

# Available Burners for propulsion grade fire testing – A review

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**Aircraft Systems Fire Protection Session:** Powerplant testing

## **Abstract:**

The release of AC20-135 Change 1 limits the use of Propane Burners. Currently the FAA, supported by industry, is seeking to develop the Sonic burner as a simpler to use and easier to calibrate burner that offers equivalency with the currently approved Kerosene Burners. The obvious issue is that the list of currently approved burners has not been revised for 40+ year. This results in an inability to find approved burners, which in turn generates an increase in both the variability and number of burners used to perform propulsion grade fire testing.

There is a solution. It should be noted that this is a means of compliance but not the only means of compliance for achieving a calibrated flame.

Resonate Testing has reviewed the historical precedent that resulted in the Modified Carlin 200CRD being no longer available, and concluded that the approved burner definition and conformity can be achieved today, with slight modification to the current off-the-shelf version which can be purchased widely across North America.

The intent is to explain the historical precedent of how the miscommunication occurred regarding historically approved burners and what is required to produce a compliant modified kerosene burner, in place of propane burners.

Please note: Resonate Testing has no financial inducement or relationship with Carlin burners. This presentation is made with the express wish of providing clarity and help to those in the industry who are adding additional kerosene burner capacity or introducing kerosene burners for the first time. The goal is to reduce variability in propulsion grade fire testing.