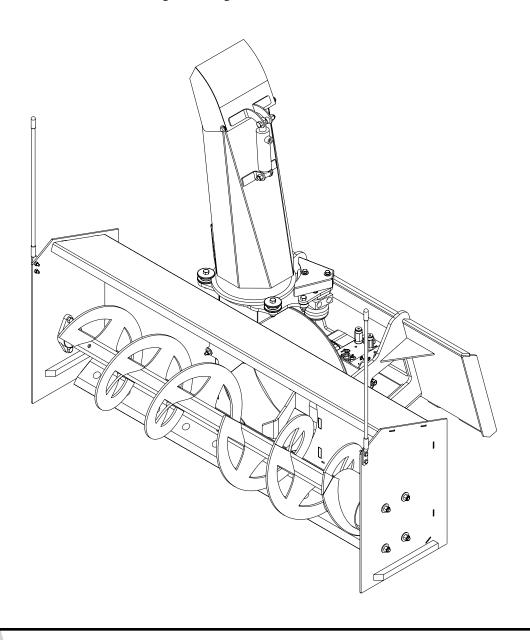
OPERATOR'S MANUAL Model HD-SNB

Heavy-Duty Snowblower





M-B Companies, Inc. 1615 Wisconsin Ave. P. O. Box 200 New Holstein, WI 53061-0200 (920) 898-1560 or 800-558-5800 FAX: (920) 898-4588

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1

NOTES



INTRODUCTION

OPERATOR'S MANUAL

You must read, understand and comply with all the safety and operating instructions in this manual before attempting to set-up and operate the snow blower.

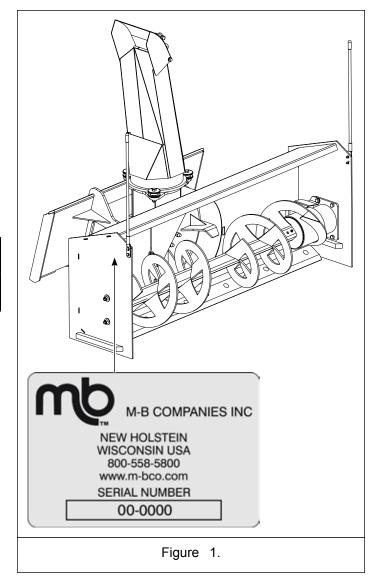
Failure to comply with the safety and operating instructions can result in loss of machine control, serious personal injury to you and/or bystanders, and risk of equipment and property damage.

IDENTIFICATION NUMBERS

When contacting your authorized dealer for information, replacement parts or service, you MUST have the model and serial number of your unit.

Record the serial number in the space provided. The serial number plate/decal can be found in the location shown in Figure 1.

Model Name/Number:	
Date Purchased:	Serial #:





SAFETY

SAFETY ALERTS

Signal words and alert symbols notify of important safety precautions.

DANGER!



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

WARNING!



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

CAUTION!



Indicates a hazardous situation or unsafe practice which, if not avoided, could result in minor or moderate injury or property damage.

SAFETY DECALS

Although reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively, we have placed several safety labels on the unit to remind you of this important information while you are operating your unit.

All DANGER, WARNING, CAUTION, and instructional messages on your unit should be carefully read and obeyed. Bodily injury can result when these instructions are not followed. The information is for your safety and it is important.

These labels will act as a constant visual reminder to you, and others who may use the equipment, to follow the safety instructions necessary for safe, effective operation.

If any of these labels are lost or damaged, replace them at once. See you local dealer for replacements.



To prevent serious injury or death:

. Do not allow any riders

290-1182

AWARNING

MOVING PART HAZARD

To prevent serious injury or death from moving parts:

- Close and secure guards and shields before starting.
- Keep hands, feet, hair and clothing away from moving parts.
- Disconnect and lockout power source before adjusting or servicing.
- Do not stand or climb on machine when operating.

ACAUTION

Read Operator's Manual before using Snowblower. If operating instructions are missing, contact the Manufacturer for your free replacement.

- Before operating, make sure all guards are installed properly.
- Unless otherwise instructed by decal or operator's manual, stop engine and remove key before leaving operator's position.
- Wait for all movement to stop before attempting to unclog, adjust, clean, lubricate or inspect.
- Hydraulic system can contain stored energy or pressure when snowblower becomes plugged.
 This energy can be released when unclogging debris.
- DO NOT operate near any objects that can be damaged by thrown debris. Keep by-standers off and away from the machine while it is operating.
- Escaping fluid under pressure can be invisible and can penetrate the skin. Do not use hands to search for leaks. Hydraulic lines and components can be hot after operating. Do not touch.

