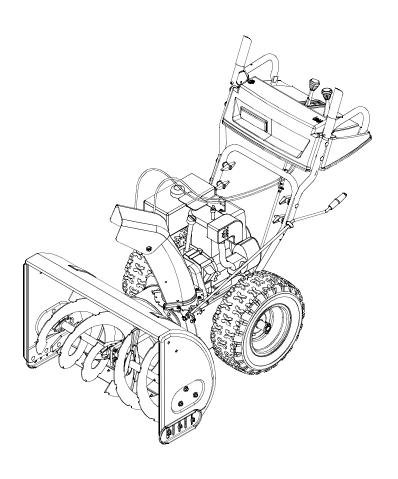


# Operator's Manual



Model 724 WE

**IMPORTANT:** Read safety rules and instructions carefully before operating equipment.

**Warning:** This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 368023 Cleveland, Ohio 44136-9722.

**CUB CADET CORP. P.O. BOX 368023 CLEVELAND, OHIO 44136-9722** 

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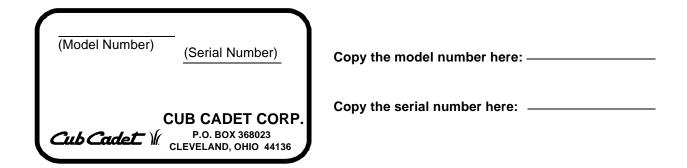
### FINDING MODEL NUMBER

This Operator's Manual is an important part of your new Snow Thrower. It will help you assemble, prepare and maintain the unit for best performance. Please read and understand what it says.



**Before you start assembling your new equipment**, please locate the model plate on the equipment and copy the information from it in the space provided below. The information on the model plate is very important if you need help from your *Cub Cadet* dealer.

• You can locate the model number by looking at the lower frame cover in the rear of your snow thrower. A sample model plate is explained below. For future reference, please copy the model number and the serial number of the equipment in the space below.



### **CALLING WARRANTY SERVICE**

If you are having difficulty assembling this product or if you have any question regarding the controls, operation or maintenance of this unit, please call the Customer Dealer Referral Line. You can reach them by calling:

#### 1-800-528-1009



Before calling your local dealer, make sure that you have your model and serial numbers ready. By having the model and serial numbers ready, you help your local dealer give you faster service.

### SECTION 1: IMPORTANT SAFE OPERATION PRACTICES



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 this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol—heed its warning.



**WARNING:** Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.



**DANGER:** This machine 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. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

### Training

- Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
- Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
- 4. Never allow adults to operate this machine without proper instruction.
- Thrown objects can cause serious personal injury. Plan your snow throwing pattern to avoid discharge of material toward roads, bystanders and the like.
- 6. Keep bystanders, helpers, pets and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
- Exercise caution to avoid slipping or falling, especially when operating in reverse.

### Preparation

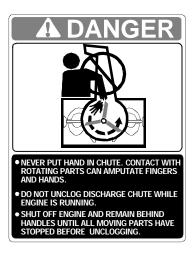
- Thoroughly inspect the area where the equipment is to be used. Remove all door mats, newspapers, sleds, boards, wires and other foreign objects which could be tripped over or thrown by the auger/impeller.
- Always wear safety glasses or eye shields during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
- Do not operate without wearing adequate winter outer garments. Do not wear jewelry, long scarves or other loose clothing which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.
- 4. Use a grounded three wire extension cord and receptacle for all units with electric start engines.
- Adjust collector housing height to clear gravel or crushed rock surfaces.
- 6. Disengage all clutch levers before starting the engine.

- Never attempt to make any adjustments while engine is running, except where specifically recommended in the operator's manual.
- 8. Let engine and machine adjust to outdoor temperature before starting to clear snow.
- 9. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
  - a. Use only an approved gasoline container.
  - Extinguish all cigarettes, cigars, pipes and other sources of ignition.
  - c. Never fuel machine indoors.
  - Never remove gas cap or add fuel while the engine is hot or running.
  - e. Allow engine to cool at least two minutes before refueling.
  - f. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to provide space for fuel expansion.
  - g. Replace gasoline cap and tighten securely.
  - If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
  - Never store the machine or fuel container inside where there is an open flame, spark or pilot light (e.g. furnace, water heater, space heater, clothes dryer etc.).
  - Allow machine to cool at least 5 minutes before storing.

### **Operation**

- Do not put hands or feet near rotating parts, in the auger/ impeller housing or discharge chute. Contact with the rotating parts can amputate hands and feet.
- The auger/impeller clutch lever is a safety device. Never bypass its operation. Doing so, makes the machine unsafe and may cause personal injury.
- The clutch levers must operate easily in both directions and automatically return to the disengaged position when released.
- Never operate with a missing or damaged discharge chute. Keep all safety devices in place and working.

- Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
- Do not operate machine while under the influence of alcohol or drugs.
- 7. Muffler and engine become hot and can cause a burn. Do not touch.
- Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic.
- Exercise caution when changing direction and while operating on slopes.
- Plan your snow throwing pattern to avoid discharge towards windows, walls, cars etc. To avoid property damage or personal injury caused by a ricochet.
- Never direct discharge at children, bystanders and pets or allow anyone in front of the machine.
- Do not overload machine capacity by attempting to clear snow at too fast of a rate.
- Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
- 14. Disengage power to the auger/impeller when transporting or not in use.
- Never operate machine at high transport speeds on slippery surfaces. Look down and behind and use care when in reverse.
- 16. If the machine should start to vibrate abnormally, stop the engine, disconnect the spark plug and ground it against the engine. Inspect thoroughly for damage. Repair any damage before starting and operating.
- 17. Disengage all clutch levers and stop engine before you leave the operating position (behind the handles). Wait until the auger/impeller comes to a complete stop before unclogging the discharge chute, making any adjustments, or inspections.
- 18. Never put your hand in the discharge or collector openings. Always use a clearing tool to unclog the discharge opening.
- 19. Use only attachments and accessories approved by the manufacturer (e.g. wheel weights, tire chains, cabs etc.).
- 20. If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer or telephone 1-800-800-7310 for assistance and the name of your nearest servicing dealer.

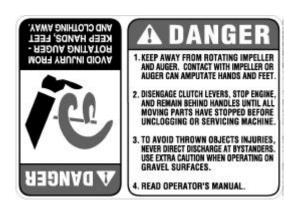


### Maintenance And Storage

- Never tamper with safety devices. Check their proper operation regularly.
- Disengage all clutch levers and stop engine. Wait until
  the auger/impeller come to a complete stop. Disconnect
  the spark plug wire and ground against the engine to
  prevent unintended starting before cleaning, repairing, or
  inspecting.
- Check bolts, and screws for proper tightness at frequent intervals to keep the machine in safe working condition.
   Also, visually inspect machine for any damage.
- Do not change the engine governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
- 5. Snow thrower shave plates and skid shoes are subject to wear and damage. For your safety protection, frequently check all components and replace with original equipment manufacturer's (O.E.M.) parts only. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
- Check clutch controls periodically to verify they engage and disengage properly and adjust, if necessary. Refer to the adjustment section in this operator's manual for instructions.
- Maintain or replace safety and instruction labels, as necessary.
- Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.
- 9. Prior to storing, run machine a few minutes to clear snow from machine and prevent freeze up of auger/impeller.
- Never store the machine or fuel container inside where there is an open flame, spark or pilot light such as a water heater, furnace, clothes dryer etc.
- 11. Always refer to the operator's manual for proper instructions on off-season storage.

#### Your Responsibility:

Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine. The safety labels are given below for your reference.



#### **SECTION 2: LOOSE PARTS**

The snow thrower is shipped with following loose parts in the carton. Please remove all loose parts from the carton before discarding it. See Figure 1 to identify the parts noting that these parts may be referred to again in the following sections of this manual. Part numbers are shown in parentheses.

