Owner's Manual

CRAFTZMAN®

GARDEN TRACTOR

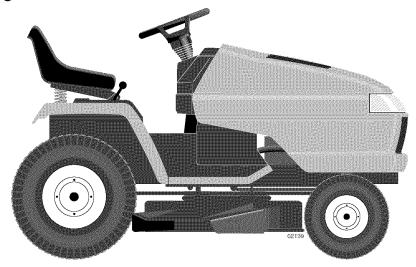
26.0 HP, 54" Mower

Electric Start

Automatic Transmission

Model No.

917.276380





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

IMPORTANT:

Read and follow all Safety Rules and Instructions before operating this equipment. For answers to your questions about this product, Call:

1-800-659-5917

Sears Craftsman Help Line

5 am - 5 pm, Mon - Sat

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WARRANTY

LIMITED WARRANTY ON CRAFTSMAN RIDING EQUIPMENT

For two (2) years from the date of purchase, if this Craftsman Riding Equipment is maintained, lubricated and tuned up according to the instructions in the owner's manual, Sears will repair or replace free of charge any parts that are found to be defective in material or workmanship according to the guidelines of coverage listed below. Sears will also provide free labor for these applicable warranted parts for the two full years. During the first 30 days of purchase, there will be no charges to service the product at your home for issues covered by this warranty. (See exclusions below). For your convenience, IN HOME warranty service will still be available after the first 30 days of purchase, but a trip charge will apply. This charge will be waived if the Craftsman product is dropped off at an authorized Sears location. For the nearest authorized Sears location, please call 1-800-4-MY-HOME®. This warranty applies only while this product is within the United States.

This Warranty does not cover:

- Expendable items which become worn during normal use, including but not limited to blades, spark plugs, air cleaners, belts, and oil filters.
- Standard Maintenance Servicing, oil changes, or tune-ups
 Tire replacement or repair caused by punctures from outside objects, such as nails,
 thorns, stumps, or glass.
- Repairs necessary because of operator abuse, including but not limited to, damage caused by towing objects beyond the capability of the riding equipment, impacting objects that bend the frame or crankshaft, or over-speeding the engine.
- Repairs necessary because of operator negligence, including but not limited to, electrical and mechanical damage caused by improper storage, failure to use the proper grade and amount of engine oil, failure to keep the deck clear of flammable debris, or failure to maintain the equipment according to the instructions contained in the owner's manual.
- Engine (fuel system) cleaning or repairs caused by fuel determined to be contaminated or oxidized (stale). In general, fuel should be used within 30 days of its purchase date.
- Normal deterioration and wear of the exterior finishes, or product label replacement.
- Riding equipment used for commercial or rental purposes.

LIMITED 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. During the first 30 days of purchase, there will be no charges to replace the battery at your HOME. After the first 30 days, for your convenience, IN-HOME warranty service will still be available but a trip charge will apply. This charge will be waived if the Craftsman product is dropped off at an authorized Sears location. For the nearest authorized Sears location, please call 1-800-4-MY-HOME®.

This battery warranty applies only while this product is within the United States.

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

Sears, Roebuck and Co., Dept.817WA, Hoffman Estates, IL 60179

SAFETY RULES

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.

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

AWARNING: Do not coast down a hill in neutral, you may lose control of the tractor.

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

WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

I. GENERAL OPERATION

- Read, understand, and follow all instructions on the machine and in the manual before starting.
- Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- 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 blades.
- Be sure the area is clear of bystanders before operating. 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.

- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blades when crossing gravel surfaces.
- Do not operate machine without the entire grass catcher, discharge guard, or other safety devices in place and working.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Disengage blades when not mowing. Shut off engine and wait for all parts to come to a complete stop before cleaning the machine, removing the grass catcher, or unclogging the discharge guard.
- Operate machine 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.
- Always wear eye protection when operating machine.
- Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.
- Follow the manufacturer's recommendation for wheel weights or counterweights.
- Keep machine free of grass, leaves or other debris build-up which can touch hot exhaust / engine parts and burn. Do not allow the mower deck to plow leaves or other debris which can cause build-up to occur. Clean any oil or fuel spillage before operating or storing the machine. Allow machine to cool before storage.

SAFETY RULES

II. SLOPE OPERATION

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

- Mow up and down slopes, not across.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Choose a low ground speed so that you will not have to stop or shift while on the slope.
- Do not mow on wet grass. Tires may lose traction.
 - Always keep the machine in gear when going down slopes. Do not shift to neutral and coast downhill.
- Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly straight down the slope.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.
- Use extra care while operating machine with grass catchers or other attachments; they can affect the stability of the machine. Do no use on steep slopes.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not mow near drop-offs, ditches, or embankments. The machine could suddenly roll over if a wheel is over the edge or if the edge caves in.

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 in the watchful care of a responsible adult other than the operator.
- Be alert and turn machine off if a child enters the area.
- Before and while backing, look behind and down for small children.

- Never carry children, even with the blades shut off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.

IV. TOWING

- Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.
- Follow the manufacturer's recommendation for weight limits for towed equipment and towing on slopes.
- Never allow children or others in or on towed equipment.
- On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
- Travel slowly and allow extra distance to stop.

V. SERVICE SAFE HANDLING OF GASOLINE

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only approved gasoline container.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never fuel the machine indoors.
- Never store the machine or fuel container where there is an open flame, spark, or pilot light such as on a water heater or other appliances.
- Never fill containers inside a vehicle or on a truck or trailer bed with plastic liner. Always place containers on the ground away from your vehicle when filling.

SAFETY RULES

- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately.
- Never overfill fuel tank. Replace gas cap and tighten securely.

GENERAL SERVICE

- Never operate machine in a closed are.
- Keep all nuts and bolts tight to be sure the equipment is in safe working 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 and remove any fuel-soaked debris. Allow machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before restarting.
- Never make any adjustments or repairs with the engine running.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.
- Maintain or replace safety and instruction labels, as necessary.











- Be sure the area is clear of bystanders before operating. 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.
- Never carry children, even with the blades shut off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator.
- Be alert and turn machine off if a child enters the area.

- Before and while backing, look behind and down for small children.
- Mow up and down slopes (15° Max), not across.
- Choose a low ground speed so that you will not have to stop or shift while on the slope.
- Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly straight down the slope.
- If machine stops while going uphill, disengage blades, shift into reverse and back down slowly.
- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.

PRODUCT SPECIFICATIONS

Gasoline Capacity and Type:	5 Gallons Unleaded Regular	
Oil Type (API-SG-SL):	SAE 10W30 SAE 5W30 (k	
Oil Capacity:	W/Filter W/O Filter	
Spark Plug: (Gap: .030")	Champion F	RC12YC
Ground Speed (MPH):	Forward: 0- Reverse: 0-	
Tire Pressure:	Front: Rear:	14 PSI 10 PSI
Charging System	:15 Amps @	3600 RPM
Battery:	Amp/Hr: Min. CCA: Case size:	280
Blade Bolt Torque	· 15 55 E+ 1	hc

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

Should you experience any problem you cannot easily remedy, please contact a Sears or other qualified service center. We have competent, well-trained technicians and the proper tools to service or repair this tractor.

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

CUSTOMER RESPONSIBILITIES

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

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

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

REPAIR PROTECTION AGREEMENTS

Congratulations on making a smart purchase. Your new Craftsman® product is designed and manufactured for years of dependable operation. But like all products, it may require repair from time to time. That's when having a Repair Protection Agreement can save you money and aggravation.

Purchase a Repair Protection Agreement now and protect yourself from unexpected hassle and expense.

Here's what's included in the Agreement:

- Expert service by our 12,000 profesional repair specialists.
- Unlimited service and no charge for parts and labor on all covered repairs.
- Product replacement if your covered product can't be fixed.
- Discount of 10% from regular price of service and service-related parts not covered by the agreement; also, 10% off regular price of preventive maintenance check.
- Fast help by phone phone support from a Sears technician on products requiring in-home repair, plus convenient repair scheduling.

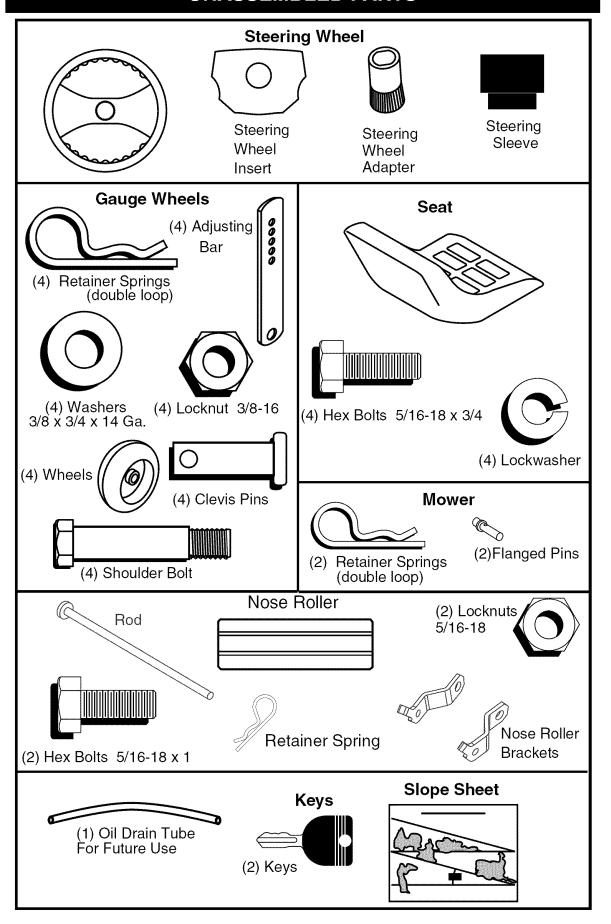
Once you purchase the Agreement, a simple phone call is all that it takes for you to schedule service. You can call anytime day or night, or schedule a service appointment online.

Sears has over 12,000 professional repair specialists, who have access to over 4.5 million quality parts and accessories. That's the kind of professionalism you can count on to help prolong the life of your new purchase for years to come. Purchase your Repair Protection Agreement today! Some limitations and exclusions apply. For prices and additional information call 1-800-827-6655.

SEARS INSTALLATION SERVICE

For Sears professional installation of home appliances, garage door openers, water heaters, and other major home items, in the U.S.A. call **1-800-4-MY-HOME®**

UNASSEMBLED PARTS



ASSEMBLY/PRE-OPERATION

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 you need are listed below.

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

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

TO REMOVE TRACTOR FROM CARTON

UNPACK CARTON

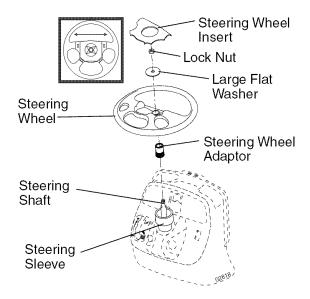
- 1. Remove all accessible loose parts and parts boxes from carton.
- 2. Cut along dotted lines on all four panels of carton. Remove end panels and lay side panels flat.
- 3. Remove mower and packing materials.
- 4. Check for any additional loose parts or cartons and remove.

BEFORE REMOVING TRACTOR FROM SKID

ATTACH STEERING WHEEL

- 1. Remove locknut and large flat washer from steering shaft.
- 2. Position front wheels of the tractor so they are pointing straight forward.
- 3. Slide the steering sleeve over the steering shaft.
- 4. Position steering wheel so cross bars are horizontal (left to right) and slide onto steering wheel adapter.
- 5. Secure steering wheel to steering shaft with locknut and large flat washer previously removed. Tighten securely.
- 6. Snap steering wheel insert into center of steering wheel.
- 7. Remove protective materials from tractor hood and grill.

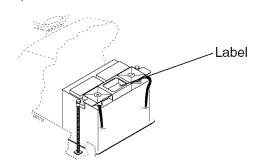
IMPORTANT: Check for and remove any staples in skid that may puncture tires where tractor is to roll off skid.



CHECK BATTERY

1. Lift hood to raised position.

NOTE: If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps. (See "BATTERY" in Maintenance section of this manual for charging instructions).



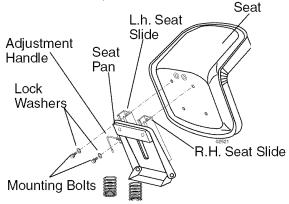
INSTALL SEAT

Seat position should be adjusted forward or backward so that the operator can comfortably reach clutch/brake pedal and safely operate the tractor.

1. Remove the two (2) bolts and flat washers securing the seat to cardboard packing. Keep the two (2) bolts only and place them with the two (2) identical bolts and four (4) washers in the parts bag. Discard the flat washers and cardboard packing.

- 2. Release L.H. seat slide on seat pan by pulling out on adjustment handle and sliding it to the rear position exposing seat mounting holes from bottom. Slide R.H. slide to same rear position.
- 3. Mount rear of seat on slides using mounting bolts and lock washers as shown.
- 4. Pull out on adjustment handle and slide seat all the way forward. Install front mounting bolts and lock washers. Tighten all mounting bolts securely.
- 5. Lower seat into operating position and sit on seat. Press clutch/brake pedal all the way down. If operating position is not comfortable, adjust seat.

To adjust seat: Grasp adjustment handle and pull out, slide seat to desired position and release adjustment handle.



NOTE: You may now roll or drive your tractor off the skid. Follow the appropriate instruction below to remove the tractor from the skid.

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

- 1. Press lift lever plunger and raise attachment lift lever to its highest position.
- 2. Release parking brake by depressing brake pedal.
- Place freewheel control in disengaged position to disengage transmission (See "TO TRANSPORT" in the Operation section of this manual).
- Roll tractor forward off skid.

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

AWARNING: Before starting, read, understand and follow all instructions in the Operation section of this manual. Be sure tractor is in a well-ventilated area. Be sure the area in front of tractor is clear of other people and objects.

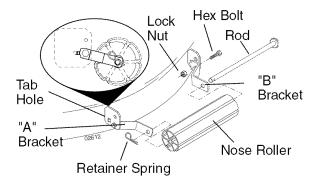
- 1. Be sure all the above assembly steps have been completed.
- 2. Check engine oil level and fill fuel tank with gasoline.
- Place freewheel control in "transmission engaged" position (see "TO TRANSPORT" in Operation section of this manual).
- 4. Sit on seat in operating position, depress brake pedal and set the parking brake.
- Press lift lever plunger and raise attachment lift lever to its highest position.
- 6. Start the engine. After engine has started, move throttle control to idle position.
- 7. Release parking brake.
- 8. Slowly move the motion control lever forward and slowly drive tractor off skid.
- 9. Apply brake to stop tractor and set parking brake.
- 10. Turn ignition key to "STOP" position. Continue with the instructions that follow.

TO ATTACH NOSE ROLLER

1. Assemble brackets "A" and "B" to the inside of mower mounting brackets as shown. Tighten securely.

NOTE: Be sure bracket tabs are positioned in tab holes in mower brackets.

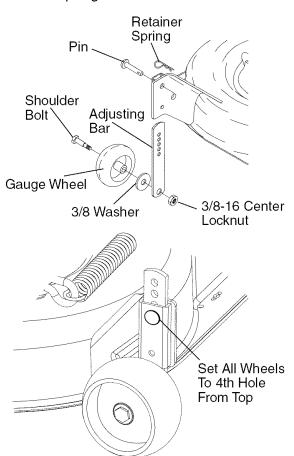
2. Position nose roller between brackets and install rod and retainer spring.



