

# R **AFTSMA MODEL NUMBER 917.258694**

**OWNER'S MANUAL** 

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



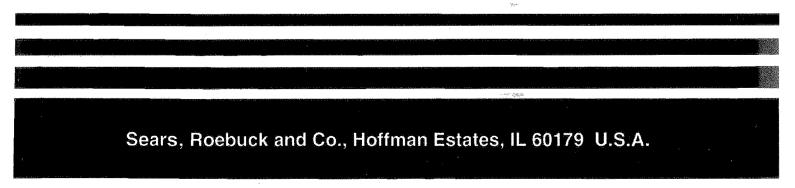


This product has a low emission engine which operates differently from previously built engines. Before you start the engine, read and understand this Owner's Manual.

For answers to your questions about this product, Call:

1-800-659-5917 Sears Craftsman Help Line 5 am - 5 pm, Mon - Sat

CAUTION: Read and follow all safety rules and instructions before operating this equipment.



## 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 OF DEATH.

#### I. GENERAL OPERATION

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

#### **II. SLOPE OPERATION**

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

#### DO:

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

#### DO NOT:

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

#### III. CHILDREN

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

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

#### **IV. SERVICE**

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



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



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

## WARNING 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. We have competent, welltrained technicians and the proper tools to service or repair this tractor.

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

#### MODEL

NUMBER 917.258694

### SERIAL

NUMBER

DATE OF PURCHASE \_\_\_

THE MODEL AND SERIAL NUMBERS WILL BE FOUND ON A PLATE UNDER THE SEAT.

YOU SHOULD RECORD BOTH SERIAL NUMBER AND DATE OF PURCHASE AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

## 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:	18.0
GASOLINE CAPACITY AND TYPE:	3.5 GALLONS UNLEADED REGULAR
OIL TYPE (API-SF/SG/SH):	SAE 30 (above 32°F) SAE 5W-30 (below 32°F)
OIL CAPACITY:	W/ FILTER: 4.2 PINTS W/O FILTER: 3.7 PINTS
SPARK PLUG: (GAP: .025")	CHAMPION RC12YC
VALVE CLEARANCE:	NOT ADJUSTABLE
GROUND SPEED (MPH):	FORWARD: 5.5 REVERSE: 2.4
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	15 AMPS @ 3600 RPM
BATTERY:	AMP/HR: 30 MIN. CCA: 240 CASE SIZE: U1R
BLADE BOLT TORQUE:	27-35 FT. LBS.

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

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 APPLIES 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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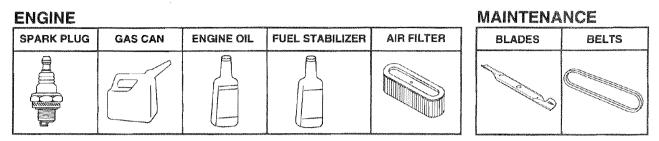
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## **ACCESSORIES AND ATTACHMENTS**

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.



### 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.

**BAGGER** lets you collect grass clippings and leaves for a healthier, neater looking lawn. Two Permanex containers hold 30-gallon plastic bags.

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.

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, carts or other heavy attachments).

**GAUGE WHEELS** on both sides of the mower deck reduce chances of "scalping" on uneven terrain. For mower decks not so equipped.

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.

MULCHING CLOSE-OUT PLATE KIT, once installed, lets you mulch, discharge or bag clippings (bagger optional) without changing blades. For models not equipped as 3-in-1 Convertible mowers. See "MOWER" in the Repair Parts section of this manual.

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

**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.

SNOW BLADE for snow removal only. 14-inch high, 48-inch wide blade clears 42-inch path when angled left or right. Raises, lowers with side lever. Adjustable skids; replaceable, reversible scraper bar. (Use with tire chains and wheel weights and/or rear drawbar weight.)

**SNOWTHROWER** has 40-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 deicers and sand.

SWEEPERS let you collect grass clippings and leaves.

**TILLER** has 5 hp engine and 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** convert unit for dethatching, aerating, hilling...without tools.

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

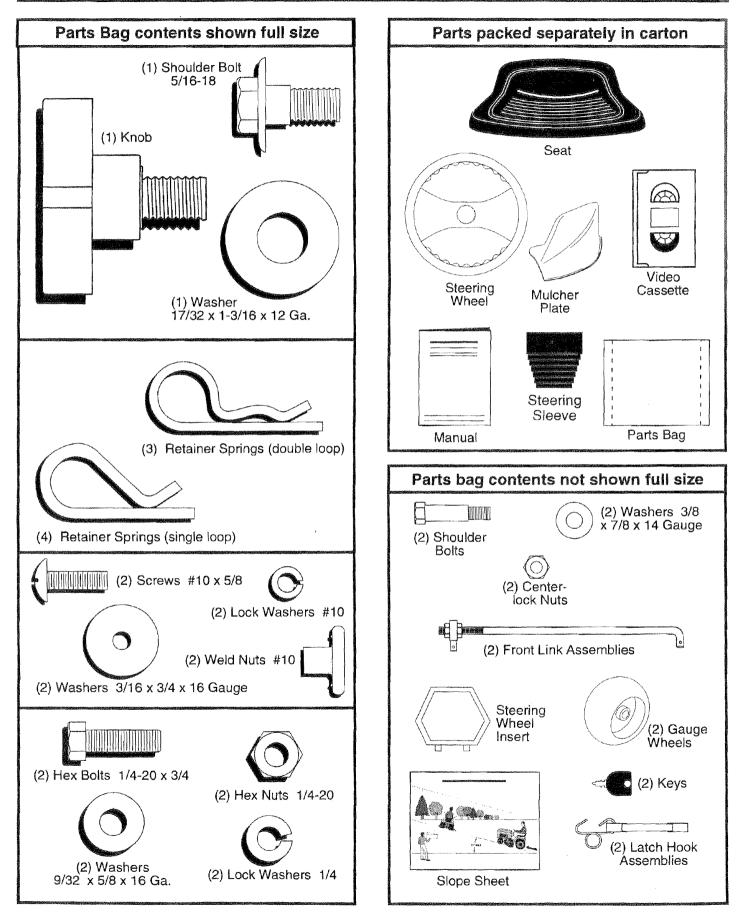
**TRACTOR CAB** has heavy duty vinyl fabric over tubular steel frame, ABS plastic top; clear plastic windshield offers 360 degree visibility. Hinged metal doors with catch. Keeps operator warm and dry. Remove vinyl sides and windshields for use as sun protector in summer. **Optional accessories include:** 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. 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 Pliers
- (1) 9/16" wrench Tire pressure gauge

(1) 3/4" Socket w/drive ratchet Phillips Screwdriver Utility knife

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**

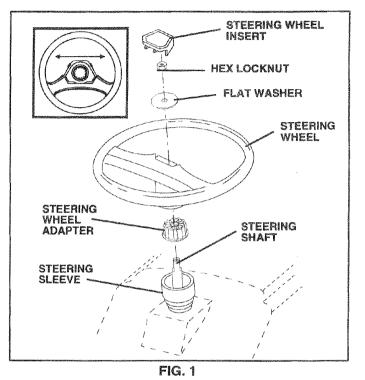
- Remove all accessible loose parts and parts cartons from carton (See page 6).
- Cut, from top to bottom, along lines on all four corners of carton, and lay panels flat.
- Remove mower and packing materials.
- Check for any additional loose parts or cartons and remove.

## **BEFORE ROLLING TRACTOR OFF SKID**

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

- Remove locknut 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 adapter.
- Secure steering wheel to steering shaft with locknut and large flat washer previously removed. Tighten securely.
- Snap steering wheel insert into center of steering wheel.
- Remove protective materials from tractor hood and grill.

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



## 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 by allowing a wrench or any other object to contact both terminals at the same time. Before connecting battery, remove metal bracelets, wristwatch bands, rings, etc.

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

- Lift hood to raised position.
- Open terminal access doors, remove terminal protective caps and discard.
- If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps.
- First connect RED battery cable to positive (+) battery terminal with hex bolt, 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.

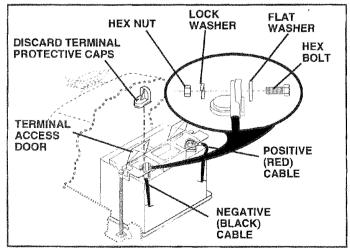


FIG. 2

### **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.

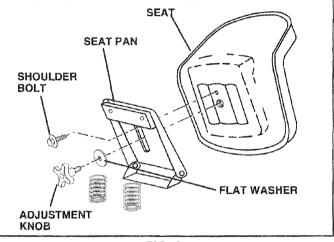


FIG. 3

### **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 outward 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.

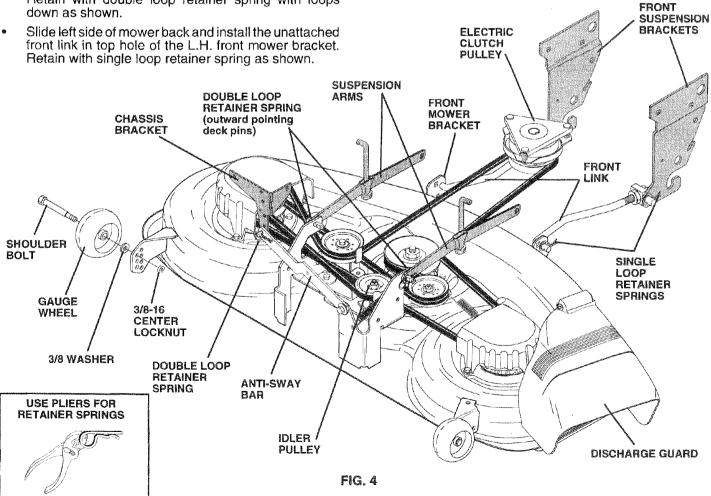
- Place the R.H. suspension arm on outward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. Retain with double loop retainer spring with loops down as shown.
- Connect anti-sway bar to chassis bracket under left footrest and retain with 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.



### 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.

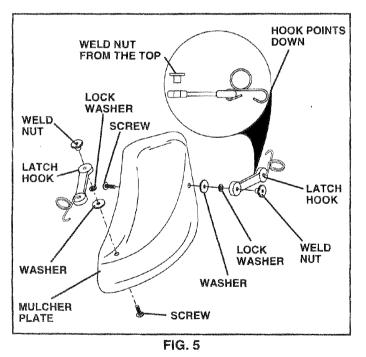


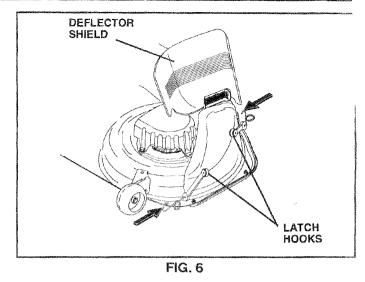
CAUTION: Do not remove discharge guard from mower. Raise and hold guard when attaching mulcher plate and allow it to rest on plate while in operation.

### 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.





## √ 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 the Operation section of this manual).

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



DANGER, KEEP HANDS AND FEET AWAY

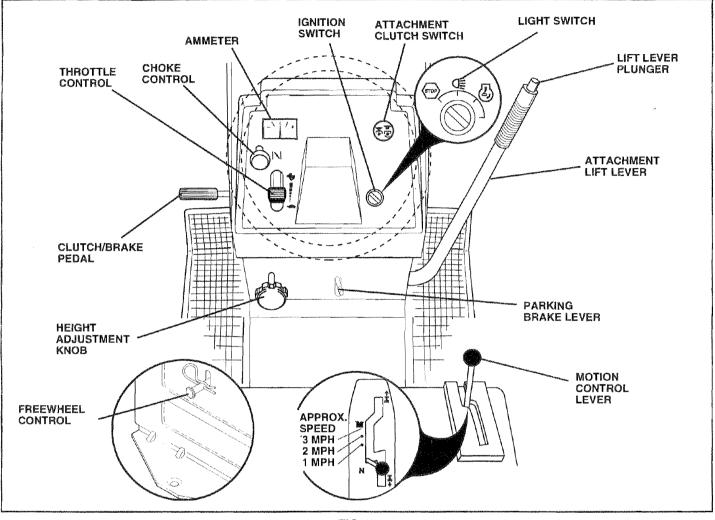
HYDROSTATIC FREE WHEEL

(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.

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

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

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

 $\label{eq:Heightadjustmentknob} \textbf{HEightadjustmentknob} \textbf{.} Used to adjust the mower height.}$ 

LIGHT SWITCH - Turns the headlights on and off.

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

**IGNITION SWITCH** - Used to start and stop the engine. **PARKING BRAKE LEVER** - Locks clutch/brake pedal into the brake position.

**THROTTLE CONTROL** - Used to control engine speed. **LIFT LEVER PLUNGER** - Used to release attachment lift lever when changing its position.

**CHOKE CONTROL** - Used when starting a cold engine. **AMMETER** - Indicates charging (+) or discharging (-) of battery.

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

WEAR YOUR
SAFETY GLASSES
FORESIGHT IS BETTER THAN NO SIGHT
Second in succession of the second second

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.

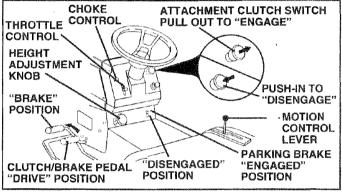


FIG. 8

## 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 THROTTLE CONTROL (See Fig. 8)

Always operate engine at full throttle.

