DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A54NM
Revision 2
Ilyushin Aviation Complex
Ilyushin Model Il-96T
November 30, 2006

TYPE CERTIFICATE DATA SHEET NO. A54NM

This data sheet which is part of Type Certificate No. A54NM prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the US Federal Aviation Regulations.

Type Certificate Holder — Ilyushin Aviation Complex
Leningradsky Prospect, 45"G"
12590 Moscow
Russia

1. Model Ilyushin Il-96T (Transport Category Airplane) approved June 2, 1999

Engines — 4 Pratt and Whitney PW-2337 turbofan engines. Refer to engine FAA-Type Certificate E17NE.

Auxiliary Power Unit — One gas turbine engine, Model VSU-10, Series 3, approved for ground use only. Manufactured by Omsk Design Bureau, Russia.

Fuel — The engines and APU must be operated with fuels and additives in accordance with PW SB No. 2016 (at the latest revision). Fuels RT and TS-1 GOST 10227-86 and fuel additives I, I-M, TGF, and TGF-M may be used in accordance with PW Document IEN No. 94MZ317 dated February 17, 1995.

Oil — The engines shall be operated with oils specified in PW Service Bulletin No. 238 (at the latest revision).

Engine Model PW 2337 Limits

Static thrust, sea level	37,530 lb.
Maximum permissible rotor speed, rpm:	
- Low pressure rotor (N1)	4,575
- High pressure rotor (N2)	12,360
- High pressure rotor (N2), 5 seconds, transient	12,445
Maximum permissible turbine exhaust temperature (T4.9), °C/°F	
- Takeoff (5 minutes)	655/1211
- Takeoff (5 second transient)	670/1238
- Maximum continuous	625/1157
- Maximum continuous, (5 second transient)	640/1184
- At start up, ground	495/923
- At start up, in flight	655/1211
Maximum permissible oil outlet temperature, °C/°F	
- Continuous operation	163/325
- Transient operation (20 minutes)	177/350

For other limitations refer to engine Data Sheet E17NE

APU Limits

Maximum bleed air flow from driven Compressor, sea level: 3.5 kg/sec, not less

Maximum load of AC generator (208/120 volts, 400hz ±2%):
- 40 kVA during 10 hours duration
- 60 kVA during 5 min duration
- 80 kVA during 5 seconds duration

When the maximum permissible value of either power turbine speed or gas generator speed, or gas temperature, or oil temperature is attained, or oil pressure is decreased below the permissible value (see the maintenance manual for the VSU-10, Section 049.70.30) automatic APU shutdown is provided.

Airspeed Limits (I.A.S.)

V_{MO}			325 KIAS (600 km/h)
M_{MO}			0.84
V_A (Maneuvering)			See approved airplane flight manual.
V_{FE} (Flaps/slats Extended)			
	Flaps/Slats	2°/3°	275 KIAS (510 km/h)
		3°/25°	264 KIAS (490 km/h)
		10°/25°	243 KIAS (450 km/h)
		25°/25°	210 KIAS (390 km/h)
		40°/25°	189 KIAS (350 km/h)
V_{LO}			
	Extension		325 KIAS (600 km/h)
	Extension before an emergency descent		325 KIAS (600 km/h)
V_{LE}	Maximum while extended		325KIAS (600 km/h)
Maximum Tire Speed			254 MPH (221 knots, 410 km/h)

Datum

The aircraft reference zero datum point (QE 0) is located 5.91 in. (150 mm) aft of the fuselage nose cone and on the fuselage centerline.

The 0% MAC datum is located 1195.145 in. (29340.7 mm) aft of the reference datum (QE 0).

Mean Aerodynamic Chord

The MAC length is 261.26 in. (6.636 m)

Center of Gravity Limits

FWD 10% MAC
AFT 34% MAC

Leveling Means

Measuring marks are provided on the aircraft for leveling. These marks are indicated by special rivets or drillings as shown and described in the Leveling Drawing 1.9625.0011.000.000 with changes 9625.00.035.004.01 and 9625.00.035.002.01.

Maximum Weights

Max Ramp Weight:	597,440 lb. (271,000 kg)
Max Takeoff Weight:	592,240 lb. (270,000 kg)
Max Landing Weight:	485,000 lb. (220,000 kg)
Max Zero Fuel Weight:	459,430 lb. (208,400 kg)
Max Payload	202,390 lb. (92,000 kg)

Minimum Crew

2 - Pilot and copilot

Temporary Operating Limitation

The aircraft must be operated by a flight crew consisting of a pilot and copilot, plus an additional person qualified as pilot in this airplane type, who shall monitor the aircraft performance and warnings. This temporary limitation is explained in the airplane flight manual, and is applicable until verification of the IDS, and ASCS software has been completed and the AFM limitation has been removed.

