



CM90 and CM95 Series

Safety, Operations & Maintenance Instructions

INTRODUCTION

This manual contains information concerned with safe practices when operating the machine, safety precautions that are necessary during operation, maintenance instructions and troubleshooting.

Before operating the machine it is imperative to have read and understood this manual. The instructions of this manual are intended to be read and followed to ensure the proper running of the CM90/95 and the safety of the user.

In the case of sale or transfer of the machine, this manual must be handed over. In the event that this manual is damaged or lost, the owner must ask the manufacturer or the former owner for a copy. This manual is to be considered as an integral part of the machine.

The information conveyed on this manual is reflective of the machine at point of sale. The manufacturer has the right to modify the machine for technical or commercial reasons and this does not make the manual unsuitable for use.

The copyright for this manual belongs to the manufacturer. The technical texts, images and pictures within this manual cannot be published or used, completely or in part, without written consent from the manufacturer.

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INFORMATION ABOUT THE MACHINE

INTENDED USE OF THE CM90/95

The Truyard CM90/95 is designed to chip most branches and prunings alongside other organic material such as palm, and mulch other organic waste such as shrubs, leaves, manure, cardboard and hay. It is not designed to process inorganic waste.

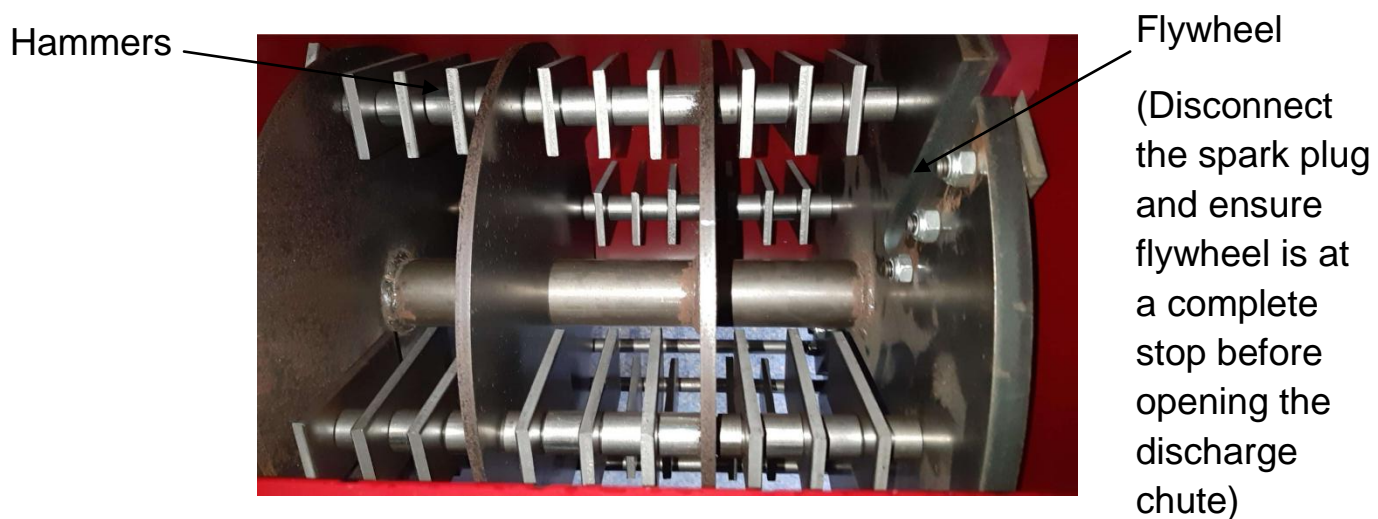
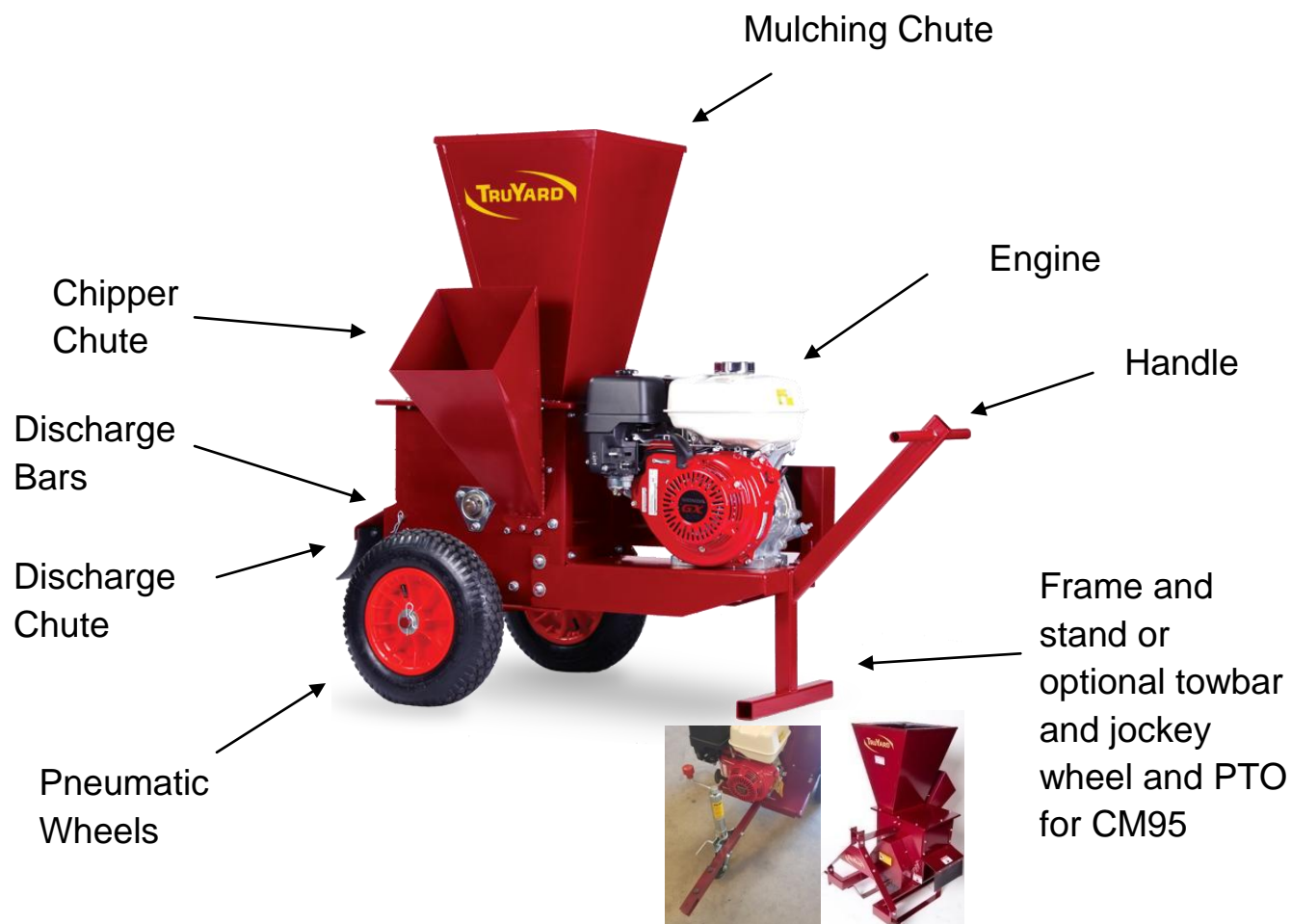
MACHINE DESCRIPTION

The Truyard CM90/95's chipping and mulching mechanism consists of a flywheel with two mounted blades and hammers respectively. As the flywheel rotates at a high speed, the blades chip the incoming material and as smaller material is entered into the mulching chute, the hammers mulch the material.

