

TABLE OF CONTENT

SECTION 1: GENERAL	5
1. Data Sheet No.	
2. Airworthiness Category	
3. Certifying Authority	
4. Type Certificate Holder	
5. Manufacturer	
SECTION 2: Antonov 26 (models An-26 and An-26B)	
I. General	6
1. Aeroplane	
2. Models	
3. EASA Reference Date	
4. EASA Restricted Type Certification Date	
II. Restricted Certification Basis	6
1. Certification Date	
2. Certification Basis	
3. EASA Airworthiness Requirements	
3.1. EASA Airworthiness Requirements	
3.2. Elect to Comply Requirements	
4. EASA Environmental Standards	
III. Technical Characteristics and Operating Limitations	8
1. Production Basis	
2. Type Design Definition	
3. Description	
4. Dimensions	
5. Engines	
6. Auxiliary Power Unit	
7. Propellers	
8. Fuel	
9. Oil	
10. Air Speeds	
11. Maximum Operating Altitude	
12. Maximum Mass	
13. Centre of Gravity	
14. Fuel Capacity	
15. Levelling Means	
16. Minimum Flight Crew	
17. Exits	
18. Cargo Compartment Loading	
19. Wheels and Tyres	
20. Other Limitations	
IV. Operation and Maintenance Instructions	10
1. Flight Manual	
2. Mandatory Maintenance Instructions	
3. Mandatory Service Bulletins	
4. Service Bulletins	
5. Service Life and Life Time	
6. Required Equipment	
7. Certification Maintenance Requirements	
V. Notes	10

ANNEX 1: ENGINE CHARACTERISTICS

I. General.....	12
1. Type	
2. Designer	
3. Manufacturer	
4. Engine Acceptance Application Date	
5. Engine Acceptance Reference Date	
II. Engine Acceptance Basis.....	12
1. Airworthiness Standards and Environmental Requirements	
2. Special Conditions	
3. Deviations	
4. Equivalent Safety Findings	
III. Technical Characteristics.....	13
1. Type Design Definition	
2. Description	
3. Dimensions	
4. Dry Weight	
5. Power Values	
6. Fluids	
7. Aircraft Accessory Drives	
8. Maximum Permissible Air Bleed	
IV. Operating Limitations.....	14
1. Temperature Limits	
2. Pressure Limits	
3. Maximum Allowable Rotor Speed	
V. Operation and Maintenance Instructions.....	15
1. Operation and Maintenance Manual	
2. Mandatory Service Bulletins	
3. Service Bulletins	
VI. Service Life.....	15

ANNEX 2: PROPELLER CHARACTERISTICS

I. General.....	16
1. Type/Variants	
2. Designer	
3. Manufacturer	
4. Propeller Acceptance Application Date	
5. Propeller Acceptance Reference Date	
II. Propeller Acceptance Basis.....	16
1. Airworthiness Standards	
III. Technical Characteristics.....	16
1. Type Design Definition	
2. Description	
3. Equipment	
4. Dimensions	
5. Weight	
6. Hub/Blade Combinations	
7. Control and Monitoring System	
8. Adaptation to Engine	
9. Direction of Rotation	

IV. Operating Limitations	18
1. Propeller Diameter	
2. Propeller Blades	
3. Propeller Power	
V. Operation and Maintenance Instructions	18
1. Operation and Maintenance Manual	
VI. Service Life and Life Time	18

ANNEX 3: APU CHARACTERISTICS

I. General	20
1. Type	
2. Designer	
3. Manufacturer	
4. APU Acceptance Application Date	
5. APU Acceptance Reference Date	
II. APU Acceptance Basis	19
1. Airworthiness Standards and Environmental Requirements	
2. Special Conditions	
3. Equivalent Safety Findings	
4. Exemptions	
III. Technical Characteristics	20
1. Type Design Definition	
2. Description	
3. Dimensions	
4. Dry Weight	
5. Thrust values	
6. Control System	
7. Fluids	
8. Aircraft accessory drives	
9. Maximum permissible air bleed extraction	
IV. Operating Limitations	21
1. Temperature Limit	
2. Pressure Limits	
3. Rotor maximum allowable speed	
V. Operation and Maintenance Instructions	22
1. Operation and Maintenance Manual	
2. Mandatory Service Bulletins	
3. Service Bulletins	
VI. Service Life	22

Note: Some titles and references are also given in Cyrillic letters (in parentheses for clarity) to avoid any confusion with the actual name of the documents or with the marking.

