

THE FAIRCHILD HILLER FH-1100 HELICOPTER

by Kent A. Mitchell

IN 1964 THE HILLER AIRCRAFT COMPANY WAS ACQUIRED by the Fairchild Stratos Corporation.¹ At that time, Hiller was engaged in a fierce competition with Bell Helicopter and Hughes Aircraft companies to win a large contract for production of a turbine-powered light observation helicopter (LOH) for the U.S. Army. During the Army technical evaluation and "fly off" of the three helicopter entries, it appeared that Hiller was the sure winner. In other words, Fairchild thought they had just bought themselves a large helicopter production contract—and the name of the corporation was changed to Fairchild Hiller.

However, as the result of Hiller production cost data being "leaked," Hughes was able to underbid price wise and win the contract. The price Hughes submitted to the Army did not even cover their Bill of Material—because Howard Hughes personally wanted to buy into the LOH program.

Consequently, if Fairchild Hiller were to remain in the helicopter business, they needed to offer their design to the commercial aviation market. Because of Defense Department policy at the time which allowed the Army to make only "off-the-shelf" aircraft procurements, Hiller's helicopter (known as the Army OH-5A) was already FAA certified.²

Hiller had built eight helicopter airframes for the LOH competition and had delivered five of them to the Army for testing. In February 1965, the remaining units at Hiller's Palo Alto, California factory were quickly repainted in civilian colors and it was announced that they would begin production as the Fairchild Hiller Model FH-1100 helicopter.³

An "1100" helicopter was featured on the cover of the April 19, 1965 issue of *Aviation Week & Space Technology* magazine and it was obvious (to anyone in the business) that it was a repainted Army OH-5A model. It did not even have FAA registration numbers painted on the fuselage.

Construction of the FH-1100 airframe was conventional for aircraft of that time. The basic body was fabricated of aluminum in a semi-monocoque structure, with a compartment behind the cabin and beneath the engine deck housing oil tanks, radio, and electrical equipment. That compartment's hatches, at both sides of the aircraft, opened to provide rigid work platforms capable of supporting two mechanics during



maintenance procedures. The basic body lower section also contained a controls tunnel and the fuel cell.

The helicopter's cabin enclosure was constructed of aluminum alloy sheet and the windscreen and side panels were of vacuum-formed plastic. The basic structure of the rear cabin wall was a stainless steel firewall. The area behind the two pilot stations could carry two or three passengers or 1,100 pounds of cargo.

The entire engine section was faired and the cowling slid



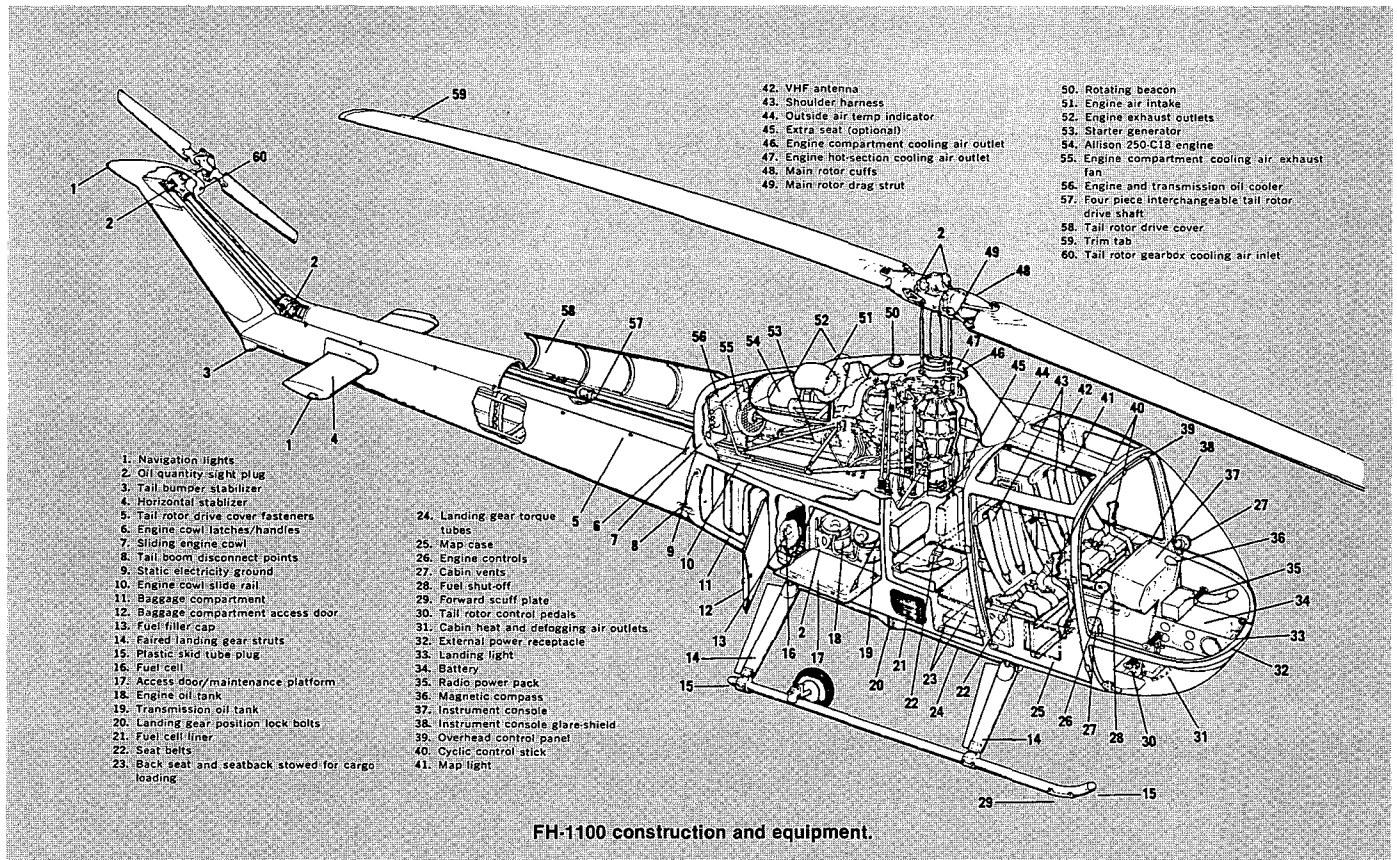
aft for easy access. The 136-pound Allison 250-C18 turbine engine was positioned by six steel members with integral end fittings to the engine deck/firewall. The transmission and main rotor structure were suspended independently from the engine. Complete engine changes could be made with the drive system remaining in place. In addition, all of the individual engine components could be changed without removing the basic engine.

The low aspect tail boom afforded minimum drag and

Fairchild Hiller FH-1100 (N549FH) passes over Sydney Harbor during demonstration tour of Australia in 1968. Note Sydney Harbor bridge and Sydney Open House.
(Fairchild Hiller Photo)

high stability in flight. The aircraft's overall low-drag configuration was maintained by the boom's uninterrupted underside fuselage. The tail boom was of aluminum alloy, semi-monocoque construction.

The landing gear consisted of tubular aluminum skid runners supported by four aerodynamically faired struts to

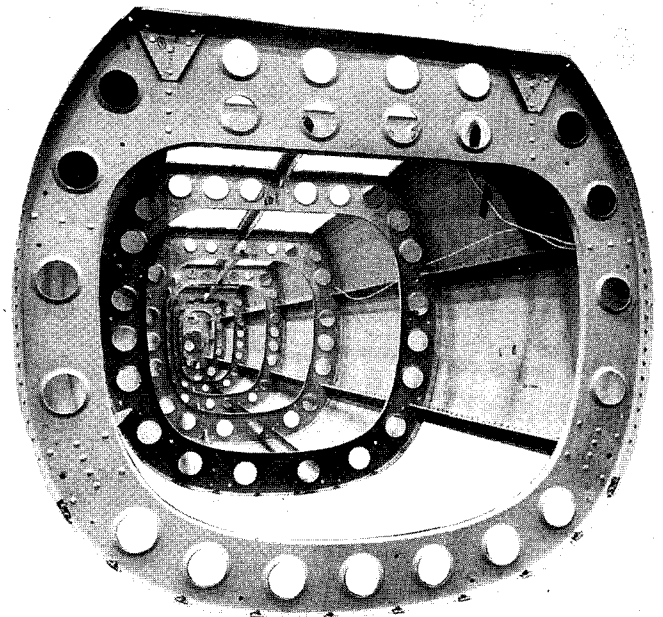


impact-absorbing torsion tubes. The height of the landing gear provided a clearance which allowed landings on slopes to 10 degrees.

The all-metal main rotor blades had a stainless steel leading edge spar and shear web. The blade trailing section was of aluminum honeycomb with an aluminum wrap construction. Permanent mass balance was provided and each blade had an aerodynamic tracking tab. Blades were individually interchangeable without field balancing and could be folded for shipping or storage.

