

# 31303

## MOUNT KIT PERSONAL PLOW

Nissan Titan

2004 - \_\_\_\_

### Installation Instructions

**▲ CAUTION**

Read this document before installing the snowplow.

**▲ CAUTION**

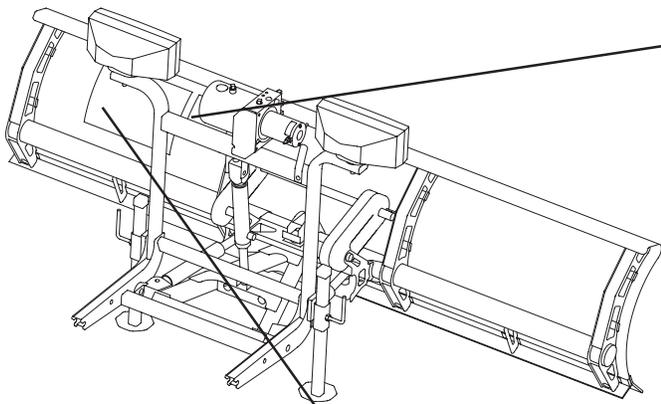
See your sales outlet for application recommendations. The Kit Selection Guide/ Selection List has specific vehicle and snowplow requirements.

**SAFETY DEFINITIONS**

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

**⚠ CAUTION**  
 Indicates a situation that, if not avoided, could result in damage to product or property.

**NOTE:** Identifies tips, helpful hints, and maintenance information the owner/operator should know.



**WARNING/CAUTION AND INSTRUCTION LABELS**

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

**Warning and Caution Label**

**⚠ WARNING**

LOWER BLADE WHEN VEHICLE IS PARKED.  
 REMOVE BLADE ASSEMBLY BEFORE PLACING VEHICLE ON HOIST.  
 DO NOT EXCEED GVWR OR GAWR INCLUDING BLADE AND BALLAST.

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**⚠ CAUTION**

READ *OWNER'S MANUAL* BEFORE OPERATING OR SERVICING SNOWPLOW.  
 TRANSPORT SPEED SHOULD NOT EXCEED 45 MPH. REDUCE SPEED UNDER ADVERSE TRAVEL CONDITIONS.  
 PLOWING SPEED SHOULD NOT EXCEED 10 MPH.  
 SEE YOUR SALES OUTLET FOR APPLICATION RECOMMENDATIONS.

**Instruction Label**

This snowplow is for personal/homeowner use only.

ATTACH INSTRUCTIONS

1. Make certain both **connecting pins** are fully retracted.
2. Drive vehicle slowly to completely insert **attachment arms** into **receiver assembly** slots.
3. Twist both **connecting pins** to release spring tension, then push **plow gear** toward vehicle so **connecting pins** fully engage holes in **attachment arms**.
4. Loosen one **jack handle** and slide **jack sleeve** down below **jack retainer**. Remove **jack** and retighten **jack handle**. Repeat for other **jack** and store them.
5. Connect all electrical cables from vehicle to snowplow.

Attachment Arm Receiver Assembly

Plow Gear Connecting Pin

Jack Handle Jack Sleeve Jack Retainer Jack

U.S. Patents 4,999,935; 5,420,480; 6,253,470; RE35,700; CAN Patent 2,060,425; and other patents pending. 27155

5. Back vehicle away from snowplow.
6. See Owner's Manual for proper snowplow storage.

3. While pushing **plow gear** toward vehicle to release **connecting pin** tension, pull **connecting pin** out on one side and twist pin handle to keep pin retracted. Repeat procedure for other **connecting pin**.
4. Disconnect all electrical cables.

1. Put blade on ground using **LOWER/FLOAT** on snowplow control. Leave control **ON** and in **FLOAT**.
2. Attach **jacks**. Loosen **jack handle**, put **jack** on ground, and raise **jack sleeve** until fully engaging **jack retainer**. Tighten **jack handle**. Repeat for other **jack**.

DETACH INSTRUCTIONS

Read *Owner's Manual* for Complete Instructions

## 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 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 can result in serious personal injury.**

### **⚠ WARNING**

**Remove blade assembly before placing vehicle on hoist.**

### **⚠ 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 blade and ballast. The rating label is found on driver-side vehicle door cornerpost.**

### **⚠ CAUTION**

**Refer to the Kit Selection Guide/Selection List for minimum vehicle recommendations and ballast requirements.**

### **⚠ CAUTION**

**To prevent accidental movement of the blade, always turn the ON/OFF switch to OFF whenever the snowplow is not in use. The control indicator light will turn off.**

## PERSONAL SAFETY

- 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 a vehicle. Keep all open flames away from gasoline tanks 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.

