BAUMALIGHT™



SKID STEER BRUSH MULCHER
MODELS MF 548 & MF 760

OPERATOR'S MANUAL

CHAINS GUARDS ARE RECOMMENDED
FOR ALL OPERATING CONDITIONS

BAUMALIGHT
SKID STEER BRUSH MULCHER

WARRANTY

This product is warranted to be free of defects in materials and workmanship under normal use and service, for a period of 12 months from the date of purchase for retail customers and 6 months for rental customers, when operated and maintained in accordance with the Operating and Maintenance Instructions supplied with this unit. This warranty does not cover wear parts nor any misuse or negligence.

Under no circumstances will the manufacturer be liable for any consequential damage or expense of any kind, including loss of profits. The manufacturer is under no circumstances liable for prime mover damage of any kind. The manufacturer is not liable for the maintenance of the product.

This warranty is extended only to the original purchaser. Warranty is void if repairs are attempted by anyone other than an Authorized Service Centre.

If a difficulty develops with the product, you should contact your nearest Authorized Repair Centre, or distributor. Only these locations are authorized to make repairs to the product or affect the replacement of defective parts, which will be done at no charge within a reasonable time after the receipt of the product. Units or parts should be returned at the customer's expense to the nearest repair location or Authorized Service Centre. Pack unit in a strong carton and pad tightly to avoid damage. Damage in-transit is not covered by warranty. Include original purchase receipt with any claim (keeping a copy for your files).

The distributor's liability under warranty is limited to repair of the product and/or replacement of parts and is given to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no warranties, expressed or implied other than those specified herein. For the nearest Authorized Service Centre call the manufacturer.

BAUMALIGHT
MTB Manufacturing Inc.
4575 Powell Road
Wallenstein, ON
N0B 2S0 Canada

www.baumalight.com

WARRANTY VOID IF NOT REGISTERED

BAUMALIGHT
SKID STEER BRUSH MULCHER

WARRANTY REGISTRATION FORM & INSPECTION REPORT

WARRANTY REGISTRATION (please print)

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

Customer's Name _____

Address _____

City, State/Province, Code _____

Phone Number (____) _____

Contact Name _____

Model _____

Serial Number _____

Delivery Date _____

Dealer Name _____

Address _____

City, State/Province, Code _____

Phone Number (___) _____

DEALER INSPECTION REPORT

____ Check For Hydraulic Leaks
____ Check That Rotor Rurns Freely
____ Fasteners Tight
____ Lubricate Machine
____ Rotor Teeth in Good Condition

SAFETY

____ Mounting Plate Lock Engaged
____ All Decals Installed
____ Guards and Shields Installed and Secured
____ Review Operating and Safety Instructions

I have thoroughly instructed the buyer on the above described equipment which review included the Operator's Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _____ Dealer's Rep. Signature _____

The above equipment and Operator's Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date _____ Owner's Signature _____

WHITE	YELLOW	PINK
MTB MFG., INC	DEALER	CUSTOMER

SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Baumalight Brush Mulcher when ordering parts or requesting service or other information.

The serial number plates are located where indicated. Please mark the numbers in the spaces provided for easy reference.



SERIAL NUMBER LOCATION

Model Number _____

Mulcher Serial Number _____

Hydraulic Motor Serial Number _____

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1 INTRODUCTION

Congratulations on your choice of a Baumalight Skid Steer Brush Mulcher to complement your mulching operation. This equipment has been designed and manufactured to meet the needs of a discriminating buyer for efficient mulching of brush.

Rear chain guards are standard equipment on all mulchers. It is recommended that the mulcher never be operated with out one.

Safe, efficient and trouble free operation of your Brush Mulcher requires that you and anyone else who will be operating or maintaining the Brush Mulcher, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.



This manual covers the Baumalight Skid Steer Brush Mulcher, models MF 548 and MF 760. Use the Table of Contents and Index as a guide to locate required information.

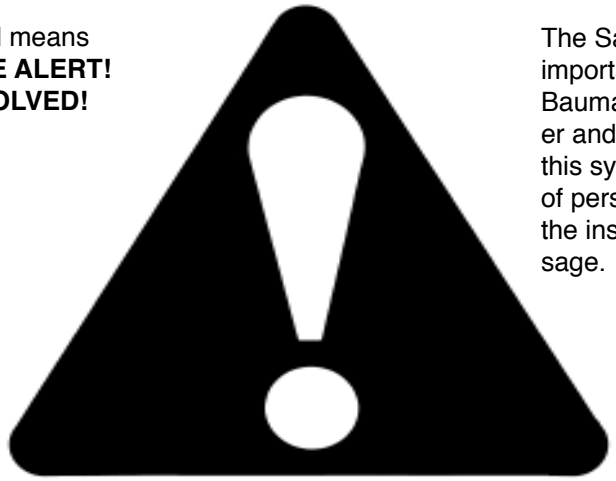
Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Baumalight dealer, distributor or the factory if you need assistance, information or additional copies of the manuals.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the skid steer driver's seat and facing in the direction of travel.

2 SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!



The Safety Alert symbol identifies important safety messages on the Baumalight Skid Steer Brush Mulcher and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER, WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or BAUMALIGHT, MTB Manufacturing Inc., 4575 Powell Road, Wallenstein, ON, N0B 2S0, www.baumalight.com

SAFETY

YOU are responsible for the **SAFE** operation and maintenance of your Baumalight Skid Steer Brush Mulcher. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Brush Mulcher be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the Brush Mulcher.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter.

- The most important safety feature on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.

- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.

- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.

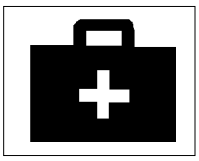
- Think SAFETY! Work SAFELY!

