TYPE CERTIFICATE DATA SHEET № ТJI 0039

FALCON 7X

Model: Falcon 7X

Issue 1, 26.01 2010

This Data Sheet which is integral part of Type Certificate № TJI 0039 prescribes the conditions and limitations under which the products for which the Type Certificate was granted meet(s) the airworthiness requirements and environmental protection requirements of Certification basis mentioned in this Data Sheet Chapters II of the Sections 2.

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<tr>
<td>Issue:</td>
<td>1</td>
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SECTION 1: GENERAL

1.1. Data Sheet No: TJI 0039
1.2. Type Certificate Holder: DASSAULT AVIATION
9 Rond Point Marcel Dassault
75008 PARIS - FRANCE
1.3. Initial Certifying Authority: EASA
1.4. Airworthiness Category: Transport Category airplane
1.5. Manufacturer: DASSAULT AVIATION
9 Rond Point Marcel Dassault
75008 PARIS - FRANCE

SECTION 2: FALCON 7X

2.I. General

2.I.1. Aircraft designation: FALCON 7X
2.I.2. Application Date for State Aviation Administration (SAAU) validation: 27.04.2009
2.I.3. SAAU Validation Date: 30.11.2009
2.I.4. Eligible serial number: aircraft serial number from 001 and subsequent.

2.II. Certification Basis

2.II.1. Reference Application Date for JAA/EASA Certification: 26.05.2002
2.II.2. EASA Certification Date: 27.04.2007
2.II.3. EASA Certification Basis: Refer to TCDS EASA.A.155
2.II.4. SAAU Certification Basis: Additional Technical Conditions based on:
2.II.4.1. Airworthiness requirements: “Airworthiness requirements for civil airplanes transport category. Part 25.” (AR-25) and
2.II.4.2. Environmental Standards: ICAO Annex 16, volume I, Part II, Chapter 4, Amendment 8.
2.II.4.3. Equivalent Safety Findings:
AR 25.485(b*) and 25.491 – Landing gears - additional loading conditions (CRI ST-8);
AR 25.519(c) – Ground gust conditions (CRI ST-7);
AR 25.699(b) – Lift and drag device indicator (EASA CRI D-19);
AR 25.772 and 25.795 – Crew cabin door (AR IAC CRI CRW-3);
AR 25.811(d)(1) τα (2) – Emergency exit marking (EASA CRI D-12);
AR 25.811(d)(1) τα (3) – Emergency exit marking (EASA CRI D-13);
AR 25.831(a) - Ventilation (EASA CRI D-15);
AR 25.971 - Fuel tank sump (CRI E-12 and EASA CRI E-9);
AR 25.865, 25.1181, 25.1195 and 25.1203 - Engine fire protection in designated fire zones (EASA CRI E-02);

AR 25.1322 - CAS window red message line space (EASA CRI F-41);

AR 25.1357(e) - Honeywell PRIMUS EPIC Integrated Modular Avionics system (compliance with requirements for individual circuit protection) (EASA CRI F-22);

AR 25.1439(a*) - Protective breathing equipment (CRI SS-5);

AR 25.1457(g) - CVR inscription on Russian language (CRI A-7);

AR 25.1459(a)(2) - Use of IRS for FDR vertical acceleration (EASA CRI F-35);

AR 25.1459(d)(1) – FDR inscription on Russian language (CRI A-8)

AR D25F.8.2.2.14 – Standby instruments list (CRI A-12);

AR 25.1549(b) – Powerplant instruments – colour markings (CRI E-9 та EASA CRI E-10)

2.II.4.4. Deviation: Door between passenger compartments (EASA CRI D-14)

Personal injury criteria of dynamic testing of side facing sofa (CRI ST-11 and EASA CRI D-18)

2.III. Technical Characteristics and Operational Limitations:

2.III.1. Aircraft description: The Falcon 7X is a maximum 22 occupants, tri-jet, long range, large aeroplane category. It has a low positioned, high swept wing, mid-height horizontal stabilizer and tricycle landing gear. Flight controls are fly-by-wire.

Three Pratt & Whitney Canada PW307A engines are rear mounted, two on side of fuselage and one in center position.

2.III.2. Type Design Definition: The Type Design aircraft configuration is the F7TC version stored in an electronic format under the virtual product management tool ENOVIA/VPM®. The repository of the ENOVIA/VPM® database is located in Dassault Aviation facilities. This F7TC version contains also the type design list of equipment.

See Note 2.V.7 for Ukrainian registered airplane.

