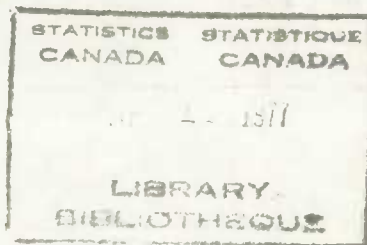


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ANNUAL



# MACHINE SHOPS

1963

## ANNUAL CENSUS OF MANUFACTURES

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Mar '66

It should be noted that the data presented in this report are based on the revised Standard Industrial Classification (S.I.C.) and New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of Industry statistics—see items "Standard Industrial Classification" and "Establishment" in the Explanatory Notes section of this report. For statistical purposes the industry titled Machine Shops in the revised Standard Industrial Classification covers establishments primarily engaged in producing machine parts and equipment, other than complete machines, for the trade. This industry includes machine shops providing custom and repair services.

## MACHINE SHOPS

1963

Data presented in this report under the heading of Machine Shops reflect the implementation of the revised Standard Industrial Classification (S.I.C.) and New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of Industry statistics—see items "Standard Industrial Classification" and "Establishment" in the Explanatory Notes section of this report. For statistical purposes the industry titled Machine Shops in the revised Standard Industrial Classification covers establishments primarily engaged in producing machine parts and equipment, other than complete machines, for the trade. This industry includes machine shops providing custom and repair services.



### 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 A. Principal Statistics classified by Province, 1962 and 1963

Year and province	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		Total employees		Total value added
		Number	Man-hours paid	Wages					Number	With-drawals	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													
Newfoundland .....	2	47	112	165	14	194	421	216	—	—	59	200	225
Prince Edward Island .....	1												
Nova Scotia .....	23	205	416	716	43	964	2,353	1,345	13	42	253	902	1,345
New Brunswick .....	19	241	528	946	55	1,639	3,512	1,891	11	45	345	1,388	2,144
Quebec .....	175	1,873	4,142	7,208	391	9,892	25,585	15,461	129	487	2,356	9,543	15,516
Ontario .....	331	2,430	5,228	9,702	588	9,618	29,677	19,775	241	1,056	3,053	12,849	20,335
Manitoba .....	44	319	708	1,263	60	2,175	5,252	2,985	33	113	430	1,890	2,984
Saskatchewan .....	23	74	171	285	29	288	849	584	19	76	96	377	631
Alberta .....	69	709	1,479	3,204	171	4,556	11,044	6,162	36	148	925	4,330	6,400
British Columbia .....	126	799	1,635	3,666	225	4,373	12,267	7,715	50	217	1,086	5,098	8,082
Yukon and Northwest Territories	—	—	—	—	—	—	—	—	—	—	—	—	—
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													
Newfoundland .....	2	57	133	198	10	297	656	366	—	—	69	247	413
Prince Edward Island .....	1												
Nova Scotia .....	24	172	351	635	40	747	1,916	1,143	14	43	215	799	1,234
New Brunswick .....	18	250	565	932	48	1,849	4,005	2,023	6	21	363	1,440	2,626
Quebec .....	192	1,926	4,359	7,894	375	10,174	27,294	16,689	125	489	2,439	10,649	16,751
Ontario .....	333	2,617	5,675	11,020	558	10,689	33,735	22,758	214	972	3,270	14,680	23,488
Manitoba .....	40	356	769	1,393	65	2,436	5,795	3,343	30	111	478	2,145	3,332
Saskatchewan .....	26	87	189	322	21	448	1,259	773	24	79	106	405	857
Alberta .....	66	752	1,624	3,607	189	5,585	13,714	8,149	26	106	1,043	5,259	8,678
British Columbia .....	132	877	1,782	4,067	227	5,250	14,110	8,727	49	224	1,196	5,614	9,143
Yukon and Northwest Territories	—	—	—	—	—	—	—	—	—	—	—	—	—
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



TABLE 1B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1962 and 1963

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		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
<b>1962</b>													
Under \$10,000	78	25	28	46	27	132	506	341	80	187	31	55	351
\$ 10,000 to \$ 24,999	145	177	314	527	81	746	2,404	1,577	142	520	207	609	1,613
25,000 " 49,999	183	579	1,177	2,011	183	8,250	6,720	4,283	159	640	718	2,459	4,381
50,000 " 99,999	180	1,071	2,319	4,060	223	3,963	12,584	8,346	118	595	1,376	5,250	8,517
100,000 " 199,999	125	1,465	3,205	6,057	374	5,993	18,300	12,163	27	205	1,939	8,372	12,690
200,000 " 499,999	70	1,628	3,498	6,714	313	7,893	21,007	12,913	6	38	2,071	9,089	13,259
500,000 " 999,999	22	950	2,132	4,078	174	6,157	14,474	8,179	—	—	1,212	5,594	8,481
1,000,000 " 4,999,999	10	802	1,746	3,662	132	6,565	14,964	8,333	—	—	1,047	5,147	8,370
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Totals</b>	<b>813</b>	<b>6,697</b>	<b>14,420</b>	<b>27,155</b>	<b>1,577</b>	<b>33,699</b>	<b>90,960</b>	<b>56,135</b>	<b>532</b>	<b>2,185</b>	<b>8,603</b>	<b>36,576</b>	<b>57,662</b>
<b>1963</b>													
Under \$10,000	59	19	38	36	3	115	421	304	60	164	23	40	317
\$ 10,000 to \$ 24,999	158	178	357	557	27	824	2,583	1,731	144	511	213	648	1,792
25,000 " 49,999	178	533	1,081	1,956	161	1,954	6,672	4,548	143	622	675	2,463	4,717
50,000 " 99,999	190	1,162	2,432	4,410	302	4,019	13,456	9,153	105	539	1,490	5,734	9,523
100,000 " 199,999	124	1,422	3,119	6,132	308	6,013	18,188	11,914	30	170	1,875	8,498	12,456
200,000 " 499,999	92	1,821	4,052	8,063	351	9,576	26,141	16,280	6	39	2,331	11,151	16,988
500,000 " 999,999	29	1,291	2,833	5,696	264	7,804	19,487	11,532	—	—	1,656	7,906	11,766
1,000,000 " 4,999,999	9	668	1,536	3,218	117	7,171	15,538	8,510	—	—	916	4,798	8,964
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Totals</b>	<b>834</b>	<b>7,094</b>	<b>15,447</b>	<b>30,069</b>	<b>1,533</b>	<b>37,476</b>	<b>102,485</b>	<b>63,972</b>	<b>488</b>	<b>2,045</b>	<b>9,179</b>	<b>41,239</b>	<b>66,522</b>

