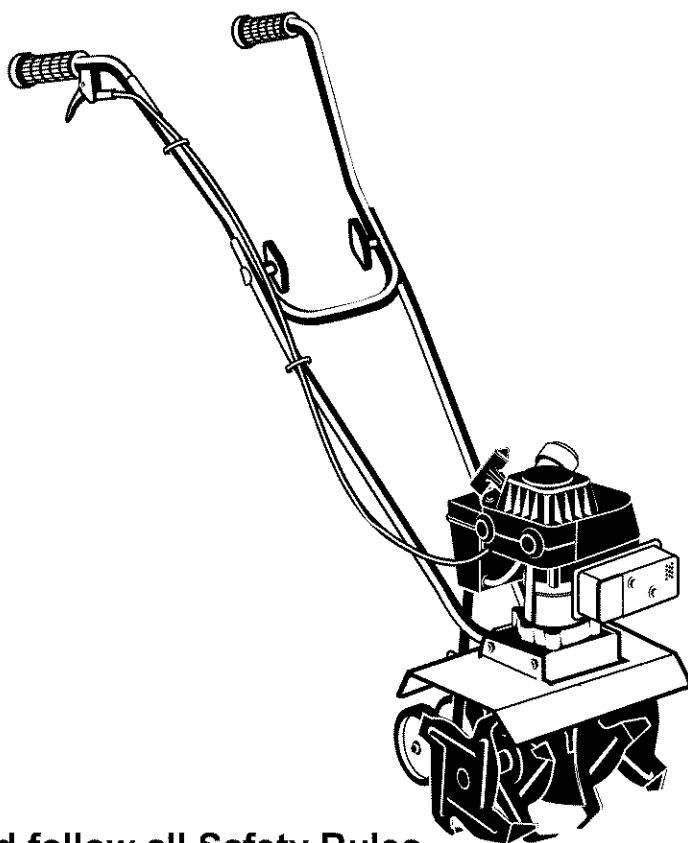


# **CRAFTSMAN®**

**49.2cc 2-cycle  
2.0HP 10 Inch Tines  
CULTIVATOR**

**MODEL NO.  
536.292521**



**Caution:**

**Read and follow all Safety Rules  
and Operating Instructions before  
first use of this product.**

**SEARS, ROEBUCK AND CO., Hoffman Estates, IL 60179 U.S.A.**

**F-001300M**

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## WARRANTY STATEMENT

### LIMITED ONE-YEAR WARRANTY ON CRAFTSMAN CULTIVATOR

For one year from the date of purchase, when this Craftsman Cultivator 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 excludes fine(s), spark plug, and air cleaner which are expendable parts and become worn during normal use.

If this Craftsman Cultivator is used for commercial or rental purposes, this warranty applies for only 90 days from the date of purchase.

**WARRANTY SERVICE IS AVAILABLE BY RETURNING THE CRAFTSMAN CULTIVATOR 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 may vary from state to state.

Sears, Roebuck and Co., D817WA, Hoffman Estates. IL 60179



### WARNING:



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

**IMPORTANT:** This unit is equipped with an internal combustion engine and must 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 must 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 a Sears Authorized Service Center for a spark arrester for the muffler.

# IMPORTANT

## Safe Operation Practices for Cultivator



**WARNING:** Look for this symbol to point out important safety precautions. It means: "Attention! Become Alert! Your Safety Is Involved."



**WARNING:** To prevent accidental starting when setting-up, transporting, adjusting or making repairs, always disconnect spark plug wire and put wire where it cannot contact the spark plug .

**IMPORTANT:** Safety standards require operator presence controls to minimize the risk of injury. Your cultivator is equipped with such controls. Do not attempt to defeat the function of the operator presence control under any circumstances.

### Before Use

- Read the owner's manual carefully. Be thoroughly familiar with the controls and the proper use of the cultivator. Know how to stop the cultivator and disengage the controls quickly.
- Do not operate the cultivator without wearing adequate outer garments. Wear footwear that will improve footing on slippery surfaces.
- Keep the area of operation clear of all persons, particularly small children and pets.
- Thoroughly inspect the area where the cultivator is to be used and remove all foreign objects.

### Fuel Safety

- Handle fuel with care; it is highly flammable.
- Use an approved container.
- Check fuel supply before each use, allowing space for expansion as the heat of the engine and/or sun can cause fuel to expand.
- Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors. Replace fuel tank cap securely and wipe up spilled fuel.
- Never remove the fuel tank cap or add fuel to a running or hot engine.

- Never store fuel or cultivator with fuel in the tank inside a building where fumes may reach an open flame.

### Operating Safety

- Never allow children or young teenagers to operate the cultivator. Keep them away while it is operating. Never allow adults to operate the cultivator without proper instruction.
- Do not operate this machine if you are taking drugs or other medication which can cause drowsiness or affect your ability to operate this machine.
- Do not use this machine if you are mentally or physically unable to operate this machine safely.
- Always wear safety glasses or eye shields during operation or while performing an adjustment or repair to protect your eyes from foreign objects that may be thrown from the cultivator.
- 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.
- Exercise caution to avoid slipping or falling.
- Never operate the cultivator without proper guards, plates, or other safety protective devices in place.
- Never operate the cultivator at high transport speeds on slippery surfaces. Look behind and use care when backing.
- Never allow bystanders near the cultivator.
- Keep children and pets away while operating.
- Never operate the cultivator without good visibility or light.
- Do not run the engine indoors. The exhaust fumes are dangerous, containing CARBON MONOXIDE, an ODORLESS and DEADLY GAS.

# IMPORTANT

- Take all possible precautions when leaving the cultivator unattended. Stop the engine.
- Do not overload the cultivator capacity by attempting to till too deep at too fast a rate.

## Safe Storage

- Always refer to the owner's manual instructions for important details if the cultivator is to be stored for an extended period.
- Never store the cultivator with fuel in the fuel tank inside a building where ignition sources are present such as water and space heaters, clothes dryers, and the like. Allow the engine to cool before storing in any enclosure.
- Keep the cultivator in safe working condition. Check all fasteners at frequent intervals for proper tightness.

## Repair / Adjustments Safety

- After striking a foreign object, stop the engine. Remove the wire from the spark plug,

and keep the wire away from the plug to prevent accidental starting. Thoroughly inspect the cultivator for any damage, and repair the damage before restarting and operating it.

- If cultivator should start to vibrate abnormally, stop engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Stop the engine whenever you leave the operating position. Also, disconnect the spark plug wire before unclogging the tines and when making any repairs, adjustments, or inspections.
- When cleaning, repairing, or inspecting, shut off the engine and make certain all moving parts have stopped.
- Never attempt to make any adjustments while the engine is running except when specifically recommended by the manufacturer.

# IMPORTANT INTERNATIONAL SYMBOLS

**IMPORTANT:** Many of the following symbols are located on your unit or on literature supplied with the product. Before you operate the unit, learn and understand the purpose for each symbol.

## Control And Operating Symbols



Slow



Fast



Fuel



Oil

Choke OFF

Half Choke

Full Choke



## Safety Warning Symbols



**WARNING**  
Thrown Objects.  
Keep Bystanders Away.



**WARNING**  
Rotating Parts. Stop Engine.  
Disconnect Spark Wire Before  
Making Adjustments.



**WARNING**



**IMPORTANT**  
Read Owner's Manual  
Before Operating  
This Machine.



**WARNING**  
Wear Eye Protection



**STOP**

# ASSEMBLY

## ASSEMBLY

### PARTS PACKED SEPARATELY IN CARTON

- 1 – Owner's Manual (not shown)
- 1 – 5.2 oz. 2-cycle Oil



1 – 5.2 oz. 2-cycle Oil



**WARNING:** Always wear safety glasses or eye shields while assembling the cultivator.

Figure 1 shows the cultivator completely assembled.

References to the right or left side of the cultivator are from the viewpoint of the operator's position behind the unit.

### HOW TO REMOVE THE CULTIVATOR FROM THE CARTON

1. Remove the bottle of oil from the carton.
2. Remove the packing material positioned around the unit.
3. Lift the cultivator out of the carton and place on a hard level surface.

