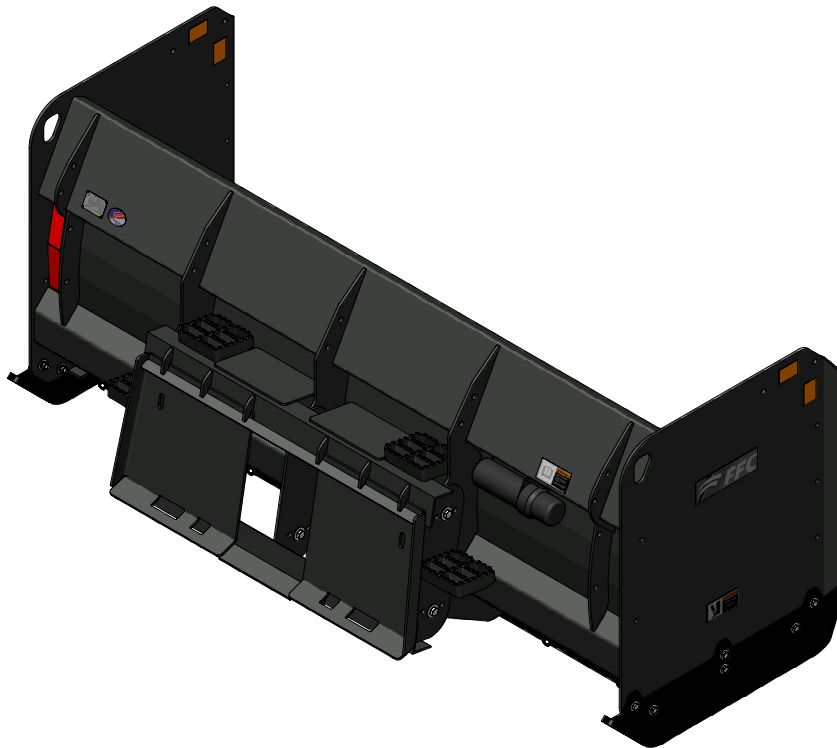




# OPERATOR'S AND PARTS MANUAL

## SNOW PUSH



SERIAL NUMBER: \_\_\_\_\_

MODEL NUMBER: \_\_\_\_\_

Manual Number: MR35630

Models: 11016;

11721, 11773, 11785, 11795;

12720, 12772, 12784, 12796;

22812, 22814, 22816, 22820;

LAF3617, LAF3618, LAF3680,

LAF3682, LAF3684, LAF3688

& Optional Kits

Date: August 2018

Rev. 4

## NOTES


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# PREFACE

## GENERAL INFORMATION

This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

**WARNING!**  **Never let anyone operate this unit without reading the “Safety Precautions” and “Operating Instructions” sections of this manual. Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.**

Unless noted otherwise, right and left sides are determined from the operator’s control position when facing the attachment.

**NOTE:** The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

## BEFORE OPERATION

The primary responsibility for safety with equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer to obtain further assistance. Keep this manual available for reference. Provide this manual to any new owners and/or operator’s

## SAFETY ALERT SYMBOL



This is the “Safety Alert Symbol” used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and the safety of others working with you.

## SERVICE

Use only manufacturer replacement parts. Substitute parts may not meet the required standards. Record the model and serial number of your unit on the cover of this manual. The parts department needs this information to insure that you receive the correct parts.

## SOUND AND VIBRATION

“Sound pressure levels and vibration data for this attachment are influenced by many different parameters; some items are listed below (not inclusive):

- prime mover type, age, condition, with or without cab enclosure and configuration
- operator training, behavior, stress level
- job site organization, working material condition, environment

Based on the uncertainty of the prime mover, operator, and job site, it is impossible to get precise machine and operator sound pressure levels, or vibration levels for this attachment.”

# SAFETY STATEMENTS



THIS SYMBOL BY ITSELF OR WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



## **DANGER**

THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.



## **WARNING**

THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.



## **CAUTION**

THIS SIGNAL WORD IS USED WHERE MINOR INJURY COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.

## **NOTICE**

NOTICE INDICATES A PROPERTY DAMAGE MESSAGE.

# GENERAL SAFETY PRECAUTIONS

## **WARNING! READ MANUAL PRIOR TO INSTALLATION**



Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE POWER UNIT'S MANUAL(S).**



## **READ AND UNDERSTAND ALL SAFETY STATEMENTS**

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



## **KNOW YOUR EQUIPMENT**

Know your equipment's capabilities, dimensions and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn and hard to read.

# GENERAL SAFETY PRECAUTIONS

## **WARNING! PROTECT AGAINST FLYING DEBRIS**



Always wear proper safety glasses, goggles or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

## **WARNING! LOWER OR SUPPORT RAISED EQUIPMENT**



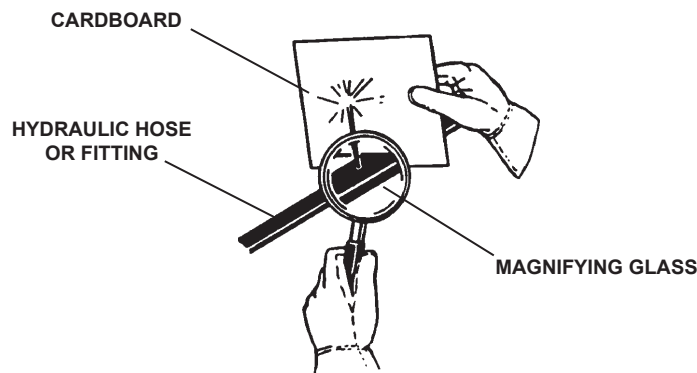
Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or onto blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.

## **WARNING! USE CARE WITH HYDRAULIC FLUID PRESSURE**



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

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.
  - If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research immediately to determine proper treatment.
  - Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. **DO NOT USE YOUR HANDS!**
- SEE ILLUSTRATION.**



# GENERAL SAFETY PRECAUTIONS

## **WARNING! DO NOT MODIFY MACHINE OR ATTACHMENTS**



Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.

## **WARNING! SAFELY MAINTAIN AND REPAIR EQUIPMENT**



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

## **WARNING! SAFELY OPERATE EQUIPMENT**



Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operators position.
- Never leave equipment unattended with the engine running or with this attachment in a raised position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

## **WARNING! CALIFORNIA PROPOSITION 65 WARNING.**



This product may contain a chemical known to the state of California to cause cancer, or birth defects or other reproductive harm. [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## GENERAL SAFETY PRECAUTIONS

### **WARNING! KNOW WHERE UTILITIES ARE**



Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

### **WARNING! EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.**



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

### **WARNING! REMOVE PAINT BEFORE WELDING OR HEATING.**



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

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

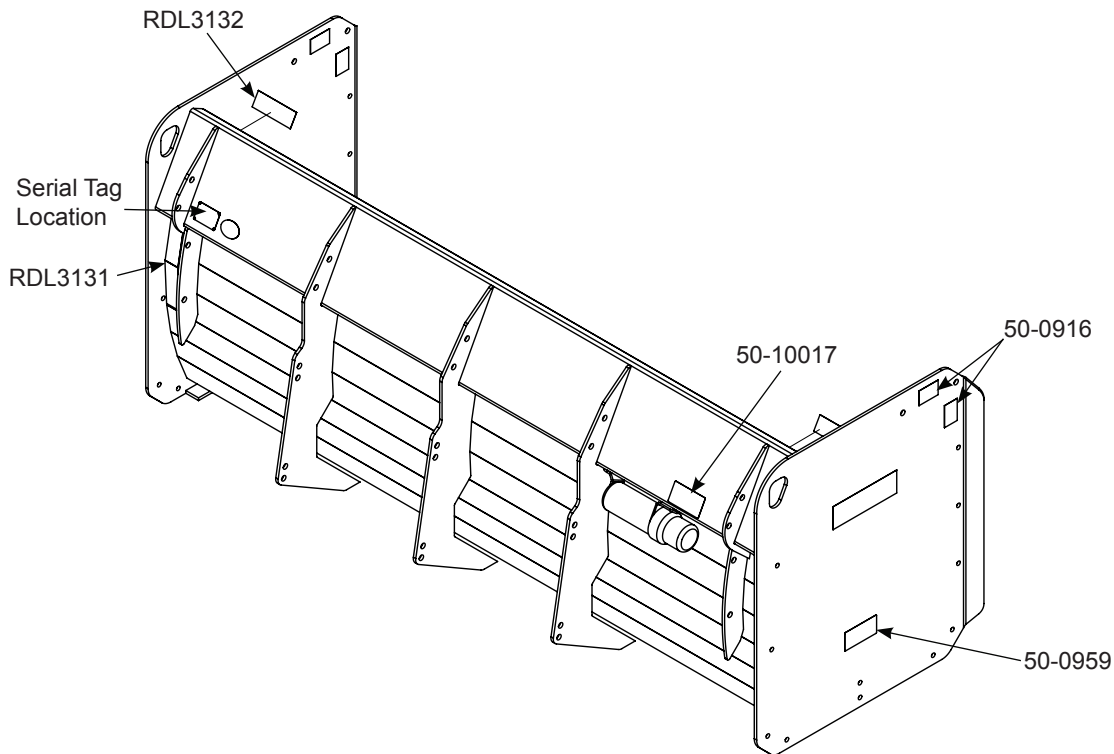
### **WARNING! END OF LIFE DISPOSAL.**



At the completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.



# SAFETY SIGNS & DECALS



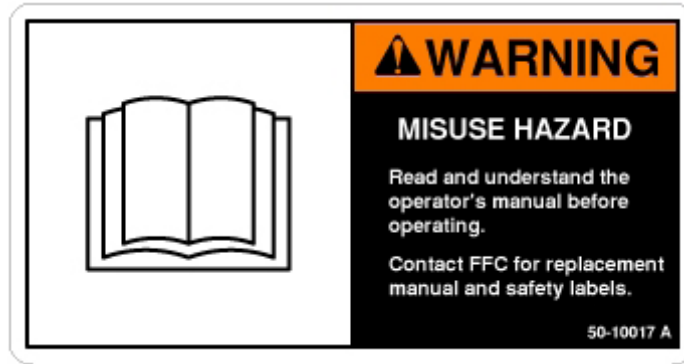
## INSTRUCTIONS

- Keep all safety signs clean and legible.
- Replace all missing, illegible, or damaged safety signs.
- Replacement parts for parts with safety signs attached must also have safety signs attached.
- Safety signs are available, free of charge, from your dealer or from FFC.

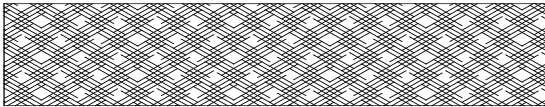
## PLACEMENT OR REPLACEMENT OF SAFETY SIGNS

1. Clean the area of application with non-flammable solvent, and then wash the same area with soap and water.
2. Allow the surface to fully dry.
3. Remove the backing from the safety sign, exposing the adhesive surface.
4. Apply the safety sign to the position shown in the diagram above and smooth out any bubbles.

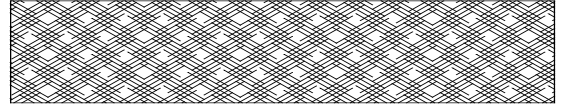
## SAFETY SIGNS & DECALS



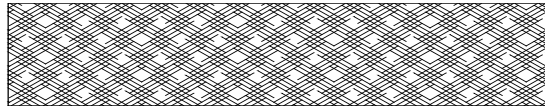
**PART # 50-10017**  
**WARNING! READ MANUAL**



**PART # RDL3131**  
**RED REFLECTIVE TAPE 2 in. (5.08 cm) X**  
**6 in. (15.24 cm)**



**PART # RDL3132**  
**AMBER REFLECTIVE TAPE 2 in. (5.08 cm)**  
**X 6 in. (15.24 cm)**



**PART # 50-0916**  
**AMBER REFLECTIVE TAPE 2 in. (5.08 cm)**  
**X 3 in. (7.6 cm)**



**PART # 50-0959**  
**WARNING! CRUSH HAZARD**

# INSTALLATION & SET-UP

## SNOW PUSH MOUNTING

### **WARNING! READ MANUAL PRIOR TO INSTALLATION**



Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).**

1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your prime mover and all workers involved in the mounting process.
2. Refer to the operator's manual(s) for your prime mover, loader, and quick-attach and follow the mounting instructions.
3. Carefully raise the loader and cycle the tilt cylinders to check clearances and to verify that all mounting procedures have been successfully completed.

