

# WOOD CHIPPER BE-WC42G



## **OPERATIONS & PARTS MANUAL**

## **FOR MODELS:**

• BE-WC42G

PURCHASE DATE	MODEL NO.	SERIAL NUMBER
DEALER		

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## TO THE COSTUMER

This manual contains valuable information about your new wood chipper. It has been carefully prepared to give you helpful suggestions for operating, adjusting and servicing.

Keep this manual in a convenient place for quick and easy reference. Study it carefully, only by proper care and operation can you expect to receive the service and long life designed and built into this mower. It is the owner's and/or operator's responsibility to:

- Read and understand the information contained in this manual.
- Operate, lubricate, assemble and maintain the equipment in accordance with all instructions and safety procedures in this manual.
- Inspect the equipment and replace or repair any parts that are damaged or worn which could cause damage, wear to the parts, or cause a safety hazard.

#### **SAFETY PRECAUTIONS**

Read and understand the Operator's Manual before operating the machine.

Keep all Children and pets away from area of operation to avoid injury caused by moving parts or flying debris.

Keep hands, feet and clothing away from moving parts. Never wear loose clothing near chipper as entanglement may result.

Never run machine indoors; engine exhaust contains carbon monoxide, which is colorless, tasteless and odorless.

Prolonged exposure to carbon monoxide can cause death.

Never open housing until rotor has come to a complete stop.

Before making any adjustments, serving or if material becomes clogged up in the machine, shut o\_ engine (trailer type) or disengage PTO and shut o\_ engine (PTO type).

Wait until the machine has reached a complete stop before adjusting or clearing debris.

Use extreme caution when feeding material into chipper. Never allow metal, bottles, cans, rocks or other foreign material to enter wood chipper.

In the event of foreign material entering machine; shut down machine, turn o\_ power supply and wait for all motion to cease. Inspect all components for damaged or loose parts.

Always wear safety goggles while operating machine.

Never allow hands or any body part inside of the feeding chute or discharge hood.

Stay clear of feeding chute and don't over reach. Keep proper balance and footing at all times.

Keep processed material clear from discharge hood. Build up of material may prevent adequate discharge and can result in hick back of material into feeding chute.

Do not transport or move machine while it is running.

Inspect machine before each use to ensure it is free of damage and e\_ects of misuse, and that all bolts are tight.

Always operate machine on a level surface free of obstructions to ensure operator stability.

Keep all guards and deflectors in place and in good working order.

Stand clear of discharge chute in case of flying projectiles.

On PTO models, always verify that tractor is in neutral and PTO is disengaged before starting tractor.

Always use safety chains when towing a trailer type wood chipper.

Be careful when attaching or detaching 3-Point hitch model to tractor.

Carelessness may result in severe crushing injury.



## WARNING!

Never operate machine with Shields or Guards remove!

## **MOUNTING INSTRUCTIONS AND INITIAL SETUP**

#### Note:

If the PTO shaft is too long, the chipper and the tractor's transmission may be damaged if the chipper is lifted as shaft may bottom-out when chipper reaches the nearest point to tractor.

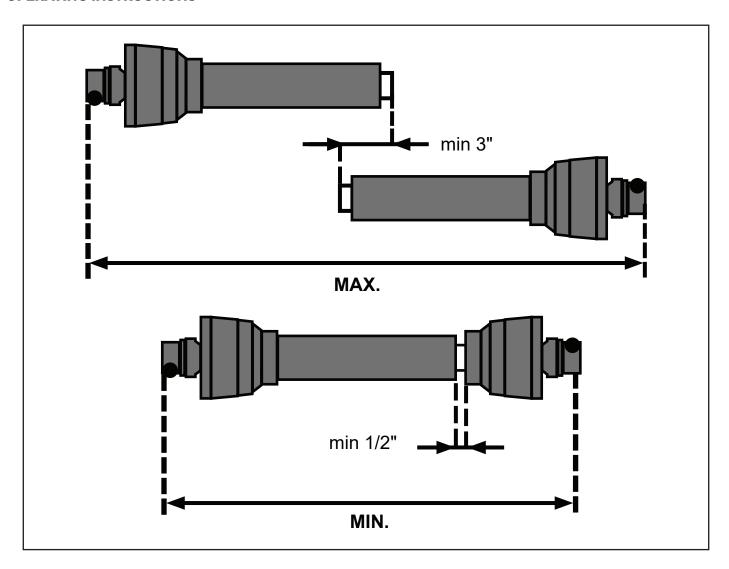
To prevent this, follow the instructions below:

- 1. Mount the chipper to the tractor's 3-Point hitch.
- 2. Lift the chipper until the chipper input shaft and tractor PTO shaft are at the nearest point to each other.
- 3. The PTO shaft may be too long and may need to be cut to length during installation.

## When shortening shaft:

- 1. Cut the same amount off both ends of the PTO shaft.
- 2. There should be at least 1/2" of clearance in the PTO shaft when chipper and the tractor are at there nearest point.
- 3. Remove burrs from shaft before assembling PTO shaft.

## **OPERATING INSTRUCTIONS**



## **A** NEVER

Operate the chipper with the hopper in the raised position!

Back tractor to chipper. Connect tractor to chipper using 3-Point hitch and PTO connections. PTO shaft must have at least 4 inches of overlap on telescoping tube for safe operation.

To engage chipper start tractor engine and gently engage PTO. Increase engine speed to rated PTO RPM. Operate chipper at rated speed of 540 RPM to 1000 RPM.

## **CHIPPING OPERATION**

Chipper accepts various sizes of branches, depending on model. Small branches can be held together and fed through in a bundle. Larger limbs may need to have side branches trimmed to eliminate jamming.

Place butt end of limb in chipper chute first. Feed through at a rate which power supply can handle.

Knives need periodic sharpening and will lessen capacity and feeding action of chipper if dull.

Refer to service & maintenance for sharpening instructions.

#### **STOPPING INSTRUCTIONS**

## **PTO MODEL**

- Move tractor throttle to low idle.
- Disengage tractor PTO and stop engine.
- Remove key to avoid engine start-up.

## **A** WARNING

Make sure machine has come to a complete stop before disconnecting PTO or attempting to adjust or repair chipper.

The chipper rotor may continue to rotate even with the engine stopped.

Never lift hopper before machine has come to a complete stop.

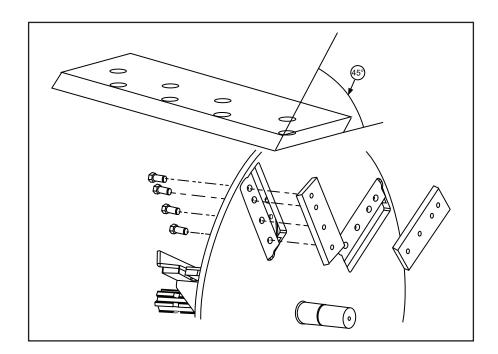
## **SERVICE AND MAINTENANCE**

## **Sharpening Knives:**

It is recommended that you sharpen the chipper knives as required. Knives may need sharpening more or less frequently, varying on type of wood chipped. Knives will need to be set up to stationary knife after each sharpening. Knives are reversible and can be reversed between sharpening.

## To sharpen Knife:

- 1. Check to make sure rotor has come to a complete stop and power source is shut off.
- 2. Open rotor housing by loosening access cover clamp.
- 3. Rotate rotor by hand to access knives. Caution must be used while turning rotor; even slow rotation could cut or sever a hand or fingers.



#### **OPERATING SAFETY**

Please remember it is important that you read and heed the safety signs on the 3-Point Wood Chipper. Clean or replace all safety signs if they cannot be clearly read and understood. They are for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.

All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices.

The manufacturer has designed this 3-Point Hitch Wood Chipper to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.

Close and secure all guards, deflectors, shields and the rotor cover before starting and operating. Read and understand operator's manual before starting. Review safety instructions annually.

Personal protection equipment including hard hat, hearing protection, safety glasses, safety shoes and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal or moving. Do not allow long hair, loose-fitting clothing or jewellery to be around moving parts.

Keep hydraulic lines and fittings tight, in good condition and free of leaks.

Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.

Turn off machine, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.

Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop machine, turn off engine and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging.

Inspect machine for damage or loose parts before resuming work. Never use alcoholic beverages or drugs which can hinder alertness of coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medication.

Do not allow riders on this machine at any time. There is no safe place for any riders. Never allow children or unauthorized people to operate or be around this machine.

Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.

Keep the working area clean and free of debris to prevent tripping. Operate only on level ground. Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury or damage.

Do not move or transport chipper when the rotor is turning. Do not exceed a safe travel speed when transporting.

#### STATIONARY KNIFE SETUP

After sharpening rotor knives, stationary knife may need to be set up. Loosen knife and set up with rotor knives to 1/32" clearance to the nearest knife. Always check clearance with all knives before tightening and using.

## **LUBRICATION SCHEDULE**

## **PTO Model:**

- 1. Greaseable bearings (2) on rotor shaft (20 Hours).
- 2. Greaseable bearings (2) on PTO shaft (20 Hours).
- 3. Lubricate telescoping tubes on PTO shaft for operator ease.

## **CLEARING PLUGGED ROTOR**

If too large a material or too much material is fed into the chipper, it could plug the rotor.

To clear the rotor, proceed with the following:

## **A** WARNING

Wait for rotor to come to a complete stop! Keep hands clear of blades!

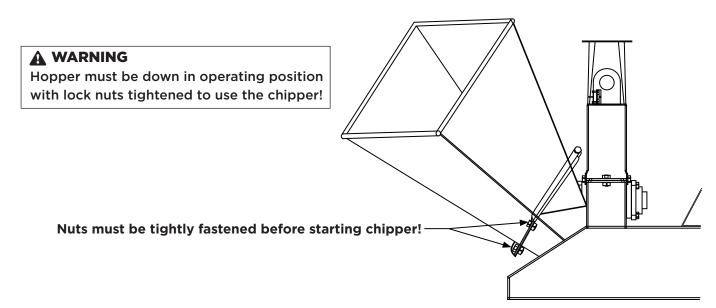
Never start tractor with rotor housing open!

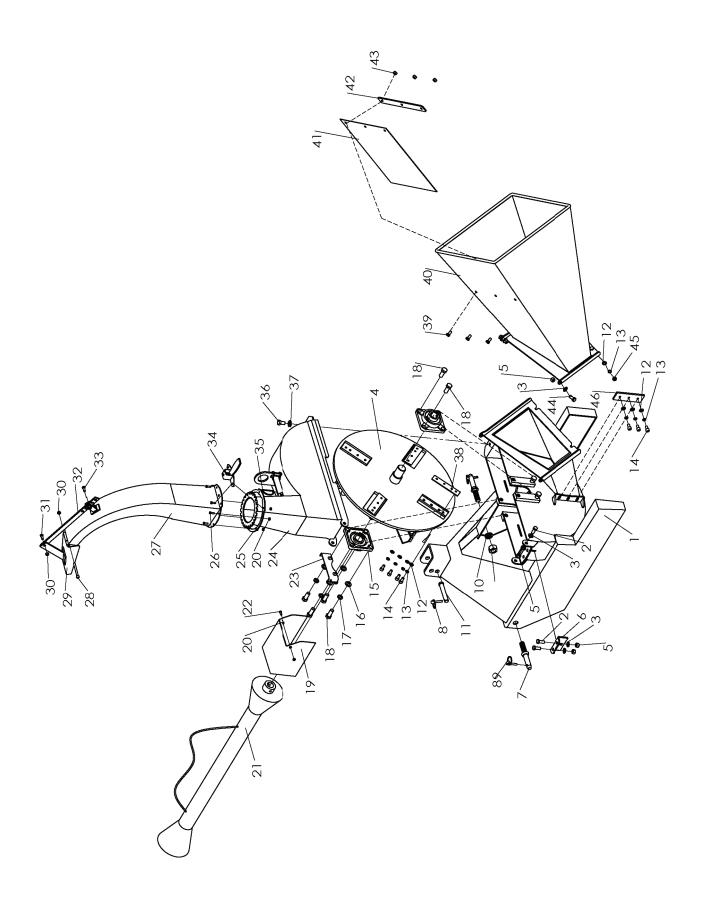
- 1. Disengage PTO and shut o tractor engine.
- 2. Remove rotor access cover belt, lift rotor access cover.
- 3. Clean the debris out of the chipping rotor, turn the rotor by hand to be sure it is free.
- 4. Replace rotor access cover and tighten rotor access bolt.
- 5. Start tractor, engage PTO and resume operation.

