RTCA Update

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RTCA Updates

- The Section 26 Draft, Fire, Flammability was sent to Working Group members in early October for their review
- Modified sections of the Fire Test Handbook have replaced the entire Category C: Flammability
- Specifically, procedures that apply to the type of components being tested to DO160 procedures
- The policy of the RTCA/DO160 document is to not make reference to any standard or agency
- Therefore, the applicable test methods from the Handbook were not copied verbatim
- The three tests that are applicable are:
  - Vertical Bunsen burner test
  - Horizontal Bunsen burner test
  - 60 degree Bunsen burner test

RTCA Updates (continued)

- The following table defines which test shall be applied to demonstrate that the equipment complies with flammability requirements:

Components	Method
All materials other than rubber or elastomer parts, wire and cable	Vertical 12 second bunsen burner test
Rubber or elastomer parts	Horizontal bunsen burner test
Wire and cable	60 degree bunsen burner test

RTCA Updates (continued)

- Vertical Bunsen Burner test
  - For discussion: Need further guidance if the parts to be tested are smaller than specified and can not be cut from larger sheet material
- Horizontal Bunsen Burner test
  - For discussion: Need to define burn rate applicable for electronic equipment
- 60 degree Bunsen Burner test
  - For discussion: Need to address specimen length if 30 inches of wire or cable is not available

Small Parts

- Parts/materials which are considered small may be exempt due to their small size and amount because they would not contribute significantly to the propagation of a fire.
- Examples of small parts could be: knobs, handles, rollers, fasteners, clips, grommets, rub strips, pulleys, etc. Further definition is offered below:

Size Relation (Typical Usage)
Fits inside a 76.2 mm x 76.2 mm x 12.7 mm (3" x 3" x .5") or 50.8 mm x 50.8 mm x 50.8 mm (2" x 2" x 2") Box without bending of the part
Smaller than 50.8 mm x 76.2 mm x 1.178 mm (label and / or its adhesive) (2" x 3" x .07")
Smaller than 6.35 mm (0.25") Dia. Sphere (drop of thread lock or Nycote)
Smaller than 101.6 mm x 2.286 mm (4" x .09") dia (lacing tape)

Small Parts (continued)

- Consideration must be given when more than one small part is located in the same proximity with the same or other small parts (one part may ignite the other part) as the combined fuel load may contribute to propagation of a flame, in this case, the above small parts exemption would not apply.
- Small parts exemption does not apply to wire and cable.

Enclosures

- Testing is not necessary on enclosures housing electronic or non-metallic material if:
  - The enclosure is constructed of metal on all sides and has no vent holes(any metal finish or paint/powder coating must meet the 12-second vertical burn test)
  - The enclosure is constructed of metal on five sides and one side is constructed of glass polycarbonate that has met the 12-second vertical burn test and has no vent holes.

Closing Points

- Points listed as “For Discussion” and comments received to date from Working Group Members will be discussed during the Task Group Meeting.