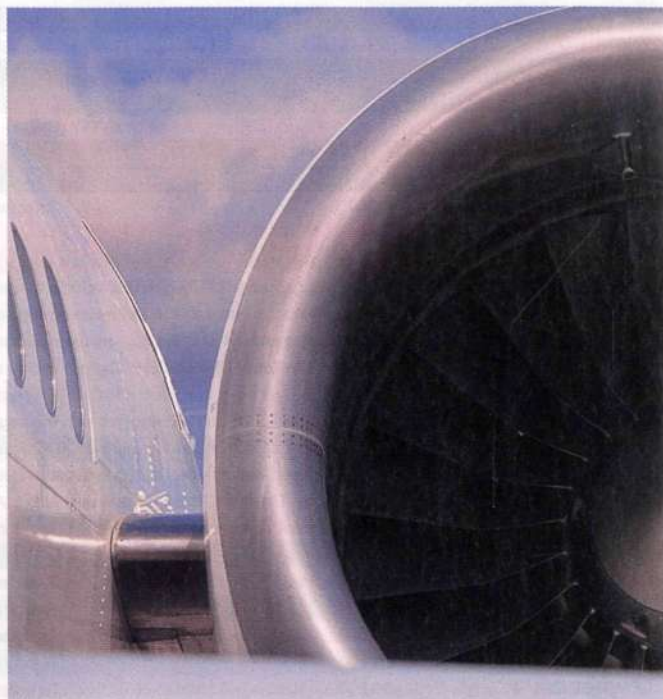


# Turbofans and turboprops by manufacturer



The grounding of older JT8D-powered aircraft (left) is bad news for Pratt & Whitney, while Rolls-Royce's BR-715 (right) powers the Boeing 717-200, which is under threat

#### CONVERSION FACTORS

1,000lb thrust = 4.45kN  
1,000shp = 745kW

Model	Max thrust (lb)	Power max (SL) (shp)	Notes/Description (inc submodel)
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#### AGILJS ENGINES

Florida-based Agilis Engines, an engineering services company established in 1993 by ex-Pratt & Whitney employees, shifted its focus this year to developing the 1,000lb-thrust TF-1000 turbofan for the Safire S-26 personal jet after upping the initial thrust target beyond the original 800lb originally. The expanded thrust range also means the TF-1000 will compete for more applications against the Williams FJ22. Core tests of the 4:1 thrust ratio lightweight engine are due to start in the second quarter of next year, with first engine-to-test due in the third quarter. First flight is scheduled for late 2003, with certification due a year later.

TF-1000			
TF-1000	1,000		Turbofan Safire S-26

#### AVIADVIGATEL

Prospects for increased production of the PS-90A turbofan are looking better than in recent times following renewed interest by Aeroflot and Atlant Soyuz in passenger and freighter versions of the Ilyushin Il-96-400. Derived from the defunct P&W PW2337-powered Il-96M/T, Aeroflot is positioned to order four -400T freighters, and is expected to decide on potential orders for passenger versions in 2002, while Atlant has firmed up the first four orders of a 10 aircraft commitment. They would be a welcome boost for engine builder Perm which saw annual production of PS-90s drop from 37 in 1992 to three in 1998 and zero in 1999. After taking an order for a single engine in 2000, new orders for from Aeroflot for six Il-96-300s had already shown signs of a turnaround for the company which has also been making efforts to bolster PS-90A reliability. Further PS-90A opportunities are likely with the growing domestic market for the Tupolev Tu-214/234. The first two production-standard Tu-214s have now entered service with Khabarovsk-based Dal' avia under a pioneering Russian leasing scheme that could lead to further orders for another 30 aircraft. Another variant dubbed the PS-90A-76 is being developed to power the Il-76.

PS-90			
PS-90-A76	31,955	-	Turbofan - Powers Ilyushin Il-76MF, Il-76TD-90, Il-76TF, Il-76MD-60.
PS-90-A	35,300	-	Turbofan - Ilyushin Il-96-300, Il-76MP, Tupolev Tu-204 and Tu-214, -234
D-30			
D-30-KU	24,247	-	Turbofan - Ilyushin Il-62M, Il-76T, Tupolev Tu-154M -30K, -30KPV powers Beriev A40

#### AVIC

Following the re-organisation of China's myriad aerospace concerns into AVIC I and II last year, the members of both groups have announced studies to develop indigenous regional jets. An Avic I-led sponsored effort is aimed at developing a 70-90 passenger regional aircraft with entry-into-service targeted for 2005. The AVIC II initiative, launched independently with Hainan Airlines and Fairchild Dornier is believed to be based around a project dubbed Golden Dragon-30. International engine makers active in the region include R-R, which signed an agreement to study possible use of the BR710 to power the proposed AVIC 1 ARJ21 regional jet. Principal civil engine makers include Zhuzhou-based China National South which produces the WJ6 and WJ9 turboprops as well as the WZ-8, a licence-built Turbomeca Arriel, and