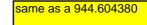
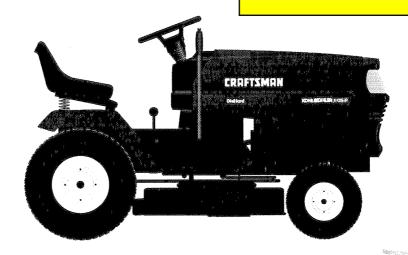
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# IRAFISMAN

MODEL NUMBER 917.257720 OWNER'S MANUAL

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





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



#### **SAFETY RULES**

#### Safe Operation Practices for Ride-On Mowers



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

#### I. GENERAL OPERATION

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

#### II. SLOPE OPERATION

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

#### DO:

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

#### DO NOT:

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

#### III. CHILDREN

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

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

#### IV. SERVICE

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



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



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

**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, well-trained technicians and the proper tools to service or repair this unit.

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

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#### MAINTENANCE AGREEMENT

FOR FUTURE REFERENCE.

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 unit.
- Follow the instructions under "Customer Responsibilities" and "Storage" sections of this owner's manual.

#### PRODUCT SPECIFICATIONS

FIIODOVI SELVI	
HORSEPOWER:	18.0
GASOLINE CAPACITY AND TYPE:	3.5 GALLONS UNLEADED REGULAR
OIL TYPE (API-SG):	SAE 30 (above 32°F) SAE 5W-30 (below 32°F)
OIL CAPACITY:	W/FILTER: 4.0 PINTS W/O FILTER: 3.5 PINTS
SPARK PLUG: (GAP: .025")	CHAMPION RV17YC
VALVE CLEARANCE:	INTAKE: .003"006" EXHAUST: .016"019"
GROUND SPEED (MPH):	Forward LO HI 1st 0.8 1.8 2nd 1.4 3.4 3rd 2.4 5.6 Reverse 0.9 2.2
TRANSAXLE OIL CAPACITY AND TYPE:	4 QUARTS SAE 30 API-SG
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	15 AMPS @ 3600 RPM
BLADE BOLT TORQUE:	30-35 FT. LBS.

**WARNING:** This unit 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 ELECTRIC START RIDING EQUIPMENT

For two (2) years from the date of purchase, if this 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 and belts.
- 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.

WARRANTY SERVICE IS AVAILABLE BY RETURNING THE RIDING EQUIPMENT TO THE NEAREST SEARS SERVICE CENTER/DEPARTMENT 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, ILLINOIS 60179

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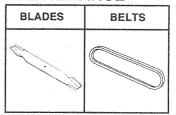
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# **ACCESSORIES AND ATTACHMENTS**

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.

# SPARK PLUG GAS CAN ENGINE OIL FUEL STABILIZER

#### MAINTENANCE



#### **PERFORMANCE**

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

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

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

BUMPER protects front end of tractor from damage.

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

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

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

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

EASY OIL DRAIN VALVE makes oil changes easier, faster.

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

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

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

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

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

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

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

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

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

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

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

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

SWEEPERS let you collect grass clippings and leaves.

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

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

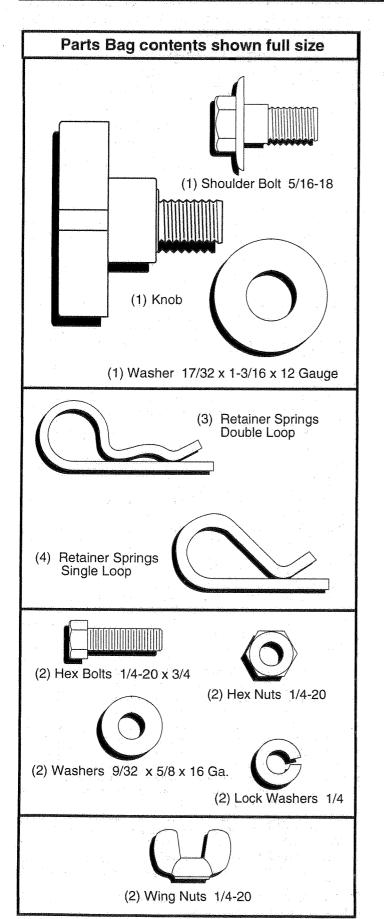
**TRACTOR CAB** has heavy duty vinyl fabric over tubular steel frame, ABS plastic top; clear plastic windshield offers 360 degree visibility. Hinged metal doors with catch. Keeps operator warm and dry. Remove vinyl sides and windshields for use as sun protector in summer. **Optional accessories include:**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

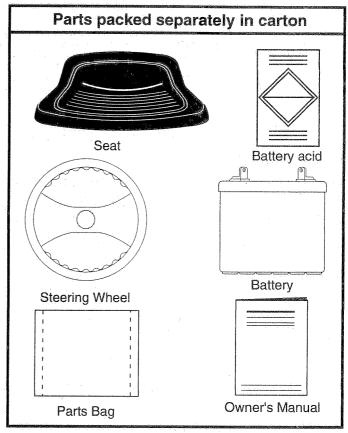
VACS for powerful collection of heavy grass clippings and leaves. Optional wand attachment to pick up debris in hard-to-reach places. VAC/CHIPPER includes a chipper-shredder.

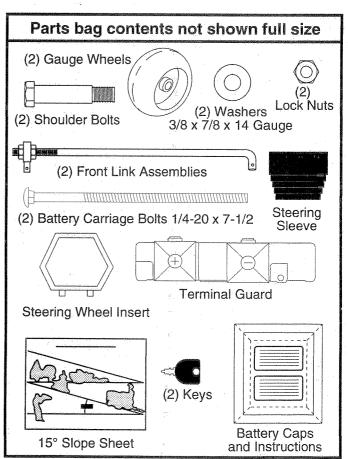
**WEIGHT BRACKET** for drawbar for snow removal applications. Can be mounted on front of tractor for plowing applications. Uses (1) 55 lb. weight.

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

# **CONTENTS OF HARDWARE PACK**







Your new tractor has been assembled at the factory with the 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

Tire pressure gauge

(1) 1/2" wrench

Utility knife

- (1) 9/16" wrench
- (1) 3/4" socket with drive ratchet

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

### TO REMOVE TRACTOR FROM CARTON

#### **UNPACK CARTON**

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

#### **BEFORE ROLLING TRACTOR OFF SKID**

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

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

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

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

- Raise attachment lift lever to its highest position.
- Release parking brake by depressing clutch/brake pedal.
- Place gearshift lever in neutral (N) position.
- Roll tractor backwards off skid.

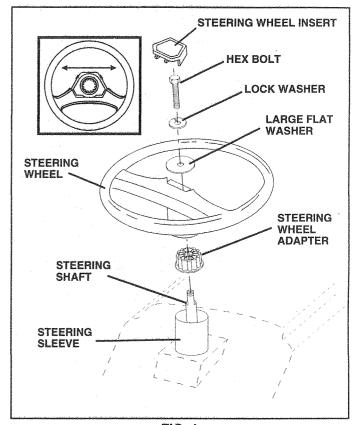


FIG. 1

#### **HOW TO SET UP YOUR TRACTOR**

#### PREPARE BATTERY (See Fig. 2)

CAUTION: Wear eye and face shield.



Wash hands or clothing immediately if accidentally in contact with battery acid.

Do not smoke. Fumes from charged battery acid are explosive.

Read the instructions included with the battery vent caps. Always wear gloves, clothing and goggles to protect your hands, skin and eyes.

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.

- See instructions packed with vent caps in parts bag.
- Fill battery with acid. Fill each cell until it reaches the bottom of the vent wells. Do not overfill.
- Allow battery to stand and settle for at least thirty minutes. After standing, check the battery cell acid level. If below the vent wells, add more acid until the correct level is reached.

While battery is standing (after adding acid) and later, while battery is being charged, continue with assembly of unit.

**IMPORTANT:** TO MAXIMIZE THE LIFE OF YOUR BATTERY, IT IS NECESSARY THAT THE BATTERY BE CHARGED BEFORE USE. FAILURE TO CHARGE BATTERY CAN RESULT IN A SHORTENED BATTERY LIFE.

- Charge battery at a rate of 6 amperes for 1 hour. Use a 12 volt battery charger. Observe all safety precautions required for battery charging.
- Check the acid level after the battery is charged. If the acid has fallen below the correct level, add distilled or iron free water.
- Install the vent caps to cover the vent wells. Wash the top of the battery with water to remove any acid, then wipe dry.
- Check battery case for leakage to make sure that no damage has occurred in handling.
- Dispose of excess battery acid. Neutralize acid for disposal by adding it to two gallons of water in a five gallon plastic container. Stir with a wooden or plastic paddle while adding baking soda until the addition of more soda causes no more foaming.
- Follow instructions on how to install battery.

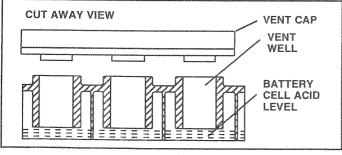


FIG. 2

#### **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.

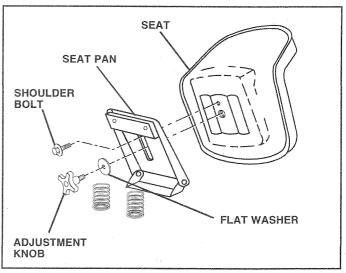


FIG. 3

#### **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. Engage parking brake.

- Cut and remove tie down securing anti-sway bar.
   Swing anti-sway bar to left side of mower deck.
- Relieve idler tension from belt. Push idler forward and place a block (standard wood 2 x 4 or equivalent) behind idler pulley.
- Slide mower under tractor with discharge guard to right side of tractor.
- Swing L.H. gauge wheel bar forward by removing rear retainer spring and pin.
- Install one front link in top hole of the L.H. front mower bracket and L.H. front suspension bracket. Retain with two single loop retainer springs as shown.
- Slide right side of mower deck forward, toward R.H. front tire.

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

- Install second front link in the top hole of the R.H. front mower bracket and R.H. front suspension bracket. Retain with two single loop retainer springs as shown.
- Carefully remove block from behind idler pulley.
- Turn height adjustment knob counterclockwise until it stops.
- Lower mower linkage with attachment lift lever.

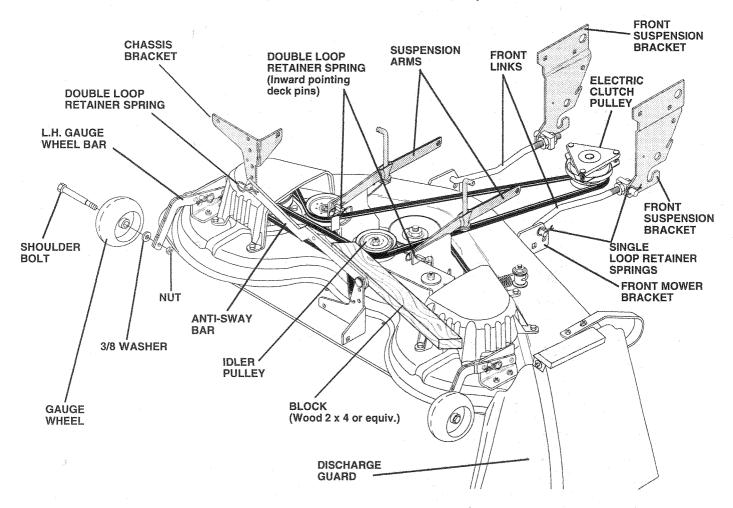
- Place the suspension arms on inward pointing deck pins. If necessary, rock and raise front of mower to align deck pins with the holes in suspension arms. Retain with double loop retainer springs.
- Connect anti-sway bar to chassis bracket under left footrest and retain with double loop retainer spring.
- Turn height adjustment knob clockwise to remove slack from mower suspension.
- Raise deck to highest position.
- Swing L.H. gauge wheel bar back towards rear of mower and secure with pin and retainer spring removed earlier.
- Assemble gauge wheels as shown using long shoulder bolts, 3/8 washers and nuts. Tighten securely.
- Adjust gauge wheels before operating mower as shown in the Operation section of this manual.

#### **CHECK DECK LEVELNESS**

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

# CHECK FOR PROPER POSITION OF ALL BELTS

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



#### **INSTALL BATTERY (See Figs. 5 and 6)**



CAUTION: Do not short battery terminals. Before installing 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.
- Be sure battery drain tube has not come loose and is securely attached to drain in battery tray.
- Lower battery into battery tray with terminals to front of tractor.
- 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.
- Slide the two battery bolts through the terminal guard and start the wing nuts onto the threads.
- Position terminal guard over battery as shown, lower battery bolts into key holes and slide square shafts of battery bolts into slots of key holes.
- Tighten wing nuts by hand making sure battery bolts remain in slots of the key holes in the battery support.
- Be sure terminal access doors are closed.

Use terminal access doors for:

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

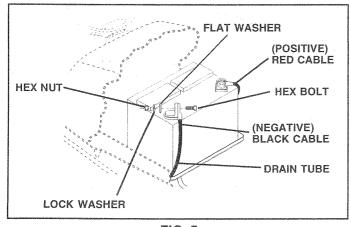


FIG. 5

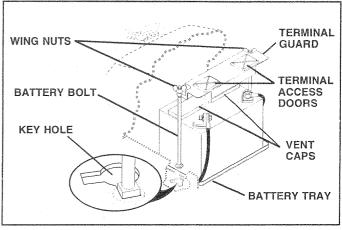


FIG. 6

#### ✓ CHECKLIST

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

PLEASE REVIEW THE FOLLOWING CHECKLIST:

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

WHILE LEARNING HOW TO USE YOUR TRACTOR, PAYEXTRA 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.

#### **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 locations of various controls and adjustments. Save this manual for future reference.