## VENTILATION

### **⚠ WARNING**

**Vehicle exhaust contains deadly carbon monoxide (CO) gas. Breathing this gas, even in low concentrations, could cause death. Never operate a vehicle in an enclosed area without venting exhaust to the outside.**

**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.**

<b>Recommended Fastener Torque Chart (Ft.-Lb.)</b>			
Size	 SAE Grade 2	 SAE Grade 5	 SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
7/16-14	30	50	75
1/2-13	45	75	115
9/16-12	66	110	165
5/8-11	93	150	225
3/4-10	150	250	370
7/8-9	150	378	591
1-8	220	583	893
<b>Metric Grade 8.8 (Ft.-Lb.)</b>			
Size	Torque	Size	Torque
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155
These torque values apply to fasteners except those noted in the instruction.			

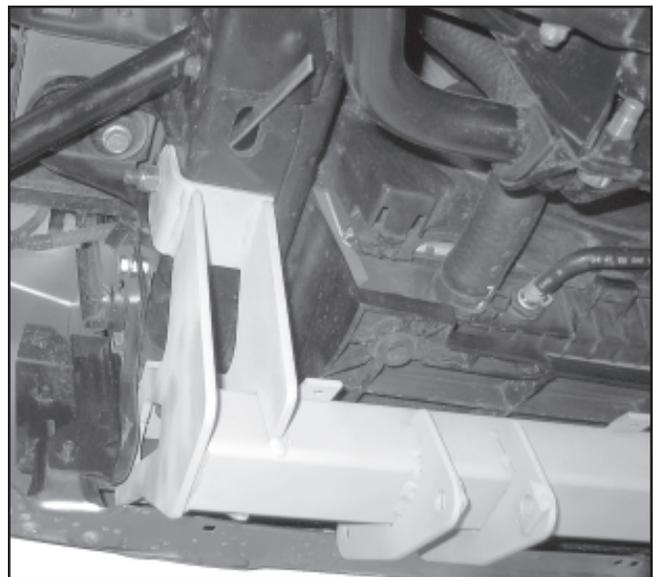
**MOUNT INSTALLATION**

1. **If the vehicle is equipped with a stamped-steel splash guard and/or tow hooks**, remove them. Retain the splash guard, tow hooks, and fasteners for reinstallation if the snowplow mount is removed.

**If the vehicle is equipped with a front skid plate**, remove it and the adjoining support brackets and tow hooks. Retain the skid plate, support brackets, tow hooks, and fasteners for reinstallation if the snowplow mount is removed. Remove the license plate and connecting bracket assembly from the skid plate and reinstall it to the vehicle's front bumper as located by the preexisting detents.

2. Position the mount against the bottom surfaces of the vehicle frame rails while aligning the front mount holes with the tow hook holes. Secure the mount to the frame rails with M12 x 1.25 cap screws and 1/2" flat washers (supplied with the mount). Hand tighten only.
3. Clamp the rear of the mount against the bottom surfaces of the vehicle frame rails on both the driver and passenger sides.
4. Remove the bumper brace to gain access for drilling holes through the vehicle frame rails. Using the rear hole in the mount as a guide, drill a 17/32" hole through the outside wall of the vehicle frame rail.

5. Place a 1/2" flat washer onto a 1/2" bolt with handle, and insert the bolt into the slot located on the bottom surface of the vehicle frame rail rearward of the mount. Pass the bolt out through the vehicle frame and mount holes, bending the handle as necessary. Place a 1/2" locknut on the bolt, and hand tighten.



6. Repeat Steps 4 and 5 on the opposite side of the vehicle.

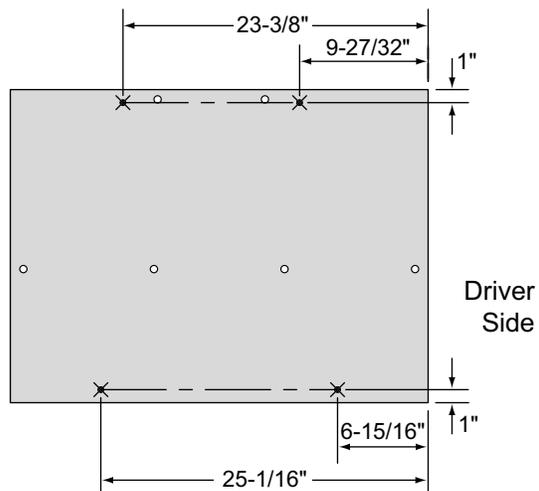
7. Tighten all fasteners according to the torque chart.
8. Bend or cut the ends of the bolt handles protruding out from the truck frame.
9. Reinstall the bumper braces on both sides of the vehicle.