The CM90/95 consists of the following features:

- A pair of pneumatic wheels to manoeuvre the machine
- A chipper chute
- A flywheel with two chipper blades
- Hammers to mulch the material
- An engine
- A discharge chute
- A mulching chute
- A handle to lift and move the machine
- A frame with a stand
- 5 discharge bars
- An optional towbar attachment with a jockey wheel or PTO design for the CM95

IDENTIFICATION OF MAIN PARTS



SPECIFICATIONS

CM90

Engine Specifications		Transmission	
Engine	Honda GX270 or Honda GX270 Key Start	Belt Drive	V Belt B section
Engine Type	Petrol	Pulleys	Cast iron
Cutting System		No Load Starting Clutch	Yes
Chipping Capacity	Up to 90mm	Machine Construction	
Number of Blades	2	Weight	135kg
Mulching Hammers	28 spring steel reversible hammers	Chassis	Steel construction
Discharge Bars	5	Special Features	
Easy-feeding	Yes	Warranty	Domestic Application 2 years, Commercial Application 3 Months

CM95

Engine Specifications		Transmission	
Engine	Honda GX390 or Honda GX390 Key Start	Belt Drive	V Belt B section
Engine Type	Petrol	Pulleys	Cast iron
Cutting System		No Load Starting Clutch	Yes
Chipping Capacity	Up to 95mm	Machine Construction	
Number of Blades	2	Weight	160kg
Mulching Hammers	40 spring steel reversible hammers	Chassis	Steel construction
Discharge Bars	5	Special Features	
Feeding System		Warranty	Domestic Application 2 years, Commercial Application 90 days
Easy-feeding	Yes	Optional Towing Attachments	PTO design or Towbar, Jockey Wheel and Hitch available

SAFETY PRECAUTIONS

ACCIDENT PREVENTION MEASURES



STRICT ADHERANCE TO THE FOLLOWING RULES, PRECAUTIONS AND SAFETY MEASURES LISTED HERE MUST BE CONDUCTED TO AVOID THE DANGER OF ACCIDENT AND DAMAGE TO PEOPLE AND THE MACHINE.

- 1) Ensure that the operator of the machine has read and understood fully this manual and the engine manual
- 2) Always wear suitable footwear. Do not use in bare feet
- 3) Always stop the engine and disconnect the sparkplugs when guards are not in place
- 4) Check that the items to be chipped are free of all foreign debris. This includes and is not limited to nails, wire, rope etc
- 5) Do not allow children to come near the CM90/95. Always ensure that children are at a safe distance and are well away from the machine
- 6) Do not put hands whatsoever inside the machine or near the belt or blade while the machine is running
- 7) Read the engine manufactures operating instructions carefully. Do not alter governor settings or over speed the engine
- 8) Carefully follow the refuelling safety instructions when refuelling the engine:
 - Always refuel the CM90/95 outdoors in a well ventilated area
 - Ensure the engine is turned off and cooled before beginning refuelling process.
 - Keep all ignition and heat sources clear of the refuelling area.
 - If spillage occurs mop up immediately and wait a suitable time so the fumes disappear
 - When storing fuel make sure it is in a suitably designed container (AS/NZS 2906:2001) and it is stored in a cool dry place.
- 9) Use your CM90/95 only in daylight when visibility is good
- 10) When using the CM90/95 slopes should be treated with caution. Never place the CM90/95 on uneven ground
- 11) Never leave the CM90/95 unattended whilst engine is running
- 12) Do not use CM90/95 in confined spaces with no ventilation
- 13) It is advisable to wear safety glasses and hearing protection whilst operating the CM90/95
- 14) Always operate with all guards in place

SAFETY LABELS AND DESCRIPTIONS

	<p>CAUTION – keep hands and feet away from the discharge and inlet openings on the machine as this could cause injury</p>
	<p>CAUTION – the operating of the engine, its maintenance and starting must be done after having read the manual to prevent any harmful incidents and misuse of the engine from occurring</p>
	<p>CAUTION – ensure that the operator has read and understood this manual before operating the machine to prevent injury</p>
	<p>CAUTION – keep hands and feet away from openings on the machine to prevent injury</p>

AFTER A PERIOD OF INACTIVITY

Ensure the following checks have been done on the CM90/95 before operation after a long period of inactivity:

- Check that the machine is undamaged and all guards are attached
- Check all the mechanical parts of the machine are not rusty and are in working condition
- Ensure the flywheel and the blades rotate freely, are sharp and are connected to the machine
- Ensure that the engine has sufficient oil and fuel
- Check all nuts and bolts are tight

OPERATING INSTRUCTIONS

BEFORE USE

Before operating the machine it is important to ensure the following to use the machine to its full capability and to keep the operator and the surrounding area safe.

