

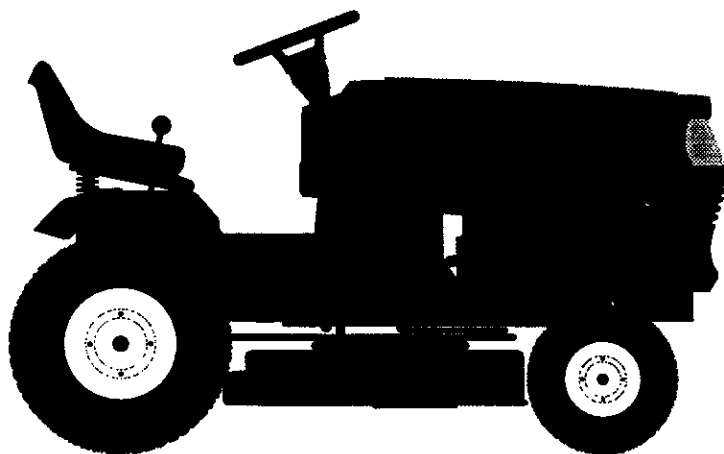
Owner's Manual
CRAFTSMAN®


**18 HP
ELECTRIC START
46" MOWER
AUTOMATIC
LAWN TRACTOR**



Model No.
917.273421

- **Safety**
- **Assembly**
- **Operation**
- **Maintenance**
- **Repair Parts**



 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.

CAUTION:
Read and follow all
Safety Rules and Instructions
before operating this equip-
ment.

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
Visit our Craftsman website: www.sears.com/craftsman

TABLE OF CONTENTS

Warranty	2	Maintenance	20
Safety Rules	2	Service and Adjustments	24
Product Specifications	5	Storage	31
Assembly	8	Troubleshooting	32
Operation	13	Repair Parts	36
Maintenance Schedule	20	Parts Ordering	Back Cover

WARRANTY

LIMITED TWO YEAR 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 found to be defective in material or workmanship.

This Warranty does not cover:

- Expendable items which become worn during normal use, such as blades, spark plugs, air cleaners, belts, etc.
- Tire replacement or repair caused by punctures from outside objects, such as nails, thorns, stumps, or glass.
- Repairs necessary because of operator abuse, negligence, improper storage or accident or the failure to maintain the equipment according to the instructions contained in the owner's manual.
- Riding equipment used for commercial or rental purposes.

LIMITED 90 DAY 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. In-home warranty service on your Craftsman riding equipment is available at no charge for 30 days from the date of purchase. Please contact your nearest service center. After 30 days from the date of purchase, warranty service is available by taking your Craftsman riding equipment to your nearest Sears Service Center. (In-home warranty service will still be available after 30 days from the date of purchase but a standard trip charge will apply). This warranty applies only while this product is in the United States. This Warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

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

SAFETY RULES

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.

SAFETY RULES

- 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.

SLOPE OPERATION

Slopes are a major factor related to loss-of-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.

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.

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.

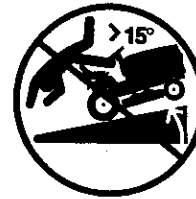
- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and down for small children.
- Never carry children. They may fall off and be seriously injured or interfere 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.

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.

SAFETY RULES

- 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.



- 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.
- 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.
- *Do not* turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.

▲ Look for this symbol to point out important safety precautions. It means **CAUTION!!! BECOME AWARE!!! YOUR SAFETY IS INVOLVED.**

▲ CAUTION: 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: The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

PRODUCT SPECIFICATIONS

GASOLINE CAPACITY AND TYPE:	3.5 GALLONS UNLEADED REGULAR
OIL TYPE (API-SF/SG/SH):	SAE 30 (above 32°F) SAE 5W-20 (below 32°F)
OIL CAPACITY:	W/FILTER: 4.4 PINTS W/O FILTER: 3.6 PINTS
COOLANT TYPE:	ETHYLENE GLYCOL ANTIFREEZE
COOLANT CAPACITY:	3.6 QUARTS
SPARK PLUG: (GAP: .026")	NGK BMR 6A
VALVE CLEARANCE	
INTAKE:	.010"
EXHAUST:	.010"
GROUND SPEED (MPH):	FORWARD: 5.5 REVERSE: 2.4
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	17 AMPS@ 3600 RPM
BATTERY:	AMP/HR: 40 MIN. CCA: 340 CASE SIZE: U1R
BLADE BOLT TORQUE:	27-35 FT. LBS.

MAINTENANCE AGREEMENT

A Sears Maintenance Agreement is available on this product. Contact your nearest Sears store for details.

CUSTOMER RESPONSIBILITIES

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

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

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

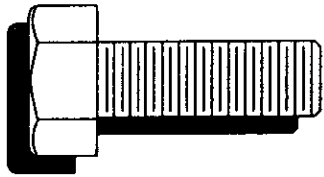
CONGRATULATIONS on your purchase of a Craftsman Tractor. It has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your nearest Sears Authorized Service Center. We have competent, well-trained technicians and the proper tools to service or repair this tractor.

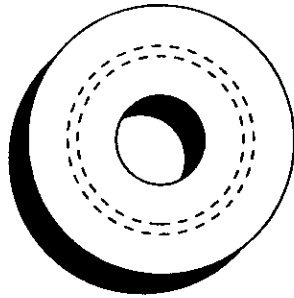
Please read and retain this manual. The instructions will enable you to assemble and maintain your tractor properly. Always observe the "SAFETY RULES".

CONTENTS OF HARDWARE PACK

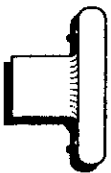
Parts Bag contents shown full size



(4) Hex Bolts
5/16-18 x 1



(4) Spacers

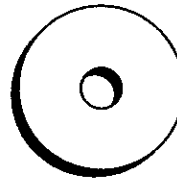


(2) Weld
Nuts #10

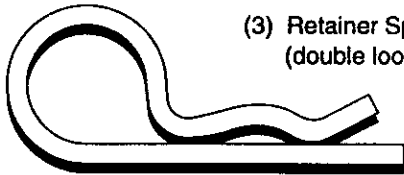


(2) Screws
#10 x 5/8

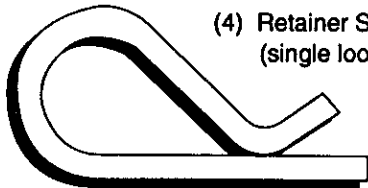
(2) Lock
Washers #10



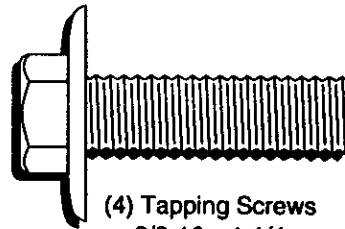
(2) Washers
3/16 x 3/4 x 16 Gauge



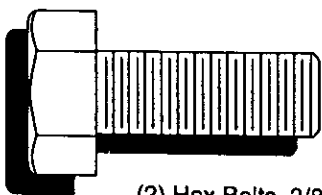
(3) Retainer Springs
(double loop)



(4) Retainer Springs
(single loop)

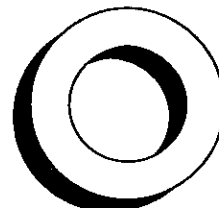


(4) Tapping Screws
3/8-16 x 1-1/4



(2) Hex Bolts 3/8-16 x 1

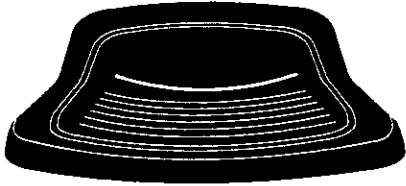
(2) Nylon Locknuts 3/8-16



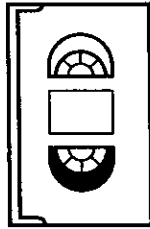
(2) Washers 17/32 x 7/8 x 16 Ga.

CONTENTS OF HARDWARE PACK

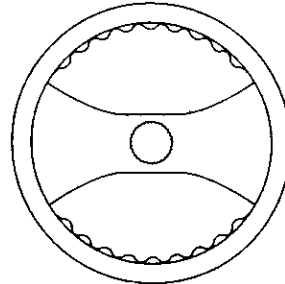
Parts packed separately in carton



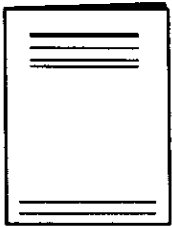
Seat



Video
Cassette



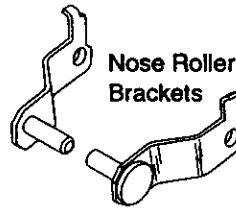
Steering
Wheel



Manual



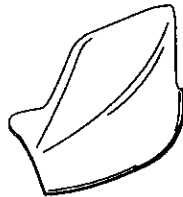
Front Bumper



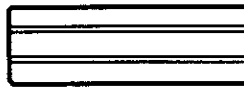
Nose Roller
Brackets



Parts Bag



Mulcher Plate

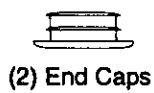


Nose Roller

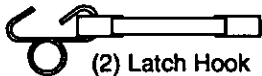


Steering
Sleeve

Parts Bag contents not shown full size



(2) End Caps



(2) Latch Hook
Assemblies



(4)
Adjusting
Bars



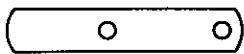
(4) Wheels



(4) Locknut
3/8-16



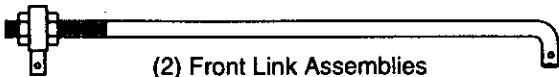
(2) Keys



(2) Extension Brackets

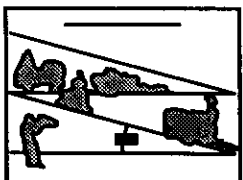
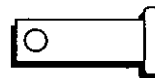


(4) Retainer
Springs

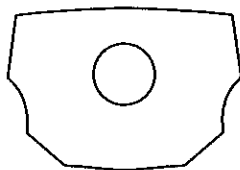


(2) Front Link Assemblies

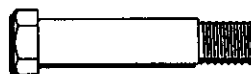
(4) Clevis Pins



Slope Sheet



Steering
Wheel Insert



(4) Shoulder Bolt

(4) Washers
3/8 x 3/4 x 14 Ga.



ASSEMBLY

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

TOOLS REQUIRED FOR ASSEMBLY

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

- | | |
|-------------------------|----------------------------------|
| (2) 9/16" wrench | (1) 3/4" Socket w/ drive ratchet |
| (1) Pliers | (1) Phillips Screw-driver |
| (1) 1/2" wrench | |
| (1) Utility knife | |
| (1) Tire pressure gauge | |

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

TO REMOVE TRACTOR FROM CARTON

UNPACK CARTON

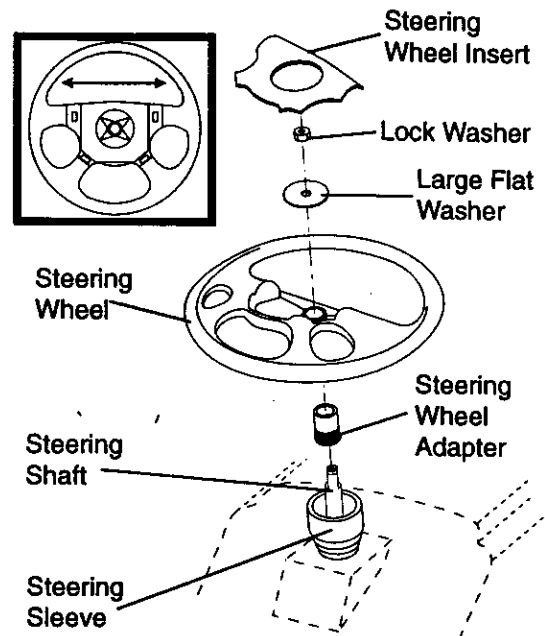
- Remove all accessible loose parts and parts boxes from shipping carton (See page 6).
- Cut, from top to bottom, along lines on all four corners of shipping carton, and lay panels flat.
- Remove mower and package materials.
- Check for any additional loose parts or boxes and remove.

BEFORE ROLLING TRACTOR OFF SKID

ATTACH STEERING WHEEL

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

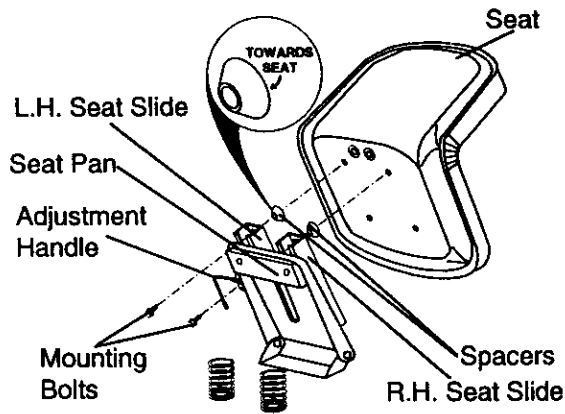
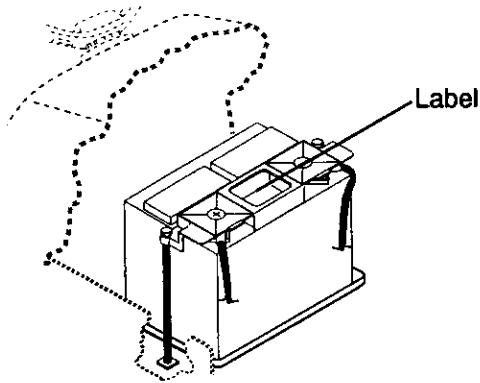


TO ROLL TRACTOR OFF SKID (See Operation section for location and function of controls)

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

CHECK BATTERY

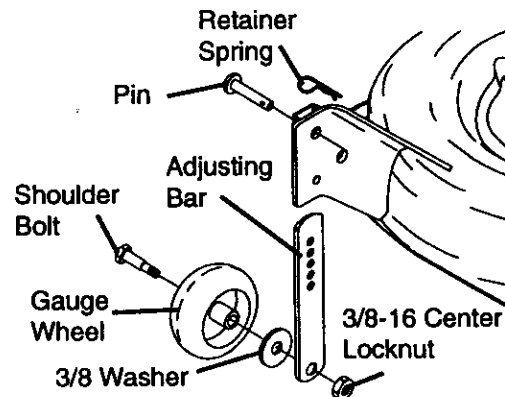
- Lift hood to raised position.
- If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps. (See "BATTERY" in Maintenance section of this manual for charging instructions).



ASSEMBLE GAUGE WHEELS 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.

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



INSTALL SEAT

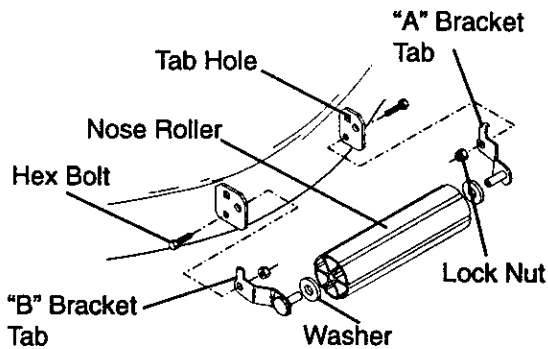
Seat position should be adjusted forward or backward so that the operator can comfortably reach clutch/brake pedal and safely operate the tractor.

- Remove tiedown strap on seat pan.
- Release L.H. seat slide on seat pan by pulling out on adjustment handle and sliding it to the rear position exposing seat mounting holes from bottom. Slide R.H. slide to same rear position.
- Mount rear of seat on slides using mounting bolts and spacers as shown. Be sure to install spacers between seat and seat slides with cupped side of spacer up toward seat.
- Pull out on adjustment handle and slide seat all the way forward. Install front mounting bolts and spacers. Tighten all mounting bolts securely.
- Lower seat into operating position and sit on seat. Press clutch/brake pedal all the way down. If operating position is not comfortable, adjust seat.
- To adjust seat: Grasp adjustment handle and pull out, slide seat to desired position and release adjustment handle.

TO ATTACH NOSE ROLLER

- Position brackets, 17/32 x 7/8 x 16 gauge washers, and nose roller between deck mounting brackets as shown. Be sure to position brackets on correct side, as shown.
- Install 3/8-16 x 1 hex bolts and 3/8-16 lock nuts as shown. Tighten hardware securely.

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



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" on page 5 of this manual.

CHECK BRAKE SYSTEM

After you learn how to operate your tractor, check to see that the brake is properly adjusted. See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual.

INSTALL MOWER AND DRIVE BELT

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.
- Slide mower under tractor with discharge guard to right side of tractor.

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

- Install belt into electric clutch pulley groove.

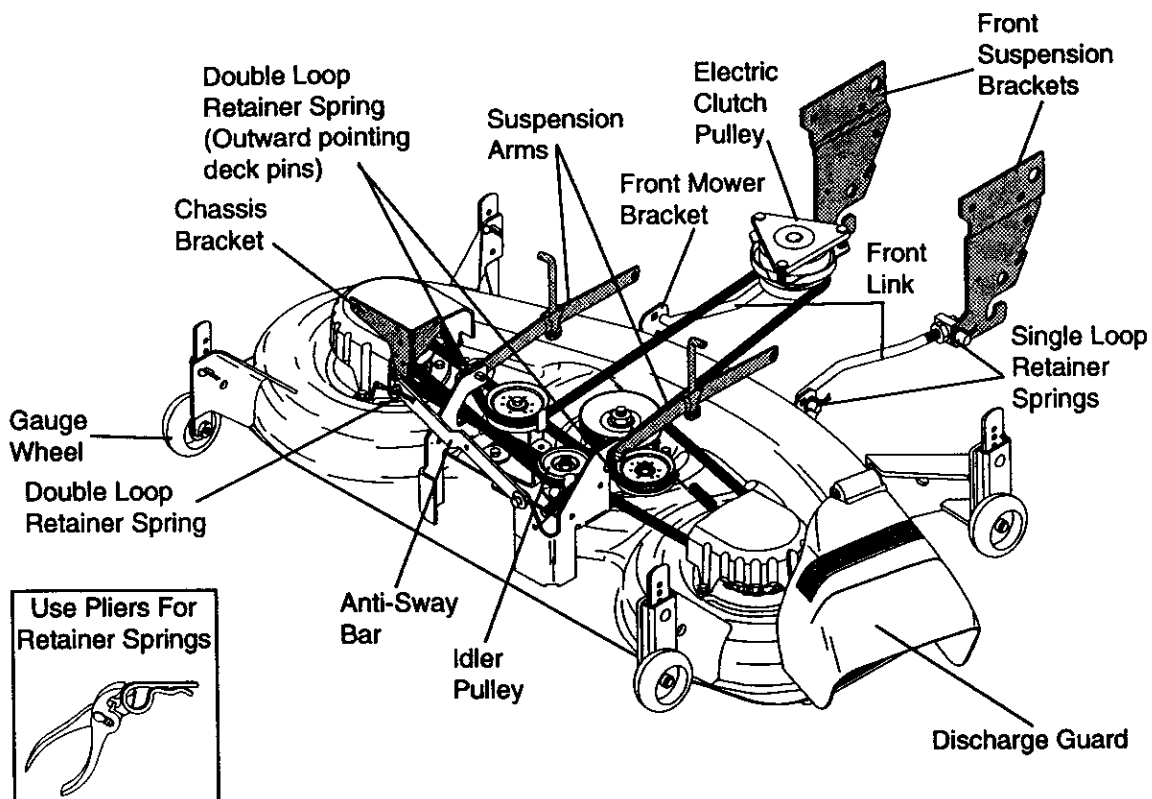
- Install one front link in top hole of the right hand front mower bracket and right hand front suspension bracket. Retain with two single loop retainer springs as shown.
- Install second front link in left hand front suspension bracket only and retain with single loop retainer spring as shown.
- Turn height adjustment knob counter-clockwise until it stops.
- Lower mower linkage with attachment lift control.
- Place the left hand suspension arm on outward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. Retain with double loop retainer spring with loops down as shown.
- Slide left side of mower back and install the unattached front link in top hole of the left hand front mower bracket. Retain with single loop retainer spring as shown.
- Place the right hand suspension arm on outward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. Retain with double loop retainer spring with loops down as shown.
- Connect anti-sway bar to chassis bracket under left footrest and retain with double loop retainer spring.
- Turn height adjustment knob clockwise to remove slack from mower suspension.
- Raise mower to highest position.
- Adjust gauge wheels before operating mower as shown in the Operations 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.



INSTALL MULCHER PLATE

- Install two latch hooks to mulcher plate using screw, washer, lock washer, and weld nut as shown.

NOTE: Pre-assemble weld nut to latch hook by inserting weld nut from the top with hook pointing down. Tighten hardware securely.

