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**ROLLS-ROYCE LIMITED**

# **Annual Report 1982**

COMPANY NUMBER  
1003142



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## Cover picture:

*The Rolls Royce 535C is the lead engine on the Boeing 757. This new airliner entered service on January 1, 1983 and has demonstrated outstanding fuel efficiency. Eastern Air Lines of the US stated that the engines '... have performed in an excellent manner with no problems normally associated with new power plants.'*

# Chairman's Statement



In last year's Statement concern was expressed that the recession in the airline industry might last longer than anticipated. In the event, the recovery in the United States' economy, widely predicted for the second half of 1982, did not materialise and Western Europe remained depressed. With few orders being placed for new civil equipment and with surplus aircraft overhanging the market, the short-term outlook for the aerospace industry continues to be bleak.

Turnover in 1982 at £1 493 million was marginally higher in monetary but not real terms than the £1 443 million of the previous year. These outward figures, however, disguise a substantial fall in available work. While the longer-established engines, such as the Spey, the Dart, the Viper and the Adour, remain substantial and profitable businesses, as do the Pegasus and RB199, Rolls-Royce was geared up to produce, in the early eighties, more than 300 large fan engines of the RB211 type each year. Estimates have been progressively revised downwards and the latest forecast is that less than a quarter of this figure will be produced in 1983. The lack of demand for the large civil engines, a lower than expected requirement for spares, reducing inventories and shorter manufacturing lead times, produced a sharp reduction in workload in 1982. There was a consequential fall in employment, a significant cut in orders on suppliers and the need for an additional provision of £32 million against inventories in excess of normal scheduled requirements. When demand picks up a substantial part of this excess inventory could be recovered but it was deemed prudent to make the increased provision.

As a result of these factors, and the highly competitive market situation, operating profit in 1982 fell to £87 million from a level of £126 million in 1981. After charging net research and development expenditure of £131 million - up £69 million from 1981 and interest expense of £47 million (1981: £46 million) the Company suffered a pre-tax loss of £91 million compared with a profit of £18 million in 1981. The substantial increase in the research and development charge was mainly on committed projects, particularly the

improved RB211 535F4 engine for the Boeing 757. Although written off against profit in the year in which it is incurred, this expenditure is not a normal recurrent cost but a major investment in the Company's future.

The number of Rolls-Royce employees in the UK, which fell by 5 900 in 1981, was further reduced by approximately 7 600 in 1982 - a decline of 23% in the two year period. These reductions resulted not only from the fall in the demand for civil engines but also from the continuing development of new manufacturing systems and methods in all the Company's factories. Highlights of these new techniques include a robotised grinding line for turbine blades and automatic quenching for the directional solidification of single crystal casting of aerofoils. Expenditure on budgeting targets require a further reduction of around 6 000 employees in 1983.

Manpower reductions were achieved on a voluntary basis and without disruption; the low profile manner in which negotiations were conducted reflects the effort made by all site managements to explain the problems to the workforce and the realism of the latter when the facts were put before them. Such an approach, which is not always possible, minimises the bitter legacies that can only too easily result from changes of this magnitude. After charging the resulting net restructuring costs of £38 million (1981: £17 million) as an extraordinary item in the profit and loss account, the loss for the year amounted to £134 million against £3 million in 1981.

The Company kept within its cash limits agreed with HMG for the year and, apart from funds available to industry in general or aerospace companies in particular, eg launch aid for new projects under the provision of the Civil Aviation Act 1949, anticipates it will not require further financial assistance from the Government.

The events in the Falkland Islands put Rolls-Royce aero-engines and naval propulsion units to a rugged test. The Ministry of Defence confirmed that reliability was outstanding and the resulting high level of availability played an important role in the success of the operation.

During 1982 the 600th RB199 engine was delivered to Panavia for installation in one of the more than 800 twin-engined Tornado aircraft planned for the British, West German and Italian armed forces. A more powerful version of the engine, aimed at later versions of the Tornado and at new combat aircraft, has had its first run with encouraging results.

On the commercial side, Eastern Airlines received in December the first of its new Boeing 757 aircraft, powered by Rolls-Royce RB211-535 engines. The first British Airways aircraft was delivered in the following month, and by the middle of April two British inclusive-tour operators, Monarch Airlines and Air Europe, will also have taken delivery of new aircraft. The B757 is the first Boeing aircraft to be built with Rolls-Royce as the launch engine supplier.

The decision to start development of another new engine, the Tay, was announced in December, and in January this year an order was received from Gulfstream Aerospace for 200 engines to power the new Gulfstream IV executive aircraft. The same engine is suitable for developments of the Fokker F28 airliner, for which the 500th Spey engine was delivered in October, and is also capable of re-engining the BAC One-Eleven.

A higher thrust development of the Viper (the Viper 680) and a more fuel-efficient version of the Dart (the Mk551) were also launched during the year, capitalising on market areas in which Rolls-Royce has had significant success over the past 25 years.

Agreement, subject to various governmental and other approvals, has been reached with Pratt & Whitney Aircraft, a Japanese consortium, MTU and Fiat Aviazione, to develop jointly an engine for the 150-seat aircraft market. Although the recession in aviation has caused the launch of a new aircraft of this size to be delayed, a need for substantial numbers of such aircraft will arise in the late eighties and beyond.

The first Gem-powered Westland 30 helicopter for export was delivered to Airspur in Los Angeles in February 1983. An uprated version of the engine (the Gem 60) will be available later this year.

New business activity on the industrial gas turbine front has been sluggish both in power generation and gas and oil pumping. Marine business was also at a lower level than in recent years, but new orders have recently been received for gas turbines to power replacement vessels for those lost in the South Atlantic, and Rolls-Royce gas turbines have been ordered for the new Type 23 frigate programme. In June, HMS Illustrious joined the fleet as the latest Rolls-Royce powered warship with four Olympus engines each producing 28 000 horsepower.

Sir William Duncan joined the Board in November and will take over as Chairman when I retire on March 31, 1983. Sir William is assuming office at a difficult time for the Company. For the next one or two years the civil aerospace industry is likely to continue to pass through a turbulent period. Until the finances of the world's airlines show a more positive trend, orders for new equipment are likely to be pushed as far into the future as possible. Once the turn-around comes, however, Rolls-Royce, both in its range of engines and manufacturing costs, should be well placed to take advantage of it.