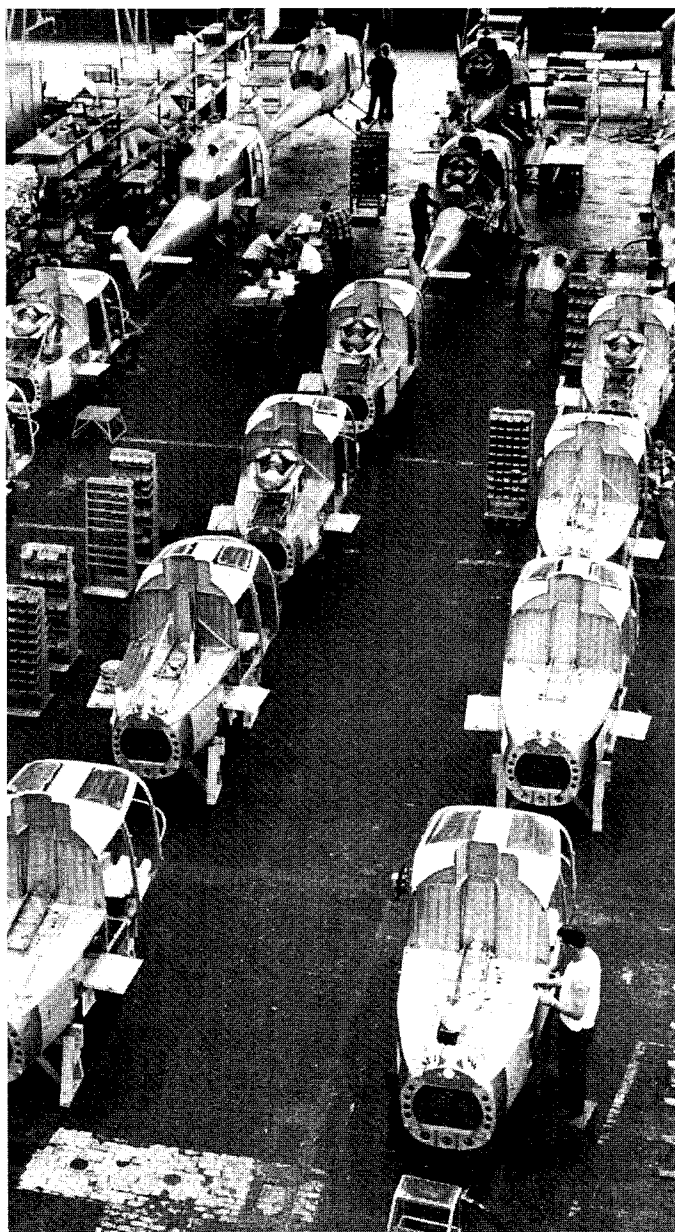
An announcement by the company was made in July that production would be shifted to Fairchild Hiller's Aircraft-Missiles Division in Hagerstown, Maryland, to "consolidate all of the corporation's light aircraft production under one roof." The company was then currently building the *Porter* aircraft there under license from Pilatus of Switzerland. (See the author's article "Fairchild Porter Aircraft" in the Fall 1990 AAHS *Journal*.) The transfer of personnel, drawings, tooling, and production equipment from California to Maryland took time, and as a consequence, the helicopter did not go into production until 1966. Even so, the FH-1100 was the first U.S. civilian turbine-powered light helicopter to go into production.

By late July 1965 the company said they had 17 firm orders for the helicopter. To meet the expected sales demand, a production rate of eight units per month was planned for the first block of 100 helicopters. To be priced at \$85,000—the civilian model would incorporate several improvements over



the military design. The modifications required FAA approval in the form of an amended type certificate.⁴

The first production FH-1100 was manufacturer's serial number 09 and went out the Hagerstown factory door on June 3, 1966, to be used as the "engineering test unit." Formal FAA certification was received November 10th.⁵ The



Looking into the FH-1100 tail boom reveals that it is of standard semi-monocoque construction, with stringers and bulkheads covered with easy-to-repair flat wrap sheet metal. (Fairchild Hiller Photo)

The company repainted an Army OH-5A in civilian colors as their model 1100. (Fairchild Hiller Photo)

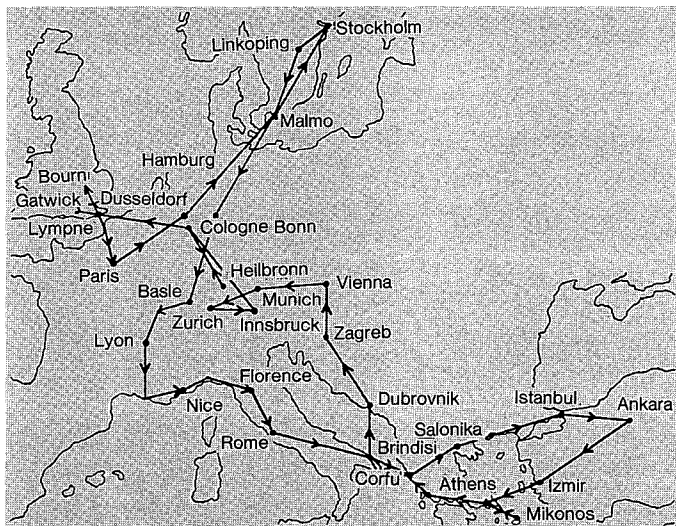
FH-1100 assembly line at the old Fairchild plant in Maryland. (Fairchild Hiller Photo)

FH-1100 was certified for a maximum gross weight of 2,750 pounds, 130 mph, a useful load of 1,355 pounds, and a range of 400 miles. The FH-1100 was the first helicopter ever produced in Maryland.⁶

During the weekend of November 5-6, two FH-1100 helicopters were used as VIP transports during New York City's "Metro '66" operation. The two-day operation proved that STOL airplanes and helicopters could provide significant airlift capability to a metropolitan area in case of disaster, using unused piers, waterfront streets and parks. Oscar Bakke, FAA Eastern Region Director who headed the operation, used an FH-1100 to tour all of the sites.⁷

Upon receiving certification, Fairchild Hiller immediately began delivering FH-1100s and increased the production rate to 10 a month. The production run had also been increased from 100 units to 250.

A new FH-1100 (N517FH) was exhibited at the Paris Air Show May 26-June 4, 1967. The prototype had led the International Helicopter Flight Demonstration at the show in 1965.⁸ After the air show, the FH-1100 was flown on a 7,000-mile four-week tour of Europe and the Mediterranean—including 1,400 miles over water. The pilot was Bob Boughton, Fairchild Hiller Export Sales Manager, and with him was L.A. "Skeets" Harris, the corporation's European representative based in London. Departing Paris on June 5, the pair proceeded through Germany via Dusseldorf and Hamburg to Stockholm, Sweden, for flight demonstrations. From there the FH-1100 was flown back through Germany and southern France, made stops in Florence and Rome, Italy, then Istanbul, and made demonstrations in Ankara, Turkey. On the return trip, demonstrations were given in

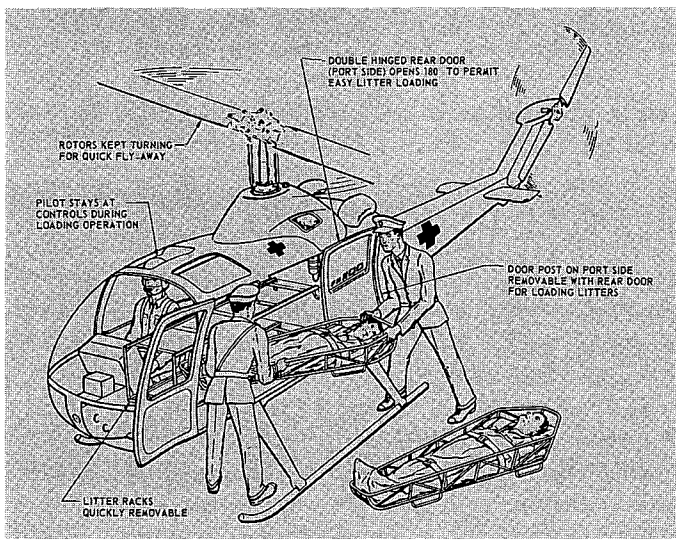


7,000-mile demonstration tour route made by an FH-1100 (N517FH) in 1967.

The FH-1100 was the first light turbine-powered helicopter to offer an airborne ambulance configuration.

