

MADE IN THE U.S.A.

PART# 5DOC19600



SNOW PUSHER

OWNER'S MANUAL

FOR MODELS:

960, 1071, 2080, 2100, 3100, 3120, 3140,
4120, 4140, 4160, 4180, 4200 and 4242.

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INTRODUCTION & IDENTIFICATION

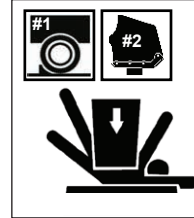
INTRODUCTION



WARNING

Read and understand the Operator's Manual before using this machine.

Failure to follow operating instructions could result in death or serious injury.



DANGER

Crushing hazard. Stay clear of pusher during operation. Securely block loader and pusher during repairs and maintenance. Store on firm, level area. Do not place any part of body under pusher or in a crush area.



It is necessary for all operators to read and understand the information provided in this manual BEFORE use.

ZM Industries Snow Pushers are intended for removing snow from driveways, parking lots and roadways. Use of a ZM Industries Pusher for any other purpose will void its warranty and may result in damage to the pusher, equipment or other property and may cause personal injury or even death. ZM Industries will not be held liable for injury or damage, nor will ZM Industries be responsible for property damage, loss of profit/income, loss of use or personal injury, up to and including death, that occurs as a result of use in accordance with this manual.

IDENTIFICATION

Every snow pusher manufactured by ZM Industries is assigned a unique sequential number known as a Serial Number for identification.

SERIAL NUMBER

Locate your Serial Number on the right side of the upper beam, as illustrated in the photo to the right, and record it in the box below for future reference.



<p>SERIAL NUMBER</p>



SAFETY



Serious injury or death can result if you do not follow these instructions and procedures which are further outlined within your owner's manual.

- Never stand in front of the unit while the machine is in operation.
- Always secure unit properly using dunnage or jack stands during maintenance.
- Never get under the unit without properly securing it.
- Do not rely solely on the hydraulics of your machine to secure your pusher during maintenance.
- Never get between the bucket/loader arms of the machine while attaching the unit.
- Do not place hands or feet under the unit or the bucket.
- Always keep hands and feet away from pinch points when attaching to equipment.
- Never operate an incomplete or damaged unit.
- Some parts are heavy. Use caution or machinery while moving/replacing these parts.
- Always chain the unit to the machine when using scoop-in option with the correct size/strength chain.
- Before each use check unit for loose or missing bolts. Never operate a unit with loose or missing bolts.
- Be aware of objects such as manhole covers, curbs, hydrants, speed bumps, drainage grates, etc. while operating.
- Never use the pusher in the dark. Make sure there is adequate lighting.
- Always follow traffic/local/state laws while moving machinery/equipment.
- As with all machinery and equipment, perform routine inspections and maintenance.
- Do not travel more than 6 miles per hour.



EQUIPMENT COMPATIBILITY LIST

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MODEL	Size	DUTY	ATTACHMENT	BLADE THICKNESS	SIDEWALL THICKNESS	RUBBER EDGE SIZE	SUB-COMPACT	COMPACT TRACTOR	LARGE COMPACT	SKID STEER	BACKHOE	LOADER
960	1'6" x 6'	Residential	Quick Attach Scoop-In	1/8"	1/4"	1" x 6"	YES	YES				
1071	2'6" x 7'	Residential	Quick Attach Scoop-In	1/8"	1/4"	1" x 6"		YES	YES	YES		
2080	2'11" x 8'	Light	Quick Attach Scoop-In	1/8"	3/8"	1" x 6"			YES	YES	YES	
2100	2'11" x 10'	Light	Quick Attach Scoop-In	1/8"	3/8"	1" x 6"			YES	YES	YES	
3100	3' x 10'	Medium / Heavy	Quick Attach Scoop-In	3/16"	3/8"	1.5" x 10"				YES	YES	
3120	3' x 12'	Medium / Heavy	Quick Attach Scoop-In	3/16"	3/8"	1.5" x 10"				YES	YES	
3140	3' x 14'	Medium / Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"					YES	YES
4120	4' x 12'	Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"					YES	YES
4140	4' x 14'	Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"						YES
4160	4' x 16'	Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"						YES
4180	4' x 18'	Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"						YES
4200	4' x 20'	Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"						YES
4242	4' x 24'	Heavy	Scoop-In	3/16"	3/8"	1.5" x 10"						YES



