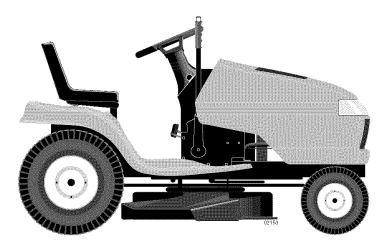
**Owner's Manual** 

# **CRAFTSMAN**<sup>®</sup>

# LAWN TRACTOR

20.0 HP, 42" Mower Electric Start Automatic Transmission

Model No. 917.275662





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

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A Visit our Craftsman website:www.sears.com/craftsman

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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.

WARNING: 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.

A 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 area.
- 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:	4.0 Gallons Unleaded Regular
Oil Type (API-SG-SL):	SAE10W-30(above 32°F) SAE 5W-30(below 32°F)
Oil Capacity:	3.0 Pints
Spark Plug: (GAP: .030")	Champion RC12YC
Ground Speed (MPH):	Forward: 5.5 Reverse: 2.4
Tire Pressure:	Front: 14 PSI Rear: 10 PSI
Charging System:	15 Amps @ 3600RPM
Battery:	Amp/Hr: 35 Min. CCA: 280 Case Size: U1R
Blade Bolt Torque:	27–35 Ft. Lbs.

**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.

**WARNING:** This tractor is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest Sears 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.

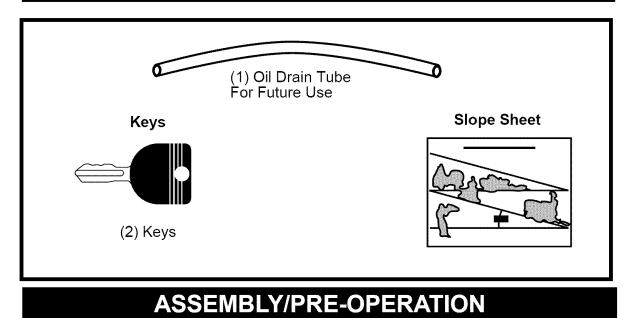
Once you purchase the Agreement, a simple phone call is all that it takes for you to schedule service. You can call anytime day or night, or schedule a service appointment online.

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



Your new tractor has been assembled at the factory. When right or left hand is mentioned in this manual, it means when you are in the operating position (seated behind the steering wheel).

# TO REMOVE TRACTOR FROM CARTON

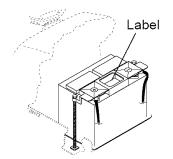
#### **UNPACK CARTON**

- 1. Cut along dotted lines on all four panels of carton. Remove end panels and lay side panels flat.
- 2. Remove protective materials from tractor hood and grille.

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

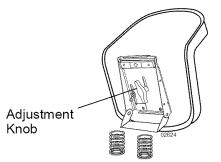
#### CHECK BATTERY

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).



#### ADJUST SEAT

- 1. Raise seat and loosen adjustment knob.
- 2. Lower seat into operating position and sit in seat.
- 3. Slide seat until a comfortable position is reached which allows you to press clutch/brake pedal all the way down.
- 4. Get off seat without moving its adjusted position.
- 5. Raise seat and tighten adjustment knob securely.



**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 clutch/brake pedal.
- 3. Place freewheel control in "transmission disengaged" position (See "TO TRANSPORT" in the Operation section of this manual).
- 4. Roll tractor forward off skid.
- 5. Remove banding holding deflector shield up against tractor.

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

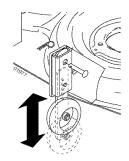
**AWARNING:** Before starting, read, understand and follow all instructions in the Operation section of this manual. Be sure tractor is in a well-ventilated area. Be sure the area in front of tractor is clear of other people and objects.

- 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 the Operation section of this manual).
- 4. Sit on seat in operating position, depress clutch/brake pedal and set the parking brake.
- 5. Place motion control lever in neutral (N) position.
- 6. Press lift lever plunger and raise attachment lift lever to its highest position.
- 7. Start the engine. After engine has started, move throttle control to idle position.
- 8. Release parking brake.
- Slowly move the motion control lever forward and slowly drive tractor off skid.
- 10. Apply brake to stop tractor, set parking brake and place motion control lever in neutral position.

11. Turn ignition key to "STOP" position. Continue with the instructions that follow.

# REPOSITION RIGHT REAR GAUGE WHEEL

For shipping purposes, the right rear gauge wheel assembly is mounted upside down on the mower. Remove the gauge wheel assembly and reinstall from the bottom as shown. To adjust gauge wheels, see the Operation section in 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 DECK LEVELNESS

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

# CHECK FOR PROPER POSITION OF ALL BELTS

See the figures that are shown for replacing motion 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:

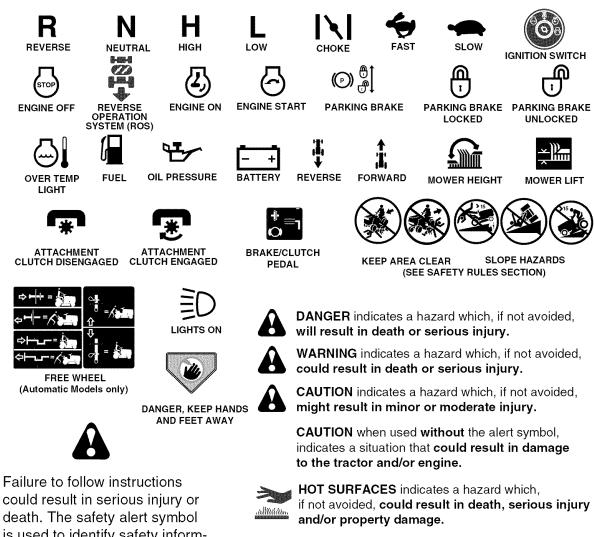
- ✓ All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- ✓ Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated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



is used to identify safety information about hazards which can result in death, serious injury and/or property damage.

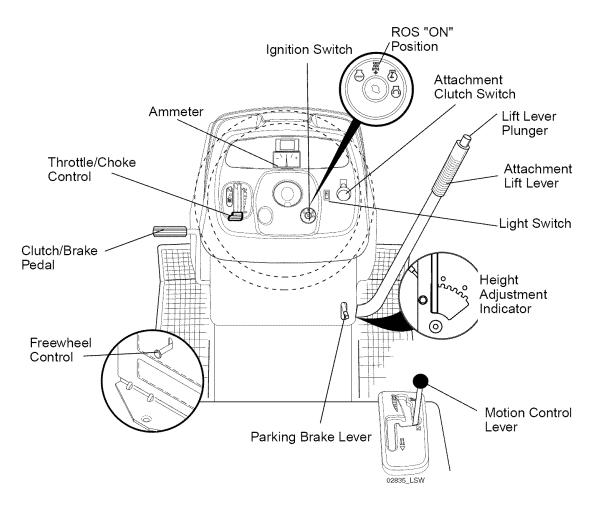
fisti)

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 charging (+) or discharging (-) of battery.

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

**ATTACHMENT LIFT LÉVER** - Used to raise, lower, and adjust the mower deck or other attachments mounted to your tractor. **CLUTCH/BRAKE PEDAL** - Used for declutching and braking the tractor and starting the engine.

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

**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.

PARKING BRAKE LEVER - Locks clutch/ brake pedal into the brake position. THROTTLE/CHOKE CONTROL - Used for starting and controlling engine speed. FREEWHEEL CONTROL - Disengagages transmission for pushing or slowly towing the tractor with the engine off.

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

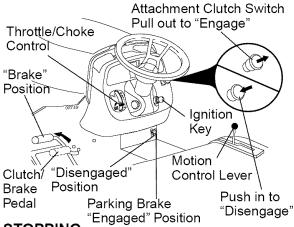


The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend standard safety glasses or a wide vision safety mask worn 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 clutch/brake pedal all the way down and hold.
- Pull parking brake lever up and release pressure from clutch/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 clutch/ brake pedal all the way down.
- Move motion control lever to neutral (N) position.

**IMPORTANT:** The motion control lever does not return to neutral (N) position when the clutch/brake pedal is depressed. ENGINE -

• Move throttle control 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.

**CAUTION:** 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 bagging and mower performance.

#### TO MOVE FORWARD AND BACKWARD

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 position of the attachment lift lever determines the cutting height.

- Grasp lift lever.
- Press plunger with thumb and move lever to desired position.

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

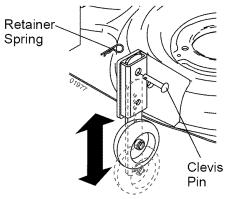
- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first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

#### TO ADJUST GAUGE WHEELS

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.
- 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.

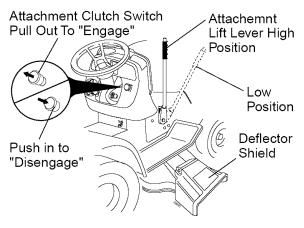


#### TO OPERATE MOWER

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. Start mower blades by engaging attachment clutch control.

TO STOP MOWER BLADES disengage attachment clutch control. **CAUTION:** Do not operate the mower without either the entire grass catcher, on mowers so equipped, or the 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.

**WARNING:** 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**.

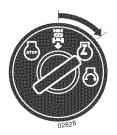
USING THE REVERSE OPERATION SYSTEM -

- 1. Move motion control lever to neutral (N) position.
- With engine running, turn ignition key counterclockwise to ROS "ON" position.
- 3. Look down and behind before backing.
- 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 clock-wise to engine "ON" position.

ROS "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 at the back of this manual.

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

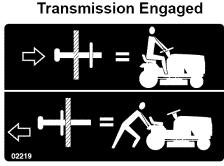
**IMPORTANT:** The motion control lever does not return to neutral (N) position when the clutch/brake pedal is depressed.

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

#### **TO TRANSPORT**

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.
- Pull freewheel control out and down 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-éngage transmission, reverse above procedure.



**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.
- Pull up and remove oil fill cap/dipstick; wipe oil off. Reinsert the dipstick into the tube and push down firmly into place. 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 tank 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 below 32°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.
- 2. Sit on seat in operating position, depress clutch/brake pedal and set parking brake.
- 3. Place motion control lever in neutral (N) position.
- 4. Move attachment clutch to disengaged position.

5. Move throttle control to choke position. **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, move throttle control to fast position, wait a few minutes and try again. If engine still does not start, move the throttle control back to the choke position and retry.

WARM WEATHER STARTING (50° F and above)

- 7. When engine starts, move the throttle control to the fast position.
- 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, leave throttle control in choke position until engine warms up and begins to run roughly. Once rough running begins, immediately move the throttle control to the fast position. Engine warm-up may take from several seconds to several minutes (the colder the temperature, the longer the warm-up).

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.
- 2. Place the motion control lever in neutral. Release the parking brake and let the clutch/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 also be used during the engine warm-up period after the transmission has been warmed up.

**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

**ACAUTION:** 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.

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

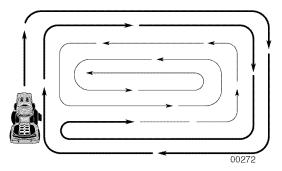
**NOTE:** During this step there will be no movement of drive wheels. The air is being removed from hydraulic drive system.

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

Your transmission is now purged and ready for normal operation.

