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BM-1700 BEACH CLEANING MACHINE

Operation and Maintenance Manual

PLEASE KEEP THIS MANUAL AND READ CAREFULLY

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Preface

Information About this Booklet

This booklet should be placed in a folder where brochures are kept. This book contains safety information, operating instructions and maintenance recommendations. Some photos and illustrations in this book may differ from your vehicle's details or attachments. With the development and advancement of the product design, it may have undergone some changes that are not covered in this book. Read, study, and keep this book with your product. If a problem arises with your vehicle or this publication, please contact BATMAN MAKINE for the latest information.



Safety

Precautions are mentioned in the warning and operating instructions. However, in this section, the warning signs and labels used on the machine describe what they are and their location.

Operation

The operation section can be considered as a reference for a new operator and as a refreshing booklet for an experienced operator. Photos and illustrations will guide the operator through checking, starting, operating and stopping the vehicle.

The operation techniques outlined in this book are basic techniques. The operator will improve his skills and techniques as he/she becomes more knowledgeable about the vehicle and its capabilities.

Maintenance

The Maintenance section is a guide to vehicle maintenance.



An electrical panel warning. Low voltage in the panel.



Keep clear the running machine and keep others away.



Keep clear the running machine and keep others away.



Maintenance-repair, cleaning, lubrication, etc. works should not be performed while the machine is running where this warning is put.



Keep away where this warning is while the machine is running.

WARNING !

Do not operate or work on this machine until you have read and understood the instructions and warnings in the Operation and Maintenance Manuals. Failure to follow instructions or to follow warnings could result in injury or death. Consult BATMAN MAKINE for replacement manuals. It is your responsibility to pay due attention.

WARNING !

Before starting the vehicle, it should be checked around the vehicle and make sure that there is no living thing. Before the move, a warning should be given from the loudspeaker.

WARNING !

Accidental engine start can result in injury or death to personnel working around the conveyor, anchors, front and rear boom. Before operating on the machine, the emergency stop buttons must be pressed.

WARNING !

While the construction machine is running, the machine should not be interfered with. Do not climb on the vehicle.

WARNING !

The cabin must be locked while performing lubrication, cleaning, maintenance, etc. Works on the heavy equipment. Only the driver must be present in the vehicle cabin.

WARNING !

Replace any missing or damaged safety signs with new ones.

Always consider the safety of the operator.

Clean safety signs with mild soap and water.

Do not use solvent-based cleaners so as to prevent damage to the material forming the safety signs.

WARNING !

Never try to plug leaky hydraulic hose lines with your hand or finger.

WARNING !

Standing persons on the machine climbing while machine is running may result in falling hazard for the people!

WARNING !

Eyebolts must be used when lifting the machine. The vehicle must not be lifted from the cab lug.

Worksite Safety

Only personnel holding G class driving license and having certified training from the Manufacturer can operate the machine. Personnel must maintain and operate the vehicle in accordance with the instruction and training received.

Hand Crush Hazard

Personnel should never interfere with the moving parts while the machine is running.

The vehicle should be stopped and cleaning, maintenance, etc. operations should be performed after the emergency stop buttons are pressed.

Falling Hazard

Personnel must get in and out of the vehicle facing the vehicle. Both arms and one foot must be in contact with the vehicle while getting on and off.

Jamming-Crushing Hazard

The machine should not be operated in the presence of people. There should be no one around during running and garbage disposal. The construction machine should not be started before making sure that the audible and visual warnings are operational.

Personal Protection Precautions

The operator of the beach cleaning machine should use SNR DB 20 > earplugs in TS EN 352-2 standard. When getting out of the vehicle, he/she should wear EN 166 safety glasses, EN 374-2 gloves, S1 type work shoes in EN 20345 Standard, and EN 812 barrier cap.

Requirements of the construction machine operator

The operator who runs the machine occasionally or regularly should have the following qualifications.

Health Requirements

The operator must have a medical report that can work in heavy and dangerous Works within the validity period given by the worksite physician. Before and after work, the operator must not drink any alcohol, take medication or other substances that may impair mental and physical abilities and, consequently, the ability to operate machinery.

Physical Requirements

Must have good eyesight and hearing ability, good coordination and the ability to safely perform all functions required for running as described in this manual.

Mental Requirements:

Must have the ability to understand and apply occupational safety rules and measures. He/she should be very careful and sensitive about his/her own and others' safety. He/she should take on his/her duty to do things correctly and responsibly.

Emotional Requirements

He/she should have the ability to stay calm, endure stress, and accurately assess his/her own physical and mental state.

