

**AIRCRAFT SPECIFIC – AIRCRAFT A****HAWKER 850XP – N123AF – S/N 258123****TABLE OF CONTENTS**

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## AIRCRAFT SPECIFIC – AIRCRAFT A

### AIRCRAFT APPLICABILITY

AIRCRAFT TYPE	REGISTRATION	SERIAL No.
Hawker 850XP	N123AF	258123

### AIRCRAFT COMPLIANCE

TYPE CERTIFICATE DATA SHEET AIRCRAFT COMPLIANCE
<b>A3W002</b>

The Type Certificate Data Sheet, **A3W002**, as amended, for this aircraft indicates that, by serial number, the aircraft is RVSM qualified. Copies of this Type Certificate Data Sheet and other supporting documentation are located in the *Non-Regulatory Materials* section of this manual.

### INSTALLED EQUIPMENT

The specific equipment that is installed which creates the *Special Use Airspace* compliance status of this specific aircraft is listed at the end of this chapter.

## AIRSPACE AUTHORIZATIONS BASED ON INSTALLED EQUIPMENT

The following list indicates that, based on installed equipment shown later in this chapter, this specific aircraft may operate in the indicated airspace. A change to any listed equipment, including, but not limited to changes only in model and series of equipment, may invalidate any or all of the authorizations. Any equipment change requires that this chapter be reviewed, updated and reapproved by the Las Vegas FSDO.

AIRCRAFT LIMITATIONS / AIRSPACE REQUESTS		
<b>X</b>	<b>RVSM</b>	Requires both an operator authorization, based on both maintenance and operational manuals or procedures and pilot training acceptable to the governing entity.
<b>X</b>	<b>WATRS</b>	Requires operational authorization by the governing entity.
<b>X</b>	<b>MNPS</b>	Requires both an operator authorization, based on maintenance and operational manuals or procedures and pilot training acceptable to the governing entity.
<b>X</b>	<b>RNP-1 / P-RNAV</b>	Equipment based as indicated in this chapter. Additionally, requires both an operator authorization, based on both maintenance and operational manuals or procedures, and pilot training acceptable to the governing entity.
<b>X</b>	<b>RNP-5 / B-RNAV</b>	Equipment based as indicated in this chapter of installed equipment.
<b>X</b>	<b>RNP-10</b>	Equipment based as indicated in this chapter. In some operational areas of the Pacific the governing entity may require additional operational procedures and pilot qualifications.

## SPECIFIC MAINTENANCE ISSUES

Persons who perform maintenance related to any item of RVSM equipment shall have the proper license(s), certificate(s), and/or ratings (as applicable), and will have appropriate training related to RVSM required maintenance.

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## CONTINUING AIRWORTHINESS

The Director of Maintenance is responsible for scheduling and tracking all routine and scheduled maintenance for this aircraft, and is responsible for managing all non-routine and unscheduled maintenance for this aircraft.

RVSM inspections and maintenance requirements for this aircraft are contained in the Hawker 850XP Aircraft Maintenance Manual (AMM).

## RVSM CRITICAL REGION

The RVSM “Critical Region” defines an area surrounding the Pilot’s and Co-Pilot’s static ports (on both sides of the airplane) that must be routinely inspected and maintained.

The specifics of this region are identified in the AMM and/or any STC/SB, if applicable, that was used for RVSM compliance. It is identified by technical schematics and indicates the boundaries of the area and what may, or may not, be done in that area in regards repairs, painting or application of strips or appliques.

The RVSM Critical Region must be checked for obvious damage on, or deformation to, the skin surface. Ensure that each of the static port regions is smooth and free of any surface roughness or damage. The port orifices must be inspected for abnormal elongation, deformation, and/or obstruction. Examples of damage or surface abnormalities include:

- a. Dents or bulges in the skin
- b. Heavy scratches or creases
- c. Evidence of impact
- d. Non-flush fasteners
- e. Excessive or protruding aerodynamic sealing compound.

## REQUIRED MEASURING AND TEST EQUIPMENT (M&TE)

- a. The required M&TE needed to perform the inspection / test tasks associated with this program are listed in the Hawker 850XP AMM.
- b. The test equipment shall have the capability to demonstrate continuing compliance with all of the parameters established for RVSM approval in the initial data package or as approved by the approving authority.

- c. All M&TE used in this program to measure, gage, test, inspect or otherwise demonstrate RVSM standards conformance of the equipment installed in this aircraft are subject to calibration confirmation at intervals not to exceed 12 calendar months, or more frequently if required by manufacturer's standards.
- d. The standards used by the calibration laboratory performing the M&TE equipment calibrations must be traceable to international or national standards such as the National Institute of Standards (NIST), national measurements of other countries which are correlated with the U.S. national standards, those of the manufacturer, or one approved by the Federal Aviation Administration Administrator.
- e. Certificates of calibration for each M&TE device shall be retained on file for not less than two (2) years following each calibration.

