



OWNER'S OPERATING and INSTRUCTION MANUAL

This equipment is designed and engineered to do an effective job while providing maximum safety to the user and other persons nearby. However, when improperly handled or used it can cause serious injury, and should be treated with the respect it deserves.

BEFORE STARTING —

1. Thoroughly inspect the area where the equipment is to be used and remove all stones, wire, bones, pieces of metal or other foreign objects.
2. Wipe up any gasoline spilled, and avoid spilling on hot engine.
3. Know how to stop equipment and engine quickly.

DURING OPERATION —

4. NEVER have children or pets near the equipment while engine is running.
5. NEVER leave equipment unattended while engine is running.
6. NEVER fill gasoline tank while engine is running.
7. NEVER remove any foreign objects next to or in the path of the equipment while engine is running.
8. NEVER put hands or feet under or in rotating parts or hidden areas, using special caution to keep hands and feet out of and away from cutter elements, belts, pulleys, gears, etc. while engine is running.
9. NEVER work on equipment while engine is running.
10. NEVER operate equipment in wet grass.
11. NEVER operate equipment when dark or hard to see.
12. NEVER operate equipment when barefooted or wearing open sandals.
13. NEVER ride double on riding mowers.
14. NEVER remove blade or belt guards while engine is running.
15. The mower must NOT be used with the deflector removed.

MISCELLANEOUS —

16. Disconnect spark plug wire before working on equipment.
17. Maintain a solid and firm footing while mowing.
18. Slopes should be worked from side to side, not up and down.
19. Never run engine indoors.
20. Read manual thoroughly.

These safety suggestions are recommended by Outdoor Power Equipment Institute and Toro Manufacturing Corp.



SELF PROPELLED



HAND PROPELLED

21" WHIRLWIND HEVI-DUTY

HAND PROPELLED MODEL

NOS. 23000-500001 & UP, 23000-600001 & UP, 23000-700001 & UP

SELF PROPELLED MODEL

NOS. 23100-500001 & UP, 23100-600001 & UP, 23100-700001 & UP

PRICE 25 CENTS

Save these important Safety Precautions - hang them near your power mower.

1964

To the Toro Owner...

This Owner Manual has been especially prepared for your information and guidance in the operation and care of your new Toro mower. Information on care and operation of the engine is contained in a separate manual furnished with the engine.

Properly adjusted, operated and maintained, this Toro mower will respond quickly and easily to every

reasonable demand and give years of reliable service.

Toro mowers are manufactured by an organization of mowing machinery specialists with over forty years experience. Each machine is carefully inspected and tested before leaving the factory. For best performance from your Toro mower, study this manual for regular maintenance procedures.



In an effort to make improvements available to Toro owners as quickly as possible, minor changes are incorporated into Toro's products from time to time that do not become immediately shown in the Owner's Operating and Parts Manual. If such a change apparently

has been made in your unit, which is not reflected in your manual, see your Toro distributor or his authorized Toro service dealer for information and parts numbers.

COPYRIGHT 1964 BY
TORO MANUFACTURING CORPORATION
MINNEAPOLIS 20, MINNESOTA-U. S. A.

SPECIFICATIONS

ENGINE: 4 H. P., 4-cycle engine with oil pump, oil bath air cleaner, recoil starter and 5 quart gas tank.

CUTTER BAR: 21" hardened high carbon steel, positive attachment with one fastener.

WIDTH OF CUT: 21"

HEIGHT OF CUT: 1" to 4 1/8" by moving wheels.

HOUSING: #12 gauge stamped steel, spiral grass chamber, right hand discharge, hinged chute deflector.

FRAME: Integral with housing; #10 gauge steel.

TRACTION CLUTCH: (Self propelled model only) tight-slack V-belt clutch operated from control bail on handle.

TRACTION DRIVE: (Self propelled model only) rear wheel drive; V-belt drive from engine to sealed worm gear speed reducer. Hardened steel pin-

ions on speed reducer output drive hardened steel wheel gears. One way overrunning clutches at each rear wheel provide differential action. Ground speed 2.84 m. p. h. at 3200 r. p. m. engine speed.

HANDLE: Welded steel tube in separable halves, plastic handle grip, 3 position handle height adjustment.

WHEELS: Ball bearing steel disc wheels with 8" diameter x 1.75" semi-pneumatic tires. Wheel spindles provided with grease fittings for lubrication.

THROTTLE CONTROL: Control wire and casing operating lever on upper handle.

DIMENSIONS:	Hand Propelled	Self Propelled
Width:	24 1/4"	24 1/4"
Height:	14 3/4"	15 1/4"
Length:	32 1/2"	34"
Less Handle - at 1" Cutting Height		

WEIGHT: Hand propelled 90 lbs.
Self propelled 110 lbs.

OPTIONAL EQUIPMENT: Bagging attachment.

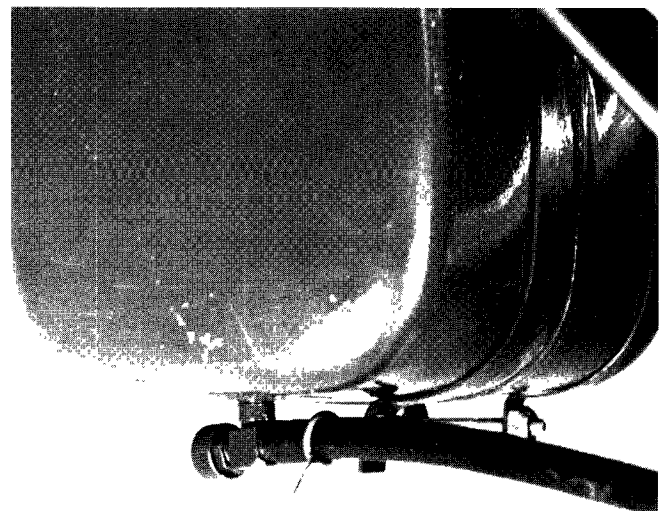
1. Remove all mower components from packing carton.
2. Install the mower handle, gas tank, deflector and throttle control by these instructions.
3. Attach grass deflector wing nut (see photo at left below).
4. Attach traction control rod (Self Propelled Model).
5. Check to see that all fittings, screws, and cutter bar are tight. Disconnect spark plug if you push or pull the cutter bar by hand.
6. Add oil to crankcase (see instructions).
7. Fill fuel tank with gasoline and check fittings for leakage.

SETTING-UP INSTRUCTIONS

Your new TORO Whirlwind mower is shipped with the mower unit completely assembled, and with the mower handle knocked down for attachment to the mower when unpacked. A separate bag contains fittings for attaching the mower handle and control cable. All items should be removed from the shipping case and accounted for before you discard the packing.

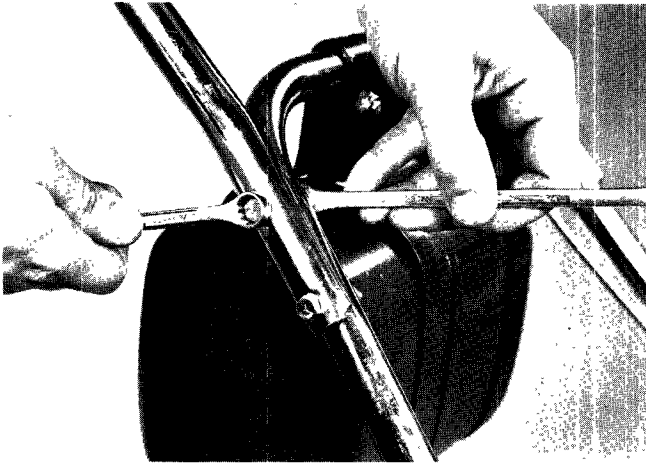


Install deflector wing nut as illustrated in above photograph. Fastener is contained in loose parts bag. Deflector must not be removed when mowing.



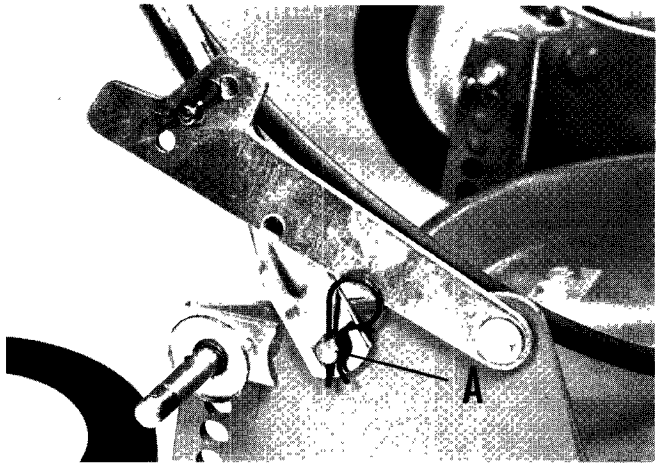
Place fuel line and clip in position as shown, and attach to fuel control valve beneath tank.

ATTACHING THE MOWER HANDLES



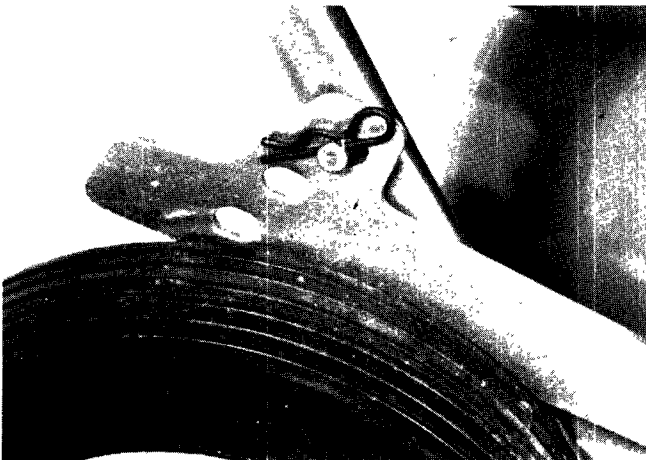
STEP 1. GAS TANK AND HANDLE ASSEMBLY

Gas tank and bracket are shipped assembled. Align the slot in the U-shaped clip with the hole in the top of the upper handle and tighten the two screws to clamp it in place. Place upper handle in position over lower handle and fasten with screws from parts bag. Tighten all fasteners securely.



