Assembly & Set-Up

2

Thank You

Thank you for purchasing this product. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the machine, its features and operation. Please be aware that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.

If applicable, the power testing information used to establish the power rating of the engine equipped on this machine can be found at www.opei.org or the engine manufacturer's web site.

If you have any problems or questions concerning the machine, phone your local authorized service dealer or contact us directly. We want to ensure your complete satisfaction at all times.

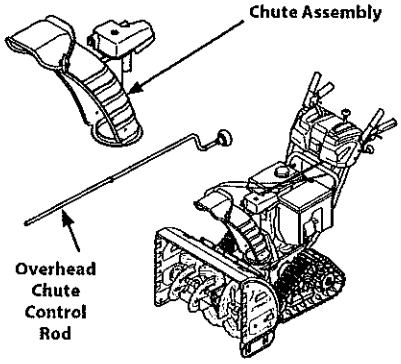
Throughout this manual, all references to *right* and *left* side of the machine are observed from the operating position.

Contents of Carton

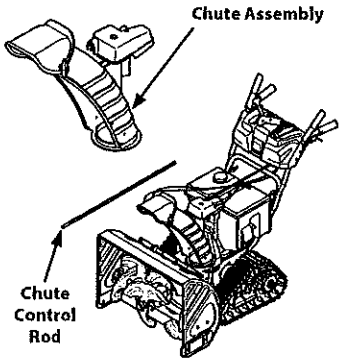
- Snow Thrower (1)
- Replacement Auger Shear Pins (2-4)
- Snow Thrower Operator's Manual (1)
- Carriage Screw† (2)
- Chute Assembly (1)
- Safety Key (2)
- Engine Operator's Manual (1)
- Flange Lock Nut† (2)
- Chute Control Rod or Flex Shaft Assembly† (1)
- Parts/Warranty Document (1)
- Product Registration Card (1)

† If Equipped

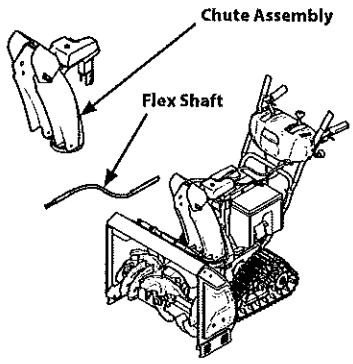
NOTE: This Operator's Manual covers several models. Features may vary by model. Not all features in this manual are applicable to all models and the model depicted may differ from yours. Refer to Figure 2-1 which shows the different versions and match the contents of carton (chute and directional control rod/flex shaft) to identify your specific unit.



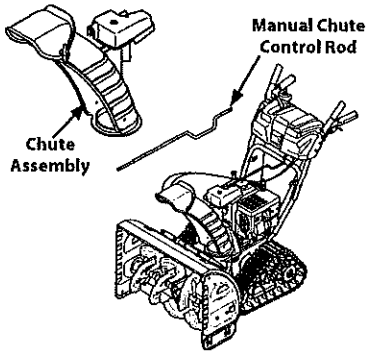
Overhead Chute Control (with Chute Control Rod)
Page 7



2-Way & 4-Way Chute Control
Page 8-9



Overhead Chute Control (with Flex Shaft and Steel Chute)
Pages 9-10



Electric Chute Control
Page 10-11

Figure 2-1

Tools Required

- Adjustable Wrench or Socket Set
- Needle Nose Pliers

Handle Assembly

Refer to Figure 2-1 and proceed to your applicable chute style.

1. Cut cable ties securing chute control rod or upper handle to the lower handle (if applicable), set aside the chute control rod (if applicable) and remove the wrap around the handles (if applicable).

   NOTE: Do not cut the cable tie securing the cables to the engine for units equipped.

   NOTE: On units with Overhead Chute Control (with Flex Shaft), Four-Way Chute Control, and Electric Chute Control cut cable ties securing flex shaft to the lower handle and set the flex shaft aside. Remove rubber bands securing cables to carriage screws and cut cable tie securing shift rod to lower handle. Refer to Figure 2-1 to help identify your unit.

2. Loosen the top two nuts (a) securing the upper and lower handle and remove the two carriage screws (b) from the lower handle and set aside as shown in Figure 2-2.

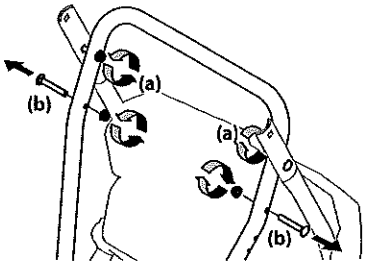


Figure 2-2

3. Place shift lever in Forward-6 position or fastest forward speed (if equipped).
4. Observe lower rear area of equipment to be sure both cables (if equipped) are aligned and seated properly in roller guides. See Figure 2-3.