ATTACHING YOUR SNOW PUSHER

Quick Attach

- 1.) Your ZM Industries snow pusher is equipped with either a universal or John Deere quick connect.
- 2.) Remove any buckets or other attachments from your machine.
- 3.) Drive machine into the adapter located on the back of the snow pusher.
- 4.) Engage the lower locking pins.



Scoop-In Attachment

- 1.) Drive the cutting edge of your machine's bucket into the post receptacle on the back of the pusher.
- 2.) Attach the chains and binder to secure the pusher to your machine.



Installing the Binder Kit

- 1.) Grab hooks are to be welded to the side or back corners of your loader bucket. (Angles and chain are available upon request).
- 2.) Attach 3/4" clevis and one section of chain to the left side of the pusher.
- 3.) Attach 3/4" clevis and one section of chain to the right side of the pusher.
- 4.) Make sure both ends are secure before tightening the binder.
- 5.) After both chains are in place, lift pusher by raising the bucket, then tighten the binder.



BINDER KIT INCLUDES:

12' of 3/8" chain,
 2 ea 3/8" chain hooks,
 2 ea 3/8" grab hooks,
 2 ea 3/4" clevis, and
 1 ea 3/8" binder.

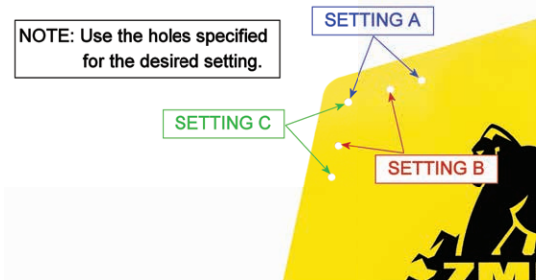


INSTALLING A BACK DRAG (models 6'-12')

Installation may require 2 or more people

1.) Choose the Setting Height that best suits your snow removal needs using the chart and hole locator illustration below.

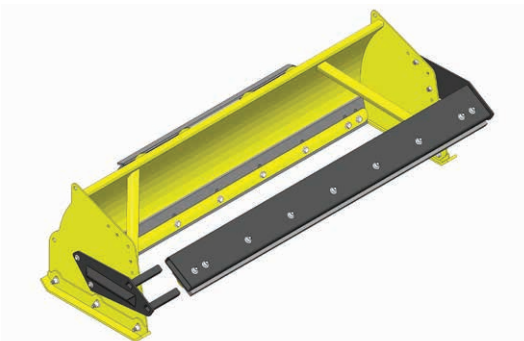
		Pusher Series			
		900	1000	2000	3000
Setting Height	A	26"	27.5"	34.5"	35.5"
	B	13.5"	15.5"	23"	24"
	C	N/A	N/A	12.5"	13.5"



2.) Insert the square tubes on the left and right back drag brackets into the main beam assembly making sure the orientation of the main beam is as shown. (Hole pattern closest to front with rubber edge facing down).



3.) Use the provided 1/2" x 1 1/2" hex bolts and flange nuts to bolt the left and right back drag brackets to the outside of the pusher side plates based on the setting position chosen. Tighten all installed hardware.



IMPORTANT:

The back drag edge is intended for back dragging snow ONLY. Under no circumstances should the operator drag anything other than snow, or use the back drag to push or lift any type of material.



OPERATING YOUR PUSHER

To ensure your pusher will provide you with years of service with minimal maintenance, follow these simple instructions.

- 1.) Once the pusher is properly attached to your machine it **MUST** be leveled **before** plowing.
- 2.) Level the unit by setting it down and adjust the curl of your bucket, making sure that **BOTH** wear shoes are resting squarely on the plowing surface.
- 3.) To ensure proper contact with the drive surface, drive your machine forward approximately 20 feet, and check to see that the area is clear. If the plowed area is not completely clear you may need to loosen the tension of the binders which will allow the pusher to vertically adjust for maximum surface contact.

