep engine and pump air intake screens and cooling fins clear at all times.

**3.1.6.** Add fuel to both tanks of the machine outside where fumes can safely dissipate. Make sure both fuel filler caps are tight. Note the fuel tank selector valve. Refer to engine owner's manual for fuel specifications.

**3.1.7.** Adjust position of operator's seat. The seat is mounted on slides. Locate latch lever beneath the seat. Move lever towards the left and slide seat to the desired position. Release latch.

**3.1.8.** Place mower in desired cutting height setting. Grasp deck lift lever and depress release latch located underneath the lever. Move lever to desired cutting height setting and release latch. Insert stop pin to desired cutting height.

**IMPORTANT:** There is a foot assist pedal located to the right front side of the footrest. Always use this assist pedal to raise or lower the deck for the desired cutting height. See Figure 3.3.

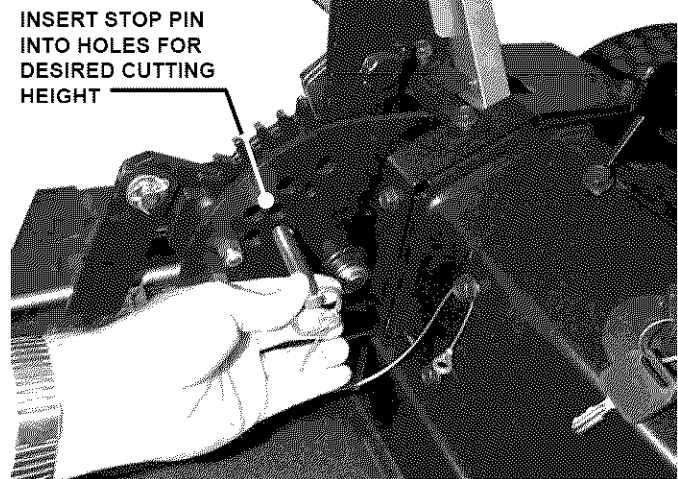
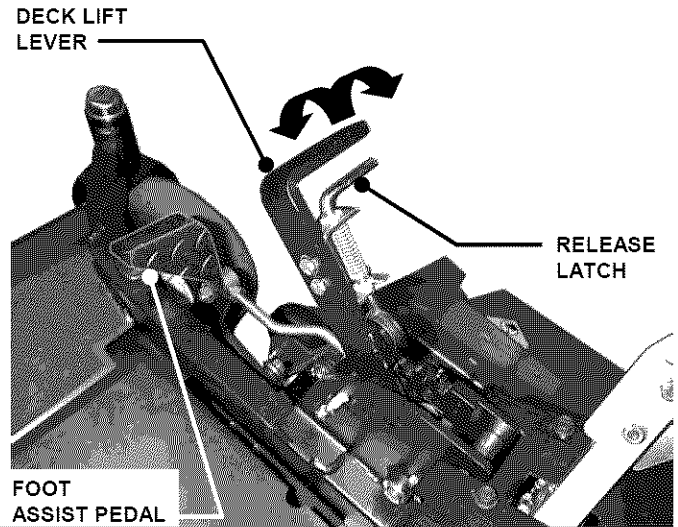


FIGURE 3.3

**IMPORTANT:** This machine is equipped with hydrostatic drive. The direction of motion and the speed of motion are controlled by the left and right motion control levers. A small movement of these controls can cause the machine to move instantly. **DO NOT** attempt to operate the machine until you read this manual and become familiar with its operation. Practice with the blades "OFF" disengaged, engine speed at a slow setting and in an open area away from obstacles.

	<b>WARNING</b>	
<b>DO NOT</b> allow operation of the machine by untrained personnel.		

# Section 3 - OPERATING INSTRUCTIONS

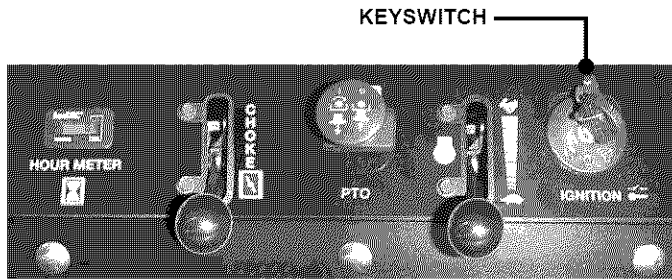
## 3.2.1. STARTING ENGINE

**NOTE:** If after 5 seconds of cranking the engine does not start, release the key. Attempt starting again after waiting for approximately 20 seconds.

7. After engine starts, move the choke control to the "OFF" or no choke position. Allow a brief warm-up until engine runs smooth.

## 3.2.2. STOPPING ENGINE

1. Stop engine by turning key to "STOP" position. Move engine speed to the Turtle "SLOW" position and turn key to "STOP". See Figure 3.6.



SHOWN FROM OPERATOR'S VIEW POINT

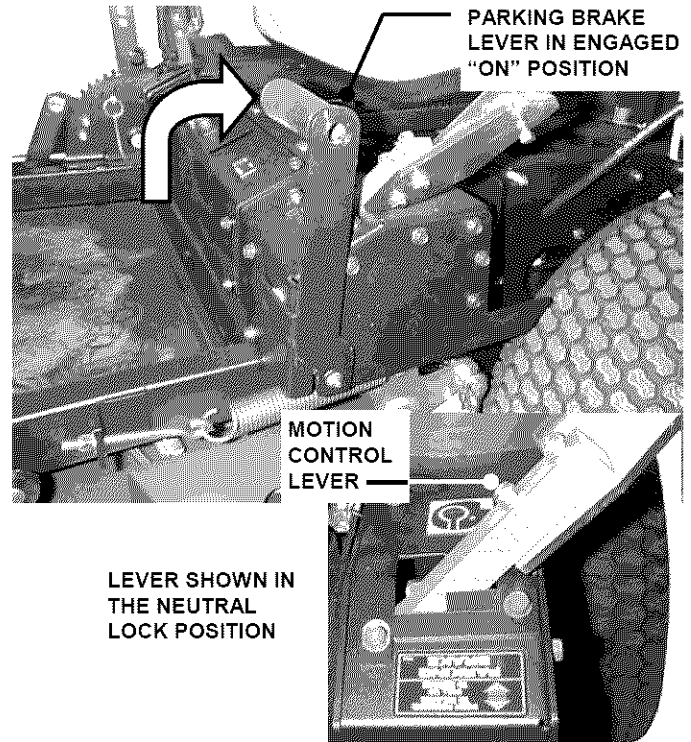
FIGURE 3.6

## 3.2.5. PARKING BRAKE

1. Engage parking brake by pulling the parking brake lever back to the engaged position. See Figure 3.7.

**NOTE:** Engaging parking brake prior to placing motion control levers in the neutral lock position will cause engine to die. See Figure 3.7.

