

Installation Instructions



Aluminum Hard Shell Tents S/B2985 & S/B2986



For Technical Support / Warranty Information please call 1-800-776-0767
Smittybilt, 1017 W 600 N, STE 4, Ogden, UT 84404

Introduction

Thank you for choosing Smittybilt accessories for your overlanding needs! If you would like to view our full range of available accessories, please visit us at www.smittybilt.com



Side and Rear Awnings



Fridges



Defender Low Profile Bed Rack

Important Notes Before Starting



WARNING

Serious injury can occur when working on vehicles alone.

When possible, work with another person to reduce risk of injury from strain or other dangers that can occur when working alone.



IMPORTANT NOTE

Carefully read through this entire instruction manual thoroughly before attempting to install or use this part. Photos are for illustration purposes only and may vary from your vehicle. Product may vary from images.

The Aluminum Hard Shell Tents are designed to easily mount to most roof rack systems or on an aftermarket rack / crossbar system. The Pop-Up Aluminum Tent weighs 196lbs and the Side Opening Aluminum Tent weighs 176lbs. Generally, most OE roof racks will have a capacity of 150-200lbs while the vehicle is in motion (dynamic rating). However, when the vehicle is parked and you are using your Smittybilt Aluminum Hard Shell Tent you are applying a static load which is easier to support. **Always check with the manufacturer of your vehicle and/or roof rack system to determine the applicable weight limitations as they vary vehicle to vehicle.** You will want to make sure that the static rating of your roof rack can handle the weight of the tent and the people that will be inside it. Make sure your roof rack can support the downward loads, upward loads, and shock loads. **A MINIMUM OF 3 CROSSBARS IS REQUIRED.**

If you need a roof rack system or a higher capacity rack check with your local supplier for an aftermarket rack, such as Smittybilt, Thule®, or Yakima®.

Check local, state, and federal laws regarding roof mounted load capacities. Always follow the laws specific to your area.



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Box Contents

1A



2



3



4



5



1B



6



7



8



9



S/B2985 - Side Open Aluminum Tent		
ID	Part Description	QTY
1A	Side Open Aluminum Tent	1
2	Window Rod	4
3	Ladder	1
4	Ladder Mounting Brackets	2
5	Shoe Bag	2
6	Shoe Bag Mounts	4
7	Handle	2
8	Slide Plate	12
9	Base Plate	6
	LED Strip Kit	1
	Storage Grid Kit	1
	Roof Bar Kit	1
	M8-1.25x55mm Bolt	12
	M8 Split Lock Washer	4
	M8-1.25 Nylock Nut	12
	M8-1.25x14mm Button Head Bolt	4
	M8-1.25 Square Nut	8
	M6-1.0x10mm Button Head Bolt	8
	M6-1.0 Square Nut	16

S/B2986 - Pop-up Aluminum Tent		
ID	Part Description	QTY
1B	Pop-up Aluminum Tent	1
2	Window Rod	8
3	Ladder	1
4	Ladder Mounting Brackets	4
5	Shoe Bag	2
6	Shoe Bag Mounts	4
7	Handle	2
8	Slide Plate	12
9	Base Plate	6
	LED Strip Kit	1
	Storage Grid Kit	1
	Roof Bar Kit	1
	M8-1.25x55mm Bolt	12
	M8 Split Lock Washer	8
	M8-1.25 Nylock Nut	12
	M8-1.25x14mm Button Head Bolt	4
	M8-1.25 Square Nut	12
	M6-1.0x10mm Button Head Bolt	8
	M6-1.0 Square Nut	24



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Tent Features

Getting Started

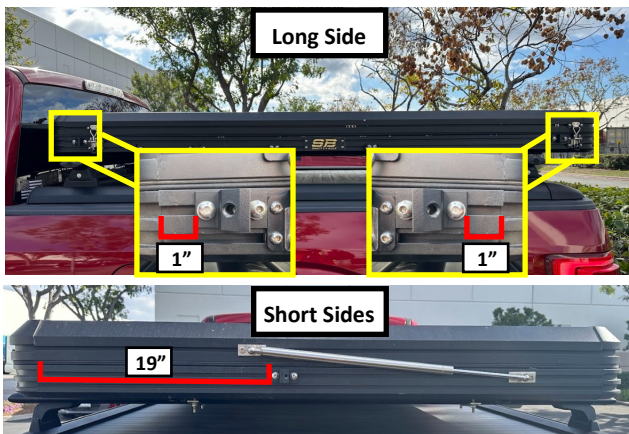
Upon receiving your tent, immediately inspect the tent for damage. Always refuse delivery for damaged goods. All the components of the tent are packed inside during shipping. Before you continue, open the tent and remove all of the components from inside the tent.

