

4. Financial performance of the major companies

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Introduction

4.1. We asked four of the major companies calibrating and servicing EGAs in the UK to provide us with detailed financial information on their operations, with particular emphasis on trading in the reference services. The companies were Sun, FKI Transervice, Churchill and GEMCO. We also asked for detailed financial information from FKI Crypton which supplies the EGAs serviced and calibrated by FKI Transervice, from Oliver which manufactures the EGAs serviced and calibrated by GEMCO and from Bear, a sister company of Churchill. We sought separate information on the calibration and servicing of EGAs, the supply of EGAs and the servicing of other products. The companies were asked to give figures for stand-alone EGAs separately from those which formed part of a more comprehensive engine diagnostic unit (referred to as 'major equipment'). Oliver was unable to provide any segmented information.

Financial performance of the major companies

Sun Electric UK Limited

4.2. Sun is a subsidiary of Sun Electric Holdings Ltd, which is itself a subsidiary of Sun Electric Corporation of the USA. Sun Electric Corporation owns all the Sun companies in Europe. Its ultimate parent company is the Snap-on-Tools Corporation, also of the USA, which acquired Sun Electric Corporation in October 1992.

4.3. Sun reports its results to Sun Electric International BV which is also the parent company of Sun Electric Europe BV, both of the Netherlands. Sun's export production is sold to Sun Electric Europe BV which sells on throughout Europe, to the Middle East, and elsewhere. Sun is the only company in the group which manufactures EGAs in Europe.

4.4. The overall financial results of Sun, including the manufacture of EGAs, for each of the three financial years up to 31 October 1992 show returns on sales of [*] per cent, [*] per cent and [*] per cent respectively and a return on average capital employed of [*] per cent in 1992. There was a marked fall in operating profits in 1992 when demand for EGAs fell.

4.5. The results of trading in EGAs, of servicing and calibrating them and of servicing other products are given from paragraph 4.14 onwards.

FKI Transervice Limited and FKI Crypton Limited

4.6. FKI Transervice and FKI Crypton are subsidiary companies of FKI plc (FKI). They operate within the process control group of FKI. FKI Crypton manufactures a range of garage equipment including EGAs which it sells via its authorized distributors to the final user. It carries out no servicing or calibration but has a substantial presence in the supply of EGAs. FKI Transervice is a specialist service company which undertakes all FKI Crypton's after-sales service and calibration and also carries out warranty work on behalf of FKI Crypton and charges FKI Crypton for it. In addition FKI Transervice services other equipment like garage hoists and parking systems supplied by FKI group companies.

4.7. The summarized results of FKI Transervice show returns on sales for each of the three financial years up to 31 March 1992 of [*] per cent, [*] per cent and [*] per cent respectively and a return on average capital employed in 1992 of [*] per cent. FKI Transervice achieved very high returns on capital employed; such high returns often occur in service companies which employ little by way of fixed assets. The results of trading in the calibration and servicing of EGAs and other equipment are given in paragraph 4.14 onwards. Figures for the servicing of machines with major equipment are not available separately from stand-alone machines and other equipment.

SPX United Kingdom Limited

4.8. SPX United Kingdom Limited (SPX) owns two companies in the UK which supply EGAs. They are Churchill and Bear. Its ultimate parent company is SPX Corporation in the USA.

4.9. Churchill and Bear sell EGAs in the UK and Churchill's results are discussed in paragraphs 4.10 to 4.12. The companies operate independently of each other and their parent.

V L Churchill Ltd

4.10. Churchill has entered into an agency agreement with its parent whereby all its trading transactions are as agent for SPX. Consequently its recent statutory accounts are those of a dormant company. The results shown here are taken from the accounts used for consolidation purposes and the company's management accounts.

4.11. The company has sold automotive tools and garage equipment for many years and in 1990 made a decision to manufacture and sell a stand-alone gas analyser, the Autogas 4. The company also distributes Allen brand EGAs, manufactured in the USA by Allen, a company acquired by the SPX group in June 1993, and falling into the category of EGAs combined with major equipment. The summarized trading results of the company show returns on sales for each of the three financial years up to 31 December 1992 of [*] per cent, [*] per cent and [*] per cent respectively and a return on average capital employed of [*] per cent in 1992. The results of calibration and servicing and trading in EGAs are given in paragraph 4.14 onwards. The company trades profitably in its traditional business, but has incurred losses on its EGA business.

*Figures omitted. See note on page iv.

