

VLJ Pilot Training-Is the Very Light Jet World Ready?

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A new day is dawning in the business aviation world. We are looking at unprecedented growth in the next 10 years. From 2007 to 2010 the amount of business airplanes built will increase from 800 a year to 1400 a year (According to a recent Honeywell Study). From 2010 to 2017 the level of business airplanes built per year will remain somewhere between 1200 and 1400.

In 2007 Very Light Jets were introduced to the business aircraft segment. Less than 75 have been delivered by two manufacturers Cessna and Eclipse! As other Very light Jet manufacturers enter the market 300 to 400 Very Light Jets will be delivered. These Very light Jet deliveries will continue at this rate until well past 2017.

Training will be an integral part of this new world. Each one of these pilots will have to go through an initial transition phase (Type Rating) and then subsequently a recurrent training phase to both enable them to fly these new aircraft and allow them to continue to fly safely as the aircraft grows in age. In this article we will focus on the type of training equipment that will be utilized to enable these pilots to complete their initial transition type rating certificates and attain a proficient level of skills needed to fly these aircraft safely.

We will focus specifically on one segment of the market. That segment is called Very Light Jets. These jets weigh less than 10,000 pounds and can fly at high speeds between 18,000 feet and 41,000 feet. Currently there are more than a dozen different airplanes that are being manufactured in this (Very Light Jet) segment. These aircraft are being manufactured by Cessna, Eclipse, Embraer, Adam, Spectrum, Honda, Epic, ATG, Piper, Cirrus and Diamond.

There are currently only two manufacturers that have their aircraft certified and have been delivering to customers. Cessna is the first out of the hopper with its Mustang aircraft. Eclipse is the next aircraft to deliver to customers.

These two companies have developed their training programs for initial transitional training. These new training programs have sought to model themselves after airline style programs. This training is built to provide experiential learning and high proficiency in flying. Both Cessna and Eclipse have acquired high end training equipment to enable this experiential learning. This equipment comes in the form of a suite of hardware. It starts off with online / CD courses for system knowledge and culminates in a high-level simulator experience that provides a full flight environment for them to operate and train in. These full flight simulators provided a day/night and any kind of weather environment to polish their skills to a highly proficient level. The equipment that Cessna and Eclipse has purchased is the same equipment utilized by Airline Captains to do their training for the airline. These simulators are certified by the FAA and classified as level "D" training devices. So what is the current status surrounding training at Cessna and Eclipse? Where are the other manufacturers in their plan for training their customers? Cessna currently has a level "5" simulator that is operating in Wichita, Kansas. It is being utilized currently to provide initial training for the Cessna Mustang. Cessna has a partnership with a flight training organization called Flight Safety. Cessna will have two simulators in Wichita and will continue with another simulator in Farnborough England in 2009. Eclipse on the other hand has decided to hold more of its training in-house. They have partnered with two firms to do their initial and transition training for the new Eclipse. One partner is from the Netherlands. The other partner is in Dallas, Texas and is providing the instructional staff to facilitate Eclipse's initial training. Eclipse has just opened a new training center in Albuquerque, New Mexico. This training center has six bays that will be available for full flight simulators. Currently Eclipse has one simulator, produced by OPINICUS, that is resident in this new facility and is certified to a level 6 in preparation for receiving a level "D" certification at the end of this year or the beginning of next. These are the two current and functional training programs for Verylightjets. There are several others that are in the developmental stages and will not be operable until their aircraft have been certified. and is developing all the courseware associated with Eclipse initial training.

Additional several very light jet manufacturers have specified their training programs (Adam, Embraer and Honda). Adam has decided to go with a firm out of Englewood, CO called SAFERjet to build their training program. They have decided to build a simulator facility near Dallas, Texas that will have four simulator bays. Mechtronix, a Canadian firm, will provide the training equipment that will be placed in these bays. Embraer has decided to go with CAE as a flight training partner and will place their first simulator at SimCom in Dallas before their aircraft is certified. Honda has decided to go with Flight Safety as a training partner and will have their first simulator installed in Greensboro, North Carolina before their plane is certified. Epic, ATG, Piper, Cirrus, Spectrum and Diamond have not announced their training intentions as of this date.

There are some interesting questions that still need to be answered for the new VLJ training industry? With only two VLJ manufacturers operating their training programs and the growth in the market still to come will training in the future have a different shape? Considering these programs take years to develop, have we set an extremely high bar for the industry? Will the acceleration of aircraft deliveries out pace the training equipment availability?

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