ASSEMBLE GAUGE WHEELS TO MOWER DECK

The gauge wheels are designed to keep the mower deck in proper position when operating mower.

- Slide gauge wheel bar down into bracket channel, Be sure that gauge wheel bar aligning holes are on top. Assemble gauge wheels as shown using shoulder bolts, 3/8 washers and 3/8-16 center locknuts and tighten securely.
- 2. For ease of mower to tractor assembly, set all the gauge wheels in the fourth hole from top. Retain with clevis pins and spring retainers.



INSTALL MOWER AND DRIVE BELT

See MOWER AND DRIVE BELT AS-SEMBLY Supplement Sheet for additional guidance on this assembly.

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

1. Turn steering wheel to the left as far as it will go and position mower on right side of tractor with deflector shield to the right.

- 2. Remove plastic tie strap from mower belt and check belt for proper routing in all mower pulley grooves.
- Slide mower under tractor until it is centered under tractor. DO NOT connect any pins. When properly centered the front mower brackets should be aligned so when the front suspension plate is lowered it should slide between the mower brackets.
- 4. Lower attachment lift lever to lowest position.
- 5. Cut plastic tie and lower front suspension plate.
- 6. ATTACH FRONT PLATE From left side of mower, position front plate assembly between front mower brackets, align holes, position flanged pin notch vertically and insert the pin all the way. The notch is in line with the hole in pin.
- Secure pin with double loop retainer spring between the plate and mower bracket. If necessary, move mower side-to-side to give space between plate and mower bracket.
- 8. Go to right hand side of mower and insert pin and retainer spring in the same manner.
- 9. CONNECT REAR PINS Connect right hand side first. Pull out and hold the spring loaded pin, align hole in suspension arm and release pin. Be sure pin returns to fully seated position and is attached to the suspension arm.
- 10. Go to left side of mower and connect rear pin in the same manner.
- 11. Disengage belt tension rod.
- 12. From right side of tractor, install belt onto engine clutch pulley.

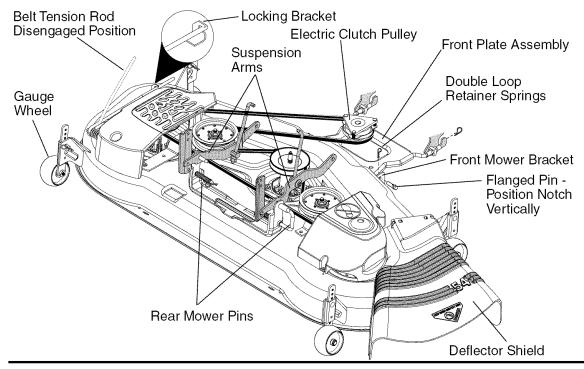
IMPORTANT: Check belt for proper routing in all mower pulley grooves.

- 13. Engage belt tension rod on locking bracket.
- **A CAUTION:** Belt tension rod is spring loaded. Have a tight grip on rod and engage slowly.
- 14. Raise attachment lift lever to highest position.
- 15. Adjust gauge wheels before operating mower as shown in the Operation section of this manual.

CHECK TIRE PRESSURE

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

• Reduce tire pressure to PSI shown in "PRODUCT SPECIFICATIONS" section of this manual.



CHECK MOWER LEVELNESS

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

CHECK FOR PROPER POSITION OF ALL BELTS

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

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.

√CHECKLIST

Before you operate your new tractor, we wish to assure that you receive the best performance and satisfaction from this Quality Product.

Please review the following checklist:

- ✓ All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- ✓ Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated at the factory).

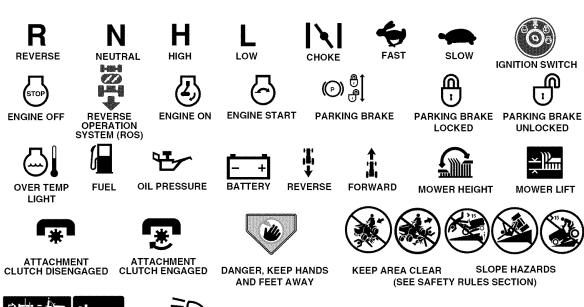
- ✓ Be sure mower deck is properly leveled side-to-side/front-to-rear for best cutting results. (Tires must be properly inflated for leveling).
- Check mower and drive belts. Be sure they are routed properly around pulleys and inside all belt keepers.
- Check wiring. See that all connections are still secure and wires are properly clamped.
- ✓ Before driving tractor, be sure freewheel control is in "transmission engaged" position (see "TO TRANSPORT" in the Operation section of this manual).

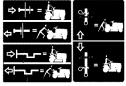
While learning how to use your tractor, pay extra attention to the following important items:

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

OPERATION

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









FREE WHEEL (Automatic Models only)



Failure to follow instructions could result in serious injury or death. The safety alert symbol is used to identify safety information about hazards which can result in death, serious injury and/or property damage.



DANGER indicates a hazard which, if not avoided, will result in death or serious injury.



WARNING indicates a hazard which, if not avoided, could result in death or serious injury.



CAUTION indicates a hazard which, if not avoided, might result in minor or moderate injury.

CAUTION when used without the alert symbol, indicates a situation that **could result in damage** to the tractor and/or engine.



HOT SURFACES indicates a hazard which, if not avoided, could result in death, serious injury and/or property damage.

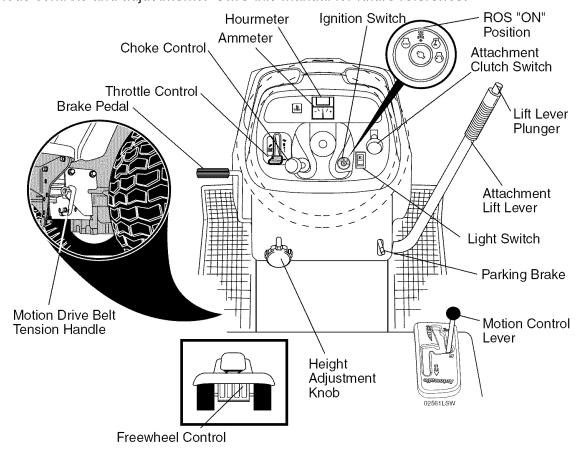


FIRE indicates a hazard which, if not avoided, could result in death, serious injury and/or property damage.

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.



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

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

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

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

BRAKE PEDAL - Used for braking the

tractor and starting the engine.

CHOKE CONTROL - Used when starting a cold engine.

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

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

HOURMETER - Indicates hours of operation.

IGNITION SWITCH - Used for starting and stopping the engine.

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

LIGHT SWITCH - Turns the headlights on and off.

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

MOTION DRIVE BELT TENSION HAN-

DLE - Used when changing motion drive belt and, if necessary, starting engine under extremely cold conditions.

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

REVERSE OPERATION SYSTEM (ROS) "ON" POSITION - Allows operation of mower deck or other powered attachment while in reverse.

THROTTLE CONTROL - Used to control engine speed.

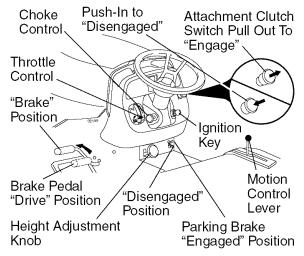


The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend standard safety glasses or a wide vision safety mask worn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

HOW TO USE YOUR TRACTOR TO SET PARKING BRAKE

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

- 1. Depress brake pedal all the way down and hold.
- Pull parking brake lever up and release pressure from brake pedal. Pedal should remain in brake position. Make sure parking brake will hold tractor secure.



STOPPING

MOWER BLADES -

 To stop mower blades, push attachment clutch switch in to disengaged position.

GROUND DRIVE -

 To stop ground drive, depress brake pedal all the way down.

IMPORTANT: The motion control lever returns to neutral (N) position when the brake pedal is fully depressed.

ENGINE -

 Move throttle control between half and full speed (fast) position.

NOTE: Failure to move throttle control between half and full speed (fast) position, before stopping, may cause engine to "backfire".

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

IMPORTANT: Leaving the ignition switch in any position other than "STOP" will cause the battery to discharge and go dead.

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

ACAUTION: Always stop tractor completely, as described above, before leaving the operator's position.

TO USE THROTTLE CONTROL

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

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

ate motion control lever when the parking brake is set or when the brake pedal is depressed. Doing so may result in misadjustment to the drive control system.

The direction and speed of movement is

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

- 1. Start tractor with motion control lever in neutral (N) position.
- 2. Release parking brake.
- 3. Slowly move motion control lever to desired position.

TO ADJUST MOWER CUTTING HEIGHT

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

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

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

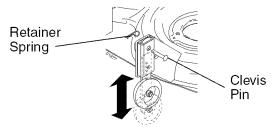
- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first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

TO ADJUST GAUGE WHEELS

Gauge wheels are properly adjusted when they are slightly off the ground when mower is at the desired cutting height in operating position. Gauge wheels then keep the deck in proper position to help prevent scalping in most terrain conditions. **NOTE:** Be sure tractor is on a flat level surface.

- Lower mower and adjust mower to desired cutting height(See "TO ADJUST MOWER CUTTING HEIGHT" in this section of manual).
- 2. Remove retainer spring and clevis pin which secure each gauge wheel bar.
- 3. Lower gauge wheels to ground. Raise gauge wheels slightly to align holes in bracket and gauge wheel bar and insert clevis pin. Gauge wheels should be slightly off the ground.
- 4. Replace retainer spring into clevis pin.
- 5. Be sure all gauge wheels are in the same setting.

IMPORTANT: Be sure to readjust gauge wheels if you change the cutting height of the mower deck.



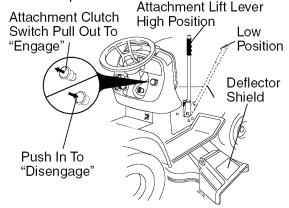
TO OPERATE MOWER

Your tractor is equipped with an operator presence sensing switch. Any attempt by the operator to leave the seat with the engine running and the attachment clutch engaged will shut off the engine. You must remain fully and centrally positioned in the seat to prevent the engine from hesitating or cutting off when operating your equipment on rough, rolling terrain or hills.

- 1. Select desired height of cut.
- 2. Lower mower with attachment lift con-
- 3. Start mower blades by engaging attachment clutch control.

TO STOP MOWER BLADES - disengage attachment clutch control.

ACAUTION: Do not operate the mower without either the entire grass catcher, on mowers so equipped, or the deflector shield in place.



REVERSE OPERATION SYSTEM (ROS)

Your tractor is equipped with a Reverse Operation System (ROS). Any attempt by the operator to travel in the reverse direction with the attachment clutch engaged will shut off the engine unless ignition key is placed in the ROS "ON" position.

AWARNING: Backing up with the attachment clutch engaged while mowing is strongly discouraged. Turning the ROS "ON", to allow reverse operation with the attachment clutch engaged, should only be done when the operator decides it is necessary to reposition the machine with the attachment engaged. **Do not mow in reverse unless absolutely necessary**.

USING THE REVERSE OPERATION SYSTEM -

- Move motion control lever to neutral (N) position.
- 2. With engine running, turn ignition key counterclockwise to ROS "ON" position.
- 3. Look down and behind before backing.
- 4. Slowly move motion control lever to reverse (R) position to start movement.
- 5. When use of the ROS is no longer needed, turn the ignition key clockwise to engine "ON" position.



Engine "ON" Position (Normal Operating)



TO OPERATE ON HILLS

AWARNING: Do not drive up or down hills with slopes greater than 15° and do not drive across any slope. Use the slope guide provided at the back of this manual.

- Choose the slowest speed before starting up or down hills.
- Avoid stopping or changing speed on hills.
- If stopping is absolutely necessary, push brake pedal quickly to brake position and engage parking brake.

IMPORTANT: The motion control lever returns to neutral (N) position when the brake pedal is depressed.

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

TO TRANSPORT

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

- 1. Raise attachment lift to highest position with attachment lift control.
- 2. Pull freewheel control out and into the slot and release so it is held in the disengaged position.
- Do not push or tow tractor at more than two (2) MPH.
- To re-engage transmission, reverse above procedure.

Transmission Engaged

Transmission Disengaged

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.).

TOWING CARTS AND OTHER ATTACH-MENTS

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

BEFORE STARTING THE ENGINE CHECK ENGINE OIL LEVEL

The engine in your tractor has been shipped, from the factory, already filled with summer weight oil.

- 1. Check engine oil with tractor on level ground.
- Unthread and remove oil fill cap/ dipstick; wipe oil off. Reinsert the dipstick into the tube and rest oil fill cap on the tube. Do not thread the cap onto the tube. Remove and read oil level. If necessary, add oil until "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting (See the oil viscosity chart in the Maintenance section of this manual).
- To change engine oil, see the Maintenance section in this manual.

ADD GASOLINE

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

ACAUTION: Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

IMPORTANT: When operating in temperatures below32°F(0°C), use fresh, clean winter grade gasoline to help insure good cold weather starting.

CAUTION: 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.

TO START ENGINE

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

- 1. Be sure freewheel control is in the transmission engaged position.
- Sit on seat in operating position, depress brake pedal and set parking brake.
- 3. Move attachment clutch to disengaged position.
- 4. Move throttle control to fast position
- Pull choke control out for a cold engine start attempt. For a warm engine start attempt the choke control may not be needed.

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

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

WARM WEATHER STARTING (50° F and above)

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

COLD WEATHER STARTING (50° F and below)

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

NOTE: In extreme cold conditions, if engine will not start you may need to disengage the motion drive belt as follows:

- 1. Be sure parking brake is engaged.
- Remove retainer spring from the drive belt tension handle to relieve belt tension.
- 3. Start engine and allow it to warm up for three (3) minutes.
- 4. Shut-off engine and engage parking brake.
- 5. Engage drive belt tension handle and replace the retainer spring.

AUTOMATIC TRANSMISSION WARM UP Before driving the unit in cold weather, the transmission should be warmed up as follows:

- 1. Be sure the tractor is on level ground.
- Place the motion control lever in neutral. Release the parking brake and let the brake slowly return to operating position.
- 3. Allow one minute for transmission to warm up. This can be done during the engine warm up period.
- The attachments can be used during the engine warm-up period after the transmission has been warmed up and may require the choke control be pulled out slightly.

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

PURGE TRANSMISSION

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

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

IMPORTANT: Should your transmission require removal for service or replacement, it should be purged after reinstallation before operating the tractor.

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

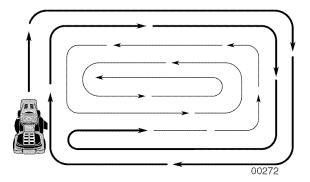
NOTE: During this step there will be no movement of drive wheels. The air is being removed from hydraulic drive system.

- 5. Move motion control lever to neutral (N) position. Shutoff engine and set parking brake.
- Engage transmission by placing freewheel control in engaged position (See "TO TRANSPORT" in this section of manual).
- 7. Sitting in the tractor seat, start engine. After the engine is running, move throttle control to half (1/2) speed. Disengage parking brake.
- 8. Slowly move motion control lever forward, after the tractor moves approximately five (5) feet, slowly move motion control lever to reverse position. After the tractor moves approximately five (5) feet return the motion control lever to the neutral (N) position. Repeat this procedure with the motion control lever three (3) times.

Your transmission is now purged and now ready for normal operation.

MOWING TIPS

- Tire chains cannot be used when the mower housing is attached to tractor.
- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has already been cut. Have the cut area to the right of the tractor. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished.



