

# GTH220

**Owner's Manual**



# SAFETY RULES

## Safe Operation Practices for Ride-On Mowers



**IMPORTANT:** THIS CUTTING MACHINE IS CAPABLE OF AMPUTATING HANDS AND FEET AND THROWING OBJECTS. FAILURE TO OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

### I. GENERAL OPERATION

- Read, understand, and follow all instructions in the manual and on the machine before starting.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Turn off blades when not mowing.
- Stop engine before removing grass catcher or unclogging chute.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.

### II. SLOPE OPERATION

Slopes are a major factor related to loss-of-control and tipover accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

#### DO:

- Mow up and down slopes, not across.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the machine. *Tall grass can hide obstacles.*
- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
- Use extra care with grass catchers or other attachments. These can change the stability of the machine.
- Keep all movement on the slopes *slow* and *gradual*. Do not make sudden changes in speed or direction.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly *straight* down the slope.

#### DO NOT:

- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced traction could cause sliding.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not use grass catcher on steep slopes.

### III. CHILDREN

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

- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and *down* for small children.
- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

### IV. SERVICE

- Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
  - Use only an approved container.
  - Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
  - Never refuel the machine indoors.
  - Never store the machine or fuel container inside where there is an open flame, such as a water heater.
- Never run a machine inside a closed area.
- Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running.
- Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.



**Look for this symbol to point out important safety precautions. It means CAUTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.**



**CAUTION: Always disconnect spark plug wire and place wire where it cannot contact spark plug in order to prevent accidental starting when setting up, transporting, adjusting or making repairs.**



## WARNING

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

**CONGRATULATIONS** on your purchase of a new tractor. It has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your nearest authorized service center/department. We have competent, well-trained technicians and the proper tools to service or repair this tractor.

Please read and retain this manual. The instructions will enable you to assemble and maintain your tractor properly. Always observe the "SAFETY RULES".

MODEL NUMBER	GTH220
SERIAL NUMBER	_____
DATE OF PURCHASE	_____
THE MODEL AND SERIAL NUMBERS WILL BE FOUND ON A PLATE UNDER THE SEAT.	
YOU SHOULD RECORD BOTH SERIAL NUMBER AND DATE OF PURCHASE AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.	

### CUSTOMER RESPONSIBILITIES

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your tractor.
- Follow the instructions under "Customer Responsibilities" and "Storage" sections of this owner's manual.

### PRODUCT SPECIFICATIONS

HORSEPOWER:	22.0
GASOLINE CAPACITY AND TYPE:	3.5 GALLONS UNLEADED REGULAR
OIL TYPE (API-SF/SG):	SAE 10W30 (above 32°F) SAE 5W-30 (below 32°F)
OIL CAPACITY:	W/ FILTER: 4.2 PINTS W/O FILTER: 3.7 PINTS
SPARK PLUG: (GAP: .040")	CHAMPION RC12YC
VALVE CLEARANCE	NOT ADJUSTABLE
GROUND SPEED (MPH):	FORWARD: 0 – 5.6 REVERSE: 0 – 2.5
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	15 AMPS @ 3600 RPM
BLADE BOLT TORQUE:	30–35 FT. LBS.

**WARNING:** This tractor is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

A spark arrester for the muffler is available through your nearest authorized service center/department (See REPAIR PARTS section of this manual).

In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.

# TABLE OF CONTENTS

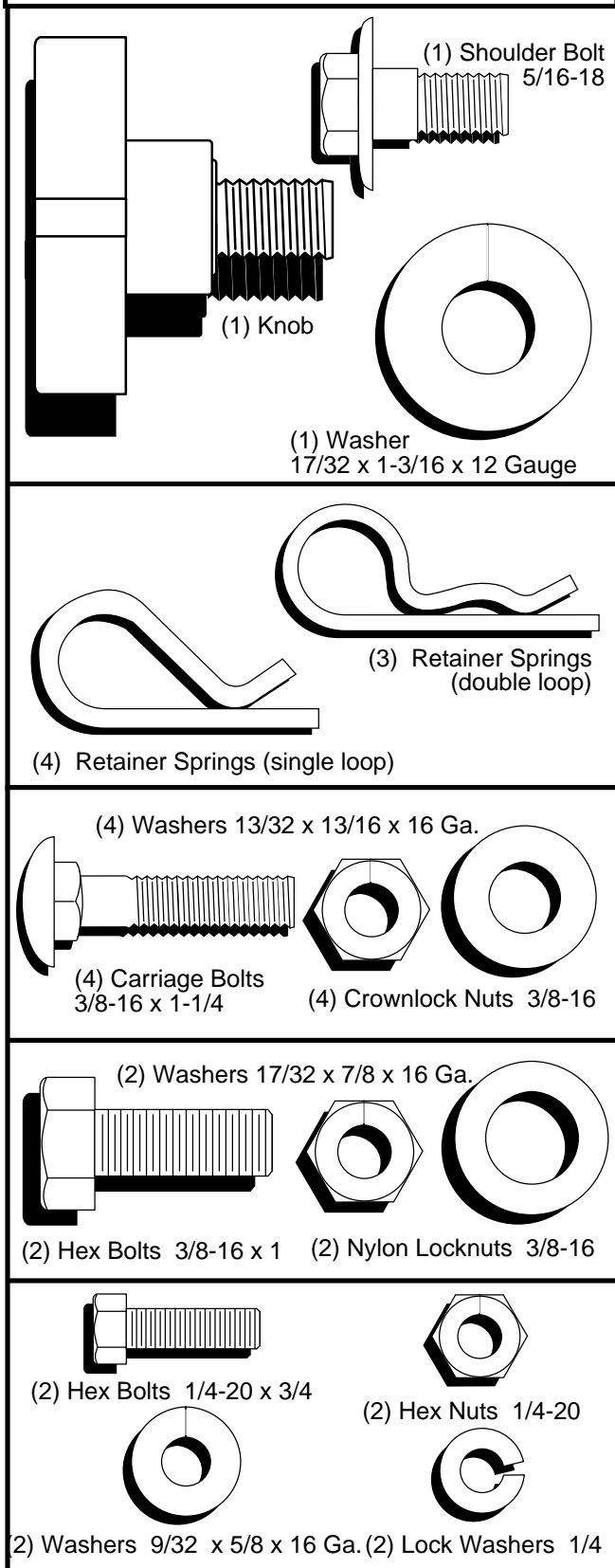
SAFETY RULES .....	2	MAINTENANCE SCHEDULE .....	16
PRODUCT SPECIFICATIONS .....	3	SERVICE AND ADJUSTMENTS .....	20-28
CUSTOMER RESPONSIBILITIES .....	3, 16-19	STORAGE .....	27
WARRANTY .....	55	TROUBLESHOOTING .....	30-31
ASSEMBLY .....	6-9	REPAIR PARTS .....	34-52
OPERATION .....	10-15		

## INDEX

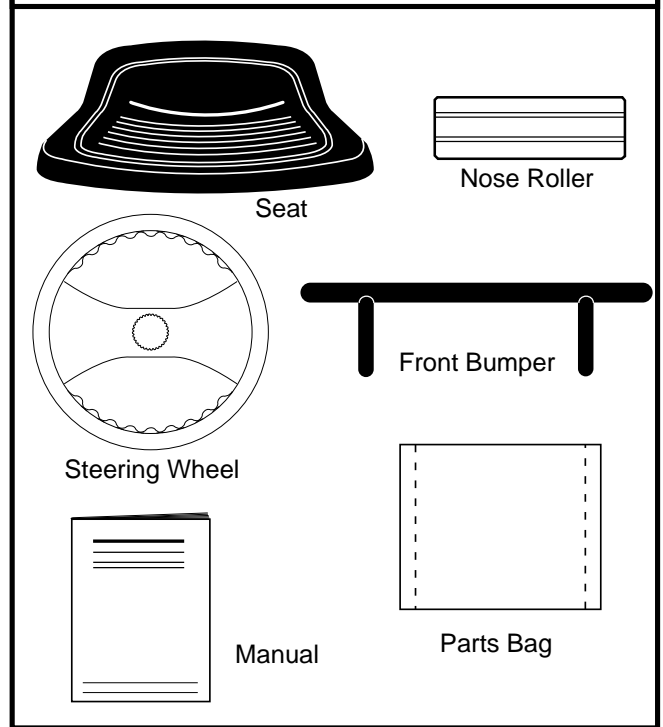
<b>A</b>	<b>E</b>	Operation .....	10-15
Adjustments:	Electrical:	Operating Mower .....	13
Brake .....	Interlocks and Relays .....	Options:	
Carburetor .....	Schematic .....	Spark Arrester .....	3,42
Clutch Pulley .....	Wiring Diagram .....	<b>P</b>	
Gauge Wheels .....	Engine:	Parking Brake .....	12
Mower	Air Filter .....	Parts Bag .....	5
Front-To-Back .....	Air Screen .....	Parts, Replacement/Repair .....	34-52
Side-To-Side .....	Cooling Fins .....	Product Specifications .....	3
Throttle Control Cable .....	Oil Change .....	<b>R</b>	
Air Filter, Engine .....	Oil Level .....	Repair Parts .....	34-52
Air Screen, Engine .....	Oil Type .....	<b>S</b>	
Assembly .....	Preparation .....	Safety Rules .....	2
	Starting .....	Seat .....	7
	Storage .....	Service and Adjustments .....	20-28
		Carburetor .....	28
<b>B</b>	<b>F</b>	Clutch Pulley .....	23
Battery:	Filter:	Fuse .....	26
Charging .....	Air Filter .....	Hood Removal/Installation .....	26
Cleaning .....	Fuel .....	Motion Drive Belt	
Levels .....	Oil .....	Removal/Replacement .....	24
Starting with Weak Battery .....	Fuel:	Mower Drive Belt	
Storage .....	Storage .....	Removal/Replacement .....	21
Terminals .....	Type .....	Mower Blade Drive Belt	
Belt:	Fuse .....	Removal/Replacement .....	22
Motion Drive	<b>H</b>	Mower Adjustment	
Removal/Replacement .....	Headlights .....	Front-to-Back .....	21
Mower Drive	Hood Removal/Installation .....	Side-to-Side .....	20
Removal/Replacement .....	<b>L</b>	Mower Removal/Installation .....	20
Mower Blade Drive	Leveling Mower Deck .....	Tire Care .....	7,17,25
Removal/Replacement .....	Lubrication:	Slope Guide Sheet .....	54
Blade:	Chart .....	Spark Plug(s) .....	19
Sharpening .....	Engine .....	Specifications .....	3
Replacement .....	<b>M</b>	Starting the Engine .....	15
Brake Adjustment .....	Maintenance Schedule .....	Steering Wheel .....	6,24
	Mower:	Stopping the Tractor .....	12
<b>C</b>	Adjustment, Front-to-Back .....	Storage .....	29
Carburetor Adjustment .....	Adjustment, Side-to-Side .....	<b>T</b>	
Clutch Pulley .....	Blade Replacement .....	Throttle Control Cable Adjustment .....	27
Controls, Tractor .....	Blade Sharpening .....	Tires .....	7,17,25
Customer Responsibilities .....	Cutting Height .....	Troubleshooting Chart .....	30-31
Engine:	Installation .....	Transaxle .....	18
Air Filter .....	Operation .....	<b>W</b>	
Air Screen .....	Removal .....	Warranty .....	55
Cooling Fins .....	Mowing Tips .....	Wiring Diagram .....	34
Engine Oil .....	Muffler .....	Wiring Schematic .....	33
Fuel Filter .....	Spark Arrester .....		
Spark Plug(s) .....	<b>O</b>		
Tractor:	Oil:		
Battery .....	Cold Weather Conditions .....		
Blade .....	Engine .....		
Lubrication Chart .....	Storage .....		
Maintenance Schedule .....			
Tire Care .....			
Transaxle .....			
Cutting Height, Mower .....			

# CONTENTS OF HARDWARE PACK

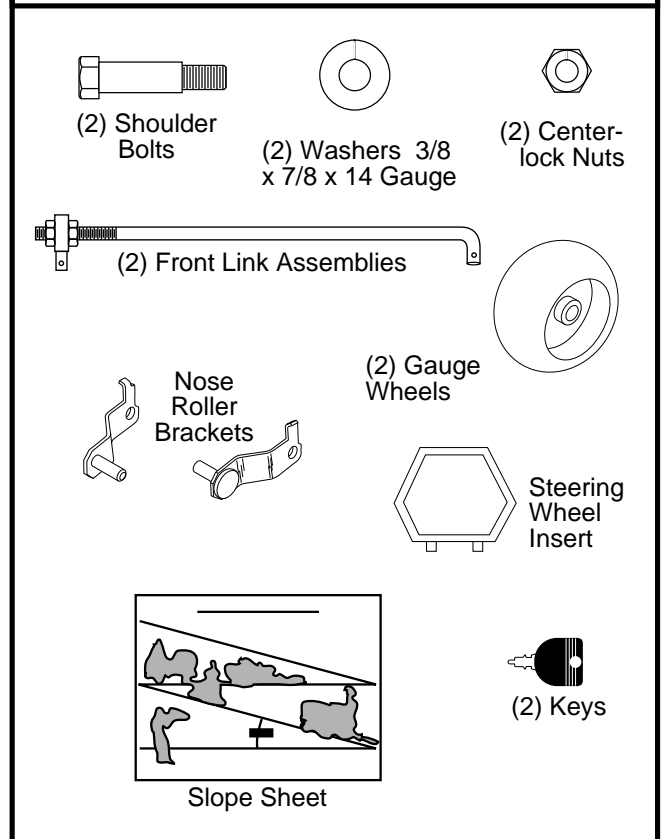
## Parts Bag contents shown full size



## Parts packed separately in carton



## Parts bag contents not shown full size



# ASSEMBLY

Your new tractor has been assembled at the factory with exception of those parts left unassembled for shipping purposes. To ensure safe and proper operation of your tractor all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to insure proper tightness.

## TOOLS REQUIRED FOR ASSEMBLY

A socket wrench set will make assembly easier. Standard wrench sizes are listed.

- (2) 7/16" wrenches
- (1) Tire pressure gauge
- (2) 9/16" wrenches
- (1) Utility knife
- (1) 1/2" wrench
- (1) 3/4" socket w/drive ratchet

When right or left hand is mentioned in this manual, it means when you are in the operating position (seated behind the steering wheel).

## TO REMOVE TRACTOR FROM CARTON

### UNPACK CARTON

- Remove all accessible loose parts and parts cartons from carton (See page 5).
- Cut, from top to bottom, along lines on all four corners of carton, and lay panels flat.
- Remove mower and packing materials.
- Check for any additional loose parts or cartons and remove.

## BEFORE ROLLING TRACTOR OFF SKID

### ATTACH STEERING WHEEL (See Fig. 1)

- Remove hex bolt, lock washer and large flat washer from steering shaft.
- Position front wheels of the tractor so they are pointing straight forward.
- Position steering wheel so cross bars are horizontal (left to right) and slide onto adapter.
- Secure steering wheel to steering shaft with hex bolt, lock washer and large flat washer previously removed. Tighten securely.
- Snap steering wheel insert into center of steering wheel.
- Remove protective plastic from tractor hood and grill.

**IMPORTANT:** CHECK FOR AND REMOVE ANY STAPLES IN SKID THAT MAY PUNCTURE TIRES WHERE TRACTOR IS TO ROLL OFF SKID.

### TO ROLL TRACTOR OFF SKID (See Fig. 7)

- Raise attachment lift lever to its highest position.
- Release parking brake by depressing clutch/brake pedal.
- Place freewheel control in freewheeling position to disengage transmission (See "TO TRANSPORT" in the Operation section of this manual).
- Roll tractor backwards off skid.

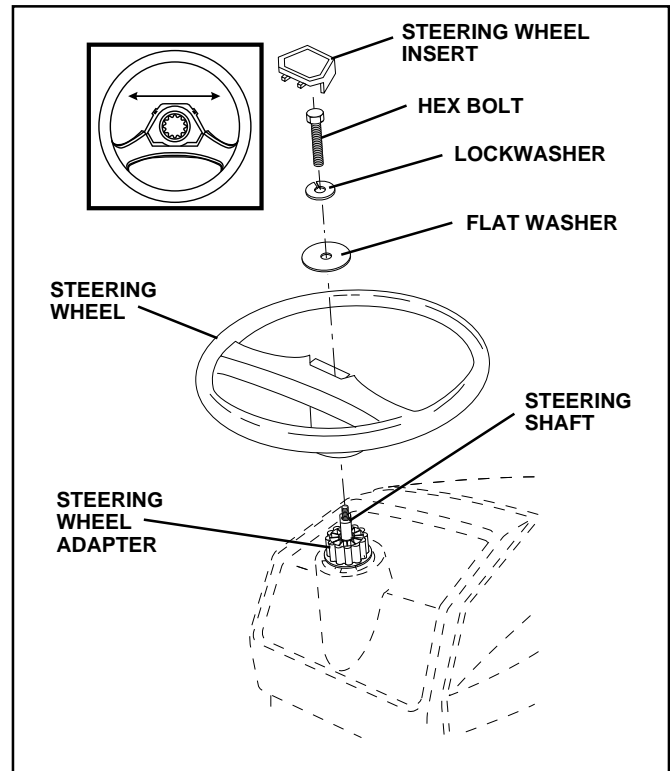


FIG. 1

### CONNECT BATTERY (See Fig. 2)



**CAUTION:** Do not short battery terminals. Before connecting battery, remove metal bracelets, wristwatch bands, rings, etc.

**Positive terminal must be connected first to prevent sparking from accidental grounding.**

- Lift hood to raised position.
- Open terminal access doors, remove terminal protective caps and discard.
- If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps.
- First connect RED battery cable to positive (+) battery terminal with hex bolt, flat washer, lock washer and hex nut as shown. Tighten securely.
- Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt, flat washer, lock washer and hex nut. Tighten securely.
- Close terminal access doors.

# ASSEMBLY

Use terminal access doors for:

- Inspection for secure connections (to tighten hardware).
- Inspection for corrosion.
- Testing battery.
- Jumping (if required).
- Periodic charging.

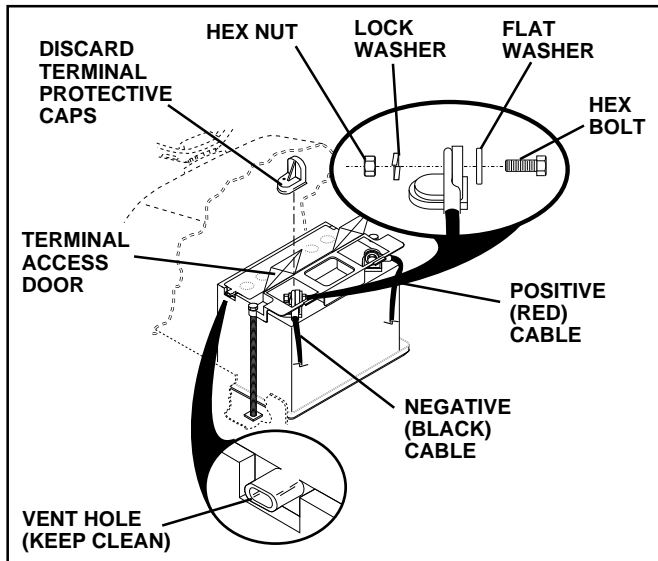


FIG. 2

## INSTALL SEAT (See Fig. 3)

Adjust seat before tightening adjustment knob.

- Remove cardboard packing on seat pan.
- Place seat on seat pan and assemble shoulder bolt.
- Assemble adjustment knob and flat washer loosely. Do not tighten.
- Tighten shoulder bolt securely.
- Lower seat into operating position and sit on seat.
- Slide seat until a comfortable position is reached which allows you to press clutch/brake pedal all the way down.
- Get off seat without moving its adjusted position.
- Raise seat and tighten adjustment knob securely.

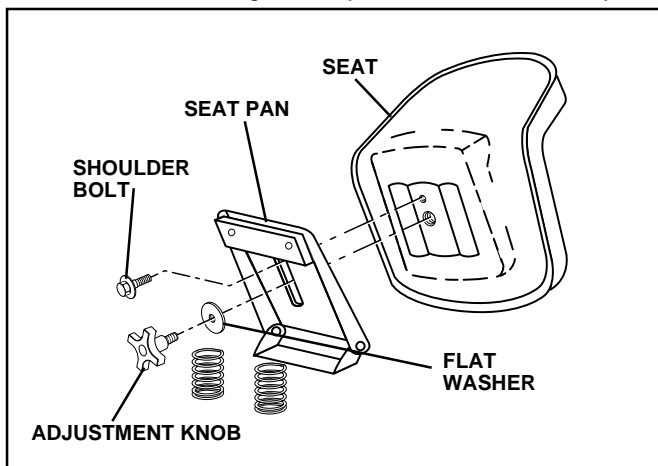


FIG. 3

## TO ATTACH NOSE ROLLER (See Fig. 4)

- Position brackets, washers and nose roller between deck mounting brackets as shown. Be sure to position brackets on correct side, as shown.
- Install hex bolts and locknuts as shown. Tighten hardware securely.

**NOTE:** Be sure tabs brackets are positioned in tab holes in deck brackets.

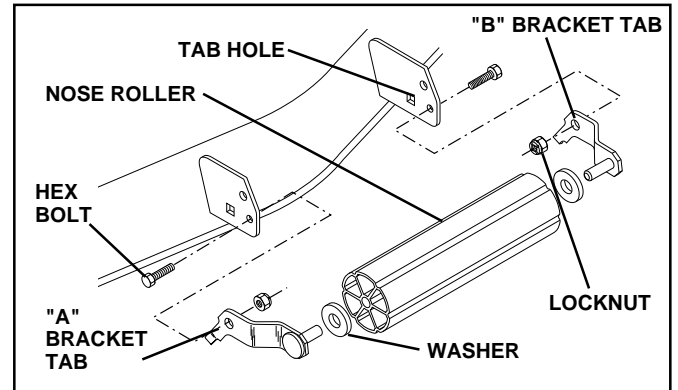


FIG. 4

## CHECK TIRE PRESSURE

The tires on your tractor were overinflated at the factory for shipping purposes. Correct tire pressure is important for best cutting performance.

- Reduce tire pressure to PSI shown in "PRODUCT SPECIFICATIONS" on page 3 of this manual.

## CHECK BRAKE SYSTEM

After you learn how to operate your tractor, check to see that the brake is properly adjusted. See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual.

# ASSEMBLY

## INSTALL MOWER AND DRIVE BELT (See Figs. 5 and 7)

Be sure tractor is on level surface and mower suspension arms are raised with attachment lift control. Engage parking brake.

- Cut and remove tie down securing anti-sway bar. Swing anti-sway bar to left side of mower deck.
- Slide mower under tractor with discharge guard to right side of tractor.

**IMPORTANT:** CHECK BELT FOR PROPER ROUTING IN ALL MOWER PULLEY GROOVES. INSTALL BELT INTO ELECTRIC CLUTCH PULLEY GROOVE.

- Install one front link in top hole of the L.H. front mower bracket and L.H. front suspension bracket. Retain with two single loop retainer springs as shown.
- Install second front link in R.H. front suspension bracket only and retain with single loop retainer spring as shown.
- Slide right side of mower deck back and install link in top hole of R.H. front mower bracket. Retain with single loop retainer spring as shown.
- Turn height adjustment knob counterclockwise until it stops.
- Lower mower linkage with attachment lift control.
- Place the suspension arms on inward pointing deck pins. Retain with double loop retainer springs.

- Connect anti-sway bar to chassis bracket under left footrest and retain with double loop retainer spring.
- Turn height adjustment knob clockwise to remove slack from mower suspension.
- Raise deck to highest position.
- Assemble gauge wheels as shown using long shoulder bolts, 3/8 washers, and 3/8-16 center locknuts. Tighten securely.
- Adjust gauge wheels before operating mower as shown in the Operation section of this manual.

## CHECK DECK LEVELNESS

For best cutting results, mower housing should be properly leveled. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.

## CHECK FOR PROPER POSITION OF ALL BELTS

See the figures that are shown for replacing motion, mower drive, and mower blade drive belts in the Service and Adjustments section of this manual. Verify that the belts are routed correctly.

