

# Owner's Manual

# CRAFTSMAN<sup>®</sup>

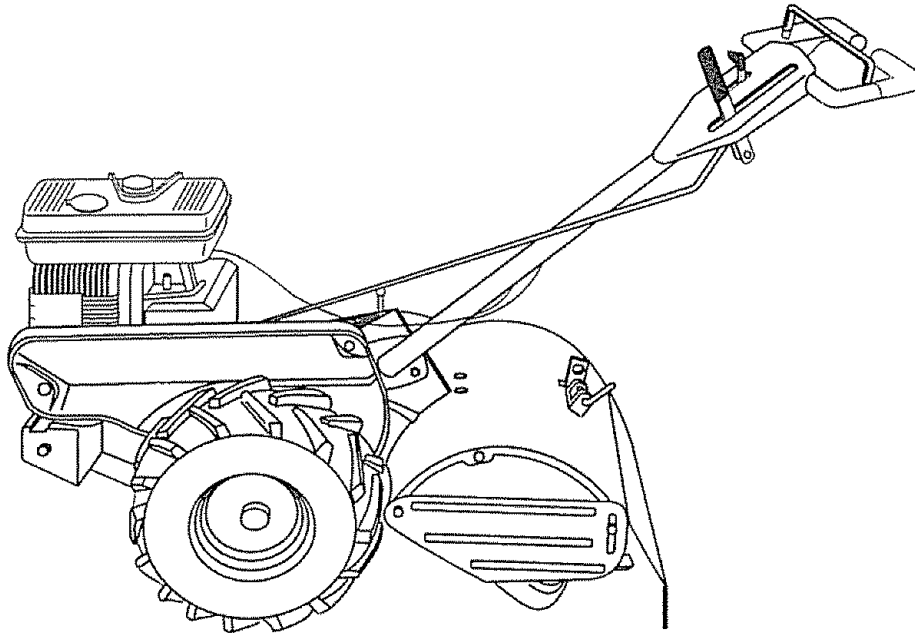
**5.5 HP  
17 INCH TINE WIDTH  
REAR TINE WITH  
COUNTER ROTATING TINES**

# TILLER

Model No.

**917.293301**

- Safety
- Assembly
- Operation
- Maintenance
- Repair Parts



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

## CAUTION:

Read and follow all Safety Rules and Instructions before operating this equipment

For answers to your questions about this product, Call:

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

Sears, Roebuck and Co., Hoffman Estates, IL 60179

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## WARRANTY

### LIMITED TWO YEAR WARRANTY ON CRAFTSMAN TILLER

For two (2) years from date of purchase, when this Craftsman Tiller is maintained, lubricated, and tuned up according to the operating and maintenance instructions in the owner's manual, Sears will repair free of charge any defect in material or workmanship. This Warranty does not cover:

- Expendable items which become worn during normal use, such as tines, spark plugs, air cleaners and belts.
- Repairs necessary because of operator abuse or negligence, including bent crankshafts and the failure to maintain the equipment according to the instructions contained in the owner's manual.
- If this Craftsman Tiller is used for commercial or rental purposes, this Warranty applies for only thirty (30) days from the date of purchase.

Warranty service is available by returning the craftsman power mower to the nearest sears service center/department in the united states. This warranty applies only while this product is in use in 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., D/817WA, HOFFMAN ESTATES, IL 60179

## SAFETY RULES

### TRAINING

- Read the Owner's Manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
- Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
- Keep the area of operation clear of all persons, particularly small children, and pets.

### PREPARATION

- Thoroughly inspect the area where the equipment is to be used and remove all foreign objects.
- Disengage all clutches and shift into neutral before starting the engine (motor).

- Do not operate the equipment without wearing adequate outer garments. Wear footwear that will improve footing on slippery surfaces.
- Handle fuel with care; it is highly flammable.
- Use an approved fuel container.
- Never add fuel to a running engine or hot engine.
- Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
- Replace gasoline cap securely and clean up spilled fuel before restarting.
- Use extension cords and receptacles as specified by the manufacturer for all units with electric drive motors or electric starting motors.
- Never attempt to make any adjustments while the engine (motor) is running (except where specifically recommended by manufacturer).

## OPERATION

- Do not put hands or feet near or under rotating parts.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
- After striking a foreign object, stop the engine (motor), remove the wire from the spark plug, thoroughly inspect the tiller for any damage, and repair the damage before restarting and operating the tiller.
- Exercise caution to avoid slipping or falling.
- If the unit should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.
- Stop the engine (motor) when leaving the operating position.
- Take all possible precautions when leaving the machine unattended. Disengage the tines, shift into neutral, and stop the engine.
- Before cleaning, repairing, or inspecting, shut off the engine and make certain all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting. Disconnect the cord on electric motors.
- Do not run the engine indoors; exhaust fumes are dangerous.
- Never operate the tiller without proper guards, plates, or other safety protective devices in place.
- Keep children and pets away.
- Do not overload the machine capacity by attempting to till too deep at too fast a rate.
- Never operate the machine at high speeds on slippery surfaces. Look behind and use care when backing.
- Never allow bystanders near the unit.
- Use only attachments and accessories approved by the manufacturer of the tiller.
- Never operate the tiller without good visibility or light.
- Be careful when tilling in hard ground. The tines may catch in the ground and propel the tiller forward. If this occurs, let go of the handlebars and do not restrain the machine.

## MAINTENANCE AND STORAGE

- Keep machine, attachments, and accessories in safe working condition.
- Check shear pins, engine mounting bolts, and other bolts at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters, clothes dryers, and the like. Allow the engine to cool before storing in any enclosure.
- Always refer to the operator's guide instructions for important details if the tiller is to be stored for an extended period.

**▲ CAUTION:** Always disconnect spark plug wire and place wire where it cannot contact spark plug in order to prevent accidental starting when setting up, transporting, adjusting or making repairs.

### **WARNING**

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

## PRODUCT SPECIFICATIONS

HORSEPOWER:	5.5 HP
DISPLACEMENT:	13 CU. IN.
GASOLINE CAPACITY:	4 Quarts Unleaded Regular
OIL (API-SF/SG/SH): (CAPACITY: 20 oz.)	SAE 30 (Above 32°F) SAE 5W-30 (Below 32°F)
SPARK PLUG : (GAP: .030")	Champion RJ19LM

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

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

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

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

## MAINTENANCE AGREEMENT

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

## CUSTOMER RESPONSIBILITIES

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your tiller.
- Follow the instructions under the "Customer Responsibilities" and "Storage" sections of this Owner's Manual.







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

In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. See your Sears Authorized Service Center for spark arrester. Refer to the Repair Parts section of this manual for part number.

## ACCESSORIES

These accessories were available when the tiller was purchased. They are also available at most Sears Retail outlets and Service Centers. Most Sears Stores can order repair parts for you when you provide the model number of your tiller.





### ENGINE

SPARK PLUG	MUFFLER	AIR FILTER	GAS CAN	ENGINE OIL	STABILIZER
					

### TILLER PERFORMANCE

FURROW OPENER


### TILLER MAINTENANCE

BELT	TINES	SHEAR PIN	HAIRPIN CLIP
			

# ASSEMBLY

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

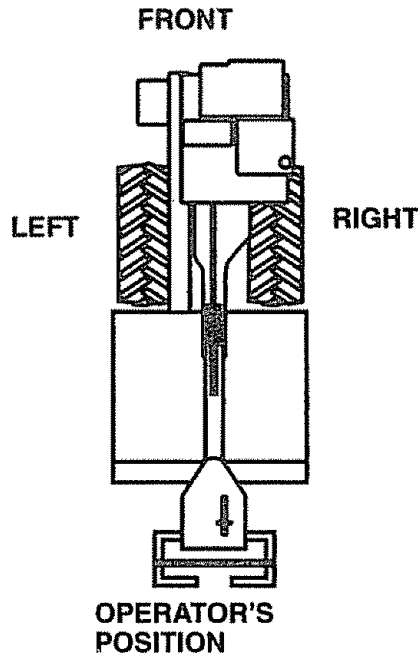
## TOOLS REQUIRED FOR ASSEMBLY

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

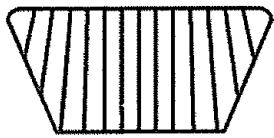
- (1) Utility knife
- (1) Wire cutter
- (1) Tire pressure gauge
- (1) Screwdriver
- (1) Pair of pliers
- (1) 9/16" wrench

## OPERATOR'S POSITION

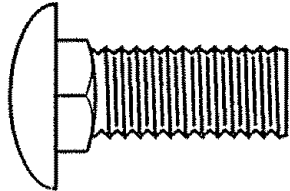
When right or left hand is mentioned in this manual, it means when you are in the operating position (standing behind tiller handles).



## CONTENTS OF HARDWARE PACK



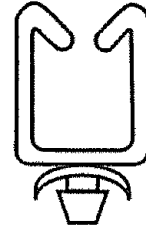
(2) Handle Locks



(1) Carriage Bolt  
3/8-16 UNC x 1 Gr. 5



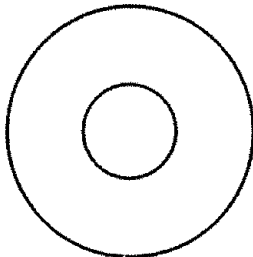
(1) Center Locknut  
3/8-16 UNC



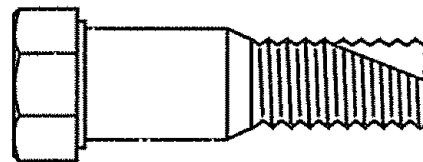
(1) Cable Clip



(2) Hairpin Clips



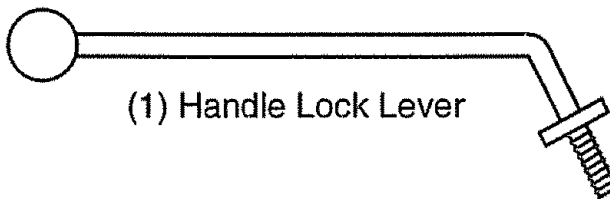
(1) Flat Washer  
13/32 x 1 x 11 Ga.



(1) Pivot Bolt  
3/8-16 UNC Grade 5



Extra Shear Pins & Clips



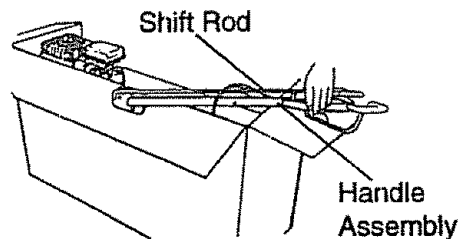
(1) Handle Lock Lever

## UNPACKING CARTON

**▲ CAUTION:** Be careful of exposed staples when handling or disposing of cartoning material.

**IMPORTANT:** When unpacking and assembling tiller, be careful not to stretch or kink cables.

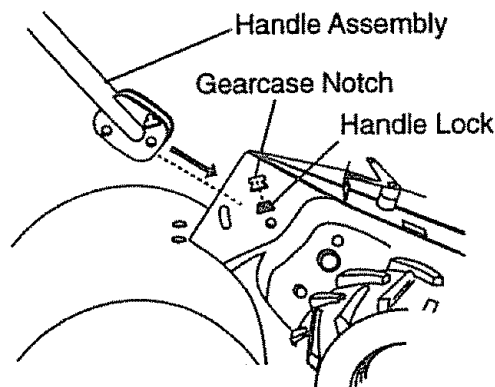
- While holding handle assembly, cut cable ties securing handle assembly to top frame. Let handle assembly rest on tiller.
- Remove top frame of carton.
- Slowly ease handle assembly up and place on top of carton.
- Cut down right hand front and right hand rear corners of carton, lay side carton wall down.
- Remove packing material from handle assembly.
- Separate shift rod from handle assembly.



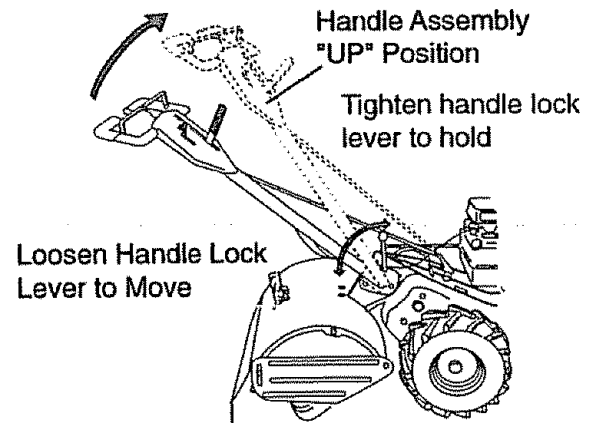
## INSTALL HANDLE

- Insert one handle lock (with teeth facing outward) in gearcase notch. (Apply grease on smooth side of handle lock to aid in keeping lock in place until handle assembly is lowered into position.)

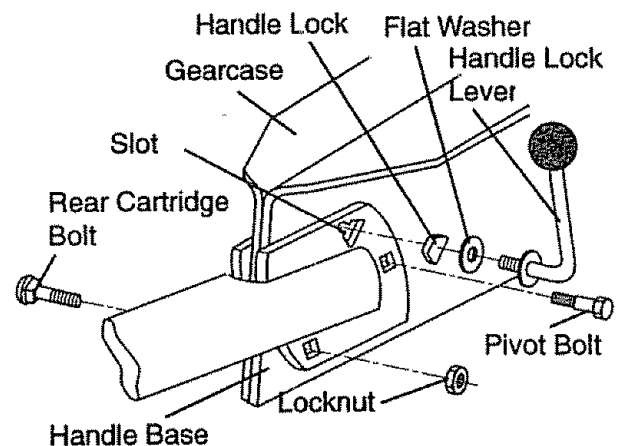
Viewed from r.h. side of tiller



- Grasp handle assembly. Hold in "up" position. Be sure handle lock remains in gearcase notch. Slide handle assembly into position.
- Rotate handle assembly down. Insert rear carriage bolt first, with head of bolt on L.H. side of tiller and loosely assemble locknut.

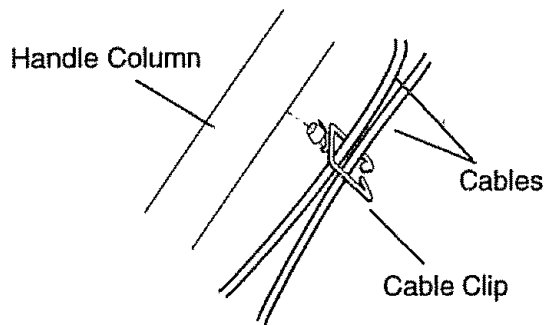


- Insert pivot bolt in front part of plate and tighten.
- Cut down remaining corners of carton and lay panels flat.
- Lower the handle assembly. Tighten nut on carriage bolt so handle moves with some resistance. This will allow for easier adjustment.
- Place flat washer on threaded end of handle lock lever.
- Insert handle lock lever through handle base and gearcase. Screw in handle lock lever just enough to hold lever in place.
- Insert second handle lock (with teeth inward) in the slot of the handle base (just inside of washer).
- Raise handle assembly to highest position and securely tighten handle lock lever by rotating clockwise. Leaving handle assembly in highest position will make it easier to connect shift rod.



### INSERT CABLE CLIP

- Insert plastic cable clip into hole on the back of handle column. Push cables into clip.



### CONNECT SHIFT ROD

- Insert end of shift rod farthest from bend into hole of shift lever indicator.
- Insert hairpin clip through hole of shift rod to secure.
- Insert other end of shift rod into hole in shift lever.
- Insert second hairpin clip through hole of shift rod.

### REMOVE TILLER FROM CRATE

- Adjust handle assembly to lowest position. Be sure lock lever is tightened securely.
- Make sure shift lever indicator is in "N" (neutral) position.
- Tilt tiller forward by lifting handle. Separate cardboard cover from leveling shield.
- Rotate tiller handle to the right and pull tiller out of carton.

