

**IMPORTANT!**  
**INSTALLATION**  
**INSTRUCTIONS**  
**READ THIS**  
**MANUAL FULLY**  
**BEFORE UNPACKING**  
**AND ASSEMBLING**  
**THE ANTENNA**

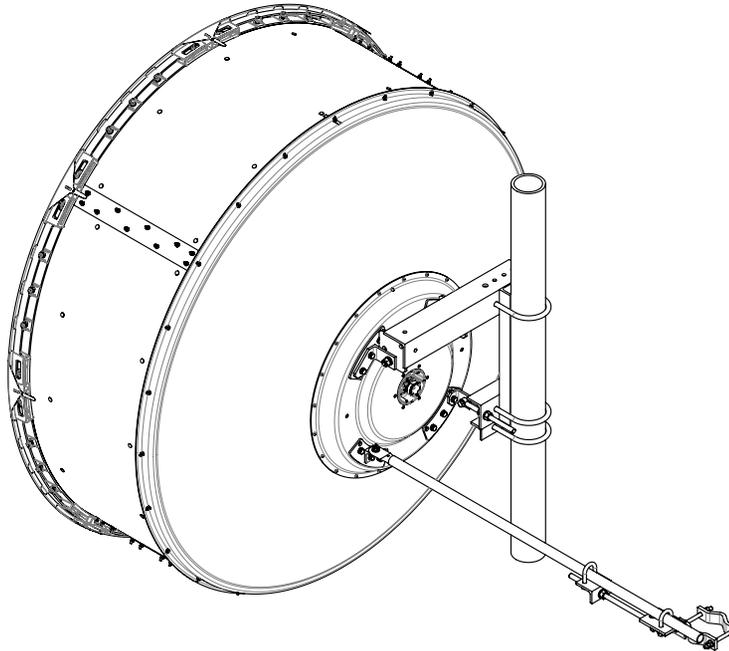
## ValuLine™ 6ft (1.8m) Antenna Factory Assembled

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Version 00 Status RE Rev A

Model Version 00 Status RE Rev A

### This document is for the following: VHLP(X)6-\*\*\* 1.8m ANTENNA



### SAFETY

**ANTENNA INSTALLATION, MAINTENANCE OR REMOVAL MUST BE PERFORMED BY QUALIFIED EXPERIENCED INSTALLATION TEAM.**

It is essential that all appropriate national and local safety regulations be strictly observed to ensure the safety of personnel and to prevent damage to the equipment. CommScope cannot accept responsibility for accidents resulting from non-compliance with such regulations.

The Antenna is designed to attach to a vertical tower pipe of diameter 115mm - 120mm. The mount provides adjustment ranges of  $\pm 5^\circ$  fine elevation and  $\pm 180^\circ$  ( $\pm 15^\circ$  Fine) azimuth.

**Always read the entire manual before commencing installation.**

### WARNING

**Do not use any installation components (screws, nuts, etc.) other than those enclosed with the equipment or recommended by CommScope.**

#### Andrew Solutions

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**INTRODUCTION**

This instruction describes how to unpack and adjust a factory assembled VHLP(X)6 antenna.

Mount to the left of the supporting structure. It can also be configured to mount to right - refer to full antenna assembly instructions on [CommScope.com](http://CommScope.com)

It is recommended that at least 2 persons unpack, mount and adjust the antenna.

## **SAFETY INSTRUCTIONS**

### **INTRODUCTION**

This section describes the system used for presenting safety information.



Reduce the risk of accidents by studying all the instructions carefully before starting working.

The safety information in this document presupposes that any person performing work on CommScope products or systems has the education, training and competence required to perform the task correctly.

### **SAFETY REQUIREMENTS**

The safety requirements in the following sections must be followed to avoid personal injury and damage to tangible property.

It is the responsibility of the installer to ensure that local regulations and the safety instructions in this document are known and followed.

### **SERVICE PERSONNEL**

Installation and service must be carried out by authorized personnel having the appropriate technical training and experience necessary to be cognizant of hazards during installation and service, and of measures to minimize any danger to themselves or any other person.

## **SAFETY SYMBOLS & DEFINITIONS**

### **HOISTING**



#### **WARNING!**

Falling objects can cause accidents.

- Use only tested and approved hoisting equipment in accordance with the instructions supplied with the equipment. Appropriately trained personnel must operate the hoisting device.
- Always hoist the equipment in the specified hoisting points.
- Never walk under hoisted loads.
- Follow local regulations for safety clothing and safety equipment for hoisting or moving goods.

### **WORKING AT HEIGHTS**



#### **WARNING!**

Some working areas involve the risk of accidents caused by falling or by falling objects

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**SAFETY REGULATIONS**

Use local safety regulations where these are mandatory. The safety instructions in this document shall be used as a supplement to the local regulations.

In case of conflict between the safety instructions in this manual and the local safety regulations, the local safety regulations shall prevail if these are mandatory. If the local regulations are not mandatory the safety instructions in this manual shall prevail.

**INSTALLATION HARDWARE**

Do not use any installation components (for example screws and nuts) other than those enclosed with the equipment or recommended by CommScope.



Use protective wear to avoid skin contact with conductive grease. Keep away from mouth. Wash thoroughly after use with liberal amounts of liquid soap and rinse with water. Do not store open near food or food substances.  
Contents: Oil, clay & zinc dust.

**INSTALLATION PROCEDURES & TOOLS**

The installation procedures in this manual must be followed. Make sure that:

- Working instructions are followed.
- Recommended tools are used.
- Adequate safety devices are used.
- The risk of falling and falling objects is known.
- All hardware is tightened to the torques specified  $\pm 5\%$ . The integrity of the antenna depends on all fasteners being tightened correctly.

**ANNUAL INSPECTION**

Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance and condition of equipment.

