



BOARD OF TRADE

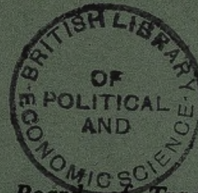
42
[HA 251]

THE REPORT
on the
CENSUS OF PRODUCTION
FOR 1951

Volume 3

Trade K

AIRCRAFT MANUFACTURE AND REPAIR



*Presented by the Board of Trade to Parliament
in pursuance of the Statistics of Trade Act, 1947
(10 & 11 Geo. 6, Ch. 39, Sec. 7).*

LONDON: HER MAJESTY'S STATIONERY OFFICE

1955

PRICE 1s 6d NET

5
42
LIST OF TABLES

Table No.	Title	Page
1	Summary: Larger establishments	3/K/2
2	Summary: Small firms	3/K/3
3	Estimated average employment: All firms	3/K/3
4	Analysis by size, 1951: Larger establishments in the United Kingdom	3/K/3
5	Analysis by standard region, 1951: Larger establishments in the United Kingdom	3/K/4
6	Analysis according to specialisation within the trade, 1951: Larger establishments in the United Kingdom	3/K/4
7	Total make of intermediate products: Larger establishments	3/K/5
8 or 8(i)	Sales of the principal products of the trade, including sales of these products by establishments classified to other trades: Larger establishments	3/K/5
8(ii)	Total sales by small firms in Great Britain	*
9	Sales of principal products of the trade by establishments classified to other trades: Larger establishments	3/K/6
10	Sales in the trade of other than principal products: Larger establishments	3/K/6
11	Production, exports and imports of certain principal products	3/K/6
12	Usage of certain specified purchased materials, 1951: Larger establishments in the United Kingdom	3/K/7
13	Employment in September: Larger establishments	3/K/8
14	Average employment: Larger establishments	3/K/9
15	Shift working, 1951: Larger establishments in Great Britain	3/K/9
16	Wages and salaries and employers' National Insurance contributions paid during the year: Larger establishments	3/K/10
17	Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work: Larger establishments	3/K/10
<u>Country tables, 1951</u>		
18	Summary: Larger establishments	3/K/11
19	Summary: Small firms in Great Britain	3/K/11
20 or 20(i)	Sales in the trade: Larger establishments	3/K/12
20(ii)	Sales in the trade: Small firms	*
21	Stocks of products on hand for sale and work in progress, and stocks of materials and fuel: Larger establishments	3/K/14
22	Employment in September: Larger establishments	3/K/14
23 or 23(i)	Average employment: Larger establishments	3/K/15
23(ii)	Average employment: Small firms	*
24	Wages and salaries and employers' National Insurance contributions paid during the year: Larger establishments	3/K/16
25	Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work: Larger establishments	3/K/16
26	Payments for transport services for finished goods sold and materials and fuel purchased: Larger establishments	3/K/16

* Not applicable to this trade

AIRCRAFT MANUFACTURE AND REPAIR TRADE

THIS REPORT on the Aircraft Manufacture and Repair Trade relates to establishments engaged wholly or mainly in the manufacture and repair of complete aircraft (including gliders, airships and balloons) and frames, and of engines, propellers, undercarriages, and other parts and accessories (except electrical equipment).

This trade corresponds to minimum list heading 82 with the addition of establishments manufacturing miscellaneous parts and accessories of aircraft included in heading 83 in the Standard Industrial Classification.

There were no larger establishments in Northern Ireland in the register for this trade in 1935.

IMPORTANT NOTES and definitions appear on the inside of the back cover of this report. In interpreting the data in the following tables, it is essential to bear these in mind.

VEHICLES
AIRCRAFT MANUFACTURE AND REPAIR TRADE

Summary

Larger establishments (a)

TABLE 1

	United Kingdom			Great Britain		United Kingdom
	1951	1950	1949	1949(b)	1948	1935
Gross output (production) (c)	£'000 188,757	£'000 151,055	£'000 140,440	£'000 ..	£'000 113,826	£'000 14,328
Receipts from Government Departments	-	130	280	..	2,676	-
Cost of materials and fuel used (d)	73,487	56,344	52,236	..	42,462	5,391
Payment for work done on materials given out	15,102	14,842	11,002	..	6,331	270
Transport payments (e)	653	..	..	..	..	..
Net output	99,515	79,999	77,482	..	67,709	8,667
Wages and salaries of persons employed	68,164 No.	56,715 No.	55,764 No.	.. No.	49,475 No.	.. No.
Average number of persons employed (f)	157,454 £	142,617 £	143,172 £	.. £	134,046 £	35,890 £
Net output per person employed (f)	632	561	541	..	505	241
Stocks at end of year	£'000	£'000	£'000	£'000	£'000	£'000
Products on hand for sale and work in progress	91,555	72,233	63,809	..	62,252	..
Materials and fuel	18,156 No.	12,065 No.	11,911 No.	.. No.	11,607 No.	.. No.
Number of establishments	215	195	184	..	195	57

