

639853 Revision D, NOV 2020

AEKT and AEKT-430 Antenna Enclosure Kit - For S4-90M-R1-V2 Antenna

INTRODUCTION AND GENERAL INFORMATION

This document explains how to install a CommScope AEKT or AEKT-430 Antenna Enclosure Kit on a vertical 60-115mm diameter cylindrical mounting pole suitable for antenna installations. The AEKT and AEKT-430 Enclosure are compatible with various specific models of S4-90M-R1-V2 Antenna. For a list of supported S4-90M-R1-V2 Antenna products, please contact your representative.

These Antenna Enclosure modules are specifically compatible with certain CommScope passive antenna types up to 2.1m long which feature a 498 x 197 mm (WxD) radome housing (AEKT only) and 430 x 197 mm (WxD) radome housing (AEKT-430 only). The passive antenna should be located directly below (in close proximity) to the Antenna Enclosure as indicated in these Instructions.

NOTE: A special Mount Kit for the passive antenna must be purchased separately and installed prior to the installation of the Antenna Enclosure module - order part number **BSAMNT-AEKT** (Qty 1 Kit required per passive antenna). This will require the de-installation of the passive antenna if already installed with different brackets. When the passive antenna is re-installed with this Mount Kit, the Antenna Enclosure may then be installed (along with the S4-90M-R1-V2 if applicable).

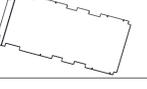
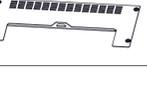
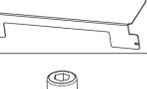
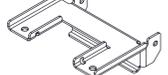
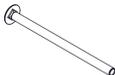
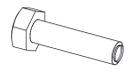
Installation Scenario #1 - S4-90M-R1-V2 to be installed at a later date (Enclosure empty).

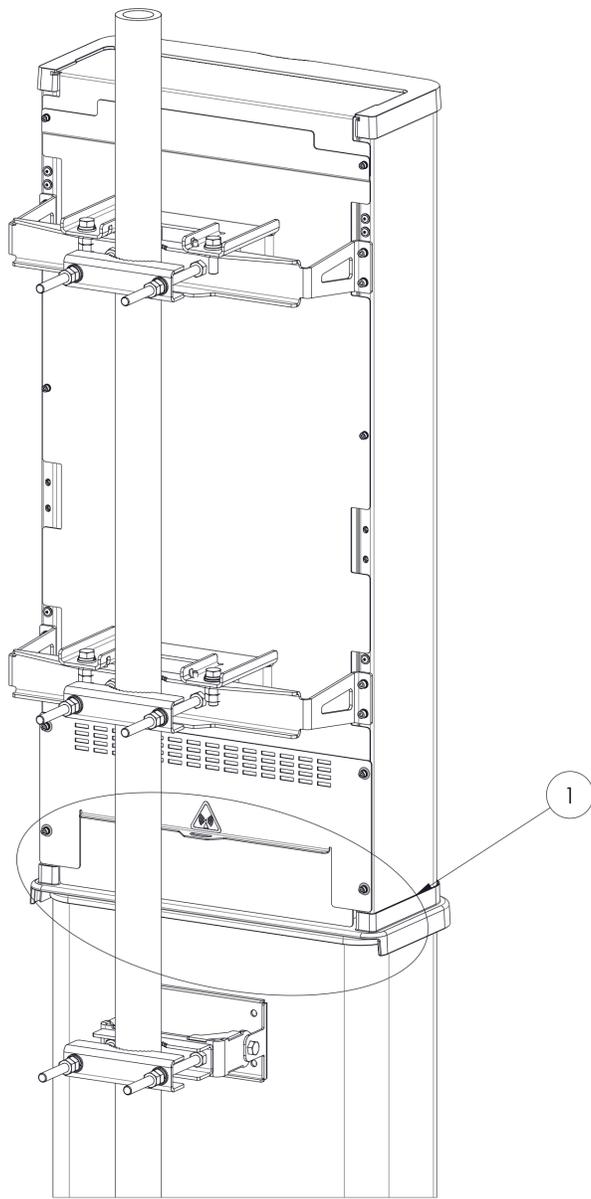
The Antenna Enclosure can be installed if the S4-90M-R1-V2 is to be installed at a later date (Enclosure empty). To protect the Enclosure, three Wind Shields are fitted to the rear of the unit at the top, middle and bottom positions. These should always remain installed whilst the Enclosure is empty. The mounting brackets and hardware for the S4-90M-R1-V2 are contained in Kit type AEKTMNT which is included with AEKT & AEKT-430. These brackets and associated hardware will need to be safely stored until required.

Installation Scenario #2 - S4-90M-R1-V2 to be installed in the Antenna Enclosure.

