PTO Chipper Shredder Attachment
Manufactured by Caravaggi S.r.l.
to fit
BCS Power Units

Operating Instructions
Before commissioning the machine, read operating instructions and observe warning and safety instructions.

PLEASE ALSO READ ORIGINAL BCS INSTRUCTION MANUAL

TRACMASTER
The landscape machinery specialists
No liability will be accepted for any damage caused to persons or property through failure to observe the operating and safety instructions.
IMPORTANT

PLEASE READ THE OWNER’S MANUAL FOR THE POWER UNIT FIRST.

For any further information or assistance please contact Tracmaster on 01444 247689 or visit www.tracmaster.co.uk
Safety

IMPORTANT! READ BOTH THE CHIPPER SHREDDER AND POWER UNIT OWNER’S MANUAL BEFORE ASSEMBLING AND OPERATING POWER UNIT AND ATTACHMENT.

The power units and attachments are designed for operation by properly instructed adults only.

Make sure that any person operating this equipment has read all operating/owner’s manuals.

IMPORTANT! DO NOT LET CHILDREN OPERATE THE UNIT.

IMPORTANT! KEEP THE OPERATING AREA CLEAR OF PEOPLE AND ANIMALS. BE CAREFUL THAT CHILDREN DO NOT COME NEAR.

Do not allow hands or any other part of the body, or clothing, inside the feeding chamber or discharge chute of the Chipper Shredder, or near any moving part.

During storage, and whenever the power unit is unattended, make the engine is unstartable by disconnecting the spark plug wire from the spark plug.

Follow the instructions to run the machine (see Power Unit Owner’s Manual).

Do not run the engine indoors or in any other closed space where deadly poisonous carbon monoxide fumes can collect.

Operate only when there is good visibility. Do not operate at dusk or at night. Do not operate when it is foggy or hazy.
Safety

Do not let your hands or any other part of your body, or your clothing, enter the chipper or shredder intakes, or the discharge chute of the Chipper Shredder unless the engine has been made unstartable (by disconnecting spark plug wire).

Gloves may be worn during chipper operation, but should be removed before use of the shredder.

Do not go in front of the chipper intake area or put your head over the shredder intake.

Never change the engine governor setting or over-speed the engine.

DISCONNECT THE SPARK PLUG WIRE FROM THE SPARK PLUG TO ENSURE THAT THE ENGINE CANNOT BE STARTED DURING ANY OF THE FOLLOWING:

1. Repairs or adjustments to unit or attachment.
2. When you have to leave the unit unattended or are going to store, transport or ship it.
3. When a foreign object has been taken into the attachment and must be taken out and the attachment inspected for damage.
4. Before cleaning out the Chipper Shredder or making grinding screen installation changes.
5. If the machine starts to vibrate or suddenly run erratically. If the unit and attachment are not running smoothly, they should be inspected by an authorised Tracmaster servicing dealer before further use.

All safety guards, plates, lockouts, deflectors and shields must be in proper position.

**WARNING!** Do not operate if any safety devices or fastening parts are missing from the Chipper Shredder.
Preparation

Wear appropriately protective clothing and safety protection articles for the attachment and climate in which you are to use the machine.

1. Wear snug-fitting clothing which protects body surfaces, and allows freedom of movement without being baggy. Ties, scarves, jewellery etc which could be caught in the machine should not be worn. Remove gloves before feeding material into the Shredder hopper.

2. Wear hearing protection.

3. Wear eye protection goggles.

4. When working in strong sunlight, protect your body with clothing and apply a sun block to exposed areas of skin. Wear sunglasses under the safety goggles.

Take the following precautions for the safe storage and handling of fuel:

1. Keep fuel supplies in approved type, properly labelled fuel containers.

2. Do not store fuels or fuelled units in enclosed (unventilated) areas, or in garages or shops connected to human living quarters. Do not store fuelled units where there are flames or sources or sparks such as electrical appliances or switches.

3. Obey all local regulations for the storage and handling of fuel.

4. Do not smoke when fuelling, or fuel where there are fumes that could be ignited by fire or sparks.

5. Do all fuelling outdoors over non-flammable surfaces. If fuel is spilled on the unit, wipe it dry and properly dispose of the wiping rag. ALWAYS MOVE THE UNIT AT LEAST 10 FEET (3m) from the fuelling spot and fuel supplies before starting the engine.