## SNOW PUSH SETUP



**SAFETY FIRST!! READ AND UNDERSTAND ALL SAFETY STATEMENTS BEFORE BEGINNING ANY SNOW PUSH SETUP**

### **PULL BACK INSTALLATION** (if not assembled prior to delivery.)

1. Park your prime mover on a level surface with your Snow Push properly attached.
2. Place your prime mover's transmission in "Park" and engage the parking brake.
3. Lower your Snow Push down on to the level surface in the normal operating position.
4. Shut off your prime mover's engine, remove the starter key, wait for all moving parts to come to a stop, and relieve all pressure in the hydraulic lines.
5. Loosely connect a side wear shoe to the inside face of one of the two side plates using hardware shown in parts list (If you do not have a parts list, see dealer). Slide the side wear shoe forward as far as possible and tighten the nuts to 75 ft.lbs (102 N-m). Repeat for the other side wear shoe.
6. Restart your prime mover, raise your loader as required, roll your Snow Push forward 90°, and lower your Snow Push down upon the side wear shoes that were just installed above. Repeat the shut down procedure in step 4 above.

For 6 ft (1.8 m), 7 ft (2.1 m) 8 ft (2.4 m), and 10 ft (3.1 m) Models Only:

7. Place the pull back weldment in position and secure each arm (one for the 6 ft (1.8 m) model and two for all other models) to the appropriate moldboard fib with hardware shown in the parts list. Secure each end plate of the pull back weldment to the corresponding end plate of your Snow Push with hardware shown in parts list. Tighten the nuts to 150 ft. lbs (203 N-m).

# INSTALLATION & SET-UP



**SAFETY FIRST!! READ AND UNDERSTAND ALL SAFETY STATEMENTS BEFORE BEGINNING ANY SNOW PUSH SETUP**

For 12 ft (3.66m) and 14 ft (4.27 m) Models Only:

8. Install both pull back in position and loosely mount the outer arms and the end plates. Position the other pull back weldment and place spacer plate and spacer washer between the left and right pull back weldment and loosely assemble the left and right pull back weldments using hardware shown in parts list.
9. Mount the center arms to the center ribs on the moldboard using hardware shown in parts list. Tighten all the nuts to 150 ft. lbs (203 N-m). on the pull back kit.
10. Restart your prime mover, raise your loader as required, roll your Snow Push back 90°, and lower your Snow Push down upon the base of your Snow Push in the normal operating position. Repeat the shut down procedure in step 4.
11. Loosen the nuts securing the side wear shoes, align the base of the shoes with base of the pull back weldment and retighten the nuts to 75 ft.lbs (102 N-m).

## **PULL BACK RUBBER EDGE KIT INSTALLATION**

1. Repeat steps 1 through 4 from the PULL BACK INSTALLATION instructions.
2. Lay the rubber edge on top of the pull back weldment.
3. Lay the rubber edge strap on top of the rubber edge and loosely secure both to the pull back weldment with hardware shown in parts list.
4. Adjust the rubber edge so that a maximum of 1 inch (2.5 cm) of the rubber edge is exposed in front of the steel plate on the pull back weldment and tighten the nuts to 75 ft.lbs (102 N-m).

**BUCKET-LIP MOUNT INSTRUCTIONS** (10 ft (3.1 m), 12 ft (3.66 m) and 14 ft (4.27 m) models -- available for LAF3600 series only.)

1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your prime mover and all workers involved in the mounting process.

**NOTICE!** *Lifting this product before Step 7 (below)*  
***CAN result in damage to this product and***  
***WILL void all FFC warranties.***

2. Carefully raise the loader arms and slowly drive forward inserting the edge of your bucket between the rectangular tubings on the Snow Push mounting.
3. Slowly roll the bucket downward (dumping) until the bucket edge is touching the lower tubes and the top of the bucket floor is touching the upper tubes, keeping the edge as close to the back of the Snow Push as possible. This will make the distance between the chain links on the Snow Push and the chain loops on your bucket as close as possible.
4. Shut off your prime mover's engine, remove the starter key, wait for all moving parts to come to a stop, and relieve all pressure in the hydraulic lines.
5. Each of the center most chains should then be inserted though the chain loops on your bucket and then re-attach to itself keeping the chain as tight as possible.
6. If the bucket is wider than 80 inches (203 cm) connect the outer two chains as well.
7. Restart your prime mover. Carefully raise the loader and cycle the rollback cylinders to verify that all mounting procedures have been successfully completed.

# INSTALLATION & SET-UP



**SAFETY FIRST!! READ AND UNDERSTAND ALL SAFETY STATEMENTS BEFORE BEGINNING ANY SNOW PUSH SETUP**

## **BUCKET LIP MOUNT INSTRUCTIONS** (16 ft (4.88 m) large loader model 11016.)

1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your prime mover and all workers involved in the mounting process.

**NOTICE!** *Lifting this product before Step 7 (below)  
CAN result in damage to this product and  
WILL void all FFC warranties.*

2. Carefully raise the loader arms and slowly drive forward inserting the edge of your bucket between the cutout slots in the Snow Push mounting ears.
3. Slowly roll the bucket downward (dumping) until the bucket edge is touching the bottom of edges the cutouts and the top of the bucket floor is touching the upper edges, keeping the bucket edge as close to the back of the Snow Push as possible. This will make the distance between the chain links on the Snow Push and the grab hooks on your bucket as close as possible.

## **INSTALLING THE BINDER KIT**

4. Shut off your prime mover's engine, remove the starter key, wait for all moving parts to come to a stop, and relieve all pressure in the hydraulic lines.
5. Grab hooks are to be welded to the side or back corners of the prime mover's bucket. The location should be chosen so the chains will be parallel to the ground when attached. This allows for easy centering of the Snow Push on the bucket.
6. Attach one end of .38 inch (.96 cm) Transport Chain sections to the right and left end of the Snow Push using .44 inch (1.12 cm) shackles. Drop the opposite ends into the grab hooks on the bucket leaving enough slack to attach ratchet binders and allow for centering of the Snow Push. Tighten ratchet binders.
7. Restart your prime mover. Carefully raise the loader and cycle the rollback cylinders to verify that all mounting procedures have been successfully completed. If the Snow Push is off center repeat Step #4 and adjust slack in chains to center the Snow Push. Make sure to re-tighten ratchet binders.

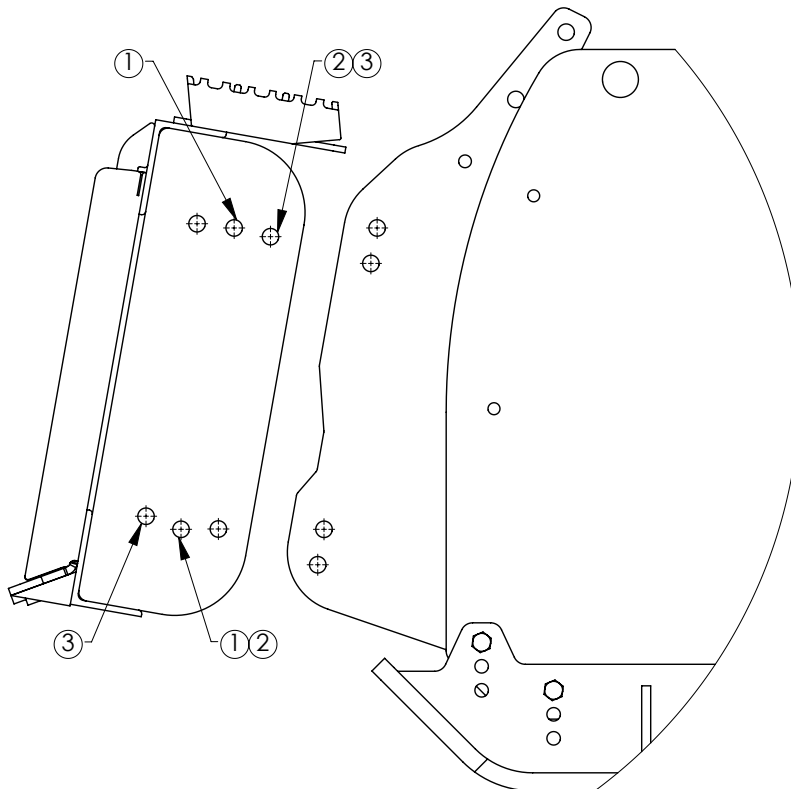
# INSTALLATION & SET-UP



**SAFETY FIRST!! READ AND UNDERSTAND ALL SAFETY STATEMENTS BEFORE BEGINNING ANY SNOW PUSH SETUP**

**SNOW PUSH MOUNTING ANGLE ADJUSTMENT** (Adjustment of the mounting angle may be required for use of the Pullback Kit on some prime movers with rollback limitations.)

1. Make sure your Snow Push is in a stable position completely on the ground, detached from your prime mover. DO NOT attempt to adjust the mounting weldment if the Snow Push is not stable.
2. Attach lifting accessories to the mounting weldment of the Snow Push in a way that the mounting weldment is fully supported when it is detached from the moldboard of the Snow Push.
3. Remove the hardware that is currently bolting the mounting weldment to the moldboard. Retain hardware for re-installation.
4. Reposition the mounting weldment in the desired position using the figure below as a reference. The numbered holes correspond to bolt positions for the 3 possible angle configurations.
5. Using the existing hardware, re-attach the mounting weldment to the moldboard. Tighten the nuts to 150 ft. lbs.
6. Slowly lower the lifting accessories allowing the mounting weldment to be held by the re-attached hardware. Be sure the hardware is sufficiently tightened and the Snow Push is stable BEFORE removing the lifting accessory.



# OPERATION

## Intended Use

This snow push is designed to push loose material only. With the optional pull back attachment, loose material may also be pulled while backing with your prime mover. Use in any other way is considered contrary to the intended use. Compliance with and strict adherence to operation, service and repair conditions as specified by the manufacturer, are also essential elements of the intended use.



### **READ AND UNDERSTAND ALL SAFETY STATEMENTS**

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

**NOTICE!**     ***Moving hardened or compacted materials  
CAN result in damage to this product and  
WILL void all FFC warranties.***

The rubber edge(s) should never be positioned to where more than 1 inch (2.5 cm) of rubber for 1 inch (2.5 cm) edge or 2 inches (5 cm) for 1-1/2 inch (3.8 cm) thick edge, is beyond the steel backing.

# OPERATION

## General Storage:

### Storage:

- Clean the unit thoroughly, removing all snow, dirt and grease.
- Inspect for visible signs of wear, breakage or damage. Order any parts required and make the necessary repairs to avoid delays upon removal from storage.
- Tighten loose nuts, capscrews and hydraulic connections.
- Coat exposed portions of the cylinder rods with grease.
- Lubricate grease fittings.
- Seal hydraulic system from contaminants and secure all hydraulic hoses off the ground to help prevent damage.
- Store unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

### Additional Precautions for Long Term Storage:

- Touch up all unpainted surfaces with paint to avoid rust.
- Inflate tires to recommended tire pressure.
- Fill fuel tank and hydraulic oil tank to maximum.
- Check antifreeze properties and drain fluids as appropriate.

### Removal from Storage:

- Remove cover.
- Wash unit and replace any damage and/or missing parts.
- Lubricate grease fittings.
- Check hydraulic hoses for damage and replace as necessary.

***NOTICE! Prolonged pressure on the rubber edge will deform the rubber edge and decrease the effectiveness of the scraping action.***

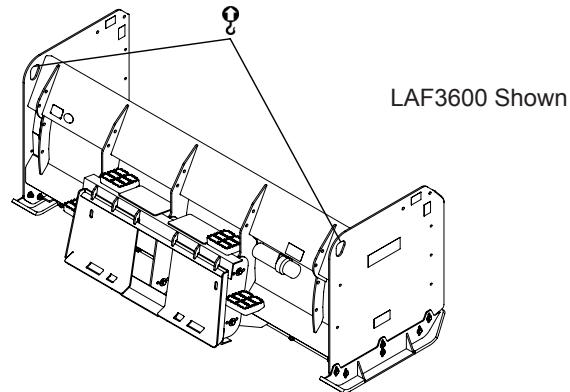
When removing this product from your prime mover, place your Snow Push such that there is no pressure on the rubber edge. Prolonged pressure on the rubber edge will deform the rubber edge and decrease the effectiveness of the scraping action.




