# SEARS

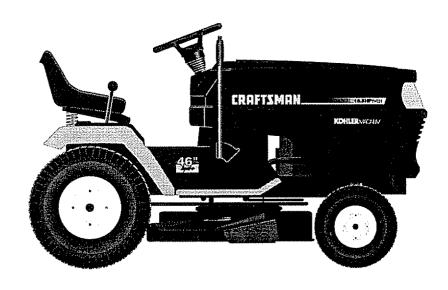
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**MODEL NUMBER 917.251493** 

**OWNER'S MANUAL** 

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





CAUTION: Read and follow all safety rules and instructions before operating this equipment.
FOR CONSUMER ASSISTANCE HOT LINE, CALL THIS TOLL FREE NUMBER: 1-800-659-5917

## SAFETY RULES



Safe Operation Practices for Ride-On Mowers



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

#### **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
- 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 safé 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
- 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 nec-
- 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.



## A WARNING A



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

**CONGRATULATIONS** on your purchase of a 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 Center/Department Department. We have competent, well-trained technicians and the proper tools to service or repair this tractor.

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

| MODEL<br>NUMBER  | 917.251493  |
|------------------|---|
| SERIAL<br>NUMBER |   |
| DATEOFPURG       | CHASE   |
|                  | ND SERIAL NUMBERS WILL BE FOUND UNDER THE SEAT.                               |
|                  | RECORD BOTH SERIAL NUMBER AND<br>CHASE AND KEEP IN A SAFE PLACE<br>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:                    | 18.5  |
|--------------------------------|---|
| GASOLINE CAPACITY<br>AND TYPE: | 3.5 GALLONS<br>UNLEADED REGULAR               |
| OIL TYPE (API-SF/SG):          | SAE30 (above 32°F)<br>SAE 5W-30 (below 32°F)  |
| OIL CAPACITY:                  | W/ FILTER: 4 0 PINTS<br>W/O FILTER: 3.5 PINTS |
| SPARK PLUG:<br>(GAP: .025")    | CHAMPION RV17YC                               |
| VALVE CLEARANCE:               | INTAKE: .003"006"<br>EXHAUST: .013"016"       |
| GROUND SPEED (MPH):            | FORWARD: 0 - 5.8<br>REVERSE: 0 - 2.1          |
| TIRE PRESSURE:                 | FRONT: 14 PSI<br>REAR: 10 PSI                 |
| CHARGING SYSTEM:               | 15 AMPS @ 3600 RPM                            |
| BATTERY:                       | AMP/HR: 30<br>MIN. CCA: 240<br>CASE SIZE: U1R |
| BLADE BOLT TORQUE:             | 30-35 FT, LBS,                                |

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

In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest Sears Authorized Service Center/ Department (See REPAIR PARTS section of this manual).

## LIMITED TWO YEAR WARRANTY ON CRAFTSMAN RIDING EQUIPMENT

For two (2) years from the date of purchase, if this Craftsman Riding Equipment is maintained, lubricated and tuned up according to the instructions in the owner's manual, Sears will repair or replace, free of charge, any parts found to be defective in material or workmanship.

This Warranty does not cover:

- Expendable items which become worn during normal use, such as blades, spark plugs, air cleaners, belts, etc.
- · Tire replacement or repair caused by punctures from outside objects, such as nails, thorns, stumps, or glass.
- Repairs necessary because of operator abuse, negligence, improper storage or accident or the failure to maintain the
  equipment according to the instructions contained in the owner's manual.
- Riding equipment used for commercial or rental purposes.

#### LIMITED 90 DAY WARRANTY ON BATTERY

For ninety (90) days 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.

IN-HOME WARRANTY SERVICE ON YOUR CRAFTSMAN RIDING EQUIPMENT IS AVAILABLE AT NO-CHARGE FOR 30 DAYS FROM THE DATE OF PURCHASE. PLEASE CONTACT YOUR NEAREST SERVICE CENTER. AFTER 30 DAYS FROM THE DATE OF PURCHASE, WARRANTY SERVICE IS AVAILABLE BY TAKING YOUR CRAFTSMAN RIDING EQUIPMENT TO YOUR NEAREST SEARS SERVICE CENTER. (IN-HOME WARRANTY SERVICE WILL STILL BE AVAILABLE AFTER 30 DAYS FROM THE DATE OF PURCHASE BUT A STANDARD TRIP CHARGE WILL APPLY) THIS WARRANTY TAPPLIES ONLY WHILE THIS PRODUCT IS IN THE UNITED STATES.

This Warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

SEARS, ROEBUCK AND CO., D/817 WA, HOFFMAN ESTATES, IL 60179

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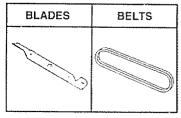
# **ACCESSORIES AND ATTACHMENTS**

These accessories and attachments were available through most Sears retail outlets and service centers when the tractor was purchased. Most Sears stores can order these items for you when you provide the model number of your tractor.

#### **ENGINE**

# SPARK PLUG GAS CAN ENGINE OIL FUEL STABILIZER AIR FILTER

#### MAINTENANCE



#### **PERFORMANCE**

Sears offers a wide variety of attachments that fit your tractor. Many of these are listed below with brief explanations of how they can help you. This list was current at the time of publication; however, it may change in future years - more attachments may be added, changes may be made in these attachments, or some may no longer be available or fit your model. Contact your nearest Sears store for the accessories and attachments that are available for your tractor.

Most of these attachments do not require additional hitches or conversion kits (those that do are indicated) and are designed for easy attaching and detaching.

AERATOR promotes deep root growth for a healthy lawn. Tapered 2.5-inch steel spikes mounted on 10-inch diameter discs puncture holes in soil at close intervals to let moisture soak in Steel weight tray for increased penetration.

BUMPER protects front end of tractor from damage

CARTS make hauling easy Variety of sizes available, plus accessories such as side panel kits, tool caddy, cart cover, protective mat and dolly.

CORING AERATOR takes small plugs out of soil to allow moisture and nutrients to reach grass roots 36-inch swath 24 hardened steel coring tips 150 lb. capacity weight tray.

**DISC HARROW** has 2 gangs of 4 steel blades that angle from 10 to 20 degrees, 40 inches wide. Can hook 2 units in tandem. (Requires sleeve hitch.)

DOZER BLADE removes snow; grades dirt, sand and gravel. 48 inches wide, 17 inches high, clears 44-inch path when angled Master lift control lever for operator ease. Spring trip for snow removal on uneven pavement; built-in float for blade to follow ground contour. Reversible, replaceable scraper bar. (Use with tire chains and wheel weights and/or rear drawbar weight.)

EASY OIL DRAIN VALVE makes oil changes easier, faster.

FRONT NOSE ROLLER canters in front of mower deck to reduce chances of "scalping" on uneven terrain.

GANG HITCH lets you tow 2 or 3 pull-behind attachments at once, such as sweepers, dethatchers, aerators (not for use with rollers, carls or other heavy attachments)

MULCH RAKE/DETHATCHER loosens soil and flips thatch and matted leaves to lawn surface for easy pickup. Twenty spring tine teeth. Useful to prepare bare areas for seeding. Available for front or rear mounting. HIGH PERFORMANCE REEL-ACTION SPRING TINE DETHATCHER covers 36-inch wide path and tosses thatch into large hopper. Mounts behind tractor

**PLOW** turns soil 6 inches deep, cuts 10-inch furrow. Crank adjustment controls depth, 3-position yoke sets width. Heavy steel landside for straight furrowing (Requires sleeve hitch)

RAMP TOPS AND FEET let you load and unload tractor from a pickup truck. Use with 2 x 8 or 2 x 10 lumber.

REAR GRADER BLADE is 42 inches wide and operated from driver's seat. Reversible steel blade can be angled at 30 degrees for grading. Reverses for pushing snow backwards. (Requires sleeve hitch.)

ROLLER for smoother lawn surface. 36-inch wide, 18-inch diameter water-tight drum holds up to 390 lbs. of weight. Rounded edges prevent harm to turf. Adjustable scraper automatically cleans drum.

SLEEVE CULTIVATOR is 43 inches wide. Prepares ground for seeding, helps weed control. Steel frame holds 5 adjustable sweeps. Adjusts vertically, horizontally. (Requires sleeve hitch.) Optional accessory: steel furrow opener for wider openings for potatoes, corn, and other deep-seeded crops

SLEEVE HITCH for use with master lift system Single pin couples/ uncouples.

SNOWTHROWER has 42-inch swath. Drum-type auger handles powdery and wet/heavy snow. Mounts easily with simple pin arrangement. Discharge chute adjusts from tractor seat. 6-inch diameter spout discharges snow 10 to 50 feet. Lift controlled at tractor seat. (Use with chains and wheel weights and/or rear drawbar weight.)

SPRAYERS use 12-volt DC electric motor that connects to the tractor battery or other 12-volt source. Includes booms for automatic spraying and hand held wand for spot spraying. Wand has adjustable spray pattern. For applying herbicides, insecticides, fungicides and liquid fertilizers.

SPREADER/SEEDERS make seeding, fertilizing, and weed killing easy Broadcast spreaders are also useful for granular de-icers and sand

SWEEPERS let you collect grass clippings and leaves

TILLER has 8 hp engine to prepare seed beds, cultivate, and compost garden residue. Chain-drive transmission. Six 11-inch diameter one piece heat-treated steel tines. Tills 30-inch path. (Requires sleeve hitch.) Or use 5 hp tow-behind TILLER with 36-inch swath to prepare seed beds, cultivate and compost garden residue. Tiller has its own built-in lift and depth control system and does NOT require a sleeve hitch. Fits any lawn, yard or garden tractor. Simply hook up to the tractor drawbar and go! Optional accessories for 5 hp tiller convert unit for dethatching, aerating, hilling, without tools.

TIRE CHAINS are heavy duty; closely spaced extra-large cross links give smooth ride, outstanding traction.

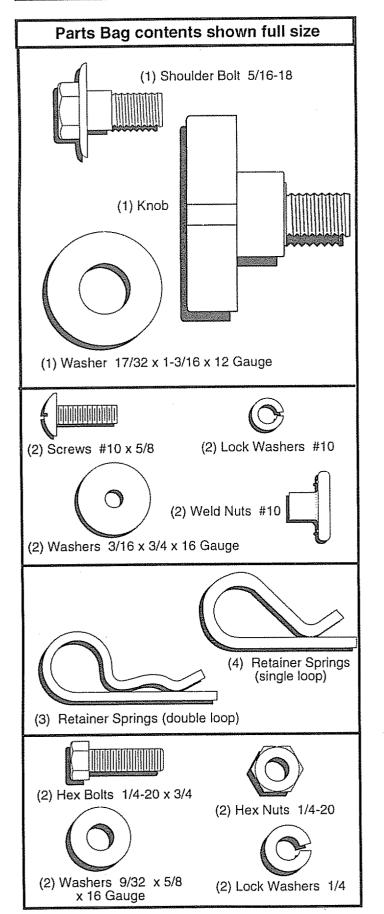
TRACTOR CAB has heavy duty vinyl fabric over tubular steel frame, ABS plastic top; clear plastic windshield offers 360 degree visibility Hinged metal doors with catch. Keeps operator warm and dry. Remove vinyl sides and windshields for use as sun protector in summer. Optional accessories include: tinted/tempered solid safety glass windshield with hand operated wiper; 12-volt amber caution light for mounting on cab top

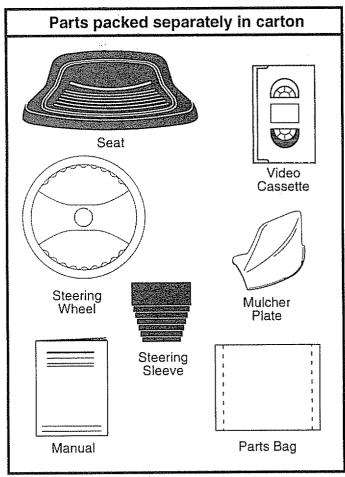
VACS for powerful collection of heavy grass clippings and leaves Optional wand attachment to pick up debris in hard-to-reach places VAC/CHIPPER includes a chipper-shredder

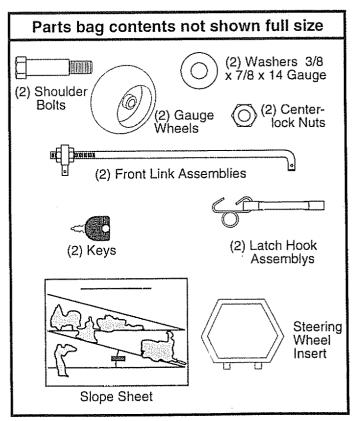
**WEIGHT BRACKET** for drawbar for snow removal applications. Can be mounted on front of tractor for plowing applications. Uses (1) 55 lb weight

WHEEL WEIGHTS for rear wheels provide needed traction for snow removal or dozing heavy materials

# 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

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 6).
- 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.
- 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 plastic from tractor hood and grill.

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

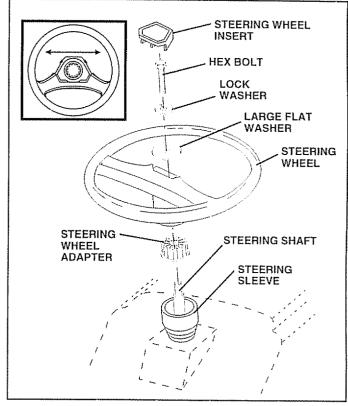


FIG. 1

# 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 backwards off skid.

#### HOW TO SET UP YOUR TRACTOR

#### **CONNECT BATTERY (See Fig. 2)**



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

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

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

Use terminal access doors for:

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

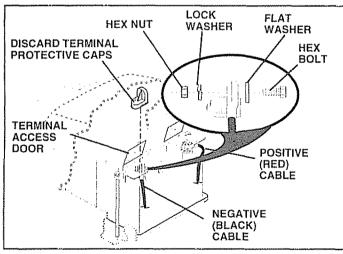


FIG. 2

#### **INSTALL SEAT (See Fig. 3)**

Adjust seat before tightening adjustment knob.

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

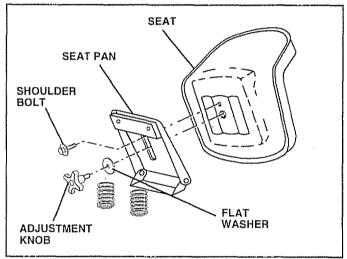


FIG. 3

#### **CHECK TIRE PRESSURE**

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

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

#### CHECK BRAKE SYSTEM

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

#### INSTALL MOWER AND DRIVE BELT (See Figs. 4 and 7)

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

- Cut and remove 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).

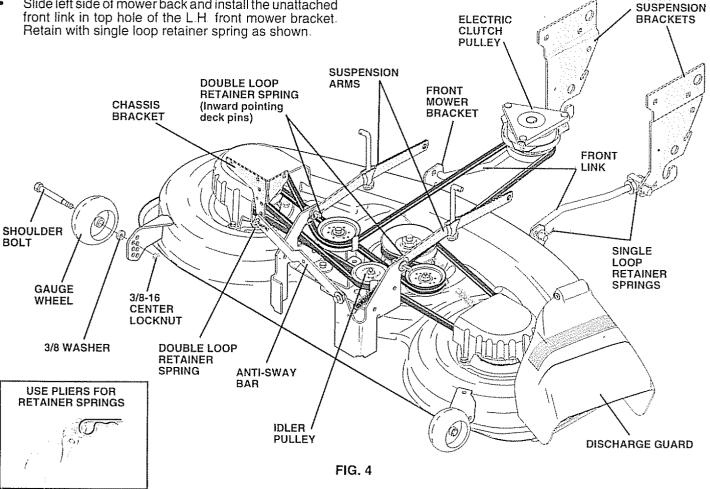
#### CHECK MOWER LEVELNESS

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. 5 and 6)**

 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.

