



CRAFTSMAN

20.0 HP ELECTRIC START 46" MOWER AUTOMATIC GARDEN TRACTOR

- Assembly
- Operation
- Customer Responsibilities
- Service and Adjustments
- Repair Parts

Sears Canada, Inc., Toronto, Ontario M5B 2B8

A

SAFETY RULES Safe Operation Practices for Ride-On Mowers



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. **CONGRATULATIONS** on your purchase of a Sears 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 Sears Authorized Service Centre/Department We have competent, welltrained 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	944.609900
SERIAL NUMBER	

DATEOFPURCHASE

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.

MAINTENANCE AGREEMENT

A Sears Maintenance Agreement is available on this product. Contact your nearest Sears store for details.

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:	20.0
GASOLINE CAPACITY AND TYPE:	3.5 GALLONS UNLEADED REGULAR
OIL TYPE (API-SF/SG/SH):	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: .030")	CHAMPION RC12YC
VALVE CLEARANCE:	NOT ADJUSTABLE
GROUND SPEED (MPH):	FORWARD: 0 – 5.8 REVERSE: 0 – 2.1
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	15 AMPS @ 3600 RPM
BATTERY:	AMP/HR: 35 MIN. CCA: 280 CASE SIZE: U1R
BLADE BOLT TORQUE:	27–35 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 Sears Authorized Service Centre/Department (See REPAIR PARTS section of this manual).

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LIMITED TWO (2) YEAR WARRANTY ON CRAFTSMAN TRACTOR (RIDING EQUIPMENT)

For two (2) years from date of purchase Sears Canada, Inc. will repair or replace at Sears option free of charge parts which are defective as a result of material or workmanship.

FULL ONE (1) YEAR WARRANTY ON BATTERY

For one (1) year from date of purchase, if any battery included with this riding equipment proves defective in material or workmanship and our testing determines the battery will not hold a charge, Sears will replace the battery at no charge.

COMMERCIAL OR RENTAL USE

Warranty on Riding Equipment used for commercial or rental purposes is limited to ninety (90) days.

This Warranty does NOT cover:

- 1. Pre-delivery set-up.
- 2. Tire replacement or repair caused by punctures from outside objects (such as nails, thorns, stumps, or glass).
- 3. Expendable items which become worn during normal use, such as blades, spark plug, air cleaners and belts.

4. Repairs necessary because of operator abuse or negligence, including damaged jackshaft or mandrel and the failure to operate and maintain the equipment according to the instructions contained in the Owner's Manual.

5. In Home service.

Warranty service is available by returning the Craftsman Riding Equipment to the nearest Sears Service Centre/Department in Canada. This warranty applies only while this product is in use in Canada.

This warranty is in addition to any statutory warranty and does not exclude or limit legal rights you may have but shall run concurrently with applicable provincial legislation. Furthermore, some provinces do NOT allow limitation on how long an implied warranty will last so the above limitations may not apply to you.

SEARS CANADA, INC., TORONTO, ONTARIO M5B 2B8

CONTENTS OF HARDWARE PACK



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
- (1) 9/16" wrench
- (1) Utility knife
- (1) 1/2" wrench
- (1) 3/4" socket w/drive ratchet
- (1) Pliers (1) Phillips Screwdriver

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.
- Slide the steering sleeve over the steering shaft.
- Align tabs and press steering sleeve extension into bottom of steering wheel.
- Position steering wheel so cross bars are horizontal (left to right) and slide onto steering wheel 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 materials 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.



FIG. 1

TO ROLL TRACTOR OFF SKID (See Operation section for location and function of controls)

- Press lift lever plunger and 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 forward off skid.

HOW TO SET UP YOUR TRACTOR

CONNECT BATTERY (See Fig. 2)



CAUTION: Do not short battery terminals by allowing a wrench or any other object to contact both terminals at the same time. 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 and keps nut as shown. Tighten securely.
- Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt and keps nut. Tighten securely.
- Close terminal access doors.

Use terminal access doors for:

- Inspection for secure connections (to tighten hard ware).
- 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. Tighten shoulder bolt securely.
- Assemble adjustment knob and flat washer loosely. Do not tighten.
- 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

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" section 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.

INSTALL MOWER AND DRIVE BELT (See Figs. 4 and 6)

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

- Cut and remove ties securing anti-sway bar and belts. 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 R.H. front mower bracket and R.H. front suspension bracket. Retain with two single loop retainer springs as shown.
- Install second front link in L.H. front suspension bracket only and 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 L.H. suspension arm on inward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. Retain with double loop retainer spring with loops down as shown.
- Slide left side of mower back and install the unattached front link in top hole of the L.H. front mower bracket. Retain with single loop retainer spring as shown.

- Place the R.H. suspension arm on inward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. Retain with double loop retainer spring with loops down as shown.
- 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 mower to highest position.
- Assemble gauge wheels (See "TO ADJUST GAUGE WHEELS" in the Operation section of this manual).

CHECK MOWER LEVELNESS

For best cutting results, mower 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.

FRONT



INSTALL MULCHER PLATE (See Figs. 5A and 5B)

 Install two latch hooks to mulcher plate using screw, washer, lock washer, and weld nut as shown.

NOTE: Pre-assemble weld nut to latch hook by inserting weld nut from the top with hook pointing down.

- Tighten hardware securely.
- Raise and hold deflector shield in upright position.
- Place front of mulcher plate over front of mower deck opening and slide into place, as shown.
- Hook front latch into hole on front of mower deck.
- Hook rear latch into hole on back of mower deck.

CAUTION: Do not remove discharge guard from mower. Raise and hold guard when attaching mulcher plate and allow it to rest on plate while in operation.

TO CONVERT TO BAGGING OR DISCHARGING

Simply remove mulcher plate and store in a safe place. Your mower is now ready for discharging or installation of optional grass catcher accessory.

NOTE: It is not necessary to change blades. The mulcher blades are designed for discharging and bagging also.



FIG. 5A



√ 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).

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



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. 6

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.

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

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

CHOKE CONTROL - Used when starting a cold engine. **LIGHT SWITCH** - Turns the headlights on and off.

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

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.

AMMETER - Indicates battery charging (+) or discharging (-).

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

 $\label{eq:Height} \begin{array}{l} \textbf{HEIGHT} \ \textbf{ADJUSTMENT} \ \textbf{KNOB-} \ \textbf{Used} \ \textbf{to} \ \textbf{adjust} \ \textbf{the} \ \textbf{mower} \\ \textbf{height}. \end{array}$



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 spectacles or standard safety glasses.

HOW TO USE YOUR TRACTOR

TO SET PARKING BRAKE (See Fig. 7)

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. 7 STOPPING (See Fig. 7)

MOWER BLADES -

 To stop mower blades, move attachment clutch switch to "DISENGAGED" position.

GROUND DRIVE -

- To stop 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.

IMPORTANT: LEAVING THE IGNITION SWITCH IN ANY POSITION OTHER THAN "OFF" WILL CAUSE THE BATTERY TO BE DISCHARGED, (DEAD).

NOTE: Under certain conditions when tractor 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.



TO USE CHOKE CONTROL (SEE FIG. 7)

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. 7)

Always operate engine at full throttle.

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

TO MOVE FORWARD AND BACKWARD (See Fig. 7)

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. 7)

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

- Turn knob clockwise (\frown) to raise cutting height.
- Turn knob counterclockwise () to lower cutting height.

The cutting height range is approximately 1-1/2" to 4-1/2". 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.

TO ADJUST GAUGE WHEELS (See Fig. 8)

Gauge wheels are properly adjusted when they are slightly off the ground when mower is at the desired cutting height in operating position. Gauge wheels then keep the deck in proper position to help prevent scalping in most terrain conditions.

- Adjust gauge wheels with tractor on a flat level surface.
- Adjust mower to desired cutting height (See "TO AD-JUST MOWER CUTTING HEIGHT" in the Operation section of this manual).
- With mower in desired height of cut position, gauge wheels should be assembled so they are slightly off the ground. Install gauge wheel in appropriate hole with shoulder bolt, 3/8 washer, and 3/8-16 locknut and tighten securely.
- Repeat for opposite side installing gauge wheel in same adjustment hole.



TO OPERATE MOWER (See Figs. 6 and 7)

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. 9

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. 6 and 10)

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. 10

TOWING CARTS AND OTHER ATTACHMENTS

Tow only the attachments that are recommended by and comply with specifications of the manufacturer of your tractor. Use common sense when towing. Too heavy of a load, while on a slope, is dangerous. Tires can lose traction with the ground and cause you to lose control of your tractor.

