



M2964020B

MODEL NUMBER: 2964020
SERIAL NUMBER: _____

Owner's Manual Operation, Maintenance and Safety Instructions Commercial Road-Towable Brush Chipper

2964020 (510SD-9-30KD)

Make sure you completely read and understand this manual before using the brush chipper for the first time. If you have any questions, contact your retail or rental dealer or DOSKO Customer Service at 1-800-822-0295

⚠ WARNING

READ and UNDERSTAND this manual completely before using the chipper! Failure to properly operate, and maintain this chipper could result in *serious injury or death* to the operator or bystanders. All machines have hazards associated with their operation. This brush chipper has certain special hazards that you must be aware of. As an operator or owner you have a duty to be aware of these hazards and know preventive measures to avoid them. In particular, be aware of the following:

- Keep hands and feet away from inlet and discharge openings.
- Do not allow children under the age of 18 or untrained adults to operate.
- Wear eye protection and other personal protection against flying debris.
- Check that the chipper hood is secured and locked.
- Do not attempt to perform adjustments, declog or clean unit while engine is running.
- Make sure no children or bystanders are within 100' (feet) of chipping operation.
- Protect cars, windows and other objects within 100' from flying debris.
- Be aware of potential for carbon monoxide (CO) poisoning.
- Prevent fires/explosions from fueling by using precautions described.
- Avoid burns from engine by not touching hot exhaust.
- Avoid using in slippery, muddy, wet or icy conditions where falls may occur.

These and other hazards in the manual and summarized at the end under "Important Safety Information."

STOP!

ADD ENGINE OIL & FUEL: Your brush chipper comes fully assembled and requires only that you add engine oil to crankcase and fuel to tank.

INSPECT COMPONENTS: Closely inspect to make sure no components are missing or damaged. See the "Receiving Your Unit" section for instructions on whom to contact to report missing or damaged parts.

Any Questions, Comments, Problems, or Parts Orders
Call your dealer or DOSKO Customer Service 1-800-822-0295

Summary of Important Safety Information

This section provides a summary of the various safety procedures and measures that have been presented throughout the manual. Keep this summary handy and refer to it to refresh your memory about how to safely use your chipper.

WARNING

Carefully read and make sure you understand the following safety information before using the chipper. Improper use or maintenance of the brush chipper can result in serious injury or death from amputation, lacerations, entanglement, burns, or fire/explosion. Damage can also occur to windows, siding, vehicles, and bystanders from chips and debris which can become projectiles.

Prohibition against Modifications

- **Never modify or alter the brush chipper in any way.** Modifications can create serious safety hazards and will also void the warranty.
- **Fuel/exhaust system.** Never modify the exhaust system, fuel tanks, or fuel lines. Carbon monoxide poisoning, fire, or explosion could result.
- **Engine.** Do not tamper with the engine's governor setting. Over-speeding the machine is dangerous and will cause damage to the engine and other moving parts of the chipper.
- **Guards.** Do not operate brush chipper unless all guards and cover shields, which prevent access to moving parts and entanglement and pinch points, are in place. Failure to guard the power transmission mechanisms may result in serious injury or death.

Safety – Before Use

General

- **Instruct operators.** The brush chipper owner or rental company must instruct all operators in safe brush chipper set-up and operation. Do not allow anyone to operate the brush chipper who has not read the Owner's Manual and been instructed on its safe use. Make sure Owner's manual is on the chipper.
- **Adults only.** Only trained adults should operate and service the chipper. Do not let children operate.
- **Under the influence.** Never operate, or let anyone else operate, the brush chipper while under the influence of alcohol, drugs, or medication.
- **Intended use.** Use this machine only for chipping wood. Do not use for other purposes, as unforeseen hazards or equipment damage may result.
- **Controls and safety labels.** Learn how to use the machine and its controls safely. Understand and follow all safety labels. Replace any labels that are missing or have become unreadable.
- **Weather.** Never use in foul, bad or questionable weather, which causes a slippery ground condition.

Getting Ready

- **Tripping.** Clear all brush and debris from work walking area to eliminate tripping hazards.
- **Flying debris.** Clear area of foreign objects such as wire, rope, etc. that could become caught in moving machine parts and ejected as a projectile. Inserting these objects into the chipper hopper could damage the flywheel and cause injury.
- **Operate OUTSIDE only – dangerous carbon monoxide exhaust!** Chippers give off carbon monoxide exhaust, a poisonous gas that can kill. You CANNOT smell it, see it, or taste it. ONLY run brush chipper outdoors and away from building air intakes. NEVER run brush chipper engine inside homes, garages, sheds, or other semi-enclosed spaces. These spaces can trap poisonous gases.
- **Cooling ventilation.** The brush chipper needs adequate, unobstructed flow of air to allow for proper cooling of engine and brush chipper. Do not allow debris to accumulate and block airflow.
- **Transporting.** During transporting, take precautions to make sure brush chipper will not tip over and cause a fuel leak hazard. Never move, load or transport the chipper while the engine is running or flywheel is turning. Shut down the engine, wait for all moving parts to come to a complete stop and then wait five minutes before moving.
- **Hot exhaust - fires.** Exhaust from engine can be extremely hot and cause fire. Position muffler at least 7' from combustible objects during operation.

