European Aviation Safety Agency

EASA

TYPE-CERTIFICATE
DATA SHEET

No. EASA.A.064

for
AIRBUS A318 – A319 – A320 – A321

Type Certificate Holder:
AIRBUS

1 Rond-point Maurice Bellonte
31707 BLAGNAC
FRANCE

For Models:

A318 – 121  A 319 – 113  A 320 – 212  A321 – 131
A 320 – 233
Intentionally left blank
# TABLE OF CONTENTS

**SECTION 1: A320 SERIES**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General</td>
<td>7</td>
</tr>
<tr>
<td>II. Certification Basis</td>
<td>8</td>
</tr>
<tr>
<td>III. Technical Characteristics and Operational Limitations</td>
<td>16</td>
</tr>
<tr>
<td>IV. Operating and Service Instructions</td>
<td>29</td>
</tr>
<tr>
<td>V. Notes</td>
<td>30</td>
</tr>
</tbody>
</table>

**SECTION 1: A320 SERIES**

<table>
<thead>
<tr>
<th>I. General</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Type/ model/ Variant:</td>
<td>7</td>
</tr>
<tr>
<td>2. Performance Class:</td>
<td>7</td>
</tr>
<tr>
<td>3. Certifying Authority:</td>
<td>7</td>
</tr>
<tr>
<td>4. Manufacturer</td>
<td>7</td>
</tr>
<tr>
<td>5. Joint Airworthiness Authority (JAA) Certification Application Date</td>
<td>7</td>
</tr>
<tr>
<td>6. EASA Certification Application Date</td>
<td>7</td>
</tr>
<tr>
<td>7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date</td>
<td>8</td>
</tr>
<tr>
<td>8. EASA Type Certification Date</td>
<td>8</td>
</tr>
<tr>
<td>9. Production conditions</td>
<td>8</td>
</tr>
</tbody>
</table>

**II. Certification Basis**

<table>
<thead>
<tr>
<th>Certification Basis</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reference Date for determining the applicable requirements</td>
<td>8</td>
</tr>
<tr>
<td>2. Initial Airworthiness Authority Type Certification Data Sheet No.</td>
<td>9</td>
</tr>
<tr>
<td>3. Initial Airworthiness Authority Certification Basis</td>
<td>9</td>
</tr>
<tr>
<td>4. EASA Airworthiness Requirements</td>
<td>9</td>
</tr>
<tr>
<td>5. Special Conditions</td>
<td>12</td>
</tr>
<tr>
<td>6. Exemptions</td>
<td>14</td>
</tr>
<tr>
<td>7. Deviations</td>
<td>14</td>
</tr>
<tr>
<td>8. Equivalent Safety Findings</td>
<td>15</td>
</tr>
<tr>
<td>9. Environmental Protection Standards</td>
<td>15</td>
</tr>
<tr>
<td>10. ETOPS</td>
<td>16</td>
</tr>
</tbody>
</table>

**III. Technical Characteristics and Operational Limitations**

<table>
<thead>
<tr>
<th>Technical Characteristics and Operational Limitations</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Type Design Definition</td>
<td>16</td>
</tr>
<tr>
<td>2. Description</td>
<td>17</td>
</tr>
<tr>
<td>3. Equipment</td>
<td>17</td>
</tr>
<tr>
<td>4. Dimensions</td>
<td>17</td>
</tr>
<tr>
<td>5. Engines</td>
<td>18</td>
</tr>
<tr>
<td>6. Auxiliary Power Unit</td>
<td>20</td>
</tr>
<tr>
<td>7. Propellers</td>
<td>20</td>
</tr>
<tr>
<td>8. Fluids (Fuel, Oil, Additives, Hydraulics)</td>
<td>20</td>
</tr>
<tr>
<td>9. Fluid Capacities</td>
<td>21</td>
</tr>
<tr>
<td>10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)</td>
<td>23</td>
</tr>
<tr>
<td>11. Flight Envelope</td>
<td>24</td>
</tr>
<tr>
<td>12. Operating Limitations</td>
<td>24</td>
</tr>
<tr>
<td>13. Maximum Certified Masses</td>
<td>26</td>
</tr>
<tr>
<td>14. Centre of Gravity Range</td>
<td>28</td>
</tr>
<tr>
<td>15. Datum</td>
<td>28</td>
</tr>
<tr>
<td>16. Mean Aerodynamic Chord (MAC)</td>
<td>28</td>
</tr>
<tr>
<td>17. Levelling Means</td>
<td>28</td>
</tr>
<tr>
<td>18. Minimum Flight Crew</td>
<td>28</td>
</tr>
<tr>
<td>19. Maximum Seating Capacity</td>
<td>28</td>
</tr>
<tr>
<td>20. Baggage/ Cargo Compartment</td>
<td>29</td>
</tr>
<tr>
<td>21. Wheels and Tyres</td>
<td>29</td>
</tr>
</tbody>
</table>

**IV. Operating and Service Instructions**

<table>
<thead>
<tr>
<th>Operating and Service Instructions</th>
<th>29</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Airplane Flight Manual (AFM)</td>
<td>29</td>
</tr>
<tr>
<td>2. Instructions for Continued Airworthiness and Airworthiness Limitations</td>
<td>29</td>
</tr>
<tr>
<td>3. Weight and Balance Manual (WBM)</td>
<td>30</td>
</tr>
</tbody>
</table>

**V. Notes**

| Notes                                                                 | 30 |
## SECTION 2: A321 SERIES

### I. General

1. Type/ model/ Variant
2. Performance Class
3. Certifying Authority
4. Manufacturer
5. Joint Airworthiness Authority (JAA) Certification Application Date
6. EASA Certification Application Date
7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date
8. EASA Type Certification Date
9. Production conditions

### II. Certification Basis

1. Reference Date for determining the applicable requirements
2. Initial Airworthiness Authority Type Certification Data Sheet No.
3. Initial Airworthiness Authority Certification Basis
4. EASA Airworthiness Requirements
5. Special Conditions
6. Exemptions
7. Deviations
8. Equivalent Safety Findings
9. Environmental Protection Standards
10. ETOPS

### III. Technical Characteristics and Operational Limitations

1. Type Design Definition
2. Description
3. Equipment
4. Dimensions
5. Engines
6. Auxiliary Power Unit
7. Propellers
8. Fluids (Fuel, Oil, Additives, Hydraulics)
9. Fluid Capacities
10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)
11. Flight Envelope
12. Operating Limitations
13. Maximum Certified Masses
14. Centre of Gravity Range
15. Datum
16. Mean Aerodynamic Chord (MAC)
17. Levelling Means
18. Minimum Flight Crew
19. Maximum Seating Capacity
20. Baggage/ Cargo Compartment
21. Wheels and Tyres

### IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)
2. Instructions for Continued Airworthiness and Airworthiness Limitations
3. Weight and Balance Manual (WBM)

### V. Notes
SECTION 3: A319 series

I. General

1. Type/ model/ Variant
2. Performance Class
3. Certifying Authority:
4. Manufacturer
5. Joint Airworthiness Authority (JAA) Certification Application Date
6. EASA Certification Application Date
7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date
8. EASA Type Certification Date
9. Production conditions

II. Certification Basis

1. Reference Date for determining the applicable requirements
2. Initial Airworthiness Authority Type Certification Data Sheet No.
3. Initial Airworthiness Authority Certification Basis
4. Manufacturer
5. Joint Airworthiness Authority Certification Application Date
6. Exemptions
7. Deviations
8. Equivalent Safety Findings
9. Environmental Protection Standards
10. ETOPS

III. Technical Characteristics and Operational Limitations

1. Type Design Definition
2. Description
3. Equipment
4. Dimensions
5. Engines
6. Auxiliary Power Unit
7. Propellers
8. Fluids (Fuel, Oil, Additives, Hydraulics)
9. Fluid Capacities
10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)
11. Flight Envelope
12. Operating Limitations
13. Maximum Certified Masses
14. Centre of Gravity Range
15. Datum
16. Mean Aerodynamic Chord (MAC)
17. Levelling Means
18. Minimum Flight Crew
19. Maximum Seating Capacity
20. Baggage/ Cargo Compartment
21. Wheels and Tyres

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)
2. Instructions for Continued Airworthiness and Airworthiness Limitations
3. Weight and Balance Manual (WBM)

V. Notes
SECTION 4: A318 Series .............................................................................................. 75
I. General ................................................................................................................... 75
   1. Type/ model/ Variant .......................................................................................... 75
   2. Performance Class: ............................................................................................. 75
   3. Certifying Authority: ......................................................................................... 75
   4. Manufacturer ...................................................................................................... 75
   5. Joint Airworthiness Authority (JAA) Certification Application Date .......... 75
   6. EASA Certification Application Date .................................................................. 75
   7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date ...... 75
   8. EASA Type Certification Date ......................................................................... 76
   9. Production conditions ...................................................................................... 76
II. Certification Basis ................................................................................................. 76
   1. Reference Date for determining the applicable requirements ....................... 76
   2. Initial Airworthiness Authority Type Certification Data Sheet No. ................. 76
   3. Initial Airworthiness Authority Certification Basis .......................................... 76
   4. EASA Airworthiness Requirements .................................................................. 76
   5. Special Conditions ............................................................................................. 78
   6. Exemptions ......................................................................................................... 80
   7. Deviation ............................................................................................................ 80
   8. Equivalent Safety Findings ............................................................................... 80
   9. Environmental Protection Standards ............................................................... 81
  10. ETOPS ............................................................................................................... 81
III. Technical Characteristics and Operational Limitations ......................................... 82
   1. Type Design Definition ..................................................................................... 82
   2. Description ......................................................................................................... 82
   3. Equipment ......................................................................................................... 82
   4. Dimensions ........................................................................................................ 82
   5. Engines .............................................................................................................. 82
   6. Auxiliary Power Unit ....................................................................................... 83
   7. Propellers .......................................................................................................... 84
   8. Fluids (Fuel, Oil, Additives, Hydraulics) ............................................................. 84
   9. Fluid Capacities .................................................................................................. 85
  10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated) ............ 86
  11. Flight Envelope .................................................................................................. 86
  12. Operating Limitations ...................................................................................... 87
  13. Maximum Certified Masses .............................................................................. 88
  14. Centre of Gravity Range .................................................................................. 88
  15. Datum ................................................................................................................. 88
  16. Mean Aerodynamic Chord (MAC) .................................................................... 88
  17. Levelling Means ................................................................................................. 88
  18. Minimum Flight Crew ...................................................................................... 88
  19. Maximum Seating Capacity ............................................................................ 88
  20. Baggage/ Cargo Compartment ....................................................................... 89
  21. Wheels and Tyres .............................................................................................. 89
IV. Operating and Service Instructions ....................................................................... 89
   1. Airplane Flight Manual (AFM) .......................................................................... 89
   2. Instructions for Continued Airworthiness and Airworthiness Limitations ...... 89
   Airworthiness Limitations .................................................................................... 89
   3. Weight and Balance Manual (WBM) ................................................................ 90
V. Notes .................................................................................................................... 90

SECTION: ADMINISTRATIVE .................................................................................. 91
I. Acronyms and Abbreviations ................................................................................. 91
II. Type Certificate Holder Record ............................................................................ 91
III. Change Record ................................................................................................... 91
SECTION 1: A320 SERIES

I. General

1. Type/ model/ Variant:

   - A320-111
   - A320-211
   - A320-212
   - A320-214
   - A320-215
   - A320-216
   - A320-231
   - A320-232
   - A320-233

   Significant Product Level Changes i.a.w. 21.A.101:

   MOD 160500 Sharklet applicable on A320-214/-215/-216/-232/-233

2. Performance Class:

   A

3. Certifying Authority:

   European Aviation Safety Agency (EASA)
   Postfach 101253
   D-50452 Köln
   Deutschland

4. Manufacturer

   AIRBUS
   1, rond-point Maurice Bellonte
   31707 BLAGNAC CEDEX – France

5. Joint Airworthiness Authority (JAA) Certification Application Date

   - A320-111
   - A320-211
   - A320-212  31 January 1990
   - A320-214  10 May 1992
   - A320-231  16 June 1988
   - A320-232  10 May 1992
   - A320-233  23 February 1995

6. EASA Certification Application Date

   - A320-215  22 December 2005
   - A320-216  22 December 2005
   - MOD 160500  08 April 2010
SECTION 1: A320 series - continued

7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date

<table>
<thead>
<tr>
<th>Model</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A320-111</td>
<td>February 26, 1988</td>
</tr>
<tr>
<td>A320-211</td>
<td>November 08, 1988</td>
</tr>
<tr>
<td>A320-212</td>
<td>November 20, 1990</td>
</tr>
<tr>
<td>A320-214</td>
<td>March 10, 1995</td>
</tr>
<tr>
<td>A320-231</td>
<td>April 20, 1989</td>
</tr>
<tr>
<td>A320-232</td>
<td>September 28, 1993</td>
</tr>
<tr>
<td>A320-233</td>
<td>October 26, 1995</td>
</tr>
</tbody>
</table>

Note: For A320-111/-211/-212/-214/-231/-232/-233 produced before December 21, 2005 DGAC-F TC 180 remains a valid reference.

8. EASA Type Certification Date

<table>
<thead>
<tr>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EASA TCDS issue 1 issued December 21, 2005</td>
</tr>
<tr>
<td>A320-215 June 22, 2006</td>
</tr>
<tr>
<td>A320-216 June 14, 2006</td>
</tr>
<tr>
<td>MOD 160500 iss.1 November 30, 2012 (A320-214,-215,-216)</td>
</tr>
<tr>
<td>MOD 160500 iss.2 December 21, 2012 (A320-232,-233)</td>
</tr>
</tbody>
</table>

9. Production conditions

A320 aircraft up to and including MSN 0925, with the exception of those listed below, were produced in Blagnac (France) under approval P09 issued by DGAC to AIRBUS INDUSTRIE.

A320 aircraft MSN 0844, 0861, 0863, 0868, 0870, 0918, and A320 aircraft from and including MSN 0927 were produced in Blagnac (France) under approval F.G.035 issued by DGAC to AIRBUS INDUSTRIE.

Since September 27, 2004 A320 aircraft were produced in Blagnac (France) under approval FR.21G.0035 issued by DGAC France to AIRBUS.

Since April 15, 2008, A320 aircraft were produced in Hamburg (Germany) under approval DE.21G.0009 issued by LBA to AIRBUS.

From July 21st, 2008, A320 aircraft were produced in Toulouse (France) and Hamburg (Germany) under approval EASA.21G.0001 issued by EASA to AIRBUS.

From May 06th, 2009, A320 aircraft are produced in Toulouse (France), Hamburg (Germany) and Tianjin (People’s Republic of China) under approval EASA.21G.0001 issued by EASA to AIRBUS.

II. Certification Basis

1. Reference Date for determining the applicable requirements

Application date of the A320-111 model
SECTION 1: A320 series - continued

2. Initial Airworthiness Authority Type Certification Data Sheet No.

Original French TCDS DGAC no. 180 was replaced by the EASA TCDS A.064

3. Initial Airworthiness Authority Certification Basis

See below

4. EASA Airworthiness Requirements

Hereafter are listed the certification bases for the different A320 models. The amendments made to a particular basis at the occasion of further A320 model certification are identified per model.

4.1 The applicable technical conditions for models A320-111, A320-211, A320-212, A320-231 and weight variants up to 006 (DGAC letter 53170 SFACT/TC) are defined as follows:

- JAR 25 Change 11 (except paragraph 25.207 which remains at Change 10) as elected by the Manufacturer
- A320 Special Conditions, Experience Related Conditions and Harmonization Conditions.

4.2 For weight variant 007 and subsequent and for all new models from and including A320-232, the following JAR 25 paragraphs are modified following the elect to comply to OP 91/1 (NPA 25C205) by the manufacturer (DGAC letter 60667/SFACT/N.AT)

- JAR 25.305
- JAR 25.321
- JAR 25.331
- JAR 25.333
- JAR 25.335(d)
- JAR 25.341
- JAR 25.343(b)(1)(ii)
- JAR 25.345(a)(c)
- JAR 25.349(b)
- JAR 25.351
- JAR 25.365(e)
- JAR 25.371
- JAR 25.373
- JAR 25.391
- JAR 25.427
- JAR 25.571(b)(2)

4.3 For all models of A320-200 series, the JAR 25 paragraphs defined in 4.2. above are modified following the Elect-to-comply with the new discrete gust requirements of JAR 25 Change 14 as amended by NPA 25C-282, by application of the major change titled “Flight Controls - deletion of LAF features from A320”, modifications 26334/26335. (CRI A2006)

4.4 ETOPS:

For the Extended Range Twin Engine Airplane Operations the applicable technical conditions are contained in AMC 20-6 (as initially published in AMJ 120-42/IL 20 and CAP 513) and A320 ETOPS CRI:

CRI G1006 ETOPS.
SECTION 1: A320 series - continued

4.5 JAR AWO Change 1 for auto-land and operations in low visibility.

4.6 For all models Airbus Elect To Comply with 14 CFR Part 25.772(a) and (c) and 25.795 amendment 106 according to CRI E12 – Reinforced Security Cockpit Door

4.7 Certification basis revised for MOD 160500 “Sharklet” by CRI A-0001-001.

CS 25 Amdt 8 for
§ 25.23 § 25.481(a)(c) amended by SC A-2 for § 25.481(a)
§ 25.25 § 25.483
§ 25.117 § 25.485
§ 25.147 § 25.489
§ 25.161 § 25.491
§ 25.177 amended by SC-F16 § 25.571(a)(b)(e)
§ 25.235 § 25.581
§ 25.251 § 25.601
§ 25.301 § 25.603
§ 25.302 § 25.605
§ 25.303 § 25.607
§ 25.305(a)(b)(c)(e)(f) § 25.609
§ 25.307(a)(d) § 25.613
§ 25.321(a)(b)(c)(d) § 25.619
§ 25.331(a)(b)(c) § 25.623
§ 25.333(a)(b) § 25.625
§ 25.335(a)(c)(d)(e)(f) amended by SC A5003 § 25.629
for (b) and SC A-2 for (e)
§ 25.337 § 25.631
§ 25.341(a)(b) § 25.651
§ 25.343(a)(b) § 25.683
§ 25.345(a)(b)(c)(d) § 25.899
§ 25.349(a)(b) amended by SC A-2.2.2 for § 25.903(d)(1) (see CRI E-39 for interpretative material)
25.349(a)
§ 25.351 § 25.1385
§ 25.365(a)(b)(d) § 25.1387
§ 25.367 § 25.1389
§ 25.371 § 25.1391
§ 25.373 § 25.1393
§ 25.391 § 25.1395
§ 25.393(b) § 25.1397
§ 25.427 § 25.1401
§ 25.445 § 25.1505
§ 25.457 § 25.1511
§ 25.459 § 25.1515
§ 25.471(a)(b) § 25.1527
§ 25.473 § 25.1587
§ 25.479(a)(c)(d) amended by SC A-2 for § 25.1591
25.479(a)
CS 25 Amdt 2 for
§ 25.253
### JAR 25 Chg 15 for

§ 25.1517

### JAR 25 Chg 14 for

- § 25.21 amended by A318 SC F5001 (for b) § 25.149 + OP96/1
- § 25.101 amended by SC F11/S79 § 25.171 replaced by SC-F5004
- § 25.103 replaced by A318 SC F5001 § 25.173 replaced by SC-F5004
- § 25.105 amended by SC F11/S79 § 25.175 replaced by SC-F5004
- § 25.107 amended by A318 SC-F5001 § 25.181
- § 25.109 amended by SC F11/S79 § 25.201 + OP96/1, replaced by SC-F5001
- § 25.111 § 25.203 + OP96/1, replaced by SC-F5001
- § 25.113 + OP96/1 amended by SC F11/S79 § 25.207 amended by SC-F5001
- § 25.115 amended by SC F11/S79 § 25.231
- § 25.119 + OP96/1 amended by A318 SC F5001 § 25.233
  (for b)
- § 25.121 + OP96/1, amended by A318 SC F5001 § 25.237
  (for c & d)
- § 25.123 § 25X261
- § 25.125 + OP96/1, amended by A318 SC F5001 § 25.1533
- § 25.143 + OP96/1, amended by SC F3, F7 & F8 § 25.1581
- § 25.145 + OP96/1 § 25.1585(a)

### JAR 25 Chg 11 for

- § 25.671
- § 25.672
- § 25.1001
- § 25.1301
- § 25.1309
- § 25.1419 amended by AMC-F14

### Interpretative Material:

**CRI E-39 Uncontained Engine Rotor Failure**

Note: The original Interpretative material applicable to each model remains effective.

### Acceptable Means of Compliance:

AMC F-14 Flight in icing condition.

Note: AMC F-14 applicability extended from A321/A319/A318 to A320 with MOD 160500.

### ETOPS

AMC 20-6 Rev 1 paragraphs related to operation in icing conditions 8.b.(11) for ice shapes on the Sharklet device.

AMC 20-6 Rev 1 paragraphs related to performance data in the AFM supplement for ETOPS 8.f.(1) (iii).

AMJ 120-42 for ETOPS for non-affected areas.

Note: This corresponds to the certification basis used for the initial ETOPS demonstration (refer to A320 CRI G1006).
5. Special Conditions

Reminder: Within the scope of the establishment of the A320 Joint Certification Basis, three types of special conditions were developed:

- Special conditions: rose to cover novel or unusual features not addressed by the JAR.

- Experience related conditions: rose to record an agreed text for the A320 Joint Certification Basis when evolution of JAR was in progress under the NPA procedure.

- Harmonization conditions: to record, for the purpose of the A320 Joint Certification Basis, a common understanding with respect to National variant. This should not be confused with the FAA/JAA harmonised regulations.