NOTE: The pusher will not remove hard-packed snow. Remove this with the steel edge of your bucket after the snow has been removed, or ask about one of ZM Industries' Steel Trip-Edge models!

DO NOT apply down force to the unit while plowing. This will shorten the life of the wear shoes and the rubber cutting edge, and isn't necessary for snow removal.
Binders **MUST** be properly tightened prior to transportation or use of the pusher.



MAINTENANCE

Rubber

The heavy-duty rubber cutting edge is both reversible and adjustable. Perform periodic inspections and make any necessary adjustments.

- 1.) Always begin by placing the pusher on a smooth, flat surface when making any adjustments. Place a 1/4 inch object under the wear shoes to raise the pusher above the level surface.
- 2.) Loosen all bolts fastening the rubber. It is not necessary to completely remove the bolts.
- 3.) Using a large mallet or pry bar, adjust the rubber so the rear, bottom edge just touches the ground.
- 4.) Once the rubber is properly positioned, tighten the bolts using a 3/4 inch impact gun for proper torque (120 ft-lb). Begin with the center bolts and work towards the side plates tightening enough to create a substantial bow in the steel hold down plate.

TIP: A warm piece of rubber will be easier to adjust than a cold one. We recommend that your machine be placed in a warm place when making adjustments to the rubber.

Wear Shoes

When replacement is required, follow these instructions.

- 1.) Raise the pusher off the ground and secure the unit under the lower rear receptacle posts, and the side plate reinforcement angles using dunnage or jack stands.
- 2.) Loosen bolts fastening the wear shoe to the unit and carefully remove.
- 3.) Position the new wear shoe on the left and right sides.
- 4.) Install the bolts, washers and locking nuts and tighten only enough to ensure they don't fall off.
- 5.) Lower the unit on a level surface and tighten the bolts securely into place.

IMPORTANT: Wear shoes are very heavy. Use caution when removing and replacing.



MAINTENANCE (continued)

Paint

Keep your pusher looking great by following the simple instructions below.

- 1.) Inspect the snow pusher for paint chips, rust and corrosion.
- 2.) Use a power washer to remove any dust and dirt.
- 3.) Remove rust and corrosion with sandpaper or a wire brush.
- 4.) Apply a metal neutralizer to help prevent further deterioration, and allow time to dry.
- 5.) Use a primer before applying the final touch up paint. Be sure to follow any manufacturer's directions for your application.

STORING YOUR PUSHER

- 1.) Thoroughly clean any snow pusher of salt, sand and debris.
- 2.) Store indoors off the floor and out of direct sunlight.
- 3.) Do Not store outdoor under a tarp, as this can accelerate rusting.
- 4.) Perform any touch ups required. (see our Paint section on above)

For additional parts or supplies, **Call ZM Industries at 844-PUSHERS.** (844-787-4377)





