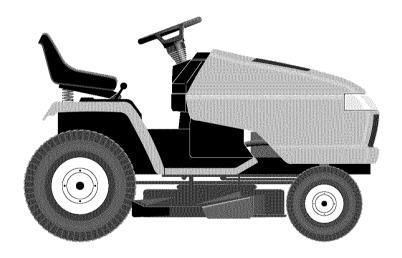
## Owner's Manual

# **CRAFTZMAN®**

# **GARDEN TRACTOR**

25.0 HP, 50"Mower Electric Start Automatic Transmission

Model No. **917.276041** 





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

## **IMPORTANT:**

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

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

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

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## WARRANTY

#### LIMITED WARRANTY ON CRAFTSMAN RIDING EQUIPMENT

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

This Warranty does not cover:

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

#### LIMITED WARRANTY ON BATTERY

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

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

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

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

## SAFETYRULES

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

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

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

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

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

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

#### I. GENERAL OPERATION

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

- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Turn off blades when not mowing.
- Stop engine before removing grass catcher or unclogging chute.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.
- Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.
- Keep machine free of grass, leaves or other debris build-up which can touch hot exhaust / engine parts and burn. Do not allow the mower deck to plow leaves or other debris which can cause buildup to occur. Clean any oil or fuel spillage before operating or storing the machine. Allow machine to cool before storage.

#### II. SLOPE OPERATION

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

## SAFETY BULES

#### DO:

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

#### DO NOT:

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

#### III. CHILDREN

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

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

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

#### IV. SERVICE

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

## SAFETYRULES











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

- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.
- If machine stops while going uphill, disengage blades, shift into reverse and back down slowly.
- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.

#### PRODUCT SPECIFICATIONS

Gasoline	5 Gallons			
Capacity	Unleaded			
and Type:	Regular			
Oil Type	SAE 10W30	)		
	(above 32°F	=)		
(API-SF-SJ):	SAE 5W-30			
	(below 32°F)			
Oil Capacity:	W/ Filter:	4.0 Pints		
. ,	W/O Filter:	3.5 Pints		
Spark Plug:	Champion RC12YC			
(Ġap: .030")	•			
Ground Speed (M	PH):			
	Forward:	5.8		
	Reverse:	2.1		
Tire Pressure:	Front:	14 PSI		
	Rear:	10 PSI		
Charging				
System:	15 Amps @	3600 RPM		
Battery:	Amp/Hr:	35		
	Min. CCA:			
	Case size:	U1R		
Blade Bolt Torque:	27-35 Ft. LI	bs.		

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

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

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

#### **CUSTOMER RESPONSIBILITIES**

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

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

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

# REPAIR PROTECTION AGREEMENTS

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

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

Here's what's included in the Agreement:

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

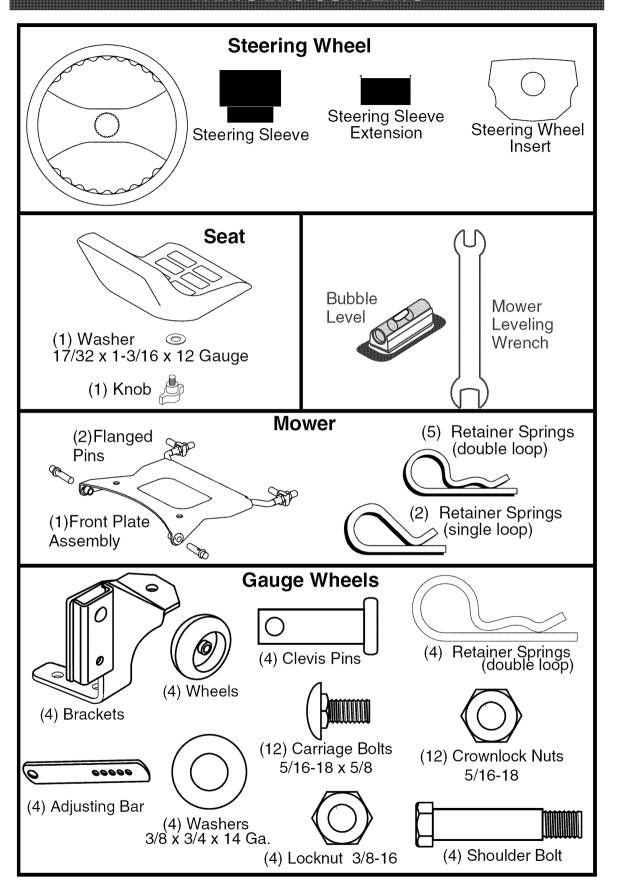
Once you purchase the Agreement, a simple phone call is all that it takes for you to schedule service. You can call anytime day or night, or schedule a service appointment online.

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

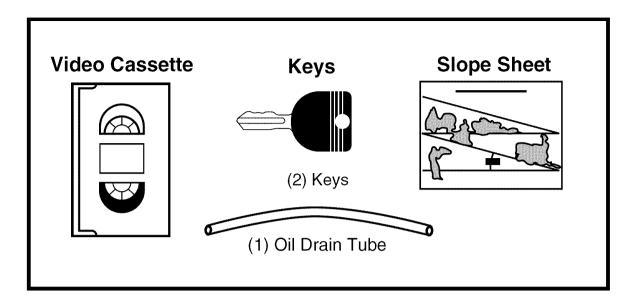
#### **SEARS INSTALLATION SERVICE**

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

## **PARTS BAG CONTENTS**



## PARTS BAG CONTENTS



## **ASSEMBLY/PRE-OPERATION**

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

# TOOLS REQUIRED FOR ASSEMBLY

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

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

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

# TO REMOVE TRACTOR FROM CARTON

#### **UNPACK CARTON**

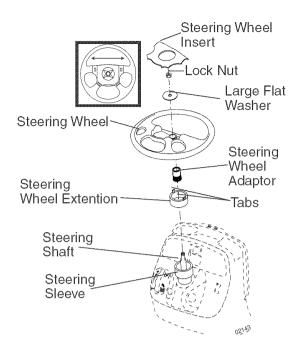
- 1. Remove all accessible loose parts and parts boxes from carton.
- 2. Cut along dotted lines on all four panels of carton. Remove end panels and lay side panels flat.
- 3. Remove mower and packing materials.
- 4. Check for any additional loose parts or cartons and remove.

# BEFORE REMOVING TRACTOR FROM SKID

#### ATTACH STEERING WHEEL

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

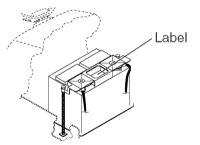
**IMPORTANT:** Check for and remove any staples in skid that may puncture tires where tractor is to roll off skid.



#### **CHECK BATTERY**

1. Lift hood to raised position.

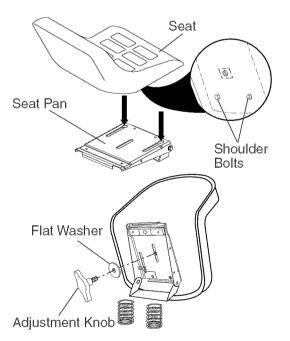
**NOTE:** If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps. (See "BATTERY" in Maintenance section of this manual for charging instructions).



#### **INSTALL SEAT**

Adjust seat before tightening adjustment knob.

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



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

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

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

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

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

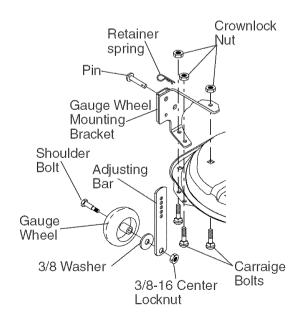
- 1. Be sure all the above assembly steps have been completed.
- 2. Check engine oil level and fill fuel tank with gasoline.
- Place freewheel control in "transmission engaged" position (see "TO TRANSPORT" in Operation section of this manual).
- Sit on seat in operating position, depress brake pedal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

# ASSEMBLE GAUGE WHEELS AND BRACKETS TO MOWER DECK

The gauge wheels are designed to keep the mower deck in proper position when operating mower. Be sure they are properly adjusted to ensure optimum mower performance.

- 1. Attach front gauge wheel brackets marked front left (FL), front right (FR) to mower deck using (3) carriage bolts and (3) locknuts. For ease of installation do not tighten locknuts until all carriage bolts have been installed.
- 2. Attach rear gauge wheel brackets marked rear left (R L), rear right (RR) to mower deck using (3) carriage bolts and (3) locknuts. For ease of installation do not tighten locknuts until all carriage bolts have been installed.
- Slide gauge wheel bar down into bracket channel, Be sure that gauge wheel bar aligning holes are on top. Assemble gauge wheels as shown using shoulder bolts, 3/8 washers and 3/8-16 center locknuts and tighten securely.
- For ease of mower to tractor assembly, raise gauge wheels to highest position and retain with clevis pins and spring retainers.

**NOTE:** Adjust gauge wheels before operating mower. See "TO ADJUST GAUGE WHEELS" in the Operation section of this manual.



# INSTALL MOWER AND DRIVE BELT

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

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

- Cut and remove ties securing anti-sway bar and belts. Swing anti-sway bar to left side of mower deck.
- 2. Slide mower under tractor with deflector shield to right side of tractor.

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

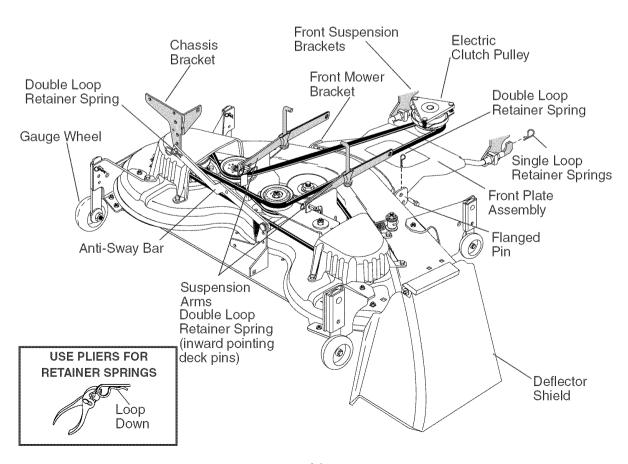
- 3. If equipped, turn height adjustment knob counterclockwise until it stops.
- 4. Lower mower linkage with attachment lift control.
- 5. Install belt into electric clutch pulley groove.
- 6. Place the suspension arms on inward pointing deck pins. Retain with double loop retainer spring with loops up as shown.
- 7. Install front plate assembly to tractor suspension brackets and retain with single loop retainer springs as shown.

8. Position front plate assembly between front mower brackets. Raise deck and plate assembly to align holes and insert flanged pins. Secure pins with double loop retainer springs between the plate and mower brackets.

**NOTE:** To assist in locating hole in flanged pin, the hole in pin is inline with notch on head of pin. If necessary, move mower side-to-side to give space between plate and mower brackets.

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

- 9. Connect anti-sway bar to chassis bracket under left footrest and retain with double loop retainer spring.
- 10. If equipped, turn height adjustment knob clockwise to remove slack from mower suspension.
- 11. Raise deck to highest position.
- 12. Assemble gauge wheels as shown using long shoulder bolts, 3/8 washers, and 3/8-16 center locknuts. Tighten securely.
- 13. Adjust gauge wheels before operating mower as shown in the Operation section of this manual.



#### CHECK TIRE PRESSURE

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

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

#### **CHECK MOWER LEVELNESS**

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

# CHECK FOR PROPER POSITION OF ALL BELTS

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

#### **✓ CHECKLIST**

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

Please review the following checklist:

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

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

- ✓ Engine oil is at proper level.
- ✓ Fuel tank is filled with fresh, clean, regular unleaded gasoline.
- ✓ Become familiar with all controls, their location and function. Operate them before you start the engine.
- ✓ Be sure brake system is in safe operating condition.
- ✓ 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.





HIGH































**OIL PRESSURE** 









LOCKED





**OVER TEMP** 

LIGHT













MOWER LIFT





DANGER, KEEP HANDS AND FEET AWAY

KEEP AREA CLEAR

SLOPE HAZARDS (SEE SAFETY RULES SECTION)



FREE WHEEL (Automatic Models only)



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



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



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



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

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



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

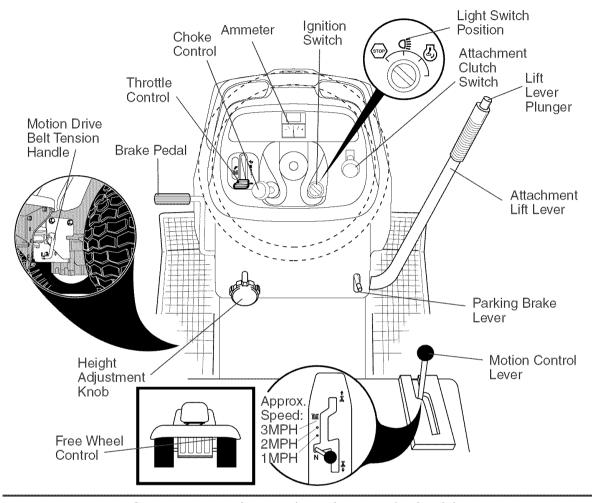


FIRE indicates a hazard which, if not avoided, could result in death, serious injury and/or property damage.

#### **KNOW YOUR TRACTOR**

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

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



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

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

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

**THROTTLE CONTROL** - Used to control engine speed.

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

**CHOKE CONTROL** - Used when starting a cold engine.

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

**IGNITION SWITCH** - Used for starting and stopping the engine.

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

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

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

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

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

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

MOTION DRIVE BELT TENSION HAN-DLE - Used when changing motion drive belt and, if necessary, starting engine under extremely cold conditions.

