

for 28 Cessna 152 trainers, prior to the closure of Cessna's single engine line. The Cessna aircraft were distributed unevenly among the 28 flying clubs. A few clubs also own Piper PA 18 Super Cubs for tailwheel training, as very few Chipmunks and Pushpaks remain in service. The Aero Club also bought, from a Canadian company, 24 (8 dual and 16 single seat) Husky ultralight aircraft. These ultralights were not distributed, and are never expected to be used for flight training in India. There are a variety of reasons for this, one of them being that certification of ultralights in India is somewhat different from the process in Canada and it apparently proved to be a major stumbling block. This whole saga has been a rather unfortunate experience for all the parties concerned.

Recently a number of aircraft have been brought to India in order to market them for flying training. For example, Riviera Aviation of Bombay demonstrated a Rans ultralight and offered it as a trainer and personal executive transport at Rs. 950,000. but none have sold as yet. Hyderabad Batteries promised to import a USA built ultralight last year but nothing has transpired. Bashi Aerospace of Bangalore is rumoured to be planning to produce a two seat trainer, but the company is non-committal and has so far only been providing engineers on short-term contract to the National Aeronautics Laboratory (NAL). Raj Hamsa Aero Sports Limited of Mysore, run by a French national, is building ultralights that do not really match training needs as they are powered weight-shift delta-wing aircraft. The company has plans for a three axis machine in the future.

The NAL has designed a light aircraft trainer called the NAL-LA (for NAL Light Aircraft). NAL have a tentative agreement with Taneja Aerospace of Hosur (near Bangalore) to build and market this composite design. See NAL under Indian Aerospace Companies for details.

HAL has shown consistent interest in the field of civil training. It abandoned an ultralight project in the mid 1980s after spending Rs 5.2 million. More recently, HAL has obtained civil certification for its military basic trainer, the HPT-32. No price has been announced, but as it is built to military specifications (i.e. fully aerobatic, etc.), it will probably not be price competitive for civil training.

The DGCA commissioned it's own R&D Directorate to design a trainer that it contracted Bharat Heavy Engineering Limited (BHEL) to manufacture. The aircraft is called the "Swati" and has both the appearance and engineering typical of 1950s aircraft. BHEL have since been asked to convert the aircraft from a tailwheel to a nosewheel and that, plus many other problems, have caused the entire project to slide. See BHEL under Indian Aerospace Companies for more details. Working in BHEL's favour, however, is the fact that most of the flying clubs are so strapped financially that they will take anything that comes to them at no cost. It is quite possible that, if the Swati is ever produced, it will be issued, like the Cessna 152s, free to these institutions (with the Government of India footing the bill). If, on the other hand, the Swati runs into difficulties, then the Central Government may well be persuaded by the flying training lobby to import training aircraft again, particularly if nothing else has appeared from domestic manufacturers.

## PROSPECTS

There will be considerable pressure on BHEL and the DGCA to make the Swati a success. However, the flight testing program suffered yet another setback when a prototype crashed in early June. If the Swati does not materialise, the Government, which is being pressured by flying clubs desperate for new equipment, may be forced to look outside the country again. If it does, the DGCA will clearly favour an aircraft that is likely to be certified on the Indian Register.

If the anticipated growth in airline passenger traffic is realised, the indigenous airline fleet, both private and national, will certainly grow. This will require an increased number of trained pilots and engineers, some of whom will come from the military, but most will have to come from an increased output from the training establishments.

Along with this growth will be the need for simulator training establishments for the more common aircraft types, such as the Boeing 737, as well as newly-inducted aircraft types. There will also be a need for contracting simulator time outside the country, as well as training on new aircraft that the private operators lease/ These developments, along with the plans of East West Airlines and The Raymond Woollen Mills to establish simulator training facilities, present good opportunities for Canadian simulator companies.