

32275

UNIVERSAL MOUNT KIT

GVWR 10,001 – 27,500 lb

Installation Instructions

⚠ CAUTION

Read this document before installing the snowplow.

⚠ CAUTION

See your sales outlet/website for specific vehicle application recommendations before installation. The online selection system has specific vehicle and snowplow requirements.

SAFETY DEFINITIONS

⚠ WARNING
 Indicates a potentially hazardous situation that, if not avoided, could result in death or serious personal injury.

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

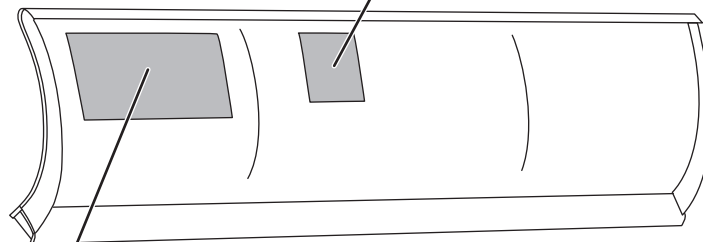
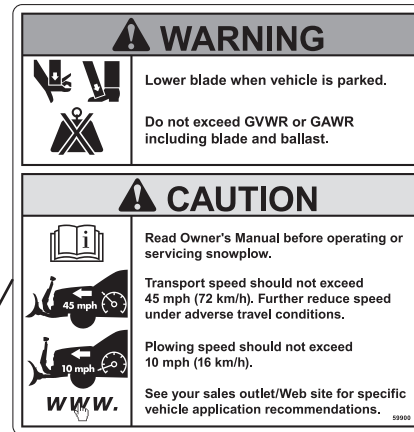
NOTE: Indicates a situation or action that can lead to damage to your snowplow and vehicle or other property. Other useful information can also be described.

WARNING/CAUTION & INSTRUCTION LABELS

Become familiar with and inform users about the warning and instruction labels on the back of the blade.

NOTE: If labels are missing or cannot be read, see your sales outlet.

Warning/Caution Label



Instruction Label

SAFETY PRECAUTIONS

Improper installation and operation could cause personal injury and/or equipment and property damage. Read and understand labels and the Owner's Manual before installing, operating, or making adjustments.

⚠ WARNING

Lower the blade when vehicle is parked. Temperature changes could change hydraulic pressure, causing the blade to drop unexpectedly or damaging hydraulic components. Failure to do this could result in serious personal injury.

⚠ WARNING

The driver shall keep bystanders clear of the blade when it is being raised, lowered, or angled. Do not stand between the vehicle and the blade or within 8 feet of a moving blade. A moving or falling blade could cause personal injury.

⚠ WARNING

Keep hands and feet clear of the blade and A-frame when mounting or removing the snowplow. Moving or falling assemblies could cause personal injury.

⚠ WARNING

Do not exceed GVWR or GAWR including the blade and ballast. The rating label is found on the driver-side vehicle door cornerpost.

⚠ WARNING

To prevent accidental movement of the blade, always turn the control OFF whenever the snowplow is not in use. The power indicator light will turn OFF.

⚠ WARNING

Remove blade assembly before placing vehicle on hoist.

⚠ CAUTION

Refer to the online selection system for minimum vehicle recommendations and ballast requirements.

PERSONAL SAFETY

- Remove ignition key and put the vehicle in park or in gear to prevent others from starting the vehicle during installation or service.
- Wear only snug-fitting clothing while working on your vehicle or snowplow.
- Do not wear jewelry or a necktie, and secure long hair.
- Wear safety goggles to protect your eyes from battery acid, gasoline, dirt, and dust.
- Avoid touching hot surfaces such as the engine, radiator, hoses, and exhaust pipes.
- Always have a fire extinguisher rated BC handy, for flammable liquids and electrical fires.

FIRE AND EXPLOSION

⚠ WARNING

Gasoline is highly flammable and gasoline vapor is explosive. Never smoke while working on vehicle. Keep all open flames away from gasoline tank and lines. Wipe up any spilled gasoline immediately.

