Federal Aviation Administration

Memorandum

Date:	October 9, 2012
To:	Leslie Smith, Manager, Air Transportation Division, AFS-200 THRU: Rick Domingo, Manager, Flight Standards Division, ANM-200
From:	Keeton D. Zachary, Manager, Seattle Aircraft Evaluation Group, SEA-AEG
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Subject:	DA-2000/2000EX Flight Standardization Broad (FSB) Report, Revision 1 - Coordination and Publication

Attached is the DA-2000/2000EX Flight Standardization Board (FSB) report, revision 1, for your review, signature, and publication on the Flight Standards Information Management System (FSIMS) web site. The FSB report was updated to the current FSB template. The aircraft compliance checklist was removed due to being out of date (Appendix 4). Additionally, this revision incorporates steep approach procedures and the respective training, checking, and currency requirements. These were added in the form of a new appendix (Appendix 6).

In keeping with our Quality Management System (QMS) FSB process, please return the signed coordination sheet with original signatures to this office for our files.

Attachment – DA-EASY FSB report

U.S. Department of Transportation
Federal Aviation Administration
Washington, D.C.

FLIGHT STANDARDIZATION BOARD REPORT

Revision: 01

Dassault

DA-2000 and DA-2000EX

Date: 09/20/2012
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RECORD OF REVISIONS

Revision Number	Sections	Date
Original	ALL	06/03/2004
1	ALL	09/20/2012

Highlights of Change:

Updated to current FSB template
Removed/Reserved Aircraft Compliance Checklist-Appendix 4
Added Training Program Objectives-Appendix 5
Added Steep Approach Appendix-Appendix 6

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1 PURPOSE AND APPLICABILITY

1.1 This report specifies master training, checking, and currency requirements applicable to crews operating DA-2000/2000EX aircraft under 14 CFR Parts 91 and 135. Provisions of this report:

a) Identify Pilot "type rating" requirements assigned to the DA-2000/2000EX aircraft.

b) Describe any unique requirement applicable to initial, transition, upgrade, or recurrent training.

c) Describe "Master Difference Requirements" (MDR) for flight crews requiring differences qualification for mixed-fleet-flying or transition,

d) Provide examples of acceptable "Operator Difference Requirements (ODR)" tables,

e) Describe acceptable training program and training device characteristics when necessary to establish compliance with applicable MDRs,

f) Identify checking and currency standards to be applied by FAA or operators, and

g) Provide a listing of regulatory compliance status (compliance checklist) for the pertinent CFR, Advisory Circulars, and other operationally related criteria that was reviewed and evaluated by the Aircraft Evaluation Group (AEG).

1.2 This report addresses DA-2000 series aircraft as specified in the FAA Type Certificate Data Sheet (TCDS).

1.3 The provisions of this Flight Standardization Board (FSB) report are effective until amended, superseded, or withdrawn by subsequent revisions to this report.

1.4 Determinations made in this report are based on the evaluations of specific DA-2000 series aircraft equipped in a given configuration and in accordance with current regulations and guidance. Modifications and upgrades made to the models described herein, or introduction of new related aircraft, may require amendment of the findings in this report. The FSB reserves responsibility/authority to re-evaluate and modify sections of this report on new or revised Advisory Circular material or the pertinent CFR, aircraft operating experience, or the testing of new or modified aircraft under the provisions of AC 120-53, as amended.

1.5 Terminology. The term "must" is used in this FSB report and certain MDR footnotes, if used, even though it is recognized that this report (as well as AC 120-53, as amended, on which it's based) provides one acceptable means, but not necessarily the only means of compliance with the pertinent CFR requirements. This terminology acknowledges the need for operators to fully comply with this FSB report, the MDR and ODR provisions of AC 120-53, as amended, are to be used by the operator as the means of complying with the pertinent CFRs. Operators who choose this method must comply with each applicable MDR provision, including any footnotes.

1.6 Unless otherwise specified, DA-2000 means the Falcon DA-2000 and Falcon DA-2000EX.

1.7 This report includes:

a) Minimum requirements for approval by FAA field offices, (e.g. MDRs, Type Rating designations, etc.),
b) General advisory information which may be approved for that operator (e.g. MDR footnotes, acceptable ODR tables), and
c) Information which is used to facilitate FAA review of an aircraft type or related aircraft that is proposed for use by an operator (e.g. compliance checklist).
d) Various sections of this report are qualified as to whether compliance (considering the provisions of FAA Advisory Circular 120-53, as amended) is required or is advisory in nature.

1.8 Relevant acronyms are defined as follows:

AC	Advisory Circular
ACO	Aircraft Certification Office
AFM	Airplane Flight Manual
AP	Autopilot
CHDO	Certificate Holding District Office
EFB	Electronic Flight Bag
EGPWS	Enhanced Ground Proximity Warning System
FMS	Flight Management System
FSB	Flight Standardization Board
FTD	Flight Training Device
HUD	Head Up Guidance Display
I-NAV	Integrated Navigation Display
IRS	Inertial Reference System
MMEL	Master Minimum Equipment List
MCDU	Multi-Function Control Display Units
MDR	Master Differences Requirements
MFF	Mixed Fleet Flying
ND	Navigation Display
ODR	Operator Differences Requirements
PFD	Primary Flight Display
POI	Principal Operations Inspector
QRH	Quick Reference Handbook
RAAS	Runway Awareness Advisory System
TAWS	Terrain Awareness and Warning System