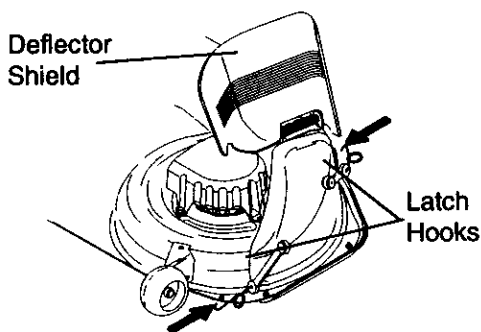
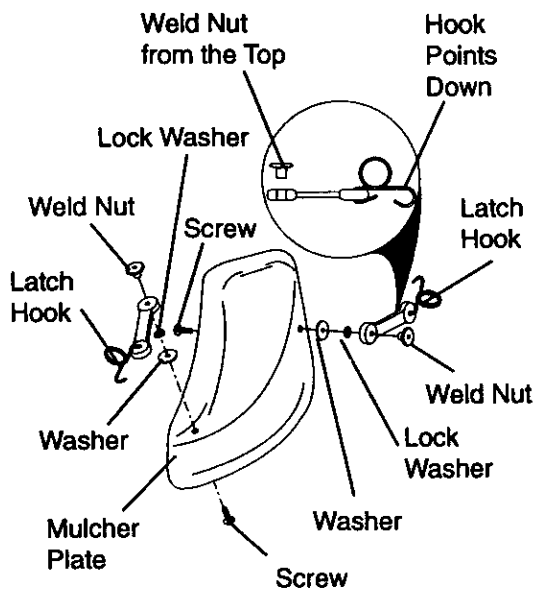
- Raise and hold deflector shield in upright position.
- Place front of mulcher plate over front of mower deck opening and slide into place, as shown.
- Hook front latch into hole on front of mower deck.
- Hook rear latch into hole on back of mower deck.

CAUTION: Do not remove discharge guard from mower. Raise and hold guard when attaching mulcher plate and allow it to rest on plate while in operation.

TO CONVERT TO BAGGING OR DISCHARGING

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

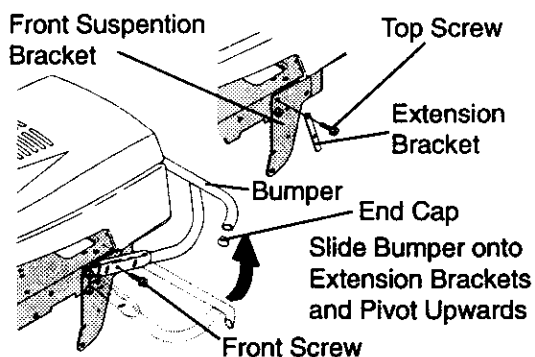
NOTE: It is not necessary to change blades. The mulcher blades are designed for discharging and bagging also.



TO ATTACH FRONT BUMPER

NOTE: For ease of assembly, you may wish to obtain the assistance of another person for mounting bumper to tractor.

- Press or tap the end caps into ends of bumper tube.
- The existing top screw and the existing front screw must be removed from both sides.
- On both sides of chassis, position extension bracket as shown and loosely assemble to rear chassis hole with supplied 3/8-16 x 1 bolt. Do not tighten the brackets. Allow them to hang from the chassis.
- Position bumper and extension brackets so brackets can be slid inside flattened ends of bumper.
- Slide bumper onto brackets and pivot upwards to align center holes in extension brackets and tractor chassis.
- With holes aligned, install additional screws.
- Tighten all four (4) screws securely.



✓ CHECKLIST

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 drive position.

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 TRANSMISSION" in the Operation section of this manual).

OPERATION

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



BATTERY



CAUTION OR WARNING



REVERSE



FORWARD



FAST



SLOW



ENGINE ON



ENGINE OFF



OIL PRESSURE



LIGHTS ON



OVER TEMP LIGHT



MOWER LIFT



FUEL



CHOKE



MOWER HEIGHT



PARKING BRAKE LOCKED



UNLOCKED



ATTACHMENT CLUTCH ENGAGED



REVERSE



NEUTRAL



HIGH



LOW



PARKING BRAKE



IGNITION



ATTACHMENT CLUTCH DISENGAGED



KEEP AREA CLEAR



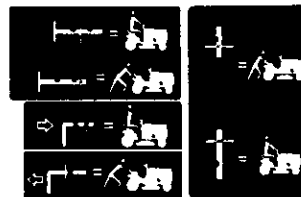
(SEE SAFETY RULES SECTION)



SLOPE HAZARDS



DANGER, KEEP HANDS AND FEET AWAY

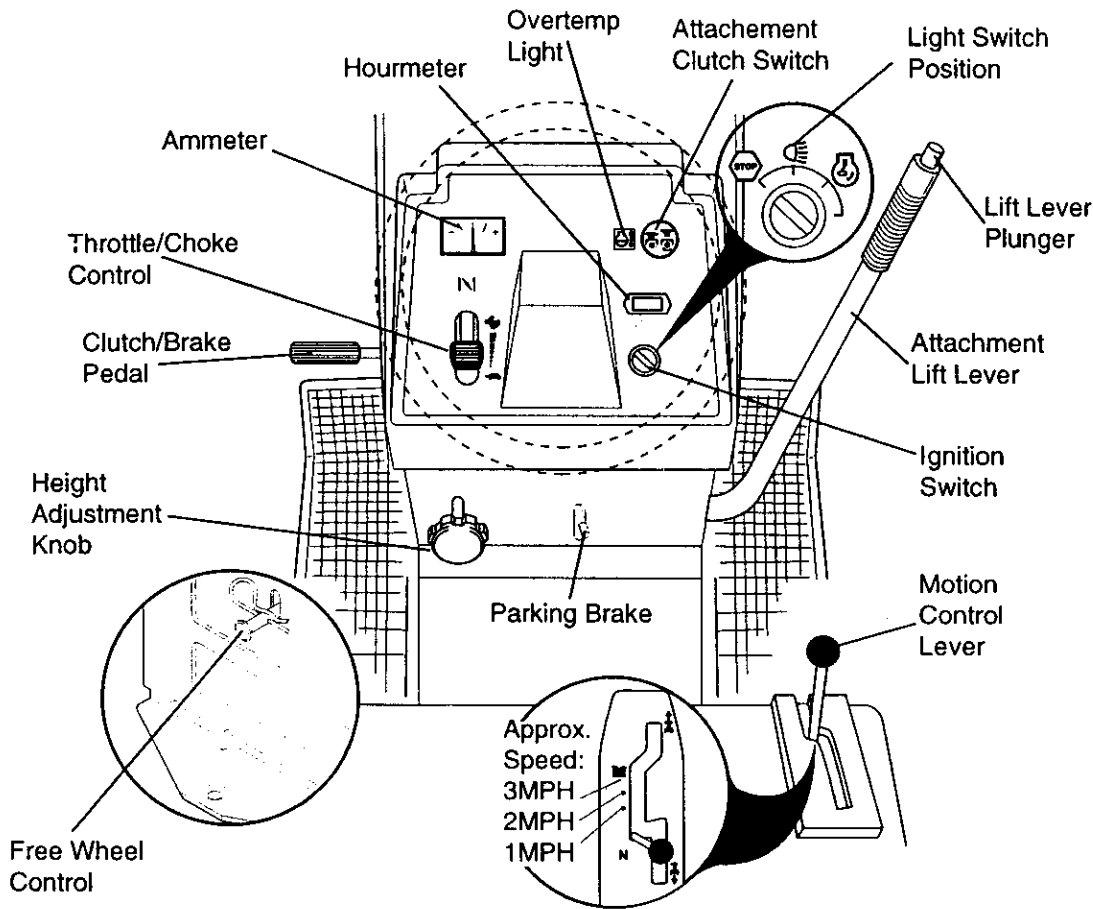


FREE WHEEL
(Automatic Models only)

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: Turns the headlights on and off.

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

CLUTCH/BRAKE PEDAL: Used for declutching and braking the tractor and starting the engine.

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

IGNITION SWITCH: Used for starting and stopping the engine.

OVERTEMP LIGHT: Indicates overheated coolant during engine operation.

ATTACHMENT LIFT LEVER: Used to raise and lower 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 battery charging (+) or discharging (-).

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

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

HOURLMETER: Indicates hours of operation

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



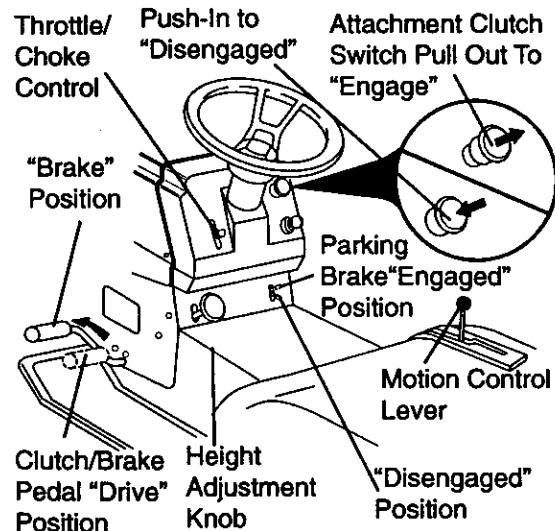
The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend a wide vision safety mask over spectacles, or standard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

HOW TO USE YOUR TRACTOR

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.

TO SET PARKING BRAKE

- Depress clutch/brake pedal into full "BRAKE" position and hold.
- Place parking brake lever in "ENGAGED" position and release pressure from clutch/brake pedal. Pedal should remain in "BRAKE" position. Make sure parking brake will hold tractor secure.



STOPPING

MOWER BLADES

- To stop mower blades, move attachment clutch switch to "DISENGAGED" position.

GROUND DRIVE

- To stop ground drive, depress clutch/brake pedal into full "BRAKE" position.
- Move motion control lever to neutral (N) position.

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

ENGINE

- Move throttle control to slow position.

NOTE: Failure to move throttle control to slow position and allowing engine to idle before stopping may cause engine to "backfire".

- Turn ignition key to "OFF" position and remove key. Always remove key when leaving tractor to prevent unauthorized use.

- Never use choke to stop engine.

IMPORTANT: Leaving the ignition switch in any position other than "OFF" will cause the battery to be discharged (dead).

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

▲ CAUTION: Always stop tractor completely, as described above, before leaving the operator's position; to empty grass catcher, etc.

THROTTLE CONTROL

Always operate engine at full throttle.

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

TO MOVE FORWARD AND BACKWARD

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

- Start tractor with motion control lever in neutral (N) position.
- Release parking brake and clutch/brake pedal.
- 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 (C) to raise cutting height.
- Turn knob counterclockwise (O) to lower cutting height.

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

- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.

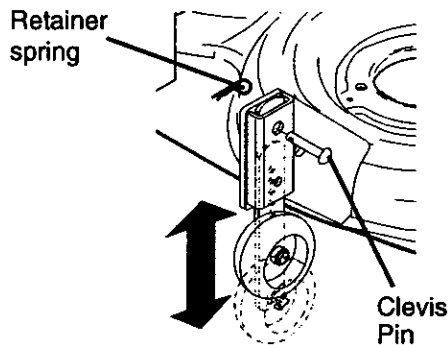
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first cut relatively high; the second to desired height.

TO ADJUST GAUGE WHEELS

Gauge wheels are properly adjusted when they are slightly off the ground when mower is at the desired cutting height in operating position. Gauge wheels then keep the deck in proper position to help prevent scalping in most terrain conditions.

- Be sure tractor is on a flat level surface.
- Lower mower and adjust mower to desired cutting height.
- Remove retainer spring and clevis pin which secure each gauge wheel bar.
- Lower gauge wheels to ground. Raise gauge wheels slightly to align holes in bracket and gauge wheel bar and insert clevis pin. Gauge wheels should be slightly off the ground.
- Replace retainer spring into clevis pin.

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.

- Select desired height of cut.
- Lower mower with attachment lift control.
- Start mower blades by engaging attachment clutch control.
- TO STOP MOWER BLADES - disengage attachment clutch control.

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

TO OPERATE ON HILLS

CAUTION: 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 slowing is necessary, move throttle control lever to slower position.
- If stopping is absolutely necessary, push clutch/brake pedal quickly to brake position and engage parking brake.
- Move motion control lever to neutral (N) position.

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

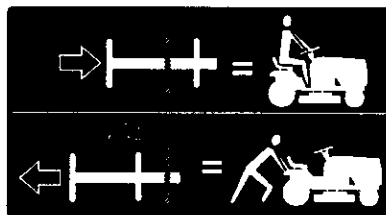
- To restart movement, slowly release parking brake and clutch/brake pedal.
- Slowly move motion control lever to slowest setting.
- Make all turns slowly.

TO TRANSPORT

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

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

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 ATTACHMENTS

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.
- 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 "OIL VISCOSITY CHART" in the Customer Responsibilities section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.

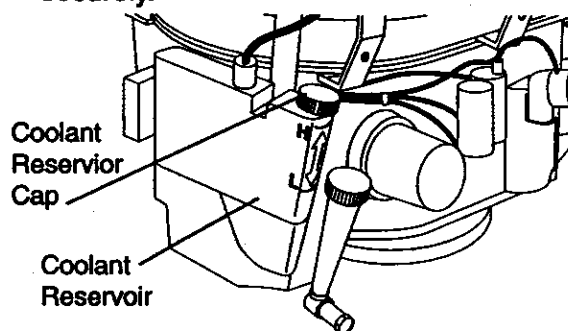
CHECK COOLANT LEVEL

CAUTION: Check coolant level at reservoir only. Do not open radiator cap.

- Check coolant with tractor on level surface.
- Observe coolant in reservoir. Coolant should be up to "H" mark on reservoir when engine is hot or to "L" mark when engine is cold.

CAUTION: Do not pour coolant into a hot engine or you may damage the cylinder head or block. Do not operate the engine without coolant.

- If necessary, add coolant by removing reservoir cap. Use only ethylene glycol antifreeze and soft water in the mixture ratio specified on the antifreeze container.
- Replace reservoir cap and tighten securely.



ADD GASOLINE

- Fill fuel tank. 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.

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

▲WARNING: Experience indicates that 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.

▲CAUTION: Fill to bottom of gas tank filler neck. Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

OVERTEMP LIGHT

Located on the dash of your tractor, this light alerts you to the engine being overheated which requires immediate attention.

- Light should come on when engine is not running and the key switch is in "ON" position, this is a test to be sure the light is working.
- If light comes on while operating the engine, stop the engine. Find and correct the problem. See "Engine Overheats" in the Trouble Shooting section of this manual.

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.

- Be sure freewheel control is in the transmission engaged position.
- Sit on seat in operating position, depress clutch/brake pedal and set parking brake.
- Place motion control lever in neutral (N) position.
- Move attachment clutch to "DISENGAGED" position.
- Move throttle control to choke position.

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

- Insert key into ignition and turn key clockwise to "START" position and release key as soon as engine starts. Do not run starter continuously for more than fifteen seconds per minute. If the engine does not start after several attempts, move throttle control to fast position, wait a few minutes and try again. If engine still does not start, move the throttle control back to the choke position and retry.

WARM WEATHER STARTING (50° F AND ABOVE)

- When engine starts, move the throttle control to the fast position.
- The attachments and ground drive can now be used. If the engine does not accept the load, restart the engine and allow it to warm up for one minute using the choke as described above.

COLD WEATHER STARTING (50° F AND BELOW)

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

AUTOMATIC TRANSMISSION WARM-UP

- Before driving the unit in cold weather, the transmission should be warmed up as follows:
 - Be sure the tractor is on level ground.
 - Place the motion control lever in neutral. Release the parking brake and let the clutch/brake slowly return to operating position.
 - Allow one minute for transmission to warm up. This can be done during the engine warm up period.
- The attachments can also be used during the engine warm-up period after the transmission has been warmed up.

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

PURGE TRANSMISSION

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

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

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

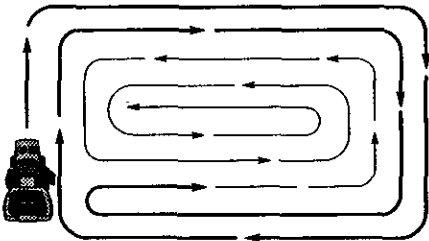
- Place tractor safely on level surface with engine off and parking brake set.
- Disengage transmission by placing freewheel control in freewheeling position (See "TO TRANSPORT" in this section of manual).
- Sitting in the tractor seat, start engine. After the engine is running, move throttle control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

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

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

MOWING TIPS

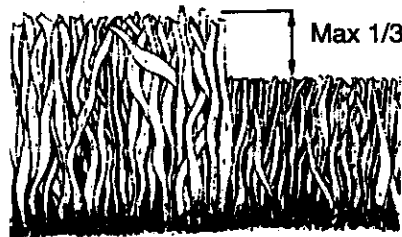
- Tire chains cannot be used when the mower housing is attached to tractor.
- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has 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 the best cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.



MULCHING MOWING TIPS

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

- The special mulching blade will recut the grass clippings many times and reduce them in size so that as they fall onto the lawn they will disperse into the grass and not be noticed. Also, the mulched grass will biodegrade quickly to provide nutrients for the lawn. Always mulch with your highest engine (blade) speed as this will provide the best recutting action of the blades.
- Avoid cutting your lawn when it is wet. Wet grass tends to form clumps and interferes with the mulching action. The best time to mow your lawn is the early afternoon. At this time the grass has dried and the newly cut area will not be exposed to the direct sun.
- For best results, adjust the mower cutting height so that the mower cuts off only the top one-third of the grass blades. For extremely heavy mulching, reduce your width of cut on each pass and mow slowly.
- Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a second cut, mow across or perpendicular to the first cut path.
- Change your cutting pattern from week to week. Mow north to south one week then change to east to west the next week. This will help prevent matting and graining of the lawn.



MAINTENANCE

MAINTENANCE SCHEDULE		REGULAR SERVICE								SERVICE NOTES	
FILL IN DATES AS YOU COMPLETE		BEFORE EACH USE	EVERY 8 HOURS	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 200 HOURS	EVERY 300 HOURS	EVERY 400 HOURS		BEFORE STORAGE
T R A C T O R	Check Brake Operation	✓	✓								
	Check Tire Pressure	✓	✓								
	Check for Loose Fasteners	✓			✓ ⁷					✓	
	Sharpen/Replace Mower Blades			✓ ⁴							
	Lubrication Chart			✓						✓	
	Check Battery Level/Recharge			✓ ⁶							
	Clean Battery and Terminals			✓						✓	
	Check Transaxle Cooling			✓							
	Adjust Blade Belt(s) Tension					✓ ⁵					
	Adjust Motion Drive Belt(s) Tension					✓ ⁵					
E N G I N E	Check Engine Oil Level	✓	✓								
	Change Engine Oil				✓ ^{1,2,3}					✓	
	Clean Air Filter			✓ ²							
	Inspect Muffler/Spark Arrester				✓						
	Replace Oil Filter (If equipped)					✓ ^{1,2}					
	Clean Engine Cooling Screens			✓ ²							
	Replace Spark Plug					✓			✓		
	Replace Air Filter Paper Cartridge						✓ ²				
Replace Fuel Filter								✓			
Change Coolant							✓ ⁸				

- 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 - If equipped with oil filter, change oil every 50 hours.
- 4 - Replace blades more often when mowing in sandy soil.
- 5 - If equipped with adjustable system.
- 6 - Not required if equipped with maintenance-free.
- 7 - Tighten front axle pivot bolt to 35 ft.-lbs. max. Do not overtighten.
- 8 - Have your nearest authorized service center/dealer perform this service.

GENERAL RECOMMENDATIONS

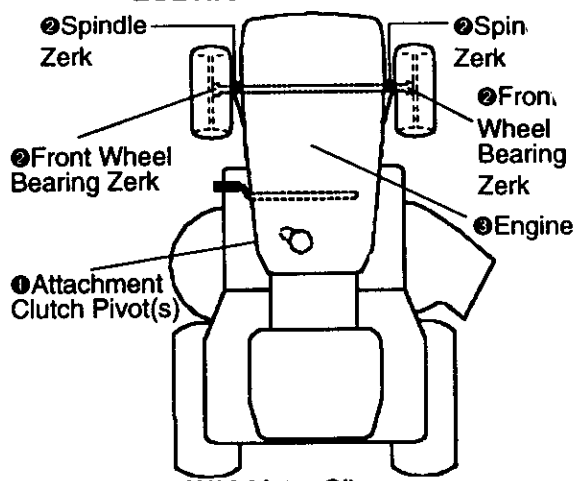
The warranty on this tractor does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain tractor as instructed in this manual. Some adjustments will need to be made periodically to properly maintain your tractor. All adjustments 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

- Check engine oil level.
- Check engine coolant level.
- Check brake operation.
- Check tire pressure.
- Check operator presence and interlock systems for proper operation.
- Check for loose fasteners.

LUBRICATION CHART



- ① SAE 30 or 10W30 Motor Oil
- ② General Purpose Grease
- ③ Refer to Customer Responsibilities "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" on page 5 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 clutch/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.