PARTS LIST

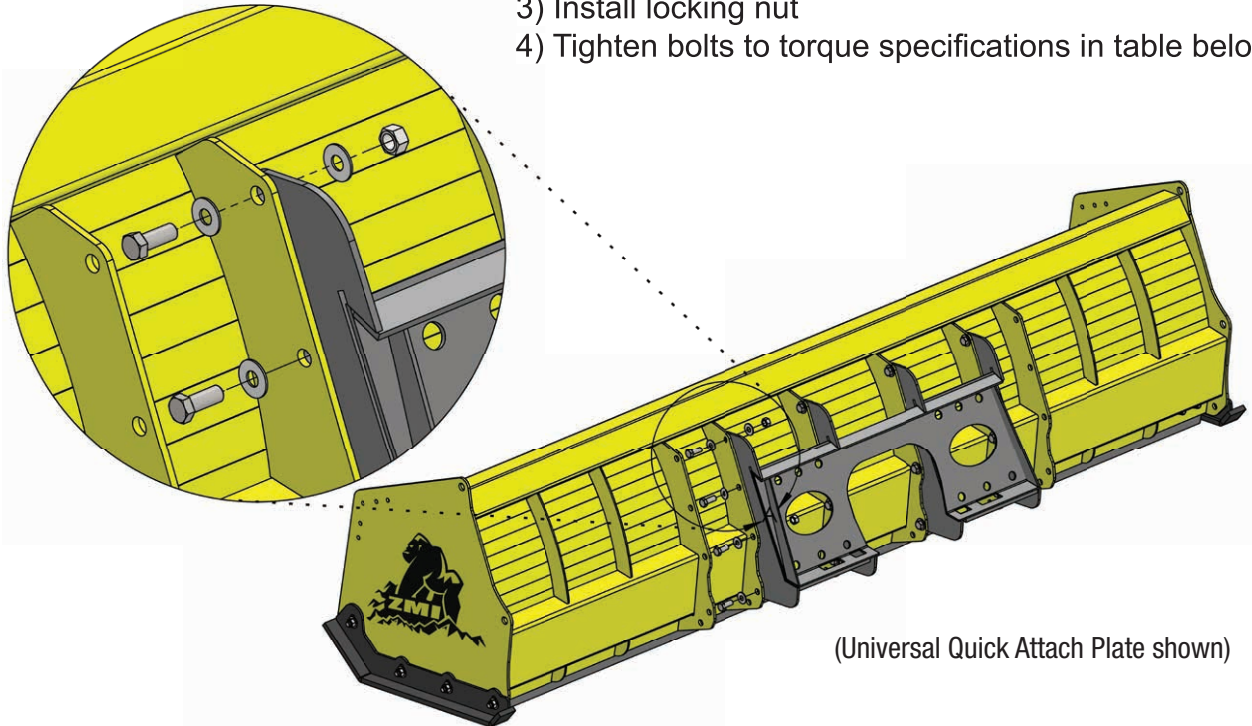
3P03100	960 Rubber Edge Bolt Kit	2P00550	960 Blade Hold Down Painted
3P03110	1071 Rubber Edge Bolt Kit	3P06530	3100 Steel Trip Edge Kit
3P03120	2080 Rubber Edge Bolt Kit	3P06535	3120 Steel Trip Edge Kit
3P03130	2100 Rubber Edge Bolt Kit	3P06540	3140 Steel Trip Edge Kit
3P03140	3100 Rubber Edge Bolt Kit	3P06545	4120 Steel Trip Edge Kit
3P03150	3120 & 4120 Rubber Edge Bolt Kit	3P06550	4140 Steel Trip Edge Kit
3P03160	3140 & 4140 Rubber Edge Bolt Kit	3P06555	4160 Steel Trip Edge Kit
3P03170	4160 Rubber Edge Bolt Kit	3P06560	4180 Steel Trip Edge Kit
3P03180	4180 Rubber Edge Bolt Kit	3P06565	4200 Steel Trip Edge Kit
3P03190	4200 Rubber Edge Bolt Kit	2P04410	Chain Kit for Pushers
1P00895	1"x6" Rubber Cutting Edge 9'	3P00010	900 Painted Shoe
1P00900	1"x6" Rubber Cutting Edge 10'	3P00070	1070 Painted Shoe
1P00910	1 1/2"x10" Rubber Cutting Edge 8'	3P00200	2000 Painted Right Shoe
1P00920	1 1/2"x10" Rubber Cutting Edge 10'	3P00250	2000 Painted Left Shoe
1P00930	1 1/2"x10" Rubber Cutting Edge 12'	3P00750	3000 Painted Right Shoe
1P00940	1 1/2"x10" Rubber Cutting Edge 14'	3P00800	3000 Painted Left Shoe
1P00950	1 1/2"x10" Rubber Cutting Edge 16'	3P02600	4000 Painted Right Shoe
1P00960	1 1/2"x10" Rubber Cutting Edge 18'	3P02650	4000 Painted Left Shoe
1P00970	1 1/2"x10" Rubber Cutting Edge 20'	2P06300	3000 Adjustable Shoe Right
2P03910	4200 Blade Hold Down Half Painted	2P06303	3000 Adjustable Shoe Left
2P03760	4180 Blade Hold Down Half Painted	2P06350	4000 Adjustable Shoe Right
2P03650	4160 Blade Hold Down Half Painted	2P06353	4000 Adjustable Shoe Left
2P03500	4140 Blade Hold Down Half Painted	1P00860	1"x6" Rubber Cutting Edge 5'
2P03340	4120 Blade Hold Down Painted	1P00870	1"x6" Rubber Cutting Edge 6'
2P02510	3140 Blade Hold Down Half Painted	1P00880	1"x6" Rubber Cutting Edge 7'
2P02310	3120 Blade Hold Down Painted	1P00890	1"x6" Rubber Cutting Edge 8'
2P02200	3100 Blade Hold Down Painted	3P03000	960 Shoes Bolt Kit
2P01580	2100 Blade Hold Down Painted	3P03001	1071 Shoes Bolt Kit
2P01480	2080 Blade Hold Down Painted	3P03002	2000 & 3000 Series Shoes Bolt Kit
2P01091	1070 Blade Hold Down Painted	3P03003	4000 Series Shoes Bolt Kit