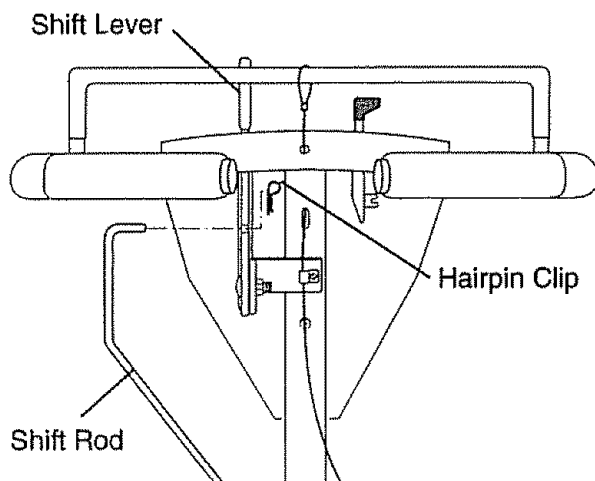
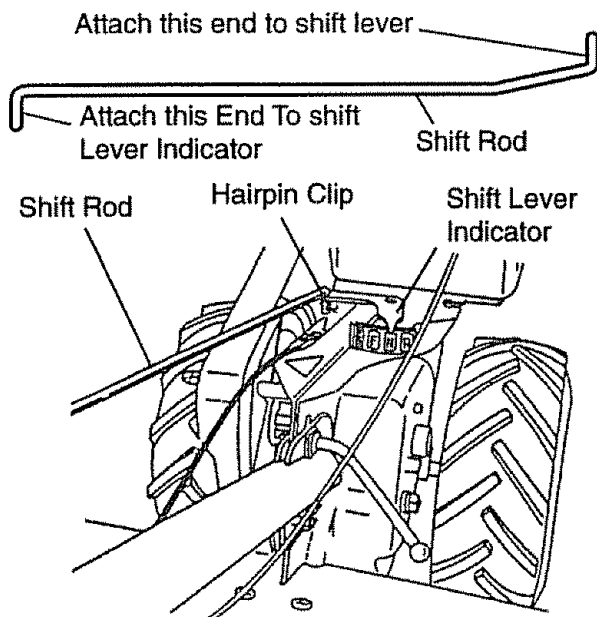
### CHECK TIRE PRESSURE

The tires on your unit were overinflated at the factory for shipping purposes. Correct and equal tire pressure is important for best tilling performance.

- Reduce tire pressure to 20 PSI.

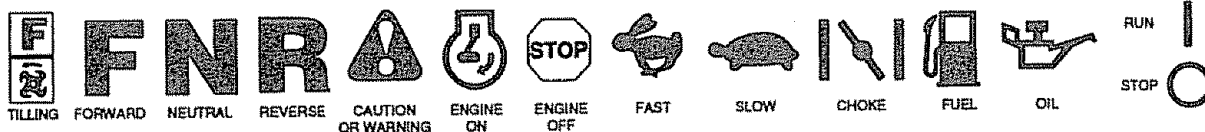
### HANDLE HEIGHT

- Handle height may be adjusted to better suit operator. (See "TO ADJUST HANDLE HEIGHT" in the Service and Adjustments section of this manual).



## OPERATION

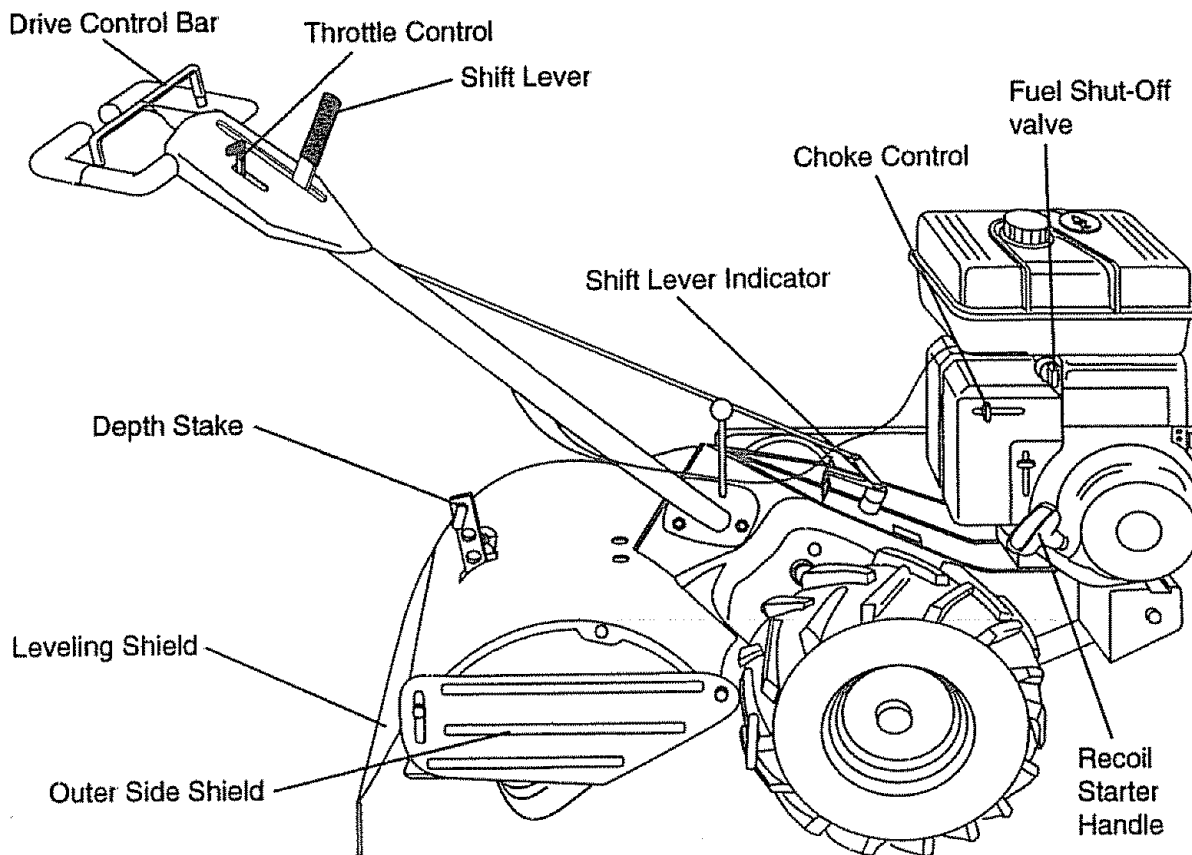
These symbols may appear on your Tiller or in literature supplied with the product. Learn and understand their meaning.



### KNOW YOUR TILLER

READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR TILLER.

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



### MEETS ANSI SAFETY REQUIREMENTS

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

**DRIVE CONTROL BAR** - Used to engage tines.

**DEPTH STAKE** - Controls depth at which tiller will dig.

**LEVELING SHIELD** - Levels tilled soil.

**OUTER SIDE SHIELD** - Adjustable to protect small plants from being buried.

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

**SHIFT LEVER** - Used to shift transmission gears.

**SHIFT LEVER INDICATOR** - Shows which gear the transmission is in.

**RECOIL STARTER HANDLE** - Used to start the engine.

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





The operation of any tiller can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before starting your tiller and while tilling. We recommend a wide vision safety mask over the spectacles or standard safety glasses.

## HOW TO USE YOUR TILLER

Know how to operate all controls before adding fuel and oil or attempting to start engine.

### STOPPING

#### TINES AND DRIVE

Release drive control bar to stop movement.

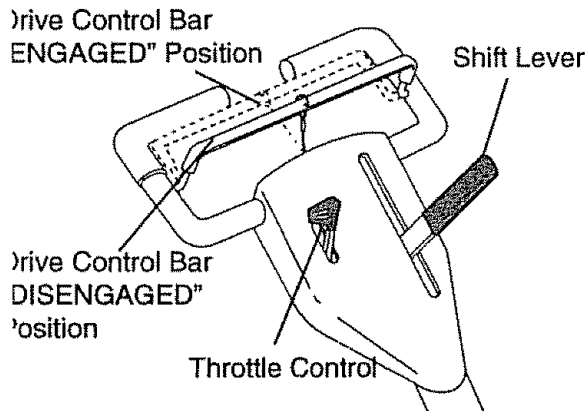
Move shift lever to "N" (neutral) position.

### STOPPING ENGINE


Move throttle control to "STOP" position.

If equipped with stop switch, move switch to "STOP" position.

Never use choke to stop engine.



### TINE OPERATION - WITH WHEEL DRIVE

Always release drive control bar before moving shift lever into another position. Tine movement is achieved by moving shift lever to (  ) till position and engaging drive control bar.

### FORWARD - WHEELS ONLY/TINES STOPPED

Release drive control bar and move shift lever indicator to "F" (forward) position. Engage drive control bar and tiller will move forward.

### REVERSE - WHEELS ONLY/TINES STOPPED

DO NOT STAND DIRECTLY BEHIND TILLER.

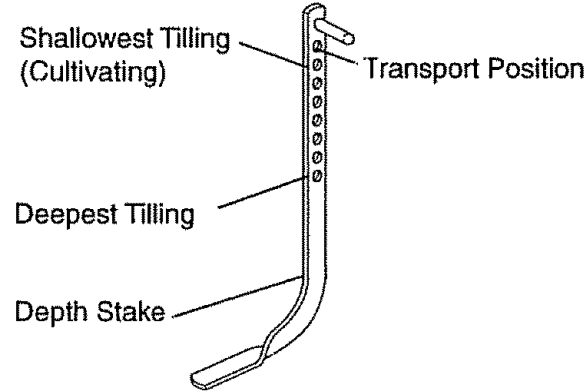
Release the drive control bar. Move throttle control to "SLOW" position.

Move shift lever indicator to "R" (reverse) position.

Hold drive control bar against the handle to start tiller movement.

### DEPTH STAKE

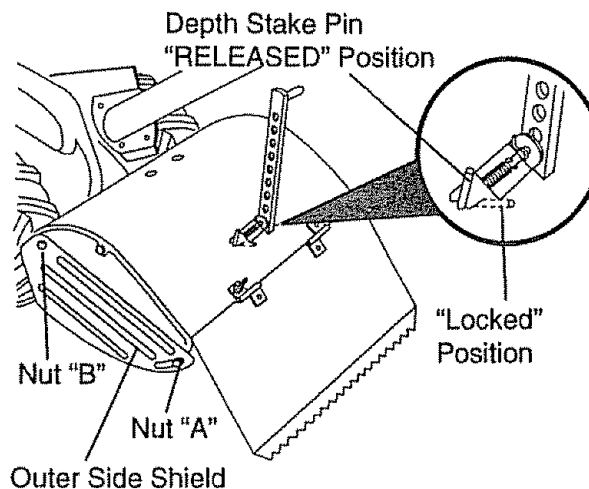
The depth stake can be raised or lowered to allow you more versatile tilling and cultivating, or to more easily transport your tiller.



### TILLING

- Release depth stake pin. Pull the depth stake up for increased tilling depth. Place depth stake pin in hole of depth stake to lock in position.
- Place shift lever indicator in till position.
- Hold the drive control bar against the handle to start tilling movement. Tines and wheels will both turn.
- Move throttle control to "FAST" position for deep tilling. To cultivate, throttle control can be set at any desired speed, depending on how fast or slow you wish to cultivate.

**IMPORTANT:** Always release drive control bar before moving shift lever into another position.



## TURNING

- Release the drive control bar.
- Move throttle control to "SLOW" position.
- Place shift lever indicator in "F" (forward) position. Tines will not turn.
- Lift handle to raise tines out of ground.
- Swing the handle in the opposite direction you wish to turn, being careful to keep feet and legs away from tines.
- When you have completed your turn-around, release the drive control bar and lower handle. Place shift lever in till position and move throttle control to desired speed. To begin tilling, hold drive control bar against the handle.

## OUTER SIDE SHIELDS

The back edges of the outer side shields are slotted so that the shields can be raised for deep tilling and lowered for shallow tilling to protect small plants from being buried. Loosen nut "A" in slot and nut "B". Move shield to desired position (both sides). Retighten nuts.

## TO TRANSPORT

**▲ CAUTION:** Before lifting or transporting, allow tiller engine and muffler to cool. Disconnect spark plug wire. Drain gasoline from fuel tank.

## AROUND THE YARD

- Release the depth stake pin. Move the depth stake down to the top hole for transporting the tiller. Place depth stake pin in hole of depth stake to lock in position. This prevents tines from scuffing the ground.
- Place shift lever indicator in "F" (forward) position for transporting.
- Hold the drive control bar against the handle to start tiller movement. Tines will not turn.
- Move throttle control to desired speed.

## AROUND TOWN

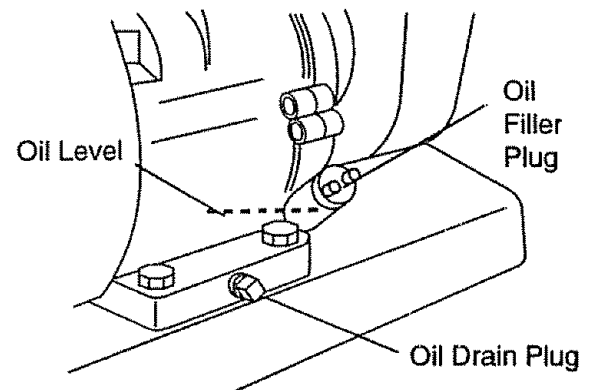
- Disconnect spark plug wire.
- Drain fuel tank.
- Transport in upright position to prevent oil leakage.

## BEFORE STARTING ENGINE

**IMPORTANT:** Be very careful not to allow dirt to enter the engine when checking or adding oil or fuel. Use clean oil and fuel and store in approved, clean, covered containers. Use clean fill funnels.

## CHECK ENGINE OIL LEVEL

- The engine in your unit has been shipped, from the factory, already filled with SAE 30 summer weight oil.
- With engine level, clean area around oil filler plug and remove plug.
- Engine oil should be to point of overflowing when engine is level. For approximate capacity see "PRODUCT SPECIFICATIONS" on page 4 of this manual. All oil must meet A.P.I. Service Classification SF, SG or SH.
- For cold weather operation you should change oil for easier starting (See oil viscosity chart in the Customer Responsibilities section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.



## ADD GASOLINE

- Fill fuel tank. Use fresh, clean, regular unleaded gasoline. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life.)
- IMPORTANT:** When operating in temperatures below 32°F (0°C), use fresh, clean, winter grade gasoline to help insure good cold weather starting.
- WARNING:** Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. **To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer.** Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. **Use fresh fuel next season.** See Storage section of this manual for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

**▲ CAUTION:** Fill to within 1/2 inch of top of fuel tank to prevent spills and to allow for fuel expansion. If gasoline is accidentally spilled, move machine away from area of spill. Avoid creating any source of ignition until gasoline vapors have disappeared.

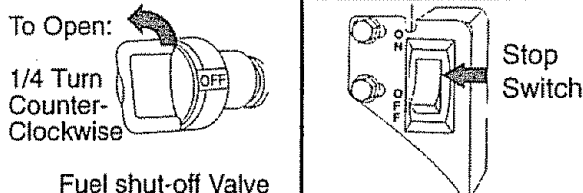
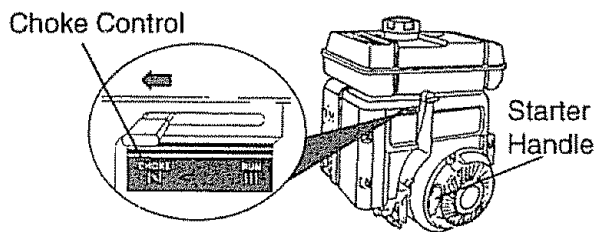
Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

## TO START ENGINE

**▲ CAUTION:** Keep tine control in "OFF" position when starting engine.

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

- Make sure spark plug wire is properly connected and access cover is completely closed to create proper seal.
- Move shift lever indicator to "N" (neutral) position.
- Place throttle control in "FAST" position.
- Turn fuel shut-off valve to "ON" position.
- Push stop switch to "ON" position.
- Move choke control to full "CHOKE" position. Grasp recoil starter handle with one hand and grasp tiller handle with other hand. Pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point).
- Pull recoil starter handle quickly. Do not let starter handle snap back against starter. Repeat if necessary.