NOTE: On select units, chute-pitch control cables will be routed under the engine on the left side and will not use roller guides.

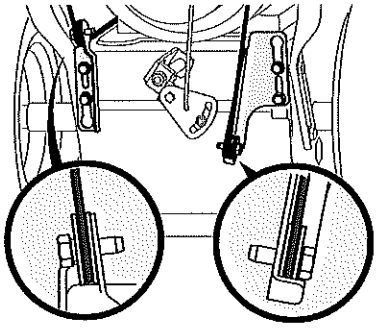


Figure 2-3

5. Pivot handle upward and align the lower handle. See Figure 2-4. Remove and discard any rubber bands, if present. They are for packaging purposes only.

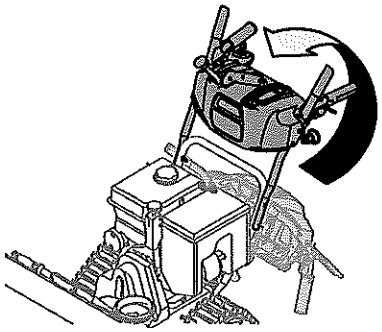


Figure 2-4

NOTE: On select units with steel rod speed selectors, you may need to lower shift rod to the side slightly to maneuver handle panel over it when pivoting handle upward.

6. Attach the two carriage screws (b) and nuts (a) removed in Step 2. Finish securing the handle by tightening the top two nuts (c) loosened in Step 2. See Figure 2-5.

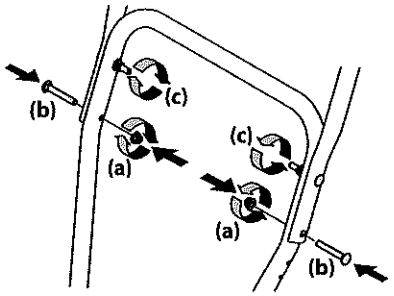


Figure 2-5

7. On units equipped with cable guides on top of the engine, check that all cables are properly routed through the cable guide.

   NOTE: For smoothest operation, cables should all be to the left of the chute directional control rod.

8. Continue to Chute Assembly Options (page 6).

Chute Assembly Options

Refer to Figure 2-1 and proceed to your applicable Chute Control Style on pages 7-10.

Overhead Chute Control (w/ Chute Control Rod)

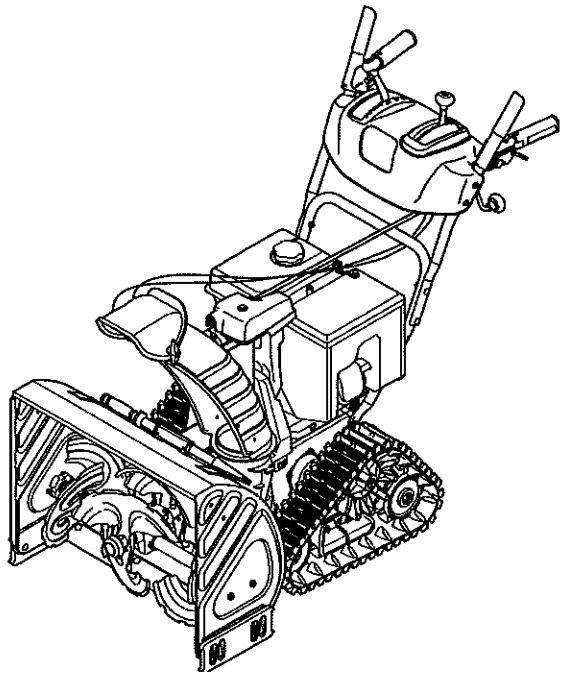


Figure 2-6

1. Remove wing nut (a) and hex screw (b) from chute control head and clevis pin (c) and cotter pin (d) from chute support bracket. Position chute assembly (forward-facing) over chute base. See Figure 2-7.

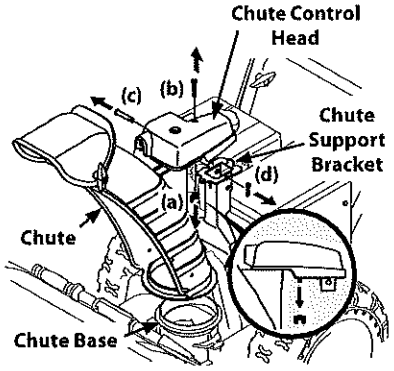


Figure 2-7

2. Place chute assembly onto chute base and secure chute control head to chute support bracket with clevis pin (c) and cotter pin (d) removed in Step 1. See Figure Figure 2-8.