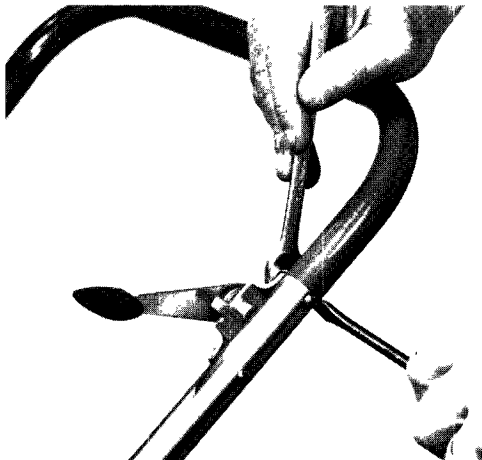
STEP 2. INSTALL HANDLE TO HOUSING

After handle sections have been joined together, place handle in position on pins "A" as shown in illustration and secure with hairpin cotter.



STEP 3. HANDLE HEIGHT LEVER

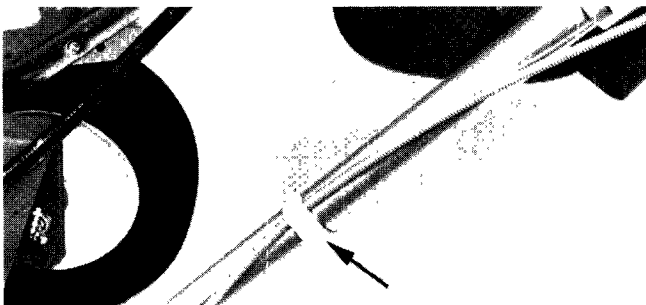
The handle adjusting levers are installed in place in the mower housing at the factory. Select one of the three holes for the most convenient handle height. Secure with hairpin cotter pin.



STEP 4. ATTACHING THROTTLE CONTROL LEVER

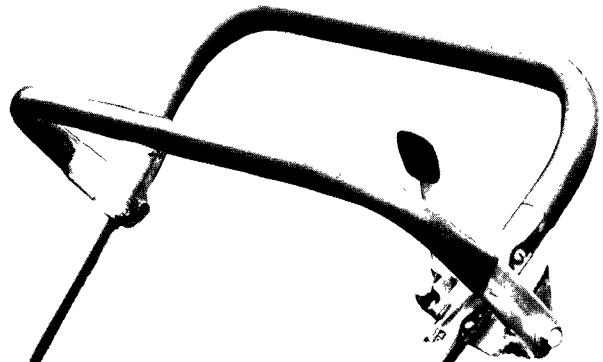
Screw control to upper left handle. The remote control cable and lever assembly are fastened at the power head end on delivery. Cable is properly adjusted at the factory. Fasten control to the left handle through hole provided with screws and locknuts. Run cable under the handle cross bar. On self-propelled model, install brackets for control bail first; then install the throttle control lever on inside of left bracket.

(See photo below for self-propelled model.)

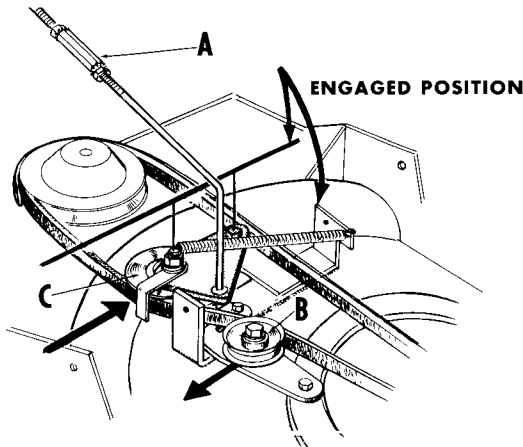


STEP 5. ATTACHING CONTROL CLIP

Clip control cable to handle as shown (see arrow). Be sure that there are no kinks in the cable on delivery and that the upper end of control cable and cable cover are firmly attached to the control lever assembly at the top end of the cable. The lever should move back and forth freely when properly installed.

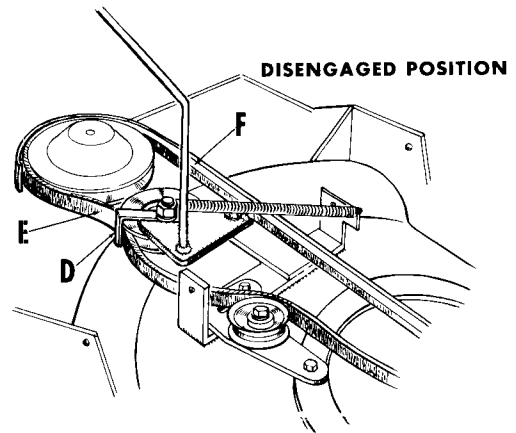


CONTROL ROD ADJUSTMENT



Adjust the length of the control rod by screwing the upper rod in or out of sleeve "A" until a line through the center of the idler arm pivot and the center of the V-groove Idler "C" is parallel with the rear edge of the idler bracket when the drive is engaged. Tighten the nuts on the control rod sleeve securely. Move auxilliary idler "B" to extreme right. Move the V-groove idler "C" to the right until the belt is tight enough to drive in the engaged position. If adjustment of V-groove idler is insufficient to tighten belt, move

BELT ADJUSTMENT

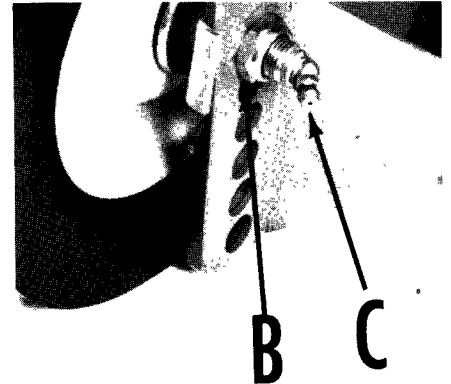
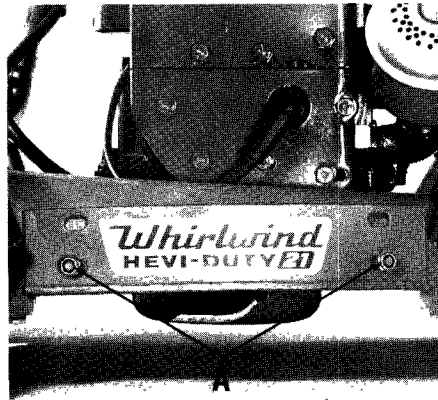
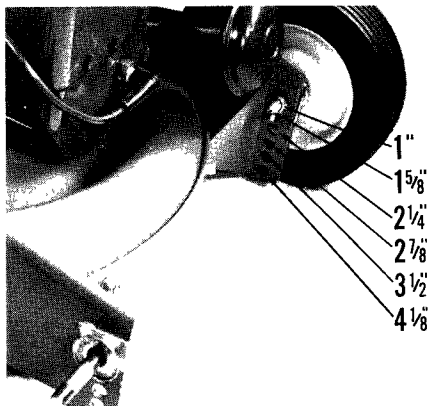


auxilliary idler "B" to left to take up excess slack and readjust V-groove idler "C". Tighten all fasteners securely. To remove belt, remove engine pulley and gear case pulley.

BELT HOOK ADJUSTMENT

Adjust position of belt hook "D" so that slack side of belt at "E" is approximately parallel with tight side at "F" when the drive is disengaged.

ADJUSTING HEIGHT-OF-CUT

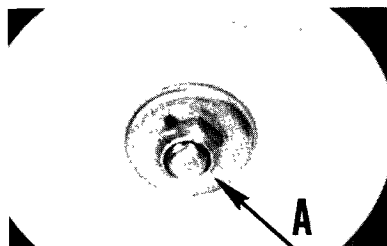


Graph in photo above indicates cutting heights available. To adjust, remove wheels by removing nut "B". For normal cutting, be sure all four wheels are in the same relative hole position. For rough cutting, rear wheels can be set higher for maximum engine power. It is also advisable to move front shield up. This is done by loosening the two nuts "A" in the slotted holes

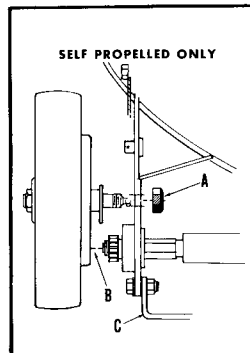
and placing in either the up or down position (see above photo). Then retighten nuts securely. **BE SURE THE ENGINE IS OFF WHEN DOING THIS OPERATION.** OILING WHEELS: Two or three shots of a good grade of gun grease into zerk fittings "C" (photo above) on all four wheels will insure easier pushing of your Toro rotary. Do this at frequent intervals.

HEIGHT OF CUT ADJUSTMENT

(Self Propelled Model)



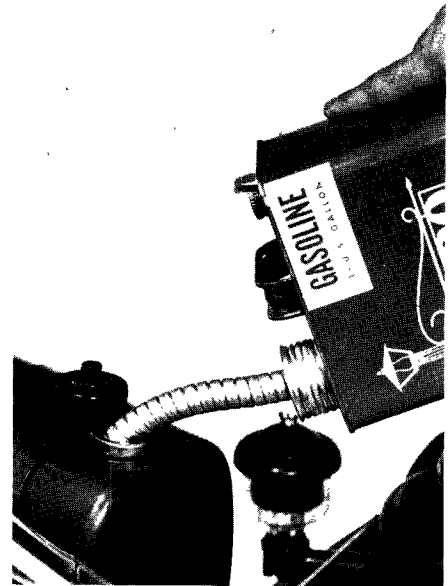
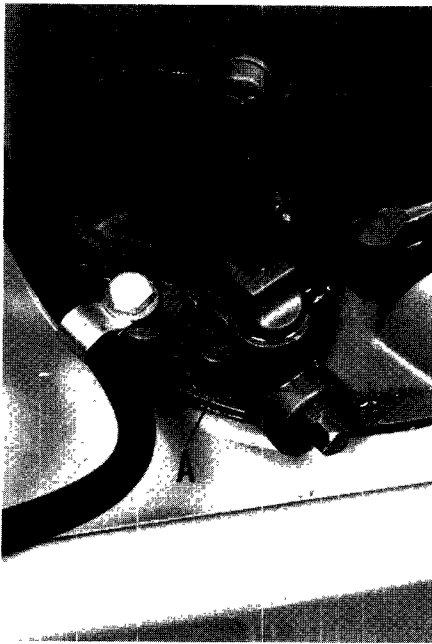
If the wheels become wobbly after lengthy service, the bearings can be adjusted by tightening nut "A" (in photo above).