Be careful when using gasoline. Do not use gasoline to clean parts. Store only in approved containers away from sources of heat or flame.

CELL PHONES

A driver's first responsibility is the safe operation of the vehicle. The most important thing you can do to prevent a crash is to avoid distractions and pay attention to the road. Wait until it is safe to operate Mobile Communication Equipment such as cell phones, text messaging devices, pagers, or two-way radios.

VENTILATION

⚠ WARNING

Vehicle exhaust contains lethal fumes. Breathing these fumes, even in low concentrations, can cause death. Never operate a vehicle in an enclosed area without venting exhaust to the outside.

NOISE

Airborne noise emission during use is below 70 dB(A) for the snowplow operator.





VIBRATION





Operating snowplow vibration does not exceed 2.5 m/s² to the hand-arm or 0.5 m/s² to the whole body.

TORQUE CHART

⚠ CAUTION

Read instructions before assembling. Fasteners should be finger tight until instructed to tighten according to the torque chart. Use standard methods and practices when attaching snowplow, including proper personal protective safety equipment.

Recommended Fastener Torque Chart					
Inch Fasteners Grade 5 and Grade 8					
Size	Torque (ft-lb)		Size	Torque (ft-lb)	
	 Grade 5	 Grade 8		 Grade 5	 Grade 8
1/4-20	8.4	11.9	9/16-12	109	154
1/4-28	9.7	13.7	9/16-18	121	171
5/16-18	17.4	24.6	5/8-11	150	212
5/16-24	19.2	27.3	5/8-18	170	240
3/8-16	30.8	43.6	3/4-10	269	376
3/8-24	35.0	49.4	3/4-16	297	420
7/16-14	49.4	69.8	7/8-9	429	606
7/16-20	55.2	77.9	7/8-14	474	669
1/2-13	75.3	106.4	1-8	644	909
1/2-20	85.0	120.0	1-12	704	995

Metric Fasteners Class 8.8 and 10.9					
Size	Torque (ft-lb)		Size	Torque (ft-lb)	
	 Class 8.8	 Class 10.9		 Class 8.8	 Class 10.9
M6 x 1.00	7.7	11.1	M20 x 2.50	325	450
M8 x 1.25	19.5	26.9	M22 x 2.50	428	613
M10 x 1.50	38.5	53.3	M24 x 3.00	562	778
M12 x 1.75	67	93	M27 x 3.00	796	1139
M14 x 2.00	107	148	M30 x 3.50	1117	1545
M16 x 2.00	167	231	M33 x 3.50	1468	2101
M18 x 2.50	222	318	M36 x 4.00	1952	2701

These torque values apply to fasteners except those noted in the instructions.