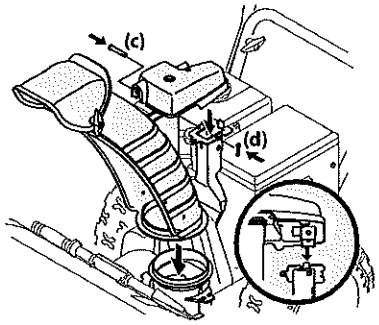


Figure 2-8

3. Finish securing chute control head to chute support bracket with wing nut (a) and hex screw (b) removed in Step 1. See Figure 2-9.

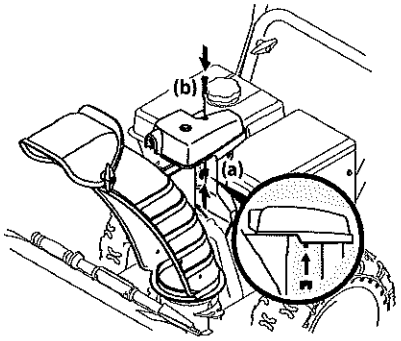


Figure 2-9

4. Insert chute control rod into the support bracket on rear of the dash panel. See Figure 2-10.

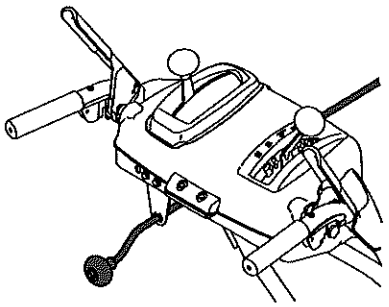


Figure 2-10

5. Remove hairpin clip (a) from rear of chute control head. See Figure 2-11.

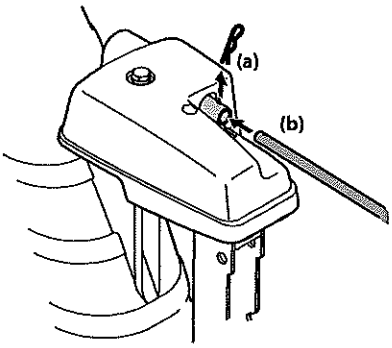


Figure 2-11

6. Insert chute control rod (b) into rear of chute control head. See Figure 2-11. Secure chute control rod to chute control assembly with hairpin clip (a) removed in Step 5.

● STOP
Continue to Set-Up (page 11).

2-Way & 4-Way Chute Control

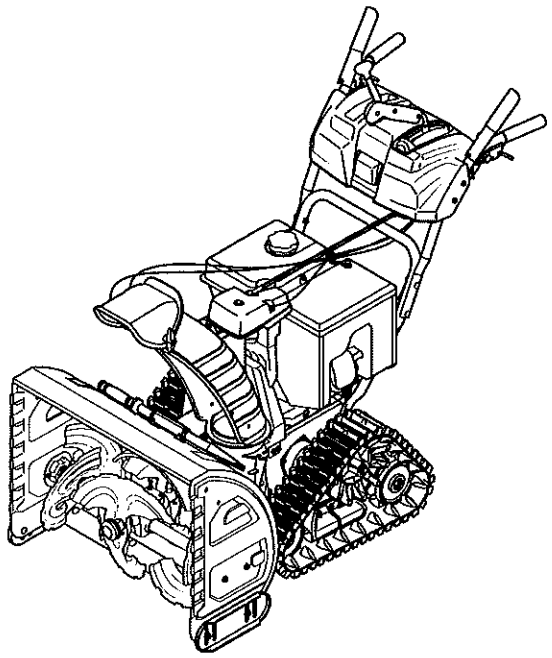


Figure 2-12

1. Remove hairpin clip (a), wing nut (b) and hex screw (c) from chute control head and clevis pin (d) and bow-tie cotter pin (e) from chute support bracket. See Figure 2-13.

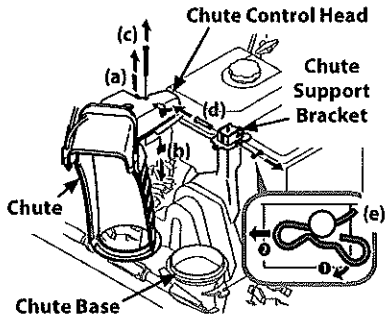


Figure 2-13

NOTE: For smoothest operation, cables should all be to the left of the chute directional control rod.