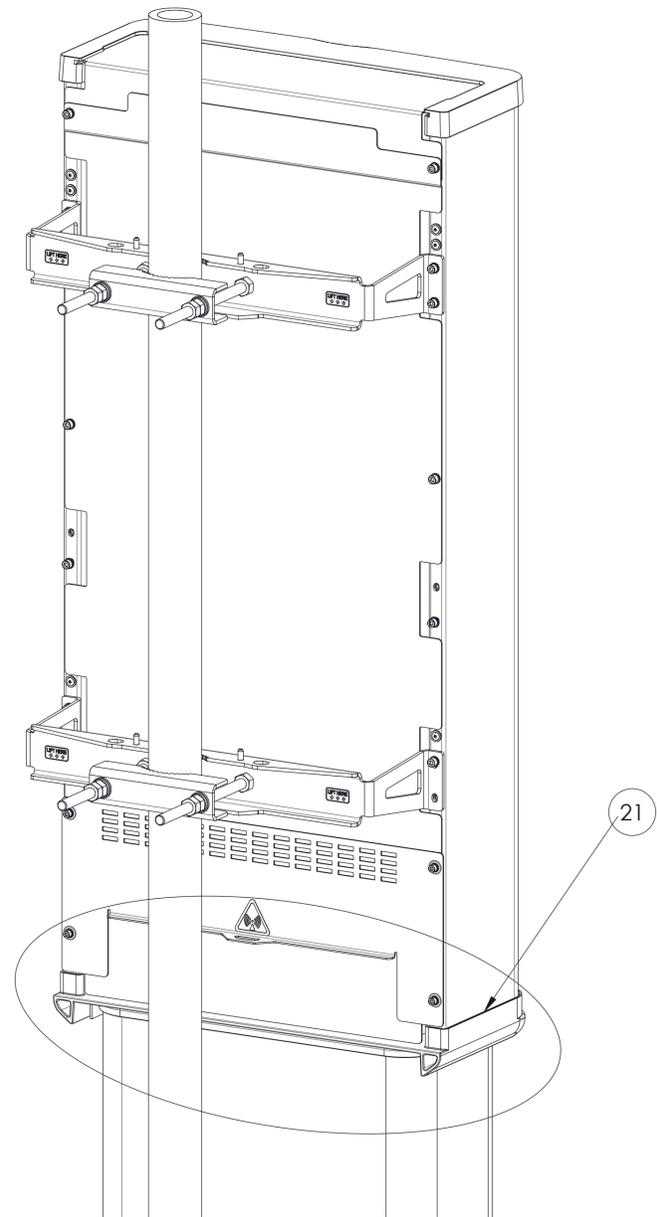
When the S4-90M-R1-V2 is to be installed, the entire Antenna Enclosure will need to be removed from the mounting pole if already installed. The S4 Antenna mounting brackets and associated hardware (for installation of the S4 Antenna inside the Enclosure) should be retrieved if previously stored. The installation of the S4 Antenna in the Antenna Enclosure will require the removal of the top and middle windshields. These should be safely retained as they may be required at a later date. In some cases the bottom windshield will have to be temporarily removed to facilitate S4 Antenna installation, but is to be re-installed along with the "Maintenance Wire" (retains the windshield during maintenance) when completing installation.

NOTE: The mounting brackets for the S4 Antenna (contained in Kit AEKTMNT) feature a series of numbered holes which enable the S4-90M-R1-V2 to be located at its correct position inside the Antenna Enclosure. It is important that the correct hole is selected - this will set the distance between the front face of the S4 Antenna relative to the inside face of the Enclosure. Contact your representative to confirm the correct setting for the S4-90M-R1-V2 being installed.

ITEM NO.	DESCRIPTION	AEKTMNT QUANTITY	AEKT QUANTITY	AEKT-430 QUANTITY	IMAGE
1	RADOME ASSEMBLY	-	1	-	
2	WIND SHIELD,MIDDLE	-	1	1	
3	WIND SHIELD,BOT	-	1	1	
4	WIND SHIELD, TOP	-	1	1	
5	SCREW ASSY M5 X 16,SS316	-	8	8	
6	SPACER, PLASTIC, ANTI-FALL	-	4	4	
7	PIPECLAMP BRACKET NO FLANGE,AEKT	2	-	-	
8	MOUNTING BRACKET,AEKT	-	2	2	
9	PIPECLAMP BRACKET, W/ PIN	2	-	-	
10	BOLT, CARRIAGE, M12X200, STL, GALV	4	-	-	
11	SCR, W/ WSHR, M6X20, SS316	8	-	-	
12	NUT, HEX, M12, STL, GALV	20	-	-	
13	WSHR, FLT, M12, 13X24X2.5, STL, GALV	8	-	-	
14	SCR, HCS, HEX, M12X40, STL, GALV	4	-	-	
15	WSHR, LK, SPLT, M12, STL, GALV	8	-	-	
16	MAINTENANCE WIRE	1	-	-	
17	SCR, HCS, HEX, M10X40, STL, GALV	-	4	4	
18	WSHR, LK, SPLT, M10, STL, GALV	-	4	4	
19	NUT, HEX, M10, STL, GALV	-	8	8	
20	RADOME ASSY, AEKTRADOME ASSY, AEKT-430	-	-	1	



AEKT Antenna Enclosure Kit



AEKT-430 Antenna Enclosure Kit

The installation procedures for the AEKT and AEKT-430 are essentially the same (as described in the following pages).