390-15072

PRE-START GUIDELINES

- Install any covers or guards which may have been removed for shipping purposes.
- Before starting equipment, walk around equipment, making a visual inspection that all safety devices are properly installed and secured.
- Check that all hardware, fasteners, hydraulic fittings, etc. are in good condition and properly fastened. Replace any fatigued or damaged items with proper replacements.
- Personnel who are not required to be in the work area should be kept away. Never start the equipment unless you are absolutely certain that everyone in the area is clear of the machine and aware it is being started.
- · Follow the manufacturer's recommended start-up procedure.

OPERATION GUIDELINES

Read, understand and follow all instructions in the manual and on the unit before starting.

- To avoid serious injury or death, do not modify equipment. Any
 modifications made to equipment can be dangerous and can void
 equipment warranty.
- · Never defeat a safety device to make a task easier.
- Always wear proper apparel when operating equipment; safety glasses, face shield or goggles, ear protection, and dust mask. Tie hair back. Never wear loose clothing or jewelry that could get caught in moving parts.
- Never operate equipment with covers or guards removed. Rotating parts can cause severe injury. Keep hands, feet, hair, jewelry and clothing away from all moving parts.
- Only allow responsible adults who are familiar with the instructions, to operate the unit (local regulations can restrict operator age).
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown.
- Be aware of surroundings. Be sure the area is clear of other people, bystanders or pets. Stop unit if anyone enters the area.
- · Always look down and behind before and while traveling in reverse.
- Be aware of discharge direction and do not point discharge at anyone. Do not point the discharge at glass enclosures, automobiles, or windows.



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SAFETY

- · Always stand clear of the discharge area when operating this unit.
- · Disengage all clutches and PTO's before starting engine.
- Never leave a running machine unattended. Always disengage the attachment and traction controls, lower the attachment, set the park brake, stop the engine and remove the ignition key before leaving the machine.
- · Operate only in daylight or good artificial light.
- Never carry passengers.
- Do not operate the unit while under the influence of drugs, alcohol or other medication.
- · Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the unit into a trailer or truck.
- Keep in mind the operator is responsible for accidents occurring to other people or property.
- Data indicates that operators, age 60 years and above, are involved in a large percentage of power equipment-related injuries. These operators should evaluate their ability to operate the unit safely enough to protect themselves and others from injury.
- All operators should seek and obtain professional and practical instruction.
- Protect eyes, face and head from objects that may be thrown from unit. Wear appropriate hearing protection.
- Always wear substantial footwear and appropriate clothing. Wear footwear that improves traction on slippery slopes. DO NOT wear long scarves or loose clothing that could become entangled in moving parts.
- Abnormal Vibrations are a warning of trouble. Striking a foreign object can damage unit. Stop unit and engine. Wait for all moving parts to stop. Inspect unit and make any necessary repairs before restart
- Never place your hands or any part of your body or clothing inside or near any moving part while unit is running.
- Stop engine before: refueling, cleaning, making adjustments or removing the attachment assembly.
- Follow the drive unit manufacturer's recommendations for wheel weights or counter weights.
- · Make any adjustments before operating unit.
- Do not touch parts which may be hot from operation. Allow such parts to cool before attempting to service the unit.
- Before using, always visually check that hardware is present, intact and secure. Replace worn or damaged parts.
- Never operate the machine with damaged guards, or without safety protective devices in place.
- Follow the manufacturer's recommendations for towing weight restrictions and procedures.
- Original purchaser of this unit was instructed by the seller on safe and proper operation. If unit is to be used by someone other than original purchaser; loaned, rented or sold, ALWAYS provide this manual and any needed safety training before operation.
- The Operator must understand the functions and parameters of all controls and how to operate, as well as how to STOP in an Emergency.

NOTE: All reference to left, right, front, or rear are given from the operator position and facing forward.

MAINTENANCE GUIDELINES

- Maintain or replace safety and instruction decals/labels as necessary.
- · Never run a unit in an enclosed area.
- · Keep nuts and bolts tight and keep equipment in good condition
- Never tamper with safety devices. Check their proper operation regularly and make necessary repairs if they are not functioning properly.
- · Keep unit free of debris and build-up. Clean up any oil spillage.
- Never make adjustments or repairs with the engine running unless specified otherwise in the engine manufacture's manual.
- Components are subject to wear, damage, and deterioration.
 Frequently check components and replace with the manufacturer's recommended parts, when necessary.
- Check control operation frequently. Adjust and service as necessary.
- · Use only factory authorized parts when making repairs.
- Always comply with factory specifications on all settings and adjustments.
- Only authorized service locations should be utilized for major service and repair requirements.
- Never attempt to make your own repairs on this unit unless you have been properly trained. Improper service procedures can result in hazardous operation, equipment damage and voiding the manufacturer' warranty.
- Stop engine on tractor and set parking brake before performing any adjustments on the machinery.
- Do not disassemble a pressurized system unless properly trained and equipped with adequate tooling.
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. Before operation, be sure that all hydraulic connections are tight and hoses are not damaged. Relieve pressure in system before making adjustments.
- Oils and fluids can be very hot under pressure. Use caution and allow the system to cool before beginning maintenance work.
- Never operate or pressurize one of these systems with worn or damaged components. Replace hoses, fittings, valves or other components which appear defective.
- Never adjust pressurized systems beyond recommended levels to achieve higher operating pressures.
- NEVER search for hydraulic leaks with only your hands. Use cardboard or a piece of wood.
- For engine equipped models, follow specific engine manufacturer's recommended service intervals for dirty/dusty environments.



