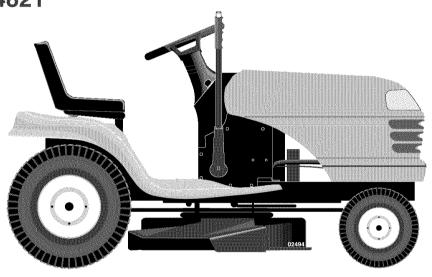
## Owner's Manual

# CRAFTSMAN®

# **LAWN TRACTOR**

18.5 HP, 42" Mower Electric Start Automatic Transmission

Model No. **917.274821** 





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

### **IMPORTANT:**

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

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

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### WARRANTY

#### LIMITED WARRANTY ON CRAFTSMAN RIDING EQUIPMENT

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

This Warranty does not cover:

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

#### LIMITED WARRANTY ON BATTERY

For ninety (90) days from date of purchase, if any battery included with this riding equipment proves defective in material or workmanship and our testing determines the battery will not hold a charge, Sears will replace the battery at no charge. During the first 30 days of purchase, there will be no charges to replace the battery at your HOME. After the first 30 days, for your convenience, IN-HOME warranty service will still be available but a trip charge will apply. This charge will be waived if the Craftsman product is dropped off at an authorized Sears location. For the nearest authorized Sears location, please call 1-800-4-MY-HOME®.

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

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

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

### SAFETY RULES

**IMPORTANT:** This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

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

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

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

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

**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 on the machine and in the manual before starting.
- Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blades.
- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.

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

### SAFETY RULES

#### II. SLOPE OPERATION

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

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

#### III. CHILDREN

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

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

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

#### IV. TOWING

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

#### V. SERVICE

#### SAFE HANDLING OF GASOLINE

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

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

### SAFETY RULES

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

#### **GENERAL SERVICE**

- Never operate machine in a closed are.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices.
   Check their proper operation regularly.

- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage and remove any fuel-soaked debris. Allow machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before restarting.
- Never make any adjustments or repairs with the engine running.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.
- Maintain or replace safety and instruction labels, as necessary.











- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Never carry children, even with the blades shut off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator.
- Be alert and turn machine off if a child enters the area.

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

#### PRODUCT SPECIFICATIONS

·				
Gasoline Capacity and Type:	3.5 Gallons Unleaded Regular			
Oil Type (API-SG-SL):	SAE 30 (above 32°F) SAE 5W-30 (Below 32°F)			
Oil Capacity:	W/Filter: 3.5 Pints W/O 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: 3 Amps Battery 5 Amps Headlights				
Battery:	Amp/Hr: 28 Min. CCA: 230 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

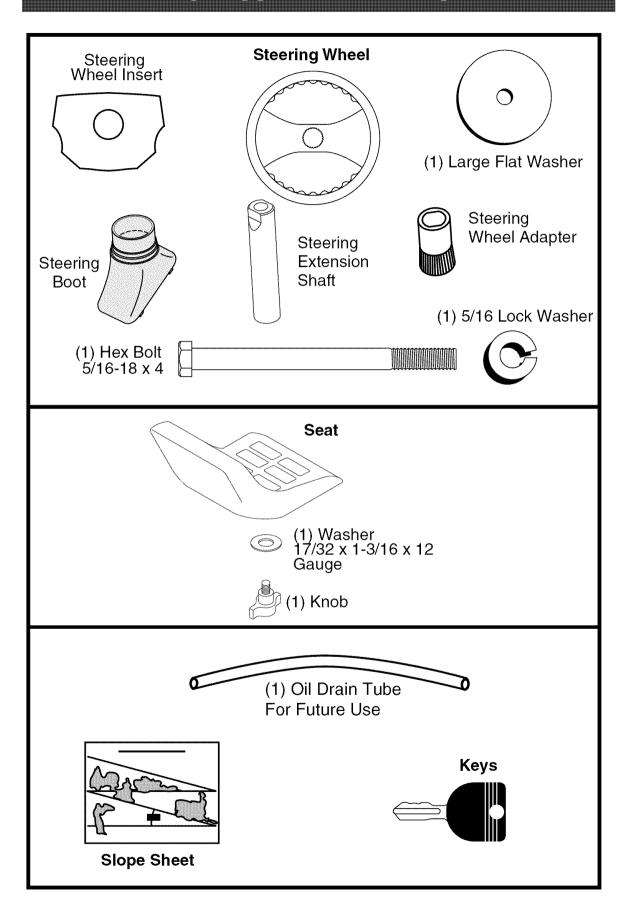
count on to help prolong the life of your new purchase for years to come. Purchase your Repair Protection Agreement today!

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-6 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 you need are listed below.

- (1) 3/4" wrench
- (1) Pliers
- (1) 1/2" wrench
- (1) Utility knife

(1) Tire pressure gauge

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

# TO REMOVE TRACTOR FROM CARTON

#### **UNPACK CARTON**

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

# BEFORE REMOVING TRACTOR FROM SKID

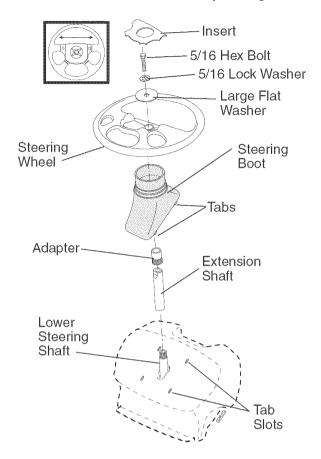
#### ATTACH STEERING WHEEL

ASSEMBLE EXTENSION SHAFT AND BOOT

- 1. Slide extension shaft onto lower steering shaft.
- 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, 5/16 lock washer, 5/16 hex bolt and tighten securely.
- 7. Snap steering wheel insert into center of steering wheel.
- 8. Remove protective materials from tractor hood and grill.



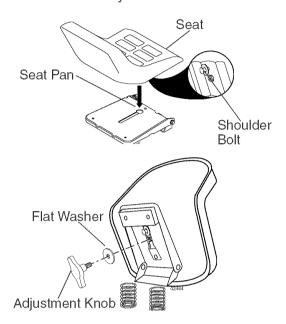
**IMPORTANT:** Check for and remove any staples in skid that may puncture tires where tractor is to roll off skid.

#### **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.
- 4. 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.

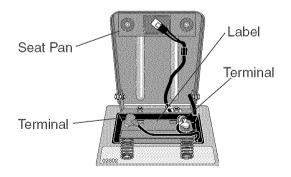
- Lower seat into operating position and sit in seat.
- 7. Slide seat until a comfortable position is reached which allows you to press clutch/brake pedal all the way down.
- 8. Get off seat without moving its adjusted position.
- 9. Raise seat and tighten adjustment knob securely.



#### **CHECK BATTERY**

1. Lift seat pan 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).



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

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

- 1. Press lift lever plunger and raise attachment lift lever to its highest position.
- 2. Release parking brake by depressing clutch/brake pedal.
- 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.
- 9 Continue with the instructions that follow.

#### **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).

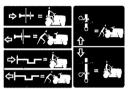
While learning how to use your tractor, pay extra attention to the following important items:

- ✓ 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.
- ✓ Be sure Operator Presence System and Reverse Operation System (ROS) are working properly (See the Operation and Maintenance sections in this manual).
- ✓ It is important to purge the transmission before operating your tractor for the first time. Follow proper starting and transmission purging instructions (See "TO START ENGINE" and "PURGE TRANS-MISSION" in the Operation section of this manual).

### **OPERATION**

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











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

1

UNLOCKED

**Y** 

MOWER LIFT



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.



(Automatic Models only)

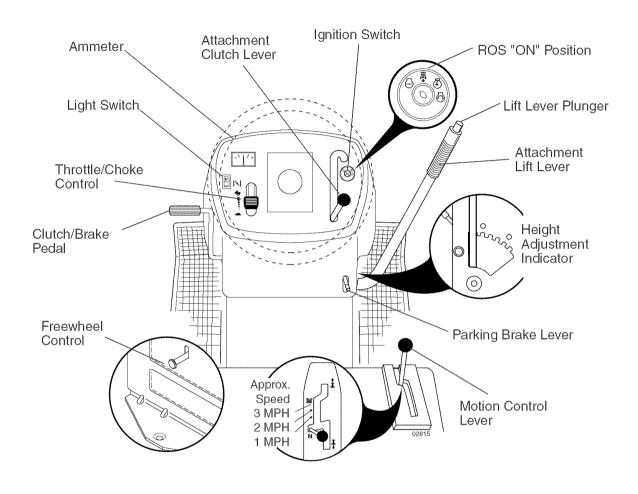


Failure to follow instructions could result in serious injury or death. The safety alert symbol is used to identify safety information about hazards which can result in death, serious injury and/or property damage.

#### **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.

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

IGNITION SWITCH - Used for starting and stopping the engine.

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

**LIGHT SWITCH** - Turns the headlights on and off.

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

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

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

THROTTLE/CHOKE CONTROL - Used for starting and controlling engine speed.

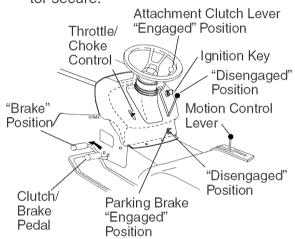


The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend standard safety glasses or a wide vision safety mask worn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

# HOW TO USE YOUR TRACTOR TO SET PARKING BRAKE

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

- 1. Depress 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.

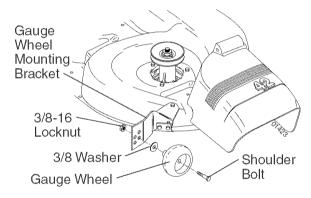
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#### TO ADJUST GAUGE WHEELS

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: Adjust gauge wheels with tractor on a flat level surface.

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



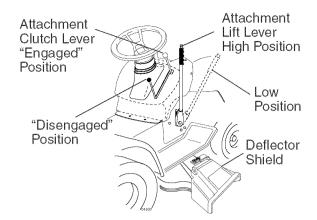
#### TO OPERATE MOWER

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.
- Start mower blades by engaging attachment clutch control.

TO STOP MOWER BLADES - disengage attachment clutch control.

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



#### **OPERATING IN REVERSE**

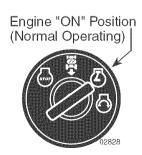
Your tractor is equipped with a Reverse Operation System (ROS). Any attempt by the operator to travel in the reverse direction with the attachment clutch engaged will shut off the engine unless the ignition key is placed in the ROS "ON" position.