Adjust front wheels per previous instructions. To change rear wheel height, remove stop nut "A" from inside of wheel spindle. Remove wheel and spindle assembly and reinstall in desired hole of semi-circular pattern. Be sure all wheels are in same relative position. Line up hole in wheel cover "B" with pinion when reinstalling wheel assembly. Replace stop nut and tighten securely. **NOTE:** In the lowest height of cut setting, it may be found that the rear gear case support bracket "C" drags and causes "scuffing". In this case, keep front wheels in 1" height of cut position and place rear wheels in 1-5/8" height setting.

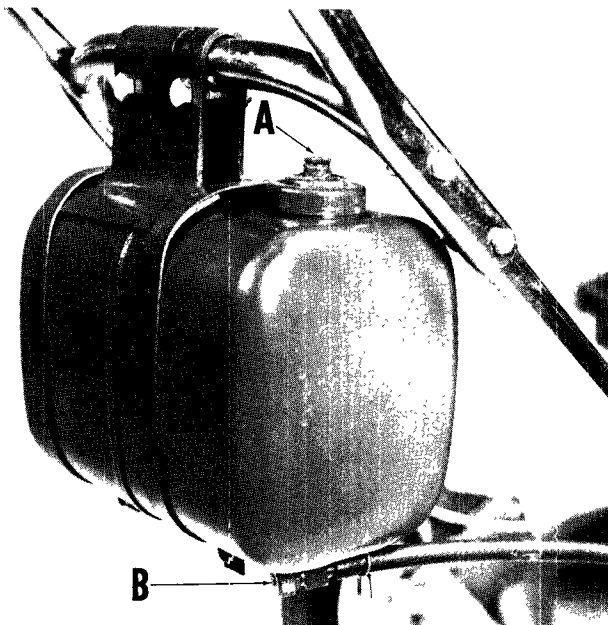
PREPARATION OF ENGINE BEFORE STARTING

OIL AND GASOLINE have been completely removed and drained from the engine, and it is essential that the preparation instructions in this manual be followed before starting.



FILL THE OIL SUMP WITH OIL - First remove filler plug "A". Place the engine level; be sure wheels are in the same position. Pour oil slowly to prevent air being trapped in oil sump. Observe filler neck for a few seconds before replacing oil filler plug. If oil does not remain at top of neck, add oil until it does. Fill to overflowing (capacity 25 oz.) with a good grade of S. A. E. 30 lubricating oil. Replace the filler plug.

FILL THE TANK with a good grade of regular gasoline. NEVER use gasoline that has been standing in a can for any length of time. SEE THAT VENT HOLE IN CAP IS OPEN. CAUTION: Do NOT fill fuel tank to overflow. Do NOT mix oil with gasoline. OBSERVE SAFETY PRECAUTIONS. ALWAYS DISCONNECT SPARK PLUG LEAD WHEN WORKING ON THE ENGINE OR MOWER CUTTER BAR.



After filling the crankcase with oil and the fuel tank with a good grade of fresh gasoline, remember to open fuel valve "B" and air vent "A" on top of gas cap. Turn in a counterclockwise direction to open, clockwise to close. It is advisable after each mowing to close the valve and air vent during storage.

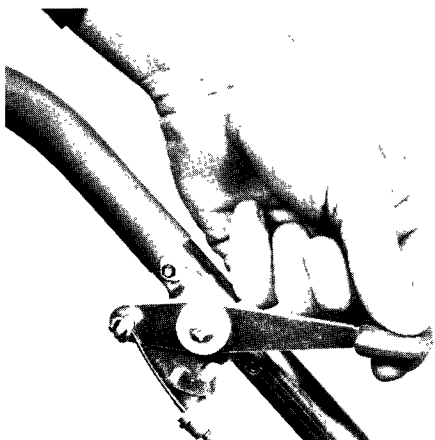


To disconnect spark plug lead wire, pull off as shown.

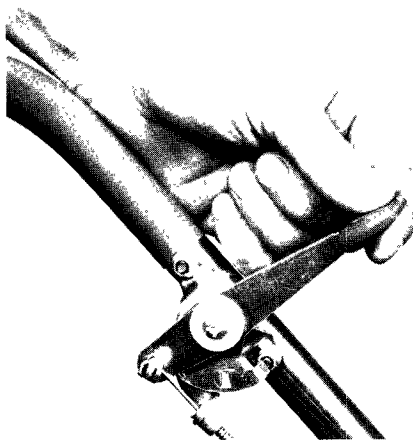
ALWAYS DISCONNECT SPARK PLUG LEAD WIRE WHEN WORKING ON ENGINE OR CUTTER BAR !

STARTING INSTRUCTIONS

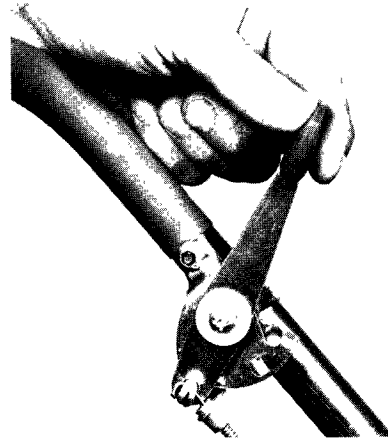
After filling with gasoline and oil, your mower is ready for operation. The engine is controlled by the control lever on the mower handle. The manual choke is located on the engine carburetor panel. Operating positions of this lever are shown below.



1. STARTING POSITION
(Full Forward)



2. RUNNING POSITION
(Lever Centered)



3. TO STOP ENGINE
(Lever Full Back)

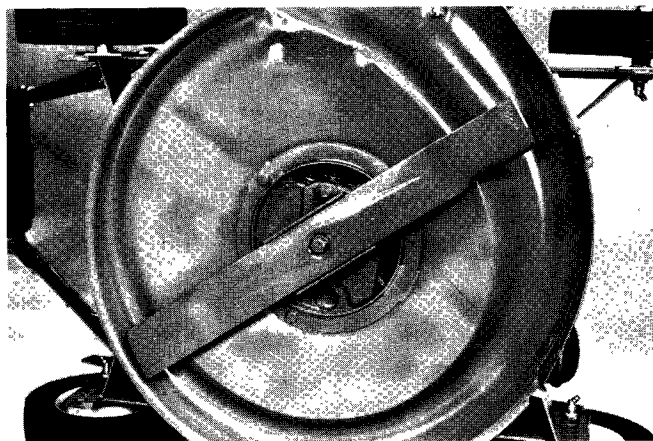
RECOIL START

First, move the handle control lever forward to the starting position as shown in illustration No. 1. **HOLD THE MOWER FIRMLY IN POSITION.** Then pull starter rope slowly until the starter clutch engages, then pull until the resistance of compression is felt. Continue to pull slowly for about two or three inches until compression ceases.

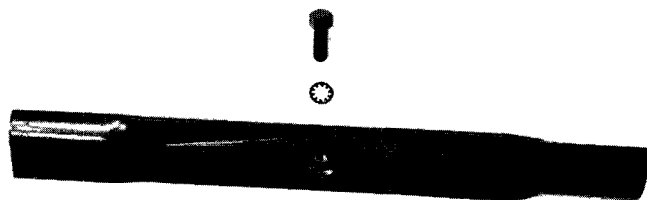
Allow starter rope to recoil and again pull out slowly until starter clutch engages. Then pull with a quick full arm stroke to start engine. Hold starter grip and allow rope to recoil. Repeat if necessary with choke opened slightly. When engine starts, open choke gradually.



CARE OF MOWER HOUSING AND CUTTER BAR

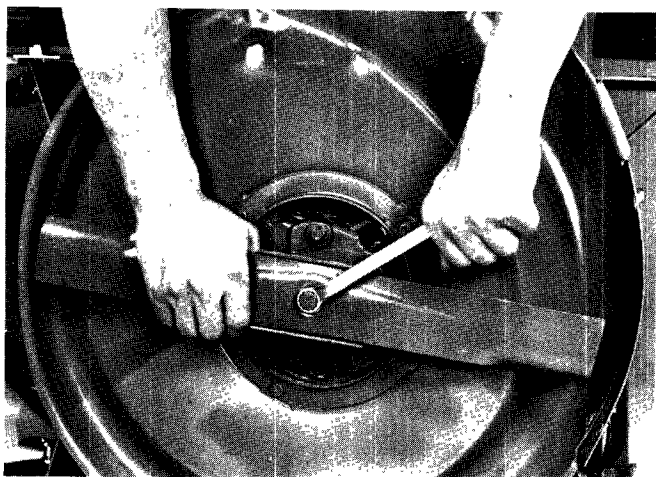


Be sure to keep under side of your mower housing and cutter bar assembly clean and free from masses and accumulations of old grass clippings. **DISCONNECT SPARK PLUG LEAD WIRE** as a safety precaution, before tilting mower on side as shown, or working on the cutter bar assembly. It is **IMPORTANT** to

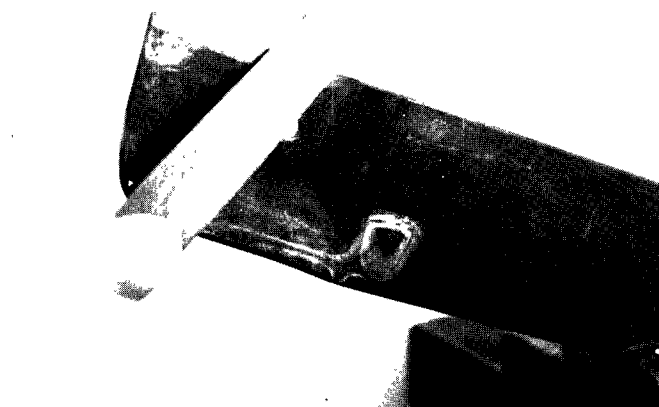


use only genuine TORO replacement cutter bars on this machine. Others may be dangerous. The cutter bar assembly is shown in the photo above. They should always be reassembled as illustrated--cutter bar, lock-washer and cutter bar screw. Be sure cutter bar screw is drawn up securely.