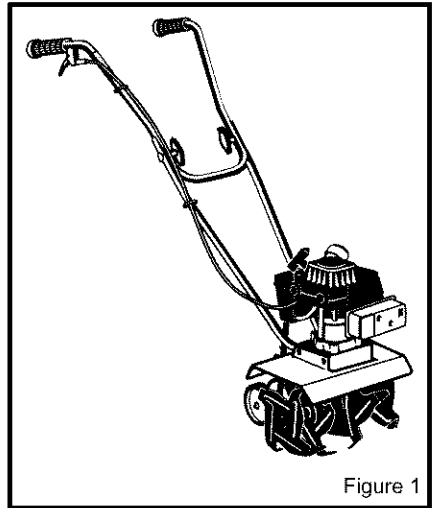


Figure 1

### HOW TO RAISE THE HANDLE

1. Loosen the **knobs** (see Figure 2). Tilt the cultivator forward and rotate the **upper handle** to the upright position. Make sure the **throttle cable** is not caught between the handles.
2. Tighten the **knobs**.

**NOTE:** To tighten the knobs, hold the curved carriage bolt head against the outside of the lower handle as you tighten the knobs.

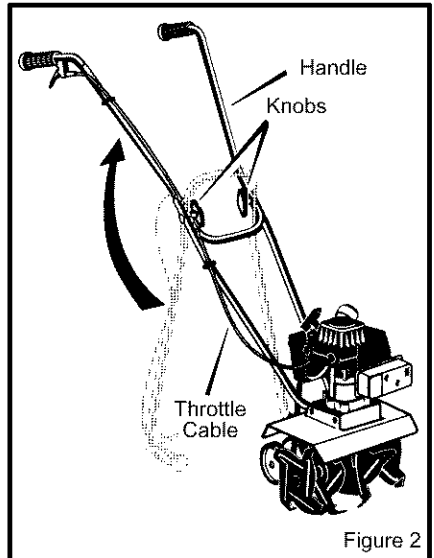


Figure 2

# ASSEMBLY

## ✓ CHECKLIST

For the best performance and satisfaction from this quality product, please review the following checklist before you operate the cultivator:

- ✓ All assembly instructions have been completed.
- ✓ Check carton. Make sure no loose parts remain in the carton.
- ✓ All fasteners have been properly tightened.

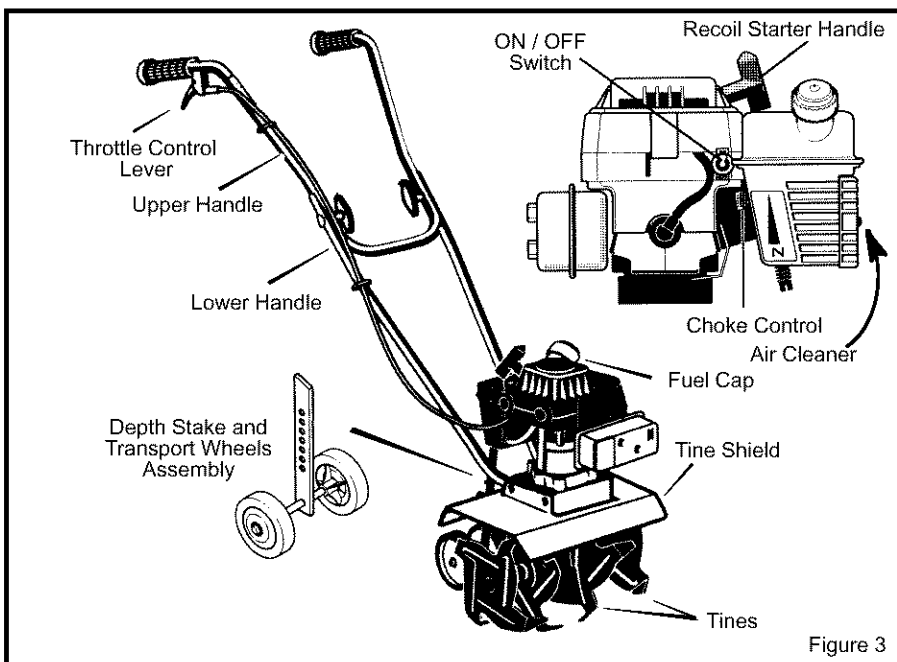
As you learn how to use the cultivator, pay extra attention to the following important items:

- ✓✓ Fuel tank is filled with a fresh, clean, fuel mixture.
- ✓✓ Become familiar and understand the function of all controls. Before you start the engine, operate all controls.

# OPERATION

## KNOW YOUR CULTIVATOR

READ THE OWNER'S MANUAL AND ALL SAFETY RULES BEFORE YOU OPERATE the cultivator. To familiarize yourself with the location of the controls, compare the illustrations with your cultivator. **Save this manual for future reference.**



**Throttle Control** – Controls the engine speed and the tine rotation. The cultivator is equipped with a centrifugal clutch that engages the tine drive system when the engine speed is increased.

**Choke Control Lever** – Use to assist when starting a cold engine.

**ON / OFF Switch** – The ON position allows the engine to start. The OFF position stops the engine and keeps the engine from starting.

**Recoil Starter Handle** – The engine is equipped with an easy pull recoil starter.

**Depth Stake** – Mount with the wheels up to adjust the depth of cut. Also use to help control the direction and speed of the cultivator.

**Transport Wheels** – Mount with the wheels down when transporting the cultivator.

## EYE PROTECTION

Always wear safety glasses. If you wear eye glasses, put a Wide Vision Safety Mask over your eye glasses.



**WARNING:** Debris thrown from the cultivator can result in foreign objects being thrown into the eyes, which can cause severe eye damage. Always wear safety glasses or eye shields when operating the cultivator.



# OPERATION

## HOW TO USE THE CULTIVATOR

### How To Stop The Cultivator

1. Release the throttle control to stop the tines.
2. Move the ON/OFF switch, on the engine, to the OFF position.

### How To Set The Depth

Use the **depth stake** to control the tilling depth and the forward speed. Set the **depth stake** to the desired tilling position as follows:

1. Remove the **hairpin** and the **clevis pin** from the **depth stake** (see Figure 4).
2. Adjust the **depth stake** upward to dig shallower or downward to dig deeper.
3. Reinstall the **clevis pin** and **hairpin**.

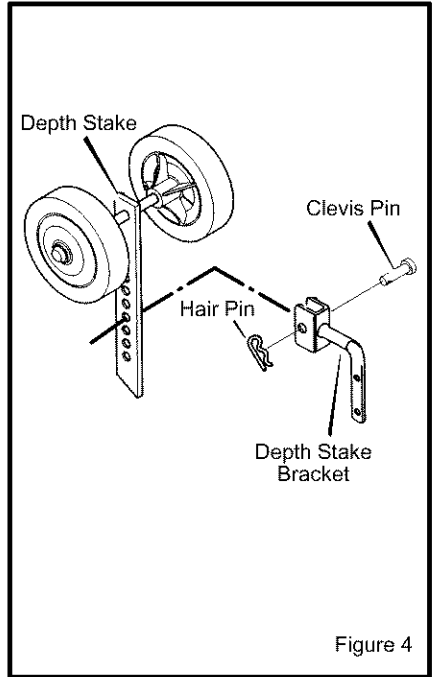


Figure 4

### How To Operate The Cultivator

1. Start the engine.
2. Tilt the unit back on the depth stake until the tines are off the ground. Squeeze the throttle control all the way up against the hand grip. The engine is governor controlled and must be run at full throttle while tilling.
3. Hold the handle firmly and slowly tilt the unit forward to begin the tilling action.
4. As the tines begin to make contact with the ground, hold back on the handles so that the tines will dig into the soil and not ride forward over the ground.
5. Avoid tilling soil that is too dry as it will pulverize and produce a dust that will not hold water. Also, tilling soil that is too wet will be hard on the machine and produce unsatisfactory clods.
6. Lowering the depth stake will slow the cultivator and make it till deeper. Raising the depth stake will allow it to move faster and till more shallow. See "How To Set The Depth".