3. Release parking brake by pushing parking brake lever forward to the released position. See Figure 3.8.



LEVER SHOWN IN THE NEUTRAL LOCK POSITION

FIGURE 3.7

## 3.2.3. STARTING MOWER BLADES

1. Start engine and set engine speed control to the Rabbit "FAST" position. See Figure 3.5.

2. Pull the Blade Switch up to the "ON" position to engage or turn "ON" the mower blades. See Figure 3.2.

## 3.2.4. STOPPING MOWER BLADES

1. Push Blade Switch down to "OFF" position to disengage or turn "OFF" the blades.

2. Move engine speed control to the Turtle "SLOW" position. Turn key to "STOP" position.

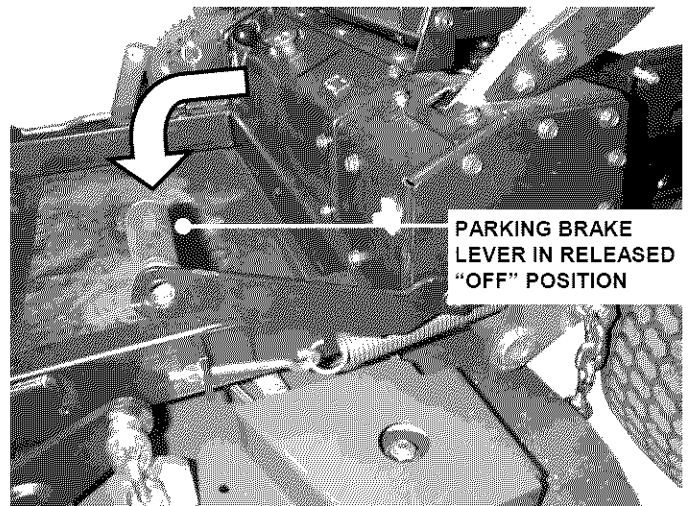


FIGURE 3.8

**WARNING**  
DO NOT operate blades in reverse. STOP blades. LOOK and SEE behind and down for children, pets, and hazards before and while backing.

**WARNING**  
Once blades are disengaged, they should come to a complete stop in 7 seconds. If the blades continue to rotate after 7 seconds, the electric clutch should be checked. Adjustment or replacement of electric clutch may be necessary. Return the machine to an authorized Snapper dealer for replacement. DO NOT CONTINUE to operate mower if blades fail to stop in 7 seconds.

**WARNING**  
DO NOT park the machine on slopes. DO NOT leave machine with engine running. Stop engine. Stop blades. Engage parking brake. Remove key.

# Section 3 - OPERATING INSTRUCTIONS

## 3.3 CUTTING HEIGHT ADJUSTMENT

1. Adjust cutting height, as desired, to any position, using deck lift lever. The release latch should be pulled up when lowering the deck. When raising the deck, the release latch does not have to be pulled up. **IMPORTANT:** There is a foot assist pedal located to the right front side of the footrest. Always use this assist pedal to raise or lower the deck to the desired cutting height. See Figure 3.9 & 3.10.
2. If a specific deck height is desired each time the machine is used, insert the stop pin to desired cutting height. See Figure 3.11.

**NOTE:** The engine does not have to be running to adjust cutting height.

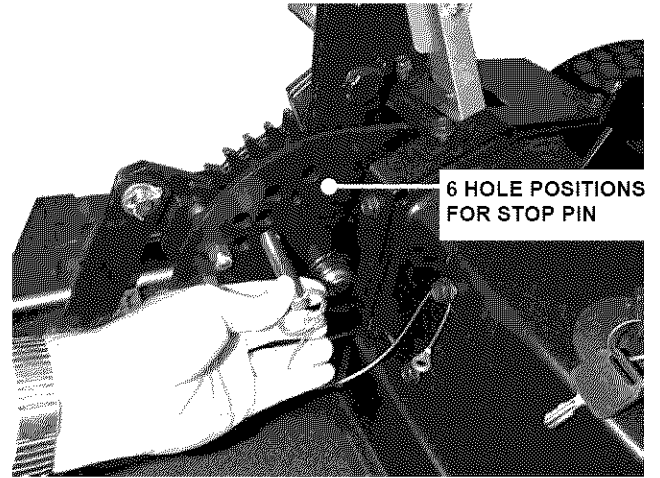


FIGURE 3.11

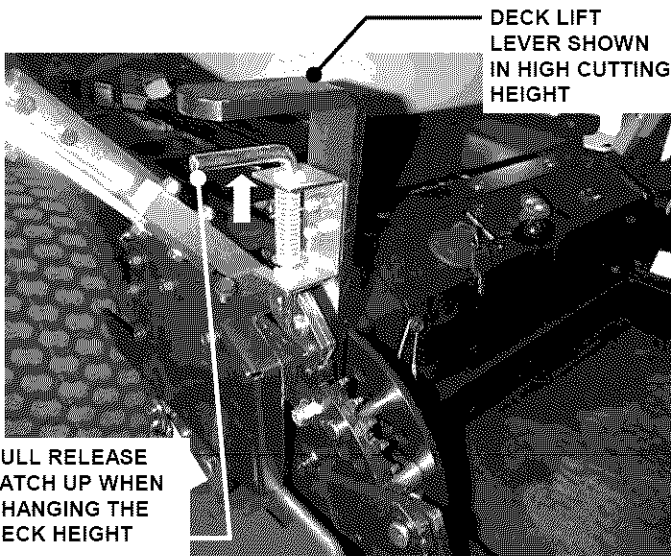


FIGURE 3.9

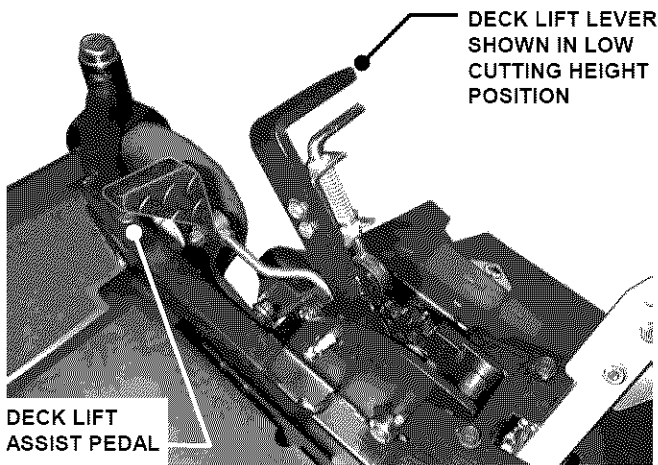


FIGURE 3.10

## 3.4 OPERATION- MOTION CONTROLS

### 3.4.1. DRIVING MACHINE

1. Start engine. Release parking brake.
  2. Move motion control levers gently and with caution in desired direction. See Figure 3.12.
- FORWARD** - Move both control levers forward.
- REVERSE** - Move both control levers rearward.
- LEFT TURN** - Move left control rearward or move right control lever forward.
- RIGHT TURN** - Move left control forward or move right control lever rearward.
- ZERO RADIUS TURN** - Move one control lever forward and move the other control lever rearward simultaneously.