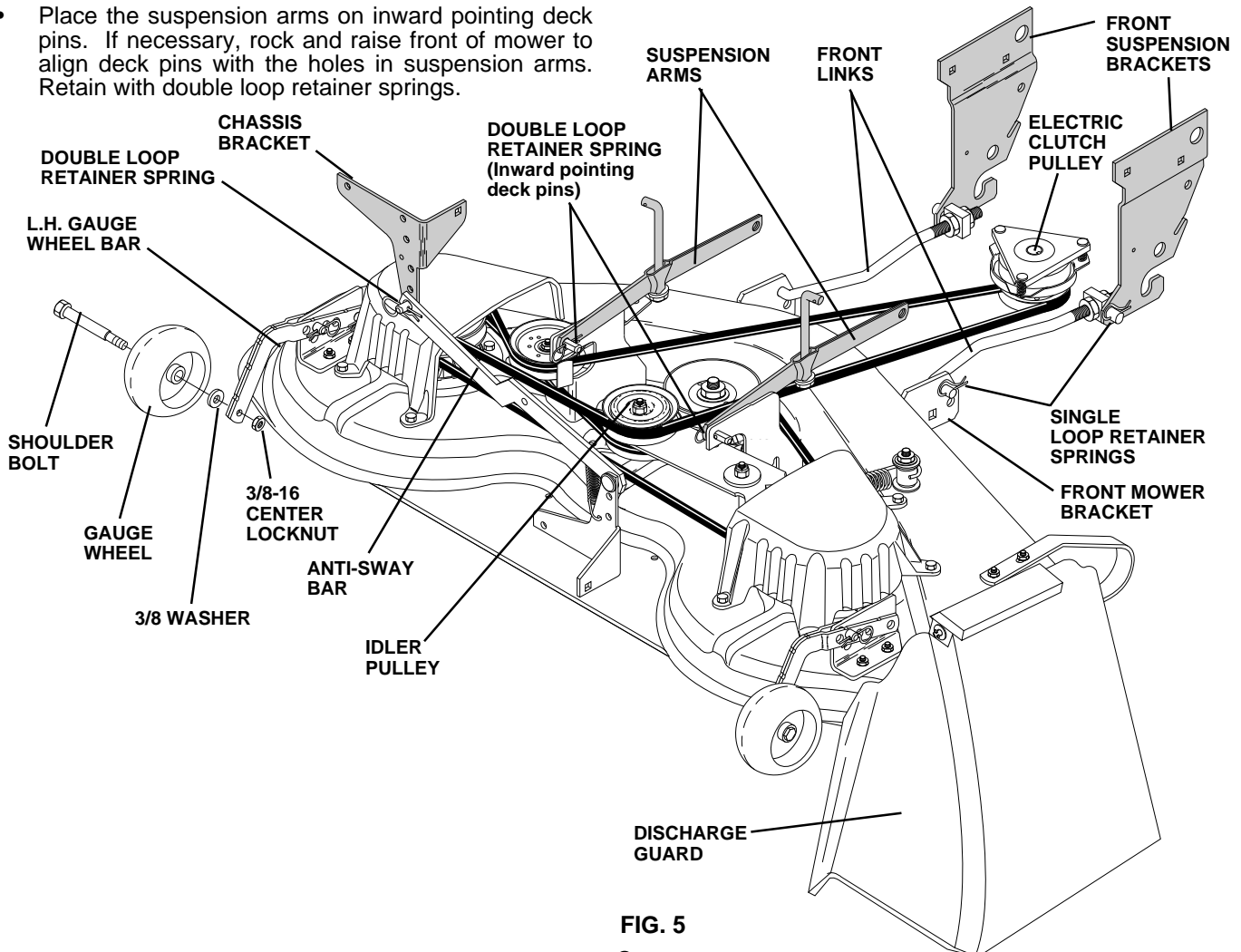


FIG. 5



# ASSEMBLY

## TO ATTACH FRONT BUMPER (See Fig. 6)

**NOTE:** For ease of assembly, you may wish to obtain the assistance of another person for mounting bumper to tractor.

- Press or tap the end caps into ends of bumper tube.
- Remove and discard the four (4) carriage bolts and locknuts securing the top of both front suspension brackets to chassis.
- On both sides of chassis, position extension bracket as shown and loosely assemble to rear chassis hole with supplied 3/8-16 x 1-1/4 carriage bolt and 3/8-16 crownlock nut from parts bag. Do not tighten the brackets. Allow them to hang from the chassis.
- Position bumper and extension brackets so brackets can be slid inside flattened ends of bumper.
- Slide bumper onto brackets and pivot upwards to align center hole in bumper with holes in extension brackets and tractor chassis.
- With all holes aligned, assemble carriage bolt, washer, and locknut to both sides of tractor chassis.
- Tighten all four (4) locknuts securely.

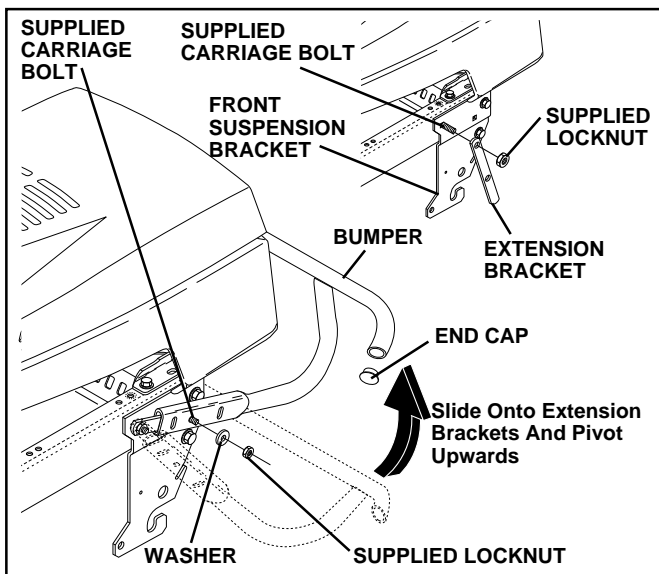


FIG. 6

## ✓ CHECKLIST

*BEFORE YOU OPERATE AND ENJOY YOUR NEW TRACTOR, WE WISH TO ASSURE THAT YOU RECEIVE THE BEST PERFORMANCE AND SATISFACTION FROM THIS QUALITY PRODUCT.*

*PLEASE REVIEW THE FOLLOWING CHECKLIST:*

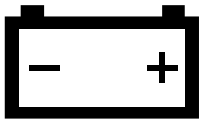
- ✓ All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- ✓ Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated at the factory).
- ✓ Be sure mower deck is properly leveled side-to-side/front-to-rear for best cutting results. (Tires must be properly inflated for leveling).
- ✓ Check mower and drive belts. Be sure they are routed properly around pulleys and inside all belt keepers.
- ✓ Check wiring. See that all connections are still secure and wires are properly clamped.
- ✓ Before driving tractor, be sure freewheel control is in drive position.

*WHILE LEARNING HOW TO USE YOUR TRACTOR, PAY EXTRA ATTENTION TO THE FOLLOWING IMPORTANT ITEMS:*

- ✓ Engine oil is at proper level.
- ✓ Fuel tank is filled with fresh, clean, regular unleaded gasoline.
- ✓ Become familiar with all controls - their location and function. Operate them before you start the engine.
- ✓ Be sure brake system is in safe operating condition.
- ✓ It is important to purge the transmission before operating your tractor for the first time. Follow proper starting and transmission purging instructions (See "TO START ENGINE" and "PURGE TRANSMISSION" in Operation section of this manual).

# OPERATION

These symbols may appear on your tractor or in literature supplied with the product. Learn and understand their meaning.



BATTERY



CAUTION OR WARNING



REVERSE



FORWARD



FAST



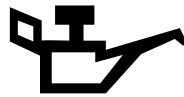
SLOW



ENGINE ON



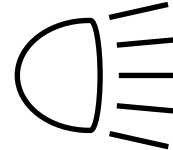
ENGINE OFF



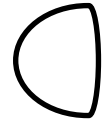
OIL PRESSURE



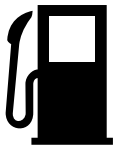
CLUTCH



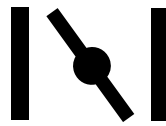
LIGHTS ON



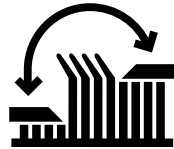
LIGHTS OFF



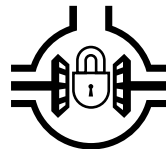
FUEL



CHOKE



MOWER HEIGHT



DIFFERENTIAL LOCK



PARKING BRAKE LOCKED



UNLOCKED



MOWER LIFT

**R**

REVERSE

**N**

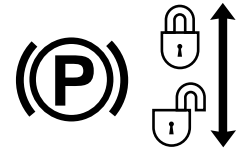
NEUTRAL

**H**

HIGH

**L**

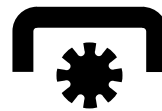
LOW



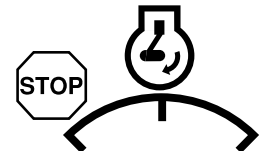
PARKING BRAKE



ATTACHMENT CLUTCH ENGAGED



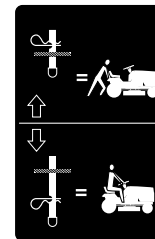
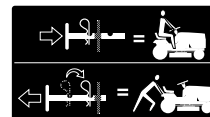
ATTACHMENT CLUTCH DISENGAGED



IGNITION



DANGER, KEEP HANDS AND FEET AWAY



HYDROSTATIC FREE WHEEL  
(Hydro Models only)

# OPERATION

## KNOW YOUR TRACTOR

**READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR TRACTOR.**

Compare the illustrations with your tractor to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

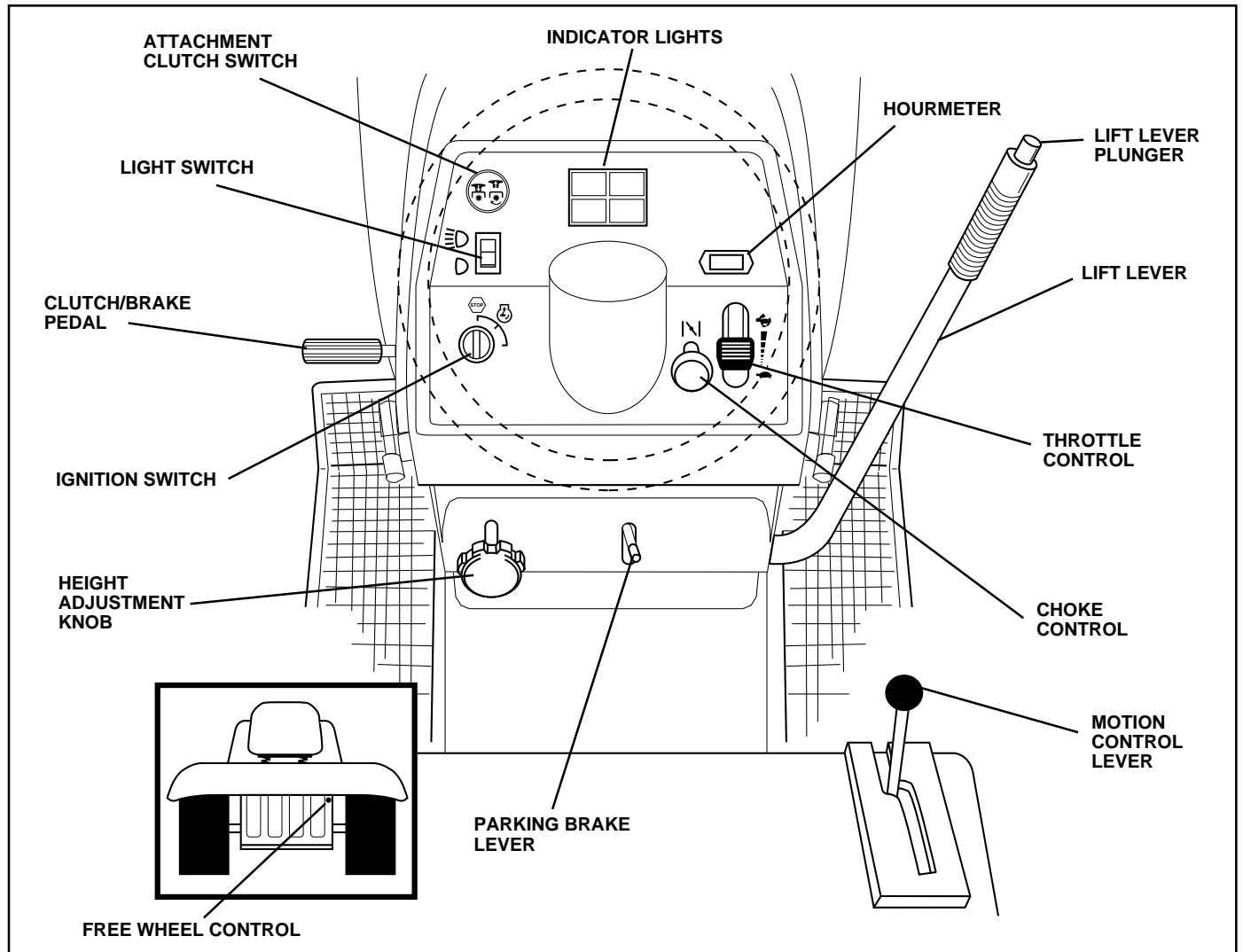


FIG. 7

Our tractors conform to the safety standards of the American National Standards Institute.

**ATTACHMENT CLUTCH SWITCH** - Used to engage mower blades or other attachments mounted to your tractor.

**LIFT LEVER** - Used to raise and lower mower deck or other attachments mounted to your tractor.

**LIFT LEVER PLUNGER** - Used to release attachment lift lever when changing its position.

**CLUTCH/BRAKE PEDAL** - Used for declutching and braking the tractor and starting the engine.

**MOTION CONTROL** - Selects the speed and direction of tractor.

**CHOKE CONTROL** - Used when starting a cold engine.

**LIGHT SWITCH** - Turns the headlights on and off.

**THROTTLE CONTROL** - Used to control engine speed.

**FREEWHEEL CONTROL** - Disengages transmission for pushing or slowly towing the tractor with the engine off.

**IGNITION SWITCH** - Used to start and stop the engine.

**HOURMETER** - Indicates hours of operation.

**PARKING BRAKE LEVER** - Locks clutch/brake pedal into the brake position.

**HEIGHT ADJUSTMENT KNOB** - Used to adjust the mower height.

**INDICATOR LIGHTS** - Indicates low fuel level, attachment engagement, low battery voltage, and low oil pressure.

# OPERATION



The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend a wide vision safety mask over the spectacles or standard safety glasses.

## HOW TO USE YOUR TRACTOR

### TO SET PARKING BRAKE (See Fig. 8)

Your tractor is equipped with an operator presence sensing switch. When engine is running, any attempt by the operator to leave the seat without first setting the parking brake will shut off the engine.

- Depress clutch/brake pedal into full “BRAKE” position and hold.
- Place parking brake lever in “ENGAGED” position and release pressure from clutch/brake pedal. Pedal should remain in “BRAKE” position. Make sure parking brake will hold tractor secure.

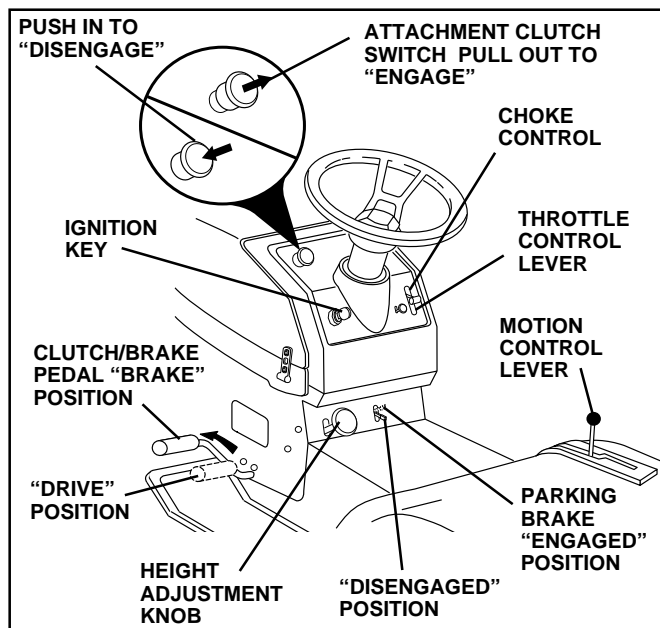


FIG. 8

### STOPPING (See Fig. 8)

#### MOWER BLADES -

- Move attachment clutch switch to “DISENGAGED” position.

#### GROUND DRIVE -

- Depress clutch/brake pedal into full “BRAKE” position.
- Move motion control lever to neutral (N) position.

**IMPORTANT:** THE MOTION CONTROL LEVER DOES NOT RETURN TO NEUTRAL (N) POSITION WHEN THE CLUTCH/BRAKE PEDAL IS DEPRESSED.

#### ENGINE -

- Move throttle control to slow (☛) position.

**NOTE:** Failure to move throttle control to slow (☛) position and allowing engine to idle before stopping may cause engine to “backfire”.

- Turn ignition key to “OFF” position and remove key. Always remove key when leaving tractor to prevent unauthorized use.
- Never use choke to stop engine.

**NOTE:** Under certain conditions when unit is standing idle with the engine running, hot engine exhaust gases may cause “browning” of grass. To eliminate this possibility, always stop engine when stopping tractor on grass areas.



**CAUTION:** Always stop tractor completely, as described above, before leaving the operator’s position; to empty grass catcher, etc.

### TO USE CHOKE CONTROL (See Fig. 8)

Use choke control whenever you are starting a cold engine. Do not use to start a warm engine.

- To engage choke control, pull knob out. Slowly push knob in to disengage.

### TO USE THROTTLE CONTROL (See Fig. 8)

Always operate engine at full throttle.

- Operating engine at less than full throttle reduces the battery charging rate.
- Full throttle offers the best mower performance.

### TO MOVE FORWARD AND BACKWARD (See Fig. 8)

The direction and speed of movement is controlled by the motion control lever.

- Start tractor with motion control lever in neutral (N) position.
- Release parking brake and clutch/brake pedal.
- Slowly move motion control lever to desired position.

### TO ADJUST MOWER CUTTING HEIGHT (See Fig. 8)

The cutting height is controlled by turning the height adjustment knob in desired direction.

- Turn knob clockwise (↻) to raise cutting height.
- Turn knob counterclockwise (↺) to lower cutting height.

The cutting height range is approximately 1-1/4" to 4-1/4". The heights are measured from the ground to the blade tip with the engine not running. These heights are approximate and may vary depending upon soil conditions, height of grass and types of grass being mowed.

- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first cut relatively high; the second to desired height.

# OPERATION

## TO ADJUST GAUGE WHEELS (See Fig. X)

Adjust gauge wheels with tractor on a flat level surface.

- Adjust mower to desired cutting height.
- Lower mower with lift control. Remove rear retainer spring and clevis pin which secure each gauge wheel.
- Lower gauge wheels to ground. Raise gauge wheels slightly to align holes in bracket and gauge wheel bar and insert clevis pins. Gauge wheels should be slightly off the ground.
- Replace retainer springs into clevis pins.

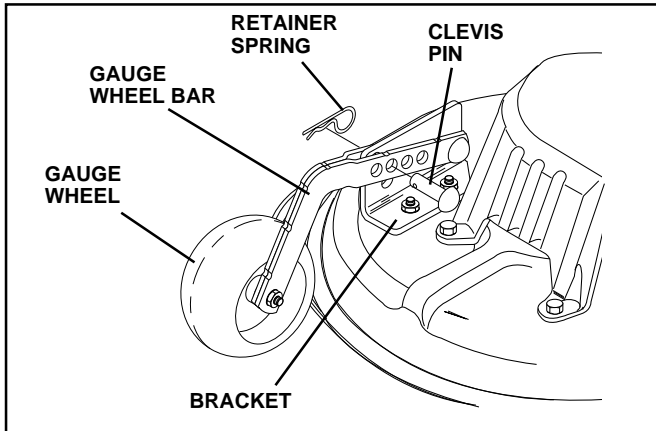


FIG. 9

## TO OPERATE MOWER (See Figs. 7 and 8)

Your tractor is equipped with an operator presence sensing switch. Any attempt by the operator to leave the seat with the engine running and the attachment clutch engaged will shut off the engine.

- Select desired height of cut.
- Lower mower with attachment lift control.
- Start mower blades by engaging attachment clutch control.
- TO STOP MOWER BLADES - disengage attachment clutch control.

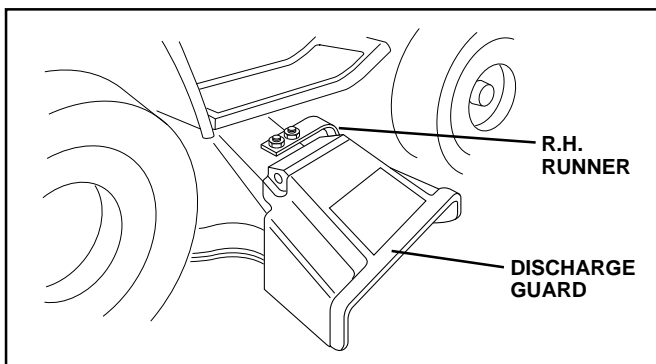
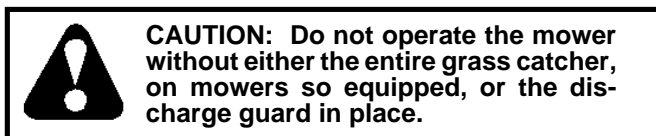


FIG. 10

## TO OPERATE ON HILLS



**CAUTION:** Do not drive up or down hills with slopes greater than 15° and do not drive across any slope.

- Choose the slowest speed before starting up or down hills.
  - Avoid stopping or changing speed on hills.
  - If slowing is necessary, move throttle control lever to slower position.
  - If stopping is absolutely necessary, push clutch/brake pedal quickly to brake position and engage parking brake.
  - Move motion control lever to neutral (N) position.
- IMPORTANT:** THE MOTION CONTROL LEVER DOES NOT RETURN TO NEUTRAL (N) POSITION WHEN THE CLUTCH/BRAKE PEDAL IS DEPRESSED.
- To restart movement, slowly release parking brake and clutch/brake pedal.
  - Slowly move motion control lever to slowest setting.
  - Make all turns slowly.

## TO TRANSPORT (See Figs. 7 and 11)

When pushing or towing your tractor, be sure to disengage transmission by placing freewheel control in freewheeling position. Free wheel control is located at the rear drawbar of tractor.

- Raise attachment lift to highest position with attachment lift control.
- Remove retainer spring from freewheel control rod.
- Push control rod in to disengage transmission and reinsert retainer spring into control rod hole now on back side of the bracket.
- Do not push or tow tractor at more than two (2) MPH.
- To reengage transmission, reverse above procedure.

**NOTE:** To protect hood from damage when transporting your tractor on a truck or a trailer, be sure hood is closed and secured to tractor. Use an appropriate means of tying hood to tractor (rope, cord, etc.).

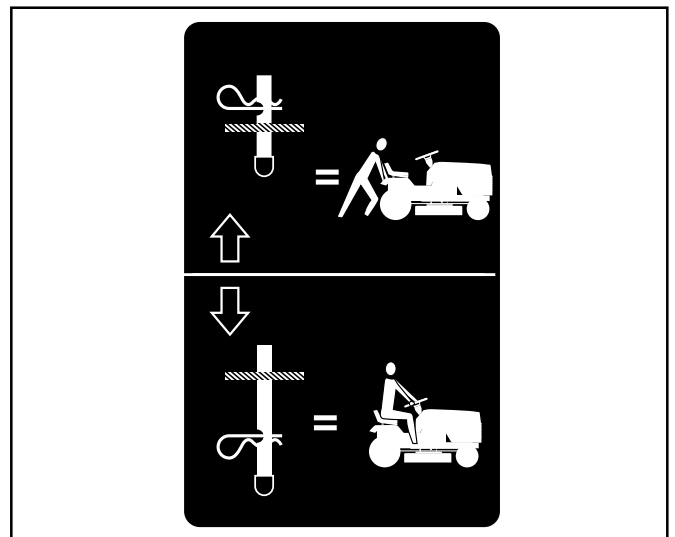


FIG. 11

# OPERATION

## BEFORE STARTING THE ENGINE

### CHECK ENGINE OIL LEVEL (See Fig. 12)

- The engine in your tractor has been shipped, from the factory, already filled with summer weight oil.
- Check engine oil with tractor on level ground.
- Unthread and remove oil fill cap/dipstick; wipe oil off. Reinsert the dipstick into the tube and rest oil fill cap on the tube. Do not thread the cap onto the tube. Remove and read oil level. If necessary, add oil until "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting (See "OIL VISCOSITY CHART" in the Customer Responsibilities section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.

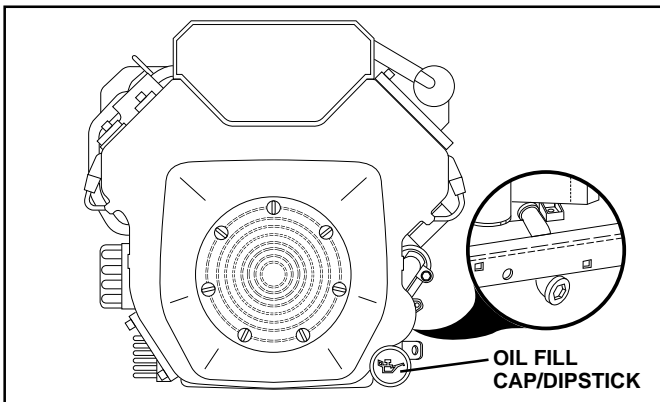


FIG. 12

### ADD GASOLINE

- Fill fuel tank. Use fresh, clean, regular unleaded gasoline. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life).

**IMPORTANT:** WHEN OPERATING IN TEMPERATURES BELOW 32°F(0°C), USE FRESH, CLEAN WINTER GRADE GASOLINE TO HELP INSURE GOOD COLD WEATHER STARTING.

**WARNING:** Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.



**CAUTION:** Fill to bottom of gas tank filler neck. Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

## INDICATOR LIGHTS

Located on the dash of your tractor, these lights alert you to necessary steps required to start your tractor or, while tractor is running, alerts you to a serious problem which requires immediate attention.



- Indicates you must depress clutch/brake pedal fully to start tractor.



- Indicates you must disengage attachment clutch control to start tractor.



- Indicates low oil pressure in your engine. Light should come on when engine is not running and key switch is in "ON" position. This is a test to be sure light is working and a reminder to always check oil level before starting engine.

## TO START ENGINE (See Fig. 8)

When starting engine for the first time or if engine has run out of fuel, it will take extra cranking time to move fuel from the tank to the engine.

