

SOUTHLAND® *Operator's Manual* **CHIPPER SHREDDER**

MODEL Nos. SCS2052.1

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IMPORTANT:

Thank you for purchasing this Southland® Chipper Shredder.

This manual provides complete instructions for safely operating and maintaining your chipper shredder. Read and save these instructions. Refer to this manual and the engine owner's manual each time before using your chipper shredder.

Record the following for future reference:

Model No: _____ **Mfg. Date Code:** _____

Date of Purchase: _____ **Attach a copy of your sales receipt.**

Consumer Toll Free Number: 1-800-737-2112

Refer to the website for electronic manual and parts book at
www.southlandpowerequipment.com



If you have a question or problem...

CALL TOLL FREE: 1-800-737-2112

KEEP THIS MANUAL FOR FUTURE REFERENCE

Safety Definitions

- Save these instructions

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






Safety Alert Symbols

The symbols below identify important safety information in this manual. Become familiar with these symbols and the warnings associated with these symbols.

▲ DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury .
▲ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury .
▲ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury .
NOTICE	Indicates a practice not related to personal injury which, if not avoided, may result in property damage .

Safety Warning Symbols

Become familiar with and understand the meaning of the safety symbols found on this product. Read, understand and follow all instructions on the machine before attempting to assemble and operate.





	Look for this symbol to point out important safety precautions. It means: Attention! Become Alert! Your Safety Is Involved.
	Read operator's manual before operating this machine. Failure to follow directions could result in serious injury.
	Wear eye protection complying with ANSI Z87.1 and hearing protection.
	AMPUTATION HAZARD Contact with the rotating blades will cause serious injury. Keep hands out of inlet while machine is running.
	BYSTANDERS Keep bystanders, pets and children away from the machine while it is in operation. Stop machine if anyone enters the area.

Safety Definitions

- Save these instructions

	<p>DISCONNECT SPARK PLUG</p> <p>Disconnect spark plug wire when not in use or before servicing, cleaning or performing maintenance on the machine.</p>
	<p>WARNING— THROWN DEBRIS</p> <p>Never operate without the chute deflector properly installed and secured with wing knobs.</p> <p>Keep hands and feet away from the discharge chute area.</p>
	<p>WARNING— IMPACT HAZARD</p> <p>Impact Hazard. Avoid hand injury. Wood objects placed into the chipper chute will feed rapidly. Loosely grip object and release once feeding starts.</p>

Control and Operating Symbols

	<p>THROTTLE CONTROL</p> <p>Move throttle lever to the FAST  position to start the engine. Move throttle lever to the STOP  position to stop the engine.</p>
	<p>CHOKE</p> <p>To start cold engines move the choke to the full choke position </p>
	<p>RUN</p> <p>Move the choke control to the run  position as the engine warms up and when starting a warm engine.</p>

Important Safe Operation Practices

- Save these instructions

RESPONSIBILITY OF OPERATOR

1. Carefully read and follow these safety instructions. Failure to do so can result in serious injury or death.
2. Know your product. Read and understand this manual before use. Compare the illustrations to machine. Learn location and function of all controls. Thoroughly understanding the machine before use will result in the best performance and safety.
3. Follow all instructions when assembling the machine. If the machine was purchased in assembled condition, the operator must check the machine carefully to make sure it was assembled according to the instructions in the manual before use.
4. Regularly inspect the chipper shredder. Make sure parts are not bent, damaged or loose.
5. Use this equipment for its intended purpose only. The intended purpose is to shred leaves and twigs and chip wood branches.
6. Operate the machine only with guards, shields and other safety items in place and working correctly.
7. Service the machine only with authorized or approved replacement parts.
8. Complete all machine maintenance and adjustments according to the instruction in this manual.

▲ DANGER Carbon Monoxide. Using an engine indoors can kill you in minutes. Engine exhaust contains high levels of carbon monoxide (CO), a poisonous gas you cannot see or smell. You may be breathing CO even if you do not smell engine exhaust.

▲ DANGER The chipper shredder is capable of amputating hands and feet and throwing objects. Read and follow all warnings and safety instructions on the chipper shredder and in this manual. Failure to do so can result in serious injury or death to you or bystanders.

▲ WARNING In order to prevent accidental starting when setting up, transporting, adjusting or making repairs, always disconnect spark plug wire and place wire where it cannot come in contact with plug.

▲ CAUTION Muffler and other engine parts become extremely hot during operation and remain hot after engine has stopped. To avoid severe burns on contact, stay away from these areas.

Important Safe Operation Practices

- Save these instructions

TRAINING

1. Read the operating and service instruction manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the machine and disengage the controls quickly.
2. Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
3. Keep bystanders, pets and children at least 75 feet (22.9 m) from the machine while it is in operation. Stop machine if anyone enters the area.
4. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property and themselves.

PREPARATION

1. Thoroughly inspect the area where the equipment is to be used and remove all foreign objects.
2. Operate only on level ground to ensure machine stability. Do not operate on hard surfaces as discharge debris can ricochet and cause injury.
3. Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair, to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
4. Do not operate the equipment without wearing adequate outer garments and safety goggles. Avoid loose-fitting clothes and use protective footwear that will improve footing on slippery surfaces. Wear leather work gloves.
5. **⚠ WARNING** Fuel is highly flammable. Take the following precautions:
 - a. Store fuel in containers specifically designed for this purpose.
 - b. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors. Do not smoke while refueling.
 - c. Add fuel before starting the engine. Never remove the cap on the fuel tank or add fuel while the engine is running or when the engine is hot. Allow engine to cool before refueling, at least two minutes.
 - d. If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have disappeared.
 - e. Replace all fuel tank and container caps securely.
 - f. After refueling, replace fuel tank cap securely and wipe up spilled fuel.
 - g. Never store fuel or chipper shredder with fuel in the tank inside a building where fumes may reach an open flame
 - h. Never fill gasoline containers or the chipper shredder fuel tank inside of a vehicle or in a truck bed. Accidental electrical static discharge can ignite fuel vapors which could result in serious injury or death.
6. Never attempt to make any adjustments while the engine (motor) is running. (except where specifically recommended by the manufacturer).