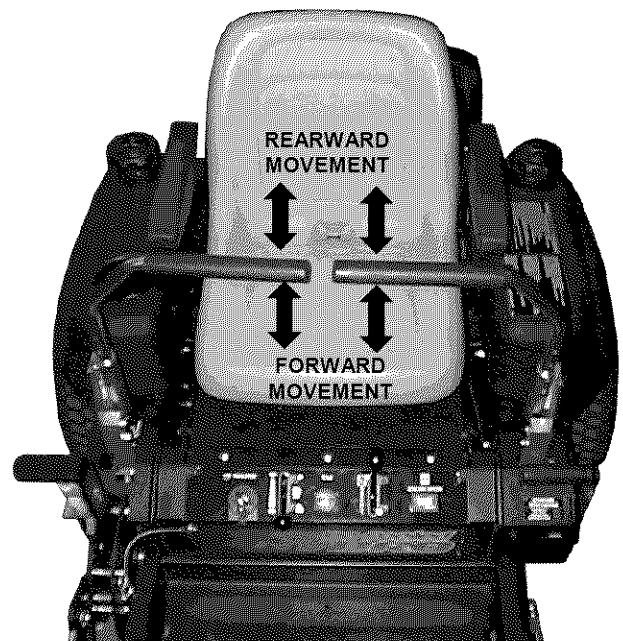


FIGURE 3.12

**WARNING**

DO NOT make turns at high speed. Slow machine motion. Move motion control lever gently and with caution. DO NOT make sudden changes in speed or direction.

## Section 3 - OPERATING INSTRUCTIONS

### 3.4.2. STOPPING MACHINE

1. Return motion control lever to the neutral position & the neutral lock position.

**IMPORTANT:** Operator must use hand assistance to bring both motion control levers to the neutral position & the neutral lock position.

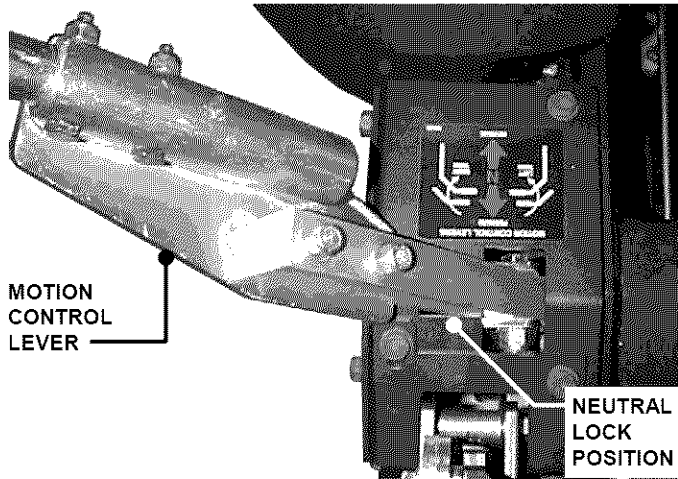


FIGURE 3.13

2. Engage parking brake.
3. Push Blade Switch down to the "OFF" position to disengage or turn "OFF" the blades.
4. Stop engine. Move engine speed control to turtle "SLOW" position. Turn key to stop position.
5. Remove key.

### 3.5 SAFETY INTERLOCK SYSTEM CHECKS

This machine is equipped with an electrical safety interlock system that is provided for the safety of the operator and others. All safety devices must be in place and functioning properly before operating the machine. Perform the following interlock system checks periodically during the operating season. Contact your authorized Snapper dealer if you have questions.

**WARNING**  
DO NOT operate machine if any safety interlock or safety device is not in place and functioning properly. DO NOT attempt to defeat, modify or remove any safety device.

#### ENGINE MUST NOT START IF:

1. Motion Control Lever(s) are not in the neutral lock position OR,
2. Parking Brake disengaged and Operator not seated in the Operator's Seat OR,
3. Blade Switch in the "ON" blades engaged position.

#### ENGINE SHOULD START IF:

1. Blade Switch in the "OFF" blades disengaged position AND,
2. Motion Control Levers are both in the neutral lock position AND,
3. Operator properly seated in the Operator's Seat OR,
4. Parking Brake engaged.

**NOTE:** The engine can be started with the parking brake disengaged only if conditions in 1, 2 and 3 have been met.

#### ENGINE MUST BEGIN TO STOP IF:

1. Motion Control Levers are moved from the neutral lock position with Parking Brake engaged OR,
2. Operator rises off of seat with Blade Switch in "ON" blades engaged position OR,
3. Operator rises off of seat with Parking Brake disengaged.

**IMPORTANT:** Engine and blades will continue to run if Operator becomes reseated prior to engine coming to a complete stop. After coming to a complete stop, the blade switch must be moved to the "OFF" position before engine can be restarted. Engine and blades must come to a complete stop within 7 seconds after the operator rises off the seat or the blade switch is moved to the "OFF" position.

**WARNING**  
DO NOT park the machine on slopes. DO NOT leave machine with engine running. Stop engine. Stop blades. Engage parking brake. Remove key.