# OPERATION

## LIFT POINTS

Lifting points are identified by lifting decals where required. Lifting at other points is unsafe and can damage attachment. Do not attach lifting accessories around cylinders or in any way that may damage hoses or hydraulic components. See diagram:

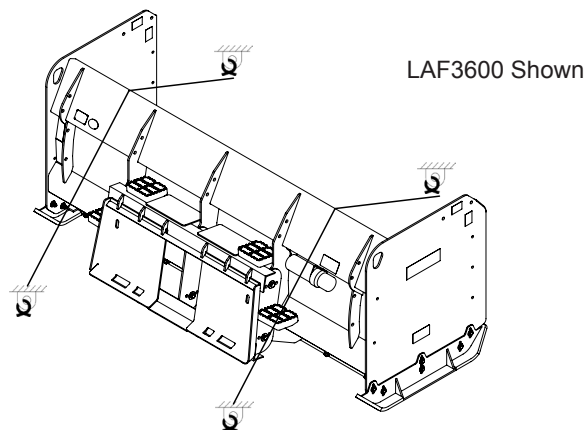


- Attach lifting accessories to unit at recommended lifting points.
- Bring lifting accessories together to a central lifting point.
- Lift gradually, maintaining the equilibrium of the unit.


**WARNING!**  **USE LIFTING ACCESSORIES (CHAINS, SLINGS, ROPES, SHACKLES AND ETC.) THAT ARE CAPABLE OF SUPPORTING THE SIZE AND WEIGHT OF YOUR ATTACHMENT. Secure all lifting accessories in such a way to prevent unintended disengagement. Failure to do so could result in the attachment falling and causing serious personal injury or death.**

## TIE DOWN POINTS

Tie down points are identified by tie down decals where required. Securing to trailer at other points is unsafe and can damage attachment. Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components. See diagram:



- Attach tie down accessories to unit as recommended.
- Check unit stability before transporting.

**WARNING!**  **VERIFY THAT ALL TIE DOWN ACCESSORIES (CHAINS, SLINGS, ROPES, SHACKLES AND ETC.) ARE CAPABLE OF MAINTAINING ATTACHMENT STABILITY DURING TRANSPORTING and are attached in such a way to prevent unintended disengagement or shifting of the unit. Failure to do so could result in serious personal injury or death.**

## MAINTENANCE

Procedure	Before Each Use
Check and Tighten all hardware and fasteners	✓
Check all safety decals that they are clean and legible	✓
Replace any damaged and excessively worn parts	✓

### KNOW YOUR EQUIPMENT



Know your equipment's capabilities, dimensions and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact.

# MAINTENANCE

## **WARNING! DO NOT MODIFY MACHINE OR ATTACHMENTS**

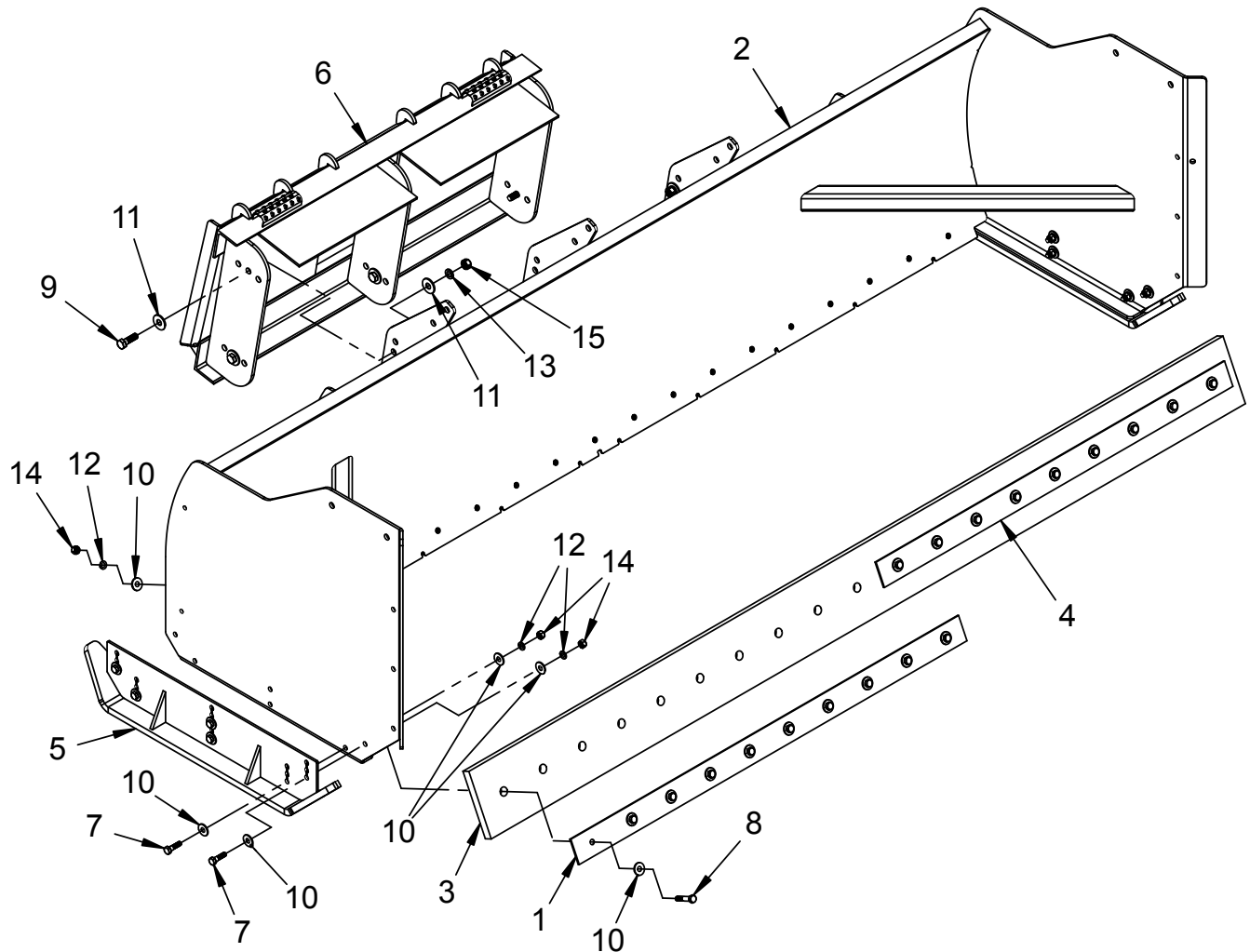


Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.

## **REPLACING THE RUBBER EDGE**

1. Park your prime mover on a level surface with this product properly attached.
2. Place your prime mover's transmission in "Park" and engage the parking brake.
3. Lower your Snow Push down on to the level surface.
  - a) If adjusting / replacing the rubber edge on your Snow Push, roll your Snow Push forward 90°, and lower your Snow Push down upon the front edge of the side plates or, if equipped with the Pull Back Option, down upon the side wear shoes.
  - b) If adjusting / replacing the rubber edge on the pull back weldment, lower your Snow Push down in the normal operating position.
4. Shut off your prime mover's engine, remove the starter key, wait for all moving parts to come to a stop, and relieve all pressure in the hydraulic lines.
5. Loosen the nuts that secure the rubber edge and:
  - a) If adjusting the rubber edge, move the rubber edge so that a maximum of 1 inch (2.5 cm) (for 1 inch thick rubber or 2 inch (5 cm) for 1.5 inch (3.8 cm) thick rubber edge) of the rubber edge is exposed beyond the steel plate. Where the rubber edge is worn down at an angle from front to back, the 1 inch (2.5 cm) maximum means a 1 inch (2.5 cm) maximum from the bottom of the rubber edge as measured along the face that is next to the steel plate.
  - b) If replacing the rubber edge, remove the rubber edge strap and the old rubber edge.
    - i. Dispose of the old rubber edge in an environmentally suitable manner.
    - ii. Lay the new rubber edge on top of the weldment.
    - iii. Lay the rubber edge strap on top of the new rubber edge and loosely secure both to the steel plate using hardware shown in parts list.
6. Retighten the nuts to 75 ft. lbs. (102 N-m) on 117,127 Series and LAF3600 Series models and 150 ft. lbs (203 N-m) on the 228 and 11016 model.