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

### TO 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 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 ( $\frown$ ) to raise cutting height.
- Turn knob counterclockwise () to lower cutting height.

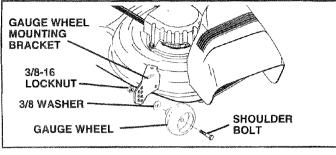
The cutting height range is approximately 1-1/2" to 4". The heights are measured from the ground to the blade tip with the engine not running. These heights are approximate and may vary depending upon soil conditions, height of grass and types of grass being mowed.

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

## TO ADJUST GAUGE WHEELS (See Fig. 9)

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

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

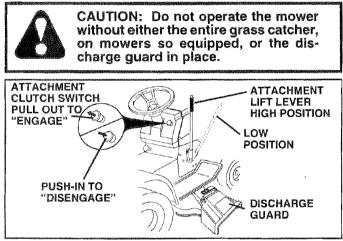


**FIG. 9** 

## TO OPERATE MOWER (See Fig. 10)

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.





## 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 Fig. 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.
- Pull freewheel control knob out and hold in position by inserting retainer spring into forward hole of control rod.
- 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.).

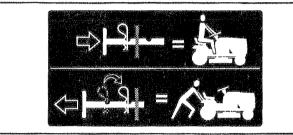


FIG. 11

### **BEFORE STARTING THE ENGINE** CHECK ENGINE OIL LEVEL (See Fig. 16)

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

#### **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 met.

14 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.

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

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

 Insert key into ignition and turn key clockwise to "START" position and release key as soon as engine starts. Do not run starter continuously for more than fifteen seconds per minute. If the engine does not start after several attempts, push choke control in, wait a few minutes and try again. If engine still does not start, pull the choke control out and retry.

WARM WEATHER STARTING (50° F and above)

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

COLD WEATHER STARTING (50° F and below)

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

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 carburator 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 machine. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished (See Fig. 12).
- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings. Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.

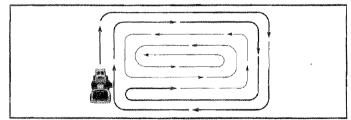


FIG. 12

## **MULCHING MOWING TIPS**

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

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

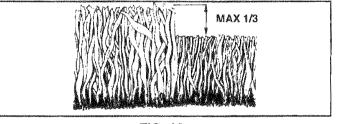


FIG. 13

FIL AS	AINTENANCE SCHEDULE L IN DATES YOU COMPLETE GULAR SERVICE	e	EFORE C	EACHUS WERY B	HOUR	SHOUP SHOUP SHOUP SHOUP ENERY E	E HOUR	SHOUL NERY	SEASON SEASON	SEF	RVICI	E DA	TES
	Check Brake Operation	<b>V</b>	Brene					<u> </u>			1		
	Check Tire Pressure	<u>v</u>	8 mars										
T	Check for Loose Fasteners	V				<b>1</b>		8/10				<u> </u>	
R	Sharpen/Replace Mower Blades			<b>8</b> 4									
A	Lubrication Chart			Sec.				Brease					
ĬŤ	Check Battery Level/Recharge			<b>8</b> 446									
0	Clean Battery and Terminals			Berto				8/					
R	Check Transaxle Cooling			8 m									
	Adjust Blade Belt(s) Tension					<b>8</b> 5							
	Adjust Motion Drive Belt(s) Tension					<b>8</b> 5							
	Check Engine Oil Level	<b>V</b>	Buene					New Construction	1				
	Change Engine Oil			1,2,3				6.eee					
	Clean Air Filter			<b>1</b> 2									
E N	Clean Air Screen			Sector 2	1			1				1	
G	Inspect Muffler/Spark Arrester				Barro				1	1			
	Replace Oil Filter (If equipped)			1		1.2			1	1		1	
N	Clean Engine Cooling Fins		1	1		<b>1</b> 2	1	1					
W	Replace Spark Plug					1 Mar	Bert	1					
	Replace Air Filter Paper Cartridge			1	Ī	<b>1</b>	1	1		1	1		
Kanada	Replace Fuel Filter	1	1				81		1				

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.

## **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.

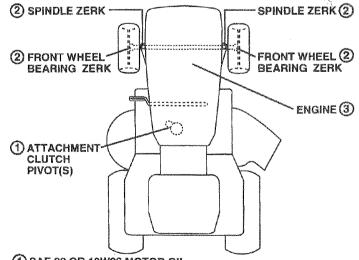
5 - If equipped with adjustable system.

6 - Not required if equipped with maintenance-free battery.

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

Do not overtighten.

### LUBRICATION CHART



() SAE 30 OR 10W30 MOTOR OIL

**(2)** GENERAL PURPOSE GREASE

③ REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION

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

## 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.

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

## **BLADE CARE**

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

## BLADE REMOVAL (See Fig. 14)

- Raise mower to highest position to allow access to blades.
- Remove hex bolt, lock washer and flat washer securing blade.
- Install new or resharpened blade with trailing edge up towards deck as shown.
- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten bolt securely (27-35 Ft. Lbs. torque).

**IMPORTANT:** BLADE BOLT IS GRADE 8 HEAT TREATED. **NOTE:** We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

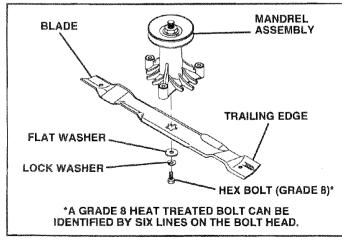


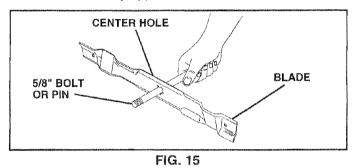
FIG. 14

## TO SHARPEN BLADE (See Fig. 15)

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

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

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



## 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).

## 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.

## TRANSAXLE COOLING

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

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

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

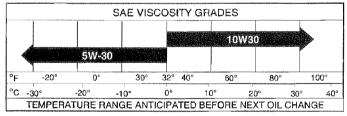
### TRANSAXLE PUMP FLUID

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

## ENGINE

## LUBRICATION

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



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

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

TO CHANGE ENGINE OIL (See Fig. 16)

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

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

• Use gauge on oil fill cap/dipstick for checking level. Insert dipstick into the tube and rest the oil fill cap on the tube. Do not thread the cap onto the tube when taking reading. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.

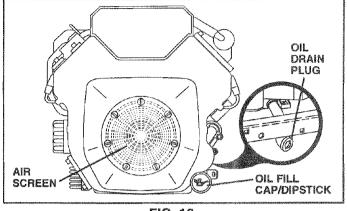


FIG. 16

## CLEAN AIR SCREEN

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

### **CLEAN AIR INTAKE/COOLING AREAS**

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

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

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

## AIR FILTER (See Fig. 17)

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

Service air cleaner more often under dusty conditions.

Loosen knob and remove cover.

TO SERVICE PRE-CLEANER

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

TO SERVICE CARTRIDGE

• Replace a dirty, bent, or damaged cartridge.

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

- Remove nut and cartridge plate.
- Reinstall the pre-cleaner (cleaned and oiled) over the paper cartridge.
- Check rubber seal for damage and proper position around stud. Replace if necessary.
- Reassemble air cleaner, cartridge plate, and nut.
- Reinstall air cleaner cover and secure by tightening knob.

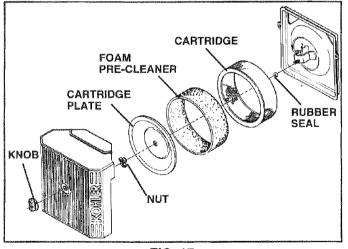


FIG. 17

#### MUFFLER

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

### SPARK PLUGS

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

### ENGINE OIL FILTER

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

## IN-LINE FUEL FILTER (See Fig. 18)

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

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

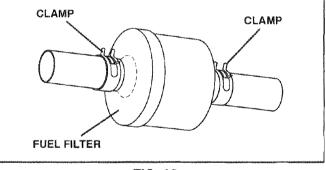


FIG. 18

## CLEANING

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

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

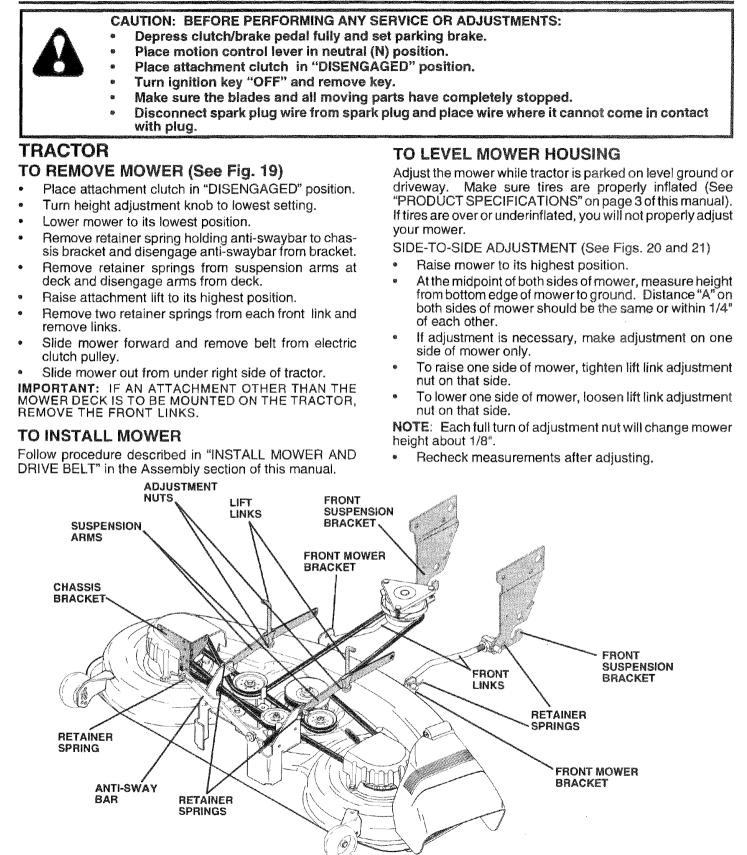


FIG. 19

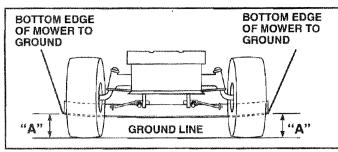


FIG. 20

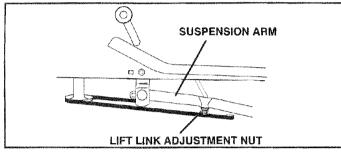


FIG. 21

FRONT-TO-BACK ADJUSTMENT (See Figs. 22 and 23) IMPORTANT: DECK MUST BE LEVEL SIDE-TO-SIDE. IF THE FOLLOWING FRONT-TO-BACK ADJUSTMENT IS NECESSARY, BE SURE TO ADJUST BOTH FRONT LINKS EQUALLY SO MOWER WILL STAY LEVEL SIDE-TO-SIDE.

To obtain the best cutting results, the mower housing should be adjusted so that 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 "D" directly in front 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. Both links should be approximately 10-3/8".
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower loosen nut "E" on both front links an equal number of turns.
- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nuts "F" against trunnion on both front links.
- To raise front of mower, loosen nut "F" from trunnion on both front links. Tighten nut "E" on both front links an equal number of turns.
- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nut "F" against trunnion on both front links.
- Recheck side-to-side adjustment.

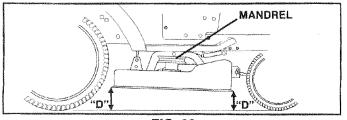
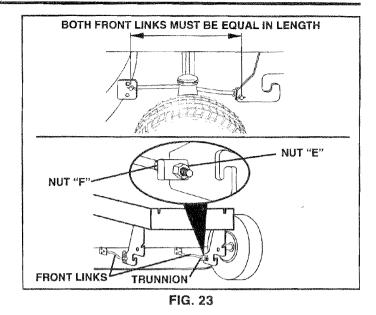


FIG. 22



### TO REPLACE MOWER DRIVE BELT

MOWER DRIVE BELT REMOVAL (See Fig. 24)

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

MOWER DRIVE BELT INSTALLATION (See Fig. 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.

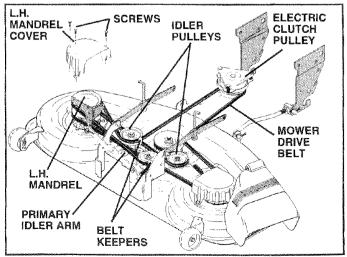
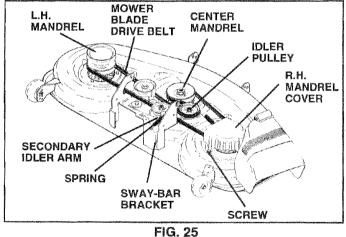


FIG. 24

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

Park the tractor on level surface. Engage parking brake.

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



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

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

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

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

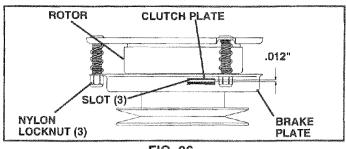


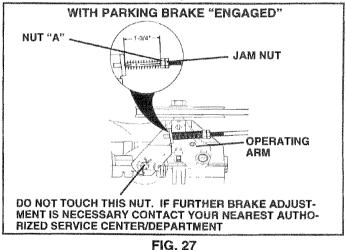
FIG. 26

### TO ADJUST BRAKE (See Fig. 27)

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

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

- Depress clutch/brake pedal and engage parking brake.
- Measure distance between brake operating arm and nut "A" on brake rod.
- If distance is other than 1-3/4", loosen jam nut and turn nut "A" until distance becomes 1-3/4". Retighten jam nut against nut "A".
- Road test tractor for proper stopping distance as stated above. Readjust if necessary. If stopping distance is still greater than six (6) feet in highest gear, further maintenance is necessary. Contact your nearest authorized service center/department.