- 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.

MAINTENANCE

AS	MAINTENANCE SCHEDUL L IN DATES YOU COMPLETE GULAR SERVICE	E	3EFORE	EACHU EACHU	HOUR	SHOUR SHOUR SHERY S	SHOUP OHOUP	O HOL	RS ON SEASONE SEFORE	SERVICE SERVICE	CE DATES
	Check Brake Operation	V	~								
	Check Tire Pressure	1	1								
Ī⊤	Check Operator Presence and ROS Systems	~									
R	Check for Loose Fasteners	V				1 5		1			
I A	Sharpen/Replace Mower Blades			1 /3							
Ι¥	Lubrication Chart			1				1			
Ιċ	Check Battery Level			1 4							
R	Clean Battery and Terminals			1				1			
	Check Transaxle Cooling			'							
	Check V-Belts					/					
	Check Engine Oil Level	V	V								
	Change Engine Oil (with oil filter)				1,	2		1			
lΕ	Change Engine Oil (without oil filter)			✓ 1,2				'			
N	Clean Air Filter			√ 2							
Ģ	Clean Air Screen			1 /2							
ľ	Inspect Muffler/Spark Arrester				1						
ΙË	Replace Oil Filter (If equipped)					1,2					
I ⁻	Clean Engine Cooling Fins					1 2					
	Replace Spark Plug					1	1				
	Replace Air Filter Paper Cartridge					1/2					
	Replace Fuel Filter						1				

- Change more often when operating under a heavy load or in high ambient temperatures.
- 2 Service more often when operating in dirty or dusty conditions.
- 3 Replace blades more often when mowing in sandy soil.
- 4 Not required if equipped with maintenance-free battery.5 Tighten front axle pivot bolt to 35 ft.-lbs. maximum.Do not overtighten.

GENERAL RECOMMENDATIONS

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

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

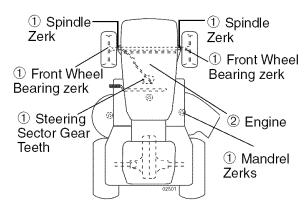
At least once a season, check to see if you should make any of the adjustments described in the Service and Adjustments section of this manual.

 At least 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

- 1. Check engine oil level.
- 2. Check brake operation.
- 3. Check tire pressure.
- 4. Check operator presence and ROS systems for proper operation.
- 5. Check for loose fasteners.

LUBRICATION CHART



- **①General Purpose Grease**
- 2 Refer to Maintenance "ENGINE" Section

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.

TRACTOR

Always observe safety rules when performing any maintenance.

BRAKE OPERATION

If tractor requires more than five (5) feet to stop at highest speed in highest gear on a level, dry concrete or paved surface, then brake must be checked and adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

TIRES

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

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

OPERATOR PRESENCE SYSTEM AND REVERSE OPERATION SYSTEM (ROS)

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

 The engine should not start unless the brake pedal is fully depressed, and the attachment clutch control is in the disengaged position.

CHECK OPERATOR PRESENCE SYSTEM

- When the engine is running, any attempt by the operator to leave the seat without first setting the parking brake should shut off the engine.
- When the engine is running and the attachment clutch is engaged, any attempt by the operator to leave the seat should shut off the engine.
- The attachment clutch should never operate unless the operator is in the seat.

CHECK REVERSE OPERATION (ROS) SYSTEM

 When the engine is running with the ignition switch in the engine "ON" position and the attachment clutch engaged, any attempt by the operator to shift into reverse should shut off the engine.

ROS "ON" Position

Engine "ON" Position (Normal Operating)





When the engine is running with the ignition switch in the ROS "ON" position and the attachment clutch engaged, any attempt by the operator to shift into reverse should NOT shut off the engine.

BLADE CARE

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

▲ CAUTION: Use only a replacement blade approved by the manufacturer of your tractor. Using a blade not approved by the manufacturer of your tractor is hazardous, could damage your tractor and void your warranty.

BLADE REMOVAL

1. Raise mower to highest position to allow access to blades.

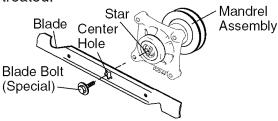
NOTE: Protect your hands with gloves and/or wrap blade with heavy cloth.

- Remove blade bolt by turning counterclockwise.
- Install new or resharpened blade with stamped "THIS SIDE UP" facing deck and mandrel assembly.

IMPORTANT: To ensure proper assembly, center hole in blade must align with star on mandrel assembly.

4. Install and tighten blade bolt securely (45-55 Ft. Lbs. torque).

IMPORTANT: Special blade bolt is heat treated.



TO SHARPEN BLADE

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

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

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
- To check blade balance, you will need a 5/8" diameter steel bolt, pin, or a cone balancer. (When using a cone balancer, follow the instructions supplied with balancer.)

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

• Slide blade on to an unthreaded portion of the steel bolt or pin and hold the

bolt or pin parallel with the ground. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.



BATTERY

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

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open.
- Recharge at 6-10 amperes for 1 hour.

NOTE: The original equipment battery on your tractor is maintenance free.

Do not attempt to open or remove caps or covers. Adding or checking level of electrolyte is not necessary.

TO CLEAN BATTERY AND TERMINALS Corrosion and dirt on the battery and terminals can cause the battery to "leak" power.

- 1. Remove terminal guard.
- Disconnect BLACK battery cable first then RED battery cable and remove battery from tractor.
- Rinse the battery with plain water and dry
- 4. Clean terminals and battery cable ends with wire brush until bright.
- 5. Coat terminals with grease or petroleum jelly.
- 6. Reinstall battery (See "REPLACING BATTERY" in the SERVICE AND ADJUSTMENTS section of this manual).

TRANSAXLE COOLING

The transmission fan and cooling fins should be kept clean to assure proper cooling. Do not attempt to clean fan or transmission while engine is running or while the transmission is hot. To prevent possible damage to seals, do not use high pressure water or steam to clean transaxle.

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

TRANSAXLE PUMP FLUID

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

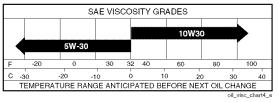
V-BELTS

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

ENGINE

LUBRICATION

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

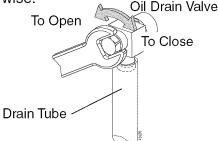


Change the oil after every 50 hours of operation or at least once a year if the tractor is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each eight (8) hours of operation.

TO CHANGE ENGINE OIL

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

- · 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.
- 2. Install the drain tube onto the fitting.
- 3. Open drain valve by using a 7/16" (11mm) wrench turning counterclockwise.



- After oil has drained completely, close the drain valve turning clockwise. Use the 7/16" (11mm) wrench to apply a small amount of torque to keep it closed. Do not over tighten.
- 5. Remove the drain tube and store in a safe place.
- 6. Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PROD-UCT SPECIFICATIONS" section of this manual.
- 7. Use gauge on oil fill cap/dipstick for checking level. Insert dipstick into the tube and rest the oil fill cap on the

21

tube. Do not thread the cap onto the tube when taking reading. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.

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.

AIR FILTER

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

Service air cleaner more often under dusty conditions.

1. Loosen knob and remove cover.

TO SERVICE PRE-CLEANER

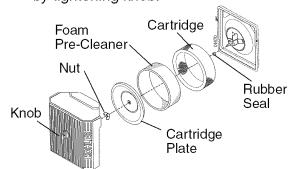
- 2. Slide foam pre-cleaner off cartridge.
- 3. Wash it in liquid detergent and water.
- 4. Squeeze it dry in a clean cloth. Allow it to dry.
- 5. Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.

TO SERVICE CARTRIDGE

Replace a dirty, bent, or damaged cartridge.

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

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



CLEAN AIR SCREEN

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

CLEAN AIR INTAKE/COOLING AREAS

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

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

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

MUFFLER

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

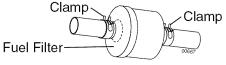
SPARK PLUG(S)

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

IN-LINE FUEL FILTER

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

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



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 or pressure washer to clean your tractor unless the engine and transmission are covered to keep water out. Water in engine or transmission will shorten the useful life of your tractor. Use compressed air or a leaf blower to remove grass, leaves and trash from tractor and mower.

SERVICE AND ADJUSTMENTS



WARNING: TO AVOID SERIOUS INJURY, BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:

- 1. Depress brake pedal fully and set parking brake.
- 2. Place attachment clutch in "DISENGAGED" position.
- 3. Turn ignition key to "STOP" and remove key.
- 4. Make sure the blades and all moving parts have completely stopped.
- 5. Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.

TRACTOR

TO REMOVE MOWER

- 1. Place attachment clutch in "DISEN-GAGED" position.
- 2. Lower attachment lift lever to its lowest position.
- 3. Disengage belt tension rod from lock bracket.

CAUTION: Belt tension rod is spring loaded. Have a tight grip on rod and release slowly.

- 4. Remove mower belt from electric clutch pulley.
- 5. DISCONNÉCT REAR MOWER PINS FIRST Pull out the spring loaded pin, disconnect suspension arm from pin and release pin.
- 6. Go to other side of mower and disconnect rear pin in the same manner.
- 7. Remove the four retainer springs and two flanged pins from front plate assembly and remove plate.
- 8. Raise attachment lift lever to its highest position.

- 9. Turn tractor steering wheel to the left as far as it will go.
- Slide mower out from under right side of tractor.

TO INSTALL MOWER

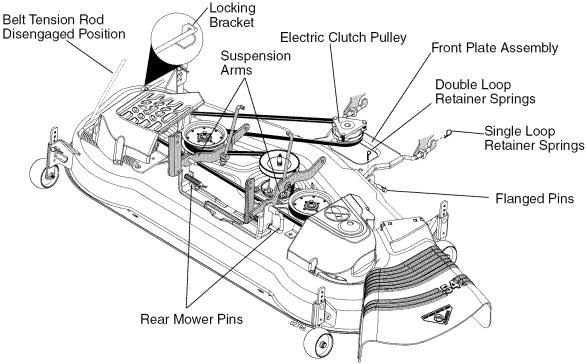
Follow procedure described in "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual. **NOTE:** You will need to reattach front plate assembly to tractor after sliding mower under the tractor.

TO LEVEL MOWER HOUSING

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

SIDE-TO-SIDE ADJUSTMENT

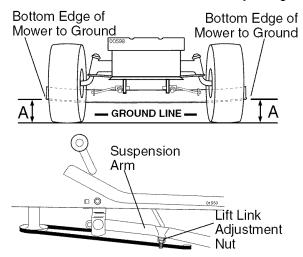
- Raise mower to its highest position.
- Measure height from bottom edge of mower to ground level at front corners of mower. Distance "A" on both sides of mower should be the same.



- If adjustment is necessary, make adjustment on one side of mower only.
- To raise one side of mower, tighten lift link adjustment nut on that side.
- To lower one side of mower, loosen lift link adjustment nut on that side.

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

Recheck measurements after adjusting.



FRONT-TO-BACK ADJUSTMENT

IMPORTANT: Deck must be level sideto-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 blades should be adjusted so the front tip is approximately 1/8" to 1/2" lower than the rear tip when the mower is in its highest position.

A CAUTION: Blades are sharp. Protect your hands with gloves and/or wrap blade with heavy cloth.

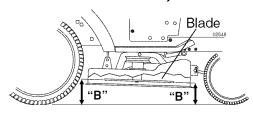
Check adjustment on right side of tractor. Position any blade so the tip is pointing straight forward. Measure distance "B" at front and rear tip of blade

- Before making any necessary adjustments, check that both front plate 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 blade, loosen nut "C" on both front links an equal number of turns.

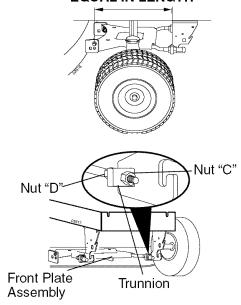
NOTE: Each full turn of nut "C" will change distance "B" by approximately 3/16".

- When distance "B" is 1/8" to 1/2" lower at front than rear, tighten nut "D" against trunnion on both front links.
- To raise front of blade, loosen nut "D" from trunnion on both front links. Tighten nut "C" on both front links an equal number of turns. The two front links must remain equal in length.

- When distance "B" is 1/8" to 1/2" lower at front than rear, tighten nut "D" against trunnion on both front links.
- Recheck side-to-side adjustment.



BOTH FRONT PLATE LINKS MUST BE EQUAL IN LENGTH



TO REPLACE MOWER DRIVE BELT

MOWER DRIVE BELT REMOVAL

- 1. Park tractor on a level surface. Engage parking brake.
- 2. Lower attachment lift lever to its lowest position.
- Disengage belt tension rod from lock bracket.

CAUTION: Belt tension rod is spring loaded. Have a firm grip on rod and release slowly.

- 4. Remove screws from R.H. and L.H. mandrel covers and remove covers.
- Remove any dirt or grass clippings which may have accumulated around mandrels and entire upper deck surface.
- 6. Remove belt from electric clutch pulley, both mandrel pulleys and all idler pulleys.

MOWER DRIVE BELT INSTALLATION

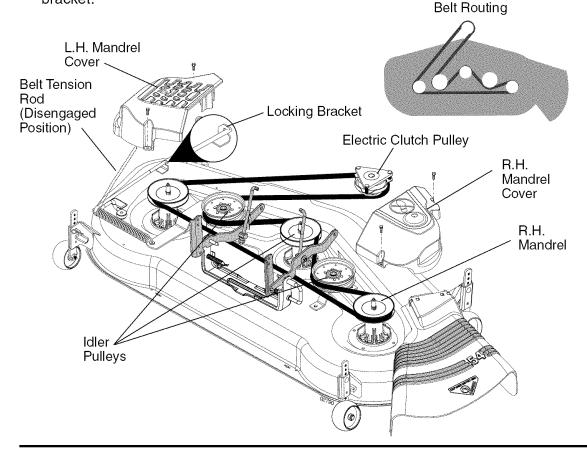
- Install belt around both mandrel pulleys and around idler pulleys as shown.
- 2. Install belt onto electric clutch pulley.

IMPORTANT: Check belt for proper routing in all mower pulley grooves.

- 3. Reassemble R.H. and L.H. mandrel covers. Securely tighten all screws.
- 4. Engage belt tension rod on locking bracket.

▲ CAUTION: Belt tension rod is spring loaded. Have a tight grip on rod and engage slowly.

5. Raise attachment lift lever to highest position.

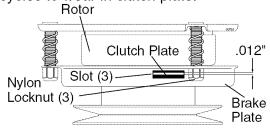


TO ADJUST ATTACHMENT CLUTCH

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 a Sears or other qualified service center.

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

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



TO CHECK AND ADJUST BRAKE

If tractor requires more than five (5) feet to stop at highest speed in highest gear on a level, dry concrete or paved surface, then brake must be checked and adjusted.

TO CHECK BRAKE

- Park tractor on a level, dry concrete or paved surface, depress clutch/brake pedal all the way down and engage parking brake.
- 2. Disengage transmission by placing freewheel control in "transmission disengaged" position. Pull freewheel control out and into the slot and release so it is held in the disengaged position.

The rear wheels must lock and skid when you try to manually push the tractor forward. If the rear wheels rotate, the brake needs to be adjusted or the pads need to be replaced.

TO ADJUST BRAKE

Contact a Sears or other qualified service center.

TO REPLACE MOTION DRIVE BELT

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.