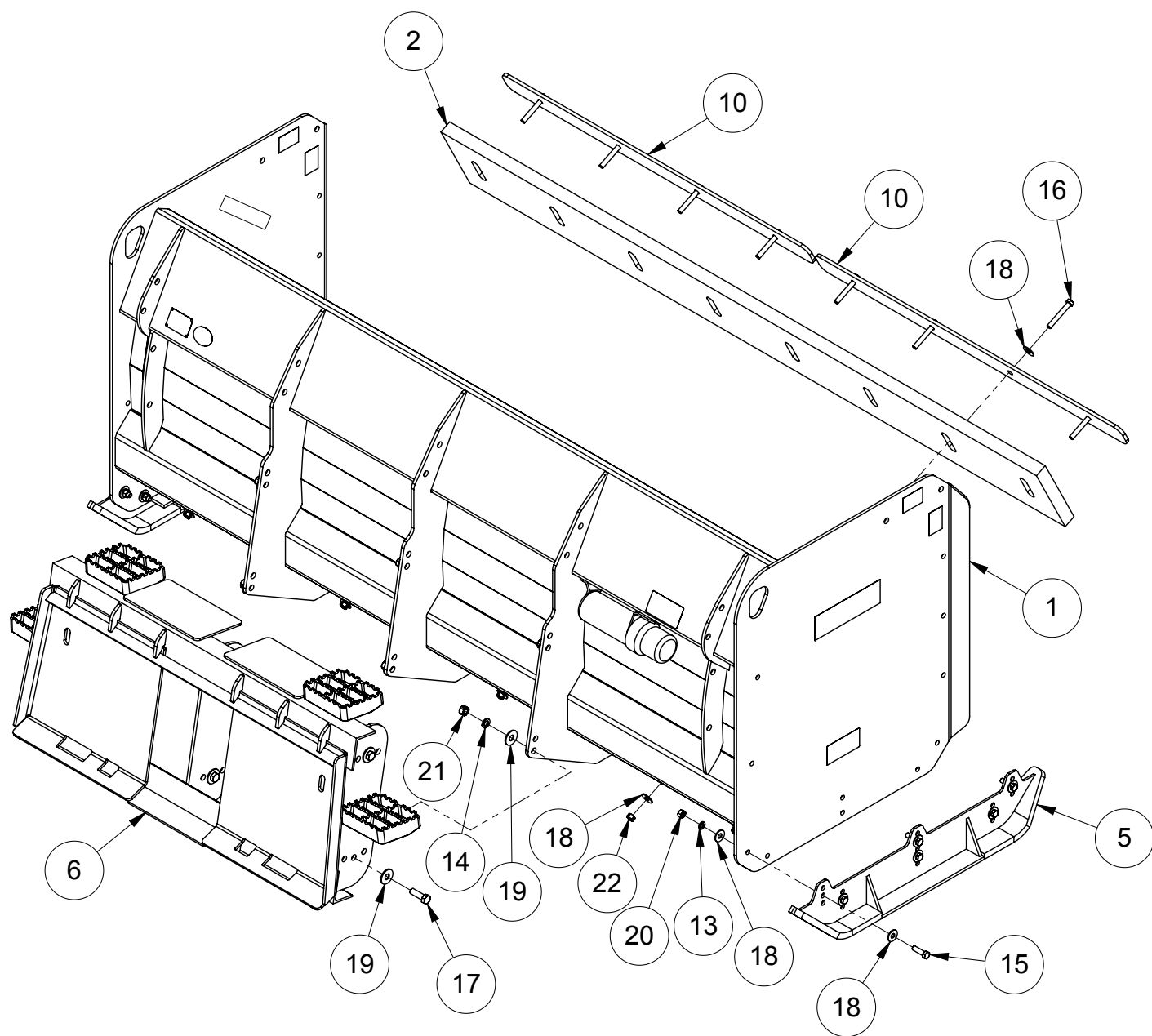
## 117/127 SERIES SNOW PUSH



## 117/127 SERIES SNOW PUSH

Item	Part	Qty	Description
1.	13-52537	1	Edge Strap (6 ft)
	13-52546	1	Edge Strap (7 ft)
	13-51941	1	Edge Strap (8 ft)
	13-51941	1	Edge Strap (10 ft)
2.	13-17481-6	1	Weld, Mold Board (6 ft)
	13-17481-7	1	Weld, Mold Board (7 ft)
	13-17481-8	1	Weld, Mold Board (8 ft)
	13-17481-10	1	Weld, Mold Board (10 ft)
3.	13-52539	1	Rubber Edge, 1 x 8 (6 ft)
	13-52538	1	Rubber Edge, 1 x 8 (7 ft)
	13-52467	1	Rubber Edge, 1 x 8 (8 ft)
	13-52468	1	Rubber Edge, 1 x 8 (10 ft)
4.	13-52476	1	Edge Strap (8 ft)
	13-52545	1	Edge Strap (10 ft)
5.	LAF3605	2	Weld, Skid Shoe
6.	LAF3624	1	Plate, Loader Attachment
7.	RHW1406	12	Screw, HHC, Gr5, .5 x 1.75
8.	P100810	11	Screw, HHC, Gr5, .5 x 2.5 (6 ft)
	P100810	13	Screw, HHC, Gr5, .5 x 2.5 (7 ft)
	P100810	15	Screw, HHC, Gr5, .5 x 2.5 (8 ft)
	P100810	19	Screw, HHC, Gr5, .5 x 2.5 (10 ft)
9.	RHW1604	6	Screw, HHC, Gr5, .63 x 2
10.	RHW5462	46	Washer, Flat, Gr5, .5 (6 ft)
	RHW5462	50	Washer, Flat, Gr5, .5 (7 ft)
	RHW5462	54	Washer, Flat, Gr5, .5 (8 ft)
	RHW5462	62	Washer, Flat, Gr5, .5 (10 ft)
11.	RHW5662	12	Washer, Flat, Gr5, .63
12.	P851108	23	Washer, Lock, Gr5, .5 (6 ft)
	P851108	25	Washer, Lock, Gr5, .5 (7 ft)
	P851108	27	Washer, Lock, Gr5, .5 (8 ft)
	P851108	31	Washer, Lock, Gr5, .5 (10 ft)
13.	P851110	6	Washer, Lock, Gr5, .63
14.	RHW7401	23	Nut, Hex, Gr5, .5 (6 ft)
	RHW7401	25	Nut, Hex, Gr5, .5 (7 ft)
	RHW7401	27	Nut, Hex, Gr5, .5 (8 ft)
	RHW7401	31	Nut, Hex, Gr5, .5 (10 ft)
15.	RHW7603	6	Nut, Lock, Center Dent, Gr5, .63

## LAF3600 SERIES SNOW PUSH

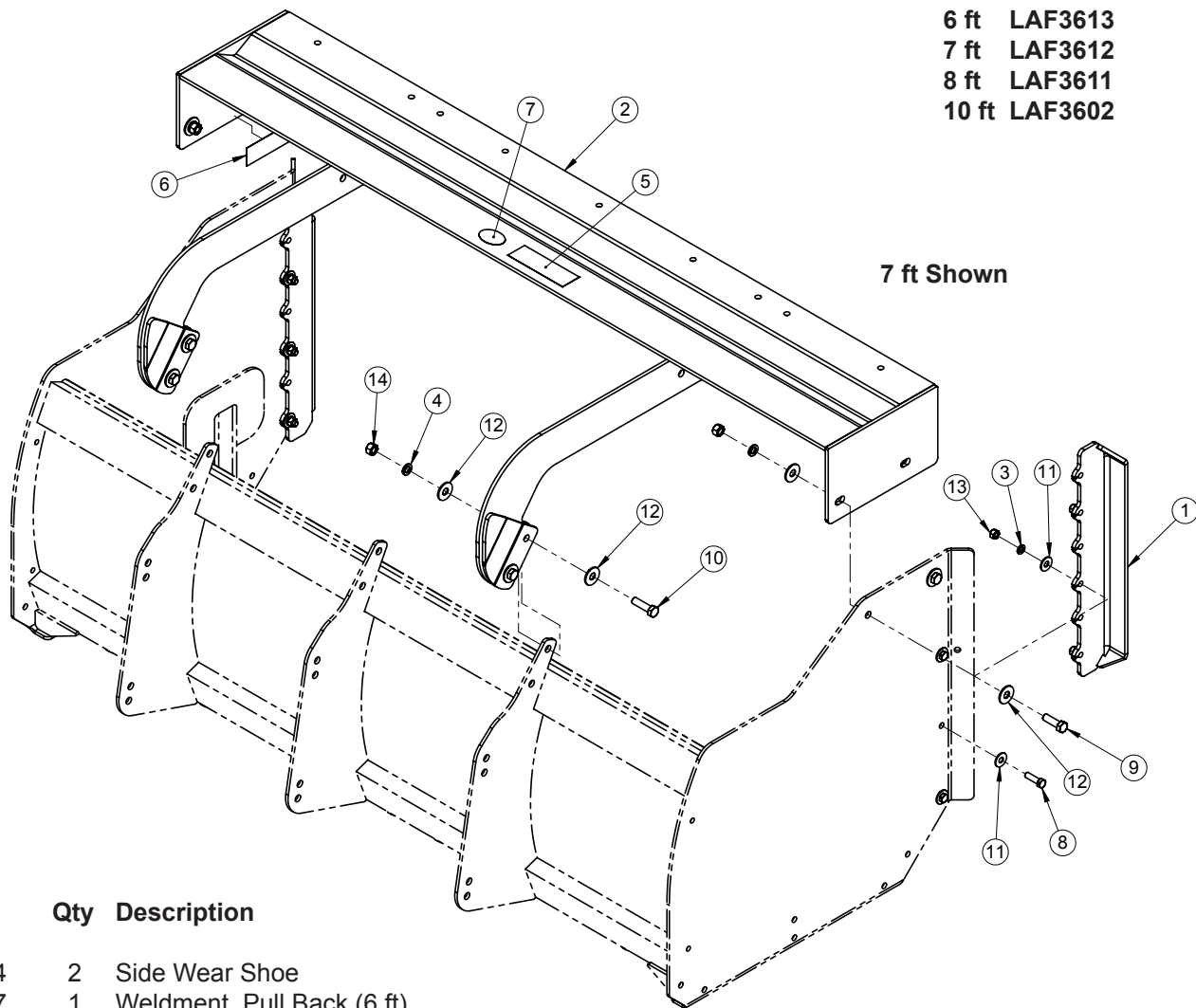


# LAF3600 SERIES SNOW PUSH

Item	Part	Qty	Description
1.	13-16486-8	1	Weld, 3 x 3, Snow Push (8 ft)
	13-16486-10	1	Weld, 3 x 3, Snow Push (10 ft)
	13-16486-12	1	Weld, 3 x 3, Snow Push (12 ft)
	13-16486-14	1	Weld, 3 x 3, Snow Push (14 ft)
2.	LAF3667	1	Rubber Edge, 1.5 x 10 x 91 (8 ft)
	LAF3668	1	Rubber Edge, 1.5 x 10 x 115 (10 ft)
	13-52879	1	Rubber Edge, 1.5 x 10 x 139 (12 ft)
	13-52880	1	Rubber Edge, 1.5 x 10 x 163 (14 ft)
5.	LAF3605	2	Weld, Skid Shoe
6.	LAF3624	1	Mounting, Frame, Skid Steer (8 & 10 ft)
	LAF3633	1	Mounting, Frame, HD
10.	LAF9408	2	Edge Strap (8 ft)
	LAF9409	2	Edge Strap (10 ft)
	LAF9410	2	Edge Strap (12 ft)
	LAF9408	2	Edge Strap (14 ft)
	LAF9410	1	Edge Strap (14 ft)
13.	P851108	12	Washer, Lock, Gr5, .5
14.	P851110	6	Washer, Lock, Gr5, .63
15.	RHW1406	12	Screw, HHC, Gr5, .5 x 1.75
16.	RHW1413	8	Screw, HHC, Gr5, .5 x 3.5 (8 ft)
	RHW1413	10	Screw, HHC, Gr5, .5 x 3.5 (10 ft)
	RHW1413	12	Screw, HHC, Gr5, .5 x 3.5 (12 ft)
	RHW1413	14	Screw, HHC, Gr5, .5 x 3.5 (14 ft)
17.	RHW1604	6	Screw, HHC, Gr5, .63 x 2
18.	RHW5462	40	Washer, Flat, Gr5, .5 (8 ft)
	RHW5462	44	Washer, Flat, Gr5, .5 (10 ft)
	RHW5462	48	Washer, Flat, Gr5, .5 (12 ft)
	RHW5462	48	Washer, Flat, Gr5, .5 (14 ft)
19.	RHW5662	12	Washer, Flat, Gr5, .63
20.	RHW7401	12	Nut, Hex, Gr5, .5
21.	RHW7603	6	Nut, Lock, Center Dent, Gr5, .63
22.	RHW7403	8	Nut, Lock, Center Dent, Gr5, .5 (8 ft)
	RHW7403	10	Nut, Lock, Center Dent, Gr5, .5 (10 ft)
	RHW7403	12	Nut, Lock, Center Dent, Gr5, .5 (12 ft)
	RHW7403	14	Nut, Lock, Center Dent, Gr5, .5 (14 ft)

