FORM NO. 3310-732 REV. A

TORO®

MODEL: 31995 – 600001 THRU 700001 & UP

OPERATOR'S MANUAL

1032 SNOWTHROWER

SAFETY INSTRUCTIONS

This safety alert symbol means CAUTION – PERSONAL SAFETY INSTRUCTION. Read the instruction because it has to do with safety. Failure to comply with the instruction may result in personal injury.

The following instructions are comparable to the "Instructions for Safe Snowthrowing" adopted by ANSI – American National Standards Institute. The snowthrower is designed and tested to offer reasonably safe service, provided it is operated in strict accordance with the following Safety Instructions. Failure to comply with these instructions MAY RESULT IN PERSONAL INJURY.

BEFORE OPERATING

1. Never allow children to operate the snowthrower. Operate the snowthrower only after READING THIS MANUAL and receiving proper instructions.

2. Familiarize yourself thoroughly with the controls. Know how to stop the engine and disengage controls quickly.

3. Keep everyone, especially children and pets away from the area of operation.

4. Wear adequate winter clothing including footwear that will improve footing on slippery surfaces.

5. Since fuel is highly flammable, handle it with care. Fill fuel tank with gasoline before trying to start the engine.

   A. Use an approved fuel container for storing gasoline.

   B. Fill fuel tank outdoors, not indoors. Fuel tank must not be filled when engine is running or when engine is hot.

   C. Install gasoline container cap and fuel tank cap, and wipe up any spilled gasoline before starting the engine.

6. Thoroughly inspect the area where snowthrower will be used. Remove all door mats, sleds, boards, wires, and any other foreign objects.

7. Keep all shields and safety devices in place. If a shield or safety device is defective, make all repairs before operating snowthrower. Also tighten loose nuts, bolts, and screws.

8. Start engine and let it warm up outdoors for about two minutes to adjust to outdoor temperature before clearing snow.

9. Move auger drive control to DISENGAGE and gear shift lever to N, neutral, before starting engine.

10. Adjust both skids so auger housing clears gravel or crushed rock surfaces.

WHILE OPERATING

11. Never operate snowthrower without good visibility or light. Always maintain secure footing and keep a firm grip on the handles, especially when operating in reverse: walk, never run.

12. Do not run engine indoors, except when starting engine. When starting engine indoors, open outside doors because exhaust gasses are dangerous.

13. Keep face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts. Stay behind the handles while operating the snowthrower. STAY CLEAR OF DISCHARGE OPENING AT ALL TIMES.

14. Do not attempt to make adjustments while engine is running.

15. Use extreme caution when clearing snow from or crossing a walk, road, or a gravel drive. Stay alert for hidden hazards and traffic on roads.

16. Never direct discharge or operate snowthrower near bystanders, glass enclosures, automobiles and trucks, window wells, or a drop-off without proper adjustment of the snow discharge angle. Keep children and pets away.

SAFETY INSTRUCTIONS

17. Never direct snow discharge at bystanders, and do not allow anyone in front of the snowthrower.

18. Do not clear snow across the face of slopes. Never clear snow from steep slopes. Exercise extreme caution when changing direction on slopes.

19. Do not overload the snowthrower by clearing snow at too fast a rate.

20. If a solid object is hit or if the snowthrower vibrates abnormally, turn key to OFF so engine stops. After waiting for all moving parts to stop, remove high tension wire from spark plug and make sure it does not contact plug accidentally. Then check snowthrower for possible damage, an obstruction, or loose parts. Repair any damage before starting and operating the snowthrower.

21. Before leaving the operator's position – behind handles – move auger drive control to DISENGAGE, move gear shift lever to N, neutral, and rotate ignition key to OFF. Remove key from switch if snowthrower will be left unattended.

22. Before adjusting, cleaning, repairing and inspecting the snowthrower, and before unclogging the discharge guide, shut engine off and wait for all moving parts to stop. Next, remove high tension wire from spark plug and keep wire away from the plug to prevent accidental starting.

23. Move auger drive control to DISENGAGE before transporting or storing the snowthrower. Never operate snowthrower at high transport speeds on slippery surfaces. Use care when backing.

24. Let engine run for a few minutes after clearing snow so moving parts do not freeze.

MAINTENANCE AND STORAGE

25. When storing the snowthrower, REMOVE KEY FROM SWITCH. Store key in a memorable place.

26. Never let fuel in the snowthrower fuel tank when snowthrower is stored in a building where there is flame or spark present. Allow engine to cool before storing.

27. Before performing any maintenance or servicing the snowthrower, turn key to OFF and wait for engine and all moving parts to stop. Remove key from switch and high tension wire from spark plug. Make sure high tension wire does not contact plug accidentally.

28. Perform maintenance and use storage instructions described in this manual.

29. Keep all nuts, bolts, and screws tight to assure snowthrower is in safe working condition.

30. At the time of manufacture, the snowthrower conformed with and exceeded safety standards in effect for snowthrowers. Therefore, to assure optimum performance and safety, purchase genuine TORO replacement parts and accessories to keep the Toro all TORO. NEVER USE "WILL-FIT" REPLACEMENT PARTS AND ACCESSORIES. The TORO logo assures genuineness.

31. For safety reasons, use only those accessories and attachments recommended by The Toro Company to assure continued safety certification of the product. Using unapproved accessories and attachments could void the product warranty of The Toro Company.

SAFETY DECALS

Safety and instruction decals are located on the control panel and snowthrower chassis. Replace any decal that is damaged.

ON BACK OF ENGINE

⚠ CAUTION

AVOID POTENTIAL HAZARDS

1. STOP ENGINE AND WAIT FOR ALL MOVEMENT TO STOP BEFORE UNCLOGGING OR SERVICING MACHINE.
2. DO NOT DEFEAT INTERLOCK SYSTEM. IT IS FOR YOUR PROTECTION.
3. NEVER DIRECT DISCHARGE TOWARD BYSTANDERS NOR WINDOWS, NOR ALLOW ANYONE IN FRONT OF OR NEAR THE MACHINE WHILE OPERATING.
4. BE SURE SNOWTHROWER IS PROPERLY ASSEMBLED AND ADJUSTED.
5. READ YOUR OWNER'S MANUAL FOR OPERATING AND SAFETY INSTRUCTIONS. IF YOU DO NOT HAVE AN OWNER'S MANUAL WRITE US, INCLUDING MODEL AND SERIAL NUMBERS.

THE TORO COMPANY, 8111 LYNDALE AVE. S. MINNEAPOLIS, MN 55420

ON AUGER HOUSING

⚠WARNING

KEEP CLEAR OF AUGER WHILE ENGINE IS RUNNING

STOP ENGINE BEFORE REMOVING DEBRIS

NEAR HANDLE GRIP

SAFETY INTERLOCK UP TO RUN

ON DEFLECTOR

⚠WARNING

KEEP HANDS OUT OF CHUTE

STOP ENGINE BEFORE UNCLOGGING OR REMOVING DEBRIS

DO NOT DIRECT DISCHARGE AT BYSTANDERS

FOREWORD

The 1032 Snowthrower is an outstanding product for snow removal. It has advanced concepts in engineering; design, and safety; and if maintained properly, the snowthrower will be reliable.

Since the snowthrower is a quality product, Toro is concerned about its future use and the safety of the user. Therefore, read this manual to familiarize yourself with correct set-up, operation, and maintenance. The four major sections of the manual are:

1. Setting Up Instructions
2. Preparation Before Starting
3. Operating Instructions
4. Maintenance

Some information in this manual needs emphasizing. The words CAUTION, IMPORTANT, and NOTE are used to classify the information. "Caution" identifies personal safety related information. "Important" identifies mechanical information demanding special attention. Be sure to read the directive because it has to do with the possibility of damaging a part or parts of the snowthrower. "Note" identifies general information worthy of special attention.

If help – concerning the snowthrower – is ever needed, contact the local Authorized TORO Service Dealer or TORO Distributor. Refer to the yellow pages for assistance. In addition to genuine TORO replacement parts, the dealer and distributor have other TORO products and many accessories for these products.

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SPECIFICATIONS

Briggs and Stratton Engine: Model 251417, type 0140-01, four cycle, air cooled engine with an output of 10 hp @3600 rpm and 16.80 ft-lb of torque @2400 rpm. Displacement is 24.36 cubic inches. Engine is equipped with manual choke, remote control throttle and battery operated starter.

Fuel Tank: Tank is made of steel and has an approximate capacity of four quarts. The winterized fuel tank cap has a side vent.

Auger: Two section, drum-type auger is made of heavy gauge steel: welded type construction. Each auger section has two flights that are 3½ inches deep. Approximate diameter of auger is 16 inches. Auger speed is 103 rpm when engine is running at 3400 rpm.

Auger Housing: Auger housing is approximately 32 inches wide and 22 inches high. The pivoting scraper blade has a rotational height of approximately one inch. By adjusting skids at sides of auger housing side plates, height of auger housing can range from 0 to 2 inches from the ground.

Auger/Impeller Drive: Drive is belt-type with idler pulley, with power transmitted to a worm gear which drives the auger and impeller; reduction is 9.00:1.

Impeller: The three blade, 14 inch diameter impeller is made of heavy gauge steel: welded type construction. Impeller speed is 925 rpm when engine is running at 3400 rpm. Blade tip speed of impeller is 3300 ft/min when engine is running at 3400 rpm. Mass throw range per minute is 1200-1500 pounds and a throw distance of approximately 25-30 feet. When auger drive control is disengaged, brake mechanism stops impeller in less than five seconds.

Discharge Chute: Chute is made of heavy gauge steel and has throat diameter of approximately 7 inches. Chute angle of rotation from side to side is 200° and deflector angle of rotation is 60° up and down.

Tires: Pneumatic tire is 16 x 4.80-8 with diamond tread design. Track width from outside of tires is approximately 26½ inches.

Traction Drive Transmission: Friction disc-type drive with forward speeds of 0.7, 1.4, and 2.2 mph, and reverse speed of 1.4 mph at engine speed of 3400 rpm. Wheel clutches transmit power to wheels.

Controls: Mounted on control panel are the throttle, ignition switch, wheel drive control, auger drive control, and two wheel clutches. Chute control rod is mounted at side of left handle, and interlock levers are mounted at grip end of handles. Engine has manual choke and electric starter. Head lamp has toggle switch.

Handles: Two, 1-1/4 inch diameter steel tubing handles have zinc plating and a clear chromate dip. Grip at end of both handles. Width between handles is approximately 25 inches and height to top of handle grip is approximately 37 inches.

Battery: Automotive type P22 F-NC battery. 12 volts and 54 amp hours.

Headlamp: Mounted on upper right handle is the 12 volt, 60 watt, sealed beam headlamp. Bulb size is Par 36 and lamp number is 4461. Wire harness has an inline, 7½ amp fuse.

Dimensions:

Overall width is approximately 35 inches.

Overall length is approximately 63 inches.

Overall height is approximately 41 inches.

Weight: Approximate dry weight is 360 pounds.

Accessories:

Tire Chains (part no. 23-2340)

Drift Breaker/Storage Bar (part no. 20-0650)

Snow Cab (part no. 12-8100)

Grader Blade (model no. 59051)

Sweeper (model no. 59072)

LOOSE PARTS

Part	Qty	Use
Flange Screws	4	Install Handles, page 5, step 2
Sems Screw & Lock Nut	2	Install Throttle, page 5, steps 1 & 2
Small Knob	1	
Clevis Pin (½" lg.) & Cotter Pin	1	Install Auger Drive Rod, page 6, step 2
Clevis Pin (2" lg.), Large Flat Washer	1	Install Wheel Drive Control, page 6, steps 2, 4 & 6
Hair Pin Cotter, Spring	1	
Clevis Pin (1¼" lg.), Cotter Pin & Large Knob	1	
Cap Screw & Lock Nut	1	Install Discharge Chute Control, page 7, step 1
Carriage Bolt, Lock Nut & Pyramidal Washer	1	Install Discharge Chute Control, page 7, step 2
Keys	2	Use in ignition switch
Registration Card	2	

SETTING UP INSTRUCTIONS

NOTE: Determine left and right sides of snow-thrower by standing behind it.

Install Handles

Tools Required: 9/16-Inch Socket and a Torque Wrench

1. Remove any tape from handles and chute control rod.

2. Position handles against outside of traction unit side plates. Next, secure handles in place with four hex flange screws (Fig. 1). Tighten hex flange screws to 23 ft-lb.