- Depress clutch/brake pedal and set parking brake.
- Place motion control lever in neutral (N) position.
- Move attachment clutch to "DISENGAGED" position.
- Pull choke control out to choke (| \ |) position for cold engine start. For warm engine start do not use choke control.
- Move throttle control to midway between fast (↻) and slow (↻) positions.
- Insert key into ignition and turn key clockwise to "START" position and release key as soon as engine starts. Do not run starter continuously for more than fifteen seconds per minute. If engine does not start after several attempts, move throttle control to fast (↻) position, wait a few minutes and try again.
- When engine starts, slowly push choke control in.
- Move throttle control to fast (↻) position.
- Allow engine to warm up for a few minutes before engaging drive or attachments.

**IMPORTANT:** COLD STARTING FOR HYDRO (BELOW 40°F) - AFTER STARTING ENGINE AND BEFORE DRIVING, LET TRANSMISSION WARM UP FOR ONE (1) MINUTE BY PLACING MOTION CONTROL LEVER IN NEUTRAL (N) POSITION AND RELEASING CLUTCH/ BRAKE PEDAL.

**NOTE:** If at a high altitude (above 3000 feet) or in cold temperatures (below 32°F), the carburetor fuel mixture may need to be adjusted for best engine performance. See "TO ADJUST CARBURETOR" in the Service and Adjustments section of this manual.

# OPERATION

## PURGE TRANSMISSION



**CAUTION:** Never engage or disengage freewheel lever while the engine is running.

To ensure proper operation and performance, it is recommended that the transmission be purged before operating tractor for the first time. This procedure will remove any trapped air inside the transmission which may have developed during shipping of your tractor.

**IMPORTANT:** SHOULD YOUR TRANSMISSION REQUIRE REMOVAL FOR SERVICE OR REPLACEMENT, IT SHOULD BE PURGED AFTER REINSTALLATION BEFORE OPERATING THE TRACTOR.

- Place tractor safely on level surface with engine off and parking brake set.
- Disengage transmission by placing freewheel control in freewheeling position (See "TO TRANSPORT" in this section of this manual).
- Sitting in the tractor seat, start engine. After the engine is running, move throttle control to slow (🐢) position. With motion control lever in neutral (N) position, slowly disengage clutch/brake pedal.
- Move motion control lever to full forward position and hold for five (5) seconds. Move lever to full reverse position and hold for five (5) seconds. Repeat this procedure three (3) times.

**NOTE:** During this procedure there will be no movement of drive wheels. The air is being removed from hydraulic drive system.

- Move motion control lever to neutral (N) position. Shut off engine and set parking brake.
- Engage transmission by placing freewheel control in driving position (See "TO TRANSPORT" in this section of this manual).
- Sitting in the tractor seat, start engine. After the engine is running, move throttle control to half (1/2) speed. With motion control lever in neutral (N) position, slowly disengage clutch/brake pedal.
- Slowly move motion control lever forward. After the tractor moves approximately five (5) feet, slowly move motion control lever to reverse position. After the tractor moves approximately five (5) feet, return the motion control lever to the neutral (N) position. Repeat this procedure with the motion control lever three (3) times.
- Your tractor is now purged and ready for normal operation.

## MOWING TIPS

- Tire chains cannot be used when the mower housing is attached to tractor.
- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- Use the runner on the right hand side of mower as a guide. The blade cuts approximately an inch outside the runner (See Fig. 10).
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has been cut. Have the cut area to the right of the tractor. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished (See Fig. 13).
- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings. Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.

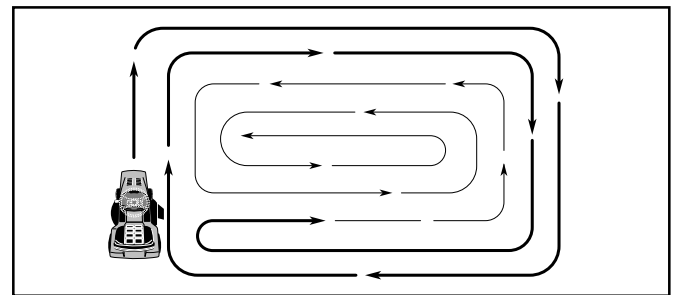


FIG. 13

# CUSTOMER RESPONSIBILITIES

MAINTENANCE SCHEDULE FILL IN DATES AS YOU COMPLETE REGULAR SERVICE		SERVICE INTERVALS							SERVICE DATES									
		BEFORE EACH USE	FIRST 2 HOURS	EVERY 8 HOURS	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	BEFORE SEASON					BEFORE STORAGE					
TRACTOR	Check Brake Operation	✓		✓														
	Check Tire Pressure	✓		✓														
	Check for Loose Fasteners	✓						✓ <sub>7</sub>		✓								
	Sharpen/Replace Mower Blades					✓ <sub>4</sub>												
	Lubrication Chart					✓				✓								
	Check Battery Level/Recharge					✓ <sub>6</sub>												
	Clean Battery and Terminals					✓				✓								
	Check Transaxle Cooling					✓												
	Adjust Blade Belt(s) Tension								✓ <sub>5</sub>									
	Adjust Motion Drive Belt(s) Tension								✓ <sub>5</sub>									
ENGINE	Check Engine Oil Level	✓		✓														
	Change Engine Oil		✓		✓ <sub>1,2,3</sub>					✓								
	Clean Air Filter				✓ <sub>2</sub>													
	Clean Air Screen				✓ <sub>2</sub>													
	Inspect Muffler/Spark Arrester					✓												
	Replace Oil Filter (If equipped)								✓ <sub>1,2</sub>									
	Clean Engine Cooling Fins								✓ <sub>2</sub>									
	Replace Spark Plug								✓	✓								
	Replace Air Filter Paper Cartridge								✓ <sub>2</sub>									
	Replace Fuel Filter									✓								

- 1 - Change more often when operating under a heavy load or in high ambient temperatures.
- 2 - Service more often when operating in dirty or dusty conditions.
- 3 - If equipped with oil filter, change oil every 50 hours.
- 4 - Replace blades more often when mowing in sandy soil.

- 5 - If equipped with adjustable system.
- 6 - Not required if equipped with maintenance-free battery.
- 7 - Tighten front axle pivot bolt to 35 ft.-lbs. maximum. Do not overtighten.

## GENERAL RECOMMENDATIONS

The warranty on this tractor does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain tractor as instructed in this manual.

Some adjustments will need to be made periodically to properly maintain your tractor.

All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

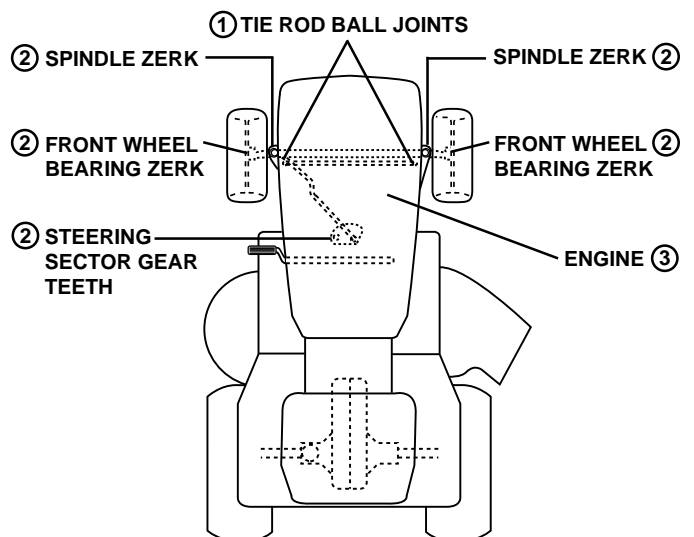
- Once a year you should replace the spark plug, clean or replace air filter, and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

### BEFORE EACH USE

- Check engine oil level.
- Check brake operation.
- Check tire pressure.
- Check for loose fasteners.

**IMPORTANT:** DO NOT OIL OR GREASE THE PIVOT POINTS WHICH HAVE SPECIAL NYLON BEARINGS. VISCOUS LUBRICANTS WILL ATTRACT DUST AND DIRT THAT WILL SHORTEN THE LIFE OF THE SELF-LUBRICATING BEARINGS. IF YOU FEEL THEY MUST BE LUBRICATED, USE ONLY A DRY, POWDERED GRAPHITE TYPE LUBRICANT SPARINGLY.

## LUBRICATION CHART



- ① SPRAY SILICONE LUBRICANT (MOVE BOOTS TO LUBRICATE)
- ② GENERAL PURPOSE GREASE
- ③ REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION



# CUSTOMER RESPONSIBILITIES

## TRACTOR

Always observe safety rules when performing any maintenance.

## BRAKE OPERATION

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

## TIRES

- Maintain proper air pressure in all tires (See "PRODUCT SPECIFICATIONS" on page 3 of this manual).
- Keep tires free of gasoline, oil, or insect control chemicals which can harm rubber.
- Avoid stumps, stones, deep ruts, sharp objects and other hazards that may cause tire damage.

## BLADE CARE

For best results mower blades must be kept sharp. Replace bent or damaged blades.

## BLADE REMOVAL (See Fig. 14)

- Raise mower to highest position to allow access to blades.
- Remove hex bolt, lock washer and flat washer securing blade.
- Install new or resharpened blade with trailing edge up towards deck as shown.
- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten bolt securely (30-35 Ft. Lbs. torque).

**IMPORTANT:** BLADE BOLT IS GRADE 8 HEAT TREATED.

**NOTE:** We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

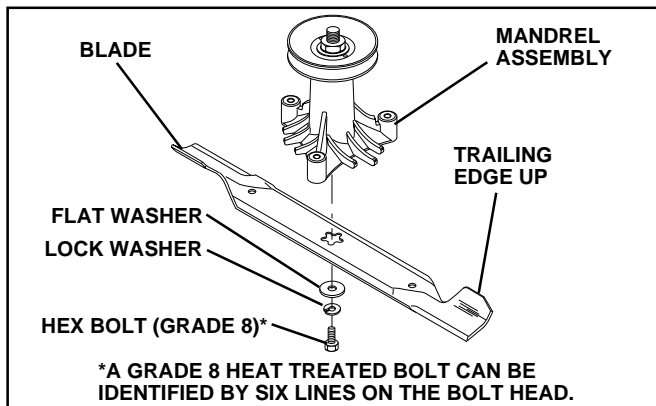


FIG. 14

## TO SHARPEN BLADE (See Fig. 15)

Care should be taken to keep the blade balanced. An unbalanced blade will cause excessive vibration and eventual damage to mower and engine.

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
- To check blade balance, you will need a 5/8" diameter steel bolt, pin, or a cone balancer. (When using a cone balancer, follow the instructions supplied with balancer).
- Slide blade on to an unthreaded portion of the steel bolt or pin and hold the bolt or pin parallel with the ground. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

**NOTE:** Do not use a nail for balancing blade. The lobes of the center hole may appear to be centered, but are not.

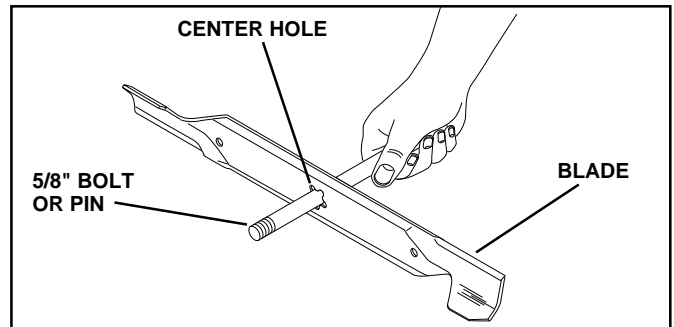


FIG. 15

## BATTERY

Your tractor has a battery charging system which is sufficient for normal use. However, periodic charging of the battery with an automotive charger will extend its life.

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open (See "CONNECT BATTERY" in the Assembly section of this manual).
- Recharge at 6-10 amperes for 1 hour.

## TO CLEAN BATTERY AND TERMINALS

Corrosion and dirt on the battery and terminals can cause the battery to "leak" power.

- Remove terminal guard.
- Disconnect BLACK battery cable first then RED battery cable and remove battery from tractor.
- Wash battery with solution of four tablespoons of baking soda to one gallon of water. Be careful not to get the soda solution into the cells.
- Rinse the battery with plain water and dry.
- Clean terminals and battery cable ends with wire brush until bright.
- Coat terminals with grease or petroleum jelly.
- Reinstall battery (See "CONNECT BATTERY" in the Assembly section of this manual).

# CUSTOMER RESPONSIBILITIES

## TRANSAXLE COOLING

The fan and cooling fins of transmission should be kept clean to assure proper cooling.

Do not attempt to clean fan or transmission while engine is running or while the transmission is hot.

- Inspect cooling fan to be sure fan blades are intact and clean.
- Inspect cooling fins for dirt, grass clippings and other materials. To prevent damage to seals, do not use compressed air or high pressure sprayer to clean cooling fins.

## TRANSAXLE PUMP FLUID

The transaxle was sealed at the factory and fluid maintenance is not required for the life of the transaxle. Should the transaxle ever leak or require servicing, contact your nearest authorized service center/department.

## V-BELTS

Check V-belts for deterioration and wear after 100 hours of operation and replace if necessary. The belts are not adjustable. Replace belts if they begin to slip from wear.

## ENGINE

### LUBRICATION

Only use high quality detergent oil rated with API service classification SF or SG. Select the oil's SAE viscosity grade according to your expected operating temperature.

**NOTE:** Although multi-viscosity oils (5W30, 10W30, etc.) improves starting in cold weather, these multi-viscosity oils will result in increased oil consumption when used above 32°C. Check your engine oil level more frequently to avoid possible engine damage from running low on oil.

Change the oil after the first two hours of operation and every 50 hours thereafter or at least once a year if the tractor is not used for 50 hours in one year.

Check the crankcase oil level before starting the engine and after each eight (8) hours of continuous use.

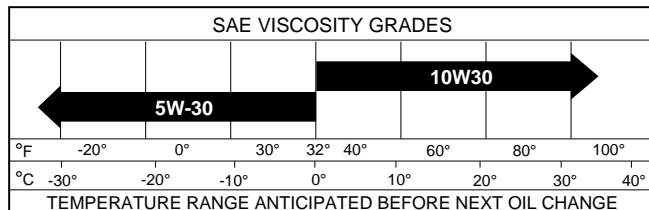


FIG. 16

## TO CHANGE ENGINE OIL (See Figs. 16 and 17)

Determine temperature range expected before oil change. All oil must meet API service classification SF or SG.

- Be sure tractor is on level surface.
- Oil will drain more freely when warm.
- Catch oil in a suitable container.
- Remove oil fill cap/dipstick. Be careful not to allow dirt to enter the engine when changing oil.
- Remove drain plug.
- After oil has drained completely, replace oil drain plug and tighten securely.
- Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PRODUCT SPECIFICATIONS" on page 3 of this manual.
- Use gauge on oil fill cap/dipstick for checking level. Insert dipstick into the tube and rest the oil fill cap on the tube. Do not thread the cap onto the tube when taking reading. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.

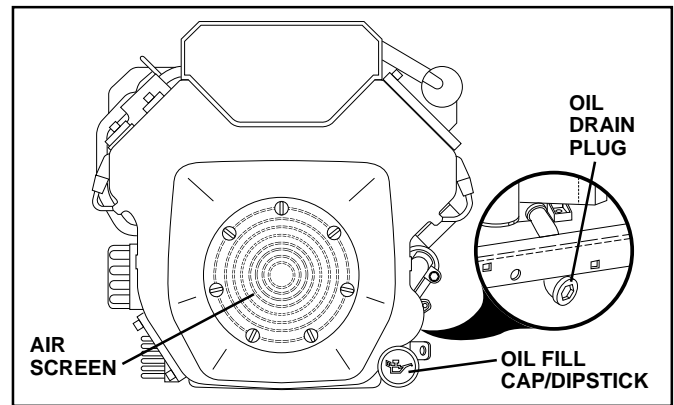


FIG. 17

## CLEAN AIR SCREEN (See Fig. 17)

Air screen must be kept free of dirt and chaff to prevent engine damage from overheating. Clean with a wire brush or compressed air to remove dirt and stubborn dried gum fibers.

# CUSTOMER RESPONSIBILITIES

## CLEAN AIR INTAKE/COOLING AREAS

To insure proper cooling, make sure the grass screen, cooling fins, and other external surfaces of the engine are kept clean at all times.

Every 100 hours of operation (more often under extremely dusty, dirty conditions), remove the blower housing and other cooling shrouds. Clean the cooling fins and external surfaces as necessary. Make sure the cooling shrouds are reinstalled.

**NOTE:** Operating the engine with a blocked grass screen, dirty or plugged cooling fins, and/or cooling shrouds removed will cause engine damage due to overheating.

## AIR FILTER (See Fig. 18)

Your engine will not run properly using a dirty air filter. Clean the foam pre-cleaner after every 25 hours of operation or every season. Service paper cartridge every 100 hours of operation or every season, whichever occurs first.

Service air cleaner more often under dusty conditions.

- Loosen knob and remove cover.

### TO SERVICE PRE-CLEANER

- Slide foam pre-cleaner off cartridge.
- Wash it in liquid detergent and water.
- Squeeze it dry in a clean cloth.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.

### TO SERVICE CARTRIDGE

- Remove nut and cartridge plate.
- Gently tap the flat side of the paper cartridge to dislodge dirt. Do not wash the paper cartridge or use pressurized air, as this will damage the cartridge. Replace a dirty, bent, or damaged cartridge.
- Reinstall the pre-cleaner (cleaned and oiled) over the paper cartridge.
- Check rubber seal for damage and proper position around stud. Replace if necessary.
- Reassemble air cleaner, cartridge plate, and nut.
- Reinstall air cleaner cover and secure by tightening knob.

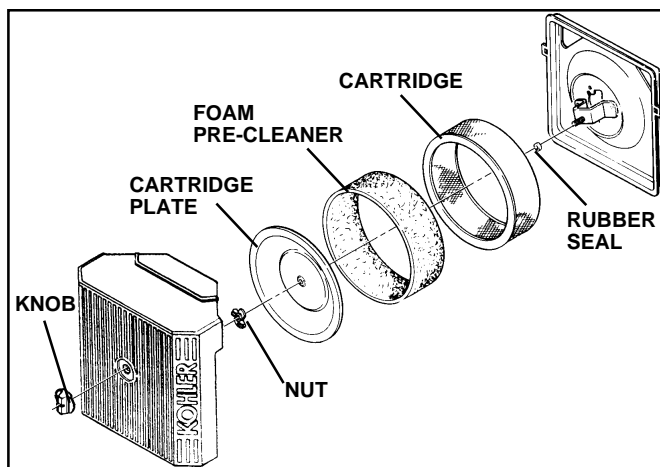


FIG. 18

## ENGINE OIL FILTER

Replace the engine oil filter every season or every other oil change if the tractor is used more than 100 hours in one year.

## MUFFLER

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

## SPARK PLUGS

Replace spark plugs at the beginning of each mowing season or after every 100 hours of operation, whichever occurs first. Spark plug type and gap setting are shown in "PRODUCT SPECIFICATIONS" on page 3 of this manual.

## IN-LINE FUEL FILTER (See Fig. 19)

The fuel filter should be replaced once each season. If fuel filter becomes clogged, obstructing fuel flow to carburetor, replacement is required.

- With engine cool, remove filter and plug fuel line sections.
- Place new fuel filter in position in fuel line with arrow pointing towards carburetor.
- Be sure there are no fuel line leaks and clamps are properly positioned.
- Immediately wipe up any spilled gasoline.

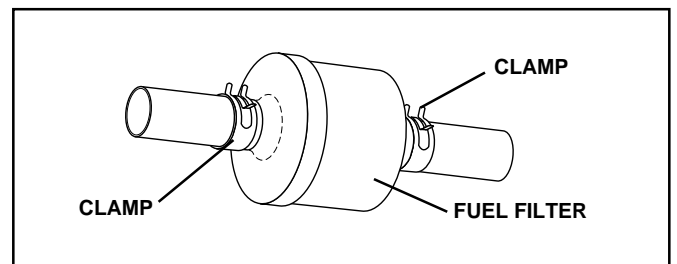


FIG. 19

## CLEANING

- Clean engine, battery, seat, finish, etc. of all foreign matter.
- Keep finished surfaces and wheels free of all gasoline, oil, etc.
- Protect painted surfaces with automotive type wax.

We do not recommend using a garden hose to clean your tractor unless the electrical system, muffler, air filter and carburetor are covered to keep water out. Water in engine can result in a shortened engine life.

# SERVICE AND ADJUSTMENTS

## CAUTION: BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:



- Depress clutch/brake pedal fully and set parking brake.
- Place motion control lever in neutral (N) position.
- Place attachment clutch in "DISENGAGED" position.
- Turn ignition key "OFF" and remove key.
- Make sure the blades and all moving parts have completely stopped.
- Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.

## TO REMOVE MOWER (See Fig. 20)

- Place attachment clutch in "DISENGAGED" position.
- Turn height adjustment knob to lowest setting.
- Lower mower to its lowest position.
- Remove retainer spring holding anti-swaybar to chassis bracket and disengage anti-swaybar from bracket.
- Remove retainer springs from suspension arms at deck and disengage arms from deck.
- Raise attachment lift to its highest position.
- Remove two retainer springs from each front link and remove links.
- Slide mower forward and remove belt from electric clutch pulley.
- Slide mower out from under right side of tractor.

**IMPORTANT:** IF AN ATTACHMENT OTHER THAN THE MOWER DECK IS TO BE MOUNTED ON THE TRACTOR, REMOVE THE FRONT LINKS.

## TO INSTALL MOWER

Follow procedure described in "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual.

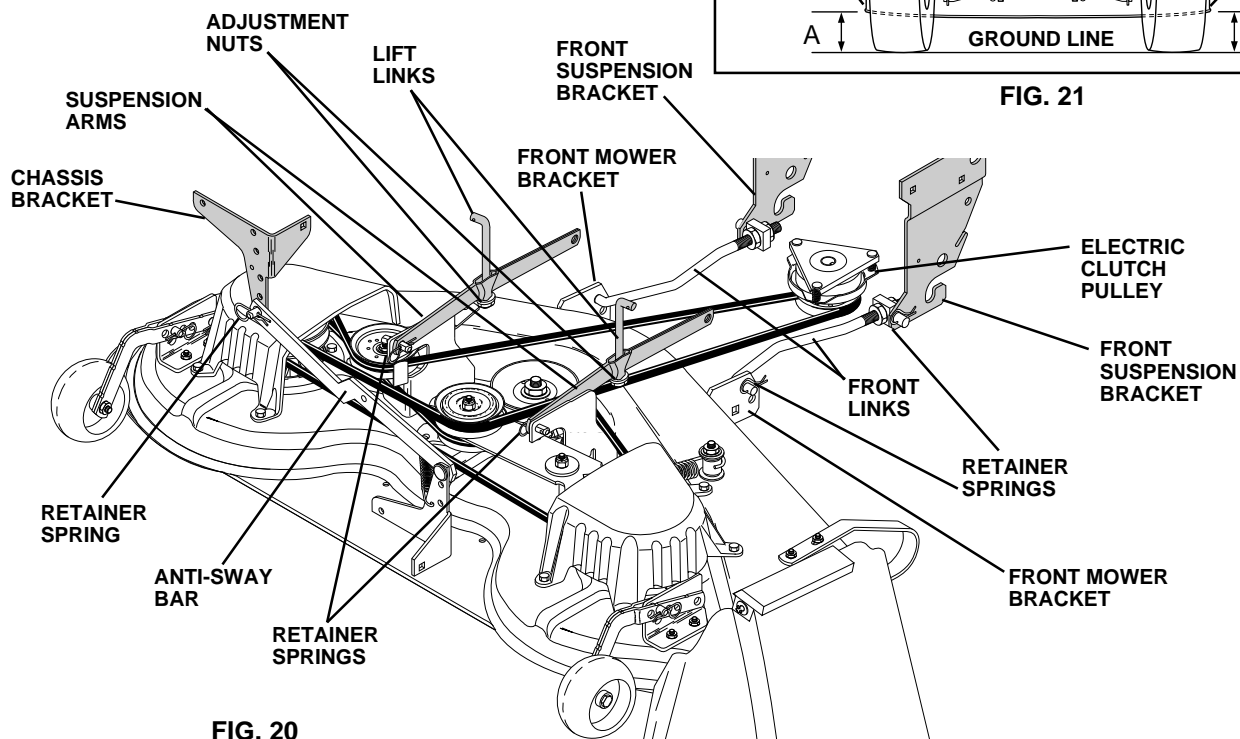


FIG. 20

## TO LEVEL MOWER HOUSING

Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PRODUCT SPECIFICATIONS" on page 3 of this manual). If tires are over or underinflated, you will not properly adjust your mower.

### SIDE-TO-SIDE ADJUSTMENT (See Figs. 20 and 21)

- Raise mower to its highest position.
- Measure height from bottom of deck curl to ground level at front corners of mower. Distance "A" on both sides of mower should be the same.
- If adjustment is necessary, make adjustment on one side of mower only.
- To raise one side of mower, tighten lift link adjustment nut on that side.
- To lower one side of mower, loosen lift link adjustment nut on that side.

**NOTE:** Each full turn of adjustment nut will change mower height about 3/16".

- Recheck measurements after adjusting.

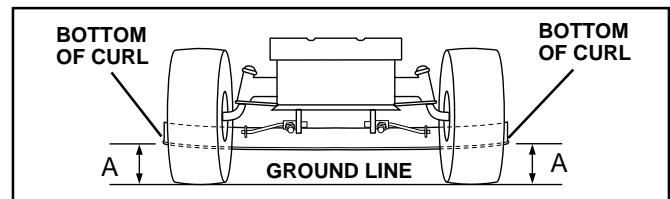


FIG. 21

# SERVICE AND ADJUSTMENTS

FRONT-TO-BACK ADJUSTMENT (See Figs. 22 and 23) -

**IMPORTANT:** DECK MUST BE LEVEL SIDE-TO-SIDE. IF THE FOLLOWING FRONT-TO-BACK ADJUSTMENT IS NECESSARY, BE SURE TO ADJUST BOTH FRONT LINKS EQUALLY SO MOWER WILL STAY LEVEL SIDE-TO-SIDE. To obtain the best cutting results, the mower housing should be adjusted so the front is approximately 1/8" to 1/2" lower than the rear when the mower is in its highest position.