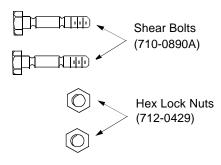


Figure 1

#### AUGER SHEAR BOLTS

The augers are secured to the auger shaft with two shear bolts and hex lock nuts. If you hit a foreign object or ice jam, the snow thrower is designed so that the bolts may shear. Two replacement shear bolts and nuts are provided for your convenience. Store in a safe place until needed.

**IMPORTANT:** NEVER replace the auger shear bolts with standard hex bolts. Any damage to the auger gearbox or other components as a result of doing so will NOT be covered by your snow thrower's warranty.

### SECTION 3: ASSEMBLING YOUR SNOW THROWER

**NOTE:** Any reference in this manual to the left or right side of the snow thrower is observed from the operator's position.

**IMPORTANT:** Make any final adjustments as instructed later on in this section BEFORE operating your snow thrower.



**WARNING:** Disconnect the spark plug wire and ground it against the engine to prevent unintended starting.

 Remove the lower two plastic wing knobs, cupped washers and carriage bolt (eyebolt on the left side) from the lower handle. See Figure 2.

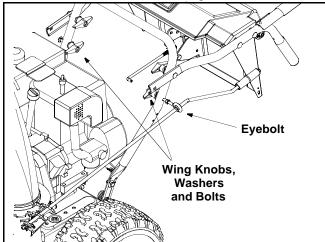


Figure 2

- Raise the upper handle assembly until it locks over the lower handle. See Figure 2 and Figure 3.
- Look at the lower rear of snow thrower frame to be sure both cables are aligned with roller guides.

 Secure the upper handle and lower handle with the two plastic wing knobs, cupped washers and carriage bolt (eyebolt on the left side) previously removed. See Figure 3.

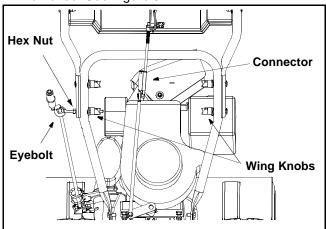


Figure 3

- Adjust the eyebolt on the chute directional control so the rod does not come into contact with the engine by moving the hex nut against the handle (if necessary). Retighten the wing nut to secure the directional control in this position.
- Slide the shift rod connector down over the end of the lower shift rod. See Figure 3. Tap the connector until it locks on the lower shift rod.

**NOTE:** If the connector is not properly assembled, the shift rod will pivot and you will not be able to change speeds or change directions.

 If not already attached, slip the cables that run from the handle panel to the chute into the cable guide located on top of the engine. See Figure 4.

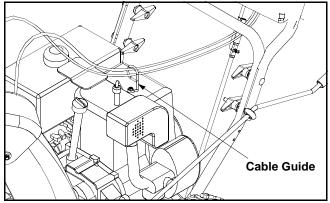


Figure 4

- Unwrap the headlight wire which is attached to the headlight, beneath the handle panel. Wind the headlight wire around the right handle until excess slack is removed.
- Plug the wire from the headlight into the wire lead coming from the right side of the engine, beneath the fuel tank.

### Final Adjustments

Auger Control Adjustment

Check the adjustment of the auger control as follows:

- Push forward on the auger control (Refer to Figure
   7) until the small rubber bumper contacts the upper handle. There should be slack in the cable.
- Release the auger control. The cable should be straight. Make certain you can depress the auger control against the left handle completely.

If adjustment is necessary, proceed as follows:

 Loosen the jam nut and thread the cable in (for less slack) or out (for more slack) as necessary. See Figure 5.

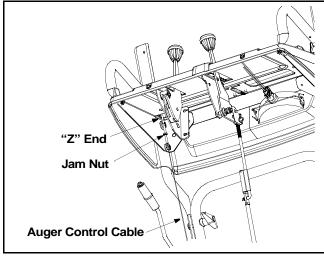


Figure 5

 Recheck the adjustment before retightening the jam nut against the cable.

#### Skid Shoe Adjustment

The space between the shave plate and the ground can be adjusted by repositioning the skid shoes found on either side of the snow throwers auger housing. For close snow removal, place skid shoes in the low position. Use middle or high position when area to be cleared is uneven. See Figure 6.

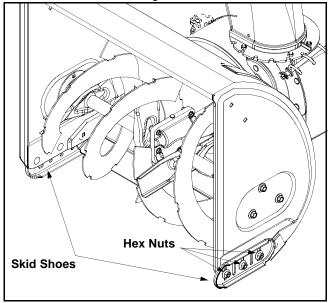


Figure 6

**IMPORTANT:** It is NOT recommended that this snow thrower be operated on a gravel surface, as loose stones can be easily picked up and thrown by the machine. If you must operate on a gravel surface, ALWAYS adjust the skid shoes into the HIGH position to allow the shave plate maximum clearance.

Adjust skid shoes as follows:

- Loosen, but do NOT remove, the three hex nuts which fasten the skid shoe to the auger housing.
- Raise or lower the skid shoe to desired position.

**NOTE:** Make certain the entire base of both skid shoes is against the ground to avoid uneven wear on the skid shoes. When one side does wear out, the skid shoes are reversible.

- Retighten the hex nuts loosened earlier.
- Repeat this adjustment on the skid shoe found on the opposite side of the snow thrower.

#### Tire Pressure Adjustment

The tires are over-inflated for shipping purposes. Check tire pressure and reduce to between 15 psi and 20 psi.

**NOTE:** If the tire pressure is not equal in both tires, the unit may pull to one side or the other.

Traction Control and Shift Lever Adjustment

To check the adjustment of the traction control and shift lever, proceed as follows:

- Move the shift lever into sixth (6) position.
  - a. With the traction control (refer to Figure 7 in Section 4 of this manual) released, gently push the snow thrower forward, then pull it back. Disregarding the overall weight of the snow thrower, the machine should otherwise move freely.
  - Engage the traction control, and attempt to move the machine both forward and rearward. You should experience resistance as the wheels should not be turning.
- Move the shift lever into the fast reverse (R2) position and repeat the previous steps (a & b).

If you experienced resistance either when repositioning the shift lever from 6 to R2 or when attempting to move the machine forward or rearward with the traction control released, your snow thrower's traction control is in need of adjustment and you should NOT operate the machine before completing the adjustment as follows:

- Loosen the jam nut on the traction control cable and UNTHREAD the cable one full turn.
- Recheck the adjustment.
- Retighten the jam nut to secure the cable when correct adjustment is reached.

If the machine can be moved freely both forward and rearward when the traction control fully depressed, proceed as follows:

- Loosen the jam nut on the traction drive cable and THREAD the cable in one full turn.
- Recheck the adjustment and repeat adjustment as necessary.
- Retighten the jam nut to secure the cable when correct adjustment is reached.

**NOTE:** If you are uncertain that you have reached the correct adjustment, refer to Traction Control Adjustment on page 10 of this manual.

#### SECTION 4: KNOW YOUR SNOW THROWER

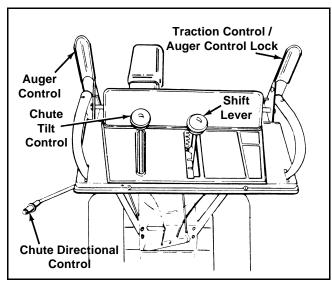


Figure 7

### Traction Control / Auger Control Lock

The traction control is located on the right handle. Squeeze the traction control to engage the wheel drive. Release to stop.

This same lever also locks the auger control so you can turn the chute directional control without interrupting the snow throwing process. If the auger control is engaged along with the traction control, the operator can release the auger control (on the left handle) and the augers will remain engaged. Release the traction control to stop both the augers and wheel drive (auger control must also be released).