2. Insert chute control rod into chute control head. Push rod as far into chute control head as possible, keeping holes in rod pointing upward. See Figure 2-14.

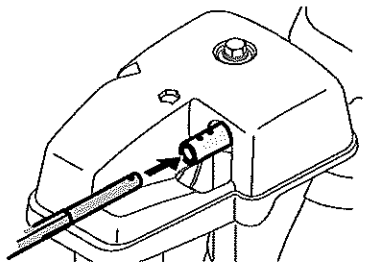


Figure 2-14

3. Place chute onto chute base and ensure chute control rod is positioned under handle panel. Install hex screw (c) removed in Step 1, but do not secure with wing nut at this time. See Figure 2-15.

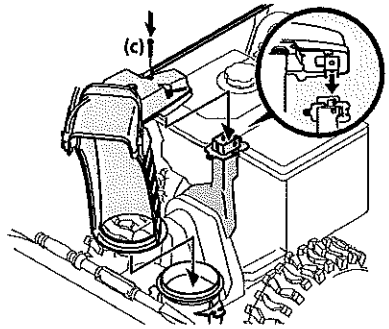


Figure 2-15

4. Squeeze trigger on joystick and rotate chute by hand to face forward. The holes in chute control input will be facing up. See Figure 2-16.

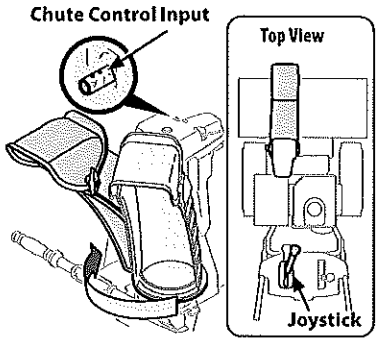


Figure 2-16

NOTE: Chute will not rotate without squeezing trigger on joystick.

5. Rotate joystick to one o'clock position so that indicator arrow on pinion gear below control panel faces upward. See Figure 2-17.

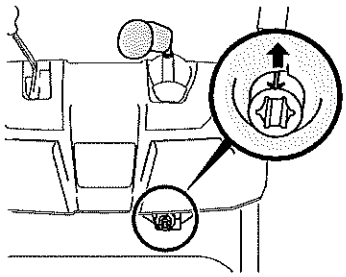


Figure 2-17

6. Insert chute control rod into pinion gear below joystick. Make sure to line up hole in rod with arrow on pinion gear. See Figure 2-18.

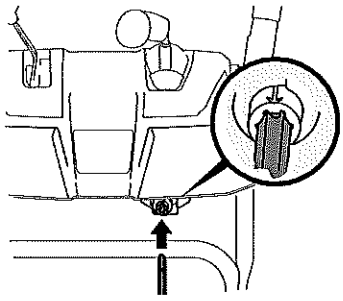


Figure 2-18

NOTE: Chute control rod will fit snug into pinion gear. Support rear of dash panel with one hand while inserting rod with your other hand to ensure rod is inserted ***all the way*** into pinion gear.

NOTE: The hole in the chute directional control rod is a reference for aligning rod with indicator arrow on pinion gear, and will be visible after rod has been inserted.

7. Push chute control rod toward control panel until hole in rod lines up with hole in chute control input closest to chute control head and insert hairpin clip (a) removed in Step 1. See Figure 2-19.

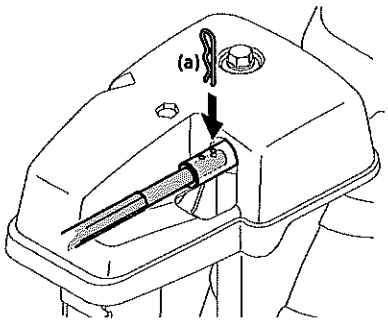


Figure 2-19

NOTE: Second hole is used to achieve further engagement of chute control rod into pinion gear if required. Refer to Service section for Chute Control Rod adjustments.

8. Finish securing chute control head to chute support bracket with wing nut (b), clevis pin (d), and bow-tie cotter pin (e) removed in Step 1.