TCAS	Traffic Alert and Collision Avoidance System
TCE	Training Center Evaluator
TCPM	Training Center Program Manager
VNAV	Vertical Navigation
WOW	Weight on Wheels

2 PILOT "TYPE RATING" REQUIREMENTS

2.1 Type Rating. In accordance with the provisions of 14 CFR Parts 1, 61, and AC 120-53, as amended, the specific pilot type rating assigned to the DA-2000, along with all the related aircraft of the DA-2000 aircraft, is designated "DA-2000"

2.2 Second-In-Command Type Rating. In accordance with the provisions of 14 CFR Part 61.55, FAA Order 8900.1 and AC 120-53, as amended, a SIC pilot type rating is assigned to the DA-2000 aircraft and is designated "DA-2000" with Limitation for "DA-2000 SIC Privileges Only".

3 MASTER DIFFERENCE REQUIREMENTS (MDRs)

3.1 Common Requirements for all DA-2000 airplanes.

3.1.1 Autopilot Engage Altitudes. As referenced by approved AFMs, the DA-2000 has specifically been evaluated for autopilot suitability for engagement at or above 200 ft AGL during takeoff.

3.1.2 Minimum Altitude for Autopilot Use/Non-Precision Approaches. The DA-2000 has specifically been evaluated for autopilot suitability for continued use during non-precision approaches to an altitude of not less than 50 ft. below the applicable DA(H)/MDA(H) unless it is coupled to an ILS glideslope and localizer or it is in the go-around mode.

3.1.3 Landing Minima Categories 14 CFR Part 97.3. All operators should comply with 14 CFR Part 97.3 and use an approach category appropriate to the speed of Vref. Certificate holders may be further restricted by their operations specifications for circling approaches.

3.1.4 Normal "Final Landing Flap Setting". The normal "Final Landing Flap Setting" per 14 CFR Part 91.126(c) is considered to be "Flaps 40+Slats" for all DA-2000 aircraft.

3.1.5 "No Flap Approach". Training and checking applicable to DA-2000 aircraft requires demonstration of "no flap" approaches. Completion of a demonstration in any DA-2000 variant suffices for any other variant.

3.1.6 Special/Unique Requirements. No other special or unique requirements common to all DA-2000 aircraft are identified beyond those provided by 14 CFR Parts 61, 91 and 135.

3.2 Master Difference Requirements.

3.2.1 Requirements for particular DA-2000 Related Aircraft Combinations. Master Difference Requirements (MDRs) for related aircraft of the DA-2000 aircraft are shown in Appendix 1. These provisions apply when differences between related aircraft exist which affect crew knowledge, skills, or abilities related to flight safety (e.g., Level A or greater differences).

3.2.2 MDR Footnotes. Footnotes to MDR requirements define acceptable "required means" or "alternate means" of compliance. A footnote can indicate requirements that are less restrictive than the basic designation, or more restrictive than the basic designation, depending on the significance of the differences between related aircraft.

3.2.3 DA-2000 - Level C differences exist between the Falcon 2000 and Falcon 2000EX related aircraft for the purposes of training, checking, and currency, regardless of which variant is used as the base aircraft. When both aircraft have the same FMS, the currency requirement is Level B.

3.2.4 DA-2000EX - Level C differences exist between the Falcon 2000EX and Falcon 2000 related aircraft for the purposes of training, checking, and currency, regardless of which variant is

used as the base aircraft. When both aircraft have the same FMS, the currency requirement is Level B.

4 ACCEPTABLE OPERATOR DIFFERENCE REQUIREMENTS (ODR) TABLES

4.1 ODR Tables. ODR tables are used to show an operator's compliance method. ODR tables for operators conducting mixed fleet operations, using the particular combination of DA-2000 related aircraft evaluated, if available are listed in Appendix 2. The ODR tables represent an acceptable means to comply with MDR provisions based on those differences and compliance methods shown. The tables do not necessarily represent the only acceptable means of compliance for operators with airplanes having other differences, where compliance methods (e.g., devices, simulators, etc.) are different. For operators flying related aircraft, which are the same as the aircraft used for the ODR table development, and using the same compliance methods, the ODR tables **provided in Appendix 2** have been found acceptable, and therefore, may be approved by a POI for a particular operator.

4.2 Operator Preparation of ODR Tables. Operators flying a "mixed fleet" of DA-2000 and other related aircraft must have approved ODR tables pertinent to their fleet.

4.3 ODR Table Coordination. Unless identical or equivalent ODR tables have been previously approved by the FAA, new ODR tables proposed by operators should be coordinated with the FSB prior to FAA approval and implementation. FSB coordination ensures consistent treatment of related DA-2000 aircraft between various operators, and compatibility of each ODR table with MDR provisions.

4.4 ODR Table Distribution. Original FAA approved ODR tables are to be retained by the operator. Copies of FAA approved ODR tables are to be retained by the Certificate Holding District Office (CHDO) and should be provided to the DA-2000 FSB Chairman at the Seattle Aircraft Evaluation Group (AEG), SEA AEG.

5 FSB SPECIFICATIONS FOR TRAINING

5.1 General

5.1.1 Assumptions Regarding Airmen's Previous Experience. The provisions of this section apply to programs for airmen who have experience in 14 CFR Part 135 air carrier operations and multi-engine transport turbojet aircraft including glass cockpit and FMS experience. For airmen not having this experience, additional requirements may be appropriate as determined by the POI, FSB, and/or AFS-200.