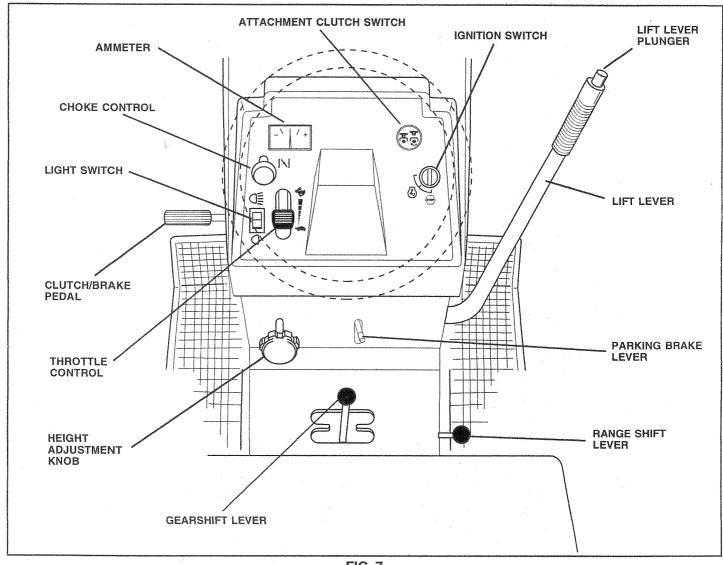


FIG. 7

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

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

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

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

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

**GEARSHIFT LEVER -** Selects the speed and direction of tractor.

THROTTLE CONTROL - Used to control engine speed.

**RANGE SHIFT LEVER** - Allows high (H) or low (L) speed for all forward and reverse gears.

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

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

LIGHT SWITCH - Turns the headlights on and off.

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

**CHOKE CONTROL** - Used when starting a cold engine. **HEIGHT ADJUSTMENT KNOB** - Used to adjust the mower height.



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 for over the spectacles or standard safety glasses.

#### HOW TO USE YOUR TRACTOR

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

- 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 vehicle secure.

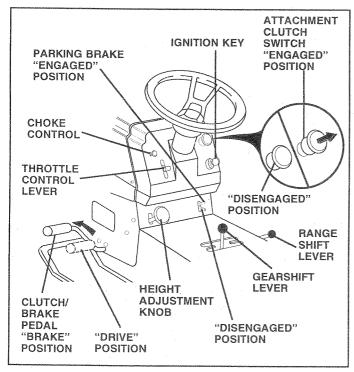


FIG. 8

#### STOPPING (See Fig. 8)

MOWER BLADES -

 Move attachment clutch switch to "DISENGAGED" position.

#### GROUND DRIVE -

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

- Start tractor with clutch/brake pedal depressed and gearshift lever in neutral (N) position.
- Move gearshift and range shift levers to desired position.
- Slowly release clutch/brake pedal to start movement.
   IMPORTANT: BRING TRACTOR TO A COMPLETE STOP BEFORE SHIFTING OR CHANGING GEARS. FAILURE TO DO SO WILL SHORTEN THE USEFUL LIFE OF YOUR TRANSAXLE.

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

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

- Turn knob clockwise ( ) to raise cutting height.

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

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

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

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

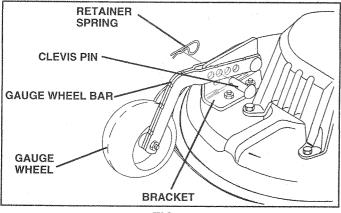


FIG. 9

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

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

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



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

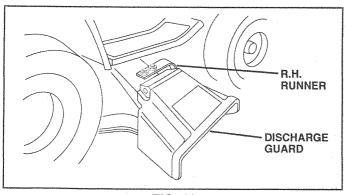


FIG. 10

#### TO OPERATE ON HILLS



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

- Choose the slowest speed before starting up or down hills.
- · Avoid stopping or changing speed on hills.
- If slowing is necessary, move throttle control lever to slower position.
- If stopping is absolutely necessary, push clutch/brake pedal quickly to brake position and engage parking brake.
- Move gearshift lever to 1st gear and range shift lever to low (L) position. Be sure you have allowed room for unit to roll slightly as you restart movement.
- To restart movement, slowly release parking brake and clutch/brake pedal.
- Make all turns slowly.

#### TO TRANSPORT

- Raise attachment lift to highest position with attachment lift control.
- When pushing or towing your tractor, be sure gearshift lever is in neutral (N) position.
- Do not push or tow tractor at more than five (5) MPH. **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.).

#### **BEFORE STARTING THE ENGINE**

#### **CHECK ENGINE OIL LEVEL (See Fig. 11)**

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

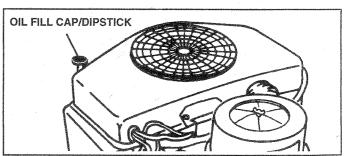


FIG. 11

#### **ADD GASOLINE**

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

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

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



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

#### TO START ENGINE (See Fig. 8)

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

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

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

#### **MOWING TIPS**

- Tire chains cannot be used when the mower housing is attached to unit.
- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- Use the runner on the right hand side of mower as a guide. The blade cuts approximately an inch outside the runner (See Fig. 10).
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has been cut. Have the cut area to the right of the 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.

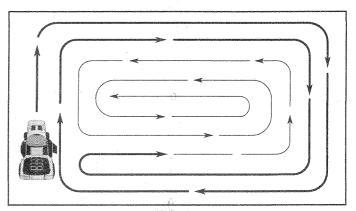


FIG. 12

FIL AS	AINTENANCE SCHEDULE L IN DATES YOU COMPLETE GULAR SERVICE		JEFORE	EACH!	JSE HOURS HOURS	HOUR!	5 HOUP 25 HOUP EVERY 5	S HOUS O HOUS VERY	AS HOUS	EASON EASON	SEF	RVICI	E DA	TES
	Check Brake Operation	V		V									HISTORY CONTRACTOR	
	Check Tire Pressure	V		3/										
I	Check for Loose Fasteners	1							W					
R	Sharpen/Replace Mower Blades				4									
IĈ.	Lubrication Chart				V				B. Carrie					
Ť	Check Battery Level/Recharge				V									
0	Clean Battery and Terminals				<b>W</b>				•					
R	Check Transaxle Cooling				Barre									
	Adjust Blade Belt(s) Tension						<b>1</b> 5							
	Adjust Motion Drive Belt(s) Tension						5							
	Check Engine Oil Level	V		8										
	Change Engine Oil				1,2,3									
E	Clean Air Filter				2									
N	Clean Air Screen				<b>2</b> 2									
G	Inspect Muffler/Spark Arrester					8								
	Replace Oil Filter (If equipped)						1,2							
N E	Clean Engine Cooling Fins						2							
	Replace Spark Plug						V	8						
	Replace Air Filter Paper Cartridge						<b>1</b> /2			NACCOLOGICAL DE LA COLOGICA DEL COLOGICA DEL COLOGICA DE LA COLOGI				
	Replace Fuel Filter					200000000000000000000000000000000000000		B. Alle						

- 1 Change more often when operating under a heavy load or in high ambient temperatures.
- 2 Service more often when operating in dirty or dusty conditions.

- 3 If equipped with oil filter, change oil every 50 hours.
- 4 Replace blades more often when mowing in sandy soil.
- 5 If equipped with adjustable system.

#### **GENERAL RECOMMENDATIONS**

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

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

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

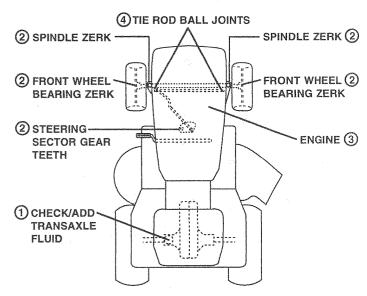
 Once a year you should replace the spark plug, clean or replace air filter, and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

#### **BEFORE EACH USE**

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

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

#### **LUBRICATION CHART**



- (1) SAE 30 MOTOR OIL API SG
- (2) GENERAL PURPOSE GREASE
- (3) REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION
- (4) SPRAY SILICONE LUBRICANT (MOVE BOOTS TO LUBRICATE)

#### TRACTOR

Always observe safety rules when performing any maintenance.

#### **BRAKE OPERATION**

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

#### **TIRES**

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

#### **BLADE CARE**

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

#### **BLADE REMOVAL (See Fig. 13)**

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

IMPORTANT: BLADEBOLT IS GRADE 8 HEAT TREATED.

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

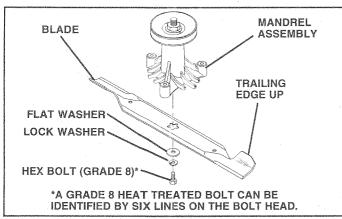


FIG. 13

#### TO SHARPEN BLADE (See Fig. 14)

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

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

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

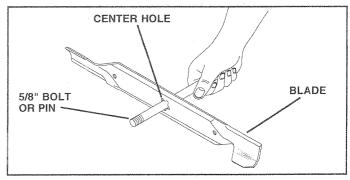


FIG. 14

#### V-BELTS

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

#### TRANSAXLE COOLING

Keep transaxle free from build-up of dirt and chaff which can restrict cooling.

# CHECK TRANSAXLE OIL LEVEL (See Fig. 15)

- Block up rear axle securely or use a tractor jack.
- Remove left rear wheel by removing hub bolts.
- Remove filler plug from transaxle. Oil level must be even with plug threads. If necessary, fill with SAE 30 motor oil, API-SG. Replace filler plug.
- Reassemble wheel to hub.
- For approximate capacity see "PRODUCT SPECIFI-CATIONS" on page 3 of this manual.

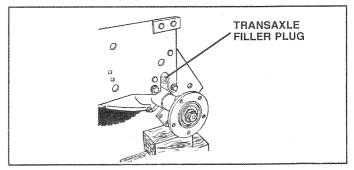


FIG. 15

#### **BATTERY (See Fig. 16)**

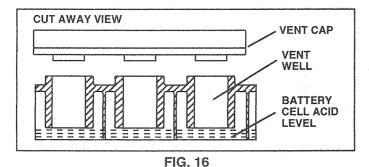
Your unit has a battery charging system which is sufficient for normal use. However, periodic charging of the battery with an automotive charger will extend its life.

- Acid solution level in each battery cell should be even with bottoms of vent wells. Add only distilled or iron free water if necessary. Do not overfill.
- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep vent caps tight and small vent holes in caps open.
- Recharge at 6 amperes for 1 hour.

#### TO CLEAN BATTERY AND TERMINALS -

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

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



**ENGINE** 

#### LUBRICATION

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

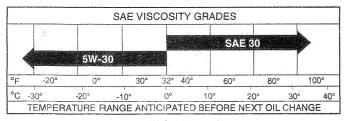


FIG. 17

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

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

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

#### TO CHANGE ENGINE OIL (See Figs. 17 and 18)

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

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

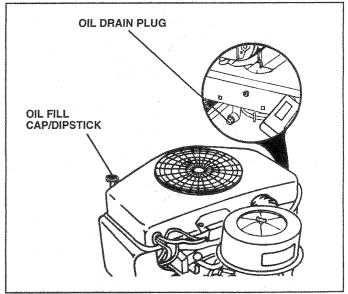


FIG. 18

#### **CLEAN AIR SCREEN (See Fig. 19)**

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

#### **ENGINE COOLING FINS (See Fig. 19)**

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

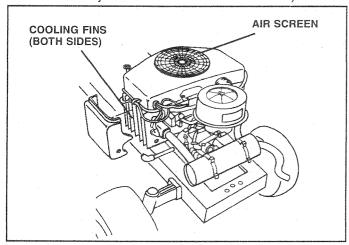


FIG. 19

#### AIR FILTER (See Fig. 20)

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

Service air cleaner more often under dusty conditions.

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

#### TO SERVICE PRE-CLEANER

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

#### TO SERVICE CARTRIDGE

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

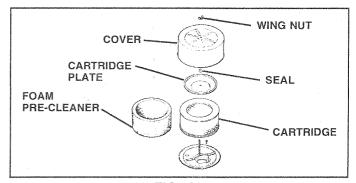


FIG. 20

#### **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 comes 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. 21)

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.

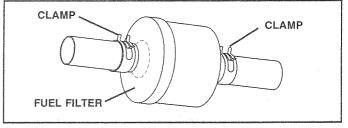


FIG. 21

#### **CLEANING**

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

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

#### **CAUTION: BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:**



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

#### TRACTOR

#### TO REMOVE MOWER (See Fig. 22)

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

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

#### TO INSTALL MOWER

Follow procedure described in "INSTALL MOWER AND

#### TO LEVEL MOWER HOUSING

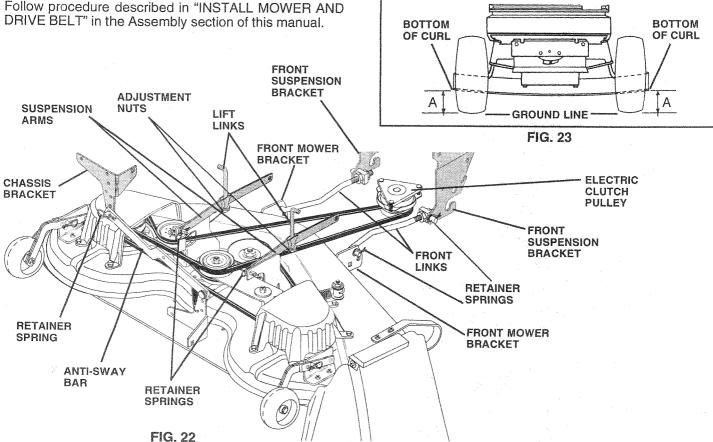
Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PRODUCT SPECIFICATIONS" on page 3 of this manual). If tires are over or underinflated, you will not properly adjust

SIDE-TO-SIDE ADJUSTMENT (See Figs. 22 and 23)

- Raise mower to its highest position.
- Measure height from bottom of deck curl to ground level at front corners of mower. Distance "A" should be the same.
- If distance "A" needs to be changed, make adjustment on one side of mower only.
- Raise one side of mower by tightening lift link adjustment nut on that side.
- Lower one side of mower by loosening lift link adjustment nut on that side.

NOTE: Each half turn of adjustment nut will change deck level about 1/4".

Recheck level after adjusting.