ASSEMBLY AND INSTALLATION

ASSEMBLY

The snowblower is shipped partially disassembled to conserve shipping space and to package securely to reduce the possibility of damage in transit. The discharge chute must be installed on top of the impeller housing outlet.

1. Remove four screws and two hold-down brackets secure chute to crate. See Figure 1.

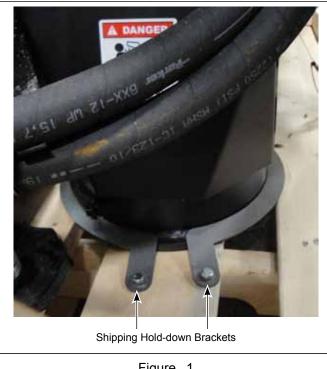
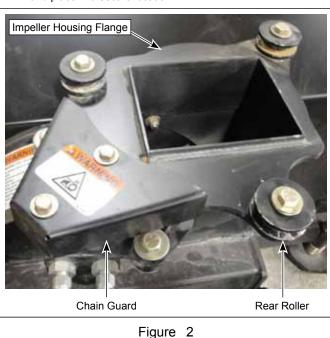


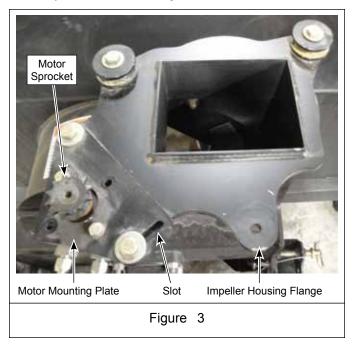
Figure 1

2. Remove chute and all other components from the shipping crate and place in a secure location.

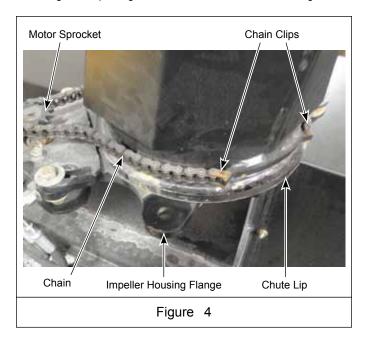


NOTE: Refer to the 905-Assembly Drawing included in the Parts List section of this manual to identify applicable parts.

- 3. Remove 1/2-13 x 2-1/2" hex head capscrew, lock nut, flat washers and rear roller from impeller housing flange. Retain all parts. See Figure 2.
- Remove two 3/8-16 x 3" hex head capscrews, lock washers, flat washers, chain guard and two spacers from motor mounting plate. Retain all parts. See Figure 2.
- 5. Loosen two 1/2" hex head capscrews securing motor mounting plate to impeller housing flange and rotate motor mounting plate fully forward in slot. See Figure 3.



6. Place discharge chute on top of impeller housing flange, inserting chute lip into grooves of two forward rollers. See Figure 4.



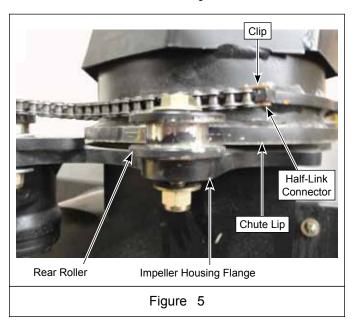
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ASSEMBLY AND INSTALLATION

- Position chain around motor sprocket and attach ends to chute with half links and clips provided. See Figure 4.
- 8. Position rear roller (removed in step 3) on impeller housing flange with chute lip in roller groove. See Figure 5.

IMPORTANT! Overtightening mounting hardware will crush roller bushing, causing roller to bind, preventing free rotation.

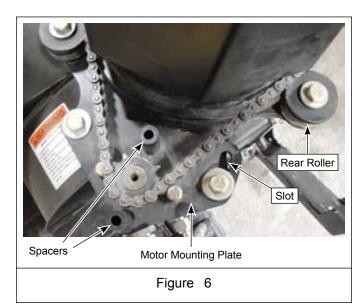
9. Secure roller to flange with 1/2-13 x 2-1/2" hex head capscrew, flat washers and lock nut. See Figure 5.



IMPORTANT! Chain should not be overly taut, which could prevent free rotation of chute.