TABLE 1C. Principal Statistics classified by Size Groups based on Manufacturing Value Added, 1962 and 1963

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		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
<b>1962</b>													
Under \$10,000	140	74	99	162	58	479	1,353	813	144	394	87	183	856
\$ 10,000 to \$ 24,999	192	416	799	1,381	161	1,798	5,202	3,233	176	692	509	1,670	3,307
25,000 " 49,999	198	920	1,970	3,348	273	3,763	11,070	7,056	150	696	1,172	4,258	7,199
50,000 " 99,999	130	1,190	2,597	4,722	320	5,309	14,805	9,174	56	371	1,534	6,326	9,528
100,000 " 199,999	99	1,580	3,519	6,770	335	7,505	21,068	13,451	6	32	2,101	9,426	14,127
200,000 " 499,999	41	1,565	3,302	6,275	266	8,029	20,369	12,237	—	—	1,978	8,525	12,468
500,000 " 999,999	10	628	1,383	3,076	109	4,229	10,993	6,515	—	—	804	4,292	6,526
1,000,000 " 4,999,999	3	324	751	1,421	56	2,587	6,100	3,656	—	—	418	1,896	3,651
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Totals</b>	<b>813</b>	<b>6,697</b>	<b>14,420</b>	<b>27,155</b>	<b>1,577</b>	<b>33,699</b>	<b>90,960</b>	<b>56,135</b>	<b>532</b>	<b>2,185</b>	<b>8,603</b>	<b>36,576</b>	<b>57,662</b>
<b>1963</b>													
Under \$10,000	129	69	138	173	12	592	1,451	846	132	406	78	191	894
\$ 10,000 to \$ 24,999	172	338	678	1,176	96	1,614	4,649	2,941	147	584	425	1,434	3,099
25,000 " 49,999	202	922	1,910	3,391	245	3,721	11,148	7,128	139	634	1,168	4,292	7,453
50,000 " 99,999	158	1,361	2,923	5,475	334	5,958	17,333	11,087	58	354	1,773	7,458	11,465
100,000 " 199,999	110	1,756	3,874	7,801	339	8,449	24,372	15,656	12	67	2,313	10,854	16,564
200,000 " 499,999	48	1,588	3,534	7,131	344	8,581	22,949	14,172	—	—	2,015	9,901	14,471
500,000 " 999,999	12	744	1,673	3,317	108	5,710	13,774	8,240	—	—	973	4,797	8,638
1,000,000 " 4,999,999	3	316	717	1,604	55	2,850	6,809	3,902	—	—	434	2,312	3,936
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Totals</b>	<b>834</b>	<b>7,094</b>	<b>15,447</b>	<b>30,069</b>	<b>1,533</b>	<b>37,476</b>	<b>102,485</b>	<b>63,972</b>	<b>488</b>	<b>2,045</b>	<b>9,179</b>	<b>41,239</b>	<b>66,522</b>

TABLE 1 D. Principal Statistics classified by Size Groups based on Total Value Added, 1962 and 1963

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		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			'000				'000		'000	
1962													
Under \$10,000 .....	136	72	96	157	56	458	1,310	785	138	376	85	177	792
\$ 10,000 to \$ 24,999 .....	192	407	780	1,344	154	1,774	5,127	3,194	179	699	491	1,590	3,227
25,000 " 49,999 .....	196	892	1,908	3,230	260	3,666	10,805	6,898	151	693	1,131	4,085	6,984
50,000 " 99,999 .....	131	1,174	2,559	4,625	314	5,173	14,505	9,019	58	384	1,504	6,135	9,253
100,000 " 199,999 .....	103	1,624	3,616	6,964	352	7,560	21,358	13,680	6	33	2,135	9,574	14,224
200,000 " 499,999 .....	40	1,529	3,221	6,121	260	7,735	19,791	11,913	—	—	1,921	8,283	11,975
500,000 " 999,999 .....	12	675	1,489	3,292	126	4,744	11,964	6,990	—	—	918	4,835	7,555
1,000,000 " 4,999,999 .....	3	324	751	1,421	56	2,587	6,100	3,656	—	—	418	1,896	3,651
5,000,000 and over .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
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													
Under \$10,000 .....	125	64	128	158	11	599	1,434	824	128	390	70	164	826
\$ 10,000 to \$ 24,999 .....	172	326	655	1,129	90	1,548	4,531	2,889	149	593	399	1,344	2,953
25,000 " 49,999 .....	200	897	1,862	3,288	239	3,368	10,682	7,017	138	641	1,136	4,172	7,112
50,000 " 99,999 .....	156	1,309	2,803	5,258	322	5,875	16,840	10,696	59	346	1,692	7,073	11,019
100,000 " 199,999 .....	116	1,839	4,033	8,097	354	8,586	24,853	15,964	14	75	2,360	10,921	16,451
200,000 " 499,999 .....	49	1,587	3,543	7,149	351	8,611	23,081	14,267	—	—	2,076	10,190	14,818
500,000 " 999,999 .....	13	756	1,705	3,385	111	6,040	14,255	8,412	—	—	1,012	5,063	9,408
1,000,000 " 4,999,999 .....	3	316	717	1,604	55	2,850	6,809	3,902	—	—	434	2,312	3,936
5,000,000 and over .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
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