#### **MOWING TIPS**

- 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 LL IN DATES YOU COMPLETE GULAR SERVICE	.E	SEFORE	EACHUS EVERY 8	SE HOURS	NERY E	NERY 1	OO HOL	SEASON SEASON	SERVIC	E DATES
	Check Brake Operation	V	1	Í					ſ		
	Check Tire Pressure	V	1								
т	Check Operator Presence and ROS Systems	V									
R	Check for Loose Fasteners	V				<b>V</b> 5		V			
A	Sharpen/Replace Mower Blades			<b>V</b> <sub>3</sub>							
Ç	Lubrication Chart			V				V			
ò	Check Battery Level			$\checkmark_4$							
Ř	Clean Battery and Terminals			1				V			
	Check Transaxle Cooling			~					1		
	Check V-Belts					~					
	Check Engine Oil Level	V	V								
	Change Engine Oil (with oil filter)				V 1,2			1			
Е	Change Engine Oil (without oil filter)			V 1,2				~			
Ň	Clean Air Filter			1/2							
Ģ	Clean Air Screen			1/2							
	Inspect Muffler/Spark Arrester				1						
N E	Replace Oil Filter (If equipped)					1.2					
-	Clean Engine Cooling Fins					1 2					
	Replace Spark Plug					1	~				
	Replace Air Filter Paper Cartridge					1/2					
	Replace Fuel Filter	1					1		1		

In high amplent temperatures.
 2 - Service more often when operating in dirty or dusty conditions.

#### **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.

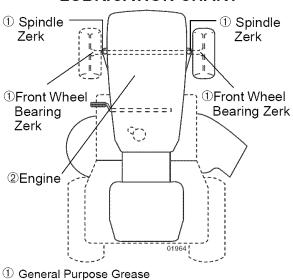
#### **BEFORE EACH USE**

- 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

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

Do not overtighten



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.

ROS "ON" Position

Engine "ON" Position (Normal Operating)





# 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.
- 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**

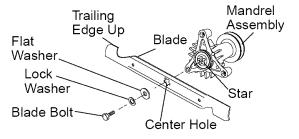
For best results mower blades must be kept sharp. Replace bent or damaged blades.

**A** 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.
- 2. Remove blade bolt, lock washer and flat washer securing blade.
- Install new or resharpened blade with trailing edge up towards deck as shown.
   IMPORTANT: To ensure proper assembly, center hole in blade must align with star
- on mandrel assembly.4. Reassemble blade bolt, lock washer and flat washer in exact order as
- and flat washer in exact order as shown. 5 Tighten blade bolt securely (27-35 F
- 5. Tighten blade bolt securely (27-35 Ft. Lbs. torque).

**IMPORTANT**: Blade bolt is heat treated. If bolt needs replacing, replace only with approve bolt shown in the Repair Parts.



#### TO SHARPEN BLADE

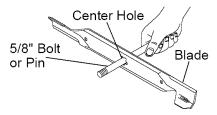
**NOTE:** We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

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.
- 2. Disconnect BLACK battery cable first then RED battery cable and remove battery from tractor.

- 3. 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.
- Reinstall battery (See "REPLACING BATTERY" in the SERVICE AND AD-JUSTMENTS 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 a Sears or other qualified service center.

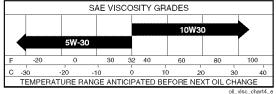
#### V-BELTS

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.

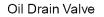


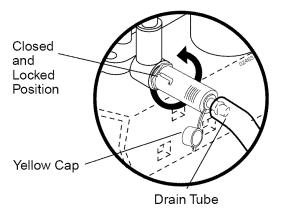
Change the oil after every 50 hours of operation or at least once a year if the tractor is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each eight (8) hours of operation.

#### 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.
- Remove yellow cap from end of drain valve and install the drain tube onto the fitting.





- 3. Unlock drain valve by pushing inward slightly and turning counterclockwise.
- 4. To open, pull out on the drain valve.
- 5. After oil has drained completely, close and lock the drain valve by pushing inward and turning clockwise until the pin is in the locked position as shown.
- 6. Remove the drain tube and replace the cap onto the end of the drain valve.
- 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.
- Use gauge on oil fill cap/dipstick for checking level. For accurate reading, insert dipstick into the tube and push down firmly into place before removing. Keep oil up to, but not over, the "FULL" line on dipstick. Push dipstick down firmly into the tube 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. Service paper cartridge every two months or every 25 hours of operation, whichever occurs first. Service paper cartridge more often under dusty conditions.

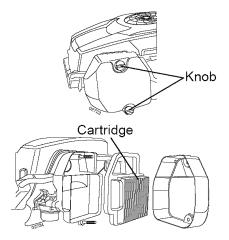
Replace the paper cartridge annually, or after every 100 hours of operation.

#### TO SERVICE CARTRIDGE

 Replace a dirty, bent, or damaged cartridge. Handle new cartridge carefully; do not use if the rubber seal is damaged.

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

- 1. Loosen knobs and remove cover.
- 2. Remove cartridge.
- 3. Gently tap pleated side of cartridge to dislodge dirt.
- 4. Clean all air cleaner components of any accumulated dirt or foreign material. Prevent any dirt from entering the throat of carburetor.
- 5. Install cleaned or new cartridge with the pleated side "out" and seat the rubber seal onto the edges of the air cleaner base.
- 6. Reinstall air cleaner cover and secure by tightening knobs.



#### **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.

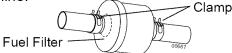
#### SPARK PLUG(S)

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 SER-VICE OR ADJUSTMENTS:

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

#### TRACTOR

#### TO REMOVE MOWER

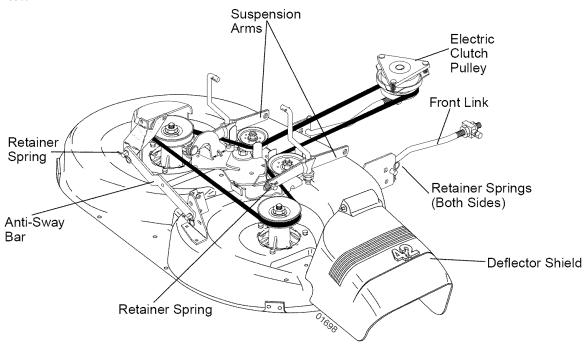
Mower will be easier to remove from the right side of tractor.

- 1. Place attachment clutch switch in "DIS-ENGAGED" position.
- 2. Move attachment lift lever forward to lower mower to its lowest position.
- 3. Roll belt off electric clutch pulley.
- 4. Disconnect anti-sway bar from chassis bracket by removing retainer spring.
- 5. Disconnect suspension arms from rear deck brackets by removing retainer springs.
- 6. Disconnect front links from deck by removing retainer springs.
- Raise lift lever to raise suspension arms. Slide mower out from under tractor.

**IMPORTANT:** If an attachment other than the mower deck is to be mounted on the tractor, remove the front links.

#### TO INSTALL MOWER

- 1. Raise attachment lift lever to its highest position.
- 2. Slide mower under tractor with deflector shield to right side of tractor.
- 3. Lower lift lever to its lowest position.
- 4. Connect front links to mower deck and secure with retainer springs.
- 5. Connect suspension arms to rear deck brackets and secure with retainer springs.
- Connect anti-sway bar to chassis bracket and secure with retainer spring.
- 7. Install belt into electric clutch pulley groove.



#### TO LEVEL MOWER HOUSING

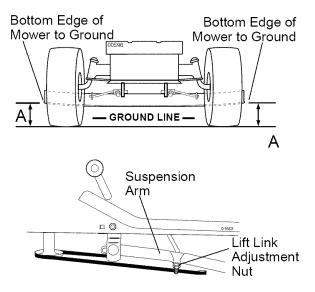
Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PROD-UCT SPECIFICATIONS" section of this manual). If tires are over or underinflated, you will not properly adjust your mower.

SIDE-TO-SIDE ADJUSTMENT

- Raise mower to its highest position.
- At the midpoint of both sides of mower, measure height from bottom edge of mower to ground. Distance "A" on both sides of mower should be the same or within 1/4" of each other.
- 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 1/8". 6.0 Recheck measurements after ad-

justing.

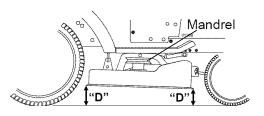


FRONT-TO-BACK ADJUSTMENT

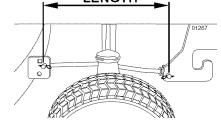
**IMPORTANT:** Deck must be level side-toside. If the following front-to-back adjustment is necessary, be sure to adjust both front links equally so mower will stay level side-to-side.

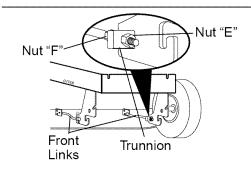
To obtain the best cutting results, the mower housing should be adjusted so that the front is approximately 1/8" to 1/2" lower than the rear when the mower is in its highest position. Check adjustment on right side of tractor. Measure distance "D" directly in front of and behind the mandrel at bottom edge of mower housing as shown.

- Before making any necessary adjustments, check that both front links are equal in length.
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower loosen nut "E" on both front links an equal number of turns.
- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nuts "F" against trunnion on both front links.
- To raise front of mower, loosen nut "F" from trunnion on both front links. Tighten nut "E" on both front links an equal number of turns. The two front links must remain equal in length.
- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nut "F" against trunnion on both front links.
- Recheck side-to-side adjustment.









# TO REPLACE MOWER BLADE DRIVE BELT

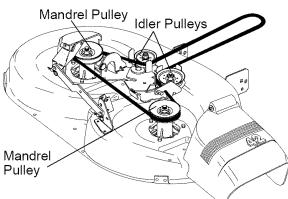
The mower blade drive belt may be replaced without tools. Park the tractor on level surface. Engage parking brake.

BELT REMOVAL -

- 1. Remove mower from tractor (See "TO REMOVE MOWER" in this section of manual).
- 2. Work belt off both mandrel pulleys and idler pulleys.
- 3. Pull belt away from mower.

#### **BELT INSTALLATION -**

- 1. Work belt around both mandrel pulleys and idler pulleys
- 2. Make sure belt is in all pulley grooves and inside all belt guides.
- 3. Install mower (See "To Install Mower" in this section of this manual).



#### TO CHECK AND ADJUST BRAKE

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

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

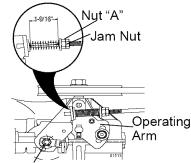
- Park tractor on a level, dry concrete or paved surface, depress clutch/brake pedal all the way down and engage parking brake.
- Disengage transmission by placing freewheel control in "transmission disengaged" position. Pull freewheel control out and into the slot and release so it is held in the disengaged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

- 1. Depress clutch/brake pedal all the way down and engage parking brake.
- 2. Measure distance between brake operating arm and nut "A" on brake rod.
- 3. If distance is other than 1-9/16", loosen jam nut and turn nut "A" until distance becomes 1-9/16". Retighten jam nut against nut "A".
- 4. Engage transmission by placing freewheel control in "transmission engaged" position.
- 5. Road test tractor for proper stopping distance as stated above. Readjust if necessary. If stopping distance is still greater than five (5) feet in highest gear, further maintenance is necessary. Replace brake pads or contact a Sears or other qualified service center.

#### With parking brake "Engaged"



Do not touch this nut. If further brake adjustment is necessary contact a Sears or other qualified service center.

#### TO REPLACE MOTION DRIVE BELT

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

#### **BELT REMOVAL -**

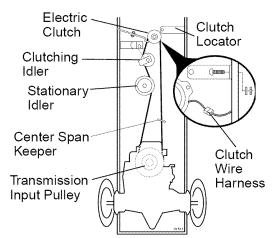
1. Remove mower (See "TO REMOVE MOWER" in this section of manual).

