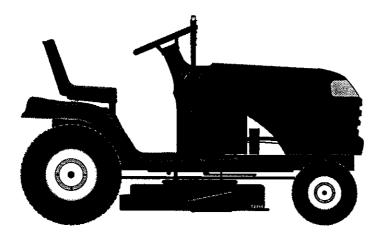
# **Owner's Manual**



# LAWN TRACTOR

21.5 HP, 42" Mower Electric Start 6 Speed Transaxle

Model No. 917.272454





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

## **IMPORTANT:**

Read and follow all Safety Rules and Instructions before operating this equipment. For answers to your questions about this product, Call: **1-800-659-5917** Sears Craftsman Help Line 5 am - 5 pm, Mon - Sat

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

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# WARRANTY

#### LIMITED WARRANTY ON CRAFTSMAN RIDING EQUIPMENT

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

This Warranty does not cover:

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

#### LIMITED WARRANTY ON BATTERY

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

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

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

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

# SAFETY RULES

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

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

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

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

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

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

#### I. GENERAL OPERATION

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

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

## **II. SLOPE OPERATION**

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

# SAFETY RULES

#### DO:

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

#### DO NOT.

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

#### **III. CHILDREN**

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

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

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

#### **IV. SERVICE**

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

# SAFETY RULES









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

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

#### **PRODUCT SPECIFICATIONS**

Gasoline Capacity and Type:	3.5 Unleaded and Regular
Oil Type (API-SF-SJ):	SAE 30 (above 32°F) SAE 5W-30 (below 32°F)
Oil Capacity:	4.0 Pints
Spark Plug: (Gap: .030")	Champion RC12YC
Ground Speed (M	Forward: 1st 1.2 2nd 1.5 3rd 2.4 4th 3.5 5th 4.8 6th 5.3 Reverse: 1.5
Tire Pressure:	Front: 14 PSI Rear: 10 PSI
Charging System:	16 Amps @ 3600RPM
Battery:	Amp/Hr: 28 Min. CCA: 230 Case Size: U1R
Blade Bolt Torque: 27-35 Ft. Lbs.	

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

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

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

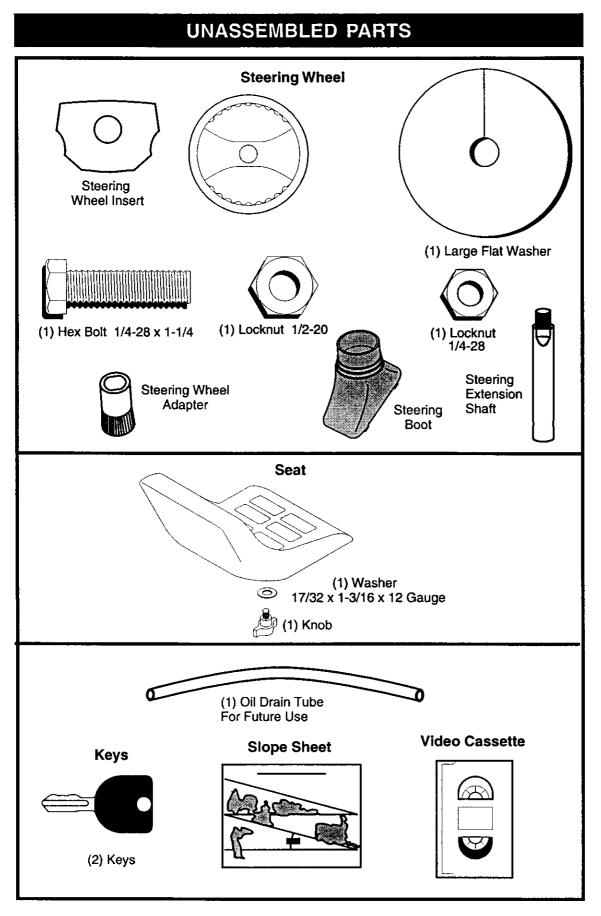
#### **REPAIR AGREEMENT**

A Repair 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.

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



# **ASSEMBLY/PRE-OPERATION**

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

### TOOLS REQUIRED FOR ASSEMBLY

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

- (1) 3/4" wrench (1) Pliers
- (2) 7/16" wrench

(1) Utilityknife

- (1) Tire pressure gauge

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

## **TO REMOVE TRACTOR FROM** CARTON

#### UNPACK CARTON

- 1. Remove all accessible loose parts and parts boxes from carton.
- 2. Cut, from top to bottom, along lines on all four corners of carton, and lay panels flat.
- 3. Check for any additional loose parts or cartons and remove.

## **BEFORE REMOVING TRACTOR** FROM SKID

#### ATTACH STEERING WHEEL

ASSEMBLE EXTENSION SHAFT AND BOOT

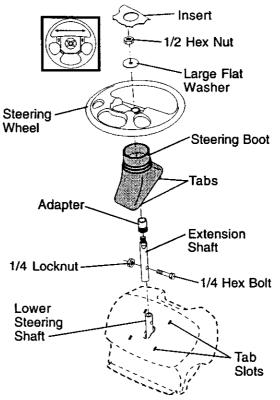
1. Slide extension shaft onto lower steering shaft. Align mounting holes in extension and lower shafts and install 1/4 hex bolt and locknut. Tighten securely.

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

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

**INSTALL STEERING WHEEL** 

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

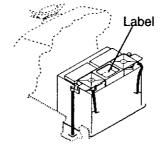


- 7. Snap steering wheel insert into center of steering wheel.
- 8. Remove protective materials from tractor hood and grill.

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

#### CHECK BATTERY

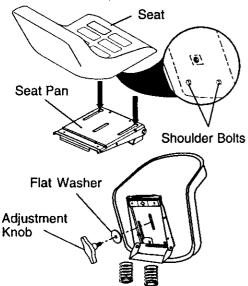
1. Lift hood to raised position. NOTE: If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps. (See "BATTERY" in Maintenance section of this manual for charging instructions).



#### **INSTALL SEAT**

Adjust seat before tightening adjustment knob.

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



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

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

- 1. Press lift lever plunger and raise attachment lift lever to its highest position.
- 2. Release parking brake by depressing clutch/brake pedal.
- 3. Place gearshift lever in neutral (N) position.
- 4. Roll tractor forward off skid.
- 5. Remove banding holding deflector shield up against tractor.

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

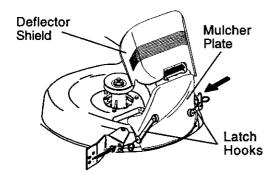
AWARNING: Before starting, read, understand and follow all instructions in the Operation section of this manual. Be sure tractor is in a well-ventilated area. Be sure the area in front of tractor is clear of other people and objects.

- 1. Be sure all the above assembly steps have been completed.
- 2. Check engine oil level and fill fuel tank with gasoline.
- 3. Sit on seat in operating position, depress clutch/brake pedal and set the parking brake.
- 4. Place gear shift lever in neutral (N) position.
- 5. Press lift lever plunger and raise attachment lift lever to its highest position.
- 6. Start the engine. After engine has started, move throttle control to idle position.
- 7. Depress clutch/brake pedal into full "BRAKE" position and hold. Move gearshift lever to 1st gear.
- 8. Slowly release clutch/brake pedal and slowly drive tractor off skid.
- 9. Apply brake to stop tractor, set parking brake and place gearshift lever in neutral position.

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

# INSTALL MULCHER PLATE (If previously removed)

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



**ACAUTION:** Do not remove deflector shield from mower. Raise and hold shield 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.

## **CHECK TIRE PRESSURE**

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

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

#### **CHECK DECK LEVELNESS**

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

# CHECK FOR PROPER POSITION OF ALL BELTS

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

### **CHECK BRAKE SYSTEM**

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

## ✓ CHECKLIST

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

Please review the following checklist:

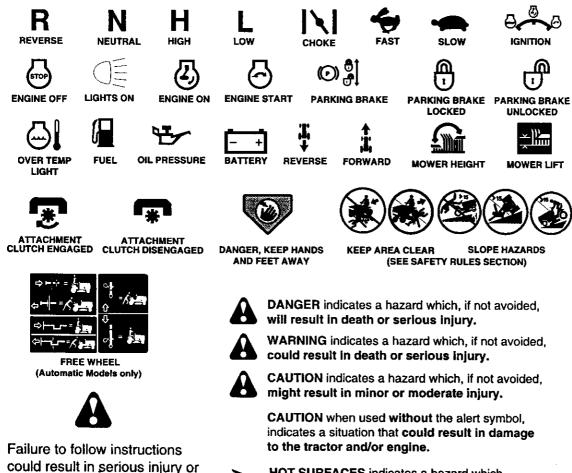
- All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- ✓ Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated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

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.

# **OPERATION**

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



could result in serious injury or death. The safety alert symbol is used to identify safety information about hazards which can

result in death, serious injury

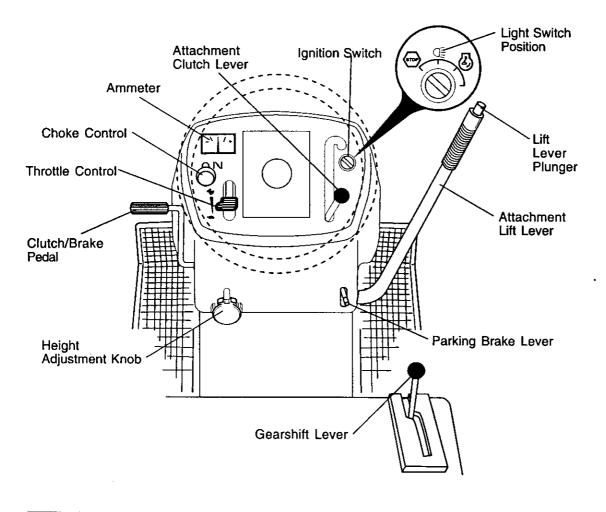
and/or property damage.

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

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

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

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



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

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

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

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

GEARSHIFT LEVER - Selects the speed and direction of tractor.

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

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

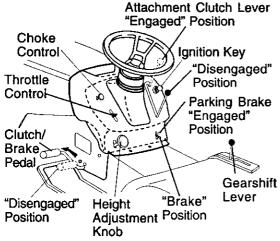
LIGHT SWITCH POSITION - Turns the headlights on and off.

PARKING BRAKE LEVER - Locks clutch/ brake pedal into the brake position. THROTTLE CONTROL - Used for starting and controlling engine speed. HEIGHT ADJUSTMENT KNOB - Used to adjust the mower cutting height. CHOKE CONTROL - Used when starting a cold engine. WEAR YOUR SAFETY GLASSES FORESIGHT IS BETTER THAN NO SIGHT 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 TO SET PARKING BRAKE

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

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



#### STOPPING

#### **MOWER BLADES -**

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

**GROUND DRIVE -**

- To stop ground drive, depress clutch/ brake pedal all the way down.
- Move gearshift lever to neutral (N) position.

**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 "STOP" position and remove key. Always remove key when leaving tractor to prevent unauthorized use.
- Never use choke to stop engine.

**IMPORTANT:** Leaving the ignition switch in any position other than "STOP" will cause the battery to discharge and go dead.

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

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

#### TO USE THROTTLE CONTROL

Always operate engine at full throttle.

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

### **TO USE CHOKE CONTROL**

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

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

#### TO MOVE FORWARD AND BACKWARD

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

- Start tractor with clutch/brake pedal depressed and gearshift lever in neutral (N) position.
- 2. Move gearshift lever to desired position.
- 3. Slowly release clutch/brake pedal to start movement.

**IMPORTANT:** Bring tractor to a complete stop before shifting or changing gears. Failure to do so will shorten the useful life of your transaxle.

# TO ADJUST MOWER CUTTING HEIGHT

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

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

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

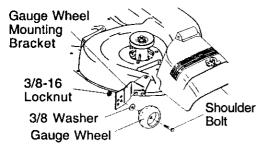
- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first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

#### TO ADJUST GAUGE WHEELS

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

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

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



#### TO OPERATE MOWER

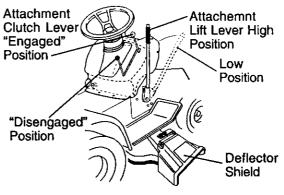
Your tractor is equipped with an operator presence sensing switch. Any attempt by the operator to leave the seat with the engine running and the attachment clutch engaged will shut off the engine.

Select desired height of cut.

- Lower mower with attachment lift control.
- 3. Start mower blades by engaging attachment clutch control.

TO STOP MOWER BLADES disengage attachment clutch control.

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



#### TO OPERATE ON HILLS

**WARNING:** Do not drive up or down hills with slopes greater than 15° and do not drive across any slope. Use the slope guide 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 gearshift lever to 1st gear. Be sure you have allowed room for tractor to roll slightly as you restart movement.
- To restart movement, slowly release parking brake and clutch/brake pedal.
- Make all turns slowly.

#### TO TRANSPORT

- Raise attachment lift to highest position with attachment lift control.
- When pushing or towing your tractor, be sure gearshift lever is in neutral (N) position.
- Do not push or tow tractor at more than five (5) MPH.

**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, 14<sup>etc.).</sup>

#### TOWING CARTS AND OTHER ATTACH-MENTS

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

#### BEFORE STARTING THE ENGINE CHECK ENGINE OIL LEVEL

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

- 1. Check engine oil with tractor on level ground.
- Remove oil fill cap/dipstick and wipe clean, reinsert the dipstick and screw cap tight, wait for a few seconds, remove and read oil level. If necessary, add oil until "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting (See the oil viscosity chart in the Maintenance section of this manual).
- To change engine oil, see the Maintenance section in this manual.

#### ADD GASOLINE

 Fill fuel tank to bottom of filler neck. Do not overfill. Use fresh, clean, regular unleaded gasoline with a minimum of 87 octane. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life). Do not mix oil with gasoline. Purchase fuel in quantities that can be used within 30 days to assure fuel freshness.

**CAUTION:** Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame. **IMPORTANT:** When operating in temperatures below32°F(0°C), use fresh, clean winter grade gasoline to help insure good cold weather starting. **CAUTION:** Alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

#### TO START ENGINE

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

- Sit on seat in operating position, depress clutch/brake pedal and set parking brake.
- 2. Place gear shift lever in neutral (N) position.
- 3. Move attachment clutch to disengaged position.
- 4. Move throttle control to fast position
- 5. Pull choke control out for a cold engine start attempt. For a warm engine start attempt the choke control may not be needed.

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

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

WARM WEATHER STARTING (50° F and above)

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

COLD WEATHER STARTING (50° F and below)

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

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

#### **MOWING TIPS**

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

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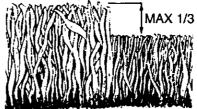
 If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings. Make first cut relatively high; the second to the desired height.

- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.

#### **MULCHING MOWING TIPS**

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

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



- Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a second cut, mow across 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 EVERYENHOURS EVERY 100 HOUP EVERY & HOURS EVERY 25 HOURS BEFORE STORN EVERYSEASC MAINTENANCE SCHEDULE FILL IN DATES AS YOU COMPLETE **REGULAR SERVICE** BE SERVICE DATES Ż Check Brake Operation V **Check Tire Pressure** V Check Operator Presence and 1 Т Interlock Systems R Check for Loose Fasteners 1 **/**. 1 Sharpen/Replace Mower Blades V С Lubrication Chart V 1 Т Check Battery Level √. 0 Ż Clean Battery and Terminals R V **Check Transaxle Cooling** V Check V-Belts V Check Engine Oil Level ~ ~ 1 Change Engine Oil (with oil filter) V Change Engine Oil (without oil filter) **/**1,2 1 Ε **Clean Air Filter** Ν $\mathbf{V}_{2}$ G Clean Air Screen $\mathbf{V}_{2}$ Inspect Muffler/Spark Arrester ✓ N Replace Oil Filter (If equipped) V1.2 F **Clean Engine Cooling Fins V** 2 V Replace Spark Plug 1 Replace Air Filter Paper Cartridge $\mathbf{V}_2$ **Replace Fuel Filter** Change more often when operating under a heavy load or 3 - Replace blades more often when mowing in sandy soil.

in high ambient temperatures

2 - Service more often when operating in dirty or dusty conditions.

