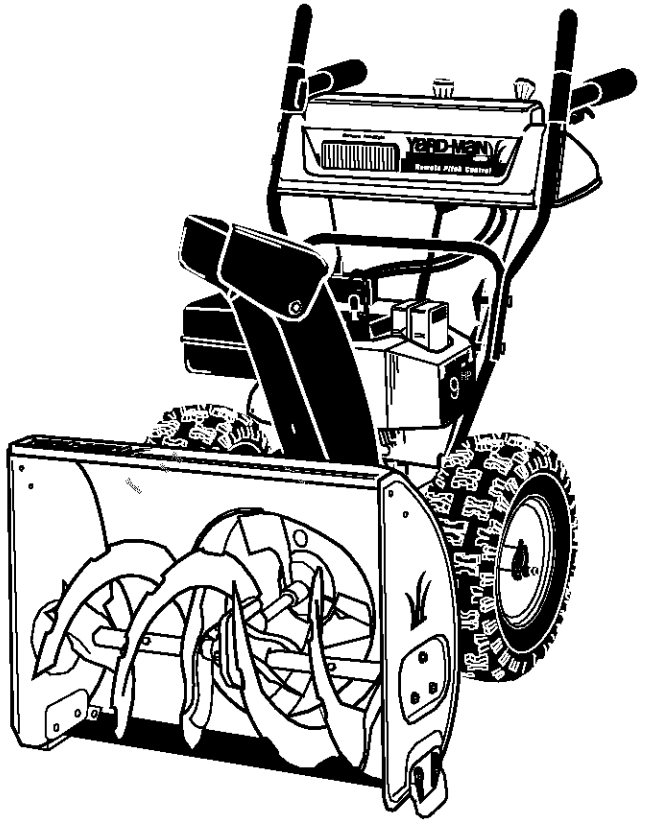
Operator's Manual



Power Steer Drive
28" Snow Thrower
Model
31AH553G401

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

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 368022 Cleveland, Ohio 44136-9722.

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

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FORM NO. 770-10028A
(7/99)

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FINDING MODEL NUMBER

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

Before you start assembling your new equipment, please locate the model plate on the equipment and copy the information from it in the space provided below. The information on the model plate is very important if you need help from our Customer Support Department or an authorized dealer.

- You can locate the model number by looking at the lower frame cover on the rear of your snow thrower. See page 27. A sample model plate is also 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: _____

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 the Customer Support Department.

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

This Warning 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.

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

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

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.

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.

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 openings. Use a stick or wooden broom handle to unclog the discharge opening.

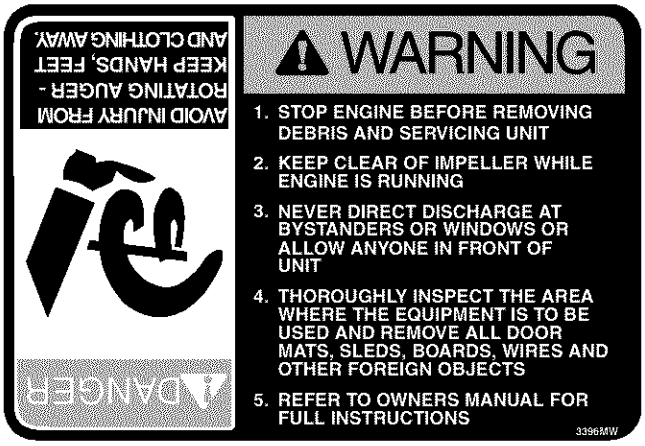
- Take all possible precautions when leaving the unit unattended. Disengage the collector/impeller, shift into neutral, stop the engine, and remove the key.
- When cleaning, repairing, or inspecting, make certain collector/impeller and all moving parts have stopped. Disconnect spark plug wire and keep 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.

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.

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. For a detailed list of all the labels, see page 27. However, the most important safety labels are reproduced below:



SECTION 2: ASSEMBLING YOUR SNOW THROWER

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

IMPORTANT: After assembling, check the adjustments as instructed on page 6 **before** operating your snow thrower. Failure to follow the instructions may cause damage to the snow thrower and void warranty.

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

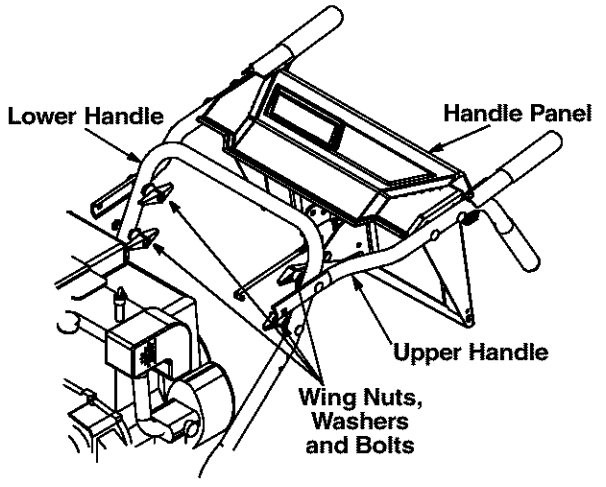


Figure 1

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

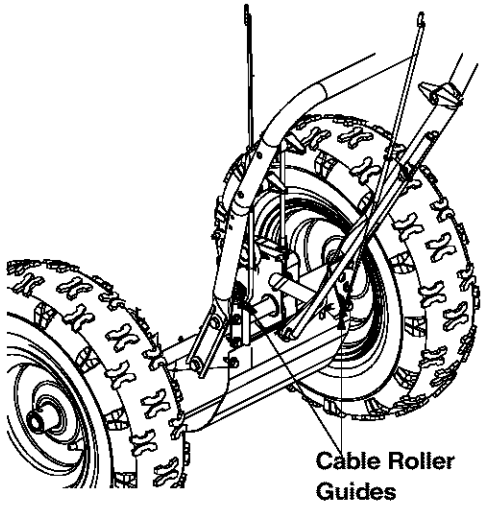


Figure 2

- Secure the upper handle and lower handle on each side with two plastic wing nuts, cupped washers and carriage bolts removed earlier. See Figure 3.

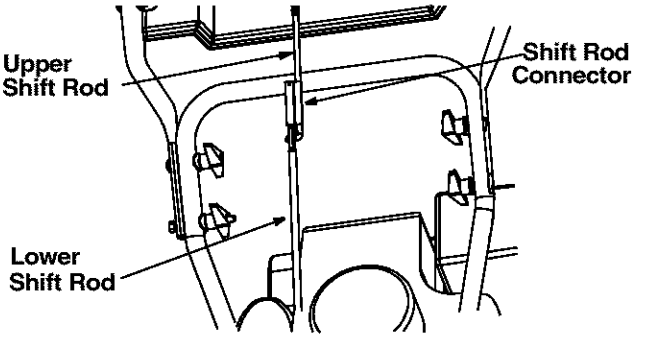


Figure 3

- Slide the shift rod connector down over the end of the lower shift rod. See Figure 3. Tap the connector until it **locks** on the lower shift rod.

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

- 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 4.

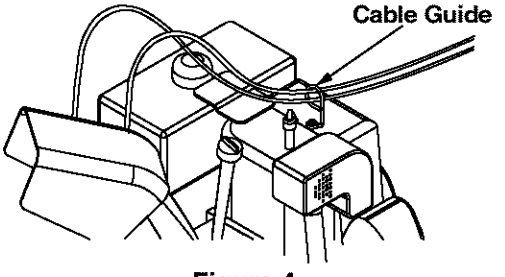


Figure 4

- Unwrap the headlight wire which is attached to the headlight, beneath the handle panel. Wind the headlight wire around the right handle until excess slack is removed. See Figure 5.
- Plug the wire from the headlight into the wire lead coming from the right side of the engine, underneath the fuel tank. See Figure 5.

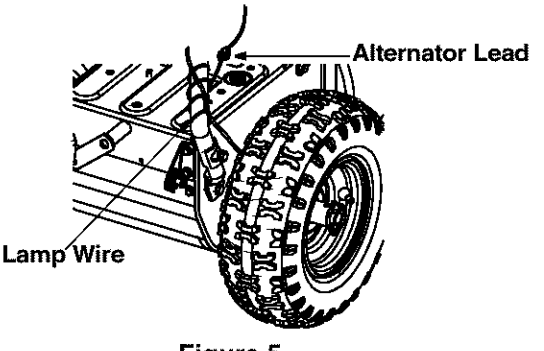


Figure 5

Final Adjustments

Auger Drive Clutch

- 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. See Figure 6.
- 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.

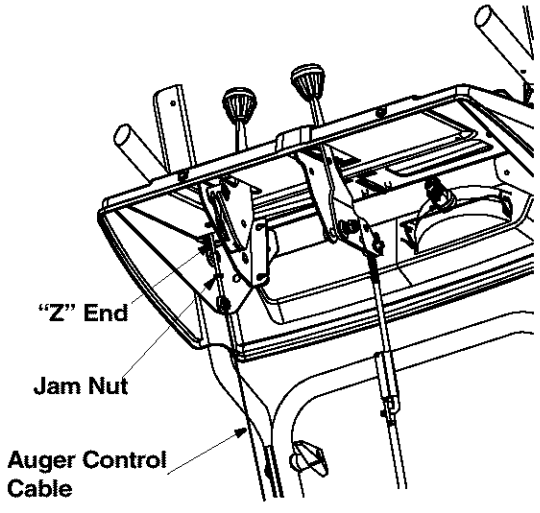


Figure 6

Traction Drive Clutch and Shift Lever

- 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.
- With the traction drive lever released, spin the snow thrower wheels by hand. The wheels should turn; however, you may feel some resistance.
- Engage the traction drive clutch grip. The wheels should no longer turn.
- Now release the traction drive clutch grip, and spin the wheels 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 turn.
- 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.
- If the wheels can still be turned when you engage the traction drive clutch grip, loosen the same lock nut again and thread the cable in one turn.
- 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 Making Adjustments section of this manual on page 11.*

Slide Shoe

The space between the shave plate and the ground can be adjusted. For close snow removal, place slide shoes in the low position. Use middle or high position when area to be cleared is uneven. See Figure 7.