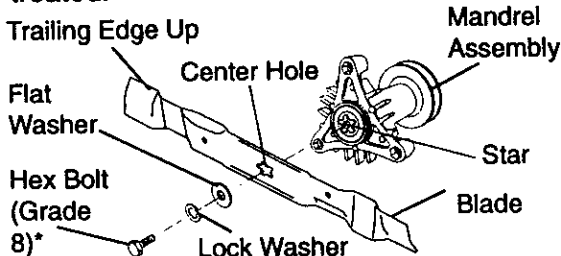
BLADE REMOVAL

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

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

- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten 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.

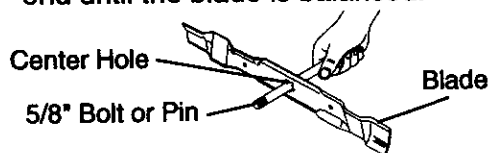
TO SHARPEN BLADE

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



BATTERY

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

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

TO CLEAN BATTERY AND TERMINALS

Corrosion and dirt on the battery and terminals can cause the battery to "leak" power.

- Remove terminal guard.
- Disconnect BLACK battery cable first then RED battery cable and remove battery from tractor.

- Rinse the battery with plain water and dry.
- Clean terminals and battery cable ends with wire brush until bright.
- Coat terminals with grease or petroleum jelly.
- Reinstall battery (See "REPLACING BATTERY" in the SERVICE AND ADJUSTMENTS section of this manual).

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.

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.

- 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

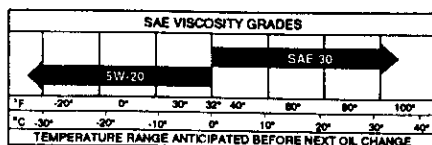
The transaxle was sealed at the factory and fluid maintenance is not required for the life of the transaxle. Should the transaxle ever leak or require servicing, contact your nearest authorized service center/department.

ENGINE

LUBRICATION

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

NOTE: Although multi-viscosity oils (5W-20, 10W-30 etc.) improve starting in cold weather, these multi-viscosity oils with result in increased oil consumption when used above 32°F. Check your engine oil level more frequently to avoid possible engine damage from running low on oil.



Change the oil after every 100 hours of operation or at least once a year if the tractor is not used for 100 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

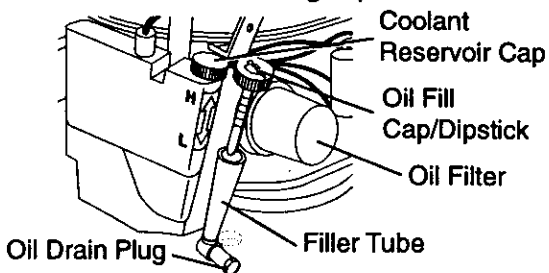
Determine temperature range expected before oil change. All oil must meet API service classification SF, SG, or SH.

- Be sure tractor is on level surface.
- Oil will drain more freely when warm.
- Catch oil in a suitable container.
- Remove oil fill cap/dipstick. Be careful not to allow dirt to enter the engine when changing oil.
- Remove drain plug.
- After oil has drained completely, replace oil drain plug and tighten securely.
- Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PRODUCT SPECIFICATIONS" on page 5 of this manual.
- 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.

CLEAN AIR SCREEN

Air screens 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.

- To access the radiator screen, remove the air intake screen and baffle assembly. Spread the side retaining clips slightly and lift up and away from engine.
- After cleaning the screens, install air intake screen and baffle by pressing down to lock retaining clips.



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.

- Remove hood and grille assembly (See Service and Adjustment section of this manual.)
- Remove air intake screen and baffle assembly from top of engine.
- Remove wing bolts, washers and cover.

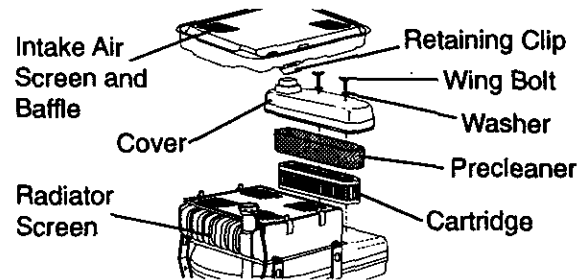
TO SERVICE PRE-CLEANER

- Slide foam pre-cleaner off cartridge.
- Wash it in liquid detergent and water.
- Squeeze it dry in a clean cloth.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.
- If very dirty or damaged, replace pre-cleaner.
- Reinstall pre-cleaner over cartridge.
- Reinstall cover and secure with knob(s).

TO SERVICE CARTRIDGE

- Carefully remove cartridge to prevent debris from entering carburetor.
- Clean cartridge by tapping gently on flat surface. If very dirty or damaged, replace cartridge.
- Reinstall pre-cleaner, cover and secure with washers and wing bolts.
- Replace air intake screen and baffle assembly.
- Replace hood and grille assembly.

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



ENGINE OIL FILTER

Replace the engine oil filter every season or with every second oil change if the tractor is used more than 200 hours in one year.

TO CHANGE ENGINE COOLANT

CAUTION: To avoid burns do not remove the reservoir cap, radiator cap, or try to change the coolant when the engine is still hot. Wait until it cools down. Since the coolant is harmful to the human body, do not use for drinking.

- Remove radiator cap by first turning the cap counterclockwise to the first stop. Push down on the cap, turn counterclockwise to the next stop and lift off the cap.

- Locate the drain in the radiator hose on the oil filter side of the engine.
- Place a suitable container under the drain outlet.
- Using two wrenches, hold the drain to prevent it from twisting and then remove the drain plug.
- After coolant has drained completely, replace drain plug and tighten securely.
- Refill engine with new coolant to the radiator filler neck bottom. Pour slowly so the coolant can expel the air from engine and radiator. For coolant type and approximate capacity see "PRODUCT SPECIFICATIONS" on page 5 of this manual.
- Replace radiator cap. Push down on cap while turning cap clockwise until it reaches the last stop.
- Remove trapped air in the cooling system - start the engine and allow it to warm up thoroughly.
- Check the coolant level (See "CHECK COOLANT LEVEL" in the Operation section of this manual).

MUFFLER

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

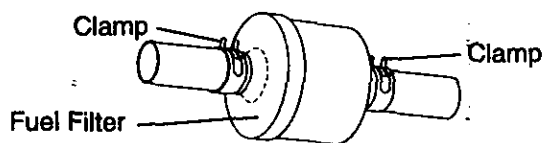
SPARK PLUGS

Replace spark plugs 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" on page 5 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.

- With engine cool, remove filter and plug fuel line sections.
- Place new fuel filter in position in fuel line with arrow pointing towards carburetor.
- Be sure there are no fuel line leaks and clamps are properly positioned.
- 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 to clean your tractor unless the electrical system, muffler, air filter and carburetor are covered to keep water out. Water in engine can result in a shortened engine life.

SERVICE AND ADJUSTMENTS

▲ CAUTION: Before performing any service or adjustments:

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

TRACTOR

TO REMOVE MOWER

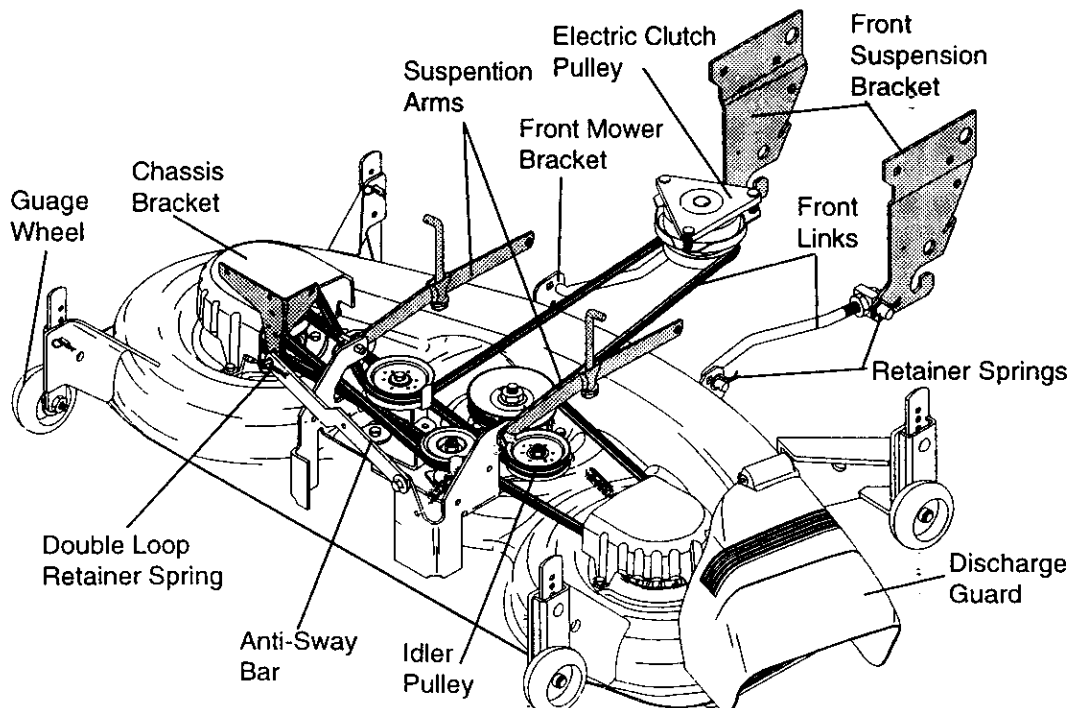
- Place attachment clutch in "DISENGAGED" position.
- Turn height adjustment knob to lowest setting.
- Lower mower to its lowest position.
- Remove retainer spring holding anti-swaybar to chassis bracket and disengage anti-swaybar from bracket.
- Remove retainer springs from suspension arms at deck and disengage arms from deck.
- Raise attachment lift to its highest position.

- Remove two retainer springs from each front link and remove links.
- 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

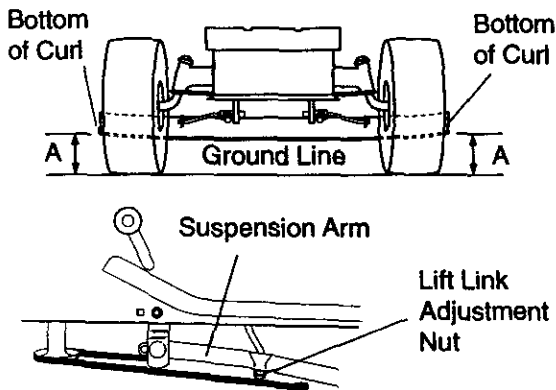
Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PRODUCT SPECIFICATIONS"). If tires are over or underinflated, you will not properly adjust your mower.

SIDE-TO-SIDE ADJUSTMENT

- Raise mower to its highest position.
- Measure height from bottom of deck curl 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.

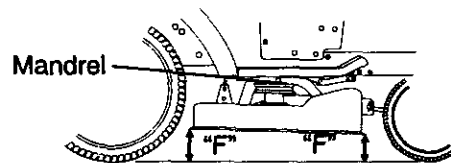
Check adjustment on right side of tractor. Measure distance "F" directly in front of and behind the mandrel at bottom edge of mower housing as shown.

- Before making any necessary adjustments, check that both front 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.

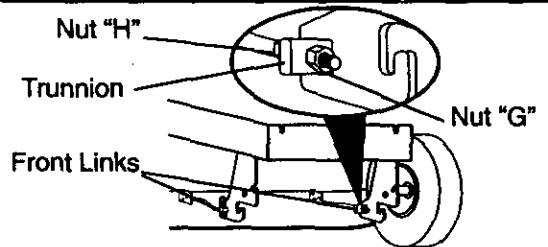
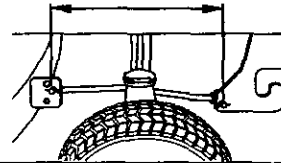
- When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.
- To raise front of mower housing, loosen nut "H" from trunnion on both front links. Tighten nut "G" on both front links an equal number of turns.
- When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.

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

- Recheck side-to-side adjustment.



Both Front Links Should be Equal in Length



TO REPLACE MOWER DRIVE BELT

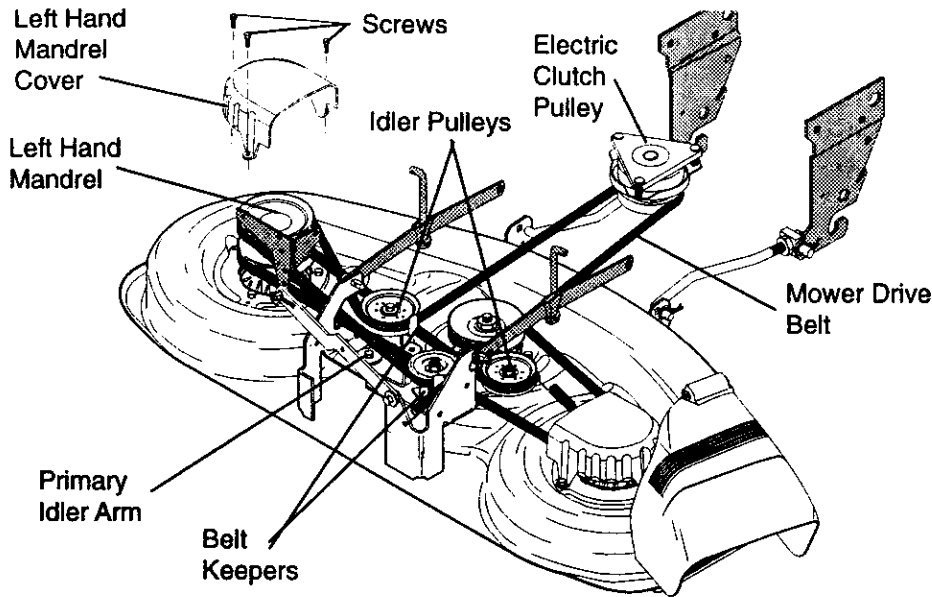
MOWER DRIVE BELT REMOVAL

- Park tractor on a level surface. Engage parking brake.
- Remove screws from left hand mandrel cover and remove cover.
- Roll belt over the top of left hand mandrel pulley.
- Remove belt from electric clutch pulley.
- Remove belt from idler pulleys.
- Remove any dirt or grass clippings which may have accumulated around mandrels and entire upper deck surface.
- Check primary idler arm and two idlers to see that they rotate freely.
- Be sure spring is securely hooked to primary idler arm and bolt in mower housing.

MOWER DRIVE BELT INSTALLATION

- Install belt in both idlers. Make sure belt is in both belt keepers at the idlers as shown.
- Install new belt onto electric clutch pulley.

- Roll belt into upper groove of left hand mandrel pulley.
- Carefully check belt routing making sure belt is in the grooves correctly and inside belt keepers.
- Reassemble left hand mandrel cover.



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).
- Remove screws from right hand mandrel cover and remove cover. Unhook spring from bolt on mower housing.
- Carefully roll belt off right hand mandrel pulley.
- Remove belt from center mandrel pulley, idler pulley, and left hand mandrel pulley.
- Remove any dirt or grass which may have accumulated around mandrels and entire upper deck surface.
- Check secondary idler arm and idler to see that they rotate freely.
- Be sure spring is hooked in secondary idler arm and sway-bar bracket.

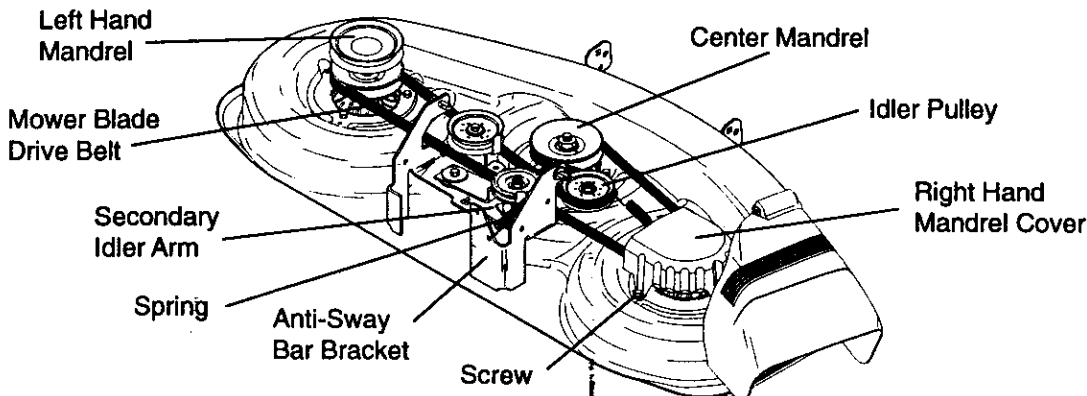
- Install new belt in lower groove of left hand mandrel pulley, idler pulley, and center mandrel pulley as shown.
- Roll belt over right hand mandrel pulley. Make sure belt is in all grooves properly.
- Reconnect spring to bolt in mower housing and reinstall right hand mandrel cover.
- Reinstall mower to tractor (See "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual).
- Reassemble mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).

TO ADJUST BRAKE

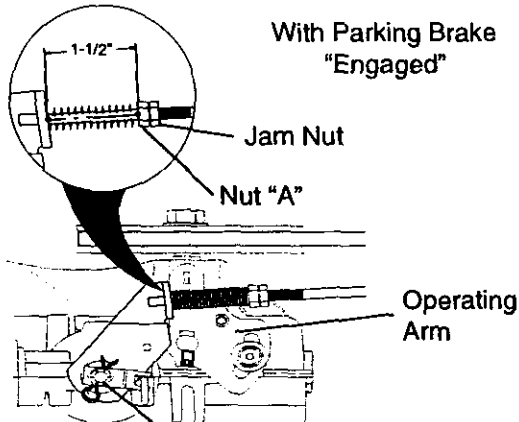
Your tractor is equipped with an adjustable brake system which is mounted on the side of the transaxle.

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted.

- Depress clutch/brake pedal and engage parking brake.



- Measure distance between brake operating arm and nut "A" on brake rod.
- If distance is other than 1-1/2", loosen jam nut and turn nut "A" until distance becomes 1-1/2". Retighten jam nut against nut "A".
- Road test tractor for proper stopping distance as stated above. Readjust if necessary. If stopping distance is still greater than six (6) feet in highest gear, further maintenance is necessary. Contact your nearest authorized service center/department.

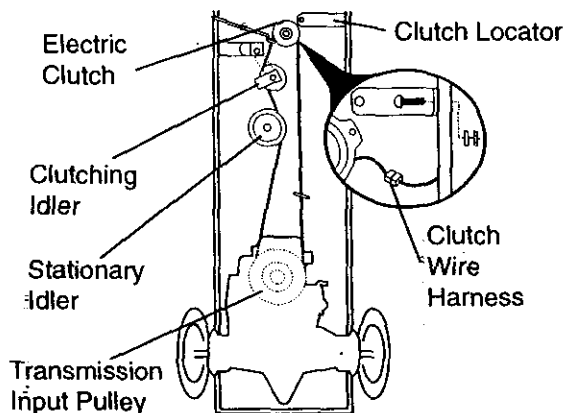


Do Not touch this nut. If further brake adjustment is necessary contact your nearest authorized service center/department

TO REPLACE MOTION DRIVE BELT

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

- Remove mower (See "TO REMOVE MOWER" in this section of this manual.)
- Disconnect clutch wire harness.
- Remove clutch locator.
- Remove belt from stationary idler and clutching idler.
- Pull belt slack toward rear of tractor. Carefully remove belt upwards from transmission input pulley and over cooling fan blades.



- Pull belt toward front of tractor and remove downwards from around electric clutch.
- Install new belt by reversing above procedure.

TRANSAXLE MOTION CONTROL LEVER NEUTRAL ADJUSTMENT

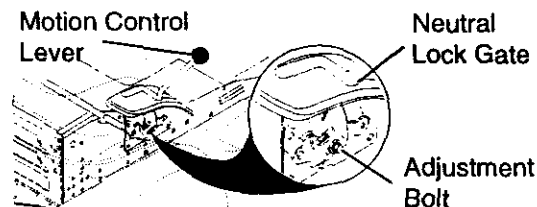
The motion control lever has been preset at the factory and adjustment should not be necessary.

- Loosen adjustment bolt in front of the right rear wheel, and lightly tighten.
- Start engine and move motion control lever until tractor does not move forward or backward.
- Hold motion control lever in that position and turn engine off.
- While holding motion control lever in place, loosen the adjustment bolt.
- Move motion control lever to the neutral (N) (lock gate) position.
- Tighten adjustment bolt securely.

NOTE: If additional clearance is needed to get to adjustment bolt, move mower deck height to the lowest position.

After above adjustment is made, if the tractor still creeps forward or backward while motion control lever is in neutral position, follow these steps:

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



TRANSMISSION REMOVAL/REPLACEMENT

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

TO ADJUST STEERING WHEEL ALIGNMENT

If steering wheel crossbars are not horizontal (left to right) when wheels are positioned straight forward, remove steering wheel and reassemble per instructions in the Assembly section of this manual.