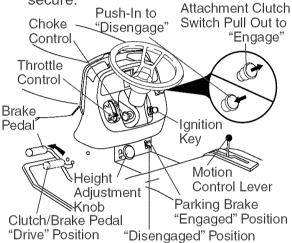


The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend standard safety glasses or a wide vision safety mask worn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

## HOW TO USE YOUR TRACTOR TO SET PARKING BRAKE

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

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



#### **STOPPING**

#### **MOWER BLADES -**

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

#### **GROUND DRIVE -**

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

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

#### FNGINF -

 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
- 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
- Full throttle offers the best mower performance.

#### TO USE CHOKE CONTROL

Use choke control whenever you are starting a cold engine. Do not use to start a warm engine.

 To engage choke control, pull knob out. Slowly push knob in to disengage.

#### TO MOVE FORWARD AND BACKWARD

**CAUTION:** Do not attempt to operate motion control lever when the parking brake is set or when the brake pedal is depressed. Doing so may result in misadjustment to the drive control system.

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

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

#### TO ADJUST MOWER CUTTING HEIGHT

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

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

The cutting height range is approximately 1-1/2" to 4-1/2". The heights are measured from the ground to the blade tip with the engine not running.

These heights are approximate and may vary depending upon soil conditions, height of grass and types of grass being mowed.

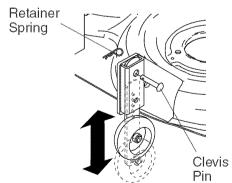
- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first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

#### TO ADJUST GAUGE WHEELS

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

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

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



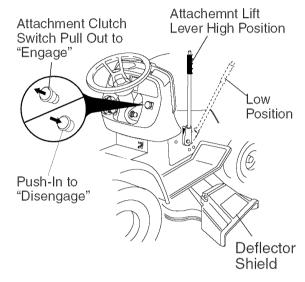
#### TO OPERATE MOWER

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

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

TO STOP MOWER BLADES - disengage attachment clutch control.

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



#### 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 guide provided at the back of this manual.

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

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

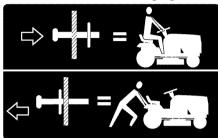
- To restart movement, slowly release parking brake and brake pedal.
- Slowly move motion control lever to slowest setting.
- Make all turns slowly.

#### **TO TRANSPORT**

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

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

#### **Transmission Engaged**



Transmission Disengaged

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

#### TOWING CARTS AND OTHER ATTACH-MENTS

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

# BEFORE STARTING THE ENGINE CHECK ENGINE OIL LEVEL

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

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

#### ADD GASOLINE

Fill fuel tank to bottom of 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.

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

**IMPORTANT:** When operating in temperatures below 32°F(0°C), use fresh, clean winter grade gasoline to help insure good cold weather starting.

**CAUTION**: Alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information.

Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

#### TO START ENGINE

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

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

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

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

a few minutes and try again. If engine still does not start, pull the choke control out and retry.

WARM WEATHER STARTING (50° F and above)

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

COLD WEATHER STARTING (50° F and below)

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

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

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

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

- 1. Be sure the tractor is on level ground.
- 2. Place the motion control lever in neutral. Release the parking brake and let the brake slowly return to operating position.
- 3. Allow one minute for transmission to warm up. This can be done during the engine warm up period.

 The attachments can be used during the engine warm-up period after the transmission has been warmed up and may require the choke control be pulled out slightly.

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

#### **PURGETRANSMISSION**

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

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

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

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

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

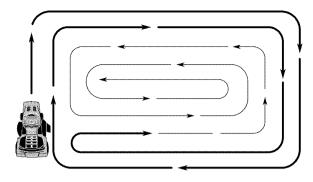
- 5. Move motion control lever to neutral (N) position. Shutoff engine and set parking brake.
- Engage transmission by placing freewheel control in engaged position (See "TO TRANSPORT" in this section of manual).
- 7. Sitting in the tractor seat, start engine. After the engine is running, move throttle control to half (1/2) speed. Disengage parking brake.

8. Slowly move motion control lever forward, after the tractor moves approximately five (5) feet, slowly move motion control lever to reverse position. After the tractor moves approximately five (5) feet return the motion control lever to the neutral (N) position. Repeat this procedure with the motion control lever three (3) times.

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

#### **MOWING TIPS**

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



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

## MAINTENANCE

AS	MAINTENANCE SCHEDUL LL IN DATES YOU COMPLETE GULAR SERVICE	E /	EFORE	ENCH U	HOUR	SHOUP SHOUP VERY S	JERY V	O HOU	AS ON EASON EFORES	TORAGE SERVIC	DE DATES
	Check Brake Operation	V	1		ĺ			***************************************	ĺ		
	Check Tire Pressure	V	<b>V</b>								
Т	Check Operator Presence and Interlock Systems	V						***************************************			
R	Check for Loose Fasteners	1				<b>1</b> /5		1			
AC	Sharpen/Replace Mower Blades			<b>√</b> 3							
١¥	Lubrication Chart			<b>/</b>				1			
ö	Check Battery Level			<b>1</b> /4							
R	Clean Battery and Terminals			/				1			
	Check Transaxle Cooling			1							
	Check V-Belts					/					
	Check Engine Oil Level	V	1					***************************************			
	Change Engine Oil (with oil filter)				<b>1</b> ,2	2		1			
E	Change Engine Oil (without oil filter)			<b>✓</b> 1,2				<b>'</b>			
N	Clean Air Filter			<b>✓</b> 2				***************************************			
Ģ	Clean Air Screen			<b>√</b> 2							
Ι'n	Inspect Muffler/Spark Arrester				1						
ΙË	Replace Oil Filter (If equipped)					1.2		***************************************			
_	Clean Engine Cooling Fins					<b>✓</b> 2					
	Replace Spark Plug					1	1				
	Replace Air Filter Paper Cartridge					1/2					
	Replace Fuel Filter						1				

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

#### **GENERAL RECOMMENDATIONS**

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

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

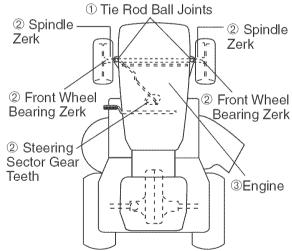
All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

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

#### **BEFORE EACH USE**

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

#### **LUBRICATION CHART**



- ① Spray Silicone Lubriant (Move Boots to Lubricate)
- 2 General Purpose Grease
- 3 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 six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

#### TIRES

- Maintain proper air pressure in all tires (See "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**

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

- The engine should not start unless the brake pedal is fully depressed and attachment clutch control is in the disengaged position.
- When the engine is running, any attempt by the operator to leave the seat without first setting the parking brake should shut off the engine.
- When the engine is running and the attachment clutch is engaged, any attempt by the operator to leave the seat should shut off the engine.
- The attachment clutch should never operate unless the operator is in the seat.

#### **BLADE CARE**

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

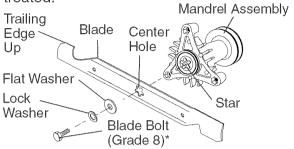
#### **BLADE REMOVAL**

- 1. Raise mower to highest position to allow access to blades.
- 2. Remove blade bolt, lock washer and flat washer securing blade.
- 3. Install new or resharpened blade with trailing edge up towards deck as shown.

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

- 4. Reassemble blade bolt, lock washer and flat washer in exact order as shown.
- 5. Tighten blade bolt securely (27-35 Ft. Lbs. torque).

**IMPORTANT:** Blade bolt is grade 8 heat treated.



\*A Grade 8 heat treated bolt can be identified by six lines on the bolt head.

#### TO SHARPEN BLADE

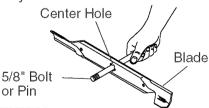
**NOTE:** We do not recommend sharpening blade, but if you do, be sure the blade is balanced.

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.

P1. Recharge at 6-10 amperes for 1 hour.

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

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

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

#### TRANSAXLE COOLING

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

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

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

#### TRANSAXLE PUMP FLUID

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

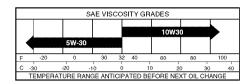
#### **V-BELTS**

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

## **ENGINE**

#### LUBRICATION

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

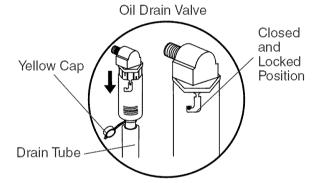


Change the oil after every 50 hours of operation or at least once a year if the tractor is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each eight (8) hours of operation.

#### TO CHANGE ENGINE OIL

Determine temperature range expected before oil change. All oil must meet API service classification SF-SJ.

- 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.



- 3. Unlock drain valve by pushing upward slightly and turning counterclockwise.
- 4. To open, pull down on the drain valve.
- After oil has drained completely, close and lock the drain valve by pushing upward and turning clockwise until the pin is in the locked position as shown.
- 6. Remove the drain tube and replace the cap onto the end of the drain valve.
- Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PROD-UCT SPECIFICATIONS" section of this manual.
- 8. Use gauge on oil fill cap/dipstick for checking level. Insert dipstick into the tube and rest the oil fill cap on the tube. Do not thread the cap onto the tube when taking reading. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.

#### **ENGINE OIL FILTER**

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

#### AIR FILTER

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

Service air cleaner more often under dusty conditions.

1. Loosen knob and remove cover.

#### TO SERVICE PRE-CLEANER

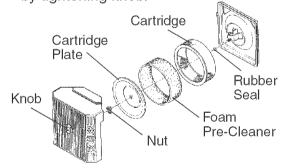
- 2. Slide foam pre-cleaner off cartridge.
- 3. Wash it in liquid detergent and water.
- 4. Squeeze it dry in a clean cloth. Allow it to dry.
- 5. Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.

#### TO SERVICE CARTRIDGE

 Replace a dirty, bent, or damaged cartridge.

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

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



#### **CLEAN AIR SCREEN**

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

#### **CLEAN AIR INTAKE/COOLING AREAS**

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

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

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

#### MUFFLER

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

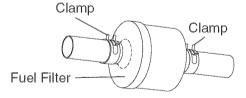
#### SPARK PLUG(S)

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

#### IN-LINE FUEL FILTER

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

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



#### **CLEANING**

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

We do not recommend using a garden hose or pressure washer to clean your tractor unless the engine and transmission are covered to keep water out. Water in engine or transmission will shorten the useful life of your tractor. Use compressed air or a leaf blower to remove grass, leaves and trash from tractor and mower.

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## **SERVICE AND ADJUSTMENTS**



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

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

#### TRACTOR

#### TO REMOVE MOWER

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

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

#### TO INSTALL MOWER

Follow procedure described in "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual.

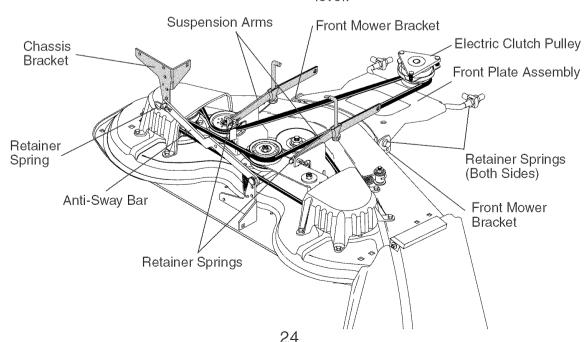
#### TO LEVEL MOWER HOUSING

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

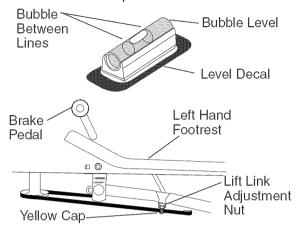
# SIDE-TO-SIDE ADJUSTMENT WITH BUBBI F I EVFI

**NOTE:** If necessary, check side-to-side surface below tractor for levelness with a long board and the bubble level.

- Using the lift lever, place mower in position where no part of the mower, including gauge wheels, is touching the ground.
- From left side of tractor, find the level decal on top of mower and place bubble level on decal as indicated.
- Mower is level side-to-side when bubble is between the two lines in the bubble level.



- If adjustment is necessary, under left hand footrest, turn lift link adjustment nut (above yellow cap) in appropriate direction to bring bubble between the lines in the bubble level.
- Remove bubble level from mower and store in a safe place.

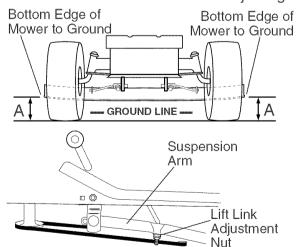


# ALTERNATE SIDE-TO-SIDE ADJUSTMENT METHOD

- Raise mower to its highest position.
- Measure height from bottom edge of mower to ground level at front corners of mower. Distance "A" on both sides of mower should be the same.
- If adjustment is necessary, make adjustment on one side of mower only.
- To raise one side of mower, tighten lift link adjustment nut on that side.
- To lower one side of mower, loosen lift link adjustment nut on that side.

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

Recheck measurements after adjusting.



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

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

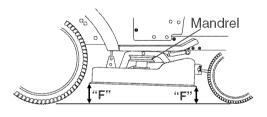
Check adjustment on right side of tractor.

Measure distance "F" directly in front of and behind the mandrel at bottom edge of mower housing as shown.

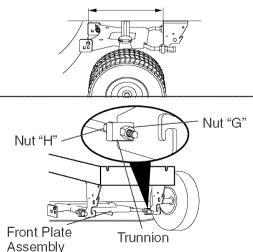
- Before making any necessary adjustments, check that both front plate links are equal in length.
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower housing, loosen nut "G" on both front links an equal number of turns.
- When distance "F" is 1/8"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

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

· Recheck side-to-side adjustment.