The FH-1100 was FAA-certified for amphibious operations with Garrett inflatable floats during tests on the Potomac River. (Fairchild Hiller Photo)

Fairchild Hiller's helicopter is shown in flight over the rugged Swiss Alps during a demonstration tour of Europe. (Fairchild Hiller Photo)



Cologne/Bonn, Germany. From Germany, the final leg was across to England on July 5—one month and over 100 additional flying hours in Boughton's log book. Of the trip, Bob said he was impressed by the way in which they just climbed into the FH-1100 each day and took off. They had experienced no mechanical trouble at all during the extended trip.⁹

Other demonstration tours plus extensive advertising in every aviation trade magazine in the world and in newspapers such as the *Wall Street Journal* soon produced a flurry of sales. By the fall of 1967, the company had delivered 60 of the FH-1100s to customers scattered all over the globe.

Sixteen of the helicopters were delivered to the Royal Thai Border Police [Thailand] to patrol the borders with Cambodia, Laos, Burma, and Malaysia.¹⁰ Those aircraft were bought by the U.S. General Services Administration (GSA) and transferred to the Thai police.

The machines began proving themselves while operating in the rugged mountains of British Columbia with Klondike Helicopters, Ltd., and Okanagan Helicopter, Ltd., of Vancouver.¹¹ Okanagan alone had ordered 30 of the FH-1100s, which was the largest number of helicopters ever

ordered at one time by a commercial operator.¹²

Also in late 1967, the FH-1100 was FAA certified for on-water operation with inflatable floats made by Garrett Air Cruisers Division. Amphibious tests for certification were conducted on the Potomac River near Hagerstown.¹³

December 1967 was a record month for FH-1100 production at the Hagerstown plant with 20 of the helicopters produced out the factory door.¹⁴

At the January 1968 convention of the Helicopter Association of America in Las Vegas, Nevada, the FH-1100 was introduced in an airborne ambulance configuration. First to offer the configuration in the light-turbine helicopter field, the airborne ambulance provided room for two stretcher patients in addition to the pilot and a medical attendant. The double-decked twin litter ran fore and aft on the left side of the cabin, with the attendant's position on the right side in the rear. Sold as an option, the self-contained litter kit required no special doors nor did it lock the aircraft into a permanent configuration.¹⁵

The first order for an FH-1100 airborne ambulance was placed by Wescan Turbo Helicopters, Ltd., based at 100 Mile House in central British Columbia. The company was engaged in mining exploration, power-line construction and forest fire-fighting work. The helicopter was to be used normally for utility work, using the large doors for easy cargo loading, and then used as an ambulance as necessary at the construction sites.¹⁶

In May 1968 Arthur Godfrey, a frequent visitor to the Fairchild Hagerstown plant, toured the production line. Godfrey, who had a helicopter pilot rating, was taken home to his farm at nearby Leesburg, Virginia, in an FH-1100.¹⁷

Another use for the versatile helicopter was revealed in





1968 when it went into service as a law enforcement aircraft with the Nassau County Police Department, Mineola, Long Island, New York. The county, with a population of 1,500,000 in a 300-square-mile area, is one of the largest in the United States. The police department (3,000 men strong) was the second largest in the Empire State and tenth largest in the country. Their FH-1100 (MSN 80) was equipped with pontoons for on-water operation, removable ambulance litters, police radio, and a Bendix radar system (only one other civil helicopter in the world had such an installation). The radar was used for spotting ships and small boats off the Atlantic coast during storms or emergencies.

Nassau County used their helicopter on routine patrols from 6 A.M. to 9 P.M. seven days a week and was on standby after that for emergency calls.¹⁸ The success of the New York operation soon induced orders from other police agencies.

The second organization to utilize the FH-1100 in police work was the California Highway Patrol beginning in March of 1969. Initially, three removable litter-equipped helicopters were stationed one each in the San Francisco, Los Angeles, and Indio areas.¹⁹ The three machines were MSNs 150, 156, and 157. A fourth FH-1100 (MSN 161) was delivered to the Patrol on September 10, 1969, and the fifth (MSN 243) and sixth (MSN 244) in 1971.

Louisiana received three FH-1100s for their State Police on September 12, 1969 (MSNs 175, 176, and 181). On September 26th, New Jersey took ownership of FH-1100 MSN 162 for their State Police. The Nassau County Police received their second machine (MSN 183) also in the fall of 1969. Next to receive a helicopter for their State Police was Michigan in December when MSN 187 was delivered.

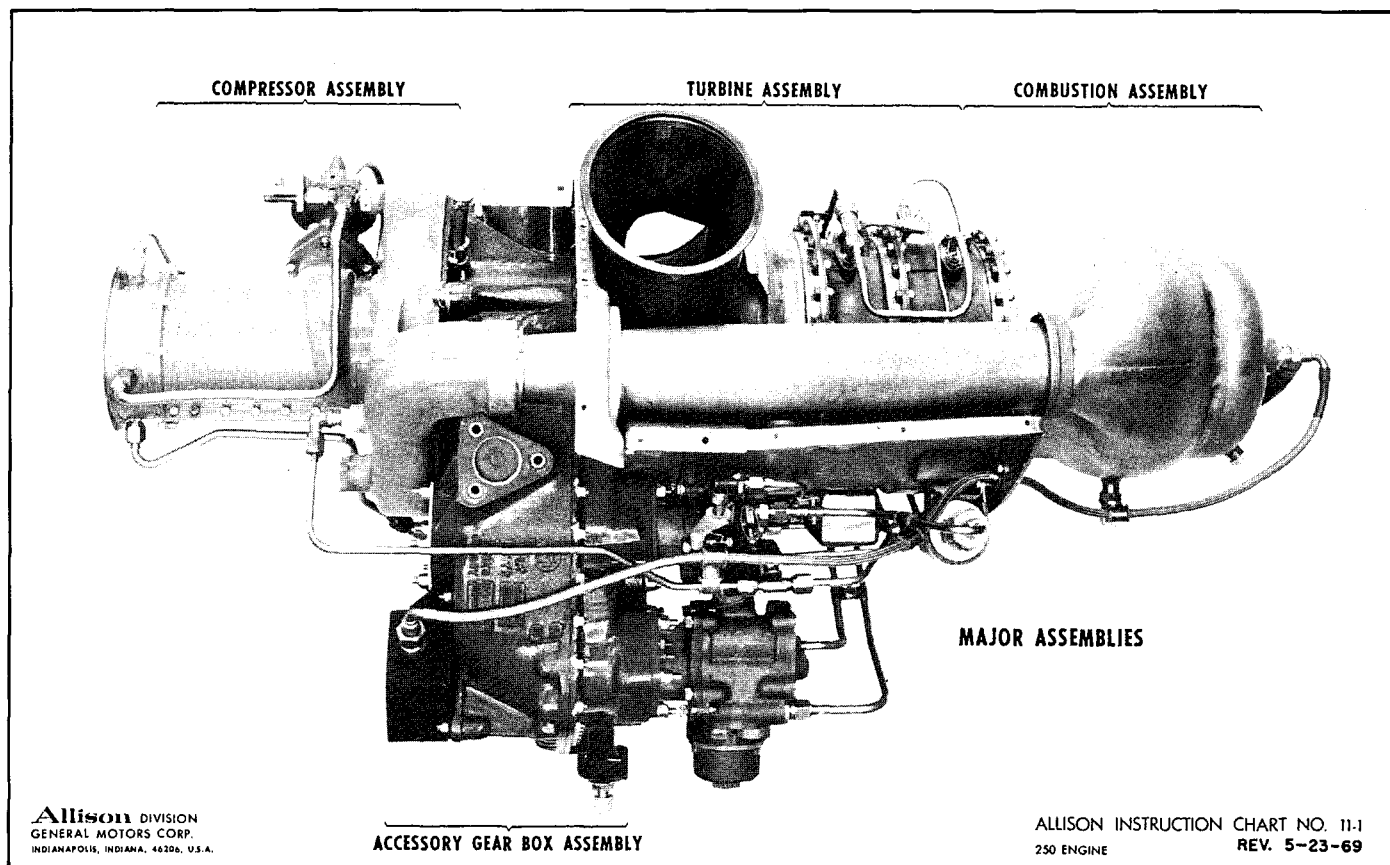
June 1970 saw the delivery of two FH-1100s (MSNs 209 and 210) to the Department of Virginia State Police to be stationed in Richmond and Roanoke.²⁰ (Another helicopter [MSN 251] was received in 1971 to be stationed in Roanoke.)

An order by the City of Columbus, Georgia, in 1970 represented the first purchase of an FH-1100 by a municipal police department. Columbus' helicopter (MSN 213) was equipped with a quick change litter kit, a night spotlight system, and a public address system. The light system was powerful enough to illuminate an area the size of a football field from an altitude of 3,000 feet.²⁰

The second municipal department in the U.S. to order an FH-1100 (MSN 214) was the Baltimore City Police of nearby Maryland in 1970. Police agencies in Puerto Rico and South America also operated FH-1100s.