**WARNING: Keep away from the rotating tines. Rotating tines can cause injury.**

# OPERATION

## BEFORE STARTING THE ENGINE

### How To Prepare The Engine



**WARNING:** Always use a safety fuel container. Do not smoke when adding the fuel mixture to the engine. When inside an enclosure, do not fill the fuel tank. Before you add the fuel mixture, stop the engine. Let the engine cool for several minutes.

### How To Mix The Fuel Mixture

The two cycle engine, used on this cultivator, requires a mixture of gasoline and oil for lubrication of the bearings and other moving parts. The correct fuel mixture ratio is 24:1 (5.2 oz. oil per one gallon of gas – see the Fuel Mixture Chart). Gasoline and oil must be pre-mixed in a clean gasoline container. Always use fresh, clean, unleaded gasoline.

Mix gasoline and oil as follows:

1. Pour one (1) U.S. quart of fresh, clean, unleaded automotive gasoline into a one gallon size gasoline container.
2. Add 5.3 ounces of clean, high quality, two-cycle oil to the gasoline container.

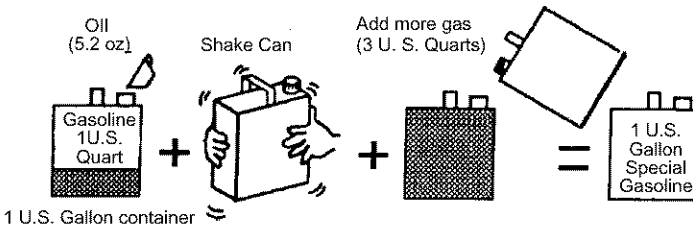
**IMPORTANT:** Do not use outboard motor oil or multi-viscosity oils, such as 10W-30 or 10W-40.

3. Install the fuel cap onto the gasoline container. Vigorously shake the gasoline container to mix the oil with the gasoline.
4. Add an additional three (3) U.S. quarts of gasoline to the gallon container. Again shake the gasoline container.
5. This completes the gasoline mixing procedure. The gasoline can now be added to the fuel tank.

### FUEL MIXTURE CHART (mixture 24:1)

U.S.		SI. (Metric)	
GAS	OIL	GAS	OIL
1 Gal.	5.2 oz.	4 Liters	.167 L
2 Gal.	11 oz.	8 Liters	.333 L
5 Gal.	27 oz.	20 Liters	.833 L

Do not fill the fuel tank with gasoline that does not have oil mixed in it. Shake the gasoline container before each filling of the fuel tank.



# OPERATION

## HOW TO START THE ENGINE

Before you start the engine, make sure that you have read and understand all the instructions on the preceding pages.

1. Fill the fuel tank to 1/2 inch below the bottom of the fill neck. Reinstall the fuel tank cap securely. Always use fresh fuel. Never use fuel that could be stale from long periods of storage.
2. Move the on-off switch to the ON position (see Figure 5).
3. Move the choke control to the FULL CHOKE position (all the way down).

**NOTE: Do not choke a hot or warm engine.**

4. Tilt the cultivator back on the depth stake or transport wheels to raise the tines off the ground.
5. Hold the upper handle firmly to stabilize the cultivator.
6. Hold the starter handle and pull slowly until you feel engine drag. Slowly return the starter handle to the original position.

7. Pull the starter handle with rapid, full arm strokes until the engine starts.
  8. When the engine starts, move the choke lever to the HALF CHOKE position. When the engine runs smoothly, move the choke lever to the NO CHOKE position.
- NOTE: If the tines do not stop when the throttle control is released, adjust the carburetor idle speed. See "How To Adjust The Carburetor" in the Service And Adjustments.**
9. To stop the engine, release the throttle control and move the on-off switch to the OFF position.
  10. If the engine becomes flooded remove and dry the spark plug. See "Spark Plug Maintenance" in the Maintenance section of this manual. Then, pull the starter rope with the choke lever in the NO CHOKE position.



**WARNING: The muffler and surrounding areas become hot after running the engine. Avoid these areas.**

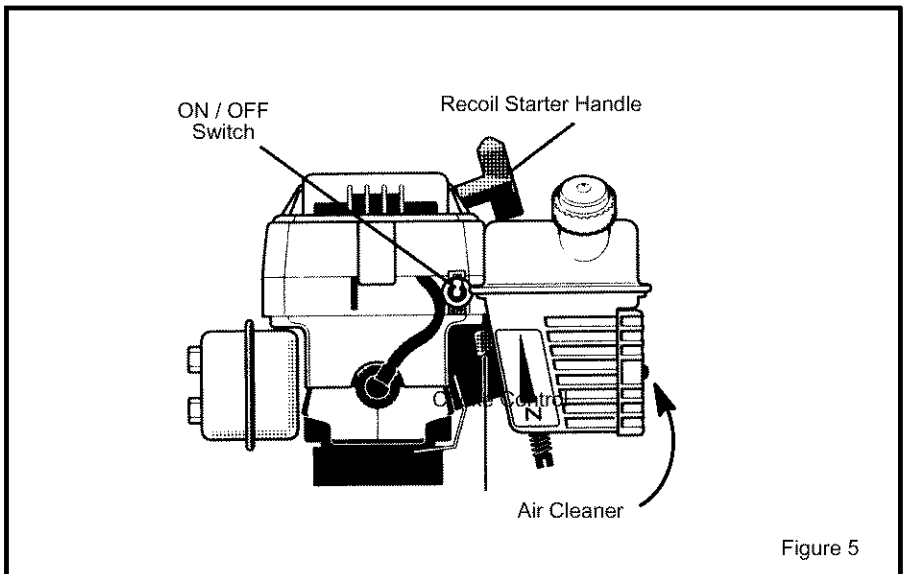


Figure 5

# OPERATION

## CULTIVATING TIPS

- Tilling is digging in, turning over and breaking up packed soil before planting. Loose unpacked soil helps root growth. Best tilling depth is 4 to 6 inches. A tiller will also clear the soil of unwanted vegetation. The decomposition of this vegetation 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.
- Avoid tilling soil that is too dry as it will pulverize and produce a dust that will not hold water. Also, tilling soil that is too wet will be hard on the machine and produce unsatisfactory clods.
- Better growth will be obtained if an area is tilled properly and used soon after tilling to preserve the moisture content.
- The depth stake (on the back of the cultivator) serves a dual purpose. It helps regulate the depth of the cut and also acts as a brake to help the operator control the speed of the cultivator.
- Lowering the depth stake will slow the cultivator and make it till deeper. Raising the depth stake will allow it to move faster and till more shallow.
- If the cultivator stops forward motion and tries to dig deeper than necessary, move the handles from side to side to start forward motion.
- Cultivating is loosening or digging around growing plants which allows the plants to flourish.
- When using the cultivator to remove weeds, it is best to cultivate no deeper than 1–1/2 inches. Cultivating deeper will only pull to the surface ungerminated weed seeds. Raising the depth stake will allow it to move faster and till more shallow.
- When cultivating around plants or close areas, you may want to remove the outside tines. See “Tine Replacement” in the Service/Adjustments section.



**WARNING: Read the Owner's manual. Know location and functions of all controls. Keep all safety devices and shields in place. Never allow children or uninstructed adults to operate cultivator. Shut off engine before unclogging tines or making repairs. Keep bystanders away from machine. Keep away from rotating parts and tines. They can cause injury.**

# MAINTENANCE

## CUSTOMER RESPONSIBILITIES

<b>SERVICE RECORDS</b> Fill in dates as you complete regular service.	<b>Before Each Use</b>	<b>After First 2 Hours</b>	<b>Every 25 Hours</b>	<b>Every 75 Hours</b>	<b>Before Storage</b>	<b>Before Each Season</b>	<b>SERVICE DATES</b>
Tighten All Screws and Nuts	✓	✓					
Lubricate Tine Shaft			✓		✓		
Lubricate Transmission			✓			✓	
Check Spark Plug			✓		✓		
Clean and Oil Air Cleaner Filter			✓		✓		
Clean Cylinder Exhaust Ports				✓			
Drain Fuel					✓		

### PRODUCT SPECIFICATIONS

**Model No.:** 536.292521  
**Date Of Purchase:**  
**Horse Power:** 2  
**Displacement:** 3.0 cu. in.  
 (49.2 cc.)  
**Gasoline Capacity:** 20 oz.  
**Fuel/Oil Mix Ratio:** 24:1 Oil To Gas  
 (5.3 oz. oil to 1 gal. gas  
 (use unleaded regular)  
**Spark Plug:** Champion  
 RCJ-8Y  
**Spark Plug Gap:** 0.035 inch  
**Idle RPM:** 1700-3000

### GENERAL RECOMMENDATIONS

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

Some adjustments must be made periodically to properly maintain your cultivator.