Window Rod Holders

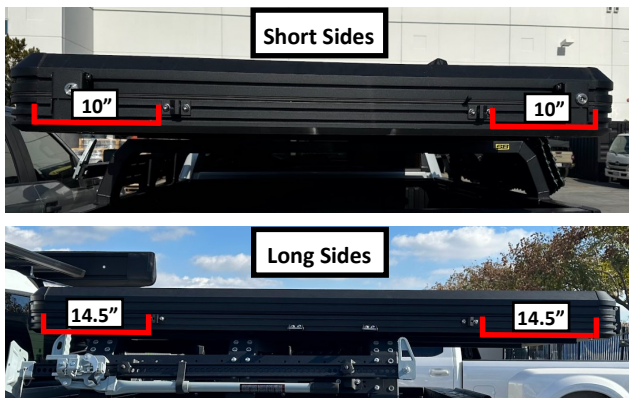
Installing the window rod holders:

1. Install the square nuts into the bottom track of the tent.
2. Use the diagram below, specific to your model tent, to install the **Window Rod Holders** in the recommended locations.
3. Once you are happy with the position, secure the **Window Rod Holders** with the **M8 Hardware**.

Side Open



Pop-up



Roof Bars

Both the Side Open and Pop-Up Aluminum Tent feature user installable roof rack style bars that can be installed on top of the tent for use in mounting accessories or camping gear. These are optional and do not need to be installed if you are not planning on using them.

Note: The roof bars can support up to 50lbs evenly distributed. Do not exceed 50lbs.

Roof Bar Kit	
Description	QTY
Roof Rack Bar	2
Roof Rack End Cap	4
Roof Rack Brackets	4
Roof Rack Slide Plates	4
M8-1.25x13mm Button Head Bolt	8
M8-1.25x18mm Button Head Bolt	8
M8-1.25x25mm Hex Bolt	4
M8-1.25 Square Nut	8
M8-1.25 Nylock Nut	12
M8 Split Lock Washer	8
M8 Flat Washer	20

Installing the roof bars:

1. Install the **M8 Square Nuts** into the slot on the long sides on the lid of the tent, 4 per side.
2. Install the **M8 Button Head** hardware through the **(4) Roof Rack Brackets** and into the **M8 Square Nuts**.
3. Then use the **M8 Hardware** to attach the **Roof Rack Bars** to the brackets.
4. The **M8 Slide Plates** and **M8 Hardware** can be used to attach accessories to the roof rack.

Note: Depending on what you're mounting on the roof bars it may require you to source your own hardware locally.



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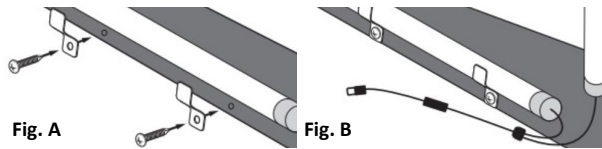
Tent Features

LED Interior Lights

Both the Side Open and Pop-Up Aluminum Tent feature user installable LED lighting that runs along the top of the interior of the tent. This light includes a 15' extension to be able to plug into a 12V power outlet. The location of the outlet in your vehicle will vary depending on make and model.