2.III.3. Dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>23.38 m</td>
</tr>
<tr>
<td>Wing span</td>
<td>26.21 m</td>
</tr>
<tr>
<td>Gross wing area</td>
<td>70.7 m²</td>
</tr>
<tr>
<td>Height</td>
<td>7.93 m</td>
</tr>
<tr>
<td>Distance between main landing gears</td>
<td>4.32 m</td>
</tr>
<tr>
<td>Wheelbase</td>
<td>9.74 m</td>
</tr>
</tbody>
</table>
2.III.4. Engines:

2.III.4.1. Model: PRATT & WHITNEY CANADA Corp.
Model PW307A
SAAU TC pГД 0046

Note: Engine is approved for operation with thrust reverser p/n F7XC782140020

2.III.4.2. Number: 3

2.III.4.3. Engine Limits (sea level, standard conditions):
- Maximum takeoff static thrust (5 minutes): 2,849 daN (2,905 kg)
- Maximum continuous static thrust at 15°C: 2,849 daN (2,905 kg)

Note: For other engine limits and operation instruction see Airplane Flight Manual(AFМ) (See 2.IV)
and TCDS pГД 0046.

2.III.5. Auxiliary Power Unit (APU):

2.III.5.1. Model: HONEYWELL - 36 - 150 [FN]
SAAU TC pГДД 0010

2.III.5.2. Number: 1

Notes: Usable for ground operation only.
For APU limits and operation instruction see Airplane Flight Manual (AFМ) (See 2.IV).

2.III.6. Fluids (Fuel/Additives/Oil/ Hydraulics):

2.III.6.1. Fuel and additives: See AFМ DGT105608 sub-sub-section 1-200-20
2.III.6.2. Oils type and limitation: See AFМ DGT105608 sub-sub-section 1-200-25
2.III.6.3. Hydraulics: Hydraulic fluid approved for use must conform to MIL-H-5606
specifications (NATO codes H515 or H520)

2.III.7. Fluid capacities

2.III.7.1. Fuel capacity:

<table>
<thead>
<tr>
<th></th>
<th>Liters</th>
<th>Kg (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USUABLE FUEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Left circuit:</td>
<td>5.944</td>
<td>4.773</td>
</tr>
<tr>
<td>- Right circuit:</td>
<td>5.944</td>
<td>4.773</td>
</tr>
<tr>
<td>- Center circuit:</td>
<td>6.154</td>
<td>4.942</td>
</tr>
<tr>
<td><strong>TOTAL USABLE:</strong></td>
<td><strong>18.042</strong></td>
<td><strong>14.488</strong></td>
</tr>
<tr>
<td><strong>UNUSABLE FUEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Drainable:</td>
<td>65</td>
<td>52</td>
</tr>
<tr>
<td>- Undrainable:</td>
<td>41</td>
<td>33</td>
</tr>
<tr>
<td><strong>TOTAL UNUSABLE:</strong></td>
<td><strong>106</strong></td>
<td><strong>85</strong></td>
</tr>
</tbody>
</table>

(*) Fuel density: 0.803 kg/l
2.III.7.2. Engine Oil Tank Capacity*:

<table>
<thead>
<tr>
<th></th>
<th>Liters</th>
<th>Kg (**)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max oil level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Left engine:</td>
<td>7.87</td>
<td>7.67</td>
</tr>
<tr>
<td>- Right engine:</td>
<td>7.87</td>
<td>7.67</td>
</tr>
<tr>
<td>- Center engine:</td>
<td>7.87</td>
<td>7.67</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td>23.61</td>
<td>23.01</td>
</tr>
<tr>
<td><strong>Minimum oil level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Left engine:</td>
<td>6.23</td>
<td>6.07</td>
</tr>
<tr>
<td>- Right engine:</td>
<td>6.23</td>
<td>6.07</td>
</tr>
<tr>
<td>- Center engine:</td>
<td>6.23</td>
<td>6.07</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td>18.69</td>
<td>18.21</td>
</tr>
</tbody>
</table>

(*) Tank quantities do not include undrainable oil or residual oil in the Accessory Gearbox, oil filter bowl or air-cooled oil cooler (ACOC)