# Section 4 - MAINTENANCE

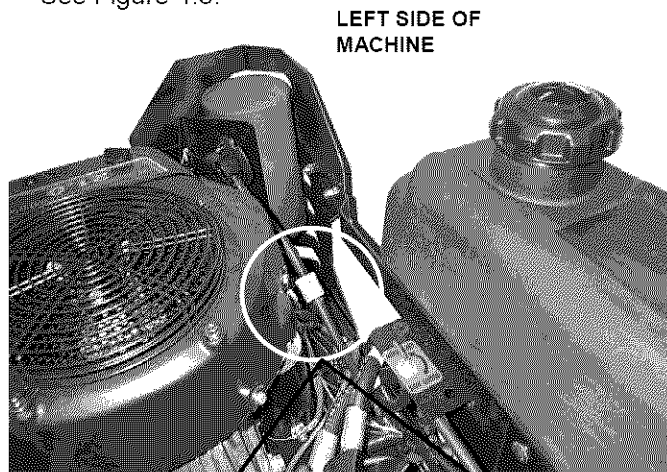
**WARNING**  
Allow engine to cool for at least ten minutes before performing service or maintenance. **DO NOT** smoke near fuel components when performing service or maintenance. **DO NOT** perform service and maintenance near an open flame. Wipe off any spilled fuel before starting engine. **DO NOT** run engine indoors.

## 4.5 ANNUALLY (END OF EACH SEASON) (Continued from previous Page)

### 4.5.2. FUEL FILTER

Service fuel filter as instructed below. Turn key to "OFF" position. Engine **MUST** be stopped and **MUST** be cold before removing filter. Clamp fuel line to prevent fuel spillage or perform filter change when fuel tank and fuel line are empty.

1. Remove fuel line clamps from fuel filter.
2. Remove fuel lines from filter. Discard filter.
3. Install new fuel filter. **IMPORTANT:** Some fuel filters are fuel flow directional. Check for arrow that shows fuel flow direction. Reinstall fuel line clamps. See Figure 4.8.



CLAMP FUEL LINE TO PREVENT SPILLAGE

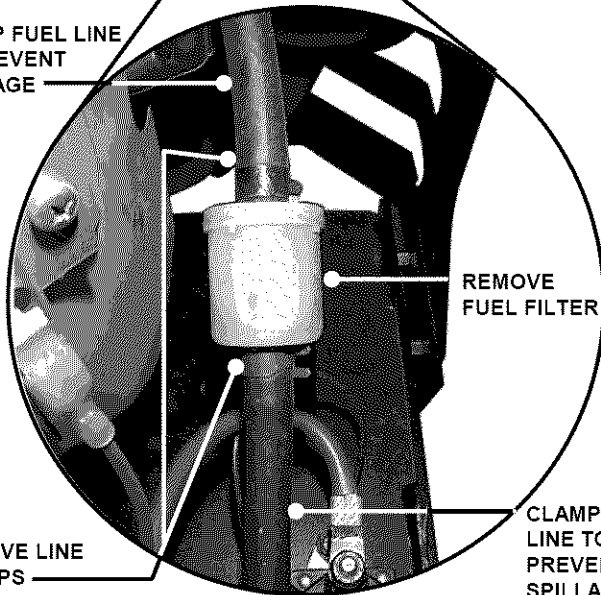
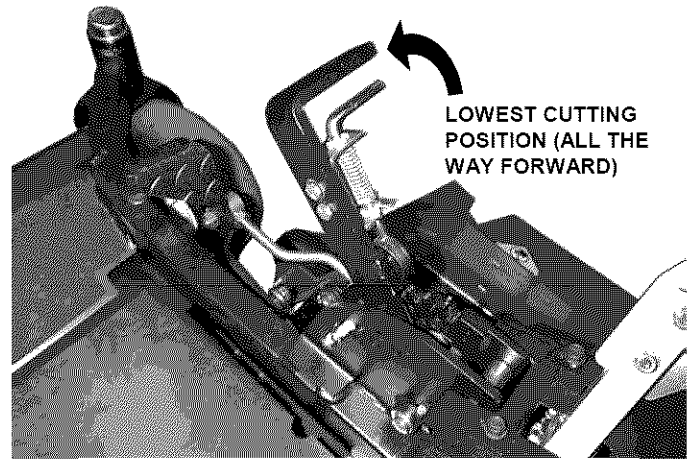


FIGURE 4.8

## 4.6 DECK REMOVAL

Move power unit/mower deck to an area where the mower deck is to be disconnected. Turn engine "OFF" and remove key from switch. Remove spark plug wire(s) and secure away from spark plug(s). Move motion control levers to the neutral position. Engage parking brake.

1. Move deck lift lever and set the mower deck to the highest cutting position. See Figure 4.9.
2. **IMPORTANT – STORED ENERGY.** Relieve tension on deck lift assist spring by backing off nut on eyebolt. Failure to relieve tension could result in personal injury. See Figure 4.9.
3. Place a wooden block under the front and rear edge of the mower deck.
4. Move deck lift lever and set the mower deck to a lower cutting position until deck rests on wooden blocks. Position the deck to where there is no tension on the deck hanger chains. See Figure 4.9.



POSITION DECK LIFT LEVER IN HIGHEST CUTTING POSITION. PLACE WOODEN BLOCKS UNDER FRONT AND REAR OF DECK. LOWER DECK ONTO

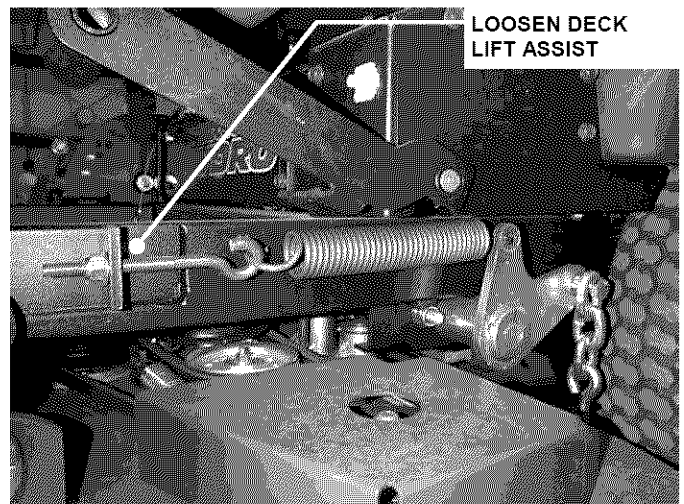


FIGURE 4.9

(Continued On Next Page)



## Section 5 - ADJUSTMENTS & REPAIR

**⚠ DANGER ⚠**  
Exercise **EXTREME CAUTION** when making this adjustment, due to close proximity of moving parts.

### 5.1 NEUTRAL POSITION ADJUSTMENTS

The motion control levers control the movement and stopping of the machine. Move the control levers to the center or neutral position to stop machine.

**IMPORTANT:** Always return both motion control levers with hand assistance to the neutral position. If machine does not come to a complete stop or machine has movement when control levers are moved to the neutral lock position, adjustment must be made.