FRONT WHEEL TOE-IN ADJUSTMENT

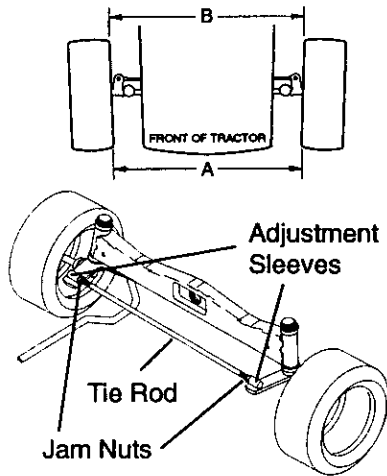
Front wheel toe-in is required for proper steering operation. Toe-in was set at the factory and adjustment should not be necessary. If parts in the front axle or steering mechanism have been replaced or damaged, check toe-in and adjust if necessary.

TO CHECK TOE-IN

- Position front wheels straight ahead.
- Measure distance between wheels at front and rear of tires (dimensions "A" and "B").
- Front dimension "A" should be 1/8" to 1/4" less than rear dimension "B".

TO ADJUST TOE-IN

- Loosen jam nuts at adjustment sleeves on tie rod.
- Adjust tie rod until dimension "A" is 1/8" to 1/4" less than dimension "B".
- Tighten jam nuts securely.

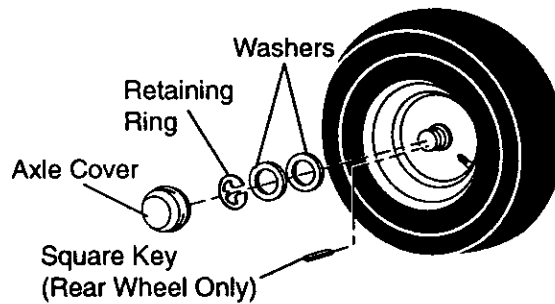


FRONT WHEEL CAMBER

The front wheel camber is not adjustable on your tractor. If damage has occurred to affect the front wheel camber, contact your nearest authorized service center/department.

TO REMOVE WHEEL FOR REPAIRS

- Block up axle securely.
- Remove axle cover, retaining ring and washers to allow wheel removal (rear wheel contains a square key - Do not lose).
- Repair tire and reassemble.
- On rear wheels only: align grooves in rear wheel hub and axle. Insert square key.
- Replace washers and snap retaining ring securely in axle groove.
- Replace axle cover



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

TO START ENGINE WITH A WEAK BATTERY

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

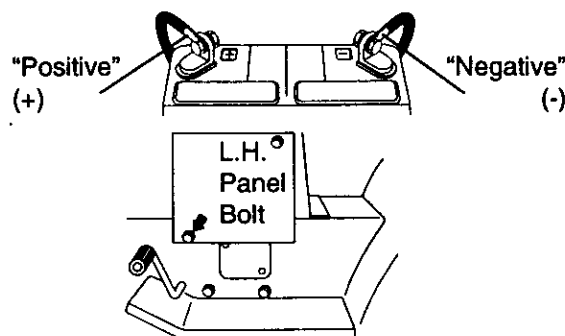
If your battery is too weak to start the engine, it should be recharged. (See "BATTERY" in the MAINTENANCE section of this manual).

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

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

TO ATTACH JUMPER CABLES -

- Connect each end of the RED cable to the POSITIVE (+) terminal of each battery, taking care not to short against chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal of fully charged battery.
- Connect the other end of the BLACK cable to good CHASSIS GROUND, away from fuel tank and battery.



TO REMOVE CABLES, REVERSE ORDER -

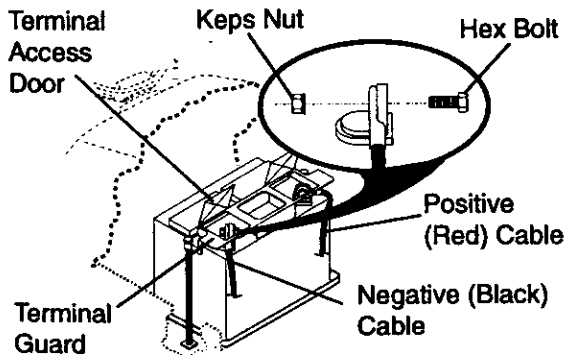
- BLACK cable first from chassis and then from the fully charged battery.
- RED cable last from both batteries.

REPLACING BATTERY

▲CAUTION: 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.

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



TO REPLACE HEADLIGHT BULB

- Raise hood.
- Pull bulb holder out of the hole in the backside of the grill.
- Replace bulb in holder and push bulb holder securely back into the hole in the backside of the grill.
- 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 of this manual.

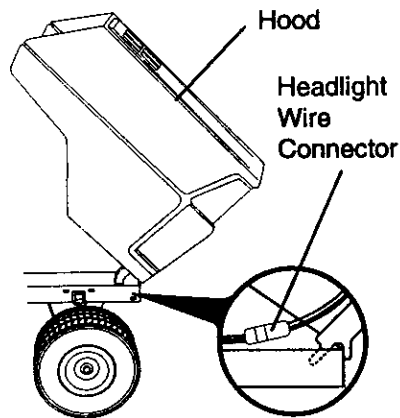
TO REPLACE FUSE

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

formed by an authorized engine manufacturer's service outlet.

TO REMOVE HOOD AND GRILL ASSEMBLY

- Raise hood.
- Unsnap headlight wire connector.
- Stand in front of tractor. Grasp hood at sides, tilt toward engine and lift off of tractor.
- To replace, reverse above procedure.



TO ADJUST THROTTLE CONTROL CABLE

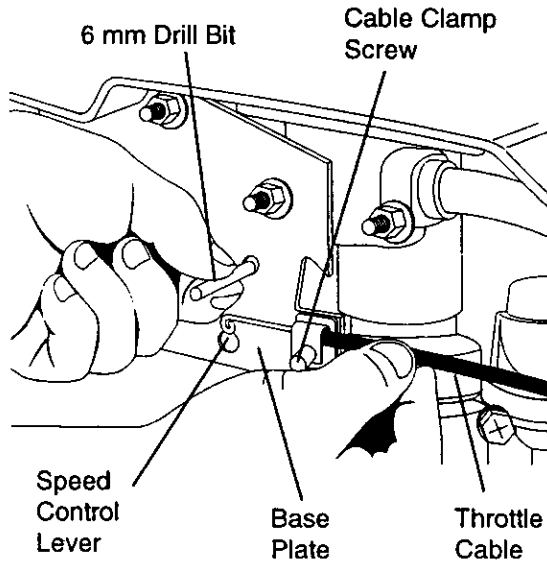
The throttle control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:

- With engine not running, move throttle control lever from slow to choke position. Slowly move lever from choke to fast position.
- Check to see if hole in speed control lever and hole in base plate are aligned.
- If holes are not aligned, loosen cable clamp screw and align the holes by inserting a 6 mm dia. (15/64 in.) drill bit through both holes.
- Pull throttle cable to remove slack and tighten cable clamp screw. Remove drill bit.

TO ADJUST CARBURETOR

The carburetor has been preset at the factory and adjustment should not be necessary. A cap or stop plate is installed on the mixture screws which does not allow adjustment. If your engine does not run properly due to suspected carburetor problems, take your tractor to an authorized service center for repair or adjustment.

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 authorized service center/department, which has proper equipment and experience to make any necessary adjustments.



STORAGE

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

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

TRACTOR

Remove mower from tractor for winter storage. This will allow you to clean it thoroughly. Remove all dirt, grease, leaves, etc. Store in a clean, dry area.

- Clean entire tractor (See "CLEANING" in the Maintenance section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- Lubricate as shown in the Maintenance section of this manual.
- Be sure that all nuts, bolts and screws are securely fastened. Inspect moving parts for damage, breakage and wear. Replace if necessary.
- 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 filter, fuel hose, or tank during storage.

Also, experience indicates that 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.

- Drain the fuel tank.
- 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)

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

OTHER

- Do not store gasoline from one season to another.
- Replace your gasoline can if it 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 cause your tractor to rust.

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

TROUBLESHOOTING CHART

PROBLEM	CAUSE	CORRECTION
Will not start	<ul style="list-style-type: none"> • Out of fuel. • Engine not "CHOKED" properly. • Engine flooded. • Bad spark plug. • Dirty air filter. • Dirty fuel filter. • Water in fuel. • Loose or damaged wiring. • Carburetor out of adjustment. • Engine valves out of adjustment. 	<ul style="list-style-type: none"> • Fill fuel tank. • See "TO START ENGINE" in Operation section. • Wait several minutes before attempting to start. • Replace spark plug. • Clean/replace air filter. • Replace fuel filter. • Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. • Check all wiring. • See "To Adjust Carburetor" in Service and Adjustments section. • Contact an authorized service center.
Hard to start	<ul style="list-style-type: none"> • Dirty air filter. • Bad spark plug. • Weak or dead battery. • Dirty fuel filter. • Stale or dirty fuel. • Loose or damaged wiring. • Carburetor out of adjustment. • Engine valves out of adjustment. 	<ul style="list-style-type: none"> • Clean/replace air filter. • Replace spark plug. • Recharge or replace battery. • Replace fuel filter. • Drain fuel tank and refill with fresh gasoline. • Check all wiring. • See "To Adjust Carburetor" in Service and Adjustments section. • Contact an authorized service center.
Engine will not turn over	<ul style="list-style-type: none"> • Clutch/brake pedal not depressed. • Attachment clutch is engaged. • Weak or dead battery. • Blown fuse. • Corroded battery terminals. • Loose or damaged wiring. • Faulty ignition switch. • Faulty solenoid or starter. • Faulty operator presence switch(es). 	<ul style="list-style-type: none"> • Depress clutch/brake pedal. • Disengage attachment clutch. • Recharge or replace battery. • Replace fuse. • Clean battery terminals. • Check all wiring. • Check/replace ignition switch. • Check/replace solenoid or starter. • Contact an authorized service center.
Engine clicks but will not start	<ul style="list-style-type: none"> • Weak or dead battery. • Corroded battery terminals. • Loose or damaged wiring. • Faulty solenoid or starter. 	<ul style="list-style-type: none"> • Recharge or replace battery. • Clean battery terminals. • Check all wiring. • Check/replace solenoid or starter.
Loss of power	<ul style="list-style-type: none"> • Cutting too much grass/too fast. • Throttle in "CHOKE" position. • Build-up of grass, leaves and trash under mower. • Dirty air filter. • Low oil level/dirty oil. 	<ul style="list-style-type: none"> • Set in "Higher Cut" position/reduce speed. • Adjust throttle control. • Clean underside of mower housing. • Clean/replace air filter. • Check oil level/change oil.

TROUBLESHOOTING CHART

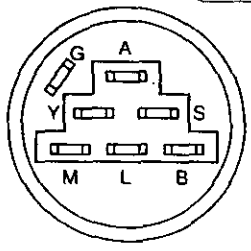
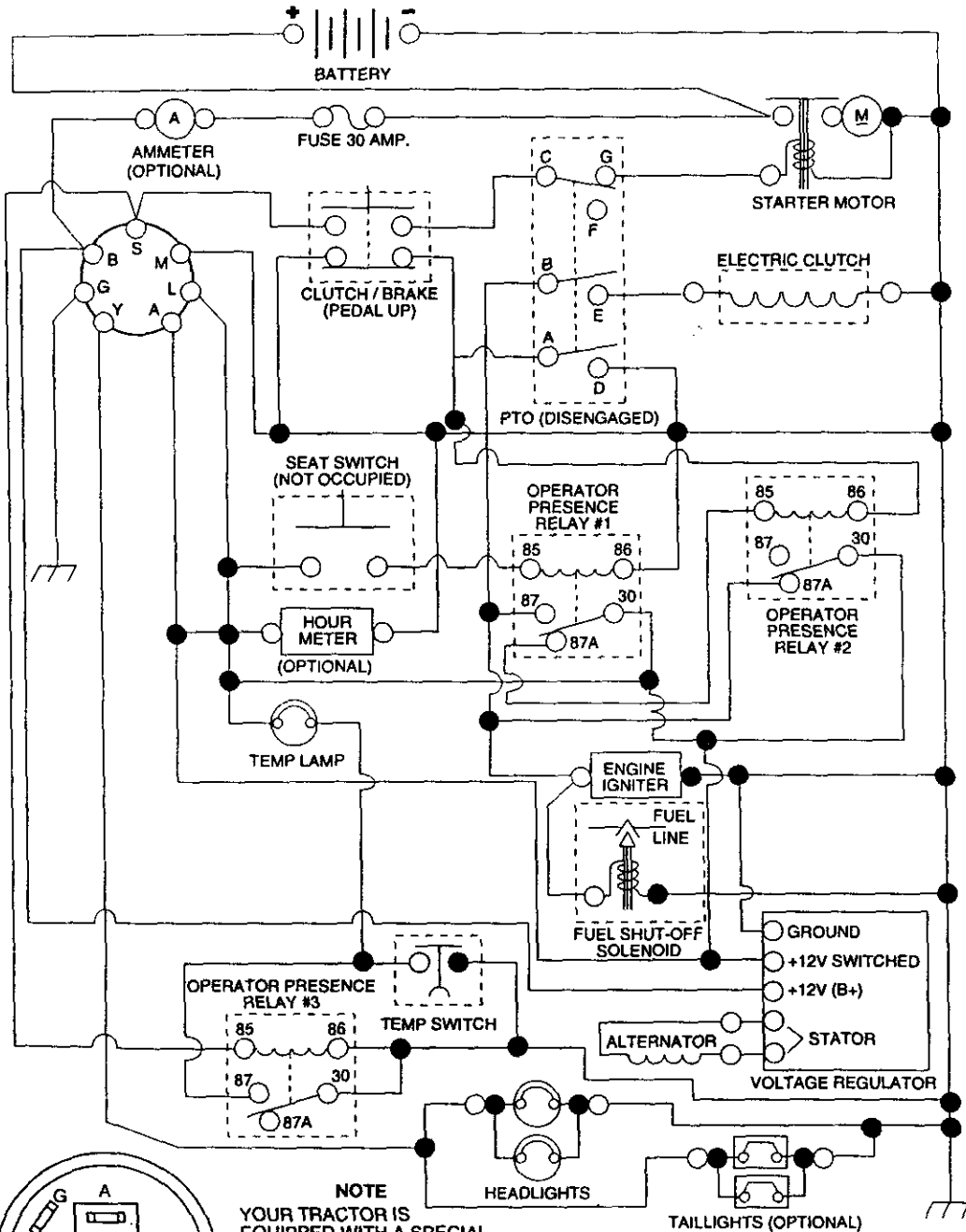
PROBLEM	CAUSE	CORRECTION
Loss of Power (con't)	<ul style="list-style-type: none"> Faulty spark plug. Dirty fuel filter. Stale or dirty fuel. Water in fuel. Spark plug wire loose. Dirty engine air screen/fins. Dirty/clogged muffler. Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. 	<ul style="list-style-type: none"> Clean and regap or change spark plug. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. Connect and tighten spark plug wire. Clean engine air screen/fins. Clean/replace muffler. Check all wiring. See "To Adjust Carburetor" in Service and Adjustments section. Contact an authorized service center.
Excessive vibration	<ul style="list-style-type: none"> Worn, bent or loose blade. Bent blade mandrel. Loose/damaged part(s). 	<ul style="list-style-type: none"> Replace blade. Tighten blade bolt. Replace blade mandrel. Tighten loose part(s). Replace damaged parts.
Engine continues to run when operator leaves seat with attachment clutch engaged	<ul style="list-style-type: none"> Faulty operator-safety presence control system. 	<ul style="list-style-type: none"> Check wiring, switches and connections. If not corrected, contact an authorized service center/department.
Engine Overheats	<ul style="list-style-type: none"> Air cleaner element plugged. Engine air intake screen plugged. Engine oil low. Engine operated too long at slow idle speed. Coolant low. 	<ul style="list-style-type: none"> Clean or replace element. Clean air intake screen. Add oil. Operate engine with throttle level in "FAST" position. Add coolant.
Poor cut - uneven	<ul style="list-style-type: none"> Worn, bent or loose blade. Mower deck not level. Buildup of grass, leaves, and trash under mower. Bent blade mandrel. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. 	<ul style="list-style-type: none"> Replace blade. Tighten blade bolt. Level mower deck. Clean underside of mower housing. Replace blade mandrel. Clean around mandrels to open vent holes.
Mower blades will not rotate	<ul style="list-style-type: none"> Obstruction in clutch mechanism. Worn/damaged mower drive belt. Frozen idler pulley. Frozen blade mandrel. 	<ul style="list-style-type: none"> Remove obstruction. Replace mower drive belt. Replace idler pulley. Replace blade mandrel.
Poor grass discharge	<ul style="list-style-type: none"> Engine speed too slow. Travel speed too fast. Wet grass. 	<ul style="list-style-type: none"> Place throttle control in "FAST" position. Shift to slower speed. Allow grass to dry before mowing.

TROUBLESHOOTING CHART

PROBLEM	CAUSE	CORRECTION
Poor grass discharge (cont.)	<ul style="list-style-type: none"> Mower deck not level. Low/uneven tire air pressure. Worn, bent or loose blade. Buildup of grass, leaves and trash under mower. Mower drive belt worn. Blades improperly installed. Improper blades used. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. 	<ul style="list-style-type: none"> Level mower deck. Check tires for proper air pressure. Replace/sharpen blade. Tighten blade bolt. Clean underside of mower housing. Replace mower drive belt. Reinstall blades sharp edge down. Replace with blades listed in this manual. Clean around mandrels to open vent holes.
Headlight(s) not working (if so equipped)	<ul style="list-style-type: none"> Switch is "OFF". Bulb(s) burned out. Faulty light switch. Loose or damaged wiring. Blown fuse. 	<ul style="list-style-type: none"> Turn switch "ON". Replace bulb(s). Check/replace light switch. Check wiring and connections. Replace fuse.
Battery will not charge	<ul style="list-style-type: none"> Bad battery cell(s). Poor cable connections. Faulty regulator (if so equipped). Faulty alternator. 	<ul style="list-style-type: none"> Replace battery. Check/clean all connections. Replace regulator. Replace alternator.
Loss of drive	<ul style="list-style-type: none"> Freewheel control in "disengaged" position. Motion drive belt worn, damaged or broken. Air trapped in transmission during shipment or servicing. 	<ul style="list-style-type: none"> Place freewheel control in "engaged" position. Replace motion drive belt. Purge transmission.
Engine "backfire when turning engine "OFF"	<ul style="list-style-type: none"> Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine. 	<ul style="list-style-type: none"> Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.

TRACTOR -- MODEL NUMBER 917.273421

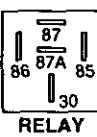
SCHEMATIC



IGNITION SWITCH

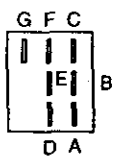
POSITION	CIRCUIT	"MAKE"
OFF	G + M + L	NONE
RUN/LIGHT	B + L	A + Y
RUN	B + L	NONE
START	B + L + S	NONE

NOTE
 YOUR TRACTOR IS EQUIPPED WITH A SPECIAL ALTERNATOR SYSTEM. THE LIGHTS ARE NOT CONNECTED TO THE BATTERY, BUT HAVE THEIR OWN ELECTRICAL SOURCE. BECAUSE OF THIS, THE BRIGHTNESS OF THE LIGHTS WILL CHANGE WITH ENGINE SPEED. AT IDLE THE LIGHTS WILL DIM. AS THE ENGINE IS SPEEDED UP, THE LIGHTS WILL BECOME THEIR BRIGHTEST.



