

## THE MOTOR AND CYCLE TRADE

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### THE MOTOR AND CYCLE TRADE

*Note.*—For information regarding the scope of the Census, instructions given to firms for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

#### Introductory

This trade comprises firms that were engaged wholly or mainly in the manufacture or repair of motor vehicles and cycles, and of parts and accessories other than rubber tyres, which are dealt with in the report on the Rubber Trade.

For the purpose of this report, the trade is divided into (A) the Manufacturing section, which includes firms whose principal business consisted in constructing or assembling motor vehicles and cycles and in manufacturing parts and accessories, and (B) the Repairing section, which includes garages, service stations and other establishments engaged principally in repair work, whether for customers or (as in the case of transport undertakings) on the owners' own vehicles. So far as possible, separate details for 1930 and 1924 are given for each section, but for the reasons stated below, these details cannot be furnished in the paragraphs dealing with "Deficiencies in 1930 aggregates" and "Regional distribution." For these two subjects and for the summary tables appended to the report the information given relates to the Motor and Cycle Trade as a whole.

**Deficiencies in 1930 aggregates.**—As no details of output were required at the 1930 Census from firms employing not more than ten persons, it was not possible to distinguish those engaged mainly in manufacture from those engaged mainly in repair work. The figures given in the following paragraphs, therefore, relate to the Motor and Cycle Trade as a whole.

The aggregate number of establishments at which not more than ten persons were employed was returned for 1930 as 13,953, and the total number of their employees was 57,269, or about 4.1 persons per establishment. No information was received from 1,349 firms to which schedules were sent and the great majority of these firms are known to have employed not more than ten persons. On the basis of the average number recorded by firms of this class, it may be estimated that these omitted establishments employed about 5,500 persons, raising the aggregate for all such small establishments to about 62,800. The total number of employees recorded by manufacturing firms was 195,281 and by repairing firms 44,972, and the aggregate for all firms engaged in 1930 in the Motor and Cycle Trade as a whole (as defined above) amounted to approximately 303,000 persons.

At the 1924 Census, 209,500 employees were recorded by all firms in the Motor and Cycle Trade (Manufacturing and Repairing) from which returns were received, about 17,800 being recorded by firms employing not more than ten persons; in addition, 4,300 firms to which schedules were sent failed to give any information. Assuming that the average number of persons employed by these 4,300 firms was the same as for all small firms making returns for that year, the total number of employees in the Motor and Cycle Trade in 1924 may be estimated as approximately 222,000 persons. Employment in 1930 was thus greater than in 1924 by 81,000, or about 36 per cent.

Apart from transport concerns, these estimates do not cover the employees of industrial firms outside the Motor and Cycle Trade that carried out repairs to the firms' own vehicles; these employees, with all others concerned with the maintenance of the firms' own properties, are included in the aggregates shown for the trade in which the firms were engaged.

The value of the gross output of the small firms in 1924 was £5,253,000, of which the following were the principal items:—

	£'000
Repair work to motor vehicles and cycles ... ..	4,067
Other work done ... ..	189
Motor cars and motor cycles, complete ... ..	140
Cycles, complete ... ..	95
Parts of motor cars, motor cycles and cycles ... ..	541
Other goods made ... ..	218
Addition on account of work in progress (see page 344)	3
TOTAL ... ..	5,253

While the small firms contributed over 26 per cent. of the value of all repair and other work recorded for 1924, their output of vehicles, parts and other manufactures formed little more than one per cent. of the whole. It is clear that the exclusion from the 1930 Census of the firms employing not more than ten persons can have had no appreciable effect on the results so far as manufactured goods are concerned.

Comparison between the numbers recorded by the small firms in the two years is probably affected to some extent by the fact that a somewhat larger proportion of employees engaged in distributive services is included in the 1930 total than in that for 1924 (see page 199). In any case, however, the figures should be considered rather in relation to the numbers employed in the Repairing than in the Manufacturing section. In 1924 rather more than 80 per cent. of the whole of the employees of the small firms were probably employed on repair work, or, say, between 24,000 and 25,000; taking a similar proportion for 1930 would give a range of 50,000 to 52,000 persons employed on repair work. The numbers recorded in the Repairing section by the firms employing

more than ten persons were 22,393 in 1924 and 44,972 in 1930. It may, therefore, be presumed that a somewhat greater proportion of the repair work was carried out by the small firms in the later year; as a rough estimate these firms may have contributed some 30 per cent. of the total value of all repair work done in 1930.

**Regional distribution.**—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the areas\* into which Great Britain has been sub-divided. Separate particulars for the Manufacturing and Repairing sections are not available in respect of 1924 and the figures given for that year accordingly cover both sections of the trade.

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed	
1.	Manufacturing 1930	No. 212	£'000 17,122	£'000 7,684	No. 31,942	£ 241
	Repairing ... 1930	292	6,672	3,806	19,911	191
Total ...	{ 1930	504	23,794	11,490	51,853	222
	{ 1924	412	17,619	9,277	37,088	250
2.	Manufacturing 1930	74	11,880	4,315	15,807	273
	Repairing ... 1930	103	1,046	632	3,605	175
Total ...	{ 1930	177	12,926	4,947	19,412	255
	{ 1924	156	9,769	5,054	15,547	325
3.	Manufacturing 1930	41	2,287	1,078	4,631	233
	Repairing ... 1930	66	439	257	1,604	160
Total ...	{ 1930	107	2,726	1,335	6,235	214
	{ 1924	82	1,853	848	3,918	217
4.	Manufacturing 1930	13	119	79	476	166
	Repairing ... 1930	46	576	331	1,836	180
Total ...	{ 1930	59	695	410	2,312	177
	{ 1924	39	305	179	972	134
5.	Manufacturing 1930	287	53,994	23,900	108,865	220
	Repairing ... 1930	68	401	237	1,467	161
Total ...	{ 1930	355	54,395	24,137	110,332	219
	{ 1924	357	44,840	21,119	96,947	218
6.	Manufacturing 1930	132	22,432	7,561	29,654	255
	Repairing ... 1930	384	3,155	1,902	12,111	157
Total ...	{ 1930	516	25,587	9,463	41,765	227
	{ 1924	376	16,384	6,747	30,370	222
7.	Manufacturing 1930	7	107	62	384	162
	Repairing ... 1930	24	161	104	698	148
Total ...	{ 1930	31	268	166	1,082	153
	{ 1924	23	151	95	583	163

\* For particulars see page xviii.

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed	
8.	Manufacturing 1930	No. 7	£'000 51	£'000 30	No. 185	£ 163
	Repairing ... 1930	7	51	30	185	163
Total ...	{ 1930	7	51	30	185	163
	{ 1924	9	36	21	151	139
9.	Manufacturing 1930	23	1,565	593	2,862	207
	Repairing ... 1930	41	401	241	1,383	174
Total ...	{ 1930	64	1,966	834	4,245	196
	{ 1924	52	1,625	780	3,470	225
10.	Manufacturing 1930	21	191	108	660	163
	Repairing ... 1930	66	657	383	2,172	176
Total ...	{ 1930	87	848	491	2,832	173
	{ 1924	61	856	451	2,635	171
TOTAL	Manufacturing 1930	810	109,697	45,380	195,281	232
	Repairing ... 1930	1,097	13,559	7,923	44,972	176
Total ...	{ 1930	1,907	123,256	53,303	240,253	222
	{ 1924	1,567	93,438	44,571	191,681	233

Area 5 (Warwickshire, Worcestershire and Staffordshire) was the principal centre of the trade in both years, between 45 and 46 per cent. of the total number of employees and of the total net output for 1930 being returned by establishments situated in this area. Taking the Manufacturing section separately, 95 per cent. of the employees were recorded by firms in four areas, viz., Area 5 (56 per cent.) Area 1 (16 per cent.), Area 6 (15 per cent.) and Area 2 (8 per cent.); the Repairing section was composed chiefly of firms in the South of England, Areas 1 and 6 contributing over 71 per cent. of the total number of persons returned for this section.

