

CATALOGUE No.

42-207

ANNUAL



MACHINE SHOPS

1965

ANNUAL CENSUS OF MANUFACTURES

Published by Authority of
The Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS
Manufacturing and Primary Industries Division

August 1967
6506-815

Price: 50 cents

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MACHINE SHOPS

1965

For statistical purposes this industry covers establishments primarily engaged in producing machine parts and equipment, other than complete machines, for the trade. It also includes machine shops providing custom and repair services.

The value of shipments of goods of own manufacture during 1965 was \$143,698,000 an increase of 21 per cent over 1964 shipments. During the same period the value of materials used increased by 23 per cent and production increased 22 per cent. The ratio of cost of materials used to production was 36 per cent in 1965 in comparison to 33 per cent in 1964.

Some of the principal products manufactured and reported by firms classified to this industry are tools, dies and jigs, rebuilt engines, conveyors, sawmill machinery, logging machinery, hoists, chain saw parts, transmission machinery; agricultural machinery, tanks, motor vehicle parts and valves.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- p preliminary figures.
- r revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, 1961-65

Year and province	Establishments	Manufacturing activity							Total activity					
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added	
		Number	Man- hours paid	Wages					Number	With- draws	Number	Salaries and wages		
	No.		'000			\$'000				\$'000			\$'000	
1961														
Totals.....	778	5,994	12,698	23,487	1,418	29,242	77,442	47,092	508	2,009	7,756	31,741	48,600	
1962														
Totals.....	813	6,697	14,420	27,155	1,577	33,699	90,960	56,135	532	2,185	8,603	36,576	57,662	
1963														
Totals.....	834	7,094	15,447	30,069	1,533	37,476	102,485	63,972	488	2,045	9,179	41,239	66,522	
1964														
Newfoundland	2	}												
Prince Edward Island.....	2		66	154	274	15	413	791	344	x	x	79	337	356
Nova Scotia	23		165	347	626	43	745	1,988	1,205	x	x	211	780	1,291
New Brunswick	22		260	598	1,138	59	2,291	4,740	2,399	10	38	377	1,594	2,527
Quebec	220		2,191	5,037	9,412	466	11,279	31,147	19,643	151	656	2,742	12,496	19,724
Ontario	366		2,898	6,387	13,035	637	12,374	39,200	26,605	224	1,054	3,559	16,940	26,671
Manitoba.....	41		388	856	1,631	89	3,124	7,129	4,061	27	94	513	2,435	4,045
Saskatchewan	26		87	188	341	31	462	1,305	814	24	104	108	444	862
Alberta	80		844	1,799	4,141	238	6,030	15,453	9,355	33	139	1,166	6,052	9,926
British Columbia.....	146		1,045	2,129	4,872	249	6,402	16,652	10,077	57	241	1,382	6,636	10,539
Yukon and Northwest Territories	—		—	—	—	—	—	—	—	—	—	—	—	—
Totals.....	928		7,944	17,496	35,469	1,827	43,120	118,404	74,504	541	2,384	10,137	47,734	75,941
1965														
Newfoundland	2	}												
Prince Edward Island.....	3		65	146	247	16	637	1,100	457	x	x	80	332	481
Nova Scotia	23		179	398	742	54	851	2,311	1,403	x	x	227	960	1,421
New Brunswick	23		304	671	1,256	76	2,690	5,496	2,799	12	53	426	1,802	2,901
Quebec	223		2,474	5,716	11,281	552	13,759	37,471	23,562	129	619	3,140	15,223	23,582
Ontario	392		3,344	7,347	16,016	777	15,285	48,684	33,069	241	1,199	4,117	20,886	33,315
Manitoba.....	44		444	968	1,916	110	3,919	8,316	4,428	27	93	580	2,849	4,445
Saskatchewan	30		142	303	556	48	1,039	2,603	1,540	19	89	192	798	1,645
Alberta	76		905	1,953	4,484	241	6,573	17,539	10,855	30	139	1,186	6,243	11,720
British Columbia.....	141		1,268	2,588	6,367	295	7,947	20,177	12,308	44	223	1,670	8,701	13,087
Yukon and Northwest Territories	—		—	—	—	—	—	—	—	—	—	—	—	—
Totals.....	957		9,125	20,089	42,864	2,169	52,699	143,698	90,420	514	2,460	11,618	57,795	92,596

TABLE 2. Principal Statistics classified by Size Group based on Value of Shipments of Goods of Own Manufacture, 1964 and 1965

Size group	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec-tricity	Cost of materials and supplies	Value of shipments of goods of own manu-facture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under \$10,000	70	30	60	78	16	111	504	378	65	196	37	92	385
\$ 10,000 to \$ 24,999	176	192	383	607	93	951	3,041	2,003	173	637	232	731	2,029
25,000 "	190	553	1,117	2,056	180	2,232	7,149	4,749	159	722	698	2,595	4,942
50,000 "	206	1,191	2,499	4,845	299	4,200	14,506	10,065	100	552	1,496	6,194	10,289
100,000 "	130	1,367	3,007	6,026	321	6,117	18,437	12,103	36	229	1,824	8,439	12,780
200,000 "	119	2,316	5,149	10,658	476	11,772	32,852	20,891	8	48	2,865	14,183	21,105
500,000 "	35	1,500	3,448	7,067	286	9,641	23,742	14,102	—	—	1,917	9,498	14,248
1,000,000 " 4,999,999	11	795	1,832	4,132	157	8,096	18,172	10,213	—	—	1,068	6,002	10,162
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	928	7,944	17,496	35,469	1,827	43,120	118,404	74,504	541	2,384	10,137	47,734	75,941
1965													
Under \$10,000	53	16	32	48	13	89	369	268	53	143	17	51	272
\$ 10,000 to \$ 24,999	158	167	333	550	82	821	2,786	1,892	145	584	198	660	1,933
25,000 "	190	532	1,072	1,965	173	2,086	6,897	4,641	158	744	660	2,439	4,786
50,000 "	217	1,162	2,409	4,959	324	4,589	15,149	10,262	115	683	1,488	6,433	10,567
100,000 "	146	1,459	3,134	6,590	341	6,835	20,432	13,340	34	244	1,872	8,965	13,853
200,000 "	135	2,676	5,939	12,840	610	14,710	41,117	26,112	9	62	3,393	17,537	26,701
500,000 "	41	1,775	4,027	8,987	355	11,469	28,977	17,754	—	—	2,212	11,892	18,024
1,000,000 " 4,999,999	17	1,338	3,144	6,925	271	12,100	27,970	16,152	—	—	1,778	9,818	16,460
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	957	9,125	20,089	42,864	2,169	52,699	143,698	90,420	514	2,460	11,618	57,795	92,596

TABLE 3. Principal Statistics classified by Size Group based on Manufacturing Value Added, 1964 and 1965

Size group	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec-tricity	Cost of materials and supplies	Value of shipments of goods of own manu-facture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under \$10,000	144	79	157	205	49	561	1,556	945	142	451	94	238	958
\$ 10,000 to \$ 24,999	213	396	792	1,400	161	2,072	5,856	3,621	196	788	500	1,768	3,763
25,000 "	210	946	1,944	3,657	259	3,868	11,812	7,739	144	754	1,174	4,559	8,023
50,000 "	161	1,345	2,892	5,715	336	5,796	17,437	11,380	37	263	1,823	8,049	12,187
100,000 "	111	1,719	3,847	7,883	362	8,619	24,559	15,760	22	128	2,168	10,568	15,814
200,000 "	69	2,166	4,824	10,067	432	11,956	31,611	19,599	—	—	2,687	13,418	19,830
500,000 "	17	981	2,316	4,826	168	7,567	18,999	11,491	—	—	1,272	6,679	11,414
1,000,000 " 4,999,999	3	312	725	1,717	60	2,680	6,573	3,968	—	—	419	2,456	3,952
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	928	7,944	17,496	35,469	1,827	43,120	118,404	74,504	541	2,384	10,137	47,734	75,941
1965													
Under \$10,000	112	47	94	140	42	440	1,218	736	111	361	52	155	745
\$ 10,000 to \$ 24,999	210	387	777	1,352	152	1,993	5,716	3,588	180	771	475	1,669	3,746
25,000 "	222	943	1,922	3,792	275	4,242	12,507	7,975	154	840	1,185	4,797	8,157
50,000 "	176	1,410	3,014	6,264	361	6,592	19,465	12,618	50	342	1,832	8,468	13,307
100,000 "	126	1,936	4,243	8,920	493	10,853	29,129	17,959	19	146	2,503	12,326	18,457
200,000 "	84	2,511	5,603	12,476	495	14,442	39,974	25,465	—	—	3,120	16,762	25,833
500,000 "	21	1,302	2,977	6,669	251	9,606	22,941	13,772	—	—	1,641	9,028	14,015
1,000,000 " 4,999,999	6	589	1,458	3,251	100	4,530	12,748	8,307	—	—	810	4,588	8,332
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	957	9,125	20,089	42,864	2,169	52,699	143,698	90,420	514	2,460	11,618	57,795	92,596

TABLE 4. Principal Statistics classified by Size Group based on Total Value Added, 1964 and 1965

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under \$10,000	142	76	151	198	49	547	1,531	935	139	443	91	231	935
\$ 10,000 to \$ 24,999	206	368	735	1,291	149	1,982	5,577	3,441	192	768	448	1,568	3,472
25,000 " 49,999	213	939	1,929	3,613	253	3,803	11,704	7,705	149	776	1,160	4,480	7,854
50,000 " 99,999	157	1,249	2,681	5,301	309	5,188	16,313	10,853	39	269	1,620	7,152	11,149
100,000 " 199,999	119	1,820	4,070	8,284	400	9,193	25,767	16,381	22	128	2,326	11,220	16,756
200,000 " 499,999	71	2,199	4,891	10,239	440	12,159	31,940	19,729	—	—	2,801	13,948	20,409
500,000 " 999,999	17	981	2,316	4,826	168	7,567	18,999	11,491	—	—	1,272	6,679	11,414
1,000,000 " 4,999,999	3	312	725	1,717	60	2,680	6,573	3,968	—	—	419	2,456	3,952
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	928	7,944	17,496	35,469	1,827	43,120	118,404	74,504	541	2,384	10,137	47,734	75,941
1965													
Under \$10,000	110	45	90	132	41	431	1,193	722	109	357	50	147	722
\$ 10,000 to \$ 24,999	205	371	745	1,290	145	1,953	5,541	3,450	178	749	445	1,553	3,493
25,000 " 49,999	224	931	1,899	3,735	276	4,224	12,458	7,941	156	852	1,169	4,716	8,053
50,000 " 99,999	173	1,335	2,838	5,924	325	6,037	18,456	12,139	51	350	1,710	7,868	12,430
100,000 " 199,999	132	2,020	4,429	9,266	509	11,099	29,917	18,543	20	153	2,596	12,748	19,078
200,000 " 499,999	85	2,492	5,569	12,420	510	14,531	39,861	25,209	—	—	3,111	16,781	25,947
500,000 " 999,999	21	1,231	2,823	6,296	246	9,074	21,753	13,233	—	—	1,593	8,716	13,312
1,000,000 " 4,999,999	7	700	1,697	3,801	116	5,349	14,520	9,184	—	—	944	5,266	9,562
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	957	9,125	20,089	42,864	2,169	52,699	143,698	90,420	514	2,460	11,618	57,795	92,596

TABLE 5. Principal Statistics classified by Size Group based on Total Employed, 1964 and 1965