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

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

- Remove mower (See "TO REMOVE MOWER" in this section of this manual.)
- Disconnect clutch wire harness.
- Remove clutch locator.
- Remove upper belt keeper.
- Remove belt from stationary idler and clutching idler.
- Pull belt slack toward rear of tractor. Carefully remove belt upwards from transmission input pulley and over cooling fan blades.
- Pull belt toward front of tractor and remove downwards from around electric clutch.
- 23 Install new belt by reversing above procedure.

#### **IMPORTANT:** MAKE SURE UPPER BELT KEEPER IS POSITIONED PROPERLY BETWEEN LOCATOR TABS AND ELECTRIC CLUTCH WIRE CONNECTION IS SECURE.

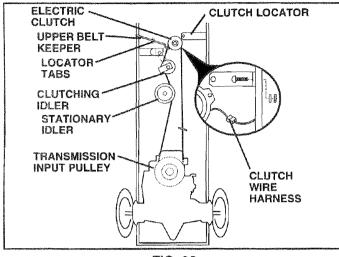


FIG. 28

## TO ADJUST MOTION CONTROL LEVER (See Fig. 29)

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

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

- Park tractor on level surface. Stop tractor by turning ignition key to "OFF" position, and engage parking brake.
- Adjust motion control lever by tightening adjustment locknut one half (1/2) turn.

**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 to 1/2 turn. Road test tractor after adjustment and repeat procedure if necessary.

## TRANSMISSION REMOVAL/REPLACEMENT

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

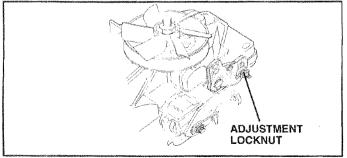


FIG. 29

## TO ADJUST STEERING WHEEL ALIGNMENT

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

### FRONT WHEEL TOE-IN/CAMBER

The front wheel toe-in and camber are not adjustable on your tractor. If damage has occurred to affect the front wheel toe-in or camber, contact your nearest authorized service center/department.

## TO REMOVE WHEEL FOR REPAIRS (See Fig. 30)

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

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

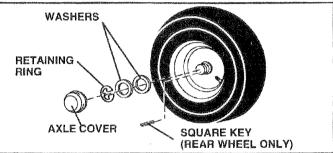


FIG. 30

## TO START ENGINE WITH A WEAK BATTERY (See Fig. 31)

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.
- 24 RED cable last from both batteries.

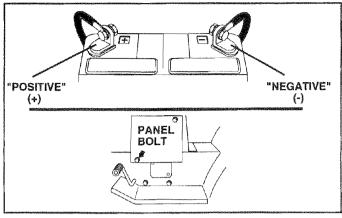


FIG. 31

## TO REPLACE HEADLIGHT BULB

- Raise hood.
- Pull bulb holder out of the hole in the backside of the grill.
- Řeplace 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 REMOVE HOOD AND GRILL ASSEMBLY (See Fig. 32)

- 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 procedure.

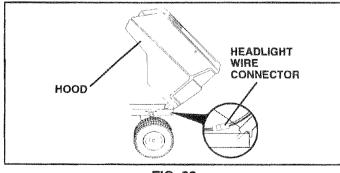


FIG. 32

## ENGINE

## TO ADJUST THROTTLE CONTROL CABLE (See Fig. 33

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.

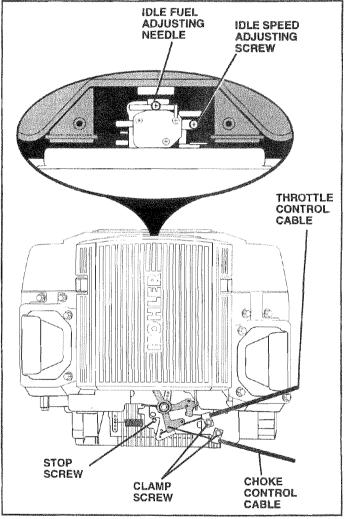


FIG. 33

### TO ADJUST CHOKE CONTROL (See Figs. 33 and 34)

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

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

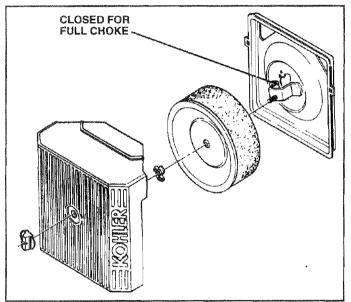


FIG. 34

## TO ADJUST CARBURETOR (See Fig. 34)

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

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

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

PRELIMINARY SETTING -

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

FINAL SETTING -

- Start engine and allow to warm for five minutes. Make final adjustments with engine running and shift/motion control lever in neutral (N) position.
- The high idle is set at the factory and cannot be adjusted.
- Idle speed setting With throttle control lever in slow position, engine should idle at 1200 RPM. If engine idles too slow or fast, turn idle speed adjusting screw in or out until correct idle is attained.
- Idle fuel needle setting With throttle control lever in slow position, turn idle fuel adjusting needle in (clockwise) until engine speed decreases and then turn out (counterclockwise) approximately 3/4 turn to obtain the best low speed performance.
- Recheck idle speed. Readjust if necessary.

ACCELERATION TEST -

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

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

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

## 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 SYSTEMPARTS 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	<ol> <li>Out of fuel.</li> <li>Engine not "CHOKED" properly.</li> <li>Engine flooded.</li> <li>Bad spark plug.</li> <li>Dirty air filter.</li> <li>Dirty fuel filter.</li> <li>Water in fuel.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>Engine valves out of adjustment.</li> </ol>	<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       1. Dirty air filter.         2. Bad spark plug.         3. Weak or dead battery.         4. Dirty fuel filter.         5. Stale or dirty fuel.         6. Loose or damaged wiring.         7. Carburetor out of adjustment.         8. Engine valves out of adjustment.		<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 Adjustment section.</li> <li>Contact an authorized service center/department</li> </ol>			
Engine will not turn over	<ol> <li>Clutch/brake pedal not depressed.</li> <li>Attachment clutch is engaged.</li> <li>Weak or dead battery.</li> <li>Blown fuse.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty ignition switch.</li> <li>Faulty solenoid or starter.</li> <li>Faulty operator presence switch(es).</li> </ol>	<ol> <li>Depress clutch/brake pedal.</li> <li>Disengage attachment clutch.</li> <li>Recharge or replace battery.</li> <li>Replace fuse.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace ignition switch.</li> <li>Check/replace solenoid or starter.</li> <li>Contact an authorized service center/department.</li> </ol>			
Engine clicks but will not start       1. Weak or dead battery.         2. Corroded battery terminals.         3. Loose or damaged wiring.         4. Faulty solenoid or starter.		<ol> <li>Recharge or replace battery.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace solenoid or starter.</li> </ol>			
Loss of power	<ol> <li>Cutting too much grass/too fast.</li> <li>Throttle in "CHOKE" position.</li> <li>Build-up of grass, leaves and trash under mower.</li> <li>Dirty air filter.</li> <li>Low oil level/dirty oil.</li> <li>Faulty spark plug.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Water in fuel.</li> <li>Spark plug wire loose.</li> <li>Dirty/clogged muffler.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>Engine valves out of adjustment.</li> </ol>	<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 tighten spark plug wire.</li> <li>Clean engine air screen/fins.</li> <li>Clean/replace muffler.</li> <li>See "To Adjust Carburetor" in Service Adjustments section.</li> <li>Contact an authorized service center/department.</li> </ol>			
Excessive vibration       1. Worn, bent or loose blade.         2. Bent blade mandrel.       3. Loose/damaged part(s).		<ol> <li>Replace blade. Tighten blade bolt.</li> <li>Replace blade mandrel.</li> <li>Tighten loose part(s). Replace damaged parts.</li> </ol>			

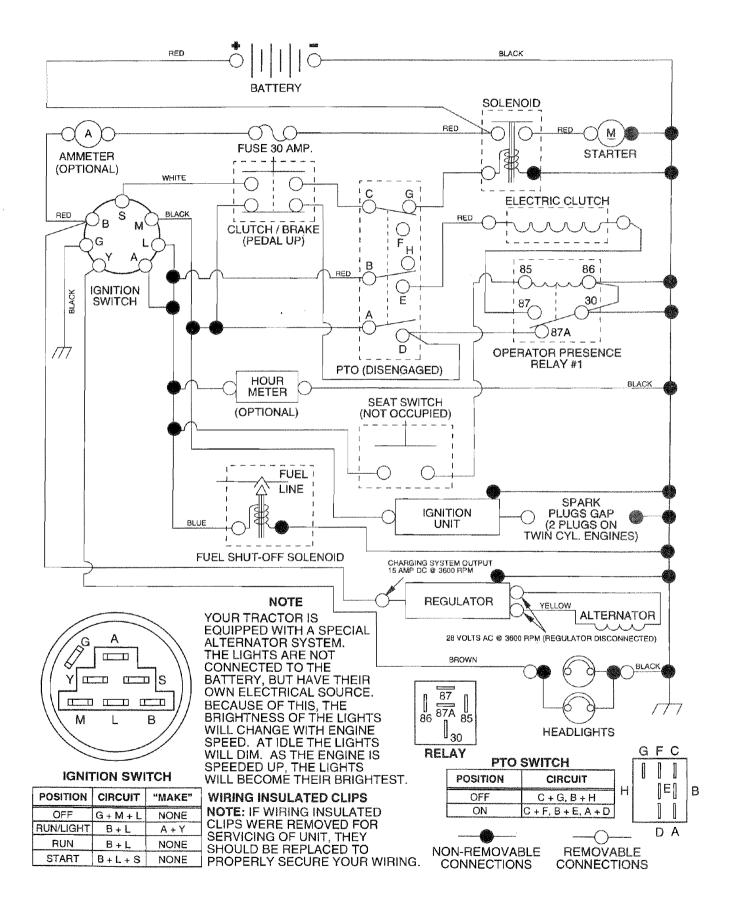
## **TROUBLESHOOTING POINTS**

PROBLEM	CAUSE	CORRECTION			
Engine continues to run when operator leaves seat with attachment clutch engaged	1. Faulty operator-safety presence control system.	<ol> <li>Check wiring, switches and connections. If not corrected, contact an authorized service center/ department.</li> </ol>			
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	<ol> <li>Obstruction in clutch mechanism.</li> <li>Worn/damaged mower drive belt.</li> <li>Frozen idler pulley.</li> <li>Frozen blade mandrel.</li> </ol>	<ol> <li>Remove obstruction.</li> <li>Replace mower drive belt.</li> <li>Replace idler pulley.</li> <li>Replace blade mandrel.</li> </ol>			
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>	<ol> <li>Place throttle control in "FAST" position.</li> <li>Shift to slower speed.</li> <li>Allow grass to dry before mowing.</li> <li>Level mower deck.</li> <li>Check tires for proper air pressure.</li> <li>Replace/sharpen blade. Tighten blade bolt.</li> <li>Clean underside of mower housing.</li> <li>Replace mower drive belt.</li> <li>Replace with blades listed in this manual.</li> <li>Clean around mandrels to open vent holes.</li> </ol>			
Headlight(s) not working (if so equipped)	<ol> <li>Switch is "OFF".</li> <li>Bulb(s) burned out.</li> <li>Faulty light switch.</li> <li>Loose or damaged wiring.</li> <li>Blown fuse.</li> </ol>	<ol> <li>Turn switch "ON".</li> <li>Replace bulb(s).</li> <li>Check/replace light switch.</li> <li>Check wiring and connections.</li> <li>Replace fuse.</li> </ol>			
Battery will not charge       1. Bad battery cell(s).         2. Poor cable connections.         3. Faulty regulator (if so equipped).         4. Faulty alternator.		<ol> <li>Replace battery.</li> <li>Check/clean all connections.</li> <li>Replace regulator.</li> <li>Replace alternator.</li> </ol>			
Loss of drive1.Freewheel control in "disengaged" position.2.Motion drive belt worn, damaged, or broken.3.Air trapped in transmission during shipment or servicing.		<ol> <li>Place freewheel control in "engaged" position.</li> <li>Replace motion drive belt.</li> <li>Purge transmission.</li> </ol>			
Engine "backfires" when turning engine "OFF"	<ol> <li>Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine.</li> </ol>	<ol> <li>Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.</li> </ol>			