BEFORE STARTING THE ENGINE

CHECK ENGINE OIL LEVEL (See Fig. 11)

- 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. 11

ADD GASOLINE

 Fill fuel tank. Use fresh, clean, regular unleaded gasoline with a minimum of 87 octane. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life). Do not mix oil with gasoline. Purchase fuel in quantities that can be used within 30 days to assure fuel freshness.

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.

TO START ENGINE (See Fig. 7)

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

- Be sure freewheel control is in the transmission engaged position.
- Sit on seat in operating position, depress clutch/brake pedal and set parking brake.
- Place motion control lever in neutral (N) position.
- Move attachment clutch to "DISENGAGED" position.
- Move throttle control to fast position
- Pull choke control out for a cold engine start attempt. For a warm engine start attempt the choke control may not be needed.

NOTE: Before starting, read the warm and cold starting procedures below.

 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 the engine does not start after several attempts, push choke control in, wait a few minutes and try again. If engine still does not start, pull the choke control out and retry.

WARM WEATHER STARTING (50° F and above)

- When engine starts, slowly push choke control in until the engine begins to run smoothly. If the engine starts to run roughly, pull the choke control out slightly for a few seconds and then continue to push the control in slowly.
- The attachments and ground drive can now be used. If the engine does not accept the load, restart the engine and allow it to warm up for one minute using the choke as described above.

COLD WEATHER STARTING (50° F and below)

When engine starts, slowly push choke control in until the engine begins to run smoothly. Continue to push the choke control in small steps allowing the engine to accept small changes in speed and load, until the choke control is fully in. If the engine starts to run roughly, pull the choke control out slightly for a few seconds and then continue to push the control in slowly. This may require an engine warm-up period from several seconds to several minutes, depending on the temperature.

AUTOMATIC TRANSMISSION WARM UP

- Before driving the unit in cold weather, the transmission should be warmed up as follows:
 - Be sure the tractor is on level ground.
 - Place the motion control lever in neutral. Release the parking brake and let the clutch/brake slowly return to operating position.
 - Allow one minute for transmission to warm up. This can be done during the engine warm up period.
- The attachments can be used during the engine warmup period after the transmission has been warmed up and may require the choke control be pulled out slightly.

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.

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 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. Shutoff engine and set parking brake.
- Engage transmission by placing freewheel control in driving position (See "TO TRANSPORT" in this section of 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 now 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.
- 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. 12).

- 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 guality of cut desired.
- 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. 12

MULCHING MOWING TIPS

IMPORTANT: FOR BEST PERFORMANCE, KEEP MOWER HOUSING FREE OF BUILT-UP GRASS AND TRASH. CLEAN AFTER EACH USE.

- The special mulching blade will recut the grass clippings many times and reduce them in size so that as they fall onto the lawn they will disperse into the grass and not be noticed. Also, the mulched grass will biodegrade quickly to provide nutrients for the lawn. Always mulch with your highest engine (blade) speed as this will provide the best recutting action of the blades.
- Avoid cutting your lawn when it is wet. Wet grass tends to form clumps and interferes with the mulching action. The best time to mow your lawn is the early afternoon. At this time the grass has dried and the newly cut area will not be exposed to the direct sun.
- For best results, adjust the mower cutting height so that the mower cuts off only the top one-third of the grass blades (See Fig. 13). For extremely heavy mulching, reduce your width of cut on each pass and mow slowly.
- Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a second cut, mow across or perpendicular to the first cut path.
- Change your cutting pattern from week to week. Mow north to south one week then change to east to west the next week. This will help prevent matting and graining of the lawn.



FIG. 13

FIL AS RE	MAINTENANCE SCHEDULE HOURS FILL IN DATES FILL IN DATES AS YOU COMPLETE BEFORE LEAN & HOURS REGULAR SERVICE BEFORE LEAN & HOURS										
	Check Brake Operation	V	V						•		
	Check Tire Pressure	~	1								
Т	Check Operator Presence and Interlock Systems	V									
R	Check for Loose Fasteners	~				17		~			
	Sharpen/Replace Mower Blades			1.							
ĬŤ	Lubrication Chart			1				~			
l ö	Check Battery Level			V 6							
Ř	Clean Battery and Terminals			1				1			
	Check Transaxle Cooling			1							
	Adjust Blade Belt(s) Tension					15					
	Adjust Motion Drive Belt(s) Tension					15					
	Check Engine Oil Level	~	V								
	Change Engine Oil			1,2,3				1			
E	Clean Air Filter			1/2							
Ň	Clean Air Screen			12							
G	Inspect Muffier/Spark Arrester				1	1					
	Replace Oil Filter (If equipped)			1		1,2					
	Clean Engine Cooling Fins		1			1/2		1			
1	Replace Spark Plug					1	1				
	Replace Air Filter Paper Cartridge			1		1/2		1			
	Replace Fuel Filter		1			1	V				

- Change more often when operating under a heavy load or in high ambient temperatures. 5 - If equipped with adjustable system. 6 - Not required if equipped with maintenance-free battery.

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.

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 property 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 airfilter, 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 operator presence and interlock systems for proper operation.
- Check for loose fasteners.

IMPORTANT: DO NOT OIL OR GREASE THE PIVOT POINTS WHICH HAVE SPECIAL NYLON BEARINGS. VISCOUS LUBRI-CANTS 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, POW-DERED GRAPHITE TYPE LUBRICANT SPARINGLY.

LUBRICATION CHART

7 - Tighten front axle pivot bolt to 35 ft,-lbs. maximum.

Do not overtighten.



() SPRAY SILICONE LUBRICANT (MOVE BOOTS TO LUBRICATE)

(2) GENERAL PURPOSE GREASE

③ REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION

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 "PROD-UCT SPECIFICATIONS" section 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.

NOTE: To seal tire punctures and prevent flat tires due to slow leaks, tire sealant may be purchased from your local parts dealer. Tire sealant also prevents tire dry rot and corrosion.

OPERATOR PRESENCE SYSTEM

Be sure operator presence and interlock systems are working properly. If your tractor does not function as described, repair the problem immediately.

- The engine should not start unless the clutch/brake pedal is fully depressed and attachement clutch control is in the disengaged position.
- When the engine is running, any attempt by the operator to leave the seat without first setting the parking brake should shut off the engine.
- When the engine is running and the attachment clutch is engaged, any attempt by the operator to leave the seat should shut off the engine.
- The attachment clutch should never operate unless the operator is in the seat.

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.

IMPORTANT: TO ENSURE PROPER ASSEMBLY, CENTER HOLE IN BLADE MUST ALIGN WITH STAR ON MANDREL ASSEMBLY.

- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten bolt securely (27-35 Ft. Lbs. torque).

IMPORTANT: BLADE BOLT IS GRADE 8 HEAT TREATED.



FIG. 14

TO SHARPEN BLADE (See Fig. 15)

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

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).

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

 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.



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.
- Recharge at 6-10 amperes for 1 hour.

NOTE: The original equipment battery on your tractor is maintenance free. Do not attempt to open or remove caps or covers. Adding or checking level of electrolyte is not necessary.

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.
- Rinse the battery with plain water and dry.

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. To prevent possible damage to seals, no not use high pressure water or steam to clean transaxle.

- 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, SG, or SH. Select the oil's SAE viscosity grade according to your expected operating temperature.



Change the oil after every 50 hours of operation 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 operation. Tighten oil fill cap/dipstick securely each time you check the oil level. TO CHANGE ENGINE OIL (See Fig. 16) Determine temperature range expected before oil change. All oil must meet API service classification SF, SG or SH.

- 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" section 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.





CLEAN AIR SCREEN (See Fig. 16)

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.

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. 17)

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. Allow it to dry.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.
- TO SERVICE CARTRIDGE
- Replace a dirty, bent, or damaged cartridge.

NOTE: Do not wash the paper cartridge or use pressurized air, as this will damage the cartridge.

- Remove nut and cartridge plate.
- 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. 17

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" section of this manual.

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.

IN-LINE FUEL FILTER (See Fig. 18)

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. 18

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.

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. 19)

- 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 ø 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.

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" section of this manual). If tires are over or underinflated, you will not properly adjust vour mower.