TABLE 1 E. Principal Statistics classified by Size Groups based on Total Employed, 1962 and 1963

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		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000			\$'000
1962													
Under 5 employed .....	311	380	712	1,235	195	2,186	6,279	3,891	298	1,031	456	1,476	3,962
5- 14 employed .....	328	1,905	4,107	7,348	532	8,145	23,794	15,115	223	1,089	2,432	9,526	15,453
15- 49 " .....	145	2,603	5,720	10,982	553	12,763	34,469	21,391	11	65	3,404	15,261	22,261
50- 99 " .....	26	1,472	3,093	5,958	226	8,604	20,849	12,169	—	—	1,850	8,009	12,411
100-199 " .....	3	337	789	1,632	72	2,000	5,569	3,569	—	—	461	2,303	3,574
200-499 " .....	—	—	—	—	—	—	—	—	—	—	—	—	—
500 employed and over .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
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													
Under 5 employed .....	308	373	752	1,302	120	2,249	6,777	4,405	294	1,100	442	1,522	4,467
5- 14 employed .....	335	2,027	4,329	8,199	487	8,603	26,319	17,269	183	882	2,586	10,783	17,698
15- 49 " .....	166	3,171	7,030	13,706	661	15,938	43,642	27,175	11	63	4,085	18,875	28,332
50- 99 " .....	21	1,106	2,418	4,849	195	7,537	18,112	10,602	—	—	1,510	7,210	11,470
100-199 " .....	4	417	919	2,013	70	3,050	7,635	4,521	—	—	556	2,849	4,556
200-499 " .....	—	—	—	—	—	—	—	—	—	—	—	—	—
500 employed and over .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
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

TABLE 1F. Principal Statistics classified by Type of Organization, 1962 and 1963

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		Total employees		Total value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
<b>1962</b>													
1 Individual ownerships .....	295	725	1,452	2,414	249	3,225	9,019	5,538	296	1,182	787	2,577	5,593
Partnerships .....	111	402	809	1,389	149	1,885	5,734	3,676	236	1,002	443	1,491	3,757
Incorporated companies .....	407	5,570	12,159	23,351	1,180	28,589	76,208	46,921	...	...	7,373	32,508	48,312
Cooperatives .....													
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Totals .....</b>	<b>813</b>	<b>6,697</b>	<b>14,420</b>	<b>27,155</b>	<b>1,577</b>	<b>33,699</b>	<b>90,960</b>	<b>56,135</b>	<b>532</b>	<b>2,185</b>	<b>8,603</b>	<b>36,576</b>	<b>57,662</b>
<b>1963</b>													
Individual ownerships .....	290	721	1,493	2,578	180	3,531	9,915	6,237	290	1,218	781	2,719	6,308
Partnerships .....	96	323	683	1,214	99	1,591	4,944	3,291	198	826	366	1,348	3,463
Incorporated companies .....	448	6,050	13,271	26,277	1,255	32,355	87,626	54,444	...	...	8,032	37,172	56,751
Cooperatives .....	-	-	-	-	-	-	-	-	...	...	-	-	-
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Totals .....</b>	<b>834</b>	<b>7,094</b>	<b>15,447</b>	<b>30,069</b>	<b>1,533</b>	<b>37,476</b>	<b>102,485</b>	<b>63,972</b>	<b>488</b>	<b>2,045</b>	<b>9,179</b>	<b>41,239</b>	<b>66,522</b>

TABLE 2. Industry Output, Input and Value Added, 1962 and 1963

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1962	1963	1962	1963	1962	1963
\$'000						
<b>Output</b>						
1. Shipments and other revenue .....	90,960	102,485	6,754	7,702	97,714	110,187
Inventories - Goods of own manufacture:						
Add closing - Goods in process .....	2,347	2,392	...	...	2,347	2,392
Finished goods .....	1,484	1,509	...	...	1,484	1,509
Less opening - Goods in process .....	2,051	2,074	...	...	2,051	2,074
Finished goods .....	1,329	1,331	...	...	1,329	1,331
2. Net inventory change .....	451	496	...	...	451	496
3. Gross output (1 + 2) .....	91,411	102,981	6,754	7,702	98,165	110,683
<b>Input</b>						
4. Purchases of goods not of own manufacture .....	...	...	4,894	4,796	4,894	4,796
Inventories - Goods not of own manufacture:						
Add opening .....	...	...	1,097	1,248	1,097	1,248
Less closing .....	...	...	1,210	1,366	1,210	1,366
5. Cost of goods sold (not of own manufacture) .....	...	...	4,781	4,678	4,781	4,678
6. Materials, supplies, components and semi-processed goods	33,699	37,476	446	473	34,145	37,949
7. Fuel and electricity .....	1,577	1,533	...	...	1,577	1,533
8. Gross input (5 + 6 + 7) .....	35,276	39,009	5,227	5,151	40,503	44,160
<b>Census value added (3 - 8) .....</b>	<b>56,135</b>	<b>63,972</b>	<b>1,527</b>	<b>2,551</b>	<b>57,662</b>	<b>66,522</b>



