Owner's Manual

CRAFTSMAN°





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.

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

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WARRANTY

LIMITED ONE YEAR WARRANTY ON CRAFTSMAN TILLER

For one (1) year 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

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

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.

SAFETY RULES

- 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

ALook for this symbol to point out important safety precautions. It means CAUTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.

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

PRODUCT SPECIFICATIONS

GASOLINE	3 QTS
CAPACITY:	UNLEADED
f	REGULAR
OIL(API-SF-SJ):	SAE 30
(CAPACITY: 20 OZ.)	(ABOVE 32°F)
ļ	SAE 5W-30
i	(BELOW 32°F)
SPARK PLUG: CH	IAMPION
(GAP: .030") RJ	19LM OR J19LM

CONGRATULATIONS on your purchase of a Sears 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 a Sears or other qualified Service Center. 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 sate and proper operation of your tiller all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to

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.

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

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 MAINTENANCE

insure proper tightness.

BELT	TINES	SHEAR PIN	HAIRPIN CLIP
	800 J		

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.

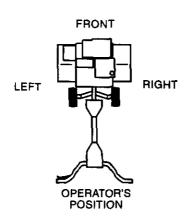
TOOLS REQUIRED FOR ASSEMBLY

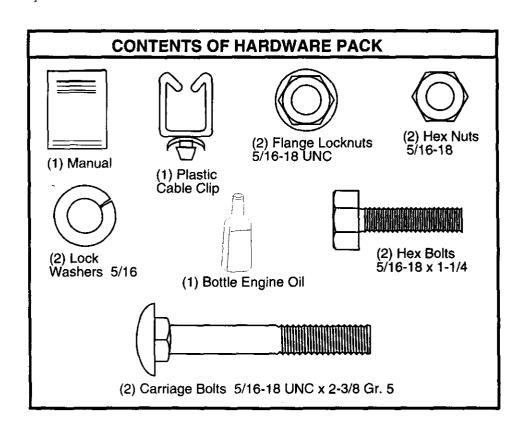
A socket wrench set will make assembly easier. Standard wrench sizes are listed.

- (1) Utility knife
- (1) Pair of pliers
- (2) 1/2 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).



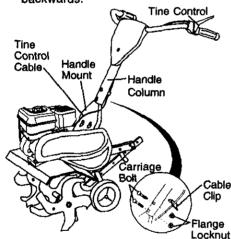


UNPACK CARTON & INSTALL HANDLE

ACAUTION: Be careful of exposed staples when handling or disposing of cartoning material.

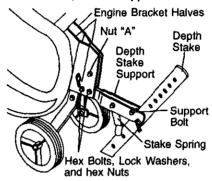
IMPORTANT: When unpacking and assembling tiller, be careful not to stretch or kink cable(s).

- Cut cable ties securing handle column.
- 2. Remove all packing from carton.
- Secure handle column to handle mount using two (2) carriage bolts and two (2) flange locknuts. Tighten both flange locknuts securely.
- Remove packing material from handle assembly.
- 5. Route tine control cable through plastic cable clip on handle column.
- 6. Insert plastic cable clip into hole in handle column.
- 7. Cut away carton.
- 8. Cut cable ties securing tiller to skid.
- Remove tiller from skid by pulling backwards.



INSTALL DEPTH STAKE ASSEMBLY

- 1. Loosen nut "A".
- Insert stake support between engine bracket halves with stake spring down.
- Bolt stake support to engine brackets with bolts, lock washers and nuts. Tighten securely. Tighten nut "A".
- Depth stake must move freely. If it does not, loosen support bolt.



HANDLE HEIGHT

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

TILLING WIDTH

 Tilling width may be adjusted to better handle your tilling conditions (See "TINE ARRANGEMENT" in the Service and Adjustments section of this manual).

TINE OPERATION

 Check tine operation before first use. (See "TINE OPERATION CHECK" in the Service and Adjustments section of this manual).

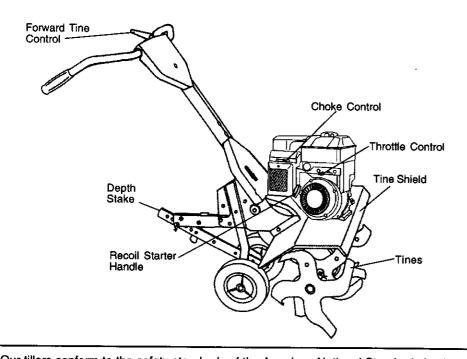
OPERATION

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 locations of various controls and adjustments. Save this manual for future reference.





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

FORWARD TINE CONTROL - Engages tines in forward direction. **CHOKE CONTROL -** Used when starting a cold engine.

THROTTLE CONTROL - Used to control engine speed.

DEPTH STAKE - Controls forward speed and the depth at which tiller will dig. **RECOIL STARTER HANDLE** - Used to start the 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 spectacles or standard safety glasses.