By April 1, 1969, the basic price of the FH-1100 had increased to \$98,000.²¹ Numerous optional accessory kits were more often than not ordered by the buyer, which increased the fly-away-from Hagerstown price considerably above that. Most often ordered were dual controls, a stability augmentation system, a rotor brake, night lighting, a nickel-cadmium battery, various radio equipment, and custom interiors. Also available were high-priced options such as amphibious landing gear and a Beech Aircraft BAK-109A air-conditioning system. The bottom-line price tag scared off many prospective new customers who were small business operators. At mid-1969 Fairchild Hiller's FH-1100 sales had peaked out.

Also, those in the business bought, sold, and leased helicopters quite often. Many times a machine was bought to provide a service under a particular contract and sold when the contract was completed. Many were bought with a mini-



mum down payment on a loan and then sold at a sheriff's sale when the operator missed payments. On many occasions, a machine was reported to Fairchild Hiller's Service Department as having been destroyed in a crash—only to reappear later as having been rebuilt and being flown by a different operator.

In addition, Fairchild Hiller had competition—the Bell Helicopter Company had been busy selling their Model 206A *JetRanger* on the commercial light-turbine helicopter market since January 1967.

Another problem surfaced in 1969 which later also hindered sales. As reported by the Helicopter Association of America (HAA), it seems that the light turbine engine-powered fleet (as of January 1969) had accumulated approximately 114,000 hours of flying time—and was experiencing an unproportionate number of engine problems. As a result, the insurance companies imposed "exorbitant" rates upon operators of the Allison Model 250-powered Bell and Fairchild Hiller helicopters. This information did not set well with the owner/operators and prospective buyers of the single-engine aircraft. Of course, Allison was not happy with the HAA report either. Bell and Fairchild Hiller were certainly not happy about the statistics—but for different reasons. The data provided by HAA Executive Director John Ryan showed that engine failures occurred more often in Bell's *JetRanger*. However, because the FH-1100 used the same engine it too was subject to the high insurance rates, which upset the Fairchild Hiller people.

The higher failure rate of the Bell engine installation was attributed by some to be the result of that machine being heavier than the FH-1100 and therefore operated at higher power levels. Others suspected that some pilots were disregarding red-line limits and over-torquing the engine or operating it at too high turbine temperatures. Still others blamed some operators for having poor maintenance procedures in the field.

During the finger-pointing and shouting contests between operators, manufacturers, insurance companies and the HAA about who was to blame, a disgusted John Ryan turned in his resignation to the HAA. However, the rank-and-file members rejected his resignation (though the board of directors accepted it), so Ryan withdrew it and stayed on the job.²²

As of May 30, 1969, four FH-1100 helicopters had in-flight malfunctions (all in 1968), while Bell *JetRangers* suffered 77 failures (50 in 1968, 22 in 1969).

The causes of the Allison engine problems appeared to be in three areas: the compressor section, fuel control unit, and main shaft bearings.²³

Allison determined that one compressor problem was a resonance in the engine at certain power levels. The remedy there was a rework of the sixth stage compressor blades by chamfering their leading edges "... to separate the natural frequency of the torsional mode of vibration from the natural frequency of the bending mode."²⁴ Another compressor problem was traced to the starter-generator which, when subjected to a high electrical load, produced vibrations that

The diminutive Allison 250-C18 turboshaft engine powered the new light helicopter. (Allison Photo)

On a Latin American demonstration tour, the FH-1100 is seen over Rio with Sugarloaf Mountain in the background. (Fairchild Hiller Photo)

This float-equipped FH-1100 was photographed from a companion helicopter by James B. Minnich as night was settling over California's San Joaquin Valley, along Highway 99, between Fresno and Stockton. (Fairchild Hiller Photo)

were transmitted to the third stage compressor blades. The fix reworked them as well as the first and second stage stator vanes. Both compressor fixes later became mandatory FAA Airworthiness Directives.

The engine fuel control problems were attributed to improperly set units as delivered to Allison from their vendor, Bendix. A misrigged unit would allow the throttle control to proceed past the idle position and cause an engine flame-out during deceleration. Allison, Bendix, and the airframe manufacturers all issued a series of service letters and bulletins to preclude this condition.²⁵

The bearing problems were determined to be excessive wear caused by heat. The existing bearings were replaced with ones made of a different material and with one-piece retainers. Pilots were also advised to let the engine idle for one minute during post-flight shutdown to allow it to cool off.

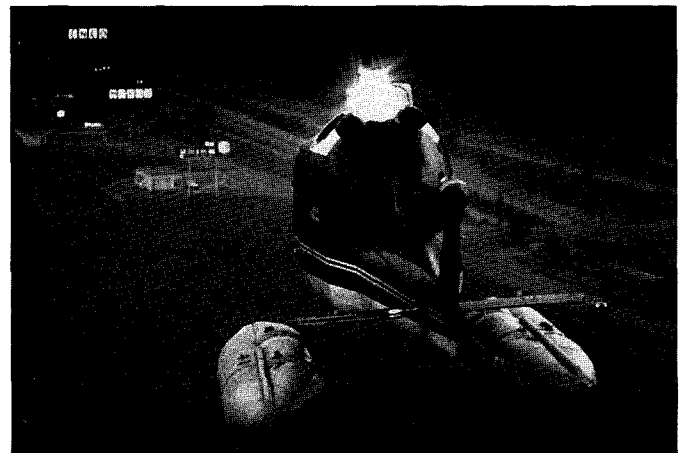
While these fixes were probably adequate, Allison engineers redesigned the Model 250 to eliminate known problem areas and improve its service/maintenance record. The redesigned version was called the "Blue Ribbon" engine and became available in late 1969. The existing engines could be retrofitted with 30 modifications at overhaul without cost to become a Blue Ribbon Allison 250.²⁶

However, the initial warm feeling produced by owning/operating a turbine-powered light helicopter was gone. Several corporate aviation departments which had bought their helicopter for executive transport had become disenchanted and sold them in less than a year. Fairchild Hiller found that new sales became hard to come by during 1970 and 1971.

In 1971, the remaining FH-1100 helicopters of the manufacturing block were built as empty "shells" (sans interiors, avionics, and accessories), were removed from the production line, and placed in a "bank" to be completed later as per a customer's sales order.

Also in 1971, Fairchild Hiller had become one of two contractors selected by the U.S. Air Force to perform a competitive prototype development phase of a new A-X close support fighter airplane. (Fairchild Hiller's entry in the competition became the A-10A, the other entry was the Northrop A-9A.) During the company's annual stockholders meeting held in April, it was voted to change the corporation's name from Fairchild Hiller Corporation to Fairchild Industries, Inc.—a signal that Fairchild was out of the helicopter business.²⁷ The company was concentrating a major part of its resources and efforts toward the eventual production of the A-10A.

After production of the FH-1100 ceased, spare parts and



service support continued until 1973 when the responsibility was assumed by Heli-Parts, Inc., of Porterville, California. Heli-Parts had already acquired the older piston engine-powered Hiller UH-12 series helicopter tooling, spares, and FAA type certificates from Fairchild and was building a few of that model as a subsidiary called Hiller Aviation. Fairchild also wanted to sell the FH-1100 package but was asking top price. Touring the Hagerstown plant and expressing interest were Michael K. Hynes, president of Brantly-Hynes Helicopter, Inc. (who once had been the author's flight instructor in a Beech T-34) and famed attorney F. Lee Bailey who then owned Enstrom Helicopter Corporation. However, because of the soft condition of the commercial helicopter market and Fairchild remaining firm about the price, the FH-1100 tool-

ing remained in storage until 1980. At that time, Hiller Aviation finally purchased all tooling, engineering documentation, and the type certificate for the FH-1100 and announced that it would resume its production in Porterville. Hiller Aviation President Edwin L. Trupe also announced that their production version would be upgraded with the installation of a higher power Allison 250-C20B engine to replace the 250-C18 and provide a higher useful load for the aircraft.²⁸

Setting up for production in California took time and it was not until 1982 that Hiller Aviation received FAA certification. In addition to the uprated engine, the new machine would include new main rotor blades with a three-inch wider chord, tail rotor blades with increased area, and an improved engine-to-transmission coupling shaft.²⁹ The new FH-1100 was also given the name of *Pegasus*—which must have raised a few eyebrows, as that flying horse had been one of Fairchild's logos since the 1920s. Were some older Hiller employees rubbing it in for Fairchild?

All did not go smoothly with reactivation of the FH-1100 production line. The expensive recertification process left the company strapped for cash. In the September 15, 1983 edition of the *Wall Street Journal* it was reported that Robert H. Cook, a Canadian businessman, had been elected a director, chairman and chief executive officer of Hiller Aviation, Inc., after shareholders approved the purchase of a 70 percent controlling interest in Hiller by Mr. Cook's company. Ed Trupe remained president and treasurer.