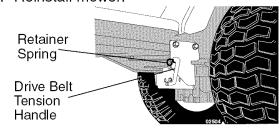
1. Remove mower (See "TO REMOVE MOWER" in this section of manual.)

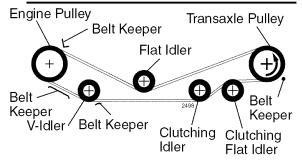
BELT REMOVAL -

- 2. Create slack in belt by removing retainer spring from drive belt tension handle.
- 3. Remove belt from all idler pulleys, transaxle pulley and then from engine pulley.

BELT INSTALLATION -

- 1. Install new belt around engine pulley first, then around transaxle pulley and lastly into all the idler pulleys.
- Check to be sure belt is positioned correctly and is on proper side of all belt keepers.
- 3. Engage the drive belt tension handle and replace the retainer spring.
- 4. Reinstall mower.





TO ADJUST STEERING WHEEL ALIGN-MENT

If steering wheel crossbars are not horizontal (left to right) when wheels are positioned straight forward, remove steering wheel and reassemble with crossbars horizontal. Tighten securely.

FRONT WHEEL TOE-IN/CAMBER

The front wheel toe-in and camber are not adjustable on your tractor. If damage has occurred to affect the front wheel toe-in or camber, contact a Sears or other qualified service center.

TO REMOVE WHEEL FOR REPAIRS

FRONT WHEEL -

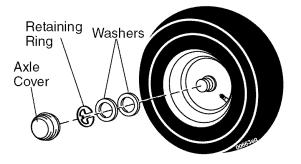
- 1. Block up axle securely.
- 2. Remove axle cover, retaining ring and washers to allow wheel removal.

- 3. Repair tire and reassemble.
- 4. Replace washers and snap retaining ring securely in axle groove.
- 5. Replace axle cover.

REAR WHEEL -

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

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



TO START ENGINE WITH A WEAK BAT-TERY

★WARNING: 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. (See "BATTERY" in the MAINTENANCE section of this manual).

If "jumper cables" are used for emergency starting, follow this procedure:

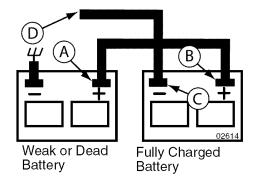
IMPORTANT: Your tractor is equipped with a 12 volt system. The other vehicle must also be a 12 volt system. Do not use your tractor battery to start other vehicles.

TO ATTACH JUMPER CABLES -

- 1. Connect one end of the RED cable to the POSITIVE (+) terminal of each battery(A-B), taking care not to short against tractor chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal (C) of fully charged battery.
- Connect the other end of the BLACK cable (D) to good chassis ground, away from fuel tank and battery.

TO REMOVE CABLES, REVERSE ORDER -

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

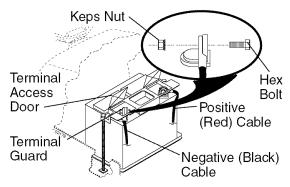


REPLACING BATTERY

AWARNING: Do not short battery terminals by allowing a wrench or any other object to contact both terminals at the same time. Before connecting battery, remove metal bracelets, wristwatch bands, rings, etc.

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

- 1. Lift hood to raised position.
- 2. Remove terminal guard.
- 3. Disconnect BLACK battery cable then RED battery cable and carefully remove battery from tractor.
- 4. Install new battery with terminals in same position as old battery.
- Reinstall terminal guard.
- First connect RED battery cable to positive (+) battery terminal with hex bolt and keps nut as shown. Tighten securely.
- 7. Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt and keps nut. Tighten securely
- 8. Close terminal access doors.
- 9. Close hood.



TO REPLACE HEADLIGHT BULB

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

INTERLOCKS AND RELAYS

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

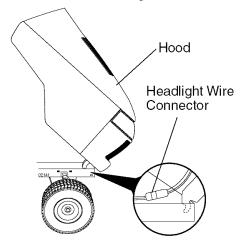
 Check wiring. See electrical wiring diagram in the Repair Parts section.

TO REPLACE FUSE

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

TO REMOVE HOOD AND GRILL AS-SEMBLY

- Raise hood.
- 2. Unsnap headlight wire connector.
- Stand in front of tractor. Grasp hood at sides, tilt toward engine and lift off of tractor.
- When replacing hood, be sure to reconnect the headlight wire connector.



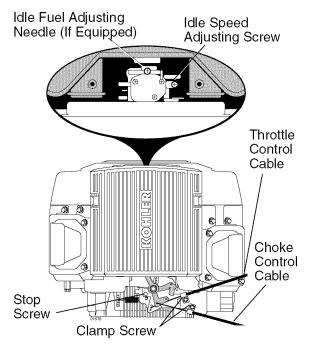
ENGINE

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

TO ADJUST THROTTLE CONTROL CABLE

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:

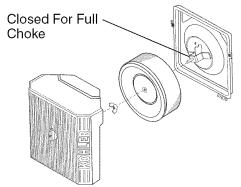
- 1. With engine not running, move throttle control lever to fast position.
- Check that speed control lever is against stop screw. If it is not, loosen casing clamp screw and pull throttle cable until lever is against screw. Tighten clamp screw securely.



TO ADJUST CHOKE CONTROL

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

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



TO ADJUST CARBURETOR

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

In general, turning the adjusting needles in (clockwise) decreases the supply of fuel to the engine giving a leaner fuel/air mixture. Turning the adjusting needles **out** (counterclockwise) increases the supply of fuel to the engine giving a richer fuel/air mixture. **IMPORTANT:** Damage to the needles and the seats in carburetor may result if screw is turned in too tight.

PRELIMINARY SETTING -

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

FINAL SETTING -

1. Start engine and allow to warm for five minutes. Make final adjustments with engine running and shift/motion control lever in neutral (N) position.

NOTE: The high idle is set at the factory and cannot be adjusted.

- Idle speed setting With throttle control lever in slow position, engine should idle at 1750 RPM. If engine idles too slow or fast, turn idle speed adjusting screw in or out until correct idle is attained.
- 3. <u>Idle fuel needle setting</u> With throttle control lever in slow position, turn idle fuel adjusting needle **in** (clockwise) until engine speed decreases and then turn **out** (counterclockwise) approximately 3/4 turn to obtain the best low speed performance.
- 4. Recheck idle speed. Readjust if necessary.

ACCELERATION TEST -

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

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

IMPORTANT: Never tamper with the engine governor, which is factory set for proper engine speed. Overspeeding the engine above the factory high speed setting can be dangerous. If you think the engine-governed high speed needs adjusting, contact a Sears or other qualified service center, which has proper equipment and experience to make any necessary adjustments.

STORAGE

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

AWARNING: 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.

- 1. Clean entire tractor (See "CLEANING" in the Maintenance section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- 3. Lubricate as shown in the Maintenance 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.
- 5. 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 Maintenance section of this manual).
- After cleaning, leave cables disconnected and place cables where they cannot come in contact with battery terminals.
- If battery is removed from tractor for storage, do not store battery directly on concrete or damp surfaces.

ENGINE

FUEL SYSTEM

IMPORTANT: It is important to prevent gum deposits from forming in essential fuel system parts such as carburetor, fuel hose, or tank during storage. Also, 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.

- Empty the fuel tank by starting the engine and letting 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 empty 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 Maintenance section of this manual).

CYLINDER(S)

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

OTHER

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

IMPORTANT: Never cover tractor while engine and exhaust areas are still warm.

TROUBLESHOOTING CHART: See appropriate section in manual unless directed to Sears service center

PROBLEM	CAUSE	CORRECTION			
Will not start	 Out of fuel. Engine not "CHOKED" properly. Engine flooded. Bad spark plug. Dirty air filter. Dirty fuel filter. Water in fuel. Loose or damaged wiring. Carburetor out of adjustment. 	 Fill fuel tank. See "TO START ENGINE" in Operation section. Wait several minutes before attempting to start. Replace spark plug. Clean/replace air filter. Replace fuel filter. Empty fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. Check all wiring. See "To Adjust Carburetor" 			
	10. Engine valves out of adjustment. 11. Extreme Cold Conditions	in Service and Adjustments section. 10. Contact a Sears or other qualified service center. 11. See "To start engine" in operation section.			
Hard to start	 Dirty air filter. Bad spark plug. Weak or dead battery. Dirty fuel filter. Stale or dirty fuel. Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. 	 Clean/replace air filter. Replace spark plug. Recharge or replace battery. Replace fuel filter. Empty fuel tank and refill tank with fresh, clean gasoline. Check all wiring. See "To Adjust Carburetor" in Service and Adjustments section. Contact a Sears or other qualified service center. 			
Engine will not turn over	 Brake pedal not depressed. Attachment clutch is engaged. Weak or dead battery. Blown fuse. Corroded battery terminals. Loose or damaged wiring. Faulty ignition switch. Faulty solenoid or starter. 9. Faulty operator presence switch(es).	 Depress brake pedal. Disengage attachment clutch. Recharge or replace battery. Replace fuse. Clean battery terminals. Check all wiring. Check/replace ignition switch. Check/replace solenoid or starter. Contact a Sears or other qualified service center. 			
Engine clicks but will not start	 Weak or dead battery. Corroded battery terminals. Loose or damaged wiring. Faulty solenoid or starter. 	 Recharge or replace battery. Clean battery terminals. Check all wiring. Check/replace solenoid or starter. 			
Loss of power	 Cutting too much grass/too fast. Throttle in "CHOKE" position. 	 Raise cutting height/reduce speed. Adjust throttle control. 			

TROUBLESHOOTING CHART: See appropriate section in manual unless directed to Sears service center

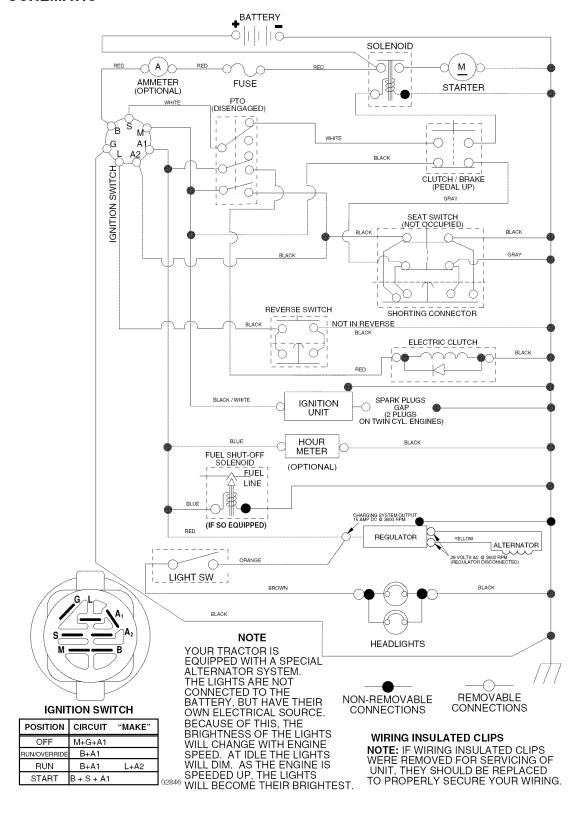
PROBLEM	CAUSE	CORRECTION
Loss of power (cont.)	 Build-up of grass, leaves and trash under mower. Dirty air filter. Low oil level/dirty oil. Faulty spark plug. Dirty fuel filter. Stale or dirty fuel. Water in fuel. Spark plug wire loose. Dirty engine air screen/fins. Dirty/clogged muffler. Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. 	 Clean underside of mower housing. Clean/replace air filter. Check oil level/change oil. Clean and regap or change spark plug. Replace fuel filter. Empty fuel tank and refill tank with fresh, clean gasoline. Empty fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. Connect and tighten spark plug wire. Clean engine air screen/fins. Clean/replace muffler. Check all wiring. See "To Adjust Carburetor" in Service and Adjustments section. Contact a Sears or other qualified service center.
Excessive vibration	 Worn, bent or loose blade. Bent blade mandrel. Loose/damaged part(s). 	 Replace blade. Tighten blade bolt. Contact a Sears or other qualified service center. Tighten loose part(s). Replace damaged parts.
Engine dies when tractor is shifted into reverse	Reverse operation system (ROS) is not "ON" while mower or other attachment is engaged.	Turn ignition key to ROS "ON" position. See Operation section.
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 a Sears or other qualified service center.
Poor cut - uneven	 Worn, bent or loose blade. Mower deck not level. Buildup of grass, leaves, and trash under mower. Bent blade mandrel. Clogged mower deck vent from build-up of grass, leaves, and trash around mandrels. 	 Replace blade. Tighten blade bolt. Level mower deck. Clean underside of mower housing. Contact a Sears or other qualified service center. Clean around mandrels to open vent holes.

TROUBLESHOOTING CHART: See appropriate section in manual unless directed to Sears service center

PROBLEM	CAUSE	CORRECTION
Mower blades will not rotate	 Obstruction in clutch mechanism. Worn/damaged mower drive belt. Frozen idler pulley. 	 Remove obstruction. Replace mower drive belt. Replace idler pulley.
	Frozen blade mandrel.	Contact a Sears or other qualified service center.
Poor grass discharge	 Engine speed too slow. Travel speed too fast. Wet grass. 	 Place throttle control in "FAST" position. Shift to slower speed. Allow grass to dry before
	 Mower deck not level. Low/uneven tire air pressure. 	mowing. 4. Level mower deck. 5. Check tires for proper air pressure.
	6. Worn, bent or loose blade.7. Buildup of grass, leaves and	6. Replace/sharpen blade.Tighten blade bolt.7. Clean underside of mower
	trash under mower. 8. Mower drive belt worn. 9. Blades improperly installed.	housing. 8. Replace mower drive belt. 9. Reinstall blades sharp edge down.
	10. Improper blades used.	10. Replace with blades listed in this manual.
	11. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.	11. Clean around mandrels to open vent holes.
Headlight(s) not working (if so equipped)	 Light switch is "OFF". Bulb(s) or lamp(s) burned out. Faulty light switch. Loose or damaged wiring. Blown fuse. 	 Turn light switch "ON". Replace bulb(s) or lamp(s). Check/replace light switch. Check wiring and connections. Replace fuse.
Battery will not charge	 Bad battery cell(s). Poor cable connections. Faulty regulator (if so equipped). 	 Replace battery. Check/clean all connections. Replace regulator.
	4. Faulty alternator.	4. Replace alternator.
Loss of drive	 Freewheel control in "disengaged" position. Motion drive belt worn, damaged, or broken. 	Place freewheel control in "engaged" position. Replace motion drive belt.
	Air trapped in transmission during shipment or servicing.	3. Purge transmission.
Engine "backfires" when turning engine "OFF"	Engine throttle control not set between half and full speed (fast) position before stopping engine.	between half and full speed