SECTION 1: GENERAL

1. Data Sheet No: EASA.IM.A.351
2. Airworthiness Category: Large Aeroplanes
3. Certifying Authority:
 - USSR;
 - State Aviation Administration of Ukraine (SAAU);
 - Interstate Aviation Committee - Aviation Registry (IAC-AR) (noise)
4. Type Certificate Holder:
 - State-Owned Company
 - ANTONOV Aviation Scientific Technical Complex
 - (Государственное предприятие*
 - Авиационный научно-технический комплекс им. О.К.*
 - Антонова)*

 - 1 Tupolev Str.
 - 03062 Kyiv
 - Ukraine
5. Manufacturer:
 - State-Owned Company
 - AVIANT Kyiv Aviation Plant
 - (Государственное предприятие*
 - Киевский авиационный завод "Авиант")*

 - 100/1 Peremogy Avenue
 - 03062 Kyiv
 - Ukraine

SECTION 2: Antonov 26 (models An-26 and An-26B)

I. General

1. Aeroplane: Antonov 26
(Антонов 26)
2. Models: An-26, An-26B
(Ан-26, Ан-26Б)
3. EASA Reference Date: 21 May 1969
4. EASA Restricted Type Certification Date: 28 September 2009

II. Restricted Certification Basis

1. Certification Date:
 - 1.1. USSR: Certificate of the An-26B (An-26) aircraft acceptance for operations in civil aviation, issued 29.08.85
 - 1.2. SAAU: Type Certificate No. ТЛ 0019, issued 23 March 2001
 - 1.3. IAC-AR:
 - Type Noise Certificate No. 41, issued 19 January 1994 (Chapter 2 of Annex 16 ICAO);
 - Type Noise Certificate No. CШ 122-Ан-26, issued 24 August 2001 (Chapter 3 of Annex 16 ICAO)
2. Basis of Primary Certification:
 - Technical requirements of Civil Aviation of the USSR for the An-26 aircraft, dated 1976, corresponded to Annex 8 to Convention on International Civil Aviation;
 - Requirements to environmental noise - in accordance with the Chapters 2 and 3 of ICAO standard, Annex 16 to Convention of International Civil Aviation (Chicago 1944), Volume 1
3. EASA Airworthiness Requirements
 - 3.1 EASA Airworthiness Requirements
 - 3.1.1 Airworthiness Standards: FAR 25, amendment 20, Eff. Date 23 April 1969
 - 3.1.2 Reversions: None

3.1.3 Special Conditions:

3.1.3.1 Novel or unusual Features or unconventional use: SC1: use of the APU for additional thrust (see CRI-T1)

3.1.3.2 General Experience: SC2 : inclement weather threat for engines (see CRI-T2)
SC3 : bird threat for engines (see CRI-T3)
SC4 : icing threat for the aircraft (see CRI-T4)
SC5 : HIRF and lightning threats for the aircraft (see CRI-T5)