**IMPORTANT:** Always release tractional control before changing speeds.

### Headlight

The headlight is on whenever the engine is running.

#### Shift Lever

The shift lever is located in the center of the handle panel and is used to determine both ground speed and direction of travel. It can be moved into any of eight positions.

#### **Forward**

Your snow thrower has six forward (F) speeds. Position number one (1) is the slowest. Position number six (6) is the fastest.

#### Reverse

Your snow thrower has two reverse (R) speeds. R1 is the slower, while R2 is the faster of the two.

6 - 5 - 4 - 3 - 2 - F 1 - R2 -

**IMPORTANT:** Always release tractional control before changing speeds.

### **Auger Control**

The auger drive clutch is located on the left handle. Squeeze the clutch grip to engage the augers. Release to stop the snow throwing action. (Traction control must also be released.)

#### Chute Directional Control

The chute directional control is located on left side of the snow thrower.

To change the direction in which snow is thrown, turn chute directional control as follows:

- Crank clockwise to discharge to the left.
- Crank counterclockwise to discharge to the right.

#### Chute Tilt Control

The distance snow is thrown can be varied by adjusting the pitch of the chute assembly. Move the chute tilt control forward to decrease the distance, or toward the rear to increase the distance.

### Fuel Shut-off Valve (if so equipped)

The fuel shut-off valve, located under fuel tank, controls fuel flow from the tank. Always make certain it is in the Open (vertical) position before attempting to start the engine.



#### Throttle Control

The throttle control is located on the engine. It regulates the speed of the engine.

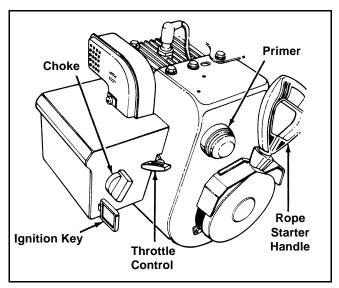


Figure 8

### **Ignition Key**

The ignition key must be fully inserted in the switch before the unit will start. Remove the ignition key when snow thrower is not in use.

**IMPORTANT:** Do NOT attempt to turn the key.

### SECTION 5: OPERATING YOUR SNOW THROWER



**WARNING:** Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

### Gas And Oil Fill-up

 Check oil level and add oil if necessary. Service the engine with gasoline as instructed in the separate engine manual packed with your snow thrower.



**WARNING:** Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and other sources of ignition.

### To Start Engine

- Attach spark plug wire to spark plug. Make certain the metal loop on the end of the spark plug wire (inside the rubber boot) is fastened securely over the metal tip on the spark plug.
- Make certain the fuel cut-off valve, if your snow thrower is so equipped, is in the OPEN position.

- Make certain the auger and drive clutch levers are in the disengaged (released) position.
- Move throttle control up to FAST position. Insert the ignition key into slot. Make sure it snaps into place.
   Do NOT turn the key.

**NOTE:** Engine will not start unless the ignition key is inserted into the ignition slot.

**Electric Starter** 



**WARNING:** The optional electric starter is equipped with a grounded three-wire power cord and plug, and is designed to operate on 120 volt AC household current. It must be used with a properly grounded three-prong receptacle at all times to avoid the possibility of electric shock. Follow all instructions carefully prior to operating the electric starter.

 Determine that your house wiring is a three-wire grounded system. Ask a licensed electrician if you are not certain.

**IMPORTANT:** If your house wiring system is not a three-wire grounded system, do NOT use this electric starter under any conditions. Use the recoil starter instead.

**IMPORTANT:** If your home electrical system is

grounded, but a three-hole receptacle is not available, one should be installed by a licensed electrician before using the electric starter.

- If you have a grounded three-prong receptacle, proceed as follows.
- Rotate choke knob to OFF position.
- Connect power cord to switch box on engine. Plug the other end of power cord into a three-prong 120volt, grounded, AC receptacle.
- Push starter button to crank engine. As you crank the engine, rotate the choke knob to FULL choke position.
- When engine starts, release starter button, and gradually rotate the choke to OFF. If the engine falters, rotate the choke immediately to FULL and then gradually to OFF.
- When disconnecting the power cord, always unplug it from the three-prong receptacle **before** unplugging it from the snow thrower.

#### Recoil Starter

- If the engine is cold, rotate the choke knob to the FULL choke position.
- If the engine is warm, place choke in OFF position instead of FULL.
- Depress the primer three times for a cold engine start.
- If the engine is warm, depress the primer only once.

**NOTE:** Always cover the vent hole in the primer button when pushing. Additional priming may be necessary for first start if temperature is below 15° Fahrenheit.

- Grasp starter handle and pull rope out slowly, until it pulls slightly harder, then let rope rewind recoil.
- Pull thestarter handle swiftly. Do not allow handle to snap back. Allow it to recoil slowly while keeping a firm hold on the starter handle.
- As engine warms up and begins to operate evenly, rotate the choke knob slowly to OFF position. If engine falters, return it to FULL choke, then slowly rotate it to the OFF position.

### To Stop Engine

- Run engine for a few minutes before stopping to help dry off any moisture on the engine.
- Move the throttle control to the STOP or OFF position.
- To help prevent possible freeze-up of starter, proceed as follows.

#### **Electric Starter**

Connect power cord to switch box on engine, then to 120 volt AC receptacle. With the engine running, push starter button and spin the starter for several seconds. The unusual sound made by spinning the starter will not harm engine or starter. Disconnect the power cord from receptacle first, and then from snow thrower's switch box.

#### **Recoil Starter**

- With engine running, pull starter rope with a rapid, continuous full arm stroke three or four times.
   Pulling the starter rope will produce a loud clattering sound, which is not harmful to the engine or starter.
- Remove the ignition key. Do not turn key.
   Disconnect the spark plug wire from the spark plug to prevent accidental starting while equipment is unattended.

**NOTE:** Keep the ignition key in a safe place. The engine will not start without the ignition key.

 Wipe all the snow and moisture from the carburetor cover in the area of the control levers. Also, move the control levers back and forth several times.

### To Engage Drive

**NOTE:** Use the slower speeds until you are familiar with the operation of the snow thrower.

- With the engine running near top speed, move shift lever into one of the six FORWARD positions or two REVERSE positions. Select a speed appropriate for the snow conditions that exist.
- Squeeze the traction control against the right

handle and the snow thrower will move. Release it and the drive motion will stop.

**IMPORTANT:** NEVER move shift lever without first releasing the traction control. Doing so will cause premature wear to drive system's friction wheel rubber.

### To Engage Augers

To engage the augers and start the snow throwing action, squeeze the auger control against the left handle.

To disengage power to the augers, release both the auger control and the traction control, if engaged,

**NOTE:** The auger control can also be locked so you can turn the chute directional control without interrupting the snow throwing process. Refer to Traction Control/ Auger Control Lock in Section 4 of this manual.

### Tire Chains (Optional Equipment)

Tire chains should be used whenever extra traction is needed. See your local *Cub Cadet* dealer for information regarding tire chains and other optional accessories for your snow thrower.

### Operating Tips

**NOTE:** Allow the engine to warm up for a few minutes as the engine will not develop full power until it reaches operating temperature.



**WARNING:** Muffler, engine and surrounding areas become hot and can cause a burn. Do not touch

Set the skid shoes 1/4" below the shave plate for

normal usage. The skid shoes may be adjusted upward (to lower the shave plate) for hard-packed snow. Adjust downward (to raise the shave plate) when using on gravel or crushed rock.

- Remove snow immediately after it falls.
- Discharge snow downwind whenever possible.
- Slightly overlap each previous cleared path.
- Follow the precautions found under the heading To Stop Engine to prevent possible freeze-up.
- · Clean the snow thrower thoroughly after each use.

