



***FORESTRY
MULCHERS
TF 120 - TF 125
TF 130
TF 130 PLUS
TF 150***

Operation and Maintenance Manual



COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL ISO 9001:2015



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INTRODUCTION AND WARRANTY

INTRODUCTION

Congratulations on your purchase of an MDB Mulcher. This equipment has been designed and manufactured to meet the needs of a discriminating buyer for efficient mulching of brush in land clearing applications.

Safe, efficient and trouble free operation of your mulcher requires that you and anyone else who will be operating or maintaining the mulcher, read and understand this Operator's Manual.

This manual covers the MDB Forestry Mulchers.

Keep this manual with the equipment for frequent reference and to pass on to new operators or owners.

Call your MDB dealer, distributor or the factory if you need assistance, information or additional copies of the manuals.

Operator orientation

The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the rear of the machine facing in the direction of travel.

WARRANTY

MDB warrants products purchased from MDB to the Original Retail Purchaser to be free from defects in material and workmanship for a period of twelve (12) months from the warranty start date.

MDB warranty service includes parts and labor costs required to repair or replace products purchased from MDB at the selling dealer's business location. MDB makes no

representations or warranties of any kind, expressed or implied (including the implied warranties of merchantability and fitness for particular purpose), except as expressly stated in this warranty statement.

MDB warranty service does not include:

- 1. Transportation to selling dealer's business location or, at the option of the original retail purchaser, the cost of a service call.**
- 2. Used equipment.**
- 3. Components covered by their own non-MDB warranties**
- 4. Normal maintenance service and expendable wear out items.**
- 5. Repairs or adjustments caused by improper use; failure to follow recommended maintenance procedures; accidents or another casualty.**
- 6. Liability for incidental or consequential damages of any type, including but not limited to lost profits of expenses of acquiring replacement equipment.**

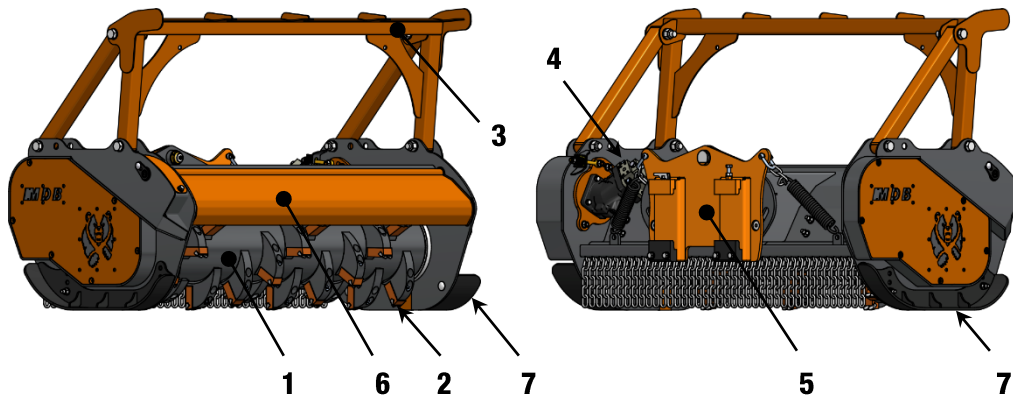
No agent, employee or representative of MDB has authority to bind MDB to any warranty except as specifically set fourth herein. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms will continue to apply.

For warranty service contact: MDB srl

Tel. +39 0872 57617

mail: sales@mdbsrl.com

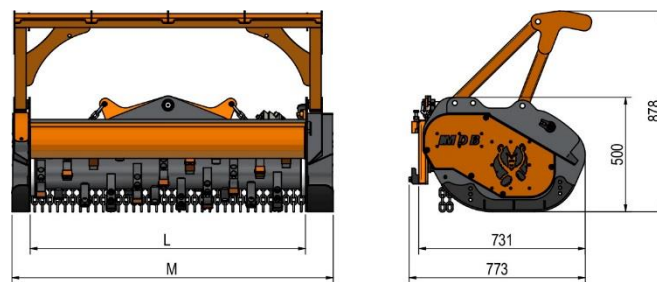
COMPONENT IDENTIFICATION



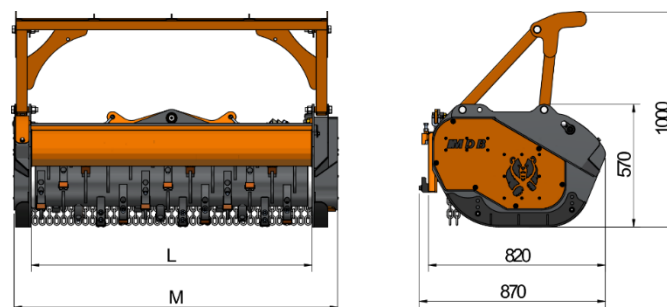
1 – Rotor	2 - Cutting Teeth	3 - Safety Push Bar	4 - Hydraulic Motor
5 - Quick Attach	7 - Skid shoe	6 - Deflector door	