EC-G11 General Definitions
(DGAC-F) SC-G17 Operational proving flights
(CAA-UK) SC-G17 Operational flight before certification
SC-F1 Stalling and Scheduled operating Speeds
SC-F3 Cockpit control - motion and effect of cockpit control
SC-F4 Static longitudinal stability
SC-F6 Static directional and lateral stability
SC-F7 Flight envelope protection
SC-F8 Normal load factor limiting
SC-F9 Dual control system
HC-F103 Accelerate Stop Distance, Take-Off Distance and Take-Off Run on a Wet Runway
HC-F114 Approach and Target Threshold Speeds
SC-A.2.1.1 Certification Criteria of Aircraft Designed with Systems Interacting with Structural Performance
SC-A.2.2.2 Design manoeuvre requirement
SC-A.2.2.3 Design dive speed
EC-A.3.6.1 High Lift Devices
(CAA-UK) SC-A.4.3 Tuned Gust Loads
HC-A.4.4 Manoeuvre Loads - High Lift Devices Deployed
HC-A.4.5 Braked roll conditions
HC-A.4.6 Speed control device
SC-S11 Limit pilot forces and torques
HC-S23 Standby gyroscopic horizon
HC-S24 VMO/MMO Warning (setting)
EC-S30 Autoflight system
SC-S33 Autothrust system
SC-S52 Operation without normal electrical power
EC-S54 Circuit protective devices
HC-S61 Design Landing Brakes Kinetic Energy
HC-S62 Rejected Take-Off Brakes Kinetic Energy
HC-S72 Flight recorder
SC-S74 Abnormal attitudes
SC-S75 Lightning protection indirect effects
SC-S76 Effect of external radiations up on aircraft systems
SC-S77 Integrity of control signal
SECTION 1: A320 series - continued

SC-P01 Full Authority Engine Control System (FADEC)
SC-E1005 Resistance to fire terminology

5.1 For weight variant 007 and subsequent and for all new models from and including A320-232, the following A320 Special Conditions and Interpretative Materials are deleted by application of JAR 25 amendment 91/1:

IM-A3.8 Discrete gust loads
SC/AMC-A4.3 Tuned gust loads
HC-A4.4 Manoeuvre loads high lift devices deployed

5.2 The following Special Conditions have been developed for the A320-233:

SC-F11 Accelerate-Stop distances and related performances, worn brakes (see CRI F2012 dated June 4, 1996)
SC-S79 Brakes requirements, qualification and testing (see CRI SE2003 dated June 4, 1996), for which the requirements are met by installation of MOD 24946 (Messier-Bugatti SEPCARB III brakes)

5.3 For A320-233 and all A320-200 with OCTOPUS AFM (see CRI F2013), the JAR 25 paragraphs are modified following the Elect-to-comply with SC-F11 and SC-S79

The following JAR Change 11 paragraphs are deleted:
JAR 25x131
JAR 25x132
JAR 25x133
JAR 25x135
JAR 25x1588

The following A320 Harmonisation Conditions are deleted:
HC-F103 Accelerate-Stop distance, Take-off distance, Take-off run on wet runway
HC-S61 Design landing brakes kinetic energy
HC-S62 Rejected take-off brakes kinetic energy

The following JAR 25 paragraphs are upgraded at Change 13 and amended by SC-F11 and SC-S79:
JAR 25.101
JAR 25.105
JAR 25.109
JAR 25.113
JAR 25.115
JAR 25.735
JAR 25x1591

5.4 For any new application (new or modified aeroplane system and associated components) after July 10, 1998, SC/IM-S76 (Effect of external radiations upon aircraft systems) are superseded by SC/IM-S76-1 (CRI SE14)

5.5 For any further variant certification after Aug. 10, 1998, the HC-A.4.5 (Braked roll conditions) is superseded by JAR 25.493(d) at Change 14 (CRI A7)
SECTION 1: A320 series - continued

5.6 The following special conditions have been developed post Type Certification:

<table>
<thead>
<tr>
<th>SC</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-01</td>
<td>Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)</td>
</tr>
<tr>
<td>E-34</td>
<td>Seat with inflatable restraints</td>
</tr>
<tr>
<td>E-13</td>
<td>Installation of inflatable restraints (optional)</td>
</tr>
<tr>
<td>D-0306</td>
<td>Heat release and smoke density requirements to seat material (applicable from June 2010)</td>
</tr>
<tr>
<td>P-27</td>
<td>Flammability Reduction System</td>
</tr>
<tr>
<td></td>
<td>If fitted, the centre fuel tank of aircraft which have made their first flight after 1st of January 2012 must be equipped in production with a fuel tank Flammability Reduction System (modification 38062). This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL revision associated with modification 38062. If modification 38062 (Fuel Tank Inerting System (FTIS)) is embodied on A318, A319, A320, or A321 airplanes, the airplane is compliant with paragraph FR Section 25.981(a) &amp; (b) at amendment 25-102, Part 25 appendix M &amp; N at amendment 25-125, and Section 26.33 at amendment 26-3.</td>
</tr>
</tbody>
</table>

| E10 | High Altitude airport operations (up to 14,100ft) (CRI E10)              |

5.7 Special Conditions for aircraft equipped with MOD 160500

| SC F-16  | Static directional and lateral stability                                    |
| A318 SC F-5001 | Stalling and scheduled operating speeds                                      |
| A318 SC F-5004 | Static Longitudinal Stability and Low energy awareness                      |
| A318 SC A-5003 | Design Dive Speed Vd                                                        |

Note: All other original Special Conditions applicable to each model remain effective.

6. Exemptions

No exemptions

7. Deviations

None
8. Equivalent Safety Findings

8.1 The following paragraphs have been complied with through equivalent safety demonstrations:

- JAR 25.783 (e) cargo doors (see CRI SM 2005)
- JAR 25.783 (f) passenger doors and bulk cargo door (MOD 20029) (see CRI SM 2004 and SM 2007)
- JAR 25.813 (c) emergency exits (see CRI E 2105 issue 3 "Type III overwing emergency exit access", seat cushion height)
- JAR 25.807 maximum number of passengers (180 PAX) (see CRI E 2107 "Passenger extension to 180")
- JAR 25.933 (a) thrust reverser autoreset function (see CRI P 1002)
- JAR 25.791 Passenger information signs (CRI S53)

8.2 The following Equivalent Safety Findings have been developed post Type Certification:

- FAR 25.856(b) Fuselage burnthrough protection in bilge area (see CRI E-32), see note below
  If modifications 150700, and 37270 (with CLS option only), 37048 and 36985 are embodied in production on A318, A319, A320, or A321 airplanes, the airplane is compliant with Fuselage Flame Penetration "Burnthrough" requirements addressed by paragraph 14 CFR Part 25.856(b) Amdt 25-111(See CRI E-28).
- 14CFR Part 25.856(a) Improved flammability standards for insulation materials (CRI E18)
- JAR 25.812(b)(1)(ii) Photo-luminescent EXIT sign for MCD (Moveable Class Divider) (CRI E14) (optional)
- JAR 25.811(f) Emergency exit marking reflectance (CRI E16)
- JAR 25.812(b)(1)(i)(ii) Symbolic EXIT signs as an alternative to red EXIT signs for passenger aircraft (CRI SE-42) (optional)

8.3 Equivalent Safety Findings for aircraft equipped with MOD 160500

- ESF F-19 Flight in natural icing condition (§25.1419 (c))

Note: The original ESFs applicable to each model remain effective.

9. Environmental Protection Standards

ICAO Annex 16:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise Requirements</td>
<td>Fuel Venting</td>
<td>Emissions</td>
</tr>
</tbody>
</table>

Notes: Further details are defined within TCDSN EASA.A.064
SECTION 1: A320 series - continued

10. ETOPS

The Type Design, system reliability and performance of A320/ models were found capable for Extended Range Operations when configured, maintained and operated in accordance with the current revision of the ETOPS Configuration, Maintenance and Procedures (CMP) document, SA/EASA: AMC 20-6/CMP.

This finding does not constitute an approval to conduct Extended Range Operations (operational approval must be obtained from the responsible Authority).

The following table provides details on the ETOPS approvals.

<table>
<thead>
<tr>
<th>Aircraft model</th>
<th>Engine Type</th>
<th>120 min Approval Date</th>
<th>180 min Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A320-212</td>
<td>CFM56-5A3</td>
<td>17 September 1991</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A320-214</td>
<td>CFM56-5B4</td>
<td>28 April 1995</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A320-215</td>
<td>CFM56-5B5</td>
<td>N/A</td>
<td>06 November 2006</td>
</tr>
<tr>
<td>A320-216</td>
<td>CFM56-5B6</td>
<td>N/A</td>
<td>06 November 2006</td>
</tr>
<tr>
<td>A320-233</td>
<td>V2527E-A5</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
</tbody>
</table>

Note:
The Configuration, Maintenance and Procedure Standards for extended range twin-engine airplane operations are contained in ETOPS CMP document reference SA/EASA: AMC 20-6/CMP at latest applicable revision. Certificated models are A320-111/-211/-212/-214/-215/-216/-231/-232/-233, with all applicable engines.

Embodiment of modification:
36666 provides ETOPS 120 mn capability for EASA
32009 provides ETOPS 180 mn capability for EASA

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

1.1 Certificated model: A320-111
Definition of reference airplane by AIRBUS INDUSTRIE document AI/E-A 414.197/87
1.2 Certificated model: A320-211
Definition of reference airplane by AIRBUS INDUSTRIE document AI/E-A-413.630/88
1.3 Certificated model: A320-212
Definition of reference airplane by AIRBUS INDUSTRIE document AI/E-A 412.1589/90 (00D000A0004/C0S)
1.4 Certificated model: A320-214
Definition of reference airplane by AIRBUS INDUSTRIE document AI/E-S 413.0150/95 (00D000A0006/C21)
SECTION 1: A320 series - continued

1.5 Certificated model: A320-215
Definition of reference airplane by AIRBUS INDUSTRIE document D00D06006382 (00D000A0215/C21)

1.6 Certificated model: A320-216
Definition of reference airplane by AIRBUS INDUSTRIE document D00D06011383 (00D000A0216/C21)

1.7 Certificated model: A320-231
Definition of reference airplane by AIRBUS INDUSTRIE document AI/EA-A 414.301/89

1.8 Certificated model: A320-232
Definition of reference airplane by AIRBUS INDUSTRIE document AI/EA-AC 414.0502/93 (00D000A0005/C21)

1.9 Certificated model: A320-233
Definition of reference airplane by AIRBUS INDUSTRIE document AI/EA-S 413.1984/95 (00D000A0007/C21)

Notes:

a. Model conversions:
   - If modification 34647 is embodied on A320-212 model powered with CFM56-5A3 engines, it is converted into A320-211 model, powered with CFM56-5A1 engines
   - If modification 35962 is embodied on A320-211 model powered with CFM56-5A1 engines, it is converted into A320-212 model, powered with CFM56-5A3 engines


2. Description

Twin turbo-fan, short to medium range, single aisle, transport category airplane.

3. Equipment

Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00D000A0101/C1S (not applicable for A320-216 and A320-215).

Cabin furnishings, equipment and arrangement shall be in conformance to the following specifications:

   ref. 00D252K0004/C01  Cabin seats
   ref. 00D252K0019/C01  Galleys

4. Dimensions

Principal dimensions of A320 Aircraft:

- Length: 37,57 m
- Width: 34,10 m
  (if MOD 160500 is installed) 35,80 m
- Height: 11,76 m
- Width at horizontal stabilizer: 12,45 m
- Outside fuselage diameter: 3,95 m
SECTION 1: A320 series - continued

- Distance between engines axis: 11,51 m
- Distance between main landing gear: 7,59 m
- Distance between nose and main landing gear: 12,64 m

5. Engines

The list below lists the basic engines fitted on the aircraft models. The notes describe usual names and certified names as well as new engines variants.

**A320-111**
- Two CFMI CFM 56-5A1 jet engines (MOD 20141), or
- CFM 56-5A1/F jet engines (MOD 23755)

**A320-211**
- Two CFMI CFM 56-5A1 jet engines (MOD 20141), or
- CFM 56-5A1/F jet engines (MOD 23755)

**A320-212**
- Two CFMI CFM 56-5A3 jet engines (MOD 22093)

**A320-214**
- Two CFMI CFM 56-5B4 jet engines (MOD 24251), or
- CFM 56-5B4/2 jet engines (MOD 24405)

**A320-215**
- Two CFMI CFM 56-5B5/P jet engines (MOD 25800)

**A320-216**
- Two CFMI CFM 56-5B6/P jet engines (MOD 25800)

**A320-231**
- Two IAE V2500-A1 jet engines (MOD 20165)

**A320-232**
- Two IAE V2527-A5 jet engines (MOD 23008)

**A320-233**
- Two IAE V2527E-A5 jet engines (MOD 25068)

Notes:

1. Whereas it is common use to apply the name of CFMI engines CFM56-5A1 and CFM56-5A1/F, the correct names of the certified engines are:
   - CFM56-5 is the certified engine name, when CFM56-5A1 is the usual name.
   - CFM56-5-A1/F is the certified engine name, when CFM56-5A1/F is the usual name.

2. A320-111/-211 CFM 56-5A1 engine can be intermixed with CFM 56-5A1/F engine (MOD 23755) on the same aircraft.

3. From March 31st 2008, there is no longer any CFM56-5B/2 non /P in field or in production. CFM56-5B4/2 engine model has been removed from CFM56-5B Type Certificate Data Sheet.
**SECTION 1: A320 series - continued**

4 If modification 25800 is embodied on models with CFM56-5B engines, the engine performance is improved. The engine’s denomination changes to /P.

The modification is currently applicable for:

- A320-214: CFM56-5B4 (SAC) which changes to CFM56-5B4/P

CFM 56-5B/"non-P" engine can be intermixed with CFM 56-5B/P engine on the same aircraft.

Note: modification 25800 is basically embodied for A320-215 and -216 models.

5 If modification 26610 is embodied on models with CFM-5B/2 (DAC) engines, the engine performance and gaseous emission levels are improved. The modification is currently applicable for:

- A320-214: CFM 56-5B4/2(DAC) which changes to CFM 56-5B4/2P(DAC II C).

CFM 56-5B/2 "non-P" (DAC) engine can be intermixed with CFM 56-5B/2P(DAC II C) engine on the same aircraft (AFM supplement).

CFM 56-5B/P or / "non-P" (SAC) engine can be intermixed with CFM 56-5B/2P (D AC II C) engine on the same aircraft (AFM supplement).

6 A320-214 CFM 56-5B4 engine can be intermixed with CFM 56-5B4/2 engine (MOD 24405) on the same aircraft (AFM supplement).

7 Introduction of CFM56-5Bx/3 “Tech Insertion” engine is done through embodiment of modification 37147 in production or 38770 in field. This modification is only applicable on CFM56-5Bx /P SAC engines.

If modification 37147 is embodied on models with CFM-5B engines, the engine’s denomination changes to /3.

The modification is currently applicable for:

- A320-214: CFM 56-5B4 (SAC) which changes to CFM 56-5B4/3
- A320-215: CFM 56-5B5 (SAC) which changes to CFM 56-5B5/3
- A320-216: CFM 56-5B6 (SAC) which changes to CFM 56-5B6/3

Modification 37147 has been demonstrated as having no impact on previously certified noise levels.

The engine characteristics remain unchanged.

CFM56-5Bx/3 engine can be intermixed with CFM56-5Bx/P engine under considerations as prescribes in modification 38573.

8 Introduction of “BUMP” function is done through embodiment of modification 38946. If modification 38946 is embodied on models with CFM-5B engines, the engine denomination changes to /P1 (SAC) or /2P1(DAC) or /3B1 (Tech Insertion).

The modification is currently applicable for:

- A320-214: CFM 56-5B4 (SAC) which changes to CFM 56-5B4/P1

Modification 38946 has been demonstrated as having no impact on previously certified noise levels.
SECTION 1: A320 series - continued

The engine characteristics remain unchanged.
Intermix at aircraft level between “Non Bump” engine and “Bump” engine is not allowed.

6. Auxiliary Power Unit

APU GARRETT

GARRETT AIRESEARCH GTCP 36-300 (A)
(Specification 31-5306B)
Approved oils: see GARRETT REPORT GT. 7800

APU APIC (Option)

The APU APIC installation is defined by MOD 22562 or MOD 35864.
APIC APS 3200 (Specification ESR 0802, Rev. A)
Approved oils: in conformance to MIL-L-7808, MIL-L-23699 or DERD 2487

APU AlliedSignal (Option)

The APU AlliedSignal installation is defined by MOD 25888
AlliedSignal 131-9[A] (Specification 4900 M1E 03 19 01)
Approved oils: according to model Specification 31-12048A-3A

Note: for A320 models, the APU APIC APS 3200 (MOD 35864) is the production standard from MSN 2645

7. Propellers
N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics)

Fuel
Fuel Specification: See installation manual: document CFM 2026 or CFM 2129 or document IAE - 0043

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SPECIFICATION (NAME)</th>
<th>FRANCE</th>
<th>USA</th>
<th>UK</th>
<th>RUSSIA</th>
<th>CHINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene</td>
<td>DCSEA 134</td>
<td>ASM D 1655 (JET A)</td>
<td>DEF STAN 91/91 (AVTUR)</td>
<td>GOST 10227-86 (RT)</td>
<td>GB 5637-2006</td>
<td>N°3 JET</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIL-DTL 83133 (JP 8)</td>
<td>DEF STAN 91/87 (AVTUR)</td>
<td>GOST R 52050-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wide cut</td>
<td></td>
<td>ASM D 6615 (JET B)</td>
<td>DEF STAN 91/88 (AVTAG)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIL-DTL 5624 (JP 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High flash point</td>
<td>DCSEA 144</td>
<td>(F-44)</td>
<td>MIL-DTL 5624 (JP 5)</td>
<td>DEF STAN 91/86 (AVCAT)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For IAE engines, TS-1 is cleared for transient use (less than 50% of operations)
SECTION 1: A320 series - continued

OIL
For oil specification:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Oils</td>
<td>SB CFMI 79-001</td>
<td>See doc IAE 0043 Sect 4.9 (MIL-L-23699)</td>
</tr>
</tbody>
</table>

Additives:
Refer to Airbus Consumable Material List (CML) and CFM SB 73-0122 or IAE Standard Practices and Processes Manual for CIS fuel additives
The above mentioned fuels and additives are also suitable for the APU

Hydraulics
Hydraulic fluids: Type IV - Specification NSA 30.7110

9. Fluid Capacities

Fuel quantity (0.8 kg/liter)

A320-100 series

<table>
<thead>
<tr>
<th>TANK</th>
<th>2 TANK AIRPLANE</th>
<th>3 TANK AIRPLANE **</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel</td>
<td>Usable fuel</td>
</tr>
<tr>
<td></td>
<td>liters (kg)</td>
<td>liters (kg)</td>
</tr>
<tr>
<td>WING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>15 588 (12 470)</td>
<td>15 588 (12 470)</td>
</tr>
<tr>
<td>mod 21145</td>
<td>15 843 (12 674)</td>
<td>15 843 (12 674)</td>
</tr>
<tr>
<td>CENTER</td>
<td>Basic</td>
<td>Basic</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>8 079 (6 463)</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>8 250 (6 600)</td>
</tr>
<tr>
<td>mod 21145</td>
<td>8 250 (6 600)</td>
<td>8 250 (6 600)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Basic</td>
<td>Basic</td>
</tr>
<tr>
<td></td>
<td>15 588 (12 470)</td>
<td>23 667 (18 933)</td>
</tr>
<tr>
<td></td>
<td>57.3 (45.8)</td>
<td>82.1 (65.7)</td>
</tr>
<tr>
<td>mod 21145</td>
<td>15 843 (12 674)</td>
<td>24 093 (19 274)</td>
</tr>
</tbody>
</table>

If modification 20024 is embodied on the series A320-100, the central wing box is used as a central fuel tank.
## A320-200 series (without MOD 160001)

<table>
<thead>
<tr>
<th>TANK</th>
<th>3 TANK AIRPLANE</th>
<th>4 TANK AIRPLANE</th>
<th>4 or 5 TANK AIRPLANE *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel liters (kg)</td>
<td>Unusable fuel liters (kg)</td>
<td>Usable fuel liters (kg)</td>
</tr>
<tr>
<td>WING</td>
<td>15 609 (12 487)</td>
<td>58.9 (47.1)</td>
<td>15 609 (12 487)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
<td>8 250 (6 600)</td>
</tr>
<tr>
<td>ACT (*)</td>
<td></td>
<td>2992 (2 393)</td>
<td>17 (13.6)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 859 (19 087)</td>
<td>82.1 (65.7)</td>
<td>26 851 (21 480)</td>
</tr>
</tbody>
</table>

On the series A320-200, the certification of installing one or two Additional Center Tanks (ACT) in bulk version is defined by modification 28378. An alternative is the installation of one ACT only (with the provisions for only one ACT), as defined by modification 34456.

## A320-211/-212/-214/-215/-216 (with MOD 37331 and without MOD 160001)

<table>
<thead>
<tr>
<th>TANK</th>
<th>3 TANK AIRPLANE</th>
<th>4 TANK AIRPLANE</th>
<th>4 or 5 TANK AIRPLANE *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel liters (kg)</td>
<td>Unusable fuel liters (kg)</td>
<td>Usable fuel liters (kg)</td>
</tr>
<tr>
<td>WING</td>
<td>15 959 (12 767)</td>
<td>58.9 (47.1)</td>
<td>15 959 (12 767)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
<td>8 250 (6 600)</td>
</tr>
<tr>
<td>ACT (*)</td>
<td></td>
<td>2992 (2 393)</td>
<td>17 (13.6)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24 209 (19 367)</td>
<td>82.1 (65.7)</td>
<td>27 201 (21 761)</td>
</tr>
</tbody>
</table>

On the series A320-200, the certification of installing one or two Additional Center Tanks (ACT) in bulk version is defined by modification 28378. An alternative is the installation of one ACT only (with the provisions for only one ACT), as defined by modification 34456.
### A320-200 series (without MOD 37331 and with MOD 160001)

<table>
<thead>
<tr>
<th>TANK</th>
<th>3 TANK AIRPLANE</th>
<th>4 TANK AIRPLANE</th>
<th>4 or 5 TANK AIRPLANE *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel liters (kg)</td>
<td>Unusable fuel liters (kg)</td>
<td>Usable fuel liters (kg)</td>
</tr>
<tr>
<td>WING</td>
<td>15 569 (12 455)</td>
<td>58.9 (47.1)</td>
<td>15 569 (12 455)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 248 (6 598)</td>
<td>23.2 (18.6)</td>
<td>8 248 (6 598)</td>
</tr>
<tr>
<td>ACT (*)</td>
<td>2992 (2 393)</td>
<td>17 (13.6)</td>
<td>2 992 / 5 984 (2 393 / 4 786)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 817 (19 054)</td>
<td>82.1 (65.7)</td>
<td>26 809 (21 447)</td>
</tr>
</tbody>
</table>

On the series A320-200, the certification of installing one or two Additional Center Tanks (ACT) in bulk version is defined by modification 28378. An alternative is the installation of one ACT only (with the provisions for only one ACT), as defined by modification 34456.