5.1.2 Training for Seat Dependent Tasks. Accomplishment of certain tasks, procedures, or maneuvers requires training of a crewmember for a particular crew position (e.g. captain, first officer, international relief officer, check airman, etc.). Training programs should recognize and address the necessary seat/position related tasks for the applicable crewmember. Accordingly, training programs should address seat dependent tasks or maneuvers to the extent necessary to satisfy crew qualification objectives and should be in accordance with ODR tables when applicable.

5.1.3 Second-In-Command Training Tasks. Flight Crews qualify to serve as SIC must accomplish certain tasks, procedures or maneuvers for the SIC crew position. Training programs should address all training elements of 14 CFR Parts 61 and 135 in accordance with FAA Order 8900.1. SIC Pilot Type Rating may be issued in accordance with 14 CFR Part 61 provided training required

by the pertinent CFRs and FAA Order 8900.1, including tasks stipulated by this report, are completed.

5.1.4 Future Air Navigation Systems (FANS)/RNP/ANP/CNS/CPDLC/ADS. Flight Crews operating aircraft equipped with FANS software should receive appropriate instruction in its general operational functions, appropriate uses for areas of operation, routes, or procedures to be flown. General training should address communications, navigation, and surveillance (CNS) functions covered by FANS, RNP, and ANP. In addition, sufficient training in use of data link communication and Automatic Dependent Surveillance (ADS) to ensure adequate knowledge, skill, and proficiency for flight crews to operate the above system(s) in typical daily operations (requiring their use) should be provided.

5.2 Pilots: Initial, Transition and Upgrade Ground and Flight Training.

5.2.1 Terminology. The term "must" is used in this FSB report even though it is recognized that this report and the Advisory Circular AC 120-53, or as amended, provide only one acceptable means, but not necessarily the only means, of compliance with 14 CFR Part 135 requirements. This terminology acknowledges the need for operators to fully comply with FSB report provisions, if this method is to be applied as that operator's means of compliance with 14 CFR Part 135. Operators who chose this method must comply with each applicable provision. Partial or selective application of the process or its provisions, does not constitute an acceptable means of compliance with 14 CFR Part 135 under AC 120-53, or as amended.

5.2.2 Minimum Acceptable Training Requirements For Integrated DA-2000 Program. An acceptable ground and flight training curriculum for a DA-2000 program is specified in 5.2.3 and 5.2.4. For DA-2000 programs already approved, reductions through provisions of 14 CFR Parts 135, should not be made without coordination with the FSB. Less comprehensive programs will only be approved if equivalence can clearly be established or other special factors apply. Examples of special factors that may be considered by the FSB include such factors as allowing credit for previous applicable experience (i.e. operators implementing fleets who have crews previously qualified) or increases in the quality or effectiveness of the training process (i.e. new types of training devices).

5.2.3 Ground Training (Academics) for the DA-2000.

5.2.3.1 Ground training in the following subjects for the DA-2000 is required:

a) Aircraft General Description (Interior/Exterior)
b) Powerplants
c) Aircraft Systems (e.g. Hydraulics, Electrical, etc.)
d) EFIS/EIED/RTU Displays and Controls
e) FMS
f) Limitations
g) Performance
h) HUD (if installed)
i) Warnings and Cautions
j) Normal/Abnormal Procedures

5.2.4 Flight Training for the DA-2000.

5.2.4.1 Flight Training should focus on the following events or maneuvers:

a) Exterior Differences
b) Cockpit/Cabin Familiarization
c) Systems Tests and Checks
d) Flight Control Malfunctions
e) EFIS/FMS
f) Power Management Procedures
g) No Flap Landing Procedures
h) Normal Procedures
i) HUD (if installed)

5.2.4.2 Minimum Acceptable Flight Training. The underlying objective in both flight and ground training is to train to proficiency.

5.2.5 Takeoff Safety.

5.2.5.1 Particular emphasis on certain takeoff safety related topics is appropriate during training. This includes emphasis on the following:

a) Meaning and proper use of V1
b) Importance of prompt and correct execution of a rejected takeoff (RTO), when necessary, with emphasis on recognition of center engine failure.
c) Need to minimize exposure to high speed RTOs for minor difficulties unrelated to the ability of the aircraft to continue a safe takeoff
d) Proper lineup and use of available runway
e) Correct accountability for clutter and/or reduced braking friction
f) Engine out performance requirements (14 CFR Part 135.379) or equivalent if operating under 14 CFR Part 91

5.2.6 Specialized Training.

5.2.6.1 Training organizations and operators should insure that all crewmembers are familiar with the provisions of AC 00-54 (Pilot Windshear Guide). This windshear training aid communicates key windshear information relevant to flightcrews. 14 CFR Part 135.345 requires procedures for recognizing, avoiding and escaping from severe weather situations, to include low-altitude windshear.

5.2.6.2 For operators choosing to install or required by regulation to install TCAS equipment, they should be familiar with the regulations of AC 120-55, as amended, and 14 CFR Parts 91.221 and 135.180.

5.2.6.3 FMS training. If level "C" training is specified due to FMS installation, training must be "hands on" instruction with an approved training device, simulator, or the airplane. If an airplane is used for the training process, it must be emphasized that as much training as possible should be accomplished in a static, "powered-up" aircraft to minimize exposure to a "heads down" environment while the aircraft is in flight.