TRACTOR -- MODEL NUMBER 917.276380

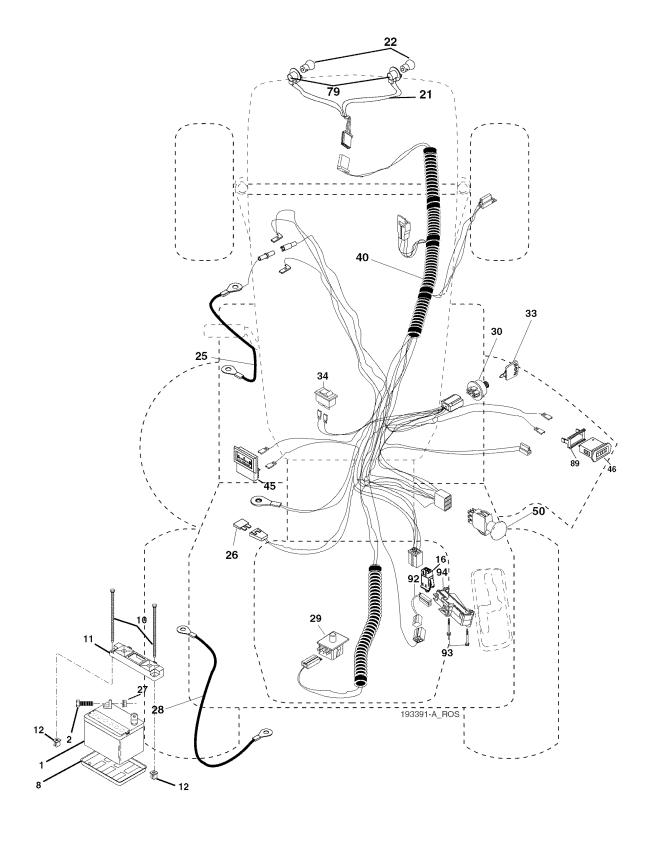
SCHEMATIC



REPAIR PARTS

TRACTOR -- MODEL NUMBER 917.276380

ELECTRICAL



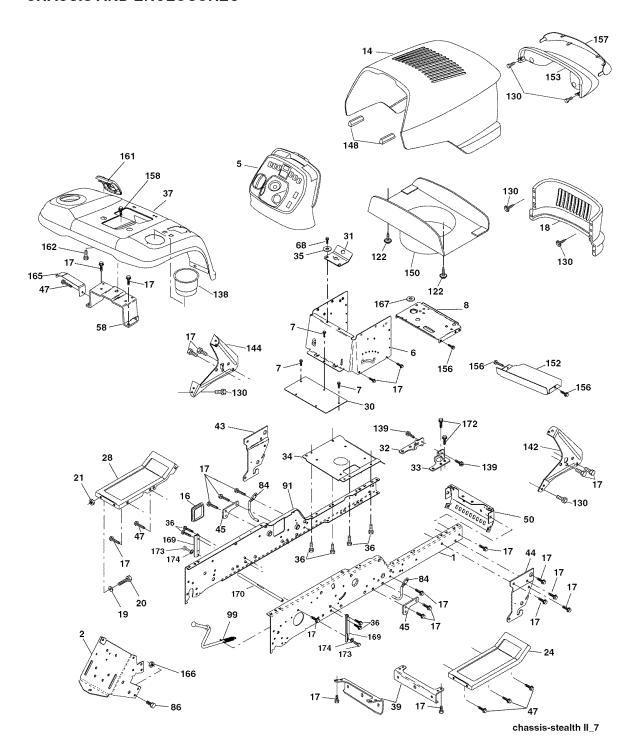
TRACTOR -- MODEL NUMBER 917.276380

ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION
1	144927 74760412	Battery Bolt Hex Head 1/4-20 x 3/4
2 8	7603J	Tray, Battery
10	145211	Bolt 1/4-20 x 7.5 Zinc
11	150109	Hold down Battery Dash Mount
12	145769	Nut Push Nylon 1/4"
16	176138	Switch Interlock Push-In
21	175688	Harness Socket Light W/4152J
22	4152J	Bulb Light
25	185456	Cable
26	108824X	Fuse
27	73510400	Nut Keps Hex 1/4-20 unc
28	170697	Cable, Ground
29	192749	Switch, Plunger
30	193350	Switch, Ign
34	110712X	Switch, Light/Reset
33	140403	Key, Ignition
40	193391	Harness Ign.
42	154336	Cover, Terminal
45	122822X	Ammeter
46	169635	Hourmeter Snap-In
50 79	174652 175242	Switch, PTO Bulbholder Asm Incandescent SV
79 89	169639	
92	193465	Bracket Snap-In Hourmeter Harness Pigtail Reverse Switch
93	192540	Screw Plastite 10-14 x 2.0
94	191834	Module Reverse ROS
J-T	131004	Module Hevelse HOO

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

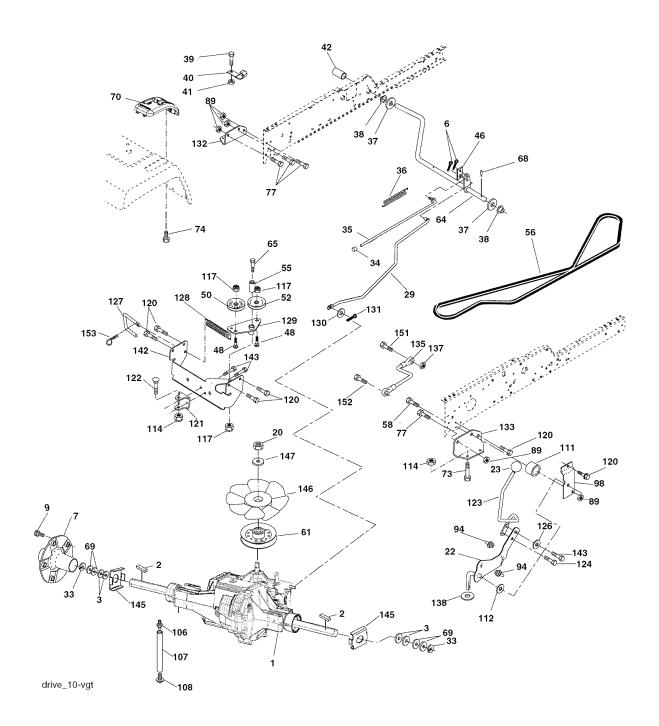
TRACTOR -- MODEL NUMBER 917.276380 CHASSIS AND ENCLOSURES



TRACTOR -- MODEL NUMBER 917.276380 CHASSIS AND ENCLOSURES

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	180375	Rail, Frame RH	84	188164	Upstop 54" Deck
2	175282	Drawbar, Gt	86	74780716	Bolt Fin Hex 7/16-14 unc x 1
5		Dash YTGT 2 Cyl	91	180374	Rail, Frame Lh
6	157882	Dash, Lower Vgt One Piece	99	177143	Rod By Pass
7	17720408	Screw, Thd Cut 1/4-20 x 1/2	122	192512	Screw Hex Wshd 10-32 x 5/8
8	184668	Support, Battery	130	191611	Screw 10 x 3/4 Single Lead-Hex
14	175260X428		138	191121X428	
16	121794X	Cover, Access	139	171873	Bolt Shoulder 5/16-18 TT
17	17000612	Screw 3/8-16 x .75	142	161897	Bracket Dash Rh
18	174515X428		144	161900	Bracket Dash Lh
19	19131312	Washer 13/32 x 13/16 x 12 Ga.	148	164655	Extrusion Bumpers
20	STD523710	Bolt, Fin Hex 3/8-16 x 1	150	175352	Duct Heat Hood
21	STD541437	Nut Crownlock 3/8-16 unc	152	177956	Shield Browning
24		Footrest, RH	153	179761	Lightbox Asm W/Lens
28		Footrest, LH	156	17000512	Screw 5/16-18 x 3/4
30	145052	Saddle, Hydro	157	161840	Lens Bar
31	161419	Brace, Supt 1-pc VGT	158	17670608	Screw Thdrol 3/8-16 x 1/2
32	161327	Bracket, Pivot Chassis Lh	161	179612X428	
33	161326	Bracket, Pivot Chassis Rh	162	142432	Screw Hex 1/4-1/2 unc
34	177018	Plate Asm Engine	165	183554	Bracket Support Tank
35	19111116	Washer 11/32 x 11/16 x 16 Ga.	166	73680700	Nut Lock 7/16-14 unc
36	17060512	Screw 5/16-18 x 3/4	167	184672	Bushing, Snap Nylon 1.250
37	192397X428		169	188598	Bracket Chassis Sway
39	175278	Bracket, Axle Front	170	194667	Rod Blanket Sway Brace
43	136939	Bracket, Spnsn Front Lh	172	17120614	Screw 3/8-16 x .875
44	136940	Bracket, Spnsn Front Rh	173	74780512	Bolt fin 5/16-18 UNC x 3/4
45	187270	Bracket Asm., Susp Chas.	174	10040500	Washer Lock HVY HLCL SPR 5/16
47	17490608	Screw Thdrol. 3/8-16 x 1/2			
50	175476	Bracket, Chassis Front	NOT	. All compon	ent dimensions given in U.S.
58	183569	Bracket Asm., Fender	NOTE		ch = 25.4 mm
68	17490508	Screw Thdrol. 5/16-18 x 1/2		HOIGS I III	51 - <u>2</u> 0. 7 11111

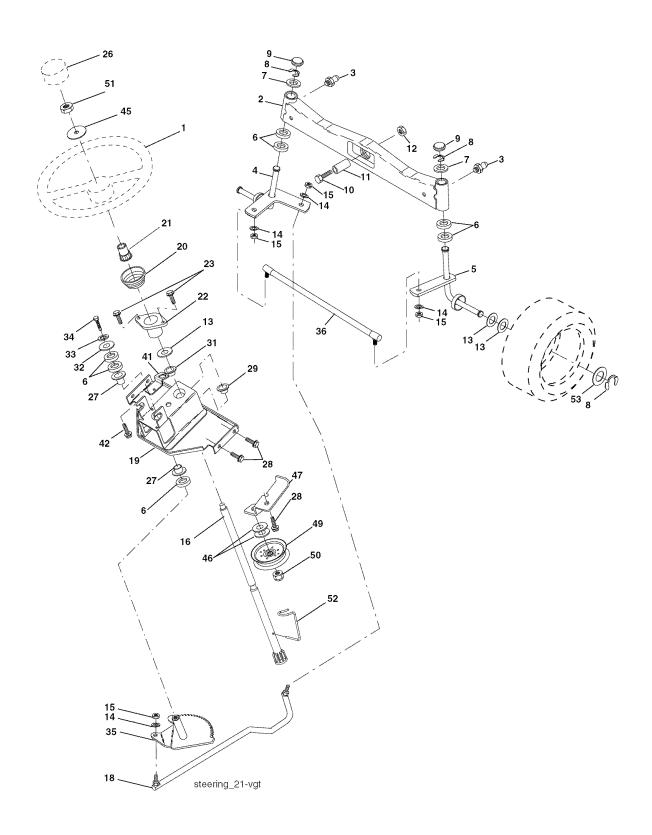
GROUND DRIVE



GROUND DRIVE

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1		Transaxle Hydro Gear	89	73680700	Nut Crownlock 7/16-14 Unc
•		331-3000 (See Breakdown)	94	133835	Fastener Christmas Tree
2	7070E	Key 1/4 x 2.5	98	141004	Bracket Shift
3	7563R	Washer Thrust	106	142918	O-Ring Asm Hydro Gear
6	STD561210	Pin, Cotter	107	154739	Line Fuel Hydro 15" VGT
7	140507	Wheel, Hub Assembly	108	142917	Cap Asm Vent Hydro Gear 70109
9	140080	Bolt, Hub	111	156240	Spacer Shift Lever VGTH
20	73940800	Nut	112	178558	Washer Nylon High Temp
22	180235	Lever Asm Shift Lower	114	73800500	Nut Lock Hx W/Ins 5/16-18 Unc
23	130564	Knob	117	73900600	Nut, Lock Flg. 3/8-16
29	176600	Brake, Rod	120	17000612	Screw 3/8-16 x .75
33	12000053	Ring E	121	175611	Bracket Strap Torque
34	71673	Cap, Parking Brake	122	72010520	Bolt RDHD SQ 5/16-18unc x 2-1/2
35	137648	Rod, Parking Brake	123	192438	Rod Shift
36	149412	Spring, Drive Ground	124	165492	Bolt Shoulder 5/16-18 x .561
37	121749X	Washer 25/32 x 1-1/4 x 16 Ga.	126	166002	Washer SRRTD 5/16ID x 1.0 x .125
38	150035	Nyliner	127	177362	Link Control Clutch
39	74321016	Screw, Fin. #10-24 x 1	128	176624	Spring Drive GRND
40	178575	Actuator, Interlock Switch	129	179473	Bracket Asm Idler Tensioning
41	73931000	Nut Centerlock 10-24 Unc	130	19131016	Washer 13/32 x 5/8 x 16 Ga
42	8883R	Cover, Pedal	131	76020312	Pin Cotter 3/32 x 3/4
46	145170	Retainer, Spring	132	175467	Bracket Mtg Hydro 3500 LH VGT
48	72110614	Bolt, 3/8-16 x 1-3/4 Gr. 5	133	175468	Bracket Mtg Hydro 3500 RH VGT
50	131494	Pulley, Idler, Flat	135	177364	Link Asm Control Hydro 3500
52	127783	Pulley, Idler, Grooved	137	1685H	Nut Lock 5/16-18 NC Thd
55	105706X	Bearing, Idler	138	1370H	Washer Thrust 5/8 x 1.10 x 1/32
56	161597	V-Belt	142	175469	Strap Torque HG-3500
58	74760724	Bolt Fin Hex 7/16-14 x 1-1/2	143	17000512	Screw Thdrol 5/16-18 x 3/4
61	143995	Pulley, Transaxle	145	163168	Washer Axle Flange HG-3000
64	176601	Shaft, Clutch/Brake Pedal	146	140462	Fan 7" Hydro
65	179613	Bolt, Shoulder	147	141322	Washer
68	STD571812	Pin, Roll	151	74760514	Bolt Fin Hex 5/16-18 x 7/8
69	123800X	Washer	152	178705	Bolt hex 5/16-18 x 1
70		Console Automatic YT/GT	153	4997H	Retainer Spring
73	74490548	Bolt Hex Flghd 5/16-18 x 3 Gr. 5		_	
74	142432	Screw Hex Wsh. Hi-Lo 1/4-1/2			nent dimensions given in U.S.
77	74780716	Bolt Hex 7/16-14 x 1-1/4 Gr. 5	inche	s 1 inch = 25.	4 mm