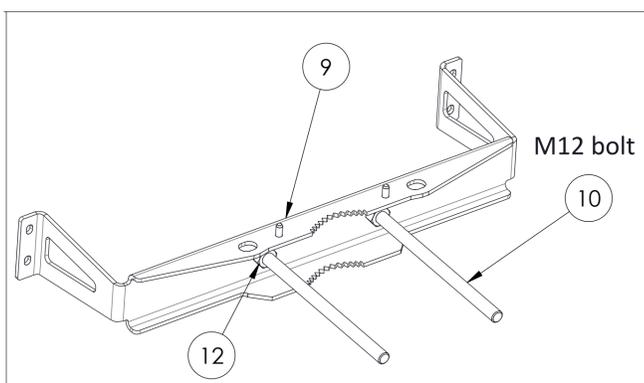
The only significant difference between these products is the bottom endcap (as indicated in the above diagrams).

The AEKT-430 endcap incorporates an extended tapered feature to improve aesthetics when a 430 mm wide CommScope passive antenna is to be located below the Antenna Enclosure.

Installation Scenario #1 - For S4-90M-R1-V2 Antenna to be installed at a later date (Enclosure empty).

TORQUE SETTINGS FOR HARDWARE

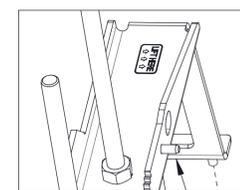
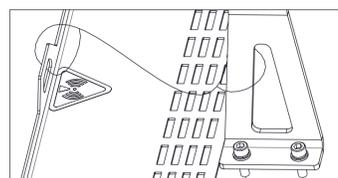
MAXIMUM TORQUE	
M6	8.0N.m (6ft.lbs)
M12	58N.m (43ft.lbs)



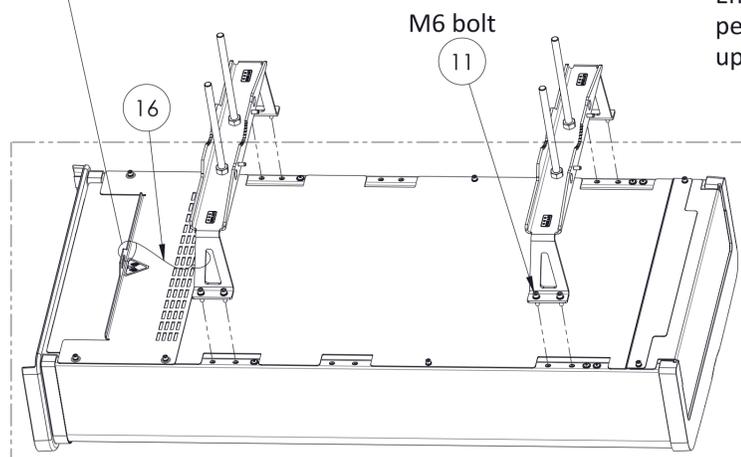
STEP 1: Assemble Pipe Mounting Bracket (Qty 2)

STEP 2: CAREFULLY place the Enclosure front face down on a clean, flat surface taking steps to protect the unit (use a suitable cushioning material). Install the Pipe Mounting Brackets to Enclosure and Maintenance Wire.

Install Maintenance Wire between tab on bottom windshield and leg of pipe mounting brackets



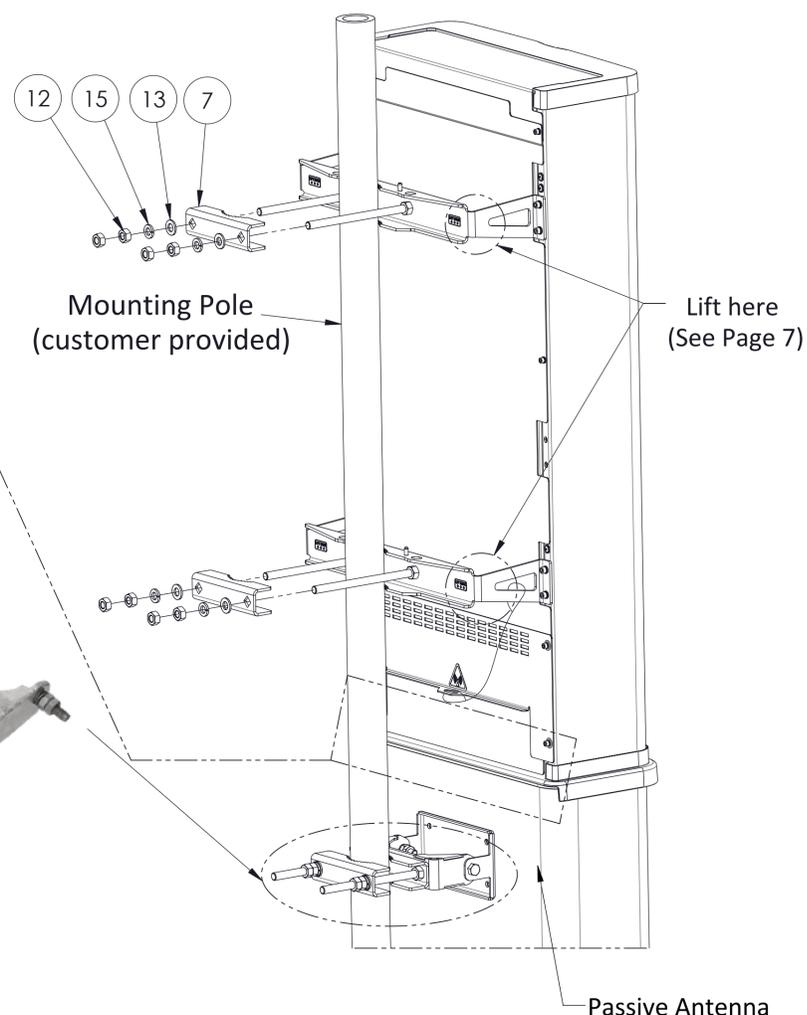
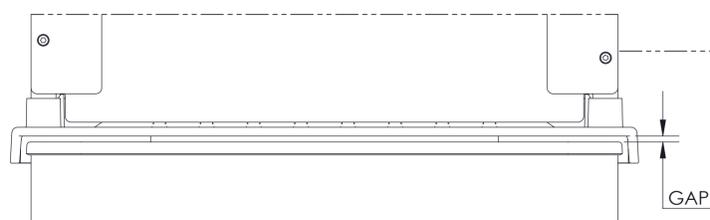
Ensure pegs face upwards



