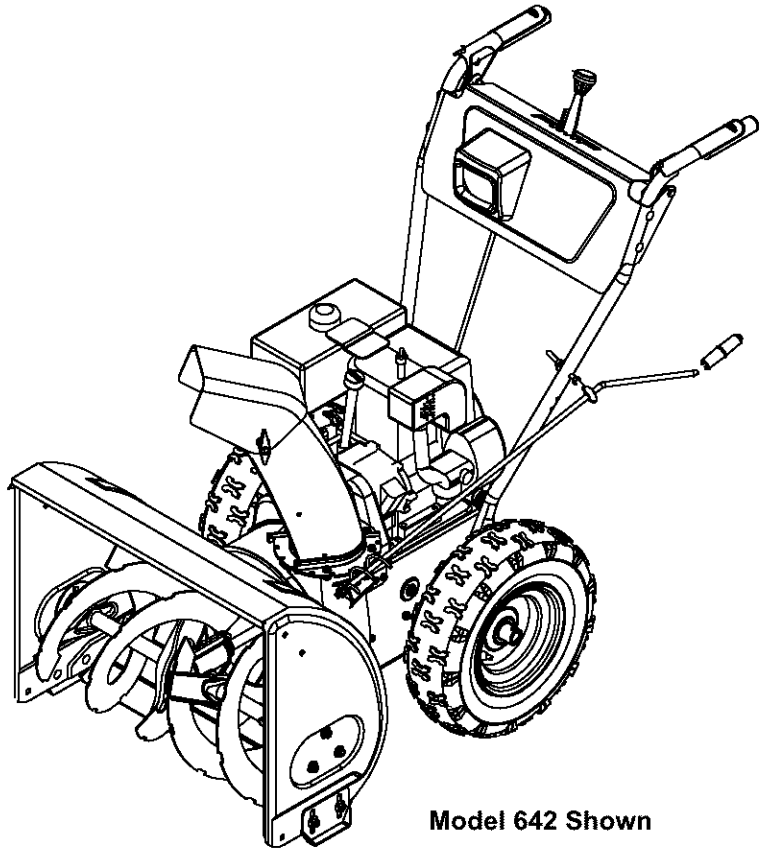
OPERATOR'S MANUAL



Model 642 Shown

SNOW THROWER

Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

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 368022 Cleveland, Ohio 44136-9722.

MTD PRODUCTS INC. P.O. BOX 368022 CLEVELAND, OHIO 44136-9722

PRINTED IN U.S.A.

FORM NO. 770-10045E
(6/2001)

TABLE OF CONTENTS

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 our Customer Support Department or an authorized dealer.

- You can locate the model number by standing behind the unit in the operating position and looking down at the rear frame below the engine. 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.

(Model Number) (Serial Number)

MTD PRODUCTS INC
CLEVELAND, OHIO 44136

Copy the model number here: _____

Copy the serial number here: _____

ENGINE INFORMATION

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual packed separately with your unit for more information.

CALLING CUSTOMER SUPPORT

If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, please call Customer Support Department or visit our website at **www.mtdproducts.com**.

Call **1- (330) 220-4MTD** (4683) or **1- (800)-800-7310** to reach a Customer Support representative. Please have your unit's model number and serial number ready when you call. See previous section to locate this information. You will be asked to enter the serial number in order to process your call.

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES

WARNING: 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

1. 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.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. 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.
5. 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.
7. Exercise caution to avoid slipping or falling, especially when operating in reverse.

Preparation

1. 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.
2. 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.
3. 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.
5. Adjust collector housing height to clear gravel or crushed rock surfaces.
6. Disengage all clutch levers before starting the engine.
7. 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.
    b. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
    c. Never fuel machine indoors.
    d. 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.
    h. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
    i. 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.).
    j. Allow machine to cool at least 5 minutes before storing.

Operation

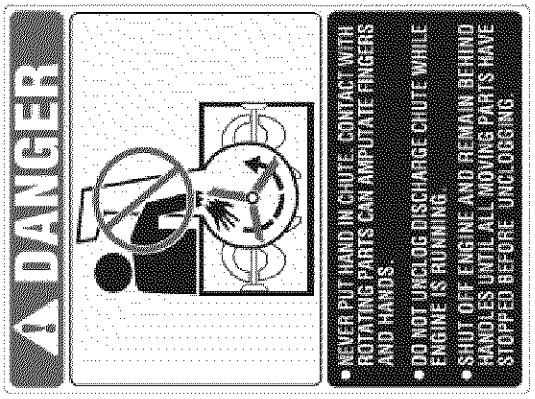
1. Do not put hands or feet near rotating parts, in the auger/impeller housing or discharge chute. Contact with the rotating parts can amputate hands and feet.
2. The auger/impeller clutch lever is a safety device. Never bypass its operation. Doing so, makes the machine unsafe and may cause personal injury.

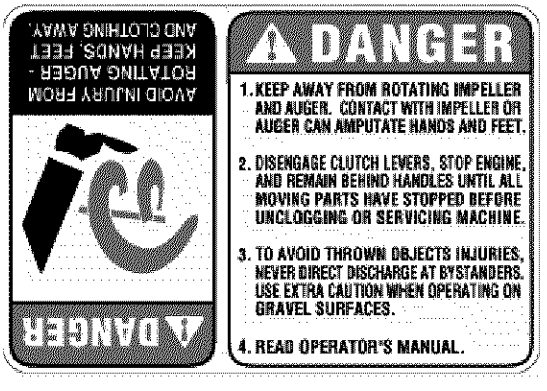
3. The clutch levers must operate easily in both directions and automatically return to the disengaged position when released.
4. Never operate with a missing or damaged discharge chute. Keep all safety devices in place and working.
5. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
6. 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.
8. Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic.
9. Exercise caution when changing direction and while operating on slopes.
10. Plan your snow throwing pattern to avoid discharge towards windows, walls, cars etc. To avoid property damage or personal injury caused by a ricochet.
11. Never direct discharge at children, bystanders and pets or allow anyone in front of the machine.
12. Do not overload machine capacity by attempting to clear snow at too fast of a rate.
13. 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.
15. 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

1. Never tamper with safety devices. Check their proper operation regularly.
2. 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.
3. 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.
4. 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!"
6. 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.
7. Maintain or replace safety and instruction labels, as necessary.
8. 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.
10. 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.

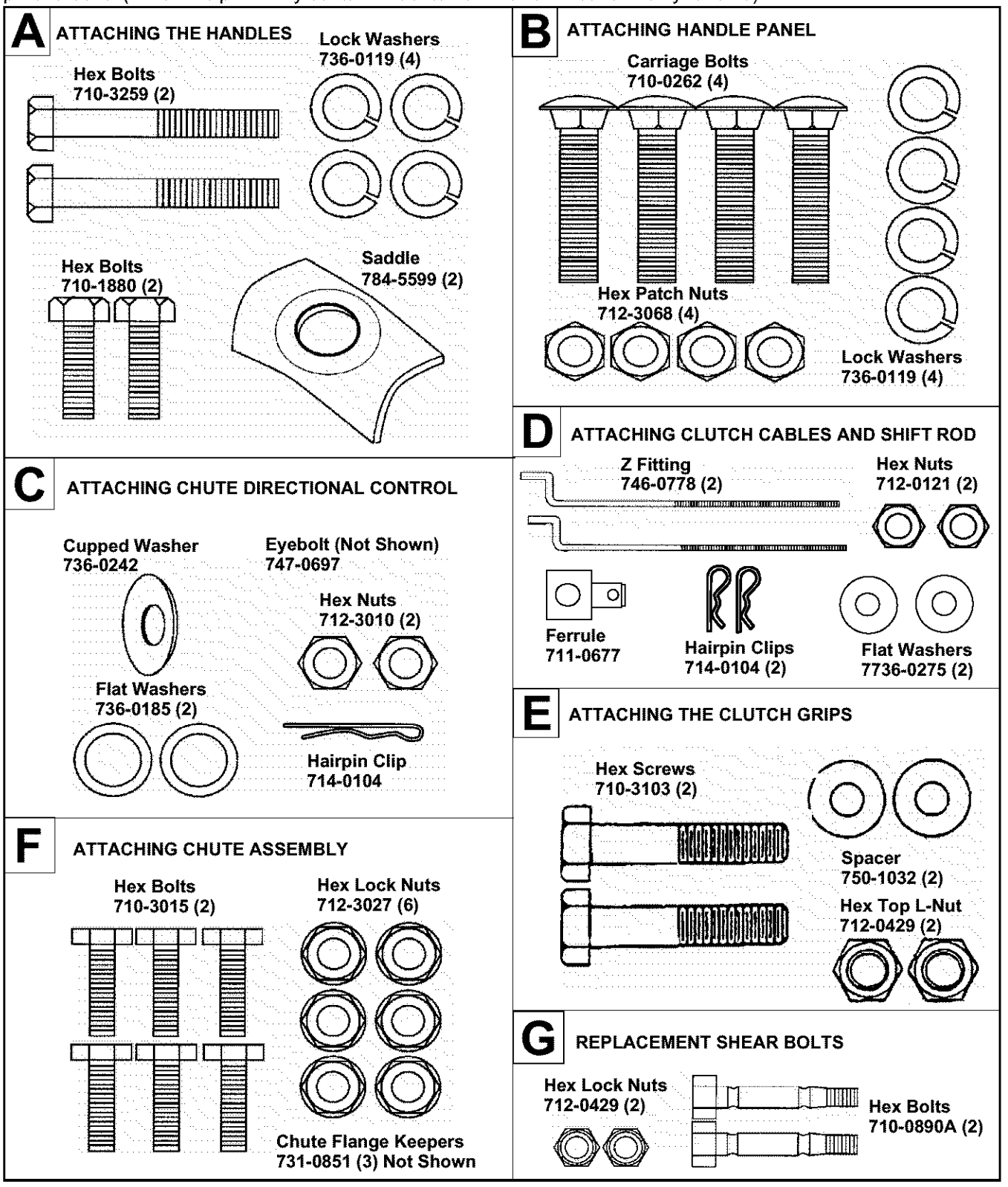
WARNING: Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.





SECTION 2: CONTENTS OF HARDWARE PACK

Lay out the hardware according to the illustration below for identification purposes. Part numbers are shown in parentheses. (Hardware pack may contain extra items which are not used on your unit.)



NOTE: *The augers are secured to the spiral shaft with two shear bolts and hex lock nuts. If you hit a hard foreign object or an 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*

SECTION 3: ASSEMBLING YOUR SNOW THROWER

NOTE: *This operator's manual covers various models of snow throwers. The units illustrated may vary slightly from your unit. Follow only those instructions which pertain to your model snow thrower.*

NOTE: References to right or left side of the snow thrower are determined from behind the unit in the operating position.

Unpacking

- Remove staples or break glue on top flaps of the carton. Remove any loose parts included with unit (i.e., operator's manual, etc.).
- Cut corners of the carton and lay ends down flat. Remove packing material.
- Roll unit out of carton. Check carton thoroughly for loose parts before discarding.
- Extend cables out behind unit and lay them on the floor.
- Lay out the contents of the hardware pack according to the illustration in section 2 and identify each part.
- Find the loose parts in the carton and lay these on the floor. See Figure 1. You should locate the following loose parts in the carton:

1. Handle panel
2. RIght Handle
3. Left Handle
4. Auger Control
5. Traction Control
6. Right Clutch Bracket
7. Left Clutch Bracket
8. Shift Rod (Not Illustrated)
9. Chute Directional Control Assembly (Not Illustrated)
10. Chute Assembly (Not Illustrated)
11. Hardware Pack (Not Illustrated)

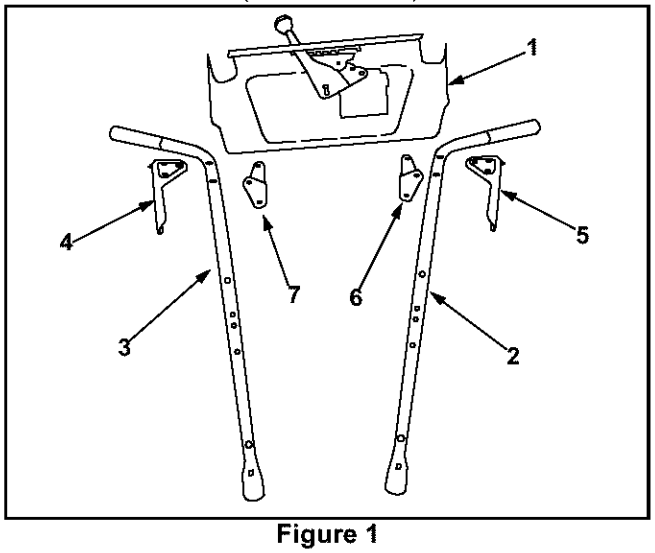


Figure 1

Before Assembly

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

Attaching the Handle Assembly (Hardware Group A, B and E)

- Attach left handle and left clutch bracket to handle panel with two carriage bolts, lock washers and hex patch nuts. (Be sure the bend in the grip bracket is towards the center of the handle panel.) Do not tighten at this time. See Figure 2.