**NOTE:** Observe entire motion drive belt and position of all belt guides and keepers.

- 2. Disconnect clutch wire harness.
- 3. Remove clutch locator.
- 4. Remove belt from stationary idler and clutching idler.
- 5. Remove belt downward from engine pulley and around electric clutch.
- Pull belt slack toward rear of tractor. Carefully remove belt upwards from transmission input pulley and over cooling fan blades.
- 7. Remove belt from center span keeper and pull belt away from tractor.

**BELT INSTALLATION -**

- 1. Carefully work new belt down around transmission cooling fan and onto the input pulley.
- 2. Slide belt into the center span keeper.
- Pull belt toward front of tractor and roll belt around electric clutch and onto engine pulley.
- 4. Install belt through stationary idler and clutching idler.
- 5. Reinstall clutch locator and tighten nut securely.
- 6. Reconnect clutch harness.
- 7. Make sure belt is in all pulley grooves and inside all belt guides and keepers.
- 8. Install mower (See "TO INSTALL MOWER" in this section of manual).



# TRANSAXLE MOTION CONTROL LEVER NEUTRAL ADJUSTMENT

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

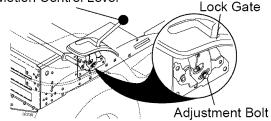
- 1. Loosen adjustment bolt in front of the right rear wheel, and lightly tighten.
- 2. Start engine and move motion control lever until tractor does not move forward or backward.

- 3. Hold motion control lever in that position and turn engine off.
- 4. While holding motion control lever in place, loosen the adjustment bolt.
- 5. Move motion control lever to the neutral (N) (lock gate) position.

6. Tighten adjustment bolt securely. **NOTE:** If additional clearance is needed to get to adjustment bolt, move mower deck height to the lowest position. After above adjustment is made, if the tractor still creeps forward or backward while motion control lever is in neutral position, follow these steps:

- 1. Loosen the adjustment bolt.
- 2. Move the motion control lever 1/4 to 1/2 inch in the direction it is trying to creep.
- 3. Tighten adjustment bolt securely.
- 4. Start engine and test.
- 5. If tractor still creeps, repeat above steps until satisfied.

Motion Control Lever



Neutral

#### TRANSMISSION REMOVAL/ REPLACEMENT

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

#### TO ADJUST STEERING WHEEL ALIGNMENT

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

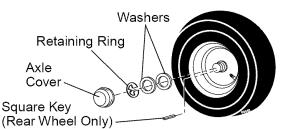
- 1. Block up axle securely.
- 2. Remove axle cover, retaining ring and washers to allow wheel removal (rear wheels have a square key - Do not lose).
- 3. Repair tire and reassemble.

NOTE: On rear wheels only: align

grooves in rear wheel hub and axle. Insert square key.

- Replace washers and snap retaining ring securely in axle groove.
- 5. Replace axle cover.

**NOTE:** To seal tire punctures and prevent flat tires due to slow leaks, purchase and use tire sealant from Sears. Tire sealant also prevents tire dry rot and corrosion.



#### TO START ENGINE WITH A WEAK BATTERY

**AWARNING:** 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 "BAT-TERY" in the MAINTENANCE section of this manual).

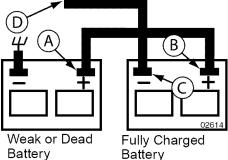
If "jumper cables" are used for emergency starting, follow this procedure:

**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.
- 2. Connect one end of the BLACK cable to the NEGATIVE (-) terminal (C) of fully charged battery.
- 3. Connect the other end of the BLACK cable (D) to good chassis ground, away from fuel tank and battery.

TO REMOVE CABLES, REVERSE ORDER -

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



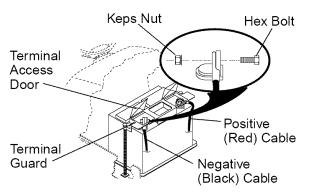
## Battery

#### **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 grounding.

- 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.
- 5. Reinstall terminal guard.
- 6. 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
- Close terminal access doors. 8.
- 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.

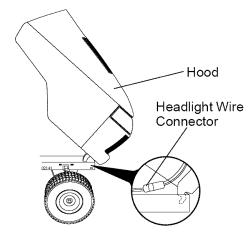
· Check wiring. See electrical wiring diagram in the Repair Parts section.

#### TO REPLACE FUSE

Replace with 20 amp automotive-type plug-in fuse. The fuse holder is located behind the dash.

#### TO REMOVE HOOD AND GRILL ASSEMBLY

- 1. Raise hood.
- Unsnap headlight wire connector.
   Stand in front of tractor. Grasp hood at sides, tilt toward engine and lift off of tractor.
- 4. 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:

- With engine not running, move throttle control lever from slow to choke position. Slowly move lever from choke to fast position.
- 2. Check to see if hole in throttle lever and hole in speed control bracket are aligned.
- 3. If holes are not aligned, loosen cable clamp screw and align the holes by inserting a pencil or a 1/4" drill bit through both holes.
- 4. Pull throttle cable up to remove slack and tighten cable clamp screw. Remove alignment pencil or drill bit.

#### TO ADJUST CARBURETOR

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

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

**IMPORTANT:** Damage to the needles and seats in carburetor may result if turned in too tight.

**NOTE:** The carburetor on this engine is low emission. It is equipped with an idle fuel adjusting needle with a limiter cap, which allows some adjustment within the limits allowed by the cap. Do not attempt to remove the limiter cap. The limiter cap cannot be removed without breaking the adjusting needle.

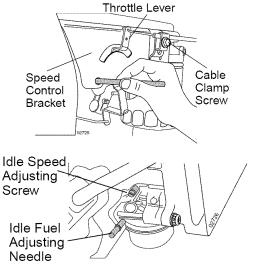
- 1. Be sure you have a clean air filter and the throttle control cable is adjusted properly (see above).
- 2. Start engine and allow to warm for five minutes. Make adjustments with engine running and shift/motion control lever in neutral (N) position.
- 3. <u>Idle speed setting</u> With throttle control 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.
- Idle fuel needle setting With throttle control lever in slow position, turn idle fuel adjustment needle in (clockwise) until engine begins to die and then turn out (counterclockwise) until engine runs rough. Turn needle to a point midway between those two positions.
- 5. 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. **WARNING:** 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).
- 2. 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.
- 4. 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	<ol> <li>Out of fuel.</li> <li>Engine not "CHOKED" properly.</li> <li>Engine flooded.</li> <li>Bad spark plug.</li> <li>Dirty air filter.</li> <li>Dirty fuel filter.</li> <li>Water in fuel.</li> </ol>	<ol> <li>Fill fuel tank.</li> <li>See "TO START ENGINE" in Operation section.</li> <li>Wait several minutes before attempting to start.</li> <li>Replace spark plug.</li> <li>Clean/replace air filter.</li> <li>Replace fuel filter.</li> <li>Empty fuel tank and carbure- tor, refill tank with fresh gas- oline and replace fuel filter.</li> </ol>
	<ol> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>10. Engine valves out of adjustment.</li> </ol>	<ol> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service and Adjustments section.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Hard to start	<ol> <li>Dirty air filter.</li> <li>Bad spark plug.</li> <li>Weak or dead battery.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> </ol>	<ol> <li>Clean/replace air filter.</li> <li>Replace spark plug.</li> <li>Recharge or replace battery.</li> <li>Replace fuel filter.</li> <li>Empty fuel tank and refill tank with fresh, clean gasoline.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service and Adjustments section.</li> </ol>
	<ol><li>Engine valves out of adjustment.</li></ol>	<ol> <li>Contact a Sears or other qualified service center.</li> </ol>
Engine will not turn over	<ol> <li>Brake pedal not depressed.</li> <li>Attachment clutch is engaged.</li> <li>Weak or dead battery.</li> <li>Blown fuse.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty ignition switch.</li> <li>Faulty solenoid or starter.</li> <li>Faulty operator presence switch(es).</li> </ol>	<ol> <li>Depress brake pedal.</li> <li>Disengage attachment clutch.</li> <li>Recharge or replace battery.</li> <li>Replace fuse.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace ignition switch.</li> <li>Check/replace solenoid or starter.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Engine clicks but will not start	<ol> <li>Weak or dead battery.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty solenoid or starter.</li> </ol>	<ol> <li>Recharge or replace battery.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace solenoid or starter.</li> </ol>
Loss of power	<ol> <li>Cutting too much grass/too fast.</li> <li>Throttle in "CHOKE" position.</li> <li>Build-up of grass, leaves and trash under mower.</li> <li>Dirty air filter.</li> </ol>	<ol> <li>Raise cutting height/reduce speed.</li> <li>Adjust throttle control.</li> <li>Clean underside of mower housing.</li> <li>Clean/replace air filter.</li> </ol>

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

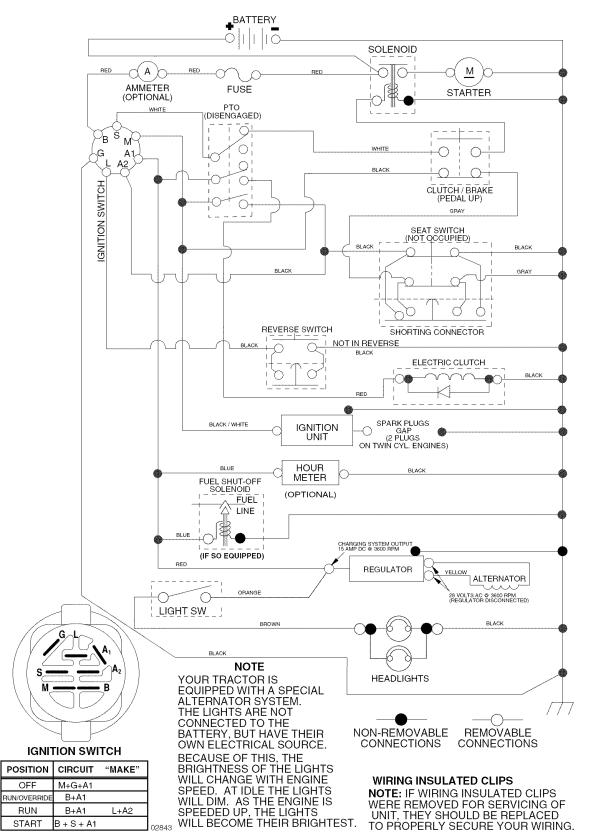
PROBLEM	CAUSE	CORRECTION			
Loss of power (continued)	<ol> <li>Low oil level/dirty oil.</li> <li>Faulty spark plug.</li> </ol>	<ol> <li>Check oil level/change oil.</li> <li>Clean and regap or change spark plug.</li> </ol>			
	<ol> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> </ol>	<ol> <li>Replace fuel filter.</li> <li>Empty fuel tank and refill tank with fresh, clean gasoline.</li> </ol>			
	9. Water in fuel.	<ol><li>Empty fuel tank and carbure- tor, refill tank with fresh gas-</li></ol>			
	10. Spark plug wire loose.	oline and replace fuel filter. 10.Connect and tighten spark plug wire.			
	<ol> <li>Dirty engine air screen/fins.</li> <li>Dirty/clogged muffler.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> </ol>	<ol> <li>Clean engine air screen/fins.</li> <li>Clean/replace muffler.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service and Adjustments</li> </ol>			
	15. Engine valves out of adjustment.	section. 15.Contact a Sears or other qualified service center.			
Excessive vibration	1. Worn, bent or loose blade.	<ol> <li>Replace blade. Tighten blade bolt.</li> </ol>			
	2. Bent blade mandrel.	<ol> <li>Contact a Sears or other qualified service center.</li> </ol>			
	3. Loose/damaged part(s).	<ol> <li>Tighten loose part(s). Replace damaged parts.</li> </ol>			
Engine dies when tractor is shifted into reverse	<ol> <li>Reverse operation system (ROS) is not "ON" while mower or other attachment is engaged.</li> </ol>	<ol> <li>Turn ignition key to ROS "ON" position. See Operation section.</li> </ol>			
Engine continues to run when operator leaves seat with attachment clutch engaged	<ol> <li>Faulty operator-safety presence control system.</li> </ol>	<ol> <li>Check wiring, switches and connections. If not corrected, contact a Sears or other qualified service center.</li> </ol>			
Poor cut - uneven	1. Worn, bent or loose blade.	<ol> <li>Replace blade. Tighten blade bolt.</li> </ol>			
	<ol> <li>Mower deck not level.</li> <li>Buildup of grass, leaves, and trash under mower.</li> <li>Bent blade mandrel.</li> </ol>	<ol> <li>Level mower deck.</li> <li>Clean underside of mower housing.</li> <li>Contact a Sears or other</li> </ol>			
	<ol> <li>Clogged mower deck vent from build-up of grass, leaves, and trash around mandrels.</li> </ol>	<ul><li>qualified service center.</li><li>5. Clean around mandrels to open vent holes.</li></ul>			