2.1 GENERAL SAFETY

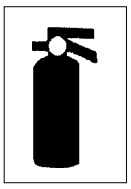
1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting or unplugging the Brush Mulcher.



2. Have a first-aid kit available for use should the need arise and know how to use it.

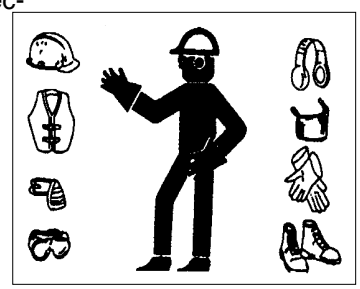


3. Have a fire extinguisher available for use should the need arise and know how to use it.

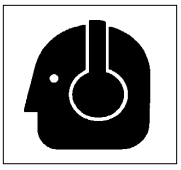


4. Do not allow riders.

5. Wear appropriate protective gear. This list includes but is not limited to:
   - A hard hat
   - Protective shoes with slip resistant soles
   - Protective goggles, glasses or face shield
   - Heavy gloves
   - Protective clothing
   - Hearing protection.



6. Wear suitable ear protection for prolonged exposure to excessive noise.



7. Turn Brush Mulcher off, lower Brush Mulcher to the ground, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

8. Clear the area of people, especially small children, before starting.

9. Review safety related items annually with all personnel who will operating or maintaining the Brush Mulcher.

2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing a machine. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you, follow them.

2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

3. Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.

4. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.

5. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.

6. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with farm machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.

7. Use a skid steer equipped with a Roll Over Protective Structure (ROPS) and a seat belt.

8. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**

9. Do not modify the equipment in any way. Unauthorized modification result in serious injury or death and may impair the function and life of the equipment.

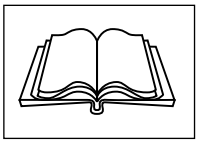
10. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the skid steer and machine Manuals. Pay close attention to the Safety Signs affixed to the skid steer and the machine.

2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.

2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.

3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.



4. **Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your skid steer, before assembly or operating, to acquaint yourself with the machines. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to operating:**

   a. Reads and understands the operator's manuals.

   b. Is instructed in safe and proper use.

5. Know your controls and how to stop skid steer engine, and machine quickly in an emergency. Read this manual and the one provided with your skid steer.

6. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will operate the machinery. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.

2.4 SAFETY SIGNS

1. Keep safety signs clean and legible at all times.

2. Replace safety signs that are missing or have become illegible.

3. Replaced parts that displayed a safety sign should also display the current sign.

4. Safety signs displayed in Section 3 each have a part number in the lower right hand corner. Use this part number when ordering replacement parts.

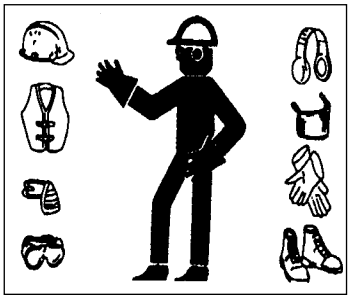
5. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

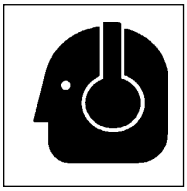
How to Install Safety Signs:

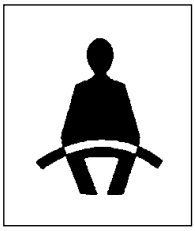
- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

2.5 PREPARATION

1. Never operate the skid steer and machine until you have read and completely understand this manual, the Skid Steer Operator's Manual, and each of the Safety Messages found on the safety signs on the skid steer, engine and machine.

2. 
Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the implement. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.

3. 
PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!
Skid steers with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss. **NOTE:** Hearing loss from loud noise (from skid steers, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.

4. 
Operate the machine only with a skid steer equipped with an approved Roll-Over-Protective Structure (ROPS). Always wear your seat belt. Serious injury or even death could result from falling off the skid steer --- particularly during a turnover when the operator could be pinned under the ROPS or the skid steer

5. Clear working area of stones or hidden obstacles that might be hooked or snagged, causing injury or damage.

6. Operate only in daylight or good artificial light.

7. Be sure machine is properly mounted, adjusted and in good operating condition.

8. Ensure that all safety shielding and safety signs are properly installed and in good condition.

2.6 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the Brush Mulcher and the safety rules set forth. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.

2. 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 Brush Mulcher 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.

3. If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated.

4. When the use of hand tools is required to perform any part of assembly, installation , adjustment, maintaining, repairing, removal, or moving, be sure the tools used are designed and recommended by the tool manufacturer or that specific task.

5. Personal protection equipment including hard hat, 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 jewelry to be around moving parts.

6. Always use two or more people to handle heavy, unwieldy components during assembly, installation, removal or moving.

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

8. Never place yourself between the skid steer and machine while the machine is in operation.

9. Do not walk or work under a raised machine or attachment unless it is securely blocked or held in position . Do not depend on the skid steer hydraulic system to hold the machine or attachment in place.

10. A heavy load can cause instability of the skid steer. Use extreme care during travel. Slow down on turns and watch out for bumps. The skid steer may need front counterweights to counterbalance the weight of the machine.

11. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.

12. Do not allow riders on the machine or skid steer at any time. There is no safe place for any riders.

13. Before you operate the machine, check over all pins, bolts, and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.

14. Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.

15. Never allow children to operate or be around this machine.

16. Clear the work area of objects which might be picked up and snagged or entangled in the machine.

17. Keep hands, feet, hair, jewelry and clothing away from all moving and/or rotating parts.

18. Mulcher teeth are sharp. Wear heavy gloves and other protective gear whenever tooth contact is required.

19. **Operate only with chain guard deflectors installed.**

2.7 TRANSPORT SAFETY

1. Comply with state and local laws governing highway safety and movement of machinery on public roads.

2. The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

3. At all times, when driving the skid steer and equipment on the road or highway under 20 mph (32 kph) use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.