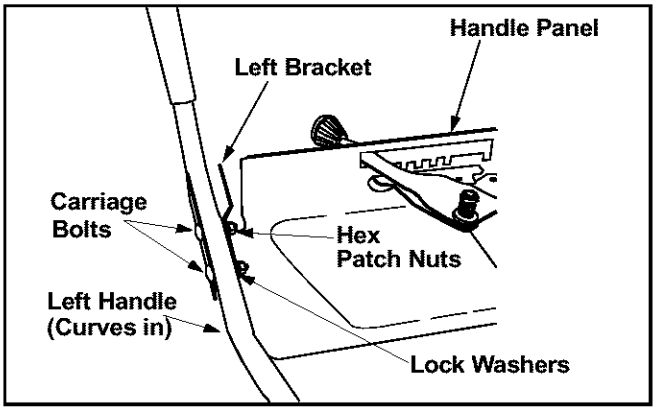


Figure 2

- Insert curved end of the Z fitting into the top hole in the triangular metal tab on the auger control grip. The triangular metal tab on the auger control grip must face the center of the handle panel. See Figure 3.

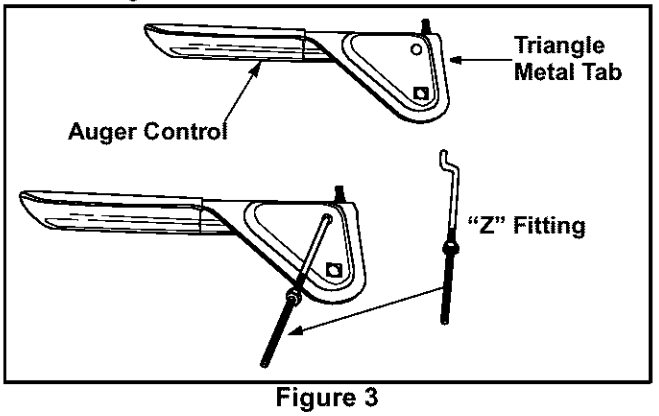


Figure 3

- Place the auger control on top of the left handle. The triangular metal tab must be between the handle and the bracket. See Figure 4.

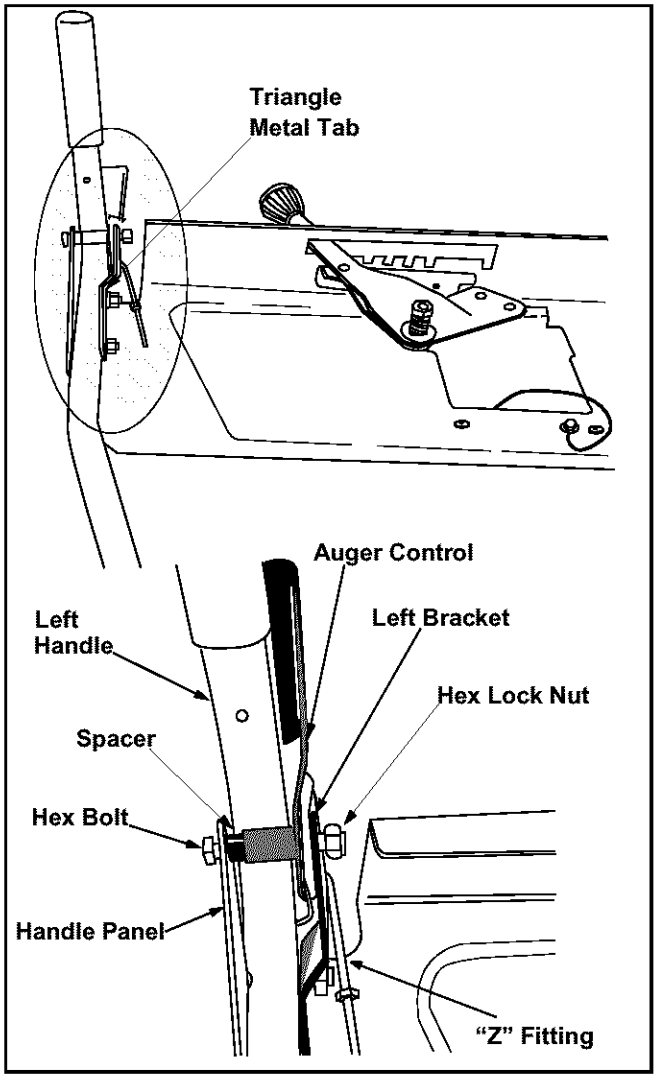


Figure 4

- Secure with hex bolt, spacer, and hex lock nut. Do not overtighten this bolt as it will prevent the control from automatically returning to their upright position.
- Repeat process for the right side Traction Control.
- Lay handle assembly behind snow thrower. See Figure 5.
- Insert a hex bolt 3/4" long and lock washer through the lower hole on the bottom of the handle.
- Hold the handle assembly up to the bottom of the snow thrower frame and thread the hex bolt into the lower hole in snow thrower frame. Do not tighten at this time. See Figure 5.
- Repeat process on the other side.

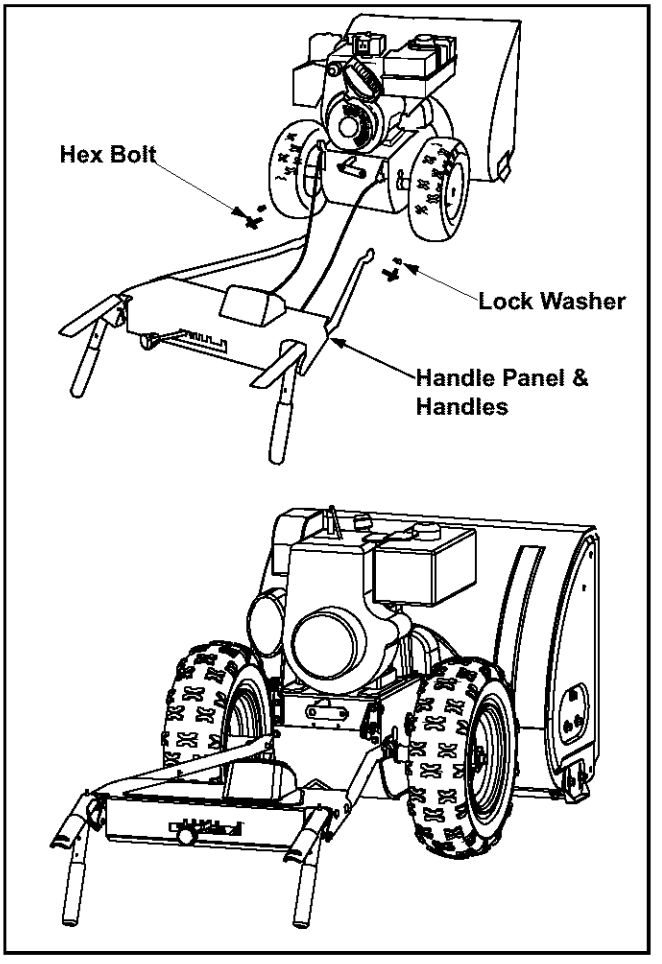


Figure 5

- Raise the handle assembly into the upright position and align the top holes in the handle with the top holes in the snow thrower frame. Attach using 2" long hex bolts, lock washers and saddles. (Curve in saddle must match the curve in the handle.) See Figure 6.
- Tighten all hardware used to attach the handle assembly to the snow thrower frame.

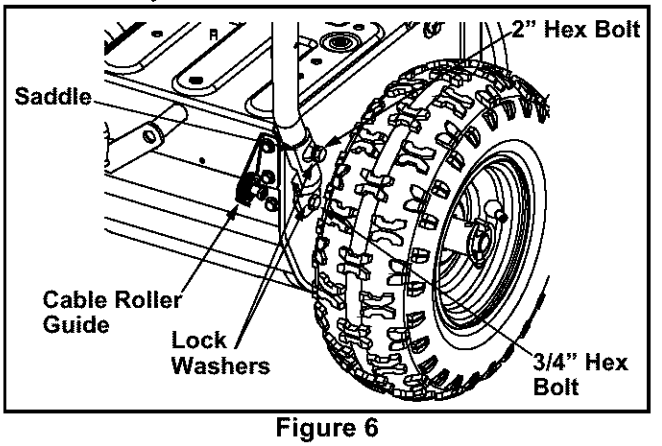


Figure 6

Attaching Shift Rod (Hardware D)

- Place the shift lever in the fastest forward speed position.

- **Models 602, 642, and 662:** Rotate the shift arm assembly counter clockwise, as far as it will go. Insert the shift rod through the shift arm assembly. When installed the shift arm assembly should point to the right. Secure with flat washer and hairpin clip. See Figure 7.
- **Models 614, 644, 664 and 6A4:** Rotate the shift arm assembly counter clockwise as far as it will go. Insert the shift rod through the shift arm assembly. When installed, the shift arm assembly should point left. Secure with flat washer and hairpin clip. See Figure 8. (Viewed from the operating position.)

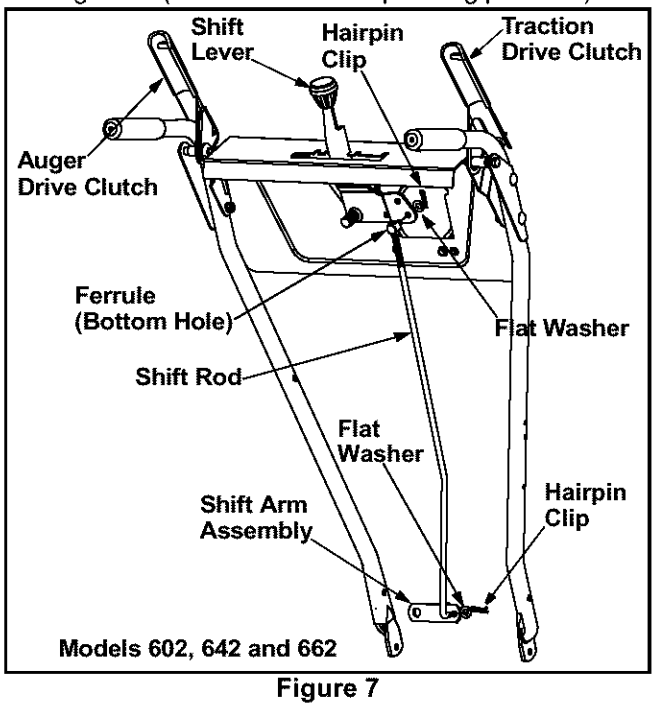


Figure 7

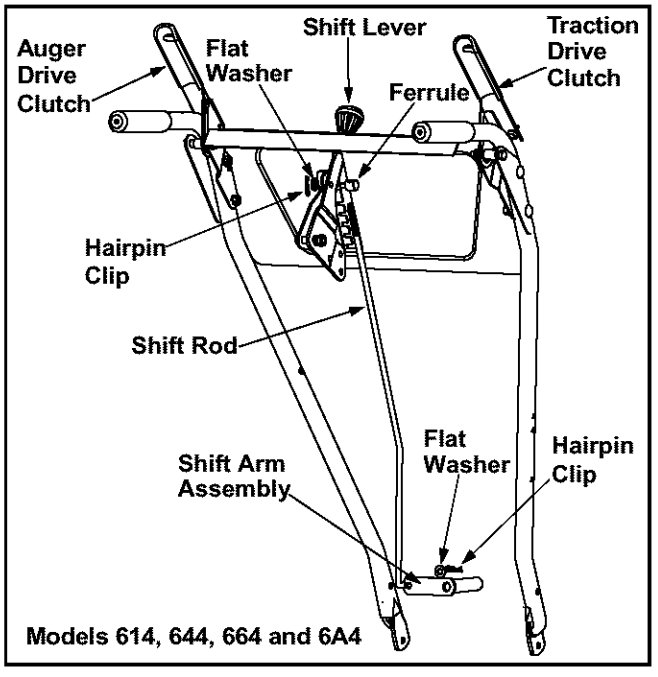


Figure 8

- **Models 602, 642, and 662:** Thread the ferrule up or down the shift rod and align with the lower hole on the shift lever assembly behind the handle panel. See Figure 7.
- **Models 614, 644, 664, and 6A4:** Thread the ferrule onto the shift rod, up or down the shift rod and align with the far hole on the narrow side of the shift lever assembly behind the handle panel. See Figure 8.
- Secure the ferrule to the shift arm assembly with the flat washer and hairpin clip.