Empty Enclosure

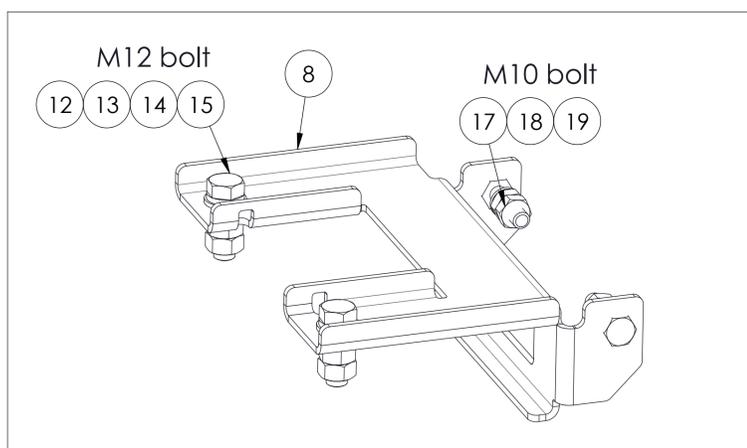
STEP 3: Install the Antenna Enclosure on the Mounting Pole (customer provided).

NOTE: The Passive Antenna should be installed first before installing the Enclosure.



Take care to avoid excessive contact between Antenna Enclosure and Passive Antenna. Leave a 5mm gap between endcaps

Ensure Passive Antenna has required Mounting Brackets Installed (Type BSAMNT-AEKT — purchase separately, not included on AEKT / AEKT-430). No mechanical tilting of the Antenna Enclosure / Passive Antenna is possible



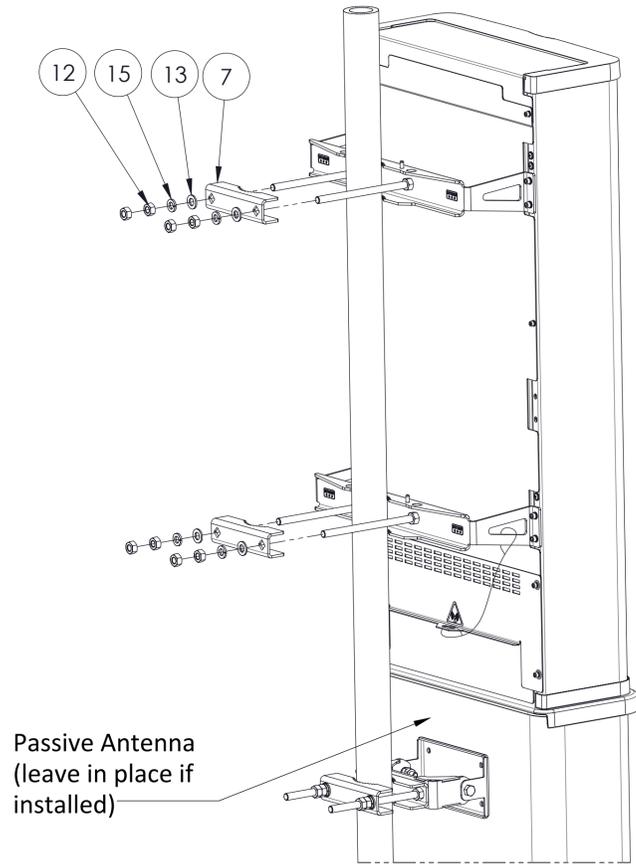
STEP 4: Safely store the S4 Antenna Mounting Brackets and Hardware until required

Installation Scenario #2: S4-90M-R1-V2 Antenna to be installed in the Antenna Enclosure.