Check adjustment on right side of tractor. Measure distance "F" directly in front of and behind the mandrel at bottom edge of mower housing as shown.

- Before making any necessary adjustments, check that both front links are equal in length.
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower housing, loosen nut "G" on both front links an equal number of turns.
- When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.
- To raise front of mower housing, loosen nut "H" from trunnion on both front links. Tighten nut "G" on both front links an equal number of turns.
- When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.

**NOTE:** Each full turn of nut "G" will change dim. "F" by approximately 3/8".

- Recheck side-to-side adjustment.

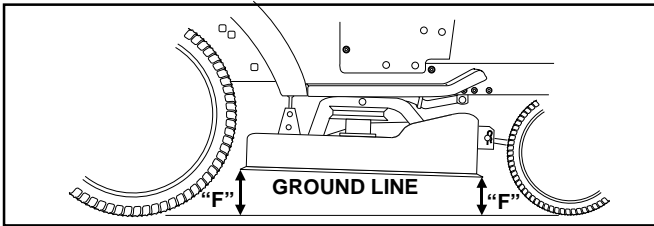


FIG. 22

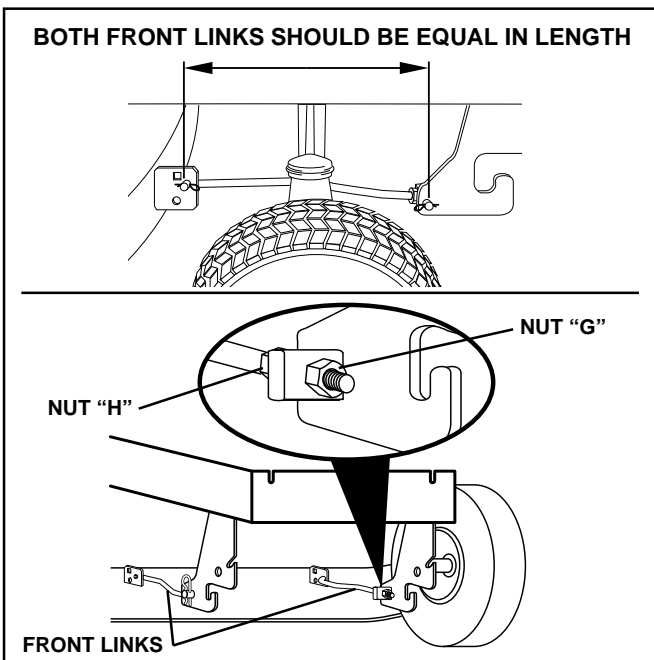


FIG. 23

## TO REPLACE MOWER DRIVE BELT

MOWER DRIVE BELT REMOVAL (See Fig. 24) -

- Park tractor on a level surface. Engage parking brake.
- Remove four screws from L.H. mandrel cover and remove cover.
- Roll belt over the top of L.H. mandrel pulley.
- Remove belt from electric clutch pulley.
- Remove belt from idler pulleys.
- Remove any dirt or grass clippings which may have accumulated around mandrels and entire upper deck surface.
- Check primary idler arm and two idlers to see that they rotate freely.
- Be sure spring is securely hooked to primary idler arm and bolt in mower housing.

MOWER DRIVE BELT INSTALLATION (See Fig. 24) -

- Install belt in both idlers. Make sure belt is in both belt keepers at the idlers as shown.
- Install new belt onto electric clutch pulley.
- Roll belt into upper groove of L.H. mandrel pulley.
- Carefully check belt routing making sure belt is in the grooves correctly and inside belt keepers.
- Reassemble L.H. mandrel cover.

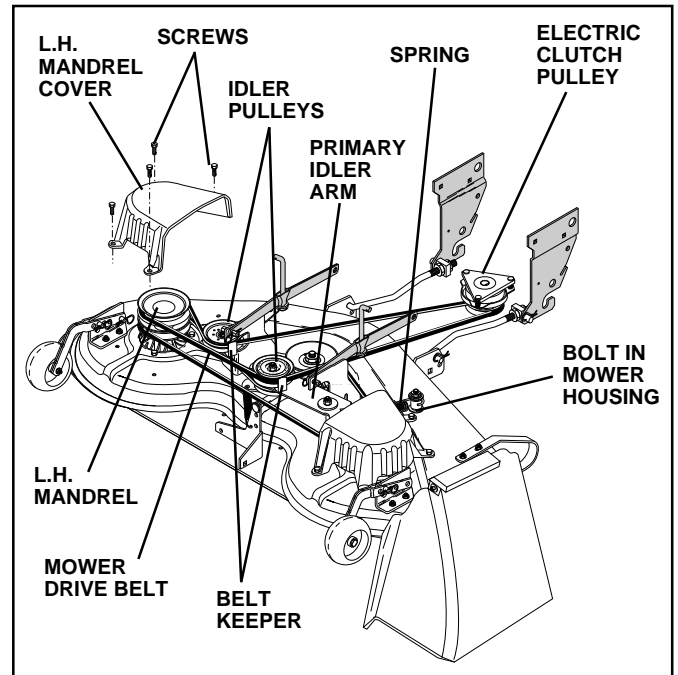


FIG. 24

# SERVICE AND ADJUSTMENTS

## TO REPLACE MOWER BLADE DRIVE BELT (See Fig. 25)

Park the tractor on level surface. Engage parking brake.

- Remove mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).
- Remove mower (See "TO REMOVE MOWER" in this section of this manual).
- Remove four screws from R.H. mandrel cover and remove cover. Unhook spring from bolt on mower housing.
- Carefully roll belt off R.H. mandrel pulley.
- Remove belt from center mandrel pulley, idler pulley, and L.H. mandrel pulley.
- Remove any dirt or grass which may have accumulated around mandrels and entire upper deck surface.
- Check secondary idler arm and idler to see that they rotate freely.
- Be sure spring is hooked in secondary idler arm and sway-bar bracket.
- Install new belt in lower groove of L.H. mandrel pulley, idler pulley, and center mandrel pulley as shown.
- Roll belt over R.H. mandrel pulley. Make sure belt is in all grooves properly.
- Reconnect spring to bolt in mower housing and reinstall R.H. mandrel cover.
- Reinstall mower to tractor (See "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual).
- Reassemble mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).

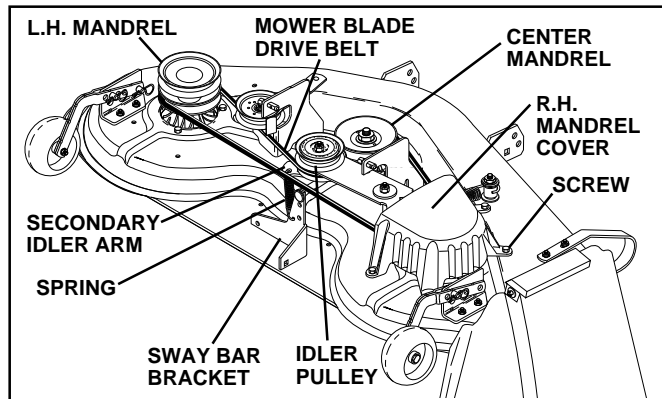


FIG. 25

## TO ADJUST ATTACHMENT CLUTCH (See Fig. 26)

The electric clutch should provide years of service. The clutch has a built-in brake that stops the pulley within 5 seconds. Eventually, the internal brake will wear which may cause the mower blades to not engage, or, to not stop as required. Adjustments should be made by your nearest authorized service center/department.

- Make sure attachment clutch and ignition switches are in "OFF" position.
- Adjust the three nylon locknuts until space between clutch plate and rotor measures .012" at all three slot locations cut in side of brake plate.

**NOTE:** After installing a new electric clutch, run tractor at full throttle and engage and disengage electric clutch 10 cycles to wear in clutch plate.

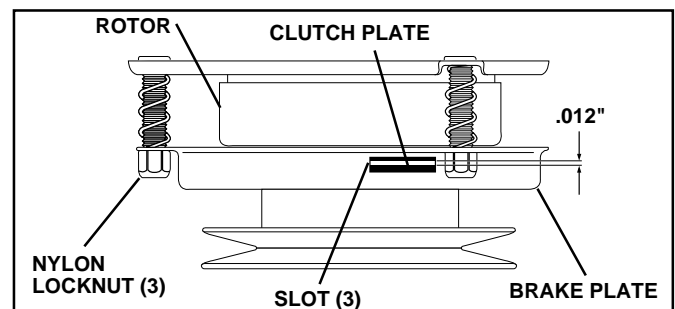


FIG. 26

# SERVICE AND ADJUSTMENTS

## TO ADJUST BRAKE (See Fig. 27)

Your tractor is equipped with an adjustable brake system which is mounted on the side of the transaxle.

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted.

- Depress clutch/brake pedal and engage parking brake.
- Measure distance between brake operating arm and nut "A" on brake rod.
- If distance is other than 1-1/2", loosen jam nut and turn nut "A" until distance becomes 1-1/2". Retighten jam nut against nut "A".
- Road test tractor for proper stopping distance as stated above. Readjust if necessary. If stopping distance is still greater than six (6) feet in highest gear, further maintenance is necessary. Contact your nearest authorized service center/department.

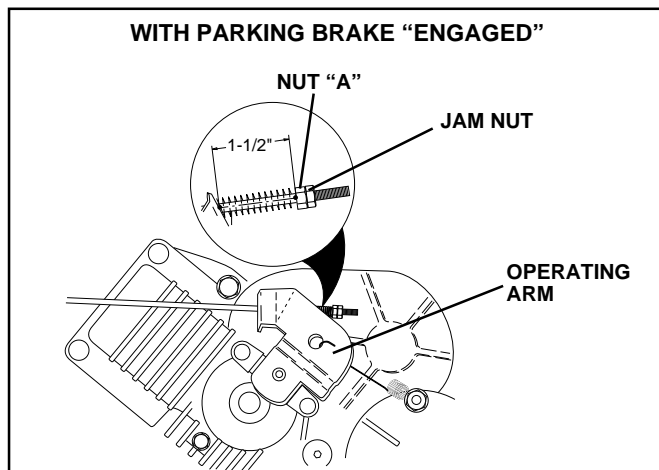


FIG. 27

## TO REPLACE MOTION DRIVE BELT (See Fig. 28)

Park the tractor on level surface. Engage parking brake. For ease of service there is a belt installation guide decal on bottom of left footrest.

- Remove mower (See "TO REMOVE MOWER" in this section of this manual.)

### BELT REMOVAL -

- Engage parking brake (creates slack in belt).
- Remove belt from clutching and fan idler pulleys.
- Remove belt from transaxle pulley.
- Remove belt from engine pulley and front V-idler pulley.
- Pull belt out of all belt keepers and remove from tractor.

### BELT INSTALLATION -

- Place V part of belt into grooves on engine pulley and front V-idler, making sure to route belt inside of all belt keepers.
- Route belt on right side, coming from V-idler, towards back of tractor, above midspan belt keeper and to top of transaxle pulley.
- Route belt on left side, coming from engine pulley, towards back of tractor and through loop in midspan belt keeper.
- Place V part of belt into grooves on transaxle and fan idler pulleys, making sure to route belt inside of all belt keepers.
- Place belt around clutching idlers as shown, making sure to route belt inside of all belt keepers.
- Check to be sure belt is positioned correctly and is on proper side of all belt keepers.
- Reinstall mower.

**IMPORTANT: CHECK BRAKE ADJUSTMENT.**

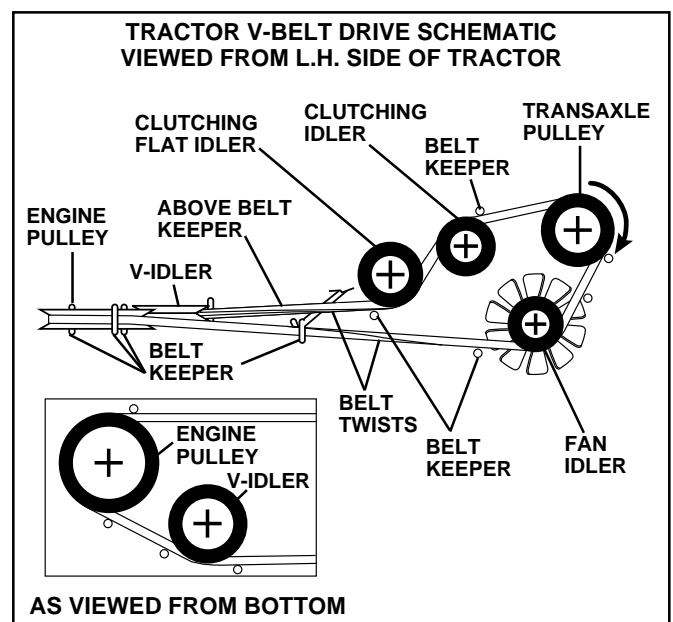


FIG. 28

# SERVICE AND ADJUSTMENTS

## TO ADJUST MOTION CONTROL LEVER

(See Fig. 29)

The motion control lever has been preset at the factory and adjustment should not be necessary.

If for any reason the motion control lever will not hold its position while at a selected speed, it may be adjusted at the friction pack located on the right side of chassis.

- Park tractor on level surface. Stop tractor by turning ignition key to "OFF" position and engage parking brake.
- Place motion control lever in neutral (N) position.
- While holding locknut, loosen jam nut
- Tighten locknut 1/4 turn.
- While holding locknut, tighten jam nut securely.

**NOTE:** If for any reason the effort to move the motion control lever becomes too excessive, reverse the above adjustment procedure by loosening locknut 1/4 turn.

Road test tractor after adjustment and repeat procedure if necessary.

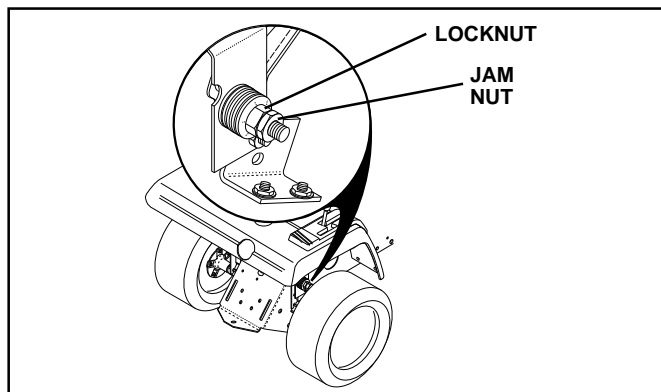


FIG. 29

## TRANSMISSION REMOVAL/REPLACEMENT

Should your transmission require removal for service or replacement, it should be purged after reinstallation before operating the tractor. See "PURGE TRANSMISSION" in Operation section of this manual.

## TO ADJUST STEERING WHEEL ALIGNMENT

If steering wheel crossbars are not horizontal (left to right) when wheels are positioned straight forward, remove steering wheel and reassemble per instructions in the Assembly section of this manual.

## FRONT WHEEL TOE-IN ADJUSTMENT

Front wheel toe-in is required for proper steering operation. Toe-in was set at the factory and adjustment should not be necessary. If parts in the front axle or steering mechanism have been replaced or damaged, check toe-in and adjust if necessary.

TO CHECK TOE-IN (See Fig. 30) -

- Position front wheels straight ahead.
- Measure distance between wheels at front and rear of tires (dimensions "A" and "B").
- Front dimension "A" should be 1/8" to 1/4" less than rear dimension "B".

TO ADJUST TOE-IN (See Figs. 30 and 31) -

- Loosen jam nuts at adjustment sleeves on tie rod.
- Adjust tie rod until dimension "A" is 1/8" to 1/4" less than dimension "B".
- Tighten jam nuts securely.



# SERVICE AND ADJUSTMENTS

## FRONT WHEEL CAMBER

The front wheel camber is not adjustable on your tractor. If damage has occurred to affect the front wheel camber, contact your nearest authorized service center/department.

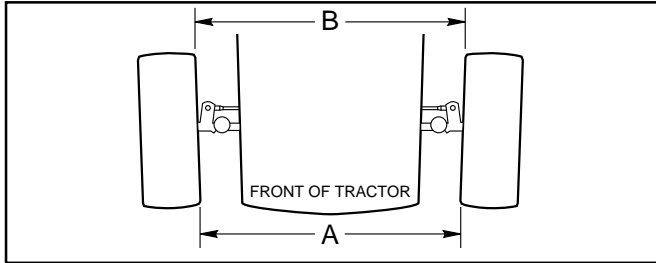


FIG. 30

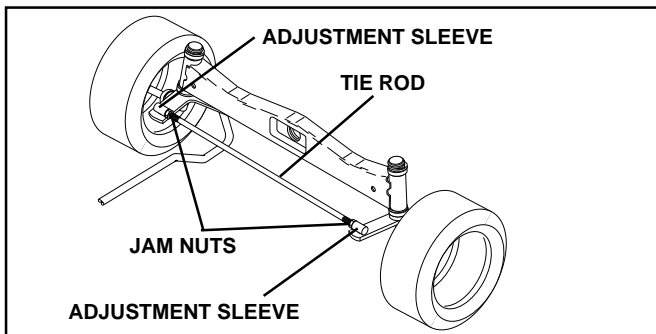


FIG. 31

## TO REMOVE WHEEL FOR REPAIRS (See Fig. 32)

- Block up axle securely.
- Remove axle cover, retaining ring and washers to allow wheel removal (rear wheel contains a square key - Do not lose).
- Repair tire and reassemble.
- On rear wheels only: align grooves in rear wheel hub and axle. Insert square key.
- Replace washers and snap retaining ring securely in axle groove.
- Replace axle cover.

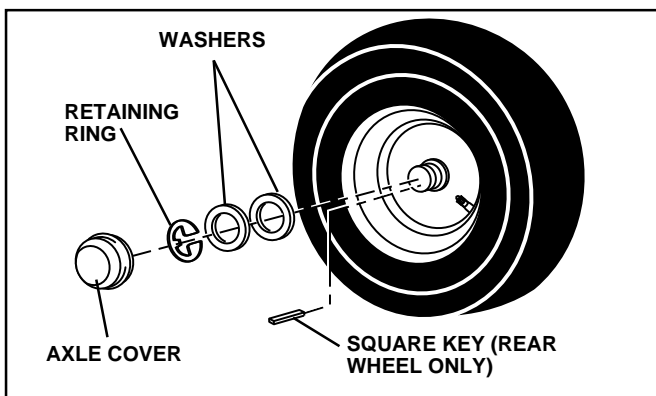


FIG. 32

## TO START ENGINE WITH A WEAK BATTERY (See Fig. 33)



**CAUTION:** Lead-acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

If your battery is too weak to start the engine, it should be recharged. If "jumper cables" are used for emergency starting, follow this procedure:

**IMPORTANT:** YOUR TRACTOR IS EQUIPPED WITH A 12 VOLT NEGATIVE GROUNDED SYSTEM. THE OTHER VEHICLE MUST ALSO BE A 12 VOLT NEGATIVE GROUNDED SYSTEM. DO NOT USE YOUR TRACTOR BATTERY TO START OTHER VEHICLES.

### TO ATTACH JUMPER CABLES -

- Connect each end of the RED cable to the POSITIVE (+) terminal of each battery, taking care not to short against chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal of fully charged battery.
- Connect the other end of the BLACK cable to good CHASSIS GROUND, away from fuel tank and battery.

### TO REMOVE CABLES, REVERSE ORDER -

- BLACK cable first from chassis and then from the fully charged battery.
- RED cable last from both batteries.

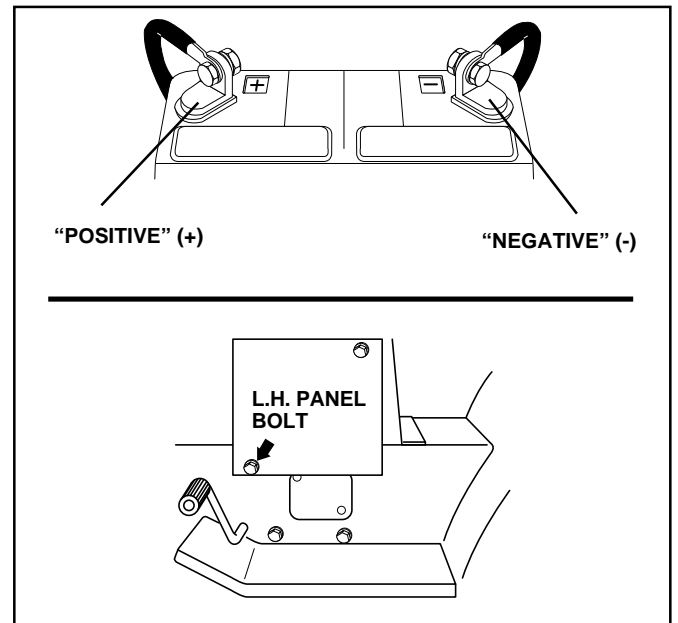


FIG. 33

# SERVICE AND ADJUSTMENTS

## TO REPLACE HEADLIGHT BULB

- Raise hood.
- Pull bulb holder out of the hole in the backside of the grill.
- Replace bulb in holder and push bulb holder securely back into the hole in the backside of the grill.
- Close hood.

## INTERLOCKS AND RELAYS

Loose or damaged wiring may cause your tractor to run poorly, stop running, or prevent it from starting.

- Check wiring. See electrical wiring diagram in the Repair Parts section of this manual.

## TO REPLACE FUSE

Replace with 30 amp automotive-type plug-in fuse. The fuse holder is located behind the dash.

## TO ADJUST ATTACHMENT LIFT SPRING (See Fig. 34)

- While holding spring bushing with wrench, loosen jam nut.
- Turn adjustment bolt clockwise to extend spring and reduce lift effort for heavier attachments.
- Turn adjustment bolt counterclockwise for lighter attachments.
- Retighten jam nut against spring bushing.

**IMPORTANT:** DO NOT ADJUST FOR MAXIMUM SPRING TENSION WHEN USING LIGHT ATTACHMENTS SUCH AS A MOWER. ADJUST LIFT LEVER SPRING TO AID IN LIFTING ATTACHMENT. DO NOT OVERPOWER SPRING. WHEN REMOVING ATTACHMENT, ALWAYS ADJUST SPRING TENSION TO ITS LOWEST POSITION.

## TO REMOVE HOOD AND GRILL ASSEMBLY (See Fig. 35)

- Lift hood. Disconnect headlight wire connection.
- Remove wing nuts on inside of side panels.
- Pivot hood and side panel forward and lift off tractor.
- To replace, reverse above procedure.

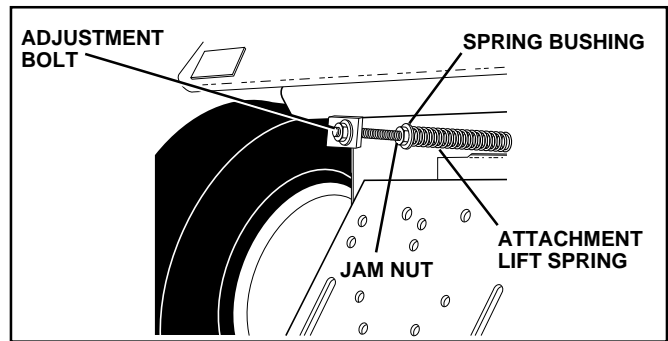


FIG. 34

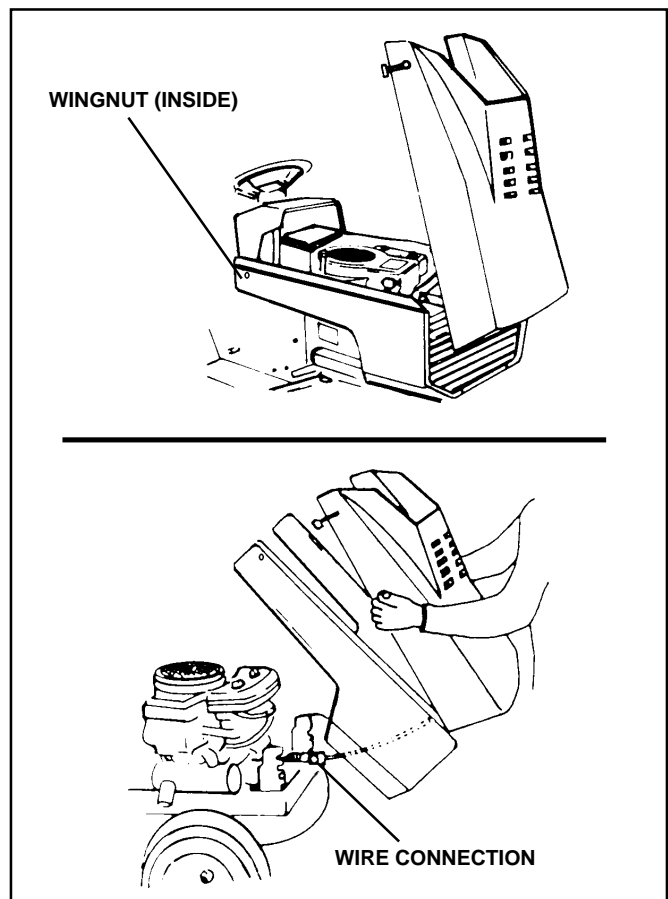


FIG. 35

# SERVICE AND ADJUSTMENTS

## ENGINE

### TO ADJUST THROTTLE CONTROL CABLE (See Fig. 36)

The throttle control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:

- With engine not running, move throttle control lever to fast (←) position.
- Check that speed control lever is against stop screw. If it is not, loosen casing clamp screw and pull throttle cable until lever is against stop screw. Tighten clamp screw securely.