Installing the lights:

1. Place the LED strips along the inside edges of the tent lid, then secure them by screwing the **Light Brackets** into the pre-drilled holes. **(Fig. A)** Note: The two long strips go at the front and back of the tent and the two short strips go on the left and right edges.
2. Connect the LED strips together with the supplied cables. The 15' cable can be connected at either of the bottom corners to suit your setup. **(Fig. B)**

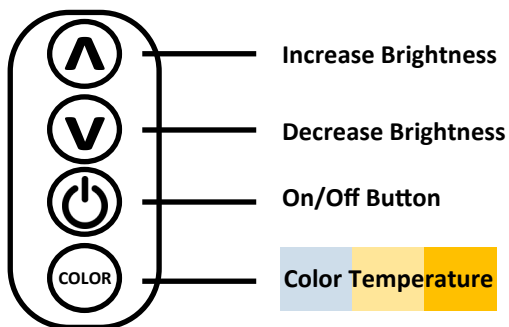


Using the lights:

1. Find a suitable place to run the lead from the passthrough in the tent to a suitable 12V power point in your vehicle, power bank, or generator.
2. Plug the included 12V plug into the outlet. Be cautious of pinch points. Note: some vehicles have a time limit on how long the power outlets are on after the vehicle is turned off. The dealer may be able to change this in the programming. This may not be possible on some vehicles. A small power bank or generator can provide consistent power.

Inline Remote

Inside the tent, inline with the power cable for the lights is a control that can be used to adjust the lighting to your liking.

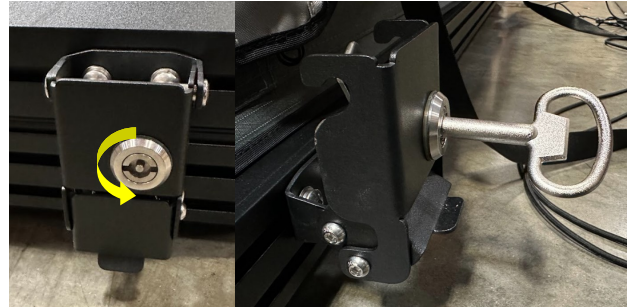


Locking Latches

Both the Side Open and Pop-Up Aluminum Tent feature locking latches to secure your tent when closed and not in use. Included in the packaging is a large easy-to-use key that can be used to lock and unlock the latches. Out of the box, the latches will be unlocked, the key can be found inside the hardware pack.

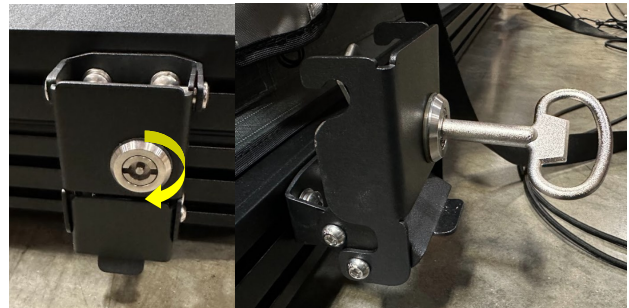
Locking The Latches:

To lock the latch, insert the key into the lock cylinder and turn counter-clockwise.



Unlocking The Latches:

To unlock the latch, insert the key into the lock cylinder and turn clockwise.



Storage Grid

1. Screw the **Storage Grid Mounts** into the pre-drilled holes on the inside of the tent lid using the Phillips head screws. **(Fig. A)**
2. Attach the **Storage Grid** using the carabiners to clip onto the mounts. **(Fig. B)**

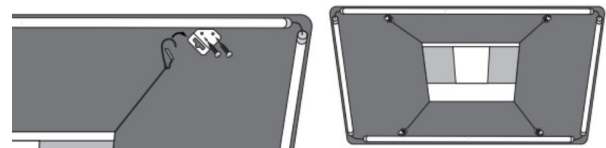


Fig. A

Fig. B



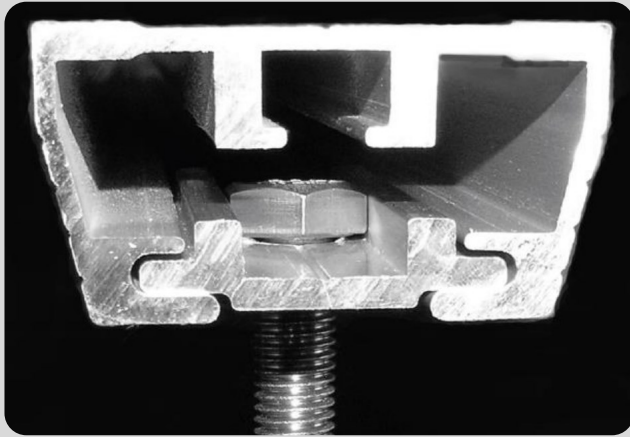
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2985 & 2986 Tent Mounting