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under 5 employed	363	443	892	1,580	216	2,817	8,329	5,313	341	1,301	539	1,932	5,338
5- 14 employed	362	2,188	4,643	9,091	566	9,228	28,865	19,151	187	1,009	2,770	11,861	19,571
15- 49 "	168	3,319	7,388	15,169	679	17,544	47,702	29,966	13	73	4,188	20,385	30,525
50- 99 "	30	1,510	3,479	7,076	278	9,669	24,258	14,626	—	—	1,995	10,007	15,158
100-199 "	5	484	1,094	2,553	88	3,862	9,250	5,447	—	—	645	3,550	5,348
200-499 "	—	—	—	—	—	—	—	—	—	—	—	—	—
500 employed and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	928	7,944	17,496	35,469	1,827	43,120	118,404	74,504	541	2,384	10,137	47,734	75,941
1965													
Under 5 employed	344	449	908	1,623	232	2,869	8,524	5,436	318	1,295	529	1,971	5,489
5- 14 employed	378	2,256	4,749	9,788	596	10,082	31,341	20,703	180	1,055	2,876	12,882	21,127
15- 49 "	192	3,809	8,363	18,150	835	21,001	57,639	36,274	16	110	4,802	24,543	37,166
50- 99 "	34	1,696	3,906	8,342	340	12,876	30,015	17,572	—	—	2,203	11,694	18,084
100-199 "	9	915	2,163	4,960	167	5,870	16,179	10,435	—	—	1,208	6,704	10,729
200-499 "	—	—	—	—	—	—	—	—	—	—	—	—	—
500 employed and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	957	9,125	20,089	42,864	2,169	52,699	143,698	90,420	514	2,460	11,618	57,795	92,596

TABLE 6. Principal Statistics classified by Type of Organization, 1964 and 1965

Type of organization	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec-tricity	Cost of materials and supplies	Value of shipments of goods of own manu-facture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Individual ownerships	319	781	1,623	2,916	243	3,711	10,817	6,867	324	1,456	848	3,111	6,939
Partnerships	104	326	679	1,258	116	1,551	5,072	3,399	217	928	358	1,355	3,513
Incorporated companies	505	6,837	15,194	31,296	1,468	37,858	102,515	64,237	...	...	8,931	43,268	65,489
Co-operatives .....	—	—	—	—	—	—	—	—	...	...	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	928	7,944	17,496	35,469	1,827	43,120	118,404	74,504	541	2,384	10,137	47,734	75,941
1965													
Individual ownerships	311	804	1,663	3,118	264	3,872	11,385	7,245	309	1,477	882	3,361	7,371
Partnerships	97	319	668	1,278	120	1,660	5,334	3,559	205	983	348	1,380	3,642
Incorporated companies	549	8,002	17,758	38,468	1,785	47,167	126,979	79,616	...	...	10,388	53,054	81,584
Co-operatives .....	—	—	—	—	—	—	—	—	...	...	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	957	9,125	20,089	42,864	2,169	52,699	143,698	90,420	514	2,460	11,618	57,795	92,596

TABLE 7. Calculation of Output, Input and Value Added, 1964 and 1965

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1964	1965	1964	1965	1964	1965
\$'000						
Output						
1. Shipments and other revenue	118,404	143,698	7,136	8,827	125,540	152,525
Inventories—Goods of own manufacture:						
Add closing—Goods in process	2,997	4,249	...	...	2,997	4,249
Finished goods	1,970	2,739	...	...	1,970	2,739
Deduct opening—Goods in process	2,403	3,108	...	...	2,403	3,108
Finished goods	1,517	2,290	...	...	1,517	2,290
2. Net inventory change	1,047	1,590	...	...	1,047	1,590
3. Gross output (1 + 2)	119,451	145,288	7,136	8,827	126,587	154,115
Input						
4. Purchases of goods not of own manufacture .....	...	...	4,986	5,753	4,986	5,753
Inventories—Goods not of own manufacture:						
Add opening .....	...	...	1,137	1,413	1,137	1,413
Deduct closing .....	...	...	1,225	1,495	1,225	1,495
5. Cost of goods sold (not of own manufacture) .....	...	...	4,898	5,671	4,898	5,671
6. Materials, supplies, etc.	43,120	52,699	801	982	43,921	53,681
7. Fuel and electricity	1,827	2,169	...	...	1,827	2,169
8. Gross input (5 + 6 + 7)	44,947	54,868	5,699	6,653	50,646	61,521
Value added (3 - 8)	74,504	90,420	2,437	2,174	75,941	92,596

TABLE 8. Employment and Payroll, 1964 and 1965

Year and province	Employees										Salaries and wages					
	Production and related workers				Adminis- trative and office		Sales and distribution		Total		Production and related workers		Adminis- trative and office	Sales and distrib- ution	Total	
	Manufacturing		Other								Manufacturing	Other				
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female						Manufac- turing	Other
	number										\$'000					
1964																
Newfoundland	}	65	1	—	—	11	2	—	—	76	3	274	—	63	—	337
Prince Edward Island																
Nova Scotia		164	1	—	—	25	12	9	—	198	13	626	—	147	27	800
New Brunswick		260	—	—	—	66	25	22	4	348	29	1,138	—	349	108	1,594
Quebec		2,171	20	—	—	378	117	54	2	2,603	139	9,412	—	2,785	300	12,496
Ontario		2,845	53	1	3	425	186	41	5	3,312	247	13,035	9	3,669	226	16,940
Manitoba		386	2	—	—	81	19	23	2	490	23	1,631	—	647	158	2,435
Saskatchewan		87	—	—	—	14	4	3	—	104	4	341	—	86	18	444
Alberta		843	1	28	—	199	59	34	2	1,104	62	4,141	143	1,562	205	6,052
British Columbia		1,038	7	2	—	216	72	43	4	1,299	83	4,872	7	1,525	233	6,636
Yukon and Northwest Terri- tories		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals		7,859	85	31	3	1,415	496	229	19	9,534	603	35,469	159	10,832	1,274	47,734
1965																
Newfoundland	}	65	—	—	—	12	3	—	—	77	3	247	—	85	—	332
Prince Edward Island																
Nova Scotia		179	—	—	—	31	14	3	—	213	14	742	—	204	14	960
New Brunswick		304	—	1	—	73	24	19	5	397	29	1,256	4	436	107	1,802
Quebec		2,458	16	—	—	451	152	61	2	2,970	170	11,281	—	3,572	371	15,223
Ontario		3,282	62	—	4	489	223	54	3	3,825	292	16,016	11	4,551	309	20,886
Manitoba		443	1	—	—	87	23	24	2	554	26	1,916	—	776	157	2,849
Saskatchewan		142	—	—	—	34	12	4	—	180	12	556	—	218	23	798
Alberta		904	1	—	—	200	52	28	1	1,132	54	4,484	—	1,553	207	6,243
British Columbia		1,257	11	18	—	224	94	62	4	1,561	109	6,367	88	1,892	355	8,701
Yukon and Northwest Terri- tories		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals		9,034	91	19	4	1,601	597	255	17	10,909	709	42,864	103	13,286	1,542	57,795

TABLE 9. Production and Related Workers, — Manufacturing Activity, 1964 and 1965

Month	1964		1965	
	Male	Female	Male	Female
	number			
Establishments reporting monthly detail (large establishments only):				
January	6,120	83	7,206	64
February	6,265	84	7,264	72
March	6,369	82	7,330	72
April	6,421	81	7,472	80
May	6,478	83	7,517	86
June	6,592	89	7,589	83
July	6,560	81	7,563	98
August	6,559	82	7,583	93
September	6,464	84	7,594	100
October	6,391	84	7,604	105
November	6,483	89	7,666	100
December	6,407	85	7,659	93
Averages	6,470	82	7,515	86
Establishments reporting annual averages (small establishments only)	1,389	3	1,519	5
Average for all establishments	7,859	85	9,034	91

TABLE 10. Inventories, 1965

Province	Manufacturing				Non-manufacturing	Total inventories
	Materials, supplies, etc.	Goods in process	Finished goods of own manufacture	Total	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland	133	3	—	136	8	144
Prince Edward Island						
Nova Scotia	201	42	10	253	15	267
New Brunswick	538	92	62	692	207	899
Quebec	2,276	917	808	4,001	88	4,089
Ontario	2,067	1,207	400	3,675	132	3,807
Manitoba	731	176	204	1,111	—	1,111
Saskatchewan	487	37	102	626	109	735
Alberta	1,329	417	433	2,178	390	2,568
British Columbia	1,191	219	271	1,681	463	2,144
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	8,953	3,108	2,290	14,351	1,413	15,764
Closing:						
Newfoundland	200	13	—	212	—	212
Prince Edward Island						
Nova Scotia	256	37	12	305	22	327
New Brunswick	649	142	80	872	218	1,090
Quebec	2,596	1,356	770	4,722	97	4,819
Ontario	2,450	1,677	377	4,504	171	4,674
Manitoba	720	136	385	1,240	4	1,245
Saskatchewan	546	62	101	709	98	807
Alberta	1,505	518	460	2,483	378	2,861
British Columbia	1,318	308	554	2,180	507	2,687
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	10,239	4,249	2,739	17,226	1,496	18,722

TABLE 11. Purchased Fuel and Electricity Used, 1964 and 1965

Description	1964		1965	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments reporting commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton	959	826	12
(b) Imported	"	327	186	3
Sub-bituminous coal (from Alberta mines only)	"	137	141	1
Anthracite coal	"	280	195	4
Lignite coal	"	102	67	1
Coke	"	36	110	3
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	930,866	1,073,230	447
Fuel oil including kerosene or coal oil	"	1,194,692	1,393,620	228
Wood	cord	125	198	1
Gas:				
(a) Liquefied petroleum gases	Imp. gal.	31,989	28,497	9
(b) Other manufactured gas	M cu. ft.	—	—	—
(c) Natural gas	"	268,768	362,172	211
Other fuel .....		...	...	—
Electricity purchased	kwh.	27,917,479	35,461,956	761
Steam purchased .....		...	...	1
2. Small establishments not reporting commodity detail:				
Estimate for fuel and electricity .....		...	...	485
3. All establishments:				
Total fuel and electricity used		1,827	...	2,169

TABLE 12. Materials and Supplies — Manufacturing Activity, 1964 and 1965

Description	Cost	
	1964	1965
	\$'000	
1. Raw materials and components used ¹	38,886	47,706
2. Containers and other packaging materials and supplies used	276	257
3. Operating, maintenance and repair supplies used (excluding fuel).....	2,773	3,322
4. Amount paid out to others for work done on materials owned by establishments	1,184	1,413
Totals	43,120	52,699

¹ No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. These estimated costs were \$5,916,926 in 1964 and \$6,750,217 in 1965.