**Northern Ireland.**—The following table summarises the particulars recorded at the Census of Production taken by the Government of Northern Ireland for 1930, together with those furnished at the 1924 Census. The 1930 figures relate to firms that employed an average of more than five persons, while those for 1924 relate to all firms.

Particulars	Unit	1930	1924
Value of goods made and work done (Gross output)	£'000	302	255
Cost of materials used ... ..	"	139	115
Paid for work given out to other firms ... ..	"	4	6
Net output ... ..	"	159	134
Average number of persons employed ... ..	No.	1,457	1,027
Net output per person employed ... ..	£	109	130
Power available :—			
Prime movers ... ..	H.P.	239	357
Electric motors driven by purchased electricity	"	443	384

The principal items included in the gross output values shown in the above table were as follows:—

	1930	1924
	£'000	£'000
Motor car bodies ... ..	13	30
Other goods made ... ..	11	
Repair work to motor cars, motor cycles and cycles ... ..	200	193
Repair work to motor lorries, omnibuses, etc ...	75	32
Other repair and jobbing work ... ..	3	
<b>TOTAL</b> ... ..	<b>302</b>	<b>255</b>

(A) MOTOR AND CYCLE TRADE (MANUFACTURING)

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons:—

Particulars	Unit	1930	1924
Value of goods made and work done (Gross output) ... ..	£'000	109,697	86,341
Cost of materials used ... ..	"	63,680	44,361
Paid for work given out to other firms ... ..	"	637	1,429
Net output ... ..	"	45,380	40,551
Average number of persons employed ... ..	No.	195,281	169,288
Net output per person employed ... ..	£	232	240
Power available:—			
Prime movers ... ..	H.P.	42,934	43,744
Electric motors driven by purchased electricity ...	"	211,019	130,599
Number of returns ... ..	No.	810	885
Number of establishments ... ..	"	1,002	*

\* Not available.

**Size of firms.**—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns:—

Size of firm (average numbers employed)	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24 ...	228	1,567	766	4,079	188
25-49 ...	192	2,574	1,270	6,636	191
50-99 ...	136	4,387	2,140	9,581	223
100-199 ...	99	6,284	2,930	14,043	209
200-299 ...	33	3,521	1,594	7,918	201
300-399 ...	22	3,787	1,678	7,588	221
400-499 ...	14	3,286	1,336	6,423	208
500-749 ...	30	8,551	3,927	18,775	209
750-999 ...	17	7,206	3,202	14,455	222
1,000-1,499 ...	10	6,857	2,514	12,530	201
1,500 and over ...	29	61,677	24,023	93,253	257
<b>TOTAL</b> ...	<b>810</b>	<b>109,697</b>	<b>45,380</b>	<b>195,281</b>	<b>232</b>

Nearly 53 per cent. of the total net output and nearly 48 per cent. of the total number of persons employed were recorded by establishments of the largest range of size, and the net output per employee in this range was greater by over 10 per cent. than the average for all establishments. The number of returns made for the two smallest ranges was more than one-half of the total number received, but the net output of the establishments included in these ranges formed less than 5 per cent. of the total.

**Sub-divisions of the industry.**—In the following table the results of the 1930 Census are grouped into the main sections of the industry:—

Group	Number of returns	Gross output	Value of characteristic products	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	£'000	No.	£
Firms wholly or mainly engaged in the manufacture of:—						
Complete motor cars (including commercial vehicles), chassis, motor cycles and tricars ...	108	71,960	50,704	25,863	99,943	259
Cycles and tricycles (not mechanically propelled) ...	38	3,177	2,355	1,337	6,637	201
Complete motor cars, chassis, motor cycles and cycles ... ..	146	75,137	53,059	27,200	106,580	255
Bodies for motor vehicles ...	330	10,468	6,888	5,224	26,251	199
Parts and accessories of motor cars, motor cycles and cycles ...	334	24,092	18,752	12,956	62,450	207
<b>TOTAL</b> ... 1930	<b>810</b>	<b>109,697</b>	<b>78,699</b>	<b>45,380</b>	<b>195,281</b>	<b>232</b>

For the purpose of the above classification, returns were assigned to the specified groups in accordance with the predominant class of manufacture composing the output, but a very large number covered more than one and, in some cases, all of the classes mentioned in the table.

Corresponding figures for 1924, but relating to all firms, including those in Northern Ireland, are as follows:—

Group	Gross output	Value of characteristic products	Net output	Average number of persons employed	Net output per person employed
Firms wholly or mainly engaged in the manufacture of:—					
Complete motor cars, chassis, motor cycles and cycles ...	61,767	50,948	27,320	105,145	260
Bodies for motor vehicles ...	10,081	6,196	5,460	26,475	207
Parts and accessories of motor cars, motor cycles and cycles ...	17,316	14,559	10,377	45,501	228
<b>TOTAL ... 1924</b>	<b>89,164</b>	<b>71,703</b>	<b>43,157</b>	<b>177,121</b>	<b>244</b>

**Production**

**Principal products.**—The following table shows the value and, where available, the numbers of motor cars, motor cycles, cycles and parts and accessories, made in 1930 and 1924:—

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Motor and Cycle Trade (Manufacturing)			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
No.	£'000	No.	No.	£'000	No.	No.	£'000	
Motor cars, including petrol, steam and electrically driven vehicles, complete:—								
Private cars (including cabs) ...	160,266	32,853	80	160,321	32,859	83	108,311	28,616
Commercial vehicles other than cabs, (including petrol lorries, steam wagons, omnibuses, charabancs, ambulances, etc.) ...	39,874	10,573	126	40,253	10,697	137	25,062	6,005
<b>TOTAL—Complete motor vehicles ...</b>	<b>200,140</b>	<b>43,426</b>	<b>...</b>	<b>200,574</b>	<b>43,556</b>	<b>...</b>	<b>133,373</b>	<b>34,621</b>

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Motor and Cycle Trade (Manufacturing)			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
No.	£'000	No.	No.	£'000	No.	No.	£'000	
Chassis, complete:—								
For private cars and cabs ...	11,826	3,010	59	11,826	3,010	59	9,189	3,656
For commercial vehicles ...	28,484	10,647	108	28,519	10,676	110	13,262	4,456
<b>TOTAL—Chassis ...</b>	<b>40,310</b>	<b>13,657</b>	<b>...</b>	<b>40,345</b>	<b>13,686</b>	<b>...</b>	<b>22,451</b>	<b>8,112</b>
Motor bodies, complete:—								
For passenger vehicles ...	42,785	5,187	185	44,058	5,856	202	...	...
For goods vehicles ...	15,338	885	221	16,530	973	288	...	6,776
<b>TOTAL—Motor bodies ...</b>	<b>...</b>	<b>6,559</b>	<b>...</b>	<b>...</b>	<b>7,360</b>	<b>...</b>	<b>...</b>	<b>6,776</b>
Trailers, complete§ ...	134	34	4	134	34	4	†	†
Motor cycles and tri-cars, complete ...	125,030	5,161	39	125,030	5,161	39	120,092	5,868
Cycles and tricycles (not mechanically propelled), complete	878,966	3,410	53	882,105	3,422	57	686,347	3,763
Engines for motor cars:—								
Engines and gear boxes in one unit	23,357	762	8	23,360	762	9	...	...
Engines ...	74,513	2,146	22	74,909	2,178	24	106,427	2,505
Engines for motor cycles and tri-cars	59,448	496	10	59,466	496	11	...	...
<b>TOTAL—Engines for motor vehicles ...</b>	<b>157,318</b>	<b>3,404</b>	<b>...</b>	<b>157,735</b>	<b>3,436</b>	<b>...</b>	<b>106,427</b>	<b>2,505</b>
Other parts and accessories for motor cars:—								
Gear boxes ...	673	36	13	673	36	13	†	†
Axes { Number and tons stated ...	68,724	831	8	68,804	832	9	249,059	336
Wheels, rims and spokes ...	1,150	39	8	1,150	39	8	—	—
Lighting and starting sets (including lamps and accumulators) ...	...	1,105	15	...	1,207	18	...	1,076
<b>TOTAL—Other parts and accessories ...</b>	<b>...</b>	<b>2,550</b>	<b>10</b>	<b>...</b>	<b>2,573</b>	<b>14</b>	<b>...</b>	<b>867§</b>