SIDE-TO-SIDE ADJUSTMENT (See Figs. 19 and 20)

- 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. 20



FRONT-TO-BACK ADJUSTMENT (See Figs. 21 and 22) 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

TO REPLACE MOWER DRIVE BELT

MOWER DRIVE BELT REMOVAL (See Fig. 23)

- Park tractor on a level surface. Engage parking brake.
- Remove 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. 23)

- 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.
- SCREWS L.H. MANDREL IDLER PULLEYS COVER ELECTRIC CLUTCH PULLEY MOWER DRIVE BELT L.H. PRIMARY **IDLER ARM** BELT **KEEPERS**

FIG. 23

Reassemble L.H. mandrel cover.

TO REPLACE MOWER BLADE DRIVE BELT (See Fig. 24)

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 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. 24

TO ADJUST ATTACHMENT CLUTCH (See Fig. 25)

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.



TO ADJUST BRAKE (See Fig. 26)

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.



TO REPLACE MOTION DRIVE BELT (See Fig. 27)

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.
- Loosen belt keeper above transaxle pulley.
- 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.
- Retighten belt keeper above transaxle pulley.
- 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. 27

TO ADJUST MOTION CONTROL LEVER (See Fig. 28)

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.

TRANSMISSION REMOVAL/REPLACEMENT

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



FIG. 28

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. 29)

- 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. 29 and 30)

- 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.

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. 29



FIG. 30

TO REMOVE WHEEL FOR REPAIRS

FRONT WHEEL (See Fig. 31)

- Block up axie securely.
- Remove axle cover, retaining ring and washers to allow wheel removal.
- Repair tire and reassemble.
- Replace washers and snap retaining ring securely in axle groove.
- Replace axle cover.

REAR WHEEL -

- Block rear axle securely.
- Remove five (5) hub bolts to allow wheel removal.
- Repair tire and reassemble. Replace and tighten hub bolts securely.

NOTE: To seal tire punctures and prevent flat tires due to slow leaks, tire sealant may be purchased from your local parts dealer. Tire sealant also prevents tire dry rot and corrosion.



TO START ENGINE WITH A WEAK BATTERY (See Fig. 32)



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 NEGA-TIVE (-) 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.



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.

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. 33)

- 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. 34)

- Raise hood.
- Unsnap headlight wire connector.
- Stand in front of tractor. Grasp hood at sides, tilt toward engine and lift off of tractor.
- To replace, reverse above procedures.



FIG. 34

ENGINE

Maintenance, repair or replacement of the emission control devices and systems, which are being done at th customers expense, may be performed by any non-road engine repair establishment or individual. Warranty repairs must be performed by an authorized manufacuter's service outlet.

TO ADJUST THROTTLE CONTROL CABLE (See Fig. 35)

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 screw. Tighten clamp screw securely.



TO ADJUST CHOKE CONTROL (See •Figs. 35 and 36)

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. 36

TO ADJUST CARBURETOR (See Fig. 36)

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.
- <u>Idle speed setting</u> 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.

STORAGE

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 corrcsion 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.
- 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).

CYLINDER(S)

- 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			
Will not start	 Out of fuel. Engine not "CHOKED" properly. Engine flooded. Bad spark plug. Dirty air filter. Dirty fuel filter. Water in fuel. Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. 	 Fill fuel tank. See "TO START ENGINE" in Operation section. Wait several minutes before attempting to start. Replace spark plug. Clean/replace air filter. Replace fuel filter. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. Check all wiring. See "To Adjust Carburetor" in Service Adjustments section. Contact an authorized service center/department. 			
Hard to start	 Dirty air filter. Bad spark plug. Weak or dead battery. Dirty fuel filter. Stale or dirty fuel. Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. 	 Clean/replace air filter. Replace spark plug. Recharge or replace battery. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Check all wiring. See "To Adjust Carburetor" in Service Adjustments section. Contact an authorized service center/department. 			
Engine will not turn over	 Clutch/brake pedal not depressed. Attachment clutch is engaged. Weak or dead battery. Blown fuse. Corroded battery terminals. Loose or damaged wiring. Faulty ignition switch. Faulty solenoid or starter. Faulty operator presence switch(es). 	 Depress clutch/brake pedal. Disengage attachment clutch. Recharge or replace battery. Replace tuse. Clean battery terminals. Check all wining. Check/replace ignition switch. Check/replace solenoid or starter. Contact an authorized service center/department. 			
Engine clicks but will not start	 Weak or dead battery. Corroded battery terminals. Loose or damaged wiring. Faulty solenoid or starter. 	 Recharge or replace battery. Clean battery terminals. Check all wiring. Check/replace solenoid or starter. 			
Loss of power	 Cutting too much grass/too fast. Throttle in "CHOKE" position. Build-up of grass, leaves and trash under mower. Dirty air filter. Low oil level/dirty oil. Faulty spark plug. Dirty fuel filter. Stale or dirty fuel. Water in fuel. Spark plug wire loose. Dirty/clogged muffler. Loose or damaged wiring. Carburetor out of adjustment. 	 Set in "Higher Cut" position/reduce speed. Adjust throttle control. Clean underside of mower housing. Clean/replace air filter. Check oil level/change oil. Clean and regap or change spark plug. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Drain fuel tank and carburetor, refil tank with fresh gasoline and replace fuel filter. Connect and tighten spark plug wire. Clean engine air screen/fins. Clean/replace muffler. Check all wiring. See "To Adjust Carburetor" in Service Adjustments section. Contact an authorized service center/department. 			
Excessive vibration	 Worn, bent or loose blade. Bent blade mandrel. Loose/damaged part(s). 	 Replace blade. Tighten blade bolt. Replace blade mandrel. Tighten loose part(s). Replace damaged parts. 			

TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION			
Engine continues to run when operator leaves seat with attachment clutch engaged	1. Faulty operator-safety presence control system.	 Check wiring, switches and connections. If not corrected, contact an authorized service center/ department. 			
Poor cut - uneven	 Worn, bent or loose blade. Mower deck not level. Buildup of grass, leaves, and trash under mower. Bent blade mandrel. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. 	 Replace blade. Tighten blade bolt. Level mower deck. Clean underside of mower housing. Replace blade mandrel. Clean around mandrels to open vent holes. 			
Mower blades will not rotate	 Obstruction in clutch mechanism. Worn/damaged mower drive belt. Frozen idler pulley. Frozen blade mandrel. 	 Remove obstruction. Replace mower drive belt. Replace idler pulley. Replace blade mandrel. 			
Poor grass discharge	 Engine speed too slow. Travel speed too fast. Wet grass. Mower deck not level. Low/uneven tire air pressure. Worn, bent or loose blade. Buildup of grass, leaves and trash under mower. Mower drive belt worn. Blades improperly installed. Improper blades used. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. 	 Place throttle control in "FAST" position. Shift to slower speed. Allow grass to dry before mowing. Level mower deck. Check tires for proper air pressure. Replace/sharpen blade. Tighten blade bolt. Clean underside of mower housing. Replace mower drive belt. Reinstall blades sharp edge down. Replace with blades listed in this manual. Clean around mandrels to open vent holes. 			
Headlight(s) not working (if so equipped)	 Switch is "OFF". Buib(s) burned out. Faulty light switch. Loose or damaged wiring. Blown fuse. 	 Turn switch "ON". Replace bulb(s). Check/replace light switch. Check wiring and connections. Replace fuse. 			
Battery will not charge	 Bad battery cell(s). Poor cable connections. Faulty regulator (if so equipped). Faulty alternator. 	 Replace battery. Check/clean all connections. Replace regulator. Replace alternator. 			
Loss of drive	 Freewheel control in "disengaged" position. Motion drive belt worn, damaged, or broken. Air trapped in transmission during shipment or servicing. 	 Place freewheel control in "engaged" position. Replace motion drive belt. Purge transmission. 			
Engine "backfires" when turning engine "OFF"	 Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine. 	 Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine. 			