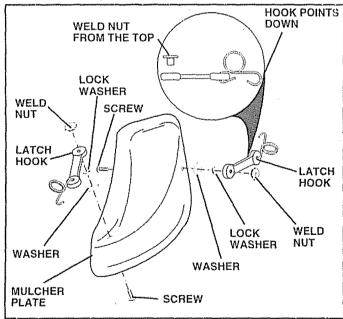


FIG. 5

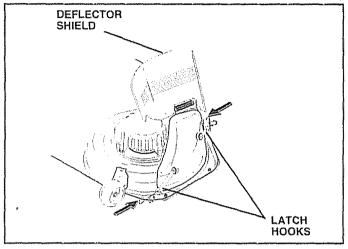


FIG. 6

#### ✓ CHECKLIST

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

PLEASE REVIEW THE FOLLOWING CHECKLIST:

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

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

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

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



**BATTERY** 



CAUTION OR WARNING



REVERSE



**FORWARD** 



FAST



SLOW



ENGINE ON



**ENGINE OFF** 



**OIL PRESSURE** 



CLUTCH



LIGHTS ON



LIGHTS OFF



**FUEL** 



CHOKE



MOWER HEIGHT



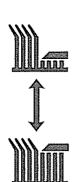
DIFFERENTIAL LOCK



PARKING BRAKE LOCKED



UNLOCKED



MOWER LIFT



REVERSE



**NEUTRAL** 



HIGH



LOW



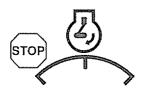
PARKING BRAKE



ATTACHMENT CLUTCH ENGAGED



ATTACHMENT CLUTCH DISENGAGED



**IGNITION** 



DANGER, KEEP HANDS AND FEET AWAY



HYDROSTATIC FREE WHEEL (Hydro Models only)

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

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

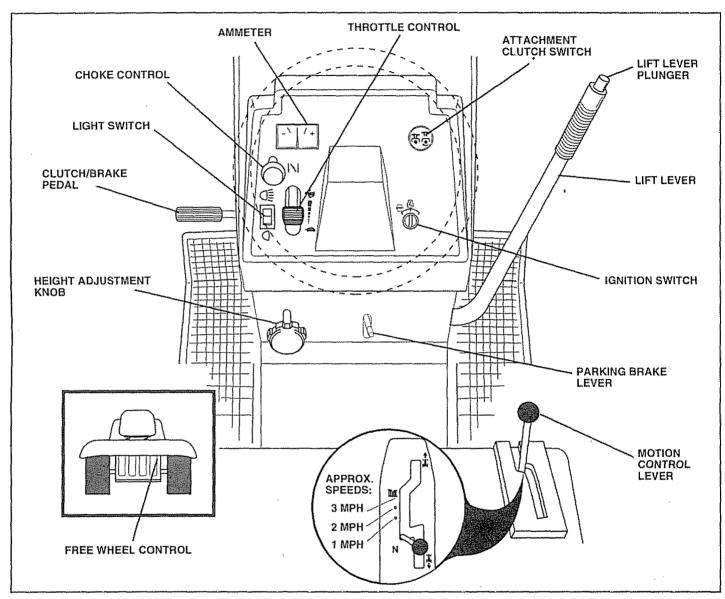


FIG. 7

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

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

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

CHOKE CONTROL - Used when starting a cold engine.

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

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

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

**IGNITION SWITCH** - Used for starting and stopping the engine.

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

LIGHT SWITCH - Turns the headlights on and off.

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

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



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

#### **HOW TO USE YOUR TRACTOR**

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

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

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

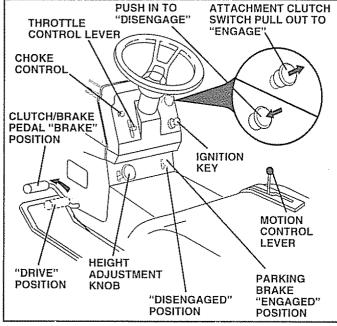


FIG. 8

#### STOPPING (See Fig. 8)

MOWER BLADES -

Move attachment clutch switch to "DISENGAGED" position.

#### **GROUND DRIVE -**

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

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

Move throttle control to slow (
 position.

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

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

**NOTE:** Under certain conditions when 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.



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

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

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

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

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

Always operate engine at full throttle.

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

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

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

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

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

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

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

The cutting height range is approximately 1-1/2" 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. 9)

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.

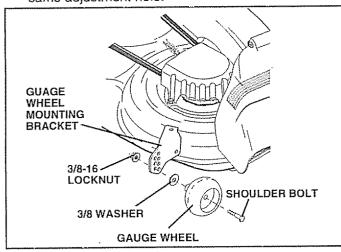


FIG. 9

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

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

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



CAUTION: Do not operate the mower without either the entire grass catcher, on mowers so equipped, or the discharge guard in place.

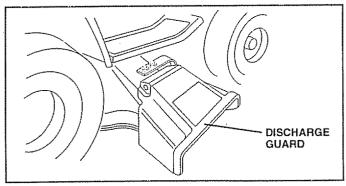


FIG. 10

#### TO OPERATE ON HILLS



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

- Choose the slowest speed before starting up or down hills.
- · Avoid stopping or changing speed on hills.
- If slowing is necessary, move throttle control lever to slower position.
- If stopping is absolutely necessary, push clutch/brake pedal quickly to brake position and engage parking brake
- Move motion control lever to neutral (N) position.

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

- To restart movement, slowly release parking brake and clutch/brake pedal.
- Slowly move motion control lever to slowest setting.
- Make all turns slowly.

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

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

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

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

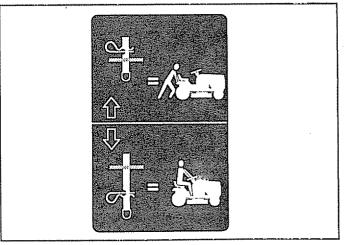


FIG. 11

#### BEFORE STARTING THE ENGINE

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

- The engine in your tractor has been shipped, from the factory, already filled with summer weight oil.
- Check engine oil with tractor on level ground.
- Remove oil fill cap/dipstick and wipe clean, reinsert the dipstick and push it all the way down into the tube, wait for a few seconds, remove and read oil level. If necessary, add oil until "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting (See "OIL VISCOSITY CHART" in the Customer Responsibilities section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.

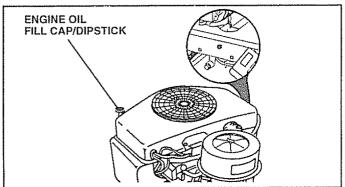


FIG. 12

#### ADD GASOLINE

 Fill fuel tank. Use fresh, clean, regular unleaded gasoline 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. 8)

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.

- 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.

#### HYDROSTATIC 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. 13).

- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings. Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used

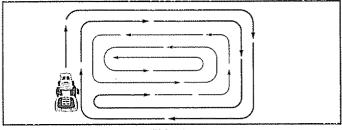


FIG. 13

#### **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. 14). 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.

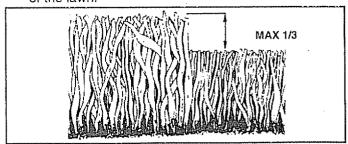


FIG. 14

| MAINTENANCE SCHEDULE  FILL IN DATES AS YOU COMPLETE REGULAR SERVICE  Check Brake Operation  MAINTENANCE SCHEDULE  FILL IN DATES  AS YOURS HOURS HOURS HOURS ON TORROR  BEFORE FRET 2 YERY 8 HOURS HOURS ON TORROR  EVERY 25 HOURS HOURS ON TORROR  EVERY 25 HOURS HOURS ON TORROR  SERVICE DATES |                                     |          |    |         |             |     |             |    |          |            |  |  |
|--|-------------------------------------|----------|----|---------|-------------|-----|-------------|----|----------|------------|--|--|
|  | Check Brake Operation               | <b>V</b> |    | 1000    |             |     |             |    |          |            |  |  |
|  | Check Tire Pressure                 | 6        |    | 0/      |             |     |             |    |          |            |  |  |
| T  | Check for Loose Fasteners           | 6/       |    |         |             |     | W/7         |    | 6/       |            |  |  |
| Ŗ  | Sharpen/Replace Mower Blades        |          |    |         | <b>4</b>    |     |             |    | <u> </u> |            |  |  |
| A  | Lubrication Chart                   |          |    |         |             |     |             |    | 6/       |            |  |  |
| ĬŤ   | Check Battery Level/Recharge        |          |    |         | 6           |     |             |    |          |            |  |  |
| 0  | Clean Battery and Terminals         |          |    |         | 6/          |     |             |    | 6/       |            |  |  |
| R  | Check Transaxle Cooling             |          |    |         | 6/          |     |             |    |          |            |  |  |
|  | Adjust Blade Belt(s) Tension        |          |    |         |             |     | <b>1</b> 5  |    |          | <u> </u>   |  |  |
|  | Adjust Motion Drive Belt(s) Tension |          |    |         |             |     | <b>1</b> /5 |    |          |            |  |  |
|  | Check Engine Oil Level              | 6/       |    | Serve . |             |     |             |    |          |            |  |  |
|  | Change Engine Oil                   |          | 9/ |         | 1,2,3       |     |             |    | 6/       |            |  |  |
| E  | Clean Air Filter                    |          |    |         | <b>6</b> /2 |     |             |    |          | The second |  |  |
| N  | Clean Air Screen                    |          |    |         | <b>1</b> /2 |     |             |    |          |            |  |  |
| G  | Inspect Muffler/Spark Arrester      |          |    |         |             | BAR |             |    |          |            |  |  |
|  | Replace Oil Filter (If equipped)    |          |    |         |             |     | 1,2         |    |          |            |  |  |
| N<br>E   | Clean Engine Cooling Fins           |          |    |         |             |     | <b>V</b> 2  |    |          |            |  |  |
|  | Replace Spark Plug                  |          |    |         |             |     | 6/          | 6/ |          |            |  |  |
|  | Replace Air Filter Paper Cartridge  |          | Ť  |         |             |     | <b>V</b> 2  |    |          |            |  |  |
|  | Replace Fuel Filter                 |          |    |         |             |     |             | 4  |          |            |  |  |

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

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

#### GENERAL RECOMMENDATIONS

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

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

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

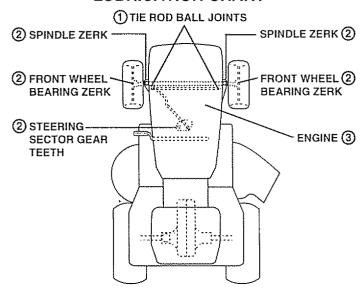
 Once a year you should replace the spark plug, clean or replace air filter, and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

#### **BEFORE EACH USE**

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

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

#### LUBRICATION CHART



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

#### 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" on page 3 of this manual).
- Keep tires free of gasoline, oil, or insect control chemicals which can harm rubber.
- Avoid stumps, stones, deep ruts, sharp objects and other hazards that may cause tire damage.

#### **BLADE CARE**

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

#### **BLADE REMOVAL (See Fig. 15)**

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

IMPORTANT: BLADE BOLT IS GRADE 8 HEAT TREATED.

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

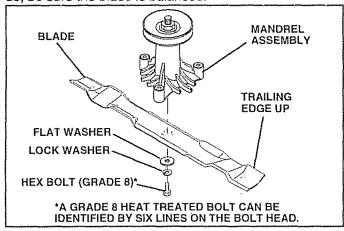


FIG. 15

#### TO SHARPEN BLADE (See Fig. 16)

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

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

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

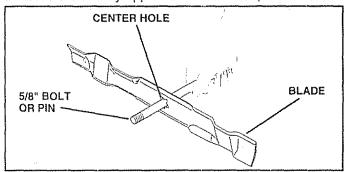


FIG. 16

#### **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.

#### 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.
- Clean terminals and battery cable ends with wire brush until bright.
- Coat terminals with grease or petroleum jelly.
- Reinstall battery (See "CONNECT BATTERY" in the Assembly section of this manual).

#### 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.

#### TRANSAXLE PUMP FLUID

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

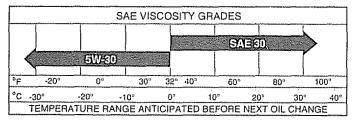
#### V-BELTS

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

#### **ENGINE**

#### LUBRICATION

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



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

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

Check the crankcase oil level before starting the engine and after each eight (8) hours of operation. Tighten oil fill cap/dipstick securely each time you check the oil level.

#### TO CHANGE ENGINE OIL (See Fig 17)

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

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

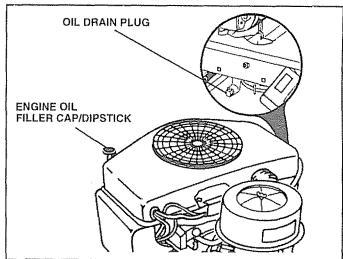


FIG. 17

#### CLEAN AIR SCREEN (See Fig. 18)

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.

#### **ENGINE COOLING FINS (See Fig. 18)**

Remove any dust, dirt or oil from engine cooling fins to prevent engine damage from overheating. Engine blower housing must be removed. Remove side panels and hood (See "TO REMOVE HOOD AND GRILL ASSEMBLY" in the Service and Adjustments section of this manual.)

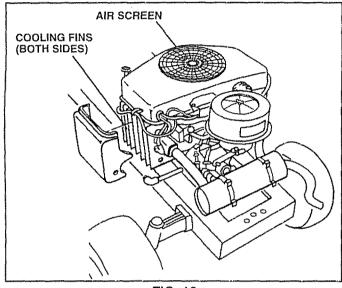


FIG. 18

#### AIR FILTER (See Fig. 19)

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.

- Remove wing nut and cover.
- Remove seal and cartridge plate.

#### TO SERVICE PRE-CLEANER

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

#### TO SERVICE CARTRIDGE

- Gently tap the flat side of the paper cartridge to dislodge dirt. Do not wash the paper cartridge or use pressurized air, as this will damage the cartridge. Replace a dirty, bent, or damaged cartridge.
- Reinstall the pre-cleaner (cleaned and oiled) over the paper cartridge.
- Reassemble air cleaner, cartridge plate, and seal.
- Install the air cleaner cover and wing nut. Tighten wing nut 1/2 turn to 1 full turn after nut contacts cover. Do not overtighten.

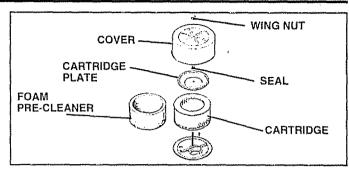


FIG. 19

#### **ENGINE OIL FILTER**

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

#### MUFFLER

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

#### **SPARK PLUGS**

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

#### IN-LINE FUEL FILTER (See Fig. 20)

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.

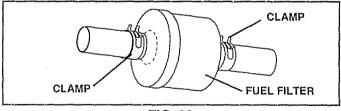


FIG. 20

#### **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. 21)

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

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

#### TO INSTALL MOWER

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

#### TO LEVEL MOWER HOUSING

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

SIDE-TO-SIDE ADJUSTMENT (See Figs. 21 and 22)

- 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 half turn of adjustment nut will change mower height about 3/16".

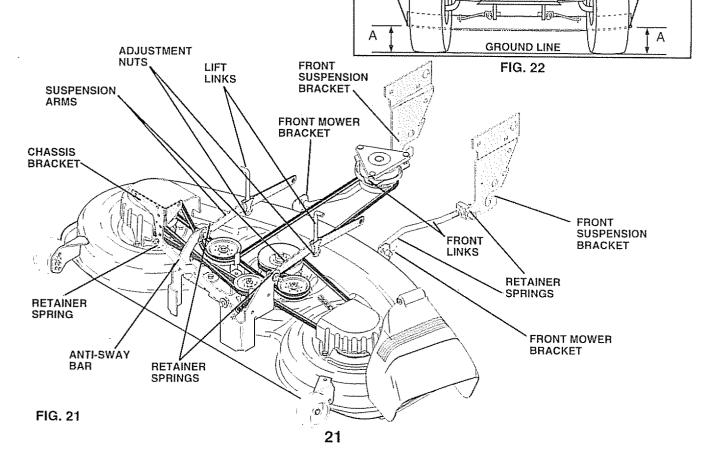
BOTTOM OF

CURL

· Recheck measurements after adjusting.

**BOTTOM OF** 

CURL



FRONT-TO-BACK ADJUSTMENT (See Figs. 23 and 24) 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.

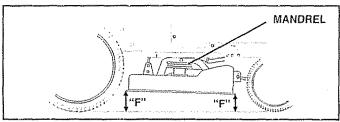
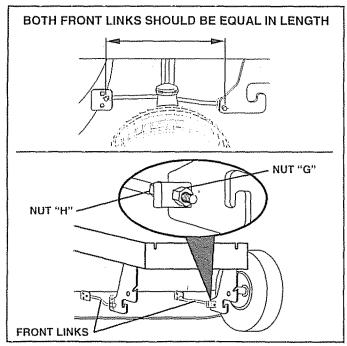


FIG. 23



#### TO REPLACE MOWER DRIVE BELT

MOWER DRIVE BELT REMOVAL (See Fig. 25)

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

#### MOWER DRIVE BELT INSTALLATION (See Fig. 25)

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

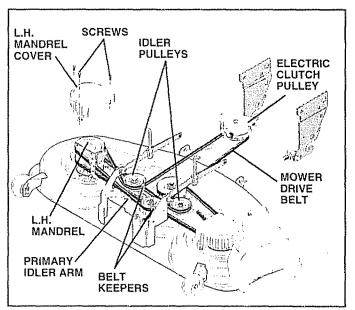


FIG. 25

# TO REPLACE MOWER BLADE DRIVE BELT (See Fig. 26)

Park the tractor on level surface. Engage parking brake.