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Motor and Cycle Trade (Manufacturing)			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
No.	£'000	No.	No.	£'000	No.	No.	£'000	
Other parts and accessories of motor cars—cont.								
Ignition apparatus (including sparking plugs) other than magnetos...	...	634	12	...	662	15	...	†
Radiators ...	135,046*	648	11	135,046*	648	11	...	†
Electric warning signals (horns, etc.) ...	...	310	13	...	310	13	...	†
Carburettors ...	...	113	6	...	113	6	...	†
Wind screens, wind shields, etc. § ...	...	299	12	...	299	12	...	174
Parts of motor bodies sold separately ...	...	297	8	...	297	8	...	†
Other parts and accessories † ...	...	627	62	...	740	73	...	†
Parts and accessories, not separately distinguished † ...	...	5,225	...	...	5,481	...	...	8,700
TOTAL — Other parts and accessories for motor cars ...	...	6,078	126	...	6,368	151	...	1,493
Other parts and accessories for motor cycles and tri-cars:—								
Wheels, rims and spokes ...	...	25	8	...	25	8	...	71
Dynamo lighting sets (including lamps therefor) ...	...	493	8	...	493	8	...	†
Other lamps ...	...	88	7	...	88	7	...	226
Saddles ...	...	64	9	...	65	10	...	119
Side-cars ...	...	206	11	...	207	12	...	357
Gears and gear casings (including complete gear boxes) § ...	...	418	4	...	418	4	...	†
Other parts and accessories † ...	...	692	...	...	698	...	...	1,443
Parts and accessories, not separately distinguished † ...	...	537	29	...	580	33	...	1,443
TOTAL — Other parts and accessories for motor cycles ...	...	2,523	...	...	2,574	...	...	2,216

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Motor and Cycle Trade (Manufacturing)			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
No.	£'000	No.	No.	£'000	No.	No.	£'000	
Parts and accessories for cycles and tricycles (not mechanically propelled):—								
Wheels, rims and spokes ...	...	69	11	...	85	12	...	258
Mudguards § ...	...	85	8	...	85	8	...	†
Hubs (sold separately) § ...	...	267	6	...	267	6	...	†
Lamps ...	...	242	6	...	242	6	...	309
Saddles ...	...	249	13	...	249	13	...	486
Pumps ...	...	114	6	...	114	6	...	126
Frames ...	264,789	234	28	264,789	234	28	...	†
Other parts and accessories † ...	...	888	...	...	935	...	...	2,513
Parts and accessories, not separately distinguished † ...	...	418	24	...	547	26	...	59
TOTAL — Parts and accessories for cycles (not mechanically propelled) ...	...	2,566	...	...	3,422	...	...	3,751
Parts and accessories of motor cars, motor cycles and cycles, not separately distinguished	...	487	15	...	699	31	...	1,472
TOTAL — Parts and accessories of motor cars, motor cycles and cycles (except motor bodies and chassis) ...	...	27,772	...	...	29,078	...	...	22,590
TOTAL—PRINCIPAL PRODUCTS ...	...	100,343	...	...	102,637	...	...	81,730

\* Quantity not stated.

§ So far as separately recorded.

† Not separately recorded.

‡ Excluding steel transmission chains, and ball and roller bearings, for which see reports on Chain, Nail, Screw, etc. Trades (page 117) and Mechanical Engineering Trade (page 261) respectively.

Of the amounts included above for other trades in 1930, the following were returned by the repairing section of the Motor and Cycle Trade :—

	Number	Value £'000	Entries
Motor cars (including cabs), complete ...	55	6	3
Chassis for commercial vehicles ...	2	3	1
Motor bodies, complete :—			
For passenger vehicles ...	786	500	9
For goods vehicles ...	434	35	15
Parts and accessories of motor cars, motor cycles and cycles (including some complete cycles) ...		11	16
<b>TOTAL ...</b>		<b>555</b>	<b>...</b>

**Classification of motor cars in 1930.**—The following table gives further details for 1930 regarding the output of motor cars and chassis both for private use and for commercial purposes, so far as the returns enable this classification to be made. In each class the horse-power shown is the Treasury rating. Similar information was not obtained at the 1924 Census.

Motor cars, including petrol, steam and electrically driven vehicles	Complete vehicles			Chassis		
	Quantity	Value	Entries	Quantity	Value	Entries
	No.	£'000	No.	No.	£'000	No.
<b>Private cars, cabs and chassis therefor :—</b>						
Not exceeding 8 h.p. ...	47,876	5,784	8	3,231	279	4
Over 8 h.p. and not exceeding 12 h.p. ...	36,630	6,462	17	1,286	168	10
Over 12 h.p. and not exceeding 16 h.p. ...	55,945	13,555	22	2,391	362	13
Over 16 h.p. and not exceeding 20 h.p. ...	11,401	3,978	15	1,970	495	14
Over 20 h.p. ...	6,260	2,437	14	2,718	1,667	14
Unclassified (including cabs)	2,209	643	7	230	39	4
<b>TOTAL—Private vehicles ...</b>	<b>160,321</b>	<b>32,859</b>	<b>...</b>	<b>11,826</b>	<b>3,010</b>	<b>...</b>
<b>Commercial vehicles (other than cabs) :—</b>						
<b>Passenger vehicles (with internal combustion engines) :—</b>						
<b>Designed to seat</b>						
Not more than 20 passengers ...	112	76	6	314	139	6
More than 20 and not more than 32 passengers ...	397	478	17	3,019	2,278	18
Over 32 passengers ...	795	1,273	10	2,279	1,957	14
Unclassified ...	22	29	3	32	25	1
<b>TOTAL—Passenger vehicles</b>	<b>1,326</b>	<b>1,856</b>	<b>...</b>	<b>5,644</b>	<b>4,399</b>	<b>...</b>

Motor cars, including petrol, steam and electrically driven vehicles	Complete vehicles			Chassis		
	Quantity	Value	Entries	Quantity	Value	Entries
	No.	£'000	No.	No.	£'000	No.
Commercial vehicles (other than cabs)— <i>cont.</i>						
Goods vehicles (with internal combustion engines) :—						
Capacity not exceeding 15 cwts. ...	10,381	1,439	20	837	98	8
Exceeding 15 cwts. and not exceeding 30 cwts. ...	12,557	2,451	19	10,559	1,877	16
Exceeding 30 cwts. and not exceeding 50 cwts. ...	10,541	2,346	21	4,341	1,468	22
Exceeding 50 cwts. ...	1,451	1,565	20	3,269	2,353	21
Capacity not stated ...	3,589	630	...	3,869	481	...
Steam and electrically driven commercial vehicles ...	408	410	8			
<b>TOTAL—Goods vehicles ...</b>	<b>38,927</b>	<b>8,841</b>	<b>...</b>	<b>22,875</b>	<b>6,277</b>	<b>...</b>
<b>TOTAL—Commercial vehicles (other than cabs) ...</b>	<b>40,253</b>	<b>10,697</b>	<b>...</b>	<b>28,519</b>	<b>10,676</b>	<b>...</b>

**Prices.**—The average selling values of motor cars, chassis, motor cycles, etc., in 1930 and 1924, as calculated from the Census returns, are shown in the following table. It should be borne in mind that these comparisons do not take account of any changes that may have occurred since the earlier year in the quality or design of the vehicles and goods included under the specified descriptions.