HOW TO USE YOUR TILLER

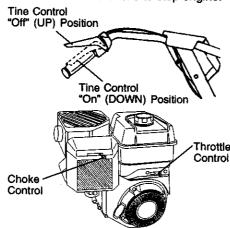
Know how to operate all controls before adding fuel and oil or attempting to start engine.

STOPPING

TINES

- Release tine control to stop movement.
 ENGINE
- Move throttle control to "STOP" position.

NOTE: Never use choke to stop engine.



TINE OPERATION

Squeeze tine control to handle.

TILLING

The speed and depth of tilling is regulated by the position of the depth stake and wheel height.

The depth stake should always be below the wheels for digging. It serves as a brake to slow the tiller's forward motion to enable the tines to penetrate the ground. Also, the more the depth stake is lowered into the ground the deeper the tines will dig.

DEPTH STAKE

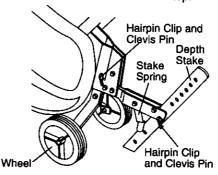
Adjust depth stake by removing the hairpin clip and clevis pin. Change depth stake to desired position. Replace the clevis pin and hairpin clip.

 For normal tilling, set depth stake at the second or third hole from the top.

WHEELS

Adjust wheels by removing the hairpin clip and clevis pin. Change wheel position. Replace the hairpin clip and clevis pin.

 For normal tilling, set wheels at the second or third hole from the top.



TO TRANSPORT

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

AROUND THE YARD

- Tip depth stake forward until it is held by the stake spring.
- Push tiller handles down, raising tines off the ground.
- 3. Push or pull tiller to desired location.

AROUND TOWN

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

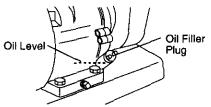
BEFORE STARTING ENGINE

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.

FILL ENGINE WITH OIL

- 1. Remove hangtag from engine.
- With engine level, remove engine oil filler plug.
- Fill engine with oil to point of overflowing. For approximate capacity see
 "PRODUCT SPECIFICATIONS" on
 page 4 of this manual. All oil must
 meet A.P.I. Service Classification SFSJ.

- Tilt tiller back on its wheels and then re-level.
- With engine level, refill to point of overflowing if necessary. Replace oil filler plug.
- For cold weather operation you should change oil for easier starting (See "OIL VISCOSITY CHART" in the Maintenance section of this manual).
- To change engine oil, see the Maintenance section of 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.

AWARNING: 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.

ACAUTION: 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

ACAUTION: 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.
- Place throttle control in "FAST" 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.

NOTE: If engine fires but does not start, move choke control to half choke position. Pull recoil starter handle until engine starts.

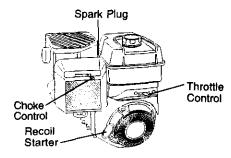
When engine starts, slowly move choke control to "RUN" position as engine warms up.

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.



BREAKING IN YOUR TILLER

Break-in your belt(s), pulleys and tine

- control before you actually begin tilling.

 Start engine, tip tines off ground by pressing handles down and engage tine control to start tine rotation. Allow tines to rotate for five minutes.
- Check tine operation and adjust if necessary. See "TINE OPERATION CHECK" in the Service and Adjustments section of this manual.

TILLING HINTS

ACAUTION: Until you are accustomed to handling your tiller, start actual field use with throttle in slow position.

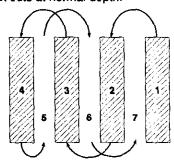
To help tiller move forward, lift up the handles slightly (thus lifting depth stake out of ground). To slow down the tiller,

press down on handles. If you are straining or tiller is shaking, the wheels and depth stake are not set properly in the soil being tilled. The proper setting of the wheels and depth stake is through trial and error and depends upon the soil condition. (The harder or wetter the ground, the slower the engine and tine speed needed. Under these poor conditions, at fast speed the tiller will run and jump over the ground).

A properly adjusted tiller will dig with little effort from the operator.

- · Tilling is digging into, turning over, and breaking up packed soil before planting. Loose, unpacked soil helps root growth. Best tilling depth is 4"-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.

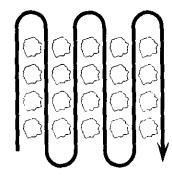
- · You will find tilling much easier if you leave a row untilled between passes. Then go back between tilled rows There are two reasons for doing this. First, wide turns are much easier to negotiate than about-faces. Second, the tiller won't be pulling itself, and you, toward the row next to it.
- · Set depth stake and wheel height for shallow tilling when working extremely hard soil or sod. Then work across the first cuts at normal depth.



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"-3".

- · You will probably not need to use the depth stake. Begin by tipping the depth stake forward until it is held by the stake spring.
- 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		/2		\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		7						
FILL IN DATES AS YOU COMPLETE REGULAR SERVICE							SE	RVI	CE I	DAT	ES	
Check Engine Oil Level	~	~										
Change Engine Oil			7	,2								
Oil Pivot Points		<										
Inspect Spark Arrester / Muffler				工								
Inspect Air Screen	~			T								
Clean or Replace Air Cleaner Cartridge			V	'z								
Clean Engine Cylinder Fins			٧	${ m T}$								
Replace Spark Plug			•	不								

- Change more often when operating under a heavy load or in high ambient temperatures.
 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

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.

