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Raytheon Aircraft RA-390 RA-390/Premier 1/1A

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PURPOSE

The Raytheon Premier 1, RA-390, Flight Standardization Board (FSB) convened in Wichita, KS on March 19, 2001 to evaluate the proposed training, checking and currency requirements for pilots qualifying in the RA-390 aircraft. No other models of the Raytheon family of aircraft were evaluated.

FSB COMPOSITION

Richard McCleish	Chairman	MKC-AEG
Roger Baker	Operations	AFS-800
Fred Beeman	Operations	MKC-AEG
Dan Buerki	Operations	ICT FSDO
Larry Wahl	Operations	MKC FSDO

BACKGROUND

By letter dated August 1, 1995, Raytheon Aircraft Co. forwarded an application for a new Type Certificate for the Raytheon Model 390. The model 390 is a light twin engine jet with a composite fuselage, a new swept wing and a new empennage and aft fuselage. The cockpit will accommodate a crew of two but will be arranged for single pilot operations. The passenger cabin will accommodate six passengers. Two Williams-Rolls FJ44-2A turbofan engines with 2300 lbs thrust each will power the aircraft. Maximum takeoff weight will be 12, 500 lbs.

APPLICATION OF FSB REPORT

The guidelines set forth in the FSB report apply to:

- a) Certified Flight Instructors
- b) Airline Transport Pilots instructing in air transportation service.
- c) Certificated Ground Instructors associated with a training center that holds Examining authority
- d) Aviation Safety Inspectors
- e) Designated Pilot Examiners
(Includes all Pilot Examiners listed in Order 8710.3C, Chapter 1, Section 2, Paragraph 5)
- f) FAR 135 Air Carrier Check Airmen and Instructors

TYPE RATING DETERMINATION

The evaluation for type rating determination was accomplished by members of the FSB attending an initial ground school on the RA-390 conducted by Flight Safety International in Wichita, KS and performing all practical test requirements for an aircraft type rating as outlined in FAA-S-8081-5D. There were no significant findings which would preclude an average pilot with average skills obtaining a type rating in this aircraft. The board recommends that a separate type rating, RA-390, be established for the Raytheon Premier Model 390.

SPECIFIC FLIGHT CHARACTERISTICS

The Board determined there are no significant flight characteristics associated with this aircraft that should be demonstrated by an applicant.

FSB SPECIFICATIONS FOR TRAINING

Additional Rating

The applicant must meet the training requirements of FAR 61.157 (b)(1) and (2) or (c) for addition of the RA-390(S) type rating to an ATP certificate or the training required by FAR 61.63(d) for addition of the RA-390(S) type rating to any other grade of certificate.

Initial Check

When a practical test is conducted for an ATP certificate or for an additional rating to an ATP certificate, the certification flight check may simultaneously be credited for a FAR 135 competency check or an instrument proficiency check, as applicable (FAR 135.293 and FAR 135.297. RE: Air Transportation Operations Inspector's Handbook 8400.10

FSB SPECIFICATIONS FOR CHECKING

Differences Checking

There are no variants to the basic model RA-390. Therefore, all checks required by FAR 135 and/or FAR 61 must be accomplished in make and model of aircraft or simulator.

FSB SPECIFICATIONS FOR CURRENCY

All currency requirements for the RA-390 are level E variants. (Reference AC 120.53 Difference Levels) which require separate experience in the RA-390. No other models of Raytheon aircraft were evaluated by the FSB for common flight characteristics, therefore no credit is allowed for recency of experience requirements from another Raytheon aircraft.

AIRCRAFT REGULATORY COMPLIANCE

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 a particular aircraft type, variant or variant group. The checklist also notes rules or policies which remain to be demonstrated to CHDOs by operators.

Due to prior FAR 91/135 operating experience of the Raytheon fleet of aircraft, a compliance checklist for the RA-390 Premier has not been included in this report with one exception.

This aircraft does not have a separate alternate static source as required under FAR 135. All RA-390 Premier aircraft are equipped with two complete static source systems each simultaneously supplying static air to both sets of instruments which is the normal mode of operation. However, each system can be separated to serve only its respective side if necessary. Those RA-390 Premier aircraft that are equipped with a 3 display system also have a third airspeed indicator, attitude indicator and altimeter. It was the Board's opinion that this aircraft can be safely operated with a failure of the pilot's static source. We recommend, however, that training and checking while conducting operations without the pilot's PFD be included in the operator's FAR 135 training program for single pilot operations.

PROVING RUNS

Proving tests to satisfy FAR 135 should be conducted in accordance with FAA Order 8400.10, Volume 3, Chapter 9.

FORWARD OBSERVER'S SEAT

FAR 135.75(b) requires a forward observer's seat on the flight deck be provided for use by the Administrator while conducting enroute inspections. There is no specific seat in the RA-390 Premier that will be installed and used strictly as forward observer's seat. The Board made no assessment of any interior configurations because of the variety of interior combinations available to the customer.

SEAT DEPENDENT TRAINING

The RA-390 Premier was designed for single pilot operations from the left seat. However, a pilot sitting in either seat can effectively accomplish any normal, abnormal or emergency maneuver/checklist provided that person has received adequate training and practice from the left and/or right pilot seats to ensure that person's competence in accomplishing those tasks.

FSB SPECIFICATIONS FOR SIMULATORS AND DEVICES

FAR 61.157(g) allows an approved simulator to be used in lieu of an airplane to satisfy the requirements of FAR 61 and the Practical Test Standards. At the time the FSB was accomplished, there were no approved simulators which could have been used to satisfy these requirements.

DESIGNATED PILOT EXAMINERS

Based on aircraft design, systems design and flight characteristics, the Board determined that at the discretion of the Principal Operations Inspector and concurrence by the appropriate Flight Standards Division Manager, a designated pilot examiner could be considered eligible for the addition of the RA-390 Premier to his/her Letter of Authorization provided that person meets the following requirements:

- 1) 12.5 hours of Pilot-in-Command experience in the RA-390 Premier aircraft and
- 2) Currently has another turbojet type rating authorization on their Letter of Authorization

The above requirements are not meant to preclude a DPE from requesting RA-390 authorization if that person meets all of the qualifications as listed in FAA Order 8700.1, General Aviation Operations Inspector's Handbook.

NOTE: This section applies to any pilot examiner designated in Order 8710.3, Chapter 1, Section 2, Paragraph 5 as amended.