#### SECTION 6: MAKING ADJUSTMENTS



**WARNING:** Never attempt to make any adjustments while the engine is running, except where specified in operator's manual.

### **Chute Assembly Adjustment**

The distance snow is thrown can be varied by adjusting the pitch of the chute assembly. Refer to Chute Tilt Control in Section 4 of this manual.

# Chute Directional Control Support Bracket Adjustment

If the spiral at the base of the chute directional control isn't fully engaging with the notches in the lower chute assembly, the support bracket can be adjusted inward or outward as follows:

 Loosen, but do NOT remove the two hex nuts which secure the chute directional control support bracket to the snow thrower housing. See Figure 9.

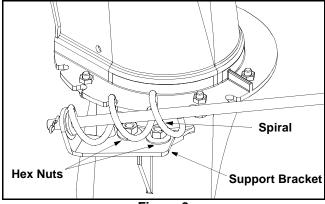


Figure 9

 Adjust the support bracket inward or outward so that the spiral is fully engaged in the notches on the chute before retightening the hex nuts.

### Skid Shoe Adjustment

The space between the shave plate and the ground can be adjusted by raising or lowering the skid shoes. Refer to Skid Shoe Adjustment in Section 3 of this manual.

### **Auger Control Adjustment**

Refer to the information found under the heading Final Adjustments in Section 3 of this manual to adjust the auger control.

### **Traction Control Adjustment**

Refer to the information found under the heading Final Adjustments in Section 3 of this manual to adjust the traction control. If you are uncertain that you have reached the correct adjustment, proceed as follows:

- Tip the snow thrower forward, allowing it to rest on the auger housing.
- Remove the frame cover underneath the snow thrower by removing six self-tapping screws.

With the traction control released, there must be clearance between the friction wheel and the drive plate in all positions of the shift lever.

With the traction control engaged, the friction wheel must contact the drive plate. See Figure 10.

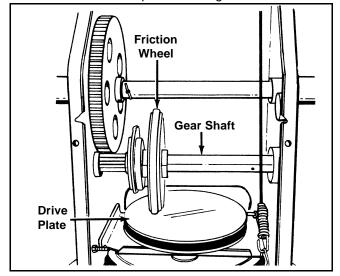


Figure 10

If adjustment is necessary:

 Loosen the jam nut on the traction drive cable and thread the cable in or out as necessary.

- Retighten the jam nut to secure the cable when correct adjustment is reached.
- · Reassemble the frame cover.

### Shift Rod Adjustment

To adjust the shift rod, proceed as follows.

 Remove the hairpin clip and slide the connector up to separate the upper shift rod from the lower shift rod. See Figure 11.

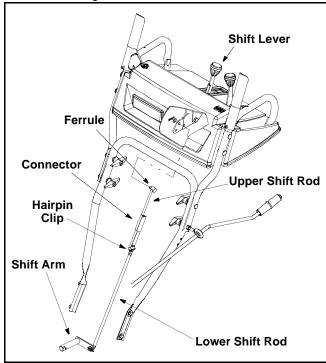


Figure 11

- Place shift lever in the sixth (6) Forward position.
- Rotate the shift arm counterclockwise (from the operator's position) as far as it will go.
- Thread the upper shift rod downward until the elbow on its lower end aligns with the hole found in the lower shift rod.
- Reconnect the upper shift rod to the lower shift rod by reinserting the hairpin clip removed earlier and sliding the connector back down into place.

**IMPORTANT:** Make certain to check for correct adjustment of the shift rod as instructed under the heading Final Adjustments on page 11 of this manual, before operating the snow thrower.

#### **Drive Wheels**

The wheels may be adjusted for two different methods of operation. The adjustment is made by placing the click pins in one of two different holes on the right side of the unit. See Figure 12.

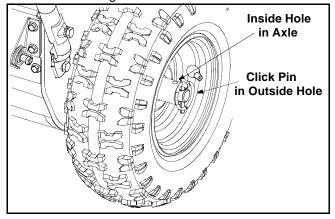


Figure 12

One Wheel Driving—Insert the click pin only through the outside hole of the axle (NOT the rim) on the right side of the snow thrower. This position gives power drive to the left wheel only, making the unit easier to maneuver.

Both Wheels Driving—Insert the click pin through the hole in the hub of the rim and the INSIDE hole on the snow thrower's right axle. This position is good for heavy snow as there is power drive in both wheels.

**IMPORTANT: NEVER** operate the snow thrower with the click pin inserted through both the **RIM and the OUTSIDE HOLE** in the axle. Doing so can result in serious damage to the drive system.

### SECTION 7: MAINTAINING YOUR SNOW THROWER

#### Lubrication



**WARNING:** Before lubricating, repairing, or inspecting, disengage all clutch levers and stop engine. Wait until all moving parts have come to a complete stop. Disconnect spark plug wire and ground it against the engine to prevent unintended starting.

#### **Engine**

Refer to the separate engine manual packed with your unit for all engine lubrication instructions.

**IMPORTANT:** When following instructions in separate engine manual for draining oil, be sure to protect frame to avoid oil dripping onto transmission parts.

#### Traction Control / Auger Control Lock

The cams on the ends of the control rods which interlock the traction drive and auger drive clutches must be lubricated at least once a season or every twenty-five hours of operation. The cams can be accessed beneath the handle panel. Use a multipurpose automotive grease.

#### Gear Shaft

Lubricate the gear shaft with 6-n-1 grease at least once a season or after every 25 hours of operation (available at auto parts stores, or order part number 737-0170). Refer to Figure 10.

#### Wheels

 Oil or spray lubricant into plastic wheel bearings inside the wheel hubs at least once a season.
 Remove wheels, clean and coat axles with a multipurpose automotive grease. See Figure 13.

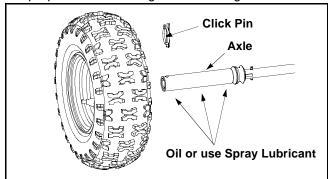


Figure 13

#### Auger Shaft

 Once a season, remove the shear bolts and oil or spray lubricant inside the shear bolt holes while rotating the augers by hand to lubricate the shaft. Also, grease fittings are located on both bearing housings. Lube with a grease gun. See Figure 14.

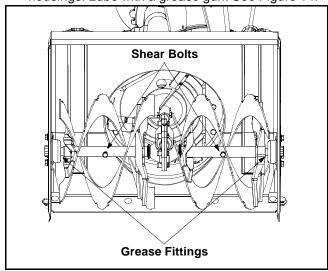


Figure 14

#### **Drive and Shifting Mechanism**

At least once a season or after every 25 hours of operation, remove rear cover. Lubricate any chains, sprockets, gears, bearings, shafts, and shifting mechanism at least once a season. Use engine oil or a spray lubricant.

**IMPORTANT:** Avoid getting oil on rubber friction wheel and aluminum drive plate. Refer to Figure 10.

#### **Chute Directional Control**

The spiral on the end of the chute directional control and the base of the discharge chute itself should be lubed with multi-purpose automotive grease once a season. See Figure 15.

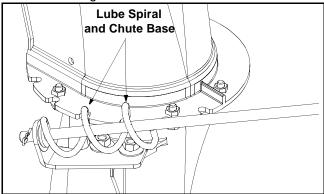


Figure 15

#### Gear Case

The gear case is equipped with a grease fitting on the left housing and should be lubricated with Shell Alvania grease EPR00, part number 737-0168A every 25 hours. See Figure 16.

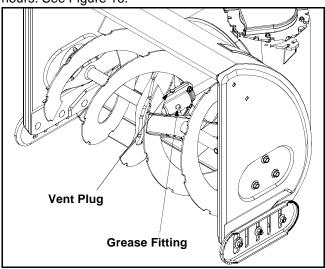


Figure 16

**IMPORTANT:** Do not overfill the gear case, its capacity is 1.5 oz. Damage to the seals could result. Be sure the vent plug is free of grease in order to relieve pressure.