Training Requirements

He/she should carefully read and study this manual, attached graphics and diagrams, remarks and warning labels and signs. He/she must have sufficient skills and training in operation of the machine. The operator must have a driver's license (license) to drive the vehicle within the limits stipulated by the laws applicable in the country where this type of machine is operated, and must have been trained to operate the machine as certified by the manufacturer. Please consult the relevant authorities.

The operator must be at least eighteen years old. He/she should be very careful and sensitive about his/her own and others' safety. He/she should take on his/her duty to do things correctly and responsibly.

Operation and Usage Instruction

- 1- Only personnel who have a G class license, trained and certified to operate the machine can use the machine.
- 2- The cabin key should only be at the driver.
- 3- No one other than the operator should be in the driver's cabin.
- 4- Before starting work, put on personal protective earplugs, glasses, a barrier cap and safety shoes.
- 5- Get on and off facing the vehicle in contact from 3 points (2 arms one foot – two feet one arm).
- 6- The construction machine should be used only after making sure that there is no one in the sandy area and around, and in accordance with intended use.
- 7- Make sure that no living thing is under the vehicle.
- 8- Clean the anchors from unrelated materials, foreign materials such as wrapped wire, fishing line, cable, etc., after making sure that the emergency stop button of the machine is pressed.
- 9- Clean the sieve from unrelated materials after making sure that the emergency stop button of the machine is pressed.
- 10- Make sure that the audible warnings of the flasher, reverse gear, speaker, camera, boom on the machine are operational.
- 11- Check the hydraulic oil and engine coolant level, tire pressures before starting work.
- 12- Replenish grease into the grease nipples indicated in the lubrication chart.
- 13- Adjust your seat and mirrors according to your own viewing angle.
- 14- The vehicle should not be used on extremely inclined surfaces.
- 15- Follow the traffic rules on highways.
- 16- Only maintenance and repair personnel should intervene in machine malfunctions.
- 17- Pay attention to the warnings on the vehicle.

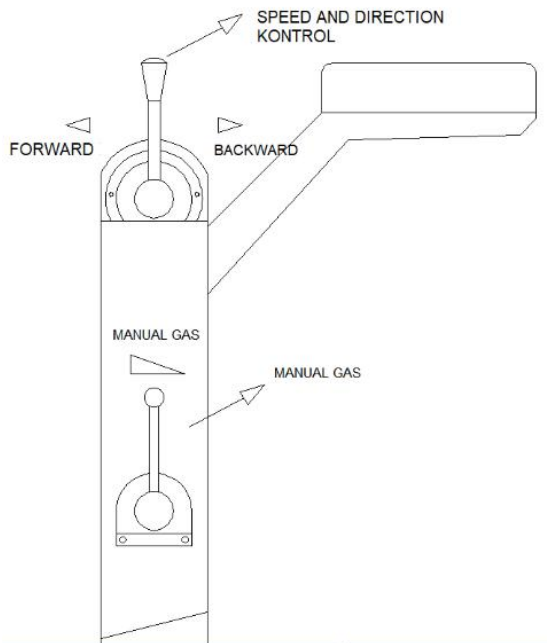
- 18- While the vehicle is running, no maintenance, cleaning, adjustment should be made and the vehicle should not be climbed on. All of these operations should be done after the engine has stopped and the emergency stop button has been pressed.
- 19- Avoid quick and hard movements during maneuvering and driving, do not allow the vehicle skid. You may sink the car.
- 20- While starting the vehicle, turn the ignition key to the '1' symbol position, after the glow plug on the instrument panel goes out, turn the ignition key to the '2' position. The engine will start.
- 21- Select the working speed suitable for the beach conditions and cleaning depth. Track your running and walking speed on the dashboard.
- 22- Check the cleaning process from the camera and the windows under your feet and the full garbage tank.
- 23- Empty the garbage, at the end of the work, in a suitable area.
- 24- The vehicle should be towed to the relevant parking area, at the end of the work, the hoes and garbage collector should be lowered and the parking brake should be applied.
- 25- If the parking brake is not applied, the symbol number 23 below on the display will light up.
- 26- Always stop the engine before refueling and/or lubricating process.
- 27- Accumulation of exhaust fumes can be extremely harmful. The machine should be operated in a well-ventilated environment and after making sure that there is no living things nearby.
- 28- If the battery fluid level is below the LOWER mark, do not use or charge the battery.