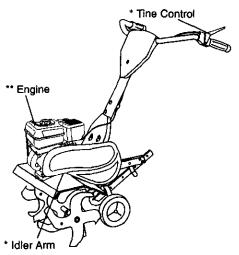
BEFORE EACH USE

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

LUBRICATION

Keep unit well lubricated (See "LUBRICA-TION CHART").

LUBRICATION CHART



- SAE 30 OR 10W-30 Motor Oil
- Refer to Maintenance "ENGINE" section

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

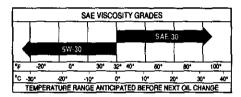
Prevent fires! Keep the engine free of grass, leaves, spilled oil, or fuel. Remove fuel from tank before tipping unit for maintenance. Clean muffler area of all grass, dirt, and debris.

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-SJ. 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.

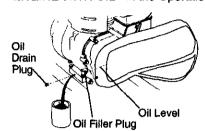
Change the oil after every 50 hours of operation or at least once a year if the tiller is not used for 50 hours in one year. Check the crankcase oil level before starting the engine and after each five (5) hours of continuous use. Add SAE 30 motor oil or equivalent. Tighten oil filler plug securely each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

- · Be sure tiller is on level surface.
- · Oil will drain more freely when warm.
- · Catch oil in a suitable container.
- 1. Remove drain plug.
- 2. 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.

5. Refill engine with oil. See "FILL ENGINE WITH OIL" in the Operation



AIR CLEANER

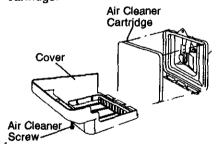
Service air cleaner cartridge every twenty-five hours, more often if engine is used in very dusty conditions.

- 1. Loosen air cleaner screw.
- 2. Remove air cleaner cover.
- Carefully remove air cleaner cartridge. Be careful. Do not allow dirt or debris to fall into carburetor.
- 4. Clean by tapping gently on a flat surface.

NOTE: If very dirty or damaged, replace cartridge.

5. Clean and replace cover. Tighten screw securely.

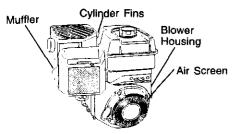
ACAUTION: Petroleum solvents, such as kerosene, are not to be used to clean cartridge. They may cause deterioration of the cartridge. Do not oil cartridge. Do not use pressurized air to clean or dry cartridge.



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 are shown in "PRODUCT SPECIFICATIONS" on page 4 of this manual.

TRANSMISSION

Your transmission is sealed and will not require lubrication unless serviced.

CLEANING

Do not clean your tiller when the engine and transmission are hot. We do not recommend using pressurized water (garden hose, etc.) to clean your unit unless the gasket area around the transmission and the engine muffler, air filter and carburetor are covered to keep water out. Water in engine will shorten the useful life of your tiller.

- 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.

SERVICE AND ADJUSTMENTS

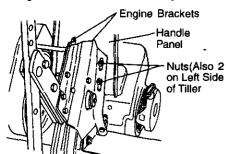
ACAUTION: Disconnect spark plug wire from spark plug and place wire where it cannot come into contact with plug.

TILLER

TO ADJUST HANDLE HEIGHT

Factory assembly has provided lowest handle height. Select handle height best suited for your tilling conditions. Handle height will be different when tiller digs into soil.

- If a higher handle height is desired, loosen the four nuts securing handle panel to engine brackets.
- Slide handle panel to desired location.
- 3. Tighten the four nuts securely.



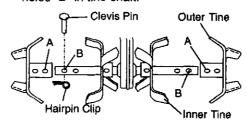
TINE ARRANGEMENT

Your outer tines can be assembled in several different ways to suit your tilling or cultivating needs.

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

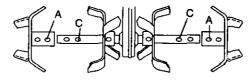
NORMAL TILLING - 24" PATH

 Assemble holes "A" in tine hubs to holes "B" in tine shaft.



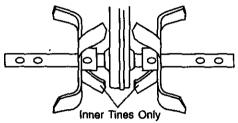
MID-WIDTH TILLING - 22" PATH

 Assemble holes "A" in tine hubs to holes "C" in tine shaft.



NARROW TILLING/CULTIVATING - 12-3/4" PATH

· Remove outer tines.



NOTE: When reassembling outer tines, be sure right tine assembly (marked "R") and left tine assembly (marked "L") are mounted to correct side of tine shaft.

TINE OPERATION CHECK

AWARNING: Disconnect spark plug wire from spark plug to prevent starting while checking tine operation.

For proper tine operation, tine control lever must be against control body and all slack removed from inner wire of control cable when control is in the "OFF" (up) position.