The values of gross output and of materials and fuel used are derived in the following way:-

	£'000	£'000	£'000	£'000	£'000	£'000
Output of firms in this trade (g)						
Principal products (h)	156,601	142,815	141,687	..	104,793	12,882
Other output (i)	13,150					
Changes in stocks and work in progress (j)	+19,006	+ 8,432	- 901	..	+ 2,696	+ 1,299(k)
Less payment for transport outwards (e)	..	192	346	..	154	14,328
Gross output (production)	188,757	151,055	140,440	..	113,980	14,328
Materials and fuel used by firms in this trade						
Purchases	79,480	56,419	52,417	..	43,356	5,391
Changes in stocks (j)	- 5,993	- 75	- 181	..	- 894	
Materials and fuel used	73,487	56,344	52,236	..	42,462	5,391

(a) For small firms' summary see Table 2.

(b) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(c) Gross output for 1951 includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services. For other years payments for transport services outwards on finished goods sold are excluded.

(d) Amounts paid for delivery services are excluded for 1951 but included for other years.

(e) Payments to other firms and undertakings and to firms' own separate transport organisations. For 1951 they cover payments for transport of both goods sold and materials and fuel purchased. For other years payments cover only transport outwards of finished goods sold.

(f) Excluding outworkers but including working proprietors. For an estimate of the total number of persons employed in this trade see Table 3.

(g) Total value of sales (1951, 1950, 1949 and 1948) or production for sale (1935).

(h) For details for 1951 and 1948 see Table 8.

(i) For details for 1951 and 1948 see Table 10.

(j) For details for 1951 see Table 21.

(k) Work in progress only.

AIRCRAFT MANUFACTURE AND REPAIR

Summary: Small firms (a)

TABLE 2

	Great Britain		United Kingdom	Great Britain	
	1951	1950	1949	1949	1948
Number of returns	19	8	42	42	24
Average number of persons employed (b)					
Males	111	46	209	209	129
Females	10	2	35	35	20
Total	121	48	244	244	149

(a) Small firms (employing on the average ten or fewer persons) that made satisfactory returns. No information about small firms was collected in Northern Ireland for 1951 or 1950.

(b) Including working proprietors.

TABLE 3

Estimated average employment (a): All firms

	United Kingdom			Great Britain		Number
	1951	1950	1949	1949	1948	
As returned by firms						
Employing on the average more than ten persons (b)	157,454	142,617	143,172	(c)	134,046	
Employing on the average ten or fewer persons (d)	121(e)	48(e)	244	244	149	
Estimated average employment in firms not making satisfactory returns	157,575	142,665	143,416	(c)	134,195	
	-	33	45	45	99	
Estimated average employment in all firms	157,575(e)	142,698(e)	143,461	(c)	134,294	

(a) Including working proprietors.

(b) See Tables 13(iv) and 14.

(c) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(d) See Table 2.

(e) Excluding any small firms in Northern Ireland.

Analysis by size, 1951

TABLE 4

Larger establishments in the United Kingdom

Average number employed	Establishments	Gross output	Net output	Persons employed	Remuneration			Net output per person employed
					Operatives	Other employees (a)	Total	
	No.	£'000	£'000	No.	£'000	£'000	£'000	£
11 - 24	20	340	232	385	98	43	141	602
25 - 49	33	1,331	768	1,253	347	133	480	613
50 - 99	27	2,098	1,265	1,913	499	276	776	661 +
100 - 199	38	6,373	3,578	5,622	1,547	671	2,218	636
200 - 299	16	4,052	2,466	3,886	1,114	580	1,695	635
300 - 399	14	5,528	3,375	4,966	1,576	685	2,261	680 +
400 - 499	6	2,649	1,647	2,745	814	364	1,178	600
500 - 749	13	8,095	5,276	8,091	2,277	1,141	3,418	652
750 - 999	7	6,719	3,786	5,908	1,676	942	2,618	641
1,000 - 1,499	13	21,849	11,470	17,390	5,115	2,304	7,419	660 +
1,500 - 1,999	7	11,869	7,010	12,321	3,236	1,645	4,881	569
2,000 - 2,499	7	18,345	10,382	15,664	4,533	2,295	6,828	663 +
2,500 - 2,999	3	8,409	4,487	8,102	2,458	1,349	3,807	79 554
4,000 - 4,999	7	36,942	20,108	31,399	8,833	4,383	13,217	640
5,000 and over	4	54,159	23,666	37,809	11,200	6,028	17,228	626
Total	215	188,757	99,515	157,454	45,325	22,839	68,164	632

(a) Administrative, technical and clerical employees.

