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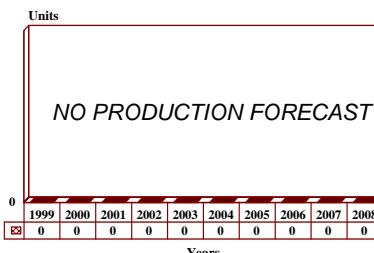
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Hiller UH-12E - Archived 12/2000

Outlook

- Very little or no production at present; no word on partial transfer to Thailand
- Hiller refurbishing existing aircraft; outlook for continuing production cloudy
- Full production resumption appears unlikely

10 Year Unit Production Forecast
1999-2008



Orientation

Description. Single-rotor, piston-powered helicopter.

Sponsor. Privately sponsored by the manufacturer.

Contractors. Hiller Aircraft Corp., Newark, CA.

Status. Production restarted early 1995, UH-12E5 development currently suspended.

Total Produced. Approximately 354 U-12 aircraft of all models produced through 1998.

Application. Utility transport, agricultural, pipeline patrol, forestry duties.

Price Range. UH-12E3, approximately \$260,000 in 1998 US dollars.

Technical Data

(UH-12E/E4)

	<u>Metric</u>	<u>US</u>
Dimensions		
Max length ^(a)	12.4 m	40.7 ft
Fuselage length	9.1 m	29.8 ft
Height overall	3.1 m	10.1 ft
Main rotor diameter	10.8 m	35.4 ft
Tail rotor diameter	1.1 m	5.5 ft

Weight

Operating, empty	798/838 kg	1,759/1,836 lb
Max weight ^(b)	1,407 kg	3,100 lb
Useful load	609/574 kg	1,341/1,264 lb

Capacities

Standard fuel	174.1 liters	46 gal
Auxiliary fuel	151.4 liters	40 gal



Performance

	<u>Metric</u>	<u>US</u>
Max permissible speed	154 km/h	83 kt
Cruise speed	144 km/h	78 kt
Max rate of climb	284/393 mpm	933/1,290 fpm
Hover ceiling (OGE) ^(c)	2,072 m	6,800 ft
Hover ceiling (IGE) ^(c)	3,169 m	10,400 ft
Service altitude	4,571 m	15,000 ft
Range, S/L, with reserves ^(d)	320 km	173 nm
Range, S/L, max fuel	674 km	364 nm
Endurance ^(e)	4.1 hr	4.1 hr

Propulsion

UH-12E3/5 (1) Textron Lycoming VO-540-C2A flat-six gasoline-fueled piston engine derated to 227.5 kW (305 hp).

Seating

UH-12E, three-seat; UH-12E5, five-seat.

^(a)Rotors extended.

^(b)To 2,255 m (7,400 ft).

^(c)At 1,270 kg (2,800 lb).

^(d)30-minute reserve.

^(e)With auxiliary tank, and with 30-min reserve.

Variants/Upgrades

UH-12E4. A discontinued four-seat version of the UH-12E, with accommodation for the pilot on a single adjustable seat forward and three passengers side-by-side on a rear bench seat. Additional space for cargo was in the tailboom. Also offered was an optional wider cabin door for ease of accessibility. Like the 12E model, the 12E4 performed mainly utility functions, such as forestry, agricultural and light crane work.

UH-12E5. Five-seat variant which flew in January 1995. Cabin lengthened by insertion of a floor insert permitting installation of the aircraft's two front seats. Flight controls and instrument pedestal have been redesigned. Development suspended.

UH-12E5T. A turbine-powered variant of the five-seat model powered by a single Allison 250-C20B turboshaft engine, rated at 310 kW (301 shp). The Allison 250 turboshaft package was originally offered

as a retrofit only, but Hiller subsequently obtained the STC from Soloy, its developer. The installation features a heavy-duty reduction gearbox. A prototype E5T flew in January 1995.

UH-12E Agricultural Variant. Agricultural equipment available to be fitted on the UH-12E includes a Simplex Manufacturing Co Model 3300 system with a 9.7 meter (32 foot) folding sprayboom apparatus and dual glassfibre tanks. The Model 3300 system has a total capacity of 416.3 liters (110 gallons US), or 529.9 liters (140 gallons US) and is designed for quick change to a dry system. Also available is the Simplex Model 4500 system, which has a single-tank capacity of 529.9 liters and features folding spraybooms. Customers include the Indian Ministry of Agriculture for two units, with a possibility of follow-on orders.

Program Review

Background. The 12E was one of the first helicopter designs, and the baseline model has served as the core of several derivatives and a host of updates. This aircraft was first flown in 1948 (as Model 360) and later became the UH-12 when the company name was United Helicopters. Hiller sold the company to Fairchild Industries, which took the helicopter line out of production in 1966. Hiller Aviation revived the company in January 1973 and acquired the design rights, production tooling and the spares of the 12E. Hiller Aviation provided spares support to many of the military UH-23s and civil 12Es previously produced.

Rogerson acquired the company in April 1984 and in 1994 Jeffrey Hiller, backed by a Thai investment consortium, bought the since renamed Hiller Aircraft

Corp from Rogerson. Production of the E3 model was restarted later that same year. The larger E5 was to enter production in 1995, but its development has since been suspended.

Turbine Models. Approximately 185 earlier model UH-12Es were converted to 250-C20B turbine power using an STC developed by Soley. Hiller now offers the E5 with either turboshaft or piston engines. The E5T offers improved climb and altitude performance, but higher fuel consumption limits its range/endurance as compared with the piston-powered version.

Timetable

Month	Year	Major Development
	1948	Model 360 first flies
	1960	Development of the E4
	1966	Fairchild Industries takes helicopter line out of production
	1973	Hiller Aviation gains production rights
Jan	1984	Hiller Aviation files Chapter 11
Apr	1984	Rogerson acquires Hiller assets; name changed to Hiller Helicopters
	1985	Hiller Helicopters renamed Rogerson Hiller Corp
Mid	1986	UH-12E production resumes
End	1993	Production ceases
	1994	Jeffrey Hiller acquires company; production restarts
Jan	1995	UH-12E5 prototype flies
Jun	1995	First Hiller-built UH-12E3 flies
Fall	1995	Initial production deliveries
	1999	Production of current model expected to end

Worldwide Distribution

Not available.

Forecast Rationale

Hiller delivered two UH-12Es in 1997 but none appear to have been shipped in 1998. Little has been heard within the past 12-18 months regarding the manufacturer's plans to transfer some parts to Thailand by the year 2001.

Hiller's primary aim, since the new ownership set up shop three years ago, has been the production of sufficient spares to support those Hillers already in the field. Hiller has also been refurbishing and reselling

previously built aircraft, including a small number for export to Thailand.

The UH-12E apparently has not been placed back in production yet, and the manufacturer's plans for this may be tied in with the planned production transfer to Thailand. Nothing has been announced regarding that development; accordingly, we are no longer forecasting new-production UH-12Es for the 1999-2008 period.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Aircraft	(Engine)	thru 98	<u>High Confidence Level</u>			<u>Good Confidence Level</u>			<u>Speculative</u>			Total 99-08	
			99	00	01	02	03	04	05	06	07	08	
HILLER UH-12E Total Production	VO-540-C2A		354	0	0	0	0	0	0	0	0	0	0
			354	0	0	0	0	0	0	0	0	0	0