4. Plan your route to avoid heavy traffic.

5. Always install transport locks, pins or brackets before transporting.

6. Do not drink and drive.

7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.

8. Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Slow down on rough or uneven surfaces.

9. Never allow riders on either skid steer or machine.

2.8 STORAGE SAFETY

1. Store the unit in an area away from human activity.

2. Do not permit children to play on or around the stored machine.

3. Store the unit in a dry, level area. Support the frame with planks if required.

2.9 MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

2. Follow good shop practices.

   - Keep service area clean and dry.
   - Be sure electrical outlets and tools are properly grounded.
   - Use adequate light for the job at hand.



3. Make sure there is plenty of ventilation. Never operate the engine of the skid steer in a closed building. The exhaust fumes may cause asphyxiation.

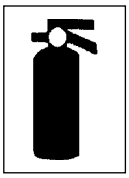
4. Before working on this machine, shut off the engine, set the brakes, and remove the ignition keys.

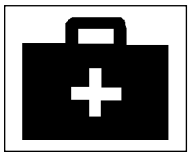
6. Never work under equipment unless it is blocked securely.

7. Use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance. Use heavy gloves when handling mulcher teeth.

8. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.

9. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.





10. Periodically tighten all bolts, nuts and screws and check that all cotter pins are properly installed to ensure unit is in a safe condition.

11. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

2.10 HYDRAULIC SAFETY

1. Make sure that all the components in the hydraulic system are kept in good condition and are clean.

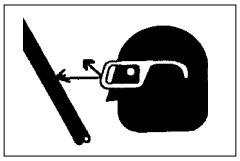
2. Replace any worn, cut, abraded, flattened or crimped hoses and metal lines.

3. Turn Brush Mulcher off, lower Brush Mulcher to the ground, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, repairing, adjusting or untangling.

4. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tapes, clamps or cements. The hydraulic system operates under extremely high-pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.

5. Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.





6. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

7. Before applying pressure to the system, make sure all components are tight and that lines, hoses and couplings are not damaged.

- Think SAFETY! Work SAFELY!

2.11 SIGN-OFF FORM

Baumalight follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Brush Mulcher must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information before the season start-up.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel that an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

SIGN-OFF FORM

DATE	EMPLOYEES SIGNATURE	EMPLOYERS SIGNATURE

3 SAFETY SIGN LOCATIONS

The types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.



A

CAUTION

- Read and understand operator's manual before starting. Review safety instructions annually.
- Do not permit riders on the skid steer or mulcher. Never carry children on machine.
- Do not allow children to operate the mulcher.
- Operate only with guards installed and in good condition.
- Keep away from moving parts.
- Operate only with skid steer equipped with ROPS and seatbelts.
- Before mulching, clear debris away from mulching area.
- Do not operate in the raised position.
- Turn machine off, lower machine to ground, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, repairing, adjusting or unplugging.
- Support mulcher securely before working beneath unit.
- Keep hydraulic components in good repair.
- Wear Personal Protective Equipment (PPE) including but not limited to hard hat, safety shoes with slip resistant soles, safety goggles or face shield and hearing protection whenever operating mulcher.
- Transport with clean reflectors, SMV and working lights as required by federal, provincial and local laws.
- Operate only with chain guard deflectors installed.

MTB-175

REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer.

The types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.



B



C



REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer.

The types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.



D

DANGER

MISSING GUARD HAZARD

- **Close and secure all guards and shields before operating.**
- **Do not operate without guards and shields.**

MTB-185

E

WARNING

ROTATING PART HAZARD
KEEP AWAY

To prevent serious injury or death from rotating parts:

- **Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before adjusting, servicing, maintaining, repairing or unplugging.**
- **Close and secure guard before operating.**
- **Keep hands, feet, hair and clothing away from moving parts.**

MTB-178

F

WARNING

HIGH PRESSURE FLUID HAZARD

To prevent serious injury or death from high-pressure fluid:

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

MTB-182

REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer.

4 OPERATION

OPERATING SAFETY

- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing or unplugging.
- Do not allow riders.
- Install and secure all guards before operating.
- Keeps hands, feet, hair and clothing away from moving parts.
- Place all controls in neutral, stop skid steer engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Place all skid steer and machine controls in neutral before starting.
- Never start or operate machine unless sitting on skid steer seat.
- Clear the area of bystanders, especially small children, before starting.
- Clean reflectors, SMV and lights before transporting.
- Use hazard flashers on skid steer when transporting.
- Do not put hands or feet under machine while skid steer engine or machine is running.
- Objects can be thrown out from under machine with sufficient force to severely injure people. Stay away from machine when it is running. Keep others away.
- Operate only with chain guard deflectors installed.
- Always know what you are mulching. Never operate mulcher in an area that has hidden obstacles. Remove stones, wire or other objects from the working area before starting.
- Review safety instructions with all operators annually.
- Operate only with chain guard deflectors installed.

4.1 TO THE NEW OPERATOR OR OWNER

The Baumalight Skid Steer Brush Mulcher is designed to cut a variety of sticks, brush or small trees. Rotational power is provided by the skid steer hydraulic system. Be familiar with the machine before starting.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependant upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment. It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine.

Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to use the mulcher safely and how to set it to provide maximum field efficiency. By following the operating instructions in conjunction with a good maintenance program, your Brush Mulcher will provide many years of trouble-free service.