### A320-214/215/216 (with MOD 37331 and MOD 160001)

<table>
<thead>
<tr>
<th>TANK</th>
<th>3 TANK AIRPLANE</th>
<th>4 TANK AIRPLANE</th>
<th>4 or 5 TANK AIRPLANE *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel liters (kg)</td>
<td>Unusable fuel liters (kg)</td>
<td>Usable fuel liters (kg)</td>
</tr>
<tr>
<td>WING</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 248 (6 598)</td>
<td>23.2 (18.6)</td>
<td>8 248 (6 598)</td>
</tr>
<tr>
<td>ACT (*)</td>
<td>2992 (2 393)</td>
<td>17 (13.6)</td>
<td>2 992 / 5 984 (2 393 / 4 786)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24 167 (19 334)</td>
<td>82.1 (65.7)</td>
<td>27 159 (21 727)</td>
</tr>
</tbody>
</table>

10. **Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)**

- Maximum Operating Mach (MMO): 0.82
- Maximum Operating Speed (VMO): 350 kt
- Manoeuvring Speed VA: See Limitations Section of the EASA approved Flight Manual
SECTION 1: A320 series - continued

Extended Flaps / Slats Speed (VFE): see table below

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Slats/Flaps (°)</th>
<th>VFE (kt)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18/0</td>
<td>230</td>
<td>Intermediate approach</td>
</tr>
<tr>
<td></td>
<td>*18/10</td>
<td>215</td>
<td>Take-off</td>
</tr>
<tr>
<td>2</td>
<td>22/15</td>
<td>200</td>
<td>Take-off and approach</td>
</tr>
<tr>
<td>3</td>
<td>22/20</td>
<td>185</td>
<td>Take-off, approach, landing</td>
</tr>
<tr>
<td>Full</td>
<td>27/35</td>
<td>177</td>
<td>Landing</td>
</tr>
</tbody>
</table>

* Auto flap retraction at 210 kt in take-off configuration

Landing gear:
VLE - Extended: 280 kt/Mach 0.67
VLO - Extension: 250 kt
Retraction: 220 kt
Tyres limit speed (ground speed): 195.5 kt (225 mph)

11. Flight Envelope

Maximum Operating Altitude:
39 100 ft (pressure altitude)
39 800 ft (pressure altitude) if modification 30748 is embodied

See the appropriate EASA approved Airplane Flight Manual

12. Operating Limitations

See the appropriate EASA approved Airplane Flight Manual

Powerplant (2.2482 lb/daN)

| Engine       | CFM56-5B5/P | CFM56-5B6/P | CFMI CFM56-5A1 CFM56-5A1/F (**) | CFM56-5A3 | CFM56-5B4 CFM56-5B4/2 (***)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M-17 (DGAC)</td>
<td>M-17 (DGAC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M-IM28 (DGAC)</td>
<td>M-IM28 (DGAC)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(**): see note 1 chapter 5 for usual names and certified names
(***): see note 3 chapter 5 for engine models no longer in prod/service.
**SECTI ON 1: A320 series - continued**

<table>
<thead>
<tr>
<th>Engine</th>
<th>IAE V2500-A1</th>
<th>IAE V2527-A5</th>
<th>IAE V2527E-A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sheets</td>
<td>E31NE (FAA)</td>
<td>E40NE (FAA)</td>
<td>M-IM22 (DGAC)</td>
</tr>
<tr>
<td></td>
<td>M-IM31 (DGAC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static thrust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at sea level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take-off (5 min)*</td>
<td>11 031 daN (24 800 lbs)</td>
<td>11 031 daN (24 800 lbs)</td>
<td></td>
</tr>
<tr>
<td>(Flat rated 30° C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum continuous</td>
<td>9 893 daN (22 240 lbs)</td>
<td>9 893 daN (22 240 lbs)</td>
<td></td>
</tr>
<tr>
<td>(Flat rated 25° C)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around) in accordance with DGAC "Fiche de Caractéristiques Moteur"

Other engine limitations: see the relevant Engine Type Certificate Data Sheet

Notes:

1. A320-212 (CFM 56-5A3 engines) - A320-111/-211 (CFM 56-5A1/F engines, see note 1 in Chapter 5 "engines" for usual names and certified names). The maximum permissible gas temperature at take-off and max continuous is extended to 915° C and 880° C respectively. However, the ECAM indication remains at 890° C and 855° C.

2. A320-231 with modification 23872 (EGT redline increase for IAE engines):
   - for consolidated bump rating operation (MOD 23408), the maximum permissible gas temperature is extended to 650° C at take-off. The ECAM indication remains at 635° C.
   - for non rating bump operation, the maximum permissible gas temperature is extended to 640° C at take-off. The ECAM indication remains at 635° C.
   - for maximum continuous and take-off operation, the maximum permissible gas temperature is extended to 615° C. The ECAM indication remains at 610° C.

3. A320-231 with modification 25000 (FADEC Standard SCN12C for IAE engines):
   - for take-off operation, the maximum permissible gas temperature is extended to 650° C. The ECAM indication remains at 635° C.
   - for maximum continuous operation, the maximum permissible gas temperature is extended to 625° C. The ECAM indication remains at 610°C.

**12.1 Approved Operations**

Transport commercial operations

**12.2 Other Limitations**

For a complete list of applicable limitations see the appropriate EASA approved Airplane Flight Manual
### SECTION 1: A320 series - continued

#### 13. Maximum Certified Masses

**A320-111**

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC)</th>
<th>001 (MOD 20939)</th>
<th>002 (MOD 22520)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>68 400</td>
<td>66 400</td>
<td>68 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>68 000</td>
<td>66 000</td>
<td>68 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>63 000</td>
<td>63 000</td>
<td>63 000</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>59 000</td>
<td>59 000</td>
<td>59 800</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>36 750</td>
<td>36 750</td>
<td>36 750</td>
</tr>
</tbody>
</table>

**A320-211/A320-212/A320-231**

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC) (MOD 20802)</th>
<th>001 (MOD 20966)</th>
<th>002 (MOD 21601)</th>
<th>003 (MOD 22269)</th>
<th>004 (MOD 21532)</th>
<th>005 (MOD 21711)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>73 900</td>
<td>68 400</td>
<td>70 400</td>
<td>75 900</td>
<td>71 900</td>
<td>67 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>73 500</td>
<td>68 000</td>
<td>70 000</td>
<td>75 500</td>
<td>71 500</td>
<td>67 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>006 (MOD 22436)</th>
<th>007 (MOD 23264)</th>
<th>008 (MOD 23900)</th>
<th>009 (MOD 23900 &amp; 22269)</th>
<th>010 (MOD 23900 &amp; 23264)</th>
<th>011 (MOD 30307)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>66 400</td>
<td>77 400</td>
<td>73 900</td>
<td>75 900</td>
<td>77 400</td>
<td>75 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>66 000</td>
<td>77 000</td>
<td>73 500</td>
<td>75 500</td>
<td>77 000</td>
<td>75 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>66 000</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>60 500</td>
<td>60 500</td>
<td>61 000</td>
<td>61 000</td>
<td>61 000</td>
<td>62 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>012 (MOD 30479)</th>
<th>013 (MOD 31132)</th>
<th>014 (MOD 31385)</th>
<th>016 (MOD 34094)</th>
<th>018 (MOD 151710)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>77 400</td>
<td>71 900</td>
<td>73 900</td>
<td>73 900</td>
<td>71 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>77 000</td>
<td>71 500</td>
<td>73 500</td>
<td>73 500</td>
<td>71 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>66 000</td>
<td>64 500</td>
<td>64 500</td>
<td>66 000</td>
<td>66 000</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>62 500</td>
<td>61 000</td>
<td>61 500</td>
<td>62 500</td>
<td>62 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>
### SECTION 1: A320 series - continued

#### A320-214/A320-232/A320-233

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC)</th>
<th>001 (MOD 20966)</th>
<th>002 (MOD 21601)</th>
<th>003 (MOD 22269)</th>
<th>005 (MOD 21711)</th>
<th>007 (MOD 23264)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>73 900</td>
<td>6 8400</td>
<td>70 400</td>
<td>75 900</td>
<td>67 400</td>
<td>77 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>73 500</td>
<td>68 000</td>
<td>70 000</td>
<td>75 500</td>
<td>67 000</td>
<td>77 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>008 (MOD 23900)</th>
<th>009 (MOD 23900)</th>
<th>010 (MOD 23900)</th>
<th>011 (MOD 30307)</th>
<th>012 (MOD 30479)</th>
<th>013 (MOD 31132)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>73 900</td>
<td>75 900</td>
<td>77 400</td>
<td>75 900</td>
<td>77 400</td>
<td>71 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>73 500</td>
<td>75 500</td>
<td>77 000</td>
<td>75 500</td>
<td>77 000</td>
<td>71 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>66 000</td>
<td>66 000</td>
<td>64 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>61 000</td>
<td>61 000</td>
<td>61 000</td>
<td>62 500</td>
<td>62 500</td>
<td>61 000</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>014 (MOD 31385)</th>
<th>015 (MOD 34047)</th>
<th>016 (MOD 34094)</th>
<th>017 (MOD 151634)</th>
<th>018 (MOD 151710)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>73 900</td>
<td>78 400</td>
<td>73 900</td>
<td>78 400</td>
<td>71 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>73 500</td>
<td>78 000</td>
<td>73 500</td>
<td>78 000</td>
<td>71 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>64 500</td>
<td>66 000</td>
<td>66 000</td>
<td>66 000</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>61 500</td>
<td>61 000</td>
<td>62 500</td>
<td>62 500</td>
<td>62 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>

#### A320-215/A320-216

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC) (MOD 20802)</th>
<th>001 (MOD 20966)</th>
<th>002 (MOD 21601)</th>
<th>003 (MOD 22269)</th>
<th>005 (MOD 21711)</th>
<th>008 (MOD 23900)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp weight</td>
<td>73 900</td>
<td>68 400</td>
<td>70 400</td>
<td>75 900</td>
<td>67 400</td>
<td>73 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>73 500</td>
<td>68 000</td>
<td>70 000</td>
<td>75 500</td>
<td>67 000</td>
<td>73 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
<td>64 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>60 500</td>
<td>61 000</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>
SECTION 1: A320 series - continued

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>WV009(3) (MOD 23900 &amp; 22269)</th>
<th>WV011(3) (MOD 30307)</th>
<th>WV013(3) (MOD 31132)</th>
<th>WV014(3) (MOD 31385)</th>
<th>WV016(3) (MOD 34094)</th>
<th>WV018(3) (MOD 151710)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. ramp weight</td>
<td>75 900</td>
<td>75 900</td>
<td>71 900</td>
<td>73 900</td>
<td>73 900</td>
<td>71 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>75 500</td>
<td>75 500</td>
<td>71 500</td>
<td>73 500</td>
<td>73 500</td>
<td>71 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>64 500</td>
<td>66 000</td>
<td>64 500</td>
<td>64 500</td>
<td>66 000</td>
<td>66 000</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>61 000</td>
<td>62 500</td>
<td>61 000</td>
<td>61 500</td>
<td>62 500</td>
<td>62 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
<td>37 230</td>
</tr>
</tbody>
</table>

Notes:
1. WV001 applicable to A320-215 (and –216) model only from MSN 530 (Introduction of A320-214 model)
2. WV005 applicable to A320-215 (and –216) models only for a/c having modification 28154 embodied
3. MOD 160500 is approved for WV 008 to WV 018, only.

14. Centre of Gravity Range
See approved Airplane Flight Manual

15. Datum
Station 0.0, located 2.540 meters forward of airplane nose

16. Mean Aerodynamic Chord (MAC)
4.1935 meters

17. Levelling Means
The A/C can be jacked on three primary jacking points.
See the appropriate EASA approved Weight and Balance Manual

18. Minimum Flight Crew
2 pilots

19. Maximum Seating Capacity
180

Note: The second Type III emergency exit can be de-activated by embodiment of modification 35177 (aft overwing exit) or modification 150016 (forward overwing exit). In this case, the maximum number of passengers is 145. The maximum number of passengers between any of the overwing exit doors and rear door is 90.

A320 all models aircraft can be operated with 150 passengers and with 3 cabin attendants for increased cabin flexibility if modification 150364 is embodied.
SECTION 1: A320 series - continued

20. Baggage/ Cargo Compartment

<table>
<thead>
<tr>
<th>CARGO COMPARTMENT</th>
<th>MAXIMUM LOAD (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>3 402</td>
</tr>
<tr>
<td>Aft</td>
<td>4 536</td>
</tr>
<tr>
<td>Rear (bulk)</td>
<td>1 497</td>
</tr>
</tbody>
</table>

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights) see Weight and Balance Manual, ref. 00E080A0001/C1S Chapter 1.10.

21. Wheels and Tyres

See SB A320-32-1007

Aircraft incorporating modification 20139 and without modification 22129, are equipped with a four-wheel bogie landing gear (up to 73.5 T MTOW).

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)


2. Instructions for Continued Airworthiness and Airworthiness Limitations

Airworthiness Limitations

- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA.

- Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Items document (ALS Part 2) approved by the EASA.

- Certification Maintenance Requirements are provided in A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 approved by the EASA.

- Ageing Systems Maintenance (ASM) limitations are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4 approved by the EASA.

- Fuel Airworthiness Limitations are provided in A318/A319/A320/A321 Fuel Airworthiness Limitations document (ALS Part 5) approved by the EASA.

Note:

For A320-211, -212, -231, -232 and –233 models, the embodiment of modification 37734 leads to change the maintenance program and its associated Limit of Validity (LoV) from 48,000FC/60,000FH to 37,500FC/80,000FH (whichever occurs first).
Other limitations

See EASA approved Flight Manual.

3. Weight and Balance Manual (WBM)

Airbus Compliance Document 00D80A0001/C1S

V. Notes

1. For models A320-111, A320-211 and A320-212, modification 21038 is the minimum standard to be qualified for Cat IIIB precision approach. For model A320-231, modification 21039 is the minimum standard to be qualified for Cat IIIB precision approach.

   All other models are qualified for Cat IIIB precision approach per basic design definition.

2. A320-111 aircraft serial numbers eligible are restricted from MSN 001 up to MSN 021
SECTION 2: A321 SERIES

I. General

1. Type/model/Variant

A321-111
A321-112
A321-131
A321-211
A321-212
A321-213
A321-231
A321-232

Significant Product Level Changes i.a.w. 21.A.101:

MOD 160023 Sharklet applicable on A321-211, A321-231

2. Performance Class

A

3. Certifying Authority

European Aviation Safety Agency (EASA)
Postfach 101253
D-50452 Köln
Deutschland

4. Manufacturer

AIRBUS
1, rond-point Maurice Bellonte
31707 BLAGNAC CEDEX – France

5. Joint Airworthiness Authority (JAA) Certification Application Date

A321-111: November 30, 1989
A321-112: November 30, 1989
A321-131: November 30, 1989
A321-211: July 17, 1996
A321-231: July 17, 1996
A321-232: September 15, 2000
SECTION 2: A321 series - continued

6. EASA Certification Application Date

Mod 160023 08 April 2010

7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date

- A321-111: May 27, 1994
- A321-112: February 15, 1994
- A321-131: December 17, 1993
- A321-211: March 20, 1997
- A321-212: August 31, 2001
- A321-213: August 31, 2001
- A321-231: March 20, 1997
- A321-232: August 31, 2001

Note: For A321 produced before December 21, 2005 DGAC-F TC 180 remains a valid reference.

8. EASA Type Certification Date

- EASA TCDS issue 1 issued December 21, 2005
- Mod 160023 issue 1 17 July 2013 (A321-211)
- Mod 160023 issue 2 30 July 2013 (A321-231)

9. Production conditions

A321 aircraft, all series, all models, were all produced in Hamburg - Germany - under approval I-A9 (until April 1999) or LBA.G.0009 (since April 1999) issued by LBA to AIRBUS INDUSTRIE

Since September 27, 2004, A321 aircraft were produced in Hamburg - Germany under approval DE.21G.0009 issued by LBA to AIRBUS

From July 21st, 2008, A321 aircraft are produced in and Hamburg (Germany) under approval EASA.21G.0001 issued by EASA to AIRBUS

II. Certification Basis

1. Reference Date for determining the applicable requirements

AIRBUS INDUSTRIE has applied for A321-100 certification on November 30, 1989 by letter AI/EA-410.106/89.

2. Initial Airworthiness Authority Type Certification Data Sheet No.

Original French TCDS DGAC no. 180 was replaced by the EASA TCDS A.064
SECTION 2: A321 series - continued

3. Initial Airworthiness Authority Certification Basis

See below

4. EASA Airworthiness Requirements

Hereafter are listed the certification bases for the different A321 models. The amendments made to a particular basis at the occasion of further A321 models certification are identified per model.

The applicable Joint Certification Basis defined in CRI G3001 Issue 4 dated 29/11/93 is:

4.1 JAR 25 Change 11 as amended by the following JAR 25 Change 13 paragraphs effective on the reference date November 30, 1989:

| JAR 25X20 | JAR 25.253 |
| JAR 25.101 | JAR 25.345(a) |
| JAR 25.105 | JAR 25.365 |
| JAR 25.107(d) | JAR 25.812(e) |
| JAR 25.109(a) | JAR 25.857(d)(6) |
| JAR 25.113 | JAR 25.1501(c) |
| JAR 25.119(b) | JAR 25.1533(b) |
| JAR 25.121 | JAR 25.1581(b) |
| JAR 25.125 | JAR 25.1583(k) |
| JAR 25.143(f) | JAR 25.1587 |
| JAR 25.207 | JAR 25X1591 |

Associated to JAR 25 Change 13, the following paragraphs are deleted:

| JAR 25X131 | Change 11 |
| JAR 25X132 | Change 11 |
| JAR 25X133 | Change 11 |
| JAR 25X135 | Change 11 |
| JAR 25X1588 | Change 11 |


a. JAR 25 paragraphs at Change 13 and amended by the NPA 25C205 Unified Discrete Gust Requirements introduced by Orange Paper 91/1:

| JAR 25.305 | JAR 25.349(b) |
| JAR 25.321 | JAR 25.351 |
| JAR 25.331 | JAR 25.365 |
| JAR 25.333 | JAR 25.371 |
| JAR 25.335(d) | JAR 25.373 |
| JAR 25.341 | JAR 25.391 |
| JAR 25.343(b)(1)(ii) | JAR 25.427 |
| JAR 25.345(a) and (c) | JAR 25.571(b)(2) |

b. JAR 25 paragraphs at Change 13 and amended by the NPA 25 BDG 244 Accelerate Stop Distances and Associated Performance.

Refer to Special Conditions F-10, S-79 and IM-S79.
SECTION 2: A321 series - continued

4.3 Airbus Industrie has applied for A321-200 certification on July 17, 1996 by letter AI/EA-S 413.1938/96. The applicable Joint Certification Basis defined in CRI G3001 Issue 4 dated 29/11/93 as described above remains applicable, except 4.3.b which is superseded by the Airbus Industrie elect-to-comply (letter AI/EA-S 413.0278/97 dated January 29, 1997) with NPA 25 BDG 244 dated January 1996, amended 24/04/96, 22/05/96, 07/06/96, 04/07/96) (see CRI F3012).

4.4 JAR AWO Change 1 for autoland and operations in low visibility.

4.5 For the Extended Twin Engine Airplane Operations the applicable technical conditions are contained in AMC 20-6 (as initially published in AMJ 120-42/IL 20) and the A321 ETOPS CRI:

<table>
<thead>
<tr>
<th>CRI G3006</th>
<th>ETOPS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CRI G3007</td>
<td>ETOPS</td>
<td>One engine inoperative cruise speed.</td>
</tr>
</tbody>
</table>

4.6 For all models, Airbus Elect To Comply with 14CFR Part 25.772(a) and (c) and 25.795 amendment 106 according to CRI E12 – Reinforced Security Cockpit Door

4.7 Certification basis revised for MOD 160023 “Sharklet” by CRI A-0001-001.

CS 25 Amdt 8 for

| § 25.23 | § 25.481(a)(c) amended by SC A-2 for § 25.481(a) |
| § 25.25 | § 25.483 |
| § 25.117 | § 25.485 |
| § 25.147 | § 25.489 |
| § 25.161 | § 25.491 |
| § 25.177 amended by SC-F16 | § 25.571(a)(b)(e) |
| § 25.235 | § 25.581 |
| § 25.251 | § 25.601 |
| § 25.301 | § 25.603 |
| § 25.302 | § 25.605 |
| § 25.303 | § 25.607 |
| § 25.305(a)(b)(c)(e)(f) | § 25.609 |
| § 25.307(a)(d) | § 25.613 |
| § 25.321(a)(b)(c)(d) | § 25.619 |
| § 25.331(a)(b)(c) | § 25.623 |
| § 25.333(a)(b) | § 25.625 |
| § 25.335(a)(b)(c)(d)(e)(f) amended by SC A5003 | § 25.629 |
| for (b) and SC A-2 for (e) |
| § 25.337 | § 25.631 |
| § 25.341(a)(b) | § 25.651 |
| § 25.343(a)(b) | § 25.683 |
| § 25.345(a)(b)(c)(d) | § 25.899 |
| § 25.349(a)(b) amended by SC A-2.2 for 25.349(a) | § 25.903(d)(1) |
| § 25.351 | § 25.1385 |
| § 25.365(a)(b)(d) | § 25.1387 |
| § 25.367 | § 25.1389 |
| § 25.371 | § 25.1391 |
SECTION 2: A321 series - continued

§ 25.373 § 25.1393
§ 25.391 § 25.1395
§ 25.393(b) § 25.1397
§ 25.427 § 25.1401
§ 25.445 § 25.1505
§ 25.457 § 25.1511
§ 25.459 § 25.1515
§ 25.471(a)(b) § 25.1527
§ 25.473 § 25.1587
§ 25.479(a)(c)(d) amended by SC A-2 for § 25.1591
25.479(a)

CS 25 Amdt 2 for
§ 25.253

JAR 25 Chg 15 for
§ 25.1517

JAR 25 Chg 14 for
§ 25.21 amended by A318 SC F5001 (for b) § 25.149 + OP96/1
§ 25.101 amended by SC F11/S79 § 25.171 replaced by SC-F5004
§ 25.103 replaced by A318 SC F5001 § 25.173 replaced by SC-F5004
§ 25.105 amended by SC F11/S79 § 25.175 replaced by SC-F5004
§ 25.107 amended by A318 SC-F5001 § 25.181
§ 25.109 amended by SC F11/S79 § 25.201 + OP96/1, replaced by SC-F5001
§ 25.111 § 25.203 + OP96/1, replaced by SC-F5001
§ 25.113 + OP96/1 amended by SC F11/S79 § 25.207 amended by SC-F5001
§ 25.115 amended by SC F11/S79 § 25.231
§ 25.119 + OP96/1 amended by A318 SC F5001 § 25.233
(for b)
§ 25.121 + OP96/1, amended by A318 SC F5001 § 25.237
(for c & d)
§ 25.123 § 25X261
§ 25.125 + OP96/1, amended by A318 SC F5001 § 25.1533
§ 25.143 + OP96/1, amended by SC F3, F7 & F8 § 25.1581
§ 25.145 + OP96/1 § 25.1585(a)

JAR 25 Chg 11 for
§ 25.671
§ 25.672
§ 25.1001
§ 25.1301
§ 25.1309
§ 25.1419 amended by AMC-F14

Interpretative Material:

CRI E-39 Uncontained Engine Rotor Failure

Note: The original Interpretative material applicable to each model remains effective.
**SECTION 2: A321 series - continued**

**Acceptable Means of Compliance:**

AMC F-14 Flight in icing condition.

Note: AMC F-14 applicability extended from A321/A319/A318 to A320 with MOD 160023.

**ETOPS**

AMC 20-6 Rev 1 paragraphs related to operation in icing conditions 8.b.(11) for ice shapes on the Sharklet device.

AMC 20-6 Rev 1 paragraphs related to performance data in the AFM supplement for ETOPS 8.f.(1) (iii).

AMJ 120-42 for ETOPS for non-affected areas.