Kind of goods	Average value		1930 as a percentage of 1924
	1930	1924	
	£ each	£ each	Per cent.
<b>Motor vehicles, complete :—</b>			
Private cars (including cabs) ...	204.9	264.2	77.6
Commercial vehicles ...	265.7	239.0	111.2
<b>Chassis, complete :—</b>			
For private cars and cabs ...	254.5	397.9	63.9
For commercial vehicles ...	374.3	336.0	111.4
Motor cycles and tri-cars, complete ...	41.3	48.9	84.5
Cycles and tricycles, complete ...	3.9	5.5	70.8
Engines for motor cars, motor cycles and tri-cars ...	21.8	23.5	92.8
<b>Axles for motor cars ...</b>	<b>£ per ton</b> 124.3	<b>£ per ton</b> 66.6	<b>186.6</b>

**Volume of production in 1930 and 1924.**—The following table compares the volume of production of motor cars, motor cycles and cycles, and parts and accessories therefor in 1930 and 1924:—

Kind of goods	Total production			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	
	£'000	£'000	£'000	Per cent.
Motor vehicles, complete:—				
Private cars (including cabs) ...	32,859	28,616	22,206	148
Commercial vehicles ...	10,697	6,005	6,678	160
<b>TOTAL—Complete motor vehicles</b>	<b>43,556</b>	<b>34,621</b>	<b>28,884</b>	<b>151</b>
Chassis, complete:—				
For private cars and cabs ...	3,010	3,656	2,336	129
For commercial vehicles ...	10,676	4,456	4,964	215
<b>TOTAL—Complete chassis ...</b>	<b>13,686</b>	<b>8,112</b>	<b>7,300</b>	<b>187</b>
Trailers ... ..	374	—	—	—
Motor cycles and tri-cars, complete	5,161	5,868	4,958	104
Cycles and tricycles, complete ...	3,422	3,763	2,664	129
Engines for motor vehicles ...	3,436	2,505	2,325	148
Parts and accessories:—				
For motor cars:—				
Axles ... ..	871	336	627*	139
Motor bodies, complete ...	7,360	6,776	15,924†	164
Other parts and accessories (except engines) ... ..	18,740	12,310		
For motor cycles (other than engines) ... ..	2,574	2,216	1,873‡	137
For cycles and tricycles (not mechanically propelled) ...	2,758	3,751	2,656§	104
For motor cars, motor cycles and cycles, not separately distinguished ... ..	699	1,472	1,222	¶
<b>TOTAL ... ..</b>	<b>102,637</b>	<b>81,730</b>	<b>68,433</b>	<b>150</b>
<i>Deduction</i> on account of work in progress (see page 344) ...	591	—	—	—
<i>Addition</i> on account of work in progress (see page 344) ...	—	300	251**	—
<b>TOTAL ... ..</b>	<b>102,046</b>	<b>82,030</b>	<b>68,684</b>	<b>149</b>

\* Based on average value per ton.

† Based on average values of complete motor vehicles.

‡ Based on average values of complete motor cycles and tricars.

§ Based on average values of complete cycles and tricycles

|| Based on average values of preceding parts and accessories.

¶ This figure would have no significance.

\*\* Based on average values of goods made.

**Duplication in value of Gross Output.**—The recorded value of the gross output of the trade in both years is considerably overstated by reason of the double record of chassis, bodies and other parts and accessories sold by the manufacturers to makers of complete vehicles and included again in the output returns of the latter firms. This duplication cannot be measured within narrow limits and the following estimates represent only rough approximations.

*Chassis.*—The great majority of the chassis returned as such for 1930 were probably sold to commercial or private owners. Additions to makers' stocks account for a proportion, and a substantial number of chassis of the light commercial type may have been disposed of to builders of motor bodies, and assembling firms, that employed fewer than ten persons and therefore made no returns to the Census. Duplication may be assumed to be confined to the few firms that fitted bodies of their own manufacture to purchased chassis (mainly of the light commercial type). So far as can be ascertained from the Census returns duplication in respect of chassis was probably not greater than £150,000 or £200,000.

*Motor bodies.*—The total value of bodies "for passenger vehicles" recorded as manufactured in 1930 was £6,195,000 and the number manufactured may be estimated as about 46,500. The number of chassis for passenger vehicles available for use in this country, for both commercial and private use, was about 17,500. It may be assumed that the same number of motor bodies were sold to the owners of these chassis and that no duplication therefore arises in respect of that number of bodies "for passenger vehicles". Examination of the manufacturers' returns indicates that the remaining bodies (about 29,000), which were probably sold to makers of complete vehicles, were intended mainly for the smaller types of cars and that their total value did not exceed £1,500,000.

*Other parts and accessories.*—The output of the manufactures included in this group in 1930 was valued at £29,100,000; the value of exports of these goods was £4,116,000, the factory value of which may be estimated at about £3,700,000, leaving approximately £25½ million as the value of goods available for use in this country. These goods are duplicated in the gross value of the output of the trade only in so far as they were purchased by makers of complete vehicles or chassis or by repairing firms that made returns at the 1930 Census, but a considerable proportion was required for the use of firms employing fewer than ten persons and others that made no returns for that year. For the purpose of a similar estimate for the year 1924, the proportion of 80 per cent. was taken to represent that part of the total production that was also included in the value of complete vehicles and chassis or in repair work, and on this basis the amount of duplication in the 1930 totals (after allowing for the omission of the smaller firms) may be estimated at approximately £19 million.



These estimates indicate that the total value of the duplicated output in the 1930 aggregates was between £20 million and £21 million and that the value of the gross output, free from duplication, was between £102 million and £103 million.