RELAY

PTO SWITCH	
POSITION	CIRCUIT
OFF	C + G, B + H
ON	C + F, B + E, A + D

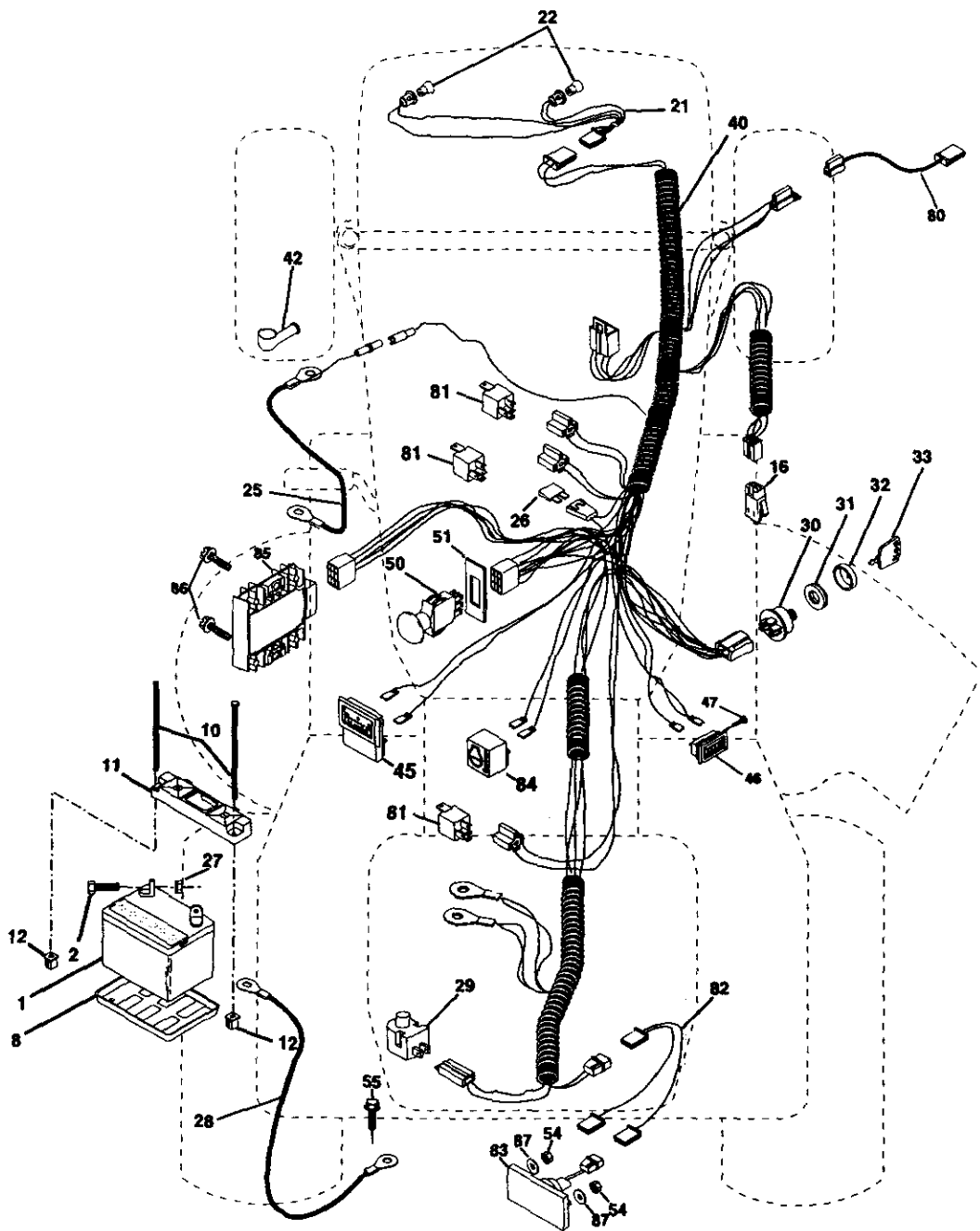


WIRING INSULATED CLIPS
 NOTE: IF WIRING INSULATED CLIPS WERE REMOVED FOR SERVICING OF UNIT, THEY SHOULD BE REPLACED TO PROPERLY SECURE YOUR WIRING.

REPAIR PARTS

TRACTOR - - MODEL NUMBER 917.273421

ELECTRICAL



TRACTOR - - MODEL NUMBER 917.273421

ELECTRICAL

KEY NO.	PART NO.	DESCRIPTION
1	145425	Battery 12 Volt 40 amp
2	74760412	Bolt Hex Hd 1/4-20unc X 3/4
8	7603J	Tray Battery 7 80 X 5 25 Blk
10	145211	Bolt RdHd Sqnk 1/4-20 x 7-1/2
11	150109	Holddown Battery Front Mount
12	145769	Nut Push Nylon 1/4 Battery
16	153664	Switch Interlock Push-In
21	136850	Harness Asm Light W/4152j
22	4152J	Bulb Light #1156
25	161003	Cable Battery 6 Ga Kawa red w/16 wire
26	108824X	Fuse 30 AMP Auto Green
27	73510400	Nut Keps Hex 1/4-20 Unc
28	145491	Cable Battery 6 Ga 21" black
29	160784	Switch Plunger (OPC)
30	140301	Switch Ign 4 pos Delta Snap-in
31	124211X	Nut Ignition
32	141226	Cover Sw Key Blk 1 25 Text SLT
33	109310X	Key Ign Molded Craftsman
40	160735	Harness Ign Dash HI Amm
42	154336	Cover Terminal Rd High Temp
45	122822X	Ammeter Rectangular
46	110940X	Hourmeter
47	17011008	Scrw, Pan Hd Cross Recess #10-24 x 1/2
50	154963	PTO Switch
51	140405	Retainer Ring PTO Switch
54	73951000	Nut Keps #10-32 Unf
55	17490508	Screw Thdrol 5/16-18 x 1/2 Tyt
80	146685	EVX Clutch Harness
81	109748X	Relay Asm.
82	159687	Light Marker Harnesss
83	159775	Asm. Light Marker
84	160630	Light Temp Water
85	160890	Regulator Rectifier Kawasaki
86	17670416	Screw Thdrol 1/4-20 UNC x 1
87	19070818	Washer 7/32 x 1/2 x 18 Ga.

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

TRACTOR - - MODEL NUMBER 917.273421

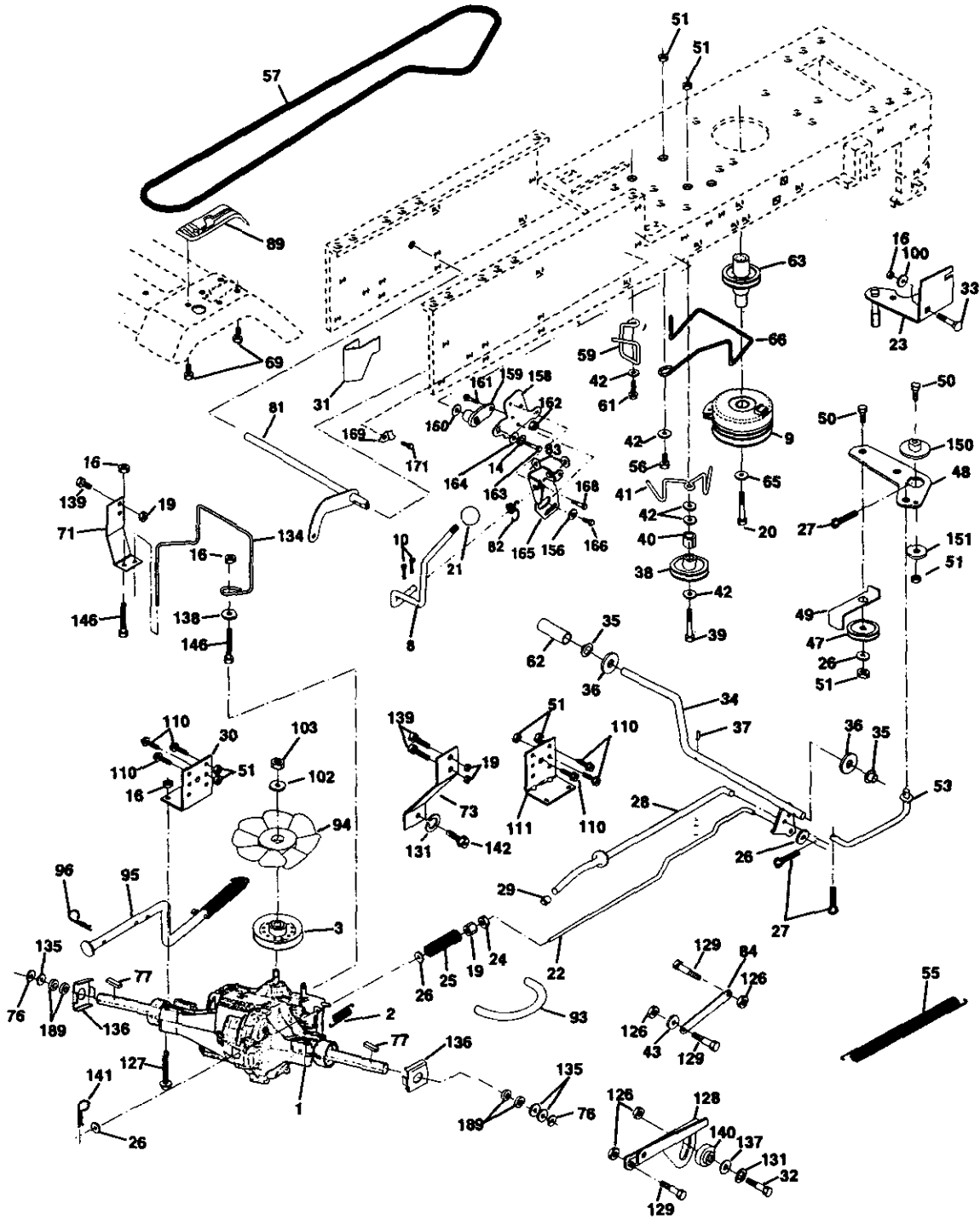
CHASSIS AND ENCLOSURES

KEY PART			KEY PART		
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	165480	Chassis	86	136670X558	Assy Panel Side RH
2	140356	Draw Bar	87	136671X558	Assy Panel Side LH
3	17490612	Screw Thdrol. 3/8-16 x 3/4 Ty-tt	90	STD551025	Washer 9/32 x 3/4 x16 Ga.
6	155923	Saddle	108	STD523707	Bolt Fin Hex 3/8-16 x 3/4
8	126471X	Clip Insulated	109	141461	Bracket Extension Bumper
9	145203	Dashboard	110	143679	Plug Plastic
10	STD533710	Bolt Carriage 3/8-16 x 1	113	150300	Bumper Asm.
11	159954	Panel Dashboard LH	114	145349	Bracket Support Dashboard
13	159953	Panel Dashboard RH	115	121794X	Cover Access
17	161053X558	Hood Asm Pnt Srs YTGT Ms 558	117	144283	Washer Serrated
			119	19092016	Washer 9/32 X 1-1/4 X 16 Ga.
23	124028X	Bushing Snap Nyl Blk Fuel Line	120	137271	Rivet Ratchet Female
24	STD523710	Bolt Hex 3/8-16 x 1 Gr. 5	121	137269	Washer Nylon
25	19131312	Washer 13/32 x 13/16 x 12 Ga	122	137270	Rivet Ratchet Male
26	STD541437	Nut Lock Hx w/Wsh 3/8-16 UNC	123	157105	Hood Pivot Bracket LH
			124	157107	Hood Pivot Bracket RH
28	136373X428	Grille YTGT 1-Pc	125	74180412	Screw Machine Thrd 1/4-20 UNC x 3/4
29	136374X599	Lens Grille Bar			Bracket Suspension Front
30	167288X558	Fender	140	158418	Screw Thdrol 3/8-16 x 1-1/4
31	137113	Bracket Fender	148	17490620	Fenderskirt, RH
33	145244X558	Footrest LH	150	165924	Fenderskirt, LH
34	145243X558	Footrest RH	151	165925	Clip,Fenderskirt
35	STD533707	Bolt Rdhd Sht Sqnk 3/8-16 x 3/4	--	52921	Washer YTGT 13/32 x 1-3/8 x 3 Ga.
			153	19132203	Cupholder YTGT Black
36	108067X	Nut Pal	159	163975X428	Screw HwHd Hi-Lo #13-16 x 3/4
38	139886	Bracket Assy Pivot LH	166	164863	Bolt Hex WshHd Wzlk 1/4-20 x 3/4
39	139887	Bracket Assy Pivot RH	197	71210412	Plug Btn Blk .359 Dia Ch/Inf
44	140675	Strip Asm Fender	--	5479J	Plug Dash Blk .500 Dia E Lift
50	137304	Rod Support Hood 1-Pc Zinc	--	8022J	
59	110436X	Bushing Snap Split			
64	150272	Dash Lower			
66	160627X010	Plate			
71	73640400	Nut Keps Blk Hex 1/4-20 UNC			
74	STD541437	Nut Crownlock 3/8-16 UNC			

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

TRACTOR -- MODEL NUMBER 917.273421

GROUND DRIVE



TRACTOR - - MODEL NUMBER 917.273421

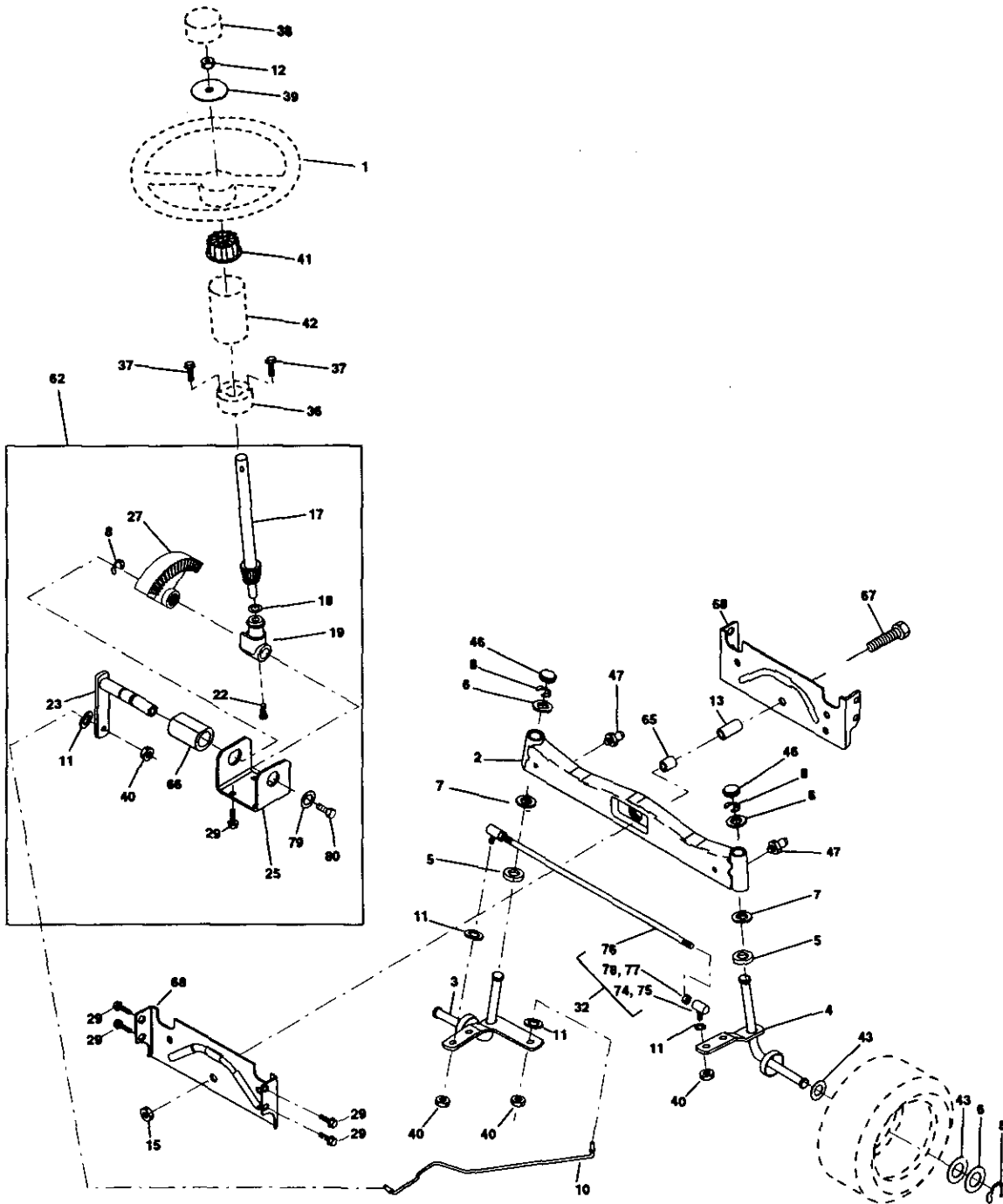
GROUND DRIVE

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	-----	Transaxle (See Breakdown) Hydro Gear Model Number 315-3000	76	12000053	E-Ring
2	142431	Spring, Return, Brake	77	9396E	Key, Square
3	143995	Pulley, Transaxle	81	165598	Shaft Asm Cross Tapered
8	166020	Rod Shift Fender Adjust YT	82	123782X	Spring Torsion T/A
9	160889	Clutch, Electric EVX	83	19171216	Washer 17/32 x 3/4 x 16 Ga.
10	76020416	Pin Cotter 1/8 x 1 CAD	84	165926	Link Transaxle
14	10040400	Washer Lock Hvy Helical	89	164892X428	Console, Shift
16	73800500	Nut Lock Hex W/Ins. 5/16-18 Unc	93	142564	Line Fuel Hydro 4"
19	73800600	Nut Lock Hex W/Wsh 3/8-16 Unc	94	140462	Fan, Hydro 7"
20	M747810110	Bolt, Hex	95	158508	Control Bypass Hydro 20" Tires
21	160684	Knob, Shifter Soft-Touch	96	4497H	Retainer Spring 1" Zinc/Cad
22	158274	Rod, Brake Hydro	100	19111216	Washer 11/32 x 3/4 x 16 Ga.
23	154798	Bracket Assy, Clutch, Mounting EVX	102	141322	Washer Bellville .501D x 1.50D
24	73350600	Nut, Hex Jam 3/8-16 Unc	103	73940800	Nut Hex Jam Toplock 1/4-20 Unf
25	106888X	Spring, Brake Rod	110	74760612	Bolt Fin Hex 3/8-16 UNC x 3/4
26	19131316	Washer	111	123776X	Bracket Transaxle RH
27	76020412	Pin Cotter 1/8 x 3/4 CAD.	126	1685H	Nut Lock 5/16-18 NC Thd
28	145204	Rod, Parking Brake	127	74490548	Bolt Hex Flg Hd 5/16-18 UNC x 3 Gr. 5
29	124236X	Cap, Parking Brake	128	158284	Bracket Neutral Adjust HG-3000
30	123780X	Bracket, Transaxle	129	105529X	Bolt Shoulder 5/16-18 UNC Blk
31	123791X	Transaxle Y/GT	131	10140500	Washer Lock 5/16 NDM PLTD
32	74760512	Bolt Hex Hd 5/16-18 Unc x 3/4	134	158278	Keeper Belt RH Hydro 3000
33	72140506	Bolt, Carriage	135	123800X	Washer 1-1/32 x 1-5/8 x 16 Ga.
34	155071	Shaft, Foot Pedal	136	163168	Washer Axle Hydro 3000
35	120183X	Bearing, Nylon	137	19111212	Washer 11/32 x 3/4 x 12 Ga.
36	19211616	Washer	138	19112016	Washer 11/32 x 1.25 x 16 Ga.
37	1572H	Pin, Roll	139	74780612	Bolt Fin Hex 3/8-16 UNC x 3/4 Grade 5
38	131494	Pulley, Idler, Flat	140	4475J	Bushing Pinion Sector
39	74760644	Bolt	141	159197	Pin Hitch 1-3/16 Zinc Yellow
40	4470J	Spacer, Split	142	74330516	Bolt 5/16 x 24 x1
41	165838	Keeper, Belt Idler	146	74490536	Bolt, Hex Flghd 5/16-18 x 2-1/4
42	19131312	Washer 13/32 x 13/16 x 12 Gauge	150	165850	Bushing Bellcrank Grd Drive
43	19111012	Washer 11/32 x 5/8 x 12 Ga.	151	19133210	Washer 13/32 x 2 x 10 Ga.
47	127783	Pulley, Idler, V-Groove	156	166002	Washer Srted 5/16 ID X 1 X .125
48	154407	Bellcrank Clutch Grnd Drv Stl	158	165589	Bracket Shift Mount
49	123205X	Retainer, Belt	159	165494	Hub Tapered Flange Shift LT
50	74760624	Bolt	160	19292016	Washer 29/32 x 1-1/4 x 16 Ga.
51	73680600	Nut Crownlock 3/8-16 UNC	161	72140406	Bolt Rdhd Sqnk 1/4-20 x 3/4 Gr. 5
53	105710X	Link, Clutch	162	73680400	Nut Crownlock 1/4-20 Unc
55	105709X	Spring, Return, Clutch	163	74780416	Bolt Hex Fin 1/4-20 Unc x 1 Gr. 5
56	74760620	Bolt Hex 3/8-16 x 1-1/4	164	19091010	Washer 5/8 x .281 x 10 Ga.
57	161741	V-Belt, Ground Drive	165	165623	Bracket Pivot Lever
59	140312	Keeper, Center Span	166	166880	Screw 5/16-18 x 5/8
61	17490612	Screw Thdrol. 3/8-16 x 3/4 Ty. TT	168	165492	Bolt Shoulder 5/16-18 x .561
62	123533X	Cover, Pedal	169	165581	Plate Fastening LT
63	161401	Pulley, Engine	171	17490608	Screw Thdrol 3/8-16 x 1/2 TY- TT
65	10040700	Washer	189	160849	Washer Spacer Axle HG-3000
66	161488	Keeper Belt Engine			
69	142432	Screw			
71	158283	Strap Torque Lh Hydro			
73	158282	Strap Torque Rh Hydro			