- Adjust slide shoes by loosening the two hex nuts and carriage bolts on each side and moving slide shoes to desired position. See Figure 7.
- Make certain the entire bottom surface of slide shoe is against the ground to avoid uneven wear on the slide shoes.
- Tighten nuts and bolts securely.

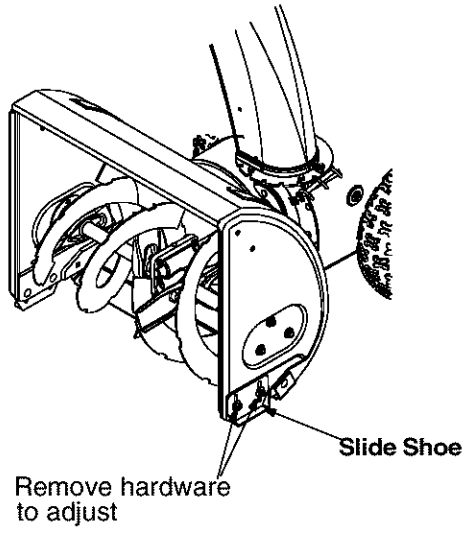


Figure 7

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.*

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

NOTE:

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 3: KNOW YOUR SNOW THROWER

Read this owner's manual and safety rules before operating your snow thrower. Compare illustration below with your snow thrower to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

The operation of any snow thrower can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always **wear safety glasses** while performing any adjustments or repairs on it.

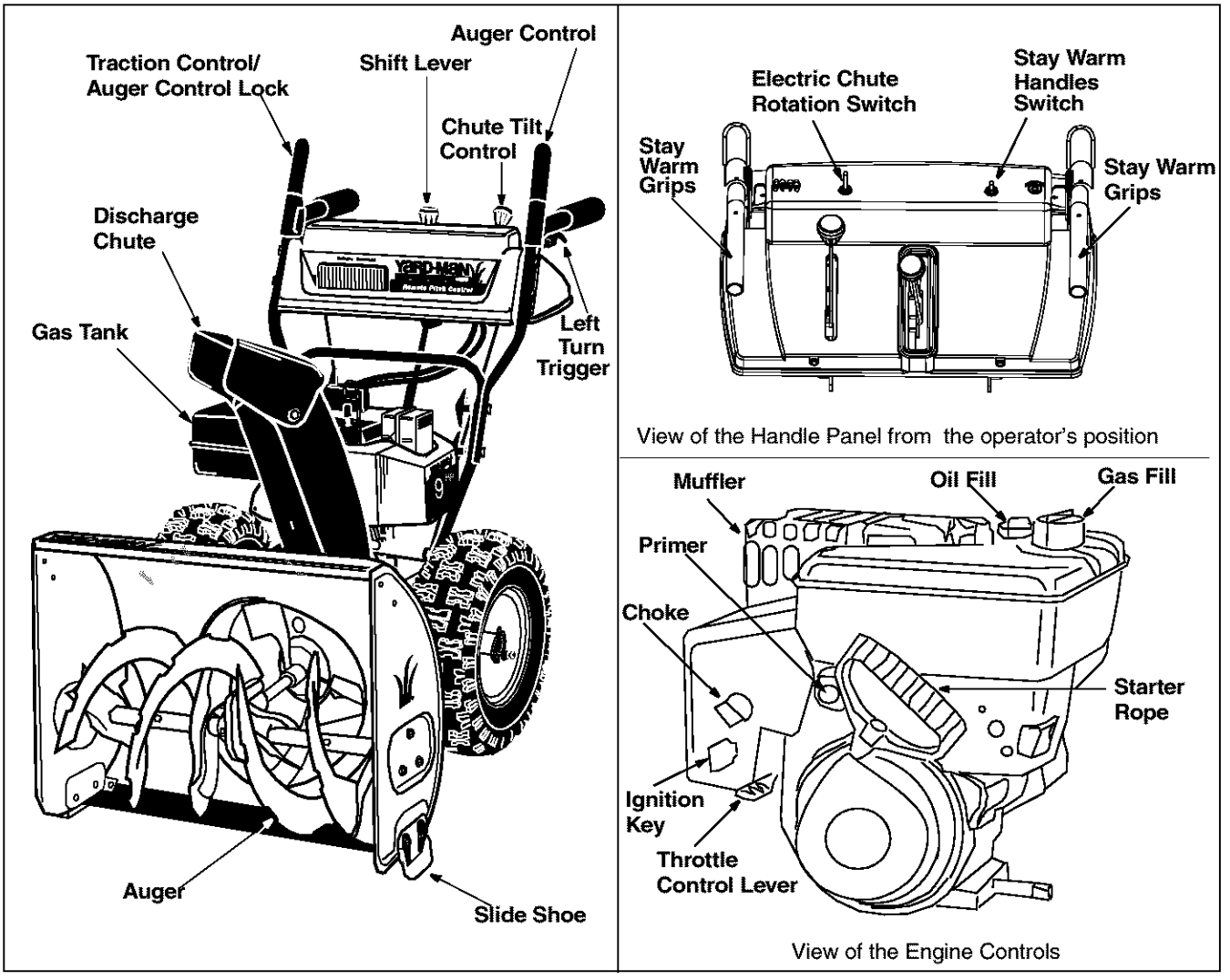


Figure 8

(Refer to Figure 8 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: Your snow thrower has six forward speeds—position one (1) the slowest and six (6) the fastest.

Reverse: Your snow thrower has two reverse (R) speeds—position R2 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 (illustrated in the figure above) 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 to avoid interruption of 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).

Headlight

The headlight is on whenever the engine is running.

Safety Ignition Switch

The ignition key 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.

Electric Chute Rotation Switch

The electric chute-rotation switch is located on the left side of the snow thrower dash panel.To change the direction in which discharged snow is thrown, proceed as follows:

- Push the toggle switch to the left to rotate the chute counter-clockwise.
- Push the toggle switch to the right to rotate the chute clockwise.

IMPORTANT: Release the switch once the chute has completed its rotation cycle in either direction. Failure to do so can result in damage to the electric chute motor and/or its drive gear.

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, and towards the rear to increase the distance.

Stay Warm Handles Switch

This switch is located on the right side of the snow thrower dash panel. To activate the Stay Warm handles, toggle the switch to the right to generate heat within the handle grips. Toggle the switch to the left to the OFF position after using the snow thrower.

NOTE: *The Stay Warm grips are a compliment to, not a substitute for, proper cold weather outerwear for the operator's hands. It is recommended that the snow thrower operator wear gloves/mittens to avoid extremities of winter while operating this equipment.*

To Stop Engine

CAUTION: If for some reason, the unit starts accidentally while the operator is getting aquainted with the controls listed above, stop the engine immediately.

- To stop engine, push the throttle lever all the way down, or remove the ignition key. Do not turn key.

SECTION 4: OPERATING YOUR SNOW THROWER

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 up a fuel tank.

Tire Pressure

- 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.
- Tire chains (optional equipment) should be used whenever extra traction is needed.

Electric Starter

WARNING: The electric starter is equipped with a three-wire power cord and three-prong 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 three-wire 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 from the three-hole grounded receptacle first.

To Start Engine

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.

- 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.
- Make certain the fuel shut-off valve, if equipped, is in the open (vertical) position.
- Make certain the auger and drive clutch levers are in the disengaged (released) position.
- Move throttle control to FAST position.
- Insert ignition key into slot. Make sure it snaps into place. **Do not** turn key.

Follow next three steps for **electric start** only.

- Rotate choke knob to OFF position.
- Connect power cord to switch box on engine. Plug the other end of power cord into a three-hole, grounded 120 volt AC receptacle.
- 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 four steps for **recoil start** only:

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

To Stop Engine

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

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.

IMPORTANT: Do not lose the ignition key. Engine will not start without it.

- Disconnect spark plug wire from the spark plug to prevent accidental starting while equipment is unattended.
- 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.
- Squeeze the left hand auger clutch grip against the handle to engage it.
- While the left hand auger clutch grip is engaged, squeeze the right hand drive clutch grip.
- Release the left hand auger clutch grip only. The interlock mechanism should keep it engaged until the right hand clutch is released.

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

- For comfort and convenience, turn on the heated grips switch as needed.

To Steer Snow Thrower

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.*

- To turn right, squeeze the right trigger lever and guide the snowthrower to the right.
- To turn left, squeeze the left trigger lever and guide the snowthrower to the left.
- Squeeze both triggers to transport the unit when the engine is not running.

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" on page 8.

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°F. Avoid these areas.

- For most efficient snow removal, remove snow immediately after it falls.
- 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 slide shoes 1/4" below the scraper bar for normal usage. The slide 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.

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

Starting Instructions at a glance

Snow Thrower	Spark Plug wire	Drive Levers	Throttle Control	Ignition Key	Choke	Power Cord	Primer	Starter	After starting
Electric Starter	Connect	Release	Move to FAST	Push to snap in	Move to FULL	Connect to source	—	Push button	1. Release button 2. Move Choke to Off 3. Disconnect cord
Recoil Starter	Connect	Release	Move to FAST	Push to snap in	Move to FULL	—	Prime	Pull handle	1. Release handle 2. Move Choke to Off.