*Table 1 Supplied Equipment and Tools*

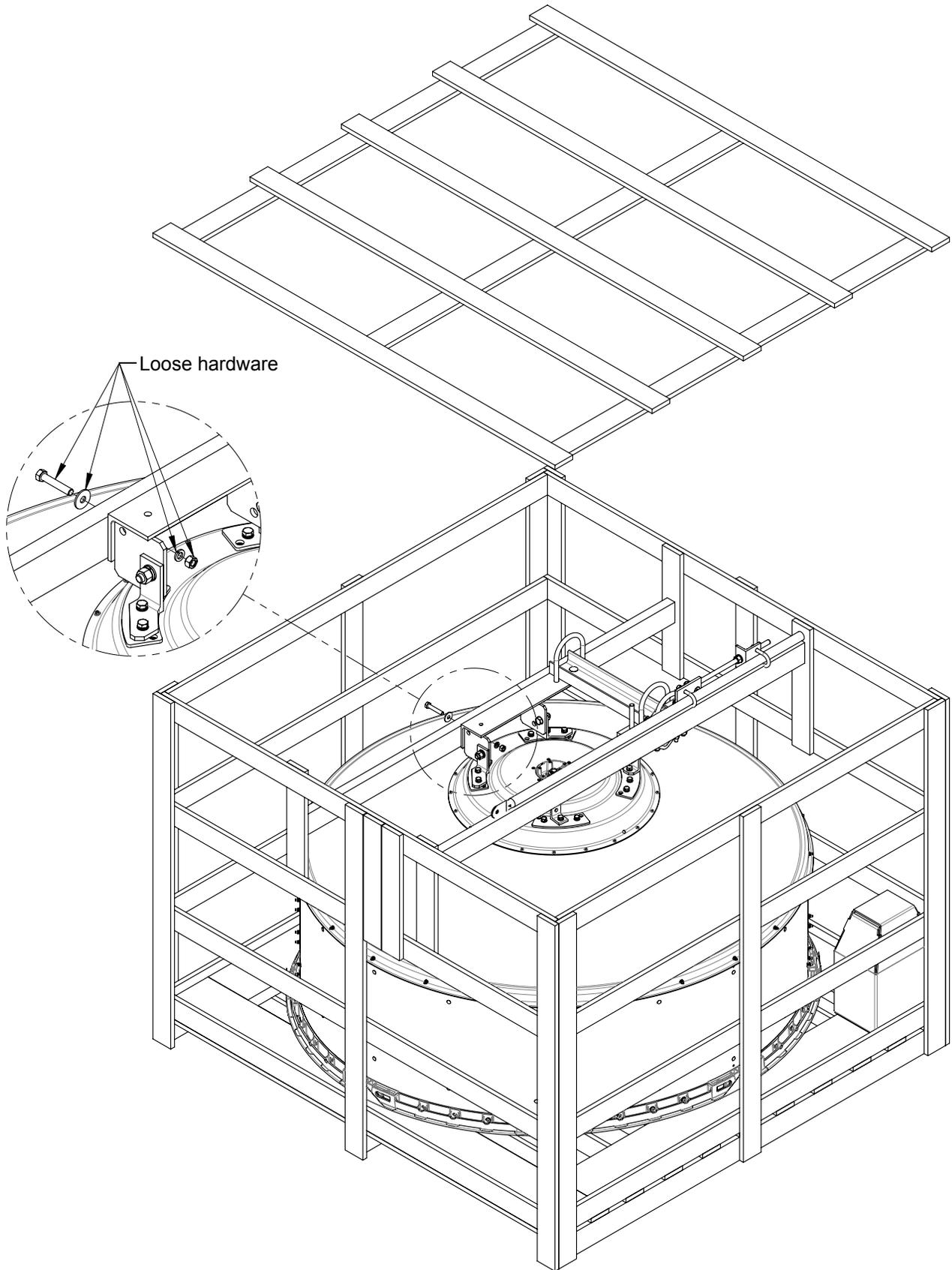
<b>Item</b>	<b>Qty</b>	<b>Description</b>
<b>A</b>	1	<b>Assembled antenna</b>
<b>B</b>	1	<b>Strut Kit</b>
<b>C</b>	1	<b>Integration Unit *</b>
<b>D</b>	1 or 2	<b>Flange Hardware kit *</b>

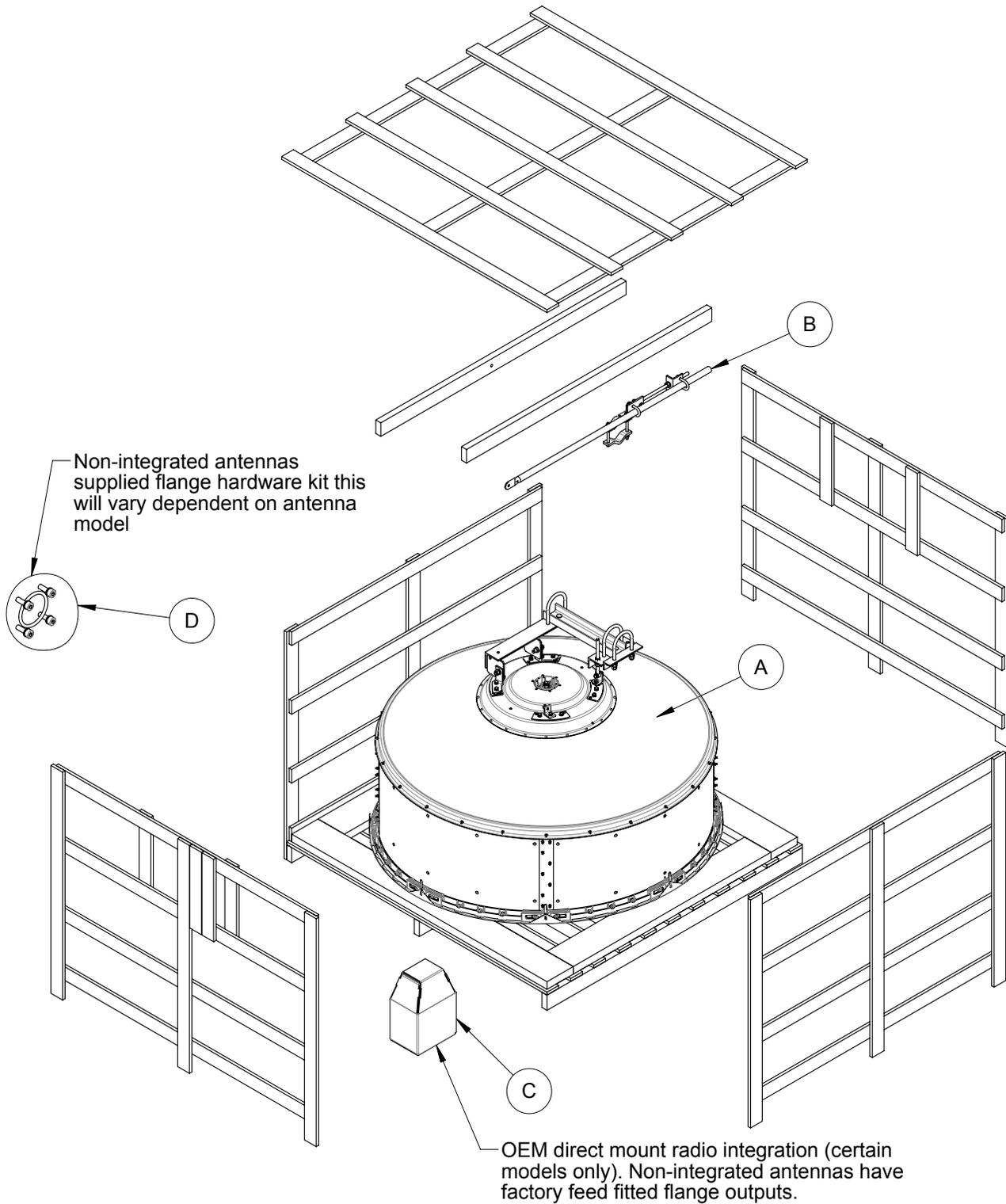
\*Either Item C (Integration Unit) or Item D (Flange Hardware Kit) are supplied.