## **GENERAL RECOMMENDATIONS**

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

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

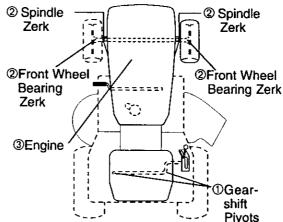
 Once a year you should replace the spark plug, clean or replace air filter, and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

#### **BEFORE EACH USE**

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

Not required if equipped with maintenance-free battery. 5. Tighten front axle pivot bolt to 35 ft.-lbs, maximum. Do not overtighten.

#### LUBRICATION CHART



①SAE 30 or 10w30 MOTOB OIL **@GENERAL PURPOSE GREASE ③REFER TO Maintenance "ENGINE"** SECTION

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

17 sparingly.

### TRACTOR

Always observe safety rules when performing any maintenance. **BRAKE OPERATION** 

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

#### TIRES

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

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

#### **OPERATOR PRESENCE SYSTEM**

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

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

#### **BLADE CARE**

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

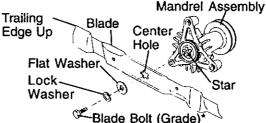
#### **BLADE REMOVAL**

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

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

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

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



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

#### TO SHARPEN BLADE

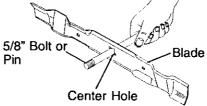
**NOTE:** We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

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

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

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

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



#### BATTERY

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

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open.

• Recharge at 6-10 amperes for 1 hour. **NOTE:** The original equipment battery on your tractor is maintenance free. Do not attempt to open or remove caps or covers. Adding or checking level of electrolyte is not necessary.

#### TO CLEAN BATTERY AND TERMINALS

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

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

#### **TRANSAXLE COOLING**

Keep transaxle free from build-up of dirt and chaff which can restrict cooling.

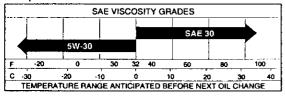
#### **V-BELTS**

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

#### ENGINE LUBRICATION

Only use high quality detergent oil rated

with API service classification SF-SJ. Select the oil's SAE viscosity grade according to your expected operating temperature.



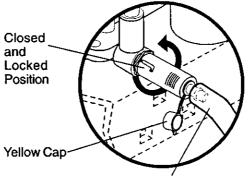
**NOTE:** Although multi-viscosity oils (5W30, 10W30 etc.) improve starting in cold weather, these multi-viscosity oils will result in increased oil consumption when used above 32°F. Check your engine oil level more frequently to avoid possible engine damage from running low on oil. Change the oil after every 50 hours of operation or at least once a year if the tractor is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each eight (8) hours of operation. Tighten oil fill cap/ dipstick securely each time you check the oil level.

#### TO CHANGE ENGINE OIL

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

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

**Oil Drain Valve** 



Drain Tube

- 3. Unlock drain valve by pushing inward slightly and turning counterclockwise.
- 4. To open, pull out on the drain valve.
- After oil has drained completely, close and lock the drain valve by pushing inward and turning clockwise until the pin is in the locked position as shown.
- 6. Remove the drain tube and replace the cap onto the end of the drain valve.
- Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PRODUCT SPECIFICATIONS" section of this manual.

 Use gauge on oil fill cap/dipstick for checking level. For accurate reading, tighten dipstick cap securely onto the tube before removing dipstick. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.

#### **ENGINE OIL FILTER**

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

#### **AIR FILTER**

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

Service air cleaner more often under dusty conditions.

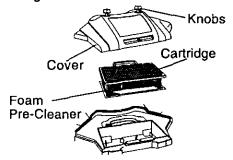
- 1. Remove knobs and cover.
- TO SERVICE PRE-CLEANER
- 2. Wash it in liquid detergent and water.
- 3. Squeeze it dry in a clean cloth.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.

**NOTE:** If very dirty or damaged, replace pre-cleaner.

#### TO SERVICE CARTRIDGE

- 1. Clean cartridge by tapping gently on flat surface. If very dirty or damaged, replace cartridge.
- 2. Reinstall precleaner cartridge, cover and secure with knobs.

**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.



#### **CLEAN AIR SCREEN**

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

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

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

Every 100 hours of operation (more often under extremely dusty, dirty conditions), remove the blower housing and other cooling shrouds. Clean the cooling fins and external surfaces as necessary. Make sure the cooling shrouds are reinstalled. **NOTE:** Operating the engine with a blocked grass screen, dirty or plugged cooling fins, and/or cooling shrouds removed will cause engine damage due to overheating.

#### MUFFLER

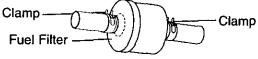
Inspect and replace corroded muffler and spark arrester (if equipped) as it could create a fire hazard and/or damage. SPARK PLUG(S)

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

#### **IN-LINE FUEL FILTER**

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

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



#### CLEANING

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

We do not recommend using a garden hose 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 20 engine life.

# SERVICE AND ADJUSTMENTS



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

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

#### TRACTOR

#### TO REMOVE MOWER

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

- 1. Place attachment clutch in "DISEN-GAGED" position.
- 2. Move attachment lift lever forward to lower mower to its lowest position.
- 3. Roll belt off engine pulley.
- 4. Remove small retainer spring, and lift clutch spring off pulley bolt.
- 5. Remove large retainer spring, slide collar off and push housing guide out of bracket.
- 6. Disconnect anti-sway bar from chassis bracket by removing retainer spring.
- Disconnect suspension arms from rear deck brackets by removing retainer springs.
- 8. Disconnect front links from deck by removing retainer springs.
- 9. Raise lift lever to raise suspension arms. Slide mower out from under tractor.

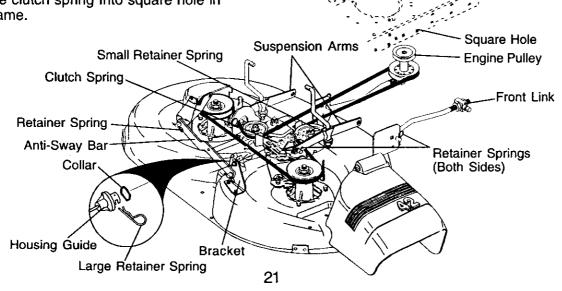
**IMPORTANT:** If an attachment other than the mower deck is to be mounted on the tractor, remove the front links and hook the clutch spring Into square hole in frame.

#### TO INSTALL MOWER

- 1. Raise attachment lift lever to its highest position.
- 2. Slide mower under tractor with deflector shield to right side of tractor.
- 3. Lower lift lever to its lowest position.
- 4. Connect front links to mower deck and secure with retainer springs.
- Connect suspension arms to rear deck brackets and secure with retainer springs.
- Connect anti-sway bar to chassis bracket and secure with retainer spring.
- 7. Push clutch cable housing guide into bracket, slide collar onto guide and secure with large retainer spring.
- 8. Install belt onto engine pulley.

#### **TO LEVEL MOWER HOUSING**

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

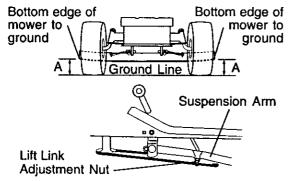


#### SIDE-TO-SIDE ADJUSTMENT

- Raise mower to its highest position.
- At the midpoint of both sides of mower, measure height from bottom edge of mower to ground. Distance "A" on both sides of mower should be the same or within 1/4" of each other.
- If adjustment is necessary, make adjustment on one side of mower only.
- To raise one side of mower, tighten lift link adjustment nut on that side.
- To lower one side of mower, loosen lift link adjustment nut on that side.

**NOTE:** Each full turn of adjustment nut will change mower height about 1/8".

Recheck measurements after adjusting.



#### FRONT-TO-BACK ADJUSTMENT

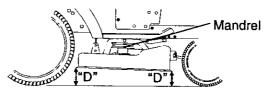
**IMPORTANT:** Deck must be level side-to side. If the following front-to-back adjustment is necessary, be sure to adjust both front links equally so mower will stay level side-to-side.

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

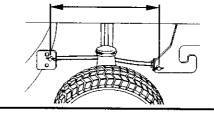
Check adjustment on right side of tractor. Measure distance "D" directly in front and behind the mandrel at bottom edge of mower housing as shown.

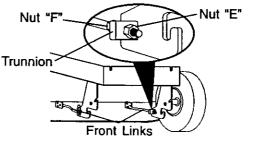
- Before making any necessary adjustments, check that both front links are equal in length.
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower loosen nut "E" on both front links an equal number of turns.
- When distance "D" is 1/8" to 1/2" lower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

- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nut "F" against trunnion on both front links.
- Recheck side-to-side adjustment.



Both Front Links Should be Equal in Length





#### TO REPLACE MOWER BLADE DRIVE BELT

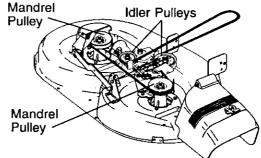
The mower blade drive belt may be replaced without tools. Park the tractor on level surface. Engage parking brake.

#### **BELT REMOVAL -**

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

#### **BELT INSTALLATION -**

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



#### TO CHECK AND ADJUST BRAKE

Your tractor is equipped with an adjustable brake system which is mounted on the right side of the transaxle. If tractor requires more than five (5) feet to stop at highest speed in highest gear on a level, dry concrete or paved surface, then brake must be checked and adjusted.

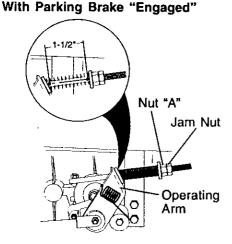
#### TO CHECK BRAKE

- 1. Park tractor on a level, dry concrete or paved surface, depress clutch/brake pedal all the way down and engage parking brake.
- 2. Place gear shift lever in neutral (N) position.

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

#### TO ADJUST BRAKE

- 1. Depress clutch/brake pedal all the way down and engage parking brake.
- 2. Measure distance between brake operating arm and nut "A" on brake rod.
- 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 five (5) feet in highest gear, further maintenance is necessary. Replace brake pads or contact a Sears or other qualified service center.



#### TO REPLACE MOTION DRIVE BELT

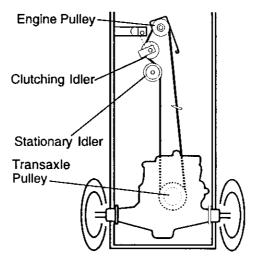
Park the tractor on level surface. Engage parking brake. For assistance, there is a belt installation guide decal on bottom side of left footrest.

#### **BELT REMOVAL -**

- 1. Remove mower (See "TO REMOVE MOWER" in this section of manual). **NOTE:** Observe entire motion drive belt and position of all belt guides and keepers.
- 2. Remove belt from stationary idler and clutching idler.
- 3. Remove belt downward from around engine pulley.
- Pull belt slack toward rear of tractor. Remove belt upwards from transaxle pulley by deflecting belt keepers.
- 5. Remove belt from center span keeper and pull belt away from tractor.

#### **BELT INSTALLATION -**

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



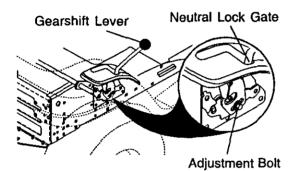
#### TRANSAXLE GEAR SHIFT LEVER NEUTRAL ADJUSTMENT

The transaxle should be in neutral when the gear shift lever is in neutral (N) (lock gate) position. The adjustment is preset at the factory; however, if adjustment is needed, proceed as follows:

1. Make sure transaxle is in neutral (N). **NOTE:** When the tractor rear wheels move freely, the transaxle is in neutral.

- 2. Loosen adjustment bolt in front of the right rear wheel.
- 3. Position the gear shift lever in the neutral (N) position.

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



# TO ADJUST STEERING WHEEL ALIGNMENT

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

#### FRONT WHEEL TOE-IN/CAMBER

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

#### **TO REMOVE WHEEL FOR REPAIRS**

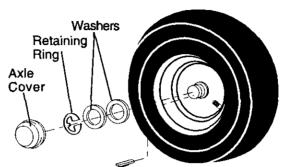
- 1. Block up axle securely.
- 2. Remove axle cover, retaining ring and washers to allow wheel removal (rear wheels have a square key Do not lose).

3. Repair tire and reassemble.

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

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

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



Square Key (Rear Wheel Only) TO START ENGINE WITH A WEAK BATTERY

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

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

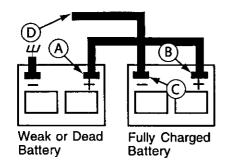
If "jumper cables" are used for emergency starting, follow this procedure: **IMPORTANT**: Your tractor is equipped with a 12 volt system. The other vehicle must also be a 12 volt system. Do not use your tractor battery to start other vehicles.

TO ATTACH JUMPER CABLES -

- Connect one end of the RED cable to the POSITIVE (+) terminal of each battery(A-B), taking care not to short against tractor chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal (C) of fully charged battery.
- 3. Connect the other end of the BLACK cable (D) to good chassis ground, away from fuel tank and battery.

TO REMOVE CABLES, REVERSE ORDER -

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

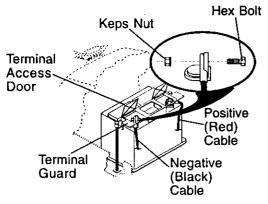


### **REPLACING BATTERY**

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

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

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



#### TO REPLACE HEADLIGHT BULB

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

#### INTERLOCKS AND RELAYS

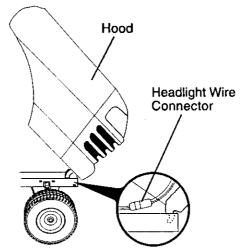
Loose or damaged wiring may cause your tractor to run poorly, stop running, or prevent it from starting.

 Check wiring. See electrical wiring diagram in the Repair Parts section.
 TO REPLACE FUSE

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

#### TO REMOVE HOOD AND GRILL ASSEMBLY

- 1. Raise hood.
- 2. Unsnap headlight wire connector.
- Stand in front of tractor. Grasp hood at sides, tilt toward engine and lift off of tractor.
- When replacing hood, be sure to reconnect the headlight wire connector.



#### ENGINE

Maintenance, repair, or replacement of the emission control devices and systems, which are being done at the customers expense, may be performed by any non-road engine repair establishment or individual. Warranty repairs must be performed by an authorized engine manufacturer's service outlet. **TO ADJUST THROTTLE CONTROL** 

#### CABLE

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

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

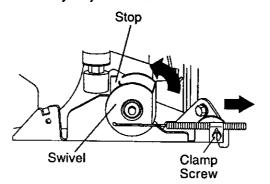
#### TO ADJUST CHOKE CONTROL

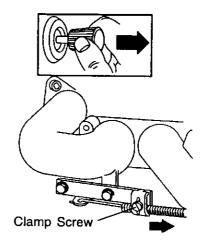
The choke control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:

- 1. With engine not running, move choke control (located on dash panel) to full choke position.
- 2. Loosen knob and remove cover assembly from air cleaner.
- Choke should be closed. If it is not, loosen casing clamp screw and move choke cable until choke is completely closed. Tighten casing clamp screw securely.
- 4. Replace air cleaner cover assembly and tighten knob.

#### **TO ADJUST CARBURETOR**

Your carburetor is not adjustable. If your engine does not operate properly due to suspected carburetor problems, take your tractor to an authorized service center for repair and/or adjustment. High speed stop is factory adjusted. Do not adjust - damage may result. **IMPORTANT:** Never tamper with the engine governor, which is factory set for proper engine speed. Overspeeding the engine above the factory high speed setting can be dangerous. If you think the engine-governed high speed needs adjusting, contact a Sears or other qualified service center,, which has proper equipment and experience to make any necessary adjustments.