TABLE 13. Shipments of Goods of Own Manufacture, 1964 and 1965

Description	Value	
	1964	1965
	\$'000	
1. All products manufactured	55,214	74,017
2. Amount received in payment for work done on materials and products owned by others.....	63,685	70,555
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	(495)	(875)
Net adjustment for establishments receiving progress payments	—	—
Total adjusted value of shipments and work done	118,404	143,698

List of Establishments classified to this Industry, 1965

(Does not include establishments classified to other industries, which as a secondary activity, manufacture products typical of this industry)

Name	Location
Newfoundland:	
Fry's Engineering Co. Ltd.	25 Springdale St., St. John's
Hall Metals Ltd.	Water St. E., St. John's
Prince Edward Island:	
Hall and Stavert Ltd.	49 Pownal St., Charlottetown
Jardine's Machine Shop	Georgetown
Waller's Machine Shop	203 Great George St., Charlottetown
Nova Scotia:	
Annand, C.A. Ltd.	442 Queen St., Truro
Antigonish Machine Shop Ltd.	Antigonish
Atlantic Spring and Machinery Co. Ltd.	King's Rd., Sydney
Collings (Wm.) & Sons Ltd.	2095 Barrington St., Halifax
Dartmouth Machine Co. Ltd.	1 Parker St., Dartmouth
Dickie, L.G. Machine Shop	Stewiacke
Digby Forging and Machine Co. Ltd.	First Ave., Digby
Fader Agencies Ltd.	83 Shore Rd., Dartmouth
Fairview Industrial Engineering Ltd.	2549 Dutch Village Rd., Halifax
Falmouth Machine Shop	Falmouth
Gateway Engineering Ltd.	83 Water St., Yarmouth
Hamilton & Porter	2 Forest St., Yarmouth
Howie's Machine Shop	57 Water St., Glace Bay
Maritime Cylinder Grinding Co. Ltd.	5447 Rainnie Dr., Halifax
McLellan's Machine Shop	Lower Onslow
Nova Automotive Machine Co. Ltd.	15 Waddell St., Dartmouth
Parnell, E.H. Machine Co.	Liverpool
Shaw and MacDonald Ltd.	51 South St., Glace Bay
Sjoberg, Carl Machine Shop	Meteghan Centre
Stellarton Machine Shop	MacKay St., Stellarton
Tremaine's Welding & Blacksmith Shop.....	58 Elm St., Bridgewater
Twin City Engine Rebuilders	2451 Maynard St., Halifax
Webb Engineering Ltd.	1959 Upper Water St., Halifax
New Brunswick:	
Apex Machine Works Ltd.	181 Pacific Ave., Moncton
Atlantic Engine Rebuilders Ltd.	12 Ray Brown St., Moncton
Belanger's Machine Shop	Sheriff St., Grand Falls
Brewster, Donald T. Machine Shop	14 Reserve St., Saint John
Castle Machine Works	Newcastle

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
New Brunswick - Concluded:	
Craig's Machine Shop Ltd.	Hartland
Devon Machine Shop	140 Canada St., Marysville
Duval Industrial Machine Works	379 St. Patrick St., Bathurst
Edmundston Machine Shop	503 Victoria St., Edmundston
Engine Machine Shop & Supply Ltd.	877 Union St., Fredericton
Fredericton Welding and Machine Shop	162 King St., Fredericton
Gauvin Engine Rebuilders	32 King St., Moncton
Horsnell Machine and Iron Works Ltd.	329 King St., Fredericton
Kelso, Wm. W. and Sons Ltd.	224 Main St., Sussex
Laforge Machine Shop	Grand Falls
Meed's Machine Shop Ltd.	Bristol
Miramichi Foundry Machine Works Ltd.	211 Upper Water St., Chatham
Moncton Foundry and Machine Co. Ltd.	175 Beaverbrook, Moncton
Richard, Machine Shop	Shediac
Robertson's Machine Shop	Riverview
Shediac Garage and Machine Shop	Shediac
Stephenson, E.S. & Co. Ltd.	15 Dock St., Saint John
Williamson, J. Fred Limited	Bridge St., Saint John
Quebec:	
A.B.C. Tool and Die and Mfg. Co. Reg'd.	2381 des Carrières St., Montreal
A. One Machine Tool	8628 - 10e Ave., Ville St-Michel
Acme Mold and Die Reg'd.	6031 Denormandie St., Montreal
Albon Welding and Mechanical Works Ltd.	10223 Armand Lavergne St., Montreal
Amos Machineries (1960) Inc.	212 1ère Ave. E., Amos
Arell Machining Ltd.	3737 Metropolitan Blvd. E., Montreal
Ascot Precision Products Ltd.	556 Sebastopol St., Montreal
Asselin, Lucien	St. Gervais
Atelier de Soudure Générale Ent.	Rivière-du-Loup
Atelier des Souds	85 rue de Castelnau Montréal
Atelier Mécanique André Roux	Princeville
Atelier Mécanique Inc.	Pike River
Atelier Mécanique d'Aima Ltée	Alma
Atelier Mécanique Ernest Paul	St-Joseph-de-Sorel
Audet, Robert	St-Tite-des-Caps
Auger, H. Welding Co. Ltd.	4809 Henri Julien St., Montreal
B.I.R. Precision Products	Ville St-Michel
Baum, S. Tooling Co.	2195 Ekers Ave., Montreal
Beauce Machine Shop Ent.	Ville St-Georges
Beaudry Machine Shop	733 St-Antoine St., Joliette
Bédard, F.X.	440 rue du Roi-est., Québec
Bélanger, Gilles	Ste-Anne-de-la-Poculaire
Bélanger Machine Shop Ent.	Coaticook
Bernatchez Machine Shop	Amos
Bérubé, Emile (Machine Shop)	Amqui
Bibeau et Frères Ent.	St-Félix-de-Valois
Boisclair, Antoine	159 rue Michaud St-Gabriel-de-Brandon
Boulanger, T.H. Ent.	4591 Brébeuf St., Montreal
Bowers Machine Co. Ltd.	5860 St. Lawrence Blvd., Montreal
British American Machine Co.	1920 rue Leber, Montreal
Brousseau, Rolland	2850 Lacordaire, Montréal
Cadioux, Wilfred	815 St. Paul St. W., Montreal
Causapsal Machine Shop	Causapsal
Chambly Machine Works Ltd.	2125 Ward St., Ville-St-Laurent
Chatham Machined Parts Ltd.	9825 Verville St., Montreal
Cometal Inc.	St-David
Cliche, Jos. et Fils Ltée	12 Michaud St., Lac Mégantic
Contrôles Hydrauliques Sept-Îles Ltée	Sept-Îles
Cloutier Machine Shop Ent.	Cap-de-la-Madeleine
Crammond and Son Limited	4865 Dagenais St., Montreal
Crankshaft Grinder Reg'd.	820 Notre-Dame St. W., Montreal
Crankshaft Grinding & Diesel Service Inc.	998 Wellington St., Sherbrooke
Crawford Machine Shop	Campbell's Bay
Crosbie, A. and Sons Ltd.	2955 Sartelon St., St. Laurent
Dallaire Metal Industries Inc.	7926 - 15e Ave., Ville St-Michel
De Champlain, Roger	Luceville
De Jean, L. & Co. Ltd.	1405 St. James St. W., Montreal
Denis Machine Shop	Barraute
Després, Alfred Inc.	66 rue St-André, Québec
Dettson Manufacturing Co. Ltd.	Sherbrooke
Difalco, P. and Co.	4401 LaFrance Lane, Montreal
Dion, Yvon Equipment	25 St-Christophe, Matane
Docal Limited	720 Marin Ave., Montreal
Dolbeau Crankshaft Ltée	Dolbeau
Dominion Tool Works	121 St. Denis St., St-Lambert
Drouin, Noël	St-Maxime Scott
Dubé, Aurèle	7625 - 18e Ave., Ville St-Michel
Dubuc Machine Shop	565 rue des Ormeaux, Montréal
Durocher, Yves	278, rue Champlain, St-Jean
Eastern Rebuilders Ltd.	106 Elizabeth St., Bedford
Eastern Townships Machine Works Ltd.	Sherbrooke
Economic Production Work Ltd.	2554 des Carrières St., Montreal
Electro Processes (Quebec) Ltd.	2405 Ville-Marie St., Montreal
Ellison Machine Shop	820 Liège St., Montreal
Empire Machine Company Limited	1535 Gladstone St., Montreal
Engine Rebuilders Company	6391 St. Lawrence Blvd., Montreal
Equipments Universels Napierville Inc.	Napierville
Experimental Research & Development Co. Ltd.	Ste-Dorothée-de-Laval
Feely, T. and Sons Machine Shop Ltd.	185 Laval St., Granby
15th Avenue Machine Shop	Ville St-Michel
Form Tools (Quebec) Inc.	8014 - 16e Ave. Ville St.-Michel

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
Quebec - Continued:	
Gagné Machine Shop	2750 Rozel St., Montreal
Gatineau Machine Shop	Gatineau
Gendron et Frères Enr.	149 Fraserville St., Rivière-du-Loup
General Machine Works Limited	911, rue Jeanne-Mance Montreal
General Machine Works Limited	Longueuil
Gingras et Charest Enr.	550, rue Ste-Hélène, Québec
Gordon Machine Shop	Lachute
Guérrette & Frère Limitée	249 St. Alexander St., Longueuil
Handy Machine Shop and Supply, Ltée	Pont-Viau
Harrington Tool & Die Co. Ltd.	735-755-1st Ave., Lachine
Henrichon, Lucien	St-Gabriel-de-Brandon
Hochelaga Tool & Die Inc.	4325 Industrial Blvd., Montreal-Nord
Hooker's Machine Works and Foundry	Glenelm, Huntingdon Co.
Hoodé, E. and Fils Enr.	St-Georges-Est
Huot, S. Inc.	990 rue Ste-Thérèse, Québec
Iberville Machine Shop	Iberville
Industrial Machining Limited	3650 St. Joseph Blvd. E., Montreal
Industrial Welding and Machine Work Ltd.	Noranda
International Machine Works Ltd.	3664, rue Sabrevois, Montreal-Nord
J. P. Industries Ltd.	3100 Rouen St. E., Montreal
Jacques Precision Works Ltd.	2585 Charlemagne St., Montreal
Joly Engineering Ltd.	8945 Park Ave., Montreal
Joyal Machine Shop	75, rue St-Albert, Drummondville
Jude Tooling and Machining Co.	679 St-Remi St., Montreal
Kiely, Martin Co. Ltd.	1159-1161 William St., Montreal
Labbé & Frère	Sherbrooke
Lachapelle Machine Shop Enr.	124 St-Joseph St., Terrebonne
Laflamme, René, Subsidiaire	St-Jean
La Fonderie Ouellet Enr.	St-Léonard-d'Aston
La Fonderie "Universal" Enr.	Victoriaville
Langevin, Gérard Machine Shop	2050 Charlemagne St., Montreal
Lapointe et Bélanger Ltée	1329 Route Nationale, Ancienne-Lorette
Lar Machinery Inc.	Métabetchouan
La Soudure de Thetford	Thetford Mines
Laurentian Metal Products Co. Ltd.	40 Montcalm St., Hull
Laval Machine Shop Ltée	Pont-Viau
Leader Products Co. Ltd.	95 St-Zotique St. W., Montreal
LeBel Machine Works Reg'd.	Lachine
Leclerc, N. & Sons Inc.	11243 Victoria St., Montreal E.
LeFebvre & Frères Ltd.	790 de Bullion St., Montreal
Lemire, Viateur	St. Bruno, Guigès
Les Ateliers Blais de Thetford Inc.	Thetford Mines
Les Ateliers Mécaniques Enr.	Roberval North
Les Industries de Mont-Laurier	Mont-Laurier
Les Industries Maniwaki Enr.	Maniwaki
Les Industries Saguenay Ltée	Port Alfred
Les Pompes Cartier Enr.	435, rue Dollard, Joliette
Les Produits d'Acier V. Ledoux Ltée	480, Ave. Brodeur, St-Hyacinthe
Lessard Machineries Enr.	St-Wenceslas
Lévesque, J. S. Machine Shop	Rivière-du-Loup
M & C Machine Shop	2101-21st Ave., Laval
Machine Industries Ltd.	Longueuil
Machine Repair and Maintenance Ltd.	2130 Bleury St., Montreal
Machinerie Lévis Enr.	38 St. Henri, Lévis
Machine Shop Lévis Létourneau, Enr.	390-3e rue, Québec
Machine Shop St. Marc	Shawinigan
Machine Works Limited	9601 Blvd. St-Laurent, Montreal
Macot Grinding Works Reg'd.	8420-9e Ave., Ville-St-Michel
Mailhot Hydraulic Inc.	St-Jacques-de-Montcalm
Maisonneuve & Frères Enr.	9917, rue Cobourg, Montreal-Nord
Mulo, A. Cie., Ltée	Joliette
Marcoux A. Machine Shop	Ste-Adèle-en-bas
Massicotte & Arcand Inc.	Cap-de-la-Madeleine
Materials Engineering Co. Ltd.	St. Lambert
Matte, Gaston	578 Kitchener St., LaTuque
Ménard, Alfred	391, rue Ste-Anne, Chicoutimi
Metro Automotive Mfg. Ind.	6405 St. Lawrence Blvd., Montreal
Metropolitan Machine Works Reg'd.	10627, rue Ste-Gertrude, Montréal-Nord
Metro Engineering Co. Ltd.	Ville-St-Pierre
Mi-Co Meter Sales & Service Ltd.	17 Levis St., Longueuil
Miller Bros. and Sons Ltd.	45 Seigneurs St., Montreal
Miller Bros. Reg'd.	Gaspé Harbour
Mining Machinery and Equipment Ltd.	Noranda
Modern Machine Industry Ltd.	445, boul. Guimond, Ville-Jacques-Cartier
Modern Machine Shop	60 Daihousie, Huntingdon
Mohawk Motors Mfg. Ltd.	2875 Hochelaga, Montreal
Monarch Punch and Die Co. Ltd.	3594 Jarry St., E., Ville-St-Michel
Mont-Joli Machinerie Ltée	126 Aubin St., Mont-Joli
Montreal Materials Processing Co. Ltd.	5270 Arnold St., Montreal
Montreal Mechanical Enterprise Co. Ltd.	1561 Papineau St., Montreal
Montreal Screw Machine Products Ltd.	957 Amherst St., Montreal
Morin, Clément	Rivière-du-Loup
Morin Frère Enr.	Cartier Ave., La Guadeloupe
Morris, F. L. Machine Shop	72 Denison Ave., Granby
Nordale Metalcraft Ltd.	35 Cartier St., Sherbrooke
North Precision Enr.	10156 London St., Montreal North
Notre Dame Tools & Dies Machinery Shop	2730 rue Desautels, St-Hubert
Ouellet et Laberge Ltée	116 Christophe Colomb Ave., Quebec
Papineau Machine Shop	Ville-St-Michel
Paquin, Alph. & Fils	Joliette
Paramount Machining Reg'd.	460 St. James St., Ville-St-Pierre
Paré, Lucien Machine Shop	St-Théodore
Parent, Pierre	Ste-Agathe-des-Monts

