

6590000 MAST ARM, SPAN WIRE, AND POLE MOUNTING ASSEMBLIES  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (5-31-17, Internal)

Section 659-2.5.3 will affect the APL. The submitter will need to meet with me to work out how this will be implemented on the APL. It will require the creation of additional categories and the determination of acceptance.

Response: No change needed to the APL. This revision will require no new APL product categories.

No change made.

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Dan Hurtado  
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Comments: (5-31-17, Internal)

1. Are these referring to the same thing or, are they different components? If they are the same, need to use consistent nomenclature.

659-2.4.5 refers to a “continued arm support tube”

659-2.4.6 refers to a “continued arm with support tube”

659-2.4.7 refers to a “continuous arm with support tube”

659-2.4.7.4 refers to a “continuous arm support tube”

Response: Change will be made to make this term consistent.

Changes made.

Comments: (6-12-17)

2. Numerous instances of highlighted text: Where is this defined? Will this be in the Index drawings?

2 inch schedule 40 pipe. The bottom portion of the tube that supports the vertical load of the hanging device must be threaded using National Pipe Thread Taper (NPT), National Pipe Thread Straight (NPS), or be non-threaded U-bolt secured, or a continued arm support tube. Threaded support tubes that are fully slotted must have an aluminum insert in the 3/4 inch slot extending a minimum of 1/2 inch beyond the threaded section. To provide easy installation of wiring, the

Response: The continuous arm support tube is defined in 659-2.4.7.4. Additional requirements/drawings may be developed once we become more familiar with this type of support tube.

No changes made.

3. 659-2.1 As written, all traffic signals must have a 72-tooth connection. The proposed revision "when utilized for alignment" does not change that.

0.090 inches thick unless otherwise specified in this Section.¶  
→ → Surfaces that mate to vehicular and pedestrian traffic signals must have a standard circular 72 tooth serration connection (two inch I.D.) capable, when utilized for alignment of providing positive positioning and alignment of the signal in 5 degree increments. The serrated teeth must be clean and sharp and at least 1/8 inch wide and 3/64 inch deep. The connection between the teeth of the signal and the upper bracket must be weather resistant.¶

Response: Changes will be made to properly specify this requirement.  
Changes made.

4. Numerous instances of replacing “aluminum” with “metal”: The ASTM references (B26 and B108) are for aluminum only. Changing this to “metal” doesn’t work without providing a different reference.

Response: Changes will be made to refer to an appropriate ASTM to cover the addition of stainless steel.  
Changes made.

5. Why not aluminum? Is this being written to accommodate a specific manufacturer?

→ → → 659-2.4.7.4 Continuous Arm Support Tube: The continuous arm support tube must be of single form construction to support the weight of any combination of signal indicators with all accessories such as backplates and visors. Metal continuous support tubes must be manufactured in either Type 316 or 304 stainless steel, and have a minimum ultimate tensile strength of 75 ksi and a minimum yield strength of 30 ksi in accordance with ASTM A554.¶

Response: Change will be made to allow aluminum as well as stainless steel.  
Change made.

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Zachary Morris  
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Comments: (6-7-17)

1. For specifications changed from requiring “aluminum” to “metal” there are no changes proposed to the ASTM specifications called out for the material. So, even though the revisions allow for metal components, the ASTM specifications called out still imply that the material needs to be aluminum. If the intent is to allow materials other than aluminum, I suggest changing the references to ASTM specifications to reflect that or to remove the references completely.

Response: Change will be made to refer to an appropriate ASTM to cover the addition of stainless steel.  
Change made.

2. There is a typo for the elongation of 535 aluminum alloy in section 659-2.5.5 for pivotal adjustable hangers. Elongation is typed as 90%, which should be 9% according to the material callout in the previous section for standard adjustable hangers.

Response: This will be corrected.

Change made.

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Cheryl Hudson  
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Comments: (6-8-17)

659-2 (multiple sub-sections) replace "aluminum" with "metal" but each sub-section refers to ASTM standards for aluminum; what is the reason for the change?

Response: Change will be made to refer to an appropriate ASTM to cover the addition of stainless steel. Reason for change is submittal of new, non-aluminum components.

Change made.

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Debbie Toole  
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Comments: (6-12-17)

Why are you removing these requirements?