## STORAGE

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

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

#### TRACTOR

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

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

### BATTERY

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

#### ENGINE

#### FUEL SYSTEM

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

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

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

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

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

#### OTHER

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

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

## TROUBLESHOOTING CHART:

PROBLEM	CAUSE	CORRECTION
Will not start	<ol> <li>Out of fuel.</li> <li>Engine not "CHOKED" properly.</li> <li>Engine flooded.</li> <li>Bad spark plug.</li> <li>Dirty air filter.</li> <li>Dirty fuel filter.</li> <li>Water in fuel.</li> </ol>	<ol> <li>Fill fuel tank.</li> <li>See "TO START ENGINE" in Operation section.</li> <li>Wait several minutes before attempting to start.</li> <li>Replace spark plug.</li> <li>Clean/replace air filter.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and carburetor, refill tank with fresh gasoline and replace</li> </ol>
	<ol> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> <li>10.Engine valves out of</li> </ol>	fuel filter. 8. Check all wiring. 9. See "To Adjust Carburetor" in Service and Adjustments section. 10.Contact a Sears or other
	adjustment.	qualified service center.
Hard to start	<ol> <li>Dirty air filter.</li> <li>Bad spark plug.</li> <li>Weak or dead battery.</li> <li>Dirty fuel filter.</li> </ol>	<ol> <li>Clean/replace air filter.</li> <li>Replace spark plug.</li> <li>Recharge or replace battery.</li> <li>Replace fuel filter.</li> </ol>
	<ol> <li>5. Stale or dirty fuel.</li> <li>6. Loose or damaged wiring.</li> <li>7. Carburetor out of adjustment.</li> </ol>	<ol> <li>5. Drain fuel tank and refill with fresh gasoline.</li> <li>6. Check all wiring.</li> <li>7. See "To Adjust Carburetor" in Service and Adjustments section.</li> </ol>
	<ol> <li>Engine valves out of adjustment.</li> </ol>	8. Contact a Sears or other qualified service center.
Engine will not turn over	<ol> <li>Clutch/brake pedal not depressed.</li> <li>Attachment clutch is engaged.</li> <li>Weak or dead battery.</li> </ol>	<ol> <li>Depress clutch/brake pedal.</li> <li>Disengage attachment clutch.</li> <li>Recharge or replace battery.</li> </ol>
	<ol> <li>Blown fuse.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty ignition switch.</li> </ol>	<ol> <li>Replace fuse.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace ignition switch.</li> </ol>
	<ol> <li>Faulty solenoid or starter.</li> <li>Faulty operator presence switch(es).</li> </ol>	<ol> <li>8. Check/replace solenoid or starter.</li> <li>9. Contact a Sears or other qualified service center.</li> </ol>
Engine clicks but will not start	<ol> <li>Weak or dead battery.</li> <li>Corroded battery terminals.</li> <li>Loose or damaged wiring.</li> <li>Faulty solenoid or starter.</li> </ol>	<ol> <li>Recharge or replace battery.</li> <li>Clean battery terminals.</li> <li>Check all wiring.</li> <li>Check/replace solenoid or starter.</li> </ol>

See appropriate section in manual unless directed to Sears service center

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

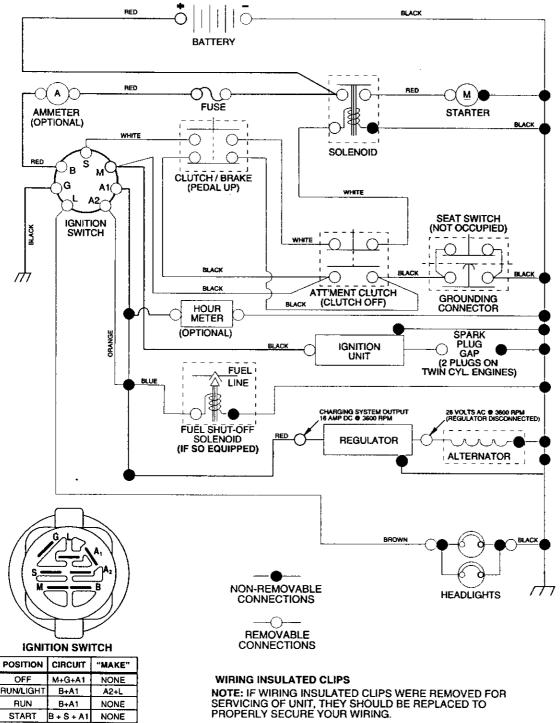
PROBLEM	CAUSE	CORRECTION
Loss of power	<ol> <li>Cutting too much grass/too fast.</li> <li>Throttle in "CHOKE" position.</li> <li>Build-up of grass, leaves and trash under mower.</li> <li>Dirty air filter.</li> <li>Low oil level/dirty oil.</li> <li>Faulty spark plug.</li> <li>Dirty fuel filter.</li> <li>Stale or dirty fuel.</li> <li>Water in fuel.</li> <li>Spark plug wire loose.</li> <li>Dirty/clogged muffler.</li> <li>Loose or damaged wiring.</li> <li>Carburetor out of adjustment.</li> </ol>	<ol> <li>Set in "Higher Cut" position/ reduce speed.</li> <li>Adjust throttle control.</li> <li>Clean underside of mower housing.</li> <li>Clean/replace air filter.</li> <li>Check oil level/change oil.</li> <li>Clean and regap or change spark plug.</li> <li>Replace fuel filter.</li> <li>Drain fuel tank and refill with fresh gasoline.</li> <li>Drain fuel tank and carbure tor, refill tank with fresh gasoline and replace fuel filter.</li> <li>Connect and tighten spark plug wire.</li> <li>Clean/replace muffler.</li> <li>Check all wiring.</li> <li>See "To Adjust Carburetor" in Service and Adjustments section.</li> <li>Contact a Sears or other qualified service center.</li> </ol>
Excessive vibration	<ol> <li>Worn, bent or loose blade.</li> <li>Bent blade mandrel.</li> <li>Loose/damaged part(s).</li> </ol>	<ol> <li>Replace blade. Tighten blade bolt.</li> <li>Replace blade mandrel.</li> <li>Tighten loose part(s). Replace damaged parts.</li> </ol>
Engine continues to run when operator leaves seat with with attachment clutch engaged	<ol> <li>Faulty operator-safety presence control system.</li> </ol>	<ol> <li>Check wiring, switches and connections. If not contact a Sears or other qualified service center.</li> </ol>
Poor cut - uneven	<ol> <li>Worn, bent or loose blade.</li> <li>Mower deck not level.</li> <li>Buildup of grass, leaves, and trash under mower.</li> <li>Bent blade mandrel.</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	<ol> <li>Replace blade. Tighten blade bolt.</li> <li>Level mower deck.</li> <li>Clean underside of mower housing.</li> <li>Replace blade mandrel.</li> <li>Clean around mandrels to open vent holes.</li> </ol>

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

PROBLEM	CAUSE	CORRECTION
Mower blades will not rotate	<ol> <li>Obstruction in clutch mechanism.</li> <li>Worn/damaged mower drive belt.</li> <li>Frozen idler pulley.</li> <li>Frozen blade mandrel.</li> </ol>	<ol> <li>Remove obstruction.</li> <li>Replace mower drive belt.</li> <li>Replace idler pulley.</li> <li>Replace blade mandrel.</li> </ol>
Poor grass discharge	<ol> <li>Engine speed too slow.</li> <li>Travel speed too fast.</li> <li>Wet grass.</li> <li>Mower deck not level.</li> <li>Low/uneven tire air pressure.</li> <li>Worn, bent or loose blade.</li> <li>Buildup of grass, leaves and trash under mower.</li> <li>Mower drive belt worn.</li> <li>Blades improperly installed.</li> <li>Improper blades used.</li> <li>Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels.</li> </ol>	down. 10.Replace with blades listed in this manual. 11.Clean around mandrels to
Headlight(s) not working (if so equipped)	<ol> <li>Switch is "OFF".</li> <li>Bulb(s) or lamp(s) burned out.</li> <li>Faulty light switch.</li> <li>Loose or damaged wiring.</li> <li>Blown fuse.</li> </ol>	<ol> <li>Turn switch "ON".</li> <li>Replace bulb(s) or lamp(s).</li> <li>Check/replace light switch.</li> <li>Check wiring and connections.</li> <li>Replace fuse.</li> </ol>
Battery will not charge	<ol> <li>Bad battery cell(s).</li> <li>Poor cable connections.</li> <li>Faulty regulator (if so equipped).</li> <li>Faulty alternator.</li> </ol>	<ol> <li>Replace battery.</li> <li>Check/clean all connections.</li> <li>Replace regulator.</li> <li>Replace alternator.</li> </ol>
Engine "backfires' when turning engine "OFF"	<ol> <li>Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine.</li> </ol>	<ol> <li>Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.</li> </ol>

#### SCHEMATIC

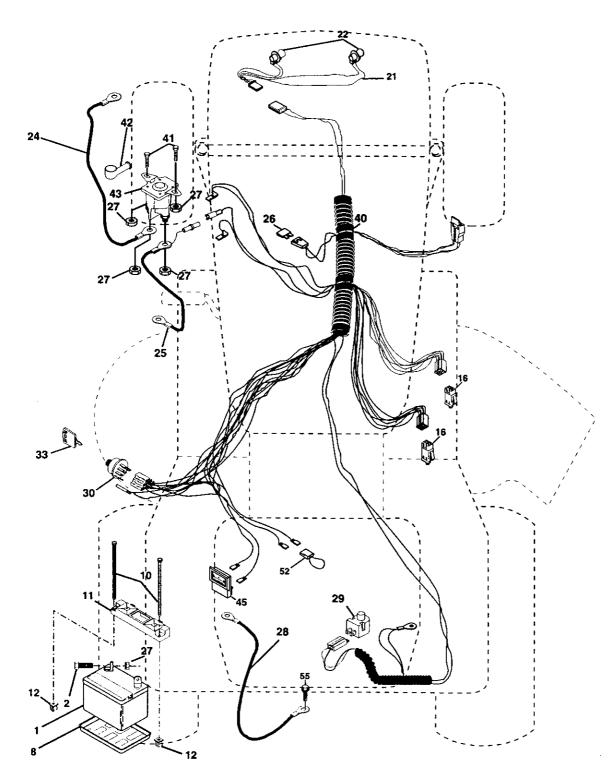
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# **REPAIR PARTS**

## TRACTOR -- MODEL NUMBER 917.272454

### ELECTRICAL



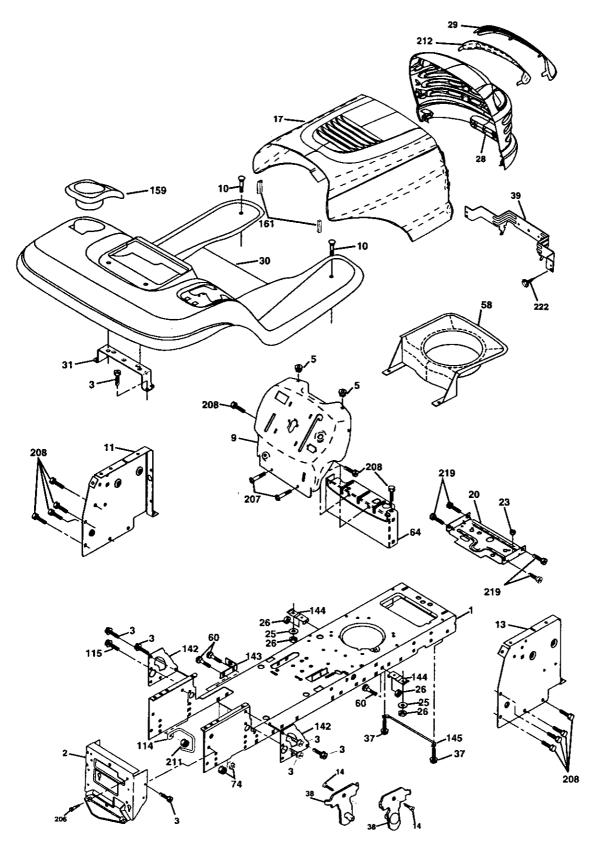
#### ELECTRICAL

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KEY NO.	PART NO.	DESCRIPTION
1 2	163465 74760412	Battery 12 VOLT 28 AMP Bolt Hex Hd 1/4-20unc x 3/4
8	7603J	Battery Tray
10	145211	Bolt, Btr Front 1/4-20 x 7-1/2
11	150109	Holddown Battery Front Mount
12		Nut, Push Nylon Battery Front 1/4
16	176138	Switch, Interlock Push-In
21	175688	Harness Light Socket (W/4152j)
22		Bulb Light #1156
24	4799J	Cable Battery
25		Cable Battery
26	175158	Fuse
27	73510400	Nut Keps Hex 1/4-20 Unc
28	145491	Cable Ground
29	121305X	Switch Seat
30	175566	Switch Ign
33	140403	Key Molded Craftsman
40	179720	Harness Ign
41	71110408	Bolt Blk. Fin Hex 1/4-20 Unc x 1/2
42	131563	CoverTerminal
43	178861	Solenoid
45	122822X	Ammeter Rectangular
52		Protection Wire Loop
55	17490508	Screw Thdrol 5/16-18 x 1/2

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

### TRACTOR -- MODEL NUMBER 917.272454 CHASSIS AND ENCLOSURES



### TRACTOR -- MODEL NUMBER 917.272454 CHASSIS AND ENCLOSURES

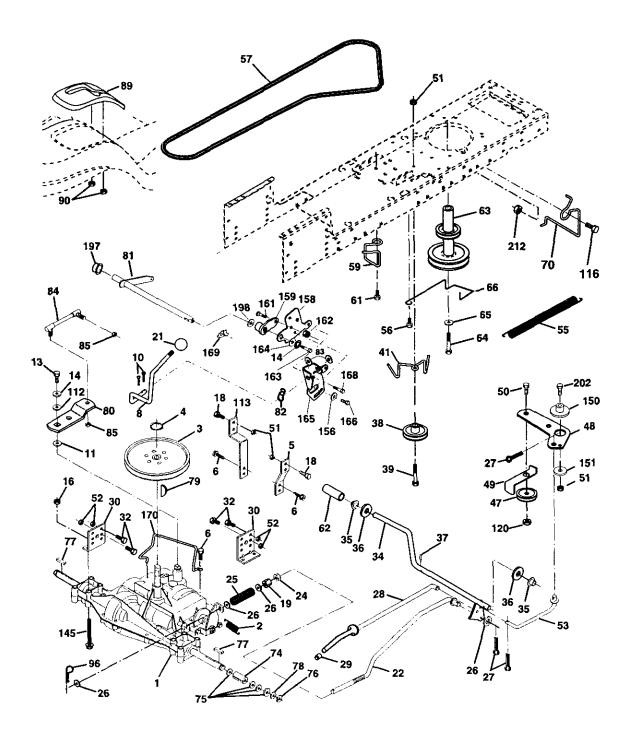
KEY NO.	PART NO.	DESCRIPTION
1	174619	Chassis Assembly
2	176554	Drawbar
3	17060612	Screw 3/8-16 x 3/4
5	155272	Bumper Hood/Dash
9	168337X013	Dash
10	STD533710	Bolt, Carriage 3/8-16 x 1
11	174996	Panel, Dash, L.H.
13	172106	Panel, Dash, R.H.
14	17490608	Screw Thdrol 3/8-16 x 1/2
17	174330X612	Hood Assembly
20	180679	Plate Mtg Battery Fuel Tank
23	124028X	Bushing, Snap, Nylon, Fuel Line
26	STD541437	Locknut, Hex, with Insert 3/8-16 Unc
28	177403	Grille/Lens Asm
29	174332X599	Lens, Grille
30	175692X612	Fend/Ftrest
31	139976	Bracket, Fender Support
37	17490508	Screw Thdrol 5/16-18 x 1/2
38	175710	Pivot Bracket Assembly
39	174714	Bracket Pivot
58	174930	Air Duct B&S
60	STD533707	Bolt Rdhd Sqnk 3/8-16 UNC x 3/4
64	154798	Dash Lower STLT
74	STD541437	Nut Crownlock 3/8-16 UNC
114	158112	Keeper Belt Rear Lh Stl
115	17060620	Screw 3/8-16 x 1-1/4
142	175702	Plate Reinforcement STLT
143	154966	Bracket Swaybar Chassis
144	175582	Bracket Pnt Footrest STLT
145	156524	Rod Pivot Chassis/Hood
159	155123X428	<b>F</b>
161	164655	Bumper Extrusion
206	170165	Bolt Shoulder 5/16-18 TT
207	17670508	Screw Thdrol 5/16-18 x 1/2
208	17670608	Screw Thdrol 3/8-16 x 1/2
211	145212	Nut Hexflange Lock
212	175143	Insert Lens Reflective
219	17000512	Screw 5/16-18 x 3/4
222	171875	Screw HwHd Hi-Lo #13-16 x 3/4