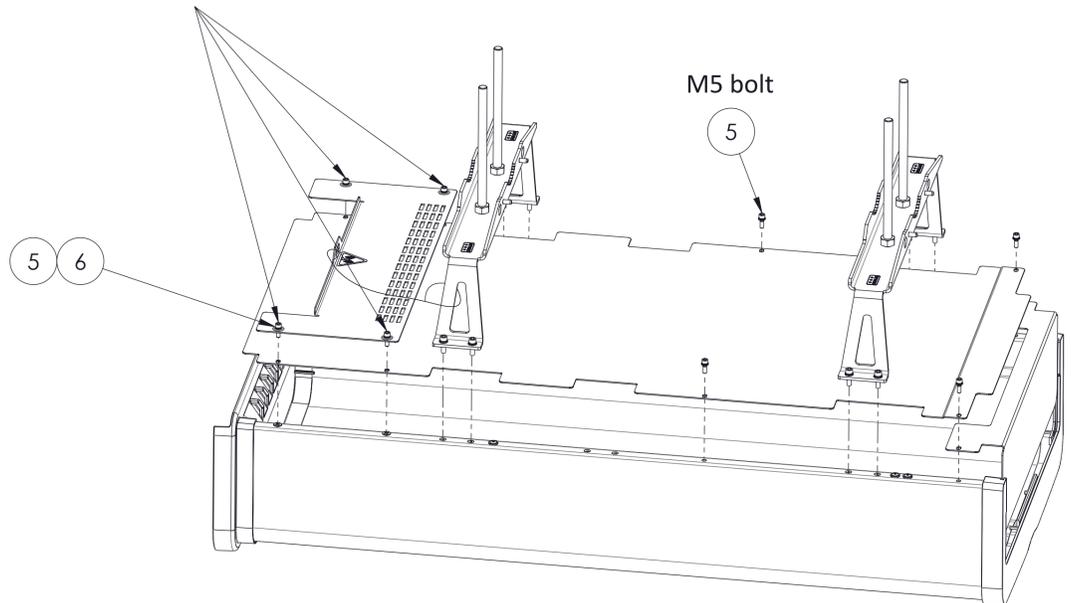
TORQUE SETTINGS FOR HARDWARE

MAXIMUM TORQUE	
M5	4.6N.m (3ft.lbs)
M6	8.0N.m (6ft.lbs)
M10	37N.m (14ft.lbs)
M12	58N.m (43ft.lbs)

STEP 1: If an Antenna Enclosure is already installed, remove it from the pole. Use the lifting points shown on Page 7. If not installed go straight to STEP 2.