4.2 MACHINE COMPONENTS

The Baumalight Brush Mulcher consists of a large spinning rotor that is equipped with sharp teeth to mulch any material that enters the machine. The teeth mulch the wood material while traveling over the working area.

Rotational power to the rotor is provided by the skid steer hydraulic system through a motor on top of the frame and through a belt drive on the left end of the frame.

Overload protection is provided by a relief valve in the hydraulic circuit.

The mulcher attaches to the loader plate on the skid steer.

Tilt the face plate back as required to get closer to larger trees. The lean bar on the rear frame pushes the brush over to allow the rotor to mulch close to the ground. Chain guards on the back of the frame keep all the material under the rotor frame.



Fig. 1 MACHINE COMPONENTS

A Hydraulic Motor
B Hydraulic Valve
C Rotor
D Rotor Frame
E Belt Drive
F Skid Plates
G Lean Bar
H Relief Valve
J Chain Guard
K Belt Tensioner

4.3 MACHINE BREAK-IN

Although there are no operational restrictions on the Hydraulic Brush Mulcher when used for the first time, it is recommended that the following mechanical items be checked:

A. **After Operating For 1/2 Hour or completing 2 Acres:**
   1. Check all nuts, bolts and other fasteners. Tighten to their specified torque.
   2. Tighten mulcher teeth anchor bolts to their specified torque.
   3. Check that the teeth are in good condition with no chips or cracks.
   4. Check that the chain guard is in good condition.

B. **After Operating For 5 Hours and 10 Hours:**
   1. Repeat steps 1 through 4 of Section A.
   2. Go to the regular service schedule as defined in Section 5.

4.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the Baumalight Brush Mulcher requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining the good mechanical condition of the Brush Mulcher that this checklist is followed.

Before operating the machine and each time thereafter, the following areas should be checked off:

1. Check that the machine is properly attached to the skid steer. Be sure lock pins are fully engaged.
2. Check the teeth. Be sure they are not nicked, damaged or broken on their mounts. Repair or replace as needed.
3. Check the mulcher teeth anchor bolts. Tighten to their specified torque.
4. Check for entangled material in all rotating parts. Remove this material.
5. **Check that the chain guard is in good condition.**
6. Install and secure all guards, doors and/or covers before starting.

4.5 EQUIPMENT MATCHING

To ensure the safe and reliable operation of the Brush Mulcher, it is necessary to use a skid steer with the correct specifications. Use the following list as a guide in selecting a skid steer to use with the Brush Mulcher.

1. **Horsepower:**
   Use Table 1 as a guide in selecting the skid steer horsepower appropriate to your model.

2. **Hydraulic System:**
   Refer to website for detailed information on hydraulic system specifications.

Table 1 Minimum HP vs. Model

Model	Minimum HP
MF 548	30
MF 760	60

4.6 ASSEMBLING

The machine comes from the factory in a shipping configuration. Always use tools, equipment and forklifts of appropriate size and capacity for the job. Always use 2 men when lifting, moving and assembling the machine.

When the machine is shipped, follow this procedure when preparing for the customer:

1. Clear the area of bystanders especially small children before starting.

2. Use a forklift to lift the pallet/machine from the truck. Carry the load close to the ground.

3. Move the machine to the assembly area. Be sure there is sufficient clearance to access the machine from all sides.



Fig. 2 SHIPPING

4. Cut the tie-down straps.



Fig. 3 TIE-DOWNS (Typical)

5. Cut the tie straps holding the hydraulic hoses.

6. Raise the machine with a hoist or skid steer and remove the pallet.



Fig. 4 Hoses

4.7 GAUGES

Both hydraulic pressure gauges are conveniently mounted in the top hydraulic component compartment where the operator would see them during operation. Review this section to familiarize yourself with the location and function of each gauge before starting.

1. **Pressure Line:**
   The pressure gauge monitors the hydraulic pressure in the rotor drive circuit. Normally the mulcher should be operated at a circuit pressure of 2500 PSI. This will allow for momentary spikes up to the relief pressure without affecting performance.

   Reduce the forward speed and rotor loading if the gauge exceeds this nominal value.

2. **Drain Pressure:**
   A high efficiency hydraulic motor is used to drive the rotor. At the high oil flow rates used on the mulcher, the motor is designed to allow a small amount of oil to flow past the internal components. This flow is called "case drain" and cools and lubricates the motor. The pressure will nominally run about 50 to 100 PSI. If it exceeds this value, it indicates the case drain is increasing and the back-pressure is too high a larger line must be installed in either the tank line or case drain.

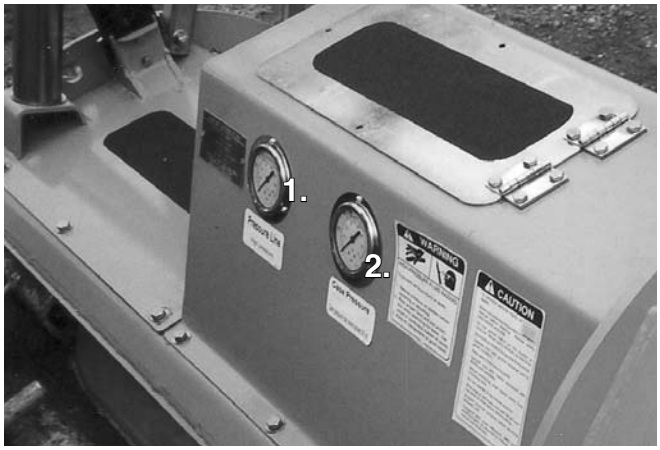


Fig. 5 GAUGES

IMPORTANT

Excessive back pressure will exert undue strain on oil seals, decrease efficiency, and worse, may cause the hydraulic motor to fail. Each of these negative consequences should be avoided with all due attention. With the aid of a back pressure gauge during the first operational engagement, determine that back pressure on return line at full flow does not exceed 500 psi. An example of decreased efficiency is 400 psi of back pressure on a 2500 psi relief system which reduces actual pressure at the motor to 2100 psi. This means the machine is operating at 84% efficiency, and will operate with significantly less cutting power than it should and was designed to do. We recommend having 1” lines installed on skid steer; this will reduce back pressure and improve efficiency.