#### **SECTION 8: SERVICE**



WARNING: Before servicing, repairing, or inspecting, disengage all clutch levers and stop engine. Wait until all moving parts have come to a complete stop. Disconnect spark plug wire and ground it against the engine to prevent unintended starting.

### **Engine**

Refer to the separate engine manual packed with your unit for all engine related maintenance procedures.

#### Shave Plate and Skid Shoes

The shave plate and skid shoes on the bottom of the snow thrower are subject to wear. They should be checked periodically and replaced when necessary. To remove the skid shoes, proceed as follows:

- Remove the six carriage bolts, bell washers and hex nuts which attach them to the snow thrower.
- Reassemble new skid shoes with the six carriage bolts, bell washers (cupped side goes against skid shoes) and hex nuts. Make certain the skid shoes are adjusted to be level.

To remove shave plate, remove the carriage bolts, belleville washers and hex nuts which attach it to the snow thrower housing. Reassemble new shave plate, making sure heads of the carriage bolts are to the inside of the housing. Tighten securely.

### Belt Removal And Replacement



WARNING: Disconnect spark plug wire and ground it against the engine to prevent unintended starting. Drain fuel into an approved container or place a piece of plastic film underneath the gas cap to prevent gasoline from leaking.

#### Auger Belt

- Remove the plastic belt cover by removing the two self-tapping screws. See Figure 17.
- Drain the gasoline from the snow thrower.
- Tip the snow thrower forward so that it rests on its auger housing and remove six self-tapping screws from the frame cover underneath the snow thrower.
- Roll the belt off the engine pulley. See Figure 18.
- Unhook the idler spring from the hex bolt on the auger housing. See Figure 19.

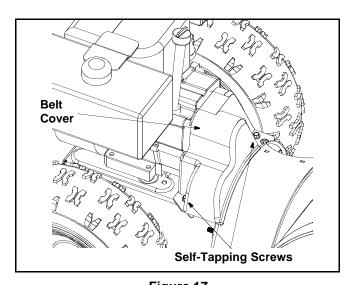


Figure 17

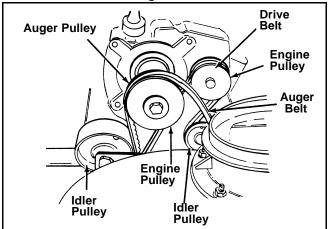
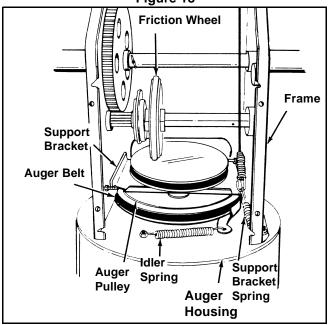


Figure 18



#### Figure 19

 Back out the stop bolt until the support bracket rests on the auger pulley. See Figure 20.

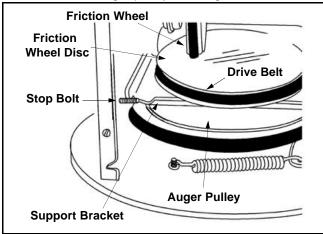


Figure 20

**NOTE:** Loosening the six nuts that connect the frame to the auger housing may aid in belt removal.

- Lift the auger belt from the auger pulley, and slip belt between the support bracket and the auger pulley. See Figure 17. Repeat this step for the front auger belt.
- Replace the auger drive belt by following instructions in reverse order.

#### **Drive Belt**

- Follow the first four steps of the instructions for servicing the auger belt.
- Pull idler pulley up, and lift belt off engine pulley and friction wheel disc. See Figure 18.

- Back out the stop bolt until the support bracket rests on the auger pulley. See Figure 20.
- Slip belt between friction wheel and friction wheel disc. See Figure 20. Remove and replace belt.
- Reassemble following the instructions in reverse order.

**NOTE:** The support bracket must rest on the stop bolt after the new belt has been assembled. See Figure 20.

### Servicing Friction Wheel Rubber

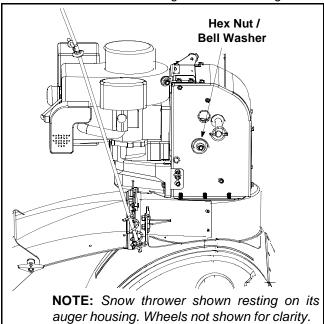


**WARNING:** Disconnect the spark plug wire and ground it against the engine to prevent unintended starting. Drain fuel into an approved container or place a piece of plastic film underneath the gas cap to prevent gasoline from leaking.

The rubber on the friction wheel is subject to wear and should be checked after 25 hours of operation, and periodically thereafter. Replace the friction wheel rubber if any signs of wear or cracking are found.

• Drain the gasoline from the snow thrower.

- Tip the snow thrower up and forward, so that it rests on the housing.
- Remove six self-tapping screws from the frame cover underneath the snow thrower.
- Remove the click pins which secure the wheels, and remove the wheels from the axle.
- Using a 7/8" wrench to hold the shaft, loosen, but do not completely remove, the hex nut and bell washer on the left end of gear shaft. See Figure 21.



#### Figure 21

- Lightly tap the hex nut to dislodge the ball bearing from the right side of frame before removing the hex nut and bell washer from left end of shaft.
- Move the gear shaft to the right and slide the friction wheel assembly from the shaft.
- Remove the six screws from the friction wheel assembly (three from each side). Remove the friction wheel rubber from between the friction wheel plates. See Figure 22.

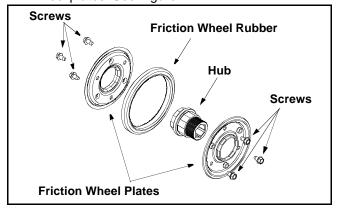
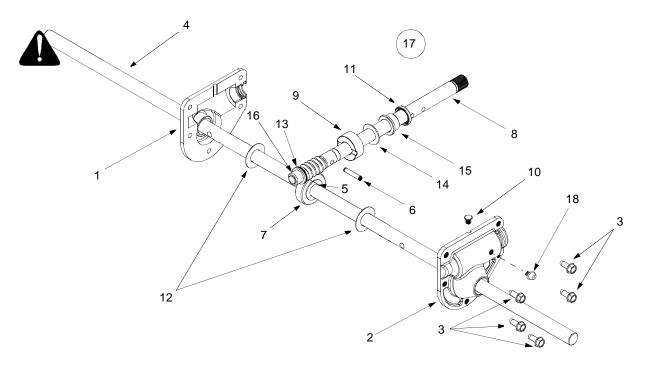