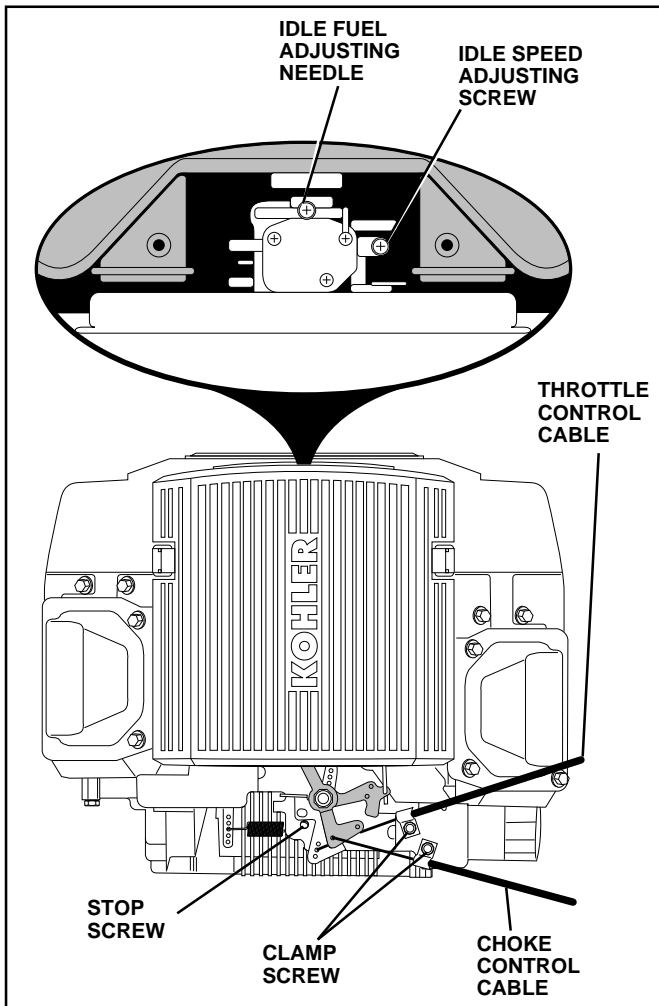


FIG. 36

### TO ADJUST CHOKE CONTROL (See Figs. 36 and 37)

The choke control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:

- With engine not running, move choke control (located on dash panel) to full choke (|>|) position.
- Remove air cleaner cover, filter and cartridge plate to expose carburetor choke (See "AIR FILTER" in the Customer Responsibilities section of this manual).
- Choke should be closed. If it is not, loosen casing clamp screw and move choke cable until choke is completely closed. Tighten casing clamp screw securely.
- Reassemble air cleaner.

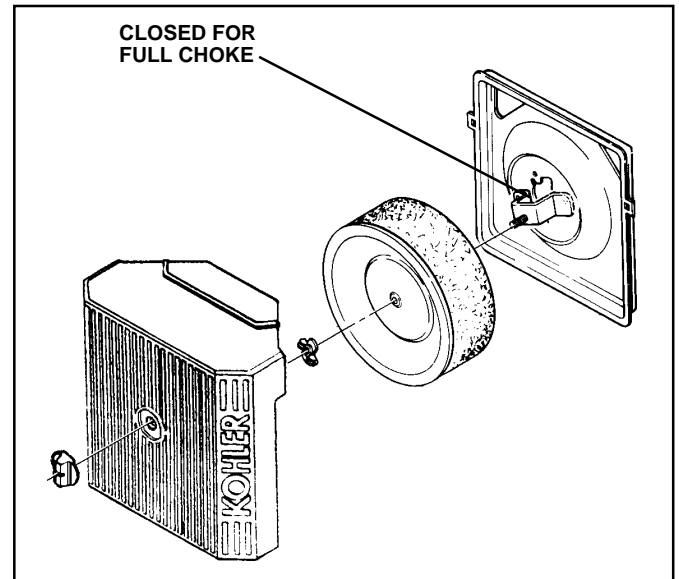


FIG. 37

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# SERVICE AND ADJUSTMENTS

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## TO ADJUST CARBURETOR (See Fig. 37)

The carburetor has been present at the factory and adjustment should not be necessary. However, minor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. If the carburetor does need adjustment, proceed as follows:

In general, turning the adjusting needles **in** (clockwise) decreases the supply of fuel to the engine giving a leaner fuel/air mixture. Turning the adjusting needles **out** (counterclockwise) increases the supply of fuel to the engine giving a richer fuel/air mixture.

**IMPORTANT:** DAMAGE TO THE NEEDLES AND THE SEATS IN CARBURETOR MAY RESULT IF SCREW IS TURNED IN TOO TIGHT.

### PRELIMINARY SETTING -

- Be sure you have a clean air filter, and the throttle control cable is adjusted properly (see "TO ADJUST THROTTLE CONTROL CABLE" in the Service and Adjustments section of this manual).
- With engine off turn idle fuel adjusting needle **in** (clockwise) closing it finger tight and then turn **out** (counterclockwise) 1 turn.

### FINAL SETTING -

- Start engine and allow to warm for five minutes. Make final adjustments with engine running and shift/motion control lever in neutral (N) position.
- The high idle is set at the factory and cannot be adjusted.

- **Idle speed setting** - With throttle control lever in slow (☛) position, engine should idle at 1200 RPM. If engine idles too slow or fast, turn idle speed adjusting screw in or out until correct idle is attained.
- **Idle fuel needle setting** - With throttle control lever in slow (☛) position, turn idle fuel adjusting needle **in** (clockwise) until engine speed decreases and then turn **out** (counterclockwise) approximately 3/4 turn to obtain the best low speed performance.
- Recheck idle speed. Readjust if necessary.

### ACCELERATION TEST -

- Move throttle control lever from slow (☛) to fast (☜) position. If engine hesitates or dies, turn idle fuel adjusting needle **out** (counterclockwise) 1/8 turn. Repeat test and continue to adjust, if necessary, until engine accelerates smoothly.

High speed stop is factory adjusted. Do not adjust-damage may result.

**IMPORTANT:** NEVER TAMPER WITH THE ENGINE GOVERNOR, WHICH IS FACTORY SET FOR PROPER ENGINE SPEED. OVERSPEEDING THE ENGINE ABOVE THE FACTORY HIGH SPEED SETTING CAN BE DANGEROUS. IF YOU THINK THE ENGINE-GOVERNED HIGH SPEED NEEDS ADJUSTING, CONTACT YOUR NEAREST AUTHORIZED SERVICE CENTER/DEPARTMENT, WHICH HAS PROPER EQUIPMENT AND EXPERIENCE TO MAKE ANY NECESSARY ADJUSTMENTS.

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# STORAGE

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Immediately prepare your tractor for storage at the end of the season or if the tractor will not be used for 30 days or more.



**CAUTION:** Never store the tractor with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

## TRACTOR

Remove mower from tractor for winter storage. When mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean, dry area.

- Clean entire tractor (See “CLEANING” in the Customer Responsibilities section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- Lubricate as shown in the Customer Responsibilities section of this manual.
- Be sure that all nuts, bolts and screws are securely fastened. Inspect moving parts for damage, breakage and wear. Replace if necessary.
- Touch up all rusted or chipped paint surfaces; sand lightly before painting.

## BATTERY

- Fully charge the battery for storage.
- After a period of time in storage, battery may require recharging.
- To help prevent corrosion and power leakage during long periods of storage, battery cables should be disconnected and battery cleaned thoroughly (see “TO CLEAN BATTERY AND TERMINALS” in the Customer Responsibilities section of this manual).
- After cleaning, leave cables disconnected and place cables where they cannot come in contact with battery terminals.
- Be sure battery drain tube is securely attached.
- If battery is removed from tractor for storage, do not store battery directly on concrete or damp surfaces.

## ENGINE

### FUEL SYSTEM

**IMPORTANT:** IT IS IMPORTANT TO PREVENT GUM DEPOSITS FROM FORMING IN ESSENTIAL FUEL SYSTEM PARTS SUCH AS CARBURETOR, FUEL FILTER, FUEL HOSE, OR TANK DURING STORAGE. ALSO, EXPERIENCE INDICATES THAT ALCOHOL BLENDED FUELS (CALLED GASOHOL OR USING ETHANOL OR METHANOL) CAN ATTRACT MOISTURE WHICH LEADS TO SEPARATION AND FORMATION OF ACIDS DURING STORAGE. ACIDIC GAS CAN DAMAGE THE FUEL SYSTEM OF AN ENGINE WHILE IN STORAGE.

- Drain the fuel tank.
- Start the engine and let it run until the fuel lines and carburetor are empty.
- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

**NOTE:** Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow the mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not drain the gas tank and carburetor if using fuel stabilizer.

### ENGINE OIL

Drain oil (with engine warm) and replace with clean engine oil. (See “ENGINE” in the Customer Responsibilities section of this manual).

### CYLINDERS

- Remove spark plug(s).
- Pour one ounce of oil through spark plug hole(s) into cylinder(s).
- Turn ignition key to “START” position for a few seconds to distribute oil.
- Replace with new spark plug(s).

## OTHER

- Do not store gasoline from one season to another.
- Replace your gasoline can if your can starts to rust. Rust and/or dirt in your gasoline will cause problems.
- If possible, store your tractor indoors and cover it to give protection from dust and dirt.
- Cover your tractor with a suitable protective cover that does not retain moisture. Do not use plastic. Plastic cannot breathe which allows condensation to form and will cause your tractor to rust.

**IMPORTANT:** NEVER COVER TRACTOR WHILE ENGINE AND EXHAUST AREAS ARE STILL WARM.

# TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
<b>Will not start</b>	<ol style="list-style-type: none"> <li>1. Out of fuel.</li> <li>2. Engine not "CHOKED" properly.</li> <li>3. Engine flooded.</li> <li>4. Bad spark plug.</li> <li>5. Dirty air filter.</li> <li>6. Dirty fuel filter.</li> <li>7. Water in fuel.</li>   <li>8. Loose or damaged wiring.</li> <li>9. Carburetor out of adjustment.</li> <li>10. Engine valves out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill fuel tank.</li> <li>2. See "TO START ENGINE" in Operation section.</li> <li>3. Wait several minutes before attempting to start.</li> <li>4. Replace spark plug.</li> <li>5. Clean/replace air filter.</li> <li>6. Replace fuel filter.</li> <li>7. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>8. Check all wiring.</li> <li>9. Contact an authorized service center/department.</li> <li>10. Contact an authorized service center/department.</li> </ol>
<b>Hard to start</b>	<ol style="list-style-type: none"> <li>1. Dirty air filter.</li> <li>2. Bad spark plug.</li> <li>3. Weak or dead battery.</li> <li>4. Dirty fuel filter.</li> <li>5. Stale or dirty fuel.</li> <li>6. Loose or damaged wiring.</li> <li>7. Carburetor out of adjustment.</li> <li>8. Engine valves out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean/replace air filter.</li> <li>2. Replace spark plug.</li> <li>3. Recharge or replace battery.</li> <li>4. Replace fuel filter.</li> <li>5. Drain fuel tank and refill with fresh gasoline.</li> <li>6. Check all wiring.</li> <li>7. Contact an authorized service center/department.</li> <li>8. Contact an authorized service center/department.</li> </ol>
<b>Engine will not turn over</b>	<ol style="list-style-type: none"> <li>1. Clutch/brake pedal not depressed.</li> <li>2. Attachment clutch is engaged.</li> <li>3. Weak or dead battery.</li> <li>4. Blown fuse.</li> <li>5. Corroded battery terminals.</li> <li>6. Loose or damaged wiring.</li> <li>7. Faulty ignition switch.</li> <li>8. Faulty solenoid or starter.</li> <li>9. Faulty operator presence switch(es).</li> </ol>	<ol style="list-style-type: none"> <li>1. Depress clutch/brake pedal.</li> <li>2. Disengage attachment clutch.</li> <li>3. Recharge or replace battery.</li> <li>4. Replace fuse.</li> <li>5. Clean battery terminals.</li> <li>6. Check all wiring.</li> <li>7. Check/replace ignition switch.</li> <li>8. Check/replace solenoid or starter.</li> <li>9. Contact an authorized service center/department.</li> </ol>
<b>Engine clicks but will not start</b>	<ol style="list-style-type: none"> <li>1. Weak or dead battery.</li> <li>2. Corroded battery terminals.</li> <li>3. Loose or damaged wiring.</li> <li>4. Faulty solenoid or starter.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recharge or replace battery.</li> <li>2. Clean battery terminals.</li> <li>3. Check all wiring.</li> <li>4. Check/replace solenoid or starter.</li> </ol>
<b>Loss of power</b>	<ol style="list-style-type: none"> <li>1. Cutting too much grass/too fast.</li> <li>2. Throttle in "CHOKE" position.</li> <li>3. Build-up of grass, leaves and trash under mower.</li> <li>4. Dirty air filter.</li> <li>5. Low oil level/dirty oil.</li> <li>6. Faulty spark plug.</li> <li>7. Dirty fuel filter.</li> <li>8. Stale or dirty fuel.</li> <li>9. Water in fuel.</li>   <li>10. Spark plug wire loose.</li> <li>11. Dirty engine air screen/fins.</li> <li>12. Dirty/clogged muffler.</li> <li>13. Loose or damaged wiring.</li> <li>14. Carburetor out of adjustment.</li> <li>15. Engine valves out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set in "Higher Cut" position/reduce speed.</li> <li>2. Adjust throttle control.</li> <li>3. Clean underside of mower housing.</li> <li>4. Clean/replace air filter.</li> <li>5. Check oil level/change oil.</li> <li>6. Clean and regap or change spark plug.</li> <li>7. Replace fuel filter.</li> <li>8. Drain fuel tank and refill with fresh gasoline.</li> <li>9. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>10. Connect and tighten spark plug wire.</li> <li>11. Clean engine air screen/fins.</li> <li>12. Clean/replace muffler.</li> <li>13. Check all wiring.</li> <li>14. Contact an authorized service center/department.</li> <li>15. Contact an authorized service center/department.</li> </ol>
<b>Excessive vibration</b>	<ol style="list-style-type: none"> <li>1. Worn, bent or loose blade.</li> <li>2. Bent blade mandrel.</li> <li>3. Loose/damaged part(s).</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade. Tighten blade bolt.</li> <li>2. Replace blade mandrel.</li> <li>3. Tighten loose part(s). Replace damaged parts.</li> </ol>

# TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
<b>Engine continues to run when operator leaves seat with attachment clutch engaged</b>	<ol style="list-style-type: none"> <li>1. Faulty operator-safety presence control system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check wiring, switches and connections. If not corrected, contact an authorized service center/ department.</li> </ol>
<b>Poor cut - uneven</b>	<ol style="list-style-type: none"> <li>1. Worn, bent or loose blade.</li> <li>2. Mower deck not level.</li> <li>3. Buildup of grass, leaves, and trash under mower.</li> <li>4. Bent blade mandrel.</li> <li>5. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade. Tighten blade bolt.</li> <li>2. Level mower deck.</li> <li>3. Clean underside of mower housing.</li> <li>4. Replace blade mandrel.</li> <li>5. Clean around mandrels to open vent holes.</li> </ol>
<b>Mower blades will not rotate</b>	<ol style="list-style-type: none"> <li>1. Obstruction in clutch mechanism.</li> <li>2. Worn/damaged mower drive belt.</li> <li>3. Frozen idler pulley.</li> <li>4. Frozen blade mandrel.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove obstruction.</li> <li>2. Replace mower drive belt.</li> <li>3. Replace idler pulley.</li> <li>4. Replace blade mandrel.</li> </ol>
<b>Poor grass discharge</b>	<ol style="list-style-type: none"> <li>1. Engine speed too slow.</li> <li>2. Travel speed too fast.</li> <li>3. Wet grass.</li> <li>4. Mower deck not level.</li> <li>5. Low/uneven tire air pressure.</li> <li>6. Worn, bent or loose blade.</li> <li>7. Buildup of grass, leaves and trash under mower.</li> <li>8. Mower drive belt worn.</li> <li>9. Blades improperly installed.</li> <li>10. Improper blades used.</li> <li>11. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place throttle control in "FAST" position.</li> <li>2. Shift to slower speed.</li> <li>3. Allow grass to dry before mowing.</li> <li>4. Level mower deck.</li> <li>5. Check tires for proper air pressure.</li> <li>6. Replace/sharpen blade. Tighten blade bolt.</li> <li>7. Clean underside of mower housing.</li> <li>8. Replace mower drive belt.</li> <li>9. Reinstall blades sharp edge down.</li> <li>10. Replace with blades listed in this manual.</li> <li>11. Clean around mandrels to open vent holes.</li> </ol>
<b>Headlight(s) not working (if so equipped)</b>	<ol style="list-style-type: none"> <li>1. Switch is "OFF".</li> <li>2. Bulb(s) burned out.</li> <li>3. Faulty light switch.</li> <li>4. Loose or damaged wiring.</li> <li>5. Blown fuse.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn switch "ON".</li> <li>2. Replace bulb(s).</li> <li>3. Check/replace light switch.</li> <li>4. Check wiring and connections.</li> <li>5. Replace fuse.</li> </ol>
<b>Battery will not charge</b>	<ol style="list-style-type: none"> <li>1. Bad battery cell(s).</li> <li>2. Poor cable connections.</li> <li>3. Faulty regulator (if so equipped).</li> <li>4. Faulty alternator.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace battery.</li> <li>2. Check/clean all connections.</li> <li>3. Replace regulator.</li> <li>4. Replace alternator.</li> </ol>
<b>Loss of drive</b>	<ol style="list-style-type: none"> <li>1. Freewheel control in "disengaged" position.</li> <li>2. Motion drive belt worn, damaged, or broken.</li> <li>3. Air trapped in transmission during shipment or servicing.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place freewheel control in "engaged" position.</li> <li>2. Replace motion drive belt.</li> <li>3. Purge transmission.</li> </ol>
<b>Engine "backfires" when turning engine "OFF"</b>	<ol style="list-style-type: none"> <li>1. Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.</li> </ol>

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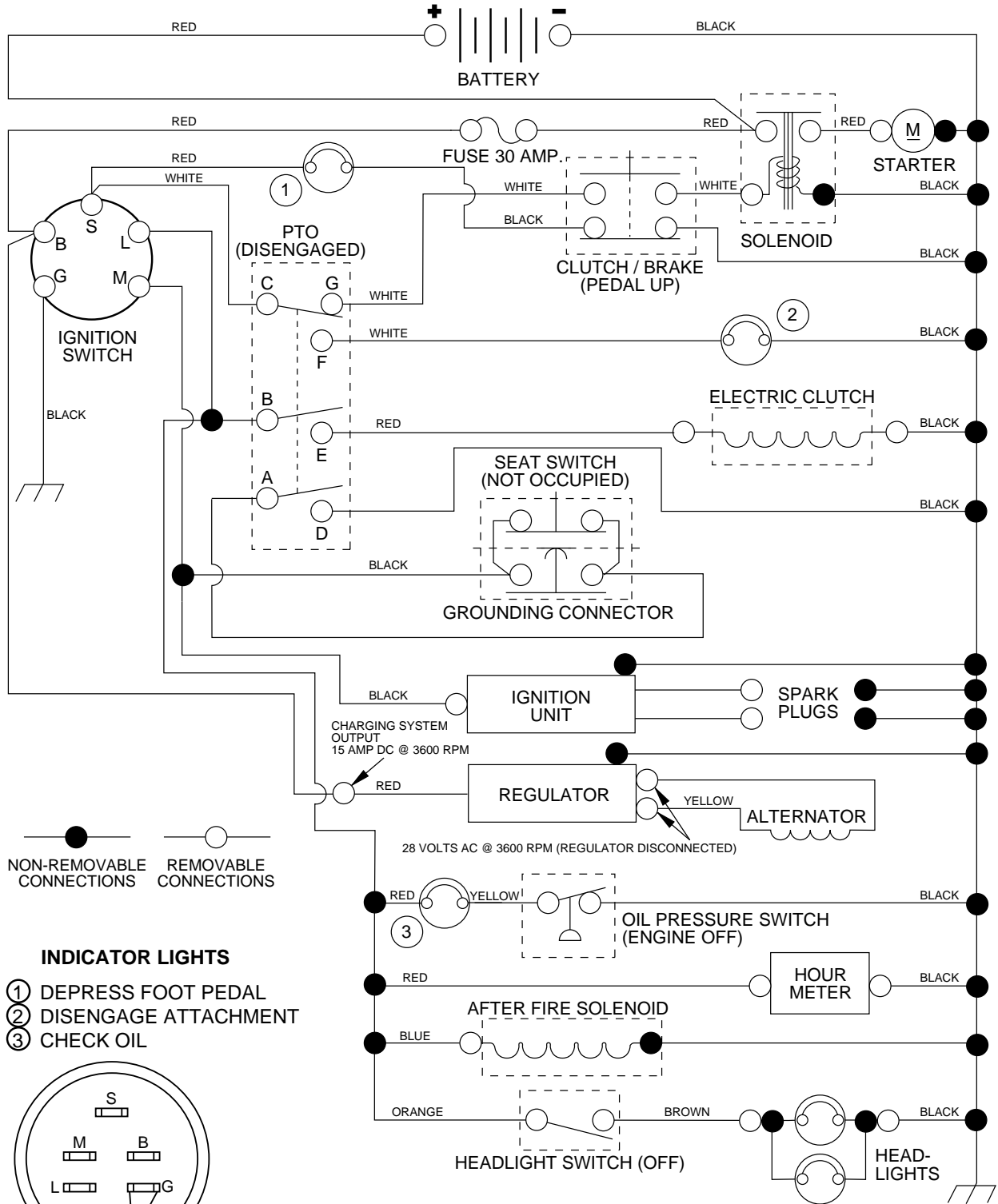
# SERVICE NOTES

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# TRACTOR - MODEL NO. GTH220 (954830167A)

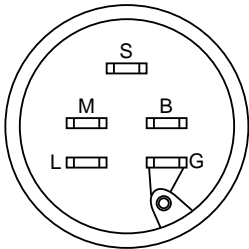
## SCHEMATIC



NON-REMOVABLE CONNECTIONS    REMOVABLE CONNECTIONS

### INDICATOR LIGHTS

- ① DEPRESS FOOT PEDAL
- ② DISENGAGE ATTACHMENT
- ③ CHECK OIL



### IGNITION SWITCH

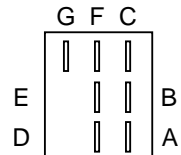
POSITION	CIRCUIT
OFF	M + G
ON	B + L
START	B + S + L

### WIRING INSULATED CLIPS

NOTE: IF WIRING INSULATED CLIPS WERE REMOVED FOR SERVICING OF UNIT, THEY SHOULD BE REPLACED TO PROPERLY SECURE YOUR WIRING.