● STOP
Continue to Set-Up (page 11)

Overhead Chute Control (w/ Flex Shaft & Steel Chute)

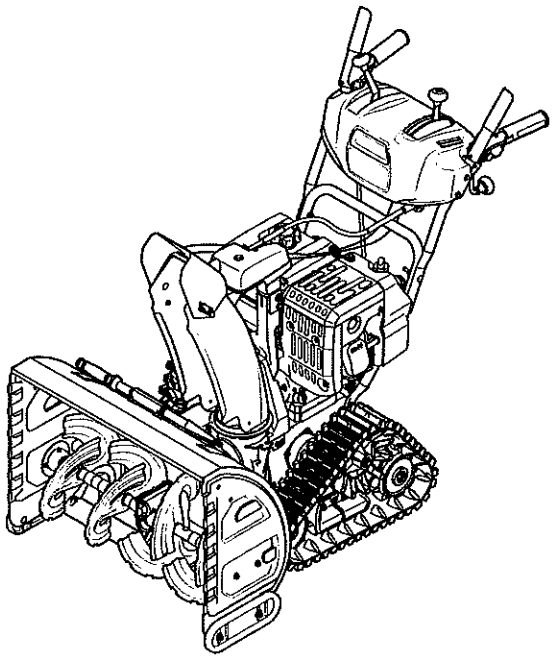


Figure 2-20

1. Remove lock nuts (a) and hex screws (b) from chute support bracket (this will require two wrenches). See Figure 2-21.

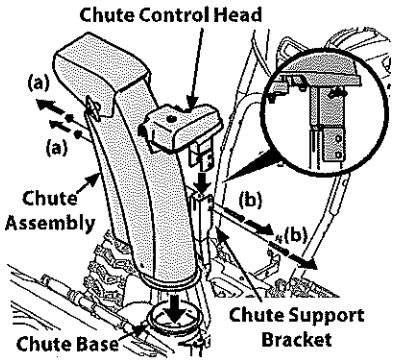


Figure 2-21

2. Place chute assembly onto chute base and chute control head onto chute support bracket. See Figure 2-22.
3. Secure chute control head to chute support bracket with lock nuts (a) and hex screws (b) removed in Step 1. See Figure 2-22

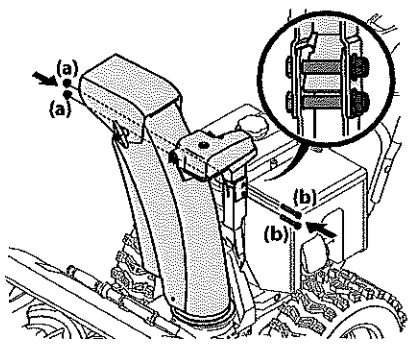


Figure 2-22

NOTE: For smoothest operation, cables should all be to the left of the chute directional control rod.

4. Remove hairpin clip (a) from rear of chute control assembly. See Figure 2-23.

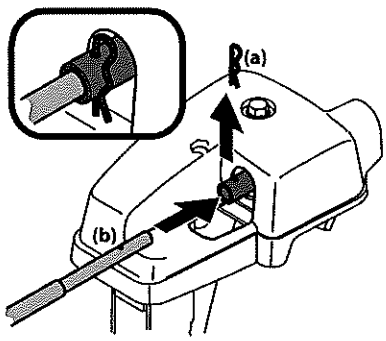


Figure 2-23

5. Insert flex shaft (b) removed during Handle Assembly from lower handle into rear of chute directional control head. See Figure 2-23. Secure flex shaft to chute control head with hairpin clip (a) removed in Step 4.

6. Insert hex end of flex shaft into chute control rod coupling under dash panel. See Figure 2-24.

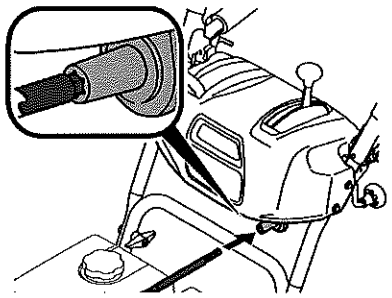


Figure 2-24

7. Ensure speed selector is in fastest forward speed.

8. Remove cotter pin (a) and washer (b) from ferrule on end of shift rod. See Figure 2-25 inset.

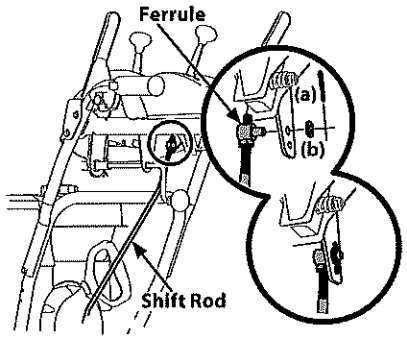


Figure 2-25

9. Make sure the shift lever on the back of the transmission is rotated downward to the full extent of its rotation. See Figure 2-26.

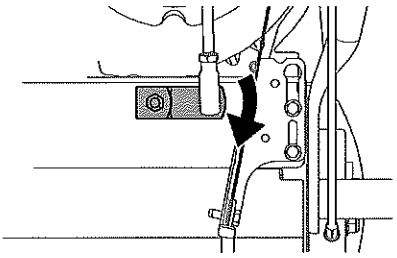


Figure 2-26

10. Insert ferrule into top hole of shift lever and secure with cotter pin (a) and washer (b) removed in Step 8. See Figure 2-25. Ferrule may need to be adjusted up or down.

