RESTRAINT OF LEATHER SEAT CUSHIONS DURING APPENDIX (F) SEAT CUSHION (FIRE BLOCK) TESTING
BACKGROUND ON CUSHION TESTING

• SURVIVABLE CRASHES - FATALITY FROM FIRES
• 1986 REGULATION BECOMES EFFECTIVE
• POSITIVE RESULTS FROM RULE
FIRE BLOCKING WITH FABRIC
MATERIALS EVOLUTION

• FIRE HARD FOAM
• VARIABILITY OF RESULTS WITH LEATHER
• FULL CABIN USE OF LEATHER IN TRANSPORT TYPE AIRCRAFT
• “LEEWAY” IN RULES AND GUIDANCE ON FASTENING – EFFECT ON PASS OR FAIL
LEATHER – “GOOD” PERFORMANCE
LEATHER – "POOR" PERFORMANCE
OBJECTIVES

• REVIEW OF AVAILABLE INFORMATION ON THE SUBJECT
• SURVEY - REAL WORLD FASTENING METHODS
• SURVEY - LAB FASTENING METHODS
• RESEARCH – LEATHER OR TOP-COAT SHRINKS?
• EXPERIMENT – VELCRO FASTENING
• PROPOSE “PREFERRED” FASTENING TO FAA
• ROUND ROBIN, “PREFERRED METHOD”
REVIEW OF AVAILABLE INFORMATION

• GOOGLE TOPIC:
• LEATHER RESTRAINTS
• VIDEO:
REAL WORLD FASTENING

EXPRESS JET – SINGLE CLASS
REAL WORLD FASTENING

DELTA - FIRST
REAL WORLD FASTENING

DELTA - COACH
REAL WORLD FASTENING

USAIRWAYS - FIRST
REAL WORLD FASTENING

USAIRWAYS - COACH
REAL WORLD FASTENING

CONTINENTAL - FIRST
REAL WORLD FASTENING

B/E AEROSPACE
REAL WORLD FASTENING

B/E AEROSPACE
REAL WORLD FASTENING

B/E AEROSPACE
REAL WORLD FASTENING

B/E AEROSPACE
LAB FASTENING METHODS
LAB FASTENING METHODS
LAB FASTENING METHODS
LAB FASTENING METHODS

STEEL WIRES
LAB FASTENING METHODS

Oil Burner Test For Seat Cushions
(Use this sheet for your preferred fixation method of fabric)

Bottom cushion:
-> 3 metallic wires around the cushion

Back cushion:
-> 4 metallic wires around the cushion
-> 2 metallic wires around the upper corners
(Diameter of the wires: 1.5mm)

Vertical center line of the burner

Back sight Back Seat Cushion

Bottom Sight Seat Cushion

Sideview
LAB FASTENING METHODS

Oil Burner Test For Seat Cushions
(Use this sheet for your preferred fixation method of leather)

Backsight Back Seat Cushion

Bottom Sight Seat Cushion

Wire gauge: 3mm
LAB FASTENING METHODS

Oil Burner Test For Seat Cushions
(Use this sheet for your preferred fixation method of leather)

Max 4 wire for seat and 4 wire for back cushion.

Dadojight Back Seat Cushion

457 mm

61 mm

508 mm

455 mm

508 mm

61 mm

Mines Ideal

Dadojight Back Seat Cushion

457 mm

61 mm

Bumom Sight Seat Cushion

Sideview

Sideview
WHAT’S NEXT

• COMPLETE INFO ON HOW LABS FASTEN COVERS (EMAIL – 30 DAYS)
• RESEARCH BURNS (ACCUFLEET + ??, 60 DAYS)
• AGREE ON “PREFERRED METHOD” (EMAIL – 90 DAYS)
• ROUND ROBIN – AFTER NEXT MEETING
QUESTIONS?