(**) Oil density: 0.975 kg/l

2.III.8. Air Speeds (Unless otherwise specified, speeds are indicated airspeeds):

\[ V_{MO} \text{(maximum operating)}: \]
- at sea level: 350 kt (648 km/h)
- straight line variation up to 10,000 ft (3,048 m): 370 kt (685 km/h)
- from 10,000 ft (3,048 m) to 28,000 ft (8,534 m): 370 kt (685 km/h)

\[ M_{MO} \text{(maximum operating)}: \]
- from 28,000 ft (8,534 m) to 51,000 ft (15,545 m): 0.9

\[ V_A \text{(maneuvering speed)}: \]
218 kt (404 km/h)

\[ V_{EF} \text{(slat and flap speeds)}: \]
- SF1 (9°flaps+ slats): 200 kt (370 km/h)
- SF2 (20°flaps+ slats): 190 kt (352 km/h)
- SF3 (40°flaps+ slats): 180 kt (333 km/h)

**Note:** Above 20,000 ft (6,096 m), do not establish, nor maintain a configuration with the slats and the flaps extended.

\[ V_{LO} \text{(landing gear operation)}: \]
200 kt (370 km/h)

\[ M_{LO}: \]
0.70

\[ V_{LE} \text{(landing gear extended)}: \]
245 kt (454 km/h)

\[ M_{LE}: \]
0.75

windshield wiper operating speed: 205 kt (380 km/h)

\[ V_{MCA} \text{(minimum control speed in flight)}: \]
CAS 80 kt (148 km/h CAS)

\[ V_{MCG} \text{(minimum control speed on ground)}: \]
CAS 81.3 kt (151 km/h CAS)

2.III.9. Maximum Operating Altitude: 51,000 ft (15,545 m)

2.III.10. All weather Capability:

Cat. II: Auto Pilot with or without MOPT0002 (HUD).

Category II requirements provided the airplane is operated in accordance with Airplane Flight Manual Annex 1 and with Supplement 1 revision 1 (or later approved revision) when monitored with HUD.
2.III.11. Weights, Center of Gravity and Loading:

2.III.11.1. Weight and Center of Gravity Limitations:

<table>
<thead>
<tr>
<th></th>
<th>Weight (kg)</th>
<th>Forward limit (% MAC)</th>
<th>Aft limit (% MAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum ramp</td>
<td>31,842</td>
<td>19.5</td>
<td>31.5</td>
</tr>
<tr>
<td>Maximum takeoff</td>
<td>31,751</td>
<td>19.5</td>
<td>33.65</td>
</tr>
<tr>
<td>Maximum for aft CG at 38.5 %</td>
<td>25,890</td>
<td>19.5</td>
<td>38.5</td>
</tr>
<tr>
<td>Maximum landing</td>
<td>28,304</td>
<td>19.5</td>
<td>38.5</td>
</tr>
<tr>
<td>Maximum zero fuel</td>
<td>18,597</td>
<td>19.5</td>
<td>38.5</td>
</tr>
<tr>
<td>Minimum flight- Forward</td>
<td>15,694</td>
<td>26.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Minimum flight- Aft</td>
<td>14,696</td>
<td>N/A</td>
<td>38.5</td>
</tr>
</tbody>
</table>

For weight and balance calculation refer to the Loading Manual (DGT 108840) - See Note 2.V.1.

2.III.11.2 Maximum Payload (kg): 2,717

2.III.11.3 Maximum weight in baggage compartments (kg): 909

2.III.11.4 Maximum floor loading (kg/m²):
  - baggage compartment: 300
  - galley floor: 400
  - cabin and servicing compartment: 200

2.III.11.5 Center of Gravity Data: The weight and balance charts are contained in the Airplane Flight Manual DGT 105608 sub-sub-section 1-100-10.

2.III.11.6 Mean Aerodynamic Cord (MAC): 3,347.54 mm

2.III.11.7 Datum: 25% of mean aerodynamic chord (MAC) – 12,183 mm from the forward end of the aircraft nose cone

*Note: The forward end of the airplane nose cone is origin of Fuselage Station. Zero % MAC is at fuselage station +11,346.1 mm*

2.III.11.8 Leveling Means Aircraft is leveled in the longitudinal and lateral axis by means of a plumb bob and target in the left main landing gear bay

2.III.12 Minimum Flight Crew: Two pilots (One pilot and one copilot).

