

Center of Gravity Limits

Refer to the FAA approved Airbus A350 Model A350-941 U.S. Airplane Flight Manual: STL 35000 (certification reference for FAA TC: 00 V 101 AF941 / C9S issue 4)

Datum

The airplane reference zero datum point is located 210.24 in. (5.34 m) forward of the nose section, 5 in. (.127 m) above the floor reference.

Leveling Means

Quick leveling procedures are provided in the Aircraft Maintenance Manual (AMM), task A350-A-08-21 (see also WBM chapter "CTL-GRD").

Maximum Weights

Variant	000	
	kg	lb
Maximum Take-off Weight, MTOW	268,000	590,838
Maximum Landing Weight, MLW	205,000	451,947
Maximum Zero Fuel Weight, MZFW	192,000	423,287

Minimum Crew

Two (2): Pilot and Co-pilot

Maximum Passenger Seating Capacity

The maximum number of passengers approved for emergency evacuation is:

- 385 for the passenger doors configuration C-A-A-A,
- 330 for the passenger doors configuration C-A-C-A,
- 440 for the passenger doors configuration A-A-A-A.

Further limitations on passenger distribution are contained in Passenger Seat Frame Specification document, ref. 00V252K0005/C91 Issue 4, and must be maintained in order to comply with §§ 25.803(c) and 25.807(e).

Maximum Compartment Weights

Cargo Compartment	Maximum Load	
	kg	lb
Forward	22,000	48,501
Aft	19,000	41,888
Rear (bulk)	3,468	7,646

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual Chapter 1.10 ref. 00 V 080 A0001 / C9S.

Fuel Capacity

Tanks	Usable Fuel			
	Liters	kg	US Gallons	lb
Wing	29,963	23,520	7,915	51,851
Center	81,052	63,625	21,411	140,267
Total	140,978	110,665	37,241	243,971

Maximum Operating Altitude

43,100 feet

Control Surface Movements

Control Surface	Maximum Travel
Aileron	+30° / - 20°
#1,2 Spoilers	+12° / -35°
#3 to 7 Spoilers	+13° / -50°
Aileron Droop	10°
Flaps	37.5°
Slats	27°
Stabilizers	+0.8° / -13.7°
Elevator	+20° / -30°
Rudder	+35° / -35°

Import Requirements

The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the exporting foreign civil airworthiness authority on behalf of the European Community. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to conform with Type Design approved under U.S. Type Certificate No. T00063IB and to be in a condition for safe operation.'

Certification Basis

For the model A350-941 airplane, the certification basis is 14 CFR part 25, effective February 1, 1965, including Amendments 25-1 through 25-129.

Special Conditions:		
Item	Special Condition No.	Subject
1	25-537-SC	Crashworthiness – Emergency Landing Conditions [Docket No. FAA-2013-0892; Special Conditions No. 25-537-SC]
2	25-535-SC	High-Speed Protection System [Docket No. FAA-2013-1001; Special Conditions No. 25-535-SC]
3	25-532-SC	Interaction of Systems and Structures [Docket No. FAA-2013-0894; Special Conditions No. 25-532-SC]
4	25-516-SC	Design Roll Maneuver Requirement [Docket No. FAA-2013-0895; Special Conditions No. 25-516-SC]
5	25-529-SC	Limit Pilot Forces Because of Side Stick Controller [Docket No. FAA-2013-0896; Special Conditions No. 25-529-SC]
6	25-523-SC	Transient Engine Failure Loads [Docket No. FAA-2013-0897; Special Conditions No. 25-523-SC]
7	25-524-SC	Ground Pivoting Loads [Docket No. FAA-2013-0890; Special Conditions. 25-524-SC]
8	25-526-SC	Composite Fuselage In-Flight Fire/Flammability Resistance [Docket No. FAA-2013-0898; Special Condition. No. 25-526-SC]
9	25-459-SC	Flammability Requirements of Aircraft Seats [Docket No. FAA-2012-0325; Special Condition No. 25-459-SC]
10	25-460-SC	Crew Rest Compartments [Docket No. FAA-2012-0343; Special Condition No. 25-460-SC]
11	25-517-SC	Flight Envelope Protection: High Incidence Protection and Alpha Floor Systems [Docket No. FAA-2012-1207; Special Conditions No. 25-517-SC]
12	25-522-SC	Electronic Flight Control System: Control Surface Awareness and Mode Annunciation [Docket No. FAA-2013-0899; Special Conditions No. 25-522-SC]
13	25-540-SC	Flight Envelope Protection: General Limiting Requirements [Docket No. FAA-2013-0900; Special Conditions No. 25-540-SC]
14	25-536-SC	Flight Envelope Protection: High Speed Limiting [Docket No. FAA-2013-0901; Special Conditions No. 25-536-SC]
15	25-521-SC	Flight Envelope Protection: Pitch and Roll Limiting [Docket No. FAA-2013-0902; Special Conditions No. 25-521-SC]
16	25-529-SC	Side Stick Controllers [Docket No. FAA-2013-0896; Special Conditions No. 25-529-SC]