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

PROBLEM	CAUSE	CORRECTION			
Mower blades will not rotate	<ol> <li>Obstruction in clutch mechanism.</li> </ol>	1. Remove obstruction.			
	2. Worn/damaged mower drive belt.	2. Replace mower drive belt.			
	<ol> <li>Frozen idler pulley.</li> <li>Frozen blade mandrel.</li> </ol>	<ol> <li>Replace idler pulley.</li> <li>Contact a Sears or other qualified service center.</li> </ol>			
Poor grass discharge	1. Engine speed too slow.	<ol> <li>Place throttle control in "FAST" position.</li> </ol>			
	<ol> <li>Travel speed too fast.</li> <li>Wet grass.</li> </ol>	<ol> <li>Shift to slower speed.</li> <li>Allow grass to dry before mowing.</li> </ol>			
	<ol> <li>Mower deck not level.</li> <li>Low/uneven tire air pressure.</li> </ol>	<ol> <li>Level mower deck.</li> <li>Check tires for proper air pressure.</li> </ol>			
	6. Worn, bent or loose blade.	<ol> <li>Replace/sharpen blade. Tighten blade bolt.</li> </ol>			
	7. Buildup of grass, leaves and trash under mower.	7. Clean underside of mower housing.			
	<ol> <li>Mower drive belt worn.</li> <li>Blades improperly installed.</li> </ol>	<ol> <li>Replace mower drive belt.</li> <li>Reinstall blades sharp edge down.</li> </ol>			
	10. Improper blades used.	10. Replace with blades listed in this manual.			
	<ol> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	11. Clean around mandrels to open vent holes.			
Headlight(s) not working (if so equipped)	<ol> <li>Light switch is "OFF".</li> <li>Bulb(s) or lamp(s) burned out.</li> <li>Faulty light switch.</li> <li>Loose or damaged wiring.</li> <li>Blown fuse.</li> </ol>	<ol> <li>Turn light switch "ON".</li> <li>Replace bulb(s) or lamp(s).</li> <li>Check/replace light switch.</li> <li>Check wiring and connections.</li> <li>Replace fuse.</li> </ol>			
Battery will not charge	<ol> <li>Bad battery cell(s).</li> <li>Poor cable connections.</li> <li>Faulty regulator</li> </ol>	<ol> <li>Replace battery.</li> <li>Check/clean all connections.</li> <li>Replace regulator.</li> </ol>			
	(if so equipped). 4. Faulty alternator.	4. Replace alternator.			
Loss of drive	<ol> <li>Freewheel control in "disengaged" position.</li> <li>Motion drive bolt were</li> </ol>	<ol> <li>Place freewheel control in "engaged" position.</li> <li>Perlage metion drive holt</li> </ol>			
	<ol> <li>Motion drive belt worn, damaged, or broken.</li> <li>Air trapped in transmission during shipment or servicing.</li> </ol>	<ol> <li>Replace motion drive belt.</li> <li>Purge transmission.</li> </ol>			
Engine "backfires" when turning engine "OFF"	<ol> <li>Engine throttle control not set between half and full speed (fast) position before stopping engine.</li> </ol>	between half and full speed			

#### TRACTOR - - MODEL NUMBER 917.275662

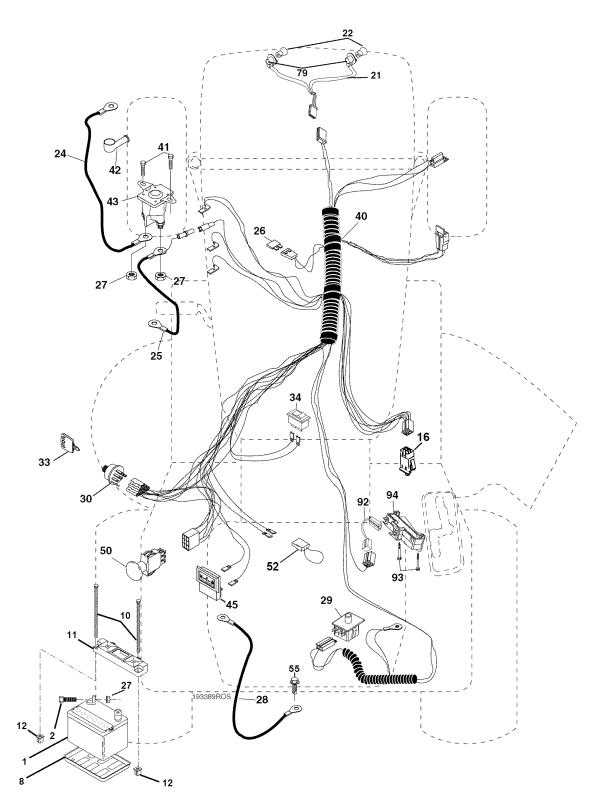
SCHEMATIC



### **REPAIR PARTS**

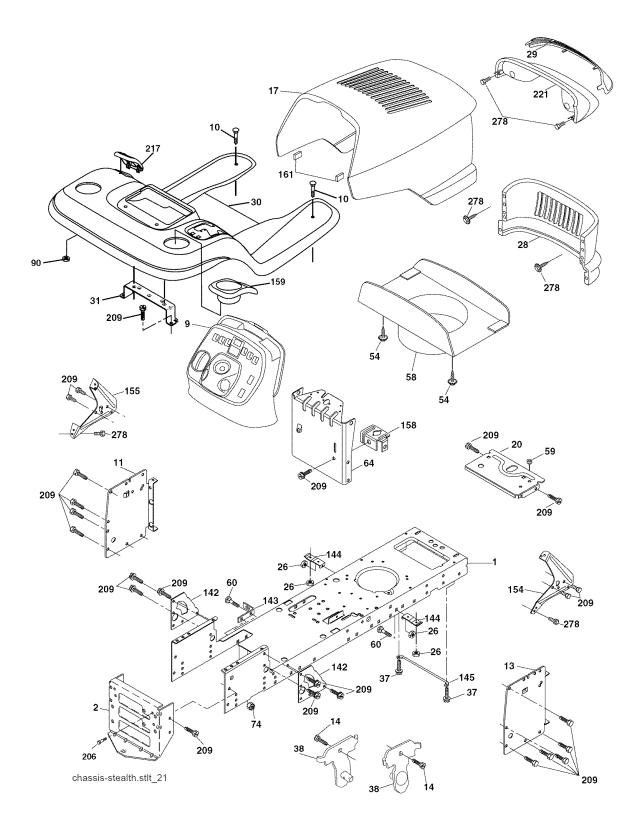
TRACTOR - - MODEL NUMBER 917.275662

ELECTRICAL



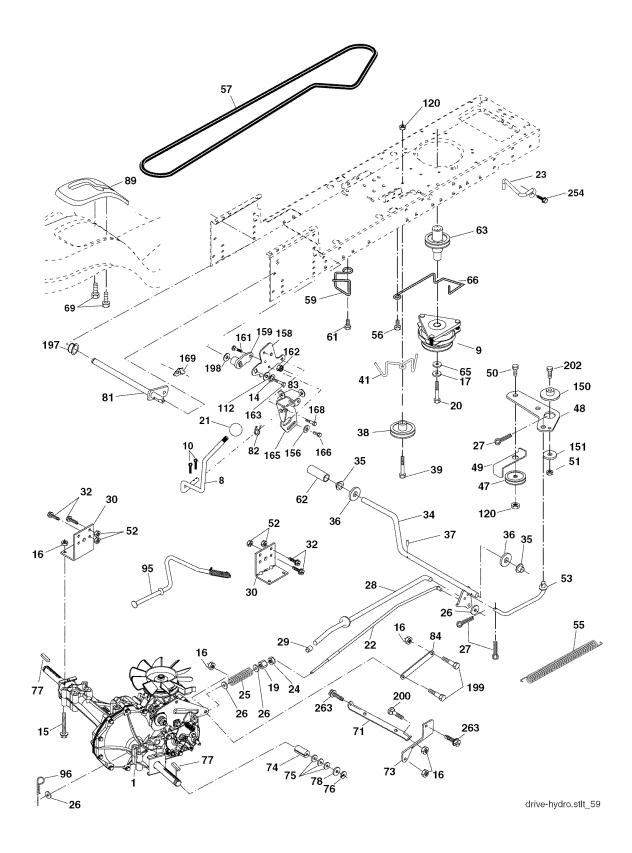
KEY NO.	PART NO.	DESCRIPTION
$\begin{array}{c}1\\2\\8\\11\\12\\22\\25\\27\\22\\20\\33\\40\\41\\23\\55\\57\\92\\34\\9\end{array}$	144927 74760412 7603J 145211 150109 145769 176138 175688 4152J 8860R 146148 175158 73510400 145491 192749 193350 140403 110712X 193389 17720408 131563 178861 122822X 174651 141940 17490508 175242 193465 192540 191834	Battery Bolt Hex 1/4-20 x 3/4 Tray Battery Bolt Btr Front 1/4-20 x 7-1/2 Holddown Battery Front Mount Nut Push Nylon Battery Front 1/4 Switch Interlock Harness Light Bulb Light Cable Starter Cable Battery Fuse Nut Keps Hex 1/4-20 unc Cable Ground Switch Seat Switch Ignition Key Molded Switch Light / Reset Harness Ignition Screw Thd Cut 1/4-20 x 1/2 Cover Terminal Solenoid Ammeter Switch PTO Protection Wire Loop Screw Thdrol 5/16-18 x 1/2 Socket Asm Bulb Twistlock Harness Pigtail Reverse Switch Screw Plastite 10-14 x 2.0 Module Reverse ROS