### PTO SWITCH

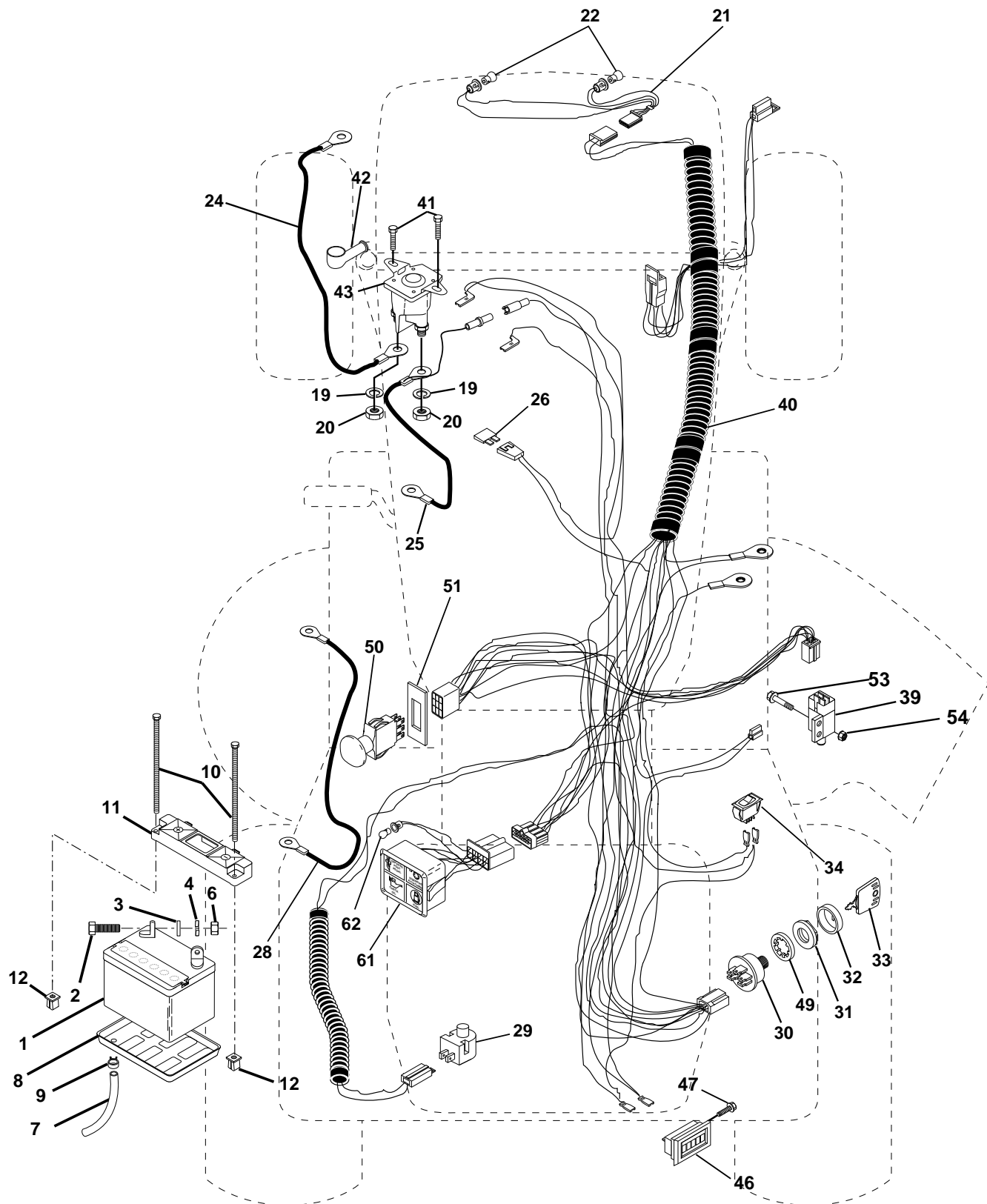
POSITION	CIRCUIT
OFF	C + G
ON	C + F, B + E, A + D



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### ELECTRICAL



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### ELECTRICAL

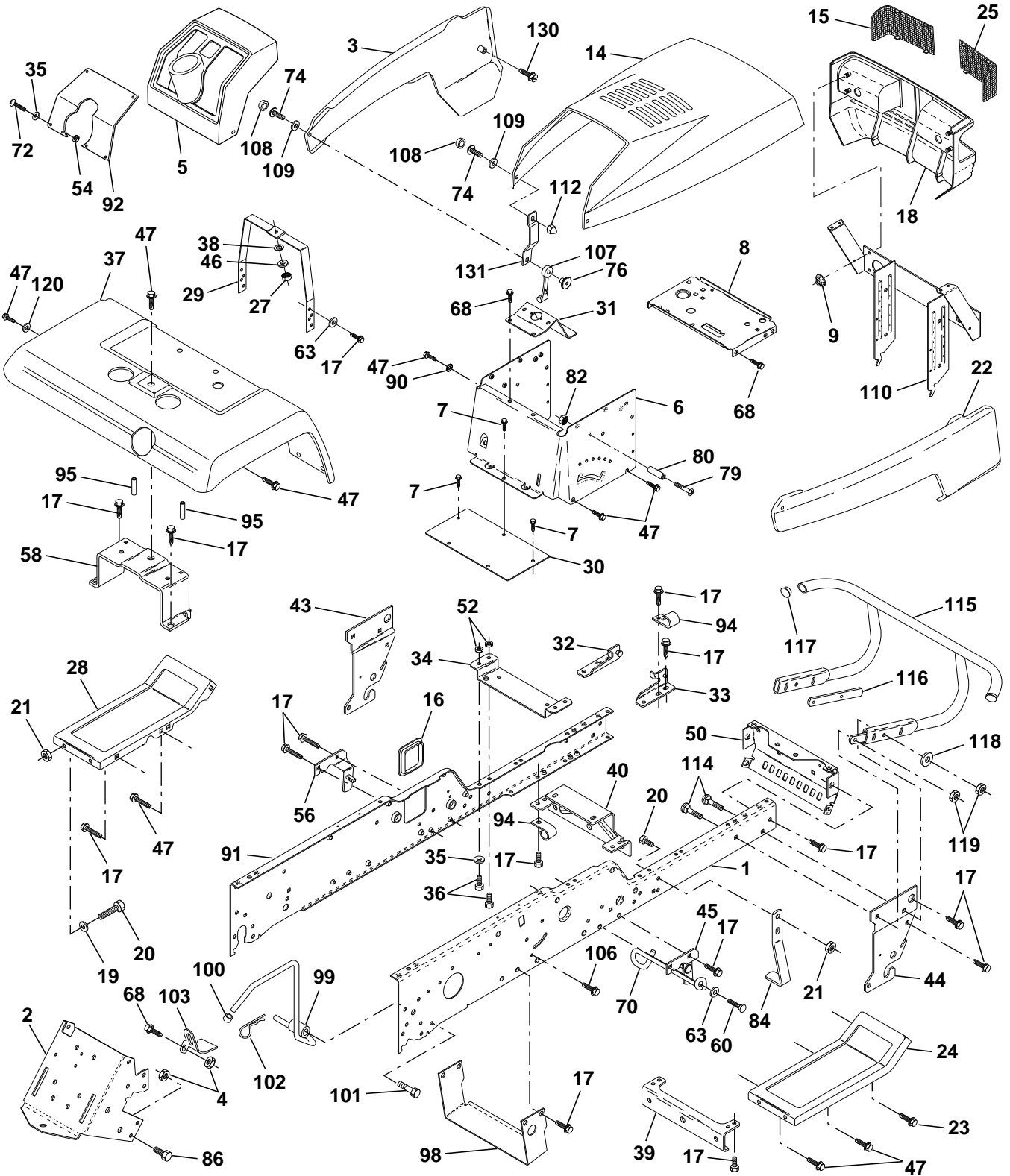
KEY NO.	PART NO.	DESCRIPTION
1	532144927	Battery
2	874760412	Bolt Hex Head 1/4-20 x 3/4
3	810040400	Washer, Lock 1/4
4	819091016	Washer 9/32 x 5/8 x 16 Ga
6	873220400	Nut Fin Hex 1/4-20
7	532007697	Tube Plastic
8	532124886	Tray, Battery
9	532109596	Clamp, Hose
10	532145211	Bolt, Btr Frt 1/4-20 x 7-1/2 Zinc
11	532145209	Holddown Battery Dash Mount
12	532145769	Nut Push Nylon 1/4" Battery Frt.
19	810090400	Washer, Lock 1/4
20	873350400	Nut, Jam Hex 1/4-20
21	532136850	Harness Socket Light w/4152J
22	532004152	Bulb Light
24	532004014	Cable, Starter
25	532146686	Cable, Battery
26	532108824	Fuse
28	532006408	Cable, Ground
29	532121305	Switch, Plunger
30	532144921	Switch, Ign
31	532140400	Nut, Ignition Switch
32	532141226	Cover Switch Key
33	532140401	Key
34	532110712	Switch, Light
39	532109553	Intlk Switch
40	532147341	Harness Ign.
41	817720408	Screw 1/4-20 x 1/2
42	532131563	Cover, Terminal Red
43	532145673	Solenoid
46	532110940	Meter Hour
47	817011008	Screw #10-24 x 1/2
49	811151000	Washer, Lock Internal Tooth 5/8
50	532140404	Switch, PTO
51	532140405	Ring Retainer PTO
53	871031008	Screw Hex Washer Hd #10-32 x 1
54	873951000	Nut Keps #10-32
61	532138101	Light Pkg Asm
62	532110143	Bulb, Light Pkg.

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### CHASSIS AND ENCLOSURES



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### CHASSIS AND ENCLOSURES

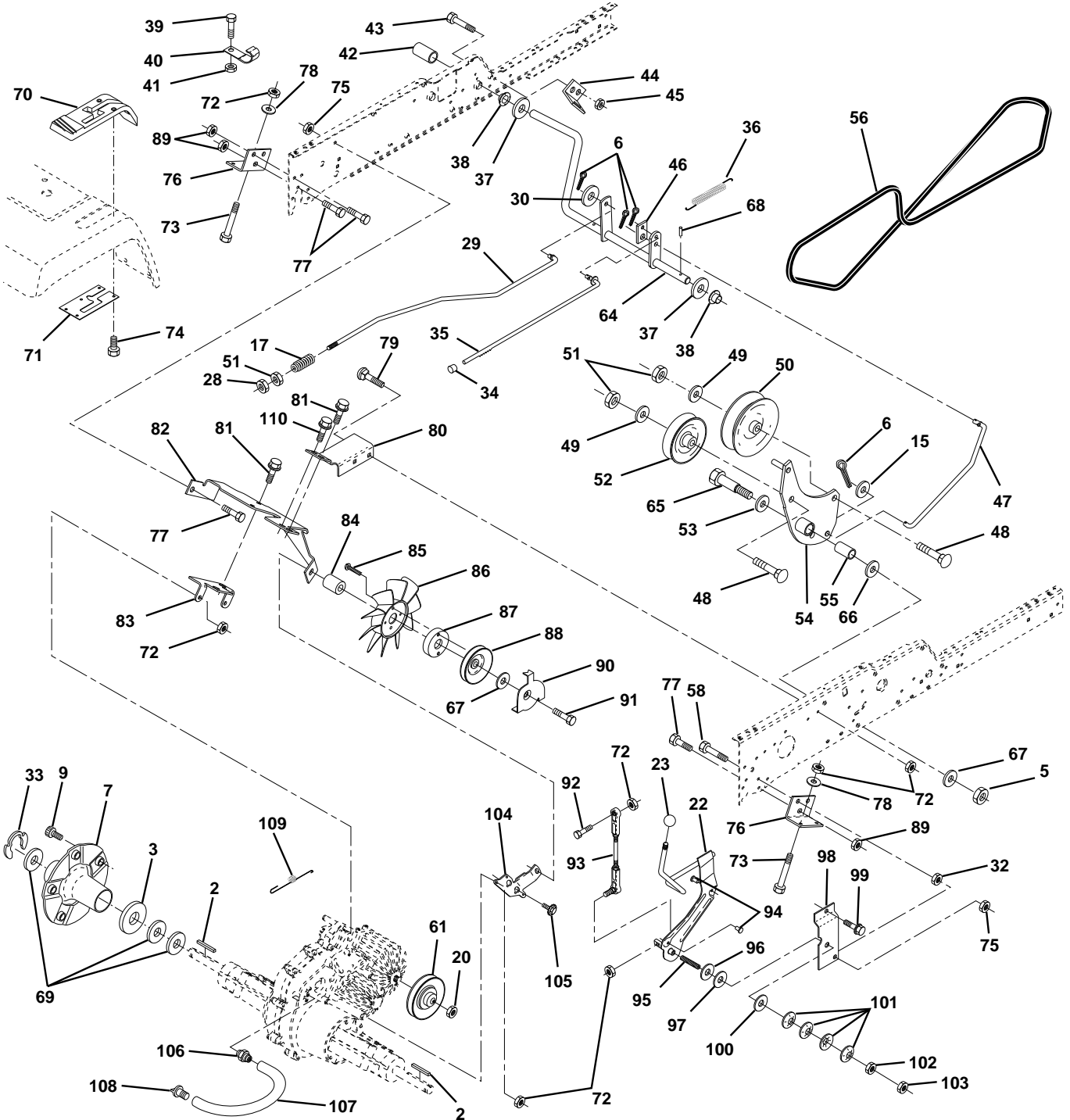
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	532144737	Rail, Frame RH	56	532138461	Bracket Asm., Susp Chassis Lh
2	532140506	Drawbar, Gt	58	532137113	Bracket Asm., Fender
3	532150478	Panel Asm., Side LH	60	817490620	Screw Thdrol 3/8-16 x 1-1/4
4	873800700	Nut, Lock Hex 7/16 Unc	63	819131614	Washer 13/32 x 1 x 14 Ga.
5	532140452	Dash, Plastic Black	68	817490508	Screw, Thdrol 5/16-18 x 1/2
6	532145053	Dash 1-PCS, Lower	70	532137159	Guide, Belt Mid Span
7	817720408	Screw, Thd Cut 1/4-20 x 1/2	72	874180512	Screw, Mach Trhd 5/16-18 x 3/4
8	532145166	Support, Battery	74	874191008	Screw, Machine #10-24
9	532108067	Nut Pal	76	532125004	Nut, Weld #10-24
14	532150477	Hood Asm., Pnt	79	874981020	Screw, Machine #10-24 x 1/4
15	532124250	Lens, Headlight LH	80	532007206	Spacer, Split
16	532121794	Cover, Access	82	873731000	Nut #10-24
17	817490612	Screw, Thdrol 3/8-16 x 3/4	84	532142992	Stop, Over Center 44" 20/23" T. 94
18	532127320	Grille	86	874760716	Bolt, Fin Hex 7/16-14 Unc x 1
19	819131312	Washer 13/32 x 13/16 x 12 Ga.	90	811050600	Washer, Lock External Tooth 3/8
20	874760616	Bolt, Fin Hex 3/8-16 x 1	91	532144735	Rail, Frame Lh
21	873680600	Nut, Crownlock 3/8-16 Unc	92	532141626	Plate, Silkscreen Dash
22	532150479	Panel Asm., Side RH	94	532100207	Clip, Fuel Line
23	817490616	Screw Thdrol. 3/8-16 x 1 Ty-TT	95	532105531	Push Nut, Nylon
24	532147202	Footrest, RH	98	532140503	Bracket Chassis Skid
25	532124251	Lens Headlight RH	99	532140871	Rod Asm. Bypass
27	873220400	Nut Fin Hex 1/4-20	100	532124236	Cap Brake Parking Red
28	532147203	Footrest, LH	101	817490628	Screw Thdrol. 3/8-16 x 1-3/4
29	532145205	Bracket, Support Dash	102	532124788	Retainer Spring 1"
30	532145052	Saddle	103	532142273	Bracket Lock Bypass
31	532145183	Brace, Support Steering	106	532138776	Screw Thdrol. Hex Hd Zinc Mur
32	532141315	Bracket Asm., Frame Pivot Lh	107	532109808	Latch, Chute Blk
33	532141314	Bracket Asm., Frame Pivot Rh	108	532110356	Cap, Snap Black
34	532142131	Bracket, Engine Support Rear	109	532110357	Cap, Washer Snap
35	819111116	Washer 11/32 x 11/16 x 16 Ga.	110	532150200	Pivot Asm. Grille/Hood Husq. VGT
36	874780512	Bolt, Fin Hex 5/16-18 x 3/4	112	532060867	Nut, Acorn, Hex #10-24
37	532141449	Fender, Pnt.	114	872140610	Bolt, Carriage 3/8-16 x 1-1/4
38	810040400	Washer, Lock 1/4	115	532141460	Bumper Asm.
39	532136961	Bracket, Axle Front	116	532141461	Bracket Extension Bumper
40	532142132	Bracket, Support Axle/Engine	117	532143679	Plug Plastic
43	532136939	Bracket, Spnsn Front Lh	118	819131316	Washer 13/32 x 13/16 x 16 Ga.
44	532136940	Bracket, Spnsn Front Rh	119	873680600	Nut Crownlock 3/8-16 UNC
45	532138460	Bracket Asm., Susp Chassis Rh	120	819131616	Washer 13/32 x 1 x 16 Ga.
46	819091216	Washer 9/32 x 3/4 x 16 Ga.	130	817521312	Screw, SLTD Hex Hd. W/PI Washer
47	817490608	Screw Thdrol 3/8-16 x 1/2	131	532150195	Bracket Support Hood/Panel YP
50	532136575	Bracket, Chassis Front	--	532125085	Plug, Hole
52	873800500	Locknut, Hex W/Ins 5/16-18 Unc			
54	873510500	Nut 5/16-18			

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### GROUND DRIVE



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### GROUND DRIVE

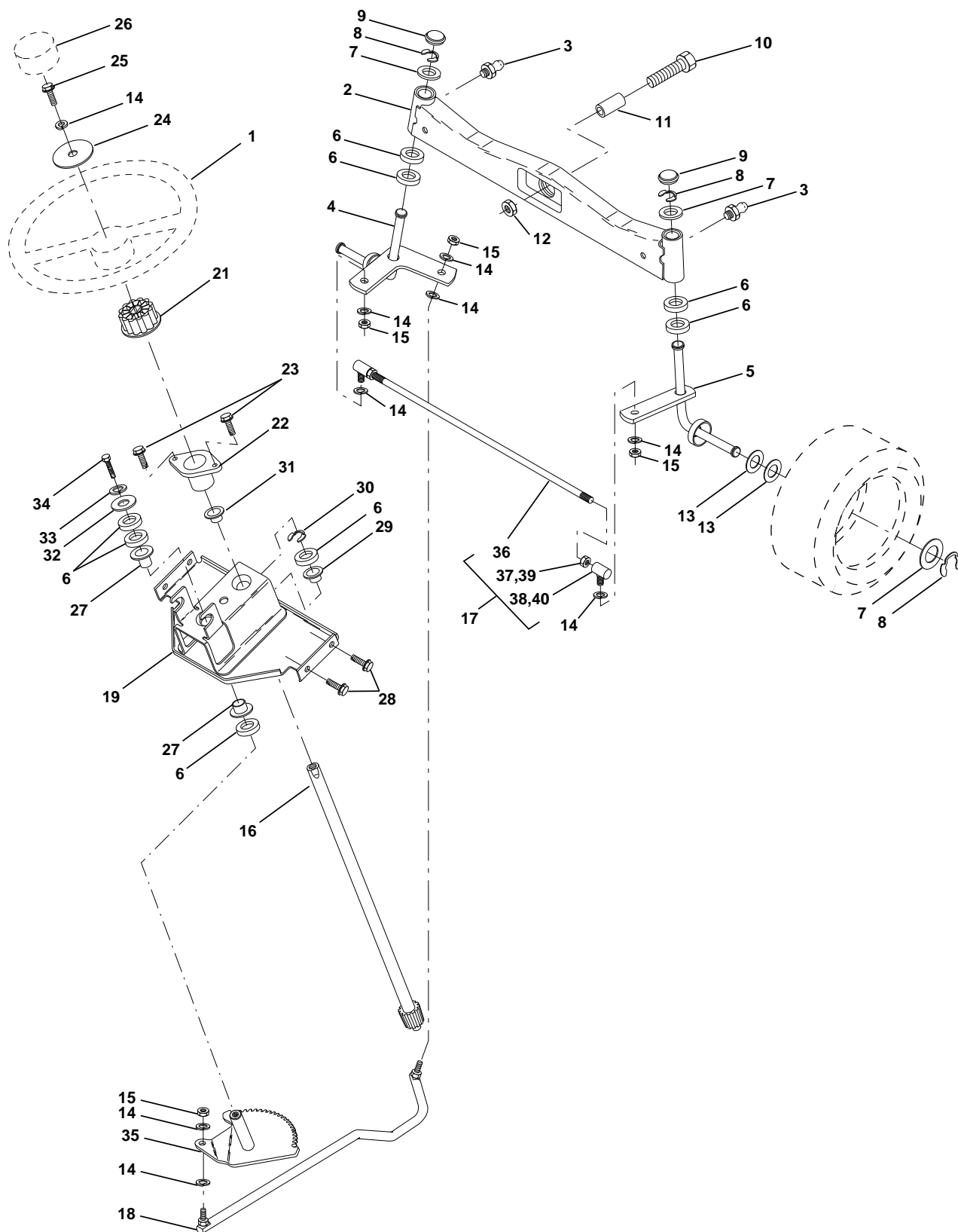
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
2	532007070	Key 1/4 x 2.5	69	532123800	Washer
3	532007563	Washer Thrust Axle Harden	70	532139989	Console Hydro Fender
5	873680600	Nut Crownlock 3/8-16	71	532140927	Plate Console Shift
6	876020412	Pin Cotter 1/8 x 3/4	72	873800500	Locknut Hex W/Washer Insert
7	532140507	Wheel Hub Asm.	73	874780548	Bolt Fin Hex 5/16-18 x 3
9	532140080	Bolt Hub	74	532142432	Screw, Hex Wsh Hi-Lo 1/4-1/2
15	819131316	Washer 13/32 x 13/16 x 16 Ga.	75	873800700	Nut Lock Hex 7/16
17	532140921	Spring Rod Brake	76	532140481	Bracket Transaxle
20	873940800	Nut Hex Jam Toplock 1/2-20	77	874760716	Bolt Fin Hex 7/16-14 x 1
22	532140498	Shaft Arm Asm	78	819111212	Washer 11/32 x 3/4 x 12 Ga.
23	532140845	Knob	79	872110505	Bolt Carriage 5/16-18 x 5/8
28	873350600	Nut, Hex Jam 3/8-16	80	532140484	Bracket Torque RH
29	532140494	Brake Rod	81	817490612	Screw Thdrol 3/8-16 x 3/4
30	819131616	Washer 13/32 x 1 x 16Ga	82	532140482	Bracket Mount Torque/Fan
32	873220700	Nut Hex 7/16-14	83	532140479	Strap Torque Mid
33	812000053	Ring E	84	532140490	Spacer
34	532071673	Cap Plunger	85	817541020	Screw #10-24 x 1-1/4
35	532137648	Rod Parking Brake	86	532140462	Fan 7" Hydro
36	532149412	Spring Drive Ground	87	532140491	Adapter Fan
37	532121749	Washer 25/32 x 1-1/4 x 16 Ga.	88	532140492	Pulley Idler
38	532110895	Nyliner	89	873680700	Nut, Crownlock 7/16-14
39	874321016	Screw Fin #10-24 x 1	90	532140489	Keeper Belt
40	532005304	Actuator Interlock Switch	91	817490644	Screw Thdrol 3/8-16 x 2-3/4
41	873631000	Nut Lock #10-24	92	874760520	Bolt Fin Hex 5/16-18 x 1.75
42	532123533	Cover Pedal	93	532140502	Link Shift Asm
43	874760412	Bolt Hex Head 1/4-20 x 3/4	94	532133835	Fastner Christmas Tree
44	532104601	Bracket Interlock	95	823200528	Screw Set 5/16-18 x 1.75
45	873800400	Nut Lock W/Insert 1/4-20	96	532141103	Washer Nickel Plated
46	532145170	Retainer Spring	97	532126874	Bearing Trust
47	532138228	Clutch Rod	98	532141004	Bracket Shift
48	872110614	Bolt Carriage 3/8-16 x 1-3/4 Gr. 5	99	817490624	Screw Thdrol 3/8-16 x 1-1/2
49	819131413	Washer 13/32 x 7/8 x 13 Ga	100	532126881	Washer Compression
50	532131494	Pulley Idler Flat	101	532059285	Washer Bellville
51	873800600	Nut Lock Hex 3/8-16	102	873560500	Nut Hex Nylok
52	532139123	Pulley Idler Grooved	103	873350500	Nut Hex Jam 5/16-18
53	532000207	Washer Hardened	104	532140480	Bracket Idler
54	532138390	Clutch Arm Asm	105	817580408	Screw Tap 1/4-20 x 1/2
55	532105706	Bearing, Idler	106	532142576	Fitting Vent Hose
56	532140218	V-Belt	107	532142577	Vent Hose
58	874760724	Bolt Fin Hex 7/16-14 x 1-1/2	108	532142578	Cap Vent
61	532140488	Pullery Transaxle	109	532140929	Spring Return Brake
64	532137649	Shaft Asm Brake Parking Clutch	110	532088652	Screw, Hinge
65	532067609	Bolt Shoulder	--	532140343	Transaxle Hydro
66	532140296	Washer Hardened			
67	819131312	Washer 13/32 x 13/16 x 12 Ga			
68	532005142	Pin Roll			