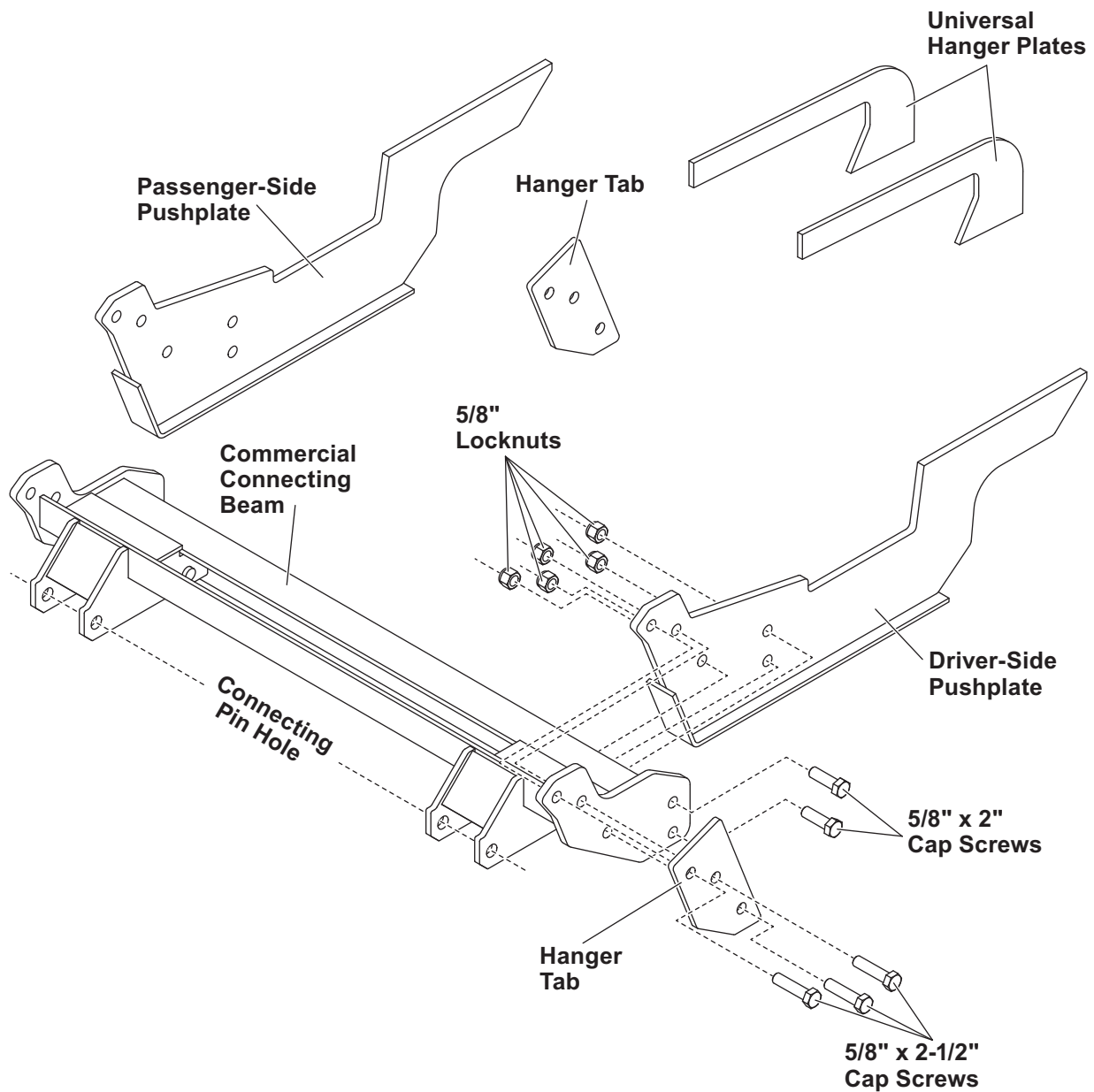
INSTALLATION INSTRUCTIONS

NOTE: For easier assembly and installation, vehicle and all snowplow components should be on a smooth, level, hard surface, such as concrete.

NOTE: To ensure proper fit of attachments, do not fully tighten any fasteners until told to do so.

NOTE: Some cutting, drilling, and welding will be necessary to complete this installation.

1. Remove the bumper and tow hooks, if equipped.
2. Assemble the driver-side pushplate to the beam assembly rear with two 5/8" x 2" cap screws and 5/8" locknuts. Install a hanger tab on the outside of the pushplate using three 5/8" x 2-1/2" cap screws. Secure the cap screws with three 5/8" locknuts.
3. Repeat on the passenger-side pushplate. Tighten all fasteners.



- Position the assembled unit under the vehicle and center between the wheels. The desired position of the connecting pin hole is 16" from ground and 2" behind front bumper. The bottom surface of the pushplates must be parallel to the ground (see Figure 1).

