

Tech Bulletin – 2 – Tilt Arms



CRITICAL INSTALLER TECH NOTE 2: For all Dealer/Installers:

All True North PowerSeries tilt mounts are designed to remain fixed and secure in high winds but the incorrect bolt torque and/or use of wrong washer hardware can lead to damage to the array in high winds. Please check the installation manual.

There are three important issues:

Tilt Support Arm - LOWER ATTACHMENT

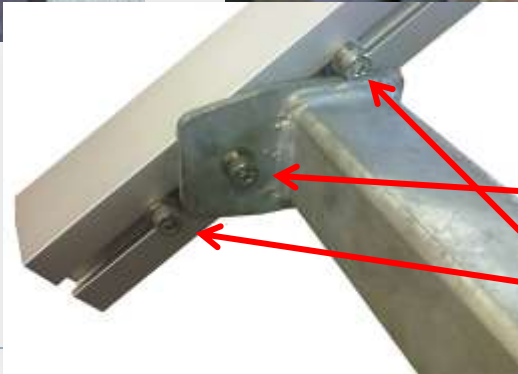
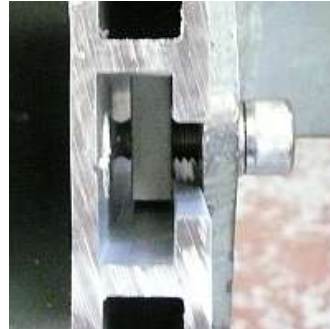
1. Correct use of the tilt arms requires split washers with the M8x20mm bolts on the LOWER attachment points . . . using a ribbed washer is incorrect and allows the end of the bolt to contact the back of the aluminum first, such that the square nut has little if any effect or grip. This can cause the array to tilt or come loose, especially in high winds.

WRONG BOLT M8x16mm
wrong ribbed lock washer
no bolt end showing and bolt

WRONG BOLT M8x16mm
wrong ribbed lock washer
does not penetrate square nut

WRONG WASHER M8x20mm
wrong with ribbed lock washer
end of bolt touches rail

CORRECT BOLT M8x20mm
Washer & Correct Split lock washer
end of bolt visible



NOTE: FOR SECURITY Use 3 Square Nuts

1 x M8x20mm SHCS, Split lock washer and Flat washer
2 x M8x16mm SHCS Split lock washer and Flat washer to prevent "creep" caused by wind buffeting. Torque 36ftlb (48nm)

CORRECT BOLT M8x20mm
Space between bolt and rail when torqued



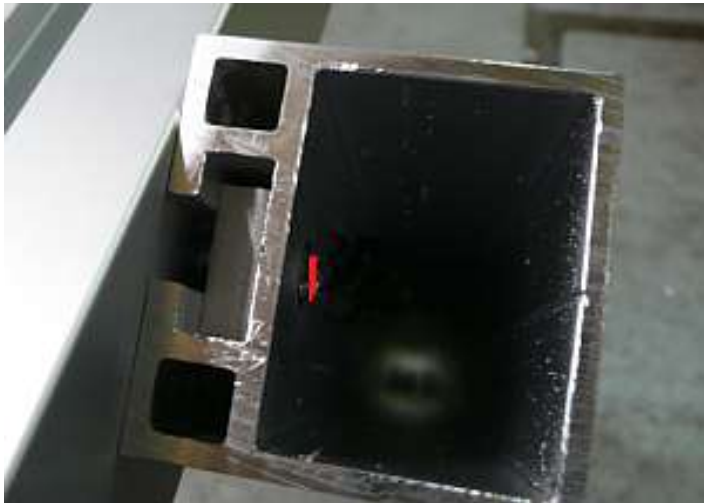
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Tilt Support Arm - UPPER ATTACHMENT

2. The upper attachment bolt M8x30mm must have a flat washer/ribbed washer combination on the bolt before inserting in the rail and a nylock nut inside the rail box. The nylock nut should be snug but not hard tightened against the inner surface of rail since it's purpose is to ensure the M8x30mm bolt cannot fall out of it becomes loose or not properly tightened.

WRONG BOLT M8x24mm
no way to add safety nut
See **red mark** bolt can fall out



CORRECT BOLT M8x30mm
with nylock safety - un-torqued or loose square nut cannot fall out



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Tilt Support Arm - UPPER ATTACHMENT

3. Whenever an installation is complete any ANYTIME a partially completed array is left unattended the main tilt bolts must be torqued to 37ftlb (51nm)

This way the array will remain immovable and secure under windy condition. (notice also RED arrow, missing nylock nut)