Figure 1

Install Throttle Control and Wheel Clutch Rods

Tools Required: 5/16-Inch Socket, 3/8-Inch Socket, and 9/16-Inch Open End Wrench

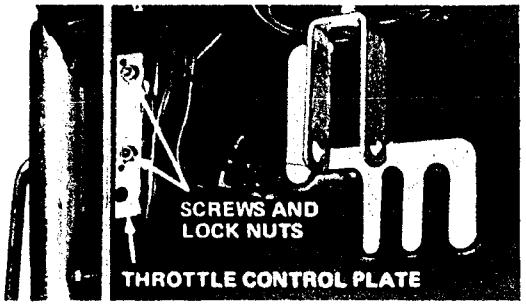


Figure 2

1. From back side, slide throttle control lever through slot in control panel. Next, secure throttle control plate in place with two hex head sems screws and lock nuts (Fig. 2).

2. Push or, if required, tap small knob onto throttle lever.

3. Remove couplings from wheel clutch rods. Next, thread couplings fully onto bottom rods (Fig. 3).

4. Thread jam nuts (Fig. 3) completely onto wheel clutch rods; then screw rods into couplings (Fig. 3) until rods "bottom out" in the couplings. Next, tighten jam nuts firmly onto top of couplings.

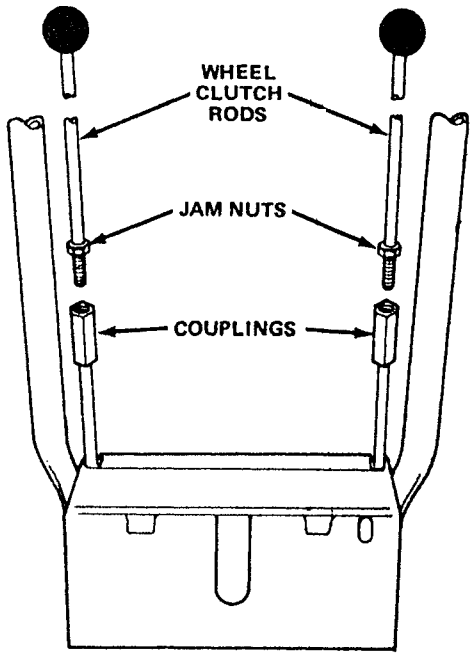


Figure 3

SETTING UP INSTRUCTIONS

Install Auger Drive Control Rod

Tools Required: Pliers and 9/16-Inch Open End Wrench

1. Move auger drive control down to DISENGAGE and hold it in that position.

2. Rotate clevis (Fig. 4) on end of control rod until holes in clevis line up with hole in bent rod. Next, secure clevis and bent rod together with clevis pin and cotter pin (Fig. 4).

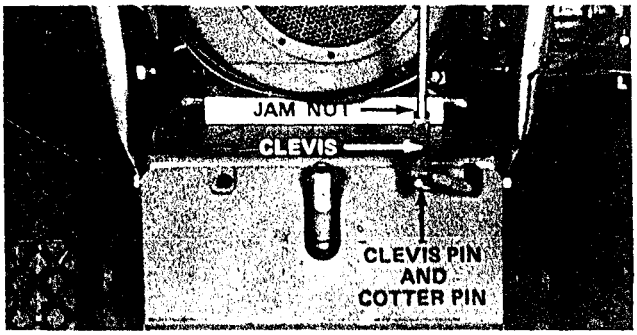


Figure 4

NOTE: Use Adjusting Auger Drive Belt instructions on page 16 if additional adjustment is required.

3. Bottom jam nut firmly onto clevis (Fig. 4).

Install Wheel Drive Control

Tools Required: Pliers

1. Install tension spring through hole at bottom center of wheel drive control (Fig. 5).

2. From back side, slide wheel drive control lever through 1st gear slot in control panel (Fig. 5). Next, line up holes in wheel drive control pivot with U-shaped pivot bracket; then secure parts in place with clevis pin (Fig. 5). Head of clevis pin must be on right side of U-shaped bracket.

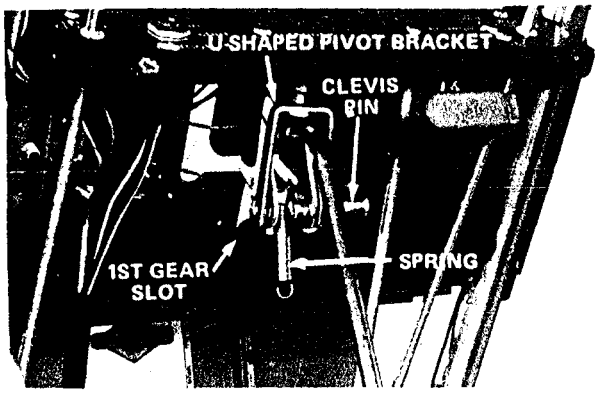


Figure 5

3. Slide flat washer onto clevis pin; then install hair pin cotter through clevis pin so all parts are retained in place (Fig. 6).

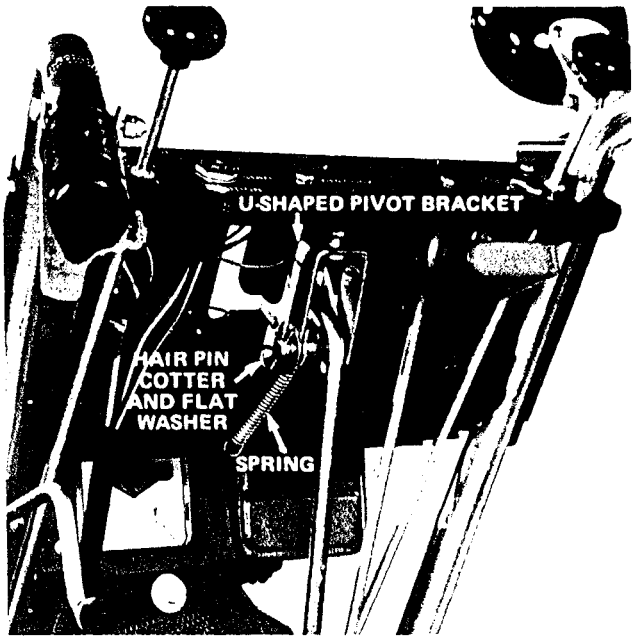


Figure 6

4. Line up holes in U-shaped end of control rod with hole in tube at center of traction unit (Fig. 7). Next, secure parts together with clevis pin and cotter pin (Fig. 7).

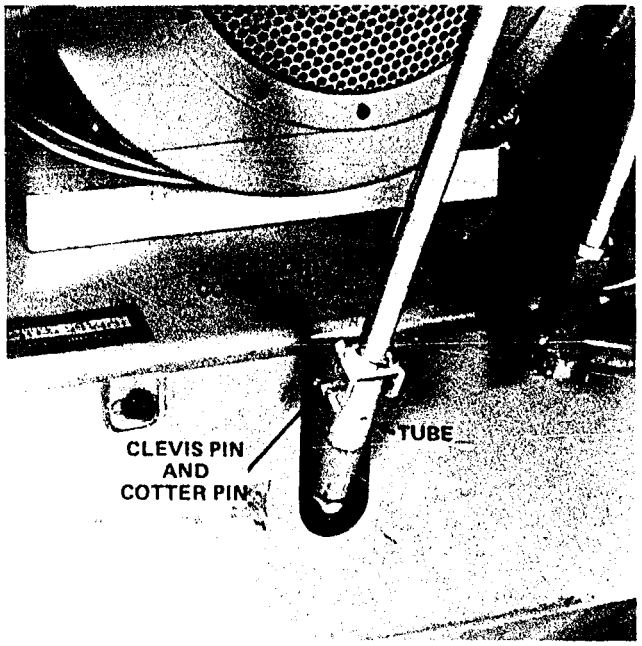


Figure 7

5. Install end of tension spring into hole in control panel (Fig. 6).

6. Screw large knob onto end of wheel drive control lever.

SETTING UP INSTRUCTIONS

Install Discharge Chute Control

Tools Required: ½-Inch Socket and ½-Inch Wrench

1. Install chute control bracket and rod against left side of handle with cap screw and lock nut (Fig. 9); but do not tighten the lock nut.

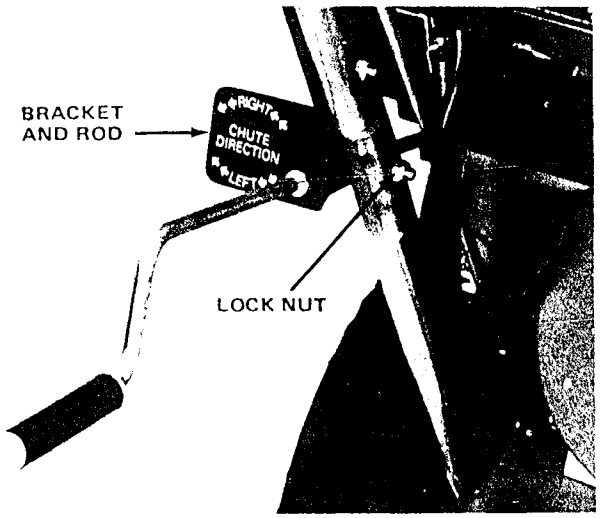


Figure 9

2. Apply no. 2 wheel bearing grease on worm gear (Fig. 10). Next, mount worm bracket and gear on top of mounting flange with carriage bolt, pyramidal washer and cone lock nut (Fig. 10). Do not tighten lock nut.

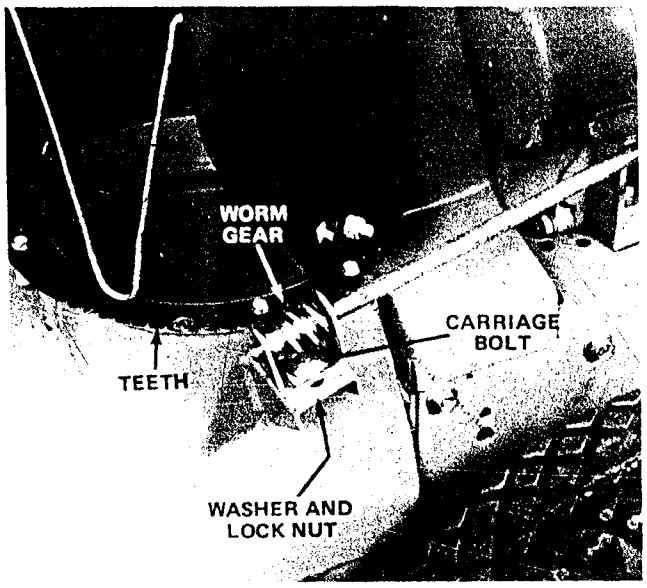


Figure 10

3. Push worm firmly against teeth in retaining ring; then tighten lock nut (Fig. 10). Also tighten lock nut holding chute control bracket against handle (Fig. 9).

Check Wheel Drive Adjustment

Tools Required: Tape Measure

1. Move wheel drive control into "third" gear and check position of lever (Fig. 11). Bottom of shift lever must be 1/4 – 3/8 inch from bottom of slot (Fig. 11). If lever is not in correct position, proceed to step 2 and adjust the U-shaped pivot bracket that holds wheel drive control. If lever is in correct position, proceed to step 4.

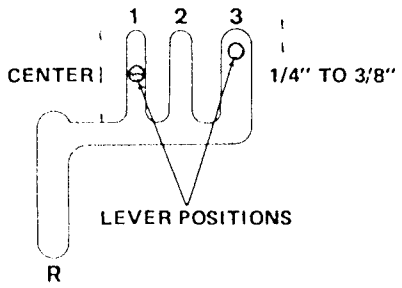


Figure 11

2. Shift into "first" gear; then remove hair pin cotter, flat washer, and clevis pin retaining wheel drive control in place (Fig. 12). Next, move wheel drive control away from U-shaped pivot bracket and rotate the pivot bracket one complete turn (Fig. 12). Then reinstall gear shift.

NOTE: Rotate U-shaped pivot bracket clockwise – in – to lower wheel drive control lever and counterclockwise – out – to raise the lever (Fig. 12).

