

Spring Clips and Cushion Selection for
Metal Tube Support, Metric

FSC 5340

RATIONALE

MA1806 has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

1.1 Type:

Spring clips (inner and outer) and associated PTFE single split cushion designed to support metric metal tubes (or inch tubes, using the inch series cushion).

1.2 Application:

Primarily for use in aerospace propulsion systems, and suitable for use up to the maximum limitations of the cushion (e.g., 260°C max).

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of aerospace standards (MA and AS) shall apply.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

MA3294	Clip - Spring, Tension, Outer, 5.5 mm Bolt Hole, AMS 5525, Metric
MA3295	Clip - Spring, Tension, Inner, 5.5 mm Bolt Hole, AMS 5525, Metric
MA3296	Cushion - Tube Clamp Support, PTFE, Metric
AS3298	Cushion - Tube Clamp Support, PTFE, Inch
MA3393	Clip - Spring, Tension, Outer, 6.7 mm Bolt Hole, AMS 5525, Metric
MA3394	Clip - Spring, Tension, Inner, 6.7 mm Bolt Hole, AMS 5525, Metric

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3. REQUIREMENTS:

3.1 Parts to be Assembled:

Figure 1 shows a tube supported by a split cushion and spring clips mounted to a bracket; this being the preferred method of attachment. This method avoids loosening a structural joint for tube removal or placing holes in highly stressed areas, such as split-line flanges.

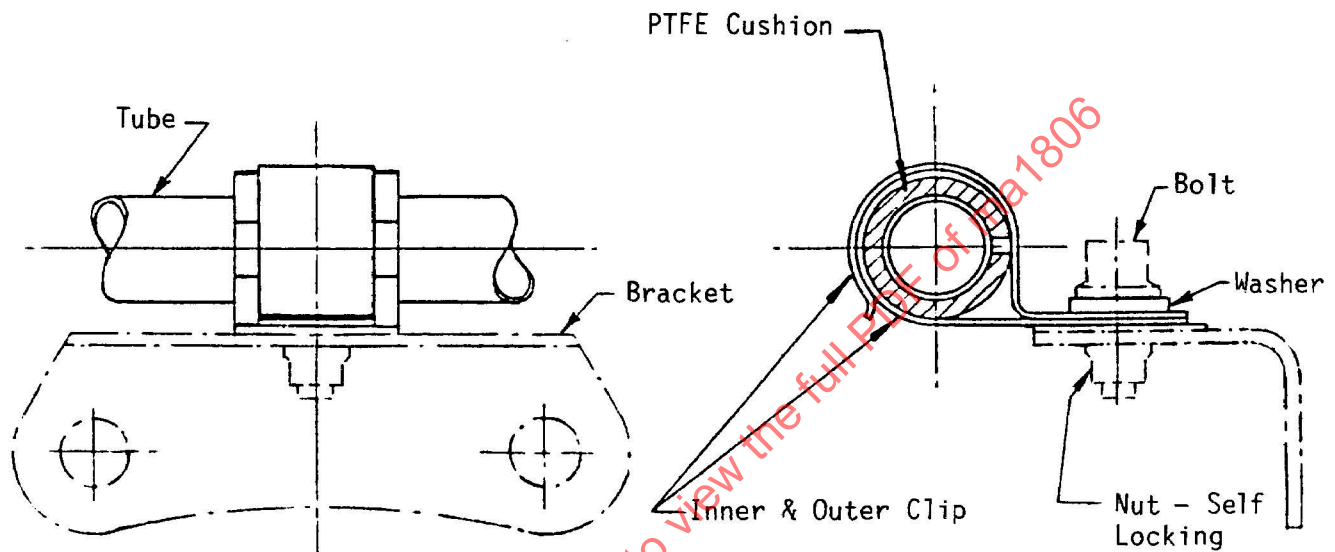


FIGURE 1 - Tube Supported by a Split Cushion and Spring Clips Mounted to a Bracket

3.1.1 The part number of the clips and cushions are tabulated in Table 1.

3.2 Design Features:

The PTFE cushion is split to allow it to be spread open and assembled onto the tube, and the clips are then sprung into position on the cushion as shown in Figure 1.

3.2.1 The inner clip half has an elongated hole to provide positional adjustment and to accommodate any mismatch with the outer clip which has a round bolt clearance hole.

3.2.2 Alternative clip standards suitable for use with 5 mm diameter and 6 mm diameter fasteners are provided for tubing ranging from 3.2 to 40 mm outside diameter (or inch tubes ranging from 0.125 to 1.500 inch outside diameter, using the inch series cushion).

3.2.3 The preferred method of fastening is to use a self-locking nut and bolt.