Analysis by standard region, 1951

Larger establishments in the United Kingdom

TABLE 5

Region	Estab- lish- ments	Gross output	Net output		Persons employed	Remuneration			Net output per person employed
			Value	Percent- age of total		Operatives	Other employees (a)	Total	
	No.	£'000	£'000		No.	£'000	£'000	£'000	£
England and Northern Ireland									
Northern: East and West Ridings; and North Midland	26	28,666	15,756	15.8	21,897	6,697	2,914	9,611	720
Eastern	17	26,161	8,444	8.5	12,662	3,555	2,257	5,813	667
London and South Eastern	57	28,927	16,182	16.3	24,151	7,081	3,800	10,881	670
Southern	44	15,449	9,678	9.7	16,539	4,592	2,274	6,867	585
South Western	23	39,613	18,980	19.1	31,357	8,567	5,187	13,754	605
Midland	22	20,060	11,859	11.9	17,425	5,789	2,029	7,818	681
North Western: and Northern Ireland	15	19,112	12,542	12.6	21,405	5,787	3,095	8,882	586
Total England and Northern Ireland	204	177,988	93,440	93.9	145,436	42,069	21,556	63,625	642
Wales	4	3,853	2,486	2.5	3,526	967	381	1,348	705
Scotland	7	6,916	3,589	3.6	8,492	2,289	902	3,191	423
United Kingdom	215	188,757	99,515	100.0	157,454	45,325	22,839	68,164	632

(a) Administrative, technical and clerical employees.

Analysis according to specialisation within the trade, 1951

Larger establishments in the United Kingdom

TABLE 6

	Estab- lish- ments	Gross output	Sales of charac- teristic products	Net output	Persons employed	Remuneration			Net output per person employed
						Operatives	Other employees (a)	Total	
	No.	£'000	£'000	£'000	No.	£'000	£'000	£'000	£
Specialist producers of Complete aircraft and airframes	19	49,487	28,746	20,140	28,358	8,141	4,544	12,685	710
Parts and accessories of aircraft, (other than aero-engines, power plant and parts thereof)	63	24,240	15,021	14,015	22,140	6,567	2,873	9,440	633
Remainder of the trade	133	115,029		65,359	106,956	30,617	15,423	46,039	611
Total	215	188,757		99,515	157,454	45,325	22,839	68,164	632

(a) Administrative, technical and clerical employees.

TABLE 7 - Total make of aero-engines: Larger establishments

The total number of aero-engines made, including those made by establishments classified to other trades, was 4,581 in 1951 and 3,199 in 1948.

Sales of the principal products of the trade, including sales of these products by establishments classified to other trades

Larger establishments

TABLE 8

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
	No.	£'000	No.	No.	£'000
Aircraft, complete, other than rotary wing aircraft					
With one engine	468	6,615	6	164	899
With two or more engines	105	5,829	7	273	4,976
Rotary wing aircraft	19 Th. B.H.P. 9	482	..	-	-
Aero-engines, complete and parts	..	34,590	43	..	18,875
Aircraft and aero-engines, reconditioned (a)	..	196	..	72	692(b)
Airframes, propellers and parts, undercarriages, spare parts of aircraft, and accessories and parts not separately distinguished (c)	..	66,401	..	..	47,626
Parachutes	No.				
Complete	16,933	414	..	..	483(d)
Parts and accessories	..		9	..	
Gliders and sailplanes, complete and parts thereof	..	360	..	..
Development and experimental work, including work on prototype aircraft, etc. for which payment was receivable (e)	..	27,983	60	..	20,546
Repair work, modifications, conversions, etc. (e)	..	14,469	66	..	16,583
Work done for the trade or on commission (including receipts in respect of cancelled contracts) (e)	..	9,964	77	..	2,533
Total		167,304	..		113,213
Sales in other trades (See Table 9)		10,704	..		8,420
Principal products of this trade sold by establishments in the trade		156,601	143		104,793

(a) So far as recorded separately.

(b) Described as 'Aircraft, reconditioned'.

(c) Including complete aircraft fitted with engines, instruments and other materials supplied by and remaining the property of H.M. Government; the value of such engines, instruments, etc. is excluded.

(d) Including model aircraft, other than toys.

(e) Amount charged.

Sales of principal products of the trade by establishments
classified to other trades

Larger establishments

TABLE 9

	United Kingdom 1951			Great Britain 1948	
	Quantity	Value	Entries	Quantity	Value
Aero-engines, complete and parts	..	£'000 4.212	No. 26	..	£'000 2.137
Airframes, propellers and parts, undercarriages, spare parts of aircraft, and accessories and parts not separately distinguished	..	5.452	..	..	5.903
Gliders and sailplanes and parts: parachutes and parts and accessories	..	109	..	..	173(a)
Development and experimental work including work on prototype aircraft, etc. for which payment was receivable (b)		123	6		75
Repair work, modifications, conversions etc. (b)		125	5		133
Work done for the trade or on commission (b)		682	16		
Total		10,704	..		8,420

(a) Including model aircraft, other than toys.
(b) Amount charged.