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

USING THE REVERSE OPERATION SYSTEM -

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





#### TO OPERATE ON HILLS

**WARNING**: Do not drive up or down hills with slopes greater than 15° and do not drive across any slope. Use the slope quide 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.

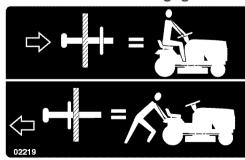
- To restart movement, slowly release parking brake and clutch/brake pedal.
- Slowly move motion control lever to slowest setting.
- Make all turns slowly.

#### **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.
- Remove oil fill cap/dipstick and wipe clean, reinsert the dipstick and screw cap tight, wait for a few seconds, remove and read oil level. If necessary, add oil until "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting ((See 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 15 products in the fuel tank or permanent damage may occur.

#### TO START ENGINE

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

- 1. Be sure freewheel control is in the transmission engaged position.
- Sit on seat in operating position, depress 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**

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

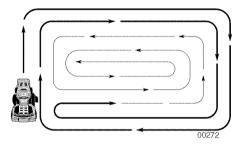
**IMPORTANT:** Should your transmission require removal for service or replacement, it should be purged after reinstallation before operating the tractor.

- Place tractor safely in an area that is flat for approximately 80 feet in front of the tractor and set the parking brake.
- 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.
- 3. Slowly move motion control lever to full forward position and hold for five (5) seconds, or approximately 40 feet. Slowly move lever to full reverse position and hold for five (5) seconds, or approximately 20 feet. After the tractor moves approximately 20 feet in reverse return the motion control lever to the neutral (N) position. Repeat this procedure three (3) times.

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

#### **MOWING TIPS**

- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has already been cut. Have the cut area to the right of the tractor. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished.



- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings.
   Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.

## MAINTENANCE

MAINTENANCE SCHEDULE FILL IN DATES AS YOU COMPLETE REGULAR SERVICE  BEFORE ERCH 38 HOURS HOURS OF SORRER BEFORE ERCH 38 HOURS HOURS OF SORRER BEFORE ERCH 38 HOURS HOURS OF SORRER BEFORE ERCH 25 HOURS OF SORRER BEFORE										
	Check Brake Operation	<b>V</b>	1							
	Check Tire Pressure	/	1							
Т	Check Operator Presence and ROS Systems	~								
R	Check for Loose Fasteners	<b>V</b>				<b>1</b> 5		1		
AC	Sharpen/Replace Mower Blades			<b>√</b> 3						
Ιĭ	Lubrication Chart			1				1		
ΙċΙ	Check Battery Level			<b>1</b> /4						
R	Clean Battery and Terminals			<b>'</b>				1		
	Check Transaxle Cooling			1						
	Check V-Belts					<b>V</b>				
	Check Engine Oil Level	1	1							
	Change Engine Oil (with oil filter)				<b>1</b> 1,2	2		<b>V</b>		
E	Change Engine Oil (without oil filter)			<b>1</b> ,2				1		
N	Clean Air Filter			1/2						
Ģ	Clean Air Screen			1/2						
Ι'n	Inspect Muffler/Spark Arrester				1					
ΙË	Replace Oil Filter (If equipped)					1.2				
I <sup>-</sup>	Clean Engine Cooling Fins					1/2				
	Replace Spark Plug					<b>'</b>	1			
	Replace Air Filter Paper Cartridge					1/2				
	Replace Fuel Filter						1			

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

#### **GENERAL RECOMMENDATIONS**

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

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

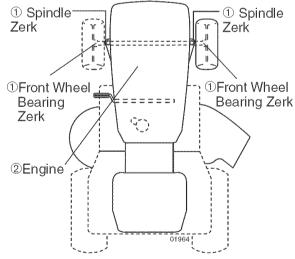
At least once a season, check to see if you should make any of the adjustments described in the Service and Adjustments section of this manual.

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

#### BEFORE EACH USE

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

#### **LUBRICATION CHART**



- 1 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 paved surface, then brake must be checked and adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

#### TIRES

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

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

# OPERATOR PRESENCE SYSTEM AND REVERSE OPERATION SYSTEM (ROS)

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

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

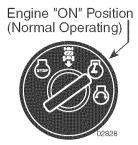
# CHECK OPERATOR PRESENCE SYSTEM

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

# CHECK REVERSE OPERATION (ROS) SYSTEM

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





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

#### **BLADE CARE**

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

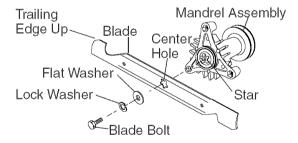
#### **BLADE REMOVAL**

- 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 shown.
- 5. Tighten blade bolt securely (27-35 Ft. Lbs. torque).

**IMPORTANT**: Blade bolt is heat treated.



If bolt needs replacing, replace only with approve bolt shown in the Repair Parts.

#### TO SHARPEN BLADE

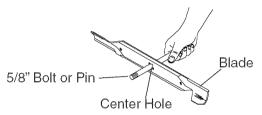
**NOTE:** We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

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

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

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

 Slide blade on to an unthreaded portion of the steel bolt or pin and hold the bolt or pin parallel with the ground. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.



#### **BATTERY**

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

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

**NOTE:** The original equipment battery on your tractor is maintenance free. Do not attempt to open or remove caps or covers. Adding or checking level of electrolyte is not necessary.

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

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

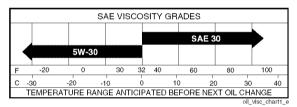
#### **V-BELTS**

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.



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

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

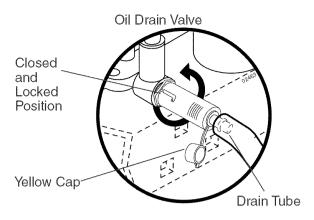
Check the crankcase oil level before starting the engine and after each eight (8) hours of operation. Tighten oil fill cap/dipstick securely each time you check the oil level.

#### TO CHANGE ENGINE OIL

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.

20



- 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.
- 7. 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, tighten dipstick cap securely onto the tube before removing dipstick. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.

#### **ENGINE OIL FILTER**

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

#### AIR FILTER

Your engine will not run properly using a dirty air filter. Replace 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.

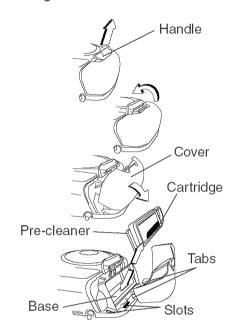
- 1. Pull up on air filter cover handle and rotate towards engine.
- 2. Remove cover.
- 3. Carefully remove air filter cartridge and pre-cleaner from base.
- 4. Clean base carefully to prevent debris from falling into carburetor.

**NOTE**: If very dirty or damaged, replace cartridge.

5. Place new pre-cleaner and cartridge firmly in base.

- 6. Align tabs on cover with slots in blower housing and replace cover.
- 7. Hook handle on cover and push down on handle to close.

**IMPORTANT:** Petroleum solvents, such as kerosene, are not to be used to clean the cartridge. They may cause deterioration of the cartridge. Do not oil cartridge. Do not use pressurized air to clean cartridge.

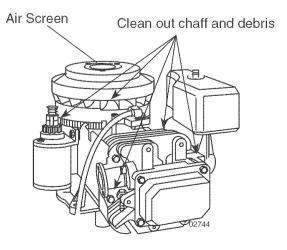


#### **CLEAN AIR SCREEN**

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.

#### **ENGINE COOLING SYSTEM**

Debris may clog the engine's air cooling system. Remove blower housing and clean area shown to prevent overheating and engine damage.



#### MUFFLER

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

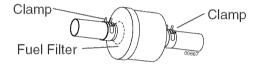
#### SPARK PLUG(S)

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.
- 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 covered to keep water out. Water in engine or transmission will shorten the usful 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.

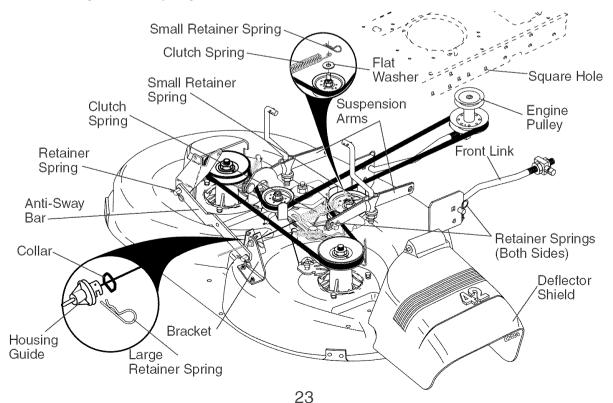
- 1. Place attachment clutch in "DISEN-GAGED" position.
- 2. Move attachment lift lever forward to lower mower to its lowest position.
- 3. Roll belt off engine pulley.
- 4. Remove small retainer spring, and remove clutch spring off pulley bolt.
- 5. Remove large retainer spring, slide collar off and 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.
- Place flat washer and clutch spring on idler pulley bolt and secure with small retainer spring.
- 9. Install belt onto engine pulley.

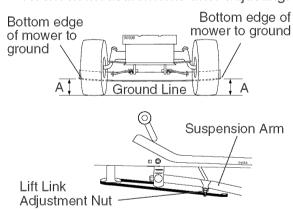
#### TO LEVEL MOWER HOUSING

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.

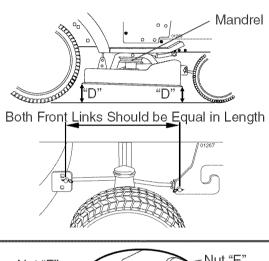


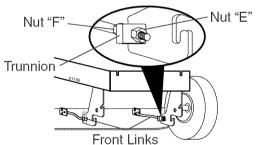
FRONT-TO-BACK ADJUSTMENT IMPORTANT: Deck must be level side-to side. If the following front-to-back adjustment is necessary, be sure to adjust both front links equally so mower will stay level side-to-side.

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.





# TO REPLACE MOWER BLADE DRIVE BELT

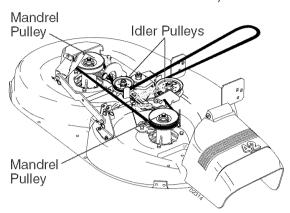
The mower blade drive belt may be replaced without tools. Park the tractor on level surface. Engage parking brake.