*Frank McFadzean*

McFadzean of Kelvinside

March 29, 1983

Opposite:  
Rolls-Royce powered Sea Harriers  
and Sea King helicopters

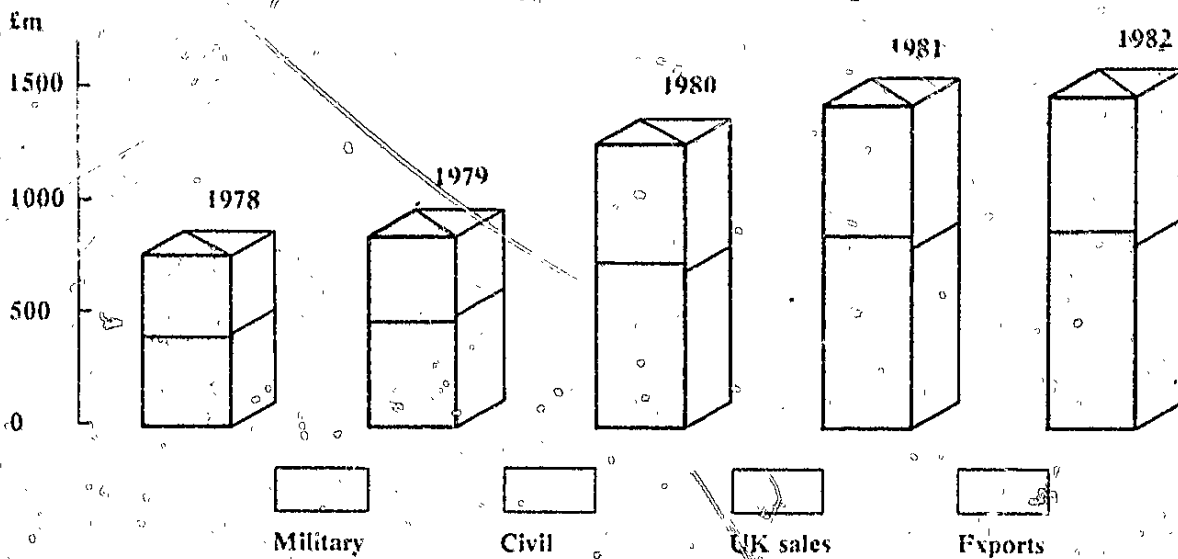


# Five-year Review

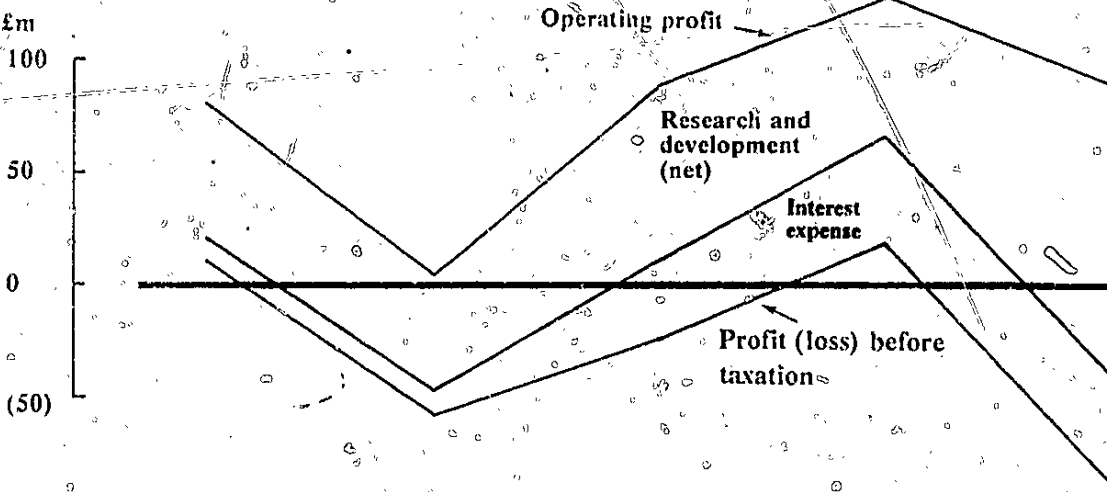
	1982	1981	1980	1979	1978
	£m	£m	£m	£m	£m
<b>Turnover</b>	1 493	1 443	1 258	848	763
<b>Operating profit</b>	87	126	89	1	80
Research and development (net)	(131)	(62)	(79)	(50)	(60)
Interest expense	(47)	(46)	(34)	(11)	(11)
<b>Profit (loss) before taxation</b>	(91)	18	(24)	(60)	9
Taxation	(4)	(3)	(1)	(3)	(2)
<b>Profit (loss) after taxation</b>	(95)	15	(25)	(63)	7
Attributable to minority shareholders	(1)	(1)	(2)		
Extraordinary item — net restructuring costs	(38)	(17)			
<b>Net profit (loss) attributable to Rolls-Royce Limited</b>	(134)	(3)	(27)	(63)	7
<b>Net assets employed</b>					
Current assets	929	1 065	940	687	544
Current liabilities	517	574	594	492	289
<b>Net current assets</b>	412	491	346	195	255
Property and plant	312	303	299	136	108
	724	794	645	331	363
<b>Financed by</b>					
Share capital	508	458	328	234	203
Reserves	(13)	121	124	6	69
	495	579	452	240	272
<b>Loans</b>	224	209	187	90	90
Minority interests in subsidiaries	5	6	6	1	1
	724	794	645	331	363



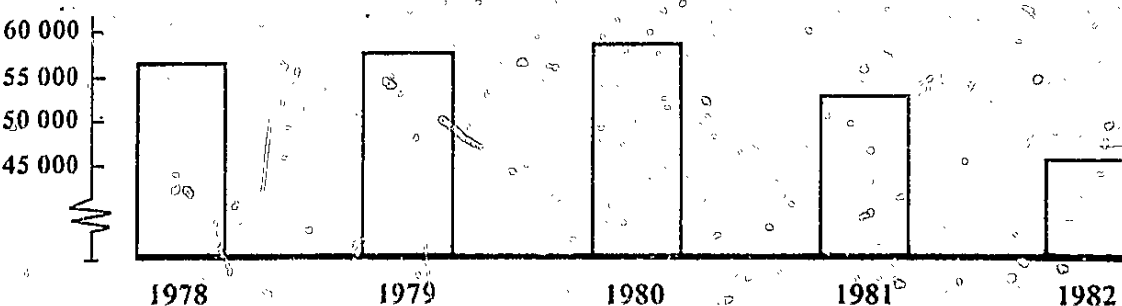
## Turnover



## Profits

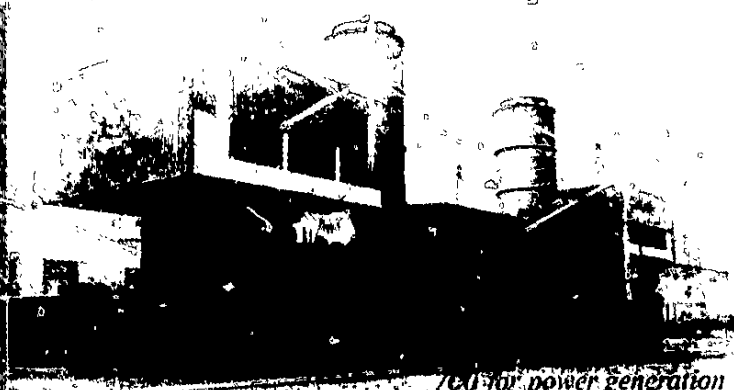


## UK Employees at end of Year





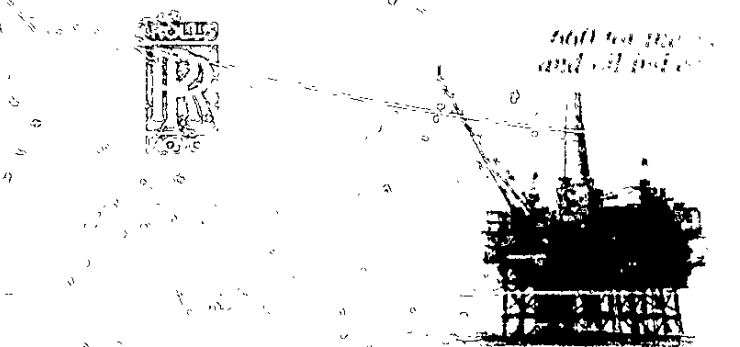
2460 for helicopters



700 for power generation



12 600 for military aircraft



600 for the and oil field



Nuclear powerplants

# Review of Activities



During 1982 Rolls-Royce's civil and military powerplants achieved several important successes in the air, on land and at sea, and the Company continued to improve its facilities and competitiveness in order to maintain its substantial share of the international gas turbine market.

Productivity was further improved through advanced technology manufacturing techniques including robot-controlled turbine blade production, activated diffusion bonding of wide-chord fan blades and casting of single-crystal blades.

Since its first flight in February the new Boeing 757 short- to medium-range airliner powered by Rolls-Royce 535C engines was engaged on its flight certification programme. This led to the award in December of the Federal Aviation Authority's certificate of airworthiness. Certification by the British Civil Aviation Authority followed in January 1983.

The 535C engines, which are two years ahead of the competing American powerplant, contributed significantly to the timely completion of the 757 test programme, during which they built up an impressive operating record.

During August and September one of the 757 flight test aircraft completed a 44 000 nautical-mile world tour and was demonstrated to more than 30 airlines. The engines performed perfectly throughout the tour.

