

# EFA development contracts signed

Contracts totalling £6 billion for the European Fighter Aircraft (EFA) and its EJ200 engine were signed on November 23. The contracts, covering development through to the late 1990s, were awarded by the Nato European Fighter Aircraft Management Agency (Nefma) to Eurofighter and Eurojet.

Development funding will be split between the project's partners according to their expected EFA purchases. The first EFA prototype is expected to be flown in West Germany by the end of 1991.

The development contracts set a maximum price and place the commercial risk with the contractors. As the programmes progress, more contracts will be converted from maximum price to fixed price.

Eurojet, the four-nation engine company, has received a £1,666 million contract from Nefma to develop the EJ200 engine. The contract also includes production of EJ200s for the EFA prototype flight-test programme.

Eurojet comprises Fiat Aviazione (Italy), MTU (West Germany), Rolls-Royce (UK), and Sener (Spain). The work-share on the engine is proportional to expected national EFA requirements: Rolls-Royce and MTU have a 33 per cent share each, while Fiat has 21 per cent, and Sener 13 per cent.

The EJ200 is a two-spool 20,000lb-thrust (90kN) re-

heated turbofan with considerable potential for thrust growth. All the major components of the EJ200 have already been demonstrated in a range of technology rigs and component development programmes. The XG40, a demonstrator engine funded by Rolls-Royce and the UK Ministry of Defence, has been bench running over several years.

Rolls-Royce will soon run the first EJ200 core at Bristol. The first run of a design verification engine (DVE) will take place at MTU's Munich facility before the end of this year. The second EJ200 DVE will be run by Fiat Aviazione and the third by Rolls-Royce.

The first two EFA prototypes will be powered by the interim Turbo-Union RB. 199-122. The first EJ200-powered EFA will be the third prototype, the first two-seater. This aircraft is scheduled to make its first flight from British Aerospace's Warton airfield in 1992.

Commenting on possible French collaboration on EFA, British Aerospace's deputy chief engineer, Ivan Yates, said, "We must first select the equipment which the EFA needs. We can then talk to the French if they wish to submit bids." However, given that the Rafale uses a different databus and different missile frequencies, he could not see how the French could be involved in a major way.

## German Lraaca blocked

West Germany's Parliamentary Defence Committee has frozen funds earmarked for replacement of the Navy's Atlantic Mkl patrol aircraft.

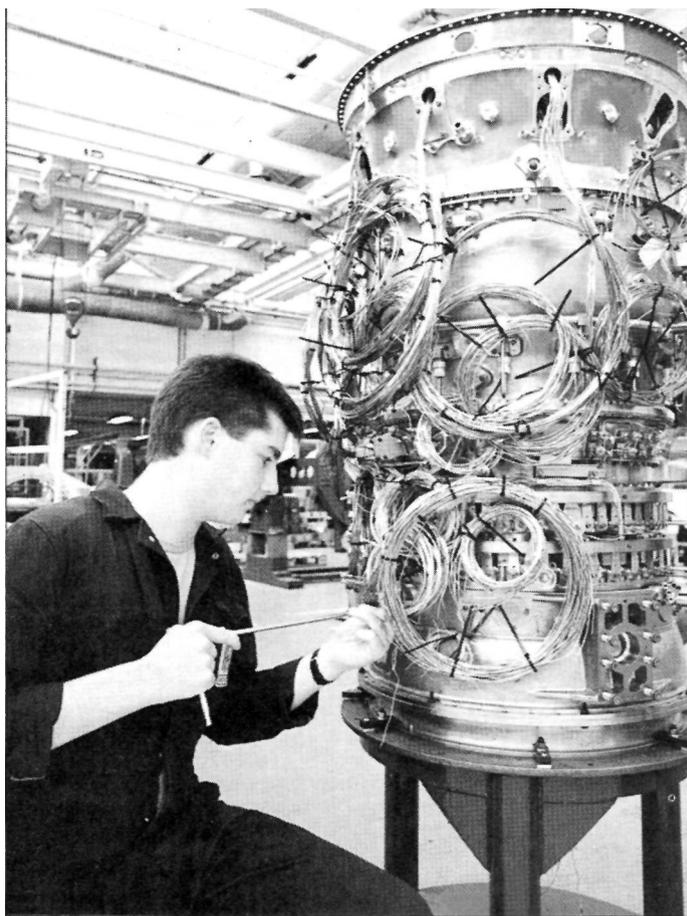
The move follows a Defence Ministry decision in favour of the Lockheed P-3G long-range air ASW-capable aircraft (Lraaca) to meet its MPA-90 requirement.

The Defence Committee argues that the German Navy is not a deep-sea force, and therefore does not need a long-range aircraft.

The Committee believes that the existing aircraft—already modernised once—should serve well into the next

century if the airframes are rebuilt and new avionics installed in the 1990s. It suggests that the German Navy collaborates with France to determine which elements of the latter's updated Atlantic ATL.2 could be used to enhance the combat value of the old aircraft.

The German Navy is furious at the Committee's surprise decision, which is prompted by a lack of funds resulting from Germany's commitment to the European Fighter Aircraft, and is expected to argue strongly its need for a larger maritime patrol aircraft.



The core of an EJ200 is prepared for testing at Rolls-Royce Bristol in preparation for the first full engine test in Munich before the end of the year

## Eurofighter tempts Belgium

Eurofighter is briefing Belgian Government and industry officials on the benefits to Belgium of joining the European Fighter Aircraft programme.

Spain's recent signature of the Third Memorandum of Understanding, essentially the last hurdle in EFA national contracting, is seen as a "point of departure" which would enable Belgium to join EFA as a single-source component supplier. Eurofighter is understood to be offering Belgium a 5 per cent share in EFA if Belgium, in turn, paid a 5 per cent share of the total R&D bill. This would be spread out over the first 11 years, says Eurofighter. Belgium's outlay would be BFr18,000 million.

A big advantage of Belgium joining EFA rather than the

US-led Agile Falcon programme is that all EFA prices will be calculated in European Currency Units (Ecu), thus avoiding fluctuations in the US Dollar exchange rates.

Eurofighter would like to see Belgian participation in EFA as an identifiable unit, and is preparing a very detailed brief for discussion within three weeks. This will include airframe, engine, engine accessories, avionics, and general systems such as hydraulics, fuel systems, and electrical generators. There are 300 separate equipment items which have been identified as suitable for Belgian involvement, and this could be spread geographically in the country to take into account Belgium's present policy of regionalising economic development.