3.1.4 Equivalent Safety Findings: 25.145(b)(2)(3): removal of the forces;
25.677(a): the rudder trim tab TURN momentary switch operation and operation of the AIL TRIM switch for aileron trim tab alternate control;
25.677(b): the available indicators of trim device position in the roll and yaw channels as regards their adjustment range;
25.701(b): the means to prevent hazardous asymmetric operation of flaps in case of a single failure in the high-lift device actuator system;
25.777(e): the arrangement of flap controls;
25.777(f): the arrangement of landing gear controls;
25.777(g): the colour of the flaps, landing gear and engine controls;
25.781: the shape of the landing gear and engine controls;
25.809(b): the absence of an external handle for opening of the upper emergency door from the outside aircraft;
25.979(b)(2): the failure indication of filling valve automatic closure devices;
25.1013(a): the oil tank and its supporting structure fire resistance;
25.1015(b): overpressure testing of the APU oil tank;
25.1017(a): fire resistance of pipelines and oil system fittings;
25.1105(b): arrangement of the APU air intake guard screen;
25.1183(a)(1): fire resistance of pipelines and fittings of the oil and fuel systems;
25.1193(e)(3): fire resistance of engine cowlings;
25.1303(a)(1)(11),(b): the warning about the maximum operating speed limit (V_{MO});
25.1305(m): the warning about the minimum oil pressure;
25.1321(c): arrangement of instruments on the pilots' instrumental panel;
25.1331(a)(1): the means of power supply indication;
25.1337(b)(1): gauging of the fuel quantity indicator;
25.1337(e): the propeller blade position indication;
25.1383(c): the landing light extended position indication means;
25.1435(c): the absence of the FAR 25.1189-required shutoff devices in the hydraulic system;
25.1549(a)(b)(c): the lines colour on powerplant control instruments

3.1.5 Exemptions: No exemption has been granted

3.2 Elect to Comply Requirements: None

4. EASA Environmental Standards:

Noise: ICAO Annex 16, Volume I (Third Edition)

Emissions: ICAO Annex 16, Volume II (Second Edition)

III. Technical Characteristics and Operating Limitations

1. Production Basis: Manufactured under Type Certificate

2. Type Design Definition: Master List 26.00.05.0635.205

3. Description:

The An-26 (An-26B) is a transport airplane designed to carry cargoes (either stacked on standard pallets or without pallets) and wheeled vehicles along short and medium range routes.

The airplane is an all-metal cantilever monoplane configuration with high wing, horizontal tail unit, single stabilizer vertical tail with a dorsal fin and two antispin ventral fins.

The landing gear is a tricycle configuration. The landing gear is retractable forward into compartments covered with doors. Each landing gear unit accommodates two wheels. The main landing gear unit wheels are fitted with disk brakes.

The airplane is equipped with two main propulsion turboprop engines with the propellers and one auxiliary turbojet engine. The main engines are accommodated in nacelles on the wing center section. The APU engine is installed in the rear part of the right engine nacelle.

Arranged in the fuselage tail section cargo door is used for cargo loading and unloading.

The ramp covering the cargo door is used for loading/unloading vehicles and cargoes. The ramp retraction under the fuselage allows motor-cars to pull up to the cargo cabin sill for direct loading from the truck body or from the ground by means of monorail motor hoist (for the An-26 aircraft) or cargo lifting device (for the An-26B aircraft). Cargoes stacked on standard pallets are loaded with fork lifts only.

The An-26 and An-26B aircraft are identical in their design and equipment configuration, except for some dissimilarity in cargo handling facilities and in their cargo transportation equipment.

4. Dimensions:
- | | |
|--------|----------|
| Length | 23,800 m |
| Span | 29,194 m |
| Height | 8,575 m |
- Wing Area:
- | | |
|-------------|----------------------|
| - reference | 74,98 m ² |
| - total | 74,98 m ² |
5. Engines: Two AI-24VT (*AI-24BT*) turbopropeller engines
(See characteristics and limitations in Annex 1 to the TCDS)
6. Auxiliary Power Unit: One RU19A-300 (*PY19A-300*) engine
(See characteristics and limitations in Annex 2 to the TCDS)
7. Propellers: Two AV-72T (*AB-72T*) propellers
(See characteristics and limitations in Annex 3 to the TCDS)
8. Fuel: Refer to approved Flight Manual
9. Oil: Refer to approved Flight Manual
10. Air Speeds: Refer to approved Flight Manual
11. Maximum Operating Altitude: 7000 m
12. Maximum mass:

Phase	Mass, kg
Taxi	24 230
Take-off	24 000
Landing	24 000
Zero fuel	21 570

13. Centre of Gravity: In accordance with approved Flight Manual:
Extreme forward C.G. – 15% MAC
Extreme aft C.G. – 33% MAC
MAC = mean aerodynamic cord, 2.813 m
14. Fuel capacity Refer to approved Flight Manual
15. Levelling Means: Refer to approved Flight Manual

16. Minimum Flight Crew: Flights may be performed by the crew consisting of

Variant 1	Variant 2 under conditions of airplane modification according to the approved Specification 26/704-2007 (see Master List 26.00.05.0635.205)
4 persons: pilot co-pilot navigator flight mechanic	3 persons: pilot co-pilot flight mechanic

17. Exits:

		Number	Type	Size, mm
1.	Entrance Doors	1	I	840 (w) x 1850 (h)
2.	Top emergency exit	1	I	640 (diameter)

18. Cargo compartment loading: The airplane must be loaded in accordance with the loading instructions given in the approved Flight Manual

19. Wheels and Tyres:

Main Landing Gear: two braked KT157 wheels (tires of 1050x400 mm);
Nosewheel Landing Gear: two unbraked K2105 wheels (tires of 700x250 mm)

20. Other limitations: As specified in the corresponding sections of operational documentation (see Chapter IV of this TCDS)

IV. Operation and Maintenance Instructions

1. Flight Manual: In English: Flight Manual 26.04.00.000.000 FM (see note 1 in § V)
In Russian :Руководство по летной эксплуатации 26.04.00.000.000 РЛЭ

2. Mandatory Maintenance Instructions

2.1 Maintenance Schedule:
In English: Maintenance Schedule of An-24, An-26 aircraft, issue 1991. Parts 1-3
In Russian: Регламент технического обслуживания самолетов Ан-24, Ан-26, издание 1991 г. Части 1-3
or
In English: Maintenance Schedule of An-24, An-26, An-30 aircraft, issue 1997, Parts 1-3
In Russian: Регламент технического обслуживания самолетов Ан-24, Ан-26, Ан-30, издание 1997 г. Части 1-3

2.2 Technological guidelines: In Russian : Технологические указания по выполнению регламентных работ на самолетах Ан-24, Ан-26, Ан-30, издание 1984-1992 г.г. Выпуски 1-27
(*Technological guidelines for scheduled maintenance checks aircraft An-24, An-26, An-30, issue 1984-1992. Books 1-27*)

2.3 In English: Instructions for Continued Airworthiness.
26.04.00.000.000 ИПЛГ
In Russian : Инструкция по поддержанию летной годности.
26.04.00.000.000 ИПЛГ

Other documents required for An-26/An-26B aircraft operation and maintenance are specified in Master List 26.00.05.0635.205.

3. Mandatory Service Bulletins: Refer to Master List 26.00.05.0635.205

4. Service Bulletins: Refer to type certificate holder

5. Service life and life time: Refer to the Instructions for Continued Airworthiness
26.04.00.000.000 ИПЛГ
(*Инструкция по поддержанию летной годности.*
26.04.00.000.000 ИПЛГ)

6. Required Equipment: The pieces of equipment required by Master List 26.00.05.0635.205 must be installed.
Optional equipment approved by National Aviation Administrations of Poland and Latvia before 2003 may be installed.

7. Certification Maintenance Requirements: Refer to the Instructions for Continued Airworthiness
26.04.00.000.000 ИПЛГ
(*Инструкция по поддержанию летной годности.*
26.04.00.000.000 ИПЛГ)

V. Notes

Note 1: An approved English version of the Flight Manual exists. However, the Russian version is to be used as the reference in case of unexpected discrepancy.