- 10. Rotate motor mounting plate back in slot to tighten chain.
- 11. Tighten two 1/2" hex head capscrews to secure motor mounting plate to impeller housing flange. See Figure 6.

NOTE: Holes in motor flange are threaded to accept mounting capscrews.



 Install two spacers and chain guard on motor mounting plate and secure with two 3/8-16 x 3" hex head capscrews, lock washers and flat washers. See Figures 6 and 7.



INSTALLATION

- 1. Perform the **ASSEMBLY** procedure listed within this instruction.
- Install snow blower to prime mover as any other attachment. Use the guick-attach on a skid steer.

NOTE: Refer to the Hydraulic Schematic within the DRAWINGS section of this manual for further details.

This unit is equipped with an anti-reverse function in the manifold to prevent accidental reversing and to prevent injury.

Connect the hydraulic hoses properly, paying attention to the direction of flow.

IMPORTANT! Electronic controls will only work with a 12VDC system. Only a positive (+) and ground (-) connection is required.

NOTE: Refer to the Electrical Schematic within the DRAWINGS section of this manual for further details.

- 4. Connect the chute rotation and deflector angle electrical controls (Figure 8) to an appropriate location on the prime mover.
- 5. Turn on prime mover and attempt to operate the snow blower impeller and auger using the prime mover's hydraulic controls. Operate the chute rotation and deflector angle electrical controls. There may be air in the system initially, so use caution when first running the unit. Operation may appear to be jerky or irregular until any air is purged from the hydraulic system.

NOTE: Viewed from the front, the impeller should rotate clockwise. Having a helper view the equipment during initial hook-up and operation will help this process.

Verify auger is turning in the proper direction (should appear to be feeding the impeller). Verify impeller is turning in the proper direction to discharge out chute.



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ASSEMBLY AND INSTALLATION



 Consult TROUBLESHOOTING section of this manual if the unit does not function properly. Call manufacturer if you cannot diagnose the problem after reviewing the troubleshooting information and contacting your local dealer.



CONTROLS AND FEATURES

CONTROLS

The raising and lowering of the snowblower and the starting and stopping of the impeller and auger are accomplished with the prime mover's controls. Refer to the prime mover's Operation/Owner's Manual.

IMPORTANT! Electronic controls will only work with a 12VDC sys-

tem. Only a positive (+) and ground (-) connection is

required.

NOTE: Refer to the Electrical Schematic within the DRAWINGS sec-

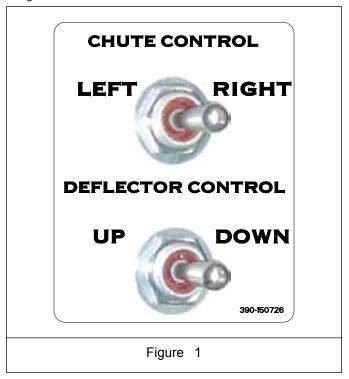
tion of this manual for further details.

CHUTE CONTROL

Used to swing the chute LEFT or RIGHT to direct snow discharge.

DEFLECTOR CONTROL

Used to tilt the chute top deflector UP or DOWN to direct snow discharge.



There may be air in the system initially, so use caution when first running the unit. Operation may appear to be jerky or irregular until any air is purged from the hydraulic system.

FEATURES

Refer to the Setup and Adjustments instruction, Specifications and Parts Lists within this manual for information on the HD Snowblower components and functions.





SETUP AND ADJUSTMENTS

SETUP

Proper setup of your snow blower will increase the life of the components and produce more efficient movement of material. Visually inspect the adjustments before each operating session and measure the adjustments once every 10 hours of operation.

SKID SHOE ADJUSTMENT

See Figure 1.

- After the snow blower is mounted to the prime mover, park the unit on a flat, level surface; preferably concrete or asphalt.
- 2. Shut off snow blower and prime mover and apply parking brake.

NOTE: The cutting edge mounting position is fixed and cannot be adjusted.

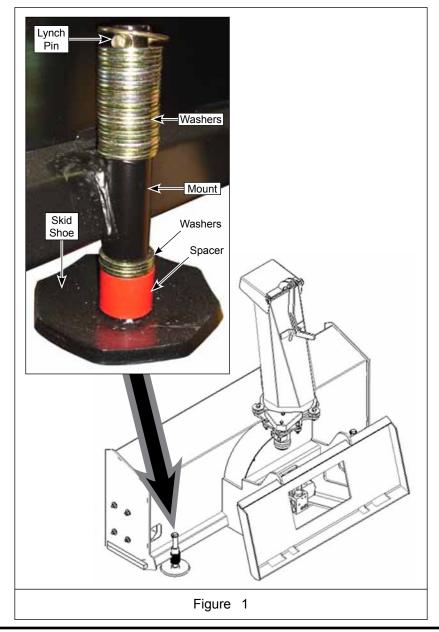
Adjust the skid shoes so that the snow blower cutting edge, mounted on the bottom front of the blower housing, has light contact along the full length of the blade edge. Measure and note distance between ground surface and bottom of snow blower lower cutting edge.