Important Safe Operation Practices

- **Save these instructions**

OPERATION

1. Do not put hands or feet near or under rotating parts or at inlet or discharge openings. Contact with the rotating impeller can amputate fingers, hands and feet.
2. Exercise extreme caution when transporting on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
3. After striking a foreign object, stop the engine, remove spark plug wire, and wait for all moving parts to come to a complete stop. Thoroughly inspect the machine for any damage, repair the damage before restarting and operating the machine.
4. Exercise caution to avoid slipping or falling.
5. If the machine should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning sign of trouble.
6. Stop the engine (motor) when leaving the operating position, and when making any repairs, adjustments and inspections.
7. Take all possible precautions as recommended by the manufacturer when leaving the machine unattended. Stop the engine, do not leave the unit unattended until all moving parts have come to a complete stop.
8. Before cleaning, repairing, or inspecting, shut off the engine and make certain that all moving parts have come to a complete stop. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting.
9. Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
10. Never operate the machine without proper guards, plates or other safety protective devices in place.
11. Never empty or change discharge bag while the engine is running.
12. Keep children and pets away.
13. Do not overload the machine by attempting to chip or shred any material beyond manufacturers recommendation.
14. Never tow the machine at speeds greater than 6 miles per hour. This machine is not approved for highway usage.
15. Never allow bystanders near the machine while running.
16. Use only attachments and accessories approved by the manufacturer of the machine.
17. Never operate the machine without good visibility or light.
18. Use extreme caution when pulling the machine towards you.
19. Do not change the engine governor settings or overspeed the engine.
20. Start the engine carefully according to the manufacturers instructions. Keep hands and feet away from inlet and discharge
21. Never move the machine while the engine is running.
22. Muffler and engine become hot and can cause a burn. Do not touch.
23. Do not operate the machine while under the influence of alcohol or drugs.

Important Safe Operation Practices

- **Save these instructions**

MAINTENANCE AND STORAGE

1. Keep machine, attachments and accessories in safe working condition.
2. Check engine mounting bolts and other hardware at frequent intervals for proper tightness to be sure the equipment is in safe working condition. Visually inspect machine for any damage and repair, if needed.
3. Maintain or replace safety and instruction labels, as necessary.
4. Never store 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 the engine to cool before storing in any enclosure.
5. Always refer to the operator's manual for important details if the machine is to be stored for an extended period.
6. If the fuel tank has to be drained, drain it outdoors into an approved container and dispose of properly.
7. Follow the manufacturer's recommendations for safe loading, unloading and storage of machine.

Important Safe Operation Practices

- Save these instructions

Do Not Modify Engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice Regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM), Oxidizing Catalyst (OC), Secondary Air Injection (SAI) and Three Way Catalyst (TWC) if so equipped.

Spark Arrestor

▲ WARNING This product may not be equipped with a spark arresting muffler. If the product is not equipped and will be used around flammable materials or on land covered with materials such as agricultural crops, forest, brush, grass or other similar items, then an approved spark arrester must be installed and is legally required in the state of California. It is a violation of California statutes section 130050 and/or sections 4442 and 4443 of the California Public Resources Code, unless the engine is equipped with a spark arrester, as defined in section 4442, and maintained in effective working order. Spark arresters are also required on some U.S. Forest Service land and may also be legally required under other statutes and ordinances.

A spark arrester for the muffler is available through your nearest engine authorized service dealer.

Specifications

- Save these instructions

Weight (unit)	158 lbs (72 kg)
Chipping Chute Capacity	2.5" (63.5 mm) diameter maximum wood
Shredder Hopper Capacity	1/2" (12,7 mm) diameter maximum wood
Debris Bag Capacity	5 bushels
Oil Capacity	20 oz. (590 mL)
Oil Type	API SG-SL 10W-30
Engine High Speed (no load)	3600 rpm
Gasoline Type	Regular Unleaded / 87 Octane (Min) (Maximum 10% ethanol)
Gasoline Capacity	0.8 gallon (3.0 L)
Bolt Torques	
Blade Bolts	18–24 ft. lbs
Impeller to Crankshaft	24-31 ft. lbs
Chipper Chute	15–18 ft. lbs
Shredder Hopper to Impeller Housing	15–18 ft. lbs
Engine Mount	18–24 ft. lbs

Refer to **Engine Owner's Manual** for engine specifications.

NOTE: This spark ignition system complies with the Canadian standard ICES-002.

Controls And Features (Fig. 1)

- Save these instructions

Read, understand, and follow all instructions on the machine and in the manual(s) before starting. To be able to operate your chipper shredder safely and get the best performance, become familiar with the controls and the proper use of the machine before starting. Save this manual for future reference.

NOTE: Photographs and line drawings used in this manual are for reference only and may not represent a specific model.