● STOP
Continue to Set-Up (page 11).

Electric Chute Control

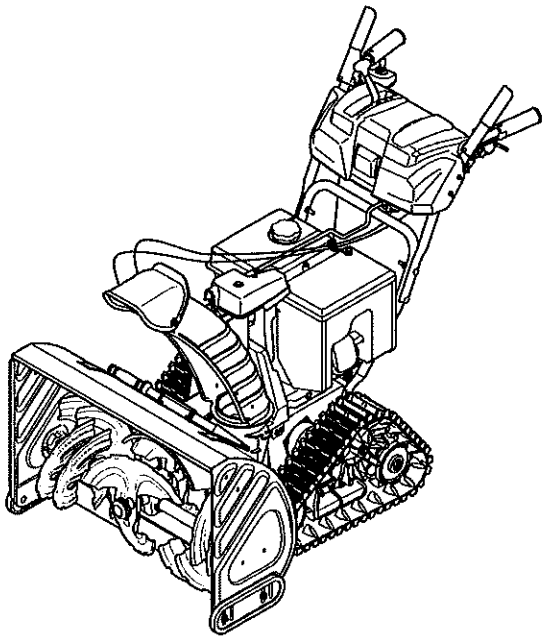


Figure 2-27

1. Remove cotter pin (a), wing nut (b) and hex screw (c) from chute control head. Remove clevis pin (d) and bow-tie cotter pin (e) from chute support bracket. See Figure 2-28.

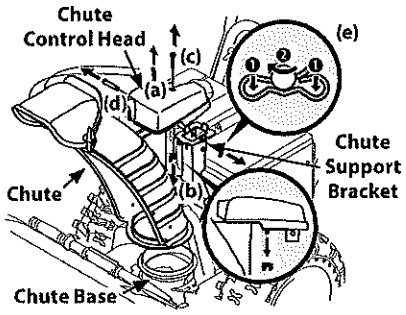


Figure 2-28

NOTE: For smoothest operation, cables should all be to the left of the chute directional control rod.

2. Insert round end of chute control rod into chute control head. Push rod as far into chute control head as possible, keeping holes in rod pointing upward. See Figure 2-29.

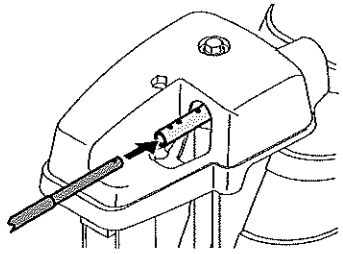


Figure 2-29

3. Place chute onto chute base and ensure chute control rod is positioned under handle panel. Secure chute control head to chute support bracket with clevis pin (d) and bow-tie cotter pin (e) removed in Step 1. See Figure 2-30.

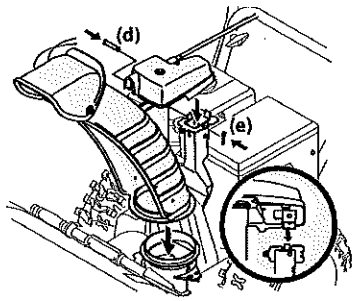


Figure 2-30

4. Finish securing chute control head by installing hex screw (c) and wing nut (b) removed in Step 1. See Figure 2-31.

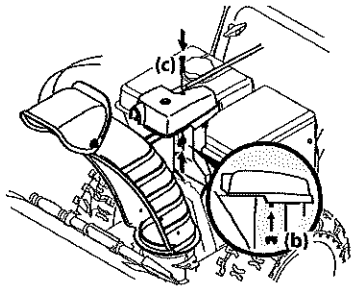


Figure 2-31

5. Insert other end of chute control rod into coupler below handle panel. Make sure to line up flat end of rod and flat end of coupler. You may need to rotate rod around until these two surfaces line up. See Figure 2-32 inset.

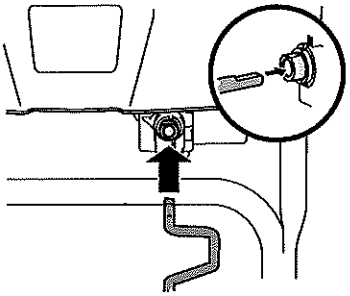


Figure 2-32

6. Push chute control rod toward the control panel until hole in rod lines up with middle hole in chute control input and insert cotter pin (a) removed in Step 1. See Figure 2-33.