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### STEERING ASSEMBLY





# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### STEERING ASSEMBLY

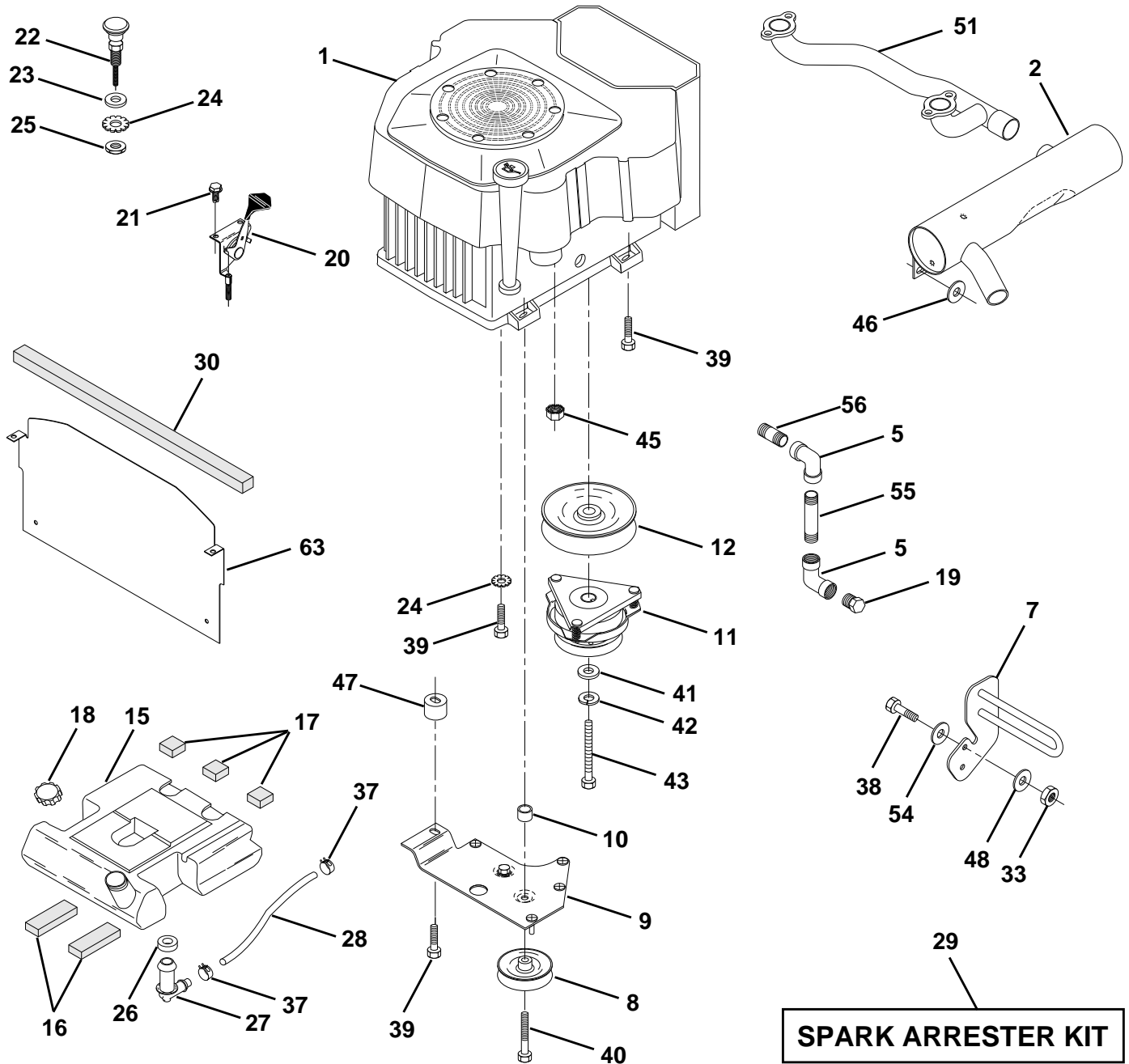
KEY NO.	PART NO.	DESCRIPTION
1	532124415	Wheel, Steering
2	532137094	Axle Asm., Front
3	532124836	Fitting, Grease
4	532136960	Spindle Asm, LH
5	532136959	Spindle Asm., RH
6	532124956	Bearing, Race Thrust Harden
7	532121748	Washer 25/32 x 1-5/8 x 16 Ga.
8	812000029	Ring, Klip #T5304-75
9	532121232	Cap, Spindle
10	874781044	Bolt, Fin Hex 5/8-11 x 2-3/4
11	532136518	Spacer, Brg. Axle Front
12	873901000	Nut, Lock Flange 5/8-11 Unc
13	532121749	Washer 25/32 x 1-1/4 x 16 Ga.
14	810040600	Washer, Lock Hvy Hlcl Spr 3/8
15	873610600	Nut, Fin Hex 3/8-24 Unf
16	532145103	Shaft Asm., Steering
17	532137347	Rod Asm., Tie Ball J Ball Vgt (Inc. Key No. 36-40)
18	532137155	Draglink, Ball Joint Solid Vgt
19	532146611	Support Asm., Steering Vgt
21	532100711	Adapter, Wheel Steering
22	532124720	Bushing, Strg. Blk
23	817431008	Screw, Slftp #10-16 x 1/2 Ty-b
24	819133808	Washer 13/32 x 2-3/8 x 8 Ga.
25	874780616	Bolt, Fin Hex 3/8-16 x 1 Gr. 5
26	532124416	Cap, Wheel Steering
27	532124937	Bearing, Col. Strg.
28	817490612	Screw Thdrol 3/8-16 x 3/4
29	532104239	Bearing, Flange
30	812000034	Ring, Klip Truarc #5304-75
31	532138136	Bushing, Nylon Snap
32	819111610	Washer 11/32 x 1 x 10 Ga.
33	810040500	Washer, Lock Hvy Hlcl Spr 5/16
34	874760512	Bolt, Hex Hd 5/16-18 x 3/4
35	532138059	Gear, Sector Steering
36	532137156	Tie Rod
37	873360600	Jam Nut RH Thread
38	532109850	Joint Asm. Ball RH Thread
39	873700600	Jam Nut LH Thread
40	532109851	Joint Asm. Ball LH Thread

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

TRACTOR - MODEL NO. GTH220 (954830167A)

## ENGINE



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### ENGINE

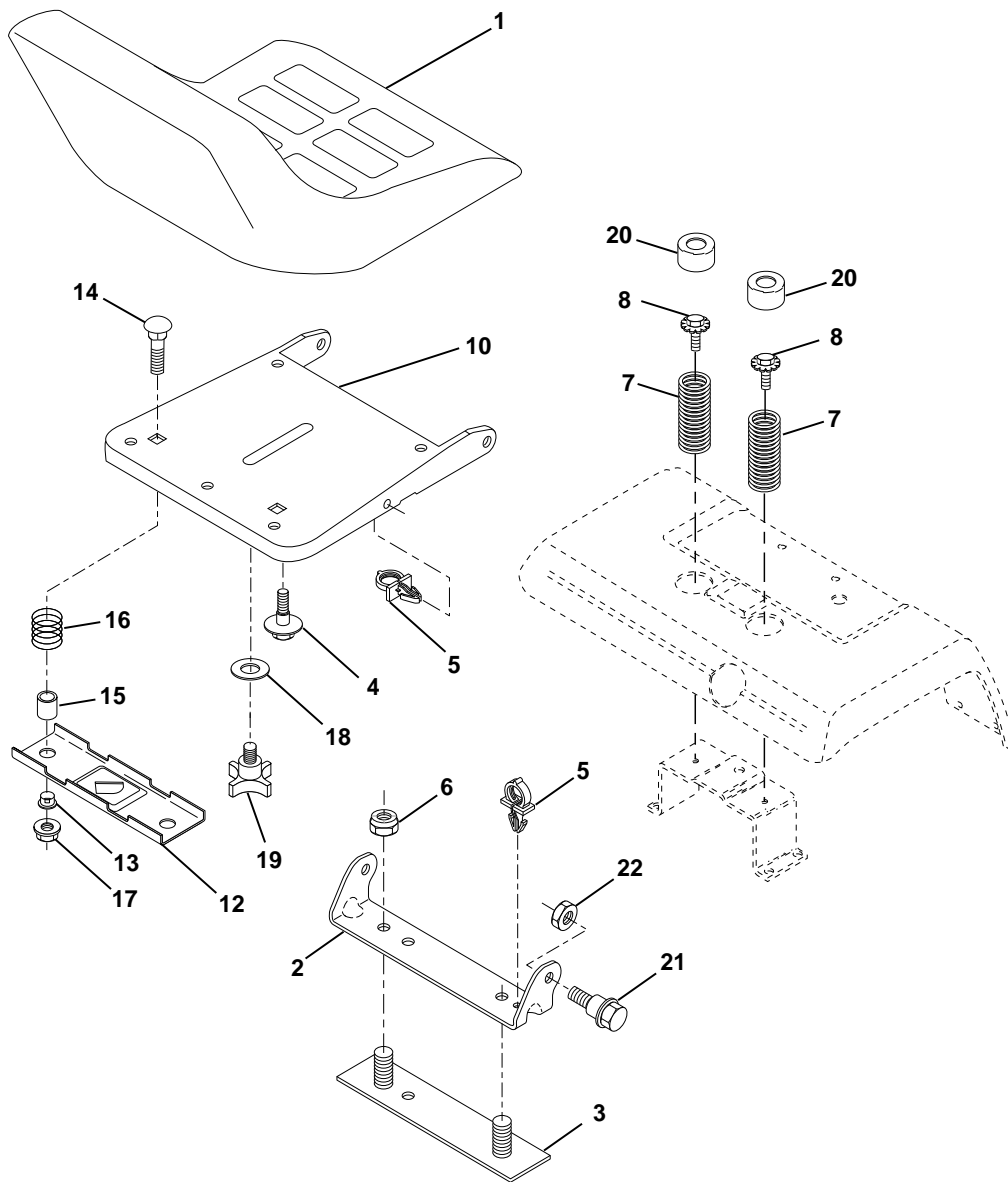
KEY NO.	PART NO.	DESCRIPTION
1	-----	Engine Kohler, Model No. CV22S
2	532144636	Muffler VGT Cylinder
5	813200300	Elbow STD 90 Degree 3/8-18 NPT
7	532143599	Muffler Assembly Guard
8	532121361	Pulley V-Idler
9	532145109	Stop Keeper Asm VGT
10	532105432	Bushing
11	532140923	Clutch Electric
12	532143996	Pulley Engine VGT Elect Clutch
15	532141069	Tank Fuel W/Sym Vented
16	532109227	Pad Spacer
17	532106082	Pad Spacer
18	532140527	Cap Asm Fuel W/Sym Vented
19	813290300	Plug Oil Drain (Order From Engine Manufacturer)
20	532132747	Control Throttle
21	817720410	Screw Hex Thd Cut 1/4-20 X 5/8
22	532132781	Control Choke
23	819131316	Washer 13/32 X 13/16 x 16 Ga
24	811050600	Washer Ext Tooth 3/8
25	873610600	Nut Fin Hex 3/8 - 24 UNF
26	532124952	Bushing
27	532139277	Stem Tank Fuel
28	532124703	Fuel Line
29	532132920	Spark Arrester Kit
30	532105037	Strip Foam 18"
33	873800600	Nut, Hex W/Ins. 3/8-16 UNC
37	532123487	Clamp Hose
38	874780624	Bolt, Fin Hex 3/8-16 UNC x 1-1/2
39	817490636	Screw TT 3/8-16 x 2-1/4 UNC
40	817490664	Screw TT 3/8-16 x 4 UNC
41	532126197	Washer 1-1/2 OD X 15/32 ID X .250
42	810040700	Washer Lock 7/16
43	532150280	Bolt Hex 7/16-20 X 4-1/4 Ga 5
45	532128861	Nut Flange 1/4-20 Starter Nut
46	819131616	Washer 13/32 x 1 x 16 Ga.
47	532142040	Spacer Engine
48	819132007	Washer 13/32 x 1-1/4 x 7 Ga.
51	532140787	Pipe Crossover
54	819131414	Washer Flat 13/32 x 7/8 x 14 Ga.
55	813090336	Nipple, Pipe 3/8 NPT x 4-1/2
56	813090308	Nipple, Pipe 3/8 NPT x 1.00
63	532145549	Shield, Heat VGT YP/Husq.

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### SEAT ASSEMBLY



KEY NO.	PART NO.	DESCRIPTION
1	532141525	Seat
2	532140551	Bracket, Pivot Seat
3	532140675	Strap, Fender
4	532127018	Bolt, Shoulder 5/16-18 X .62
5	532145006	Clip, Push In Hinged
6	873800600	Nut, Lock Hex W/Ins. 3/8-16 Unc
7	532124181	Spring, Seat Cprsn
8	817490508	Screw, Thdrol 5/16-18 X 1/2
9	819131614	Washer 13/32 X 1 X 14 Ga.
10	532140552	Pan, Seat
12	532121246	Bracket, Mounting Switch
13	532121248	Bushing, Snap

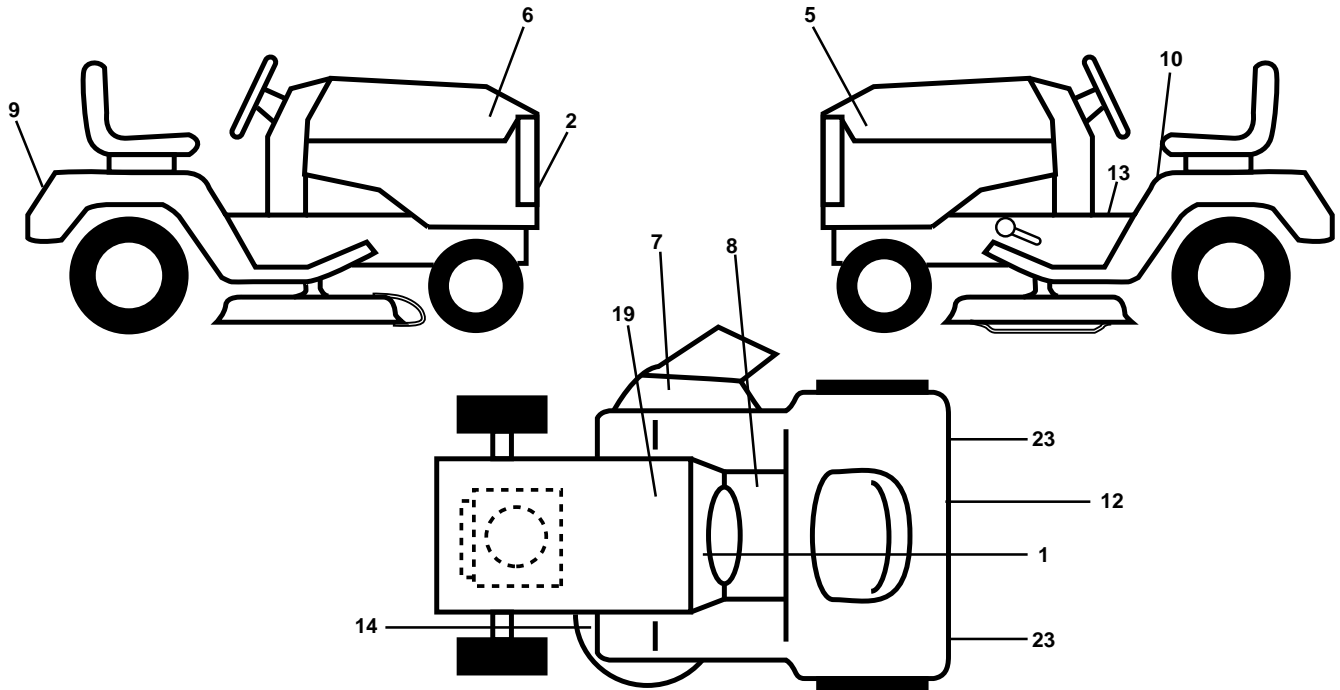
KEY NO.	PART NO.	DESCRIPTION
14	872050411	Bolt, Carriage 1/4-20 X 1-3/8
15	532121249	Spacer, Split
16	532123740	Spring, Cprsn
17	532123976	Nut, Lock 1/4 Lge Flg Gr. 5
18	819171912	Washer 17/32 X 1-3/16 X 12 Ga.
19	532120068	Knob, Seat 1/2-13 Unc
20	532124238	Cap, Spring Seat
21	532139888	Bolt, Shoulder 5/16-18 Unc
22	873680500	Nut, Crownlock 5/16-18 Unc

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### DECALS

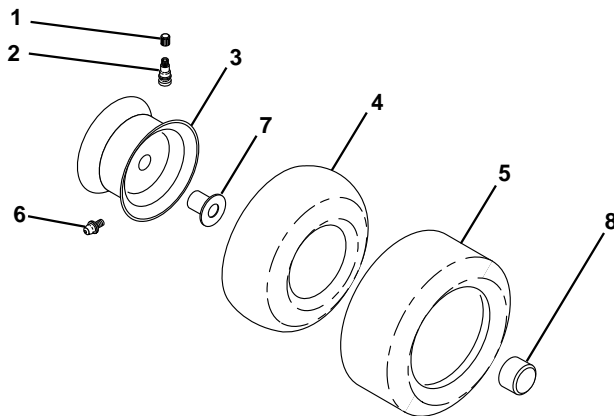


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	532138956	Decal, Operating Instruction	--	532138311	Decal, Handle Lft Height Adjust (Lift Handle)
2	532150616	Decal, Grille Husqvarna	--	532145246	Pad Ftrst Rbr Sq Generic 95
5	532150619	Decal, Inst Hood LH GTH220 Hydro	--	532145247	Fastener Pop-In Footrest (8 per)
6	532150618	Decal, Insrt Hood RH GTH220 Hydro	--	532150629	Manual, Owner's (English)
7	532137259	Decal, Warning Multi-Language	--	532150630	Manual, Owner's (French)
8	532140837	Decal, Brake Parking Saddle			
9	532140617	Decal, Fender			
10	532133795	Decal, Caution			
11	532101892	Decal, Clutch/Brake			
12	532142342	Decal, D-Bar Ctrl. Mvt Hyd YT/GT			
13	532142337	Decal, Sdl Cold Start Hyd E/F			
14	532139346	Decal, V-Belt Schematic			
19	532145005	Decal, Battery			
23	532106202	Reflector, Taillight			

Accessories not included with tractor:

--	SH10	Sleeve Hitch
--	TA128	Tire Chains
--	GBD48	Snow Blade
--	TA321	#55 Wheel Weights
--	EA20	Electric Assist Kit
--	GSB42	Snow Blower

### WHEELS & TIRES



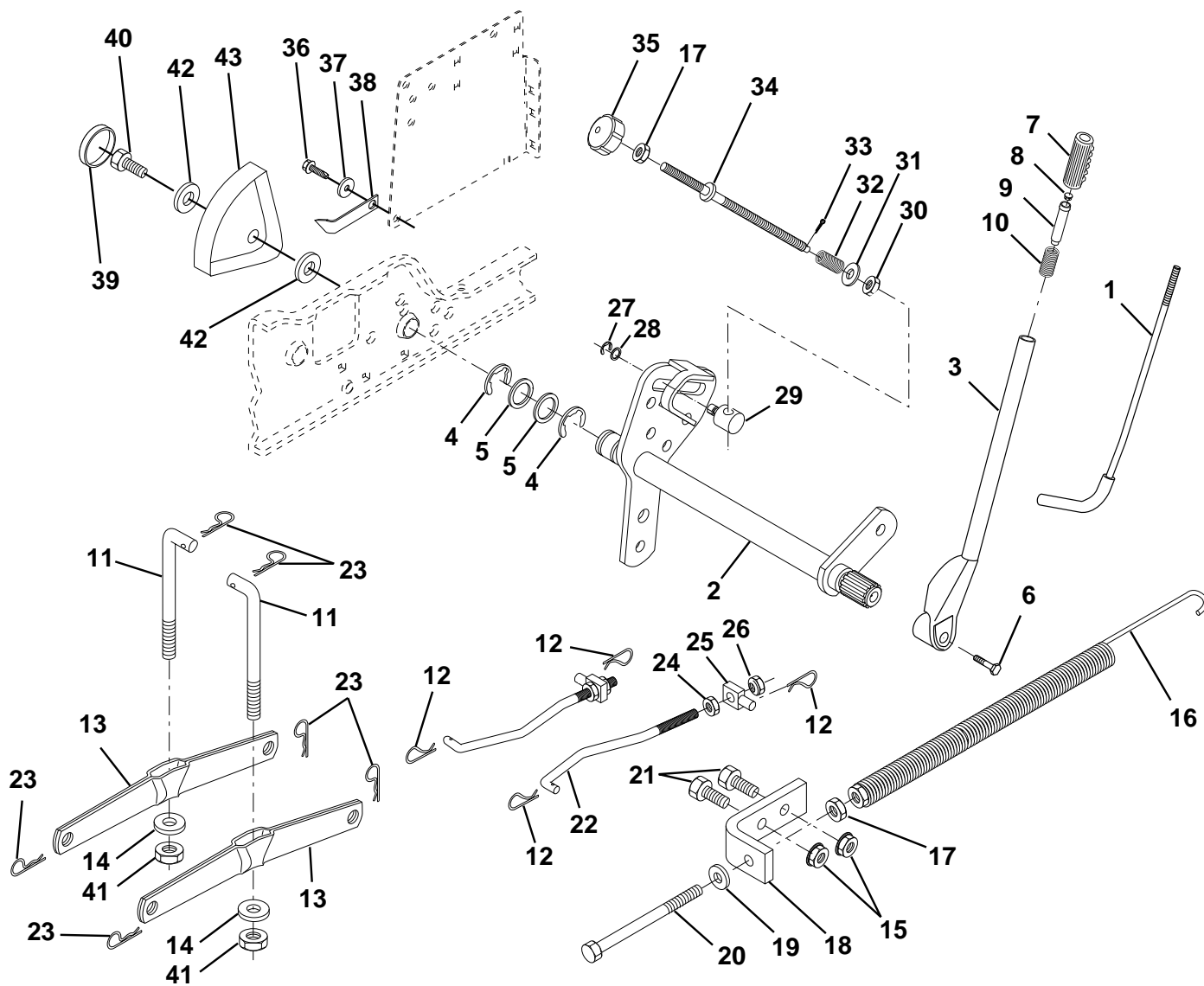
KEY NO.	PART NO.	DESCRIPTION
1	532059192	Cap, Valve, Tire
2	532065139	Stem, Valve
3	532144509	Rim Assembly, Front
	532144510	Rim Assembly, Rear
4	532008134	Tube, Front (Service Item Only)
	532007154	Tube, Rear (Service Item Only)
5	532106230	Tire, Front
	532105588	Tire, Rear
6	532124860	Fitting, Grease
7	532124959	Bearing, Flange (Front Wheel Only)
8	532104757	Cap, Hub, Axle Blk.
--	532144334	Sealant, Tire (10 oz. Tube)

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

TRACTOR - MODEL NO. GTH220 (954830167A)

## LIFT ASSEMBLY



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### LIFT ASSEMBLY

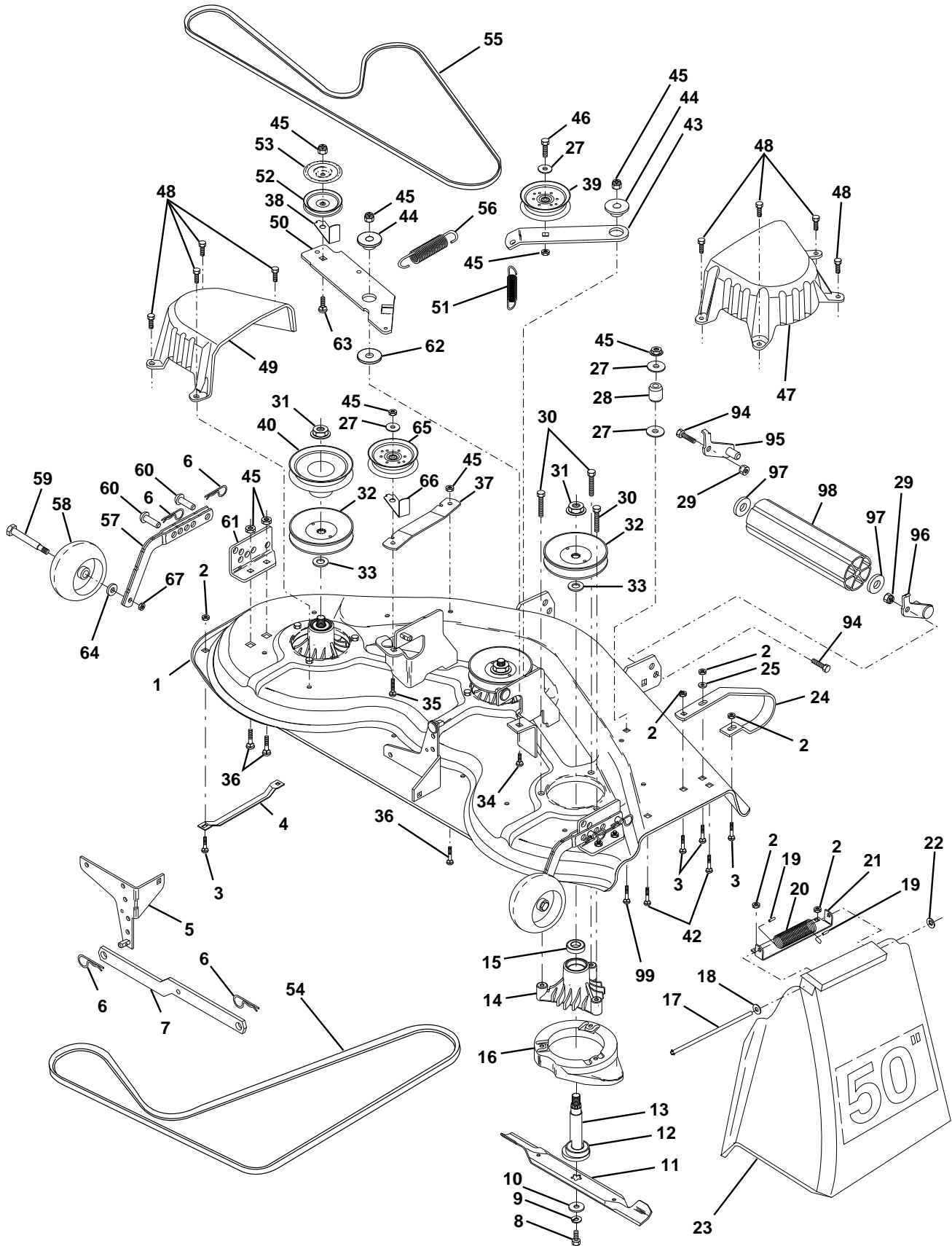
KEY NO.	PART NO.	DESCRIPTION
1	532121006	Rod Asm., Lever
2	532145542	Shaft Asm., Lift Vgt
3	532121002	Lever Asm., Lift Rh
4	812000022	E-Ring Truarc #5133-87
5	819292016	Washer 29/32 x 1-1/4 x 16 Ga.
6	874780624	Bolt, Fin Hex 3/8-16 x 1-1/2
7	532125631	Grip, Handle Fluted
8	532124526	Button, Plunger
9	532122364	Plunger, Lever Lift
10	532124874	Spring 2-1/8"
11	532146704	Link Lift
12	532124660	Retainer, Spring
13	532139868	Arm, Suspension Vgt
14	532140302	Bearing
15	873680600	Nut, Crownlock 3/8-16 Unc
16	532124687	Spring Asm., Assist Lift
17	873350600	Nut, Hex Jam 3/8-16 Unc
18	532143363	Bracket, Spring Assist
19	819131316	Washer 13/32 x 13/16 x 16 Ga.
20	532005328	Bolt, Adjust Spring Assist
21	874760616	Bolt, Fin Hex 3/8-16 x 1
22	532127218	Link, Front
23	532124670	Retainer, Spring
24	873350800	Nut, Jam Hex 1/2-13 Unc
25	532130171	Trunnion
26	873800800	Nut, Lock W/Wsh 1/2-13 Unc
27	812000037	Ring, Klip #T5304-37
28	819151216	Washer 15/32 x 3/4 x 16 Ga.
29	532110810	Trunnion, Dp Stop Dbl Thds Plt
30	532110807	Nut, Special
31	819131016	Washer 13/32 x 5/8 x 16 Ga.
32	532137150	Spring, Compression Inf Hgt
33	876020308	Pin, Cotter 3/32 x 1/2
34	532137167	Rod, Adj Lift
35	532138057	Knob, Inf 3/8-16 Unc
36	817490612	Screw, Thdrol 3/8-16 x 3/4
37	532120529	Washer, Nylon
38	532138346	Pointer, Pnt Height Indicator
39	532123935	Plug, Hole
40	817490512	Screw Thdrol 5/16-18 x 3/4
41	873540600	Nut, Crownlock 3/8-24
42	819112410	Washer 11/32 x 1-1/2 x 10 Ga.
43	532123934	Scale, Indicator Height