SERVICE NOTES

TRACTOR - - MODEL NUMBER 944.609900

SCHEMATIC



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ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION
1	144927	Battery
2	74760412	Bolt Hex Head 1/4-20 x 3/4
8	7603J	Tray, Battery
10	145211	Bolt Btr Frt 1/4-20 X 7.5 zinc
11	150109	Holdown Battery Front Mount
12	145769	Nut Push Nylon 1/4"
16	153664	Switch Interlock Push-In
19	STD551125	Washer, Lock 1/4
20	73350400	Nut, Jam Hex 1/4-20
21	166184	Harness Headlight
22	4152J	Bulb Light
24	4014J	Cable, Battery
25	146686	Cable, Battery
26	108824X	Fuse
27	73510400	Nut Keps Hex 1/4-20 Unc
28	157899	Cable, Ground
29	160784	Switch, Plunger
30	163968	Switch, Ign
33	140403	Key
40	166176	Harness, Ignition
41	17720408	Screw 1/4-20 x 1/2
42	131563	Cover, Terminal Red
43	145673	Solenoid
45	122822X	Ammeter
50	154963	Switch, PTO
52	141940	Protection Wire Loop
81	109748X	Relay Asm.
83	163996	Socket, Light Bulb

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

TRACTOR - - MODEL NUMBER 944.609900

CHASSIS AND ENCLOSURES



TRACTOR - - MODEL NUMBER 944.609900

CHASSIS AND ENCLOSURES

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KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	150253	Rail, Frame RH	52	STD541431	Nut, Crownlock 5/16-18
2	140506	Drawbar, Gt	56	154914	Bracket Asm., Susp Chassis Lh
4	73800700	Nut, Lock Hex 7/16 Unc	58	137113	Bracket Asm., Fender
5	163976	Dash	60	17490620	Screw Thdrol 3/8-16 x 1-1/4
6	157882	Dash Asm., Lower	63	19131614	Washer 13/32 x 1 x 14 Ga.
7	17720408	Screw, Thd Cut 1/4-20 x 1/2	68	17490508	Screw, Thd 5/16-18 x 1/2
8	145166	Support, Battery	70	137159	Guide, Belt Mid Span
14	161023X558	Hood Asm., Pht	84	142992	Stop, Over Center Mower
15	160568	Lens, Asm Headlight bar	86	74760716	Bolt, Fin Hex 7/16-14 Unc x 1
16	121794X	Cover, Access	90	11050600	Washer, Lock External Tooth 3/8
17	17490612	Screw, Thdrol 3/8-16 x 3/4	91	156586	Rail, Frame Lh
18	160564X558	Grille	95	105531X	Push Nut, Nylon
19	19131312	Washer 13/32 x 13/16 x 12 Ga.	98	140503	Bracket Skid Chassis
20	STD523710	Bolt, Fin Hex 3/8-16 x 1	99	140871	Rod By Pass
21	STD541437	Nut, Crownlock 3/8-16 Unc	100	124236X	Cap By Pass Rod
23	17490616	Screw Thdrol 3/8-16 x 1 TY-TT	101	17490628	Screw Thdrol 3/8-16 x 1-3/4
24	145243X558	Footrest, RH	102	STD624003	Retainer, Spring
28	145244X558	Footrest, LH	103	142273	Lock, By Pass
30	145052	Saddle, Hydro 1995	106	138776	Bolt 5/16-18 Type TT
31	161419	Bracket, Supt 1-pc VGT Steering	120	19131616	Washer 13/32 x 1 x 16 Ga.
32	161327	Bracket, Pivot Chassis LH	122	161464	Screw Hex Wshd 8-18 x 7/8
33	161326	Bracket, Pivot Chassis RH	130	164863	Screw HWHD Hi-Lo #13-16 x 3/4
34	142131	Bracket, Engine Support Rear	138	163975X428	Cupholder YTGT
35	19111116	Washer 11/32 x 11/16 x 16 Ga.	139	161330	Bolt Shoulder 5/16-18 TT
36	74780512	Bolt, Fin Hex 5/16-18 x 3/4	140	163806	Magnet YTGT
37	163982X558	Fender, Pnt.	141	163805	Stricker Plate YTGT
39	136961	Bracket, Axle Front	142	161897	Bracket Dash RH
40	156111	Bracket, Support Axle/Engine	144	161900	Bracket Dash LH
42	STD533710	Bolt, Carriage 3/8-16 x 1	147	162967	Fastener Nutpal
43	136939	Bracket, Spnsn Front Lh	148	164655	Extrusion Bumper
44	136940	Bracket, Spnsn Front Rh	149	164769	Pinch Welt Hood
45	154913	Bracket Asm., Susp Chassis Rh	150	161237	Duct Heat Hood
47	17490608	Screw Thdrol 3/8-16 x 1/2			···
50	152728	Bracket, Chassis Front	NOT	E: All compon	ent almensions given in U.S. inches
				1 inch - 25	4 mm

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TRACTOR - - MODEL NUMBER 944.609900

GROUND DRIVE



TRACTOR - - MODEL NUMBER 944.609900

GROUND DRIVE

KEY NO.	PART NO.	DESCRIPTION
2	7070E	Key 1/4 x 2.5
3	7563H	Washer I hrust Axle Harden
5	SID541437	Nut Crownlock 3/8-16
6	S10561210	Pin Cotter 1/8 X 3/4
(140507	Vyneel Hub Asm. Dolt Hub
45	140080	Duil HUD Machar 12/22 x 12/16 x 16 Ga
15	19131310	Spring Rod Brake
20	140921 CTD541250	Nut Hay Jam Toplack 1/2-20 LINE
20	156103	Shift Arm Asm
22	130564	Knoh
28	STD541237	Nut
29	140494	Brake Bod
30	19131616	Washer 13/32 x 1 x 16 Ga.
33	12000053	Ring E
34	124236X	Cap Plunger
35	137648	Rod Parking Brake
36	149412	Spring Drive Ground
37	121749X	Washer 25/32 x 1-1/4 x 16 Gauge
38	150035	Nyliner, Bushing
39	STD511010	Screw Fin #10-24 x 1
40	5304J	Actuator Interlock Switch
41	STD541410	Nut Lock #10-24
42	8883R	Cover Pedal
40	145170	Retainer Spring
47	130220	Rolt Carriage 2/9-16 x 1-1/2 Gr 5
40 50	121/0/2	Pulley Idler Elat
51	STD541437	Nut Crownlock 3/8-16 UNC
52	139123	Pulley Idler Grooved
53	207J	Washer Hartdened
54	161590	Arm Asm Idler Clutch 98
55	105706X	Bearing, Idler
56	140218	V-Belt
58	74760724	Bolt Fin Hex 7/16-14 x 1-1/2
61	140488	Pullery Transaxle
64	154752	Shaft Asm Brake Parking Clutch
65	67609	Bolt Shoulder
66	140296	Washer Hardened
67	19131312	Washer 13/32 X 13/16 X 12 Ga
68	51D5/1812	PIN ROII Waabar
59	1238008	Washer Concolo Hudro Fondor
70	1040927420	Console mydro Fender

KEY NO.	PART NO.	DESCRIPTION
71	151179	Plate Console Shift
72	SID541431	Nut Crownlock 5/16-18
73	74490548	Bolt Hex FLGHD 5/16-18 x 3 Gr. 5
74	142432	Screw Hex Wsh. Hi-Lo 1/4-1/2
76	140481	Bracket I ransaxle
77	/4/60/16	Bolt Fin Hex //16-14 X 1
79	STD533106	Bolt Carriage 5/16-18 X 5/8
80	140484	Bracket Lorque RH
81	17490612	Screw Indroi 3/8-16 X 3/4
82	150586	Bracket Mount Torque/Fan
83	140479	Strap Torque Mid
04 05	17541000	Spacer Sorow #10.24 x 1.1/4
00	1/04/020	Sciew #10-24 X 1-1/4
00 97	140402	Adapter Ean
88	161502	Pullov Idlor
80	73680700	Net Crownlock 7/16-14 LINC
90	140489	Keeper Belt
91	17490644	Screw Thdrol 3/8-16 x 2-3/4
92	74760520	Bolt Fin Hey 5/16-18 x 1 25
93	140502	Link Shift Asm
94	133835	Fastner Christmas Tree
96	141103	Washer Nickel Plated
98	141004	Bracket Shift
99	17490624	Screw Thdrol 3/8-16 x 1-1/2
100	126881X	Washer Compression
101	156106	Washer Bellville
104	140480	Bracket Idler
105	17580408	Screw Tap 1/4-20 x 1/2
106	142918	O-Ring Asm. Hydro Ger 70110
107	154739	Line Fuel Hydro 15" Vgt Serv
108	142917	Cap Asm Vent Hydro Gear 70109
109	140929	Spring Return Brake
111	156240	Spacer Shift Leer Vgth
112	156104	Washer Nylon High Temp
113	73220700	Nut, Hex Asf 7/16-14 UNC
115	123405X	Keeper Belt T/A Gnd Dr. LR
116	73900500	Nut Lock Hex Flange 5/16-18
117	73900600	Nut Lock Flange 3/8-16 UNC
	163198	Transaxle Hydro