SECTION 5: MAKING ADJUSTMENTS

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

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.
- 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.
- With the traction drive clutch engaged, the friction wheel must contact the drive plate (Figure 20).
- If adjustment is necessary, loosen the jam nut on the traction drive cable and thread the cable in or out as necessary. See Figure 9.

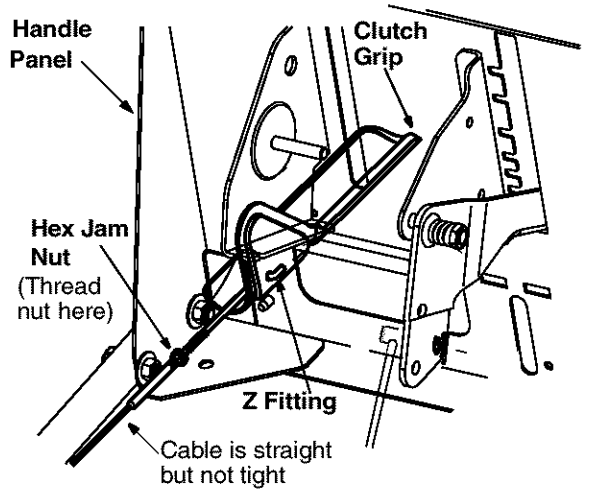


Figure 9

- 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.

Shift Rod

- Remove the hairpin clip and flat washer from the shift handle under the handle panel.
- Place shift lever in sixth (6) position or fastest forward speed.

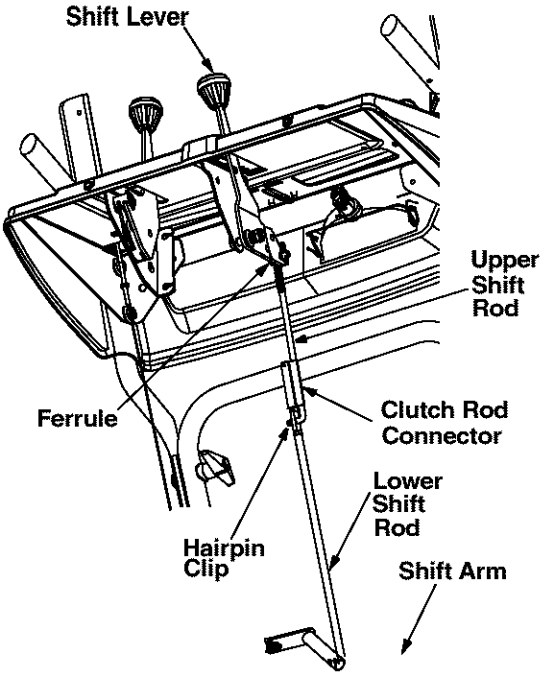


Figure 10

- Push shift arm assembly down as far as it will go.
- 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 10.
- Insert ferrule from the left side of the snow thrower into the upper hole in shift lever.
- Reinstall the hairpin clip and the washer. See Figure 10.
- Make certain to check for correct adjustment before operating the snow thrower.

Chute Assembly

The distance snow is thrown can be adjusted by adjusting the angle of the chute assembly. Refer to the "Know Your Snow Thrower" section on page 7.

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

Slide Shoe

The space between the shave plate and the ground can be adjusted. Refer to Figure 7 on page 6 for instructions on adjustment.

SECTION 6: MAINTAINING YOUR SNOW THROWER

General Recommendations

- Always observe safety rules when performing any maintenance.
- The warranty on this snow thrower does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain the snow thrower as instructed in this manual.
- Some adjustments will have to be made periodically to maintain your unit properly.
- All adjustments in the service and adjustments sections of this manual should be checked at least once each season.
- Follow the maintenance schedule given below.
- Periodically check all fasteners and make sure these are tight.

WARNING: Always stop the engine and **disconnect** the spark plug wire before performing any maintenance or adjustments.

Customer Responsibilities

	MAINTENANCE SCHEDULE	Before each use	After each use	Every 25 hours	Every 50 hours	Before storage	SERVICE DATES*					
PRODUCT	Lubricate pivot points			✓		✓						
	Clean snow thrower		✓			✓						
	Clean shave plate			✓								
	Clean slide shoes			✓								
	Check V-belts				✓							
	Check friction wheel rubber			✓								
ENGINE	Check engine oil	✓										
	Check spark plug				✓	✓						
	Check muffler				✓							
	Empty fuel system					✓						

* Fill in dates as you complete regular service

✓ Check; service if needed

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. Refer to the engine manual for instructions.

Lubrication

(See Figure 11.)

WARNING: Disconnect the spark plug wire and ground against engine before starting lubrication or maintenance job on unit.

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.

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-1 grease (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.

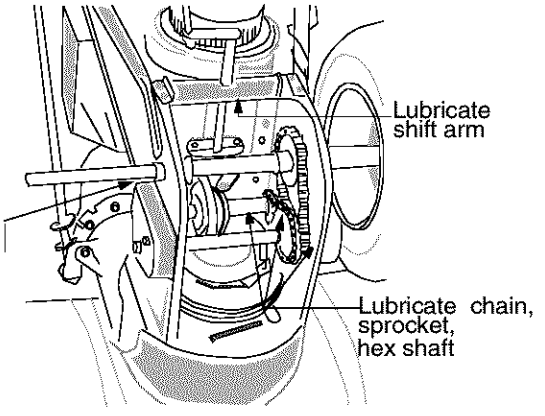
Drive and Shifting Mechanism

- 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 spray a 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.



* Viewed when unit standing on auger housing and the drive case removed

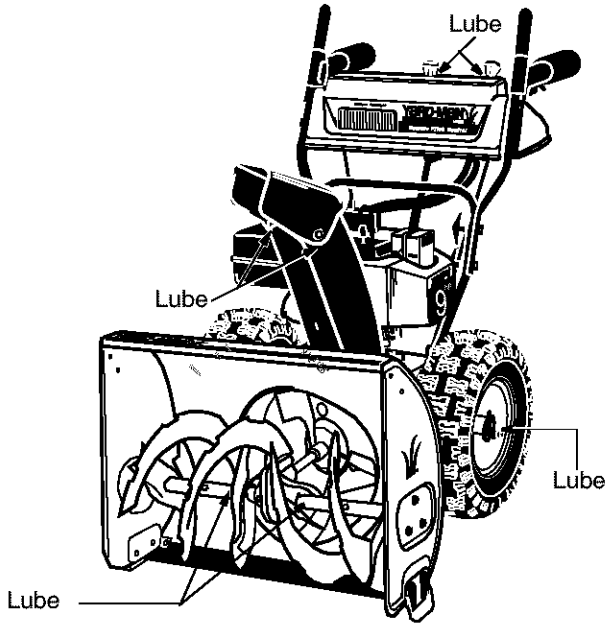


Figure 11: Lubrication Chart

Check Friction Wheel

Follow the instructions below to check the condition of the friction wheel rubber every 25 hours of operation.

- Remove the six self-tapping screws from the frame cover underneath the snow thrower. See Figure 12.

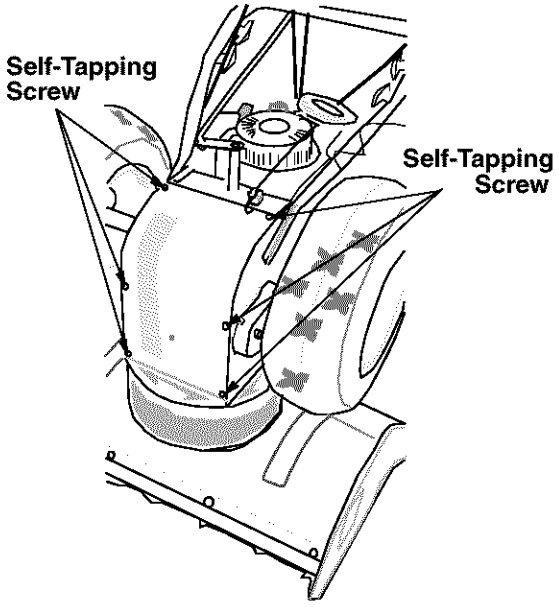


Figure 12

- Visually inspect the friction wheel rubber for excessive wear, cracks, or loose fit on the friction wheel drive hub.
- Also engage traction drive control and check if the friction wheel is making contact with the friction plate.
- If it does not make contact, adjust the traction drive cable following instructions and recheck the friction wheel.
- Replace friction wheel rubber if necessary. Refer to instructions on page 17.

Check V-belts

Follow the instructions below to check the condition of the drive belts every 50 hours of operation.

- Remove the plastic belt cover on the front of the engine by removing two self-tapping screws.
- Visually inspect for frayed, cracked, or excessively worn out belts.

SECTION 7: SERVICING YOUR SNOW THROWER

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

Augers

The augers are secured to the spiral shaft with two shear bolts and hex lock nuts. See Figure 13. If you hit a foreign object or ice jam, the snow thrower is so designed that the bolts will shear.

- If the augers do not turn, check to see if the bolts have sheared and replace if necessary. Two replacement shear bolts (shown in Figure 13 inset) and hex lock nuts have been provided with the snow thrower. Please note that lock nuts cannot be threaded onto a bolt by hand. This type of nut is used where vibration occurs. So you will have to use a set of wrenches to tighten these hardware. When replacing bolts, spray an oil lubricant into shaft before inserting new bolts.