## **SERVICE NOTES**

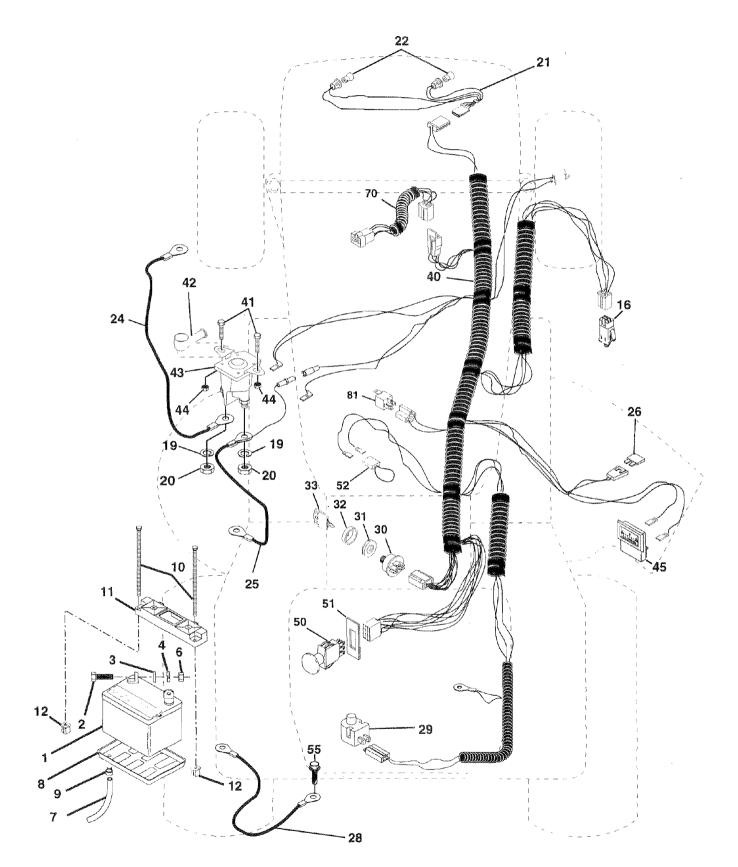
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### SCHEMATIC



**TRACTOR - - MODEL NUMBER 917.258694** 

ELECTRICAL



## **TRACTOR - - MODEL NUMBER 917.258694**

## ELECTRICAL

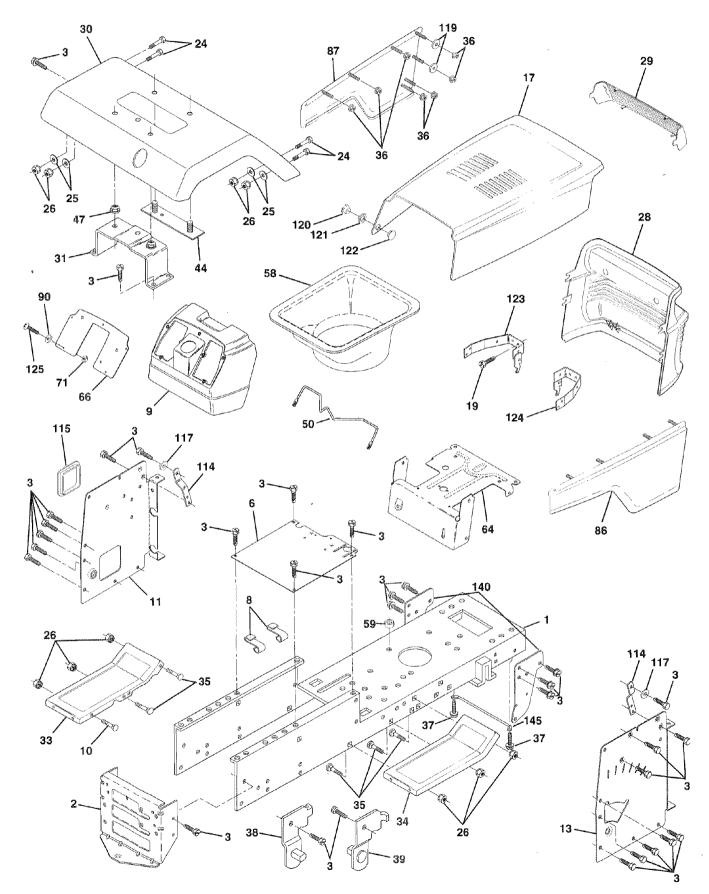
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KEY NO.	PART NO.	DESCRIPTION
1	144926 74760412	Battery Bolt, Hex 1/4-20 UNC x 3/4
2 3	STD551025	Washer
4	STD551125	Washer
6	STD541025	Nut
7	7697J	Tube, Plastic
8	7603J	Tray, Battery
9	109596X	Clamp, Hose
10	145211	Bolt, Btr. Frt 1/4-20 x 7.5
	150109	Holddown Btr. Dash
12	145769	Nut, Push Nylon 1/4" Battery
16	153664 STD551125	Switch Interlock Push-In Washer, Lock
19 20	73350400	Nut, Hex, Jam 1/4-20 UNC
21	136850	Harness, Light Socket W/4152J
	4152J	Bulb, Light
	4206J	Cable Battery
	146148	Cable, Battery
26	108824X	Fuse
28	145491 160784	Cable, Ground
29	160784	Switch, Plunger Normal Op Olive
	140301	Switch, Ignition
31		Nut, Ignition
32 33		Cover, Ignition Switch
40	109310X 160721	Key, Ignition Harness, Ignition
41	71110408	Bolt Blk Fin. Hex 1/4-20 UNC x 1/2
42	131563	Cover, Terminal
43	145673	Solenoid
	73640400	Nut, Keps Blk. Hex 1/4-20 UNC
	122822X	Ammeter Rectangular 15 Amp
50	154963	Switch PTO 3 Pot Red Delta
51	140405	Ring Retainer PTO
	141940 17490508	Wire Loop
	147682	Screw Thdrol 5/16-18 x 1/2 TYT
81	109748X	Harness Engine Koh CV18 LT/YT Relay Asm
01	100/HUN	now non

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

TRACTOR - - MODEL NUMBER 917.258694

CHASSIS AND ENCLOSURES



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## **TRACTOR - - MODEL NUMBER 917.258694**

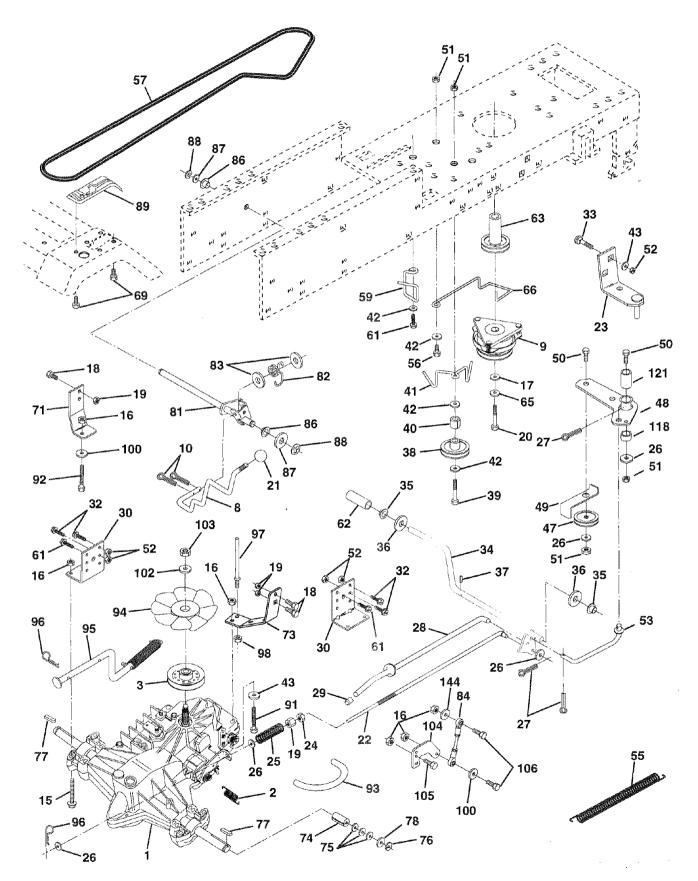
## CHASSIS AND ENCLOSURES

KEY NO.	PART NO.	DESCRIPTION
$\begin{array}{c} \textbf{NO.} \\ 1 \\ 2 \\ 3 \\ 6 \\ 8 \\ 9 \\ 10 \\ 11 \\ 17 \\ 19 \\ 4 \\ 5 \\ 6 \\ 8 \\ 9 \\ 11 \\ 17 \\ 19 \\ 4 \\ 5 \\ 2 \\ 2 \\ 2 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3$		DESCRIPTION Chassis Drawbar Screw, Thdrol. 3/8-16 x 3/4 Type TT Saddle Clip, Fuel Line Dash, Plastic Bolt, Carriage 3/8-16 x 1 Panel, Dash, LH Panel, Dash, LH Panel, Dash, RH Hood Assembly Screw Sltd Hex Hd W/Pl Bolt Washer 13/32 x 13/16 x 12 Gauge Nut Grill Lens, Bar, Clear Fender Bracket Assembly, Fender Footrest, LH Footrest, RH Bolt Nut, Pal Screw Thdrol 5/16-18 x 1/2 Bracket Assembly, Pivot, LH Bracket Assembly, Pivot, RH Fender Strap Nut, Push, Nylon Rod, Support Duct Duct Air CV Twin YT/GT Bushing, Snap, Split Dash, Lower Plate, Dash Nut Panel Assembly, RH Panel Assembly, LH Washer 17/64 Bracket, Support, Dash Cover, Access Washer Serrated Disk 13/32 x 1 Washer 9/32 x 1-1/4 x 16 Ga. Rivet, Ratchet, Female Washer, Nylon Rivet, Ratchet, Male Bracket, Weldment Pivot Hood, LH Bracket, Weldment Pivot Hood, RH Screw, Machine 1/4-20 x 3/4
140 145	158418 156524 8022J	Bracket Suspension Front Rod Pivot Chassis/Hood Plug Dash Blk 500 Dia E. Lift