# 117/127/LAF3600 SERIES PULL BACK (6, 7, 8 & 10 ft)

6 ft LAF3613  
7 ft LAF3612  
8 ft LAF3611  
10 ft LAF3602



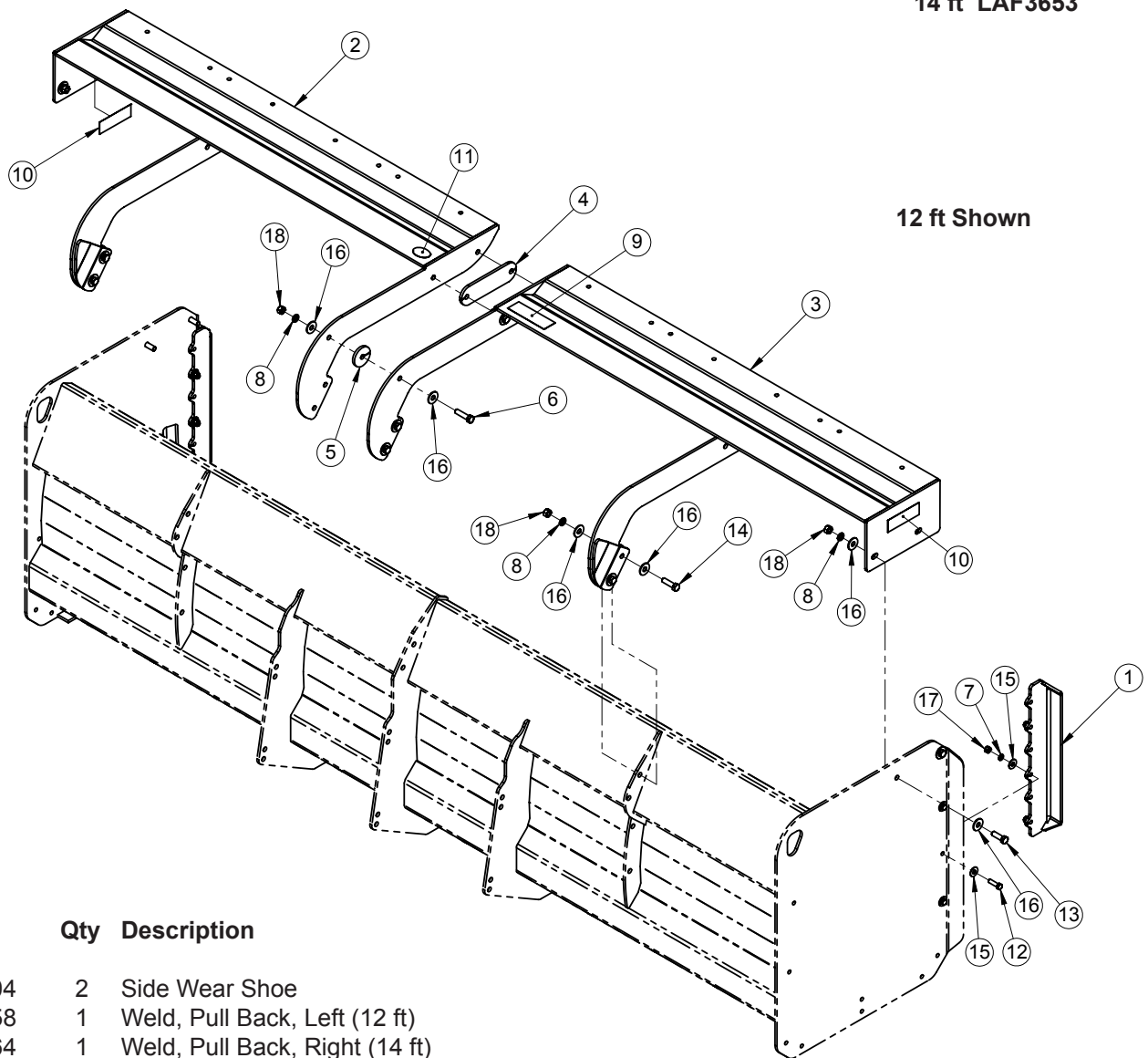
Item	Part	Qty	Description
1.	LAF3604	2	Side Wear Shoe
2.	LAF3627	1	Weldment, Pull Back (6 ft)
	LAF3628	1	Weldment, Pull Back (7 ft)
	LAF3621	1	Weldment, Pull Back (8 ft)
	LAF3601	1	Weldment, Pull Back (10 ft)
3.	P851108	6	Washer, Lock, Gr5, .5
4.	P851110	6	Washer, Lock, Gr5, .63 (6 ft)
	P851110	8	Washer, Lock, Gr5, .63 (7,8,10 ft)
5.	RDL3118	1	Label, Logo, FFC, Medium
6.	RDL3132	2	Tape, Amber, Reflective, 2 x 6 (6,7,8,10 ft)
7.	RDL3137	1	Label, Made In USA
8.	RHW1406	6	Screw, HHC, Gr5, .5 x 1.75
9.	RHW1604	4	Screw, HHC, Gr5, .63 x 2
10.	RHW1605	2	Screw, HHC, Gr5, .63 x 2.25 (6 ft)
	RHW1605	4	Screw, HHC, Gr5, .63 x 2.25 (7,8,10 ft)
11.	RHW5462	12	Washer, Flat, Gr5, .5
12.	RHW5662	12	Washer, Flat, Gr5, .63 (6 ft)
	RHW5662	16	Washer, Flat, Gr5, .63 (7,8,10 ft)
13.	RHW7401	6	Nut, Hex, Gr5, .5
14.	RHW7601	6	Nut, Hex, Gr5, .63 (6 ft)
	RHW7601	8	Nut, Hex, Gr5, .63 (7,8,10 ft)



# 117/127/LAF3600 SERIES PULL BACK (12 & 14 ft)

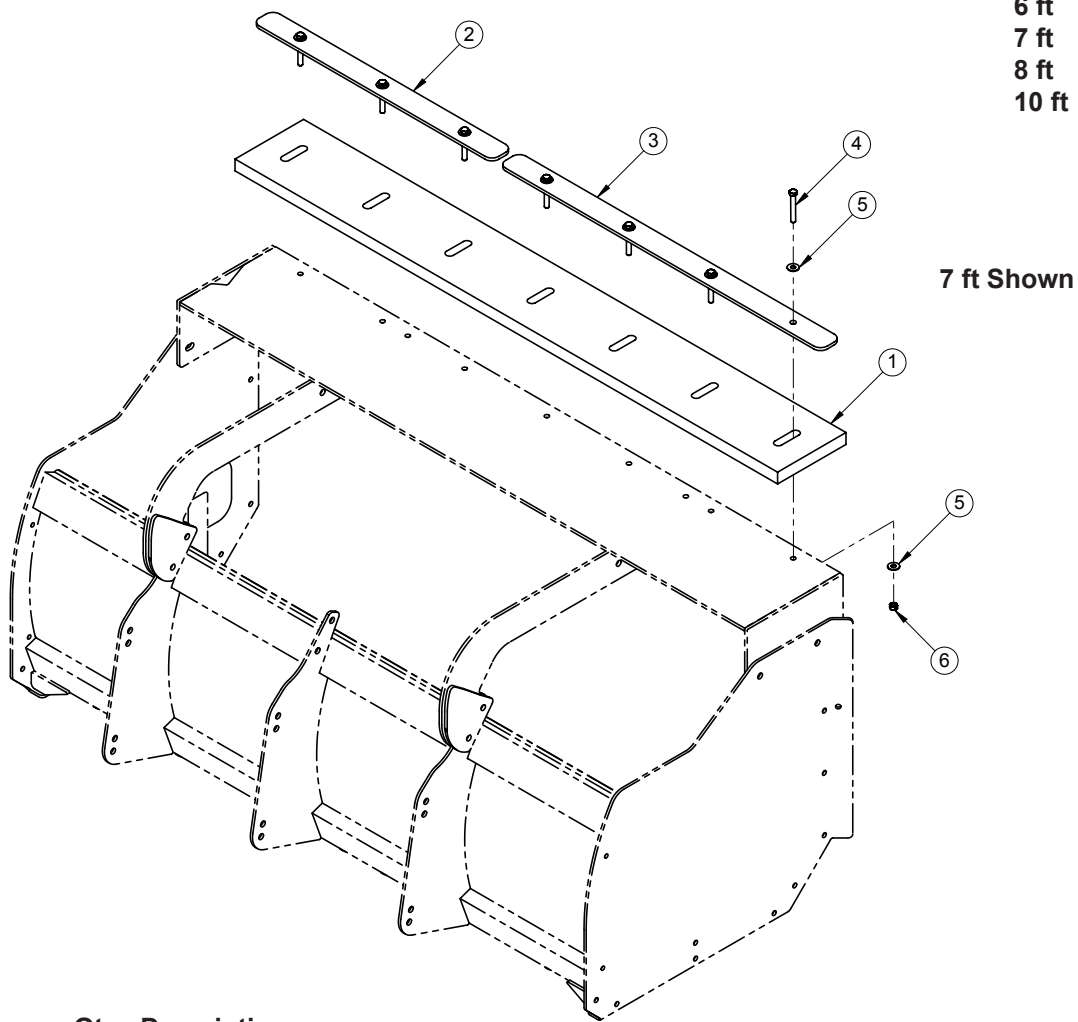
12 ft LAF3651

14 ft LAF3653



Item	Part	Qty	Description
1.	LAF3604	2	Side Wear Shoe
2.	LAF3658	1	Weld, Pull Back, Left (12 ft)
	LAF3664	1	Weld, Pull Back, Right (14 ft)
3.	LAF3659	1	Weld, Pull Back, Left (12 ft)
	LAF3663	1	Weld, Pull Back, Right (14 ft)
4.	LAF9435	1	Plate, Spacer
5.	LAF9436	1	Washer, Spacer
6.	P101010	5	Screw, HHC, Gr5, 5/8-11 x 2 1/2
7.	P851108	6	Washer, Lock, Gr5, .5
8.	P851110	13	Washer, Lock, Gr5, .63
9.	RDL3118	1	Label, Logo, FFC, Medium
10.	RDL3132	4	Tape, Amber, Reflective, 2 x 6
11.	RDL3137	1	Label, Made In USA
12.	RHW1406	6	Screw, HHC, Gr5, .5 x 1.75
13.	RHW1604	4	Screw, HHC, Gr5, .63 x 2
14.	RHW1605	4	Screw, HHC, Gr5, .63 x 2.25
15.	RHW5462	12	Washer, Flat, Gr5, .5
16.	RHW5662	26	Washer, Flat, Gr5, .63
17.	RHW7401	6	Nut, Hex, Gr5, .5
18.	RHW7601	13	Nut, Hex, Gr5, .63

# 117/127/LAF3600 PULL BACK RUBBER EDGE (6, 7, 8 & 10 ft)



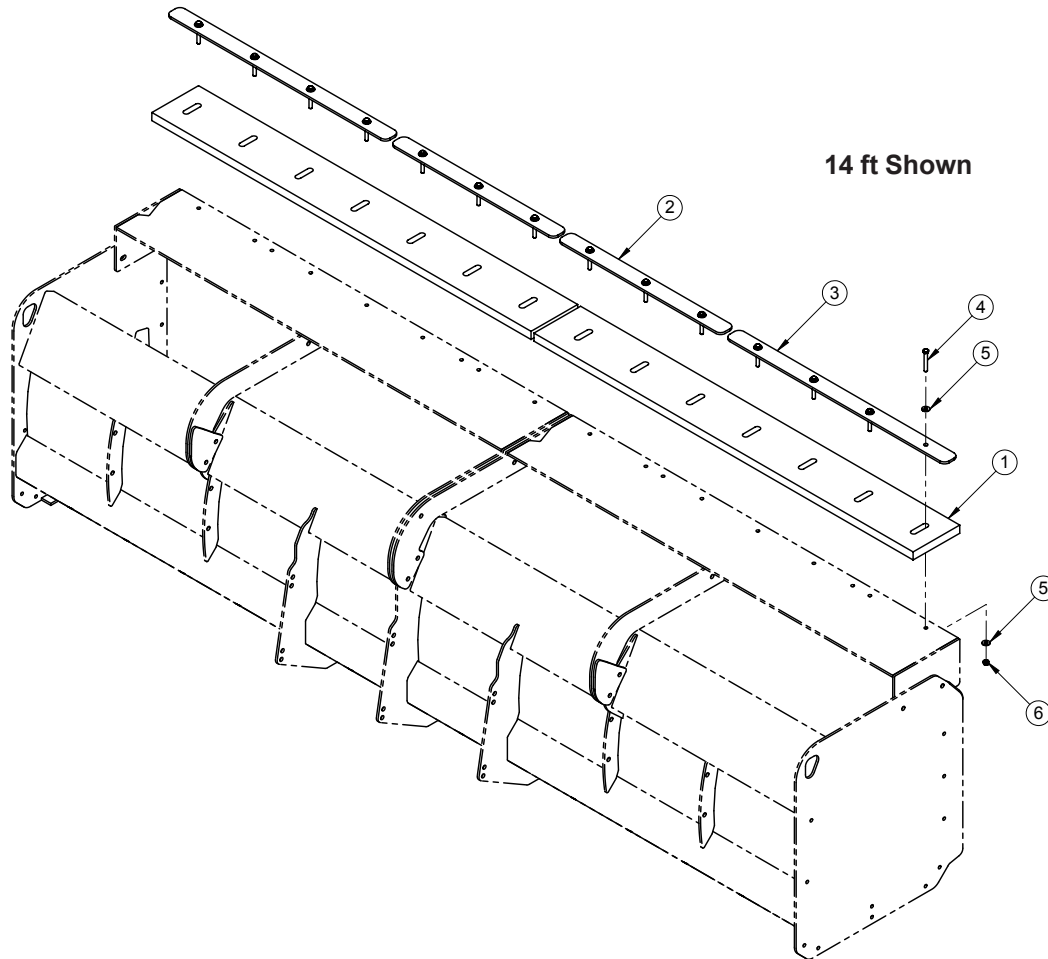
6 ft LAF3632  
7 ft LAF3631  
8 ft LAF3630  
10 ft LAF3629