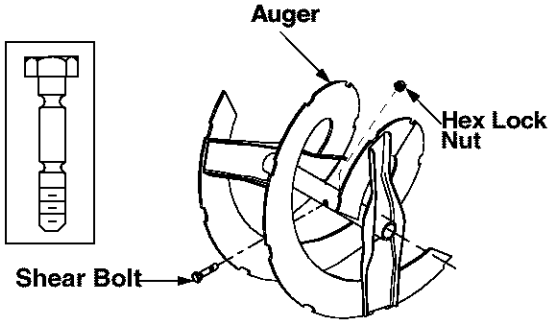


Figure 13

Shave Plate and Slide Shoes

The shave plate and slide shoes on the bottom of the snow thrower are subject to wear. They should be checked periodically and replaced when necessary.

- Remove the four carriage bolts, Belleville washers and hex nuts which attach slide shoes to the snow thrower on two sides. See Figure 14.
- Reassemble new slide shoes with the hardware removed earlier (cupped side of Belleville washer goes against slide shoes). Make certain the slide shoes are adjusted to be level.
- To remove shave plate, remove slide shoe and the associated hardware including carriage bolts, Belleville washers and hex nuts which attach shave plate to the snow thrower housing. For location of shave plate and carriage bolts, see Figure 14.
- Reassemble new shave plate, making sure heads of the carriage bolts are to the inside of the housing. See Figure 14.
- Reinstall slide shoe. Tighten securely.

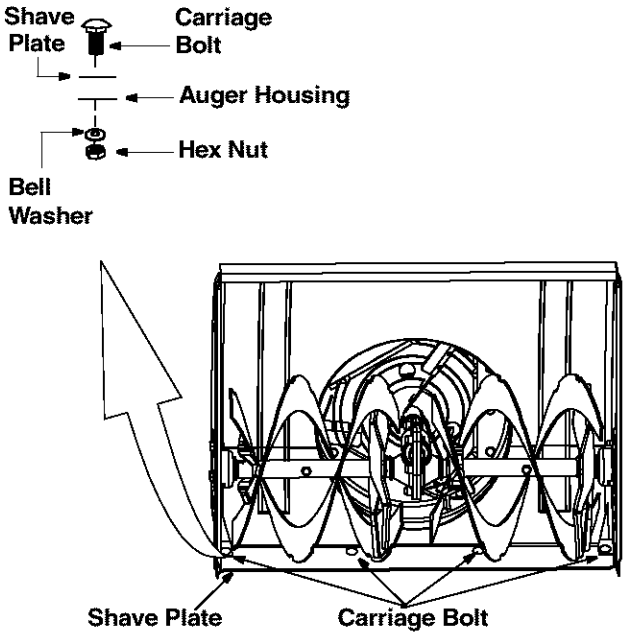


Figure 14

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 15.

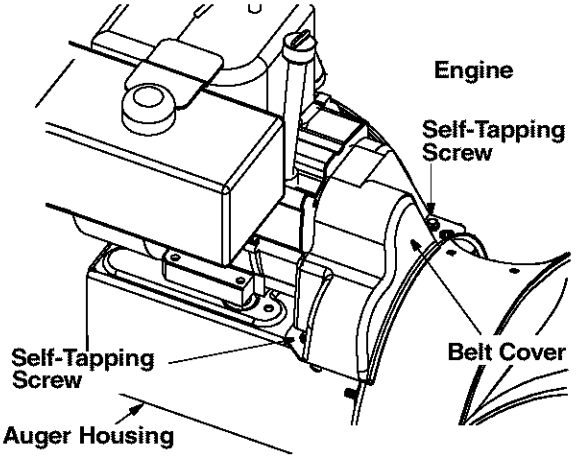


Figure 15

- Remove the three hex nuts and lock washers which attach the auger housing assembly to the frame assembly on each side. See Figure 16.

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.

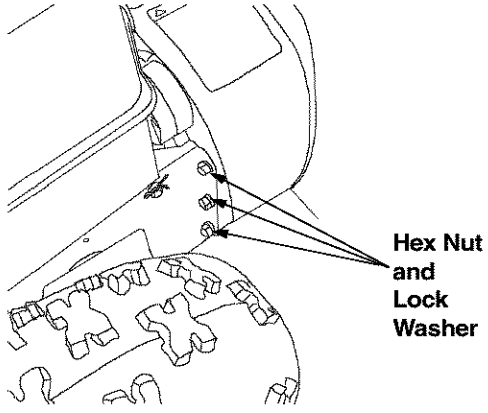


Figure 16

- 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.
- Remove the two belts from the two engine pulleys. For location of the belts, see Figure 17.

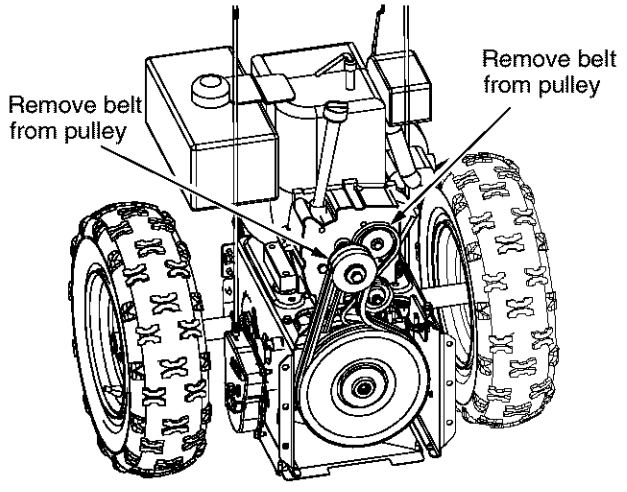


Figure 17

- To remove the front auger drive belt, push the idler pulley to the left. The belt brake should move outward. See Figure 18. Lift the front auger drive belt from the front auger pulley.

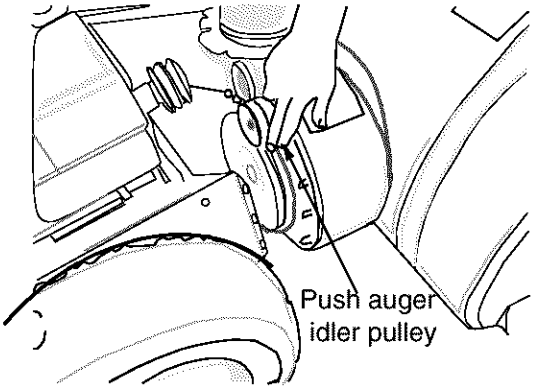


Figure 18

- 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.
- 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 19.

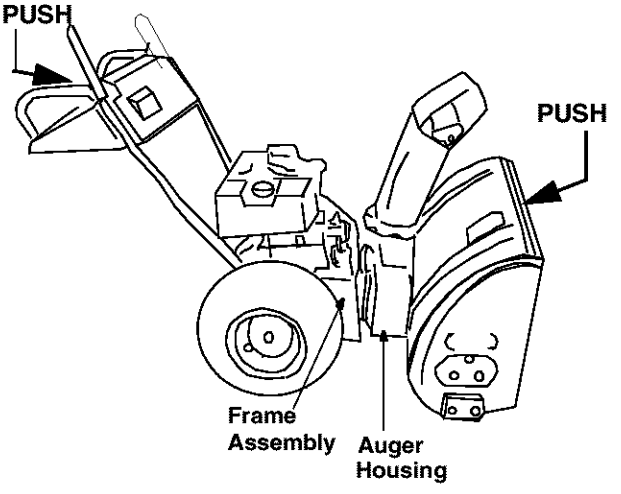


Figure 19

- Level the frame assembly and tip the auger housing forward to align studs with the corresponding holes on both sides of the frame assembly.

WARNING: 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 . Refer to Figure 16. These pieces of hardware were removed earlier. Tighten nuts securely.

- Reinstall the belt cover on the front of the engine with the two self-tapping screws and flat washers. Refer to Figure 15.

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

Drive Belt

- Drain the gasoline from the snow thrower, or place a piece of plastic under the gas cap.
- Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws.
- Tip the snow thrower up and forward, so that it rests on the housing.
- Remove six self-tapping screws from the frame cover underneath the snow thrower.
- 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.
- Working from the underside of the frame, slip belt between the friction wheel and the friction wheel disc. See Figure 20. 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.
- Replace new belt. Reassemble following the above instructions in reverse order.

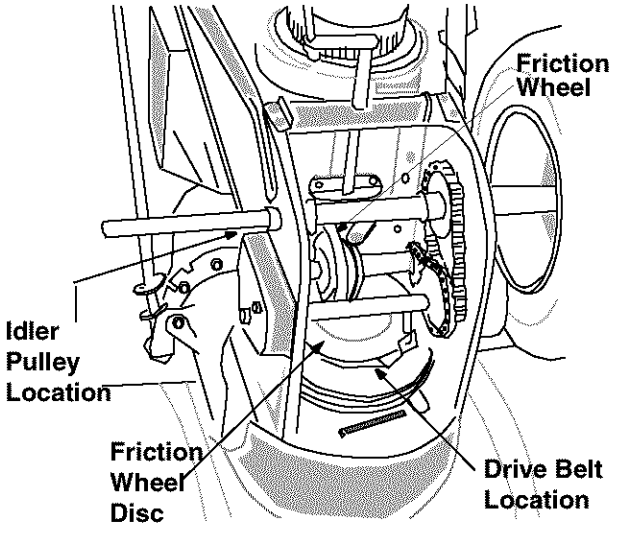


Figure 20

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.
- 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 housing.
- Remove six screws from the frame cover underneath the snow thrower. Refer to Figure 12.
- Remove the left wheel from the axle.

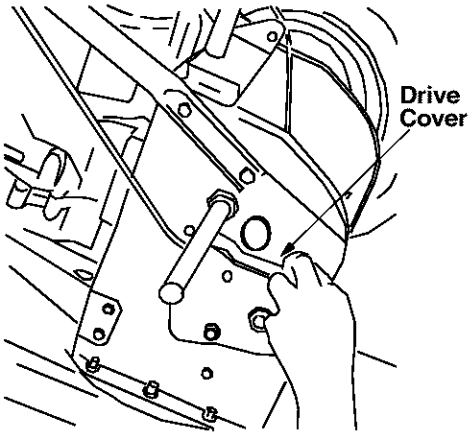


Figure 21

- Remove the four screws securing the left drive cover to the frame. Remove the drive cover from the side of the frame. See Figure 21.