Special Conditions:		
17	25-542-SC	Electronic Flight Control System: Lateral-Directional and Longitudinal Stability and Low Energy Awareness [Docket No. FAA-2013-0904; Special Conditions No. 25-542-SC]
18	25-531-SC	Flight Envelope Protection: Normal Load Factor (g) Limiting [Docket No. FAA-2013-0905; Special Conditions No. 25-531-SC]
19	25-530-SC	Lightning Protection of Fuel-Tank Structure To Prevent Fuel-Tank Vapor Ignition [Docket No. FAA-2013-1002; Special Conditions No. 25-530-SC]
20	25-541-SC	Tire Failure – Debris Penetration or Rupture of Fuel Tank Structure [Docket No. FAA-2013-0907; Special Conditions No. 25-541-SC]
21	25-538-SC	Post-Crash Fire Survivability: Airplane Level of Safety Provided by Composite Fuel Tank Structure [Docket No. FAA-2013-0908; Special Conditions No. 25-538-SC]
22	25-533-SC	Electronic System-Security Protection From Unauthorized External Access [Docket No. FAA-2013-0909; Special Conditions No. 25-533-SC]
23	25-534-SC	Isolation or Protection of the Aircraft Electronic System Security From Unauthorized Internal Access [Docket No. FAA-2013-0910; Special Conditions No. 25-534-SC]
24	25-562-SC	Permanently Installed Rechargeable Lithium-Ion Batteries and Battery Systems [Docket No. FAA-2013-0801; Special Conditions No. 25-562-SC]
25	25-561-SC	Operation without Normal Electrical power [Docket No. FAA-2014-0303; Special Conditions No. 25-561-SC]
26	25-539-SC	Lateral Trim Function through Differential Flap Setting [Docket No. FAA-2013-0911; Special Conditions No. 25-539-SC]

NOTE: The FAA Special Conditions referenced above may be accessed at internet location:
http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgSC.nsf/MainFrame?OpenFrameSet