SPECIFICATION

TF 120



TF 130 - TF 130 PLUS - TF 150



Model	Weight	Number of Cutting Teeth	Working Width (L)	Overall Width (M)
TF 120	404 kg 891 lbs	30	1200 mm 47 in	1410 mm 56 in
TF125	408 kg 900 lbs	30	1250 mm 49 in	1460 mm 58 in
TF 130	502 kg 1106 lbs	36	1300 mm 51 in	1510 mm 60 in
TF 130 PLUS	502 kg 1106 lbs	36	1300 mm 51 in	1510 mm 60 in
TF 150	533 kg 1175 lbs	39	1500 mm 59 in	1660 mm 65 in

IMPORTANT SAFETY INFORMATION

Most accidents that involve product operation, maintenance and repair are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. A person must be alert to potential hazards. This person should also have the necessary training, skills and tools to perform these functions properly.

Improper operation, lubrication, maintenance or repair of this product can be dangerous and could result in injury or death.

Do not operate or perform any lubrication, maintenance or repair on this product, until you have read and understood the operation, lubrication, maintenance and repair information.

SAFETY ALERT SYMBOL AND SIGNAL WORDS

You must read, understand and follow the instructions given by the operating unit manufacturers, as well as the instructions in this manual.

The safety information in this manual is denoted by the safety alert symbol:



This symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

The level of risk is indicated by the following signal words:



DANGER - Indicates a hazardous situation, which, if not avoided, **WILL** result in death or serious injury.



WARNING - Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.



CAUTION - Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.



NOTICE - Indicates a situation that could result in damage to the equipment or other property.

MDB cannot anticipate every possible circumstance that might involve a potential hazard.

The warnings in this publication and on the product are, therefore, not all inclusive. You must not use this product in any manner different from that considered by this manual without first satisfying yourself that you have considered all safety rules and precautions applicable to the operation of the product in the location of use, including site-specific rules and precautions applicable to the worksite. If a tool, procedure, work method or operating technique that is not specifically recommended by **MDB** is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that the product will not be damaged or become unsafe by the operation, lubrication, maintenance or repair procedures that you intend to use.

GENERAL SAFETY PRECAUTIONS

Read manual prior to installation

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the Green Climber thoroughly before beginning installation, operation, or maintenance.

Read and understand all safety statements

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

Know your equipment

Know your equipment's capabilities, dimensions, and operations before operating.

Visually inspect your equipment before you start,

and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible.

Keep decals clean and replace them if they become worn or hard to read.

OPERATIONAL HAZARDS



Prevent serious injury or death.

Read and understand this manual before operating mulcher.

If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.



Rotating drum hazard! Stay back! Objects can be thrown!

DO NOT operate near bystanders.



To avoid serious personal injury or death the

Mulcher must not be attached to any power unit that does not have a forestry guard package installed.



Flying debris hazard. Clear area of bystanders and livestock before operating. The mulcher is capable of producing large amounts of flying debris in all directions.



Before leaving the operator's station: lower the lift arms against frame and place unit on the ground. Disengage auxiliary hydraulics. Engage parking brake. Stop

Engine. Remove the key.

Never allow anyone near mulcher during operation.

Travel at a safe speed.



Prevent serious injury or death from moving parts.

Moving parts can crush and dismember. Do not operate without guards and shields in place.

Disconnect and lockout power source before adjusting or performing maintenance.



Use mulcher only for the designed applications.

Any other use may result in personal injury, damage to equipment and may void the warranty.



Prevent serious injury or death.

Verify mulcher is locked to quick attach hitch before operation or transport.

SAFE OPERATION NEEDS A QUALIFIED OPERATOR

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine.

A qualified operator must do the following:

Understand the written instructions, rules and regulations

- Check the rules and regulations at your location. The rules may include an employer's work safety requirements.

Have training with actual operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by your MDB dealer.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine and attachment safely under all conditions of the work area.

Know the Work Conditions

- The operator must know any prohibited uses or work areas, for example, he or she needs to know about excessive slopes.
- Know the location of any underground lines.



Protect from flying debris.

Wear proper safety glasses, goggles, or a face shield to protect from flying debris.



Safely operate equipment.

Allow only properly trained and qualified personnel to operate this equipment.

Carefully read all safety messages in this manual and on equipment safety signs. Keep safety signs in good condition and replace missing or damaged safety signs.