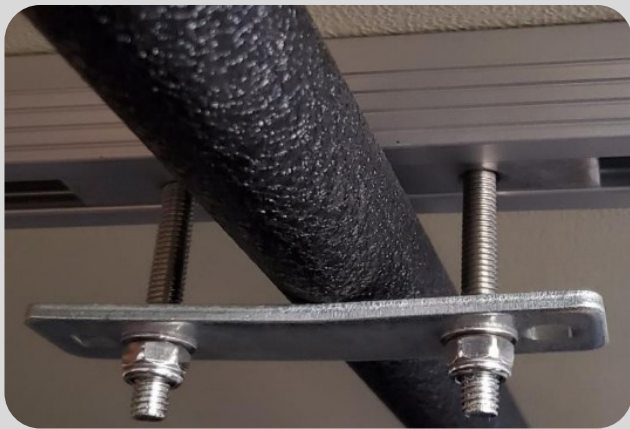
Step 1:

With assistance, carefully lift the tent onto the vehicle and position it to your liking. The crossbars on your vehicle should be evenly spaced, having too much overhang or too much space between crossbars may cause damage to the tent. For Side Open models, be sure to install the tent so it opens the way you want for access. A minimum of 3 crossbars is required.



Step 2:

Place (1) M8-1.25x55mm Bolt into (1) Slide Plate. Slide it into the mounting extrusion. Each mounting extrusion will get (6) Slide Plates and (6) M8-1.25x55mm Bolts.



Step 3:

Attach the tent to your roof rack or cross bars in six places. One set per corner and two sets in the center. Use the **Slide Plates** with **M8 Bolts** on either side of the crossbar, then use the **Base Plate** and **M8-1.25 Nylock Nuts** to wrap around and grab onto the crossbar.

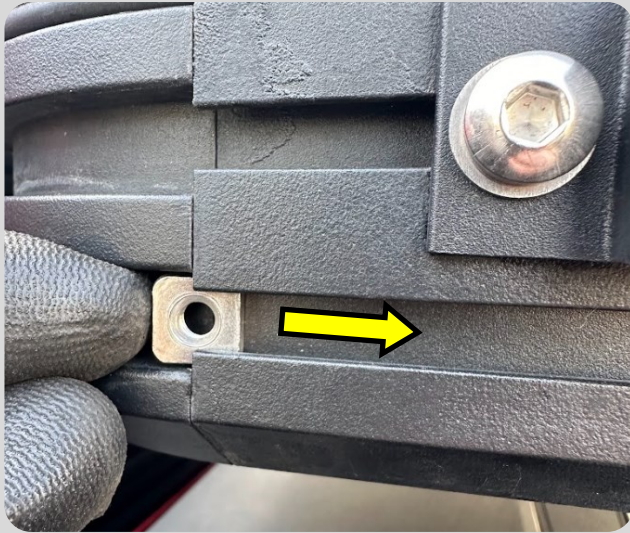
Do not over tighten the nuts as this can cause the bolt head to strip the aluminum slide plate.

Periodically check the torque of all hardware.



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2985 & 2986 Ladder Mount Install



Step 1:

At the corner of the tent, slide the (2) **Ladder Mount** square nuts into the track as shown. Then repeat this step on the opposite end of the tent

Note: The latch is also mounted in this track and these bottom square nuts will need to be removed temporarily in order to install the ladder mount square nuts.



Step 2:

Loosely attach the **Tent Mounts** and hardware to the square nuts in the track.



Step 3:

Use the **Tent Ladder** to center and align the ladder mounts. Then remove the ladder and tighten the **Ladder Mount** hardware.

Ladder Mount installation is now complete.

Periodically check the torque of all hardware.