ANNEX 1: Engine Characteristics

I. General

1. Type: AI-24VT
(AI-24BT)
2. Designer: State-Owned Company
IVCHENKO-PROGRESS Zaporozhye Machine-Building
Design Bureau
*(Государственное предприятие
Запорожское машиностроительное конструкторское
бюро «Прогресс» им. академика А.Г. Ивченко)*

2 Ivanova Str.
69068, Zaporozhye
Ukraine
3. Manufacturer: MOTOR SICH JSC
(ЗАО «Мотор Сич»)

15 Eighth March Str.
69068, Zaporozhye
Ukraine
4. Engine Acceptance Application Date: Certified as part of the An-26/An-26B aircraft
5. Engine Acceptance Reference Date: 21 May 1969

II. Engine Acceptance Basis

1. Airworthiness Standards
and Environmental Requirements: FAR 33, amendment 3, Eff. Date 3 April 1967
2. Special Conditions:
(see aircraft special conditions) SC2: inclement weather threat for engines (see CRI-T2)
SC3: bird threat for engines (see CRI-T3)
3. Deviations: None
4. Equivalent Safety Findings: None

III. Technical Characteristics

1. Type Design Definition: Master List 26.00.05.0635.205

2. Description: AI-24VT engine is a single-shaft turboprop engine comprising the following assemblies:

- two-stage planetary reduction gear with a torquemeter;
- front casing;
- ten-stage axial compressor;
- annular combustor;
- three-stage axial turbine;
- fixed-area nozzle;
- units supporting operation of the engine and the aircraft.

The engine is controlled by a hydromechanical fuel control unit.

The system automatically limits thrust when shaft torque exceeds the pre-set value.

The system automatically limits engine exhaust gas temperature when it exceeds the pre-set value.

The engine is provided with an automatic feathering system actuated on the commands from the torque sensors and from negative thrust of the propeller shaft.

The starter is part of the engine. Engine mounts are part of the aircraft.

3. Dimensions:

Total length	2346 ± 5 mm
Width	677 ± 5 mm
Height	1075 ± 5 mm

4. Dry weight:

Empty engine mass	600 + 12 kg
-------------------	-------------

5. Power values:

Conditions: ISA, SL

Rating	Power, kW (h.p)
Take-off (limited to 5 min)	2075 (2820)
Maximum (limited to 60 min)	1847 (2510)
Nominal (unlimited)	1648 (2240)

Note 1 : Take-off rating may be used in case of engine failure during climb.

Note 2 : Nominal is an unlimited maximum continuous rating (as specified in CS-E 40 (a)).

Note 3 : Maximum rating may be used in case of engine failure during climb and in any other flight condition as necessary.

6. Fluids:

6.1 Fuel and additions: Refer to approved Flight Manual

6.2 Oil: Refer to approved Flight Manual

7. Aircraft Accessory Drives:

1. DC generator, left-hand rotation, speed 6687 rpm;
2. AC generator, left-hand rotation, speed 7973 rpm;
3. Hydraulic pump, right-hand rotation, speed 2599 rpm.

8. Maximum Permissible Air Bleed:

Behind the 10th stage of engine compressor the air is constantly off-taken:

- for bleeding, ventilation and heating of the pressure cabin not over 0.2 kg/s;
 - including at take-off not over 0.04 kg/s.
- Episodically:
- to aircraft anti-icing devices 0.425 kg/s;
 - including air intake heating 0.125 kg/s.

IV. Operating Limitations

1. Temperature Limits:

1.1 Exhaust gas temperature

- Maximum at ground starting: not over 750 °C
- Maximum allowed while starting in flight: not over 700 °C
- Maximum allowed at take-off rating 525 °C
- Maximum allowed at maximum rating 503 °C

1.2 Fuel Temperature

1.2.1 Minimum fuel temperature:

at an ambient air temperature of +5 °C and below anti-icing additives («I» liquid or its alternatives) are added to the fuel in an amount of 0.10 +0.05 % of the volume

1.2.2 Maximum fuel temperature:

Refer to approved Flight Manual

1.3 Oil Temperature at engine inlet:

- Minimum for the engine starting on the ground -15 °C
- Minimum for the engine starting in flight +20 °C
- Minimum for power above ground idle +40 °C
- Maximum permissible at operating settings 90 °C
- Maximum (for 15 min) 100 °C