List of Establishments classified to this Industry, 1963 - Continued

Name	Location
Québec - Concluded:	
Parent Tool and Machine Parts	Jacques-Cartier
Paulson Machine Co. Ltd.	Lachute
Plante Machine Shop Enr.	St-David-de-Lévis
Poulin, J. E. Reg'd.	6580 Magloire St., St-Léonard-de-Port-Maurice
Precision Industries Reg'd.	3744 St-Ambroise St., Montreal
Princeville Machine Shop Inc.	Princeville
Proulx, A. et Fils	166 First St., Iberville
Provencher, Raoul	Plessisville
Provost, Edouard	800 Wellington St., Sherbrooke
Quebec Tools and Machine Works Ltd.	9770 St-Laurent Blvd., Montreal
Quenneville, Isaié Inc.	Valleyfield
Rainville, Georges Machine Shop Enr.	Iberville
Rapid Steel and Brass Products Co.	10137 London Ave., Montreal North
Ray Machine Shop Inc.	Sept-Îles
Remembrance Machine Shop Reg'd.	2377 Remembrance St., Lachine
Rimouski Transfer Machine Shop Ltd.	98 St-Pierre St., Rimouski
Rite Manufacturing Ltd.	5110-12th Ave., Montreal
Ruel, J.R.	Giffard
St. John's Tool and Die	272 St-Pierre St., St-Jean
St-Roch Machine Shop Enr.	490, rue de l'Église, Québec
Salonen Machine and Repair Shop	59 Mgr. Tessier St. W., Rouyn
Sansoucy, B. Ltée	St-Césaire
Senneterre Machine Shop	Senneterre
Shawinigan Machine Shop	Shawinigan
Sciotte Machine Shop Ltd.	10563, rue L'Archevêque, Montreal-Nord
Sciotte, Paul & Fils Ltée	71, rue Dubois, Ste-Thérèse
Sigama Ltée	Cap-de-la-Madeleine
Simplex Piston Ring Services Ltd.	2009 St. James St. W., Montreal
Société Industrielle de Décolletage & d'Outillage Ltée	Granby
Soucy, Adélaré Ltée	St-Ludger
Soudure Industrielle Enr.	880-106th Ave., Drummondville
Sparcon Industries Ltd.	Lachine
Speedway Machine Works	1050 Montpellier St., St. Laurent
Steel Flange Manufacturing Co. Ltd.	106 Elmslie St., Ville LaSalle
Stewart Machine Works Limited	Noranda
Sunset Industries Reg'd.	2275 Jeanne d'Arc St., Montreal
Tac Machine Shop Enr.	St-Jérôme
Tanguay, Auto Jack Hospital	94 Bourget St., Montreal
Technical Accessories Ltd.	5595 Fullum St., Montreal
Technodyne Company	Ville St-Pierre
Tilly, L. Tool and Machine Reg'd.	10045 St. Lawrence Blvd., Montreal
Trahan Machine Shop	641-7th Ave., Grand'Mère
Transmission Specialty Ltd.	5529 Papineau St., Montreal
Tremblay, Vincent Inc.	1655 Letourneaux St., Montreal
Trotter, A. and Fils Ltée	Doitbeau
Trudeau, G.	Laprairie
Turbo Precision Industries Ltd.	10780 Racette St., Montreal
Universal Die and Tool Mfg. Ltd.	2125 St. Catherine St. E., Montreal
Valée Machine Shop	472 St-Charles St., Shawinigan Falls
Valleyfield Machine Parts	Ville Jacques-Cartier
Verdon Machine Shop Reg'd.	St-Lambert
Victory Tool and Machine Co. Ltd.	250 Rose-de-Lima St., Montreal
Viens Machine Shop & Repairs Ltd.	2010 Roberval St., Montreal
Vohl, Adrien & Fils Ltée	St-Marc-des-Carières
Vulcan Machine Works	St-Jérôme
Walter Welding Inc.	10523 Henault, Montreal-Nord
Wilson Machine Co. Ltd.	2299 Lapierre St., Lachine
Wright's Industrial Maintenance Ltd.	Ste-Rose
Yelle Machine Shop	St-Urbain
Ontario:	
A & G Dies Ltd.	66 Milvan Dr., Weston
Aalus Engineering Co. Ltd.	76 Moira Ave., Toronto
Able Welding and Machine Co. Ltd.	290 Oak St. W., North Bay
Accurate Crankshaft Grinding Ltd.	142 George St., Toronto
Accurate Engineering Co.	267 Caledonia Rd., Toronto
Accurate Stamp and Stencil Co.	481 Main St., Hamilton
Acro Machine and Tool Company Limited	427 Birchmount St., Scarborough
Active Key Works Limited	645 King St., W. Toronto
Ada Precision Machine & Tool Co.	24 St. Albans Rd; Islington
Advance Machine and Tools Co. Ltd.	1160 Albert Rd., Windsor
Advance Tool and Mould Co. Ltd.	10 Sunrise Ave., Toronto 16
Alda Machine and Tool Co.	9 Magnificent Rd., Toronto
Allied Machine and Tool	32 Chauncey St., Toronto
All-Weld Co. Ltd.	24 Carlaw Ave., Toronto
Altch Engineering Co.	1040 Martin Grove Rd., Rexdale
Altberg's Machine Shop	164 Merton St., Toronto
Amco Machine Co.	Dawson Rd., Port Arthur
Andros Machine Company	109 Judge Rd., Toronto
Annen Automotive Service	856 Walker Rd., Windsor
Apex Machine and Tool Co.	2 Derby St., Toronto
Appleford Bros.	13 Sanders St., Tillsonburg
Arc Tool and Die Works Ltd.	1230 Plains Rd. E., Burlington
Armstrong Bros. Engineering Co. Ltd.	136 Adelaide St. W., Toronto
Art Metal Craft	L'Original
Associated Tool and Mfg. Co. Ltd.	3673 Dufferin St., Downsview
Atkins and Hoyle Limited	71 Portland St., Toronto
Atkinson, C. H. and Co.	159 Centre St. E., Richmond Hill
Auged Engineering & Machine Shop	9 Fennings St., Toronto
Austin, A. Industries Ltd., The	51 Kipling Ave., Toronto
Automotive Machine Service	222 Main St., Toronto