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

# MAINTENANCE

## LUBRICATION

Every 25 hours and/or at the beginning of each season, make sure the gear box is filled with lubricant (see Figure 6). Tubes of gear lubricant are available from most automotive supply stores. Use portable tool grease such as Lubriplate 630AA (Product No. 06787, 1-3/4 oz. tube) or Lubriplate GR-132 (Product No. 15892, 10 oz. tube).

After cleaning and before storage, apply oil to the **tine shaft** (see Figure 6).



**WARNING:** Allow the transmission to cool before filling with grease.

1. Remove both left side tines. See "How To Replace The Tines" in the Service and Adjustments section.
2. Remove the **air vent screw** (see Figure 6).
3. Mount a grease gun onto the **grease fitting**. Fill the transmission until the grease begins to come out of the air vent screw hole.
4. Reinstall the **air vent screw**.
5. Check the condition of the **felt washer** (see Figure 6). Replace the **felt washer**

if it is damaged (see the Repair Parts section in this manual).

6. Clean and lubricate the **tine shaft** with a few drops of oil.
7. Reinstall the left side tines.
8. Remove the right side tines. Check the **felt washer** for damage. Clean and oil the **tine shaft**. Reinstall the right side tines.

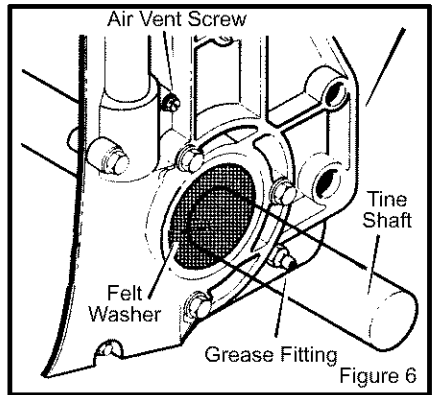


Figure 6

## HOW TO CLEAN THE TINES

Always remove dirt and debris from the cultivator after each use. Remove any string, wire or vegetation that may become lodged in the mechanism and stop the tines from rotating.

1. Release the throttle control and move the on-off switch to the OFF position. Disconnect the spark plug wire from the spark plug.
2. While wearing gloves, remove the **hairpins** and **clevis pins** that secure the tine assemblies to the shaft (see Figure 7). Remove the tines from the shaft.
3. Remove any lodged debris from the shaft and tines. Clean and lubricate the tine shaft with a few drops of oil.
4. Reassemble the tines on the shaft and secure with a clevis pin and hairpin.

5. Connect the spark plug wire to the spark plug.

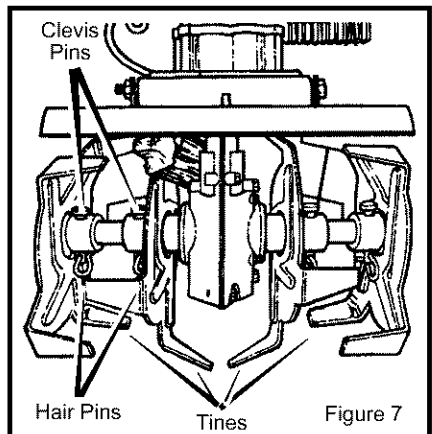


Figure 7

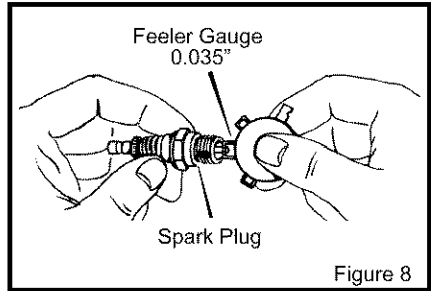
# MAINTENANCE

## SPARK PLUG

Check the **spark plug** every 25 hours. Replace the **spark plug** if the electrodes are pitted or burned or if the porcelain is cracked.

1. Make sure the **spark plug** is clean. Clean the **spark plug** by carefully scraping the electrodes (do not sand blast or use a wire brush).
2. Check the **spark plug** gap with a **feeler gauge**. See "Product Specifications" for the correct **spark plug** gap and replacement **spark plug**.

3. Before installing the **spark plug**, coat the threads lightly with oil for easy removal. Tighten the spark plug to a torque of 15 foot-pounds.



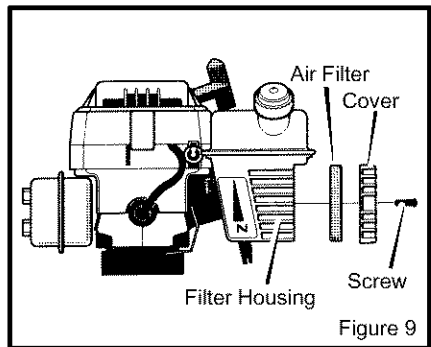
## HOW TO CLEAN THE AIR FILTER

The engine uses a foam air filter that can be cleaned and reused. Clean and oil the air filter every 25 hours. Clean more often in dusty conditions. Remove and clean the air filter as follows:

**CAUTION: Never run the engine without the air filter installed. An air filter clogged with dust can result in loss of engine power and can cause excessive wear or damage to the engine. If the air filter is clogged, clean or replace immediately.**

1. Disconnect the spark plug wire from the spark plug.
2. Remove the **screws** from the **air filter cover** (see Figure 9). Remove the **air filter cover** and the **air filter**.
3. Wipe the **cover** and the inside of the **air filter housing** with a clean cloth.
4. Clean the **air filter** in a solution of water and household detergent. Rinse thoroughly in clean water.
5. Wrap the **air filter** in a dry clean cloth. Squeeze out (do not twist) all solution until dry.

6. Cover the outside of the **air filter** with oil. Use the same type of oil as used to make the fuel mixture. Lightly squeeze the **air filter** to distribute and remove any excess oil.
7. Put the clean **air filter** into the **air filter housing**.
8. Install the **air filter cover** and secure with the **screws** as shown.
9. Connect the spark plug wire to the spark plug.



## CYLINDER EXHAUST PORTS

Clean the cylinder exhaust ports after every 75 hours of operation. For this procedure, we recommend that you take your unit to a Sears Service Center.

F-001300M

# SERVICE AND ADJUSTMENT

## HOW TO REMOVE AND INSTALL THE TINES

References to the right or left side of the cultivator are from the viewpoint of the operator's position behind the unit.

All four tines are different and cannot be interchanged. The tines must be correctly installed or the cultivator will not function properly.

To till around plants or in small areas, the outside tines can be removed to reduce the tilling width to approximately 7 inches.