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

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TRACTOR - - MODEL NUMBER 944.609900

STEERING ASSEMBLY



TRACTOR - - MODEL NUMBER 944.609900

STEERING ASSEMBLY

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KEY NO.	PART NO.	DESCRIPTION
1	159944X428	Wheel, Steering
2	137094	Axle Asm., Front
3	6855M	Fitting, Grease
4	101049	Spindle Asm, LT Spindle Asm, BH
e e	6266H	Bearing Bace Thrust Harden
7	121748X	Washer 25/32 x 1-5/8 x 16 Ga.
8	12000029	Ring, Klip #T5304-75
9	121232X	Cap, Spindle
10	74781044	Bolt, Fin Hex 5/8-11 x 2-3/4
11	136518	Spacer, Brg. Axle Front
12	73901000	Nut, Lock Flange 5/8-11 Unc
13	121/49X	Washer 25/32 X 1-1/4 X 16 Ga.
14	STD551157 STD541527	Nut Lock Contor 3/8-24 Unf
16	145103	Shaft Asm Steering
17	137347	Bod Asm., Tie Ball J Ball Vot (Inc.
••		Kev No. 36-40)
18	137155	Draglink, Ball Joint Solid Vgt
19	156011	Support Asm., Steering Vgt
20	163887	Boot Steering Stealth GTYT
21	159945	Adapter, Wheel Steering
22	155105	Bushing, Strg.
23	152927 CTD509740	Screw Bolt Fin How 8/9 16 x 1 Cr. 5
20	510523710	Bolt, Fin Hex 3/8-16 X 1 Gr. 5
20	3366R	Bearing Col Stra
28	17490612	Screw thdrol 3/8-16 x 3/4 TY-TT
29	104239X	Bearing, Flange
30	12000034	Ring, Klip Truarc #5304-75
31	138136	Bushing, Nyliner Snap
32	19111610	Washer 11/32 x 1 x 10 Ga.
33	STD551131	Washer, Lock Hvy Hicl Spr 5/16
34	STD523107	Bolt, Hex Hd 5/16-18 x 3/4
30	130039	Gear, Sector Steering
37	73360600	Jam Nut BH Thread
38	109850X	Joint Asm. Ball RH Thread
39	73700600	Jam Nut LH Thread
40	109851X	Joint Asm. Ball LH Thread
41	155246	Bracket Switch Interlock Vgt 97
42	17490508	Screw Thdrol 5/16-18 x 1/2 Tyt
44	160135	Extension Steering
45	19132411	wasner 13/32 x 1-1/2 x 11 Ga.

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

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TRACTOR - - MODEL NUMBER 944.609900

ENGINE



TRACTOR - - MODEL NUMBER 944.609900

ENGINE

KEY NO.	PART NO.	DESCRIPTION
1		Engine (See Breakdown) Kohler CV20S-65551
2	161063	Muffler (Inc. Key No. 34)
5	13200300	Elbow STD 90 Degree 3/8-18 NPT
7	151936	Muffler Assembly Guard 96
8	121361X	Pulley V-Idler
9	150828	Keeper Asm Belt Engine Vgt 96
10	105432X	Bushing
11	140923	Clutch Electric
12	143996	Pulley Engine Grnd Drive
10	101340	Tank Fuel Rear 3.50 Y I/GT
17	1092278	Pad Spacer
10	1000027	Cap Acm Evol w/Gourse Vented
10	13290300	Plug Oil Drain
10	10200000	(Order From Engine Manufacturer)
20	164067	Control Throttle
21	164863	Screw HWHD Hi-Lo #13-16 x 3/4
22	164415	Control Choke
24	STD551237	Lockwasher Ext Tooth 3/8
25	73920600	Nut Keps 3/8-24 UNF
26	3645J	Bushing
27	139277	Stem Tank Fuel
28	7834R	Fuel Line
29	132920	Spark Arrester Kit
33	STD541437	Nut Lock Hex W/Ins 3/8-16 UNC
35	10010500	Washer Split
37	1234878	
30	17/00024	Bolt Fin Hex 3/8-16 UNC x 1-1/2
40	17490030	Screw 3/8 - 16 x 2-1/4 UNC 11
41	126107X	Washer 1-1/2 OD X 15/22 ID X 250
42	STD551143	Washer Lock 7/16
43	150280	Bolt Hey 7/16-20 X 4-1/4 Ga 5 1 38
45	128861	Nut Flange 1/4-20 Starter Nut
47	142040	Spacer Engine CV22 Round PM
48	19132007	Washer 13/32 x 1-1/4 x 7 Ga.
51	161231	Manifold Pipe
54	19131414	Washer Flat 13/32 x 7/8 x 14 Ga.
55	13280336	Nipple Pipe 4-1/2"
64	17490612	Screw Thdrol 3/8-16 x 3/4 TY-TT
65	19131614	Washer 13/32 x 1 x 14 Ga.
69	24-041-02	Gasket
74	162295	Elbow Street Brass
//	19131316	wasner 13/32 x 13/16 x 16 Ga.
80	M13030800	Nut Flange M8-1.25

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

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TRACTOR - - MODEL NUMBER 944.609900

SEAT ASSEMBLY



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 2 3 4 5 6 7 8	140124 140551 140675 127018X 145006 STD541437 124181X 150176	Seat Bracket, Pivot Seat Strap, Fender Asm. Bolt, Shoulder 5/16-18 x .62 Clip, Push-In Hinged Nut, Crownlock 3/8-16 Spring, Seat Cprsn. Bolt 5/16-18 UNC x 3/4 w/Sems	15 16 17 18 19 20 21 22	121249X 123740X 123976X 19171912 166369 124238X 153236 STD541431	Spacer, Split Spring, Cprsn. Nut, Lock 1/4 Lg. Flg. Gr. 5 Washer 17/32 x 1-3/16 x 12 Ga. Knob, Seat Cap, Spring Seat Blk Bolt 5/16-18 Nut, Crownlock, 5/16-18
10 12 13 14	155925 121246X 121248X 72050412	Pan, Seat Bracket, Mounting Switch Bushing, Snap Bolt, Carriage 1/4-20 x 1-1/2	NOT	E: All compo 1 inch = 2	nent dimensions given in U.S. inches 5.4 mm

TRACTOR - - MODEL NUMBER 944.609900

LIFT ASSEMBLY



NO.	NO.	DESCRIPTION
1	121006X	Rod Asm., Lever
2	159187	Shaft Asm., Lift Vgt
3	159189	Lever Asm., Lift Rh
4	12000022	E-Ring Truarc #5133-87
5	19292016	Washer 29/32 x 1-1/4 x 16 Ga.
6	STD523715	Bolt, Fin Hex 3/8-16 x 1-1/2
7	125631X	Grip, Handle Fluted
8	122365X	Button, Plunger
9	122364X	Plunger, Lever Lift
10	2876H	Spring 2-1/8"
11	146704	Link Lift
12	163552	Retainer, Spring
13	139868	Arm, Suspension Vgt
14	140302	Bearing, Pvt. Lift Spherical
15	STD541437	Nut, Crownlock 3/8-16 Unc
16	674A247	Spring Asm., Assist Lift
17	STD541237	Nut, Hex Jam 3/8-16 Unc
18	143363	Bracket, Spring Assist
19	19131316	Washer 13/32 x 13/16 x 16 Ga.
20	5328J	Bolt, Adjust Spring Assist
21	STD523710	Bolt, Fin Hex 3/8-16 x 1

KEY NO.	PART NO.	DESCRIPTION
22 23 24 25 29 30 32 33 45 38 30 41 42 37 2	127218 STD624008 73350800 130171 73800800 150233 110807X 19131016 137150 STD560907 137167 138057 155097 123935X 17490512 73540600 19112410 123934X 145212 110452X	Link, Front Retainer, Spring Nut, Jam Hex 1/2-13 Unc Trunnion Nut, Lock W/Wsh 1/2-13 Unc Trunnion Inf. Height Nut, Special Washer 13/32 x 5/8 x 16 Ga. Spring, Compression Inf Hgt Pin, Cotter 3/32 x 1/2 Rod, Adj Lift Knob, Inf 3/8-16 Unc Pointer, Height Indicator Plug, Hole Screw Thdrol 5/16-18 x 3/4 Nut, Crownlock 3/8-24 Washer 11/32 x 1-1/2 x 10 Ga Scale, Indicator Height Nut, Hexflange Lock Nut, Push Phos & Oil
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NOTE: All component dimensions given in U.S. inches 1 inch = 25.4 mm