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### MOWER DECK





# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### MOWER DECK

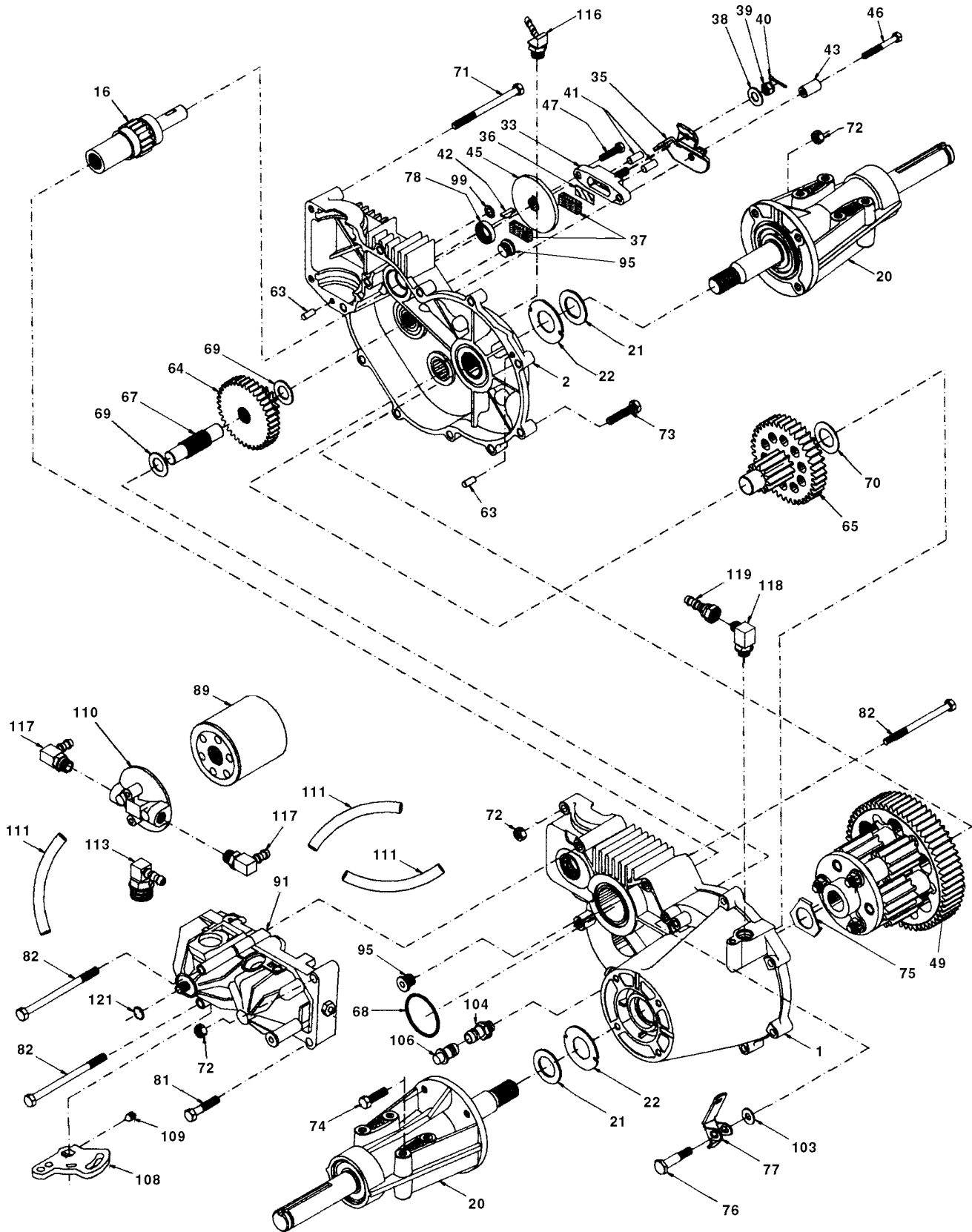
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	532136457	Deck Asm., Mower 50" Vented	42	872140506	Bolt, Carriage 5/16-18 Unc x 3/4
2	873680500	Nut, Crownlock 5/16-18 Unc	43	532136460	Arm, Idler Secondary
3	872110506	Bolt, Carriage 5/16-18 x 3/4	44	532122052	Spacer, Retainer
4	532125074	Runner, Mower LH	45	873680600	Nut, Crownlock 3/8-16 Unc
5	532138457	Bracket Asm., Sway Bar	46	874760628	Bolt, Fin Hex 3/8-16 Unc x 1-3/4
6	532124670	Retainer, Spring	47	532137200	Cover, Mandrel RH
7	532130832	Arm Suspension, Rear	48	532137729	Screw, Thd Roll 1/4-20 x 5/8
8	532850857	Bolt 3/8-24 x 1.25 Gr. 8 Patched	49	532136574	Cover, Mandrel LH
9	810030600	Washer, Lock Hvy 3/8 Unplated	50	532137272	Arm, Idler Primary
10	532140296	Washer, Hard Blade Mower Vented	51	532137273	Spring, Secondary
11	532137380	Blade (3 Required)	52	532139245	Pulley, Idler V Groove
12	532129895	Bearing, Ball #6204 (Mandrel)	53	532137789	Shield, Idler
13	532137553	Shaft Asm., W/Lower Brg (Includes Key No. 12)	54	532139573	V-Belt, Mower Primary
14	532137152	Housing, Mandrel 50" Vent	55	532144959	V-Belt, Mower Secondary
15	532110485	Bearing, Ball Mandrel	56	532138687	Spring, Primary
16	532140329	Stripper, Mower Vented	57	532136577	Bar Asm., Wheel Gauge
17	532106735	Rod, Hinge	58	532133957	Wheel, Gauge
18	819111016	Washer 11/32 x 5/8 x 16 Ga.	59	532137644	Bolt, Shoulder
19	532105304	Cap, Sleeve	60	532139031	Pin, Clevis
20	532123713	Spring, Torsion Deflector	61	532136573	Bracket, Wheel Gauge
21	532137607	Bracket, Deflector	62	532133943	Washer Hardened
22	532110452	Nut, Push	63	872110612	Bolt Carriage 3/8-16 x 1-1/2
23	532110509	Shield, Deflector Mower	64	819121414	Washer 3/8 x 7/8 x 14 Ga.
24	532136320	Runner, RH	65	532102403	Pulley Idler Flat Mower
25	819111216	Washer 11/32 x 3/4 x 16 Ga.	66	532139622	Keeper, Belt Idler 50" Vent
27	819131316	Washer 13/32 x 13/16 x 16 Ga.	67	873930600	Nut, Center Lock 3/8-16
28	532132823	Spacer, Spring Stop Idler	94	874760616	Bolt, Fin Hex 3/8-16 UNC x 1
29	873800600	Nut, Lock Hex W/Wsh 3/8-16 Unc	95	532132274	Bracket, Asm. Noseroller LH
30	532138776	Screw Thdrol Hex Head	96	532132273	Bracket, Asm. Noseroller RH
31	532137266	Nut, Flg Top Lock Cntr 9/16	97	819171416	Washer 17/32 x 7/8 x 16 Ga.
32	532129861	Pulley, Mandrel	98	532132264	Roller, Nose
33	532129963	Washer, Spacer Mower Vented	99	872110614	Bolt, Carriage 3/8-16 x 1-3/4 Gr. 5
34	872140610	Bolt, Carriage 3/8-16 x 1-1/4	--	532143651	Mandrel Asm (Includes Key Nos. 8-10, 12-15, 31 and 33)
35	872110616	Bolt, Carriage 3/8-16 x 2	--	532141051	Mower Asm Service (Std. Deck - Order separately all Nose Roller and all Gauge Wheel components)
36	872110608	Bolt, Carriage 3/8-16 x 1 Gr. 5			
37	532137166	Stiffener, Arm Idler			
38	532137554	Keeper, Belt Idler			
39	532131494	Pulley, Idler Flat			
40	532136572	Pulley, Driven			

**NOTE:** All component dimensions given in U.S. inches  
1 inch = 25.4 mm

# REPAIR PARTS

TRACTOR - MODEL NO. GTH220 (954830167A)

TRANSAXLE HYDRO GEAR MODEL NUMBER 210-3010



# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

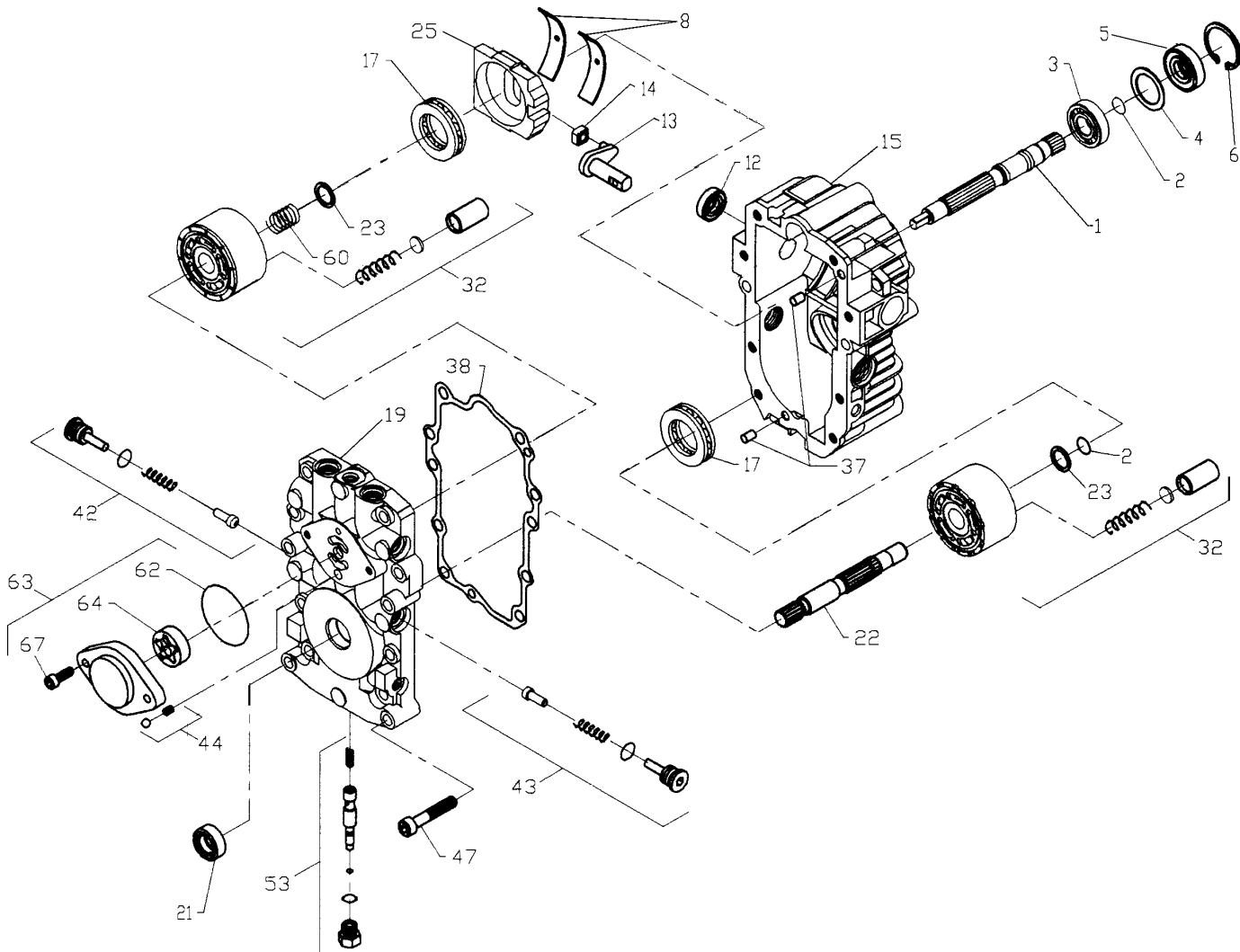
### TRANSAXLE HYDRO GEAR MODEL NUMBER 210-3010

ITEM NO.	AYP PART NO.	DESCRIPTION	ITEM NO.	AYP PART NO.	DESCRIPTION
1	532142874	Assembly, Lh Housing	71	532142902	Bolt, Hex 5/16-18 X 3.5
2	532142875	Assembly, Rh Housing	72	532142903	Hex Lock Nut, 5/16-18
16	532142876	Brake Shaft Assembly	73	532142904	Bolt, Hex 5/16-18 X 1-1/2
20	532142877	Axle Mounting Horn Ass'y	74	532142905	Hex Cap Screw, 5/16-18 X 1
21	532142878	Washer, 1.0x1.63x.08	75	532142906	Washer, Differential
22	532142879	Washer, 1.0x2.06x.09	76	532142907	Shoulder Bolt
33	532142929	Brake Yoke Assembly	77	532142908	Freewheel Actuating Arm
35	532142880	Brake Arm	78	532142909	Oil Seal, .625 X 1.0 X .25
36	532142882	Puck Plate	81	532142910	Bolt, Hex 5/16-18 X 1-3/4
37	532142883	Brake Puck	82	532142911	Bolt, 5/16-18 X 4-1/2
38	532142884	Washer, 7/8odx7/16x.060	89	532142912	Spin On Filter
39	532142885	Castle Nut, 5/16-24	91	532142913	Bdu-10l-118
40	532142886	Cotter Pin	95	532142914	Straight Thread Plug
41	532142887	Brake Actuating Pin	99	532142915	Washer, 11/32 X 9/16
42	532142888	Hi Pro Key	103	532142916	Washer
43	532142889	Spacer	104	532142917	Cap-Vent Assembly
45	532142890	Brake Disc	106	532142918	Fitting-O Ring Assembly
46	532142891	Bolt, 1/4-20 X 1-1/2	108	532142919	Control Arm
47	532142892	Bolt, 1/4-20 X 1	109	532142920	Set Screw
49	532142893	Differential Assembly	110	532142921	Filter Head
63	532142894	Dowel Pin	111	532142922	Hose, 5/16 X 12" Long
64	532142896	14t-38t Reduction Gear	113	532142923	90° 7/8 Sae Fitting
65	532142897	Final Drive Pinion Ass'y	116	532142924	45° 9/16 Sae Fitting
67	532142898	Jack Shaft	117	532142925	90° 9/16 Sae Fitting
68	532142899	O Ring	118	532142926	90° Sae #6 Flare Male Fitting
69	532142900	Washer, 5/8 X 1-5/32	119	532142927	90° Sae #6 Flare Female Fitting
70	532142901	Washer, 7/8 X 1-1/2	121	532142928	Wire Retaining Ring

# REPAIR PARTS

## TRACTOR - MODEL NO. GTH220 (954830167A)

### TRANSAXLE PUMP- - MODEL NUMBER BDU-10L-118



#### KEY PART NO. NO.

#### DESCRIPTION

1	532144569	Shaft, Pump
2	532122716	Ring, Retaining
3	532122745	Bearing, Ball
4	532122715	Spacer
5	532122700	Seal, Lip
6	532122699	Ring, Retaining
8	532122767	Bearing, Cradle
12	532122717	Seal, Lip
13	532122748	Arm, Trunnion
14	532122749	Guide, Slot
15	532144571	Housing Kit, Transmission
17	532122770	Bearing, Thrust, Ball
19	532144572	Center Section Kit
21	532122722	Seal, Lip
22	532144573	Shaft, Motor
23	532142978	Washer, Block Thrust

#### KEY PART NO. NO.

#### DESCRIPTION

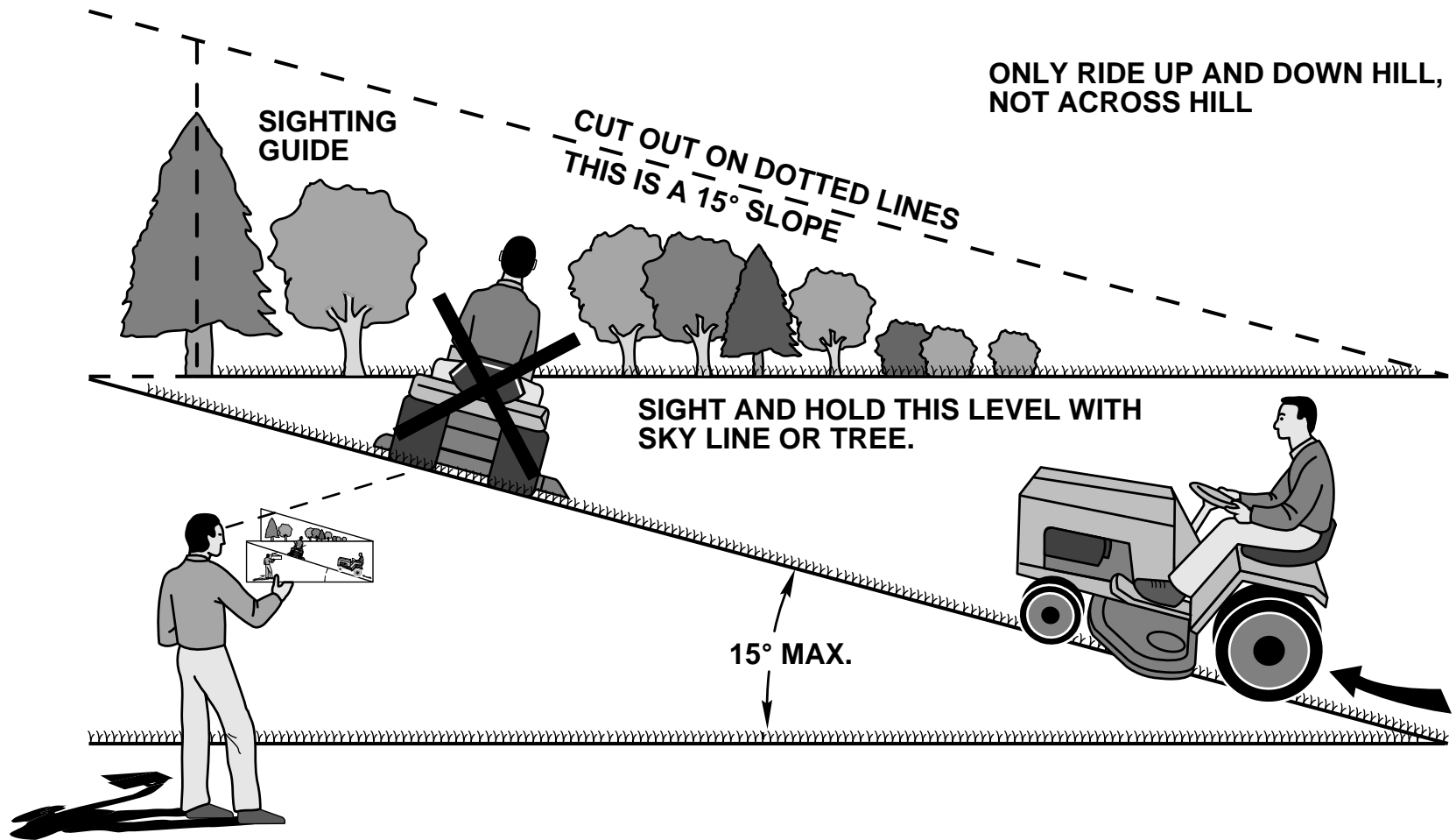
25	532127148	Swashplate, Variable
32	532142938	Block Assembly
37	532122786	Pin, Stainless, Headless
38	532122718	Gasket, Center Section
42	532144578	Check Valve Kit
43	532144578	Check Valve Kit
44	532144579	Charge Relief Kit
47	532122752	Screw, Socket Head, Cap
53	532127153	Bypass Valve Kit
60	532142977	Block Spring
62	532144581	O-Ring
63	532144582	Charge Pump Kit
64	532144583	Gerotor Assembly
67	532144584	Screw, Socket Head, Cap
--	532144576	Pump Assembly, Complete

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# SERVICE NOTES

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# SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



54

 Operate your Tractor up and down the face of slopes (not greater than 15°), never across the face. Make turns gradually to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.



## WARRANTY STATEMENT

### **SECTION 1: LIMITED WARRANTY**

Husqvarna Forest & Garden Company ("Husqvarna") warrants Husqvarna product to the original purchaser to be free from defects in material and workmanship from the date of purchase for the "Warranty Period" of the product as set forth below:

**Lifetime Warranty:** All tiller tines, trimmer shafts, ignition coils and modules on hand held product.

**2 Year Warranty:** Riding lawn mowers, yard and garden tractors, walk behind mowers, tillers, trimmers, brushcutters, snow blowers, handheld blowers, hedge trimmers, and electrical products for noncommercial, nonprofessional, noninstitutional or nonincome producing use, except as herein stated.

Emission control system components necessary to comply with CARB-95 and EPA regulations, except for those components which are part of engine systems manufactured by third party engine manufacturers for which the purchaser has received a separate warranty with product information supplied at time of purchase.

**1 Year Warranty:** Chain saws, clearing saws and backpack blowers for noncommercial, nonprofessional, noninstitutional or nonincome producing use. Trimmer models 120, 125, 122, 132, 225, 232 and 235 used for commercial purposes.

**90 Day Warranty:** Any Husqvarna product used for rental, commercial, institutional, professional or income producing use except as otherwise provided herein.

**30 Day Warranty:** Husqvarna bow guide and replacement parts.

### **SECTION 2: HUSQVARNA'S OBLIGATIONS UNDER THE WARRANTY**

Husqvarna will repair or replace defective components without charge for parts or labor if a component fails because of a defect in material or workmanship during the warranty period.

### **SECTION 3: ITEMS NOT COVERED BY THIS WARRANTY**

The following items are not covered by this warranty:

- (1) Normal customer maintenance items which become worn through normal regular use, including, but not limited to, belts, blades, blade adapters, bulbs, filters, guide bars, lubricants, rewind springs, saw chain, spark plugs, starter ropes and tines;
- (2) Natural discoloration of material due to ultraviolet light;
- (3) Engine and drive systems not manufactured by Husqvarna; these items are covered by the respective manufacturer's warranty as provided in writing with the product information supplied at the time of purchase; all claims must be sent to the appropriate manufacturer;
- (4) Lawn and garden attachments are covered by a third party which gives a warranty, all claims for warranty should be sent to the manufacturer; and
- (5) Emission Control System components necessary to comply with CARB-95 and EPA regulations which are manufactured by third party engine manufacturer.

### **SECTION 4: EXCEPTIONS AND LIMITATIONS**

This warranty shall be inapplicable to defects resulting from the following:

- (1) Accident, abuse, misuse, negligence and neglect, including stale fuel, dirt, abrasives, moisture, rust, corrosion, or any adverse reaction due to incorrect storage or use habits;

- (2) Failure to operate or maintain the unit in accordance with the Owner's/Operator's manual or instruction sheet furnished by Husqvarna;
- (3) Alterations or modifications that change the intended use of the product or affects the product's performance, operation, safety, or durability, or causes the product to fail to comply with any applicable laws; or;
- (4) Additional damage to parts or components due to continued use occurring after any of the above.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. HUSQVARNA SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THESE PRODUCTS EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THESE PRODUCTS IS LIMITED IN DURATION TO THE WARRANTY PERIOD AS DEFINED IN THE LIMITED WARRANTY STATEMENT. HUSQVARNA RESERVES THE RIGHT TO CHANGE OR IMPROVE THE DESIGN OF THE PRODUCT WITHOUT NOTICE, AND DOES NOT ASSUME OBLIGATION TO UPDATE PREVIOUSLY MANUFACTURED PRODUCTS.

Some states do not allow the exclusion of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### **SECTION 5: CUSTOMER RESPONSIBILITIES**

The product must exhibit reasonable care, maintenance, operation, storage and general upkeep as written in the maintenance section of the Owner's/Operator's manual. Should an operational problem or failure occur, the product should not be used, but delivered as is to an authorized Husqvarna dealer for evaluation. Proof of purchase, as explained in section 6, rests solely with the customer.

### **SECTION 6: PROCEDURE TO OBTAIN WARRANTY CONSIDERATION**

It is the Owner's and Dealer's responsibility to make certain that the Warranty Registration Card is properly filled out and mailed to Husqvarna Forest & Garden Company. This card should be mailed within ten (10) days from the date of purchase in order to confirm the warranty and to facilitate post-sale service.

Proof of purchase must be presented to the authorized Husqvarna dealer in order to obtain warranty service. This proof must include date purchased, model number, serial number, and complete name and address of the selling dealer.

To obtain the benefit of this warranty, the product believed to be defective must be delivered to an authorized Husqvarna dealer in a timely manner, no later than thirty (30) days from date of the operational problem or failure. The product must be delivered at the owner's expense. Pick-up and delivery charges are not covered by this warranty. An authorized Husqvarna dealer can be normally located through the "Yellow Pages" of the local telephone directory or by calling 1-800-HUSKY62 for a dealer in your area.

**HUSQVARNA FOREST & GARDEN COMPANY  
9006-J PERIMETER WOODS DRIVE  
CHARLOTTE, NC 28216**