Equivalent Level of Safety Findings:			
Item	Section	Subject	ELOS Memo reference
(1)	§ 25.107(e)(1)(iv)	Reduced Margins Between Takeoff rotation Speed and Liftoff Speed for Geometry Limited Airplanes	TC0544IB-T-F-13
(2)	§ 25.331	Checked Pitch Maneuver Loads	TC0544IB-T-A-7
(3)	§ 25.341	Continuous Turbulence Loads and Rough Airspeed	TC0544IB-T-A-10
(4)	§ 25.365(a)	Pressurized Compartment Loads	TC0544IB-T-A-8
(5)	§§ 25.471, 25.473, 25.477, 25.479, 25.481, 25.485, 25.491, 25.493, 25.499, 25.503, 25.507, 25.511, 25.519, 25.723	Ground Load Conditions	TC0544IB-T-A-11
(6)	§ 25.495	Ground Turning Conditions	TC0544IB-T-A-12
(7)	§ 25.671(c)(1)	Slat Geared Rotary Actuator Failure	TC0544IB-T-SF-6
(8)	§ 25.671(c)(2)	Flight Control System Failure Criteria	TC0544IB-T-SF-5
(9)	§ 25.779(b)(1)	Reduced (flexible) takeoff Thrust Operations and Throttle Motion	TC0544IB-T-P-7
(10)	§ 25.783(a)	APU Maintenance Doors	TC0544IB-T-CS-14
(11)	§ 25.783(e)(2)	Passenger/Crew Doors Closed Latched Locked Indication	TC0544IB-T-CS-10
(12)	§ 25.795(a)(1)	Reduced intrusion loads in certain areas of the flight deck boundaries	TC0544IB-T-CS-13
(13)	§§ 25.811(g), 25.812(b)(1)	Use of Symbolic Exit Signs	TC0544IB-T-CS-1
(14)	§ 25.811(e)(4)	Green Arrow and "OPEN" Placard for Emergency Exit Marking"	TC0544IB-T-CS-12
(15)	§ 25.831(g)	Cabin Temperature-Humidity Limits	TC0544IB-T-ES-15
(16)	§§ 25.841(a), 25.841(b)(6)	Cabin Pressurization – High Altitude Takeoff and Landing Operations	TC0544IB-T-ES-14
(17)	§§ 25.841(b)(1), 25.843(b)(1)	Overpressure Relief valves and Outflow valves	TC0544IB-T-ES-11
(18)	§§ 25.856(b), appendix F part VII	Composite Fuselage Post-Crash Fire Survivability	TC0544IB-T-CS-5
(19)	§ 25.933(a)(1)	Prevention of Inadvertent In-flight Thrust Reverser Deployment	TC0544IB-T-P-10
(20)	§ 25.934	Thrust Reverser Testing	TC0544IB-T-P-33
(21)	§ 25.963(d)	Fuel Tank Emergency Loads	TC0544IB-T-A-13
(22)	§ 25.979 (b)(1)	Pressure fueling System shut-off operation check	TC0544IB-T-P-24
(23)	§ 25.981(b)	Aircraft Descent Rate for Fuel Tank Flammability Reduction Assessment	TC0544IB-T-P-30
(24)	§ 25.1193(e)(3)	Cowlings and Nacelle Skins Fireproof Regions	TC0544IB-T-P-31
(25)	§ 25.1195(c)	Fire Extinguishing Agent Concentration	TC0544IB-T-P-25
(26)	§ 25.1203(d)	Turbine Overheat Detection	TC0544IB-T-P-19
(27)	§§ 25.1301, 25.1309	Use of ARAC Recommended Revision to §§ 25.1301 and 25.1309	TC0544IB-T-S-2
(28)	§ 25.1305(c)(6)	Warning Means for Engine Fuel Filter Contamination	TC0544IB-T-P-9
(29)	§ 25.1317(b)	HIRF Equipment Protection Test Levels	TC0544IB-T-SE-11
(30)	§ 25.1329	Pitot Heat Indication	TC0544IB-T-SA-23
(31)	§ 25.1383(b)	Single Landing Light Switch	TC0544IB-T-SE-5
(32)	§ 25.1438	Pneumatic Systems	TC0544IB-T-ES-10
(33)	§ 25.1441(c)	Crew Determination of Quantity of Oxygen in Passenger Gaseous Oxygen System Distributed Cylinders	TC0544IB-T-ES-7
(34)	§ 25.1443	Minimum Oxygen Flow rates	TC0544IB-T-ES-13
(35)	§ 25.1447(c)(1)	Improved Passenger Oxygen Mask Deployment System	TC0544IB-T-ES-3
(36)	§ 25.1457(d)(5)	Independent Power Source for Cockpit Voice Recorder	TC0544IB-T-SA-5
(37)	§ 25.1529	Instructions for Continued Airworthiness	TC0544IB-T-G-5
(38)	§ 25.1549(a)	Oil temperature Indication	TC0544IB-T-P-16

