

OPERATOR'S MANUAL



Models 31AE553F401 31AE573H401



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 forestcovered, 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

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FORM NO. 770-10028 (7/98)

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 YOUR SNOW THROWER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL-HEED ITS WARNING.



WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



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

1. TRAINING

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

2. PREPARATION

- Thoroughly inspect the area where the equipment is to be used and remove all door mats, sleds, boards, wires and other foreign objects.
- Disengage all clutches and shift into neutral before starting engine.
- Do not operate equipment without wearing adequate winter outer garments. Do not wear jewelry, long scarfs or other loose clothing which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.
- Before working with gasoline, extinguish all cigarettes and other sources of ignition. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, while the engine is running, or until

engine has been allowed to cool at least two minutes. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.

- Use a grounded three wire plug-in for all units with electric drive motors or electric starting motors.
- Adjust collector housing height to clear gravel or crushed rock surface.
- Never attempt to make any adjustments while engine is running (except where specifically recommended by manufacturer).
- Let engine and machine adjust to outdoor temperature before starting to clear snow.
- Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.

3. OPERATION

- Do not put hands or feet near or under rotating parts. Keep clear of discharge opening and auger at all times.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
- After striking a foreign object, stop the engine, remove wire from spark plug, and thoroughly inspect the snow thrower for any damage. Repair the damage before restarting and operating the snow thrower.
- If the snow thrower should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Stop engine whenever you leave the operating position, before unclogging the collector/impeller housing or discharge guide, and making any

repairs, adjustments, or inspections. Never place your hand in the discharge or collector openings. Use a stick or wooden broom handle to unclog the discharge opening.

- Take all possible precautions when leaving the unit unattended. Disengage the collector/impeller, shift into neutral, stop the engine, and remove the key.
- When cleaning, repairing, or inspecting, make certain collector/impeller and all moving parts have stopped. Disconnect spark plug wire and keep away from plug to prevent accidental starting.
- Do not run engine indoors, except when starting engine and transporting snow thrower in or out of building. Open doors. Exhaust fumes are dangerous.
- Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Never operate snow thrower without guards, plates, or other safety protection devices in place.
- Never operate snow thrower near glass enclosure, automobiles, window wells, drop off, etc., without proper adjustments of snow thrower discharge angle. Keep children and pets away.
- Do not overload machine capacity by attempting to clear snow at too fast a rate.
- Never operate the machine at high transport speeds on slippery surfaces. Look behind and use care when backing.

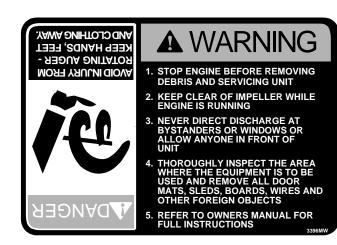
- Never direct discharge at bystanders or allow anyone in front of unit.
- Disengage power to collector/impeller when transporting or not in use.
- Use only attachments and accessories approved by the manufacturer of snow thrower (such as wheel weights, counter weights, cabs, etc.).
- Never operate the snow thrower without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
- Muffler and engine become hot and can cause a burn. Do not touch.

4. MAINTENANCE AND STORAGE

- Check shear bolts, engine mounting bolts, etc., at frequent intervals for proper tightness to be sure equipment is in safe working condition.
- Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters, clothes dryers, and the like. Allow engine to cool before storing in any enclosure.
- Always refer to operators manual instructions for important details if snow thrower is to be stored for an extended period.
- Run machine a few minutes after throwing snow to prevent freeze up of collector/impeller.
- Check clutch controls periodically to verify they engage and disengage properly and readjust if necessary. Refer to operators manual for adjustment instructions.



WARNING - 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.





Safety Labels found on your unit.

SECTION 2: FINDING SNOW THROWER MODEL NUMBER

This Operators Manual is an important part of your new snow thrower. It will help you assemble, prepare and maintain your snow thrower. Please read and understand what it says.

Before you prepare your snow thrower for its first use, please locate the model plate and copy the information from it in this Operators Manual. The information on the model plate is very important if you need help from your dealer or the MTD Customer Support Department.

- Every snow thrower has a model plate. You can locate it by standing behind the unit in the operating position and looking down at the dash panel.
- The model plate will look like this.

	This is where model number will be.
xxx-x-xxxx-x-xxx <u>xxxxxxxxxxx</u>	This is where serial number will be.
	Copy the model number here:
For A Ground Words MTD PRODUCTS INC CLEVELAND, OHIO 44136	Copy the serial number here:
HOLA BROWING WORKE	

SECTION 3: CALLING CUSTOMER SUPPORT

If you are having difficulty assembling this product or if you have any question regarding the controls, operation or maintenance of this snow thrower, please contact the Customer Support Department. You can reach them by calling:

1-800-800-7310

Before you call, make sure that you have the snow thrower model and serial numbers ready. This will help the Customer Support Representative give you faster service. To find your unit's model and serial numbers, see the previous section.

SECTION 4: UNPACKING THE SNOW THROWER

- 1. Remove screws from the top sides and ends of the shipping crate.
- 2. Remove panels and set aside to avoid tire punctures or personal injury.
- 3. Remove and discard plastic bag that covers unit.
- 4. Roll unit out of crate.
- 5. Make sure to retrieve all loose parts and hardware bag from the crate before discarding it.

SECTION 5: SET-UP INSTRUCTIONS

NOTE: Reference to right or left side of the snow thrower in this manual is from behind the unit in the operating position.

IMPORTANT: Check the adjustments as instructed on page 6, and make any final adjustments necessary **before** operating your snow thrower. Failure to follow the instructions may cause damage to the snow thrower and void warranty.

1. Remove the **lower** two plastic wing nuts, cupped washers and carriage bolts from each side of the lower handle. See Figure 1.

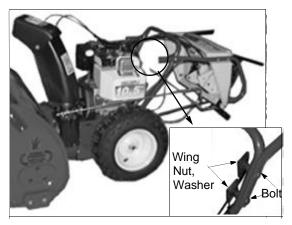


Figure 1

- 2. The chute crank may be attached to the lower handle with cable ties for shipping purposes. If so, cut the cable ties and remove the chute crank at this time.
- 3. Raise the upper handle assembly until it locks over the lower handle. See Figure 2.

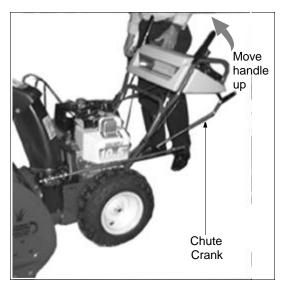


Figure 2 4. Look at lower rear of snow thrower frame to be

sure all cables are aligned with cable roller guides. See Figure 3.

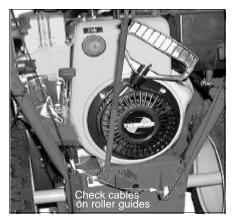
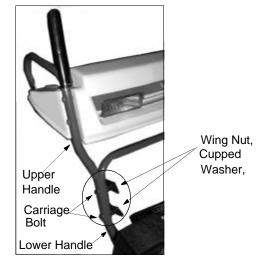


Figure 3

5. Secure the upper handle and lower handle with the two plastic wing nuts, cupped washers and carriage bolts previously removed. See Figure 4.





6. Slide the shift rod connector down over the end of the lower shift rod. See Figure 5. Tap the connector until it **locks** on the lower shift rod.