19

FRONT-TO-BACK ADJUSTMENT (See Figs. 24 and 25)-IMPORTANT: DECK MUST BE LEVEL SIDE-TO-SIDE. IF THE FOLLOWING FRONT-TO-BACK ADJUSTMENT IS NECESSARY, BE SURE TO ADJUST BOTH FRONT LINKS EQUALLY SO MOWER WILL STAY LEVEL SIDE-TO-SIDE. To obtain the best cutting results, the mower housing should be adjusted so the front is approximately 1/8" to 1/2" lower than the rear when the mower is in its highest position.

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

 Before making any necessary adjustments, check that both front links are equal in length.

 If links are not equal in length, adjust one link to same length as other link.

 To lower front of mower housing, loosen nut "G" on both front links an equal number of turns.

• When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.

 To raise front of mower housing, loosen nut "H" from trunnion on both front links. Tighten nut "G" on both front links an equal number of turns.

When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.

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

Recheck side-to-side adjustment.

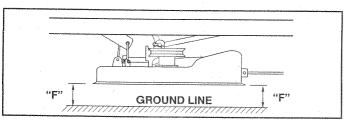


FIG. 24

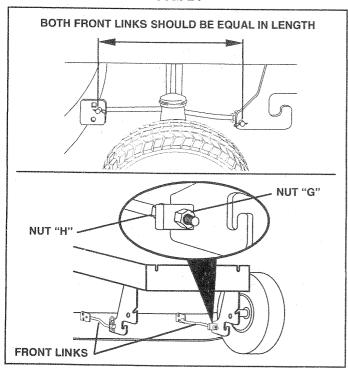


FIG. 25

#### TO REPLACE MOWER DRIVE BELT

MOWER DRIVE BELT REMOVAL (See Fig. 26) -

- 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. 26) -

- 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.

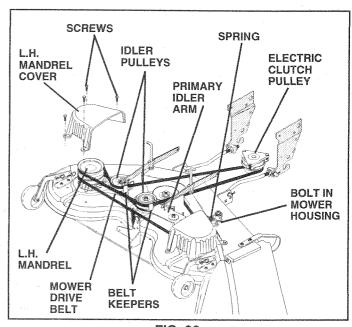


FIG. 26

# TO REPLACE MOWER BLADE DRIVE BELT (See Fig. 27)

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 "TO INSTALL MOWER" in the Assembly section of this manual).
- Reassemble mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).

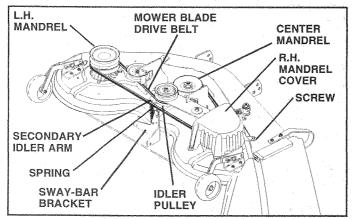


FIG. 27

# TO ADJUST ATTACHMENT CLUTCH (See Fig. 28)

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 inside 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.

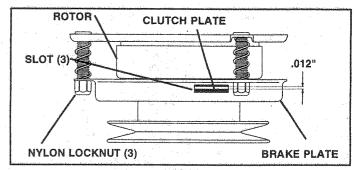


FIG. 28

#### TO ADJUST BRAKE (See Fig. 29)

Your tractor is equipped with an adjustable brake system which is mounted on the left 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.

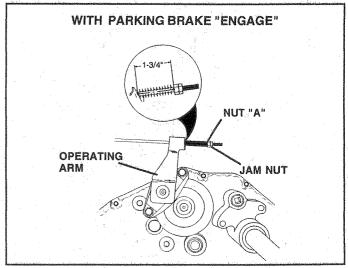


FIG. 29

# TO REPLACE MOTION DRIVE BELT (See Fig. 30)

Park the tractor on level surface. Engage parking brake. For ease of service there is a belt installation guide decal on bottom of left footrest. It is not necessary to remove mower.

#### **BELT REMOVAL -**

- Raise hood and disconnect BLACK (grounding) battery cable.
- Set parking brake (to get belt slack).
- Remove mower drive belt from electric clutch pulley only (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).
- Roll motion drive belt off transaxle pulley.
- Roll belt off clutching idler pulleys, then off engine pulley and front V-idler pulley.
- Pull belt out of all belt keepers.

#### **BELT INSTALLATION -**

- Place V part of belt into grooves on engine pulley and front V-idler, making sure to route belt inside of belt keepers.
- Put belt coming from V-idler above midspan belt keeper, then onto clutching idler pulleys as shown.
- Make sure "V" part of belt engages "V" idler.
- Place belt around transaxle pulley, beginning at top.
   "V" part of belt should engage transaxle pulley.
- Place long lower section of belt through loop in midspan belt keeper.
- Check to be sure belt is on proper side of all belt keepers.
- Reinstall mower drive belt onto electric clutch pulley.
- Release parking brake.

#### IMPORTANT: CHECK BRAKE ADJUSTMENT.

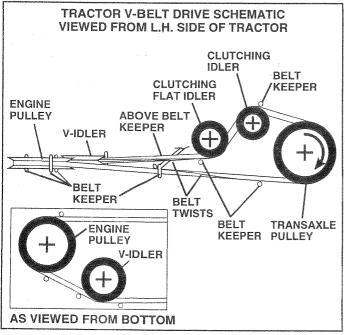


FIG. 30

#### TO ADJUST STEERING WHEEL ALIGNMENT

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

#### FRONT WHEEL TOE-IN ADJUSTMENT

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

#### TO CHECK TOE-IN (See Fig. 31) -

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

#### TO ADJUST TOE-IN (See Figs. 31 and 32) -

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

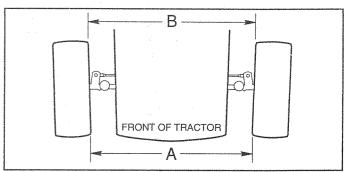


FIG. 31

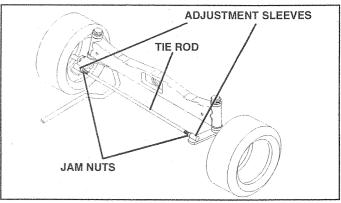


FIG. 32

#### FRONT WHEEL CAMBER

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

#### TO REMOVE WHEEL FOR REPAIRS

FRONT WHEEL (See Fig. 33) -

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

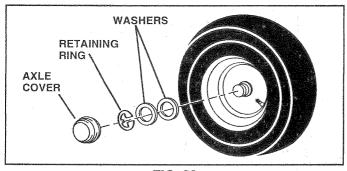


FIG. 33

#### **REAR WHEEL-**

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

# TO START ENGINE WITH A WEAK BATTERY (See Figs. 34 and 35)



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 a panel bolt on the left side of the tractor, away from fuel tank and battery.

#### TO REMOVE CABLES, REVERSE ORDER 6

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

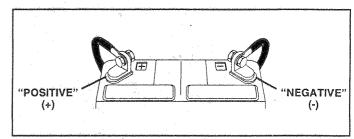


FIG. 34

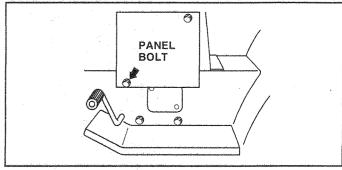


FIG. 35

#### TO REPLACE HEADLIGHT BULB

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

#### INTERLOCKS AND RELAYS

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

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

#### TO REPLACE FUSE

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

# TO ADJUST ATTACHMENT LIFT SPRING (See Fig. 36)

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

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

# TO REMOVE HOOD AND GRILL ASSEMBLY (See Fig. 37)

- 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.

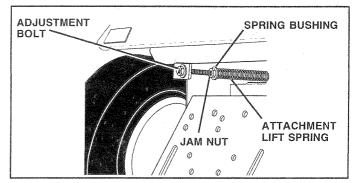


FIG. 36

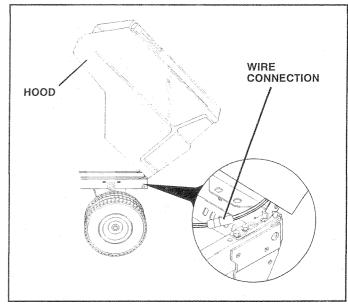


FIG. 37

#### **ENGINE**

# TO ADJUST THROTTLE CONTROL CABLE (See Fig. 38 & 39)

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

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

#### TO ADJUST CARBURETOR (See Fig. 40)

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 not need adjustment, proceed as follows:

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

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

#### PRELIMINARY SETTING -

- Be sure you have a clean air filter, and the throttle control cable is adjusted properly (see above).
- With engine off turn idle fuel adjusting needle in (clockwise) closing it finger tight and then turn **out** (counterclockwise) 1-1/4 turns.
- Turn main fuel adjusting needle in (clockwise) closing finger tight and then turn out (counterclockwise) 1 turn.

#### FINAL SETTING -

- Start engine and allow to warm for five minutes. Make final adjustments with engine running and shift/motion control lever in neutral (N) position.
- With throttle control lever in fast ( ) position, turn main fuel adjusting needle in (clockwise) until engine begins to die then turn out (counterclockwise) until engine runs rough. Turn needle to a point midway between those two positions.
- Idle speed setting With throttle control lever in slow
   (
   ) position, engine should idle at 1400 RPM. If
   engine idles too slow or fast, turn idle speed adjusting
   screw in or out until correct idle is attained.
- Idle fuel needle setting With throttle control lever in slow ( ) position, turn idle fuel adjusting needle in (clockwise) until engine begins to die and then turn out (counterclockwise) until engine runs rough. Turn needle to a point midway between those two positions.
- Recheck idle speed. Readjust if necessary.

#### **ACCELERATION TEST-**

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

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

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

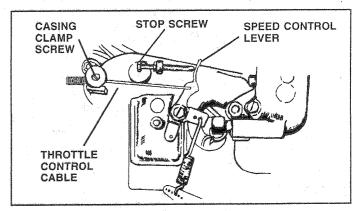


FIG. 38

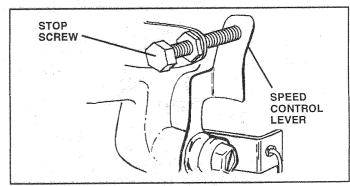


FIG. 39

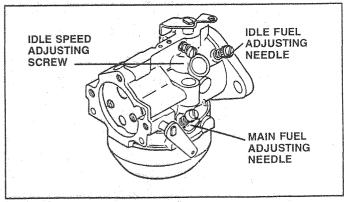


FIG. 40

## 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.

# SERVICE NOTES

# TROUBLESHOOTING POINTS

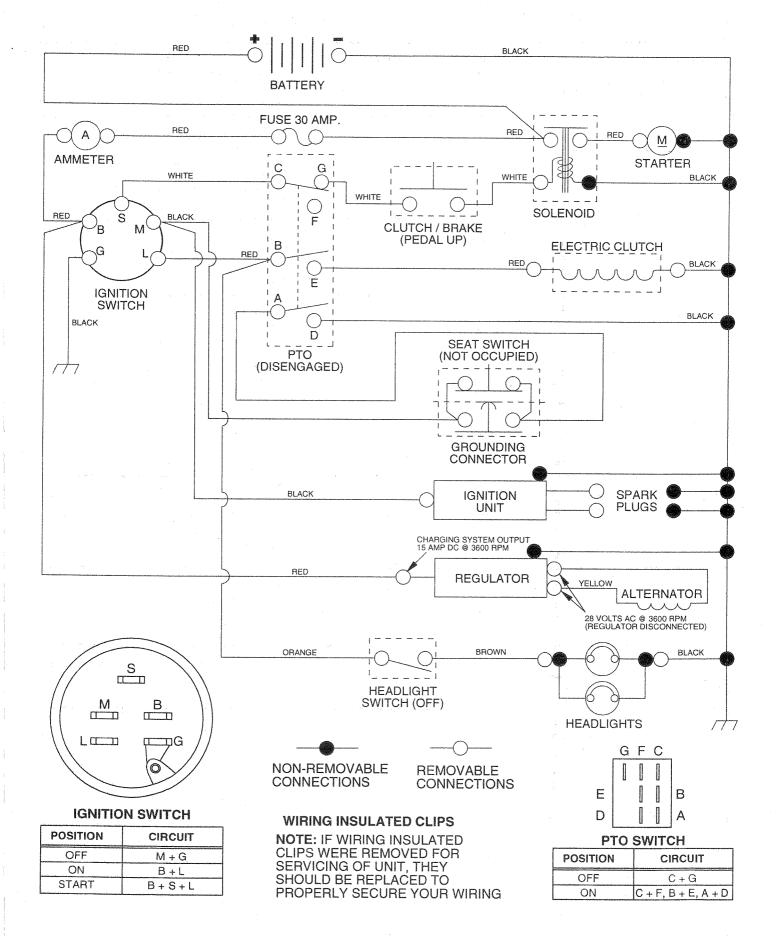
PROBLEM	CAUSE	CORRECTION
Will not start	<ol> <li>Out of fuel.</li> <li>Engine not "CHOKED" properly.</li> <li>Engine flooded.</li> <li>Bad spark plug.</li> <li>Dirty air filter.</li> <li>Dirty fuel filter.</li> <li>Water in fuel.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</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>Contact an authorized service center/department.</li> <li>Contact an authorized service center/department.</li> </ol>
Hard to start	<ol> <li>Dirty air filter.</li> <li>Bad spark plug.</li> <li>Weak or dead battery.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>Engine valves out of adjustment.</li> </ol>	<ol> <li>Clean/replace air filter.</li> <li>Replace spark plug.</li> <li>Recharge or replace battery.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and refill with fresh gasoline.</li> <li>Check all wiring.</li> <li>Contact an authorized service center/department.</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	Weak or dead battery.    Corroded battery terminals.    Loose or damaged wiring.    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>
oss of power	1. Cutting too much grass/too fast. 2. Throttle in "CHOKE" position. 3. Build-up of grass, leaves and trash under mower. 4. Dirty air filter. 5. Low oil level/dirty oil. 6. Faulty spark plug. 7. Dirty fuel filter. 8. Stale or dirty fuel. 9. Water in fuel.  10. Spark plug wire loose. 11. Dirty engine air screen/fins. 12. Dirty/clogged muffler. 13. Loose or damaged wiring. 14. Carburetor out of adjustment. 15. Engine valves out of adjustment.	<ol> <li>Set in "Higher Cut" position/reduce speed.</li> <li>Adjust throttle control.</li> <li>Clean underside of mower housing.</li> <li>Clean/replace air filter.</li> <li>Check oil level/change oil.</li> <li>Clean and regap or change spark plug.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and refill with fresh gasoline.</li> <li>Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>Connect and tighten spark plug wire.</li> <li>Clean engine air screen/fins.</li> <li>Clean/replace muffler.</li> <li>Check all wiring.</li> <li>Contact an authorized service center/department.</li> <li>Contact an authorized service center/department.</li> </ol>
xcessive vibration	<ol> <li>Worn, bent or loose blade.</li> <li>Bent blade mandrel.</li> <li>Loose/damaged part(s).</li> </ol>	Replace blade. Tighten blade bolt.     Replace blade mandrel.     Tighten loose part(s). Replace damaged parts.

# TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
Engine continues to run when operator leaves seat with attachment clutch engaged	Faulty operator-safety presence control system.	Check wiring, switches and connections. If not corrected, contact an authorized service center/department.
Poor cut - uneven	<ol> <li>Worn, bent or loose blade.</li> <li>Mower deck not level.</li> <li>Buildup of grass, leaves, and trash under mower.</li> <li>Bent blade mandrel.</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	<ol> <li>Replace blade. Tighten blade bolt.</li> <li>Level mower deck.</li> <li>Clean underside of mower housing.</li> <li>Replace blade mandrel.</li> <li>Clean around mandrels to open vent holes.</li> </ol>
Mower blades will not rotate	<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>Reinstall blades sharp edge down.</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>
Engine "backfires" when turning engine "OFF"	Engine throttle control not set at "SLOW"     position for 30 seconds before stopping engine.	Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.
enember de comprehense de contractiva contractiva con tractiva de la material de contractiva com es el contractiva		

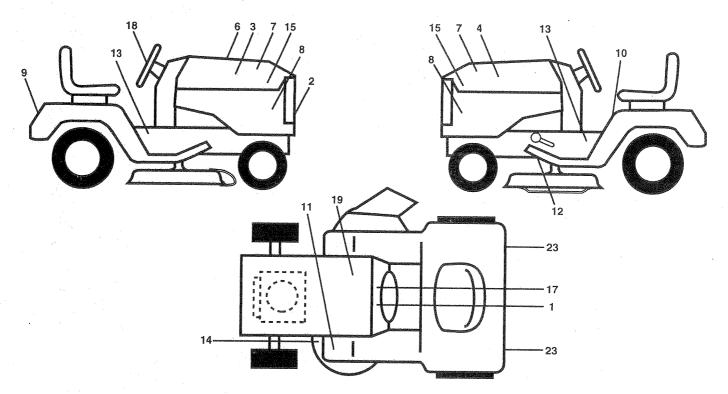
## 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### SCHEMATIC



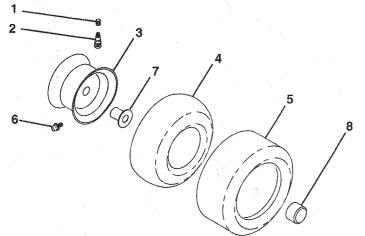
# 18 HP 44" TRACTOR - - MODEL NUMBER 917.257720

#### **DECALS**



	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 2 3 4 6 7 8 9 10 11 12	138955 142254 138042 138043 133644 138048 142243 128314 137537 4900J 138435	Decal, Operating Instruction Decal, Grill GT 6000 USA Black Decal, Hood, Craftsman, RH Decal, Hood, Craftsman, LH Decal, Maintenance Decal, Side Panel Decal, Side Panel Decal, Fender, Craftsman Decal, Caution Decal, Clutch/Brake Decal, V-Belt Drive Schematic	13 14 15 17 18 19 23	105567X 139346 142242 138834 132266 138047 106202X 138311 140330 140331	Decal, Chassis, 6 Speed/44" Decal, V-Belt Schematic Decal Hood Insert Hd GT Decal, Dash Decal, Insert Strg Decal, Battery Reflector, Taillight Decal, Handle Lft Height Adjust (Lift Handle) Manual, Owner's (Eng) Manual, Owner's (Span)

#### WHEELS & TIRES



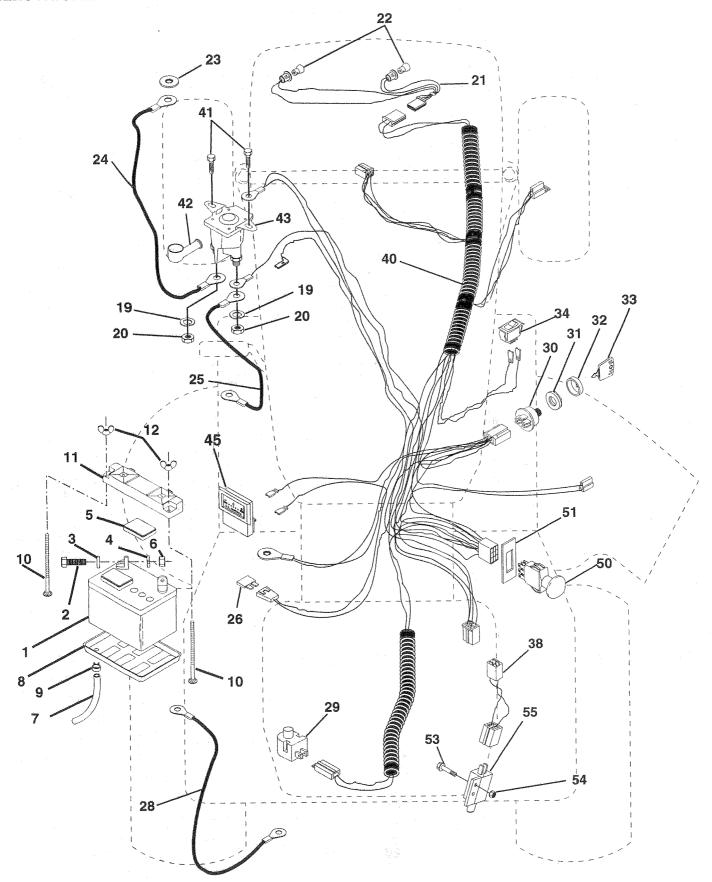
	PARI	
IO.	NO.	DESCRIPTION

1 2 3 4	59192 65139 106228X427 106277X427 8134H	Cap, Valve, Tire Stem, Valve Rim Assembly, Front Rim Assembly, Rear Tube, Front (Service Item Only)
•	7154J	Tube, Rear (Service Item Only)
5	106230X	Tire, Front
_	105588X	Tire, Rear
6	278H	Fitting, Grease (Front Wheel Only)
	6856M	Fitting, Grease
7	9040H	Bearing, Flange (Front Wheel Only)
8	104757X	Cap, Axle (Front Wheel Only)
~	136327	Cover, Axle (Rear Wheel Only)
	100021	ouver, Axie (Hear Wrider Offly)

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

# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### ELECTRICAL



## 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

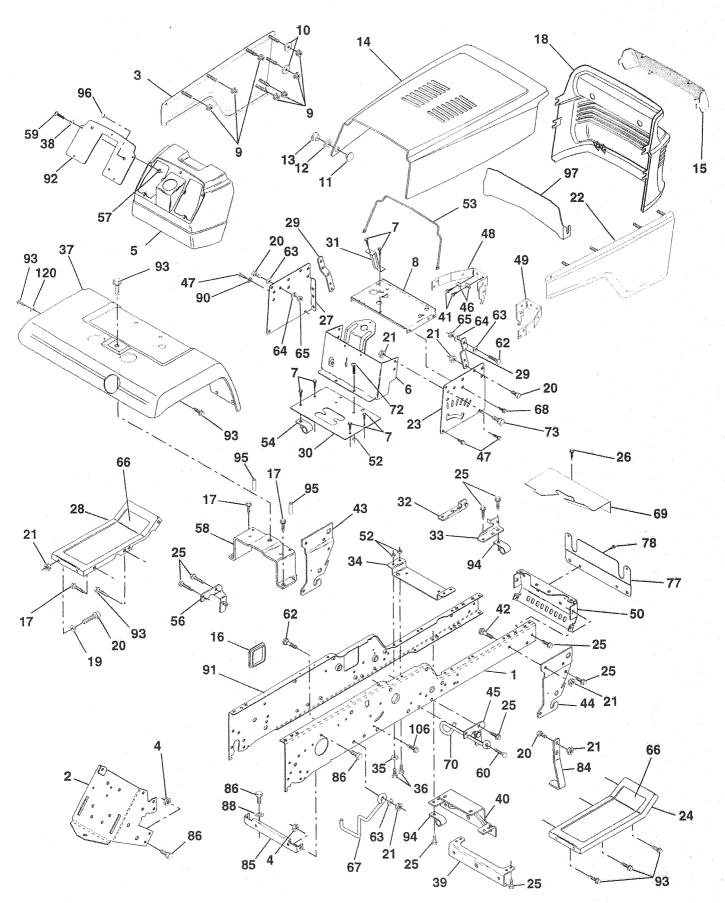
#### ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION
20 21 22 23 24 25 26 28 29 30 31 32 33 34 40 41 42 43 45 50 51 53 54	121537X 74760412 STD551025 STD551125 121264X STD541025 7697J 7603J 109596X 72240460 102476X 123198X 10090400 73350400 127441X 4152J 11150400 4799J 4799J 108824X 121080X 121305X 140399 140400 141226 140403 110712X 140660 140428 17720408 131563 138406 122822X 140404 140405 71031008 73951000 104445X	Battery Bolt, Hex 1/4-20 x 3/4 Washer 9/32 x 5/8 x 16 Ga. Washer, Lock 1/4 Caps, Battery Nut, Hex 1/4-20 Tube, Drain Tray, Battery Clamp, Hose Bolt, Carriage 1/4-20 x 7-1/2 Guard, Terminal Nut, Wing 1/4-20 Washer, Lock 1/4 Nut, Hex Jam 1/4-20 Harness, Light Socket Bulb, Headlight Washer, Lock, Int. Tooth Cable Battery Cable Battery Fuse Cable, Ground Switch, Plunger Switch, Ignition Nut, Ignition Cover, Switch Key Key, Ignition Switch, Light Harness Adapter Harness, Ignition Screw, Hex Washer Head, Thread Cutting 1/4-20 x 1/2 Cover, Terminal Solenoid Ammeter Switch, P.T.O. Ring Retainer PTO Screw, Hex Washer Head #10-32x1/2 Nut, Keps #10-32
90	ハンナナナンハ	Switch, Intlk Cl Grd Gry 2 Term

Intragio D

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

# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720 CHASSIS AND ENCLOSURES



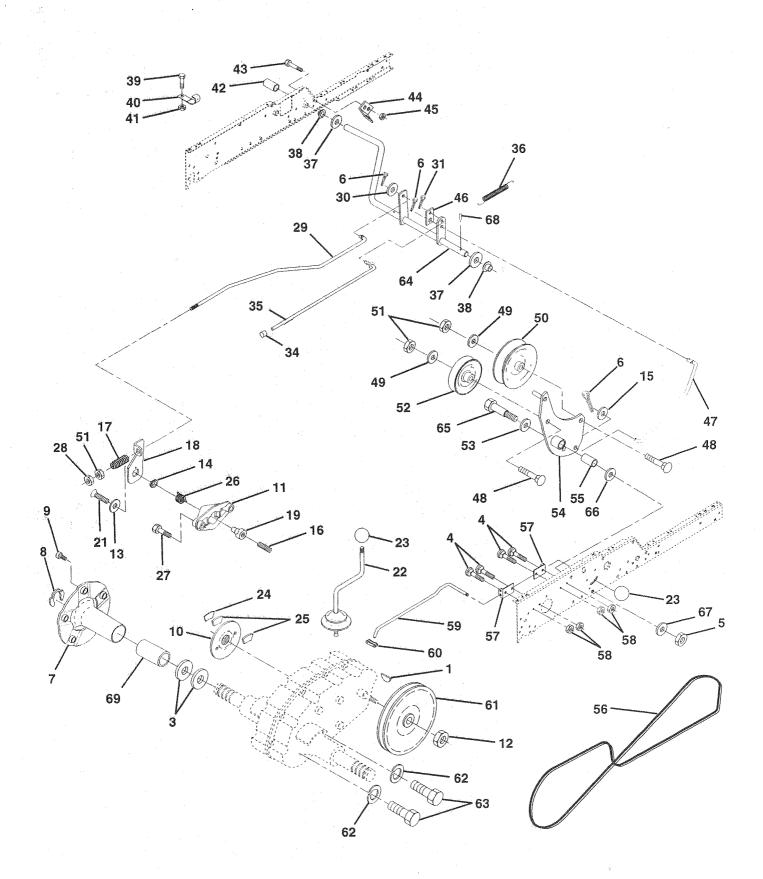
# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720 CHASSIS AND ENCLOSURES