The 757 entered service with Eastern Air Lines on January 1 and with British Airways on February 9, 1983, and is demonstrating outstanding fuel economy in regular passenger service. Monarch Airlines and Air Europe have also taken delivery of their first 757s.

Nine airlines have now ordered the aircraft, eight of them selecting the 535 engine. There are 103 firm orders and options for the aircraft with Rolls-Royce engines.

The next Mark of the 535, the E4, accounted for a large part of the total development effort and is now the Company's technology pacemaker. Several of its design features,

developed from years of advanced engineering programmes, are unique to Rolls-Royce. This engine is scheduled to be certificated in late 1983, and 757s powered by it will use significantly less fuel than the do with the current 535.

Another international airline, Malaysian Airlines System, took delivery in March of Boeing 747 airliners powered by 524 engines, the most powerful in the RB211 family. The year also marked the delivery of the 500th 524 engine.

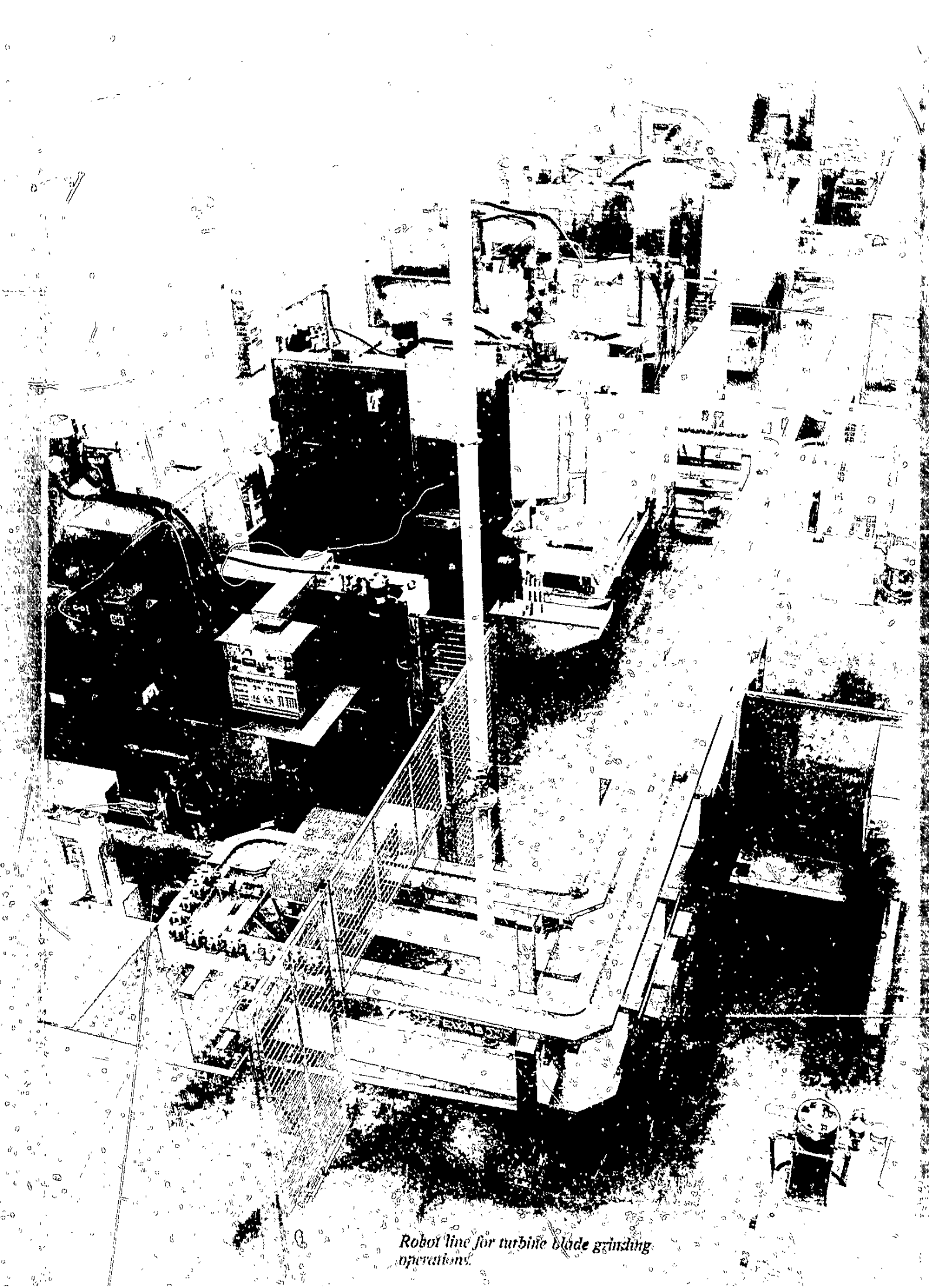
By the end of the year RB211s of all models had accumulated over 12 million hours of airline service and are achieving up to 8000 hours on the wing between shop visits. They power some 225 wide-body airliners and are used by six of the world's ten largest operators.

The year end also saw the decision to go ahead with a new, smaller civil engine, the Tay for the Gulfstream IV executive jet in America. Two hundred of these engines have been ordered by Gulfstream Aerospace so continuing a long relationship between the Companies. All Gulfstream I, II and III aircraft have used Rolls-Royce engines since the first of these aircraft flew in 1958.

The engine is also aimed at new developments of the Fokker F28 airliner and several airlines are considering using it to replace the current engines on BAe One-Eleven aircraft.

The F28 currently uses RB183 engines and during 1982 the 500th of these was delivered to Fokker. They have attained such high reliability that the average in-flight shutdown rate is now one in 40 000 hours, or once in 20 years of typical F28 operations.

The RJ500 engine for new 150-seat airliners expected to emerge by the end of the decade made good progress. The two demonstrator engines, one in Japan and one in Britain, both ran for the first time during 1982. A run, strip and inspect programme has continued with associated design and modification work to achieve the necessary performance level and reliability.



*Robot line for turbine blade grinding operations.*



Talks with other companies aimed at enlarging the existing Rolls Royce and Japanese collaboration on this project led to the signing in March 1983 of an agreement with Pratt & Whitney Aircraft of America and their partners, MTU in Germany and Fiat Aviazione in Italy. Rolls-Royce already works with MTU and Fiat Aviazione on the military RB199 engine, and is associated with Pratt & Whitney Aircraft on manufacture of Pegasus engines.

The new Dart 551 turboprop, launched at the end of the year, provides ten per cent better fuel consumption than current models. Modification kits to upgrade current Dart RDa7 engines to this higher standard will be available in the first half of 1984.

