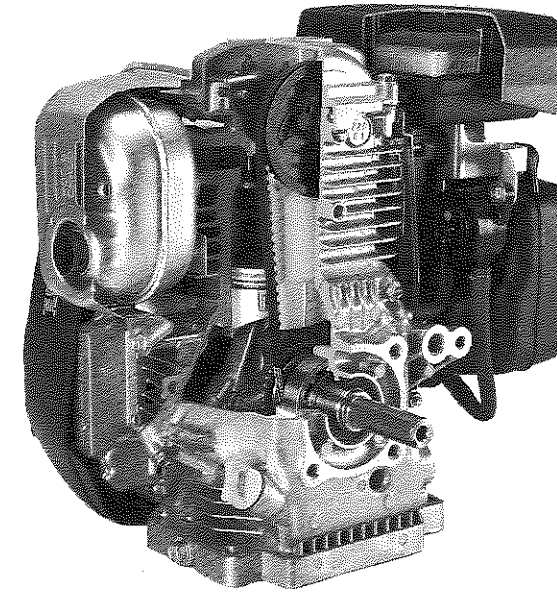




CHAPTER
20

Snow Throwers

Name _____

Date _____ Period _____

Instructor _____

After studying this chapter, you will be able to:

- ▼ Safely operate and service snow-throwing equipment.
- ▼ List important purchasing considerations for snow throwers.
- ▼ Identify major parts of walk-behind snow throwers.
- ▼ Make adjustments to snow throwers.
- ▼ Properly maintain snow-throwing machines.

Instructions: After studying Chapter 20 in the text, complete the following questions and problems.

1. Good _____ must always be used when operating or working with any power equipment.
2. The operator of a snow thrower must always be alert for _____ and never allow them to operate a snow thrower.
3. List five safety precautions that should be taken into account when operating a snow thrower.

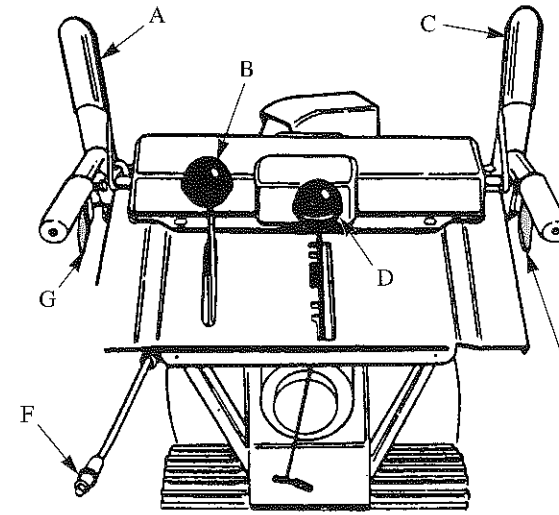
4. Before using a snow thrower you should inspect the machine to be sure all hardware is tight and all damaged or badly worn parts have been _____ or _____.
4. _____

5. If a child or pet enters the work area, you should _____ the machine and direct them to a safe area.
6. Small snow throwers for light snow falls and small areas are generally _____.
 - a. 10"-12" in width and about 2 hp
 - b. 12"-15" in width and about 4 hp
 - c. 16"-20" in width and about 3 hp
 - d. 20"-22" in width and about 3 hp
7. Almost all small machines have _____ (rope) start.
8. Small snow throwers are single-stage with _____ or _____ blades that rotate like paddles.
9. The direction of snow throwing is controlled by the _____.
10. Midsize snow throwers have _____ engines with 3 to 8 horsepower.
 - a. four-cycle
 - b. two-cycle
 - c. either two- or four-cycle
11. Midsize snow throwers have wheels with _____ tires and heavy _____.
12. Proper _____ can improve traction and minimize tire wear.
13. On some models, one or both _____ can be engaged to propel the machine.
14. Augers on mid-sized snow throwers are _____-_____ steel that _____ the snow into the machine.
15. Some augers have _____ edges to help break up ice and snow before feeding them into the _____ stage blower.
16. Heavy-duty snow throwers are from _____.
 - a. 2-3 hp
 - b. 5-10 hp
 - c. 8-20 hp
 - d. 25-30 hp
17. Heavy-duty snow throwers are _____-_____, two-stage machines.
18. Large pneumatic tires are common to heavy-duty machines and cleated _____ are used on some of the larger models.
19. Snow can be thrown as far as _____ feet, and is controllable by a(n) _____ at the top of the direction chute.
20. On some models, the weight can be shifted by moving the _____.

5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

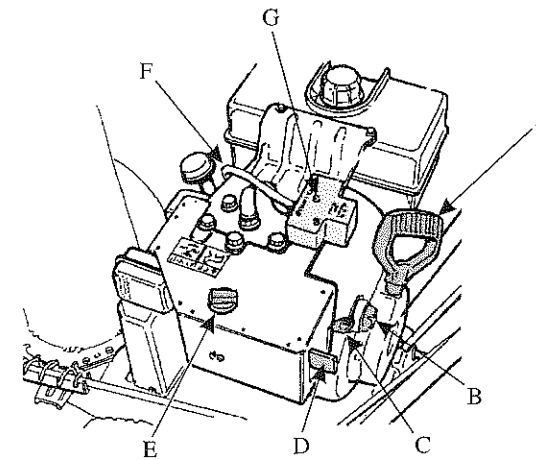
Name _____

21. Identify the operator controls shown in the illustration below.



21. A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____

22. Identify the engine controls shown in the illustration below.



22. A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____

23. Snow throwers that have electric starters also have a back-up _____.

- a. kick starter
- b. crank starter
- c. inertia starter
- d. recoil starter

23. _____

24. Self-propelled snow throwers will have two separate drive systems. One system drives the auger, or auger and _____, and the second system drives the _____ or _____.