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

**TRACTOR - - MODEL NUMBER 917.258694** 

DRIVE



# **TRACTOR - - MODEL NUMBER 917.258694**

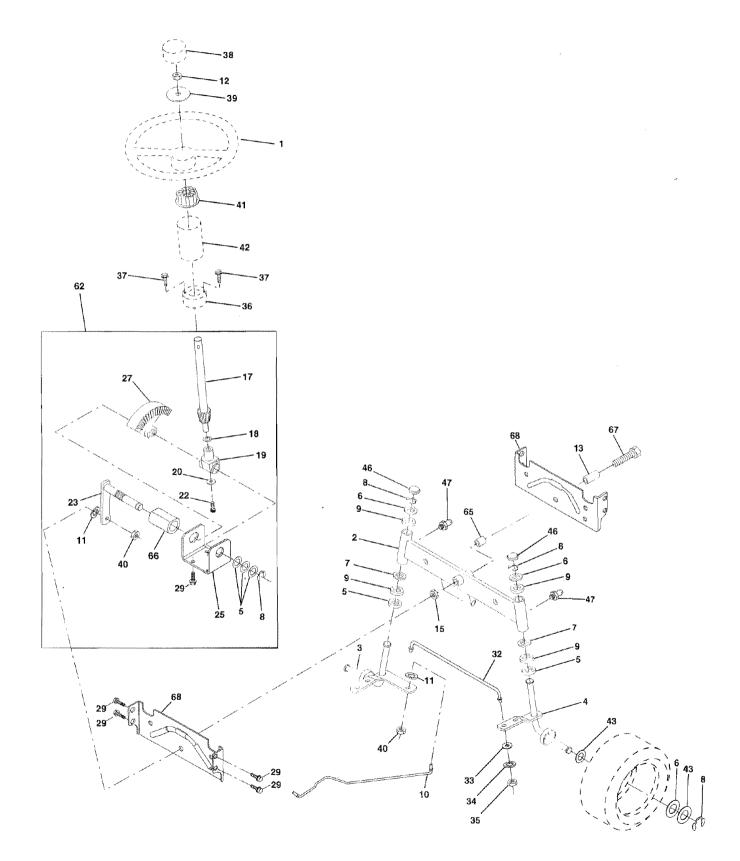
### DRIVE

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KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 2	150071 142431	Transaxle Assembly Spring, Brake Return		140294 140312	V-Belt, Drive Retainer, Belt
3	143995	Pulley, Transaxle		17490612	Screw Thdrol 3/8-16 x 3/4
8	141002	Rod, Shifter	62	8883R	Cover, Foot Pedal
9	137140	Clutch, Electric		140189	Pulley, Engine
	76020416	Pin, Cotter 1/8 x 1		STD551143 154778	Washer, Lock Hvy Hicl Spr 7/16 Keeper Belt Engine
15 16	74490544 73800500	Bolt, Hex Fighd 5/16-18 Gr. 5 Nut Lock Hx W/Ins 5/16-18unc		142432	Screw
17	126197X	Washer 15/32 x 1-3/4 x 1/4		140158	Strap Torque Lh Hydro 18/20"T
18	74780616	Bolt Fin Hex 3/8-16 UNC x 1 Gr. 5	73	156347	Strap Torque Rh Hydro 18/20"T
	73800600	Locknut 3/8-16		121199X	Spacer, Split
20	150280	Bolt, Hex 7/16-20 x 4-1/4		121749X	Washer 25/32 x 1-1/4 x 16 Ga.
21 22	130564 145627	Knob Rod, Brake		12000001 123583X	E-Ring Key Square
23	137141	Bracket Assembly, Clutch		121748X	Washer 25/32 x 1-5/8 x 16 Ga.
24	73350600	Nut, Hex Jam 3/8-16	81	156046	Shaft asm Cross 20" tires 650
25	106888X	Spring, Rod, Brake			Hydro
	19131316	Washer 13/32 x 13/16 x 16 Gauge		123782X	Spring, Torsion
27 28	76020412 145204	Pin, Cotter 1/8 x 3/4 Rod, Brake, Park		19171216 140548	Washer 17/32 x 3/4 x 16 Gauge Rod, Tie
20	124236X	Cap, Plunger		71208	Bushing, Rod, Steering
	130807	Bracket, Transaxle, L.H.		19212016	Washer 21/32 x 1-1/4 x 16 Gauge
32.	74760512	Botl, Hex Hd. 5/16-18 UNC x 3/4	88	12000008	Ring, Klip
33	STD533107	Bolt,Carriage 5/16-18 x 3/4		151146	Console, 6 Speed
	155071	Shaft, Foot Pedal	91	74780536 74780524	Bolt Fin Hex 5/16-18 x 2-1/4 Bolt Fin Hex 5/16-18 UNC x 1-1/2
	120183X 19211616	Bearing Nylon Washer 21/32 x 1 x 16 Gauge		142564	Line Fuel Hydro 4"
	1572H	Pin,Roll 3/16 x 1		140462	Fan, Hydro 7"
	123674X	Idler, Flat		144643	Control Bypass Hydro 20" Tires
	74760644	Bolt, Hex 3/8-16 x 2-3/4		4497H	Retainer Spring 1" Zinc/Cad
	4470J	Spacer		161901	Keeper Bolt Rh Hydro 0750. 18/20"
	154777 19131312	Keeper, Belt Idler		73510600 19111216	Nut Keps Hex 3/8-16 UNC Washer 11/32 x 3/4 x 16 Ga.
	19111012	Washer 13/32 x 13/16 x 12 Gauge Washer 11/32 x 5/8 x 12 Gauge		141322	Washer Bellville .501D x 1.50D
	127783	Pulley, Idler		73940800	Nut Hex Jam Toplock 1/2-20 UNF
48	154604	Bellcrank, Asm. Clutch	104	140156	Arm, Control Hydro
49	123205X	Retainer, Belt		71070516	Screw Cap Hex 5/16 x 18 x 1
	74760624 STD541437	Bolt, Hex 3/8-16 x 1-1/2		74780520 154774	Bolt Fin Hex 5/16-18 UNC x 1-1/4
	73680500	Nut, Crownlock 3/8-16 Nut, Lock Hex w/Ins 5/16-18		154774	Spacer Bellcrank Nyliner Clutching Stl
	105710X	Link, Clutch		19111016	Washer $11/32 \times 5/8 \times 16$ Ga.
55	105709X	Spring, Return, Clutch			ent dimensions given in U.S. inches
56	74760620	Bolt, Fin. Hex 3/8-16 UNC x 1-1/4	14911	1  inch = 25.	

# **TRACTOR - - MODEL NUMBER 917.258694**

### STEERING ASSEMBLY



## **TRACTOR - - MODEL NUMBER 917.258694**

### STEERING ASSEMBLY

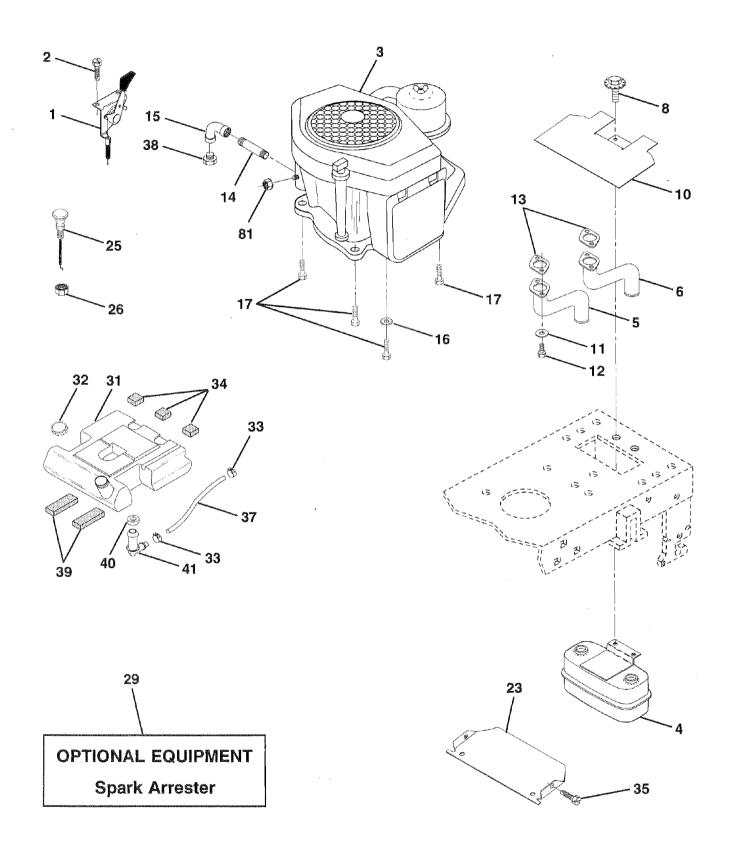
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KEY NO.	PART NO.	DESCRIPTION
1	121472X	Steering Wheel
2	154427	Axle Assembly, Front
3	156483	Spindle Assembly, LH
4 5	157473 6266H	Spindle Assembly, RH
6	121748X	Bearing, Race, Thrust, Hardened Washer 25/32 x 1-5/8 x 16 Gauge
7	19272016	Washer 27/32 x 1-1/4 x 16 Gauge
8	12000029	Ring, Klip
9	3366R	Bearing
10	156438	Link, Drag
11	STD551137	Washer, Ľock
12	73940800	Nut, Hex, Jam Toplock 1/2-20 UNF
13 15	154779 73901000	Bearing, Axle Locknut, Hex, Jam, w/Washer Insert
15	/3301000	5/8-11 UNC
17	156543	Shaft Assembly, Steering
18	57079	Washer, Thrust .515 x .750 x .033
19	124035X	Support, Shaft
20	126684X	Washer, Shim 1/4 x 5/8 x .062
22 23	71200410	Screw Hex Socket 1/4-20 x 2-3/4
25 25	127501 154406	Shaft Assembly, Pittman Bracket, Steering
27	136874	Gear, Sector
29	17490612	Screw, Thdrol 3/8-16 x 3/4
32	139929	Tie Rod
33	19111216	Washer 11/32 x 3/4 x 16 Ga.
34	STD551131	Washer Lock Hvy Hild Spr. 5/16
35	73810500	Locknut 5/16-24 UNF
36 37	145207 152927	Bushing, Steering Screw TT #10-32 5 3/8 Flange
38	126805X	Insert, Cap, Steering Wheel
39	100712K	Washer .53 x 2.25 x .160
40	STD541537	Nut Lock Center 3/8-24 UNF
41	100711L	Adapter, Steering Wheel
42	140216	Column, Steering
43	121749X	Washer 25/32 x 1-1/4 x 16 Gauge
46 47	121232X	Cap, Spindle
62	6855M 156595	Fitting, Grease Kit, Steering Assembly
	154780	Spacer Axle
66	154404	Bearing Arm Pittman
67	74781044	Bolt Fin Hex 5/8-11 UNC x 2-3/4
68	154429	Brace Axle
NOT		ent dimensions given in U.S. inches
	1 inch = 25	4 mm

1 inch = 25.4 mm

TRACTOR - - MODEL NUMBER 917.258694

ENGINE



### TRACTOR - - MODEL NUMBER 917.258694

### ENGINE

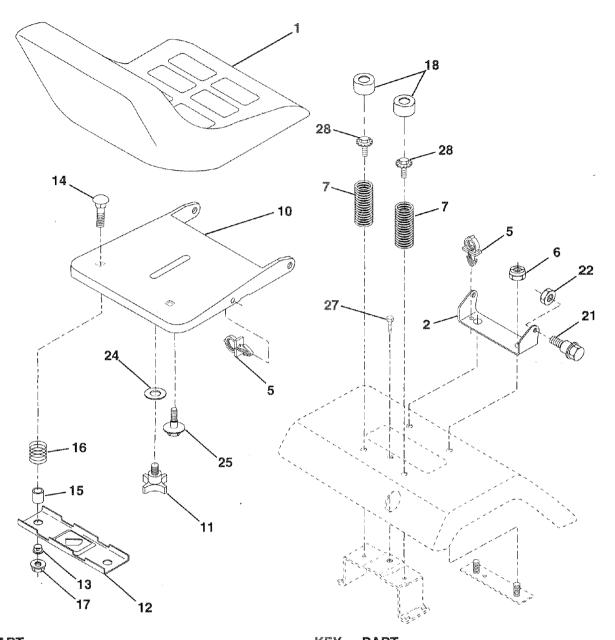
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KEY NO.		DESCRIPTION
1 2	132757 17720410	Control, Throttle Screw, Hex Head, Thread Cutting 1/4-20 x 5/8
З		Engine (See Breakdown) Kohler Model No. CV20S-PS61554
	4	Muffler, Asm. Twin Lo-Tone Pipe Exhaust LH CV18/20 Pipe Exhaust RH CV18/20 Bolt 5/16-18 UNC x 3/4 w/Sems Shield Heat Washer Lock Hvy HLCL Spr. 5/16(Order From Engine Mfg) Screw Hex Skt 5/16 UNV x 3/4(Order From
13 14 15 16 17 25 26 29 31 25 29 32 34 35 37 38 39 40	13280336 13200300 STD551237 17490624 159880 161729 73920600 137180 151346 152334 123487X 106082X 17490512 8543R	Engine Mfg) Gasket (Order From Engine Mfg) Nipple, Pipe Elbow, Standard 90°, 3/8-18 NPT Washer, Lock Screw Thdrol 3/8-16 x 1-1/2 TT Shield, Browning/Debris Guard Control Choke Nut Keps 3/8-24 UNF Arrester, Spark Tank, Fuel Cap Assembly, Fuel Clamp, Hose Spacer, Pad Screw Thdrol 5/16-18 x 3/4 TYT Line, Fuel Plug, Oil Drain (Order From Engine Manufacturer) Spacer Pad Bushing Stem, Fuel Tank Nut Flange 1/4-20 Starter Nut

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

TRACTOR - - MODEL NUMBER 917.258694

SEAT ASSEMBLY

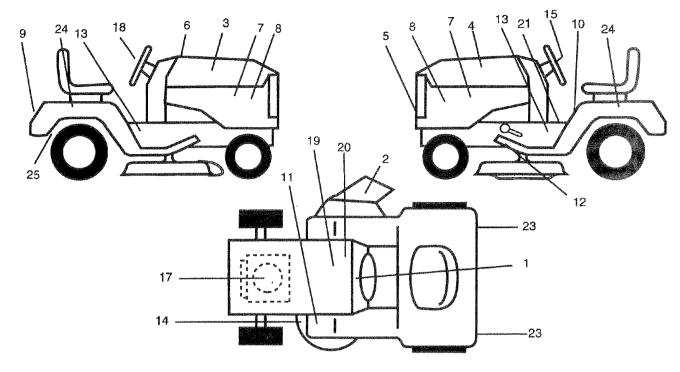


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	NO.	DESCRIPTION
1 5 6 7 10 11 12 13 14 15	140123 140551 145006 STD541437 124181X 155925 120068X 121246X 121246X 121248X 72050412 134300	Seat Bracket, Pivot, Seat Clip Push-In Nut, Lock Hex w/Ins. 3/8-16 UNC Spring, Seat Pan, Seat Knob, Seat Bracket, Switch Mounting Bushing, Snap, Nylon Bolt, Carriage 1/4-20 x 1-1/2 Spacer, Split	16 17 18 21 22 24 25 27 28 <b>NOT</b>	121250X 123976X 124238X 153236 STD541431 19171912 127018X 17490608 150176 <b>E:</b> All compor 1 inch = 25	Spring Nut, Flangelock 1/4 Grade 5 Cap, Spring, Seat Bolt, Shoulder 5/16-18 UNC - 2A Nut Washer 17/32 x 1-3/16 x 12 Gauge Bolt, Shoulder 5/16-18 x .62 Screw Thdrol. 3/8-16 x 1/2 Bolt 5/16-18 x 3/4 w/Sems thent dimensions given in U.S. inches

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**TRACTOR - - MODEL NUMBER 917.258694** 

DECALS

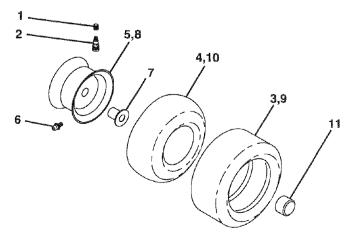


# KEY<br/>NO.PART<br/>NO.DESCRIPTION1156835Decal, Operating Instruction2156787Decal, Deck Mower, EZ33160291Decal, Hood, Craftsman, BH

3	160291	Decal, Hood, Crattsman, HH
4	160292	Decal, Hood, Craftsman, LH
5	151400	Decal, Grille
6	133644	Decal, Maintenance
7	138048	Decal, Side Panel
8	142241	Decal, Side Panel
9	146709	Decal, Fender, Craftsman
10	156439	Decal, Caution
11	4900J	Decal, Clutch/Brake
12	146046	Decal, V-Belt Drive Schematic
13	151401	Decal, Chassis, 46" Hydro Srs.
		Polo

### WHEELS & TIRES

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### KEY PART

NO. NO.

