

ARCHIVED REPORT

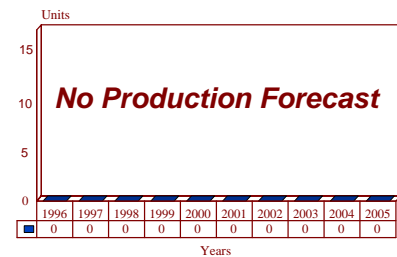
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BAe ATP/Jetstream 61 - Archived 7/97

Outlook

- Final ATPs delivered in 1994
- No further production seen in wake of link-up with ATR

10 Year Unit Production Forecast
1996-2005



Orientation

Description. Twin-turboprop-powered 50-72 seat pressurized commuter/regional transport aircraft.

Sponsor. British Aerospace.

Contractors. The BAe 748 was developed by A.V. Roe & Co and later produced by British Aerospace plc, British Aerospace Commercial Aircraft Group, Airlines Division, Weybridge, Surrey, England, UK. The ATP derivative was developed by BAe and is now the responsibility of BAe's Jetstream Division. Production is at Prestwick, having been transferred from Woodford in 1992.

Licensee. Hindustan Aeronautics Limited, Kanpur Div, Chakeri, Kanpur, India; for the 748 only.

Status. J61/ATP production ended in 1994.

Total Produced. A total of 383 HS/BAe 748 aircraft produced and delivered, including 89 built under license by HAL in India. BAe delivered last of 55 ATPs in 1994.

Application. Regional/commuter line passenger services on short-range segments up to about 250 nm. Additional applications include small package/cargo/freight and several potential military and paramilitary uses, including airborne terrestrial and maritime surveillance, anti-submarine warfare, and electronic intelligence.

Price Range. Approximately \$13.25 million fully equipped (1995 US constant dollars).

Technical Data

(ATP)

Design Features. Cantilever low wing monoplane with conventional cantilever tail section; all of standard light alloy construction with a small percentage of the overall airframe fabricated from composite materials. Retractable tricycle landing gear is employed. Aircraft fuselage is

derived from the HS.748, the airframe being approximately 25 percent common with the older model and 40 percent common when all subsystems are considered. Wings, control systems, propulsion, undercarriage, hydraulics and electrical systems are new.

Dimensions	Metric	US
Length overall	26.00 m	85.33 ft
Height	7.14 m	24.4 ft
Wingspan	30.63 m	100.5 ft
Cabin internal width	2.49 m	8.083 ft
Cabin height, max	1.92 m	6.33 ft
Cabin length	19.20 m	63.0 ft
Weights		
Max zero-fuel weight	21,772 kg	48,000 lb
Max T-O weight	23,678 kg	52,200 lb
Capacities		
Standard fuel	6,364 liters	1,681 gallons US
Max payload	7,452 kg	16,430 lb
Performance		
Take-off run, ISA/SL	1,329 m	4,360 ft
Max cruise speed	500 km/h	270 kt
Max range from 1,220 m airfield, ISA + 200 C	370 km	200 nm
Propulsion		
ATP (early)	(2)	UTC Pratt & Whitney Canada PW126A turboprops rated 1,978 kW (2,653 shp) each.
ATP (final production version)	(2)	UTC Pratt & Whitney Canada PW127D turboprops rated 2,051 kW (2,750 shp) each.
Jetstream 61	(2)	UTC Pratt & Whitney Canada PW127D turboprops rated 2,051 kW (2,750 shp) each.

Variants/Upgrades

Jetstream 61. Formerly called the ATP Improved, Jetstream 61 was intended replacement for the original production-baseline ATP aircraft and provides a 20 percent improvement in payload range. On a 250 nm sector, carrying 64 passengers and baggage, the aircraft

needs only 3,500 ft of runway. The original ATP needed 4,265 ft, while the directly competitive ATR-72 required 4,200 ft. Powered by updated PW127Ds and featuring increased design weights and revised interior. Standard seating is for 70 at four-abreast.

Program Review

Background. The British Aerospace Advanced Turbo-prop (ATP) transport, designated as of April 1993 as the Jetstream 61, was derived from the earlier BAe 748, formerly the HS.748 and originally the A.V. Roe Andover. The Jetstream 61's predecessor flew for the first time in June 1960, and entered production in the UK and in India, under license to Hindustan Aeronautics Ltd

(HAL), the following year. Final deliveries of the Super 748 model took place in 1987; a total of 89 machines was built by HAL in addition to 292 units produced in Britain.