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
Ontario - Continued:	
Avery Machine Ltd.	289 Sumach St., Toronto
Aylmer Toolcraft	23 Raglan St., Aylmer
Baderski, Frank and Son Ltd.	464 Aigonquin Blvd. E., Timmins
Baird Machines Ltd.	568 Dundas St., Woodstock
Bakerville Foundry and Machine Shop	R.R. 2, Woodslee
Ball, J. Machine Shop	Narrow St., Wellington
Barlow Tool and Machine Ltd.	2493 Barton St. E., Hamilton
Barnes Machine Shop	137 Water St., Wallaceburg
Barrie Welding and Machine Ltd.	39 Anne St., Barrie
Bassett, Frank	3 York St., Picton
Bathurst Grinding Services Ltd.	45 Niagara St., Toronto
Battye, Harold & Co.	767 Warden Ave., Scarborough
Beasley Machine Ltd.	410 Front St. N., Sarnia
Beaver Equipment Mfg. Co. Ltd.	65 Hymus Rd., Scarborough
Beaverton Metal Works	Beaverton
Bee, P.	33 Fidler St., Woodstock
Beehoo Engineering	Old Station Rd., Streetsville
Bekaert Machine and Tool Repair	271 Inshes Ave., Chatham
Belmar Welding Ltd.	19 Woodburn Ave., St. Catharines
Bell, Stuart & Sons Ltd.	Perth
Bennett and McPhie Limited	1230 Dundas St., Toronto
Bexton, S. and Son	385 Horton St., London
Binkley Die Castings Ltd.	175 Samuelson St., Guelph
Blakes Welding & Machine	178 King St., Clinton
Blue Water Machine & Tool Co. Ltd.	790 Philip St., Sarnia
Bolton Die Company	3245 Byng Rd., Windsor
Bowman, Joe P.	292 Murray St., Brantford
Bowman Tools	Drumbo
Branson Machine and Tool	300 McGill St., Peterborough
Brantford Precision Ltd.	Prince Charles Rd., Brantford
Bremridge Industrial Engineering	120 Barbados Blvd., Scarborough
Brigden Manufacturing Co.	Hornby
Bristol Machine Works	75 Armstrong St., Sudbury
Britton Machine and Welding Ltd.	16 Gordon St., Guelph
Brown Engineering Corp.	15 Alcom Ave., Toronto
Bruno Machine Shop Co.	308 Adelaide St. W., Toronto
Burston Mfg. Limited	239 Bering Ave., Toronto
C.D.M. Equipment Repair Ltd.	91 Crockford Blvd., Scarborough
C-Pak Machine Ltd.	2352 Midland Ave., Agincourt
Canadian Beaver Co. Ltd.	993 Eastern Ave., Toronto
Canadian Bedding Machine Service	69 Densley Ave., Toronto
Canadian Precision Mfg.	172 Toryork Dr., Weston
Cantool Company Ltd.	2115 Midland Ave., Scarborough
Carson J. and Sons	95 Hamilton Rd., London
Central Machine Shop	251 Campbell St., Sarnia
Central Tool & Die Ltd.	71 Carling St., London
Champion Machine and Tool Co. Ltd.	2532 Wharton Glen Ave., Cooksville
Circle G. Tool & Engineering	924 Walker Rd., Windsor
Clark Machine Co. Ltd.	423 Glendale Ave., St. Catharines
Clarke, Ben Machine Works	112 Louth St., St. Catharines
Clarke Bros. Machine Co. Ltd.	506 Adelaide St. E., Toronto
Clay, T. Welding and Machine Shop	241 Montelth Ave., Stratford
Coles Machine Shop	290 York St., Hamilton
Coleman Machine and Tool Co. Ltd.	1292 Dupont St., Toronto
Commonwealth Manufacturing	1849 Mattawa Ave., Cooksville
Connecting Rod Specialty Ltd.	4 Windmer St., Toronto
Cooke and Denison Ltd.	31 Yarmouth St., Guelph
Cooper Machine and Tool Co.	29 Stafford St., Toronto
Cooper Automotive Windsor Ltd.	3514 Dominion Blvd., Windsor
Cote Custom Machine	322 York Rd., Guelph
Craig, James C. and Son	54 Logan Ave., Toronto
Crysler Machine Co. Limited	193 St. Paul St. W., St. Catharines
Custom Machine Works and Metallizing Ltd.	809 Michigan Ave., Point Edward
Custom Machining Co.	873- #B Highway, Fruitland
D & J Machine Shop	157 Wellington St., Goderich
Dalby Machine Shop Ltd.	565 Speers Rd., Oakville
Daly Machine Company	85 Jaffray St., Galt
Damman Machine Shop	91 Dearborn St. E., Waterloo
Damp Bros. Machine and Welding Co.	492 Gilbert Ave., Toronto
Dashwood, D. and Sons	117 Main St., Dunnville
Daumar Mfg. & Hydraulics Co.	55 Chauncey Ave., Toronto
Davidson Machine Shops Ltd.	123 Mainville Rd., Scarboro
Davis Machine & Welding	97 Isabella, Parry Sound
Debo Machine Ltd.	22 Holtby Ave., Brampton
Delhi Die and Mfg. Co. Ltd.	454 East St., Delhi
Dillon, E. & R. Mfg. Co.	741 Queen St. E., Toronto
Dingwell's Machine Shop	79 Machar Ave., Port Arthur
Disco Limited	433 Comstock Rd., Scarborough
Dixie Machine & Tool Co. Ltd.	10 St. Albans Rd., Islington
Dodd, T.W. Machine Works	35 McGhie St., St. Catharines
Dual Machine Products Ltd.	289 Bering, Toronto
Dunnville Metal	R.R.5, Dunnville
Duomac Industries Ltd.	1238 St. Paul Ave., Niagara Falls
Dyer and Kerst Ltd.	265 Richmond St. E., Toronto
Eastern Tool Mfg. Co. Ltd.	100 Penn Dr., Weston
East-End Welding Limited	1086 Cannon St. E., Hamilton
Eastview Engineering Machine Shop	140 St. Cecile St., Eastview
Ebert Welding Ltd.	27 Armstrong St., New Liskeard
Economy Machine Tool Co. Ltd.	208 Cavan St., Port Hope
Edwards, Frank Machine and Tool	R.R. 1, Midland
Edwards, George H. Fine Instruments	2150 Yonge St., Toronto
Ehlers Mfg. Ltd.	1889 Mattawa Ave., Cooksville

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
Ontario - Continued:	
Electro Processes (Ont.) Ltd.	9 Millwick Dr., Weston
Elliott's Machine Shop	Strathroy
Elliott, Leonard Tools Ltd.	R.R. 1, Brantford
Elrose Machine Products Limited	1 Elrose Ave., Weston
Empire Machine & Steel Ltd.	1 Lippincott St., Toronto
Erco Tool & Die	R.R. 6, Bowmanville
Europa Machine Shop	7 Connie St., Toronto
Evans, H. Machinery Co.	316 William St., London
Fairlane Transmission & Supplies	1417 Crawford Ave., Windsor
Farmer, Patrick Ltd.	Owen Sound
Feldcamp and Fraser Machine Works	Seymour St., North Bay
Ferraby, J.H. Machine and Repair Shop Service	1188 Frances St., London
Fine Plastics Tool & Machine Co. Ltd.	1551 Keele St., Toronto
Finkle, Wm. Machine Co.	68 Dundas W., Belleville
Finlayson, B. Machine Shop	Harriston
Flexen, C.E. Machine Co. Ltd.	11 Manitoba St., St. Thomas
Forex Machine and Tool Co. Ltd.	241 Bridgeland Ave., Toronto
Freiburger, Frank	R.R. 2, Walkerton
Frey Instrument Co. Ltd.	Mazie St., Smiths Falls
Gelderland Ltd.	120 Barbados Blvd., Scarborough
General Instrument Co.	37 Hanna Ave., Toronto
General Machining Services	1a Harold Ave., Toronto
General Metallic Parts Ltd.	16 Milford Ave., Toronto
Geometrix Ltd.	1120 Castlefield Ave., Toronto
Girrotti Machine Works Ltd.	288 Glendale Ave., St. Catharines
Goodman-Brown Machine & Marine Ltd.	415 Main St. E., Welland
Goodwin Chuck Co. Ltd.	27 Jarvis St., Brantford
Goodwin Metal Products Ltd.	298 Edinburgh St., Peterborough
Gordon Company, The	321 Coleman St., Belleville
Great Lakes Boat and Machine Co. Ltd.	Midland
Great Lakes Machine and Metal Fabricators Limited	River Rd., Sault Ste. Marie
H. & J. Precision Industries	724 Erskin Ave., Peterborough
H & M Machining	R.R. 1, Ariss
H. & O. Centerless Grinding Ltd.	809 Victoria St. N., Kitchener
Haliburton Machine Shop	Haliburton
Hall, Fred and Son Ltd.	35 Glow Ave., Hamilton
Hamill Machine Co.	1488 Arthur St., Niagara Falls
Hamilton Machine Parts Ltd.	11 Ferguson Ave. North, Hamilton
Hanson, Machines Ltd.	55 Clarke St. S., Woodstock
Hansons Tool and Die Ltd.	1124 Dubeau St., Cyrville
Harnden & Newell Limited	271 First Ave., Timmins
Harper Machine Co.	18 Clarence St., Brantford
Harri Machine Shop	R.R. 4, Brantford
Harwil Enterprise	Hwy. 53, Cathcart, Brant Co.
Hastings Ronald Co. Ltd.	284 Maple Leaf Dr., Toronto
Hawkins Machine Shop	Quebec St., Michell
Heavy Equipment Repair Co.	Con. IV, Markam Twp., Willowdale
Henley, A.W. Machine and Tool Co.	23 Rainside Rd., Don Mills
Henning Graphics	331 Adelaide St. W., Toronto
Henry's Machine Shop Ltd.	42 George St., Brockville
Hep-Sur Engineering Co.	85 Shorncliffe Rd., Toronto
Herculock Limited	677 Bultry Ave., Niagara Falls
Hill-Cook Industries Ltd.	351 Leaside Ave., Stoney Creek
Hillsdale Repair Centre	22 Industrial Rd., Richmond Hill
Hooper's Machine Shop	525 High St., Orillia
Huffman Brothers	22 Cavan St., Port Hope
Humber Machine and Tool Ltd.	381 Homer Ave., Toronto
Humberstone Machine Co.	65 Brydon Dr., Rexdale
Humberstone Port Colborne Machine Works	114 Chesnut St., Port Colborne
Hunter Bridge & Boiler Works	Kincardine
I.X.L. Manufacturing Co. Ltd.	275 Kipling Ave. S., Toronto
Ideal Engine Repairs	17 Louth St., St. Catharines
Iroquois Equipment Ltd.	107 Toryork Rd., Weston
Jan-Zen Metal Industries Ltd.	11 Sheffield St., Toronto
Jay-Gor Ltd.	28 Industrial St., Guelph
Jenkins Machine and Tool Co.	232 Wellington St., Kingston
Jenson's Machine Shop	Rainy River
Jig Boring Service Ltd.	76 McCulloch Ave., Toronto
Jim's Machine Shop	Queen St., Hensall
Johnny Welding Ltd.	28 Rutherford Rd., Brampton
Johnsen's Tool and Machine Shop	982 Brant St., Burlington
Johnson, W.H. and Son	96 Ross St., Barrie
Jones Machine and Tool Co.	229 Earls Court Ave., Toronto
Jones Tool and Machine Co.	2114 Junction St., Burlington
K.K. Precision Parts	204 Pellatt Ave., Weston
K & K General Machine Shop	R.R. 3, Woodstock
K. & K. Tool Die and Machine Co. Ltd.	26 St. Albans Rd., Islington
Kallio Jack	1829 Paris St., Sudbury
Kapcon Supplies & Services	127 Barnesdale N., Hamilton
Karger Engineering	St. Jacobs
Kelco Engineering Ltd.	21 Heather Cres., London
Kendan Mfg. Limited	2918 Walker Rd., Windsor
Keough, A.E.	109½ Rectory St., London
Kipling Machine & Tool Ltd.	Norval
Kirkland Lake Machines and Welding Ltd.	10 Station Rd., Kirkland Lake
Knight-Bolton Co. Ltd.	3878 McLeod Rd., Niagara Falls
L & B Fabco Industries Ltd.	Chemong Rd., Peterborough
L.C.S. Metals Corp. Ltd.	147 St. Mary St., Brantford
L & L Tools	Bowmanville
Lacelle Tool and Die Works	R.R. 2, Beaverton
Lamont's Machine Shop	553-8th Ave., Hanover
Langs Automotive Parts	185 Market St., Hamilton