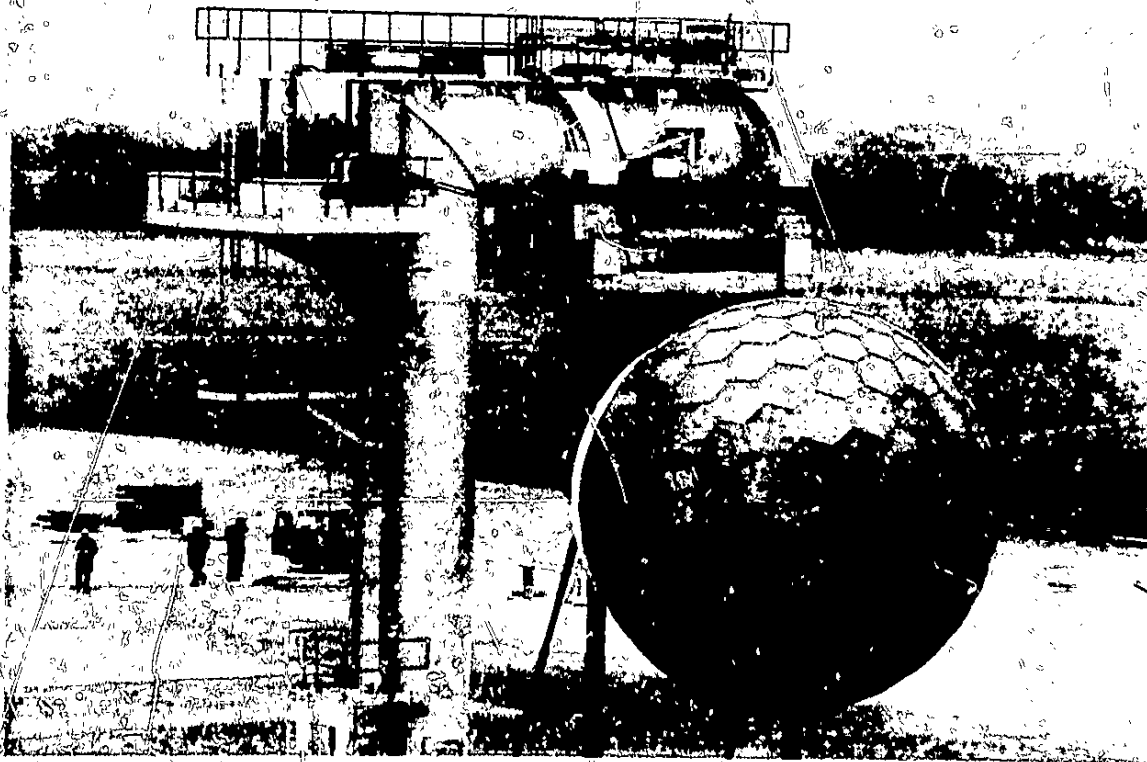
The Olympus 593, the Concorde's powerplant, exceeded its reliability targets. It is the only engine in the world in regular supersonic commercial service. During 1982 the Olympus 593 engine reached 300 000 hours' total running time and

Concorde carried its one millionth passenger. This represents a bank of technical experience unmatched in the industry.

The Turbo Union RB199 military engine entered operational service in June with the first RAF Tornado squadron. Turbo-Union is a British, West German, Italian Company in which Rolls-Royce has a 40 per cent share. This year also saw delivery of the 600th RB199, of which 300 have come from Rolls Royce production. More than 2000 are scheduled for the presently planned Tornado programme.

Development continued to ensure that later versions of the RB199 will be strong candidates to power the new generation of combat aircraft which are beginning to emerge. In particular, the Company is involved in the Experimental Aircraft Programme announced by the Ministry of Defence in September.

In December a demonstrator RB199, the precursor of a more powerful model, made its



New open air test facility.

## *Review of Activities*

first run and delivered 20 per cent more thrust without any increase in specific fuel consumption.

Another major military engine, the Pegasus, which powers the Harrier family of 'jump-jets', saw combat for the first time in 1982. During the Falklands operation Harriers carried out 2000 sorties without a single unscheduled engine change. This fact greatly helped the Harriers to achieve an unprecedented level of operational readiness.

The improved Pegasus 11-21E which will power later Harriers has successfully completed Ministry of Defence ground tests. Rolls-Royce test pilots began flying a Harrier with full-authority digital engine control which, with other benefits, will improve fuel

consumption, extending Harrier range or payload and reducing servicing and maintenance time.

In India, the most powerful version of the Adour, the Mark 804 of 8400 lb thrust, made its first flight in a Jaguar. The Adour, without reheat, is also the engine which will power the Hawk aircraft chosen for continued development for the US Navy's new pilot training programme, which will last to the end of the century.

The 30th anniversary of the first flight of the Viper engine occurred in 1982. It was originally an expendable turbojet to power pilotless target drones, but it has become a classic example of an engine finding many more applications than the one for which it was originally intended. Thirty air forces now use the engine, accumulating over 30 000 flying hours a month. More than 5000 Viper engines have been sold, powering 25 different types of aircraft.

*The Company uses one of the largest industrial computer complexes outside the USA.*





During 1982 the go-ahead was given for another improved version, the Viper 680, giving an additional 14 per cent thrust. A simple reheat system has been developed and has demonstrated more than 5000 lb thrust, well over three times the power of the original Viper. These improvements are aimed at the continuing market for advanced trainers and close-air-support aircraft.

Gem engines for civil helicopters were delivered for the first batch of Westland 30s ordered by British Airways Helicopters and Airspur of California. There was substantial progress with the development of the higher powered Gem 60 of some 1300 shaft horsepower. This engine is due to be certificated in mid-1983 and will be used for the full production launch of the Westland 30 with first sales in the USA.

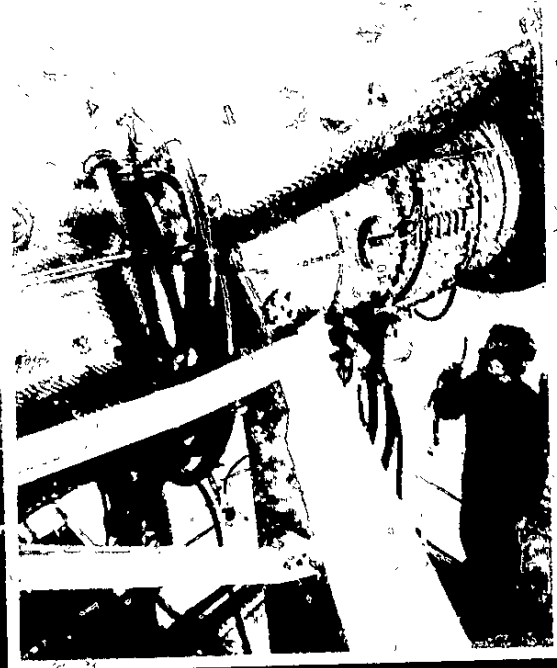
With Turbomeca of France and Italian interests, detailed proposals have been made seeking Government support for a new European engine family, the RTM 322, covering the power range 1800-2800 shp in both turboshaft and turboprop configurations. A 2100 shp version of this engine is aimed at powering the European Helicopter (EH) 101 being developed for military and civil use by Westland and its partner Agusta in Italy.

During 1982 five new ships for the Royal Navy, three for the Royal Netherlands Navy and one for the Greek Navy were commissioned, all powered by Rolls-Royce gas turbines. Continued development of the marine version of the Spey aero-engine has led to production orders from the Royal Navy and Japan and promises to reduce warship fuel consumption by some 25 per cent.

Five Rolls-Royce powered electrical generating stations with a total output of over 500 megawatts, were commissioned in 1982, three of them overseas. At the end of the year three more stations were being commissioned, all of them overseas.

Two Avon engines on oil pipeline pumping duties set records during 1982: one in Canada achieved 52 400 hours between overhauls and the other completed 6300 hours, or nearly nine months, of non-stop running. Also during the year several individual Avon engines on pipelines achieved total running times of 100 000 hours.

Cooper Rolls, the joint venture with Cooper Industries of Houston, Texas, maintained its share of the pipeline pumping market. There were orders from Norway, Thailand, Iraq and the USA and the Company increased its order book during the year.



*Industrial Olympic Games power the new combined cycle gasification, used for power generation and district heating, in The Hague. Inset: A project support engineer checks one of them.*

# Worldwide Product Support



Rolls Royce customers range from 280 airlines, including six of the world's ten largest, 110 air forces and 26 navies, to oil and gas companies in Alaska and the Gulf, electricity utilities in the Andes, Europe, Africa and America and 10 operators of business aircraft.