TABLE 3. Employment and Payroll, 1962 and 1963

Year and province	Employees										Salaries and wages					
	Production and related workers				Adminis- trative and office		Sales and distribution		Total employees		Production and related workers		Admin- istra- tive and office	Sales and distri- bution	Total salaries and wages	
	Manufacturing		Other								Manufacturing	Other				
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female						Manufac- turing
	number										\$'000					
1962																
Newfoundland .....	}	47	—	—	—	10	2	—	—	57	2	166	—	35	—	200
Prince Edward Island .....		202	3	—	—	35	10	3	—	240	13	716	—	175	11	902
Nova Scotia .....		241	—	—	—	47	25	32	—	320	25	946	—	296	146	1,388
New Brunswick .....		1,842	31	12	—	303	110	57	1	2,214	142	7,208	26	2,028	281	9,543
Quebec .....		2,387	43	13	3	360	178	68	1	2,828	225	9,702	71	2,760	316	12,849
Ontario .....		319	—	—	—	73	23	13	2	405	25	1,263	—	554	72	1,890
Manitoba .....		74	—	4	—	11	4	3	—	92	4	285	14	64	14	377
Saskatchewan .....		707	2	—	—	157	39	17	3	881	44	3,203	—	1,009	117	4,330
Alberta .....		794	5	2	—	190	65	30	—	1,016	70	3,666	7	1,307	118	5,098
British Columbia .....		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yukon and Northwest Terri- tories .....		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals .....		6,613	84	31	3	1,186	456	223	7	8,053	550	27,155	118	8,229	1,074	36,576
1963																
Newfoundland .....	}	57	—	—	—	10	2	—	—	67	2	198	—	49	—	247
Prince Edward Island .....		171	1	—	—	29	11	3	—	203	12	635	—	150	14	799
Nova Scotia .....		250	—	—	—	62	26	25	—	337	26	932	—	385	123	1,440
New Brunswick .....		1,900	26	—	—	333	111	65	4	2,298	141	7,894	—	2,412	343	10,649
Quebec .....		2,559	58	14	9	384	181	59	6	3,016	254	11,020	99	3,241	319	14,680
Ontario .....		356	—	—	—	79	23	18	2	453	25	1,393	—	628	125	2,145
Manitoba .....		87	—	—	—	13	4	2	—	102	4	322	—	73	10	405
Saskatchewan .....		751	1	25	—	181	49	32	4	989	54	3,607	115	1,308	229	5,259
Alberta .....		874	3	—	—	201	73	42	3	1,117	79	4,067	—	1,330	217	5,614
British Columbia .....		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yukon and Northwest Terri- tories .....		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals .....		7,005	89	39	9	1,292	480	246	19	8,582	597	30,069	214	9,577	1,379	41,239

TABLE 3A. Production and Related Workers, — Manufacturing Activity, by Months, 1962 and 1963

Month	Establishments reporting monthly detail			
	1962		1963	
	Male	Female	Male	Female
	number			
January .....	5,071	78	5,360	86
February .....	5,105	74	5,542	86
March .....	5,133	73	5,608	81
April .....	5,191	77	5,674	85
May .....	5,227	77	5,774	88
June .....	5,282	73	5,880	86
July .....	5,354	76	5,824	87
August .....	5,269	77	5,868	88
September .....	5,260	73	5,876	87
October .....	5,210	79	5,836	87
November .....	5,189	77	5,850	92
December .....	5,138	77	5,655	92
Average for establishments reporting monthly detail (collected only for large establishments) ..	5,214	76	5,751	87
Average for small establishments (only annual averages collected) .....	1,399	8	1,254	2
Average for all establishments .....	6,613	84	7,005	89

TABLE 4. Industry Inventories, 1963

Province	Manufacturing				Non-manufacturing	Total inventories
	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total manufacturing	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland .....	43	3	—	46	14	60
Prince Edward Island .....						
Nova Scotia .....	195	11	2	208	55	263
New Brunswick .....	557	119	79	756	131	887
Quebec .....	1,841	772	560	3,174	91	3,265
Ontario .....	1,590	740	251	2,581	262	2,843
Manitoba .....	403	33	69	505	20	525
Saskatchewan .....	148	14	73	235	52	287
Alberta .....	1,221	246	150	1,617	224	1,842
British Columbia .....	915	135	147	1,197	399	1,595
Yukon and Northwest Territories .....	—	—	—	—	—	—
Totals .....	6,914	2,074	1,331	10,319	1,248	11,567
Closing:						
Newfoundland .....	44	22	—	66	48	114
Prince Edward Island .....						
Nova Scotia .....	184	18	8	210	71	282
New Brunswick .....	464	55	59	577	146	723
Quebec .....	2,014	694	584	3,291	92	3,383
Ontario .....	1,732	936	325	2,993	276	3,269
Manitoba .....	461	92	59	612	15	627
Saskatchewan .....	162	23	48	233	71	304
Alberta .....	1,245	330	274	1,849	259	2,108
British Columbia .....	992	223	153	1,368	387	1,755
Yukon and Northwest Territories .....	—	—	—	—	—	—
Totals .....	7,297	2,392	1,509	11,199	1,366	12,565

