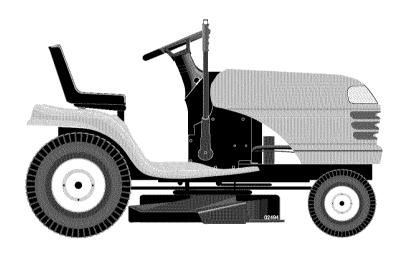
### Owner's Manual

# **CRAFTZMAN®**

# **LAWN TRACTOR**

20.0 HP, 42" Mower Electric Start Automatic Transmission

Model No. **917.273860** 





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.

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

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

AWARNING: 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.

AWARNING: 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 in the manual and on the machine before starting.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers.

- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Turn off blades when not mowing.
- Stop engine before removing grass catcher or unclogging chute.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.
- 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.
- 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 buildup to occur. Clean any oil or fuel spillage before operating or storing the machine. Allow machine to cool before storage.

#### II. SLOPE OPERATION

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

### SAFETY RULES

#### DO:

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

#### DO NOT:

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

#### III. CHILDREN

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

- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and down for small children.

- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

#### IV. SERVICE

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

### SAFETY RULES











- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers or children even with the blades off.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and down for small children.
- Mow up and down slopes (15° Max), not across.

- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Avoid starting or stopping on a slope. If 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):	SAE10w30(above 32°F) SAE 5W-30(Below 32°F	
Oil Capacity:	W/Filter 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.

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

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

# REPAIR PROTECTION AGREEMENTS

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

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

Here's what's included in the Agreement:

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

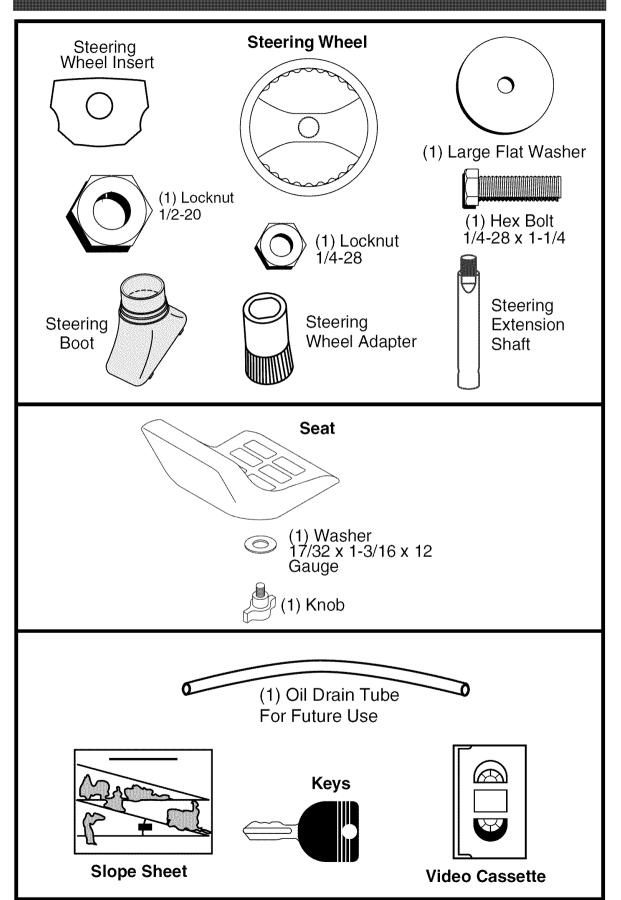
Once you purchase the Agreement, a simple phone call is all that it takes for you to schedule service. You can call anytime day or night, or schedule a service appointment online.

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

#### SEARS INSTALLATION SERVICE

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

### **UNASSEMBLED PARTS**



### **ASSEMBLY/PRE-OPERATION**

Your new tractor has been assembled at the factory with the exception of those parts left unassembled for shipping purposes. To ensure safe and proper operation of your tractor all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to insure proper tightness. Review the video cassette before you begin.

# TOOLS REQUIRED FOR ASSEMBLY

A socket wrench set will make assembly easier. Standard wrench sizes are listed.

(1) 3/4" wrench

Pliers

(2) 7/16" wrenches

Utility knife

Tire pressure gauge

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

# BEFORE REMOVING TRACTOR FROM SKID ATTACH STEERING WHEEL

# ASSEMBLE EXTENSION SHAFT AND BOOT

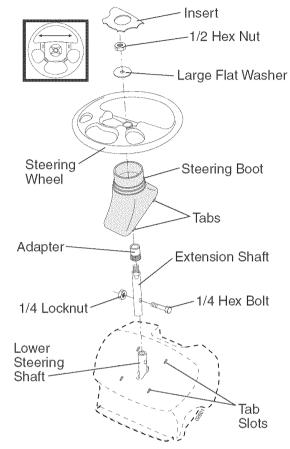
1. Slide extension shaft onto lower steering shaft. Align mounting holes in extension and lower shafts and install 1/4 hex bolt and locknut. Tighten securely.

**IMPORTANT:** Tighten bolt and nut securely to 10-12 ft. lbs torque.

2. Place tabs of steering boot over tab slots in dash and push down to secure.

#### **INSTALL STEERING WHEEL**

- 3. Position front wheels of the tractor so they are pointing straight forward.
- 4. Remove steering wheel adapter from steering wheel and slide adapter onto steering shaft extension.
- 5. Position steering wheel so cross bars are horizontal (left to right) and slide inside boot and onto adapter.
- 6. Assemble large flat washer, 1/2 hex nut and tighten securely.
- 7. Snap steering wheel insert into center of steering wheel.



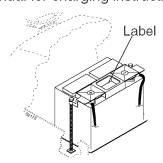
8. Remove protective materials from tractor hood and grill.

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

# HOW TO SET UP YOUR TRACTOR CHECK BATTERY

1. Lift hood to raised position.

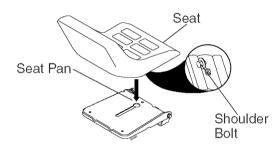
**NOTE:** If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps. (See "BATTERY" in Maintenance section of this manual for charging instructions).

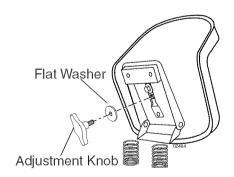


#### **INSTALL SEAT**

Adjust seat before tightening adjustment knob.

- Remove adjustment knob and flat washer securing seat to cardboard packing and set aside for assembly of seat to tractor.
- 2. Pivot seat upward and remove from the cardboard packing. Remove the cardboard packing and discard.
- 3. Place seat on seat pan so head of shoulder bolt is positioned over large slotted hole in pan.
- Push down on seat to engage shoulder bolt in slot and pull seat towards rear of tractor.
- 5. Pivot seat and pan forward and assemble adjustment knob and flat washer loosely. Do not tighten.
- 6. Lower seat into operating position and sit in seat.
- 7. Slide seat until a comfortable position is reached which allows you to press clutch/brake pedal all the way down.
- 8. Get off seat without moving its adjusted position.
- 9. 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)

- 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)

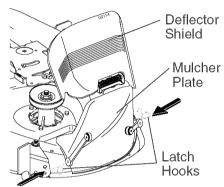
**AWARNING:** Before starting, read, understand and follow all instructions in the Operation section of this manual. Be sure tractor is in a well-ventilated area. Be sure the area in front of tractor is clear of other people and objects.

- 1. Be sure all the above assembly steps have been completed.
- 2. Check engine oil level and fill fuel tank with gasoline.
- 3. 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.

# INSTALL MULCHER PLATE (If previously removed)

- 1. Raise and hold deflector shield in upright position.
- 2. Place front of mulcher plate over front of mower deck opening and slide into place, as shown.
- 3. Hook front latch into hole on front of mower deck.
- 4. Hook rear latch into hole on back of mower deck.

**ACAUTION**: Do not remove deflector shield from mower.



# TO CONVERT TO BAGGING OR DISCHARGING

Simply remove mulcher plate and store in a safe place. Your mower is now ready for discharging or installation of optional grass catcher accessory.

**NOTE:** It is not necessary to change blades. The mulching blades are designed for discharging and bagging also.

#### 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.

#### **VCHECKLIST**

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:

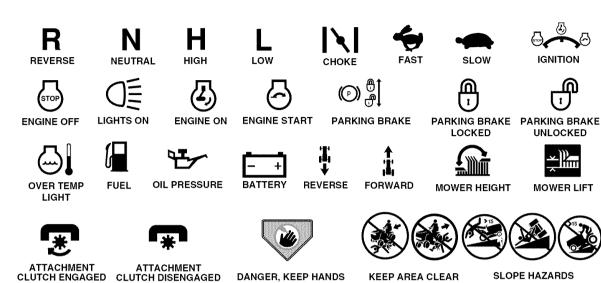
- ✓ All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- ✓ Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated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

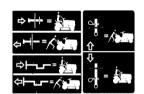
While learning how to use your tractor, pay extra attention to the following important items:

- ✓ 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.
- ✓ 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.





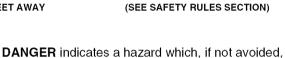
**FREE WHEEL** (Automatic Models only)



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



DANGER, KEEP HANDS



KEEP AREA CLEAR



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



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

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



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

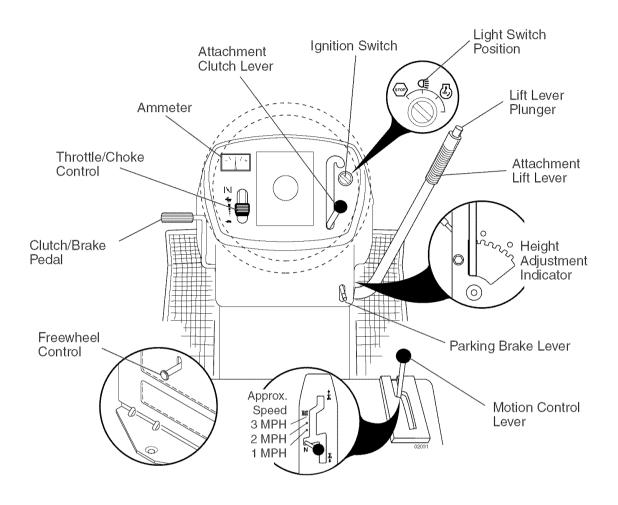


FIRE indicates a hazard which, if not avoided. could result in death, serious injury and/or property damage.

#### **KNOW YOUR TRACTOR**

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

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



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

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

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

ATTACHMENT LIFT LEVER - 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 POSITION** - 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.

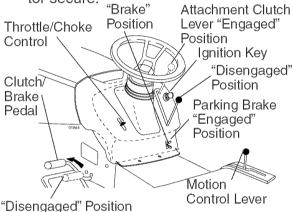


The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend standard safety glasses or a wide vision safety mask worn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

- 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, move attachment clutch lever 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.

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

#### TO USE THROTTLE CONTROL

Always operate engine at full throttle.