New equipment components and repair parts must

include the current safety decal.

Learn how to properly operate equipment. NEVER operate or work around this equipment without proper instruction, while fatigued or under the influence of alcohol, prescription or non-prescription medication or if feeling ill.

Keep your equipment in proper working condition.

Know the regulations and laws that apply to you and your industry. This manual is not to replace any regulations or laws. (Additional information may be found at: <https://osha.europa.eu/> or www.osha.gov)

If you do not understand any part of this manual, contact MDB srl +39 0872 57617.

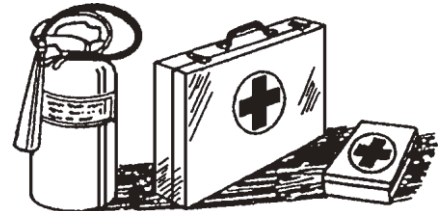
PREPARE FOR EMERGENCIES

Be prepared in case of emergencies.

Keep a fire extinguisher and first aid kit close to the machine.

Keep emergency phone numbers close to your phone.

Know your address so emergency services can locate you if an emergency arises.



REPLACE SAFETY SIGNS

Replace missing or damaged safety signs.

Safety sign location are identified in this manual.

Replacement safety signs are available from your dealer.

DO NOT ALLOW RIDERS

NEVER lift or carry anyone on mulcher.

NEVER use mulcher as a work platform.

NEVER allow passengers on mulcher.

Travel slow and avoid slopes.

LOWER OPERATING SPEED

Keep mulcher low and move at slow speeds on rough or uneven terrain.

AVOID ROLLOVER

The equipment may rollover, resulting in death or serious injury. To help prevent rollover:

- Travel at a slow speed.
- Avoid sharp turns & sudden movement on slopes.
- Carry mulcher close to the ground.
- Avoid holes, ditches and other obstructions which may cause equipment to rollover.
- Use caution when operating on slopes and do not operate on excessively steep slopes.
- Do not exceed load capacity of equipment.

AVOID POWER LINES & UNDERGROUND UTILITIES



Prevent electrocution.

Death or serious injury can result if equipment comes near or contacts power lines.

Electrocution can occur without direct contact.

Check clearance before raising equipment.

Have local utilities locate and mark underground wires, cables, pipelines and other hazards before digging.

DO NOT leave the operator's station if any part of the equipment contacts electric lines or cables

DETACH MULCHER SAFELY

Detach mulcher on a firm and level surface. Mulcher may fall over if detached on unlevel or soft surface.

TRANSPORT SAFELY

Carry mulcher low.

RAISED ATTACHMENT



Crushing hazard.

Raised, unsupported mulcher can fall, resulting in death or serious injury.

Never enter the area under a raised mulcher.

A raised mulcher can lower unexpectedly, resulting in death or serious injury. Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels, or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or on blocks. Lower booms and attachments to the ground before leaving the operator's station.

NEVER enter area under a raised mulcher.

Lower mulcher to ground, engage parking brake, shut off engine and remove key before servicing.

AVOID HIGH PRESSURE FLUIDS



Pressurized fluids can penetrate the skin.

Pressure can be trapped in the hydraulic circuit long after the engine has been stopped. The pressure can cause hydraulic fluid or items such as pipe plugs to escape rapidly if the pressure is not relieved correctly.

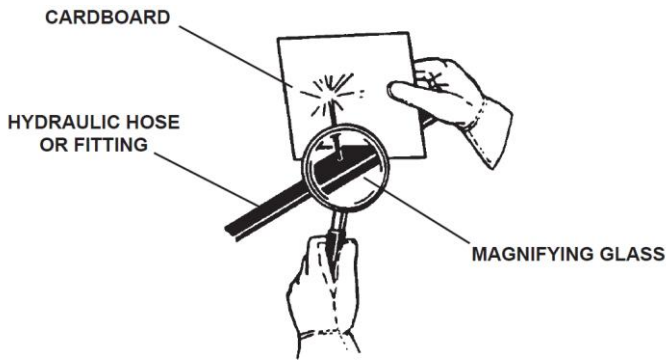
Hydraulic hoses can fail from age, damage and exposure.

Do not bend high-pressure lines. Do not strike high-pressure lines.

Use body and face protection while searching for leaks. A tiny, almost invisible leak can penetrate the skin, thereby requiring immediate medical attention.

Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

Use wood or cardboard to detect hydraulic leaks, never use your hands.



Escaping fluid under pressure can penetrate the skin causing serious injury. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your Green Climber's operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

Prevent the hazard by relieving pressure before connecting or disconnecting hydraulic lines. Verify all connections are tight before applying pressure. Search for leaks with a piece of cardboard or wood.