- If engine fires but does not start, move choke control to half choke position. Pull recoil starter handle until engine starts.
- When engine starts, slowly move choke control to "RUN" position as engine warms up.

**NOTE:** A warm engine requires less choking to start.

- Move throttle control to desired running position.
- Allow engine to warm up for a few minutes before engaging tines.

**NOTE:** If at a high altitude (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.

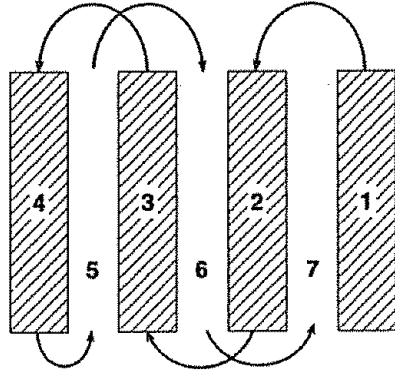
**NOTE:** If engine does not start, see troubleshooting points.

## TILLING HINTS

**▲ CAUTION:** Until you are accustomed to handling your tiller, start actual field use with throttle in slow position (mid-way between "FAST" and "IDLE").

- Tilling is digging into, turning over, and breaking up packed soil before planting. Loose, unpacked soil helps root growth. Best tilling depth is 4" to 6". A tiller will also clear the soil of unwanted vegetation. The decomposition of this vegetable matter enriches the soil. Depending on the climate (rainfall and wind), it may be advisable to till the soil at the end of the growing season to further condition the soil.
- Soil conditions are important for proper tilling. Tines will not readily penetrate dry, hard soil which may contribute to excessive bounce and difficult handling of your tiller. Hard soil should be moistened before tilling; however, extremely wet soil will "ball-up" or clump during tilling. Wait until the soil is less wet in order to achieve the best results. When tilling in the fall, remove vines and long grass to prevent them from wrapping around the tine shaft and slowing your tilling operation.
- You will find tilling much easier if you leave a row untilled between passes. Then go back between tilled rows. There are two reasons for doing this. First, wide turns are much easier to negotiate than about-faces. Second, the tiller won't be pulling itself, and you, toward the row next to it.
- Do not lean on handle. This takes weight off the wheels and reduces traction.

To get through a really tough section of sod or hard ground, apply upward pressure on handle or lower the depth stake.



### TINE SHEAR PINS

The tine assemblies on your tiller are secured to the tine shaft with shear pins (See "TINE REPLACEMENT" in the Service and Adjustments section of this manual).

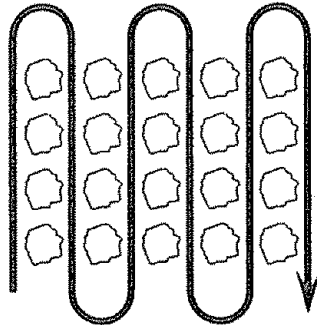
If the tiller is unusually overloaded or jammed, the shear pins are designed to break before internal damage occurs to the transmission.

- If shear pin(s) break, replace only with those shown in the Repair Parts section of this manual.

### CULTIVATING

Cultivating is destroying the weeds between rows to prevent them from robbing nourishment and moisture from the plants. At the same time, breaking up the upper layer of soil crust will help retain moisture in the soil. Best digging depth is 1" to 3" (2.5-7.5 cm). Lower the outer side shields to protect small plants from being buried.

- Cultivate up and down the rows at a speed which will allow tines to uproot weeds and leave the ground in rough condition, promoting no further growth of weeds and grass.



# MAINTENANCE

## MAINTENANCE SCHEDULE

FILL IN DATES AS YOU COMPLETE REGULAR SERVICE

SERVICE DATES

	BEFORE EACH USE	EVERY 5 HOURS	EVERY 25 HOURS	EVERY 50 HOURS													
Check Engine Oil Level	✓	✓															
Change Engine Oil			✓ <sub>1,2</sub>														
Oil Pivot Points		✓															
Inspect Spark Arrester / Muffler			✓														
Inspect Air Screen	✓																
Clean or Replace Air Cleaner Cartridge			✓ <sub>2</sub>														
Clean Engine Cylinder Fins			✓														
Replace Spark Plug			✓														

- 1 - Change more often when operating under a heavy load or in high ambient temperatures  
 2 - Service more often when operating in dirty or dusty conditions.

## GENERAL RECOMMENDATIONS

The warranty on this tiller does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain tiller as instructed in this manual. Some adjustments will need to be made periodically to properly maintain your tiller. 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 tines and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

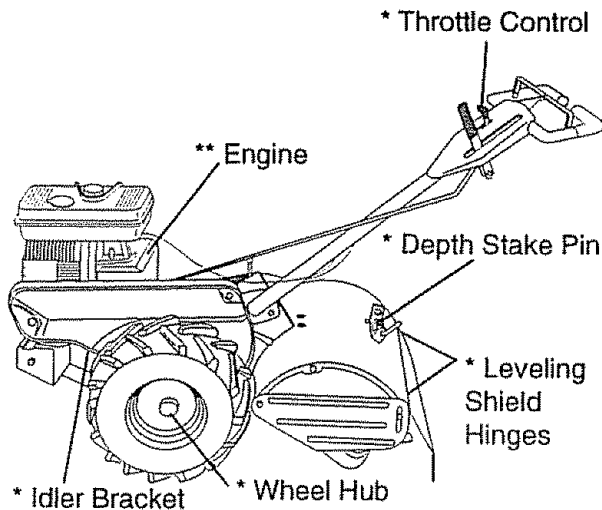
### BEFORE EACH USE

- Check engine oil level.
- Check tine operation.
- Check for loose fasteners.

### LUBRICATION

Keep unit well lubricated (See "LUBRICATION CHART").

## LUBRICATION CHART



- \* SAE 30 OR 5W-30 MOTOR OIL
- \*\* REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION

Disconnect spark plug wire before performing any maintenance (except carburetor adjustment) to prevent accidental starting of engine.

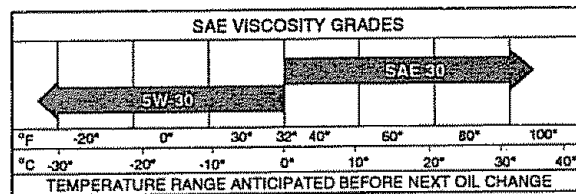
Prevent fires! Keep the engine free of grass, leaves, spilled oil, or fuel. Remove fuel from tank before tipping unit for maintenance. Clean muffler area of all grass, dirt, and debris.

Do not touch hot muffler or cylinder fins as contact may cause burns.

## ENGINE

### LUBRICATION

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



**NOTE:** Although multi-viscosity oils (5W-30, 10W-30, etc.) improve starting in cold weather, these multi-viscosity oils will result in increased oil consumption when used above 32°F (0°C). Check your engine oil level more frequently to avoid possible engine damage from running low on oil.

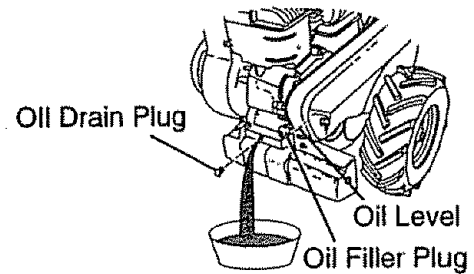
Change the oil after every 50 hours of operation or at least once a year if the tiller is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each five (5) hours of continuous use. Add SAE 30 motor oil or equivalent. Tighten oil filler plug securely each 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, SG or SH.

- Be sure tiller is on level surface.
- Oil will drain more freely when warm.
- Use a funnel to prevent oil spill on tiller, and catch oil in a suitable container.
- Remove drain plug.
- Tip tiller forward to drain oil.
- After oil has drained completely, replace oil drain plug and tighten securely.
- Remove oil filler plug. Be careful not to allow dirt to enter the engine.

- Refill engine with oil. See "CHECK ENGINE OIL LEVEL" in the Operation section of this manual.



### 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.

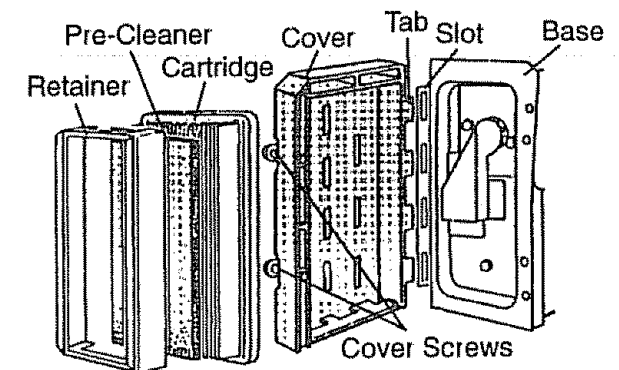
Service air cleaner more often under dusty conditions.

- Loosen air cleaner cover screws. Remove cover and air cleaner assembly from base.

- Remove air cleaner assembly from inside cover and disassemble.

### TO SERVICE PRE-CLEANER

- Wash it in liquid detergent and water.
- Squeeze it dry in a clean cloth.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.



### TO SERVICE CARTRIDGE

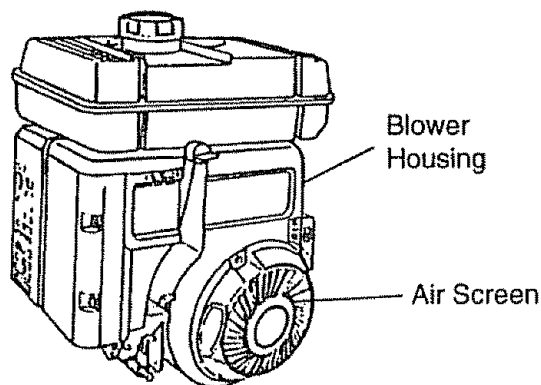
- Gently tap the flat side of the paper cartridge to dislodge dirt. Do not wash the paper cartridge or use pressurized air, as this will damage the cartridge. Replace a dirty, bent, or damaged cartridge.
- Re-assemble retainer on pre-cleaner and cartridge (screen side of pre-cleaner toward cartridge pleats). Place assembly into cover.

- Insert tabs on cover into slots in base and tighten cover screws securely.
- ▲ CAUTION:** Petroleum solvents, such as kerosene, are not to be used to clean cartridge. They may cause deterioration of the cartridge. Do not oil cartridge. Do not use pressurized air to clean or dry cartridge.

### COOLING SYSTEM

Your engine is air cooled. For proper engine performance and long life keep your engine clean.

- Clean air screen frequently using a stiff-bristled brush.
- Remove blower housing and clean as necessary.
- Keep cylinder fins free of dirt and chaff.



### MUFFLER

Do not operate tiller without muffler. Do not tamper with exhaust system. Damaged mufflers or spark arresters could create a fire hazard. Inspect periodically and replace if necessary. If your engine is equipped with a spark arrester screen assembly, remove every 50 hours for cleaning and inspection. Replace if damaged.

### SPARK PLUG

Replace spark plugs at the beginning of each tilling season or after every 50 hours of use, whichever comes first. Spark plug type and gap setting is shown in "PRODUCT SPECIFICATIONS" on page 4 of this manual.

### TRANSMISSION

Your transmission is sealed and will only require lubrication if serviced.

### CLEANING

- Clean engine, wheels, 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 unit unless the muffler, air filter and carburetor are covered to keep water out. Water in engine can result in a shortened engine life.

## SERVICE AND ADJUSTMENTS

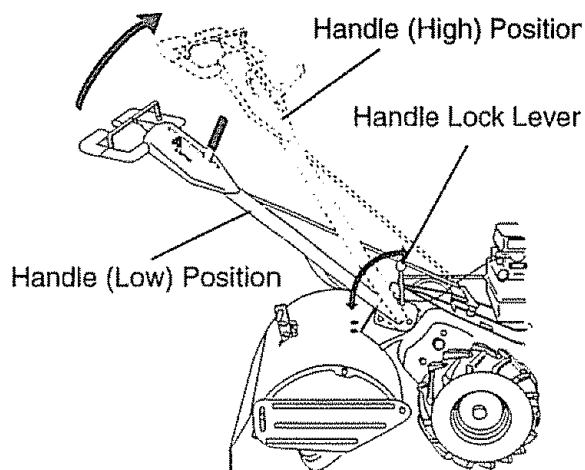
**▲ CAUTION:** Disconnect spark plug wire from spark plug and place wire where it cannot come into contact with plug.

### TILLER

#### TO ADJUST HANDLE HEIGHT

Select handle height best suited for your tilling conditions. Handle height will be different when tiller digs into soil.

- First loosen handle lock lever.
- Handle can be positioned at different settings between "HIGH" and "LOW" positions.
- Retighten handle lock lever securely after adjusting.



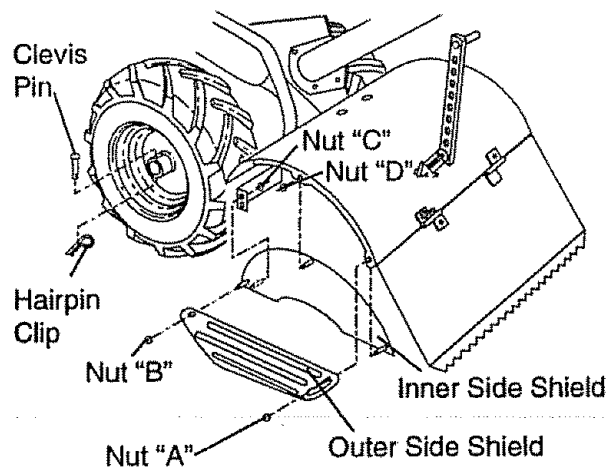
## TIRE CARE

**▲ CAUTION:** When mounting tires, unless beads are seated, overinflation can cause an explosion.

- Maintain 20 pounds of tire pressure. If tire pressures are not equal, tiller will pull to one side.
- Keep tires free of gasoline or oil which can damage rubber.

## TO REMOVE WHEEL

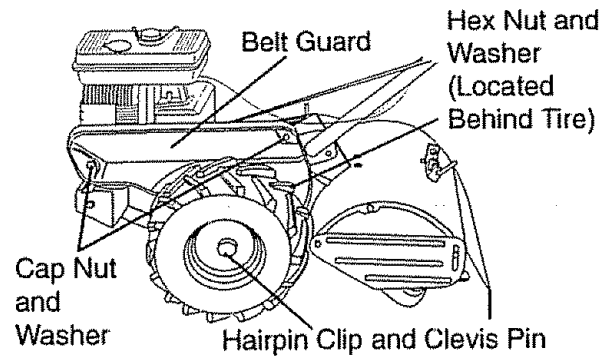
- Place blocks under transmission to keep tiller from tipping.
- Remove outer side shield by removing nuts "A" and "B".
- Remove inner side shield by removing nuts "C" and "D".
- Remove hairpin clip and clevis pin from wheel.
- Remove wheel and tire. • Repair tire and reassemble.



## TO REMOVE BELT GUARD

**NOTE:** For ease of removal, remove hairpin clip and clevis pin from left wheel. Pull wheel out from tiller about 1 inch.