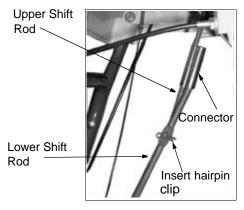


Figure 5

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

- 7. **Models with two-piece chute crank only:** Remove the hairpin clip from the end of the upper chute crank. Slide the upper chute crank into the lower chute crank. Align the holes, and secure with hairpin clip.
- 8. **Models with one-piece chute crank only:** (Follow steps 13 through 15.) Loosen the two hex nuts which secure chute crank support bracket to the snow thrower housing beside discharge chute. See Figure 6.
- 9. Remove the hairpin clip and one flat washer from the lower end of the chute crank. Leave the other flat washer in place on the end of the chute crank. See Figure 6.

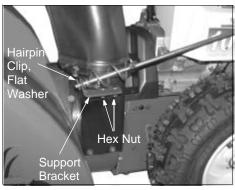


Figure 6

10. Insert the end of the crank into the hole in the plastic bushing in the chute crank support bracket. Place the other flat washer onto the end of the crank, and secure with hairpin clip. See Figure 6.

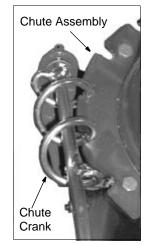


Figure 7

 Adjust the chute crank support bracket so that the spiral on the chute crank fully engages the teeth on the chute assembly. See Figure 7. Tighten the nuts on the chute crank support bracket securely.

- 12. Adjust the eyebolt on the chute crank so the chute crank does not touch the engine. Move the hex nut against the handle (if necessary). Tighten the wing nut to secure the crank in this position.
- 13. If not already attached, slip the cables that run from the handle panel to the chute into the cable guide on top of the engine. See Figure 8.

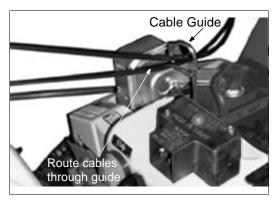


Figure 8

- 14. 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 9.
- 15. Plug the wire from the headlight into the wire lead coming from the right side of the engine, underneath the fuel tank. See Figure 9.



Figure 9

FINAL ADJUSTMENTS

Auger Drive Clutch

- 1. To check the adjustment of the auger drive clutch, push forward on the left hand clutch grip (depress the rubber bumper). There should be slack in the cable.
- 2. Release the clutch grip. The cable should be straight. Make certain you can depress the

auger drive clutch grip against the left handle completely.

 If necessary, loosen the hex lock nut and thread the cable in (for less slack) or out (for more slack) as necessary. Recheck the adjustment. Tighten the lock nut against the cable when correct adjustment is reached.

Traction Drive Clutch and Shift Lever

- 1. Tip the snow thrower forward so that it rests on the auger housing.
- Move the shift lever all the way forward to sixth (6) position.
- 3. With the traction drive lever released, spin the snow thrower wheels by hand. The wheels should turn; however, you may feel some resistance.
- 4. Engage the traction drive clutch grip. The wheels should no longer turn.
- 5. Now release the traction drive clutch grip, and spin the wheels again.
- 6. 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 turn.
- 7. If you face resistance when moving the shift lever or the snow thrower wheels stop when they should not, loosen the lock nut on the traction drive cable and unthread the cable one turn.
- 8. If the wheels can still be turned when you engage the traction drive clutch grip, loosen the lock nut

on the traction drive cable and thread the cable in one turn.

9. Recheck the adjustment and repeat adjustment as necessary. Tighten the lock nut to secure the cable when correct adjustment is reached.

NOTE: If you are not sure that you have reached correct adjustment, refer to the Adjustment section on page 11.

Skid Shoe

The space between the shave plate and the ground can be adjusted. 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 15 on page 13.

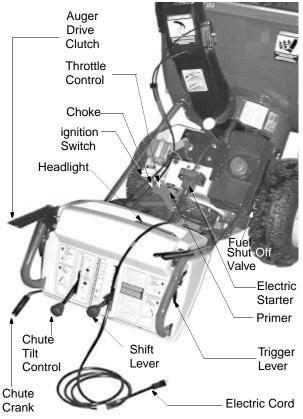
- 1. Adjust skid shoes by loosening the four hex nuts and carriage bolts and moving skid shoes to desired position.
- 2. Make certain the entire bottom surface of skid shoe is against the ground to avoid uneven wear on the skid shoes.
- 3. Tighten nuts and bolts securely.

TIRE PRESSURE (Pneumatic Tires)

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

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

SECTION 6: CONTROLS



• The snow thrower has been shown here from an upside down perspective in order to better explain the controls. Please note that the snow thrower cannot be operated in this position.

Figure 10

(Refer to Figure 10 for illustration of controls described below.)

SHIFT LEVER

The shift lever is located in the center of the handle panel. The shift lever may be moved into one of eight positions. Use the shift lever to determine ground speed.

Forward—one of six speeds. Position number one (1) is the slowest. Position number six (6) is the fastest.

Reverse—two reverse (R) speeds. "R" closest to the operator (all the way back) is the faster of the two.

AUGER DRIVE

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 drive clutch must also be released.)

TRIGGER LEVER

The left and right turn triggers are located on the underside of the handles and are used to assist in steering your snowthrower. Squeeze the right turn trigger when turning right and the left trigger when turning left.

TRACTION DRIVE/AUGER CLUTCH LOCK

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

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

CHUTE CRANK

The chute crank is located on left hand side of the snow thrower.

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

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

CHUTE TILT CONTROL

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

HEADLIGHT

The headlight is on whenever the engine is running.

THROTTLE CONTROL

The throttle control is located on the engine. It regulates the speed of the engine. When blowing snow, always run engine with throttle in the fast position.

SAFETY IGNITION SWITCH

The ignition key switch must be inserted completely in the switch before the unit will start. 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 tank. Make sure it is not turned off before starting the engine.

SECTION 7: OPERATION

GAS AND 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: Never fill fuel tank indoors, with engine running or while engine is hot. Do not smoke when filling fuel tank.

Electric Starter

WARNING: The electric starter is equipped with a three-wire power cord and plug, and is designed to operate on 120 volt AC household current. It must be properly grounded at all times to avoid possibility of electric shock which may be injurious to the operator. Follow all instructions carefully. 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 threewire grounded system, do not use this electric starter under any conditions. If your house wiring system is grounded but a three-hole receptacle is not available at the point the starter will normally be used, one should be installed by a licensed electrician. When connecting the power cord, always connect cord to starter on engine first, then plug the other end into a three-hole grounded receptacle.

When *disconnecting the power cord*, always unplug the end from the three-hole grounded receptacle first.

TO START ENGINE

(See Figure 11)

IMPORTANT: If unit shows any sign of motion (drive or augers) with the clutch grips disengaged, shut engine off immediately. Readjust as instructed in the "Final Adjustments" section of the Set-Up Instructions.

- 1. Attach spark plug wire to spark plug. Make certain that 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.
- 2. Make certain the fuel shut-off valve is in the open (vertical) position.
- 3. Make certain the auger and drive clutch levers are in the disengaged (released) position.
- 4. Move throttle control to FAST position.
- 5. Insert ignition key into slot. Make sure it snaps into place. **Do not** turn key.

Follow the next three steps in the case of **electric start** only.