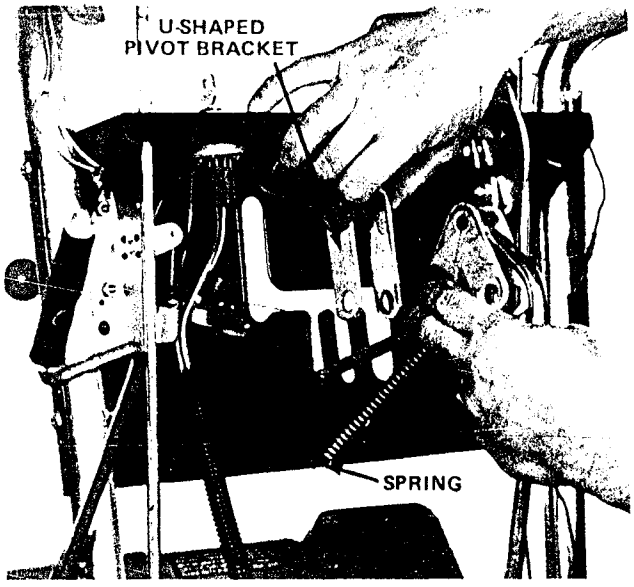


Figure 12

3. Check the adjustment by repeating step 1.

4. Move wheel drive control to N – neutral.

SETTING UP INSTRUCTIONS

Connect Light And Interlock Wires

Tools Required: None

1. Push connector at end of headlamp wire onto terminal below center of starter motor (Fig. 13).

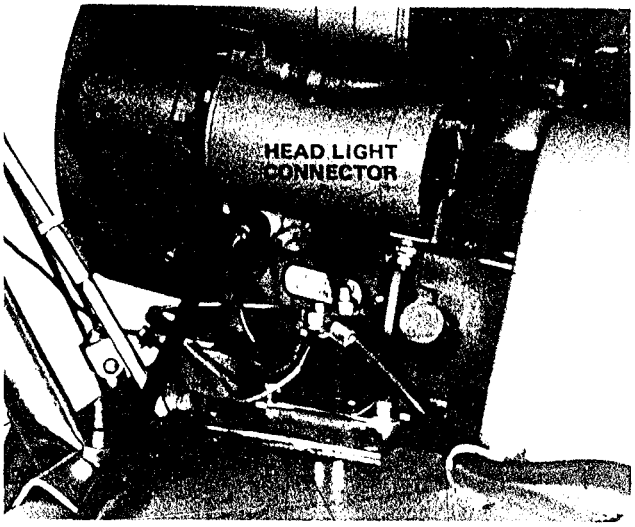


Figure 13

2. Push ignition connector onto ignition switch terminals (Fig. 14).

3. The ignition connector has a single wire that is free. Push the terminal at end of single wire onto top terminal of wheel drive control interlock switch (Fig. 14).

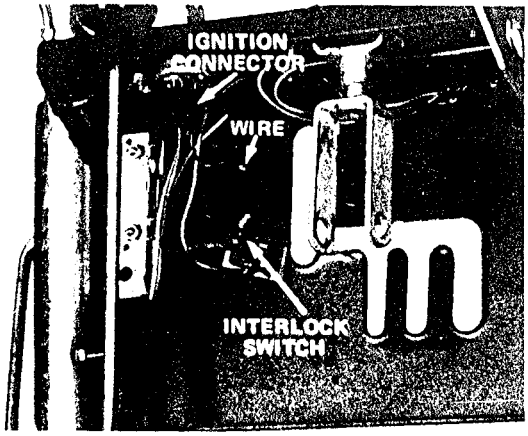


Figure 14

Check Auger Gear Box Oil

Tools Required: 3/8-Inch Open End Wrench

1. Move snowthrower to a level surface.

2. Remove pipe plug from gear box (Fig. 15); then check level of oil in gear box. Oil must be at point of overflowing in filler opening.

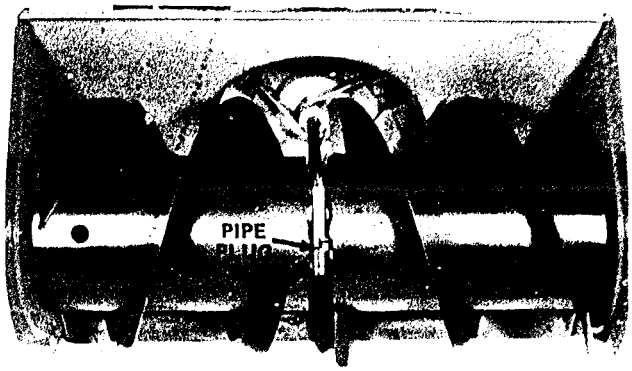


Figure 15

3. If level of oil is low, add SAE 90 EP transmission oil to the gear box until point of overflow.

4. Install pipe plug in gear box (Fig. 15).

IMPORTANT: Change oil in auger gear box once a year. If possible, run auger just before changing oil because warm oil flows better and carries more contaminants than cold oil.

Remove Battery From Mounting Plate

Tools Required: Two, 1/2-Inch Open End Wrenches

1. Remove two top nuts retaining end of battery strap (Fig. 16). Set battery strap aside.

NOTE: Battery cover cannot be removed at this time because there is interference with other parts.

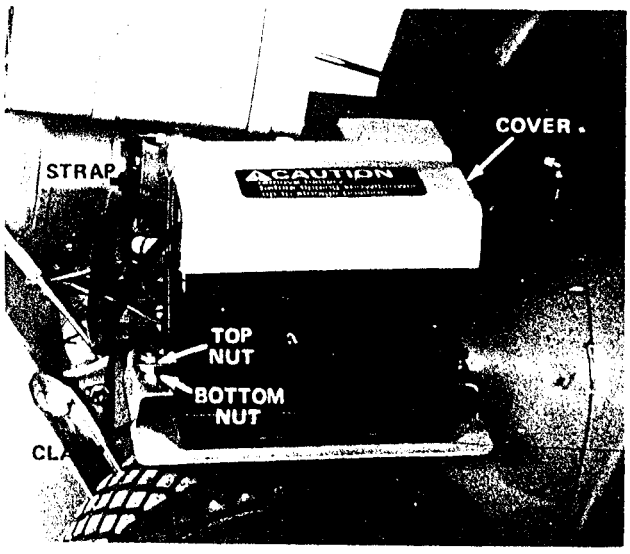


Figure 16

2. Loosen both bottom nuts until clamps do not secure battery in place (Fig. 16). Next, slide battery off mounting plate about two inches; then remove cover from top of battery.

SETTING UP INSTRUCTIONS

3. In sequence, slide positive and negative battery cables off the battery posts (Fig. 17). Next, lift battery off mounting plate and set it aside.

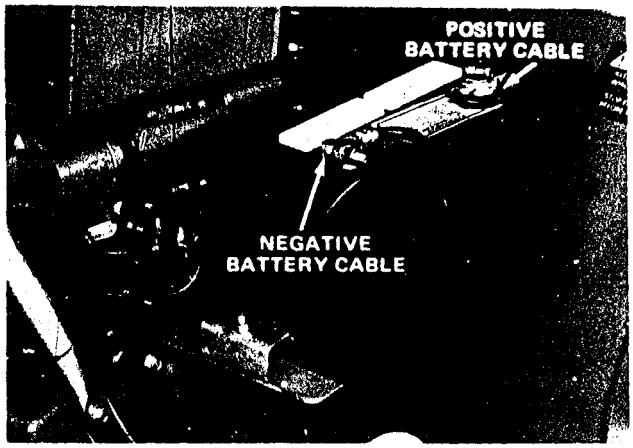


Figure 17

Fill Battery With Electrolyte.

Tools Required: Safety Goggles and Rubber Gloves

NOTE: There is no electrolyte shipped with the snowthrower; therefore, the electrolyte must be purchased at an "automotive supply store" or "service station". Correct "specific gravity" for the electrolyte is 1.260.

CAUTION

Electrolyte — battery acid — is corrosive and poisonous because it contains sulfuric acid. Keep electrolyte out of the reach of children. Avoid acid contact with skin, eyes, and clothing. When filling battery with electrolyte, wear safety goggles and rubber gloves to protect eyes and hands.

1. Remove vent caps from top of battery by pulling them up (Fig. 18).

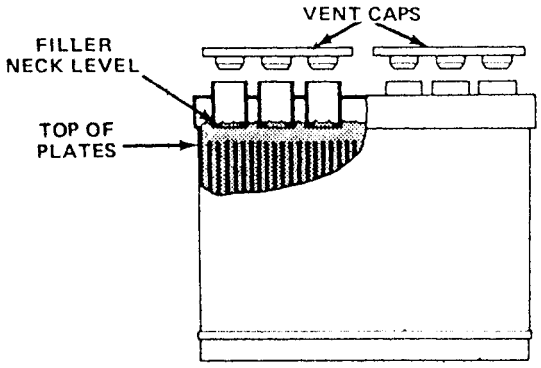


Figure 18

CAUTION

Read instructions on electrolyte package before filling battery to prevent possible accidents.

2. Fill battery cells until level of electrolyte is over the plates, but only up to the ring at bottom of filler neck (Fig. 18). DO NOT OVERFILL. Next, let battery stand for about 15 minutes. During this time, level of electrolyte may settle and fall below the prescribed level; therefore, add electrolyte to any affected cell until level is up to ring at bottom of filler neck.

IMPORTANT: Never add electrolyte to any battery cell after battery is charged because damage to the battery will result.

3. Install vent caps on top of battery.

CAUTION

After filling the battery cells, a small amount of electrolyte is usually left in the electrolyte package. This excess electrolyte must be neutralized and disposed safely.

Neutralize and Dispose Excess Electrolyte

Tools Required: Plastic Pail, Baking Soda, Wooden Stick, Safety Goggles, and Rubber Gloves

1. Put approximately one pint of water and five heaping teaspoons of BAKING SODA into a plastic pail.

2. Dissolve baking soda by stirring solution with the wooden stick.

3. After baking soda is dissolved, pour excess electrolyte into the soda-water solution. Foaming action will result. Next, rinse inside of electrolyte package with water; then pour the water into the pail of soda-water. The electrolyte package is now neutralized and can be disposed.

4. Stir solution in pail with wooden stick. Continue to stir the solution and add more BAKING SODA until all foaming stops. When foaming stops electrolyte is neutralized and safe for disposal.

5. Dispose of the solution in the pail by flushing solution down a toilet or by pouring it down a

drain. Next, rinse the pail and wooden stick with clean water; then dispose of the water. The pail and stick are now neutralized.

6. Dispose of the electrolyte package and wooden stick by putting them in a refuse container.

Charge Battery

Tools Required: 6 to 10 Amp Battery Charger

CAUTION

Charge battery in a well-ventilated area because gases are produced while battery is being charged. Do not inhale the gases because nausea may result. Also, the gases are explosive; therefore, do not smoke, and keep away from open flame and electrical spark to prevent a possible explosion. Have enough water available to flush electrolyte from skin and eyes, if it is accidentally contacted. Wear safety goggles when near a battery being charged.

Do not connect or disconnect battery and charger while charger is plugged into 110-120 VAC wall outlet because a spark could possibly cause the battery to explode. Therefore, pull charger plug out of wall outlet before connecting or disconnecting charger from battery (Fig. 19).

1. Charge the battery. Using a 6 to 10 amp charger (Fig. 19), charge battery according to the instructions supplied by the manufacturer of the charger. "Quick charging" the battery is not recommended.

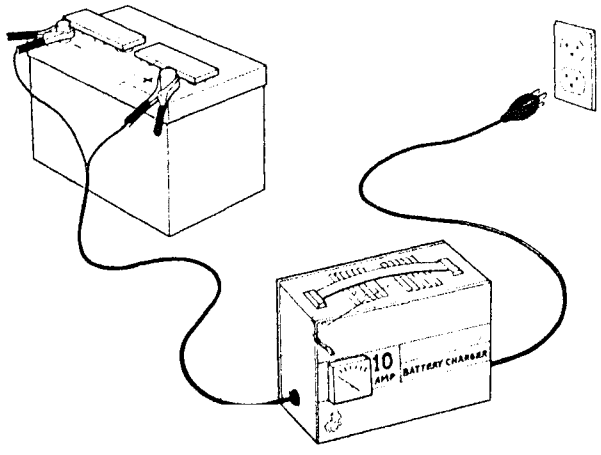


Figure 19

2. After battery is charged, remove vent caps from top of battery (Fig. 18). Next, check level of electrolyte in battery cells to make sure it is up to the ring at bottom of filler neck (Fig. 18). If level is low, add drinking water to raise level.

3. Install vent caps on top of battery.

4. On top of the battery there are some die-cut circles with numbers. Lift out the die-cut circles to indicate month and year of the initial charging.

Install Battery on Mounting Plate

Tools Required: Two, 1/2-Inch Open End Wrenches

1. Set battery onto mounting plate of snowthrower. Battery posts must be to the outside, not toward the fuel tank (Fig. 17). Allow about one inch of the battery to extend over outside of mounting plate (Fig. 17).

2. Push clamp at end of black battery cable, which is grounded to engine, onto smallest diameter, negative (-), battery post (Fig. 17). Tighten clamp retaining nut. Next, push clamp at end of black battery cable with red band, which is connected to the solenoid, onto the largest diameter, positive (+), battery post (Fig. 17). Tighten clamp retaining nut.