TABLE 5. Purchased Fuel and Electricity Used in Manufacturing Activity, 1962 and 1963

Description	1962		1963	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments which reported commodity detail:				
Bituminous coal:				
(a) From Canadian mines .....	ton	1,577	999	16
(b) Imported .....	"	600	717	7
Sub-bituminous coal (from Alberta mines only) .....	"	80	169	2
Anthracite coal .....	"	131	297	6
Lignite coal .....	"	312	296	1
Coke .....	"	34	68	2
Gasoline (including gasoline used in cars and trucks) .....	Imp. gal.	809,457	806,437	321
Fuel oil including kerosene or coal oil .....	"	916,805	962,093	170
Wood .....	cord	294	65	1
Gas:				
(a) Liquefied petroleum gases .....	Imp. gal.	27,298	29,185	9
(b) Other manufactured gas .....	M cu.ft.	1,179	592	1
(c) Natural gas .....	"	137,807	223,147	123
Other fuel .....	...	3	...	5
Electricity purchased .....	kwh.	19,834,750	23,420,786	553
Steam purchased .....	...	1	...	3
2. Estimate for small establishments:				
Fuel and electricity .....	...	458	...	314
3. All establishments:				
<b>Total fuel and electricity used</b> .....	...	<b>1,577</b>	...	<b>1,533</b>

TABLE 6. Materials and Supplies - Manufacturing Activity, 1962 and 1963

Description	Cost	
	1962	1963
	\$'000	
1. Raw materials and components used <sup>1</sup>	30,635	33,887
2. Containers and other packaging materials and supplies used	117	186
3. Operating, maintenance and repair supplies used (excluding fuel)	2,090	2,519
4. Amount paid out to others for work done on materials owned by establishments	857	884
<b>Totals</b>	<b>33,699</b>	<b>37,476</b>

<sup>1</sup> No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. These estimated costs were \$5,926,456 in 1962 and \$5,135,321 in 1963.

TABLE 7. Shipments of Goods of Own Manufacture, 1962 and 1963

Description	Value	
	1962	1963
	\$'000	
1. All products manufactured	37,379	42,981
2. Amount received in payment for work done on materials and products owned by others	53,827	59,778
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	(246)	(273)
Net adjustment for establishments receiving progress payments	—	—
<b>Total adjusted value of shipments and work done</b>	<b>90,960</b>	<b>102,485</b>

**List of Establishments classified to This Industry, 1963**

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

Name	Location
<b>Newfoundland:</b>	
Fry's Engineering Co. Ltd.	25 Springdale St., St. John's
Hall Metals Ltd.	Water St. E., St. John's
<b>Prince Edward Island:</b>	
Hall and Stavert Ltd.	49 Pownal St., Charlottetown
<b>Nova Scotia:</b>	
Annand, C.A. Ltd.	219 Queen St., Truro
Antigonish Machine Shop Ltd.	Antigonish
Atlantic Spring and Machinery Co. Ltd.	King's Rd., Sydney
Dartmouth Machine Co. Ltd.	1 Parker St., Dartmouth
Digby Diesel Shop	Digby
Digby Forging and Machine Co. Ltd.	First Ave., Digby
Fader Agencies Ltd.	83 Shore Rd., Dartmouth
Fairview Industrial Engineering Ltd.	325 Dutch Village Rd., Halifax
Falmouth Machine Shop	Falmouth
Fraser, T.J.	Bridgewater
Gateway Engineering, Ltd.	83 Water St., Yarmouth
Gunn's Machine and Welding Shop	34 Provost St. N. New Glasgow
Hamilton & Porter	2 Forest St., Yarmouth
Howie, Lester Machine Shop	57 Water St., Glace Bay
Maritime Cylinder Grinding Co. Ltd.	5447 Rainnie Dr., Halifax
McLellan's Machine Shop	Lower Onslow
Moir, W. & A. Limited	694 Barrington St., Halifax
Parnell, E.H. Machine Co.	Liverpool
Shaw and MacDonald Ltd.	51 South St., Glace Bay
Sjöberg, Carl Machine Shop	Meteghan Centre
Stellarton Machine Shop	MacKay St., Stellarton
Truro Machine Shop	Lower Truro
Twin City Engine Rebuilders	37 Bilby St., Halifax
Webb Engineering Limited	Dutch Village Rd., Halifax