1. Turn key to "OFF" position.
2. Move motion control levers to the neutral lock position. Refer to Figure 3.7.
3. Raise both rear wheels off the ground. Secure machine with safety blocks.
4. Remove cover screen to expose top of hydro pumps and linkages. See Figure 5.1.
5. Remove both fans from top of hydro pumps.
6. Disconnect motion lever connecting rods from hydro pump activation assembly. See Figure 5.2.

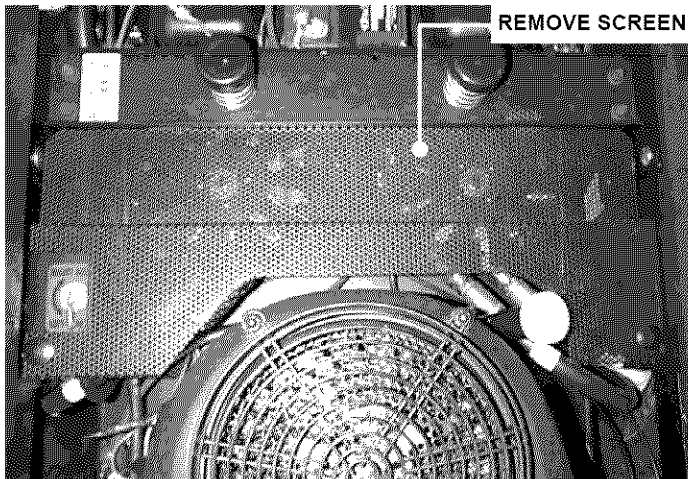


FIGURE 5.1

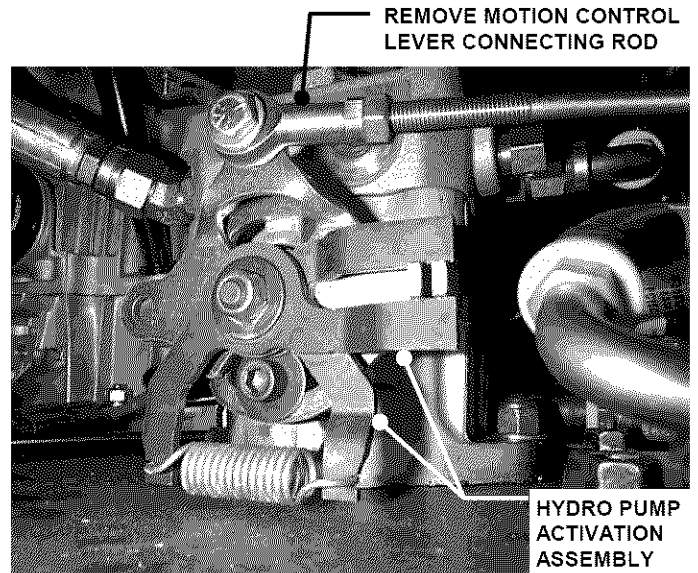


FIGURE 5.2

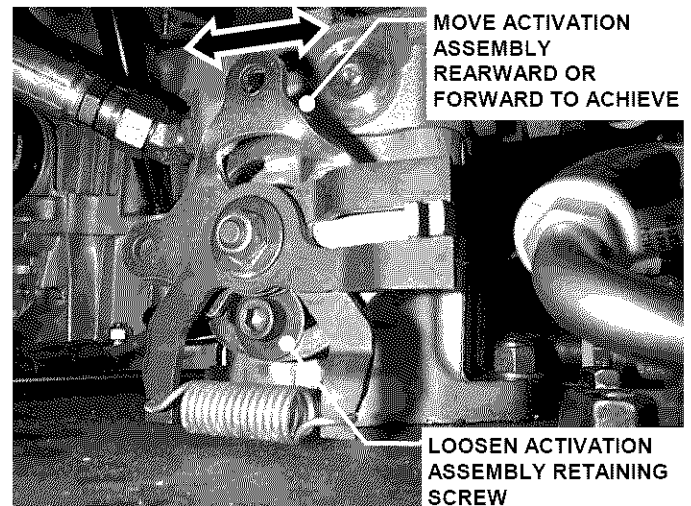


FIGURE 5.3

(Continued On Next Page)

7. Turn key to start position and start machine. Move engine speed control to the Rabbit "FAST" position.
8. Disengage parking brake.
9. Both wheels should not have any movement, not rotating.
10. If wheel(s) are rotating, loosen the hydro pump activation assembly retaining screw. Move activation assembly forward or rearward to stop rotation of wheel. Retighten retaining screw. Repeat this step for other hydro pump. See Figure 5.3.
11. Stop engine.

## Section 5 - ADJUSTMENTS & REPAIR

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine running. STOP engine. STOP blades. Set brake. Remove key. Remove spark plug wires and secure away from spark plugs. Engine and components are HOT. Avoid serious burns, allow sufficient time for all parts to cool.

### 5.3 TRACTION BELT TENSION

The traction drive belt tension does not require adjustment. If the belt is slipping, it will have to be replaced.

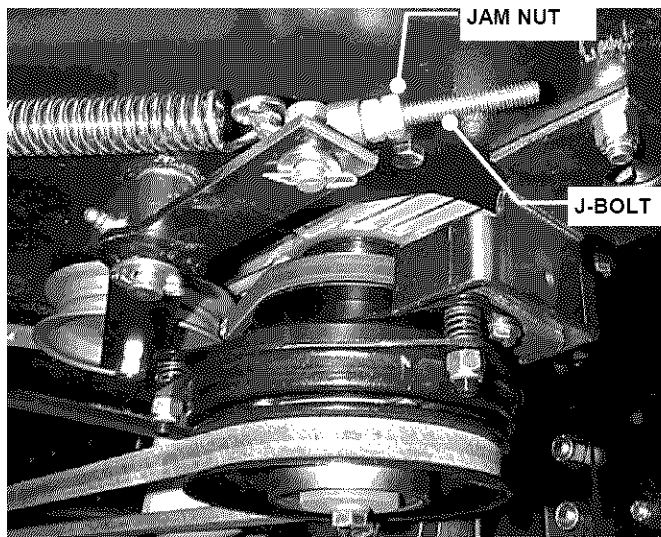
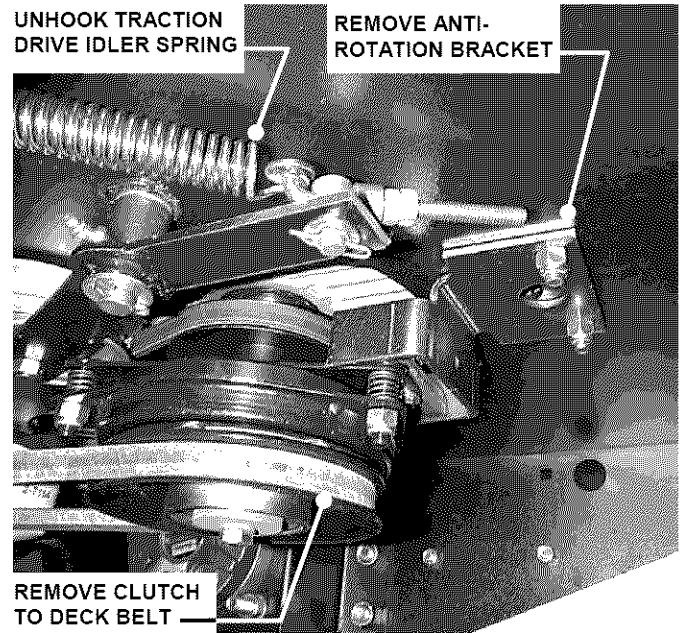


