

HOW TO WINTERIZE YOUR TILLER



**You
can do it!**
No special skills needed.

Are you planning on putting your Troy-Bilt “to bed for the winter,” or for any period of a month or more? If so, here are a few simple steps you should take to be sure that your tiller will not collect rust or gum in its vital parts.

Just by taking a few minutes to read these instructions on how to “winterize” and store your Troy-Bilt Roto Tiller the *correct* way, you can extend the life of your Troy-Bilt many extra years. Here are our special recommendations for winterizing and storing your tiller during the off-season, and for operating it during cold weather (to remove snow with the dozer blade, for example).

These added steps can lengthen the life of your *tiller* and *its engine*. For more information (and helpful pictures) you can also refer to your Engine Manufacturer’s Operating and Maintenance Instructions. (If you have misplaced your copy, write us for another one.)

If you intend to use your tiller during the winter for snow plowing or other work, where the temperature gets below 32°F, you should drain your No. 30 weight oil and switch to SE No. 10W motor oil in your engine. If you are in a climate where temperatures get quite low, it also makes sense to switch from 140 weight to 90 weight gear oil in the *tiller transmission*.

This lighter weight oil will provide better lubrication protection for your transmission during the cold months.

In cold weather, *always* take 5 or 10 minutes to warm the engine up. This will warm up the oil so that it flows adequately for proper lubrication. Also, as you warm up the engine, leave the tiller Wheel Speed Shift Lever in *Free Wheeling* position and put the Forward/Reverse Lever in *Forward* position for 5 minutes or more. This will rotate the tine shaft (without tines on shaft) and warm up the tiller transmission oil. If the wheels ever get frozen in ice, *don’t* try to drive the tiller out under its own power—melt the ice around the wheels first (try using hot water).

NOTE: Always remove the tines from your tiller before snow plowing, since revolving tines can be dangerous on slippery sidewalks or driveways. Also, maneuverability is greatly increased with tines removed.

For winter protection, wrap the tine shafts with tape to prevent rust or injury to threads and keyways.

BrentChalmers.com

Wintertime and Off-Season Engine Care

There are *two* ways you can go about protecting your tiller's engine for the off-season. You can keep the gasoline tank *full* if you add a fuel stabilizer to the gasoline to prevent gum formations in the carburetor during storage. *Or*, you can *drain* the gasoline from your tank and carburetor.

Photo 1:
Some owners prefer to completely drain the gas from the engine. A simpler way is to add a gasoline additive, such as "Stabil."



HERE'S THE FIRST METHOD:

FILL FUEL TANK AND ADD STABIL.

Adding STABIL to your full fuel tank will prevent the formation of gum and varnish in the gasoline while standing for periods up to one year (refer to instructions on the can). *After* you add fuel and STABIL to your tank, run the engine for a few minutes to bring a mixture of STABIL and fuel into the carburetor bowl. Then (provided your engine has a fuel shut-off valve), leave your fuel line open during the winter so that fresh fuel can come down from the fuel tank as fuel evaporates in the carburetor. This method will also prevent rust from forming in your fuel tank.

A can of gasoline additive can be obtained from your local small engine, lawnmower, or snow mobile dealer, and at a nearby boat marina.

We recommend that you change your engine oil in the spring (before you use the tiller), to remove any moisture which may collect in the crankcase over the winter.

HERE'S THE SECOND METHOD:

DRAIN GASOLINE FROM THE ENGINE AND CARBURETOR.

Instead of adding STABIL to your fuel, you can drain all of the gasoline from the fuel tank. After draining the tank, start the engine (*keep* the oil in the engine) and run it until all of the gasoline in the carburetor has been burned up. This will prevent the accumulation of gum and

varnish deposits in the carburetor and the fuel system (which cause engine starting problems in the springtime).

Again, remember to change the engine oil in the spring, to get rid of wintertime moisture build-up in the crankcase.

and Other Off-Season Tiller Storage Tips



Photo 2:
If you plan to use your tiller in temperatures below 32°F, it is best to change to a different weight oil (see your engine manual for their recommendations).

CHANGE THE OIL FOR COLD WEATHER USE.

If you'll be using your Troy-Bilt during extremely cold weather, change to a lighter engine oil. We suggest you use a straight No. 30 weight SE classified motor oil when operating above 32°F, and No. 10W weight (SE rated), when operating below 32°F. Consult your engine manual for the specific weight motor oil recommended by the engine manufacturer at lower temperatures. When tilling weather arrives, be sure and change back to No. 30 weight engine oil.



POUR OIL IN SPARK PLUG HOLE.

To protect the piston and cylinder wall of your tiller engine from corrosion, remove the spark plug, and pour a tablespoon of clean engine oil into the spark plug hole. Then, crank the engine slowly by pulling the starter rope to distribute the oil evenly. Clean and replace the spark plug, but leave the wire off until springtime. Now, slowly pull the starter until you feel compression. At this point, the valves are seated and rust can't form in the cylinder or on valve seats.

Photo 3:
Remove spark plug, then pour a tablespoon of clean engine oil into spark plug hole. Pull the recoil starter. Clean and replace the spark plug, but don't connect the spark wire until springtime. Now distribute the oil by slowly pulling the starter until you feel compression.