List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>New Brunswick:</b>	
Apex Machine Works Ltd.	181 Pacific Ave., Moncton
Atlantic Engine Rebuilders	12 Ray Brown St., Moncton
Bathurst Machine and Supply	600 Ste. Anne Rd., Bathurst
Belanger's Machine Shop	Sheriff St., Grand Falls
Castle Machine Works	Newcastle
Craig's Machine Shop Limited	Hartland
Engine Machine Shop & Supply Ltd.	Union St. Extension, Fredericton
Fredericton Welding and Machine Shop	162 King St., Fredericton
Horsnell Machine and Iron Works Ltd.	329 King St., Fredericton
Industrial Machine Works	379 St. Patrick St., Bathurst
Kelso, Wm. W. and Sons Ltd.	224 Main St., Sussex
Laforge, Armand	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
Shediac Garage and Machine Shop	Shediac
Stephenson and Co. Limited	15 Dock St., Saint John
Williamson, J. Fred Limited	Bridge St., Saint John
<b>Quebec:</b>	
A.B.C. Tool and Die and Mfg. Co. Reg'd.	2381 Des Carrières St., Montreal
Acme Mold and Die Reg'd.	6031 Denormandie St., Montreal
Aibon Welding and Mechanical Works Ltd.	10223 Armand Lavergne, Montreal
Alie Machine Shop	25 Cousineau St., Hull
Amos Machineries (1960) Inc.	212 First Ave., Amos
Arell Machine Works Reg'd.	4670-18th Ave., Montreal
Atelier de Soudre General Enrg.	Rivière-du-Loup
Atelier Mécanique	Princeville
Ateliers Des Souds-Muets	65 Castelnau St., Montreal
Atelier Mécanique Enrg.	St-Cyprien
Atelier Mécanique D'Alma Enrg.	Alma
Atelier Mécanique Tremblay Enrg.	Alma
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.	4749 Coolbrook Ave., Montreal
Beauce Mécanique	Beauceville
Beaudry Machine Shop	733 St-Antoine St., Joliette
Bédard, F.X.	440 Du-Roi St., Quebec
Bibeau and Frères Enrg.	St-Félix-de-Valois
Blanchet, Gérard	St-Apollinaire
Boisclair, Antoine	159 Michaud St., St-Gabriel-de-Brandon
Boulanger, T.H. Enrg.	4591 Brébeuf St., Montreal
Bowers Machine Co. Ltd.	5860 St. Lawrence Blvd., Montreal
Branconnier and Carreau	Senneterre
British American Machine Co.	4761 St. James St. W., Montreal
Brousseau, Rolland	2850 Lacordaire St., Montreal
Cadieux, Wilfred	815 St. Paul St. W., Montreal
Camco Precision Machine Co.	6715 Casgrain St., Montreal
Causapsal Machine Shop	Causapsal
Chambly Machine Works Ltd.	Ville St-Laurent
Chatham Machined Parts Ltd.	805 Chatham St., Montreal
Cometal Inc.	St-David
Cliche, Jos. and Fils Ltée	12 Michaud St., Mégantic
Cloutier Machine Shop Enrg.	Cap-de-la-Madeleine
Constructive Engineering Co.	4306 City Hall Ave., Montreal
Crammond and Son Limited	4865 Dagenais St., Montreal
Crankshaft Grinder Reg'd.	820 Notre-Dame St. W., Montreal
Crosbie, A. and Sons Ltd.	9370 Jeanne Mance St., Montreal
Dallaire Metal Industries Inc.	7926 Hugo, Ville St. Michel
De Jean, L. & Co. Ltd.	1405 St. James St. W., Montreal
Denis Machine Shop	Barraute
Després, Alfred Inc.	66 St-Andre, Quebec
Dettson Manufacturing Co. Ltd.	Sherbrooke
Difalco, P. and Co.	4401 La France Lane, Montreal
Dion, Yvon Equipment	25 St-Christophe, Matane
Docal Limited	720-724 Marin Ave., Montreal
Dolbeau Crankshaft Ltée	Dolbeau
Dominion Machine Shop Reg'd.	6½ Lacroix St., Quebec
Dubé, Aurèle	7625-18th Ave., Ville St-Michel
Dubuc Machine Shop	565 Des Ormeaux, Montreal
Durocher, Yves Machine Shop	St. Jean
Eastern Rebuilders Ltd.	106 Elizabeth St., Bedford
Eastern Townships Machine Works Ltd.	Sherbrooke
Economic Production Work Ltd.	2454 Des Carrières, Montreal
Electro Processes (Quebec) Ltd.	805 Chatham St., Montreal
Ellison Machine Shop	820 Liege St., Montreal
Empire Machine Company Limited	1535 Gladstone St., Montreal
Engine Rebuilders Company	6389 St. Lawrence Blvd., Montreal
Feeley, T. and Sons Machine Shop Ltd.	185 Laval St., Granby
Gagné Machine Shop	2750 Rozel St., Montreal
Gatineau Machine Shop	Gatineau
Gaudreau, J.E. Enrg.	Montmagny
Gendron and Frères Enrg.	149 Fraserville St., Rivière-du-Loup
General Machine Works Limited	911 St. George St., Montreal
General Machine Works Limited	Longueuil
Gingras and Charest Enrg.	550 Ste-Hélène, Quebec
Gordon Machine Shop	Lachute
Guérrette & Frère Limitée	249 St. Alexander, Longueuil
H. and A. and Industrial Metallizing Ltd.	1815 Le Caron St., Montreal
Handy Machine Shop and Supply, Ltée	Pont-Viau
Harris, J. & B.	121 St-Denis, St-Lambert