Item	Part	Qty	Description
1.	LAF3665	1	Rubber Edge, 1.5 x 10 (6 ft)
	LAF3666	1	Rubber Edge, 1.5 x (7 ft)
	LAF3667	1	Rubber Edge (8 ft)
	LAF3668	1	Rubber Edge (10 ft)
2.	LAF9407	1	Edge Strap, 3 ft (7 ft)
3.	LAF9410	1	Edge Strap, 6 ft (6 ft)
	LAF9408	1	Edge Strap, 4 ft (7 ft)
	LAF9408	2	Edge Strap, 4 ft (8 ft)
	LAF9409	2	Edge Strap, 5 ft (10 ft)
4.	RHW1413	6	Screw, HHC, Gr5, .5 x 3.5 (6 ft)
	RHW1413	7	Screw, HHC, Gr5, .5 x 3.5 (7 ft)
	RHW1413	8	Screw, HHC, Gr5, .5 x 3.5 (8 ft)
	RHW1413	10	Screw, HHC, Gr5, .5 x 3.5 (10 ft)
5.	RHW5462	12	Washer, Flat, Gr5, .5 (6 ft)
	RHW5462	14	Washer, Flat, Gr5, .5 (7 ft)
	RHW5462	16	Washer, Flat, Gr5, .5 (8 ft)
	RHW5462	20	Washer, Flat, Gr5, .5 (10 ft)
6.	RHW7403	6	Nut, Lock, Gr5, .5 (6 ft)
	RHW7403	7	Nut, Lock, Gr5, .5 (7 ft)
	RHW7403	8	Nut, Lock, Gr5, .5 (8 ft)
	RHW7403	10	Nut, Lock, Gr5, .5 (10 ft)

# 117/127/LAF3600 PULL BACK RUBBER EDGE (12 & 14 ft)

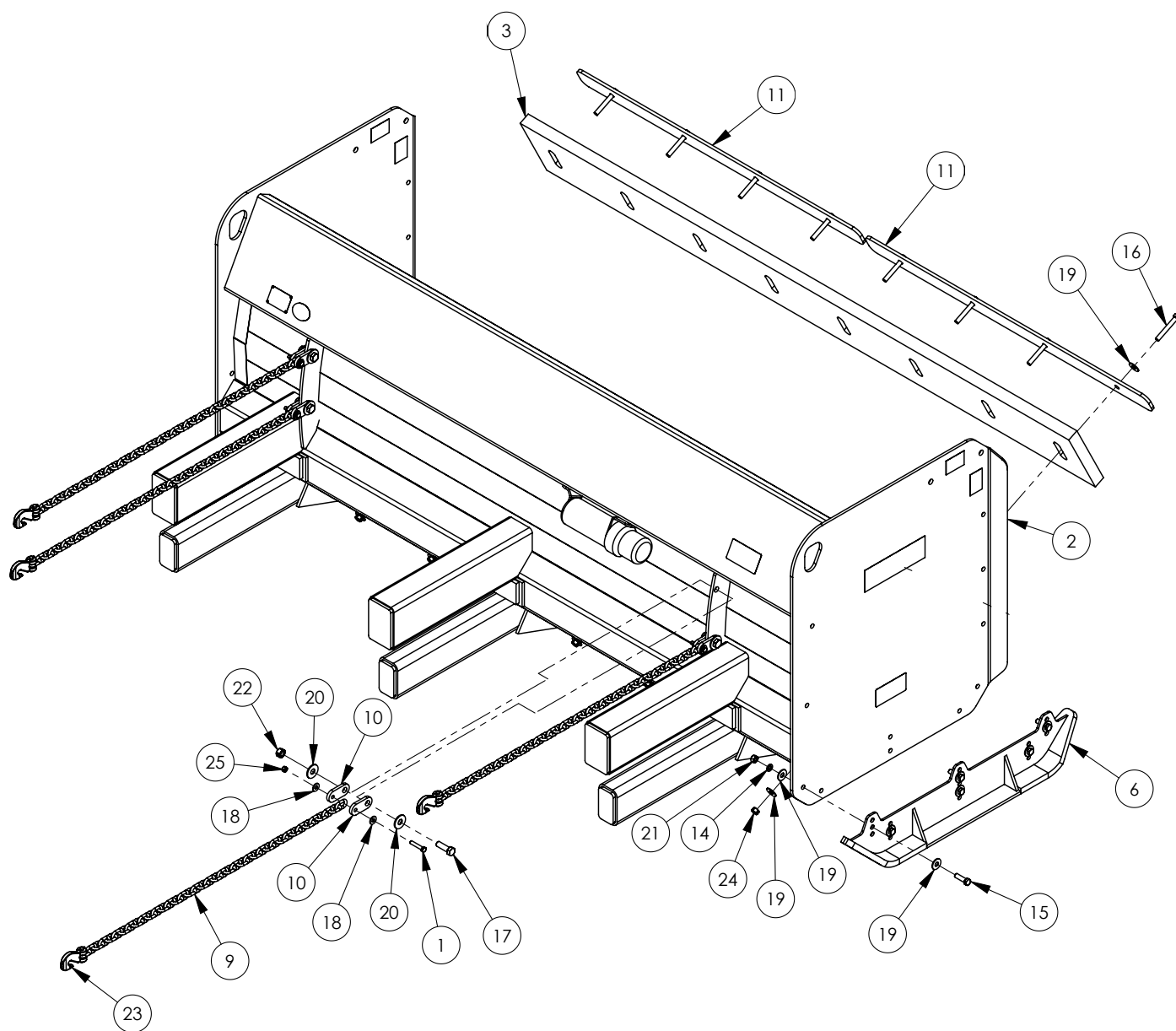
12 ft LAF3649

14 ft LAF3650



Item	Part	Qty	Description
1.	LAF3616	2	Rubber Edge (12 ft)
	LAF3660	2	Rubber Edge (14 ft)
2.	LAF9410	2	Edge Strap (12 ft)
	LAF9407	2	Edge Strap (14ft)
3.	LAF9408	2	Edge Strap (14 ft)
4.	RHW1413	12	Screw, HHC, Gr5, .5 x 3.5 (12 ft)
	RHW1413	14	Screw, HHC, Gr5, .5 x 3.5 (14 ft)
5.	RHW5462	24	Washer, Flat, Gr5, .5 (12 ft)
	RHW5462	28	Washer, Flat, Gr5, .5 (14 ft)
6.	RHW7403	12	Nut, Lock, Gr5, .5 (12 ft)
	RHW7403	14	Nut, Lock, Gr5, .5 (14 ft)

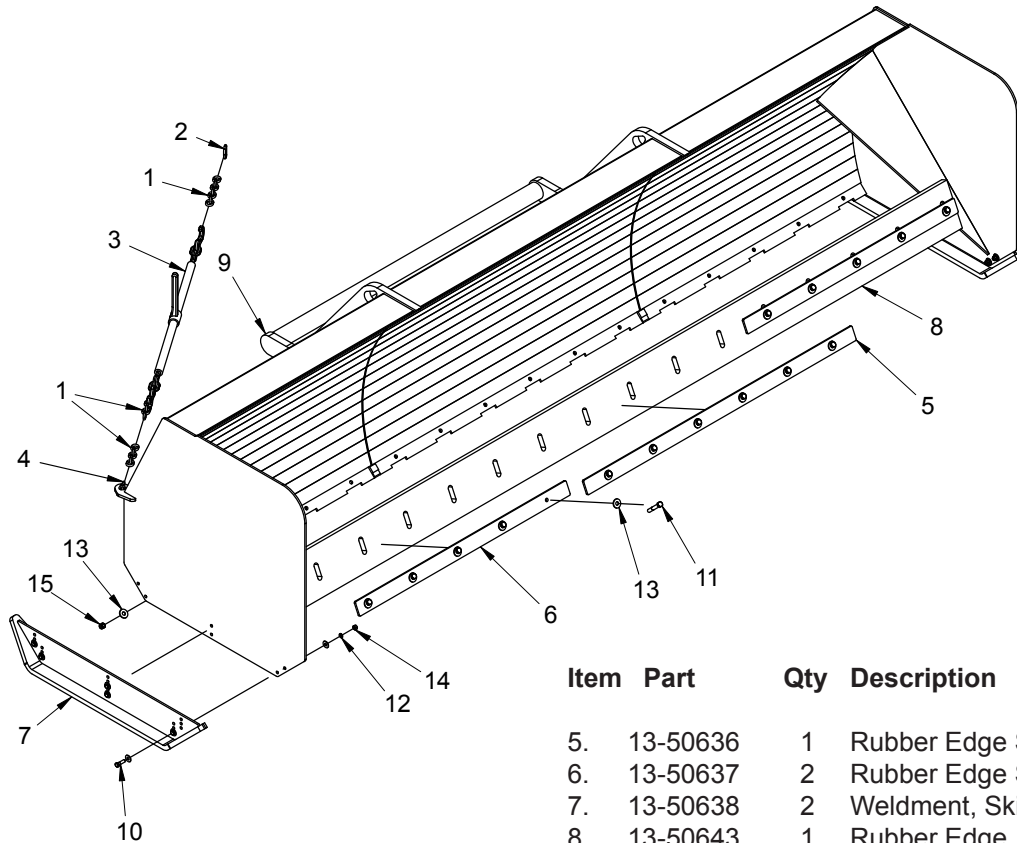
## BUCKET LIP MOUNT (8, 10, 12 & 14 ft)



## BUCKET LIP MOUNT (8, 10, 12 & 14 ft)

Item	Part	Qty	Description
1.	07-3657	4	Screw, HHC, Gr8, .38 x 2
2.	13-16493-8	1	Bucket Mount (8 ft)
	13-16493-10	1	Bucket Mount (10 ft)
	13-16493-12	1	Bucket Mount (12 ft)
	13-16493-14	1	Bucket Mount (14 ft)
3.	LAF3667	1	Edge, 1.5 x 10 x 91(8 ft)
	LAF3668	1	Edge, 1.5 x 10 x 115 (10 ft)
	13-52879	1	Edge, 1.5 x 10 x 139 (12 ft)
	13-52880	1	Edge, 1.5 x 10 x 163 (14 ft)
6.	LAF3605	2	Weld, Skid Shoe
9.	LAF3671	4	Chain, Gr40, .31 x 60
10.	LAF3672	8	Chain Link
11.	LAF9408	2	Plate, Edge Strip, 4 ft (8 ft & 14 ft)
	LAF9409	2	Plate, Edge Strip, 5 ft (10 ft)
	LAF9410	2	Plate, Edge Strip, 6 ft (12 ft)
	LAF9410	1	Plate, Edge Strip, 6 ft (14 ft)
14.	P851108	12	Washer, Lock, 1/2
15.	RHW1406	12	Screw, HHC, Gr5, Nylock, 1/2-13 x 1 3/4
16.	RHW1413	8	Screw, HHC, Gr5, 1/2-13 x 3 1/2 (8 ft)
		10	Screw, HHC, Gr5, 1/2-13 x 3 1/2 (10 ft)
		12	Screw, HHC, Gr5, 1/2-13 x 3 1/2 (12 ft)
		14	Screw, HHC, Gr5, 1/2-13 x 3 1/2 (14 ft)
17.	RHW1604	4	Screw, HHC, Gr5, .63 x 2
18.	RHW5262	8	Washer, Flat, Gr5, .38
19.	RHW5462	40	Washer, Flat, Gr5, 1/2 (8 ft)
		44	Washer, Flat, Gr5, 1/2 (10 ft)
		48	Washer, Flat, Gr5, 1/2 (12 ft)
		52	Washer, Flat, Gr5, 1/2 (14 ft)
20.	RHW5662	8	Washer, Flat, Gr5, .63
21.	RHW7401	12	Nut, Hex, Gr5, 1/2
22.	RHW7603	4	Nut, Lock, Gr5, .63
23.	RHW8228	4	Grab Hook, Gr40, .31 Clevis End
24.	RHW7403	8	Nut, Lock, Gr5, .5 (8 ft)
		10	Nut, Lock, Gr5, .5 (10 ft)
		12	Nut, Lock, Gr5, .5 (12 ft)
		14	Nut, Lock, Gr5, .5 (14 ft)
25.	RHW7203	4	Nut, Lock, Gr5, .38