**Production, exports and imports.**—The following table shows, in relation to production, the numbers, where available, of the principal classes of motor vehicles, chassis, cycles, etc., exported from the United Kingdom in 1930 and 1924, together with the numbers imported and retained. The figures of production for 1924 include the recorded output of firms in Northern Ireland and also that of the small firms. With regard to the items for which values only are given, the differences in valuation should be borne in mind, the values for production being *ex factory*, for exports, *f.o.b.* and for imports, *c.i.f.*

Kind of goods	Production	Exports	Proportion of production exported	Retained imports	Available for use in the United Kingdom	Share of home market held by British products
	No.	No.	Per cent.	No.	No.	Per cent.
Motor cars, complete :—						
Private cars (including cabs) 1930	160,321	19,226	12.0	6,936	148,031	95.3
1924	108,330	11,007	10.2	10,800	108,123	90.0
Commercial vehicles other than tractors* 1930	40,253	3,486	8.7	38	36,805	99.9
1924	25,070	1,747	7.0	856	24,179	96.5
Total—Complete motor cars ... 1930	200,574	22,712	11.3	6,974	184,836	96.2
1924	133,400	12,754	9.6	11,656	132,302	91.2
Chassis, complete† :—						
For private cars and cabs ... 1930	11,826	3,984	33.7	2,815	10,657	73.6
For commercial vehicles ... 1930	28,519	3,057	10.7	1,490	26,952	94.5
Total—Complete chassis ... 1930	40,345	7,041	17.4	4,305	37,609	88.6
1924	22,454	2,905	12.9	12,090	31,639	61.8
Motor cycles and tri-cars, complete ... 1930	125,030	42,631	34.1	236	82,635	99.7
1924	120,422	37,607	31.2	402	83,217	99.5
Cycles and tricycles (not mechanically propelled) complete ... 1930	882,105	247,147	28.0	1,084	636,042	99.8
1924	704,352	200,781	28.5	1,097	504,668	99.8
Engines for motor cars ... 1930	98,269	19,706	20.1	2,307	80,870	97.1
Engines for motor cycles and tri-cars ... 1930	59,466	32,275	54.3	7	27,198	99.9
Total—Engines for motor vehicles ... 1930	157,735	51,981	33.0	2,314	108,068	97.9
1924	107,308	16,209	15.1	4,386	95,485	95.4

Kind of goods	Production	Exports	Proportion of production exported	Retained imports	Available for use in the United Kingdom	Share of home market held by British products
	£'000	£'000	Per cent.	£'000	£'000	Per cent.
Other parts and accessories for motor cars :—						
Wheels, rims and spokes‡ ... 1930	1,207	41	3.3	34	1,200	97.2
1924	1,079	51	5.0	142	1,170	87.9
Axles ... 1930	871	9	1.0	43	905	95.2
1924	336	3	0.9	220	553	60.2
Other parts and accessories§ ... 1930	17,533	1,642	9.1	3,068	18,959	83.8
1924	10,625	1,506	14.2	2,378	11,497	79.3
Other parts and accessories for motor cycles and tri-cars :—						
Wheels, rims and spokes‡ ... 1930	25	7	28.9		18	100.0
1924	71	5	7.3	1	67	98.0
Other parts and accessories§ ... 1930	2,549	693	27.2	5	1,861	99.7
1924	2,173	531	24.4	11	1,653	99.3
Other parts and accessories for cycles and tricycles :—						
Wheels, rims and spokes‡ ... 1930	85	49	57.6	49	85	42.4
1924	263	89	33.8	26	200	87.0
Other parts and accessories§ ... 1930	2,673	1,056	39.5	272	1,889	85.6
1924	3,526	1,707	48.4	279	2,098	86.7
Total—Other parts and accessories for motor cars, motor cycles and cycles 1930	25,642¶	3,497	13.6	3,471	25,616¶	86.5
1924	20,431¶	3,892	19.0	3,057	19,596¶	84.4

\* For tractors see report on Mechanical Engineering Trade (page 239).

† In addition, exports of chassis for motor cars, etc., without engines or otherwise incomplete (with or without fitted tyres) amounted in 1930 to 37 tons, valued at £4,535, and retained imports to 646 tons, valued at £59,245. Similar particulars were not recorded separately in the trade returns for 1924.

‡ Described in overseas trade returns for 1930 as "Wheels (with or without fitted tyres) and unenumerated parts of wheels."

§ Excluding tyres, transmission chains and ball and roller bearings.

|| £32.

¶ Includes £699,000 for 1930 and £2,353,000 for 1924, in respect of parts and accessories of motor cars, motor cycles and cycles, not separately distinguished.

**Work in progress.**—The value of the work in progress at the beginning of 1930 was returned as £10,232,000 as compared with £9,641,000 at the end of the year. Work in progress at the beginning of 1924 was valued at £8,717,000 and at the end of the year at £9,017,000. Work in progress at the end of the year represents the estimated value of unfinished motor cars, motor cycles, etc., that were in course of construction at the end of the year, and work in progress at the beginning of the year represents a similar estimate for motor cars, motor cycles, etc., in course of construction at that time, some or all of which would represent goods completed within the year. The amount by which the value of work in progress at the beginning of 1930 exceeded that at the end of the year, viz., £591,000, should be deducted from the value of the goods completed in order to arrive at the value of the output attributable to the year, while the corresponding amounts returned in respect of 1924 represent an addition of £300,000 to the value of the goods completed in that year.

**Repair work, work done for the trade, etc.**—The total amount recorded as received for repair work, work done for the trade, etc., in 1930 by firms in the Manufacturing section of the trade was £5,425,000, the corresponding total for 1924 being £5,001,000. The principal kinds of work included in these totals were as follows:—

Kind of work	1930	1924
	Amount received	Amount received
	£'000	£'000
<b>Repair work:—</b>		
To motor cars and motor cycles ... ..	4,376	3,014
To other cycles ... ..	69	69
Not separately distinguished ... ..	66	1,524
<b>TOTAL.—Repair work to motor vehicles and cycles...</b>	<b>4,511</b>	<b>4,607</b>
<b>Other work:—</b>		
Work done for the trade (machining, grinding, enamelling, etc.) ... ..	271	104
Repair work to other vehicles (including aircraft)	379	46
Other repair and jobbing work ... ..	264	244
<b>TOTAL ...</b>	<b>5,425</b>	<b>5,001</b>

For further details respecting repair work see section (B) of this report (page 348).

**Other products.**—In addition to the output shown in the table of principal products on pages 334-7, the following goods were produced in 1930 and 1924 by firms in the Manufacturing section of the Motor and Cycle Trade. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods	1930	1924
	Value	Value
	£'000	£'000
Aircraft engines and parts ... ..	682	527
Other parts of aircraft ... ..	163	
Ball bearings, roller bearings, etc., and steel transmission chains ... ..	572	1,054
Wireless apparatus ... ..	16	57
Electrical machinery and apparatus and parts thereof (including magnetos, dynamos, etc.) ... ..	486	1,925
Locomotives, tractors, trams and other vehicles and parts thereof ... ..	497	
Other machinery and parts thereof ... ..	303	
Other manufactures of iron and steel ... ..	300	
Scientific, dental and surgical instruments ... ..	366	
Other manufactures:—		
Mainly of non-ferrous metals ... ..	109	
Mainly of wood ... ..	18	
Mainly of leather ... ..	105	
Other goods made and electricity sold ... ..	842	
<b>TOTAL ... ..</b>	<b>4,459</b>	<b>3,563</b>

**Waste products sold.**—Sales of manufacturers' scrap recorded by firms in the Motor and Cycle Trade for 1930 amounted to £61,000, of which iron and steel scrap was valued at £24,000 and other metal scrap at £37,000. Particulars of scrap sold were not recorded for 1924.

### Employment and Wages

**Employment.**—The following table shows the average numbers of persons employed in 1930 and 1924:—

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
<b>1930</b>						
Operatives (average for the year) ... ..	16,154	143,386	5,481	24,293	21,635	167,679
Administrative, technical and clerical staff (as at 18th October) ... ..	1,883	18,177	1,859	9,425	3,742	27,602
<b>TOTAL ... ..</b>	<b>18,037</b>	<b>161,563</b>	<b>7,340</b>	<b>33,718</b>	<b>25,377</b>	<b>195,281</b>
<b>1924</b>						
Operatives (average for the year) ... ..	16,003	128,951	4,292	19,123	20,295	148,074
Administrative, technical and clerical staff (as at 18th October) ... ..	1,683	14,415	1,359	6,799	3,042	21,214
<b>TOTAL ... ..</b>	<b>17,686</b>	<b>143,366</b>	<b>5,651</b>	<b>25,922</b>	<b>23,337</b>	<b>169,288</b>

**Wages.**—The available information as to the amount of wages paid in 1930 and 1924 is given, for the Motor and Cycle Trade as a whole, on pages 212-3. Separate particulars for the Manufacturing and the Repairing sections of the trade cannot be given.