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2985 Side Open Tent Setup



Step 1:

Unlatch both of the front tent latches.



Step 2:

Push the top lid of the tent upwards until the shocks lift the tent lid into the fully open position.



Step 3:

Pull the built-in bungee up and around the top of the tent to relieve the tension off the tent skin.



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2985 Side Open Tent Setup



Step 4:

Reach into the tent and grab the veranda pole. Pull the veranda pole up and out of the tent.



Step 5:

Install the **Tent Ladder**.



Step 6:

Be sure both latches on the veranda pole are unlocked, then push the top section of the section of the veranda pole upwards until the tent skin is tight. Then lock both latches to keep the veranda pole in place.



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2985 Side Open Tent Setup



Step 7:

Pull the center support pole outwards until it is full extended against the veranda pole. Then, lock both of the latches.



Step 8:

Install the window rods into the window rod holders on the base of the tent at a 45° angle. The longer window rods will go at the front of the tent. The shorter window rods will go on each side of the tent. Then, bend the window rods and attach the hook end to the eyelets on the rainfly.



Step 9:

Setup is now complete.



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2985 Side Open Tent Teardown



Step 1:

Unlock and collapse the center support bar and the veranda pole. Remove the **Tent Ladder** and **Window Rods** and place inside the tent for storage. Fold the veranda pole inside the tent. Then, pull the bungee cord up and over the tent so that it holds the tent skin inward.



Step 2:

At the entrance of the tent use the pull strap to pull down the lid of the tent until it meets the base.



Step 3:

Work your way around the tent being sure to tuck the tent skin inside the aluminum shell. Then, latch both latches.

Teardown is now complete.



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2986 Pop-up Tent Setup



Step 1:

Unlatch all 4 latches.



Step 2:

At the rear of the tent push the lid of the tent straight up until the internal shocks take over and open the rear half of the tent. Then do the same at the front of the tent to completely open it. Note: Do not open the tent from the sides as this can damage the internal hinge assemblies.



Step 3:

Install the **Tent Ladder** to the **Tent Ladder Mounts**.



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2986 Pop-up Tent Setup



Step 4:

Install the **Window Rods** into the **Window Rod Holders** on the base of the tent at a 45° angle. Then bend the **Window Rods** and attach the hook end to the eyelets on the rainfly.



Step 5:

Setup is now complete.



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2986 Pop-up Tent Teardown



Step 1:

Remove the **Tent Ladder** and **Window Rods** and place inside the tent for storage.



Step 2:

At the rear of the tent use the pull strap to pull down the lid of the tent until it meets the base. Then repeat this step for the front section.

Note: Do not try to close the tent from the sides. Doing so can damage the internal hinges. Damage from doing so is not covered under warranty.



Step 3:

Work your way around the tent being sure to tuck the tent skin inside the aluminum shell. Then latch all 4 latches.

Teardown is now complete.



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Guidelines and Maintenance

Handling Guidelines

- **Increased Height** - You should note that mounting a tent on top of your vehicle will increase the overall height. Measure the vehicle and tent height as this information will be handy for parking structures, drive-thrus, etc.
- **Center of Gravity** - The attachment of a rooftop tent to your vehicle (similar to any other load on your roof rack) will its center of gravity. Adjust your driving accordingly.
- **Pre/During/Post Trip Inspections** - Regularly check that all nuts and bolts attaching your rooftop tent to your vehicle are tight and in good shape. Check all the tent hardware, such as the mounting extrusion, hinge, and ladder mount hardware. Every nut and bolt should be inspected. This is an important step and must be done regularly. Failure to maintain the tent may void the warranty.
- **Weather Conditions** - The rooftop tent is not made for extreme weather. Excessive rain, wind, snow, or other extreme conditions can affect and/or damage the tent. Always use your judgement prior to use in inclement weather.
- **Overhead Obstructions** - Before opening the tent, be sure the area is free from any overhead obstructions, such as power lines or tree branches. Failure to do so could result in damage, injury, and/or death.
- **Closing the Tent** - To prevent mold and mildew from developing inside the tent, never put the tent away wet. Allow the tent to completely dry before closing it.
- **Handles** - The tent includes two handles that can be used for assistance when entering or exiting the tent. Do not put unnecessary force on the tent skin, poles, or other components not intended to take the load. Serious damage and or injury can occur.
- **Seasoning** - Be sure to season the tent prior to use.