- 6. Rotate choke knob to OFF position.
- Push the primer button while covering the vent hole. Remove finger from the primer between primes. Do not prime to start a warm engine. Prime two to three times at temperature above 15 degree F and four times below 15 degree F.
- 8. Connect power cord to switch box on engine. Plug the other end of power cord into a threehole, grounded 120 volt AC receptacle.
- 9. Push starter button to crank the engine. When engine starts, release the starter button, and move choke gradually to FULL, and then to OFF position. If the engine falters, move choke immediately to FULL position and then gradually move it to OFF position.

Follow the next three steps for recoil start only:

- 10. Rotate choke knob to FULL position. If engine is already warm, place choke in OFF position instead of FULL position.
- 11. Push primer button two or three times. If engine is warm, push primer button once only.
- 12. 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. Repeat until engine starts. 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.

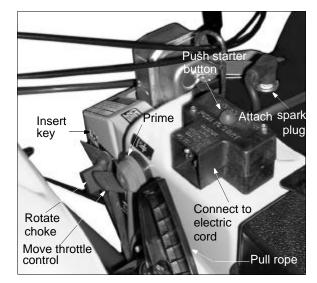


Figure 11

TO STOP ENGINE

1. Run engine for a few minutes before stopping to help dry off any moisture on the engine.

2. To avoid 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 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 the starter.

 To stop engine, push the throttle lever all the way down, or 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.

4. 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. Leave throttle control lever in the STOP or OFF position. Leave choke control in the FULL choke position.

TO ENGAGE DRIVE

- 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. Use the slower speeds until you are familiar with the operation of the snow thrower.
- 2. Squeeze the left hand auger clutch grip against the handle to engage it.
- 3. While the left hand auger clutch grip is engaged, squeeze the right hand drive clutch grip.
- 4. Release the left hand auger clutch grip only. The interlock mechanism should keep the left hand clutch engaged until the right hand clutch is released.

NOTE: NEVER move shift lever without first releasing the drive clutch.

TO STEER SNOWTHROWER

The trigger levers are located on the underside of the handles and are used to steer your snowthrower. **NOTE:** The drive clutch must be engaged when using the triggers to steer the snow thrower.

- 1. To turn right, squeeze the right trigger lever and guide the snowthrower to the right.
- 2. To turn left, squeeze the left trigger lever and

guide the snowthrower to the left.

3. Squeeze both triggers to transport the unit when the engine is not running.

NOTE: These controls should be used while operating your snowthrower in open areas until you become familiar with their operation.

TO ENGAGE AUGERS

To engage augers and start snow throwing action, squeeze the auger clutch grip against the left handle. Release to stop the augers (traction drive clutch grip must also be released).

The auger drive clutch can also be locked so you can turn the chute crank without interrupting the snow throwing process. Refer to "Traction Drive/ Auger Clutch Lock" in the Control section.

TIRE PRESSURE

- 1. Tires are over-inflated for shipping purposes. Reduce the tire pressure to 10-15 p.s.i. for snowthrower operation. Use pneumatic tires only on your snowthrower unit.
- 2. Tire chains (optional equipment) 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: Temperature of muffler and surrounding areas may exceed 150^oF. Avoid these areas.

- 1. For most efficient snow removal, remove snow immediately after it falls.
- 2. Discharge snow downwind whenever possible. Slightly overlap each previous swath. The distance that snow is being thrown can be adjusted by altering the angle of the chute assembly. Sharper the angle, shorter the distance snow is thrown.
- 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.
- 4. Be certain to follow the precautions listed under "To Stop Engine" to prevent possible freeze-up.
- 5. Clean the snow thrower thoroughly after each use.



WARNING: Never attempt to clean chute or make any adjustments while engine is running.

SECTION 8: ADJUSTMENTS



WARNING: Never attempt to clean chute or make any adjustments while engine is running.

CHUTE ASSEMBLY

The distance snow is thrown can be adjusted by adjusting the angle of the chute assembly. Refer to the Control section of this manual.

1. The remote chute control cables have been preadjusted at the factory. Move the remote chute lever on the control panel back and forward to adjust angle of the chute asssembly.

SKID SHOE

The space between the shave plate and the ground can be adjusted. For close snow removal, place skid shoes in the low position. Use middle or high position when area to be cleared is uneven.

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

NOTE: It is not recommended that you operate this snow thrower on gravel as loose gravel can be easily picked up and thrown by the auger causing an injury or damage to the snow thrower.

4. If for some reason, you have to operate the snow thrower on gravel, keep the skid shoe in the highest position for maximum clearance between the ground and the shave plate.

TRACTION DRIVE CLUTCH

Refer to the Final Adjustment section of the Set-Up Instructions to adjust the traction drive clutch. To check the adjustment, proceed as follows:

- With the snow thrower tipped forward (be certain to drain the gasoline or place plastic film under the gas cap if the snow thrower has already been operated), remove the frame cover underneath the snow thrower by removing six self-tapping screws.
- 2. With the traction drive clutch released, there must be clearance between the friction wheel and the drive plate in all positions of the shift lever.
- 3. With the traction drive clutch engaged, the friction wheel must contact the drive plate (shown in Figure 22).

If adjustment is necessary, loosen the jam nut on the traction drive cable and thread the cable in or out as

necessary. See Figure 12. Tighten the jam nut to secure the cable when correct adjustment is reached. Reassemble the frame cover. **NOTE:** If you placed plastic under the gas cap, be certain to remove it.

AUGER CLUTCH

To adjust the auger clutch, refer to Final Adjustment section of Set-Up Instructions.

(Viewed from under the handle panel)

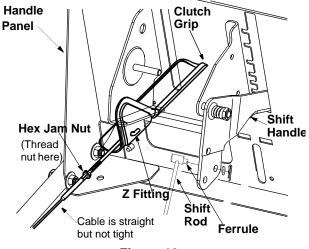


Figure 12

SHIFT ROD

To adjust the shift rod, proceed as follows.

- 1. Remove the hairpin clip and flat washer from the shift handle under the handle panel.
- 2. Place shift lever in sixth (6) position or fastest forward speed.
- 3. Push shift arm assembly down as far as it will go.
- 4. Rotate the ferrule up or down on the shift rod as necessary until the ferrule lines up with the upper hole in the shift lever. See Figure 12.
- 5. Insert ferrule from the left side of the snowthrower into the upper hole in shift lever.

6. Reinstall the hairpin clip and the washer.

Make certain to check for correct adjustment before operating the snow thrower.

CARBURETOR



WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), **keep clear** of all moving parts. **Be careful** of heated surfaces and mufflers.

Minor carburetor adjustments may be required to compensate for differences in fuel temperature, altitude and load.

SECTION 9: LUBRICATION

(See Figure 13)



WARNING: Disconnect the spark plug wire and ground against the engine before performing any lubrication or maintenance.

WHEELS

Oil or spray lubricant into wheel bearings at least once a season. Remove wheels, clean and coat axles with a multi-purpose automotive grease.

CHUTE CRANK

The gear on the end of the chute crank should be greased with multi-purpose automotive grease once a season.

AUGER SHAFT

Lubricate auger shaft at least once a season. Also lubricate the auger bearings at least once a season. Remove shear bolts on auger shaft. Oil or spray lubricant inside shaft.

HEX SHAFT

Lubricate the hex shaft with Belray 6-in-1grease (available at automotive stores, or order by part number 737-0170) at least once a season or after every 25 hours of operation. If for any reason, the transmission was disassembled and the drive cable disconnected, make sure, while reassembling, to route the cable under the drive shaft and the axle before reconnecting to the support bracket. **Important:** Keep all grease and oil off of the rubber friction wheel and aluminum drive plate.