## BOTH FRONT PLATE LINKS MUST BE EQUAL IN LENGTH



#### TO REPLACE MOWER DRIVE BELT

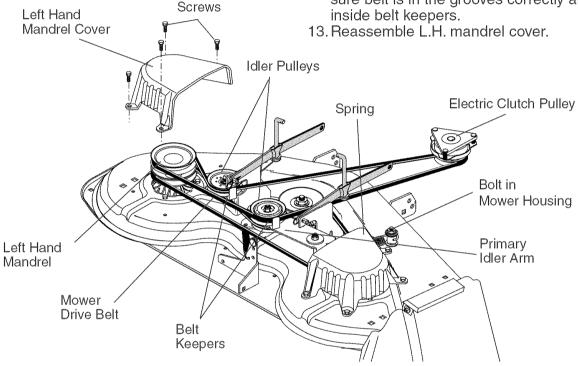
#### MOWER DRIVE BELT REMOVAL

- 1. Park tractor on a level surface. Engage parking brake.
- 2. Remove screws from L.H. mandrel cover and remove cover.
- 3. Roll belt over the top of L.H. mandrel pulley.
- Remove belt from electric clutch pulley.
- 5. Remove belt from idler pulleys.
- 6. Remove any dirt or grass clippings which may have accumulated around mandrels and entire upper deck surface.

- 7. Check primary idler arm and two idlers to see that they rotate freely.
- 8. Be sure spring is securely hooked to primary idler arm and bolt in mower housing.

#### MOWER DRIVE BELT INSTALLATION

- 9. Install belt in both idlers. Make sure belt is in both belt keepers at the idlers as shown.
- 10. Install new belt onto electric clutch pulley.
- 11. Roll belt into upper groove of L.H. mandrel pulley.
- 12. Carefully check belt routing making sure belt is in the grooves correctly and inside belt keepers.



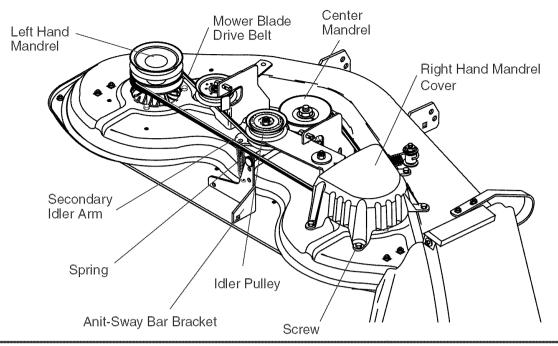
# TO REPLACE MOWER BLADE DRIVE BELT

Park the tractor on level surface. Engage parking brake.

- Remove mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).
- Remove mower (See "TO REMOVE MOWER" in this section of this manual).
- 3. Remove screws from R.H. mandrel cover and remove cover. Unhook spring from bolt on mower housing.
- 4. Carefully roll belt off R.H. mandrel pulley.
- Remove belt from center mandrel pulley, idler pulley, and L.H. mandrel pulley.
- 6. Remove any dirt or grass which may have accumulated around mandrels and entire upper deck surface.

- 7. Check secondary idler arm and idler to see that they rotate freely.
- 8. Be sure spring is hooked in secondary idler arm and sway-bar bracket.
- 9. Install new belt in lower groove of L.H. mandrel pulley, idler pulley, and center mandrel pulley as shown.
- 10. Roll belt over R.H. mandrel pulley.

  Make sure belt is in all grooves properly.
- Reconnect spring to bolt in mower housing and reinstall R.H. mandrel cover.
- 12. Reinstall mower to tractor (See "IN-STALL MOWER AND DRIVE BELT" in the Assembly section of this manual).
- 13. Reassemble mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).

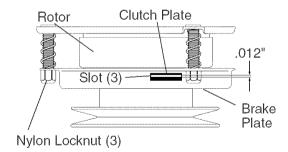


#### TO ADJUST ATTACHMENT CLUTCH

The electric clutch should provide years of service. The clutch has a built-in brake that stops the pulley within 5 seconds. Eventually, the internal brake will wear which may cause the mower blades to not engage, or, to not stop as required. Adjustments should be made by your nearest authorized service center/department.

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

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



#### TO CHECK AND ADJUST BRAKE

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

#### TO CHECK BRAKE

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

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

#### TO ADJUST BRAKE

Contact a Sears or other qualified service center.

#### TO REPLACE MOTION DRIVE BELT

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

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

#### **BELT REMOVAL -**

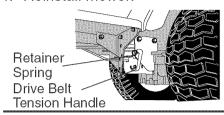
- 2. Create slack in belt by removing retainer spring from drive belt tension handle.
- 3. Remove belt from all idler pulleys, transaxle pulley and then from engine pulley.

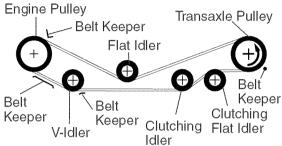
#### **BELT INSTALLATION -**

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1. Install new belt around engine pulley first, then around transaxle pulley and lastly into all the idler pulleys.

- Check to be sure belt is positioned correctly and is on proper side of all belt keepers.
- 3. Engage the drive belt tension handle and replace the retainer spring.
- 4. Reinstall mower.

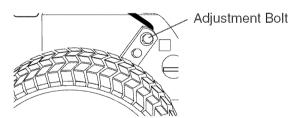




#### TRANSAXLE MOTION CONTROL LE-VER NEUTRAL ADJUSTMENT

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

- 1. Park Tractor on level surface. Stop tractor by turning ignition key to "OFF" position and engage parking brake.
- 2. Loosen the adjustment bolt in front of the right rear wheel.
- 3. Move motion control lever to the neutral position.
- 4. Tighten the adjustment bolt.



#### 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

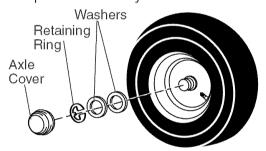
#### FRONT WHEEL -

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

#### **REAR WHEEL -**

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

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



### TO START ENGINE WITH A WEAK BAT-TERY

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

If your battery is too weak to start the engine, it should be recharged. (See "BATTERY" in the MAINTENANCE section of this manual).

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

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

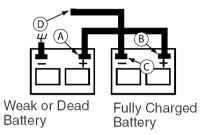
#### TO ATTACH JUMPER CABLES -

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

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

# TO REMOVE CABLES, REVERSE ORDER -

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

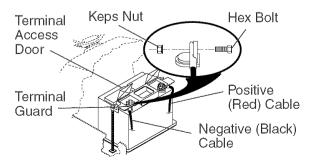


## REPLACING BATTERY

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

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

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



#### TO REPLACE HEADLIGHT BULB

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

#### **INTERLOCKS AND RELAYS**

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

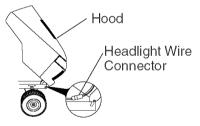
 Check wiring. See electrical wiring diagram in the Repair Parts section.

#### TO REPLACE FUSE

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

# TO REMOVE HOOD AND GRILL ASSEMBLY

- 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.



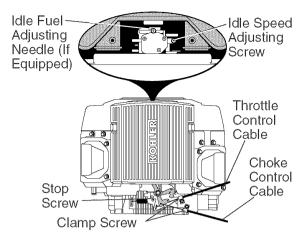
#### **ENGINE**

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:

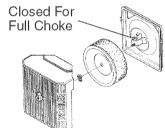
- 1. With engine not running, move throttle control lever to fast position.
- Check that speed control lever is against stop screw. If it is not, loosen casing clamp screw and pull throttle cable until lever is against screw. Tighten clamp screw securely.



#### TO ADJUST CHOKE CONTROL

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

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



#### TO ADJUST CARBURETOR

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

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

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

#### PRELIMINARY SETTING -

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

#### FINAL SETTING -

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

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

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

#### **ACCELERATION TEST -**

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

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

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

## STORAGE

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

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

#### **TRACTOR**

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

- 1. Clean entire tractor (See "CLEANING" in the Maintenance section of this manual).
- 2. Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- 3. Lubricate as shown in the Maintenance section of this manual.
- 4. Be sure that all nuts, bolts and screws are securely fastened. Inspect moving parts for damage, breakage and wear. Replace if necessary.
- 5. Touch up all rusted or chipped paint surfaces; sand lightly before painting.

#### BATTERY

- Fully charge the battery for storage.
- After a period of time in storage, battery may require recharging.
- To help prevent corrosion and power leakage during long periods of storage, battery cables should be disconnected and battery cleaned thoroughly (see "TO CLEAN BATTERY AND TERMINALS" in the Maintenance section of this manual).
- After cleaning, leave cables disconnected and place cables where they cannot come in contact with battery terminals.
- If battery is removed from tractor for storage, do not store battery directly on concrete or damp surfaces.

#### **ENGINE**

#### **FUEL SYSTEM**

**IMPORTANT**: It is important to prevent gum deposits from forming in essential fuel system parts such as carburetor, fuel hose, or tank during storage. Also, alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

- 1. Drain the fuel tank.
- 2. Start the engine and let it run until the fuel lines and carburetor are empty.
- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

**NOTE:** Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow the mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not drain the gas tank and carburetor if using fuel stabilizer.

#### **ENGINE OIL**

Drain oil (with engine warm) and replace with clean engine oil. (See "ENGINE" in the Maintenance section of this manual).

#### CYLINDER(S)

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

#### OTHER

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

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

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

PROBLEM	CAUSE	CORRECTION
Will not start	<ol> <li>Out of fuel.</li> <li>Engine not "CHOKED" properly.</li> <li>Engine flooded.</li> <li>Bad spark plug.</li> <li>Dirty air filter.</li> <li>Dirty fuel filter.</li> <li>Water in fuel.</li> </ol>	<ol> <li>Fill fuel tank.</li> <li>See "TO START ENGINE" in Operation section.</li> <li>Wait several minutes before attempting to start.</li> <li>Replace spark plug.</li> <li>Clean/replace air filter.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>Check all wiring.</li> </ol>
	<ul><li>8. Loose or damaged wiring.</li><li>9. Carburetor out of adjustment.</li><li>10. Engine valves out of adjustment.</li><li>11. Extreme Cold Conditions</li></ul>	
Hard to start	<ol> <li>Dirty air filter.</li> <li>Bad spark plug.</li> <li>Weak or dead battery.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>Engine valves out of adjustment.</li> </ol>	<ol> <li>Clean/replace air filter.</li> <li>Replace spark plug.</li> <li>Recharge or replace battery.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and refill with fresh gasoline.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service and Adjustments section.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Engine will not turn over	<ol> <li>Brake pedal not depressed</li> <li>Attachment clutch is engaged.</li> <li>Weak or dead battery.</li> <li>Blown fuse.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty ignition switch.</li> <li>Faulty solenoid or starter.</li> <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>

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

PROBLEM	CAUSE	CORRECTION
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> <li>Faulty spark plug.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Water in fuel.</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>Set in "Higher Cut" position/reduce speed.</li> <li>Adjust throttle control.</li> <li>Clean underside of mower housing.</li> <li>Clean/replace air filter.</li> <li>Check oil level/change oil.</li> <li>Clean and regap or change spark plug.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and refill with fresh gasoline.</li> <li>Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter.</li> <li>Connect and tighten spark plug wire.</li> <li>Clean engine air screen/fins.</li> <li>Clean freplace 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  Engine continues to run when operator leaves seat with	<ol> <li>Worn, bent or loose blade.</li> <li>Bent blade mandrel.</li> <li>Loose/damaged part(s).</li> <li>Faulty operator-safety presence control system.</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> <li>Check wiring, switches and connections. If not corrected contact a Sears or other qualified service center.</li> </ol>
attachment clutch engaged  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>

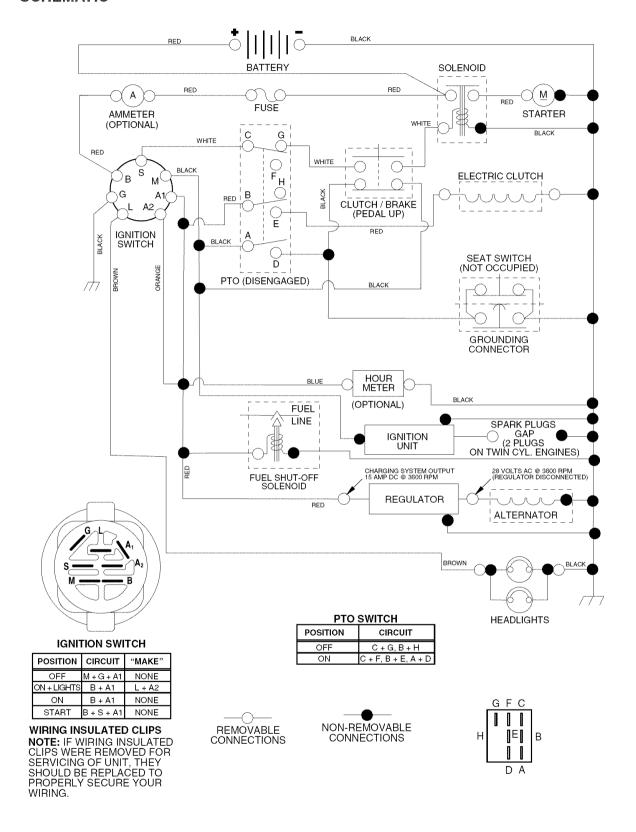
## TROUBLESHOOTING CHART:

