Installation guide – Roof Rack

MERCEDES SPRINTER

Anchored on Mercedes rails

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WARNINGS

SECURITY WARNINGS

ATLAS Roadcamp disclaims all liability related to an injury which happened while installing, maintaining or using in any way ATLAS Roadcamp's roof rack

The first installation of a roof rack can take up to 6 hours.

Make sur you always:

- Are 2 persons to install a roof rack.
- Are secured with an approved safety harness and an approved anchor point higher than the vehicle at all times when installing a roof rack. If it is not possible, it is imperative to use scaffolds and / or 8-foot stepladders on each side of the vehicle in order to work in a safe manner. There is a significant risk of falling from the top of a vehicle.
- Wear safety glasses and cut resistant gloves

If you have any hesitations or questions while installing a roof rack, stop the work and contact ATLAS Roadcamp.

TECHNICAL WARNINGS

- Before starting the installation, apply a protection, like cardboard or plastic wrap, to the roof of the vehicle in order to protect it.
- All bolts and nuts have to be tightened manually (using ratchets, Allen keys and torque wrenches) to the tightening torques indicated in this guide.
- NEVER use an impact driver as the hardware is in stainless steel so it can easily seize/grab and become unusable.
- At all steps where a stainless steel (SS) bolt is assembled with a nylon nut, it is mandatory to put anti-seize on the bolt in order to ensure that the assembly does not seize.
- Nylon lock nuts are used to assemble ATLAS Roadcamp roof racks. This type of nuts shouldn't be tightened and loosened repeatedly. Therefore, it is important to carefully follow the tightening steps prescribed in this guide.
- All assemblies without nylon lock nuts require the use a threadlock such as LOCTITE 242 or LOXEAL 54-03. It is important to apply it properly on the bolts prescribed in this guide.

GENERAL WARNINGS

- Installation of an ATLAS Roadcamp roof rack or any other component (fans, air conditioning, Thule cargo box, etc.) on the roof of your vehicle may cause or accentuate hissings, vibrations and/or turbulence. Correct installation of the rack's wind fairing helps to reduce theses noises. However, ATLAS Roadcamp is not responsible for any noises, hissings, turbulences and/or vibration caused by the addition of roof components.
- ATLAS Roadcamp is not responsible for the increased fuel consumption of your vehicle as a result of the installation a roof rack.
- At all time, observe the maximum roof loads as well as the maximum heights prescribed by your vehicle's manufacturer.
- Distribute, as evenly as possible, the different loads on the 4 cross bars.
- ATLAS Roadcamp roof racks are designed to support RV roof items as solar panels, roof boxes and lighting LEDs. ATLAS Roadcamp disclaims all liability for uses or installations not intended for RVs.
- Any non-approved modification or alteration to an ATLAS Roadcamp rack will void the product warranty.
- The addition of items not approved by ATLAS Roadcamp will void the product warranty

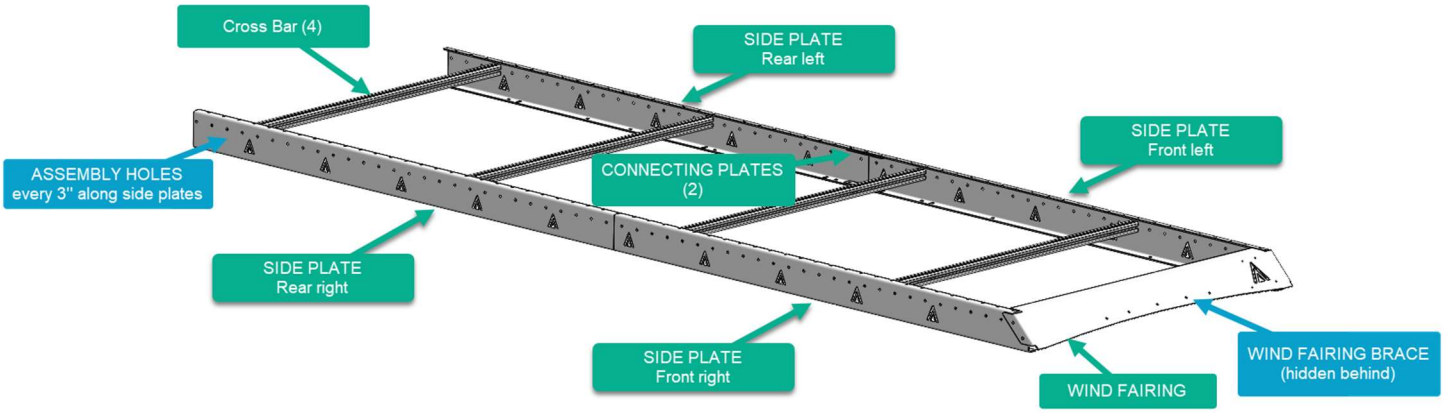
Reminder: At any time, if you have any doubts about the installation, stop immediately and contact ATLAS Roadcamp.