SHARPENING THE CUTTER BAR



1. To remove the cutter bar, disconnect spark plug lead wire, grasp bar as shown, and turn blade screw sharply counterclockwise. Remove blade screw, lock-washer and cutter bar.



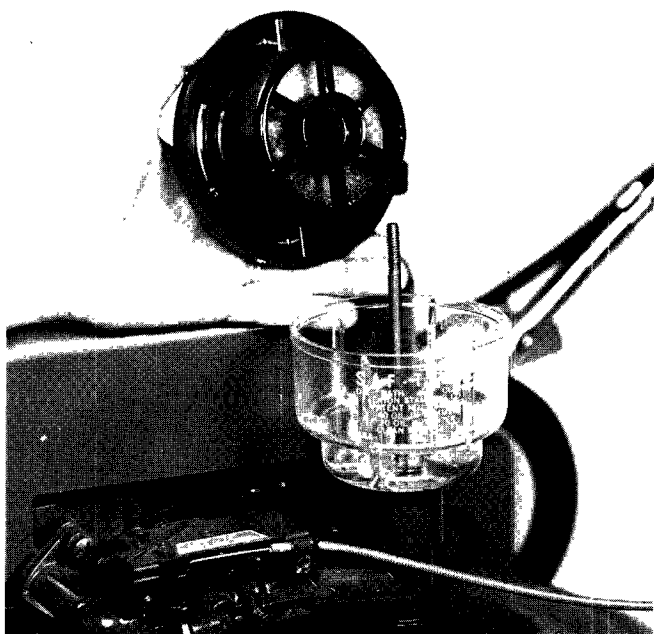
2. Sharpen the cutting ends of the bar with a 10 inch mill-bastard file to as close to the original bevel as possible. Keep blade ends razor sharp. Be sure blade is in proper balance. Remove same amount from each end of bar.

CLEANING THE ENGINE AIR CLEANER

Your engine is equipped with an oil bath air cleaner. Add oil before starting engine. (See instructions on air cleaner bowl.)

Remove wing nut, and air cleaner cover and element. BE CAREFUL not to pour oil into center hole of air cleaner. Do not fill above "FILL LEVEL" mark. Replace cover, element and wing nut.

CLEAN cover and element, and bowl periodically. Re-fill bowl with fresh oil.



CHECKING SPARK PLUG GAP

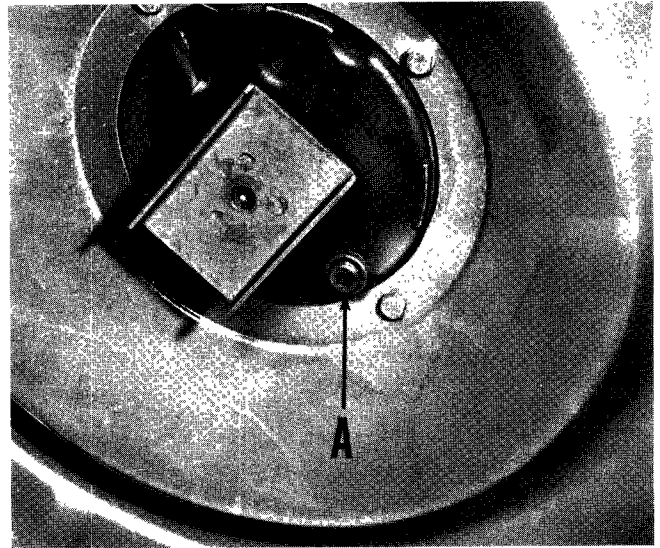
This engine is equipped with a 14 mm spark plug (Use Champion J-8 or equivalent for replacement). Keep a fresh plug on hand. Clean and reset the gap at .030 inches every 100 hours of operation. Use some graphite grease on threads when replacing spark plug.



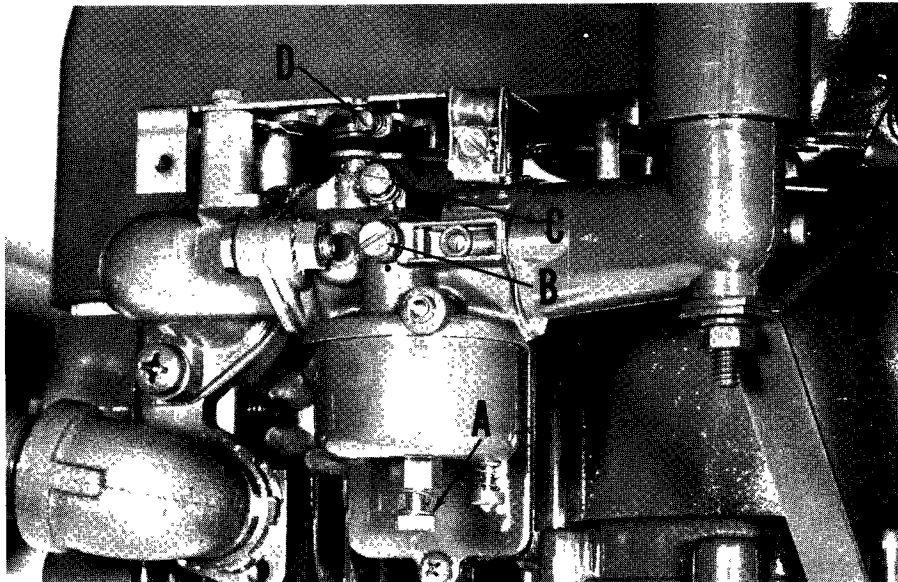
DRAINING AND REFILLING THE OIL SUMP

To avoid spilling gasoline on your lawn or driveway, plan to change the oil when the gas tank and carburetor are empty. To facilitate drainage of oil sump, remove cutter bar, loosen filler plug "A" at front of engine, tip mower on side and remove drain plug as shown in illustration at right. Place mower in normal position over shallow pan and let it drain.

Change oil after first two hours of operation WHILE ENGINE IS WARM. Add oil regularly after each FIVE HOURS of operation. Thereafter, change oil every 10 hours of operation WHILE ENGINE IS WARM. Be sure to replace drain plug and oil filler cap.



CARBURETOR ADJUSTMENTS



Power and idle screw adjustments are set at the factory for best performance. If it should become necessary to adjust the carburetor, proceed as follows:

speed adjusting screw "A". Allow setting to be slightly rich to compensate for load. Turn counter clockwise to richen mixture.

HIGH SPEED ADJUSTMENTS

1. Initial adjustment, turn high speed adjusting screw "A" clockwise until finger tight.
2. Carefully turn high-speed adjusting screw "A" in a counter clockwise direction 1 turn.
3. After engine has warmed up, make final adjustments by turning adjusting screw an eighth of a turn at a time, allowing an interval between adjustments for the engine to react.
4. If engine speed is not high enough, adjust high speed by turning screw "D". After increasing speed, make final high speed carburetor adjustments with high

IDLE ADJUSTMENTS

Set throttle control lever in idle position.

1. Turn idle adjusting screw "B" clockwise until finger tight.
2. Turn counter clockwise $1\frac{1}{2}$ turns to open. After engine is started, make final adjustments by turning screw an eighth of a turn at a time, allowing time between turns for engine to react.
3. Idle speed can be adjusted by turning screw "C". After making speed adjustment, make final idle adjustment by turning screw "B".

TORO

ACCESSORIES



LAWN VAC ATTACHMENT KIT

Bag your leaves--end tedious raking forever. Toro's optional Lawn Vac Attachment Kit contains a super size bag, bagging chute, and the necessary rods and fasteners for easy installation. Order kit by model #81059, and chute 3-6220.



GAS CAN

Fill'er up with a Toro gas can. One gallon capacity with a flexible spout for convenient filling. Available at your Toro Dealer.



EXTRA GIANT BAGS

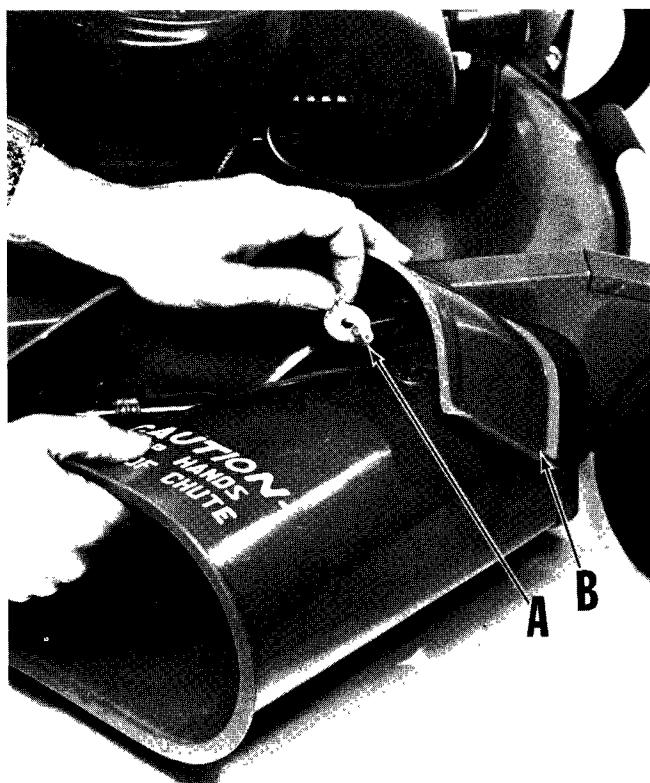
Additional leaf bags can be purchased at nominal cost. The Lawn Vac Attachment Kit, pictured at left, includes only one bag. Save steps and ease your yard clean-up chore with the purchase of extra bags.