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



# TRACTOR - - MODEL NUMBER 917.275662 CHASSIS AND ENCLOSURES

KEY NO.	PART NO.	DESCRIPTION
<b>NO.</b> 1291011314720628933137384559064491434454558916699711811551515161622278	174619 176554 193635X428 72140608 167203 188702X010 17490608 175260X428 162026 STD541437 174515X428 161840 192395X428 139976 17490508 175710 192512 175351 187495 STD533707 174997 STD541437 124346X 175702 186689 175582 156524 161897 161900 162037 191120X428 164655 170165	Chassis Drawbar Dash Bolt RDHD SQNK 3/8-16 x 1 Panel Dash LH Panel Dash RH Screw Thdrol 3/8-16 x 1/2 Hood Assembly Plate Battery Locknut Hex with Insert 3/8-16 unc Grille Lens Bar Fender/Footrest Bracket Fender/Support Screw Thdrol 5/16-18 x 1/2 TYT Bracket Asm Pivot Mower Rear Screw Hex Wshd 10-32 x 5/8 Duct Hood Bushing 1.375 OD Bolt Rdhd Sqnk 3/8-16 unc x 3/4 Dash Lower Nut Crownlock 3/8-16 unc Nut Self-Thd Wsh-Hd 1/4 Plate Reinforcement Bracket Swaybar Chassis Bracket Footrest Rod Pivot Chassis/Hood Bracket Dash Rh Bracket Dash Lh Parking Brake Bkrt



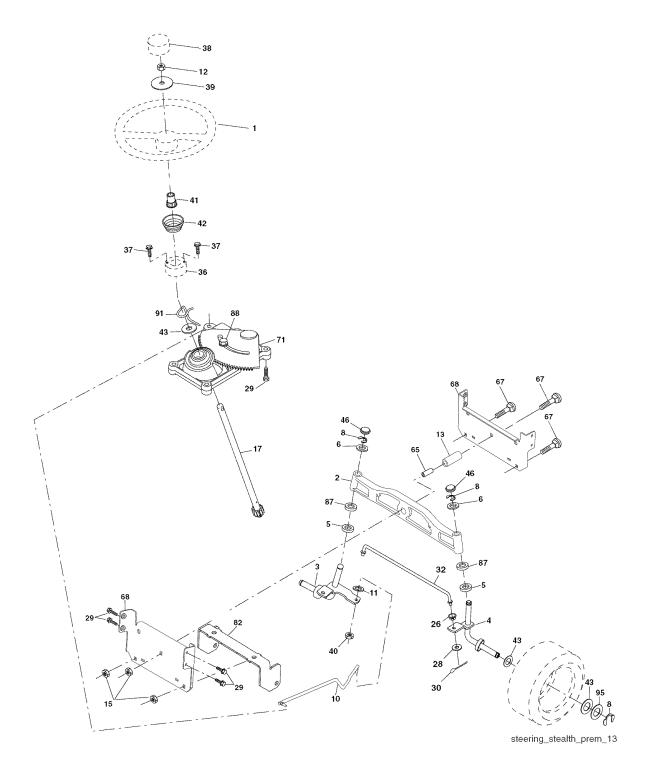
## GROUND DRIVE

# TRACTOR - - MODEL NUMBER 917.275662

### KEY PART NO. NO. DESCRIPTION

110.	NU.	
1		Transaxle, HydroGear, Model Number 314-0510 (See Break
8 9 10 14 15 16 17	192502 180505 76020416 10040400 74490544 73800500 126197X	down) Rod Shift Fend. Clutch Electric Pin Cotter 1/8 x 1 Washer Lock Hvy 1/4 Bolt Hex Flghd 5/16-18 Gr. 5 Nut Lock Hex W/Ins. 5/16-18 unc Washer 1-1/2 OD x 15/32 ID x .250
19 20	73800600 173937	Nut Lock Hex W/Wsh 3/8-16 unc Bolt Hex 7/16-20 x 4 x Gr. 5-1.5 Thr.
$\begin{array}{c} 21\\ 22\\ 23\\ 24\\ 25\\ 26\\ 27\\ 28\\ 29\\ 30\\ 32\\ 35\\ 36\\ 37\\ 38\\ 39\\ 41\\ 48\\ 9\\ 51\\ 52\\ 55\\ 56\\ 57\\ 59 \end{array}$	130564 169498 190736 73350600 106888X 19131316 76020412 175765 124236X 169592 74760512 175578 120183X 19211616 1572H 179114 72110622 175556 127783 154407 123205X 72110612 73680600 73680500 105710X 105709X 17060620 140294 169691	Knob Rod, Brake Bracket Anti-Rotation Nut, Hex Jam 3/8-16 unc Spring, Brake Rod Washer Pin Cotter 1/8 x 3/4 CAD. Rod, Parking Brake Knob Brake Parking Bracket, Transaxle Bolt Hex Hd 5/16-18 unc x 3/4 Shaft, Foot Pedal Bearing, Nylon Washer Pin, Roll Pulley, Composite Bolt Rdhd 3/8-16 unc x 2-3/4 Gr. 5 Keeper, Belt Idler Flat Pulley, Idler, V-Groove Bellcrank Clutch Grnd Drw Stl Retainer, Belt Bolt Nut Crownlock 3/8-16 unc Nut, Crownlock 5/16-18 unc Link, Clutch Spring, Return, Clutch Screw 3/8-16 x 1-1/4 V-Belt, Ground Drive Keeper, Center Span

KEY NO.	PART NO.	DESCRIPTION	
61 62 63 669 777778 82388999 11200116899120022543 1120011689120022543	17120614 123533X 174607 10040700 154778 142432 169183 169182 137057 121749X 12000001 123583X 121748X 165596 165711 19171216 169594	Screw 3/8-16 x .875 Cover, Pedal Pulley, Engine Washer Keeper Belt Engine Screw Hew Wsh Hi-Lo 1/4-1/2 unc Strap Torque LH Strap Torque RH Spacer, Axle Washer 25/32 x 1-1/4 x 16 Ga. E-Ring Key, Square Washer 25/32 x 1-5/8 x 16 Ga. Shaft Assy. Cross Taper Spring Torsion Washer 17/32 x 3/4 x 16 Ga. Link Transaxle Console, Shift Rod Bypass Retainer Spring 1" Zinc/Cad Washer 9/32 x 3/4 x 10 Ga. Link Transaxle Console, Shift Rod Bypass Retainer Spring 1" Zinc/Cad Washer 9/32 x 3/4 x 10 Ga. Nut Lock Flg 3/8-16 unc Spacer Retainer Washer 13/32 x 2 x 10 Ga. Washer 5/16 ID x 1.0 x .125 Bracket Shift Mount Hub Shift Bolt Rdhd Sqnk 1/4-20 x 3/4 Gr. 5 Nut Crownlock 1/4-20 unc Bolt Hex Fin 1/4-20 unc x 1 Gr. 5 Bracket Pivot Lever Screw 5/16-18 x 5/8 Bolt Shoulder 5/16-18 x .561 Plate Fastener Cross Shf. Nyliner Snap-in 5/8 ID Washer Nyl 7/8 ID x .105" Bolt Shoulder 5/16-18 unc Bolt Rdhd Sqnk 5/16-18 unc x 1 Bolt Carr Sh 3/8-16 x 1-3/4 Gr. 5 Screw 3/8-16 x 1	
NOTE: All component dimensions given in U.S. inches			

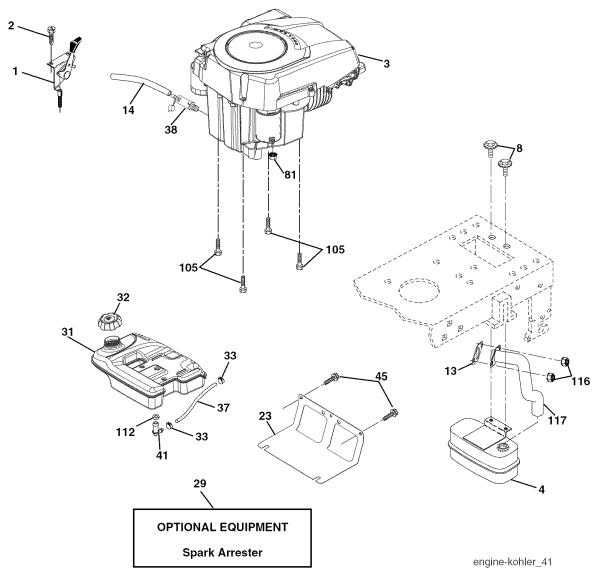


# TRACTOR - - MODEL NUMBER 917.275662 STEERING ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
NO. 1 2 3 4 5 6 8 10 11 23 4 5 6 8 10 11 12 13 5 17 26 28 29 30 32 36 37 38 9 40 41 42 42 42 42 42 42 42 42 42 42	NO. 186094X428 184706 169840 169839 6266H 121748X 12000029 175121 STD551137 73940800 136518 145212 177883 126847X 19131416 17000612 76020412 192757 155105 152927 186095X428 19183812 73540600 186737 163888X428 121749X 184946X505 160367	Wheel Steering Axle Asm Spindle Asm LH Spindle Asm RH Bearing Race Thrust Harden Washer 25/32 x 1-5/8 x 16 Ga. Ring Klip #t5304-75 Link Drag Washer Lock Hvy HIcl Spr 3/8 Nut Hex Jam Toplock 1/2-20 unf Spacer Bearing Axle Front Nut Hex Flange Lock Shaft Asm Steering Bushing Link Drag Washer 13/32 x 7/8 x 16 Ga. Screw 3/8-16 x 3/4 Pin Cotter 1/8 x 3/4 Rod Tie Bushing Strg Screw Insert Cap Strg Wh Washer 9/16 ID x 2-3/8 OD 12 Ga. Nut Crownlock 3/8-24 Adaptor Wheel Strg Boot Steering Washer 25/32 1 1/4 x 16 Ga. Cap Spindle Spacer Brace Axle
67 68	72110618 169827	Bolt Rdhd Sq 3/8-16 unc x 2-1/4 Axle Brace
68 71 82 87 88 91	169827 175146 169835 173966 175118 175553	Axle Brace Steering Asm. Bracket Susp. Chassis Front Washer Flat .781 x 1-1/2 x .15 Bolt Shoulder 7/16-20 unc Clip Steering
95	188967	Washer Harden .793 x 1.637 x .060

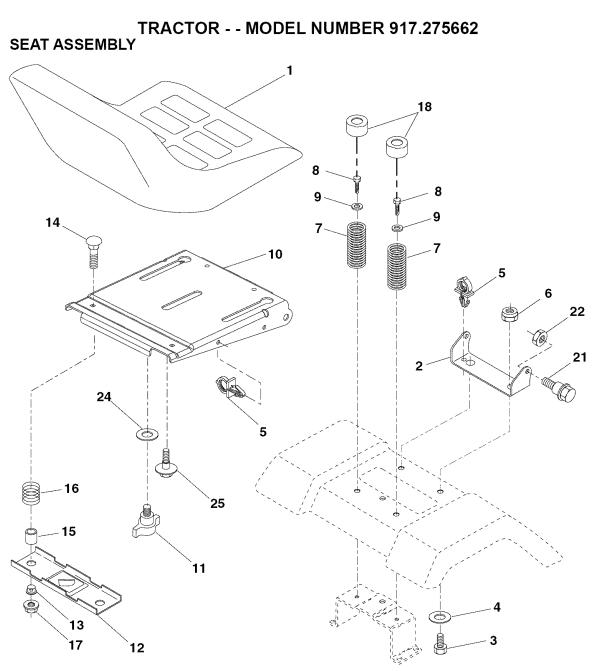
## TRACTOR - - MODEL NUMBER 917.275662

## ENGINE



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.
1	176636X505	Control Throttle/Choke	33	123487
2	191611	Screw 10 x 3/4 Single Lead-Hex	37	8543R
3		Engine Kohler Model	38	181654
		SV600-0001 (See Breakdown)	41	13927
4	188655	Muffler	45	170006
8	171877	Bolt 5/16-18 unc x 3/4 w/sems	81	735104
13	185909	Muffler Gasket	105	171206
14	148456	Tube Drain Oil Easy	112	3645J
23	169837	Shield Heat	116	184362
29	137180	Kit Spark Arrestor (Flat Scrn)	117	188654
31 32	179022 179124X428	Tank Fuel Cap Asm Fuel		E: All c s 1 inch

NO.	NO.	DESCRIPTION			
33 37 38 41 45 81 105 112 116 117	123487X 8543R 181654 139277 17000612 73510400 17120616 3645J 184362 188654	Clamp Hose Black Line Fuel Plug Drain Oil Easy Stem Tank Fuel Screw Hexwsh Thdr 3/8-16 x 3/4 Nut Keps Hex 1/4-20 unc Screw 3/8-16 x 1 SMGML Bushing Nut Hex Flange Toplock M8-1.25 Tube Exhaust			
NOT	<b>NOTE:</b> All component dimensions given in U.S.				