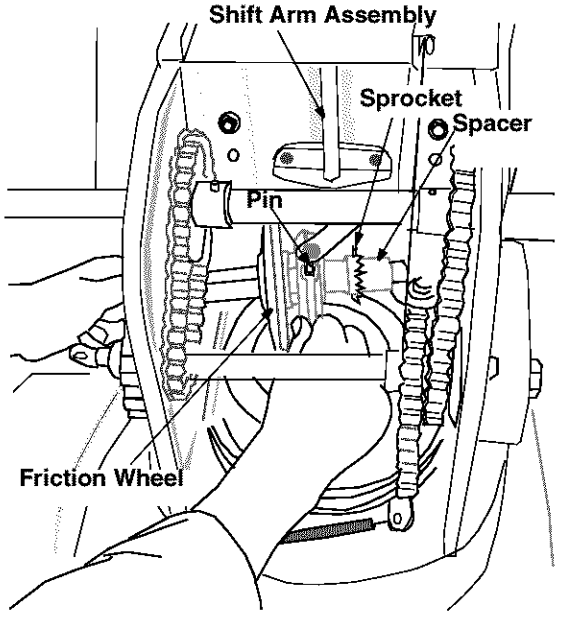


Figure 22

- Holding the friction wheel assembly as shown in Figure 22, 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.
- Lift the friction wheel assembly out between the axle shaft and the drive shaft assemblies.
- 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.
- Insert the pin from the shift arm assembly into the friction wheel assembly and hold assembly in position. See Figure 22.
- Slide the hex shaft through the left side of the housing and through the friction wheel assembly.
- Insert the hex shaft through the sprocket and the spacer. See Figure 23. Make certain that the chain engages both the large and the small sprocket.

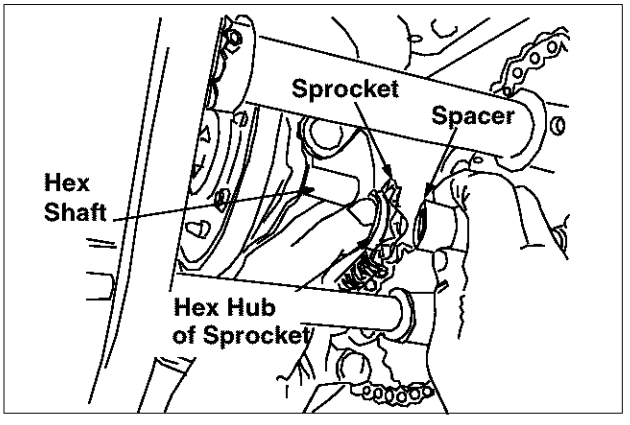


Figure 23

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 toward the friction wheel when sliding the sprocket on to the hex shaft. See Figure 23.*

- Align the hex shaft with the right hand bearing and carefully guide the left hand bearing into the left side of the housing.
- 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.

SECTION 8: 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.
- Remove all dirt from exterior of engine and equipment.
- Follow lubrication recommendations on page 13. Store in a clean, dry area.

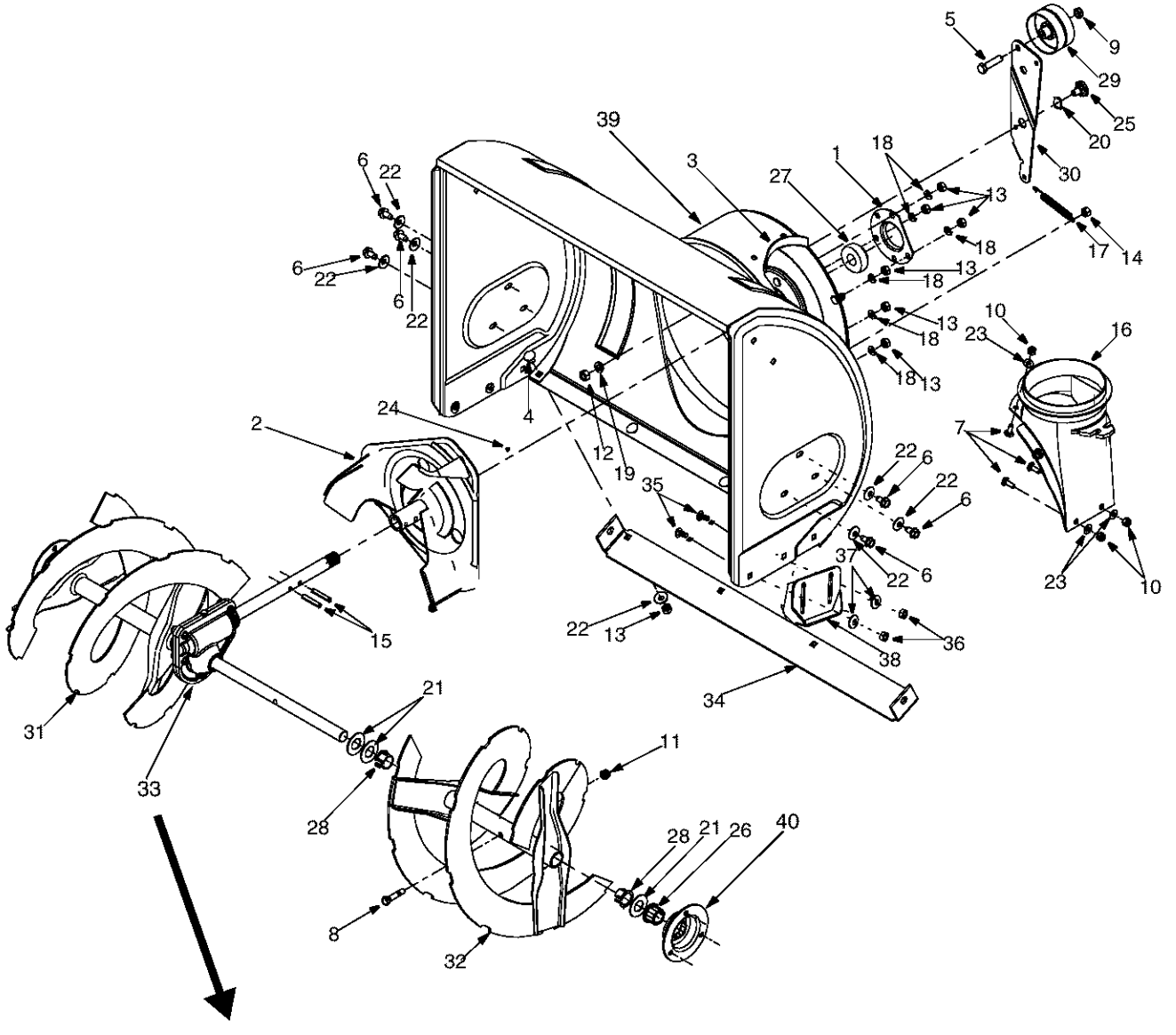
NOTE: *When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.*

SECTION 9: TROUBLE SHOOTING GUIDE

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	1. Fuel tank empty, or stale fuel. 2. Blocked fuel line. 3. Choke not in the ON position 4. Faulty spark plug. 5. Safety key not in ignition switch on engine. 6. Spark plug wire disconnected. 7. Primer button not being used properly. 8. Fuel shut-off valve closed.	1. Fill tank with clean, fresh gasoline. Fuel becomes stale after thirty days. 2. Clean the fuel line. 3. Move switch to the ON position 4. Clean, adjust gap or replace. 5. Insert the key fully into the switch. 6. Connect spark plug wire. 7. Refer to the engine manual. 8. Open fuel shut-off valve.
Engine runs erratic	1. Unit running on CHOKE. 2. Blocked fuel line or stale fuel. 3. Water or dirt in the fuel system.	1. Move the choke lever to OFF position. 2. Clean the fuel line; fill the tank with clean, fresh gasoline. 3. Drain the fuel tank and carburetor. Refill with fresh fuel.
Loss of power	1. Spark plug wire loose. 2. Gas cap vent hole plugged.	1. Connect and tighten spark plug wire. 2. Remove ice and snow from gas cap. Be certain vent hole is clear.
Excessive vibration	1. Loose parts or damaged auger.	1. Stop the engine immediately and disconnect the spark plug wire. Tighten all bolts and nuts. If vibration continues, have the unit serviced by an authorized service dealer.
Unit fails to propel itself	1. Traction control cable in need of adjustment. 2. Drive belt loose or damaged.	1. Adjust traction control cable. Refer to page 11 of this manual. 2. Replace drive belt. Refer to page 17 of this manual.
Unit fails to discharge snow	1. Discharge chute clogged. 2. Foreign object lodged in auger. 3. Auger control cable in need of adjustment. 4. Auger belt loose or damaged. 5. Shear bolt sheared.	1. Stop engine and disconnect spark plug wire. Clean discharge chute and inside of auger housing. 2. Stop engine immediately and disconnect spark plug wire. Remove object from auger. 3. Adjust auger control cable. Refer to page 11 of this manual. 4. Refer to page 15 of this manual. 5. Replace shear bolt.
Electric chute fails to turn	1. Loose electrical connections. 2. Blown Fuse.	1. Make sure all connections are tight and fully installed. 2. Replace with new 5 amps fuse. (Fuse is located under handle panel near switch connector.)
Electric chute turns in opposite direction of the switch	1. Switch connector installed backwards	1. Unplug the switch connector under the handle panel. Turn connector 180° and reconnect.
Heated grips are not creating heat	1. Loose electrical connections. 2. Blown fuse. 3. Faulty Stay Warm grip.	1. Under the handle panel, check connections from the handles to the wiring harness. 2. Replace with new 5 amps fuse under the handle panel near crank switch connector. 3. Have the grips checked at an authorized service dealer. **NOTE:** *If one Stay Warm grip fails, both grips will not function.*