MAINTENANCE

- All tightening torques must be verified after the first 100 km and 500 km traveled with your vehicle following the installation of a rack or a ladder.
- At each season change, verify the correct tightening of the hardware, the general positioning of the rack and the condition of the SIKA221 to ensure that the anchors are watertight.

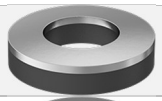
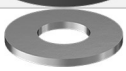
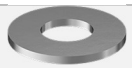
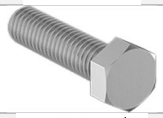
REQUIRED MATERIAL

SUPPLIED MATERIAL



- 22 rubber sheets – to insert in between rails and side plates

SUPPLIED HARDWARE

QTY	Hardware items	Hardware images	Assembly usage
22	Button head bolt SS 5/16 x 1''		To assemble side plates to the roof of the vehicle **16 bolts for the Sprinter 144'' **22 bolts for the Sprinter 170'' and 170''-EXT
14	Button head bolt SS 5/16 x 1''		- 6 to assemble top connecting plates to the side plates - 8 to assemble cross bars to side plates
22	Sealing washer SS 5/16''		To be inserted on the 22 button head 5/16'' bolts
4	Flat washer SS 3/8''		To assemble wind fairing with front side plates
4	Button head bolt SS 3/8-16 X 1''		To assemble wind fairing with front side plates
4	Nylon locknut SS 3/8''-16		To assemble wind fairing with front side plates
34	Flat washer SS 5/16''		- 12 to assemble top connecting plates to the side plates - 22 to assemble side plates to the roof of the vehicle
28	Nylon locknut SS 5/16''- 18		- 6 to assemble top connecting plates to the side plates -22 to assemble side plates to the roof of the vehicle
5	Button head bolt SS 1/4''- 20 X 1''		To assemble wind fairing brace to the wind fairing
17	Flat washer SS 1/4		- 5 to assemble wind fairing brace to the wind fairing - 12 to assemble 3 solar panels to the cross bars
5	Nylon locknut SS 1/4''- 20		- To assemble wind fairing brace to the wind fairing
12	Boulon à tête Hex. 1/4''-20 x 5/8'' Hexagonal SS 1/4-20 x 5/8''		- To assemble wind fairing brace to the wind fairing
12	Lock washer 1/4''		- To assemble 3 solar panels to the cross bars
12	SS drop-in T-nut w/spring-ball 1/4-20		- To assemble 3 solar panels to the cross bars
12	Carriage bolt SS 5/16''-18 x 1''		If the roof rack is installed on Mercedes originals rails and not directly on the vehicle's roof
12	Plates (designed for Mercedes rails)		To be inserted on the 5/16'' carriage bolts if the roof rack is installed on Mercedes originals rails and not directly on the vehicle's roof.

REQUIRED TOOLS (NON-INCLUDED)

- Torque Wrench
- Allen key or Hex key bit socket 5/32'', 3/16" et 7/32" with a ratchet wrench
- Sockets : 9/16'', 7/16'' et ½''.

REQUIRED PRODUCTS (INCLUDED)

- Anti-seize tube

REQUIRED PRODUCTS (NOT INCLUDED)

- Isopropyl alcohol 99%
- Clean rags
- Large blanket or carton.
- LOCTITE 242 OU LOXEAL 54-03 :

****Note valid for the entirety of this installation guide: At all steps where a stainless steel (SS) bolt is assembled with a nylon nut, it is mandatory to put anti-seize on the bolt in order to ensure that the assembly does not seize.****

INSTALLATION STEPS

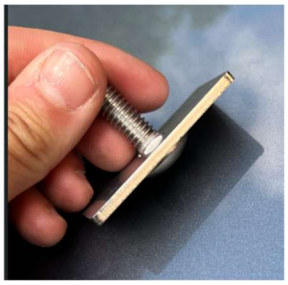
1. RAIL ANCHORS INSTALLATION

Final result:

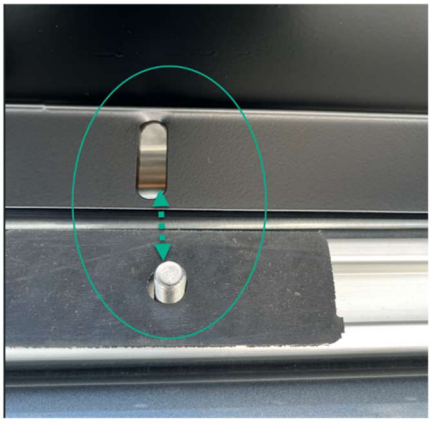
REQUIRED MATERIAL:

- 12 x Specially designed Mercedes rail plates
- 12 x carriage bolt 5/16’’-18 x 1’’
- 12 x rubber sheets

1.1 Insert a carriage bolt inot an anchor plate



1.2 Insert the assembly into the roof rails from the rear and slide them to their approximate position; i.e. opposite the slotted holes in the side plates. Place the rubber sheets on the anchors.



2. SIDE PLATES ASSEMBLY

Final result:

REQUIRED MATERIAL :

- 2 front side plate (left and right)
- 2 rear side plate (left and right)
- 12 Nylock 5/16’’- 18
- 12 flat washers 5/16’’

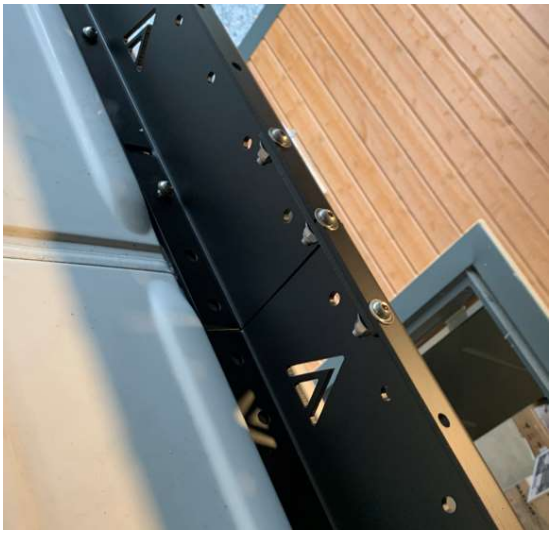
2.1. Insert a side plate on its 3 respective anchors through the oblong holes (reminder : put anti-seize on the carriage bolts) Finger tighten only.

****Do not tighten the bolts firmly at this stage, to allow easy insertion of the crossbars later**.**

2.2. Repeat previous step for the 3 other side plates.

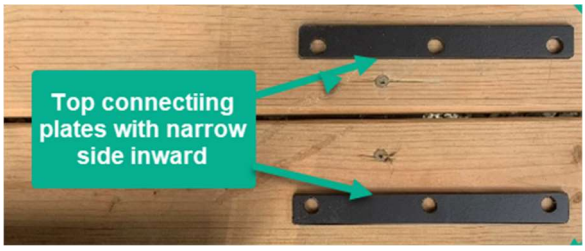
3. CONNECT THE FRONT SIDE PLATES WITH THE REAR SIDE PLATES

Final result:



REQUIRED MATERIAL:

- 2 connecting plates to assemble the top of the side plates
- 6 button head bolts SS 5/16'' X 1"
- 12 flat washers SS 5/16''
- 6 nylon locknut SS 5/16''



3.1 Manually align the front and rear side plates as straight as possible.

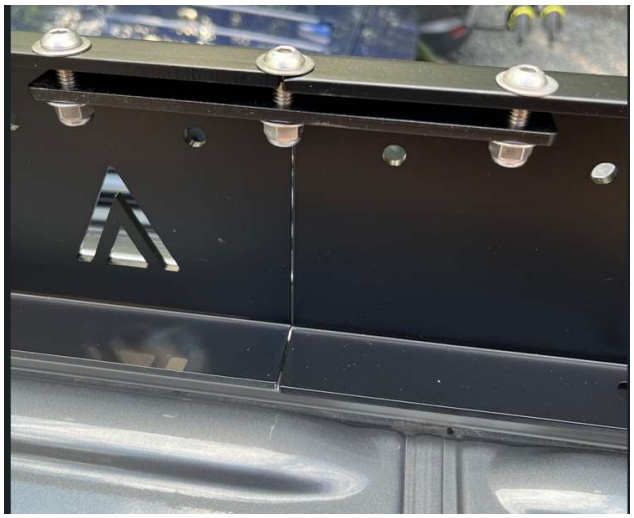
3.2 Insert a flat washer on a 5/16’’-18 x 1’’ button head bolt