4.8 ATTACHING/UNHOOKING SKID STEER

The machine is shipped from the factory in a basic, universal configuration that allows it to be mounted to any model skid steer. However, the skid steer must be equipped with a remote hydraulic outlet on the front of the cab frame.

The mulcher should always be located on a level, dry area that is free of debris and other foreign objects. When attaching the mulcher to a skid steer, follow this procedure:

1. Make sure that all bystanders, especially small children are clear of the work area.

2. Make sure there is enough room and clearance to safely drive up to the mulcher.

3. Drive up to the mulcher while aligning the mounting components.



Fig. 6 MACHINE (Typical)



Fig. 7 MATING FACE PLATES

4. **Secure the mounting:**

   a. Drive into the mounting frame.

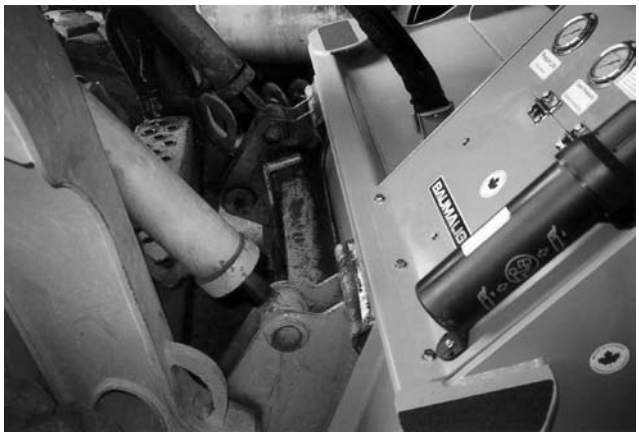
   b. Seat the top of the face plate into the frame of the mulcher.

   c. Raise the loader and tilt the face plate until it is fully mated.

5. Engage the lock pins to secure the mulcher frame to the loader.



MF 548



MF 760

Fig. 8 LATCHED

6. **Connect the hydraulics:**

NOTE

Clip the plastic ties securing the hoses for shipping if this is the first time the mulcher is mounted.

a. Use a clean rag or paper towel to clean the dirt from the couplers and on the hose ends of the skid steer.

b. Connect the hoses to the skid steer couplers. Be sure the couplers are securely seated. A disconnected coupler will result in a blown shaft seal.





One Hose



Two Hoses



Connected

Fig. 9 HYDRAULICS

c. Route and secure the hoses along the frame with clips, tape or plastic ties to prevent binding and pinching. Be sure to provide slack for tilting.

7. Raise the machine.



Fig. 10 MOUNTED (Typical)

8. Reverse the above procedure when unhooking.

9. Place planks or boards under the frame for extra support if required.

4.9 FIELD OPERATION

OPERATING SAFETY

- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing or unplugging.
- Never operate the machine with guards removed.
- When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintaining, repairing, removal, or moving, be sure the tools used are designed and recommended by the tool manufacturer or that specific task.
- Personal protection equipment including hard hat, 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 jewelry to be around moving parts.
- Always use two or more people to handle heavy, unwieldy components during assembly, installation, removal or moving.
- Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintaining, repairing, removal or moving.
- Never place yourself between the skid steer and machine while the machine is in operation.
- Do not walk or work under a raised machine or attachment unless it is securely blocked or held in position . Do not depend on the skid steer hydraulic system to hold the machine or attachment in place.
- A heavy load can cause instability of the skid steer. Use extreme care during travel. Slow down on turns and watch out for bumps. The skid steer may need front counterweights to counterbalance the weight of the machine.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Do not allow riders.
- Before you operate the machine, check over all pins, bolts, and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.
- Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.
- Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Keep hands, feet, hair, jewelry and clothing away from all moving and/or rotating parts.
- Mulcher teeth are sharp. Wear heavy gloves and other protective gear whenever tooth contact is required.
- **Operate only with chain guard deflectors installed.**

Brush Mulchers are designed with the inherent flexibility of operating well in almost any kind of woodlot, brush and terrain conditions. However the operator has the responsibility of being familiar with all operating and safety procedures and following them.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependant upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment. Each operator should review this section of the manual at the start of the season and as often as required to be familiar with the machine.

When using the Brush Mulcher, follow this procedure:

1. Review and follow the Pre-Operation Checklist.
2. Attach the machine to the skid steer (see Section 4.7).
3. Before going into the working area, review Section 4.9; Transporting.
4. For a new operator or using the mulcher with a new skid steer, move to an open area and move the loader and face plate through their entire range of motion. Know how the controls move the machine before starting to work.
5. Lower the mulcher into working position.

6. Align the machine with the working area.

7. **Starting Machine:**

   a. Run the engine at low idle.

   b. Set the skid plates on the ground.

   c. Place the hydraulic control in the detent position to start the machine.

   d. Slowly bring the engine to 3/4 speed. Increase the throttle setting if more oil is required but do not exceed rated speed.

   e. Lower the machine to the ground and proceed down the working area.

8. **Stopping Machine:**

   a. Slowly decrease skid steer engine speed to low idle.

   b. Stop forward motion of skid steer.

   c. Place hydraulic control in neutral.