NOTE: Battery cables must be specially routed on and around the battery (Fig. 17).

3. Install cover on top of battery. Next, slide battery completely onto mounting plate. Secure battery in place with cap screws, battery hold-down clamps, and nuts (Fig. 17).

4. Install battery strap onto battery cover and slide mounting ends of strap onto ends of cap screws (Fig. 16). Secure all parts in place with two nuts (Fig. 16).

Check Tire Pressure

IMPORTANT: Check pressure of tires before the snowthrower is operated. Assure that pressure in both tires is 30 psi.

CAUTION

For optimum performance, to gain knowledge of the product, and most importantly, to assure maximum safety, it is essential that you or any other operator of the snowthrower read and understand the contents of this manual before the engine is ever started.

PREPARATION BEFORE STARTING

Fill Crankcase With Oil

Tools Required: Funnel and Clean Rag

IMPORTANT: Check level of oil every 5 operating hours or each time snowthrower is used. Initially, change oil after first 2 operating hours; thereafter, under normal conditions, change oil after every 25 hours of operation. If possible, run engine just before changing oil because warm oil flows better and carries more contaminants than cold oil.

1. Move snowthrower to a level surface. If snowthrower is tilted, level of oil will be too high or too low.

2. Clean area around dipstick so foreign matter does not enter filler hole when dipstick is removed. Next, remove dipstick from filler neck (Fig. 20).

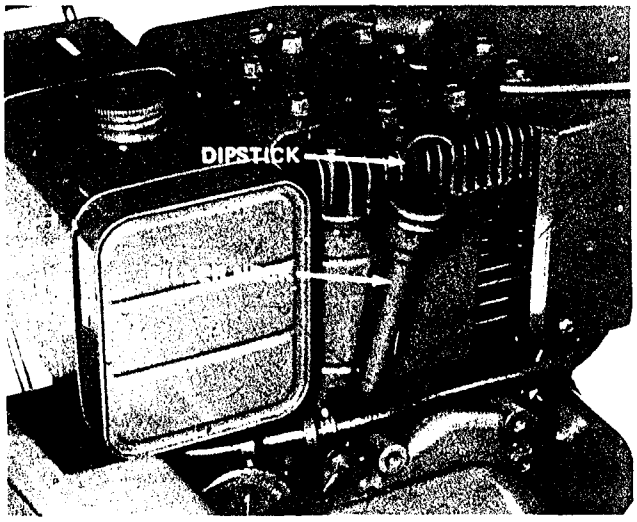


Figure 20

3. Slowly, pour approximately 48 ounces of any high-quality detergent oil with "service classification" SC, SD, SE, or MS into the filler neck. Oil Viscosity – weight – must be selected according to ambient temperature. Temperature/viscosity recommendations are:

A. From +50° F to 0° F – Use SAE 5W-20 or 5W-30. SAE 10 or 10W-30 may be used if the other oils are not available.

B. Below 0° F – Use SAE 10 or 10W-30 that is diluted 10% with kerosene.

4. Wipe end of dipstick. Next, push dispstick completely down into filler neck to get accurate oil level reading (Fig. 20); then pull dipstick out and check oil level. If level of oil is low, add enough oil to raise level to "F" mark – full – on dipstick. DO NOT OVERFILL.

5. Push dipstick into filler neck (Fig. 20).

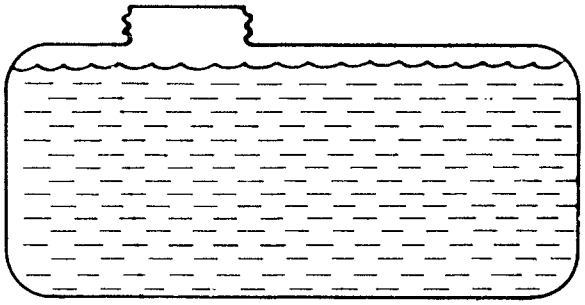
Fill Fuel Tank With Gasoline

Tools Required: Clean Rag and Funnel

IMPORTANT: Do not mix oil w/gasoline because engine damage and poor performance may result. Do not use premium gas, white gas or gasoline additives. Either leaded-regular or lead-free gasoline is recommended to fill the 4 quart fuel tank.

CAUTION

Because gasoline is flammable, caution must be used when storing or handling it. Do not fill fuel tank while engine is running, hot or when unit is in an enclosed area. Keep away from open flame and electrical spark, and DO NOT SMOKE while filling the fuel tank to prevent the possibility of an explosion. Always fill fuel tank outside and wipe up any spilled gasoline before starting engine. Use a funnel or spout to prevent spilling gasoline, and fill fuel tank to about 1/2 inch from the top of the tank, not the filler neck.



Store gasoline in a clean, approved container and keep the cap in place on the container. Keep gasoline in a cool, well-ventilated place; never in the house. To assure volatility, do not buy more than a 30 day supply of gasoline. Gasoline is a fuel for internal combustion engines; therefore, do not use it for any other purpose. Since many children like the smell of gasoline, keep it out of their reach because the fumes are explosive and dangerous to inhale.

1. Clean area around the fuel tank cap. Remove cap from fuel tank and fill tank to within 1/2 inch from the top w/lead-free or leaded-regular gasoline. Reinstall fuel tank cap securely.

NOTE: Lead-free gasoline reduces combustion deposits and extends valve life, and when available, this type of gasoline is recommended. Otherwise, use leaded-regular gasoline.

CONTROLS

Fuel Shut-Off Valve (Fig. 21) – Close valve to stop fuel flow from fuel tank and open valve to allow fuel to flow to the carburetor.

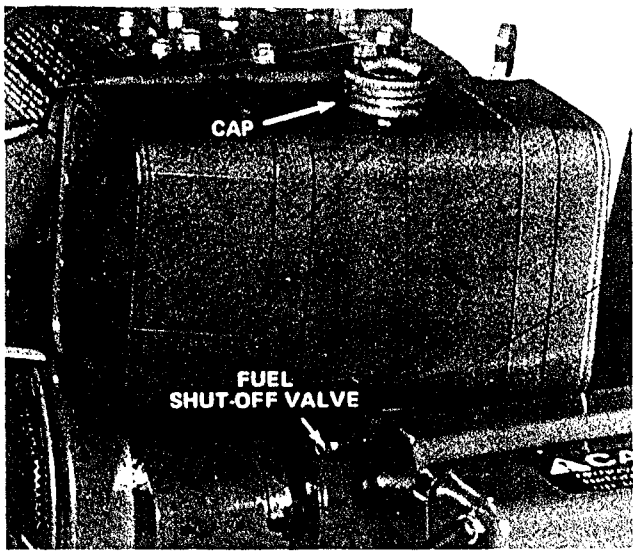


Figure 21

Auger Drive Control (Fig. 22) – Control has two positions: ENGAGE and DISENGAGE. To engage auger and impeller, pull control up slowly until it stops in an over center position. To disengage auger and impeller, pull control down.

Interlock Levers (Fig. 22) – One interlock lever must be compressed against handle grip when auger drive or wheel drive control is engaged. The engine will shut off if both levers are released when auger drive or wheel drive control is engaged. This is a safety feature that reminds the user to disengage auger drive control before leaving operator's position behind the handles.

Wheel Clutches (Fig. 22) – Pull both wheel clutches out to get free-wheeling characteristic. By contrast, push both clutches in to get direct drive to both wheels. When one wheel clutch is pushed in and the other is out, direct drive will be to the wheel that has clutch pushed in; and the other wheel will be free-wheeling.

Wheel Drive Control (Fig. 22) – The control has five positions: N–neutral, R–reverse, 1, 2, and 3. To change speeds, move wheel drive control to position desired. Control must be held in R–reverse – when backing, and when it is released, gear shift automatically returns to neutral. Use positions 1, 2, and 3 depending on snow conditions. Keep interlock lever compressed when shifting.

Throttle (Fig. 22) – The variable speed throttle has two positions: FAST and SLOW. Moving the throttle forward increases engine speed. Use only enough engine speed to throw snow to the place desired.

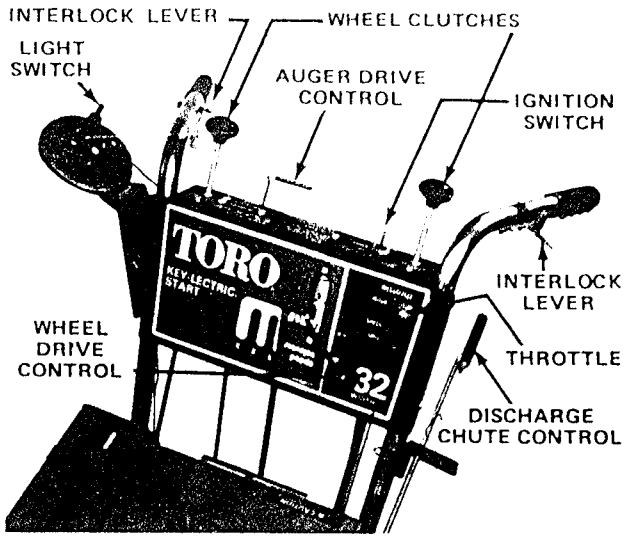


Figure 22

Discharge Chute Control (Fig. 22) – Rotate discharge chute control clockwise to move discharge chute to the left and counterclockwise to move chute to the right.

Ignition Switch (Fig. 22) – Ignition switch is used to start and stop the engine. Rotate key fully clockwise to engage starter motor with ring gear in engine. Release key immediately when engine starts. DO NOT ENGAGE STARTER MOTOR WHILE ENGINE IS RUNNING because damage will likely result. Rotate key counterclockwise to stop engine.

Choke (Fig. 23) – The choke is on left side of engine. Push choke down until it stops to get full choke position for starting a cold engine. As engine warms up, move choke fully up.

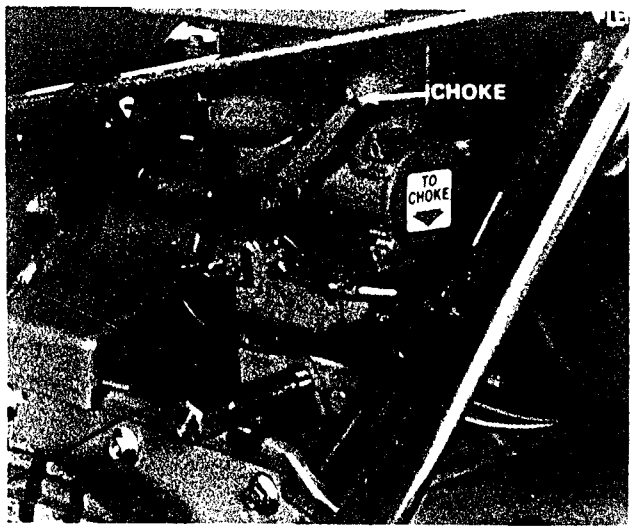
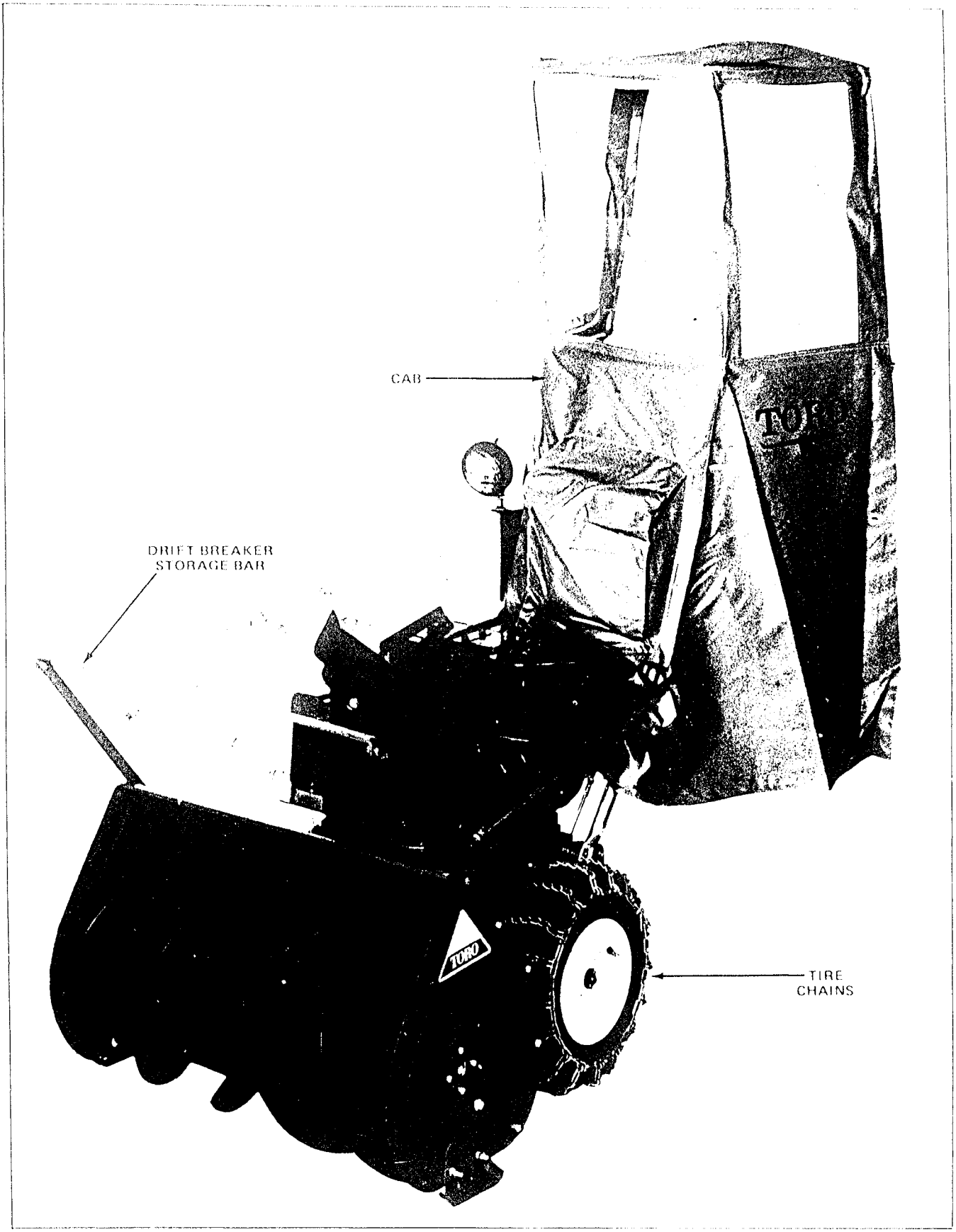