Note: This corresponds to the certification basis used for the initial ETOPS demonstration (refer to A320 CRI G1006).

**5. Special Conditions**

**Reminder:** Within the scope of the establishment of the A320 Joint Certification Basis, three types of special conditions were developed:

- Special conditions: rose to cover novel or unusual features not addressed by the JAR.
- Experience related conditions: rose to record an agreed text for the A320 Joint Certification Basis when evolution of JAR was in progress under the NPA procedure.
- Harmonization conditions: to record, for the purpose of the A320 Joint Certification Basis, a common understanding with respect to National variant. This should not be confused with the FAA/JAA harmonised regulations.

5.1 The following A320 Special Conditions, Experience Related Conditions and Harmonization Conditions are deleted:

   a. Further to application of the updated requirements of above paragraphs 4.1 and 4.2:

   - HC-F103 ASD-TOD-TOR on wet runways
   - HC-F114 Approach and Target Threshold Speeds
   - EC-A.3.6.1 High Lift Devices
   - SC-A.4.3 Tuned Gust Loads (UK)
   - HC-A.4.4 Manoeuvre Loads - High Lift Devices Deployed
   - HC-S61 Design Landing Brake Kinetic Energy
   - HC-S62 Rejected Take-Off Brake Kinetic Energy
   - IM-AMC-F101 Wet Runway Friction Characteristics
   - IM-F103 ASD-TOD-TOR on Wet Runways
   - IM-A38 Discrete Gust Requirements
   - AMC-A43 Tuned Gust Loads (UK)
b. Further to JAR 25 requirements evolution:

- **EC-G11** General Definition
- **IM-F107** Landing Distance Determination
- **AMC-F111** Take-Off Speeds VMU

b. Further to JAR 25 requirements evolution:

- **IM-A35** Rapid Decompression
- **IM-A47** Emergency Landing Conditions

5.2 New or updated A321 Special Conditions and Advisory Material:

**Flight**

- SC-F1 and IM-F1 (CRI F3001) Stalling and Scheduled Operating Speeds
- SC-F10 (CRI F3002) Accelerate - Stop Distance
- IM-F4 (CRI F3003) Static Longitudinal Stability (low energy awareness)
- IM-F12 (CRI F3004) Computerized Airplane Flight Manual
- IM-F13 (CRI F3005) Landing Distance Extrapolation
- AMC-F14 (CRI F3006) Flight in Icing Conditions

**Structure**

- SC-A2 (CRI A3002) Stalling Speeds for Structural Design
- IM-A3 (CRI A3003) Rapid Decompression
- IM-A4 (CRI A3004) Crashworthiness of Fuel Tanks outside the fuselage

**Propulsion**

- SC-P1 and IM-P1 (CRI P3001) FADEC
- IM-P2 (CRI P3003) Nacelle Cowling Resistance to Fire

**Environment**

- SC-E1 and IM-E1 (CRI E3005) Resistance to Fire Terminology
- AMC-E2 (CRI E3006) Emergency Evacuation Demonstration
- SC-E3 (CRI E3001) Exit Configuration
- IM-E4 (CRI E3002) Reclassification of door 2 and 3 to Type III

**Systems**

- IM-S78 Low altitude autopilot engagement
- SC-S79 and IM-S79 Brakes requirements qualification and testing
5.3. The following A320 Special Conditions and Interpretative Material are validated for A321:

<table>
<thead>
<tr>
<th>SC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-G17 (F)</td>
<td>Operational proving flights</td>
</tr>
<tr>
<td>SC-G17 (G)</td>
<td>Operational flight for certification</td>
</tr>
<tr>
<td>SC-F3</td>
<td>Cockpit Control - motion and effect of cockpit control</td>
</tr>
<tr>
<td>SC-F4</td>
<td>Static Longitudinal Stability</td>
</tr>
<tr>
<td>SC-F6</td>
<td>Static Directional and Lateral Stability</td>
</tr>
<tr>
<td>SC-F7/IM-F7</td>
<td>Flight Envelope Protection</td>
</tr>
<tr>
<td>SC-F8</td>
<td>Normal Load Factor Limiting</td>
</tr>
<tr>
<td>SC-F9</td>
<td>Dual Control System</td>
</tr>
<tr>
<td>AMC-F116</td>
<td>Take-off Speeds VMU</td>
</tr>
<tr>
<td>SC-A.2.2.2/IM-A.2.2.2</td>
<td>Design Manoeuvre requirement</td>
</tr>
<tr>
<td>SC-A.2.2.3/IM-A.2.2.3</td>
<td>Design Dive Speed</td>
</tr>
<tr>
<td>AMC-A23</td>
<td>Composite Aircraft Structure</td>
</tr>
<tr>
<td>IM-A313</td>
<td>Composite Turbulence - use of calculation results</td>
</tr>
<tr>
<td>IM-A37</td>
<td>Emergency Landing Conditions and Landing Gear</td>
</tr>
<tr>
<td>IM-A39</td>
<td>Discrete Source Damage</td>
</tr>
<tr>
<td>HC-A.4.5/IM-A.4.5</td>
<td>Brake Roll Conditions</td>
</tr>
<tr>
<td>HC-A.4.6</td>
<td>Speed control device</td>
</tr>
<tr>
<td>AMC-S1</td>
<td>Digital Equipment</td>
</tr>
<tr>
<td>AMC-S5</td>
<td>Electrical bonding and lightning protection (direct effects)</td>
</tr>
<tr>
<td>SC-S11</td>
<td>Limit pilot forces and torques</td>
</tr>
<tr>
<td>IM-S13</td>
<td>Standby gyroscopic horizon</td>
</tr>
<tr>
<td>IM/AMC-S14</td>
<td>Electrical flight controls (manual flight)</td>
</tr>
<tr>
<td>AMC-S20</td>
<td>Electronic instrument systems</td>
</tr>
<tr>
<td>IM-S21</td>
<td>Landing Gear</td>
</tr>
<tr>
<td>HC-S23/IM-S23</td>
<td>Standby Gyroscopic Horizon</td>
</tr>
<tr>
<td>HC-S24</td>
<td>VMO/MMO Warning (Setting)</td>
</tr>
<tr>
<td>IM/AMC-S27</td>
<td>Altitude Display System</td>
</tr>
<tr>
<td>EC-S30/AMC-S30</td>
<td>Autoflight System</td>
</tr>
<tr>
<td>SC-S33</td>
<td>Autothrust System</td>
</tr>
<tr>
<td>IM-S35</td>
<td>Autopilot Synchronization</td>
</tr>
<tr>
<td>IM/AMC-S42</td>
<td>APU Rotor Burst</td>
</tr>
<tr>
<td>IM-S51</td>
<td>Emergency Loads</td>
</tr>
<tr>
<td>SC-S52/IM-S52</td>
<td>Operation without normal electrical power</td>
</tr>
<tr>
<td>SC-S54/IM-S54</td>
<td>Circuit protective devices</td>
</tr>
<tr>
<td>HC-S72/IM-S73</td>
<td>Flight recorder</td>
</tr>
<tr>
<td>SC-S74</td>
<td>Abnormal attitudes</td>
</tr>
<tr>
<td>SC-S75</td>
<td>Lightning protection (indirect effects)</td>
</tr>
<tr>
<td>SC-S76/IM-S76</td>
<td>Effect of external radiations upon aircraft systems</td>
</tr>
<tr>
<td>SC-S77/IM-S77</td>
<td>Integrity of signal control</td>
</tr>
</tbody>
</table>

5.4. For any new application (new or modified aeroplane system and associated components) after July 10, 1998, SC/IM-S76 (Effect of external radiations upon aircraft systems) are superseded by SC/IM-S76-1 (CRI SE14).
5.5. For any further variant certification after Aug. 10, 1998, the HC-A.4.5 (Braked roll conditions) is superseded by JAR 25.493(d) at Change 14 (CRI A7).

5.6. The following special conditions have been developed post Type Certification:

- **SC H-01** Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)
- **SC E-34** Seat with inflatable restraints
- **SC E13** Installation of inflatable restraints (optional)
- **SCD-0306** Heat release and smoke density requirements to seat material (applicable from June 2010)
- **SC P-27** Flammability Reduction System (see Note below)
  
  If fitted, the centre fuel tank of aircraft which have made their first flight after 1st of January 2012 must be equipped in production with a fuel tank Flammability Reduction System (modification 38062). This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL revision associated with modification 38062. If modification 38062 (Fuel Tank Inerting System (FTIS)) is embodied on A318, A319, A320, or A321 airplanes, the airplane is compliant with paragraph FR Section 25.981(a) & (b) at amendment 25-102, Part 25 appendix M & N at amendment 25-125, and Section 26.33 at amendment 26-3.
- **SC E10** High altitude airport operations (up to 14,100ft)(CRI E10)

5.7. Special Conditions for aircraft equipped with MOD 160023

- **SC F-16** Static directional and lateral stability
  
  A318 SC F-5001 Stalling and scheduled operating speeds
  A318 SC F-5004 Static Longitudinal Stability and Low energy awareness
  A318 SC A-5003 Design Dive Speed Vd

  Note: All other original Special Conditions applicable to each model remain effective.

6. Exemptions

No exemptions.

7. Deviations

None

8. Equivalent Safety Findings

8.1 The following paragraphs JAR 25 have been complied with through equivalent safety demonstration:

- JAR 25.783 (f) passenger doors and bulk door (see CRI SM 3001, SM 3002 and SM 3004)
- JAR 25.933 (a) Thrust reverser autoreset function (see CRI P 3008).
8.2 The following Equivalent Safety Findings have been developed post Type Certification:

FAR 25.856(b) Fuselage burnthrough protection in bilge area (see CRI E-32).
If modifications 150700, and 37270 (with CLS option only), 37048 and 36985 are embodied in production on A318, A319, A320, or A321 airplanes, the airplane is compliant with Fuselage Flame Penetration “Burnthrough” requirements addressed by paragraph 14 CFR Part 25.856(b) Amdt 25-111 (See CRI E-28).
14CFR Part 25.856(a)Improved flammability standards for insulation materials (CRI E18)
JAR 25.812(b)(1)(ii) Photo-luminescent EXIT sign for MCD (Moveable Class Divider) (CRI E14) (optional)
JAR 25.811(f) Emergency exit marking reflectance (CRI E16)
JAR 25.812(b)(1)(i)(ii) Symbolic EXIT signs as an alternative to red EXIT signs for passenger aircraft (CRI SE-42) (optional)

8.3 Equivalent Safety Findings for aircraft equipped with MOD 160023

ESF F-19 Flight in natural icing condition (§25.1419 (c))

Note: The original ESFs applicable to each model remain effective.

9. Environmental Protection Standards

ICAO Annex 16:

<table>
<thead>
<tr>
<th>Vol. I, Part II</th>
<th>Noise Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vol. II, Part II</td>
<td>Fuel Venting</td>
</tr>
<tr>
<td>Vol. II, Part III Chapter 2</td>
<td>Emissions</td>
</tr>
</tbody>
</table>

Notes: Further details are defined within TCDSN EASA.A.064

10. ETOPS

The Type Design, system reliability and performance of A321 models were found capable for Extended Range Operations when configured, maintained and operated in accordance with the current revision of the ETOPS Configuration, Maintenance and Procedures (CMP) document, SA/EASA: AMC 20-6/CMP.

This finding does not constitute an approval to conduct Extended Range Operations (operational approval must be obtained from the responsible Authority).

The following table provides details on the ETOPS approvals.

<table>
<thead>
<tr>
<th>Aircraft model</th>
<th>Engine Type</th>
<th>120 min Approval Date</th>
<th>180 min Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A321-111</td>
<td>CFM56-5B1</td>
<td>29 May 1996</td>
<td>11 March 2004</td>
</tr>
</tbody>
</table>
SECTION 2: A321 series - continued

<table>
<thead>
<tr>
<th>Model</th>
<th>Engine Type</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A321-211</td>
<td>CFM56-5B3</td>
<td>28 July 1997</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A321-212</td>
<td>CFM56-5B1</td>
<td>N/A</td>
<td>28 April 2006</td>
</tr>
<tr>
<td>A321-213</td>
<td>CFM56-5B2</td>
<td>N/A</td>
<td>28 April 2006</td>
</tr>
<tr>
<td>A321-232</td>
<td>V2530-A5</td>
<td>N/A</td>
<td>28 April 2006</td>
</tr>
</tbody>
</table>

Note:
The Configuration, Maintenance and Procedure Standards for extended range twin-engine airplane operations are contained in ETOPS CMP document reference SA/EASA: AMC 20-6/CMP at latest applicable revision. Certificated models are A321-111/-112/-131/-211/-212/-213/-231/-232, with all applicable engines.

Embodyment of modification:
- 36666 provides ETOPS 120 mn capability for EASA
- 32009 provides ETOPS 180 mn capability for EASA

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

1.1 Certificated model: A321-111
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-A 413.1063/94 (00E000A0008/C21)

1.2 Certificated model: A321-112
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-A 414.0118/94 (00E000A0002/C11)

1.3 Certificated model: A321-131
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-A 414.0900/93 (00E000A0003/C21)

1.4 Certificated model: A321-211
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-S 413.0400/97 (00E000A0211/C21)

1.5 Certificated model: A 321-212
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-S 413.1359/01 (00E000A0212/C21)

1.6 Certificated model: A321-213
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-S 413.1360/01 (00E000A0213/C21)

1.7 Certificated model: A321-231
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-S 413.0388/97 (00E000A0231/C21)

1.8 Certificated model: A321-232
Definition of reference airplane by AIRBUS INDUSTRIE Document AI/EA-S 413.1361/01 (00E000A0232/C21)

NOTES
a. Model conversions:
   - If modification 34368 is embodied on A321-111 model powered with CFM56-5B1/2P engines, it is converted into A321-211 model, powered with CFM56-5B3/2P engines.
   - If modification 34818 is embodied on A321-211 model powered with
SECTION 2: A321 series - continued

CFM56-5B3/P engines, it is converted into A321-212 model, powered with CFM56-5B1/P engines.

- If modification 35252 is embodied on A321-212 model powered with CFM56-5B1/P engines, it is converted into A321-211 model, powered with CFM56-5B3/P engines.
- If modification 35718 is embodied on A321-131 model powered with V2530-A5 engines, it is converted into A321-231 model, powered with V2533-A5 engines.

2. Description

Twin turbo-fan, short to medium range, single aisle, transport category airplane.

3. Equipment

A321-111
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0007/C1S

A321-112
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0006/C1S.

A321-131
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0004/C0S

A321-211
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0211/C0S.

A321-212
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0212/C0S.

A321-213
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0213/C0S.

A321-231
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0231/C0S.

A321-232
Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00E000A0232/C0S.

Note:
The type design definitions and certification standard equipment lists are complemented by doc. 00D000A0546/C0S “A319-100/A321-200 FMGC Type Std Evolution”.

Cabin furnishings, equipment and arrangement shall be in conformance to the following specifications:

ref. 00D252K0004/C01 Cabin seats
ref. 00D252K0019/C01 Galleys
SECTION 2: A321 series - continued

4. Dimensions

Principal dimensions of A321 Aircraft:
- Length: 44.51 m
- Width: 34.10 m
  (If mod 160023 installed) 35.80 m
- Height: 11.76 m
- Width at horizontal stabilizer: 12.45 m
- Outside fuselage diameter: 3.95 m
- Distance between engine axis: 11.51 m
- Distance between main landing gear: 7.59 m
- Distance between nose and main landing gear: 16.91 m

5. Engines

The list below lists the basic engines fitted on the aircraft models. The notes describe usual names and certified names as well as new engines variants.

**A321-111**
Two CFMI CFM 56-5B1 jet engines (MOD 23083), or
CFM 56-5B1/2 jet engines (MOD 24404)

**A321-112**
Two CFMI CFM 56-5B2 engines (MOD 23152)

**A321-131**
Two IAE V2530 - A5 jet engines (MOD 22989)

**A321-211**
Two CFMI CFM 56-5B3/P jet engines (MOD 26359 + 25800), or
CFM 56-5B3/2P jet engines (MOD 27640)

**A321-212**
Two CFMI CFM 56-5B1 jet engines (MOD 23083), or
CFM 56-5B1/2 jet engines (MOD 24404)

**A321-213**
Two CFMI CFM 56-5B2 engines (MOD 23152)

**A321-231**
Two IAE V2533-A5 jet engines (MOD 25643)

**A321-232**
Two IAE V2530 - A5 jet engines (MOD 22989).

Notes:

1. If modification 25800 is embodied on models with CFM-5B engines, the engine performance is improved. The engine denomination changes to /P.

   The modification is currently applicable for:
SECTION 2: A321 series - continued

A321-111: CFM 56-5B1 (SAC) which changes to CFM 56-5B1/P
A321-112: CFM 56-5B2 (SAC) which changes to CFM 56-5B2/P
A321-212: CFM 56-5B1 (SAC) which changes to CFM 56-5B1/P
A321-213: CFM56-5B2 (SAC) which changes to CFM 56-5B2/P

CFM 56-5B/"non-P" engine can be intermixed with CFM 56-5B/P engine on the same aircraft. See notes 3 & 4 below as well.

2. If modification 26610 is embodied on models with CFM-5B/2 (DAC) engines, the engine performance and gaseous emission levels are improved. The engine denomination changes to /2P.

The modification is currently applicable for:

A321-111: CFM 56-5B1/2 (DAC) which changes to CFM 56-5B1/2P (DAC II C)
A321-212: CFM 56-5B1/2 (DAC) which changes to CFM 56-5B1/2P (DAC II C)

CFM 56-5B/2 "non P" (DAC) engine can be intermixed with CFM 56-5B/2P (DAC II C) engine on the same aircraft (AFM supplement).

CFM 56-5B/P or "/non-P" (SAC) engine can be intermixed with CFM 56-5B/2P (DAC II C) engine on the same aircraft (AFM supplement).

3. From March 31st 2008, there is no longer any CFM56-5B1 non /P in field or in production.

4. From March 31st 2008, there is no longer any CFM56-5B1/2 non /P in field or in production.

5. A321-111 CFM 56-5B1 engine can be intermixed with CFM 56-5B1/2 engine (MOD 24404) on the same aircraft (AFM supplement).

6. CFM56-5B3/P (SAC) engine (MOD 26359 + 25800) can be intermixed with CFM56-5B3/2P (DAC II C PIP) engine (MOD 27640) on the same aircraft (AFM supplement).

7. Introduction of CFM56-5Bx/3 "Tech Insertion" engine is done through embodiment of modification 37147 in production or 38770 in field. This modification is only applicable on CFM56-5Bx/P SAC engines.

If modification 37147 is embodied on models with CFM-5B engines the engine denomination changes to /3.

The modification is currently applicable for:

A321-111: CFM 56-5B1 (SAC) which changes to CFM 56-5B1/3
A321-112: CFM 56-5B2 (SAC) which changes to CFM 56-5B2/3
A321-211: CFM 56-5B3 (SAC) which changes to CFM 56-5B3/3
A321-212: CFM 56-5B1 (SAC) which changes to CFM 56-5B1/3
A321-213: CFM 56-5B2 (SAC) which changes to CFM 56-5B2/3

The engine characteristics remain unchanged.
SECTION 2: A321 series - continued

Modification 37147 has been demonstrated as having no impact on previously certified noise levels. CFM56-5Bx/3 engine can be intermixed with CFM56-5Bx/P engine under considerations as prescribes in modification 38573.

8. Introduction of “BUMP” function is done through embodiment of modification 38946. If modification 38946 is embodied on models with CFM-5B engines, the engine denomination changes to /P1 (SAC) or /2P1 (DAC) or /3B1 (Tech Insertion).

The modification is currently applicable for:

A321-211: CFM 56-5B3 (SAC) which changes to CFM 56-5B3/P1

Modification 38946 has been demonstrated as having no impact on previously certified noise levels. The engine characteristics remain unchanged. Intermix at aircraft level between “Non Bump” engine and “Bump” engine is not allowed.

6. Auxiliary Power Unit

APU GARRETT

GARRETT AIRESEARCH GTCP 36-300 (A)
(Specification 31-5306B)
Approved oils: see GARRETT REPORT GT.7800

APU APIC (Option)

The APU APIC installation is defined by MOD 22562 or MOD 35864
APIC APS 3200 (Specification ESR 0802, Rev. A).
Approved oils: in conformance to MIL-L-7808, MIL-L-23699 or DERD 2487

APU AlliedSignal (Option)

The APU AlliedSignal installation is defined by MOD 25888
AlliedSignal 131-9[A] (Specification 4900 M1E 03 19 01)
Approved oils: according to model Specification 31-12048A-3A

Note: For A321 models, the APU APIC APS 3200 (MOD 35864) is the production standard from MSN 2653

7. Propellers
N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics)

Fuel
Fuel Specification: See installation manual: document CFM 2026 or CFM 2129 or document IAE - 0043
**SECTION 2: A321 series - continued**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SPECIFICATION (NAME)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRANCE</strong></td>
<td><strong>USA</strong></td>
</tr>
<tr>
<td>Kerosene</td>
<td>DCSEA 134</td>
</tr>
<tr>
<td>Wide cut</td>
<td>ASTMD 6615 (JET B)</td>
</tr>
<tr>
<td></td>
<td>MIL-DTL 5624 (JP 4)</td>
</tr>
<tr>
<td>High flash point</td>
<td>DCSEA 144 (F-44)</td>
</tr>
</tbody>
</table>

* For IAE engines, TS-1 is cleared for transient use (less than 50% of operations)

**OIL**

**Engine**

<table>
<thead>
<tr>
<th>Engine</th>
<th>Approved oils</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFMI</td>
<td>See SB CFMI 79-001-OX</td>
</tr>
<tr>
<td>CFM56-5B1 (**)</td>
<td>See Doc IAE 0043 Sect 4.9 (MIL-L 23 699)</td>
</tr>
<tr>
<td>CFM56-5B1/2 (**)</td>
<td></td>
</tr>
<tr>
<td>CFM56-5B2</td>
<td></td>
</tr>
<tr>
<td>CFM56-5B3 (IP only)</td>
<td></td>
</tr>
<tr>
<td>CFM56-5B3/2P</td>
<td></td>
</tr>
<tr>
<td>IAE</td>
<td>V2530-A5</td>
</tr>
</tbody>
</table>

(**): see notes 3 and 4 in chapter 5 for engine models no longer in prod/service.

**Additives:**

Refer to Airbus Consumable Material List (CML) and CFM SB 73-0122 or IAE Standard Practices and Processes Manual for CIS fuel additives.

The above mentioned fuels and additives are also suitable for the APU.

