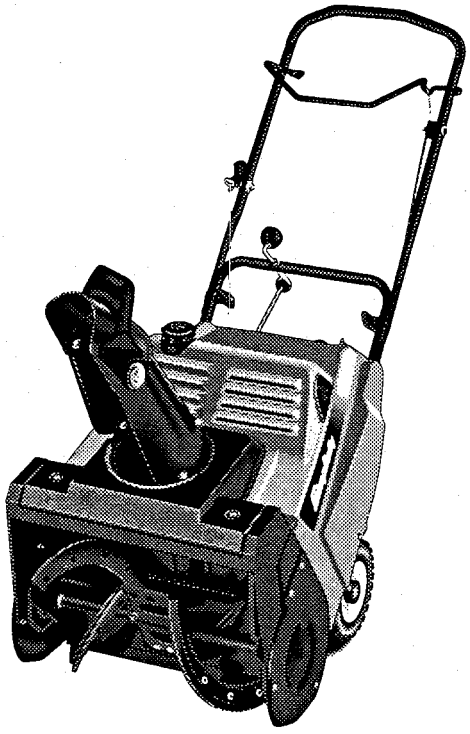
Simplicity®

OPERATOR'S MANUAL

SINGLE STAGE SNOWTHROWER MODELS



551M

Mfg. No. 1692320
(Serial Number 10000 and up)

551E

Mfg. No. 1692321
(Serial Number 20000 and up)

FORM NO. 770-0355M

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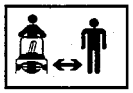
MAINTAINING SAFETY

This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate your snow thrower. failure to comply with these instructions may result in personal injury. When you see this symbol, heed its warning.

WARNING **Your snow thrower was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.**

TRAINING

1. Read this owner's guide carefully in its entirety before attempting to assemble or operate this machine. Be completely familiar with the controls and the proper use of this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Never allow children under 14 years old to operate a snow thrower. Children 14 years old and over should only operate snow thrower under close parental supervision. Only persons well acquainted with these rules of safe operation should be allowed to use your snow thrower.
3. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
4. Keep the area of operation clear of all persons, especially small children and pets.
5. Exercise caution to avoid slipping or falling, especially when operating in reverse.



PREPARATION

6. Thoroughly inspect the area where the equipment is to be used and remove all door mats, sleds, boards, wires and other foreign objects.
7. Disengage all clutches and shift into neutral before starting engine.
8. Do not operate equipment without wearing adequate winter outer garments. Do not wear jewelry, long scarfs or other loose clothing which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.
9. Before working with gasoline, extinguish all cigarettes and other sources of ignition. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, while the engine is running, or until engine has been allowed to cool at least two minutes. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.

10. Use a grounded three wire plug-in for all units with electric drive motors or electric starting motors.
11. Adjust collector housing height to clear gravel or crushed rock surface.
12. Never attempt to make any adjustments while engine is running (except where specifically recommended by manufacturer).

13. Let engine and machine adjust to outdoor temperature before starting to clear snow.
14. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.

OPERATION

15. Do not put hands or feet near or under rotating parts. Keep clear of discharge opening and auger at all times.
16. Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
17. After striking a foreign object, stop the engine, remove wire from spark plug, and thoroughly inspect the snow thrower for any damage. Repair the damage before restarting and operating the snow thrower.
18. If the snow thrower should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
19. Stop engine whenever you leave the operating position, before unclogging the collector/impeller housing or discharge guide, and making any repairs, adjustments, or inspections. Never place your hand in the discharge or collector openings. Use a stick or wooden broom handle to unclog the discharge opening.

20. Take all possible precautions when leaving the unit unattended. Disengage the collector/impeller, shift into neutral, stop the engine, and remove the key.

21. When cleaning, repairing, or inspecting, make certain collector/impeller and all moving parts have stopped. Disconnect spark plug wire and keep away from plug to prevent accidental starting.
22. Do not run engine indoors, except when starting engine and transporting snow thrower in or out of building. Open doors. Exhaust fumes are dangerous.
23. Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.

24. Never operate snow thrower without guards, plates, or other safety protection devices in place.
25. Never operate snow thrower near glass enclosure, automobiles, window wells, drop off, etc., without proper adjustments of snow thrower discharge angle. Keep children and pets away.
26. Do not overload machine capacity by attempting to clear snow at too fast a rate.
27. Never operate the machine at high transport speeds on slippery surfaces. Look behind and use care when backing.
28. Never direct discharge at bystanders or allow anyone in front of unit.
29. Disengage power to collector/impeller when transporting or not in use.
30. Use only attachments and accessories approved by the manufacturer of snow thrower (such as wheel weights, counter weights, cabs, etc.).
31. Never operate the snow thrower without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run with the snow thrower.
32. Muffler and engine become hot and can cause a burn. Do not touch.

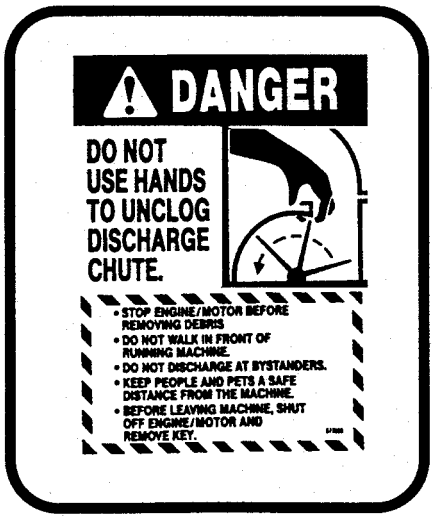
MAINTENANCE & STORAGE

33. Check shear bolts, engine mounting bolts, etc., at frequent intervals for proper tightness to be sure equipment is in safe working condition.
34. Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters, clothes dryers, and the like. Allow engine to cool before storing in any enclosure.

35. Always refer to owner's guide instructions for important details if snow thrower is to be stored for an extended period.
36. Run machine a few minutes after throwing snow to prevent freeze up of collector/impeller.
37. Check clutch controls periodically to verify they engage and disengage properly and readjust if necessary. Refer to owner's guide for adjustment instructions.

SAFETY DECALS

The safety decals are located near any area of potential danger and are easily visible to the operator. These are meant to warn the operator of the danger. It is very important to follow the instruction on these decals to maintain safety.