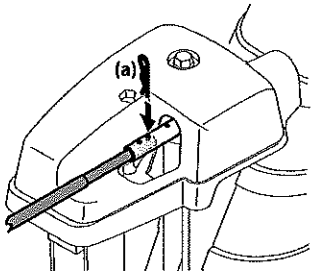


Figure 2-33

NOTE: There is a reference hole provided at rear end of control rod to help know when holes are vertical.

NOTE: Hole furthest from chute control head is used to achieve further engagement of chute control rod into coupler if required. Refer to Service section for Chute Control Rod adjustment on page 20.
Hole closest to chute control head is used for manual movement of chute assembly if required. Refer to Controls & Operation section on page 15.

● STOP
Continue to Set-Up (page 11)

Set-Up

Chute Control Cable Routing (If Equipped)

For units equipped with 2-way or 4-way chute control joystick, electric chute control and/or chute-pitch controls, ensure control cables are routed properly.

Chute control cables are routed through a single wire guide (a) on top of the engine and/ or through two wire guides (b) located on the left side of the unit.

NOTE: For smoothest operation, cables should all be to the left of the chute directional control rod.

NOTE: The number of cables routed through the wire guides will depend on unit model.

1. Locate cable guide(s) and perform the following:

- Units with Top Mounted Wire Guide (a) - Check that all cables are properly routed through cable guide on top of engine. See Figure 2-34.
- Units with Side Mounted Wire Guides (b) - Check that all cables are properly routed through the wire guide below the left side of the engine and the wire guide below the chute control head. See Figure 2-34.

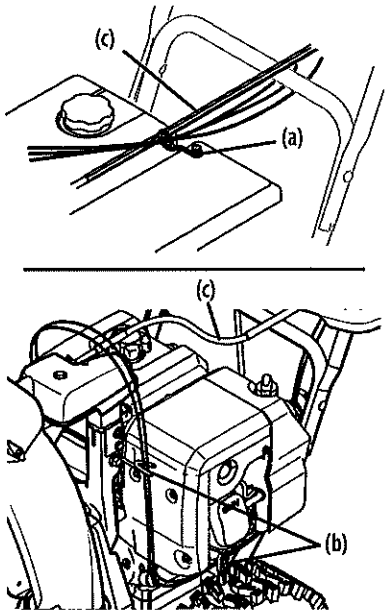


Figure 2-34

Shear Pins Storage (If Equipped)

On select units, holes are provided in the rear of the handle panel for shear pin (a) and bow-tie cotter pin (b) storage as shown in Figure 2-35. If not provided, make sure to store them in a safe place until needed.

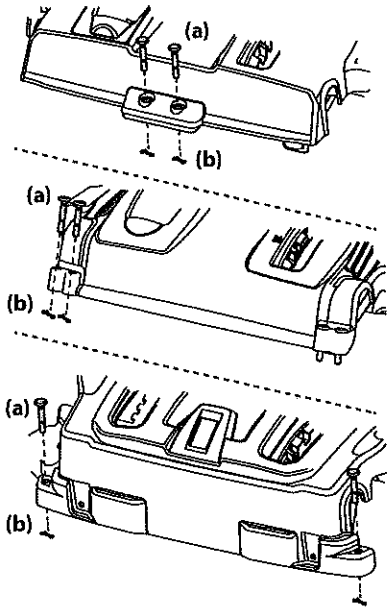


Figure 2-35

NOTE: Three stage units come with four (4) shear pins and bow-tie cotter pins.

Chute Clean-Out Tool

The chute clean-out tool is fastened to the top of the auger housing with a mounting clip. See Figure 2-36.

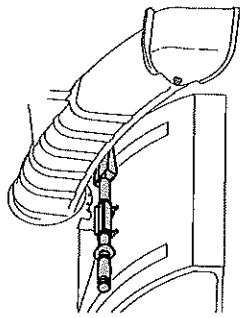


Figure 2-36

Adjustments

Chute Assembly

NOTE: For models with 2-Way/4-Way or Electric Chute Directional Control and/or models with chute-pitch controls see Controls and Operation on page 13.

On units with manual chute tilt the distance snow is thrown can be adjusted by changing angle of chute assembly. To do so:

1. Loosen wing knob found on left side of chute assembly. See Figure 2-37.

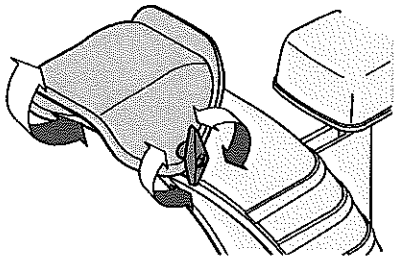


Figure 2-37

2. Pivot chute upward or downward before retightening wing knob.

Skid Shoes

The snow thrower skid shoes are adjusted at the factory set roughly 1/8" below the shave plate. Adjust them downward, if desired, prior to operating the snow thrower.