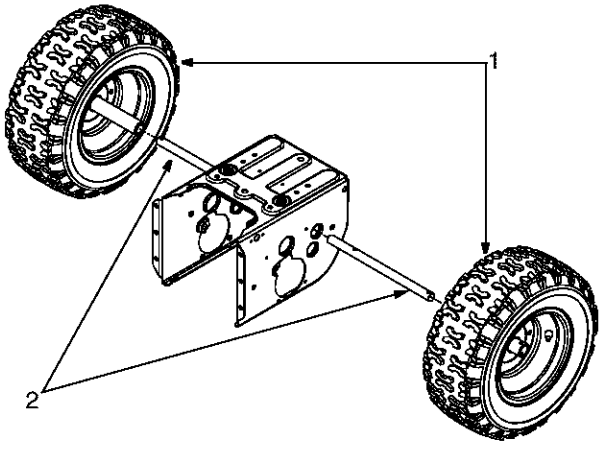
NOTE: *For repairs beyond the minor adjustments listed above, please contact your local authorized service dealer.*

SECTION 10: PARTS LIST FOR MODEL 553



Model 553

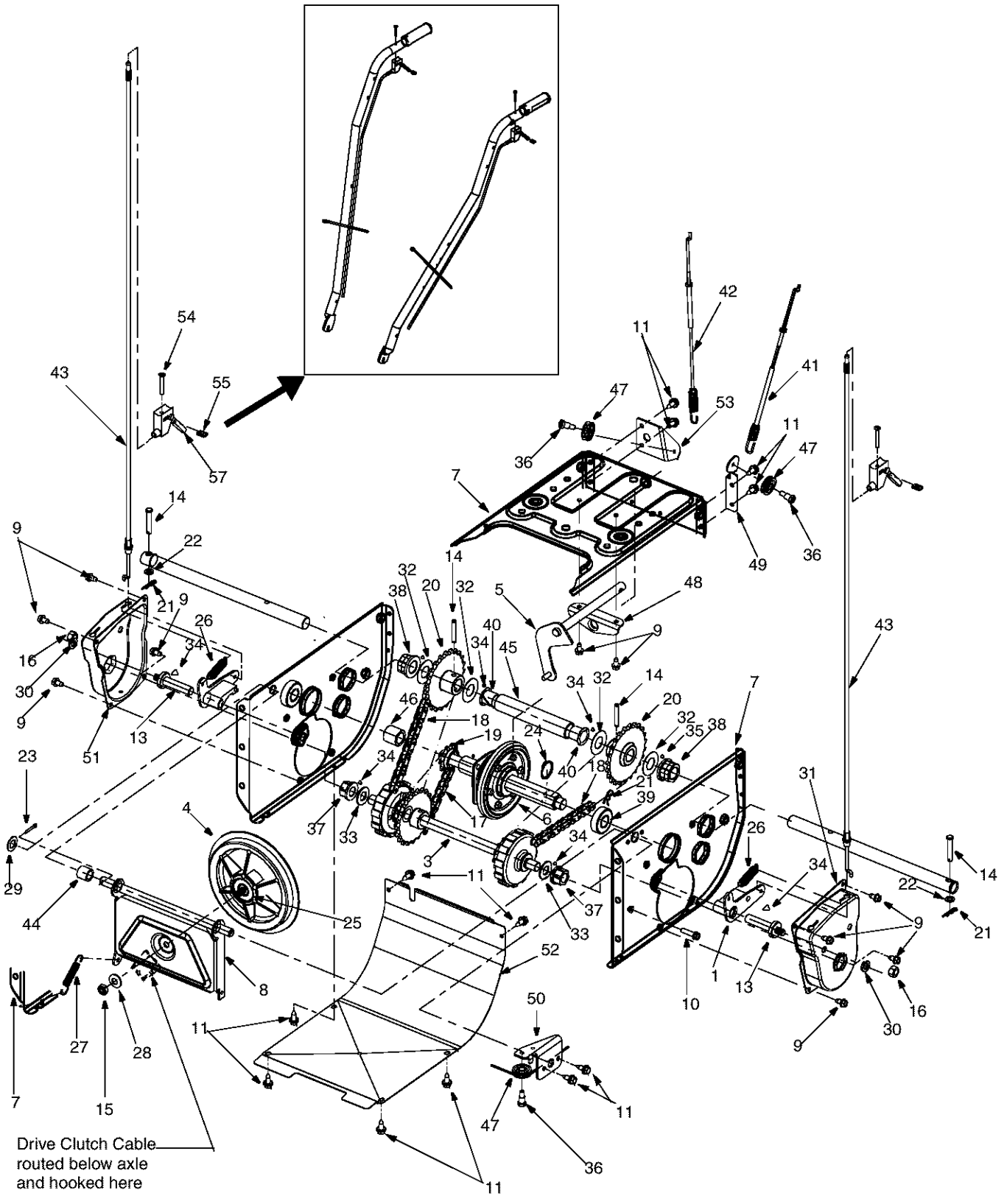
Ref. No.	Part No.	Description
1.	05931	Bearing Housing
2.	684-0065	Impeller Assy. 12" dia.
3.	705-5226	Chute Reinforcement
4.	710-0451	Carriage Bolt 5/16-18 x .75" Gr.2
5.	710-0459A	Hex Screw 3/8-24 x 1.5" Gr.5
6.	710-0604	Hex Washer Head Self-Tapping Screw 5/16-18 x .62"
7.	710-0703	Carriage Screw 1/4-20 x .75"
8.	710-0890A	Shear Bolt 5/16-18 x 1.5"
9.	712-0116	Jam Nut 3/8-24
10.	712-0324	Hex Lock Nut 1/4-20
11.	712-0429	Hex Lock Nut 5/16-18
12.	712-0798	Hex Nut 3/8-16 Gr.2
13.	712-3010	Hex Nut 5/16-18 Gr.5
14.	712-3068	Hex Patch Nut 5/16-18
15.	715-0114	Spiral Pin
16.	731-1379A	Chute Adapter
17.	732-0611	Extension Spring
18.	736-0119	Lock Washer
19.	736-0169	Lock Washer
20.	736-0174	Wave Washer



1.	734-1709	Wheel Assembly: 16" x 4.8"
2.	738-0994A	Axle: .75" dia. x 12.201" Lg.

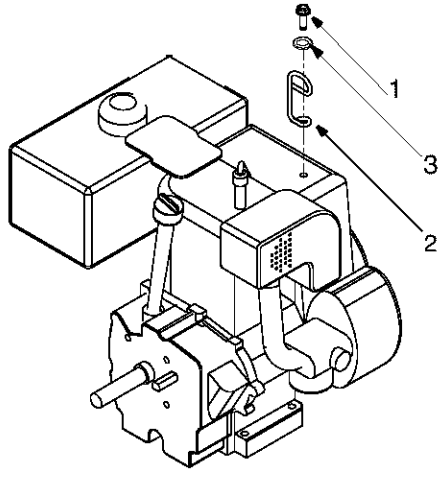
Ref. No.	Part No.	Description
21.	736-0188	Flat Washer
22.	736-0242	Belleville Washer
23.	736-0463	Flat Washer
24.	737-3007	Grease
25.	738-0281	Shoulder Screw
26.	741-0245	Hex Flange Bearing
27.	741-0309	Flange Ball Bearing
28.	741-0493A	Flange Bushing
29.	756-0178	Flat Idler
30.	784-5632A	Auger Idler Arm
31.	605-5196A	Spiral Assembly: RH 28"
32.	605-5197A	Spiral Assembly: LH 28"
33.	618-0122	Gear Assembly: Auger 28" (Includes Ref. # 41-56)
34.	784-5582A	Shave Plate: Auger 28"
35.	710-0451	Carr. Bolt: 5/16-18 x 0.75
36.	712-3010	Hex Nut: 5/16-18 Gr.5
37.	736-0242	Belleville Washer
38.	784-5580	Slide Shoe
39.	684-0041C	Auger Housing Assy. 28"
40.	784-5618	Bearing Housing
41.	618-0123	RH Housing
42.	618-0124	LH Housing
43.	710-0642	TT Screw, 1/4-20 x .75
44.	711-0910	Spiral Axle, 28"
45.	714-0161	Hi-Pro Key, 3/16 x 5/8
46.	715-0143	Spring Spiral Pin, .25 x 1.25
47.	717-0528	Worm Gear, 20-tooth
48.	717-0526	Worm Shaft
49.	718-0186	Thrust Collar
50.	721-0325	Grease Plug
51.	721-0327	Grease Seal
52.	736-0351	Flat Washer, .76 x 1.5 x .030
53.	736-0369	Flat Washer, .508 x 1.0 x .020
54.	736-0445	Flat Washer, .76 x 1.5 x .060
55.	741-0662	Flange Bearing, .75 x 1.0 x .59
56.	741-0663	Flange Bearing, .503 ID x .75 OD
57.	737-3000	Grease Fitting
—	737-0168	Grease (Two Ounces)