6. Always remove the engine fuel cap very slowly to equalise the tank pressure and avoid spurting of fuel. Keep your face and eyes away from the tank whilst loosening the cap.

7. Do not fuel a running or hot engine. Do not loosen the fuel cap until the engine has stopped. Then wait for several minutes for the engine to cool before pouring fuel.

Before starting the engine, put all control levers in neutral (N) position. All “N” positions on the gear selector are neutral. Also be sure to disengage the PTO (power take-off) to the Chipper Shredder.

NEVER make any adjustments to the Chipper Shredder attachment while the engine is running.
Preparing a New Chipper Shredder

After the Chipper Shredder is unpacked, the following assembly may be required:

1. The rear support assembly includes the PTO flange, drive shaft and a large double pulley.
   (a) Remove protective tape from pulley rims.
   (b) Slip v-belts around shaft and pulley, and align support assembly with rear panel of the Chipper Shredder. Hold loosely in position with four 10 x 25 x 17mm hex head bolts and wavy washers (figure 1).
   (c) Mount v-belts on large and small pulleys.
   (d) Push to support bracket in a downward direction to increase belt tension. Make tension as tight as possible (nearly zero deflection), and tighten the bolts.

2. Install the belt cover with two sets of wavy washers and 8 x 16 x 13mm hex head bolts (see figure 2).

3. Insert the castor wheel shafts into the wheel mounts, and tighten the clamps. Adjustment to level the Chipper-Shredder by raising or lowering the wheels should be made at each work site (figure 3).

4. Install Chipper chute with 8mm nuts and wavy washers on the three mounting studs (figure 3).

5. Install Shredder hopper with 16 wavy washers and eight sets of 8mm bolts and lock nuts. The wavy washers go on both top and bottom.

6. Check out your assembly. Make sure all nuts, bolts and other fasteners are tight.
Setting up the Chipper Shredder

1. Couple the Chipper Shredder to the power unit. Before transporting it to the work site, be sure the two rear supports are in a raised position to clear the ground and the front castor wheels are in contact with the ground.

2. The machine reduces wood to small chips and pulverizes softer materials, so be careful where and how you set it up. Do not place it on hard gravel, stone, brick, concrete or asphalt surfaces which provide no cushion. SET THE UNIT UP ONLY ON FIRM, LEVEL GROUND.

3. Level the machine by adjusting and reclamping the castor wheels in their mounts. Then stabilise the machine by adjusting the two rear supports.

4. For most materials, the standard screen is suitable. However, the screen may be replaced with the series of rods and tubes when the material (leaves, grass etc) to be shredded is wet.

5. If the wet material cannot be discharged, it may be necessary to throw some dry wood chips or small twigs into the hopper to clear out the Shredder.

**WARNING!** Inspect what you plan to feed into the hopper. Remove glass, metal, brick, stones, long or thick branches, and anything else which could damage the machine or be discharged at high velocity.

**WARNING!** Inspect hopper before running the machine. Be sure the hopper is empty before starting the engine.

**WARNING!** Always shut down the machine and wait for all movement to stop before clearing the shredder screen, chipper chute, or the material discharge area. NEVER insert tools, such as a hoe handle etc, into a machine that is running in an attempt to clear a jam. The Chipper Shredder operates so quietly that it is necessary to check the painted slash mark on the end of the shaft to see whether all motion has stopped (figure 4).

**NOTE:** Always disengage the PTO lever before stopping the engine. If the PTO remains engaged during engine shutdown the rotating Chipper Shredder shaft may cause the engine to restart.
How the Chipper Shredder Works

The Chipper Shredder is so named because it is both a hammermill and a rotary knife.

Grass, leaves, twigs and garden waste fed into the hopper at the top are finely shredded by 28 hammer blades on the hammermill shaft.

The rotary knife blade of the chipper works much the same as a food slicer does.

When wood, up to 7cm (3”) in diameter, is fed into the chipper chute, the rotary knife keeps cutting off the end.

A set of rods is provided. These can be installed in place of the standard discharge screen, resulting in finer mulch or smaller chips. See page 13 for more information on how to change the screen.
Chipper Shredder Operation

Control Setting

NOTE: Your power unit owner’s manual may warn you not to “tape down or otherwise defeat the purpose of the stop switch lever”.

This warning refers to the red OPC lever and applies to applications where the unit is in gear.