Summary of Important Safety Information

- **Spark Arrestor.** Equip engine with a spark arrestor if brush chipper will be used near any ignitable forest, brush or grassy land. Make sure you comply with applicable local, state and federal codes.
- **Fire extinguisher.** Keep a fire extinguisher rated “ABC” by the National Fire Protection Association nearby. Keep it properly charged and be familiar with its use.
- **Passengers.** Never carry passengers or allow people to sit on the chipper while it is running or being transported.

Personal Protective Equipment

- **Eye protection.** Wear ANSI approved eye protection when operating the chipper.
- **Hearing protection.** The use of ear-plugs or other hearing protection device is recommended for those in close proximity to the brush chipper while it is operating.
- **Head protection.** Wear a hard hat to protect your head from material that may be kicked out of the machine.
- **Hand protection.** Wear snug-fitting gloves. Do not wear gloves with loose cuffs.
- **Loose / dangling.** Loose or dangling apparel, jewelry or hair can become entangled in moving parts. Never wear jewelry or loose-fitting clothing when operating the chipper.
- **Long pants.** Wear long, heavy-duty pants to protect legs from ejected materials.
- **Sturdy Shoes.** Wear sturdy, non-slip shoes to help you keep a firm footing on the ground and reduce the risk of slipping and falling into the chipper. Do not use the machine while barefoot or wearing open sandals.

Fuel Safety

- **Fuel is highly flammable and explosive.** You can be burned or seriously injured when handling fuel. Use extreme care when handling fuel:
- **Fuel outdoors.** Fill fuel tank outdoors – never indoors. Fuel vapors can ignite if they collect inside an enclosure. Explosion can result.
- **Use approved container.** Never pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use an UL approved fuel container to transfer fuel to the engine.
- **Running / hot engine.** A running engine is hot enough to ignite fuel. Never add fuel or remove fuel cap if engine is running or still hot. Stop the engine and allow to cool at least five minutes before adding fuel.
- **Heat / flames / sparks.** Keep sources of heat, flame, or sparks away while adding fuel.
- Don't overfill. DO NOT overfill the fuel tank. Allow at least 1” of empty space below the fill neck to allow for fuel expansion.
- **Replace cap.** Replace fuel cap securely before starting engine.
- **Spills.** Clean up fuel spills immediately. Move brush chipper away from spilled fuel on the ground. Wipe fuel off engine and wait 5 minutes for excess fuel to evaporate before starting engine. Fuel soaked rags should be disposed of properly.
- **On skin / clothes.** If fuel is spilled on your skin or clothes, change clothes and wash skin immediately.
- **Inspect fuel system.** Check fuel system on a regular basis. Look for signs of leaks, deterioration, chafed or spongy fuel hose, loose or missing fuel hose clamps, damaged fuel tank, or a defective fuel shut-off valve. Do not start brush chipper until needed repairs have been completed.
- **Fuel storage.** Store fuel in a cool, dry place in an UL-approved, tightly sealed container away from children.

Safety – During Use

- **Safety equipment / controls.** Always operate the brush chipper with all safety covers, guards, and barriers in place and in good working order, and all controls properly adjusted for safe operation.
- **Guard chipper discharge.** Never use the machine with the chipper hopper or discharge chute removed.
- **Controls.** Stay in the OPERATOR POSITION while actuating controls.
- **Know how to stop.** Be thoroughly familiar with proper use of the equipment and all brush chipper controls. Know how to stop the brush chipper quickly if needed by PUSHING safety bar towards hopper.
- **Feeding branches.** Never stand directly in front of the hopper opening. Stand to the curb side of the hopper infeed table when feeding brush into the chipper. Feed material only when chipper is operating at full operating speed.
- **Climbing on.** Never climb or sit on the chipper while it is running.
- **“Bounceback”.** Keep your face and body away from the chipper hopper in the event of accidental bounce back of any material.

Summary of Important Safety Information

- **Slipping/Falling.** Operating in slippery, muddy, wet or icy conditions could lead to losing your footing and slipping or falling.
- **Damaged.** Do not operate the brush chipper with damaged, missing, incorrectly adjusted, or broken parts.
- **Check for fuel leak before starting.** After opening fuel valve, smell for fuel before starting engine. If you smell fuel, DO NOT start engine. DO NOT light a match. DO NOT flip on an electrical switch. Exit area immediately and call fire department.
- **Carbon monoxide exhaust.** The running engine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it. If you start to feel sick, dizzy, or weak while using the chipper, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.
- **Other exhaust dangers.** This product contains or emits chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Avoid inhalation of exhaust.
- **Smoking/sparks.** Never smoke near the running chipper, and never operate near sources of sparks or flames.
- **Hot muffler.** Never touch hot muffler or hot exhaust manifold. Exhaust and engine parts can be very hot and will burn you.
- **Machine's moving parts.** Keep hands, feet, and apparel away from knives, belts, flywheel, and other moving parts. Never remove any drive belt or guard while the unit is operating. Contact with belt or knives will cause personal injury.
- **Refueling.** DO NOT refuel the engine until it has cooled at least five minutes.
- **Malfunction during operation.** Always shut the machine off if any unusual noise or vibration occurs.
- **Vibration.** Overexposure to machine vibration on a daily basis may lead to circulatory or nerve damage.
- **Adjusting / repairing.** Always turn off brush chipper and disconnect positive battery cable before working on the brush chipper to prevent accidental starting.