See appropriate section in manual unless directed to Sears service center

PROBLEM	CAUSE	CORRECTION
Mower blades will not rotate	<ol> <li>Obstruction in clutch mechanism.</li> <li>Worn/damaged mower drive belt.</li> <li>Frozen idler pulley.</li> <li>Frozen blade mandrel.</li> </ol>	<ol> <li>Remove obstruction.</li> <li>Replace mower drive belt.</li> <li>Replace idler pulley.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Poor grass discharge	<ol> <li>Engine speed too slow.</li> <li>Travel speed too fast.</li> <li>Wet grass.</li> <li>Mower deck not level.</li> <li>Low/uneven tire air pressure.</li> <li>Worn, bent or loose blade.</li> <li>Buildup of grass, leaves and trash under mower.</li> <li>Mower drive belt worn.</li> <li>Blades improperly installed.</li> <li>Improper blades used.</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	<ol> <li>Place throttle control in "FAST" position.</li> <li>Shift to slower speed.</li> <li>Allow grass to dry before mowing.</li> <li>Level mower deck.</li> <li>Check tires for proper air pressure.</li> <li>Replace/sharpen blade.         Tighten blade bolt.</li> <li>Clean underside of mower housing.</li> <li>Replace mower drive belt.</li> <li>Reinstall blades sharp edge down.</li> <li>Replace with blades listed in this manual.</li> <li>Clean around mandrels to open vent holes.</li> </ol>
Headlight(s) not working (if so equipped)	<ol> <li>Switch is "OFF".</li> <li>Bulb(s) or lamp(s) burned out.</li> <li>Faulty light switch.</li> <li>Loose or damaged wiring.</li> <li>Blown fuse.</li> </ol>	<ol> <li>Turn switch "ON".</li> <li>Replace bulb(s) or lamp(s).</li> <li>Check/replace light switch.</li> <li>Check wiring and connections.</li> <li>Replace fuse.</li> </ol>
Battery will not charge	<ol> <li>Bad battery cell(s).</li> <li>Poor cable connections.</li> <li>Faulty regulator         (if so equipped).</li> <li>Faulty alternator.</li> </ol>	<ol> <li>Replace battery.</li> <li>Check/clean all connections.</li> <li>Replace regulator.</li> <li>Replace alternator.</li> </ol>
Loss of drive	<ol> <li>Freewheel control in "disengaged" position.</li> <li>Motion drive belt worn, damaged, or broken.</li> <li>Air trapped in transmission during shipment or servicing.</li> </ol>	<ol> <li>Place freewheel control in "engaged" position.</li> <li>Replace motion drive belt.</li> <li>Purge transmission.</li> </ol>
Engine "backfires" when turning engine "OFF"	Engine throttle control not set at "SLOW"     position for 30 seconds before stopping engine.	Move throttle control to     "SLOW" position and allow     to idle for 30 seconds before     stopping engine.

#### TRACTOR -- MODEL NUMBER 917.276041

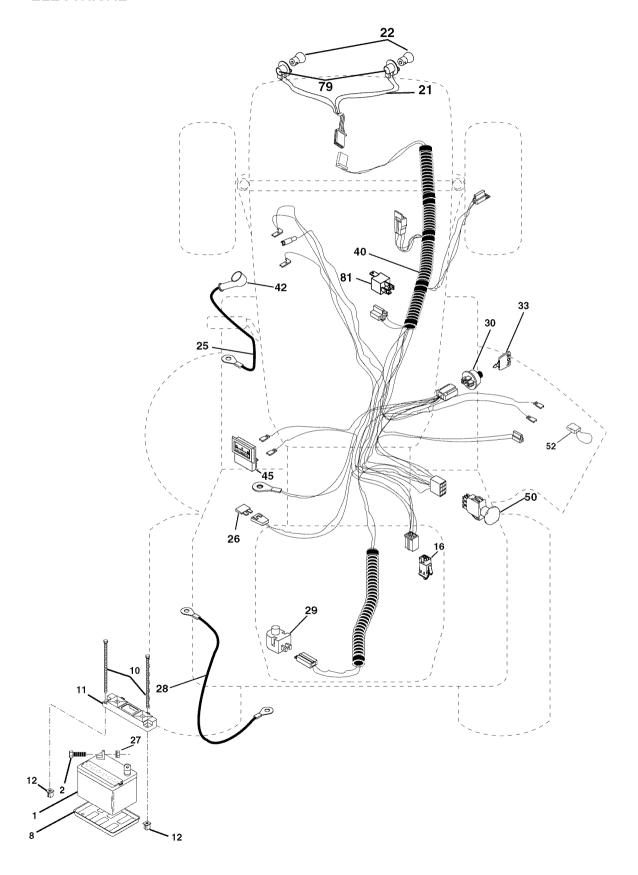
#### **SCHEMATIC**



## REPAIR PARTS

## **TRACTOR -- MODEL NUMBER 917.276041**

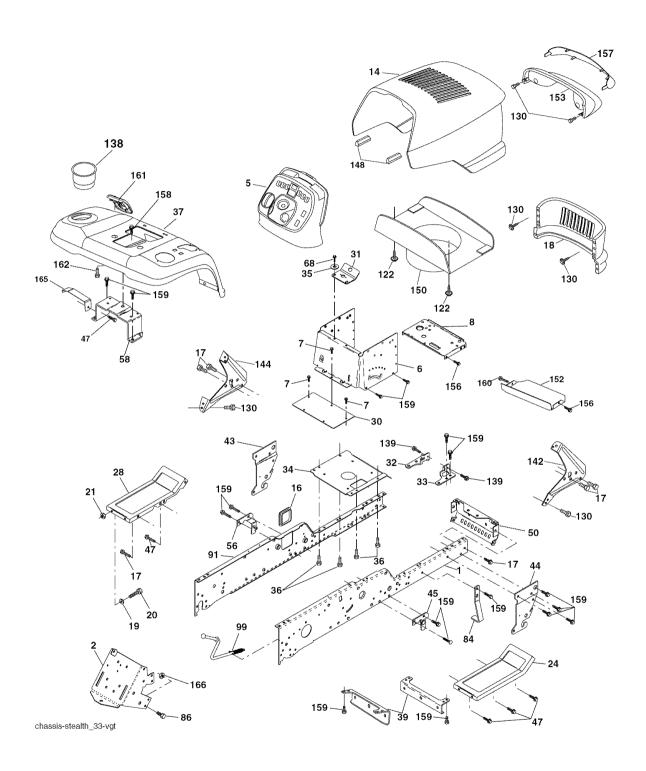
## ELECTRICAL



### ELECTRICAL

KEY	PART	
NO.	NO.	DESCRIPTION
1	144927	Battery
2	74760412	Bolt Hex Head 1/4-20 x 3/4
8	7603J	Tray, Battery
10	145211	Bolt 1/4-20 x 7.5 Zinc
11	150109	Hold down Battery Dash Mount
12	145769	Nut Push Nylon 1/4"
16	176138	Switch Interlock Push-In
	175688	Harness Socket Light W/4152J
22	4152J	Bulb Light
25	185456	Cable, Battery
26	108824X	Fuse
	73510400	Nut Keps Hex 1/4-20 Unc
28	170697	Cable, Ground
	121305X	Switch, Plunger
	175566	Switch, Ign
	140403	Key, Ignition
	188032	Harness Ign.
	154336	Cover, Terminal
	122822X	Ammeter
	174652	Switch, PTO
	141940	Hourmeter Adaptor
	175242	Bulbholder Asm Incandescent SV
81	109748X	Relay Asm.

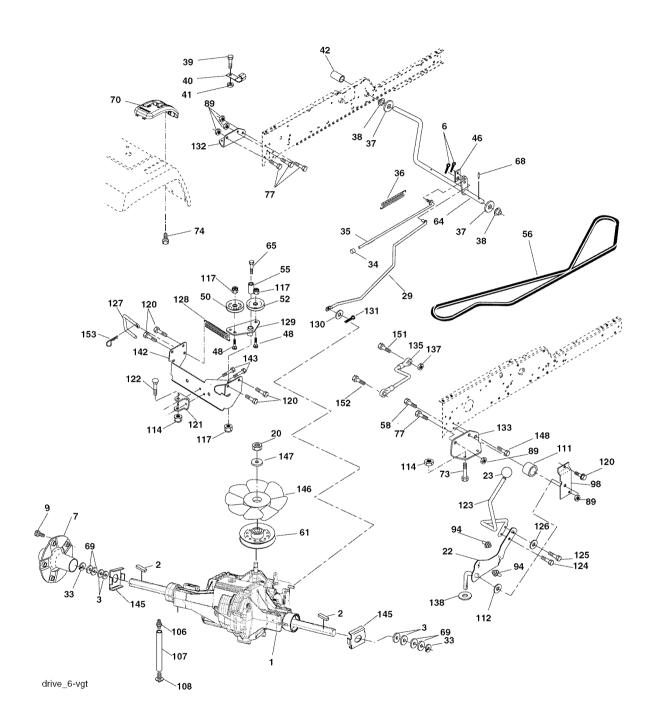
## TRACTOR -- MODEL NUMBER 917.276041 CHASSIS AND ENCLOSURES



## TRACTOR -- MODEL NUMBER 917.276041 CHASSIS AND ENCLOSURES

KEY NO.	PART NO.	DESCRIPTION
1 2	180375 175282	Rail, Frame RH Drawbar, Gt
5	163976X428	Dash YTGT 2 Cyl
6 7	157882	Dash, Lower Vgt One Piece
8	17720408 184668	Screw, Thd Cut 1/4-20 x 1/2 Support, Battery
14	175260X615	Hood Asm
16	121794X	Cover, Access
17 18	17060612 174515X615	Screw 3/8-16 x .75 Grille
19	19131312	Washer 13/32x13/16x12 Ga.
20	STD523710	Bolt, Fin Hex 3/8-16 x 1
21	STD541437	Nut Crownlock 3/8-16 Unc
24 28	179717X615 179716X615	Footrest, RH Footrest, LH
30	145052	Saddle, Hydro
31	161419	Brace, Supt 1-pc VGT
32 33	161327 161326	Bracket, Pivot Chassis Lh
34	177018	Bracket, Pivot Chassis Rh Plate Asm Engine
35	191111116	Washer 11/32x11/16x16 Ga.
36	17060512	Screw 5/16-18 x 3/4
37 39	178510X615 175278	Fender Pnt Bracket, Axle Front
43	136939	Bracket, Axie Front Lh
44	136940	Bracket, Spnsn Front Rh
45	154913	Bracket Asm., Susp Chas.Rh
47 50	17490608 175476	Screw Thdrol. 3/8-16 x 1/2 Bracket, Chassis Front
56	154914	Bracket Asm., Susp Chas. Lh
58	183569	Bracket Asm., Fender
68 84	17490508 142992	Screw Thdrol. 5/16-18 x 1/2 Stop Over Center
86	74780616	Bolt Fin Hex 7/16-14 UNC x 1
91	180374	Rail, Frame Lh
99	177143	Rod By Pass
122 130	161464 171875	Screw Hex Wshd 8-18 x 7/8 Screw Hwhd Hi-Lo #13-16x3/4
138	179125X428	Cup Holder
139	171873	Bolt Shoulder 5/16-18 TT
142 144	161897 161900	Bracket Dash Rh Bracket Dash Lh
148	164655	Extrusion Bumpers
150	175352	Duct Heat Hood
152	177956	Shield Browning
153 156	179761 17000612	Lightbox Asm W/Lens Screw 3/8-16 x .75
157	161840	Lens Bar
158	17670608	Screw Thdrol 3/8-16 x 1/2
159 160	17000612 17000512	Screw Hexwsh Thdrl 3/8-16 x 3/4 Screw 5/16-18 x 3/4
161	179612X428	Console Fuel Window
162	142432	Screw Hex 1/4-1/2 Unc
165	183554	Bracket Support Tank
166	73680700	Nut 7/16-14