It does not apply to use of the Chipper Shredder where the unit will be out of gear (in neutral).

However, Tracmaster strongly recommends that the PTO Chipper Shredder is operated by two competent adults.

IMPORTANT: Read the Operating Instructions for your power unit before commencing work.

NOTE: ALWAYS OPERATE THE CHIPPER SHREDDER AT FULL THROTTLE.

Feeding the Chipper Shredder

WARNING! Material can be discharged from both the feed and discharge openings. Always wear safety goggles and head protection. Do not look into the Shredder hopper or place your head over it whilst feeding material. Do not go directly in front of the Chipper chute or the discharge opening.

WARNING! Shut off the engine and disconnect the spark plug wire before cleaning a jammed hopper. Do not put sticks or other cleaning implements anywhere inside the hopper or other parts of the machine unless the engine is shut down and there is no movement.
Chipper Shredder Operation

Chipping Wood

(figure 7)

1. Do not go on the discharge side when the Chipper Shredder is running. Stand a little to the right side of the Chipper chute while feeding it.

2. Try to direct the end of the branch right at the knife blade at bottom, centre of the chute. Find just the right feed pressure - not too much!

3. Do not put very soft or very short pieces into the chute. If a short-chipped piece remains in the chute, do not take it out with your hands. Push through the Chipper with the next piece. Never put hands or fingers into the chute.

Shredding

(figure 8)

1. Be very careful what you put into the hopper. The Shredder cannot handle cloth, string, plastics, glass, rubber, rocks or paving, bricks, large wood chunks, metal, long branches and vines.

2. Soggy soil, green garden waste and wet grass clippings may be processed through the Shredder without clogging, if dry wood chips or leaves are mixed in with the wet material, the standard discharge screen is replaced with rods and tubes (see Changing the Screen section on page 13).

3. You may operate the Shredder and Chipper at the same time as long as you do not overload the machine.

⚠️ WARNING! Do not wear gloves, rings, bracelets, wrist watches or any other items which could be caught in the material and be drawn with it into the Shredder.
Chipper Shredder Operation

Changing the Screen

1. The standard screen, seen in the discharge opening, is a curved piece with “Swiss cheese” holes (figure 9). This piece must be removed when the parts are being installed to process wet material or make finer chips.

2. Notice the series of six holes on the chute side of the Chipper. The bottom hole is not used. Two of the other holes will have long rods running through to the back of the machine. They retain the standard screen.

3. The belt cover must be removed temporarily for access to the top position rod. Remove the “hairpins” and pull out the two rods. Lift out the standard screen.

4. Five sets of rods, tubes and retaining pins (hairpins) are to be installed. Start one rod in the top position hole on the front (Chipper chute) side. Slip a tube onto the rod and push the rod through the hole in the rear side (figure 10). Lock in place with a hairpin. Install the other four rods and tubes in the same manner, leaving the bottom hole empty.

5. Reinstall the belt cover.
Maintenance & Storage

Keep engine unit and Chipper Shredder attachment in good working condition.

Clean the attachment at regular intervals, and check each time for missing parts.

Check the tightness of all fasteners.

Perform all items of maintenance given in this owner’s manual.

Do not attempt any disassembly or repair to the attachment for which instructions have not been furnished.

Certain adjustments, and servicing should be done only by a Tracmaster-trained servicing dealer.

Follow the instructions in the Power Unit Owners Manual regarding maintenance and storage of the Power Unit.
Chipper Shredder Maintenance

1. Clean out the hopper before each use.

2. Clean the exterior at regular intervals and apply oil or wax to prevent rust.

3. Check all nuts and bolts frequently and tighten any that are loose. Replace missing parts.

4. Some internal parts, such as hammers, will require replacement from time to time. Every part of the Chipper Shredder is available from Tracmaster parts stock. If you are unsure, contact our spares department.

5. If anything should go wrong with your machine, consult our technical department who will be able to advise you. DO NOT attempt any repairs yourself that are not in the owner’s manual or authorised by a member of Tracmaster staff.

⚠️ **WARNING!** Do not use this Chipper Shredder with the discharge left unscreened. Discharge must be covered either with the rods and tubes or the standard screen.

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Manufacturer Information

This machine is manufactured in Italy by Caravaggi S.r.l.

Tracmaster Ltd is the UK distributor for this model, the Caravaggi BIO 100.

Please ensure you read the original manufacturer’s manual before operating this machine.

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