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

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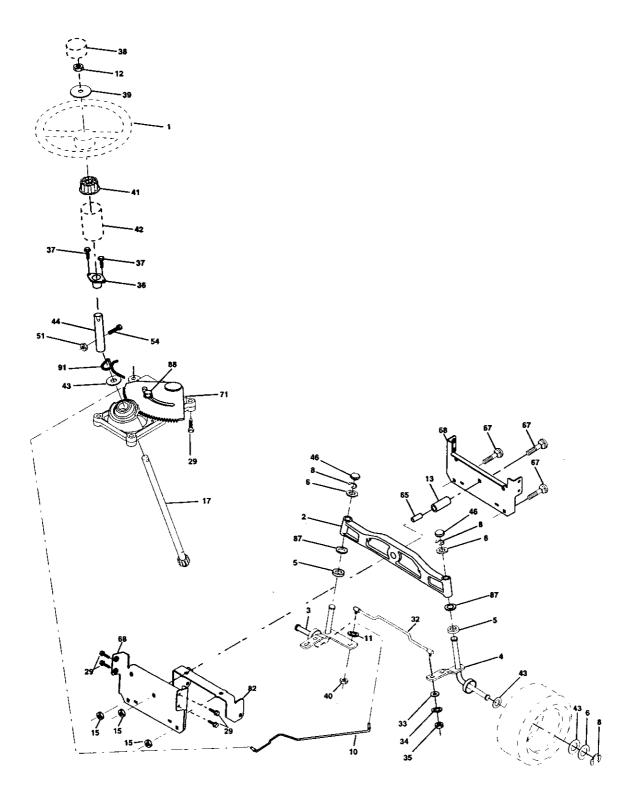
GROUND DRIVE



# **GROUND DRIVE**

KEV	PART		KEV	PART	
	NO.	DESCRIPTION		NO.	DESCRIPTION
1		Transaxle (See Breakdown)	64	71170764	Bolt, Hex 7/16-20 x 4 Grade 5
~	4 40000	Peerless 206-545C	65	STD551143	Washer
2 3	146682	Spring, Return, Brake	66	154778	Keeper, Belt, Engine, Fool-Proof
4	123666X 12000028	Pulley, Transaxle	70	134683	Guide, Mower Drive Belt, R.H.
5	121520X	Ring, Retainer Strap, Torque	74	137057	Spacer, Axle
6	17060512	Screw 5/16-18 x 3/4	75 76	121749X	Washer 25/32 x 1-1/4 x 16 Ga.
8	165866	Rod Shifter Fender STLT	77	STD581075 123583X	E-Ring
10	STD561210	Pin, Cotter	78	123565A 121748X	Key, Square 2.0 x .1845/.1865 Washer 25/32 x 1-5/8 x 16 Ga
iĭ	105701X	Washer, Shift Plate	79	STD580025	Key Woodruff
13	74550412	Bolt 1/4-28 UNF W/Patch Gr. 8	80	145090	Arm. Shift
14	10040400	Washer Lock Hvy Helical	81	165592	Shaft Asm Cross Tapered 650 20
16	73800500	Nut Lock Hx W/Ins 5/16-18	82	165711	Spring, Torsion
18	STD523710	Bolt Fin Hex 3/8-16UNC x 1 Gr 5	83	19171216	Washer 17/32 x 3/4 x 16 Ga.
19	STD541437	Nut	84	166231	Link Transaxle
21	106933X	Knob	85	150360	Nut, Nylock
22	130804	Rod, Brake	89	158391X428	
24	STD541237	Nut	90	124346X	Nut, Self-Thding, Wsh Hd 1/4
25	106888X	Spring, Brake Rod	96	STD624003	Retainer Spring 1"
26	STD551037	Washer	112	19091210	Washer 9/32 x 3/4 x 10 Gauge
27	STD561210	Pin	113	127285X	Strap Torque 90 Degrees
28	175765	Rod, Parking Brake	116	72140608	Bolt Rdhd Sqneck 3/8-16 x 1
29	71673	Cap, Parking Brake	120	73900600	Nut Lock Flg. 3/8-16
30	169592	Bracket, Transaxle	145	74490540	Bolt, Hex Fighd 5/16-18 Gr. 5
32	STD523107	Bolt 5/16-18 x 3/4	150	175456	Spacer Retainer
34	175578	Shaft Assembly, Foot Pedal	151	19133210	Washer 13/32 x 2 x 10 Ga.
35 36	120183X	Bearing, Nylon	156	166002	Washer Srrted 5/16ID x 1.125
37	STD551062 STD571810	Washer 21/32 x 1 x 16 Ga. Roll Pin 3/16 x 1	158	165589	Bracket Shift Mount
38	179114	Pulley, Composite, Flat	159	165494	Hub Tapered Flange Shift Lt
39	74760648	Bolt, Fin Hex 3/8-16 x 3	161 162	72140406	Bolt Rdhd Sqnk 1/4-20 x 3/4 Gr.5
41	175556	Keeper, Belt, Idler	162	73680400 74780416	Nut Crownlock 1/4-20 Unc
47	127783	Pulley, Idler, V-Groove, Plastic	163	19091010	Bolt Hex Fin 1/4-20Unc x 1 Gr 5 Washer 5/8 x .281 x 10 Ga
48	154407	Bellcrank Clutch Grnd Dry Stl	165	165623	Bracket Pivot Lever
49	123205X	Retainer, Belt	166	166880	Screw 5/16-18 x 5/8
50		Bolt Hex Hd 3/8-16 x 1-1/2	168	165492	Bolt Shoulder 5/16-18 x .561
51	STD541437	Nut Crown Lock 3/8-16 UNC	169	165580	Plate Fastening Lt
52	STD541431	Nut Crown Lock 5/16-18 UNC	170	178394	Keeper Belt Transaxle Gear
53	105710X	Link, Clutch	197	169613	Nyliner Snap-In
55	105709X	Spring, Clutch Return	198	169593	WasherNyliner
56	17120614	Screw 3/8-16 x .875	202	72110614	Bolt Carr. SH 3/8-16 x 1-3/4 Gr. 5
57	130801	V-Belt, Ground Drive	212	145212	Nut Hex Flg. Lock
5 <del>9</del>	169691	Keeper, Belt, Center Span			5
61	17120614	Screw 3/8-16 x .875	NOT		ant dimensione sives in U.C.
62	8883R	Cover, Pedal	NOT		ent dimensions given in U. S. ch = 25.4 mm
63	175410	Pulley, Engine			01 - 20,7 1101

STEERING



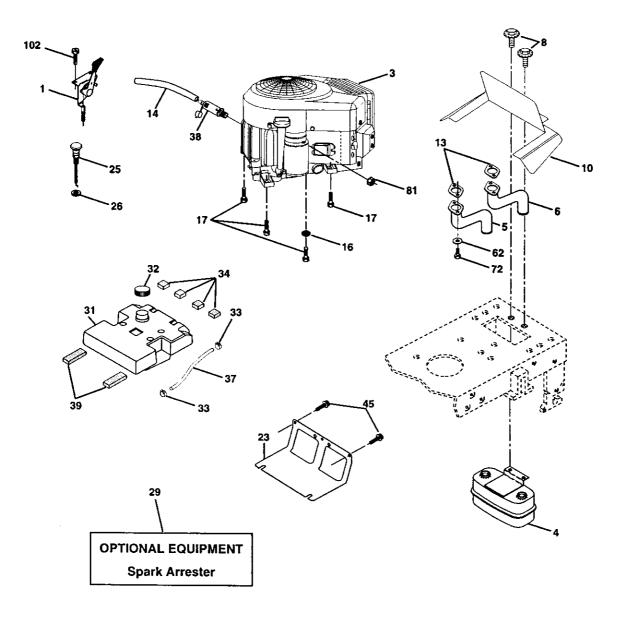
## STEERING

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KEY NO.	PART NO.	DESCRIPTION
1	159944X428	Steering Wheel
2	172393	Axle Assembly
2 3	169840	Spindle Assembly, L.H.
4	169839	Spindle Assembly, R.H.
5	6266H	Bearing, Race, Thrust, Hardened
6	121748X	Washer 25/32 x 1-5/8 x 16 Gauge
8	12000029	Ring, Klip
10	175121	Draglink
11	STD551137	Washer, Lock 3/8
12	73940800	Nut Hex Jam Toplock 1/2-20 Unf
13	136518	Spacer, Bearing, Axle
15	145212	Nut, Hexflange Lock
17	180641	Shaft Assembly, Steering
29	17060612	Screw_ 3/8-16 x 3/4
32	171888	Rod, Tie
33	19111216	Washer 11/32 x 3/4 x 16 Ga.
34	10040500	Washer Lock 5/16
35	73540500	Crownlock Nut 5/16-24 Unf
36	155099	Bushing, Steering
37	152927	Screw
38	159946X428	
39	19182411	Washer 9/16 D x 1-1/2 OD 11 Ga.
40	STD541537	Nut Lock 3/8-24 Unf
41	159945	Adaptor, Steering Wheel
42	145054X428	
43 44	121749X 180640	Washer 25/32 x 1-1/4 x 16 Ga. Extension Shaft Steering
44	121232X	Cap, Spindle
40 51	73540400	Nut Crownlock 1/4-28
54	71130420	Bolt Hex 1/4-28 Unf x 1-1/4 Gr. 8
65	160367	Spacer Brace Axle
67	72140618	Bolt RDHD SQNK 3/8-16 x 2-1/4
68	169827	Axie, Brace
71	175146	Steering Asm
82	169835	Bracket Susp Chassis Front
87	173966	Washer Flat .781 x 1-1/2 x .14
88	175118	Bolt shoulder 7/16-20
91	175553	Clip Steering
-		ent dimensione diven in LL S

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

## ENGINE



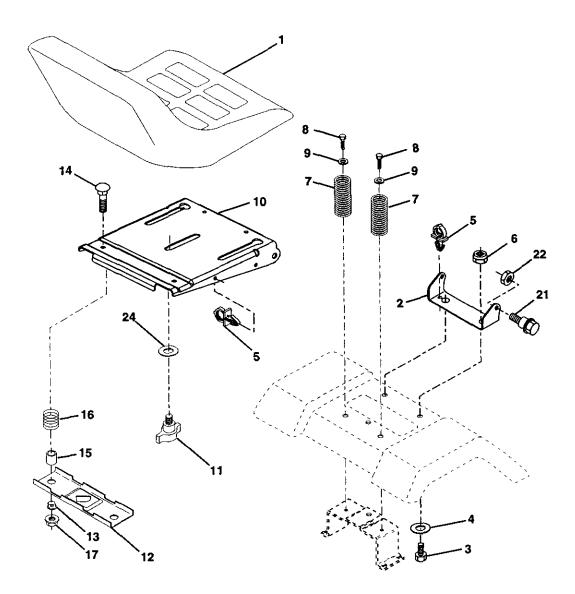
#### ENGINE

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KEY NO.	PART NO.	RECORDINA
		DESCRIPTION
1	170546	Control, Throt Paddle
3		Engine, B&S, (See Breakdown) No. 445777-0129-E1
4	149723	Muffler Exhaust
5	159955	Exhaust Asm. Left
6	160589	Exhaust Asm. Right
8	171877	Bolt 5/16-18unc x 3/4 W/Sems
10	162797	Heat Shield Lt
13	165391	Gasket, Muffler
14	148456	Tube Drain Oil Easy
16	STD551237	Washer Lock Ext Tooth 3/8
17	17060624	Screw 3/8-16 x 1-1/2
23	169837	Shield, Brn/Dbr Guard
25	145996	Control Choke
26	73920600	Nut Keps 3/8-24 Unf
29	137180	Arrestor, Spark
31	157103	Tank, Fuel
32	161696	Cap Fuel Guage
33	123487X	Clamp, Hose
34	106082X	Spacer Pad
37	8543R	Line, Fuel
38	148315	Plug, Oil Drain Easy
39	109227X	Pad Idler
45	17000612	Screw Hex Wsh3/8-16 x 3/4
62	10040500	Washer Lock 5/16
72	71070512	Screw Hex 5/16-18 x 3/4
81	73510400	Nut Keps Hex 1/4-20 Starter Nut
102	17720408	Screw, Hex Thd Cut 1/4-20 x 1/2

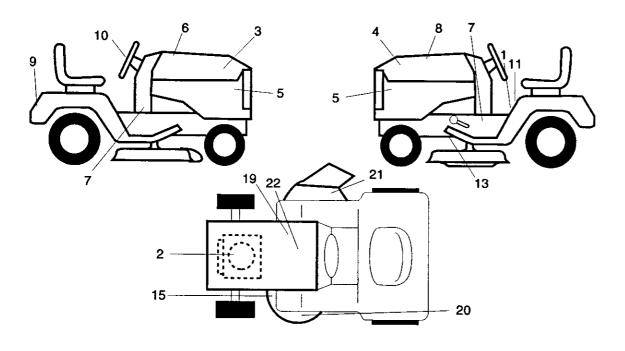
NOTE: All component dimensions given in U. S. inches 1 inch = 25.4 mm

SEAT ASSEMBLY



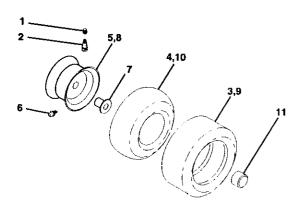
KEY NO.	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1	180597	Seat	13	121248X	Bushing, Snap
2	180166	Bracket, Pivot, Seat	14	72050412	Bolt, Carriage 1/4-20 x 1-1/2
3	71110616	Bolt	15	134300	Spacer, Split .28 x .88
4	19131610	Washer 13/32 x 1 x 10 Gauge	16	121250X	Spring
5	145006	Clip, Push-In Hinged	17	123976X	Locknut, Flange 1/4 Grade 5
6	STD541437	Nut	21	171852	Bolt, Shoulder 5/16-18 UNC
7	124181X	Spring, Seat	22	STD541431	Nut
8	17000616	Screw 3/8-16 x 1-1/2	24	19171912	Washer 17/32 x 1-3/16 x 12 Ga.
9	19131614	Washer 13/32 x 1 x 14 Gauge			
10	180186	Pan, Seat			
11	166369	Knob Seat	NOT	E: All compor	ent dimensions given in U.S.
12	121246X	Bracket, Switch Mounting		inches 1 inc	sh = 25.4 mm