Figure 23

Deflector Handle – Deflector handle is on top of discharge chute and it is used to control height of the snow stream.

SNOWTHROWER



NOTE: Optional cab, drift breaker/storage bar, and tire chains are available at an Authorized Toro Service Dealer.

STARTING AND STOPPING INSTRUCTIONS

To Start Engine:

IMPORTANT: Check auger and impeller to assure that both parts are not frozen solid, but free to rotate. Also, make sure discharge chute is not obstructed.

1. Move auger drive control down to DISENGAGE (Fig. 22).

2. Move wheel drive control to N – neutral – and throttle to FAST (Fig. 22).

3. Open fuel shut-off valve (Fig. 21).

4. Move choke down until it stops (Fig. 23).

5. Insert key into ignition switch (Fig. 22); then rotate key to START position. Release key as soon as engine starts and regulate the choke to keep engine running. As engine warms up, move choke fully up. Let engine warm up for a few minutes before using snowthrower.

IMPORTANT: Do not keep starter motor engaged for more than 8-10 seconds because the starter motor may overheat.

NOTE: If engine does not start and temperature is -10°F or less, rotate needle valve on carburetor 1/8 turn counterclockwise (Fig. 41). Repeat steps 4 & 5. When engine fires, move choke up slightly; engine should start.

6. After engine starts, regulate choke and throttle until engine runs smoothly. Allow engine to warm up before using the snowthrower.

To Stop Engine:

1. Move wheel drive control to N – neutral – and auger drive control to DISENGAGE (Fig. 22).

2. Move throttle to SLOW and rotate ignition key counterclockwise to OFF (Fig. 22).

NOTE: Always close fuel shut-off valve after engine is shut off. This prevents fuel from flowing from the fuel tank and into the carburetor.

OPERATING INSTRUCTIONS

Left and Right Wheel Clutches

Before the snowthrower is started and operated, practice using the left and right wheel clutches.

1. With snowthrower on a flat surface, push the left or right wheel clutch in (Fig. 24). If clutch cannot be pushed in, exert pressure on the knob while moving opposite handle back and forth until clutch moves down (Fig. 24). Next, push the other wheel clutch in. If clutch cannot be pushed in, exert pressure on the knob while moving opposite handle back and forth until clutch moves down.

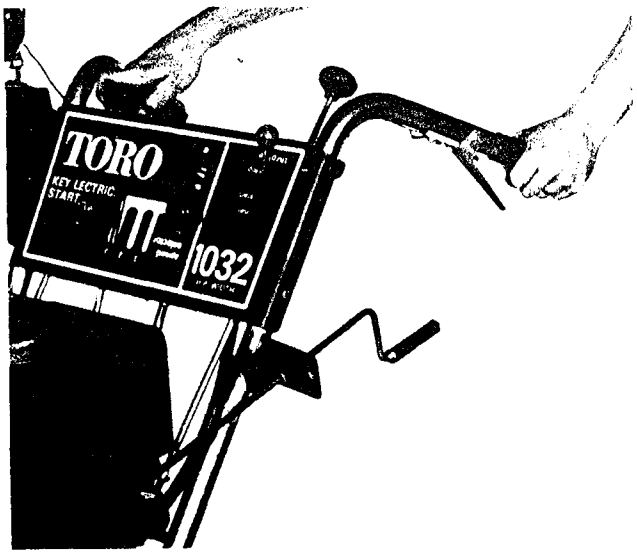


Figure 24

IMPORTANT: Do not use too much force when pushing wheel clutches because damage may result.

2. When wheel clutches can be pushed in and pulled out without trouble, move snowthrower to an open area and start the engine.

3. With engine running at idle speed and wheel drive control in 2 – second gear – push both wheel clutches down (Fig. 25) to transmit power to both wheels. MAKE SURE BOTH WHEEL CLUTCHES ARE FULLY ENGAGED – PUSHED IN – TO PREVENT ACCIDENTAL DISENGAGEMENT OF THE WHEELS.

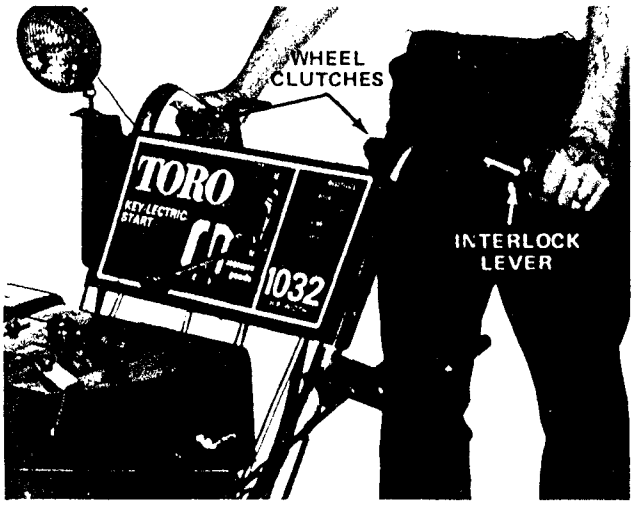


Figure 25

OPERATING INSTRUCTIONS

4. Pull left wheel clutch out fully (Fig. 24). The snowthrower will turn left because right wheel is driving and left wheel is free-wheeling. Just before turn is completed, exert steady pressure on left wheel clutch until it moves fully toward the control panel. Both wheels will now drive. Do the opposite to turn right.

5. In some conditions; a wheel clutch may not be able to be pulled out – disengaged. If this happens, move wheel drive control to N – neutral position; then pull wheel clutch out.

6. Transport – When moving snowthrower by pushing it from one place to another, pull both wheel clutches out so wheels are free to rotate.

Checking Safety Interlock System

The safety interlock system grounds out and stops the engine through a series of switches (Fig. 26), if the operator releases both interlock levers at once before moving wheel drive control to N – neutral – and auger drive control to DISENGAGE. So, to keep engine running when wheel drive is in gear or when auger drive control is ENGAGED, at least one of the safety interlock levers (Fig. 25) must be compressed against handle grip. This system also prevents the operator from starting the engine with the wheel drive control in gear or auger drive control engaged.

WARNING

If interlock system does not operate properly, have the interlock system repaired immediately by an Authorized TORO Service Dealer. DO NOT TRY TO DEFEAT THE INTERLOCK SYSTEM BY DISCONNECTING WIRES OR SWITCHES, OR IN ANY OTHER WAY MAKE IT INOPERATIVE. An inoperative interlock system will allow the auger and impeller to rotate continuously when operator's position is left; and this situation is HAZARDOUS. Check the interlock system every time snowthrower is used.

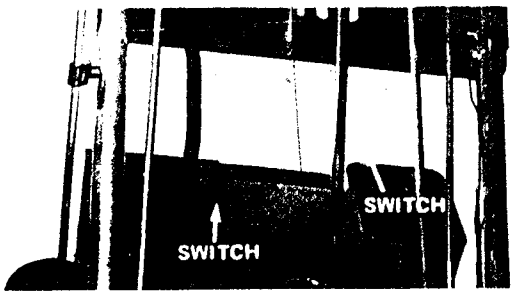


Figure 26

To Check Interlock System:

1. Push snowthrower outdoors onto a flat, open area. Start the engine: refer to Starting and Stopping Instructions, page 14.

2. Slowly, move auger drive control to ENGAGE while both interlock levers are fully released. Engine should begin to shut off; and when it does, immediately move auger drive control back to DISENGAGE. If engine begins to shut off, switch is operating correctly.

3. Slowly, move wheel drive control to 1 – 1st gear – while both interlock levers are fully released. Engine should begin to shut off; and when it does, immediately move wheel drive control back to N – neutral. If engine begins to shut off, switch is operating correctly.

Snowthrowing Tips

1. When snowthrower is not being used, close fuel shut-off valve, have wheel drive control in N – neutral position, auger drive control in DISENGAGE position and key removed from the ignition switch.

2. Remove snow as soon as possible after it falls. This will produce best snow removal results.

3. If snow will be removed from crushed rock or gravel areas, adjust skids so bottom of auger housing clears the rocks: refer to Adjusting Skids, page 17.

4. For concrete or asphalt surfaces, adjust skids so there is 1/8 inch between bottom of auger and concrete or asphalt surface.

5. The snowthrower is designed to clean snow down to the contact surface, but there are times when front of snowthrower may tend to ride up. If this happens, reduce forward speed by shifting into a lower gear. If front still tends to ride up, lift up on both handles to hold down front of snowthrower

6. Discharge snow downwind whenever possible, and overlap each swath to assure complete snow removal. If wheels slip, shift into a lower gear which reduces forward speed.

7. Normally, chains are not required; however, tire chains are recommended when the wheels spin excessively.

8. In some snow and cold weather conditions, some controls and moving parts may freeze solid. Therefore, when any control becomes hard to operate, stop the engine; then check all parts for freeze up. DO NOT USE EXCESSIVE FORCE AND TRY TO OPERATE THE CONTROLS WHEN FROZEN. Free all controls and moving parts before operating.

MAINTENANCE

CAUTION

To prevent accidental starting of the engine while performing maintenance, rotate ignition key to off and remove it from the switch. Next, pull high tension wire off spark plug (Fig. 27) and make sure wire does not accidentally touch the plug.

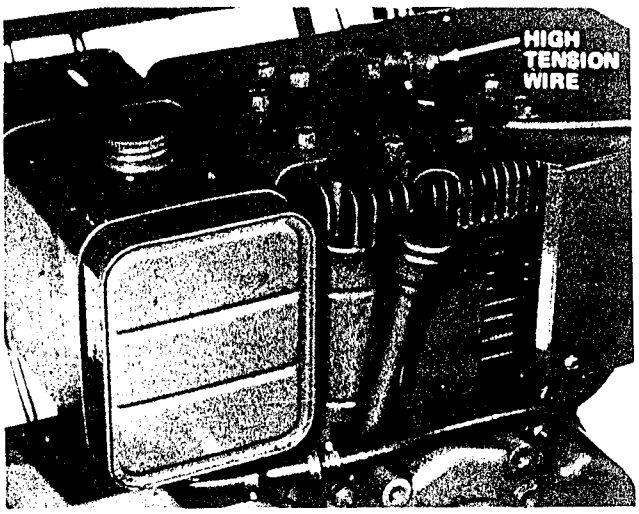


Figure 27

Lubricating Snowthrower

Tools Required: 3/8-Inch Socket and Clean Rag

Lubricate control linkage and other moving parts of the snowthrower after every 15 hours of operation.