Protect hands and body from high pressure fluids. If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or serious infection may result.

Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.



Exposure to respirable crystalline silica dust along with other hazardous dusts may cause serious or fatal respiratory disease.

It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause high levels of dust.

MAINTENANCE HAZARDS

Before servicing, park machine on a firm and level surface, shut down engine, check tracks, and place a "Do Not Operate" tag on control panel. Read and understand this manual. If you do not understand any part of the manual, contact

MDB Srl +39 0872 57617

Always wear face and/or eye protection, safety shoes, and other protective equipment appropriate for the job.

Always use MDB Genuine replacement parts.



Remove paint before welding or heating

Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator.

If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.



Crushing hazard.

- Before performing inspections, service or maintenance, lockout operating unit by:
- Park machine on firm, level surface.
- Turn engine off and remove key.
- Place "Do Not Operate" tag on control panel.

Support the equipment properly before you perform any work or maintenance beneath that equipment.

Do not depend on the hydraulic cylinders to hold up the equipment. Equipment can fall if a control is moved, or if a hydraulic line breaks.

Unless you are instructed otherwise, never attempt adjustments while the machine is moving or while the engine is running.

If it is necessary to remove guards in order to perform

maintenance, always install the guards after the maintenance is performed.



Moving parts can crush and cut. Keep clear of moving components.

Follow lockout procedure before performing maintenance



Entanglement hazard.

Keep clear of moving components.

Wear proper protective equipment appropriate for the job.

Do not wear loose clothing or jewelry that can snag on controls or on other parts of the equipment.



Burn hazard.

Hot and high pressure hydraulic oil. Allow oil to cool before servicing.

HAZARDS FROM MODIFYING EQUIPMENT

Do not make any alterations to your mulcher. Altering may cause your equipment to be unsafe and may void the manufacturers' warranty.

Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts



SAFELY MAINTAIN AND REPAIR EQUIPMENT

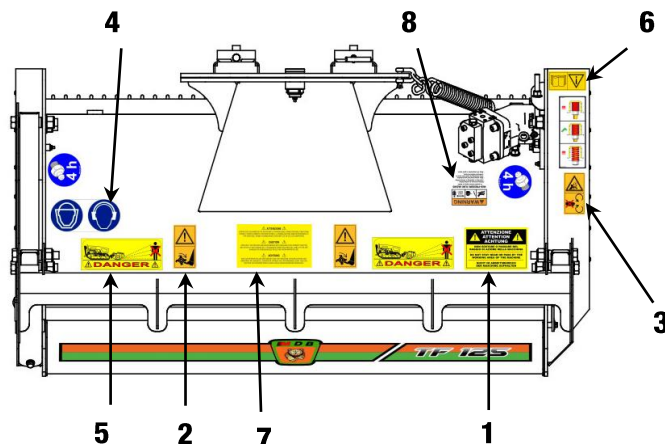
- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer



Safety warning labels

To protect you and others against death or serious injury, all labels shown must be on mulcher and must be legible.

If any of these labels are missing or cannot be read, contact your dealer for replacement labels



Decal 1



Decal 2



Danger of contact with moving working parts. Do not approach the machine's moving flailing parts, with the transmission connected and the engine running. do not wear loose clothing



Decal 3

Warning of crushing hazard. Turn machine off, lower machine to ground, stop engine, remove ignition key and wait for all moving parts to stop before servicing, repairing, adjusting or unplugging. Stay away from pinch point when engine is running. Keep others away.

Decal 4

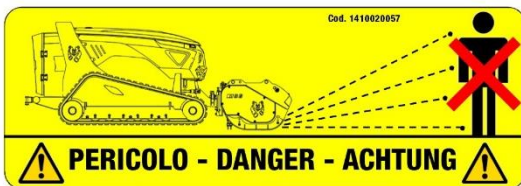
Always use appropriate personal protective equipment (PPE) to perform the task.



Decal 5

Danger of thrown object hazard.

Do not operate unless all guards are installed. Stop blade rotation if bystanders come within several hundred feet of machine



Decal 6

Read and understand the operator's manual before starting.



Decal 7



Decal 8



HIGH-PRESSURE FLUID HAZARD

To prevent serious injury or death:

- Relieve pressure on system before repairing or adjusting or disconnecting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

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OPERATION



SAFELY OPERATE EQUIPMENT

- Quick-Attach must always be fully engaged and in the locked position.
- Keep bystanders away from equipment while in use.
- Always wear face or eye protection, safety shoes, and other protective equipment appropriate for the job.
- Do not operate, work on or around this machine while under the influence of alcohol, drugs or if feeling ill.
- Always keep clear of moving machinery.
- Turnoff machine before leaving operator's station.
- It is your responsibility to operate this equipment safely. You must be familiar with the equipment and all safety practices before use.
- Do not allow untrained or unqualified people to operate this equipment.
- Do not alter or remove any safety feature from the Green Climber or this attachment.
- Do not allow riders on the attachment or the Green Climber.

