

FED. SUPPLY CLASS

53GP

**FOREWORD:**

This standard sets forth a standard test method to determine and evaluate sheet pull-up capabilities of blind fasteners.

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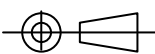
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① COMPLETELY REVISED

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MIL-STD-1312-30.  
DESIGNATION FOR THIS TEST METHOD REMAINS MIL-STD-1312-30.

|                                          |                                                                                     |                                                                                              |                                                               |
|------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| THIRD<br>ANGLE<br>PROJECTION             |  | CUSTODIAN<br><br>NATIONAL AEROSPACE STANDARDS COMMITTEE                                      | REVISION<br><br><b>1</b>                                      |
| PROCUREMENT<br>SPECIFICATION<br><br>NONE |                                                                                     | TITLE<br><br><b>FASTENER TEST METHODS<br/>METHOD 30<br/>SHEET PULL-UP OF BLIND FASTENERS</b> | CLASSIFICATION<br>STANDARD PRACTICE<br><br><b>NAS 1312-30</b> |



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## 1. SCOPE

- 1.1 Applicability. This method covers the procedures and equipment to be used for evaluating the sheet pull-up capability of blind fasteners at room temperature.

## 2. REFERENCED DOCUMENTS

Not applicable.

## 3. DEFINITIONS

Not applicable.

## 4. GENERAL REQUIREMENTS

### 4.1 Test apparatus

- 4.1.1 Low load force dynamometer. Low load force dynamometer or equivalent with an accuracy within  $\pm 1$  percent of the full range (e.g. Dillion Force Gauge Model X or equivalent). See Figures 2 and 3 for a typical calibration set up.

- 4.1.2 Testing machine. Universal test machine or other load indicating devices.

### 4.2 Test specimen

- 4.2.1 Configuration. The specimen configuration shall be as shown in Figure 1 or Figure 2. Figure 2 specimen shall be used when fastener requires an "end load" to maintain installation tool contact with manufactured head of fastener.

- 4.2.1.1 Material. The specimen material shall be as specified by procuring activity to suit requirements of specific fastener.

- 4.2.1.2 Top sheet. The top sheet shall be a minimum of .020 inches thicker than the depth of the countersink for flush head fasteners.

- 4.2.2 Holes. The fastener hole shall be match-drilled perpendicular to the sheet surface within one (1) degree. The edges of the hole shall be deburred by using a flat deburr tool, stone or equivalent to ensure a sharp edge. The edges shall not be chamfered, radiused or broken but must remain sharp. When countersinking is required, the countersink shall be concentric with the hole within .002 FIM (Full Indicator Movement) and the depth shall be such that the installed fastener is flush within  $+.002, -.005$  inches. In cases where the top sheet thickness cannot be adjusted to accommodate the various fastener grips, a spacer (washer) may be inserted between the manufactured head of the fastener and the top sheet. The spacer diameter at the point of contact with the top sheet shall be equal to the bearing diameter of the fastener head ( $+.010/-0.000$ ) and be similar to the material of the specimen. The tests shall be performed in both minimum and maximum recommended hole size within limits of  $\pm .0005$  inches.

## 5. DETAIL REQUIREMENTS

### 5.1 Test procedure

- 5.1.1 Installation. The fastener shall be installed in the test specimen according to the fastener manufacturer's recommended installation procedure.

- 5.1.2 Gap measurement. The gap closure shall be verified by the use of a .002 inch feeler gage. If the feeler gage tends to stick or wedge between the sheets when attempting to contact the fastener shank, the gap will be considered closed. If the feeler gage contacts the shank without interference, progressively thicker feeler gages may be used to determine the amount of gap remaining.

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REVISION

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NAS Documents

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