659-2.4.5 ~~Gusseted~~ Support Tube: ~~Gusseted~~Support tubes used in mast arm mounting assemblies must be ~~extruded aluminum~~metal having a minimum yield strength of 31 ksi and a minimum ultimate tensile strength of 35 ksi as per ASTM B221. A gusseted hollow design ~~must~~may be used to provide for the routing of necessary wiring. The tube cross-sectional

Response: Gusseted tube not removed. This revision only adds the allowance of other non-gusseted materials as long as they meet the material strength requirements.

No change made.

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Mike Britten  
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Comments: (6-19-17)

659-2.4 and various places throughout the document "Aluminum" was replaced by Metal. ASTM B26 and ASTM B108 are reference "in accordance with" in each of these revisions. These ASTM documents refer to Aluminum.

Response: Change will be made to refer to an appropriate ASTM to cover the addition of stainless steel.

Change made.

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Mel Wilton  
815-229-1600

Comments: (6-22-17)

**1. 659-2.1 General Hardware** (studs, bolts and u-bolts) must be a minimum of 5/16" diameter.  
Issue: 1/4" set screws is mentioned several times in later portions of specifications. Our cover plate is attached by a 1/4" pan head screw.

Response: This was not changed in this revision. 5/16 inch must be provided "unless otherwise specified" in the spec. We do not consider set screws to be studs, bolts or U-bolts. The 1/4 pan head screw will continue to be acceptable for the cover plate.  
No change made.

**2. 659-2.1 General** SAE Grade 8 bolts and nuts are also acceptable  
Issue: Grade 8 is not available in stainless steel; can all hardware be grade 8?

Response: This was not changed during this revision. Grade 8 bolts, which are typically used for the larger fasteners, has been allowed since the 2014 revision of this spec.  
No change made.

**3. 659-2.4 Mast Arm Mounting Assemblies** Cable clamp mechanism  
Issue: Not sure what this refers to. Does this apply to the cable ends or a tie back mechanism for the excess cable? Neither intent would not be needed for banding style applications

Response: Change will be made to clarify the cable clamp mechanism is for cable clamps only. This is the mechanism that secures the cable to the clamp/mast arm.  
Change made.

**4. 659-2.4.2 Swivel** Configured to permit the support tube to pivot 360 degrees  
Issue: Our swivel provides 22 degrees of positive and negative adjustment from both the vertical and horizontal mounting positions

Response: Change will be made to clarify intent.  
Change made.

**5. 659-2.8 Miscellaneous Mounting Components** Mounting assemblies not approved with a specific primary device (such as a camera, detector, etc.) must be approved and listed separately on the APL.

Issue: We have been told several times that components included in complete product listing do not need to be listed separately. Do we need to submit items that can be used in alternate applications such as clamp kits for standalone product listings?

Response: This requirement is being misinterpreted. Components within an assembly are not required to have a separate approval number. What is meant is, if a camera is submitted with a mount, it can be approved with the mount. If the camera is not submitted with a mount, the mount must be approved separately or you must use a mount already listed on the APL.  
No change made.

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Bob Townsend  
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Comments: (6-29-17)

1. 659-2.4.2 Swivel: after “in accordance with ASTM B26 or ASTM B108” add “or ASTM A240”

Response: Change will be made to refer to an appropriate ASTM to cover the addition of stainless steel.  
Change made.

2. 659-2.4.4 Cable Clamp Mechanism: after “per ASTM B26 or 30 ksi per ASTM B221” add “or ASTM A240”

Response: Change will be made to refer to an appropriate ASTM to cover the addition of stainless steel.  
Change made.

3. 659-2.5.1 Span Wire Clamp: change “Span wire clamps must be aluminum alloy with a minimum ultimate tensile strength of” to “Metal span wire clamps must have a minimum ultimate tensile strength of”

Response: Change will be made to allow aluminum and stainless steel span wire clamps and to refer to an appropriate ASTM to cover the addition of stainless steel.  
Change made.

4. 659-2.5.1 Span Wire Clamp: After “in accordance with ASTM B28 or ASTM B108” add “or ASTM A240”

Response: Change will be made to refer to an appropriate ASTM to cover the addition of stainless steel.  
Change made.

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