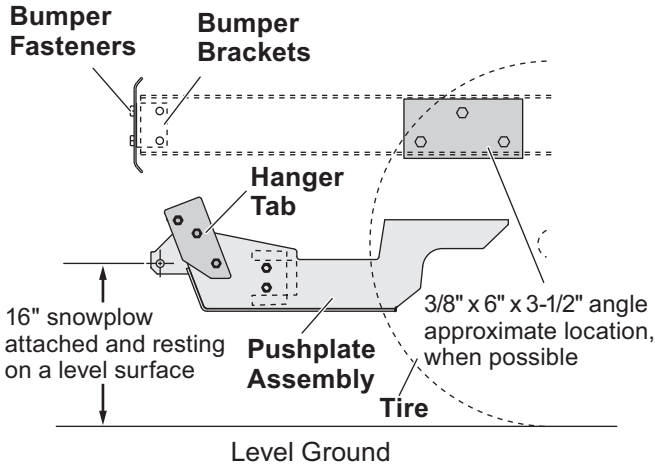


Figure 1

On some vehicles the 16" height will not be possible. In such cases, position the pushplates as high as possible, minimum 13".

On other vehicles it may also be necessary to position the plates slightly forward of the front bumper rather than the suggested 1" to 2" behind the bumper (see Figure 2).

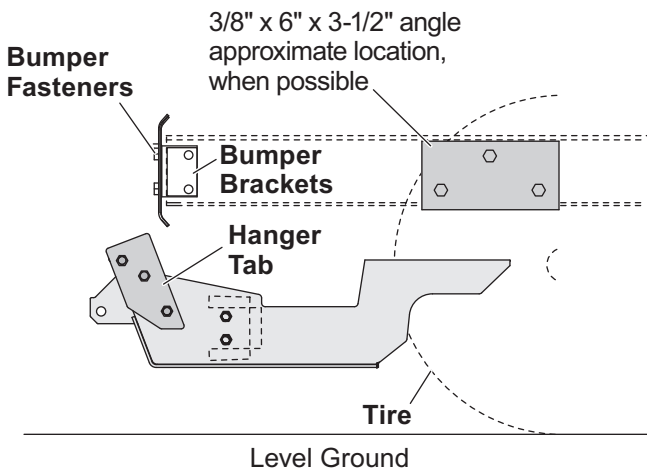


Figure 2

The rear portion of the pushplates may have to be cut on certain vehicles to obtain the 1" to 2" distance behind bumper.

NOTE: Floor stands are recommended to set the pushplate assembly on to hold it in place.

- To check the position of the pushplate assembly, attach the snowplow headlamps to the plow. Attach the snowplow receivers to the connecting beam and position the plow to engage the receivers. Check for proper clearance (2.0" minimum) between the plow components and the bumper, and the headlamps and the vehicle grille.

Adjust the position of the pushplate assembly to ensure the 2.0" minimum clearances for the plow components and snowplow headlamps.

- Locate a place on the driver's side of the vehicle frame, above the rear section of the pushplate, for attaching a section of the 3/8" x 6" x 3-1/2" angle. Location requirements include:

- Clearance for bent or flat pieces to connect the rear portion of the pushplates with the 3/8" x 6" x 3-1/2" angle. There should be no interference with any steering or suspension components including axle, tie rods, or springs.
- No interference with frame brackets, brake lines, fuel lines, cooling lines, or any other obstructions.
- Existing frame holes should be used when available. Others can be drilled when necessary.

Use at least three cap screws through the vehicle frame.

CAUTION

Use caution not to pinch, cut, or drill through any wires or hoses running along the frame rails.

- Cut an appropriate length of the 3/8" x 6" x 3-1/2" angle as needed. Place it against the frame in desired location. Mark and drill 5/8" holes in the angle where needed. Attach to the vehicle frame using 5/8" x 2-1/2" cap screws provided.
- Repeat on the passenger's side.

9. Fabricate the pieces needed to attach the rear of the pushplate to the bottom of the 3/8" angle. Use the 5/16" flat bar stock provided. Multiple pieces can be used to produce the desired width. A minimum width of 10" is suggested when possible (see Figure 3).