1.4 Ambient Air Temperature Limits:

Engine operation on the ground - 60 °C, + 45 °C

2. Pressure Limits:

2.1 Fuel Pressure

At inlet (measured at the engine inlet):
58,76 kPa to 293,8 kPa
For further information refer to the Operation and Maintenance Manual

2.2 Oil Pressure at the engine inlet behind the oil filter

While operation at the ground idle power
293.8 kPa to 440,7 kPa
While operation at flight idle power
342,8 kPa to 440,7 kPa

3. Maximum Allowable Rotor Speed:

At operating power setting	15800 ± 150 rpm
At ground idle power,	14050 ± 225 rpm

In case of operation at power setting exceeding the stated limits it is necessary to refer to the Operation and Maintenance Manual, section installation, in order to take the necessary measures.

V. Operation and Maintenance Instructions

1. Operation and Maintenance Manual: Operation and Maintenance Manual of AI-24VT Aviation Turboprop Engine, issue 2005
(Руководство по эксплуатации и техническому обслуживанию авиационного турбовинтового двигателя AI-24BT, издание 2005)
2. Mandatory Service Bulletins: Refer to Master List 26.00.05.0635.205
3. Service Bulletins. Check with type certificate holder

VI. Service Life

Refer to the Instructions for Continued Airworthiness
26.04.00.000.000 ИПЛГ
(Инструкция по поддержанию летной годности.
26.04.00.000.000 ИПЛГ)

ANNEX 2: Propeller Characteristics

I. General

- | | | |
|---|---|--------------------------|
| 1. Type / Variants: | AV-72T
(AB-72T) | 02A series
серия 02A) |
| 2. Designer: | AEROSYLA Scientific Development Company JSS
(ОАО "Научно-производственное предприятие
"Аэросила")

6 Zhdanov Str.
142800 Stupino
Russian Federation | |
| 3. Manufacturer: | Stupino Machine-Building Development Company
JSS
(ОАО "Ступинское машиностроительное
производственное объединение")

42 Academician Belov Str.
142800 Stupino
Russian Federation | |
| 4. Propeller Acceptance Application Date: | Certified as part of the An-26/An-26B aircraft | |
| 5. Propeller Acceptance Reference Date: | 21 May 1969 | |

II. Propeller Acceptance Basis

- | | |
|----------------------------|---|
| 1. Airworthiness Standards | FAR 35, amendment 2, Eff. Date 3 April 1967 |
|----------------------------|---|

III. Technical Characteristics

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Master List 26.00.05.0635.205 |
| 2. Description: | It is a forward-mounted four-blade propeller with pitch-control mechanism driven from the engine hydraulic unit (propeller governor) ensuring constant rotation speed of the propeller at operating engine ratings, as well as feathering from the feathering pump.
Propeller structure:
- body, material 12X2H4A-ClJ steel;
- cylinder, material AK6T1 aluminium alloy;
- blades, material Д14 aluminium alloy |

3. Equipment:
- Propeller spinner: as a part of the aircraft set;
 - Propeller governor: as a part of the engine set;
 - Anti-icing protection: blades ice protection system consisting of the electro-thermal anti-icing strips on the blades, TC-6 current collector with a set of brushes and wiring from the current collector to the electric thermal blades.
4. Dimensions:
- 4.1. Propeller diameter: 3.9 m
- 4.2. Propeller blades:
- 4.2.1. Blade maximum width: 351 mm
- 4.2.2. Relative end section width: 0.04 mm
- 4.2.3. Blade effective factor: 106 mm
5. Weight: 255 kg \pm 2%
6. Hub/Blade-Combinations: The propeller blades are attached into the blade barrels (ref. drawing No.72-233) secured with four rows of balls in four propeller blade cuffs.
7. Control and Monitoring System: The engine unit - P68ДК-24M speed governor.
The aircraft unit - НФ-2ТА feathering pump.
The mechanical and centrifugal pitch locks are located in the propeller hub and are intended to secure propeller pitch against its inadvertent decreasing.
Rotational speed while pitch locking at an angular range from φ_{\min} up to φ_{op} . - 1335 rpm.
The mechanical pitch lock duplicates the centrifugal one in the range of blade setting angles from 8° up to 50°.
Propeller pitch unlock speed is not less than 1330 rpm.
8. Adaptation to Engine: A special flange of the propeller body and an oil manifold connecting hydraulic channels of engine control and the cavities of propeller pitch control mechanism.
9. Direction of Rotation: Propeller rotation direction is left hand if viewing from the engine side.