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

TRACTOR -- MODEL NUMBER 917.273421

STEERING ASSEMBLY



TRACTOR - - MODEL NUMBER 917.273421

STEERING ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
1	159944X428	Wheel Steering
2	137094	Axle Asm Fr LT
3	157482	Spindle Asm LH
4	157481	Spindle Asm RH
5	6266H	Bearing Race Thrust Harden
6	121748X	Washer 25/32 X 1-5/8 X 16ga
8	12000029	Ring Klip #t5304-75
10	154432	Link Drag Sol Ball Jt 20 064
11	STD551137	Washer Lock Hvy Hlcl Spr 3/8
12	73940800	Nut Hex Fin 3/8-24 Unf
13	154779	Bearing Axle
15	73901000	Nut Lock Flange 5/8-11 Unc
17	156543	Shaft Asm Strg
18	57079	Washer Thrust 515x 750x 033
19	160395	Support Shaft
22	165857	Screw Hex WshHd Torx
23	165851	Shaft Asm Pittman
25	154406	Bracket Steering
27	136874	Gear Sector 22 Teeth
29	17490612	Screw Thdrol 3/8-16x3/4 Ty-tt
32	137347	Rod Asm Tie Ball
36	145207	Bushing Strg Blk 3/4 angle
37	152927	Screw TT #10-32 x 5 x 3/8 Flange
38	159946X428	Cap Wheel Steer
40	7810H	Nut Lock
41	159945	Adapter Wheel Strg
42	160626	Boot Steering Shaft
43	121749X	Washer 25/32 X 1-1/4 X 16 Ga
46	121232X	Cap Spindle Fr Top Blk
47	6855M	Fitting Grease
62	167905	Kit Steer Asm. Svc
65	154780	Spacer Axle
66	154404	Bearing Arm Pittman
67	74781044	Bolt, Fin Hex 5/8-11 UNC x 2-3/4
68	154429	Axle, Brace
72	19182411	Washer 9/16 ID x 1-1/2 Od
74	109850X	Joint Asm Ball Rh
75	1009851X	Joint Asm. Ball Lh
76	137156	Rod Tie Ball J Adjust
77	73700600	Nut Hex Jam 3/8-24 Unf Lh
78	73360600	Nut Hex Jam 3/8-24 Unf
79	19132012	Washer 13/32 x 1-1/4 x 12 Ga.
80	74950612	Bolt Hex Nylon 3/8-16 x 3/4

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

TRACTOR - - MODEL NUMBER 917.273421

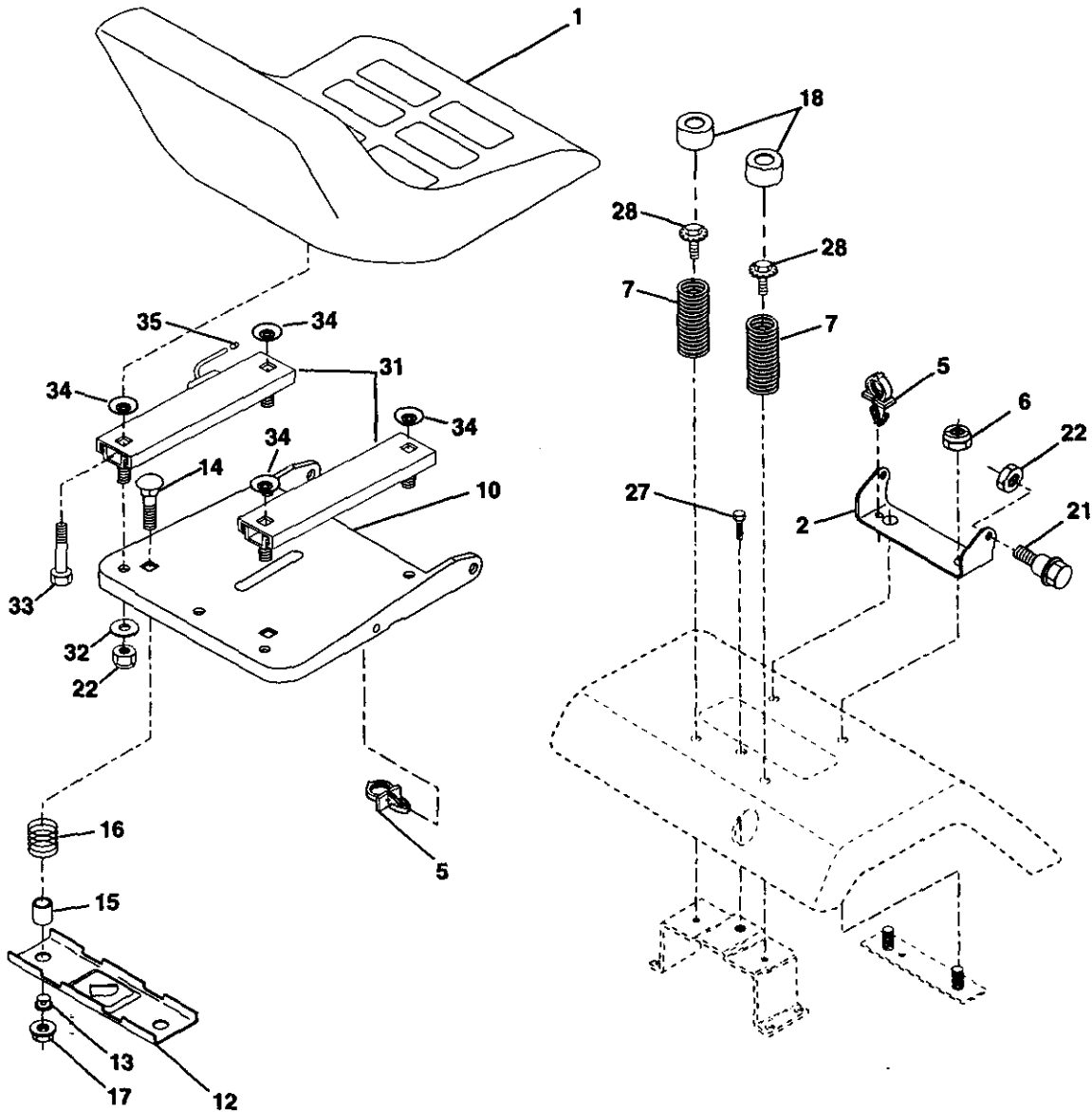
ENGINE

KEY NO.	PART NO.	DESCRIPTION
1	160588	Control Throt RH Blk Pdl
2	17720410	Screw Hex Thd Cut 1/4-20x5/8 T
3	-----	Engine (See Breakdown) Kawasaki Model No. FD59OV
4	149723	Muffler Asm Twin Lo-Tone
5	156796	Exhaust Asm RH 18 HP Vert
6	156799	Exhaust Asm LH 18 HP Vert
8	150176	Bolt 5/16-18 Unc x 3/4 w/Sems
10	160624	Shield Heat Kawasaki
11	-----	Washer Lock Hvy Helical 1/4 (Order from Engine Manufacturer)
13	-----	Gasket Muffler (Order from Engine Manufacturer)
16	STD551237	Washer Lock Ext Tooth 3/8
17	17490624	Screw Thdrol 3/8-16 X 1-1/2 Tt
23	159880	Shield Browning
29	137180	Kit Spark Arrestor
31	151346	Tank Fuel
32	161493	Cap Asm Fuel w/Gauge Vented
33	123487X	Clamp Hose Blk
34	106082X	Pad Spacer
35	17490512	Screw Thdrol 5/16-18 x 3/4
37	8543R	Line Fuel 5/4"
39	109227X	Pad Idler
40	3645J	Bushing
41	139277	Stem Fuel Tank
44	17490612	Scrw Hex Thdrol 3/8-16 x 3/4
94	160858	Filter Asm Engine Kawasaki
95	160629	Trim, Seal
96	-----	Nut Hex (Order from Engine Manufacturer)
97	M73040800	Nut Serrated WB Ms-1.25
99	160771	Bracket Asm. Pivot LH
100	160772	Bracket Asm. Pivot RH

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

TRACTOR - - MODEL NUMBER 917.273421

SEAT ASSEMBLY



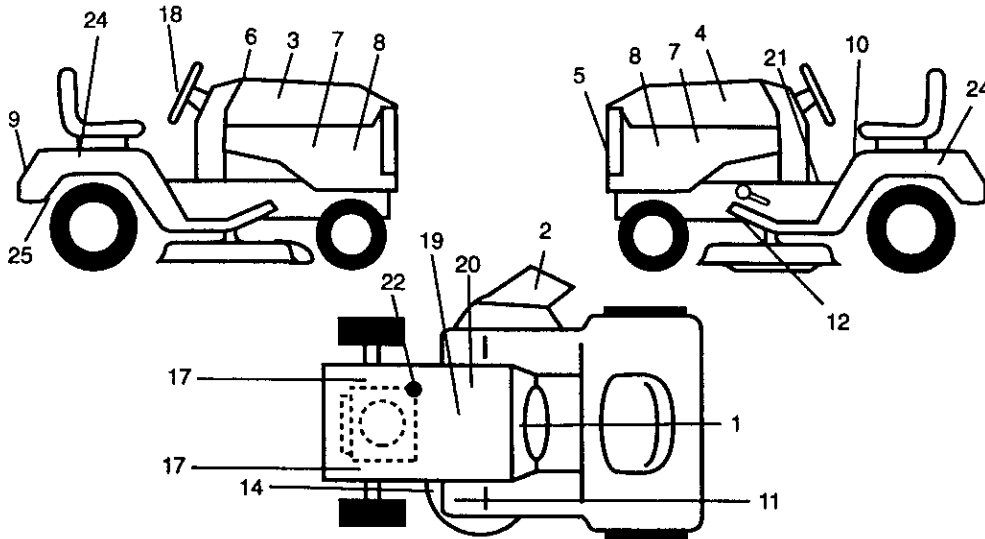
KEY NO.	PART NO.	DESCRIPTION
1	156234	Seat
2	140551	Bracket Pnt Pivot Seat (blk)
5	145006	Clip Push-In
6	STD541437	Nut Lock Hex W/Ins 3/8 -16 UNC
7	124181X	Spring Seat Cprsn 2 250 Blk Zi
10	155925	Pan Pnt Seat
12	121246X	Bracket Pnt Mounting Switch
13	121248X	Bushing Snap Blk Nyl 50 Id
14	72050412	Bolt Rdhd Sht Nk 1/4-20x1-1/2
15	121249X	Spacer Split 28 X 88
16	123740X	Spring Cprsn
17	123976X	Nut Lock 1/4 Lge Flg Gr 5 Zinc
18	124238X	Cap Spring Seat

KEY NO.	PART NO.	DESCRIPTION
21	153236	Bolt Shoulder 5/16-18 Unc Blkz-2A
22	STD541431	Nut Lock Hex W/Ins 5/16-18
27	17490608	Screw Thdrol. 3/8-16 x 1/2
28	150176	Bolt 5/16 -18 UNC X 3/4 W/Sems
31	124428X	Asm. Slide Seat
32	19111610	Washer
33	74780516	Bolt Carriage 5/16-18 UNC x 1" Lg
34	124427X	Spacer
35	156382	Cap, Plunger Red

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

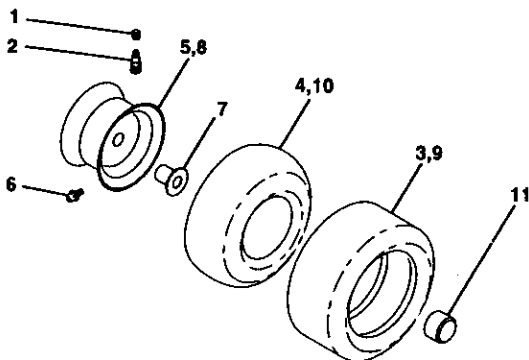
TRACTOR -- MODEL NUMBER 917.273421

DECALS



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	156835	Decal, Operating Instruction	17	161040	Decal, HP Engine
2	166887	Decal, Deck, EZ3	18	164065	Decal, Insert Strg
3	164948	Decal, Hood, Craftsman, RH	19	138047	Decal, Battery
4	164949	Decal, Hood, Craftsman, LH	20	149516	Decal, Btry, Dngr/Psn. Eng. Acme
5	164950	Decal, Grille	21	140837	Decal, Brake Parking Saddle
6	133644	Decal, Maintenance	22	161048	Decal, Cap Radiator
7	160987	Decal, Side Panel	24	163230	Decal, Fend Auto Trans
8	164947	Decal, Side Panel	25	142341	Decal, Drawbar Cntrl Mvt
9	163204	Decal, Fender, Craftsman	--	138311	Decal, Handle Lift Height Adj.
10	156439	Decal, Caution	--	157199	Pad Footrest
11	4900J	Decal, Clutch/Brake	--	165142	Manual, Owner's (Eng)
12	146046	Decal, V-Belt Drive Schematic	--	165143	Manual, Owners (Span)
14	160397	Decal, V-Belt Schematic			

WHEELS & TIRES



KEY NO.	PART NO.	DESCRIPTION
1	59192	Cap Valve Tire
2	65139	Stem Valve
3	161024	Tire Front
4	59904	Tube, Front (Service Item Only)
5	106228X427	Rim Asm, Front
6	278H	Fitting Grease (Front Wheel Only)
7	9040H	Bearing Flange (Front Wheel Only)
8	124074X427	Rim Asm, Rear
9	161025	Tire Rear
10	7154J	Tube Rear (Service Item Only)
11	104757X	Cap Axle
--	144334	Sealant, Tire (10 oz. Tube)

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

TRACTOR - - MODEL NUMBER 917.273421

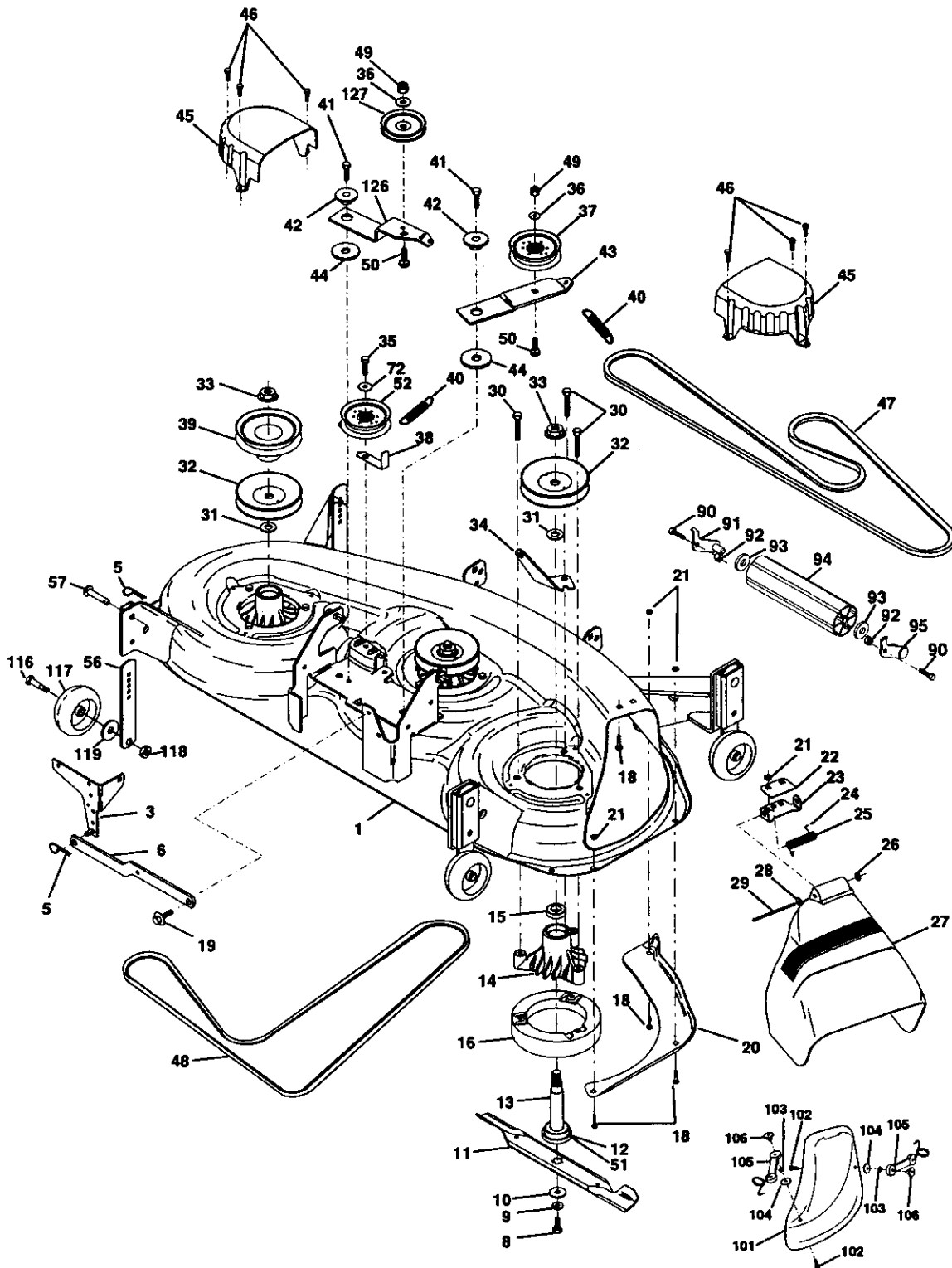
LIFT ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
1	121006X	Rod, Lever
2	159188	Shaft , Lift
6	74780624	Bolt Hex 3/8-16 x 1-1/2
7	125631X	Grip, Handle
8	122365X	Button, Plunger
9	122364X	Plunger, Lever
10	2876H	Spring
11	145537	Link, Lift, LH
12	145536	Link, Lift, RH
13	STD624008	Retainer, Spring
14	159189	Lever, Lift
15	127218	Link Front
16	73350800	Nut, Hex, Jam 1/3-13 UNC
17	130171	Trunnion, Blk Zinc
18	73680800	Nut, Crownlock 1/2-13 Unc
19	139868	Arm, Suspension
20	163552	Retainer Spring
23	110807X	Nut, Hex, Special
24	STD551037	Washer 13/32 x 5/8 x 16 Gauge
25	137150	Spring
26	STD560907	Pin, Cotter 3/32 x 1/2
27	160985	Rod, Adjust, Lift
28	STD541237	Nut, Hex, Jam 3/8-16
29	138057	Knob, Infinite Height Adjustment
30	150233	Trunnion
31	140302	Bearing Pvt Lift Spherical
32	73540600	Nut, Crownlock 3/8-24
36	155097	Pointer Pnt Height Ind
37	123935X	Plug Hole Blk
38	17490512	Screw, Thdrol 5/16-18 x 3/4
39	142992	Stop Over Center
40	19112410	Washer 11/32 x 1-1/2 x 10 Ga.
41	123934X	Scale Ind. Height Blk
42	STD541437	Nut Crownlock 3/8-16 UNC
43	19131612	Washer 13/32 x 1 x 12 Ga.
44	STD533710	Bolt Carriage 3/8-16 x 1.00
46	12000022	E-Ring
47	19292016	Washer 29/32 x 1-1/4 x 16 Gauge
49	145212	Nut Hex Flange Lock
50	110452X	Nut Push Phos & Oil