1. Lubricate pivot points in the control linkage with a few drops of SAE 10W-40 oil (Fig. 28). Wipe up any excess oil.

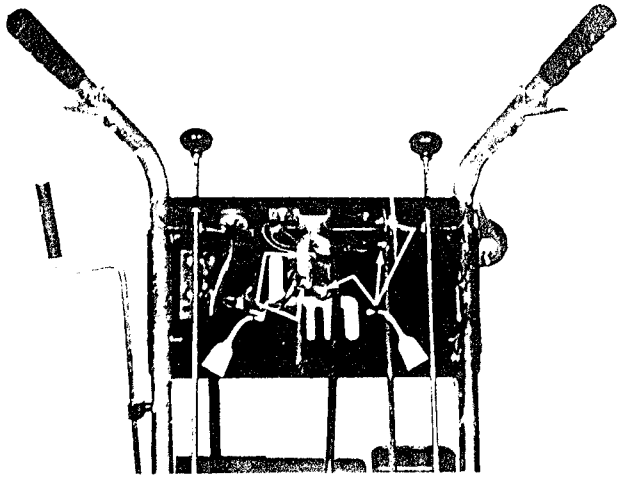


Figure 28

2. Lubricate pivot points of both wheel clutches with two drops of SAE 10W-40 oil (Fig. 29). Wipe up any excess oil.

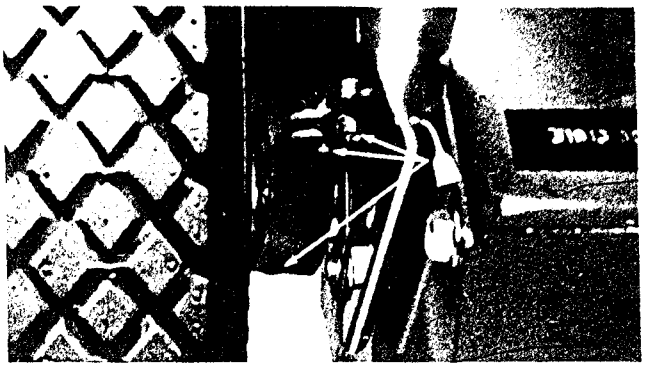


Figure 29

3. Remove four thread forming screws holding rear shield against traction unit; then slide shield away from traction unit. Next, lightly lubricate drive chains, sprocket bushing, nylon ring, hex shaft, and the other pivot points with SAE 10W-40 oil and #2 grease (Fig. 30). Wipe up any excess oil. Lastly, install rear shield against traction unit with four thread forming screws.

IMPORTANT: Do not get oil on rubber wheel or friction drive plate because the wheel will slip and the rubber may deteriorate.

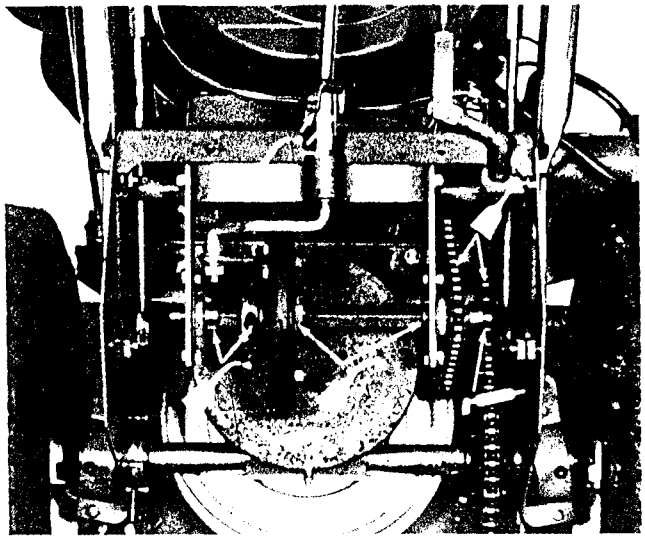


Figure 30

Changing Crankcase Oil

Tools Required: 15/16-Inch Open End Wrench, Drain Pan, and Clean Rag

Initially, change oil after the first 2 hours of engine operation. Thereafter, change oil after every 25 hours of engine operation. If possible, run engine just before changing oil because warm oil flows better and carries more contaminants than cold oil.

MAINTENANCE

NOTE: Drain oil when fuel tank is empty to prevent spilling gasoline.

1. Pull high tension wire off spark plug and make sure it does not contact plug accidentally.

2. Put a two inch block under the right wheel so snowthrower is tipped slightly to the side. This will assure that all oil is drained from crankcase.

3. Clean area around oil drain cap. Next, slide oil drain pan below drain extension; then remove oil drain cap (Fig. 31).

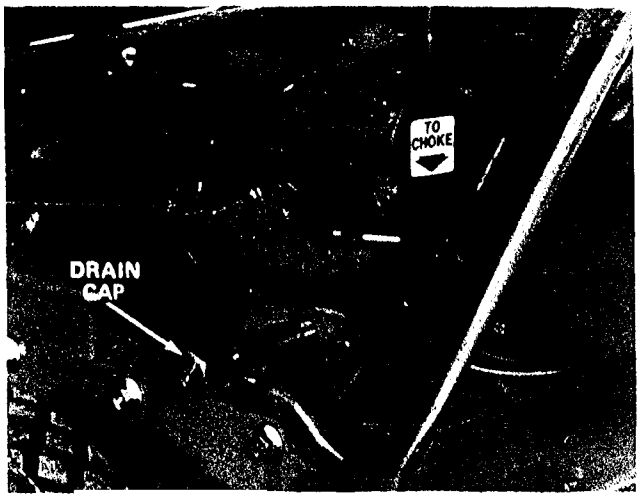


Figure 31

4. After all oil is drained, install oil drain cap. Also, REMOVE BLOCK FROM UNDER RIGHT WHEEL.

5. Position snowthrower on a level surface. Next, fill crankcase with oil: use Fill Crankcase With Oil, page 11. Wipe up any oil that may have spilled.

Changing Auger Gear Box Oil

Tools Required: 3/8-Inch Open End Wrench, Drain Pan, and Clean Rag

Change auger gear box oil once a year. If possible, run the auger just before changing oil because warm oil flows better and carries more contaminants than cold oil.

1. Remove battery from snowthrower: use Remove Battery From Mounting Plate, page 8.

2. Drain gasoline from fuel tank. Wipe up any spilled gas.

3. Position snowthrower on a level surface.

4. Clean area around pipe plug so dirt is removed.

5. Put a drain pan below the pipe plug (Fig. 32) at front of auger gear box; then remove pipe plug.

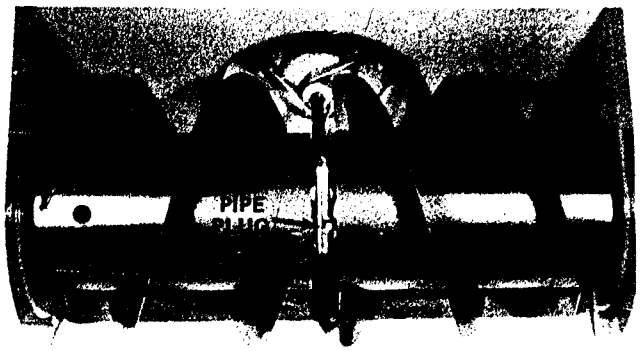


Figure 32

6. Tip snowthrower forward and hold it up until all oil drains from the gear box.

7. Carefully let snowthrower down to its normal position. Make sure it is on a level surface. Next, fill auger gear box with 3 ounces of SAE 90 EP transmission oil, or fill to point of overflow.

8. Thread pipe plug back into gear box (Fig. 32).

9. Install battery: use Install battery On Mounting Plate, page 10.

Adjusting Skids

Tools Required: 9/16-Inch Wrench

When snowthrower will be used on concrete or asphalt surfaces, adjust skids using steps 1 - 3. However, use step 4 when snowthrower will be used on gravel or crushed rock surfaces.

1. Move snowthrower to a level surface. Next, loosen four flange nuts (Fig. 33) securing both skids to auger side plates. Skids must slide up and down.

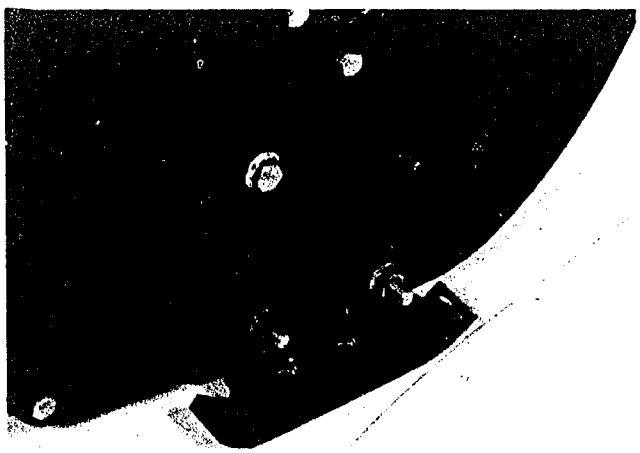


Figure 33

2. Push snowthrower forward so pivoting scraper blade moves backward.

3. Adjust both skids so there is 1/8-inch between bottom of auger and level surface. When skids are adjusting correctly, tighten flange nuts. Next, check pivoting scraper blade that is mounted at bottom of auger housing. Scraper must be parallel with level surface. If scraper is not parallel, adjust skids again. Do not use step 4 after adjusting skids for hard surfaces.

4. Loosen four flange nuts (Fig. 33) securing both skids to auger side plates. Next, slide skids down as far as possible so auger is as far from the level surface as skid adjustment allows; then tighten flange nuts.

Replacing V-Belts

Tools Required: 7/16-Inch Socket and 9/16-Inch Open End Wrench

When traction or auger drive belt becomes worn, stretched, oil-soaked, or otherwise defective, belt replacement is required.

1. Pull high tension wire off spark plug and make sure it does not contact plug accidentally.

2. Remove two thread forming screws holding belt guard in place.

3. Remove two upper flange screws and loosen the two lower lock nuts holding auger housing and traction unit together.

4. Remove the defective belt or belts; then install new belt(s). Make sure auger drive belt is installed to inside of the belt guide (Fig. 34). Traction drive belt must be installed against inside of the idler pulley (Fig. 34).

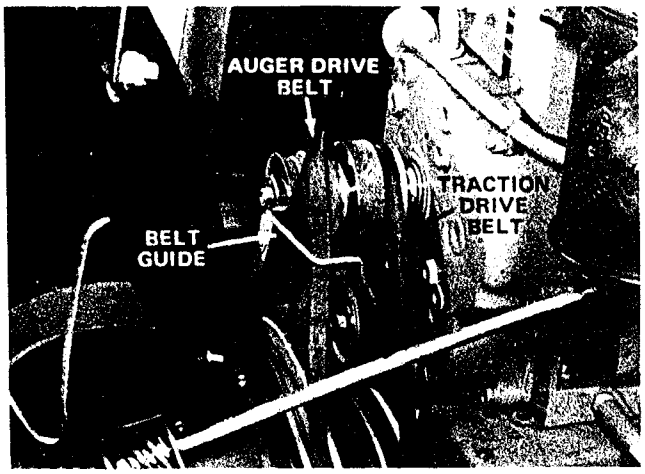


Figure 34

5. Secure auger housing and traction unit together by lining up top holes and installing two flange screws. Tighten two upper flange screws and lower lock nuts.

6. Install belt guard with two thread forming screws.

Adjusting Auger Drive Belt

Tools Required: Pliers and 9/16-Inch Open End Wrench

If auger slips, which means the auger drive belt is slipping, an adjustment is required. When a new belt is installed, an adjustment may also be required.

1. Loosen jam nut from clevis at bottom of auger drive control rod (Fig. 35). Next, remove cotter pin and clevis pin holding clevis to bent rod (Fig. 35).

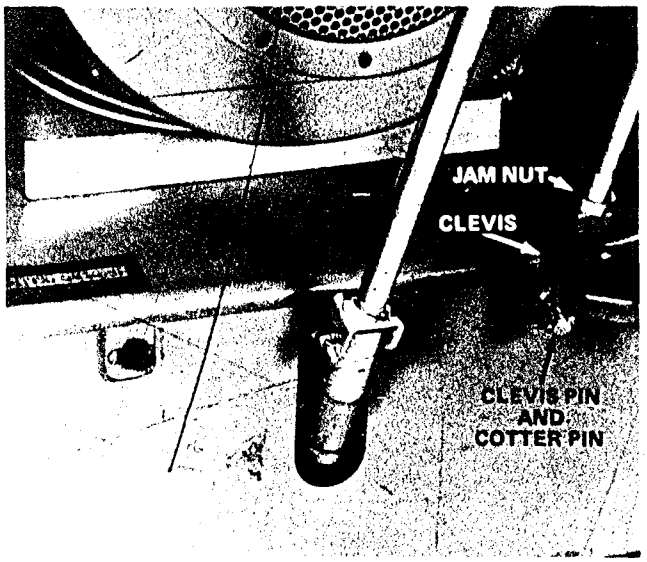


Figure 35

2. Rotate clevis (Fig. 35) counterclockwise – out – to increase belt tension. By contrast, rotate clevis clockwise – in – to decrease belt tension.