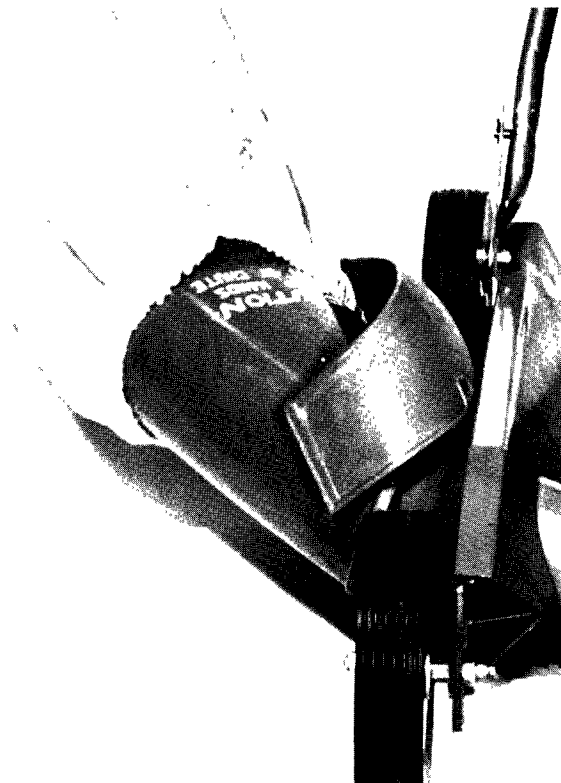
ROTARY BLADE SHARPENER

Now! Every owner of a rotary lawn mower can sharpen his own cutter bar. A properly sharpened blade is a must to obtain the ultimate in lawn grooming. This easy-to-use tool will permit professional sharpening.

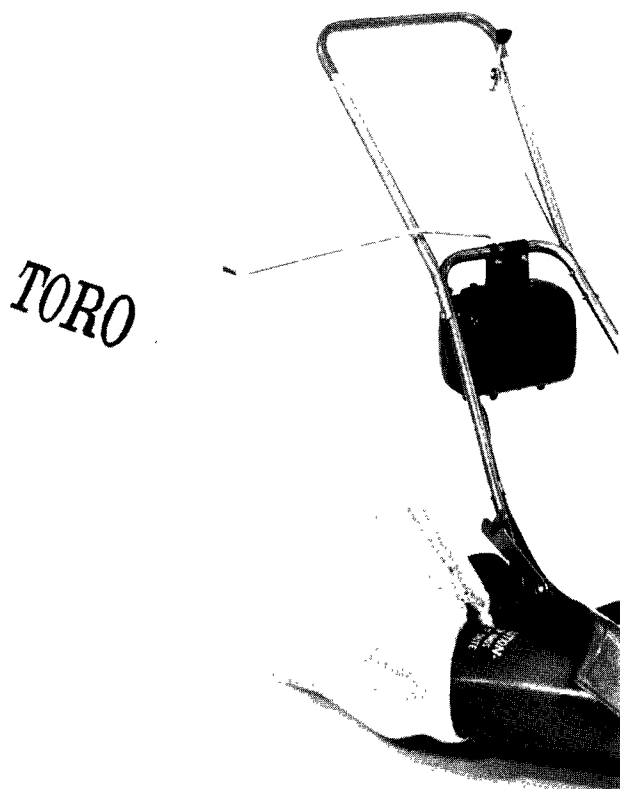
INSTALLATION OF LAWN VAC KIT (Optional Equipment)



Remove wing nut "A" and lift hinged deflector "B". Then place discharge chute in position as shown in above illustration. Replace wing nut "A" securely on stud under the hinged deflector.



Install the cloth bag and fastener as shown above. Bag should be secured on the bagging chute lip.



The 21" Whirlwind Hevi-Duty mower with the bagging attachment properly installed is illustrated above.

BAGGING TIPS

When using the bagging attachment on your new Toro Whirlwind, the following tips are suggested to give you the most effective results:

1. INSTALL THE BAGGING ATTACHMENT BEFORE STARTING THE ENGINE.
2. Walk leisurely behind your Toro mower; do not run.
3. Wet grass cutting is not advisable; wait until the grass is dry.
4. In tall grass, cut at the highest height-of-cut setting and recut lawn a second time.
5. Empty the bag often for more effective results.
6. Do not launder bags. Washing dissolves the sizing and may cause deterioration of fabric.
7. Do not use your bag for rough cutting.
8. When backing your mower into tight areas, lift up on the bag so the rear wheel will not run over the bag and pull it under the housing.
9. DO NOT PUT YOUR HANDS OR FEET UNDER THE MOWER HOUSING OR INTO DISCHARGE CHUTE WHILE THE ENGINE IS RUNNING. TO STOP THE CUTTING BLADE, SHUT OFF THE ENGINE.
10. Maximum engine speed is desirable for efficient bag filling.



12

21" WHIRLWIND HEVI-DUTY HAND PROPELLED MOWER PARTS LIST

Ref. No.	Part No.	Description	No. Used
1	3-9960	Housing	1
2	3-4412	Guard	1
3	3256-23	Washer	6
4	3296-28	Nut 32146 5	8
5	3-2574	Deflector 5-3311	1
6	3-2644	Pin, Hinge	1
7	3-2123	Clamp	2
8	321-4	Screw	2
9	3296-42	Nut 32146-8	2
10	3-2625	Wing Nut	1
11	221-225	Engine 221-225	11
12	322-7	Screw	2
13	3-5182	Clamp, Hose	1
14	322-4	Screw	1
15	3253-4	Lockwasher	1
16	5-1508	Decal	1
17	3-5301	Decal	1
18	3-4813	Decal	1
19	3-6432	Decal	1
20	3-2656	Handle Latch	2
21	3-1846	Shoulder Screw 5-2490	2
22	3290-211	Spring Washer	2
23	3-4059	Spindle Assy. with Ref. 25	4
24	3296-28	Nut	8
25	302-5	Grease Fitting	4
26	3-7070	Wheel Assy. (Includes (2) Ref. 27 Brgs.)	4
27	251-171	Bearing	8
28	237-30	"O" Ring	8
29	3-4417	Felt Washer	8
30	3-4416	Slinger	8
31	234-18	Tire	4

Ref. No.	Part No.	Description	No. Used
32	3257-3	Key	1
33	3-8570	Retainer, Blade	1
34	3-5215	Blade	1
35	3-5246	Special Screw	1
36	3254-14	Lockwasher 3253 22	1
37	3-6850	Lower Handle Assy.	1
38	3290-255	Hair Pin Cotter	2
39	3290-250	Hair Pin Cotter	2
40	222-14	Fuel Tank	1
41	222-15	Cap, Fuel Tank	1
42	304-71	Valve, Fuel Tank	1
43	3-6345	Bracket, Fuel Tank	1
44	3-6346	Strap, Fuel Tank	2
*	321-10	Screw, Fuel Tank	2
*	3296-42	Nut, Fuel Tank 32146 8	2
45	3-6477	Clamp, Fuel Tank	1
46	322-7	Screw	2
47	3296-20	Nut 32146 5	2
48	2210-87	Clamp, Hose	1
49	2-4549	Upper Handle Assy.	1
50	321-8	Screw	4
51	32149-2	Nut	4
52	3-2067	Decal, Throttle Control	1
53	3-5136	Throttle Control	1
54	3251-13	Screw	2
55	3296-2	Nut	2
56	5-0748	Clamp, Throttle Control	1
57	3-5181	Clamp, Fuel Hose	1
58	3-8282	Arm Protector	1
59	3296-4	Nut 32146 4	2
60	5-1507	Decal	1
61	32146-11	- Stop Nut	4

* Not Illustrated

INSIST ON GENUINE TORO PARTS

*New engine
work required*

Warranty

The Manufacturer warrants each new piece of equipment sold to be free of defects in material and workmanship. For one year from the purchase date of consumer line equipment or 45 days if sold for commercial use, Toro Manufacturing Corporation will repair or replace for the original purchaser, free of charge, through any Authorized Service Dealer, any part or parts found at our factory in Minneapolis, Minnesota, to be defective under normal use and service. All institutional equipment is warranted for ninety (90) days from the purchase date.

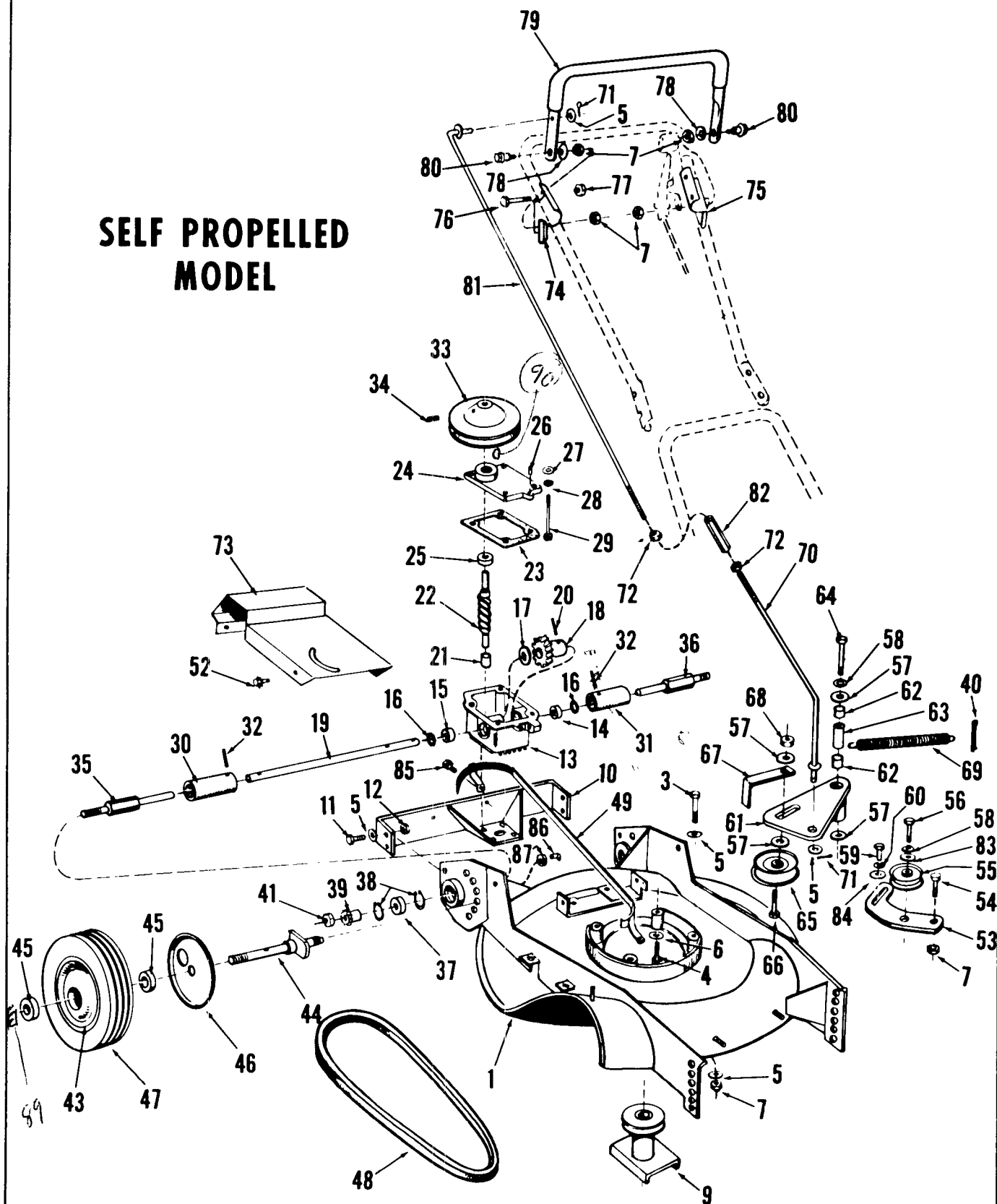
This Warranty does not obligate the Manufacturer to bear the cost of transportation charges in con-

nection with the replacement or repair of defective parts -- nor shall it apply to a machine upon which repairs or alterations have been made, unless authorized by the manufacturer.