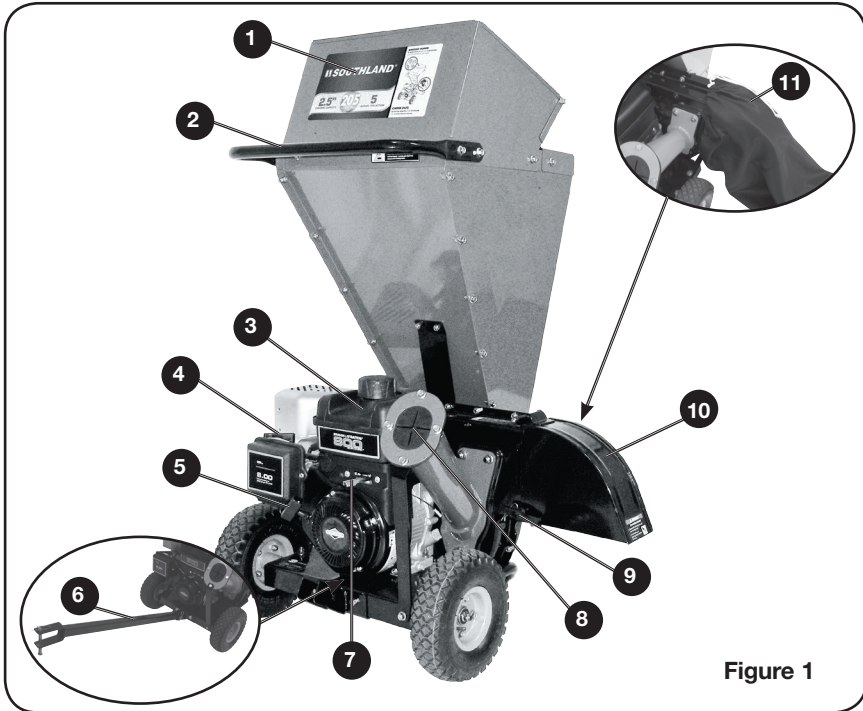


Figure 1

1. **Shredder Hopper:** Leaves, twigs, and branches up to 1/2" (12.7 mm) in diameter may be placed into the hopper for shredding.


NOTICE

Never place branches with a diameter greater than 1/2" (12.7 mm) in the hopper. Doing so can result in serious damage to your machine's shredder blade, flails or impeller.

2. **Handle:** Used to transport chipper shredder.
3. **Engine:** Refer to the separate Engine Owner's manual for location and function of the controls on the engine.
4. **Choke Control:** Opens and closes carburetor choke valve. Refer to **Engine Owner's Manual** for further information.

Controls And Features (Fig. 1)

- Save these instructions
-

5. **Starter Grip:** Pull the starter grip to start engine. Refer to **Engine Owner's Manual** for further information.
6. **Tow Bar (if equipped):** Used to tow the chipper shredder behind a lawn tractor or ATV. Tow speed must not exceed 6 mph. Not approved for highway usage.
7. **Throttle Control:** Regulates the engine speed. Throttle control must be placed in the fast  position for the engine to operate properly. Refer to **Engine Owner's Manual** for further information.
8. **Chipper Chute:** Branches up to 2.5" (63.5 mm) in diameter may be fed into the chipper chute for chipping.
9. **Wing Knobs:** Holds chute deflector in place during operation and can be loosened to allow access to impeller housing.
10. **Chute Deflector:** Debris is discharged from chute.
11. **Debris Bag:** Collects debris discharged through chute deflector.

Safety Decals

• Save these instructions

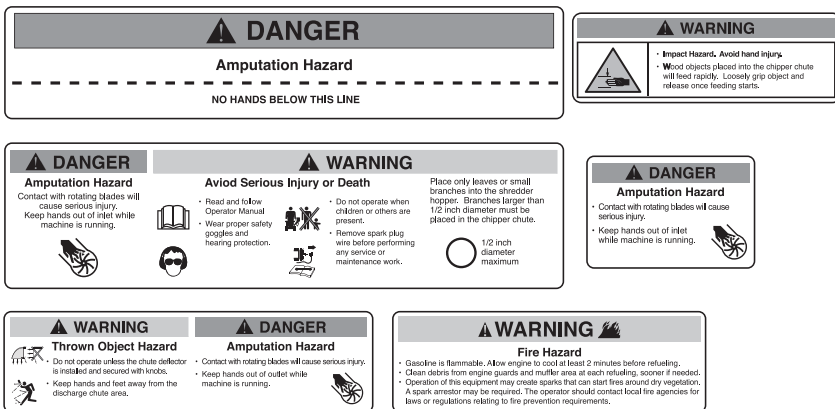
This chipper shredder has been designed and manufactured to provide you with the safety and reliability you would expect from an industry leader in outdoor power equipment manufacturing.

Although reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively, we have placed several safety labels on the chipper shredder to remind you of this important information and warn you of specific hazards while operating the machine.

These important safety labels are illustrated below, and are shown here to help familiarize you with the location and content to the safety messages you will see as you perform normal chipping/shredding operations. Please review these labels now. If you have any questions regarding their meaning or how to comply with these instructions, reread the complete **Important Safe Operation Practice** text or contact your local dealer.

Should any of the safety labels become unreadable because of being worn, faded or otherwise damaged during the use of your chipper shredder, please contact your local authorized dealer to order replacement label.

The safety labels are easily applied, and will act as a constant visual reminder to you and others who may use the equipment. Following the safety instructions is necessary for safe, effective operation of your chipper shredder.



Assembly

- Save these instructions



If you need assistance or find any parts missing, CALL TOLL FREE: 1-800-737-2112

Read and follow the assembly instructions. Do not discard any parts or materials until the machine is assembled.

▲ WARNING In order to prevent accidental starting when setting up, transporting, adjusting or making repairs, always disconnect spark plug wire and place wire where it cannot come in contact with plug.

▲ WARNING Always wear ANSI compliant safety glasses with side shields while assembling the chipper shredder.

▲ WARNING Risk of bursting. Use a tire pressure gauge to check the tires pressure before each use and while inflating tires; see the tire sidewall for the correct tire pressure.

IMPORTANT: Air tanks, compressors and similar equipment used to inflate tires can fill small tires similar to these very rapidly. Adjust pressure regulator on air supply to no more than the rating of the tire pressure. Add air in small increments and frequently use the tire gauge to prevent over inflation. DO NOT over inflate.