While the mulcher is in operation, constantly survey the area around the machine in order to identify potential hazards as hazards become visible around the machine.

Appropriate job site organization is required in order to minimize hazards that are caused by restricted visibility. Job site organization is a collection of rules and procedures that coordinates machines and people that work together in the same area. Examples of job site organization include the following:

- Safety instructions
- Controlled patterns of machine movement and vehicle movement
- Workers that direct traffic to move when it is safe

- Restricted areas
- Operator training
- Warning symbols or warning signs on machines or on vehicles
- A system of communication
- Communication between workers and operators prior to approaching the machine

ATTACHING

1. Read and follow all safety instructions.
2. Attach the mulcher to machine plate. See machine Operator's Manual.
3. Verify screw and pins are secure in the correct position.
4. Connect hydraulic hoses. Verify hydraulic hoses are clear of pinch areas.
5. Move to a clear open area to test functions.

DETACHING

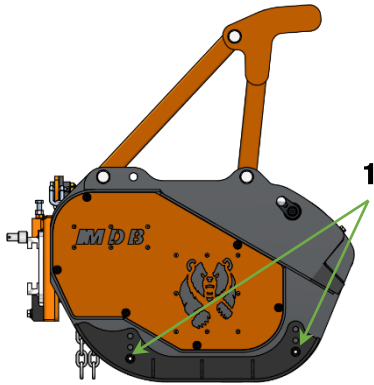
1. On firm, level ground. Lower the mulcher to the ground. Move the control levers back and forth to relieve pressure in the line.
2. Disconnect couplers

Skid shoe adjustment

The Mulcher is equipped with adjustable skid plates. By lowering the skid shoes, the amount of hammer to ground impact can be reduced, thus increasing the life of the cutting hammers. The need to move the plates can be determined by the desired outcome after mulching is complete.

To Adjust Skid Shoe Plates:

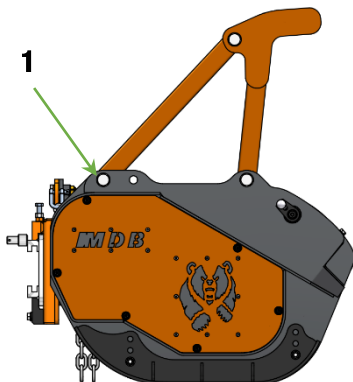
1. Remove the two bolts (1) that secure the right skid shoe to the mulcher.
2. Place the skid shoe plate in the desired location and reinstall the bolts to secure it to the mulcher frame. Torque to specification.
3. Repeat Steps 1 & 2 for the left skid shoe.



Safety Push Bar adjustment

The front position should be used for pushing over brush when mulching strictly brush and not standing trees. The rear position is for mulching standing trees and little brush. If you need to much a standing tree and the push over bar is in the front position, tilt the attachment back to prevent bending the push bar.

The push over bar is easily adjusted by removing the two bolts (1) at the back mounting ears. Move the bar to the desired location and reinstall the bolts



Hydraulic deflector door

The deflector door can be open or closed when operating in either direction. However, we recommend that the door be open when operating in a forward motion with the mulcher engaged. This will prevent brush or standing trees from pushing on the deflector door and bending it in towards the rotor and therefore causing damage to the door and/or hammers. When traveling in reverse we recommend closing the deflector door to direct the debris and mulch down to the ground and produce a smooth clean looking finished product. Ultimately, safety is the responsibility of the operator and he should be aware of his surroundings at all times.

OPERATION

Read and understand all warnings and precautions in this manual and on the machine before operating the mulcher. The MDB mulcher is relatively simple to use, and with the help of the information in this manual and a little practice you should become proficient in its operation and able to develop procedures suitable to your particular situation.

Starting the mulcher

Start the attachment with the engine at an idle only.

Check position of the skid shoes, deflector door and push over bar. Make sure they are in the correct position for your Green Climber and the job at hand.

Position the Green Climber, check that all personnel and bystanders are out of the area, start rotor and increase engine speed.

Be sure the mulcher is operating smoothly at full throttle and then start forward travel.

NOTICE

Continual monitoring of hydraulic oil temperature and water temperature of the Green Climber is required during mulcher operation. If temperature rises too high the mulcher must be removed from the brush/debris and the Green Climber returned to an idle until it has cooled down sufficiently to continue operation.

