

Restraint of Leather Seat Cushions During Testing

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Federal Aviation
Administration



Use of Wires in Restraining Leather Seats

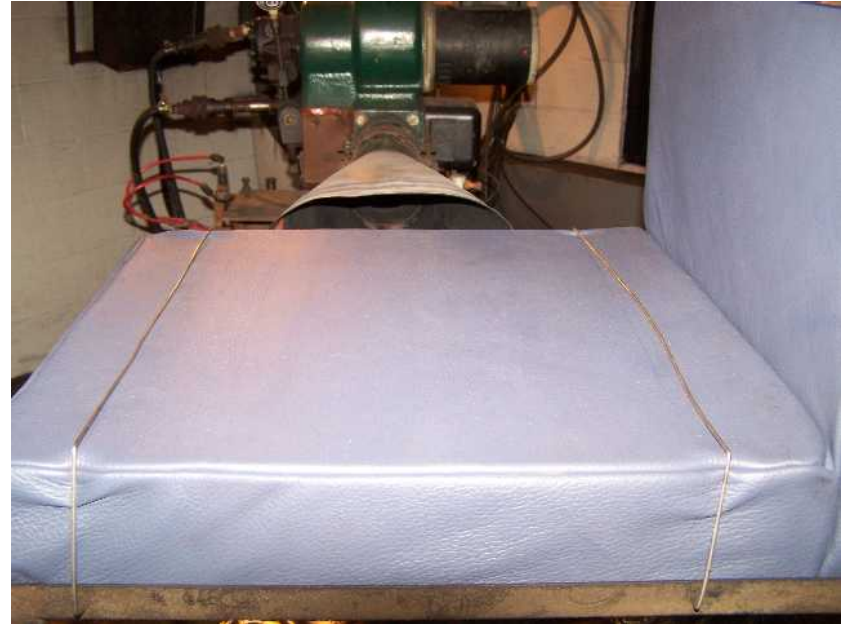
Survey of 6 labs in the United States:

Lab A	<ul style="list-style-type: none">• Two Wires on the Vertical Cushion• No Wire on the Horizontal Cushion
Lab B	<ul style="list-style-type: none">• Two Wires on the Vertical Cushion• Two Wires on the Horizontal Cushion• More wires added if two are insufficient
Lab C	<ul style="list-style-type: none">• Four Wires on the Vertical Cushion (with Two Wires on the Diagonal)• Three Wires on the Horizontal Cushion (with Two Wires on the Diagonal)
Lab D	<ul style="list-style-type: none">• Three Wires on the Vertical Cushion• Four Wires on the Horizontal Cushion (with Two Wires on the Diagonal)
Lab E	<ul style="list-style-type: none">• Two Wires on the Vertical Cushion• Two Wires on the Horizontal Cushion
Lab F	<ul style="list-style-type: none">• Two Wires on the Vertical Cushion• Two Wires on the Horizontal Cushion

Use of Wires in Restraining Leather Seats *Actual Two Horz. & Two Vert. Configurations:*



View 1 of 4



View 2 of 4

Use of Wires in Restraining Leather Seats *Actual Two Horz. & Two Vert. Configurations:*



View 3 of 4



View 4 of 4

Use of Wires in Restraining Leather Seats *Actual Four Horz. (with two on the diagonal) & Three Vert. Configurations:*



View 1 of 3



View 2 of 3

Use of Wires in Restraining Leather Seats *Actual Four Horz. (with two on the diagonal) & Three Vert. Configurations:*



View 3 of 3

Testing done by CAAC



**Three Wires around
the vertical cushion
&
Three Wires around
the Horizontal
cushion**

15.6% Weight Loss

Testing done by CAAC



**Three Wires around
the vertical cushion
&
Four Wires around
the Horizontal
cushion**

6.3% Weight Loss

Use of Wires in Restraining Test Cushions:

- Chapter 7 Supplement (7.3.5) discusses the use of one wire in securing the vertical seat cushion to the specimen frame.
- The survey of labs above shows that multiple wires are being used not only on the vertical cushion, but the horizontal cushion as well.
- Full-scale testing of both restrained and unrestrained leather seats is being considered at the Tech Center.

Aircraft Seat Working Group ...

- **Discussion of K-Type Thermocouples**
- **Any problems?**