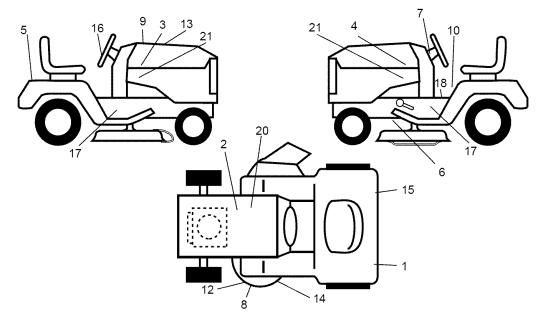


seat\_lt.knob\_14

KEY	PART	
NO.	NO.	DESCRIPTION
1	180598	Seat
2	180166	Bracket Pivot Fender
3	STD523710	Bolt Fin Hex 3/8-16 unc x 1
4	19131610	Washer 13/32 x 1 x 10 Ga
5	145006	Clip Push-In
6	STD541437	Nut Hex w/Ins 3/8-16 unc
7	124181X	Spring Seat Cprsn
8	17000616	Screw 3/8-16 x 1-1/2
9	19131614	Washer 13/32 x 1 x 14 Ga.
10	180186	Pan Seat
11	166369	Knob Seat Adj Wingnut
12	174648	Bracket Mounting Switch

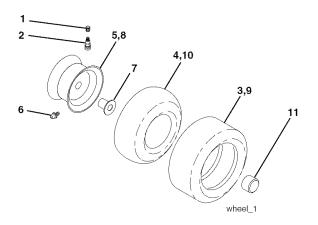
KEY NO.	PART NO.	DESCRIPTION		
13	121248X	Bushing Snap Blk Nyl 50 ld		
14	72050412	Bolt Rdhd Sqnk 1/4-20 x 1-1/2		
15	121249X	Spacer Split		
16	123740X	Spring Cprsn		
17	123976X	Nut Lock 1/4 Lge Flg Gr. 5 Zinc		
18	124238X	Cap Spring Seat		
21	171852	Bolt Shoulder 5/16-18 unc		
22	STD541431	Nut Hex Lock W/Ins 5/16-18		
24	19171912	Washer 17/32 x 1-3/16 x 12 Ga.		
25	127018X	Bolt Shoulder 5/16-18 x 62		
NOT				

## TRACTOR - - MODEL NUMBER 917.275662

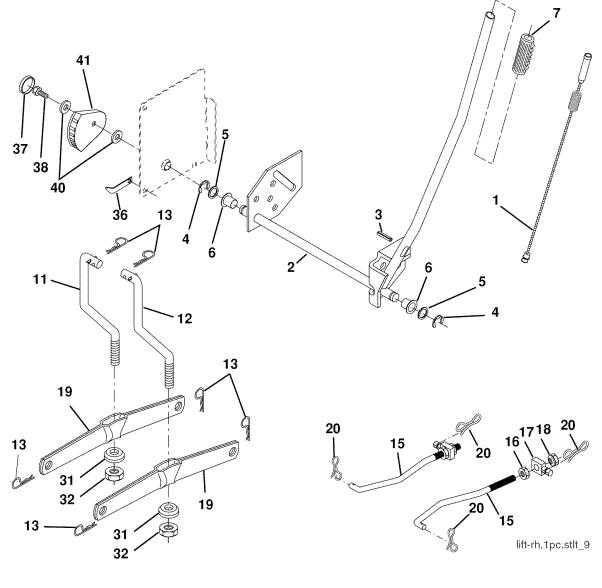


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	187407	Decal Reflector LH	14	160396	Decal V-Belt Schematic
2	138047	Decal Battery Diehard Sears	15	187408	Decal Reflector RH
3	194023	Decal Hood RH	16	164065	Decal Steering Wheel
4	194024	Decal Hood LH	17	195909	Decal Chassis 20 H.P.
5	194027	Decal Fender Craftsman	18	193307	Decal Fender Opr.
6	146046	Decal V-Belt Drive Schematic	20	149516	Decal Battery
7	193654	Decal Dash	21	194025	Decal Hood Side Panel
8	179128	Decal Deck Caution		166960	Decal By-Pass
9	194045	Decal Replacement Hood		184310X428	Pad Footrest LH
10	156439	Decal Fender Danger		184311X428	Pad Footrest RH
12	172331	Decal Mower Heavy-Duty		199062	Manual Owner's English
13	133644	Decal Replacement Parts		199063	Manual Owner's Spanish

WHEELS & TIRES



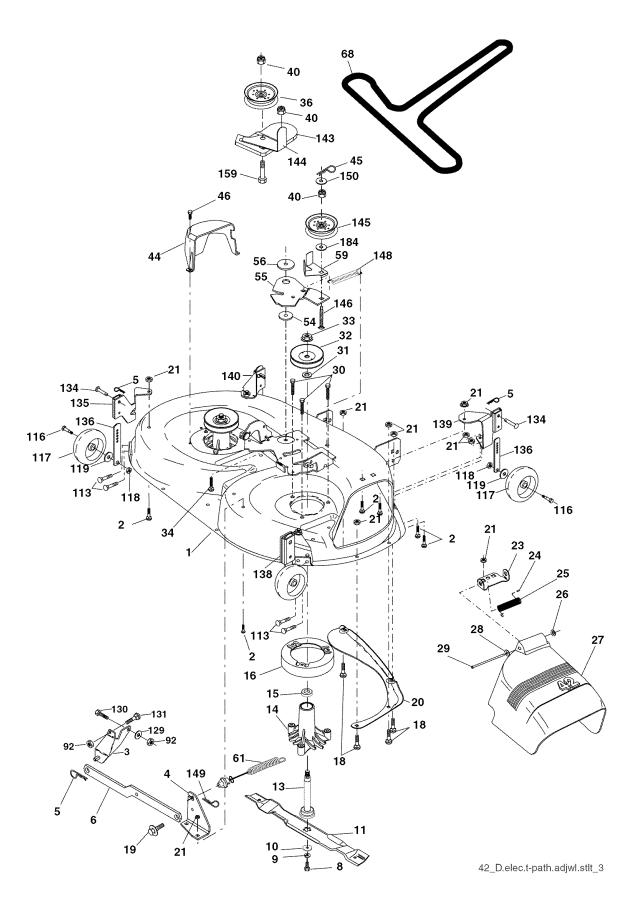
KEY NO.	PART NO.	DESCRIPTION	
1	59192	Cap Valve Tire	
2	65139	Stem Valve	
3	106222X	Tire F Ts 15 x 6.0 - 6 Service	
4	59904	Tube Front (Service Item Only)	
5	106732X417	Rim Asm 6" front Service	
6	278H	Fitting Grease (Front Wheel Only)	
7	9040H	Bearing Flange (Front Wheel	
_		Only)	
8		Rim Asm 8" rear Service	
9	138468	Tire R Ts 20 x 8-8 C Service	
10	7152J	Tube Rear (Service Item Only)	
11	104757X428	Cap Axle Blk 1.50 x 1.00	
	144334	Sealant, Tire (10 oz. Tube)	
<b>NOTE:</b> All component dimensions given in U.S. inches 1 inch = 25.4 mm			



KEY NO.	PART NO.	DESCRIPTION
1	197980	Plunger Assembly
2	198070	Shaft Assembly, Lift
3	188822	Pin Groove
4	12000002	E-Ring
5	19211621	Washer 21/32 x 1 x 21 Ga.
6	120183X	Bearing Nylon
7	175830	Grip Handle Fluted
11	139865	Link Lift L.H.
12	139866	Link Lift R.H.
13	STD624008	Retainer Spring
15	173288	Link Front Susp
16	73350800	Nut Hex Jam 1/2-13 unc
17	175689	Trunnion Front Susp

KEY NO.	PART NO.	DESCRIPTION
18 19 20 31 32 36 37 38 40 41	73800800 139868 194209 169865 73540600 155097 123935X 17060516 19112410 155098	Nut Lock w/Wsh 1/2-13 unc Arm Asm Suspension Mower Pin Cotter 7/16 bow Tie Lock Bearing Pivot Lift Nut Crownlock 3/8-24 Pointer height Indicator Plug Hole Screw 5/16-18 x 1 Washer 11/32 x 1-1/2 10 Ga. Indicator Height