NOTE: *Make certain to check for correct adjustment of the shift rod as instructed in the FINAL ADJUSTMENTS section before operating the snow thrower.*

Attaching Clutch Cables (Hardware D)

- Thread the hex jam nuts all the way up the threaded portion of the "Z" ends.
- Make certain all cables are in the grooves of the cable roller guides. The roller guides are located in the lower rear of the unit. Lift the clutch grip in the raised (up) position.
- Thread the cable onto the threaded portion of the "Z" end until there is no slack in the cable, but the cable is NOT tight. Do not overtighten cable. See Figure 9.
- When correct adjustment is reached, tighten the hex nut against the cable to lock it in position.

WARNING: If cable is tightened so there is tension on the cable with the clutch grip released, the safety features of the snow thrower may be overridden.

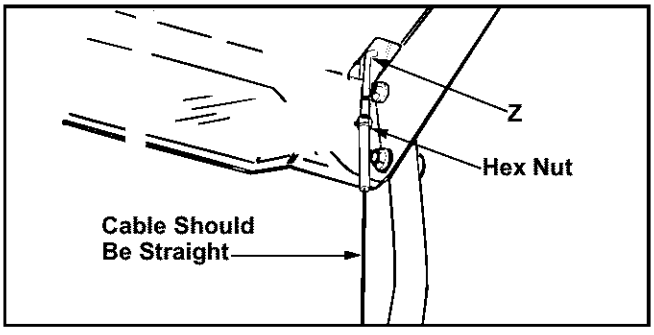


Figure 9

Attaching the Chute Assembly (Hardware F)

- Place chute assembly over chute opening, with the opening in the chute assembly facing the front of the unit.
- Place chute flange keepers beneath lip of chute assembly with flat side down. See Figure 10.
- Insert hex bolt up through chute flange keeper and chute assembly. Secure with hex lock nut.

- After assembling all three chute flange keepers, tighten all nuts and bolts securely then back off 1/4 turn to allow easier movement.

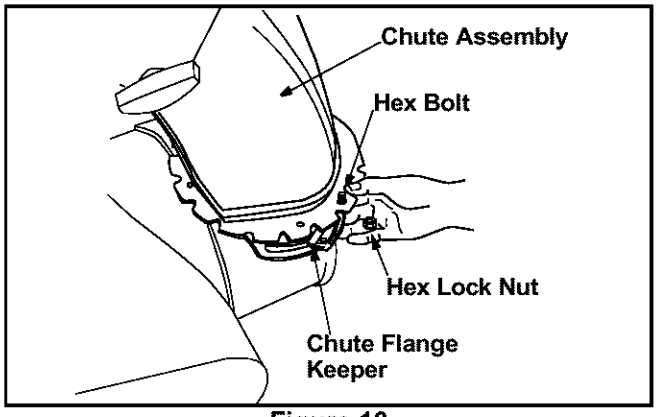


Figure 10

Attaching The Chute Directional Control (Hardware C)

- Thread one hex nut about halfway onto eye bolt on the chute directional control.
- Insert eye bolt through the hole provided in the left handle. See Figure 11.
- Secure with cupped washer (cupped side against the handle) and other hex nut. Do not tighten until after attaching the other end of the chute directional control.

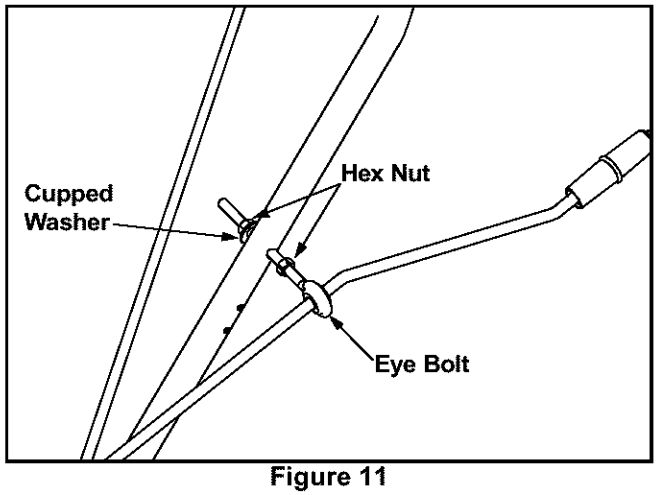


Figure 11

- To align the spiral on the chute directional control, you may have to loosen the carriage bolts and hex lock nuts securing lower chute bracket to the extension on the left side of the chute assembly. See Figure 12.
- Place one flat washer on the end of the chute directional control, then insert the end of the control into the hole in the plastic bushing in the lower chute bracket.
- Place another flat washer on the end of the chute directional control, and insert hairpin clip into hole in the end of control. See Figure 12.
- Adjust the chute bracket so that the spiral on the chute directional control fully engages the teeth on the chute assembly.

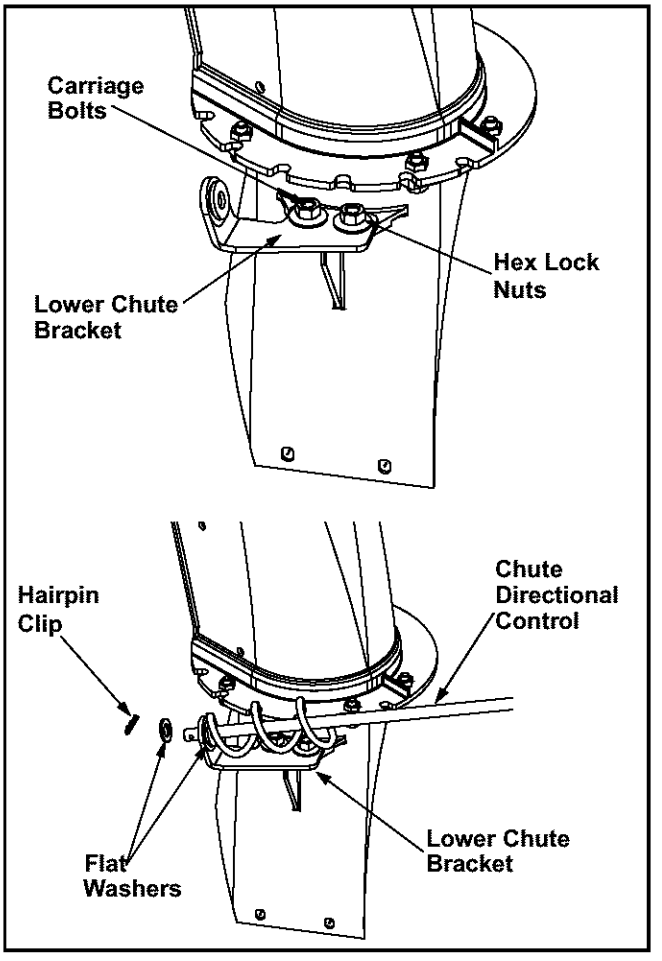


Figure 12

- Tighten nuts on the lower chute bracket securely.
- Tighten hex nut on the eye bolt on chute directional control.

Lamp Wiring (If Equipped)

If for shipping purposes, the headlight wire was left unattached to the alternator lead, follow the steps below to attach it now:

- 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. See Figure 13.
- Plug the wire from the headlight into the alternator lead coming from the right side of the engine, underneath the fuel tank.

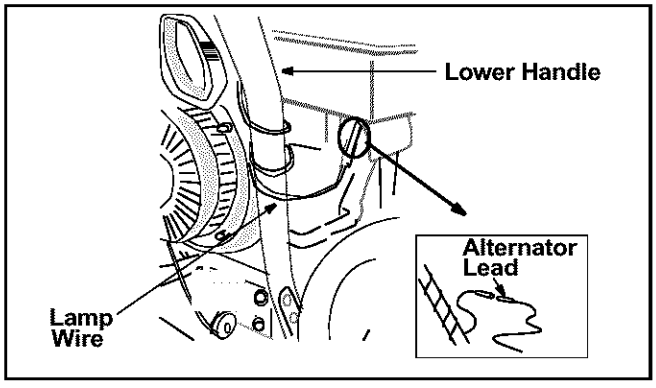


Figure 13

Final Adjustments

Auger Control

- To check the adjustment of the auger control clutch, push forward on the left hand clutch grip depressing the rubber bumper under the clutch grip. There should be slack in the cable.
- Release the clutch grip. The cable should be straight. Make certain you can depress the auger control clutch grip against the left handle completely.
- If necessary, loosen the hex jam nut and thread the cable in (for less slack) or out (for more slack) as necessary. Refer to Figure 9. Recheck the adjustment.
- Tighten the jam nut against the cable when correct adjustment is reached.

Traction Control and Shift Lever

- To check the adjustment of the traction control clutch and shift lever, move the shift lever all the way forward to the highest speed. With the traction control lever released, push the snow thrower forward. The unit should roll forward. Then engage the traction control grip. The wheels should stop turning.
- Now release the traction control grip and push the unit again. Move the shift lever back to the fast reverse position then all the way forward again. There should be no resistance in the shift lever, and the wheels should keep turning.
- If you have resistance when moving the shift lever or the wheels stop when they should not, loosen the jam nut on the traction control cable and unthread the cable one turn.
- If the wheels do not stop when you engage the traction control clutch grip, loosen the jam nut on the traction control cable and thread the cable in one turn.
- Recheck the adjustment and repeat as necessary. Tighten the jam nut to secure the cable when correct adjustment is reached.

NOTE: *If you are not sure that you have adjusted correctly, refer to the Adjustment section.*

Skid Shoes

The space between the shave plate and the ground can be adjusted. See Figure 14.

a. For close snow removal on a smooth surface, raise skid shoes higher on the auger housing.
b. Use a middle or lower position when the area to be cleared is uneven.

- Adjust skid shoes by loosening the four hex nuts and carriage bolts. Move skid shoes to desired position.
- Make certain the entire bottom surface of skid shoe is against the ground to avoid uneven wear on the skid shoes. Retighten nuts and bolts securely.

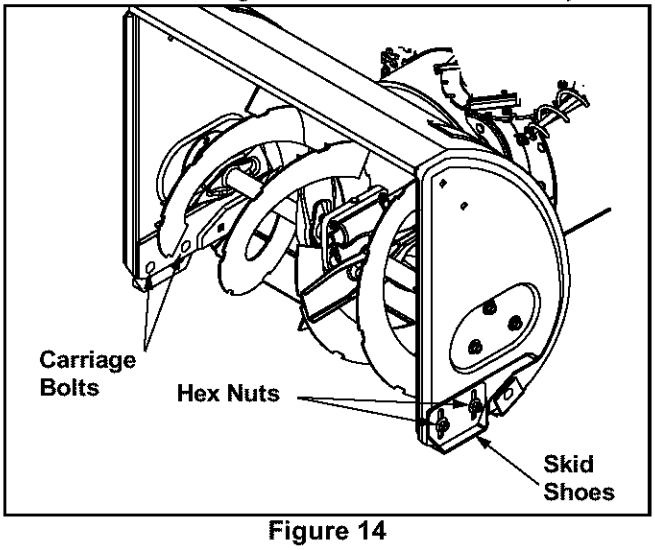


Figure 14

Tire Pressure (Pneumatic Tires)

The tires are overinflated for shipping purposes.

- Check tire pressure. Maintain pressure between 15 to 20 psi. Refer to tire sidewalls for recommended tire pressure.

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

WARNING: Maximum tire pressure under any circumstance is 30 psi. Equal tire pressure should be maintained at all times. Excessive pressure (over 30 psi) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

SECTION 4: KNOW YOUR SNOW THROWER

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

Shift Lever

The shift lever is located in the center of the handle panel. The shift lever may be moved into one of six positions. Run engine with throttle in the fast positions Run engine with throttle in the fast position. Use the shift lever to determine ground speed. See Figure 15.

Forward

There are five forward speeds on this snow thrower. Position one (1) is the slowest and position five (5) is the fastest.

Reverse

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

NOTE: *Model 614, 644, 664, and 6A4 has five forward positions and two reverse.*

Auger Drive Control

The auger drive control is located on the left handle. Squeeze the control grip to engage the augers. Release to stop the snow throwing action.

Traction Control

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

Chute Directional Control

The chute directional control is located on left side of the snow thrower. See Figure 15.

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.

Skid Shoe

The position of the skid shoe is determined by the condition of the ground from where snow has to be removed. See Figure 15.

Throttle Control

The throttle control is located on the engine. It regulates the speed of the engine and will shut off the engine when pushed down completely. See Figure 15.