#### 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 -**

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



#### TO CHECK AND ADJUST BRAKE

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

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

#### TO CHECK BRAKE

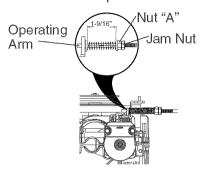
- Park tractor on a level, dry concrete or paved surface, depress clutch/brake pedal all the way down and engage parking brake.
- 2. Disengage transmission by placing freewheel control in "transmission disengaged" position. Pull freewheel control out and into the slot and release so it is held in the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



#### TO REPLACE MOTION DRIVE BELT

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

#### **BELT REMOVAL -**

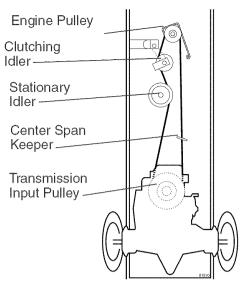
1. Remove mower (See "TO REMOVE MOWER" in this section of manual).

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

- 2. Remove belt from stationary idler and clutching idler.
- 3. Remove belt downward from around engine pulley.
- 4. Pull belt slack toward rear of tractor. Carefully remove belt upwards from transmission input pulley.
- 5. Remove belt from center span keeper and pull belt away from tractor.

#### **BELT INSTALLATION -**

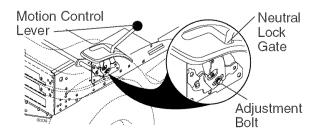
- 1. Carefully work new belt down onto the input pulley.
- 2. Slide belt into the center span keeper.
- 3. Pull belt toward front of tractor and roll around the top groove of engine pulley.
- 4. Install belt through stationary idler and clutching idler.
- 5. Make sure belt is in all pulley grooves and inside all belt guides and keepers.
- Install mower (See "TO INSTALL MOWER" in this section of manual).



#### TRANSAXLE MOTION CONTROL LE-VER NEUTRAL ADJUSTMENT

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

- 1. Loosen adjustment bolt in front of the right rear wheel, and lightly tighten.
- 2. Start engine and move motion control lever until tractor does not move forward or backward
- 3. Hold motion control lever in that position and turn engine off.
- 4. While holding motion control lever in place, loosen the adjustment bolt.
- 5. Move motion control lever to the neutral (N) (lock gate) position.
- 6. Tighten adjustment bolt securely. **NOTE:** If additional clearance is needed to get to adjustment bolt, move mower deck height to the lowest position. After above adjustment is made, if the tractor still creeps forward or backward while motion control lever is in neutral position, follow these steps:
- 1. Loosen the adjustment bolt.
- 2. Move the motion control lever 1/4 to 1/2 inch in the direction it is trying to creep.
- 3. Tighten adjustment bolt securely.
- 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 ALIGN-**MENT**

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

#### FRONT WHEEL TOE-IN/CAMBER

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

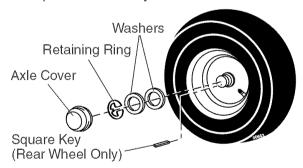
#### TO REMOVE WHEEL FOR REPAIRS

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

**NOTE:** On rear wheels only: align grooves in rear wheel hub and axle. Insert square kev.

- 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 BAT-**TERY**

**MARNING:** Lead-acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

If your battery is too weak to start the engine, it should be recharged. (See "BAT-TERY" in the MAINTENANCE section of 26<sup>this manual</sup>).

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

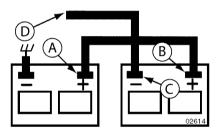
**IMPORTANT**: Your tractor is equipped with a 12 volt system. The other vehicle must also be a 12 volt system. Do not use your tractor battery to start other vehicles.

#### 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.
- 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.



Weak or Dead Battery Fully Ch

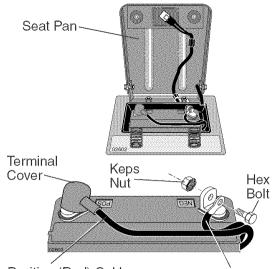
**Fully Charged Battery** 

#### REPLACING BATTERY

**WARNING:** 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 seat pan to raised position.
- Disconnect BLACK battery cable first then RED battery cable and carefully remove battery from tractor.
- 3. Install new battery with terminals in same position as old battery.
- 4. First connect RED battery cable to positive (+) terminal with hex bolt and keps nut as shown. Tighten securely. Slide terminal
- 5. Connect BLACK grounding cable to negative (-) terminal with remaining hex bolt and keps nut. Tighten securely.



Positive (Red) Cable Negative (Black) Cable

#### 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.

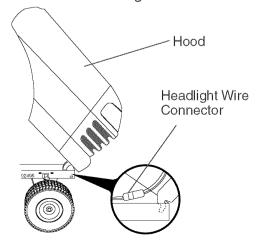
 Check wiring. See electrical wiring diagram in the Repair Parts section.

#### 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.



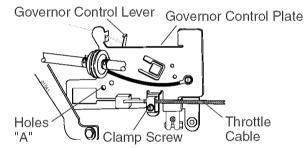
#### **ENGINE**

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 that holes "A" in governor control lever and hole in governor plate line-up. If holes "A" are not aligned, loosen clamp screw and move throttle cable until holes are aligned. Tighten clamp screw securely.



#### TO ADJUST CARBURETOR

**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.

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 idle mixture valve in (clockwise) decreases the supply of fuel to the engine giving a leaner fuel/air mixture. Turning the idle mixture valve **out** (counterclockwise) increases the supply of fuel to the engine giving a richer fuel/air mixture.

**IMPORTANT:** Damage to the needle valve and the seat in carburetor may result if screw is turned in too tight.

#### PRELIMINARY SETTING -

- Air cleaner assembly must be assembled to the carburetor when making carburetor adjustments.
- 2. Be sure the throttle control cable is adjusted properly (see above).

FINAL SETTING -(See "TO ADJUST THROTTLE CONTROL CABLE" in this section of the manual.)

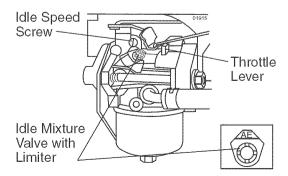
- 1. Start engine and allow to warm for five minutes. Make final adjustments with engine running and shift/motion control lever in neutral (**N**) position.
- Move throttle control lever to slow position. With finger, rotate and hold throttle lever against idle speed screw. Turn idle speed screw to attain 1750 RPM.
- 3. While still holding throttle lever against idle speed screw, turn idle mixture valve full travel clockwise then counterclockwise until engine runs rough. Turn valve to a point midway between those two positions. Release throttle lever.

#### **ACCELERATION TEST -**

 Move throttle control lever from slow to fast position. If engine hesitates or dies, turn idle mixture valve **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 or 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.

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

#### TRACTOR

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

- 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 TER-MINALS" 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> <li>Engine valves out of adjustment.</li> </ol>	in Service and Adjustments section. 10.Contact a Sears or other
Hard to start	adjustment.  1. Dirty air filter. 2. Bad spark plug. 3. Weak or dead battery. 4. Dirty fuel filter. 5. Stale or dirty fuel. 6. Loose or damaged wiring. 7. Carburetor out of adjustment. 8. Engine valves out of adjustment.	qualified service center.  1. Clean/replace air filter. 2. Replace spark plug. 3. Recharge or replace battery. 4. Replace fuel filter. 5. Empty fuel tank and refill tank with fresh, clean gasoline. 6. Check all wiring. 7. See "To Adjust Carburetor" in Service and Adjustments section. 8. Contact a Sears or other qualified service center.
Engine will not turn over	<ol> <li>Brake pedal not depressed.</li> <li>Attachment clutch is engaged.</li> <li>Weak or dead battery.</li> <li>Blown fuse.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty ignition switch.</li> <li>Faulty solenoid or starter.</li> <li>Faulty operator presence switch(es).</li> </ol>	<ol> <li>Depress brake pedal.</li> <li>Disengage attachment clutch.</li> <li>Recharge or replace battery.</li> <li>Replace fuse.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace ignition switch.</li> <li>Check/replace solenoid or starter.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Engine clicks but will not start	<ol> <li>Weak or dead battery.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty solenoid or starter.</li> </ol>	<ol> <li>Recharge or replace battery.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace solenoid or starter.</li> </ol>
Loss of power	<ol> <li>Cutting too much grass/too fast.</li> <li>Throttle in "CHOKE" position.</li> <li>Build-up of grass, leaves and trash under mower.</li> <li>Dirty air filter.</li> <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 (cont.)	<ol> <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>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 dies when tractor is shift into reverse  1. Reverse operation system (ROS) is not "ON" while mower or other attachment is engaged.		Turn ignition key to     ROS "ON" position.     See Operation section.			
Engine continues to run when operator leaves seat with attachment clutch engaged	Faulty operator-safety presence control system.	Check wiring, switches and connections. If not corrected, contact a Sears or other qualified service center.			
Poor cut - uneven	<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>			

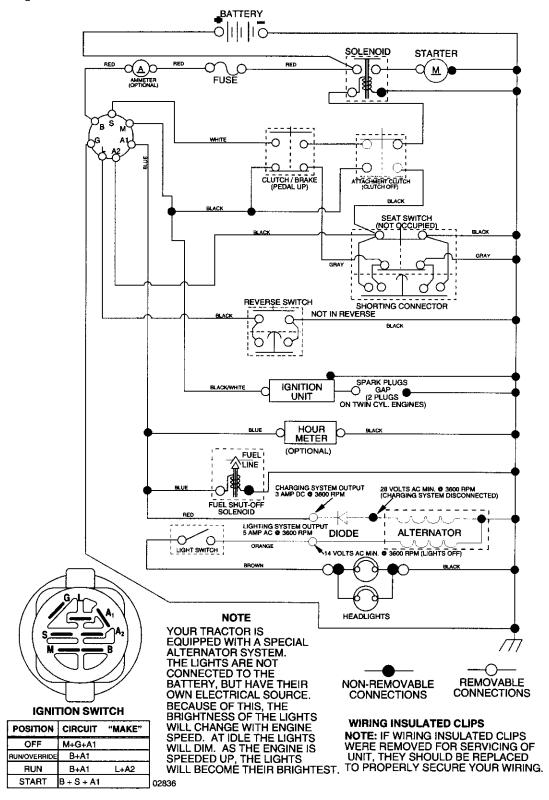
### TROUBLESHOOTING CHART: See appropriate section in manual unless directed to Sears service center

PROBLEM	CAUSE	CORRECTION
Mower blades will not rotate	belt. 3. Frozen idler pulley.	<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>
Poor grass discharge Poor grass discharge (continued)	<ol> <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> </ol>	<ol> <li>Place throttle control in "FAST" position.</li> <li>Shift to slower speed.</li> <li>Allow grass to dry before mowing.</li> <li>Level mower deck.</li> <li>Check tires for proper air pressure.</li> <li>Replace/sharpen blade.         Tighten blade bolt.</li> <li>Clean underside of mower housing.</li> <li>Replace mower drive belt.</li> <li>Reinstall blades sharp edge down.</li> <li>Replace with blades listed in this manual.</li> <li>Clean around mandrels to open vent holes.</li> </ol>
Headlight(s) not working (if so equipped)	Bulb(s) or lamp(s) burned out.     Faulty light switch.     Loose or damaged wiring.	<ol> <li>Turn light switch "ON".</li> <li>Replace bulb(s) or lamp(s).</li> <li>Check/replace light switch.</li> <li>Check wiring and connections.</li> <li>Replace fuse.</li> </ol>
Battery will not charge	3. Faulty regulator (if so equipped).	<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.	Move throttle control     between half and full speed     (fast) position before     stopping engine.