KEY	PART		KEA	PART	
	NO.	DESCRIPTION		NO.	DESCRIPTION
12345678901123456789011234567890122222456789012345678904442	140505 140506 136671X459 73800700 136696 139420 17720408 137563 108067X 19092016 137270 137269 137271 136673X459 136374 121794X 17490612 136373X428 19131312 74760616 73800600 136670X459 121045X 105464X459 17490512 121046X 105465X459 138193 137143X014 137556 136742 136741 136963 19111116 74780512 121642X459 19091216 136961 136962 74760408 72140608	Rail, Frame RH Drawbar, Gt Panel Asm., Side LH Nut, Lock Hex 7/16 Unc Dash, Plastic Black Dash Asm., Lower Screw, Thd Cut 1/4-20 x 1/2 Support, Battery Nut, Pal Washer 9/32 x 1-1/4 x 16 Ga. Rivet, Ratchet Male Washer, Nylon Rivet, Ratchet Female Hood Asm., Pnt Lens, Bar Clear Cover, Access Screw, Thdrol 3/8-16 x 3/4 Grille Washer 13/32 x 13/16 x 12 Ga. Bolt, Fin Hex 3/8-16 x 1 Nut, Lock Hex W/Wsh 3/8-16 Unc Panel Asm., Side RH Panel, Dash Side RH Footrest, RH Screw, Thdrol 3/8-16 x 3/4 Screw, Thdrol 3/8-16 x 3/4 Screw, Thdrol 5/16-18 x 3/4 Panel, Dash Side LH Footrest, LH Bracket, Support Dash Saddle, Sikscr Vgt Brace, Support Steering Bracket Asm., Frame Pivot Lh Bracket Asm., Frame Pivot Rh Bracket, Engine Support Rear Washer 11/32 x 11/16 x 16 Ga. Bolt, Fin Hex 5/16-18 x 3/4 Fender, Pnt. Washer 9/32 x 3/4 x 16 Ga. Bracket, Axle Front Bracket, Support Axle/Engine Bolt, Fin Hex 1/4-20 Unc x 1/2 Bolt, Carriage 3/8-16 x 1	445 445 447 489 555 555 555 555 566 667 667 677 777 885 888 999 999 106	136940 138460 10040400 17490608 136814 136813 136575 72140506 73800500 137304 126470X 138461 73510400 137113 74180412 17490620 72110608 19131614 10040600 73220600 105466X 137157 17490508 139212 137159 74180512 74780616 137308 17720408 138952 120404X 74760716 10040700 11050600 140504 140941X013 17490608 100207K 105531X 8022J 137373 17580520	Bracket, Spnsn Front Rh Bracket Asm., Susp Chassis Rh Washer, Lock Hvy Helical 1/4 Screw Thdrol. 3/8-16 x 1/2 Bracket Asm., Pivot Hood Lh Bracket Asm., Pivot Hood Rh Bracket, Chassis Front Bolt, Carriage 5/16-18 x 3/4 Locknut, Hex W/Ins 5/16-18 Unc Rod, Support Hood Clip, Insulated Bracket Asm., Susp Chassis Lh Nut, Keps Hex 1/4-20 Bracket Asm., Fender Screw, Mach Cr 1/4-20 x 3/4 Screw Thdrol. 3/8-16 x 1 Gr. 5 Washer 13/32 x 1 x 14 Ga. Washer, Lock Hvy Hicl Spr 3/8 Nut, Fin Hex 3/8-16 Unc Pad, Footrest Guide, Belt Mid Span Screw Thdrol. 5/16-18 x 1/2 Shield, Heat Guide, Belt Mid Span Screw, Mach Trhd 5/16-18 x 3/4 Bolt, Fin Hex 3/8-16 x 1 Gr. 5 Shield, Front Screw, Thd. Cut 1/4-20 x 1/2 Stop, Over Center Mower Bracket, Support Transaxle Bolt, Fin Hex 7/16-14 Unc x 1 Washer, Lock Hvy Hicl Spr 7/16 Washer, Lock External Tooth 3/8 Rail, Frame Lh Plate, Silkscreen Dash Screw, Thdrol 3/8-16 x 1/2 Clip, Fuel Line Push Nut, Nylon Plug, Hole Shield, Heat, Engine Bolt 5/16-18 x 1-1/4
	136939	Bracket, Spnsn Front Lh			

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

# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### **GROUND DRIVE**

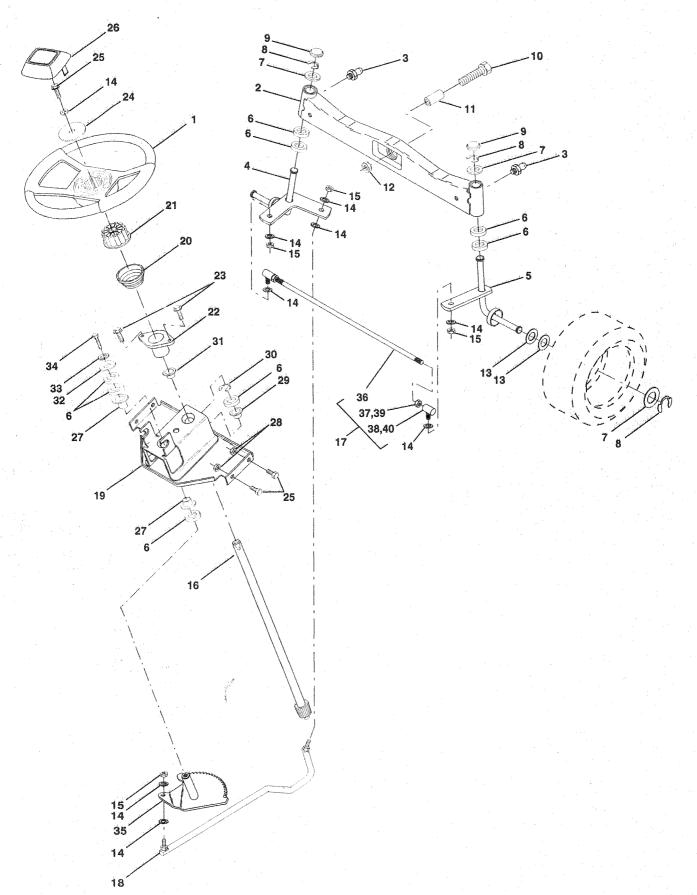


# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### GROUND DRIVE

	ART O.	DESCRIPTION		KEY NO.	PART NO.	DESCRIPTION
1 9856 3 7566 5 7366 6 7602 7 1357 8 1200 9 1400 10 1430 11 1369 12 9204 13 1394 14 3890 15 1913 16 1430 17 1269 18 1377 19 1369 20 7214 21 2326 22 633/ 23 1069 24 1369 25 1369 26 1375 27 1749 28 7335 29 1372 30 1913 31 7602	8M1 3R 80600 20412 758 00034 080 046 927 4H 419 01 31316 012 909X 104 926 40506 60412 A109 932X 925 932X 925 925 925 925 925 925 925 925	Key, Woodruff Washer, Thrust, Axle Nut, Crownlock 3/8-16 Pin, Cotter Wheel, Hub Assembly Klip, Ring Bolt, Hub Disc, Brake Yoke, Brake Disc Locknut 1/2-20 Washer, Special Bushing Wahser 13/32 x 13/16 x 16 Ga. Set, Screw 1/4-28 x 3/4 Spring Lever, Brake Cam, Brake Disc Bolt, Carriage 5/18-18 x 3/4 Screw, Flat Head 1/4-28 x 3/4 Gearshift, Lever Assembly Knob Support, Puck Brake Puck, Brake Top Spring, Return Screw, Hex Wsh Thd. 5/16-18 x 3/4 Nut, Hex Jam 3/8-16 Brake, Rod Washer 13/32 x 1 x 14 Ga. Pin, Cotter 3/32 x 3/4 Cap, Plunger Rod, Parking Brake Spring, Extension	1	38 39 41 42 44 45 46 47 48 49 51 51 52 53 54 55 55 56 66 66 66 66 67	110895X 74321016 5304J 73631000 8883R 74760412 104601X 73800400 121358X 138228 72110614 19131413 131494 73800600 139123 207J 138390 105706X 137153 105598X 73800500 122253X 122268X 137524 10040700 74760720 137649 67609 140296 19131312 5142H 136327	Nyliner Screw, Fin. #10-24 x 1 Actuator, Interlock Switch Locknut #10-24 Cover, Pedal Bolt, Hex 1/4-20 x 3/4 Bracket, Interlock Locknut w/Insert 1/4-20 Retainer, Spring Clutch Rod Bolt, Carriage 3/8-16 x 1-3/4 Gr. 5 Washer 13/32 x 7/8 x 13 Ga. Pulley, Idler, Flat Locknut, Hex 3/8-16 Pulley, Idler, Grooved Washer, Hardened Clutch, Arm Assembly Bearing, Idler V-Belt Bracket, Shift Rod, Hi-Lo Locknut, Hex, with Insert 5/16-19 Shift Rod, Hi-Lo Spring Clip, Connecting Link Pulley, Transaxle Washer, Lock 7/16 Bolt, Fin Hex 7/16-14 x 1-1/4 Shaft, Clutch/Brake Pedal Bolt, Shoulder Washer, Hardened Washer, Flat Pin, Roll Hub, Cover
		Washer 25/32 x 1-1/4 x 16 Ga.		NOT	E: All compon 1 inch = 25	ent dimensions given in U.S. inches .4 mm

# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720 STEERING ASSEMBLY



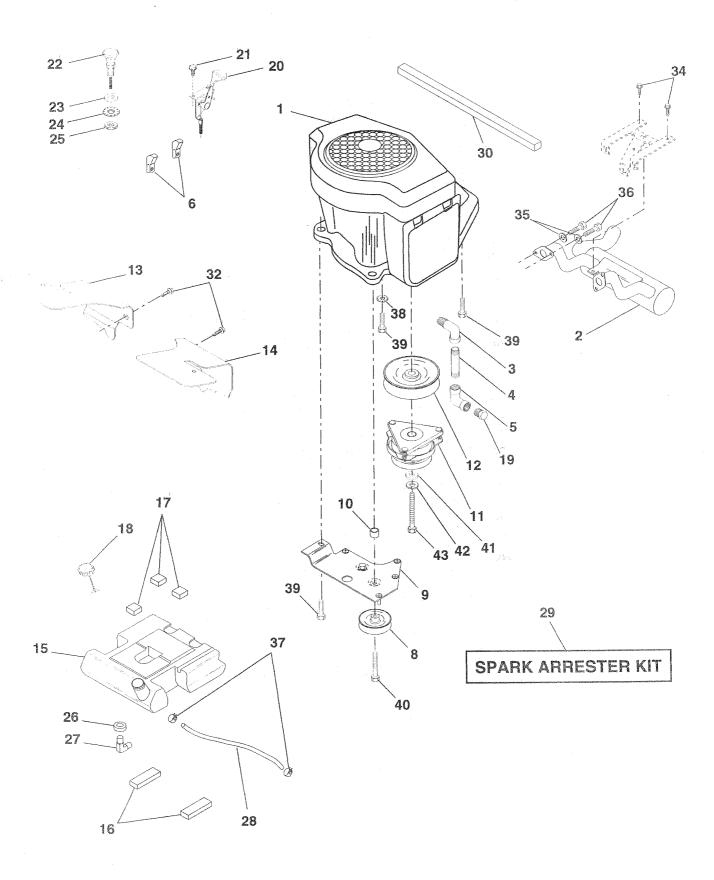
# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720 STEERING ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
123456789011234567 111234567	73610600 102458X 137347 137155	Wheel, Steering Axle Asm., Front Fitting, Grease Spindle Asm, LH Spindle Asm., RH Bearing, Race Thrust Harden Washer 25/32 x 1-5/8 x 16 Ga. Ring, Klip #T5304-75 Cap, Spindle Bolt, Fin Hex 5/8-11 x 2-3/4 Spacer, Brg. Axle Front Nut, Lock Flange 5/8-11 Unc Washer 25/32 x 1-1/4 x 16 Ga. Washer, Lock Hvy Hlcl Spr 3/8 Nut, Fin Hex 3/8-24 Unf Shaft Asm., Steering Rod Asm., Tie Ball J Ball Vgt (Inc. Key No. 36-40) Draglink Asm. Steering
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 40 40 40 40 40 40 40 40 40 40 40 40	74780616 126805X 3366R 73800600 104239X 12000034 138136 19111610 10040500 74760512 138059 137156 73360600 109850X	Support Asm., Steering Vgt Column, Steering Adapter, Wheel Steering Bushing, Strg. Blk Screw, Slftp #10-16 x 1/2 Ty-b Washer 13/32 x 2-3/8 x 8 Ga. Bolt, Fin Hex 3/8-16 x 1 Gr. 5 Cap, Wheel Steering Bearing, Col. Strg. Nut, Lock Hex W/Wsh 3/8-16 Unc Bearing, Flange Ring, Klip Truarc #5304-75 Bushing, Nyliner Snap Washer 11/32 x 1 x 10 Ga. Washer, Lock Hvy Hlcl Spr 5/16 Bolt, Hex Hd 5/16-18 x 3/4 Gear, Sector Steering Tie Rod Jam Nut RH Thread Joint Asm. Ball RH Thread Joint Asm. Ball LH Thread

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

#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### ENGINE



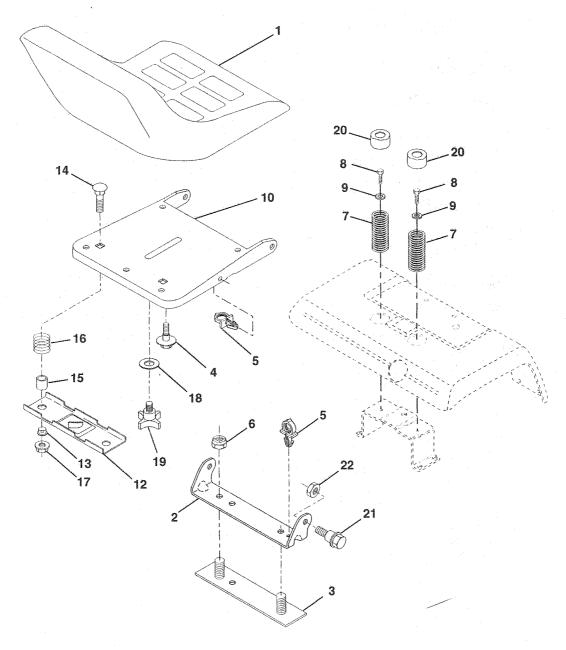
# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### ENGINE