3.3 Insert the button head bolt (with the washer) through the side plate’s top and the connecting plate. (put anti-seize)

3.4 Insert a flat washer and manually screw a nylon lock nut on the bolt.

3.5 Repeat these steps for the other 2 connecting plate bolts.

3.6 Repeat steps 3.1 to 3.5 for the other connecting plate



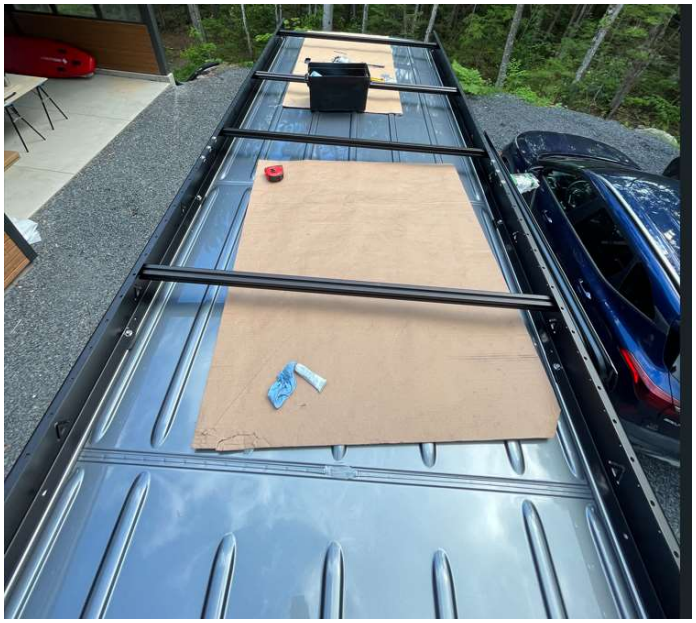
3.7 Complete the final tightening of all 6 bolts of the connecting plates using a torque wrench

- 6 button head bolts 5/16’’ (3 per top connecting plate) : **12 Nm**

4. CROSS BARS ASSEMBLY

** SOME PHOTOS IN THIS SECTION ARE TAKEN FROM A FORD TRANSIT ATLAS ROADCAMP RACK AND NOT A MERCEDES SPRINTER RACK, BUT THEY ARE STILL REPRESENTATIVE **

Final result:



REQUIRED MATERIAL:

- 4 black anodized aluminum crossbars 1.5'' x 1.5'' x 52 1/8''
- 8 button head bolts SS 5/16 X 1''
- Threadlock: LOCTITE 242 or LOXEAL 54-03

4.1 Move the left and right side plates as far apart as possible (facilitates the insertion of the crossbars).

4.2 Position the 4 crossbars on the seats of the side plates lined up with the assembly holes of your choice (assembly holes are present every 3'' along the side plates). Position the crossbars according to the configuration of the accessories of your vehicle roof and pay particular attention to the dimensions of your solar panels so as not to have to move the crossbars again.