## **Tools**

### **TOOL REQUIREMENTS**

<b>Tools Required</b>	<b>Bolt Diameter in MM</b>				
	<b>M4</b>	<b>M6</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>
Ring and Open spanner (A/F)		<b>10mm</b>	<b>17mm</b>	<b>19mm</b>	<b>24mm</b>
Torque Wrench	<b>2.5 - 95Nm</b>				
Sockets (A/F)		<b>10mm</b>	<b>17mm</b>	<b>19mm</b>	<b>24mm</b>
Allen Key (A/F)	<b>3mm</b>	<b>5mm</b>	<b>8mm</b>		

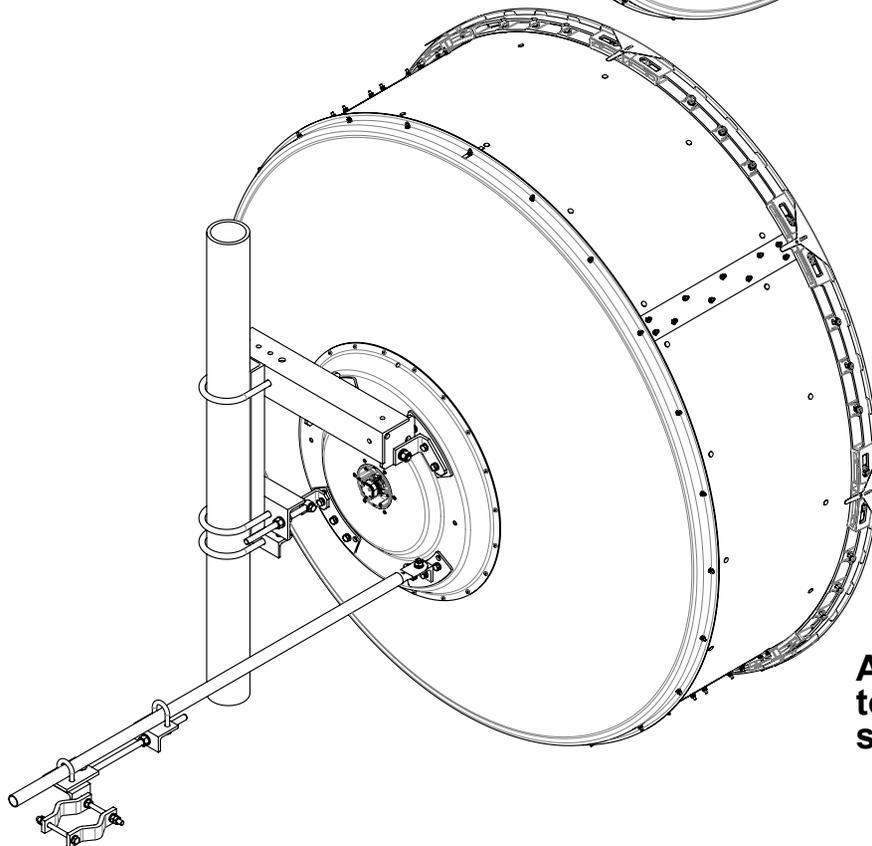
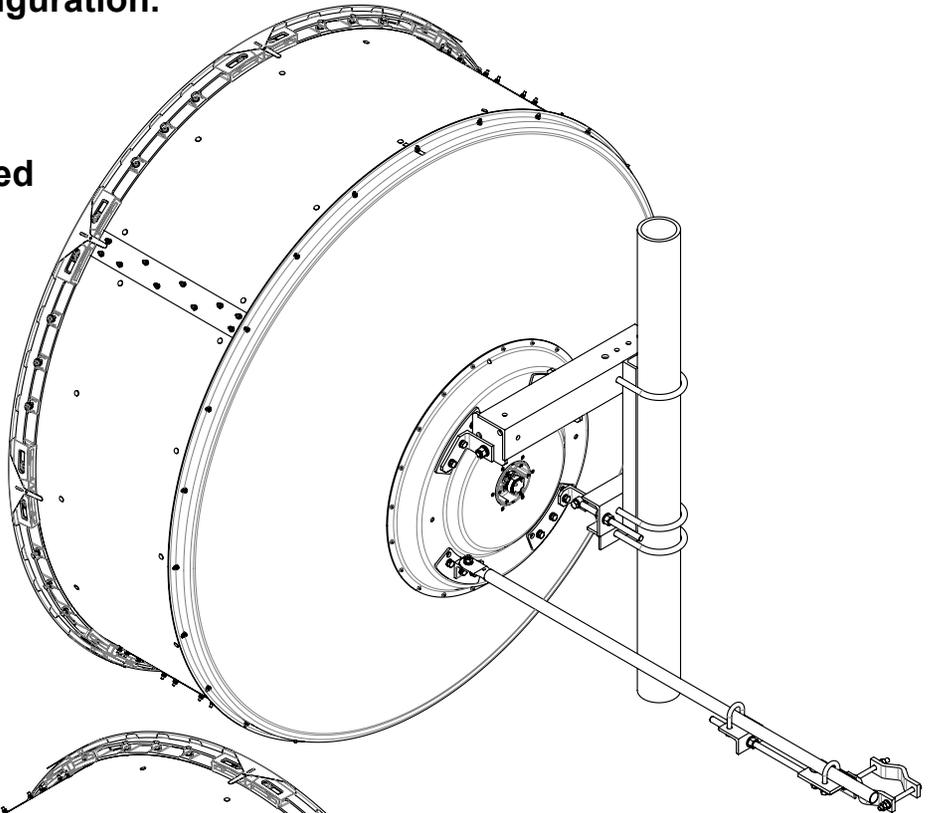