Storing the Tent

1. If storing the tent off the vehicle, ensure the tent is packed away completely dry.
2. Be careful not to drag the tent on the ground. This can cause damage to the aluminum shell.
3. Do not store directly on the floor.
4. Do not place items on top of the tent.
5. If possible, keep the tent elevated off the ground.

Maintenance/Care Instructions

1. Clean only with cold water and a soft brush. Do not use soap or detergent as this will remove the waterproofing compounds.
2. Do not expose to gas/petrol, oil or solvents.
3. New polycotton fabrics will initially experience some weeping through the seams. This will reduce over time as the fabric cures.
4. Well-worn tents may be re-proofed using a good quality waterproofing solution. This is highly recommended to be re-applied every 1-2 years depending on how much you use or clean the tent. Some waterproofing agents may also contain UV inhibitors. Companies such as 303® Products, Star Brite®, and KIWI® offer polycotton safe waterproofing solutions.
5. **It is recommended to season your tent before your first trip. Completely setup the tent on a level surface, prior to installing on a vehicle. Then, remove the rainfly from the tent and all the contents from inside the tent. With a hose, wet down the tent lightly, focusing on the areas that are stitched. Waterlog the fabric as best you can. Let the tent dry completely on its own, do not use heat or compressed air. Avoid direct sunlight, this process may take a day to complete. Repeat this process two more times if necessary. This process allows the canvas and threads to shrink and expand as much as they can effectively sealing the seams. Do not be alarmed if the tent leaks during the first or second time you season the tent, this is normal. Liquid seam sealer can be applied after the third seasoning. Season the rain fly by hanging it up and spraying both sides of the fabric with water and following the same procedure as the tent.**
6. Zippers can be lubed with a silicon spray or bee's wax. This keeps them lubed up and helps with water resistance. Clean zippers with a soft brush.
7. If the fabric needs cleaning, use a mild detergent mixture (1 cup of Lysol® All-Purpose Cleaner to 1 gallon of warm water) use with a soft brush to clean the fabric as needed. Rinse off the tent with a rinse solution of (1 cup lemon juice, 1 cup sea salt to 1 gallon of warm water). To finish, rinse with cool water and allow to dry completely before storing. Re-proof the tent if needed.
8. Stainless steel hardware is less likely to stain or corrode than most other steel hardware but it still needs to be maintained. After you check torque on bolts, wipe down with a cloth and Break-Free® CLP

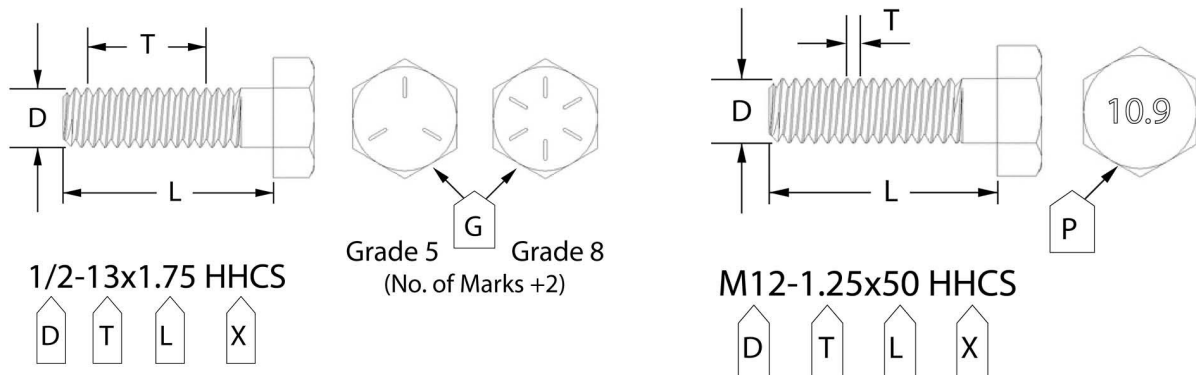


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Bolt Torque Specifications

Use this only as a guide for hardware without a called out torque specification in the instruction manual.