TRACTOR - - MODEL NUMBER 944.609900

MOWER DECK



TRACTOR - - MODEL NUMBER 944.609900

MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	164210	Deck Weldment Mower 46" 97	35	17490628	Screw, Thdroll 3/8-16 x 1-3/4 Tvtt
3	138457	Bracket Asm., Sway Bar	36	STD551037	Washer 13/32 x 13/16 x 16 Ga.
5	STD624008	Retainer Spring	37	131494	Pullev, idler, Flat
6	130832	Arm, Suspension, Rear (Sway Bar)	38	156086	Keeper, Belt, Idler
8	850857	Bolt. Patched 3/8-24 x 1-1/4 Gr. 8	39	144917	Pulley, Idler, Driven
9	STD551137	Washer, Lock Hvv., Unplated 3/8	40	137273	Spring, Secondary 44/46/50 Vent
10	140296	Washer, Hard Blade, Mower	41	17490620	Screw, Thdroll 3/8-16 x 1-1/4 Tvtt
		Vented	42	122052X	Spacer. Retainer
11	163819	Blade, 46" Mulching (Originally	43	144949	Arm. Idler Secondary
		equipped with)	44	133943	Washer, Hardened
		(Following Blades are Optional)	45	145059	Cover, Mandrel Deck
	157033	Blade Hi-Lift Premium 46" (For	46	137729	Screw, Thdroll, 1/4-20 x 5/8
		better bagging, especially in wet	47	144959	V-Belt, Mower, Secondary
		conditions)	48	148763	V-Belt, Mower, Primary
	159705	Blade 46" Hi-lift Bahia (For better	49	STD541437	Nut. Crownlock 3/8-16 UNC
		quality of cut in trash, pasture or	50	72110612	Bolt, Carriage 3/8-16 x 1-1/2 Gr 5
		bahia grass)	51	153390	Washer Felt
		NOTE: This blade does not work	52	156493	Pulley Idler 46 Pri Drive 97
		well in good quality grasses!!	72	19131616	Washer 13/32 x 1 x 16 Ga.
12	129895	Bearing, Ball, Mandrel #6204	101	145579	Cover, Mulching
13	137553	Shaft Asm. w/Lower Bearing	102	71161010	Screw
		(Includes Key No. 12)	103	10071000	Washer, Lock #10
14	137152	Housing, Mandrel	104	19061216	Washer
15	110485X	Bearing, Ball, Mandrel	105	160793	Latch Asm. Bagger
16	140329	Stripper, Mower Round	106	2029J	Nut, Weld
18	STD533106	Bolt, Carriage 5/16-18 x 5/8	116	137644	Bolt, Shoulder
19	132827	Bolt, Hex Head, Shoulder 5/16-18	117	133957	Gauge Wheel, Wide
20	145055	Baffle, Vortex Mower 46"	118	73930600	Nut, Centerlock 3/8-16 UNC
21	STD541431	Nut, Crownlock 5/16-18 UNC	119	19121414	Washer 3/8 x 7/8 x 14 Ga.
22	134753	Stiffiner, Bracket	126	144948	Arm, Idler, Primary Deck 46"
23	131267	Bracket, Deflector	127	146763	Pulley, Idler, V-Groove Dim, 4.25
24	105304X	Cap, Sleeve	128	19132203	Washer 13/32 x 1-3/8 x 3 Ga
25	149287	Spring, Torsion, Deflector		166222	Deck Complete (Std. Deck-Order
26	110452X	Nut, Push			separately mulcher plate and gauge
27	157788	Shield, Deflector Mower			wheel components Key Nos. 101-
28	19111016	Washer 11/32 x 5/8 x 16 Ga.			106 and 116-118)
29	131491	Rod, Hinge		143651	Mandrel Asm. 44"/50" service
30	157722	Screw, Thdroll Wsh Hd			(Includes Key Nos. 8-10, 12-15, 31
31	129963	Washer, Spacer Mower Vented			and 33)
32	153531	Pulley, Mandrel			
33	137266	Nut, Fig. Top Lock Cntr. 9/16	NOT		ant dimensions given in LLS inches
34	144945	Anchor, Spring Deck 46"	101	1 inch = 25	.4 mm

TRACTOR - - MODEL NUMBER 944.609900 HYDRO GEAR TRANSAXLE - - MODEL NUMBER 222-3010L



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TRACTOR - - MODEL NUMBER 944.609900 HYDRO GEAR TRANSAXLE - - MODEL NUMBER 222-3010L

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	164591	Assembly, Housing, LH	72	153767	Locknut, Hex 5/16-18
2	164592	Assembly, Housing, RH	73	142904	Bolt Hex 5/16-18 x 1-1/2
7	153765	Oil Seal .984 x 1.5 x .25	74	142905	Hex Cap Screw 5/16-18 x 1
16	142876	Brake Shaft Assembly	76	142907	Shoulder Bolt
20	142877	Axle Mounting Horn Assembly	77	142908	Freewheel Actuating Arm
21	142878	Washer 1.0 x 1.63 x .08	78	142909	Oil Seal .625 x 1.0 x .25
22	142879	Washer 1.0 x 2.06 x .09	79	153768	Grease (10 oz. Tube)
33	142929	Brake Yoke Assembly	81	142910	Bolt, Hex 5/16-18 x 1-3/4
35	142880	Brake Arm	82	142911	Bolt 5/16-18 x 4-1/2
36	142882	Puck Plate	89	142912	Filter, Spin On
37	142883	Brake Puck	91	153769	Pump, BDU-10L-122
38	142884	Washer 7/8 O.D. x 7/16 x .060	95	142914	Plug, Straight Thread
39	142885	Nut, Castle 5/16-24	96	153770	60° 7/18 SAE x 5/16 Fitting
40	142886	Cotter Pin	103	142916	Washer
41	142887	Brake Actuating Pin	104	142917	Vent Cap Assembly
42	142888	Hi Pro Key	106	142918	Fitting O-Ring Assembly
43	142889	Spacer	108	142919	Control Arm
45	142890	Brake Disc	109	142920	Set Screw
46	142891	Bolt 1/4-20 x 1-1/2	110	142921	Filter Head
47	142892	Bolt 1/4-20 x 1	111	150820	Hose 1/2"
4 9	153766	Differential Assembly	112	150823	Fitting, 1/2" Beaded 90° 7/8 SAE
63	142894	Dowel Pin	113	150821	Fitting, 1/2* Beaded 60° 9/16
64	150818	Reduction Gear,	117	150822	Fitting, 1/2" Beaded 90° 9/16
		14 Teeth to 38 Teeth	123	150824	ORing
65	142897	Final Drive Pinion Assembly	124	150825	Pinch Clamp
67	142898	Jackshaft	129	153771	Spring, Long
68	142899	O-Ring			
69	142900	Washer 5/8 X 1-5/32			
70	142901	Washer 7/8 X 1-1/2	NOT	E: All compone	ent dimensions given in U.S. inches
71	142902	Bolt, Hex 5/16-18 x 3.5		1 inch = 25.	4 mm

TRACTOR - - MODEL NUMBER 944.609900

HYDRO GEAR PUMP - MODEL NUMBER BU-10L-122



KEY NO.	PART NO.	DESCRIPTION	KEY PART NO. NO.	DESCRIPTION
1 2 3 4 5 6 8 2 3 4 5 7 9 1 2 2 3 4 5 6 8 2 3 4 5 7 9 1 2 2 3	144569 122716X 122745X 122715X 122700X 122699X 122767X 122748X 122748X 122748X 122749X 144571 122770X 153801 122722X 144573 142978	Shaft, Pump Ring, Retaining Bearing, Ball Spacer Seal, Lip Ring, Retaining Bearing, Cradle Seal, Lip Arm, Trunnion Guide, Slot Housing Kit, Transmission Bearing, Thrust, Ball Center Section Kit Seal, Lip Shaft, Motor Washer, Block Thrust	25 127148 32 142938 37 122786 38 122718 42 144578 43 144578 43 144575 47 122755 53 127155 60 14297 62 14458 63 14458 63 14458 64 14458 67 14458 67 15376	 Swashplate, Variable Block Assembly Pin, Stainless, Headless Gasket, Center Section Check Valve Kit Charge Relief Kit Screw, Socket Head, Cap Block Spring O-Ring Charge Pump Kit Gerotor Assembly Screw, Socket Head, Cap Pump Assembly, Complete