14

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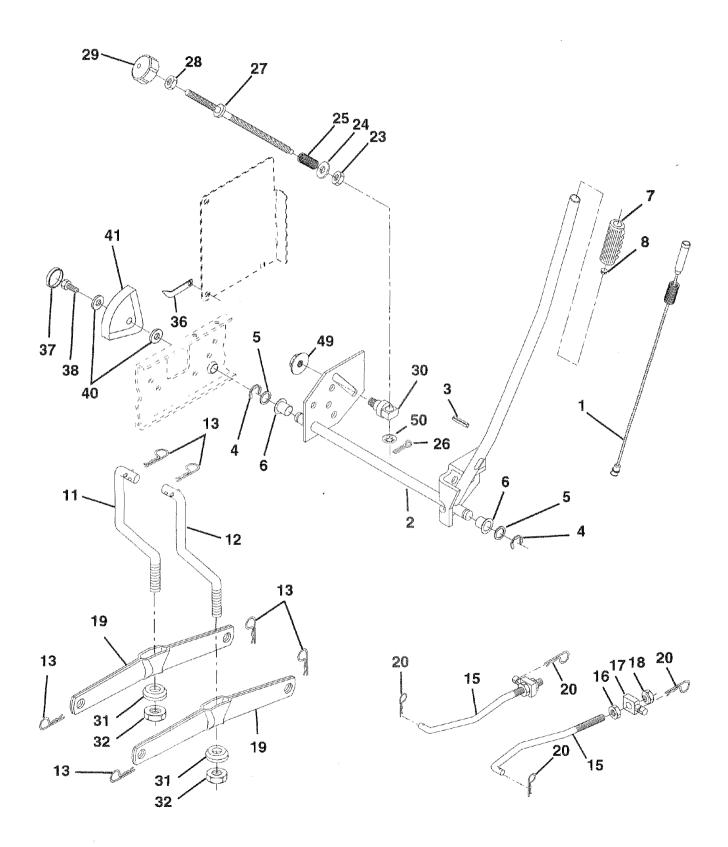
#### DESCRIPTION

KEY NO.	PART NO.	DESCRIPTION
1	59192	Cap, Valve, Tire
2	65139	Stem, Valve
3	106222X	Tire, Front
4	59904	Tube, Front (Service Item Only)
5	106732X427	Rim Assembly, Front
6	278H	Fitting, Grease (Front Wheel Only)
7	9040H	Bearing, Flange (Front Wheel Only)
8	106108X427	Rim Assembly, Rear
9	122082X	Tire, Rear
10	7152J	Tube, Rear (Service Item Only)
11	104757X	Cap, Axle
	144334	Sealant, Tire (10 oz. Tube)

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

**TRACTOR - - MODEL NUMBER 917.258694** 

### **MOWER LIFT**



KEY PART

# TRACTOR - - MODEL NUMBER 917.258694

### **MOWER LIFT**

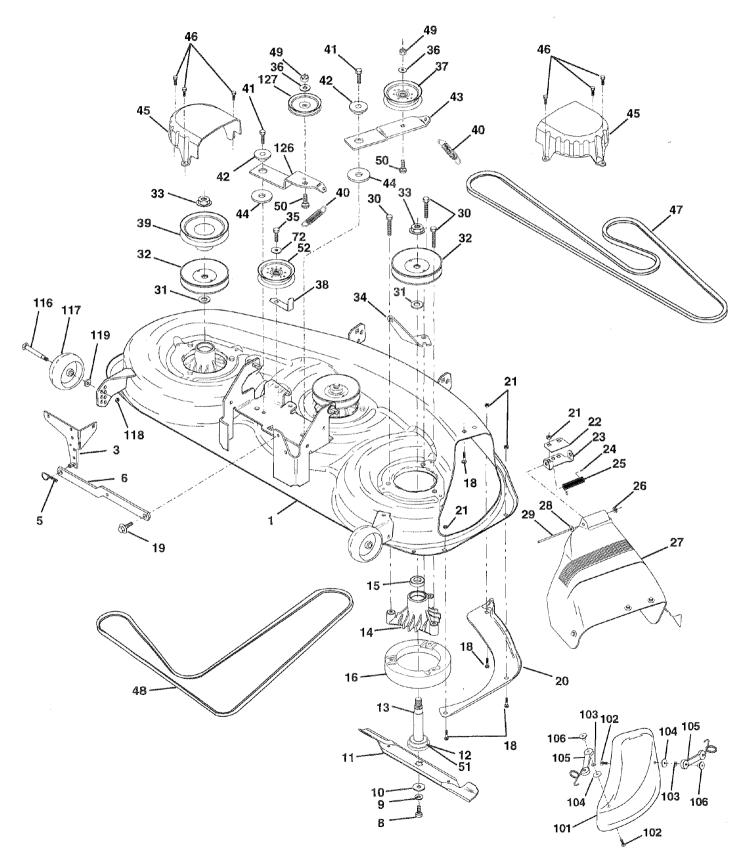
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NO.		DESCRIPTION
16 17 18 20 23 24 25 26 27 28 20 31 32 36 37 38 40 41	139865 139866 STD624008 127218 73350800 130171 73800800 139868 STD624008 110807X 19131016 137150 76020308 137167 73350600 138057 150233 140302 73540600 155097 123935X	Wire Asm., Inner w/plunger Shaft Asm Lift Pin Groove E Ring #5133-62 Washer 21/32 X 1 X 21 Ga Bearing Nylon Grip Handle Fluted Button, Plunger Link Lift Lh Link Lift Lh Link Lift Rh Retainer Spring Link Front Nut Jam Hex 1/2-13 Unc Trunnion Bik Zinc Nut Lock W/Wsh 1/2-13 Unc Arm Suspension Rear Spring Retainer Nut Special Washer 13/32 X 5/8 X 16 Ga Spring" Pin Cotter 3/32 x 1/2 Rod Adjust Lift Nut Hex Jam 3/8-16 Unc Knob Infinite 3/8-16 Unc Black Trunnion Infin Height Bearing Pvt. Lift Spherical Nut, Crownlock 3/8-24 Pointer, Height Indicator Plug, Hole Screw Thdrol 5/16-18 x 3/4 Washer 11/32 x 1-1/2 x 10 Gauge Scale, Height Indicator Nut Hex Flange Lock Nut Push Phos & Oil

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

### **TRACTOR - - MODEL NUMBER 917.258694**

**MOWER DECK** 



### **TRACTOR - - MODEL NUMBER 917.258694**

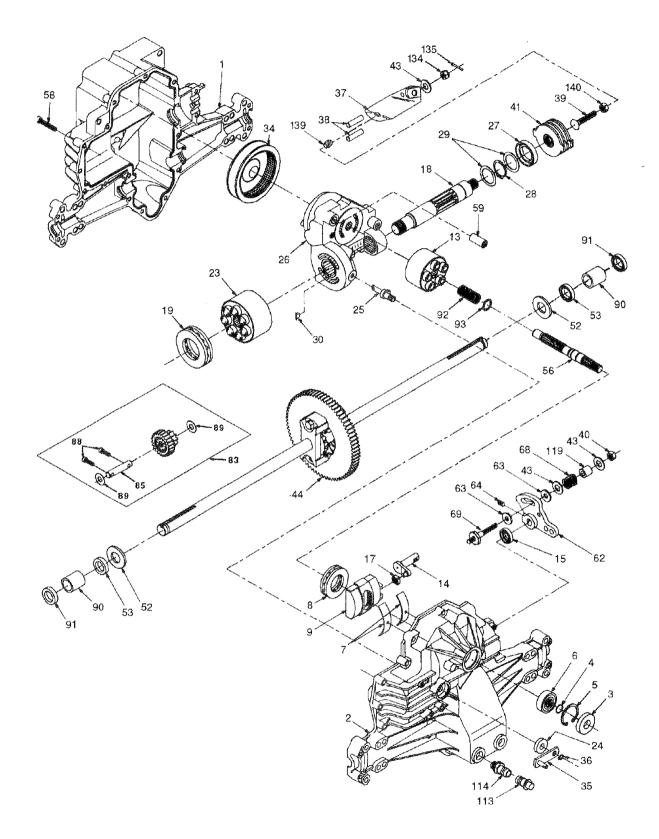
### MOWER DECK

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KE' NO		DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 3 5 6 8 9 10	156948 138457 STD624008 130832 850857 STD551137 140296	Housing, Mower 46" Bracket Asm., Sway Bar Retainer Spring Arm, Suspension, Rear (Sway Bar) Bolt, Patched 3/8-24 x 1-1/4 Gr. 8 Washer, Lock Hvy., Unplated 3/8 Washer, Hard Blade, Mower	39 40 41 42 43 44 45	144917 137273 17490620 122052X 144949 133943 145059	Pulley, Idler, Driven Spring, Secondary 44/46/50 Vent Screw, Thdroll 3/8-16 x 1-1/4 Tytt Spacer, Retainer Arm, Idler Secondary Washer, Hardened Cover, Mandrel Deck
11 12 13	152443 129895 137553	Vented Blade, 46" Mower Deck Bearing, Ball, Mandrel #6204 Shaft Asm. w/Lower Bearing (Includes Key No. 12)	46 47 48 49 50	137729 144959 139573 STD541437 72110612	Screw, Thdroll. 1/4-20 x 5/8 V-Belt, Mower, Secondary V-Belt, Mower, Primary Nut, Crownlock 3/8-16 UNC Bolt, Carriage 3/8-16 x 1-1/2 Gr. 5
14 15 16 18 19	137152 110485X 140329 72140505 132827	Housing, Mandrel Bearing, Ball, Mandrel Stripper, Mower Round Bolt, Carriage 5/16-18 x 5/8 Bolt, Hex Head, Shoulder 5/16-18	72 101 102	153390 156493 19131616 145579 71161010	Washer Felt Pulley Idler Washer 13/32 x 1 x 16 Ga. Cover, Mulching Screw
20 21 22 23 24 25	145055 STD541431 134753 131267 105304X 149287	Baffle, Vortex Mower 46" Nut, Crownlock 5/16-18 UNC Stiffiner, Bracket Bracket, Deflector Cap, Sleeve Spring, Torsion, Deflector	104 105 106 116	10071000 19061216 160793 2029J 137644 133957	Washer, Lock #10 Washer Latch Asm. Bagger Nut, Weld Bolt, Shoulder Gauge Wheel, Wide
26 27 28 29 30	110452X 157788 19111016 131491 157722	Nut, Push Shield, Deflector Mower Washer 11/32 x 5/8 x 16 Ga. Rod, Hinge Screw, Thd Rolling Washer Head	118 119 126	73930600 19121414 144948 146763 158851	Nut, Centerlock 3/8-16 UNC Washer 3/8 x 7/8 x 14 Ga. Arm, Idler, Primary Deck 46" Pulley, Idler, V-Groove Dim. 4.25 Deck Complete (Std. Deck-Order
31 32 33 34 35 36	129963 153531 137266 144945 17490628 STD551037	Washer, Spacer Mower Vented Pulley, Mandrel Nut, Flg. Top Lock Cntr. 9/16 Anchor, Spring Deck 46" Screw, Thdroll 3/8-16 x 1-3/4 Tytt Washer 13/32 x 13/16 x 16 Ga.	~ -	143651	separately mulcher plate and gauge wheel components Key Nos. 101- 106 and 116-118) Mandrel Assembly (Includes Key Numbers 8-10, 12-15, 31 and 33)
37 38	131494 156086	Pulley, Idler, Flat Keeper, Belt, Idler	NOT	E: All compor 1 inch = 25	nent dimensions given in U.S. inches 5.4 mm

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# TRACTOR - - MODEL NUMBER 917.258694 HYDRO TRANSAXLE - MODEL NUMBER 310-0650



### TRACTOR - - MODEL NUMBER 917.258694

**KEY PART** 

### HYDRO TRANSAXLE - MODEL NUMBER 310-0650

ΚΕΥ	PART
5 W.Smith 5	
8 S	15 N 25%

	NO.	DESCRIPTION	NÕ.	NO.
1	142930	Housing, Lower	43	142884
2	142931	Assembly, Upper Housing	44	150829
2 3	142932	Seal, Lip	52	142991
4	142928	Ring, Wire Retaining	53	142961
4 5 6 7	142933	Ring, Retaining	56	142963
6	142934	Bearing, Shaft Ball	58	142964
	142935	Bearing, Cradle	59	142965
8	150771	Bearing, Thrust 30 x 52 x 13	62	142966
9	142937	Swashplate, Variable	63	142967
13	142938	Block, Cylinder Assembly	64	142920
14	142939	Arm, Trunnion	68	142969
15	142940	Seal, Lip	69	144610
17	142941	Guide, Slot	83	142971
18	150772	Shaft, Motor	85	150806
19	150773	Bearing, Thrust 42 x 68 x 16	88	142973
23	142944	Block, Cylinder Assembly	89	142974
24	142945	Seal, Lip 10 x 25 x 7	90	142975
25	142946	Actuator, Bypass	91	142976
26	150774	Center Section Assembly Kit	92	142977
27	142948	Seal, Lip 26 x 42 x 8	93	142978
28	142949	Ring, Retaining		142917
29	142950	Washer 26 x 35 x 1		142918
30	150787	Plate, Bypass		142980
34	142951	Oil Filter Element		144607
35	142952	Arm, Bypass		144608
36	142953	Ring, Retaining		150775
37	142954	Arm, Actuating	140	150776
38	142955	Pin, Actuating	NOT	
39	150777	Bolt 5/16-24 x 1-3/4	IVVI	E: All cor
40	150778	Locknut, Hex 5/16-24 UNJC Brake Rotor/Stator Kit		1 inch
41	142958	DIAKE HUIUI/SIAIUI KII		