CLEAN THE AIR CLEANER

Foam-type air cleaners should be removed and cleaned preferably in kerosene, or in water and detergent—as long as the foam air cleaner has *all* of the water removed before running the engine. Then, squeeze completely dry, squirt on two tablespoons of clean engine oil, squeezing out any excess. Papertype cleaners should be vacuum cleaned or replaced. Consult your Owner's Manual for more complete engine air filter cleaning instructions.



Photo 4:
Each make of engine has a different type air cleaner; please see Section Seven in your Owner's Manual for exact instructions on this important step.

Over please...

BrentChalmers.com



Photo 5:
Be sure the battery on electric starting units is charged and in good condition (a weak battery may freeze during cold weather). Disconnect battery and store in a cool, dry place. Temperatures best for storage range from 10° to 45°F., as long as the battery retains its charge. A weak battery can freeze and rupture.

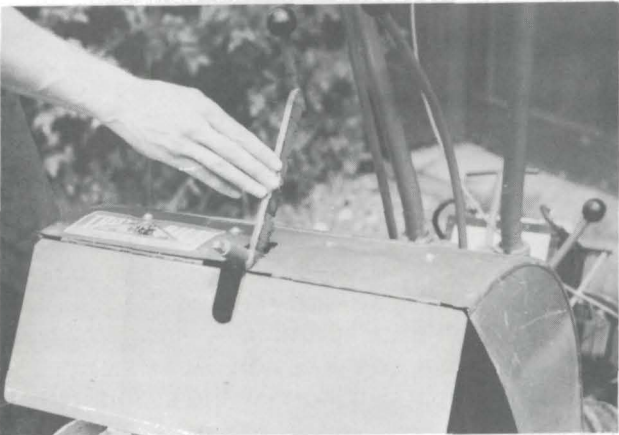


Photo 6:
Clean tiller thoroughly. Check transmission oil level (see Section One in Owner's Manual) and tighten loose nuts and bolts. Here, grease is being rubbed onto the back of the depth regulator; you'll be surprised how much easier the regulator works when it's properly lubricated!

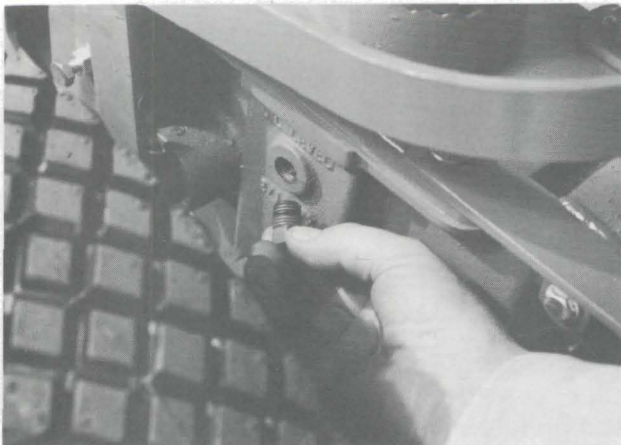


Photo 7:
Make sure the gear oil level in your tiller's transmission is up to the level of the oil plug (located three inches above the left wheel). Use 90 weight gear oil in the winter for snow plowing.

ELECTRIC STARTING MODELS.

Disconnect the battery if you have an electric starting Troy-Bilt and store it in a cool (10° to 45°F.), dry place. Once a month you should check the level of the battery acid, and also the posts for possible corrosion. Wash corroded posts by sprinkling with baking soda and flushing with water. To test the charge during storage, reconnect the battery (be sure to connect negative to ground), leave the spark plug wire off, Forward/Reverse lever in Neutral, and push the starter button or turn the key on key start models (for no longer than 10 seconds). If the starter turns over weakly, have the battery charged at a service station. Battery charging rate should not exceed 6 amperes.

LUBRICATE MOVING PARTS.

Now is a good time to clean your Troy-Bilt thoroughly and lubricate all moving parts. After cleaning, use an oil rag to spread a light film of oil over any areas that could corrode such as the speed shift linkage.

CHECK TRANSMISSION OIL.

The tiller transmission's oil level should be checked and filled if necessary. Make sure it's up to the level of the plug on the left side of the transmission, and no higher.

GENERAL INSPECTION

Inspect all moving parts, tightening any loose nuts and bolts or knobs handles. Check the tiller belts and replace over-stretched or worn belts with new ones. (See your Owner's Manual, on "Proper Belt Adjustment" for complete belt maintenance advice.)

These suggestions and your own good, common sense will help you get extra years of problem-free performance from your Troy-Bilt Roto Tiller-Power Composter (and all of your other lawn and garden equipment for that matter.)

And please remember, the off-season is the best possible time to order replacement parts for your Troy-Bilt. Waiting until springtime could result in unhappy gardening delays—just when you're most anxious to sink your feet in the newly-warmed garden soil.

If by any chance you ever have any trouble with your Troy-Bilt, please let us know . . . as always, we'll do our very best to help you out!

SER-3

© 1977 Garden Way Manufacturing Co., Inc.



GARDEN WAY MANUFACTURING CO., INC.

102nd St., & 1st Ave., Troy, Mo. 64601

Phone (518) 235-6010

BrentChalmers.com