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

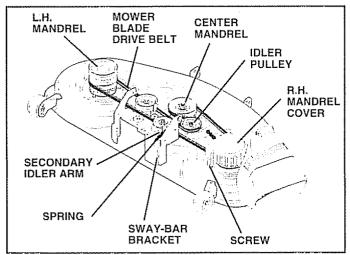


FIG. 26

# TO ADJUST ATTACHMENT CLUTCH (See Fig. 27)

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

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

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

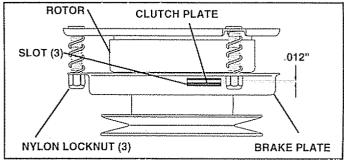


FIG. 27

#### TO ADJUST BRAKE (See Fig. 28)

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

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

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

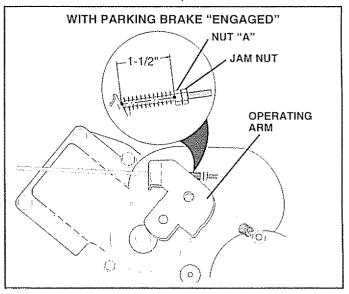


FIG. 28

# TO REPLACE MOTION DRIVE BELT (See Fig. 29)

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

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

#### **BELT REMOVAL -**

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

#### **BELT INSTALLATION -**

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

#### IMPORTANT: CHECK BRAKE ADJUSTMENT.

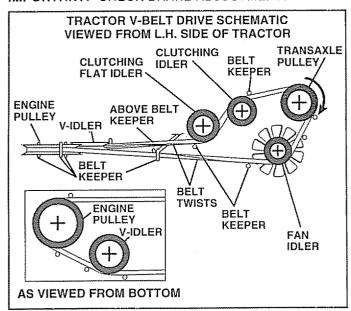


FIG. 29

# TO ADJUST MOTION CONTROL LEVER (See Fig. 30)

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 TRANSMISSION" in the Operation section of this manual.

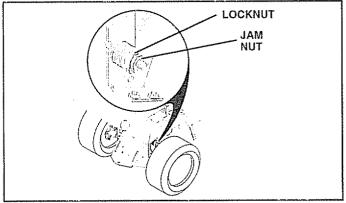


FIG. 30

#### 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. 31)

- 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. 31 and 32)

- 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.

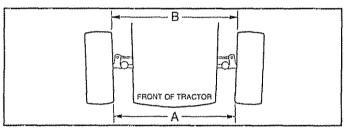


FIG. 31

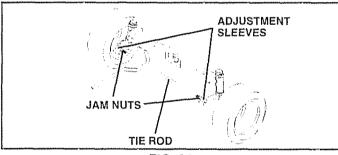


FIG. 32

#### 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.

#### TO REMOVE WHEEL FOR REPAIRS

FRONT WHEEL (See Fig. 33)

- Block up axle 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 axie cover.

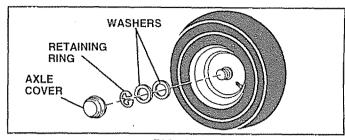


FIG. 33

#### **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.

# TO START ENGINE WITH A WEAK BATTERY (See Fig. 34)



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

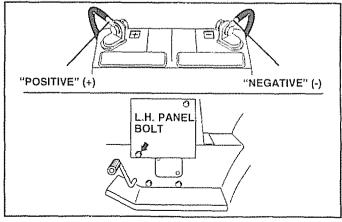


FIG. 34

#### TO REPLACE HEADLIGHT BULB

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

#### INTERLOCKS AND RELAYS

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

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

#### TO REPLACE FUSE

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

# TO ADJUST ATTACHMENT LIFT SPRING (See Fig. 35)

- 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.

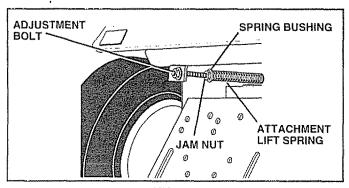


FIG. 35

# TO REMOVE HOOD AND GRILL ASSEMBLY (See Fig. 36)

- 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.

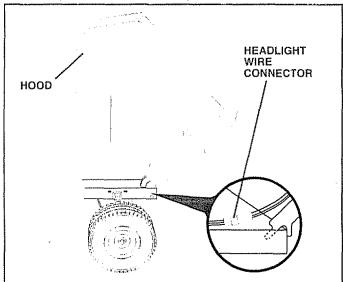


FIG. 36

#### **ENGINE**

# TO ADJUST THROTTLE CONTROL CABLE (See Figs. 37 & 38)

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 CARBURETOR (See Fig. 39)

The carburetor has been preset 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 above).
- With engine off turn idle fuel adjusting needle in (clockwise) closing it finger tight and then turn out (counterclockwise) 1-1/4 turns.
- Turn main fuel adjusting needle in (clockwise) closing 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.
- With throttle control lever in fast (�) position, turn main fuel adjusting needle in (clockwise) until engine begins to die then turn out (counterclockwise) until engine runs rough. Turn needle to a point midway between those two positions.
- Idle speed setting With throttle control lever in slow
   (>>) position, engine should idle at 1400 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 begins to die and then turn out (counterclockwise) until engine runs rough. Turn needle to a point midway between those two positions.
- Recheck idle speed. Readjust if necessary.

#### **ACCELERATION TEST -**

Move throttle control lever from slow (<a>) to fast (<a>) position. If engine hesitates or dies, turn idle mixture screw 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.

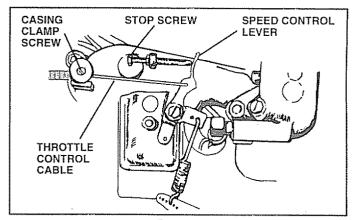


FIG. 37

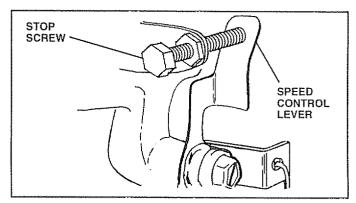


FIG. 38

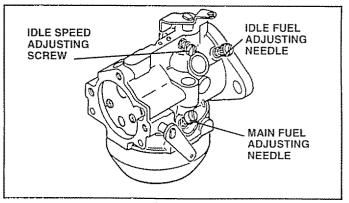


FIG. 39

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

#### **ENGINE**

#### **FUEL SYSTEM**

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

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

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

#### **ENGINE OIL**

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

#### **CYLINDERS**

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

#### **OTHER**

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

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

# TROUBLESHOOTING POINTS

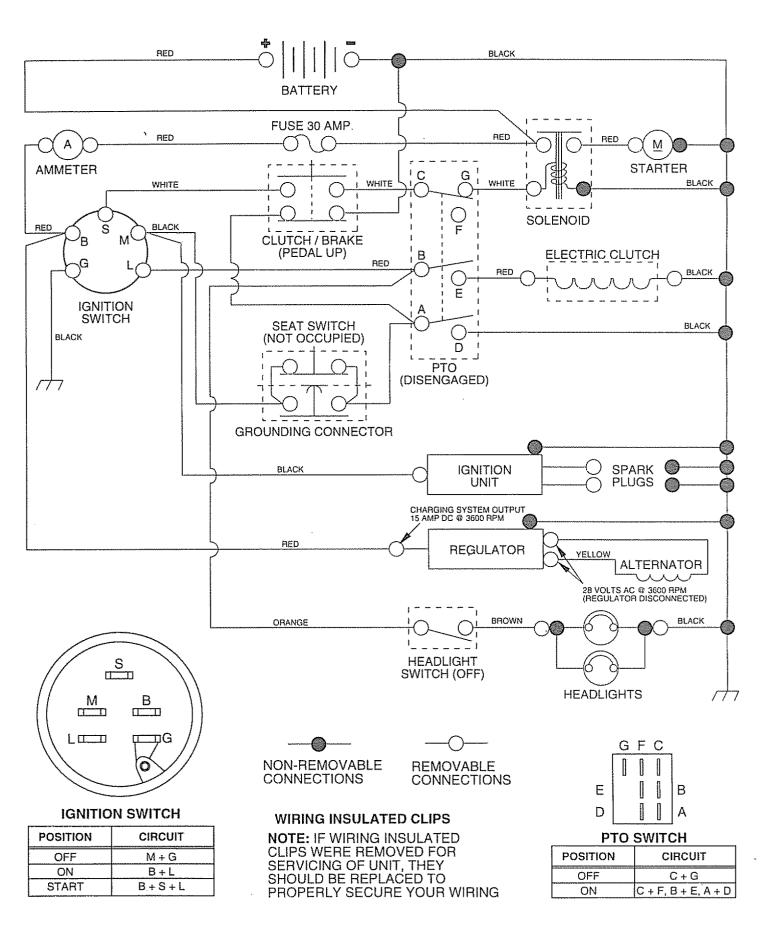
| PROBLEM                             | CAUSE  | CORRECTION  |
|-------------------------------------|--|---|
| Will not start                      | 1. Out of fuel. 2. Engine not "CHOKED" properly. 3. Engine flooded 4. Bad spark plug 5. Dirty air filter 6. Dirty fuel filter. 7. Water in fuel. 8. Loose or damaged wiring 9. Carburetor out of adjustment  | <ol> <li>Fill fuel tank.</li> <li>See "TO START ENGINE" in Operation section.</li> <li>Wait several minutes before attempting to start</li> <li>Replace spark plug</li> <li>Clean/replace air filter.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter</li> <li>Check all wiring</li> <li>See "To Adjust Carburetor" in Service Adjustments section</li> <li>Contact an authorized service center/department.</li> </ol>  |
| Hard to start                       | <ol> <li>Dirty air filter</li> <li>Bad spark plug</li> <li>Weak or dead battery</li> <li>Dirty fuel filter</li> <li>Stale or dirty fuel</li> <li>Loose or damaged wiring</li> <li>Carburetor out of adjustment</li> <li>Engine valves out of adjustment</li> </ol>   | <ol> <li>Clean/replace air filter.</li> <li>Replace spark plug.</li> <li>Recharge or replace battery</li> <li>Replace fuel filter</li> <li>Drain fuel tank and refill with fresh gasoline.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service Adjustments section</li> <li>Contact an authorized service center/department.</li> </ol>   |
| Engine will not turn over           | 1 Clutch/brake pedal not depressed 2 Attachment clutch is engaged 3 Weak or dead battery 4 Blown fuse 5 Corroded battery terminals 6 Loose or damaged wiring 7 Faulty ignition switch 8 Faulty solenoid or starter 9 Faulty operator presence switch(es)   | Depress clutch/brake pedal     Disengage attachment clutch     Recharge or replace battery     Replace fuse     Clean battery terminals.     Check all wiring     Check/replace ignition switch     Check/replace solenoid or starter     Contact an authorized service center/department.  |
| Engine clicks but will not<br>start | Weak or dead battery     Corroded battery terminals     Loose or damaged wiring.     Faulty solenoid or starter.   | 1 Recharge or replace battery. 2 Clean battery terminals 3 Check all wiring 4 Check/replace solenoid or starter.  |
| Loss of power                       | 1. Cutting too much grass/too fast. 2. Throttle in "CHOKE" position. 3. Build-up of grass, leaves and trash under mower 4. Dirty air filter. 5. Low oil level/dirty oil. 6. Faulty spark plug. 7. Dirty fuel filter 8. Stale or dirty fuel 9. Water in fuel. 10. Spark plug wire loose 11. Dirty engine air screen/fins. 12. Dirty/clogged muffler 13. Loose or damaged wiring. 14. Carburetor out of adjustment. 15. Engine valves out of adjustment. | <ol> <li>Set in "Higher Cut" position/reduce speed</li> <li>Adjust throttle control.</li> <li>Clean underside of mower housing</li> <li>Clean/replace air filter</li> <li>Check oil level/change oil</li> <li>Clean and regap or change spark plug.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and refill with fresh gasoline</li> <li>Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter</li> <li>Connect and lighten spark plug wire</li> <li>Clean engine air screen/fins.</li> <li>Clean/replace muffler</li> <li>Check all wiring</li> <li>See "To Adjust Carburetor" in Service Adjustments section.</li> <li>Contact an authorized service center/department</li> </ol> |
| 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<br>when operator leaves seat<br>with attachment clutch<br>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   | <ol> <li>Worn, bent or loose blade</li> <li>Mower deck not level</li> <li>Buildup of grass, leaves, and trash under mower.</li> <li>Bent blade mandrel</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels</li> </ol>   | <ol> <li>Replace blade. Tighten blade bolt</li> <li>Level mower deck.</li> <li>Clean underside of mower housing</li> <li>Replace blade mandrel</li> <li>Clean around mandrels to open vent holes.</li> </ol>  |  |  |  |  |
| 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  | <ol> <li>Engine speed too slow.</li> <li>Travel speed too fast.</li> <li>Wet grass.</li> <li>Mower deck not level.</li> <li>Low/uneven tire air pressure.</li> <li>Worn, bent or loose blade.</li> <li>Buildup of grass, leaves and trash under mower.</li> <li>Mower drive belt worn.</li> <li>Blades improperly installed.</li> <li>Improper blades used.</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol> | 1. Place throttle control in "FAST" position 2. Shift to slower speed. 3. Allow grass to dry before mowing 4. Level mower deck 5. Check tires for proper air pressure 6. Replace/sharpen blade. Tighten blade bolt 7. Clean underside of mower housing 8. Replace mower drive belt 9. Reinstall blades sharp edge down 10. Replace with blades listed in this manual. 11. Clean around mandrels to open vent holes. |  |  |  |  |
| Headlight(s) not working<br>(if so equipped)  | 1 Switch is "OFF". 2. Bulb(s) burned out. 3. Faulty light switch. 4. Loose or damaged wiring 5. Blown fuse  | Turn switch "ON"     Replace bulb(s).     Check/replace light switch     Check wiring and connections     Replace fuse  |  |  |  |  |
| Battery will not charge   | 1. Bad battery cell(s) 2. Poor cable connections 3. Faulty regulator (if so equipped) 4. Faulty alternator.   | Replace battery.     Check/clean all connections     Replace regulator.     Replace alternator.   |  |  |  |  |
| Engine "backfires"<br>when turning engine<br>"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  |  |  |  |  |

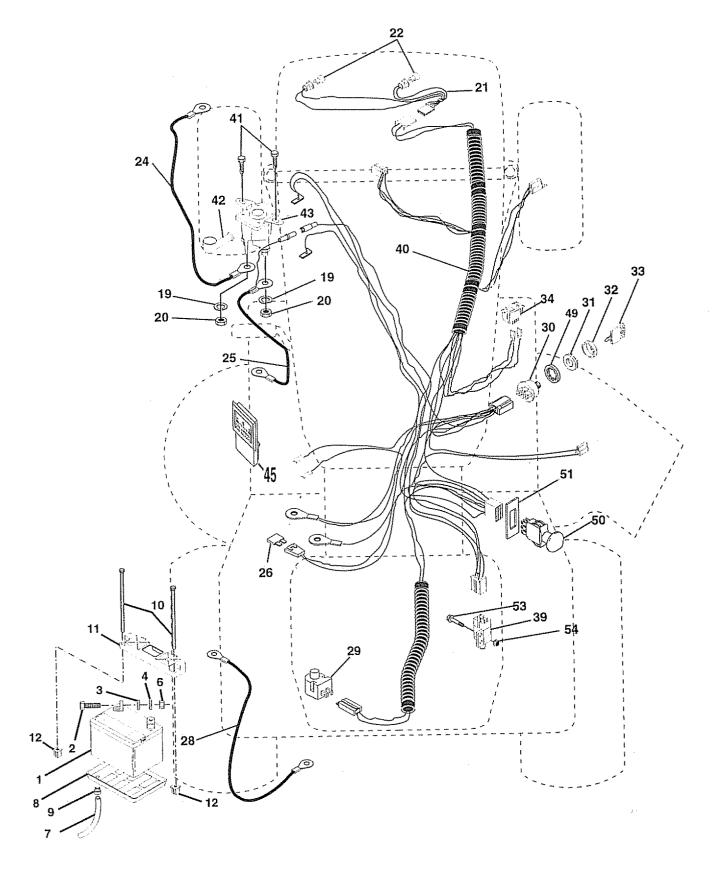
#### TRACTOR - - MODEL NUMBER 917.251493