**Power**

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
<b>PRIME MOVERS</b>	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines ...	6,640	3,537	10,177	7,292	2,632	9,924
Steam turbines ...	11,160	2,725	13,885	10,070	2,065	12,135
Internal combustion engines :—						
Gas ...	8,418	1,009	9,427	13,642	2,104	15,746
Petrol, kerosene, or other light oils ...	179	99	278	1,140	375	1,515
Heavy oils ...	7,210	1,935	9,145	3,525	864	4,389
Water engines ...	—	22	22	35	—	35
<b>TOTAL ...</b>	<b>33,607</b>	<b>9,327</b>	<b>42,934</b>	<b>35,704</b>	<b>8,040</b>	<b>43,744</b>
<b>ELECTRIC GENERATORS</b>	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by						
Reciprocating steam engines ...	3,825	2,631	6,456	4,405	1,508	5,913
Steam turbines ...	8,250	2,036	10,286	7,500	1,536	9,036
Internal combustion engines :—						
Gas ...	1,582	154	1,736	2,524	552	3,076
Petrol, kerosene, or other light oils ...	13	21	34	789	270	1,059
Heavy oils ...	4,169	1,548	5,717	2,111	592	2,703
Water engines ...	—	—	—	20	—	20
<b>TOTAL ...</b>	<b>17,839</b>	<b>6,390</b>	<b>24,229</b>	<b>17,349</b>	<b>4,458</b>	<b>21,807</b>
<b>ELECTRIC MOTORS</b>	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by						
Electricity generated in same works ...	27,969	5,245	33,214	24,872	1,519	26,391
Purchased electricity	195,358	15,661	211,019	113,311	17,288	130,599
<b>TOTAL ...</b>	<b>223,327</b>	<b>20,906</b>	<b>244,233</b>	<b>138,183</b>	<b>18,807</b>	<b>156,990</b>

**Consumption of fuel**

The following table shows the quantities of coal, coke and electricity recorded as used in 1930 :—

Kind of fuel used	For power (driving engines)	For other purposes (so far as recorded)
	Tons	Tons
Coal ...	60,999	161,816*
Coke ...	415	50,907*
Electricity used for all purposes :—		B.T.U. (Kw.-hrs.) '000
Generated in same works ...		29,113
Purchased ...		180,416
<b>TOTAL—Electricity</b>		<b>209,529</b>

\* These figures were recorded by firms representing 94.2 per cent. of the total net output of the Manufacturing section of the Motor and Cycle Trade.

**(B) MOTOR AND CYCLE TRADE (REPAIRING)**

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons :—

Particulars	Unit	1930	1924
Value of work done and goods made (Gross output)	£'000	13,559	7,097
Cost of materials used ...	"	5,361	2,917
Paid for work given out to other firms ...	"	275	160
Net output ...	"	7,923	4,020
Average number of persons employed ...	No.	44,972	22,393
Net output per person employed ...	£	176	180
Power available :—			
Prime movers ...	H.P.	3,097	1,578
Electric motors driven by purchased electricity	"	18,851	9,344
Number of returns ...	No.	1,097	682
Number of establishments ...	"	1,622	*

\* Not available.

**Size of firms.**—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns :—

Size of firm (average numbers employed)	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24 ...	682	3,125	1,836	11,173	164
25-49 ...	265	2,470	1,502	8,908	169
50-99 ...	92	1,777	1,019	6,003	170
100-199 ...	34	1,422	842	4,398	191
200-299 ...	12	707	426	2,812	152
300-399 ...	8	941	566	2,941	193
400 and over ...	4	3,117	1,732	8,737	198
<b>TOTAL ...</b>	<b>1,097</b>	<b>13,559</b>	<b>7,923</b>	<b>44,972</b>	<b>176</b>

It should be borne in mind that the firms covered by the above table are not confined to those that carried out repairs on customers' vehicles but also include the maintenance depôts of transport concerns, some of which require a large staff to keep their vehicles in running order.

#### Value of repair work done

The amounts recorded for the various classes of repair and other work carried out in 1930 and 1924 by firms included in this group are shown in the following statement:—

Kind of work	1930		1924
	Amount received	Entries	Amount received
	£'000	No.	£'000
<b>Repair work:—</b>			
To motor cars and motor cycles ... ..	11,685	1,001	6,491
To other cycles... ..	14	38	17
Not separately distinguished ... ..	515	62	51
<b>TOTAL—Repair work to motor vehicles and cycles... ..</b>	<b>12,214</b>	<b>...</b>	<b>6,559</b>
<b>Other work:—</b>			
Work done for the trade (machining, grinding, enamelling, etc.)... ..	65	33	—
Repair work to other vehicles (including aircraft) ... ..	295	72	225
Other repair and jobbing work ... ..	412	195	145
<b>TOTAL ... ..</b>	<b>12,986</b>	<b>...</b>	<b>6,929</b>

The value of the repair work to motor vehicles and cycles carried out by firms primarily engaged in the manufacture of motor vehicles, cycles, parts and accessories, was £4,511,000 in 1930 and

£4,607,000 in 1924 (see page 344). The following table shows the total amount recorded by all firms in respect of repair work, including that returned on schedules for trades other than the Motor and Cycle Trade:—

Kind of work	1930		1924
	Amount received	Entries	Amount received
	£'000	No.	£'000
<b>Repair work:—</b>			
To motor cars and motor cycles ... ..	16,070	1,463	9,537
To other cycles... ..	83	70	86
Not separately distinguished ... ..	581	69	1,575
<b>TOTAL—Repair work (All trades) ... ..</b>	<b>16,734</b>	<b>...</b>	<b>11,198</b>

**Volume.**—Precise comparison of the volume of repair work done in 1930 and 1924 is not practicable, but on the assumption that the relationship between prices in the two years was the same for repair work as for the manufactured goods included in the table on page 340, it may be estimated that the value of repair work, which in 1924 was returned as £11,213,000 (including £15,000 on account of work in progress), would amount to approximately £9½ million if valued in terms of 1930 prices. For 1930 the value of all repair work was returned as £16,739,000 (including £5,000 for work in progress), and on the assumption made the volume of the repair work returned for that year may be stated as about 76 per cent. greater than that recorded for 1924. If the output of the small firms were included for both years the proportionate increase would be even greater, probably between 85 and 90 per cent.

**Other products.**—In addition to the repair work shown in the table on page 348, the following output was recorded for 1930 and 1924 by firms whose principal business consisted in the repair of motor vehicles and cycles. These items are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods	1930	1924
	Value	Value
	£'000	£'000
Motor bodies ... ..	535*	87
Motor vehicles and cycles, including parts and accessories ... ..	20	66
Other goods ... ..	13	—
<b>TOTAL ... ..</b>	<b>568</b>	<b>153</b>

\* Including 786 complete motor bodies for passenger vehicles (£500,000) and 434 complete motor bodies for goods vehicles (£35,000).

**Work in progress.**—The value of the work in progress at the end of 1930 was £178,000, and at the beginning of the year, £173,000, involving an addition of £5,000 to the value of the work

attributable to that year. The corresponding addition for 1924 was £15,000, representing the difference between the value of the work in progress at the beginning (£76,000) and end (£91,000) of that year.