NOTE: When adjusting clevis, rotate it one complete – 360° – turn.

3. Connect clevis to bent rod with clevis pin and cotter pin (Fig. 35). Next, tighten jam nut against top of clevis (Fig. 35).

4. Check tension of belt by operating the auger. If belt still slips, adjust clevis again.

IMPORTANT: Do not adjust belt too tight because the belt will wear out quickly or possibly cause damage to the snowthrower. Belt is too tight when auger will not disengage.

MAINTENANCE

Adjusting Traction Disc

Tools Required: Pliers, 3/8-Inch Socket

If snowthrower does not drive in reverse or forward speeds, or if snowthrower does not disengage – come out of gear – an adjustment is required.

1. Move wheel drive control to 1, first gear.

2. Disengage back of wheel drive control from U-shaped pivot bracket by removing hair pin cotter, flat washer, and clevis pin (Fig. 6). Next, move control away from U-shaped pivot bracket (Fig. 36).

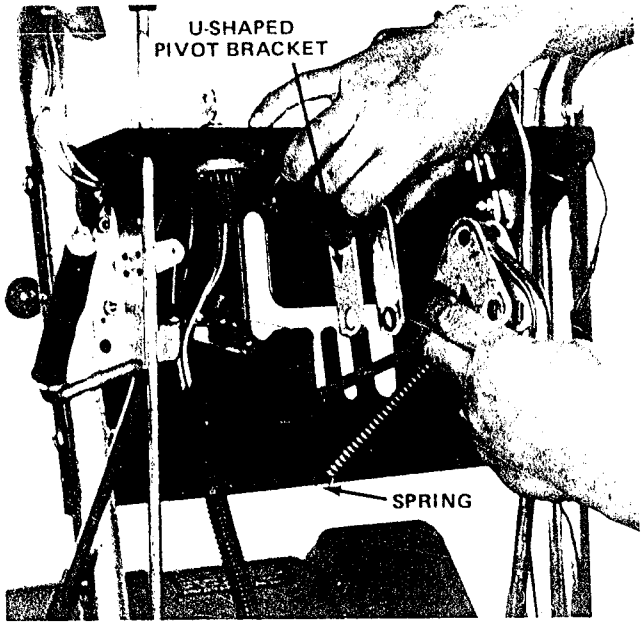


Figure 36

3. If snowthrower does not drive in reverse or forward speeds, rotate U-shaped pivot bracket (Fig. 36) outward – counterclockwise – one complete turn. By contrast, rotate pivot bracket inward – clockwise – if drive does not come out of gear.

4. Install back of wheel drive control between U-shaped pivot bracket with clevis pin, flat washer, and hair pin cotter (Fig. 6). Head of clevis pin must be on right side.

5. Remove four thread forming screws holding rear shield against traction unit; then slide shield away from traction unit. Next, move wheel drive control to N, neutral position.

6. Slide a 3/32 inch gauge between rubber wheel and friction disc (Fig. 37). If there is too little or too much clearance, repeat steps 1 - 4. If clearance is as specified – 3/32 inch – install rear shield with four thread forming screws.

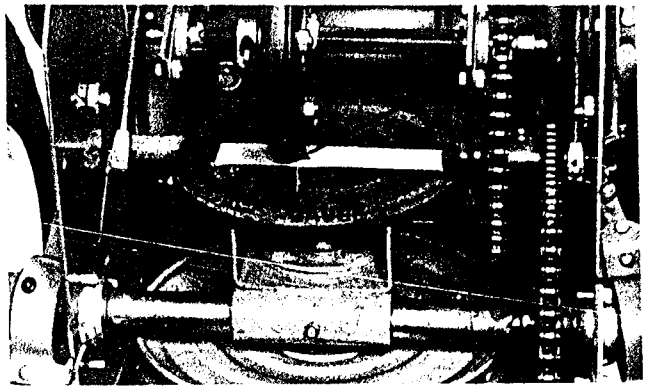


Figure 37

IMPORTANT: Too little clearance between rubber wheel and friction plate will cause the rubber wheel to wear rapidly. If it will not drive forward or reverse, even after correct adjustment is made, contact the local Authorized TORO Service Dealer.

Adjusting Ground Speed

Tools Required: 7/16-Inch Socket and 7/16-Inch Wrench

If ground speed in 1 – first gear – is too slow or too fast, or if it is hard to move wheel drive control into 3rd gear, an adjustment is required.

1. Loosen two cap screws and lock nuts holding swivel bracket against control panel (Fig. 38).

2. To reduce ground speed, move swivel bracket (Fig. 38) to the right. By contrast, move swivel bracket to the left to increase speed in 1st gear.

3. When desired adjustment is obtained, tighten the two cap screws and lock nuts (Fig. 38).

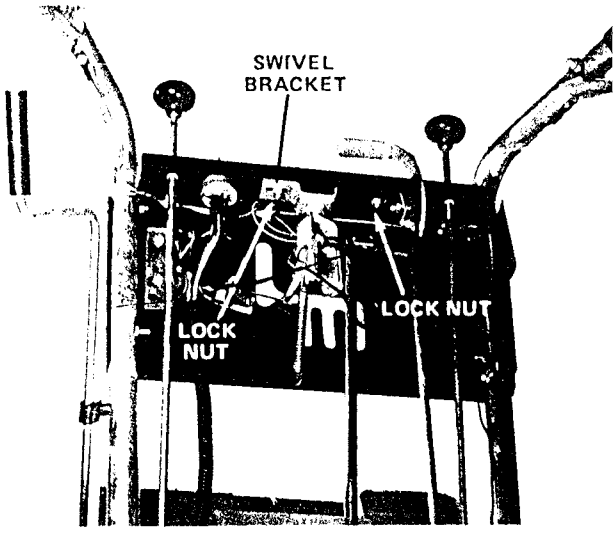


Figure 38

MAINTENANCE

Replacing Spark Plug

Tools Required: 3/4-Inch Spark Plug Socket, Spark Plug Gapping Tool, and Clean Rag

Correct spark plug to use is a Champion RCJ-8 or Autolite AR7N, and correct air gap is 0.030 of an inch. Since air gap between center and side electrodes of the spark plug increases gradually during normal engine operation, install a new plug after every 25 hours of engine operation.

1. Clean area around spark plug so foreign matter cannot fall into cylinder when plug is removed.

2. Pull high tension wire off spark plug (Fig. 39); then remove plug from cylinder head.

IMPORTANT: A cracked, fouled, or dirty spark plug must be replaced. Do not sand blast, scrape, or clean electrodes using a wire brush because grit may eventually release from the plug and fall into the cylinder. The result will likely be engine damage.

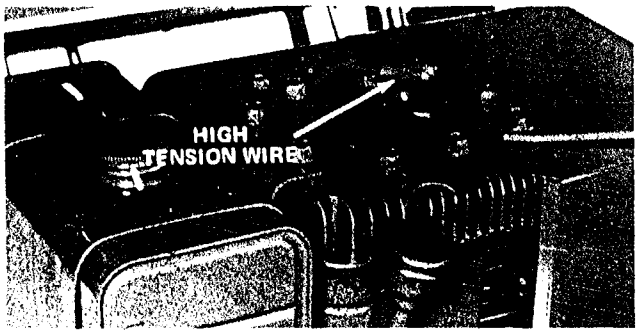


Figure 39

3. Set air gap between electrodes of new spark plug at 0.030 of an inch (Fig. 40). Next, install spark plug in cylinder head. Tighten plug to 15 ft-lb. If torque wrench is not used, tighten plug firmly.

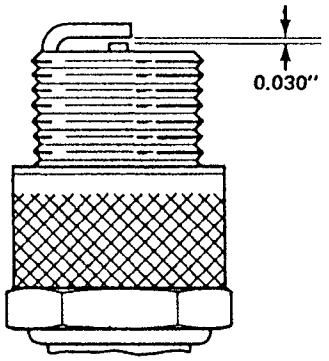


Figure 40

4. Push high tension wire onto spark plug (Fig. 39).

Adjusting Carburetor

Tools Required: Screwdriver

The carburetor has been adjusted at the factory, but an adjustment may be required if carburetor has been disassembled. Do not make unnecessary carburetor adjustments because factory settings are correct for most applications.

IMPORTANT: Do not close needle valve too tight because valve and seat in carburetor will likely be damaged.

1. Needle Valve (Fig. 41) – Close needle valve by gently rotating it clockwise.

2. Rotate – open – needle valve (Fig. 41) 1-1/8 turns counterclockwise.

IMPORTANT: Do not close idle valve too tight because valve and seat in carburetor will likely be damaged.

3. Idle Valve (Fig. 41) – Close idle valve by gently rotating it clockwise.

4. Rotate – open – idle valve (Fig. 41) 1-1/8 turns counterclockwise.

NOTE: The needle valve and idle valve settings are approximates; however, the settings will allow engine to be started so carburetor can be fine tuned – steps 5 - 11.

CAUTION

Engine must be running so final adjustment of the carburetor can be performed. To guard against possible personal injury, move auger drive and wheel drive controls to DISENGAGE and N, and remember to keep hands, feet, face, and other parts of the body away from muffler, auger, discharge chute, and any moving part(s).

5. Start engine and let it warm up for approximately two to three minutes; then move throttle to FAST.

6. Rotate needle valve (Fig. 41) clockwise – in – until engine misses because of a lean gasoline mixture. Then rotate needle valve counterclockwise – out – so engine runs unevenly because of a rich gasoline mixture. Next, rotate needle valve clockwise, back to the midpoint between the rich and lean setting so engine runs smoothly.

7. Move throttle backward to idle speed. Next,

rotate idle speed adjusting screw (Fig. 41) until engine idles fast – 1750 rpm.

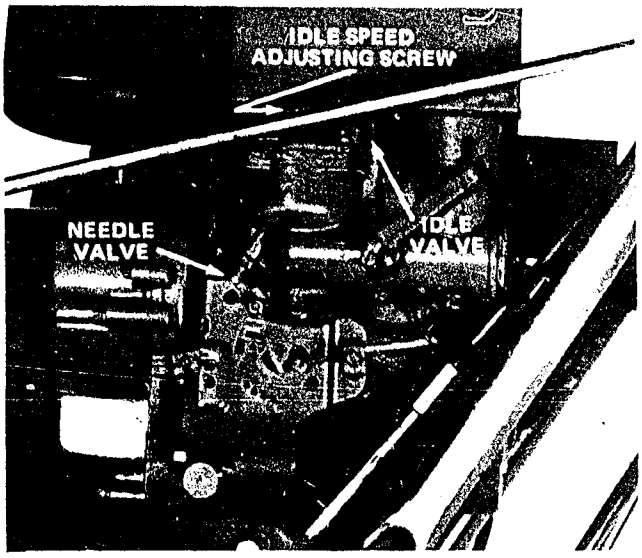


Figure 41

8. Rotate idle valve (Fig. 41) clockwise – in – until engine begins to miss because of a lean mixture. Then rotate idle valve counterclockwise – out – until engine runs unevenly because of rich mixture. Next, rotate idle valve clockwise, back to the mid-point between rich and lean setting.

9. Again, rotate idle speed adjusting screw (Fig. 41) until engine idles at 1750 rpm.

10. Check carburetor adjustment by quickly moving throttle from low speed to high speed. Engine should accelerate without hesitation or sputtering. If engine does not accelerate properly, adjust carburetor to a slightly richer mixture.

11. After carburetor is adjusted, shut engine off.

Maintaining and Charging Battery

Tools Required: 6 to 10 Amp Battery Charger

Before charging the 12 volt battery, make sure the battery case is not cracked. Also, remove vent caps and look into filler holes. Top of plates must not have ice crystals on them. If ice crystals are evident, do not charge the battery; take battery indoors so it can warm up. After ice crystals are dissolved, battery can be charged.

During normal use and storage, the battery may discharge slowly. A partial short or leaving the snow-thrower light on for a long time could also cause a slow discharge of the battery. Whenever the battery is discharged, charge it using a 6 to 10 amp charger. Use charging instructions supplied by manufacturer of charger.