#### TRACTOR - - MODEL NUMBER 917.274821

#### **SCHEMATIC**

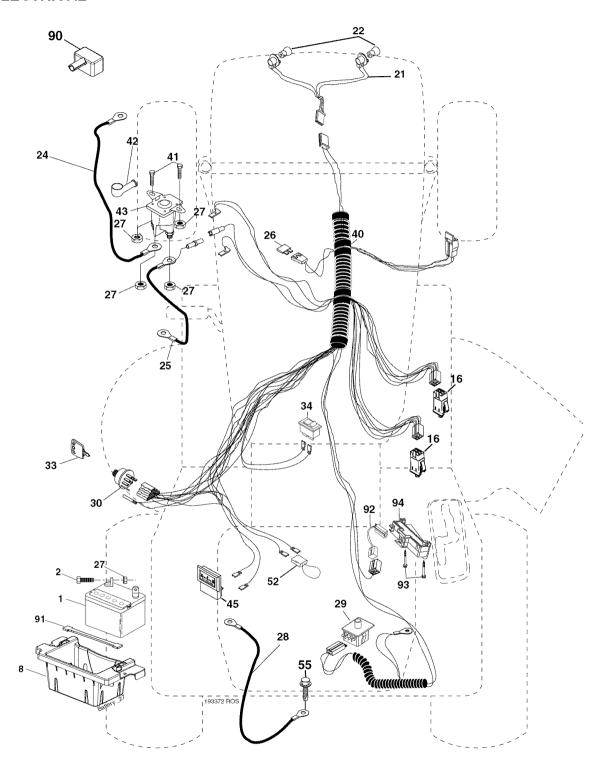
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## REPAIR PARTS

### TRACTOR - - MODEL NUMBER 917.274821

### ELECTRICAL



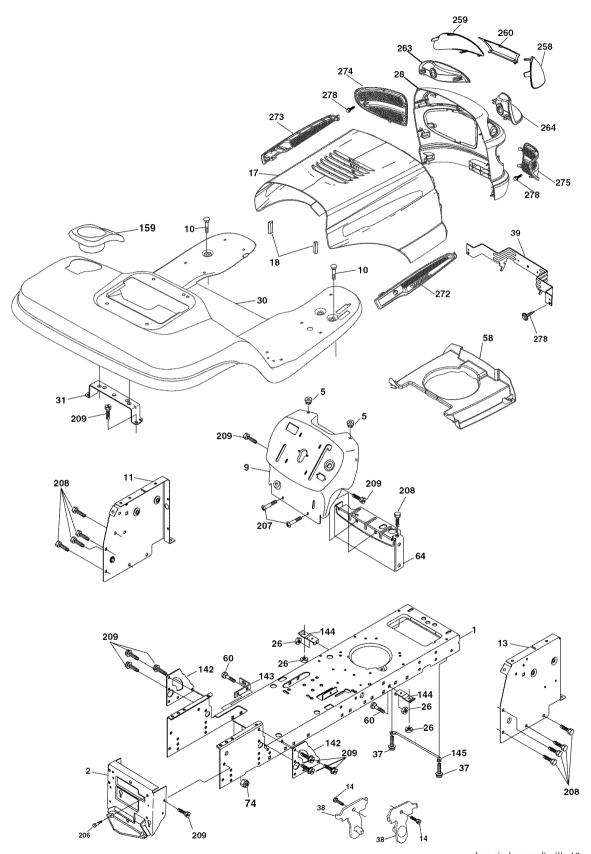
### TRACTOR - - MODEL NUMBER 917.274821

#### ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION
1	163465	Battery
2	74760412	Bolt, Hex 1/4-20 x 3/4
8 16	186491 176138	Box, Battery Switch Interlock
	183759	Harness, Light Socket (w/4152J)
	4152J	Light Bulb
24		Cable, Battery
	146148	Cable, Battery
	175158	Fuse
27	73510400	Nut Keps Hex 1/4-20 unc
28	145491	Cable, Ground
29	192749	Switch, Seat
	193350	Switch, Ignition
	140403	Key, Molded
	110712X	Switch Light
	193374	Harness, Ignition
	71110408	Bolt Blk Fin Hex 1/4-20 unc x 1/2
	131563	Cover, Terminal
43 45	178861	Solenoid
45 52	121433X 141940	Ammeter Rectangular Protection Wire Loop (Hour Meter)
	17490508	Screw Thdrol 5/16-18 x 1/2
	180449	Cover Terminal
	190270	Strap Battery Mount Front
92		Harness Pigtail Reverse
	192540	Screw
94	191834	Module Reverse ROS

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

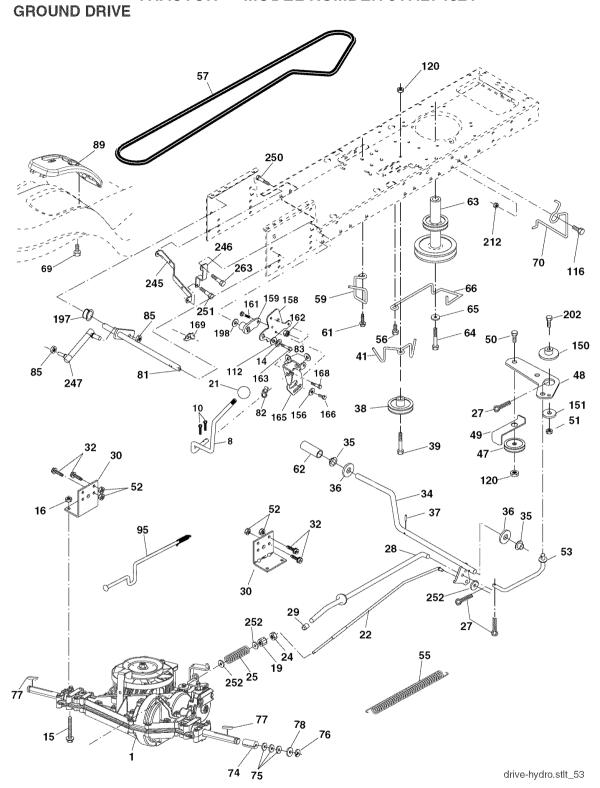
# TRACTOR - - MODEL NUMBER 917.274821 CHASSIS AND ENCLOSURES



### TRACTOR - - MODEL NUMBER 917.274821 CHASSIS AND ENCLOSURES

KEY NO.	PART NO.	DESCRIPTION
1	174619	Chassis
2	176554	Drawbar
5	155272	Bumper Hood/Dash
9	193511X013	Dash Comings 3/0 46 x 4
10	STD533710	Bolt, Carriage 3/8-16 x 1
11	174996	Panel, Dash, LH
13	172105X010	Panel, Dash, RH
14 17	17490608 184272X615	Screw Thdrol 3/8-16 x 1/2
18	184921	Hood Assembly Bumper Extrusion
26	STD541437	Locknut, Hex, with Insert 3/8-16 unc
28	184259	Grille/Lens Asm.
20	104233	(Includes Key Nos. 258, 259, 260, 263, 264, 274 and 275)
30	192393X615	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	184270	Air Duct
60	72140606	Bolt Rdhd Sqnk 3/8-16 unc x 3/4
64	154798	Dash Lower STLT
74	STD541437	Nut Crownlock 3/8-16 unc
90	124346X	Nut 1/4
142	175702	Plate Reinforcement STLT
143	186689	Bracket Swaybar Chassis
144	175582	Bracket Footrest STLT
145	156524	Rod Pivot Chassis/Hood
159 166	155123X428	Cupholder
206	189747 170165	Screw Hi-Lo #13-16 x 5/8 w/Patch Bolt Shoulder 5/16-18TT
207	17670508	Screw Thdrol 5/16-18 x 1/2
208	17670608	Screw Thdrol 3/10-16 x 1/2
209	17070000	Screw Hex Wsh Thdrol 3/8-16 x 3/4
217	179132X428	Console Fuel Window
258	184264X599	Lens RH
259	184263X599	Lens LH
260	184262X428	Cover Lens
263	184265	Bezel Grille LH
264	184266	Bezel Grille RH
272	184269X428	Vent Hood RH
273	184268X428	Vent Hood LH
274	184260X428	Insert Grille LH
275	184261X428	Insert Grille RH
278	191611	Screw 10 x 3/4 Single Lead Hex
	5479J	Plug Button
	187801	Plug Dome Plastic (Choke Hole)