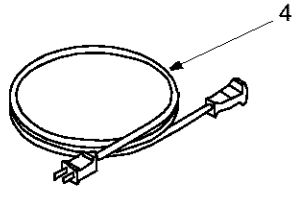
Model 553



Model 553

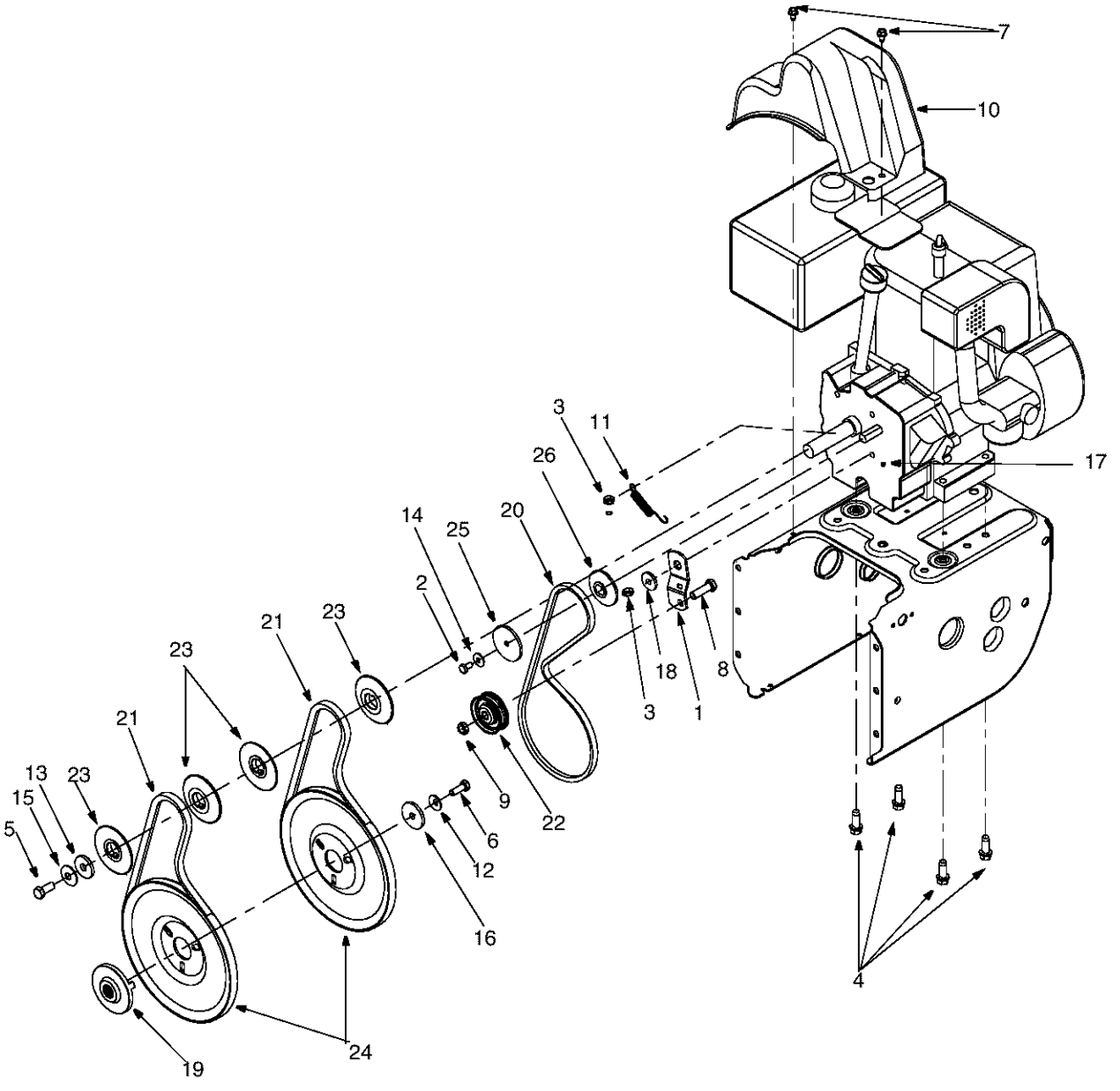
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1.	618-0043	Dogg Assembly: RH	29.	736-0160	Flat Washer
2.	618-0044	Dogg Assembly: LH	30.	736-0169	Lock Washer
3.	618-0303B	Shift Assembly: Steerable Drive	31.	784-5740	Retainer Shaft LH: Actuator Drive
4.	656-0012A	Friction Wheel Disc Assy.	32.	736-0351	Flat Washer
5.	684-0014B	Shift Rod Assembly	33.	736-0626	Flat Washer
6.	684-0042B	Bearing	34.	737-0170	Lubricant: 6 in 1
7.	684-0130	Transmission Frame Assembly	35.	737-3007	Grease
8.	684-0131A	Support Bracket Assembly	36.	738-0924	Shoulder Screw
9.	710-0599	Hex Washer Hd. TT Screw 1/4-20 x 0.5"	37.	741-1111	Hex Flange Bearing
10.	710-0788	Hex Washer Hd. TT Screw 1/4-20 x 1.0"	38.	741-0598	Hex Flange Bearing
11.	710-1652	Hex Washer Hd. TT Screw 1/4-20 x .625"	39.	741-0600	Ball Bearing
12.	711-1267	Drive Shaft	40.	741-0701	Flange Bushing
13.	711-1268	Actuator Shaft	41.	746-0897	Auger Clutch Cable
14.	711-1364	Pin	42.	746-0898	Drive Clutch Cable
15.	712-0711	Jam Nut 3/8-24 Gr.8	43.	746-0956	Steering Cable
16.	712-3017	Hex Nut: 3/8-16	44.	748-0190	Spacer
17.	713-0233	Chain	45.	750-1161	Support Tube: Axle
18.	713-0374	Chain	46.	750-1162	Spacer
19.	713-0413	Sprocket: 10T	47.	756-0625	Roller Cable
20.	713-0472	Sprocket	48.	784-5590	Shift Bracket
21.	714-0104	Cotter Pin	49.	784-5687A	Auger Clutch Cable Guide Bracket
22.	736-0142	Flat Washer	50.	784-5689A	Front Support Guide Bracket
23.	714-0474	Cotter Pin	51.	784-5730A	Retainer Shaft RH: Actuator Drive
24.	716-0102	Snap Ring	52.	784-5732	Frame Cover
25.	721-0263	Adhesive: Loctite	53.	784-5733	Roller Bracket: Drive Cable
26.	732-0209	Extension Spring	54.	710-1233	Oval C-Sunk Machine Screw
27.	732-0264	Extension Spring	55.	712-0127	Weld Nut
28.	736-0105	Bell Washer	56.	725-0157	Cable Tie
			57.	746-0950	Turn Trigger
			58.	714-0104	Cotter Pin





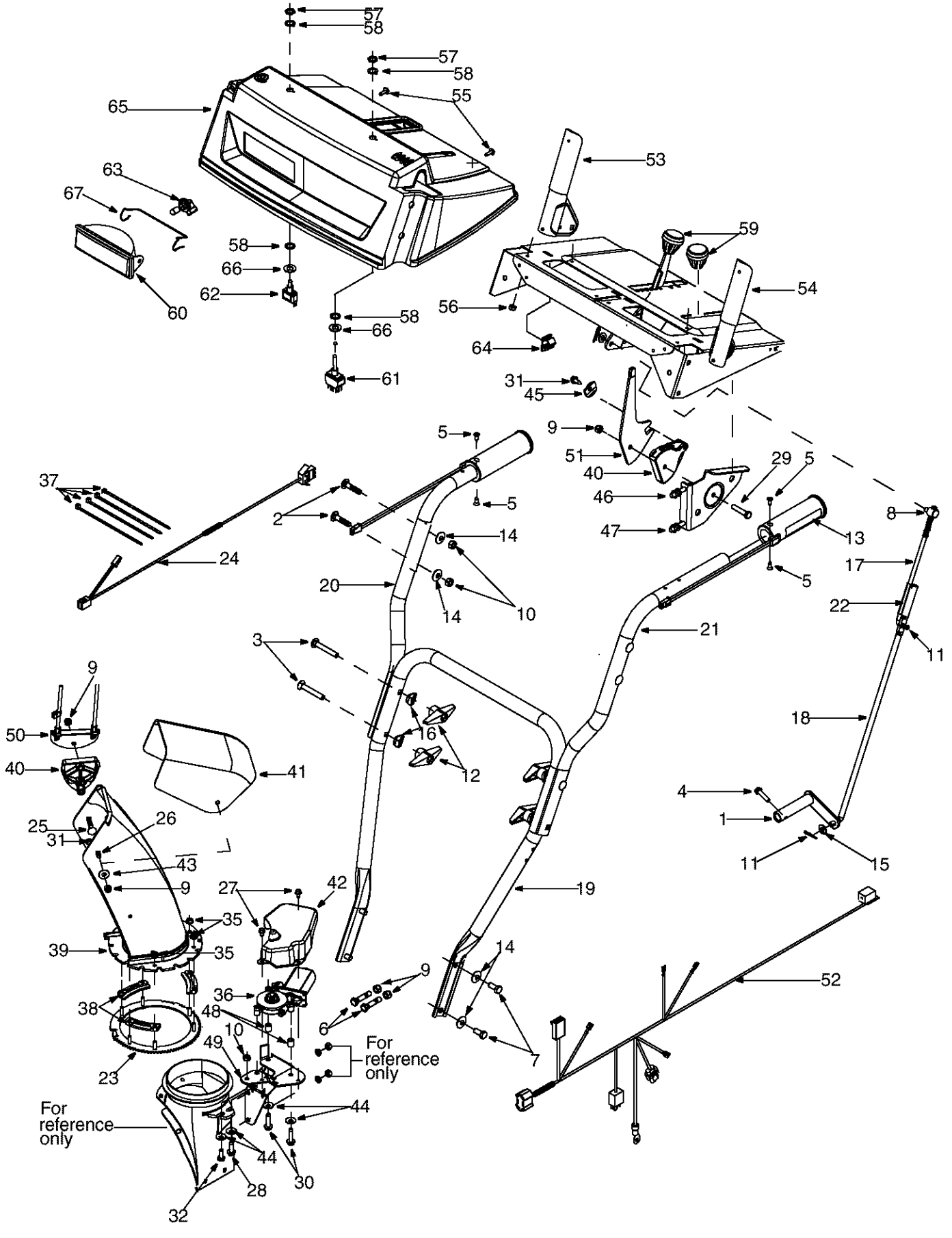
Ref. No.	Part No.	Description
1.	712-0324	Hex Lock Nut: 1/4-20
2.	732-0705	Cable Guide
3.	736-0173	Flat Washer
4.	629-0071	Extension Cord: 110V, 3-prong