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

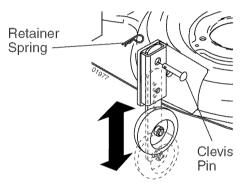
- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first 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.
- 3. Lower gauge wheels to ground. Raise gauge wheels slightly to align holes in bracket and gauge wheel bar and insert clevis pin. Gauge wheels should be slightly off the ground.
- 4. Replace retainer spring into clevis pin.
- 5. Be sure all gauge wheels are in the same setting.

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



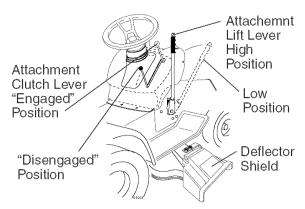
#### TO OPERATE MOWER

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

- 1. Select desired height of cut.
- 2. Start mower blades by engaging attachment clutch control.

TO STOP MOWER BLADES - disengage attachment clutch control.

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



#### 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.

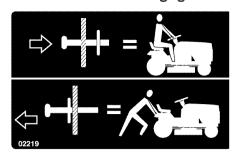
- To restart movement, slowly release parking brake and clutch/brake pedal.
- Slowly move motion control lever to slowest setting.
- Make all turns slowly.

#### 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.
- 2. 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-engage transmission, reverse above procedure.

#### **Transmission Engaged**



**Transmission Disengaged** 

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

#### TOWING CARTS AND OTHER ATTACH-MENTS

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

# BEFORE STARTING THE ENGINE CHECK ENGINE OIL LEVEL

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

- 1. Check engine oil with tractor on level ground.
- 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, allow engine to run with the throttle control in the choke position until the engine runs roughly, then move throttle control to fast position. This may require an engine warm-up period from several seconds to several minutes, depending on the temperature.

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.)

#### **PURGETRANSMISSION**

**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.
- 4. Move motion control lever to full forward position and hold for five (5) seconds. Move lever to full reverse position and hold for five (5) seconds. Repeat this procedure three (3) times.

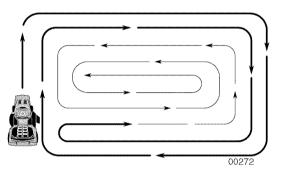
**NOTE:** During this step there will be no movement of drive wheels. The air is being removed from hydraulic drive system.

- 5. Move motion control lever to neutral (N) position. Shutoff engine and set parking brake.
- Engage transmission by placing freewheel control in "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.
- 8. Slowly move motion control lever forward, after the tractor moves approximately five (5) feet, slowly move motion control lever to reverse position. After the tractor moves approximately five (5) feet return the motion control lever to the neutral (N) position. Repeat this procedure with the motion control lever three (3) times.

Your transmission is now purged and 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.

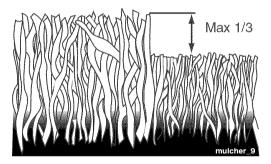


- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings.
   Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet.
   Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before 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.

#### MULCHING MOWING TIPS

**IMPORTANT:** For best performance, keep mower housing free of built-up grass and trash. Clean after each use.

- The special mulching blade will recut the grass clippings many times and reduce them in size so that as they fall onto the lawn they will disperse into the grass and not be noticed. Also, the mulched grass will biodegrade quickly to provide nutrients for the lawn. Always mulch with your highest engine (blade) speed as this will provide the best recutting action of the blades.
- Avoid cutting your lawn when it is wet.
  Wet grass tends to form clumps and
  interferes with the mulching action. The
  best time to mow your lawn is the early
  afternoon. At this time the grass has
  dried, the newly cut area will not be
  exposed to direct sunlight.
- For best results, adjust the mower cutting height so that the mower cuts off only the top one-third of the grass blades. For extremely heavy grass, reduce your width of cut on each pass and mow slowly.



- Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a second cut, mow across (perpendicular) to the first cut path.
- Change your cutting pattern from week to week. Mow north to south one week then change to east to west the next week. This will help prevent matting and graining of the lawn.

### **MAINTENANCE**

AS	MAINTENANCE SCHEDUL LI IN DATES YOU COMPLETE EGULAR SERVICE	E /	BEFORE S	EACH US	HOUR	5 HOUR 5 HOUR EVERY 5	HOUP OHOUP VERY	S HOL	AS ON EASON EFORES	ORAGE SERVIC	CE DATES	S
	Check Brake Operation	~	1									
	Check Tire Pressure	1	<b>V</b>									
Т	Check Operator Presence and Interlock Systems	~										
Ŗ	Check for Loose Fasteners	V				1/5		1				1
A	Sharpen/Replace Mower Blades			<b>√</b> 3								
Ι¥	Lubrication Chart			1				1				
ö	Check Battery Level			<b>1</b> /4								
R	Clean Battery and Terminals			1				1				
	Check Transaxle Cooling			V								
	Check V-Belts					1						
	Check Engine Oil Level	~	1									
	Change Engine Oil (with oil filter)				<b>✓</b> 1,2	2		1				
ΙE	Change Engine Oil (without oil filter)			<b>1</b> ,2				1				
N	Clean Air Filter			1/2								ı
Ģ	Clean Air Screen			1/2								1
Ι'n	Inspect Muffler/Spark Arrester				1							
E	Replace Oil Filter (If equipped)					1,2						٦,
-	Clean Engine Cooling Fins					1/2						
	Replace Spark Plug					1	1					
	Replace Air Filter Paper Cartridge					1/2						
	Replace Fuel Filter						1					- 1

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

#### 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.

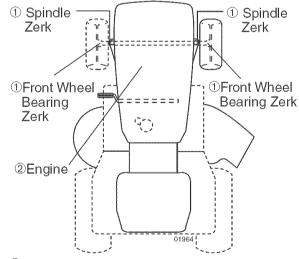
At least once a season, check to see if you should make any of the adjustments described in the Service and Adjustments section of this manual.

 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.
- Check brake operation.
- 3. Check tire pressure.
- 4. Check operator presence and interlock systems for proper operation.
- Check for loose fasteners.

#### **LUBRICATION CHART**



- General Purpose Grease
- ② REFER TO Maintenance "ENGINE" SECTION

**IMPORTANT:** Do not oil or grease the pivot points which have special nylon bearings. Viscous lubricants will attract dust and dirt that will shorten the life of the self-lubricating bearings. If you feel they must be lubricated, use only a dry, powdered graphite type lubricant sparingly.

#### TRACTOR

Always observe safety rules when performing any maintenance.

#### **BRAKE OPERATION**

If tractor requires more than five (5) feet to stop at highest speed in highest gear on a level, dry concrete or payed 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 rub-
- 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**

Be sure operator presence and interlock 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 attachement clutch control is in the disengaged position.
- 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.

#### **BLADE CARE**

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

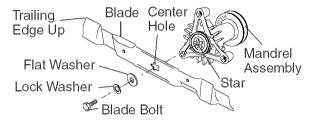
#### **BLADE REMOVAL**

- 1. Raise mower to highest position to allow access to blades.
- 2. Remove blade bolt, lock washer and flat washer securing blade.
- 3. 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
- 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

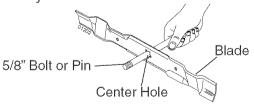
NOTE: We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

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.
- 19 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.

- Disconnect BLACK battery cable first then RED battery cable and remove battery from tractor.
- 2. Rinse the battery with plain water and dry.
- 3. Clean terminals and battery cable ends with wire brush until bright.
- 4. Coat terminals with grease or petroleum jelly.
- 5. Reinstall battery (See "REPLACING BATTERY" in the Service and Adjustments section of this manual).

#### TRANSAXLE COOLING

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

Do not attempt to clean fan or transmission while engine is running or while the transmission is hot. To prevent possible damage to seals, do not use high pressure water or steam to clean transaxle.

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

#### TRANSAXLE PUMP FLUID

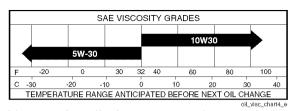
The transaxle was sealed at the factory and fluid maintenance is not required for the life of the transaxle. Should the transaxle ever leak or require servicing, contact a Sears or other qualified service center.

#### 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.

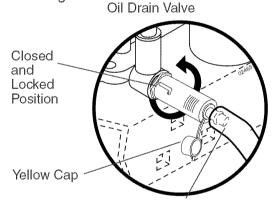


Change the oil after every 50 hours of operation or at least once a year if the tractor is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each eight (8) hours of operation.

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.
- 1. Remove oil fill cap/dipstick. Be careful not to allow dirt to enter the engine when changing oil.
- 2. Remove yellow cap from end of drain valve and install the drain tube onto the fitting.



**Drain Tube** 

- 3. Unlock drain valve by pushing inward slightly and turning counterclockwise.
- 4. To open, pull out on the drain valve.
- 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.
- 8. 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 dow firmly into the tube when finished.

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#### **ENGINE OIL FILTER**

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

#### AIR FILTER

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

Service air cleaner more often under dusty conditions.

1. Loosen knobs and remove cover.

#### TO SERVICE PRE-CLEANER

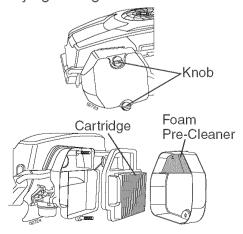
- 2. Remove foam pre-cleaner from cover.
- 3. Wash it in liquid detergent and water.
- 4. Squeeze it dry in a clean cloth. Allow it to dry.
- 5. Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.

#### TO SERVICE CARTRIDGE

 Replace a dirty, bent, or damaged cartridge. 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. Remove cartridge.
- 2. Gently tap pleated side of cartridge to dislodge dirt.
- 3. Install cleaned or new cartridge with the pleated side "out" and seat the rubber seal onto the edges of the air cleaner base.
- 4. Reinstall the pre-cleaner (cleaned and oiled) into the cover. Make sure the hole in pre-cleaner is aligned with the upper mounting knob.
- 5. 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.

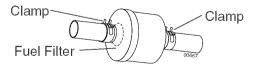
#### SPARK PLUG(S)

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 SERVICE 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

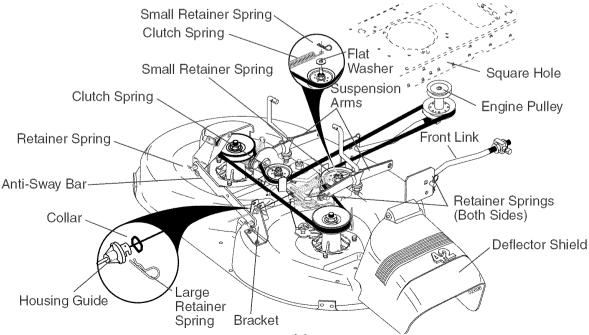
Mower will be easier to remove from the right side of tractor.