## 11016 SNOW PUSH



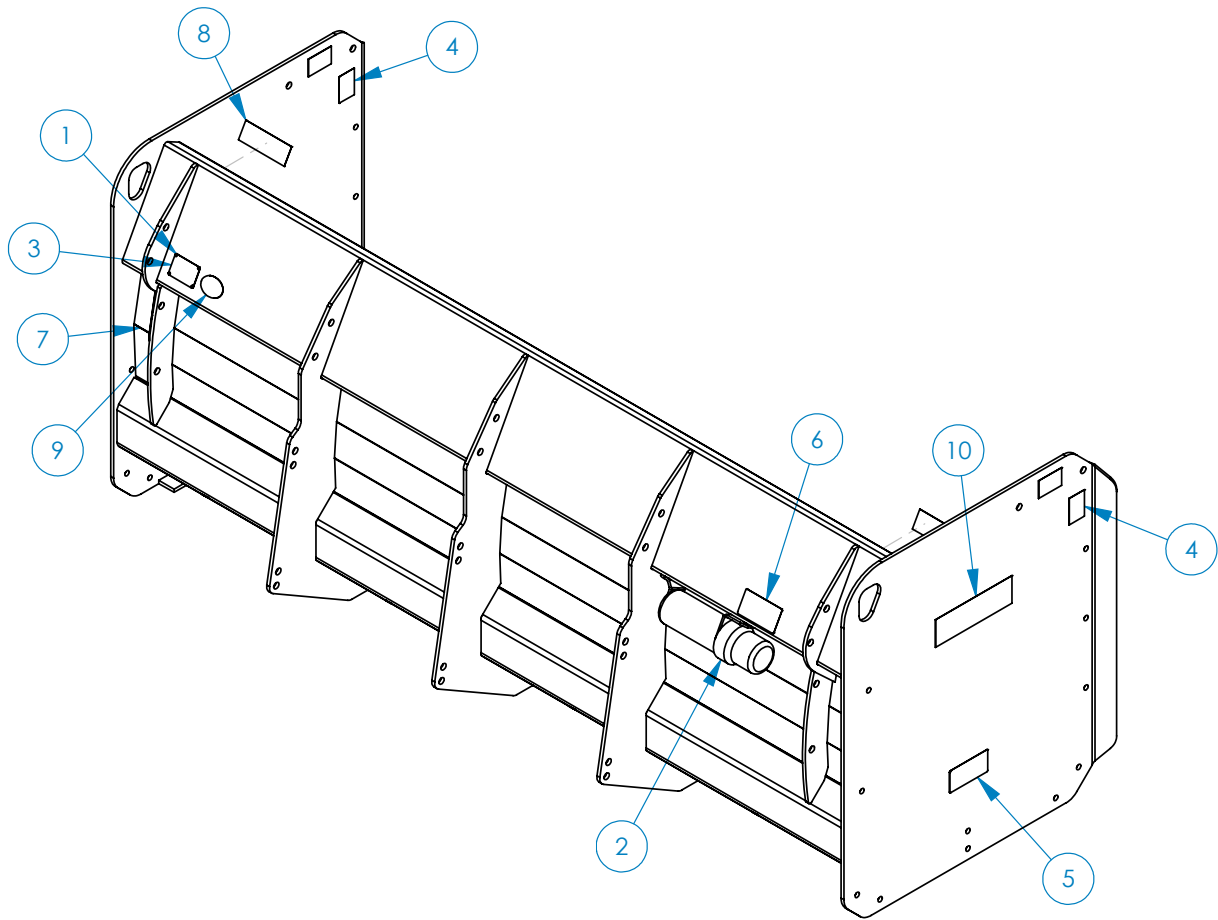
Item	Part	Qty	Description
5.	13-50636	1	Rubber Edge Strap, 72 inches
6.	13-50637	2	Rubber Edge Strap, 56.5 inches
7.	13-50638	2	Weldment, Skid Shoe
8.	13-50643	1	Rubber Edge
9.	13-50644	1	Mold Board
10.	07-3671	12	Screw, HHC, Gr8, .5 x 1.75
11.	07-3682	16	Screw, HHC, Gr8, .63 x 4
12.	07-0156	24	Washer, Flat, Gr8, .5
13.	07-3120	32	Washer, Flat, Gr8, .63
14.	07-4037	12	Nut, Hex, Nylock, Gr8, .5
15.	07-4031	16	Nut, Hex, Nylock, Gr8, .63

## OPTIONAL BINDER/CHAIN KIT PARTS LIST

Kit # 28-9213

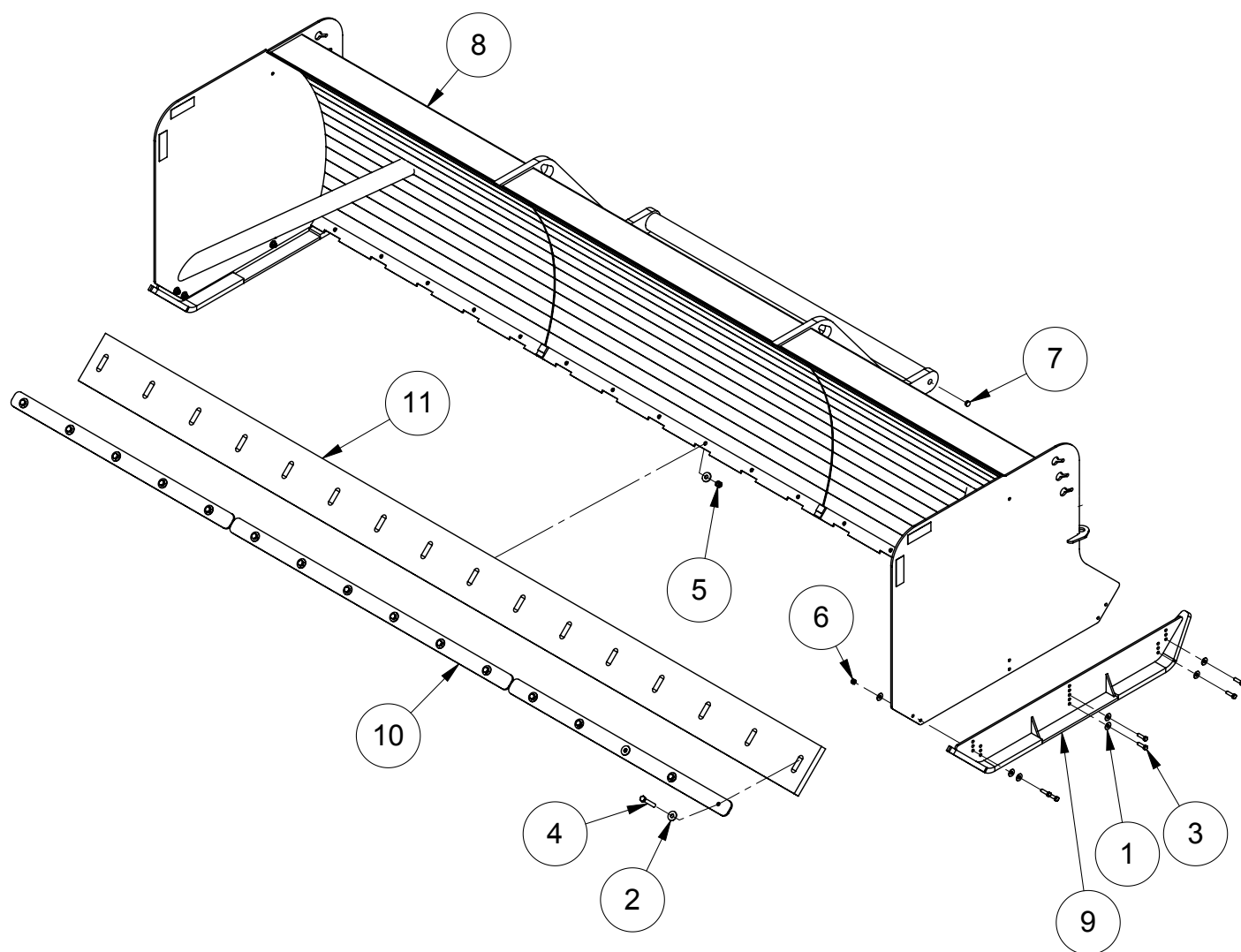
Item	Part	Qty	Description
1.	07-6243	176	Chain, Bulk, Gr70, .38
2.	07-6445	2	Hook Grab, Weldable, .5 Opening
3.	07-8382	2	Binder Ratchet with Grab Hooks
4.	07-6447	2	Shackle Chain, .44

# 110/117/127/228/LAF3600 SNOW PUSH LABEL ASSEMBLY



Item	Part	Qty	Description
1.	07-3624	4	Tack, Metal
2.	07-6869	1	Manual Holder
3.	50-0856	1	Serial Tag, FFC
4.	50-0916	8	Decal, Reflective Tape, Amber, 2 x 3
5.	50-0959	2	Decal, Warning, Foot Crush, ANSI
6.	50-10017	1	Label, Warning, Avoid Serious Injury
7.	RDL3131	4	Decal, Reflective Tape, Red, 2 x 6
8.	RDL3132	2	Decal, Reflective Tape, Amber, 2 x 6
9.	RDL3137	1	Decal, Made In USA
10.	RDL3258	2	Label, Logo, FFC, Large

## 228 SERIES SNOW PUSH BUCKET LIP





## 228 SERIES SNOW PUSH BUCKET LIP

Item	Part	Qty	Description
1.	07-0156	24	Washer, Flat, Gr8, 1/2
2.	07-3120	24	Washer, Flat, Gr8, 5/8 (12 ft)
	07-3120	28	Washer, Flat, Gr8, 5/8 (14 ft)
	07-3120	32	Washer, Flat, Gr8, 5/8 (16 ft)
	07-3120	40	Washer, Flat, Gr8, 5/8 (20 ft)
3.	07-3671	12	Screw, HHC, Gr8, 1/2-13 x 1 3/4
4.	07-3682	12	Screw, HHC, Gr8, 5/8-11 x 4 (12 ft)
	07-3682	14	Screw, HHC, Gr8, 5/8-11 x 4 (14 ft)
	07-3682	16	Screw, HHC, Gr8, 5/8-11 x 4 (16 ft)
	07-3682	20	Screw, HHC, Gr8, 5/8-11 x 4 (20 ft)
5.	07-4031	12	Nut, Hex, Nylock, Gr8, 5/8-11 (12 ft)
	07-4031	14	Nut, Hex, Nylock, Gr8, 5/8-11 (14 ft)
	07-4031	16	Nut, Hex, Nylock, Gr8, 5/8-11 (16 ft)
	07-4031	20	Nut, Hex, Nylock, Gr8, 5/8-11 (20 ft)
6.	07-4037	12	Nut, Hex, Nylock, Gr8, 1/2-13
7.	07-4523	4	Cap, Tube, Vinyl, 1 x .51, Black
8.	13-17623-12	1	Weld, 4 x 4 SP, 12 ft, Bucket Lip Mount
	13-17623-14	1	Weld, 4 x 4 SP, 14 ft, Bucket Lip Mount
	13-17623-16	1	Weld, 4 x 4 SP, 16 ft, Bucket Lip Mount
	13-17623-20	1	Weld, 4 x 4 SP, 20 ft, Bucket Lip Mount
9.	13-17627	2	Weld, Skid Shoe
10.	13-17769	2	Plate, 3/8 x 3 x 68.5 (12 ft)
	13-50637	2	Plate, 3/8 x 3 x 56.5 (14 ft)
	LAF9408	1	Plate, 4 ft, Edge Strip (14 ft)
	13-50636	1	Plate, 3/8 x 3 x 72 (16 ft)
	13-50637	2	Plate, 3/8 x 3 x 56.5 (16 ft)
	13-50637	2	Plate, 3/8 x 3 x 56.5 (20 ft)
	LAF9409	2	Plate, 5 ft, Edge Strip (20 ft)
11.	13-17773	1	Edge, 1.5 x 10 x 137.5 (12 ft)
	13-17774	1	Edge, 1.5 x 10 x 161.5 (14 ft)
	13-50643	1	Edge, 1.5 x 10 x 185.5 (16 ft)
	13-51166	1	Edge, 1.5 x 10 x 233.5 (20 ft)

## POWER UNIT SPECIFICATIONS

**NOTICE!** *Exceeding any of the maximum recommended prime mover specifications CAN result in damage to this product and WILL void all FFC warranties.*