Sales in the trade of other than principal products

Larger establishments

TABLE 10

	United Kingdom 1951		Great Britain 1948	
	Quantity	Value	Quantity	Value
Motor vehicles and parts and accessories	..	£'000 2,854	..	£'000 2,312
Plant and machinery, and parts	..	1,078	..	662
Machine tools and parts	..	2,402	..	1,079
Other metal goods (excluding scrap)	..	3,691	..	1,002
Other goods		160		
Waste products	Th. tons			
Aluminium and aluminium alloys scrap	{ 6	410	..	1,258(a)
	{ ..	286		
Iron and steel scrap	{ 14	75		
Other waste products	..	85		
Work done, including research and development work (other than on aircraft) (b)		125		
		1,985		180
Total		13,150		6,491

(a) Recorded as 'Aluminium scrap, £177,000; other scrap metals (including metallic residues), £115,000; and other goods (including waste) £966,000'.

(b) Amount charged.

TABLE 11 - Production, exports and imports of certain principal products

Owing to differences in classification a comparison between production and oversea trade is impracticable.

Usage of certain specified purchased materials, 1951 (a)

Larger establishments in the United Kingdom

TABLE 12

Materials used	Quantity
	Th. tons
Non-alloy steel	
Ingots, billets, blooms and slabs	0.2
Angles, shapes and sections	1.7
Girders, joists, beams and pillars (not fabricated)	1.4
Bars and rods	8.3
Hoop and strip (including tape)	2.9
Tin-terne and black plates and sheets	0.8
Electrical sheets	-
Other plates and sheets	
1/8 inch thick and over	5.8
Under 1/8 inch thick	6.9
Tubes and fittings	1.6
Wire (single wire)	0.1
Forgings, in the rough (other than drop forgings)	1.0
Drop forgings	1.1
Castings, in the rough	2.1
Alloy steel (including high speed steel)	
Ingots, billets, blooms and slabs	0.4
Bars, rods, angles, shapes, sections, girders, joists, beams and pillars (not fabricated)	7.7
Plates, sheet and strip	
1/8 inch thick and over	1.3
Under 1/8 inch thick	1.4
Tubes and fittings	0.5
Wire (single wire)	0.1
Forgings, in the rough (other than drop forgings)	3.9
Drop forgings	3.6
Castings, in the rough	1.3
Iron and steel not specified above, except finished parts and scrap	2.0
Non-ferrous metals in all forms, except finished parts and scrap	
Aluminium and aluminium alloys	23.0
Brass and other copper alloys, including nickel silver but excluding all other nickel alloys	2.1
Copper	0.3
Zinc and zinc alloys	0.8
Zinc compounds	-
Timber (other than reclaimed), including that used for packing or packing case manufacture but excluding joinery, other fabricated woodwork and purchased packing cases	Th. cu. ft.
Hardwood	124.3
Softwood	500.8

(a) In addition to usage of certain specified purchased materials the following particulars were recorded of aero-engines, propellers and undercarriages, purchased by establishments in this trade during 1951:-

	Number	£'000	Entries
Aero-engines (including second-hand)	{ 234	1,394	15
	{ ..	1,030	
Propellers	{ 524	141	8
	{ ..	39	
Undercarriages (including complete sets)	1,321	1,080	10

Employment in September
Larger establishments (a)

TABLE 13
(i) Operatives

	United Kingdom			Great Britain		United Kingdom
	1951(b)	1950(b)	1949(b)	1949(c)	1948(d)	1935(d)
Males						
Under 18	4,109	3,106	2,863	..	2,659	3,129
All ages	102,104	89,703	92,305	..	85,345	28,266
Females						
Under 18	351	255	298	..	202	270
All ages	10,739	8,603	8,536	..	8,567	1,687
Total						
Under 18	4,460	3,361	3,161	..	2,861	3,399
All ages	112,843	98,306	100,841	..	93,912	29,953

(ii) Administrative, technical and clerical employees (e)

	United Kingdom			Great Britain		United Kingdom
	1951	1950	1949	1949(c)	1948	1935
Males						
Under 18	778	600	675	..	661	417
All ages	36,192	32,098	31,718	..	29,413	4,719
Females						
Under 18	1,642	1,302	1,226	..	1,134	261
All ages	14,030	11,591	11,521	..	10,718	1,218
Total						
Under 18	2,420	1,902	1,901	..	1,795	678
All ages	50,222(f)	43,689(f)	43,239(f)	..	40,131(f)	5,937

(iii) Total employees

	United Kingdom			Great Britain		United Kingdom
	1951	1950	1949	1949(c)	1948	1935
Males						
Under 18	4,887	3,706	3,538	..	3,320	3,546
All ages	138,296	121,801	124,023	..	114,758	32,985
Females						
Under 18	1,993	1,557	1,524	..	1,336	531
All ages	24,769	20,194	20,057	..	19,285	2,905
Total						
Under 18	6,880	5,263	5,062	..	4,656	4,077
All ages	163,065(f)	141,995(f)	144,080(f)	..	134,043(f)	35,890

(a) Excluded employees. The following persons were employed at the larger establishments in this trade in 1951 but are not included in the above tables or in any other Census of Production report (employees in Great Britain engaged, for example, in merchandising and in Northern Ireland canteen and welfare workers):-

Canteen workers	201	Males	1,436	Females	
Other workers	1,102	Males	260	Females	

(b) In week ended September 22, 1951, September 30, 1950, and September 24, 1949.

