Proposed Special Condition on Cooktop installation

Applicable to A318-112

Introductory note:

The following Special Condition has been classified as an important Special Condition and as such shall be subject to public consultation, in accordance with EASA Management Board decision 02/04 dated 30 March 2004, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

Statement of Issue

Each cooktop must be designed and installed to minimize any potential threat to the airplane, passengers, and crew. This Special Condition (SC) is issued since there is no specific JAR/CS 25 guidance material. The SC is based upon FAA NPRM 07-13, Special Requirements for Private Use Transport Category Airplanes.

The following special condition criteria define the design requirements to be complied with in addition to the applicable standards of the basis of certification. These criteria address airworthiness issue only and do not include any additional operational limitations.

A318-112 Special Condition D-05

- Cooktop installation -

Considering the specific features of cooktop installed in VIP aircraft, the following special condition criteria define the design requirements to be met. Each cooktop must be designed and installed as follows:

(1) Means, such as conspicuous burner-on indicators, physical barriers, or handholds must be installed to minimize the potential for inadvertent personnel contact with hot surfaces of both the cooktop and cookware. Conditions of turbulence must be considered.

(2) Sufficient design means must be included to restrain cookware while in place on the cooktop, as well as representative contents, e.g., soup, sauces, etc., from the effects of flight loads and turbulence. Restraints must be provided to preclude hazardous movement of cookware and contents. These restraints must accommodate any cookware that is identified for use with the cooktop. Restraints must be designed to be easily utilized and effective in service. The cookware restraint system should also be designed so that it will not be easily disabled, thus rendering it unusable. Placarding must be installed which prohibits the use of cookware that cannot be accommodated by

the restraint system.

(3) Placarding must be installed which prohibits the use of cooktops (i.e., power on any burner) during taxi, takeoff, and landing.

(4) Means must be provided to address the possibility of a fire occurring on or in the immediate vicinity of the cooktop. Two acceptable means of complying with this requirement are as follows:

(a) Placarding must be installed that prohibits any burner from being powered when the cooktop is unattended. (Note: This would prohibit a single person from cooking on the cooktop and intermittently serving food to passengers while any burner is powered.) A fire detector must be installed in the vicinity of the cooktop which provides an audible warning in the passenger cabin, and a fire extinguisher of appropriate size and extinguishing agent must be installed in the immediate vicinity of the cooktop. Access to the extinguisher must not be blocked by a fire on or around the cooktop.

(b) An automatic, thermally activated fire suppression system must be installed to extinguish a fire at the cooktop and immediately adjacent surfaces. The agent used in the system must be an approved total flooding agent suitable for use in an occupied area. The fire suppression system must have a manual override. The automatic activation of the fire suppression system must also automatically shut off power to the cooktop.

(5) The surfaces of the galley surrounding the cooktop, which would be exposed to a fire on the cooktop surface or in cookware on the cooktop, must be constructed of materials that comply with the flammability requirements of Part III of Appendix F to part 25. This requirement is in addition to the flammability requirements typically required of the materials in these galley surfaces. During the selection of these materials, consideration must also be given to ensure that the flammability characteristics of the materials will not be adversely affected by the use of cleaning agents and utensils used to remove cooking stains.

(6) The cooktop must be ventilated with a system independent of the airplane cabin and cargo ventilation system. Procedures and time intervals must be established to inspect and clean or replace the ventilation system to prevent a fire hazard from the accumulation of flammable oils and be included in the instructions for continued airworthiness. The ventilation system ducting must be protected by a flame arrestor. [Note: The applicant may find additional useful information in Society of Automotive Engineers, Aerospace Recommended Practice 85, Rev. E, entitled ``Air Conditioning Systems for Subsonic Airplanes,'' dated August 1, 1991.]

(7) Means must be provided to contain spilled foods or fluids in a manner that will prevent the creation of a slipping hazard to occupants and will not lead to the loss of structural strength due to airplane corrosion.

(8) Cooktop installations must provide adequate space for the user to immediately escape a hazardous cooktop condition.

(9) A means to shut off power to the cooktop must be provided at the galley containing the cooktop and in the cockpit. If additional switches are introduced in the cockpit, revisions to smoke or fire emergency procedures of the Airplane Flight Manual will be required.

(10) If the cooktop is required to have a lid to enclose the cooktop there must be a means to automatically shut off power to the cooktop when the lid is closed.