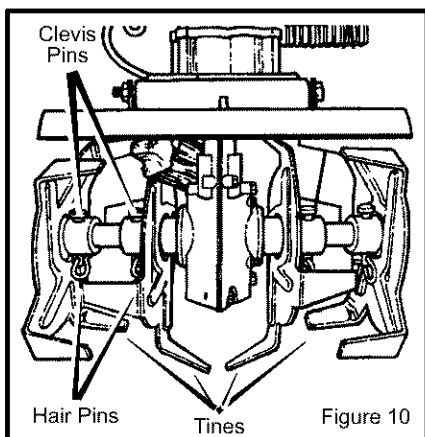


**WARNING:** The tines are self sharpening and will become quite sharp from use. Handle carefully.

The tines will all wear evenly. If the tines are being replaced because of wear, we recommend that all four tines be replaced at the same time. To replace the tines, do the following:

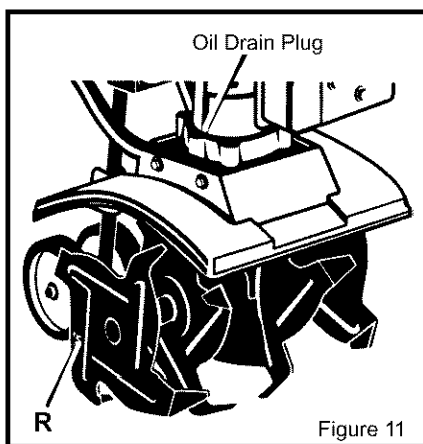
### Tine Removal

1. Put the on-off switch in the OFF position.
2. Disconnect the spark plug wire from the spark plug.
3. While wearing gloves, remove the **hairpins** and **clevis pins** that secure the tine assemblies to the shaft (see Figure 10). Remove the **tines** from one side of the unit.



### Tine Installation

1. Clean and lubricate the tine shaft with a few drops of oil.
2. Place the inside tine on the tine shaft and reinstall the **clevis pin** and **hairpin**.
3. When the tines are properly installed, the letter **R** will be visible on the outside of the **right tine** (see Figure 11). The letter **L** will be visible on the outside of the left tine.



4. Mount the outside tine on the tine shaft and fasten with the **clevis pin** and **hairpin** (see Figure 10).
5. The cutting tips on the outside tines all bend in toward the inside tine. When assembled correctly, the letter **R** on the right side, or **L** on the left side, will be visible from the outside of the unit.
6. Repeat the above steps on the opposite side of the unit.

**NOTE:** Make sure the tines are installed on the correct side of the unit.



# SERVICE AND ADJUSTMENT

## HOW TO ADJUST THE CARBURETOR

A dirty air cleaner will cause the engine to run improperly or to smoke excessively. Before adjusting the carburetor, make sure the air cleaner is clean. Never make unnecessary adjustments to the carburetor. The carburetor was set at the factory to operate efficiently under most applications. However, if adjustments are required, we recommend you contact your nearest Sears Service Center. If you feel that you are competent to make carburetor adjustment proceed as follows.



**WARNING: Use extreme care when making adjustments that require the engine to be running. Keep hands, feet, hair and loose clothing away from all moving parts.**

1. Turn the **mixture adjustment screw** clockwise to until closed (see Figure 12).

**IMPORTANT: To prevent damage to the carburetor or to the adjusting screw, tighten the adjustment screws with your fingers.**

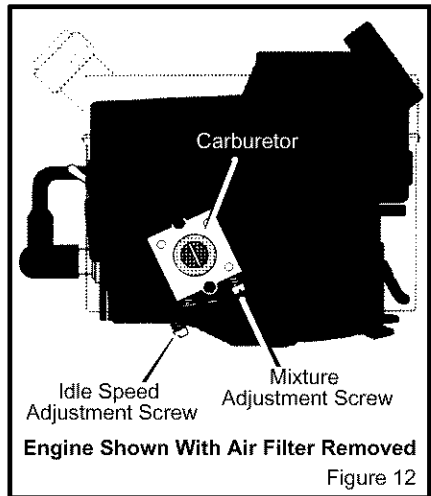
2. Turn the **mixture adjustment screw** counterclockwise one turn.
3. Start the engine and let it warm up for approximately 3 to 5 minutes. Do not adjust the carburetor when the engine is cold.
4. If the engine runs erratically or stops after the choke lever is moved to the **CHOKE OFF** position, then open the **mixture adjustment screw** an additional 1/8 turn counterclockwise.
5. With the engine running, release the throttle control (idle position) to make the mixture adjustments.
6. Slowly turn the **mixture adjustment screw** clockwise until the engine begins to run erratically. Note this position.
7. Then, slowly turn the mixture adjustment screw counterclockwise until the engine again begins to run erratically. Note this position.

8. Turn the mixture adjusting screw clockwise until it is halfway between the first position and the second position.
9. Check the engine idle speed. Start the engine and release the throttle control. If the tines do not turn with the throttle control is released, the idle speed is correct. If the tines turn with the throttle control is released, adjust the engine idle speed as follows.
10. Have someone tilt the cultivator back on its depth stake so that the tines are off the ground.
11. Start the engine.
12. With the throttle in the released (idle position), turn the **idle speed adjustment screw** counterclockwise until the tines stop rotating.



**WARNING: The engine governor is set at the factory. Do not change the governor setting.**

**Over speeding the engine above the factory setting can be dangerous. If you think the engine governor needs an adjustment, contact your nearest Sears Service Center.**



# SERVICE AND ADJUSTMENT

## STORAGE



**WARNING:** Never store the cultivator indoors with fuel in the fuel tank. Never store in an enclosed, poorly ventilated area where fumes could reach an open flame, a spark or a pilot light as on a furnace, water heater or clothes dryer.



**WARNING:** Do not remove gasoline while inside a building, near a fire, or while you smoke. Gasoline fumes can cause an explosion or a fire.

When the cultivator is put in storage for thirty days or more, follow the steps below to make sure the cultivator is in good condition the following season.

### Cultivator

- Completely clean the cultivator.
- Remove the tines. Clean and apply oil to the tine shafts. Mount the tines onto the tine shafts. See "How To Remove And Install The Tines" in the Service And Adjustments section.
- Loosen the knobs that secure the upper handle to the lower handle. Carefully fold the upper handle. Make sure the throttle cable is not bent. Tighten the knobs.
- The cross piece of the upper handle (between the lower handles) can now be used as a carry handle. To store the cultivator up off the floor and out of the way, the cross piece can also be hooked over a wall hook.
- Put the cultivator in a building that has good ventilation.

- Cover the cultivator with a suitable protective cover that does not retain moisture. Do not use plastic.

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

**NOTE:** A yearly checkup or tune-up by a Sears Service Center is a good way to make sure that your cultivator will provide maximum performance for the next season.

### Engine

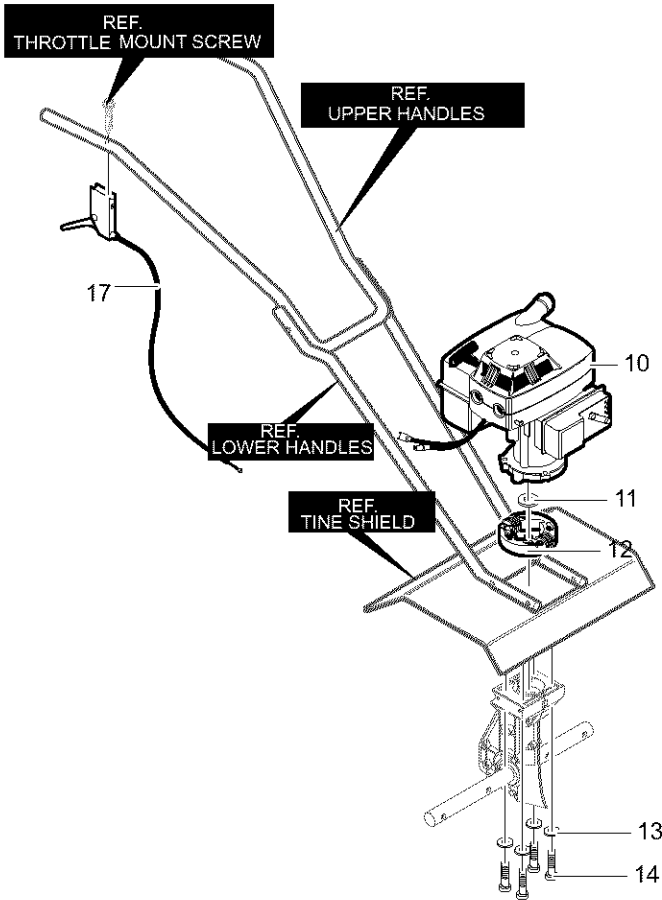
**IMPORTANT:** It is important to prevent gum deposits from forming in fuel system parts such as the carburetor, fuel filter, fuel hose, and tank during storage. Also, using alcohol-blended fuels (called gasohol, ethanol or methanol) can attract moisture which leads to separation and formation of acids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

To prevent engine damage when the cultivator is in storage for 30 days or more, follow the steps below:

- Let the engine run until it is out of gasoline.
- Slowly pull the starter handle until you feel resistance due to compression in the cylinder, then stop.
- Slowly release the starter rope. This position will close both the intake and the exhaust ports and help prevent corrosion of the piston and cylinder.