5.2.6.4 Cockpit displays training. (Reserved)

5.2.6.5 Long range/Extended Range/overwater flights. Due to criticality of fuel computations, crews should be familiar with all aspects of fuel management to include normal and abnormal procedures and the manner in which fuel computations are made.

5.2.7 Hazardous weather and winter operations. Proper precautions and procedures regarding hazardous weather/winter operations, which may be unique to DA-2000 aircraft should be addressed. For example, topics such as proper use of wing/tail de-ice, antiskid braking characteristics when stopping on slippery runways, use of procedures described in the windshear training aid, hazards associated with rejecting takeoffs near V1 on slippery runways, and other such topics, are appropriate for emphasis in training programs.

5.2.8 Reduced Vertical Separation Minimum (RVSM). Operations training programs and operating practices and procedures. Practices and procedures in the following areas should be standardized using guidelines published in the "Guidance Material on the Approval of Operations/Aircraft for RVSM Operations" (No. 91-RVSM), as amended. Flight planning, preflight procedures in the aircraft for each flight, procedures prior to RVSM airspace entry, in-flight procedures, and flightcrew training procedures are found in Appendix 4 of the No. 91-RVSM document. Appendix 4, paragraph 7 contains special emphasis items for flightcrew training. Also pilots, and where applicable, dispatchers should be knowledgeable on contingency and other procedures unique to specific areas of operation. (See the appendices for guidance on such procedures. Appendix 5, for example, contains guidance on oceanic contingency procedures).

<u>14 CFR Part 135</u>. Such operators should submit training syllabi and other appropriate material to the FAA to show that the operating practices and procedures and training items related to RVSM operations are incorporated in initial and, where warranted, recurrent training programs. (dispatcher should be included, where appropriate).

<u>14 CFR Part 91 Operators</u>. These operators should demonstrate to the FAA that pilot knowledge of RVSM operating practices and procedures will be adequate to warrant granting of approval to conduct RVSM operations. The operator must show the FAA that its pilots will have adequate

knowledge of the RVSM operating practices and procedures contained in Appendices 4 and 5 of the No. 91-RVSM document.

5.2.9 Selected event training. Selected event training is voluntary flight training in hazardous in-flight situations, which are not specifically identified in FAA regulations or directives. Although there are many examples of selective event training, the training and recovery from unusual attitudes has received special attention from the National Transportation Safety Board (NTSB), the FAA and industry. In addressing these concerns, a consensus has been reached that the most valuable training would not necessarily be limited to unusual attitude recovery, but would also address recognition and containment that might lead to unusual attitudes.

The goal of upset recovery training is to increase the pilot's ability to recognize and avoid situations that can lead to airplane upsets and improve the pilot's ability to recover control of an airplane that has exceeded the normal flight regime. This can be accomplished by increasing awareness of potential upset situations and knowledge of flight dynamics and by application of this knowledge during simulator training sessions.

Although not required, it is highly recommended that each operator or flight training center develop an effective academic and practical upset simulator-training program. For those organizations that do not have or are in the process of creating a complete training program, the *Airplane Upset Recovery Training Aid*, developed by industry and published by The Boeing Company, or FAA Order 8900.10 (Air Transportation Operations Inspector's Handbook) will readily provide the foundation for a through and efficient program.

5.2.10 Some DA-2000 tasks, procedures, or maneuvers are considered to have seat dependent elements, and may need to be considered and addressed under 14 CFR Part 135 training programs:

a) Use of nosewheel steering during taxi
b) Rejected takeoffs
c) Cat II/III operations including HUD (if installed)
d) Crosswind takeoffs and landings
e) Engine inoperative takeoffs and landings
f) Emergency communications
g) Loss of all generators
h) Emergency descent
i) Operation on emergency power

Initial, Upgrade, or Transition Training.

5.3 Pilots: Initial, Transition and Upgrade Ground Training, 14 CFR Part 135.345. Initial, transition or upgrade ground training for the DA-2000 is accomplished in accordance with 14 CFR Part 135 Subparts E, G, and H. Training program hours may be reduced as specified in Order 8900.10, but not in a manner or in areas that invalidate compliance with provisions of the MDR.

5.3.1 Pilots: Initial, Transition and Upgrade Flight Training, 14 CFR Part 135.347. Initial, transition or upgrade flight training for DA-2000 is accomplished in accordance with 14 CFR Part Subparts E, G, and H. Training program hours may be reduced as specified in Order 8900.10, but not in a manner or in areas that invalidate compliance with provisions of the MDR.

5.3.2 Crewmember Emergency Training. Crewmember emergency training in the DA-2000 should be conducted IAW 14 CFR Part 135.331 and the provisions of Order 8900.10, Volume 3, Chapter 19, Section 4.

5.4 Differences Training.

5.4.1 14 CFR Part 135 operators flying more than one variant of the DA-2000/2000EX in a mixed fleet, must have differences training programs meeting criteria specified in the MDR.

5.5 Recurrent Training.

5.5.1 Recurrent Flight Training. Recurrent flight training requires appropriate maneuvers and procedures identified in 14 CFR Part 135, Subpart H. As permitted by 14 CFR Part 135.351(c), satisfactory completion of a proficiency check IAW 135.293 may be substituted for training.