FIGURE 5.9

### 5.4 TRACTION BELT REPLACEMENT

1. Remove clutch to deck belt. See Figure 5.10
2. Loosen jam nut on J-Bolt and turn both nuts out to the end of J-Bolt, reducing spring tension. Unhook traction idler spring from bolt in frame. See Figure 5.9
3. Remove anti-rotation bracket. See Figure 5.10
4. Disconnect the electric clutch from main wire harness.
5. Remove traction belt from around engine pulley and hydro pumps.
6. Install new belt and route around engine pulley and hydro pump pulleys.
7. Reconnect electric clutch to main wire harness.
8. Reinstall anti-rotation bracket and tighten nuts securely.
9. Reattach traction idler spring. Run both nuts all the way to the end of the threads on the J-Bolt. Tighten jam nut securely. See Figure 5.10.
10. Reinstall electric clutch to deck belt onto electric clutch.



### 5.5 BLADE BRAKE/ELECTRIC CLUTCH ADJUSTMENT

The blade switch engages the electric clutch when pulled out to the "ON" position. When the blade switch is in the "ON" position the cutting blade(s) are engaged. The blade switch disengages the electric clutch when the blade switch is pushed in to the "OFF" position. When the blade switch is in the "OFF" position the cutting blade(s) are disengaged. The electric clutch is adjustable. The blades should stop rotation in 7 seconds or less. If the electric clutch fails to stop the blades rotation in 7 seconds, adjustment is necessary.

1. Insert a feeler gauge into the three slots on the electric clutch.
2. Check gap through all three slots in the side of the clutch. The gap should be set at .015.
3. If gap is incorrect rotate nuts in or out to achieve the correct gap. See Figure 5.11.

**NOTE:** Electric Clutch is shown removed from the machine. Removal is not necessary for adjustment.

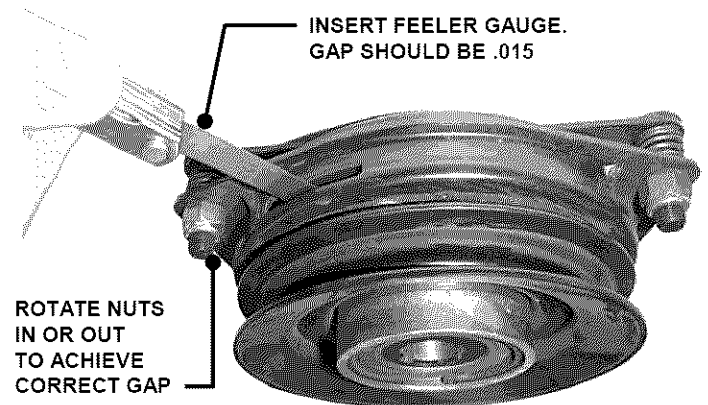


FIGURE 5.11

## Section 5 - ADJUSTMENTS & REPAIR

### 5.6 TRACKING ADJUSTMENT

If the machine does not track straight when the Motion Control Levers are in the maximum forward speed position, perform the following adjustment. Rear tire pressure must be set to 12 PSI before making this adjustment.

1. Loosen bolts that secure adjustment plates and slide plates all the way forward. Retighten bolts.
2. Start machine and drive in smooth flat open area at maximum forward speed.
3. If machine tracks to the right, loosen bolts that secure the left adjustment plate. Move plate rearward to slow the left wheel. Retighten bolts.
4. If machine tracks to the left, loosen bolts that secure the right adjustment plate. Move plate rearward to slow the right wheel down. Retighten bolts. See Figure 5.12.
5. Drive machine again. Repeat adjustment as necessary until machine tracks straight.

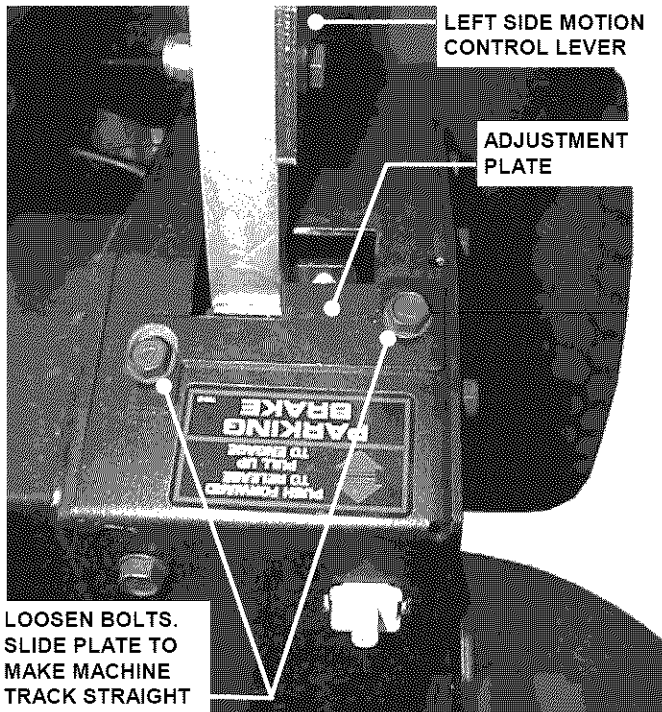


FIGURE 5.12

### 5.7 MOWER DRIVE BELT REPLACEMENT

Inspect mower drive belt. Replace belt if it shows signs of excessive wear, damage and/or is broken.

#### 5.7.1. BELT REMOVAL

1. Remove power unit footrest.
2. The engine to deck belt must be removed before the deck belt can be removed. Remove engine to deck belt.
3. Disconnect deck belt tension spring.
4. Remove old deck belt. Note the belt routing. See Figure 5.12.