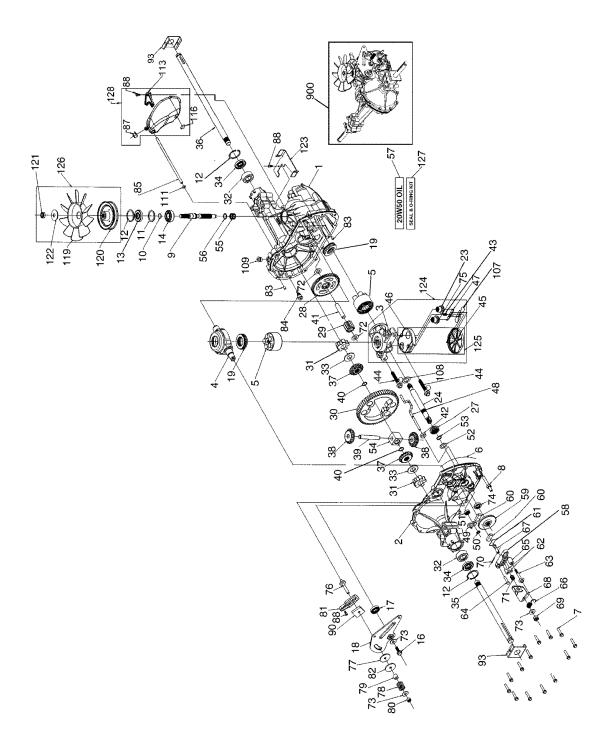
**MOWER DECK** 



# TRACTOR - - MODEL NUMBER 917.275662

## MOWER DECK

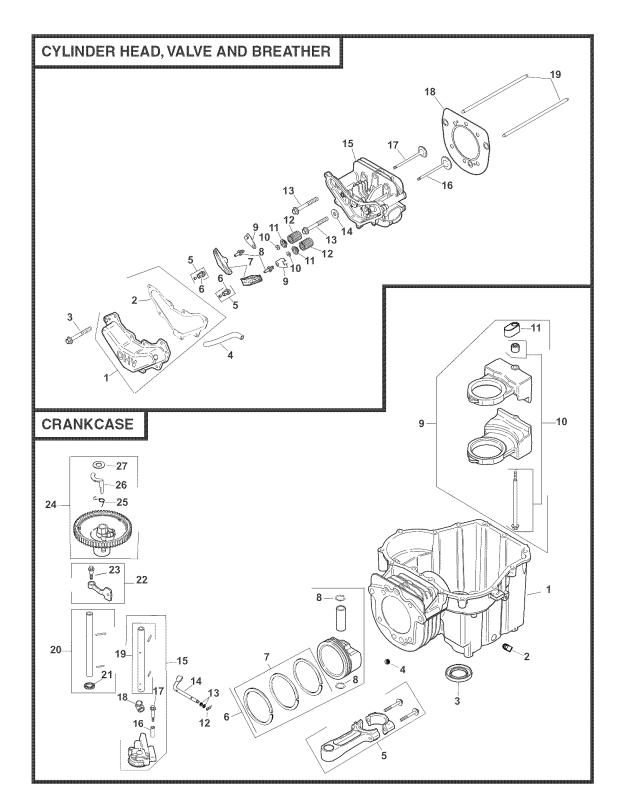
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	182032	Mower Housing	56	165723	Spacer Retainer
	STD533107	Bolt	59	141043	Guard Tuv Idler (94)
2 3	138017	Bracket Asm Sway Bar Front	61	174882	Spring Ext Elect Clutch
4	165460	Bracket Sway Bar 38/42"	68	174883	V-Belt
5	STD624008		92	STD541437	Locknut Hex W/Wsh 3/8-16 unc
6	178024	Bar Sway Deck	113	17000510	Screw 5/16-18
8	850857	Bolt Hex 3/8-24 x 1.25 Gr. 8	116	4898H	Bolt Shoulder
9	STD551137		117	188606	Wheel Gauge
10	140296	Washer Hardened	118	73930600	Nut Crownlock 3/8-1
		(The following blades are available)	119	19121414	Washer 13/32 x 7/8 x 14 Ga.
11	138971	Blade 42" Hi-Lift	129	19131312	Washer 13/32 x 13/16 x 12 Ga.
		(For bagging or discharge)	130	STD523710	Bolt Fin Hex 3/8-16 unc x 1Gr. 5
	134149	Blade 42" Mulching STD	131	STD533710	Bolt Rdhd Sqnk 3/8-16 unc x 1
		(For mulching mowers only)	134	156941	Pin Head Rivet
	139775	Blade 42" Mulching Premium	135	159765	Bracket Asm Wheel Gauge Rear
		(For better wear when mulching)			LH
13	137645	Shaft Assembly Mandrel Vented	136	155986	Bar Adjusting Gauge Wheel
		(Incl. Key Number 6)	138	159763	Bracket Asm Wheel Gauge Rear
14	128774	Housing Mandrel Vented			RH
15	110485X	Bearing Ball Mandrel	139	159767	Bracket Asm Wheel Gauge Front
16	174493	Stripper Mower Deck		450300	RH
18	72140505	Bolt Carriage 5/16-18 x 5/8	140	159768	Bracket Asm Wheel Gauge Front
19	132827	Bolt Shoulder	4.40	457400	LH Due sloet Arms Julian 40"
20	159770	Baffle Vortex	143	157109	Bracket Arm Idler 42"
21	STD541431	Nut Crownlock 5/16-18 unc	144	158634	Keeper Belt 42" Clutch Cable
23	177563	Bracket Deflector	145	165888	Pulley Idler Flat
24	105304X	Cap Sleeve	146	171977	Bolt Carraige Idler
25	123713X	Spring Torsion Deflector	148	169022	Spring Return Idler
26	110452X	Nut Push	149	165898	Retainer Spring Yellow Zinc
27 28		Shield Deflector	150 159	19091210	Washer 9/32 x 3/4 x 10 Ga.
	19111016	Washer 11/32 x 5/8 x 16 Ga.	184	STD533717	Bolt Rdhd Sqn 3/8-16 unc x 1-3/4
29 30	131491	Rod Hinge		19131410	Washer 3/8
30 31	173984	Screw Thdrol Rolling Wsh Hd		130794	Mandrel Assembly (Includes
32	187690	Washer Spacer			housing, shaft and shaft hardware
32 33	153535 178342	Pulley Mandrel		181542	only-pulley not included)
34	STD533717	Nut Toplock Flanged Bolt		101042	Replacement Mower, Complete (Std. Deck-Order separately
36	131494	Pulley Idler Flat			gauge wheels 5, 116-119, 134,
40	73900600	Nut Lock 3/8-16 unc			
40 44	140088	Guard Mandrel L.H.			136).
44 45	STD624003				
45	137729	Screw Thd. Roll 1/4-20 x 5/8	NOT		ont dimonsions given in LLS inches
40 54	178515	Washer Hardened	NUT	1 inch = 25.4	ent dimensions given in U.S.inches
54 55	155046	Arm Idler		1 1101 - 20.4	T 11011
50	,000-0				



## TRACTOR - - MODEL NUMBER 917.275662 HYDRO GEAR TRANSAXLE - - MODEL NUMBER 314-0510

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	170351	Main Housing, Assembly	59	170408	Rotor, Brake
2	170352	Side Housing, Assembly	60	142883	Brake Puck
2 3	170353	Center Section, Assembly	61	142881	Puck Plate
4	170354	Swashplate, Trunion Machined	62	142887	Brake Actuating Pin
5	169898	Block - Assembly	63	170410	Hfhcs 1/4-20x2 W/Patch,
6	170355	Sealant 10.5 Oz			SpecialFlange
7	170356	Hex Flange Screw 1/4-20 X 1.25	64	142892	Bolt, 1/4-20 X 1 W/Patch
8	170357	Stud, 5/16-24 Hex Double End	65	170411	Spacer
9	170358	Shaft, Input	66	189386	Spring, Brake Arm Bias
10	170359	Ring - Retaining	67	170413	Sq. Hd. Bolt 5/16-24-Ribbed
11	170360	Spacer	68	170414	Arm, Brake
12	169870	Ring - Retaining	69	170415	Slotted Hex Nut 5/16-24
13	170361	Seal, Lip .67 X 1.58 X .276	70	170416	Cotter Pin 3/32 X 3/4
14	169869	Ball Brg 17mm Id X 40mm Od X	71	170417	Compression Spring Brake Anti-
		12mm			Drag
16	170362	Hex Flange Head Screw 5/16-	72	170418	Washer, Ht .5 I.D. X 1 O.D. X .032
	170000	24X0.75	73	142884	Flat - Washer 11/32 I.D. X 7/8 O.D
17	170363	Lip Seal 18 X 32 X 7	74	170419	Oil Seal .625 X 1.0 X .25
18	170364	Arm, Control	75	170420	Check Plug Assembly,
19	150771	Bearing, 30x52x13 Thrust	76	170401	.027,Washer
23 24	170365 170366	Check Plug Assembly, Washer Shaft, Motor	76 77	170421 170422	Stud, 5/16-24 Friction Pack
24 27	170367	Gear - Pinion, 13t	78	142969	Puck, .330 X 1.50 X .0975 Spring, Helical Comp
28	170368	10t/48t Gear	79	142980	Spacer
29	170369	Gear, 10t Jackshaft	80	150778	Hex Lock Nut 5/16-24Unjf(Nylon
30	170370	60t Bull Gear	00	100770	Insert)
31	170371	Sleeve Bearing .75 X 1.575 X	81	170423	Wedge, Friction Pack
01		.625	82	170424	Clip, Washer .316x1.50x.1046
32	170389	SleeveBearing(Outboard)			(Plated)
		.75x1.750x.625	83	161162	Pin, Standard Headless
33	142991	Washer, 3/4 ld X 1-1/2 Od X .13	84	170425	Fitting, 5/16 Sae 5/32 Tube
		Thk	85	170426	Hose, Expansion Tank
34	170390	Lip Seal Axle Seal	86	170427	Expansion Tank
35	170391	Shaft, Axle .75 X 11.39 (Key, R.H.)	87	170424	Cap - Poppet Valve
36	170392	Shaft, Axle .75 X 16.99 (Key, L.H.)	88	170429	Bolt, Self Tapping 10-32 X 1/2
37	150792	Miter Gear (Splined)	90	170430	Puck, Inner Wedge
38	150793	Miter Gear 15t (0.5 ld)	93	170431	Spring Clip - Housing Thrust
39	150809	Shaft	107	170432	Deflector
40	170393	Ring, Spiral Retaining	108	170433	Washer,Motor Shaft
41	170394	Pin, Jackshaft			.71idx1.15odx.030thk
42	170395	Magnet, Ring	109	170434	Plug, Sae #6
43	170396	Spring, Bypass	111	170435	O-Ring .07 X .301 I.D.
44	150797	Hydro Mtg Screw 3/8-24 X 2.5	112	170436	Shield, Vent
45	470207	Long	113	170437	Bracket, Support Expansion Tank
45 46	170397	Filter	116	170438 170439	Silicon Sponge
46 47	170398 170999	Base, Filter	119 120	170439	Fan, 7 In. Pulley
47 48	170400	Actuator, Bypass	120	170440	
49 49	170401	Rod, Bypass Actuator Arm, Bypass	121	170441	Hex Lock Nut 1/2-20 (Nylon Insert)
50	170202	Retaining Ring .250 External	122	170442	Washer, Belleville
51	170403	Seal, Lip .741 X .250 X .250 Tc	123	170443	Belt Keeper
52	170404	Flat Washer, 5/8 ld X 1.0 Od X	124	170444	Center Section-Filter-Bypass
92		.05 Thk	127		Assembly
53	170405	Retaining Ring	125	170445	Filter Assembly
54	170406	Bearing, Center Block	126	170446	Fan - Pulley Service Assembly
55	142977	Spring - Helical Compression	127	170447	Seal - O-Ring Kit
56	142978	Washer	900	166768	Transaxle Complete
57		20w-50 Oil			1
58	170407	Brake Yoke	NOT	E: All compor	nent dimensions given in U.S. inches
				n = 25.4 mm	

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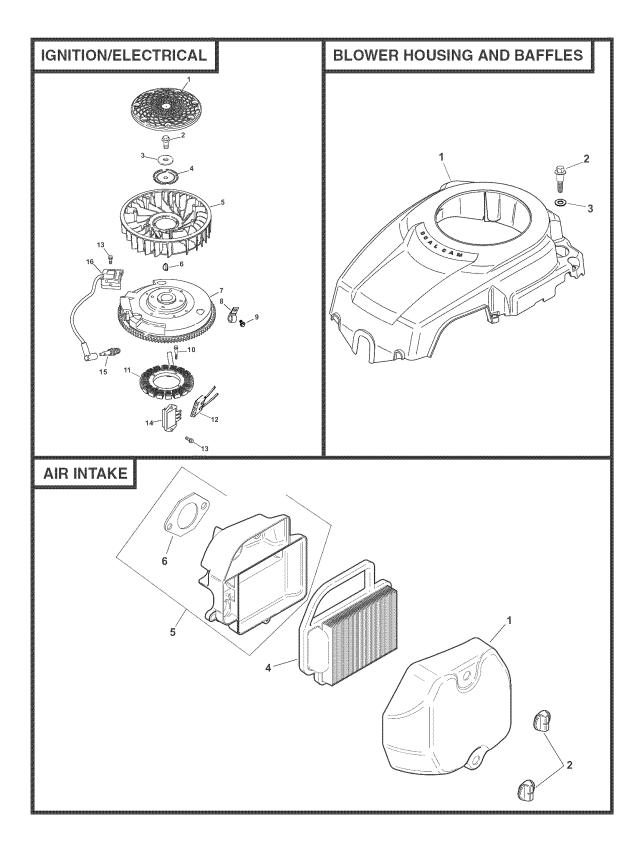