IV. Operating Limitations

1. Blade angle at control section R=1000 mm:
 - 1.1. minimum rotational drag angle at engine starting: 8°
 - 1.2. flight low pitch angle: 19°
 - 1.3 feathered position angle: 92°30'
 - 1.4 setting angle range: 84°30'
2. Propeller constant speed at operating power setting and allowable deviation of $\pm 0,75\%$: 1305 rpm
 - allowable runaway:
 - at a prompt application of power: up to 1400 rpm
 - at an abrupt change of the ram air direction: $\pm 2\%$
 - rpm recovery time after a runaway: not over 6 s
3. Propeller power at the take-off condition and rotation speed of 1305 rpm: 2229 kW (3090 h.p.)

V. Operation and Maintenance Instructions

1. Operation and Maintenance Manual: Operation Manual. AV-72 ser. 02A and AV-72T ser. 02A Propellers. Issued on 18.12.1975
(Руководство по эксплуатации. Воздушные винты АВ-72 сер. 02А и АВ-72Т сер. 02А. Издание 18.12.1975 г.)

VI. Service life and life time:

Refer to the Instructions for Continued Airworthiness 26.04.00.000.000 ИПЛГ
(Инструкция по поддержанию летной годности. 26.04.00.000.000 ИПЛГ)

ANNEX 3: APU Characteristics

I. General

1. Type: RU19A-300
(PY19A-300)
2. Designer: Tyumen Design Bureau of Machine Building JSC
(ООО "Тюменское конструкторское бюро
машиностроения")

1 Khutoryansky Square
625014 Tyumen
Russian Federation
3. Manufacturer: Tyumen Aviation Engines JSC
(ЗАО "Тюменские авиадвигатели")

1 Khutoryansky Square
625014 Tyumen
Russian Federation
4. APU Acceptance Application Date: Certified as part of the An-26/An-26B aircraft
5. APU Acceptance Reference Date: 21 May 1969

II. APU Acceptance Basis

1. Airworthiness Standards and Environmental Requirements: TSO-C77, dated 20 May 1963
2. Special Conditions:
(see aircraft special conditions) SC1: use of the APU for additional thrust (see CRI-T1)
3. Equivalent Safety Findings: TSO-C77:
5.3.4.4: oil tank overpressure test;
6.2: durability of fatigue testing;
7.3: localization of the engine rotor disk fragments
4. Exemptions: Paragraphs 5.9 and 5.10 of TSO-C77, which require automatic control means for speed and temperature.

III. Technical Characteristics

1. Type Design Definition: Master List 26.00.05.0635.205
2. Description: Single-shaft one-flow turbojet with an axial 7-stage compressor, annular combustor, axial one-stage reaction turbine and D.C. generator, intended for application on aircraft as an additional thrust source
3. Dimensions:

Total length:	1812	mm
Maximum height:	779	mm
Maximum Width:	650	mm
4. Dry weight: 222 kg
5. Thrust values:

Static thrust at ISA, SL conditions:

For an uninstalled engine

Thrust	
Nominal	Cruise, V(IAS)=430 km/h, H=6000 m
Not less than 7840 N (800 kgf)	Not less than 7259 N (740 kgf)

For the engine as installed in An-26 aircraft (i.e. including installation losses)

Thrust		
Nominal	Cruise, V(IAS)=430 km/h, H=6000 m	Idle
Not less than 7448 N (760 kgf)	Not less than 3430 N (350 kgf)	1568 N (160 kgf)

Note : nominal rating is an unlimited maximum continuous rating as specified in CS-E 40 (a).