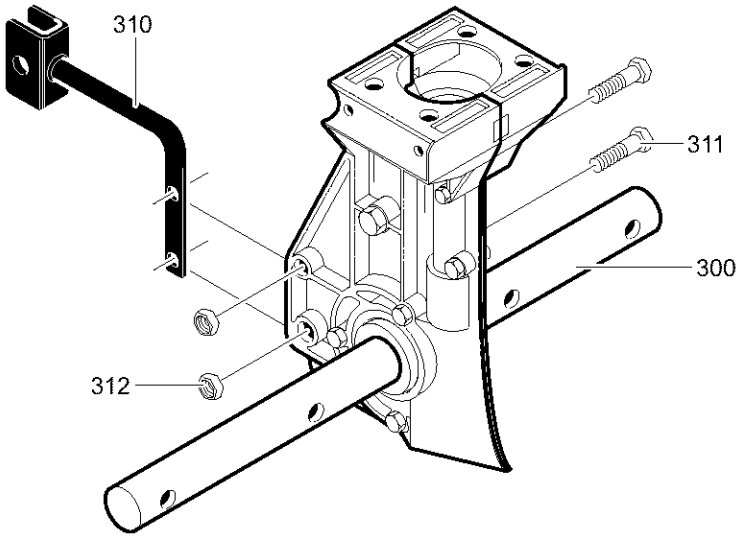
# TROUBLE SHOOTING CHART

<b>TROUBLE</b>	<b>CAUSE</b>	<b>CORRECTION</b>
<b>Engine difficult to start</b>	Stale fuel mixture	Drain fuel tank. Fill with fresh fuel mixture.
<b>or</b>	Too much oil in fuel mixture	Check fuel mixture chart and mix fresh fuel.
<b>Engine runs erratically</b>	Dirt in fuel tank or out of fuel	Clean fuel tank.
<b>or</b>	Carburetor out of adjustment	See Carburetor Adjustment section.
<b>Engine will not run at full speed</b>	Fouled spark plug	Clean and set spark plug gap.
	Dirty air filter	Clean and oil air filter.
<b>Engine speed does not increase properly</b>	Debris interfering with throttle linkage	Clean dirt and debris of top of carburetor.
<b>Engine smokes excessively</b>	Plugged air filter	Clean and oil air filter.
	Too much oil in fuel mixture	Check fuel mix chart and mix fresh fuel.
<b>Tines continue to rotate when throttle control is released</b>	Carburetor out of adjustment	Adjust carburetor idle speed. See "How To Adjust The Carburetor" in the Maintenance section.
<b>Tines will not turn</b>	Debris lodged in tine	Remove debris. See "How To Clean The Tines" in the Maintenance section.
<b>Unit does not till properly</b>	Incorrect tine installation	Check the tines for proper installation. See "How To Remove And Install The Tines" in the Service And Adjustments section.



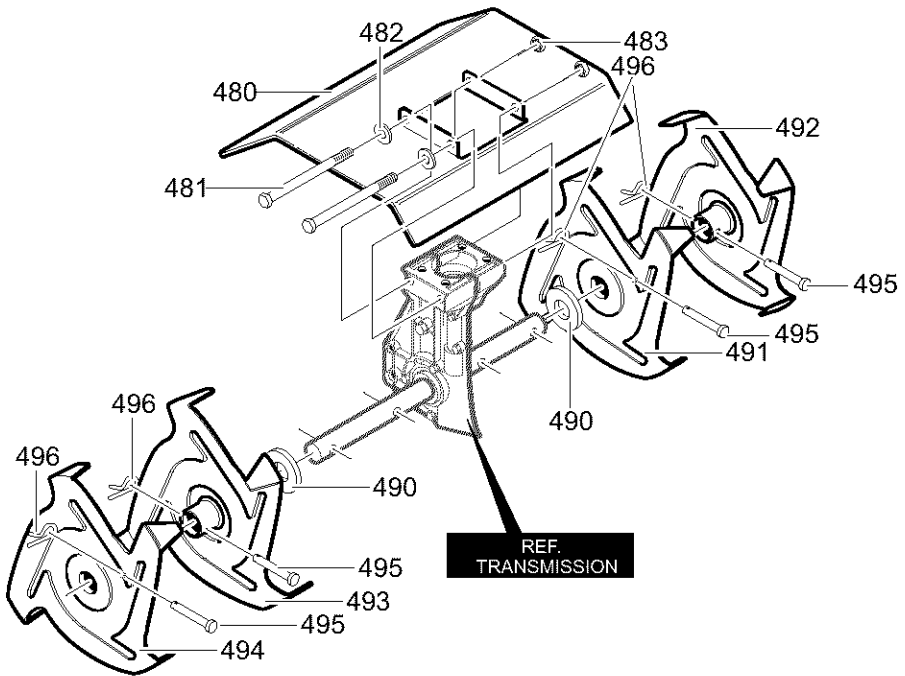
323392C

KEY NO.	DESCRIPTION	PART NO.	KEY NO.	DESCRIPTION	PART NO.
10	Engine 143.002072	2.0HP	14	Screw	180042
11	Flat washer	56694	17	Cable, Throttle	319306
12	Rotor	335350	—	Instruction Manual	F-001300M
13	Washer	120380			



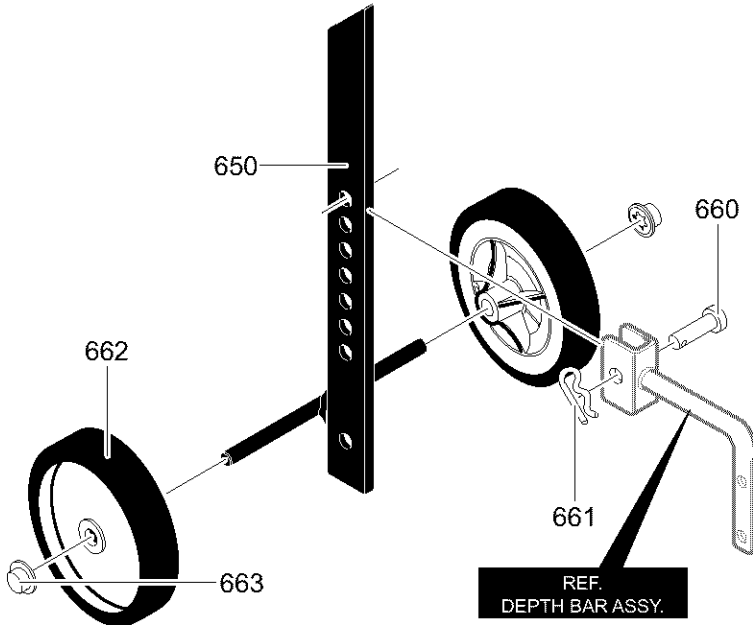
318848C

KEY NO.	DESCRIPTION	PART NO.
300	Transmission	740061
310	Bracket, Depth Rod	340550
311	Screw, 1/4-20x1.25	180024
312	Nut, 1/4-20	782585