Handle antenna  
**CAREFULLY** at  
all times

**Prior to assembly of mount to antenna, determine the desired installation configuration.**

**Antenna assembled  
to left of support  
structure**



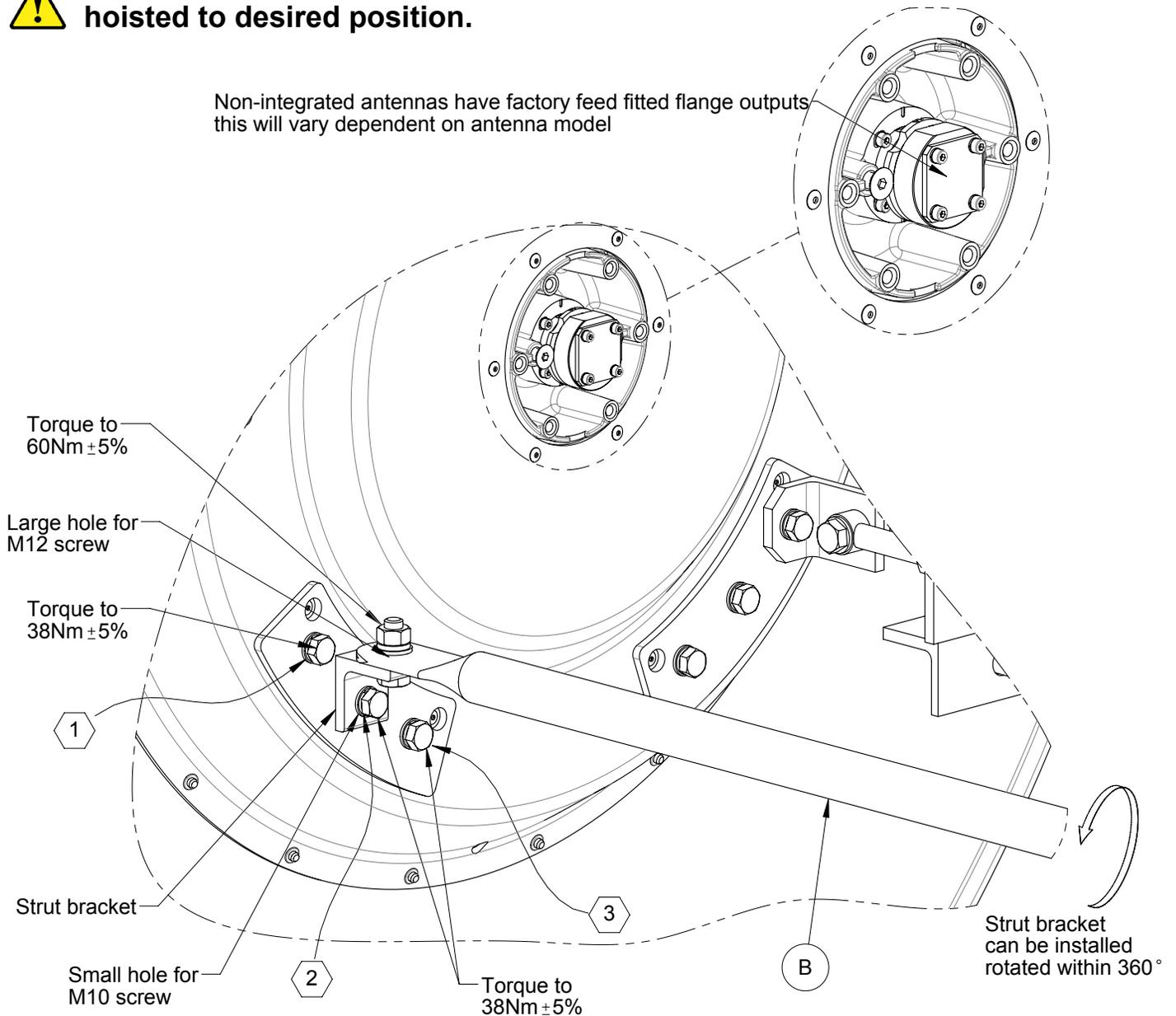
**Antenna assembled  
to right of support  
structure**

**Refer to full antenna assembly instructions on [www.commscope.com](http://www.commscope.com) for details on how to switch mount offset**

 **Where required, fit radio integration unit at this stage - refer to instructions supplied with integration unit.**

 **Strut to be fitted after Antenna is hoisted to desired position.**

Non-integrated antennas have factory feed fitted flange outputs  
this will vary dependent on antenna model



**Install the strut using one of the three indicated ①, ② or ③ attachment points so it does not interfere with the radio or it's cables.**

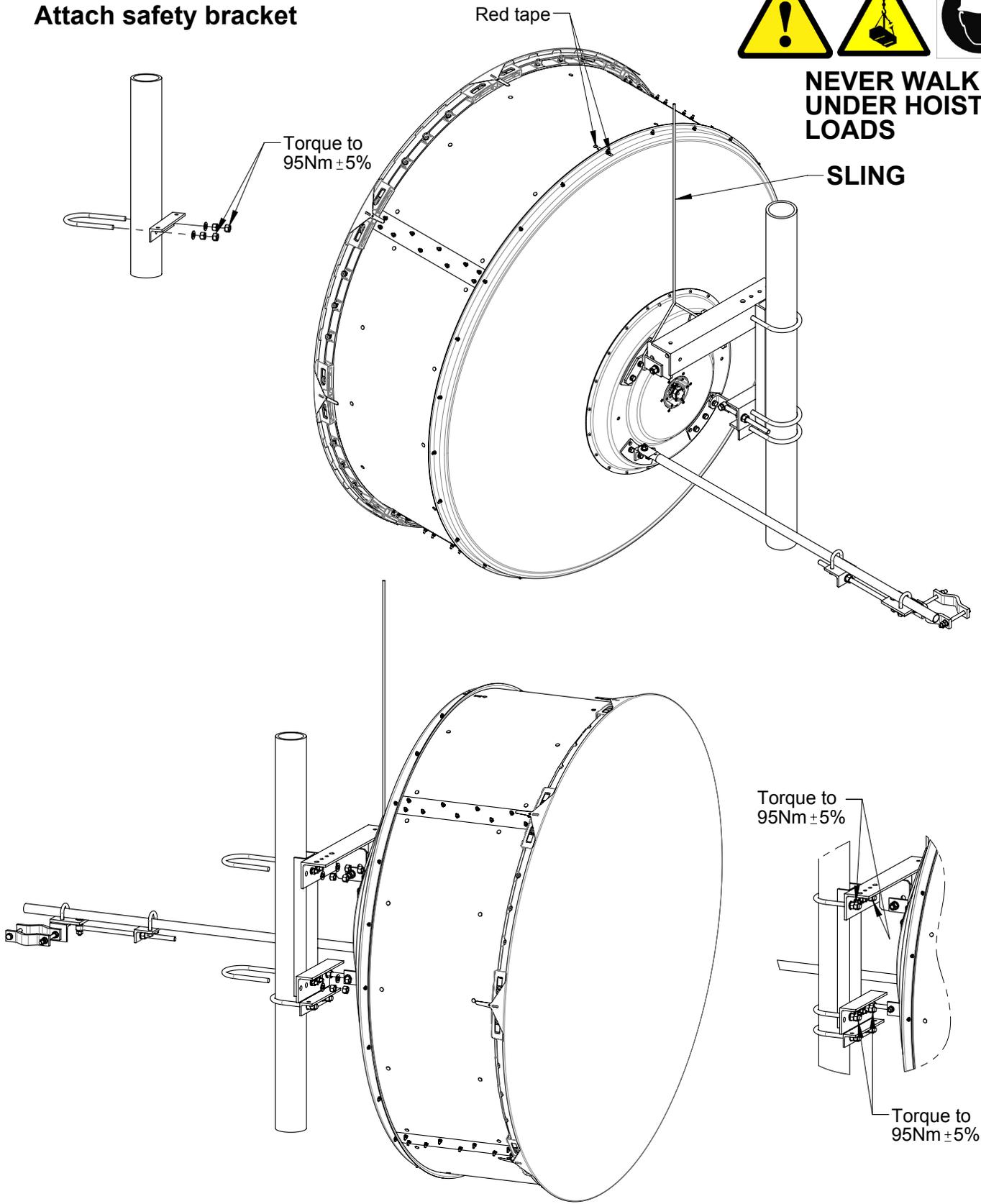
**Strut to be loosely fitted until alignment is complete then tighten all fixings to torque specified.**