- 1. Place attachment clutch in "DISEN-GAGED" position.
- 2. Move attachment lift lever forward to lower mower to its lowest position.
- 3. Roll belt off engine pulley.
- 4. Remove small retainer spring, and remove clutch spring off pulley bolt.
- 5. Remove large retainer spring, slide collar off and push housing guide out of bracket.
- 6. Disconnect anti-sway bar from chassis bracket by removing retainer spring.
- 7. Disconnect suspension arms from rear deck brackets by removing retainer springs.
- 8. 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 and hook the clutch spring Into square hole in frame.

#### 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.
- 6. Connect anti-sway bar to chassis bracket and secure with retainer spring.
- 7. Push clutch cable housing guide into bracket, slide collar onto guide and secure with large retainer spring.
- 8. Place flat washer and clutch spring on idler pulley bolt and secure with small retainer spring.
- 9. Install belt onto engine pulley.



#### TO LEVEL MOWER HOUSING

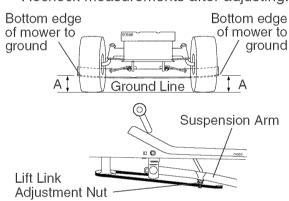
Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PROD-UCT SPECIFICATIONS" section of this manual). If tires are over or underinflated, you will not properly adjust your mower.

#### 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".

Recheck measurements after adjusting.



#### FRONT-TO-BACK ADJUSTMENT

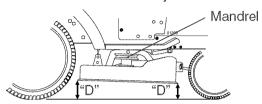
**IMPORTANT:** Deck must be level side-to side. If the following front-to-back adjustment is necessary, be sure to adjust both front links equally so mower will stay level side-to-side.

To obtain the best cutting results, the mower housing should be adjusted so that the front is approximately 1/8" to 1/2" lower than the rear when the mower is in its highest position.

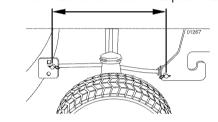
Check adjustment on right side of tractor. Measure distance "D" directly in front and behind the mandrel at bottom edge of mower housing as shown.

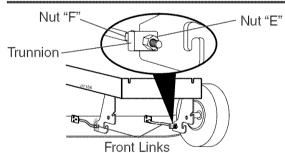
- Before making any necessary adjustments, check that both front links are equal in length.
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower loosen nut "E" on both front links an equal number of turns.

- 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.



Both Front Links Should be Equal in Length





## TO REPLACE MOWER BLADE DRIVE BELT

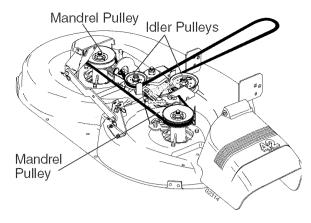
The mower blade drive belt may be replaced without tools. Park the tractor on level surface. Engage parking brake.

#### BELT REMOVAL -

- 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 -**

- 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

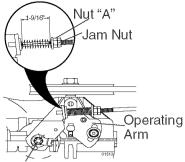
- Park tractor on a level, dry concrete or paved surface, depress clutch/brake pedal all the way down and engage parking brake.
- 2. Disengage transmission by placing freewheel control in "transmission disengaged" position. Pull freewheel control out and into the slot and release so it is held in the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

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

#### TO ADJUST BRAKE

- 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

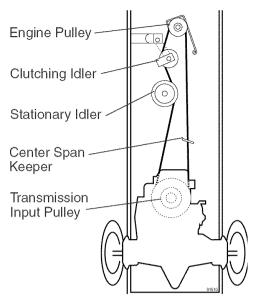
Park the tractor on level surface. Engage parking brake. For assistance, there is a belt installation guide decal on bottom side of left footrest.

#### BELT REMOVAL -

- 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. Remove belt from stationary idler and clutching idler.
- 3. Remove belt downward from around engine pulley.
- Pull belt slack toward rear of tractor. Carefully remove belt upwards from transmission input pulley and over cooling fan blades.
- 5. 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.
- 3. Pull belt toward front of tractor and roll around the top groove of engine pulley.
- 4. Install belt through stationary idler and clutching idler.
- 5. Make sure belt is in all pulley grooves and inside all belt guides and keepers.
- 6. Install mower (See "TO INSTALL MOWER" in this section of manual).



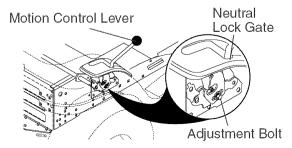
## TRANSAXLE MOTION CONTROL LEVER NEUTRAL ADJUSTMENT

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.
- 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.
- If tractor still creeps, repeat above steps until satisfied.



#### 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.

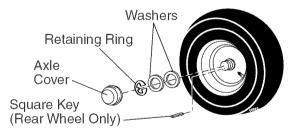
#### TO REMOVE WHEEL FOR REPAIRS

- 1. Block up axle securely.
- 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.

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

**NOTE:** To seal tire punctures and prevent flat tires due to slow leaks, 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 "BATTERY" in the MAINTENANCE section of this manual).

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

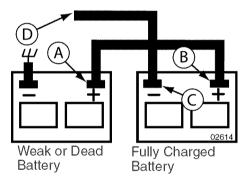
**IMPORTANT**: Your tractor is equipped with a 12 volt system. The other vehicle must also be a 12 volt system. Do not use your tractor battery to start other vehicles.

#### TO ATTACH JUMPER CABLES -

- 1. Connect one end of the RED cable to the POSITIVE (+) terminal of each battery(A-B), taking care not to short against tractor chassis.
- 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.



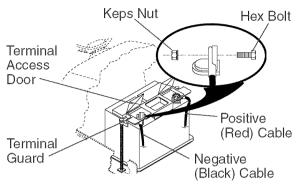
#### **REPLACING BATTERY**

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

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

- 1. Lift hood to raised position.
- 2. Remove terminal quard.
- 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
- 8. Close terminal access doors.
- 9. Close hood.



#### TO REPLACE HEADLIGHT BULB

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

#### **INTERLOCKS AND RELAYS**

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

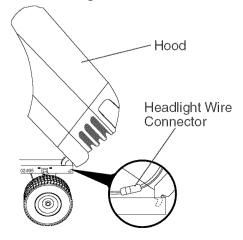
 Check wiring. See electrical wiring diagram in the Repair Parts section.

#### TO REPLACE FUSE

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

#### TO REMOVE HOOD AND GRILL AS-SEMBLY

- 1. Raise hood.
- 2. Unsnap headlight wire connector.
- 3. 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.
- 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.
- 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.

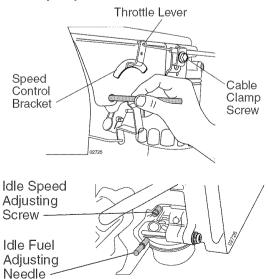
- 1. Be sure you have a clean air filter and the throttle control cable is adjusted properly (see above).
- 2. Start engine and allow to warm for five minutes. Make adjustments with engine running and shift/motion control lever in neutral (N) position.
- 3. Idle speed setting With throttle control lever in slow position, engine should idle at 1750 RPM. If engine idles too slow or fast, turn idle speed adjusting screw in or out until correct idle is attained.
- 4. <u>Idle fuel needle setting</u> 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 -**

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

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

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



### STORAGE

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

**AWARNING:** Never store the tractor with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

#### TRACTOR

Remove mower from tractor for winter storage. When mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean, dry area.

- 1. Clean entire tractor (See "CLEANING" in the Maintenance section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- 3. Lubricate as shown in the Maintenance section of this manual.
- 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> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> </ol>	<ol> <li>Fill fuel tank.</li> <li>See "TO START ENGINE" in Operation section.</li> <li>Wait several minutes before attempting to start.</li> <li>Replace spark plug.</li> <li>Clean/replace air filter.</li> <li>Replace fuel filter.</li> <li>Empty fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor"</li> </ol>
	Carburetor out or adjustment.      10. Engine valves out of adjustment.	in Service and Adjustments section.  10. Contact a Sears or other qualified service center.
Hard to start	<ol> <li>Dirty air filter.</li> <li>Bad spark plug.</li> <li>Weak or dead battery.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>Engine valves out of adjustment.</li> </ol>	<ol> <li>Clean/replace air filter.</li> <li>Replace spark plug.</li> <li>Recharge or replace battery.</li> <li>Replace fuel filter.</li> <li>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> <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> </ol> 9. Faulty operator presence switch(es).	<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> <li>Low oil level/dirty oil.</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> <li>Check oil level/change oil.</li> </ol>

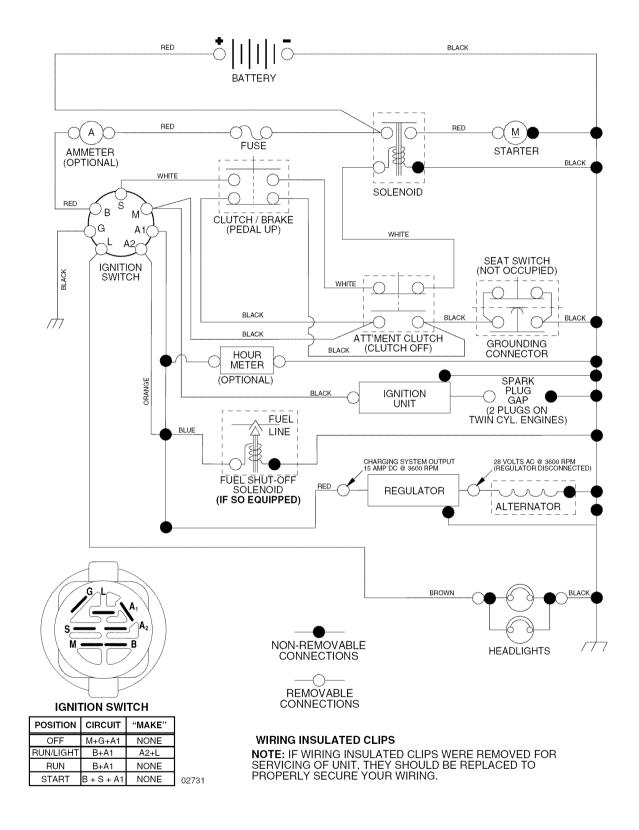
### TROUBLESHOOTING CHART: See appropriate section in manual unless directed to Sears service center