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

10. Install the rubber splash shield as instructed below.

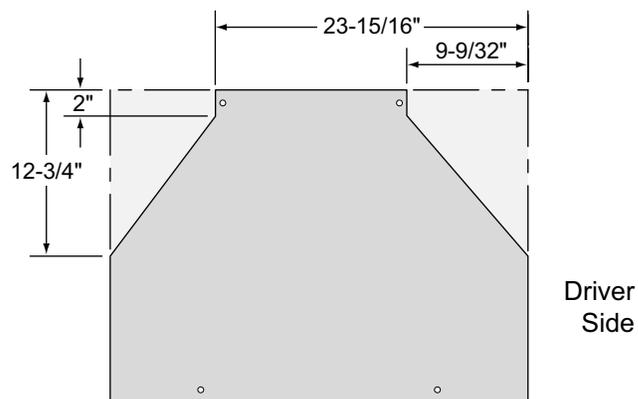
## SPLASH SHIELD INSTALLATION

1. Lay the rubber material on a flat surface. Drill four holes in the trimmed rubber splash shield according to the layout illustrated below.



- × = Measure and drill  $5/16\text{'}$  holes (4 places).
- o = Use mount and vehicle frame as guides to drill  $5/16\text{'}$  holes (6 places).

2. Cut the material as shown below.



3. Position the splash shield on the vehicle so that the tapered end is toward the rear and the shield is on top of the mount and below the vehicle sway bar.

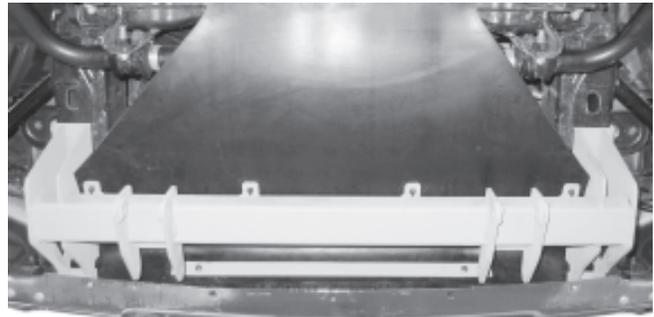
4. **If the vehicle is equipped with a transaxle skid plate**, remove the two front skid plate bolts. Position the tapered end of the splash shield between the skid plate and the vehicle frame cross member. Install two M6 x 1.00 cap screws and flat washers (supplied with the mount) through the holes drilled in Step 1 and into the cross member. Do not over tighten. Using the holes in the skid plate as guides, drill two 5/16" holes in the rubber splash shield. Reinstall the two skid plate bolts through the skid plate and splash shield.



**If the vehicle is not equipped with a transaxle skid plate**, align the holes in the rear splash shield retainer and the tapered end of the splash shield with those in the vehicle frame cross member. Install two M6 x 1.00 cap screws and flat washers (supplied with the mount) through the rear splash shield retainer and splash shield and into the cross member. Do not over tighten.



5. Make sure the splash shield is under the vehicle sway bar, then pull the uncut end of the shield to the vehicle bumper support beam.
6. Attach the front of the splash shield to the angled surface of the vehicle bumper support beam using the front splash shield retainer and the M6 x 1.00 cap screws and flat washers (supplied with the mount).



7. If the bumper fascia has extensions that attached to the stamped-steel splash guard or skid plate, use those bolt holes as guides and drill two 5/16" holes in the splash shield. Attach the splash shield to the bumper extensions by inserting two plastic push rivets down through the shield holes and into the bumper extension holes.
8. Using the holes in the tabs at the rear of the mount center tube as guides, drill four 5/16" holes in the splash shield. Attach the center of the splash shield to the mount center tube by inserting four plastic push rivets down through the shield holes and into the tab holes.

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 and/or the vehicle manufacturer may require and/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.