**Hydraulics**

Hydraulic fluids: Type IV Specification NSA 30.7110

**9. Fluid Capacities**

**Fuel quantity (0.8 kg/liter)** (see note 1 below)

<table>
<thead>
<tr>
<th>TANK</th>
<th>3 TANK AIRPLANE</th>
<th>4 or 5 TANK AIRPLANE (*) (**)</th>
<th>Unusable fuel liters (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WING</td>
<td>15 500 (12 400)</td>
<td>22.6 (18)</td>
<td>15 500 (12 400)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 200 (6 560)</td>
<td>23.2 (18.6)</td>
<td>8 200 (6 560)</td>
</tr>
<tr>
<td>ACT (*) (**)</td>
<td>2 900 or 2 992 / 5 984 ** (2 320) or (2 393 / 4 786) ** (13.6 / 27.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 700 (18 960)</td>
<td>45.8 (36.6)</td>
<td>26 600 or 26 692 / 29 684 ** (21 280) or (21 353 / 23 746) ** (50.2 / 63.8)</td>
</tr>
</tbody>
</table>

* See notes 2 and 3 below

** 1 ACT high pressure system, 2900 liters on A321-200, on additional centre tanks 1 / 2

ACT low pressure system 2992/5984 liters on A321-200
SECTION 2: A321 series - continued

Note:
1. On series A321-200 equipped with IAE engines, introduction of standard of wingbox without dry bay (modification 38616) will increase the fuel capacity by 350 liters.

2. On the series A321-200, one Additional Center Tank (ACT) in bulk version is defined by modification 25453 (high pressure system). Its approval together with structural and system provisions is subject of Major Change E2-001 (compliance to CRI P9).

3. On the series A321-200, one or two Additional Center Tanks (ACT) in bulk version are defined by modification 30422 (low pressure system). Their approval together with structural and system provisions is subject of Major Change E2-002 (compliance to CRI P9).

10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Slats/Flaps (°)</th>
<th>VFE (kt)</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18/0</td>
<td>230 **</td>
<td>Intermediate approach</td>
</tr>
<tr>
<td></td>
<td>18/10</td>
<td>215 **</td>
<td>Take-off</td>
</tr>
<tr>
<td>2</td>
<td>22/14</td>
<td>205</td>
<td>Take-off and approach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>215*</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>22/21</td>
<td>195</td>
<td>Take-off, approach, landing</td>
</tr>
<tr>
<td>Full</td>
<td>27/25</td>
<td>190</td>
<td>Landing</td>
</tr>
</tbody>
</table>

* See note 1  ** See note 2

Landing gear:
VLE - Extended: 280 kt/Mach 0.67
VLO - Extension: 250 kt
Retraction: 220 kt

Tyres limit speed (ground speed): 195.5 kt (225 mph)

Notes:
1. If FWC Standard D2 and FAC Standard BAM 0510 are fitted on A321 aircraft, VFE speed in Configuration 2 is increased from 205 kts to 215 kts (as identified by speed limitation placard installed by modification 24641).

2. On the series A321-200, Weight Variant 001, 002 & 011, VFE speed in Configuration 1 is increased from 230 to 235 kts, and in Configuration 1+F increased from 215 to 225 kts (as identified by speed limitation placard installed by modification 28960 or 28721).
SECTION 2: A321 series - continued

11. Flight Envelope

Maximum Operating Altitude:
- 39,100 ft (pressure altitude)
- 39,800 ft (pressure altitude) if modification 30748 is embodied

See the appropriate EASA approved Airplane Flight Manual

12. Operating Limitations

See the appropriate EASA approved Airplane Flight Manual

Powerplant (2,2482 lb/daN)

A321-111 or –212 / A321-112 or –213 / A321-131 or -232

<table>
<thead>
<tr>
<th>Engine</th>
<th>CFMI CFM56-5B1 (**)</th>
<th>CFMI CFM56-5B1/2 (**)</th>
<th>CFMI CFM56-5B2</th>
<th>IAE V2530-A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sheets</td>
<td>E37NE (FAA)</td>
<td>E37NE (FAA)</td>
<td>E37NE (FAA)</td>
<td>E40NE (FAA)</td>
</tr>
<tr>
<td></td>
<td>E38NE (FAA)</td>
<td>M-17 (DGAC)</td>
<td>E38NE (FAA)</td>
<td>M-IM31 (DGAC)</td>
</tr>
<tr>
<td></td>
<td>M-IM28 (DGAC)</td>
<td>M-17 (DGAC)</td>
<td>M-IM28 (DGAC)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Static thrust at Sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off (5 minutes)*</td>
</tr>
<tr>
<td>(Flat rated 30° C)</td>
</tr>
<tr>
<td>13,344 daN (30,000 lbs)</td>
</tr>
<tr>
<td>13,789 daN (31,000 lbs)</td>
</tr>
<tr>
<td>13,300 daN (29,900 lbs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum continuous (Flat rated 25° C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,940 daN (29,090 lbs)</td>
</tr>
<tr>
<td>12,940 daN (29,090 lbs)</td>
</tr>
<tr>
<td>11,988 daN (26,950 lbs)</td>
</tr>
</tbody>
</table>

* 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around) in accordance with DGAC "Fiche de Caractéristiques moteur"
Other engine limitations: see the relevant Engine Type Certificate Data Sheet
** see notes 3 and 4 in chapter 5 for engine models no longer in prod/service.

A321-211/-231

<table>
<thead>
<tr>
<th>Engine</th>
<th>CFMI CFM56-5B3 (P only) CFM56-5B3/2P</th>
<th>IAE V2533-A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sheets</td>
<td>E37NE (FAA)</td>
<td>E40NE (FAA)</td>
</tr>
<tr>
<td></td>
<td>E38NE (FAA)</td>
<td>M-IM31 (DGAC)</td>
</tr>
<tr>
<td></td>
<td>M-17 (DGAC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M-IM28 (DGAC)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Static thrust at Sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off (5 minutes)*</td>
</tr>
<tr>
<td>(Flat rated 30° C)</td>
</tr>
<tr>
<td>14,234 daN (32,000 lbs)</td>
</tr>
<tr>
<td>14,055 daN (31,600 lbs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maxi continuous (Flat rated 25° C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,940 daN (29,090 lbs)</td>
</tr>
<tr>
<td>11,988 daN (26,950 lbs)</td>
</tr>
</tbody>
</table>
SECTION 2: A321 series - continued

* 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around) in accordance with DGAC "Fiche de Caractéristiques Moteur"
Other engine limitations: see the relevant Engine Type Certificate Data Sheet

12.1 Approved Operations

Transport commercial operations

12.2 Other Limitations

For a complete list of applicable limitations see the appropriate EASA approved Airplane Flight Manual

13. Maximum Certified Masses

A321-111/A321-112

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC)</th>
<th>002 (MOD 24178)</th>
<th>003 (MOD 24899)</th>
<th>004 (MOD 24308)</th>
<th>005 (MOD 25649)</th>
<th>006 (MOD 26600)</th>
<th>007 (MOD 26888)</th>
<th>008 (MOD 30334)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>83 400</td>
<td>83 400</td>
<td>85 400</td>
<td>78 400</td>
<td>83 400</td>
<td>78 400</td>
<td>80 400</td>
<td>89 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>83 000</td>
<td>83 000</td>
<td>85 000</td>
<td>78 000</td>
<td>83 000</td>
<td>78 000</td>
<td>80 000</td>
<td>89 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>73 500</td>
<td>74 500</td>
<td>74 500</td>
<td>73 500</td>
<td>75 000</td>
<td>74 500</td>
<td>73 500</td>
<td>75 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>69 500</td>
<td>70 500</td>
<td>70 500</td>
<td>69 500</td>
<td>71 000</td>
<td>70 500</td>
<td>69 500</td>
<td>71 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
</tr>
</tbody>
</table>

A321-131

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC)</th>
<th>002 (MOD 24178)</th>
<th>003 (MOD 24899)</th>
<th>004 (MOD 24308)</th>
<th>005 (MOD 25649)</th>
<th>006 (MOD 26600)</th>
<th>007 (MOD 26888)</th>
<th>008 (MOD 30334)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>83 400</td>
<td>83 400</td>
<td>85 400</td>
<td>78 400</td>
<td>78 400</td>
<td>80 400</td>
<td>89 400</td>
<td>89 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>83 000</td>
<td>83 000</td>
<td>85 000</td>
<td>78 000</td>
<td>78 000</td>
<td>80 000</td>
<td>89 000</td>
<td>89 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>73 500</td>
<td>74 500</td>
<td>74 500</td>
<td>73 500</td>
<td>74 500</td>
<td>73 500</td>
<td>75 500</td>
<td>75 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>69 500</td>
<td>70 500</td>
<td>70 500</td>
<td>69 500</td>
<td>70 500</td>
<td>69 500</td>
<td>71 500</td>
<td>71 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
</tr>
</tbody>
</table>

Note:
On the series A321-100, Weight Variant 006 is defined either by MOD 26600, building up on Weight Variant 003, or MOD 30310, building up on Weight Variant 000.
SECTION 2: A321 series - continued

### A321-211/A321-231

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 (BASIC)</th>
<th>001 (MOD 28960)</th>
<th>002 (MOD 28721)</th>
<th>003 (MOD 31613)</th>
<th>004 (MOD 31614)</th>
<th>005 (MOD 27553)</th>
<th>006 (MOD 31616)</th>
<th>010 (MOD 31321)</th>
<th>011 (MOD 32456)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>89 400</td>
<td>93 400</td>
<td>89 400</td>
<td>91 400</td>
<td>87 400</td>
<td>85 400</td>
<td>83 400</td>
<td>85 400</td>
<td>93 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>89 000</td>
<td>93 000</td>
<td>89 000</td>
<td>91 000</td>
<td>87 000</td>
<td>85 000</td>
<td>83 000</td>
<td>85 000</td>
<td>93 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>75 500</td>
<td>77 800</td>
<td>77 800</td>
<td>77 800</td>
<td>75 500</td>
<td>75 500</td>
<td>75 500</td>
<td>77 800</td>
<td>77 800</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>71 500</td>
<td>73 800</td>
<td>73 800</td>
<td>73 800</td>
<td>71 500</td>
<td>71 500</td>
<td>71 500</td>
<td>73 800</td>
<td>73 800</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
</tr>
</tbody>
</table>

### A321-212/A321-213/A321-232

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 BASIC</th>
<th>001 (MOD 28960)</th>
<th>002 (MOD 28721)</th>
<th>003 (MOD 31613)</th>
<th>004 (MOD 31614)</th>
<th>005 (MOD 31615)</th>
<th>006 (MOD 31616)</th>
<th>007 (MOD 31617)</th>
<th>008 (MOD 31618)</th>
<th>009 (MOD 31619)</th>
<th>010 (MOD 31321)</th>
<th>011 (MOD 32456)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>89 400</td>
<td>93 400</td>
<td>89 400</td>
<td>91 400</td>
<td>87 400</td>
<td>85 400</td>
<td>83 400</td>
<td>80 400</td>
<td>78 400</td>
<td>85 400</td>
<td>85 400</td>
<td>93 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>89 000</td>
<td>93 000</td>
<td>89 000</td>
<td>91 000</td>
<td>87 000</td>
<td>85 000</td>
<td>83 000</td>
<td>80 000</td>
<td>78 000</td>
<td>85 000</td>
<td>85 000</td>
<td>93 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>75 500</td>
<td>77 800</td>
<td>77 800</td>
<td>77 800</td>
<td>75 500</td>
<td>75 500</td>
<td>75 500</td>
<td>73 500</td>
<td>73 500</td>
<td>77 800</td>
<td>77 800</td>
<td>77 800</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>71 500</td>
<td>73 800</td>
<td>73 800</td>
<td>73 800</td>
<td>71 500</td>
<td>71 500</td>
<td>71 500</td>
<td>69 500</td>
<td>69 500</td>
<td>69 500</td>
<td>73 800</td>
<td>73 800</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
<td>47 500</td>
</tr>
</tbody>
</table>

14. Centre of Gravity Range
   See the appropriate DGAC approved Airplane Flight Manual

15. Datum
   Station 0.0, located 2.540 meters forward of airplane nose

16. Mean Aerodynamic Chord (MAC)
   4.1935 meters

17. Levelling Means
   The A/C can be jacked on three primary jacking points.
   See the appropriate EASA approved Weight and Balance Manual

18. Minimum Flight Crew
   2 pilots

19. Maximum Seating Capacity
   220

Notes:
- For cabin arrangements of 201 passenger seats up to the maximum number of 220 passenger seats, five cabin crewmembers are required.
- For cabin arrangements up to and including 200 passenger seats, only four cabin crewmembers are required.
SECTION 2: A321 series - continued

20. Baggage/ Cargo Compartment

<table>
<thead>
<tr>
<th>CARGO COMPARTMENT</th>
<th>MAXIMUM LOAD (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>5 670</td>
</tr>
<tr>
<td>Aft</td>
<td>5 670</td>
</tr>
<tr>
<td>Rear (bulk)</td>
<td>1 497</td>
</tr>
</tbody>
</table>

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights) see Weight and Balance Manual, ref. 00E080A0001/C1S Chapter 1.10.

21. Wheels and Tyres

See SB A320-32-1007

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)

2. Instructions for Continued Airworthiness and Airworthiness Limitations

Airworthiness Limitations

- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA.

- Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Items document (ALS Part 2) approved by the EASA.

- Certification Maintenance Requirements are provided in A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 approved by the EASA.

- Ageing Systems Maintenance (ASM) limitations are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4 approved by the EASA.

- Fuel Airworthiness Limitations are provided in A318/A319/A320/A321 Fuel Airworthiness Limitations document (ALS Part 5) approved by the EASA.

Other limitations

See EASA approved Flight Manual.

3. Weight and Balance Manual (WBM)

Airbus Compliance Document 00E80A0001/C1S
V. Notes

1. For models A321-111 and A321-112, modification 25199 is the minimum standard to be qualified for Cat IIIB precision approach. For models A321-131, modification 25200 is the minimum standard to be qualified for Cat IIIB precision approach.

All other models are basically qualified for Cat IIIB precision approach.

2. DOOR 2 and/or DOOR 3 may be derated to Type III.
SECTION 3: A319 series

I. General

1. Type/ model/ Variant

   A319-111
   A319-112
   A319-113
   A319-114
   A319-115
   A319-131
   A319-132
   A319-133

   Significant Product Level Changes i.a.w. 21.A.101:

   MOD 160500 Sharklet applicable on A319-111/-112/-115/-131/-132/-133 including CJ

2. Performance Class

   A

3. Certifying Authority:

   European Aviation Safety Agency (EASA)
   Postfach 101253
   D-50452 Köln
   Deutschland

4. Manufacturer

   AIRBUS
   1, rond-point Maurice Bellonte
   31707 BLAGNAC CEDEX – France

5. Joint Airworthiness Authority (JAA) Certification Application Date

   A319-111       June 17, 1992
   A319-112       June 17, 1992
   A319-113       June 17, 1992
   A319-114       June 17, 1992
   A319-115       September 14, 1998
   A319-131       June 17, 1992
   A319-132       June 17, 1992
   A319-133       September 14, 1998

6. EASA Certification Application Date

   MOD 160500 08 April 2010

7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date
SECTION 3: A319 series - continued

A319-111 April 10, 1996
A319-112 April 10, 1996
A319-113 May 31, 1996
A319-114 May 31, 1996
A319-115 July 30, 1999
A319-131 December 18, 1996
A319-132 December 18, 1996
A319-133 July 30, 1999

Note: For A319 produced before the 21st of December 2005, DGAC-F TC 180 remains a valid reference.

8. EASA Type Certification Date

EASA TCDS issue 1 issued December 21, 2005
MOD 160500 iss.4 May 28, 2013 A319-111,-112,-115 excluding CJ
MOD 160500 iss 5 September 6, 2013 A319-112 (CJ), A319-115 (CJ),
A319-131 (PAX), A319-132 (PAX and CJ),
A319-133 (PAX and CJ)

9. Production conditions

A319 aircraft, all series, all models, were produced in Hamburg (Germany) under
approval I-A9 (until April 1999) or LBA.G.0009 (since April 1999) issued by LBA to
AIRBUS INDUSTRIE
Since September 27, 2004, A319 aircraft were produced in Hamburg - Germany under
approval DE.21G.0009 issued by LBA to AIRBUS
From July 21st, 2008, A319 aircraft were produced in Hamburg (Germany) under
approval EASA.21G.0001 issued by EASA to AIRBUS.
From May 06th, 2009, A319 aircraft are produced in Hamburg (Germany) and Tianjin
(People’s Republic of China) under approval EASA.21G.0001 issued by EASA to
AIRBUS.

II. Certification Basis

1. Reference Date for determining the applicable requirements

AIRBUS INDUSTRIE has applied for A319 certification on June 17, 1992 by letter AI/EA
410.0122/92.

2. Initial Airworthiness Authority Type Certification Data Sheet No.

Original French TCDS DGAC no. 180 was replaced by the EASA TCDS A.064

3. Initial Airworthiness Authority Certification Basis
4. EASA Airworthiness Requirements

Hereafter are listed the certification bases for the different A319 models. The amendments made to a particular basis at the occasion of further A319 models certification are identified per model.

The applicable Joint Certification Basis defined in CRI G4001 Issue 4 dated 21/03/96 is:

4.1 JAR 25 Change 11
- except Subpart BB,
- except all National Variants,
- except, due to the application of the procedure for establishing the Joint Type Certification Basis for derivative large aeroplanes, the following JAR 25 paragraphs which are upgraded at Change 13 and eventually amended by Orange Paper 90/1 or Orange Paper 91/1:

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 X 20</td>
<td>25.253</td>
</tr>
<tr>
<td>25.107(d)</td>
<td>25.365 amended by OP 91/1</td>
</tr>
<tr>
<td>25.121</td>
<td>25.807(c) amended by OP 90/1</td>
</tr>
<tr>
<td>25.125</td>
<td>25.812(e)</td>
</tr>
<tr>
<td>25.143(f)</td>
<td>25.857(d)(6)</td>
</tr>
<tr>
<td>25.207</td>
<td></td>
</tr>
</tbody>
</table>
- except, due to the Elect to Comply with NPA 25-C205, the following JAR 25 paragraphs which are upgraded at Change 13 and amended by Orange Paper 91/1:

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.305</td>
<td>25.349 (b)</td>
</tr>
<tr>
<td>25.321</td>
<td>25.351</td>
</tr>
<tr>
<td>25.331</td>
<td>25.365 (e)</td>
</tr>
<tr>
<td>25.333</td>
<td>25.371</td>
</tr>
<tr>
<td>25.335 (d)</td>
<td>25.373</td>
</tr>
<tr>
<td>25.341</td>
<td>25.391</td>
</tr>
<tr>
<td>25.343 (b) (1) (ii)</td>
<td>25.427</td>
</tr>
<tr>
<td>25.345 (a) and (c)</td>
<td>25.571 (b) (2)</td>
</tr>
</tbody>
</table>
- except, due to the Elect to Comply with SC-F11 and SC-S79, the following deleted paragraphs:

<table>
<thead>
<tr>
<th>Paragraph</th>
</tr>
</thead>
<tbody>
<tr>
<td>25x131</td>
</tr>
<tr>
<td>25x132</td>
</tr>
<tr>
<td>25x133</td>
</tr>
<tr>
<td>25x135</td>
</tr>
<tr>
<td>25x1588</td>
</tr>
</tbody>
</table>
- the following JAR 25 paragraphs upgraded at Change 13 and amended by SC-F11 and SC-S79:

<table>
<thead>
<tr>
<th>Paragraph</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.101</td>
</tr>
<tr>
<td>25.105</td>
</tr>
</tbody>
</table>
SECTION 3: A319 series - continued

- if modification 153945 is embodied on A319 aircraft, the following paragraph is upgraded at CS25 amendment 11 due to an Elect-to-Comply:

25.813(c)(2)(ii)

4.2 JAR AWO at Change 1 for autoland and operations in low visibility.

4.3 For the Extended Twin Engine Airplane Operations the applicable technical conditions are contained in AMC 20-6 (as initially published in AMJ 120-42/IL 20) and the A319 ETOPS CRI:

CRI G4006 ETOPS
CRI G4007 ETOPS - One engine inoperative cruise speed.

4.4 For all models Airbus Elect To Comply with 14CFR Part 25.772(a) and (c) and 25.795 amendment 106 according to CRI E12 –Reinforced Security Cockpit Door.

4.5 Certification basis revised for MOD 160500 “Sharklet” by CRI A-0001-001.

CS 25 Amdt 8 for
§ 25.23 § 25.481(a)(c) amended by SC A-2 for § 25.481(a)
§ 25.25 § 25.483
§ 25.117 § 25.485
§ 25.147 § 25.489
§ 25.161 § 25.491
§ 25.177 amended by SC-F16 § 25.571(a)(b)(e)
§ 25.235 § 25.581
§ 25.251 § 25.601
§ 25.301 § 25.603
§ 25.302 § 25.605
§ 25.303 § 25.607
§ 25.305(a)(b)(c)(e)(f) § 25.609
§ 25.307(a)(d) § 25.613
§ 25.321(a)(b)(c)(d) § 25.619
§ 25.331(a)(b) § 25.623
§ 25.333(a)(b) § 25.625
§ 25.335(a)(c)(d)(e)(f) amended by SC A5003 for (b) and SC A-2 for (e) § 25.629
§ 25.337 § 25.631
§ 25.341(a)(b) § 25.651
§ 25.343(a)(b) § 25.683
§ 25.345(a)(b)(c)(d) § 25.899
§ 25.349(a)(b) amended by SC A-2.2.2 for 25.349(a) § 25.903(d)(1) (see CRI E-39 for interpretative material)
§ 25.351 § 25.1385
§ 25.365(a)(b)(d) § 25.1387
§ 25.367 § 25.1389
SECTION 3: A319 series - continued

§ 25.371 § 25.1391
§ 25.373 § 25.1393
§ 25.391 § 25.1395
§ 25.393(b) § 25.1397
§ 25.427 § 25.1401
§ 25.445 § 25.1505
§ 25.457 § 25.1511
§ 25.459 § 25.1515
§ 25.471(a)(b) § 25.1527
§ 25.473 § 25.1587
§ 25.479(a)(c)(d) amended by SC A-2 for § 25.1591
25.479(a)

CS 25 Amdt 2 for
§ 25.253

JAR 25 Chg 15 for
§ 25.1517

JAR 25 Chg 14 for
§ 25.21 amended by A318 SC F5001 (for b) § 25.149 + OP96/1
§ 25.101 amended by SC F11/S79 § 25.171 replaced by SC-F5004
§ 25.103 replaced by A318 SC F5001 § 25.173 replaced by SC-F5004
§ 25.105 amended by SC F11/S79 § 25.175 replaced by SC-F5004
§ 25.107 amended by A318 SC-F5001 § 25.181
§ 25.109 amended by SC F11/S79 § 25.201 + OP96/1, replaced by SC-F5001
§ 25.111 § 25.203 + OP96/1, replaced by SC-F5001
§ 25.113 + OP96/1 amended by SC F11/S79 § 25.207 amended by SC-F5001
§ 25.115 amended by SC F11/S79 § 25.231
§ 25.119 + OP96/1 amended by A318 SC F5001 § 25.233
(for b)
§ 25.121 + OP96/1, amended by A318 SC F5001 § 25.237
(for c & d)
§ 25.123 § 25X261
§ 25.125 + OP96/1, amended by A318 SC F5001 § 25.1533
§ 25.143 + OP96/1, amended by SC F3, F7 & F8 § 25.1581
§ 25.145 + OP96/1 § 25.1585(a)

JAR 25 Chg 11 for
§ 25.671
§ 25.672
§ 25.1001
§ 25.1301
§ 25.1309
§ 25.1419 amended by AMC-F14

Interpretative Material:

CRI E-39 Uncontained Engine Rotor Failure

Note: The original Interpretative material applicable to each model remains effective.