PROBLEM	CAUSE	CORRECTION
Loss of power (continued)	<ol> <li>Low oil level/dirty oil.</li> <li>Faulty spark plug.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Water in fuel.</li> <li>Spark plug wire loose.</li> <li>Dirty engine air screen/fins.</li> <li>Dirty/clogged muffler.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>Engine valves out of adjustment.</li> </ol>	<ol> <li>Check oil level/change oil.</li> <li>Clean and regap or change spark plug.</li> <li>Replace fuel filter.</li> <li>Empty fuel tank and refill tank with fresh, clean gasoline.</li> <li>Empty fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>Connect and tighten spark plug wire.</li> <li>Clean engine air screen/fins.</li> <li>Clean/replace muffler.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service and Adjustments section.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Excessive vibration	<ol> <li>Worn, bent or loose blade.</li> <li>Bent blade mandrel.</li> <li>Loose/damaged part(s).</li> </ol>	<ol> <li>Replace blade. Tighten blade bolt.</li> <li>Contact a Sears or other qualified service center.</li> <li>Tighten loose part(s). Replace damaged parts.</li> </ol>
Engine continues to run when operator leaves seat with attachment clutch engaged	Faulty operator-safety     presence control system.	Check wiring, switches and connections. If not corrected, contact a Sears or other qualified service center.
Poor cut - uneven	<ol> <li>Worn, bent or loose blade.</li> <li>Mower deck not level.</li> <li>Buildup of grass, leaves, and trash under mower.</li> <li>Bent blade mandrel.</li> <li>Clogged mower deck vent from build-up of grass, leaves, and trash around mandrels.</li> </ol>	<ol> <li>Replace blade. Tighten blade bolt.</li> <li>Level mower deck.</li> <li>Clean underside of mower housing.</li> <li>Contact a Sears or other qualified service center.</li> <li>Clean around mandrels to open vent holes.</li> </ol>
Mower blades will not rotate	<ol> <li>Obstruction in clutch mechanism.</li> <li>Worn/damaged mower drive belt.</li> <li>Frozen idler pulley.</li> <li>Frozen blade mandrel.</li> </ol>	<ol> <li>Remove obstruction.</li> <li>Replace mower drive belt.</li> <li>Replace idler pulley.</li> <li>Contact a Sears or other qualified service center.</li> </ol>

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

PROBLEM	CAUSE	CORRECTION
Poor grass discharge	<ol> <li>Engine speed too slow.</li> <li>Travel speed too fast.</li> <li>Wet grass.</li> </ol>	1. Place throttle control in "FAST" position. 2. Shift to slower speed. 3. Allow grass to dry before
	<ol> <li>Mower deck not level.</li> <li>Low/uneven tire air pressure.</li> <li>Worn, bent or loose blade.</li> <li>Buildup of grass, leaves and trash under mower.</li> <li>Mower drive belt worn.</li> <li>Blades improperly installed.</li> <li>Improper blades used.</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around</li> </ol>	<ul> <li>mowing.</li> <li>4. Level mower deck.</li> <li>5. Check tires for proper air pressure.</li> <li>6. Replace/sharpen blade.     Tighten blade bolt.</li> <li>7. Clean underside of mower housing.</li> <li>8. Replace mower drive belt.</li> <li>9. Reinstall blades sharp edge down.</li> <li>10. Replace with blades listed in this manual.</li> <li>11. Clean around mandrels to open vent holes.</li> </ul>
Headlight(s) not working (if so equipped)	mandrels.  1. Switch is "OFF". 2. Bulb(s) or lamp(s) burned out. 3. Faulty light switch. 4. Loose or damaged wiring. 5. Blown fuse.	<ol> <li>Turn 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 (if so equipped).</li> <li>Faulty alternator.</li> </ol>	<ol> <li>Replace battery.</li> <li>Check/clean all connections.</li> <li>Replace regulator.</li> <li>Replace alternator.</li> </ol>
Loss of drive	<ol> <li>Freewheel control in "disengaged" position.</li> <li>Motion drive belt worn, damaged, or broken.</li> <li>Air trapped in transmission during shipment or servicing.</li> </ol>	<ol> <li>Place freewheel control in "engaged" position.</li> <li>Replace motion drive belt.</li> <li>Purge transmission.</li> </ol>
Engine "backfires" when turning engine "OFF"	Engine throttle control not set between half and full speed (fast) position before stopping engine.	between half and full speed

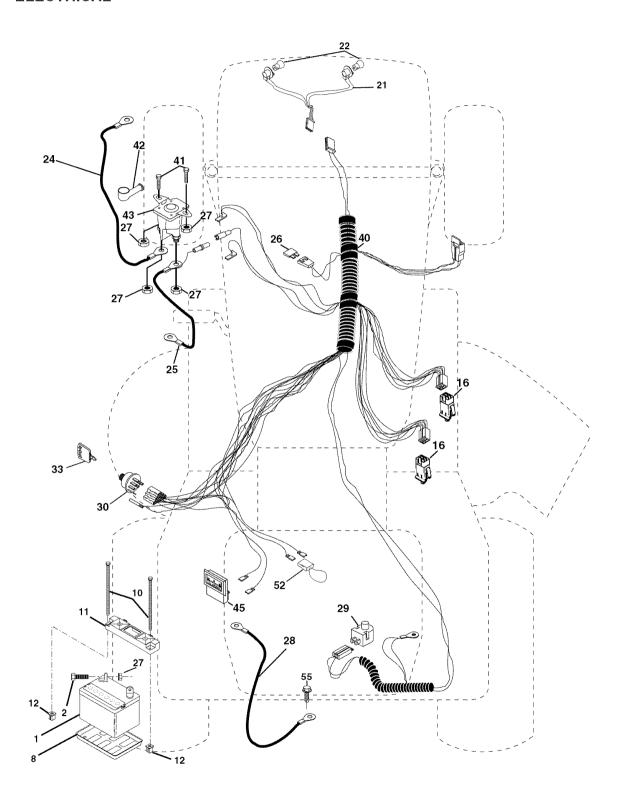
#### **SCHEMATIC**



### **REPAIR PARTS**

### TRACTOR - - MODEL NUMBER 917.273860

### ELECTRICAL



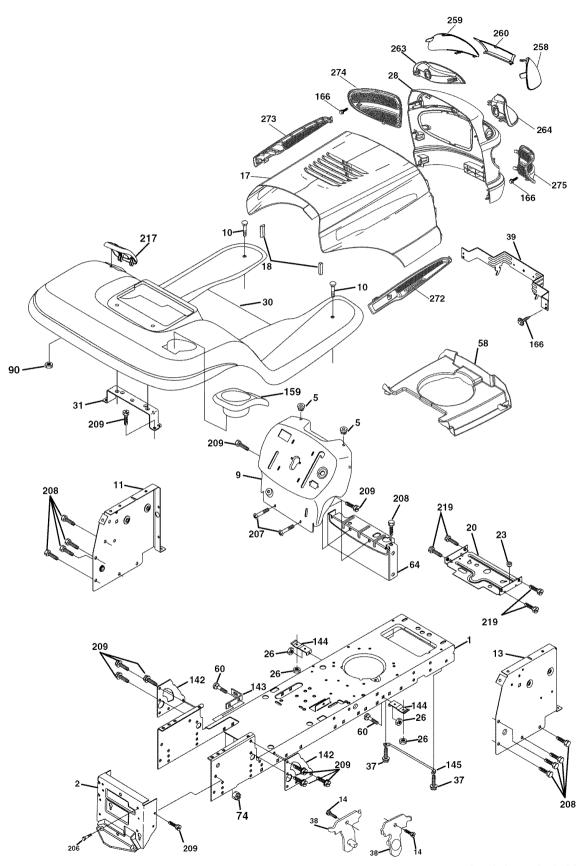
### TRACTOR - - MODEL NUMBER 917.273860

### ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION
1 2 8 10 11 12 16 21 22 24 25 26	183759 4152J	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 Socket (w/4152J) Light Bulb Cable, Battery Cable, Battery Fuse
27 28 29 30 33 40	73510400 145491 121305X 175566 140403 179720 71110408 131563 178861 122822X	Nut Keps Hex 1/4-20 Unc Cable, Ground Switch, Seat Switch, Ignition Key, Molded Harness, Ignition Bolt Blk Fin Hex 1/4-20 Unc x 1/2 Cover, Terminal Solenoid Ammeter Rectangular 15 Amp Protection Wire Loop (Hour Meter) Screw Thdrol 5/16-18 x 1/2

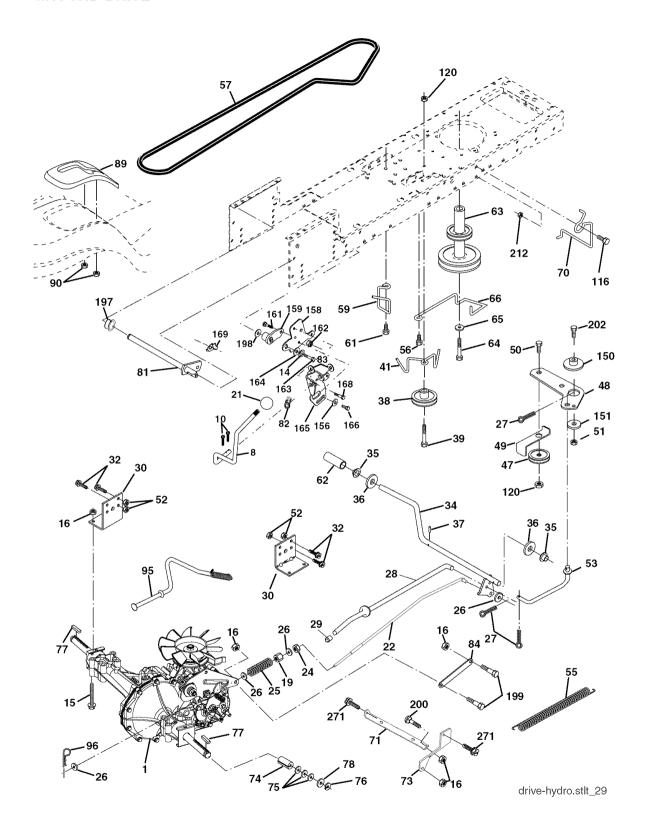
**NOTE:** All component dimensions given in U.S. inches 1 inch = 25.4 mm