(c) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(d) Average for the year.

(e) In week ended September 22, 1951, September 30, 1950, September 24, 1949, September 25, 1948 and October 12, 1935.

(f) Working proprietors. In addition working proprietors, shown in Table 13 (iv) below, were engaged in this trade in larger establishments. The 1935 figures include working proprietors.

(iv) Working proprietors

	United Kingdom			Great Britain	
	1951	1950	1949	1949	1948
Males	5	5	7	..	3
Females	-	-	-	..	-
Total	5	5	7	..	3

Average employment
Larger establishments (a)

TABLE 14

	United Kingdom			Great Britain		United Kingdom
	1951	1950	1949	1949(b)	1948	1935
Operatives	109,215	98,278	100,528	..	93,912	29,953
Administrative, technical and clerical employees	48,234	44,334	42,637	..	40,131(c)	5,937(c)
Total	157,449	142,612	143,165	..	134,043	35,890

(a) For employment in small firms (employing on the average ten or fewer persons) that made satisfactory returns see Table 2.

(b) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(c) In week ended September 25, 1948 and October 12, 1935. The 1935 figure includes working proprietors.

Outworkers. In addition to the employees shown above the firms in this trade employed outworkers whose numbers are shown below.

	United Kingdom			Great Britain		United Kingdom
	1951	1950	1949	1949	1948	1935
Males	-	-	28	28	9	..
Females	-	-	1	1	-	..
Total	-	-	29	29	9	..

Shift working, 1951 (a)

Larger establishments in Great Britain

TABLE 15

	Total number of man-shifts worked in the week	Total number of shift-hours worked in the week	Number of returns showing the systems stated
Continuous 3 shift systems per 24 hours averaging 8 hours per shift	600	4,905	2
Continuous 4 shift systems per 24 hours averaging 6 hours per shift	-	-	-
All 2 shift systems	67,155	657,917	13
Other shift systems	7,315	69,935	9
Total	75,070	732,757	(b)

(a) Shift working during week ended September 22, 1951.

(b) The number and percentage of returns showing shift working and of operatives on shift-work were as follows:-

	Returns		Operatives		
	Total in trade	Showing shift-work	Total in trade	Total on returns showing shift-work	Number employed on shift-work
Number	..	24	..	58,265	14,875
Percentage of total in trade showing shift-work	100.0	17.0(c)	100.0	53.0(c)	14.0(c)
				100.0	25.5

(c) Rounded to avoid disclosure.

Wages and salaries and employers' National Insurance
contributions paid during the year

Larger establishments

	United Kingdom			Great Britain	
	1951	1950	1949	1949(a)	1948
Wages and salaries (b) of					
Operatives	45,325	37,479	37,655	..	32,936
Administrative, technical and clerical employees	22,839	19,236	18,109	..	16,539
Total	68,164	56,715	55,764	..	49,475
Employers' contributions to all National Insurance Schemes	1,581	1,427	1,448	..	1,054

(a) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

(b) Including bonus and commission payments, but excluding payments to outworkers (£8,000 in 1949 and a negligible amount in 1948).

Plant, machinery and vehicles - acquisitions and disposals,
and capital expenditure on new building work

Larger establishments

	United Kingdom		Great Britain	
	1951	1949	1949(a)	1948
Plant, machinery and vehicles				
Acquisitions				
Plant and machinery				
New	3,294	1,936	..	1,508
Second-hand	480	272	..	1,331
Vehicles				
New	466	229	..	170
Second-hand	73	34	..	116
Total acquisitions	4,312	2,470	..	3,125
Disposals				
Plant and machinery	157	157	..	211
Vehicles	83	39	..	44
Total disposals	240	196	..	255
New building work				
Capital expenditure on new building and other constructional work of a capital nature (excluding site values and development charges)	1,508	642	..	780

(a) Owing to the risk of disclosure of information relating to individual firms in Northern Ireland separate particulars for Great Britain cannot be given.