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TRACTOR - - MODEL NUMBER 944.609900



KEY NO.	PART NO.	DESCRIPTION
1	164095	Decal, Dash
2	164757	Decal, Engine
3	163916	Decal, Hood, Craftsman, RH
4	163917	Decal, Hood, Craftsman, LH
5	163265	Decal, Dash
6	137259	Decal, Warning, Multi-Lang
7	164884	Decal, Blower HSNG
9	163204	Decal, Fender, Craftsman
10	157140	Decal, Danger
11	101892X	Decal, Clutch/Brake
12	146790	Decal, V-Belt Drive Schematic
14	160397	Decal, V-Belt Schematic

WHEELS & TIRES



KEY NO.	PART NO.	DESCRIPTION
15	164065	Decal, ins. Whi. Strg.
16	166887	Decal, Deck Mower EZ3
17	140837	Decal, Saddle Brake Parking
19	138047	Decal, Battery
23	106202X	Reflector, Taillight
24	149517	Decal, Btry Dngr/Psn
27	142342	Decal, Drawbar
29	163230	Decal, Fender Auto Trans
	138311	Decal, Handle Lift (Lift Handle)
	157199	Pad Footrest
	168288	Manual, Owner's (English)
	168289	Manual, Owner's (French)

KEY NO.	PART NO.	DESCRIPTION
1	59192	Cap, Valve, Tire
2	65139	Stem, Valve
3	106228X427	Rim Assembly, Front
4	8134H	Tube, Front (Service Item Only)
5	106230X	Tire, Front
6	278H	Fitting, Grease (Front Wheel Only)
7	9040H	Bearing, Flange (Front Wheel Only)
8	104757X	Cap, Axle (Front Wheel Only)
9	105588X	Tire, Rear
10	7154J	Tube, Rear (Service Item Only)
11	106277X427	Rim Ássembly, Rear
12	6856M	Fitting, Grease
	144334	Sealant, Tire (10 oz. Tube)
NOT	E: All compor	ent dimensions given in U.S. inches

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

TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551



TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551

HEAD/VALVE/BREATHER

KEY NO.	PART NO.	DESCRIPTION
1	24-033-03	Kit, breather cover w/gasket (Includes 2,3)
2	24-041-23	Gasket, breather
3	24-096-15	Cover, breather
4	M-0645020	Screw, hex. flange M6x1.0x20 (4)
5	X-75-23	Plug, allen hd. 1/8"
6	12-351-02	Lifter, valve (4)
7	24-755-66	Kit, valve train (Includes 8,11,12)
8	24-411-05	Rod, push (4)
10	24-041-08	Gasket, cylinder nead (2)
10	24-310-12	Arm rocker (4)
12	20-100-01	Pivot rocker arm (4)
12	M-0640034	Scrow box flance M6v1 0v34 (4)
14	12-086-16	Screw bey flange M10v1 5v90 (8)
15	24-755-74	Kit valve cover - plain
.0	2470074	(includes 16 17)
16	24-153-16	O-Bing
17	24-086-32	Screw, shoulder (4)
18	24-445-01	Strap, lifting
1 9	24-016-01	Valve, exhaust (Std.) (2)
	24-016-02	Valve, exhaust (.25) (2)
20	24-017-01	Valve, intake (Std.) (2)
.	24-017-02	Valve, intake (.25) (2)
21	24-032-05	Seal, valve stem (2)
22	235011	Retainer, spring (4)
23	24-089-02	Spring, valve (4)
24	12-1/3-01	Cap, valve spring (4)
20	12-705-03	NI, fetainer (4)
20	24-310-11	Kit valvo covor - broathor
21	24-733-70	(incl. 16 17 28)
28	25-313-02	Grommet rubber
29	24-755-57	Kit breather separator
		(Includes 28.30-33)
30	M-0545016	Screw, hex, flange M5x0.8x16 (2)
31	24-445-02	Strap, breather
32	24-126-44	Bracket, breather separator
33	24-112-12	Spacer
34	24-294-06	Fitting
35	24-326-13	Hose, breather
36	24-326-14	Hose, breather
37	X-426-9	Clamp, hose (2)

CRANKCASE KEY PART NO. NO. DE

DESCRIPTION

1	24-032-01	Seal, oil front
2		Crankcase
-		(USE: Miniblock 24 782 05)
3	24-294-13	Fitting
4	12-380-17	Pin, dowel locating (6)
5	24-067-13	Connecting Rod (Std.) (2)
	24-067-14	Connecting Rod (.25) (2)
6	24-874-01	Piston w/Ring Set (Std.) (2)
		(Includes 7,8)
	24-874-02	Piston w/Ring Set (.25) (2)
	24-874-03	Piston w/Ring Set (.50) (2)
7.	24-108-01	Ring Set (Std.) (2)
	24-108-02	Ring Set (.25) (2)
	24-108-03	Ring Set (.50) (2)
8	24-018-01	Retainer, piston pin (4)
9	12-422-09	Shim, camshaft (A.R.)
	12-422-13	Shim, camshaft (A.R.)
	12-422-07	Shim, camshaft (A.R.)
	12-422-08	Shim, camshaft (A.R.)
	12-422-10	Shim, camshaft
	12-422-11	Shim, camshaft (A.R.)
	12-422-12	Shim, camshaft (A.B.)
10	24-010-03	Camshaft (includes 11)
11	24-089-21	Spring, actuating (ACB)
12	52-139-09	Plug, cup
13	M-0545010	Screw, hex. flange M5x0.8x10 (2)
14	24-018-04	Retainer, reed (2)
15	24-402-05	Reed, breather (2)
16	12-153-01	O-Bing, lower oil fill tube
17	24-126-19	Bracket, oil fill tube
18	12-123-04	Tube, oil fill
19	M-0545016	Screw bey flange M5x0 8x16
20	12-153-02	O-Ring upper oil fill tube
21	24-038-04	Dinstick assembly (Includes 22 23)
22	24-755-46	Kit oil fill can (Includes 23)
23	12-153-03	O-Bing dinstick
24	12-380-04	Pin hitch
25	M-0631005	Wesher Inlain 6 mm
26	12-032-01	Seal dovernor croce chaft
27	X-25-102	Wachar Inlain 1//
28	24-144-01	Shaft governor cross
20	2	

TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551



TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551

IGNITION/CHARGING

KEY NO.	PART NO.	DESCRIPTION
1	54-755-15	Kit, grass screen (Includes 2-4.and 24 113 18)
2	M-0403025	Screw, hex. cap M4x0.7x25 (4)
3	X-25-92	Washer, plain 5/16" (4)
4	24-112-04	Spacer, grass screen (4)
5	25-086-47	Bolt, shoulder (4)
6	24-157-03	Fan
7	12-086-14	Screw, hex. flange M10x1.5x46
8	12-468-03	Washer, plain 3/8".
9	X-42-15	Key
10	24-025-04	Flywheel
11	25-403-03	Rectifier-regulator
12	X-25-92	Washer, plain 3/16" (2)
13	24-086-18	Screw, phillips hd. 11-16x7/8 (2)
14	236602	Connector (3 contact)
15	54-755-09	Kit, 15 amp stator
		(Includes 24 126 71)
16	12-132-06	Spark Plug (2)
17	M-0548025	Screw, hex. cap M5x0.8x25 (2)
18	235173	Clip, cable
19	48-154-02	Clip, cable
20	X-25-63	Washer, plain 1/4"
21	24-584-01	Module, ignition (2)
22	M-0545020	Screw, hex. flange M5x0.8x20 (4)
NOT	ILLUSTRATE	D
	24-126-71	Bracket, stator wire
	X-22-11	Washer, lock 1/4"
	24-176-12	Harness, wiring
		Lead, black (rectreg. 4" - 18 gauge
	25-518-28	insulated grip barrel eyelets)
	24-113-18	Decal, grass screen
	12-454-01	Tie, wire