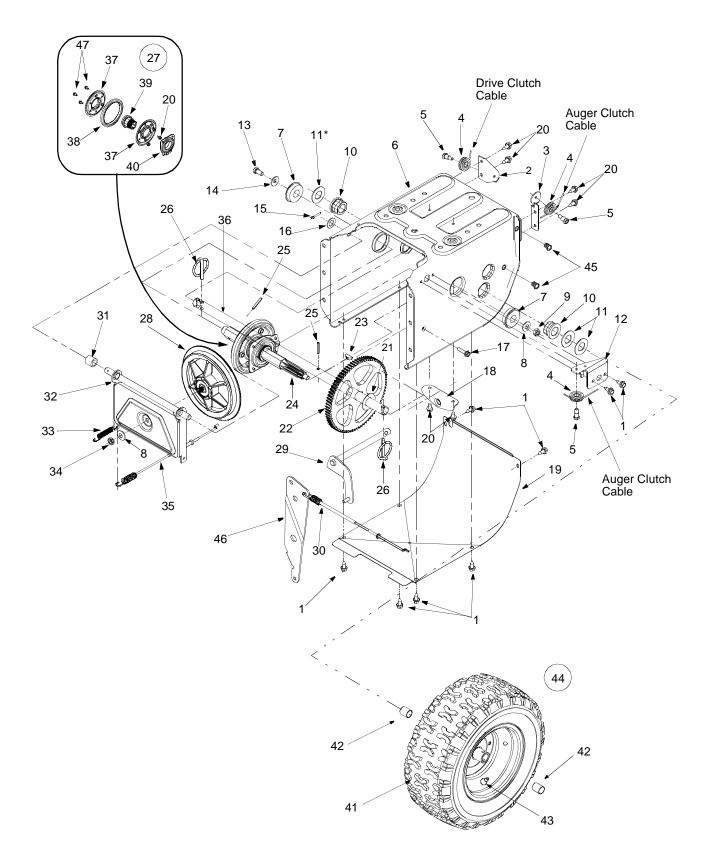
Figure 22

 Reassemble new friction wheel rubber to the friction wheel plates and hub, tightening the six screws in rotation and with equal force. • Position the friction wheel assembly up onto the pin of the shift rod assembly, and slide the shaft through the assembly. Reassemble in reverse order.





Ref. No.	Part No.	Part Description	
1.	618-0123	RH Housing	
2.	618-0418	LH Housing w/Fitting Hole	
3.	710-0642	Self Tapping Screw, 1/4-20 x .75	
4.	711-0908A	Spiral Axle, 24"	
5.	714-0161	Hi-Pro Key, 3/16 x 5/8	
6.	715-0143	Spring Spirol Pin, .25 x 1.25	
7.	717-0528	Worm Gear, 20-tooth	
8.	717-0526	Worm Shaft	
9.	718-0186	Thrust Collar	
10.	721-0325	Grease Plug	
11.	721-0327	Grease Seal	
12.	736-0351	Flat Washer, .76 x 1.5 x .030	
13.	736-0369	Flat Washer, .508 x 1.0 x .020	
14.	736-0445	Flat Washer, .76 x 1.5 x .060	
15.	741-0662	Flange Bearing, .75 x 1.0 x .59	
16.	741-0663	Flange Bearing, .503 ID x .75 OD	
17.	618-0414A	Gear Assembly Complete, 24", w/ Fitting	
18.	737-3000	Grease Fitting, 3/16" Drive	
_	737-0168A	Grease (1-1/2 oz.)	

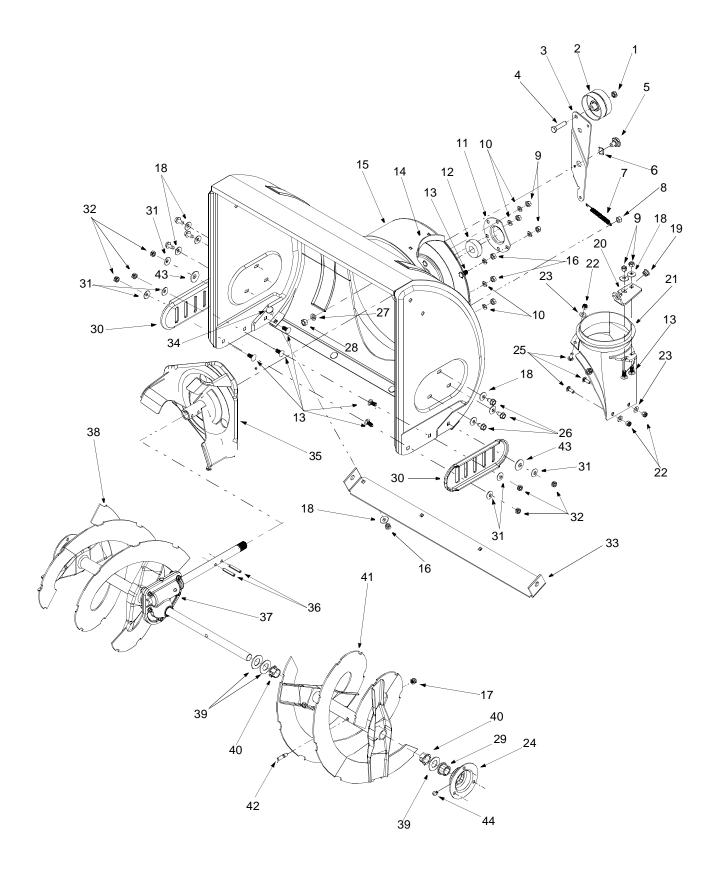


<sup>\*</sup> Add a second washer here, if needed, to reduce axle play.

Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	710-1652	Hex Screw 1/4-20 x .625	25.	715-0249	Roll Pin
2.	784-5688	Drive Cable Guide Bracket	26.	714-0143	Clik Pin
3.	784-5687A	Auger Clutch Cable Bracket	27.	684-0042C	Friction Wheel Assembly
4.	756-0625	Cable Roller	28.	656-0012A	Friction Wheel Disc
5.	738-0924	Shoulder Screw 1/4-28 x .375	29.	684-0013B	Wheel Shift Rod Assembly
6.	784-5630A	Frame Assembly	30.	746-0897	Drive Cable
7.	741-0563	Ball Bearing	31.	748-0190	Spacer
8.	736-0105	Bell Washer	32.	684-0021	Friction Wheel Bracket Ass'y
9.	712-0116	Lock Jam Nut, 3/8-24	33.	732-0264	Extension Spring
10.	741-0598	Hex Flange Bearing	34.	712-0711	Jam Nut, 3/8-24
11.	736-0188	Flat Washer, .76 x 1.49 x .06	35.	746-0898	Drive Cable
12.	784-5689A	Front Support Guide Bracket	36.	738-0869	Wheel Axle, .750 x 22.21
13.	710-0538	Hex Cap Screw, 5/16-18 x 625	37.	784-5617A	Friction Wheel Side Plate
14.	736-0242	Bell Washer .340 ID x .872 OD	38.	735-0243B	Friction Wheel Rubber
15.	714-0474	Cotter Pin, .125 x .75	39.	718-0301A	Friction Wheel Hub
16.	736-0160	Flat Washer .536 ID x .930 OD	40.	618-0063A	Friction Wheel Bearing
17.	710-0809	Hex Washer Screw 1/4-20	41.	734-1859	Tire Only, 15 x 5 x 6
18.	784-5590	Shift Bracket Frame	42.	741-0401	Sleeve Bearing, .75 x .87 x 1
19.	784-5638	Frame Cover	43.	734-0255	Air Valve
20.	710-0599	Hex Washer Screw 1/4-20	44.	634-0140	Wheel Assembly
21.	736-0351	Flat Washer .760 ID x .50 OD			(Incl. Ref. 41, 42, & 43)
22.	717-1445	Gear, 80-tooth	45.	712-0703A	Insert Nut, 5/16-18
23.	714-0126	Key, 3/16 x 3/4	46.	784-5632A	Auger Idler Arm
24.	717-1444	7-Tooth Shaft	47.	710-1652	Hex Washer Screw 1/4-20

**NOTE:** For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part, numbered 700-xxxx, is painted Cub Yellow, the part number to order would be 700-xxxx-0716.