List of Establishments classified to this Industry, 1963 - Continued

Name	Location
Ontario - Continued:	
Lattner, C. W. and Sons	8 Hoffman St., Kitchener
Leclerc, Oram Machine Shop	528 Main St., Hawesbury
Leco Tool and Machine Limited	11 Bertrand Ave., Scarborough
Lennox Tool and Die Co. Ltd.	49a Fina Crescent, Toronto
Lenwill Mfg. Company	65 Martin Ross Ave., Downsview
Lepper, F. and Son Limited	87 Northline Rd., Toronto
Lincoln Machine Shop Ltd.	44 Scott St., St. Catharines
Little Metal Products	653 Bishop St., Preston
Lloyd's Machine Shop	57 Albert St., Cobourg
Locker Machine & Tool	R.R. 2, Wardsville
London Metallizing & Machine Co. Ltd.	406 First St., London
M. & R. Tool Co., Ltd., The	6534 Kingston Rd., West Hill
M. V. Machine Works Co. Ltd.	70 Chauncey Ave., Toronto
Maass Brothers Ltd.	22 Irving Ave., Ottawa
Machine Products	2 Dartnell Ave., Toronto
Machine Specialties	980 Roselawn Ave., Toronto
McLean Underfeed Stoker Co. Ltd.	4319 Lawrence Ave. E., West Hill
Mac-Wood Machine Co. Ltd.	17 Sheard Ave., Brampton
Magma Electronics Corp.	970 Broadview Ave., Toronto
Mainline Tool and Die	582 Eightline N., Oakville
Mansion Tool and Die Ltd.	19 Mansion Ave., Scarborough
Marsland Precision Equipment Ltd.	380 Weber St. N., Waterloo
McCoy Machinery and Supply Co. Ltd.	258 Catherine St. N., Hamilton
McCrindle, A.C. Ltd.	300 Eugenie St., Windsor
McDermott, L. and Associates Ltd.	63 Crockford Ave., Scarborough
McDermott Metal Products	481 - 9th Ave., Hanover
McLeod and Jessiman Engineering	240 Gore St. W., Port William
McQueen Brothers	270 Erie St. S., Leamington
Mecon Industries Ltd.	17 Malley Rd., Scarborough
Metro Industrial Equipment & Supply	Seymour St., North Bay
Micro Machine and Tool	15 Penn Dr., Weston
Milton Machine Shop Ltd.	203 Mill St., Milton
Monarch Machine Works	Sioux Lookout
Moore's Mfg. Co.	126 Willowdale Ave., Willowdale
Mosur Machine Co. Ltd.	59 Milvan Dr., Weston
Multi Purpose Machine & Tool Co. Ltd.	75 Densley Ave., Toronto
Murray, F. J. Machine Co. Ltd.	58 Rosemount Ave., Weston
N & L Machinery & Equipment Co.	1281 Florence St., London
National Auto Supply Co.	55 Merrick St., Hamilton
National Machine Products Ltd.	65 Torbarrie Rd., Downsview
Nelson Precision Boring Co.	139 Wendell Ave., Weston
Neo Machine Ltd.	76 Mead Ave., Hamilton
Nesbitt Engineering Ltd.	131 Loretta Ave., Ottawa
Newark Tool and Machine Ltd.	81 Millwick Dr., Weston
Niagara Machine Works	R.R. 1, Welland
Nilhan Industries	339 Bering Ave., Toronto
North Bay Auto Supply Ltd.	142 McIntyre St., North Bay
Northern Steel Products Ltd.	137 Black Rd., Sault Ste. Marie
Oak-Burl Industries Ltd.	914 Appleby Line, Burlington
Oakville Iron Works	Oakville
Oakwood Machine and Tool Co.	175 Eileen Ave., Toronto
Oliver, A. H. Machinery Co.	177 Cedar St. E., Orillia
Optimec	160 Maria St., Toronto
Orillia Tool & Stamping Ltd.	68 West St. S., Orillia
Ottawa Equipment Rebuilding	Gloucester
Ottawa Machine Shop	451 Ottawa St. S., Kitchener
Owen Sound Die and Engineering	1515 - 2nd Ave. E., Owen Sound
Oxford Welding and Machine Shop	Ingersoll
P. M. Machine & Die Co.	27 St. Alban's Rd., Islington
Page Machine Tool and Die Works Ltd.	40 Page St., St. Catharines
Pal Engines	R.R. 1, Orillia
Papazian Machine & Tool	68 Princess St., Toronto
Paragon Metal Industries Ltd.	6501 Kingston Rd., Scarborough
Parkdale Machine and Tool Co.	3269 Queen Elizabeth Way, Burlington
Patterson, P. and Sons	83 Lake St., Pembroke
Payne Metal Industries Ltd.	252 Bering Ave., Toronto
Peerless Machine and Tool Co. Ltd., The	59 Duke St., Guelph
Penn Machine & Manufacturing Co. Ltd.	33 Niagara St., Toronto
Perkins, Frank Co.	201 Sophia St. S., Prescott
Peterborough Tool and Machine Co. Ltd.	138 Dalhousie St., Peterborough
Pett Machine and Supply Ltd.	170 Webster Rd., Kitchener
Pettit Bob Machinists	920 Dufferin Ave., London
Piccione Machine Tool & Gear Mfg. Ltd.	117 Cartwright Ave., Toronto
Poole and Co.	365 Adelaide St. E., Toronto
Poppleton, George Machine Works	207 Crawford St., South Porcupine
Porter's Automotive Machine	R.R. 5, Woodstock
Post Machine Co.	15 Belvia Rd., Toronto
Precision Engineering Co. Ltd.	545 Keele St., Toronto
Precision Milling Co.	76 McCulloch Ave., Rexdale
Premat Precision Machine & Tool Co.	24 St. Alban's Rd., Islington
Presco Mfg. Co.	476 King St. E., Toronto
Prescott Machine and Welding Ltd.	River Road E., Prescott
Preston Machinery Co.	Preston
Preston Rebuilt Machinery	Railway St., Preston
Pyke, Bert Limited	751 Farewell Ave., Oshawa
Queensway Machine Products Ltd., The	1549 Queensway Ave., Toronto
Quinte Machine and Repair Co. Ltd.	Frankford Rd., Trenton
R. W. Custom Machine Shop	Meadowdale
R. & Y. Tool and Die Co. Limited	36 Emmett Ave., Fonthill
Rae and Foster Ltd.	729 Third St., Port Credit
Rae Metal Products	R.R.3, St. Thomas
Rankin-Strite Ltd.	290 Oak St., Hespeler

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
Ontario - Concluded:	
Rechtsman Brass Works Ltd.	62 A Eugene St., Toronto
Rector's Machine Shop	728 Wellington St. N., Sault Ste. Marie
Redman Machine and Metallizing Ltd.	1145 Brydges St., London
Reliable Tool and Mfg. Co.	91 Ormond St. N., Thorold
Renfrew Electric Co. Ltd.	349 Carlaw Ave., Toronto
Renfrew Tool Ltd.	149 Bonnechere St. N., Renfrew
Renown Specialties Co.	46 Racine Rd., Rexdale
Richmond Machine and Tool	1222 Dundas St. W., Toronto
Ridgetown Tool and Die	53 David St., Ridgetown
Riverdale Machine and Tool Co. Ltd.	123 Manville Rd., Scarborough
Romeo Machine Shop Ltd.	1577 Howard Ave., Windsor
Roubax Precision Manufacturing Ltd.	27 Stafford St., Toronto
Rumball, J. E. Ltd.	1020 Elizabetha St., Sudbury
Sandrin Bros. Ltd.	177 Samuel St., Sarnia
Sauve Machine and Welding Works	Casselman
Scarboro Products Co.	1570 Midland Ave., Scarborough
Scharf Garnet Machine & Tool	R.R. 1, Orillia
Schuller Machine and Tool Ltd.	27 Malley Rd., Scarborough
Screw Machine Products	230 Mackenzie Ave., Ajax
Seaforth Machine Shop	Main St. S., Seaforth
Seward, N.A. Machine Tool Co.	246 Front St., Campbellford
Siegner Screw Machine Products	296 Egerton St., London
Siemonsen Mechanical Products Co. Ltd.	Carlaw Ave., Kingston
Simcoe Automotive Machine Shop	127 First Ave., Simcoe
Snobelen Enterprises Limited	Thamesville
Solo Mor Motor Manufacturing Ltd.	220 Medland St., Toronto
Soo Foundry and Machine Co. Ltd.	457 Bay St., Sault Ste. Marie
Special Machining Company	1630 Langlois St., Windsor
Specialty Welding and Machine Co. Ltd.	712 Lite St., Point Edward
Stalker Engineering Co. Ltd. The	250 Colborne St. N., Simcoe
Stapley, W.C.	185 Alma St., Campbellford
Steel Metal Machine Shop	347 Cannon St. E., Hamilton
Sterling Rd. Machine Fabricators	240 Sterling Rd., Toronto
Stouffville Machine & Tools Ltd.	101 Station St., Stouffville
Swissway Machining	108 Merton St., Toronto
Tape, Robert Ltd.	85 Rosemount Ave., Ottawa
Taper Machine Tool Co.	299 Adelaide St. W., Toronto
Thered Machine Co. Ltd.	Etobicoke
Thermotek Limited	247 Colborne St. W., Brantford
Thexton Hydraulic Co. Ltd.	289 Sumach St., Toronto
Thompson Machine Repair	Burks Falls
Thurson Machine Co. Ltd.	219 Fares St., Port Colborne
Tillsonburg Machine Ltd.	Tillsonburg
Titan Tool and Die Limited	452 Charles St., Sandwich
Toolrite Engineering	785 1/2 Lake Shore Rd., Sarnia
Tool Steel Hardened Prods. of Canada Ltd.	1344 Martin Grove Rd., Rexdale
Toronto Automotive Machine Co. Ltd.	90 Shaftsbury Ave., Toronto
Toronto Machine Repair Co. Ltd.	235 King St. E., Toronto
Tortex Machine Works Limited	485 Wellington St. W., Toronto
Trapp Manufacturing Ltd.	Export St., St. Catharines
Treco Machine & Tool Ltd.	123 Crockford Blvd., Scarborough
Trenton Machine Tool Ltd.	155 Bay St., Trenton
True Forge Ltd.	695 Bishop St., Preston
Triangle Die and Tool Co. Ltd.	240 Glendale Ave., St. Catharines
Turret Lathe Services	Woodbridge
Twin City Auto Parts Ltd.	94 Borden Ave. S., Kitchener
Twin City Machine & Repair	133 Bedford Rd., Kitchener
United Auto Parts Inc. (London Machine Shop)	89 York St., London
Upper Canada Mfg. Ltd.	223 Evans Ave., New Toronto
Vaillancourt Machine Shop	235 Kitchener St., Hawkesbury
Verral Metal Fabricators	22 Howden Ave., Scarborough
Viking Engine and Tool Co. Ltd.	310 Barlett Ave., Toronto
Vojin, Joseph and Son	West Lome
W.L.C. Machine and Welding Co.	25 A Water St. S., Galt
Wanco Machine and Metal Products	18 Childers St., London
Wasco Valve Seat Company Limited	38 Gordon Ave., Essex
Waterloo Machine and Tool	24 Bridgeport Rd., Waterloo
Webber Gear and Machine Co. Ltd.	15 Alcorn Ave., Toronto
Weiler Machine Co. Ltd.	309 Main St., Woodstock
West End Machine Shop	3 Tecumseh Rd., Chatham
West, R.J. Ltd.	200 Milvan Dr., Weston
Western Engineering Services Ltd.	274 King St., Port William
Westside Machiners	2562 Stramfield Rd., Cooksville
Wheeler Machine Shop	3012 King St. E., Kitchener
Whitaker, Ray & Son	R.R.2, Port Perry
Whitby Metal Products	Watson St., Whitby
Whitelaw Machinery Co. Ltd.	572 Main St., Woodstock
Windsor Machine and Stamping Ltd.	777 Caron Ave., Windsor
Wing & Son Limited	32 Bay St. N., Hamilton
Wolfe Transmission Ltd.	1401 The Queensway, Toronto
Wright, Geo. A., and Son Machine Works Ltd.	146 Hickson Ave., Kingston
Wright Machine and Tools Ltd.	127 Vine St., St. Catharines
Wunder Machine Company Ltd.	61 Kent Ave., Kitchener
Wyebbridge Machine Co.	Wyebbridge
Yarmouth Machine Co. Ltd.	181 Woodworth Ave., St. Thomas
Yorke, N.A. Machinery Co.	198-30th St., Toronto
Manitoba:	
Astbury, Chas. B.	Tupper St. N., Portage La Prairie
Bowen Machinery Ltd.	1560 Erin St., Winnipeg
Canadian Tool and Die Works Ltd.	1331 Chevrier Blvd., Winnipeg
Casi's Machine Shop	Neepawa