5.6 Other Training.

5.6.1 Flight Attendants. Initial and transition ground training, 14 CFR Part 135.349. Due to the configuration of the cabin several unique training problems will need to be addressed.

a) Normal operations
b) Control and stowage of passenger's personal items
c) Familiarity with emergency exits
d) Use of emergency equipment (e.g. fire extinguishers, first aid kit, oxygen bottle, crew PBE and oxygen masks)

6 FSB SPECIFICATIONS FOR CHECKING

6.1 General.

6.1.1 Checking Items. 14 CFR Parts 61 and 135 Checking Items. Testing, Checking and Evaluations specified by 14 CFR Parts 61 and 135, SFAR 58, and FAA Practical Test Standards (PTS).

6.1.2 Areas of emphasis. The following areas of emphasis should be addressed during checks as necessary:

a) Proficiency with manual and automatic flight in normal and non-normal situations must be demonstrated. For crews not experienced with AFCS, emphasis is related to proper mode selection and use, crew coordination when performing mode or data changes, and interpretation of annunciations. For crews familiar with AFCS but not having recent experience with newer generation flight instruments; navigation, manual capture of

altitudes, raw data approaches, racking of VOR radials/NDB bearings using an RMI and other such systems or procedures may require additional practice or review in one or more of the above areas.

b) EFIS: proper setup, selection, and use of those displays should be demonstrated, particularly during instrument approaches.
c) Communication Radio Management: clear understanding and use of the communication radio display should be demonstrated. This will be particularly important when flight training device (FTD) and simulator training sessions may not fully incorporate simulated ATC.
d) "No Flap" Approaches. Checking regarding "No Flap" Approaches for DA-2000 aircraft is conducted in accordance with the provisions of paragraph 3.1.3. "No Flap" and "Hydraulic System Abnormal" approaches may be combined and should be addressed during training.
e) Proper outside visual scan without prolonged fixation on cockpit displays or controls should be consistently demonstrated.
f) Proper speed management and control application during rotation and flare.
g) When noise abatement procedures other than as specified in AC 91-53 are used, proper performance of the alternate procedures should be addressed.

6.2 Proficiency checks are administered as designated in 14 CFR Part 61.58 and 135.297 for the DA-2000. An authorized check airman or operationally qualified FAA Safety Inspector must administer these checks. Satisfactory completion of a proficiency check may be substituted for recurrent flight training IAW 14 CFR Part 135.351(c).

7 FSB SPECIFICATIONS FOR CURRENCY

7.1 Currency (Recency of Experience) - 14 CFR Part 135.247.

7.1.1 Use of the term "Segment" as applied to currency. For the purposes of this FSB report, a segment consists of the following flight phases or maneuvers: Preflight, Start, Takeoff, Climb, Cruise, Descent, Approach, Landing and Shutdown. Credit for a segment requires that a crewmember serve in an appropriate cockpit crew position during the necessary flight phases or maneuvers, but does not require the crewmember to physically control the aircraft or autopilot during those maneuvers. For example, both pilots may take credit for a segment even though only one actually controls the aircraft during the takeoff and landing. Pilots may not take credit for a segment by observation from a jumpseat.

8 AIRCRAFT REGULATORY COMPLIANCE CHECKLIST

8.1 Compliance Checklist (see Appendix 4).

Compliance checklists are provided as an aid to FAA Certificate Holding District Offices (CHDO) in identifying those specific rules or policies for which compliance has already been demonstrated to the FAA for aircraft having a particular aircraft type certificate. The checklist also notes rules or policies not demonstrated to the FSB, which must be demonstrated to CHDOs by operators.

8.2 Discussion of Specific Compliance Checklist Items

8.2.1 DA-2000 Observer Seat. The observer seat on the DA-2000 aircraft, as evaluated, satisfies the requirements of 14 CFR 135.

9 FSB SPECIFICATIONS FOR DEVICES AND SIMULATORS

9.1 Flight Training Device And Simulator Characteristics. Flight training device (FTD) and simulator characteristics pertinent to the DA-2000 are as specified by pertinent 14 CFR Part 135 regulations and AC 120-40, 120-45, 120-46, 120-53, as amended, except as described below.

9.2 Use of FTDs for Specific Check/Evaluation Items. Certain ATPC, type rating, or proficiency check/evaluation items may be completed in FAA qualified FTDs. This is appropriate for items such as FMS initialization (e.g., 14 CFR Part 61, Appendix A - I.(b),(2)) or engine start non-normals (e.g., 14 CFR Part 61, Appendix A - I.(d)). Under 14 CFR Part 135, checking credit in such instances must be approved by the POI. Under 14 CFR Part 91, equivalent standards should be used.

9.3 Simulator Device Compatability (Ref. 14 CFR Part 135.335). When related aircraft are flown in mixed fleets, the combination of simulators and training devices used to satisfy MDR and ODR provisions should address related aircraft flown by that operator. The acceptability of differences between devices, simulators, and aircraft should be addressed by the POI.

9.4 Flight Training Device Approval. Requests for device approval should be made to the POI. If device characteristics clearly meet established FAA criteria and are qualified, the POI may approve those devices for that carrier. Where devices do not clearly satisfy a given level, POIs should request advice from the FSB Chairman (AEG), NSP (National Simulator Program) , or AFS-200.

10 APPLICATION OF FSB REPORT

10.1 Relevant parts of this report (e.g. Type Rating Designation, checking maneuvers, etc.) are effective when the report is approved by the FAA.