#### SCHEMATIC



# TRACTOR - - MODEL NUMBER 917.251493

## **ELECTRICAL**



#### **TRACTOR - - MODEL NUMBER 917.251493**

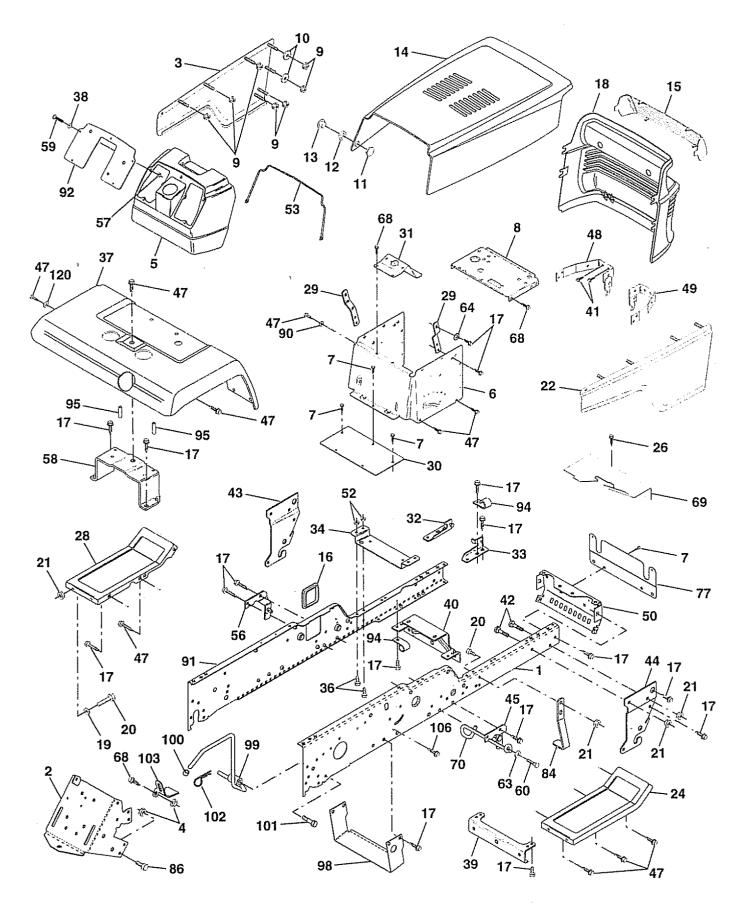
#### **ELECTRICAL**

| KEY<br>NO.   | PART<br>NO.   | DESCRIPTION   |
|--|---|---|
| 11<br>12<br>19<br>21<br>22<br>24<br>25<br>26<br>28<br>29<br>31<br>33<br>34<br>41<br>42<br>43<br>45<br>55<br>51<br>53 | 145769<br>STD551125<br>73350400<br>136850<br>4152J<br>4799J<br>146149<br>108824X<br>4207J<br>121305X<br>144921<br>140400<br>141226<br>140403<br>110712X<br>109553X<br>146065<br>17720408<br>131563<br>145673<br>122822X<br>153249 | Battery Bolt Hex Head 1/4-20 x 3/4 Washer, Lock 1/4 Washer 9/32 x 5/8 x 16 Ga Nut Fin Hex 1/4-20 Tube Plastic Tray, Battery Clamp, Hose Bolt Wet BTR 1/4-20 x 7.5 Zinc Hold down Battery Dash Mount Nut Push Nylon 1/4" Wet Battery Washer, Lock 1/4 Nut, Jam Hex 1/4-20 Harness Socket Light W/4152J Bulb Light Cable, Battery Cable 6 Ga. Red 12.5" W 16 Wire Fuse Cable, Ground Switch, Plunger Switch, Ign Nut, Ignition Switch Cover Switch Key Key Switch, Light Intlk Switch Harness Ign. Screw 1/4-20 x 1/2 Cover, Terminal Red Solenoid Ammeter Washer Pinned Delta Switch, PTO Ring Retainer PTO Screw Hex Washer Hd #10-32 x 1 Nut Keps #10-32 |

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

#### **TRACTOR - - MODEL NUMBER 917.251493**

#### **CHASSIS AND ENCLOSURES**



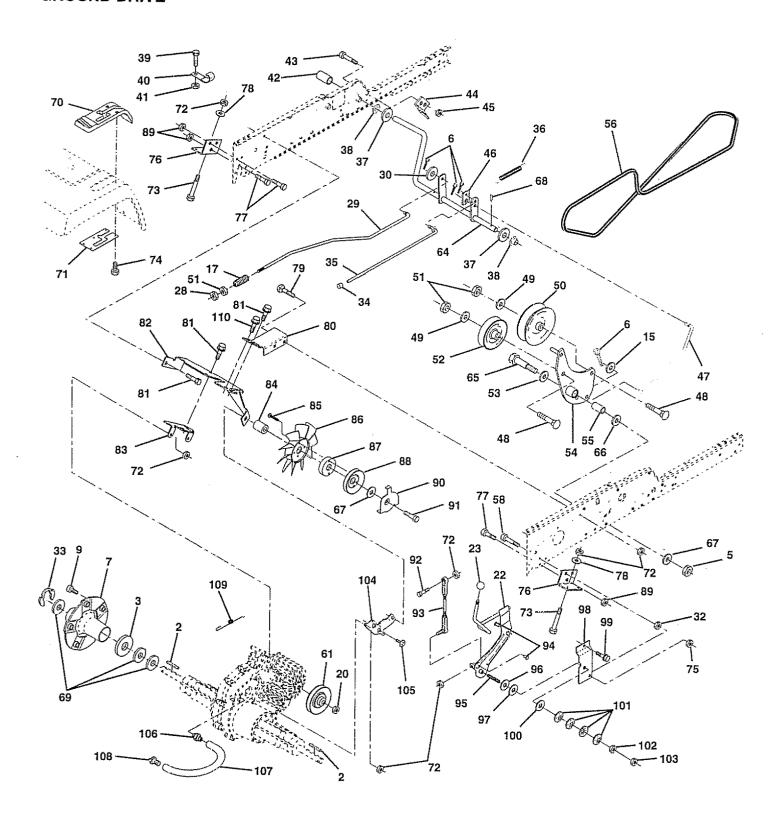
## TRACTOR - - MODEL NUMBER 917.251493

#### **CHASSIS AND ENCLOSURES**

| KEY<br>No. | PART<br>NO. | DESCRIPTION                   | KEY<br>NO. | PART<br>NO.   | DESCRIPTION                         |
|------------|-------------|-------------------------------|------------|---------------|-------------------------------------|
| 1          | 150253      | Rail, Frame RH                | 44         | 136940        | Bracket, Spnsn Front Rh             |
| 2          | 140506      | Drawbar, Gt                   | 45         | 154913        | Bracket Asm., Susp Chassis Rh       |
| 3          |             | Panel Asm., Side LH           | 47         | 17490608      | Screw Thdrol 3/8-16 x 1/2           |
| 4          | 73800700    | Nut, Lock Hex 7/16 Unc        | 48         | 154994        | Bracket Asm., Pivot Hood Lh         |
| 5          | 145203      | Dash, Plastic Black           | 49         | 154992        | Bracket Asm., Pivot Hood Rh         |
| 6          | 150273      | Dash Asm., Lower              | 50         | 152728        | Bracket, Chassis Front              |
| 7          | 17720408    | Screw, Thd Cut 1/4-20 x 1/2   | 52         | 73680500      | Nut, Crownlock 5/16-18              |
| 8          | 145166      | Support, Battery              | 53         | 137304        | Rod, Support Hood                   |
| 9          | 108067X     | Nut, Pal                      | 56         | 154914        | Bracket Asm., Susp Chassis Lh       |
| 10         | 19092016    | Washer 9/32 x 1-1/4 x 16 Ga   | 57         | 73640400      | Nut, Keps Hex 1/4-20                |
| 11         | 137270      | Rivet, Ratchet Male           | 58         | 137113        | Bracket Asm., Fender                |
| 12         | 137269      | Washer, Nylon                 | 59         | 74180412      | Screw, Mach Cr 1/4-20 x 3/4         |
| 13         | 137271      | Rivet, Ratchet Female         | 60         | 17490620      | Screw Thdrol 3/8-16 x 1-1/4         |
| 14         | 136673X558  |                               | 63         | 19131614      | Washer 13/32 x 1 x 14 Ga.           |
| 15         | 136374      | Lens, Bar Člear               |            | 144283        | Washer, Serrated Disc 13/32 x 1     |
| 16         | 121794X     | Cover, Access                 | 68         | 17490508      | Screw, Thd 5/16-18 x 1/2            |
| 17         | 17490612    | Screw, Thdrol 3/8-16 x 3/4    | 69         | 153991        | Shield, Heat                        |
| 18         | 136373X428  | Grille                        | 70         | 137159        | Guide, Belt Mid Span                |
| 19         | 19131312    | Washer 13/32 x 13/16 x 12 Ga. | 77         | 137308        | Shield, Front                       |
| 20         | 74760616    | Bolt, Fin Hex 3/8-16 x 1      | 84         | 142992        | Stop, Over Center Mower             |
| 21         | 73680600    | Nut, Crownlock 3/8-16 Unc     | 86         | 74760716      | Bolt, Fin Hex 7/16-14 Unc x 1       |
| 22         | 136670X558  | Panel Asm., Side RH           | 90         | 11050600      | Washer, Lock External Tooth 3/8     |
| 24         | 145243X558  | Footrest, RH                  | 91         | 150851        | Rail, Frame Lh                      |
| 26         | 17490512    | Screw, Thdrol 5/16-18 x 3/4   |            | 143485X013    | Plate, Silkscreen Dash              |
| 28         | 145244X558  | Footrest, LH                  | 94         | 100207K       | Clip, Fuel Line                     |
| 29         | 145349      | Bracket, Support Dash         | 95         | 105531X       | Push Nut, Nylon                     |
| 30         | 145052      | Saddle, Hydro 1995            | 98         | 140503        | Bracket Skid Chassis                |
| 31         | 145183      | Brace, Support Steering       |            | 140871        | Rod By Pass                         |
| 32         | 141315      | Bracket Asm., Frame Pivot Lh  |            | 124236X       | Cap By Pass Rod                     |
| 33         | 141314      | Bracket Asm., Frame Pivot Rh  |            | 17490628      | Screw Thdrol 3/8-16 x 1-3/4         |
| 34         | 142131      | Bracket, Engine Support Rear  |            | 4497H         | Retainer, Spring                    |
| 36         | 74780512    | Bolt, Fin Hex 5/16-18 x 3/4   |            | 142273        | Lock, By Pass                       |
| 37         | 140002X558  | Fender, Pnt.                  |            | 138776        | Bolt 5/16-18 Type TT                |
| 38         | 19091216    | Washer 9/32 x 3/4 x 16 Ga.    |            | 19131616      | Washer 13/32 x 1 x 16 Ga.           |
| 39         | 136961      | Bracket, Axle Front           |            | 8022J         | Plug, Hole                          |
| 40         | 142132      | Bracket, Support Axle/Engine  |            |               |                                     |
| 41         | 17580408    | Screw Tap Tite 1/4-20 x 1/2   | MOT        | E. All compon | ent dimensions given in U.S. inches |
| 42         | 72140608    | Bolt, Carriage 3/8-16 x 1     | NOT        | 1 inch = 25   |                                     |
| 43         | 136939      | Bracket, Spnsn Front Lh       |            | 1 HIGH = 25   | -MMP   E     RE   E                 |

## **TRACTOR - - MODEL NUMBER 917.251493**

#### **GROUND DRIVE**



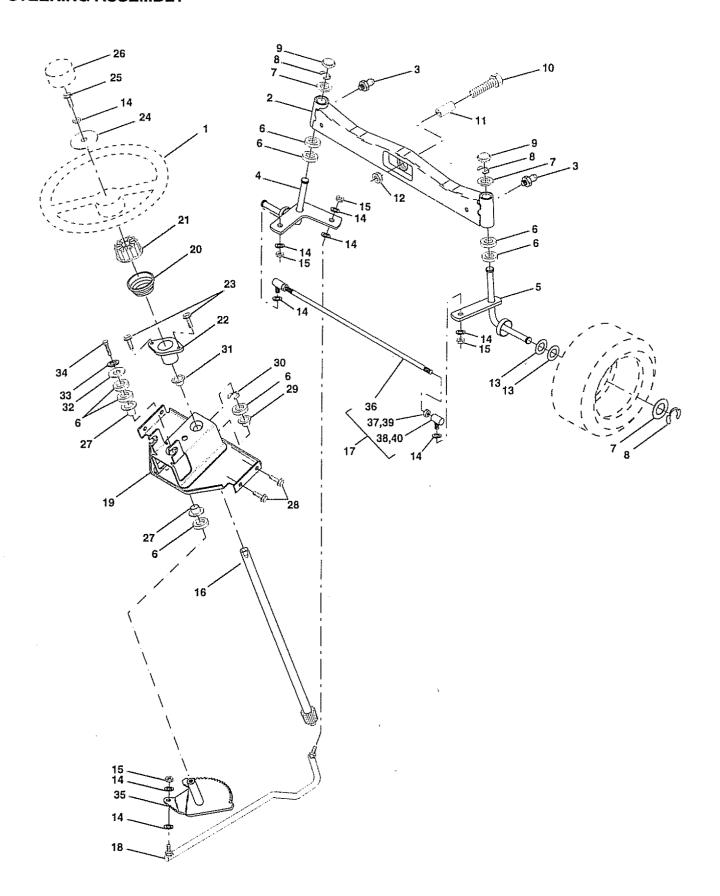
#### TRACTOR - - MODEL NUMBER 917.251493

#### **GROUND DRIVE**

| KEY<br>NO.  | PART<br>NO.   | DESCRIPTION  | KEY<br>NO.  | PART<br>NO.   | DESCRIPTION  |
|---|---|--|---|---|--|
| 235679517022389023333336789941423444565555568667<br>1122238902333333334444444455555568667 | 7070E 7563R STD541437 STD561210 140507 140080 STD551037 140921 73940800 140498 106933X STD541237 140494 19131616 73220700 12000053 124236X 137648 149412 121749X 150035 74321016 5304J 73631000 8883R 74760412 104601X 73800400 145170 138228 72110614 19131413 131494 STD541437 139123 207J 138390 105706X 140218 74760724 140488 154752 67609 140296 19131312 | Key 1/4 x 2.5 Washer Thrust Axle Harden Nut Crownlock 3/8-16 Pin Cotter 1/8 x 3/4 Wheel Hub Asm. Bolt Hub Washer 13/32 x 13/16 x 16 Ga Spring Rod Brake Nut Hex Jam Toplock 1/2-20 Shaft Arm Asm Knob Nut Brake Rod Washer 13/32 x 1 x 16 Ga. Nut Hex 7/16-14 Ring E Cap Plunger Rod Parking Brake Spring , Drive Ground Washer 25/32 x 1-1/4 x 16 Gauge Nyliner Screw Fin #10-24 x 1 Actuator Interlock Switch Nut Lock #10-24 Cover Pedal Bolt Hex Head 1/4-20 x 3/4 Bracket Interlock Nut Lock W/Insert 1/4-20 Retainer Spring Clutch Rod Bolt Carriage 3/8-16 x 1-3/4 Gr 5 Washer 13/32 x 7/8 x 13 Ga Pulley Idler Flat Nut Crownlock 3/8-16 UNC Pulley Idler Grooved Washer Hartdened Clutch Arm Asm Bearing, Idler V-Belt Bolt Fin Hex 7/16-14 x 1-1/2 Pullery Transaxle Shaft Asm Brake Parking Clutch Bolt Shoulder Washer Hardened Washer 13/32 x 13/16 x 12 Ga | 101<br>102<br>103<br>104<br>105<br>106<br>107<br>108<br>109 | 141004<br>17490624<br>126881X<br>59285<br>73560500<br>73350500<br>140480<br>17580408<br>142918<br>154739<br>142917<br>140929<br>88652<br>150073 | Pin Roll Washer Console Hydro Fender Plate Console Shift Locknut Hex W/Washer Insert Bolt Fin Hex 5/16-18 x 3 Screw Hex Wsh. Hi-Lo 1/4-1/2 Nut Lock Hex 7/16 Bracket Transaxle Bolt Fin Hex 7/16-14 x 1 Washer 11/32 x 3/4 x 12 Ga Bolt Carriage 5/16-18 x 5/8 Bracket Torque RH Screw Thdrol 3/8-16 x 3/4 Bracket Mount Torque/Fan Strap Torque Mid Spacer Screw #10-24 x 1-1/4 Fan 7" Hydro Adapter Fan Pulley Idler Nut Crownlock 7/16-14 UNC Keeper Belt Screw Thdrol 3/8-16 x 2-3/4 Bolt Fin Hex 5/16-18 x 1.25 Link Shift Asm Fastner Christmas Tree Screw Set 5/16-18 x 1.5 Washer Nickel Plated Bearing Trust Bracket Shift Screw Thdrol 3/8-16 x 1-1/2 Washer Compression Washer Bellville Nut Hex Nylok Nut Hex Jam 5/16-18 Bracket Idler Screw Tap 1/4-20 x 1/2 O-Ring Asm Hydro Gear 70110 Line Fuel Hydro 15" VGT Serv. Cap Asm Vent Hydro Gear 70109 Spring Return Brake Bolt Transaxle Hydro nent dimensions given in U.S. inches |