Carton Contents

Chipper Shredder (1)	Debris Bag (1)
Operator's Manuals (1)	Chute deflector assembly with sleeves and fastener (1)
Quick Start Guide (1)	
Engine Operator's Manual (1)	Tow bar and assembly hardware (if equipped)
Engine Oil [20 oz. (590 mL)] (1)	

Assembly

- Save these instructions

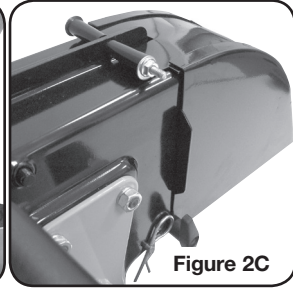
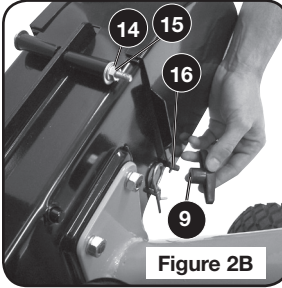
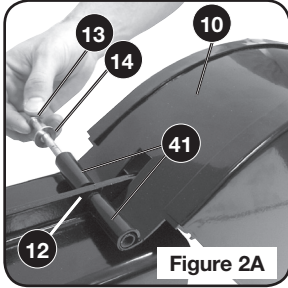


If you need assistance or find any parts missing, CALL TOLL FREE: 1-800-737-2112

A Chute Deflector (Fig. 2)

▲ WARNING DO NOT operate chipper shredder unless the chute deflector is installed and secured with wing knobs.

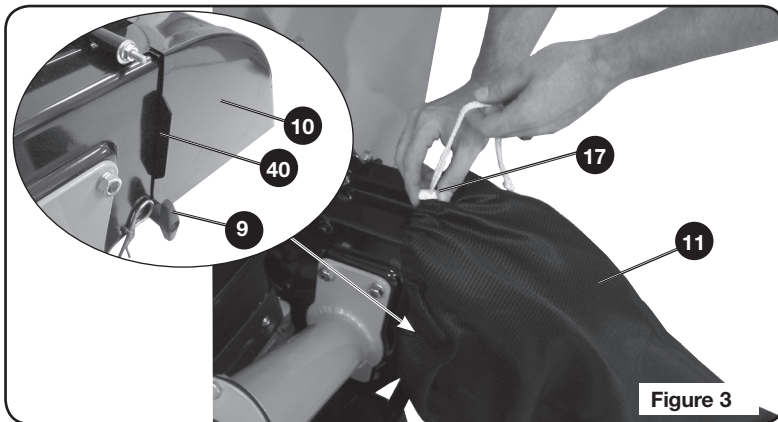
1. Align hole in discharge chute (12) with holes on chute deflector (10).



2. Slide bolt (13) with washer (14) through sleeve (41), chute deflector (10), discharge chute (12) and second sleeve (41). Secure with other washer (14) and nut (15). Tighten using a 10 mm open end wrench or socket. Ensure deflector pivots freely with no resistance.
3. Close the chute deflector (10). Ensure the discharge chute hooks onto post (16). Secure chute deflector with wing knobs (9).

B Debris Bag (Fig. 3)

1. Place the opening of the bag (11) completely over the chute deflector (10).
2. Ensure wing knobs (9) and side tabs (40) are completely covered by the bag and drawstring.
3. Depress the cord lock (17) and slide it down the drawstring until the bag is secured in place around the chute deflector. Release cord lock to lock drawstring in place.



Assembly

- Save these instructions



If you need assistance or find any parts missing, CALL TOLL FREE: 1-800-737-2112

C

Tow Bar (Fig. 4)

NOTE: The tow bar is not included with all models. The tow bar may be purchased as an accessory.

1. Align tow bar (6) with receiver (19) and slide clevis pin (20) through holes in tow bar and receiver.
2. Secure in place with hair pin (21).

NOTE: When not in use store clevis pin and hair pin in hole on tow bar.

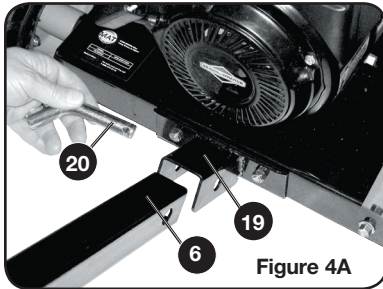


Figure 4A

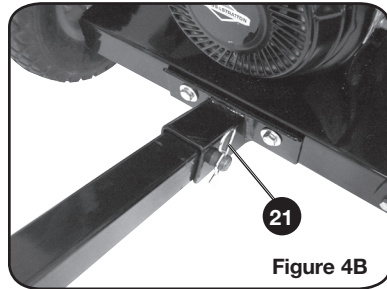


Figure 4B

Operation

- Save these instructions

A Pre-Start Check List

1. Make sure all safety guards are in place and all nuts and bolts are secure.
2. Check oil level in engine crankcase. See your **Engine Owner's manual** for procedure and specifications.
3. Inspect air cleaner for cleanliness. See your **Engine Owner's manual** for procedure.
4. Check the fuel supply. Fill the fuel tank no closer than 1" (25.4 mm) from top of tank to provide space for expansion. See your **Engine Owner's manual** for fuel recommendations.
5. Be sure spark plug wire is attached and spark plug is tightened securely.
6. Look for signs of damage to machine and engine.
7. Remove excessive debris from engine guards and muffler area.

NOTICE

The engine is shipped without gasoline or oil. Before starting engine, add gasoline and oil as described in the **Engine Owner's manual**. Damage to the engine will occur if the engine is run without oil, this damage will not be covered under warranty.

WARNING

Read, understand, and follow all instructions on the machine and in the manual(s) supplied before starting. Be thoroughly familiar with the controls and the proper use of the machine before starting. Always perform the pre-start checklist before starting the engine.

DANGER

Contact with rotating blades will cause serious injury. Keep hands out of inlet while machine is running.

WARNING

Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death.

When Adding Fuel

- Turn engine off and let engine cool at least 2 minutes before removing the fuel cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not over fill fuel tank. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Keep fuel away from sparks, open flames, pilot lights, heat and other ignition sources.
- Check fuel lines, tank, cap and fittings frequently for cracks or leaks, replace if necessary.
- If fuel spills, wait until it evaporates before starting engine.


Operation

- Save these instructions

B Start-up




A more detailed description of engine operation and all related precautions and procedures can be found in the **Engine Owner's Manual** that accompanies each chipper shredder. Read and follow these instructions.