Acceptable Means of Compliance:
AMC F-14 Flight in icing condition.

Note: AMC F-14 applicability extended from A321/A319/A318 to A320 with MOD 160500.

ETOPS

AMC 20-6 Rev 1 paragraphs related to operation in icing conditions 8.b.(11) for ice shapes on the Sharklet device.
AMC 20-6 Rev 1 paragraphs related to performance data in the AFM supplement for ETOPS 8.f.(1) (iii).

AMJ 120-42 for ETOPS for non-affected areas.

Note: This corresponds to the certification basis used for the initial ETOPS demonstration (refer to A320 CRI G1006.

5. Special Conditions

5.1 The following A320 Special conditions, Experience Related Conditions and Harmonization Conditions which are kept for the A319:

Reminder: Within the scope of the establishment of the A320 Joint Certification Basis, three types of special conditions were developed:

- Special conditions: rose to cover novel or unusual features not addressed by the JAR.

- Experience related conditions: rose to record an agreed text for the A320 Joint Certification Basis when evolution of JAR was in progress under the NPA procedure.

- Harmonization conditions: to record, for the purpose of the A320 Joint Certification Basis, a common understanding with respect to National variant. This should not be confused with the FAA/JAA harmonised regulations.

(DGAC-F) SC-G17 Operational proving flights
(CAA-UK) SC-G17 Operational flight before certification
SC-F3 Cockpit control - motion and effect of cockpit control
SC-F4 Static longitudinal stability
SC-F6 Static directional and lateral stability
SC-F7 Flight envelope protection
SC-F8 Normal load factor limiting
SC-F9 Dual control system
SC-A.2.2.2. Design manoeuvre requirement
SC-A.2.2.3. Design dive speed
HC-A.4.5. Braked roll conditions
HC-A.4.6. Speed control device
SC-S11 Limit pilot forces and torques
HC-S23 Standby gyroscopic horizon
HC-S24 VMO/MMO Warning (setting)
SECTION 3: A319 series - continued

EC-S30 Autoflight system
SC-S33 Autothrust system
SC-S52 Operation without normal electrical power
EC-S54 Circuit protective devices
HC-S72 Flight recorder
SC-S74 Abnormal attitudes
SC-S75 Lightning protection indirect effects
SC-S76 Effect of external radiations up on aircraft systems
SC-S77 Integrity of control signal

5.2 The following Special Conditions developed for the A319:

SC-A2 "Stalling Speeds for Structural Design" (see CRI A4002)
SC-F1 "Stalling and Scheduled Operating Speeds" (see CRI F4001)
SC-F11 "Accelerate-Stop distances and related performances, worn brakes" (see CRI F4012)
SC-S79 "Brakes requirements, qualification and testing" (see CRI SE4003)

5.3 For A319, Airbus Industrie has elected to comply with the following A321 Special Conditions:

SC-A1 "Interaction of Systems and Structure" (see CRI A 4001)
SC-P1 "FADEC" (see CRI P 4001)
SC-E1 "Resistance to Fire Terminology" (see CRI E 4005)

5.4 For any new application (new or modified aeroplane system and associated components) after July 10, 1998, SC/IM-S76 (Effect of external radiations upon aircraft systems) are superseded by SC/IM-S76-1 (CRI SE14).

5.5 For A319 weight variant 002 and for any further variant certification after Aug. 10, 1998, the HC-A.4.5 (Braked roll conditions) is superseded by JAR 25.493(d) at Change 14 (CRI A7).

5.6 For A319-115 and -133 models, the following JAR 25 paragraphs and Special Conditions are upgraded at Change 14 and Orange Paper 96/1:

25.119(a)
25.121(d)/SC-F1 Appendix 3
25.145(b)(c)
25.149(f)(g)(h)(i) and associated ACJ

This is introduced as Special Condition applicable to the "Third Rating", with a wording as close as possible to those paragraphs of the NPA 25B-261 involving the Go-around rating (CRI F8).

5.7 The following special conditions have been developed post Type Certification:

SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)
SC E-34 Seat with inflatable restraints
SC E-13 Installation of inflatable restraints
SC D-0306 Heat release and smoke density requirements to seat material (applicable from June 2010)
SC P-27 Flammability Reduction System
SECTION 3: A319 series - continued

If fitted, the centre fuel tank of aircraft which have made their first flight after 1st of January 2012 must be equipped in production with a fuel tank Flammability Reduction System (modification 38062). This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL revision associated with modification 38062. If modification 38062 (Fuel Tank Inerting System (FTIS)) is embodied on A318, A319, A320, or A321 airplanes, the airplane is compliant with paragraph FR Section 25.981(a) & (b) at amendment 25-102, Part 25 appendix M & N at amendment 25-125, and Section 26.33 at amendment 26-3.

SC-E10 High altitude airport operations (up to 14,100 ft)” (see CRI E10).

5.8 Special Conditions for aircraft equipped with MOD 160500

SC F-16 Static directional and lateral stability
A318 SC F-5001 Stalling and scheduled operating speeds
A318 SC F-5004 Static Longitudinal Stability and Low energy awareness
A318 SC A-5003 Design Dive Speed Vd

Note: All other original Special Conditions applicable to each model remain effective.

6. Exemptions

No exemptions

7. Deviations

None

8. Equivalent Safety Findings

8.1 Equivalent Safety findings to the following requirements are granted, as documented in relevant CRIs:

JAR 25-783(f) "Doors" (see CRI SM 4004 "Passenger doors"; The same Equivalent Safety finding was previously granted for A320 and A321).

JAR 25-807(c)(1) "Passengers emergency exits" (see CRI E 4001 - "Exit configuration" issued on the basis of the JAA policy dated December 1995).

JAR 25-813(c)(1) "Emergency exit access" (see CRI E 4105 - "Type III over wing emergency exit access", issued on the basis of A320 CRI E2105 issue 3).

JAR 25-933(a)(1) "Reversing systems" (see CRI P4008 - "Thrust Reverser Auto restow", issued on the basis of A320 CRI P1002).

JAR AWO 313 "Minimum approach break-off height" (see CRI SE 4005 - "Minimum approach break-off height").
8.2 The following Equivalent Safety Findings have been developed post Type Certification:

- **FAR 25.856(b)** Fuselage burnthrough protection in bilge area (see CRI E-32)
  
  If modifications 150700, and 37270 (with CLS option only), 37048 and 36985 are embodied in production on A318, A319, A320, or A321 airplanes, the airplane is compliant with Fuselage Flame Penetration “Burnthrough” requirements addressed by paragraph 14 CFR Part 25.856(b) Amdt 25-111 (See CRI E-28). Regarding the fuselage skin in the bilge area, EASA issued an equivalent level of safety finding through CRI E-32.

- **14CFR Part 25.856(a)** Improved flammability standards for insulation materials (CRI E18)

- **JAR 25.812(b)(1)(ii)** Photo-luminescent EXIT sign for MCD (Moveable Class Divider) (CRI E14) (optional)

- **JAR 25.811(f)** Emergency exit marking reflectance (CRI E16)

- **JAR 25.812(b)(1)(i)(ii)** Symbolic EXIT signs as an alternative to red EXIT signs for passenger aircraft (CRI SE-42) (optional)

8.3 Equivalent Safety Findings for aircraft equipped with MOD 160500

- **ESF F-19** Flight in natural icing condition (§25.1419 (c))

Note: The original ESFs applicable to each model remain effective.

9. Environmental Protection Standards

ICAO Annex 16:

<table>
<thead>
<tr>
<th>Vol. I, Part II</th>
<th>Noise Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vol. II, Part II</td>
<td>Fuel Venting</td>
</tr>
<tr>
<td>Vol. II, Part III Chapter 2</td>
<td>Emissions</td>
</tr>
</tbody>
</table>

Notes: Further details are defined within TCDSN EASA.A.064

10. ETOPS

The Type Design, system reliability and performance of A319 models were found capable for Extended Range Operations when configured, maintained and operated in accordance with the current revision of the ETOPS Configuration, Maintenance and Procedures (CMP) document, SA/EASA: AMC 20-6/CMP.

This finding does not constitute an approval to conduct Extended Range Operations (operational approval must be obtained from the responsible Authority).

The following table provides details on the ETOPS approvals.
 SECTION 3: A319 series - continued

<table>
<thead>
<tr>
<th>Aircraft model</th>
<th>Engine Type</th>
<th>120 min Approval Date</th>
<th>180 min Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A319-111</td>
<td>CFM56-5B5</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A319-112</td>
<td>CFM56-5B6</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A319-113</td>
<td>CFM56-5A4</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A319-114</td>
<td>CFM56-5A5</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A319-115</td>
<td>CFM56-5B7</td>
<td>25 November 1999</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A319-131</td>
<td>V2522-A5</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
<tr>
<td>A319-132</td>
<td>V2524-A5</td>
<td>14 February 1997</td>
<td>11 March 2004</td>
</tr>
</tbody>
</table>

Note:
The Configuration, Maintenance and Procedure Standards for extended range twin-engine airplane operations are contained in ETOPS CMP document reference SA/EASA: AMC 20-6/CMP at latest applicable revision. Certificated models are A319-111/-112/-113/-114/-115/-131/-132/-133, with all applicable engines.

Embodiment of modification:
36666 provides ETOPS 120 mn capability for EASA
32009 provides ETOPS 180 mn capability for EASA

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

1.1 Certificated model: A319-111
Definition of reference airplane by doc: AI/EA-S 413.0700/96 (00J000A0011/C21).

1.2 Certificated model: A319-112
Definition of reference airplane by doc: AI/EA-S 413.0505/96 (00J000A0003/C21).

1.3 Certificated model: A319-113
Definition of reference airplane by doc: AI/EA-S 413.1377/96 (00J000A0113/C21).

1.4 Certificated model: A319-114
Definition of reference airplane by doc: AI/EA-S 413.1400/96 (00J000A0114/C21).

1.5 Certificated model: A319-115
Definition of reference airplane by doc: AI/EA-S 413.1204/99 (00J000A0115/C21)

1.6 Certificated model: A319-131
Definition of reference airplane by doc: AI/EA-S 413.3250/96 (00J000A0131/C21)

1.7 Certificated model: A319-132
Definition of reference airplane by doc: AI/EA-S 413.3300/96 (00J000A0132/C21)

1.8 Certificated model: A319-133
Definition of reference airplane by doc: AI/EA-S 413.1205/99 (00J000A0133/C21)
NOTES
Model conversions:
- If modification 30149 is embodied on A319-113 model powered with CFM56-5A4 engines, it is converted into A319-114 model, powered with CFM56-5A5 engines.
- If modification 34281 is embodied on A319-111 model powered with CFM56-5B5/P engines, it is converted into A319-112 model, powered with CFM56-5B6/P engines.
- If modification 34815 is embodied on A319-132 model powered with V2524-A5 engines, it is converted into A319-133 model, powered with V2527M-A5 engines.

2. Description

Twin turbo-fan, short to medium range, single aisle, transport category airplane.

3. Equipment

- **A319-111**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0012/C0S.

- **A319-112**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0004/C0S.

- **A319-113**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0113/C0S.

- **A319-114**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0114/C0S.

- **A319-115**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0115/C0S.

- **A319-131**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0131/C0S.

- **A319-132**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0132/C0S.

- **A319-133**
  Equipment approved for installation is listed in the Certification Standard Equipment List ref. 00J000A0133/C0S.

Note
The type design definitions and certification standard equipment lists are complemented by doc. 00D000A0546/C0S “A319-100/A321-200 FMGC Type Std Evolution” and doc. 00J000A0067/C0S “A319-111/112 ATC Transponder Type Std Evolution”.

Cabin furnishings, equipment and arrangement shall be in conformance to the following specifications:

- ref. 00 D 252 K 0004/C01 for Cabin seats
- ref. 00 D 252 K 0019/C01 for Galleys
SECTION 3: A319 series - continued

4. Dimensions

Principal dimensions of A319 Aircraft:

- Length: 33.84 m
- Width: 34.10 m
- (if MOD 160500 is installed) 35.80 m
- Height: 11.76 m
- Width at horizontal stabilizer: 12.45 m
- Outside fuselage diameter: 3.95 m
- Distance between engine axes: 11.51 m
- Distance between main landing gear: 7.59 m
- Distance between nose and main landing gear: 11.04 m

5. Engines

The list below lists the basic engines fitted on the aircraft models. The notes describe usual names and certified names as well as new engines variants.

**A319-111**
Two CFMI CFM 56-5B5 jet engines (MOD 24932).

**A319-112**
Two CFMI CFM 56-5B6 jet engines (MOD 25287), or
CFM 56-5B6/2 jet engines (MOD 25530).

**A319-113**
Two CFMI CFM 56-5A4 jet engines (MOD 25238), or
CFM 56-5A4/F jet engines (MOD 23755).

**A319-114**
Two CFMI CFM 56-5A5 jet engines (MOD 25286), or
CFM 56-5A5/F jet engines (MOD 23755).

**A319-115**
Two CFMI CFM 56-5B7 jet engines (MOD 27567)

**A319-131**
Two IAE V2522-A5 jet engines (MOD 26152)

**A319-132**
Two IAE V2524-A5 jet engines (MOD 26298)

**A319-133**
Two IAE V2527M-A5 jet engines (MOD 27568)

Notes:
1. From March 31st 2008, there is no longer any CFM56-5B5 non /P in field or in production.
2. From March 31st 2008, there is no longer any CFM56-5B6 non /P in field or in production.
SECTION 3: A319 series - continued

3. From March 31st 2008, there is no longer any CFM56-5B6/2 non /P in field or in production.

4. From March 31st 2008, there is no longer any CFM56-5B7 non /P in field or in production.

5. If modification 25800 is embodied on models with CFM-5B engines, the engine performance is improved. The engine denomination changes to /P. The modification is currently applicable for:

   - A319-111: CFM 56-5B5 (SAC) which changes to CFM 56-5B5/P
   - A319-112: CFM 56-5B6 (SAC) which changes to CFM 56-5B6/P
   - A319-112: CFM 56-5B6/2 (DAC) which changes to CFM 56-5B6/2/P
   - A319-115: CFM 56-5B7 (SAC) which changes to CFM 56-5B7/P

   CFM 56-5B/"non-P" engine can be intermixed with CFM 56-5B/P engine on the same aircraft.

6. A319-112 CFM 56-5B6 engine can be intermixed with CFM 56-5B6/2 engine (MOD 25532) on the same aircraft (AFM supplement).

7. If modification 26610 is embodied on models with CFM-5B/2 (DAC) engines, the engine performance and gaseous emission levels are improved.

   - A319-112: CFM 56-5B6/2 (DAC) which changes to CFM 56-5B6/2P (DAC II C)

   CFM 56-5B/2 "non P" (DAC) engine can be intermixed with CFM 56-5B/2P (DAC II C) engine on the same aircraft (AFM supplement).
   CFM 56-5B/P or / "non P" (SAC) engine can be intermixed with CFM 56-5B/2P (DAC II C) engine on the same aircraft (AFM supplement).

8. If modification 25800 is embodied on models with CFM-5B engines, the engine performance is improved. The engine denomination changes to /P. The modification is currently applicable for:

   - A319-111: CFM 56-5B5 (SAC) which changes to CFM 56-5B5/P
   - A319-112: CFM 56-5B6 (SAC) which changes to CFM 56-5B6/P
   - A319-112: CFM 56-5B6/2 (DAC) which changes to CFM 56-5B6/2/P
   - A319-115: CFM 56-5B7 (SAC) which changes to CFM 56-5B7/P

   CFM 56-5B/"non-P" engine can be intermixed with CFM 56-5B/P engine on the same aircraft.

9. Introduction of CFM56-5Bx/3 "Tech Insertion" engine is done through embodiment of modification 37147 in production or 38770 in field.

   This modification is only applicable on CFM56-5Bx /P SAC engines.
   If modification 37147 is embodied on models with CFM-5B engines, the engine denomination changes to /3.

   The modification is currently applicable for:

   - A319-111: CFM 56-5B5 (SAC) which changes to CFM 56-5B5/3
   - A319-112: CFM 56-5B6 (SAC) which changes to CFM 56-5B6/3
SECTION 3: A319 series - continued

A319-115: CFM 56-5B7 (SAC) which changes to CFM 56-5B7/3

Modification 37147 has been demonstrated as having no impact on previously certified noise levels. The engine characteristics remain unchanged.

CFM56-5Bx/3 engine can be intermixed with CFM56-5Bx/P engine under considerations as prescribed in modification 38573.

6. Auxiliary Power Unit

**APU GARRETT**

GARRETT AIRESEARCH GTCP 36-300 (A)
(Specification 31-5306B)
Approved oils: see GARRETT REPORT GT.7800

**APU APIC (Option)**

The APU APIC installation is defined by MOD 22562 or MOD 35864.
APIC APS 3200 (Specification ESR 0802, Rev. A).
Approved oils: in conformance to MIL-L-7808, MIL-L-23699 or DERD 2487.

**APU AlliedSignal (Option)**

The APU AlliedSignal installation is defined by MOD 25888.
AlliedSignal 131-9[A] (Specification 4900 M1E 03 19 01)
Approved oils: according to model Specification 31-12048A-3A.

Note: for A319 models, the APU APIC APS 3200 (MOD 35864) is the production standard from MSN 2643.

7. Propellers
N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics)

**Fuel**
Fuel Specification: See installation manual: document CFM 2026 or CFM 2129 or document IAE - 0043

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FRANCE</th>
<th>USA</th>
<th>UK</th>
<th>RUSSIA</th>
<th>CHINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene</td>
<td>DCSEA 134</td>
<td>ASTM D 1655 (JET A)</td>
<td>DEF STAN 91/91 (AVTUR) (JET A1)</td>
<td>GOST 10227-86 (RT) (TS1)*</td>
<td>GB 5637-N°3 JET 2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(JET A1)</td>
<td>(JET A1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIL-DTL 83133 (JP 8)</td>
<td>DEF STAN 91/87 (AVTUR) (JET A1)</td>
<td>GOST R 52050-2006</td>
<td></td>
</tr>
<tr>
<td>Wide cut</td>
<td>ASTM D 6615 (JET B)</td>
<td>DEF STAN 91/88 (AVTAG)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIL-DTL 5624 (JP 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High flash point</td>
<td>DCSEA 144 (F-44)</td>
<td>MIL-DTL 5624 (JP 5)</td>
<td>DEF STAN 91/86 (AVCAT)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For IAE engines, TS-1 is cleared for transient use (less than 50% of operations)
**SECTION 3: A319 series - continued**

**OIL**
For oil specification:

<table>
<thead>
<tr>
<th>Engine</th>
<th>CFM56-5B5</th>
<th>CFM56-5B6</th>
<th>CFM56-5B6/2</th>
<th>CFM56-5B7</th>
<th>CFM56-5A4</th>
<th>CFM56-5A4/F</th>
<th>CFM56-5A5</th>
<th>CFM56-5A5/F</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAE V2522-A5</td>
<td>IAE V2524-A5</td>
<td>IAE V2527M-A5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additives**
Refer to Airbus Consumable Material List (CML) and CFM SB 73-0122 or IAE Standard Practices and Processes Manual for CIS fuel additives. The above mentioned fuels and additives are also suitable for the APU.

**Hydraulics**
Hydraulic fluids: Type IV - Specification NSA 30.7110.

9. Fluid Capacities

**Fuel quantity (0.8 kg/liter)**

**A319 aircraft (without MOD 160001)**

<table>
<thead>
<tr>
<th>Tank</th>
<th>3 TANK AIRPLANE Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>4 or 5 TANK AIRPLANE* Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>4 or 5 TANK AIRPLANE** Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing</td>
<td>15 609 (12 487)</td>
<td>58.9 (47.1)</td>
<td>15 609 (12 487)</td>
<td>58.9 (47.1)</td>
<td>15 609 (12 487)</td>
<td>58.9 (47.1)</td>
</tr>
<tr>
<td>Center</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
</tr>
<tr>
<td>ACT</td>
<td>3 121 / 6 242 (2 497 / 4 994)</td>
<td>17 / 34 (13.6 / 27.2)</td>
<td>2 992 / 5 984 (2 393 / 4 786)</td>
<td>17 / 34 (13.6 / 27.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 859 (19 087)</td>
<td>82.1 (65.7)</td>
<td>26 980 / 30 101 (21 584 / 24 081)</td>
<td>99.1 / 116.1 (79.3 / 92.9)</td>
<td>26 851 / 29 843 (21 480 / 23 873)</td>
<td>99.1 / 116.1 (79.3 / 92.9)</td>
</tr>
</tbody>
</table>

* see note 1 below
** see note 2 below

<table>
<thead>
<tr>
<th>Tank</th>
<th>6 or 7 TANK AIRPLANE* Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>8 or 9 TANK AIRPLANE* Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing</td>
<td>15 609 (12 487)</td>
<td>58.9 (47.1)</td>
<td>15 609 (12 487)</td>
<td>58.9 (47.1)</td>
</tr>
<tr>
<td>Center</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
<td>8 250 (6 600)</td>
<td>23.2 (18.6)</td>
</tr>
</tbody>
</table>
### A319 aircraft (with MOD 37331 and MOD 160001)

<table>
<thead>
<tr>
<th>TANK</th>
<th>Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WING</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 248 (6 598)</td>
<td>23.2 (18.6)</td>
<td>8 248 (6 598)</td>
<td>23.2 (18.6)</td>
<td>8 248 (6 598)</td>
<td>23.2 (18.6)</td>
</tr>
<tr>
<td>ACT (*)</td>
<td>2 992 (2 393)</td>
<td>17 (13.6)</td>
<td>2 992 (2 393)</td>
<td>17 (13.6)</td>
<td>2 992 (2 393)</td>
<td>17 (13.6)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24 167 (19 334)</td>
<td>82.1 (65.7)</td>
<td>27 159 (21 727)</td>
<td>99.1 (79.3)</td>
<td>27 159 (21 727)</td>
<td>99.1 / 116.1 (79.3 / 92.9)</td>
</tr>
</tbody>
</table>

(*) On the A319 aircraft, the certification of installing one or two Additional Center Tanks (ACT) in bulk version is defined by modification 33973. An alternative is the installation of one ACT only (with the provisions for only one ACT), as defined by modification 37226.

