

**TABLE 1.**

**Selected Listing of Regulations in 14 CFR part 25  
Related to Flight Crew Human Factors**

| <b>FAR SECTION</b>                             | <b>REQUIREMENT</b><br><i>(In some cases, the content of the subparagraphs has been paraphrased for clarity. Actual Certification Plans should use the exact wording of the regulations.)</i>   |
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| <b>General Human Factors (HF) Requirements</b> |  |
| § 25.771(a)                                    | Each pilot compartment and its equipment must allow the minimum flight crew to perform their duties without unreasonable concentration or fatigue.   |
| § 25.771(e)                                    | Vibration and noise characteristics of cockpit equipment may not interfere with safe operation of the airplane.  |
| § 25.773(a)(1)                                 | Each pilot compartment must be arranged to give the pilots sufficiently extensive, clear, and undistorted view, to enable them to safely perform any maneuvers within the operating limitations of the airplane, including takeoff, approach, and landing.   |
| § 25.773(a)(2)                                 | Each pilot compartment must be free of glare and reflections that could interfere with the normal duties of the minimum flight crew.   |
| § 25.777(a)                                    | Each cockpit control must be located to provide convenient operation and to prevent confusion and inadvertent operation.   |
| § 25.777(c)                                    | The controls must be located and arranged, with respect to the pilot's seats, so that there is full and unrestricted movement of each control without interference from the cockpit structure or the clothing of the minimum flight crew when any member of this flight crew, from 5'2" to 6'3" in height, is seated with the seat belt and shoulder harness fastened. |
| § 25.1301(a)                                   | Each item of installed equipment must be of a kind and design appropriate to its intended function.  |
| § 25.1309(b)(3)                                | . . . Systems, controls, and associated monitoring and warning means must be designed to minimize crew errors that could create additional hazards.  |
| § 25.1321(a)                                   | . . . Each flight, navigation, and powerplant instrument for use by any pilot must be plainly visible to him from his station with the minimum practicable deviation from his normal position and line of vision when he is looking forward along the flight path.   |
| § 25.1321(e)                                   | If a visual indicator is provided to indicate malfunction of an instrument, it must be effective under all probable cockpit lighting conditions.   |

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| § 25.1523                                   | The minimum flight crew must be established so that it is sufficient for safe operation, considering (a) the workload on individual crewmembers; (b) the accessibility and ease of operation of necessary controls by the appropriate crewmember; and (c) the kind of operation authorized under § 25.1525. The criteria used in making the determinations required by this section are set forth in Appendix D.  |
| § 25.1543(b)                                | Each instrument marking must be clearly visible to the appropriate crewmember.  |
| <b>System-Specific HF Requirements</b>      |   |
| § 25.785(g)                                 | Each seat at a flight deck station must have a restraint system... that permits the flight deck occupant, when seated with the restraint system fastened, to perform all of the occupant's necessary flight deck functions.   |
| § 25.785(l)                                 | The forward observer's seat must be shown to be suitable for use in conducting the necessary enroute inspections.   |
| § 25.1141(a)                                | Powerplant controls: Each control must be located so that it cannot be inadvertently operated by persons entering, leaving, or moving normally in the cockpit.  |
| § 25.1357(d)                                | If the ability to reset a circuit breaker or replace a fuse is essential to safety in flight, that circuit breaker or fuse must be located and identified so that it can be readily reset or replaced in flight.  |
| § 25.1381(a)(2)                             | The instrument lights must be installed so that (ii) no objectionable reflections are visible to the pilot.   |
| <b>Specific Crew Interface Requirements</b> |   |
| § 25.773(b)(2)                              | The first pilot must have a window that is openable ... and gives sufficient protection from the elements against impairment of the pilot's vision.   |
| § 25.1322                                   | <p>If warning, caution, or advisory lights are installed in the cockpit, they must, unless otherwise approved by the Administrator, be-</p> <ul style="list-style-type: none"> <li>(a) Red, for warning lights (lights indicating a hazard which may require immediate corrective action);</li> <li>(b) Amber, for caution lights (lights indicating the possible need for future corrective action);</li> <li>(c) Green for safe operation lights; and</li> <li>(d) Any other color, including white, for lights not described in paragraphs (a) through (c) of this section, provided the color differs sufficiently from the colors prescribed in paragraphs (a) through (c) of this section to avoid possible confusion.</li> </ul> |