If lever and cable are loose, loosen cable clip at lower end of cable. Pull up on cable to remove slack, without extending spring on end of cable, and retighten cable clip.

FINAL CHECK "OFF" POSITION

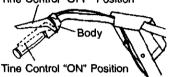
- With tine control "OFF" (up), push down on handle to raise tines off the ground.
- Slowly pull recoil starter handle while observing tines. Tines should not rotate.
- If tines rotate, inner wire of control cable is too tight which is extending lower spring and engaging tines.
 Loosen cable clip and push down on cable only enough to relieve spring tension. Tighten cable clip.
- 4. Recheck in "OFF" position and adjust if necessary.

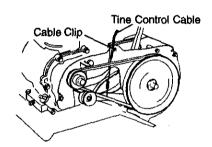
FINAL CHECK "ON" POSITION

- With tine control "ON" (held down to handle) push down on handle to raise tines off the ground.
- Slowly pull recoil starter handle while observing tines. Tines should rotate forward.
- If tines do not rotate, inner wire of control cable is too loose. Loosen cable clip and pull cable up to remove slack and retighten clip.
- Recheck in "ON" position and adjust if necessary.

NOTE: If "ON" position check required adjustment, recheck "OFF" position adjustment to insure tines do not rotate when control is "OFF" (up).

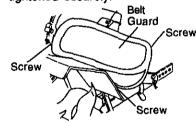
Tine Control "OFF" Position





TO REMOVE BELT GUARD

- Remove screws from side of belt quard
- guard.
 2. Pull belt guard out and away from unit.
- Replace belt guard by reversing above procedure. Be sure slot in bottom of belt guard is under head of tine shield bolt and all nuts are tightened securely.



TO REPLACE V-BELT

Replace V-belt if it has stretched considerably or if it has cracks or frayed edges.

 Belt guard must be removed to service belt. See "TO REMOVE BELT GUARD" in this section of manual.

BELT REMOVAL

Remove V-belt from transmission pulley first and then from engine pulley.

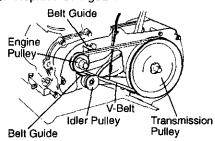
BELT REPLACEMENT

 Install new V-belt to engine pulley first then to transmission pulley. Be sure belt is positioned on inside groove of both pulleys, inside all belt guides and rests on idler pulley.

14

CHECK TINE OPERATION

- 4. See "TINE OPERATION CHECK" in this section of manual.
- 5. Replace belt guard



ENGINE

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

The carburetor has been preset at the factory and adjustment should not be necessary. However, engine performance can be affected by differences in fuel, temperature, altitude or load. If the carburetor does need adjustment, contact your nearest authorized service center/ department

IMPORTANT: Never tamper with the engine governor, which is factory set for proper engine speed. Overspeeding the engine above the factory high speed setting can be dangerous. If you think the engine-governed high speed needs adjusting, contact your nearest sears or other qualified service center which has 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.

ACAUTION: 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 Maintenance section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- 3. Lubricate as shown in the Maintenance section of this manual.
- 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 Maintenance section of this manual).

CYLINDER

- 1. 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.
- 4. Replace with new spark plug.

OTHER

- Do not store gasoline from one seasor 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 an 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.

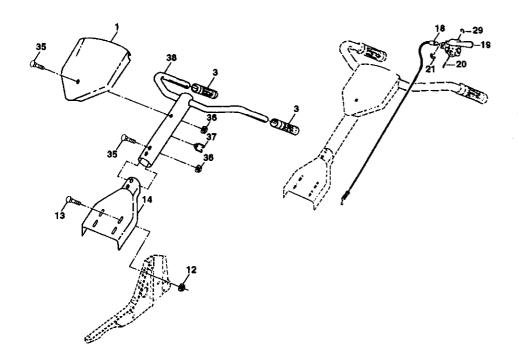
TROUBLESHOOTING					
PROBLEM	CAUSE	CORRECTION			
Will not start	 Out of fuel. Engine not "CHOKED" properly. Engine flooded. Dirty air cleaner. Water in fuel. Clogged fuel tank. Loose spark plug wire. Bad spark plug or improper gap. Carburetor out of adjustment. 	 Fill fuel tank. See "TO START ENGINE" in the Operation section. Wait several minutes before attempting to start. Clean or replace air cleaner cartridge. Drain fuel tank and carburetor, and refill tank with fresh gasoline. Remove fuel tank and clean. Make sure spark plug wire is seated properly on plug. Replace spark plug or adjust gap. Make necessary adjustments. 			
Hard to start	1. Throttle control not set properly. 2. Dirty air cleaner. 3. Bad spark plug or improper gap. 4. Stale or dirty fuel. 5. Loose spark plug wire. 6. Carburetor out of adjustment.	Place throttle control in "FAST" position. Clean or replace air cleaner cartridge. Replace spark plug or adjust gap. Drain fuel tank and refill with fresh gasoline. Make sure spark plug wire is seated properly on plug. Make necessary adjustments.			
Loss of power	 Engine is overloaded. Dirty air cleaner. Low oil level/dirty oil. Faulty spark plug. Oil in fuel. Stale or dirty fuel. Water in fuel. Clogged fuel tank. Spark plug wire loose. Dirty engine air screen. Dirty/clogged muffler. Carburetor out of adjustment. Poor compression. 	 Set depth stake and wheels for shallower tilling. Clean or replace air cleaner cartridge. Check oil level/change oil. Clean and regap or change spark plug. Drain and clean fuel tank and refill, and clean carburetor. Drain fuel tank and refill with fresh gasoline. Drain fuel tank and carburetor, and refill tank with fresh gasoline. Remove fuel tank and clean. Connect and tighten spark plug wire. Clean/replace muffler. Make necessary adjustments. Contact a Sears or other qualified service center. 			