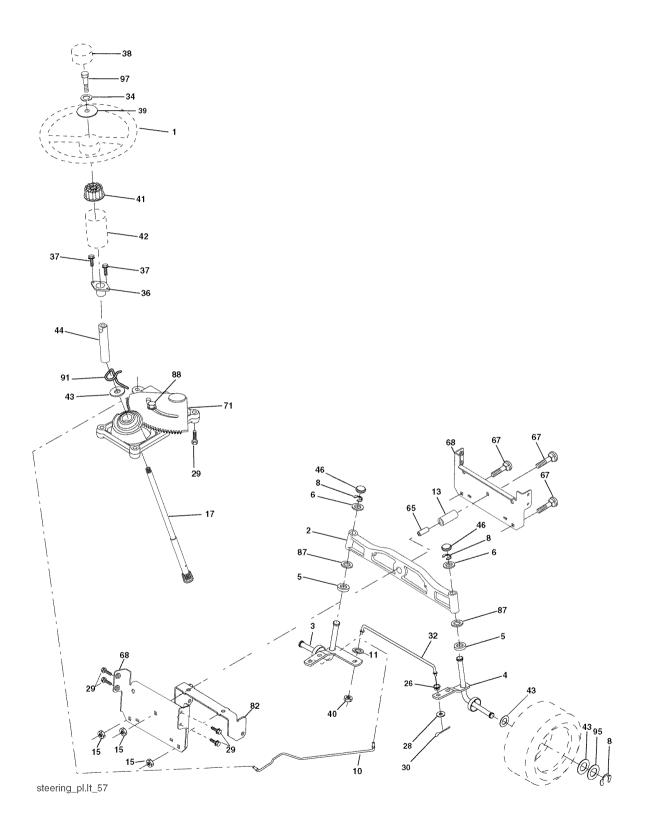
**NOTE:** All component dimensions given in U.S. inches 1 inch = 25.4 mm



#### **GROUND DRIVE**

KEY PART NO. NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
	Transaxle Peerless LTH2000 (See Breakdown) Rod Shift Fender Adjust Pin Cotter 1/8 x 1 CAD Washer Lock Hvy Helical Bolt Hex FLGHD 5/16-18 Gr. 5 Nut Lock Hex W/Ins. 5/16-18 unc Nut Lock Hex W/Wsh 3/8-16 unc Knob 1/2-13 Rod, Brake Nut, Hex Jam 3/8-16 Unc Spring, Brake Rod Pin Cotter 1/8 x 3/4 CAD. Rod, Parking Brake Cap, Parking Brake Cap, Parking Brake Bracket, Transaxle Bolt Hex Hd 5/16-18 unc x 3/4 Shaft, Foot Pedal Bearing, Nylon Washer Pin, Roll Pulley, Composite Bolt Rdhd 3/8-16 unc x 2-3/4 Gr. 5 Keeper, Belt Idler			Screw Hex Wsh Hi-Lo 1/4-1/2 unc Keeper Belt Engine Spacer Washer 25/32 x 1-1/4 x 16 Ga. E-Ring Key, Square Washer 25/32 x 1-5/8 x 16 Ga. Shaft Asm Cross Tapered Spring Torsion Washer 17/32 x 3/4 x 16 Ga. Nut Lock Center 1/4-28 FNTHD Console, Shift Disconnect Asm Rod Bypas LTH Washer 9/32 x 3/4 x 10 Ga. Bolt Rdhd Sqneck 3/8-16 x 1 Nut Lock Flg 3/8-16 Spacer Retainer Washer 13/32 x 2 x 10 Ga. Washer Srrted 5/16 ID x 1.125 Bracket Shift Mount Hub Shift Bolt Rdhd Sqnk 1/4-20 x 3/4 Gr. 5 Nut Crownlock 1/4-20 unc Bolt Hex Fin 1/4-20 unc
47 127783 48 154407 49 123205X 50 72110612 51 STD541437 52 STD541431 53 105710X 55 105709X 56 17060620 57 178138 59 169691 61 17120614 62 8883R 63 175410 64 173937 65 STD551143 66 154778	Pulley, Idler, V-Groove Bellcrank, Clutch Retainer, Belt Bolt Carr Sh 3/8-16 x 1-1/2 Gr 5 Nut Crownlock 3/8-16 unc Nut, Crownlock 5/16-18 unc Link, Clutch Spring, Return, Clutch Screw 3/8-16 x 1-1/4 V-Belt Keeper, Center Span Screw 3/8-16 x .875 Cover, Pedal Pulley, Engine Bolt Hex 7/16-20 x 4 Gr. 5 Washer Keeper Belt Engine Hydro	165 166 168 169 197 198 202 212 245 246 247 250 251 252 263	165623 17490510 165492 165580 169613 169593 72110614 145212 178122 178121 181462 17060612 17060516 19131616 17000612	Bracket Pivot Lever Screw 5/16-18 x 5/8 Bolt Shoulder 5/16-18 x .561 Plate Fastening Nyliner Snap-In 5/8"ID Washer Nyl 7/8 ID x .105" Hyd Bolt Carr Sh 3/8-16 x 1-3/4 Gr.5 Nut Hex Flange Lock Strap Torque Lh LTH2000 Strap Torque Rh LTH2000 Link Shift Transaxle LTH2000 Screw 3/8-16 x .75 Screw 5/16-18 x 1 Washer 13/32 x 1 x 16 Ga. Screw Hex Wsh Thdr 3/8-16 x 3/4 ant dimensions given in U.S. inches

# TRACTOR - - MODEL NUMBER 917.274821 STEERING ASSEMBLY

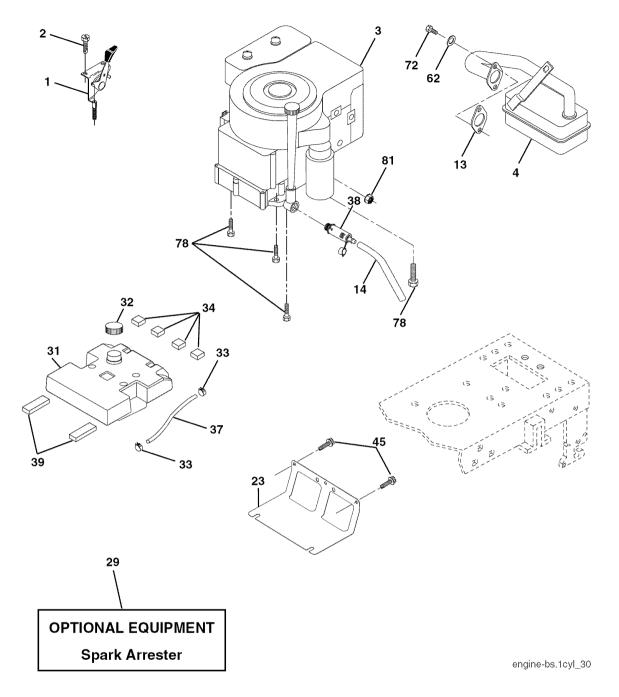


### TRACTOR - - MODEL NUMBER 917.274821 STEERING ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
1	186093X428	Steering Wheel
2	184706	Front Axle Assembly
3	169840	Spindle Assembly, L.H.
4	169839	Spindle Assembly, R.H.
5	6266H	Bearing, Race, Thrust, Hardened
6	121748X	Washer 25/32 x 1-5/8 x 16 Ga.
8	12000029	Ring, Klip
10	175121	Link, Drag
11	STD551137	Washer, Lock
13	136518	Spacer, Bearing, Front Axle
15	145212	Nut, Hexflange Lock
17	190753	Shaft Assembly, Steering
26	126847X	Bushing Link Drag
28	19131416	Washer 13/32 x 7/8 x 16 Ga.
29	17000612	Screw 3/8-16 x 3/4
30	76020412	Pin Cotter 1/8 x 3/4
32	130465	Rod, Tie
34	10040500	Washer Lock Hvy Hlcl Spr. 5/16
36	155099	Bushing, Steering
37 38	152927	Screw TT #I0-32 x 5 x 3/8 Flange
38 39	186095X428 19113812	Insert, Steering Wheel Washer 11/32 x 2-3/8 x 12 Ga.
39 40	73540600	Lock Nut Center 3/8-24
41	186737	Adaptor, Steering Wheel
42	145054X428	Boot, Steering
43	121749X	Washer 25/32 x 1-1/4 x 16 Ga.
44	190752	Extension Steering
46	184946X505	Cap, Spindle
65	160367	Spacer Brace Axle
67	72110618	Bolt Rhnd Sq 3/8-16 x 2-1/4
68	169827	Brace Axle
71	175146	Steering Asm
82	169835	Bracket Susp Chassis Front
87	173966	Washer Flat .781 x 1-1/2 x .14
88	175118	Bolt Shoulder 7/16-20
91	175553	Clip Steering
95	188967	Washer Hardened .793 x 1.637 x .060
97	74780564	Bolt 5/16-18 x 4" Gr. 5

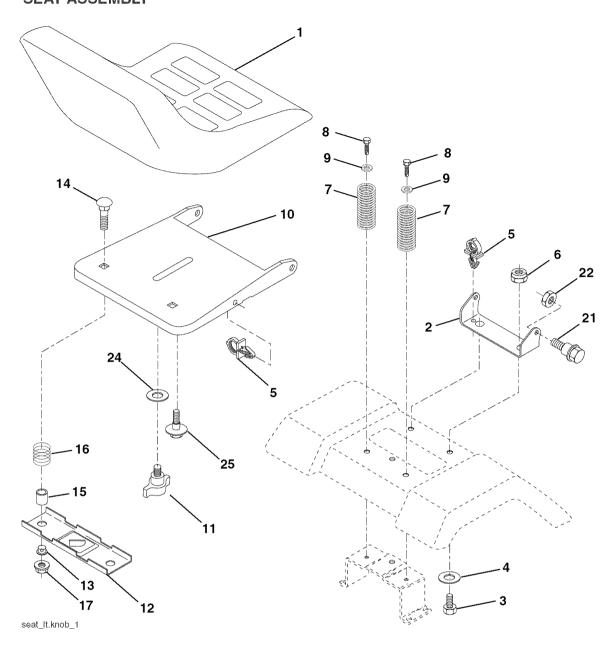
**NOTE:** All component dimensions given in U.S. inches 1 inch = 25.4 mm

#### **ENGINE**



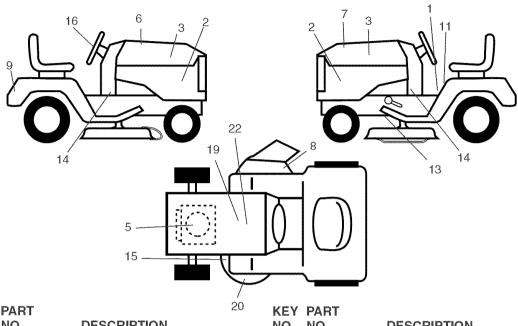
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	170545	Control Throttle/Choke	38	181654	Plug, Drain Oil Easy
2	17720408	Screw Hex Thd Cut 1/4-20 x 5/8	39	109227X	Pad Idler
3	w # # w # w #	Engine (See Breakdown) Briggs	44	17670412	Screw Hexwsh Thdrl 1/4-20 x 3/4
		Model No. 31P777-0296-E1	45	17000612	Screw Hex Wsh Thdrol
4	137352	Muffler Exhaust			3/8-16 x 3/4
13	165291	Gasket Muffler	46	19091416	Washer 9/32 x 7/8 x 16 Ga.
14	148456	Tube, Drain Oil Easy	62	10010500	Washer Split
23	169837	Shield Browning/Debris Guard	72	71070512	Screw Hex Head Cap 5/16-18
29	137180	Arrestor Spark			x 3/4
31	157103	Tank Fuel	78	17060620	Screw 3/8-16 x 1-1/4
32	161696	Cap Fuel	81	73510400	Nut, Keps 1/4-20 Starter Nut
33	123487X	Clamp Hose Blk	NOTE	· All compone	nt dimensions given in U.S.
34	106082X	Pad Špacer		s 1 inch = 25.4	
37	8543R	Line Fuel	1110116	3 I 111011 - 20.	7 111111
		A	Ω		