This Warranty does not include nor cover standard accessories produced by other manufacturers. Such accessories have separate warranties by their respective manufacturers . . . and repair or exchange will be made on the basis of such warranties, and the policies authorized by them shall be adhered to.

This Warranty is in lieu of all other warranties expressed or implied.

SELF PROPELLED MODEL



Drawing No. 538-14

21" WHIRLWIND HEVI-DUTY SELF PROPELLED MOWER PARTS LIST

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
1	5-0350	Housing	1	43	2-9999	Drive Wheel Assy., Includes	2
*	221-142	Engine	1			(2) Ref. 45 Bearings	2
3	322-13	Screw	2	44	3-0779	Spindle Assy., w/zerk (Ref. 86)	2
4	322-10	Screw	2	45	251-180	Bearing	4
5	3256-23	Washer	10	46	3-6451	Cover, Wheel	2
6	3253-4	Lockwasher	2	47	3-7404	Tire, Rear	2
7	3296-29	Nut, Lock <i>32146-5</i>	10 <i>11</i>	48	3-6593	Belt	1
*	322-6	Screw	1	49	3-6594	Belt Guide	1
9	5-0410	Blade Retainer	1	*	321-4	Screw, Belt Guide	1
10	5-0370	Support, Gear Case <i>5-3566</i>	1	*	3296-42	Nut, Belt Guide <i>32146-8</i>	1
11	3210-5	Screw	4	52	32140-18	Screw	4
12	3296-20	Nut, Lock <i>32146-4</i>	4	53	3-6911	Arm, Auxilliary Idler	1
*	3-0129	Gear Case Assy. (Includes Ref. 13 thru Ref. 29)	1	54	322-3	Screw	1
13	2-9489	Gear Case, Incl. (1) Ref. 14 (1) Ref. 15 & (1) Ref. 21	1	55	3-4244	Idler	1
14	256-110	Bushing	1	56	323-7	Screw	2
15	256-109	Bushing	1	57	3256-24	Washer	5
16	253-86	Oil Seal	2	58	3253-21	Lockwasher	2
17	3-0724	Thrust Washer	1	59	322-1	Screw	1
18	3-6436	Worm Gear	1	60	3254-2	Lockwasher	1
19	3-6437	Shaft, Gear Box	1	61	2-9909	Idler Arm, Incl. (1) Ref. 62	1
20	32121-63	Roll Pin	1	62	256-1	Bushing	2
21	252-51	Needle Bearing	1	63	3-6468	Spacer	1
22	3-4738	Shaft, Worm <i>5-3680</i>	1	64	323-10	Screw	1
23	3-0734	Gasket	1	65	3-4243	Pulley, Idler	1
24	3-6438	Cover, Gear Case	1	66	3-7283	Screw	1
25	251-144	Bearing	1	67	3-6471	Belt Hook	1
26	32121-1	Roll Pin	2	68	3296-5	Nut <i>32146-6</i>	1
27	3256-22	Washer	4	69	3-7294	Spring	1
28	3253-3	Lockwasher	4	70	3-6472	Control Rod, Lower	1
29	321-14	Screw	4	71	3272-6	Cotter Pin	2
30	2-9839	Clutch Assy., Right	1	72	32149-1	Nut	2
31	2-9880	Clutch Assy., Left	1	73	3-6473	Shroud	1
32	32121-64	Roll Pin <i>5-1111</i>	2	74	3-7371	Bracket, Control Bail, Right	1
33	3-6442	Pulley, Gear Box <i>5-3681</i>	1	75	3-7372	Bracket, Control Bail, Left	1
34	3246-3	Set Screw	1	76	3251-11	Screw	4
35	3-6452	Shaft, Output, Right	1	77	3296-2	Nut	4
36	3-6454	Shaft, Output, Left	1	78	3290-211	Spring Washer	2
37	251-183	Bearing	2	79	2-9849	Control Bail	1
38	32151-8	Retaining, Ring	4	80	3-1846	Shoulder Screw <i>5-2490</i>	2
39	3-6453	Pinion, Right	1	81	3-6478	Control Rod, Upper	1
*	3-6455	Pinion, Left	1	82	3-6481	Sleeve, Control Rod	1
40	3272-11	Cotter Pin	1	83	3256-4	Washer	1
41	3220-3	Jam Nut	1	84	3256-23	Washer	1
*	3-5781	Special Nut, Left Hand Thread	2	85	32140-16	Screw	1
				86	302-42	Grease Fitting	2
				87	3296-28	Nut	3 <i>4</i>

*Not Illustrated

INSIST ON GENUINE TORO PARTS

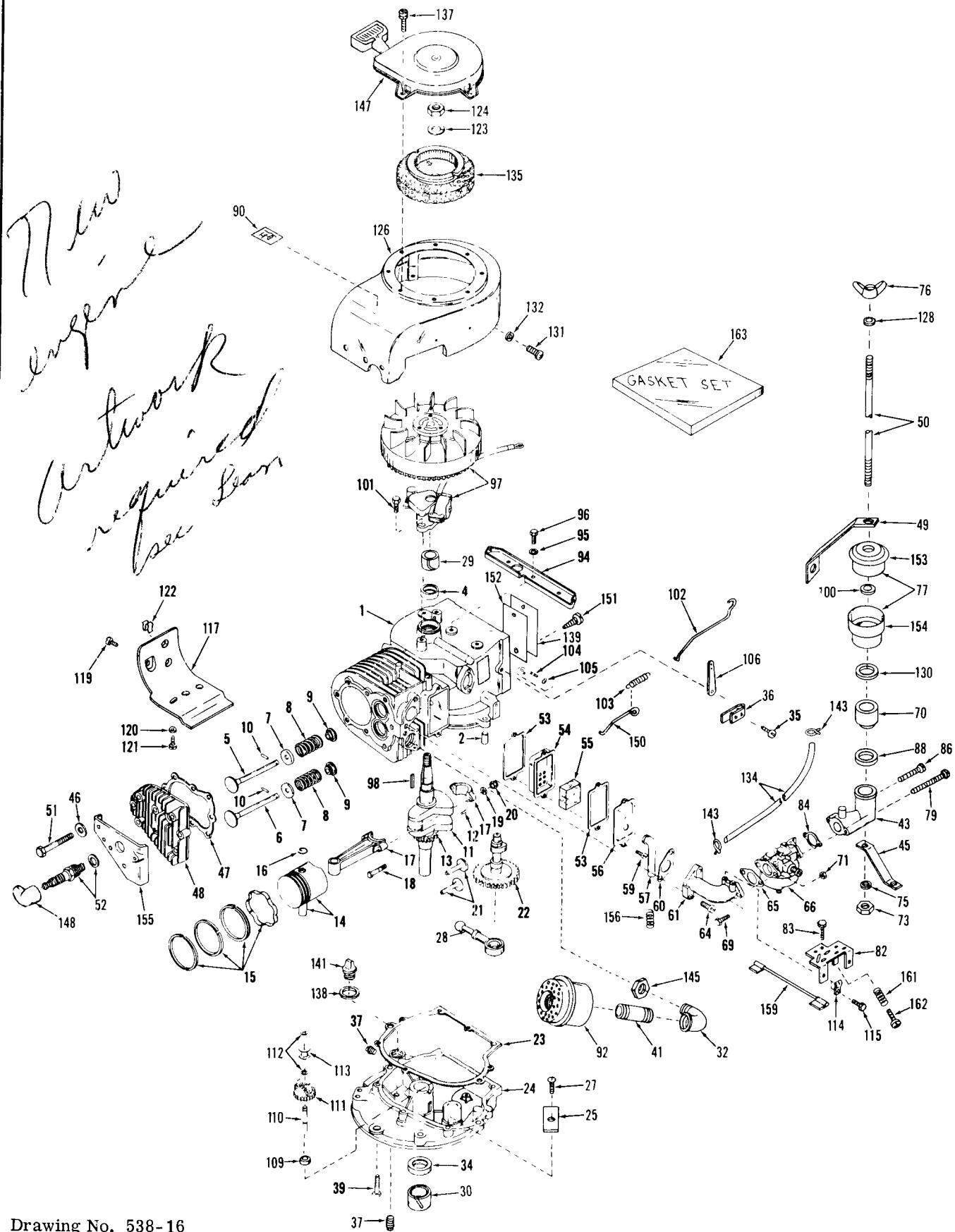
Above listed parts are used on the SELF PROPELLED MODEL only. For parts not shown, see Hand Propelled Drawing on page 12 of this manual. *84 32146 11 Stop M. 1 90 3257-27 Key*

IMPORTANT ORDERING INSTRUCTIONS

Repair parts are available from your TORO distributor or service dealer. To insure getting correct parts without delay, please furnish the following information:

1. Serial number of your mower as shown on the name plate.
2. Part number, description and quantity of each part required.
3. Name and address where parts are to be shipped.
4. Do not order by reference number; use part number only.