Bolt Torque and ID						
Decimal System			Metric System			
<i>All Torques in Ft. Lbs. Maximums</i>						
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15	20	M6	5	9	12
3/8	30	45	M8	18	23	27
7/16	45	60	M10	32	45	50
1/2	65	90	M12	55	75	90
9/16	95	130	M14	85	120	145
5/8	135	175	M16	130	165	210
3/4	185	280	M18	170	240	290



G= Grade (Bolt Strength)
 D= Nominal Diameter (Inches)
 T= Thread Count (Threads per Inch)
 L= Length (Inches)
 X= Description (Hex Head Cap Screw)

P= Property Class (Bolt Strength)
 D= Nominal Diameter (Millimeters)
 T= Thread Pitch (Thread Width, mm)
 L= Length (Millimeters)
 X= Description (Hex Head Cap Screw)



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Notes and Disclaimers

Product cleaning and maintenance instructions

Stainless Steel Finish – Aluminum polish may be used to polish small scratches and scuffs on the finish. Mild soap, window or glass cleaner may be used to clean the finish. Dual state powder coat finish – Mild soap, window or glass cleaner may be used to clean the finish. In order to protect the finish, you may wax your product on a regular basis with pure carnauba automotive wax. Do not use any types of soap, polish or wax that contains abrasive that could damage the finish. Textured coated finishes should be cleaned with a mild soap on a damp sponge. Do not apply polish or wax that requires to be removed by means of buffing. This type of wax is commonly used at car wash facilities. Chrome Finish – Mild soap, window or glass cleaner may be used to clean the finish. In order to protect the finish, you should wax your product on a regular basis with pure carnauba automotive wax. Do not use any types of soap, polish or wax that contains abrasive that could damage the finish.

SMITTYBILT ADVANTAGE WARRANTY

5-YEAR WARRANTY

Smittybilt Automotive Products, LLC (SAP) warrants to the original purchaser that (a) the physical components (e.g., metal components, welds, etc.) of any SAP **Aluminum Hard Shell Tent** will be free of defects in material and workmanship for a period of 5-years from the date of purchase of the tent, and (b) the finish will be free of defects in material and workmanship for a period of 5-years from the original date of purchase. This warranty applies only to the original purchaser of the tent and is non-transferable. To obtain any warranty service, you must provide SAP with a proof of purchase and date of purchase that is acceptable to SAP, such as a copy of your purchase receipt.

This warranty does not cover labor of part replacement of the tent. SAP will, at its sole discretion, provide replacement part(s) for a defective tent or component, provided this is done within the warranty period. To request assistance under warranty, one must call or email using the phone number or email at the bottom of this page. This warranty does not apply (1) wearable components; or (2) if the tent has been damaged, including, but not limited to: abuse, misuse, collision, modification, misapplication, improper installation, or improper service. This warranty is void if any SAP serial number has been removed or defaced; or if the tent is used for any commercial, industrial, or rental applications. This warranty only applies to tent bought, sold, and used within the United States or Canada unless otherwise specifically agreed in writing by SAP.

THE WARRANTY SET FORTH ABOVE IS THE ONLY WARRANTY. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTY WHICH BY LAW MAY NOT BE EXCLUDED IS LIMITED TO A DURATION OF ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE OF THE PRODUCT. No SAP dealer, agent, or employee is authorized to make any modification, extension or addition to this warranty. SAP SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, DOWN TIME OR LOSS OF USE) UNDER ANY LEGAL THEORY, EVEN IF SAP WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some states do not allow the exclusion of implied warranties or the exclusion or limitation of liability for incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights. You may also have other rights that vary from state to state. SAP reserves the right to change product design without notice. In situations in which SAP has changed a product design, SAP shall have no obligation to upgrade or otherwise modify previously manufactured products. For warranty inquiries contact SAP at:

Smittybilt Automotive Products, LLC

Customer Service Department

Call 1-800-776-0767 or Email info@smittybilt.com



WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov



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