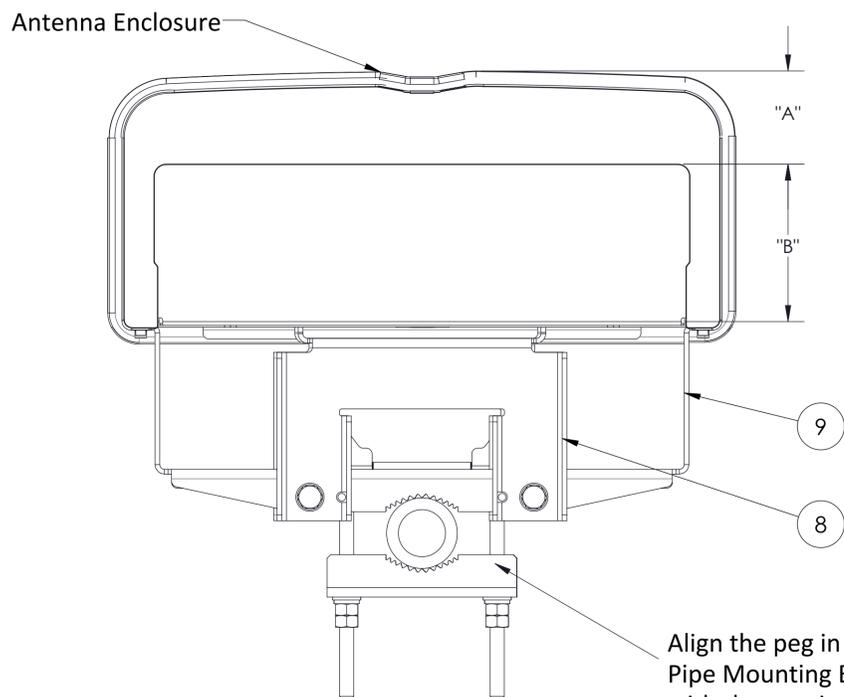


Do not remove the 4 screws and plastic retaining washers from bottom windshield

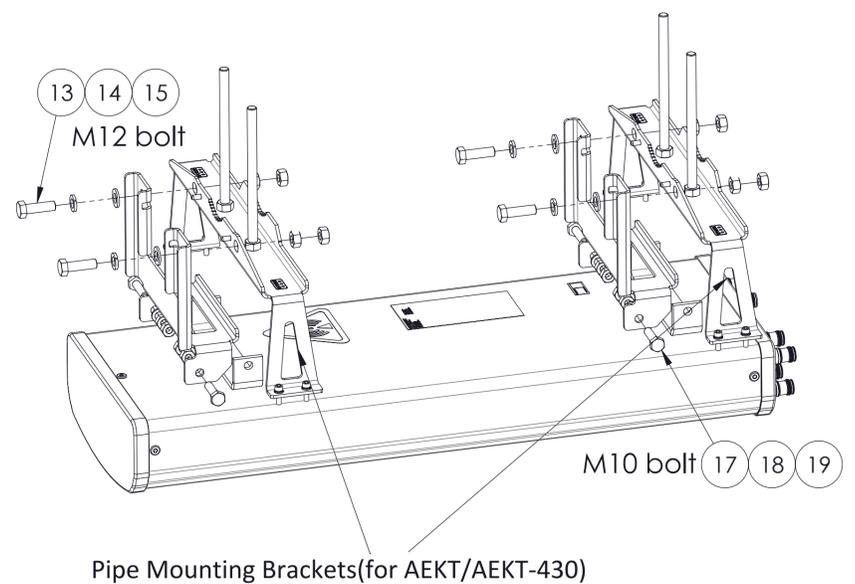


STEP 2: CAREFULLY place the empty Enclosure front face down on a clean, flat surface taking steps to protect the unit (use a suitable cushioning material). Remove all 3 Windshields and both Pipe Mounting Brackets (if fitted) and retain all hardware.

STEP 3: CAREFULLY place the S4-90M-R1-V2 Antenna front face down on a clean, flat surface taking steps to protect the unit (use a suitable cushioning material). Install the two S4 Antenna mounting brackets to the S4-90M-R1-V2 Antenna with the M10 hardware provided. Install the two Pipe Mounting Brackets to the S4 Antenna Mounting Brackets with the M12 hardware provided.



Align the peg in the Pipe Mounting Bracket with the required position in the S4 Antenna Mounting Bracket and install the M12 hardware provided.



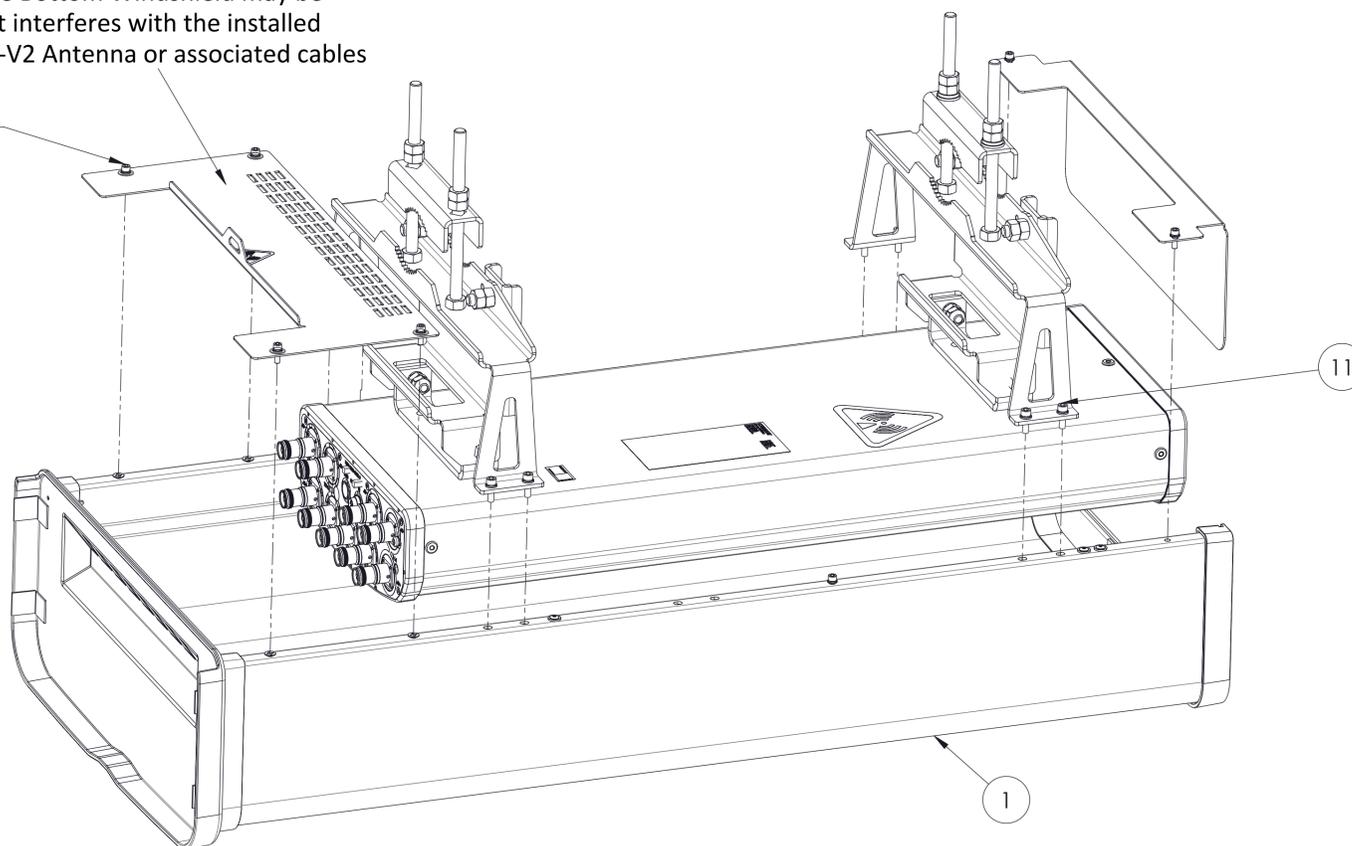
Installation Scenario #2 (Cont.): S4-90M-R1-V2 Antenna to be installed in the Antenna Enclosure.