Then, a disastrous automobile accident wiped out the top management (and funding) of Hiller Aviation in one fell swoop. The company was soon forced to file for protection from creditor lawsuits under Chapter 11 of the Bankruptcy Code on January 23, 1984. On April 4, the bankruptcy court approved sale of the assets to Rogerson Aircraft Corporation. Once again the FH-1100 program was moved, this time to the northern coast of Washington State at Port Angeles, where at last report, service support and limited production was under way.

As of 1994, used FH-1100 helicopters were being advertised for sale in the *Trade-A-Plane* publication and still commanding a price of \$150,000.

Most who flew and maintained the FH-1100 preferred it for its flight characteristics, good altitude performance, lifting capacity, and ease of maintenance. It—as many other aircraft—was just in the wrong place at the wrong time. Fairchild management had lost interest in the commercial helicopter business and opted to concentrate on the more lucrative military business.

POSTSCRIPT

Subsequent to the preparation of this article, it was announced in the July 25, 1994 issue of *Aviation Week & Space Technology* magazine that "Rogerson Aircraft Corp. is selling its helicopter unit, Rogerson-Hiller, to Stanley Hiller, Jr., who founded the Aircraft Div. of Hiller Industries in 1942, and members of his family. Rogerson-Hiller made the UH-12 and RH-1100 helicopters, but neither has been produced for

First stringer.

The Fairchild Hiller FH-1100 is a glutton for work in the back country. It has everything going for it: strength, speed, range, easy maintenance, and dependability. It shuttles workers, strings powerlines, fights fires, sprays crops, and operates equally well on land or water, in any kind of weather, day in and day out. The most dependable engine/airframe combination is found in the Fairchild FH-1100.

The FH-1100 is quickly adapted to do a wide variety of jobs, over any terrain, in any climate from the Sahara to the Antarctic. Want a demonstration? Contact the FH-1100 Marketing Director, Fairchild Aircraft Marketing Company, Germantown, Maryland 20767. Phone 301-945-9600.

FAIRCHILD HILLER
... helps get America off the ground.



several years. The division has been making spares for existing helicopters."

Thus the story of the FH-1100 has come full circle—the helicopter is back home. □

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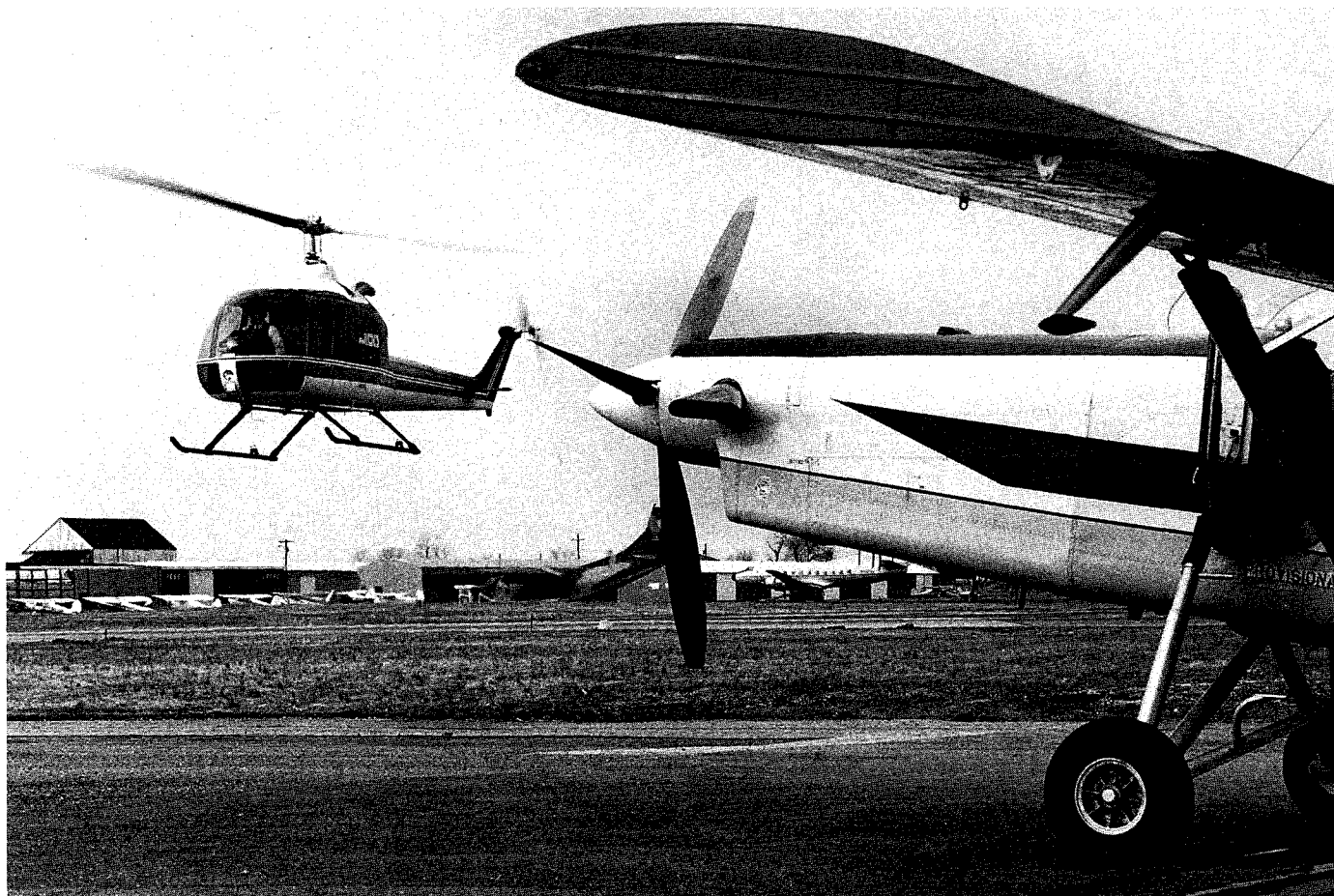
Fairchild Hiller magazine advertisement shows an FH-1100 stringing a power line in British Columbia.

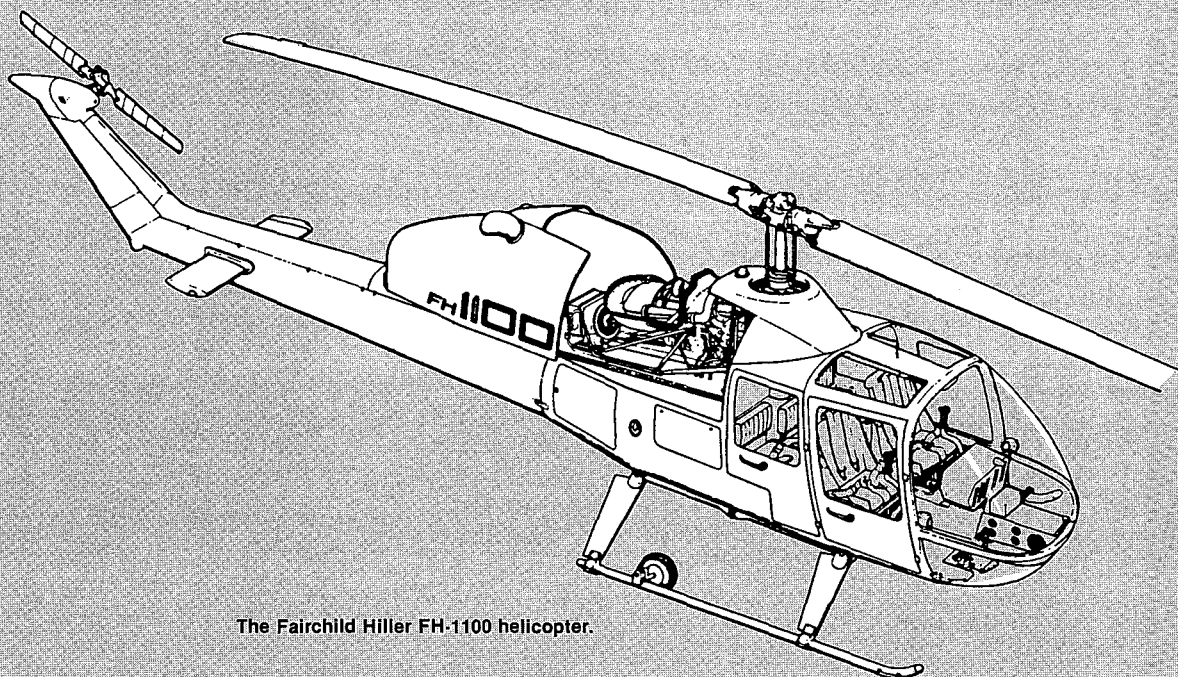
An FH-1100 air-taxies past another company product—a PC-6/B2-H2 Porter. (Fairchild Hiller Photo)