### Table 3: 3 TANK AIRPLANE | 4 TANK AIRPLANE | 4 or 5 TANK AIRPLANE *
<table>
<thead>
<tr>
<th>Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
<th>Usable fuel liters (kg)</th>
<th>Unusable fuel liters (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
</tr>
<tr>
<td>Center</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
<td>58.9 (47.1)</td>
<td>15 919 (12 735)</td>
</tr>
<tr>
<td>ACT (* )</td>
<td>8 428 / 10 614 (6 743 / 8 492)</td>
<td>56.7 / 78 (44.8 / 62.4)</td>
<td>13 660 / 16 781 (10 929 / 13 426)</td>
<td>90 / 107 (72 / 85.6)</td>
<td>37 827 / 40 948 (30 262 / 32 759)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32 595 / 34 781 (26 076 / 27 825)</td>
<td>138.1 / 160.1 (110.5 / 128.1)</td>
<td>37 827 / 40 948 (30 262 / 32 759)</td>
<td>172.1 / 189.1 (137.7 / 151.3)</td>
<td></td>
</tr>
</tbody>
</table>

* see note 1 below
**SECTION 3: A319 series - continued**

*A319 aircraft (without MOD 37331 and with MOD 160001)*

<table>
<thead>
<tr>
<th>TANK</th>
<th>3 TANK AIRPLANE</th>
<th>4 TANK AIRPLANE</th>
<th>4 or 5 TANK AIRPLANE *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel liters (kg)</td>
<td>Usable fuel liters (kg)</td>
<td>Unusable fuel liters (kg)</td>
</tr>
<tr>
<td>WING</td>
<td>15 569 (12 455)</td>
<td>15 569 (12 455)</td>
<td>15 569 (12 455)</td>
</tr>
<tr>
<td></td>
<td>58.9 (47.1)</td>
<td>58.9 (47.1)</td>
<td>58.9 (47.1)</td>
</tr>
<tr>
<td>CENTER</td>
<td>8 248 (6 598)</td>
<td>8 248 (6 598)</td>
<td>8 248 (6 598)</td>
</tr>
<tr>
<td></td>
<td>23.2 (18.6)</td>
<td>23.2 (18.6)</td>
<td>23.2 (18.6)</td>
</tr>
<tr>
<td>ACT (*)</td>
<td></td>
<td>2992 (2 393)</td>
<td>17 (13.6)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 817 (19 054)</td>
<td>26 809 (21 447)</td>
<td>99.1 (79.3)</td>
</tr>
</tbody>
</table>

(*) On the A319 aircraft, the certification of installing one or two Additional Center Tanks (ACT) in bulk version is defined by modification 33973. An alternative is the installation of one ACT only (with the provisions for only one ACT), as defined by modification 37226.

<table>
<thead>
<tr>
<th>Tank</th>
<th>6 or 7 TANK AIRPLANE*</th>
<th>8 or 9 TANK AIRPLANE*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel liters (kg)</td>
<td>Unusable fuel liters (kg)</td>
</tr>
<tr>
<td>Wing</td>
<td>15 569 (12 455)</td>
<td>58.9 (47.1)</td>
</tr>
<tr>
<td>Center</td>
<td>8 248 (6 598)</td>
<td>23.2 (18.6)</td>
</tr>
<tr>
<td>ACT</td>
<td>8 428 / 10 614 (6 743 / 8 492)</td>
<td>56.78 / 62.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32 245 / 34 431 (25 796 / 27 545)</td>
<td>138.1 / 160.1 (110.5 / 128.1)</td>
</tr>
</tbody>
</table>

* see note 1 below

**Notes:**

1- On A319 for Corporate Jet use, the certification of installing up to six Additional Center Tanks (ACT) in bulk version is defined by modification 28238. The approval together with structural and system provisions is subject of Major Change J1-CJT (compliance to CRI P9).

A319 for Corporate Jet use are defined through the following set of modifications:

- modification 28238: Installation of up to 6 ACTs
- modification 28162: Extension of the flight envelope up to 41000ft
- modification 28342: Extension of the forward C.G.
SECTION 3: A319 series - continued

2- The certification of installing one or two Additional Center Tanks (ACT) in bulk version is defined by modification 33973. The approval together with structural and system provisions is subject of Major Change J-33973 (compliance to CRI P9).

10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Slats/Flaps (°)</th>
<th>VFE (kt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18/0</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>18/10*</td>
<td>215</td>
</tr>
<tr>
<td>2</td>
<td>22/15</td>
<td>200</td>
</tr>
<tr>
<td>3</td>
<td>22/20</td>
<td>185</td>
</tr>
<tr>
<td>Full</td>
<td>27/40</td>
<td>177</td>
</tr>
</tbody>
</table>

* Auto flap retraction at 210 kt in Take-off configuration

Extended Flaps/Slats Speed (VFE):

Extended Flaps/Slats Speed (VFE): see table below

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Slats/Flaps (°)</th>
<th>VFE (kt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18/0</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>18/10*</td>
<td>215</td>
</tr>
<tr>
<td>2</td>
<td>22/15</td>
<td>200</td>
</tr>
<tr>
<td>3</td>
<td>22/20</td>
<td>185</td>
</tr>
<tr>
<td>Full</td>
<td>27/40</td>
<td>177</td>
</tr>
</tbody>
</table>

11. Flight Envelope

Maximum operating altitude:

- 39 100 ft (pressure altitude)
- 41 000 ft (pressure altitude) if modification 28162 is embodied
- 39 800 ft (pressure altitude) if modification 30748 is embodied

12. Operating Limitations

See the appropriate EASA approved Airplane Flight Manual

Powerplant (2.2482 lb/daN)

**CFMI Engines**

<table>
<thead>
<tr>
<th>Engine</th>
<th>CFM56-5B5</th>
<th>CFM56-5B6</th>
<th>CFM56-5B7</th>
<th>CFM56-5A4</th>
<th>CFM56-5A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFM56-5B5</td>
<td>CFM56-5B6</td>
<td>CFM56-5B7</td>
<td>CFM56-5A4</td>
<td>CFM56-5A5</td>
<td></td>
</tr>
<tr>
<td>Data sheets</td>
<td>E37NE (FAA)</td>
<td>E37NE (FAA)</td>
<td>E37NE (FAA)</td>
<td>E28NE (FAA)</td>
<td>E28NE (FAA)</td>
</tr>
</tbody>
</table>
SECTION 3: A319 series - continued

<table>
<thead>
<tr>
<th>Engine</th>
<th>IAE V2522-A5</th>
<th>IAE V2524-A5</th>
<th>IAE V2527M-A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sheets</td>
<td>E40NE (FAA) M-IM31 (DGAC)</td>
<td>E40NE (FAA) M-IM31 (DGAC)</td>
<td>E40NE (FAA) M-IM31 (DGAC)</td>
</tr>
<tr>
<td>Static thrust at sea level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take-off (5 min)* (Flat rated 30° C)</td>
<td>10 249 daN (23 040 lb)</td>
<td>10 889 daN (24 480 lb)</td>
<td>11 031 daN (24 800 lb)</td>
</tr>
<tr>
<td>Maximum continuous (Flat rated 25° C)</td>
<td>8 540 daN (19 200 lb)</td>
<td>8 540 daN (19 200 lb)</td>
<td>9 893 daN (22 240 lb)</td>
</tr>
</tbody>
</table>

* 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around) in accordance with DGAC "Fiche de Caractéristiques Moteur".

Other engine limitations: see the relevant Engine Type Certificate Data Sheet.

Note:
A319-113/-114 (CFM 56-5A4/F or -5A5/F engines):
- The maximum permissible gas temperature at take-off and max. continuous is extended to 915° C and 880° C respectively. However, the ECAM indication remains at 890° C and 855° C.
- CFM 56-5A4 engines can be intermixed with CFM 56-5A4/F engine (MOD 23755) on the same aircraft.
- CFM 56-5A5 engines can be intermixed with CFM 56-5A5/F engine (MOD 23755) on the same aircraft.
SECTION 3: A319 series - continued

12.1 Approved Operations

Transport Commercial operations

12.2 Other Limitations

For a complete list of applicable limitations, see the appropriate EASA approved Airplane Flight Manual.

13. Maximum Certified Masses

A319-111/A319-112/A319-113/A319-114/A319-115/A319-131/A319-132/A319-133

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 BASIC</th>
<th>001 MOD 25328</th>
<th>002 MOD 27112</th>
<th>003 MOD 26457</th>
<th>004 MOD 28053</th>
<th>005 MOD 28136</th>
<th>006 MOD 33418</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>64 400</td>
<td>70 400</td>
<td>75 900</td>
<td>68 400</td>
<td>68 400</td>
<td>70 400</td>
<td>73 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>64 000</td>
<td>70 000</td>
<td>75 500</td>
<td>68 000</td>
<td>68 000</td>
<td>70 000</td>
<td>73 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>61 000</td>
<td>61 000</td>
<td>62 500</td>
<td>61 000</td>
<td>62 500</td>
<td>62 500</td>
<td>62 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>57 000</td>
<td>57 000</td>
<td>58 500</td>
<td>57 000</td>
<td>58 500</td>
<td>58 500</td>
<td>58 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>007 MOD 35197</th>
<th>008 MOD 36291</th>
<th>009 MOD 36292</th>
<th>010 (*) MOD 39021</th>
<th>011 MOD 36933</th>
<th>012 MOD 36934</th>
<th>013 (**) MOD 153453</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>75 900</td>
<td>64 400</td>
<td>66 400</td>
<td>76 900</td>
<td>66 400</td>
<td>62 400</td>
<td>75 900</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>75 500</td>
<td>64 000</td>
<td>66 000</td>
<td>76 500</td>
<td>66 000</td>
<td>62 000</td>
<td>75 500</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>61 000</td>
<td>62 500</td>
<td>62 500</td>
<td>62 500</td>
<td>61 000</td>
<td>61 000</td>
<td>62 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>57 000</td>
<td>58 500</td>
<td>58 500</td>
<td>58 500</td>
<td>57 000</td>
<td>57 000</td>
<td>52 000</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
<td>35 400</td>
</tr>
</tbody>
</table>

* WV010 is only certified for A319 in Corporate Jet configuration (modifications 28238, 28162 and 28342).
** WV013 is only certified for A319-133, MSN 4042

14. Centre of Gravity Range

See EASA approved Airplane Flight Manual.

15. Datum

Station 0.0, located 2.540 meters forward of airplane nose

16. Mean Aerodynamic Chord (MAC)

4.1935 meters

17. Levelling Means

The A/C can be jacked on three primary jacking points.

See the appropriate EASA approved Weight and Balance Manual.
18. Minimum Flight Crew

2 pilots

19. Maximum Seating Capacity

145

Notes:
1. A second pair of overwing emergency exit (Type III) can be installed by embodiment of modification 32208. In this case, the maximum number of passengers is 160. If in addition the modification 150365 is embodied, the aircraft can be operated with 150 passengers and with 3 cabin attendants for increased cabin flexibility.

2. The LH & RH rear passenger doors can be de-activated by embodiment of modification 37807. In this case, the maximum number of passengers is 80.

3. For aircraft models A319-115, A319-132 and A319-133, the Type III emergency exit hatch can be de-activated by embodiment of modification 152777. In this case, the maximum number of occupants in the passenger cabin is limited to zero during taxi, take-off, flight and landing, unless terms and conditions to occupy specific cabin areas have been approved by operator’s competent airworthiness authority.

20. Baggage/ Cargo Compartment

<table>
<thead>
<tr>
<th>CARGO COMPARTMENT</th>
<th>MAXIMUM LOAD (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>2 268</td>
</tr>
<tr>
<td>Aft</td>
<td>3 021</td>
</tr>
<tr>
<td>Rear (bulk)</td>
<td>1 497</td>
</tr>
</tbody>
</table>

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights) see Weight and Balance Manual, ref. 00 J 080 A 0001/C1S Chapter 1.10.

21. Wheels and Tyres

See SB A320-32-1007

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)
EASA Approved Airplane Flight Manual for A319 (Airbus Compliance Document....)
SECTION 3: A319 series - continued

2. Instructions for Continued Airworthiness and Airworthiness Limitations

Airworthiness limitations

* Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA.

* Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Items document (ALS Part 2) approved by the EASA.
   
   Note: Depending on the kind of A/C operation (CJ or not), the appropriate limitations have to be considered.

* Certification Maintenance Requirements are provided in A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 approved by the EASA.

* Ageing Systems Maintenance (ASM) limitations are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4 approved by the EASA.

* Fuel Airworthiness Limitations are provided in A318/A319/A320/A321 Fuel Airworthiness Limitations document (ALS Part 5) approved by the EASA.

Other limitations

See EASA approved Flight Manual.

3. Weight and Balance Manual (WBM)

Airbus Compliance Document 00J80A0001/C1S

V. Notes

1. For models A319-111, A319-112, A319-113 and A319-114, modification 26799 (FM without ACARS) or 26968 (FM ACARS) is the minimum standard to be qualified for Cat IIIB precision approach.
   For models A319-131 and A319-132, modification 26716 (FM without ACARS) or 26717 (FM ACARS) is the minimum standard to be qualified for Cat IIIB precision approach.
   
   All other models are basically qualified for Cat IIIB precision approach.
SECTION 4: A318 Series

I. General

1. Type/ model/ Variant

   A318-111
   A318-112
   A318-121
   A318-122

2. Performance Class:

   A

3. Certifying Authority:

   European Aviation Safety Agency (EASA)
   Postfach 101253
   D-50452 Köln
   Deutschland

4. Manufacturer

   AIRBUS
   1, rond-point Maurice Bellonte
   31707 BLAGNAC CEDEX – France

5. Joint Airworthiness Authority (JAA) Certification Application Date

   Airbus Industrie has applied for A318 certification on December 11, 1998 by letter AI/EA-S 413.2952/1998

6. EASA Certification Application Date

   N/A

7. DGAC-F / Joint Airworthiness Authority (JAA) Type Certification Date

   A318-111: May 23, 2003
   A318-112: May 23, 2003
SECTION 4: A318 series - continued

8. EASA Type Certification Date

EASA TCDS issue 1 issued December 21, 2005

<table>
<thead>
<tr>
<th>Model</th>
<th>Certification Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318-121</td>
<td>December 21, 2005</td>
</tr>
<tr>
<td>A318-122</td>
<td>December 21, 2005</td>
</tr>
</tbody>
</table>

Note: For A318-111/-112 models produced before the 21st of December 2005, DGAC-F TC 180 remains a valid reference

9. Production conditions

A318 aircraft, all series, all models, were produced in Hamburg (Germany) under approval LBA.G.0009 issued by LBA to AIRBUS.

Since September 27, 2004, A318 aircraft were produced in Hamburg - Germany under approval DE.21G.0009 issued by LBA to AIRBUS.

From July 21st, 2008, A318 aircraft are produced in Hamburg (Germany) under approval EASA.21G.0001 issued by EASA to AIRBUS

II. Certification Basis

1. Reference Date for determining the applicable requirements

Airbus Industrie has applied for A318 certification on December 11, 1998 by letter AI/EA-S 413.2952/1998.

2. Initial Airworthiness Authority Type Certification Data Sheet No.

Original French TCDS DGAC no. 180 was replaced by the EASA TCDS A.064

3. Initial Airworthiness Authority Certification Basis

See below

4. EASA Airworthiness Requirements

Hereafter are listed the certification bases for the different A318 models. The amendments made to a particular basis at the occasion of further A318 models certification are identified per model.
SECTION 4: A318 series - continued

The applicable Joint Certification Basis defined in CRI G5001 Issue 3 dated May 2003 are:

4.1 JAR 25 Change 11
   - except Subpart BB which remains at Change 10,
   - except all National Variants,
   -

JAR 25 X 20 Change 14 JAR 25.335 Change 15
JAR 25.21 Change 14 JAR 25.341 Change 15
JAR 25.23 Change 14 JAR 25.343 Change 15
JAR 25.25 Change 14 JAR 25.345 Change 15
JAR 25.27 Change 14 JAR 25.349 Change 15
JAR 25.29 Change 14 JAR 25.351 Change 15
JAR 25.31 Change 14 JAR 25.361 Change 15 ONLY for A318-121/-122
JAR 25.101 Change 14 JAR 25.363 Change 15 ONLY for A318-121/-122
JAR 25.103 Change 14 JAR 25.365 Change 13
JAR 25.105 Change 14 JAR 25.367 Change 15 ONLY for A318-121/-122
JAR 25.107 Change 14 JAR 25.371 Change 15
JAR 25.109 Change 14 JAR 25.373 Change 15
JAR 25.111 Change 14 JAR 25.391 Change 15
JAR 25.113 Change 14 amended by OP 96/1 JAR 25.415 Change 15
JAR 25.115 Change 14 JAR 25.427 Change 15
JAR 25.117 Change 14 JAR 25.445 Change 15
JAR 25.119 Change 14 amended by OP 96/1 JAR 25.473 Change 15
JAR 25.121 Change 14 amended by OP 96/1 JAR 25.479 Change 15
JAR 25.123 Change 14 JAR 25.481 Change 15
JAR 25.125 Change 14 amended by OP 96/1 JAR 25.483 Change 15
JAR 25.143 Change 14 amended by OP 96/1 JAR 25.485 Change 15
JAR 25.145 Change 14 amended by OP 96/1 JAR 25.491 Change 15
JAR 25.147 Change 14 JAR 25.493(d) Change 14 amended by OP 96/1
JAR 25.149 Change 14 amended by OP 96/1 JAR 25.499 Change 15
JAR 25.161 Change 14 JAR 25.511 Change 15
JAR 25.171 Change 14 JAR 25.X519 Change 13
JAR 25.173 Change 14 JAR 25.561(c) Change 15
JAR 25.175 Change 14 JAR 25.562 Change 14 (see CRI E5001)
JAR 25.177 Change 14 amended by OP 96/1 JAR 25.571 Change 15
JAR 25.181 Change 14 JAR 25.801 Change 14
JAR 25.201 Change 14 amended by OP 96/1 JAR 25.803 Change 14
JAR 25.203 Change 14 amended by OP 96/1 JAR 25.807 Change 14
JAR 25.207 Change 14 JAR 25.809 Change 14
JAR 25.231 Change 14 JAR 25.810 Change 14
JAR 25.233 Change 14 JAR 25.811 Change 14
JAR 25.235 Change 14 JAR 25.812 Change 14
JAR 25.237 Change 14 JAR 25.813 Change 14
JAR 25.251 Change 14 JAR 25.853 Change 14
JAR 25.253 Change 14 amended by OP 96/1 JAR 25.855 Change 14
JAR 25.255 Change 14 JAR 25.857 Change 14
JAR 25X261 Change 14 JAR 25.858 Change 14
JAR 25.305 Change 15 JAR 25.901 Change 15 ONLY for A318-121/-122
JAR 25.321 Change 15 JAR 25.903 Change 15 ONLY for A318-121/-122
JAR 25.331 Change 15 JAR 25.933 Change 15 ONLY for A318-121/-122
JAR 25.333 Change 15 JAR 25.934 Change 15 ONLY for A318-121/-122
4.2 JAR AWO at Change 1 for autoland and operations in low visibility.

4.3 For the Extended Twin Engine Airplane Operations the applicable technical conditions are contained in AMC 20-6 (as initially published in AMJ 120-42/IL 20) and the A318 ETOPS CRI:

CRI G-22  ETOPS approval.

4.4 For all models Airbus Elect To Comply with 14 CFR part 25.772(a) and (c) and 25.795 amendment 106 according to CRI E12 – Reinforced Security Cockpit Door

5. Special Conditions

5.1 The following A320 Special Conditions, Experience Related Conditions and Harmonization Conditions which are kept for the A318:

Reminder: Within the scope of the establishment of the A320 Joint Certification Basis, three types of special conditions were developed:

- Special conditions: rose to cover novel or unusual features not addressed by the JAR.
- Experience related conditions: rose to record an agreed text for the A320 Joint Certification Basis when evolution of JAR was in progress under the NPA procedure.
- Harmonization conditions: to record, for the purpose of the A320 Joint Certification Basis, a common understanding with respect to National variant. This should not be confused with the FAA/JAA harmonised regulations.

(DGAC-F) SC-G17  Operational proving flights
(CAA-UK) SC-G17  Operational flight before certification
SC-F3  Cockpit control - motion and effect of cockpit control
SC-F6  Static directional and lateral stability
SECTION 4: A318 series - continued

SC-F7 Flight envelope protection
SC-F8 Normal load factor limiting
SC-F9 Dual control system
SC-A2.2.2 Design manoeuvre requirements
SC-S11 Limit pilot forces and torques
SC-S33 Auto-thrust system
SC-S52 Operation without normal electrical power
SC-S74 Abnormal attitudes
SC-S75 Lightning protection indirect effects
SC-S77 Integrity of control signal
HC-A4.6 Speed control device
HC-S23 Standby gyroscopic horizon
HC-S24 VMO/MMO warning (setting)
HC-S72 Flight recorder
EC-G11 General definition
EC-S30 Autoflight system
EC-S54 Circuit protective devices

5.2 The following A319 Special Conditions, are kept for the A318:

SC-A2 Stalling speeds for structural design
SC-F11 Accelerate-stop distances and relates performances, worn brakes
SC-A1 Interaction of systems and structure
SC-P1 FADEC for CFM56 and AMJ20X-1 change 14 for PW6000
SC-S79 Brakes requirements, qualification and testing

5.3 The following A319/A320/A321 Special Conditions are kept for the A318:

SC-S76-1 Effect of external radiations upon aircraft systems (modified by CRI SE14)

5.4 The following Special Conditions are developed for the A318:

SC-F5001 Stalling and scheduled operation speed
SC-F5004 Static longitudinal stability and low energy awareness
SC-A5001 Engine Failure Loads (PW engine only)
SC-A5003 Design Dive Speed
SC-P5004 Engine Sustained Imbalance (PW engine only)
SC-SE5002 AFM – RVR limits

5.5 The following special conditions have been developed post Type Certification:

SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)
SC E-34 Seat with inflatable restraints
SC E13 Installation of inflatable restraints
SC D-0306 Heat release and smoke density requirements to seat material (applicable from June 2010)
SC P-27 Flammability Reduction System (see Note 4.3.8)
If fitted, the centre fuel tank of aircraft which have made their first flight after 1st of January 2012 must be
equipped in production with a fuel tank Flammability Reduction System (modification 38062). This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL revision associated with modification 38062. If modification 38062 (Fuel Tank Inerting System (FTIS)) is embodied on A318, A319, A320, or A321 airplanes, the airplane is compliant with paragraph FR Section 25.981(a) & (b) at amendment 25-102, Part 25 appendix M & N at amendment 25-125, and Section 26.33 at amendment 26-3.

SC F5011  Steep approach

6. Exemptions

No exemptions.

7. Deviation

None.