**Attach safety bracket**

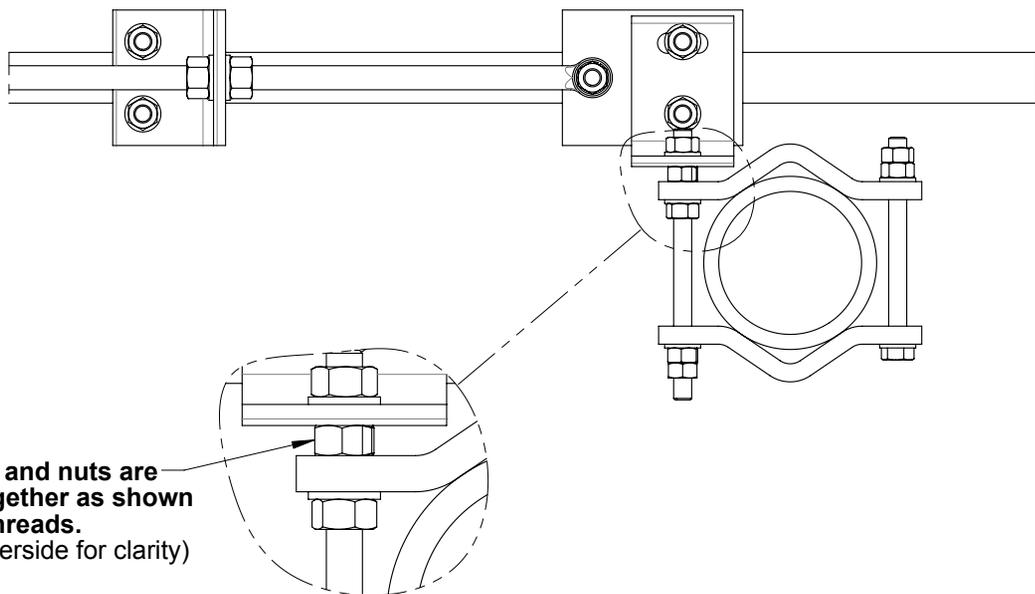
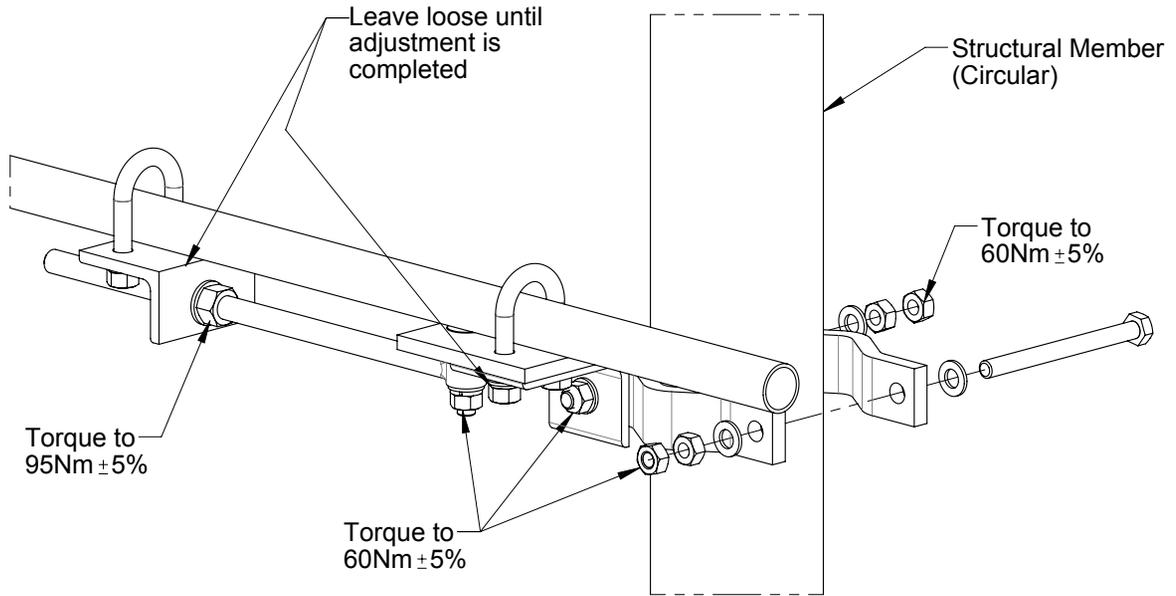


**NEVER WALK  
UNDER HOISTED  
LOADS**

**SLING**



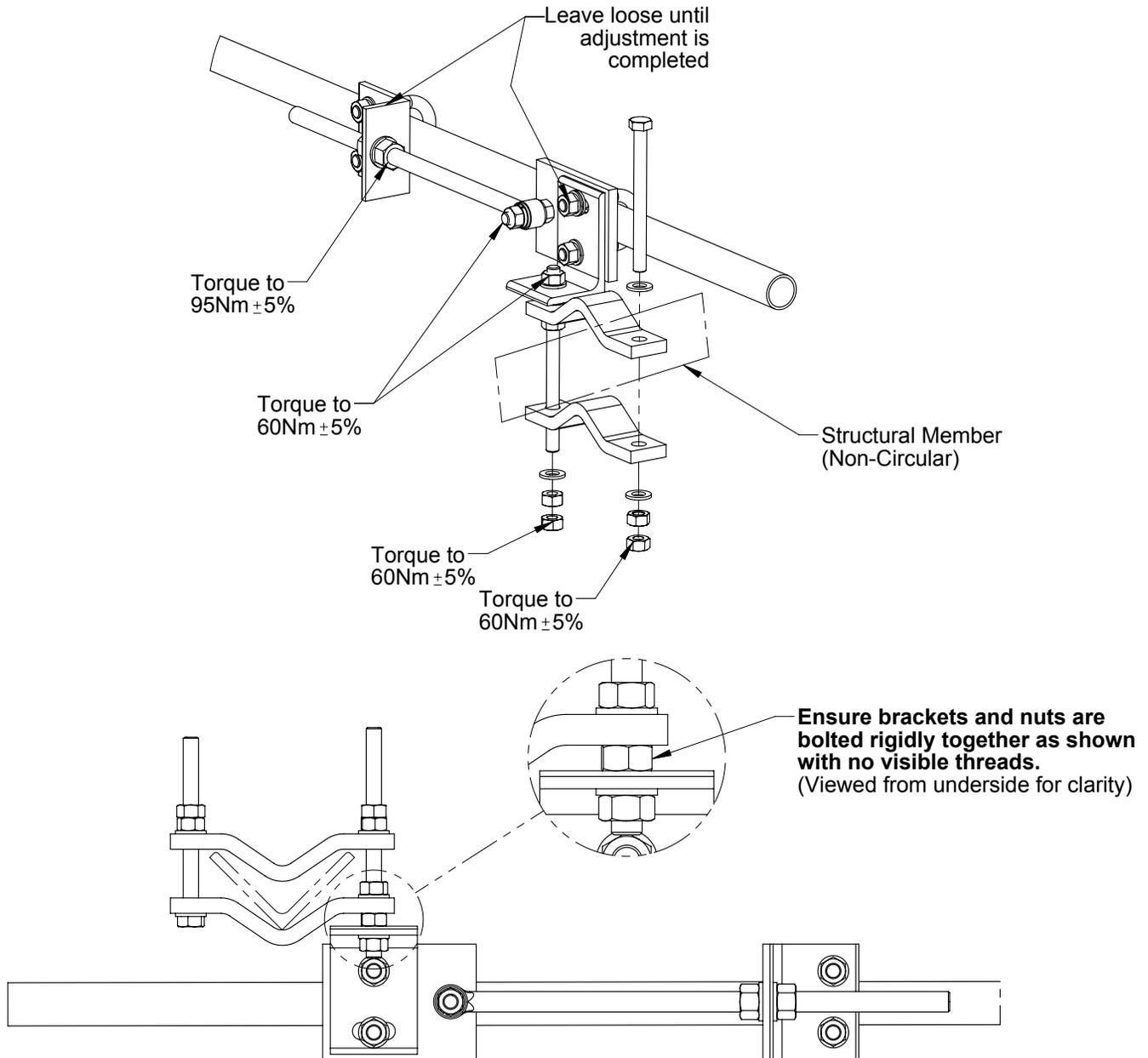
**ATTACHMENT TO CIRCULAR STRUCTURAL MEMBERS.**