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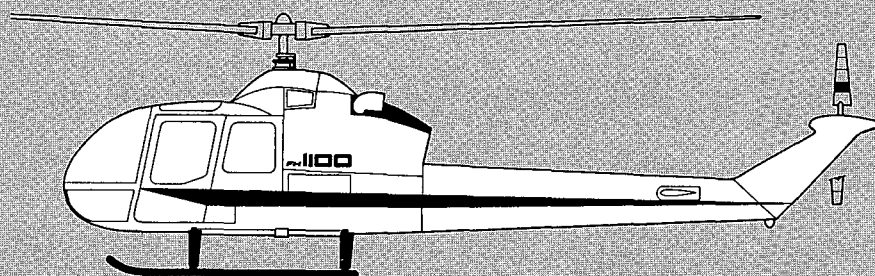
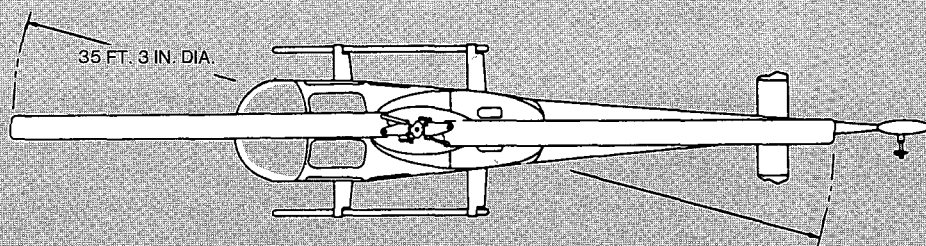
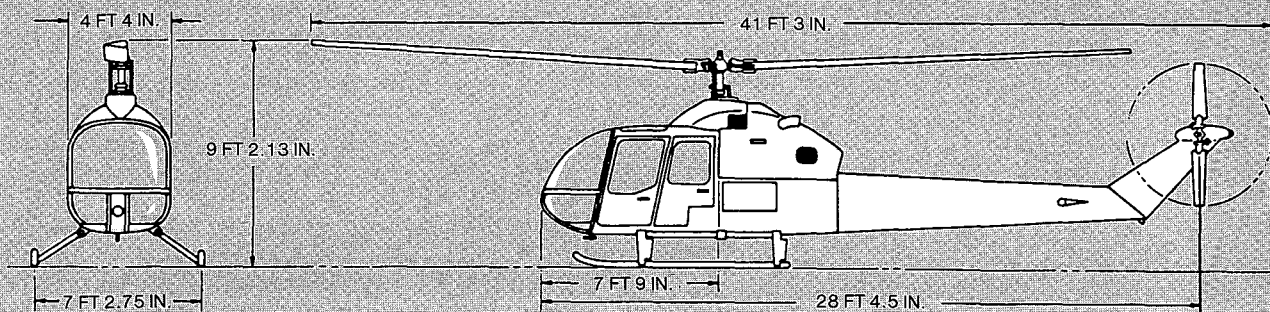
FH-1100 PERFORMANCE SUMMARY

Mission Weight	lbs	2085	2750
Empty Weight	lbs	1415	1415
Useful Load	lbs	670	1335
Pilot	lbs	170	170
Payload w/145 lbs fuel	lbs	355	1020
Payload w/442 lbs. fuel	lbs	58	723
Max. Speed @ S.L.	mph	127	127
Max. Cruise @ 4000 ft	mph	133	133
Max. Range @ 5000 ft	Statute Miles	417	400
Max. Endurance @ 5000 ft	hrs	4.8	4.3
Max. Rate of Climb, Takeoff Power	fpm	2450	1600
Max. Rate of Climb, Normal Rated Power	fpm	2260	1450
Vertical Rate of Climb, Takeoff Power	fpm	2000	800
Vertical Rate of Climb, Normal Rated Power	fpm	1880	700
Service Ceiling	ft	21500	14100
Hover Ceiling, Out of Ground Effect	ft	16600	8400
Hover Ceiling, In Ground Effect	ft	21000	13000





The Fairchild Hiller FH-1100 helicopter.



FH-1100 standard paint scheme.

SYNOPSIS — THE FAIRCHILD HILLER FH-1100

Mfgr's S/N	Operator(s)	Initial Del.	Remarks
09	Retained by Fairchild Hiller as an engineering test unit.	Jun 3, 1966	Was later sold to Condor Helicopter, Ventura, Calif.
10	Helicopter Sales, Ltd.	Dec 6, 1966	Destroyed
11	Trans-Supply, Inc., then Leland C. Nollau, Belleville, Ill.	Apr 24, 1969	
12	O'Connor (?)	Sep 29, 1966	Destroyed
13	Interstate Helicopters, then M&B Helicopters, Vancouver, B.C., Canada.	Apr 7, 1966	
14	Welder (?), then Utility Helicopters, Long Beach, Calif.	Nov 2, 1966	
15	Fairchild Hiller engineering test unit.	Oct 3, 1966	Still retained by FH as of March 1974.
16	Calicopters, then Condor Helicopters.	Dec 9, 1966	
17	Helicopter Utilities Pty. Ltd., Mascot, Australia.	Nov 16, 1966	Used to support the Australian National Antarctic Research Expedition.
18	Wescan Turbo Helicopters, 100 Mile House, B.C., Can., then Klondike Helicopters Ltd., Calgary, Alberta, Can.	May 30, 1967	
19	Helicopter Utilities	Nov 16, 1966	
20	Klondike Helicopters	Dec 15, 1966	
21	Highland Aviation, Oneida, Tenn., then Klondike Helicopters.	May 26, 1967	
22	Thomson Industries, Inc., Manhasset, NY, then Parsons Corp., Stockton, Calif.	Mar 10, 1967	
23	Geophysical Engineering & Survey, Toronto, Ontario, Can.	Jan 18, 1967	Was leased from FH.
24	William Fiore, Pittsburgh, Pa., then Harold L. Runnels, Aldie, Va.	Mar 9, 1967	
25	CARGO (Atomic Energy Commission), Taylor Flying Service, Marana, Ariz.	Jul 10, 1968	Operated for the AEC.
26	Continental Air Service, then Parsons Corp. of Calif.	Jul 15, 1967	
27	Condor Helicopters, then Arctic Air Services, Anchorage, Alaska.	Apr 7, 1967	
28	Bald Mountain Development, then Barnett, Los Angeles, Calif.	May 6, 1967	
29	Calicopters, then Idaho Helicopters, Boise, Idaho.	Mar 5, 1967	
30	Robert C. Robards (UNICEF), Lagos, Nigeria.	Nov 20, 1967	Shown on FH records as "in storage" in 1974.
31	Accurate, then Klondike Helicopters	Apr 1, 1967	
32	Falconbridge Nickel, then Westfrob Mines, Ltd., Vancouver, B.C., Canada.	Apr 11, 1967	
33	Royal Thai Border Police, Bangkok, Thailand.	Aug 12, 1967	
34	Livingston	Apr 18, 1967	Destroyed
35	Alexander Helicopters, Wanganui, New Zealand.	May 23, 1967	Destroyed
36	Klondike Helicopters	May 25, 1967	Destroyed
37	CEMIG (Centrais Electricas SE Minas Gerais, S.A.), Brazil.	Jul 24, 1967	
38	CEMIG	Jul 24, 1967	Destroyed
39	Cypress Airways, Ltd.	Jun 14, 1967	
40	Judge Ray Wilson, then Summers Taylor, Inc., Elizabethton, Tenn.	Sep 23, 1967	
41	Okanagan Helicopters, Ltd., Vancouver, B.C., Canada.	Nov 29, 1967	Destroyed
42	Inter-Mountain Helicopters, Boise, Idaho.	Jul 6, 1967	
43	Latrobe Aviation, Latrobe, Pa.	Oct 6, 1967	