Jetstream 61 Design Details. BAe formally unveiled a full-scale ATP fuselage mock-up at the 1982 Farnborough show. The aircraft retains the fuselage cross section of the Super 748, but the new model incorporates a 5.64 m (18.5

ft) stretch to accommodate 64-72 passengers, and is fitted with six-bladed propellers of composite construction. Originally, aircraft for North American customers were to be powered by Pratt & Whitney Canada PW124A turboprops rated at 1,790 kW (2,400 shp), while all others were to be fitted with 1,978 kW (2,653 shp) PW126A engines. BAe subsequently standardized on the more powerful (2,051 kW/2,750 shp) PW127D powerplants.

International Subcontractor Base. As an incentive to future Jetstream 61 sales, BAe signed contracts with several overseas manufacturers covering the manufacture and supply of components and subassemblies. India's HAL built the 748 under license and received a contract, with an initial value of \$10.7 million, to provide up to 150 sets of

tailplanes; the Shenyang Aircraft Corp of the People's Republic of China built rudders under an \$800,000 contract; while Greece's Hellenic Aerospace Industries built flaps. BAe also signed an MoU with Aerospace Industries of Malaysia covering future collaboration.

BAe/ATR Venture - J61's Demise. In January 1995 BAe and the Franco-Italian ATR consortium, comprised of Aerospaiale and Alenia, entered into an agreement calling for the joint marketing of each other's product lines. Consequently, the new consortium agreed to phase the J61 out as it may have diluted the market potential of the similar sized ATR-72, which has chalked up a fairly impressive order backlog. The final J61 delivery was made in 1994.

Funding

Not available. FI/DMS estimates development cost at approximately \$100 million.

Timetable

Jan	1959	Design begun
Jun	1960	Prototype first flight
Aug	1961	First production aircraft flew
Nov	1961	First HAL-assembled 748 flew
Jun	1967	First flight of Series 2A aircraft
Dec	1976	300th Model 748 delivered
Feb	1977	First flight of Coastguarder variant
Sep	1978	Series 2B announced
Mid	1979	Initial Series 2B deliveries
Sep	1982	ATP announced
Mar	1984	Production go-ahead decision made on ATP
Late	1984	Initial Series 2B Super deliveries
Late	1984	HAL series production ended
Mid	1985	748 production series ended
Jun	1985	Initial orders placed for ATP
Aug	1986	Prototype ATP first flight
Apr	1988	Initial ATP deliveries
Apr	1993	ATP name changed to Jetstream 61
Jan	1995	BAe/ATR joint marketing agreement announced; J61 to be dropped
Late	1996	Final ATP deliveries anticipated

Worldwide Distribution

Refer to World Airline Inventories in the Appendices.

Forecast Rationale

The final J61 was delivered in 1994 and it appears that orders for three remaining units were dropped in 1995. Tentative plans for a further upgraded variant have apparently fallen by the wayside in favor of additional

ATR-72 versions in the wake of formation of the AI(R) consortium.

Based on these developments, no further production is forecast.

Ten-Year Outlook

		ESTIMATED CALENDAR YEAR PRODUCTION												Total
		<u>High Confidence</u>				<u>Good Confidence</u>				<u>Speculative</u>				
		<u>Level</u>				<u>Level</u>								
<u>Aircraft</u>	<u>(Engine)</u>	<u>thru 95</u>	<u>96</u>	<u>97</u>	<u>98</u>	<u>99</u>	<u>00</u>	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>96-05</u>	
BRITISH AEROSPACE A/C GROUP														
748-2A/2B/2B SUPER	DART RDA.7/2 MK 552	294	0	0	0	0	0	0	0	0	0	0	0	
ATP/JETSTREAM 61	PW124A/126/127D	55	0	0	0	0	0	0	0	0	0	0	0	
Subtotal - BRITISH AEROSPACE A/C GROUP		349	0	0	0	0	0	0	0	0	0	0	0	
HAL (Licensee)														
748	DART RDa.7	89	0	0	0	0	0	0	0	0	0	0	0	
Subtotal - HAL (Licensee)		89	0	0	0	0	0	0	0	0	0	0	0	
Total Production		438	0	0	0	0	0	0	0	0	0	0	0	