

INTRODUCTION

For example, let us look at a general specification for turbine engine operating characteristics:

CS 25.939 Turbine engine operating characteristics (See AMC 25.939)

(a) Turbine engine operating characteristics must be investigated in flight to determine that no adverse characteristics (such as stall, surge, or flame-out) are present, to a hazardous degree, during normal and emergency operation within the range of operation limitations of the aeroplane and of the engine. (See AMC 25.939 (a))

(b) Reserved.

(c) The turbine engine air inlet system may not, as a result of air flow distortion during normal operation, cause vibration harmful to the engine. (See AMC 25.939 (c))

From the excerpt, we can see that there are strict criteria that the engine manufacturer has to follow. However, there are what is referred to as AMC (Acceptable Means of Compliance). This allows the manufacturer to *slightly* deviate from the design criteria in order to achieve the final goal. Although CS-25 is for large aircraft, the design criteria for general aviation aircraft is referred to as CS-23 for normal and utility category and CS-27 and CS-29 for small and large rotorcraft (helicopters), respectively¹.

¹ Other specifications that can be accessed directly on the EASA website:
<https://www.easa.europa.eu/document-library/certification-specifications>