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
Manitoba - Concluded:	
Community Brake Service	1155 McLeod Ave., Winnipeg
Craftsman Machine Co.	201 Princess St., Winnipeg
Crankshaft Industries Ltd.	926 St. James St., Winnipeg
Crescent Electric and Machine Works	98 King St., Winnipeg
Darragh Machine Works	229 Marion St., St. Boniface
Dauphin Machine Works	29-2nd N.E., Dauphin
Donalds' Machine Shop	Lot 17 McPhillips, Old Kildonan P.O.
Erin Welding Co.	580 Erin St., Winnipeg
Friesen Machine Works Ltd.	Steinback
Hannover Machine Works	410 Main St., Steinback
Hansen's Carl Machine Shop	1442 Erin St., Winnipeg
Joe's Machine Shop	918 Elizabeth Rd., St. Boniface
Johnson Bros. Mfg. Ltd.	903 Marion St., Winnipeg
Kunec Machine Works	4 Powers St., Winnipeg
Lechner, A. & J.	205 Stephen St., Morden
Logan Machine Works	288 Bushnell St., Winnipeg
Manitoba Bearing Works Ltd.	270 St. Mary's Ave., Winnipeg
Manitoba Welding Machine Works	253 McPhillips St., Winnipeg
Mechanical Welding Co. Ltd.	1011 Alexander Ave., Winnipeg
Micro Tool & Machinery Ltd.	1132 Sandford St., Winnipeg
Morris Welding & Iron Works Ltd.	Morris
Muzeen and Elythe Ltd.	187 Sutherland Ave., Winnipeg
Parsons Machine Shop	Virren
Peters Machine Shop	Plum Coulee
Piston Ring Service Supply Ltd.	1108 Wall St., Winnipeg
Precision Machine Works Ltd.	584 Erin St., Winnipeg
Precision Mfg. & Machining Brandon Ltd.	2312 Park Ave., Brandon
Pritchard Engineering Company Ltd.	70 Garry St., Winnipeg
Pydee Engineering Co. Ltd.	1018 Sherbrooke St., Winnipeg
Selkirk Machine Works	490 Main St., Selkirk
Shefrin Welding and Iron Works	885 Madison St., St. James
Shepherd Machine Tool and Die Works Ltd.	677 Notre Dame Ave., Winnipeg
Sommers, F. Mfg. Co. Ltd.	203 Main St., Winnipeg
Standard Machine Works Ltd.	660 St. Matthews Ave., Winnipeg
Star Machine Shop	601 Washington Ave., East Kildonan
Sterling Engine Works Limited, The	33 Water St., Winnipeg
Thor Machinery Co. Ltd.	13 Higgins Ave., Winnipeg
Universal Machinery and Engineered Products (1964) Ltd.	1354 Waverley St., Winnipeg
Western Engine Works Ltd.	410 Madison St., Winnipeg
Western Machine Works	307 Talbot St., Winnipeg
Saskatchewan:	
Acme Machine and Electric Co.	150 Avenue "A" North, Saskatoon
Assinibola Machine Shop	300 1st. Ave., Assinibola
Automotive Machine and Supply Co. Ltd.	326 High Street W., Moose Jaw
Beeler's Machine Shop	3rd Avenue, Nokomis
Davis Machine Co. Ltd.	142 Avenue "A" North, Saskatoon
Estevan Machine Shop	Estevan
General Automotive Supply Ltd.	208-212-20th St. W., Saskatoon
Hall's Machine Shop	174 Centre Street, Shaunavon
Hauser's Machinery and Welding	340-3rd Avenue W., Melville
Lipton Machine Shop	Lipton
Lou's Machine Shop	Estevan
McIntyre Manufacturing Co. Ltd.	144-3rd Avenue W., Swift Current
Melfort Machine and Welding	210 Burrows Ave. W., Melfort
Meschishnick Bros.	St. Gregor
Motive Machine Works Ltd.	1342 Lorne St., Regina
Motor Rebuilders Ltd.	1650 Winnipeg St., Regina
Ornamental Iron Works	1320 Hamilton St., Regina
Pascoe's Machine Works	412 High Street W., Moose Jaw
Peebles Machine Shop	Myrtle St., Yorkton
Peters Machine Service	518-42nd A Street E., Saskatoon
R & S Machine Ltd.	1375 Scarth St., Regina
Railway Ave. Repairs	109 Railway Avenue, Weyburn
Regina Electric and Machine Co. Ltd.	1763 Halifax Street, Regina
Saskatoon Engine Rebuilders Ltd.	621 Avenue "O" South, Saskatoon
Swanson Industries Ltd.	417 Avenue M. S., Saskatoon
Tractor Boneyard	400 McIntyre Street, Regina
Venables Machine Works Ltd.	309 Avenue "B" North, Saskatoon
Western Automotive Rebuilders	71-1st Ave. N., Saskatoon
Western Machine Shop	102 Sask. Avenue E., Melfort
Weyburn Iron Works	703 Railway Avenue, Weyburn
Alberta:	
Able Machine Works (Edmonton) Ltd.	111th Avenue & 151st Street, Jasper Place
Acro Machine and Specialty (Calgary) Ltd.	1917-10th Ave. S.W., Calgary
Alberta Chrome & Grinding Ltd.	1440-9th Ave. S.E., Calgary
Alberta Oil Tool Co. Ltd.	9530-60th Avenue, Edmonton
Alco Machine Works Ltd.	6915-104th Street, Edmonton
Argus Machine Co. Ltd.	5820-97th Street, Edmonton
Barber Machinery Co. Ltd.	4608 Macleod Trail, Calgary
Barber Machinery Co. Ltd.	10358-65th Avenue, Edmonton
Burnie's Engine Service & Supply Co. Ltd.	6022-104th Street, Edmonton
Burtman's Machine Shop	1st Street W., Hanna

List of Establishments classified to this Industry, 1965 - Continued

Name	Location
Alberta—Concluded:	
Byer's Machine Shop	12819 Fort Road, Edmonton
Camrose Engineering and Machine Co.	4918-51st. St., Camrose
Canadian Equipment Sales and Service Co. Ltd.	7310-99th Street, Edmonton
Central Hydraulic Manufacturing Co.	9809-62nd Avenue, Edmonton
Consort Machine Shop	Consort
Coronet Machine & Supply Ltd.	7833 Coronet Rd., Edmonton
Cromdale Machine Works Ltd.	11285-82nd Street, Edmonton
Curtis Hoover Ltd.	12654-97th Street, Edmonton
Cutler Manufacturing Company Ltd.	5324-4th Street S.E., Calgary
Dahl, G. and Sons Ltd.	5001-49th Street, Camrose
Dick's Machine Co. Ltd.	5013-48th Street, Camrose
Diro Machine and Steel Ltd.	620-51st Ave. S.E., Calgary
Drumheller Iron Works	220-5th St. W., Drumheller
Edmonton Auger & Bit Service Ltd.	6931-104th St., Edmonton
Electric Machine Service	10550-106th St., Edmonton
Engine Rebuilders Ltd.	14710-112th Ave., Edmonton
Fort Machine Works Ltd.	Fort Saskatchewan
Gleave Machine Ltd.	5002-44th Ave., Stettley
Hans Machine Shop	1276-2nd Ave. S., Lethbridge
Harison's Machine Shop	4717-49 "B" Ave., Lacombe
Hayden's Machine Shop	Longview
Hoover Tool Joint Service Ltd.	6620-100th St. S., Edmonton
Hunt Welding Services	1442-2nd Avenue S., Lethbridge
H-Way Machine Shop	Alix
Independent Machinery Ltd.	1449-17th Ave. S.E., Calgary
Industrial Machine Shop Ltd.	10549-110th Street, Edmonton
Irma Machine Works	Irma
Jackson's Welding (Calgary) Ltd.	2005-14 "A" Street S.E., Calgary
Kemell Machine Co.	Sundre
Kinsella Welding	Kinsella
Kirk's Metallizing Works Ltd.	11716-82nd Street, Edmonton
Lennox Welding and Supply Ltd.	5734-103rd Street, Edmonton
Lethbridge Industries Ltd.	1117-2nd Ave. "A" North, Lethbridge
Liberty Machine Works Ltd.	10247-103rd Street, Edmonton
Linden Machine Works Ltd.	Linden
Lo-Cost Automatic Transmission Rebuilders Ltd.	9317-111th Ave., Edmonton
McCombie, B.T. & Supply Ltd.	9613-62nd Ave., Edmonton
McKinney Machine Company Ltd.	9535-63rd Avenue, Edmonton
McLennan and Rooks	Vermilion
Medicine Hat Iron Works	690 South Railway St., Medicine Hat
Micro Machine Co. Ltd.	244-40th Ave. N.E., Calgary
Mid-Western Machine Work Ltd.	5739-1st St. S.W., Calgary
Moore's Machine Shop	719-3rd St. N.E., Calgary
Moro Machine Co. Ltd.	Peace River
Mount View Machine Co. Ltd.	424-51st Avenue S.E., Calgary
Nichols Bros. Ltd.	10103-95th Street, Edmonton
Niven Truck Equipment Ltd.	216-1st Avenue South, Lethbridge
North Edmonton Iron Works	12804 Fort Road, Edmonton
North Red Deer Welding Shop	5902-54th Ave., Red Deer
Northern Hydraulics & Instruments Ltd.	5310-103 "A" Street, Edmonton
Oilfield Specialty Welding Ltd.	5610-103 "A" Street, Edmonton
Oilwell Machine Co.	Turner Valley
Oxford Machine and Welding Co. Ltd.	10904-119th Street, Edmonton
Paragon Machine Co.	511-3rd Avenue S.W., Calgary
Pepper Bros. Ltd.	360-4th St. W., Drumheller
Red Deer Iron Works	4912-52nd Street, Red Deer
Rice Machine Service Ltd.	319-38th Avenue S.E., Calgary
Steel Industries of Grande Prairie Ltd.	10115-101st Avenue, Grande Prairie
Superior Machine Service Ltd.	131-61st Ave. S.E., Calgary
Swan Hills Machine Shop Ltd.	Swan Hills
Tappenden, Fred S. Ltd.	11902-72nd St., Edmonton
Tofield Farm Equipment	Tofield
Valley Tool and Machine Co.	1504-40th Avenue S.W., Calgary
Volk Machine Shop Ltd.	4512-6th Street N.E., Calgary
Warren Machine Works	Delburne
Western Hydraulic and Machine Ltd.	12225 Fort Rd., Edmonton
British Columbia:	
A & B Machine Works	720 Princess Ave., Victoria
Abbotsford Machine Repairs	Essendene Ave., Abbotsford
Adams, Ray, Machine Works Ltd.	821 Victoria St., New Westminster
Aero Machine Shop Ltd.	7327 Duncan Street, Powell River
Alberni Engineering & Shipyard Ltd.	104 Bird Street, Port Alberni
Allied Engine Remanufacturers Ltd.	153 West 6th Ave., Vancouver
Allied Parts & Engine Rebuilders Ltd.	118 West 2nd Ave., Vancouver
Ansell Machine Works	1615 Franklin St., Vancouver 6
Argyle Machine Works (1962) Ltd.	10 Argyle Street, Port Alberni
Arm, W.F. Machine Works Ltd.	2022 Main Street, Vancouver
Armstrong Machine Shop Ltd.	Railway Avenue, Armstrong
Bohn's Machine Shop	Island Highway, Union Bay
Boyd's, Repair Ltd.	Squamish
Brinkhurst Machine Products	416 E. Hastings St., Vancouver 4
Broadway Welding Shop Ltd.	1529 Venables St., Vancouver 6
Brunette Machine Works Ltd.	149 Nelson Street, New Westminster
Burke Machine Works Ltd.	341 West 6th Avenue, Vancouver
Cache Creek Machine Shop	Cache Creek
Campbell River Welding and Machine Works Ltd.	1821 Island Highway, Campbell River
Cannon Machine Works Ltd.	626 Alexander Street, Vancouver
Capilano Engineering Co. Ltd.	1675 West 2nd Avenue, Vancouver 9
Carlboo Drives and Bearing Sales Ltd.	100 Mile House
Carter Machine Works Ltd.	71 Braid St., New Westminster