1951

Summary

Larger establishments

TABLE 18

	England (a)	Wales	Scotland	Great Britain	Northern Ireland (a)	United Kingdom
	£'000	£'000	£'000	£'000	£'000	£'000
Gross output (production)	177,988	3,853	6,916	..	..	188,757
Cost of materials and fuel used	68,891	1,364	3,232	..	..	73,487
Payment for work done on materials given out	15,087	-	14	..	..	15,102
Transport payments	570	2	81	..	..	653
Net output	93,440	2,486	3,589	..	..	99,515
Wages and salaries of persons employed	63,625	1,348	3,191	..	..	68,164
	No.	No.	No.	No.	No.	No.
Average number of persons employed (b)	145,436	3,526	8,492	..	..	157,454
	£	£	£	£	£	£
Net output per person employed (b)	642	705	423	..	..	632
	£'000	£'000	£'000	£'000	£'000	£'000
Stocks at end of year						
Products on hand for sale and work in progress	85,924	2,851	2,780	..	..	91,555
Materials and fuel	17,522	386	248	..	..	18,156
	No.	No.	No.	No.	No.	No.
Number of establishments	204	4	7	..	..	215

The values of gross output and of materials and fuel used are derived in the following way:-

	£'000	£'000	£'000	£'000	£'000	£'000
Output of firms in this trade						
Total value of sales (see Table 20)	161,493	2,881	5,377	..	..	169,751
Changes in stocks and work in progress (see Table 21)	+ 16,495	+ 972	+ 1,539	..	..	+ 19,006
Gross output (production)	177,988	3,853	6,916	..	..	188,757
Materials and fuel used by firms in this trade						
Purchases	74,657	1,564	3,259	..	..	79,480
Changes in stocks (see Table 21)	- 5,766	- 199	- 27	..	..	- 5,993
Materials and fuel used	68,891	1,364	3,232	..	..	73,487

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland, where net output was about 2 per cent. of that of the United Kingdom, cannot be given separately and have been included with those for England.

(b) Including working proprietors.

TABLE 19 - Summary: Small firms in Great Britain

See Table 2. No small firms were recorded in Scotland in the register for this trade. Owing to the risk of disclosure of information relating to individual firms further details cannot be given.

Sales in the trade
Larger establishments

TABLE 20

	England and Wales		Scotland		Great Britain		Northern Ireland		United Kingdom	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Principal products	No.	£'000		£'000	No.	£'000		£'000	No.	£'000
Aircraft complete, other than rotary wing aircraft										
With one engine	468	6,615	-	-	468	6,615	-	-	468	6,615
With two or more engines	105	5,829(a)	-	-	..	..	..	(a)	105	5,829
Rotary wing aircraft	19 Th.B.H.P. 9	482	-	-	19 Th.B.H.P. 9	482	-	-	19 Th.B.H.P. 9	482
Aero-engines, complete and parts	..	(b)	..	(b)	..	30,377	-	-	..	30,377
Aircraft and aero-engines, reconditioned	..	196	-	-	..	196	-	-	..	196
Airframes, propellers and parts, undercarriages, spare parts of aircraft, and accessories and parts not separately distinguished	..	60,283(a)	..	667	..	..	..	(a)	..	60,949
Gliders and sailplanes and parts; parachutes and parts and accessories	..	666	-	-	..	666	-	-	..	666
Development and experimental work, including work on prototype aircraft, etc. for which payment was receivable (c)	..	(b)	..	(b)	..	..	..	(b)	..	27,860
Repair work, modifications, conversions, etc. (c)	..	11,481(a)	..	2,863	..	..	..	(a)	..	14,344
Work done for the trade or on commission (including receipts in respect of cancelled contracts) (c)	..	(b)	..	(b)	..	..	..	(b)	..	9,282
Total principal products		151,399(a)		5,202		..		(a)		156,601

VEHICLES COUNTRY TABLES

Other output										
Motor vehicles and parts and accessories	..	2,777	..	77	..	2,854	-	-	..	2,854
Plant and machinery, and parts	..	(b)	..	(b)	..	1,078	-	-	..	1,078
Machine tools and parts	..	2,385	..	17	..	2,402	-	-	..	2,402
Other metal goods (excluding scrap)	..	3,678	..	14	..	3,691	-	-	..	3,691
Other goods	..	160	-	-	..	160	-	-	..	160
Waste products										
Aluminium and aluminium alloys scrap	..	(b)	..	(b)	..	..	..	(b)	Th. tons 6	410 286
Iron and steel scrap	..	(b)	..	(b)	..	..	..	(b)	14	75 85
Other waste products	..	125(a)	-	-	..	..	..	(a)	..	125
Work done, including research and development work (other than on aircraft) (c)	..	1,985(a)	-	-	..	..	..	(a)	..	1,985
Total		164,374(a)		5,377		..		(a)		169,751

AIRCRAFT MANUFACTURE AND REPAIR COUNTRY TABLES

- (a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.
 (b) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.
 (c) Amount charged.

Stocks of products on hand for sale and work in progress,
and stocks of materials and fuel

Larger establishments

		England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Products on hand for sale	{ at beginning of year	(a)	(a)	..	(a)	5,170
	{ at end of year					6,058
Work in progress	{ at beginning of year	(a)	(a)	..	(a)	67,379
	{ at end of year					85,497
Total products on hand for sale and work in progress	{ at beginning of year	71,308 (b)	1,241	..	(b)	72,549
	{ at end of year	88,775 (b)	2,780	..	(b)	91,555
Materials and fuel	{ at beginning of year	11,943 (b)	221	..	(b)	12,164
	{ at end of year	17,908 (b)	248	..	(b)	18,156

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars for products on hand for sale and for work in progress cannot be given.