- Remove two (2) cap nuts and washers from side of belt guard.
- Remove hex nut and washer from bottom of belt guard (located behind wheel).
- Pull belt guard out and away from unit.
- Replace belt guard by reversing above procedure.



## TO REPLACE GROUND DRIVE BELT

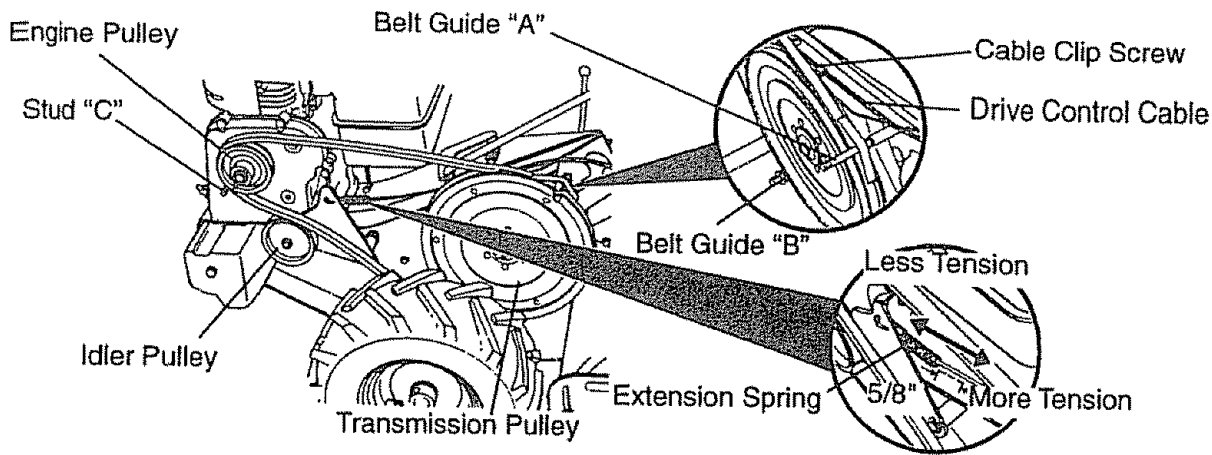
- Remove belt guard as described in "TO REMOVE BELT GUARD".
- Loosen belt guides "A" and "B" and also remove stud "C".
- Remove old belt by slipping off engine pulley first then remove from the pulley.
- Place new belt in groove of transmission pulley and into engine pulley. BELT MUST BE IN GROOVE ON TOP OF IDLER PULLEY. NOTE POSITION OF BELT TO GUIDES.
- Tighten belt guides "A" and "B" and stud "C".
- Check belt adjustment as described below.
- Replace belt guard.
- Reposition wheel and replace clevis pin and hairpin clip.

## GROUND DRIVE BELT ADJUSTMENT

For proper belt tension, the extension spring should have about 5/8 inch stretch when drive control bar is in "ENGAGED" position. This tension can be attained as follows:

- Loosen cable clip screw securing the drive control cable.
- Slide cable forward for less tension and rearward for more tension until about 5/8 inch stretch is obtained while the drive control bar is engaged.
- Tighten cable clip screw securely.



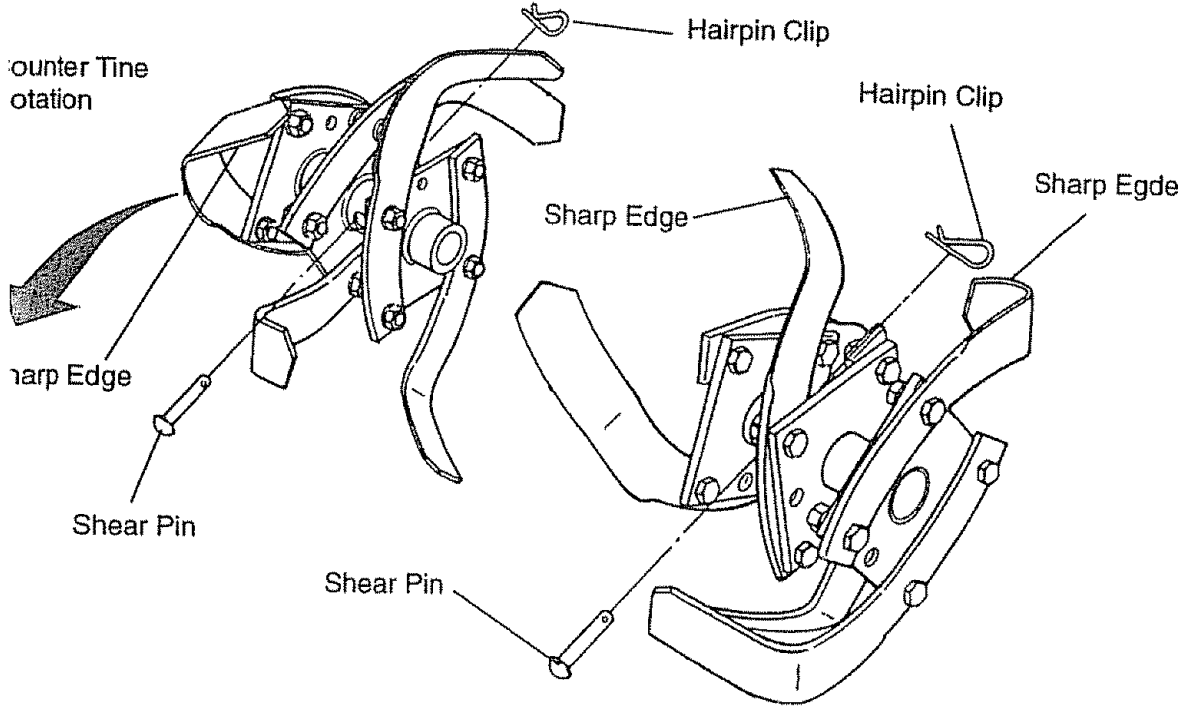
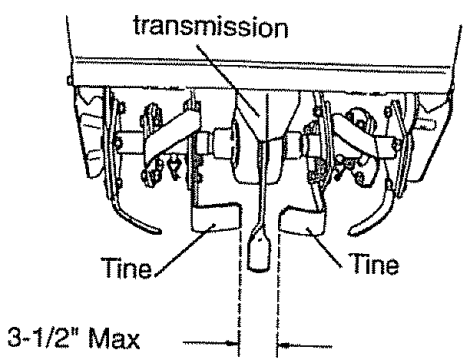
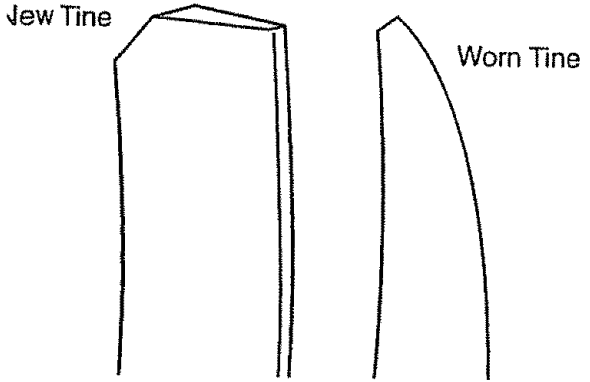


**TINE REPLACEMENT**

**CAUTION:** Tines are sharp. Wear gloves or other protection when handling tines.

A badly worn tine causes your tiller to work harder and dig more shallow. Most important, worn tines cannot chop and shred organic matter as effectively nor bury it as deeply as good tines. A tine this worn needs to be replaced.

- To maintain the superb tilling performance of this machine the tines should be checked for sharpness, wear, and bending, particularly the tines which are next to the transmission. If the gap between the tines exceeds 3-1/2 inches they should be replaced or straightened as necessary.
- New tines should be assembled. Sharpened tine edges will rotate rearward from above.



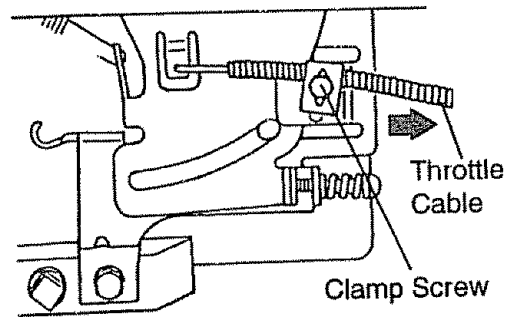
## ENGINE

Maintenance, repair, or replacement of the emission control devices and systems, which are being done at the customer's 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

Loosen cable clamp screw to allow cable to move.

- Move throttle control lever on upper handle to "FAST" position.
- Pull throttle cable out to end of travel
- Hold cable in this position and tighten clamp screw securely.



### TO ADJUST CARBURETOR

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

### IDLE RPM ADJUSTMENT

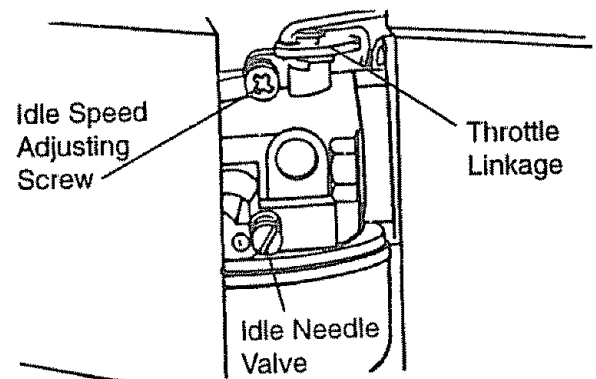
- To adjust idle RPM, rotate throttle linkage counterclockwise and hold against stop while adjusting idle speed adjusting screw to obtain 1750 RPM. Release throttle linkage.

### ACCELERATION TEST

- Move throttle control lever from "SLOW" to "FAST" position. If engine hesitates or dies, turn needle valve out (counterclockwise) 1/8 turn. Repeat test and continue to adjust, if necessary, until engine accelerates smoothly.

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

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



## STORAGE

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

**▲ CAUTION:** Never store the tiller 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.

### TILLER

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

### ENGINE

#### FUEL SYSTEM

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

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

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

### ENGINE OIL

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

### CYLINDER

- Remove spark plug.
- Pour 1 ounce (29 ml) of oil through spark plug hole into cylinder.
- Pull starter handle slowly several times to distribute oil.
- Replace with new spark plug.

### 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 unit indoors and cover it to give protection from dust and dirt.
- Cover your unit 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 unit to rust.

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

# TROUBLE SHOOTING

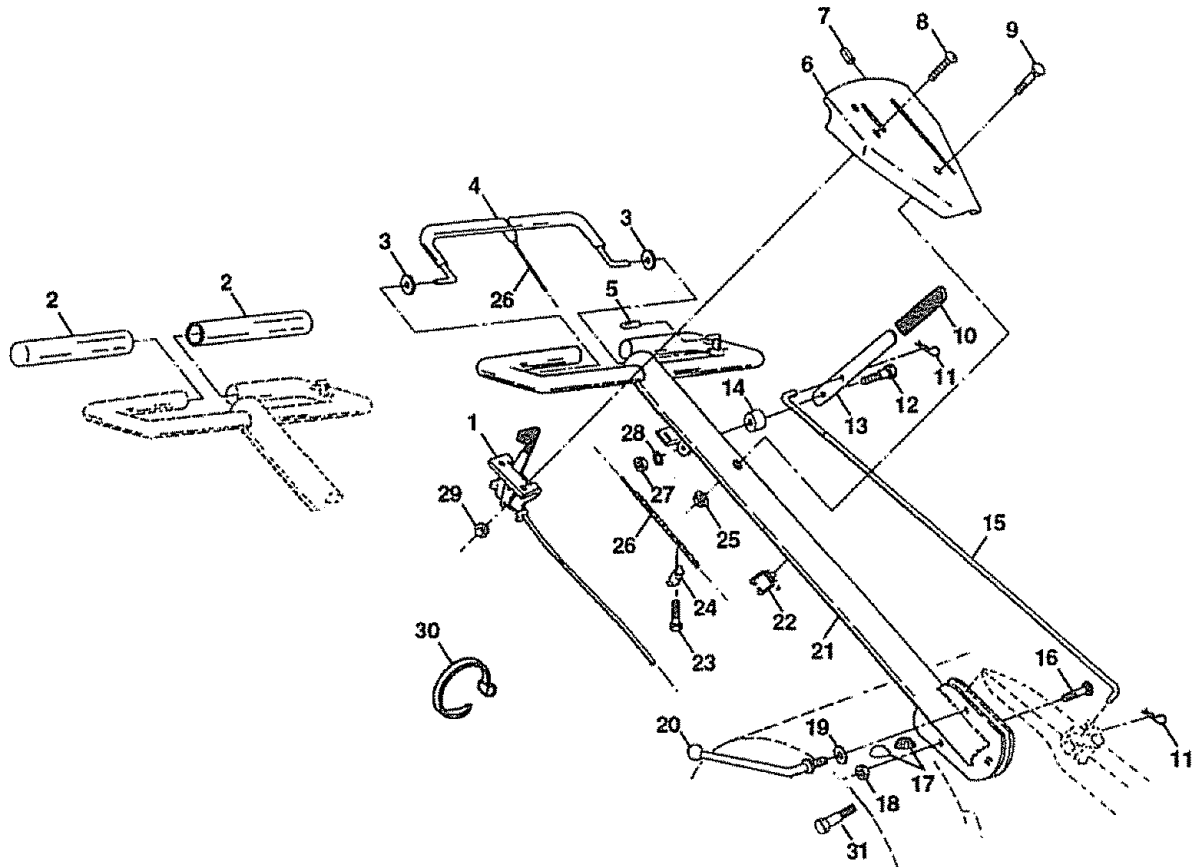
PROBLEM	CAUSE	CORRECTION
<b>Will not start</b>	<ol style="list-style-type: none"> <li>1. Out of fuel.</li> <li>2. Engine not "CHOKED" properly.</li> <li>3. Engine flooded.</li> <li>4. Dirty air cleaner.</li> <li>5. Water in fuel.</li> <li>6. Clogged fuel tank.</li> <li>7. Loose spark plug wire.</li> <li>8. Bad spark plug or improper gap.</li> <li>9. Carburetor out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill fuel tank.</li> <li>2. See "TO START ENGINE" in the Operation section.</li> <li>3. Wait several minutes before attempting to start.</li> <li>4. Clean or replace air cleaner cartridge.</li> <li>5. Drain fuel tank and carburetor, and refill tank with fresh gasoline.</li> <li>6. Remove fuel tank and clean.</li> <li>7. Make sure spark plug wire is seated properly on plug.</li> <li>8. Replace spark plug or adjust gap.</li> <li>9. Make necessary adjustments.</li> </ol>
<b>Hard to start</b>	<ol style="list-style-type: none"> <li>1. Throttle control not set properly.</li> <li>2. Dirty air cleaner.</li> <li>3. Bad spark plug or improper gap.</li> <li>4. Stale or dirty fuel.</li> <li>5. Loose spark plug wire.</li> <li>6. Carburetor out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place throttle control in "FAST" position.</li> <li>2. Clean or replace air cleaner cartridge.</li> <li>3. Replace spark plug or adjust gap.</li> <li>4. Drain fuel tank and refill with fresh gasoline.</li> <li>5. Make sure spark plug wire is seated properly on plug.</li> <li>6. Make necessary adjustments.</li> </ol>
<b>Loss of power</b>	<ol style="list-style-type: none"> <li>1. Engine is overloaded.</li> <li>2. Dirty air cleaner.</li> <li>3. Low oil level/dirty oil.</li> <li>4. Faulty spark plug.</li> <li>5. Oil in fuel.</li> <li>6. Stale or dirty fuel.</li> <li>7. Water in fuel.</li> <li>8. Clogged fuel tank.</li> <li>9. Spark plug wire loose.</li> <li>10. Dirty engine air screen.</li> <li>11. Dirty/clogged muffler.</li> <li>12. Carburetor out of adjustment.</li> <li>13. Poor compression.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set depth stake and wheels for shallower tilling.</li> <li>2. Clean or replace air cleaner cartridge.</li> <li>3. Check oil level/change oil.</li> <li>4. Clean and regap or change spark plug.</li> <li>5. Drain and clean fuel tank and refill, and clean carburetor.</li> <li>6. Drain fuel tank and refill with fresh gasoline.</li> <li>7. Drain fuel tank and carburetor, and refill tank with fresh gasoline.</li> <li>8. Remove fuel tank and clean.</li> <li>9. Connect and tighten spark plug wire.</li> <li>10. Clean engine air screen.</li> <li>11. Clean/replace muffler.</li> <li>12. Make necessary adjustments.</li> <li>13. Contact an authorized Sears Service Center/Department.</li> </ol>