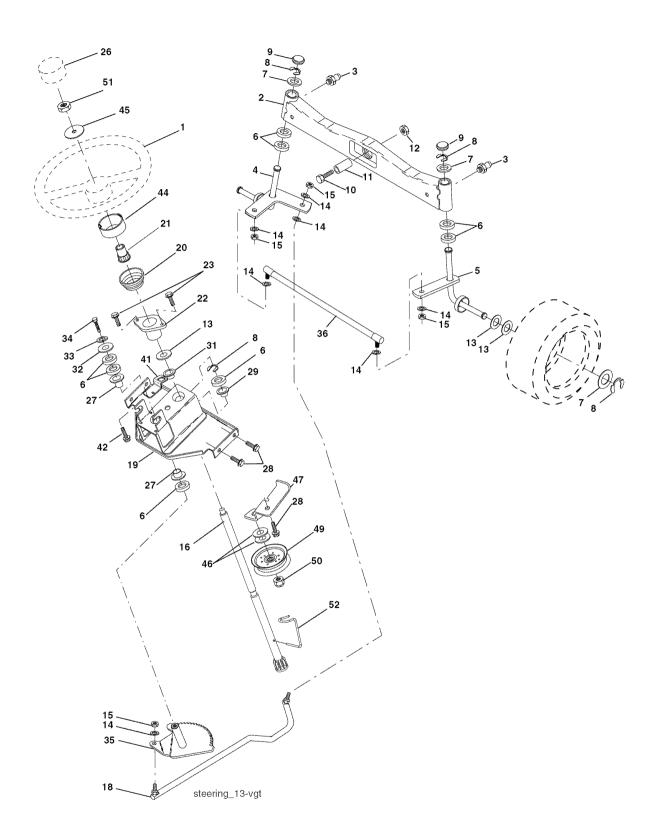
### **GROUND DRIVE**



### **GROUND DRIVE**

	PART			PART	
NO.	NO.	DESCRIPTION	NO.		DESCRIPTION
1	w w w m m	Transaxle Hydro Gear	98	141004	Bracket Shift
		331-3000 (See Breakdown)	106	142918	O-Ring Asm Hydro Gear
2	7070E	Key 1/4 x 2.5	107	154739	Line Fuel Hydro 15" VGT
3	7563R	Washer Thrust	108	142917	Cap Asm Vent Hydro Gear 70109
6	STD561210	Pin, Cotter	111	156240	Spacer Shift Lever VGTH
7	140507	Wheel, Hub Assembly	112	178558	Washer Nylon High Temp
9	140080	Bolt, Hub	114	73800500	Nut Lock Hx W/Ins 5/16-18 Unc
20	73940800	Nut	117	73900600	Nut, Lock Flg. 3/8-16
22	180235	Lever Asm Shift Lower	120	17060612	Screw 3/8-16 x .75
23	130564	Knob	121	175611	Bracket Strap Torque
29	176600	Brake, Rod	122	72010520	Bolt RDHD SQ 5/16-18 unc x
33	12000053	Ring E			2-1/2
34	71673	Cap, Parking Brake	123	183254	Rod Shift
35	137648	Rod, Parking Brake	124	165492	Bolt Shoulder 5/16-18 x .561
36	149412	Spring, Drive Ground	125	166880	Screw 5/16-18 x 5/8
37	121749X	Washer 25/32 x 1-1/4 x 16 Ga.	126	166002	Washer SRRTD 5/16ID x 1.0 x
38	150035	Nyliner "40 04 44	407	477000	.125
39	74321016	Screw, Fin. #10-24 x 1	127	177362	Link Control Clutch
40	178575	Actuator, Interlock Switch	128 129	176624 179473	Spring Drive GRND Bracket Asm Idler Tensioning
41	73931000 8883R	Nut Centerlock 10-24 Unc	130	19131016	Washer 13/32 x 5/8 x 16 Ga
42 46	145170	Cover, Pedal	131	76020312	Pin Cotter 3/32 x 3/4
48	72110614	Retainer, Spring Bolt, 3/8-16 x 1-3/4 Gr. 5	132	175467	Bracket Mtg Hydro 3500 LH VGT
50	131494	Pulley, Idler, Flat	133	175468	Bracket Mtg Hydro 3500 RH VGT
52	127783	Pulley, Idler, Grooved	135	177364	Link Asm Control Hydro 3500
55	127763 105706X	Bearing, Idler	137	1685H	Nut Lock 5/16-18 NC Thd
56	161597	V-Belt	138	1370H	Washer Thrust 5/8 x 1.10 x 1/32
58	74760724	Bolt Fin Hex 7/16-14 x 1-1/2	142	175469	Strap Torque HG-3500
61	143995	Pulley, Transaxle	143	17060512	Screw Thdrol 5/16-18 x 3/4
64	176601	Shaft, Clutch/Brake Pedal	145	163168	Washer Axle Flange HG-3000
65	179613	Bolt, Shoulder	146	140462	Fan 7" Hydro
68	STD571812	Pin, Roll	147	141322	Washer
69	123800X	Washer	148	17060620	Screw 3/8-16 x 1.0-1/4
70	179121X428	Console Automatic YT/GT	151	74760514	Bolt Fin Hex 5/16-18 x 7/8
73	74490548	Bolt Hex Flghd 5/16-18 x 3 Gr. 5	152	178705	Bolt hex 5/16-18 x 1
74	142432	Screw Hex Wsh. Hi-Lo 1/4-1/2	153	4997H	Retainer Spring
77	74780716	Bolt Fin Hex 7/16-14 x 1 Gr. 5			, ,
89	73680700	Nut Crownlock 7/16-14 Unc			
94	133835	Fastener Christmas Tree	NOTE	E: All compone	nt dimensions given in U.S.
			inche	s 1 inch = 25.4	mm

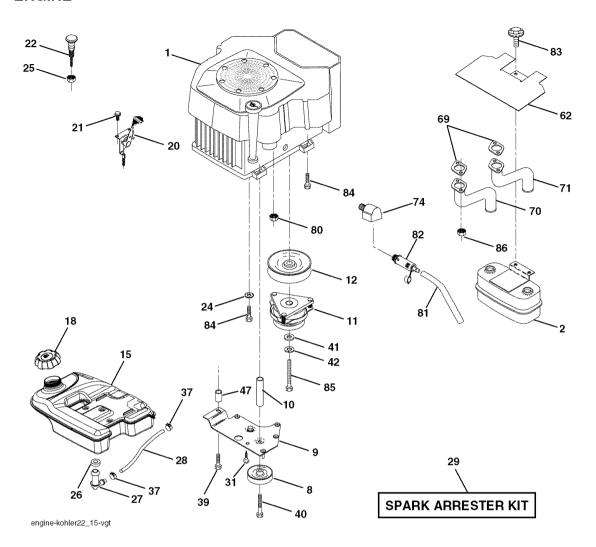
### STEERING



#### STEERING

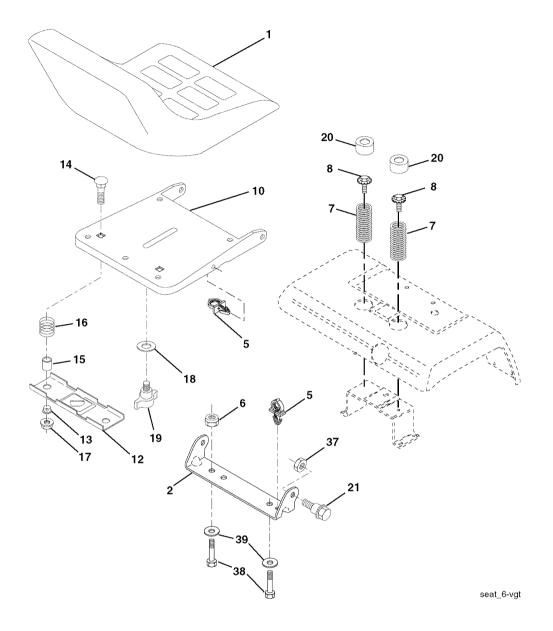
KEY NO.	PART NO.	DESCRIPTION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 19 20 1 22 23 26 27 28 29 31 23 33 34 42 44 45 46 47 49 50 51 52	159944X428 178557 6855M 161849 161848 6266H 121748X 12000029 184946X505 74781044 136518 73901000 121749X STD551137 STD551137 STD541537 186814 175572 156011 163887X428 159945 155105 152927 159946X428 3366R 17000612 104239X 138136 19111610 STD551131 74780512 187039 186799 155246 17490508 160135X428 19182411 19131610 179471 175820 73900600 73940800 175553	Wheel, Steering Axle Asm., Front Fitting, Grease Spindle Asm, LH Spindle Asm., RH Bearing, Race Thrust Harden Washer 25/32 x 1-5/8 x 16 Ga. Ring, Klip #T5304-75 Cap, Spindle Bolt, Fin Hex 5/8-11 x 2-3/4 Spacer Bearing Axle Front Nut, Lock Flange 5/8-11 Unc Washer 25/32 x 1-1/4 x 16 Ga. Washer, Lock Hvy Hlcl Spr 3/8 Nut, Lock Center 3/8-24 UNF Shaft Asm., Steering Draglink Vgt Support Asm., Steering Vgt Boot, Steering Adapter, Wheel Steering Bushing, Strg. Blk Screw Cap , Wheel Steering Bearing, Col. Strg. Screw, 3/8-16 x 3/4 Bearing, Flange Bushing, Nyliner Snap Washer 11/32 x 1 x 10 Ga. Washer, Lock Hvy Hlcl Spr 5/16 Bolt Fin Hex 5/16-18 unc x 3/4 Gear, Sector Steering Tie Rod Bracket Switch Interlock VGT 97 Screw Thdrol 5/16-18 x 1/2 Tyt Extension, Steering Washer 9/16 x 1-1/2 x 11 Ga. Washer Flat 13/32 x 1 x 10 Ga. Bracket Asm Idler Stationary Pulley Idler Flat Nut Lock Flg 3/8-16 UNC Nut Hex Jam Toplock 1/2-20 unf Clip Steering

### **ENGINE**



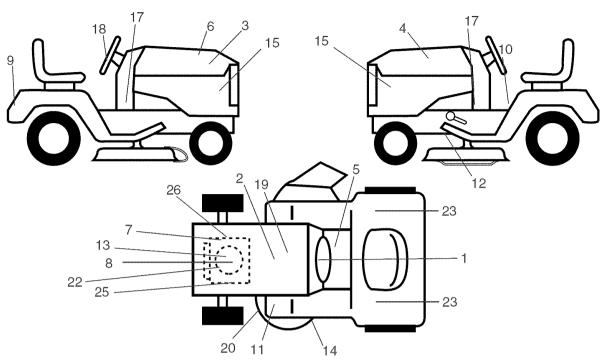
KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	W 00 00 00 00 00	Engine (See Breakdown) Kohler Model No. CV730-0017	40 41	17490664 126197X	Screw TT 3/8-16 x 4 UNC Washer 1-1/2 OD x15/32 ID x
2 8	149723 121361X	Muffler Pullev V-Idler	42	STD551143	.250 Washer Lock 7/16
9	177748	Keeper Asm. Belt Engine	47	175287	Spacer Engine
10 11	175288 170056	Bushing Clutch Electric	62 69	146629 24-041-49	Shield Heat Muffler Gasket
12	143996	Pulley Engine VGT Elect Clutch Tank Fuel Rear 5.0 Yt/Gt 96	70 71	175545 175546	Tube Exhaust LH Tube Exhaust RH
15 18	179115 179124X428	Cap Asm Fuel W/Gauge	74	162295	Elbow Street Brass
20 21	177328X428 171875	Control Throttle Screw hwhd Hi-Lo #13-16x3/4	80 81	M73030800 148456	Nut Flange Tube Drain Oil Easy
22	175441X428	Control Choke	82 83	181654 171877	Plug Drain Oil Easy Bolt 5/16-18unc x 3/4
24 25	STD551237 73920600	Washer Ext Tooth 3/8 Nut Keps 3/8 - 24 UNF	84	17060624	Screw 3/8-16 x 1-1/2
26 27	3645J 139277	Bushing Stem Tank Fuel	85 86	179953 184362	Bolt Hex 7/16 - 20 x 3.75 Gr. 5 Nut Hex Flange Toplock M8-
28	7834R	Fuel Line			1.25
29 31	137180 145006	Spark Arrester Kit Clip			
37 39	123487X 17490636	Clamp Hose Screw TT 3/8-16 x 2-1/4 UNC	NOTI		nt dimensions given in U.S. h = 25.4 mm

### SEAT ASSEMBLY



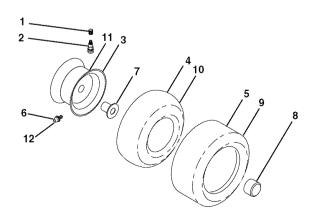
KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1 2 5 6 7 8 10 12 13 14 15	180598 180166 145006 STD541437 124181X 171877 180186 121246X 121248X 72050412 121249X	Seat Bracket, Pivot Seat Clip, Push In, Hinged Nut 3/8-16 Unc Spring, Seat Cprsn Bolt 5/16-18Uncx3/4 w/Sems Pan, Seat Bracket, Mounting Switch Bushing, Snap Bolt, Carriage 1/4-20 X 1-1/2 Spacer, Split	16 17 18 19 20 21 37 38 39		Spring, Cprsn Nut, Lock 1/4 Lge Flg Gr. 5 Washer 17/32x1-3/16x12 Ga. Knob, Seat Cap, Spring Seat Bolt, Shoulder 5/16-18 Nut, Lock Hx w/lns. 5/16-18 Bolt 3/8-16 x 1 Washer 13/32 x 1 x 10 Ga. ent dimensions given in U. S. th = 25.4 mm

### DECALS



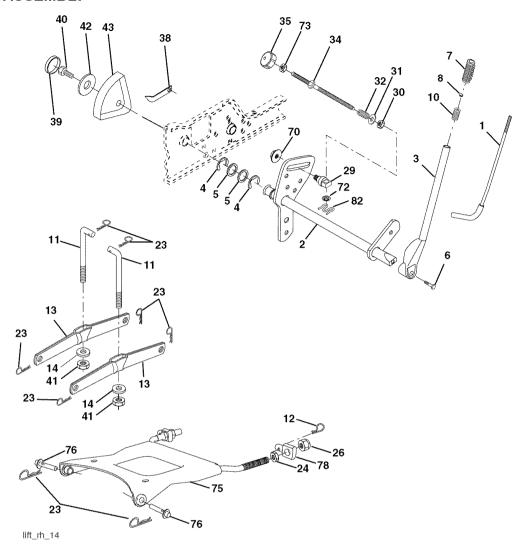
KEY			KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	164094	Decal Dash	17	177665	Decal Dash Panel
2	149516	Decal Battery DNGR/PSN	18	164065	Decal Insert Strg
		ENG Asm	19	138047	Decal Battery
3	186242	Decal Hood RH	20	181470	Decal Deck Level
4	186243	Decal Hood LH	22	177914	Decal Engine Logo
5	140837	Decal Brake Parking Saddle	23	106202X	Reflector, Taillight
6	133644	Decal Maintenance	25	177917	Decal Engine LH
7	185980	Decal Engine	26	177916	Decal Engine RH
8	177918	Decal Engine		179768X428	Pad Footrest LH
9	186572	Decal, Fender		166960	Decal Drawbar CNTRL
10	156439	Decal Fender Danger		179769X428	Pad Footrest RH
11	181252	Decal FTREST		188083	Owner's Manual, English
12	177554	Decal V-Belt Dr Sch		188084	Owner's Manual, Spanish
13	186404	Decal Replacement			
14	160397	Decal V-Belt Schem			
15	186725	Decal Hood Side Pnl			