ENGINE Nos. V40-50008C and V40-50037C



Drawing No. 538-16

ENGINE Nos. V40-50008C & V40-50037C PARTS LIST

Ref. No.	Part No.	Description	No. Used
1	31460	Cylinder Assy.(Incl.#2, 4, & 29)	1
2	27652	Pin, Dowel	2
4	*27876A	Seal, Oil	1
5	31467	Valve, Intake(Standard)	1
5	31468	Valve, Intake(1/32"oversize) (Incl. No. 9)	1
6	31469	Valve, Exhaust(Standard)	1
6	31470	Valve, Exhaust(1/32"oversize) (Incl. No. 9)	1
7	27882	Cap, Upper Valve Spring	2
8	27881	Spring, Valve	2
9	27883	Cap, Lower Valve Spring (Std.)	2
9	30964	Cap, Lower Valve Spring (1/32" oversize)	2
10	20810	Pin, Valve Spring Retaining	2
11	31459	Crankshaft Assy. (Incl. Nos. 12 & 13) V40-50008C	1
11	31729	Crankshaft Assy. (Incl. Nos. 12 & 13) V40-50037C	1
12	29783	Pin, Crankshaft Gear	1
13	27884	Gear, Crankshaft	1
14	28739	Piston & Pin Assy. (Standard) (Incl. 2 of No. 16)	1
14	27886	Piston & Pin Assy. (.010 over- size) (Incl. 2 of No. 16)	1
14	27887	Piston & Pin Assy. (.020 over- size) (Incl. 2 of No. 16)	1
15	31463	Ring Set, Piston (Standard)	1
15	31464	Ring Set, Piston(.010 oversize)	1
15	31465	Ring Set, Piston(.020 oversize)	1
16	27888	Ring, Piston Pin Retaining	2
17	31466	Rod Assy., Connecting (Incl. Nos. 18, 19 & 20)	1
18	21718	Bolt, Connecting Rod	2
19	26073	Washer, Connecting Rod Bolt	2
20	28264	Nut	2
21	27893	Lifter, Valve	2
22	31354	Camshaft	1
23	*30684	Gasket, Mounting Flange	1
24	31471	Flange Assy., Mounting (Incl. Nos. 25, 27, 30, 34, 37, & 110)	1
25	31355	Screen, Oil Filter	1
27	29117	Screw	1
28	31356	Pump Assy., Oil	1
29	31461	Bushing, Crankshaft	1
30	31462	Bushing, Crankshaft	1
32	29574	Elbow, Exhaust (90-degree)	1
34	*27897	Seal, Oil	1
35	650548	Screw	1
36	31335	Clamp, Governor Lever	1
37	27642	Plug, Oil Drain	2
39	650488	Screw	7
41	30244	Nipple, Pipe	1
43	31473	Elbow, Air Cleaner	1
45	31475	Brace, Cleaner Elbow	1
46	26073	Washer, Flat	1
47	*28938A	Gasket, Cylinder Head	1
48	30938A	Head, Cylinder	1
49	31474	Brace, Cleaner	1
50	31476	Stud, Air Cleaner	1
51	28261	Screw	8
52	21943	Plug, Spark(Champion J-8 or equivalent)	1

Ref. No.	Part No.	Description	No. Used
53	*27896	Gasket, Valve Chamber Cover	2
54	28423	Body Assy., Breather	1
55	28424	Element, Breather	1
56	28425	Cover, Valve Chamber	1
57	27627	Tube, Breather	1
59	650128	Screw	2
60	*27915	Gasket, Intake Pipe	1
61	31512	Pipe, Intake	1
64	650378	Screw	2
65	*31688	Gasket, Carburetor	1
66	631117	Carburetor	1
69	6201	Screw	2
70	29497	Spacer, Cleaner	1
71	29752	Nut	2
73	650129	Nut	1
75	27513	Lockwasher, Split	1
76	650513	Nut, Wing	1
77	31477	Cleaner Assy., Oil Bath Air (Incl. Nos. 100, 128, 130, 153, and 154)	1
79	650519	Screw	1
82	31736	Control Assy., Speed	1
83	30200	Screw	2
84	*27272	Gasket, Air Cleaner Elbow	1
86	28597	Screw	1
88	*27165	Gasket, Spacer	1
90	31478	Decal, H. P.	1
92	29633	Muffler	1
94	28738	Bracket, Blower Housing (Incl. Nos. 131 & 132)	1
95	8303	Lockwasher	2
96	650561	Screw	2
97	610689	Magneto, Tecumseh	1
98	30884	Key, Flywheel	1
100	31480	"O" Ring	1
101	650489	Screw	2
102	31823	Link, Governor	1
103	31361	Spring, Governor	1
104	30669	Rod, Governor (Incl. No. 105)	1
105	28277	Washer, Flat	1
106	31357	Lever, Governor	1
109	31707	Spacer	1
110	30668	Shaft, Mechanical Governor	1
111	30591	Gear Assy., Governor	1
112	29193	Ring, Retaining	2
113	30588A	Spool, Governor	1
114	27793	Clip, Conduit	1
115	28942	Screw	1
117	30622	Extension, Blower Housing	1
119	650128	Screw	1
120	8303	Lockwasher	1
121	30688	Screw	1
122	27275	Clip, Hi-Tension Wire Retain.	2
123	650490	Washer, Belleville	1
124	8116	Nut	1
126	31472	Housing, Blower	1
128	31481	Washer, Copper	1
130	31479	Washer, Fiber	1
131	29596	Screw	2
132	8274	Lockwasher	2
134	30965	Line, Fuel	1
135	29709	Hub and Screen	1
137	29716	Screw	4

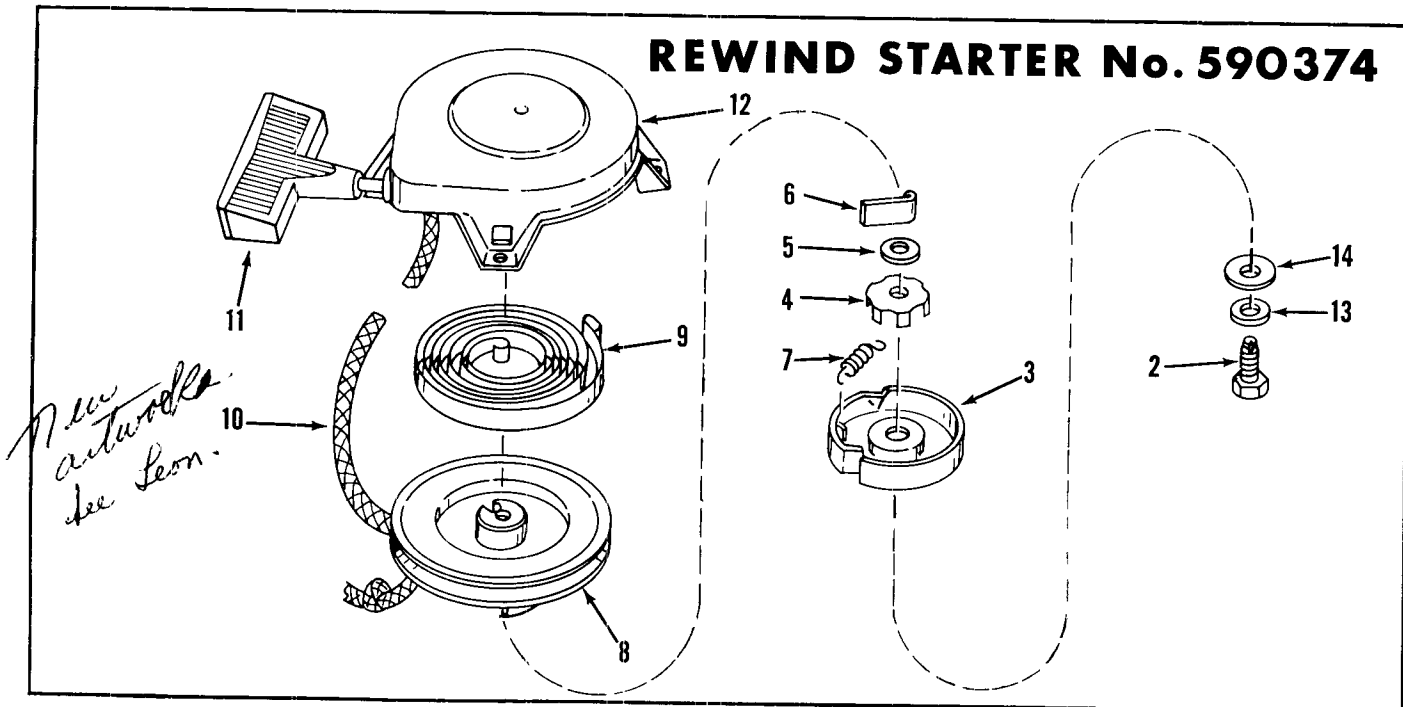
* Included in Gasket Set, Ref. No. 163

ENGINE Nos. V40-50008C and V40-50037C PARTS LIST (Continued)

Ref. No.	Part No.	Description	No. Used
138	*29673	Gasket, Oil Filler	1
139	31398	Decal, Name & Instruction	1
141	27625	Plug, Oil Filler	1
143	26460	Clamp, Fuel Line	2
145	28443	Nut, Conduit	1
147	590374	Starter, Rewind	1
148	27276	Cover, Spark Plug	1
150	31362	Link, Governor Spring	1
151	28670	Stud, Drive	2
152	31345	Plate, Identification	1

Ref. No.	Part No.	Description	No. Used
153	31669	Cover, Oil Bath Cleaner	1
154	31670	Bowl, Oil Bath Cleaner	1
155	30939	Cover, Cylinder Head	1
156	28819	Spring, Coil	1
159	28468	Wire, Ground	1
161	31342	Spring, Compression	1
162	650549	Screw	1
163	31372A	Gasket Set (Includes items marked *)	1

REWIND STARTER No. 590374



Ref. No.	Part No.	Description	No. Used
2	29728	Screw, Retainer	1
3	31280	Retainer	1
4	28774	Brake	1
5	31281	Washer, Thrust	1
6	590148	Dog, Starter	1
7	31277	Spring, Retainer	1
8	31282	Pulley Assembly	1

Ref. No.	Part No.	Description	No. Used
9	31278	Spring, Rewind	1
10	30337	Rope, Starter	1
11	590288	Handle, Starter	1
12	31283	Housing, Starter	1
13	28780	Washer, Brake	1
14	31289	Washer, Spacer	1

OFF-SEASON STORAGE INSTRUCTIONS

Mowers stored for any length of time should be completely drained of fuel to prevent gum deposits forming on essential parts such as the carburetor, fuel lines and tank. Such deposits may affect the operation of the engine when used again. Therefore, it is important that the following instructions be adhered to before storing the engine.