ATTACHMENTS & TORQUE VALUES

INSTALLING THE ATTACHMENTS

- 1) Align quick attach bracket bolt holes with pusher
- 2) Install bolts with a washer on both sides
- 3) Install locking nut
- 4) Tighten bolts to torque specifications in table below




(Universal Quick Attach Plate shown)

TORQUE VALUES

TORQUE VALUES FOR GRADE 5 BOLTS			
Bolt Size	TPI	Nm	FT-LB
1/2"	13	105	76
5/8"	11	205	150
3/4"	10	360	265

Torque tolerance +0%, -15% of torquing values.
Unless otherwise specified, use torque values listed above.

BOLT HEAD IDENTIFICATION 

ZM Industries uses Grade 5 bolts.

TPI = Threads per Inch
Nm = Newton-Meters
FT-LB = Foot Pounds



LIMITED 10 YEAR WARRANTY

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Certificate of Warranty

ZM Industries will repair or replace any ZMI snow pusher due to a defect in material or workmanship for 10 years after purchase date, in agreement with the following terms and conditions:

- ZM Industries will determine whether a ZM Industries unit will be repaired or replaced.
- Transfer of ownership to any other party at any other time voids the warranty.
- Shipping and handling charges for return units to ZM Industries facilities will be paid by responsible party.
- ZM Industries makes no other warranty of any kind, either expressed or implied.



EXCEPTIONS TO WARRANTY

- Any wear associated with hardware, the cutting edge, and shoes.
- All damages that occur as a result of negligence, misuse of equipment, impact to curbs, manholes, or any other accidental impact.
- Any repair or alteration to any ZM Industries pusher will void all warranties.
- ZM Industries will not be held liable for any personal or property damage that occurs as a result of use. This includes, but is not limited to injury, death, loss of use, income and profit loss, and property loss/damage.

WARRANTY FORM MUST BE SUBMITTED TO VALIDATE WARRANTY

Warranty Form included with this manual



WARRANTY CARD & NOTES

WARRANTY CARD:

Locate the Pusher Warranty Card in this booklet. Complete and return the card to register your new pusher and activate its warranty.

PLEASE NOTE: The Warranty on your new Pusher IS NOT ACTIVE until the Pusher Warranty Card is completed and returned to ZM Industries.

PUSHER WARRANTY CARD
THIS CARD MUST BE SUBMITTED TO VALIDATE WARRANTY

PURCHASE INFORMATION
Date of Purchase: _____ Dealer Name: _____
Dealer Location: _____ Sales Person: _____

CUSTOMER INFORMATION
Customer Name: _____ Contact Name: _____
Address: _____
City: _____ State: _____ ZIP: _____
Phone: (____) _____ - _____ Email: _____
Pusher Model: _____ Serial #: _____

(844) PUSHERS www.zmindustries.com

NOTES:



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WORK LIKE A BEAST!