



Strain Gage Loads Calibration Testing of the Active Aeroelastic Wing FA-18 Aircraft

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Bibliogov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 22 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. This report describes strain-gage calibration loading through the application of known loads of the Active Aeroelastic Wing FA-18 airplane. The primary goal of this test is to produce a database suitable for deriving load equations for left and right wing root and fold shear; bending moment; torque; and all eight wing control-surface hinge moments. A secondary goal is to produce a database of wing deflections measured by string potentiometers and the onboard flight deflection measurement system. Another goal is to produce strain-gage data through both the laboratory data acquisition system and the onboard aircraft data system as a check of the aircraft system. Thirty-two hydraulic jacks have applied loads through whiffletrees to 104 tension-compression load pads bonded to the lower wing surfaces. The load pads covered approximately 60 percent of the lower wing surface. A series of 72 load cases has been performed, including single-point, double-point, and distributed load cases. Applied loads have reached 70 percent of the flight limit load. Maximum wingtip deflection has reached nearly 16 in. This item ships from La Vergne, TN. Paperback.



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