- Make sure that the operator has read and understood how to use the engine as per the manufacturer's instructions
- Before operating the CM95 PTO ensure you have read your tractor's manufacturer's instructions in regards to the use of a PTO drive.
- Ensure that the air cleaner is clean and oil and fuel in the engine are as per the engine manufacturer's instructions.
- Check that all guards and parts are in place
- Make sure the throttle control is at its lowest setting. At idle the centrifugal clutch should be disengaged
- Ensure that the CM90/95 is located on flat, even ground and that there are no people or animals in the vicinity of its working function, including the area surrounding the discharge chute
- Ensure that the operator has read and understood this manual, including how to control the machine
- Wear the prescribed safety equipment
- Check that the material to go through the CM90/95 does not contain nails, ropes or any metal object that can damage the machine whilst it is being mulched

DURING OPERATION

Once satisfied that the above criteria have been met, turn on the engine as per the manufacturer's instructions. Once running:

- Gently increase the throttle until the clutch engages and the blades rotate. Operate the CM90/95 at near full throttle for optimal performance
- For the CM90/95 all branches go through the chipper chute. It is best if the thickest end of the branch gets fed into the chipper chute first; generally this is the end that you cut the branch at. Sometimes it may be required to prune the side branches to fit the main branch into the chipper chute. Ensure this is done before you start chipping. The CM90/95 generally will draw the branches in and on no occasion do you need to put your hand inside the chipper chute. Once the branch has been put through, put leaves and other organic waste no more than approximately 10mm in diameter through the mulching chute at the top of the machine. Once again, do not put your hands in the mulching chute.
- To adjust the cutting of the CM90/95, the discharge bars can be taken out or put in. Ensure that when adjusting the amount of discharge bars in the machine that the machine is off and the flywheel has stopped rotating. The discharge

bars are important for the efficient use of the machine. They are there for the purpose of allowing the CM90/95 to handle multiple types of material without clogging. For an example let the top bar be no.1 and the bottom bar be no. 5. For dry materials such as gum trees etc. leave all the bars in. For wetter materials, plants, manure, flowers etc with higher water content, take out no. 3 and no. 5. For newspapers and cardboard, take out no. 5, 4 and 3. Generally, if what is being inserted into the machine is not coming out, there are too many bars in place.

MACHINE BLOCKAGE

During operation it is possible that a branch or pruning with a diameter higher than the working capacity of the machine is entered, and blocks the rotation of the flywheel.

To remove the blockage, ensure that the machine has been turned off, the spark plug has been disconnected and that the flywheel has no power supply that will make it rotate while the material is being removed. Once the blockage has been taken out, the machine can be re-started.

AFTER USE

When you have finished operation of the machine and have turned the engine off:

- Allow machine to cool down
- Check the machine over to see if there are any irregularities that could impede your next use
- Check fuel and oil levels for next use

GENERAL MAINTENANCE

For the servicing of the machine it is strongly recommended, for safety and quality of the maintenance, for this to be conducted by authorised professionals from Truyard authorised dealers who know the machine.

ADJUSTMENT OR REPLACEMENT OF THE CHIPPER BLADES



Disconnect the spark plug to ensure that the machine will not receive power whilst you are working on the flywheel



Take off the hopper plate of the machine using a 13mm spanner. Place a bar through the flywheel. Ensure that the flywheel doesn't rotate when this bar is in place by pulling the engine cord.



Remove the chipper chute using a 13mm spanner to give access to the bolt holding the chipper blade.



Using a 13mm spanner, loosen the nut that connects the chipper blade to the flywheel.

CAUTION – THE CHIPPER BLADE IS SHARP AND CAN CAUSE INJURY



In order to fully remove the nut and bolt, use a 6mm Allen key to counter the force from the spanner. Remove the nuts and bolts from the chipper blade. Once all three have been removed, take out the chipper blade. The chipper blade will come out of the chipper chute entrance. When putting the blades back in you should always replace the nuts and bolts and Loctite the thread for safety.