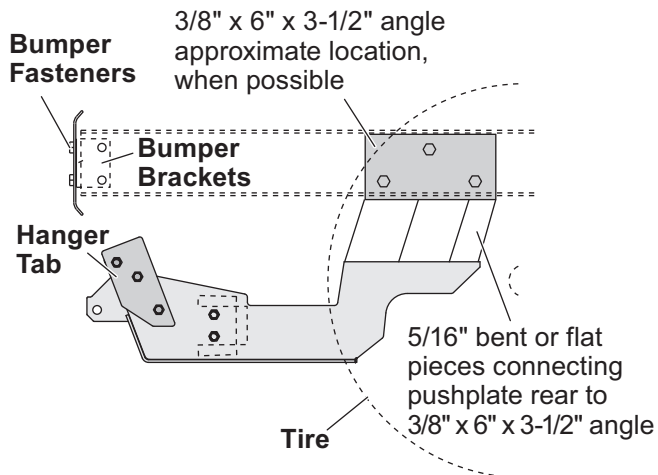


Figure 3

10. Tack weld the fabricated pieces to the pushplate and 3/8" angle. Do the same on the opposite side.
11. Use the 5/16" x 2" flat bar to fabricate a minimum of two stiffeners that will attach between the pushplate, the pieces that span between the 3/8" x 6" x 3-1/2" angle, and the angle itself (see Figure 4).

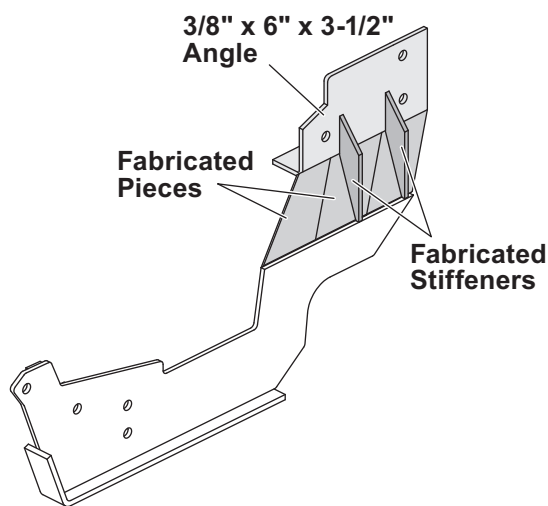


Figure 4

12. Tack weld in place.

13. Install the front hanger using the method most suitable to fabricate a front hanger for your application, as described below.

Vehicles equipped with tow hooks or bumper brackets:

- Fabricate pieces of 5/16" x 4" flat bar so they will fit the area where the tow hooks were, keeping them in front of the spring brackets.
- Drill holes in the plates to match the tow hook fastener holes.
- Install the plates using the tow hook fasteners when possible.
- Cut and bend a hanger plate, as needed, so it will fit between the tow hook plate and the hanger tab attached to the outside of the pushplate (see Figure 5).

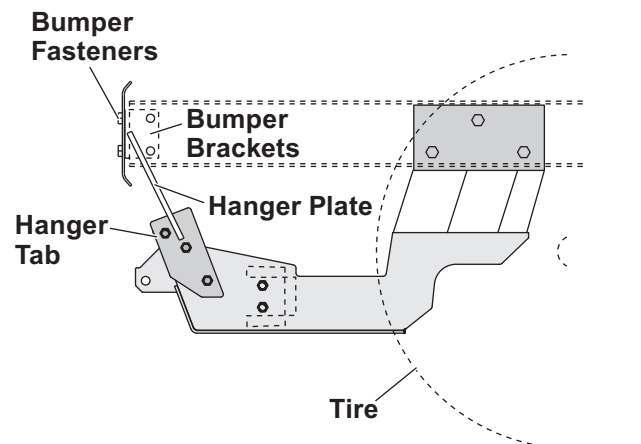


Figure 5

- e. Tack weld the hanger. Stiffen, as necessary, by tacking on gussets fabricated from any remaining stock (see Figure 6).