GEAR BOX

The worm gear box has been filled with grease at the factory. If disassembled for any reason, lubricate with 1.5 ounces of Shell Alvania grease EPR00 (part number 737-0168). Before reassembling, remove old sealant and apply Loctite 5699 or equivalent.



WARNING: Do not overfill the gear box; or damage to the seals could result. Be sure the vent plug is free of grease in order to relieve pressure.

DRIVE AND SHIFTING MECHANISM

Lubricate at least once a season or after every 25 hours of operation. Remove rear cover. Lubricate 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.**

ENGINE

Refer to engine manual for all engine lubrication instructions.



WARNING: When following instructions in separate engine manual for draining oil, be sure to **protect frame** by avoiding oil dripping into transmission parts.

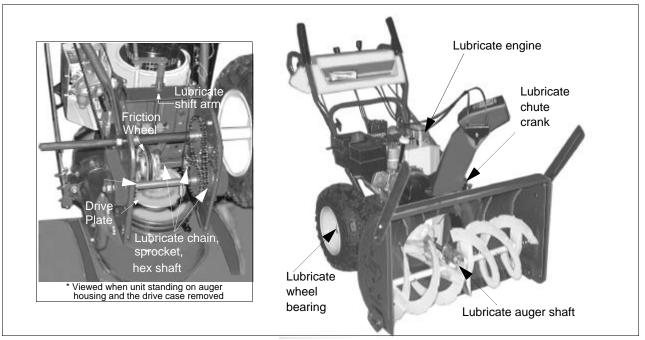


Figure 13

SECTION 10: MAINTENANCE

WARNING: Disconnect the spark plug wire and ground against the engine before performing any repairs or maintenance.

AUGERS

The augers are secured to the spiral 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 will shear. Lock nuts cannot be threaded onto a bolt by hand. This type of nut is used where vibration occurs.

If the augers do not turn, check to see if the bolts have sheared. Two replacement shear bolts (shown in inset here) and hex lock nuts have been provided with the snow thrower. When replacing bolts, spray an oil lubricant into shaft before inserting new bolts.

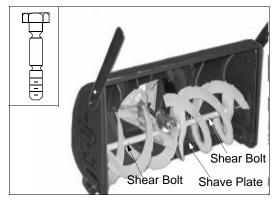


Figure 14

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.

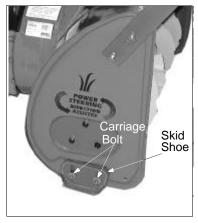


Figure 15

1. Remove the four carriage bolts, belleville washers and hex nuts which attach skid shoes to the snow thrower on two sides. See Figure 15.

- 2. Reassemble new skid shoes with the four carriage bolts, belleville washers (cupped side goes against skid shoes) and hex nuts. Make certain the skid shoes are adjusted to be level.
- 3. To remove shave plate, remove the skid shoe and the rest of hardware including carriage bolts, belleville washers and hex nuts which attach shave plate to the snow thrower housing. For location of shave plate, see Figure 14.
- 4. Reassemble new shave plate, making sure heads of the carriage bolts are to the inside of the housing. Reinstall skid shoe. Tighten securely.

REPLACING BELT



WARNING: Disconnect the spark plug wire from the spark plug and ground.

Auger Belts

 Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws. See Figure 16.



Remove belt cover

Figure 16

2. Disconnect chute crank assembly at the discharge chute by removing the hairpin clip and the two flat washers. See Figure 17.





 Remove the six hex nuts and lock washers which attach the auger housing assembly to the frame assembly. See Figure 18. **WARNING: Do not attempt** to change the auger belt without the help of an assistant. It is very important that one person, standing at the operating position, firmly hold the snow thrower housing to prevent it from tipping while the other person replaces the belt. Failure to comply with this may result in injury.

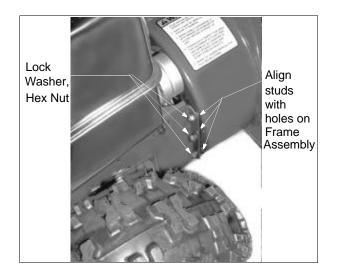


Figure 18

- 4. Standing in the operating position, lift up on the handles and pull the frame assembly rearward. The frame and the housing will separate, and the rear auger belt will come off the pulley. Maintain control of the frame assembly while pulling it.
- 5. Remove the two belts from the two engine pulleys. For location of the pulleys, see Figure 19.

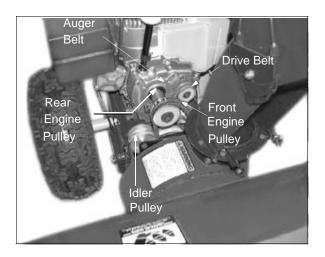


Figure 19

6. To remove the front auger drive belt, push the idler pulley to the left. The belt brake should move outward. See Figure 20. Lift the front

auger drive belt from the front auger pulley.



Figure 20

- 7. Place new belts on the two auger pulleys making sure that the front auger belt is under the belt brake. Route belts under and to the left of the flat idler pulley. Hold the belts upward in this position.
- 8. While lifting up on the handles, bring the frame assembly close to the auger housing, and place the two belts on the front and rear engine pulleys. See Figure 21.

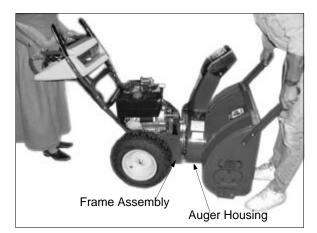


Figure 21

9. Level the frame assembly and tip the auger housing forward to align studs with the corresponding holes on both sides of the frame assembly. See Figure Figure 18. Push the frame assembly fully on to the studs.

NOTE: Use care to avoid pinching the control cable.

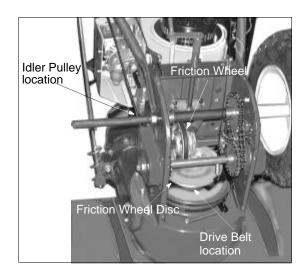
- From the frame assembly side, insert six lock washers and hex nuts on to the studs . These pieces of hardware were removed earlier. Tighten the nuts securely.
- 11. Reinstall the belt cover on the front of the engine with the two self-tapping screws and flat washers.
- 12. Reattach the chute crank to the chute assembly with the hairpin clip and flat washer.

NOTE: Make sure that the auger cable is routed in front of the belt.

underneath the snow thrower. See Figure 23.

Drive Belt

- 1. Drain the gasoline from the snow thrower, or place a piece of plastic under the gas cap.
- 2. Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws.
- 3. Tip the snow thrower up and forward, so that it rests on the housing.
- 4. Remove six self-tapping screws from the frame cover underneath the snow thrower.
- 5. Pull the idler pulley away from the drive belt and remove the belt from the engine pulley. You will find the idler pulley in front of the engine and under the belt cover that you removed earlier. See Figure 19.
- 6. Working from the underside of the frame, slip belt between the friction wheel and the friction wheel disc. See Figure 22. You may have to twist the belt flat in order to slide it through the clearance between the friction wheel and the friction wheel disc. Remove the belt completely.
- 7. Replace new belt. Reassemble following the instructions in reverse order.