⚠ CAUTION
Use extreme caution when on gravel and adjust auger housing height to clear gravel or crushed rock surfaces to avoid picking up and throwing gravel or crushed rock.

- For close snow removal on a smooth surface, raise skid shoes higher on auger housing.
- Use a lower position when area to be cleared is uneven, such as a gravel driveway.

NOTE: If you choose to operate unit on a gravel surface, keep skid shoes in position for maximum clearance between ground and shave plate.

To adjust skid shoes:

1. Loosen four hex nuts (a) (two on each side) and carriage bolts (b). Move skid shoes to desired position. See Figure 2-38.

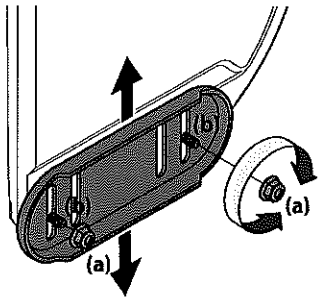


Figure 2-38

NOTE: The skid shoes on your unit may look slightly different (and have different hardware) than ones shown in Figure 2-38.

2. Make certain entire bottom surface of skid shoe is against ground to avoid uneven wear on skid shoes.
3. Retighten hex nuts (a) and carriage bolts (b) securely.

Shave Plate

NOTE: this procedure applies to units equipped with adjustable shave plates only.

To adjust the shave plate:

1. Allow engine to run until it is out of fuel. Do not attempt to pour fuel from the engine.
2. Carefully pivot unit up and forward so that it rests on auger housing.
3. Loosen rear skid shoe bolts (a) on both sides of auger housing and remove carriage bolts (b) and hex nuts (c) which attach shave plate (d) to the bottom of the auger housing. See Figure 2-39.

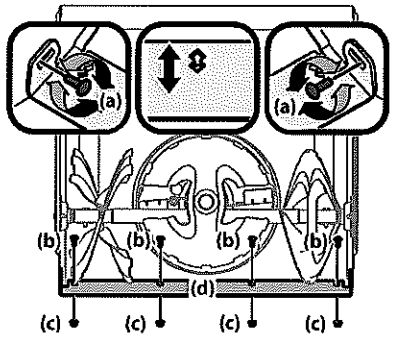


Figure 2-39

NOTE: 3-Stage unit shown.

4. Adjust the shave plate to one of 2 mounting positions. Reinstall and tighten the carriage bolts (b) and hex nuts (c) all bolts securely. See Figure 2-39.
5. Adjust the skid shoes. See Skid Shoes on page 12.

Auger Control

⚠ WARNING!
Prior to operating your unit, carefully read and follow all instructions below. Perform all adjustments to verify your equipment is operating safely and properly.

Refer to Controls & Operation section (page 13) for the location of auger control lever and check adjustment as follows:

1. When auger control lever is released and in disengaged "UP" position, the cable should have very little slack. It should NOT be tight.
2. In a well-ventilated area, start the snow thrower engine. Refer to your Engine Operator's Manual.
3. While standing in the operator's position (behind the unit), depress the auger control lever to engage auger.
4. Allow auger to remain engaged for approximately ten (10) seconds before releasing auger control lever. Repeat this several times.
5. With auger control lever in disengaged "UP" position, walk to front of machine.
6. Confirm that auger has completely stopped rotating and shows NO signs of motion. If auger shows ANY signs of rotating, immediately return to operator's position and shut OFF engine. Wait for ALL moving parts to stop before readjusting auger control lever.
7. To readjust the auger control cable, loosen upper hex screw (a) unit auger control bracket. See Figure 2-40.

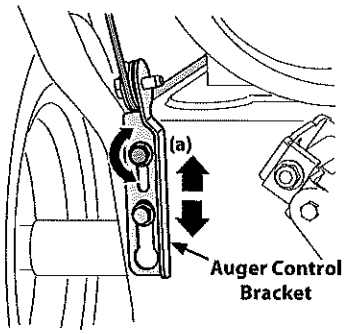


Figure 2-40

8. Position bracket upward to provide more slack (or downward to increase cable tension. See Figure 2-40.
9. Retighten upper/rear hex screw (a).
10. Repeat the steps 2 - 6 to verify proper adjustment has been achieved.

Adding Fuel & Oil

Refer to the Engine Operator's Manual for information on adding fuel and oil.