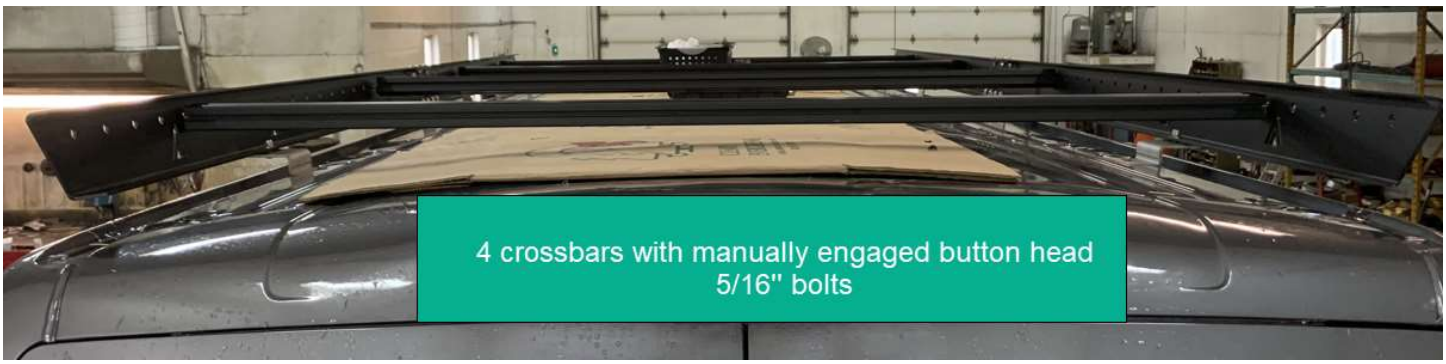
** Crossbars should be distributed as evenly as possible. Minimum 1 crossbar assembled to the rear side plates **

4.3 Add a drop of threadlock on the end of a button head bolt 5/16’’x1.’’.

4.4 Engage the bolt, with the threadlock added on it, through the side plate and manually screw a few turns into the crossbar.

4.5 Repeat these steps for the opposite end of the crossbar.

4.6 Repeat these steps for the other 3 crossbars



4.7 Tighten the 8 crossbar bolts to a torque of **12 N·m** using a torque wrench.

5. WIND FAIRING ASSEMBLY

Final result:

REQUIRED MATERIAL:

- 1 wind fairing.
- 1 wind fairing brace.
- 5 button head Bolt SS 1/4’’-20 X 1.25’’.
- 5 flat washers SS 1/4''.
- 5 nylon lock nut SS 1/4’’-20.
- 4 button head Bolt SS 3/8’’-16 X 1’’.
- 4 flat washer SS 3/8’’.
- 4 nylon lock nut SS 3/8’’-16.

5.1. Installation of the wind fairing brace.

Step 5.1 final result:

5.1.1.Place the brace inside the wind fairing.

5.1.2.Insert the 5 button head ¼’’-20 x 1 1/4’’ bolts through the wind fairing first and then through the brace

5.1.3.Insert the ¼’’ flat washers and a nylon lock nuts ¼’’-20 on the bolts.

5.1.4.Tighten the bolts/lock nuts assemblies to a torque of **12 N·m** using a torque wrench.

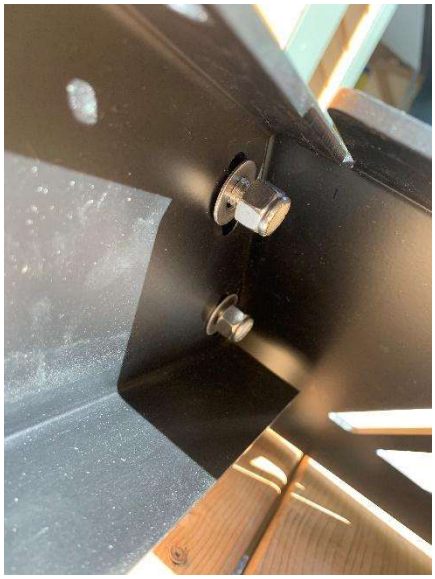
5.2. Wind fairing and front side plates assembly.

5.2.1.Position the wind fairing so as to align its assembly holes to the assembly holes of the side plates.

5.2.2.Insert the 3/8’’-16 x 1’’ bolts through the wind fairing and than the side plate.

*****IMPORTANT: Put anti-seize on the bolts*****

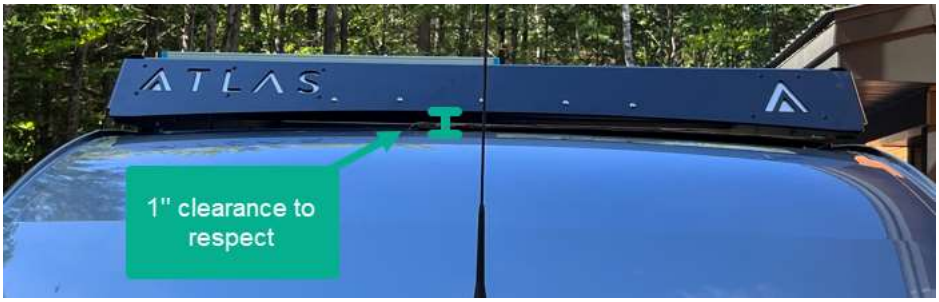
5.2.3.Insert a 3/8’’ flat washer and a nylon lock nut 3/8’’ on the bolts.