Between them, more than 1000 customers in 117 countries operate more than 25 000 engines manufactured and supported in service by the Company. This is Rolls-Royce world wide. To support this mammoth operation there are Company offices in most major countries, manufacturing facilities in Canada and the USA (in addition to the main factories in Britain), over 70 overhaul bases either approved or operated by Rolls-Royce, and a

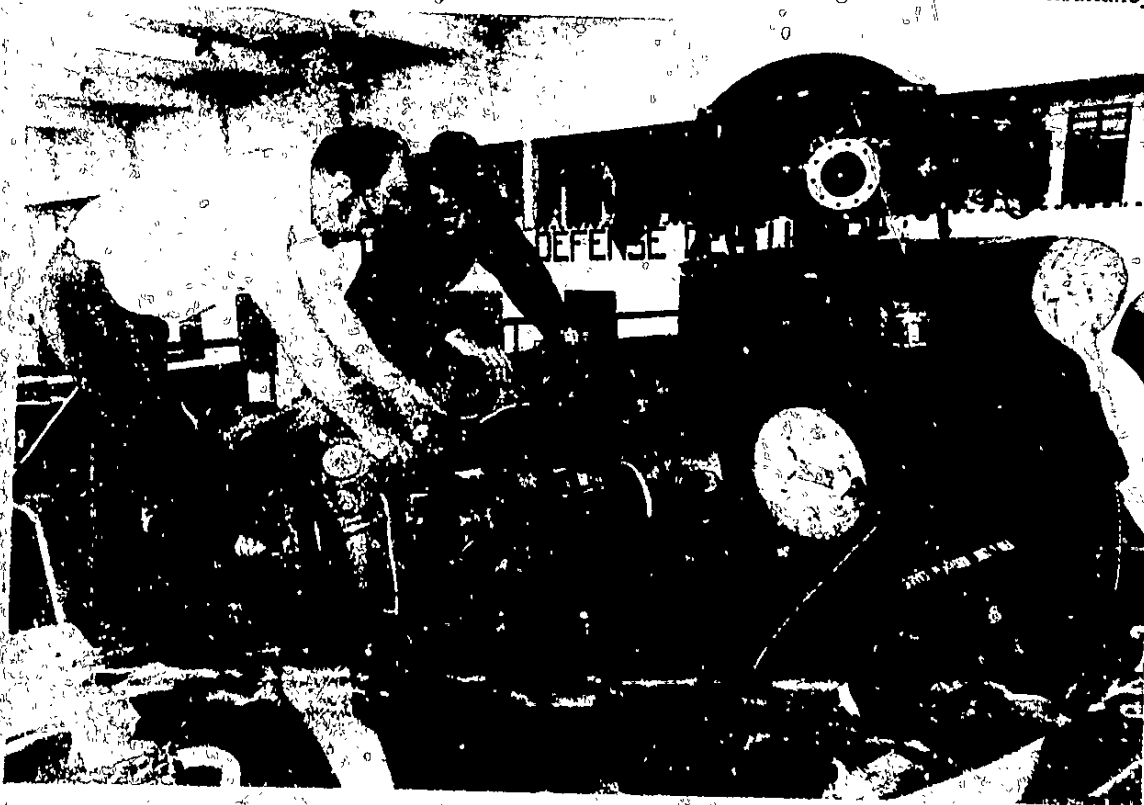
network of service representatives who are either resident with, or regularly visit, every customer.

Product Support is Rolls Royce in the field, keeping the engines running. It is the face of the Company which customers see every day helping them to maintain their powerplants safely and cost-effectively, updating them as product development continues in the factories and ensuring that spares are always available, even in the remote places, to cope with the most unexpected problem.

Product Support analyses customers' operating statistics, anticipates their problems, proposes product improvements through lessons learned in the field, provisions spare parts and improves the management and data systems that are essential for all these activities.

Engaged in this are 2500 men and women, ten per cent of them based abroad with operators and repair bases, and a consultancy

*A Rolls Royce service representative and a Belgian Air Force mechanic work together at Koksijde, Belgium, on a Gnome engine in a Westland Sea King helicopter.*



with a Black & White  
picture of a man in a  
New York



## Worldwide Product Support

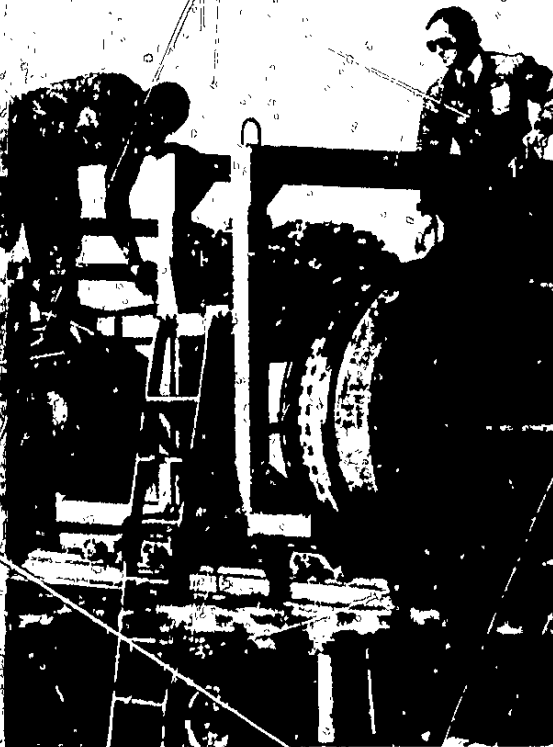


group providing expertise to enable customers to set up their own repair shops and maintenance activities.

With engines having a life of 20 years or more, keeping them in service means making sure the operators know of every design change and every improvement in operating procedure. In 1982 more than 46 million printed pages of information were distributed to customers sharing knowledge and expertise. Training courses in the UK were attended by over 2600 students from 54 countries, and many more were trained by instructors sent into the field.

There is growing customer acceptance of new communications technology and Product Support is progressively replacing or augmenting traditional forms of information interchange.

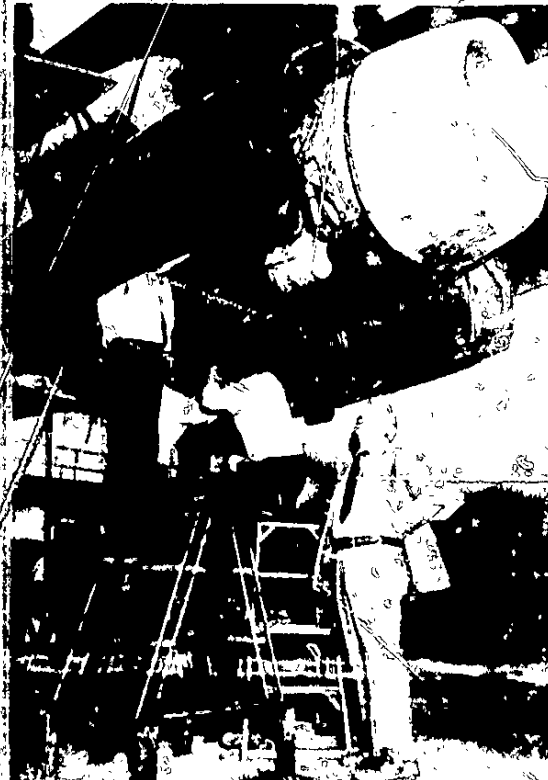
*A Rolls-Royce engineer works with a US Marine at Yuma, Arizona, where the US Marine Corps operates AV-8A Harriers.*



During 1982 the Falklands operation put particularly heavy pressure on Product Support. Overnight the Company was faced with huge increases in calls for engines, spares and advice. Every aircraft type except one used in the Falklands by the British Forces was powered by engines made, or maintained, by Rolls Royce and many tributes have been paid to their performance during intensive flying in severe weather.

Nineteen of the Royal Navy's warships in the operation were powered by Rolls-Royce gas turbines including the carrier HMS Invincible. The highlight was undoubtedly Invincible's record 166-day tour of duty covering 52 000 miles.

*At Pittsburgh, Pennsylvania, a resident service engineer checks a Spey engine being serviced on one of USAir's British Aerospace One Eleven airliners.*



# Report of the Directors

## Principal activities

The Company's principal business is the design, development, manufacture and sale of gas turbine engines and ancillary equipment for aircraft and for industrial and marine applications.

Subsidiary companies include Rolls-Royce and Associates Limited which designs, develops and procures nuclear steam raising plant for naval purposes. Other subsidiaries are mainly concerned with providing sales and service support of the Company's products in overseas countries.

