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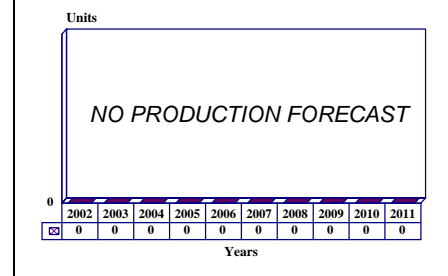
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Eurocopter SA.341/342 Gazelle - Archived 4/2003

Outlook

- No additional Gazelle production is anticipated
- More than 1,800 have been produced

10 Year Unit Production Forecast
2002 - 2011



Orientation

Description. Five-seat, single-turboshaft powered military and commercial utility and military anti-armor helicopters.

Sponsor. French Ministry of Defense.

Contractors. Societe Nationale Industrielle Aerospatiale Division Helicopters, which was merged with DASA/MBB helicopter operations in 1992 to form Eurocopter. The Gazelle was produced by Aerospatiale in La Courneuve, France.

Coproducer. Westland Group Plc, Westland Helicopters; Yeovil, Somerset, UK.

Licensees. Arab British Helicopter Company (ABHCo), Helwan, Egypt; and Vazduhoplovna Industrija SOKO, Mostar, Bosnia and Herzegovina.

Status. French production ended in 1991; Yugoslav licensed production halted in 1992.

Total Produced. Through 1991, Aerospatiale produced approximately 683 SA.341s and 574 SA.342 models for a total of 1,257. Licensed production totaled an estimated 554 units, including 30 by ABHCo, 230 by SOKO, and 294 by Westland.

Application. Military missions include reconnaissance, light attack, border patrol, fire support, liaison, and drug interdiction. Commercial uses include resource development, pipeline and utility power line patrol, fishery protection, flight training, and media reporting, among others.

Price Range. \$850,000 to \$1 million, depending upon weapons and avionics fit, in 1991 US dollars.

Technical Data

(SA.342L1/342M)

	<u>Metric</u>	<u>US</u>
Dimensions		
Max length overall	11.97 m	39.27 ft
Height (max)	3.19 m	10.47 ft
Main rotor diameter	10.50 m	34.45 ft

	<u>Metric</u>	<u>US</u>
Tail rotor diameter	0.695 m	2.28 ft
Weight		
Weight empty (SA.342L1)	999 kg	2,202 lb
Max TO weight	2,000/2,100 kg	4,410/4,630 lb
Capacities		
Usable fuel	545 liters	144 gal
Performance^(a)		
Max cruise at SL	260 kmph	140 kt
Service ceiling	4,100 m	13,450 ft
Hover ceiling:		
OGE	2,370 m	7,775 ft
IGE	3,040 m	9,975 ft
Range at SL, normal fuel	710 km	383 nm
Propulsion		
SA.342L1/M	(1)	Turbomeca Astazou XIVM single-shaft, axial-centrifugal-flow turboshaft engine rated 640 kW (858 shp).

Seating

Standard seating for five.

Armament

Available options included two rocket pods capable of carrying Thomson-Brandt 68 mm or FZ 6.985 cm (2.75 in) rockets, four or six HOT wire-guided missiles, two forward-firing 7.62 mm machine guns, four Mistral air-to-air missiles, or one Giat M621 20 mm cannon.

^(a)SA.342L1 at maximum take-off weight.

Variants/Upgrades

Aerospatiale marketed about a dozen Gazelle variants; the most recent line is briefly described as follows:

SA.342L1. This variant was a basic military export model, superseding the SA.342L. It had a higher gross weight than earlier derivatives and was powered by the Turbomeca Astazou XIVM engine, as was the SA.342M.

SA.342M. The military variant for the French Army Light Aviation Corps (ALAT). The SA.342M has an

ALAT instrument panel and uses the Astazou XIVM turboshaft engine with an automatic start function and high-energy ignition. Optional equipment as specified by the ALAT included the SFIM PA 85G autopilot, Sextant Avionique Nadir self-contained navigation system, Decca 80 Doppler, and night flight equipment. The SA.342M is capable of carrying four to six HOT anti-tank missiles. ALAT deliveries began in February 1980. Orders for the French Army totaled 188 units.