4.12. The company is unique in the operation of its servicing facilities for the Autogas 4. These are calibrated at the MOT station by engineers trained only to calibrate. If any repairs are required, the machines are sent to the factory in Daventry for servicing and a replacement machine is provided in the meantime.

Garage Equipment Maintenance Co Ltd

4.13. GEMCO supplies the Gascheck 2000 EGA manufactured by Oliver and carries out the calibration and servicing of this model. GEMCO also supplies and services a large range of other garage equipment. Its trading results show returns on sales for each of the three financial years up to 30 June 1992 of [*] per cent, [*] per cent and [*] per cent respectively and a return on average capital employed of [*] per cent in 1992. The results of calibration and servicing and trading in EGAs are discussed in paragraph 4.14 onwards. The company itself sold the great majority of Oliver's machines direct to their final users.

Product profitability

Profitability of calibration and servicing

4.14. We asked the major companies to analyse the results of their trading between the supply of EGAs, the servicing and calibration of EGAs, the servicing and calibration of other garage equipment and other activities. In all the cases the companies told us that they had to make some assumptions about the allocation of costs to each of the trading segments since their own management accounting systems did not differentiate calibration and servicing of EGAs from the balance of their business. Sun was unable to split its calibration and service results between stand-alone equipment, machines with major equipment and other equipment. Its results are all included under stand-alone machines in Table 4.1. Due to the number of contracts for servicing combinations of equipment, FKI Transervice could only split out the results of stand-alone machines. Its results for machines with major equipment are included in Table 4.3 which shows the profitability of calibrating and servicing equipment other than EGAs.

4.15. Table 4.1 shows the trading results of calibrating and servicing stand-alone EGAs and those combined with major equipment. The table ranks the results by operating profit percentage over the three years reviewed.

TABLE 4.1 **Profitability of calibration and servicing of EGAs in four major companies for each year-1990, 1991 and 1992 ranked in order of operating margin**

			<i>per cent</i>		
<i>Stand-alone machines*</i>			<i>Machines with major equipment†</i>		
<i>Company/ annual results‡</i>	<i>Gross margin</i>	<i>Operating margin</i>	<i>Company/ annual results‡</i>	<i>Gross margin</i>	<i>Operating margin</i>
1	19.4	12.6	9	50.0	10.0
2	65.9	5.3	10	23.5	(2.0)
3	34.5	(2.8)	11	27.4	(23.0)
4	59.8	(10.3)			
5	(3.4)	(15.4)			
6	29.4	(23.5)			
7	44.7	(27.3)			
8	(65.7)	(185.7)			
Weighted average	45.8	(7.9)	Weighted average	29.9	(12.4)

Source: MMC from companies' data.

*Sun was unable to split its EGA calibration and servicing results between stand-alone machines and machines with major equipment. We have included Sun's results under stand-alone machines.

†FKI Transervice was unable to split its results for calibration and servicing EGA machines with major equipment and other equipment. Its results for EGA machines with major equipment and other equipment are shown together in Table 4.3.

‡The results shown do not identify the company or the year in which the result was incurred.

The companies generally incurred losses on their calibration and servicing of EGAs of both types at the operating profit level. The weighted average operating loss of those companies able to provide data was 7.9 per cent of turnover in calibration and servicing of stand-alone machines and 12.4 per cent on machines with major equipment. There were three examples of companies making profits compared with eight making losses.

4.16. The MOT emission test regulations came into operation in November 1991 by which time the bulk of demand for new machines had been satisfied. Most companies operate a 12-month warranty and some companies also offered a free calibration service for the first year. Generally the results for 1992 included in Table 4.1 are depressed by the costs incurred in repairing EGAs under warranty and in providing free calibration. However, as noted in paragraph 4.6, one company (FKI Transervice) receives income from its sister company for warranty work, and this income, together with similar income from other group companies, is reflected in its margins shown for stand-alone machines in Table 4.1 and for calibrating and servicing other equipment in Table 4.3.

4.17. The cost of carrying out warranty work can be considered as part of the cost of supplying the original equipment. One company, using a recently-introduced computer system, provided us with an estimate of the cost of carrying out warranty work on all its products. The difference between its operating profits including and excluding warranty work are shown in Table 4.2. These results are, of course, specific to the company concerned and, in that company's view, are likely to overstate the costs of warranty.

TABLE 4.2 **Example of profitability of servicing and calibrating all products including and excluding the cost of warranty work for three years (ranked in order of operating margin)**

	<i>per cent</i>	
	<i>Operating margin including cost of warranty work</i>	<i>Operating margin excluding cost of warranty work</i>
Year 1	5.3	19.7
2	(10.3)	7.4
3	(27.3)	(3.9)

Source: MMC from company data.