DECALS



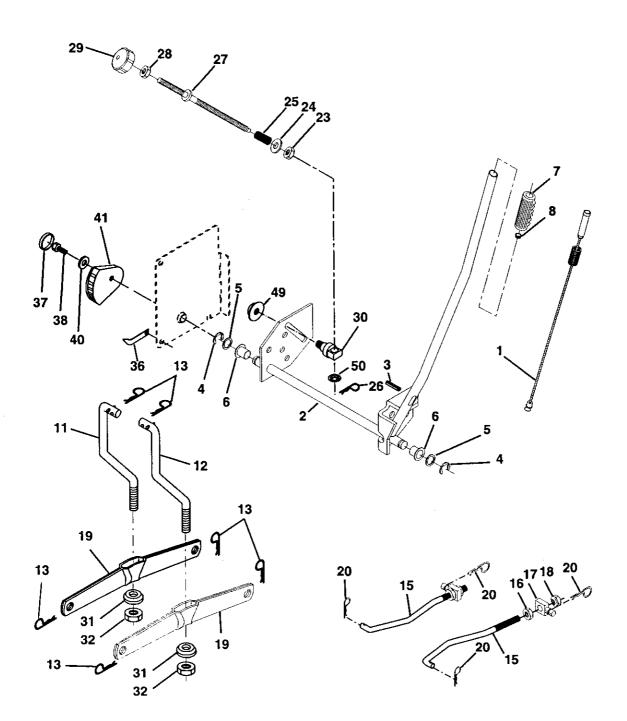
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	156439	Decal, Fender Danger Sears	13	146046	Decal, V-Belt Dr Sch Tractor
2	181569	Decal, Engine	15	160396	Decal, Mower Drive Schematic
3	177356	Decal, Hood, R.H.	19	138047	Decal, Battery Diehard Sears
4	177357	Decal, Hood, L.H.	20	172331	Decal, Deck Sears
5	177355	Decal, Hood Side	21	179128	Decal, Deck
6	133644	Decal, Maintenance	22	149516	Decal, Battery
7	181703	Decal, Lower Dash		138311	Decal, Lift Handle
8	181428	Decal, Rplcmnt		165800X428	Pad Footrest LH STLT
9	163204	Decal, Fender, Craftsman White		165799X428	
10	164065	Decal, Strng Whi Domed		184115	Owner's Manual, English
11	156368	Decal, Fender STLT Oper Inst E/S		184116	Owner's Manual, Spanish

## WHEELS AND TIRES



KEY	PART				
NO.	NO.	DESCRIPTION			
1	59192	Valve Cap, Tire			
2 3	6513 <del>9</del>	Stem, Valve			
3	106222X	Tire, Front			
4	59904	Tube, Front Tire			
		(Not Provided, Service Item Only)			
5	106732X624	Rim, Front			
6	278H	Fitting, Grease (Front Wheel Only)			
7	9040H	Bearing, Flange (Front Wheel			
		Only)			
8	106108X624	Rim, Rear			
9	122082X	Tire, Rear			
10	7152J	Tube, Rear Tire			
		(Not Provided, Service Item Only)			
11	104757X428	Cap, Axle			
	144334	Sealant, Tire 10 oz.			
NOTE: All component dimensions given in U.S.					

LIFT ASSEMBLY



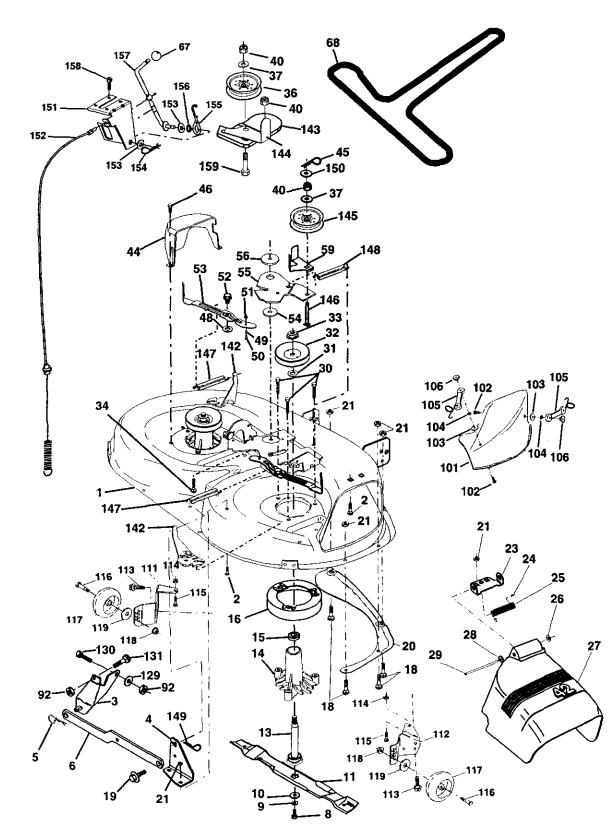
#### LIFT ASSEMBLY

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KEY NO.	PART NO.	DESCRIPTION
1	159460	Wire Asm Inner/Sprg W/plunger LT
2	159471	Shaft Asm Lift RH w/Inf
3	105767X	Pin Groove 1 500 Zinc
4	12000002	E Ring #5133-62
5	19211621	Washer 21/32 X 1 X 21 Ga
6	120183X	Bearing Nylon Blk 629 ld
7	125631X	Grip Handle
8	122365X	Button Plunger Yellow
11	139865	Link Lift LH Fixed Length
12	139866	Link Lift RH Fixed Length
13	4939M	Retainer Spring
15	173288	Link Front
16	73350800	Nut Jam Hex 1/2-13 Unc
17	175689	Trunnion Blk Zinc
18	73800800	Nut Lock w/Wsh 1/2-13 Unc
19	139868	Arm Suspension Rear
20	163552	Retainer Spring
23	110807X	Nut Special
24	19131016	Washer 13/32 X 5/8 X 16 Ga
25	2876H	Spring2-1/8
26	169484	RetainerClip
27	126971X	Rod Adj Lift Zinc 7 49 Wrk Lg
28	73350600	Nut Hex Jam 3/8-16 Unc
29	138057	Knob Inf 3/8-16 Unc Blk W/sym
30	150233	Trunnion Infin Height
31	169865	Bearing Pvt Lift
32	73540600	Nut Crownlock 3/8 - 24
36	155097	Pointer Height Indicator
37	123935X	Plug Hole Blk 1.485/1.515 Dia.
38	17060516	Screw Thdrol 5/16-18 x 1
40	19112410	Washer 11/32 x 1-1/2 10 Ga.
41	155098	Indicator Height STLT
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

MOWER DECK

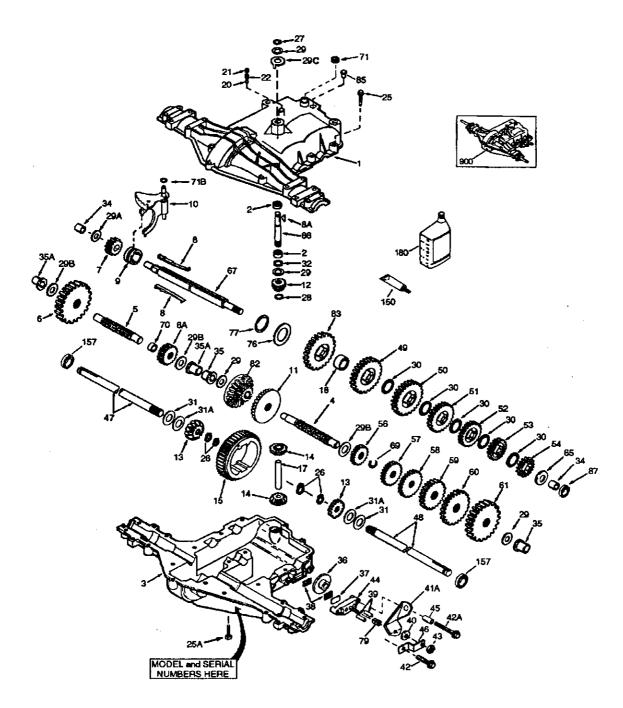


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## MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	165892	Mower Deck Assembly, 42"	67	149846	Knob Custom Ovai
2	STD533107	Bolt	68	144959	V-Belt
3	138017	Bracket Assembly, Sway Bar,	92	STD541437	Nut
		Front	101	136420	MulcherCover
4	165460	Bracket Sway Bar 38/42" Deck	102	71081010	Screw Pan HD Phillip 10-24 x 5/8
5	STD624008	RetainerSpring	103	19061216	Washer #10
6	178024	Bar Sway Deck	104	STD551110	
8 9	850857 STD551137	Bolt, Hex 3/8-24 x 1.25 Gr. 8 Washer, Lock	105	160793 2029J	Latch Assembly, Bagger
9 10	140296		106	179292	Nut, Weld
11	134149	Washer, Hardened Blade, Mulching	111 112	179292	Bracket, Gauge, Wheel L.H. Bracket, Gauge, Wheel R.H.
13	137645	Shaft Assembly, Mandrel, Vented	113	179295	Screw 3/8-16 x .625
13	128774	Housing, Mandrel, Vented	114	STD541431	Nut, Hex, Keps 5/16-18 UNC
15	110485X	Bearing, Ball, Mandrel	115	72110505	Bolt, Carriage 5/16 UNC x 5/8
16	174493	Stripper, Mower Deck	116	4898H	Bolt, Shoulder
18	72140505	Bolt, Carriage 5/16-18 x 5/8	117	165746	Wheel, Gauge
19	132827	Bolt, Shoulder	118	73930600	Nut, Centerlock 3/8-16
20	159770	Baffle, Vortex	119	STD551037	Washer 3/8 x 7/8 x 14 Gauge
21	STD541431	Nut Crownlock 5/16-18 UNC	129	19131312	Washer 13/32 x 13/16 x 12 Ga.
23	177563	Bracket, Deflector	130	STD523710	Bolt, Fin Hex 3/8-16 UNC x 1
24	105304X	Cap, Sleeve	100	0.0000.10	Gr. 5
25	123713X	Spring, Torsion, Deflector	131	STD533710	Bolt, Rdhd Sqnk 3/8-16UNC x 1
26	110452X	Nut, Push	142	165890	Arm Spring Brake Mower
27		Shield, Deflector	143	157109	Bracket Arm Idler 42"
28	19111016	Washer 11/32 x 5/8 x 16 Ga.	144	158634	Keeper Belt 42" Clutch Cable
29	131491	Rod, Hinge	145	165888	Pulley Idler Flat
30	173984	Screw Thorol Washer Head	146	171977	Bolt Čarriage Idler
31	129963	Washer, Spacer	147	131335	Spring Extension
32	153535	Pulley, Mandrel	148	169022	Spring Return Idler
33	178342	Nut, Toplock, Flanged	149	165898	Retainer Spring Yellow Zinc
34	STD533717	Bolt	150	19091216	Washer 9/32 x 3/4 x 16 Ga.
36	131494	Pulley, Idler, Flat	151	169670	Bracket Clutch
37	STD551037	Washer 13/32 x 13/16 x 16	152	169676	Cable Clutch 42 In
	070544407	Gauge	153	169674	Washer Flat 3/8" Type B
40	STD541437	Nut Črownlock 3/8-16 UNC	154	169675	Spring Retainer
44	140088	Guard, Mandrel, L.H.	155	169671	Spring Retention Lever
45	STD624003	Retainer	156	169672	Spacer
46 48	137729		157	169669	Rod Clutch
48 49	133944 174284	Washer, Hardened	158	17720408	Screw Hex Thd Cut 1/4-20 x 1/2
49 50	131340	Roller Assembly, Cam Follower Bolt, Shoulder #10-24 Grade 5	159	STD533717 130794	Bolt Rdhd Sqn 3/8-16Unc x 1-3/4
50 51	STD541410	Locknut		130794	Mandrel Assembly (Includes Housing, Shaf and Shaft Hardware
52	139888	Bolt, Shoulder 5/16-18 UNC			Only-Pulley not included)
53	131845	Arm Assembly, Pad, Brake		169583	Replacement Mower, Complete
53 54	133943	Washer, Hardened		109000	replacement wower, complete
55	155046	Arm, idler	NOT		nent dimensions given in U.S.
56	165723	Spacer, Retainer			ach = 25.4  mm
59	141043	Guard, TUV Idler			

## TRACTOR - - MODEL NUMBER 917.272454 PEERLESS TRANSAXLE--MODEL NUMBER 206-545C

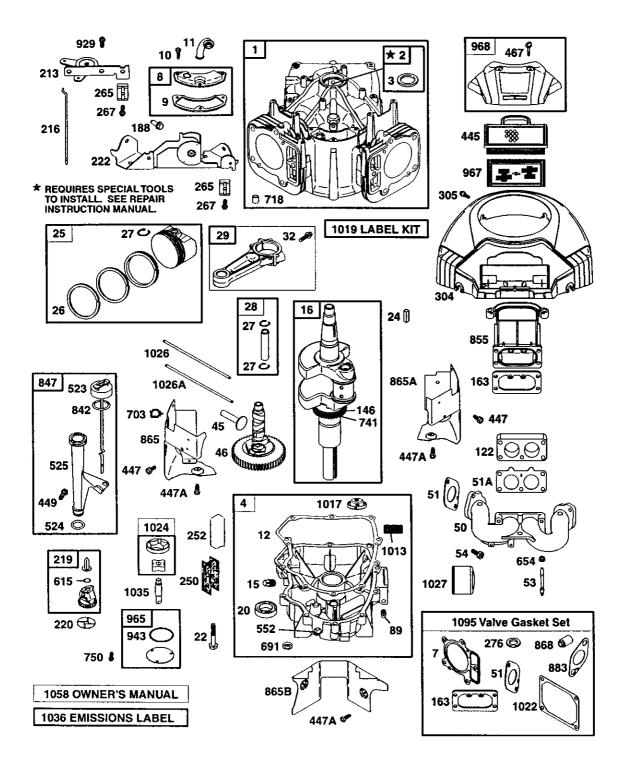


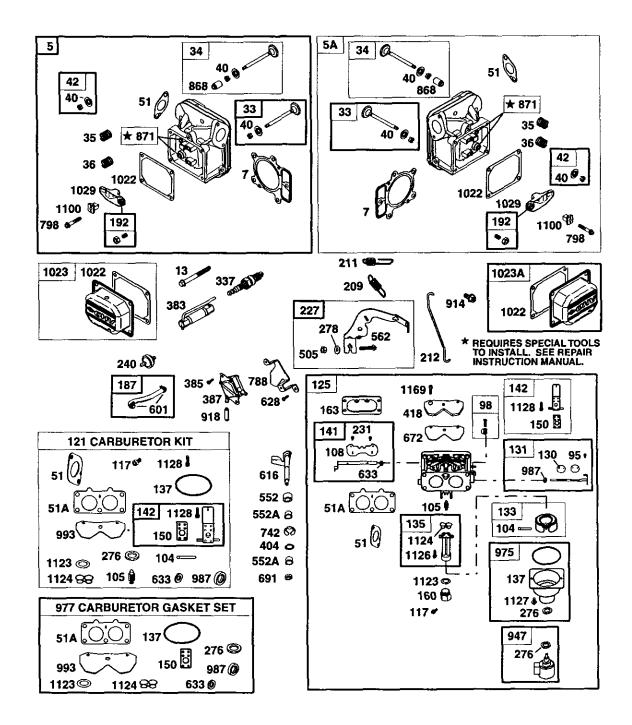
#### TRACTOR - - MODEL NUMBER 917.272454 PEERLESS TRANSAXLE--MODEL NUMBER 206-545C