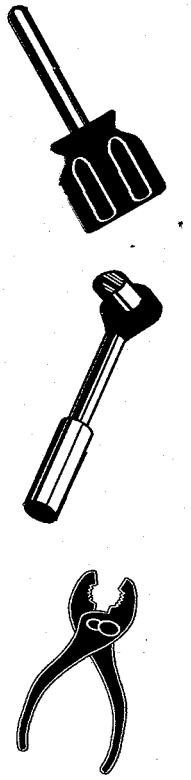
This safety decal is located on the discharge chute.It is very important that you follow its instructions. Also replace it, if damaged.

This safety decal is located on the auger housing. It is very important that you follow its instructions. Also replace it, if damaged.

ASSEMBLING YOUR UNIT

TOOLS REQUIRED

- Socket wrench set
- A pair of pliers
- Screwdrivers (Phillips head)



CHUTE ASSEMBLY

1. Install discharge chute on the rotating ring located on the auger housing. Secure with three 5/16 inch carriage bolts, flat washers and nylok nuts. Install the rear bolt first for easier alignment. You will find the hardware in the parts bag. See figure 1.
2. Make sure that for all three bolts, the bolt head goes inside the rotating ring, and the washer and the nut are on the outside. Tighten bolts securely with the wrench.
3. Lift up the folding handle and align it with the lower handle until it clicks into place. Tighten the wing nuts securely.

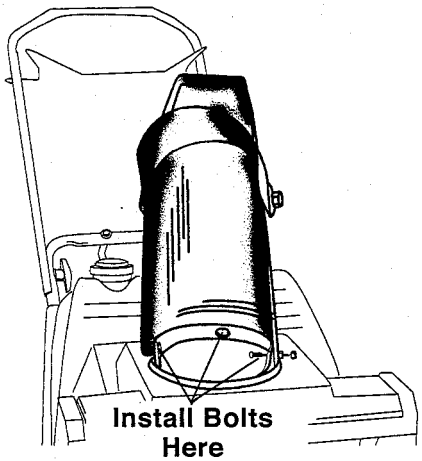


FIGURE 1

FUEL & OIL MIXTURE

Note: *Your snow thrower unit uses a two cycle engine that requires a mixture of gasoline and oil for lubrication of bearings and other moving parts.*

- Mix the gasoline and oil in a clean gasoline container.
- Always use fresh, unleaded, winter grade gasoline; never use 'stale' gasoline left over from last season or stored for 30 days or longer.
- Use the correct fuel/oil mix to prevent engine damage. Follow the chart below.

FUEL/OIL MIXTURE CHART (50:1)

U.S.		IMPERIAL		METRIC	
Gasoline Gallons	2 Cycle Oil Ounces	Gasoline Gallons	2 Cycle Oil Ounces	Gasoline Liters	2 Cycle Oil ml.
1	2.5	1	2.8	4	80
2	5	2	5.6	8	160
5	13	5	14.1	20	400

WARNING

- **Handle gasoline carefully. Remember that it is highly flammable.**
- **Careless use or handling of gasoline could cause fire hazard and result in damage to your person and/or property.**
- **Always fill gasoline container outdoors.**

1. Fill an approved clean one-gallon container with one quart fresh unleaded gasoline. See figure 2.
2. Pour recommended amount of 2.5 oz. high quality two cycle oil into the gasoline container.

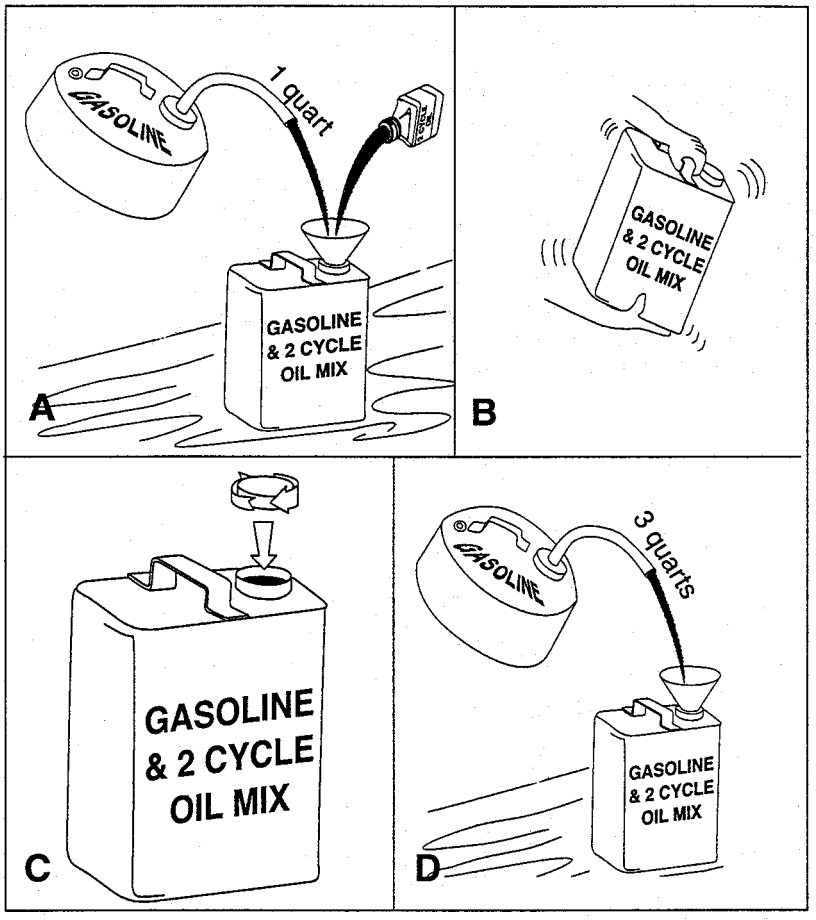


FIGURE 2

Note: *Do not use multiviscosity oils such as 10W-30 or 10W-40.*

3. Put the cap back on the gasoline container, tighten it, and shake the container vigorously so that the oil and gasoline mix.
4. Unscrew the cap and fill the container with three quarts of gasoline. Shake the container again. See figure 2.
5. Remove the fuel tank cap and carefully pour mixed gasoline into the fuel tank, filling to 1/2 inch below the filler neck to allow room for expansion. Shake the gasoline container each time before filling the fuel tank.