4.18. Companies allocated overheads to their business segments in a manner they considered appropriate to their businesses. Most of the companies adopted as a basis a proportion of their sales revenue. The figures used were in the range of 40 to 50 per cent of turnover in most cases, although one company allocated overheads which accounted for around 70 per cent of its turnover in this business segment in its last two years and 60 per cent in the first year under review. This company adopted an approach to allocation which was more considered than the other companies. Its accounting system was able to identify more costs which were specific to the reference activities than other companies could.

Profitability of servicing other products

4.19. Companies were usually more profitable at servicing equipment other than EGAs (see Table 4.3). With a single minor exception the companies made operating profits on their other businesses. The gross margins made in this segment of business are usually in line with those of servicing EGAs as is the proportion of overheads allocated.

TABLE 4.3 Profitability of calibration and servicing of equipment other than EGAs* in three major companies for each year-1990, 1991 and 1992 ranked in order of operating margin

Company/ annual results†	per cent	
	Gross margin	Operating margin
1	29.2	21.7
2	27.0	19.8
3	23.3	17.2
4	31.2	6.2
5	50.8	2.6
6	24.2	2.5
7	20.2	1.5
8	40.3	1.4
9	50.3	(0.2)
Weighted average	27.2	13.6

Source: MMC from companies' data.

*FKI Transervice was unable to split its results for calibrating and servicing other equipment from EGAs with major equipment. Its results are shown together in this table.

†The results shown do not identify the company or the year in which the result was incurred.

Profitability of the supply of EGAs

4.20. The results relating to the supply of machines, split between stand-alone and combined with major equipment, are shown in Table 4.4.

TABLE 4.4 Profitability of the supply in the UK of EGAs in four major companies for each year-1990, 1991 and 1992 ranked in order of operating margin

Company/ annual results*	Stand-alone machines		Machines with major equipment		
	Gross margin	Operating margin	Company/ annual results*	Gross margin	Operating margin
1	45.9	24.1	11	51.3	29.5
2	46.7	18.1	12	42.8	27.9
3	32.0	16.9	13	45.2	16.6
4	22.2	10.2	14	45.5	16.0
5	17.2	8.9	15	25.8	13.7
6	20.3	6.8	16	26.2	7.7
7	21.0	(0.6)	17	34.7	(1.8)
8	3.8	(12.4)	18	37.3	(8.9)
9	4.8	(24.8)	19	6.5	(9.8)
10	18.4	(313.8)			
Weighted average†	32.1	11.2	Weighted average	46.4	20.2

Source: MMC from companies' data.

*The results shown do not identify the company nor the year in which the result was incurred.

†One company reported only start-up costs in 1990 which are not shown in the annual results but reflected in the calculation of the weighted average.

Uniform pricing

4.21. The major companies have all adopted a pricing policy whereby a standard charge is made irrespective of the location of the MOT station or garage. We asked each of the major companies to estimate the profits or losses arising from the work carried out by their service and calibration engineers working in areas of the country

with different population densities of EGAs. Companies were asked to provide information for low, medium and high densities. Three companies (Churchill, FKI Transervice and Sun) were able to provide us with the information and the aggregate results of all three companies are shown in Table 4.5. The companies were not able readily to split out the servicing and calibration of stand-alone analysers separately from those combined with major equipment. Churchill's stand-alone machines were calibrated at the MOT station, but if servicing was required it was carried out at the factory. FKI Transervice engineers serviced extensively equipment other than EGAs, and Sun was not able to split stand-alone machines from the rest of the equipment it serviced. Consequently the figures shown are for a combination of service visits, comprising EGAs and other garage equipment. Some companies had difficulty in identifying areas with different density characteristics since their engineers frequently worked simultaneously in two or more types of areas and on different types of equipment. In particular, Churchill gave us figures for a combination of two engineers working a single area. Table 4.5 therefore is the combined results of four engineers working for three companies.

TABLE 4.5 **Estimated profitability of calibration and servicing garage equipment in areas of different EGA population densities**

	<i>Total for three companies</i>		
	<i>Low</i>	<i>Medium</i>	<i>High</i>
Number of visits carried out	1,781	2,247	2,736
Annualized turnover arising from engineers' activities:	£	£	£
Total income	132,663	153,945	199,386
Total direct costs	(114,814)	(114,781)	(128,654)
Gross profit	17,849	39,164	70,732
Direct overheads	(13,954)	(20,224)	(23,057)
Allocated overheads	(34,631)	(34,631)	(34,631)
Operating profit	(30,736)	(15,691)	13,044
Gross income per visit	74.49	68.51	72.88
Direct cost per visit	(64.47)	(51.08)	(47.02)
Operating profit per visit	(17.26)	(6.98)	4.77

Source: MMC from companies' data.