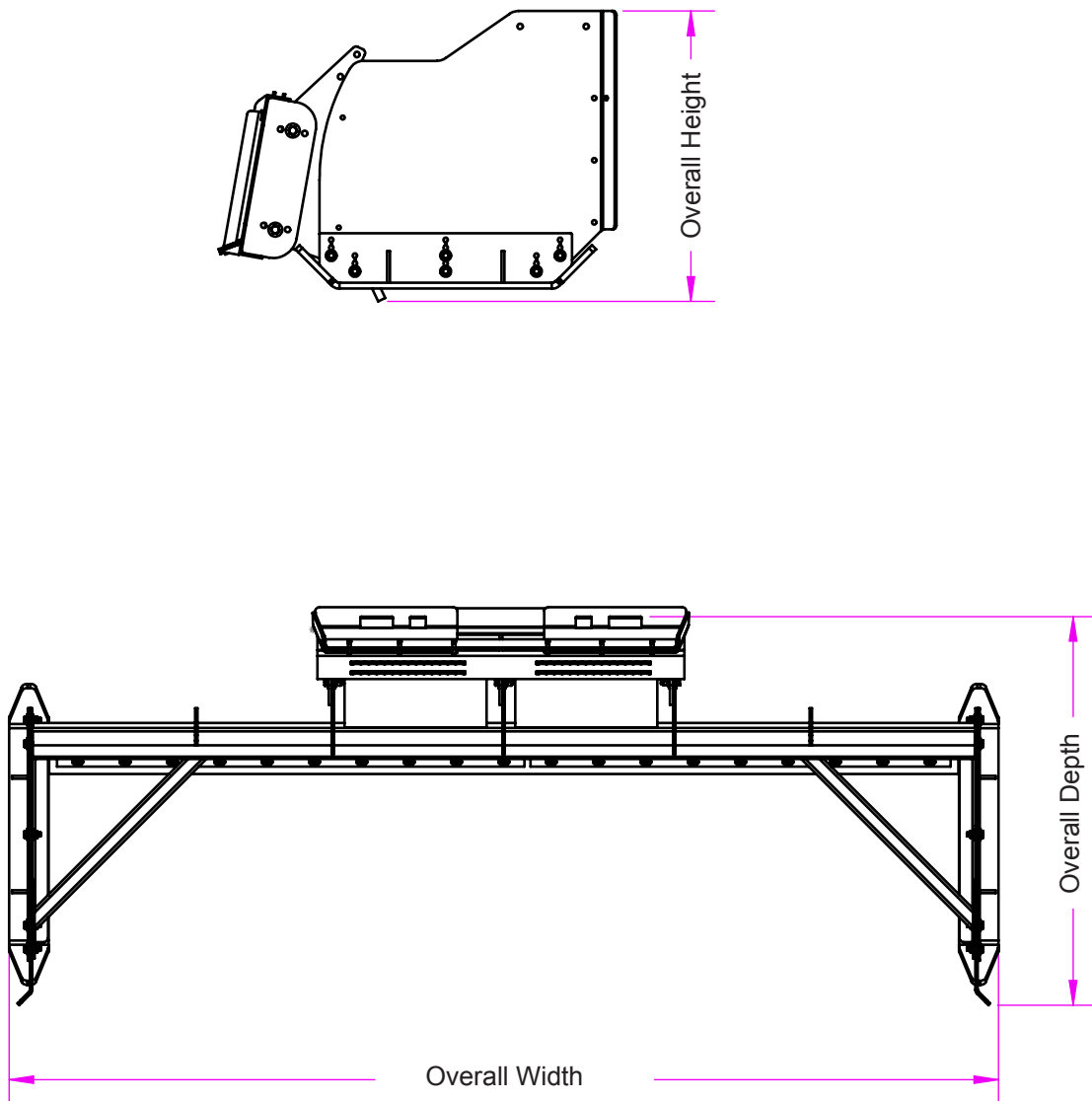
DESCRIPTION	SPECIFICATIONS		
SNOW PUSH	117/127 Series	LAF3600 Series	11016 / 228 Series
Weight of Prime Mover without Snow Push	11,000 lbs. (4990 kg) maximum	20,000 lbs. (9072 kg) maximum	32,000 lbs. (14,515 kg) maximum
Lift Capacity of Power Unit's Loader	9,500 lbs. (4309 kg) maximum	11,000 lbs. (4990 kg) maximum	11,000 lbs. (4990 kg) maximum
Minimum Loader Bucket Capacity	n/a	n/a	2.5 yards (1.9 cu. meters)
Rear Ballast	As required to maintain full prime mover stability. (Note the Shipping Weight on the specifications page, then see the operator's manual(s) for your prime mover, loader, and quick-attach for ballasting needs.)		

## SNOW PUSH SPECIFICATIONS

Model Number	Overall Width	Overall Height	Overall Depth	Snow Push Shipping Weight	Pull Back Shipping Weight	Pull Back Rubber Edge Kit Shipping Weight
11773	78 in (198 cm)	37.2 in ( cm)	49.3 in (125 cm)	920 lbs (417 kg)	250 lbs (113 kg)	110 lbs (49.9 kg)
11785	90 in (229 cm)	37.2 in ( cm)	49.3 in (125 cm)	950 lbs (431 kg)	290 lbs (132 kg)	120 lbs (54.4 kg)
11795	102 in (259 cm)	37.2 in ( cm)	49.3 in (125 cm)	1000 lbs (454 kg)	310 lbs (141 kg)	130 lbs (58.9 kg)
11721	126 in (320 cm)	37.2 in ( cm)	49.3 in (125 cm)	1,080 lbs (490 kg)	350 lbs (159 kg)	150 lbs (68 kg)
12772	77.4 in (196.6 cm)	37.2 in ( cm)	49.3 in (125 cm)	920 lbs (417 kg)	250 lbs (113 kg)	110 lbs (49.9 kg)
12784	89.4 in (227.1 cm)	37.2 in ( cm)	49.3 in (125 cm)	950 lbs (431 kg)	290 lbs (132 kg)	120 lbs (54.4 kg)
12796	101.4 in (257.6 cm)	37.2 in ( cm)	49.3 in (125 cm)	1000 lbs (454 kg)	310 lbs (141 kg)	130 lbs (58.9 kg)
12720	125.4 in (318.5 cm)	37.2 in ( cm)	49.3 in (125 cm)	1,080 lbs (490 kg)	350 lbs (159 kg)	150 lbs (68 kg)
LAF3618	102 in (259 cm)	39.5 in (100 cm)	49.3 in (125 cm)	1,270 lbs (576 kg)	310 lbs (141 kg)	130 lbs (58.9 kg)
LAF3617	126 in (320 cm)	39.5 in (100 cm)	49.3 in (125 cm)	1,425 lbs (646 kg)	350 lbs (159 kg)	150 lbs (68 kg)
LAF3688	101.3 in (257.3 cm)	41.3 in (105 cm)	49.3 in (125 cm)	1270 lbs (576 kg)	310 lbs (141 kg)	130 lbs (58.9 kg)
LAF3680	125.3 in (318.3 cm)	41.3 in (105 cm)	49.3 in (125 cm)	1425 lbs (646 kg)	350 lbs (159 kg)	150 lbs (68 kg)
LAF3682	149.3 in (379.2 cm)	41.3 in (105 cm)	49.3 in (125 cm)	1,650 lbs (748 kg)	395 lbs (179 kg)	170 lbs (77.1 kg)
LAF3684	173.3 in (440.2 cm)	41.3 in (105 cm)	49.3 in (125 cm)	1,800 lbs (817 kg)	430 lbs (195 kg)	190 lbs (86.2 kg)
11016	198 in (503 cm)	47 in (119 cm)	72 in (183 cm)	2,700 lbs (1225 kg)	n/a	n/a
22812	149.7 in (380.2 cm)	48.8 in (124 cm)	71.6 in (182 cm)	2,485 lbs (1127 kg)	n/a	n/a
22814	173.7 in (441.2 cm)	48.8 in (124 cm)	71.6 in (182 cm)	2,660 lbs (1207 kg)	n/a	n/a
22816	197.7 in (502.2 cm)	48.8 in (124 cm)	71.6 in (182 cm)	2,835 lbs (1286 kg)	n/a	n/a
22820	245.7 in (624.1 cm)	48.8 in (124 cm)	71.6 in (182 cm)	3,185 lbs (1445 kg)	n/a	n/a

# SNOW PUSH SPECIFICATIONS

117 Series Shown



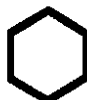






# BOLT TORQUE SPECIFICATIONS

## GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.




## SAE BOLT TORQUE SPECIFICATIONS

**NOTE:** The following torque values are for use with extreme pressure lubricants, plating or hard washer applications. Increase torque 15% when using hardware that is unplated and either dry or lubricated with engine oil.

		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE				Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary
Bolt Size		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	<div>GRADE 2</div> <div></div> <div>GRADE 5</div> <div></div> <div>GRADE 8</div> <div></div>
5/16	7.94	14	17	19	23	20	25	27	34	
3/8	9.53	30	36	41	49	38	46	52	62	
7/16	11.11	46	54	62	73	60	71	81	96	
1/2	12.70	68	82	92	111	94	112	127	152	
9/16	14.29	94	112	127	152	136	163	184	221	
5/8	15.88	128	153	174	207	187	224	254	304	
3/4	19.05	230	275	312	373	323	395	438	536	
7/8	22.23	340	408	461	553	510	612	691	830	
1	25.40	493	592	668	803	765	918	1037	1245	
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660	
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305	
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135	
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103	

## METRIC BOLT TORQUE SPECIFICATIONS

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

Bolt head identification marks as per grade.		
		

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

# WARRANTY

## Limited Warranty

Except for the Excluded Products as described below, all new products are warranted to be free from defects in material and/or workmanship during the Warranty Period, in accordance with and subject to the terms and conditions of this Limited Warranty.

1. Excluded Products. The following products are excluded from this Limited Warranty:

(a) Any cable, part that engages with the ground (i.e. sprockets), digging chain, bearing, teeth, tamping and/or demolition head, blade cutting edge, pilot bit, auger teeth and broom brush that either constitutes or is part of a product.

(b) Any product, merchandise or component that, in the opinion of Paladin Light Construction<sup>1</sup>, has been (i) misused; (ii) modified in any unauthorized manner; (iii) altered; (iv) damaged; (v) involved in an accident; or (vi) repaired using parts not obtained through Paladin Light Construction.

2. Warranty Period. The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the first to occur of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six (6) months after the date of shipment by Paladin Light Construction as evidenced by the invoiced shipment date (the "Commencement Date") and ends on the date that is twelve (12) months after the Commencement Date.

3. Terms and Conditions of Limited Warranty. The following terms and conditions apply to the Limited Warranty hereby provided:

(a) Option to Repair or Replace. Paladin Light Construction shall have the option to repair or replace the product.

(b) Timely Repair and Notice. In order to obtain the Limited Warranty, (i) the product must be repaired within thirty (30) days from the date of failure, and (ii) a claim under the warranty must be submitted to Paladin Light Construction in writing within thirty (30) days from the date of repair.

(c) Return of Defective Part or Product. If requested by Paladin Light Construction, the alleged defective part or product shall be shipped to Paladin Light Construction at its manufacturing facility or other location specified by Paladin Light Construction, with freight PRE-PAID by the claimant, to allow Paladin Light Construction to inspect the part or product.

Claims that fail to comply with any of the above terms and conditions shall be denied.

### **LIMITATIONS AND EXCLUSIONS.**

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING OR USAGE OF TRADE.**

**IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.**

**IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR ANY LOSS OR CLAIM IN AN AMOUNT IN EXCESS OF THE PURCHASE PRICE, OR, AT THE OPTION OF PALADIN LIGHT CONSTRUCTION, THE REPAIR OR REPLACEMENT, OF THE PARTICULAR PRODUCT ON WHICH ANY CLAIM OF LOSS OR DAMAGE IS BASED. THIS LIMITATION OF LIABILITY APPLIES IRRESPECTIVE OF WHETHER THE CLAIM IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHER CAUSE AND WHETHER THE ALLEGED DEFECT IS DISCOVERABLE OR LATENT.**

<sup>1</sup>Attachment Technologies Inc., a subsidiary of Paladin Brands Holding, Inc. (PBHI) is referred to herein as Paladin Light Construction.

February 10, 2010