TO STOP ENGINE (FIG. 1)

Move the throttle control lever (7) to the STOP  position. Refer to **Engine Owner's Manual** for further information. DO NOT use the choke control (4) to stop the engine.


TO START ENGINE (FIG. 1)

Cold Starts

1. Move choke control (4) to the full choke position .
2. Move throttle control lever (7) to the fast  position.
3. Firmly hold the starter grip (5). Pull the starter grip handle slowly until resistance is felt, then pull rapidly.
4. As the engine starts up, move the choke control (4) to the run  position.

Warm Starts

Restarting a warm engine does not require use of the choke.

1. Move throttle control lever (7) to the fast  position.
2. Firmly hold the starter grip (5). Pull the starter grip handle slowly until resistance is felt, then pull rapidly.

C Shredding (Fig. 1)

Yard waste such as leaves, twigs and pine needles can be placed in the shredder hopper (1) for shredding. After material has been processed by the shredder blade and flails, it will be forced out of the chute deflector.

▲ DANGER Contact with rotating blades will cause serious injury. Keep hands out of inlet while machine is running.

▲ WARNING DO NOT operate chipper shredder unless the chute deflector is installed and secured with wing knobs.

▲ WARNING Keep hands and feet away from the discharge chute area.

▲ WARNING Always wear ANSI compliant safety glasses with side shields while operating the chipper shredder.

NOTICE Never place branches with a diameter greater than 1/2" (12.7 mm) in the hopper. Doing so can result in serious damage to your machine's shredder blade, flails or impeller.

Operation

- Save these instructions

C Shredding (Fig. 1) - Cont.

Observe the following guidelines when shredding yard debris:

- Never attempt to shred material other than normal yard debris (leaves, twigs, pine cones, etc.).
- Avoid shredding excessively wet leaves or fibrous material. Wet material may result in a clogged hopper.
- Place reasonable amounts of debris into the hopper at a time. DO NOT overload the hopper.
- Allow the material in the hopper to be drawn into the blades and shredded before adding additional debris to the hopper. Failure to do so may result in a clogged hopper, clogged chute deflector or a stalled engine.
- Avoid placing twigs longer than 24" (0.6 m) into the hopper. Twigs longer than 24" (0.6 m) may result in a clogged hopper.

D Clearing Clogged Hopper (Fig. 1)

Should the hopper become clogged with debris during operation, proceed as follows:

1. Grasp the handle (2) with both hands and gently agitate the chipper shredder to help loosen debris, drawing it into the impeller.

If the clog does not clear, proceed as follows:

2. Stop engine. Refer **to Stop Engine** paragraph under **Start-up**.

▲ WARNING Ensure all parts have stopped moving before proceeding.

3. Use your hands to remove any debris found near the top of the hopper.
4. Use a branch (or other available device, i.e. broomstick) to dislodge debris located toward the base of the hopper.
5. Restart engine. Refer **to Start Engine** paragraph under **Start-up**.

NOTE: If you're unable to pull the starter rope as a result of accumulated debris near the impeller, follow instructions under the heading **Cleaning the Impeller Housing** in the **Maintenance & Adjustments** section of this manual.

Operation

- Save these instructions

E Chipping

Branches up to 2.5" (63.5 mm) in diameter can be fed into the chipper chute.

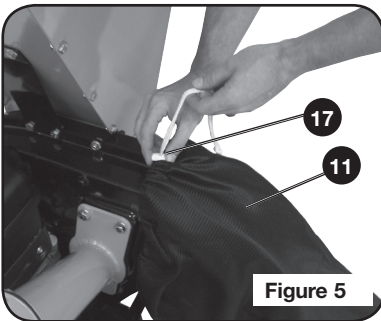
NOTICE Never feed branches with a diameter greater than 2.5" (63.5 mm) into the chipper chute. Doing so can result in serious damage to your machine's chipper blades, flails or impeller.

Observe the following guidelines when chipping branches:

- Never feed more than one branch into the chipper chute at a time.
- Never feed anything other than branches (or wood) into the chipper chute.
- Wood objects placed into the chipper chute will feed rapidly. Loosely grip branch and release once feeding starts.

NOTE: For best performance, always operate the machine with sharp chipper blades. If a noticeable loss in performance is encountered while chipping branches, the chipper blades should be replaced.

F Emptying the Debris Bag (Fig. 5)



1. Stop engine. Refer to **Stop Engine** paragraph under **Start-up**.
2. Depress the cord lock (17) and slide it up the drawstring to loosen drawstring on chute deflector.
3. Remove and empty the debris bag (11).
4. Reattach the bag to the chute deflector opening. Refer to the **Debris Bag** paragraph under **Assembly**.

Maintenance

- Save these instructions

▲ WARNING Before performing any maintenance, turn engine off and remove the spark plug wire from the spark plug and place it where it cannot come in contact with plug to prevent accidental starting and serious injury.

▲ WARNING Use only GENUINE replacement parts. Other parts may damage the machine or result in injury.

▲ CAUTION Muffler and other engine parts become extremely hot during operation and remain hot after engine has stopped. To avoid severe burns on contact, stay away from these areas.

IMPORTANT: The warranty on this chipper shredder does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain the chipper shredder as instructed in this manual, and only use genuine replacement parts.

A Maintenance Table

The following table lists required periodic maintenance.

	BEFORE EACH USE	AFTER EVERY 10 HOURS OF USE	AFTER EACH USE	BEFORE STORAGE
Clean Debris from Machine	√		√	√
Check fasteners for tightness		√ ¹	√	
Refer to the separate Engine Owner's Manual for all engine Maintenance.				
1-Check fasteners for tightness after the first 2 hours of initial use.				

B Lubrication

- Refer to the separate **Engine Owner's Manual** for lubrication schedule and instructions for engine lubrication.

C Chipper Shredder Care

- Clean the chipper shredder thoroughly before and after each use.
- Wash bag periodically with water. Allow to dry thoroughly away from direct sunlight.
- If the impeller housing becomes clogged, remove and clean as instructed in the **Cleaning The Impeller Housing** paragraph.