CAUTION – THE CHIPPER BLADE IS SHARP AND CAN CAUSE INJURY

ADJUSTING BELT TENSION



Remove the protective cover that sits over the belts with a 13mm socket.



Using a 17mm spanner, loosen the nuts that connect the engine to the frame of the machine. Once all four have been loosened, slide the engine on the rails to increase the belt tension. Re-tighten the nuts and ensure that the engine is secure.

NOTE: WHEN ADJUSTING THE BELT, THE FLYWHEEL SHOULD TURN WITHOUT TURNING THE MOTOR. DO NOT OVERTIGHTEN.

DISCHARGE BARS

CORRECT



WRONG



CORRECT POSITION OF CLIP FOR DISCHARGE BARS

When re-inserting the discharge bars, ensure that the R-clip is fully inserted such that it is pushed all the way through to the large loop before restarting the machine

WARNING!

MAKE SURE MACHINE IS TURNED OFF, HAS COME TO A COMPLETE STOP AND SPARK PLUG LEAD IS REMOVED BEFORE ACCESSING ANY PART OF THE MACHINE

TYRE PRESSURE

The maximum tyre pressure for the pneumatic tyres is 18psi. Over inflation of the tyre can cause injury.

STORAGE

In the case that the CM90/95 will not be used for an extended period, it is important to store the machine in a location that is sheltered from the weather to avoid damages to the machine.

The storage temperate recommended is between 0°C and 50°C.

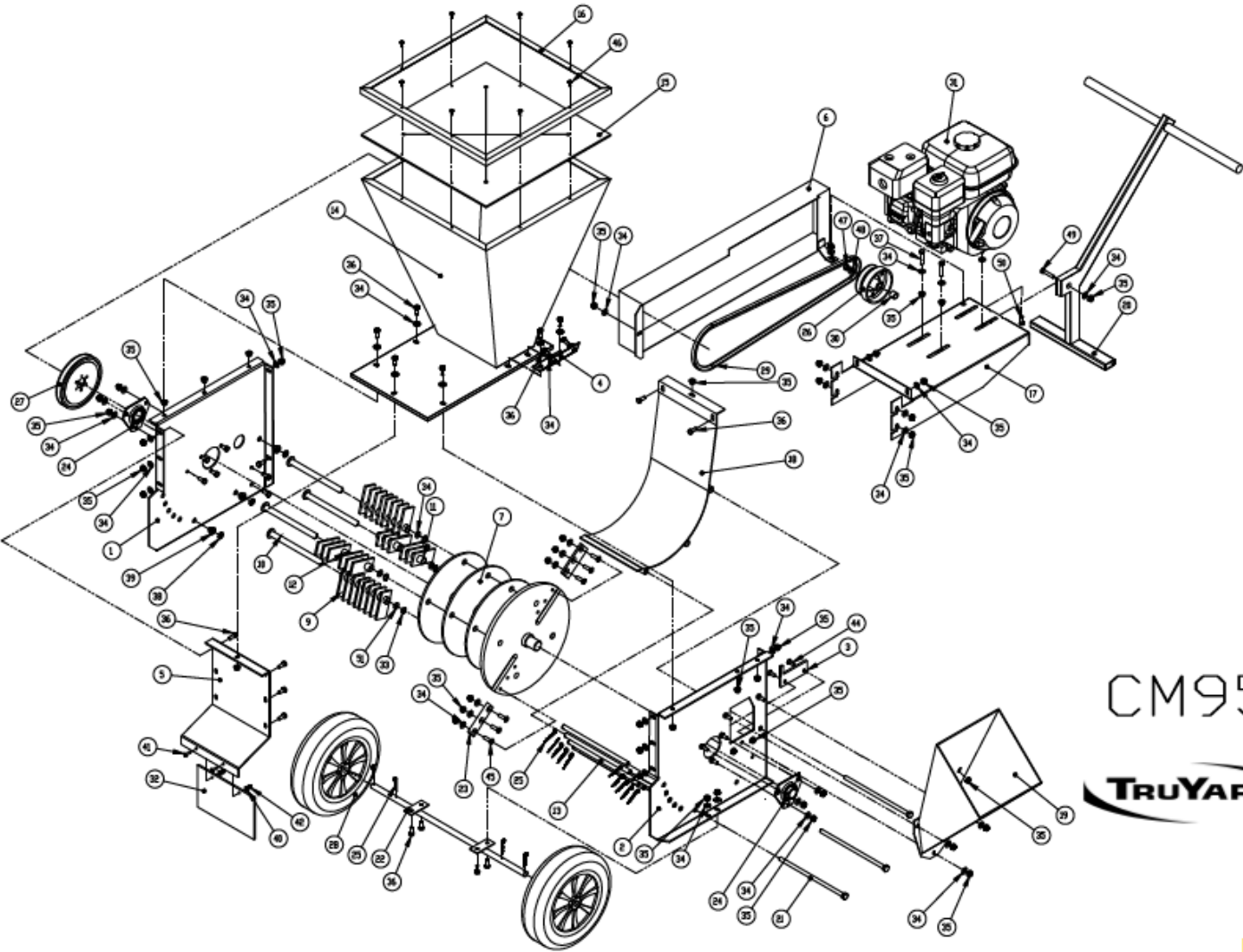
Before this period in storage, it is recommended to:

- Properly clean the machine
- Carefully free the flywheel from any remains of chipped wood
- Ensure that the area in which the machine is to be stored is sheltered and the ground surface is flat and compact
- Perform a check of the machine to detect possible damages or irregularities and to ensure that the safety labels are undamaged and clearly visible

CLEANING

Regularly clean the machine using only compressed air, blowing away wood dust and green waste residue. For this operation ensure that you wear protective gloves and eyewear.

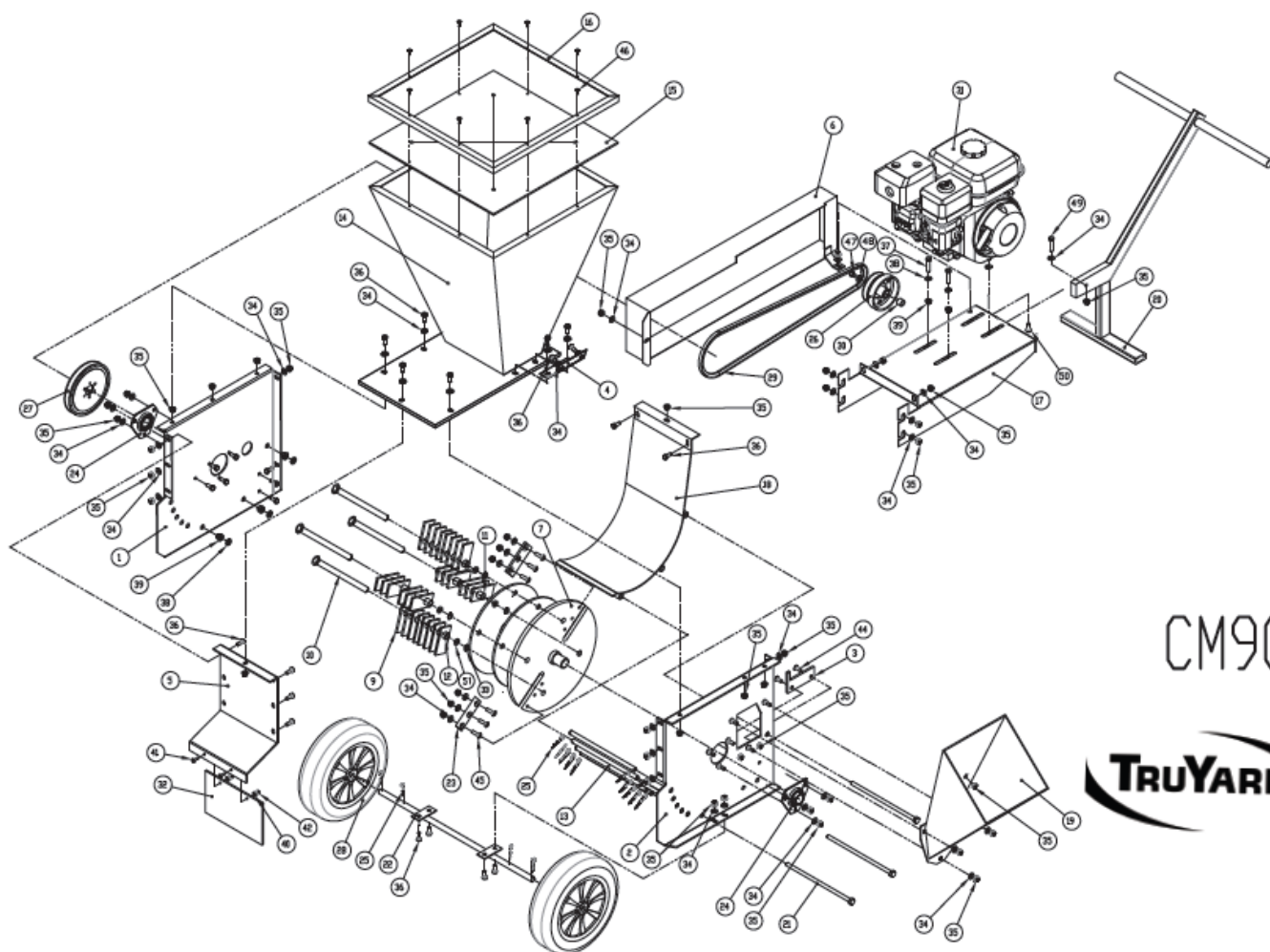
PARTS LIST



CM95
TruYard

P1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1203001	Drive Side Plate	1
2	1203002	Off Side Plate	1
3	1203005	Arvil	1
4	1203006	Bracket	1
5	1204007	Small Deflector	1
6	1203008	Belt Guard	1
7	1204010	Fly Wheel	1
9	1203016	Mulcher blade	40
10	1204017	Spindle 5/8x300 mm	4
11	1203018	Spacer 18 mm	36
12	1203019	Spacer 10 mm	12
13	1204029	Discharge Bar 358 mm	5