Equivalent Level of Safety Findings:			
(39)	§ 25.1549	Digital Only Display of the Turbine Engine High (N3), Intermediate (N2), and Fan (N1) Rotor Speeds	TC0544IB-T-F-16
(40)	14 CFR 25 Subpart E, F, and G requirements applicable to APU installation	Adoption of Draft Harmonized Rules for APU Certification	TC0544IB-T-P-11
(41)	§§ 25.1535, K25.2.2(c)	Validation of Maintenance Procedures for ETOPS Significant Systems	TC0544IB-T-EE-7

NOTE: The FAA Equivalent Level of Safety Memos referenced above may be accessed at internet location: http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgELOS.nsf/MainFrame?OpenFrameSet

Exemptions:			
(1)	§ 25.562(b)(2) per Amendment 25-64	Emergency Landing Dynamic Conditions	Exemption No. 9999
(2)	§ 25.841(a)(2) and (3), per Amendment 25-87	Cabin Pressurization	Exemption No. 10228
(3)	§ 25.809(a), per Amendment 25-116	Outside viewing of the flight deck emergency exit	Exemption No. 10996

NOTE: The FAA Exemptions referenced above may be accessed at internet location: http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgEX.nsf/MainFrame?OpenFrameSet

Environmental Standards:

14 CFR part 34, effective September 10, 1990, including Amendments 34-1 through 34-5A.
14 CFR part 36, effective December 1, 1969, including Amendments 36-1 through 36-28.

Optional Requirements Elected:

- (1) Sections 25.801, 25.1411 and 25.1415 for ditching
- (2) Section 25.1419 for ice protection

Part 26 of the Federal Aviation Regulations:

Based on 14 CFR Section 21.29(a) for new import Type Certificates (TCs), (or Section 21.101(g) for changes to TCs), applicable provisions of 14 CFR Part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

Production Basis

A350 airplanes, all series and models, are produced in France under production approval EASA.21G.0001 issued by the European Aviation Safety Agency, (EASA).

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see the Certification Basis) must be installed in the aircraft for certification (refer to A350-941 FAA Type Design Definition, ref. 00 V 000 A F941 / C90 issue 1, dated November 6, 2014).

Cabin seats must conform to the specification 00 V 252 K0005 / C91.

Hydraulic Fluids

Fluid specifications: TYPE IV LD and TYPE V LD, as per NSA 307-110, or any mixture of both.

Auxiliary Power Unit (APU)

One (1) APU, Honeywell HGT1700.

Tires

Gear	Quantity	Wheel size	Tire size
NLG	2	16"	1050 x 395R16 28PR
MLG	8	23"	1400 x 530R23 42PR

Airplane Flight Manual

Refer to the Airbus A350 Model A350-941 U.S. Airplane Flight Manual: .STL 35000 (certification reference for FAA TC: 00 V 101 AF941 / C9S issue 4), approved by EASA on behalf of the FAA. The document “A350 Operations Engineering Bulletins / Limitations – Applicable to FAA TC only”, reference STL D14029252 Issue 3, is considered part of the AFM and provides a temporary list of Operations Engineering Bulletins (OEB) / Limitations applicable to the A350 at time of TC and until revised.

Service Information

Each of the documents listed below that contain a statement that it is approved by the European Aviation Safety Agency (EASA) are accepted by the FAA and are considered FAA approved. Additionally, approvals issued by Airbus under the authority of EASA approved Design Organization EASA.21J.031 are considered FAA approved. These approvals pertain to the type design only.

- Airbus Service Bulletins, except as noted below,
- Structural repair manuals,
- Vendor manuals referenced in Airbus service bulletins,
- Aircraft flight manuals,
- Repair Instructions.