### **NON-ROUTINE MAINTENANCE PROCEDURES**

The Director of Maintenance ensures that all maintenance reports are properly routed to/from the repair facility, and that all maintenance entries are properly completed prior to aircraft return to service.

### **RVSM INSPECTIONS AND REPAIRS**

#### **SCHEDULED INSPECTIONS AND UNSCHEDULED REPAIRS TRACKING**

We utilize an approved maintenance tracking system and applicable Hawker 850XP AMM to schedule and track RVSM maintenance. The AMM identifies inspection requirements and the inspection tracking ensures that the identified inspections are carried out according to the AMM.

We use the CAMP inspection program.

#### **TWENTY FOUR (24) MONTH INSPECTIONS**

The following inspection requirements all apply:

- a. Altimeter System and Altitude Reporting Equipment Tests and Inspections required by FAR 91.411
- b. Altimeter System Test and Inspection required by FAR 43, Appendix E
- c. ATC Transponder Tests and Inspections required by FAR 91.413
- d. ATC Transponder Tests and Inspections required by FAR 43, Appendix F

Please note that THE TOLERANCES STATED IN FAR 43, APPENDIX E DO NOT MEET RVSM SPECIFICATIONS.

You must perform the RVSM altimeter system tests in accordance with the more restrictive tolerances which meet or exceed the tolerances stated in FAR 43 Appendix E. These tolerances are stated in the approved RVSM maintenance documentation for this aircraft.

## RVSM PRE-FLIGHT INSPECTIONS AND RVSM AVIONICS SYSTEMS CHECKS

The following actions shall be accomplished during preflight:

- a. Review maintenance logs and forms to ascertain the condition of equipment required for flight in the RVSM airspace. Ensure that maintenance action has been taken to correct defects to required equipment;
- b. During the external inspection of aircraft, particular attention should be paid to the condition of static sources and the condition of the fuselage skin in the vicinity of each static source and any other component that affects altimetry system accuracy (this check may be accomplished by a qualified and authorized person other than the pilot, e.g., a maintenance personnel);
- c. Before takeoff, the aircraft altimeters should be set to the local altimeter setting and should display a known elevation (e.g., field elevation) within the limits specified in aircraft operating manuals. The difference between the known elevation and the elevation displayed on the altimeters should not exceed 75 feet. The two primary altimeters should also agree within limits specified by the aircraft operating manual.
- d. Before take-off, equipment required for flight in RVSM airspace should be operational, and indications of malfunction should be resolved.

## POST FLIGHT

In making maintenance log book entries against malfunctions in height-keeping systems, the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair the system. The pilot should detail the actual defect and the crew action taken to try to isolate and rectify the fault. The following information should be noted when appropriate:

- a. Primary and standby altimeter readings.
- b. Altitude selector setting.
- c. Subscale setting on altimeter.
- d. Autopilot used to control the airplane and any differences when the alternate system was selected.
- e. Differences in altimeter readings if alternate static ports selected.
- f. Use of air data computer selector for fault diagnosis procedure.
- g. Transponder selected to provide altitude information to ATC and any difference if alternate transponder or altitude source is manually selected.

## STRUCTURAL REPAIRS TO RVSM QUALIFIED AIRCRAFT

Structural repairs to RVSM qualified aircraft will be evaluated for impact on the approved RVSM criterion. Such repairs will be evaluated and approved by the manufacturer to generate approved data for the repair.

### REPAIRS TO THE PITOT/STATIC BASE PLATE AREA

- a. All repairs accomplished in these areas will conform to the guidelines specified in the Hawker 850XP Structural Repair Manual.
- b. The Director of Maintenance will contact the manufacturer for specific repair instructions when these areas are damaged.

### STRUCTURAL DAMAGE AND REPAIRS

- a. Structural damage and repairs that may affect the integrity of the pitot static system or the *RVSM Critical Region* require detailed evaluation for RVSM Continued Airworthiness.

- b. A skin mapping and area integrity inspection may be required if a radome is replaced or if a panel is replaced in the RVSM critical region.
- c. A RVSM validation flight may be required if significant structural repairs have been accomplished which affect the integrity of the pitot-static system, the RVSM critical area skin waviness, and/or pitot probe alignment. Consult the Hawker 850XP Structural Repair Manual (SRM) and the aircraft manufacturer as required for guidance.

### PAINTING

If the aircraft skin or structure in the RVSM critical region is painted, particular attention must be given to the RVSM critical region inspection and skin mapping criteria that is contained in the approved RVSM maintenance documentation for the aircraft.

### RETURN TO SERVICE

- a. Inspections of and Repairs to RVSM qualified equipment shall be in accordance with the Hawker 850XP AMM and Airworthiness Directives (ADs) as appropriate. RVSM maintenance entries in the aircraft records shall include RVSM specific references to the appropriate section(s) of these documents.
- b. For checks to altimeters covered under 14 CFR part 91.411, see 91.411(b) for a list of persons/entities that may return an aircraft to service under this part.
- c. For transponder tests required by 14 CFR part 91.413, refer to 91.413(c) for a list of whom may perform these tests.
- d. If a MEL deferred item placard has been installed, clear the open MEL entries and remove the placard. See the following section on placarding instructions.