14	1204030	Hopper	1
15	1204031	Rubber Top	1
16	1204032	Hopper Rim	1
17	1204040	Engine Plate	1
18	1204060	Large Deflector	1
19	1203071	Chipper Chute	1
20	1203080	Handle	1
21	1204091	All Thread L367	3
22	1204020	Axle	1
23	1203014	Chipper Blade Set With Bolt	2
24	1901507	Bearing	2
25	1901410	R-Clip	14
26	1901623	Clutch Extreme Duty 3.7 OD	1
27	1901618	Biloc Pulley Set 28 mm	1
28	1901012	Wheel 4.00x8	2
29	1901609	Belt	1
30	1901419	Spacer	5
31	-	Engine	1
32	1204055	Discharge Rubber	1
33	1901420	External Retaining	4
34	1901300	Washer M8	45
35	1901230	Nut M8	41
36	1901101	Bolt M8x20	39
37	1901103	Bolt M8x40	4
38	1901310	Washer M10	3
39	1901210	Nut M10	3
40	1901320	Washer M6	2
41	1901151	Bolt M6x20	2
42	1901200	Nut M6	2
44	1901403	Screw M8x20 Flat Skt	2
45	1901406	Screw M8x30 Flat Skt	6
46	1901404	Techscrew M10x3/4	8
47	1901441	Bolt 7/16x25	1
48	1901360	Washer 7/16	1
49	1901107	Bolt M8x65	1
50	1901142	Bolt 3/8x1	1
51	1901332	Washer M16	6