TROUBLESHOOTING							
PROBLEM	CAUSE	CORRECTION					
Engine overheats	 Low oil level/dirty oil. Dirty engine air screen. Dirty engine. Partially plugged muffler. Improper carburetor adjustment. 	 Check oil level/change oil. Clean engine air screen. Clean cylinder fins, airscreen, muffler area. Remove and clean muffler. Adjust carburetor to richer position. 					
Excessive bounce/difficult handling	Ground too dry and hard. Wheels and depth stake incorrectly adjusted.	Moisten ground or wait for more favorable soil conditions. Adjust wheels and depth stake.					
Soil balls up or clumps	1. Ground too wet.	Wait for more favorable soil conditions.					
Engine runs but tiller won't move	1. Tine control is not engaged. 2. V-belt not correctly adjusted. 3. V-belt is off pulley(s).	 Engage tine control. Inspect/adjust V-belt. Inspect V-belt. 					
Engine runs but labors when tilling	Tilling too deep. Throttle control not properly adjusted. Carburetor out of adjustment.	Set depth stake for shallower tilling. Check throttle control setting. Make necessary adjustments.					

REPAIR PARTS

TILLER -- MODEL NUMBER 917.292480

HANDLES

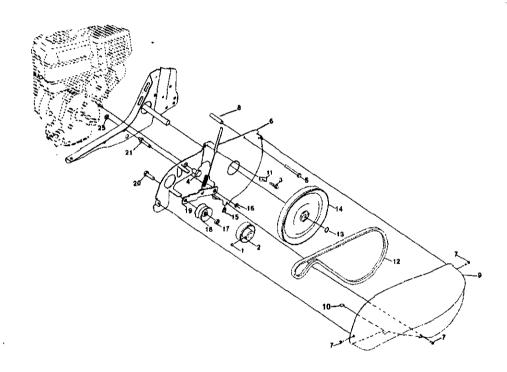


KEY	PAHI		K
NO.	NO.	DESCRIPTION	N
1	137118	Panel, Control	2
3	9266R	Grip, Handle	25
12	98000129	Nut, Flange	39
13	STD533107	Bolt, Carriage 5/16-18 x 3/4	30
14	110514X	Assembly, Panel and Tube	3
18	3066J	Cable, Tine Control	30
19	151229	Lever, Control, Tine	
20	154805	Pin Pivot	N

	PART	
NO.	NO.	DESCRIPTION
21	12000027	Ring, Clip
29	12000059	Retainer, Ring
35	72010520	Bolt 5/16-18 x 2-1/2
36	73970500	Locknut, Flange 5/16-18 UNC
37	165197	Clip, Cable
38	152094	Assembly, Handle Column

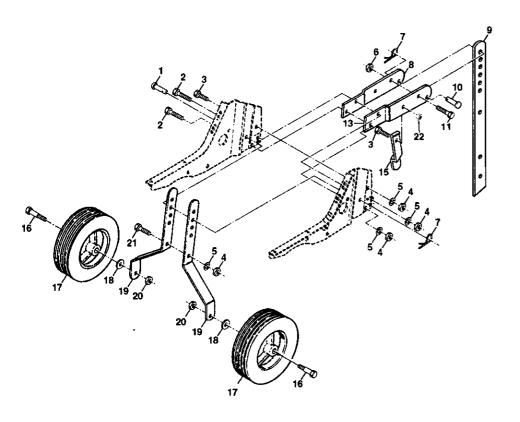
NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm

TILLER -- MODEL NUMBER 917.292480 BELT GUARD AND PULLEY ASSEMBLY



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	23230506	Screw Set 5/16-18 x 3/8 Patch	13	12000028	Ring, Retainer
2	130812	Sheave, Engine	14	151223	Sheave, Transmisison
3	17211006	Screw, Tap Hex Head	16	12000036	Ring, Klip
4	74610812	Bolt, Hex Head 1/2-20 x 3/4	17	STD541237	Nut, Hex, Jam 3/8-16
5	17490440	Bolt, Thd Roller 1/4-20 x 2-1/2	18	161806	Pulley, Idler
ě.	174898	Shield, Inner Belt Guard	19	175377	Arm, İdler
7	170488	Screw Hex Wsh Hd #8-18 x 1/2	20	STD523712	Bolt, Hex Head 3/8-16 x 1-1/4
å	139155	Spacer Split	21	106968X	Shaft, Idler Arm
9	165768X558		25	73350500	Nut, Hex, Jam 5/16-18
10	109227X	Pad, Idler			
11	9484R	Clip, Cable	NOT	E: All compor	ent dimensions given in U.S.
12	9180R	V-Belt		s. 1 inch = 25	