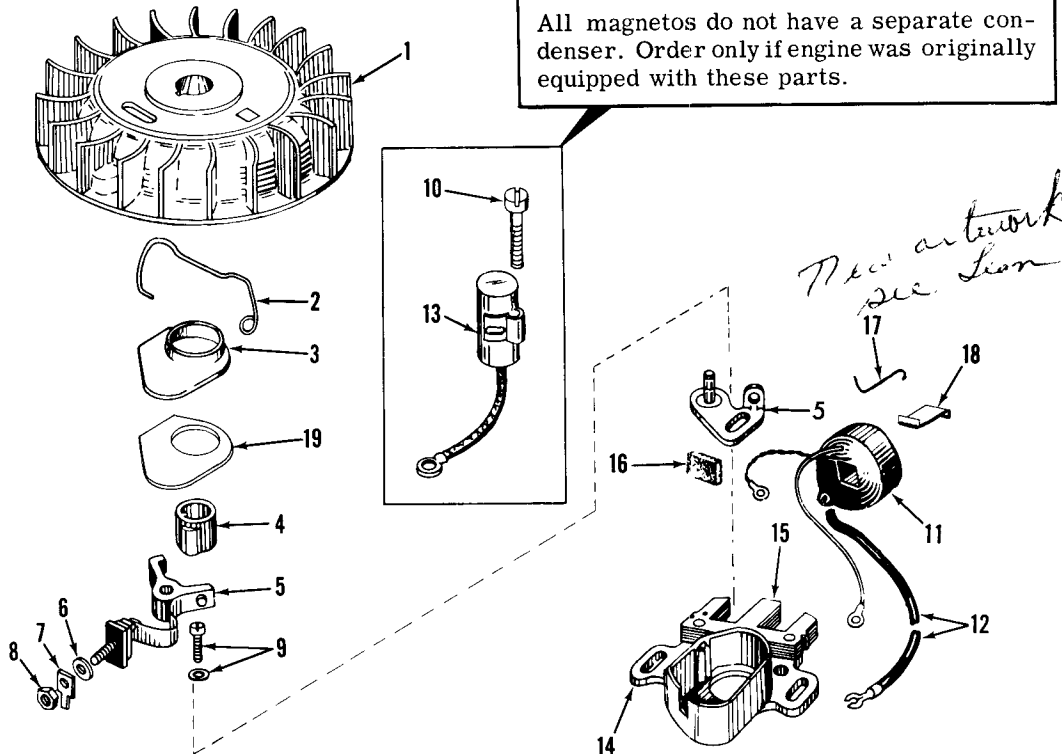
1. Drain the fuel tank completely.
2. Operate the engine until it stops from exhaustion of fuel to clean all gasoline out of the carburetor.
3. While the engine is still warm, drain and clean the crankcase drain. Refill with fresh oil.
4. Replace the drain and fill plugs.
5. Remove sparkplug, pour one ounce of S. A. E. #20 oil into the cylinder. Crank the starter one full turn, push down to start position on handle control to spread the oil. Replace the spark plug.
6. Clean dirt and chaff from cylinder and cylinder head fins, blower housing, etc.
7. Remove engine cylinder head and scrape carbon from valves, piston head, and combustion chamber; this should be done every 250 hours.

COVER AND STORE YOUR MOWER IN A DRY, WARM LOCATION

MAGNETO No. 610689

NOTE:

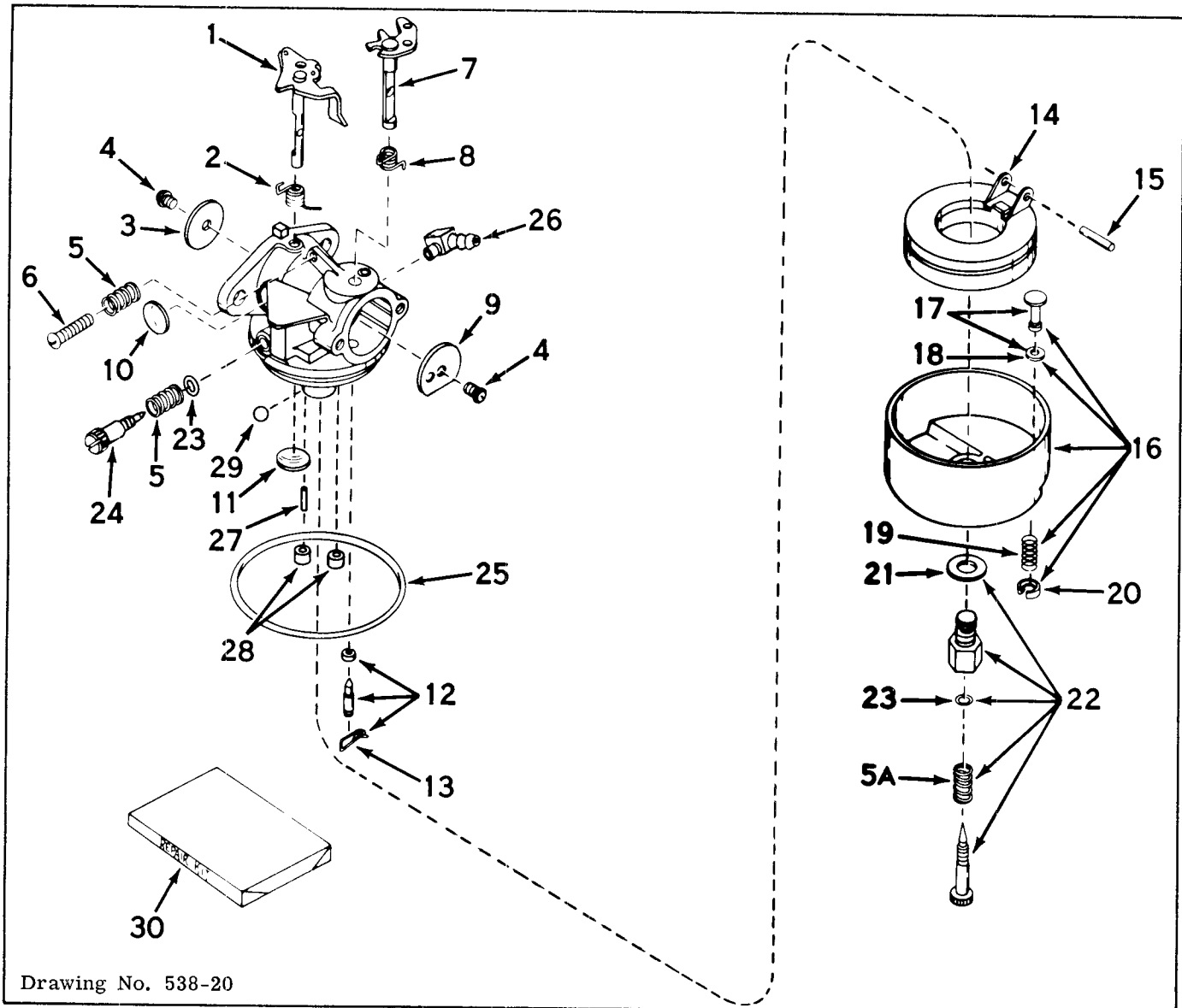
All magnetos do not have a separate condenser. Order only if engine was originally equipped with these parts.



Ref. No.	Part No.	Description	No. Used
1	30555	Flywheel	1
2	30551	Spring, Breaker Box	1
3	30550	Cover, Breaker Box Dust	1
4	30992	Cam, Breaker	1
5	30547	Breaker Assy.	1
6	610385	Washer, Terminal	1
7	30843	Tab, Ground Terminal	1
8	610408	Nut, Terminal	1
9	29181	Screw & Washer, Breaker	1
10	610593	Screw, Condenser Fastening	1
11	*30560	Coil Assy. (Incl. Ref. Nos. 12 & 18)	1
12	30554	Wire, Lead	1

Ref. No.	Part No.	Description	No. Used
13	30548	Condenser	1
14	30545	Core & Plate	1
15	30561	Stator Assy., (Incl. Nos. 5 thru 14, 16, 17 & 18)	1
16	30549	Felt, Cam Wiper	1
17	31311	Clip, Coil Locking	1
18	29629	Spring, Coil Wedge	1
19	30883	Gasket, Dust Cover	1
*Replacement coil does not require condenser. See instructions included with replacement coil.			

CARBURETOR No. 631117



Drawing No. 538-20

Ref. No.	Part No.	Description	No. Used
1	31834	Shaft & Lever Assy., Throttle	1
2	630731	Spring, Throttle Return	1
3	631036	Shutter, Throttle	1
4	650506	Screw	2
5	630766	Spring, Idle Regulating Screw	2
5A	630738	Spring, Main Adjustment Screw	1
6	650417	Screw, Idle Regulating	1
7	630973	Shaft & Lever Assy., Choke	1
8	630821	Spring, Choke Return	1
9	631037	Shutter, Choke	1
10	630748	Plug, Welch	1
11	631027	Plug, Welch	1
12	*631021	Inlet Needle, Seat & Clip Assy. (Incl. No. 13)	1
13	631022	Clip, Inlet Needle	1
14	631023	Float, Carburetor	1
15	*631024	Shaft, Float	1

Ref. No.	Part No.	Description	No. Used
16	631025	Bowl & Drain Assy. Float (Incl. Nos. 17 thru 20)	1
17	27136	Plunger Assy., Drain (Incl. #18)	1
18	27554	Gasket, Drain Plunger	1
19	27137	Spring, Drain Plunger	1
20	27138	Retainer, Plunger Spring	1
21	*27110	Gasket, Bowl-to-Body	1
22	*631026	Adjustment Screw Assy., Main (Incl. Nos. 5A, 21 & 23)	1
23	630740	"O" Ring, Adjustment Screw	2
24	*631078	Screw, Idle Adjustment	1
25	*631028	"O" Ring, Bowl-to-Body	1
26	631038	Fitting, Fuel Inlet	1
27	631039	Pin	1
28	630747	Plug, Cup	2
29	631081	Ball, Aluminum	1
30	631029	Repair Kit (Incl. items marked *)	1