During 1982 the Company transferred its shareholding in Rolls-Royce and Associates Limited to a wholly-owned subsidiary company, RNC Nuclear Limited.

## Results for the year

Turnover for the year was £1 493m (1981 £1 443m) including direct exports of £691m (1981 £610m).

The loss before taxation was £91m (1981 profit £18m).

## Share capital

During 1982 the Company issued 50 million shares of £1 each, at par, for working capital purposes.

## Property and plant

Expenditure on property and plant during the year amounted to £37m (1981 £28m) mainly in respect of machine tools at aero-engine facilities.

The professional valuation of the Company's land and buildings at December 31, 1980 has been updated to the end of 1982 and suggests a value £7m greater than the figure shown in the accounts.

## Employees

The weekly average number of employees working wholly or mainly in the United Kingdom was 48 800 (1981, 56 000). Their aggregate remuneration was £400m (1981 £423m).

The number of United Kingdom employees at the end of the year was 45 300.

## Disabled persons

The Company's policy is to consider all applications for employment or advancement on their merits and where an individual has some disability, to make every effort to accommodate that disability.

## Donations

No political donations were made by the Company or its subsidiaries. Charitable donations, including £20 000 to the South Atlantic Fund, amounted to £68 600 (1981 £55 200).

## Directors

The Directors listed on Page 17 were in office throughout 1982, apart from Mr Ralph Robins and Sir Francis Tombs, appointed to the Board on March 9, 1982, Mr James Rigg, appointed July 13, 1982 and Sir William Duncan, appointed November 1, 1982.

Mr Dennis Head resigned from the Board on June 30, 1982, Sir Neil Wheeler on July 8, 1982 and Mr Ashley Raeburn on December 17, 1982.

Lord McFadzean of Kelvinside will resign from the Board on March 31, 1983 and Sir William Duncan will replace him as Chairman and Chief Executive from that date.

None of the Directors of the Company at December 31, 1982 had, during the year, any interests in the shares or debentures of the Company or any of its subsidiaries.

## Auditors

A resolution to re-appoint the auditors, Coopers & Lybrand, will be proposed at the Annual General Meeting.

By order of the Board *Anthony Warrington,*  
Secretary  
March 29, 1983

# Board of Directors

as at March 29, 1983



## Chairman

Lord McFadden of Keshmidee

Directors

Sir George Butler CBE

Sir William Deane CBE

Sir St John Elstob CBE

Samuel Higginbottom CBE

Peter Molony

Alan Newton CBE

Donald Pepper\*

James Rigg

Ralph Robins

Trevor Salt

Sir Peter Thornton KCB

Sir Francis Tombs

\*Vice Chairman

## Secretary

Anthony Warrington

## Registered office

65 Buckingham Gate,  
London SW1

## Auditors

Coopers & Lybrand  
Abacus House, Gutter Lane,  
London EC2

## Solicitors

Freshfields  
Grindall House, 25 Newgate Street,  
London EC1

## Bankers

National Westminster Bank PLC  
15 Bishopsgate,  
London EC2

Barclays Bank PLC

54 Lombard Street,  
London EC3

# Accounting Policies

## Basis of accounting

The accounts on Pages 16 to 29, which comply with Section 152A of the Companies Act 1948 and Schedule 8A of that Act, have been prepared on the historic cost basis, modified to include the revaluation of land and buildings at December 31, 1980.

## Turnover and trading profit

Turnover excludes value added tax and comprises:

- (i) Amounts invoiced to customers.
- (ii) Estimated sales values, where prices have not been agreed with customers.
- (iii) Income from licences and management fees

Trading profit is taken at the time of sale; in the case of long-term contracts, profit is arrived at by reference to the estimated overall contract profitability.

## Exchange rates

### (i) Subsidiaries

Foreign currencies are translated into sterling on the following bases:

- (a) Turnover and profit at the average rates ruling for the year, any difference on exchange being adjusted in arriving at the consolidated results.
- (b) Assets and liabilities at the exchange rates ruling at the year end, the differences on translating the opening net assets of overseas subsidiaries being taken into account in arriving at the consolidated results.

### (ii) Parent Company

Assets and liabilities in foreign currencies are translated into sterling at the exchange rates ruling at the year end; where forward exchange contracts have been entered into, the applicable average forward exchange rate has been used.

## Taxation

Provision is made at the rate for the year for United Kingdom corporation tax, for overseas taxation on profits of overseas subsidiaries and for deferred taxation where a liability is expected to arise in the foreseeable future.

## Research and development

Capital expenditure on research laboratories and plant is written off over its expected working life. All other research and development expenditure borne by the Company is charged in the year of expenditure.

Her Majesty's Government makes contributions towards the cost of some of the Company's research and development. In such cases, arrangements are made for the Company to pay levies in respect of future sales.

## Inventories

Inventories are valued at cost of material, labour and relevant manufacturing overheads, less provisions for obsolete and surplus items and, where necessary, provisions to reduce cost to estimated realisable value.

Progress payments received are deducted from inventories up to the limit of the relevant work in progress. Other advance payments and deposits are included in accounts payable and provisions.

## Depreciation

### (i) Properties

Depreciation is provided on the valuation of properties adopted at December 31, 1980 and is calculated on the straight-line basis over estimated lives which, with effect from January 1, 1981, have been revised to levels agreed with the Group's professional valuers. Depreciation is not provided on the valuation of land.



The estimated lives are

- (a) freehold buildings  
10 to 45 years (average 28 years)
- (b) leasehold buildings  
lower of value or estimate of period  
of lease.

(ii) **Plant**

Depreciation is provided on the original cost of plant and is calculated on the straight-line basis over estimated lives in the range 5 to 14 years.

**Warranties and guarantees**

Provision is made for likely future expenditure on warranties and guarantees relating to sales up to the year end. The sum set aside for this purpose is included under accounts payable and provisions

**Provisions**

In accordance with Statement of Standard Accounting Practice No. 9, provisions are made for any anticipated losses on current contracts and projects

## Report of the Auditors

To the members of Rolls-Royce Limited

We have audited the accounts on Pages 18 to 32 in accordance with approved auditing standards. The accounts on Pages 18 to 29 have been prepared under the historical cost convention and the supplementary accounts on Pages 30 to 32 have been prepared under the current cost convention as described in Statement of Standard Accounting Practice No. 16.

In our opinion the accounts on Pages 18 to 29 give a true and fair view of the state of affairs of the Company and the Group at December 31, 1982 and of the results and source and application of funds of the Group for the year then ended and comply with the Companies Acts 1948 to 1981.

In our opinion the supplementary current cost accounts on Pages 30 to 32 have been properly prepared in accordance with the policies and methods described in Notes 1 to 5 to give the information required by Statement of Standard Accounting Practice No. 16.

London  
March 29, 1983

*Coopers & Lybrand*  
Coopers & Lybrand  
Chartered Accountants

# Profit and Loss Account

for the year ended December 31, 1982

	Notes	Consolidated	
		1982 £m	1981 £m
Turnover		1 493	1 443
Operating profit		87	126
Research and development (net)		(131)	(62)
Interest expense	2	(47)	(46)
Profit (loss) before taxation	1	(91)	18
Taxation	4	(4)	(3)
Profit (loss) after taxation		(95)	15
Attributable to minority shareholders		(1)	(1)
Extraordinary item — net restructuring costs	5	(38)	(17)
Net (loss) attributable to Rolls-Royce Limited		(134)	(3)

		Consolidated	
		1982 £m	1981 £m
Reserves			
At January 1		121	124
Net (loss) for the year		(134)	(3)
At December 31	6	(13)	121

The notes on Pages 23 to 29 form part of these accounts.