Starting



Stopping

Fig. 11 POSITIONING

9. **Emergency Stopping:**
   In an emergency situation, stop skid steer engine. Correct emergency situation before starting engine and resuming work.

WARNING

Place all controls in neutral, lower machine, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before dismounting.

10. This mulcher was designed for one-man operation from the seat of the skid steer. It is the responsibility of the operator to see that no one is within 100 feet (33 m) of the mulcher when it is started.

11. **Lean Bar:**
The machine is equipped with a lean bar to push the brush or small trees over and allow the mulcher teeth to contact the lower portion of the brush and mulch it or cut it off. The rest of the plant will be mulched as the machine moves through the working area.



Bar



Working

Fig. 12 LEAN BAR

12. **Hydraulic Relief Valve:**
Each machine is designed with a relief valve in the hydraulic circuit to prevent overloading any of the drive components. Do not adjust the pressure for any reason.



Fig. 13 HYDRAULIC RELIEF VALVE

13. **Teeth:**
The rotor is designed with 4 teeth around the circumference of the rotor that cut into and mulch the wood material as it moves into the rotor. They must be maintained in good condition in order to perform as expected.

Any metal objects in the wood or rocks/ stones on the ground that enter the rotor can damage teeth. Inspect daily to keep the teeth in good condition. Repair or replace as required.



Rotor



Teeth (Close-Up)

Fig. 20 TEETH

14. **Tall Brush:**
There are several techniques an operator can use when mulching tall brush. These are suggestions but not limited to:

a. Use the lean bar to push the brush over and cut off close to ground.



Fig. 15 LEAN BAR

b. Raise the loader to start mulching the top and then lower to the ground. Raise machine, move forward and repeat.

Each operator must experiment to find a technique that works for them in their application.



High



Medium



Low

Fig. 16 TALL BRUSH

15. **Trees:**
The mulcher can be used to cut and mulch trees if they are in the working area. When mulching trees, follow this procedure:

a. Tilt the face plate back to slightly expose more of the rotor.

b. Raise the loader to 4 to 6 feet (1.3 to 1.9 m).

c. Be sure the lean bar is pushing on the tree so it falls away from the machine.

d. Move slowly into the tree.

e. Watch the pressure gauge. Do not exceed the nominal working pressure of 2500 PSI.

f. Continue to move forward until the tree is cut off and falls over.



Starting



Middle



Breaking Off



Pressure Guage

Fig. 17 TREES

16. **Ground Speed:**
Travel speed can vary between 1 and 3 mph (2 and 5 kph) depending on the wood, brush and terrain conditions. It is the responsibility of the operator to note the condition of the work area and set the speed to obtain a quality mulching job and maintain control of the machine.

The speed can be increased if a good job is being done.

Decrease speed if you are producing a ragged cut or leaving brush uncut.



Fig. 18 GROUND SPEED

17. **Operating Hints:**

a. Although it is best to mulch when it is dry, the machine works well in wet conditions. However, the operator will have to travel more slowly to do the same quality mulching. It will also be necessary to clean the machine more frequently to prevent caking and clogging of the rotor area.

b. The machine should always be operated at 3/4 throttle to the rated speed. The mulching action is generated by the speed of the teeth. When the speed drops below a certain rate (slowing the input speed or oil flow rate), the teeth start to tear the material rather than mulching it and will give a ragged-looking cut.

c. Vary ground speed by changing skid steer speed rather than changing the throttle setting. Foward travel speeds can range from 1 to 3 mph (2 to 5 kph) or more depending on the type of terrain, size of brush or tree height, moisture level and power available. It is the operator's responsibility to determine and operate the machine at a safe speed at all times.



Fig. 19 FIELD



Fig. 20 OPERATION

d. If the brush is tall, use the lean bar to push the brush over and allow the rotor to cut low on the stem.

e. When mulching a new area for the first time, always inspect the area for unknown obstructions. If none are found, proceed with the work.

f. The teeth will need replacing when you see that the work area has not been cut evenly or it looks like the brush has been ripped off.

g. Always reduce ground speed when mulching around obstructions or in close quarters.

h. The machine has a rotor under its frame that is turning at a high rate of speed. With this speed, the teeth can pick up objects on the ground and expel them out from under the frame or out the discharge areas. It is extremely important that the operator be aware that objects can be expelled in this way and never point the discharge areas toward people, animals or property. These expelled objects are moving fast enough to cause injury to people, animals or property. It is better to stop mulching when there are bystanders, especially children than to risk the chance of injury.

DANGER

The rotating rotor/teeth can pick up objects and expel them at a high rate of speed. These projectiles can be a hazard to people and property. Always keep deflectors in place. Never operate the brush mulcher when there are bystanders, especially children nearby. Use extra care when operating in populated or congested areas.

If people or animals approach the working area, stop the machine immediately. Do not restart until the working area is cleared.

j. The manufacturer recommends only operating the machine with chain guard deflectors in place. These deflectors will reduce the amount of debris or number of objects expelled from under the machine.



Fig. 21 TEETH



Operating



Rear

Fig. 22 CHAIN GUARD DEFLECTORS

k. The machine is designed with a bypass line in the drive circuit that allows the returning oil to bypass the circuit and allows the rotor to free wheel until it stops. The minimizes overloading of the drive components.

l. If the rotor stalls, stop rotor motion and rise slightly and try again, if still stalled lower unit so teeth tips dig slightly into sod then reverse flow, a freewheeling check valve will let the pressure pass but you still must do this to open the hydraulic lock on the rotor. Then with flow in reverse back up skid steer and the branch will disengage.

   Stop rotor motion and rise slightly and try again.