STEERING

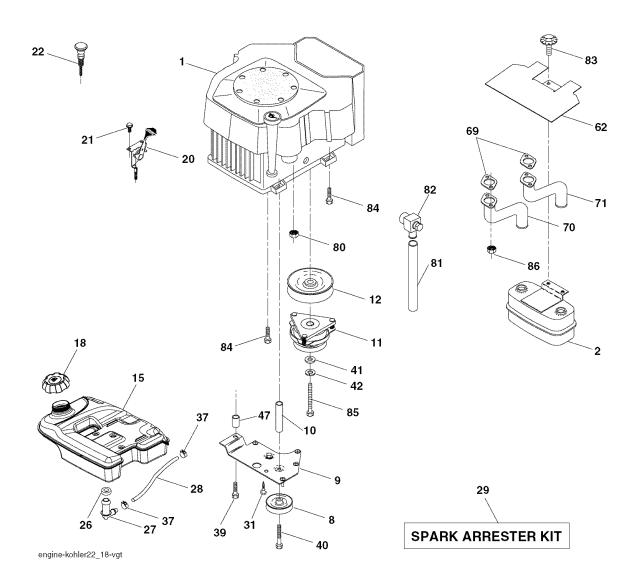


STEERING

KEY NO.	PART NO.	DESCRIPTION
1	186094X428	Wheel, Steering
2	178557	Axle Asm., Front
3	183226	Fitting, Grease
4	161849	Spindle Asm, LH
5	161848	Spindle Asm., RH
6	6266H	Bearing, Race Thrust Harden
7	121748X	Washer 25/32 x 1-5/8 x 16 Ga.
8	12000029	Ring, Klip #T5304-75
9	184946X505	Cap, Spindle
10	74781044	Bolt, Fin Hex 5/8-11 x 2-3/4
11	136518	Spacer Bearing Axle Front
12	73901000	Nut, Lock Flange 5/8-11 Unc
13	121749X	Washer 25/32 x 1-1/4 x 16 Ga.
14	STD551137	Washer, Lock Hvy Hlcl Spr 3/8
15	STD541537	Nut, Lock Center 3/8-24 UNF
16	186814	Shaft Asm., Steering
18	187799	Draglink Vgt
19	156011	Support Asm., Steering Vgt
20	163887X428	
21	186737	Adapter, Wheel Steering
22	155105	Bushing, Strg. Blk
23	152927	Screw
26		Insert, Cap Steering Wheel
27	3366R 17000612	Bearing, Col. Strg.
28 29	17000612 104239X	Screw, 3/8-16 x 3/4
31	138136	Bearing, Flange
32	19111610	Bushing, Nyliner Snap Washer 11/32 x 1 x 10 Ga.
33	STD551131	Washer, Lock Hvy Hlcl Spr 5/16
34	74780512	Bolt Fin Hex 5/16-18unc x 3/4
35	187039	Gear, Sector Steering
36	186799	Tie Rod
41	155246	Bracket Switch Interlock VGT 97
42	17490508	Screw Thdrol 5/16-18 x 1/2 Tyt
45	19183812	Washer 9/16 x 2-3/8 x 12 Ga.
46	19131610	Washer Flat 13/32 x 1 x 10 Ga.
47	179471	Bracket Asm Idler Stationary
49	175820	Pulley Idler Flat
50	73900600	Nut Lock Flg 3/8-16 UNC
51	73940800	Nut Hex Jam Toplock 1/2-20 unf
52	175553	Clip Steering .750
53	188967	Washer Hardened
NOTE	. All compon	ant dimanaiana diyan in LLC

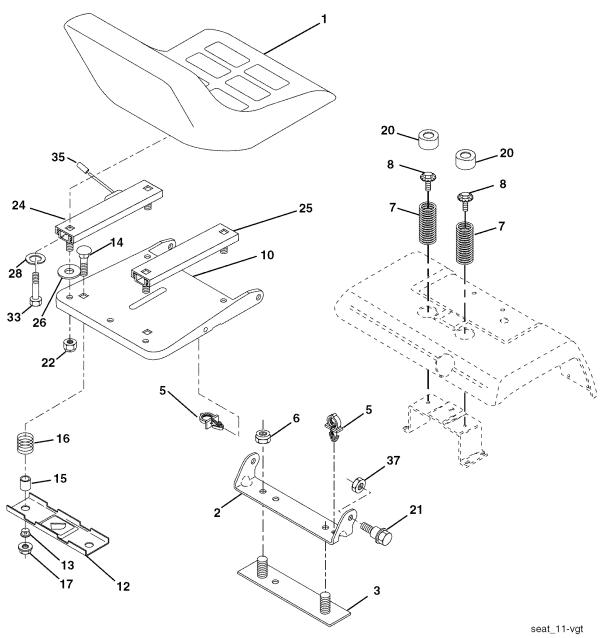
NOTE: All component dimensions given in U. S. inches 1 inch = 25.4 mm

ENGINE



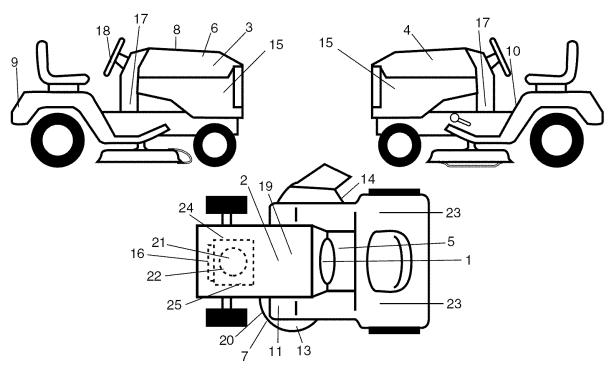
KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1		Engine Kohler Model No.	39	17490636	Screw TT 3/8-16 x 2-1/4 unc
		CV730-0041	40	17490664	Screw TT 3/8-16 x 4 unc
2	149723	Muffler	41	126197X	Washer 1-1/2 OD x 15/32 ID x .250
8	121361X	Pulley V-Idler	42	STD551143	Washer Lock 7/16
9	177748	Keeper Asm. Belt Engine	47	175288	Bushing
10	175287	Bushing	62	146629	Shield Heat Muffler
11	179335	Clutch Electric	69	24-041-49	Gasket
12	143996	Pulley Engine VGT Elect Clutch	70	175545	Tube Exhaust LH
15	179115	Tank Fuel Rear 5.0 Yt/Gt	71	175546	Tube Exhaust RH
18	179124X428	Cap Asm	80	M73030800	Nut Flange
20	177328X428	Control Throttle	81	188800	Tube Drain Oil Easy
21	191611	Screw 10 x 3/4 Single Lead Hex	82	188799	Valve Oil Drain
22	187768X428	Control Choke	83	171877	Bolt 5/16-18 unc x 3/4 W/ Sems
26	3645J	Bushing	84	17060624	Screw 3/8-16 x 1-1/2
27	139277	Stem Tank Fuel	85	179953	Bolt Hex 7/16-20 x 3.75 Gr. 5
28	7834R	Fuel Line	86	184362	Nut Hex Flange Toplock M8-1.25
29	137180	Spark Arrester Kit	MOTE		
31	145006	Clip Push-In Hinged	NOTE		ent dimensions given in U.S. inches
37	123487X	Clamp Hose		1 inch = 25.	4 mm

TRACTOR -- MODEL NUMBER 917.276380 SEAT ASSEMBLY



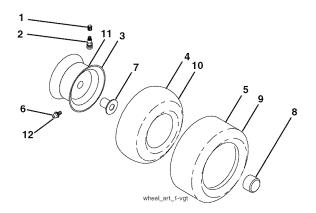
KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	188714	Seat	20	124238X	Cap, Spring Seat
2	140551	Bracket, Pivot Seat	21	171852	Bolt, Shoulder 5/16-18
3	140675	Strap, Fender Assembly	22	73680500	Nut Crown Lock 5/16-18
5	145006	Clip, Push In, Hinged	24	177946	Track Slide Seat LH
6	STD541437	Nut 3/8-16 Unc	25	177947	Track Slide Seat RH
7	124181X	Spring, Seat Cprsn	26	19111012	Washer 11/32 x 5/8 x 12 Ga.
8	171877	Bolt 5/16-18Unc x 3/4 w/Sems	28	10010500	Washer Split
10	182493	Pan, Seat	33	74780512	Bolt Fin Hex 5/16-18 UNC x 3/4
12	174648	Bracket, Mounting Switch	35	178426	Cap Vinyl 1.00 x .34 Red
13	121248X	Bushing, Snap	37	73800500	Nut, Lock Hx w/lns. 5/16-18
14	72050412	Bolt, Carriage 1/4-20 x 1-1/2			
15	121249X	Spacer, Split			
16	123740X	Spring, Cprsn	NOTE	E: All compon	ent dimensions given in U.S.
17	123976X	Nut, Lock 1/4 Lge Flg Gr. 5		inches 1 in	ch = 25.4 mm

DECALS



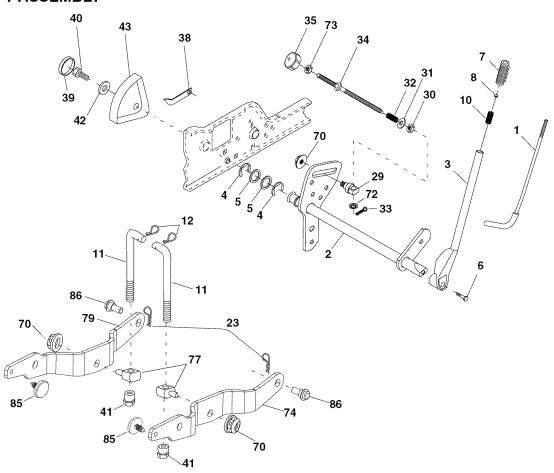
KEY				PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	195892	Decal Dash	17	196189	Decal Dash Panel
2	149516	Decal Battery DNGR/PSN	18	164065	Decal Insert Strg
		ENG Asm	19	138047	Decal Battery
3	194023	Decal Hood RH	20	178455	Decal Deck Caution
4	194024	Decal Hood LH	21	177918	Decal Engine
5	140837	Decal Brake Parking Saddle	22	194270	Decal Engine Logo
6	133644	Decal Maintenance	23	106202X	Reflector, Taillight
7	193114	Decal Deck Upstop	24	177916	Decal Engine RH
8	191582	Decal Replacement	25	177917	Decal Engine LH
9	194027	Decal Fender		179768X428	
10	156439	Decal Fender Danger		166960	Decal Drawbar Bypass
11	181252	Decal FTREST		179769X428	Pad Footrest RH
13	178482	Decal Deck Heavy Duty		195841	Owner's Manual, English
14	188298	Decal V-Belt Schem		195842	Owner's Manual, Spanish
15	198326	Decal Hood Side Pnl			
16	177914	Decal Engine			

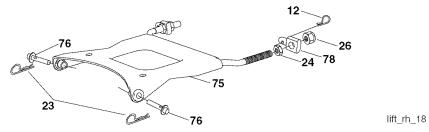
WHEELS AND TIRES



	PART	DECODIDATION
NO.	NO.	DESCRIPTION
1	59192	Cap Valve Tire
2	65139	Stem Valve
2 3	106228X417	Rim Asm Front
4	8134H	Tube, Front (Service Item Only)
5	105588X	Tire, Front
6	278H	Fitting Grease (Front Wheel Only)
7	9040H	Bearing Flange(Front Wheel Only)
8	104757X428	Cap Axle (Front Wheel Only)
9	106230X	Tire Rear
10	7154J	Tube Rear (Service Item Only)
11	106277X417	Rim Asm Rear
12	6856M	Fitting Grease
	144334	Sealant, Tire (10 oz. Tube)
NOTE	. All compon	ant dimensione given in LLC

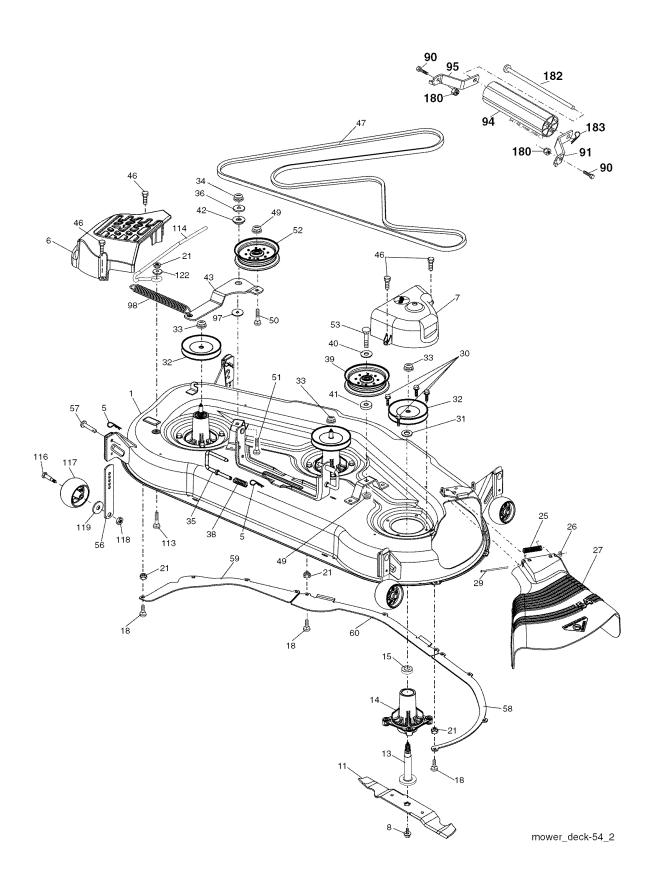
LIFT ASSEMBLY





	PART	DESCRIPTION		PART	DESCRIPTION
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	121006X	Rod Asm., Lever	35	138057	Knob, Inf 3/8-16 unc
2	180045	Shaft Asm., Lift Vgt	38	155097	Pointer, Height Indicator
3	159189	Lever Asm., Lift Rh	39	123935X	Plug, Hole
4	12000022	E-Ring Truarc #5133-87	40	17060516	Screw Hex Wsh 5/16-18 x 1
5	19292016	Washer 29/32 x 1-1/4 x 16 Ga.	41	175994	Nut, Lift Link 7/16-20
6	71110624	Bolt, Fin Hex 3/8-16 x 1-1/2	42	19112410	Washer 11/32 x 1-1/2 x 10 Ga.
7	175830	Grip, Handle Fluted	43	123934X	Scale, Indicator Height
8	175831X505	Plunger, Button	70	145212	Nut Hex Flange Lock
10	183894	Spring	72	110452X	Nut Push Phos & Oil
11	175375	Link Lift	73	73350600	Nut Hex Jam 3/8-16 unc
12	163552	Retainer Spring	74	187277	Arm Susp. Rear RH
23	STD624008	Retainer, Spring	75	175805	Plate Asm. Susp. Front
24	73350800	Nut, Jam Hex 1/2-13 unc	76	175560	Pin, Flange
26	73800800	Nut Lock 1/2-13 unc	77	176205	Trunnion Susp. Arm
29	150233	Trunnion, Infin Height	78	175689	Trunnion Susp. Front
30	110807X	Nut, Special	79	187276	Arm, susp. R LH
31	STD551037	Washer 13/32 x 5/8 x 16 Ga.	85	189013	Insert Wear
32	137150	Spring, Compression Inf Hgt	86	188528	Bolt Shoulder
33	STD560907	Pin, Cotter 3/32 x 1/2	NOT	E: All compor	nent dimensions given in U.S.
34	137167	Rod, Adj Lift			nch = 25.4 mm
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MOWER DECK