1. It is the fuel indicator on the construction machine.
- 2. Trailer directional signal, it is an unused icon.**
- 3. 4 WD, It is an unused icon.**
4. Automatic lifting system.
5. Hydraulic filter.
6. Preheating.
7. Air filter.
8. Indicates the amount of vehicle in the construction machine.
9. Left directional signal light.
10. It indicates the speed of the construction machine and the number of engine revolutions. When the light bulb icon illuminates, it indicates the speed or RPM option.
11. Displays the working time in hours.
12. It is a warning showing that the engine is running.
13. Indicates the time.
14. Right directional signal light.
15. Indicates the engine coolant temperature.
- 16. It is an unused icon.**
17. Differential lock.
- 18. It is an unused icon.**

- 19. Brake system malfunction.
- 20. It is an unused icon.**
- 21. It is an unused icon.**
- 22. Hydraulic temperature.
- 23. Indicates that the parking brake is engaged.
- 24. Indicates that the vehicle's main beam is on.
- 25. Indicates that parking brakes are on.
- 26. Malfunction.
- 27. PTO active.
- 28. Engine oil pressure.
- 29. Battery charge.





VEHICLE DIRECTION AND SPEED LEVERS

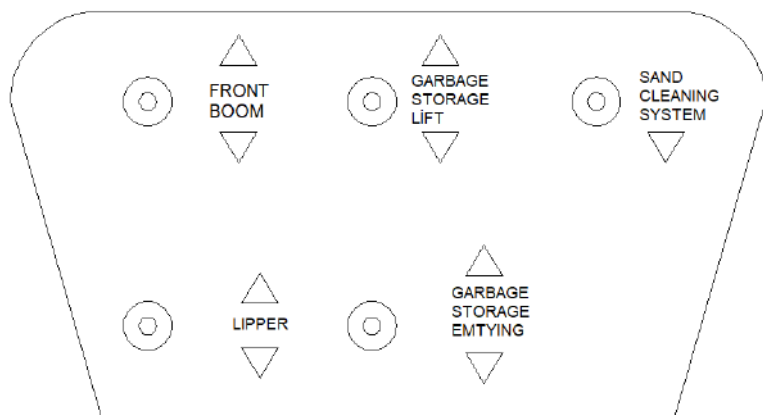
Manual Gas: It accelerates the vehicle and increases the engine speed.

Speed and Direction Control: Allows the vehicle to go forward and backward.

The middle position of the lever provides braking.

In order to change the direction of movement of

the vehicle, the lever is first taken in the middle position. Then it is withdrawn to the other direction position. Do not change the direction of travel before the vehicle comes to a complete stop.



CONTROL PANEL

Front Boom: Serves to move the sand collection system upwards and downwards.

Garbage Storage Lift: It is the function used to raise and lower the garbage storage located at the back of the vehicle.

Sand Cleaning System: It is a function for turning the anchors and sieve inside the front boom.

Lipper : The Lipper located at the back of the garbage storage levels and smooths the surface of the cleaned, sieved sand. It forms a corrugated sand surface.

Garbage Storage Emptying: Opens and closes the emptying cover of the filled garbage storage.



Depth Control System: Laser sensing cleaning depth control system adjusts the beach cleaning depth. Depth adjustment is made by loosening the wing nut and tightened after adjustment.

ENGINE SERVICE FREQUENCIES

Every 50 hours	Checking fuel pipes and clamp bands
	Emptying the water separator
250 hours or 1 year, whichever comes first	Engine oil change 1"
Every 250 hours	Cleaning the air filter element
	Fuel filter change
	Battery electrolyte level check
	Checking the fan belt tension
	Checking radiator hoses and clamp bands
	Intake air line check
Every 500 hours	Oil filter cartridge replacement
	Fuel filter cartridge replacement
	Cleaning the sludge in the fuel tank
	Cleaning the water jacket (inside of the radiator)
	Cleaning the fan belt
	Cleaning the water separator
Monthly or bimonthly	Charging the battery
Once a year	Replacing the air filter element
Every 1000 hours	Valve clearance check
Every 1500 hours	Fuel nozzle injection pressure control
Every 3000 hours	Turbocharger control
	Spray pump control
Once in two years	Radiator coolant change (L.L.C.)
	battery replacement
	Replacement of radiator hoses and clamp bands
	Replacing fuel pipes and clamp bands
	Changing the intake air line
	Fan belt replacement (or every 500 hours)



BEACH CLEANING MACHINE MAINTENANCE SHEET

YEAR : _____
 Form No. _____
 MACHINE : _____

MAINTENANCE TO PERFORM MONTHLY

- 1- Check Overview
- 2- Perform Peripheral Check
- 3- Tires, Gauges, Water level, Hydraulic level
- 4- Anchor and Conveyor Cleaning
- 5- Replenish Grates Nipples
- 6- Check Safety Equipment