#### HEAD/VALVE/BREATHER

#### CRANKCASE

KEY NO.	PART NO.	DESCRIPTION	K
1 2 3	20 041 04-S	Kit, valve cover (Includes 2) Gasket, valve cover Screw, hex. flange M6x1.0x20	1 2 3
4 5	20 326 01-S 20 599 01-S	(7) Hose, breather Kit, rocker arm pivot (2) (In- cludes 6)	3 4 5 6
6 7 8 9	20 186 01-S 20 086 03-S 20 146 03-S	Screw, set (2) Arm, rocker (2) Screw, set - rocker pivot (2) Plate, push rod guide (2)	7 8 9
10 11 12 13	20 062 01-S 20 173 01-S 20 089 03-S 20 086 02-S	Spring, valve (2)	1 1 1 1
14 15 16	20 318 01-S	Washer, flat 1/2" Head, cylinder	1 1
17 18	20 017 01-S	Valve, exhaust Valve, intake Kit, cylinder head gasket repair	1 1 1
19	20 411 02-S		1 2
			~

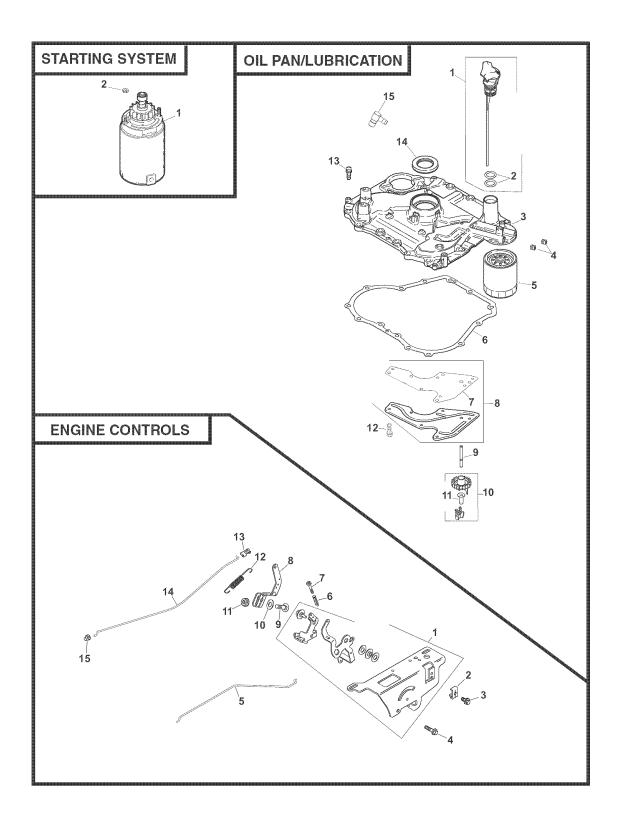
KEY NO.	PART NO.	DESCRIPTION
1		Crankcase (USE: Short Block
2 3 4 5 6	20 032 01-S 20 194 02-S 20 067 04-S	20 522 01) Plug, sq. hd. pipe 3/8" Seal, oil Ball, check valve Rod, connecting Piston w/Ring Set (Includes 7,8)
7 8 9	20 018 04-S	Ring Set (94 mm) Retainer, piston pin (2) Kit, balance weight (Includes 10,11)
10 11 12 13	20 423 02-S 12 154 05-S	Kit, screw/guide pin Shoe, guide Clip, hitch pin Nasher, TBD
14 15	20 144 02-S	Shaft, governor cross Pump assembly, oil (Includes 16-19)
16 17 18 19 20	20 086 13-S 20 032 05-S 20 144 04-S	Spacer, oil pump screw (2) Screw, oil pump (2) Seal, oil pump outlet Shaft center, cam - Intake Shaft center, cam - Exhaust (Includes 21)
21 22	20 468 01-S 20 090 01-S	Washer, thrust
23 24	20 086 06-S 20 010 03-S	Screw, shoulder
25 26 27	20 089 06-S 20 044 16-S 20 468 03-S	Spring, ACR Weight, ACR
NOTE	E: All compon	ent dimensions given in U.S.



IGNITION/ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION		
1 2	20 162 02-S 12 086 14-S	Screen, grass Screw, hex. flange M10x1.5x46		
3 4 5 6 7 8	12 468 03-S 20 146 02-S 20 157 01-S X-42-15-S 20 025 05-S M-561025-S	Washer, spring 3/16" Plate, fan mounting Fan Key, woodruff Flywheel Screw, hex. flange M5x0.8x25		
9 10 11 12 13	231285-S M-548025-S 237878-S 236602-S M-545020-S	Kit, stator Connector, body Screw, hex. flange M5x0.8x20		
15 16	12 132 02-S 20 584 01-S LLUSTRATEE	Module, ignition		
BLOW	ER HOUSIN	G & BAFFLES		
KEY NO.		DESCRIPTION		
1 2	20 027 02-S 20 086 06-S			
3	X-25-28-S	(4) Washer, plain		
AIR INTAKE/FILTRATION				
KEY NO.	PART NO.	DESCRIPTION		
1	20 096 05-5	Cover, air cleaner		

- 1 2
- 20 096 05-S Cover, air cleaner 25 341 03-S Knob, cover (2) 20 083 02-S Element, air cleaner 20 094 01-S Kit, air cleaner base (Includes 6) 4 5
- 6 12 041 02-S Gasket, air cleaner base

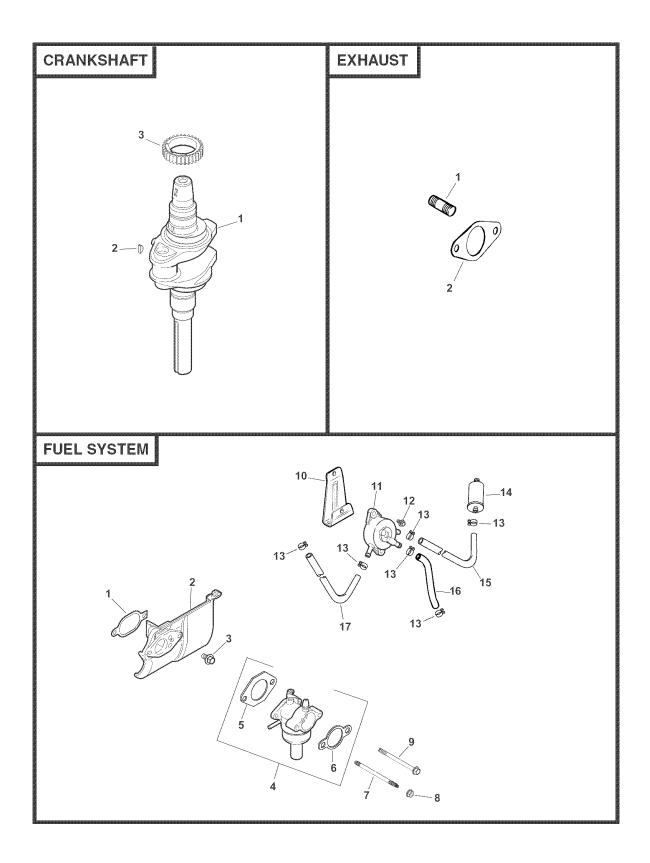


#### STARTING SYSTEM

KEY NO.	PART NO.	DESCRIPTION
1 2		Starter assembly, inertia drive Nut, hex. serrated flange (2)
OIL P/	AN/LUBRICAT	TION
KEY NO.	PART NO.	DESCRIPTION
1	20 040 02-S	
2 3	20 153 01-S 20 009 03-S	cludes 2) O-Ring, dipstick (2) Plate assembly, closure (Includes 4,10,11)
4 5 6 7	25 139 60-S 52 050 02-S 20 041 01-S 20 096 02-S	Plug, pipe (2) Filter, oil Gasket, closure plate
8 9 10	20 041 02-S 20 144 03-S 20 310 03-S	Gasket, oil passage Shaft, governor gear
11 12	12 380 01-S M-545013-S	Pin, governor regulating
13	M-851030-S	
14 15	20 032 01-S 25 155 02-S	Seal, oil Connector, 90°

#### ENGINE CONTROLS

KEY NO.	PART NO.	DESCRIPTION
1 2 3	12 237 01-S	Control assembly, speed Clamp, cable Screw, torx hd. ctsk. M5x0.8x16
4	M-664020-S	Screw, lobed sckt. M6x1.0x20 (2)
5 6 7	12 089 11-S	Linkage, choke – single wire Spring, speed control (2) Screw, thread forming M4x0.7x25 (2)
8 9 10 11 12 13 14 15	52 211 04-S X-22-11-S 12 100 07-S 20 089 07-S 25 158 11-S 20 079 01-S	Lever, governor Bolt, round head 1/4-20x1" Washer, lock 1/4" Nut, hex. flange 1/4-20" Spring, governor Bushing, throttle linkage Linkage, throttle Bushing, linkage retaining



#### CRANKSHAFT

KEY NO.	PART NO.	DESCRIPTION
1 2	X-42-15-S K	Crankshaft (Includes 2) ey 3/16"

3 20 043 12-S Gear, crankshaft

#### EXHAUST

KEY NO.	PART NO.	DESCRIPTION

- 25 072 04-S Stud, exhaust (2) 1 20 041 12-S Gasket, exhaust 2
- ---
- 20 522 01 Short Block 20 755 05-S Gasket Set ---

FUEL SYSTEM

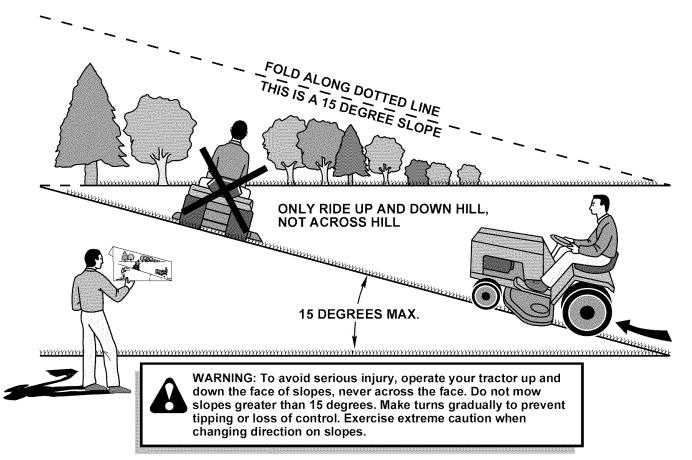
KEY NO.	PART NO.	DESCRIPTION			
1 2 3 4	20 265 01-S M-651020-S	Gasket, heat deflector Deflector, heat Screw, hex. flange M6x1.0x20 Carburetor w/gaskets (In- cludes 5,6)			
5 6 7 8 9 10 11 12	12 041 02-S 20 072 03-S M-641060-S 20 086 11-S 20 126 02-S	Gasket, carburetor Gasket, air cleaner Stud, carburetor mounting Nut, hex. flange M6x1.0 Screw, carb S60x1.42x85 Bracket, fuel pump mounting Pump assembly, fuel Screw, hex. flange M5x0.8x10			
13 14 15 16 17	25 237 14-S 25 050 08-S 41 353 15-S 24 353 12-S 20 353 01-S				
NOT I	NOT ILLUSTRATED				

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- X-22-11-S Washer, lock 1/4" (ground) 66 431 04-S Sleeve, insulating (for 11" fuel ---12 757 02-S Kit, float 12 757 03-S Kit, carburetor repair 12 757 33-S Kit, solenoid repair 12 757 37-S Kit, bowl replacement w/
- ---
- ---
- ---
- --gaskets 12 454 03-S Tie, wire
- ---

# 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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