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

TRACTOR - - MODEL NUMBER 917.273421

MOWER DECK



TRACTOR - - MODEL NUMBER 917.273421

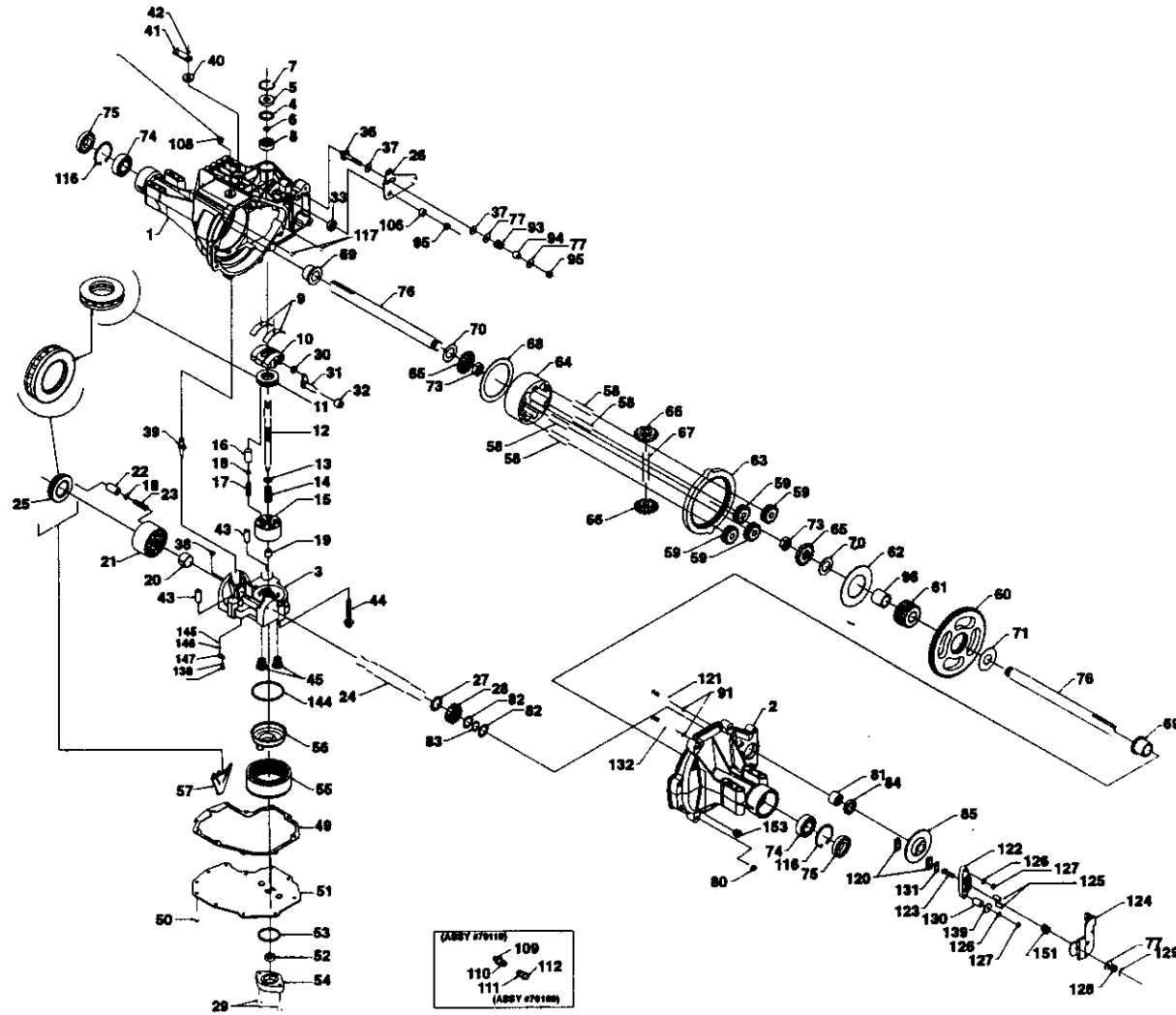
MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	164212	Deck Weldment. w/Adj. GWB 46"	41	17490620	Screw, Thdroll 3/8-16 x 1-1/4 Tytt
3	138457	Bracket Asm., Sway Bar	42	122052X	Spacer, Retainer
5	STD624008	Retainer Spring	43	144949	Arm, Idler Secondary
6	130832	Arm, Suspension, Rear (Sway Bar)	44	133943	Washer, Hardened
8	850857	Bolt, Patched 3/8-24 x 1-1/4 Grade 8	45	145059	Cover, Mandrel Deck
9	STD551137	Washer, Lock Hvy., Unplated 3/8	46	137729	Screw, Thdroll. 1/4-20 x 5/8
10	140296	Washer, Hard Blade, Mower Vented	47	144959	V-Belt, Mower, Secondary
11	163819	Blade, 46" Mower Deck Mulching	48	148763	V-Belt, Mower, Primary
12	129895	Bearing, Ball, Mandrel #6204	49	STD541437	Nut, Crownlock 3/8-16 UNC
13	137553	Shaft Asm. w/Lower Bearing (Includes Key No. 12)	50	72110612	Bolt, Carriage 3/8-16 x 1-1/2 Grade 5
14	137152	Housing, Mandrel	51	153390	Washer Felt
15	110485X	Bearing, Ball, Mandrel	52	156493	Pulley Idler 46" Prim. Drive
16	140329	Stripper, Mower Round	56	155986X505	Bar Pnt. Adjusting Wheel Gauge
18	STD533106	Bolt, Carriage 5/16-18 x 5/8	57	156941	Pin Head Rivet
19	132827	Bolt, Hex Head, Shoulder 5/16-18	72	19131616	Washer 13/32/1/16 Ga.
20	145055	Baffle, Vortex Mower 46"	90	74760616	Bolt, Fin Hex 3/8-16 UNC x 1
21	STD541431	Nut, Crownlock 5/16-18 UNC	91	132274	Bracket Asm. Noseroller LH
22	134753	Stiffener, Bracket	92	73800600	Nut Lock Hex w/Ins 3/8-16 UNC
23	131267	Bracket, Deflector	93	19171416	Washer 17/32 x 7/8 x 16 Ga.
24	105304X	Cap, Sleeve	94	132264	Noseroller
25	149287	Spring, Torsion, Deflector	95	132273	Bracket Asm. Noseroller RH
26	110452X	Nut, Push	101	145579	Cover, Mulching
27	157788	Shield, Deflector Mower	102	71161010	Screw
28	19111016	Washer 11/32 x 5/8 x 16 Ga.	103	STD551110	Washer, Lock #10
29	131491	Rod, Hinge	104	19061216	Washer
30	157722	Screw Thdrol Washer Head	105	160793	Latch Asm. Bagger
31	129963	Washer, Spacer Mower Vented	106	2029J	Nut, Weld
32	153531	Pulley, Mandrel	116	137644	Bolt, Shoulder
33	137266	Nut, Flg. Top Lock Cntr. 9/16	117	133957	Gauge Wheel
34	144945	Anchor, Spring Deck 46"	118	73930600	Nut, Centerlock 3/8-16 UNC
35	17490628	Screw, Thdroll 3/8-16 x 1-3/4 Tytt	119	19121414	Washer 3/8 x 7/8 x 14 Ga.
36	STD551037	Washer 13/32 x 13/16 x 16 Gauge	126	144948	Arm, Idler, Primary Deck 46"
37	131494	Pulley, Idler, Flat	127	146763	Pulley, Idler, V-Groove Dim. 4.25
38	156086	Keeper, Belt, Idler	--	166208	Mower Service 46" (Standard Deck)
39	144917	Pulley, Idler, Driven	--	143651	Mandrel Asm 44/50 Service (Includes Key Nos. 8-10, 12-15, 31 and 33)
40	137273	Spring, Secondary 44/46/50 Vent			

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

HYDRO GEAR TRANSAXLE - MODEL NUMBER 315-3000

52



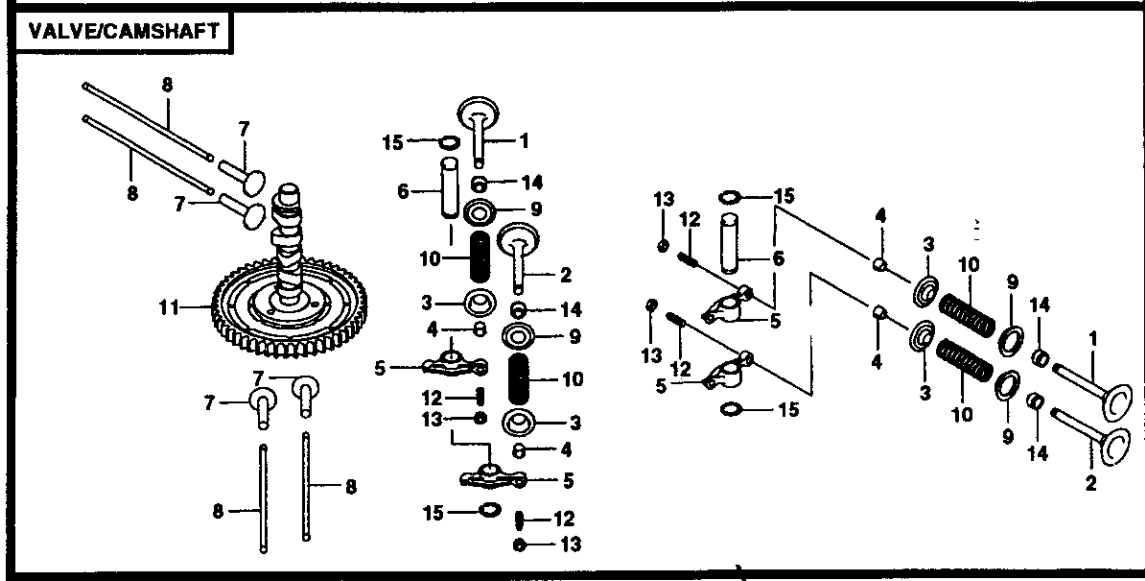
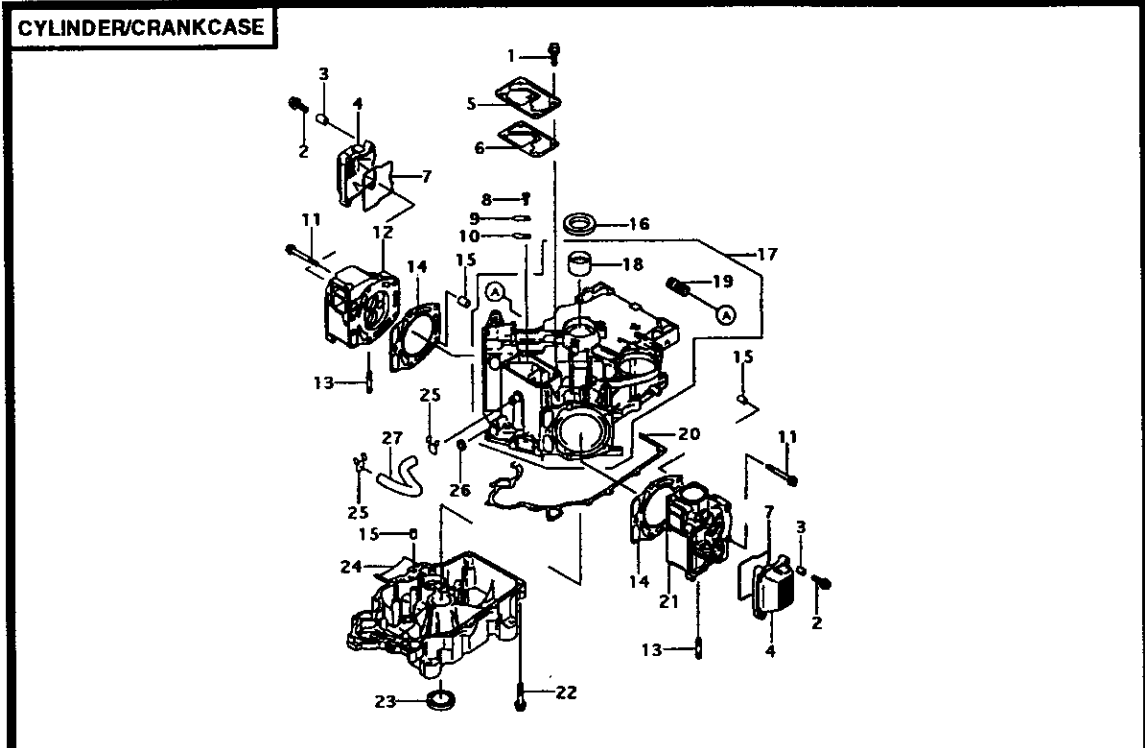
TRACTOR - - MODEL NUMBER 917.273421

HYDRO GEAR TRANSAXLE - MODEL NUMBER 315-3000

KEY PART			KEY PART			KEY PART		
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	161122	Main housing assembly	44	150797	Screw	93	142969	Spring, friction pack
2	161123	RH housing assembly	49	161135	Gasket, lower	94	142980	Spacer, friction pack
3	161124	Center section assembly	50	161136	Screw-self tapping	95	142957	Hex lock nut 5/16-24
4	161125	Spacer	51	161137	Lower cover	96	161165	Sleeve bearing
5	142932	Seal-lip	52	161138	Gerotor assembly	97	150798	Oil
6	142928	Wire retaining ring	53	144581	O-ring	106	161166	Spacer, trunnion
7	142933	Retaining ring	54	161139	Gerotor cover	109	142918	Fitting-O ring assembly
8	142934	Ball bearing	55	161140	Filter	111	142917	Cap-vent assembly
9	142935	Cradle bearing	56	161141	Charge manifold	116	161167	Retaining ring
10	142937	Variable swashplate	57	161142	Retainer, motor bearing	117	161168	Std hdls pin
11	150771	Thrust bearing 30 x 52 x 13	58	161143	Pin, carrier	120	142883	Puck, brake
12	161126	Input shaft	59	161144	15t planet gear	122	161169	Brake yoke
13	142978	Block thrust washer	60	161145	67t spur gear	123	161170	Bolt, square head
14	142977	Block spring	61	161146	21 tooth sun gear	124	161171	Arm, brake
15	142938	10cc cylinder block assembly	62	161147	Planet thrust plate	125	142887	Pins, brake
21	142944	10cc cylinder block assembly	63	161148	51t ring gear	126	161172	Lockwasher, 1/4
24	161127	Output (motor) shaft	64	161149	Planetary carrier	127	161173	Nut, 1/4-20
25	150773	Thrust bearing 42 x 68 x 16	65	161150	Miter gear, diff. (splined)	128	142885	Nut, castle
26	161128	Control arm	66	161151	Miter gear, diff.	129	142886	Cotter pin
27	161129	Spacer	67	161152	Shaft, differential	130	161174	Spacer
28	161130	16t pinion gear	68	161153	Diff. thrust plate	131	142882	Puck plate
29	161131	Capscrew, M6 x 1-22	70	161154	Washer	138	161175	Screw
30	142941	Slot guide	71	161155	Washer	139	161176	Washer, 7/80D x .2651D x .125 THK
31	161132	Trunnion arm	73	161156	Hex jam nut, 5/8-18	144	161177	O ring, 2.864 ID 0.070 THK
32	161133	Trunnion bushing	75	161157	Seal, 1" ID x 2.0472 x 0.375	145	161178	Charge relief spring
33	142940	Lip seal	76	161158	Shaft, axle	146	161179	Ball
36	161134	5/16-24 stud	77	142884	Washer	147	161180	Plate, relief
37	142967	Puck, friction	79	150801	Gasket material	151	161181	Comp. spring, brake anti-drag
38	150787	Bypass plate	80	161159	Torx head screw, 5/16-18	153	142914	Plug, straight thread
39	142946	Bypass actuator	81	161160	Needle bearing (SCE1412)			
40	142945	Lip seal	82	161161	Washer			
41	142952	Bypass arm	83	161162	Retaining ring			
42	142953	Retaining ring	84	161163	Lip seal (.8751.D. x 1.30.D. x.25)			
43	142965	Pin	85	161164	Brake disk			

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

**TRACTOR -- MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07**



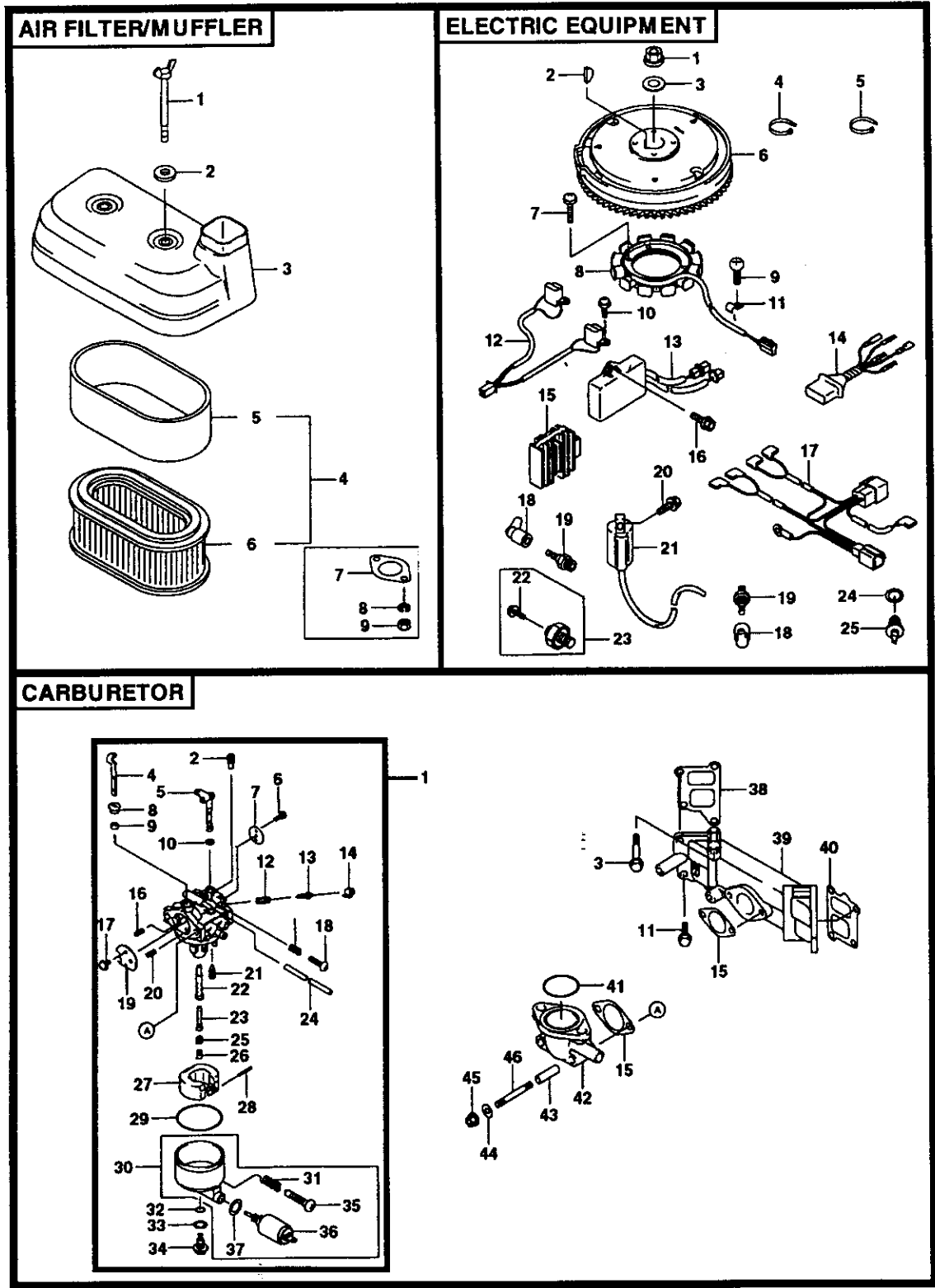
**TRACTOR - - MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07**

CYLINDER/CRANKCASE

VALVE/CAMSHAFT

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	130B0816	Bolt-Flanged	1	12004-2106	Valve-Intake
2	130B0625	Bolt-Flanged	2	12005-2094	Valve-Exhaust
3	92143-2010	Collar	3	12009-2067	Retainer-Valve Spring
4	11022-2056	Case-Rocker	4	12011-2056	Collet
5	14024-2109	Cover	5	12016-2056	Arm-Rocker
6	11060-2074	Gasket	6	12020-2059	Shaft-Rocker
7	11060-2332	Gasket, Rocker Case	7	12032-2064	Tappet
8	92009-2308	Screw	8	13116-2057	Rod-Push
9	13183-2120	Plate	9	39108-2057	Retainer-Spring
10	16126-2146	Valve	10	49078-2071	Spring-Engine Valve
11	130G0865	Bolt-Flanged	11	49118-2063	Camshaft-Comp
12	11008-2066	Head-Comp-Cylinder	12	92009-1109	Screw
13	92004-2141	Stud	13	92015-1137	Nut
14	11004-2098	Gasket-Head	14	92049-2109	Seal-Oil
15	92043-1037	Pin	15	480J1200	Circlip
16	92049-2110	Seal-Oil			
17	49120-6070	Crankcase-Comp			
18	92141-2110	Bearing-Plane			
19	59071-2079	Joint			
20	11060-2284	Gasket,Crankcase Cover			
21	11008-6005	Head-Comp-Cylinder			
22	130G0845	Bolt-Flanged			
23	92049-2112	Seal-Oil			
24	49015-6200	Cover-Crankcase			
25	92170-2002	Clamp			
26	92049-2097	Seal-Oil			
27	92190-2145	Tube			

TRACTOR - - MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07



**TRACTOR - - MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07**

AIR FILTER/MUFFLER

KEY NO.	PART NO.	DESCRIPTION
1	92150-2004	Bolt
2	92022-1545	Washer
3	11011-2193	Case-Air Filter
4	11029-2001	Element-Assy-Air Filter
5	11013-2114	Element-Air Filter
6	11013-2115	Element-Air Filter
7	11060-2079	Gasket-Mufflirt
8	461F0600	Washer-Spring
9	311G0600	Nut-Hex