6. Control System: Hydro-mechanical.
The engine control is performed by means of cable connection of the throttle control lever with 745A fuel flow control unit
7. Fluids:

7.1 Fuel and additions:	Refer to approved Flight Manual
7.2 Oil:	Refer to approved Flight Manual

- | | | | | | |
|-----------------------------------|--|----------------------|---------|-------------------------|-------|
| 8. Aircraft Accessory Drives: | <table border="0"> <tr> <td style="padding-right: 20px;">1. Starter-generator</td> <td>ГC-24Б;</td> </tr> <tr> <td>2. Tachometer-generator</td> <td>ДТЭ-1</td> </tr> </table> | 1. Starter-generator | ГC-24Б; | 2. Tachometer-generator | ДТЭ-1 |
| 1. Starter-generator | ГC-24Б; | | | | |
| 2. Tachometer-generator | ДТЭ-1 | | | | |
| 9. Maximum Permissible Air Bleed: | <p>The air from the engine compressor is off-taken to the aircraft ejector system to cool the generator and to the anti-icing system to heat the compressor rotor fairing: 400 kg/h</p> | | | | |

IV. Operating Limitations

1. Temperature Limits

1.1 Exhaust Gas Temperature - LPT inlet

- | | |
|------------------------------|--------|
| 1.1.1 Maximum during starts: | |
| for H ≤ 1000 m | 750 °C |
| for H > 1000 m | 850 °C |

- | | |
|------------------------------|--------|
| 1.1.2 Maximum during flight: | 740 °C |
|------------------------------|--------|

1.2 Fuel Temperature

- | | |
|---------------------------------|---------|
| 1.2.1 Minimum fuel temperature: | - 60 °C |
|---------------------------------|---------|

- | | |
|---------------------------------|---------|
| 1.2.2 Maximum fuel temperature: | + 60 °C |
|---------------------------------|---------|

1.3 Oil Temperature at the Engine Inlet

- | | |
|------------------------------------|---------|
| 1.3.1 Minimum for engine starting: | - 30 °C |
|------------------------------------|---------|

- | | |
|----------------------------------|--------|
| 1.3.2 Maximum for unlimited use: | 100 °C |
|----------------------------------|--------|

1.4 Ambient Air Temperature Limits

- | | |
|-------------------------|-----------------|
| 1.4.1 Ground operation: | - 60 °C,+ 45 °C |
|-------------------------|-----------------|

- | | |
|--|---------|
| 1.4.2 Ground operation at icing conditions | - 20 °C |
|--|---------|

2. Pressure Limits

2.1 Fuel Pressure

2.1.1 Minimum inlet pressure (measured at engine inlet): 60 kPa to 101 kPa absolute:

For further information refer to approved Flight Manual

2.2 Oil Pressure at Engine Inlet behind the Oil Filter

2.2.1 Minimum oil pressure:

Operation at ground idle power not less than 120 kPa

Operation at flight idle power and over 350 kPa to 404 kPa

3. Rotor Maximum Allowable Speeds 16 083 rpm

V. Operation and Maintenance Instructions

1. Operation and Maintenance Manual: Operation and Maintenance Manual of RU19A-300 Aviation Turbojet Engine, Book 1 and Book 2, issue 1991
(Руководство по эксплуатации и техническому обслуживанию авиационного турбореактивного двигателя РУ19А-300, Книга 1 и Книга 2, издание 1991 года)

2. Mandatory Service Bulletins: Refer to Master List 26.00.05.0635.205

3. Service Bulletins. Check with type certificate holder

VI. Service life: Refer to the Instructions for Continued Airworthiness 26.04.00.000.000 ИПЛГ
(Инструкция по поддержанию летной годности. 26.04.00.000.000 ИПЛГ)