### **TRACTOR - - MODEL NUMBER 917.251493**

### STEERING ASSEMBLY



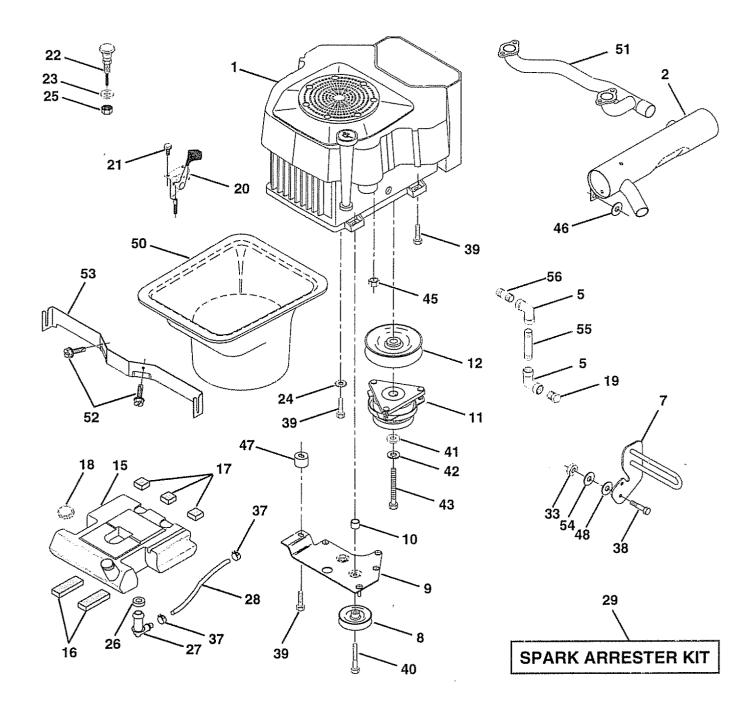
## **TRACTOR - - MODEL NUMBER 917.251493**

#### STEERING ASSEMBLY

| KEY<br>NO.   | PART<br>NO.  | DESCRIPTION  |
|--|--|--|
| 14   | 121472X<br>137094<br>6855M<br>136960<br>136959<br>6266H<br>121748X<br>12000029<br>121232X<br>74781044<br>136518<br>73901000<br>121749X<br>STD551137<br>STD541537<br>145103<br>137347   | Wheel, Steering Axle Asm., Front Fitting, Grease Spindle Asm., LH Spindle Asm., RH Bearing, Race Thrust Harden Washer 25/32 x 1-5/8 x 16 Ga. Ring, Klip #T5304-75 Cap, Spindle Bolt, Fin Hex 5/8-11 x 2-3/4 Spacer, Brg. Axle Front Nut, Lock Flange 5/8-11 Unc Washer 25/32 x 1-1/4 x 16 Ga. Washer, Lock Hvy Hlcl Spr 3/8 Nut, Lock Center 3/8-24 Unf Shaft Asm., Steering Rod Asm., Tie Ball J Ball Vgt (Inc.   |
| 18<br>19<br>20<br>21<br>22<br>23<br>24<br>25<br>26<br>27<br>28<br>29<br>30<br>31<br>32<br>33<br>34<br>35<br>36<br>37 | 137155<br>146611<br>145182<br>100711L<br>155105<br>152927<br>19133808<br>74780616<br>126805X<br>3366R<br>17490612<br>104239X<br>12000034<br>138136<br>19111610<br>STD551131<br>74760512<br>138059<br>137156<br>73360600<br>109850X | Key No. 36-40) Draglink, Ball Joint Solid Vgt Support Asm., Steering Vgt Column, Steering Adapter, Wheel Steering Bushing, Strg. Blk Screw Washer 13/32 x 2-3/8 x 8 Ga. Bolt, Fin Hex 3/8-16 x 1 Gr. 5 Cap , Wheel Steering Bearing, Col. Strg. Screw, Thrdrol 3/8-16 x 3/4 Bearing, Flange Ring, Klip Truarc #5304-75 Bushing, Nyliner Snap Washer 11/32 x 1 x 10 Ga. Washer, Lock Hvy Hlcl Spr 5/16 Bolt, Hex Hd 5/16-18 x 3/4 Gear, Sector Steering Tie Rod Jam Nut RH Thread Joint Asm. Ball RH Thread Joint Asm. Ball LH Thread |

#### **TRACTOR - - MODEL NUMBER 917.251493**

#### **ENGINE**



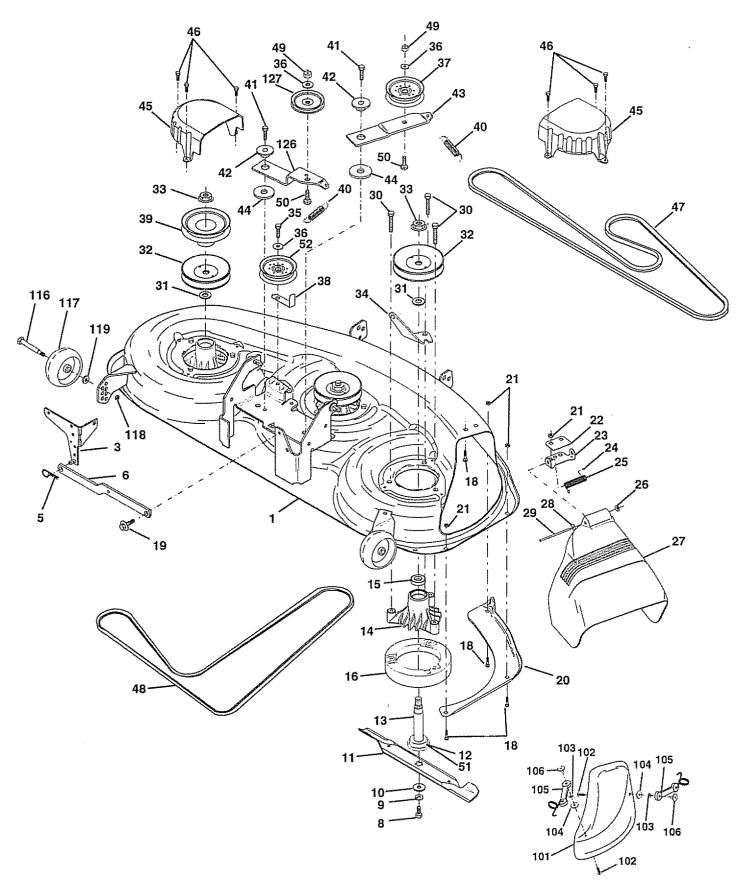
## **TRACTOR - - MODEL NUMBER 917.251493**

#### **ENGINE**

| KEY<br>NO.   | PART<br>NO.  | DESCRIPTION   |
|--|--|---|
| 1  | 146412   | Engine Kohler<br>Model MV19S-57529  |
| 2  | 144110   | Muffler Asm Kohler VGT  |
| 3 4 5 6 8 9 10 11 23 14 15 16 17 18 19   | 13240300<br>13280328<br>13200300<br>138129<br>121361X<br>150828<br>105432X<br>137140<br>136907<br>154575<br>154574<br>151346<br>109227X<br>106082X<br>152334<br>13290300   | (Inc. Key No. 34) Elbow Street 3/8 NPT Nipple Pipe 3/8NPT X 3 - 1/2 Elbow STD 90 Degree 3/8 - 18 NPT Clamp Tube Double Engine Pulley V-Idler Keeper Asm Belt Engine Bushing Clutch Electric Pulley Engine VGT Elect Clutch Baffle Air LH Koh VGT Baffle Air RH Koh VGT Tank Fuel Rear 3.50 YT/GT Pad Spacer Pad Spacer Cap Asm Fuel W/Gauge Vented Plug Oil Drain   |
| 20<br>21<br>22<br>23<br>24<br>25<br>26<br>27<br>28<br>29<br>32<br>34<br>35<br>36<br>37<br>39<br>41<br>42<br>43<br>45<br>62 | 133439<br>17720410<br>138672<br>19132616<br>STD551237<br>73920600<br>3645J<br>139277<br>7834R<br>132920<br>105037X<br>17490508<br>17720408<br>STD551131<br>74570512<br>123487X<br>17490624<br>17490652<br>126197X<br>STD551143 | (Order From Engine Manufacturer) Control Throttle Screw Hex Thd Cut 1/4 - 20 X 5/8 Control Choke Washer 13/32 X 1 - 5/8 X 16 Ga Lockwasher Ext Tooth 3/8 Nut Keps 3/8 - 24 UNF Bushing Stem Tank Fuel Fuel Line Spark Arrester Kit Strip Foam Screw Thdrol 5/16 - 18 X 1/2 Screw Thd Cut 1.4 - 20 x 1/2 Washer Lock 5/16 Screw Hex 5/16 - 16 UNC X 3/4 Clamp Hose Screw Thdrol 3/8 - 16 X 1 - 1/2 TT Screw Thdrol 3/8 - 16 X 3 - 1/4 Washer 1-1/2 OD X 15/32 ID X .250 Washer Lock 7/16 Bolt Hex 7/16-20 X 4-1/4 Ga 5 Nut Flange 1/4-20 Starter Nut Shield Heat |

### **TRACTOR - - MODEL NUMBER 917.251493**

#### **46" MOWER DECK**



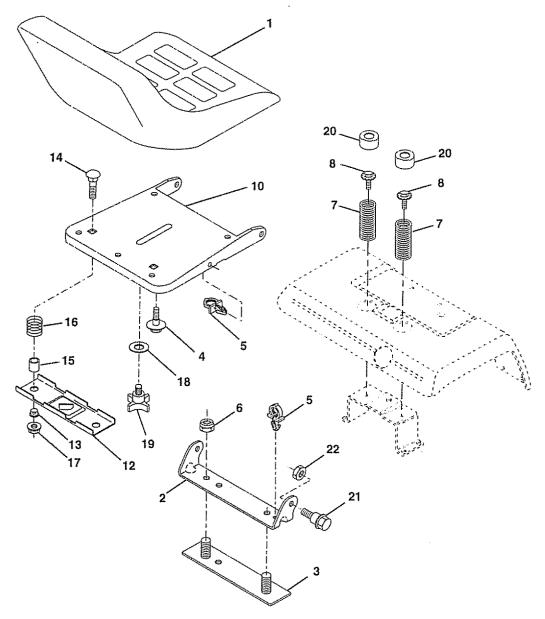
#### **TRACTOR - - MODEL NUMBER 917.251493**

#### 46" MOWER DECK

| KEY<br>NO. | PART<br>NO.         | DESCRIPTION   | KEY<br>NO. | PART<br>NO.                   | DESCRIPTION  |
|------------|---------------------|---|------------|-------------------------------|--|
| 1          | 153125<br>138457    | Deck Asm., Mower 46"<br>Bracket Asm., Sway Bar                      |            | 137554<br>144917              | Keeper, Belt, Idler<br>Pulley, Idler, Driven                     |
| 5          | 4939M               | Retainer Spring   | 40         | 137273                        | Spring, Secondary 44/46/50 Vent                                  |
| 6<br>8     | 130832<br>850857    | Arm, Suspension, Rear (Sway Bar) Bolt, Patched 3/8-24 x 1-1/4 Gr. 8 | 41<br>42   | 17490620<br>122052X           | Screw, Thdroll 3/8-16 x 1-1/4 Tytt<br>Spacer, Retainer           |
| 9          | STD551137           | Washer, Lock Hvy., Unplated 3/8                                     | 43         | 144949                        | Arm, Idler Secondary   |
| 10         | 140296              | Washer, Hard Blade, Mower   | 44         | 133943                        | Washer, Hardened   |
|            |                     | Vented  | 45         | 145059                        | Cover, Mandrel Deck  |
| 11         | 152443              | Blade, 46" Mower Deck   | 46         | 137729                        | Screw, Thdroll. 1/4-20 x 5/8                                     |
| 12         | 129895              | Bearing, Ball, Mandrel #6204  | 47         | 144959                        | V-Belt, Mower, Secondary   |
| 13         | 137553              | Shaft Āsm. w/Lower Bearing<br>(Includes Key No. 12)                 | 48<br>49   | 148763<br>STD541437           | V-Belt, Mower, Primary Nut, Crownlock 3/8-16 UNC                 |
| 14         | 137152              | Housing, Mandrel  |            | 72110612                      | Bolt, Carriage 3/8-16 x 1-1/2 Gr. 5                              |
| 15         | 110485X             | Bearing, Ball, Mandrel  |            | 153390                        | Washer Felt  |
| 16         | 140329              | Stripper, Mower Round   |            | 155191                        | Pulley, Idler Flat 46 Pri Drive                                  |
| 18         | 72140505            | Bolt, Carriage 5/16-18 x 5/8  |            | 145579                        | Cover, Mulching  |
| 19         | 132827              | Bolt, Hex Head, Shoulder 5/16-18                                    |            | 71161010                      | Screw  |
| 20         | 145055              | Baffle, Vortex Mower 46"  |            | STD551110                     | Washer, Lock #10   |
| 21<br>22   | STD541431<br>134753 | Nut, Crownlock 5/16-18 UNC Stiffiner, Bracket                       |            | 19061216<br>130758            | Washer<br>Latch Asm. Bagger                                      |
| 23         | 131267              | Bracket, Deflector  |            | 2029J                         | Nut, Weld  |
| 24         | 105304X             | Cap, Sleeve   |            | 137644                        | Bolt, Shoulder   |
| 25         | 123713X             | Spring, Torsion, Deflector  |            | 133957                        | Gauge Wheel, Wide  |
| 26         | 110452X             | Nut, Push   |            | 739306001                     | Nut, Centerlock 3/8-16 UNC                                       |
| 27         | 145325              | Shield, Deflector Mower   |            | 19121414                      | Washer 3/8 x 7/8 x 14 Ga   |
| 28         | 19111016            | Washer 11/32 x 5/8 x 16 Ga.   |            | 144948                        | Arm, Idler, Primary Deck 46"                                     |
| 29<br>30   | 131491<br>138776    | Rod, Hinge<br>Screw, Hex Head, Thdroll                              | 127        | 146763<br>143651              | Pulley, Idler, V-Groove Dim. 4.25<br>Mandrel Asm 44"/50" Service |
| 31         | 129963              | Washer, Spacer Mower Vented   |            | 143031                        | (Includes Key Nos. 8-10, 12-15, 31                               |
| 32         | 153531              | Pulley, Mandrel   |            |                               | and 33)  |
| 33         | 137266              | Nut, Flg. Top Lock Cntr. 9/16                                       |            | 147401                        | Deck Complete (Std. Deck-Order                                   |
| 34         | 144945              | Anchor, Spring Deck 46"   |            |                               | separately mulcher plate and gauge                               |
| 35         | 17490628            | Screw, Thdroll 3/8-16 x 1-3/4 Tytt                                  |            |                               | wheel components Key Nos. 101-                                   |
| 36         | STD551037           | Washer 13/32 x 13/16 x 16 Ga.                                       |            |                               | 106 and 116-118)   |
| 37         | 131494              | Pulley, Idler, Flat   | NOT        | TE: All compor<br>1 inch = 25 | nent dimensions given in U.S. inches<br>.4 mm                    |

## **TRACTOR - - MODEL NUMBER 917.251493**

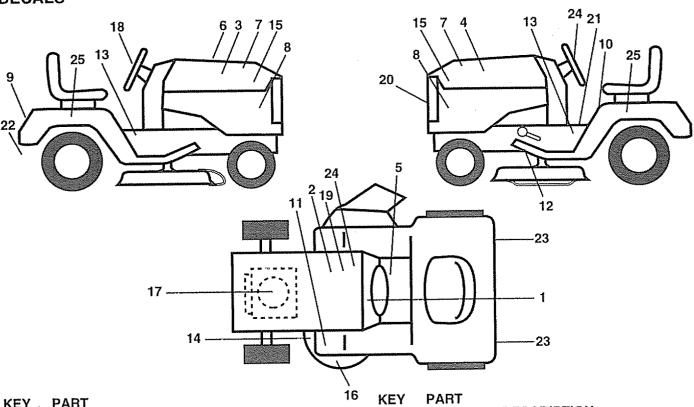
#### SEAT ASSEMBLY



| KEY<br>NO.                                       | PART<br>NO.  | DESCRIPTION  | KEY PART<br>NO. NO.  | DESCRIPTION   |
|--|--|--|--|---|
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>10<br>12 | 140124<br>140551<br>140675<br>127018X<br>145006<br>STD541437<br>124181X<br>150176<br>140552<br>121246X | Seat Bracket, Pivot Seat Strap, Fender Bolt, Shoulder 5/16-18 X .62 Clip, Push In Hinged Nut, Crownlock 3/8-16 Unc Spring, Seat Cprsn Bolt 5/16-18 UNC x 3/4 w/Sems Pan, Seat Bracket, Mounting Switch | 15 121249X<br>16 123740X<br>17 123976X<br>18 19171912<br>19 120068X<br>20 124238X<br>21 153236<br>22 STD541431 | Spacer, Split Spring, Cprsn Nut, Lock 1/4 Lge Flg Gr. 5 Washer 17/32 X 1-3/16 X 12 Ga. Knob, Seat 1/2-13 Unc Cap, Spring Seat Bolt, Shoulder 5/16-18 Unc Nut, Crownlock 5/16-18 Unc |
| 13<br>14   | 121248X<br>72050411  | Bushing, Snap Bolt, Carriage 1/4-20 X 1-3/8  | NOTE: All compo  | onent dimensions given in U.S. inches<br>5.4 mm   |