CHANGING FRICTION WHEEL RUBBER

Check the rubber on the friction wheel after 25 hours of operation, and periodically thereafter. Replace the rubber if any signs of wear or cracking are found.

- 1. Drain the gasoline from the snow thrower, or place a piece of plastic under the gas cap.
- 2. Tip the snow thrower up and forward, so that it rests on the housing.
- 3. Remove six screws from the frame cover





- 4. Remove klick pin securing the left wheel, and remove the wheel from the axle.
- 5. Remove the four screws securing the left drive cover to the frame. Remove the drive cover from the side of the frame. See Figure 24.

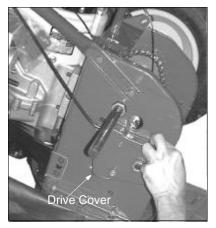


Figure 24

- 6. Holding the friction wheel assembly, slide the hex shaft out of the left side of the unit. The spacer on the right side of the hex shaft will fall and the sprocket should remain hanging lose in the chain.
- 7. Lift the friction wheel assembly out between the axle shaft and the drive shaft assemblies.
- 8. Remove the six screws from both sides of the friction wheel assembly. Remove 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. It is important to assemble the rubber on the friction wheel symmetrically for proper functioning.
- 10. Insert the pin from the shift arm assembly into

the friction wheel assembly and hold assembly in position. See Figure 25.

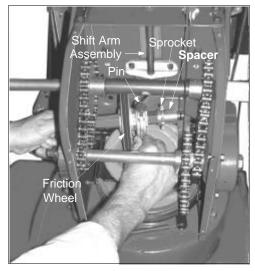


Figure 25

- 11. Slide the hex shaft through the left side of the housing and through the friction wheel assembly.
- 12. Insert the hex shaft through the sprocket and the spacer. See Figure 25. Make certain that the chain engages both the large and the small sprocket.

NOTE: If the sprocket fell from the snow thrower while removing the hex shaft, place the sprocket on the hex shaft. Position the hex hub of the sprocket

SECTION 11: OFF-SEASON STORAGE



WARNING: Never store engine with fuel in tank indoors or in poorly ventilated areas, where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer or other gas appliance.

If unit is to be stored over 30 days, prepare engine for storage as instructed in the separate engine manual included with your unit.

- 1. Remove all dirt from exterior of engine and equipment.
- 2. Follow lubrication recommendations on pages page 12. Store in a clean, dry area.

toward the friction wheel when sliding the sprocket on to the hex shaft. See Figure 26.

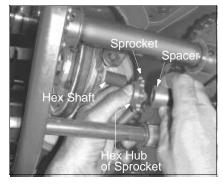


Figure 26

- 13. Align the hex shaft with the right hand bearing and carefully guide the left hand bearing into the left side of the housing.
- 14. Reassemble the drive cover with the four screws that were earlier removed.

Note: If you placed plastic under the gas cap, be certain to remove it.

ENGINE

Refer to separate engine manual for all engine maintenance procedures.

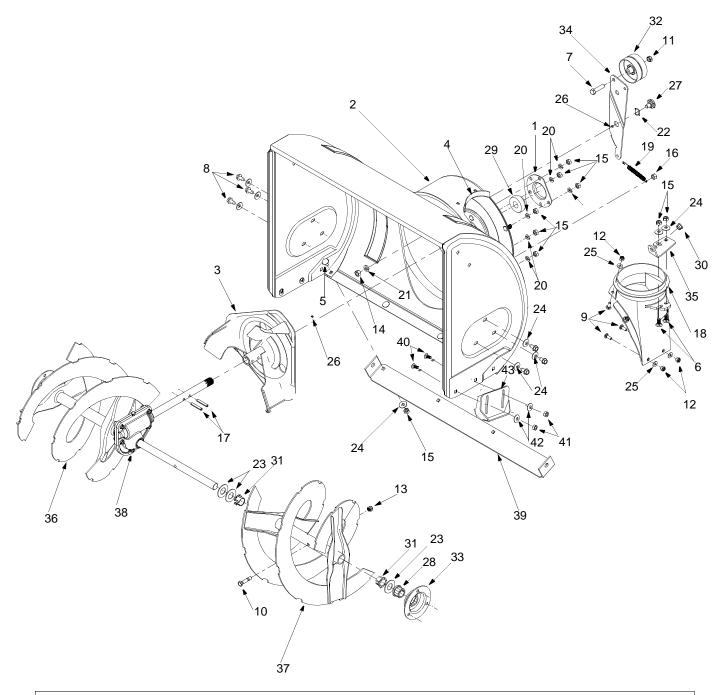
NOTE: When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rust proof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.

SECTION 12: 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 packed with your unit.
	Fuel shut-off valve closed	Open fuel shut-off valve.
	(if so equipped).	
	Throttle in Stop position	Move Throttle to RUN position.
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 packed with your unit or have
		carburetor adjusted by an authorized service dealer.
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-see Maintenance section of engine manual.
Engine overheats	Carburetor not adjusted	Refer to the engine manual packed with your unit or have
	properly.	carburetor adjusted by an authorized service dealer.
Excessive vibration	Loose parts or damaged	Stop engine immediately and disconnect spark plug wire. Tighten
	auger.	all bolts and nuts. Make all necessary repairs. If vibration
		continues, have unit serviced by an authorized service dealer.
Unit fails to propel	Incorrect adjustment of drive	Adjust drive cable. Refer to Adjustment section of this manual.
itself	cable.	Replace drive belt. Refer to Belt Replacement in Maintenance
	Drive belt loose or damaged.	section of this manual.
	Rubber on friction wheel worn	Replace rubber following instructions on page 15.
	off	
Unit fails to	Discharge chute clogged.	Stop engine immediately and disconnect spark plug wire. Clean
discharge snow		discharge chute and inside of auger housing.
-	Foreign object lodged in	Stop engine immediately and disconnect spark plug wire.
	auger.	Remove object from auger.
	Incorrect adjustment of drive	Adjust drive cable. Refer to Adjustment section of this manual.
	cable.	Replace drive belt. Refer to Belt Replacement in Maintenance
	Drive belt loose or damaged.	section of this manual.

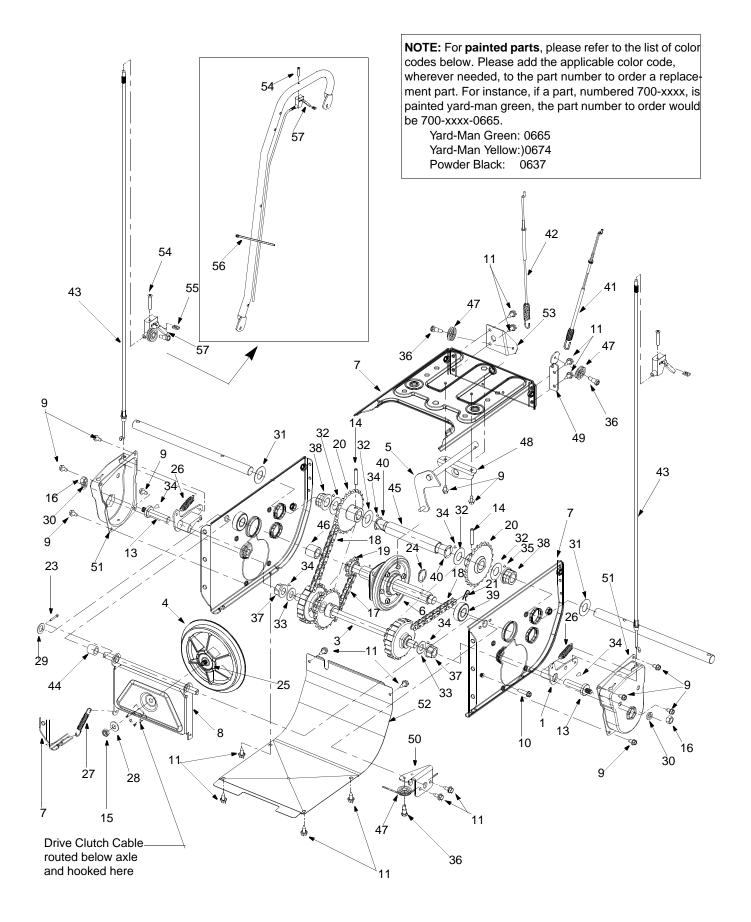
Note: For repairs beyond the minor adjustments above, contact your local authorized service dealer.