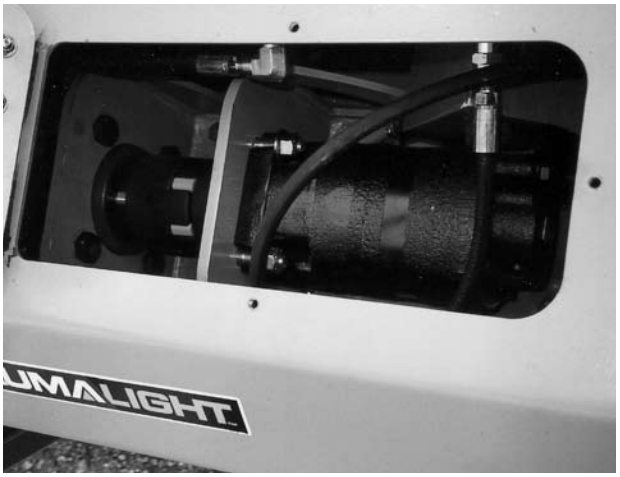


Fig. 23 HYDRAULIC BYPASS

4.10 TRANSPORTING

TRANSPORT SAFETY

- Comply with state and local laws governing highway safety and movement of machinery on public roads.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- At all times, when driving the skid steer and equipment on the road or highway under 20 mph (32 kph) use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
- Plan your route to avoid heavy traffic.
- Always install transport locks, pins or brackets before transporting.
- Do not drink and drive.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
- Never allow riders on either skid steer or machine.

When transporting the machine, review and follow these instructions:

1. Be sure all bystanders are clear of the machine.
2. Be sure that the machine is securely attached to the skid steer. Be sure the face plate anchor pins are fully engaged.
3. Review and follow the Transport Safety instructions in the skid steer manual.
4. Do not run the mulcher while transporting
5. Always use hazard warning flashers on the skid steer when transporting unless prohibited by law.
6. Clean lights, reflectors and SMV before transporting. Be sure lights are working.
7. Do not exceed 20 mph (32 kph) during transport.



Fig. 24 TRANSPORTING

4.11 STORAGE

STORAGE SAFETY

- Following operation, or when unhooking, stop the skid steer, set the park brake, disengage the PTO, shut off the skid steer engine and remove the ignition key.
- Store the unit in a dry, level area. Support the frame with planks if required.
- Do not permit children to play on or around the stored machine.

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary downtime at the start of next season. To insure a long, trouble-free life, this procedure should be followed when preparing the unit for storage.

1. Clear the area of bystanders, especially small children.
2. Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris and residue.
3. Inspect the teeth and rotor for damage or entangled material. Repair or replace damaged parts. Remove all entangled material.
4. Touch up all paint nicks and scratches to prevent rusting.
5. Move to storage area.
6. Select an area that is dry, level and free of debris. Inside a building is ideal.
7. Unhook by following the procedure in Section 4.8.
8. If the machine cannot be stored inside, cover with a waterproof tarpaulin and tie securely in place.
9. Store the machine in an area away from human activity.
10. Do not allow children to play on or around the stored machine.



Fig. 25 STORAGE

5 SERVICE AND MAINTENANCE

MAINTENANCE SAFETY

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Follow good shop practices.
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for the job at hand.
- Make sure there is plenty of ventilation. Never operate the engine of the skid steer in a closed building. The exhaust fumes may cause asphyxiation.
- Before working on this machine, disengage the hydraulic system, shut off the engine, set the park brake, and remove the ignition key.
- Be certain all moving parts have come to a complete stop before attempting to perform maintenance.
- Never work under equipment unless it is blocked securely.
- Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work.

5.1 SERVICE

5.1.1 SERVICING INTERVALS

The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent servicing.

8 Hours or Daily

1. Check the condition of the teeth. Replace if dull, chipped or broken.



Fig. 26 TEETH

40 Hours or Weekly

1. Check drive belt tension.

WARNING

Machine is shown with guard removed or rotor cover opened for illustrative purposes only. Do not operate machine with guard removed or cover opened.



Fig. 27 SPRING-LOADED IDLER

Annually

1. Wash machine.



Fig. 28 MACHINE

5.1.2 SERVICE RECORD

See Lubrication and Maintenance sections for details of service. Copy this page to continue record.

ACTION CODE: CK CHECK CL CLEAN R REPLACE
G GREASE CH CHANGE

HOURS / SERVICED BY / MAINTENANCE																								
8 Hours or Daily																								
CK Teeth																								
40 Hours or Weekly																								
CK Spring-Loaded Tensioner																								
100 Hours or Annually																								
CL Machine																								

5.2 MAINTENANCE

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble-free operation

5.2.1 TOOTH REPLACEMENT

After extended use, a tooth may become chipped, broken or worn and have to be replaced.

When replacing teeth or teeth bolts, follow this procedure:

1. Clear the area of bystanders, especially small children.

2. Tilt the face plate back a little to expose the rotor.

3. Block up or support frame to prevent leak down from the loader.

4. Remove tooth anchor bolt.

5. Replace tooth if there are no remaining sharp edges on the tip.

6. Tighten the anchor bolt to its specified torque.



Teeth



Rotor

Fig. 29 TEETH

5.2.2 DRIVE BELT TENSION AND ALIGNMENT

A cog belt transmits rotational power between the rotor and the hyudraulic motor. It is designed with a spring-loaded idler to maintain the drive belt tension.

Check the tension weekly to be the belt is properly tensioned. When maintaining the drive belt, follow this procedure:

1. Clear the area of bystanders, especially small children.

2. Lower machine to the ground, stop skid steer engine, set park brake, remove ignition key and wait for all moving parts to stop before dismounting.