# TRACTOR - - MODEL NUMBER 917.273860 CHASSIS AND ENCLOSURES



# TRACTOR - - MODEL NUMBER 917.273860 CHASSIS AND ENCLOSURES

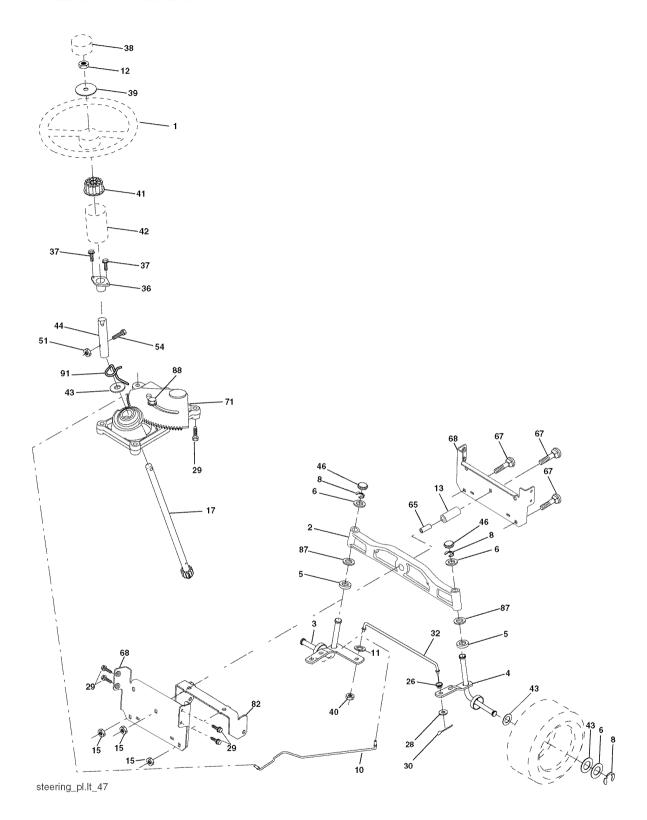
1       174619       Chassis         2       176554       Drawbar         5       155272       Bumper Hood/Dash         9       168337X013       Dash         10       STD533710       Bolt, Carriage 3/8-16 x 1         11       174996       Panel, Dash, LH         13       172105X010       Panel, Dash, RH         14       17490608       Screw Thdrol 3/8-16 x 1/2         17       184272X615       Hood Assembly         18       184921       Bumper Hood         20       180679       Plate Mtg Battery Fuel Tank         23       124028X       Bushing, Snap, Nylon, Fuel Line         26       STD541437       Locknut, Hex, with Insert 3/8-16 U         28       184259       Grille/Lens Asm.         30       179131X615       Fender/Footrest         31       139976       Bracket, Fender/Support         37       17490508       Screw, Thdrol. 5/16-18 x 1/2 TYT         38       175710       Bracket Asm Pivot Mower Rear         39       174714       Bracket Pivot Laser Lt         58       187154       Air Duct         60       72140606       Bolt Rdhd Sqnk 3/8-16 Unc x 3/4         64	nc
64 154798 Dash Lower STLT 74 STD541437 Nut Crownlock 3/8-16 Unc 90 124346X Nut Self-Thd Wsh-Hd 1/4 142 175702 Plate Reinforcement STLT	
143 186689 Bracket Swaybar Chassis 144 175582 Bracket Footrest STLT 145 156524 Rod Pivot Chassis/Hood 159 179950X428 Cupholder	
166 171875 Screw Hshd. HiLo #13-16 x 5/8 206 170165 Bolt Shoulder 5/16-18TT 207 17670508 Screw Thdrol 5/16-18 x 1/2 208 17670608 Screw Thdrol 3/8-16 x 1/2	
209 17000612 Screw Hex Wsh Thdrol 3/8-16 x 3/4 217 179132X428 Console Fuel Window 219 17000512 Screw 5/16-18 x 3/4 258 184264X599 Lens RH 259 184263X599 Lens LH	1
260 184262X428 Cover Lens 263 184265 Bezel Grille LH 264 184266 Bezel Grille RH 272 185925X428 Vent Hood Laser III RH 273 185924X428 Vent Hood Laser III LH 274 184260X428 Insert Grille LH 275 184261X428 Insert Grille RH 5479J Plug Button	



### **GROUND DRIVE**

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	100 W W 100 100	Transaxle (See Breakdown)	70	134683	Keeper Belt Engine
0	405000	Hydro Gr 314-0510	71 73	169183 169182	Strap Torque Lh Hydro
8 10	165866	Rod Shift Fender Adjust Pin Cotter 1/8 x 1 CAD	73 74	137057	Strap Torque Rh Hydro Spacer
14	10040400	Washer Lock Hvy Helical	75 75	121749X	Washer 25/32 x 1-1/4 x 16 Ga.
15	74490544	Bolt Hex FLGHD 5/16-18 x Gr. 5	76	STD581075	E-Ring
16		Nut Lock Hex W/Ins.	77	123583X	Key, Square
10	010041401	5/16-18 Unc	78	121748X	Washer 25/32 x 1-5/8 x 16 Ga.
19	STD541437	Nut Lock Hex W/Wsh	81	165596	Shaft Asm Cross Tapered
	012011107	3/8-16 Unc	82	165711	Spring Torsion
21	130564	Knob, Deluxe 1/2-13	83	19171216	Washer 17/32 x 3/4 x 16 Ga.
22	169498	Rod, Brake Hydro	84	169594	Link Transaxle
24	73350600	Nut. Hex Jam 3/8-16 Unc	89	164890X428	Console, Shift
25	106888X	Spring, Brake Rod	90	124346X	Nut Self-Thd Wsh-hd 1/4 Zinc
26	STD551037		95	170201	Control Bypass Hydro 20" Tires
27	STD561210	Pin Cotter 1/8 x 3/4 CAD.	96	4497H	Retainer Spring 1" Zinc/Cad
28	175765	Rod, Parking Brake	116	72140608	Bolt Rdhd Sqneck 3/8-16 x 1.25
29	71673	Cap, Parking Brake	120	73900600	Nut Lock Flg 3/8-16
30	169592	Bracket, Transaxle	150	175456	Spacer Retainer
32	74760512	Bolt Hex Hd 5/16-18 Unc x 3/4	151	19133210	Washer 13/32 x 2 x 10 Ga.
34	175578	Shaft, Foot Pedal	156	166002	Washer Strited 5/16 ID x 1.125
35	120183X	Bearing, Nylon	158 159	165589	Bracket Shift Mount
36 37	19211616 1572H	Washer Pin. Roll	161	183900 72140406	Hub Shift Bolt Rdhd Sank
38	179114	Pulley, Composite, Flat	101	72140400	1/4-20 x 3/4 Gr 5
39	72110622	Bolt Fin Hex 3/8-16 x 2-3/4 Gr. 5	162	73680400	Nut Crownlock 1/4-20 Unc
41	175556	Keeper, Belt Idler	163	74780416	Bolt Hex Fin
47	127783	Pulley, Idler, V-Groove			1/4-20 Unc x 1 Gr. 5
48	154407	Bellcrank, Clutch	164	19091210	Washer 9/32 x 3/4 x 10 Ga.
49	123205X	Retainer, Belt	165	165623	Bracket Pivot Lever
50	72110612	Bolt Carr Sh 3/8-16 x 1-1/2	166	17490510	Screw 5/16-18 x 5/8
51	STD541437	Nut Crownlock 3/8-16 Unc	168	165492	Bolt Shoulder 5/16-18 x .561
52	STD541431	Nut, Crownlock 5/16-18 Unc	169	165580	Plate Fastening
53	105710X	Link, Clutch	197	169613	Nyliner Snap-In 5/8"ID
55	105709X	Spring, Return, Clutch	198	169593	Washer Nyl 7/8 ID x .105" Hyd
56	17060620	Screw 3/8-16 x 1.04	199	169612	Bolt Shoulder 5/16-18 Unc
57	140294	V-Belt	200	72140508	Bolt Rdhd Sgnk
59	169691	Keeper, Center Span	000	70440044	5/16-18 Unc x 1
61	17120614	Screw . 3/8-16 x .875	202	72110614	Bolt Carr Sh 3/8-16 x 1-3/4 Gr.5
62 63	8883R 175410	Cover, Pedal	212 271	145212 17000612	Nut Hex Flg. Lock Screw 3/8-16 x .75
64	173937	Pulley, Engine Bolt Hex 7/16-20 x 4 Gr. 5-1.5	211	17000012	3016W 3/0-10 X ./3
65	STD551143				
66	154778	Keeper Belt Engine Hydro	NOTE	: All compone	ent dimensions given in U.S.
-				s 1 inch = 25.	

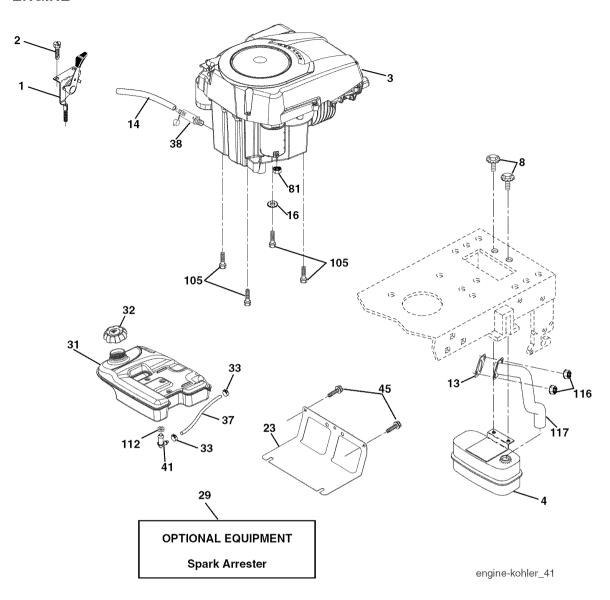
# TRACTOR - - MODEL NUMBER 917.273860 STEERING ASSEMBLY



# TRACTOR - - MODEL NUMBER 917.273860 STEERING ASSEMBLY

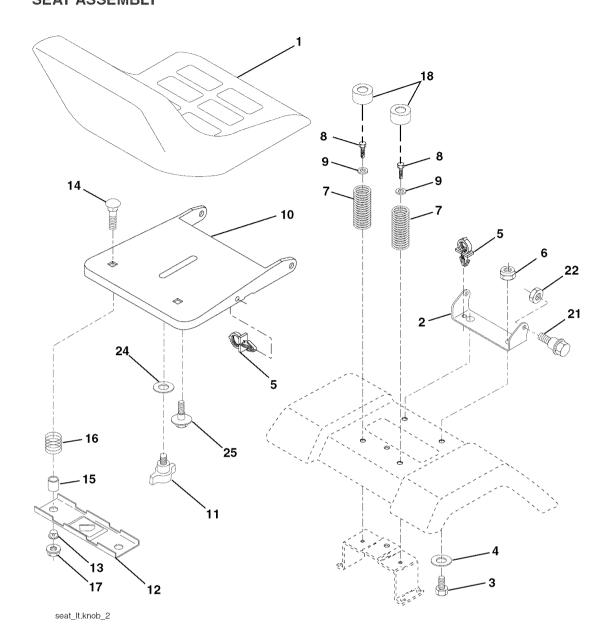
KEY NO.	PART NO.	DESCRIPTION
1 2 3 4 5 6 8 10 11 12 13 15	159944X428 184706 169840 169839 6266H 121748X 12000029 175121 STD551137 73940800 136518 145212	Steering Wheel Front Axle Assembly Spindle Assembly, L.H. Spindle Assembly, R.H. Bearing, Race, Thrust, Hardened Washer 25/32 x 1-5/8 x 16 Ga. Ring, Klip Link, Drag Washer, Lock Nut Hex Jam Toplock 1/2-20 Unf Spacer, Bearing, Front Axle Nut, Hexflange Lock
17 26 28 29 30 32 36 37 38 39	180641 126847X 19131416 17000612 STD561210 130465 155099 152927 159946X428 19182411	Shaft Assembly, Steering Bushing Link Drag Washer 13/32 x 7/8 x 16 Ga. Screw 3/8-16 x 3/4 Pin Rod, Tie Bushing, Steering Screw TT #10-32 x 5 x 3/8 Flange Insert, Steering Wheel Washer 9/16 x 1-1/2 11 Ga.
40 41 42 43 44 46 51 54 65 67 68 71 82 87	73540600 159945	Lock Crownlock 3/8-24 Adaptor, Steering Wheel Boot, Steering Dash P/L Mtl Blk Washer 25/32 x 1-1/4 x 16 Ga. Extension Steering
88 91	175118 175553	Bolt Shoulder 7/16-20 Clip Steering