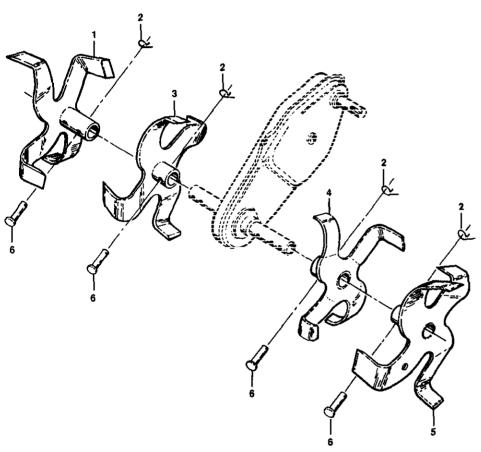
TILLER - - MODEL NUMBER 917.292480 WHEEL AND DEPTH STAKE ASSEMBLY



KEY NO.		DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	9194R	Pin, Clevis	13	1951J	Support, Depth Stake, L.H.
2	74760520	Bolt, Hex Head 5/16-18 x 1-1/4	15	5388J	Spring, Stake
3	STD523107	Bolt, Hex Head 5/16-18 x 3/4	16	121117X	Bolt, Shoulder
4	STD541031	Nut, Hex 5/16-18	17	9188R	Wheel
5	STD551131	Washer, Lock 5/16	18	STD551037	Washer 13/32 x 13/16 x 11 G
6	STD541437	Locknut, w/washer 3/8-16	19	9190R	Bracket, Wheel
7	4921H	Clip, Hairoin	20	STD541437	Locknut, Crown 3/8-16
8	1952J	Support, Depth Stake, R.H.	21	74760516	Bolt, Hex Head 5/16-18 x 1
9	122233X	Stake, Depth	22	STD541431	Locknut, w/insert 5/16-18
10 11	326J 74780628	Pin, Clevis Bolt, Hex 3/8-16 x 1-3/4		E: All compor s. 1 inch = 25	nent dimensions given in U.S. .4 mm

TILLER -- MODEL NUMBER 917.292480

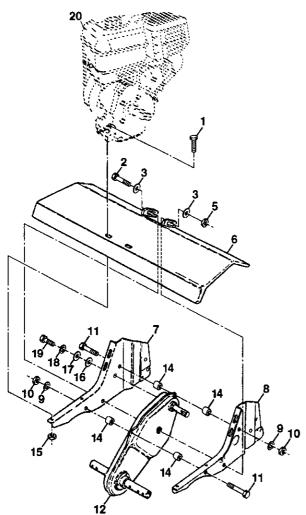
TINE ASSEMBLY



	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	156926	Tine, Outer, R.H.	5	156925	Tine, Outer, L.H.
2	3146R	Retainer, Spring Zinc	6	4929H	Pin, Clevis
3 4	156924 156923	Tine, Inner, R.H. Tine, Inner, L.H.		: All comp s. 1 inch = 2	onent dimensions given in U.S. 25.4 mm

TILLER - - MODEL NUMBER 917.292480

TRANSMISSION



KEY	PART
NO.	NO.
1	74760524
2	STD523732
3	STD551037
5	STD541437
6	9056R558
7	165835
8	165834
9	STD551131
10	STD541031
11	74760544
12	176112

DESCRIPTION

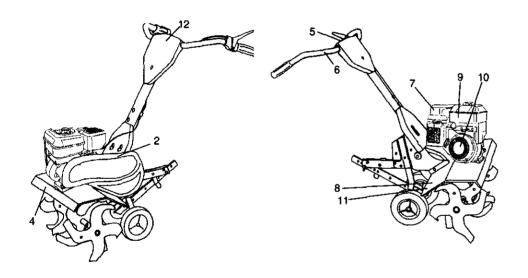
DESCRIPTION
Bolt, Hex 5/16-18 x 1-1/2 Gr. 2
Bolt, Fin, Hex 3/8-16 x 3-1/4
Washer 13/32 x 13/16 x 11
Locknut, w/washer 3/8-16
Shield, Tine
Bracket, Engine, R.H.
Bracket, Engine, L.H.
Washer, Lock 5/16
Nut, Hex 5/16-18
Bolt, Hex Head 5/16-18 x 2-3/4
Transmission Transmission