NOTICE Cleaning chipper shredder with a forceful spray of water is not recommended as it could contaminate the fuel system.

Maintenance

- Save these instructions

D Engine Care

- Refer to the separate **Engine Owner's Manual** for engine Maintenance.

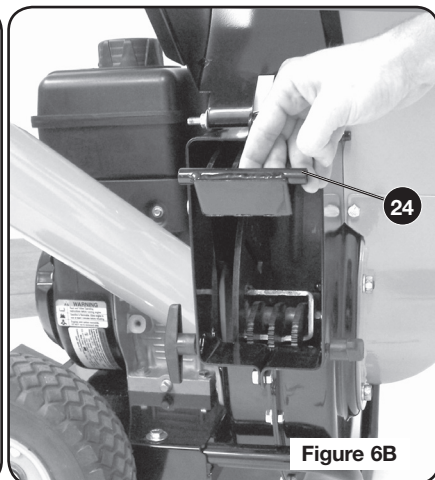
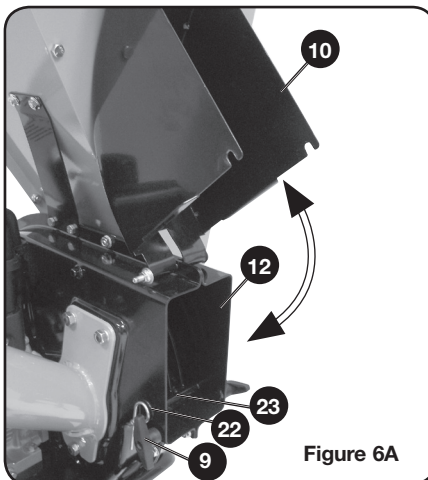
E Cleaning the Impeller Housing (Fig. 6)

The impeller's shredder blade and chipper blades are sharp. Wear leather work gloves to protect your hands when cleaning out the impeller housing.

If the impeller housing becomes clogged with debris, the shredder grate can be pivoted upward to clean the surrounding area.

To do so, proceed as follows:

1. Stop engine, disconnect spark plug and wait for chipper shredder to come to a complete stop.
2. Remove debris bag. Refer to **Emptying Debris Bag** paragraph under **Operation** for correct procedure.
3. Loosen the two wing knobs (9) on either side of the chute deflector (10) and pivot the chute deflector upward.
4. Remove the hairpin (22) from the clevis pin (23) which extends through the housing and shredder grate. Remove the clevis pin.
5. Pivot the shredder grate (24) upward. Clean the surrounding area by scraping away debris.
6. When the area is cleaned, pivot the shredder grate downward and secure with the clevis pin (23) and hairpin (22) removed earlier.
7. Verify that the spark plug wire is disconnected and away from spark plug. Pull on the starter rope two-to-three times to purge any remaining debris from the impeller housing.
8. Tighten wing knobs (9) and reattach the debris collection bag to the chute deflector. Refer to **Debris Bag** paragraph under **Assembly** for correct procedure.
9. Install spark plug wire to spark plug when ready to continue using the machine.



Blade Care

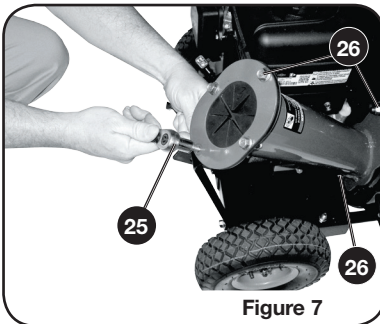
- Save these instructions

⚠ WARNING Before performing any maintenance, turn engine off and remove the spark plug wire from the spark plug and place it where it cannot come in contact with plug to prevent accidental starting and serious injury.

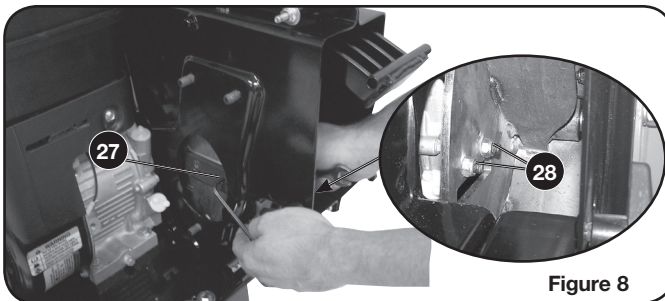
CHIPPER BLADES (FIG. 7-13)

⚠ WARNING The impeller's chipper blades are sharp. Wear leather work gloves to protect your hands.

1. Stop engine, disconnect spark plug and wait for chipper shredder to come to a complete stop.
2. Remove debris bag. Refer to **Emptying Debris Bag** paragraph under **Operation** for correct procedure.
3. Remove bolt (25) securing brace to chipper chute (8).
4. Remove the three nuts and washers (26) secure in the chipper chute (8) to the housing.
5. Pivot the shredder grate upward as instructed in **Cleaning the Impeller Housing** under **Maintenance**.



6. Rotate the impeller by hand until one of the two chipper blades is visible through the impeller housing opening.
7. Remove the hex screws (27) and nuts (28) securing the blade. Retain the hardware.



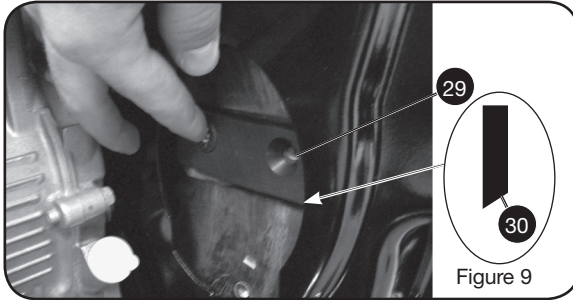
Blade Care

- Save these instructions

NOTE: Use a 13 mm hex wrench on the outside of the blade and a 11 mm open end wrench or socket on the inside of the impeller. Hold the hex wrench stationary and rotate the open end wrench or socket to loosen the nut.

