

(2) As used with respect to the certification of aircraft, means those aircraft which are similar in design. Examples include: DC-7 and DC-7C; 1049G and 1049H; and F-27 and F-27F.

(3) As used with respect to the certification of aircraft engines means those engines which are similar in design. For example, JT8D and JT8D-7 are engines of the same type, and JT9D-3A and JT9D-7 are engines of the same type.

*United States*, in a geographical sense, means (1) the States, the District of Columbia, Puerto Rico, and the possessions, including the territorial waters, and (2) the airspace of those areas.

*United States air carrier* means a citizen of the United States who undertakes directly by lease, or other arrangement, to engage in air transportation.

*VFR over-the-top*, with respect to the operation of aircraft, means the operation of an aircraft over-the-top under VFR when it is not being operated on an IFR flight plan.

*Warning area*. A warning area is airspace of defined dimensions, extending from 3 nautical miles outward from the coast of the United States, that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both.

*Winglet or tip fin* means an out-of-plane surface extending from a lifting surface. The surface may or may not have control surfaces.

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EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 1.1, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

### § 1.2 Abbreviations and symbols.

In Subchapters A through K of this chapter:

*AGL* means above ground level.  
*ALS* means approach light system.  
*ASR* means airport surveillance radar.  
*ATC* means air traffic control.  
*CAS* means calibrated airspeed.  
*CAT II* means Category II.

*CONSOL* or *CONSOLAN* means a kind of low or medium frequency long range navigational aid.

*DH* means decision height.

*DME* means distance measuring equipment compatible with TACAN.

*EAS* means equivalent airspeed.

*FAA* means Federal Aviation Administration.

*FM* means fan marker.

*GS* means glide slope.

*HIRL* means high-intensity runway light system.

*IAS* means indicated airspeed.

*ICAO* means International Civil Aviation Organization.

*IFR* means instrument flight rules.

*ILS* means instrument landing system.

*IM* means ILS inner marker.

*INT* means intersection.

*LDA* means localizer-type directional aid.

*LFR* means low-frequency radio range.

*LMM* means compass locator at middle marker.

*LOC* means ILS localizer.

*LOM* means compass locator at outer marker.

*M* means mach number.

*MAA* means maximum authorized IFR altitude.

*MALS* means medium intensity approach light system.

*MALSR* means medium intensity approach light system with runway alignment indicator lights.

*MCA* means minimum crossing altitude.

*MDA* means minimum descent altitude.

*MEA* means minimum en route IFR altitude.

*MM* means ILS middle marker.

*MOCA* means minimum obstruction clearance altitude.

*MRA* means minimum reception altitude.

*MSL* means mean sea level.

*NDB(ADF)* means nondirectional beacon (automatic direction finder).

*NOPT* means no procedure turn required.

*OEI* means one engine inoperative.

*OM* means ILS outer marker.

*PAR* means precision approach radar.

*RAIL* means runway alignment indicator light system.

### § 1.3

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*RBN* means radio beacon.  
*RCLM* means runway centerline marking.  
*RCLS* means runway centerline light system.  
*REIL* means runway end identification lights.  
*‘RR’* means low or medium frequency radio range station.  
*RVR* means runway visual range as measured in the touchdown zone area.  
*SALS* means short approach light system.  
*SSALS* means simplified short approach light system.  
*SSALSR* means simplified short approach light system with runway alignment indicator lights.  
*TACAN* means ultra-high frequency tactical air navigational aid.  
*TAS* means true airspeed.  
*TCAS* means a traffic alert and collision avoidance system.  
*TDZL* means touchdown zone lights.  
*TVOR* means very high frequency terminal omnirange station.  
*V<sub>A</sub>* means design maneuvering speed.  
*V<sub>B</sub>* means design speed for maximum gust intensity.  
*V<sub>C</sub>* means design cruising speed.  
*V<sub>D</sub>* means design diving speed.  
*V<sub>DF</sub>/M<sub>DF</sub>* means demonstrated flight diving speed.  
*V<sub>EF</sub>* means the speed at which the critical engine is assumed to fail during takeoff.  
*V<sub>F</sub>* means design flap speed.  
*V<sub>FC</sub>/M<sub>FC</sub>* means maximum speed for stability characteristics.  
*V<sub>FE</sub>* means maximum flap extended speed.  
*V<sub>H</sub>* means maximum speed in level flight with maximum continuous power.  
*V<sub>LE</sub>* means maximum landing gear extended speed.  
*V<sub>LO</sub>* means maximum landing gear operating speed.  
*V<sub>LOF</sub>* means lift-off speed.  
*V<sub>MC</sub>* means minimum control speed with the critical engine inoperative.  
*V<sub>MO</sub>/M<sub>MO</sub>* means maximum operating limit speed.  
*V<sub>MU</sub>* means minimum unstick speed.  
*V<sub>NE</sub>* means never-exceed speed.  
*V<sub>NO</sub>* means maximum structural cruising speed.  
*V<sub>R</sub>* means rotation speed.

*V<sub>S</sub>* means the stalling speed or the minimum steady flight speed at which the airplane is controllable.  
*V<sub>S0</sub>* means the stalling speed or the minimum steady flight speed in the landing configuration.  
*V<sub>S1</sub>* means the stalling speed or the minimum steady flight speed obtained in a specific configuration.  
*V<sub>Toss</sub>* means takeoff safety speed for Category A rotorcraft.  
*V<sub>X</sub>* means speed for best angle of climb.  
*V<sub>Y</sub>* means speed for best rate of climb.  
*V<sub>1</sub>* means the maximum speed in the takeoff at which the pilot must take the first action (e.g., apply brakes, reduce thrust, deploy speed brakes) to stop the airplane within the accelerate-stop distance. *V<sub>1</sub>* also means the minimum speed in the takeoff, following a failure of the critical engine at *V<sub>EF</sub>*, at which the pilot can continue the takeoff and achieve the required height above the takeoff surface within the takeoff distance.  
*V<sub>2</sub>* means takeoff safety speed.  
*V<sub>2</sub> min* means minimum takeoff safety speed.  
*VFR* means visual flight rules.  
*VHF* means very high frequency.  
*VOR* means very high frequency omnirange station.  
*‘ORTAC’* means collocated VOR and TACAN.

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EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 1.2, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

#### § 1.3 Rules of construction.

(a) In Subchapters A through K of this chapter, unless the context requires otherwise:

- (1) Words importing the singular include the plural;
- (2) Words importing the plural include the singular; and
- (3) Words importing the masculine gender include the feminine.

(b) In Subchapters A through K of this chapter, the word:

- (1) *Shall* is used in an imperative sense;
- (2) *May* is used in a permissive sense to state authority or permission to do the act prescribed, and the words “no