List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Quebec - Continued:</b>	
Helix Precisions Co. Ltd.	352 Inspector, Montreal
Hooker's Machine Works and Foundry	Huntingdon
Houde, E. and Fils Enrg.	St-Georges-Est
Henrichon, Lucien	St-Gabriel-de-Brandon
Huot Inc.	930 Ste.-Thérèse, Quebec
Iberville Machine Shop	25-3rd. Ave. Iberville
Industrial Machinery Limited	3650 St.-Joseph Blvd. E., Montreal
Industrial Welding and Machine Work Ltd.	Noranda
Jacques Precision Works Ltd.	2585 Charlemagne, Montreal
Joly Engineering Ltd.	8945 Park Ave., Montreal
Joyal Machine Shop	75 St-Albert, Drummondville
Jude Tooling and Machining Co.	679 St-Remi St., Montreal
Julien, Louis and Fils Enrg.	St-Anaclet
Kiely, Martin Co. Ltd.	1159-1161 William St., Montreal
Labbe & Frère	Sherbrooke
Lachapelle Machine Shop Enrg.	46 St-Joseph, Terrebonne
La Fonderie Ouellet Enrg.	St-Leonard-d'Aston
La Fonderie "Universal" Enrg.	Victoriaville
Langevin, Gérard	2050 Charlemagne, Montreal
Lapointe et Bélanger Ltée	1329 Route Nationale, Ancienne-Lorette
La Soudure de Thetford	Thetford Mines
Lar Machinery Inc.	Metabetchouan
Laurentian Metal Products Co. Ltd.	40 Montcalm St., Hull
Leader Products Co. Ltd.	95 St-Zotique St. W., Montreal
Lebel Machine Works Reg'd.	Lachine
Lefèvre Frères Limited	970 De Bullion St., Montreal
Lemire, Thomas	Guigues
Les Ateliers Mécaniques Enrg.	Roberval North
Les Entreprises St. Joseph Ltée	Napierville
Les Equipements Universels Enrg.	Napierville
Les Industries Enrg.	Maniwaki
Les Industries de Mont Laurier	Mont-Laurier
Les Pompes Cartier Enrg.	1 Rue Dollard Joliette
Lessard Machineries Enrg.	St-Wenceslas
Levesque, J.S. Machine Shop	Rivière-du-Loup
Machine Industries Ltd.	Longueuil
Machine Repair and Maintenance	2130 Bleury St., Montreal
Machine Shop Levis Létourneau	390-3rd. St., Quebec
Machine Shop St. Marc	Shawinigan
Machine Works Limited	9601 Blvd. St-Laurent, Montreal
Mulhot Hydraulic Enrg.	Grand Rang St-Jacques
Mulo, A. Co. Ltd.	Joliette
Massicotte and Arcand Inc.	Cap-de-la-Madeleine
Matte, Gaston	578 Kitchener St., Latuque
Ménard, Alfred	391 St.-Anne, Chicoutimi
Met Machine Works Reg'd.	6785-11th Ave., Montreal
Metro Engineering Company Ltd.	Ville St-Pierre
Mi-Co Meter Sales & Service Ltd.	Longueuil
Mills & Marcoux	St-Jean
Miller, C. & H. Bros.	Gaspé Harbour
Miller Bros. and Sons Limited	45 Seigneurs St., Montreal
Mining Machinery and Equipment Ltd.	Noranda
Modern Machine Shop	60 Dalhousie, Huntingdon
Mohawk Motors Mfg. Ltd.	2875 Hochelaga, Montreal
Monarch Punch and Die Co. Ltd.	Ville St-Michel
Montcalm Machine Shop	6865 De L'Épée, Montreal
Mont-Joli Machinerie Ltée	126 Aubin St., Mont-Joli
Montreal Materials Processing Co. Ltd.	5270 Arnold, Montreal
Montreal Mechanical Enterprise Co. Ltd.	1561 Papineau, Montreal
Montreal Scale Works Enrg.	406 Notre Dame St. E., Montreal
Montreal Screw Machine Products Ltd.	957 Amherst St., Montreal
Morin Frère Enr.	Cartier Ave., La Guadeloupe
Morris, F.L. Machine Shop	72 Denison Ave., Granby
Nadeau, Walter	10527 Henault St., Montreal
Nordale Metalcraft Ltd.	Sherbrooke
15th Avenue Machine Shop	Ville St-Michel
North Precision	10156 London St., Montreal North
Ostergaard, E.	2024 McGill College Ave., Montreal
Ouellet et Laberge Ltée	116 Christophe Colomb Ave., Quebec
Papineau Machine Shop	Ville St-Michel
Parent, Pierre	Ste-Agathe-des-Monts
Parent Tool and Machine Parts	Jacques-Cartier
Paulson Machine Co. Ltd.	Lachute
Poulin, J.E. Reg'd.	999 Ste-Elizabeth St., Montreal
Precision Industries Reg'd.	3744 St-Ambroise St., Montreal
Princeville Machine Shop Inc.	Princeville
Proulx, A. and 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
Rainville, Georges Machine Shop	Iberville
Rapid Steel and Brass Products Co.	10137 London Ave., Montreal North
Sansoucy, B. Ltée	St-Césaire
Remembrance Machine Shop Reg'd.	2377 Remembrance St., Lachute
Rimouski Transfer Machine Shop Ltd.	98 St-Pierre St., Rimouski
Rite Manufacturing Ltd.	5110-12th Ave., Montreal
Ruel, J.R.	Giffard
Saguenay Industries Limited	Port-Alfred
Salonen Machine and Repair Shop	59 Mgr. Tessier St., Rouyn
Sicotte Machine Shop Ltd.	4720 Papineau St., Montreal
Sicotte, Paul et Fils Ltée	Ste-Thérèse
Skyway Hydraulics Co.	225 Dunbar St., Town of Mt. Royal