Note: Design changes that are contained in Airbus Service Bulletins and that are classified as Level 1 Major in accordance with either the US/EASA Bilateral Aviation Safety Agreement Implementation Procedures for Airworthiness must be approved by the FAA.

Additional Design requirements and Conditions:

The following design details or information must be maintained to ensure that an unsafe design condition is not present:

In-Flight Engine Restart:

1. A minimum restart capability after an all engines out scenario must be established under the following conditions using procedures provided in the airplane flight manual (AFM):

- a) During the take-off and the initial climb-out portion of the flight, the airplane should have the capability for the flightcrew to restore engine power immediately following an all-engine-out scenario and when the fuel source to the engine is restored.
- b) During the high altitude portion of the flight at cruise speed and maximum altitude, the airplane should have the capability for the flightcrew to restart from a stabilized windmill speed those engines required to maintain level flight or restart all but one of the engines and produce maximum continuous thrust or power prior to descending below an altitude of 15,000 feet.
- c) During flight at speeds greater than the minimum flaps-up “holding speed” and at altitudes below 20,000 feet, the airplane should have the capability for the flightcrew to restart with the engines at stabilized windmill speed those engines necessary to maintain level flight prior to descending of 5,000 feet from the initiation of the restart procedure and prior to exceeding an airspeed of 300 knots.

Notes:

Note 1: A current weight and balance report including list of the equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each aircraft at the time of original airworthiness certification and at all times thereafter.

Note 2: Airplane operation must be in accordance with the U.S. Airplane Flight Manual. All placards required by either the U.S. AFM, the applicable operating rules, or the certification basis must be installed in the airplane.

Note 3: Maintenance Instructions and Airworthiness Limitations:

The Airworthiness Limitations section specifies maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA approved.

- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A350 Airworthiness Limitations Section (ALS) Part 1 (Document 00 V 050 ALS01 / C01),
- Limitations applicable to Damage-Tolerant Airworthiness Limitation Items are provided in the A350 Airworthiness Limitations Section (ALS) Part 2 (Document 00 V 050 ALS02 / C01),
- Certification Maintenance Requirements are provided in the A350 Airworthiness Limitations Section (ALS) Part 3 (Document 00 V 050 ALS03 / C01),
- A350 System Equipment Maintenance Requirements are provided in the A350 Airworthiness Limitations Section (ALS) Part 4 (Document 00 V 050 ALS04 / C01),

- A350 Fuel System Airworthiness Limitations are provided in the A350 Airworthiness Limitations Section (ALS) Part 5 (Document 00 V 050 ALS05 / C01) and Variation 0.1 to Revision 00 of ALS Part 5 – Fuel Airworthiness Limitations (FAL), (Document 00 V 050 A145A/C01).
- A350 Maintenance Review Board Report (Document 00 V 050 AMRBR / C01).
- The document “A350-900 Temporary TC limitations document”, reference 00 V 050 T TCLD / C91 Issue 3, is recording the temporary limitations identified at TC that are not published within the A350 ALS Part 3 and Part 4. This document is applicable to the A350 at TC and until further notice.
- The document “A350-900 - Temporary TC Limitation Document not ALS related and to be removed before EIS”, reference 00 V 207 A TTCL / C91 Issue 1, is recording an additional temporary limitation identified at TC, that is not ALS related. This document is applicable to the A350 at TC and until further notice.

Note 4: Per 14 CFR 21.50, the Instructions for Continued Airworthiness, as defined in 14 CFR 25.1529 and Appendix H, must be complete and accepted by the FAA prior to delivery of the first aircraft or issuance of a standard certificate of airworthiness, whichever occurs later. Contact the Seattle Aircraft Evaluation Group for information.

Note 5 ETOPS: Airbus has not yet shown compliance to all applicable standards required for FAA ETOPS approval.

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