Caution: Never put plain, unmixed gasoline into the fuel tank.

Note: *You can use gasoline containing up to 10% ethanol or grain alcohol (gasohol), but make sure that you follow the engine manufacturer's special instructions for engine care when the engine is not used for an extended period. See Storage Instructions in the engine manual for that information.*

WARNING

- **Always fill up the fuel tank outdoors or in a well-ventilated area.**
- **Use a funnel or spout to prevent spilling.**
- **If there is spillage, wipe off immediately before attempting to start the engine.**
- **Never fill up the gas tank while the engine is running or is hot.**
- **Do not smoke while mixing the gasoline and oil, or filling up the fuel tank.**

KNOWING OPERATION CONTROLS

Note: *It is very important to know and understand the controls and safety devices of your snow thrower before you attempt to operate it. Make sure that the operator of the snow thrower has read this manual and understood the Safety Operation Rules on pages 2 & 3 before running the unit for the first time. Refer to the manual again for clarification whenever any question arises.*

THROTTLE The snow thrower does not have a remote throttle for controlling the operating speed of the engine. The engine governor maintains the operating speed according to the snow removal condition.

IGNITION SWITCH This switch is used to start and stop the engine. Insert key in the switch and turn switch to ON position to start the engine; turn switch to OFF position to stop the engine.

CHOKE CONTROL This control is used to enrich the fuel mixture to start a cold engine. A warm engine will normally not require choking to start. You can locate the operating position for the choke control on the decal. You may have to partially close the choke to allow the cold engine to run smoothly until it warms up.

PRIMER BUTTON This button helps in starting a cold engine. Depress the primer button to supply extra fuel mixture to start the cold engine. Do not prime a warm engine since it will flood the engine.

ELECTRIC STARTER On electric start models, plug the cord for the electric starter switch into the receptacle on the unit. Next, plug the other end into a 120V, AC household receptacle. Next depress the starter button to start the motor and crank the engine.
Note: *You can start these electric start engines manually with the starter rope. See instructions on how to use electric starter.*

AUGER CLUTCH CONTROL This control starts and stops the auger. Pull the control back against the handle to start the auger; release the control to stop the auger. When the auger touches the ground the snow thrower moves forward. Do not manually turn the auger in a clockwise direction because that will loosen the belt and unthread the pulley.

DISCHARGE CHUTE CONTROL This control is used to rotate the discharge chute to the desired direction. Turn crank clockwise to rotate the chute to the right, turn it counterclockwise to rotate the chute to the left.

SNOW DISCHARGE DEFLECTOR This deflector is used to control the distance that the snow will be thrown. Move deflector up to throw snow further; move deflector down to throw snow closer.

WARNING

- **The operation of any snow thrower can result in foreign objects being thrown into the eyes resulting in severe eye damage. Protect your eyes with safety glasses or eye shields whenever you operate this unit.**
- **This machine can be dangerous if used carelessly. So be careful in handling it.**
- **Never ignore safety devices or bypass these.**
- **Never operate the snow thrower without all guards, covers, and shields in place.**

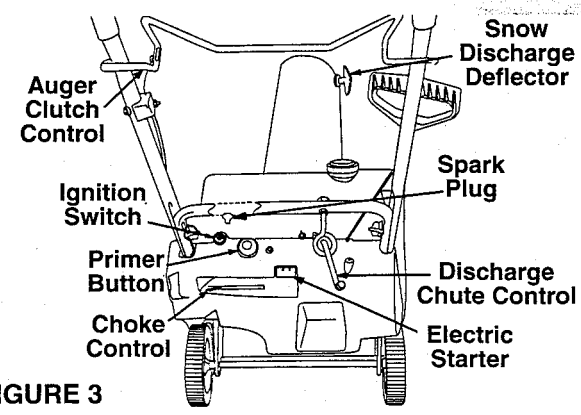


FIGURE 3

OPERATING THE UNIT

Note: *The snow thrower engine is designed to operate at cold temperatures and will be difficult to start in warm weather. Avoid operating your snow thrower in warmer conditions since engine may vapor lock and stop running after a short time.*

Never run the engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains CARBON MONOXIDE, an ODORLESS, DEADLY gas.

STARTING ENGINE

Pull Start Models: See figure 4.

1. Insert key in ignition switch and turn key to ON position.
2. Move choke control lever to the ON position on cold engines. If the engine is warm from operation, this step may not be necessary.
3. Push the primer button two or three times holding finger over vent hole. Allow a few seconds between each push for air to enter bulb through vent hole. You may have to prime more for the initial start at temperature below 15°F/-10°C.
4. Grasp the starter rope handle and slowly pull out the rope until you feel a resistance. Allow the rope to rewind slowly, then pull it out rapidly to start the engine. Let the rope return slowly to the starter. If the engine does not start after three pulls, push primer button one more time and pull the starter rope.

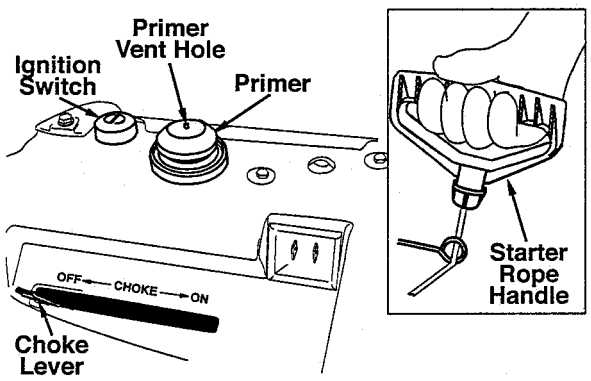


FIGURE 4

5. Once the engine starts and gradually warms up, move the choke lever to the OFF position. Be prepared to move the choke lever to the ON position if the engine sputters during warm up.
6. Allow the engine to warm up before snow throwing. The engine will operate at full throttle when it warms up.

Electric Start Model: See figure 5.