1         772147         Transaxle Cover         39         766026         DowelPin           2         78006A         Needle Bearing 5/6"         40         792076A         Transaxle Case         312 ID x.059W           4         776335         Countershaft         42         792076A         Screw 1/4 - 20 x 1-1 /4"           6         776336         Spur Gear (13 teeth)         42         792075A         Screw 1/4 - 20 x 2 1/4"           6         776336         Spur Gear (11 teeth)         44         792075         Screw 1/4 - 20 x 2 1/4"           6         778356         Spur Gear (11 teeth)         44         792075         Darket Lever           7         778330         Spur Gear (11 teeth)         44         792075         Brake Lever Bracket           8         792047         Woodruft Key #9         46         786066         Spur Gear (21 teeth)           10         784378         Shift Rod & Fork         48         774690         Axle (11-15 / 16' Long)           11         778354         Bevel Gear (30 teeth)         50         778338         Spur Gear (21 teeth)           12         77809         Input Bevel Pinon (13 teeth)         51         778350         Spur Gear (11 teeth)           14	KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
2         780086A         Needle Bearing 5/8"         40         72276A         FlattWasher           3         770128         Transaule Case         312 ID x. 059W         Brake Lever           5         7776409         Output Shaft         42         792073A         Screw 1/4 - 20 x 1-1 /4"           6A         7778365         Spur Gear (15 teeth)         42         792085A         Screw 1/4 - 20 x 2 1 /4"           6A         778305         Spur Gear (15 teeth)         43         792075         Locknut 5 / 16 - 24           7         778305         Spur Gear (15 teeth)         44         7780066         Spacer 2825 x 1.0           6A         792047         Woodruff Key #9         46         786066         Spacer 2825 x 1.0           784352         Shift Rod & Fork         48         774890         Akle (11-15 / 16" Long)           10         778436         Bevel Gear (30 teeth)         49         778338         Spur Gear (21 teeth)           12         7778368         Bevel Gear (13 teeth)         51         778335         Spur Gear (11 teeth)           13         778368         Bevel Gear (13 teeth)         56         778335         Spur Gear (11 teeth)           14         778638         Bevel Ring Gaa <t< td=""><td>1</td><td>772147</td><td>Transaxle Cover</td><td>39</td><td>786026</td><td>Dowel Pin</td></t<>	1	772147	Transaxle Cover	39	786026	Dowel Pin
3       7770128       Transaxle Case       .312 Dx .059W         4       776395       Countershaft       41A       790079       Brake Lever         5       776409       Output Shaft       42A       792073A       Screw 1/4 - 20 x 1-1 /4"         6       778364       Spur Gear (15 teeth)       43       792075       Locknut 5 / 16 - 24         7       778330       Spur Gear (11 teeth)       44       790025       Brake Pad Holder         8       792105       Nift Key #9       46       786066       Spacer .252 x 1.0         8A       792047       Woodruft Key #9       46       786086       Brake Lever Bracket         9       784325       Shift Collar       47       774690       Axie (11-15 / 16" Long)         10       784378       Shurt Bevel Finion (13 teeth)       50       778338       Spur Gear (27 teeth)         13       778368       Bevel Gear (13 teeth)       51       778350       Spur Gear (16 teeth)         14       778368       Bevel Finion (13 teeth)       53       778355       Spur Gear (17 teeth)         15       778370       Ring Gear (43 teeth)       56       778355       Spur Gear (17 teeth)         16       778077       Bal 5/16' dia </td <td>2</td> <td>780086A</td> <td>Needle Bearing 5/8"</td> <td>40</td> <td>792076A</td> <td>FlatWasher</td>	2	780086A	Needle Bearing 5/8"	40	792076A	FlatWasher
4       776395       Countershaft       41A       790079       Brake Lever         6       778364       Spur Gear (38 teeth)       42A       792073A       Screw 1/4 - 20 x 1-1/4"         6A       778364       Spur Gear (15 teeth)       43       792075       Locknut 5 / 16 - 24         7       778330       Spur Gear (11 teeth)       44       790025       Brake Pad Holder         8       792170       Shift Key #9       46       786066       Spacer .2525 x 1.0         8       792170       Wodruff Key #9       46       786006       Brake Lever Bracket         9       778333       Bevel Gear (30 teeth)       49       778336       Spur Gear (11 teeth)         12       778334       Bevel Gear (30 teeth)       49       778336       Spur Gear (21 teeth)         13       778358       Bevel Gear (13 teeth)       51       778336       Spur Gear (15 teeth)         14       778368       Bevel Pinion (13 teeth)       53       778337       Spur Gear (15 teeth)         14       778368       Drive Pin       57       778337       Spur Gear (15 teeth)         15       778370       Ring Gear (43 teeth)       56       778335       Spur Gear (21 teeth)         17	3					.312 ID x .059W
5       776409       Output Shaft       42       792073A       Screw 1/4 - 20 x 1-1/4"         6A       778369       Spur Gear (15 teeth)       43       792075       Locknut 5 / 16 - 24         7       778330       Spur Gear (11 teeth)       44       790025       Brake Pad Holder         8       792075       Woodruff Key #9       45       786066       Spacer - 2625 x 1.0         9       784325       Shift Collar       47       774890       Axte (11-15 / 16" Long)         10       784378       Shift Rod & Fork       48       774691       Axte (16 - 1 / 2" long)         11       778334       Bevel Gear (30 teeth)       49       778356       Spur Gear (21 teeth)         12       778338       Bevel Gear (13 teeth)       51       778353       Spur Gear (19 teeth)         13       778368       Bevel Finion (13 teeth)       53       778355       Spur Gear (15 teeth)         14       778368       Bevel Finion (13 teeth)       54       778355       Spur Gear (11 teeth)         15       778370       Ring Gear (43 teeth)       56       778355       Spur Gear (17 teeth)         16       786188       Drive Pin       57       7778353       Spur Gear (17 teeth)	4	776395		41A	790079	Brake Lever
6         778364         Spur Gear (13 teeth)         42A         792065A         Screw 1/4 - 20 x 2 1/4"           6A         778330         Spur Gear (11 teeth)         43         792075         Locknut 5 / 16 - 24           7         778330         Spur Gear (11 teeth)         44         790025         Brake Pad Holder           8         792180         Shift Key #9         46         786066         Spacer .2625 x 1.0           8         792047         Woodruff Key #9         46         786066         Spacer .2625 x 1.0           9         784378         Shift Rod & Fork         48         774290         Axle (11-15 / 16" Long)           10         784378         Shift Rod & Fork         48         7745491         Axle (11 -15 / 16" Long)           11         778336         Bevel Gear (13 teeth)         50         778353         Spur Gear (21 teeth)           12         778368         Bevel Pinion (13 teeth)         53         778350         Spur Gear (11 teeth)           14         778378         Ring Gear (43 teeth)         56         778353         Spur Gear (13 teeth)           17         78618         Drive Pin         57         778353         Spur Gear (13 teeth)           17         Rota <t< td=""><td>5</td><td></td><td></td><td>42</td><td>792073A</td><td>Screw 1/4 - 20 x 1-1 /4"</td></t<>	5			42	792073A	Screw 1/4 - 20 x 1-1 /4"
6A         778369         Spur Gear (15 teeth)         43         792075         Locknut 5 / 16 - 24           8         792180         Shift Key         45         786066         Spacer .2625 x 1.0           8A         792180         Shift Collar         47         774690         Axtle (11-15 / 16" Long)           9         784352         Shift Collar         47         774690         Axtle (16 - 1 / 2" long)           10         784378         Shift Ad & Fork         48         774691         Axtle (16 - 1 / 2" long)           11         778334         Bevel Gear (13 teeth)         50         778338         Spur Gear (27 teeth)           13         7778368         Bevel Gear (13 teeth)         51         778350         Spur Gear (15 teeth)           14         778368         Bevel Finion (13 teeth)         53         778350         Spur Gear (15 teeth)           15         778370         Ring Gear (43 teeth)         56         778353         Spur Gear (11 teeth)           16         786102         Spacer 1.130 X.695         58         778353         Spur Gear (11 teeth)           17         78018         Drive Pin         57         778353         Spur Gear (21 teeth)           17         7802073 <t< td=""><td></td><td></td><td></td><td>42A</td><td>792085A</td><td>Screw 1/4 - 20 x 2 1/4"</td></t<>				42A	792085A	Screw 1/4 - 20 x 2 1/4"
7       778330       Spur Gear (11 teeth)       44       790025       Brake Pad Holder         8       792180       Shift Key       45       786086       Brake Lever Bracket         9       784332       Shift Collar       47       7774990       Axle (11-15 / 16" Long)         10       784378       Shift Collar       47       7774990       Axle (16 - 1 / 2" Long)         11       778334       Bevel Gear (30 teeth)       49       778356       Spur Gear (22 teeth)         12       778309       Input Bevel Pinion (13 teeth)       50       778353       Spur Gear (21 teeth)         13       778368       Bevel Gear (13 teeth)       51       778350       Spur Gear (15 teeth)         14       778370       Ring Gear (43 teeth)       56       778353       Spur Gear (15 teeth)         15       778370       Ring Gear (43 teeth)       56       778353       Spur Gear (15 teeth)         16       786102       Spacer 1,130 X.695       58       7778351       Spur Gear (21 teeth)         21       792078       Set Screw 3/8 - 16 x 3/8"       60       778345       Spur Gear (22 teeth)         22       792079       Spring 3.10 OD x.625 L       61       778345       Spur Gear (23 teeth)			Spur Gear (15 teeth)	43	792075	Locknut 5 / 16 - 24
8         792180         Shift Key         45         786066         Spacer .2625 x 1.0           8A         792047         Woodruff Key #9         46         786066         Brake Lever Bracket           9         784352         Shift Rod & Fork         48         774690         Axle (11-15 / 16" Long)           10         784378         Shift Rod & Fork         48         774690         Axle (15 - 1 / 2" long)           11         778334         Bevel Gear (30 teeth)         49         778356         Spur Gear (21 teeth)           12         778309         Input Bevel Pinion (13 teeth)         50         778332         Spur Gear (18 teeth)           13         778368         Bevel Finion (13 teeth)         53         778350         Spur Gear (11 teeth)           14         778370         Ring Gear (43 teeth)         56         778353         Spur Gear (11 teeth)           15         778370         Ring Gear (43 teeth)         56         778353         Spur Gear (12 teeth)           16         766102         Spacer 1.130 X .695         58         778353         Spur Gear (21 teeth)           21         792077A         Ball 5/16" dia         59         778345         Spur Gear (21 teeth)           21         792078			Spur Gear (11 teeth)	44	790025	Brake Pad Holder
BA         792047         Woodruff Key #9         46         786086         Brake Lever Bracket           9         784352         Shift Collar         47         774690         Axle (11-15 / 16" Long)           10         784378         Shift Collar         47         774690         Axle (11-15 / 16" Long)           11         778309         Input Bevel Gear (30 teeth)         49         778356         Spur Gear (21 teeth)           12         778309         Input Bevel Gear (13 teeth)         51         778350         Spur Gear (21 teeth)           13         778368         Bevel Pinion (13 teeth)         53         778350         Spur Gear (15 teeth)           14         778370         Ring Gear (43 teeth)         56         778353         Spur Gear (11 teeth)           15         778370         Ring Gear (43 teeth)         56         778353         Spur Gear (11 teeth)           16         786102         Spacer 1,130 X.695         58         778351         Spur Gear (21 teeth)           17         786188         Drive Pin         57         778353         Spur Gear (21 teeth)           21         792077A         Ball 5/16" dia         59         778351         Spur Gear (21 teeth)           22         792079 </td <td></td> <td></td> <td>Shift Key</td> <td>45</td> <td>786066</td> <td>Spacer .2625 x 1.0</td>			Shift Key	45	786066	Spacer .2625 x 1.0
9         784352         Shift Collar         47         774690         Axle (11-15 / 16* Long)           10         784378         Shift Collar         48         774691         Axle (11-15 / 16* Long)           11         778334         Bevel Gear (30 teeth)         49         778356         Spur Gear (22 teeth)           12         778309         Input Bevel Gear (13 teeth)         50         778352         Spur Gear (23 teeth)           13         778368         Bevel Gear (13 teeth)         51         778352         Spur Gear (19 teeth)           14         778370         Ring Gear (43 teeth)         53         778353         Spur Gear (11 teeth)           15         778370         Ring Gear (43 teeth)         56         778353         Spur Gear (11 teeth)           16         786102         Spacer 1.130 X. 695         58         778353         Spur Gear (21 teeth)           21         7920778         Set Screw 3/8 - 16 x 3/8"         60         778345         Spur Gear (24 teeth)           21         792078         Set Screw 3/8 - 16 x 3/8"         66         776439         Spur Gear (24 teeth)           21         792079         Spring .310 OD x. 625 L         61         7778345         Spur Gear (24 teeth) <t< td=""><td></td><td></td><td></td><td>46</td><td>786086</td><td></td></t<>				46	786086	
10         784378         Shift Rod & Fork         48         774691         Axle (16 - 1 / 2" long)           11         778334         Bevel Gear (30 teeth)         49         778336         Spur Gear (29 teeth)           12         778309         Input Bevel Pinion (13 teeth)         50         778338         Spur Gear (21 teeth)           13         778368         Bevel Pinion (13 teeth)         51         778350         Spur Gear (17 teeth)           14         778368         Bevel Pinion (13 teeth)         53         778350         Spur Gear (15 teeth)           15         778370         Ring Gear (43 teeth)         56         778333         Spur Gear (11 teeth)           16         786102         Spacer 1.130 X .695         58         778351         Spur Gear (17 teeth)           20         792077A         Ball 5/16" dia         59         778351         Spur Gear (24 teeth)           21         792078         Set Screw 3/8 - 16 x 3/8"         60         778349         Spur Gear (24 teeth)           22         792073         Screw 1/4 - 20 x 1 - 1/4"         65         780189         Flat Washer           25A         792177         Screw 1/4 - 20 x 1 - 3/6"         58         776326         Shifter & Brake Shaft						
11       778334       Bevel Gear (30 teeth)       49       778356       Spur Gear (29 teeth)         12       778309       Input Bevel Pinion (13 teeth)       50       778338       Spur Gear (27 teeth)         13       778368       Bevel Gear (13 teeth)       51       778354       Spur Gear (19 teeth)         14       778367       Ring Gear (43 teeth)       53       778350       Spur Gear (15 teeth)         15       778370       Ring Gear (43 teeth)       56       778353       Spur Gear (17 teeth)         17       786188       Drive Pin       57       778353       Spur Gear (17 teeth)         18       786102       Spacer 1.130 X.695       58       778353       Spur Gear (24 teeth)         20       792077A       Ball 5/16' dia       59       778345       Spur Gear (24 teeth)         21       792078       Set Screw 3/8 - 16 x 3/8"       60       776345       Spur Gear (24 teeth)         25       792073A       Screw 1/4 - 20 x 1-1/4"       65       780189       Flat Washer       .563 1D x.062W         26       792177       Retaining Ring (pkg of 2)       66       776396       Shifter & Brake Shaft         28       788040       Retaining Ring       67       776396				48	774691	Axle (16 - 1 / 2" long)
12       778308       Input Bevel Pinion (13 teeth)       50       778338       Spur Gear (27 teeth)         13       778368       Bevel Gear (13 teeth)       51       778354       Spur Gear (23 teeth)         14       778368       Bavel Pinion (13 teeth)       53       778350       Spur Gear (19 teeth)         14       778368       Bavel Pinion (13 teeth)       53       778350       Spur Gear (15 teeth)         15       778370       Ring Gear (43 teeth)       56       778355       Spur Gear (11 teeth)         16       786188       Drive Pin       57       778353       Spur Gear (11 teeth)         17       786188       Drive Pin       57       778351       Spur Gear (21 teeth)         17       786188       Drive Pin       57       778353       Spur Gear (21 teeth)         20       792077A       Ball 5/16' dia       59       778349       Spur Gear (21 teeth)         21       792078       Set Screw 3/8 - 16 x 3/8"       60       778349       Spur Gear (21 teeth)         22       792079       Spring 310 OD x .625 L       61       776396       Shifter & Brake Shaft         25       792177       Screw 1/4 -20 x 1 -3/8"       50       Trotzt Washer       .563 ID x .062W				49	778356	Spur Gear (29 teeth)
13       778368       Bevel Gear (13 teeth) (Include. 14)       51       778354       Spur Gear (23 teeth) (Include. 14)         14       778368       Bevel Pinion (13 teeth) (Include. 13)       52       778350       Spur Gear (15 teeth)         15       778370       Ring Gear (43 teeth)       56       778355       Spur Gear (15 teeth)         16       Tression       57       778353       Spur Gear (17 teeth)         17       786188       Drive Pin       57       778353       Spur Gear (17 teeth)         20       792077A       Ball 5/16° dia       59       778353       Spur Gear (24 teeth)         21       792077A       Ball 5/16° dia       59       778354       Spur Gear (24 teeth)         21       792077A       Ball 5/16° dia       59       778345       Spur Gear (24 teeth)         22       792073       Spring.310 OD x.625 L       61       778349       Spur Gear (24 teeth)         25A       792177       Screw 1/4 - 20 x 1-1/4"       65       780189       Flat Washer       -5631D x.062W         26       792125       Retaining Ring (pkg of 2)       66       776422       Input Shaft       -         27       792035       Retaining Ring       69       792170						Spur Gear (27 teeth)
14         778368         Bevel Pinion (13 teeth)         52         778352         Spur Gear (19 teeth)           14         778368         Bevel Pinion (13 teeth)         53         778350         Spur Gear (11 teeth)           15         778370         Ring Gear (43 teeth)         56         778335         Spur Gear (11 teeth)           16         786188         Drive Pin         57         778337         Spur Gear (11 teeth)           17         786188         Drive Pin         57         778337         Spur Gear (11 teeth)           20         792077A         Ball 5/16" dia         59         778349         Spur Gear (21 teeth)           21         792078         Set Screw 3/8 - 16 x 3/8"         60         778349         Spur Gear (22 teeth)           25         792073         Screw 1/4 - 20 x 1 - 1/4"         65         780189         Flat Washer           25A         792177         Screw 1/4 - 20 x 1 - 3/8"         56         776422         Input Shaft           28         788040         Retaining Ring         67         776436         Shifter & Brake Shaft           28         780072         ThrustWasher         718         788092         'O'' Ring           762 ID x .031W         71         7800			Revel Gear (13 teeth)			
14       778368       Bevel Pinion (13 teeth) (Include. 13)       53       778350       Spur Gear (16 teeth)         15       778370       Ring Gear (43 teeth)       56       778337       Spur Gear (11 teeth)         17       786188       Drive Pin       57       778337       Spur Gear (11 teeth)         18       786102       Spacer 1.130 X.695       58       778353       Spur Gear (21 teeth)         20       792077A       Ball 5/16" dia       59       778351       Spur Gear (21 teeth)         21       792078       Set Screw 3/8 - 16 x 3/8"       60       778349       Spur Gear (21 teeth)         22       792079       Spring .310 OD x.625 L       61       778345       Spur Gear (22 teeth)         25       792073       Screw 1/4 - 20 x 1-3/8"       .563 ID x.062W       .563 ID x.062W         26       792175       Retaining Ring       67       776396       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       71       786089       Square Cut Ring         294       780160       Thrust Washer       71       788078A       Inverted Retaining Ring         2	10	//0000	(Include 14)			
(Include. 13)         54         778346         Spur Gear (15 teeth)           15         778370         Ring Gear (43 teeth)         56         7778355         Spur Gear (11 teeth)           17         786188         Drive Pin         57         778353         Spur Gear (11 teeth)           18         786102         Spacer 1.130 X.695         58         778353         Spur Gear (21 teeth)           20         792077A         Ball 5/16" dia         59         778345         Spur Gear (21 teeth)           21         792078         Set Screw 3/8 - 16 x 3/8"         60         778349         Spur Gear (21 teeth)           25         792079         Spring .310 OD x.625 L         61         7778345         Spur Gear (24 teeth)           25         792073A         Screw 1/4 - 20 x 1-1/4"         65         780189         Flat Washer           26         792125         Retaining Ring (pkg of 2)         66         776436         Shifter & Brake Shaft           28         788040         Retaining Ring         69         792170         Retaining Ring           29         780072         Thrust Washer         70         786187         Spacer .890           .627 ID x .031W         76         780090         Flat Washer	14	778368			778350	
15       778370       Řing Gear (43 teeth)       56       778355       Spur Gear (11 teeth)         17       786188       Drive Pin       57       778337       Spur Gear (13 teeth)         18       786102       Spacer 1.130 X.695       58       778337       Spur Gear (17 teeth)         20       792077A       Ball 5/16" dia       59       778351       Spur Gear (21 teeth)         21       792078       Set Screw 3/8 - 16 x 3/8"       60       778349       Spur Gear (21 teeth)         22       792073A       Screw 1/4 - 20 x 1-1/4"       65       780189       Flat Washer         25A       792177       Screw 1/4 - 20 x 1-3/8"       .563 ID x.062W       .563 ID x.062W         26       792125       Retaining Ring (pkg of 2)       66       776436       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer .890         .627 ID x.031W       71       788069       Square Cut Ring       .762 ID x.031W       76       780090       Flat Washer         .762 ID x.031W       77       788078A       Inverted Retaining Ring       .570 T78333       Bev		1.0000	(Include 13)			
17       786188       Drive Pin       57       778337       Spur Gear (13 teeth)         18       786102       Spacer 1.130 X.695       58       7778353       Spur Gear (17 teeth)         20       792077A       Ball 5/16" dia       59       778351       Spur Gear (21 teeth)         21       792073A       Set Screw 3/8 - 16 x 3/8"       60       778349       Spur Gear (24 teeth)         22       792073A       Screw 1/4 - 20 x 1-1/4"       65       780189       Flat Washer         25A       792175       Screw 1/4 - 20 x 1-3/8"       66       776422       Input Shaft         26       792125       Retaining Ring (pkg of 2)       66       776396       Shifter & Brake Shaft         27       792035       Retaining Ring       69       792170       Retaining Ring       69         29       780072       Thrust Washer       71       788069       Square Cut Ring         29A       780160       Thrust Washer       718       788078A       Inverted Retaining Ring         29B       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       750 ID x .032W       1.127 ID x .032W       teeth) </td <td>15</td> <td>778370</td> <td></td> <td></td> <td></td> <td></td>	15	778370				
18       786102       Spacer 1.130 X.695       58       778353       Spur Gear (17 teeth)         20       792077A       Ball 5/16" dia       59       778351       Spur Gear (21 teeth)         21       792078       Set Screw 3/8 - 16 x 3/8"       60       778349       Spur Gear (21 teeth)         21       792073       Set Screw 3/8 - 16 x 3/8"       60       778345       Spur Gear (21 teeth)         25       792073A       Screw 1/4 - 20 x 1 - 1/4"       65       780189       Flat Washer         26A       792175       Retaining Ring (pkg of 2)       66       776422       Input Shaft         26       792125       Retaining Ring       69       792170       Retaining Ring       53       Spacer 890         28       780072       Thrust Washer       70       786187       Spacer 890       Square Cut Ring         29A       780160       Thrust Washer       718       788090       Flat Washer       1.128 ID x .058W         29E       780051       Thrust Washer       718       788078A       Inverted Retaining Ring         29C       780108       Cup Washer       72       728078A       Inverted Retaining Ring         29C       780018       Cup Washer       750 ID x .05						Spur Gear (13 teeth)
20         792077A         Bail 5/16" dia         59         778351         Spur Gear (21 teeth)           21         792078         Set Screw 3/8 - 16 x 3/8"         60         778349         Spur Gear (24 teeth)           22         792079         Spring .310 OD x .625 L         61         778349         Spur Gear (24 teeth)           25         792073A         Screw 1/4 - 20 x 1 - 1/4"         65         780189         Flat Washer           25A         792125         Retaining Ring (pkg of 2)         66         776422         Input Shaft           26         792125         Retaining Ring         69         792170         Retaining Ring           28         788040         Retaining Ring         69         792170         Retaining Ring           29         780072         Thrust Washer         70         786187         Spacer .890           .627 ID x .031W         76         780090         Flat Washer         1.128 ID x .058W           29B         780051         Thrust Washer         71B         788078A         Inverted Retaining Ring           29C         780108         Cup Washer         79         792144         Spur Gear (30 & 13           29C         780001         Flat Washer .750 ID x .056W <td< td=""><td></td><td></td><td></td><td></td><td></td><td>Spur Gear (17 teeth)</td></td<>						Spur Gear (17 teeth)
21       792078       Set Screw 3/8 - 16 x 3/8"       60       778349       Spur Gear (24 teeth)         22       792079       Spring .310 OD x .625 L       61       778345       Spur Gear (25 teeth)         25       792073A       Screw 1/4 - 20 x 1 - 1/4"       65       780189       Flat Washer         26       792177       Screw 1/4 - 20 x 1 - 3/8"       .563 ID x .052W       .563 ID x .052W         26       792125       Retaining Ring       67       776336       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer.890         .627 ID x .031W       71       788069       Square Cut Ring         29A       780160       Thrust Washer       71       788092       "O" Ring         .762 ID x .031W       76       780090       Flat Washer       1.128 ID x .058W         29B       780051       Thrust Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778338       Spur Gear (27 teeth)         31       780001       Flat Washer .750 ID x .056W       83       <				-		Spur Gear (21 teeth)
22       792079       Spring .310 OD x .625 L       61       778345       Spur Gear (25 teeth)         25       792073A       Screw 1/4 - 20 x 1 - 1/4"       65       780189       Flat Washer         26A       792177       Screw 1/4 - 20 x 1 - 3/8"       .563 ID x .062W         26       792125       Retaining Ring (pkg of 2)       66       776422       Input Shaft         27       792035       Retaining Ring       69       792170       Retaining Ring         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer.890         .627 ID x .031W       71       7880969       Square Cut Ring         29A       780160       Thrust Washer       71B       788092       "O" Ring         .762 ID x .031W       76       780900       Flat Washer       1.128 ID x .058W         29C       780199       Anti-Rotation Washer.632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778338       Spur Gear (27 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27						Sour Gear (24 teeth)
25       792073A       Screw 1/4 - 20 x 1-1/4"       65       780189       Flat Washer         25A       792177       Screw 1/4-20 x 1-3/8"       .563 ID x .062W         26       792125       Retaining Ring (pkg of 2)       66       776422       Input Shaft         27       792035       Retaining Ring       67       776396       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer .890         29       780160       Thrust Washer       71       788069       Square Cut Ring         298       780160       Thrust Washer       71       788078A       Inverted Retaining Ring         296       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778338       Spur Gear (27 teeth)         31       780091       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer .750 ID x .056W       157       788089A       Oil Seal 5/8"         32       7880193       Flanged Bus				61	778345	
25A       792177       Screw 1/4-20 x 1-3/8"       .563 ID x .062W         26       792125       Retaining Ring (pkg of 2)       66       776422       Input Shaft         27       792035       Retaining Ring       67       776396       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer .890         .627 ID x .031W       71       788069       Square Cut Ring         29A       780160       Thrust Washer       71B       788092       "O" Ring         .762 ID x .031W       76       780090       Flat Washer       1.128 ID x .058W         29B       780051       Thrust Washer       71       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13         1.127 ID x .032W       11.127 ID x .032W       Inverted Retaining Ring       11       11         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 tee	25				780189	
26       792125       Retaining Ring (pkg of 2)       66       776422       Input Shaft         27       792035       Retaining Ring       67       776396       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer .890         .627 ID x. 031W       71       788069       Square Cut Ring         29A       780160       Thrust Washer       71B       788092       "O" Ring         .762 ID x. 031W       76       780090       Flat Washer       1.128 ID x.058W         .762 ID x. 031W       76       78078A       Inverted Retaining Ring         29B       780051       Thrust Washer       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x.5000 L         30       780108       Cup Washer       82       778338       Spur Gear (27 teeth)         1.127 ID x.032W       Intert Washer       87       788089A       Oil Seal 9 / 16"         31       780001       Flat Washer       87       788089A       Oil Seal 9 / 16"	25A					.563 ID x .062W
27       792035       Retaining Ring       67       776396       Shifter & Brake Shaft         28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer .890         .627 ID x .031W       71       788069       Square Cut Ring         29A       780160       Thrust Washer       70       780090       Flat Washer         .762 ID x .031W       76       780090       Flat Washer       1.128 ID x .058W         .762 ID x .031W       76       780090       Flat Washer       1.128 ID x .058W         .762 ID x .031W       76       780078A       Inverted Retaining Ring         29B       780051       Thrust Washer       1.128 ID x .058W         .762 ID x .031W       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778338       Spur Gear (27 teeth)         1.127 ID x .032W       Iso 788093A       Oil Fill Plug       314       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"			Retaining Ring (pkg of 2)	66	776422	Input Shaft
28       788040       Retaining Ring       69       792170       Retaining Ring         29       780072       Thrust Washer       70       786187       Spacer .890         .627 ID x .031W       71       788069       Square Cut Ring         29A       780160       Thrust Washer       71       7880780       Flat Washer         .762 ID x .031W       76       780090       Flat Washer       1.128 ID x .058W         29B       780051       Thrust Washer       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       78009A       Oil Seal 3 /4"       34         34       780193       Flanged Bushing 5 / 8" ID       90       794712       Replacement MST         35A       780193       Flanged Bushing 5 / 8" ID       90       79		+	Retaining Ring	67	776396	
29       780072       Thrust Washer       70       786187       Spacer .890         29A       780160       Thrust Washer       71       788069       Square Cut Ring         29A       780160       Thrust Washer       71       788092       "O" Ring         29B       780051       Thrust Washer       76       780090       Flat Washer         29B       780051       Thrust Washer       76       78078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       788088A       Oil Seal 3 /4"       24         34       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         35A       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36       790075       Brake			Retaining Ring	69	792170	Retaining Ring
.627 ID x .031W       71       788069       Square Cut Ring         29A       780160       Thrust Washer       71B       788092       "O" Ring         29B       780051       Thrust Washer       76       780090       Flat Washer         29B       780051       Thrust Washer       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       788093A       Liquid Gasket RTV Silicone         32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36       790075       Brake Disk       790007       Brake Pad				70	786187	Spacer .890
29A       780160       Thrust Washer       71B       788092       "O" Ring         29B       780051       Thrust Washer       76       780090       Flat Washer         29B       780051       Thrust Washer       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer       83       778338       Spur Gear (27 teeth)         (Use As Needed)       85       792154       Oil Fill Plug         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       788093A       Liquid Gasket RTV Silicone         32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36       790075       Brake Disk       837       730229A       Gear Oi				71	788069	Square Cut Ring
.762 ID x .031W       76       780090       Flat Washer         29B       780051       Thrust Washer       1.128 ID x .058W         .762 ID x .031W       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer       87       788093A       Oil Seal 9 / 16"         .750 ID x .062W       150       788093A       Liquid Gasket RTV Silicone         32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 9 / 16"         .22       780193       Flanged Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36       790075       Brake Pad Plate       NOTE: All component dimensions given in       NOTE: All component dimensions given in	29A	780160		71B	788092	"O" Ring
29B       780051       Thrust Washer .762 ID x .031W       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer 1.127 ID x .032W       82       778338       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W (Use As Needed)       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer .750 ID x .062W       83       778308A       Oil Fill Plug         31A       780195       Flat Washer .750 ID x .062W       87       788089A       Oil Seal 9 / 16"         32       788083       Oil Seal 5/8"       150       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36       790075       Brake Disk       79007       Brake Pad Plate       NOTE: All component dimensions given in				76	780090	
.762 ID x .031W       77       788078A       Inverted Retaining Ring         29C       780199       Anti-Rotation Washer .632       79       792144       Spring .430 OD x .5000 L         30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31       780195       Flat Washer .750 ID x .056W       85       792154       Oil Fill Plug         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       788083A       Oil Seal 9 / 16"         .750 ID x .062W       150       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         354       780197       Flanged Bushing .751       206-545C Transaxle         36       790075       Brake Pad Plate       NOTE: All component dimensions given in	29B	780051				1.128 ID x .058W
30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31       780195       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer .750 ID x .056W       87       788089A       Oil Fill Plug         31A       780195       Flat Washer .750 ID x .062W       87       788089A       Oil Seal 9 / 16"         32       788083       Oil Seal 5/8"       150       788093A       Liquid Gasket RTV Silicone         32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         35A       780197       Flanged Bushing .751       206-545C Transaxle       36         36       790075       Brake Disk       NOTE: All component dimensions given in			.762 ID x .031W	77	788078A	Inverted Retaining Ring
30       780108       Cup Washer       82       778333       Bevel & Spur Gear (30 & 13 teeth)         31       780001       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31       780195       Flat Washer .750 ID x .056W       83       778338       Spur Gear (27 teeth)         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       788093A       Liquid Gasket RTV Silicone         32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 3 /4"         34       780193       Flanged Bushing 5/8" ID       900       794712       Replacement MST         35A       780197       Flanged Bushing .751       206-545C Transaxle         36       790075       Brake Pad Plate       NOTE: All component dimensions given in	29C	780199	Anti-Rotation Washer 632	79	792144	Spring .430 OD x .5000 L
31       780001       Flat Washer .750 ID x .056W (Use As Needed)       83       778338       Spur Gear (27 teeth) Oil Fill Plug         31A       780195       Flat Washer .750 ID x .062W       87       788089A       Oil Seal 9 / 16" .750 ID x .062W         32       788083       Oil Seal 5/8"       150       788093A       Liquid Gasket RTV Silicone         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36       790075       Brake Disk       Kase Pad Plate       NOTE: All component dimensions given in	30	780108	. CupWasher	82	778333	Bevel & Spur Gear (30 & 13
illuse As Needed)       85       792154       Oil Fill Plug         31A       780195       Flat Washer       87       788089A       Oil Seal 9 / 16"         .750 ID x .062W       150       788093A       Liquid Gasket RTV Silicone         32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         36A       790075       Brake Disk       NOTE: All component dimensions given in			1.127 ID x .032W			teeth)
31A         780195         Flat Washer .750 ID x .062W         87         788089A         Oil Seal 9 / 16"           32         788083         Oil Seal 5/8"         150         788083A         Oil Seal 3 /4"           34         780194         Bushing .563         180         730229A         Gear Oil 80W90           35         780193         Flanged Bushing 5 / 8" ID         900         794712         Replacement MST           36         790075         Brake Disk         37         790007         Brake Pad Plate         NOTE: All component dimensions given in	31	780001	Flat Washer .750 ID x .056W		778338	
.750 ID x .062W         150         788093A         Liquid Gasket RTV Silicone           32         788083         Oil Seal 5/8"         157         788088A         Oil Seal 3 /4"           34         780194         Bushing .563         180         730229A         Gear Oil 80W90           35         780193         Flanged Bushing 5 / 8" ID         900         794712         Replacement MST           35A         780197         Flanged Bushing .751         206-545C Transaxle           36         790075         Brake Disk         NOTE: All component dimensions given in			(Use As Needed)		792154	Oil Fill Plug
32       788083       Oil Seal 5/8"       157       788088A       Oil Seal 3 /4"         34       780194       Bushing .563       180       730229A       Gear Oil 80W90         35       780193       Flanged Bushing 5 / 8" ID       900       794712       Replacement MST         35A       780197       Flanged Bushing .751       206-545C Transaxle         36       790075       Brake Disk       NOTE: All component dimensions given in	31A	780195	FlatWasher		788089A	
34         780194         Bushing .563         180         730229A         Gear Oil 80W90           35         780193         Flanged Bushing 5 / 8" ID         900         794712         Replacement MST           35A         780197         Flanged Bushing .751         206-545C Transaxle           36         790075         Brake Disk         NOTE: All component dimensions given in			.750 ID x .062W		788093A	Liquid Gasket RTV Silicone
34         780194         Bushing .563         180         730229A         Gear Oil 80W90           35         780193         Flanged Bushing 5 / 8" ID         900         794712         Replacement MST           35A         780197         Flanged Bushing .751         206-545C Transaxle           36         790075         Brake Disk         NOTE: All component dimensions given in	32	788083	Oil Seal 5/8"			
35780193Flanged Bushing 5 / 8" ID900794712Replacement MST35A780197Flanged Bushing .751206-545C Transaxle36790075Brake Disk37790007Brake Pad Plate37790007Brake Pad PlateNOTE: All component dimensions given in	34	780194	Bushing .563			
35A780197Flanged Bushing .751206-545C Transaxle36790075Brake Disk37790007Brake Pad PlateNOTE: All component dimensions given in	35	780193		900	794712	
36     790075     Brake Disk       37     790007     Brake Pad Plate       NOTE: All component dimensions given in		780197				206-545C Transaxle
37 790007 Brake Pad Plate NOTE: All component dimensions given in	36	790075				
		790007	Brake Pad Plate	NOT		
	38	799021	Brake Pad (pkg of 2)		U.S. inches	s 1 inch = 25.4 mm