(b) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

Employment in September

Larger establishments (a)(b)

Note - Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales throughout this table.

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males					
Under 18	3,981	128	..	..	4,109
All ages	96,292	5,812	..	..	102,104
Females					
Under 18	348	3	..	..	351
All ages	9,931	808	..	..	10,739
Total					
Under 18	4,329	131	..	..	4,460
All ages	106,223	6,620	..	..	112,843

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males					
Under 18	730	48	..	..	778
All ages	34,792	1,400	..	..	36,192
Females					
Under 18	1,522	120	..	..	1,642
All ages	13,357	673	..	..	14,030
Total					
Under 18	2,252	168	..	..	2,420
All ages (c)	48,149	2,073	..	..	50,222

TABLE 22 (contd.)

(iii) Total employees

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males					
Under 18	4,711	176	..	..	4,887
All ages	131,084	7,212	..	..	138,296
Females					
Under 18	1,870	123	..	..	1,993
All ages	23,288	1,481	..	..	24,769
Total					
Under 18	6,581	299	..	..	6,880
All ages (c)	154,372	8,693	..	..	163,065

(a) Excluded employees. The number of persons employed at the larger establishments in this trade but not included in the above tables or in any other Census of Production report (employees in Great Britain engaged, for example, in merchandising and in Northern Ireland canteen and welfare workers) are shown in Table 22(v) below.

(b) Number employed in the week ended September 22, 1951.

(c) Working proprietors. In addition working proprietors, shown in Table 22(iv) below, were engaged in this trade in larger establishments.

(iv) Working proprietors

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Males	5	-	..	..	5
Females	-	-	..	..	-
Total	5	-	..	..	5

(v) Excluded employees

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Canteen workers					
Males	194	7	..	..	201
Females	1,409	27	..	..	1,436
Total	1,603	34	..	..	1,637
Other workers					
Males	971	131	..	..	1,102
Females	239	21	..	..	260
Total	1,210	152	..	..	1,362
Total excluded employees	2,813	186	..	..	2,999

Average employment

Larger establishments (a)

	England and Wales (b)	Scotland	Great Britain	Northern Ireland (b)	United Kingdom
Operatives	102,657	6,558	..	..	109,215
Administrative, technical and clerical employees	46,300	1,934	..	..	48,234
Total	148,957	8,492	..	..	157,449

(a) For employment in small firms in Great Britain (employing on the average ten or fewer persons) see Table 2.

(b) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

Outworkers. No outworkers were recorded for 1951.

Wages and salaries and employers' National Insurance contributions paid during the year

Larger establishments

TABLE 24 £'000

	England and Wales (a)	Scotland	Great Britain	Northern Ireland (a)	United Kingdom
Wages and salaries (b) of					
Operatives	43,036	2,289	..	..	45,325
Administrative, technical and clerical employees	21,937	902	..	..	22,839
Total	64,974	3,191	..	..	68,164
Employers' contributions to all National Insurance Schemes	1,498	83	..	..	1,581

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

(b) Including bonus and commission payments.

Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work

Larger establishments

TABLE 25 £'000

	England and Wales (a)	Scotland	Great Britain	Northern Ireland (a)	United Kingdom
Plant, machinery and vehicles					
Acquisitions					
Plant and machinery					
New	3,245	49	..	..	3,294
Second-hand	453	27	..	..	480
Vehicles					
New	456	9	..	..	466
Second-hand	72	-	..	..	73
Total acquisitions	4,227	86	..	..	4,312
Disposals					
Plant and machinery	155	3	..	..	157
Vehicles	64	19	..	..	83
Total disposals	218	22	..	..	240
New building work					
Capital expenditure on new building and other constructional work of a capital nature (excluding site values and development charges)	1,502	6	..	..	1,508

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

Payments for transport services for finished goods sold and materials and fuel purchased

Larger establishments

TABLE 26 £'000

	England and Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
Amounts paid to other firms and undertakings	398(a)	31	..	(a)	429
Amount paid or credited to firms' own separate transport organisations	173	50	224	-	224
Total	572(a)	81	..	(a)	653

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Northern Ireland cannot be given separately and have been included with those for England and Wales.

GENERAL NOTES

The following brief notes refer to Great Britain and, unless otherwise stated, to the census of production for 1951. Reference should be made to the separate booklet in this series entitled 'The Report on the Census of Production for 1951: Introductory Notes' (price 1s.6d. net) for particulars of the minor differences in the Northern Ireland censuses and other details about the census of production.