11 ALTERNATE MEANS OF COMPLIANCE

11.1 14 CFR Part 135 Subparts G and H require differences training for mixed fleet operations involving related aircraft of the same aircraft type. FSB reports specify the levels of that training, checking, and currency between these related aircraft. Deviations from FSB provisions for differences training, checking, and currency must be approved by AFS-200. Operators seeking deviations from FSB provisions must show that the proposed differences training, checking, and currency complies with all applicable FAA regulations and provides an equivalent level of safety to the specifications of this FSB report. Analysis, demonstrations, proof of concept testing, differences documentation or other evidence may be required.

11.2 Equivalent Safety. In the event deviation from FSB specifications for differences training, checking, or currency is sought, training program length, simulator approvals and device approvals may be significantly limited and reporting requirements may be increased to ensure equivalent safety. FAA will generally not consider relief from FSB provisions unless sufficient lead time has been planned by an operator to allow for any necessary testing and evaluation.

11.3 Interim Programs. In the event of clearly unforeseen circumstances in which it is not possible for an operator to comply with MDR provisions, the operator may seek an interim

program approval rather than a permanent alternate compliance method. Financial arrangements, scheduling adjustments and other such reasons are not considered "unforeseen circumstances" for the purposes of this provision.

APPENDIX 1 MASTER DIFFERENCE REQUIREMENTS

Type Rating: DA-2000		Falcon-2000	Falcon-2000EX
To Aircraft	Falcon-2000	N/A	C/C/C 1) C/C/B
	Falcon-2000EX	C/C/C 1) C/C/B	N/A

1) If both aircraft have same FMS, currency requirement is reduced

APPENDIX 2 SAMPLE ODR TABLES

Sample ODR tables may be obtained by contacting the DA-2000 FSB Chairman.

APPENDIX 3 ACCEPTABLE DIFFERENCE TRAINING PROGRAM FOR A DA-2000/2000EX MIXED FLEET

Day 1:

AM Session 4.0 Hours

Aircraft General
Landing Gear and Brakes
Flight Controls
Fuel
Pneumatics

PM Session 3.0 Hours

Ice and Rain Protection
Air Conditioning
Pressurization
Oxygen
Powerplant (Part 1)

Day 2:

AM Session 4.0 Hours

Weight and Balance
Performance
Powerplant (Part 2)
Thrust Reversers
Approved Flight Manual
Avionics
Review and Final Exam

PM session (optional for clients coming from Collins FMS Systems)
4.0 /hours

Collins FMS
FMS Review and Final Exam

APPENDIX 4 DA-2000 COMPLIANCE CHECKLIST

Reserved

APPENDIX 5 TRAINING PROGRAM OBJECTIVES

1 GENERAL TRAINING PERFORMANCE OBJECTIVES

This paragraph highlights the general training performance objectives related to the DA-2000 Initial Type Rating Training Course, which come in addition to the relevant training performance objectives developed in the Falcon Training Policy Manual DSC 02/02-770-TOD.

Upon completion of a DA-2000 Initial Type Rating Training Course, a pilot shall be able to:

- Demonstrate a good knowledge and understanding of all aircraft systems and limitations, including avionics and engines,
- Demonstrate a good knowledge and understanding of the philosophy used in the design of the DA-2000 cockpit,
- Execute any maneuver safely, smoothly and accurately,
- Strictly apply normal, abnormal and emergency procedures, at the appropriate time, in coordinated manner and upon relevant triggering event,
- Use appropriate manufacturer or company documentation when necessary,
- Keep at any moment situational awareness, in order that the success of a procedure or a maneuver is doubtless,
- Show pertinent judgment in flight management,
- Understand and apply CRM procedures,
- Positively communicate with other crew members,
- Demonstrate a good knowledge and understanding of aircraft performances through the use of relevant materials (documentation, electronic tools such as PETAL, PILOT, etc),
- Use the operational documentation (CODDE 2, QRH 1, QRH 2).

2 Ground instruction segment

2.1 Introduction

This part provides the Dassault Aviation specifications of the ground instruction segment, including the laboratories sessions.

The ground instruction segment comprises daily ground courses organized in two parts:

- the first part, ground session, provides interactive theoretical knowledge,
- the second part, laboratories session, provides interactive hands-on experience on the items instructed during the related first part. The second part shall be based on laboratories.

The two parts shall be performed on the same day.

2.2 Prerequisites

Refer to applicable regulations.

2.3 Ground session profile and characteristics

The ground sessions shall provide the student with the knowledge consistent with the defined training performance objectives and completions standards with respect to the following:

- Manufacturer Falcon documentation, including CODDE 2, QRH 1, QRH 2,
- Training documentation,
- Cockpit design,
- Systems location,
- Systems operation in normal, abnormal and emergency situations, including associated procedures and CRM principles,
- Systems limitations in normal, abnormal and emergency situations, including the aircraft itself,
- Man machine interface,
- Operational methodology,
- Performance,
- Loading,
- Weight and Balance.

The minimum required items are:

- Air conditioning and pressurization,
- Aircraft Systems Synoptic,
- Anemometry,
- Auxiliary power unit,
- Avionics, including avionics architecture, display and panel management, EFIS,
- Bleed air system,
- Brakes,
- Communication,
- Crew Alerting System,
- Dimensions,

- Doors and openings,
- Electrical power system,
- Electronic Checklist (if equipped),
- Emergency equipment,
- Fire and overheating protection,
- Flight Planning, Flight Management and Navigation (including PRNAV),
- Fuel system,
- Hydraulic power system,
- Integrated maintenance,
- Ice and rain protection,
- Interior and exterior lights,
- Landing gear,
- Lighting,
- Markings and placards,
- Nose wheel steering,
- Oxygen system,
- Power plant,
- Warnings and indicating,
- Water waste.