Note: *The electric starter is designed to operate on 120 volts AC household power supply using the power cord supplied with your snow thrower. When using the power cord, match the wide blade of the plug to the wide slot of the receptacle.*

7. Follow steps 1-3 from "pull start model" section.
8. Plug power cord into receptacle on the starter switch *first*, then plug the other end of the cord into a standard120 volts AC household outlet. **Do not** use any extension cord to lengthen the power cord supplied with the unit.

WARNING

- **Wear safety glasses while operating the unit.**
- **Never direct discharge at bystanders or allow anyone in front of the unit.**
- **Never direct discharge towards windows.**
- **Never operate the unit without all guards, covers, and shields in place.**
- **Stop the engine whenever leaving the operating position.**
- **Stop the engine, remove the key, and disconnect the spark plug before unclogging auger housing or discharge chute and/or before making repairs or adjustments.**
- **To reduce the risk of fire, keep the unit clean and free from spilled gas, oil and other debris.**

Make sure that there is no moisture on the cord ends or receptacles when plugging in the cord.

9. Push the starter button to crank the engine. Do not crank the engine for more than 15 seconds without allowing the electric starter to cool for around 10 minutes. Attempt further cranking *only* after the starter has cooled down.

Do not push the primer button while the engine is being cranked.
Electric start engines can be severely damaged if you do not follow proper starting instructions.

10. Release starter button once the engine starts and gradually move the choke lever to the OFF position.
11. Disconnect the power cord from (i) household receptacle and then from (ii) starter switch on the snow thrower. Store the cord in a dry place.

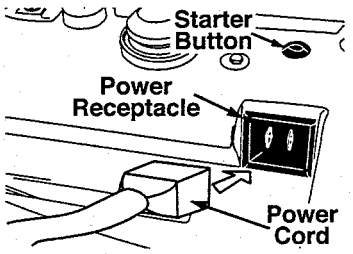


FIGURE 5

Always disconnect power cord from the household receptacle first, then unplug from starter switch.

STOPPING ENGINE

1. Turn ignition key to the OFF position.
2. Remove the key from the switch if you are leaving the operating position and/or before making repairs or adjustments.
3. Allow the unit to run for a few minutes before storing.

THROWING SNOW

Note: *The snow thrower will be pulled forward by the auger as the handle is raised. The unit will also move forward when the auger comes in contact with the accumulated snow.*

1. Before entering the area where snow needs to be cleared, adjust the position of the discharge chute so that snow will be thrown in the desired direction.

Note: *Snow should not be thrown towards buildings, automobiles, or people. Always try to throw snow down wind.*

2. Adjust the deflector on top of the discharge chute up or down to control the distance that the snow will be thrown. See figure 6.

Disengage auger drive before adjusting discharge deflector.

3. Review the area to be cleared of snow and establish a pattern for the most efficient snow removal.
4. Inspect the area for possible obstructions like gravel and rocks. Remove, if any.
5. Begin snow removal by clearing a path down the center of a walk or driveway along your pattern for snow removal. Gradually widen the path throwing snow to both sides. Allow the snow thrower to move the snow at its own pace.
6. When clearing wet and heavy snow, you may have to push down the handle and slow down. But allow engine to work at full throttle.

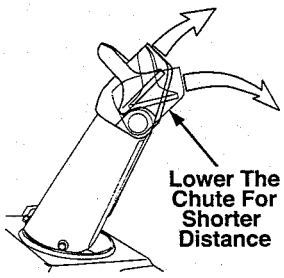


FIGURE 6

WARNING

- **Do not use snow thrower on surfaces above ground level, such as the roof of a building.**

- **Stay away from the front of your snow thrower unit when the auger is turning.**
- **Avoid picking up gravel with the auger since this could damage the unit and/or cause serious injury to the operator.**
- **Always be alert to the hidden hazards that might be struck by the auger.**
- **Should you hit a foreign object with the auger stop the engine immediately, remove key, disconnect spark plug and inspect the machine for any damage.**
- **Repair damage before operating the unit again.**

ADJUSTMENTS

To avoid serious bodily injury on the job when performing adjustments, maintenance or lubrication, stop the engine, remove key from the switch and disconnect the spark plug. Follow safety instructions mentioned here and safety labels on the unit.

REMOVING ENGINE COVER /COWLING:

In many of the adjustment and service tasks, you will have to first remove the engine cover/cowling, perform the task, and reinstall the cover.

A. Remove key from the ignition switch.
B. Remove the three screws holding the discharge chute to the rotating ring. Remove the chute. See figure 7.
C. Remove the two hex bolts from the top of the engine cover.
D. Remove two screws and flat washers each from inside the auger housing, rear of the cover, and both sides of the cover.
E. Remove the fuel tank cap and lift the cover and cowling carefully up and away from the engine exhaust pipes. Reinstall the cap on the fuel tank. Do not lose the hardware.
F. During reassembly of cover and cowling, remove fuel tank cap first. Next, make sure that the metal grommet for engine starter rope is in position between cowlings. The tabs at lower front of cover must be positioned to the inside of belt cover on the left and inside the lower cowling on the right.
G. Leave retaining screws loose until all are in place, then tighten them securely. Reinstall fuel tank cap.

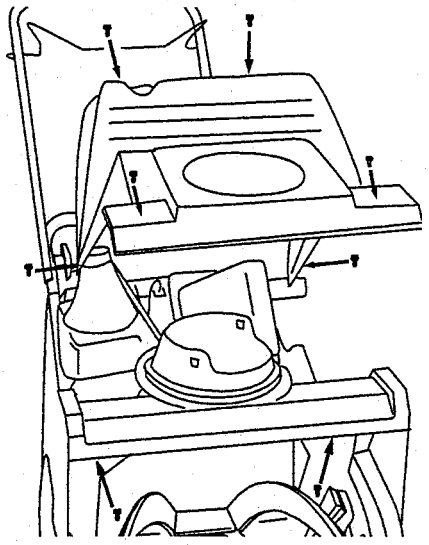


FIGURE 7

AUGER CLUTCH CABLE

Note: *The length of the auger clutch cable is adjustable. However, you will not have to do this frequently since the operating tension on the drive belt is maintained by the clutch engaging spring on the end of the cable.*

- If the auger turns slowly under heavy load or you hear the drive belt squeal when entering heavy snow, **reduce** the length of the cable. This will increase the pressure applied by the idler pulley on the drive belt.
- If auger continues to turn after the clutch control is released, the cable is too tight. **Increase** the length of the cable so that the cable is slightly slack when clutch control is released.