### TRACTOR - - MODEL NUMBER 917.274821 SEAT ASSEMBLY



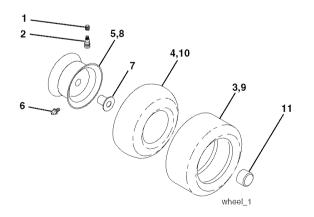
KEY NO.	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1 2 3 4 5 6 7 8 9 10 11 12	188719 140551 71110616 19131610 145006 STD541437 124181X 17000616 19131614 182493 166369 174648	Seat Bracket Pnt Pivot Seat Bolt Fin Hex 3/8-16 unc x 1 Washer 13/32 x 3/4 x 10 Ga. Clip Push In Hinged Nut Hex Lock w/Ins 3/8-16 unc Spring Seat Cprsn 2 250 Blk Zi Screw 3/8-16 x 1.5 SMGML Washer 13/32 x 1 x 14 Ga. Pan Pnt Seat Knob Seat Bracket Pnt Mounting Switch	13 14 15 16 17 21 22 24 25 NOTE	121248X 72050412 134300 121250X 123976X 171852 STD541431 19171912 127018X E: All componen 1 inch = 25.4 n	Bushing Snap Blk Nyl 50 Id Bolt Rdhd Sht Nk 1/4-20 x 1-1/2 Spacer Split 28 x 96 Zinc Spring Cprsn 1 27 Blk Pnt Nut Lock 1/4 Lge Flg Gr. 5 Zinc Bolt Shoulder 5/16-18 unc-2A Nut Hex Lock w/lns 5/16-18 Washer 17/32 x 1-3/16 x 12 Ga. Bolt Shoulder 5/16-18 x .62 t dimensions given in U.S. inches

#### DECALS



	PART	DESCRIPTION		PART	NEANINTIALI
NO.	NU.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	156439	Decal Fender Danger Sears	16	164065	Decal Steering
2	186367	Decal Hood Side RH/LH	19	138047	Decal Battery Diehard Sears
3	186366	Decal Hood RH/LH	20	172331	Decal Deck Mower EZ3
5	189020	Decal Engine H/P	22	149516	Decal Battery
6	133644	Decal Maint Customer Sears Dom		178392	Decal Disconnect
7	193565	Decal Replacement		138311	Decal Lift Handle
8	179128	Decal Deck	**	184310X428	Pad Footrest Lh STLT
9	186572	Decal Fender Craftsman		184311X428	Pad Footrest Rh STLT
11	193307	Decal Fender STLTH Oper Inst E/S		193809	Manual Owner's (English)
13	146046	Decal V-belt Dr Sch Tractor E	**	193810	Manual Owner's (Spanish)
14	189088	Decal Dash Panel			
15	160396	Decal Mower Drive Schematic			

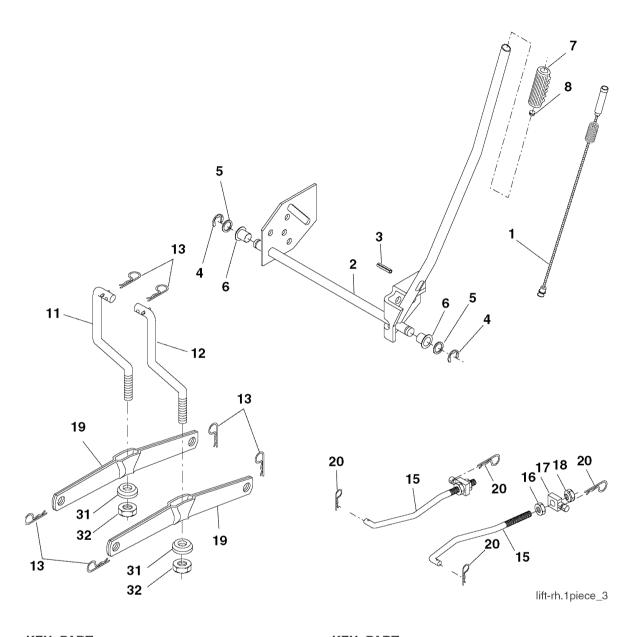
#### WHEELS & TIRES



KEY NO.	PART 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	138468	Tire, Rear
10	7152J	Tube, Rear Tire(Not Provided,
		Service Item Only)
11	104757X428	Cap, Axle
	144334	Sealant, Tire (10 oz. Tube)

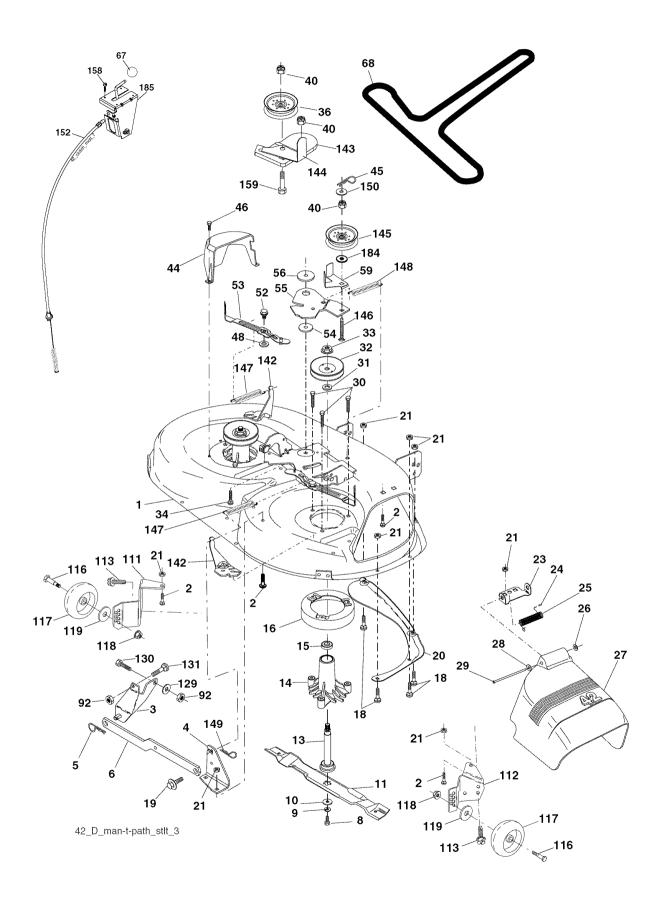
**NOTE:** All component dimensions given in U.S. inches 1 inch = 25.4 mm

#### LIFT ASSEMBLY



KEY NO.	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1	159460	Lift Lever Inner Wire Asm.	15	173288	Link Front
2	159471	Shaft Asm. Lift	16	73350800	Nut Jam Hex 1/2-13 unc
3	105767X	Pin Groove	17	175689	Trunnion
4	12000002	E Ring	18	73800800	Nut Lock w/Wsh 1/2-13 unc
5	19211621	Washer 21/32 x 1 x 21 Ga.	19	139868	Arm Suspension Mower
6	120183X	Bearing Nylong	20	163552	Retainer Spring
7	125631X	Grip Handle Fluted	31	169865	Bearing, Pvt. Lift. Tapered
8	122365X	Button Plunger Read	32	73540600	Nut Crownlock 3/8-24
11	139865	Link Asm Lift L.H.			
12	139866	Link Asm Lift R.H.	NOTE	: All componer	nt dimensions given in U.S. inches
13	STD624008	Retainer Spring		1 inch = $25.4$	mm