### **ENGINE**



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 2 3	170548 17720408	Control Throt Paddle Screw Hex Thd Cut 1/4-20 x 5/8 Engine (See Breakdown) Kohler	33 37 38	123487X 8543R 181654	Clamp Hose Blk Line Fuel Plug, Drain Oil Easy
4 8	188655 171877	Model No. SV600-0001 Muffler Bolt 5/16 - 18 Unc x 3/4 W/Sems	41 45	139277 17000612	Stem Tank Fuel Screw Hex Wsh Thdrol 3/8-16 x 3/4
13 14	185909 148456	Gasket Muffler Tube, Drain Oil Easy	81 105	73510400 17120616	Nut, Keps 1/4-20 Starter Nut Screw 3/8-16 x 1
16 23	STD551237 169837	Washer Lock Ext Tooth 3/8 Shield Browning/Debris Guard	112 116	3645J 184362	Bushing Nut Flange Toplock M8-1.25
29 31	137180 179022	Arrestor Spark Tank Fuel 4.0 Rear	117	188654 - All compor	Tube Exhaust
32	179124X428	Cap Fuel		<b>=:</b> All compor s 1 inch = 25.	nent dimensions given in U.S. 4 mm

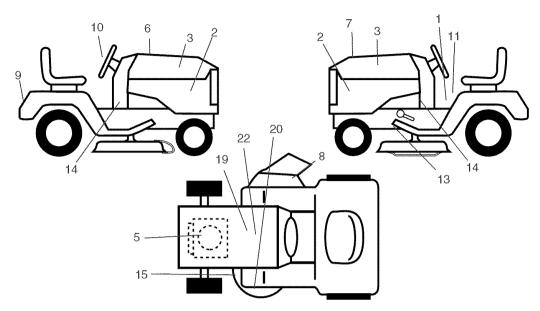
# TRACTOR - - MODEL NUMBER 917.273860 SEAT ASSEMBLY



ic x 1
10 Ga
3-16 Unc
50 Blk Zi
IGML
Ga
Switch

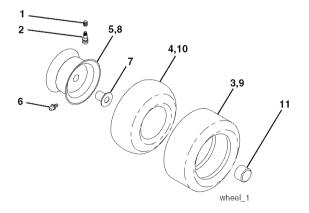
KEY	PART	
NO.	NO.	DESCRIPTION
13	121248X	Bushing Snap Blk Nyl 50 Id
14	72050412	Bolt Rdhd Sht Nk 1/4-20 x 1-1/2
15	134300	Spacer Split 28 x 96 Zinc
16	121250X	Spring Cprsn 1 27 Blk Pnt
17	123976X	Nut Lock 1/4 Lge Flg Gr. 5 Zinc
18	124238X	Cap Spring
21	171852	Bolt Shoulder 5/16-18 Unc-2A
22	STD541431	Nut Hex Lock w/lns 5/16-18
24	19171912	Washer 17/32 x 1-3/16 x 12 Ga.
25	127018X	Bolt Shoulder 5/16-18 x .62

## DECALS



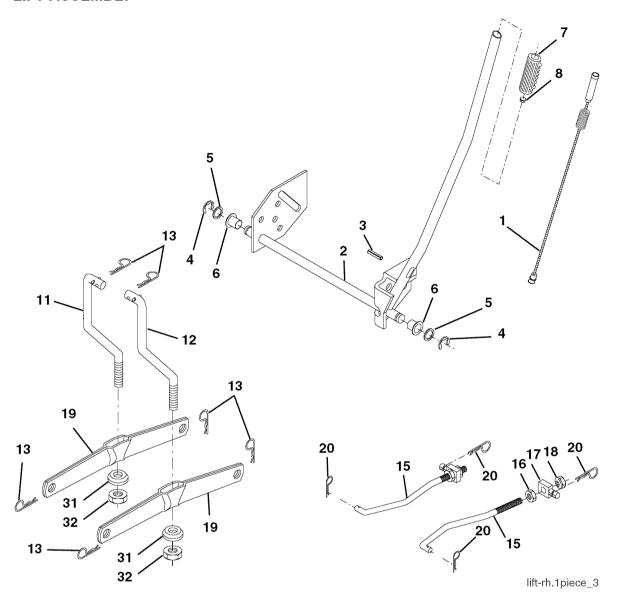
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	156439	Decal Fender Danger Sears	14	186788	Decal Dash Panel
2	186367	Decal Hood Side	15	160396	Decal Mower Drive Schematic
3	186366	Decal Hood	19	138047	Decal, Battery Diehard Sears
5	185974	Decal Engine H/P	20	172331	Decal Deck Mower EZ3
6	133644	Decal Maint Customer Sears Dom	22	149516	Decal Battery
7	189083	Decal Replacement		166960	Decal By Pass Lt Hydro
8	179128	Decal Deck		138311	Decal Lift Handle
9	186572	Decal Fender		184310X428	Pad Footrest Lh STLT
10	164065	Decal Steering Wheel		184311X428	Pad Footrest Rh STLT
11	156811	Decal Fender STLTH Oper Inst		189049	Manual, Owner's (English)
		E/S		189050	Manual, Owner's (Spanish)
13	146046	Decal V-belt Dr Sch Tractor F			, , ,

### WHEELS & TIRES



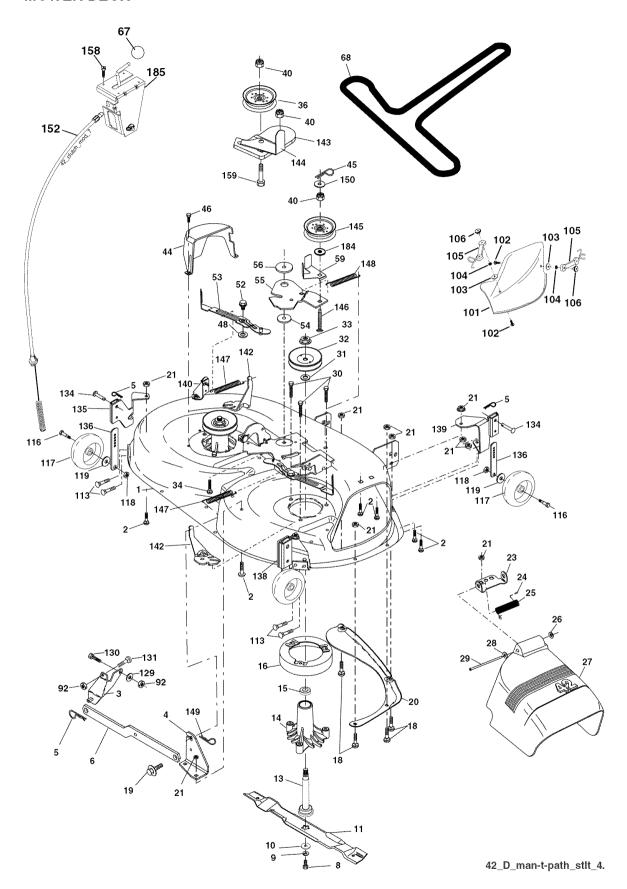
KEY	PART	
NO.	NO.	DESCRIPTION
1	59192	Valve Cap, Tire
2	65139	Stem, Valve
3	106222X	Tire, Front
4	59904	Tube, Front Tire (Not Provided,
		Service Item Only)
5	106732X624	Rim, Front
6	278H	Fitting, Grease (Front Wheel Only)
7	9040H	Bearing, Flange (Front Wheel
		Only)
8	106108X624	Rim, Rear
9	122082X	Tire, Rear
10	7152J	Tube, Rear Tire
		(Not Provided, Service Item Only)
11	104757X428	Cap, Axle
	144334	Sealant, Tire (10 oz. Tube)

### LIFT ASSEMBLY



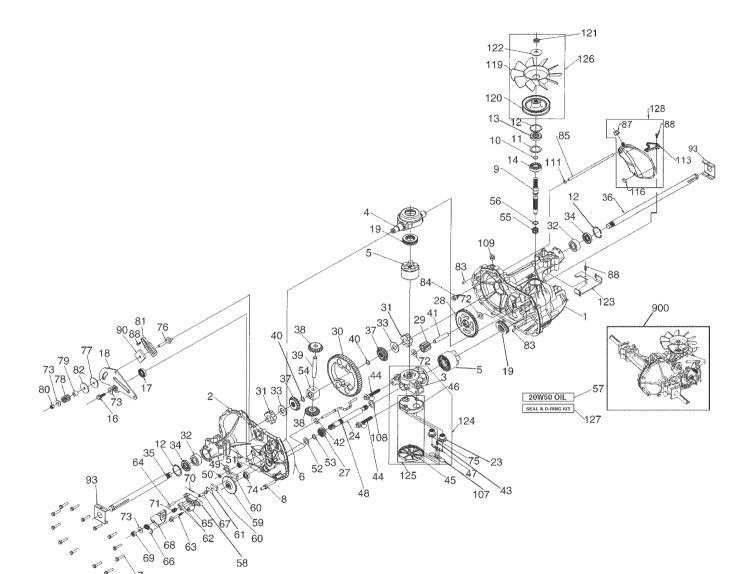
PTION
t Hex 1/2-13 Unc w/Wsh 1/2-13 Unc pension Mower Spring Pvt. Lift. Tapered nlock 3/8-24 sions given in U.S. inches
t