CAUTION

Charge battery in a well-ventilated area because gases are produced while battery is being charged. Do not inhale the gases because nausea may result. Also, the gases are explosive; therefore, stay away from open flame and electrical spark, and do not smoke while the battery is being charged.

1. Remove the battery; use Remove Battery From Mounting Plate, page 8.

2. Connect battery charger cables to battery posts (Fig. 42). Make sure that red, positive charger connector is attached to positive (+) – largest diameter – battery post (Fig. 42). The black, negative charger connector must be attached to negative (-) – smallest diameter – battery post (Fig. 42).

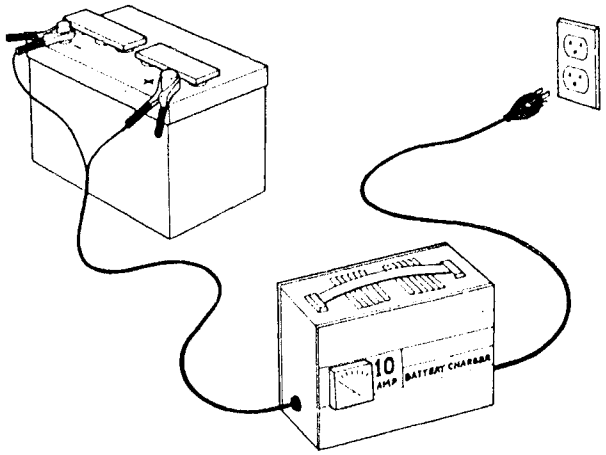


Figure 42

3. Plug power cord of charger into a grounded 110-120 volt outlet so battery can be charged (Fig. 42).

IMPORTANT: Battery must not be in a discharged condition during cold temperatures because battery case could crack.

CAUTION

Do not connect or disconnect the charger and battery when charger is plugged into 110-120 volt outlet because a spark could possibly cause the battery to explode.

4. After battery is charged, remove power cord of

charger from wall outlet (Fig. 42). Next, disconnect charger from battery (Fig. 42).

5. Remove vent caps from battery (Fig. 43). Next, check level of electrolyte in each cell. Add drinking water to the battery if electrolyte is not up to the ring at bottom of filler neck (Fig. 43). ADD WATER ONLY AFTER CHARGING THE BATTERY. Install vent caps (Fig. 43).

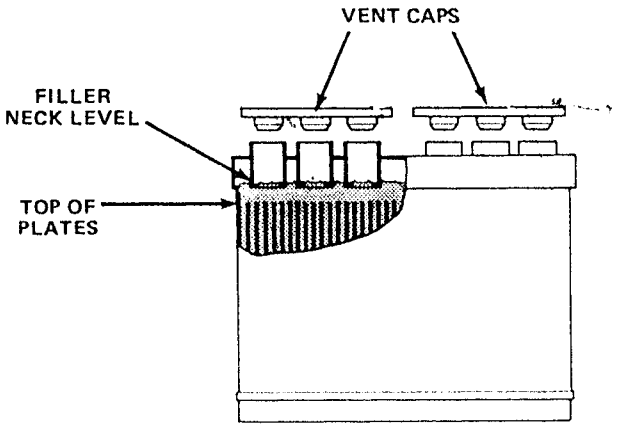


Figure 43

6. Install the battery: use Install Battery on Mounting Plate, page 10.

Preparing Snowthrower For Storage

1. Drain gasoline from fuel tank. Wipe up any gasoline that may have spilled. Also clean fuel filter. Open fuel shut-off valve.

2. Start the engine and let it run until it stops because there is no gasoline in the fuel system. When engine sputters, push choke down so fuel in carburetor is expended.

3. Remove spark plug from cylinder head. Next, pour two teaspoons of SAE 30 engine oil into spark plug hole in cylinder head. Install spark plug in cylinder head, but do not install high tension wire on the plug. Then pull recoil starter slowly to distribute oil on inside of cylinder.

4. Change oil in crankcase: use Changing Crankcase Oil, page 16.

5. Change oil in auger gear box: use Changing Auger Gear Box Oil, page 17.

6. Lubricate the snowthrower: use Lubricating Snowthrower, page 16.

7. Clean the snowthrower. Touch up chipped surfaces with paint. Sand affected areas before painting. Use a rust preventative to prevent metal parts from rusting.

8. Tighten all screws and nuts. If any part is damaged, repair or replace it.

9. Store snowthrower in a clean, dry place, and cover it to give protection.

10. If snowthrower is equipped with the optional, drift breaker storage bar, the snowthrower may be stored in upright position (Fig. 44). However, remove battery from mounting plate, and make sure to drain gas before tipping snowthrower upright.

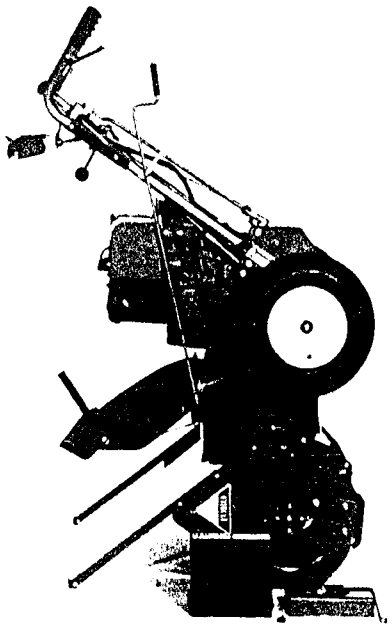


Figure 44

11. Store the battery in a cool, dry place and give it a booster charge every 30 days. If the battery, for some reason, must be stored in freezing temperatures, make sure it is fully charged because a discharged battery will freeze and probably crack.

WIRING DIAGRAMS

Main Wiring Schematic

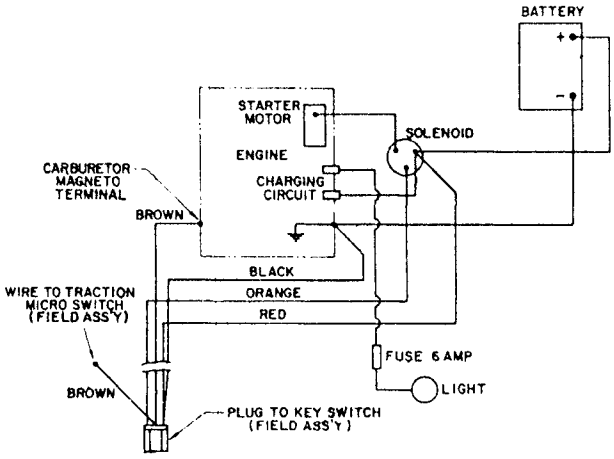


Figure 45

Interlock Schematic

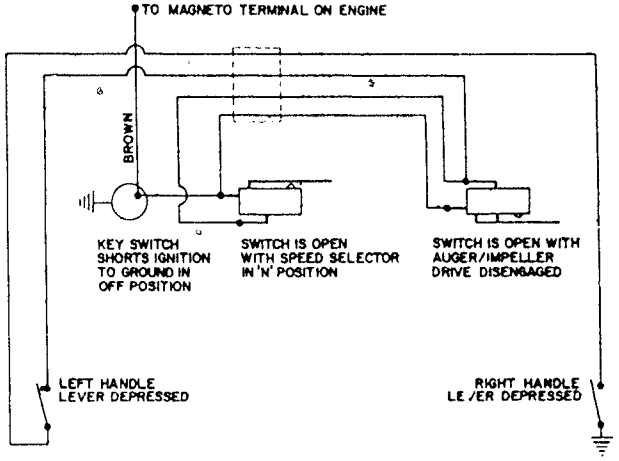


Figure 46

TROUBLESHOOTING

PROBLEM	SOLUTION
1. Starter mechanism fails to crank engine.	• Frozen starter drive – Thaw it out. • Low or dead battery – Recharge
2. Engine fails to start.	• Make sure auger impeller clutch is disengaged and gear shift is in neutral and are actuating interlock switches under control panel. • Check fuel tank for gas and fuel shutoff valve. (Turn counterclockwise for "ON") • Throttle lever not in start position. • Spark plug or spark plug wire loose, disconnected or wet. • Carburetor improperly adjusted. • Engine flooded. Remove & dry plug, crank engine with plug removed and throttle in run, (full on) position. Replace plug and wire and resume start procedure.
3. Erratic engine operation, hard starting or loss of power	• Insufficient fuel in tank. • Loose spark plug wire. • Dirt in gas tank. • Carburetor improperly adjusted. • Gas cap vent plugged.
4. Occasional engine skip (hesitates) at high speed.	• Spark plug fouled or gap too wide. • Carburetor improperly adjusted.
5. Erratic idle.	• Carburetor idle speed adjustment improperly set. • Spark plug gap too close.
6. Engine overheats.	• Low on crankcase oil. • Carburetor improperly adjusted.
Auger and impeller sluggish or fail to run.	• Broken or loose belt. Adjust belt idler or replace belt. • Impeller frozen in housing – break loose.
8. Dead man reverse fails to return shift lever to neutral.	• Broken or missing shift lever spring. Replace with new spring.
9. Wheel drive fails to rotate wheels when shift lever is in fwd, 1, 2, 3, or reverse.	• Low wheel drive belt tension, or worn belt. Adjust idler. • Check two final drive chains. • Check traction disc adjustment to assure good rubber friction wheel contact.
10. Poor snow cleanup.	• Pivoting scraper blade hung up or jammed. Remove objects • Check skid adjustment.

NOTE: For repairs beyond the minor adjustments listed above, please contact your local TORO service dealer. (see Yellow Pages)

IDENTIFICATION AND ORDERING

Model and Serial Numbers

The snowthrower has two identification numbers: a model number and a serial number. The two numbers are stamped on a decal (Fig. 47) which is located on left rear side of the engine mounting plate. In any correspondence concerning the snowthrower, supply model and serial numbers to assure that correct information and replacement parts are obtained.

To order replacement parts from an Authorized TORO Service Dealer, supply the following information:

1. Model and serial numbers of the snowthrower.

2. Part number, description, and quantity of part(s) desired.

NOTE: Do not order by reference number if a parts catalog is being used; use the PART NUMBER.

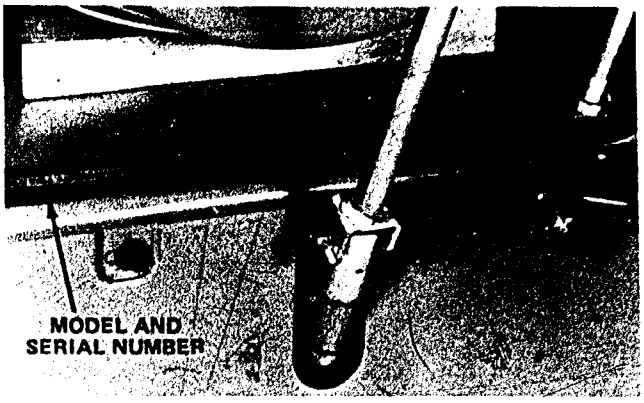


Figure 47

THE TORO PROMISE

It is Toro's policy to design and produce TORO products to provide our customers with a high level of performance and durability in normal operation. Our products, however, are produced in high volume, and it is inevitable that occasionally a unit will reach a customer with a defect in materials or workmanship which causes the unit to fall below the normal high level of TORO performance. Invariably, such a defect will be noticed in a residential product and in an institutional product within one year after purchase. Recognizing this possibility, Toro has established a simple guarantee policy and procedure that is intended to assure customer satisfaction. This guarantee statement is as follows:

The Toro Promise

A Full One Year Warranty

The Toro Company promises to repair any TORO product if defective in materials or workmanship. The following time periods from the date of purchase apply:

Residential and Institutional Products . . . . . 1 year
Residential Products Used Commercially . . 45 days

The costs of parts and labor are included, but the customer pays the transportation costs. Just return any residential product to an Authorized TORO Service Dealer, or any institutional product to a TORO distributor.

Should the customer feel that a product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact any Authorized TORO Service Dealer or Distributor, but preferably the dealer or distributor from whom you purchased the product.
2. He will instruct you to either return the product to him, or tell you the name and address of your nearest Authorized TORO Service Dealer or Distributor if the product is to be returned to such a dealer or distributor.
3. Bring the product and your original sales slip, or other evidence of purchase date, to the service dealer or distributor.
4. The servicing dealer or distributor will inspect the unit, advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without extra charge to the customer.

If for any reason the customer is dissatisfied with the dealer's or distributor's analysis of the defect or the service he performs, he can contact us. Write:

TORO "Customer Care" Department
8111 Lyndale Avenue South
Minneapolis, Minnesota 55420

Litho In U.S.A.