8. Install a replacement blade with the hardware removed earlier.

NOTE: Ensure the counter sink (29) on the blade faces out and the sharp edge (30) of blade points down. Torque hardware to 18–24 ft. lbs.



IMPORTANT: When sharpening the blade, protect hands by using gloves. Follow the original angle of grind and make sure to remove an equal amount from each blade.

9. To replace the other blade, rotate the impeller to expose the second blade and repeat the steps above.
10. Reassemble chipper chute (8) to housing (Torque hardware to 15–18 ft. lbs.). Pivot the shredder grate down and reinstall clevis pin and hair pin. Tighten wing knobs and reattach the debris collection bag to the chute deflector. Refer to **Debris Bag** paragraph under **Assembly** for correct procedure.

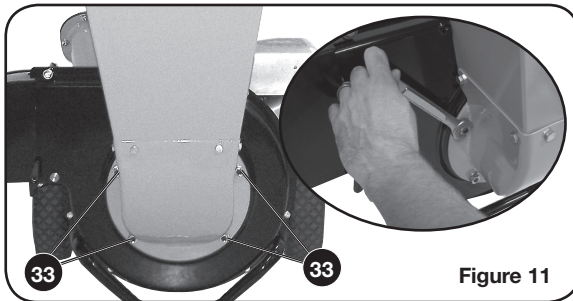
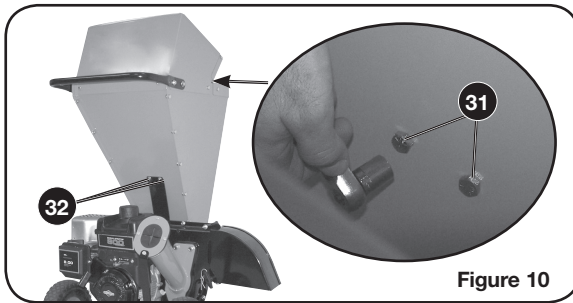
Blade Care

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SHREDDER BLADE (10-13)

⚠ WARNING The shredder blade is sharp. Wear leather work gloves to protect your hands.

1. Stop engine, disconnect spark plug and wait for chipper shredder to come to a complete stop.
2. Remove the two nuts (31) and bolts (32) which secure the shredder hopper support bracket to the impeller housing. Retain the hardware.
3. Remove four nuts (33) which attach the shredder hopper to the impeller housing.



Blade Care

- Save these instructions

4. Carefully separate the shredder hopper (1) from the impeller housing and set it aside.
5. Remove the two hex screws (36), spacers (37) and nuts (38) securing the shredder blade (35) to the impeller. Carefully remove the blade from the housing.

NOTE: Use a 13 mm hex wrench on the outside of the blade and a 11 mm open end wrench or socket on the inside of the impeller. Hold the hex wrench stationary and rotate the open end wrench or socket to loosen the nut.

6. Install a sharpened or replacement blade with the hardware removed earlier.
NOTE: Ensure the counter sink (39) on the blade faces out.

IMPORTANT: When reassembling the blade, tighten bolts to 18–24 ft. lbs.

IMPORTANT: If sharpening the blade for reuse, follow the original angle of grind as a guide. Make certain each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. Remove metal from the heavy side until it is balanced evenly.

7. Reassemble the shredder hopper to the impeller housing. Torque hardware to 20–25 ft. lbs.).
8. Reassemble the shredder hopper support bracket and associated hardware. Torque hardware to 15–18 ft. lbs.).

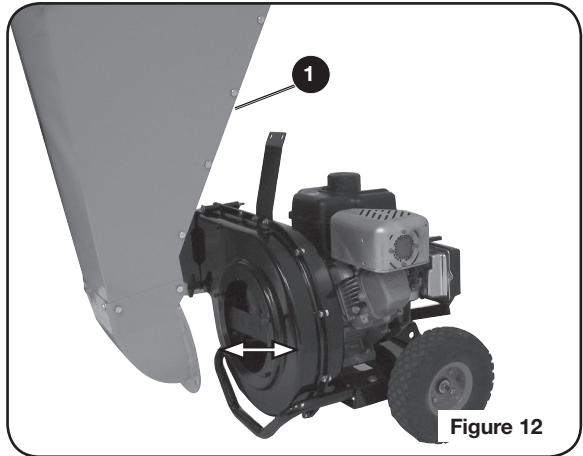


Figure 12

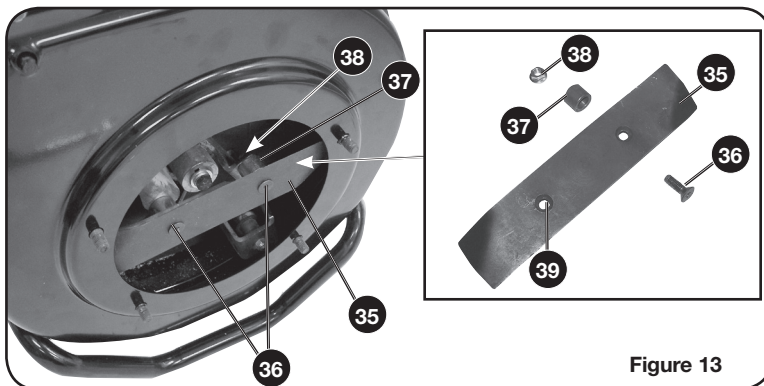


Figure 13

Storage

- Save these instructions

Immediately prepare your chipper shredder for storage at the end of the season or if the machine will not be used for 30 days or more.

A Engine

Consult the separate *Engine Owner's Manual* for manufacturer's recommendations for storage.

NOTE: If the gasoline in your engine deteriorates during storage, you may need to have the carburetor, and other fuel system components, serviced or replaced. Commonly available fuel additives which reduce varnish and gum in your engine's fuel system can be added according to the manufacturer's instructions. See *Engine Owner's Manual* for more information.