### MOWER DECK



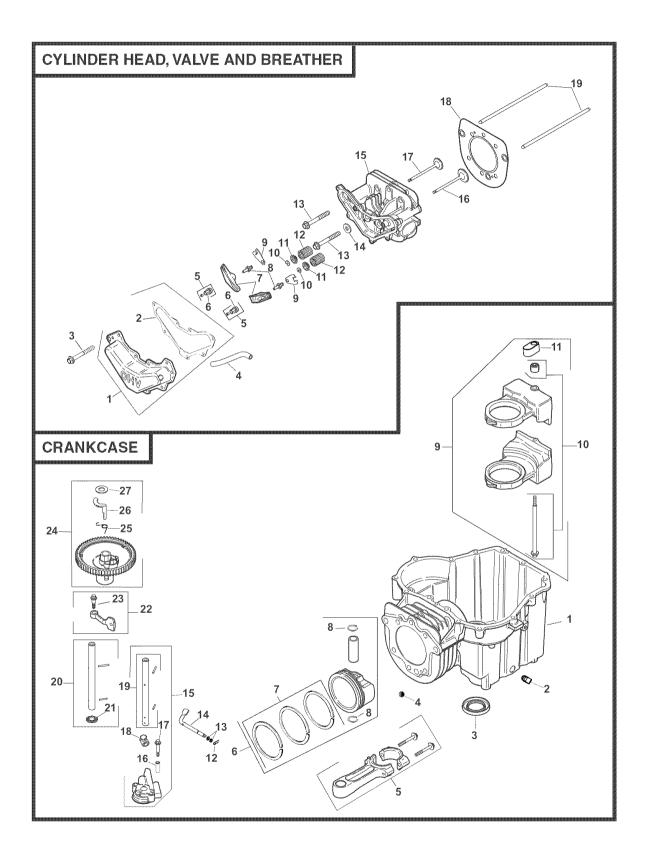
### MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 2 3	182032 STD533107 138017	Mower Housing Bolt Bracket Assembly,Sway Bar, Front	59 67 68 92	141043 149846 144959 STD541437	Guard, Tuv Idler (94) Knob Custom Oval V-Belt Locknut, Hex W/Wsh 3/8-16 Unc
4 5 6 8 9 10	178024 850857	Bracket Sway Bar 38/42" Retainer Spring Bar Sway Deck Bolt, Hex 3/8-24 x 1.25 Gr. 8 Washer, Lock Washer, Hardened (The following blades are avail able)	101 102 103 104 105 106 113 116	136420 71081010 19061216	Cover Mulching 42" Black Screw Truss Hd Phil 10-24 x 5/8 Washer #10 Washer Lock Latch Asm Bagger Nut Weld Screw 5/16-18 x 3/4 Bolt, Shoulder
11	134149 139775	Blade, 42" Mulching Std (For mulching mowers only) Blade, 42" Mulching Premium (For	117 118 119	174873 73930600 19121414	Wheel, Gauge Nut, Crownlock 3/8-1 Washer 13/32 x 7/8 x 14 Ga.
~ ~	138971	better wear when mulching) Blade, 42" Hi-Lift (For bagging or discharging)	129 130	19131312 STD523710	Washer 13/32 x 13/16 x 12 Ga. Bolt, Fin Hex 3/8-16 Unc x 1 Gr. 5
13	137645	Shaft Assembly, Mandrel, Vented (Incl. Key Number 6)	131 134	156941	Bolt Rdhd Sqnk 3/8-16 Unc x 1 Pin Head Rivet
14 15 16 18 19 20 21 23 24 25 26 27 28 29 30 31 32 33 34 36	128774 110485X 174493 72140505 132827 159770 STD541431 177563 105304X 123713X 110452X 130968X428 19111016 131491 173984 129963 153535 178342 72110612 131494	(Incl. Key Number 6) Housing, Mandrel, Vented Bearing, Ball, Mandrel Stripper, Mower Deck Bolt, Carriage 5/16-18 x 5/8 Bolt, Shoulder Baffle, Vortex Nut, Crownlock 5/16-18 Unc Bracket, Deflector Cap, Sleeve Spring, Torsion, Deflector Nut, Push Shield, Deflector Washer 11/32 x 5/8 x 16 Ga. Rod, Hinge Screw Thdrol Rolling Wsh Hd Washer, Spacer Pulley, Mandrel Nut, Toplock, Flanged Bolt Carr. Sh 3/8-16 x 1-1/2 Gr. 5 Pulley, Idler, Flat			Pin Head Rivet Bracket Asm Whl Ga. Rear LH Bar Adjusting Gauge Wheel Bracket Asm Whl Ga. Rear RH Bracket Asm Whl Ga. Front RH Bracket Asm Whl Ga. Front LH Arm Spring Brake Mower Bracket Arm Idler 42" Keeper Belt 42" Clutch Cable Pulley Idler Flat Bolt Carraige Idler Spring Extension Spring Return Idler Retainer Spring Yellow Zinc Washer 9/32 x 3/4 x 10 Ga. Cable Clutch 42" Screw Hex Thd Cut 1/4-20 x 5/8 Bolt Rdhd Sqn 3/8-16 Unc x 1-3/4 Washer 3/8 Head Asm Cable Clutch Mandrel Assembly (Includes
40 44 45 46 48 52 53 54 55 56	73900600 140088 STD624003 137729 133944 139888 184907 178515 155046 165723	Nut, Lock Flag 3/8-16 Unc Guard, Mandrel, L.H. Retainer Screw, Thd. Roll 1/4-20 x 5/8 Washer, Hardened Bolt, Shoulder 5/16-18 Unc Arm Assembly, Pad, Brake Washer, Hardened Arm, Idler Spacer, Retainer	NOTI	186917 E: All compone 1 inch = 25.4	housing, shaft and shaft hardware only-pulley not included) Replacement Mower, Complete (Std. Deck-Order separately mulcher cover and guage wheel components key nos. 101 - 106 and 116 - 119) ent dimensions given in U.S.inches mm



# TRACTOR - - MODEL NUMBER 917.273860 HYDRO GEARTRANSAXLE - - MODEL NUMBER 314-0510

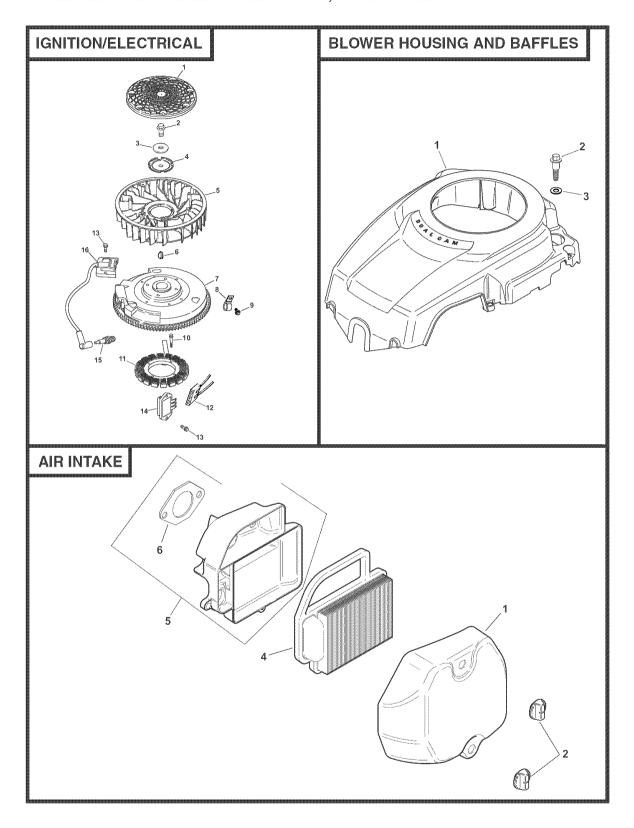
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	170351	Main Housing, Assembly	59	170408	Rotor, Brake
2	170352	Side Housing, Assembly	60	142883	Brake Puck
3	170353	Center Section, Assembly	61	142881	Puck Plate
4	170354	Swashplate, Trunion Machined	62	142887	Brake Actuating Pin
5	169898	Block - 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 11	170359 170360	Ring - Retaining Spacer	67 68	170413 170414	Sq. Hd. Bolt 5/16-24-Ribbed 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
		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			.027,Washer
23	170365	Check Plug Assembly, Washer	76	170421	Stud, 5/16-24 Friction Pack
24	170366	Shaft, Motor	77	170422	Puck, .330 X 1.50 X .0975
27 28	170367 170368	Gear - Pinion, 13t 10t/48t Gear	78 79	142969 142980	Spring, Helical Comp Spacer
20 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
		.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
3.4	170390	Thk	85 86	170426	Hose, Expansion Tank
34 35	170390	Lip Seal Axle Seal Shaft, Axle .75 X 11.39 (Key,	87	170427 170424	Expansion Tank Cap - Poppet Valve
55	170091	R.H.)	88	170429	Bolt, Self Tapping 10-32 X 1/2
36	170392	Shaft, Axle .75 X 16.99 (Key, L.H.)	90	170430	Puck, Inner Wedge
37	150792	Miter Gear (Splined)	93	170431	Spring Clip - Housing Thrust
38	150793	Miter Gear 15t (0.5 ld)	107	170432	Deflector
39	150809	Shaft	108	170433	Washer,Motor Shaft
40	170393	Ring, Spiral Retaining			.71idx1.15odx.030thk
41	170394	Pin, Jackshaft	109	170434	Plug, Sae #6
42	170395	Magnet, Ring	111	170435	O-Ring .07 X .301 I.D.
43	170396	Spring, Bypass	112	170436	Shield, Vent
44	150797	Hydro Mtg Screw 3/8-24 X 2.5	113	170437 170438	Bracket, Support Expansion Tank
45	170397	Long Filter	116 119	170438	Silicon Sponge Fan, 7 In.
46	170397	Base, Filter	120	170440	Pulley
47	170999	Actuator, Bypass	121	170441	Hex Lock Nut 1/2-20 (Nylon
48	170400	Rod, Bypass Actuator		.,	Insert)
49	170401	Arm, Bypass	122	170442	Washer, Belleville
50	170202	Retaining Ring .250 External	123	170443	Belt Keeper
51	170403	Seal, Lip .741 X .250 X .250 Tc	124	170444	Center Section-Filter-Bypass
52	170404	Flat Washer, 5/8 ld X 1.0 Od X			Assembly
	1	.05 Thk	125	170445	Filter Assembly
53	170405	Retaining Ring	126	170446	Fan - Pulley Service Assembly
54 ==	170406	Bearing, Center Block	127	170447	Seal - O-Ring Kit
55 56	142977 142978	Spring - Helical Compression Washer	900	166768	Transaxle Complete
57	142970	20w-50 Oil	NOTE	· All compon	ent dimensions given in U.S. inches
58	170407	Brake Yoke		i = 25.4 mm	on annonorm given in o.o. mones
	*				