### WHEELS AND TIRES



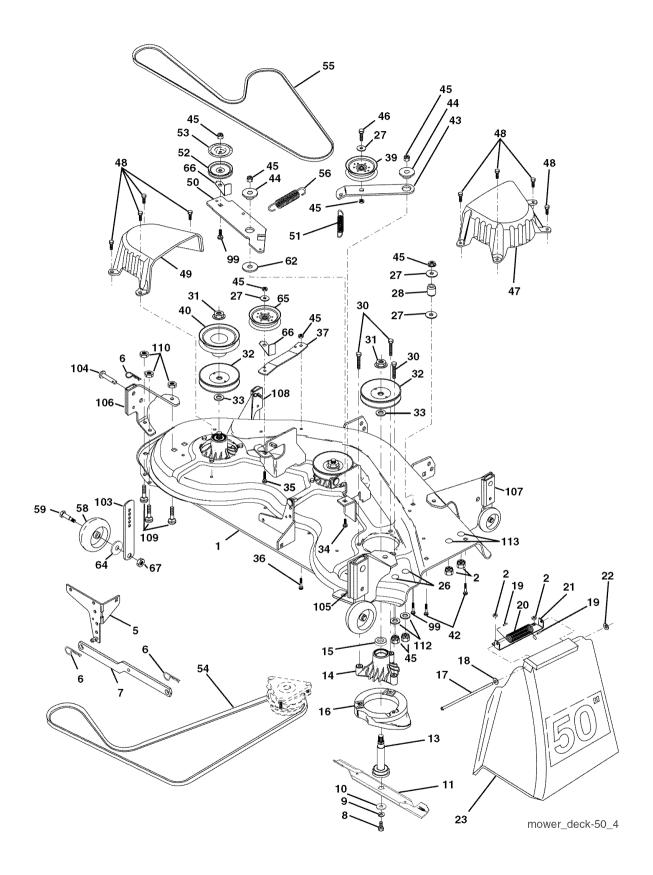
KEY NO.	PART NO.	DESCRIPTION
1	59192	Cap Valve Tire
2	65139	Stem Valve
3	106228X624	Rim Asm Front
4	8134H	Tube, Front (Service Item Only)
5	105588X	Tire, Front
6	278H	Fitting Grease (Front Wheel
		Only)
7	9040H	Bearing Flange(Front Wheel
		Only)
8	104757X428	Cap Axle (Front Wheel Only)
9	106230X	Tire Rear
10	7154J	Tube Rear (Service Item Only)
11	106277X624	Rim Asm Rear
12	6856M	Fitting Grease
	144334	Sealant, Tire (10 oz. Tube)

### LIFT ASSEMBLY



KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	121006X	Rod Asm., Lever	34	137167	Rod, Adj Lift
2	180045	Shaft Asm., Lift Vgt	35	138057	Knob, Inf 3/8-16 Unc
3	159189	Lever Asm., Lift Rh	38	155097	Pointer, Height Indicator
4	12000022	E-Ring Truarc #5133-87	39	123935X	Plug, Hole
5	19292016	Washer 29/32 x 1-1/4 x 16 Ga.	40	17060516	Screw Hex Wsh 5/16-18 x 1
6	71110624	Bolt, Fin Hex 3/8-16 x 1-1/2	41	73540600	Nut 3/8-24
7	175830	Grip, Handle Fluted	42	19112410	Washer 11/32 x 1-1/2 x 10 Ga.
8	175831X505	Plunger, Button	43	123934X	Scale, Indicator Height
10	183894	Spring	70	145212	Nut Hex Flange Lock
11	146704	Link Lift	72	110452X	Nut Push Phos & Oil
12	163552	Retainer Spring	73	73350600	Nut Hex Jam 3/8-16 UNC
13	139868	Arm Asm. Suspension Mower	75	175805	Plate Asm. Susp. Front
14	169865	Bearing Pivot Lift Tapered	76	175560	Pin, Flange
23	STD624008	Retainer, Spring	78	175689	Trunnion Susp. Front
24	73350800	Nut, Jam Hex 1/2-13 Unc	82	169484	Retainer Clip
26	73800800	Nut 1/2-13 Unc			
29	150233	Trunnion, Infin Height			
30	110807X	Nut, Special		- 611	-4 -8
31	STD551037	Washer 13/32 x 5/8 x 16 Ga.	NOIL		nt dimensions given in U.S.
32	137150	Spring, Compression Inf Hgt		inches 1 inch	1 = 25.4 mm

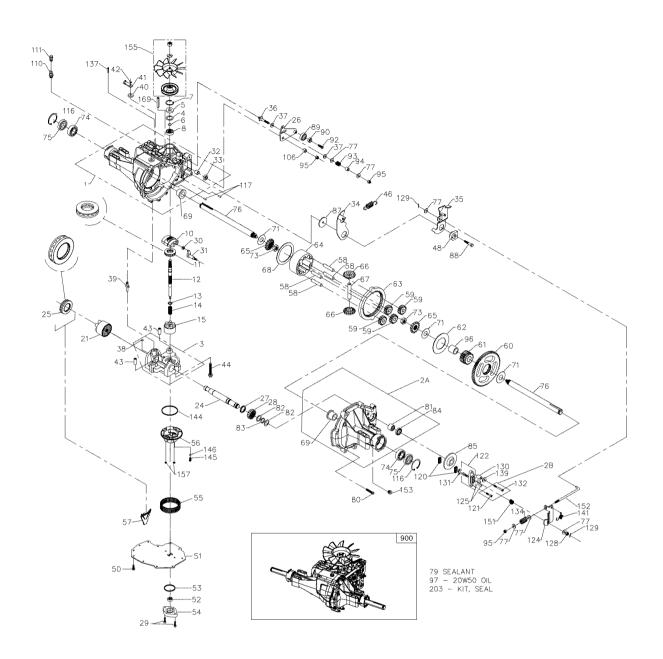
#### **MOWER DECK**



#### **MOWER DECK**

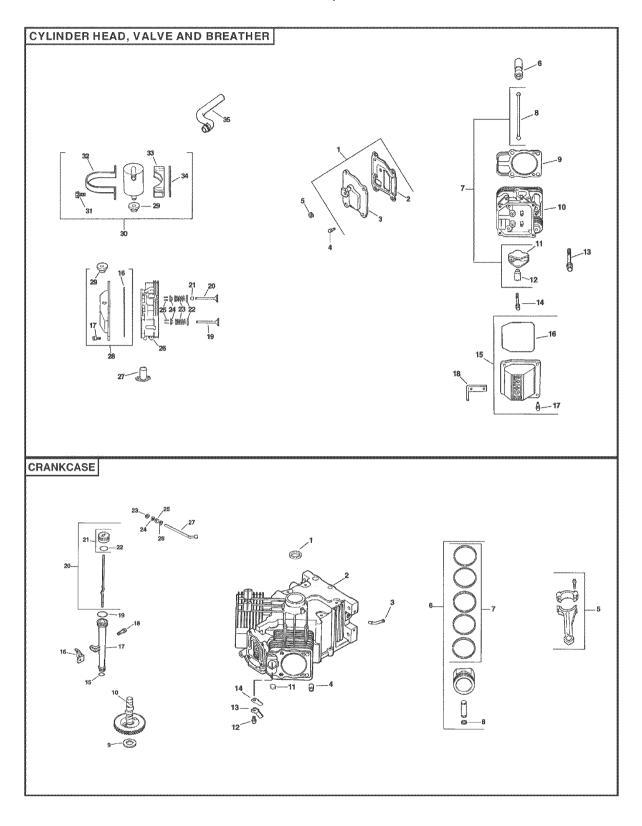
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	181606	Mower Deck Weldment 50	43	136460	Arm, Idler Secondary
2 5	STD541431	Nut, Crownlock 5/16-18	44	165723	Spacer, Retainer
5	138457	Bracket Asm., Sway Bar	45	STD541437	Nut, Crownlock 3/8-16 Unc
6	STD624008	Retainer, Spring	46	74760628	Bolt, Fin Hex 3/8-16 Unc x 1-3/4
7	178024	Bar, Sway Deck	47	137200	Cover, Mandrel RH
8	850857	Bolt 3/8-24 x 1.25 Gr. 8	48	137729	Screw, Thd Roll 1/4-20 x 5/8
^	070001407	Patched	49	136574	Cover, Mandrel LH
9	STD551137	Washer, Lock Hvy 3/8	50	137272	Arm, Idler Primary
10	140296	Unplated Washer, Hard Blade Mower	51	137273	Spring, Secondary
10	140290	Vented	52	184058	Pulley, Idler V Groove
		(The following blades are	53 54	180807 148763	Shield, Idler
		available)	55	144959	V-Belt, Mower Primary V-Belt, Mower Secondary
11	137380	Blade, 50" Hi-Lift Std	56	138687	Spring, Primary
	156468	Blade, 50" Hi-Lift Premium	58	133957	Wheel, Gauge
		(For better wear)	59	184219	Bolt, Shoulder
13	137553	Shaft Asm., W/Lower Brg	62	178515	Washer Hardened
14	137152	Housing, Mandrel 50" Vent	64	19121414	Washer 3/8 x 3/4 x 14 Ga.
15	110485X	Bearing, Ball Mandrel	65	151831	Pulley Idler Flat Mower
16	174493	Stripper, Mower Vented	66	156009	Keeper, Belt Idler 44/50"
17	106735X	Rod, Hinge	67	73930600	Nut, Centerlock 3/8-16
18	19111016	Washer 11/32 x 5/8 x 16 Ga.	99	72110614	Bolt, Carriage 3/8-16 x 1-3/4 Gr.5
19	105304X	Cap, Sleeve	103	155986X505	Bar Adj Wheel Gauge
20	123713X	Spring, Torsion Deflector	104	156941	Pin Head Pivot
21 22	137607 110452X	Bracket, Deflector Nut, Push	105	156852	Bracket Wheel Rivet Gauge
23	110452A 110509X428	Shield, Deflector Mower	400	450050	Rear RH
26	72110606	Bolt 3/8-16 x 3/4	106	156853	Bracket Wheel Rivet Gauge Rear LH
27	STD551037	Washer 13/32 x 13/16 x 16 Ga.	107	156854	Bracket Wheel Rivet Gauge
28	132823	Spacer, Spring Stop Idler	107	100004	Front RH
30	173984	Screw Thdrol Rolling Washer	108	156856	Bracket Wheel Rivet Gauge
		Head	100	100000	Front LH
31	178342	Nut, Flg Top Lock Cntr 9/16	109	72010505	Bolt 5/16-18 x 5/8
32	153535	Pulley, Mandrel	110	73980500	Nut 5/16-18
33	129963	Washer, Spacer Mower Vented	112	19171216	Washer 17/32 x 3/4 x 16 Ga.
34	72140610	Bolt, Carriage 3/8-16 x 1-1/4	113	72110504	Bolt Carriage 5/16 x 1/2
35	72110616	Bolt, Carriage 3/8-16 x 2		143651	Mandrel Assembly (Includes
36	72110608	Bolt, Carriage 3/8-16 x 1 Gr. 5			Key Nos. 8-10, 13-15, 31 and 33)
37	137166	Stiffener, Arm Idler	* *	185831	Replacement Mower, Complete
39	131494	Pulley, Idler Flat			
40 42	174375 STD533107	Pulley, Driven	NOT	E. Alloomnone	ent dimensions given in LLS
42	310333107	Bolt, Carriage 5/16-18 Unc x 3/4		E: All compone	ent dimensions given in U.S.