TORQUE SETTINGS FOR HARDWARE

MAXIMUM TORQUE	
M5	4.6N.m(3ft.lbs)
M6	8.0N.m (6ft.lbs)
M8	20.0N.m(14ft.lbs)
M12	58N.m (43ft.lbs)

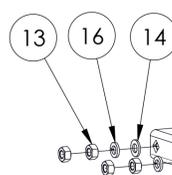
* **NOTE:** The Bottom Windshield may be omitted if it interferes with the installed S4-90M-R1-V2 Antenna or associated cables

M5 Screws

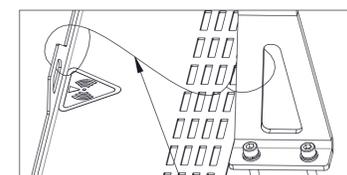


STEP 4: Carefully lift the MAA unit and mounting bracket assembly and lower it into position on the enclosure. Install the 8 x M6 hardware. Install the bottom windshield*.

Mounting Pole
(customer provided)

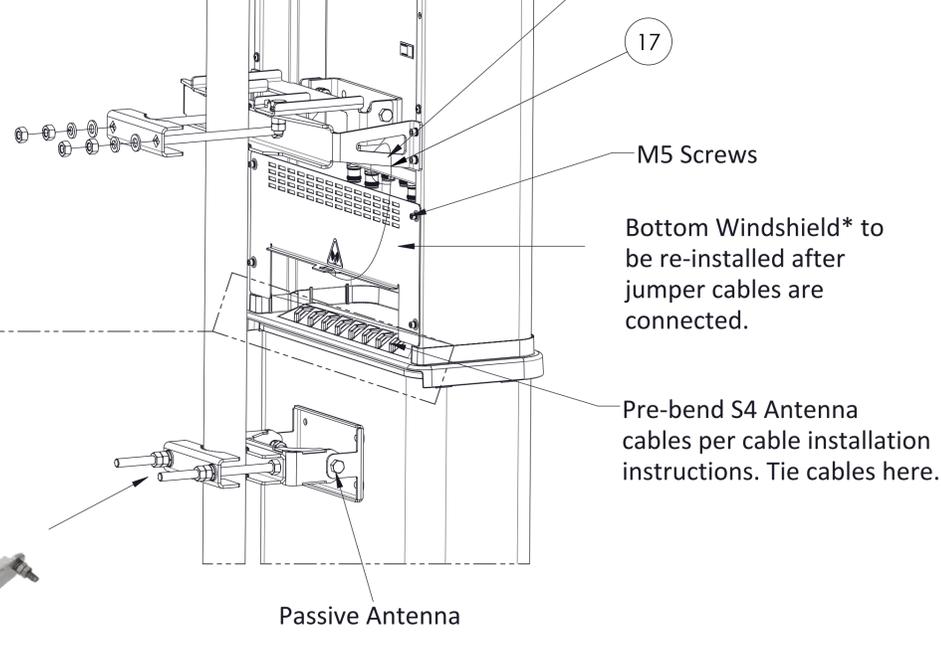
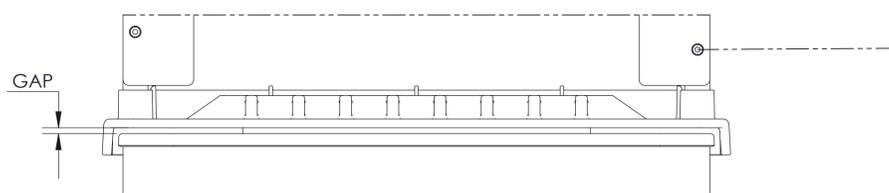


Install Maintenance Wire between tab on bottom windshield and leg of pipe mounting brackets (to prevent loss of the Windshield during maintenance)