Stopping the rotor

Disengage the rotor by first idling the engine all the way down and allow the rotor to slow down as far as it will go and then disengage the auxiliary hydraulics. Failure to follow this shut down procedure will cause severe damage to the hydraulic and drive

GENERAL OPERATING TIPS

Operate all functions in an open area with machine in idle to get a good feel for the controls.

Operating at maximum pressure can shorten the life of hydraulic components. Operating at slightly below maximum pressure will allow for better productivity and more efficient operation.

Do not engage or disengage the drum while the engine rpm are above a low idle.

Ground speed

Operating at ground speed that is too fast will cause the

rotor to engage too much material and stall. As you slow down the ground speed and reduce the amount of material going through the mulcher.

Stalling

If the attachment stalls, the operator will have to stop and remove the mulcher from the material and allow the rotor to regain speed. Slow down your ground speed to prevent further stalling.

Jam

When a jam occurs, shut off the hydraulics. Move the mulcher to a clear area, tip forward and drive in reverse to force the drum to rotate without hydraulics and therefore discharging the jam.

Brush

When clearing brush set the skid shoes down and travel forward through the brush at a pace that will not decrease the rotor rpm. Once you are completely through, tip the mulcher forward slightly and reverse. This will re-mulch the brush and produce a more finished surface.

Traveling too fast will not properly mulch the material.

NOTICE

The push bar is used for pushing over brush and small trees when mulching, not for pushing over standing trees.



CAUTION



Take extra care when mulching dead standing trees. There is a danger of the tops falling back onto the operator, causing injury or property damage.

When doing excessive ground engaged mulching, inspect the cutting hammers more often to prevent wearing the cutters into the holders.

Ground mulching / mixing

The mulcher head is capable of mulching and mixing debris below ground level. Keep in mind that excessive ground engaging will rapidly decrease the life of the cutting hammers.

ROUTINE MAINTENANCE

- Before performing maintenance, disengage auxiliary hydraulics, lower the attachment to the ground, turn off the engine, remove the key and apply the brakes.
- Never perform any work on the attachment unless you are authorized and qualified to do so. Always read the operator manual before any repair is made. After completing maintenance or repair, check for correct functioning of the attachment.
- If not functioning properly, always tag “DO NOT OPERATE” until all problems are corrected.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from MDB.
- Never make hydraulic repairs while the system is under pressure. Serious personal injury or death could result.
- Never work under a raised attachment.

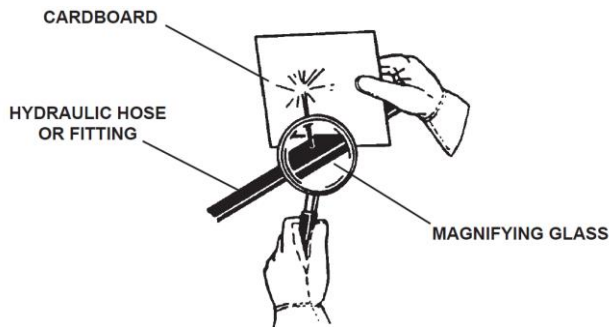
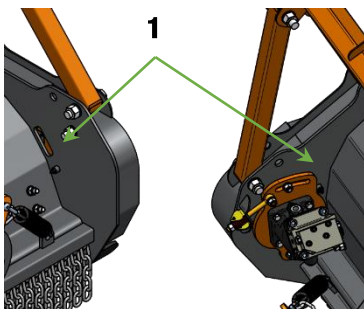
Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to the absolute minimum. However, it is very important that these maintenance functions be performed as described below.

Daily

- Check all bolts and nuts for tightness.
- Replace any missing bolts or nuts with approved replacement parts.
- Check hydraulic system for hydraulic oil leaks. See procedure below.
- Visually inspect the machine for worn parts or cracked welds, and repair as necessary. Pay particular attention to the integrity of the welding on the tool holders.
- Visually inspect the machine for worn, broken or missing hammer teeth. Repair or replace as necessary.
- Clean rotor of any accumulated debris and dirt.

Every 4 hours

- Lubricate grease fitting (1) on bearing housing using a hand gun.



Break in period

- Check drive belt tension at 40 hour intervals for the first 120 hours.

Every 100 hours

- Check drive belt tension.



Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities. If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.



INSPECTIONS

Check hydraulic hoses and fittings daily for leaks. Replace hose if worn or damaged.

Replace the affected parts if any of the following conditions are present:

- End fittings are damaged or leaking.
- Outer coverings are chafed or cut.
- Outer coverings are swelling or ballooning.
- Flexible parts of the hoses are kinked.
- Outer covers have exposed embedded armoring.
- End fittings are displaced.