Laboratories session profile and characteristics

The lab sessions shall provide interactive hands–on experience on the items instructed during the related ground sessions.

Each main system learnt during ground session shall be reviewed and used through the cockpit interface. This shall be done after each corresponding ground session module.

Lab sessions shall train the student to be familiar with the tasks sharing, recommended by the Dassault operational documentation, in order to ease the transition to simulator sessions.

Lab sessions can be based on local flight (only to give realism to the associated situation learnt).

For instance, at the end of the fuel system ground session, the same day (or the day after, regarding the schedule of the day flow and the trainees working time), a lab session shall be performed to review and practice the fuel system including normal phases and all the warnings and the associated procedures.

A typical lab session shall be organized as follows:

- Limitations associated,
- Normal use of the system / device and tasks sharing recommended,
- Warnings associated to the system / device.

Various pedagogical means can be used to be in compliance with these specifications to obtain an increase of hands-on experience:

- FBS (Fixed Base Simulator),
- CPT (Cockpit Procedures trainer),
- Interactive computer,
- Other means adapted to interactive learning.

The following main chapters hereafter shall be taught during lab sessions in addition to ground sessions:

- Avionics interface:
  - Architecture,
  - Normal, abnormal, emergency configurations and associated procedures,
- Electrical system: normal, abnormal, emergency configurations and associated procedures,
- Fuel system: normal, abnormal, emergency configurations and associated procedures,
- Hydraulic system and associated devices: normal, abnormal, emergency configurations and associated procedures,
- Bleed air, air conditioning, pressurization and anti ice systems: normal, abnormal, emergency configurations and associated procedures,
- Engines and APU: normal, abnormal, emergency configurations and associated procedures,
- Fire detection and extinction system: normal, abnormal, emergency configurations and associated procedures
- Flight Planning, flight management and navigation:
  - Normal procedures,
  - Diversion and runway changes,
  - Use with one system inoperative,
  - Associated tasks sharing.

2.4 Duration

The daily ground and lab session duration should not exceed 6 hours.

The overall ground instruction segment shall not be less than 49 hours for the ground sessions and 15 hours for the lab sessions.

2.5 Training progress

The output level of each trainee shall be evaluated through a test, checking the successful completion of the training performance objectives for each ground session.

At the end of the ground instruction segment, the output level of each trainee shall be evaluated through a test, checking the successful completion of the training performance objectives in compliance with the applicable regulations.

The training performance objectives shall include, at the minimum:

- knowledge of normal procedures,
- knowledge of the associated tasks sharing,
- knowledge of ways to gain access to the relevant information,
- knowledge of performance computations.

3 SIMULATOR INSTRUCTION SEGMENT

3.1 Introduction

3.2 This part provides the Dassault Aviation specifications of the FBS and FFS sessions.

3.3 Prerequisites

3.4 Ground instruction segment shall be completed and the subsequent test successfully passed before starting the simulator instruction segment, in addition to any specific regulatory requirements.

3.5 FBS / FFS session profile and characteristics

FBS sessions shall be based on local flights only, as defined here below.

Full Flight Simulator sessions shall be based on:

- Local flights for the two first FFS sessions,
- Line Oriented Flight Training and local flights for the following FFS sessions.

3.6 Briefing / Debriefing

Each FBS / FFS session shall include:

- A briefing time, before the FBS / FFS session, to explain the purpose of the session, to describe the various exercises and the expected training performance objective, and to highlight specific items

- A debriefing, after the FBS / FFS session, to analyze the results of the various exercises, and put in place the corrective actions in order to meet the training performance objectives.

3.7 Local flight

3.8 Profile

Local flights address specific phases of flight, maneuvers, with or without abnormal and emergency procedures.

3.9 Characteristics

It shall be possible to:

- Reset the failure,
- Freeze the flight,
- Position on ground or in flight for rehearsal of specific exercise.

3.10 LOFT

3.11 Profile

LOFT shall be based on cross-country flights in realistic conditions followed by local flights.

3.12 Characteristics

Loft shall be performed under realistic operational conditions.

In flight chained failures shall be realistic.

Failure reset shall be restricted to the two first LOFT sessions.

Departure and arrival environmental conditions shall be provided.

Routing shall be provided.

Payload shall be provided.

3.13 Duration

The recommended duration for a typical FBS / FFS session is 4 hours (2 hours PF, 2 hours PNF).

The recommended duration for a typical briefing is 60 minutes.

The recommended duration for a typical debriefing is 30 minutes.

3.14 Training progress

At the time of FFS no 4, the trainee shall be able to:

- Execute the flow without documentation support,
- Master the ECL (if equipped) and QRH 2 management

APPENDIX 6 STEEP APPROACH LANDING OPERATIONS

BACKGROUND:

A Flight Standardization Board (FSB) was convened in October, 2011 and January, 2012 to evaluate operational suitability and to determine training, checking, and currency requirements for conducting steep approach landing operations in the Mystere-Falcon 900/Falcon 900EX and Falcon 2000/2000EX aircraft. Supporting regulatory material is the FAA Issue Paper IP AEG-O-8 "Operational Suitability".