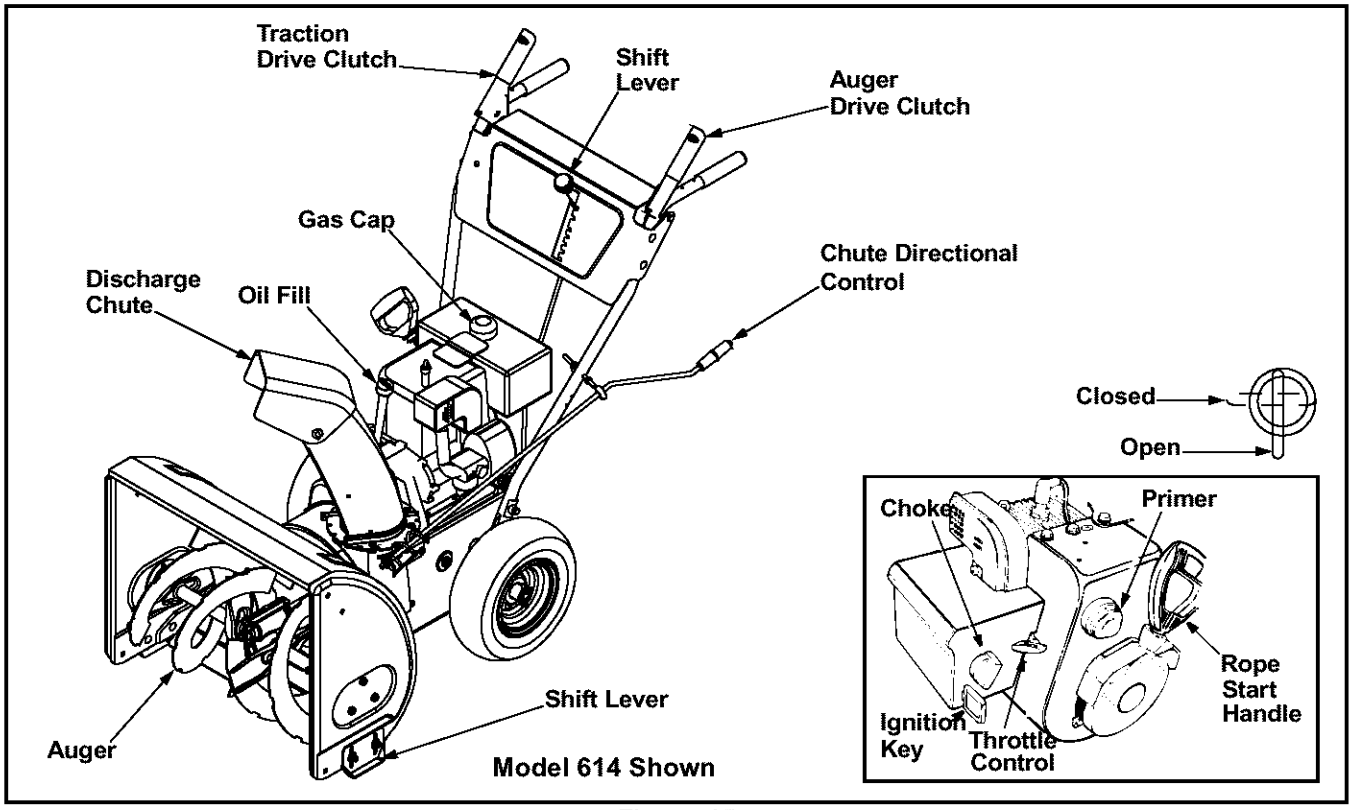


Figure 15

Safety Ignition Key

The safety ignition key must be fully inserted in the switch before the unit will start. Remove the ignition key when the snow thrower is not in use. See Figure 15.

IMPORTANT: Do NOT attempt to turn the key.

Fuel Shut-off Valve

The fuel shut-off valve, located under the fuel tank, controls fuel flow from the tank. Always make certain it is in the Open (vertical) position before attempting to start the engine. See Figure 15.

SECTION 5: OPERATING YOUR SNOW THROWER

Before Starting

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

Gas & Oil Fill-Up

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your snow thrower. **Read instructions carefully.**

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.

- A plastic **cup** is provided inside the fuel fill opening on the fuel tank. Remove and discard this cup before filling up the tank. Use the separate fuel tank cap to close after fill-up.

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 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 OPEN position. See Figure 15.
- Make certain the auger and drive clutch levers are in the disengaged (released) position.
- Move throttle control up to FAST position. Insert ignition key into slot. Make sure it snaps into place. **Do not turn key.**

NOTE: *Engine will not start unless ignition key is inserted into ignition slot in carburetor cover.*

Electric Starter (If equipped)

- Determine that your house wiring is a three-wire grounded system. Ask a licensed electrician if you are not certain.
- If your house wiring system is not a three-wire grounded system, do not use this electric starter under any conditions.

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.

- 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 and do not prime engine.
- Connect power cord to switch box on engine. Plug the other end of power cord into a three-prong 120-volt, grounded, AC receptacle.
- Push starter button to crank engine. As you crank the engine, move choke knob to FULL choke position.
- When engine starts, release starter button and move choke gradually to OFF. If engine falters, move choke immediately to FULL and then gradually to OFF.
- When disconnecting the power cord, always unplug from the three-prong receptacle first and then from the snow thrower.

Recoil Starter

- Rotate choke knob to FULL choke position (cold engine start). If engine is warm, place choke in OFF position instead of FULL.
- Push primer button two or three times for cold engine start. If engine is warm, push primer button only once.

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

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

To Stop Engine

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

Electric Starter (If equipped)

- 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 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 engine or starter.
- To stop engine, move throttle control to "stop" or "off" position.
- 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: *Do not lose ignition key. Keep it in a safe place. Engine will not start without the ignition key.*

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

To Engage Drive

- With the engine running near top speed, move shift lever into one of the five FORWARD positions or two REVERSE positions. Select a speed appropriate for the snow conditions that exist. Use the slower speeds until you are familiar with the operation of the snow thrower.
- Squeeze the auger control grip and the augers will turn. Release it and the augers will stop.
- Squeeze traction control grip and the snow thrower will move. Release it and drive motion will stop.
- NEVER move shift lever without releasing drive clutch.

To Engage Augers

- To engage the augers and start throwing snow, squeeze the auger control grip against the left handle. Release to stop the augers.

Tire Chains (If Equipped)

- Tire chains should be used whenever extra traction is needed.

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.

- For most efficient snow removal, remove snow immediately after it falls.
- Discharge snow downwind whenever possible. Slightly overlap each previous swath.
- Set the skid shoes 1/4" below the scraper bar for normal usage. The skid shoes may be adjusted upward for hard-packed snow. Adjust downward when using on gravel or crushed rock.
- Be certain to follow the precautions listed under "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

- The distance snow is thrown can be controlled by adjusting the angle of the top section of the chute assembly.

Skid Shoe

- The space between the shave plate and the ground can be adjusted. Refer to the Final Assembly in the Assembly section.

Traction Control

- Drain gasoline and engine oil from the snow thrower. Place plastic film under the gas cap if the snow thrower has already been operated.
- Tip the snow thrower so that it rests on the auger housing. See Figure 16.

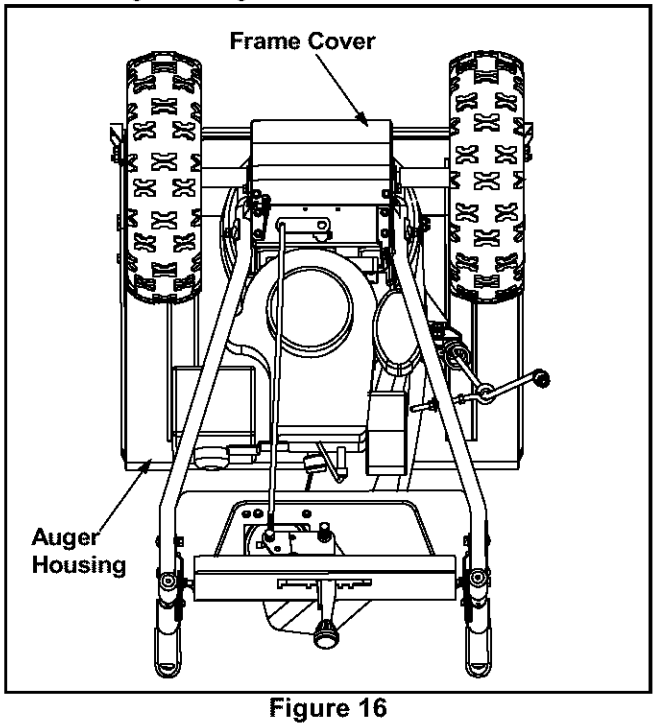


Figure 16

- Remove the frame cover underneath the snow thrower by removing six self-tapping screws. For location of the frame cover.
- When the traction control is released, there must be clearance between the friction wheel and the drive plate in all positions of the shift lever. When the traction control is engaged, the friction wheel must contact the drive plate. See Figure 17.
- If any one of these are not occurring, adjustment is necessary. Follow the steps below to adjust the traction control.
- Loosen the lock nut on the traction control cable and thread the cable in or out as necessary. Tighten the lock nut to secure the cable when correct adjustment is reached. Reassemble the frame cover.

NOTE: *If you placed plastic under the gas cap earlier, remove it now.*

Auger Control

- To adjust the auger clutch, refer to Final Assembly in the Assembly section.

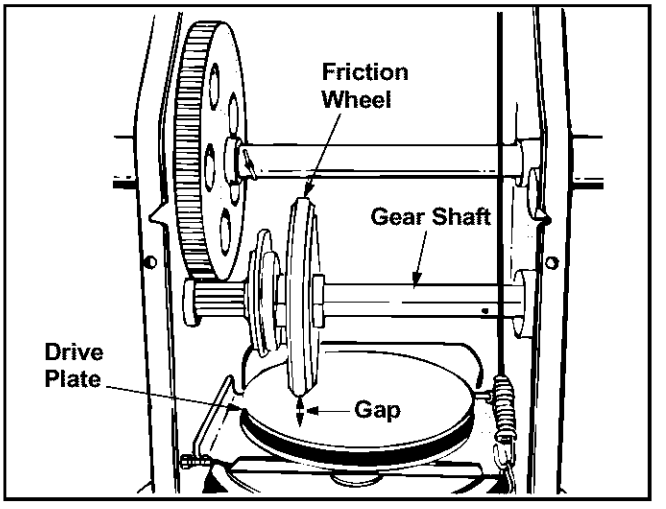


Figure 17

Adjusting Shift Rod

- Remove the hairpin clip and flat washer from the ferrule and remove the ferrule from the shift lever. Place the shift lever in the fastest forward speed position.

Models 602, 642, 662

- Push up on the shift arm assembly as far as it will go. Thread the ferrule up or down the shift rod and align with the lower hole on the wider side of the shift lever assembly behind the handle panel. Secure the ferrule to the shift arm assembly again with the hardware earlier removed. Refer to Figure 7.

Models 614, 644, 664, and 6A4

- Push down on the shift arm assembly as far as it will go. Thread the ferrule up or down the shift rod and align it with the hole closest to the shift knob on the narrow side of the shift lever assembly behind the handle panel. Refer to Figure 8.

NOTE: *Make certain to check for correct adjustment of the shift rod as instructed in the Final Adjustments section before operating the snow thrower.*

Carburetor

WARNING: If any adjustments need to be made to the engine while the engine is running (e.g. carburetor), keep clear of all moving parts. Be careful of muffler, engine and other surrounding heated surfaces.

- Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load.
- Refer to the separate engine manual, packed with your unit, for carburetor adjustment information.

Drive Wheels

- The wheels may be adjusted for two different methods of operation. Follow the steps below for adjustment. See Figure 18.

One Wheel Driving

- On the right side of the unit, place klick pin in the outside axle hole only. Do not place pin through wheel hub.This position gives power drive to the left wheel only, making the unit easier to maneuver.

Both Wheels Driving

- Rotate wheel assembly to align hole in the hub with the inner hole on the axle shaft. Insert klick pin in the hole. Outer axle shaft hole should be visible.

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.

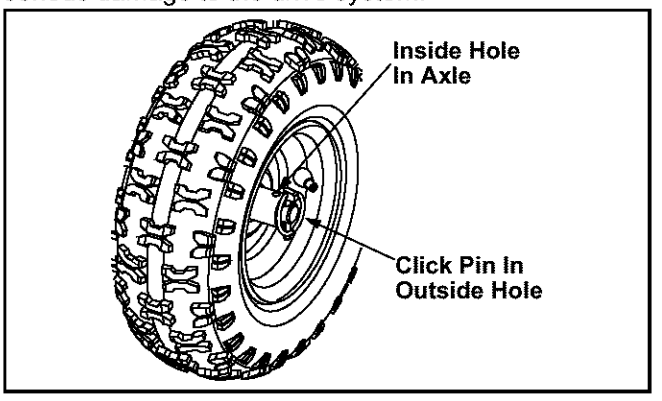


Figure 18

SECTION 7: MAINTAINING YOUR SNOW THROWER

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.

Lubrication

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.

Gear Shaft

- Lubricate the gear shaft with a good all-weather multi-purpose light grease at least once a season or after every 25 hours of operation.

IMPORTANT: Keep all grease and oil off the friction wheel and drive plate.

Chute Directional Control

- The worm gear on the chute directional control should be greased with multipurpose automotive grease.