#### 5.7.2. BELT REPLACEMENT

1. The deck belt must be installed first and the engine to deck belt installed last.
2. Route deck belt around blade pulleys and idler pulley in the same position as old belt was removed. See Figure 5.13.
3. Reconnect idler pulley spring.
4. Reinstall engine to deck belt.
5. Reinstall power unit footrest.

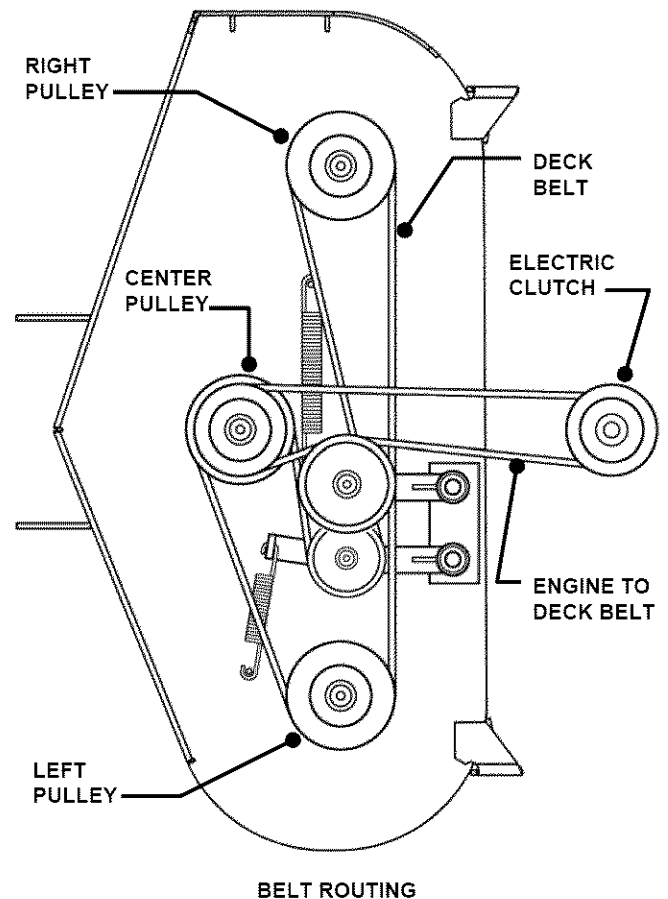


FIGURE 5.13

## Section 5 - ADJUSTMENTS & REPAIR

**WARNING**

Shield the positive terminal with terminal cover located on battery harness. This prevents metal from touching the positive terminal, which could cause sparks. Cables must be connected to battery terminals in the proper position. RED (Positive) cable must go to the ( + ) terminal. BLACK (Negative) cable must go to the ( - ) terminal. If battery is removed, DO NOT operate engine without insulating Positive + battery cable terminal with electrical tape, or sparking from the battery cables can result.

### 5.7 BATTERY

#### 5.7.1. BATTERY REMOVAL

1. Remove battery retainer. See Figure 5.17.
2. Slide terminal cover away from positive terminal.
3. Observe and note cable positions on battery. Disconnect cables from battery terminals, disconnecting BLACK (Negative) cable first and RED (Positive) last. Retain mounting bolts and nuts. See Figure 5.17.

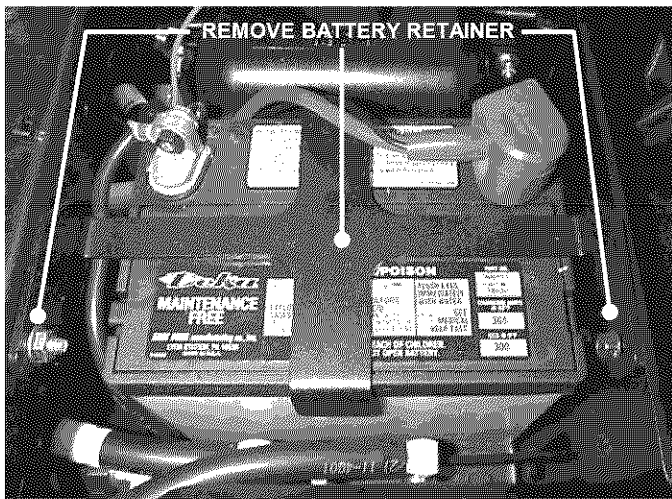


FIGURE 5.17

#### 5.7.2. BATTERY INSTALLATION

1. Position battery into battery compartment.
2. Connect cables to battery terminals. Connect RED (Positive) cable first. Connect BLACK (Negative) cable last. See Figure 5.18.
3. Reinstall battery retainer and positive terminal cover. See Figure 5.17.

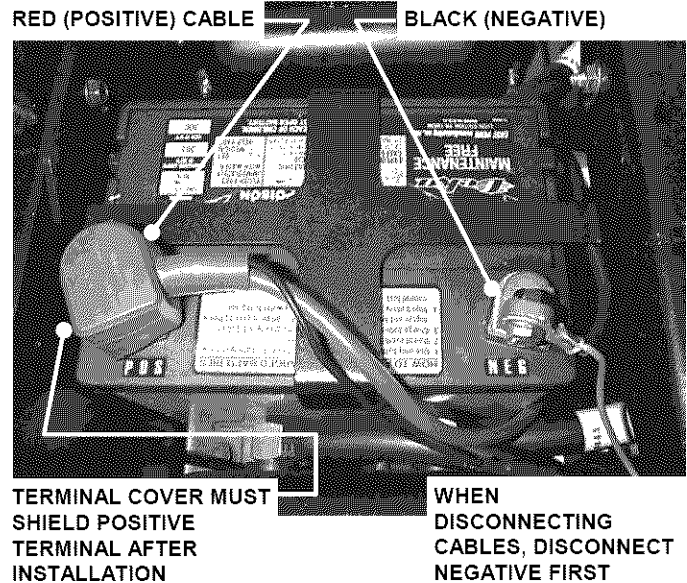


FIGURE 5.18

#### 5.7.3. BATTERY SERVICE

1. Remove battery.
2. Place battery in a well-ventilated area on a level surface.
3. Using distilled water, refill cells as required to cover cell plates.
4. With cell caps removed, connect battery charger to battery terminals. RED to positive (+) terminal and BLACK to negative (-) terminal.
5. Slow charge battery at 1 amp for 10 hours. An alternative fast charge should be no more than 2.5 amps for four hours.
6. If battery will not accept charge or is partially charged after 10 hours of charging at 1 amp, replace with new battery.