1. Access the clutch cable adjusting nuts by removing the engine cover and cowling.
2. Measure the spring while the clutch control on the handle is in the disengaged position. Record this measurement.
3. Pull the clutch control against the handle and again measure the spring. Record this measurement.
4. Compare the two measurements - the figure obtained with the spring extended should be 7/16th inch greater than with the spring unextended. If it is not, you will need to alter the length of the cable.

5. To reduce or extend the length of the clutch cable, adjust the nuts on the clutch cable. See figure 8. Reducing the cable length will increase idler pulley pressure on the belt.

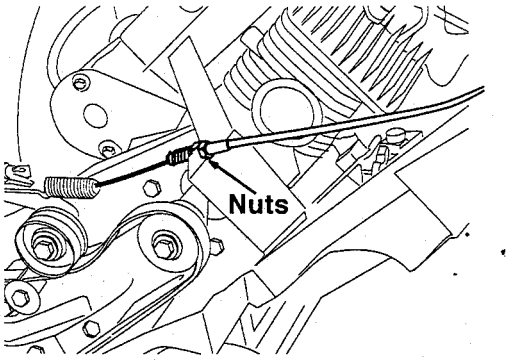


FIGURE 8

Use extreme caution when making adjustments that require engine to be running. Keep hands, feet, hair and loose clothing away from any moving parts.

6. Start the engine and pull back on clutch control to operate the auger. Release the clutch control and check to be sure that the auger stops turning.
7. Cable must have some slack when the clutch control is released. If the auger continues to turn after the clutch control is released, the cable is too tight. Adjust the nuts accordingly.
8. Reinstall the engine cover/cowling and secure with the correct hardware.

CARBURETOR

- The carburetor is properly calibrated and pre-set at the factory for efficient cold weather operation. There are no adjusting screws on the carburetor.
- If you feel, during operation of the snow thrower, that the carburetor is not providing adequate fuel supply to the engine, contact your nearest Authorized Tecumseh Service Outlet for service.

MAINTENANCE

To prevent accidental starting of engine during maintenance or service, always remove ignition key from switch.

Removing Belt Cover

In many of the maintenance tasks, you will have to first remove the belt cover, perform the task, and reinstall the cover.

A. Remove key from the ignition switch.
B. Remove the four screws from the side cover.
C. Remove the cover.
D. Lubricate the pivot point and reinstall the cover in reverse order.

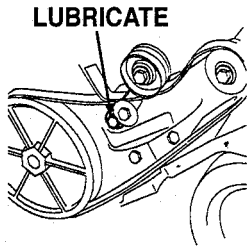


FIGURE 9A

LUBRICATION

1. Apply a few drops of light machine oil to the upper end of the clutch control cable. Wipe off any excess oil. This will ensure free movement of cable through outside casing. See figure 9A.
2. The drive pulley end of auger shaft is supported by a sealed ball bearing and requires no lubrication. The ball bearing on the other end of the auger shaft is also sealed and will not require lubrication.
3. At the beginning of each snow throwing season, remove discharge chute and generously lubricate the steel flange at the back of the rotating ring with light grease such as Lubriplate. Rotate the ring with crank to distribute the grease. See figure 9B.
4. Remove the belt cover and lightly apply oil to the pivot point for the idler pulley arm. MAKE SURE THAT YOU DO NOT SPILL OIL ON THE BELT OR THE PULLEYS. See figure 9C.
5. The two-cycle engine used on this snowthrower is lubricated by the gasoline/oil mixture. Observe recommended gasoline to oil mixture ratio shown on pages 4 & 5.
6. The drive belt idler pulley has a sealed bearing that requires no lubrication.

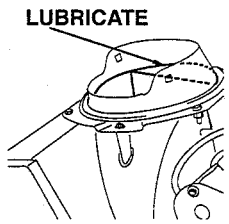


FIGURE 9B

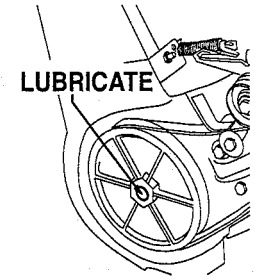


FIGURE 9C

REPLACING DRIVE BELT

1. Remove key from the ignition switch and disconnect spark plug.
2. Remove the belt cover.
3. Remove the engine cover/cowling following instructions on page 9.
4. Move the auger control bail on the handle and slip the belt out from between the brake lever and the roller and away from the idler pulley. See figure 10.
5. Remove the belt from the engine and the auger pulleys.
6. Install the new belt around the engine and auger pulleys and underneath idler pulley. THE RIBBED SIDE OF THE PULLEY MUST BE INSIDE, AGAINST THE AUGER AND ENGINE PULLEYS.
7. Slip belt into place between the brake lever and the roller.

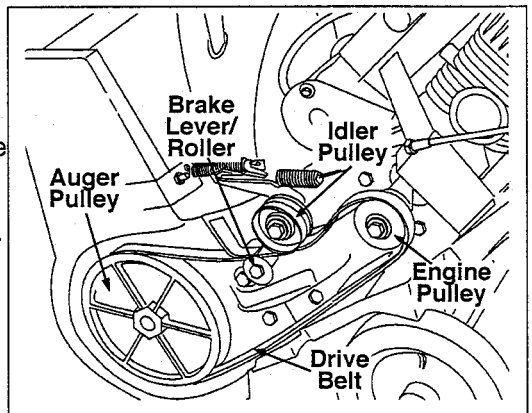


FIGURE 10

8. Start engine; engage and disengage auger clutch control to be sure that the auger stops turning when the clutch control is released.
9. If the auger does not stop turning when control is released, adjust the tension on the clutch control cable following instructions on page 6.
10. Reinstall the belt cover and the engine cover/cowling.

REPLACING SHAVE PLATE

1. Remove key from ignition switch.
2. Remove the three screws and nuts securing the shave plate to the auger housing. Save the hardware. See figure 11.
3. Remove the worn blade.
4. Install the new blade and secure it with the three screws and nuts earlier removed.