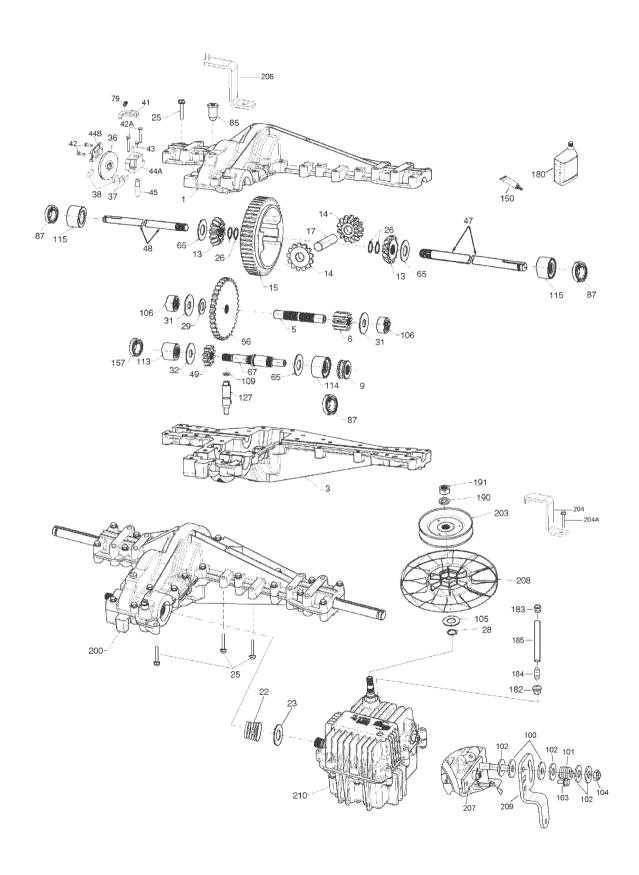
#### MOWER DECK



#### MOWER DECK

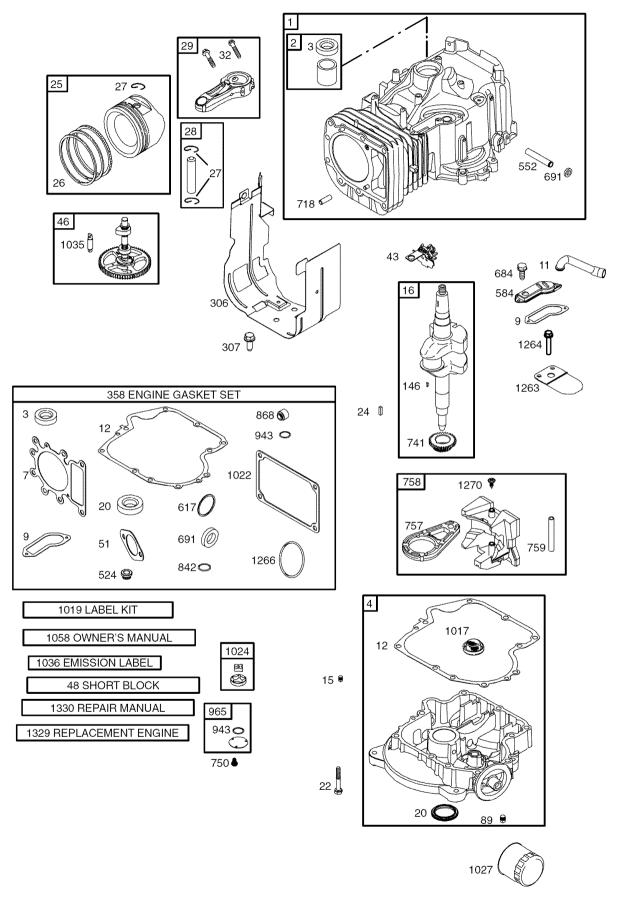
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	165892	Mower Housing	56	165723	Spacer, Retainer
2	STD533107	Bolt	59	141043	Guard, Tuv Idler (94)
3	138017	Bracket Asm, Sway Bar, Front	67	149846	Knob Custom Oval
4	165460	Bracket Sway Bar 38/42"	68	144959	V-Belt
5	STD624008	Retainer Spring	92 111	STD541437 179292	Locknut, Hex W/Wsh 3/8-16 unc
6 8	178024 850857	Bar Sway Deck Bolt, Hex 3/8-24 x 1.25 Gr. 8	112	179292	Bracket Wheel Guage LH Bracket Wheel Guage RH
9	STD551137	Washer, Lock	113	17000512	Screw 5/16-18 x 3/4
10	140296	Washer, Hardened	116	4898H	Bolt, Shoulder
		(The following blades are avail-	117	188606	Wheel, Gauge
		able)	118	73930600	Nut, Crownlock 3/8-1
11	138971	Blade, 42" Hi-Lift	119	19121414	Washer 13/32 x 7/8 x 14 Ga.
		(For bagging or discharge)	129	19131312	Washer 13/32 x 13/16 x 12 Ga.
* *	134149	Blade, 42" Mulching Std	130	STD523710	Bolt, Fin Hex 3/8-16 unc x 1Gr. 5
	139775	(For mulching mowers only) Blade, 42" Mulching Premium	131 134	STD533710 156941	Bolt Rdhd Sqnk 3/8-16 unc x 1 Pin Head Rivet
	139775	(For better wear when mulching)	135	159765	Bracket Asm. Wheel Gauge
13	137645	Shaft Assembly, Mandrel, Vented	100	100700	Rear LH
.0	107010	(Incl. Key Number 6)	136	155986	Bar Adj. Gauge Wheel
14	128774	Housing, Mandrel, Vented	138	159763	Bracket Asm. Wheel Gauge
15	110485X	Bearing, Ball, Mandrel			Rear RH
16	174493	Stripper, Mower Deck	139	159767	Bracket Asm. Wheel Gauge
18	72140505	Bolt, Carriage 5/16-18 x 5/8	4.40	1=0=00	Front RH
19 20	132827 159770	Bolt, Shoulder Baffle, Vortex	140	159768	Bracket Asm. Wheel Gauge Front LH
21	STD541431	Nut, Crownlock 5/16-18 unc	142	165890	Arm Spring Brake Mower
23	177563	Bracket, Deflector	143	157109	Bracket Arm Idler 42"
24	105304X	Cap, Sleeve	144	158634	Keeper Belt 42" Clutch Cable
25	123713X	Spring, Torsion, Deflector	145	165888	Pulley Idler Flat
26	110452X	Nut, Push	146	171977	Bolt Carraige Idler
27	130968X428	Shield, Deflector	147	131335	Spring Extension
28	19111016	Washer 11/32 x 5/8 x 16 Ga.	148	169022	Spring Return Idler
29 30	131491	Rod, Hinge Screw Thdrol Rolling Wsh Hd	149 150	165898 19091210	Retainer Spring Yellow Zinc Washer 9/32 x 3/4 x 10 Ga.
31	173984 187690	Washer, Spacer	152	169676	Cable Clutch 42"
32	153535	Pulley, Mandrel	158	17720408	Screw Hex Thd Cut 1/4-20 x 5/8
33	178342	Nut, Toplock, Flanged	159	STD533717	Bolt Rdhd Sqn 3/8-16 unc x 1-3/4
34	72110612	Bolt Carr Sh. 3/8-16 x 1-1/2 Gr. 5	184	19131410	Washer 3/8
36	131494	Pulley, Idler, Flat	185	188234	Head Asm Cable Clutch
40	73900600	Nut, Lock Flg. 3/8-16 unc		130794	Mandrel Assembly (Includes
44	140088	Guard, Mandrel, L.H.			housing, shaft and shaft hardware
45 46	STD624003	Retainer		171491	only-pulley not included) Replacement Mower, Complete
46 48	137729 133944	Screw, Thd. Roll 1/4-20 x 5/8 Washer, Hardened		17 1491	(Std. Deck-Order separately
52	139888	Bolt, Shoulder 5/16-18 unc			guage wheel components key
53	184907	Arm Assembly, Pad, Brake			nos. 116 - 119).
54	178515	Washer, Hardened	NOTE	· All componer	nt dimensions given in U.S.inches
55	155046	Arm, Idler	14-716	1 inch = 25.4 r	

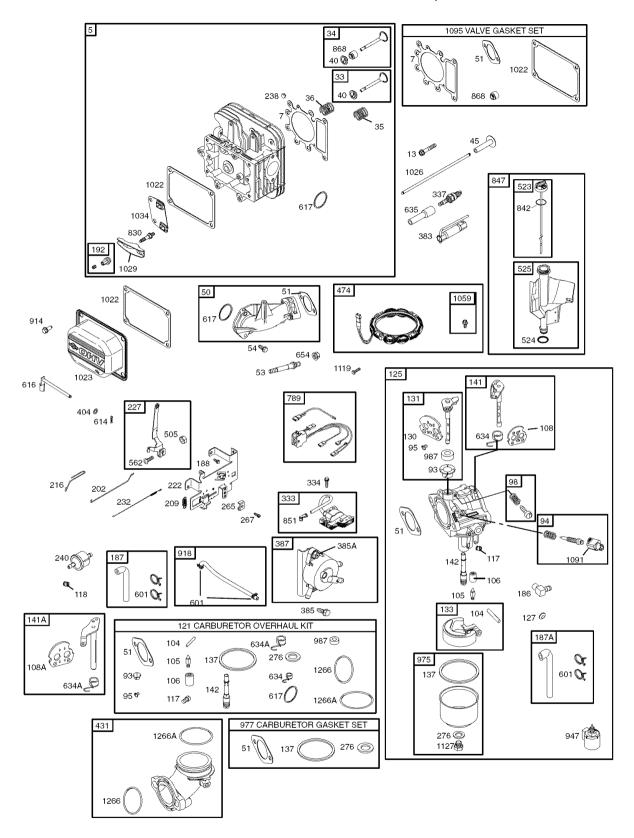
### TRACTOR - - MODEL NUMBER 917.274821 PEERLESS TRANSAXLE - - MODEL NUMBER LTH2000

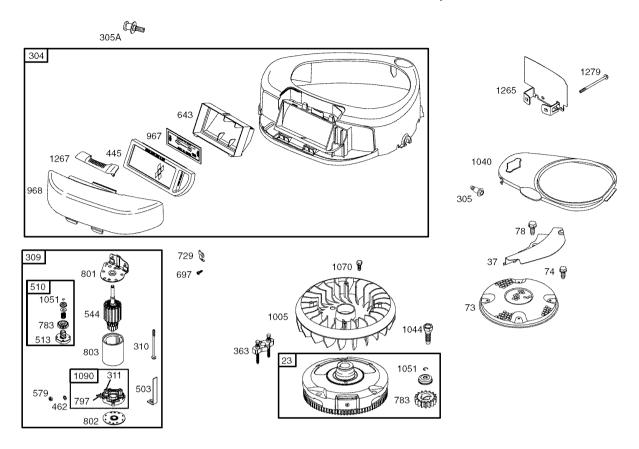


# TRACTOR - - MODEL NUMBER 917.274821 PEERLESS TRANSAXLE - - MODEL NUMBER LTH2000

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1 3 5 6 9 13 14 15 17 22 23 25 28 29 31 36 37 38 40 41 42 42 43 44 44 45 47 48 49 56 67	772151 770135 776355 776355 778263 786197 778368 778368 778373 786139 792194 792195 792073A 792125 792035 780065 780189 790071 790007 799021 792204 790102 792202 792203 792171 790100 790099 790101 774869 774688 778378 778379 780195 776440	Cover L.H. Case Counter Shaft Spur Gear 11T Neutral Sleeve (.572) Bevel Gear (Incl. 14) (13 Teeth) Bevel Gear (Incl. 13) (13 Teeth) Ring Gear (54 Teeth) Drive Pin Spring Washer .750 ID Screw 1/4-20 x 1-1/4" Retaining Ring Retaining Ring Washer .627 ID .091W Washer .563 ID .062W Brake Disk Brake Pad Plate Brake Pad Roll Pin .25 Brake Lever Screw, 1/4-20 x 3/4 Screw, 1/4-20 x 1-3/4 Screw, 10-24 x .500 Inside Brake (Mach) Outside Brake (Mach) Outside Brake (Casting) Actuator Rod Axle 16.812 Axle 11.625 Spur Gear 18T Spur Gear 81T Washer .750ID .062W Brakeshaft	70 79 85 87 99 100 101 102 103 104 105 106 107 109 113 114 115 127 150 182 183 184 185 190 191 200 203 206 207 208 209 210	786196 792201 792154 788088A 792141 792200 792199 792184 792198 780096 786162 792046 788104 786199 786200 786198 784384 788093A 788102 730229 788103 792118 792196 798050 792151 794787 798044 798055 798053 798040 798054 798054 798054	Spacer .625 .765 Spring Oil Fill Plug Oil Seal 3/4" Washer .377ID .058W Snubber Washer Snubber Spring .47ID Washer .437ID .078W Screw, 1/4-28 x .490 Nut, 3/8-24 Washer .625 ID .057W Sleeve Assembly Screw, 1/4-20 x 1" "O" Ring Sleeve Ass'y (Incl. 157) Sleeve Ass'y (Incl. 87) Sleeve Assembly (Incl. 87) Sleeve Assembly (Incl. 87) Sleeve Assembly (Incl. 87) Sleeve Assembly (Incl. 109) Liquid Gasket RTV Silicon Oil Seal 9/16"ID BOil Spec. (80W90) Grommet Relief Valve Hose Barb Tubing 1/2 x 5 Washer Nut 7/16-20 Differential (Gear Reduction Drive) Pulley & Hub Ass'y Disconnect Lever Mounting Plate Fan Control Lever Hydro Module LH Fender Con-
					trol