KEY NO.	PART NO.	DESCRIPTION	KEY PART NO. NO.	DESCRIPTION
1 2	141948 144110	Engine Kohler 18 Mag Vt Muffler Asm Kohler VGT (Inc. Key No. 34)	22 138672 23 19132616	
3	13240300	Elbow Street 3/8 NPT	24 11050600 25 73610600	
4	13280328	Nipple Pipe 3/8NPT X 3 - 1/2	26 3645J	Bushing
5	13200300	Elbow STD 90 Degree 3/8 - 18 NPT	27 139277	Stem Tank Fuel
6	138129	Clamp Tube Double Engine	28 7834R	Fuel Line
8 9	121361X	Pulley V-Idler	29 132920	Spark Arrester Kit
	138559	Stop Keeper Asm VGT	30 105037X	Strip Foam
10	105432X	Bushing	32 17490508	
11	137140	Clutch Electric	34 17720408	
12	136907	Pulley Engine VGT Elect Clutch	35 10040500	
13	138486	Baffle Air LH Koh VGT	36 74570512	
14	138487	Baffle Air RH Koh VGT	37 123487X	Clamp Hose _
15	127334X	Tank Fuel W/Sym Vented	38 11050600	
16	109227X	Pad Spacer	39 17490624	
17 18	106082X	Pad Spacer	40 17490652	
19	123549X	Cap Asm Fuel W/Sym Vented	41 126197X	Washer 1-1/2 OD X 15/32 ID X .250
19	13290300	Plug Oil Drain (Order From Engine	42 10040700	
20	133439	Manufacturer) Control Throttle	43 71170768	Bolt Hex 7/16 - 20 X 4 - 1/4 Ga 5
21	17720410	Screw Hex Thd Cut 1/4 - 20 X 5/8		ponent dimensions given in U.S. inches 25.4 mm

#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

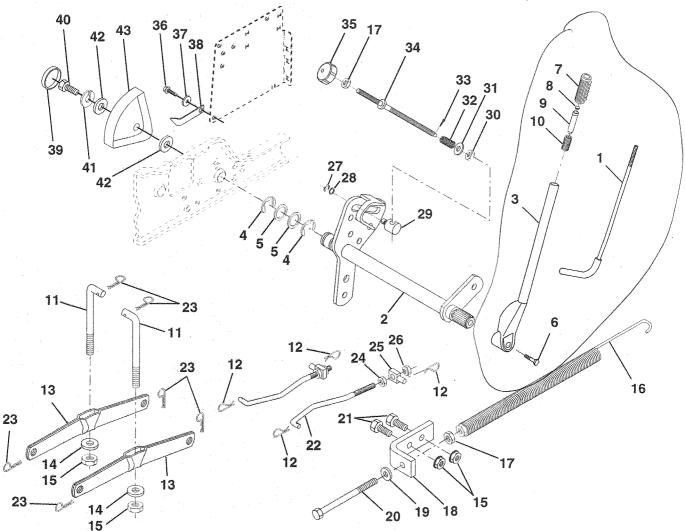
# SEAT ASSEMBLY



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
2 A 400 P	1 4 00 1		1001		
1	127439	Seat	14	72050411	Bolt, Carriage 1/4-20 X 1-3/8
2	140551	Bracket, Pivot Seat	15	121249X	Spacer, Split
3	140675	Strap, Fender	16	123740X	Spring, Cprsh
4	127018X	Bolt, Shoulder 5/16-18 x .62	17	123976X	Nut, Lock 1/4 Lge Flg Gr. 5
5	140407	Clip, Push In	18	19171912	Washer 17/32 x 1-3/16 x 12 Ga.
6	73680600	Nut, Crownlock 3/8-16 Unc	19	120068X	Knob, Seat 1/2-13 Unc
7	124181X	Spring, Seat Cprsn	20	124238X	Cap, Spring Seat
8	17490508	Screw, Thdrol 5/16-18 X 1/2	21	139888	Bolt, Shoulder 5/16-18
9	19131614	Washer 13/32 X 1 X 14 Ga.	22	73680500	Nut, Crownlock 5/16-18 Unc
10	140552	Pan, Seat			
12	121246X	Bracket, Mounting Switch	NIO"	E. Alloomoo	nent dimensions given in U.S. inches
13	121248X	Bushing, Snap	INO	1 inch = 2	

# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

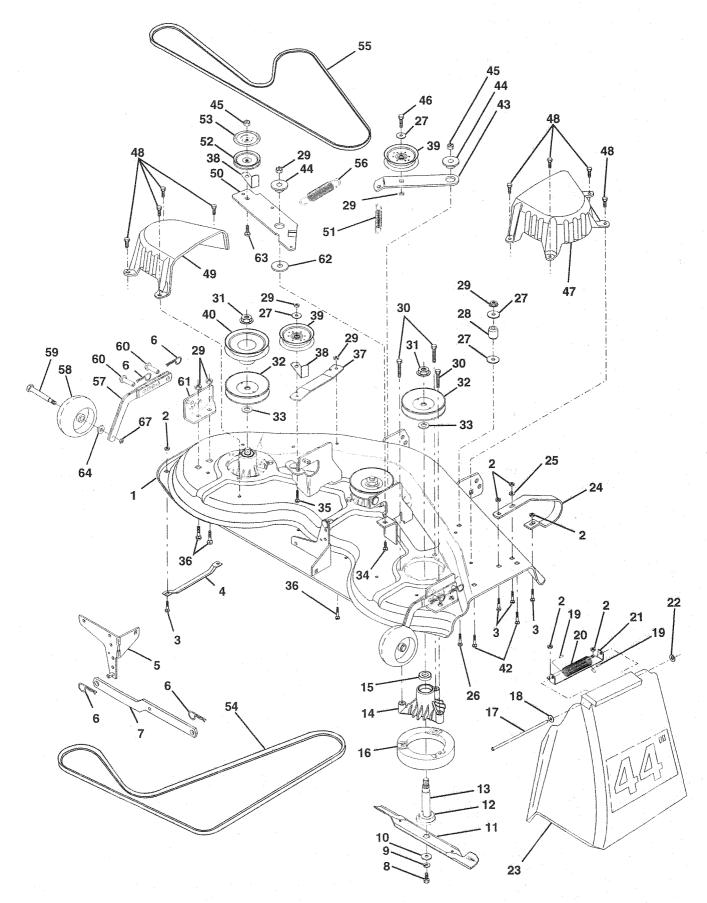
#### LIFT ASSEMBLY



KEY	PART		KEY		
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	121006X	Rod Asm., Lever	24	73350800	Nut, Jam Hex 1/2-13 Unc
2	137295	Shaft Asm., Lift Vgt	25	130171	Trunnion
	121002X	Lever Asm., Lift Rh	26	73800800	Nut, Lock W/Wsh 1/2-13 Unc
4	12000022	E-Ring Truarc #5133-87	27	12000037	Ring, Klip #T5304-37
5	19292016	Washer 29/32 x 1-1/4 x 16 Ga.	28	19151216	Washer 15/32 x 3/4 x 16 Ga.
6	74780624	Bolt, Fin Hex 3/8-16 x 1-1/2	29	110810X	Trunnion, Dp Stop Dbl Thds Plt
7	125631X	Grip, Handle Fluted	30	110807X	Nut, Special
8	122365X	Button, Plunger	31	19131016	Washer 13/32 x 5/8 x 16 Ga.
9	122364X	Plunger, Lever Lift	32	137150	Spring, Compression Inf Hgt
10	2876H	Spring 2-1/8"	33	76020308	Pin, Cotter 3/32 x 1/2
11	138020	Link Lift	34	137167	Rod, Adj Lift
12	3146R	Retainer, Spring	35	138057	Knob, Inf 3/8-16 Unc
13	139867	Arm, Suspension Vgt	36	17490612	Screw, Thdrol 3/8-16 x 3/4
14	140302	Bearing	37	120529X	Washer, Nylon
15	73800600	Nut, Lock Hex W/Wsh 3/8-16 Unc	38	123933X505	Pointer, Pnt Height Indicator
16	674A247	Spring Asm., Assist Lift	39	123935X	Plug, Hole
17	73350600	Nut, Hex Jam 3/8-16 Unc	40	74780516	Bolt, Fin Hex 5/16-18 x 1
18	5329J	Bracket, Spring Assist	41	10040500	Washer, Lock Hvy Hlcl Spr 5/16
19	19131316	Washer 13/32 x 13/16 x 16 Ga.		19112410	Washer 11/32 x 1-1/2 x 10 Ga.
20	5328J	Bolt, Adjust Spring Assist	43	123934X	Scale, Indicator Height
21	74760616	Bolt, Fin Hex 3/8-16 x 1			
22	127218	Link, Front	NOT		ent dimensions given in U.S. inches
23	4939M	Retainer, Spring		1 inch = $25$ .	.4 mm

# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### 44" MOWER DECK



#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### 44" MOWER DECK

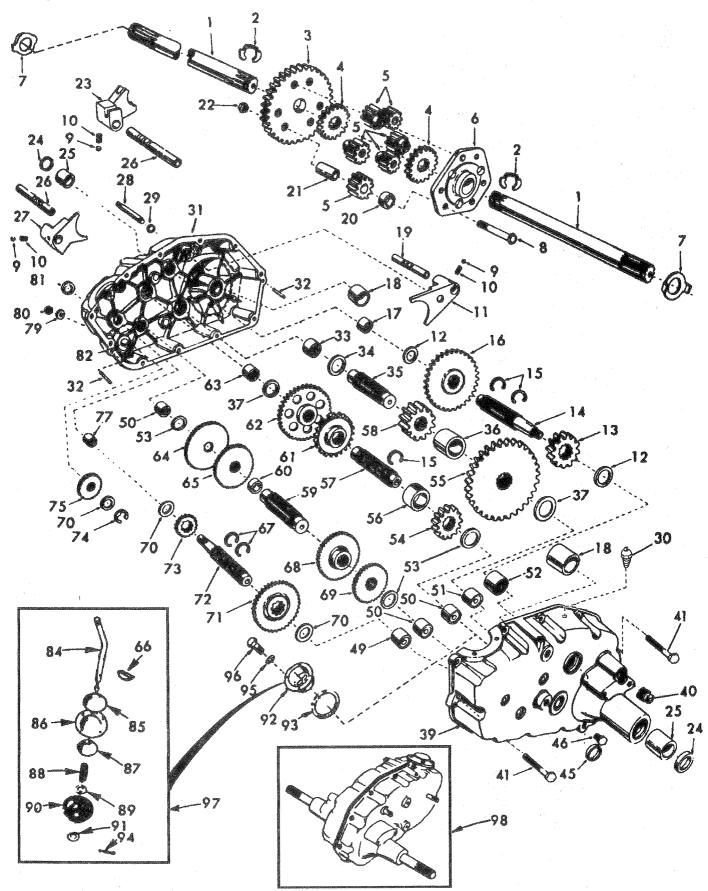
144075 Comp. Deck

KEY			KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	136471	Deck Asm., Mower 44" Vented	33	129963	Washer, Spacer Mower Vented
2 3	73800500	Locknut, Hex W/Ins 5/16-18 Unc	34	72140610	Bolt, Carriage 3/8-16 x 1-1/4
4	72110506 7631J	Bolt, Carriage 5/16-18 x 3/4 Runner, Mower LH	35	72110616	Bolt, Carriage 3/8-16 x 2
	138457	Bracket Asm., Sway Bar	36 37	72110608	Bolt, Carriage 3/8-16 x 1 Gr. 5
5	4939M	Retainer, Spring	38	137166 137554	Stiffener, Arm Idler Keeper, Belt Idler
7	130832	Arm Suspension, Rear	39	131494	Pulley, Idler Flat
8	850857	Bolt 3/8-24 x 1.25 Gr. 8 Patched	40	136572	Pulley, Driven
9	10030600	Washer, Lock Hvy 3/8 Unplated	42	72140506	Bolt, Carriage 5/16-18 Unc x 3/4
10	129962	Washer, Hard Blade Mower Vented	43	136460	Arm, Idler Secondary
11 12	130652 129895	Blade Bearing, Ball #6204 (Mandrel)	44	122052X	Spacer, Retainer
13	137553	Shaft Asm., W/Lower Brg (Includes	45	73680600	Nut, Crownlock 3/8-16 Unc
	107000	Key No. 12)	46 47	74760628 137200	Bolt, Fin Hex 3/8-16 Unc x 1-3/4
14	137152	Housing, Mandrel 44" Vent	48	137729	Cover, Mandrel RH Screw, Thd Roll 1/4-20 x 5/8
15	110485X	Bearing, Ball Mandrel	49	136574	Cover, Mandrel LH
16	136929	Stripper, Mower Vented	50	137272	Arm, Idler Primary
17	106735X	Rod, Hinge	51	137273	Spring, Secondary
18	19111016	Washer 11/32 x 5/8 x 16 Ga.	52	139245	Pulley, Idler V Groove
19 20	105304X 123713X	Cap, Sleeve	53	137789	Shield, Idler
21	137607	Spring, Torsion Deflector Bracket, Deflector	54	131264	V-Belt, Mower Primary
22	110452X	Nut, Push	55 56	131290 138687	V-Belt, Mower Secondary
23	109785X	Shield, Deflector Mower	57	136577	Spring, Primary Bar Asm., Wheel Gauge
24	136321	Runner, RH	58	133957	Wheel, Gauge
25	19111216	Washer 11/32 x 3/4 x 16 Ga.	59	137644	Bolt, Shoulder
26	72110614	Bolt, Carriage 3/8-16 x 1-3/4 Gr. 5	60	139031	Pin, Clevis
27	19131316	Washer 13/32 x 13/16 x 16 Ga.	61	136573	Bracket, Wheel Gauge
28 29	132823 73800600	Spacer, Spring Stop Idler	62	133943	Washer Hardened
30	133776	Nut, Lock Hex W/Wsh 3/8-16 Unc Bolt 5/16-18 x 1.25	63	72110612	Bolt Carriage 3/8-16 x 1-1/2
31	137266	Nut, Flg Top Lock Cntr 9/16	64 67	19121414 73930600	Washer 3/8 x 3/4 x 14Ga
32	129861	Pulley, Mandrel	07	73930000	Nut, Centerlock 3/8-16