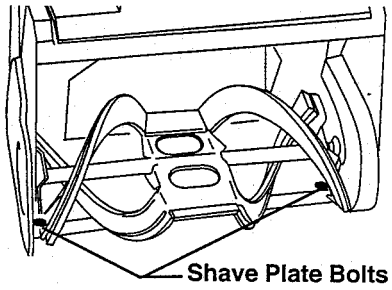


FIGURE 11

SERVICING SPARK PLUG

1. Remove key from the ignition switch.
2. Remove the engine cover following instructions on page 11.
3. Disconnect wire from the spark plug and remove the plug. See figure 12A.
4. Inspect the plug and clean carbon deposit from the electrodes with a wire brush.
5. If the plug is burned or pitted, replace it with a new plug (part # 731-0732) as recommended in the engine manual.
6. Adjust the gap between electrodes to .030 inch using a wire feeler gauge. See figure 12B.
7. Install the plug and tighten it firmly. Reconnect the plug wire.
8. Reinstall the engine cover/cowling.

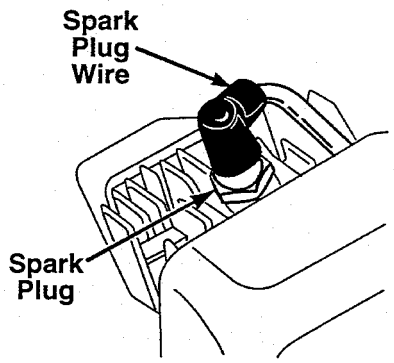


FIGURE 12A

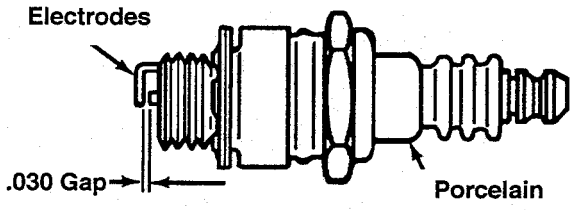


FIGURE 12B

STORAGE

Note: *If the unit is to be left unused for 30 days or more, or if the unit is to be stored for the off season, prepare the snow thrower following these instructions for storage.*

DRAIN CARBURETOR

1. Locate the bowl drain below the carburetor. See figure 14.
2. Press upward on bowl drain and drain the carburetor. (This is applicable only when your unit is so equipped.)

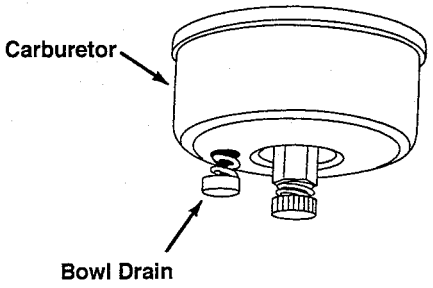


FIGURE 14

DRAIN FUEL

Handle gasoline carefully.
Drain fuel in approved container outdoors and away from open flame.
Do not smoke.

1. Remove all fuel from carburetor and fuel tank to prevent gum deposits.
2. Drain fuel into approved container outdoors and away from any open flame. Make sure that the engine is cool to the touch. Do not smoke. Dispose off the fuel in an EPA-approved place.
3. Run engine until the fuel tank is empty and the engine stops due to lack of fuel.
4. If you had used gasohol, follow the above steps, then put 1/2 pint of fuel-oil mix (mixed according to chart on page 4) and run engine till fuel tank is dry. For more details, consult engine manual.

CLEAN UNIT

1. Clean your snow thrower unit thoroughly.
2. Wipe all surfaces with a rag.

LUBRICATE

1. Lubricate wheel hubs, auger clutch control bar with oil.
2. Lubricate discharge chute flange. Follow instructions on page 8.

STOP CORROSION

1. Pull starter handle slowly until you feel a resistance from compression pressure.
2. Stop pulling the handle. Release the starter tension slowly to prevent engine from reversing from compression pressure.
3. This position will close the intake and exhaust ports and prevent corrosion of the piston and the cylinder bore.

SERVICE PARTS

1. Inspect unit for damaged or missing parts and replace these as needed. Follow the illustrated parts list to order parts.

STORE UNIT

1. Store the snow thrower unit indoors, if possible, and cover to keep off dust and dirt.

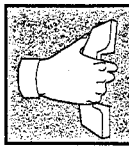
WARNING

- **Never store unit with fuel in tank in poorly ventilated enclosures, where fuel fumes may reach an open flame, spark or pilot light as on furnace, water heater, clothes dryer, etc.**
- **Gasoline is highly flammable and careless use can result in serious fire hazard resulting in damage to person and/or property.**
- **Drain fuel into approved container outdoors and away from any open flame.**
- **Make sure that the engine is cool to the touch before you start draining the fuel.**

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
Engine does not start	1. Key not in ON position 2. Choke in OFF position 3. Fuel tank empty 4. Old "stale" fuel mixture 5. Faulty spark plug 6. Engine not primed	Turn key to ON position Move choke to ON position. Fill fuel tank with fuel-oil mix. Drain the stale fuel mixture; refill with fresh fuel mixture. Replace spark plug. See page 12. Push primer button two or three times following starting instructions.
Engine runs erratic, sputters	1. Incorrect spark plug gap 2. Choke in ON position after engine has warmed up 3. Fuel contaminated with water and/or dirt particles 4. Gas cap vent hole plugged	Adjust gap to .030". Move choke to OFF position. Drain and refill with fresh fuel mixture Clean vent hole or replace cap.
Unit does not throw snow	1. Loose or broken drive belt 2. Incorrect control cable adjustment 3. Discharge chute clogged; foreign object lodged in auger 4. Carburetor not supplying enough fuel	Adjust or replace belt. See page 11. Adjust cable length. See pages 9 and 10. Stop engine, remove key and clean the discharge chute. Contact the nearest Tecumseh service outlet
Auger does not stop turning when control is released	1. Incorrect adjustment of control cable	Adjust cable length. See pages 9 and 10.
Unit vibrates excessively	1. Loose parts 2. Damaged auger	Stop engine, remove key and check. Make necessary repairs; tighten bolts. Take snow thrower to an authorized service dealer.
Unit loses power	1. Spark plug wire loose 2. Gas cap vent hole plugged 3. Exhaust port plugged.	Connect and tighten spark plug wire. Remove ice and snow from cap, and make sure that the vent opening is clear. Clean the exhaust port; see engine manual for instructions.