SECTION 13: REPAIR PARTS

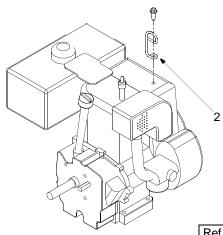


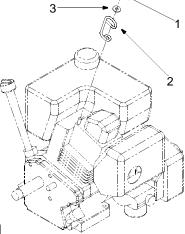
NOTE: For painted parts, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part, numbered 700-xxxx, is painted yard-man green, the part number to order would be 700-xxxx-0665. Yard-Man Green: 0665 Yard-Man Yellow:)0674 Powder Black: 0637

Ref. No.	Part No.	Code	Description	Ref. No.	Part No.	Code	Description
1.	05931		Bearing Housing	22.	736-0174		Wave Washer
2.	684-0040B		Auger Housing Assy. 26"	23.	736-0188		Flat Washer
	684-0055A		Auger Housing Assy. 30"	24.	736-0242		Belleville Washer
3.	684-0065		Impeller Assy. 12" dia.	25.	736-0463		Flat Washer
4.	705-5226		Chute Reinforcement	26.	737-3007		Grease
5.	710-0260		Carriage Bolt 5/16-18 x	27.	738-0281		Shoulder Screw
			.62"	28.	741-0245		Hex Flange Bearing
6.	710-0451		Carriage Bolt 5/16-18 x	29.	741-0309		Flange Ball Bearing
			.75" Gr.2	30.	741-0475		Bushing
7.	710-0459A		Hex Screw 3/8-24 x 1.5"	31.	741-0493A		Flange Bushing
			Gr.5	32.	756-0178		Flat Idler
8.	710-0604		Hex Washer Head Self-	33.	784-5618		Bearing Housing
			Tapping Screw 5/16-18 x	34.	784-5632		Auger Idler Arm
			.62"	35.	784-5647		Chute Crank Bracket
9.	710-0703		Carriage Screw 1/4-20 x	36.	605-5192A		Spiral Assembly: RH 26"
40	740 00004		.75"		605-5248A		Spiral Assembly: RH 30"
10.	710-0890A		Shear Bolt 5/16-18 x 1.5"	37.	605-5193A		Spiral Assembly: LH 26"
11.	712-0116		Jam Nut 3/8-24		605-5249A		Spiral Assembly: LH 30"
12.	712-0324		Hex Lock Nut 1/4-20	38.	618-0121		Gear Assembly: Auger 26"
13.	712-0429		Hex Lock Nut 5/16-18		618-0160		Gear Assembly: Auger 30"
14.	712-0798		Hex Nut 3/8-16 Gr.2	39.	784-5579A		Shave Plate: Auger 26"
15.	712-3010		Hex Nut 5/16-18 Gr.5				_
16.	712-3068		Hex Patch Nut 5/16-18		784-5575		Shave Plate: Auger 30"
17.	715-0114		Spiral Pin	40.	710-0451		Carr. Bolt: 5/16-18 x 0.75
18.	731-1379		Chute Adapter	41.	712-3010		Hex Nut: 5/16-18 Gr.5
19.	732-0611		Extension Spring	42.	736-0242		Beleville Washer
20.	736-0119		Lock Washer	43.	784-5580		Slide Shoe
21.	736-0169		Lock Washer				

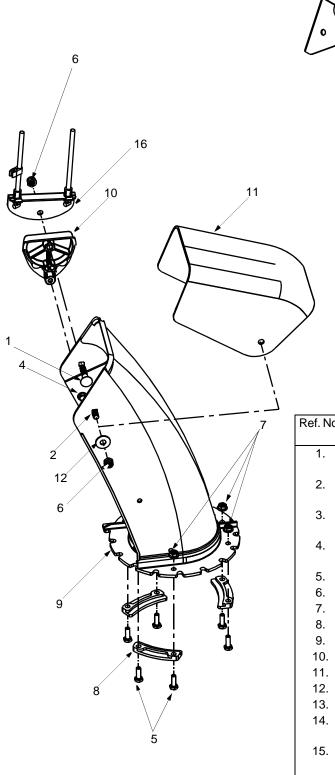


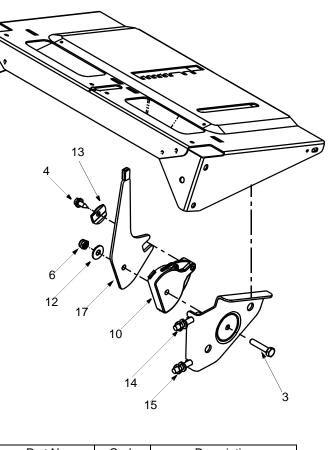
Ref. No.	Part No.	Code	Description	Ref. No.	Part No.	Code	Description
1.	618-0043		Dogg Assembly: RH	30.	736-0169		Lock Washer
2.	618-0044		Dogg Assembly: LH	31.	736-0188		Flat Washer
3.	618-0303A		Shift Assembly: Steerable	32.	736-0351		Flat Washer
			Drive	33.	736-0626		Flat Washer
4.	656-0012A		Friction Wheel Disc Assy.	34.	737-0170		Lubricant: 6 in !
5.	684-0014B		Shift Rod Assembly	35.	737-3007		Grease
6.	684-0042B		Bearing	36.	738-0924		Shoulder Screw
7.	684-0130		Transmission Frame	37.	741-0597		Hex Flange Bearing
			Assembly	38.	741-0598		Hex Flange Bearing
8.	684-0131		Support Bracket Assembly	39.	741-0600		Ball Bearing
9.	710-0599		Hex Washer Hd. TT Screw	40.	741-0701		Flange Bushing
			1/4-20 x 0.5"	41.	746-0897		Auger Clutch Cable
10.	710-0788		Hex Washer Hd. TT Screw	42.	746-0898		Drive Clutch Cable
			1/4-20 x 1.0"	43.	746-0956		Steering Cable
11.	710-1652		Hex Washer Hd. TT Screw	44.	748-0190		Spacer
40			1/4-20 x .625"	45.	750-1161		Support Tube: Axle
12.	711-1267		Drive Shaft	46.	750-1162		Spacer
13.	711-1268		Actuator Shaft	47.	756-0625		Roller Cable
14.	711-1364		Pin	48.	784-5590		Shift Bracket
15.	712-0711		Jam Nut 3/8-24 Gr.8	49.	784-5687		Auger Clutch Cable Guide
16.	712-3017		Hex Nut: 3/8-16				Bracket
17.	713-0233		Chain	50.	784-5689A		Front Support Guide
18.	713-0374		Chain				Bracket
19.	713-0413		Sprocket: 10T	51.	784-5730		Retaining Shaft: Actuator
20.	713-0472		Sprocket				Drive
21.	714-0104		Cotter Pin	52.	784-5732		Frame Cover
23	714-0474		Cotter Pin	53.	784-5733		Roller Bracket: Drive Cable
24.	716-0102		Snap Ring	54.	710-1233		Oval C-Sunk Machine
25.	721-0263		Adhesive: Loctite				screw
26.	732-0209		Extension Spring	55.	712-0127		Weld Nut
27.	732-0264		Extension Spring	56.	725-0157		Cable Tie
28.	736-0105		Bell Washer	57.	746-0950		Turn Trigger
29.	736-0160		Flat Washer	58.	714-0104		Cotter Pin