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTION</b>
<b>Engine overheats</b>	<ol style="list-style-type: none"> <li>1. Low oil level/dirty oil.</li> <li>2. Dirty engine air screen.</li> <li>3. Dirty engine.</li> <li>4. Partially plugged muffler.</li> <li>5. Improper carburetor adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check oil level/change oil.</li> <li>2. Clean engine air screen.</li> <li>3. Clean cylinder fins, air screen, muffler area.</li> <li>4. Remove and clean muffler.</li> <li>5. Adjust carburetor to richer position.</li> </ol>
<b>Excessive bounce/difficult handling</b>	<ol style="list-style-type: none"> <li>1. Ground too dry and hard.</li> <li>2. Wheels and depth stake incorrectly adjusted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Moisten ground or wait for more favorable soil conditions.</li> <li>2. Adjust wheels and depth stake.</li> </ol>
<b>Soil balls up or clumps</b>	<ol style="list-style-type: none"> <li>1. Ground too wet.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wait for more favorable soil conditions.</li> </ol>
<b>Engine runs but tiller won't move</b>	<ol style="list-style-type: none"> <li>1. Tine control is not engaged.</li> <li>2. V-belt not correctly adjusted.</li> <li>3. V-belt is off pulley(s).</li> </ol>	<ol style="list-style-type: none"> <li>1. Engage tine control.</li> <li>2. Inspect/adjust V-belt.</li> <li>3. Inspect V-belt.</li> </ol>
<b>Engine runs but labors when tilling</b>	<ol style="list-style-type: none"> <li>1. Tilling too deep.</li> <li>2. Throttle control not properly adjusted.</li> <li>3. Carburetor out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set depth stake for shallower tilling.</li> <li>2. Check throttle control setting.</li> <li>3. Make necessary adjustments.</li> </ol>

# REPAIR PARTS

## TILLER - - MODEL NUMBER 917.293301

### HANDLES

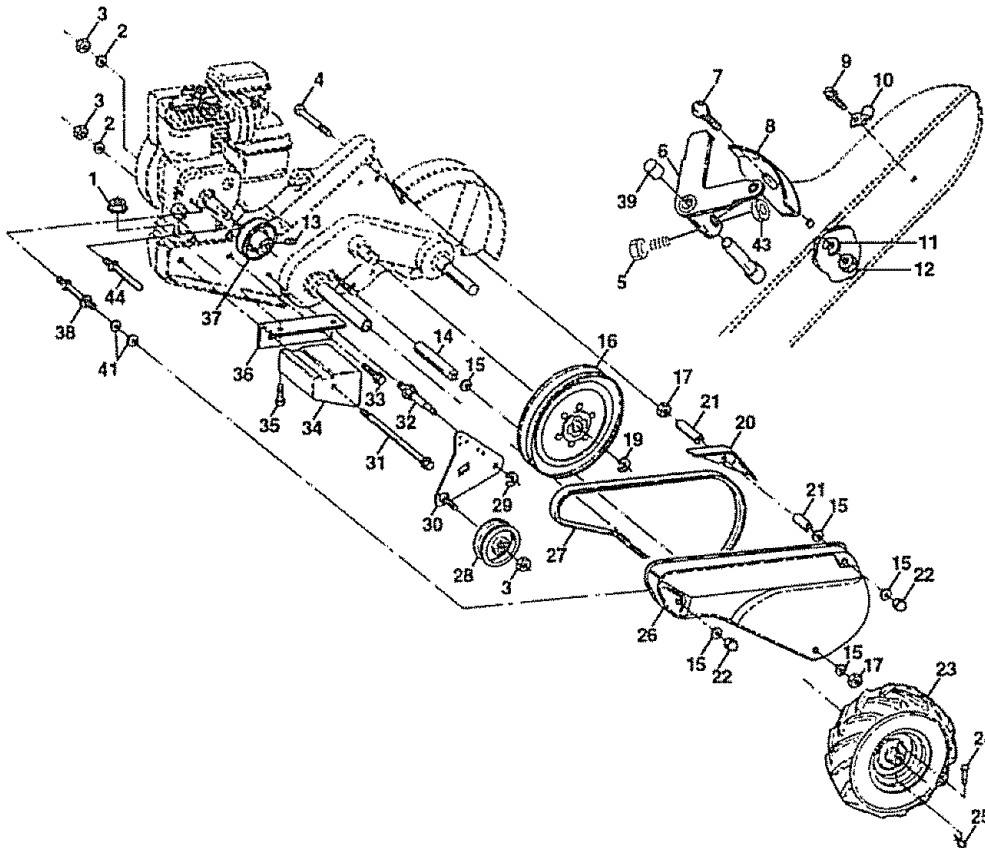


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	148583	Throttle, Control	18	STD541437	*Nut, Centerlock 3/8-16
2	141406	Grip, Handle	19	19131611	Washer 13/32 x 1 x 11 Ga.
3	110673X	Grommet, Handle	20	109228X	Lever, Lock, Handle
4	127254X	Bar, Drive Control Assembly	21	150258	Handle, Assemble
5	6712J	Cap, Vinyl	22	121145X	Clip, Plastic, Cable
6	137119	Panel, Control	23	86777	Screw, Hex, Washer Hd, Slotted #10-24 x 1/2
7	110641X	Bushing, Split	24	9484R	Clip
8	71191008	*Screw, Pan Head #10-24	25	73970500	Locknut, Hex, Flange
9	72010520	*Bolt, 5/16-18 x 2-1/2	26	110675X	Clutch, Cable
10	110646X	Handle, Grip	27	STD541025	*Nut, Hex 1/4-20
11	STD624003	*Clip, Hairpin	28	STD551125	*Washer, Lock 1/4
12	81328	Bolt, Shoulder	29	STD541462	*Nut, Keps #10-24
13	110741X	Handle, Shift	30	104164X	Tie, Cable
14	109313X	Grommet, Rubber	31	150696	Bolt, Pivot
15	110702X	Rod, Shift			
16	STD533710	*Bolt, Carriage 3/8-16 x 1 Gr. 5			
17	109229X	Lock, Handle			

\* STANDARD HARDWARE - - PURCHASE LOCALLY  
 NOTE: All component dimensions given in U.S. inches.  
 1 inch = 25.4 mm

# TILLER - - MODEL NUMBER 917.293301

## MAINFRAME, LEFT SIDE

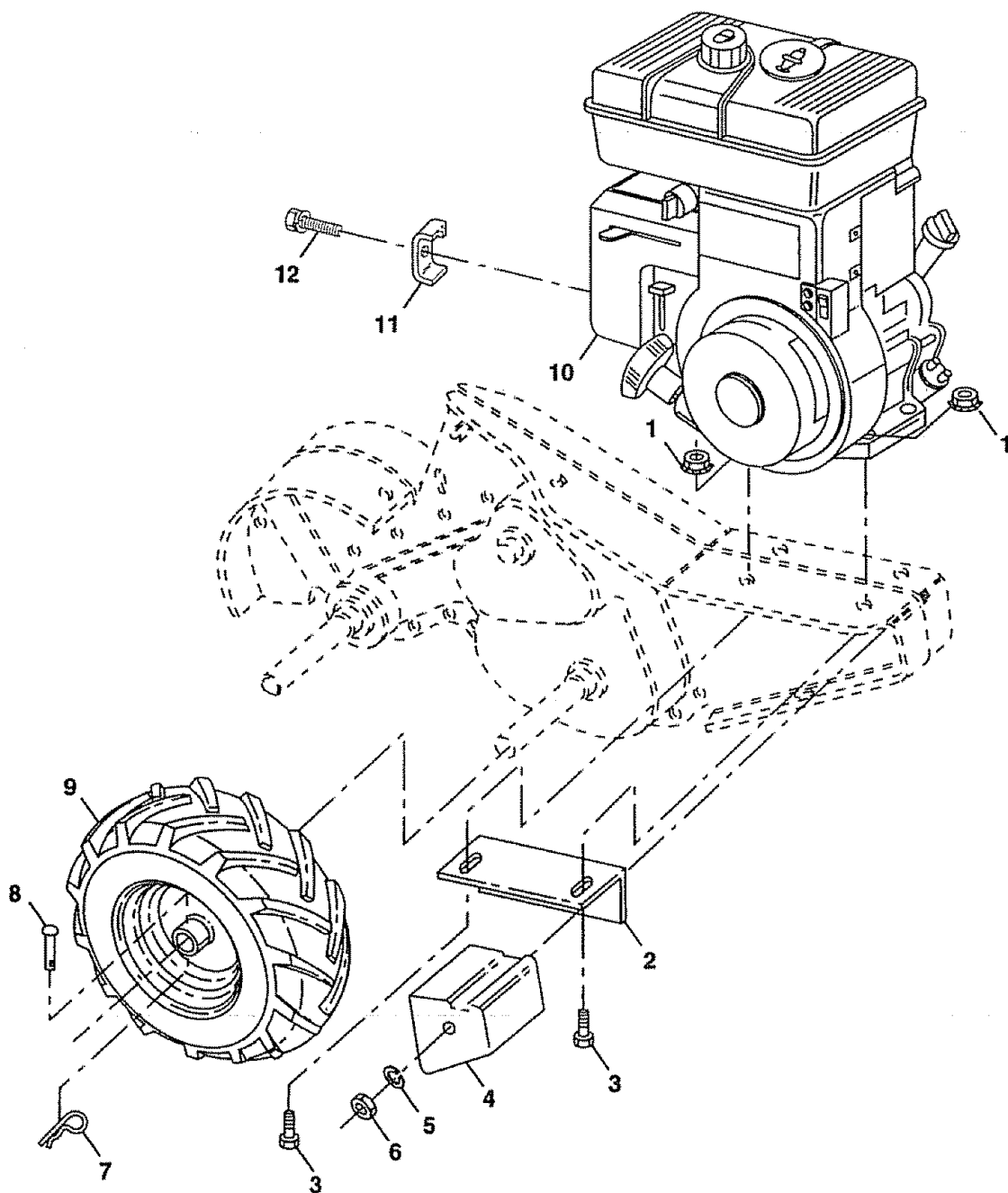


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	STD541431	Nut, Keps 5/16-18	24	126875X	Rivet, Drilled
2	STD551137	*Washer, Lock 3/8	25	STD624003	*Clip, Hairpin
3	STD541037	*Nut, Hex 3/8-16	26	131159X574	Guard, Belt
4	74930568	Bolt, Hex 5/16-18 x 4-1/4	27	132801	Belt, V
5	154734	Screw Shift Lever	28	104679X	Pulley, Idler
6	110111X	Lever, Shift	29	12000032	Ring, Klip
7	STD532505	*Bolt, Carriage 1/4-20 x 1/2 Gr. 5	30	159229	Bracket, Idler
8	8700J	Plate, Shift Indicator	31	102384X	Bolt, Hex 5/16-16 x 12
9	86777	Screw, Hex, Washer Head, Slotted #10-24 x 1/2	32	102141X	Shaft, Idler Arm
10	9484R	Clip	33	STD523710	*Bolt, Hex 3/8-16 x 1
11	STD551125	*Washer, Lock 1/4	34	102383X	Counterweight, L.H.
12	STD541025	*Nut, Hex 1/4-20	35	74760524	Bolt, Hex 5/16-18 x 1 1/2
13	23230506	*Screw, Set, 5/16-18 x 3/8	36	102331X	Bracket, Reinforcement, L.H.
14	120938X	Spacer, Split 0.327 x 0.42 x 2.68	37	130812	Sheave, Engine
15	STD551031	*Washer 11/32 x 11/16 x 16 Ga.	38	145822	Stud, Guard Belt
16	145102	Sheave, Transmission	39	140062	Cap, Plunger
17	STD541031	*Nut, Hex 5/16-18	41	19111610	Washer 11/32 x 1 x 10 Ga.
19	12000028	Ring, Retainer	42	151004	Spacer
20	110653X	Guard, Pinch Point	43	69180	Nut Lock #10-24
21	145216	Spacer, Split 0.327 x 0.42 x 1.688	44	164173	Belt Keeper
22	104214X	Nut, Cap 5/16-18			
23	5015J	Tire			
	128952	Rim			
	795R	Tire Valve			

\*STANDARD HARDWARE - - PURCHASE LOCALLY  
**NOTE:** All component dimensions given in U.S. inches.  
 1 inch = 25.4 mm

# TILLER - - MODEL NUMBER 917.293301

## MAINFRAME, RIGHT SIDE

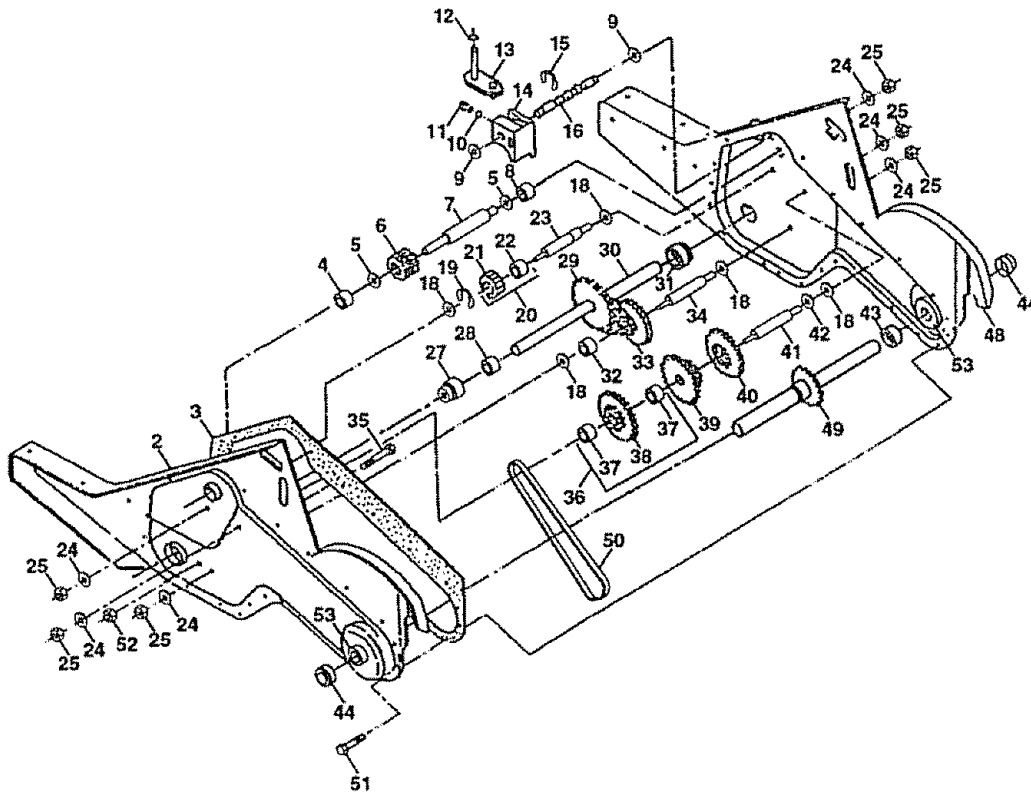


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	STD541431	*Nut, Keps 5/16-18	10	-----	Engine, (See Breakdown) Briggs & Stratton(IP) Model No. 134402, Type No. 1120-E1
2	102332X	Bracket, Reinforcement	11	221535	Clamp
3	74760524	Bolt, Hex 5/16-18 x 1-1/2	12	94906	Screw
4	102173X	Counter Weight, R.H.	* STANDARD HARDWARE - - PURCHASE LOCALLY		
5	STD551137	*Washer, Lock 3/8	NOTE: All component dimensions given in U.S.inches. 1 inch = 25.4 mm		
6	STD541037	*Nut, Hex 3/8-16			
7	STD624003	*Clip, Hairpin			
8	126875X	Rivet, Drilled			
9	5015J	Tire			
	128952	Rim			
	795R	Tire Valve			