Wheels

- Oil or spray lubricant into bearings at wheels at least once a season. Pull klick pin, remove wheels, clean and coat axles with a multipurpose automotive grease. See Figure 19.

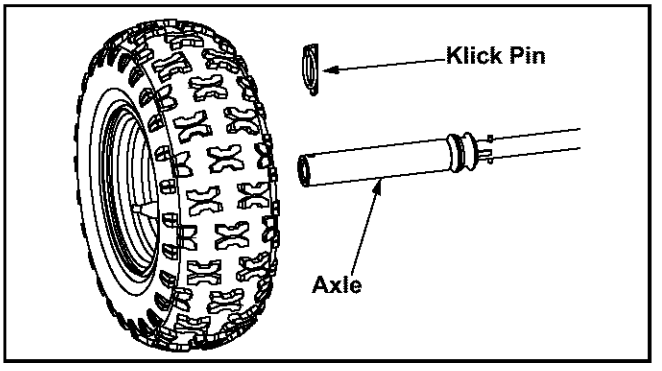


Figure 19

Auger Shaft

- At least once a season, remove shear bolts on auger shaft. Oil or spray lubricant inside shaft and lubricate the auger bearings. See Figure 20.

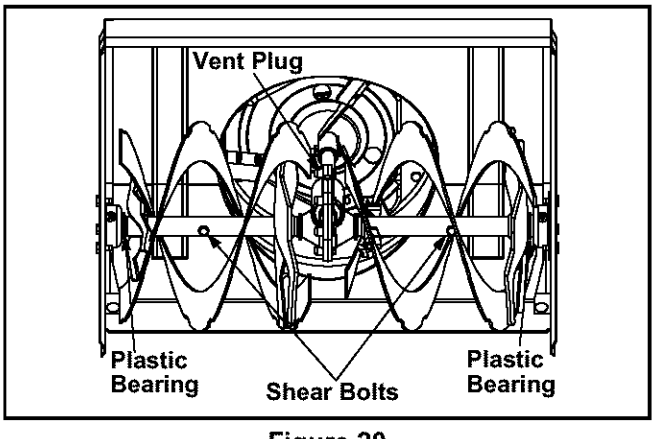


Figure 20

Gear Case

The worm gear case has been filled with grease at the factory. If disassembled for any reason, lubricate with 2 ounces of shell grease, part number 737-0168.

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

Drive and Shifting Mechanism

Remove rear cover. Oil any chains, sprockets, gears, bearings, shafts, and shifting mechanism at least once a season. Use engine oil or a spray lubricant. Avoid getting oil on rubber friction wheel and aluminum drive plate.

Friction Wheel

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. Refer to the Friction Wheel Rubber in the SERVICE section.

SECTION 8: SERVICING YOUR SNOW THROWER

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 maintenance procedures.

Augers

- The augers are secured to the spiral shaft with two shear bolts and hex lock nuts. If you hit a hard foreign object or ice jam, the snow thrower is designed so that the bolts may shear. Refer to Figure 20.
- If the augers will not turn, check to see if the bolts have sheared. Replacement shear bolts and hex lock nuts have been provided with the snow thrower. When replacing bolts, spray an oil lubricant into shaft before inserting new bolts.

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.

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 skid shoes, remove the four carriage bolts, cupped washers and hex nuts which attach them to the snow thrower. Reassemble new skid shoes with the four carriage bolts, cupped washers (cupped side goes against skid shoes) and hex nuts. See Figure 21.

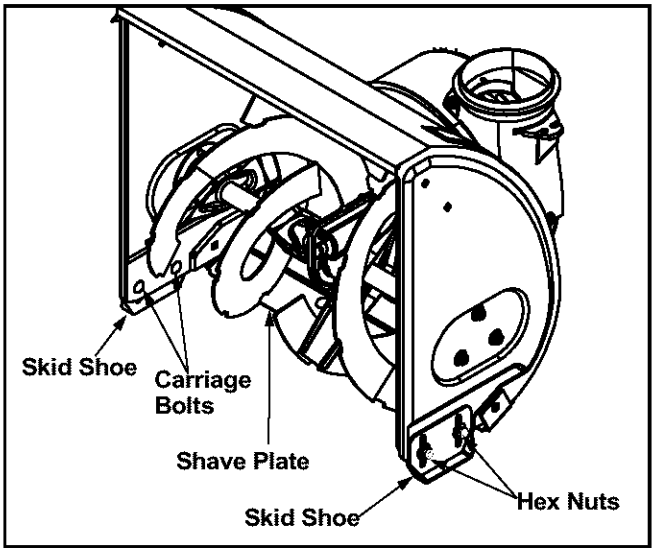


Figure 21

- To remove shave plate, remove the carriage bolts, cupped washers and hex nuts which attach it to the snow thrower housing. Reassemble new shave plate, making sure heads of carriage bolts are to the inside of housing. Tighten securely. See Figure 21.

Belt Removal and Replacement

Auger Belts

NOTE: *It is necessary to remove both belts in order to change either one. If changing just one belt, be certain to check the condition of the other belt.*

- Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws. See Figure 22.
- Drain the gasoline from the snow thrower, or place a piece of plastic under the gas cap.
- Tip the snow thrower up and forward so that it rests on the auger housing.

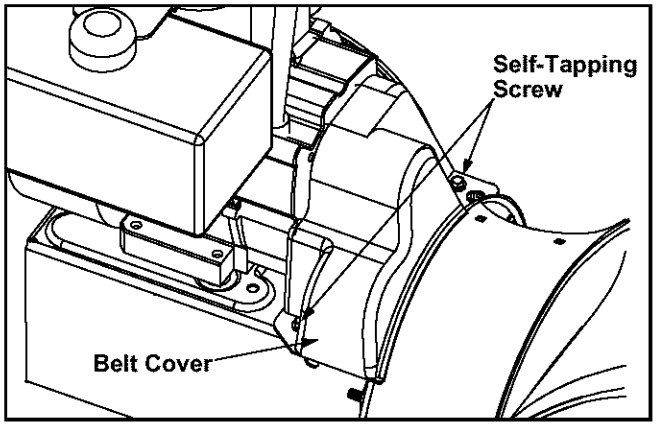


Figure 22

- Remove six self-tapping screws from the frame cover underneath the snow thrower.
- Roll the front and rear auger belts off the engine pulley. See Figure 23.
- Unhook the idler spring from the hex bolt on the auger housing. See Figure 24.
- Unhook the support bracket spring from the frame.

NOTE: *It may be necessary to loosen the six hex nuts that fasten the frame to the auger housing to aid in belt removal.*

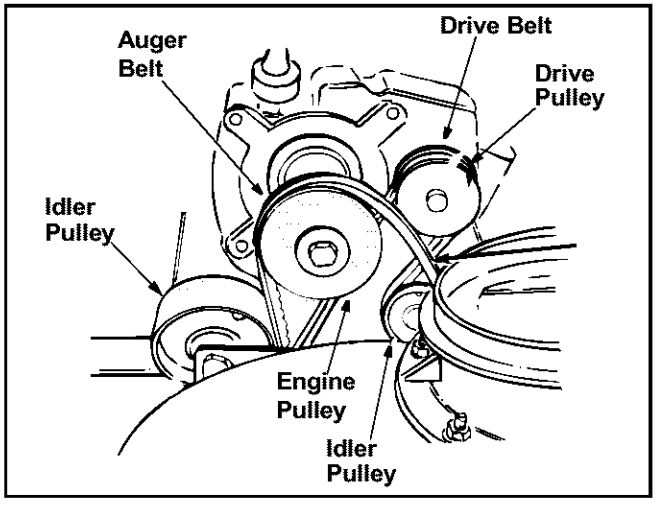


Figure 23

- Lift the rear auger belt from the auger pulley, and slip belt between the support bracket and the auger pulley. Repeat this step to remove the front auger belt. See Figure 23.
- Reassemble auger drive belt(s) by following instructions in reverse order.

Drive Belt

- Follow first four steps of previous instructions.
- Pull idler pulley up, and lift belt off engine pulley and friction wheel disc. See Figure 23.

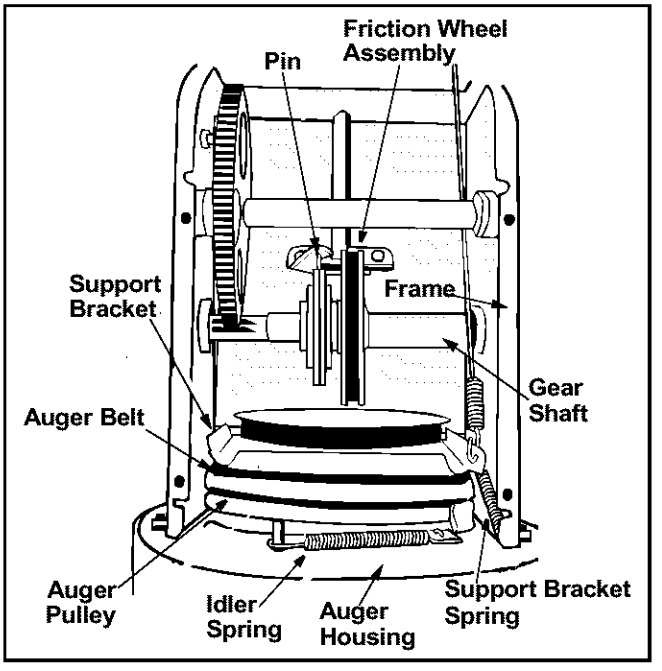


Figure 24

- Using a wrench, loosen the nut on the stop bolt until the support bracket rests on the auger pulley. See Figure 25.
- Slip belt between friction wheel and friction wheel disc. Remove and replace belt. Reassemble in reverse order.

NOTE: *The support bracket must rest on the stop bolt after the new belt has been assembled. See Figure 25.*

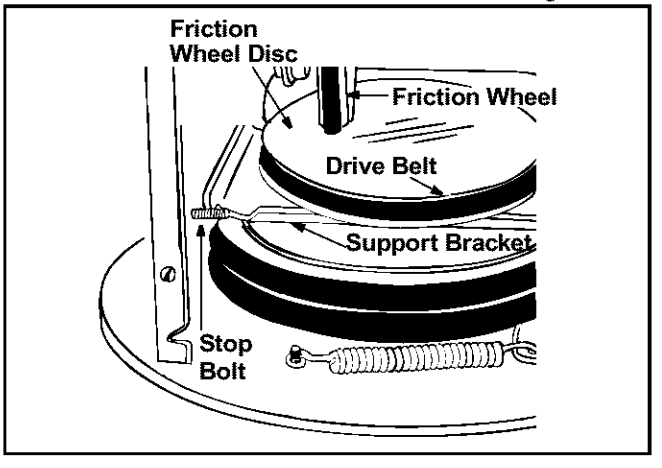


Figure 25

Friction Wheel Rubber

Replace the friction wheel rubber if any signs of wear or cracking are found. Follow instructions below to replace the rubber.

- Tip the snow thrower up and forward, so that it rests on housing. Refer to Figure 16.
- Remove six self-tapping screws from the frame cover underneath the snow thrower.

- Remove the klick pins which secure the wheels, and remove the wheels from the axle.
- Using a 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 26.

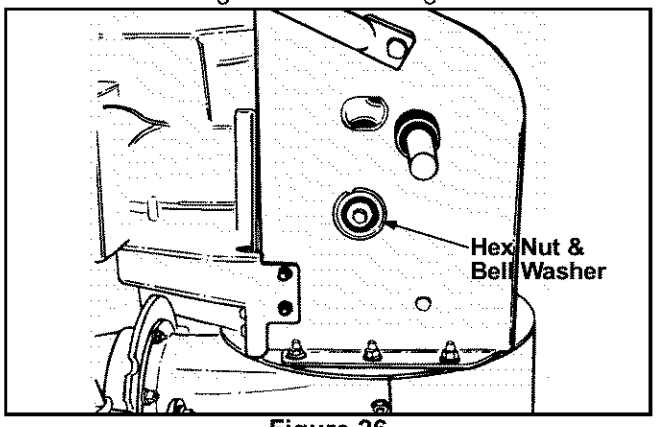


Figure 26

- Lightly tap the hex nut to dislodge the ball bearing from the right side of the frame. Remove the hex nut and bell washer from the left end of the shaft.
- Slide the gear shaft to the right then slide the friction wheel assembly from the shaft.
- Remove the six screws from the friction wheel assembly (three from each side). See Figure 27.