If using the snow blower on gravel or uneven surfaces, a higher cutting edge position is recommended to minimize the scraping effect of unwanted debris. This will help avoid running gravel through the snow blower.

- b. Raise snow blower high enough to place adequate supports of sufficient height below it to allow skid shoe removal.
- c. Lower snow blower onto supports.
- d. Remove the lynch pin from top of skid shoe shaft.
- e. Slide skid shoe out of housing mount while retaining all washers and/or spacer located on top of mount.

Raising (retracting) the skid shoes will increase the cutting edge contact, causing more scraping of the ground.

Lowering (extending) the skid shoes will decrease the cutting edge contact with the ground.







SETUP AND ADJUSTMENTS

IMPORTANT! The spacer/washers placement must be identical on both skid shoes to ensure the snow blower is level.

NOTE: Spacer is 1-1/2" thick. Washers are 1/8" thick. Any combination of the spacer and washers positions is allowable.

- f. Lower the skid shoe (raises cutting edge) by adding spacer/ washers to shaft.
- g. Raise the skid shoe (lowers cutting edge), by amount measured in step a, by removing spacer/washers from shaft.
- h. Install skid shoe into mount and hold fully raised.
- Install remaining spacer/washers on skid shoe shaft, above mount.
- 10. Install lynch pin through top end of skid shoe shaft.
- Lower snow blower to ground and verify cutting edge contact (gap).
- 12. Run the unit forward approximately 10 feet in the operating position. Stop and raise the snow blower, then back the unit away. The 'cleaned' portion of the surface should exhibit light ground contact with minimal snow leftover and no debris pick up.

CHUTE ROTATION CHAIN ADJUSTMENT

See Figure 2.

1. Loosen two 1/2" hex head capscrews securing motor mounting plate to impeller housing flange.

IMPORTANT! Chain should not be overly taut, which could prevent free rotation of chute.

- 2. Rotate motor mounting plate back in slot to tighten chain.
- Tighten two 1/2" hex head capscrews to secure motor mounting plate to impeller housing flange.





OPERATION

PRE-START CHECKS

IMPORTANT! You must read, understand and comply with all the safety and operating instructions in this manual before attempting to set-up and operate your snow blower.

> Failure to comply with the safety and operating instructions can result in loss of machine control, serious personal injury to you and/or bystanders, and risk of equipment and property damage.

- 1. Visually inspect equipment and hardware to ensure that all parts are secure and all hardware is tightened and secure.
- 2. Check for oil leaks and loose hose connections.
- Inspect the skid shoe adjustment to ensure that there is proper cutting edge contact or clearance and that the snow blower is
- Inspect the cutting edge and skid shoes to determine if replacements are needed.
- Inspect the hoses from the prime mover to snow blower to ensure correct hydraulic oil flow direction.

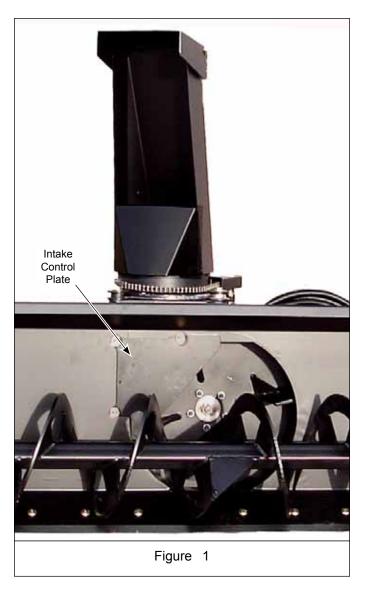
OPERATION

- Operate prime mover and snow blower at a speed that is appropriate for the conditions and location.
- For heavy material such as wet or frozen snow, drive more slowly or cut smaller swaths into the snow.
- If the surface being cleaned is uneven and causes the snow blower to leave patches or gouges, adjust skid shoes height to compensate. Refer to the SETUP and ADJUSTMENT instruction.
- If the material being cleaned is frozen-on or difficult to remove such as ice, it may be necessary to drive extremely slow to allow the snow blower cutting edge to "scrape" the surface clean and the auger to break up large chunks.
- The intake control plate partially covers the intake opening of the auger housing to increase suction when clearing lighter, more powdery snow. It may be removed to allow greater volume when clearing heavy, wet snow. See Figure 1.

