HAIREPORT

Re-enginedS-76 to fly soon
Sikorsky is aiming to fly the PT6-powered S-76 in March, and certification is expected before the end of the year. The flight-test vehicle is in final assembly at Bridgeport and will be shipped to Sikorsky's West Palm Beach flight devel-opment centre in the next few weeks. It will be fully instrumented for flight-testing, which will last until mid-November. A second PT6-powered S-76 is already in ground testing at West Palm Beach and will become the second flight-test article in April. Flight-testing will include a two-month hot/high programme in south-west USA.

"Sikorsky is making a more-than-$18 million investment in the PT6," says the company's president, William F. Paul. The new engine will give a 46 per cent increase in take-off power at sea level and 32-2°C. Under hot/high conditions (25°C/5,000ft) the increase in useful load will be 51 per cent.
The PT6B-36 is being used, not the PT6T Twin-Pac, but the latter has a mean time between unscheduled removals of 25,000hr, and the in-flight shutdown record is said to be near zero. Sikorsky says that a "dressed" engine can be installed in lOmin and removals are easy, owing to quick-release pins.
Gear face width increases give the gear-box a higher rating, and it should reach a time-between-overhauls of 3,000hr. More than 3,000hr of bench running has been completed. A 140 per cent overtorque test is scheduled. Flight-testing of the rotor system at the new weight of 11,0001b shows no change in component replace-ment times, says Sikorsky.
A 15 per cent decrease in tail rotor pylon area and an increase in blade chord give the tail rotor the extra thrust needed to handle the extra power. The PT6s will have dual digital electronic fuel control under development by Hamilton Stan-dard.

Sikorsky sold 36 S-76s last year, 15 to corporate operators, eight for offshore work, and 13 went abroad. Air Logistics has the first S-76 to exceed 5,000hr, and the company brought the aircraft to HAI. Air Logistics had the first two aircraft to come off the production line in February 1979, and has since built up a fleet of 16 totalling 37,000hr. Worldwide S-76 fleet time is now over 317,000hr. More than 200 S-76s are operating worldwide, and 130 are being flown offshore by 30 oper-ators. Sikorsky is looking for 50 S-76 sales in 1984. A composite rotor should fly on the type soon.

Sikorsky's composite fabrication plant in Alabama will give the company a 400 per cent increase in capacity with "a great deal of automation on the way". Subcon-tract work is being sought, and Sikorsky can shape a pound of composite in two man-hours.

Air Logistics owns the first S-76 to exceed 5,000hr. It entered service on March 31, 1979, and averaged 92hr a month

Hiller rebuilds market
Rebuilt helicopters are becoming a signifi-
cant part of Hiller's business. Executive
vice-president Herbert Moseley tells Flight
that "in October we shipped four rebuilts
to Argentina, while Thailand and Israel took one new machine each, and Mexico got two new machines". During the first 20 days of January Hiller delivered three new FH-llOOs and a rebuilt one.

Rebuilt aircraft cost about 60 per cent of the price of a new one. A rebuilt 12E is

$89,500 basic, compared with $153,000 basic new. A rebuilt FH-1100 with zero-time parts is $172,000, compared with $315,000. Crash-damaged machines are remanufactured at Porterville and turned out with a six-month/300hr warranty.
A new FH-1100 main-rotor blade should be certificated by mid-March. The 13in-chord blade will give the FH-1100 a maximum weight (with external load) of 3,2001b.

Enstrom diversifies

Some years ago Enstrom announced
its intention to diversify to ensure survival. The programme has been successful. Enstrom is building long-range tanks for the 727 and 737, and has supplied 92 units to 16 customers over two years. The company also does Hiller blade work.
Revealed at HAI was the Enstrom 280FX, the 225 h.p. high speed version of the 280 series. At 75 per cent power the 280FX will cruise at 110 m.p.h. while burning 14-7 US gal/hr, says Enstrom. Maximum power speed is said to be over 125 m.p.h., and range is 300 miles with the standard 40 US gal of fuel. An internal tank increases range to 390 miles.

Vertical endplates on the hori-zontal stabiliser are said to give excellent directional stability, and the aircraft can be flown in balance at 100 m.p.h. with feet off the anti-torque pedals, says Enstrom. The 280FX has engine monitors which display cylinder head, exhaust stack, and turbo inlet temperatures. This makes it easy to lean the mixture to obtain peak exhaust gas tempera-

ture for best fuel economy. Main and tail gearbox chip detectors will also help reduce maintenance costs, and the aircraft is fitted with crashworthy seats. UK distributor Southern Air took delivery of the display article in Las Vegas.
Certification should take about
60 days and will be pursued by Enstrom in the USA and Southern Air in the UK. No price has been announced, but Enstrom says that it will try to put the aircraft out at the same price as the previous model.

The company forecasts sales of 36 aircraft this year. It sold 20 in 1983 but only manufactured nine, owing to backlog. Burnside Ott bought two F-28s for training following a four-month trial period. Two more will be taken by the company soon.
A main-rotor brake and auxiliary fuel tank have been developed for both F and C models. .A 45sec shut-
down is possible with the hydraulic
brake, and the 13 US gal tank, installed
in the baggage compartment, gives
a 30 per cent increase in range and
endurance.

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