**Employment and Wages**

**Employment.**—The following table shows the average numbers of persons employed in 1930 and 1924 :—

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
1930						
Operatives (average for the year)	4,674	38,510	27	265	4,701	38,775
Administrative, technical and clerical staff (as at 18th October) ... ..	470	4,582	253	1,615	723	6,197
TOTAL ... ..	5,144	43,092	280	1,880	5,424	44,972
1924						
Operatives (average for the year)	2,403	18,854	9	107	2,412	18,961
Administrative, technical and clerical staff (as at 18th October) ... ..	209	2,552	152	880	361	3,432
TOTAL ... ..	2,612	21,406	161	987	2,773	22,393

**Wages.**—The available information as to the amount of wages paid in 1930 and 1924 is given, for the Motor and Cycle Trade as a whole, on pages 212 and 213. Separate particulars for the Manufacturing and Repairing sections of the trade cannot be given.

**Power**

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
PRIME MOVERS						
Reciprocating steam engines ... ..	60	20	80	—	20	20
Internal combustion engines :—						
Gas ... ..	444	90	534	834	12	846
Petrol, kerosene, or other light oils ...	1,360	246	1,606	590	68	658
Heavy oils ... ..	747	124	871	42	—	42
Water engines ... ..	6	—	6	12	—	12
TOTAL ... ..	2,617	480	3,097	1,478	100	1,578

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Internal combustion engines :—						
Gas ... ..	130	—	130	129	—	129
Petrol, kerosene, or other light oils ...	480	29	509	139	29	168
Heavy oils ... ..	315	18	333	3	—	3
Water engines ... ..	4	—	4	12	—	12
TOTAL ... ..	929	47	976	283	29	312
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works ...	220	22	242	140	18	158
Purchased electricity	17,927	924	18,851	8,850	494	9,344
TOTAL ... ..	18,147	946	19,093	8,990	512	9,502

**Consumption of fuel**

The following table shows the quantities of coal, coke and electricity recorded as used in 1930 :—

Kind of fuel used	For power (driving engines)	For other purposes
		Tons
Coal ... ..	207	2,272
Coke ... ..	20	9,446
Electricity used for all purposes :—		B.T.U. (Kw.-hrs.)
Generated in same works ... ..		'000
Purchased ... ..		962
TOTAL—Electricity ... ..		16,081
		17,043

## TABLES

## I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of goods made and work done (Gross output) ... ..	£'000	120,442	2,814	123,256
Cost of materials used ... ..	"	67,571	1,470	69,041
Paid for work given out to other firms... ..	"	893	19	912
Net output ... ..	"	51,978	1,325	53,303
Average number of persons employed... ..	No.	233,176	7,077	240,253
Net output per person employed ... ..	£	223	187	222
Power available :—				
Prime movers ... ..	H.P.	44,218	1,813	46,031
Electric motors driven by purchased electricity ... ..	"	224,456	5,414	229,870

## II. Production

Goods sold or added to stock and work done	Great Britain*	
	Quantity	Value
Motor cars, including petrol, steam and electrically driven vehicles :—	Number	£'000
Private cars, complete :—		
Not exceeding 8 h.p. (Treasury rating) ... ..	47,876	5,784
Over 8 h.p. and not exceeding 12 h.p. ... ..	36,630	6,462
Over 12 h.p. and not exceeding 16 h.p. ... ..	55,945	13,555
Over 16 h.p. and not exceeding 20 h.p. ... ..	11,401	3,978
Over 20 h.p. ... ..	6,260	2,437
Chassis (complete) for private cars :—		
Not exceeding 8 h.p. ... ..	3,231	279
Over 8 h.p. and not exceeding 12 h.p. ... ..	1,286	168
Over 12 h.p. and not exceeding 16 h.p. ... ..	2,391	362
Over 16 h.p. and not exceeding 20 h.p. ... ..	1,970	495
Over 20 h.p. ... ..	2,718	1,667
Unclassified (including cabs) :—		
Complete cars ... ..	2,209	643
Chassis ... ..	230	39
TOTAL—Private cars and cabs, complete ... ..	160,321	32,859
TOTAL—Chassis therefor ... ..	11,826	3,010

Goods sold or added to stock and work done	Great Britain*	
	Quantity	Value
Motor cars, including petrol, steam and electrically driven vehicles— <i>cont.</i>	Number	£'000
Commercial vehicles (other than cabs) :—		
Passenger vehicles (with internal combustion engines) :—		
Complete vehicles :—		
Designed to seat not more than 20 passengers ... ..	112	76
Designed to seat more than 20 and not more than 32 passengers ... ..	397	478
Designed to seat more than 32 passengers ... ..	795	1,273
Chassis for passenger vehicles with internal combustion engines :—		
Designed to seat not more than 20 passengers ... ..	314	139
Designed to seat more than 20 and not more than 32 passengers ... ..	3,019	2,278
Designed to seat more than 32 passengers ... ..	2,279	1,957
Goods vehicles (with internal combustion engines) :—		
Complete vehicles :—		
Capacity not exceeding 15 cwts. ... ..	10,090	1,374
Exceeding 15 cwts. and not exceeding 30 cwts. ... ..	12,557	2,451
Exceeding 30 cwts. and not exceeding 50 cwts. ... ..	10,541	2,346
Capacity exceeding 50 cwts. ... ..	1,451	1,565
Capacity not stated ... ..	3,586	628
Chassis (complete) for goods vehicles with internal combustion engines :—		
Capacity not exceeding 15 cwts. ... ..	837	98
Exceeding 15 cwts. but not exceeding 30 cwts. ... ..	10,559	1,877
Exceeding 30 cwts. but not exceeding 50 cwts. ... ..	4,341	1,468
Exceeding 50 cwts. ... ..	3,269	2,353
Capacity not stated (including all steam and electrically driven) ... ..	3,868	480
Steam and electrically driven commercial vehicles, complete ... ..	345	382
TOTAL—Complete commercial vehicles (other than cabs) ... ..	39,874	10,573
TOTAL—Chassis therefor ... ..	28,486	10,650
TOTAL—COMPLETE MOTOR VEHICLES, INCLUDING PETROL, STEAM AND ELECTRICALLY DRIVEN VEHICLES ... ..	200,195	43,432
TOTAL—CHASSIS THEREFOR ... ..	40,312	13,660
Motor bodies, complete :—		
For passenger vehicles ... ..	43,571	5,687
For goods vehicles ... ..	15,772	920
TOTAL—Motor bodies ... ..	59,343	6,607
Trailers, complete † ... ..	134	34
Motor cycles and tricars, complete ... ..	125,030	5,161
Cycles and tricycles, complete... ..	879,076	3,411