# Balance Sheets

at December 31, 1982



Company			Consolidated	
1981	1982		1982	1981
£m	£m	Notes	£m	£m
975	821	Net assets employed		
534	391	Current assets	7	929
		Current liabilities	8	517
441	430	Net current assets		412
271	274	Property and plant	9	312
27	(38)	Subsidiary companies	10	303
739	666		724	794
458	508	Financed by		
78	(62)	Share capital	11	508
		Reserves	6	(13)
536	446	Loans	12	495
203	220	Minority interests in subsidiary companies		224
			5	209
739	666		724	794

McFadzean of Kelvinside  
J A Rigg } Directors

March 29, 1983

*Handwritten signature: J A Rigg*

The notes on Pages 23 to 29 form part of these accounts.

# Source and Application of Funds

for the year ended December 31, 1982

	Consolidated	
	1982	1981
	Am	£m
<b>Source of funds</b>		
Profit (loss) before taxation	(91)	18
Depreciation	31	27
	(60)	45
Issue of shares for cash	50	130
Loans (net)	15	22
	5	197
<b>Application of funds</b>		
Change in net current assets:		
Increase (decrease) in inventories, net of progress payments	(122)	114
Increase (decrease) in accounts receivable	8	(23)
Decrease in accounts payable and provisions	72	69
	(42)	160
Capital expenditure	37	28
Extraordinary item - net restructuring costs	38	17
Other items	8	5
	41	210
<b>Change in net liquid funds</b>		
Increase (decrease) in cash balances	(22)	34
(Increase) in bank loans, overdrafts and other short term borrowings	(14)	(47)
	(36)	(13)

The notes on Pages 23 to 29 form part of these accounts.

# Notes to the Accounts



## 1 Profit (loss) before taxation is after charging

	1982	1981
	£m	£m
Depreciation	31	27
Charges for leased assets	15	11
Hire of plant and equipment	10	10
Auditors' remuneration (1982 £0.5m, 1981 £0.5m)		

## 2. Interest expense

On loans in excess of five years	26	27
On short term indebtedness	17	16
Less interest received	43	43
	3	2
Financing costs of leased assets (included in Note 1 above)	40	41
	7	5
	47	46

## 3. Emoluments of directors and senior employees

The emoluments of directors, charged before arriving at operating profit, were:

	1982	1981
	£	£
Chairman	61 000	61 600
Other directors:		
Fees	19 900	15 600
Other emoluments, including pension contributions	536 100	402 800
Compensation for loss of executive office	55 000	—

The emoluments of directors (other than the Chairman) and senior employees working wholly or mainly in the United Kingdom, excluding pension contributions, fell within the ranges below:

Emoluments £	Number of directors		Number of senior employees	
	1982	1981	1982	1981
Nil to 5 000	5	2		
5 001 to 10 000		1		
15 001 to 20 000	1			
25 001 to 30 000		1		
30 001 to 35 000	1		16	9
35 001 to 40 000	2	2	1	1
40 001 to 45 000	2	1	1	
45 001 to 50 000	1			
50 001 to 55 000	2	3		

#### 4. Taxation charge

	1982	1981
	£m	£m
United Kingdom corporation tax	1	
Overseas taxation	3	3
	<u>4</u>	<u>3</u>

Deferred taxation of £4m (1981 £2m) has been provided by subsidiary companies.

A potential deferred taxation liability of £39m has not been provided in respect of the surplus arising on the revaluation of land and buildings as there is no present intention to dispose of any land and buildings. No other potential deferred taxation liability existed at December 31, 1982.

#### 5. Extraordinary item

The Company commenced a major restructuring of its operations in 1981. The actions, originally planned to be completed by the end of 1982, will now extend to 1983. Net restructuring costs, including the cost of redundancy and voluntary termination, are treated as a separate item in the profit and loss account.

#### 6. Reserves

Company		Consolidated	
1981	1982	1982	1981
£m	£m	£m	£m
139	136	141	144
(3)	(3)	(3)	(3)
<u>136</u>	<u>133</u>	<u>138</u>	<u>141</u>
(44)	(58)	(20)	(20)
(17)	(140)	(134)	(3)
3	3	3	3
<u>(58)</u>	<u>(195)</u>	<u>(151)</u>	<u>(20)</u>
<u>78</u>	<u>(62)</u>	<u>(13)</u>	<u>121</u>
		Total at December 31	



## 7. Current assets

Company			Consolidated	
1981	1982		1982	1981
£m	£m		£m	£m
135	101	Inventories:		
407	316	Raw materials	109	141
409	398	Work in progress, jigs and tools	344	431
		Finished parts and engines	428	434
951	815		881	1 006
(242)	(244)	Progress payments against inventories	(246)	(249)
709	571		635	757
236	243	Accounts receivable	276	268
30	7	Bank balances and deposits	18	40
975	821		929	1 065

## 8. Current liabilities

Company			Consolidated	
1981	1982		1982	1981
£m	£m		£m	£m
388	301	Accounts payable and provisions	350	422
146	90	Short term borrowings:	90	147
		Bank loans and overdrafts	71	—
		Other	6	5
		Taxation		
534	391		517	574

# Notes to the Accounts

## 9. Property and plant

Company			Consolidated	
1982	1981		1982	1981
£m	£m		£m	£m
<b>Cost or valuation</b>				
163	166	Land and buildings		
7	7	Freehold	179	173
1	7	Long leasehold	12	12
269	291	Short leasehold	7	7
		Plant and other equipment	329	269
<u>446</u>	<u>471</u>		<u>527</u>	<u>491</u>
<b>Accumulated depreciation</b>				
5	11	Land and buildings		
		Freehold	12	6
1	1	Long leasehold	1	
169	185	Short leasehold	1	1
<u>175</u>	<u>197</u>	Plant and other equipment	201	181
271	274		<u>215</u>	<u>188</u>
		<b>Net book value at December 31</b>	<u>312</u>	<u>303</u>
<b>Movements in the year</b>				
277	271	Net book value at January 1	303	299
20	31	Additions at cost	37	28
—	—	Differences on exchange	4	5
(1)	(1)	Disposals (net of accumulated depreciation)	(1)	(2)
(25)	(27)	Depreciation provided in year	(31)	(27)
<u>271</u>	<u>274</u>	<b>Net book value at December 31</b>	<u>312</u>	<u>303</u>

The original cost of assets fully written off, but still in use and included in the consolidated figures above, amounts to £101m (1981 £96m).

Land and buildings at valuation or cost at end of year comprise:

Company			Consolidated		
Freehold	Leasehold		Freehold	Leasehold	
£m	Long	Short	£m	Long	Short
	£m	£m		£m	£m
8	—	—	14	1	—
15	7	7	165	11	7
<u>166</u>	<u>7</u>	<u>7</u>	<u>179</u>	<u>12</u>	<u>7</u>
Cost					
Valuation 1980					



## 10. Subsidiary companies

	Company	
	1982	1981
	£m	£m
Shares, less amounts written off	19	19
Amounts owing from subsidiaries	23	24
Amounts owing to subsidiaries	(80)	(16)
	<u>(38)</u>	<u>27</u>

Investments in subsidiary companies are carried in the Company's books at the net book value of the assets and liabilities at May 22, 1971, with subsequent additions at cost less post-acquisition losses.

Rolls-Royce Finance Limited, a wholly owned subsidiary, has not been consolidated. The Company, through this subsidiary, has entered into arrangements for the financing of purchases by certain customers. The circumstances relating to these arrangements are such that the subsidiary operates under restrictions imposed by lenders. The control of the subsidiary by Rolls Royce Limited is significantly impaired and, in the opinion of the directors, it would be misleading to consolidate it. The following information is provided with regard to Rolls-Royce Finance Limited:

	1982	1981
	£m	£m
Net assets at December 31	4	4
Net aggregate profits attributable to Rolls-Royce Limited, dealt with in the accounts of the Parent Company:		
(i) net profit for the year		1
(ii) accumulated profits		—
Amounts owing to Parent Company	1	1
Amounts due from fellow subsidiary	5	5

## 11. Share capital

	Consolidated and Company	
	1982	1981
	£m	£m
Authorised		
At January 1	600	400
Increased during year	—	200
At December 31	<u>600</u>	<u>600</u>
Issued ordinary shares of £1 each fully paid		
At January 1	458	328
Issued during year	50	130
At December 31	<u>508</u>	<u>458</u>

## Notes to the Accounts

### 12. Loans

Company			Consolidated	
1981	1982		1982	1981
£m	£m		£m	£m
190	219	<b>Unsecured</b>		
12	—	Bank loans repayable 1985-90 or earlier	219	190
—	—	National Enterprise Board loans	—	12
202	219		219	202
—	—	<b>Secured</b>		
1	1	Loans repayable up to 1998, with interest rates 7½% to 10½%	5	7
203	220		224	209

The increase in the value of bank loans results principally from the rise in the value of a loan of US \$315m, caused by exchange rate movements in the year. The effect of this has been charged in arriving at the operating profit in the profit and loss account.