# TILLER - - MODEL NUMBER 917.293301

## TRANSMISSION

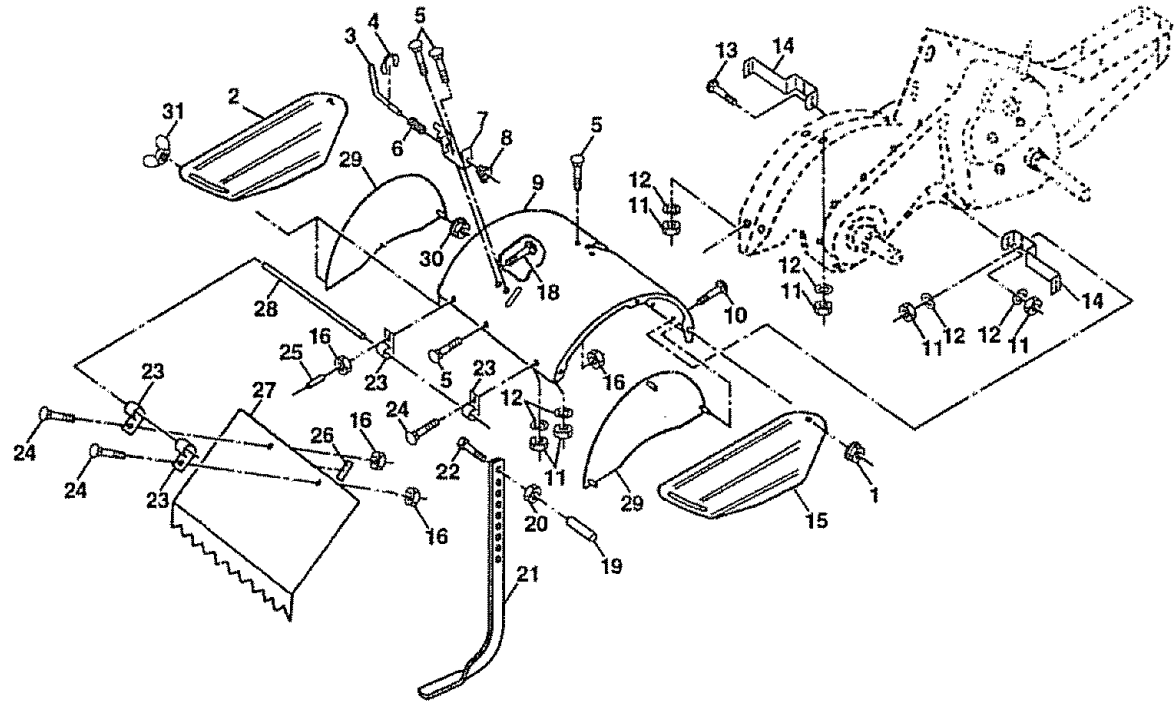


KEY NO.	PART NO.	DESCRIPTION			
1	154354	Transmission Assembly (Includes Key Nos. 2-52)	28	106390X	Spacer 0.765 x 1.125 x 1.23
2	150698	Gearcase, L.H. w/Bearing (Includes Key No. 4)	29	102134X	Chain #35-50 Pitch
3	106211X	Gasket, Gearcase	30	150737	Ground Shaft Assembly
4	5020J	Bearing, Needle	31	143008	Bearing, Shaft, Ground Drive R.H.
5	1370H	Washer, Thrust 5/8 x 1.10 x 1/32	32	106388X	Spacer 0.70 x 1.00 x 1.150
6	137335	Pinion, Input	33	102121X	Sprocket and Gear Assembly
7	145101	Shaft, Input	34	102112X	Shaft, Reduction (2nd)
8	4895H	Bearing, Needle	35	102101X	Screw, Whiz, Lock 5/16-18 x 3- 1/2
9	154467	Washer, Seal	36	154355	Sprocket Assembly w/Bearing (Includes Key Nos. 37 and 38)
10	7392M	Ball, Steel	37	4422J	Bearing, Needle
11	100371K	Spring, Shift, Fork	38	154356	Sprocket, Tine
12	106160X	O-Ring	39	105345X	Gear, Cluster, Red 1st & 2nd
13	142145	Arm, Shift	40	105346X	Gear, Reverse
14	8353J	Fork, Shift	41	8358J	Shaft, Reduction (1st)
15	12000039	Ring, Klip	42	4220R	Washer, Thrust
16	154466	Shaft, Shift	43	106146X	Spacer 1.01 x 1.75 x 0.760
18	4358J	Washer	44	155236	Seal Asm. Oil
19	12000040	Ring, Klip	48	150700	Gearcase, R.H. w/Bearing (Includes Key No. 8)
20	102114X	Gear, Assembly, Reverse Idler (Includes Key Nos. 21 and 22)	49	132688	Shaft, Tine
21	102115X	Gear, Reverse Idler	50	106147X	Chain, Roller #50-50 Pitch
22	6803J	Bearing, Needle	51	17720408	Screw 1/4-20 x 1/2
23	102111X	Shaft, Reverse Idler	52	73220500	*Nut, Hex 5/16-18
24	STD551143	*Washer, Lock 7/16	53	122204X	Bearing Kit, Tine Shaft
25	STD541143	*Nut, Hex 7/16-20	--	6066J	Grease, Plastilube #1
27	143009	Bearing, Shaft, Ground Drive L.H.			

\* STANDARD HARDWARE - - PURCHASE LOCALLY  
NOTE: All component dimensions given in U.S.inches.  
1 inch = 25.4 mm

# TILLER - - MODEL NUMBER 917.293301

## TINE SHIELD

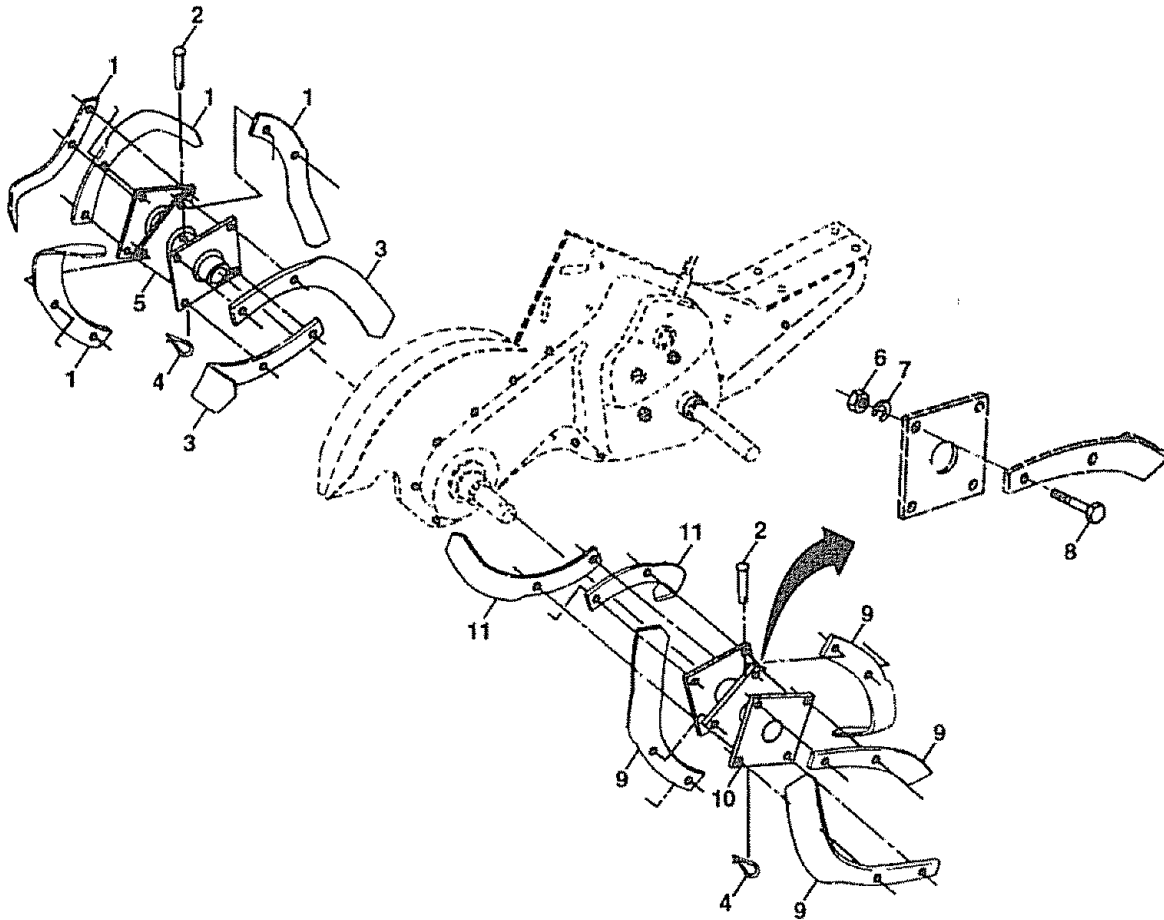


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	98000129	Nut, Flange 5/16-18	17	162175	Nut, Wing Forged 5/16-18
2	161415X574	Shield, Side, Outer L. H.	18	STD532512	*Bolt, Carriage 1/4-20 x 1-1/4 Gr. 5
3	8393J	Pin, Stake, Depth	19	102701X	Grip
4	12000036	Ring, Klip	20	STD541037	*Nut, Hex 3/8-16
5	STD533107	*Bolt, Carriage 5/16-18 x 3/4 Gr 5	21	102156X	Stake, Depth
6	8394J	Spring	22	74930632	Bolt, Hex 3/8-16 x 2
7	8392J	Bracket, Latch	23	4440J	Hinge
8	109230X	Spring, Depth Stake	24	72140404	*Bolt, Carriage 1/4-20 x 1/4
9	124289X574	Shield, Tine	25	6712J	Cap, Vinyl
10	STD533110	*Bolt, Carriage 5/16-18 x 1 Gr. 5	26	109227X	Pad, Idler
11	STD541031	*Nut, Hex 5/16-18	27	102695X574	Shield, Leveling
12	STD551131	*Washer, Lock 5/16	28	120588X	Pin, Hinge
13	72110510	Bolt, Carriage 5/16-18 x 1-1/4	29	124309X574	Shield, Side
14	124311X	Bracket, Shield Tine	30	73970500	Locknut, Hex, Flange
15	161414X574	Shield, Side, Outer R.H.	31	162175	Wing Nut
16	73510400	Nut, Hex 1/4-20			

\* STANDARD HARDWARE - - PURCHASE LOCALLY  
 NOTE: All component dimensions given in U.S. inches  
 1 inch = 25.4 mm

# TILLER - - MODEL NUMBER 917.293301

## TINE ASSEMBLY



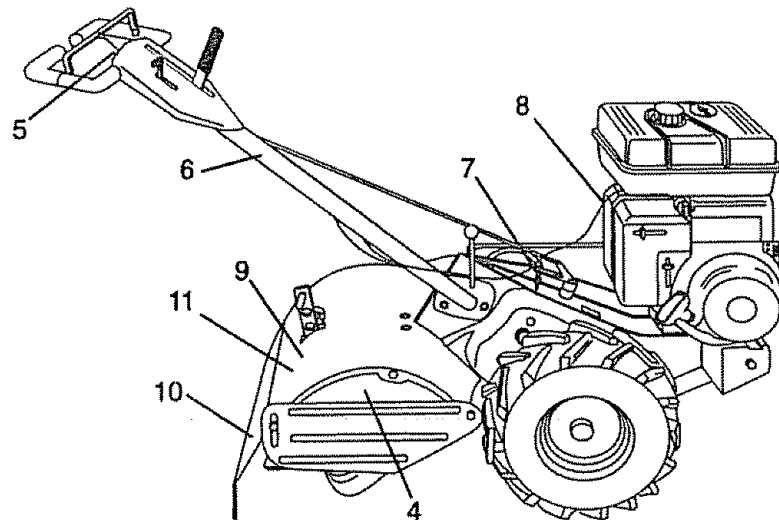
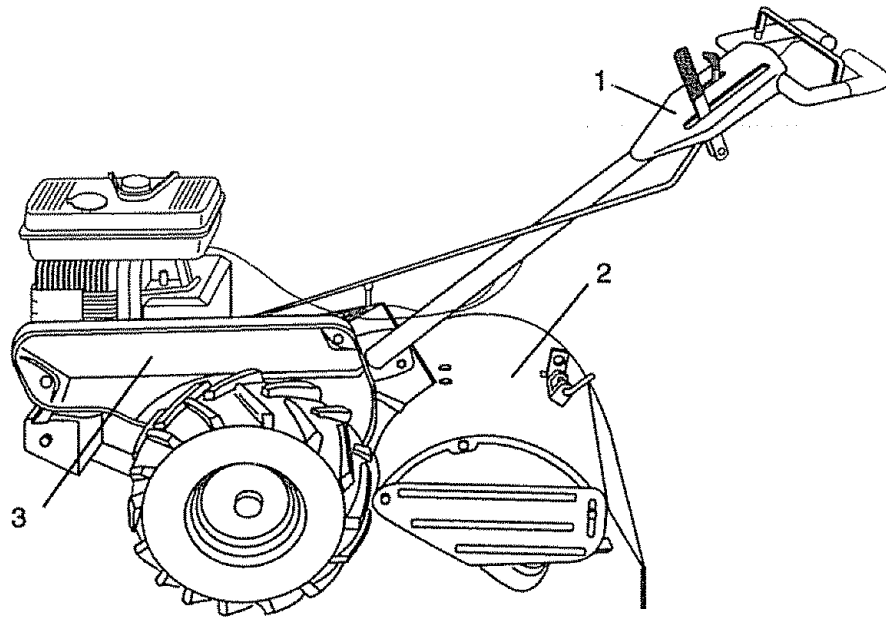
KEY NO.	PART NO.	DESCRIPTION
1	4459J	Tine, Outer, L.H.
2	132673	Pin, Shear
3	6554J	Tine, Inner, L.H.
4	STD624008	*Clip, Hairpin
5	132727	Assembly, Hub and Plate, L.H.
6	73610600	Nut, Hex 3/8-24
7	STD551137	*Washer, Lock 3/8
8	74610616	Bolt, Hex 3/8-24 x 1

KEY NO.	PART NO.	DESCRIPTION
9	4460J	Tine, Outer, R.H.
10	132728	Assembly, Hub and Plate, R.H.
11	6555J	Tine, Inner, R.H.