Goods sold or added to stock and work done	Great Britain*	
	Quantity	Value
	Number	£'000
Engines for motor cars:—		
Engines and gear boxes in one unit ... ..	23,360	762
Engines ... ..	74,513	2,146
Engines for motor cycles and tricars ... ..	59,448	496
TOTAL—Engines ... ..	157,321	3,404
Other parts and accessories of motor cars:—		
Gear boxes ... ..	673	36
Parts of motor bodies sold separately ... ..	...	630
Axles {	Number and tons stated ... ..	68,724
	Tons ... ..	6,686
} {	Number ... ..	831
	Number only stated ... ..	1,150
Wheels, rims and spokes ... ..	...	1,105
Lighting and starting sets (including lamps and accumulators) ... ..	...	2,550
Ignition apparatus (including sparking plugs), other than magnetos ... ..	...	634
Radiators ... ..	135,046	648
	†	310
Electric warning signals (horns, etc.) ... ..	...	113
Carburettors ... ..	...	299
Wind screens, wind shields, etc. ‡ ... ..	...	297
Other parts and accessories... ..	...	5,229
Parts and accessories, not separately distinguished ... ..	...	6,078
TOTAL—Other parts and accessories of motor cars ... ..	...	18,799
Other parts and accessories of motor cycles and tricars:—		
Wheels, rims and spokes ... ..	...	25
Dynamo lighting sets (including lamps therefor)... ..	...	493
Other lamps ... ..	...	88
Saddles ... ..	...	64
Side-cars ... ..	...	206
Gears and gear casings (including complete gear boxes) ‡ ... ..	...	418
Other parts and accessories ... ..	...	694
Parts and accessories, not separately distinguished ... ..	...	537
TOTAL—Other parts and accessories of motor cycles and tricars ... ..	...	2,525
Parts and accessories of cycles and tricycles (not mechanically propelled):—		
Frames ... ..	264,789	234
Wheels, rims and spokes ... ..	...	69
Mudguards † ... ..	...	85
Hubs (sold separately) ‡ ... ..	...	267
Lamps ... ..	...	242
Saddles ... ..	...	249
Pumps ... ..	...	114
Other parts and accessories... ..	...	888
Parts and accessories, not separately distinguished ... ..	...	418
TOTAL—Parts and accessories of cycles and tricycles ... ..	...	2,566

Goods sold or added to stock and work done	Great Britain*	
	Quantity	Value
	Number	£'000
Parts and accessories of motor cars, motor cycles and cycles, not separately distinguished ... ..	...	488
TOTAL—Parts and accessories of motor cars, motor cycles and cycles (except motor bodies, chassis and trailers) ... ..	...	27,782
TOTAL—Complete vehicles, parts and accessories ... ..	...	100,898
Aircraft engines, complete and parts... ..	...	682
Other parts of aircraft ... ..	...	163
Ball bearings, roller bearings, etc., and steel transmission chains ... ..	...	572
Wireless apparatus ... ..	...	16
Electrical machinery and apparatus and parts thereof (including magnetos, dynamos, etc.) ... ..	...	486
Locomotives, tractors, tramcars and other vehicles and parts thereof ... ..	...	499
Other machinery and parts thereof ... ..	...	303
Other manufactures of iron and steel ... ..	...	300
Scientific, dental and surgical instruments ... ..	...	366
Other manufactures:—		
Mainly of non-ferrous metals ... ..	...	109
Mainly of wood ... ..	...	18
Mainly of leather ... ..	...	105
Other goods made ... ..	...	837
Electricity sold ... ..	...	16
Scrap metal sold ... ..	...	61
TOTAL VALUE OF GOODS MADE ... ..	...	105,431
Repair work:—		
To motor cars and motor cycles ... ..	...	16,061
To other cycles ... ..	...	83
Not separately distinguished ... ..	...	581
Work done for the trade (machining, grinding, enamelling, etc.) ... ..	...	336
Other work:—		
Repair work to other vehicles (including aircraft) ... ..	...	674
Other repair and jobbing work ... ..	...	676
TOTAL AMOUNT RECEIVED FOR WORK DONE ... ..	...	18,411
TOTAL OF ABOVE ... ..	...	123,842
Plus value of work in progress at the end of 1930 ... ..	...	9,819
Less value of work in progress at the beginning of 1930 ... ..	...	10,405
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ... ..	...	123,256

\* The gross output recorded for Scotland was £2,814,000, of which £1,132,000 was in respect of repair work to motor cars and motor cycles. Owing to the possible disclosure of information relating to individual firms detailed particulars of the other items of output cannot be given.

† Quantity not stated.

‡ So far as separately recorded.

## III. Employment

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930

Persons employed	Males		Females		Males and females	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
	<i>England and Wales :—</i>					
Operatives ... ..	19,853	173,461	5,387	23,968	25,240	197,429
Administrative, etc.*	2,251	21,943	2,024	10,567	4,275	32,510
TOTAL ... ..	22,104	195,404	7,411	34,535	29,515	229,939
<i>Scotland :—</i>						
Operatives ... ..	628	5,341	3	49	631	5,390
Administrative, etc.*	102	816	88	473	190	1,289
TOTAL ... ..	730	6,157	91	522	821	6,679
<i>Great Britain :—</i>						
Operatives ... ..	20,481	178,802	5,390	24,017	25,871	202,819
Administrative, etc.*	2,353	22,759	2,112	11,040	4,465	33,799
TOTAL ... ..	22,834	201,561	7,502	35,057	30,336	236,618

\* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1930

Week ended	Males and females			Week ended	Males and females		
	England and Wales	Scotland	Great Britain		England and Wales	Scotland	Great Britain
Jan. 18 ...	209,756	5,899	215,655	July 19 ...	189,309	5,790	195,099
Feb. 15 ...	210,927	5,962	216,889	Aug. 16 ...	185,079	5,740	190,819
Mar. 15 ...	207,935	6,173	214,108	Sept. 13 ...	192,271	5,601	197,872
Apr. 12 ...	209,416	6,228	215,644	Oct. 18 ...	197,429	5,390	202,819
May 17 ...	207,810	6,179	213,989	Nov. 15 ...	199,626	5,262	204,888
June 21 ...	195,829	5,960	201,789	Dec. 13 ...	202,602	5,271	207,873
AVERAGE FOR THE 12 MONTHS ...					200,666	5,788	206,454

## IV. Power

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS

Power equipment	England and Wales		Scotland		Great Britain	
	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle
PRIME MOVERS						
Reciprocating steam engines ... ..	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Steam turbines ... ..	6,035	2,727	665	830	6,700	3,557
Internal combustion engines :—	11,160	2,725	—	—	11,160	2,725
Gas ... ..	8,774	1,099	88	—	8,862	1,099
Petrol, kerosene or other light oils...	1,471	345	68	—	1,539	345
Heavy oils ... ..	7,819	2,035	138	24	7,957	2,059
Water engines ... ..	6	22	—	—	6	22
TOTAL ... ..	35,265	8,953	959	854	36,224	9,807
TOTAL OF PRIME MOVERS INSTALLED	44,218		1,813		46,031	
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ... ..	3,426	2,056	400	575	3,825	2,631
Steam turbines ... ..	8,250	2,036	—	—	8,250	2,036
Internal combustion engines :—	1,663	154	49	—	1,712	154
Gas ... ..	465	50	27	—	493	50
Petrol, kerosene or other light oils ... ..	4,416	1,566	68	—	4,484	1,566
Heavy oils ... ..	4	—	—	—	4	—
Water engines ... ..	4	—	—	—	4	—
TOTAL ... ..	18,224	5,862	544	575	18,768	6,437
TOTAL OF ELECTRIC GENERATORS INSTALLED ...	24,086		1,119		25,205	
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works	27,633	3,804	556	1,463	28,189	5,267
Purchased electricity	209,044	15,412	4,241	1,173	213,285	16,585
TOTAL ... ..	236,677	19,216	4,797	2,636	241,474	21,852
TOTAL OF ELECTRIC MOTORS INSTALLED	255,893		7,433		263,326	



## V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
	Tons	Tons	Tons
Coal used for power ... ..	59,356	1,850	61,206
Coke used for power ... ..	435	—	435
	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes :—			
Generated in same works ... ..	29,559	516	30,075
Purchased ... ..	192,205	4,292	196,497
TOTAL—Electricity ... ..	221,764	4,808	226,572