**WARNING**

The electrolyte (acid) produces a highly explosive gas. Keep all sparks, flame and fire away from area when charging battery or when handling electrolyte or battery. Electrolyte (acid) is a highly corrosive liquid. Wear eye protection. Wash affected areas immediately after having eye or skin contact with electrolyte (acid). Battery acid is corrosive. Rinse empty acid containers with water and mutilate before discarding. If acid is spilled on battery, bench, or clothing, etc., Flush with clear water and neutralize with baking soda.

## Section 5 - ADJUSTMENTS & REPAIR

### 5.8 MOWER SPINDLES (Field Serviceable Spindles) BEARING REPLACEMENT

In the event that a spindle bearing requires replacement, the SNAPPER Field Serviceable Spindles have been designed so that no special tools or presses are required.

1. Remove belt. Loosen blade nut and remove. Allow blade bolt, washer, blade and four spacers to drop down out of the spindle housing. See Figure 5.19.

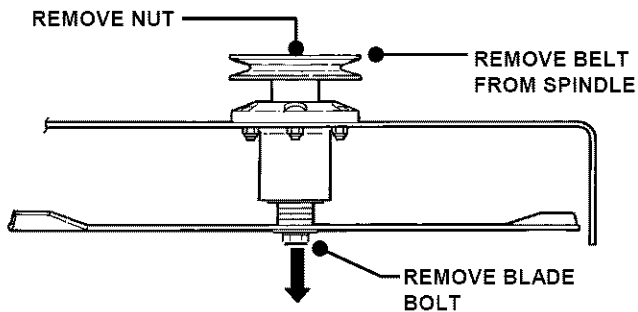


FIGURE 5.19

2. Remove spindle pulley from spindle shaft.
3. Locate circular retaining ring on spindle shaft at top bearing. Remove retaining ring. Allow spindle shaft to drop out of housing.
4. Top and bottom bearings are now removable. Pull out on inner race to slide bearing from housing. See Figure 5.20.
5. Thoroughly clean all parts removing all old contaminated grease.
6. Install new bottom bearing first.
7. NOTE: The bearing is sealed/shielded on one side only. The bottom bearing must be installed with the sealed/shielded side DOWN.
8. Insert spindle shaft up through the bottom bearing. Slide spacer down over spindle shaft.
9. Install new top bearing. Install the top bearing with the seal/shield UP.
10. Slide circular retaining ring down spindle shaft until it fully locks into groove on shaft.
11. Apply a generous amount of general-purpose grease to the concave side of the nylos seal. Install the nylos seal with concave greased side down.
12. Place spindle pulley and spacer on top of spindle shaft.
13. Reinstall blade bolt, washer, blade and four spacers. See Figure 5.15
14. Torque blade bolt and nut to 70 to 80 ft. lbs.
15. Pump grease into spindle housing until grease purges from vent on housing.
16. After the first 5 hours of operation, grease spindle housing to insure it is full, then every 25 hours.

**IMPORTANT:** Spindle housing must be filled with grease before operating mower. Failure to fill housing will cause premature bearing failure.

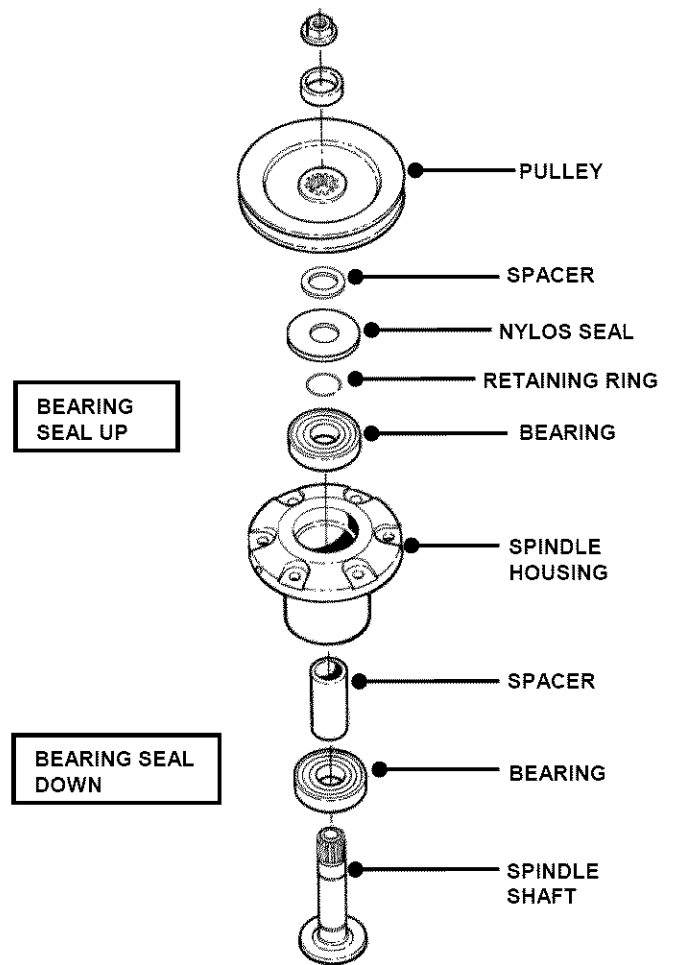


FIGURE 5.20

## Safety Instructions & Operator's Manual for

# **SNAPPER**<sup>®</sup>

**MID MOUNT Z-RIDER**

**ZERO TURNING**

**HYDRO DRIVE**

**SERIES 0**

### **IMPORTANT**

Snapper products are built using engines that meet or exceed all applicable emissions requirements on the date manufactured. The labels on those engines contain very important emissions information and critical safety warnings. Read, Understand, and Follow all warnings and instructions in this manual, the engine manual, and on the machine, engine and attachments. If you have any questions about your Snapper product, contact your local authorized Snapper dealer or contact Snapper Customer Service at Snapper, McDonough, GA. 30253. Phone: (1-800-935-2967).



#### **WARNING**

BATTERY POSTS, TERMINALS AND RELATED ACCESSORIES CONTAIN LEAD AND LEAD COMPOUNDS, CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. WASH HANDS AFTER HANDLING.



#### **WARNING**

ENGINE EXHAUST, SOME OF ITS CONSTITUENTS, AND CERTAIN VEHICLE COMPONENTS CONTAIN OR EMIT CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR OTHER REPRODUCTIVE HARM.

**SNAPPER**<sup>®</sup> McDonough, GA., 30253 U.S.A.