## **SHEAR BOLT REPLACEMENT**

PTO models are protected by a shear bolt on main rotor shaft. If shear bolt shears remove broken shear bolt and install replacement shear bolt.

For operator safety, never use a harder grade of shear bolt than recommended.





## **WOOD CHIPPER PARTS - PARTS LIST**

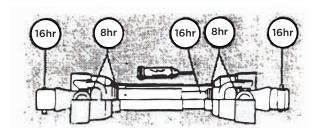
REF	PART NO	DESCRIPTION	QTY
1	110001	Base Frame	1
2	110002	Hex Bolt - M12x30	4
3	110003	Flat Washer - Ø12	8
4	110004	Disc Blade Holder	1
5	110005	Lock Nut M12	6
6	110006	Twig Breaker	1
7	110007	Hitch Pin	2
8	110008	Lynch Pin	3
9	110009	Nut - M24	2
10	110010	Lock Washer Ø24	2
11	110011	Upper Lift Pin	1
12	110012	Flat Washer - Ø10	21
13	110013	Spring Washer - Ø10	21
14	110014	Inner Hex Bolt - M10x20	19
15	110015	Bearing Holder	2
16	110016	Flat Washer - Ø16	8
17	110017	Spring Washer - Ø12	8
18	110018	Hex Bolt - M16x40	8
19	110019	Shield	1
20	110020	Lock Nut - M6	10
21	110021	PTO Shaft	1
22	110022	Hex Bolt - M6x16	2
23	110023	Shield Connecting Bracket	1

REF	PART NO	DESCRIPTION	QTY
24	110024	Top Rotor Housing	1
25	110025	Spacer Ring	1
26	110026	Hex Bolt - M6x20	8
27	110027	Discharge Hood	1
28	110028	Inner Hex Bolt - M8x100	1
29	110029	Deflector	1
30	110030	Lock Nut - M8	2
31	110031	Hex Bolt - M8x20	1
32	110032	Adjusting Brace	1
33	110033	Star Huddle - M8x30	1
34	110034	Hood Latch Assembly	1
35	110035	D Pin	1
36	110036	Hex Bolt - M14x25	1
37	110037	Flat Washer - Ø14	1
38	110038	Reversible Blade	4
39	110039	Hex Bolt - M10x20	3
40	110040	Feed Hopper	1
41	110041	Rubber Flap	1
42	110042	Clamp Plate	1
43	110043	Lock Nut - M10	3
44	110044	Hex Bolt- M12x25	2
45	110045	Nut - M10	2
46	110046	Stationary Blade	1

## **TROUBLESHOOTING**

	AVOIDABLE DAMAGES	POSSIBLE CAUSES	CORRECTIVE ACTIONS
SHIELD	- Excessive wear of shield bearings.	- Insufficient lubrication	- Follow lubrication instructions
		- Incorrect chain mounting.	- Mount chain to allow maximum angularity.
		- Shield interfering with implement.	- Avoid contact of the shields with fixed parts of the machine or tractor.
<b>B</b>			- Replace shield bearings.
	- Chain moving or failure.	- Shield interfering with implement	Avoid contact of the shields     with fixed parts of the machine     or tractor.
E N		- Incorrect chain mounting.	- Mount chain to allow maximum angularity.
			- Replace defective parts.
	- Guard cone damaged.	- Guard cone in contact with components on the tractor and/or implement.	- Eliminate interference between guard cones and any part on the tractor and/or implement.
		- Excessive Angularity.	- Avoid excessive angle during cornering or when lifting or lowering the implement.
			- Replace damaged guard cones.
	- Guard tubes damaged (deformed and split at one side).	- Guards in contact with components on the tractor and/or implement.	- Eliminate interference between guard cones and any part on the tractor and/or implement.
			- Replace damaged tubes.
		- Guard tubes overlap too short or no overlap at all with extended P.T.O. Drive shaft.	- Adjust guard tubes length with longer tubes.