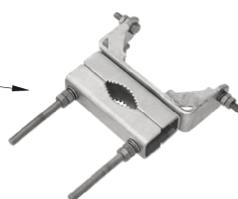
Maintenance Wire

GAP

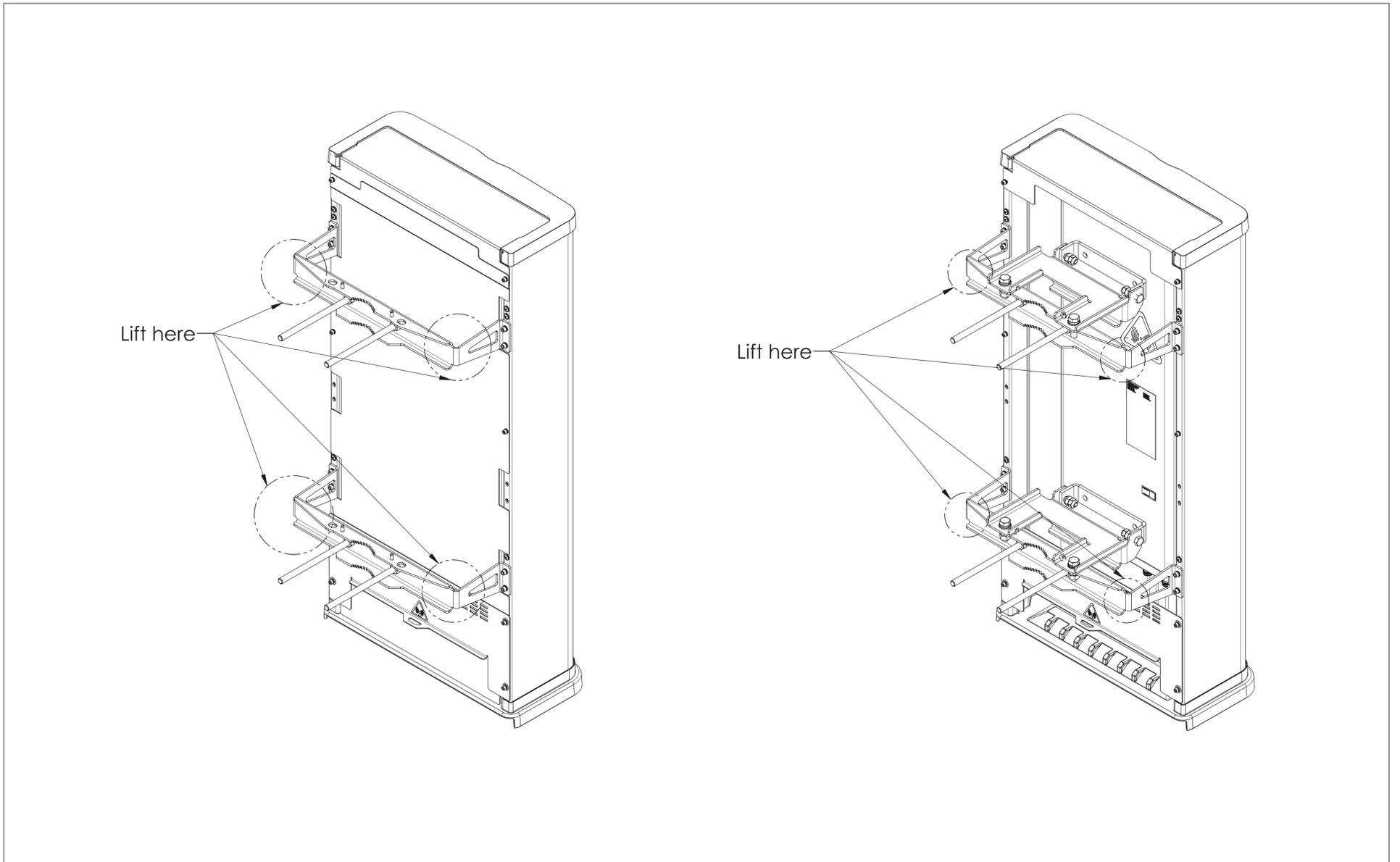


Take care to avoid excessive contact between Antenna Enclosure and Passive Antenna. Leave a 5mm gap between endcaps

Ensure Passive Antenna has required Mounting Brackets Installed (Type BSAMNT-AEKT — purchase separately, not included on AEKT-430). No mechanical tilting of the Antenna Enclosure / Passive Antenna is possible



STEP 5: Carefully lift the Antenna Enclosure / S4 Antenna assembly (refer to the lifting points on Page 6) and install on the Mounting Pole (customer provided). Tighten all hardware. Install Maintenance Wire. After jumper cable installation re-install Bottom Windshield*. NOTE: The Passive Antenna should be installed first before installing the Enclosure.



Location of Lifting Points

SAFETY NOTICE

The installation, maintenance, or removal of an antenna requires qualified, experienced personnel. CommScope installation instructions are written for such installation personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment.

CommScope disclaims any liability or responsibility for the results of improper or unsafe installation practices.

It is recommended that transmit power be turned off when the field installation is performed. Follow all applicable safety precautions as shown on this page.



Do not install near power lines. Power lines, telephone lines, and guy wires look the same. Assume any wire or line can electrocute you.



Do not install on a wet or windy day or when lightning or thunder is in the area. Do not use metal ladder.



Wear shoes with rubber soles and heels. Wear protective clothing including a long-sleeved shirt and rubber gloves.