#### **HEAD/VALVE/BREATHER**

#### CRANKCASE

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 2		Kit, valve cover (Includes 2) Gasket, valve cover	1	OUX DAT COLC COLC COLC COLC COLC COLC COLC	Crankcase (USE: Short Block 20 522 01)
3		Screw, hex. flange M6x1.0x20 (7)	2	25 139 57-S 20 032 01-S	Plug, sq. hd. pipe 3/8"
4 5	20 326 01-S 20 599 01-S	Hose, breather Kit, rocker arm pivot (2) (In-	4 5	20 067 04-S	Ball, check valve Rod, connecting
6	20 086 04-S	cludes 6) Screw, set (2)	6		Piston w/Ring Set (Includes 7,8)
7 8	20 086 03-S	Arm, rocker (2) Screw, set - rocker pivot (2)	7 8	20 018 04-S	Ring Set (94 mm) Retainer, piston pin (2)
9 10 11	20 062 01-S	Plate, push rod guide (2)  Kit, retainer (2) (Includes 6)	9		Kit, balance weight (Includes 10,11)
12 13	20 089 03-S	Cap, valve spring (2) Spring, valve (2) Screw, hex. flange	10 11 12	20 423 02-S	Kit, screw/guide pin Shoe, guide Clip, hitch pin
14		M10x1.5x37 (6) Washer, flat 1/2"	13 14		Washer, TBD Shaft, governor cross
15 16	20 318 01-S	Head, cylinder Valve, exhaust	15	20 393 01-S	Pump assembly, oil (Includes 16-19)
17 18	20 017 01-S	Valve, intake Kit, cylinder head gasket	16 17	20 086 13-S	Spacer, oil pump screw (2) Screw, oil pump (2)
19	20 411 02-S	repair Rod, push (2)	18 19	20 032 05-S 20 144 04-S	Seal, oil pump outlet Shaft center, cam - Intake
			20		Shaft center, cam - Exhaust (Includes 21)
			21 22	20 468 01-S 20 090 01-S	Washer, thrust Lever assembly, cam (2) (Includes 23)
			23 24		Screw, shoulder Gear assembly, cam (Includes 25-27)
			25 26	20 089 06-S 20 044 16-S	Spring, ACR Weight, ACR
			27	20 468 03-S	Washer, thrust - ACR (2)



#### IGNITION/ELECTRICAL

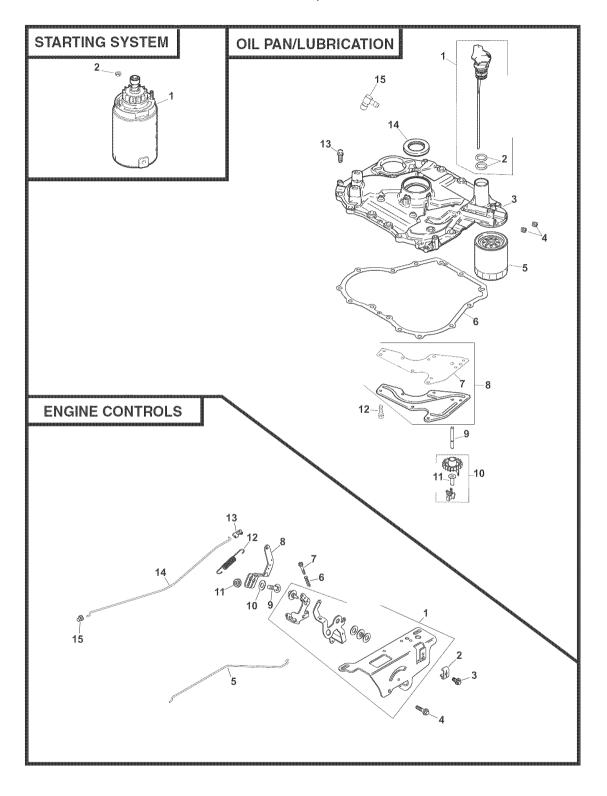
KEY NO.	PART NO.	DESCRIPTION
1		Screen, grass
2	12 086 14-S	Screw, hex. flange M10x1.5x46
3	12 468 03-S	Washer, spring 3/16"
4		Plate, fan mounting
4 5	20 157 01-S	Fan
6	X-42-15-S	
7	20 025 05-S	
8	M-561025-S	Screw, hex. flange M5x0.8x25 (2)
9	231285-S	Člip, cable (2)
10	M-548025-S	Screw, hex. hd. M5x0.8x25 (2)
11	237878-S	Kit, stator
12	236602-S	Connector, body
13	M-545020-S	Screw, hex. flange M5x0.8x20 (2)
		Rectifier-regulator
	12 132 02-S	Plug, spark
	20 584 01-S	Module, ignition
NOT I	LLUSTRATEI	
	20 176 01-S	Harness, wiring

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

KEY NO.	PART NO.	DESCRIPTION
1 2	20 027 02-S 20 086 06-S	Housing, blower Screw, shoulder M5x0.8x36
3	X-25-28-S	(4) Washer, plain

#### AIR INTAKE/FILTRATION

KEY NO.	PART NO.	DESCRIPTION
4	00 000 05 0	Cayar air alaanar
ı		Cover, air cleaner
2	25 341 03-S	Knob, cover (2)
4	20 083 02-S	Element, air cleaner
5	20 094 01-S	Kit, air cleaner base (Includes
		6)
6	12 041 02-S	Gasket, air cleaner base



#### STARTING SYSTEM

KEY	PART	
NO.	NO.	DESCRIPTION

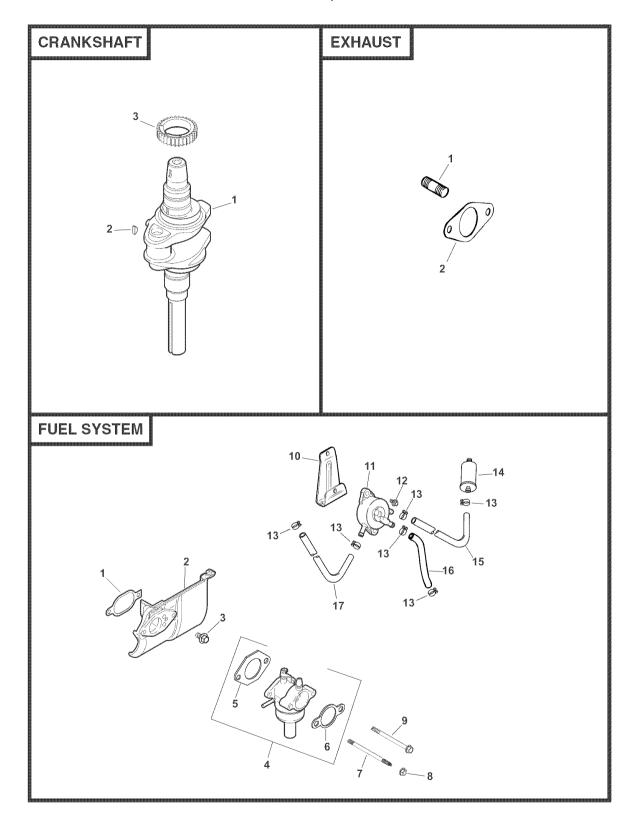
1 20 098 01-S Starter assembly, inertia drive 25 100 31-S Nut, hex. serrated flange (2)

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

KEY NO.		DESCRIPTION
1	20 040 02-S	Kit, dipstick assembly (Includes 2)
2	20 153 01-S	O-Ring, dipstick (2)
2 3	20 009 03-S	Plate assembly, closure (Includes 4,10,11)
4 5		Plug, pipe (2)
5	52 050 02-S	
6 7		Gasket, closure plate
7	20 096 02-S	Kit, oil passage cover (In- cludes 8)
8	20 041 02-S	Gasket, oil passage
9	20 144 03-S	Shaft, governor gear
10		Kit, gear and weight assembly (Includes 11)
11	12 380 01-S	Pin, governor regulating
12	M-545013-S	Screw, hex. flange M5x0.8x13 (6)
13	M-851030-S	Screw, hex. flange M8x1.25x30 (14)
14	20 032 01-S	
15		Connector, 90°

#### **ENGINE CONTROLS**

KEY NO.	PART NO.	DESCRIPTION
1		Control assembly, speed
2	12 237 01-S	Clamp, cable
3	24 086 43-S	Screw, torx hd. ctsk. M5x0.8x16
4	M-664020-S	Screw, lobed sckt. M6x1.0x20 (2)
5	20 079 02-S	Linkage, choke – single wire
6	12 089 11-S	Spring, speed control (2)
7	20 086 10-S	Screw, thread forming M4x0.7x25 (2)
8	20 090 02-S	Lever, governór
9		Bolt, round head 1/4-20x1"
10	X-22-11-S	
11	12 100 07-S	
12	20 089 07-S	
13	25 158 11-S	Bushing, throttle linkage
14		Linkage, throttle
15	25 158 08-S	Bushing, linkage retaining



#### CRANKSHAFT

KEY NO.	PART NO.	DESCRIPTION
1	20 014 14-S	Crankshaft (Includes 2)
2	X-42-15-S	Key 3/16"
3	20 043 12-S	Gear, crankshaft

#### **EXHAUST**

KEY NO.	PART NO.	DESCRIPTION
1 2	25 072 04-S 20 041 12-S	Stud, exhaust (2) Gasket, exhaust
00 EE	20 522 01 20 755 05-S	Short Block Gasket Set

#### **FUEL SYSTEM**

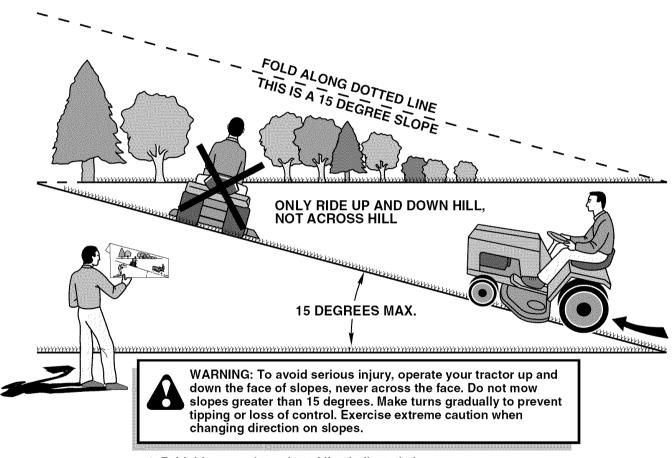
KEY NO.	PART NO.	DESCRIPTION
1 2 3	20 041 07-S 20 265 01-S M-651020-S	Gasket, heat deflector Deflector, heat Screw, hex. flange M6x1.0x20
4	20 853 01-S	Carburetor w/gaskets (Includes 5,6)
5	12 041 01-S	Gasket, carburetor
5 6 7	12 041 02-S	Gasket, air cleaner
7	20 072 03-S	Stud, carburetor mounting
8	M-641060-S	Nut, hex. flange M6x1.0
9	20 086 11-S	Screw, carb S60x1.42x85
10	20 126 02-S	Bracket, fuel pump mounting
11	24 393 16-S	Pump assembly, fuel
12	M-545010-S	Screw, hex. flange M5x0.8x10 (2)
13	25 237 14-S	Clamp, hose (6)
14	25 050 08-S	Filter, fuel
15	41 353 15-S	Line, fuel 2" (pump to filter)
16	24 353 12-S	Line, fuel 11" (pulse to pump)
17	20 353 01-S	Line, fuel 15-3/4" (pump to carb)

#### **NOT ILLUSTRATED**

	X-22-11-S	Washer, lock 1/4"
on an	66 431 04-S	(ground) Sleeve, insulating (for 11" fuel line)
	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
	12 454 03-S	w/gaskets Tie, wire

# SERVICE NOTES

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- Fold this page along dotted line indicated above.
   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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