4.22. Table 4.5 shows that the income per visit of all types was relatively constant throughout the country while the direct costs of doing the work varied from £47 per visit in high-density to £51 per visit in medium to £64 per visit in low-density areas. Using the companies' methods of allocating overheads, operating profits varied from a loss of £17 a visit in the low to a profit of £5 a visit in the high-density areas. It was only in high-density areas, ie where engineers made around 700 visits of all types per annum, that companies were able to make an operating profit. We have no reason to believe that these figures are unrepresentative of a visit comprising a service and calibration of an EGA.

Life-cycle costs of EGAs

4.23. We asked the major manufacturers to estimate the total costs to an MOT station of buying, maintaining and calibrating an EGA over its useful life. Companies were asked both to assess the costs and estimate the life of their best-selling stand-alone EGA. Most companies estimated seven years as the effective life of their machines. The results are summarized in Table 4.6. Also shown in Table 4.6 as a comparison are the estimated costs over an eight-year life of maintaining and repairing a small petrol-engined motor car. These figures are taken from April 1993 figures supplied by the Automobile Association and costs include oil, tyres, servicing and repairing but not petrol. A further example is personal computer maintenance which is usually offered on a basis of 10 to 12.5 per cent of capital cost. Costs have been discounted at 8 per cent.

TABLE 4.6 Life-cycle costs of servicing and calibrating EGAs and other equipment

	<i>Churchill Autogas 4</i>	<i>Sun MGA 1200</i>	<i>GEMCO Gascheck 2000*</i>	<i>1000cc motor car</i>	<i>Computer maintenance 10% 12.5%</i>	
Costs of service etc discounted:†						
(a) as a proportion of capital cost (%)	90	58	126	68	62	78
(b) as a proportion of discounted life-cycle costs (%)‡	47	37	56	41	38	44

Source: MMC from companies' data and Automobile Association.

*GEMCO allocated a five-year life to the Gascheck 2000.

†The discount rate used was 8 per cent.

‡Capital cost plus servicing and calibration.

Compared with computer maintenance at 12.5 per cent of capital cost, which gives servicing costs of 44 per cent as a percentage of discounted lifetime costs, owners of EGAs incur costs in the range of 37 to 56 per cent on the same basis.

Charging-out rates for calibration and servicing

4.24. We asked the companies to provide us with the charging rates they used when determining the prices of servicing and calibration. The companies provided us with service engineers' hourly rates that applied to both the length of time spent travelling to sites and the time spent on site servicing and calibrating equipment. These travel and service and calibration rates of between £25 and £33 per hour are shown in Table 4.7. However, in some cases users benefit from discounts.

TABLE 4.7 Service engineers' charging-out rates for both calibration and servicing and travel time*

	<i>£/man-hour</i>
Company 1	25
2	29
3	30
4	33

Source: The companies.

*One company, whose rate is included in the table, uses slightly higher rates in London and a lower rate where EGA servicing is combined with other work on the site.

4.25. The RMIF told us that average labour charging-out rates used in the servicing of motor cars in garages were £22 per hour for independent garages and £28 to £30 for franchised dealers.

Productivity and cost of service engineers

4.26. We asked the major companies to give us estimates of the number of hours worked by engineers who serviced and calibrated EGAs. Companies varied in their methods of operation. Some engineers were used on specific types of equipment, some only calibrated EGAs and did not service them. The results for the two companies that could provide data are shown in Table 4.8. Information is shown only for a medium-density population area of EGAs.

TABLE 4.8 Productivity of service and calibration engineers working in a medium-density area

	Company 1	Company 2
<i>Number of visits carried out</i>		
Calibration and servicing:		
Stand-alone machines	674	260
Machines with major equipment	90	-
Other equipment	-	<u>369</u>
Total visits	764	629
<i>All types of equipment</i>		
Number of hours worked per annum (including overtime):		
Site time	764	887
Travelling time	1,665	510
Training time	49	28
Other time	-	<u>186</u>
Total hours	2,478	1,611
<i>All types of equipment</i>		
Number of hours worked (including overtime) per visit:		
Site time	1.00	1.41
Travelling time	2.18	0.81
Training time	0.06	0.04
Other time	-	<u>0.30</u>
Total hours worked	3.24	2.56

Source: MMC from companies' data.