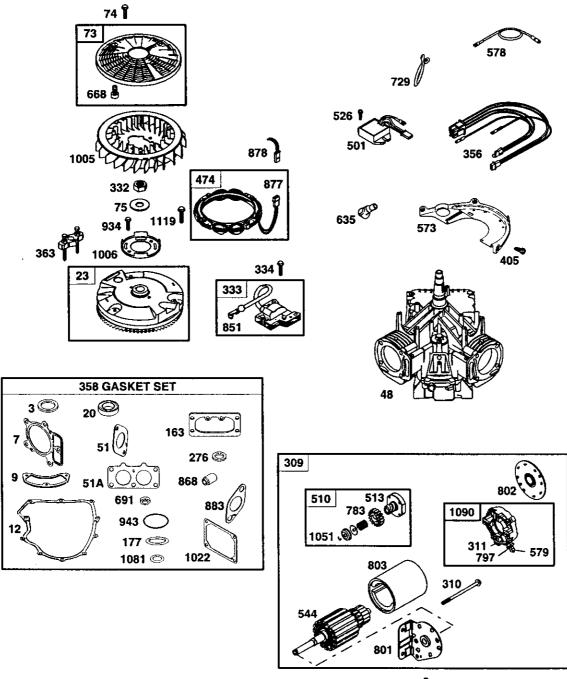
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KEY NO.	PART NO.		DESCRIPTION	KEY NO.	NO.	DESCRIPTION
1	694001		Cylinder Assembly	130	690993	Throttle Valve
2 3	499585 391086	+	Bushing/Seal Kit Oil Seal	131	499805	Throttle Shaft Kit
4	690069	+	Engine Sump	133 135	499806	Carburetor Float
5	499587		Cylinder Head (Cylinder #1)	137	499803	Fuel Transfer Tube Float Bowl Gasket
ŠΑ	499595		Cylinder Head (Cylinder #2)	141	499807	Choke Shaft Kit
7		•	Cylinder Head Gasket	142		Carburetor Nozzle
8	499601		Breather Assembly	146	94388	Timing Key
9		ŧ	Breather Gasket	150		Nozzle Gasket
10	690960		Screw (Breather Assembly)	160	690996	Solenoid Retainer
11 12	690942 273488	+	Breather Tub Crankcase Gasket	163		Air Cleaner Gasket
13	94728	+	Screw (Cylinder Head)	187 188	298049 690960	Fuel Line
15	94239		Oil Drain Plug	192	690083	Screw (Control Bracket) Rocker Arm Adjustor
16	690360		Crankshaft	209	691018	Governor Spring
20	690947	ŧ	Oil Seal	211	691019	Governed Idle Spring
22	690360		Screw (Crankcase Cover)	212	691020	Throttle Link
23	691053		Flywheel	213	691021	Choke Control Bracket
24	222698		Flywheel Key	216	691022	Choke Link
25	694003 694005		Piston Assembly (Standard)	219	394348	Governor Gear
	694007		Piston Assy. (.010 Oversize) Piston Assy. (.020 Oversize)	220 222	690412 691023	Washer (Governor Gear) Control Bracket
	694009		Piston Assy. (.030 Oversize)	227	691048	Governor Control Lever
26	694004		Ring Set (Standard)	231	805538	Screw (Choke Valve)
	694006		Ring Set (.010 Oversize)	240	495629	Fuel Filter
	694008		Ring Set (.020 Oversize)	250	690957	Breather Retainer
07	494010		Ring Set (.030 Oversize)	252	690956	Oil Collector
27 28	263181 499582		Piston Pin Lock	265	221535	Casing Clamp
29	499583		Piston Pin (Standard) Connecting Rod (Standard)	267 276	695134	Screw (Casing Clamp)
32	95075		Screw (Connecting Rod)	278	690997௥ 691017	Sealing Washer Washer (Governor Control
33	499596		Exhaust Valve	270	001017	Lever)
34	499597		Intake Valve	304	691004	Blower Housing
35	263163		Valve Spring	305	691005	Screw (Blower Housing)
36	263163		Valve Spring	309	691262	Starter Motor
40 42	263215 499586		Valve Retainer Valve Keeper	310	95035	Bolt (Starter Motor)
45	262679		Valve Tappet	311 332	497608 230674	Brush Set
46	690978		Camshaft	333	691060	Nut (Flywheel) Magneto Armature
48	693292 .		Short Block	334	94731	Screw (Magneto Armature)
50	690948		Intake Manifold	337	691043	Spark Plug
51	273487 ++	•	Intake Gasket	356	695050	Stop Wire
51A		•	Intake Gasket	358	694012	Engine Gasket Set
53 54	690951 94913		Stud (Carburetor)	363 383	691062	Flywheel Puller
73	691055		Screw (Intake Manifold) Rotating Screen	385	690966 690960	Spark Plug Wrench Screw (Fuel Pump)
74	691057		Screw (Rotating Screen)	000	030300	Screw (Fuer Fullip)
75	691056		Washer (Flywheel)	<b>RPM</b>	Settings:	Low Speed: 1900-2100
89	690283		Oil Plug		<b>j</b>	High Speed: 3000-3200
95	805538		Screw (Throttle Valve)			
98	499802		Idle Speed Kit	•	Included in (	Gasket Set, Ref. No. 1095
104 105	690984	+	Float Hinge Pin	ø	Included in C	Gasket Set, Ref. No. 977
105	690985 690986	+	Float Needle Valve Choke Valve	<b>‡</b>		Gasket Set, Ref. No. 358
117		+	Main Jet	+	niciudea in C	Gasket Set, Ref. No. 121
	690989	•	Main Jet (High Altitude)	NOTE	E: All compor	nent dimensions given in U.S.
121	499811		Carburetor Overhaul Kit	inche	s 1 inch = 25.	4 mm
122	690952		Carburetor Spacer			
125	499804		Carburetor			