TRAVEL PROCEDURE

Follow these instructions for extended travel (i.e. to and from the work

- · Set snow blower rotation control to the OFF position.
- Use the lift control to bring the snow blower to the fully raised posi-





MAINTENANCE

MAINTENANCE SCHEDULE

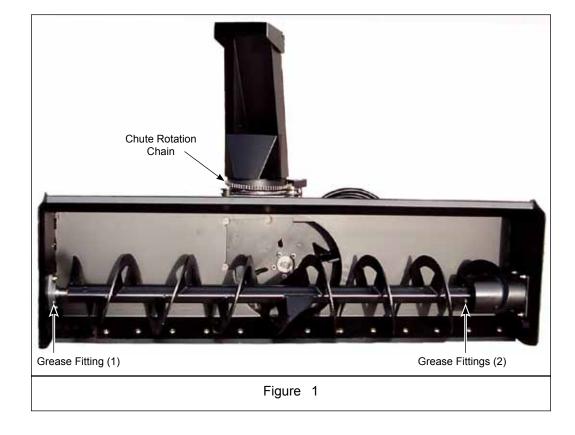
- Check adjustments every 10 hours of operation.
- Oil chute rotation chain every 10 hours of operation.
- Grease auger shaft and its support bearing every 10 hours of operation.
- · Replace cutting edge and skid shoes as needed.

LUBRICATION

- Grease bearings and pivot points per the MAINTENANCE SCHED-ULE using Chevron Ultra Duty II, Grade 2; or equivalent high-temp grease.
- There are (3) grease points on the unit: (2) in the shaft at the auger motor connection and (1) at the opposite end auger support bearing. These can be reached without removing any access covers. See Figure 1.
- It may be necessary to lightly lubricate the discharge chute hinge pin if adjustment becomes difficult.
- Oil chute rotation chain using either the drip method or lightly brushing on oil. See Table 1 for recommended oil.

Table 1. Chain Oil				
Recommended Grade	Temperature, °F	Temperature, °C		
SAE 10	-20 to +80	-29 to +27		
SAE 20	+10 to +110	-12 to +43		
SAE 30	+20 to +130	-7 to +54		
SAE 40	+30 to +140	-1 to +60		
SAE 50	+40 to +150	+4 to +66		

Note: When temperature range permits a choice, use the heavier grade oil.





STORAGE

STORAGE

- Store the unit in a supported position with the cutting edge off the ground, such as on a wooden skid. If stored on the ground, the components are subjected to more moisture which can accelerate rusting.
- Properly drain hydraulic hoses or cap off to prevent spillage of oil.
 Clean up any spills quickly and appropriately.
- Connect Quick couplers together if disconnecting blower from prime mover to allow fluid to circulate.
- Disconnect all electrical connections between the blower and prime mover for extended storage to prevent battery drain.
- Properly clean the unit before storage, removing dirt, gravel, salt, etc. to extend paint life.
- If the unit is power-washed, all lubrication points should be greased or oiled before storage

TROUBLESHOOTING

Trouble	Possible Cause	Remedy
Auger does not rotate, or rotates	Hydraulic hoses not connected.	Check hose connections.
backwards.	Hydraulic hoses hooked up backwards.	Check flow direction of unit.
	Key missing/broken on auger motor drive shaft.	Inspect and replace key.
	Auger motor shaft is broken or installed improperly.	Inspect motor shaft and install or repair as necessary.
	5. Auger bent or motor seized.	Disassemble, inspect and repair/replace as necessary.
Impeller does not rotate, or rotates	Hoses hooked up backwards.	Check hose connections.
backwards.	Key broken or missing.	Disassemble and inspect impeller motor shaft and key.
Discharge chute does not rotate.	Chain bound or stuck.	Inspect and correct tension for smooth operation. Refer to the CHUTE ROTATION CHAIN ADJUSTMENT procedure within the Setup and Adjustments instruction.
	Connector links or clips missing or broken.	Replace as needed.
Snow blower discharging poorly or clogging.	Material is frozen on auger, impeller or inside snow blower housing.	Slow down prime mover speed. Stop, back up, shut down and remove debris.
	Uneven ground surface.	Adjust skid shoes height.
	3. Material is too heavy.	Take a smaller swath of material at a time.
	Forward motion too fast.	Slow down prime mover speed.
Cutting edge or skid shoe wearing unevenly.	Improperly height adjustment for terrain type or uneven adjustment of skid shoes.	Refer to the SKID SHOE ADJUSTMENT procedure within the Setup and Adjustments instruction.
Snow Blower producing excessive vibration.	Caked on debris or object in auger or impeller.	Remove foreign objects.
	Bent or broken impeller or auger.	Inspect and repair or replace as necessary.
	Auger support bearing worn out.	Replace bearing as necessary. Properly lube bearing.
	Auger or impeller hydraulic drive motor damaged.	Inspect and repair or replace as necessary.