CHECK BELT TENSION

1. Lower mulcher to ground.
2. Set parking brake, stop engine and remove key.

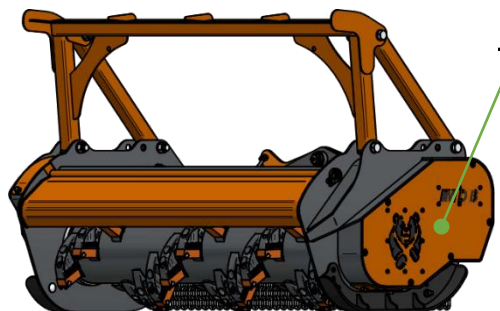


Moving parts can crush and cut.

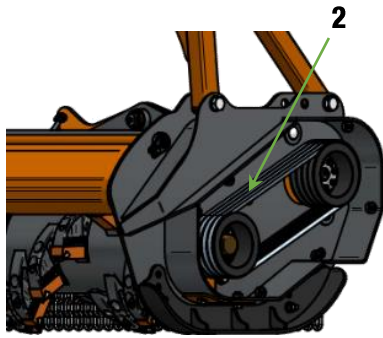
Keep clear of moving components.

Lockout operating unit before performing maintenance.

3. Remove inspection cover (1).

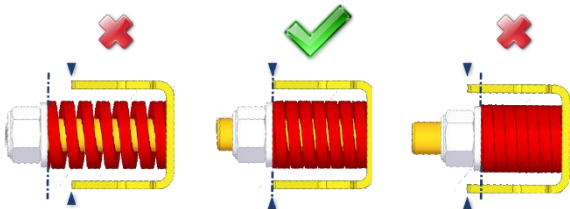
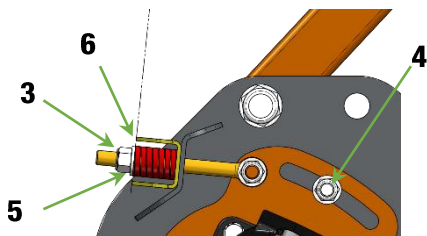
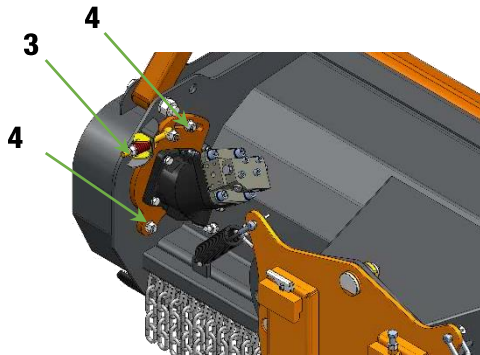


4. Inspect belt (2) for wear, damage and proper tension.



5. Adjust idler to set belt tension.

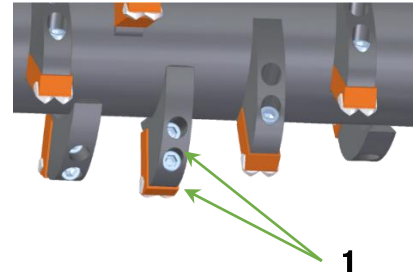
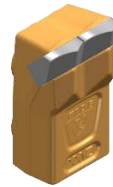
To adjust the belt tension: unscrew the locking nuts (4) and act on the adjusting nut (3), until the washer (5) is aligned with the reference (6). After setting the right tension, tighten the locking nut (4).



REPLACING HAMMER TEETH

Worn, broken or missing teeth will cause excessive machine vibration and reduce productivity.

It is important that all hammer teeth are attached properly.



1. Unscrew the M16 screws (1) and remove existing hammer tooth.
2. Check to make sure the mounting surface and screw holes are clean and free of debris. (Any accumulation of debris can cause the hammer not to seat properly in the slot resulting in unsafe operation).
3. Position the new hammer tooth onto the holder and after both screws have been started, push the hammer up into the mounting slot and tighten

NOTE: Replace any damaged screws.

NOTICE

Failure to start screws into the hammer tooth first before tightening a screw, can bind the other screw, and damage the screw and possibly the cutting hammer, rendering the hammer and screw unusable.

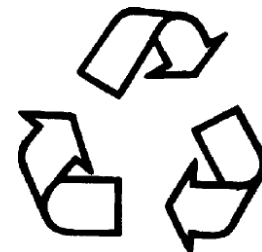
WARNING

Improper mounting can void warranty and cause serious injury and/or death. Use only manufacturer replacement parts.

DISPOSE OF WASTE PROPERLY

Improperly disposing of waste can threaten the environment. Potentially harmful fluids should be disposed of according to local regulations.