List of Establishments classified to this Industry, 1965 -Continued

Name	Location
British Columbia - Continued:	
Cassidy Industrial Engineering Ltd.	95 East 3rd Avenue, Vancouver 10
Castco Diesel & Equipment Engineering Ltd.	1711 Franklin St., Vancouver
Central Machine Shop	448 Dawson Ave., Penticton
Chapman Manufacturing Co. Ltd.	1680 W. 5th Avenue, Vancouver 9
Chrome Grinders	1000 Parker St., Vancouver
City Welding and Machine Shop Ltd.	44375 Yale Rd. W., Chilliwack
Coast Machine Works Shop	1279 E. Pender St., Vancouver 6
Coleman Machine Works Ltd.	Quesnel
Columbia Machine Works Ltd.	360 W. 4th Avenue, Vancouver 10
Coulter and Marsh Machine Shop Ltd.	4878 Elliott St., Ladner
Courtenay Machine Shop Ltd.	Union Bay Rd., Courtenay
Cowle Machine Co. Ltd.	362 Selby Street, Nanaimo
Crestwood Engineering Co. Ltd.	851 West Road, Richmond
Curtis Hoover (B.C.) Ltd.	Fort St. John
Cylinder Grinders Ltd.	1216 Seymour St., Vancouver 2
Dafoe, V.M.	Foot of Roger St., Vancouver
David Machine Shop & Welding	Chase
Dawson Creek Industries	1705 Alaska Ave., Dawson Creek
Derrick Machinery Co. Ltd.	9113 McKenzie St., Fort St. John
Duncan Iron Works Ltd.	162 Government St., Duncan
E & M Machine Works Ltd.	Duncan
Earl's Machine Shop	560 Raymur St., Vancouver
Easthope Bros. Ltd.	1225 #1 Road, Steveston
Ebco Manufacturing and Plating Ltd.	235 East 5th Ave., Vancouver
Eldo Industries	1272 West 6th Avenue, Vancouver 9
Fauchon Engineering Works Ltd.	Campbell River
Fort Machine Shop	Fort St. James
Gillen and Pike Ltd.	1784 West Georgia St., Vancouver 5
Glendale Machine Shop Ltd.	Williams Lake
Golden Machine Shop Ltd.	922-11th Avenue E., Golden
Hafer Machine Co. Ltd.	1720 Store Street, Victoria
Harbour Machine Shop	31 Erie St., Victoria
Harjim Machine Works Ltd.	2500 Rock Bay Ave., Victoria
Harvey's Machine Shop	Box 438, Oliver
Heatley Machine Works Ltd.	636 Alexander St., Vancouver 4
Herry's Machine Shop	Squamish
Hill's Machine Shop Ltd.	Gibsons Landing
Hope Machine Shop	Wallace Street, Hope
Hope Manufacturing Co. Ltd.	1995 Franklin Street, Vancouver 6
Humphrey, Art Ltd.	4449 Dawson St., Burnaby 2
Hydraulic Service and Equipment Co. Ltd.	102 East 2nd Avenue, Vancouver 10
Ideal Iron Works Limited	369 Alexander St., Vancouver 4
International Drills (1955) Ltd.	346 West 5th Avenue, Vancouver 10
Kamloops Rebuilders	181 Victoria St. W., Kamloops
Kaslo Machine Shop	Kaslo
Kelowna Steel Fabricators Ltd.	864 Cowley Ave., Kelowna
Langley Welding and Machine Shop	20272 Trans-Canada Hwy., Langley
M & M Motor Parts Ltd.	114 West 5th Ave., Vancouver
Marpole Machine Works Ltd.	1422 S.W. Marine Drive, Vancouver
Massey's Machine Shop Ltd.	5915 Ghisholm St., Ladner
Master Machine Co. Ltd.	5 West 2nd Avenue, Vancouver
McConnell's Machine Shop Ltd.	Government St., Burns Lake
Merritt Machine Shop	2175 Coldwater Ave., Merritt
Modern Engineering Co. Ltd.	1695 West 5th Avenue, Vancouver 9
Mooney Machine Works	300 East Esplanada St., North Vancouver
Murray-Latta Machine Co. Ltd.	311 W. 2nd Avenue, Vancouver 10
Nafco Manufacturing Co.	Port Coquitlam
Nanaimo Foundry and Engineering Works Ltd.	100 Comox Road, Nanaimo
National Nubuilt Corp. Ltd.	1175 Union St., Vancouver
National Shops Ltd.	Grandville Island, Vancouver 9
Newnes Machine and Iron Works Ltd.	Front St., Salmon Arm
Norco Machine Work Ltd.	430 Tranquille Road, North Kamloops
North Arm Machine Ltd.	Foot of 20th Street, New Westminster
North Vancouver Machinery Ltd.	815 Low Level Rd., North Vancouver
Norwell Industries Ltd.	2540 Bowen Rd., Nanaimo
Olmstead's Machine Shop	Campbell River
Osoyoos Machine Works	Osoyoos
P & J Machine Shop Ltd.	Atholmer
P. & S. Engineering Ltd.	1000 Parker St., Vancouver
Paragon Equipment Mfg. Co. Ltd.	885 E. Cordova St., Vancouver 4
Pendozi Machine Shop	3006 Pandosy St., Kelowna
Penticton Engineering Works Ltd.	Penticton
Pinchbeck, F.W.	1429 River St., Kamloops
Plant Service	8932 Oak St., Vancouver 14
Port Machine Works	707-4th Avenue North, Port Alberni
Powell Machine Works Ltd.	32893 Lougheed Highway, Mission City
Progressing Engineering Works Ltd.	360 West First Ave., Vancouver 10
Quality Machine and Motor Service Ltd.	8914 Oak Street, Vancouver 15
R. & S. Machine Works Ltd.	1878 Kent Street, Vancouver 15
Ramsay Machine Works Ltd.	1630 Store Street, Victoria
Ray's Machine Shop	360 Wesley Street, Nanaimo
Reekie's Machine Shop Ltd.	126 North Van Home, Cranbrook
Reliance Motor & Machine Works, Ltd.	395 Alexander St., Vancouver 4
Rempel, H. Ltd.	4207 Fraser St., Vancouver
Richards Engineering Company Ltd.	8810 Selkirk Street, Vancouver 14
Rosedale Machine Shop Ltd.	9880 Munro Avenue, Rosedale
Rousson's Machine Shop	10500-135th "A" Street, North Surrey
Sig's Machine Shop	1832 West Georgia St., Vancouver 5
Smith, Charles Machine Works Ltd.	1990 Cypress St., Vancouver
Smith Industries (1958) Ltd.	197 East 20th Avenue, Vancouver 10
Smyth Machine Shop	98 Hwy. North, Princeton
Sooke Machine Shop Ltd.	Sooke

List of Establishments classified to this Industry, 1965 - Concluded

Name	Location
British Columbia - Concluded:	
Specialty Machine Shop.....	1248 Seymour St., Vancouver
Standard Machine Shop Ltd.	1st Avenue & Manson Way, Prince Rupert
Stevenson Machinery Ltd.	708 Vernon Street, Nelson
Steveston Machine Shop.....	1235-1st Rd., Steveston
Stewart Bros. Repair Shop.....	504 Lake St., Nelson
Stuart Island Machine Shop.....	Stuart Island
Surrey Engineering Co.	13495 King George Hwy., Whalley
Tofino Marine Service Ltd.	Tofino
Trail Machine Works Ltd.	2045 Columbia Avenue, Trail
Trail Sales and Machine Ltd.	3160 Highway Drive, Trail
United Engineering Works, Ltd.	575 Pembroke St., Victoria
Valemont Saw Repairs Ltd.	Valemont
Vernon Machine and Equipment Ltd.	3002-34th Street, Vernon
Viking Mfg. Co. Ltd.	1671 East Hastings St., Vancouver 6
Vulcan Automotive Equipment Ltd.	655 W. 7th Ave., Vancouver
Wallace Machine and Manufacturing Co. Ltd.	1663 Venables St., Vancouver 6
Warner Machine Shop	1820 River Dr., New Westminster
Western Industries Ltd.	4132 Halifax St., Burnaby
Western Machine Works Ltd.	1705 W. Georgia St., Vancouver 5
Westview Machine Shop Ltd.	Westview
White Bros. Machining and Mfg. Co.	1100 Comox Road, Courtenay
Williams & White Machine Shop Ltd.	6280 McKay Ave., S. Burnaby
Williams Lake Machine Shop.....	S. Mackenzie Ave., Williams Lake
Williams Lake Machine Works.....	Williams Lake
Will-Mon Mfg. Ltd.	11890-10th Ave., Haney
Windsor Machine Co. Ltd.	1331 Venables St., Vancouver

CONCEPTS AND DEFINITIONS

Census of Manufactures

General

The Census of Manufactures is an annual mail survey covering Canada's Manufacturing Industries. It is based on the Standard Classification of Industries and full details concerning the system may be found in the Standard Industrial Classification manual, Catalogue No. 12-501 which is available from the Queen's Printer or the Dominion Bureau of Statistics. In summary, the Classification as it relates to the manufacturing industries provides for a breakdown into 140 industries arranged in 20 major industry groups. Of the 140 (3 digit) industries, 18 are further broken down into 55 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 176 separate industries. They cannot all be published separately by province, however, because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the **establishment** (see definition of "Establishment" in following section) and a return is requested from every establishment classified to a manufacturing industry. Although respondents are required to submit reports covering the calendar year, financial year reports other than the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in the Census of Manufactures; (a) short form (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to manufacturing industries and differ only in the amount of detail requested. The short form is a single-sheet questionnaire sent to small manufacturers generally reporting shipments of less than \$100,000; this cut-off, however, varies somewhat between industries. The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the manufacturing establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments which are coded (on the basis of their principal activity) to industries other than manufacturing in the Standard Industrial Classification system, but which undertake some manufacturing as a subsidiary activity. This single-sheet questionnaire is designed to collect information on the quantity and value of goods of own manufacture shipped by such establishments in order to achieve full coverage of domestically manufactured commodities (see the following note under Shipments).

The results of the Census are presented in some 135 publications. In addition to these annual industry publications there are annual summary reports for Canada and the provinces and special reports giving principal statistics by detailed geographic areas, by type of ownership and size of establishment. A special annual report covering the shipments of all manufactured commodities arranged in alphabetical order is also published.

Since 1960 the following major changes have been implemented in the Census of Manufactures; (a) a revised Standard Industrial Classification (b) a new establishment definition and (c) an extension of the establishment definition to cover the non-manufacturing activities of manufacturing establishments. The statistics presented in the reports reflect the complete implementation of these changes and enable comparisons to be made back to and including 1961. For a complete description of the procedures followed in establishing the revised series, reference should be made to the Explanatory Notes included in the 1960, 1961 and 1962 industry publications. The statistical framework within which the Census of Manufactures is now carried out is based on the following concepts and definitions which have been developed as part of a general programme to achieve a fully integrated system of economic statistics.

Establishment

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment"

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour

force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

Head Offices and Auxiliary Units

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digit). When establishments of

such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers — Manufacturing activities

In addition to those engaged in production and assembling activities, they include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. In the case of those establishments reporting on the "short" form, respondents are requested to report average annual figures. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). Data on man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated on the basis of ratios derived from the 1958 census. During this census all establishments reported on the long form. In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers — Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total Employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees **before** deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages,

bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for over-time are included. Figures on salaries and wages refer to the calendar year.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

Materials and Supplies

(a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-manufacturing activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of

purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Shipments

(a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of the net change in progress payments over the year.

(b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity

are collected by means of the Commodity questionnaire referred to earlier. Such shipments together with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

(c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the

receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods pur-

chased for re-sale) and the cost of non-manufacturing materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By Total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net output or net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, "Survey of Production".

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