\* STANDARD HARDWARE - - PURCHASE LOCALLY  
 NOTE: All component dimensions given in U.S. inches.  
 1 inch = 25.4 mm

# TILLER -- MODEL NUMBER 917.293301

## DECALS

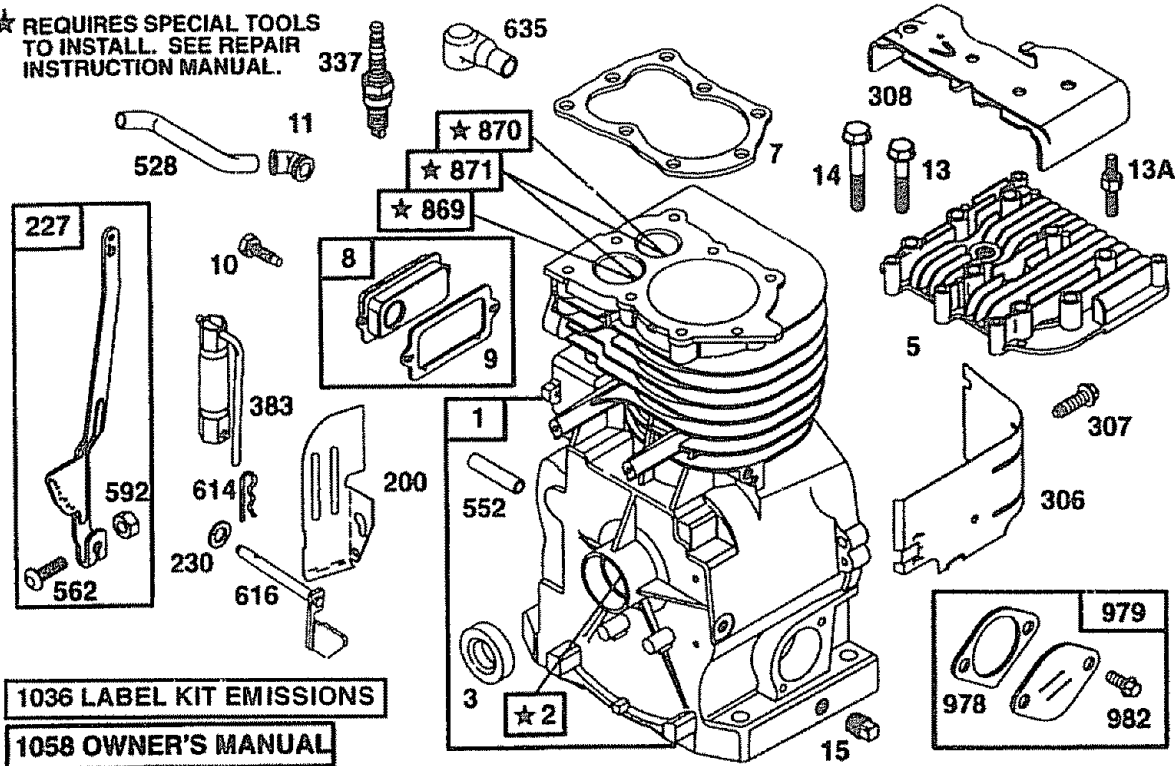


KEY NO.	PART NO.	DESCRIPTION
1	158096	Decal, Logo
2	157991	Decal, Logo
3	157990	Decal, Logo
4	157984	Decal, Description
5	137538	Decal, Caution, Drive Control
6	120431X	Decal, Hand Placement
7	102180X	Decal, Shift Indicator
8	147592	Decal, Operation and Lubrication
9	163094	Decal, Depth Stake
10	120075X	Decal, Warning, Rotating Tines
11	162215	Decal, Tine Shield Wrng Dom
--	164659	Manual, Owner's (English)
--	164660	Manual, Owner's (Spanish)

**TILLER - - MODEL NUMBER 917.293301**

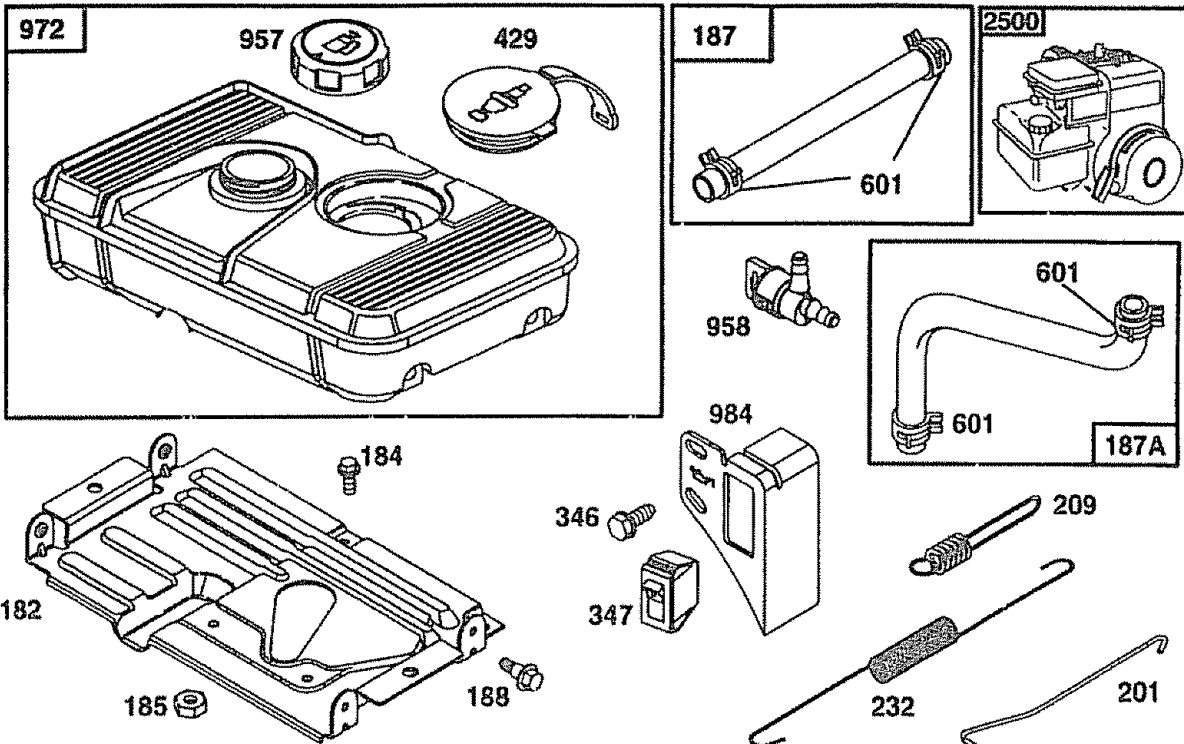
**ENGINE, BRIGGS & STRATTON - - MODEL NUMBER 134402, TYPE NO. 1120-E1**

★ REQUIRES SPECIAL TOOLS TO INSTALL. SEE REPAIR INSTRUCTION MANUAL.

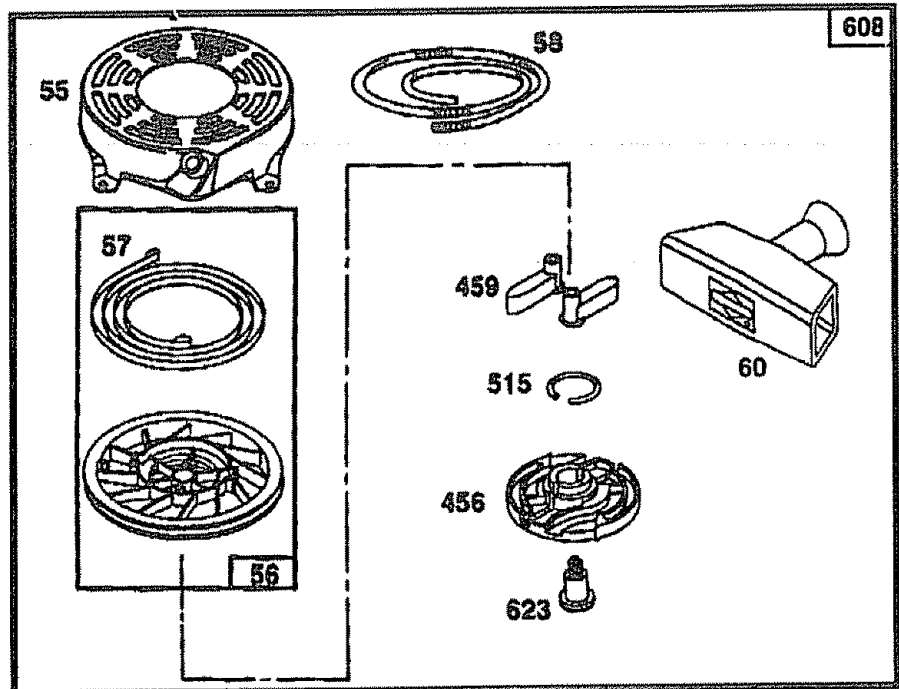
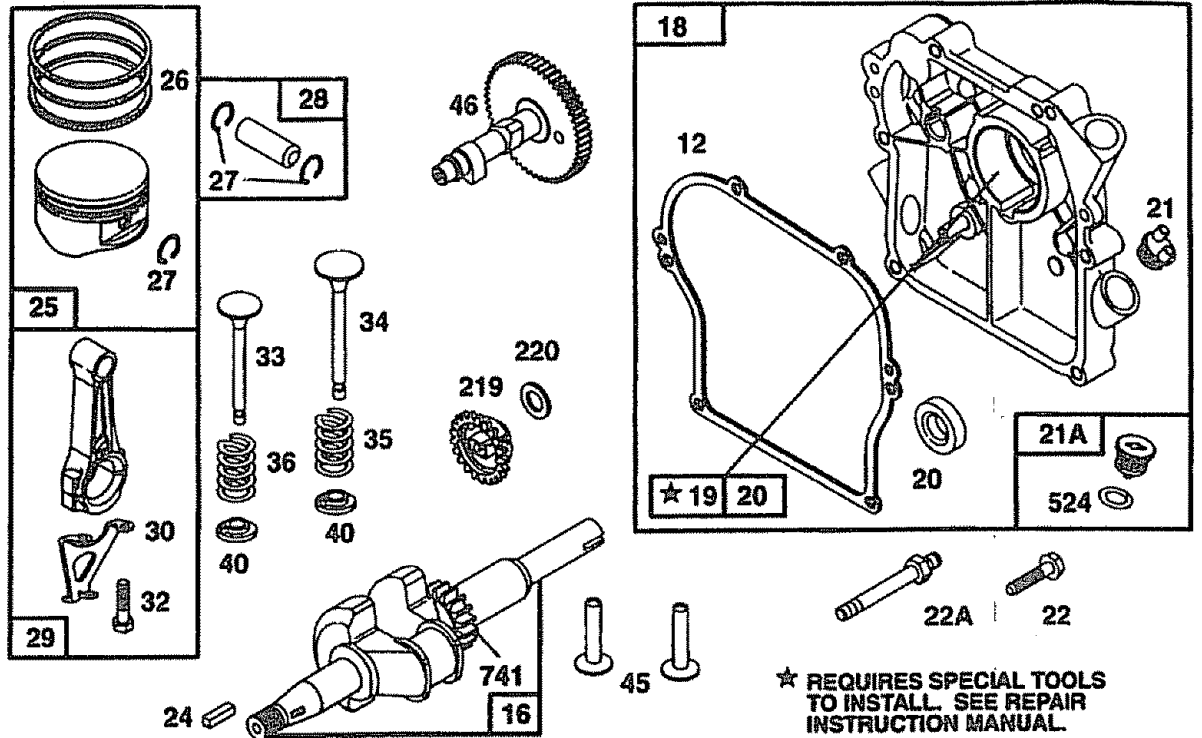


1036 LABEL KIT EMISSIONS

1058 OWNER'S MANUAL

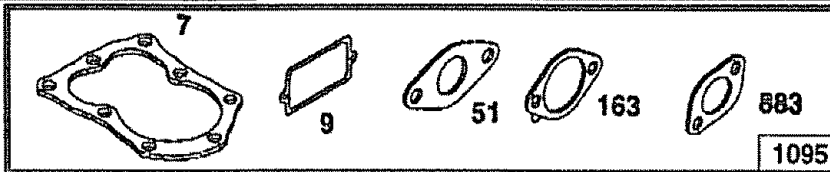
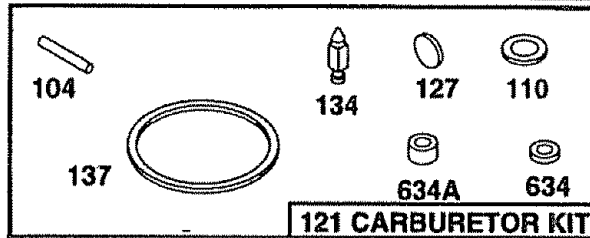
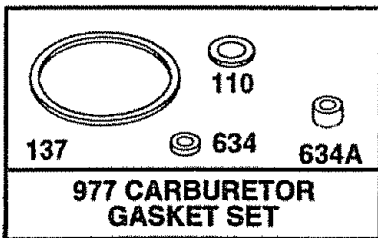
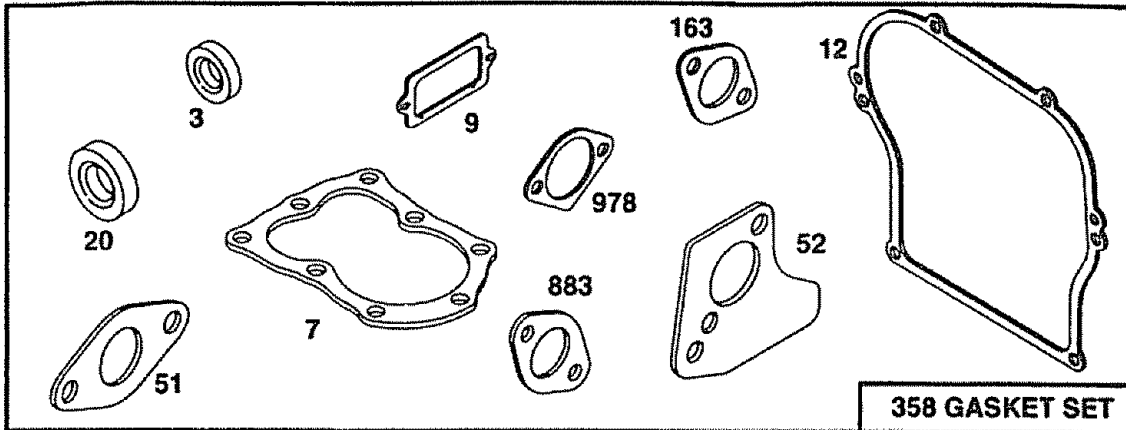
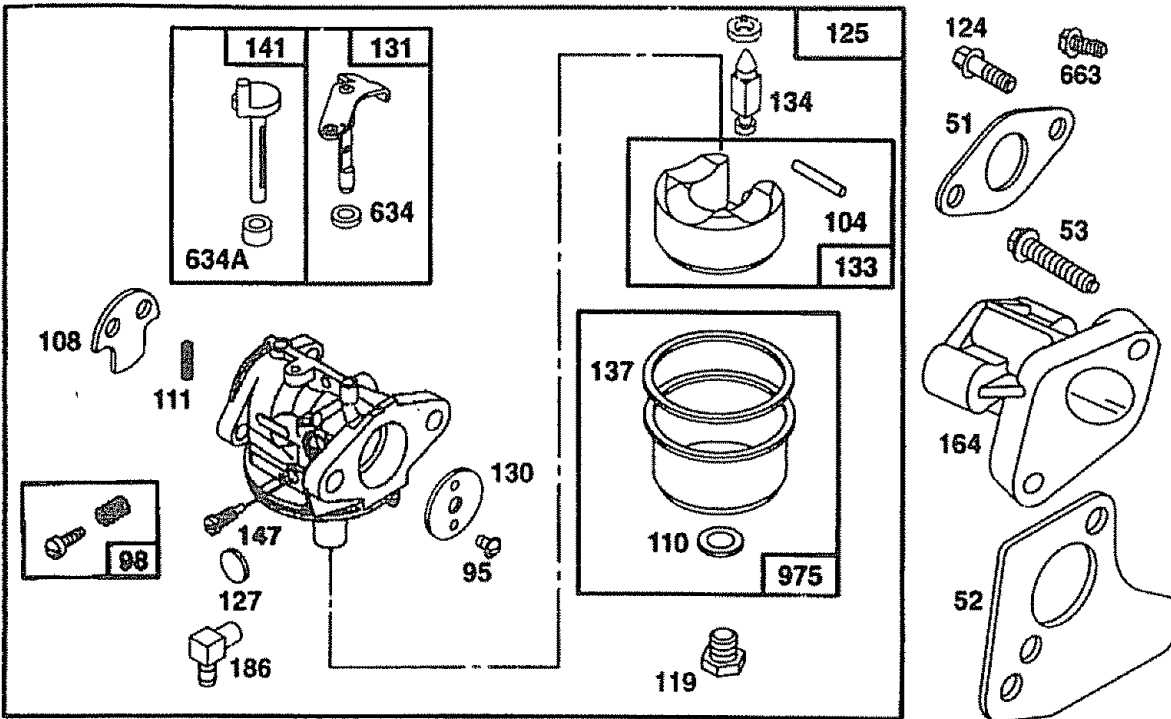