2.III.13 Maximum number of passengers: 19 (see Note 2.V.2)

2.III.14 Emergency exits:

<table>
<thead>
<tr>
<th></th>
<th>Type</th>
<th>Quantity</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger door</td>
<td>I</td>
<td>1</td>
<td>800 x 1,720</td>
</tr>
<tr>
<td>Emergency exit</td>
<td>III</td>
<td>1</td>
<td>534 x 916</td>
</tr>
</tbody>
</table>

2.III.15 Other Limitations: Refer to approved Airplane Flight Manual DGT 105608
2.IV. Operating and Service Instructions:

For Flight operation:

- Airplane Flight Manual (AFM): EASA approved Document DGT 105608 with the EASA approved Supplements and special pages for Ukrainian registered airplanes;

- Crew Operational Documentation for Dassault EASy (CODDE):
  
  - Airplane description (CODDE 1): Document DGT 9731;
  
  - Operations manual (CODDE 2): Document DGT 105609 with the special pages for Ukrainian registered airplanes;
  
  - Quick Reference Handbook (CODDE 3): Document DGT 105610 (Handbook 1 - books 1 and 2) and Document DGT 105611 (Handbook 2);

- Master Minimum Equipment List (MMEL): Section 6 of CODDE 2 (EASA approved Certification Documents DGT 106042 and DGT 10644);

- Configuration Deviation List (CDL): Section 6 of CODDE 2;

- Loading Manual: Document DGT 108840;

- Performance Manual: Document DGT 112614;

- Ground Servicing Manual: Document DGT 779 (Publication number 779);

Instructions for Maintenance and Continued Airworthiness:

- Falcon Integrated Electronic Library by Dassault (FIELD) including:
  

  - Chapter 5-40 “Airworthiness limitations”: EASA approved Document DGT 107838 (EASA approved Certification Documents DGT 107421)

  - Aircraft Maintenance Manual (AMM): Publication number 787;

  - Structural Repair Manual: Publication number 787 (EASA approved);

  - Illustrated Parts Catalog;

  - Service Bulletins and Service Letters;

- AMM Supplements for individual aircraft.
2.V. **Notes**

2.V.1. a) - A current weight and balance report must be carried in the aircraft at all times from the moment the aircraft is originally certified.

   b) - Loading of the aircraft must be accomplished in a manner that always maintains the center of gravity within the specified limits considering crew and passenger movements as well as fuel consumption and transfer.

2.V.2. a) Maximum Seating Capacity:

   - 2 + 1 crew - third crew member seat authorized for take-off and landing in the cockpit;
   - 19 passengers in cabin.

   b) Cabin interior and seating configuration must be approved. SAAU will accept all passenger cabin configurations of Falcon 7X aircraft approved by EASA.

2.V.3. The basic equipment of Falcon 7X provides comply with:

   - RVSM requirements and
   - RNP RNAV operations, down to RNP 0.3 RNAV (RTCA/DO-236A and DO-283).

2.V.4. The noise levels of the airplane are not greater than the noise level prescribed in ICAO, Annex 16, Volume I, Part 2, Chapter 4, Amendment 8 noise limits. The noise levels are as follows:

<table>
<thead>
<tr>
<th>Modification</th>
<th>Noise levels in control points EPNL, EPNdB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>During take-off</td>
</tr>
<tr>
<td></td>
<td>Gmax, kg</td>
</tr>
<tr>
<td>SF 2 configuration (20°flaps+ slats)</td>
<td>31,298</td>
</tr>
<tr>
<td>Basic</td>
<td>31,298</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modification</th>
<th>Noise levels in control points EPNL, EPNdB</th>
</tr>
</thead>
<tbody>
<tr>
<td>M0192 (SF1 configuration)</td>
<td>31,298</td>
</tr>
<tr>
<td>M0826 (weight increase)</td>
<td>31,751</td>
</tr>
</tbody>
</table>

Restrictions, conditions and operational methods for provision of the above noise levels are contained in the AFM DGT 105608, sub-sub-section 5-900-05.

2.V.5. The basic modifications are marked as MXXXX. The optional modifications are marked as M-OPTXXXX.

2.V.6. Modifications M0478 and M0826 for maximum take-of weight increase 31,751kg were performed on all Falcon 7X fleet.

2.V.7. The modifications M-OPT0601 (Provision portable emergency radio station P-855A1 installation and Provision Placards in Russian language) and M0995 (permissible fuel designations marking – CIS TC-1 fuel) must be incorporate on the Ukrainian registered airplane.
2.V.8. Each of the documents listed below that contain a statement that it is approved by the EASA are accepted by the SAAU and are considered SAAU approved. Approvals issued by Dassault Aviation under the authority of EASA approved Design Organization Approval (DOA) EASA.21J.051 are considered SAAU approved.

- Dassault Aviation Service Bulletins and Modifications;
- Structural repair manuals;
- Vendor manuals referenced in Dassault Aviation service bulletins;
- Airplane Flight Manuals;
- Aircraft Maintenance Manual;
- Repair Instructions.

* * *

Head of Aeronautical Products
Type Certification Department

Sergiy Haidenko