KEY	PART	
NO.	NO.	DESCRIPTION
14	9173F	Spacer, Split
15	73970500	Nut, Lock Hex Flange 5/16-18UNC
16	19091412	Washer 9/32 x 7/8 x 12 Ga.
17	19092016	Washer 9/32 x 1-1/4 x 16 Ga.
18	STD551125	Washer, Lock 1/4
19	74610412	Bolt, Hex 1/4-28 x 3/4 Gr. 5
20	• • • • •	Engine (See Breakdown) Briggs Model 110402.0206-E1

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

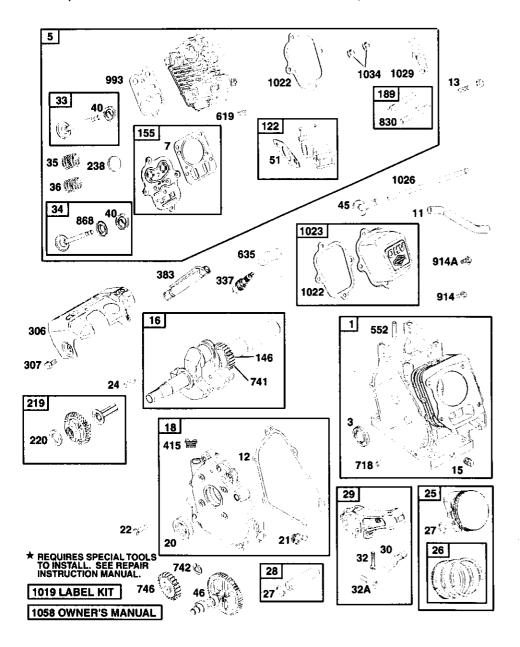
TILLER - - MODEL NUMBER 917.292480

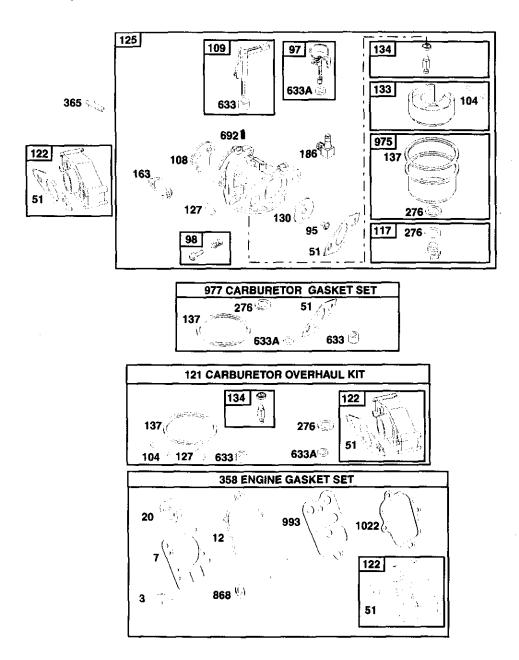
DECALS



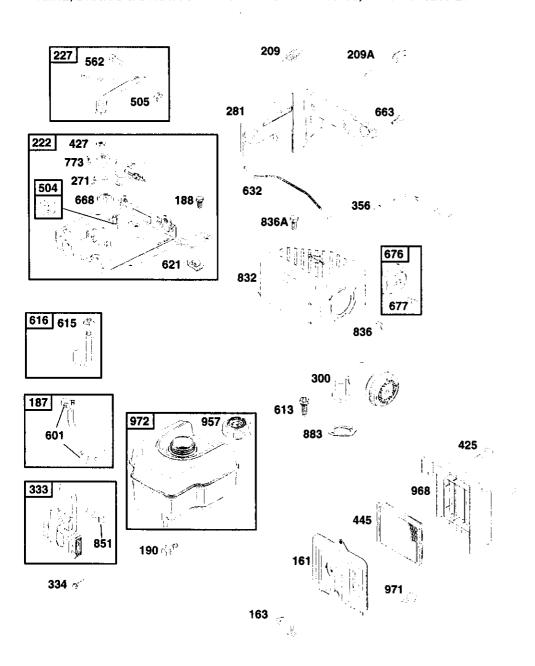
KEY	PART	
NO.	NO.	DESCRIPTION
2	166214	Decal, Logo
4	166215	Decal, Belt Guard Tine Shield HP
5	137539	Decal, Cntrl Pnl Inst.
6	120431X	Decal, Hand Placement
7	176783	Decal, Engine Oper.
8	120075X	Decal, Warning, Rotating Tines
9	167156	Decal, Engine B&S Intek
10	171078	Decal, Rewind Intek
11	162215	Decal, Tine Shield Warning
12	166217	Decal, Control Panel
	176742	Manual, Owner's (Eng/Span)

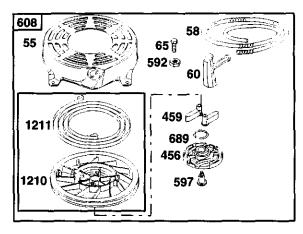
TILLER - - MODEL Number 2: ...232480
ENGINE, BRIGGS & STRATTON -- MODEL NUMBER 110402, TYPE NO. 0206-E1