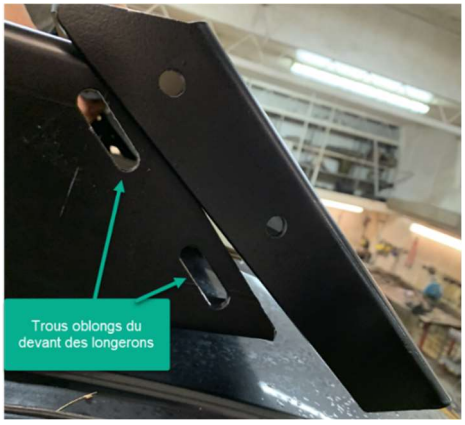
5.2.4.Finger tighten the lock nuts to secure the assembly.

5.2.5.Adjust the height of the wind fairing so that its center, at the bottom of it, is at least 1 inch from the roof of the vehicle.

**** WARNING: This clearance is necessary to avoid any interference between the wind fairing and the roof when the vehicle is moving*****



To adjust this clearance, raise the wind fairing higher than the side plates using the oblong holes allowing this adjustment.



5.2.6. Tighten the 4 bolts/nuts assemblies to a torque of **16 N·m** using a torque wrench.

6. FINAL TIGHTENING AND TIGHTENING CHECK TOUR OF ALL RACK BOLTS:

Tighten each of the following bolts/assemblies to the specified torque:

- 16 ou 22 roof anchor bolts 5/16'' x 1'' : **7 N·m**
- 6 – SS 5/16''-18 x 1'' button head bolts (top connecting plates to side plates): **12 N·m.**
- 8 – SS 5/16''-18 x 1'' button head bolts (side plates to crossbars): **12 N·m.**
- 5 – SS ¼''-20 x 1.25'' (wind fairing with its brace): **12 N·m.**
- 4 – SS 3/8''-16 x 1'' (wind fairing with side plates): **16 N·m.**

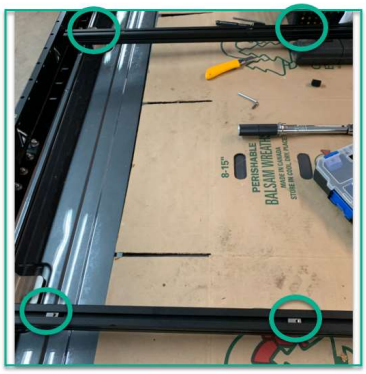
ANNEXE 1: SOLAR PANELS ASSEMBLY

REQUIRED MATERIAL:

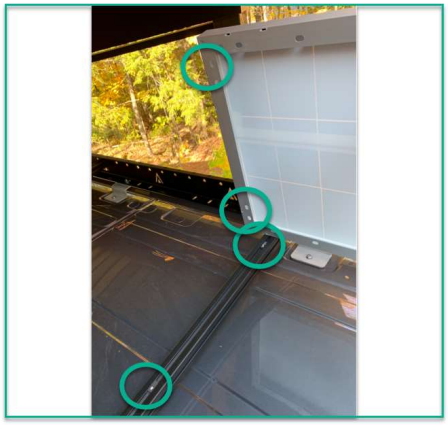
- 12 SS drop-in T-nut w/spring-ball ¼''-20
- 12 lock washers ¼''
- 12 Hex. head 1/4''-20 x 0.625'' bolts

STEPS:

1.1. Insert 2 spring nuts ¼''-20 in the groove of a crossbar provided for this purpose.



1.2. Position the spring nuts at the same distance as the assembly holes of your solar panel to be installed.



1.3. Repeat these steps on the other selected crossbar to install your solar panel on.

1.4. Place a panel on the crossbars.

1.5. Insert a ¼'' lock washer on a hex. Head ¼''-20 x 5/8'' bolt.

1.6. Insert the assembly through the solar panel and manually screw into a spring nut.

1.7. Repeat these steps for the other 3 corners of your solar panel.
1.8. Tighten all bolts securely using a 7/16'' ratchet wrench.
1.9. Repeat these steps for each solar panel (material provided for the installation of 3 panels).