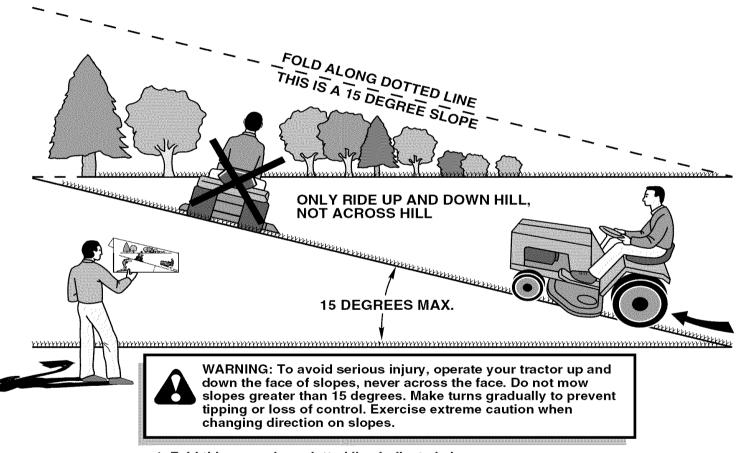


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.		DESCRIPTION
NO.  1 2 3 4 5 7 9 11 12 13 15 16 20 22 23 24 25 26 27 28 29 32 33 34 35 36 37 40 43 45 46 48 50 51 53 54 73 74 78 89	697174 399265 391086 697188 698147 699168 697109 697113 697110 690360 690946 697127 690947 692125 693557 222698 699052 699054 699051 697559 698469 697796 697126 697263 69252 695760 695761 691279	Cylinder Assembly Kit-Bushing/Seal (Magneto Side) Seal-Oil (Magneto Side) Sump-Engine Head-Cylinder Gasket-Cylinder Head Gasket-Breather Tube-Breather Gasket-Crankcase Screw (Cylinder Head) Plug-Oil Drain Crankshaft Seal-Oil (PTO Side) Screw (Crankcase Cover/Sump) Flywheel Key-Flywheel Piston Assembly (Standard) Piston Assembly (.020" Oversize) Ring Set (Standard) Ring Set (.020" Oversize) Lock-Piston Pin Pin-Piston Rod-Connecting (Standard) Rod-Connecting (Standard) Rod-Connecting (.020" Undersize) Screw (Connecting Rod) Valve-Exhaust Valve-Intake Spring-Valve (Exhaust) Guard-Flywheel Retainer-Valve Slinger-Governor/Oil Tappet-Valve Camshaft Short Block Manifold-Intake #+Gasket-Intake Stud (Carburetor) Screw (Intake Manifold) Screen-Rotating Screw (Flywheel Guard) Plug-Oil	NO.  108A 117 118 121 125 127 130 131 133 137 141 141A 142 146 186 187 187A 188 192 209 216 222 238 240 265 267 276 304 305 305A 306 307 309 311 333 334 337 358 363 383	892344 694352 697228 697241 698445 695005 691750 494379 494381 281165 495097 495931 697140 691639 692317 697098 698417 691693 691840 694042 691374 691843 298090 691024 695134 692255 699829 697102 697103 697103 697107 691003 693551 690323 497608 492341 691061 691043 697191 19203 89838	Ø	Valve-Choke (Choke A Matic) Jet-Main (Standard) Jet-Main (High Altitude) Kit-Carburetor Overhaul Carburetor Plug-Welch Valve-Throttle Kit-Throttle Shaft Float-Carburetor Gasket-Float Bowl Kit-Choke Shaft (Manual Choke) Kit-Choke Shaft (Choke A Matic) Nozzle-Carburetor Key-Timing Connector-Hose Line-Fuel Line-Fuel Screw (Control Bracket) Adjuster-Rocker Arm Link-Mechanical Governor Spring-Governor Link-Choke Bracket-Control Lever-Governor Control Spring-Governor Cap-Valve Filter-Fuel Clamp-Casing Screw (Casing Clamp) Washer-Sealing Housing-Blower Screw (Blower Housing) Screw (Blower Housing) Screw (Cylinder Shield) Motor-Starter Bolt (Starter Motor) Brush Set Armature-Magneto Screw (Magneto Armature) Plug-Spark Gasket Set-Engine Flywheel Puller Wrench-Spark Plug
93	690602 Ø	Bushing-Throttle Shaft	383 385	89838 694476		Screw (Fuel Pump)
94 95	498030 691636	Kit-Idle Mixture Screw (Throttle Valve)	385A	690297		Screw (Fuel Pump)
98	495800	Kit-Idle Speed				ngine Gasket Set, Key. No. 358
104	690525 Ø 231855 Ø	Pin-Float Hinge Valve-Float Needle	Ø		I in C	arburetor Overhaul Kit, Key. No.
105 106	691780 Ø	Seat-Inlet	‡		l in C	arburetor Gasket Set, Key. No.
108	690464	Valve-Choke (Manual Choke)	£	977 Included	Lin V	alve Gasket Set, Key. No. 1095
			+	meruaea	III V	aive Gaskei Sei, Ney. No. 1095

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

KEY NO.	PART NO.		DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
387	697090		Pump-Fuel	947	694393	Solenoid-Fuel
404	691691		Washer (Governor Crank)	965	499613	Cover-Oil Pump
431	697122		Elbow-Intake	967	697015	Filter-Pre Cleaner
445	697153		Filter-Air Cleaner Cartridge	968	699848	Cover-Air Cleaner
462	691261		Washer (Starter Cable)	975	495933	Bowl-Float
474	696459		Alternator	977	690192	Gasket Set-Carburetor
503	691532		Strap-Starter	987	691326 Ø	Seal-Throttle Shaft
505	691251		Nut (Governor Control Lever)	1005	697111	Fan-Flywheel
510	693699		Drive-Starter	1017	690770	Screen-Oil Pump
513	692024		Clutch-Drive	1019	697143	Kit-Label
523	697086		Dipstick	1022	272475 •+	Gasket-Rocker Cover
524	691032	0	Seal-Dipstick Tube	1023	692492	Cover-Rocker Arm
525	697085		Tube-Dipstick	1024	499054	Pump-Oil
544	692034		Starter-Armature	1026	692003	Rod-Push (Intake)
552	697144		Bushing-Governor Crank	W MC MC MA MA MA	692011	Rod-Push (Exhaust)
562	691119		Bolt (Governor Control Lever)	1027	696854	Filter-Oil
579	691029		Nut (Starter Cable)	1029	691751	Arm-Rocker
584	697112		Cover-Breather Passage	1034	690822	Guide-Push Rod
601	95162		Clamp-Hose	1035	693784	Shaft-Pump
614	691620		Pin-Cotter	1036	695700	Label-Emission
616	692012		Crank-Governor	1040	699852	Plate-Trim
617	692138	Ø.	Seal-O Ring (Intake Manifold)	1044	698139	Screw (Flywheel)
634	690801	Ø	Spring/Seal Assembly	1051	691265	Ring-Retaining
			(Manual Choke)	1058	275038	Owner's Manual
634A	690802	Ø	Spring/Seal Assembly	1059	698516	Kit-Screw/Washer
			(Choke A Matic)	1070	691058	Screw (Flywheel Fan)
635	691909		Boot-Spark Plug	1090	691293	Retainer-Brush
643	697155		Retainer-Air Filter	1091	691333	Cap-Limiter
654	690958		Nut (Carburetor)	1095	690190	Gasket Set-Valve
684	697157		Screw (Breather Passage Cover)	1119	691183	Screw (Alternator)
691	692407	Ф	Seal-Governor Shaft	1127	691657	Screw (Float Bowl)
697	690372		Screw (Drive Cap)	1263	697124	Reed-Breather
718	690959		Pin-Locating	1264 1265	697104 697125	Screw (Breather Reed)
729	691224		Clip-Wire	1265	691917 •Ø	Support-Blower Housing Seal-O Ring (Intake Elbow)
741	697128		Gear-Timing		697123 Ø	Seal-O Ring (Intake Elbow)
750 757	691033		Screw (Oil Pump Cover)	1267	697424	Latch-Blower Housing
757	697607		Link-Counterweight	1270	697156	Plug-AVS Counterweight
758 750	697134		Counterweight	1279	690960	Screw (Blower Housing Support)
759	697392		Pin-Counterweight	1329		6 Replacement Engine
783	693713		Gear-Pinion	1330	272147	Repair Manual
789 797	698329 693167		Harness-Wiring	1000	2,217,	110pan Mariaar
801	691283		Nut (Brush Retainer) Cap-Drive	•	Included in F	ingine Gasket Set, Key. No. 358
802	691286		Cap-End	Ø		Carburetor Overhaul Kit, Key. No.
803	693757		Housing-Starter	~	121	and the first of the state of t
830	691095		Stud (Rocker Arm)	‡		Carburetor Gasket Set, Key. No.
842	691031	•	Seal-O Ring (Dipstick Tube)	*	977	
847	697087		Dipstick/Tube Assembly	+		alve Gasket Set, Key. No. 1095
851	692424		Terminal-Spark Plug			
868	690968	•+	Seal-Valve	NOTE:	All compone	nt dimensions given in U.S. inches
914	690960		Screw (Rocker Cover)		1 inch = 25.4	
918	697091		Line-Vacuum			
943	690589	ф	Seal-O Ring (Oil Pump Cover)			
-			J ()			

#### SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



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

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