### 13. Principal subsidiary and associated companies

#### Subsidiary companies

##### Registered in England:

	Percentage of equity
Rolls-Royce and Associates Limited (25% A shares 100% B shares)	43
Rolls-Royce (Far East) Limited	100
Rolls-Royce Finance Limited	100
Rolls-Royce (France) Limited	100
Rolls-Royce (India) Limited	100
Rolls-Royce Leasing Limited	100
Sawley Packaging Company Limited	100

The interest in Rolls-Royce and Associates Limited is held by RNC Nuclear Limited, a wholly owned subsidiary.

##### Incorporated overseas:

Australia	Rolls-Royce of Australia Pty. Limited	100
Brazil	— Motores Rolls-Royce Limitada	100
Canada	— Rolls-Royce Holdings Canada Limited	100
	— Bristol Aerospace Limited	100*
	— Rolls-Royce (Canada) Limited	100*
USA	— Rolls-Royce Holdings Inc.	100
	— Rolls-Royce Inc.	100**
	— Rolls-Royce Credit Corporation	100**
	— Rolls-Royce Capital Inc.	100

The interests in companies marked \* are held by Rolls-Royce Holdings Canada Limited.

The interests in companies marked \*\* are held by Rolls-Royce Holdings Inc.



#### Associated companies

##### Registered in England:

Rolls-Royce and Japanese Aero Engines Limited (100% A shares)	50
Rolls-Royce Turbomeca Limited (100% B shares)	50
Turbo-Union Limited (40% ordinary shares 37.5% A shares)	40
Deeside Titanium Limited	20

Percentage of equity

##### Incorporated overseas:

Cooper R. Inc.

50

The results of associated companies are not consolidated in these accounts, except to the extent of dividends received, as the results are not material.

#### 14. Pension funding

The several pension schemes of the Company and its subsidiaries are administered by trustees and the assets of the funds invested by them independently of the finances of the Group. The schemes are funded by annual contributions over the period of employment at rates designed to provide for future pensions, including amounts in respect of past service, based upon professional valuations carried out not less than once every three years.

#### 15. Future capital expenditure

Company			Consolidated	
1981	1982		1982	1981
£m	£m		£m	£m
32	48	Capital expenditure authorised but not spent at end of year of which there has been committed	49	36
14	28		29	15

#### 16. Contingent liabilities

Company			Consolidated	
1981	1982		1982	1981
£m	£m		£m	£m
7	4	Guarantees, custom bonds and other matters estimated at	5	8

# Current Cost Profit and Loss Account

for the year ended December 31, 1982

	Notes	Consolidated 1982	1981
		£m	£m
<b>Turnover</b>		<b>1 493</b>	<b>1 443</b>
Operating profit on the historic cost basis		87	126
Current cost operating adjustments		(78)	(88)
Current cost operating profit		9	38
Research and development (net)		(131)	(162)
Gearing adjustment	3	23	23
Interest expense		(47)	(46)
Current cost (loss) before taxation		(146)	(46)
Taxation		(4)	(3)
Current cost (loss) after taxation		(150)	(49)
Attributable to minority shareholders		(1)	(1)
Extraordinary item — net restructuring costs		(38)	(17)
Current cost (loss) attributable to Rolls-Royce Limited		(189)	(67)
<b>Reserves</b>		<b>404</b>	<b>402</b>
At January 1		(189)	(67)
Current cost (loss) for the year		40	69
Movements on current cost reserve		—	—
At December 31		<b>255</b>	<b>404</b>

## Current Cost Balance Sheet

at December 31, 1982

		£m	£m
Net assets employed		444	534
Net current assets	4	548	543
Property and plant		<b>992</b>	<b>1 077</b>
<b>Financed by</b>		<b>508</b>	<b>458</b>
Share capital		472	432
Current cost reserve		(217)	(28)
Other reserves		763	862
Loans		224	209
Minority interests in subsidiary companies		5	6
		<b>992</b>	<b>1 077</b>

# Notes to the Current Cost Accounts



## 1. Accounting policies

The accounting policies adopted in the current cost accounts are similar to those set out on Pages 18 and 19.

The current cost operating profit arises from the ordinary activities of the business. It is determined after allowing for the impact of price changes on the funds needed to maintain the net operating assets of the business, but takes no account of the manner in which these assets are financed.

The current cost loss attributable to Rolls Royce Limited is the deficit after allowing for the impact of price changes on the funds needed to maintain the shareholders' proportion of net operating assets and after adjustment for gearing.

Property and plant is included in the balance sheet at current cost, net of depreciation.

## 2. Current cost operating adjustments

	1982 £m	1981 £m
Working capital	58	65
Depreciation	20	23
	<u>78</u>	<u>88</u>

Working capital, which comprises the net total of current assets and current liabilities (excluding bank borrowings), has been adjusted by means of published indices to reflect the effect of changes in input prices of goods and resources used during the year.

## 3. Gearing adjustment

A proportion of the net operating assets is financed by borrowing, repayment of which is fixed in monetary amount irrespective of price changes on the proportion of assets so financed. The gearing adjustment, as applied in the current cost profit and loss account, abates the current cost operating adjustments by the average gearing proportion in the year.

## 4. Property and plant

The current cost of property and plant has been determined as follows:

- Land and buildings at the professional valuation at December 31, 1980, with subsequent additions at cost.
- Plant and equipment by the application of suitable indices to historic cost, or by internal valuation.

The net current cost of property and plant at December 31, 1982 was:

	Gross £m	Depreciation £m	Net £m
Land and buildings	198	14	184
Plant and equipment	914	550	364
At December 31, 1982	<u>1 112</u>	<u>564</u>	<u>548</u>
At December 31, 1981	<u>1 046</u>	<u>503</u>	<u>543</u>

Asset lives of land and buildings are as advised by the Group's professional advisers and average 28 years. Asset lives of plant and equipment are estimated at 5 to 25 years.

# Notes to the Current Cost Accounts

## 5. Current cost reserve

	1982	1981
	£m	£m
At January 1	432	363
Revaluation surpluses reflecting price changes:		
Property and plant	16	16
Working capital	47	77
Gearing adjustment	(23)	(24)
	40	69
At December 31	472	432
Of which:		
Unrealised	268	283
Realised	204	149
	472	432

# Notice of the Annual General Meeting

Notice is hereby given that the twelfth Annual General Meeting of Rolls-Royce Limited will be held at 65 Buckingham Gate on Wednesday, June 1, 1983 at 12.30 pm for the following purposes:

1. To receive the Report of the Directors and the audited accounts for the year ended December 31, 1982.
2. To re-appoint Coopers & Lybrand, the retiring auditors, and to authorise the directors to fix their remuneration.

By order of the Board

Anthony Warrington, Secretary  
May 5, 1983

A member entitled to attend and vote at the above meeting is entitled to appoint a proxy to attend and, on a poll, to vote in his stead. A proxy need not be a member of the Company. To be effective, proxies must be received at 65 Buckingham Gate not less than 48 hours before the time fixed for holding the meeting.



**ROLLS-ROYCE LIMITED**

65 Buckingham Gate, London SW1

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