Follow step-by-step instructions and observe safety rules to make adjustments and repairs on your snow thrower.



For repairs and adjustments beyond those listed above, please contact the factory or authorized service dealer near you.

Simplicity Outdoor Power Equipment

SIMPLICITY/AGCO ALLIS
OWNER WARRANTY POLICY
EFFECTIVE MAY 1, 1996
Replaces all Warranties dated before MAY 1, 1996

AGCO ALLIS Outdoor Power Equipment

LIMITED WARRANTY

Simplicity Manufacturing, Inc. warrants to the original purchaser that each new product listed below is merchantable and free from defects in workmanship and material. This warranty is effective for the time periods listed below and is subject to the conditions that are provided in this policy. NO OTHER WARRANTY OR IMPLIED WARRANTY BY SIMPLICITY MANUFACTURING, INC. EXISTS EXCEPT WHERE REQUIRED BY LAW. THE COMPANY'S LIABILITY ARISING OUT OF WARRANTIES, REPRESENTATIONS, INSTRUCTIONS, OR DEFECTS FROM ANY CAUSE, SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACING PARTS UNDER THE CONDITIONS IN THIS WARRANTY, AND IN NO EVENT WILL THE COMPANY BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

	WARRANTY PERIOD	
PRODUCTS	**CONSUMER USE**	**COMMERCIAL USE**
GARDEN TRACTORS	2 YEARS	1 YEAR 2 YEARS ON SUNSTAR/1900 SERIES ONLY
LAWN TRACTORS	2 YEARS	1 YEAR
RIDING MOWERS	2 YEARS	1 YEAR
WALK-BEHIND SNOW THROWERS	2 YEARS	90 DAYS
FRONT CUT MOWERS	2 YEARS	1 YEAR
CHIPPER/SHREDDERS & CHIPPER VACUUMS	2 YEARS	90 DAYS
COMMERCIAL CHIPPER/SHREDDERS	1 YEAR	90 DAYS
WALK-BEHIND MOWERS	2 YEARS	90 DAYS
ATTACHMENTS	2 YEARS	1 YEAR
REPAIR PARTS (NO LABOR)	90 DAYS	45 DAYS
BATTERIES	1 YEAR	1 YEAR

WARRANTY PERIOD:

1. Repair parts installed on products receive the same warranty period remaining for the product or 90 days consumer use and 45 days commercial use, whichever is longer.

2. All riding products and two-stage walk-behind snow throwers used for personal household use will be allowed a one time pickup and delivery allowance not to exceed $25.00 during the two year warranty period for warranty repairs only. (WITHIN U.S.A. & CANADA ONLY)

OWNER RESPONSIBILITIES:

To qualify for warranty service, the purchaser of a Simplicity/AGCO Allis product must:

1. Have sent in the Warranty Registration Card to Simplicity/AGCO Allis at the time of purchase.

2. Notify a Simplicity/AGCO Allis Dealer as soon as possible after discovery of a possible defect. (If you are not aware of your nearest Simplicity/AGCO Allis dealer, write for such information to Simplicity Mfg., Inc., Attn.: Service Dept., 500 N. Spring St., Port Washington, WI 53074-0977 or refer to the yellow pages of your telephone directory under Lawn & Garden Equipment.)

NOT COVERED BY WARRANTY:

The following are not covered by this Limited Warranty:

1. Transportation charges to and from dealers except as noted above under Item #2 in the Warranty Period concerning the one time pickup and delivery allowance.

2. Damage caused by misuse of the product or by operating the product in excess of recommended capacities.

3. Damage caused by negligence or accident.

4. Products which have been altered or repaired in a manner not authorized by Simplicity/AGCO Allis.

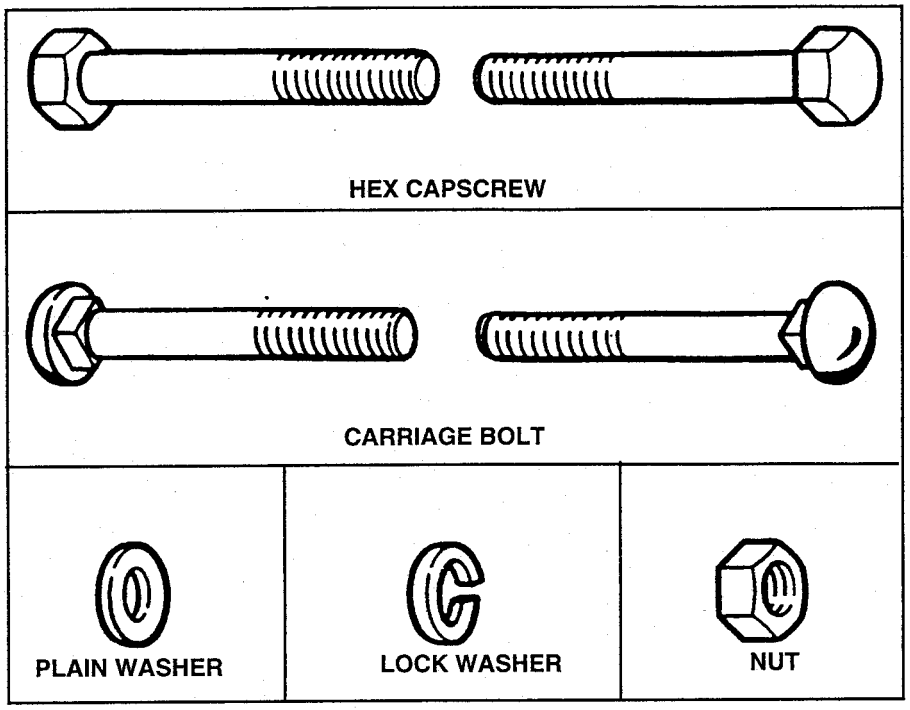
5. Engines, electric starters and some transaxles are warranted separately by their respective manufacturers, except Simplicity/AGCO Allis agrees to make available to the owners whatever warranty benefits may be made available to Simplicity/AGCO Allis by the manufacturers.