Model 553



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

Model 553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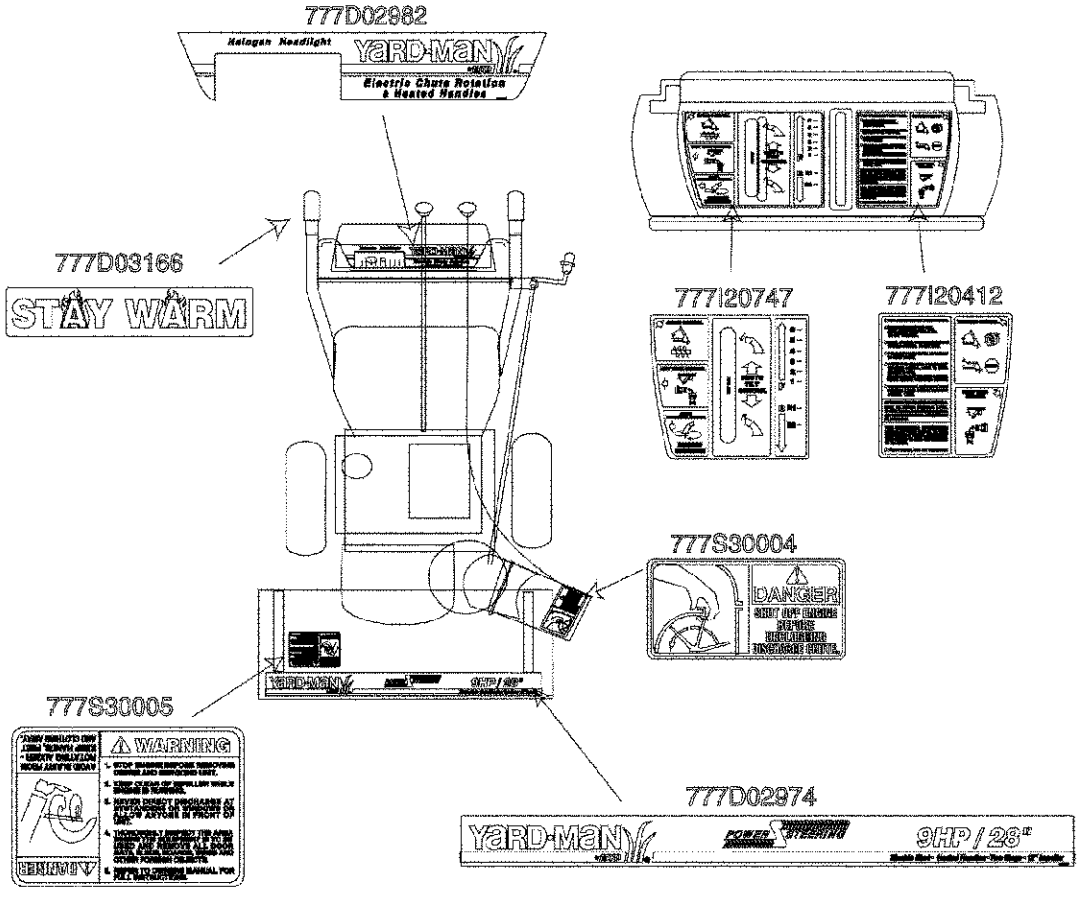
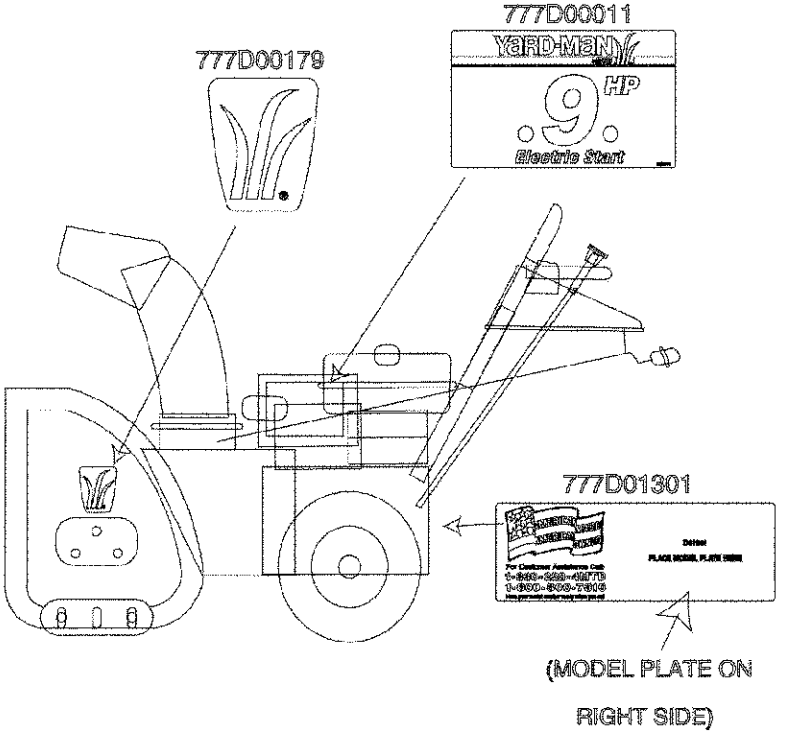
Model 553

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1.	684-0008A	Shift Arm Assembly	36.	724-0249	Electric Motor: Chute Crank
2.	710-0262	Carriage Bolt 5/16-18 x 1.5"	37.	725-0157	Cable Tie
3.	710-0449	Carriage Bolt 5/16-18 x 2.25"	38.	731-0851A	Chute Flange Keeper
4.	710-0788	TT Screw 1/4-20 x 1"	39.	731-1300A	Lower Chute
5.	710-0837	Oval C-Sk. Screw AB #10-16 x 0.625"	40.	731-1313C	Cable Guide: Chute Tilt
			41.	731-1320	Upper Chute
6.	710-0890A	Shear Bolt 5/16-18 x 1.5"	42.	731-2279	Motor Cover: Chute Rotation
7.	710-3008	Hex Screw 5/16-18 x .75"	43.	736-0159	5/16 Washer
8.	711-0677	Ferrule	44.	736-0242	Belleville Washer
9.	712-0429	Hex Lock Nut 5/16-18	45.	736-0506	Special Washer
10.	712-3010	Hex Nut 5/16-18	46.	746-0896	Control Cable
11.	714-0104	Cotter Pin	47.	746-0901	Control Cable
12.	720-0284	Handle Knob	48.	750-1232	Spacer
13.	725-1757	Heated Grip	49.	782-0599	Motor Bracket
14.	736-0242	Belleville Washer	50.	784-5594	Cable Bracket
15.	736-0275	Flat Washer	51.	784-5604	Handle: Chute Tilt
16.	736-0451	Saddle Washer	52.	629-0936	Harness Assembly: Upper
17.	747-0620A	Shift Rod: Upper	53.	684-0036	Handle Assembly RH: Engagement, Black
18.	747-0621	Shift Rod: Lower			
19.	749-0951	Lower Handle	54.	684-0037	Handle Assembly LH: Engagement, Black
20.	749-0952A	Upper Handle: L Style RH			
21.	749-0953A	Upper Handle: L Style LH	55.	710-1003	Special Hex Screw
22.	750-0963	Connector: Shift Rod	56.	712-0271	Hex Sems Nut: 1/4-20
23.	618-0419	Gear Assembly: Ring	57.	712-0693	Hex Nut
24.	629-0937	Electric Harness: Lower	58.	716-0398	Lock Ring: Toggle Switch
25.	710-0262	Carriage Bolt: 5/16-18 x 1.5"	59.	720-0232	Shift Knob
26.	710-0451	Carriage Bolt: 5/16-18 x .75"	60.	725-1672	Lamp Housing
27.	710-0599	TT Screw: 1/4-20 x 0.5"	61.	725-1755	Toggle Switch: Double Throw
28.	710-0602	TT Screw: 5/16-18 x 1"	62.	725-1756	Toggle Switch: Single Throw
29.	710-0805	Hex Screw: 5/16-18 x 1.5"	63.	725-1759	Halogen Lamp: 50W, 12V
30.	710-0817	TT Screw: 5/16-18 x 1.25"	64.	726-0152	Mounting Clamp
31.	710-0896	Hex Screw AB: 1/4-14 x 0.625"	65.	731-2275	Handle Panel
32.	710-3008	Hex Scew: 5/16-18 x .75"	66.	736-0226	Flat Washer
35.	712-3027	Hex Flange Lock Nut	67.	747-1136	Headlight Retainer

Model 553: Label Part Numbers





MANUFACTURER'S LIMITED WARRANTY FOR:

YARD-MAN™ by MTD®

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. No product returned directly to the factory will be accepted unless prior written permission has been extended by the Customer Service Department of MTD PRODUCTS INC.

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. 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.
c. Log splitter pumps, valves and cylinders have a separate one year warranty.
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.