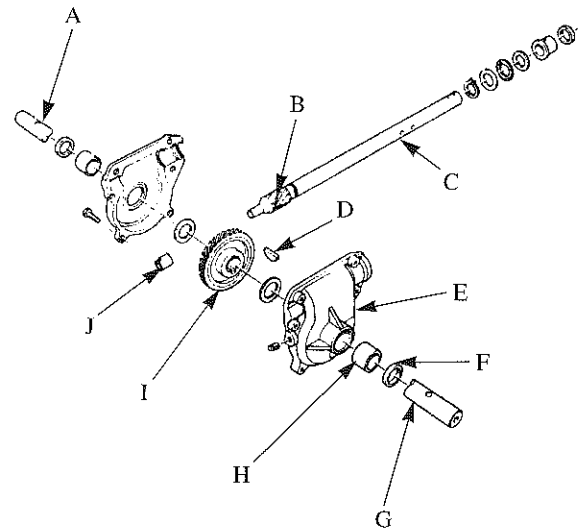
24. _____

25. An electric starter uses _____ current which is converted to _____ current for the starter motor.

- a. 110 volt dc, 12 volt ac
- b. 110 volt ac, 12 volt dc
- c. 12 volt dc, 110 volt ac
- d. 12 volt ac, 110 volt dc

25. _____

26. Electric starting requires a 3-wire grounded _____.
27. Identify the parts of the auger gearbox illustrated below.



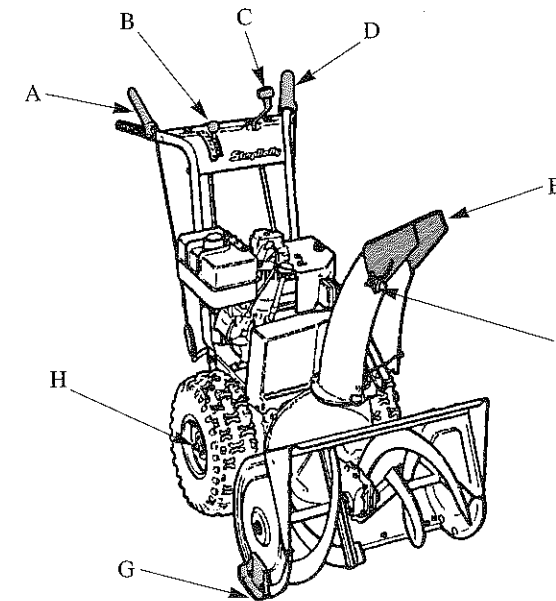
28. Self-propelled snow throwers use a(n) _____ mechanism to vary the speed of the machine.
29. On track-driven machines, it is very important that the track tension be adjusted properly and _____.
30. To remove the drive chain, it is necessary to locate and remove the _____ link and the _____ link.
31. To establish the correct height of the auger housing above the ground, adjustment to the _____ is necessary.
32. On smooth surfaces, such as concrete or asphalt, the scraper bar should be adjusted to lightly scrape or clear by about _____ or _____.
33. On gravel surfaces, the scraper bar should be adjusted to clear by about _____ or _____.
34. The scraper bar adds _____ to the auger housing.
35. On snow throwers with operator presence controls, the auger stops rotating when the _____ is released.
36. The engine should always be _____ and the spark plug wire should be _____ before reaching into the auger housing or chute to clear an obstruction.

26. _____
27. A. _____
B. _____
C. _____
D. _____
E. _____
F. _____
G. _____
H. _____
I. _____
J. _____

28. _____
29. _____
30. _____
31. _____
32. _____
33. _____
34. _____
35. _____
36. _____

Name _____

37. Identify the snow thrower controls in the illustration below.



37. A. _____
B. _____
C. _____
D. _____
E. _____
F. _____
G. _____
H. _____

38. List the procedure for starting a snow thrower engine. _____

39. For best performance, a snow thrower engine should be run at _____.

- a. slow speed
b. medium speed
c. high speed
d. Any speed is suitable.

40. Before removing the fuel tank cap on a snow thrower you should remove any _____.

41. Water in the fuel will freeze in the _____ part of the fuel system and prevent starting.

42. It is best to fill the fuel tank after each use of the snow thrower to avoid _____.

43. The auger gearbox must be lubricated with a(n) _____ worm gear oil.

44. If either, or both, of the auger halves should stop turning even though the auger clutch is engaged, the problem is probably _____

45. External mechanical parts of the snow thrower can be lubricated with _____.

- a. 10W oil
- b. molybdenum disulfide grease
- c. lithium grease

46. Why is it necessary to liberally lubricate the exterior of the solid shafts of the gearbox when assembling the auger tubes over them? _____

47. How can the auger tubes be lubricated periodically without disassembling them? _____

48. What are two possible reasons the unit may fail to propel itself? _____

• Research and write complete answers to the following questions.

49. Describe how the friction disc works for changing the speed of the snow thrower wheels. _____

50. Describe how to prepare a snow thrower for off-season storage. _____