### EXAMPLE MAINTENANCE ENTRY:

*“Performed skin waviness inspection of RVSM critical region in accordance with (IAW) the Hawker 850XP AMM. RVSM critical region found to be within acceptable tolerances.”*

## PARTS CONTROL

- a. RVSM component part numbers are listed in the Hawker 850XP Illustrated Parts Catalog.
- b. Components specified in the IPC are tested to RVSM tolerances after completion of repairs by the approved repair facility before being returned to service.
- c. Components will be checked for shipping damage, corrosion, or other deterioration. Rejected parts shall be returned to the source of supply.
- d. The physical part number will be crosschecked against the part number as specified in the IPC.
- e. Part number changes of RVSM equipment must first be approved by the manufacturer and the Las Vegas FSDO. After part number changes are approved we will submit a revision to this program for review by the responsible office. If the revision is approved, the new part number(s) will be eligible for installation.
- f. Service bulletins and modifications to RVSM components must be approved by the manufacturer and the Las Vegas FSDO.

Should it become necessary to replace an RVSM qualifying component with a non-RVSM qualifying component (assuming that such a replacement is otherwise permitted), the technician performing the work shall placard the aircraft to prohibit RVSM operations.

The technician will annotate the aircraft's flight log and the *RVSM Open Discrepancies* form (form 30-105) with an open pilot information discrepancy and inform the Director of Maintenance that the aircraft is *not* RVSM qualified.

## PLACARDING INSTRUCTIONS

- a. The aircraft shall be placarded to prohibit RVSM operations if the aircraft is dispatched per the MEL but is not fully RVSM capable. The placard may be installed by a member of the flight crew or by a technician who has been authorized to perform RVSM related maintenance on the aircraft. The placard shall be placed adjacent to the inoperative equipment in the cockpit or otherwise in clear view of the flight crew.
- b. The placard shall state "*RVSM Operations Prohibited*".

**NOTE:** Refer to the following section on MEL Critical Items.

### MEL CRITICAL ITEMS

The following MEL items need special attention to ensure that if a RVSM related discrepancy is deferred per the MEL then the aircraft is not operated in RVSM airspace without specific ATC approval. Items with an \*X indicate the equipment, when installed, may be required, or there may be additional conditional limitations.

MEL ATA	EQUIPMENT	RVSM	MNPS
22-10-1	Autopilot system	X	
23-10-1 1)	VHF Comm		X
23-10-1 2)	HF Communications		X
23-20-1	SELCAL		*X
23-70-3	SATCOM		*X
30-30-1	Pitot Probe/Pitot Mast Heaters (Both required to be operating for RVSM)	X	
30-30-5	Static Plate Heaters (Both required to be operating for RVSM)	X	
34-10-2	Altitude Alerting System	X	
34-20-3	Attitude Heading Reference System (AHRS)	*X	
34-50-1	LNAV or RVAN Systems		*X
34-50-2	Flight Management Systems (FMS)	*X	*X
34-50-4	ATC Transponders and Automatic Altitude Reporting Systems	X	
34-60-1	TCAS	*X	

**Note:** The following items must be operative before entry into RVSM airspace:

- c. 2 Primary Altitude Measurement Systems
- d. 1 ATC Transponder System
- e. 1 Altitude Alerting System
- f. 1 Automatic Altitude Control System

Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid flight in this airspace.

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SAMPLE

## SUMMARY OF INSTALLED EQUIPMENT

INSTALLED AVIONICS EQUIPMENT			
QTY	MANUFACTURER	MODEL NUMBER	TYPE OF EQUIPMENT
2	Collins	TDR-94D	Mode S Transponders
2	Collins	FGC-3000	Flight Guidance Computer with Altitude Hold
1	Collins	FGP-3000	Flight Guidance Panel with Altitude Alert
2	Collins	ADC-3000	Air Data Computers
2	Collins	AHC-3000	AHRS
2	Collins	FMC-6000	FMS (Flight Management System)
2	Collins	GPS-4000A	GPS (Global Positioning System)

COMMUNICATION SYSTEMS			
1	Collins	HF-9031A	HF Comm
2	Collins	VHF-4000	VHF Comm with 8.33 kHz Channel Spacing

TCAS			
1	Collins	TTR-4000	TCAS II with Change 7

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**RVSM INSPECTION PROGRAM REFERENCES**

The specific items in the aircraft inspection and tracking program that are referenced in this document change from time-to-time. The Las Vegas FSDO may want a copy of the specific and current inspection items, including the cards or other specific inspection items and instructions, kept at the end of this chapter for reference.

**CHANGED INSPECTION ITEMS**

Insert the current inspection items or cards at the end of this chapter.

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