**Clamps must be attached to a circular structural member (Dia 48mm - 120mm) capable of supporting 7694N in accordance with TIA-222.**

**The maximum allowable relative deflection between the antenna mounting pipe and the strut attachment point must be less than 2mm at survival wind speed of the antenna.**

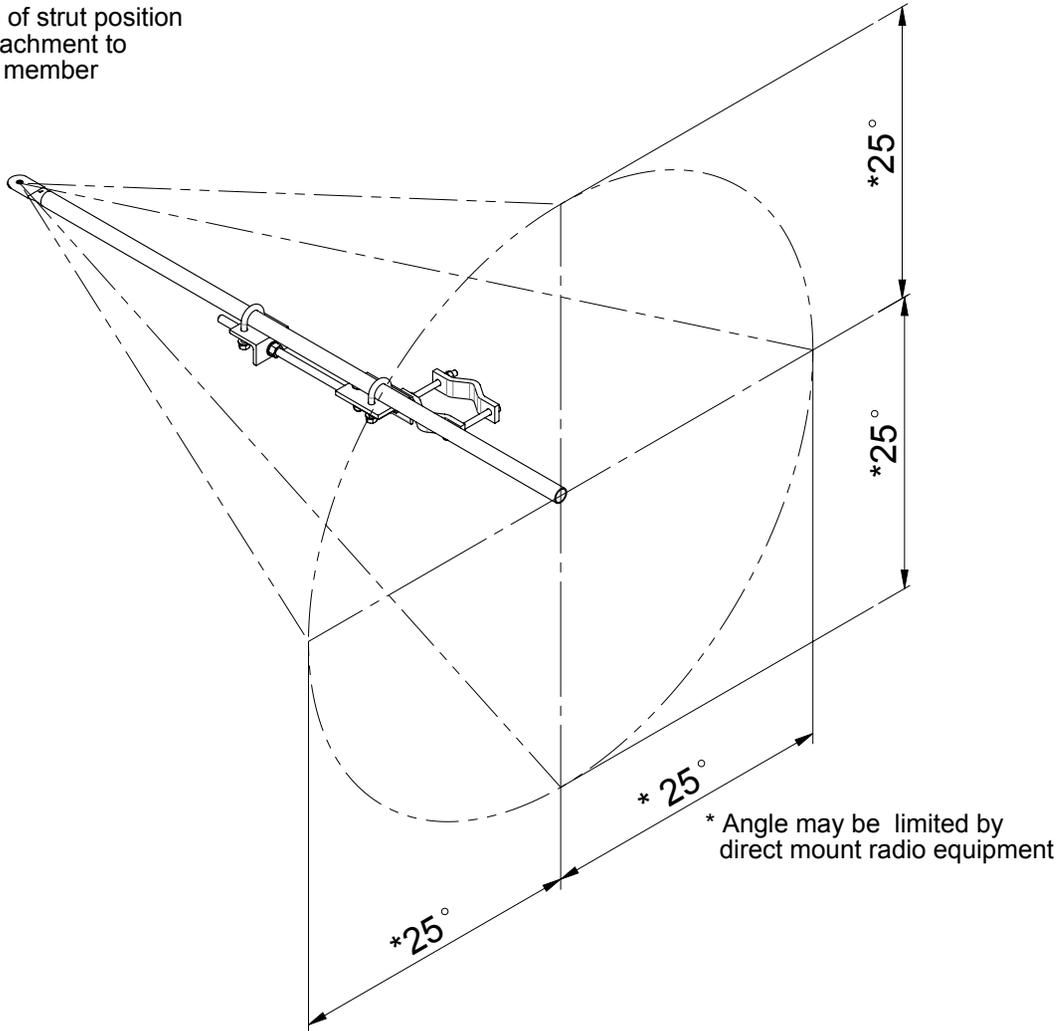
**ATTACHMENT TO NON-CIRCULAR STRUCTURAL MEMBERS.**



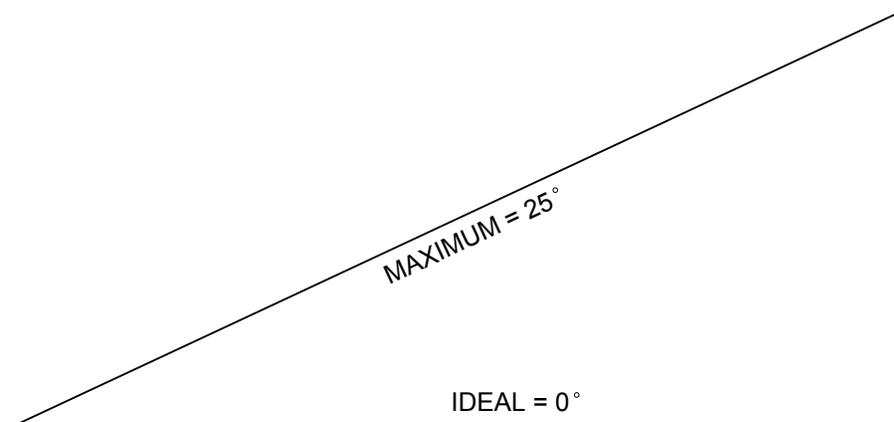
**Clamps must be attached to a non-circular structural member capable of supporting 7694N in accordance with TIA-222.**

**The maximum allowable relative deflection between the antenna mounting pipe and the strut attachment point must be less than 2mm at survival wind speed of the antenna.**