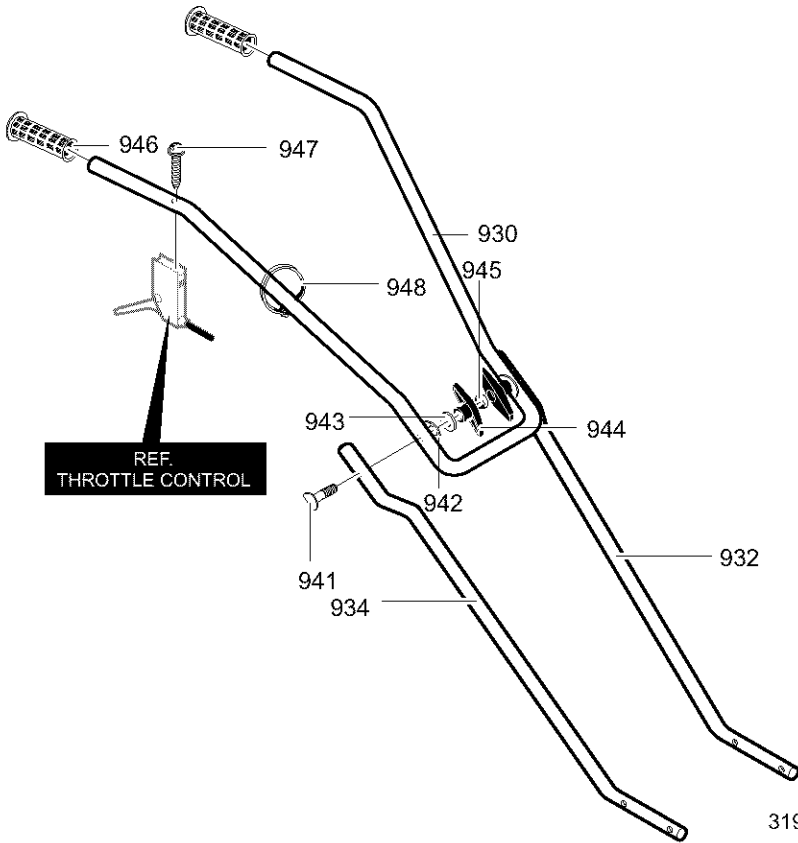
318849c

KEY NO.	DESCRIPTION	PART NO.	KEY NO.	DESCRIPTION	PART NO.
480	Shield, Tine	309073-848	493	Tine Assy. Inner RH	56156-853
481	Screw, 1/4-20x5.00	273869	494	Tine Assy. Outer RH	56154-853
482	Flat washer	120392	495	Clevis Pin	56123
483	Nut, 1/4-20	46931	496	Hair Pin	56180
490	Washer, Felt	56158	—	Decal, Caution	320711
491	Tine Assy. Inner LH	56157-853	—	Decal, Tine Shield	712457
492	Tine Assy. Outer LH	56155-853			



318852G

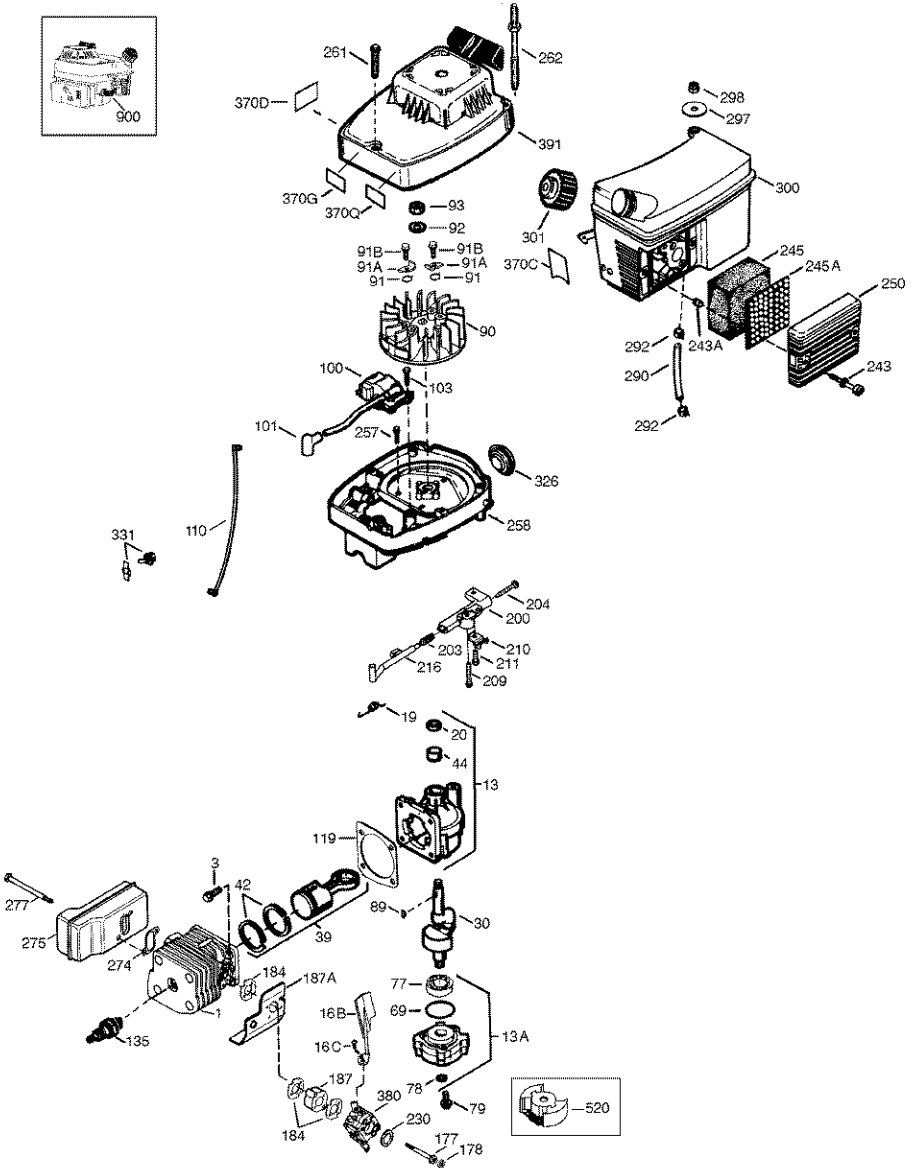
KEY NO.	DESCRIPTION	PART NO.
650	Wheel Support Assy.	330799-853
660	Clevis Pin	333635
661	Hair Pin	56180
662	Tire & Rim	339277
663	Push On Nut	73664



319375C

KEY NO.	DESCRIPTION	PART NO.
930	Upper Handle	56237-853
932	Lower Handle LH	339398-853
934	Lower Handle RH	339399-853
941	Bolt 5/16-18x1.63	56199
942	Formed Washer	783000
943	Flat washer	120393
944	T Knob	57171
945	Nut, 5/16-18	120376
946	Hand Grip	56778
947	Screw, 10-16x1.50	426635
948	Cable Tie	712267
—	Decal, Caution (Starting)	305828