BLOWER HOUSING & BAFFLES

KEY	PART	
NO.	NO.	DESCRIPTION
1	54-027-95	Housing, blower (Incl. M-0545010 & 24 063 36)
2	24-100-02	Nut, plastic (2)
3	M-0545020	Screw, hex. flange M5x0.8x20 (2)
4	M-0545016	Screw, hex. flange M5x0.8x16 (5)
5	M-0551016	Screw, hex. flange M5x0.8x16
6	M-0645016	Screw, hex. flange M6x1.0x16 (6)
7	24-146-02	Plate, backing - # 2 side
8	24-146-08	Plate, backing - # 1 side
9	24-063-20	Baffle, cylinder barrel-# 2 side
10	24-063-14	Baffle, valley - #2 side
11	24-063-30	Baffle, cylinder barrel-# 1 side
12	24-063-23	Baffle, valley - #1 side
13	M-0545010	Screw, hex. flange M5x0.8x10 (2)
NOT	ILLUSTRATE) ·
	24-063-36	Baffle, blower housing
	M-0545010	Screw, hex. flange M5x0.8x10 (2)
	N/A	Cover, control
	24-086-06	Screw, phillips hd. 11-16x3/4" (2)

AIR INTAKE/FILTRATION

KEY NO.	PART NO.	DESCRIPTION
1	24-164-06	Manifold, intake
2	M-0651055	Screw, hex. flange M6x1.0x55 (4)
3	24-041-01	Gasket, intake manifold (2)
4	24-041-14	Gasket, air cleaner base
5	24-094-13	Base, air cleaner
6	24-041-13	Gasket, fuel spitback cup
7	24-109-05	Cup, fuel spitback
8	24-083-05	Precleaner, element
9	24-083-03	Element, air cleaner
10	230046	Seal, breather
11	24-096-01	Cover, inner air cleaner
12	12-100-01	Wing Nut
13	24-096-65	Cover, air cleaner
14	54-755-01	Kit, knob with seal
		(Includes 15 & 16)
15	24-153-15	Ò-Ring
16	25-341-03	Knob, cover
		-

TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551



TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551

STARTING SYSTEM

KEY PART NO. NO.

DESCRIPTION

Screw, hex. flange M8x1.25x70 Cover, pinion Screw, hex. flange M8x1.25x80 Washer, plain 11/32" (3) Starter, (Includes 6-11) Kit, brush 1 M-0839070 2 24-096-05 3 M-0839080 12-468-01 4 5 25-098-05 6 7 12-221-01 12-227-13 Cap 8 12-211-01 Bolt, thru (2) 9 12-755-54 Kit, drive 10 12-227-06 Cap, drive end 11 12-170-05 Armature

ENGINE CONTROLS

KEY PART NO. NO.

. DESCRIPTION

1	SM-0642025	Screw, hex. flange M6x1.0x25
2	24-090-14	Lever, governor
3	M-0641060	Nut, hex. flange M6x1.0
4	24-089-01	Spring, linkage
5	25-158-08	Bushing, linkage retaining
6	24-079-04	Linkage, throttle
7	25-158-11	Bushing, throttle linkage
8	M-0547050	Nut, hex. lock M5x0.8
9	24-089-03	Spring, throttle
10	24-126-56	Bracket, control
11	M-0645016	Screw, hex. flange M6x1.0x16 (4)
12	12-237-01	Clamp, cable (2)
13	M-0545016	Screw, hex. flange M5x0.8x16 (3)
14	24-090-07	Lever, thorttle actuator
15	24-468-01	Washer, plain 5.5 mm (3)
16	24-089-18	Spring, governor
17	M-0446030	Nut, hex M4x0.7
18	24-090-13	Lever, throttle control
19	M-0545020	Screw, hex. flange M5x0.8x20
20	24-089-38	Spring, throttle limiter
21	24-090-05	Lever, choke
22	41-468-03	Washer, spring 1/4"
23	M-0403025	Screw, hex. cap M4x0.7x25
24	24-079-05	Linkage, choke

OIL PAN/LUBRICATION

KEY NO.	PART NO.	DESCRIPTION
1	M-0645025	Screw, hex. flange M6x1.0x25 (2)
2	M-0631005	Washer, plain 6 mm (2)
3	24-199-07	Pan, oil assembly
	·	(Includes 1,2, & 4-10)
4	24-393-08	Oil pump assembly (Includes 5)
5	24-123-05	Tube, oil pickup
6	24-162-26	Screen, oil
7	24-043-12	Kit, governor gear w/pin
		(Includes 8)
8	12-380-01	Pin, governor regulating
9	52-448-02	Tab, locking
10	12-144-02	Shaft, governor gear
11	24-153-08	O-Ring
12	X-75-32	Plug, hex. ctsk. 3/8"
13	24-136-01	Nipple, oil filter
14	52-050-02	Filter, oil
15	52-032-08	Seal, oil (PTO end)
16	24-086-17	Screw, hex. flange M8x1.25x45
17	24-086-16	Screw, hex. flange M8x1.25x45 (9)
18	X-75-10	Plug, sq. hd. solid 3/8" N.P.T.F.

TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551



TRACTOR - - MODEL NUMBER 944.609900

KOHLER ENGINE - MODEL NUMBER CV20S, TYPE NUMBER 65551

CRANKSHAFT

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FUEL SYSTEM

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	24-014-72	Crankshaft (Includes 2)	1	24-853-25	Kit, carburetor w/gaskets
2	32-103-03	riug, cop	2	24-041-15	Gasket, carburetor
			3		Carburetor assembly
					(For information only not
					available separately)
EXH	AUST				(Includes 24 757 18, 24-053-25,
				~ ~ ~ ~ ~ ~ ~ ~	24-757-19, 24-757-20, 24-757-22)
KEY	PART	DECODICTION	4	24-041-14	Gasket, air cleaner base
NO.	NO.	DESCRIPTION	5	M-0629095	Stud, M6X1.0X95 (2)
	04.044.00	Conduct outpount (0)	5	M-0641060	Nut, nex. flange M6x1.0 (2)
1	24-041-02	Gaskel, exhaust (2) Stud Meyt 25y22 (4)		47-154-01	Ulp, cable
NOT	23-072-04	5100, MOX1.25X55 (4)	Ö	24-353-03 X-426-0	Clamp base (6)
	24-522-16	Short Block	10	24-086-12	Screw bey cap M6v1 7v18 (2)
	24-782-05	Miniblock	11	24-393-04	Pump, fuel - nulse
	24-755-03	Gasket Set	12	24-100-01	Nut. plastic (2)
			13	25-353-03	Line, fuel 13-1/2"
			14	24-050-02	Filter, fuel
			NOT	ILLUSTRATE	D
				24-757-18	Kit, overhaul w/gaskets
				24-757-19	Kit, choke repair w/gaskets
				24-757-20	Kit, gasket
				24-757-22	Kit, solenoid replacement w/gaskets

SERVICE NOTES



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SEARS OWNER'S MANUAL	CRAFTSMAN® 20.0 HP ELECTRIC START 46" MOWER AUTOMATIC GARDEN TRACTOR
MODEL NO. 944.609900	 Each tractor has its own model number. Each engine has its own model number. The model number for your tractor will be found on the model plate located under the seat. The model number for your engine will be found on the blower housing of the engine. All parts listed herein may be ordered from any Sears Canada, Inc. Service Centre/Department and most Retail Stores. WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION: PRODUCT - TRACTOR MODEL NUMBER - 944.609900 ENGINE MODEL NUMBER - CV20S, TYPE NUMBER 65551 PART NUMBER
HOW TO ORDER REPAIR PARTS	 PART DESCRIPTION Your Sears merchandise has added value when you consider Sears has service units nationwide staffed with Sears trained technicians professional technicians specifically trained to insure that we meet our pledge to you, we service what we sell. NEED A PART? SEARS HAS ACCESS TO OVER 800,000 PARTS WHETHER IT'S A SPARK PLUG OR LAWNMOWER BLADE. SEARS PARTS AND SERVICE CAN SUPPLY YOU WITH TOP QUALITY REPAIR PARTS FOR ALL YOUR PRODUCTS. JUST CALL ONE OF THE FOLLOWING NUMBERS TO PLACE YOUR ORDER. IF CALLING LOCALLY: Regina - 566-5124 Montreal - 333-5740 Toronto - 744-4900 Halifax - 454-2444 Kitchener - 894-7590 Ottawa - 738-4440 Vancouver - 420-8211 ALL OTHER AREAS CALL 1-800-665-4455

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Sears Canada, Inc., Toronto, Ontario M5B 2B8

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