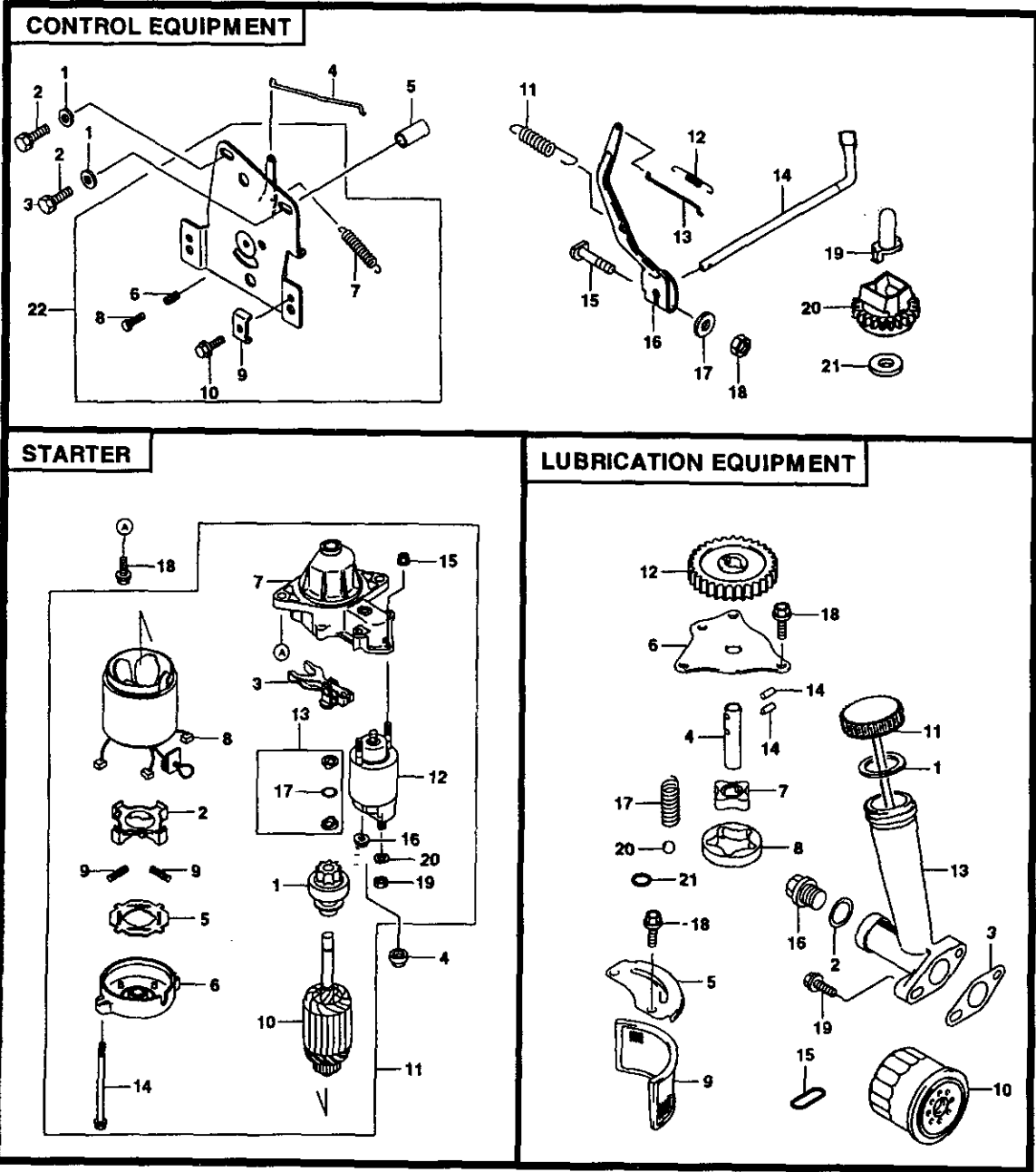
CARBURETOR

KEY NO.	PART NO.	DESCRIPTION
1	15003-2620	Carburetor-Assy
2	92064-2102	Jet-Pilot #37.5
3	130B0645	Bolt-Flanged
4	16041-2235	Shaft-Carburetor
5	16041-2170	Shaft-Carburetor,Throttl
6	92009-2080	Screw
7	16025-2192	Valve-Throttle #145
8	92027-2004	Collar
9	92027-2003	Collar
10	92093-2002	Seal
11	130B0620	Bolt-Flanged
12	92081-2009	Spring
13	16014-2075	Screw-Pilot Air
14	39076-2053	Limiter
15	11060-2076	Gasket,Intake Pipe
16	16035-2062	Jet-Air #1.3
17	92009-2081	Screw
18	214B0414	Screw-Pan
19	16126-2147	Valve,Choke
20	16035-2055	Jet-Air #1.0
21	16030-2076	Valve-Float
22	49121-2100	Nozzle-Main #18A
23	49121-2101	Nozzle-Main #18A
24	92191-2018	Tube
25	49123-2015	Holder-Main Jet
26	92063-2305	Jet-Main #112.5
27	16031-2065	Float
28	92043-2006	Pin
29	11009-2024	Gasket
30	16020-2135	Chamber-Float
31	92144-2174	Spring
32	92055-2148	O Ring
33	11009-2769	Gasket
34	92150-2250	Bolt
35	92009-2025	Screw
36	21188-2009	Solenoid
37	92022-2231	Washer
38	11060-2077	Gasket
39	59076-2053	Manifold-Intake
40	11060-2078	Gasket
41	670B3036	O Ring
42	16060-2127	Pipe-Intake
43	92143-2011	Collar
44	92022-2373	Washer 6.2 x 15 x 1.2
45	92015-1193	Nut
46	172G0695	Bolt-Stud

ELECTRIC EQUIPMENT

KEY NO.	PART NO.	DESCRIPTION
1	92015-2167	Nut
2	510A5100	Key-Woodruff
3	92022-2245	Washer
4	92072-1195	Band
5	92072-2003	Band
6	21193-2148	Flywheel-Assy
7	92009-2273	Screw
8	59031-2122	Coil-Charging
9	214B0510	Screw-Pan
10	225B0414	Screw-Pan-WSP-CROS
11	92037-2208	Clamp
12	59026-2054	Coil-Pulsing
13	21119-2120	Igniter
14	26030-2234	Harness
15	21066-2070	Regulator-Voltage
16	130B0614	Bolt-Flanged
17	26030-2246	Harness
18	21130-2060	Cap-Spark-Plug
19	92070-2060	PlugSpark,BMR6A (NGK),Solid
20	130B0520	Bolt-Flanged
21	21121-2083	Coil-Ignition
22	241B0406	Screw-Pan-WP
23	27010-2170	Switch
24	11009-2766	Gasket
25	27010-2181	Switch

TRACTOR -- MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07



**TRACTOR - - MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07**

CONTROL EQUIPMENT

KEY NO.	PART NO.	DESCRIPTION
1	92200-2070	Washer
2	180B0616	Bolt-Upset-ws
3	180B0635	Bolt-Upset-ws
4	16169-2121	Link-Choke
5	92143-2200	Collar 6.8 x 10 x 20.5
6	92144-2004	Spring
7	92144-2052	Spring
8	214B0520	Screw-Pan
9	92037-2209	Clamp
10	92150-2182	Bolt 5 x 18
11	39129-2018	Spring-Governor
12	92081-2192	Spring
13	16171-2057	Link
14	39003-2064	Arm-Pivot
15	92002-2269	Bolt
16	49103-2108	Arm-Governor
17	411B0600	Washer-Plain
18	311B0600	Nut-Hex
19	42036-2051	Sleeve
20	49110-2073	Governor-Assy
21	92200-2036	Washer
22	49113-2073	Panel-Comp-Control

LUBRICATION EQUIPMENT

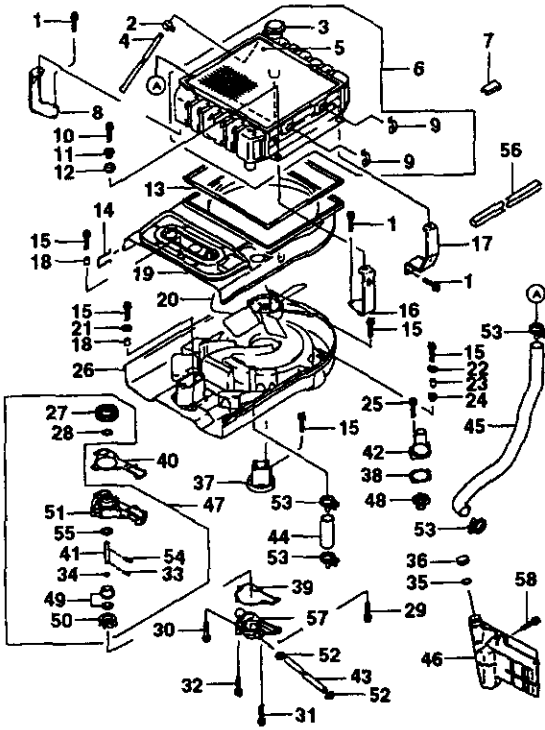
KEY NO.	PART NO.	DESCRIPTION
1	110092346	Gasket, Oil Gauge
2	110092566	Gasket, Drain Plug
3	110602083	Gasket, Filler
4	131072099	Shaft,Oil Pump
5	131832121	Plate
6	140242113	Cover,Oil Pump
7	161542053	Rotor-Pump, In
8	161542054	Rotor-Pump, Out
9	490652058	Filter-Oil
10	490652071	Filter-Oil
11	520052079	Gauge,Oil
12	590512114	Gear-Spur
13	592312080	Filler
14	92042014	Pin
15	920552086	Ring-O
16	920662099	Plug,Drain
17	921442053	Spring
18	130B0614	Bolt-Flanged
19	130G0625	Bolt-Flanged
20	600A1300	Ball-Steel
21	670B2011	O Ring

STARTER

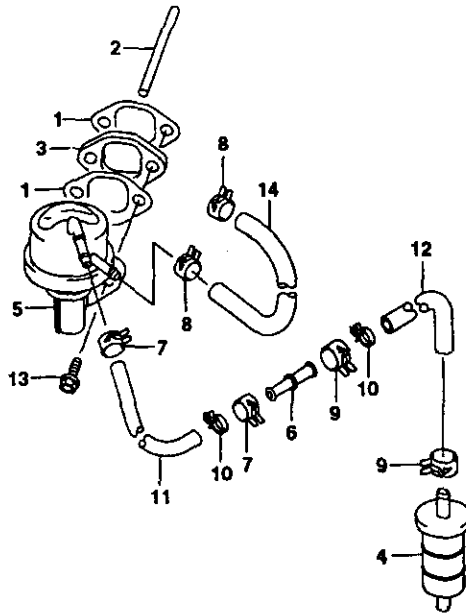
KEY NO.	PART NO.	DESCRIPTION
1	13081-2108	Clutch-Assy
2	13091-2068	Holder, Brush
3	13168-2131	Lever,Shift
4	14024-2205	Cover
5	16073-2098	Insulator
6	16146-2077	Cover-Assy
7	16146-2128	Cover-Assy
8	21039-2059	Brush
9	21040-2052	Spring-Brush
10	21080-2054	Armature
11	21163-2077	Starter-Electric
12	27010-2122	Switch
13	32085-2097	Stopper
14	92002-2277	Bolt
15	92015-2146	Nut
16	92015-2147	Nut
17	92033-2081	Ring-Snap
18	130B0830	Bolt-Flanged
19	317B0800	Nut-Hex-Small
20	461F0800	Washer-Spring

TRACTOR - - MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07

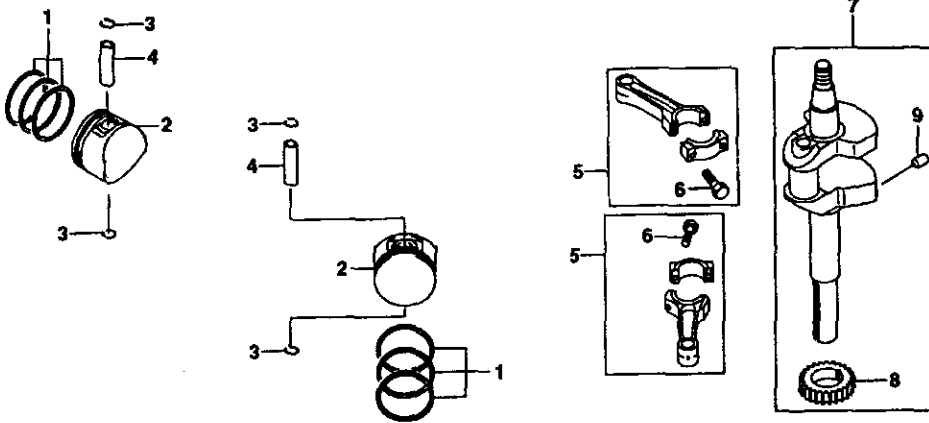
COOLING EQUIPMENT



FUEL TANK/FUEL VALVE



PISTON/CRANKSHAFT



**TRACTOR - - MODEL NUMBER 917.273421
ENGINE KAWASAKI - MODEL NUMBER FD590V, TYPE NUMBER AS07**

COOLING EQUIPMENT

FUEL TANK/FUEL VALVE

KEY NO.	PART NO.	DESCRIPTION
1	130B0816	Bolt-Flanged
2	92037-2001	Clamp
3	49085-2052	Cap-Assy-Pressure
4	39062-2054	Hose-Cooling 7.5 x 10.5 x 460
5	14037-2108	Screen
6	39061-2058	Radiator-Assy
7	92160-2039	Damper
8	11046-2010-9H	Bracket
9	92144-2346	Spring
10	130B0825	Bolt-Flanged
11	92027-271	Collar
12	92160-2001	Damper
13	92093-2085	Seal
14	92037-2211	Clamp
15	130B0620	Bolt-Flanged
16	11047-2059-9H	Bracket
17	11047-2058-9H	Bracket
18	92143-2014	Collar
19	14073-2067	Duct
20	59041-2063	Fan, Cooling
21	92022-2247	Washer
22	92022-1557	Washer 6.5 x 20 x 1.6
23	92143-2013	Collar
24	92160-2002	Damper
25	92150-2231	Bolt 6 x 20
26	14073-2068	Duct
27	59051-2113	Gear-Spur
28	92200-2044	Washer
29	130G0645	Bolt-Flanged
30	130G0675	Bolt-Flanged
31	130G0870	Bolt-Flanged
32	130H0665	Bolt-Flanged
33	551A0314	Pin-dowel
34	670B1507	O Ring
35	11009-1145	Gasket
36	11012-1084	Cap
37	11046-2008	Bracket
38	11060-2084	Gasket, Thermostat Cover
39	11060-2288	Gasket, Pump Cover
40	11060-2289	Gasket, Pump Case
41	13107-2097	Shaft, Impeller
42	14024-2114	Cover
43	39062-2051	Hose-Cooling 7.5 x 13.5 x 305
44	39062-2052	Hose-Cooling 24 x 31.2 x 90
45	39062-2055	Hose-Cooling
46	43078-2051	Reservoir
47	49044-2058	Pump-Water
48	49054-2053	Thermostat
49	49063-2056	Seal-Mechanical
50	59256-2057	Impeller
51	59336-2052	Case-Pump
52	92037-2065	Clamp
53	92037-2210	Clamp
54	9204-2014	Pin
55	92049-2111	Seal-Oil
56	92093-2111	Seal
57	16142-2069	Cover-Pump
58	130B0614	Bolt-Flanged

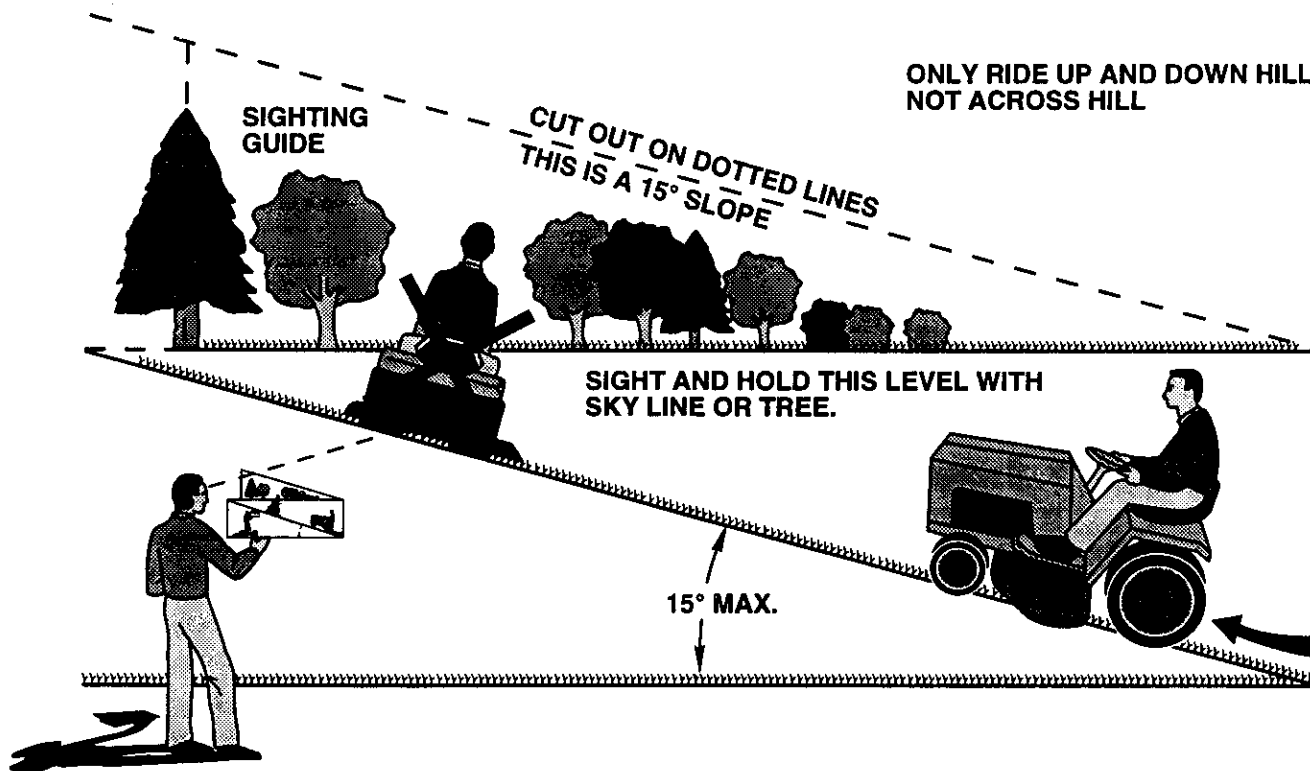
KEY NO.	PART NO.	DESCRIPTION
1	11060-2075	Gasket,Fuel Pump
2	13116-2058	Rod-Push
3	16073-2116	Insulator
4	49019-1055	Filter-Fuel
5	49040-2061	Pump-Fuel
6	59071-2119	Joint
7	92170-2042	Clamp
8	92170-2043	Clamp
9	92170-2082	Clamp
10	92170-2097	Clamp
11	92191-2056	Tube 6 x 10 x 550
12	92191-2059	Tube 7 x 12 x 130
13	130B0835	Bolt-Flanged
14	705A061000	Tube-Braid

PISTON/CRANKSHAFT

KEY NO.	PART NO.	DESCRIPTION
1	13008-6016	Ring-Set-Piston
2	13001-2123	Piston-Engine
3	92036-021	Ring-Snap
4	13002-1013	Pin-Piston
5	13251-6022	Rod-Assy-Connecting
6	92002-2053	Bolt
7	49119-2130	Crankshaft-Assy
8	59051-2112	Gear-Spur
9	551A0408	Pin-Dowel
---	13025-6001	Ring-Set-Piston L, 0.25
---	13025-6002	Ring-Set-PistonL, 0.50
---	13029-2090	Piston-Engine L, 0.25
---	13029-2091	Piston-Engine L, 0.50
---	13251-6026	Rod-Assy-Connecting

U/S=0.50

SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



Operate your Tractor up and down the face of slopes (not greater than 15°), never across the face. Make turns gradually to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.

For in-home major brand repair service:
Call 24 hours a day, 7 days a week

1-800-4-MY-HOMESM (1-800-469-4663)
Para pedir servicio de reparación a domicilio
1-800-676-5811

In Canada for all your service and parts needs call
Au Canada pour tout le service ou les pièces
1-800-665-4455

For the repair or replacement parts you need:
Call 6 am-11pm CST, 7 days a week
PartsDirectSM
1-800-366-PART (1-800-366-7278)

Para ordenar piezas con entrega a domicilio
1-800-659-7084

For the location of a Sears Parts and Repair Center
in your area:
Call 24 Hours a day, 7 days a week
1-800-488-1222

For information on purchasing a Sears Maintenance
Agreement or to inquire about an existing Agreement:
Call 9 am-5 pm, Monday - Saturday
1-800-827-6655