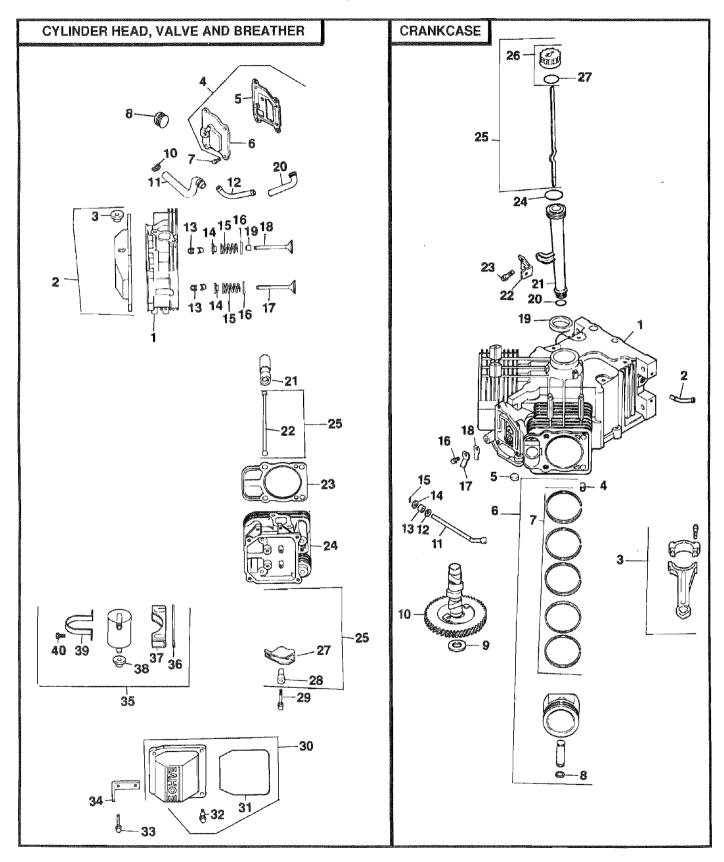
Washer 7/16 x 7/8 x .060 Differential Assembly Washer 3/4 x 1.5 x .13 Seal .75 x 1.25 x .250 Shaft, Input Bolt 1/4-20 x 1.38 Pin .5 OD x .43 ID x .750 Arm, Control Puck, Dampener Set Screw Spring Stud 5/16-24 Jackshaft Assembly Jackshaft Screw, Cap Washer 7/16 x 1 x 1/2 Sleeve Bearing Seal, Wiper Spring, Block Washer, Block Thrust Cap. Vent Assembly Fitting, O-Ring Assembly Spacer Nut, Castle 5/16-24 Pin. Cotter Spring, Compression Nut, Hex 5/16-24

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DESCRIPTION

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

# TRACTOR - - MODEL NUMBER 917.258694 KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554



### **TRACTOR - - MODEL NUMBER 917.258694**

### KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554

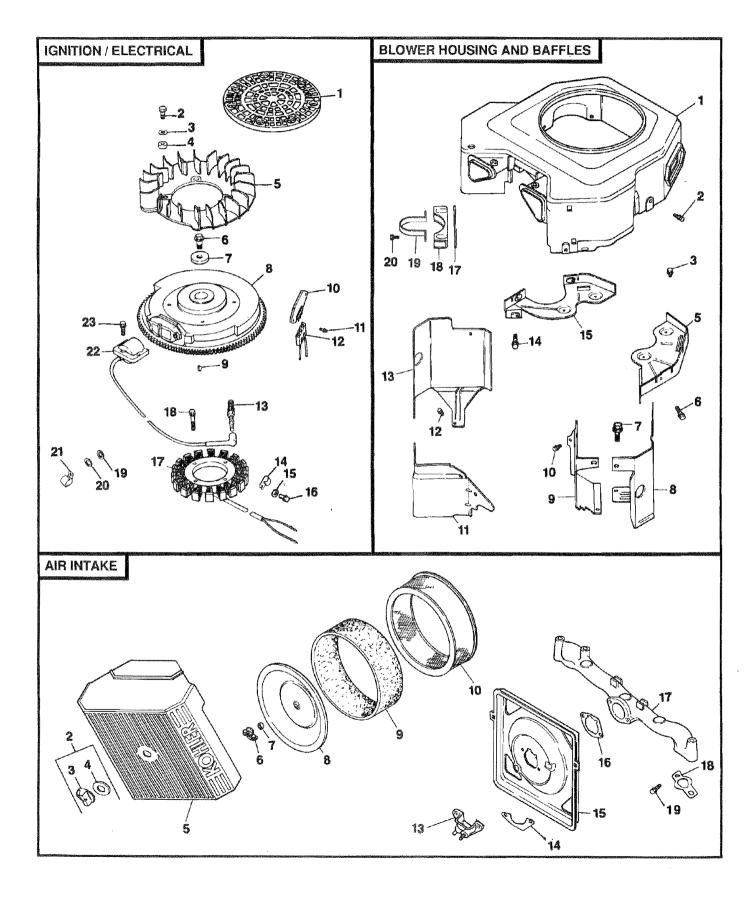
#### CYLINDER HEAD/VALVE/BREATHER

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#### CRANKCASE

	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1	24-318-11	Head Assembly, #1 Cylinder	1	24-782-05	Cylinder Crankcase
Ż	24-755-76	Kit, Valve Cover, Breather	2	24-294-13	Fitting
		(Includes Key #3, 31 and 32)	3	24-067-09	Connecting Rod (Standard) (2)
3	25-313-02	Grommet, Rubber		24-067-10	Connecting Rod (.25) (2)
4	24-033-03	Kit, Breather Cover with Gasket	4	12-380-17	Pin, Dowel Locating (6)
		(Includes Key Numbers 5 and 6)	5	52-139-09	Plug, Cup
5	24-041-23	Gasket, Breather	6	24-874-01	Piston with Ring Set (Standard) (2)
6	24-096-15	Cover, Breather		24-874-02	Piston with Ring Set (.25) (2)
7	M-0645020	Screw M6 x 1.0 x 20 (4)		24-874-03	Piston with Ring Set (.50) (2)
8	X-75-23	Plug, Pipe, Allen Head 1/8	7	24-108-01	Ring Set (Standard) (2)
10	X-426-9	Clamp, Hose (2)		24-108-02	Ring Set (.25) (2)
11	24-326-14	Hose, Breather	-	24-108-03	Ring Set (.50) (2)
12	24-294-06	Fitting	8	24-018-01	Retainer, Piston Pin (4)
13	12-755-03	Kit, Retainer (4)	9	12-422-10	Shim, Camshaft, Yellow
14	12-173-01	Cap, Valve Spring (4)		12-422-09	Shim, Camshaft, Red
15	24-089-02	Spring, Valve (4)		10 100 10	(As Required)
16	235011	Retainer, Spring (4)		12-422-13	Shim, Camshaft, Black
17	24-016-01	Valve, Exhaust, Standard Size (2)		10 400 07	(As Required)
40	24-016-02	Valve, Exhaust, .25 Oversize (2)		12-422-07	Shim, Camshaft, White
18	24-017-01	Valve, Intake, Standard Size (2)		10 400 00	(As Required)
10	24-017-02	Valve, Intake, .25 Oversize (2)		12-422-08	Shim, Camshaft, Blue
19 20	24-032-05 24-326-13	Seal, Valve Stem (2)		12-422-11	(As Required) Shim, Camshaft, Green
21	12-351-02	Hose, Breather Lifter, Valve (4)		12*422~11	(As Required)
22	24-411-05	Rod, Push (4)		12-422-12	Shim, Camshaft, Grey
23	24-041-08	Gasket, Cylinder Head (2)		12-422-12	(As Required)
24	24-318-12	Head Assembly, #2 Cylinder	10	24-010-03	Camshaft
25	24-755-66	Kit, Valve Train (Includes	11	24-144-01	Shaft, Governor Cross
20	21100 00	Key Numbers 22, 27 thru 28)	12	M-0631005	Washer, Plain 6mm
27	25-186-01	Arm, Rocker (4)	13	12-032-01	Seal, Governor Cross Shaft
28	24-599-01	Pivot, Rocker Arm (4)	14	X-25-102	Washer, Plain 1/4
29	M-0640034	Screw M6 x 1.0 x 34 (4)	15	12-380-04	Pin, Hitch
30	24-755-74	Kit, Valve Cover, Plain	16	M-0545010	Screw, Hex, Flange
		(Includes Key Numbers 31 and 32)			M5 x 0.8 x 10 (2)
31	24-153-16	O-Ring	17	24-018-04	Retainer, Reed (2)
32	24-086-32	Screw, Shoulder (4)	18	24-402-05	Reed, Breather (2)
33	12-086-16	Screw M10 x 1.5 x 91 (8)	19	24-032-01	Seal, Oil, Front
34	24-445-01	Strap, Lifting	20	12-153-01	O-Ring, Lower Oil Fill Tube
35	24-755-57	Kit, Breather Separator	21	12-123-04	Tube, Oil Fill
		(Includes Key Numbers 36 thru 40)	22	24-126-19	Bracket, Oil Fill Tube
36	24-112-12	Spacer	23	M-0545016	Screw, Hex, Flange M5 x 0.8 x 16
37	24-126-44	Bracket, Breather Separator	24	12-153-02	O-Ring, upper Oil Fill Tube
38	25-313-02	Grommet, Rubber	25	24-038-04	Dipstick Assembly (Includes 26-27)
39	24-445-02	Strap, Breather Separator	26	25-755-13	Kit, Oll Fill Cap (Includes 27)
40	M-0545016	Screw, Hex, Flange	27	12-153-03	O-Ring, Dipstick
		M5 x 0.8 x 16 (2)	NOT	E: All componen 1 inch = 25.4	t dimensions given in U.S. inches mm

# TRACTOR - - MODEL NUMBER 917.258694 KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554



### TRACTOR - - MODEL NUMBER 917.258694

### KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554

#### **IGNITION/ELECTRICAL**

KEY NO.	PART NO.	DESCRIPTION
1	24-162-17	Screen, Grass
2	M-0403025	Screw, Hex, Flange
0	V 05 00	$M4 \times 0.7 \times 24 (4)$
3	X-25-92	Washer, Plain 3/16 (4)
	24-112-04 24-157-03	Spacer, Fan (4)
э 6	M-0639016	Fan Screw, Hex, Flange
0	W-005010	M6 x 1.0 x 16 (4)
7	12-112-01	Spacer, Fan (4)
8	24-025-04	Flywheel Assembly
9	X-42-15	Key
1Õ	25-403-03	Rectifier-Regulator
11	24-086-18	Screw, Phillips (2)
12	236602	Connector, Rectifier-Regulator,
		3 Contact
13	12-132-02	Spark Plug (2)
14		Clip, Cable
	12-468-03	Washer, Plain 3/8
16	12-086-14	Screw, Hex, Flange
17	54-7555-09	M10 x 1.5 x 46 Kit, 15 Amp Stator (Includes #24, #126,
17	54-7555-08	#71 Bracket)
18	M-0548025	Screw, Hex, Cap M5 x 0.8 x 25 (2)
	X-25-63	Washer, Plain 1/4 (2)
20	X-25-92	Washer, Plain 3/16 (2)
21	235173	Clip, Cable
	24-584-01	Module, Ignition (2)
23	M-0545020	Screw, Hex, Flange M5 x 0.8 x 20 (4)
NOT	ILLUSTRATED	()
	24-176-12	Harness, Wire
	25-518-28	Lead, Black (4", 18 Gauge, Insulated
		Grip Barrel Eyelets)
	24-113-18	Decal, Grass Screen
	24-126-71	Bracket, Stator Wire
	X-22-11	Washer, Lock 1/4"

#### **BLOWER HOUSING & BAFFLES**

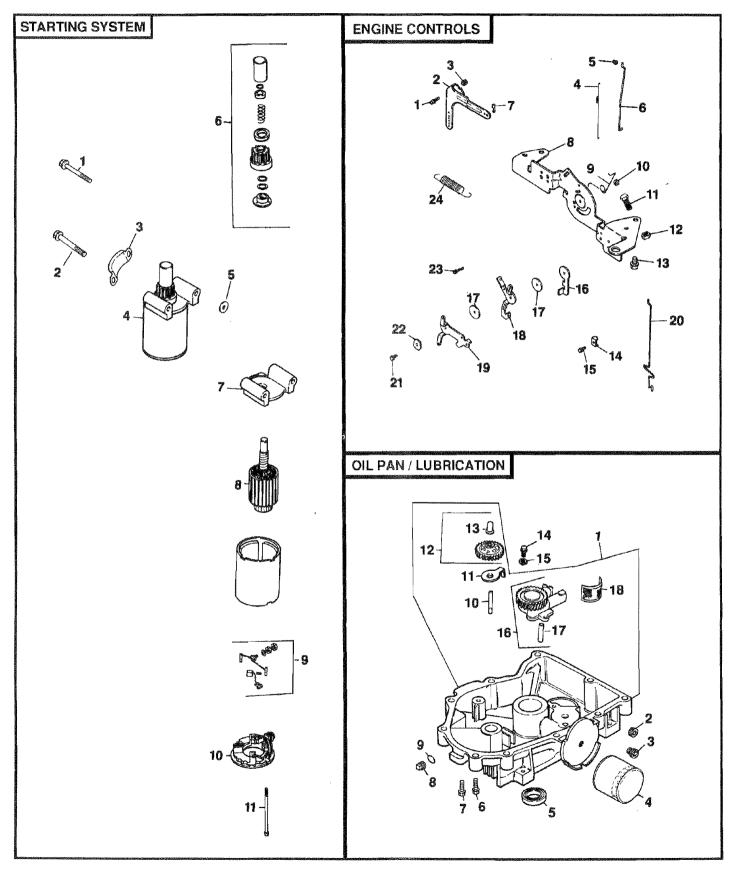
KEY NO.	PART NO.	DESCRIPTION
1 2	24-027-20 M-0545016	Housing, Blower Screw, Hex, Flange M5 x 0.8 x 16 (3)
3	SM-0645016	Screw, Hex, Flange M6 x 1.0 x 16 (4)
5	24-146-02	Plate, Backing, # 2 Side
6	M-0545020	Screw, Hex, Flange M5 x 0.8 x 20 (2)
7	M-0551016	Screw, Hex, Flange M5 x 0.8 x 14
8	24-063-20	Baffle, Cylinder Barrel, # 2 Side
9	24-063-14	Baffle, Valley, # 2 Side
10	M-0545010	Screw, Hex, Flange M5 x 0.8 x 10 (2)
11	24-063-23	Baffle, Valley, #1 Side
12		Screw, Hex, Flange
		M5 x 0.8 x 16 (2)
13	24-063-30	Baffle, Cylinder Barrel, # 1 Side
	M-0645016	Screw, Hex, Flange
		M6 x 1.0 x 16 (2)
15	24-146-08	Plate, Backing, # 1 Side
	24-112-12	Spacer
18	24-126-44	Bracket, Breather Separator
19	24-445-02	Strap, Breather
20	24-086-27	Screw (2)
NOT	ILLUSTRATED	
** **	24-100-01	Nut, Plastic (3)
	24-100-02	(Included with Blower Housing) Nut, Plastic (2) (Included with Blower Housing)
	25-139-16	Plug, Button 9/16
<b></b>	24-113-53	(Included with Blower Housing) Decal, HP