6. Normal maintenance and/or replacement of maintenance and wear items such as oil, filters, blades, belts, brake and clutch linings.

7. Problems caused by the use of non-Simplicity/AGCO Allis repair parts.

8. Products which have been sold to a second owner.

WARRANTY IS AVAILABLE ONLY THROUGH AUTHORIZED SIMPLICITY/AGCO ALLIS DEALERS.



STANDARD FASTENER IDENTIFICATION CHART

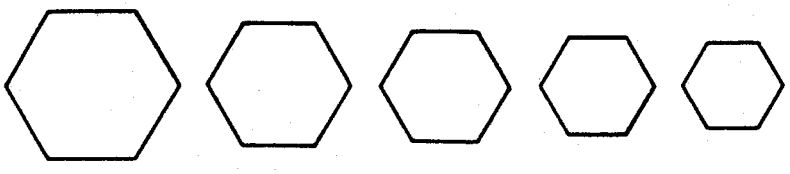
Hardware sizes are given throughout this manual.

If a washer or nut is identified as "washer, 1/2" or "nut, 1/2", this means the inside diameter is 1/2 inch.

If a screw is identified as "screw, 1/2 x 2", this means the shaft diameter is 1/2 inch and the shaft of the screw is 2 inches long. If a screw is identified as "screw, 1/2-16 x 2", the number "16" means that the screw has 16 threads per inch.

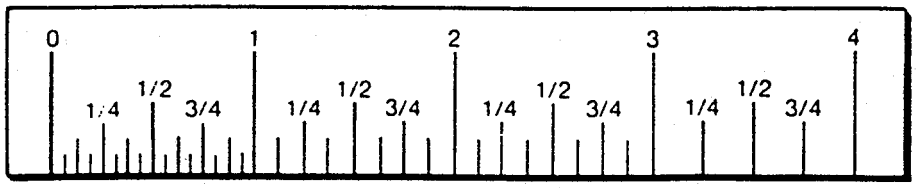
HEX CAPSCREW IDENTIFICATION

Shown below are actual size hex heads for standard screw sizes. Example: a 1/4" screw has a 7/16 head and thus requires a 7/16 wrench. To measure length, use the scale below.



3/4" Head screw with 1/2" S.D. | 5/8" Head screw with 7/16" S.D. | 9/16" Head screw with 3/8" S.D. | 1/2" Head screw with 5/16" S.D. | 7/16" Head screw with 1/4" S.D.

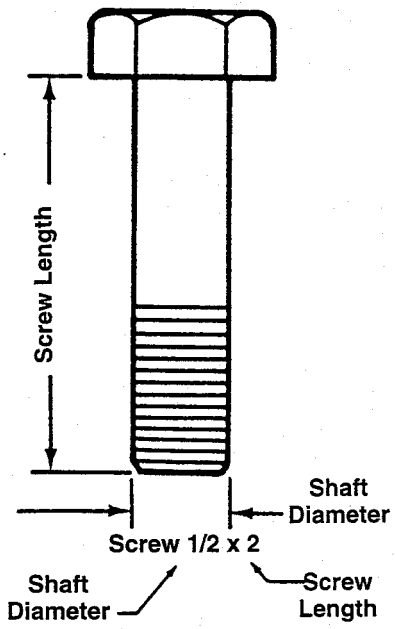
S.D. = Shaft Diameter



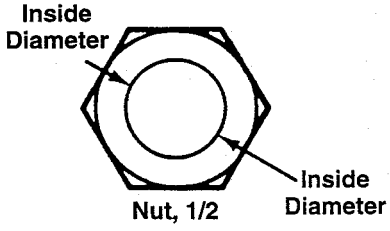
WASHER AND NUT IDENTIFICATION

Place the washer or nut on the above scale to determine the inside diameter. The actual inside diameter can vary 1/16 inch. Use the scale for comparison.

SAMPLE: SCREW IDENTIFICATION



SAMPLE: NUT IDENTIFICATION



TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE TOLERANCE ±20%

SIZE	SAE GRADE #2		SAE GRADE #5		SAE GRADE #8	
	In./Lbs. Ft./Lbs.	Nm.	In./Lbs. Ft./Lbs.	Nm.	In./Lbs. Ft./Lbs.	Nm.
8-32	19	2.1	30	3.4	41	4.6
8-36	20	2.3	31	3.5	43	4.9
10-24	27	3.1	43	4.9	60	6.8
10-32	31	3.5	49	5.5	68	7.7
1/4-20	66	7.6	8	10.9	12	16.3
1/4-28	76	8.6	10	13.6	14	19.
5/16-18	11	15.	17	23.1	25	34.
5/16-24	12	16.3	19	25.8	25	34.
3/8-16	20	27.2	30	40.8	45	61.2
3/8-24	23	31.3	35	47.6	50	68.
7/16-14	30	40.8	50	68.	70	95.2
7/16-20	35	47.6	55	74.8	80	108.8
1/2-13	50	68.	75	102.	110	149.6
1/2-20	55	74.8	90	122.4	120	163.2
9/16-12	65	88.4	110	149.6	150	204.
9/16-18	75	102.	120	163.2	170	231.2
5/8-11	90	122.4	150	204.	220	299.2
5/8-18	100	136.	180	244.8	240	326.4
3/4-10	160	217.6	260	353.6	386	525.
3/4-16	180	244.8	300	408.	420	571.2
7/8-9	140	190.4	400	544.	600	816.
7/8-14	155	210.8	440	598.4	660	897.6
1-8	220	299.2	580	788.8	900	1,224.
1-12	240	326.4	640	870.4	1,000	1,360.

NOTE:

1. These torque values are to be used for all hardware excluding: lock nuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for lock nuts:
   a. For prevailing torque lock nuts—use 65% of grade 5 torques.
   b. For flange whizlock nuts (and screws)—use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings all torque values must meet this specification.

BOLT HEAD MARKING S.A.E. GRADE:

2 

5 

8 

Simplicity
Outdoor Power Equipment

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Port Washington, WI 53074-0997 USA

Form Nos. 1716554

Rev. 6/96
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TP 100-2011-00-SW-S