Mfgr's S/N	Operator(s)	Initial Del.	Remarks
44	Fairchild Hiller engineering test unit.	Jun 1, 1967	Was later sold to Condor Helicopters.
45	Walsh (Ireland), then Twyford Moors (Heli) Ltd., Southampton, Hants, England.	Jul 27, 1967	
46	B/S Land & Cattle Co., then Anchorage Helicopter Service, Anchorage, Alaska.	Jan 15, 1968	
47	Fairchild Hiller engineering test unit.	Jun 15, 1967	Was later sold to Condor Helicopters.
48	CEE — EM Reality Inc., then Roger J. Au, Mansfield, Ohio.	May 10, 1968	
49	Helicopter Utilities	Dec 20, 1967	Destroyed
50	Columbia Construction Helicopters, Inc., Portland, Ore., then Inland Equipment Co., Grants Pass, Ore.	Oct 4, 1968	Crashed
51	Helicopter Utilities	Nov 9, 1967	Crashed
52	Tropical Airways, then Guevara & Sons Corp., Mandaluyong Rizal, Philippines.	Oct 25, 1967	
53	Fairchild Hiller demonstrator.	Nov 17, 1967	
54	Manila Banking Corp., Manila, Philippines.	Sep 28, 1967	
55	Lockheed Electronics, then International Air Taxi, Anchorage, Alaska.	Aug 31, 1967	Crashed
56	Royal Thai Border Police	Aug 31, 1967	
57	Royal Thai Border Police	Aug 31, 1967	
58	Royal Thai Border Police	Sep 5, 1967	
59	Royal Thai Border Police	Sep 6, 1967	
60	Royal Thai Border Police	Sep 18, 1967	
61	Royal Thai Border Police	Sep 18, 1967	Crashed
62	Royal Thai Border Police	Sep 19, 1967	
63	Royal Thai Border Police	Sep 19, 1967	Crashed
64	Royal Thai Border Police	Sep 21, 1967	
65	Royal Thai Border Police	Sep 21, 1967	Destroyed
66	Royal Thai Border Police	Sep 21, 1967	
67	Royal Thai Border Police	Sep 21, 1967	
68	Royal Thai Border Police	Sep 21, 1967	
69	Royal Thai Border Police	Sep 21, 1967	
70	Royal Thai Border Police		
71	Ecuador	Dec 14, 1967	Destroyed
72	Condor Helicopters, then Arctic Air Services, Anchorage, Alaska	Jul 13, 1969	
73	Fairchild Hiller demonstrator, then Seneca Helicopters, Inc., Oil City, Pa.	Apr 18, 1969	
74	Consolidated Trader, Ltd., then Whirl-Wide Aviation, Timaru, South Island, New Zealand.	Jan 2, 1968	
75	Aerospace Leasing, then Helicopter Charters of Texas, Addison, Texas.	Aug 30, 1968	Destroyed
76	Fairchild Hiller demonstrator in South America, then Linea Aerea de Helicopter (Helicopservices), Santiago, Chile.	Mar 27, 1968	
77	Helicopter Associates, Woods Cross, Utah.	Jan 9, 1968	
78	Garden Island Helicopters	Jan 10, 1968	
79	Twyford Moors (Heli) Ltd.	Feb 15, 1968	
80	Nassau County Police, Mineola, Long Island, N.Y.	Feb 22, 1968	One of first civil helicopters to be radar equipped.
81	Republic Aviation Division, Fairchild Hiller Corp., Farmingdale, Long Island, N.Y.	Feb 8, 1968	
82	Direccion Provincial de Aeronautica Formosa, Republic of Argentina.	Apr 24, 1968	

SYNOPSIS — THE FAIRCHILD HILLER FH-1100

Mfg's S/N	Operator(s)	Initial Del.	Remarks
83	Klondike Helicopters	Dec 19, 1967	
84	Condor Helicopters, then Arctic Air Services.	Mar 1, 1968	
85	Lake Tahoe Helicopters, the Klondike Helicopters.	May 24, 1968	Crashed
86	Okanagan Helicopters	Jan 16, 1968	
87	Okanagan Helicopters, then James Aviation, Hamilton, New Zealand.	Jan 16, 1968	
88	Okanagan Helicopters, then F. Kjerstad Helicopters, Jackson Hole, Wyo.	Jan 16, 1968	
89	Okanagan Helicopters, then Panhandle Aviation, Lincoln, Neb.	Jan 16, 1968	
90	Evergreen Helicopters, Inc., McMinnville, Ore., then Astro Aviation, North Hollywood, Calif.	Jun 11, 1969	Crashed
91	Panamanian Air Force, Republica de Panama, Panama City, Pan.	Feb 18, 1969	Crashed
92	Okanagan Helicopters, then Metropolitan Helo, Inc., Glenco, Mo.	Jan 16, 1968	
93	Okanagan Helicopters, then Panhandle Aviation.	Jan 16, 1968	
94	Okanagan Helicopters, then Panhandle Aviation.	Jan 16, 1968	
95	Okanagan Helicopters, then Panhandle Aviation.	Jan 16, 1968	
96	Okanagan Helicopters	Jan 16, 1968	Destroyed
97	Aerofoto (Mexico), then Des Envolvimento Rodiario S.A. (DERSA), Sao Paulo, Brazil.	Mar 4, 1968	
98	Pruner (?), then Rogers Helicopters, Clovis, Calif.	Jun 30, 1969	
99	Triangle Airways, Baileys Crossroads, Va.	Oct 23, 1969	Provided shuttle service between Washington's National, Dulles, and Baltimore's Friendship airports. Crashed.
100	Asplundh Aviation, Philadelphia, Pa.	Jul 3, 1969	
101	Klondike Helicopters, then Joe Brewer, Everett, Wash.	Feb 2, 1968	
102	Brazilian Navy, Brazil, S.A.	Jun 24, 1968	
103	Brazilian Navy	Jun 23, 1968	
104	Brazilian Navy	Jun 24, 1968	
105	Brazilian Navy	Jun 25, 1968	
106	Brazilian Navy	Jun 25, 1968	
107	Malaysian Air Charter	Aug 10, 1969	
108	Republic of Argentina	Apr 24, 1968	
109	Brazilian Navy	Jun 26, 1968	
110	John Daily, Helicopters de Panama, Republic of Panama	Jun 29, 1969	
111	Columbia Helicopters, then Utility Helicopters, Long Beach, Calif.	May 4, 1968	Destroyed
112	Hudson Bay Mining & Smelting, Toronto, Ontario, Canada.	Apr 6, 1968	
113	Bureau of Reclamation, Department of the Interior.	May 15, 1968	Destroyed
114	Public Health of Mexico, then Jim Kruger Helicopter Service, Cuttbank, Montana.	Apr 27, 1968	
115	Lake Tahoe Helicopters, then Condor Helicopters.	Jun 21, 1969	
116	Autair, then Alma Air Service Ltd., Alma, Quebec, Canada.	Apr 27, 1968	
117	Fairchild Hiller demonstrator, then C&K Coal, Clarion, Pa.	Jul 9, 1969	
118	Lannon Helicopters, then Arrons Aviation, Oxnard, Calif.	Apr 5, 1968	Crashed
119	Republic of Panama	Feb 18, 1969	
120	Highland Aviation	Apr 8, 1968	



Mfg's S/N	Operator(s)	Initial Del.	Remarks
121	Companhia Hidro Eletrica Do Sao Fransisco (CHESF), (Brazil Hydro Electric), Rio de Janeiro, Brazil.	Aug 2, 1968	
122	CHESF	Aug 2, 1968	
123	Public Service of Colorado, then Parsons Corp. of California.	May, 4, 1968	
124	Columbia Helicopters	Jan 24, 1969	
125	Columbia Helicopters, then Bohemia Lbr. Co., Eugene, Ore.	Nov 13, 1968	
126	Columbia Helicopters, then Merric, Inc., Fairbanks, Alaska.	Jun 30, 1969	
127	Triangle Airways, then Paul Delorengo, Mt. Pleasant, Mich.	Oct 31, 1969	
128	Columbia Helicopters	Jul 10, 1969	
129	Servicio Aero de La S.O.P. Hangar, Mexico.	Jul 25, 1969	
130	Gobierno Del Estado de Durango	Mar 27, 1969	
131	The Cosmodyne Corp., Calif., then Anchorage Helicopter Serv.	May 13, 1969	
132	Panamanian Air Force	Aug 12, 1969	
133	Alaska Helicopters, Anchorage, Alaska.	Feb 5, 1969	
134	Evergreen Helicopters, then Inland Equipment Co., Grants Pass, Ore.	Jun 7, 1968	
135	Republic Aviation Division	Aug 14, 1968	Destroyed
136	Inter-Mountain Helicopters	May 24, 1968	
137	Alaska Helicopters	Apr 23, 1969	Crashed
138	Subsecretaria Forestal Y de La Fauna (Forest Department, Mexico), Mexico.	Aug 30, 1968	
139	Prefeitura Do Municipio de Sao Paulo, Sao Paulo, Brazil.	Nov 19, 1968	
140	Okanagan Helicopters, then Linea Aerea de Helicopter, Santiago, Chile.	Jul 3, 1969	
141	Alaska Helicopters	May 7, 1969	
142	Asplundh Aviation, then Parsons Corp. of Calif., then Colmill Enterprises, Nashville, Tenn.	Sep 12, 1968	
143	Avery Aviation, then Merric, Inc.	Dec 11, 1968	