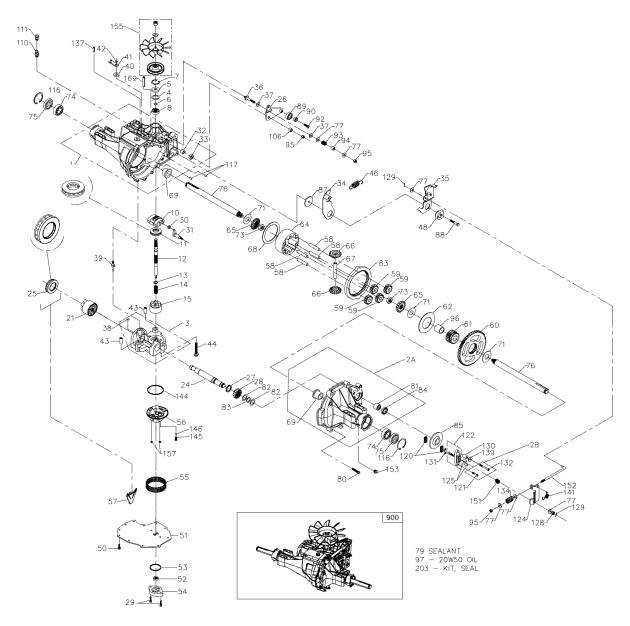


MOWER DECK

	PART	DECORPTION
NO.	NO.	DESCRIPTION
1	194846	Deck Weldment Mower
5	STD624008	Retainer Spring
6 7	187297	Cover Mandrel LH
8	188187 174365	Cover Mandrel RH Bolt 7/16 Asm. Blade
0 11	187254	Blade, Standard (For mulching mowers only)
13	187291	Shaft Asm. w/Lower Bearing
14	187281	Mandrel Housing.
15	110485X	Bearing, Ball, Mandrel
18	72140505	Bolt, Carriage 5/16-18 x 5/8
21	73680500	Nut, Crownlock 5/16-18 unc
25	178102	Spring, Torsion
26	110452X	Nut, Push
27		Deflector Shield
29	131491	Rod, Hinge
30 31	173984 187690	Screw, Thdroll Washer Head Washer, Spacer Mower Vented
32	153535	Pulley, Mandrel
33	178342	Nut, Flg. Top Lock Cntr. 9/16
34	73680600	Nut
35	188635	Pin Suspension Rear
36	19131316	Washer 13/32 x 13/16 x 16 Ga.
38	188657	Spring Compression
39	187284	Pulley, Idler, Stationary
40	19131312	Washer 13/32 x 13/16 x 12 Ga
41 42	19132203 165723	Washer 13/32 x 1-3/8 x 3 Ga Spacer, Retainer
43	196216	Arm, Idler
46	137729	Screw, Thdroll. 1/4-20 x 5/8
47	191273	V-Belt, Mower
49	73900600	Nut, Lock Flg. 3/8-16 unc
50	72110616	Bolt, Carr. 3/8-16 x 2
51	72110610	Bolt
52	188460	Pulley Idler Clutching
53 56	74780636	Bolt Fin Hex 3/8-16 UNC x 2-1/4
57	155986 156941	Bar Pnt Adj. Pin Head Rivet
58	187342	Baffle Right
59	187344	Baffle Left
60	187607	Baffle Center
90	74760516	Bolt Hex HD 5/16-18 Unc
91	180535	Bracket Noseroller RH
94	176066	Noseroller
95	180534	Bracket Noseroller LH
97	19133210	Washer 13/32
98 113	187282 72110508	Spring Clutch Drive Bolt Rdhd Sqnk 5/16-18 x 3/4
114	187556	Rod Tension Relief
116	193406	Bolt, Shoulder
117	174873	Gauge Wheel
118	73930600	Nut, Centerlock 3/8-16 unc
119	19121414	Washer 3/8 x 7/8 x 14 Ga.
122	187557	Bushing Tension Relief
180	73800500	Nut Lock Hx W/Ins 5/16-18 UNC
182 183	179127 163552	Rod Roller Nose Retainer Spring
103	187292	Mandrel Asm. Service (Includes Key Nos. 13-15 and 33)
	196101	Replacement Mower, Complete
		,

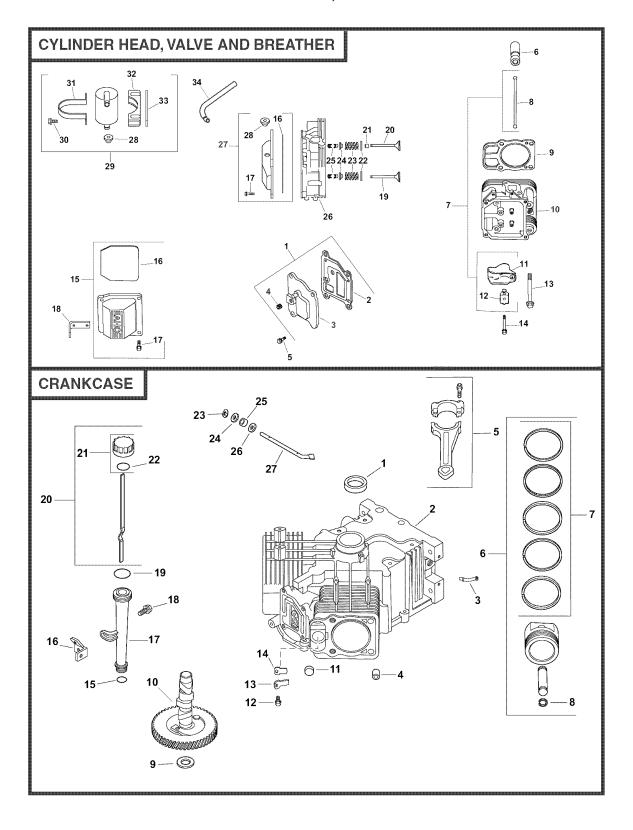
NOTE: All component dimensions given in U. S. inches 1 inch = 25.4 mm

TRACTOR -- MODEL NUMBER 917.276380 TRANSAXLE--MODEL NUMBER 331-3000



TRACTOR -- MODEL NUMBER 917.276380 TRANSAXLE--MODEL NUMBER 331-3000

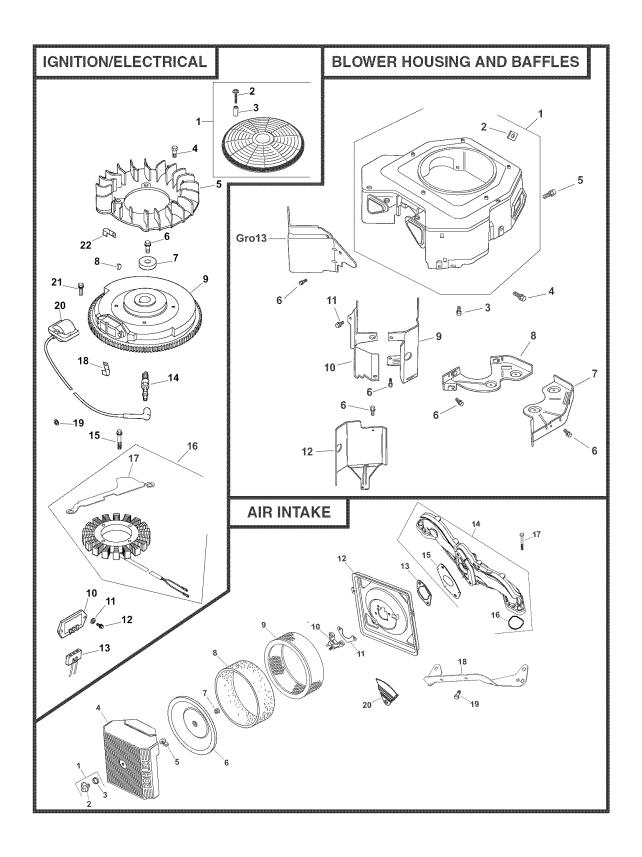
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	161122	Kit, housing main Main housing Lip seal	65 66	161150 161151	Gear, differential bevel (310-3000) Gear, differential bevel pinion
2A	193015	Flange bearing Trunnion bushing Cradle bearing Kit, housing r/h R.H. Housing	67 68 69 71 73	161152 161153 169534 161155 161156	(310-3000) Shaft, differential (310-3000) Plate, differential thrust (310-3000) Bearing, flange (310-3000) Washer, flat (1.00 ld) (310-3000) Nut, 5/8-18 hex jam (310-3000)
OD	193016	Flange bearing Needle bearing (sce1412) Lip seal (.875 ID x I.3 0D x .25)	74 75 76	169535 161157 161158	Bearing, ball (310-3000) Seal, lip (310-3000) Shaft, axle (310-3000)
2B	193016	Kit, brake bolt Bolt, hex hd 1/4-20 x 1.25 W/patch Bolt, hex hd 1/4-20 x 2.25 W/patch	77 79 80	142884 178322 161159	Washer, flat Sealant tube Screw, torx head 5/16-18 (310-3000)
3	184703	Kit, center section Center section Bushing .50 X .60 X .50 Bushing .90 X I.02 X .75	81 82 83 84	161160 161161 161162 161163	Bearing, needle (210-3000) Washer, flat (0.880 ID) (310-3000) Ring, retaining (310-3000) Seal, lip (.875 ID x 1.38 OD x .25)
4 5	161125 142932	Plate, bypass Check plug assembly, 044 Check plug assembly, no bleed Spacer (BDP, BDU 10) Seal, lip	85 87 88	161164 178323 178784	(310-3000) Brake disc (310-3000) Washer (310-3000) Screw, 5/16-24x 1 1/2 socket head cap (310-3000)
5 6 7 8 10 11	142928 142933 142934 169524 173159	Retaining ring Retaining ring Bearing, ball Swash plate (BDP, BDU 10) Bearing, thrust (10cc)	89 90 92 93 94	178783 178326 178787 142969 142980	Bearing, ball Spacer, locating (310-3000) Screw (310-3000) Spring Spacer
12 13 14	161126 142978 142977	Shaft, input (31Ò-3000) Washer, block thrust Spring, helical compression	95 96 97	169537 169538 	Nut, nylon insert hex lock 5/16-24 Bearing, sleeve (310-3000) 20W-50 oil 122 oz
15	169898	Kit, cylinder block (10cc) 10CC cylinder block 10CC piston 10CC piston spring Piston seat washer	106 108 110	161166 150800 150813	Spacer, trunnion (310-3000) Plug, plastic shipping O-ring Fitting, plastic hose
21	150786	Block, (BD-21& IHT) 21CC Cylinder block Piston seat washer 21CC piston	111 116	150812 169539	O-ring Breather vent, plastic Vent, plastic Vent, cap Ring, retaining (310-3000)
24 25 26 27	161127 169526 161128 161129	21CC piston spring Shaft, motor (310-3000) Bearing, thrust (21cc) Control arm (310-3000) Spacer (310-3000)	117 120 121 122 124	161168 142883 193019 178329 178330	Pin Brake puck Bolt, hex hd 1/4-20 x 1.25 W/patch Kit, brake yoke Brake arm
28 29 30 31 32	161130 169527 142941 169887 161133	Gear, 16t pinion Capscrew Guide block (BD-21) Trunnion, tapered square Bearing, journal	125 128 129 130 131	170409 170415 170416 170411 142882	Pin, brake actuating Nut, castle 5/16-24 Pin, cotter 3/32x3/4 Spacer, brake torsion spring Brake puck plate
33 34 35 36 37	142940 178318 178319 170421 142967	Seal, lip Return arm (310-3000) Actuating arm (310-3000) Bolt, stud 5/16-24 Friction puck	132 134 137 139 141	193020 178331 178333 161176 178335	Bolt, hex hd 1/4-20 x 2.25 W/patch Brake comp. Spring Pin, spring (310-3000) Washer, flat Spring, brake arm bias
38 39 40 41	184694 169529 142945 142952	Kit, bypåss plate Bypass actuator (IHT) Seal, lip Bypass arm	144 145 146 151	169545 169546 169547 170417	O-ring Spring, relief Steel ball 7/16 Brake spring
42 43 44 46 48 50	142953 142965 150797 184702 178320 178343	Retaining ring Pin Bolt 3/8-24 x 2-1/2 Spring, neutral (310-3000) Puck, adjusting (310-3000) Screw, hex head washer cap screw (IZT) 1/4-20 x 3/4	152 153 155	178336 170434 178337	Brake pull rod Plug, straight thread 9/16-18 Kit, fan/pulley Nut, jam 1/2-20 Washer, OD slotted .53 X 1.63 X .06 Pulley Fan
51 52 53 54 55	169530 169531 144581 161139 178321	Lower cover Geroter assembly O-ring Charge pump housing Kit, filter Gasket .10 X .16 X 4.24	157 169 203	169548 184701 178338	O-ring Pin, spring 5/16 x 1.75 Kit, seal Lip seal 15 x 5 x 37 Lip seal 12 x 25 x 7 Lip seal 10 x 25 x 7
56 57 58 59 60 61	169533 161142 161143 161144 161145 161146	Filter Charge manifold 310-3000 Retainer, motor bearing (310-3000) Pin, carrier (310-3000) Gear, 15t planet (310-3000) Gear, 67t spur (310-3000) Gear, 21t sun (310-3000)			O-ring .103 X 1.862 Seal 25 x 52 x 10 Lip seal .875 ID x I.3 OD x .25 O-ring .070 X .239 Kit, o-ring, manifold Pin, spring 5/16 x 1.75 Pin, spring 1/4 x 1.00
62 63 64	161147 161148 161149	Plate, planet thrust (310-3000) Gear, 51t ring (310-3000) Carrier, planetary (310-3000)	900 NOTE	176056	Transaxle
04	101149	Camer, planetary (310-3000)	NOTE	: All Compone 1 Inch = 25.4	nt Dimensions Given In U.s. Inches MM



HEAD/VALVE/BREATHER

CRANKCASE

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1.	24-033-03-S	Kit, breather cover w/gasket (Includes 2, 3)	1. 2.	24-032-01-S	Seal, front oil Crankcase (USE: Miniblock
2. 3. 4.	24-041-51-S 24-096-87-S M-645020-S	Gasket, breather Cover, breather Screw, hex. flange	3. 4.	24-294-13-S 24-380-13-S	24 782 14) Fitting Pin, locating (6)
5. 6.	25 139 60-S 25-351-01-S	M6x1.0x20 (4) Plug, hex. ctsk. 1/8" Lifter, valve (4)	5. 6.	24-067-13-S 24-067-14-S 24-874-08-S	Connecting Rod (Std.) (2) Connecting Rod (.25) (2) Piston w/Ring Set (Std.) (2)
7. 8.	24-755-66-S 24-411-05-S	Kit, valve train (Includes 8, 11, 12) Rod, push (4)		24-874-16-S 24-874-20-S	(Includes 7, 8) Piston w/Ring Set (.08) Piston w/Ring Set (.25)
9.	24-841-03-S	Kit, cylinder head gasket (2) (Includes 13)	7.	24-874-21-S 24-108-05-S 24-108-06-S	Piston w/Ring Set (.50) Ring Set (Std. & .08) (2) Ring Set (.25)
10. 11. 12.	24-318-72-S 25-186-01-S 24-599-01-S	Head assembly, #2 cylinder Arm, rocker (4) Pivot, rocker arm (4)	8.	24-108-07-S 24-018-01-S	Ring Set (.50) Retainer, piston pin (4)
13. 14.	12 086 16-S 66-086-07-S	Screw, hex. flange M10x1.5x90 (8) Screw, hex. flange	9.	12-422-09-S 12-422-13-S 12-422-07-S	Shim, camshaft (A.R.) Shim, camshaft (A.R.) Shim, camshaft (A.R.)
15.		M6x1.0x34 (4) Kit, valve cover - plain		12-422-08-S 12-422-10-S	Shim, camshaft (A.R.) Shim, camshaft
16. 17.	24-153-28-S M-651030-S	(Includes 16,17) O-Ring Screw, hex. flange	10.	12-422-11-S 12-422-12-S 24-012-16-S	Shim, camshaft (A.R.) Shim, camshaft (A.R.) Camshaft
18.	24-445-01-S	M6x1.0x30 (4) Strap, lifting	11. 12.	52-139-09-S M-545010-S	Plug, cup Screw, hex. flange
19. 20.	24-016-01-S 24-016-02-S 24-017-01-S	Valve, exhaust (Std.) (2) Valve, exhaust (.25) (2) Valve, intake (Std.) (2)	13. 14.	24-018-04-S 24-402-05-S	M5x0.8x10 (2) Retainer, reed (2) Reed, breather (2)
21.	24-017-02-S 66-032-05-S	Valve, intake (.25) (2) Seal, valve stem (2)	15. 16.	12-153-01-S 24-126-19-S 12-123-04-S	O-Ring, lower oil fill tube Bracket, oil fill tube Tube, oil fill
22. 23. 24.	235011-S 24-089-02-S 12-173-01-S	Retainer, spring (4) Spring, valve (4) Cap, valve spring (4)	17. 18.	M-545016-S	Screw, hex. flange M5x0.8x16
25. 26. 27.	12-755-03-S 24-318-69-S	Kit, retainer (4) Head assembly, #1 cylinder Kit, valve cover - breather	19. 20.	12-153-02-S 24-038-04-S	O-Ring, upper oil fill tube Dipstick assembly (Includes 21, 22)
28.	25-313-03-S	(Includes 16,17,29) Grommet, rubber	21. 22.	24-755-46-S 25 153 02-S	Kit, oil fill cap (Includes 22) O-Ring, dipstick
29. 30.	24-755-57-S M-545016-S	Kit, breather separator (Includes 29,31-34) Screw, hex. flange	23. 24. 25.	24-018-09-S M-931010-S 28-032-09-S	Ring, retainer Washer, nylon (top) Seal, governor cross shaft
31.	24-445-02-S	M5x0.8x16 (2) Strap, breather	26. 27.	24-468-15-S 24-144-38-S	Washer (bottom) Shaft, governor cross
32. 33. 34.	24-126-44-S 24-112-12-S 24-326-55-S	Bracket, breather separator Spacer Hose, breather		E: All compone s 1 inch = 25.4	nt dimensions given in U.S. mm
NOT	ILLUSTRATED 24 755 147-S	Kit, cylinder head hardware			



Screw, hex. cap M5x0.8x25 (2)

Screw, hex flange M5x0.8x20

Kit, 15 amp stator

Bracket, stator wire

Washer, plain 1/4"

Module, ignition (2)

(Includes 18)

Clip, cable

IGNITION/ELECTRICAL

KEY PART

NO.