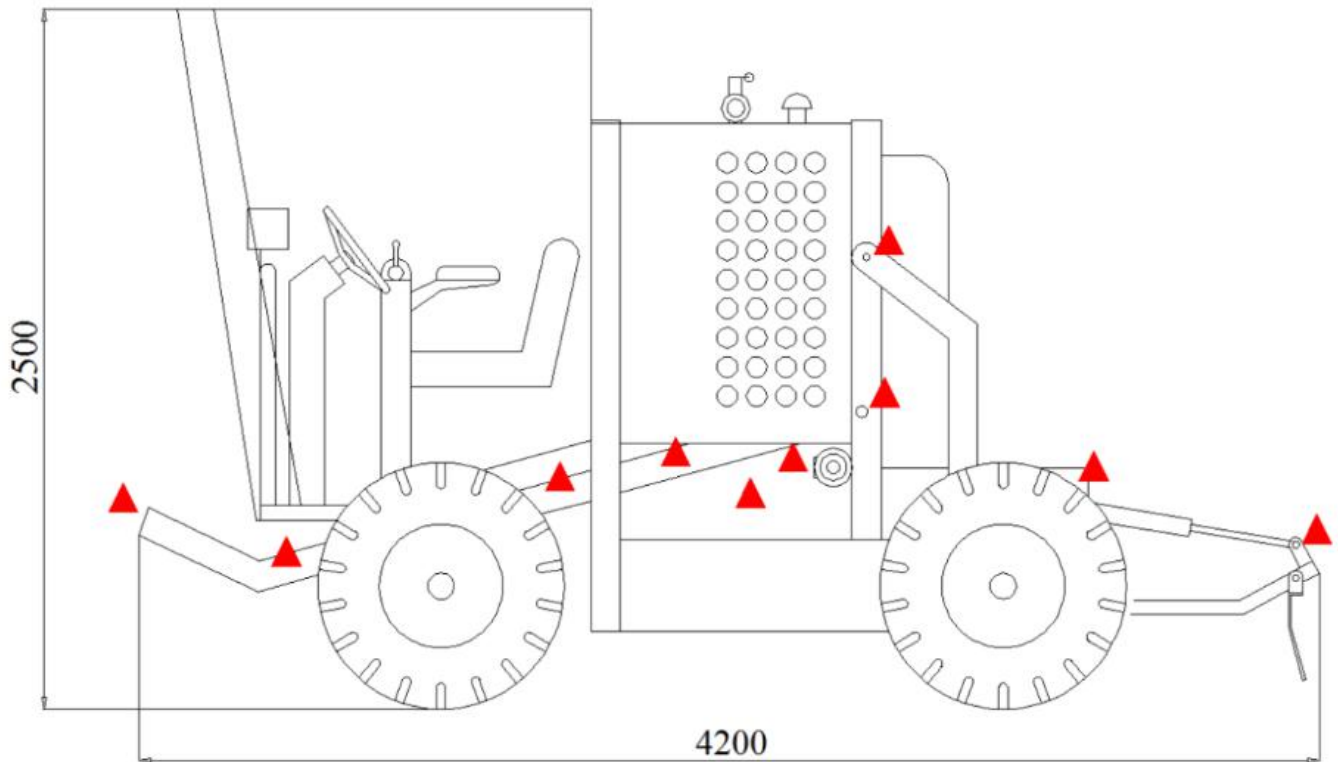
- 1- Control of Hydraulic Systems
- 3- Conveyor and Anchor Mech. Control
- 4- Control of Other Mechanisms

MANUFACTURER OVERALL CONTROL MAINTENANCE REPAIR

MANUFACTURER	OPERATOR	MAINTENANCE - REPAIR
YEAR		

	DATE																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
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Lubrication Scheme



TECHNICAL DATA:

Machine Description: Beach Cleaning Machine

Machine Model: BM-1700

Engine Type : Kubota V-3600 Stage 3A Tiar 4

Fuel Type: EURODiesel

Fuel Tank Capacity: 55 liter

Total Weight: 2780 kg

Hydraulic Tank Capacity: 95 liter

Hydraulic To Use: SAE 46

Vehicle Dimensions: L=4200 mm W=2530 mm H=2500 mm

Tire Pressures: 18 psi

Tire Sizes: 400 / 60-15,5

Recommended battery capacity: 12V, 88AH