## TRACTOR -- MODEL NUMBER 917.276041 TRANSAXLE--MODEL NUMBER 331-3000



# TRACTOR -- MODEL NUMBER 917.276041 TRANSAXLE--MODEL NUMBER 331-3000

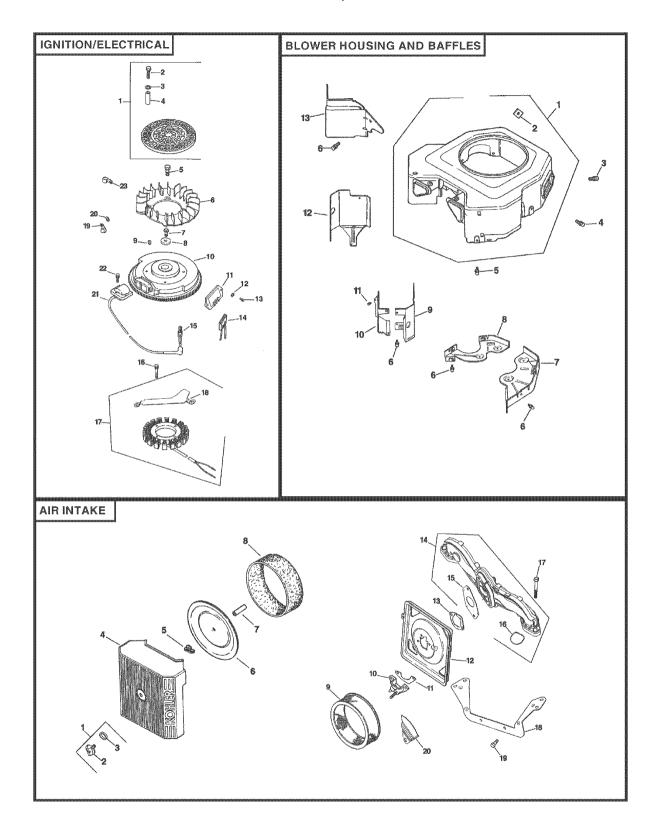
Key No.	Part No.	Description	Key No.	Part No.	Description
1	161122	Kit, housing main Main housing Lip seal	65 66	161150 161151	Gear, differential bevel (310-3000) Gear, differential bevel pinion
		Flange bearing	67	161152	(310-3000) Shaft, differential (310-3000)
		Trunnion bushing Cradle bearing	68 69	161153 169534	Plate, differential thrust (310-3000) Bearing, flange (310-3000)
2A	193015	Kit, housing r/h	71	161155	Washer, flat (1.00 ld) (310-3000)
		R.H. Housing Flange bearing	73 74	161156 169535	Nut, 5/8-18 hex jam (310-3000) Bearing, ball (310-3000)
		Needle bearing (sce1412)	75	161157	Seal, lip (310-3000)
2B	193016	Lip seal (.875 ID x I.3 0D x .25) Kit, brake bolt	76 77	161158 142884	Shaft, axle (310-3000) Washer, flat
		Bolt, hex hd 1/4-20 x 1.25 W/patch	79	178322	Sealant tube
3	184703	Bolt, hex hd 1/4-20 x 2.25 W/patch Kit, center section	80 81	161159 161160	Screw, torx head 5/16-18 (310-3000) Bearing, needle (210-3000)
		Center section Bushing .50 X .60 X .50	82	161161	Washer, flat (0.880 ID) (310-3000)
		Bushing .90 X I.02 X .75	83 84	161162 161163	Ring, retaining (310-3000) Seal, lip (.875 ID x 1.38 OD x .25)
		Plate, bypass Check plug assembly, 044			(310-3000)
		Check plug assembly, no bleed	85 87	161164 178323	Brake disc (310-3000) Washer (310-3000)
4	161125 142932	Spacer (BDP, BDU 10) Seal, lip	88	178784	Screw, 5/16-24x 1 1/2 socket head cap
4 5 6 7	142928	Retaining ring	89	178783	(310-3000) Bearing, ball
7 8	142933 142934	Retaining ring Bearing, ball	90	178326	Spacer, locating (310-3000)
10	169524	Swash plate (BDP, BDU 10)	92 93	178787 142969	Screw (310-3000) Spring
11 12	173159 161126	Bearing, thrust (10cc) Shaft, input (310-3000)	94 95	142980 169537	Spacer
13	142978	Washer, block thrust	96	169538	Nut, nylon insert hex lock 5/16-24 Bearing, sleeve (310-3000)
14 15	142977 169898	Spring, helical compression Kit, cylinder block (10cc)	97 106	161166	20W-50 oil 122 oz Spacer, trunnion (310-3000)
		10CC cylinder block	108	150800	Plug, plastic shipping
		10CC piston 10CC piston spring	110	150813	O-ring Fitting, plastic hose
21	150786	Piston seat washer Block, (BD-21& IHT)	444	150010	O-ring
·	100,00	21CC Cylinder block	111	150812	Breather vent, plastic Vent, plastic
		Piston seat washer 21CC piston	116	169539	Vent, cap Ring, retaining (310-3000)
0.4	101107	21CC piston spring	117	161168	Pin
24 25	161127 169526	Shaft, motor (310-3000) Bearing, thrust (21cc)	120 121	142883 193019	Brake puck Bolt, hex hd 1/4-20 x 1.25 W/patch
26 27	161128 161129	Control arm (310-3000)	122	178329	Kit, brake yoke
28	161130	Spacer (310-3000) Gear, 16t pinion	124 125	178330 170409	Brake arm Pin, brake actuating
29 30	169527 142941	Capscrew Guide block (BD-21)	128	170415	Nut, castle 5/16-24
31	169887	Trunnion, tapered square	129 130	170416 170411	Pin, cotter 3/32x3/4 Spacer, brake torsion spring
32 33	161133 142940	Bearing, journal Seal, lip	131 132	142882 193020	Brake puck plate
34	178318	Return arm (310-3000)	134	178331	Bolt, hex hd 1/4-20 x 2.25 W/patch Brake comp. Spring
35 36	178319 170421	Actuating arm (310-3000) Bolt, stud 5/16-24	137 139	178333 161176	Pin, spring (310-3000) Washer, flat
37	142967	Friction puck	141	178335	Spring, brake arm bias
38 39	184694 169529	Kit, bypåss plate Bypass actuator (IHT)	144 145	169545 169546	O-ring Spring, relief
40 41	142945 142952	Seal, lip	146	169547	Steel ball 7/16
42	142953	Bypass arm Retaining ring	151 152	170417 178336	Brake spring Brake pull rod
43 44	142965 150797	Pin Bolt 3/8-24 x 2-1/2	153	170434	Plug, straight thread 9/16-18
46	184702	Spring, neutral (310-3000)	155	178337	Kit, fan/pulley Nut, jam 1/2-20
48 50	178320 178343	Puck, adjusting (310-3000) Screw, hex head washer cap screw			Washer, OD slotted .53 X 1.63 X .06
		(IZT) 1/4-20 x 3/4			Pulley Fan
51 52	169530 169531	Lower cover Geroter assembly	157 169	169548 184701	O-ring Pin, spring 5/16 x 1.75
53 54	144581	O-ring	203	178338	Kit, seal
54 55	161139 178321	Charge pump housing Kit, filter			Lip seal 15 x 5 x 37 Lip seal 12 x 25 x 7
		Gasket .10 X .16 X 4.24 Filter			Lip seal 10 x 25 x 7
56	169533	Charge manifold 310-3000			O-ring .103 X 1.862 Seal 25 x 52 x 10
57 58	161142 161143	Retainer, motor bearing (310-3000) Pin, carrier (310-3000)			Lip seal .875 ID x I.3 OD x .25
59	161144	Gear, 15t planet (310-3000)			O-ring .070 X .239 Kit, o-ring, manifold
60 61	161145 161146	Gear, 67t spur (310-3000) Gear, 21t sun (310-3000)			Pin, spring 5/16 x 1.75 Pin, spring 1/4 x 1.00
62	161147	Plate, planet thrust (310-3000)	900	176056	Transaxle
63 64	161148 161149	Gear, 51t ring (310-3000) Carrier, planetary (310-3000)	Note	All Component	Dimensions Given In U.s. Inches
				1 Inch = 25.4	



#### HEAD/VALVE/BREATHER

#### CRANKCASE

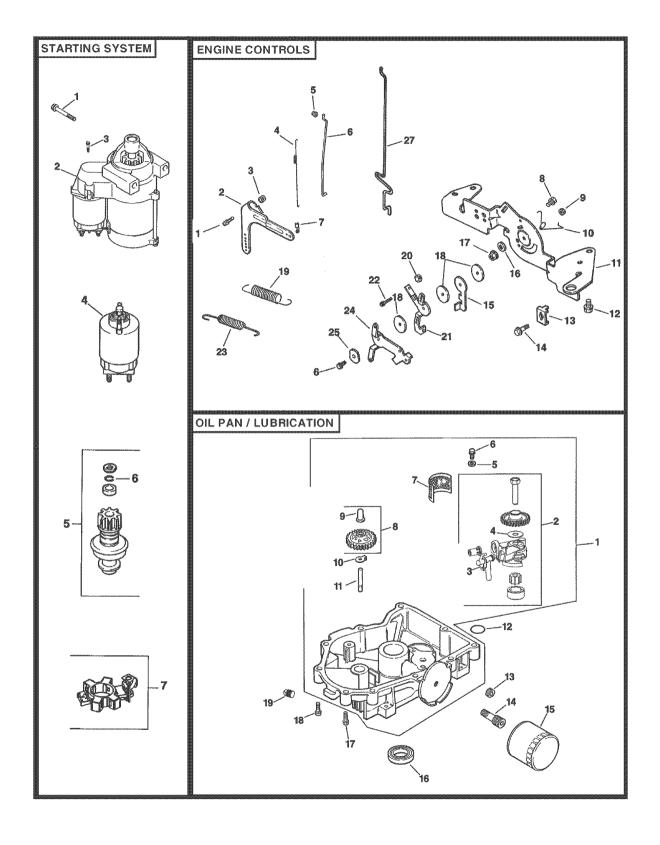
KEY NO.	PART NO.	DESCRIPTION	KEY NO.		DESCRIPTION
1	24-033-03-S	Kit, breather cover w/gasket (Includes 2, 3)	1 2	24-032-01-S	Seal, front oil Crankcase (USE: Miniblock
2 3 4	24-041-23-S 24-096-87-S M-645020-S	Gasket, breather Cover, breather Screw, hex. flange	3 4	24-294-13-S 24-380-13-S	24 782 14) Fitting Pin, locating (6)
5	25 139 60-S	M6x1.0x20 (4) Plug, hex. ctsk. 1/8"	5	24-067-13-S 24-067-14-S	Connecting Rod (Std.) (2) Connecting Rod (.25) (2)
6 7	25-351-01-S 24-755-66-S	Lifter, valve (4) Kit, valve train (Includes 8,	6	24-874-08-S	Piston w/Ring Set (Std.) (2) (Includes 7, 8)
8	24-411-05-S 24-041-37-S	11, 12) Rod, push (4) Gasket, cylinder head (2)	7 8	24-874-16-S 24-108-05-S 24-018-01-S	Kit, piston w/ring set (.08) Ring Set (Std. & .08) (2) Retainer, piston pin (4)
10 11 12	24-318-72-S 25-186-01-S 24-599-01-S	Head assembly, #2 cylinder Arm, rocker (4) Pivot, rocker arm (4)	9	12-422-09-S 12-422-13-S 12-422-07-S	Shim, camshaft (A.R.) Shim, camshaft (A.R.) Shim, camshaft (A.R.)
13	12 086 16-S	Screw, hex. flange M10x1.5x90 (4)		12-422-08-S 12-422-10-S	Shim, camshaft (A.R.) Shim, camshaft
14	M-640034-S	Screw, hex. flange M6x1.0x34 (4)	4.0	12-422-11-S 12-422-12-S	Shim, camshaft (A.R.) Shim, camshaft (A.R.)
15	24-755-74-S 24-153-23-S	Kit, valve cover - plain (Includes 16,17)	10 11 12	24-012-16-S 52-139-09-S M-545010-S	Camshaft Plug, cup Screw, hex. flange
16 17	24-153-23-5 24-086-32-S	O-Ring Screw, shoulder M6x1.0x30 (4)	13	24-018-04-S	M5x0.8x10 (2) Retainer, reed (2)
18 19	24-445-01-S 24-016-01-S	Strap, lifting Valve, exhaust (Std.) (2)	14 15	24-402-05-S 12-153-01-S	Reed, breather (2) O-Ring, lower oil fill tube
20	24-016-02-S 24-017-01-S	Valve, exhaust (.25) (2) Valve, intake (Std.) (2)	16 17	24-126-19-S 12-123-04-S	Bracket, oil fill tube Tube, oil fill
21	24-017-02-S 66-032-05-S	Valve, intake (.25) (2) Seal, valve stem (2)	18	M-545016-S	Screw, hex. flange M5x0.8x16
22 23 24	235011-S 24-089-02-S 12-173-01-S	Retainer, spring (4) Spring, valve (4) Cap, valve spring (4)	19 20	12-153-02-S 24-038-04-S	O-Ring, upper oil fill tube Dipstick assembly (Includes 21, 22)
25 26	12-755-03-S 24-318-69-S	Kit, retainer (4) Head assembly, #1 cylinder	21 22	24-755-46-S 25 153 02-S	Kit, oil fill cap (Includes 22) O-Ring, dipstick
27 28	24 605 01-S 24-755-76-S	Liner, exhaust port (2) Kit, valve cover - breather (Includes 16,17,29)	23 24 25	24-018-09-S M-931010-S 28-032-09-S	Ring, retainer Washer, nylon (top) Seal, governor cross shaft
29 30	25-313-03-S 24-755-57-S	Grommet, rubber Kit, breather separator	26 27	24-468-15-S 24-144-38-S	Washer (bottom) Shaft, governor cross
31	M-545016-S	(Includes 29,31-34) Screw, hex. flange		: All compone s 1 inch = 25.4	ent dimensions given in U.S.
32 33 34 35	24-445-01-S 24-126-44-S 24-112-12-S 24-326-55-S	M5x0.8x16 (2) Strap, breather Bracket, breather separator Spacer Hose, breather	пспе	s i iiiuii = 23.4	111111