*One company's stand-alone EGAs are serviced and calibrated by engineers specific to that product. EGAs with major equipment are serviced by engineers who work on other products.

4.27. The average site time was one hour per visit for one company and 1.4 hours for the other. The corresponding travelling times were 2.2 and 0.8 hours per visit.

4.28. FKI Transervice provided us with a typical example of the savings it made when offering large customers a discount for servicing more than one piece of equipment on the same visit. The customer paid £190 per EGA per annum compared with FKI Transervice's normal price of £250, a saving of 24 per cent. FKI Transervice estimated that in a recent 12-month period, on visits to sites with an FKI Crypton EGA and other items of FKI Crypton equipment, it made a saving in travel time equivalent to a cost saving of some £14 per EGA contract, representing 5 to 6 per cent of the £250 normal contract cost.

Costs of training and NAMAS approval for engineers

4.29. We asked the major companies to estimate the costs they incurred over the last two years in maintaining NAMAS approval for their engineers. For those companies able to provide figures, they are shown in Tables 4.9 and 4.10. The costs incurred by the companies in the first year of operation were around £300 for each engineer. Company 3's costs are not typical since they include the costs of setting up its own calibration laboratory. Table 4.10 shows that the ongoing annual costs of keeping engineers trained and approved were up to £1,900 per engineer.

TABLE 4.9 **Costs of initial NAMAS approval of calibration engineers**

	<i>Company 1</i> 1992	<i>Company 2</i> 1992	<i>Company 3</i>	
			1991	1992
Number of new engineers approved during period	28	60		49
	£	£	£	£
<i>Costs of NAMAS approval</i>				
Direct costs	8,000	16,000	5,000	178,000
Other costs			<u>20,000</u>	
Total costs	<u>8,000</u>	<u>16,000</u>	25,000	<u>178,000</u>
Costs of training and NAMAS approval per engineer	286	267		4,143*

Source: MMC from companies' data.

*Company 3 set up its calibration laboratory between October and December 1991. Consequently no engineers were approved at the end of its 1991 financial year in October. The calculations therefore are made on 1992 figures of engineers in the field and the combined initial costs of 1991 and 1992.

TABLE 4.10 **Costs of training and of maintaining NAMAS approval for calibration and service engineers**

	<i>Company 1</i> 1992	<i>Company 2</i> 1992	<i>Company 3</i> 1992
Average number of calibration and service engineers employed during year:			
Based in the field	22	59	43
Based at the factory	7	7	6
Annual costs of NAMAS approval and training:			
Direct costs	13,000	31,000	7,000
Overhead allocation	-	<u>44,000</u>	-
Total costs	13,000	75,000	7,000
Other costs of training:			
Direct costs	3,000	29,000	30,000
Overhead allocation	-	24,000	-
Other costs	<u>1,000</u>	-	<u>15,000</u>
Total other training costs	4,000	53,000	45,000
Total approval and training costs	17,000	128,000	52,000
Continuing costs, for engineers in place, per engineer	586	1,939	1,061

Source: MMC from companies' data.

Costs of developing manuals and software

4.30. We asked the major companies to estimate the costs of developing their service manuals and associated software for individual products. The results are shown in Table 4.11. One company could not split out the software costs separately.

TABLE 4.11 Development costs of service and calibration manuals and software

	£			
	1990	1991	1992	Total
<i>Company 1</i>				
SIRA charge	-	5,000	-	5,000
Software development	-	30,000	-	30,000
Total development costs over three years				35,000
<i>Company 2</i>				
Systems development and other associated costs	156,000	166,000	162,000	
Total development costs over three years				484,000
<i>Company 3*</i>				
Safety and engineering approvals	-	-	110,000	110,000
Service manual developments	-	-	41,000	41,000
Total development costs over three years				151,000

Source: MMC from companies' data.

*Company 3 also incurred software development costs in another group company which are not shown in this table.

Payments in advance for service and calibration contracts

4.31. We asked the companies to analyse the payments they received in advance in respect of servicing and calibration contracts. FKI Transervice was the only company that reported significant payments in advance. As at 31 March 1993 it had received £594,000 in advance of contracts for calibrating and servicing EGAs which was 57 per cent of sales in the preceding year. Sun made only a round sum provision in its accounts for advance payments and other companies only accounted for small amounts received in advance.