Always use leakproof containers when you drain fluids. Do not pour waste onto the ground, down a drain, or into any source of water.



BOLT TORQUE SPECIFICATIONS

Use the following charts when determining bolt torque specifications when special torques are not given.

The torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications

Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.5-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Rotor not turning.	Auxiliary hoses not hooked up to the Green Climber.	Check coupler engagement.
	Obstruction in hydraulic lines.	Remove obstruction and replace if necessary.
	Hydraulic motor damaged or seals blown.	Call MDB service department for instructions.
	Auxiliary control valve not engaged.	Verify hydraulic flow using inline flow meter or other attachment.
	Rocks and debris caught between rotor and mainframe.	Remove debris. (See "General Operating Tips")
	Damaged quick coupler.	Replace if necessary
	Drive belt broken.	Replace.
Rotor rotates sluggishly.	Insufficient hydraulic flow from the Green Climber.	Refer to Green Climber owners manual and verify hydraulic flow using an inline flow meter or other attachment.
	Damaged quick coupler.	Replace if necessary.
	Hydraulic motor damaged or seals blown.	Call MDB service department for instructions.
	Oil filter on Green Climber needs replaced	Refer to Green Climber owners manual
Leaking Oil.	Loose or damaged hydraulic line.	Tighten or replace.
	Upper bearing failure.	Replace as necessary
	O-Rings on fittings damaged.	Replace if necessary.
	Hydraulic motor damaged or seals blown.	Call MDB service department for instructions.
	Fittings loose or damaged.	Tighten or replace.
	Cylinder seals damaged.	Replace cylinder seals.
	Case drain not properly connected or coupler damaged.	Engage coupler or replace.
Insufficient power.	Insufficient hydraulic flow from the Green Climber.	Refer to Green Climber owners manual and verify hydraulic flow using an inline flow meter or other attachment.
	Relief valve setting adjusted too low.	Refer to Green Climber owners manual.
	Hydraulic motor damaged or seals blown.	Call MDB service department for instructions.
	Oil filter on Green Climber needs replaced	Refer to owners manual.
Excessive oil temperature	Hydraulic oil level too low.	Refer to Green Climber owners manual
	Obstruction in hydraulic lines.	Remove obstruction and replace if necessary.
	Hydraulic oil or oil filter in Green Climber needs replaced.	Refer to Green Climber owners manual
	Relief valve setting adjusted too low.	Refer to Green Climber owners manual.
	Obstructed radiator/cooler on Green Climber.	Clean radiator/cooler.
	Operating the mulcher at maximum pressure for an extended amount of time.	Slow down the speed and/or the down pressure on the mulcher until operating below maximum pressure

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive vibration during operation.	Hammer teeth are worn, broken or missing.	Inspect and replace as necessary.
	Bearing failure.	Inspect and replace as necessary.
	Rotor obstruction.	Clear all debris from rotor and hammer teeth. (See General Operating Tips)
Hydraulic cylinder not operating.	Insufficient hydraulic flow from the Green Climber.	Refer to Green Climber owners manual and verify hydraulic flow using an inline flow meter or other attachment.
	Cylinder rod bent.	Visually inspect the cylinder for damage.
	Cylinder seals damaged	Replace cylinder seals.
	Obstruction in hydraulic lines.	Remove obstruction and replace if necessary.
	Damaged electrical wiring.	Test and replace if necessary.
	Faulty switch or electrical connection.	Repair or replace as necessary.
	Solenoid valve spool bent.	Replace spool.
	Faulty control valve coil.	Replace coil.
Hydraulic cylinders only operating in one direction.	Contaminants in the hydraulic system and solenoid valve.	Remove spool from solenoid valve and check for foreign material. Clean or replace. Remove spool from solenoid valve and check seals for damage. Replace if necessary.
	Damaged electrical wiring.	Test and replace if necessary.
	Solenoid valve spool bent.	Replace spool.
	Faulty control valve coil	Replace coil.
Excessive or uneven tooth wear on drive belt	Incorrect tensioning of belt.	Retension belt. See Belt Tensioning.
	Belt misaligned.	Align pulleys using a straight edge.
	Pulley's worn.	Replace as necessary.
	Debris in drive assembly.	Remove debris and replace covers.
Drive belt cracking.	Excessive low temperatures.	Moderate temperatures, especially at start up.
	Exposed to oil solvents/chemicals	Eliminate exposure to chemicals and shield drive.
Drive belt skipping or ratcheting.	Belt undertensioned.	Retension belt. See Belt Tensioning
	Pulley worn.	Replace worn pulley.
	Debris in drive assembly.	Remove debris and replace covers.



***Green
Climber***

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