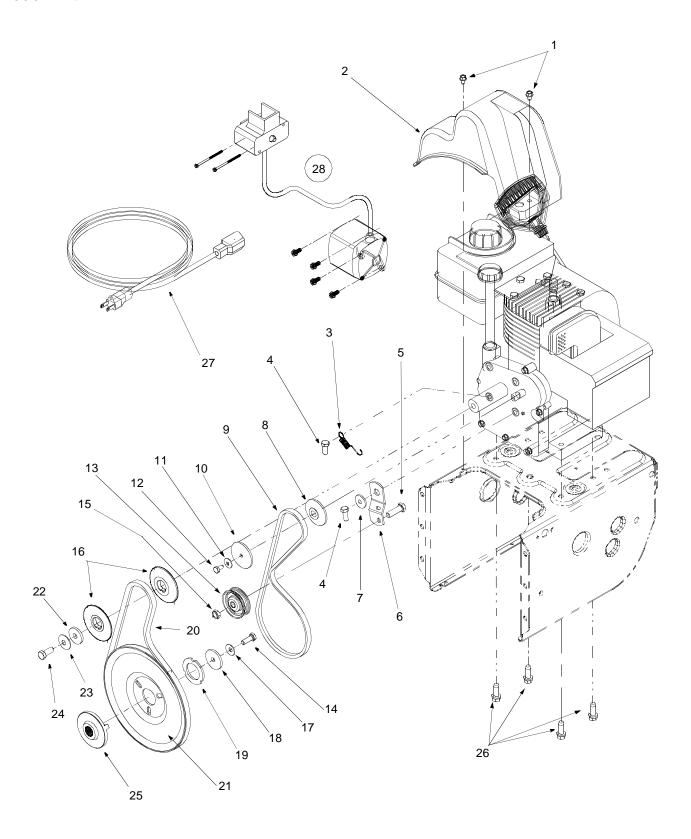
Cub Yellow: 0716 Cub Beige: 0499 Powder Black: 0637



Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	712-0116	Lock Jam Nut 3/8-24	23.	736-0463	Flat Washer
2.	756-0178	Flat Idler, 2.75 w/o Flanges	24.	784-0399	Bearing Housing w/ Fitting Hole
3.	784-5632A	Auger Idler Arm	25.	710-0703	Carriage Screw 1/4-20 x .75
4.	710-0459A	Hex Cap Screw 3/8-24 x 1.50	26.	710-0604	Hex Washer Screw 5/16-18
5.	738-0281	Shoulder Screw	27.	736-0169	Lock Washer 3/8
6.	736-0174	Wave Washer	28.	712-0798	Hex Nut 3/8-16
7.	732-0611	Extension Spring	29.	741-0245	Hex Flange Bearing
8.	712-3068	Hex Nut 5/16-18	30.	784-5038B	Skid Shoe
9.	712-0429	Hex Lock Nut 5/16-18	31.	736-0242	Bell Washer
10.	736-0119	Lock Washer 5/16	32.	712-3010	Hex Nut 5/16-18
11.	05931A	Bearing Housing, 1.85	33.	784-5581A	Shave Plate, 23.66"
12.	741-0309	Ball Bearing, .75 x 1.85	34.	710-0260	Carriage Bolt 5/16-18 x .62
13.	710-0451	Carriage Bolt 5/16-18 x .75	35.	684-0065	Impeller Assembly, 12
14.	705-5226	Chute Reinforcement	36.	715-0114	Spiral Pin, .25 x 1.5
15.	684-0039C	24" Housing Assembly	37.	618-0414A	24" Gearbox Ass'y w/ Fitting
16.	712-3010	Hex Nut 5/16-18	38.	605-5188A	RH Serrated Spiral Assembly
17.	712-0429	Lock Nut 5/16-18	39.	736-0188	Flat Washer
18.	736-0242	Bell Washer	40.	741-0493A	Flange Bushing
19.	741-0475	Plastic Bushing, .380	41.	605-5189A	LH Serrated Spiral Assembly
20.	784-5647	Chute Crank Bracket	42.	710-0890A	Shear Bolt 5/16-18 x 1.5
21.	731-1379C	Chute Adapter, 5.0	43.	736-0231	Flat Washer, .344 x 1.12 x .87
22.	712-0324	Hex Lock Nut 1/4-20	44.	737-3000	Grease Fitting, 3/16" Drive

**NOTE:** For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part, numbered 700-xxxx, is painted Cub Yellow, the part number to order would be 700-xxxx-0716.

Cub Yellow: 0716 Cub Beige: 0499 Powder Black: 0637

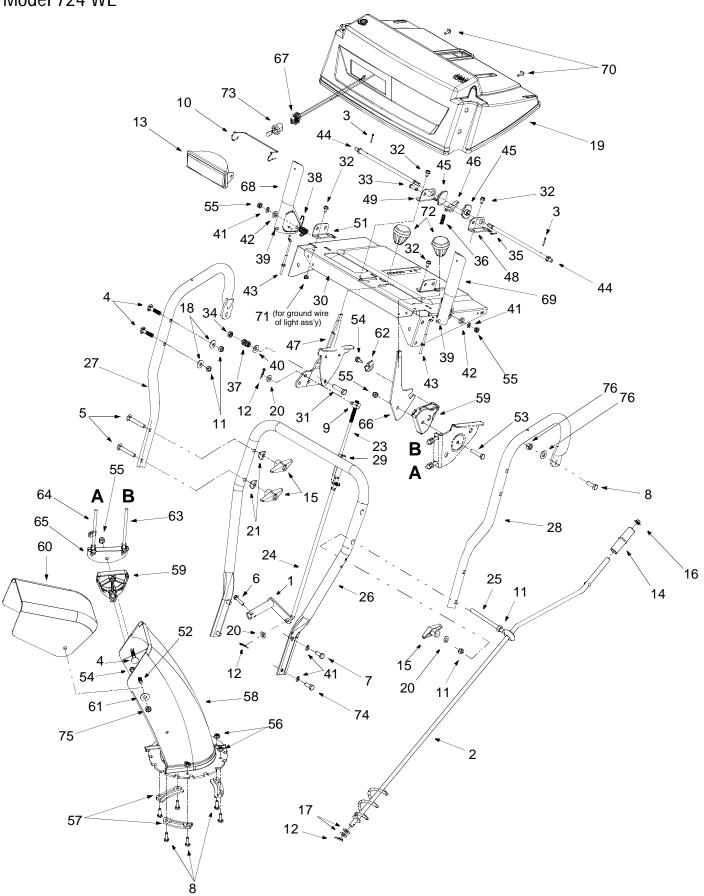


Ref. No.	Part No.	Part Description	
1.	710-1652	Hex Washer Screw 1/4-20 x.625	
2.	731-1324	Belt Cover	
3.	732-0339	Extension Spring	
4.	710-0627	Hex Screw 5/16-24 x .75	
5.	710-3005	Hex Cap Screw 3/8-16 x 1.25	
6.	05896A	Drive Clutch Bracket	
7.	748-0234	Shoulder Spacer	
8.	756-0985	Pulley Half	
9.	754-0343	V-Belt	
10.	756-0984	Pulley Half	
11.	736-0270	Bell Washer	
12.	710-0230	Hex Cap Screw 1/4-28 x .50	
13.	756-0313	Flat Idler	
14.	710-1245A	Lock Cap Screw 5/16-24	
15.	712-0181	Lock Jam Nut 3/8-16	
16.	756-0569	Pulley Half	
17.	736-0242	Bell Washer	
18.	736-0505	Flat Washer	
19.	736-0507	Washer	
20.	754-0430A	Belt	
21.	756-0967	Auger Pulley	
22.	736-0247	Flat Washer	
23.	736-0331	Bell Washer	
24.	710-0696	Hex Cap Screw 3/8-24	
25.	748-0360	Pulley	
26.	710-0654A	Hex Washer Screw 3/8-16 x 1.0	
27.	629-0071	Extension Cord	
28.	OEM-390-987	Electric Start Kit (Includes Ref. 27)	