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

#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### TRANSAXLE

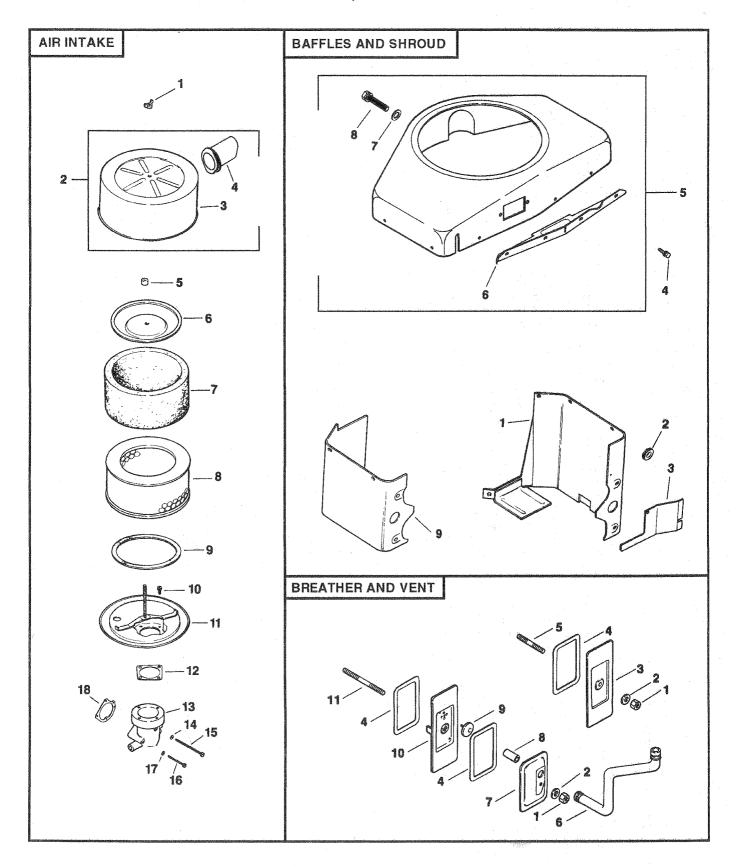


# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### **TRANSAXLE**

	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1	4197R	Axle Shaft	52	8119M	Needle Bearing
2	12000034	Retaining Ring	53	4220R	Thrust Bearing Race
3	4199R	Final Drive Gear	54		3rd Reduction Pinion, Low
4	4216R	Differential Gear	55	4213R	4th Reduction Gear
5	4215R	Differential Pinion	56	4442R	3rd Reduction Pinion Spacer
6	4217R	Differential Carrier	57	4195R	2nd Reduction Gear Shaft
7	6256H	Axle Thrust Washer	58	4214R	Final Drive Pinion
8	74020652	Bolt, Hex Head 3/8-24 x 3-1/4	59	4194R	1st Reduction Gear Shaft
9	720014	(1" Thread Length)	60	7528R	1st Reduction Shaft Spacer
10	7392M 137261	Steel Ball	61	4208R	3rd Reduction Plnion High
11	4985R	Spring Shift Fork Detent	62	4207R	2nd Reduction Gear
12	6266H	Shift Fork, High-Low Range		7398H	Needle Bearing
13	4212R	Thrust Bearing Race 4th Reduction Pinion	64	4203R	Low Speed Gear and 2nd
14	137125	Shaft, Brake	0.5	40045	Reduction Pinion Cluster
15	6276H	Snap Ring, Crescent Type	65	4204R	Reverse Gear
16	633A63	High-Low Range Gears	66 67	2898J	Key, Hi-Pro 1/8 x 17/32
17	8118M	Needle Bearing	68	12000033 4205R	Klip Ring
18	8740H1	Sintered Iron Bearing	69	4206R	Intermediate Speed Gear High Speed Gear
19	122238X	Shift Fork Shaft, High-Low Range	70	1370H	Thrust Bearing Race
20	4218R	Differential Pinion Spacer	71	633A69	Intermediate and High Speed
21	6252H1	Differential Pinion Bushing	, .	000/100	Cluster Pinions
22	7810H	Gripco Centerlock Nut 3/8-24	72	139120	Input Shaft
23	6262H	Shift Fork, R.H.	73	4201R	Low Speed Pinion
24	7393R	Oil Seal		12000008	E-Ring
25	992R1	Sintered Iron Bearing	75	1153R	Reverse Idler Gear
26	139111	Shift Fork Shaft	77	6803J	Needle Bearing
27	4986R	Shift Fork, L.H.	79	1167R	Sealing Washer
28	122254X	Shift Shaft, High-Low Range	80	73360700	Nut, Hex, Jam 7/16-20
29	6269H	Oil Seal	81	6270H	Oil Seal
30 31	5855H	Pressure Relief Valve	82	136984	Reverse Idler Shaft
31	139538	Gearcase, Reverse Idler Shaft and	84	5384J	Gearshift Lever, Bent
		Bearings, R.H. (Includes Key No.'s 17,18, 25, 33, 50, 63, 77 and 82)	85	2978J	Gearshift Cap
32	6277H	Dowel Pin		633A85	Gearshift Ball Cover and Pin
33	4225R	Needle Bearing	87 88	8739H1 4924H	Shift Lever Guide Ball, Keyed
34	7396H	Thrust Bearing Race		19151516	Spring Washer 15/33 x 15/16 x 16 Gauge
35	4198R	4th Reduction Gear Shaft		110542X	Washer 15/32 x 15/16 x 16 Gauge Shift Mechanism Seal
36	4200R	4th Reduction Gear Spacer	91	19181511	Washer 9/16 x 15/16 x 12 Gauge
37	7395H	Thrust Bearing Race	92	75J	Gearshift Gate and Reinforcement
39	139536	Gearcase and Bearings, L.H.		6274H	Shift Ball Cover Gasket
		(Includes Key Numbers 18, 25, 49,	94	76020412	Cotter Pin 1/8 x 3/4
		50 (2), 51 and 52)	95	10040500	Washer, Lock 5/16
40	13320400	Pipe Plug 1/2-14 N.P.T.	96	74760514	Bolt, Hex Head 5/16-18 UNC x 7/8
41	17580520	Bolt, Hex 5/16-18 UNC x 1-1/4	97	633A109	Gearshift Lever Assembly
45	6271H	Oil Seal	98	139535	Transaxle Assembly
46	13060200	Pipe Plug 1/4-18 N.P.T.			(Less Brake Drum and Shift Lever)
49 50	4895H	Needle Bearing	N 9 alle 1	s forme du la r	
50 51	4222R 1529R	Needle Bearing	NOT		nent dimensions given in U.S. inches
51	I UZULI	Needle Bearing		1 inch = 25	o.4 mm

#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720



# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

# KOHLER ENGINE - MODEL NUMBER MV18S, TYPE NUMBER 58560

AIR INTAKE			BAI	BAFFLES & SHROUD		
	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION	
1 2	X-276-7 52 755 83	Wing Nut 1/4-20 Kit, Cover and Tube (Includes Key Numbers 3 and 4)	1 2 3	52 063 41 52 313 05	Baffle, #2 Cylinder Head Grownet (2)	
3	52 096 35 52 123 21	Cover, Air Cleaner Tube, Air Intake	4	52 063 42 X-67-83	Baffle, Fuel Pump Screw, Hex Washer Head 1/4-20 x 7/16 (14)	
5 6 7	231032 52 082 04	Seal, Element Cover Cover, Air Cleaner Element	5	52 755 70	Kit, Blower Housing (Includes Key Numbers 6 thru 8)	
8	45 083 01 45 083 02	Pre-Cleaner Element	6 7	52 217 01	Support, Upper Housing	
9	237423	Seal, Air Cleaner Cover	8	52 468 16 52 086 11	Washer, Flat (2) Screw 1/4-20 x 5/8 (6)	
10	X-67-98	Screw, Hex Washer Head #10-32 x 9/16 (4)	9	52 124 23	Baffle, #1 Cylinder Head	
11	52 201 06	Base, Air Cleaner	TON	ILLUSTRATE	ED.	
12	277093	Gasket, Air Cleaner (2)		52 113 46	Decal, Horsepower (3)	
13	52 054 39	Elbow, Air Intake				
14 15	X-25-79	Washer, Plain #10	-	EL 20 100000 W 10 10000 10000		
15	X-50-37	Screw, Slotted Pan Head #10-32 x 2-1/4	BHE	ATHER & VE	NT	
16	X-50-57	Screw, Slotted Pan Head #10-32 x 1-3/4 (2)		PART NO.	DESCRIPTION	
17	X-22-9	Washer, Lock, Internal Tooth #10 (2)	4		Most House (4 on 40)	
18	25 041 06	Gasket, Air Cleaner Elbow	2	X-81-1 X-25-12	Nut, Hex 1/4-20 (2) Washer, Plain 1/4 (2)	
NOT	ILLUSTRATE	·	3	52 096 18	Cover, #2 Cylinder Valve	
	25 113 15	Decal, Air Cleaner	4 5	52 055 01 X-352-39	Gasket, Cover (3)	
	52 113 30	Decal	J	ハーリンと・・ひざ	Stud, #2 Cylinder Valve Cover	

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

Hose, Breather

Cover, #1 Upper Cylinder Valve Seal, Breather Valve, Umbrella

Cover, #1 Lower Cylinder Valve

Stud, #1 Cylinder Valve Cover 1/4-20 x 3-1/4

52 326 12

52 096 08

52 032 04

52 462 01

52 096 22

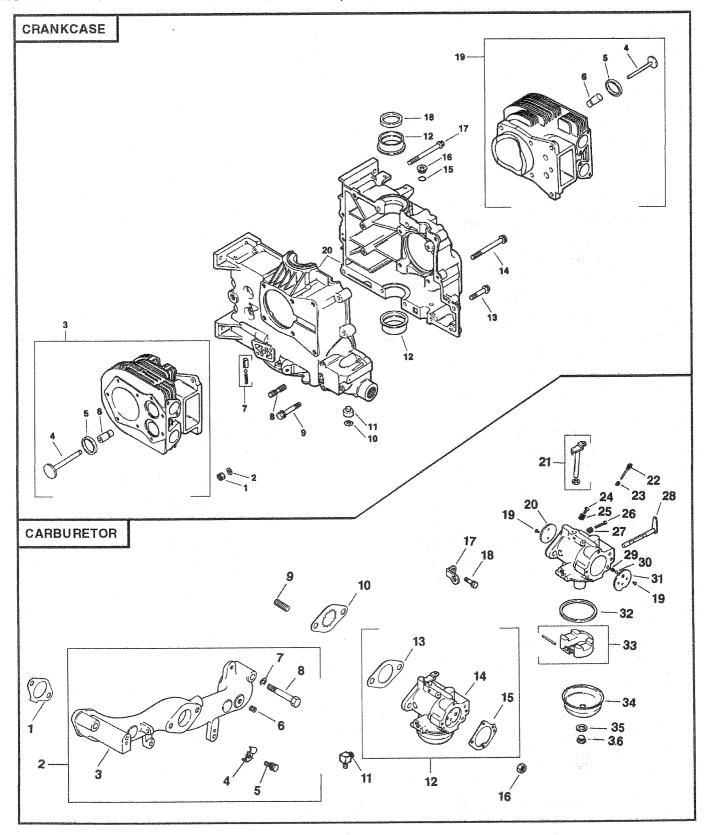
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#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720



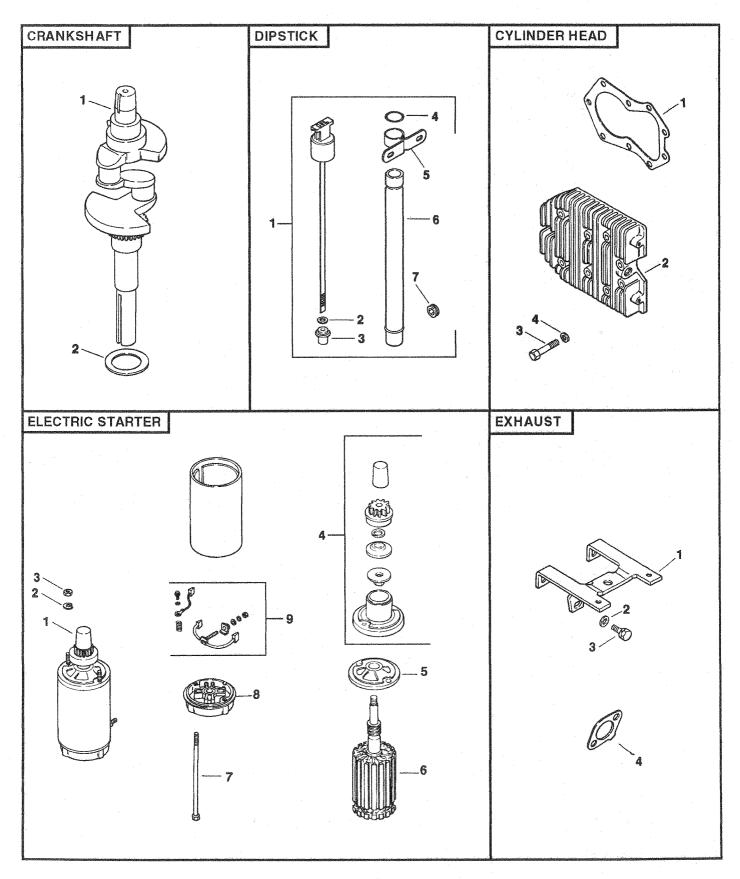
#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

#### **KOHLER ENGINE - MODEL NUMBER MV18S, TYPE NUMBER 58560**

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

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

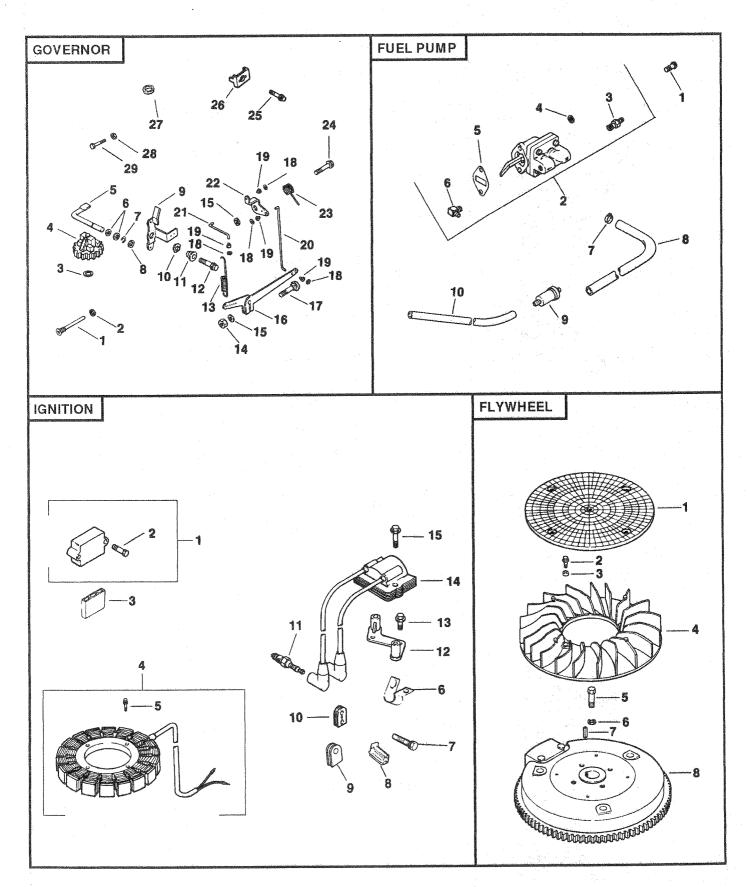
#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720