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SPECIFICATIONS

Model:	HD-SNB 66"	HD-SNB 72"	HD-SNB 78"	HD-SNB 84"
Overall Width:	68.5"	74.5"	80.5"	86.5"
Overall Height:			61"	
Intake Height (Chute)			27"	
Length (Front to Back)		38.5"		
Impeller Diameter		20"		
Auger Diameter	14"			
Cutting Edge (Scraper) Size:	0.50" thick x 4" wide			
Chute Discharge Rotation	270°			
Throw Distance:	Up to 40'			
Operational Weight	780 lbs 815 lbs 845 lbs 875 lbs			
	Hydraulically Operated Chute Deflector Hose Kit Sight/Guide Indicators			
Options:				





SERVICE PARTS

Part Number	Description	
202-147728	Hydraulic Manifold Assembly (14-16 GPM)	
202-147729	Hydraulic Manifold Assembly (16-22 GPM)	
202-147188	Hydraulic Manifold Assembly (20-27 GPM)	
202-169538	#10 Check Valve (CV port)	
202-147188-01	#8 Solenoid Valve (SV1 and SV2 ports)	
202-169536	#10 Relief Valve (RV1 port)	
202-169537	#8 Relief Valve (RV2 port)	
202-169539	#16 Piloted Spool (EP port)	
202-169540	#04 Check Valve (CV2 port)	
201-143083	Hydraulic Motor, Impeller	
201-147737-01	Seal Kit, Impeller Hydraulic Motor	
201-147736	Hydraulic Motor, Auger (14-16 GPM)	
201-147189	Hydraulic Motor, Auger(16-22 GPM)	
201-147737	Hydraulic Motor, Auger (20-27 GPM)	
201-147189-01	Seal Kit, Auger Hydraulic Motor (fits 201-147736, 147189, 147737)	
201-143096	Hydraulic Motor, Chute Rotation	
201-143096-02	Seal Kit, Chute Rotation Hydraulic Motor	
203-143068	Hydraulic Cylinder, Chute Deflector	
N/A	Seal Kit, Chute Deflector Cylinder	
600-143122	Bearing, Auger Support	
104-147061	Shoe, Skid	
401-143058	Cutting Edge, 66"	
401-143904	Cutting Edge, 72"	
401-143172	Cutting Edge, 78"	
401-143905	Cutting Edge, 84"	

Part Number	Description
390-160105	Guide Stick, 1/2" x 26"
401-160790	Bracket, Guide Stick
109-131128	Paint, Spray, MB Yellow
249-92003	Paint, Spray, Black
249-92005	Primer, Spray

Please have your serial number (S/N) ready when contacting M-B Co. or an Authorized Dealer for replacement parts or service information.

M-B Co. 1615 Wisconsin Ave. P.O. Box 200

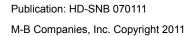
New Holstein, WI 53061-0200

website: www.m-bco.com email: sales@m-bco.com

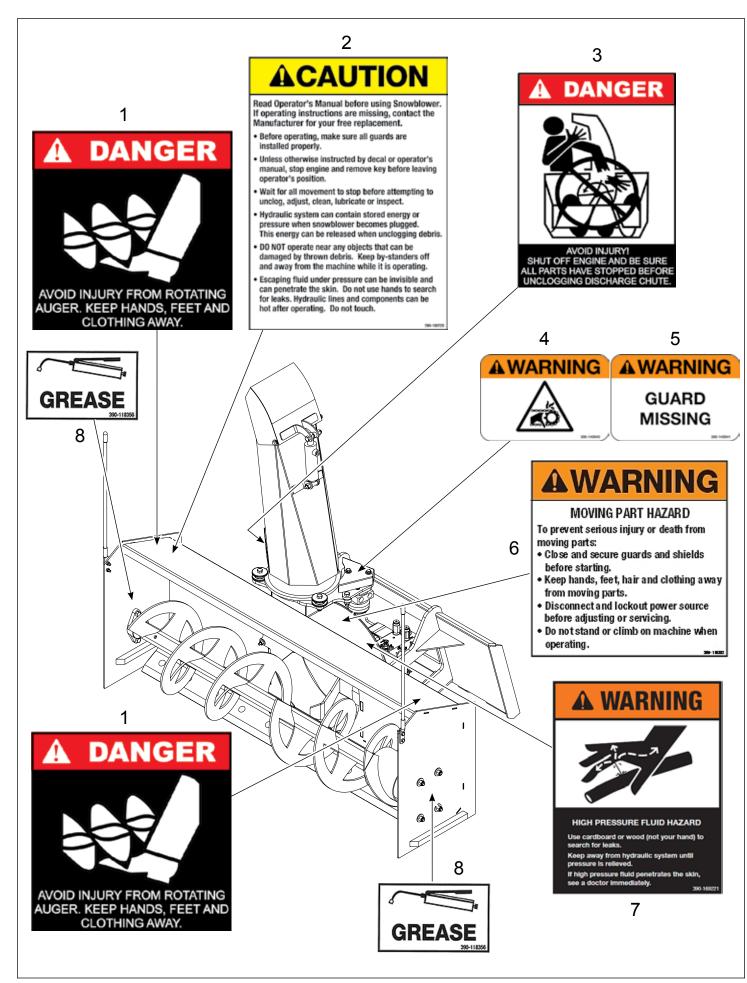
Phone: 800-558-5800 or 920-898-4203

FAX:

Main 920-898-4588 Attachments 920-898-1085 Brush Dept. 920-898-1082







HD-SNB Decals

Item	Description	Part Number	
	Decal Sheet	390-160895	(Includes items 1 - 8)
1	Decal, DANGER, Rotating Auger	390-150720	
2	Decal, CAUTION, Read Operator's Manual	390-150728	
3	Decal, DANGER, Discharge Chute	390-150721	
4	Decal, WARNING, Pinch Point	390-140940	(Located on top of chain guard.)
5	Decal, WARNING, Guard Missing	390-140941	(Located below chain guard.)
6	Decal, WARNING, Moving Part/Guards	390-118352	
7	Decal, WARNING, High Pressure Fluid	390-169221	
8	Decal, Grease	390-118356	

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CENTURY OF INNOVATION SINCE

LIMITED WARRANTY

Limited Warranty: Subject to the limitations set forth herein, M-B Companies, Inc. ("M-B") warrants its products to be free from defects in material and workmanship for a period of twelve (12) months from the date of delivery of the product to its original owner, except that the warranty is twelve (12) months solely for the following products: Truck Mounted Pavement Marking Equipment, Airport Snow Removal Products, Attachment Products, Brushes, MSV Multi-Service Vehicles. Parts shall have a ninety (90) day warranty. This warranty is not transferable without the written consent of M-B.

Notice: M-B's obligations under this Limited Warranty are conditioned on M-B receiving, within the warranty period, written notice from Buyer specifying the nature of any alleged defect and requesting corrective action by Seller.

Remedies: M-B, at its option, will repair or replace, or provide a credit to Buyer for, defective warranted items. If requested by M-B, products or parts for which a warranty claim is made shall be returned, transportation prepaid, to M-B's factory. Buyer shall not return any product for repair, replacement or credit without M-B's advance written consent.

Other Manufacturer's Warranty: On products furnished by M-B, but manufactured by any other manufacturer, the warranty of said manufacturer, if any, will be assigned to Buyer, if the said warranty is assignable. However, M-B does not represent or guarantee that such manufacturer will comply with any of the terms of the warranty of such manufacturer.

Exclusions: Any improper use, operation beyond capacity, or substitution of parts not approved by M-B, or alteration or repair by others in such a manner as in M-B's judgment materially and/or adversely affects the product shall void this warranty. This warranty does not apply to defects caused by damage or unreasonable use while in the possession of the owner, including but not limited to: failure to provide reasonable and necessary maintenance, normal wear, routine tune ups or adjustments, improper handling or accidents, operation at speed or load conditions contrary to published specifications, improper or insufficient lubrication, or improper storage.

Seller manufactures power brooms that mount to many makes and models of equipment. Seller attempts to ensure that the mounting frames fit correctly. However, the large number of tractor models, types and options currently available, compounded by frequent manufacturer design changes, may prevent Seller from supplying a frame that fits every unit correctly. Therefore, unless Buyer supplies drawing which detail the attachment points on the specific unit to which the broom will be mounted, Seller will not be responsible for the fit of the mounting frame.

The batteries, tires, rubber material, brushes and material normally consumed in operation, and major components such as engines, air compressors, and hydraulic pumps and motors are excluded from this warranty but may be covered to the extent of any warranty received by M-B from its supplier if permitted by the terms of such warranty.

Limitations of liability: M-B shall not be liable for any incidental, consequential, punitive or special damages of any kind, including, but not limited to, consequential labor costs or transportation charges in connection with the repair or replacement of defective parts, or lost time profits or expense which may have accrued because of said defect.

M-B disclaims all other warranties, whether express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. This warranty is exclusive remedy of buyer. This warranty cannot be extended, broadened or changed in any respect except in writing by an authorized officer of M-B.

Notwithstanding anything in this warranty is to the contrary, in no event shall M-B's total liability hereunder exceed the purchased price of the particular product.

AIRPORT SNOW REMOVAL EQUIPMENT: PAVEMENT MARKING EQUIPMENT-PA PAVEMENT MARKING EQUIPMENT-OR ATTACHMENTS DIVISION 1200 Park Street Chilton: WI 53014

79 Montgomery Street Montgomery, PA 17757 800-558-5800 888-323-2900

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1615 Wisconsin Avenue New Holstein, WL53061 800-558-5800



W W W . M - B C O . C O M

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