		KEY PART	
KEY PART NO. NO.	DESCRIPTION	NO. NO. DESCRIPTION	
NO. NO. 387 808656	Fuel Pump	865B 691015 Air Guide Cover	
		868 690968 ‡• Valve Seal	
	Washer (Governor Crank)		
	Screw (Back Plate)		
418 690999	Carburetor Plate	877 399916 Alternator Connector Wire	
445 499486	A/C Cartridge Filter	878 393362 Alternator Harness (Dual Circuit	J
447 94930	Screw (Air Guide Cover)	914 690960 Screw (Rocker Arm Cover)	
447A 690960	Screw (Air Guide Cover)	918 694000 Vacuum Hose	
449 690960	Screw (Oil Fill Bracket)	929 691003 Screw (Choke Control Bracket)	
467 691008	Air Cleaner Knob	934 94627 Screw (Fan Retainer)	
474 393295	Alternator	943 690589 ‡ O-Ring Seal (Oil Pump Cover)	
501 394890	Regulator (Regulated 16	947 499809 Fuel Solenoid	
	Amp)	965 499613 Oil Pump Cover	
505 92278	Nut (Governor Control Lever)	967 273638 Pre-Cleaner Filter	
510 497606	Starter Drive	968 499788 Air Cleaner Cover	
513 398003	Drive Clutch	975 690992 Float Bowl	
523 691036	Dipstick	977 499812 Carburetor Gasket Set	
	Dipstick Tube Seal	987 691000 Ø+ Throttle Shaft Seal	
525 691037	Dipstick Tube	1005 691243 Flywheel Fan	
526 690960	Screw (Regulator)	1006 691247 Fan Retainer	
544 ———	StarterArmature (Serviced By		
	691262 Starter Motor Only)	1017 690770 Oil Pump Screen	
552 690552	Governor Crank Bushing	1019 693995 Label Kit	
552A 690553	Governor Crank Bushing Bolt (Governor Control Lever)	1022 273486 ‡• Rocker Cover Gasket	
562 93853	Bolt (Governor Control Lever)	1023 499599 Rocker Arm Cover (Cylinder #1)	
573 691009	Back Plate	1023A 499600 Rocker Arm Cover (Cylinder #2)	)
578 691208	Wire Assembly	1024 499054 Oil Pump	
579 92278	Nut (Starter Cable)	1026 690981 Push Rod (Steel)	
601 95162	Hose Clamp	1026A690982 Push Rod (Aluminum)	
615 690317	Governor Shaft Retainer	1027 492932 Oil Filter	
616 691045	Governor Crank	1029 690972 Rocker Arm	
628 690960	Screw (Fuel Pump Bracket)	1035 691042 Pump Shaft	
	UNIONE SHAIL SEAL	1050 095104 Emissions Laber	
635 66538	Spark Plug Boot	1051 263080 Retaining Ring	
654 94010	Nut (Carburetor)	1058 273694 Owner's Manual	
668 94401	Spacer	1090 497605 Brush Retainer	
672 690234 Ø+	Carburetor Plate Gasket	1095 694013 Valve Gasket Set Kit	
691 690657 ‡	Governor Shaft Seal Screw (Drive Cap)	1100 690973 Rocker Arm Pivot	
697 690372	Screw (Drive Cap)	1119 93621 Screw (Alternator)	
100 031010	i lose olih	1123 690987 Ø+ O-Ring Seal (Solenoid	
718 230192	Locating Pin	Retainer)	
729 694123	Wire Clip	1124 690988 Ø+ O-Ring Seal (Fuel Transfer	
741 690980	Timing Gear	Tube)	
742 690328	E-Ring Retainer	1126 690991 Screw (Fuel Transfer Tube)	
750 691033	Screw (Oil Pump Cover)	1127 690992 Screw (Float Bowl)	
783 693058	Pinion Gear	1128 690990 + Screw (Carburetor Nozzle)	
788 691039	Fuel Pump Bracket	1169 693140 Screw (Carburetor Cover Plate)	ł
797 693167	Nut (Brush Retainer)	445777-0027-E1 Replacement Engine	
798 690967	Screw (Rocker Arm)		
801 499787	Drive Cap	RPM Settings: Low Speed: 1900-2100	
802 497607	End Cap	High Speed: 3000-3200	
803 ———	Starter Housing (Serviced By		
	691262 Starter Motor Only)	<ul> <li>Included in Gasket Set, Ref. No. 1095</li> </ul>	
	Dipstick/Tube Seal	Ø Included in Gasket Set, Ref. No. 977	
847 499602	Dipstick/Tube Assembly	‡ Included in Gasket Set, Ref. No. 358	
851 493880	Cable Terminal	I Included in Gasket Set, Ref. No. 121	
855 691011	Air Adapter	•	
865 691012	Air Guide Cover (Cylinder #1)	NOTE: All component dimensions given in U.S.	
865A 691014	Air Guide Cover (Cylinder #2)	inches 1 inch = 25.4 mm	

# SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



- Hold page before you so that its left edge is vertically parallel to a tre trunk or other upright structure.
- 3. Sight across the fold in the direction of hill slope you want to measure,
- 4. Compare the angle of the fold with the slope of the hill.

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