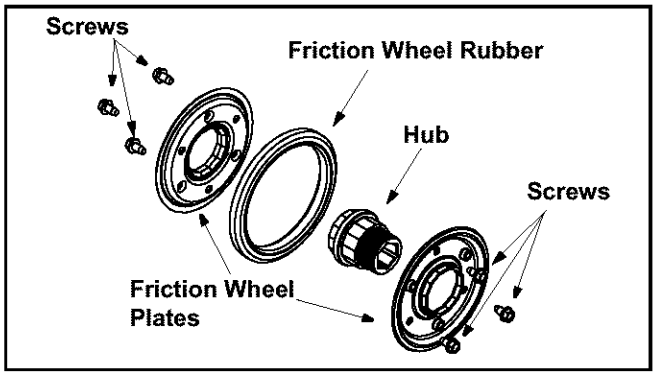


Figure 27

- Remove the friction wheel rubber from between the friction wheel plate.
- Reassemble new friction wheel rubber to the friction wheel assembly, tightening the six screws in rotation and with equal force. See Figure 27.
- Slide friction wheel assembly back onto the gear shaft. Be sure to align the pin on the shift rod with hole in the friction wheel assembly. See Figure 24.
- Reassemble gear shaft and the wheels. Reattach the frame cover. Flip snow thrower back to its operating position and remove any plastic from under the machine or around the gas cap if you had put it earlier.

Off-Season Storage

WARNING: Never store the machine or fuel container indoors where there is an open flame, spark or pilot light such as on a water heater, furnace, clothes dryer or other gas appliances.

WARNING: Drain fuel into an approved container outdoors, away from open flame. Allow engine to cool. Extinguish cigarettes, cigars, pipes, and other sources of ignition prior to draining fuel. Fuel left in engine for extended period deteriorates and will cause serious starting problems.

If unit is to be stored over 30 days, prepare for storage as follows:

- Remove gasoline from carburetor and fuel tank to prevent gum deposits from forming on these parts and causing possible malfunction of engine.
- Run engine until fuel tank is empty and engine stops due to lack of fuel.
- Drain carburetor by pressing upward on bowl drain, located below the carburetor cover.

NOTE: *Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Do not drain carburetor if using fuel stabilizer.*

- Wipe equipment with an oiled rag to prevent rust.
- Remove spark plug and pour one ounce of engine oil through spark plug hole into cylinder. Cover spark plug hole with rag. Crank engine several times to distribute oil. Replace spark plug.
- Follow the lubrication recommendations found in the Maintenance Section.
- Always store the snow thrower in a clean, dry area.

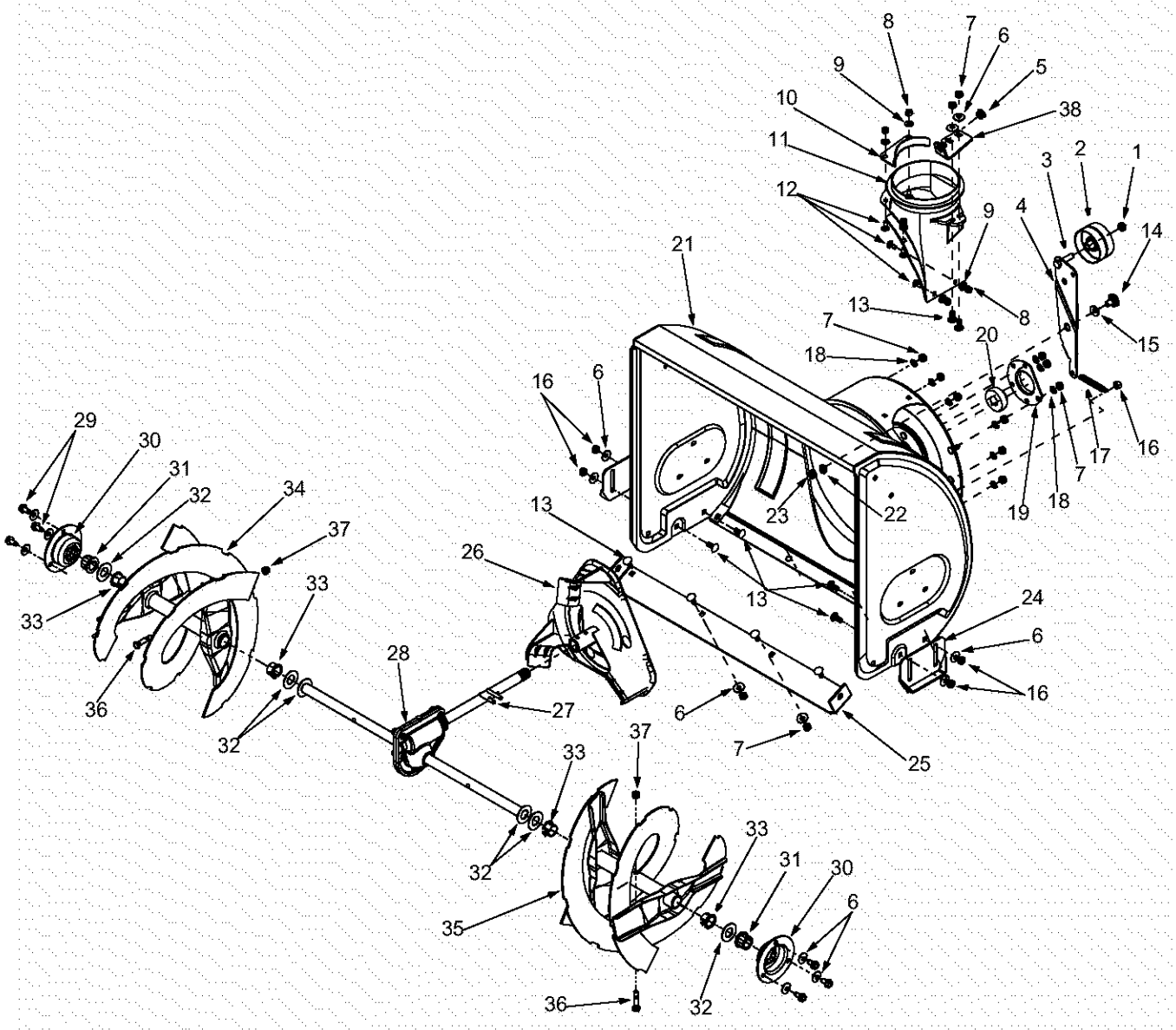
When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rust proof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.

SECTION 9: TROUBLE SHOOTING GUIDE

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	Fuel tank empty, or stale fuel.	Fill tank with clean, fresh gasoline. Fuel will not last over thirty days unless a fuel stabilizer is used.
	Blocked fuel line.	Clean fuel line.
	Choke not in ON position	Move switch to ON position
	Faulty spark plug.	Clean, adjust gap or replace.
	Key not in switch on engine.	Insert key.
	Spark plug wire disconnected.	Connect spark plug wire.
	Primer button not depressed.	Refer to the engine manual.
	Fuel shut-off valve closed (if so equipped).	Open fuel shut-off valve.
Engine runs erratic	Unit running on CHOKE.	Move choke lever to OFF position.
	Blocked fuel line or stale fuel.	Clean fuel line; fill tank with clean fresh gasoline. Fuel will not last over thirty days unless a fuel stabilizer is used.
	Water or dirt in fuel system.	Drain fuel tank. Refill with fresh fuel.
	Carburetor out of adjustment.	Refer to the engine manual.
Loss of power	Spark plug wire loose.	Connect and tighten spark plug wire.
	Gas cap vent hole plugged.	Remove ice and snow from cap. Be certain vent hole is clear.
	Exhaust port plugged.	Clean following the engine manual.
Engine overheats	Carburetor not adjusted properly.	Refer to the engine manual packed with your unit or have carburetor adjusted by an authorized service dealer.
	Incorrect fuel mixture.	Drain fuel tank. Refill with proper fuel mixture.
Excessive vibration	Loose parts or damaged auger.	Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. Make all necessary repairs. If vibration continues, have unit serviced by an authorized service dealer.
Unit fails to propel itself	Incorrect adjustment of drive cable.	Adjust drive cable.
	Drive belt loose or damaged.	Replace drive belt.
Unit fails to discharge snow	Discharge chute clogged.	Stop engine immediately and disconnect spark plug wire. Clean discharge chute and inside of auger housing.
	Foreign object lodged in auger.	Stop engine immediately and disconnect spark plug wire. Remove object from auger.
	Incorrect adjustment of drive cable.	Adjust drive cable.
	Drive belt loose or damaged.	Replace drive belt.

NOTE: *For repairs beyond the minor adjustments above, contact your local authorized service dealer.*

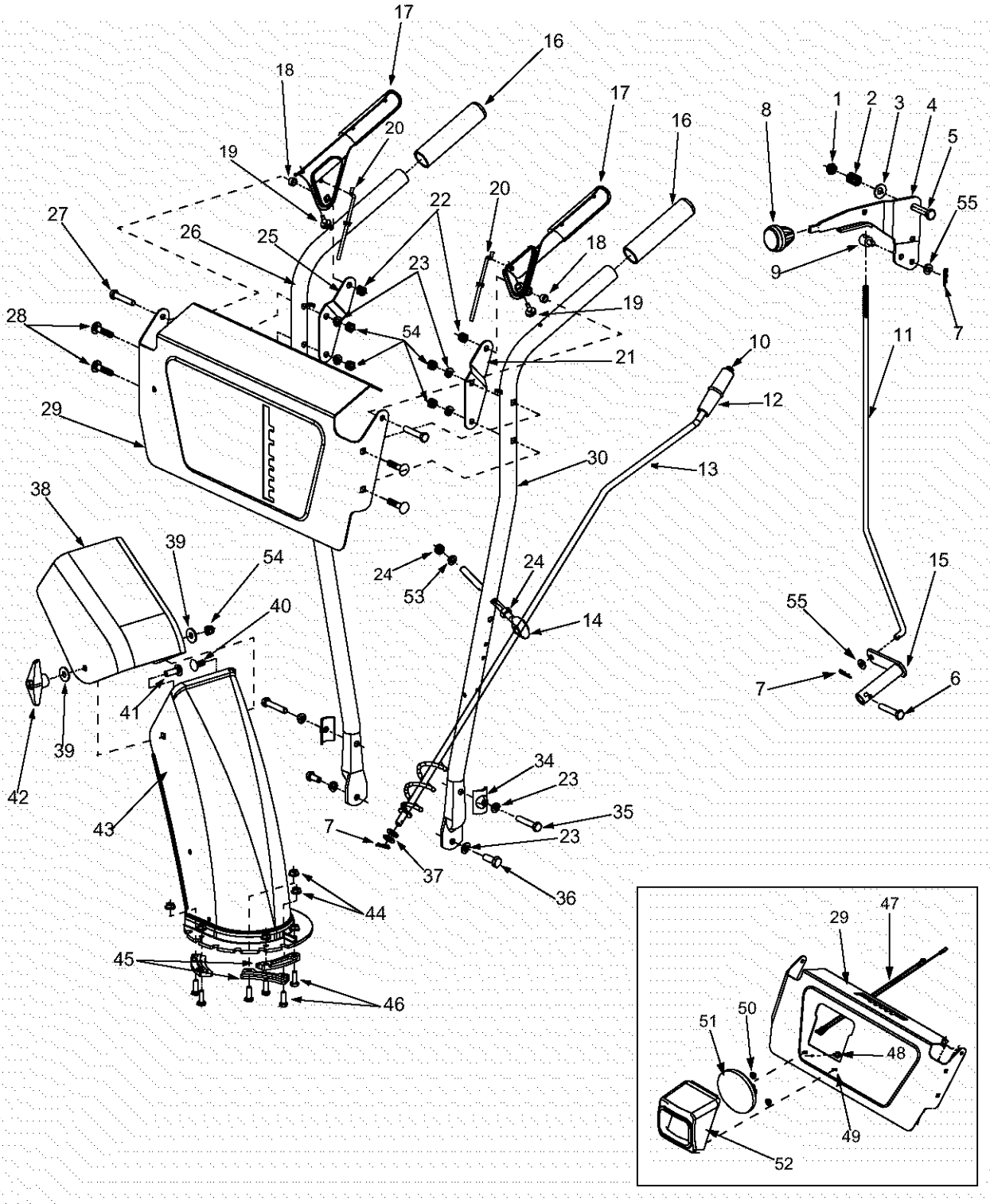
Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E



Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E

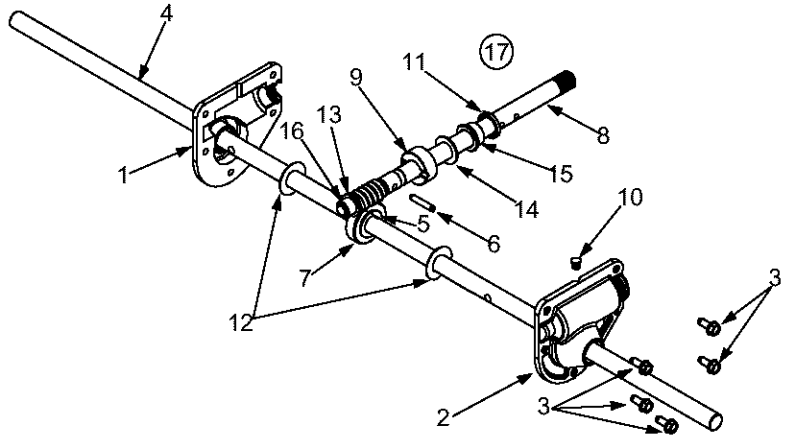
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1.	712-0116	Lock Jam Nut 3/8-24	25.	784-5581A	24" Shave Plate
2.	756-0178	Flat Idler		784-5579A	26" Shave Plate
3.	784-5632A	Auger Idler Arm		784-5582A	28" Shave Plate
4.	710-0459A	Hex Cap Screw 3/8-24 x 1.50		784-5575	30" Shave Plate
5.	741-0475	Bushing	26.	684-0065	Impeller Assembly
6.	736-0242	Bell Washer	27.	715-0114	Pin
7.	712-3010	Hex Nut 5/16-18	28.	618-0120A	24" Gear Assembly
8.	712-0324	Hex Lock Nut 1/4-20		618-0121A	26" Gear Assembly
9.	736-0463	Flat Washer		618-0122A	28" Gear Assembly
10.	705-5226	Reinforcement Chute		618-0160A	30" Gear Assembly
11.	731-1379C	Chute Adapter	29.	710-0604A	Hex Washer Screw 5/16-18
12.	710-0703	Carriage Screw 1/4-20 x .62	30.	784-5618	Bearing Housing
13.	710-0451	Carriage Bolt 5/16-18	31.	741-0245	Hex Flange Bearing
14.	738-0281	Shoulder Screw	32.	736-0188	Flat Washer
15.	736-0167	Flat Washer	33.	741-0493A	Flange Bushing
16.	712-3068	Hex Nut 5/16-18	34.	605-5188A	Spiral 24" RH
17.	732-0611	Extension Spring		605-5192A	Spiral 26" RH
18.	736-0119	Lock Washer 5/16		605-5196A	Spiral 28" RH
19.	05931A	Bearing Housing		605-5248A	Spiral 30" RH
20.	741-0309	Ball Bearing	35.	605-5189A	Spiral 24" LH
21.	684-0039C	24" Housing Assembly		605-5193A	Spiral 26" LH
	684-0040C	26" Housing Assembly		605-5197A	Spiral 28" LH
	684-0041C	28" Housing Assembly		605-5249A	Spiral 30" LH
	684-0055B	30" Housing Assembly	36.	710-0890A	Shear Bolt 5/16-18 x 1.5
22.	736-0169	Lock Washer 3/8	37.	712-0429	Lock Nut 5/16-18
23.	712-0798	Hex Nut 3/8-16	38.	784-5647	Chute Directional Control Bracket
24.	784-5580	Slide Shoe			

Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E



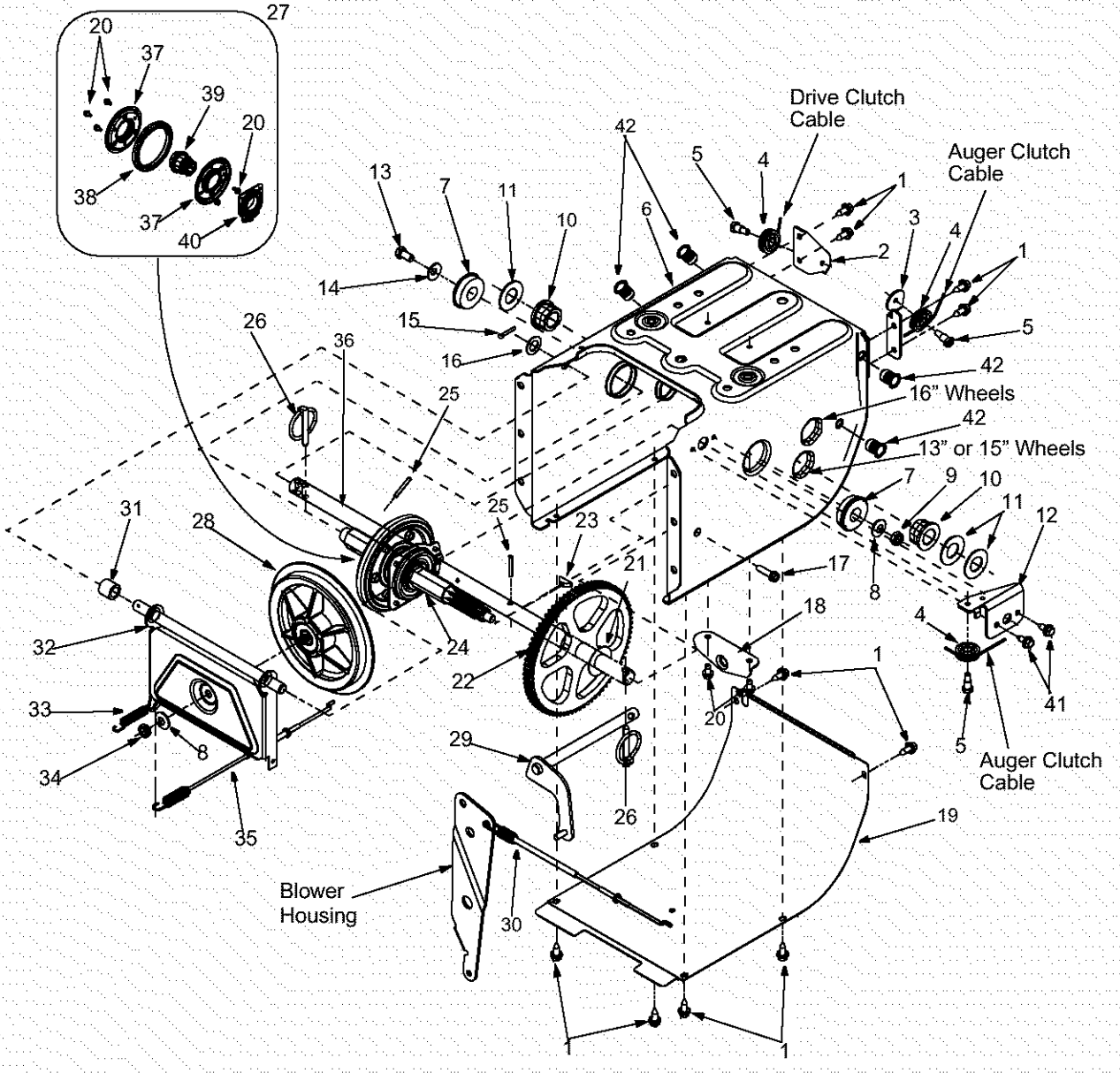
Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1.	712-0116	Jam Lock Nut 3/8-24	27.	710-3103	Hex Cap Screw 5/16-18 x 2.0
2.	732-0193	Compression Spring	28.	710-0262	Carriage Bolt 5/16-18 x 1.50
3.	736-0105	Bell Washer	29.	684-0105	Control Panel Assy - 2 Style
4.	784-5619A	Shift Handle		684-0145	Control Panel Assy- 2 Style w/light
5.	710-0459A	Hex Cap Screw 3/8-24		684-0106	Control Panel Assy - 4 Style
6.	710-0788	Tap Screw 1/4-20	30.	749-0911C	Handle LH
7.	714-0104	Cotter Pin	34.	784-5599	Handle Tab
8.	720-0232	Shift Knob	35.	710-3259	Hex Cap Screw 5/16-18 x 2.0
9.	711-0677	Ferrule	36.	710-1880	Hex Cap Screw 5/16-18 x .75
10.	726-0100	Push Cap	37.	736-0185	Flat Washer
11.	747-0921	Shift Rod	38.	731-0921	Upper Chute
12.	720-0201A	Chute Knob	39.	736-0159	5/16 Washer
13.	705-5204A	Chute Directional Control	40.	710-0451	Carriage Bolt 5/16-18 x .75
14.	747-0697	Eyebolt	41.	710-0276	Carriage Screw 5/16-18 x 1.0
-	735-0234	Grommet only	42.	720-0284	Knob
15.	684-0008A	Shift Arm Assy	43.	731-1300A	Lower Chute
16.	720-0274	Grip	44.	712-3027	Hex Lock Nut 1/4-20
17.	705-5233A	Clutch Lever Assy LH	45.	731-0851A	Flange Keeper
	705-5234A	Clutch Lever Assy RH	46.	710-3015	Hex Cap Screw 1/4-20 x .75
18.	750-1032	Spacer	47.	629-0058	Round Light Harness
19.	735-0199A	Rubber Bumper	48.	710-1652	Hex Tap Screw 1/4-20 x .625
20.	746-0778	Cable	49.	710-1003	Hex Screw
21.	705-5275	Lever Bracket LH	50.	712-0415	Hex Nut
22.	712-0429	Lock Hex Nut 5/16-18	51.	725-1300	Headlight 18 Watts
23.	736-0119	Lock Washer 5/16	52.	731-1317	Headlight Cover
24.	712-3010	Hex Nut 5/16-18	53.	736-0242	Bell Washer
25.	705-5274	Lever Bracket RH	54.	712-3068	Hex P\atch Nut 5/16-18
26.	749-0910C	Handle RH	55.	736-0275	Flat Washer .344 ID x .688 OD



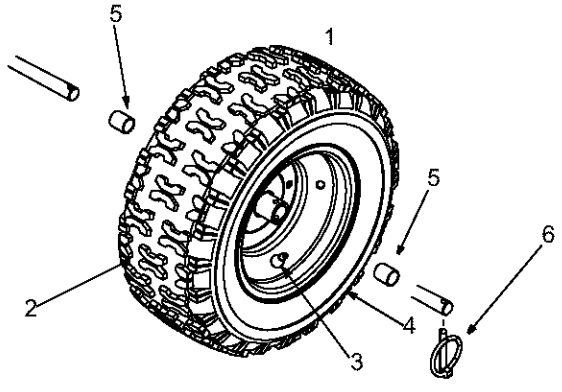
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1.	618-0123	Housing—R.H.	9.	721-0325	Plug
	618-0124	Housing—L.H.	10.	721-0327	Seal-Oil
2.	710-0642	Hex Screw 1/4-20 x .75	11.	736-0351	Washer-Flat
3.	711-0908A	Spiral Axle 24"	12.	736-0369	Washer-Flat
	711-0909A	Spiral Axle 26"	13.	736-0445	Washer-Flat
	711-0910A	Spiral Axle 28"	14.	737-0168	Grease
	711-1024A	Spiral Axle 30"	15.	741-0662	Bearing-Flange
4.	714-0161	Key	16.	741-0663	Bearing-Flange
5.	715-0143	Pin-Spiral	17.	618-0120A	Ass'y. Complete 24"
6.	717-0526	Shaft-Worm		618-0121A	Ass'y. Complete 26"
7.	717-0528	Gear-Worm		618-0122A	Ass'y. Complete 28"
8.	718-0186	Collar-Thrust		618-0160A	Ass'y Complete 30"

Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E



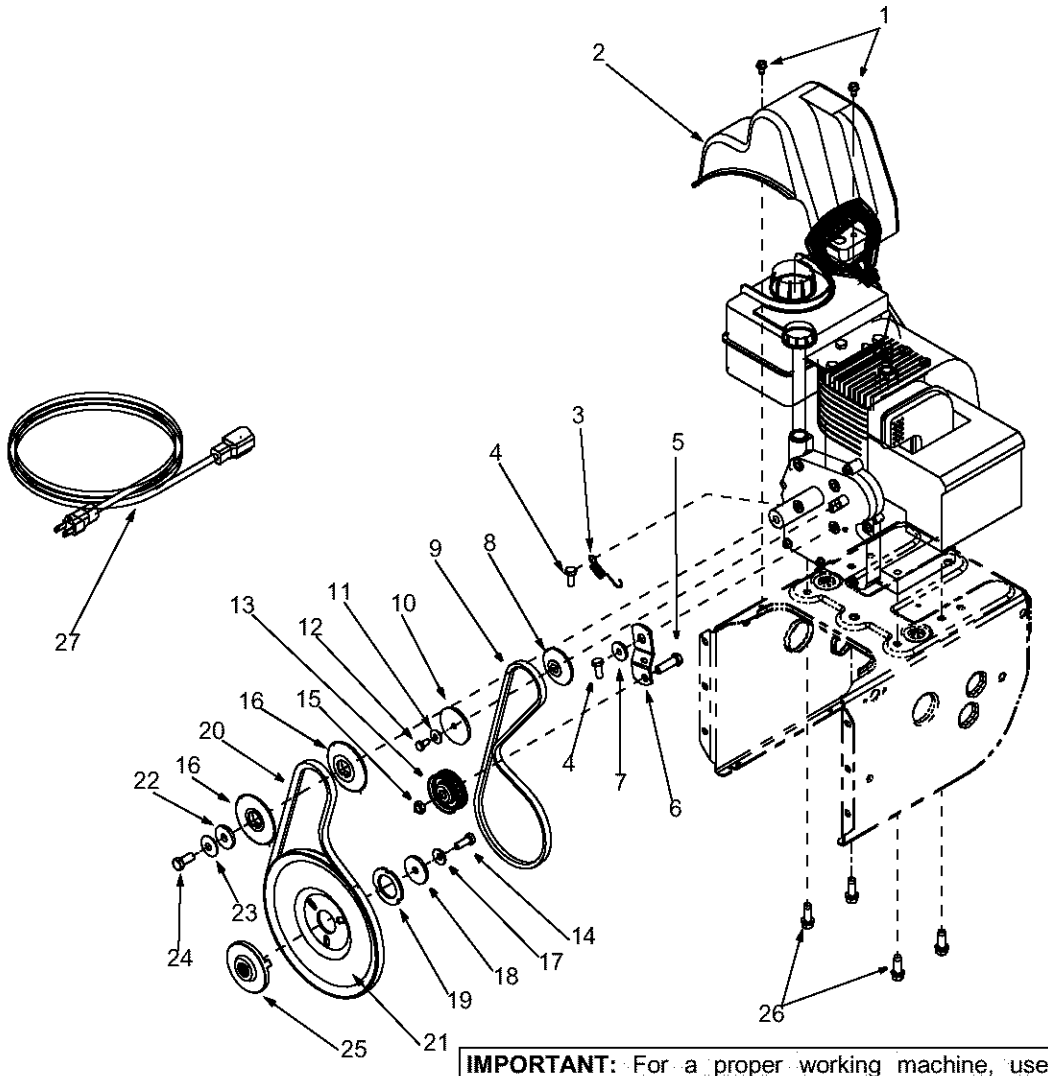
Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1.	710-0599	Hex Screw	23.	714-0126	Key
2.	784-5688	Drive Cable Guide Bracket	24.	717-1444	7-Tooth Shaft
3.	784-5687A	Auger Clutch Cable Bracket	25.	715-0249	Roll Pin
4.	756-0625	Roller Cable	26.	714-0143	Klik Pin
5.	738-0924	Hex Screw 1/4-28	27.	684-0042C	Friction Wheel Assembly
6.	784-5630A	Frame Assembly	28.	656-0012A	Friction Disc Wheel
7.	741-0563	Ball Bearing	29.	684-0013B	Wheel Shift Rod Assembly
8.	736-0105	Bell Washer	30.	746-0897	Drive Cable
9.	712-0116	Lock Jam Nut	31.	748-0190	Spacer
10.	741-0598	Hex Flange Bearing	32.	684-0021	Friction Wheel Bracket Assembly
11.	736-0188	Flat Washer	33.	732-0264	Extension Spring
12.	784-5689A	Front Support Guide Bracket	34.	712-0711	Jam Nut 3/8-24
13.	710-0538	Lock Hex Screw	35.	746-0898	Drive Cable
14.	736-0242	Bell Washer .340 ID x .872 OD	36.	738-0869	Axle 13" Wheels
15.	714-0474	Cotter Pin		738-0830	Axle 16" Wheels
16.	736-0160	Flat Washer .536 ID x .930 OD	37.	784-5617A	Friction Plate
17.	710-0809	Hex Washer Screw 1/4-20	38.	735-0243B	Friction Wheel Rubber
18.	784-5590	Frame Shift Bracket	39.	718-0301A	Friction Wheel Hub
19.	784-5638	Frame Cover	40.	618-0063A	Friction Wheel Bearing
20.	710-0599	Hex Washer Screw 1/4-20	41.	710-1652	Tap Screw 1/4-20
21.	736-0351	Flat Washer .760 ID x .50 OD	42.	712-0703A	Insert Nut 5/16-18
22.	717-1445	Gear			



Wheel Assembly						
SIZE	REF. NO. 1 WHEEL ASS'Y COMPLETE	REF. NO. 2 TIRE ONLY	REF. NO. 3 AIR VALVE	REF. NO. 4 RIM ONLY	REF. NO. 5 SLEEVE BEARING (2)	REF. NO 6 Klik Pin
13 x 4	634-0114	734-1732	734-0255	734-1713	741-0401	714-0143
13 x 5	734-1714	734-1527	734-0255	734-1713	741-0401	714-0143
16 x 6.5	734-1712	734-1525	734-0255	734-1711	741-0401	714-0143
16.5 x 4.8	734-1709	734-1530	734-0255	734-1708	741-0401	714-0143

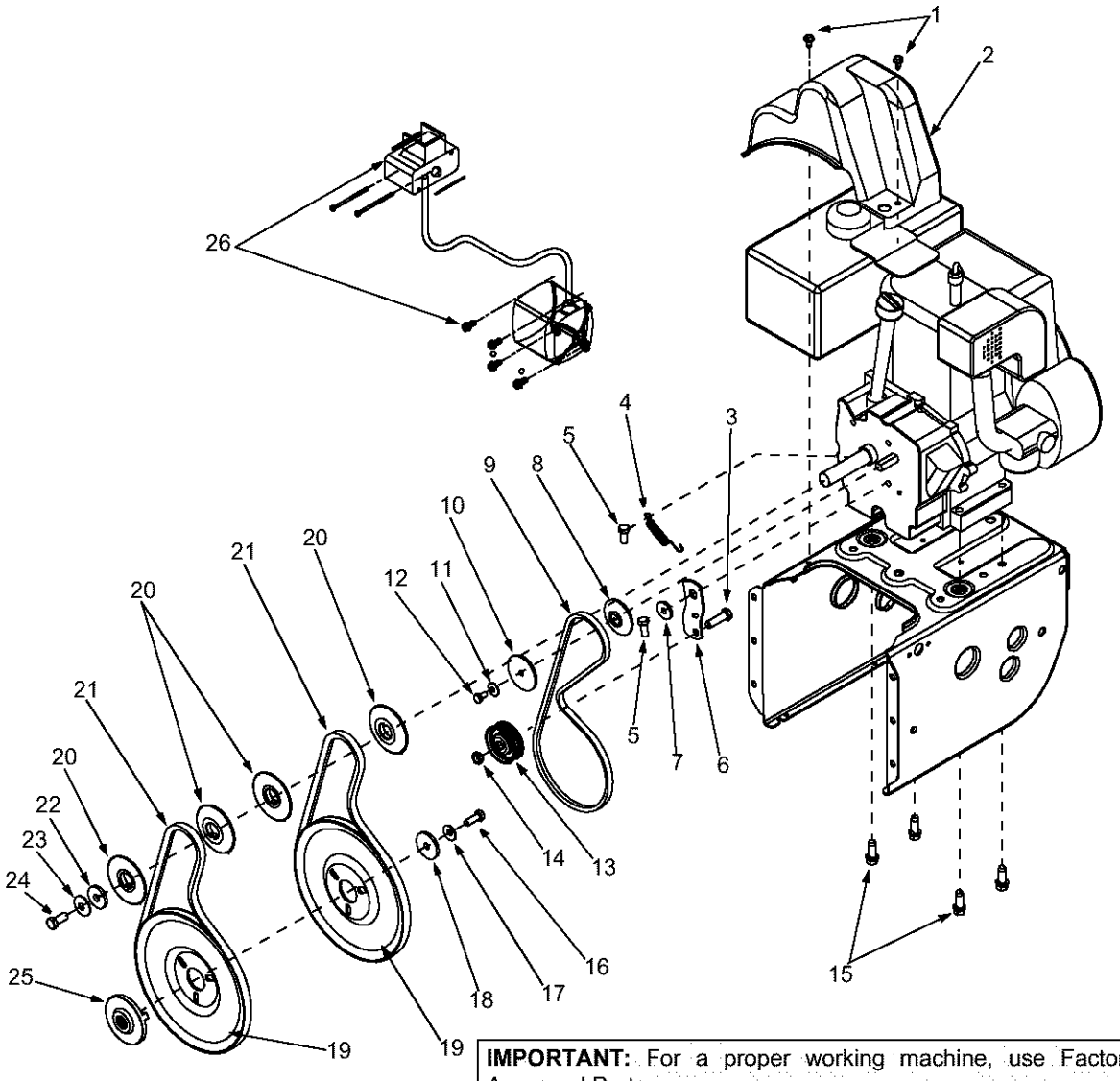
Models 614E



IMPORTANT: For a proper working machine, use Factory Approved Parts.
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.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1.	710-1652	Hex Washer Screw 1/4-20 x.5	15.	712-0181	Lock Jam Nut 3/8-16
2.	731-1324	Belt Cover	16.	756-0569	Pulley Half
3.	732-0339	Extension Spring	17.	736-0242	Bell Washer
4.	710-0627	Hex Screw 5/16-24 x .75	18.	736-0505	Flat Washer
5.	710-3005	Hex Cap Screw 3/8-16 x 1.25	19.	736-0507	Washer
6.	05896A	Drive Clutch Bracket	20.	754-0430A	Belt
7.	748-0234	Shoulder Spacer	21.	756-0967	Auger Pulley
8.	756-0985	Pulley Half	22.	736-0247	Flat Washer
9.	754-0343	V-Belt	23.	736-0331	Bell Washer
10.	756-0984	Pulley Half	24.	710-0696	Hex Cap Screw 3/8-24
11.	736-0270	Bell Washer	25.	748-0360	Pulley
12.	710-0230	Hex Cap Screw 1/4-28 x .50	26.	710-0654A	Hex Washer Screw 3/8-16 x 1.0
13.	756-0313	Flat Idler	27.	629-0071	Extension Cord
14.	710-1245A	Lock Cap Screw 5/16-24		OEM-390-986	Electric Start Kit

Models 642E, 642F, 662E, 614E, 644E, 664F, & 6A4E



IMPORTANT: For a proper working machine, use Factory Approved Parts.
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REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1.	710-1652	Hex Washer Screw 1/4-20 x .50	14.	712-0181	Lock Jam Nut 3/8-16
2.	731-1324	Belt Cover	15.	710-0654A	Hex Washer Screw 3/8-16 x 1.0
3.	710-3005	Hex Cap Screw 3/8-16 x 1.25	16.	710-1245A	Hex Lock Screw 5/16-24 x .875
4.	732-0710	Spring Extension	17.	736-0242	Bell Washer .340 ID x .872 OD
5.	710-0627	Hex Screw 5/16-24 x .75	18.	736-0505	Flat Washer .341 ID x .50 OD
6.	05896A	Drive Clutch Idler Bracket	19.	756-0967	Pulley Auger
7.	748-0234	Shoulder Spacer	20.	756-0569	Pulley Half
8.	756-0987	Pulley Half	21.	754-0430A	V-Belt
9.	754-0346	Belt	22.	736-0247	Flat Washer
10.	756-0986	Pulley Half	23.	736-0331	Bell Washer .39 ID x 1.13 OD
11.	736-0270	Bell Washer	24.	710-0696	Hex Cap Screw 3/8-24 x .875
12.	710-0230	Hex Cap Screw	25.	748-0360	Pulley Adapter
13.	756-0313	Flat Idler	26.	OEM-390-987	Electric Start

MANUFACTURER'S LIMITED WARRANTY

The limited warranty set forth below is given by MTD PRODUCTS INC ("MTD") with respect to new merchandise purchased and used in the United States, its possessions and territories.

MTD warrants this product against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in material or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water or damage because of other peril or natural disaster. Damage resulting from the installation or use of any accessory or attachment not approved by MTD Products Inc. for use with the product(s) covered by this manual will void your warranty as to any resulting damages.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear part or component failures will be covered on the product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear part failures will be covered ONLY IF caused by defects in material or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires. Batteries are covered by a 90-day limited replacement warranty.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE THROUGH YOUR LOCAL AUTHORIZED SERVICE DEALER. To locate the dealer in your area, please check for a listing in the Yellow Pages or contact the Customer Service Department of MTD PRODUCTS INC by calling 1-800-800-7310 or writing to P.O. Box 368022, Cleveland, Ohio 44136-9722.

This limited warranty does not provide coverage in the following cases:

a. The engine or component parts thereof. These items carry a separate manufacturer's warranty. Please refer to the applicable manufacturer's warranty on these items.
b. Log splitter pumps, valves and cylinders have a separate one year warranty.
c. Routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments; and normal deterioration of the exterior finish due to use or exposure.
d. MTD does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except those sold through MTD's authorized channels of export distribution.

No implied warranty, including any implied warranty of merchantability or fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty or guaranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product shall bind MTD. During the period of the Warranty, the exclusive remedy is repair or replacement of the product as set forth above. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

The provisions as set forth in this Warranty provide the sole and exclusive remedy arising from the sales. MTD shall not be liable for incidental or consequential loss or damages including, without limitation, expenses incurred for substitute or replacement lawn care services, for transportation or for related expenses, or for rental expenses to temporarily replace a warranted product. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.)

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. Alteration of the safety features of the product shall void this Warranty. You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the use or misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser, original lessee or the person for whom it was purchased as a gift.

How State Law Relates to this Warranty: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.