\*Note: Shield bearing must be greased every 8 working hours. For any additional details (capacity, angle, length), please refer to catalogue.



Sold by:			

	AVOIDABLE DAMAGES	POSSIBLE CAUSES	CORRECTIVE ACTIONS
Cross Kit	- Cross arms broken.	- Extreme torque peak or chock load.  - Axial Loads too high.	<ul> <li>Use appropriate safety device.</li> <li>Change to a larger P.T.O. size.</li> <li>Shorten P.T.O. shaft</li> <li>Replace defective cross bearings.</li> </ul>
	- Bearing caps turning in their cross journal.  - Overheated bearing caps.	- Excessive continuous torque and/or excessive working angle.  - Inadequate greasing.	- Verify compatibility between shaft and working conditions.  - Carefully allow greasing instructions.  - Replace affective cross bearings.
	- Accelerated wear of cross kit.	- Excessive continuous torque and/or excessive working angle.  - Inadequate greasing.	- Verify compatibility between shaft and working conditions.  - Carefully follow greasing instructions.  - Replace defective cross bearing.

<sup>\*</sup>Note: Cross bearing must be greased every 8 working hours.

	AVOIDABLE DAMAGES	POSSIBLE CAUSES	CORRECTIVE ACTIONS
Telescopic Tube	- Telescopic tubes failure or twisting.	- Extreme torque peak or shock load.  - Short tube engagement.	<ul> <li>Use appropriate safety device.</li> <li>Change to larger P.T.O. size</li> <li>Replace the P.T.O. drive shaft with one having adequate length.</li> <li>Replace defective tubes.</li> </ul>
	- Accelerated wear of telescopic tubes.	- Extreme load when sliding.  - Short tube engagement.  - Inadequate greasing.	- Change to a P.T.O. drive shaft with one having adequate length  - Replace the P.T.O. drive shaft with one having adequate length.  - Carefully follow greasing instructions.
		- Continuous (sand, etc.).	- Replace defective tubes.

<sup>\*</sup>Note: Telescopic tubes must be cleaned and greased every 16 working hours.

	AVOIDABLE DAMAGES	POSSIBLE CAUSES	CORRECTIVE ACTIONS
Quick-disconnect yoke	- Quick-disconnect pin tight or completely seized.	- Quick-disconnect pin dirty (insufficient maintenance).	- Clean, oil and follow service instructions.
	- Quick-disconnect pin damaged (broken or bent).	- Quick-disconnect pin defective (forced engagement, incorrect handling).	- Replace quick-disconnect pin.
	-Quick-disconnect pin damaged in the locking portion.	- Excessive shaft length.	- Shorten shaft length (cut both telescopic tubes as well as shields and remove burrs).
		- Axial loads too high.	- Replace quick-disconnect pin.  - Clean and grease telescopic tubes and replace both tubes, if necessary.
			- Replace quick-disconnect pin.

<sup>\*</sup>Note: Quick-disconnect pins must be cleaned and greased every 16 working hours.

	AVOIDABLE DAMAGES	POSSIBLE CAUSES	CORRECTIVE ACTIONS
Yoke	- Yoke ears deformation.	- Excessive shaft length.	- Shorten shaft length (cut both telescopic tubes as well as shields and remove burrs).
		- Axial loads too high.	- Replace defective yokes.
		- Excessive working angle and torque.	- Clean and grease telescopic tubes and replace both tubes if necessary.  - Replace defective yokes.
			- Verify compatibility between shaft and working conditions
			- Disengage tractor P.T.O. during cornering or when lifting or lowering the implement.
	,		- Replace defective yokes.
	- Yoke ears distorted.	- Overload caused by high starting and peak torques.	- Engage P.T.O. more carefully.  - Use appropriate safety device.  - Replace defective yokes.
	- Yoke ears worn or pounded.	- Excessive working angle.	- Avoid excessive working angle.
			- Disengage tractor P.T.O. during cornering.
			- Replace defective yokes.



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