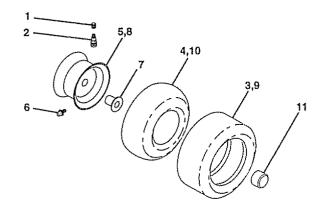
## TRACTOR - - MODEL NUMBER 917.251493

#### **DECALS**



| KEY<br>NO.                          | PART<br>NO.   | DESCRIPTION   | <br>NO.  | NO.  | DESCRIPTION  |
|-------------------------------------|---|---|--|--|--|
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | 138955<br>149516<br>146705<br>146706<br>140837<br>133644<br>138048<br>151441<br>146709<br>137537<br>4900J<br>146790<br>151401<br>139346<br>142243 | Decal, Operating Instruction Decal, Battery DNGR/PSN/Acme Decal, Hood, Craftsman, RH Decal, Hood, Craftsman, LH Decal, Brake Parking Saddle Decal, Maintenance Decal, Side Panel Decal, Ins. Hood Decal, Fender, Craftsman Decal, Caution Decal, Clutch/Brake Decal, V-Belt Drive Schematic Decal, V-Belt Schematic Decal, V-Belt Schematic Decal, Hood Insert Hd GT Decal, Deck Mower EZ3 Polo | 17<br>18<br>19<br>20<br>21<br>22<br>23<br>24<br>25 | 52-113-54<br>146710<br>138047<br>151448<br>142336<br>142342<br>106202X<br>150333<br>149918<br>138311<br>145245<br>145247<br>156191 | Decal, Koh 18.5 Mag Sears Decal, Insert Strg Decal, Battery Decal, Grille GT IPC Decal, SDL Cold Start Decal, Drawbar CNTRL Reflector, Taillight Decal, Cap Cnsmr Help Line Decal, Fend Auto Trans Srs Gold Decal, Handle LFT Hieght Adj. (Lift Handle) Pad Footrest Fastener Pop-in Footrest Manual, Owner's (Eng) Manual, Owner's (Span) |
| 16                                  | 151302  | Decai, Deck Mower Lzo i dio   |  |  |  |

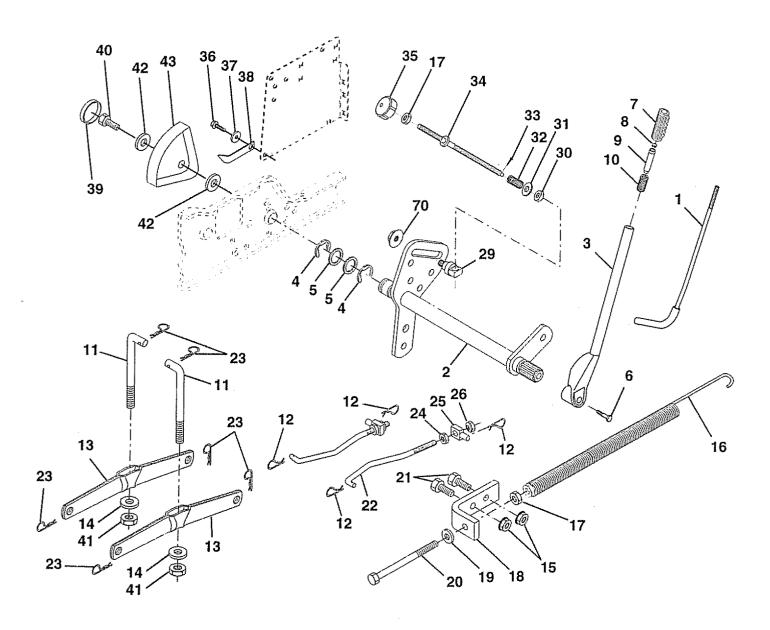
#### **WHEELS & TIRES**



| KEY<br>NO.       | PART<br>NO. | DESCRIPTION                        |
|------------------|-------------|------------------------------------|
| 1                | 59192       | Cap, Valve, Tire                   |
| 2                | 65139       | Stem, Valve                        |
| 3                | 106230X     | Tire, Front                        |
| 4                | 8134H .     | Tube, Front (Service Item Only)    |
| 2<br>3<br>4<br>5 | 106228X427  | Rim Assembly, Front                |
|                  | 6856M       | Fitting, Grease                    |
| 7                | 9040H       | Bearing, Flange (Front Wheel Only) |
| 8                | 106277X427  | Rim Assembly, Rear                 |
| 8<br>9           | 105588X     | Tire, Rear                         |
|                  | 7154J       | Tube, Rear                         |
| 11               | 104757X     | Cap Hub Axle BLK 1.50 x 1.00       |
|                  | 278H        | Fitting Grease                     |
|                  | 144334      | Sealant, Tire (10 oz. Tube)        |

## **TRACTOR - - MODEL NUMBER 917.251493**

## LIFT ASSEMBLY

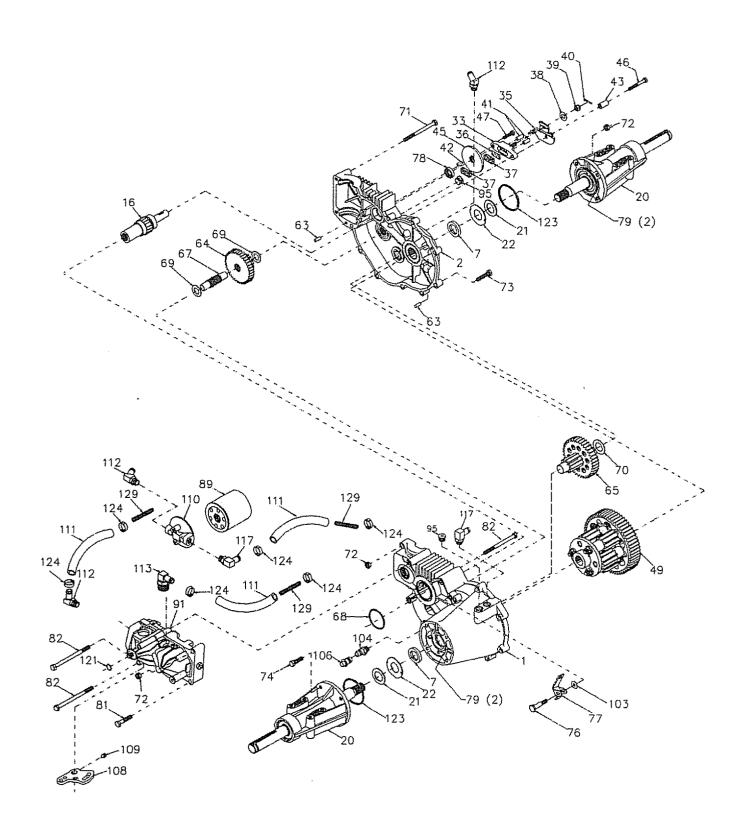


#### **TRACTOR - - MODEL NUMBER 917.251493**

#### LIFT ASSEMBLY

| KEY<br>NO.   | PART<br>NO.   | DESCRIPTION   |
|--|---|---|
| 1234567890112345678901123456789012345690123345678901234470 | 73350600<br>143363<br>STD551037<br>5328J<br>STD523710<br>127218<br>4939M<br>73350800<br>130171<br>73800800<br>150233<br>110807X<br>19131016<br>137150<br>76020308<br>137167<br>138057<br>17490612<br>120529X<br>123933X505<br>123935X<br>17490512<br>73540600 | Rod Asm., Lever Shaft Asm., Lift Vgt Lever Asm., Lift Rh E-Ring Truarc #5133-87 Washer 29/32 x 1-1/4 x 16 Ga. Bolt, Fin Hex 3/8-16 x 1-1/2 Grip, Handle Fluted Button, Plunger Plunger, Lever Lift Spring 2-1/8" Link Lift Retainer, Spring Arm, Suspension Vgt Bearing, Pvt. Lift Spherical Nut, Crownlock 3/8-16 Unc Spring Asm., Assist Lift Nut, Hex Jam 3/8-16 Unc Bracket, Spring Assist Washer 13/32 x 13/16 x 16 Ga. Bolt, Adjust Spring Assist Bolt, Fin Hex 3/8-16 x 1 Link, Front Retainer, Spring Nut, Jam Hex 1/2-13 Unc Trunnion Nut, Lock W/Wsh 1/2-13 Unc Trunnion Infin. 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 Screw, Thdrol 3/8-16 x 3/4 Washer, Nylon Pointer, Pnt 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, Hex Flange Lock |

# TRACTOR - - MODEL NUMBER 917.251493 HYDRO GEAR TRANSAXLE - - MODEL NUMBER 218-3010L

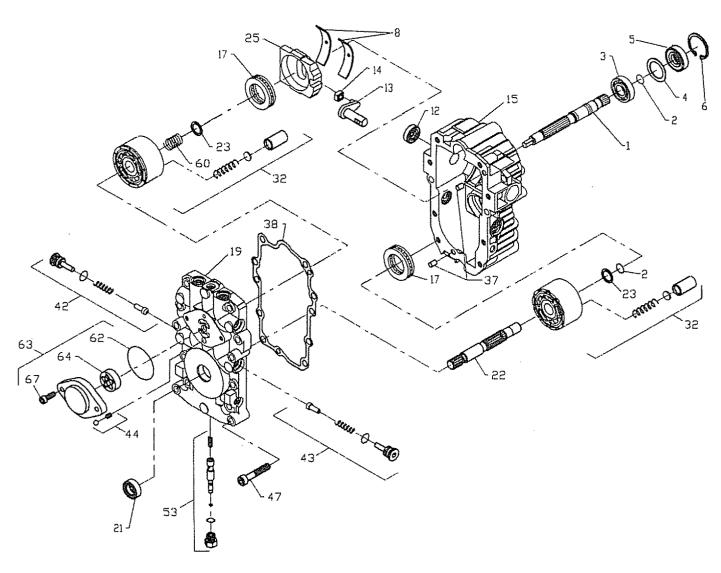


# TRACTOR - - MODEL NUMBER 917.251493 HYDRO GEAR TRANSAXLE - - MODEL NUMBER 218-3010L

|  | / PART<br>NO.  | DESCRIPTION   |  | PART<br>NO.                    | DESCRIPTION  |
|--|--|---|--|--------------------------------|--|
| 1 2 7 16 20 21 22 33 35 36 37 38 39 40 412 43 446 447 49 63 64 65 67 | 142874<br>142875<br>153765<br>142876<br>142877<br>142878<br>142879<br>142929<br>142880<br>142882<br>142883<br>142884<br>142885<br>142886<br>142887<br>142889<br>142890<br>142891<br>142891<br>142892<br>153766<br>142894<br>150818 | Assembly, Housing, LH Assembly, Housing, RH Oil Seal .984 x 1.5 x .25 Brake Shaft Assembly Axle Mounting Horn Assembly Washer 1.0 x 1.63 x .08 Washer 1.0 x 2.06 x .09 Brake Yoke Assembly Brake Arm Puck Plate Brake Puck Washer 7/8 O.D. x 7/16 x .060 Nut, Castle 5/16-24 Cotter Pin Brake Actuating Pin Hi Pro Key Spacer Brake Disc Bolt 1/4-20 x 1-1/2 Bolt 1/4-20 x 1 Differential Assembly Dowel Pin Reduction Gear, 14 Teeth to 38 Teeth Final Drive Pinion Assembly Jackshaft | 104<br>106<br>108<br>109<br>110<br>111<br>112<br>113<br>117<br>123 | 150825                         | Locknut, Hex 5/16-18 Bolt, Hex 5/16-18 x 1-1/2 Hex Cap Screw 5/16-18 x 1 Shoulder Bolt Freewheel Actuating Arm Oil Seal .625 x 1.0 x .25 Grease (10 oz. Tube) Bolt, Hex 5/16-18 x 1-3/4 Bolt 5/16-18 x 4-1/2 Filter, Spin On Pump, BDU-10L-122 Plug, Straight Thread 60° 7/18 SAE x 5/16 Fitting Washer Vent Cap Assembly Fitting O-Ring Assembly Control Arm Set Screw Filter Head Hose 1/2" Fitting, 1/2" Beaded 90° 7/8 SAE Fitting, 1/2" Beaded 90° 9/16 Fitting, 1/2" Beaded 90° 9/16 O Ring Pinch Clamp Spring, Long |
| 68<br>69<br>70<br>71   | 142899<br>142900<br>142901<br>142902   | O-Ring<br>Washer 5/8 X 1-5/32<br>Washer 7/8 X 1-1/2<br>Bolt, Hex 5/16-18 x 3.5  | NOT  | E: All compone<br>1 inch = 25. | ent dimensions given in U.S. inches<br>4 mm  |

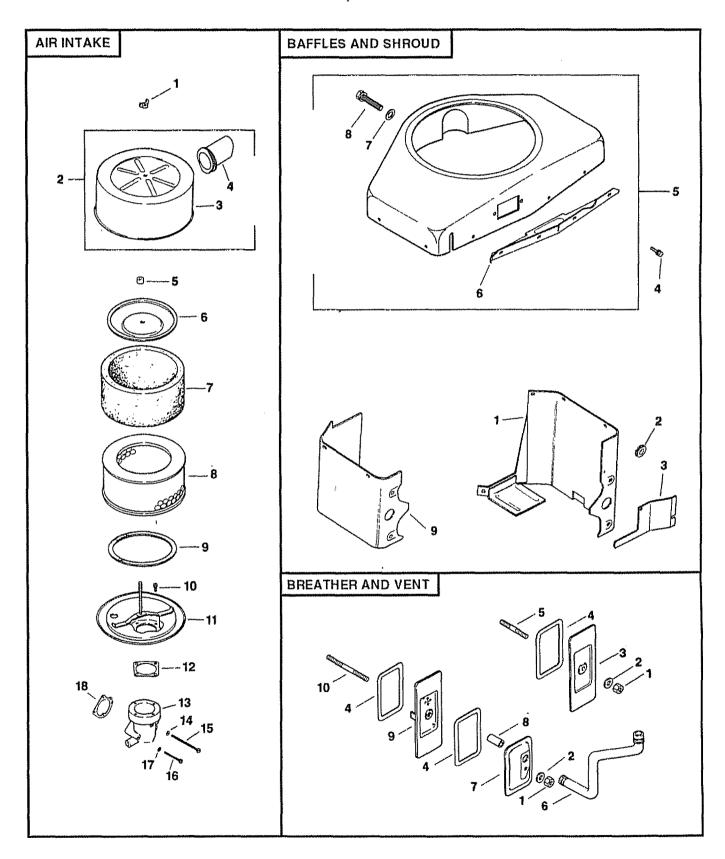
#### **TRACTOR - - MODEL NUMBER 917.251493**

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



| KEY<br>NO.                                  | PART<br>NO.  | DESCRIPTION  | KEY<br>NO.   | PART<br>NO.   | DESCRIPTION  |
|---|--|--|--|---|--|
| 1<br>2<br>3<br>4<br>5<br>6<br>8<br>12<br>13 | 144569<br>122716X<br>122745X<br>122715X<br>122700X<br>122699X<br>122767X<br>122717X<br>122748X | Shaft, Pump Ring, Retaining Bearing, Ball Spacer Seal, Lip Ring, Retaining Bearing, Cradle Seal, Lip Arm, Trunnion         | 25<br>32<br>37<br>38<br>42<br>43<br>44<br>47<br>53 | 127148X<br>142938<br>122786X<br>122718X<br>144578<br>144578<br>144579<br>122752X<br>127153X | Swashplate, Variable Block Assembly Pin, Stainless, Headless Gasket, Center Section Check Valve Kit Check Valve Kit Charge Relief Kit Screw, Socket Head, Cap Bypass Valve Kit |
| 14<br>15<br>17<br>19<br>21<br>22<br>23      | 122749X<br>144571<br>122770X<br>153801<br>122722X<br>144573<br>142978                          | Guide, Slot Housing Kit, Transmission Bearing, Thrust, Ball Center Section Kit Seal, Lip Shaft, Motor Washer, Block Thrust | 60<br>62<br>63<br>64<br>67                         | 142977<br>144581<br>144582<br>144583<br>144584<br>153769                                    | Block Spring O-Ring Charge Pump Kit Gerotor Assembly Screw, Socket Head, Cap Pump Assembly, Complete   |