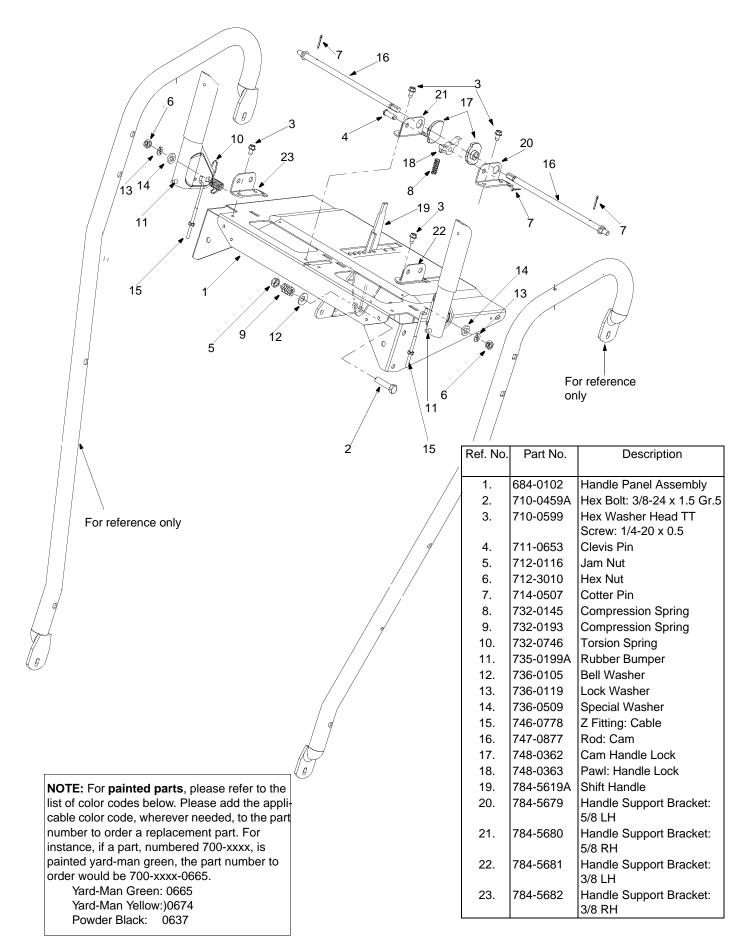


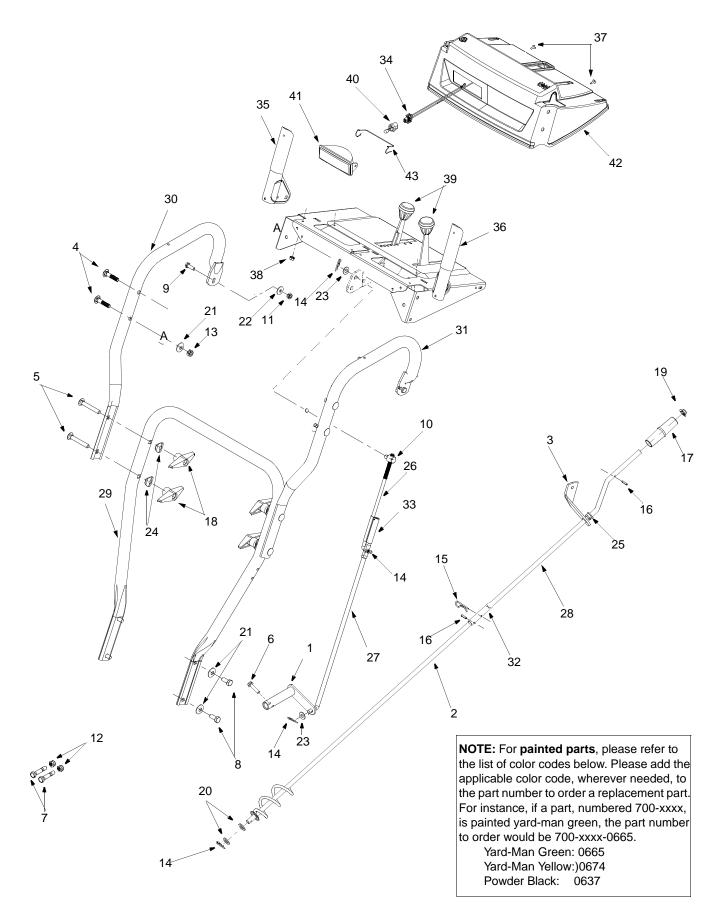
Ref. No.	Part No.	Code	Description
1. 2.	712-0324 732-0705		Hex Lock Nut: 1/4-20 Cable Guide
3.	736-0173		Flat Washer





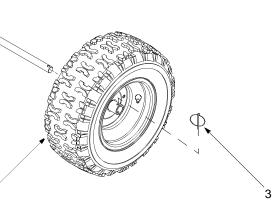
lef. No.	Part No.	Code	Description
1.	710-0262		Carriage Bolt: 5/16-18 x 1.5"
2.	710-0451		Carriage Bolt: 5/16-18 x 0.75"
3.	710-0805		Hex Bolt: 5/16-18 x 1.5 Gr. 5
4.	710-0896		Hex Washer Head AB Screw: 1/4-14 x 0.625"
5.	710-3015		Hex Bolt: 1/4-20 x 0.75"
6.	712-0429		Hex Lock Nut: 5/16-18
7.	712-3027		Flange Lock Nut
8.	731-0851A		Chute Flange Keeper
9.	731-1300A		Lower Chute
10.	731-1313B		Chute Tilt Cable Guide
11.	731-1320		Upper Chute
12.	736-0159		5/16 Washer
13.	736-0506		Special Washer
14.	746-0896		Control Cable: Chute Deflector
15.	746-0901		Chute Deflector Cable w/Clip
16.	784-5594		Cable Bracket
17.	784-5604		Chute tilt Handle