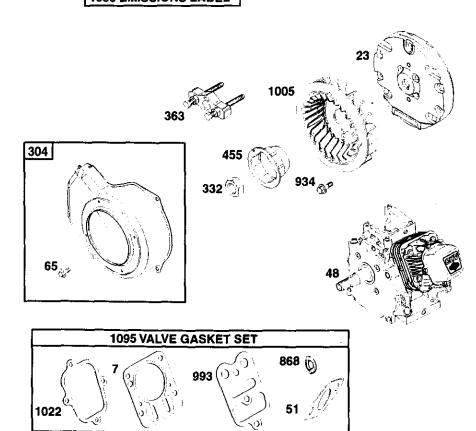


TILLER - - MODEL NUMBER 917.292480 ENGINE, BRIGGS & STRATTON -- MODEL NUMBER 110402, TYPE NO. 0206-E1





1036 EMISSIONS LABEL



				DADT
KEY	PART		KEY	
NO.	NO.	DESCRIPTION	NO.	NO. DESCRIPTION
1	693811	Cylinder Assembly	104	691242 Ø Pin-Float Hinge
3	299819	 Seal-Oil (Magneto Side) 	108	692567 Valve-Choke
5	693643	Head-Cylinder	109	690023 Shaft-Choke
7		•+ Gasket-Cylinder Head	117	694975 Jet-Main (Standard)
11	692600	Tube-Breather	121	695157 Kit-Carburetor Overhaul
12	692549	 Gasket-Crankcase 	122	693749 • Ø Spacer-Carburetor
13	691137	Screw (Cylinder Head)	125	696065 Carburetor
15	691686	Plug-Oil Drain	127	691739 Ø Plug-Welch
16	693797	Crankshaft	130	691181 Valve-Throttle
18	694466	Cover-Crankcase	133	398187 Float-Carburetor
20	692550	Seal-Oil (PTO Side)	134	398188 Ø Kit-Needle/Seat
21	281658	Cap-Oil Fill	137	693981 ؇ Gasket-Float Bowl
22	691662	Screw (Engine Sump)	146	690979 Key-Timing
23	692987	Flywheel	155	695882 Plate-Cylinder Head
24	222698	Key-Flywheel	161	696063 Base-Air Cleaner
25	690021	Piston Assembly (Standard)	163	696024 Gasket-Air Cleaner
	694167	Piston Assembly (.010" O.S.)	186	692317 Connector-Hose
	694168	Piston Assembly (.020" O.S.)	187	693401 Line-Fuel (Molded)
	694169	Piston Assembly (.030" O.S.)	188	690877 Screw (Control Bracket)
26	499631	Piston Assembly (.030" O.S.) Ring Set-Piston (Standard)	189	694543 Ball-Rocker Arm
	692785	Ring Set-Piston (.010" O.S.)	190	692127 Screw (Fuel Tank)
	692786	Ring Set-Piston (.020"O.S.)	209	691278 Spring-Governor
	692787	Ring Set-Piston (.030" O.S.)		A 692571 Spring-Governor
27	691866	Lock-Piston Pin	219	693578 Gear-Governor
28	499423	Pin-Piston	220	691724 Washer (Governor Gear)
29	499424	Rod-Connecting	222	694253 Bracket-Control
3ŏ	692562	Dipper-Connecting Rod	227	692573 Control Lever-Governor
32	691664	Screw (Connecting Rod)	238	691300 Cap-Valve
32A	695759	Screw (Connecting Rod)	271	694256 Lever-Control
33	499642	Valve-Exhaust	276	271716 ؇ Sealing Washer
34	499641	Valve-Intake	281	694252 Panel-Control
35	691304	Spring-Valve (Intake)	300	693593 Muffler
36	691304	Spring-Valve (Exhaust)	304	696066 Housing-Blower
40	692194	Retainer-Valve	306	693610 Shield-Cylinder
45	690977	Tappet-Valve	307	690345 Screw (Cylinder Shield)
46	693404	Camshaft	901	RPM Settings:Low Speed: 1900-2100
48	030404	Short Block (Replacement		High Speed: 3000-3200
70		Engine)	•	Included in Engine Gasket Set, Key. No.
51	602555	؇+ Gasket-Intake	•	358
55	691421	Housing-Rewind Starter	Ø	Included in Carburetor Overhaul Kit, Key.
58	692259	Rope-Starter (Cut to	v	No. 121
30	092239	Required Length)	‡	Included in Carburetor Gasket Set, Key.
60	281434		+	No. 977
65	690837	Grip-Starter Rope		
95	691636	Screw (Rewind Starter) Screw (Throttle Valve)	+	Included in Valve Gasket Set, Key. No.
97	690024	Shaft-Throttle		1095
98	398185	Kit-Idle Speed	NOT	E: All component dimensions given in U.S.
90	390103	Iditiole Opecu	NOT	inches 1 inch = 25.4 mm
				HICHOS I HICH = 23.4 HIH

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

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