Mfg's S/N	Operator(s)	Initial Del.	Remarks
144	Produrado General, Mexico	Dec 11, 1968	Destroyed
145	Jefe de Mantenimiento Policia de Puerto Rico (Puerto Rico Police), San Juan, Puerto Rico.	Sep 20, 1968	
146	Puerto Rico Police	Sep 20, 1968	
147	Gobierno Del Estado de Durango	Dec 3, 1968	Destroyed
148	The Cosmodyne Corp., then Anchorage Helicopter Service.	May 1, 1969	
149	Argentine Art Graphic, then Bank de La Plata, Province of Buenos Aires, Argentina.	Apr 7, 1969	
150	California Highway Patrol, Sacramento, Calif., then Jack Gifford, Anchorage, Alaska.	Mar 10, 1969	Equipped with removable litters.
151	Direccion Nacional de Gendarmeria (Argentine Army), Buenos Aires, Argentina.	Sep 19, 1968	Crashed
152	Commando En Jefe Del Ejercito (Argentine Army)	Sep 18, 1968	
153	Direccion Nacional de Gendarmeria	Sep 30, 1968	
154	Direccion Nacional de Gendarmeria	Sep 18, 1968	
155	Commando En Jefe Del Ejercito	Oct 2, 1968	
156	California Highway Patrol, then Arizona Helicopters, Scottsdale, Arizona.	Mar 10, 1969	Equipped with removable litters. Destroyed.

Mfg's S/N	Operator(s)	Initial Del.	Remarks
157	California Highway Patrol	Mar 10, 1969	Equipped with removable litters.
158	Belcher Oil, Miami, Fla., then Malaysia Air Charter, Kuala Lumpur, Malaysia.	May 1, 1969	
159	Carabineros de Chile, Santiago, Chile	Jul 30, 1969	
160	Helicopters de Panama	May 15, 1969	Crashed
161	California Highway Patrol	Sep 10, 1969	Equipped with removable litters.
162	State of New Jersey, Division of State Police, Trenton, N.J.	Sep 26, 1969	
163	Evergreen Helicopters	May 29, 1969	
164	Arizona Helicopters, then Highland Aviation	Apr 29, 1969	
165	Arizona Helicopters	Apr 29, 1969	
166	Commando En Jefe Del Ejercito	Sep 24, 1968	
167	Commando En Jefe Del Ejercito	Oct 1, 1968	
168	Evergreen Helicopters, then Alpine Helicopters, Maple Valley, Wash.	Jun 5, 1969	
169	Evergreen Helicopters, then Alexander Helicopters	Jun 6, 1969	
170	Carabineros de Chile, Santiago, Chile	Jul 30, 1969	
171	Centrais Eletricas de Sao Paulo (CESP)	Sep 18, 1969	
172	CESP	Sep 18, 1969	
173	Evergreen Helicopters, then Colmill Enterprises	Jul 25, 1969	
174	Bologna Coal Co., Burgettstown, Pa.	Aug 7, 1969	

This FH-1100 is performing power line inspection duty.
(Fairchild Hiller Photo)

Fairchild Hiller's engineering test unit (N516FH) makes a high-speed pass over the Hagerstown, Maryland airport in 1966. (Photo by Lyle S. Mitchell)



SYNOPSIS — THE FAIRCHILD HILLER FH-1100

Mfgr's S/N	Operator(s)	Initial Del.	Remarks
175	State of Louisiana, Division of State Police, Baton Rouge, La.	Sep 12, 1969	
176	State of Louisiana	Sep 12, 1969	
177	Triangle Airways, then Kerris & Helfrick, Inc., Mt. Carmel, Pa.	Sep 10, 1969	
178	Fairchild Hiller demonstrator, then Merric, Inc.	Sep 19, 1969	
179	Fairchild Hiller demonstrator, then Merric, Inc.	Sep 23, 1969	
180	Fairchild Hiller demonstrator, then Nassau County Police.	Oct 1, 1969	
181	State of Louisiana	Sep 12, 1969	
182	Parsons Corp. of California	1969	Crashed
183	Nassau County Police	1969	Crashed
184	AAA Ambulance Service, Hattiesburg, Miss.	1969	
185	Helicopters de Panama, then Fuerza Aerea Salvadoreña, Ilopango, El Salvador.		
186	Fairchild Hiller demonstrator, then Crown Oil & Wax Co., Frederick, Md.	Oct 30, 1969	
187	State of Michigan, Department of State Police, Lansing, Mich.	Dec 1969	
188	Star Enterprises, then Helicopterservices (Chile).		
189	Highlife Helicopters, then M&B Helicopters, Vancouver, British Columbia, Canada.	Mar 27, 1970	Crashed
190	Direccion General de Aeronautical Provincia, Republic of Argentina.		
191	Thomson Industries, Inc., Manhasset, N.Y.		
192	Columbia Helicopters, then Roseburg Lumber Co., Roseburg, Ore.	May 15, 1970	
193	Centrais Eletricas de Sao Paulo (CESP)		
194	Alaska Helicopters		
195	Utility Helicopters		
196	Utility Helicopters		
197	Alaska Helicopters		
198	Alaska Helicopters		
199	Guanabara Police (Brazil)		
200	Guanabara Police		
201	Perforadora (Mexico)		
202	Byerly Aviation, Peoria, Illinois		
203	Wayne Traylor, Monroe, Wash.	Mar 30, 1970	
204	Direccion General de Fabricaciones Militares, Buenos Aires, Argentina.	1970	
205	Direccion General de Fabricaciones Militares	1970	
206	Seneca Helicopters, Inc.	1970	
207	Alaska Helicopters	1970	
208	Compania Metropolitana de Aguas de Sao Paulo (COMASP), Sao Paulo, Brazil	1970	
209	Department of Virginia State Police, Richmond, Va., then South Carolina Helicopters, Saluda, S.C.	June 1970	Equipped with removable litters, night spotlight, and public address system.
210	Department of Virginia State Police	June 1970	
211	Helicopters de Panama	Dec 19, 1969	
212	Fairchild Hiller demonstrator, then M.F. Fetterolf Coal Co., Boswell, Pa.	Dec 23, 1969	
213	City of Columbus, Ga., then South Carolina Helicopters.	1970	Equipped with removable litters, night spotlight, and public address system.

Mfgr's S/N	Operator(s)	Initial Del.	Remarks
214	Baltimore City Police, Baltimore, Maryland.	1970	
215	Arizona Helicopters	1970	
216	Aeroleo Taxi Aero Ltd., Rio de Janeiro, Brazil.	1970	
217	?		
218	Astro Aviation	1970	
219	?		
220	Buffalo Coal Co., Bayard, W.Va.	1970	
221	Secretaria de Estado GE Obras Pullicas Y Transportation, Buenos Aires, Argentina.	1971	
222	Secretaria de Estado de Energia Y Minería, Buenos Aires, Argentina.	1971	
223	Hawaii Helicopters, Lihue, Hawaii	1971	
224	Gendarmaria (Argentina)	1971	
225	Transpotes Aereos Subsecretaria Forestal (Mexico)	1971	
	Lanning Corp., Grand Rapids, Mich.	1971	
227	Florida Flood Control, Central & Southern District, West Palm Beach, Fla.	1970	
228	?		
229	?		
230	?		
231	Institute of Geografico Militar, Buenos Aires, Argentina.	1970	
232	Robert W. Winzinger, Inc., Hainesport, N.J.	1970	
233	Western Rotor Service, Glendale, Calif.	1970	
234	Desenvolvimento Rodovia-Rio S.A. (DERSA), Sao Paulo, Brazil.	1970	
235	CEMIG (Brazil)	1970	
236	Gobierno de Costa Rica, San Jose, Costa Rica.	1970	
237	Aeroleo Taxi Aero Ltd., Rio de Janeiro, Brazil.	1970	
238	William Fiore, Pittsburgh, Pa.	1970	
239	Guam Helicopters, Agana, Guam	1970	
240	Carolina Explorers, Troy, N.C.	1970	
241	Aeroleo Taxi (Brazil)	1970	
242	Highlife Helicopters	1970	
243	California Highway Patrol	1971	
244	California Highway Patrol	1971	
245	Aeroleo Taxi	1970	
246	Aeroleo Taxi	1970	
247	Helicopterservices (Chile)	1970	
248	Aeroleo Taxi	1970	
249	Aeroleo Taxi	1970	
250	Chugiak Aviation, Chugiak, Alaska	1970	
251	Virginia State Police, Roanoke, Va.	1971	
252	Guanabara Police (Brazil)	1971	
253	Guanabara Police	1971	
254	Goetz Construction, Chambersburg, Pa.	1971	

Production of the FH-1100 by Fairchild Hiller Corporation ceased in 1971. Spare parts and service support continued to be provided until 1973 when the responsibility was assumed by Heli-Parts, Inc., of Porterville, California.