Maximum Cabin Crew

Four persons

Type of Baggage Compartment

Class "E" Compartment (main deck cargo compartment)
Class “E” Compartments (below the floor)

Maximum Cargo

Total of 202,820.96 lbs. (92,000 kg) on the main deck compartment
- 59,523.54 lbs. (27,000 kg) in the forward lower compartment
- 46,296.09 lbs. (21,000 kg) in the aft lower compartment
- Maximum. floor loading = 82 lb./ft^2 on the main deck

Fuel Capacity

116,300 kg maximum, when $\gamma = 0.775$
254,672.6 lbs (115, 520 kg) usable

Oil Capacity

Oil capacity per Engine

	MAX OIL TANK	MIN OIL TANK
US Gallons	7.0	1.2
Liters	26.5	4.56

Maximum Operating Altitude 43,000 ft. (13,100 m)

Control Surface Movements

Wing Flaps	2°, 3°, 10°, 25°, and 40°
Ailerons	31° up (±1.5°), 16° down (+1°, -1.5°)
Elevator	17.5° up (+1.5°, -1°), 10° down (+2°, -0.5°)
Stabilizer	12° nose up (+12’, -30’), 2° nose down (±12’)
Rudder	27° right (-1°), 27° left (-1°)

Serial Numbers

S/N 976693201001T and subsequent.

Import Requirements

To be considered eligible for operation in the United States, each aircraft manufactured under this type certificate must be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states (in the English language): This aircraft conforms to its U.S. Type Design (Type Certificate No. A54NM) and is in a condition for safe operation.

Certification Basis

14 CFR part 25 Effective February 1, 1965, including Amendments 25-1 through 25-81. In addition, Ilyushin has elected to comply with Part 25 of the FAR as amended by Amendments 25-83 through 86.

Special Conditions:
- No. 25-ANM-135, “Ground Loads and Conditions for Central Landing Gear”
- No. 25-ANM-135, “Design Maneuver Requirements
- No. 25-ANM-135, “Effect of Flight Control Systems on Structure
- No. 25-ANM-135, “High intensity Radiated Fields”

Exemptions:
- No. 6011 for FAR 25.571(e), Bird Strike Speed
- No. 6754, Hydraulic Systems

No. 6877, Partial Grant for Floor Warpage Test Requirements

Equivalent Level of Safety Findings:
- Checked Maneuver Loads (FAR 25.331(c)(2))
- Premium Selection of Materials (FAR 25.603, 25.613)
- Flap Gust Conditions (FAR 25.345)
- Aircraft Pressurization Outflow and Safety Valves (FAR 25.841)
- Unique Aural Overspeed Warning (FAR 25.1303(c)(1))

Optional Requirements complied with:
- FAR 25.1419 Icing

Environmental Standards complied with:
- FAR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-21.
- FAR Part 34 effective September 10, 1990, including Amendment 34-1

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see the Certification Basis) must be installed in the aircraft. The lists of all equipment as well as optional approved equipment are contained in the document:

Type Design Definition Document No. Reg.W.9625.00.00183.872 (Master Drawing List)

Airplane Flight Manual

Aviation Register approved Airplane Flight Manual No. 9625 AFM, original issue, approved June 2, 1999

Service Information

Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), structural repair manuals, airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type designs included in this Type Certificate and that include a statement ”AR Approved” are accepted by the FAA and are considered ”FAA Approved.”

NOTES

NOTE 1.

Current weight and balance report including a list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at its delivery.

For further information see Il-96T Weight & Balance Manual dated March 30, 1998

NOTE 2.

Airworthiness Limitations including structural inspections and retirement times for safe-life parts are listed in Ilyushin Airworthiness Limitations Document N9625-701 CD dated November 4, 1998.

NOTE 3.

Certification Maintenance Requirements (CMR) are listed in the Il-96T CMR Document. Dated November 30, 1998

NOTE 4.

Compliance with the optional ditching requirements of FAR 25.801, FAR 25.1411, and FAR 25.1415 has been shown.

NOTE 5.

FAA Certificate of Airworthiness is not to be issued until the Instructions for Continued Airworthiness, as defined in 14 CFR 25.1529 and Appendix H, have been approved. Contact the Seattle Aircraft Evaluation Group for information.

NOTE 6.

A FAA Certificate of Airworthiness is not to be issued until compliance is found to SFAR 88.

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