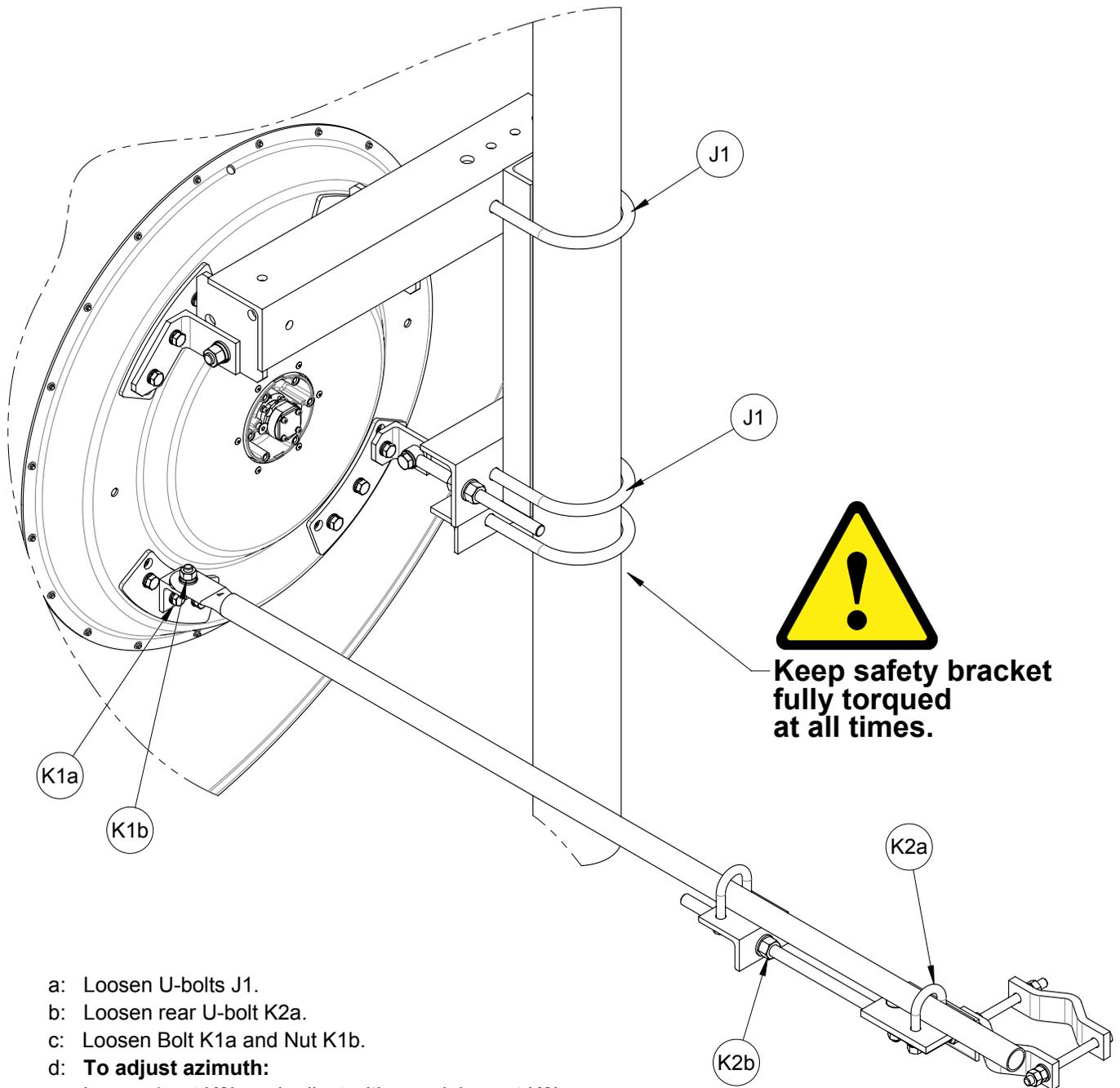
Limits of strut position  
for attachment to  
tower member



**View show below is intended as a guide for strut alignment.  
Strut must be attached to appropriate structural mounting point.  
Strut angle must not exceed maximum specified.  
Failure to install the strut as instructed may result in mechanical failure of the antenna.**