Safety – After use

- **Cool engine before storing.** Let engine cool for at least five minutes before storing. A hot engine can be a fire hazard.
- **Shut off fuel supply.** Make sure fuel shut-off valve is in the OFF position.
- **Prevent accidental starting.** When brush chipper is not in use, remove key from starter (electric start engines) and secure in a safe location, or disconnect positive battery terminal from battery in order to ensure that brush chipper cannot be started in a storage location or by untrained persons.
- **Storage location.** Store the brush chipper in a dry location away from sources of heat, open flames, sparks or pilot lights – such as water heaters, space heaters, furnaces, clothes dryers, or other fuel appliances – EVEN IF the chipper's fuel tank is empty. Residual fuel could ignite.
- **Operate engine regularly.** Operate chipper engine every four weeks to dry out moisture that accumulates in the windings. If brush chipper cannot be exercised on a regular basis, prepare brush chipper for long term storage.

Safety - Inspection/Maintenance

- Inspect and maintain your brush chipper on a regular basis and repair as needed to keep it in safe working condition:
- **Turn off chipper.** Always turn off brush chipper, remove key from ignition, remove positive battery terminal from battery – to prevent accidental starting before working on the engine or brush chipper.
- **Replace guards / shields.** Make sure all guards and shields are replaced after servicing the chipper.
- **Burns.** Do not touch hot muffler. Muffler may be hot even if unit is stopped. Allow unit to cool before servicing.
- **Replacement parts.** If a part needs replacement, only use parts specified by the manufacturer. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the brush chipper and will void the warranty.

Special Safety Information on Static Electricity

Static electricity and filling fuel:

Static electricity can initiate from ungrounded fuel tanks or containers, from flowing fuel, and from persons carrying a static electric charge.

Static electricity can explosively ignite fuel vapors that are present during the fueling process, resulting in serious burns to all nearby persons. To avoid static electricity while fueling, certain steps must be followed before and during the fueling process in order to minimize and safely dissipate static charge build-up.

Filling Portable Containers at Service Stations:

Use a portable container to fill brush chipper tank. Never fill the chipper's fuel tank directly from the service station's fuel dispenser pump – the chipper's tank is not grounded and the high velocity flow of fuel from a fuel pump can cause static electric build-up. Use an approved portable container to transfer fuel to the chipper's tank.

- **Use a portable container made of metal or conductive plastic.** It will dissipate charge to ground more readily.
- **Fill container on the ground.** Never fill the portable fuel container while it is sitting inside a vehicle, trailer, trunk, or pick-up truck bed. ALWAYS place container on the ground to be filled.
- **Touch a grounded metal object before starting.** Always dissipate static charge from your body before beginning the fueling process by touching a grounded metal object at a safe distance away from fuel sources.
- **Keep nozzle in contact with container.** Keep fuel dispenser nozzle in contact with the portable container at all times while filling at a service station. Do not use the nozzle lock-open device on the dispenser hose.

About static electricity and fueling

Many common objects can accumulate and retain a static electric charge. Objects made of non-conductive materials (e.g. plastics) easily accumulate and retain static electric charge, as can objects made of conductive material (e.g. metal, water) if they are not electrically grounded. The static electric charge on an object, such as a human body or plastic fuel tank/container, can reach as high as several thousand volts!

A static electric spark can be generated if the static electric charge stored on an object “jumps” to another, less charged object. Such a spark can ignite invisible fuel vapors that are present during fueling situations.

Typical sources of static electric hazards during fueling

The following objects can accumulate a static electric charge and cause an ignition spark in typical fueling situations:

Ungrounded tanks/containers. Any ungrounded fuel tank or container can accumulate a static electric charge as a result of contact with other objects or friction during transportation. This static electricity can discharge as a spark to the grounded fuel dispenser nozzle, as the nozzle is first brought close to the tank/container at the beginning of the fueling process.

Flowing fuel. Most people are not aware that fuel accumulates static electric charge while flowing through a hose or pipe. This charge then transfers to and accumulates in the fuel tank or container that is being filled. The total amount of charge accumulation depends on the amount of fuel pumped into the container, the speed with which it is pumped, and whether or not the tank/container is grounded. If sufficient static electric charge accumulates in the fuel tank or container during the fueling process, the tank/container may discharge a spark to the grounded fuel dispenser nozzle.

Persons. A person dispensing the fuel can carry a static electric charge on their body, typically resulting from contact with their car seat or electronics. The static electricity can discharge as a spark between that person's hand and either the grounded dispenser nozzle or the fuel tank opening.