# CRAFTSMAN 143.002072

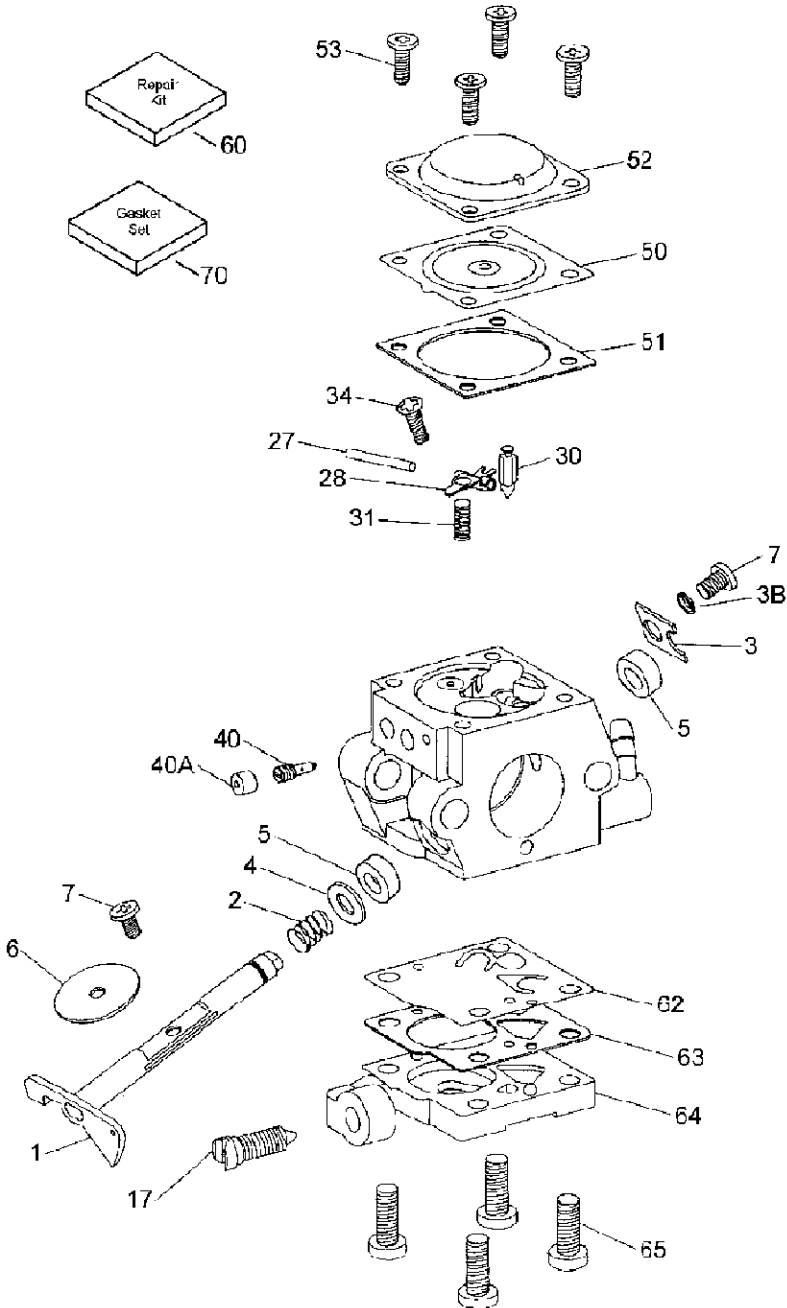
# REPAIR PARTS

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
	0	RPM High 5000 to 5400	93	650849	Flywheel Nut
	0	RPM Low 1700 to 3000	100	611056	Solid State Ignition (Incl. 101)
1	250303	Cylinder (Incl. 119, 184, 187 & 187A)	101	610118	Spark Plug Cover
3	650888	Screw, T-30	103	651007	Screw, T-15
13	270288A	Crankcase Ass'y. (Incl. 20, 44 & 69)	110	611135	Ground Wire
13A	270298	Crankcase Cover	119	510349	Cylinder Head Gasket
16B	490324	Air Vane	135	611049	Resistor Spark Plug (RCJ8Y)
16C	650986	Screw, T-8, 3-48 x 7/32"	177	650858	Carburetor Mounting Stud
19	570716	Governor Spring	178	650580	Lock Nut, 10-24
20	510328	Oil Seal	184	510327B	Carburetor Gasket
30	290664	Crankshaft	187	570648A	Spacer
39	310285A	Piston & Rod Assy. (Incl. 42)	187A	570698A	Air Baffle (Incl. 184 & 187)
42	310275	Ring Set	200	570700	Speed Control Body
44	530163	Cartridge Bearing	203	570701	Compression Spring
69	510348	"O" Ring	204	651042	Screw, T-15, 8-32 x 1"
77	530110	Ball Bearing	209	651042	Screw, T-15, 8-32 x 1"
78	510319	Oil Seal	210	27793	Conduit Clip
79	650844	Screw, 1/4-20 x 3/4"	211	651047	Screw, T-15
89	611054	Flywheel Key	216	570712	R.P.M. Adjusting Lever
90	611180	Flywheel	230	570649A	"O" Ring
91	590691	Pawl Spring	243	650955	Screw, 10-32 x 29/32"
91A	590692	Starter Pawl	243A	650964	Thread Insert
91B	650985	Screw, 12-24 x 11/64"	245	450252	Air Filter (Poly)
92	650848	Belleville Washer	245A	450255	Air Filter (Flocked)

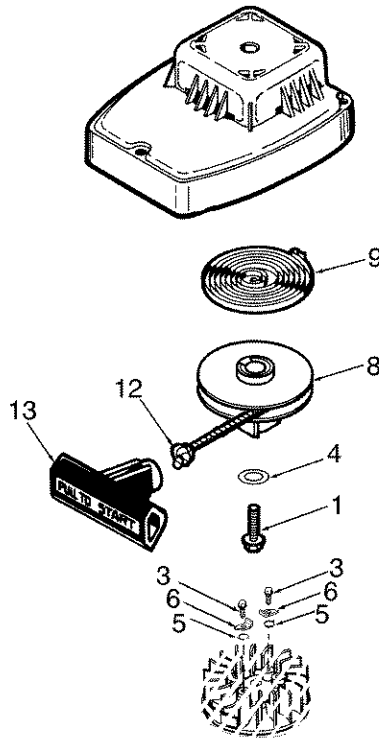
## CRAFTSMAN 143.002072

## REPAIR PARTS

250	450253	Air Cleaner Cover	301	410280	Fuel Cap
257	650867	Screw, 10–24 x 1/2"	326	570659	Blower Housing Plug
258	350435	Blower Housing Base	331	610650B	Toggle Switch
261	650850	Screw, 8–32 x 1–9/16"	370C	550239	Choke Decal
262	650939	Stud	370D	35977	Caution Decal
274	510347	Exhaust Gasket	370G	550228	Instruction Decal
275	390322	Muffler (Incl. 274 & 277)	370Q	550247	Emissions Decal
277	650938	Screw, 1/4–20 x 2.409"	380	640231	Carburetor (Incl. 184)
290	410246A	Fuel Line	391	590690	Recoil Starter Ass'y.
292	410253	Fuel Line Clamp	520	0	Clutch (Supplied by OEM)
297	27261	Washer	900	0	Replacement Engine 710580, order from 71–999
298	650954	Lock Nut, 8–32			
300	410277A	Fuel Tank (Incl. 290, 292, 298, 301 & 370C)	900	0	Replacement S/B 710542B, order from 71–999



<b>KEY NO.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
0	640231	Carburetor (Incl. 184 of Engine Parts List)
1	640232	Throttle Shaft & Lever Ass'y.
2	640233	Throttle Return Spring
3	640234	Dust Seal Retainer
3B	640236	Spacer
4	640237	Dust Seal Washer
5	640238	Dust Seal
6	640239	Throttle Shutter
7	640235	Screw, Throttle Shutter & Dust Seal Retainer
17	640240	Idle Speed Screw
27	640241	Hinge Pin
28	640242	Metering Lever
30	640243	Inlet Needle
31	640244	Metering Lever Spring
34	640245	Screw, Metering Lever Pin
40	640246	High Speed Jet
40A	640247	High Speed Jet Sealer Cap
50	640248	Diaphragm (Included in Gasket Set)
51	640249	Cover Gasket (Included in Gasket Set)
52	640250	Cover
53	640251	Cover Screw
60	640256	Repair kit (Incl. Items Marked PK in Notes) Incl. (1) each of part #'s 640242, 640243, 640257
62	640252	Pump Diaphragm (Incl. in Gasket Set)
63	640253	Pump Gasket (Included in Gasket Set)
64	640255	Pump Cover
65	640254	Pump Cover Screw
70	640257	Gasket Set Incl. (1) each of part #'s 640248, 640249, 640252, 640253



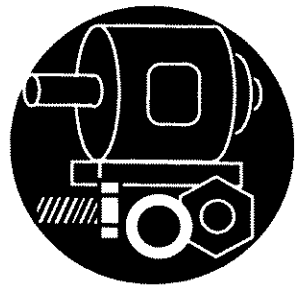
KEY NO.	PART NO.	DESCRIPTION
0	590690	Rewind Starter & Housing Ass'y.
1	650987	Retainer Screw, 10-24 x 1-3/8"
3	650985	Pawl Screw, 12-24 x 11/64"
4	650147	Washer
5	590691	Pawl Spring
6	590692	Pawl
8	590693	Pulley
9	590562	Rewind Spring
12	590639	Starter Rope (#4 rope, 71" long)
13	590452	Starter Handle

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- Model Number
- Part Description

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