## **TRACTOR - - MODEL NUMBER 917.251493**

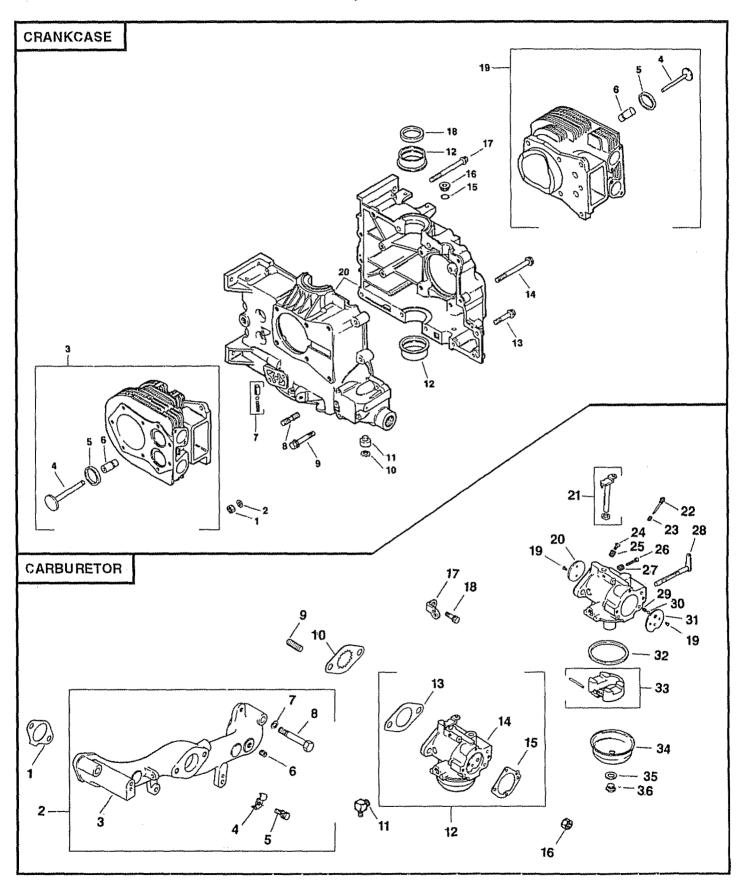


#### TRACTOR - - MODEL NUMBER 917.251493

#### **KOHLER ENGINE - MODEL NUMBER MV20S, TYPE NUMBER 57529**

| AIR                               | INTAKE   |  | BAFFLES & SHROUD |  |  |
|-----------------------------------|--|--|------------------|--|--|
|                                   | PART<br>NO.  | DESCRIPTION  |                  | PART<br>NO.  | DESCRIPTION  |
| 1<br>2                            | X-276-7<br>52 755 83                                 | Wing Nut 1/4-20<br>Kit, Cover and Tube<br>(Includes Key Numbers 3 and 4)   | 1<br>2<br>3      | 52 063 44<br>52 313 05<br>52 063 42                                  | Baffle, #2 Cylinder Head<br>Grommet (2)<br>Baffle, Fuel Pump   |
| 3<br>4                            | 52 096 35<br>52 123 21                               | Cover, Air Cleaner Tube, Air Intake  | 4                | X-67-83  | Screw, Hex Washer Head<br>1/4-20 x 7/16 (14)   |
| 5<br>6                            | 231032<br>52 082 04                                  | Seal, Element Cover Cover, Air Cleaner Element   | 5                | 52 755 70  | Kit, Blower Housing<br>(Includes Key Numbers 6 thru 8)   |
| 7<br>8                            | 45 083 01<br>45 083 02                               | Pre-Cleaner<br>Element   | 6<br>7           | 52 217 01<br>52 468 16   | Support, Upper Housing<br>Washer, Flat (2)   |
| 9                                 | 237423   | Seal, Air Cleaner Cover  | 8                | 52 086 11  | Screw 1/4-20 x 5/8 (6)   |
| 10                                | X-67-98  | Screw, Hex Washer Head<br>#10-32 x 9/16 (4)  | 9                | 52 124 05  | Baffle, #1 Cylinder Head   |
|                                   | 52 201 06<br>277093                                  | Base, Air Cleaner<br>Gasket, Air Cleaner (2)   | BRE              | ATHER & VE   | NT   |
| 13                                | 52 054 39  | Elbow, Air Intake  |                  |  | •  |
|                                   |  |  |                  |  |  |
| 14                                | X-25-79  | Washer, Plain #10  |                  | PART   | DESCRIPTION  |
|                                   |  | Washer, Plain #10<br>Screw, Slotted Pan Head<br>#10-32 x 2-1/4   |                  | PART<br>NO.  | DESCRIPTION  |
| 14                                | X-25-79  | Screw, Slotted Pan Head<br>#10-32 x 2-1/4<br>Screw, Slotted Pan Head   | NO.<br>1         | NO.<br>X-81-1  | Nut, Hex 1/4-20 (2)  |
| 14<br>15                          | X-25-79<br>X-50-37                                   | Screw, Slotted Pan Head<br>#10-32 x 2-1/4<br>Screw, Slotted Pan Head<br>#10-32 x 1-3/4 (2)<br>Washer, Lock, Internal Tooth   | NO. 1 2 3        | NO.<br>X-81-1<br>X-25-12<br>52 096 55                                | Nut, Hex 1/4-20 (2)<br>Washer, Plain 1/4 (2)<br>Cover, #2 Cylinder Valve   |
| 14<br>15<br>16                    | X-25-79<br>X-50-37<br>X-50-57                        | Screw, Slotted Pan Head<br>#10-32 x 2-1/4<br>Screw, Slotted Pan Head<br>#10-32 x 1-3/4 (2)   | NO.              | NO.<br>X-81-1<br>X-25-12   | Nut, Hex 1/4-20 (2)<br>Washer, Plain 1/4 (2)<br>Cover, #2 Cylinder Valve<br>Gasket, Cover (3)<br>Stud, #2 Cylinder Valve Cover                                     |
| 14<br>15<br>16<br>17<br>18<br>NOT | X-25-79<br>X-50-37<br>X-50-57<br>X-22-9<br>25 041 06 | Screw, Slotted Pan Head<br>#10-32 x 2-1/4<br>Screw, Slotted Pan Head<br>#10-32 x 1-3/4 (2)<br>Washer, Lock, Internal Tooth<br>#10 (2)<br>Gasket, Air Cleaner Elbow | NO. 1 2 3 4 5    | X-81-1<br>X-25-12<br>52 096 55<br>52 055 01<br>X-352-39<br>52 326 12 | Nut, Hex 1/4-20 (2)<br>Washer, Plain 1/4 (2)<br>Cover, #2 Cylinder Valve<br>Gasket, Cover (3)<br>Stud, #2 Cylinder Valve Cover<br>1/4-20 x 2-1/4<br>Hose, Breather |
| 14<br>15<br>16<br>17<br>18<br>NOT | X-25-79<br>X-50-37<br>X-50-57<br>X-22-9<br>25 041 06 | Screw, Slotted Pan Head<br>#10-32 x 2-1/4<br>Screw, Slotted Pan Head<br>#10-32 x 1-3/4 (2)<br>Washer, Lock, Internal Tooth<br>#10 (2)<br>Gasket, Air Cleaner Elbow | NO. 1 2 3 4      | X-81-1<br>X-25-12<br>52 096 55<br>52 055 01<br>X-352-39              | Nut, Hex 1/4-20 (2)<br>Washer, Plain 1/4 (2)<br>Cover, #2 Cylinder Valve<br>Gasket, Cover (3)<br>Stud, #2 Cylinder Valve Cover<br>1/4-20 x 2-1/4                   |

#### **TRACTOR - - MODEL NUMBER 917.251493**

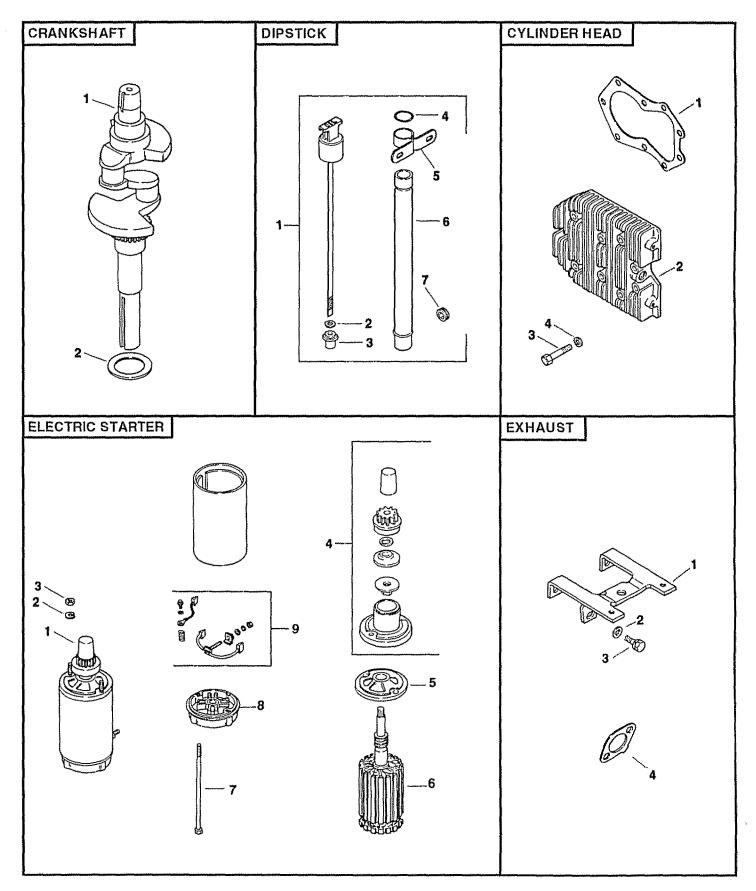


#### **TRACTOR - - MODEL NUMBER 917.251493**

#### **KOHLER ENGINE - MODEL NUMBER MV20S, TYPE NUMBER 57529**

| CRANKCASE           |   |  | CARBURETOR  |   |  |
|---------------------|---|--|---|---|--|
|                     | PART<br>NO.   | DESCRIPTION  |   | PART<br>NO.   | DESCRIPTION  |
| 1<br>2<br>3         | X-82-2<br>52 468 12<br>82 755 18  | Nut, Hex 5/16-18 (12)<br>Washer, Flat 5/16 (12)<br>Kit, #1 Cylinder Barrel   | 1 2   | 52 041 09<br>52 755 91  | Gasket, Intake (2)<br>Kit, Manifold<br>(Includes Key Numbers 3 thru 8)   |
| 4<br>5<br>6         | 52 016 06<br>52 031 01<br>52 316 06                                       | (Includes Key Numbers 4 thru 6) Valve, Exhaust Insert, Valve Seat (2) Guide, Valve (2)   | 3<br>4<br>5   | 52 164 15<br>235778<br>X-67-97  | Manifold, Intake<br>Clamp, Cable<br>Screw, Hex Washer Head<br>#10-24 x 3/8 (2)   |
| 7<br>8              | 52 755 50<br>52 072 12  | Kit, Oil Relief<br>Step Stud 5/16-18 x 3/4,<br>3/8-16 x 5/8, 2" Long (12)  | 6   | X-75-23   | Plug, Hex, Countersunk 1/8 N.P.T.F. Wooder, Lock 5/16 (4)  |
| 9<br>10<br>11<br>12 | 25 086 12<br>X-269-43<br>52 078 05<br>52 030 10<br>52 030 11<br>52 030 12 | Screw, Hex Flange 5/16-18 x 2 (2) Ring, Retaining Shaft, Governor Bearing, Sleeve, Standard (2) Bearing, Sleeve .010" (2)  | 9   | X-21-1<br>X-6-29<br>41 072 19<br>52 063 40<br>25 155 02<br>52 853 25  | Washer, Lock 5/16 (4) Screw, Hex Cap 5/16-18 x 1-1/4 (4) Stud 5/16-18 x 1 (2) Baffle, Carburetor Connector, Hose Kit, Carburetor with Gasket |
| 13                  | 25 086 10   | Bearing, Sleeve .020" (2)<br>Screw, Hex Flange<br>5/16-18 x 1-1/2 (3)  | 13<br>14  | 271030<br>52 053 54   | (Includes Key Numbers 15 thru 23) Gasket, Carburetor Carburetor Assembly (Information  |
| 14                  | 25 086 13   | Screw, Hex Flange<br>3/8-16 x 3-5/8 (2)  | , ,   |   | Only - Not Available Separately)<br>(Includes Key Numbers 19 thru 36)  |
| 15<br>16<br>17      | 52 141 02<br>52 139 08<br>25 086 11                                       | O-Ring<br>Plug<br>Screw, Hex Flange<br>5/16-18 x 3-1/2 (8)   |   | 25 041 06<br>X-77-2<br>232867<br>X-67-62  | Gasket, Air Cleaner<br>Nut 5/16 (2)<br>Strap, Lifting<br>Screw, Hex Washer Head  |
| 18<br>19            | 52 032 10<br>82 755 19  | Seal, Oil, Front<br>Kit, #2 Cylinder Barrel  | 19  | 25 086 27   | 1/4-20 x 3/4<br>Screw, Throttle and Choke Plate (4)<br>Plate, Throttle   |
| 20                  |   | (Includes Key Numbers 4 thru 6) 20 25 Crankcase (Service with Short 21 52 Block, Part Number 82 522 47) 22 25 23 25 24 25 25 25 26 25 27 25 28 52 29 25 30 25 31 25 32 25 33 25 34 25 35 25 36 25  NOT ILL | 25 146 02<br>52 144 24<br>25 368 01<br>25 089 02<br>25 086 26<br>25 089 04<br>25 368 03<br>25 089 02<br>52 090 13<br>25 089 03<br>25 194 01<br>25 146 03<br>25 041 04<br>25 757 09<br>25 104 01<br>25 041 03<br>25 100 05 | Shaft, Throttle with Lever and Seal Needle, Idle Fuel Adjust Spring, Idle, Fuel Screw, Idle Speed Adjust Spring, Idle Speed Needle, Main Fuel Spring, Main Fuel Lever, Choke Spring, Choke, Friction Ball, Choke, Friction Plate, Choke Gasket, Bowl Kit, Float Bowl, Fuel Gasket, Bowl Retainer Screw Screw, Bowl Retainer |  |
| ÷                   |   |  | NO1   | ILLUSTRATEI<br>271030   | Gasket, Carburetor (2)   |

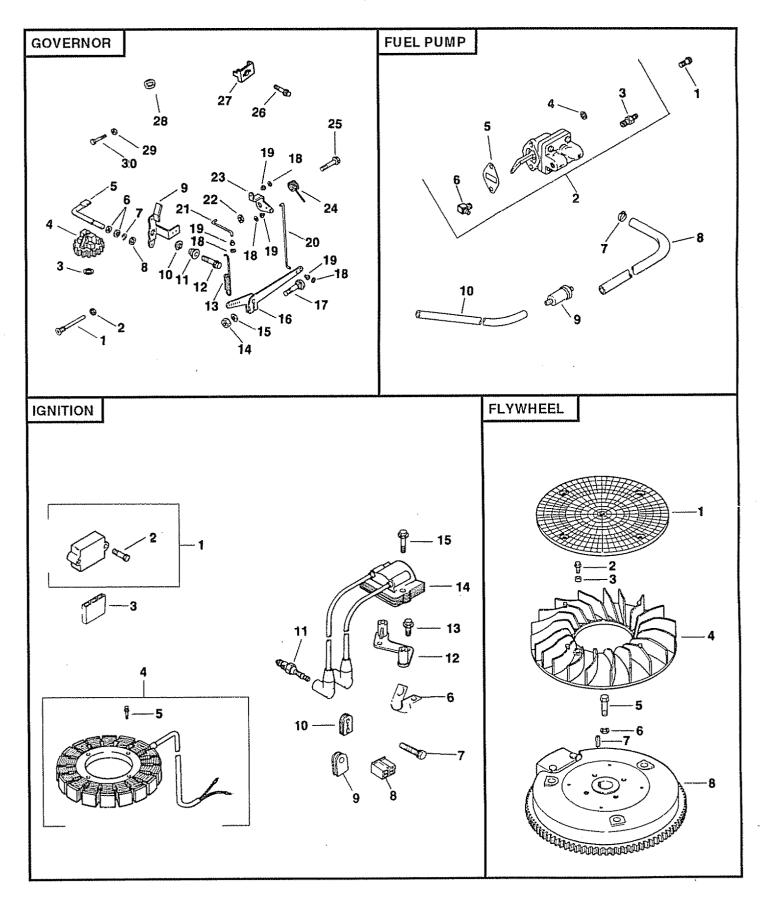
#### **TRACTOR - - MODEL NUMBER 917.251493**