# 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

CRANKSHAFT			ELE	ELECTRIC STARTER		
	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION	
1 2	52 014 93 52 468 03 52 468 04 52 468 05	Crankshaft Washer, Thrust .119/.122 (A.R.) Washer, Thrust .128/.131 Washer, Thrust .137/.140 (A.R.)	1 2 3 4 5 6	52 098 12 X-20-1 X-81-1 82 755 26 52 081 07 52 170 05	Starter Assembly (Includes Key Numbers 4 thru 9) Washer, Lock 1/4 (2) Nut, Hex 1/4-20 (2) Kit, Drive Cap, Drive End Armature	
KEY	PART NO.	DESCRIPTION	7	52 211 01 52 227 10 82 755 28	Bolt, Thru (2) Cap, Commutator End Kit, Brush	
1 2 3 4 5	2 X-25-44 3 52 032 14	Dipstick Assembly (Includes Key Numbers 2 and 3) Washer, Plain 5/16 Seal, Rubber O-Ring Bracket, Oil Tube Support Tube, Oil Fill 11-7/8 Plug, Hex, Countersunk 3/4 N.P.T.F.		ILLUSTRATE 25 450 03 AUST	D Tag, Caution	
6 7				PART NO.	DESCRIPTION	
	INDER HEAD		1 2 3 4	52 126 12 X-25-72 52 086 11 52 041 14	Bracket Washer, Plain (3) Screw 1/4-20 x 5/8 (3) Gasket, Exhaust (2)	
	PART NO.	DESCRIPTION	NOT		ent dimensions given in U.S. inches	
1 2 3 4	52 041 20 52 015 08 220534 41 086 02	Gasket, Head (2) Cylinder Head (2) Washer, Plain 5/16 (18) Screw, Hex Head 5/16-18 x 1-1/2 (18)	1 inch = 25.4 mm			

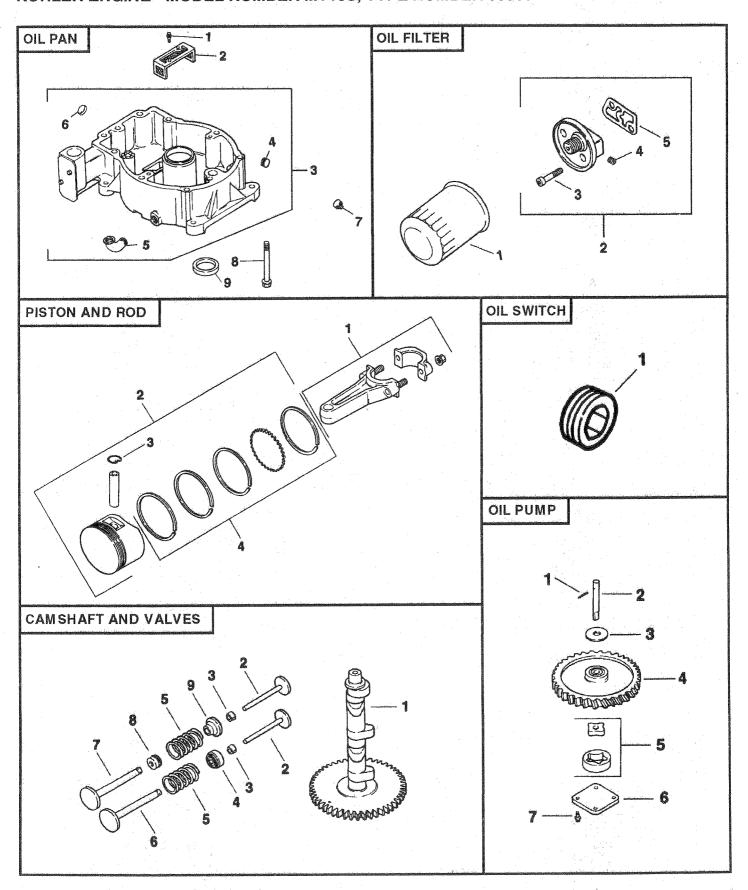
#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720



#### 18 HP 44" TRACTOR - MODEL NUMBER 917.257720

FLYWHEEL		FUEL PUMP	
KEY PART NO. NO.	DESCRIPTION	KEY PART NO. NO.	DESCRIPTION
1 25 162 01 2 25 086 21	Screen, Grass Screw, Hex Washer Head	1 47 086 08	Screw, Pozidriv, Truss Head 1/4-20 x 5/8 (2)
3 25 112 04 4 25 157 01 5 25 086 24 6 52 468 15 7 X-286-17 8 52 025 36	1/4-20 x 5/8 (4) Spacer (4) Fan Screw, Hex Machine 3/8-24 x 1-1/4 Washer, Plain Key, Square 3/16 x 7/8 Flywheel	2 52 559 01 3 X-380-1 4 X-25-63 5 25 041 09 6 25 155 02 7 X-426-9 8 52 353 18 9 25 050 03	Pump, Fuel Assembly (Includes Key Numbers 3 thru 6) Connector, Straight Washer, Plain 1/4 (2) Gasket, Fuel Pump Connector, Hose Clamp, Hose (4) Line, Fuel, 8" Filter, Fuel
GOVERNOR		10 15 353 04	Line, Fuel, 11-1/2"
KEY PART NO. NO.	DESCRIPTION	IGNITION	
1 231355 2 X-25-12 3 237022 4 A-235743-S	Pin, Governor Stop Washer, Plain 1/4 Washer, Thrust Kit, Governor Gear	KEY PART NO. NO. 1 25 755 03	DESCRIPTION  Kit, Rectifier-Regulator
5 52 078 04 6 X-25-102 7 X-269-28 8 X-25-72 9 52 090 23 10 277341	Shaft, Governor Cross Washer, Plain 1/4 (2) Retainer, Governor Washer, Plain 1/4 (2) Lever, Speed Control Washer. Tension	2 X-132-5 3 236602 4 237878 5 X-67-51 6 210281	(Includes Key Number 2) Screw, Hex Cap 1/4-20 x 5/8 (2) Connector, 3 Contact Kit, Stator (Includes Key Number 5) Screw, Hex Cap #10-24 x 3/4 (2) Clip (2)
11 52 158 07 12 25 086 15 13 52 089 07 14 X-81-1 15 X-25-63 16 52 186 09 17 52 211 04	Bushing, Throttle Control Lever Screw, Hex Washer Head 1/4-20 x 1 Spring, Governor Nut, Hex 1/4-20 Washer, Plain 1/4 Arm, Governor Screw, Round Head, Square Neck	7 X-67-64  8 41 155 03 9 220297 10 52 313 02 11 52 132 02 12 52 126 08 13 25 086 15	Screw, Hex Washer Head #10-32 x 7/16 Connector, 2 Contact Grommet, Rubber Grommet Spark Plug (2) Bracket, Module Screw, Hex Washer Head
18 25 141 03 19 25 158 08 20 52 079 07 21 52 079 06	1/4-20 x 1 Ring, Retaining (4) Bushing, Linkage Retaining (4) Linkage, Governor Linkage, Throttle	14 52 584 02 15 25 086 16	1/4-20 x 1 (2) Module, Ignition Screw, Hex Washer Head 1/4-20 x 7/8 (2)
22 52 090 14 23 52 089 08 24 25 086 21	Lever, Throttle Spring, Torsion Screw, Hex Washer Head 1/4-20 x 5/8	NOT ILLUSTRATE 47 518 33	D Lead, Violet, Rectifier-Regulator (11", 14 Gauge, Uninsulated Push On Tab Terminals)
25 X-67-97 26 235778 27 25 431 01	Screw, Hex Washer Head #10-24 x 3/8 (3) Clamp, Cable (3) Bushing, Speed Control Lever	52 518 19	Lead, White, Module To Connector (19-1/2", 14 Gauge, Insulated Push On Tab, Uninsulated Push On Tab Terminals)
28 X-70-3 29 52 086 05	Nut, Hex #10-32 Screw, Hex Head #10-32 x 7/8	NOTE: All compor 1 inch = 25	nent dimensions given in U.S. inches

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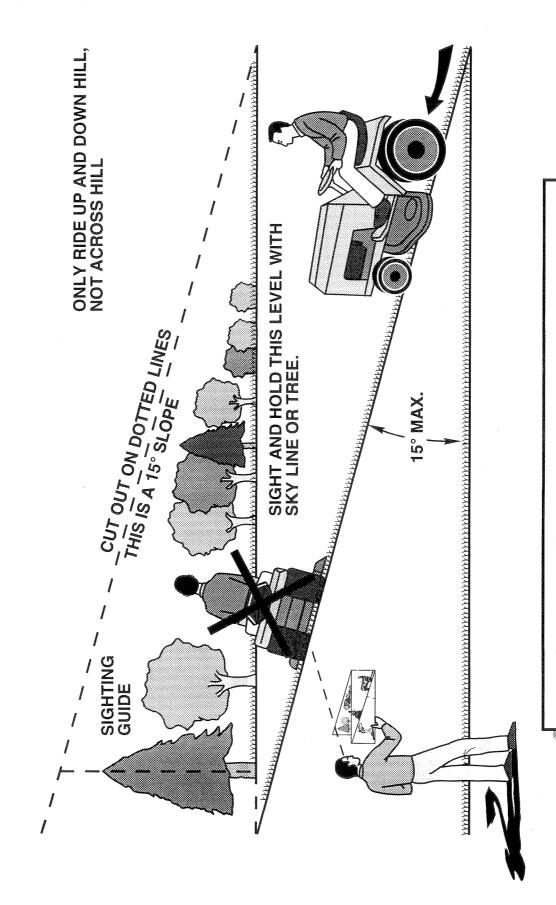
# **KOHLER ENGINE - MODEL NUMBER MV18S, TYPE NUMBER 58560**

OIL	PAN			52 108 10	Ring Set .010" (2)
	PART NO.	DESCRIPTION	LOV	52 108 11 52 108 12 V OIL PRESSU	
1 2	X-67-64 52 050 03	Screw, Hex Washer Head #10-32 x 7/16 (2) Filter, Oil Pickup		PART NO.	DESCRIPTION
3 4 5	52 199 14 X-702-14 52 054 07	Oil Pan (Includes Key #4 thru 6) Plug, Cup 1-1/16 Elbow, Street	1	X-75-23	Plug, Pipe 1/8 N.P.T.F.
6	X-75-38	Plug, Hex, Countersunk 1/4 N.P.T.F.	CAN	ISHAFT & VAL	_VES
7 8	X-75-10 52 086 12	Plug, Square Head 3/8 N.P.T.F. (2) Screw, Hex Washer Head 5/16-18 x 1-1/4 (9)		PART NO.	DESCRIPTION
9	52 032 10	Seal, Oil, Rear	1 2	52 012 09 52 019 03	Camshaft Tappet (4)
OIL	FILTER		4	41 755 10 52 413 01	Kit, Retainer (4) Rotator, Exhaust Valve (2)
	PART NO.	DESCRIPTION	6 7	25 089 01 52 016 05 52 017 08 52 032 13	Spring, Valve (4) Valve, Exhaust (2) Valve, Intake (2)
1 2	52 050 02 82 755 23	Oil Filter Kit, Oil Filter Adaptor (Includes Key Numbers 3 thru 5)		230011	Seal, Íntake Valve Stem (2) Retainer, Intake Valve (2)
3	X-55-15	Screw, Hex Socket Head 5/16-18 x 1-1/4 (2)	OIL	PUMP	
4	X-75-23	Plug, Hex, Countersunk		PART NO.	DESCRIPTION
5	52 041 16	Gasket, Oil Filter	1	X-280-25	Pin, Roll
PIST	ON & ROD		3	52 144 05 52 422 01	Shaft, Oil Pump Spacer, Shim (As Required, Maximum of 2)
	PART NO.	DESCRIPTION	5	52 043 05 52 393 09 52 096 03	Gear, Oil Pump Rotor Set Cover, Oil Pump
1	52 067 67 52 067 68	Connecting Rod, Standard (2) Connecting Rod .010" (2)	7	X-67-64	Screw, Hex Washer Head #10-32 x 7/16 (4)
2	52 874 11 52 874 12 52 874 13	Piston with Ring Set, Standard (2) Piston with Ring Set .003" (2) Piston with Ring Set .010" (2)	NOT	ILLUSTRATE	)
Ó	52 874 14 52 874 15	Piston with Ring Set .020" (2) Piston with Ring Set .030" (2)		82 522 30 52 755 94	Short Block Gasket Set
3 4	230004 52 108 09	Retainer, Piston Pin (4) Ring Set, Standard and .003" (2)		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. 917.257720

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# **CRAFTSMAN®**

18.0 HP IC ELECTRIC START 44" MOWER 6 SPEED TRANSAXLE GARDEN TRACTOR

Each tractor has its own model number. Each engine has its own model number.

The model number for your tractor will be found on the model plate located under the seat.

The model number for your engine will be found on the blower housing of the engine.

All parts listed herein may be ordered from any Sears, Roebuck and Co. Service Center/Department and most Retail Stores.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- PRODUCT TRACTOR
- MODEL NUMBER 917.257720
- ENGINE MODEL NO. MV18S-58556
- PART NUMBER
- PART DESCRIPTION

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