8. Equivalent Safety Findings

8.1 Equivalent Safety findings to the following requirements are granted, as documented in relevant CRIs:

JAR 25.783(f)  "Doors (see A319 CRI SM 4004 "passenger doors")
JAR 25.807(d)  "Passenger emergency exits" (see CRI E 5004 "Exit configuration" similar to A319 CRI E 4001)
JAR 25.813(c)(1)  "Emergency exit access" (see CRI E 5005 "Type III overwing emergency exit access")
JAR 25.831(a)  "Ventilation" (see CRI E 5006 "Packs Off Operation")
JAR 25.933(a)(1)  "Reversing systems" (see A319 CRI P 4008 "Thrust Reverser Auto restow")
JAR AWO 313  "Minimum Approach Break-Off Height") (see A319 CRI SE 4005 "Minimum Approach Break-Off Height")
JAR AWO 236  "Excess Deviation Alerts" (see CRI SE 5005 "Cat III Operation – Excess Deviation Alert")
NPA AWO 10  "Airworthiness Harmonization package n°2" (see CRI SE-5002 "AFM – RVR limits")

8.2 The following Equivalent Safety Findings have been developed post Type Certification:

FAR 25.856(b)  Fuselage burnthrough protection in bilge area (see CRI E-32).
If modifications 150700, and 37270 (with CLS option only), 37048 and 36985 are embodied in production on A318, A319, A320, or A321 airplanes, the airplane is compliant with Fuselage Flame Penetration “Burn
SECTION 4: A318 series - continued

through” requirements addressed by paragraph 14 CFR Part 25.856(b) Amdt 25-111 (see CRI E-28).

14 CFR Part 25.856(a) Improved flammability standards for insulation materials (CRI E18)

JAR 25.812(b)(1)(ii) Photo-luminescent EXIT sign for MCD (Moveable Class Divider) (CRI E14) (optional)

JAR 25.811(f) Emergency exit marking reflectance (CRI E16)

JAR 25.812(b)(1)(i)(ii) Symbolic EXIT signs as an alternative to red EXIT signs for passenger aircraft (CRI SE-42) (optional)

9. Environmental Protection Standards

ICAO Annex 16:

<table>
<thead>
<tr>
<th>Vol. I, Part II</th>
<th>Noise Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vol. II, Part II</td>
<td>Fuel Venting</td>
</tr>
<tr>
<td>Vol. II, Part III Chapter 2</td>
<td>Emissions</td>
</tr>
</tbody>
</table>

Notes: Further details are defined within TCDSN EASA.A.064

10. ETOPS

The Type Design, system reliability and performance of A318 models were found capable for Extended Range Operations when configured, maintained and operated in accordance with the current revision of the ETOPS Configuration, Maintenance and Procedures (CMP) document, SA/EASA: AMC 20-6/CMP.

This finding does not constitute an approval to conduct Extended Range Operations (operational approval must be obtained from the responsible Authority).

The following table provides details on the ETOPS approvals.

<table>
<thead>
<tr>
<th>Aircraft model</th>
<th>Engine Type</th>
<th>120 min Approval Date</th>
<th>180 min Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318-111</td>
<td>CFM56-5B8</td>
<td>N/A</td>
<td>06 November 2006</td>
</tr>
<tr>
<td>A318-112</td>
<td>CFM56-5B9</td>
<td>N/A</td>
<td>06 November 2006</td>
</tr>
<tr>
<td>A318-121</td>
<td>PW6122A</td>
<td>N/A</td>
<td>16 November 2010</td>
</tr>
<tr>
<td>A318-122</td>
<td>PW6124A</td>
<td>N/A</td>
<td>16 November 2010</td>
</tr>
</tbody>
</table>

Note:
The Configuration, Maintenance and Procedure Standards for extended range twin-engine airplane operations are contained in ETOPS CMP document reference SA/EASA: AMC 20-6/CMP at latest applicable revision. Certificated models are A318-111/-112/-121/-122, with all applicable engines.

Embodiment of modification:
- 36666 provides ETOPS 120 min capability for EASA,
- 32009 provides ETOPS 180 min capability for EASA
III. Technical Characteristics and Operational Limitations

1. Type Design Definition

1.1 Certificated model: A318-111
Definition of reference airplane by doc.: D03006056 (00P000A0111/C21).

1.2 Certificated model: A318-112
Definition of reference airplane by doc.: D03006716(00P000A0112/C21).

1.3 Certificated model: A318-121
Definition of reference airplane by doc.: D05028326 (00P000A0121/C21).

1.4 Certificated model: A318-122
Definition of reference airplane by doc.: D05028327 (00P000A0122/C21).

2. Description
Twin turbo-fan, short to medium range, single aisle, transport category airplane.

3. Equipment
Not applicable.

Cabin furnishings, equipment and arrangement shall be in conformance to the following Specifications:

ref. 00 D 252 K 0004/C01 plus ref.00D 252 K 0030/C01 for Cabin seats
ref. 00 D 252 K 0019/C01 for Galleys.

4. Dimensions
Principal dimensions of A318 Aircraft:

Length: 31.45 m
Width: 34.10 m
Height: 12.79 m
Width at horizontal stabilizer: 12.45 m
Outside fuselage diameter: 3.95 m
Distance between engine axes: 11.51 m
Distance between main landing gear: 7.59 m
Distance between nose and main landing gear: 11.04 m

5. Engines
The list below lists the basic engines fitted on the aircraft models. The notes describe usual names and certified names as well as engines variants.

A318-111
Two CFM56-5B8/P jet engines (MOD 32028).
SECTION 4: A318 series - continued

A318-112
Two CFM CFM 56-5B9/P jet engines (MOD 32029).

A318-121
Two PW 6122A jet engines (MOD 30034)

A318-122
Two PW 6124A jet engines (MOD 31882)

Notes:
1. Introduction of CFM56-5Bx/3 “Tech Insertion” engine is done through embodiment of modification 37147 in production or 38770 in field.

This modification is only applicable on CFM56-5Bx/P SAC engines. If modification 37147 is embodied on models with CFM-5B engines, the engine’s denomination changes to /3.

The modification is currently applicable for:
A318-111: CFM 56-5B8 (SAC) which changes to CFM 56-5B8/3
A318-112: CFM 56-5B9 (SAC) which changes to CFM 56-5B9/3

The engine characteristics remain unchanged.

modification 37147 has been demonstrated as having no impact on previously certified noise levels.

CFM56-5Bx/3 engine can be intermixed with CFM56-5Bx/P engine under considerations as prescribe in modification 38573.

6. Auxiliary Power Unit

1. Basic
   - A318-111/-112
     HONEYWELL AIRRESEARCH GTCP 36-300 (A) (Specification 31-5306 B)
     Approved oil: See Garrett report GT 7800.

   - A318-121/-122
     APIC APS 3200 (Specification ESR 0802, Rev. A).
     APU APIC installation defined by MOD 35864.
     Approved oils: in conformance to MIL-L-7808, MIL-L-23699 or DERD 2487.

2. Option
   - A318-111/-112
     APIC APS 3200 (Specification ESR 0802, Rev. A).
     APU APIC installation defined by MOD 22562 or 35864.
     Approved oils: in conformance to MIL-L-7808, MIL-L-23699 or DERD 2487.
 SECTION 4: A318 series - continued

Or

AlliedSignal 131-9[A] (Specification 4900 M1E 03 19 01)
The APU AlliedSignal installation is defined by MOD 25888.
Approved oils: according to model Specification 31-12048A-3A.

- **A318-121/-122**

AlliedSignal 131-9[A] (Specification 4900 M1E 03 19 01)
The APU AlliedSignal installation is defined by MOD 25888.
Approved oils: according to model Specification 31-12048A-3A.

Note: For A318 models, the APU APIC APS 3200 (MOD 35864) is the production standard from MSN 2686

7. Propellers
N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics)

**Fuel**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SPECIFICATION (NAME)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FRANCE</td>
</tr>
<tr>
<td><strong>Kerosene</strong></td>
<td></td>
</tr>
<tr>
<td>DCSEA 134</td>
<td>ASTM D 1655 (JET A)</td>
</tr>
<tr>
<td></td>
<td>MIL-DTL 83133 (JP 8)</td>
</tr>
<tr>
<td><strong>Wide cut</strong></td>
<td></td>
</tr>
<tr>
<td>DCSEA 144</td>
<td>ASTM D 6615 (JET B)</td>
</tr>
<tr>
<td></td>
<td>MIL-DTL 5624 (JP 4)</td>
</tr>
<tr>
<td><strong>High flash point</strong></td>
<td></td>
</tr>
<tr>
<td>DCSEA 144</td>
<td>MIL-DTL 5624 (JP 5)</td>
</tr>
</tbody>
</table>

* Wide cut is only certified for CFM engines

**OIL**
For oil specification:

<table>
<thead>
<tr>
<th>Engine</th>
<th>CFM56-5B8/P</th>
<th>PW6122A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CFM56-5B9/P</td>
<td>PW6124A</td>
</tr>
</tbody>
</table>

Approved Oils: SB CFMI 79-001-OX SB PW 238

**Additives:**
Refer to Airbus Consumable Material List (CML) and CFM SB 73-0122 or PW SB 2016 for CIS fuel additives
The above-mentioned fuels and additives are also suitable for the APU.

**Hydraulics:**
Hydraulic fluids: Type IV - Specification NSA 30.7110.
9. Fluid Capacities

Fuel quantity (0.8 kg/liter)

### A318-100 series (without MOD 160001)

<table>
<thead>
<tr>
<th>Tank</th>
<th>3 TANK AIRPLANE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel</td>
<td>Unusable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>liters (kg)</td>
<td>fuel</td>
<td>liters (kg)</td>
</tr>
<tr>
<td>Wing</td>
<td>15 609</td>
<td>58.9</td>
<td>(12 487)</td>
</tr>
<tr>
<td>Center</td>
<td>8 250</td>
<td>23.2</td>
<td>(6 600)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 859</td>
<td>82.1</td>
<td>(19 087)</td>
</tr>
</tbody>
</table>

### A318-100 series (with MOD 37331 and without MOD 160001)

<table>
<thead>
<tr>
<th>Tank</th>
<th>3 TANK AIRPLANE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel</td>
<td>Unusable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>liters (kg)</td>
<td>fuel</td>
<td>liters (kg)</td>
</tr>
<tr>
<td>Wing</td>
<td>15 959</td>
<td>58.9</td>
<td>(12 767)</td>
</tr>
<tr>
<td>Center</td>
<td>8 250</td>
<td>23.2</td>
<td>(6 600)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24 209</td>
<td>82.1</td>
<td>(19 367)</td>
</tr>
</tbody>
</table>

### A318-100 series (without MOD 37331 and with MOD 160001)

<table>
<thead>
<tr>
<th>Tank</th>
<th>3 TANK AIRPLANE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel</td>
<td>Unusable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>liters (kg)</td>
<td>fuel</td>
<td>liters (kg)</td>
</tr>
<tr>
<td>Wing</td>
<td>15 568</td>
<td>58.9</td>
<td>(12 454)</td>
</tr>
<tr>
<td>Center</td>
<td>8 248</td>
<td>23.2</td>
<td>(6 598)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 816</td>
<td>82.1</td>
<td>(19 052)</td>
</tr>
</tbody>
</table>

### A318-100 series (with MOD 37331 and with MOD 160001)

<table>
<thead>
<tr>
<th>Tank</th>
<th>3 TANK AIRPLANE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usable fuel</td>
<td>Unusable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>liters (kg)</td>
<td>fuel</td>
<td>liters (kg)</td>
</tr>
<tr>
<td>Wing</td>
<td>15 918</td>
<td>58.9</td>
<td>(12 734)</td>
</tr>
<tr>
<td>Center</td>
<td>8 248</td>
<td>23.2</td>
<td>(6 598)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24 166</td>
<td>82.1</td>
<td>(19 332)</td>
</tr>
</tbody>
</table>

---

**SECTION 4: A318 series - continued**
SECTION 4: A318 series - continued

10. Airspeed Limits (Indicated Airspeed – IAS – unless otherwise stated)

Maximum Operating Mach (MMO): 0.82
Maximum Operating Speed (VMO): 350 kt
Manoeuvring Speed (VA): see Limitations Section of the EASA approved Flight Manual

Extended Flaps/Slats Speed (VFE): see table below

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Slats/Flaps (°)</th>
<th>VFE (kt)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18/0</td>
<td>230</td>
<td>Intermediate approach</td>
</tr>
<tr>
<td></td>
<td>18/10*</td>
<td>215</td>
<td>Take-off</td>
</tr>
<tr>
<td>2</td>
<td>22/15</td>
<td>200</td>
<td>Take-off and approach</td>
</tr>
<tr>
<td>3</td>
<td>22/20</td>
<td>185</td>
<td>Take-off, approach, landing</td>
</tr>
<tr>
<td>Full</td>
<td>27/40</td>
<td>177</td>
<td>Landing</td>
</tr>
</tbody>
</table>

* Auto flap retraction at 210 kt in Take-off configuration

Landing gear:
VLE - Extended: 280 kt/Mach 0.67
VLO - Extension: 250 kt
- Retraction: 220 kt
Tyres Limit Speed (Ground speed): 195.5 kt (225 mph)

11. Flight Envelope

Maximum operating altitude
39 800 ft (pressure altitude)
41 100 ft (pressure altitude) if modification 39195 is embodied
(models A318-111/-112 only)
SECTION 4: A318 series - continued

12. Operating Limitations

See the appropriate EASA approved Airplane Flight Manual

**Powerplant (2.2482 lb/daN)**

**CFMI Engines**

<table>
<thead>
<tr>
<th>Engine</th>
<th>CFMI CFM565B8/P</th>
<th>CFM56-5B9/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sheets</td>
<td>E37NE, E38NE (FAA) M-17, M-IM28 (DGAC)</td>
<td>E37NE, E38NE (FAA) M-17, M-IM28 (DGAC)</td>
</tr>
<tr>
<td>Static thrust at sea level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take-off (5 min)* (Flat rated 30° C)</td>
<td>9 608 daN (21 600 lbs)</td>
<td>10 364 daN (23 300 lbs)</td>
</tr>
<tr>
<td>Maximum continuous (Flat rated 25° C)</td>
<td>8478 daN (19 060 lbs)</td>
<td>9 008 daN (20 250 lbs)</td>
</tr>
</tbody>
</table>

* 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around) in accordance with DGAC "Fiche de Caractéristiques Moteur".

**PW Engines**

<table>
<thead>
<tr>
<th>Engine</th>
<th>PW6000</th>
<th>PW6122A</th>
<th>PW6124A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sheets</td>
<td>IM.E.020 (EASA) E00064EN (FAA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sea level static thrust ratings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take-off (5 min)* (Flat rated 30° C)</td>
<td>9 830 daN (22 100 lbs)</td>
<td>10 587 daN (23 800 lbs)</td>
<td></td>
</tr>
<tr>
<td>Maximum continuous (Flat rated 25° C)</td>
<td>9030 daN (20 300 lbs)</td>
<td>9 297 daN (20 900 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

* 5 min TO time limit can be extended to 10 min for one engine inoperative

Other engine limitations: see the relevant Engine Type Certificate Data Sheet.

12.1 Approved Operations

Transport commercial operations

12.2 Other Limitations

For a complete list of applicable limitations see the appropriate EASA approved Airplane Flight Manual
SECTION 4: A318 series - continued

13. Maximum Certified Masses

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>000 BASIC</th>
<th>001 MOD 31672</th>
<th>002 MOD 31673</th>
<th>003 MOD 31674</th>
<th>004 MOD 31675</th>
<th>005 MOD 31676</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>59 400</td>
<td>61 900</td>
<td>63 400</td>
<td>64 900</td>
<td>66 400</td>
<td>68 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>59 000</td>
<td>61 500</td>
<td>63 000</td>
<td>64 500</td>
<td>66 000</td>
<td>68 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>56 000</td>
<td>56 000</td>
<td>57 500</td>
<td>57 500</td>
<td>57 500</td>
<td>57 500</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>53 000</td>
<td>53 000</td>
<td>54 500</td>
<td>54 500</td>
<td>54 500</td>
<td>54 500</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>34 500</td>
<td>34 500</td>
<td>34 500</td>
<td>34 500</td>
<td>34 500</td>
<td>34 500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VARIANT</th>
<th>006 MOD 33235</th>
<th>007 MOD 33126</th>
<th>008 MOD 33128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Ramp Weight</td>
<td>56 400</td>
<td>61 400</td>
<td>64 400</td>
</tr>
<tr>
<td>Max. Take-off Weight</td>
<td>56 000</td>
<td>61 000</td>
<td>64 000</td>
</tr>
<tr>
<td>Max. Landing Weight</td>
<td>56 000</td>
<td>56 000</td>
<td>56 000</td>
</tr>
<tr>
<td>Max. Zero Fuel Weight</td>
<td>53 000</td>
<td>53 000</td>
<td>53 000</td>
</tr>
<tr>
<td>Minimum Weight</td>
<td>34 500</td>
<td>34 500</td>
<td>34 500</td>
</tr>
</tbody>
</table>

14. Centre of Gravity Range
See the appropriate DGAC approved Airplane Flight Manual

15. Datum
Station 0.0, located 2.540 meters forward of airplane nose

16. Mean Aerodynamic Chord (MAC)
4.1935 meters

17. Levelling Means
The A/C can be jacked on three primary jacking points.
See the appropriate EASA approved Weight and Balance Manual

18. Minimum Flight Crew
2 pilots

19. Maximum Seating Capacity
136

Notes:
1. The LH & RH rear passenger doors can be de-activated by embodiment of modification 37807. In this case, the maximum number of passengers is 80.
2. The Type III emergency exit can be de-activated by embodiment of modification 39673. In this case, the maximum number of passengers is 110 when operating overland and 32 when operating overwater.
SECTION 4: A318 series - continued

20. Baggage/ Cargo Compartment

<table>
<thead>
<tr>
<th>CARGO COMPARTMENT</th>
<th>MAXIMUM LOAD (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>1614</td>
</tr>
<tr>
<td>Aft</td>
<td>2131</td>
</tr>
<tr>
<td>Rear (bulk)</td>
<td>1372</td>
</tr>
</tbody>
</table>

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights) see Weight and Balance Manual, ref. 00 P 080 A 0001/C1S Chapter 1.10.

21. Wheels and Tyres
See SB A320-32-1007

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)


2. Instructions for Continued Airworthiness and Airworthiness Limitations

Airworthiness Limitations

- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA.

- Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A318/A319/A320/A321 Airworthiness Limitations Items document (ALS Part 2) approved by the EASA.

- Certification Maintenance Requirements are provided in A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 approved by the EASA.

- Ageing Systems Maintenance (ASM) limitations are provided in the A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4 approved by the EASA.

- Fuel Airworthiness Limitations are provided in A318/A319/A320/A321 Fuel Airworthiness Limitations document (ALS Part 5) approved by the EASA.

Other limitations

See EASA approved Flight Manual.
3. Weight and Balance Manual (WBM)

Airbus Compliance Document 00P80A0001/C1S

V. Notes

All models are basically qualified for Cat IIIB precision approach
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations
- reserved -

II. Type Certificate Holder Record
AIRBUS
1 Rond-point Maurice Bellonte
31707 BLAGNAC
FRANCE

III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>22.06.2006</td>
<td>-</td>
<td>No change</td>
</tr>
<tr>
<td>3</td>
<td>20.05.2008</td>
<td>-</td>
<td>No change</td>
</tr>
<tr>
<td>4</td>
<td>18.07.2008</td>
<td>-</td>
<td>No change</td>
</tr>
<tr>
<td>5</td>
<td>06.05.2009</td>
<td>-</td>
<td>No change</td>
</tr>
</tbody>
</table>
| 6     | 25.05.2011 | - ETOPS approval information added  
- Weight Variants added. 015, 017, 018 (A320), 004, 006 (A321)  
- Introduction of Post-TC SC (H-01, E-34, D-0306, P-27)  
- Introduction of Post-TC ESF (E-28), ETOPS reference doc updated  
- Limitation on JP4 deleted, ACT fuel quantity corrected  
- Note reworded on Cat IIIB precision approach,  
- Notes 2.4.2 to 2.4.5, 3.3.7 deleted  
- ETOPS reference doc updated and models added (A320-215/-216)  
- Noise compliance clarified to take into account D/E/J noise project  
- MOD 150365 (capacity of 150 pax + 3 cabin attendants) added to note  
- MOD 38770 for "tech insertion kit" for in-service aircraft added to note  
- models A320-211/-212 added to note  
- Note added to take into account the burnthrough (CRI E-28 and E-32)  
- Note added to take into account the flammability reduction system (SC P-27)  
- Note added to introduce the wingbox without dry bay (MOD 38616)  
- MOD 39673 De-activation of Type III exit  
- MOD 39195 Operations up to 41 000 ft | No change |
| 7     | 13.06.2011 | - MOD 150016 – deactivation of forward Type III exit for A320 added to note  
- Note modified to take into account the production cut-in for installation of  
  flammability reduction system on new aeroplanes | No change |
| 8     | 06.06.2012 | - Correction of Post-TC ESF (E-32 instead of E-28)  
- Title of SC E-34 modified to reflect the real CRI title  
- Correction in the table of fuel specification due to obsolescence | No change |
<table>
<thead>
<tr>
<th>Date</th>
<th>Changes</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 30.11.2012</td>
<td>• MOD 150364 – cabin operational flexibility added</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>• Introduction of D/E/J noise project step 2 for A320-214</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reference to CFM document 2129 “Installation manual” for CFM-5B added</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reference to CFM document 2129 “Installation manual” for CFM-5B added and reference to CFM document 2026 “installation manual” for CFM-5A deleted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MOD 153453 - WV013 A319-133, MSN 4042</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MOD 152777 - DOORS - EMERGENCY EXIT-DEACTIVATE TYPE III OVERWING EXITS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Note reworded on Cat IIIB precision approach (error on MOD numbers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Editorial changes to accommodate new TCDS template.</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>• A320 Fuel Quantity figures revised due to MOD 160001.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Approval of MOD 160500 “Sharklets” for A320-214, -215, -216.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Detailed references to modifications concerning noise removed. Reference to TCDSN added.</td>
<td></td>
</tr>
<tr>
<td>10 21.12.2012</td>
<td>• Approval of MOD 160500 “Sharklets” for A320-232, -233</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>• A319 Fuel Quantity figures revised due to MOD 160001</td>
<td></td>
</tr>
<tr>
<td>11 31.05.2013</td>
<td>• A318 Fuel Quantity figures revised due to MOD 160001</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>• Removal of MOD 36984</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Approval of MOD 160500 “Sharklets” for A319-111, 112, 115 excluding CJ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clarification of fuel additives</td>
<td></td>
</tr>
<tr>
<td>12 12.09.2013</td>
<td>• Correction of TC date for A320-233</td>
<td>12.09.2013</td>
</tr>
<tr>
<td></td>
<td>• Correction of reference number of SC-S79-1 for A318;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of Post TC SC F5011 - Steep Approach for A318;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of Elect-to-Comply E12 for all models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of SC E1005 for A320 models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of SC E13 for all models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of ESF E14 for all models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of ESF E16 for all models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of ESF E18 for all models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of ESF SE42 for all models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of ESF S53 for A320 models;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Moving SC E10 to Post-TC SC section;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of A321 mod 160023</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusion of A321 WV 10 for A321-211 &amp; A231-231</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Extension of the applicability of mod 160500</td>
<td></td>
</tr>
</tbody>
</table>

- END -