Program Review

Background. The Gazelle is a five-place helicopter developed largely from proven components and systems of Aerospatiale's popular Alouette series. The aircraft resembles the Alouette III to some degree, but incorporates the French company's shrouded-fan-type (fenestron) tail rotor. It also uses the Alouette II's transmission and employs a three-bladed, semi-articulated main rotor with fiberglass blades.

Under an agreement signed in 1967 between Westland and Aerospatiale, Westland began producing Gazelle aircraft. The UK firm built 294 units, ending production in 1984. SOKO, then of Yugoslavia, began Gazelle production in 1971. The Arab British Helicopter Company assembled Gazelles under license, and completed an order for 30 units in 1985. The

Astazou XIV engines for these aircraft were assembled by the Arab British Engine Co (ABECo).

Funding

Not available.

Recent Contracts

None

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Apr	1967	Prototype first flight
Apr	1968	Initial flight of second prototype
Aug	1971	First flight of production-standard aircraft; deliveries begun
	1971	Yugoslav licensed production begun
	1985	ABHCo licensed program completed
	1991	French production ended
	1992	SOKO licensed production halted

Worldwide Distribution

Military/Government Operators

Angola Air Force	10	Morocco Air Force	24
Burundi Air Force	5	Morocco Police	6
Cameroon Air Force	4	PRC Air Force	8
Chad Air Force	1	Qatar Air Force	14
Cyprus Army	4	Qatar Police	2
Ecuador Army	28	Rwanda Air Force	6
Egypt Air Force	91	Senegal Air Force	1
Egypt Navy	12	Syria Air Force	58
France Army	349	Trinidad & Tobago Government	1
Gabon Air Force	5	UAE Air Force	11
Guinea Air Force	1	UK Air Force	27
Iraq Air Force	52	UK Army	154
Ireland Air Force	2	UK Navy	19
Jordan Air Force	8	Yugoslavia Air Force	38
Kenya Air Force	2	Yugoslavia Navy	1
Kuwait Air Force	20	Total	1,008
Lebanon Air Force	4		
Libya Army	40		

Forecast Rationale

Gazelle production by Aerospatiale was completed in 1991. Eurocopter, which later absorbed the helicopter division of Aerospatiale, is currently focusing on development and initial production of the Tiger combat helicopter. The Tiger will be one of Eurocopter's

principal military rotorcraft products for the next 20 years.

As shown in the chart below, no additional new Gazelle production is forecast. Some opportunities could develop for retrofit and modification work on existing Gazelles.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Aircraft	(Engine)	thru 01	High Confidence Level				Good Confidence Level			Speculative			Total 02-11
			02	03	04	05	06	07	08	09	10	11	
EUROCOPTER													
SA.341	ASTAZOU IIIA	683	0	0	0	0	0	0	0	0	0	0	0
SA.342	ASTAZOU XIV	343	0	0	0	0	0	0	0	0	0	0	0
SA.342L1/M	ASTAZOU XIVM	231	0	0	0	0	0	0	0	0	0	0	0
Subtotal - EUROCOPTER		1257	0	0	0	0	0	0	0	0	0	0	0
ARAB BRITISH HELICOPTER CO (Licensee)													
SA.342	ASTAZOU XIVH	30	0	0	0	0	0	0	0	0	0	0	0
Subtotal - ARAB BRITISH HELICOPTER CO (Licensee)		30	0	0	0	0	0	0	0	0	0	0	0
SOKO, MOSTAR (Licensee)													
SA.341	ASTAZOU IIIB	158	0	0	0	0	0	0	0	0	0	0	0
SA.342	ASTAZOU XIVH	72	0	0	0	0	0	0	0	0	0	0	0
Subtotal - SOKO, MOSTAR (Licensee)		230	0	0	0	0	0	0	0	0	0	0	0
WESTLAND (Licensee)													
SA.341/342	ASTAZOU III/XIV	294	0	0	0	0	0	0	0	0	0	0	0
Subtotal - WESTLAND (Licensee)		294	0	0	0	0	0	0	0	0	0	0	0
Total Production		1811	0	0	0	0	0	0	0	0	0	0	0