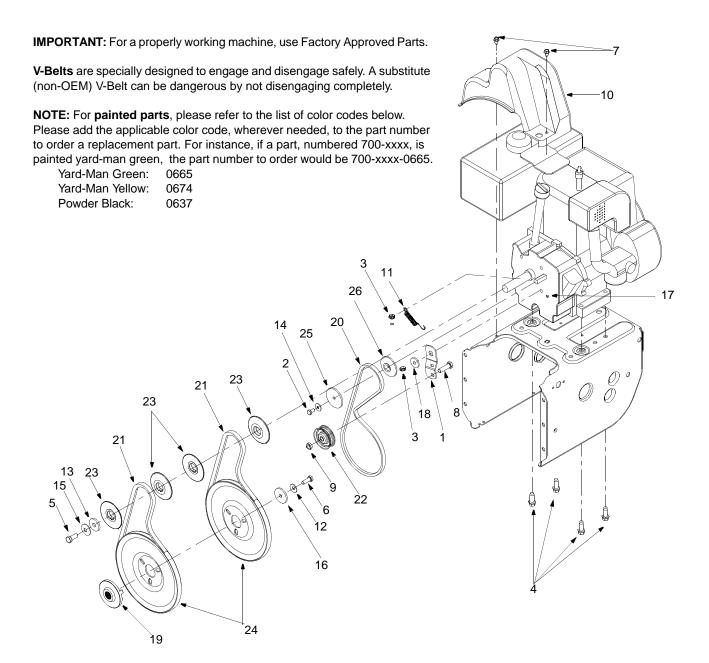


Ref. No.	Part No.	Code	Description	Ref. No.	Part No.	Code	Description
1.	684-0008A		Shift Arm Assembly	23.	736-0275		Flat Washer
2.	684-0053		Chute Crank Assembly	24.	736-0451		Saddle Washer
3.	705-5266		Chute Crank Bracket	25.	741-0475		Plastic Bushing
4.	710-0262		Carr. Bolt 5/16-18 x 1.5	26.	747-0620A		Shift Rod: Upper
5.	710-0449		Carr. Screw 5/16-18 x 2.25	27.	747-0621		Shift Rod: Lower
			Gr.5	28.	747-0737		Chute Crank: Upper
6.	710-0788		Hex Washer Head TT	29.	749-0951		Lower Handle
			Screw 1/4-20 x 1.0	30.	749-0954		Handle: C Style RH
7.	710-0890A		Shear Bolt 5/16-18 x 1.5	31.	749-0955		Handle: C Style LH
8.	710-3008		Hex Bolt 5/16-18 x 0.75	32.	750-0785		Spacer
			Gr.5	33.	750-0963		Clutch Rod Connector
9.	710-3015		Hex Bolt 1/4-20 x 0.75 Gr.5	34.	629-0059		Harness, Halogen Light
10.	711-0677		Ferrule	35.	684-0036		Handle Engagement
11.	712-0287		Hex Nut: 1/4-20				Assembly: RH Black
12.	712-0429		Hex Lock Nut	36.	684-0037		Handle Engagement
13.	712-3010		Hex Nut: 5/16-18				Assembly: LH Black
14.	714-0104		Cotter Pin	37.	710-1003		Hex washer Hd. Sp. screw
15.	714-0145		Click Pin	38.	712-0271		Hex Sems Nut
16.	715-0138		Roll Pin	39.	720-0232		Shift Knob
17.	720-0201A		Chute Crank Knob	40.	725-1658		Halogen Lamp
18.	720-0284		Wing Nut	41.	725-1672		Lamp Housing
19.	726-0100		Push Cap	42.	731-1545A		Handle Panel: yellow w/
20.	736-0185		Flat Washer				Tilt, Light
21.	736-0242		Belleville Washer	43.	747-1136		Halogen Retainer: Handle
22.	736-0270		Bell Washer				

Ref. No.	Part No.	Code	Description
1.	734-1712		Wheel Assembly: 16 x 6.5 steerable
	734-1709		Wheel Assembly: 16 x 4.8 steerable
2.	738-0994		Axle:).75" dia. x 12.201" Lg.
3.	714-0143		Klick Pin



To the



Ref. No.	Part No.	Code	Description	Ref. No.	Part No.	Code	Description
1.	05896A		Idler Bracket	12.	736-0242		Bellevile Washer
2.	710-0230		Hex Bolt 1/4-28 x 0.5" Gr.5	13.	736-0247		Flat Washer
3.	710-0627		Hex Screw w/ patch: 5/16-	14.	736-0270		Bell Washer
			24 x 0.75"	15.	736-0331		Bell Washer
4.	710-0654A		Hex Washer HeadTT	16.	736-0505		Flat Washer
			Sems Screw	17.	737-3007		Grease
5.	710-0696		Hex Bolt 3/8-24 x .875"	18.	748-0234		Shoulder Spacer
			Gr.8	19.	748-0360		Adapter Pulley
6.	710-1245		Hex Screw w/ Patch: 5/16-	20.	754-0346		V-Belt
			24 x .875" Gr.5	21.	754-0430A		Belt
7.	710-1652		Hex Washer Head TT	22.	756-0313		Flat Idler
8.	710-3005		Hex Screw: 3/8-16 x 1.0"	23.	756-0569		Pulley Half
9.	712-0181		Top Lock Jam Nut: 3/8-16	24.	756-0967		Auger Pulley
10.	731-1324		Belt Cover	25.	756-0986		Pulley Half
11.	732-0710		Extension Spring	26.	756-0987		Pulley Half

Optional Parts:

Following optional parts are available for your snow thrower. Please call 1-800-800-7310 to order these parts. While ordering, do not forget to mention the applicable part number.

Tire Chain: Part Number

Wheel Size	Wheel Size	Tire Chain Part Number
(with Sno Hog	(without Sno Hog	
Tire)	Tire)	
16" x 6.5"		OEM-390-655
	16" x 6.5"	OEM-390-146
16" x 4.8"		OEM-390-991
	15" x 6"	OEM-390-145
	13" x 5"	OEM-390-143



Drift Cutter Kit: Part Number: OEM-390-679



MANUFACTURER'S LIMITED WARRANTY FOR:



For TWO YEARS from the date of retail purchase within the United States of America, its possessions and territories, MTD PRODUCTS INC will, at its option, repair or replace, for the original purchaser, free of charge, any part or parts found to be defective in material or workmanship. This warranty covers units which have been operated and maintained in accordance with the operating instructions furnished with the unit, and which have not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance or alteration.

Normal wear parts or components thereof are subject to separate terms as noted below in the "No Fault Ninety Day Consumer Warranty" clause.

All normal wear part failures will be covered on this product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear parts failures will be covered ONLY IF caused by defects in material or workmanship of OTHER component parts. Normal wear parts are defined as batteries*, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires.

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 the yellow pages or contact the Customer Service Department of MTD PRODUCTS INC, P. O. Box 368022, Cleveland, Ohio 44136-9722.

Phone 1 (800) 800-7310. The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by the Customer Service Department of MTD PRODUCTS INC.

Transportation charges: Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser.

Units exported out of the United States: MTD PRODUCTS INC 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 PRODUCTS INC's authorized channels of export distribution.

Other Warranties:

- 1. The engine or component parts thereof carry separate warranties from their manufacturers. Please refer to the applicable manufacturer's warranty on these items.
- 2. *Batteries are covered by a 90-day replacement warranty.
- Log splitter pumps, valves and cylinders or component parts thereof are covered by a one year warranty.
- 4. All other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose, are hereby expressly disclaimed in their entirety.
- The provisions as set forth in this warranty provide the sole and exclusive remedy of MTD PRODUCTS INC's obligations arising from the sales of its products. MTD PRODUCTS INC will not be liable for incidental or consequential loss or damage.

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. Certain disclaimers are not allowed in some states and therefore they may not apply to you under all circumstances.

NOTE: This warranty does not cover routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments. Nor does this warranty cover normal deterioration of the exterior finish due to use or exposure.