FSB members completed the simulator portion of the evaluation at CAE's Morristown, NJ and Dallas, TX locations along with FSI's Moonachie, NJ and Paris, France locations. The flight portion of the evaluation was done at Dassault Aviation's facilities in Istres, France. Certification activities were conducted together with FSB evaluation.

Steep approach landing operations in the Mystere-Falcon 900/Falcon 900EX and Falcon 2000/2000EX are defined as those glide paths greater than 4.5 degrees. The maximum glide path is determined in the limitations of the applicable AFM for each specific model. Dassault Aviation modifications for steep approach landing operations are defined by M5649 for Type Certificate Data Sheet A46EU and M3364 for Type Certificate Data Sheet A50NM.

The FSB evaluation included numerous steep approach landing operations, both on the full flight simulator and on the actual aircraft. London City airport (EGLC) was only flown on the full flight simulator, and Lugano airport (LSZA) was flown both on the full motion simulator and with the actual aircraft. Some steep approach landing operations were also flown with the actual aircraft in Istres (LFMI).

Steep approach landing operations were conducted during day conditions using either 5.5 or 6.65 degree approach angles. Glide path abuse cases, up to 2.0 degree higher than the desired approach angle up to 8.65 degrees, were also conducted. Speed abuse cases (-5 knots of target speed) were also conducted but never in conjunction with the glide path abuse cases. All engines operative and one-engine inoperative steep approach landing operations were flown, terminating either with a landing, or execution of a missed approach or balked landing procedure. Inadvertent touchdown during balked landings were evaluated on all models. Although steep approach landing operations in all models of the Falcon must be conducted with all engines operative, the FSB evaluated piloting skills required to perform a one-engine inoperative extraction should an engine fail at or below Decision Altitude (DA).

OPERATIONAL SUITABILITY ASSESSMENT:

The FSB has determined that the conduct of steep approach landing operations requires no higher piloting skill level that than of normal (3 degree) approaches. However, since steep approach landing operations are often tailored to demanding airports - located in mountainous areas, short runways - the FSB requires academic and flight training for competency in conducting steep approach landing operations.

FSB has evaluated two cases of Steep Approach procedures as described below, and found that Mystere-Falcon 900/Falcon 900EX and Falcon 2000/2000EX aircraft were operationally suitable with aircrew trained in accordance with the requirements set in this Appendix:

1. The first case of steep approach procedure (London City like) requires the requested glidepath angle from the initial approach fix/glide slope intercept to touchdown,
2. The second case of steep approach procedure (Lugano like) requires a steep glidepath with an intercept of a lesser glidepath based on a Visual Glide Slope Indicator (VGSI) or electronic (internal or external) glidepath.

PREREQUISITES FOR STEEP APPROACH TRAINING:

Unless Steep Approach training is integrated with, or occurs sequentially preceding an initial qualification pilot proficiency check, a prerequisite to Steep Approach training in the applicable type Falcon is prior training, qualification, and currency in the same type Falcon aircraft. Definition of "type" for this training is considered the specific type rating.

Any PIC/SIC who has been properly qualified under 14 CFR Parts 61.55, 135, or 91 Subpart K may conduct steep approach landing operations provided the training, checking, and currency requirements of this Appendix have been satisfactorily accomplished.

STEEP APPROACH TRAINING CREDIT AMONG TYPES/MODELS:

Steep Approach Training in any one of the DA-900 (A46EU), DA-900EX (A46EU), DA-2000 (A50NM), or DA-2000EX (A50NM) models may be considered completed for the other models in this group provided level A training is conducted on the differences in the avionics as they relate to steep approach procedures.

Steep Approach Training in any one of the DA-900EX EASy (A46EU) or DA-2000EX EASy (A50NM) models may be considered completed for the other models in this group.

STEEP APPROACH TRAINING REQUIREMENTS:

Academic Training

Academic training must consist of training in the following areas and is appropriate to any aircrew position:

1. AFM Annex and CODDE2 review to include: Limitations, Abnormal Procedures, Emergency Procedures, Normal Procedures, and Performance with special emphasise on increased landing distance.
2. Stages of the Steep Approach to include: Stabilized approach concept as a key success for steep approach landing, appropriate slats/flaps configuration and approach speed.
3. Comparison of the Steep Approach sight picture to that of 3.0 degree (normal) approach.
4. Pilot Techniques to include: avoidance of abrupt control inputs, ground rush illusion.

5. Identification of airports with Steep Approaches to include the specificity of airports with steep approach, for example the landing distance safety factor for London City Airport.

Flight Training

Flight training, simulator or aircraft, must consist of training in the following areas and is appropriate to any aircrew position:

1. Use of aircraft equipment to include: use of the head-up display (HUD) if equipped, steep approach with and without the flight director displayed.

STEEP APPROACH CHECKING REQUIREMENTS:

There is no requirement for knowledge checking or flight proficiency testing for Falcon steep approach qualification. Proof of completion of Falcon steep approach training is sufficient for showing qualification.

STEEP APPROACH RECURRENT REQUIREMENTS:

The FSB recommends, regardless of the number of steep approaches completed, a review of all academic and flight training items be accomplished annually and documented in a manner acceptable to the administrator.

OPERATIONAL APPROVAL:

This FSB report does not constitute operational approval for the execution of steep approaches in the Dassault Mystere-Falcon 900/Falcon 900EX and Falcon 2000/2000EX series of aircraft.

Additionally, be advised, it is common that individual airport authorities have training and documentation requirements specific to their airfields with regard to steep approaches.