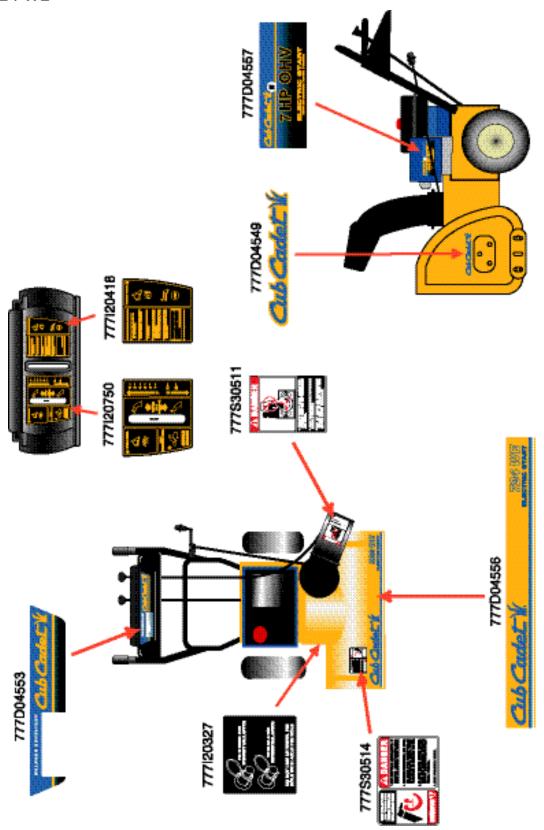
IMPORTANT: For a proper working machine, use Factory Approved Parts.

V-BELTS are specially designed to engage and disengage

**V-BELTS** are specially designed to engage and disengage safely. A substitute (non OEM) V-Belt can be dangerous by not disengaging completely



Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	684-0008A	Shift Arm Assembly	39.	735-0199A	Rubber Bumper
2.	705-5204A	Chute Crank Assembly	40.	736-0105	Bell Washer, .401 x .87 x .063
3.	714-0507	Cotter Pin, 3/32 x .75	41.	736-0119	Lock Washer, 5/16
4.	710-0458	Carriage Bolt, 5/16-18 x 1.75	42.	736-0509	Special Washer, .35 x .72 x .13
5.	710-0449	Carriage Bolt, 5/16-18 x 2.25	43.	746-0778	Cable "Z" Fitting
6.	710-0788	Self Tapping Screw, 1/4-20 x 1	44.	747-0877	Cam Rod
7.	710-0643	Hex Cap Screw, 5/16-18 x 1.0	45.	748-0362	Cam Handle Lock
8.	710-3015	Hex Cap Screw, 1/4-20 x .75	46.	748-0363	Handle Lock Pawl
9.	711-0677	Ferrule, 5/16-18 x .312	47.	784-5619A	Shift Handle
10.	747-1136	Headlamp Retainer	48.	784-5679	LH Handle Support Bracket
11.	712-3010	Hex Nut, 5/16-18	49.	784-5680	RH Handle Support Bracket
12.	714-0104	Internal Cotter Pin	50.	784-5681	LH Handle Support Bracket
13.	725-1672	Lens Assembly / Lamp Housing	51.	784-5682	RH Handle Support Bracket
14.	720-0201A	Chute Crank Knob	52.	710-0451	Carriage Bolt, 5/16-18 x .75
15.	720-0284	Wing Knob, 5/16-18	53.	710-0805	Hex Cap Screw, 516-18 x 1.5
16.	726-0100	Push Cap, 3/8	54.	710-0896	Screw, 1/4-14 x .625
17.	736-0185	Flat Washer, .375 x .738 x .063	55.	712-0429	Hex Lock Nut, 5/16-18
18.	736-0242	Bell Washer, .34 x .872	56.	712-3027	Hex Flange Lock Nut, 1/4-20
19.	731-1737A	Handle Panel, Black	57.	731-0851A	Lower Chute Flange Keeper
20.	736-0275	Flat Washer, .344 x .688 x .065	58.	731-1300A	Lower Chute
21.	736-0451	Saddle Washer, .32 x .93	59.	731-1313C	Chute Tilt Cable Guide
22.	741-0475	Plastic Bushing	60.	731-1320	Upper Chute
23.	747-0620A	Upper Shift Rod	61.	736-0159	Washer, 5/16
24.	747-0621	Lower Shift Rod	62.	736-0506	Special Washer, .28 x 1.2 x .06
25.	747-0697	Eyebolt	63.	746-0896	Chute Deflector Control Cable
_	735-0234	Eyebolt Grommet (Not Shown)	64.	746-0901	Chute Deflector Cable w/ Clip
26.	749-0951	Lower Handle	65.	784-5594	Cable Bracket
27.	749-0954	RH Handle (Upper), C-style	66.	784-5604	Chute Tilt Handle
28.	749-0955	LH Handle (Upper), C-style	67.	629-0059	Halogen Light Harness
29.	750-0963	Shift Rod Connector	68.	684-0036A	RH Engagement Handle Ass'y
30.	684-0102	Handle Panel Assembly	69.	684-0037B	LH Engagement Handle Ass'y
31.	710-0459A	Hex Cap Screw, 3/8-24 x 1.5	70.	710-1003	Special Screw, #10-16 x .625
32.	710-0599	Self Tapping Screw, 1/4-20 x .5	71.	712-0271	Hex Sems Nut, 1/4-20
33.	711-0653	Clevis Pin	72.	720-0232	Plastic Knob
34.	712-0116	Jam Nut, 3/8-24	73.	725-1658	Halogen Lamp, 12-volt, 27 Watt
35.	714-0104	Cotter Pin, .072 x 1.0	74.	710-1880	Hex Cap Screw, 5/16-18 x .75
36.	732-0145	Compression Spring, .36 x 1.0	75.	712-3068	Hex Nut 5/16-18
37.	732-0193	Comp. Spring, .39 x .6 x .88	76.	736-0270	Bell Washer, .265 x .75 x .062
38.	732-0746	Torsion Spring, .44 x .8	77.	712-0287	Hex Nut, 1/4-20



# **NOTES**

#### MANUFACTURER'S LIMITED WARRANTY FOR:



# TWO-YEAR RESIDENTIAL ONE-YEAR COMMERCIAL

Proper maintenance of your Cub Cadet equipment is the owner's responsibility. Follow the instructions in your operator's manual for correct lubricants and maintenance schedule. Your Cub Cadet dealer carries a complete line of quality lubricants and filters for your equipment's engine, transmission, chassis and attachments.

# Riding mowers, lawn tractors, garden tractors, Cub Cadet attachments and home maintenance products

This limited warranty for residential users, covers any defect in materials or workmanship in your Cub Cadet equipment for two years from the date of purchase for the first user purchaser. We will replace or repair any part or parts without charge through your authorized Cub Cadet dealer.

Batteries have a one-year prorated limited warranty with 100% replacement during the first three months.

V-belts for either the traction drive or any attachments are covered for one year only.

Cub Cadet equipment used commercially is warranted for one year only.

(Commercial use is defined as either having hired operators or used for income producing purposes.)

#### Items not covered

The warranty does not cover routine maintenance items such as lubricants, filters (oil, fuel, air and hydraulic), cleaning, tune-ups, brake and/or clutch inspection, adjustments made as part of normal maintenance, blade sharpening, set-up, abuse, accidents and normal wear. It does not cover incidental costs such as transporting your equipment to and from the dealer, telephone charges or renting a product temporarily to replace a warranted product.

There is no other express warranty.

#### How to obtain service

Contact your authorized Cub Cadet servicing dealer who sold you your Cub Cadet equipment. If this dealer is not available, see the Consumer Yellow Pages under "lawn mowers" for the name of a dealer near you.

If you need further assistance in finding an authorized Cub Cadet servicing dealer, contact:

Cub Cadet Corporation Post Office Box 368023 Cleveland, Ohio 44136

#### How does state law apply?

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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