#### **AIR INTAKE**

KEY NO.	PART NO.	DESCRIPTION
2	54-755-01	Kit, Knob with Seal (Includes Key Numbers 3 and 4)
3	25-341-03	Knob, Cover
	24-153-15	Seal, Knob, Air Cleaner Cover
4 5 6	24-096-24	Cover, Air Cleaner
6	12-100-01	Wing Nut
	24-032-03	Seal, Air Intake
	24-096-01	Cover, Inner Air Cleaner
9	24-083-02	Element, Pre-Cleaner
10	47-083-03	Element, Air Cleaner
13	24-109-06	Cup, Fuel Spitback
•••	24-041-13	Gasket, Fuel Spitback Cup
	24-094-14	Base, Air Cleaner
	24-041-14	Gasket, Air Cleaner Base
	24-164-06	Manifold, Intake
	24-041-01	Gasket, Intake Manifold (2)
19	M-0651055	Screw M6 x 1.0 x 55 (4)

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

# TRACTOR - - MODEL NUMBER 917.258694 KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554



# TRACTOR - - MODEL NUMBER 917.258694

### KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554

#### STARTING SYSTEM

KEY NO.	PART NO.	DESCRIPTION
1	M-0839070	Screw, Hex, Flange M8 x 1.25 x 70
2	M-0839080	Screw, Hex, Flange M8 x 1.25 x 80
3	24-096-05	Cover, Pinion
4	25-098-05	Starter Assembly (Includes 6-11)
5	12-468-01	Washer, Plain 11/32 (3)
6	12-755-54	Kit, Drive End
7	12-227-06	Cap, Drive End
8	12-170-05	Armature
9	12-221-01	Kit, Brush and Spring
10	12-227-13	Cap, Commutator End
11	12-211-01	Bolt, Thru (2)

#### **OIL PAN/LUBRICATION**

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KEY NO.	PART NO.	DESCRIPTION
1	24-199-07	Oil Pan Assembly (Includes Key Numbers 10 thru 18)
2	X-75-32	Plug, Hex, Countersunk, 3/8 N.P.T.F.
3	24-136-01	Nipple, Oil Filter
3 4 5 6 7	12-050-01	Filter, Oil
5	52-032-08	Seal, Oil (PTO End)
6	24-086-17	Screw, Oil Pan M8 x 1.25 x 45
	24-086-16	Screw, Oil Pan M8 x 1.25 x 45 (9)
8	X-75-10	Plug, Śolid, Square Head, 3/8 N.P.T.F.
9	24-153-08	O-Ring
10	12-144-02	Shaft, Governor Gear
11	52-448-02	Tab, Locking
12	24-043-12	Kit, Governor Gear with Pin (Includes Key Number 13)
13	12-380-01	Pin, Governor Regulating
14	M-0645025	Screw M6 x 1.0 x 25 (2)
15	M-0631005	Washer, Plain (2)
16	24-393-08	Oil Pump Assembly (Includes 17)
17	24-123-05	Tube, Oil Pickup
18	24 -162-26	Screen, Oil

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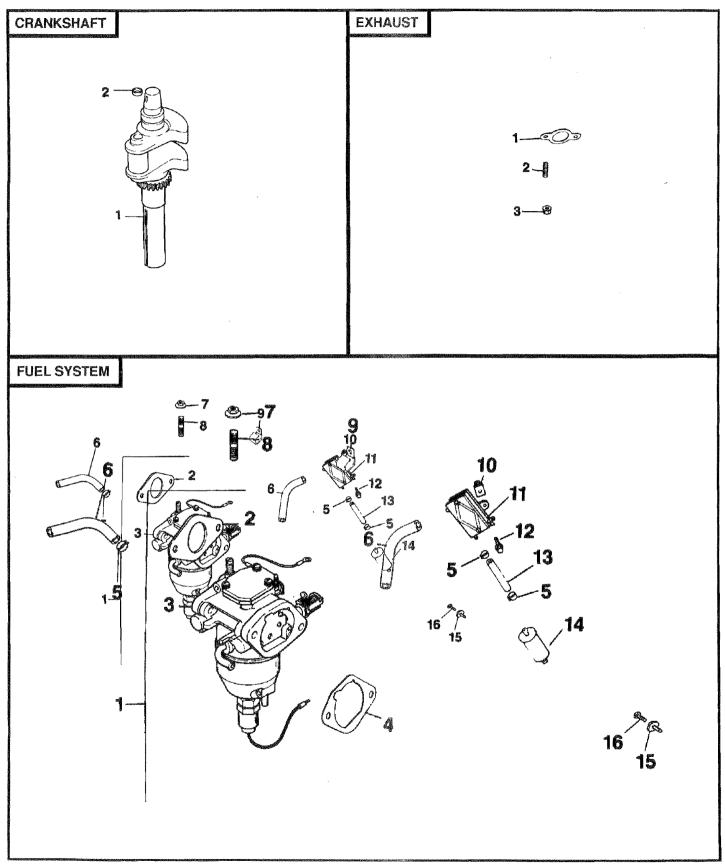
#### ENGINE CONTROLS

KEY NO.	PART NO.	DESCRIPTION
1	SM-0642025	Screw, Hex, Flange M6 x 1.0 x 25
2	24-090-14	Lever, Governor
3	M-0641060	Nut, Hex, Flange M6 x 1.0
4	24-089-01	Spring, Linkage
5	25-158-08	Bushing, Linkage Retaining
6	24-079-04	Linkage, Throttle
7	25-158-11	Bushing, Throttle Linkage
2345678	24-126-56	Bracket, Control
	24-089-03	Spring, Choke Return
10	M-0547050	Locknut, Hex M5 x 0.8
11	SM-0545016	Screw, Hex, Flange
		M5 x 0.8 x 16
12	M-0446030	Nut, Hex M4 x 0.7
13	SM-0645016	Screw, Hex, Flange
		M6 x 1.0 x 16 (4)
14	12-237-01	Clamp, Cable (2)
15	M-0545016	Screw, Hex, Flange
		M5 x 0.8 x 16 (2)
16	24-090-07	Lever, Throttle Actuator
17	24-468-01	Washer (3)
18	24-090-13	Lever, Throttle Control
19	24-090-05	Lever, Choke
20		Linkage, Choke
21	M-0545020	Screw, Hex, Flange
~~	44 400 00	M5 x 0.8 x 20
22 23	41-468-03	Washer, Spring 1/4
23	M-0403025	Screw, Hex, Cap
04	04 000 10	M4 x 0.7 x 25
	24-089-18 ILLUSTRATED	Spring, Governor
ION	24-089-38	Onving Throttle Limiter
	24-009-30	Spring, Throttle Limiter

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

### **TRACTOR - - MODEL NUMBER 917.258694**

KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554



### TRACTOR - - MODEL NUMBER 917.258694

### KOHLER ENGINE - MODEL NUMBER CV18S, TYPE NUMBER PS61554

#### FUEL SYSTEM

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KEY NO.	PART NO.	DESCRIPTION	Key No.	PAF NO.
1	24-853-41	Kit, Carburetor with Gasket (Includes Key Numbers 2 thru 4, 15 and 16)	1 2	24-( 52-1
2	24-041-15	Gasket, Carburetor	P# 5.48 1 /	* * * ****
3	24-053-25	Carburetor Assembly (For Information Only, Not Available Separately)	EXH	4031
		(Includes Kits Shown in Not Illustrated)	KEY	ΡΑΙ
4	24-041-14	Gasket, Air Cleaner Base	NO.	NO.
5	X-426-9	Clamp, Hose (6)		
6 7 8 9	24-353-03	Line, Fuel, 10-5/8" (2)	7	24-(
7	M-0641060	Nut M6 x 1.0 (2)	2 3	25-0
8	M-0629095	Stud M6 x 1.0 x 95 (2)	3	M-0
	47-154-01	Clip, Cable		
10	24-100-01	Nut, Plastic (2)		
		Pump, Fuel, Pulse	NOT	ILLU
		Screw, Hex Cap Head (2)		
13	24-353-03	Line, Fuel, 10-1/2"	KEY	PAF
	25-050-03	Filter, Fuel	NO.	NO.
15	24-126-29	Bracket, Throttle Stop		
16	M-0259006	Screw, Throttle Stop Bracket	er	24-5
NOT	ILLUSTRATED		100 RO	24-7
	52-353-20	Line, Fuel 10"		
	24-757-18	Kit, Överhaul with Gasket		
	24-757-19	Kit, Carb Repair with Gasket		RPN
	24-757-20	Kit, Gasket with Gaskets		
	<b>24-7</b> 57 <b>-</b> 22	Kit, Soleniod with Gaskets		

CRANKSHAFT

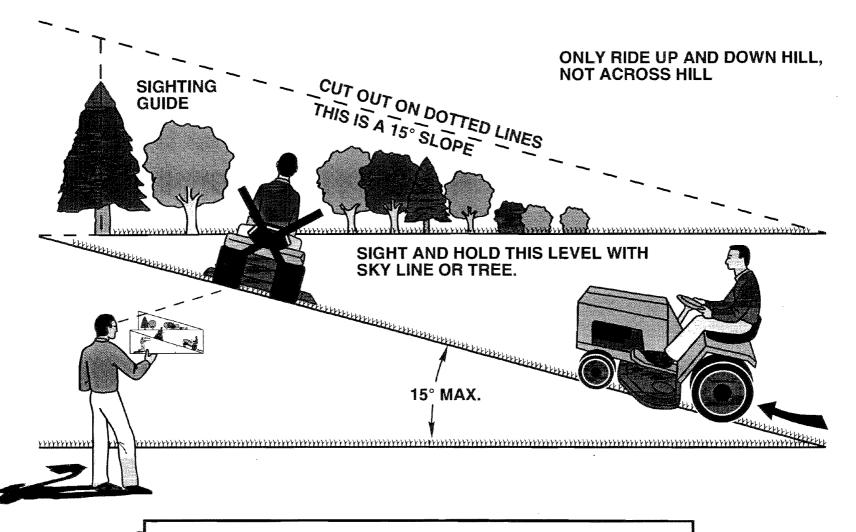
KEY NO.	PART NO.	DESCRIPTION	
1 2	24-014-42 52-139-09	Crankshaft Plug, Cup	
ЕХНА	<b>UST</b>		
KEY NO.	PART NO.	DESCRIPTION	
1 2 3	24-041-02 25-072-04 M-0841080	Gasket, Exhaust (2) Stud M8 x 1.25 x 33 (4) Nut, Hex, Flange M8 x 1.25 (4)	
NOT ILLUSTRATED			
KEY NO.	PART NO.	DESCRIPTION	
	24-522-62 24-755-03	Short Block Gasket Set	

RPM Settings: Low Speed: 1150-1650 High Speed: 3200-3400

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

# **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. 917.258694

### IF YOU NEED REPAIR SERVICE OR PARTS:

FOR REPAIR SERVICE, CALL THIS TOLL FREE NUMBER:

#### 1-800-4-REPAIR (1-800-473-7247)

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

1-800-FON-PART (1-800-366-7278)

FOR CONSUMER ASSISTANCE HOT LINE, CALL THIS TOLL FREE NUMBER: **1-800-659-5917** 

# **CRAFTSMAN**®

# 18.0 HP ELECTRIC START 46" MOWER AUTOMATIC (HYDROSTATIC) LAWN 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 917.258694
- ENGINE MODEL NO. CV18S TYPE NO. PS61554
- PART NUMBER
- PART DESCRIPTION

Your Sears merchandise has added value when you consider Sears has service units nationwide staffed with Sears trained technicians... professional technicians specifically trained to insure that we meet our pledge' to you, we service what we sell.

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