3. Open belt access door.

4. The long span of the belt should be taut to the touch.

5. The spring on the belt tensioner should have a small gap between its coils.

6. To replace the drive belt:

   a. Unhook tensioner spring.

   b. Remove old belt and replace with a new one.

   c. Re-attach tensioner spring.

   d. Check that pulleys are aligned.



Left End



Tensioner

Fig. 30 DRIVE BELT

WARNING

Machine is shown with guard removed or rotor cover opened for illustrative purposes only. Do not operate machine with guard removed or cover opened.

7. To pulley alignment:

   a. Lay a straight edge across pulley faces.

   b. Use the pulley taper lock to align pulleys.

   c. Pulleys need to be adjusted if the gap at the pulley edge is more than 1/32 inch (0.7 mm).



Fig. 31 ALIGNMENT

5.2.3 CHAIN GUARD INSTALLATION

Front chain guards are standard equipment on all Baumalight Brush Mulchers. It is recommended that the machine never be operated without one. If you need to replace a chain guard that is damaged, follow this procedure:

1. Clear the area of bystanders, especially small children.

2. Raise the machine above the ground to provide access to the front of the deck.

3. Stop engine, set park brake, remove ignition key and wait for all moving parts to stop before dismounting.

4. Place large blocks or safety stands under each skid plate.

5. Remove the chain guards from the machine.

6. Install new chains.

7. Tighten fasteners to their specified torque.

8. Remove blocks or stands from under skid plates.

9. Lower machine to working height.

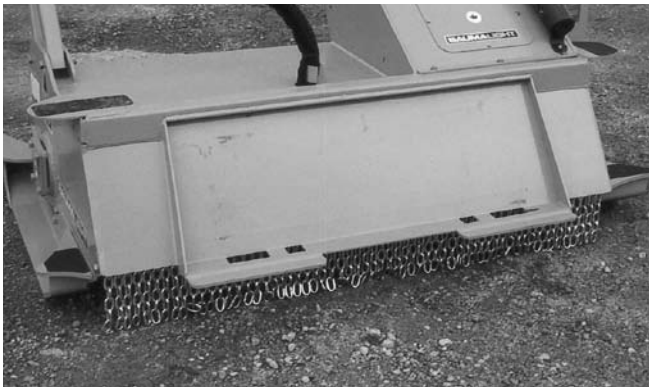


Fig. 32 DEFLECTORS

6 TROUBLE SHOOTING

The Baumalight Hydraulic Brush Mulcher uses teeth on a rotor to mulch brush, branches and small trees. It is a simple and reliable system that requires minimal maintenance.

In the following section, we have listed many of the problems, causes and solutions to the problems that you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this trouble shooting section, please call your local dealer, distributor or Baumalight. Before you call, please have this Operator's Manual and the serial number from your Brush Mulcher ready.

PROBLEM	CAUSE	SOLUTION
Rotor doesn't turn.	Broken drive belt.	Replace drive belt.
	No oil flow.	Place hydraulic lever in detent.
Poor mulching job.	Travelling too fast.	Slow down.
	Teeth dull.	Replace teeth.
	Stripping in brush.	Broken tooth. Replace with new tooth.
	Brush being left.	Travelling too fast. Slow down.
High drive pressure.	System overloaded.	Reduce forward speed.
.	Teeth dull.	Replace teeth.
	Rotor jammed.	Free rotor.

7 SPECIFICATIONS

7.1 MECHANICAL

FEATURE	MF 548	MF 860
Path Width	62 in (157.5 cm)	75 in (190.5 cm)
Rotor Width	48 in (121.9 cm)	60 in (152.4 cm)
Cutting Height	0-1 1/2 in (0-38.1 mm)	0-1 1/2 in (0-38.1 mm)
Rotor RPM	1200	1750
No. of Cutters	104	126
Max HP	Check flow & PSI	Check flow & PSI
Min HP	35	60
System Protection	Built-in relief	Built-in relief
Unit Weight	1500 lbs (975.2 kg)	2150 lbs (975.2 kg)

7.2 HYDRAULIC FITTING TORQUE

Tightening Flare Type Tube Fittings *

1. Check flare and flare seat for defects that might cause leakage.

2. Align tube with fitting before tightening.

3. Lubricate connection and hand tighten swivel nut until snug.

4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

• The torque values shown are based on lubricated connections as in reassembly.

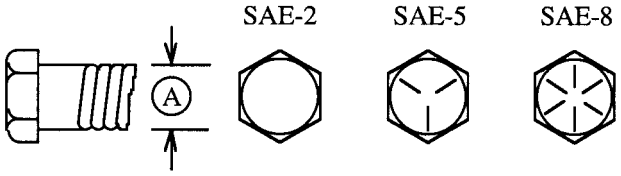
Tube Size OD	Nut Size Across Flats	Torque Value•		Recommended Turns To Tighten (After Finger Tightening)	
(in.)	(in.)	(N.m)	(lb-ft)	(Flats)	(Turn)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	**11/16**	**24**	**18**	**1**	**1/6**
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

7.3 BOLT TORQUE

CHECKING BOLT TORQUE

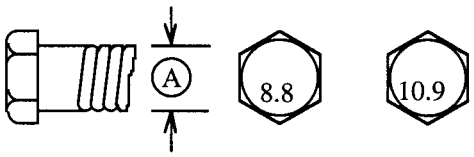
ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*					
	SAE 2		SAE 5		SAE 8	
	(N.m)	(lb-ft)	(N.m)	(lb-ft)	(N.m)	(lb-ft)
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



METRIC TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*			
	8.8		10.9	
	(N.m)	(lb-ft)	(N.m)	(lb-ft)
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and capscrews are identified by their head markings.

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