#### **TRACTOR - - MODEL NUMBER 917.251493**

| CRANKSHAFT          |  |  |                  | ELECTRIC STARTER  |  |  |
|---------------------|--|--|------------------|---|--|--|
| KEY PART<br>NO. NO. |  | DESCRIPTION  |                  | PART<br>NO.   | DESCRIPTION  |  |
| 2 52<br>52          | 014 27<br>468 03<br>468 04<br>468 05             | Crankshaft<br>Washer, Thrust .119/.122 (A.R.)<br>Washer, Thrust .128/.131<br>Washer, Thrust .137/.140 (A.R.) | 3<br>4<br>5<br>6 | 52 098 12<br>X-20-1<br>X-81-1<br>82 755 26<br>52 081 07<br>52 170 05<br>52 211 01 | Starter Assembly (Includes Key Numbers 4 thru 9) Washer, Lock 1/4 (2) Nut, Hex 1/4-20 (2) Kit, Drive Cap, Drive End Armature Bolt, Thru (2) Cap, Commutator End Kit, Brush |  |
| KEY PA<br>NO. NO    |  | DESCRIPTION  | 8<br>9           | 52 227 10<br>52 227 10<br>82 755 28   |  |  |
| 2 X-2<br>3 52       | 038 14<br>25-44<br>032 14                        | Dipstick Assembly<br>(Includes Key Numbers 2 and 3)<br>Washer, Plain 5/16<br>Seal, Rubber                    | * *              |   | D<br>Tag, Caution  |  |
| 5 52<br>6 52        | 41 153 01<br>52 126 11<br>52 123 20<br>47 139 01 | O-Ring Bracket, Oil Tube Support Tube, Oil Fill 11-7/8 Plug, Hex, Countersunk 3/4 N.P.T.F.                   | KEY              | IAUST<br>' PART<br>NO.  | DESCRIPTION  |  |
| CYLINDER HEAD       |  |  | 1<br>2<br>3<br>4 | 52 126 12<br>X-25-72<br>52 086 11<br>52 041 14                                    | Bracket<br>Washer, Plain (3)<br>Screw 1/4-20 x 5/8 (3)<br>Gasket, Exhaust (2)  |  |
| KEY PA<br>NO. NO    |  | DESCRIPTION  | пол              | NOTE: All component dimensions given in U.S. inches 1 inch = 25.4 mm              |  |  |
| 2 52<br>3 220       | 041 20<br>015 10<br>0534<br>086 02               | Gasket, Head (2)<br>Cylinder Head (2)<br>Washer, Plain 5/16 (18)<br>Screw, Hex Head<br>5/16-18 x 1-1/2 (18)  |                  |   |  |  |

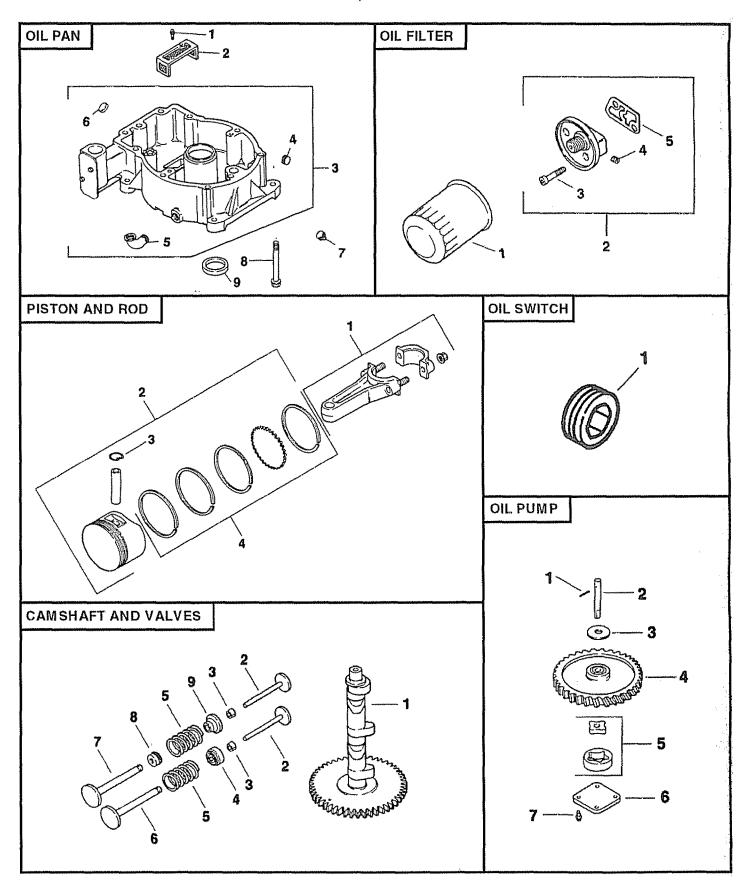
#### **TRACTOR - - MODEL NUMBER 917.251493**



#### **TRACTOR - - MODEL NUMBER 917.251493**

| VOLANT  |  |   |  |  |  |  |
|---|--|---|--|--|--|--|
| NO. NO.<br>DE DE<br>RÉF. PIÈCE  | DESCRIPTION  | NO. NO.<br>DE DE<br>RÉF. PIÈCE  | DESCRIPTION  |  |  |  |
| 1 25 162 01<br>2 25 086 21<br>3 25 112 04<br>4 25 157 01<br>5 25 086 24<br>6 52 468 15<br>7 X-286-17<br>8 52 025 36                                       | Ecran d'herbe<br>Vis H à tête de rondelle 1/4-20 x 5/8 (4)<br>Entretoise (4)<br>Ventilateur<br>Vis mécanique 3/8-24 x 1-1/4<br>Rondelle<br>Clé 3/16 x 7/8<br>Volant  | 1 47 086 08<br>2 52 559 01<br>3 X-380-1<br>4 X-25-63<br>5 25 041 09<br>6 25 155 02<br>7 X-426-9<br>8 25 353 03<br>9 25 050 02<br>10 52 353 18 | Vis pozidriv 1/4-20 x 5/8 (2) Pompe de l'ensemble de carburant, (Y compris le no. de réf. 3-6) Connecteur Rondelle 1/4 (2) Garniture de la pompe de carburant Connecteur du tuyau de 90° Collier du tuyau (4) Conduite d'essence 13-1/2 po. Filtre d'essence Conduite d'essence de 8 po.   |  |  |  |
| RÉGULATEUR  |  |   |  |  |  |  |
| NO. NO.<br>DE DE  | DESCRIPTION  | ALLUMAGE  |  |  |  |  |
| RÉF. PIÈCE<br>1 231355  | Goupille d'arrête du régulateur  | NO. NO.<br>DE DE<br>RÉF. PIÈCE  | DESCRIPTION  |  |  |  |
| 2 X-25-12<br>3 237022<br>4 A-235743-S<br>5 52 078 04<br>6 X-25-102<br>7 X-269-28<br>8 X-25-63<br>9 52 090 23<br>10 277341<br>11 52 158 07<br>12 25 086 15 | Rondelle 1/4 Rondelle Trousse d'engrenages du régulateur Arbre du régulateur Rondelle 1/4 (2) Retenue du régulateur Rondelle 1/4 (2) Levier de la commande de vitesse Rondelle de tension Douille Vis H à tête de rondelle 1/4-20 x 1 Ressort du régulateur Écrou H 1/4-20 Rondelle 1/4 Bras du régulateur Vis 1/4-20 x 1 Bague de retenue (4) Douille (4) Dispositif de retenue du régulateur Dispositif de retenue du papillon des | 1 25 755 03<br>2 X-132-5<br>3 236602<br>4 237878<br>5 X-67-51<br>6 210281<br>7 X-67-64<br>8 41 155 02   | Jeu du redresseur-régulateur (Y compris le no de réf. 2) Vis à chapeau H 1/4-20 x 5/8 (2) Connecteur à 3 contact Jeu de stator (Y compris le no. de réf. 5) Vis à chapeau H n° 10-24 x 3/4 (2) Pince (2) Vis à tête de rondelle H n° 10-32 x 7/16 Connecteur à 3 contact Passe-fils Passe-fils Bougie d'allumage (2) Support de module Vis à tête de rondelle H 1/4-20 x 1 (2) Module d'allumage Vis à tête de rondelle H 1/4-20 x 7/8 (2) |  |  |  |
| 13 52 089 07<br>14 X-81-1<br>15 X-25-72<br>16 52 186 09<br>17 52 211 04<br>18 25 141 03<br>19 25 158 08<br>20 52 079 07<br>21 52 079 06                   |  | 9 220297<br>10 52 313 02<br>11 52 132 02<br>12 52 126 08<br>13 25 086 15<br>14 52 584 02<br>15 25 086 16<br>PAS ILLUSTRÉ                      |  |  |  |  |
| 22 X-25-63<br>23 52 090 14<br>24 52 089 08<br>25 25 086 21<br>26 235778   | gaz<br>Rondelle 1/4<br>Levier du papillon des gaz<br>Ressort de torsion<br>Vis H à tête de rondelle 1/4-20 x 5/8<br>Bride de serrage du câble (3)  | 47 518 33<br>52 518 19  | Fil rouge, redresseur au régulateur<br>(11", 14 ga., non-isolé pousser sur les<br>cosses du volet)<br>Fil blanc, module au connecteur<br>(19-1/2", 14 ga., isolé pousser sur le  |  |  |  |
| 27 X-67-97<br>28 25 431 01<br>29 X-70-3<br>30 52 086 05   | Vis H à tête de rondelle<br>n° 10-24 x 3/8 (3)<br>Douille du levier de la commande de<br>vitesse<br>Écrou H n° 10-32<br>Vis à tête de rondelle 10-32 x 7/8   | REMARQUE: Toute<br>données en pouces  | volet- non-isolé pousser sur les cosses<br>du volet)<br>s les dimensions de composant sont<br>ÉU. 1 pouce = 25,4 mm.   |  |  |  |
| PAS ILLUSTRÉ<br>52 755 80   | Jeu de la commande de vitesse (Y compris les nos. de réf. 9, 10, 25 et 28)   |   |  |  |  |  |
| POMPE DE CARBURANT  |  |   |  |  |  |  |

#### **TRACTOR - - MODEL NUMBER 917.251493**



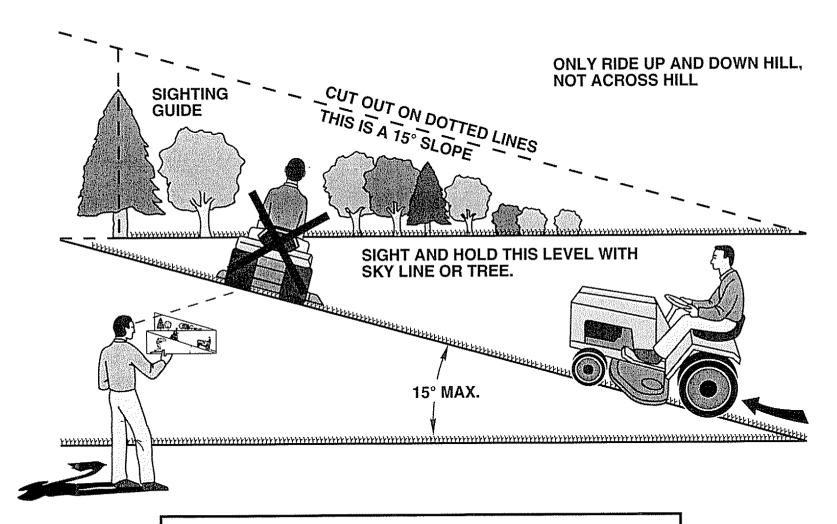
#### **TRACTOR - - MODEL NUMBER 917.251493**

| OIL PAN     |   |  |  | LOW OIL PRESSURE SWITCH                                     |  |  |  |
|-------------|---|--|--|---|--|--|--|
|             | PART<br>NO.   | DESCRIPTION  |  | PART<br>NO.   | DESCRIPTION  |  |  |
| 1           | X-67-64   | Screw, Hex Washer Head<br>#10-32 x 7/16 (2)  | 1  | X-75-23   | Plug, Pipe 1/8 N.P.T.F.  |  |  |
| 2<br>3<br>4 | 52 050 03<br>52 199 14<br>X-702-14  | Filter, Oil Pickup<br>Oil Pan (Includes Key #4 thru 6)<br>Plug, Cup 1-1/16   | CAMSHAFT & VALVES  |   |  |  |  |
| 5<br>6      | 52 054 14<br>X-75-38  | Elbow, Street Plug, Hex, Countersunk 1/4 N.P.T.F.  |  | PART<br>NO.   | DESCRIPTION  |  |  |
| 7<br>8      | X-75-10<br>52 086 12  | Plug, Square Head 3/8 N.P.T.F. (2)<br>Screw, Hex Washer Head<br>5/16-18 x 1-1/4 (9)  | 1 2 3  | 52 012 06<br>52 019 02<br>41 755 10                         | Camshaft<br>Tappet (4)<br>Kit, Retainer (4)                      |  |  |
| 9           | 52 032 10   | Seal, Oil, Rear  | 4<br>5   | 52 413 01<br>25 089 01                                      | Rotator, Exhaust Valve (2) Spring, Valve (4) Valve, Exhaust (2)  |  |  |
| OIL FILTER  |   |  | 6<br>7   | 52 016 06<br>52 017 07<br>52 032 13                         | Valve, Exnaust (2) Valve, Intake (2) Seal, Intake Valve Stem (2) |  |  |
|             | PART<br>NO.   | DESCRIPTION  | 8<br>9   | 230011  | Retainer, Intake Valve (2)                                       |  |  |
| 1 2         | 52 050 02<br>82 755 23  | Oil Filter<br>Kit, Oil Filter Adaptor  | OIL  | PUMP  |  |  |  |
|             | X-55-15   | (Includes Key Numbers 3 thru 5)<br>Screw, Hex Socket Head<br>5/16-18 x 1-1/4 (2)   |  | PART<br>NO.   | DESCRIPTION  |  |  |
| 4           | X-75-23   | Plug, Hex, Countersunk   | 1<br>2   | X-280-25<br>52 144 23                                       | Pin, Roll<br>Shaft, Oil Pump                                     |  |  |
| 5           | 52 041 16   | Gasket, Oil Filter   | 3  | 52 422 01   | Spacer, Shim<br>(As Required, Maximum of 2)                      |  |  |
| PIST        | TON & ROD   |  | 5  | 52 043 05<br>52 393 23                                      | Gear, Oil Pump<br>Rotor Set                                      |  |  |
|             | PART<br>NO.   | DESCRIPTION  | 6<br>7   | 52 096 50<br>52 086 21                                      | Cover, Oil Pump<br>Screw, Hex Washer Head<br>#10-32 x 7/16 (4)   |  |  |
| 1           | 52 067 71<br>52 067 724   | Connecting Rod, Standard (2) NOT ILLUSTRATED Connecting Rod .010" (2)  |  | D   |  |  |  |
| 2           | 52 874 16<br>52 874 17<br>52 874 18   | Piston with Ring Set, Standard (2) Piston with Ring Set .003" (2) Piston with Ring Set .010" (2)   | <br>   | 52 755 94<br>82 522 47                                      | Gasket Set<br>Short Block  |  |  |
| 3<br>4      | 52 874 19<br>52 874 20<br>52 141 01<br>52 108 09<br>52 108 10<br>52 108 11<br>52 108 12 | Piston with Ring Set .020" (2) Piston with Ring Set .030" (2) Retainer, Piston Pin (4) Ring Set, Standard and .003" (2) Ring Set .010" (2) Ring Set .020" (2) Ring Set .030" (2) |  | RPM Settings: Low Speed: 1150-1650<br>High Speed: 3200-3400 |  |  |  |
|             |   |  | NOTE: All component dimensions given in U.S. inches 1 inch = 25.4 mm |   |  |  |  |

## SERVICE NOTES

# SERVICE NOTES

## SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION





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

## SEARS

# OWNER'S MANUAL

MODEL NO. 917.251493

#### IF YOU NEED REPAIR SERVICE OR PARTS:

FOR REPAIR SERVICE, CALL THIS TOLL FREE NUMBER:

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FOR REPLACEMENT PARTS INFORMATION AND ORDERING, CALL THIS TOLL FREE NUMBER:

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FOR CONSUMER ASSISTANCE HOT LINE, CALL THIS TOLL FREE NUMBER:

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# CRAFTSMAN®

### 18.5 HP TWIN CYLINDER ELECTRIC START 46" MOWER HYDROSTATIC (AUTOMATIC) GARDEN TRACTOR

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, Roebuck and Co. Service Center/Department and most Retail Stores.

## WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- PRODUCT TRACTOR
- MODEL NUMBER 917.251493
- ENGINE MODEL NO. MV20S-57529
- PART NUMBER
- PART DESCRIPTION

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