**Azimuth Adjustment**

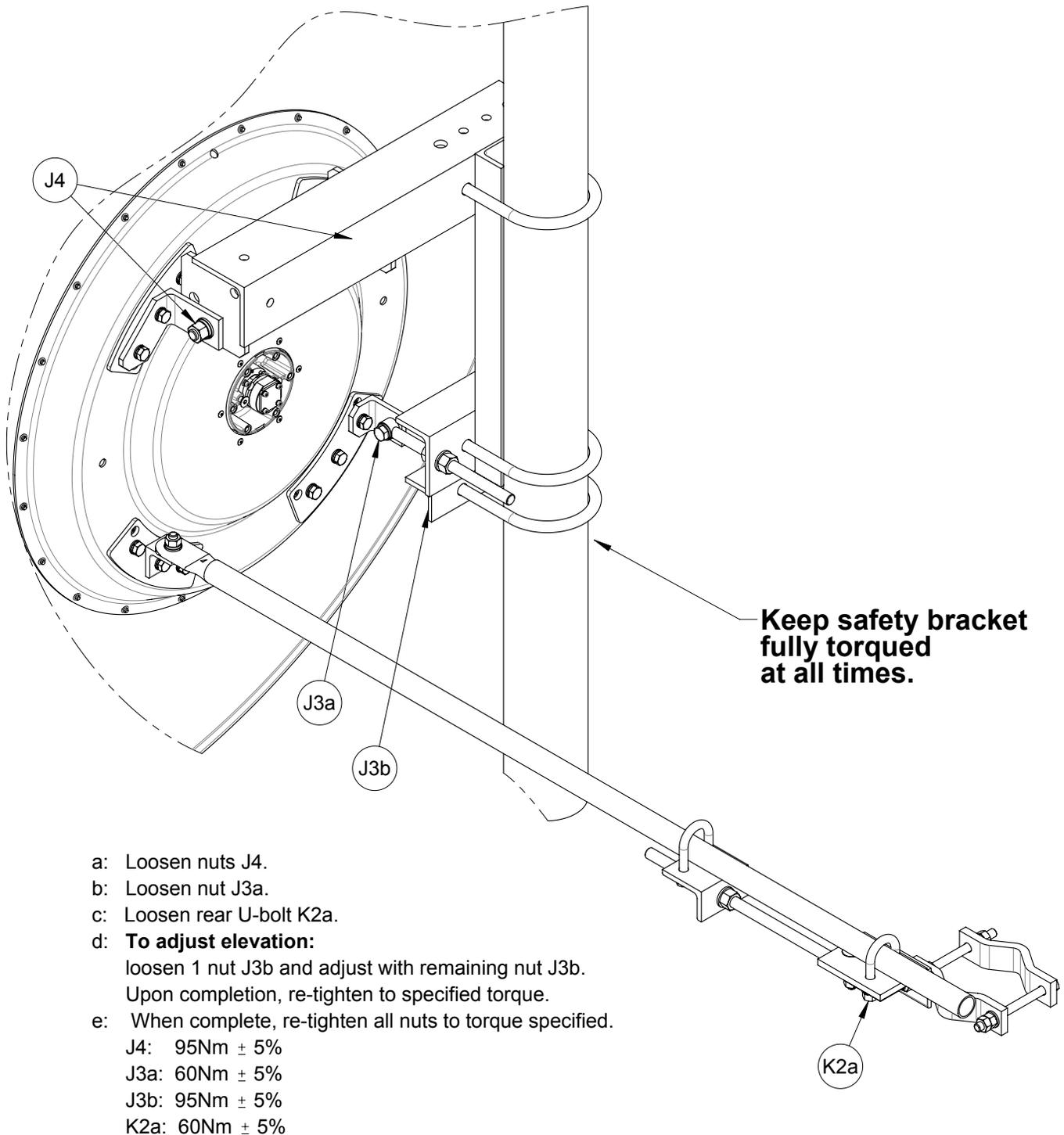


**Keep safety bracket  
fully torqued  
at all times.**

- a: Loosen U-bolts J1.
- b: Loosen rear U-bolt K2a.
- c: Loosen Bolt K1a and Nut K1b.
- d: **To adjust azimuth:**  
loosen 1 nut K2b and adjust with remaining nut K2b.  
Upon completion, re-tighten to specified torque.
- e: When complete, re-tighten all nuts to torque specified.

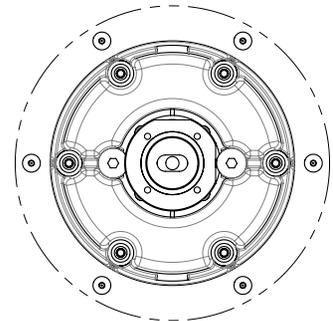
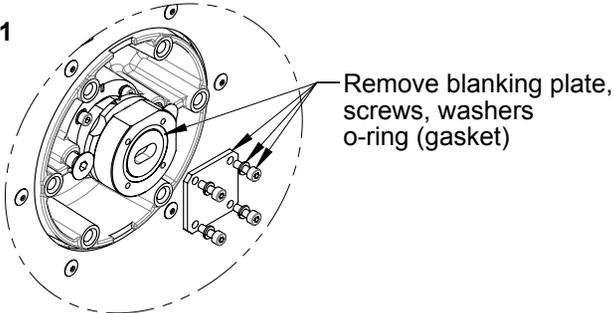
- J1: 95Nm ± 5%
- K1a: 38Nm ± 5%
- K1b: 60Nm ± 5%
- K2a: 60Nm ± 5%
- K2b: 95Nm ± 5%

**Elevation Adjustment**



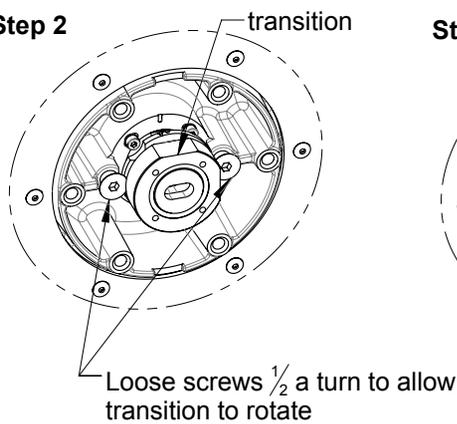
**Single polarisation**

**Step 1**

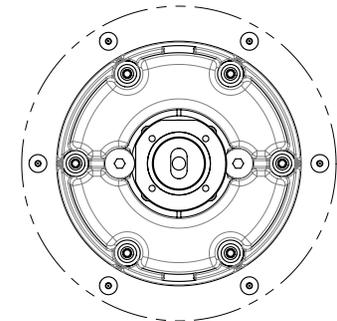
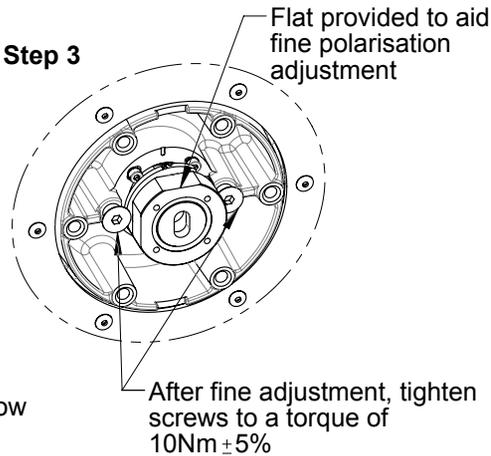


**Vertical polarisation**

**Step 2**

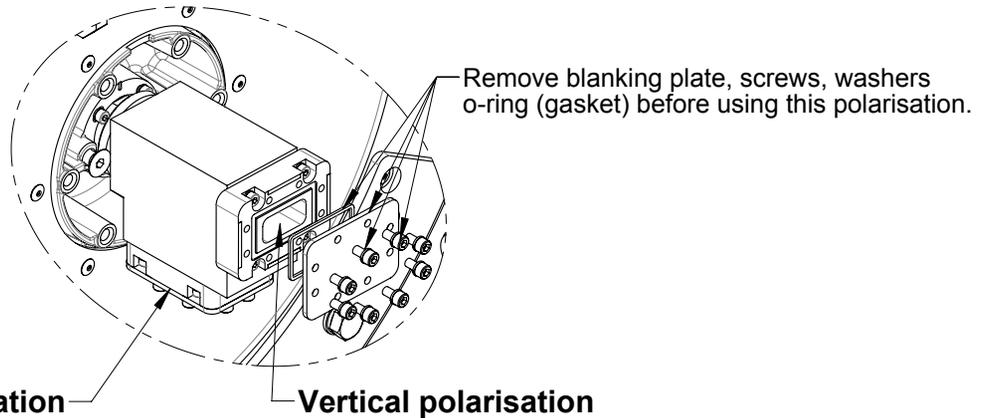


**Step 3**



**Horizontal polarisation**

**Dual polarisation**

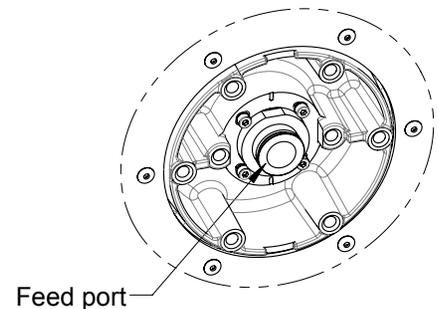


Remove blanking plate, screws, washers o-ring (gasket) before using this polarisation.

**For OEM direct mount radio integration installation of integration unit see separated INSTALLATION INSTRUCTIONS**



**Prior to assembly of integration unit, remove any tape or protective cap from feed port**



## 7 General Information

### 7.1 General maintenance

The antenna is designed such that minimal maintenance is required. Other than strong wind conditions the unit is not subject to abnormal forces and regular inspection and maintenance should ensure trouble free operation.

### 7.2 Cleaning of Antenna

To clean the antenna, use a diluted solution of water and mild detergent. Organic solvents should not be used.