CM90



P1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1203001	Drive Side Plate	1
2	1203002	Off Side Plate	1
3	1203005	Anvil	1
4	1203006	Bracket	1
5	1203007	Small Deflector	1
6	1203008	Belt Guard	1
7	1203010	Fly Wheel	1
9	1203016	Mulcher blade	28
10	1203017	Spindle 5/8x210 mm	4
11	1203018	Spacer 18 mm	28
12	1203019	Spacer 10 mm	4
13	1203029	Discharge Bar 263 mm	5
14	1203030	Hopper	1
15	1203031	Rubber Top	1
16	1203032	Hopper Rim	1
17	1203040	Engine Plate	1
18	1203060	Large Deflector	1
19	1203071	Chipper Chute	1
20	1203080	Handle	1
21	1203090	All Thread L250	3
22	1203020	Axle	1
23	1203014	Chipper Blade Set With Bolt	2
24	1901507	Bearing	2
25	1901410	R-Clip	14
26	1901623	Clutch Extreme Duty 3.7 OD	1
27	1901618	Bilac Pulley Set 28 mm	1
28	1901012	Wheel 4,00x8	2
29	1901609	Belt	1
30	1901419	Spacer	5
31		Engine	1
32	1203055	Discharge Rubber	1
33	1901420	External Retaining	4
34	1901300	Washer M8	45
35	1901230	Nut M8	41
36	1901101	Bolt M8x20	39
37	1901103	Bolt M10x40	4
38	1901310	Washer M10	3
39	1901210	Nut M10	3
40	1901320	Washer M	2
41	1901151	Bolt M6x20	2
42	1901200	Nut M6	2
44	1901403	Screw M8x20 Flat Skt	2
45	1901406	Screw M8x30 Flat Skt	6
46	1901404	Tech Screw M10x3/4	8
47	1901441	Bolt 7/16x25	1
48	1901360	Washer 7/16	1
49	1901107	Bolt M8x65	1
50	1901142	Bolt 3/8x1	1
51	1901332	Washer M16	6

WARRANTY POLICY

Under the warranty your CM90/95 is warranted for 2 years from the date of purchase against mechanical defects, faulty workmanship or material. 90 days for commercial use. This warranty covers only the replacement, repair or adjustment of any part which fails as a result of a fault in manufacture or assembly. Defective parts will be repaired or replaced without charge for labour or materials subject to the conditions detailed below.

Warranty Exclusions, Limitations and Rights:

- 1) Any failure that results from accident, abuse or neglect is not covered by this warranty
- 2) Transport of the CM90/95 to and from the manufacturer, their agents or dealers, to be paid for by the owner
- 3) Proof of purchase date must be provided prior to the commencement of the warranty work
- 4) Any failure of parts or material that is contributable to fair wear
- 5) Any indirect or consequential loss, damage, costs or expenses suffered by the consumer that may result either directly or indirectly from the failure or malfunction of the product
- 6) Any repairs carried out other than those by authorised Truyard agents or dealers cancel this warranty
- 7) Engine warranty is separate and is in accordance with the Engine manufacturers express warranty

TROUBLESHOOTING

ISSUE	CAUSE	SOLUTION
Irregular Chipping	<ul style="list-style-type: none">• Worn or damaged blades or anvil worn or damaged• Loose belts	<ul style="list-style-type: none">• Sharpen or change blade• Replace worn anvil• Adjust to within 1-2mm of chipper blade• Adjust the belts to the correct tension
Excessive noise	<ul style="list-style-type: none">• Over tightened belts• Bearing	<ul style="list-style-type: none">• Loosen and inspect belt damage in case they need to be replaced• Replace the bearing
Motor starts but mulcher doesn't	<ul style="list-style-type: none">• Blockage in the flywheel	<ul style="list-style-type: none">• Remove the spark plug and make sure the flywheel is at a complete stop. Open the discharge chute and take out the blockage carefully. Test spinning the flywheel a full 360° to ensure that there aren't more blockages. Be careful of the blades.

Note: Truyard has available spare parts for the machine if a replacement is necessary

MACHINE MAINTENANCE SCHEDULE

Bolt tightening check	Inspect every 5 hours of use
Replacement of the chipper blades	Inspect blades for sharpness, burs and chips every 10 hours of use. If the blades are damaged replace.
Belt adjustment or replacement	Inspect belts every 10 hours of use looking for cracks and tightness. If cracks appear replace the belts
Bearings	Inspect bearing every 10 hours of use for movement. If loose or has a gravelly noise, replace
Engine oil	Consult the manufacturers manual for these specifications

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