Typical Front Hanger Design

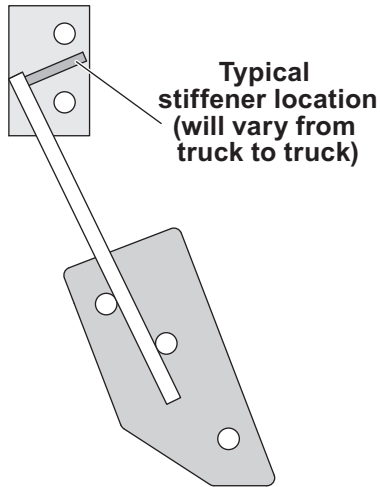


Figure 6

- f. Additional stiffness can be achieved by shimming between any hanger parts and stationary vehicle frame members. Use appropriately sized blocks and tack them to the hangers. This will provide a butted connection to the frame upon final installation.
- g. Repeat on the passenger's side.

Vehicles without tow hooks or low profile vehicles:

- Cut a piece of 1/2" x 3" flat bar long enough to match up with the bumper bracket holes.
- Drill two holes in the flat bar that align with the bumper bracket holes.
- Place the 1/2" x 3" flat bar and a spacer the thickness of the bumper against the bumper bracket on the driver's side. The spacer will be removed during the final installation when bumper is reinstalled on the vehicle.
- Fabricate a piece of 1/2" x 3" flat bar to make a connection between the drilled 1/2" x 3" bumper plate and the hanger tab on the pushplate (see Figure 7).

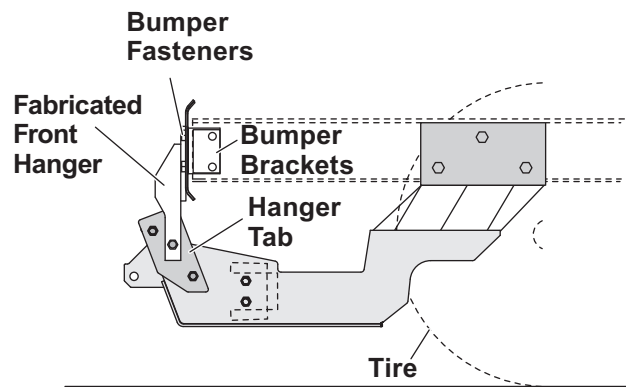


Figure 7

- e. Tack weld in place. Stiffen, as necessary, by tacking on gussets fabricated from any remaining stock (see Figure 8).

Typical Front Hanger Design

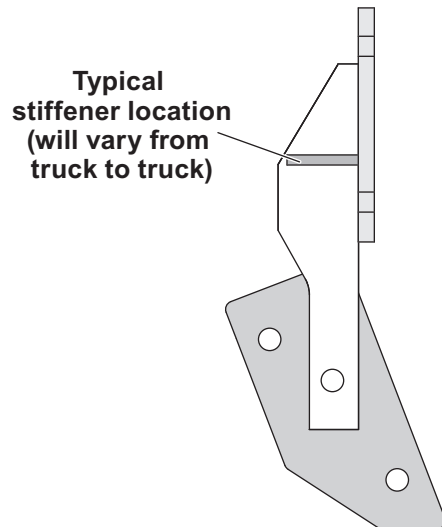


Figure 8

- f. Additional stiffness can be achieved by shimming between any hanger parts and stationary vehicle frame members using appropriately sized blocks and tacking them to the hangers. This will provide a butted connection to the frame upon final installation.
- g. Repeat on the passenger's side.

NOTE: Installation of attachments on low profile vehicles will require the use of the lowest hole in the A-frame pushers.

14. Remove the hangers and the pushplate assembly from the vehicle.
15. Weld the pushplate assembly and hangers.
16. Paint the unit when sufficiently cooled from welding.
17. Reinstall the bumper and other previously removed vehicle components.
18. Install the pushplate assembly on the vehicle.
19. Tighten all fasteners according to the torque chart.

NOTE: After five to ten hours of snowplow usage, retorque all mount assembly fasteners.

The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used. This equipment manufacturer or the vehicle manufacturer may require or recommend optional equipment for snow removal. Do not exceed vehicle ratings with a snowplow. The company offers a limited warranty for all snowplows and accessories. See separately printed page for this important information.

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