#### IGNITION/ELECTRICAL

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

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	54-755-15-S	Kit, grass screen	1		Housing, blower (Includes 2)
2	M-403025-S	(Includes 2-4) Screw, hex. cap M4x0.7x25	2 3	24-100-01-S M-551016-S	Nut, plastic (2) Screw, hex. flange
3 4	X-25-92-S 24-112-04-S	(4) Washer, plain 5/16" (4) Spacer, grass screen (4)	4	M-545016-S	M5x0.8x16 Screw, hex. flange M5x0.8x16 (3)
5 6	25-086-47-S 24-157-08-S	Bolt, shoulder M6x1.0x16 (4) Fan	5	M-545020-S	Screw, hex. flange M5x0.8x20 (4)
7	12-086-14-S	Screw, hex. flange M10x1.5x46	6	M-645016-S	Screw, hex. flange M6x1.0x16 (6)
8	12-468-03-S	Washer, plain 3/8"	7	24-146-16-S	Plate, backing - # 2 side
9	X-42-15-S	Key	8	24-146-20-S	Plate, backing - # 1 side
10	24-025-01-S	Flywheel	9	24-063-20-S	Baffle, cylinder barrel - # 2
11 12	25-403-03-S X-25-92-S	Rectifier-regulator Washer, plain 3/16" (2)	10	24-063-58-S	side Baffle, cylinder barrel - # 1
13	24-086-18-S	Screw, phillips hd. 11-16x7/8	4.4	NA E 4E040 C	side
14 15	236602-S 12-132-06-S	(2) Connector (3 contact) Spark Plug (2)	11	M-545010-S	Screw, hex. flange M5x0.8x10 (2)
16	M-548025-S	Screw, hex. cap M5x0.8x25	12	24-063-14-S	Baffle, valley - #2 side
177	E 4 7 E E OO C	(2) Kit, 15 amp stator	13	24-063-60-S	Baffle, valley - #1 side
17	54-755-09-S	(Includes 18)	NOT	ILLUSTRATED	
18	24 126 71-S	Bracket, stator wire	1401	24-096-85-S	Cover, blower housing
19	48-154-02-S	Clip, cable		25-086-91-S	Screw, tapping 10-16x1/2" (2)
20	X-25-63-S	Washer, plain 1/4"		20 000 01 0	ocion, tapping to tox t/2 (2)
	/ LU UU U	vaonoi, piam 174			
21 22	24-584-01-S M-545020-S	Module, İgnition (2) Screw, hex flange M5x0.8x20	AIR II	NTAKE/FILTRA	TION
22	M-545020-S	Screw, hex flange M5x0.8x20 (4)	KEY	PART	
21 22 23		Screw, hex flange M5x0.8x20			TION DESCRIPTION
22 23	M-545020-S 235173-S ILLUSTRATED	Screw, hex flange M5x0.8x20 (4) Clip, cable	KEY	PART	<b>DESCRIPTION</b> Kit, knob with seal
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S	Screw, hex flange M5x0.8x20 (4) Clip, cable Washer, lock 1/4"	KEY NO.	<b>PART</b> <b>NO.</b> 54-755-01-S	DESCRIPTION  Kit, knob with seal (Includes 2,3)
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring	<b>KEY NO.</b> 1	PART NO. 54-755-01-S 25-341-03-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12	<b>KEY NO.</b> 1 2 3	PART NO. 54-755-01-S 25-341-03-S 24-153-20-S	DESCRIPTION  Kit, knob with seal (Includes 2,3)  Knob, cover O-Ring
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel	KEY NO. 1 2 3 4	PART NO. 54-755-01-S 25-341-03-S 24-153-20-S 24-096-67-S	DESCRIPTION  Kit, knob with seal (Includes 2,3)  Knob, cover O-Ring Cover, air cleaner
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO. 1 2 3 4 5	PART NO. 54-755-01-S 25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S	DESCRIPTION  Kit, knob with seal (Includes 2,3)  Knob, cover O-Ring Cover, air cleaner Wing Nut
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel	KEY NO. 1 2 3 4 5 6	PART NO. 54-755-01-S 25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 24-096-01-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO. 1 2 3 4 5 6 7	PART NO.  54-755-01-S  25-341-03-S  24-153-20-S  24-096-67-S  12-100-01-S  24-096-01-S  231032-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8	PART NO.  54-755-01-S  25-341-03-S  24-153-20-S  24-096-67-S  12-100-01-S  24-096-01-S  231032-S  24-083-05-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 24-096-01-S 231032-S 24-083-05-S 24-083-03-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 24-096-01-S 231032-S 24-083-05-S 24-083-03-S 24-109-09-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 24-096-01-S 231032-S 24-083-05-S 24-083-03-S 24-109-09-S 24-041-13-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-07-S 12-100-01-S 23-1032-S 24-083-05-S 24-083-03-S 24-109-09-S 24-041-13-S 24-094-34-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13	PART NO.  54-755-01-S  25-341-03-S  24-153-20-S  24-096-67-S  12-100-01-S  24-096-01-S  231032-S  24-083-03-S  24-083-03-S  24-109-09-S  24-041-13-S  24-094-34-S  24-041-14-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-07-S 12-100-01-S 23-1032-S 24-083-05-S 24-083-03-S 24-109-09-S 24-041-13-S 24-094-34-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner Gasket, intake (Includes
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13 14	PART NO.  54-755-01-S  25-341-03-S  24-153-20-S  24-096-67-S  12-100-01-S  24-096-01-S  231032-S  24-083-05-S  24-083-03-S  24-109-09-S  24-041-13-S  24-094-34-S  24-041-14-S  24-164-51-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner Gasket, air cleaner Manifold, intake (Includes 15,16)
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13	PART NO.  54-755-01-S  25-341-03-S  24-153-20-S  24-096-67-S  12-100-01-S  24-096-01-S  231032-S  24-083-05-S  24-083-05-S  24-083-03-S  24-109-09-S  24-041-13-S  24-094-34-S  24-041-14-S  24-164-51-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner Gasket, air cleaner Gasket, carburetor
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	PART NO.  54-755-01-S  25-341-03-S  24-153-20-S  24-096-67-S  12-100-01-S  24-096-01-S  231032-S  24-083-05-S  24-083-03-S  24-109-09-S  24-041-13-S  24-094-34-S  24-041-14-S  24-164-51-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner Gasket, air cleaner base Manifold, intake (Includes 15,16) Gasket, carburetor O-Ring, intake port (2) Screw, hex. flange M6x1.0x40 (4)
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 231032-S 24-083-05-S 24-083-03-S 24-041-13-S 24-041-14-S 24-041-14-S 24-164-51-S  24 041 52-S 24 041 52-S 24 153 27-S M-651040-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner base Manifold, intake (Includes 15,16) Gasket, carburetor O-Ring, intake port (2) Screw, hex. flange M6x1.0x40 (4) Bracket, air cleaner base
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 24-096-01-S 231032-S 24-083-05-S 24-083-03-S 24-109-09-S 24-041-13-S 24-041-14-S 24-164-51-S  24 041 52-S 24 153 27-S M-651040-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner base Manifold, intake (Includes 15,16) Gasket, carburetor O-Ring, intake port (2) Screw, hex. flange M6x1.0x40 (4) Bracket, air cleaner base Screw, hex. flange
22 23	M-545020-S 235173-S ILLUSTRATED X-22-11-S 24-176-82-S 24-518-12-S	Screw, hex flange M5x0.8x20 (4) Clip, cable  Washer, lock 1/4" Harness, wiring Lead, black (rectreg. 6" - 12 gauge insulated grip barrel eyelets)	KEY NO.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PART NO.  54-755-01-S  25-341-03-S 24-153-20-S 24-096-67-S 12-100-01-S 231032-S 24-083-05-S 24-083-03-S 24-041-13-S 24-041-14-S 24-041-14-S 24-164-51-S  24 041 52-S 24 041 52-S 24 153 27-S M-651040-S	DESCRIPTION  Kit, knob with seal (Includes 2,3) Knob, cover O-Ring Cover, air cleaner Wing Nut Cover, inner air cleaner Seal, breather Precleaner, element Element, air cleaner Cup, fuel spit-back Gasket, fuel spit-back cup Base, air cleaner Gasket, air cleaner base Manifold, intake (Includes 15,16) Gasket, carburetor O-Ring, intake port (2) Screw, hex. flange M6x1.0x40 (4) Bracket, air cleaner base

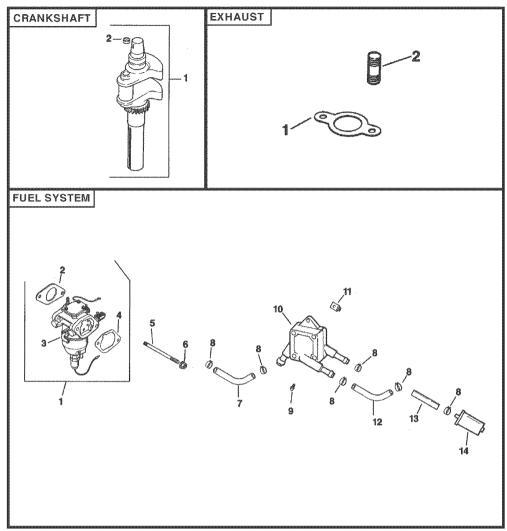


#### STARTING SYSTEM

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

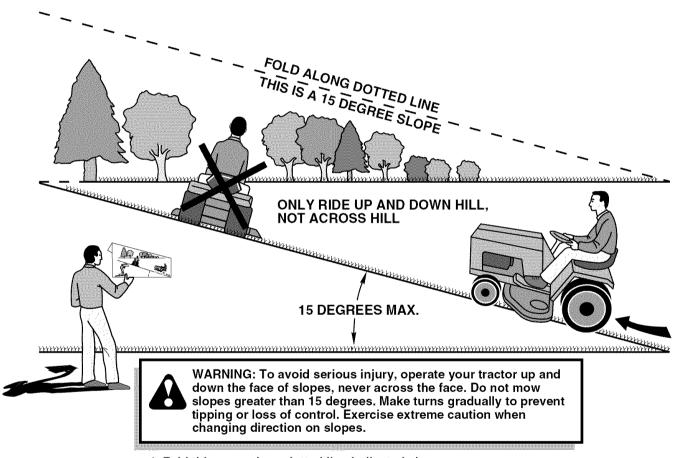
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	M-839080-S	Screw, hex. flange M8x1.25x80 (2)	1	24-199-07-S	Pan assembly, oil (Includes 2-11)
2	25-098-09-S	Starter, solenoid shift (Includes 3-7)	2	24-393-37-S	Oil pump assembly (Includes 3,4)
3	25 086 113-S	Screw, external torx hd. (3)	3	24-381-11-S	Tube, oil pickup
	25-435-05-S	Kit, solenoid (Includes 3)	4	24 153 01-S	O-Ring, oil pump
4 5	25-755-33-S	Kit, pinion drive (Includes 6)	5	M-631005-S	Washer, plain 6 mm (2)
6	25-141-05-S	Ring	6	M-645025-S	Screw, hex. flange
7	25-221-01-S	Kit, brush			M6x1.0x25 (2)
		•	7	24-162-26-S	Screen, oil `
ENGI	NE CONTROLS	<b>S</b>	8	24-043-12-S	Kit, governor gear w/pin (Includes 9)
KEY	PART		9	12-380-01-S	Pin, governor regulating
NO.	NO.	DESCRIPTION	10	52-448-02-S	Tab, locking
			11	12-144-02-S	Shaft, governor gear
1	24 211 03-S	Bolt, round head square	12	24-153-08-S	O-Ring
		neck	13	25-139-62-S	Plug, hex. ctsk. 3/8"
2	24-090-33-S	Lever, governor	14	24-136-01-S	Nipple, oil filter
2 3 4 5	M-641060-S	Nut, hex. flange M6x1.0	15	12-050-01-S	Filter, oil
4	24-089-01-S	Spring, linkage	16	52-032-08-S	Seal, oil (PTO end)
5	25-158-08-S	Bushing, linkage retaining	17	24-086-17-S	Screw, hex. flange
6	24-079-04-S	Linkage, throttle			M8x1.25x45
7	25-158-11-S	Bushing, throttle linkage	18	24-086-16-S	Screw, hex. flange
8	M-545016-S	Screw, hex. flange			M8x1.25x45 (9)
		M5x0.8x16	19	25-139-57-S	Plug, sq. hd. solid 3/8"
9	M-547050-S	Nut, hex. lock M5x0.8			N.P.T.F.
40	0.4.000.00.0	Carrier alegates undersus			

9000 \$ # Arball 18 # 9000 Arba \$ # 18 \$ 9 Arba 1900 Arba				
KEY NO.	PART NO.	DESCRIPTION		
1	24 211 03-S	Bolt, round head square neck		
2 3 4 5 6 7 8	24-090-33-S M-641060-S 24-089-01-S 25-158-08-S 24-079-04-S 25-158-11-S M-545016-S	Lever, governor Nut, hex. flange M6x1.0 Spring, linkage Bushing, linkage retaining Linkage, throttle Bushing, throttle linkage Screw, hex. flange M5x0.8x16		
9 10 11 12	M-547050-S 24-089-03-S 24-126-56-S M-645016-S	Nut, hex lock M5x0.8 Spring, choke return Bracket, control Screw, hex. flange M6x1.0x16 (4)		
13 14	12-237-01-S 24-086-43-S	Clamp, cable (2) Screw, hex. flange M5x0.8x16 (2)		
15 16 17 18 19 20 21 22	24-090-07-S X-20-1-S M-541050-S 24-468-01-S 24-089-45-S M-446030-S 24-090-13-S M-545020-S	Lever, throttle actuator Washer, lock 1/4" Nut, hex. flange M5x0.8 Washer, plain 5.5 mm (3) Spring, governor Nut, hex M4x0.7 Lever, throttle control Screw, hex. flange M5x0.8x20		
23 24 25 26 27	24-089-51-S 24-090-05-S 41-468-03-S M-403025-S 24-079-02-S	Spring, throttle limiter Lever, choke Washer, spring 1/4" Screw, hex. cap M4x0.7x25 Linkage, choke		



CRANKSHAFT			3	24-053-90	Carburetor assembly (For information only not	
KEY NO.	PART NO.	DESCRIPTION			available separately) (Service with 24 234 02-S & Kits 24 757 18-S, 24 757	
1 2	24-014-72-S 52-139-09-S	Crankshaft (Includes 2) Plug, cup	4	24 041 14-S	19-S, 24 757 20-S, 24 757 21-S, & 24 757 22-S) Gasket, air cleaner base	
EXHA	UST		5 6	M-629095-S	Stud, M6x1.0x95 (2)	
KEY NO.	PART NO.	DESCRIPTION	6 7 8 9	M-641060-S 25-353-03-S 25-237-14-S 24-086-12-S	Nut, hex. flange M6x1.0 (2) Line, fuel 14" Clamp, hose (6) Screw, hex. cap. M6x1.7x18	
1 2	24-041-02-S 25-072-04-S 24 782 23 24 755 113-S	Gasket, exhaust (2) Stud, M8x1.25x33 (4) Miniblock Gasket Set	10 11 12 13 14	24-393-16-S 24-100-01-S 24-353-03-S 15-353-04-S 24-050-02-S	(2) Pump, fuel - pulse Nut, plastic (2) Line, fuel 10-5/8" Line, fuel 11-1/2" Filter, fuel	
FUEL SYSTEM						
KEY NO.	PART NO.	DESCRIPTION	NOI 	1LLUSTRATED 24 234 02-S 24 757 18-S 24 757 19-S	Bowl, float Kit, overhaul Kit, choke repair	
1	24-853-90-S	Kit, carburetor w/gaskets		24 757 20-S	Kit, gasket	
2	24-041-52-S	(Includes 2-4) Gasket, carburetor		24 757 21-S 24 757 22-S	Kit, accelerator pump repair Kit, fuel shutdown solenoid	

### SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



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

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