Trade classification: Establishments are classified to trades according to the nature of their output. Certain products, called principal products, are identified as characteristic of the production of individual trades, the principal products for a given trade being of a similar nature or commonly associated in production. An establishment is classified to a trade if its output of principal products of that trade accounted for a greater proportion of the value of its output than did its output of principal products of any other trade.

The establishment: The basic unit for the collection of information is generally the establishment which in most cases comprises the whole of the premises under the same ownership or management at a particular address (e.g., a factory). Offices, warehouses and other ancillary places of business situated apart from the producing works are included in the return for the works.

Larger establishments and small firms: Larger establishments are those which employed more than 10 persons on the average during the year; small firms are those employing on the average 10 or fewer persons.

Working proprietors are proprietors of businesses other than limited companies, and include members of their families who work in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded.

Persons employed: Administrative employees include directors other than those paid by fee only, managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; and travellers and office (including works office) employees. Operatives include all other classes of employees, that is, broadly speaking, all manual workers.

All these figures exclude canteen employees and persons engaged in merchandising or any other activity not covered by a firm's return who are shown separately as excluded employees.

Figures for employees include only persons on the pay-roll (that is whose National Insurance cards were held by the firm), whether full-time or part-time employees.

Outworkers, who are shown separately, are persons employed by the firm who work on materials supplied by the firm, but do not work on the premises; operatives directly employed who work out of doors (e.g., maintenance workers) and sub-contractors are not included as outworkers.

Wages and salaries include all overtime payments, bonuses, and commissions, without any deduction for income tax, insurance, contributory pensions, etc. They exclude payments to working proprietors.

Capital expenditure: Expenditure on plant, machinery and vehicles relates to expenditure charged to capital account during the year of return, including transport and installation costs involved. Expenditure on new building work is similarly that charged to capital account during the year.

Materials and fuel: The cost of materials and fuel purchased includes all purchases during the year of materials for use in production and of fuel (including oil, gas, and electricity for all purposes, including heating and lighting); all packing materials, including the full cost of returnable containers when first purchased; workshop materials; office materials; water charges; materials for repairs to firms' own buildings, plant and vehicles when carried out by

their own work people included in the return; and consumable tools and parts for machinery purchased as replacement. Materials, components, etc. which were purchased and re-sold in the same state (that is, merchanted or factored goods) were excluded. For 1951 firms in many trades were required to state the quantities of certain purchased materials used.

Stocks and work in progress: Firms were instructed to give these at income tax value.

Output: Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. For all post-war censuses the value of sales was the net selling value, that is, the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

Gross output of a trade is the total value of goods made and other work done during the year; this means the value of sales and work done during the year adjusted for changes in the values of stocks.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used and the amount paid for work given out and, for 1951, any transport payments included in firms' returns. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met as well as depreciation and profits.

Customs and Excise Duty paid on materials purchased is included in the cost of materials, but where it is especially important separate figures are shown.

Later reports: Reports will be published later summarising the main census results and giving information about power equipment and fuel consumption.

Disclosure of information: The report has been prepared in conformity with the disclosure provisions of the Statistics of Trade Act, 1947. Figures have been combined with others of a similar nature in certain cases where publication of separate details might disclose the operations of an individual firm.

Symbols used: '..' for 'Not available', '-' for 'Nil or negligible (less than half the final digit shown)'

The figures in the tables have been rounded off to the nearest final digit, and there may be an apparent slight discrepancy between the sums of the constituent items and the totals shown.

Tables 1 to 17 show figures for the United Kingdom (or Great Britain).

Tables 18 to 26 are country tables and give, where practicable, separate details for England and Wales, Scotland and Northern Ireland.

Table 6: Specialist producers refer to those establishments 50 per cent. or more of whose total output by value is accounted for by the groups of products specified.

Table 8 (or 8(i)) shows the total sales of principal products of the trade, and includes therefore the sales of these products returned by establishments whether classified to the trade or to other trades. Those produced by establishments in other trades are shown in Table 9.

Table 10 shows the sales by establishments in the trade of products other than those regarded as principal products of the trade.

Table 20 (or 20(i)) shows sales by establishments in the trade of products, whether principal products or not, and broadly the aggregates here are equal to the corresponding figures in Table 8 (or 8(i)) less those in Table 9, plus those in Table 10.

Crown Copyright Reserved

PRINTED AND PUBLISHED BY HER MAJESTY'S STATIONERY OFFICE

To be purchased from

York House, Kingsway, LONDON, W.C.2 423 Oxford Street, LONDON, W.1
P.O. Box 569, LONDON, S.E.1
13a Castle Street, EDINBURGH, 2 109 St. Mary Street, CARDIFF
39 King Street, MANCHESTER, 2 Tower Lane, BRISTOL, 1
2 Edmund Street, BIRMINGHAM, 3 80 Chichester Street, BELFAST

or from any Bookseller

1955

Price 1s 6d net

PRINTED IN GREAT BRITAIN

S.O. Code No. 51-328-3-11