**TILLER - - MODEL NUMBER 917.293301**  
**ENGINE, BRIGGS & STRATTON - - MODEL NUMBER 134402, TYPE NO. 1120-E1**

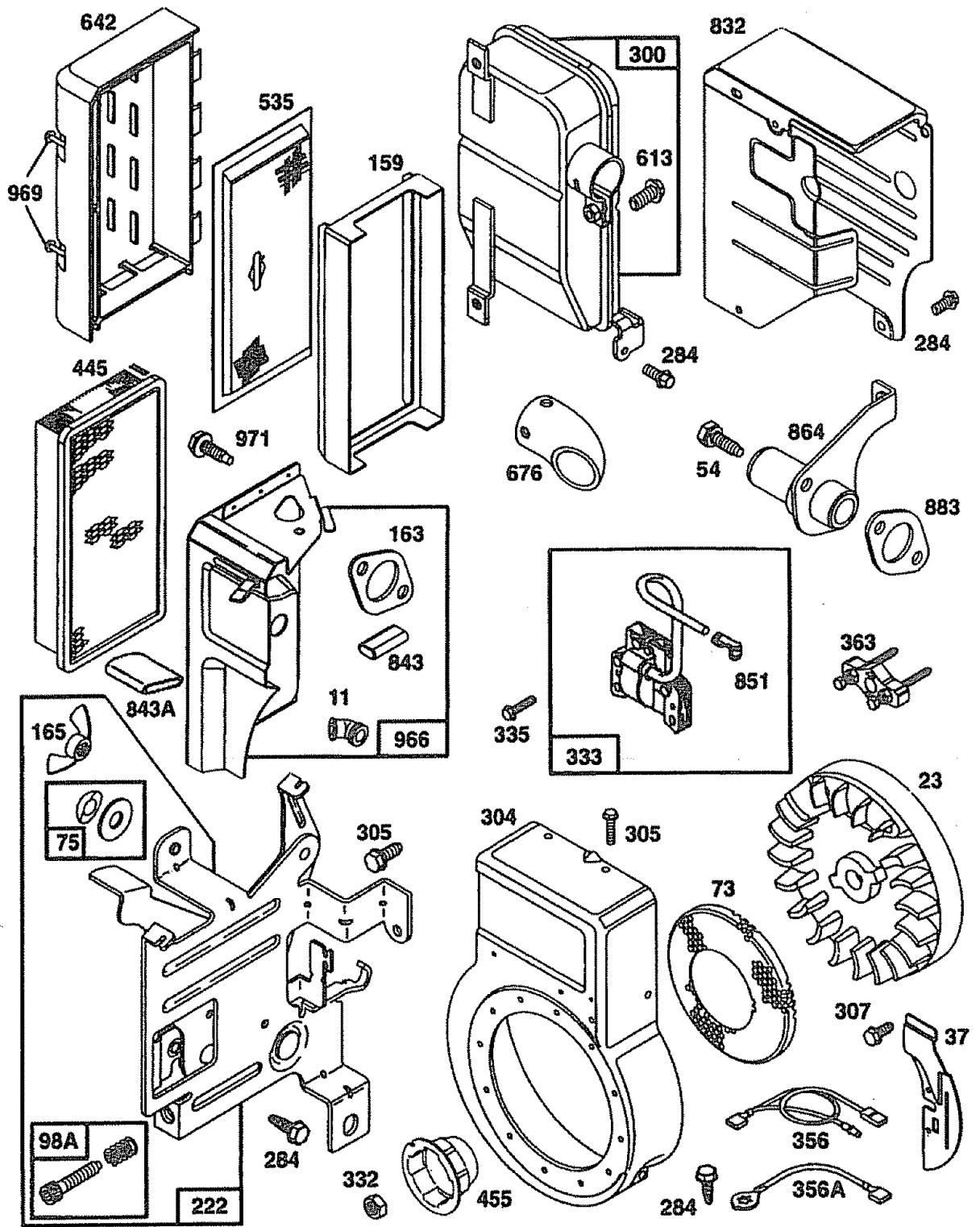


TILLER - - MODEL NUMBER 917.293301

ENGINE, BRIGGS & STRATTON - - MODEL NUMBER 134402, TYPE NO. 1120-E1



**TILLER - - MODEL NUMBER 917.293301**  
**ENGINE, BRIGGS & STRATTON - - MODEL NUMBER 134402, TYPE NO. 1120-E1**





## TILLER - - MODEL NUMBER 917.293301

ENGINE, BRIGGS & STRATTON - - MODEL NUMBER 134402, TYPE NO. 1120-E1

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	495133	Cylinder Assembly	35	260552	Spring, Intake Valve
2	399268	Bushing	36	26478	Spring, Exhaust Valve
3	299819	*Seal, Oil	37	222443	Guard, Flywheel
5	214040	Head, Cylinder	40	93312	Retainer, Spring
7	272157	****Gasket, Cylinder Head	45	260642	Tappet, Valve
8	495774	Breather Assembly	46	214726	Gear, Cam
9	27549	****Gasket, Breather	51	272295	****Gasket, Carburetor
10	94621	Screw, Breather Mounting	52	272585	*Gasket, Intake Port
11	66578	Grommet	53	94923	Screw, Adapter Mounting
12	270080	*Gasket, Crankcase, .015" Thick (Standard)	54	94706	Screw, Hex Head
	270125	*Gasket, Crankcase, .005" Thick	55	497442	Housing, Rewind Starter
	270126	*Gasket, Crankcase, .009" Thick	56	498144	Pulley, Starter
13	94221	Screw, Cylinder Head 2-5/16	57	263074	Spring, Rewind Starter
13A	94915	Stud, Cylinder Head	58	66894	Rope, Starter (Cut to Required Length)
14	94679	Screw, Cylinder Head 2-15/32	60	691915	Handle, Rewind Starter
15	94916	Plug, Oil Drain, 1/4" Standard, Square Head	65	94686	Screw, Starter Mounting
			73	225176	Screen, Rotating
16	492088	Crankshaft	75	495659	Washer Kit
	94388	Crankshaft Gear Key	95	94098	Screw, Round Head
18	494044	Cover, Crankcase	98	398185	Screw, Idle Adjusting
19	495660	Bushing	98A	493280	Screw Assembly, Speed Adjustment
20	294606	Seal, Oil			**Pin, Hinge (Sold in Kit Only)
21	281658	Plug, Oil Fill	104	- - -	Valve, Choke
21A	399195	Plug, Oil Fill (For High Oil Fill Hole)	108	224783	***Gasket, Sealing (Sold in Kit Only)
			110	- - -	Spring, Lever
22	94980	Screw, Crankcase Cover Mounting	111	262715	Jet, Main (Std.)
22A	94917	Stud, Hex Head, Crankcase Cover Mounting	117	497610	Jet, Main (Hi-Alt.)
			118	483564	Carburetor Kit
23	399673	Flywheel	121	493762	Screw, Torx® Hex
24	222698	Key, Flywheel	124	94920	Carburetor
25	393819	Piston Assembly, Standard Size	125	498599	**Plug, Welch
	393820	Piston Assembly, .010" Oversize	127	223472	Valve, Throttle
	393821	Piston Assembly, .020" Oversize	130	223470	Shaft, Throttle
	393822	Piston Assembly, .030" Oversize	131	493556	Float, Carburetor
26	399067	Ring Set, Standard Size	133	398187	**Valve, Inlet (Includes Seat)
	399014	Ring Set, .010" Oversize	134	398188	**Gasket, Bowl (Sold in Kit Only)
	399015	Ring Set, .020" Oversize	137	- - -	
	399016	Ring Set, .030" Oversize			
27	26026	Lock, Piston Pin	*		Included in Gasket Set (495661)
28	298909	Pin, Piston, Standard Size	**		Included in Carburetor Kit (493762)
	298908	Pin, Piston, .005" Oversize	***		Included in Carburetor Kit (493762), and Carburetor Gasket Set (490937)
29	299430	Rod, Connecting	****		Included in valve overhaul, Gasket set (498531) and Gasket set (495661)
	390459	Rod, Connecting, .020" Undersize Crankpin Bore			
30	225183	Dipper, Connecting Rod			
32	94699	Screw, Connecting Rod			
33	211119	Valve, Exhaust			
34	261044	Valve, Intake			

**NOTE:** All component dimensions given in U.S. inches  
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## TILLER - - MODEL NUMBER 917.293301

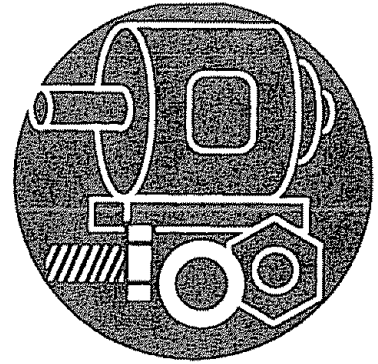
**ENGINE, BRIGGS & STRATTON - - MODEL NUMBER 134402, TYPE NO. 1120-E1**

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
141498593		Shaft, Choke	601	93053	Clamp, Hose, Green
147	231907	Jet, Pilot		93807	Clamp, Hose, Black
159	280871	Support, Air Cleaner	608	692696	Starter, Rewind
163	272948	****Gasket, Air Cleaner	614	93306	Pin, Cotter
164	281247	Manifold, Intake	616	495243	Crank, Governor
165	94692	Nut, Wing	623	94943	Screw, Shoulder
182	224669	Bracket, Fuel Tank	634	---	***Seal, Shaft (Sold in Kit Only)
184	94905	Screw, Torx®	634A	---	***Seal, Choke Shaft (Sold in Kit Only)
185	94010	Nut, Hex			
186	493496	Connector, Fuel Line	635	66538	Elbow, Spark Plug
187A	495218	Line, Fuel, Molded	642	281188	Cover, Air Cleaner
188	94895	Screw, Hex Head	663	93343	Screw, Hex
200	223886	Guide, Air	676	495074	Deflector Assembly
202	262865	Link	741	262992	Gear, Timing
209	262283	Spring, Governor		Uses:	94388 Key, Woodruff
219	494845	Gear, Governor	832	494903	Guard, Muffler
220	221551	Washer, Thrust	843	280149	Sleeve, Lever
222	494899	Bracket, Control	843A	280643	Sleeve, Lever
227	496082	Lever Assembly, Governor	851	493880	Terminal, Cable
230	94927	Washer, Governor Lever	864	494904	Flange, Muffler
232	260585	Spring, Link	869	211787	Seat, Intake Valve
265	221535	Clamp, Casing	870	263094	Seat, Exhaust Valve, Cobalite®
267	94906	Screw, Hex	871	262001	Guide, Exhaust Valve
284	94929	Screw, Hex Head		63709	Guide, Intake Valve
300	494562	Muffler, Exhaust	883	272309	*Gasket, Exhaust
304	497018	Housing, Blower	957	493988	Cap, Fuel Tank
305	94786	Screw, Hex	958	494769	Valve, Shut-Off
306	224820	Shield, Cylinder	966	494902	Base, Air Cleaner
307	94680	Screw, Hex Head, Cylinder Shield	969	94872	Screw, Hex Head
			971	94925	Screw, Hex Head
308	224740	Cover, Cylinder Head	972	495345	Tank, Fuel
332	94877	Nut, Flywheel	975	493640	Bowl, Float
333	397358	Armature, Magneto	977	490937	Gasket Set, Carburetor
335	93414	Screw, Armature	978	271736	*Gasket Cover
337	802592	Plug, Spark (1-7/8" High, 48mm, Resistor Type)	979	494807	Cover, Oil Gard®
			982	94658	Screw, Oil Gard® Cover
			984	224746	Bracket, Indicator Light
346	94896	Screw, Hex Head, Sems	1036	499348	Label Kit Emissions
347	493521	Switch, Stop	1058	272528	Owner's Manual
356	495135	Wire, Stop (Armature to Switch)	1095	498531	Gasket Set, Valve Overhaul
356A	495118	Wire, Stop (Stop Switch to Ground)	2500	134402-0513	Replacement Engine
			---	495952	Replacement Shortblock
358	495661	Gasket Set			
363	19069	Puller, Flywheel	*		Included in Gasket Set (495661)
383	89838	Wrench, Spark Plug			
429	281190	Cover, Spark Plug	**		Included in Carburetor Kit (493762)
445	494511	Filter, Air			
455	225121	Cup, Flywheel	***		Included in Carburetor Kit (493762), and Carburetor Gasket Set (490937)
456	281503	Retainer, Spring			
459	287505	Pawl, Ratchet			
515	263073	Spring, Torsion	****		Included in valve overhaul, Gasket set (498531) and Gasket set (495661)
524	271485	*Seal, Oil Fill			
528	231818	Tube, Breather			
535	492889	Filter, Air			
552	231079	Bushing, Governor Crank			
562	94907	Bolt, Governor Lever			
592	231978	Nut, Hex			

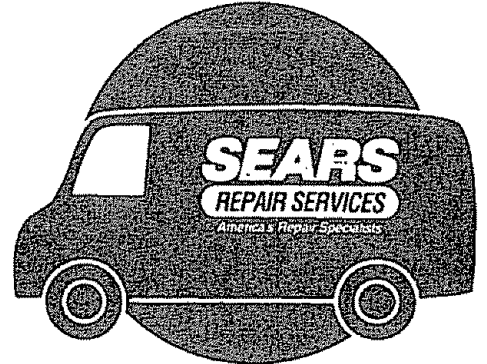
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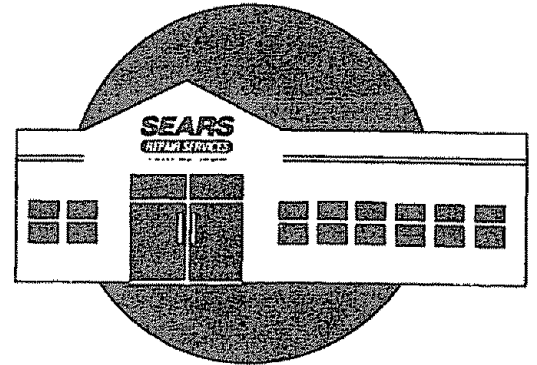
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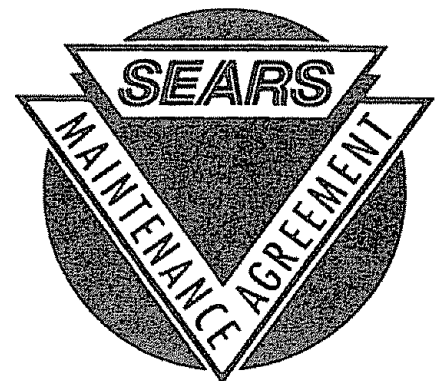
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