1.

2.

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21.

DESCRIPTION NO. NO. NO. DESCRIPTION 54-755-15-S 24-027-114-S Housing, blower (Includes 2, Kit, grass screen 1. (Includes 2-4, & 24-113-18-S) 24 096 85-S, & 25 086 91-S) Screw, sems hex. hd. (4) Nut, plastic (2) 25-086-117-S 2. 24-100-01-S 24-112-04-S Spacer, grass screen (4) 3. M-551016-S Screw, hex. flange 25-086-47-S M5x0.8x16 Bolt, shoulder M6x1.0x16 (4) 24-157-08-S 4. M-545016-S Screw, hex. flange 12-086-14-S Screw, hex. flange M10 x 1.5 M5x0.8x16 (3) Screw, hex. flange 5. M-545020-S x 46 12-468-07-S Washer, plain 3/8" M5x0.8x20 (4) X-42-15-S Key 6. M-645016-S Screw, hex. flange 24-025-01-S Flywheel M6x1.0x16 (6) 7. 41-403-09-S Réctifier-regulator 24-146-16-S Plate, backing - # 2 side Washer, plain 3/16" (3) Plate, backing - # 1 side X-25-92-S 24-146-20-S 8. 24-086-18-S Screw, phillips hd. 11-16x7/8 24-063-39-S Baffle, cylinder barrel - # 2 9. (2)Connector (3 contact) Spark Plug (2) 236602-S 10. 24-063-58-S Baffle, cylinder barrel - # 1 12-132-02-S side

11.

12.

13

KEY PART

22. 235173-S Člip, cable NOT ILLUSTRATED

M-548025-S

54-755-09-S

24 126 139-S

48-154-02-S

24-584-01-S

M-545020-S

X-25-63-S

24-126-137-S	Bracket, ground strap
24-176-82-S	Harness, wiring
25-454-03-S	Tie, wire (3)
24-113-18-S	Decal, grass screen

25-113-39-S Deca

M-545010-S

24-063-69-S

24-063-60-S

24-096-85-S

25-086-91-S

NOT ILLUSTRATED

KEY PART

BLOWER HOUSING & BAFFLES

NO.	NO.	DESCRIPTION
1.	54-755-01-S	Kit, knob with seal (Includes 2,3)
2.	25-341-04-S	Knob, cover
3.	24-153-20-S	O-Ring
4.	24-096-67-S	Cover, air cleaner
5.	12-100-01-S	Wing Nut
6.	24-096-01-S	Cover, inner air cleaner
7.	231032-S	Seal, breather
8.	24-083-05-S	Precleaner, element
9.	24-083-03-S	Element, air cleaner
10.	24-109-09-S	Cup, fuel spit-back
11.	24-041-13-S	Gasket, fuel spit-back cup
12.	24-094-34-S	Base, air cleaner
13.	24-041-14-S	Gasket, air cleaner base
14.	24-164-51-S	Manifold, intake (Includes 15,16)
15.	24 041 52-S	Gasket, carburetor
16.	24 153 27-S	O-Ring, intake port (2)
17.	M-651040-S	Screw, hex. flange M6x1.0x40 (4)
18.	24 126 130-S	Bracket, air cléaner base
19.	M-545010-S	Screw, hex. flange M5x0.8x10 (2)
20.	24-063-51-S	Baffle, spit-back cup

Screw, hex. flange

Baffle, valley - #2 side

Baffle, valley - #1 side

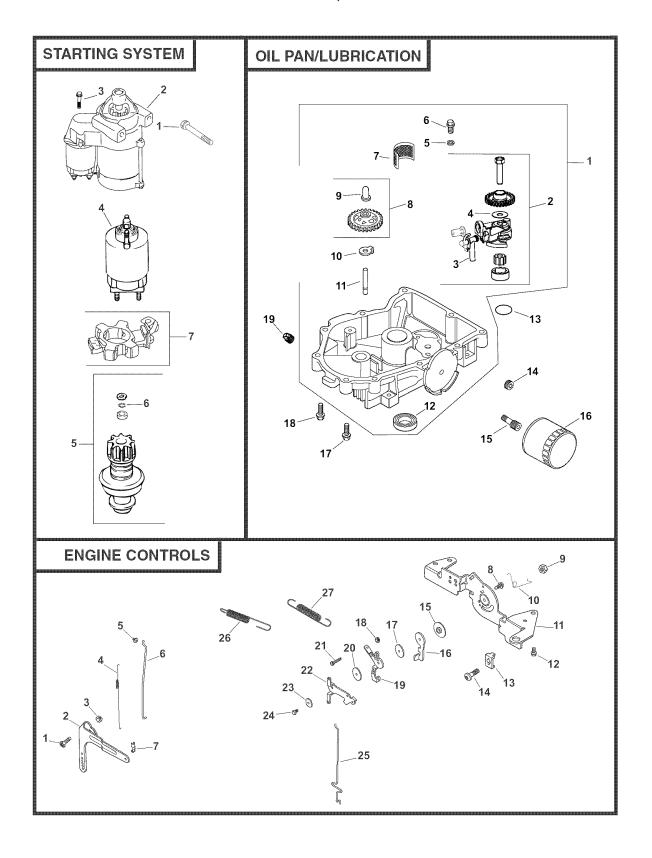
Cover, blower housing

Decal, clear lamination

Screw, tapping 10-16x1/2" (2)

M5x0.8x10 (2)

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



STARTING SYSTEM

KEY NO.	PART NO.	DESCRIPTION
1.	M-839080-S	Screw, hex. flange M8x1.25x80 (2)
2.	25-098-09-S	Starter, solenoid shift (Includes 3-7)
3.	25 086 113-S	Screw, external torx hd. (3)
4.	25-435-05-S	Kit, solenoid (Includes 3)
5.	25-755-33-S	Kit, pinion drive (Includes 6)
<u>6</u> .	25-141-05-S	Ring
7.	25-221-01-S	Kit, brush

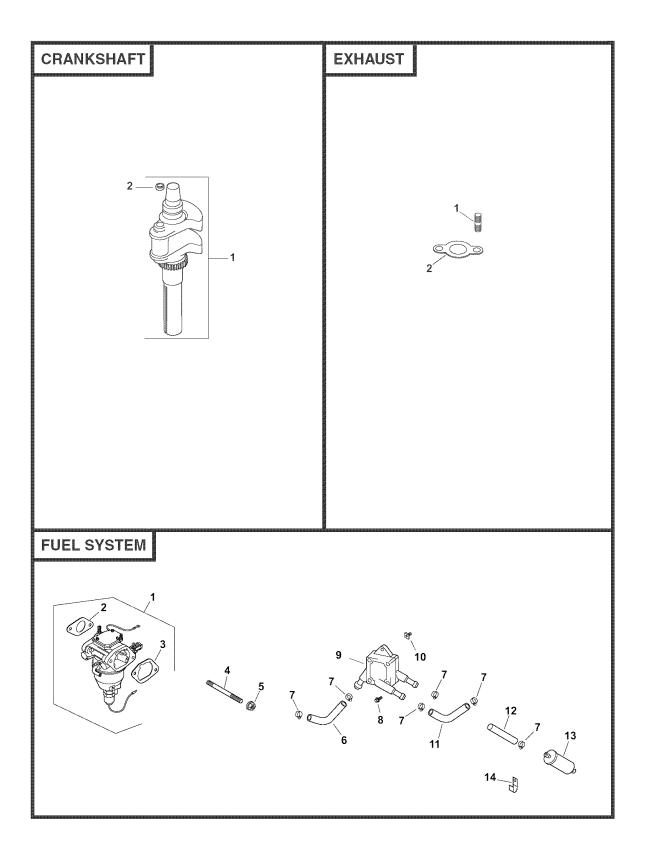
ENGINE CONTROLS

KEY NO.	PART NO.	DESCRIPTION
1. 2. 3. 4. 5. 6. 7. 8.	24 211 03-S 24-090-33-S M-641060-S 24-089-01-S 25-158-08-S 24-079-04-S 25-158-11-S M-545016-S	Bolt, round head square neck Lever, governor Nut, hex. flange M6x1.0 Spring, linkage Bushing, linkage retaining Linkage, throttle Bushing, throttle linkage Screw, hex. flange M5x0.8x16
9. 10. 11. 12.	M-547050-S 24-089-03-S 24-126-56-S M-645016-S	Nut, hex. lock M5x0.8 Spring, choke return Bracket, control Screw, hex. flange M6x1.0x16 (4)
13. 14.	12-237-01-S 24-086-43-S	Clamp, cable (2) Screw, hex. flange M5x0.8x16 (2)
15. 16. 17. 18. 19. 20. 21.	24-112-27-S 24-090-47-S 24-468-20-S M-446030-S 24-090-13-S 24-468-01-S M-545020-S	Spacer Lever, throttle actuator Washer, plain Nut, hex M4x0.7 Lever, throttle control Washer, plain 5.5 mm (3) Screw, hex. flange M5x0.8x20
22. 23. 24. 25. 26. 27.	24-090-05-S 41-468-03-S M-403025-S 24-079-22-S 24-089-55-S 24-089-25-S	Lever, choke Washer, spring 1/4" Screw, hex. cap M4x0.7x25 Linkage, choke Spring, throttle limiter Spring, governor

OIL PAN/LUBRICATION

KEY NO.		DESCRIPTION
1.	24-199-07-S	Pan assembly, oil (Includes 2-11)
2.	24-393-37-S	Oil pump assembly (Includes 3,4)
3. 4. 5. 6.	24-381-11-S 24 153 01-S M-631005-S M-645025-S	Tube, oil pickup O-Ring, oil pump Washer, plain 6 mm (2) Screw, hex. flange
7. 8.	24-162-26-S 24-043-12-S	M6x1.0x25 (2) Screen, oil Kit, governor gear w/pin (Includes 9)
17.	12-380-01-S 24-448-02-S 12-144-02-S 52-032-08-S 24-153-08-S 25-139-62-S 24-136-01-S 52-050-02-S 24-086-17-S	Pin, governor regulating Tab, locking Shaft, governor gear Seal, oil (PTO end) O-Ring Plug, hex. ctsk. 3/8" Nipple, oil filter Filter, oil Screw, hex. flange M8x1.25x45
18. 19.	24-086-16-S 25-139-57-S	Screw, hex. flange M8x1.25x45 (9) Plug, sq. hd. solid 3/8" N.P.T.F.
NOTE: All component dimensions given in U.S.		

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



CRANKSHAFT

KEY NO.	PART NO.	DESCRIPTION
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24-014-72-S Crankshaft (Includes 2) 52-139-09-S Plug, cup

EXHAUST

KEY NO.	PART NO.	DESCRIPTION
1. 2.	24-041-49-S 25-072-04-S	Gasket, exhaust (2) Stud, M8x1.25x33 (4)
	24-522-332 24-782-23 24-755-113-S	Short Block Miniblock Gasket Set

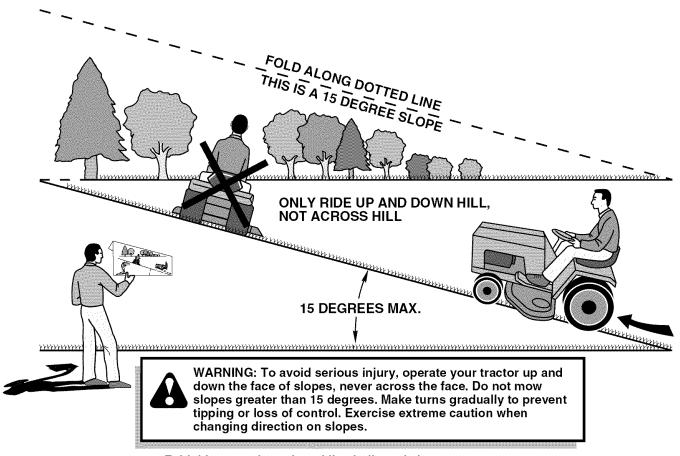
FUEL SYSTEM

KEY NO.	PART NO.	DESCRIPTION
1.	24-853-102-S	Kit, carburetor w/gaskets (Includes 2,3)
2. 3. 4. 5. 6. 7. 8.	24-041-52-S 24 041 14-S M-629095-S M-641060-S 25-353-03-S 25-237-14-S 24-086-12-S	Gasket, carburetor Gasket, air cleaner base Stud, M6x1.0x95 (2) Nut, hex. flange M6x1.0 (2) Line, fuel 14" Clamp, hose (6) Screw, hex. cap. M6x1.7x18
10. 11. 12.	24-393-16-S 24-100-01-S 24-353-12-S 15-353-04-S 24-050-10-S	(2) Pump, fuel - pulse Nut, plastic (2) Line, fuel 11" Line, fuel 11-1/2" Filter, fuel
14.	47-154-01-S	Clip, cable
NOT ILLUSTRATED		
	24 234 02-S 24 757 18-S 24 757 19-S 24 757 20-S 24 757 22-S	Bowl, float Kit, overhaul Kit, choke repair Kit, gasket Kit, fuel shutdown solenoid

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

SERVICE NOTES

SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



- 1. Fold this page along dotted line indicated above.
- 2. Hold page before you so that its left edge is vertically parallel to a tree trunk or other upright structure.
- 3. Sight across the fold in the direction of hill slope you want to measure.
- 4. Compare the angle of the fold with the slope of the hill.

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