B Chipper Shredder

Off-Season Storage

- Allow the machine to run and clear out all debris for a short time before shutting the machine down before storage.
- When storing the chipper shredder in an unventilated or metal storage shed, care should be taken to rustproof the non-painted surfaces. Using a light oil or silicone, coat the equipment, especially any springs, bearings, and cables.
- Remove all dirt from exterior of engine and equipment.
- Follow lubrication recommendations. See *Maintenance*.
- Refer to *Engine Owner's Manual* for correct engine storage instructions.
- Store equipment in a clean, dry area. Store machine away from sparks, open flames, pilot lights, heat and other ignition sources.

Technical Service

- Save these instructions
-

You may have further questions about assembling, operating, or maintaining this chipper shredder. If so, you can contact our Technical Service Department at 1-800-737-2112 (English only). You may also write to:

METL Corporate Office - CORRESPONDENCE ONLY

ATTN: Technical Service – METL

6700 Wildlife Way

Long Grove, IL 60047

When contacting the Technical Service Department, have ready:







- Your Name
- Your Address
- Your Phone Number
- Model Number of Product
- Date of Purchase (include copy of receipt for written requests)



If you need assistance or have any questions,
CALL TOLL FREE: 1-800-737-2112

Troubleshooting

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PROBLEM	POSSIBLE CAUSE(S)	SOLUTIONS(S)
Engine difficult to start	Throttle control lever not in correct starting position	Move throttle control lever to fast  position
	Spark plug wire disconnected	Connect spark plug wire to spark plug
	Choke not in the Choke  position	Move choke to Choke  position
	Faulty spark plug	Remove spark plug. Inspect. Replace if necessary
	Dirty Carburetor	Take machine to an authorized service center for carburetor cleaning
	Dirty air filter	Refer to the separate Engine Owner's Manual
	Clogged fuel filter	Remove fuel filter. Inspect. Replace if necessary
	Fuel tank empty or fuel stale	Fill tank with clean, fresh gasoline
Engine runs erratically	Spark plug loose	Connect spark plug wire
	Choke in the Choke  position	Move choke to the run  position
	Faulty spark plug	Remove spark plug. Inspect. Replace if necessary
	Dirty air filter	Refer to the separate Engine Owner's Manual
	Clogged fuel filter	Remove fuel filter. Inspect. Replace if necessary
	Contaminated Fuel	Drain fuel tank. Clean fuel tank. Fill with fresh fuel
	Carburetor out of adjustment	Take machine to an authorized service center for carburetor adjustment
Excessive Vibration	Loose parts or damaged impeller	See authorized service dealer
Machine does not discharge	Discharge area clogged	Stop engine immediately and disconnect spark plug wire. Follow Cleaning the Impeller Housing under Maintenance
	Foreign object lodged in impeller	Stop engine immediately and disconnect spark plug wire. Remove lodged object
Rate of discharge slows considerably or composition of discharged material changes	Low engine RPM	Throttle control lever must be in the fast  position
	Chipper blade dull	Replace chipper blade or see your authorized service dealer

Warranty

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CHIPPER SHREDDER LIMITED WARRANTY

Always specify model number when contacting the factory.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied. MAT Engine Technologies, LLC warrants this Chipper shredder and any parts thereof, to be free from defects in material and workmanship for two years (90 days for commercial use or for reconditioned machine) from the date of first purchase from an authorized dealer, provided that the product has been properly maintained and operated in accordance with all applicable instructions. This warranty is extended only to the original retail purchaser. The bill of sales or proof of purchase must be presented at the time a claim is made under this warranty. This warranty does not cover industrial or rental usage, nor does it apply to parts that are not in original condition because of normal wear and tear, or parts that fail or become damaged as a result of misuse, accident, lack of proper maintenance, tampering, or alteration. Exceptions to the standard warranty period would be normal wear items such as cutting blades, pneumatic tires and tubes, air filters and spark plugs which are only covered for 60 days against defects in material or workmanship. Travel, handling, transportation, and incidental costs associated with warranty repairs are not reimbursable under this warranty and are the responsibility of the owner. To the full extent allowed by the law of the jurisdiction that governs the sale of the product, this express warranty excludes any and all other expressed warranties and limits the duration of any and all implied warranties, including warranties of merchantability and fitness for a particular purpose to two years from the date of first purchase, and MAT Engine Technologies, LLC's liability is hereby limited to the purchase price of the product and MAT Engine Technologies, LLC shall not be liable for any other damages whatsoever including indirect, incidental, or consequential damages. Some states do not allow limitation of how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation of damages may not apply to you. This warranty provides the original purchaser with specific rights.

For information regarding those rights, please consult the applicable state laws.

METL Corporate Office - CORRESPONDENCE ONLY

ATTN: Technical Service – METL

**6700 Wildlife Way
Long Grove, IL 60047**

Warranty

- Save these instructions
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OWNER'S WARRANTY RESPONSIBILITY

As the power equipment engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. **METL** recommends that you retain all receipts covering maintenance on your power equipment engine, but **METL** can not deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the power equipment engine owner, you should however be aware that **METL** may deny your warranty coverage if your power equipment engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your power equipment engine to a distribution center or service center authorized by **METL** as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact

MAT Engine Technologies, Inc.
6700 Wildlife Way
Long Grove, IL 60047
Tel: 1-800-737-2112

HOW TO OBTAIN WARRANTY SERVICE

You must take your power equipment along with evidence of the date of the sale to the original purchaser, at your expense, to any **METL Authorized Service Center** during its normal business hours. To locate your nearest **METL Authorized Service Center**, call (800) 737-2112. The product owner shall be responsible for any expenses or charges incurred for service calls or transportation of the product or equipment engine to and from the **METL** Authorized Service Center, including any and all damages or losses incurred during such transportation or shipment.

LIMITATIONS OF LIABILITY

METL disclaims any responsibility for loss of time or use of the engine, or the equipment in which the engine is installed, transportation, commercial loss, or any other incidental or consequential damage. Any implied warranties are limited to the duration of this written limited warranty. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions and limitations may not apply to you.

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





If you have a question or problem...

CALL TOLL FREE: 1-800-737-2112