List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Quebec - Concluded:</b>	
Soucy, Adélard Ltée .....	St-Ludger
Soudure Industrielle Enrg. ....	880-106th Ave., Drummondville
Sparcon Industries Ltd. ....	Lachine
Sept-Iles Hydraulic Enrg. ....	Sept-Iles
St-Cyr Loader .....	Cadillac
Steel Flange Manufacturing Co. ....	4869 Westmore Ave., Montreal
Stewart Machine Works Limited .....	Noranda
St. John's Tool and Die .....	272 St-Pierre St., St-Jean
Isaie Quenneville Inc. ....	Valleyfield
Sunset Industries Reg'd. ....	2275 Jeanne d'Arc St., Montreal
Tac Machine Shop Enrg. ....	St-Jérôme
Tanguay, G. and Fils .....	94 Bourget St., Montreal
Trahan Machine Shop .....	641-7th Ave., Grand' Mère
Tremblay, Vincent Inc. ....	1655 Letourmeaux St., Montreal
Trottier, A. and Fils Ltée .....	Dolbeau
Trudeau, M.G. ....	Laprairie
Turbo Precision Industries Ltd. ....	10,780 Racette St., Montreal
Universal Die and Tool Mfg. Ltd. ....	2,125 St.Catherines St., Montreal
Vallee Machine Shop .....	472 St-Charles St., Shawinigan Falls
Valleyfield Machine Parts .....	Ville Jacques-Cartier
Verdun Machine Shop Reg'd. ....	St-Lambert
Victory Tool and Machine Co. Ltd. ....	250 Rose-de-Lima St., Montreal
Viens Machine Shop & Repairs Ltd. ....	2,010 Roberval St., Montreal
Vohl, Adrien & Fils Ltée .....	St-Marc-des-Carières
Vulcan Machine Works .....	St-Jérôme
<b>Ontario:</b>	
A-1 Engineering .....	117 Cartwright Ave., Toronto
Aalus Engineering Co. Ltd. ....	2,783 Danforth Ave., Toronto
Able Welding and Machine Co. Ltd. ....	290 Oak St. W., North Bay
Accurate Engineering Co. ....	267 Caledonia Rd., Toronto
Accurate Stamp and Stencil Co. ....	481 Main St., Hamilton
Acro Machine and Tool Company Limited .....	427 Birchmount, Scarboro
Active Key Works Limited .....	645 King St. W., Toronto
Advance Machine and Tools Co. Ltd. ....	1,160 Albert Rd., Windsor
Advance Tool and Mould Co. Ltd. ....	10 Sunrise Ave., Scarborough
A&G Dies Ltd. ....	66 Milvan Dd., Weston
Alda Machine and Tool Co. ....	9 Magnificent Rd., Toronto
Allied Machine and Tool .....	32 Chauncey, Toronto
All-Weld Company Limited .....	24 Carlaw Ave., Toronto
Alskip Machine Works .....	21 Villa Rd., Long Branch
Altherg'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. ....	32 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. ....	3,673 Dufferin St., Downsview
Atkins and Hoyle Limited .....	71 Portland St., Toronto
Atkinson, C.H. and Co. ....	159 Centre St. E., Richmond Hill
Atlas Poplar Company Limited .....	60 Northline Rd., Toronto
Auged Engineering and Machine Shop Co. ....	9 Fennings St., Toronto
Austin, A. Industries Ltd., The .....	51 Kipling Ave. S., Toronto
Automotive Machine Service .....	222 Main St., Toronto
Avery Machine Ltd. ....	289 Sumach St., Toronto
Aylmer Toolcraft .....	23 Raglan St., Aylmer
Baderski, Frank and Son Ltd. ....	464 Algonquin 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 Limited .....	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
Beasleys Machine Shop .....	410 Front St. N., Sarnia
Beaver Equipment Mfg. Co. Ltd. ....	65 Hymus Rd., Scarborough
Bee, F. ....	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
Belpree Co. Ltd. ....	4 Mansion Ave., Scarborough
Bennett and McPhie Limited .....	1,230 Dundas St. E., Toronto
Bexton, S. and Son .....	385 Horton St., London
Blakes Welding & Machine .....	King St., Clinton
Bolton Die Company .....	3,245 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
Brigden Manufacturing Co. ....	Hornby
Britton Machine and Welding Ltd. ....	16 Gordon St., Guelph
Brown Engineering Corp. ....	15 Alcorn Ave., Toronto
Bruno Machine Shop Co. ....	308 Adelaide St. W., Toronto
Burston Mfg. Limited .....	239 Bering Ave., Toronto
Canadian Clip Angle Products Ltd. ....	88 Joseph St., Brampton
Carruthers Engineering .....	21 Jarvis St., Toronto
Carson J. and Sons .....	95 Hamilton Rd., London
C. and E. Machine and Die Co. ....	1,889 Mattawa Ave., Cooksville



List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Ontario - Continued:</b>	
Champion Machine and Tool Co. Ltd.	2532 Wharton Glen Ave., Cooksville
Clark Machine Co. Ltd.	423 Glendale Ave., St. Catharines
Clarke, Ben Machine Works	112 Louth St., St. Catharines
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
Comet Engines Limited	5150 Dixie Rd., Cooksville
Connecting Rod Specialty Ltd.	4 Widmer St., Toronto
Cooke and Denison, Ltd.	31 Yarmouth, St., Guelph
Cooper Machine and Tool Co.	29 Stratford St., Toronto
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 Steel	Taunton Rd. E., Oshawa
Dalby Machine Shop	565 Speers Rd., Oakville
Damman Machine Shop	91 Dearborn St. E., Waterloo
Damp Bros. Machine and Welding Co.	492 Gilbert Ave., Toronto
Dashwood, D. and Sons	109 Main St., Dunnville
Davidson Machine Shops, Ltd.	123 Mainville Rd., Scarboro
Debo Instruments	22 Holtby Ave., Brampton
Delhi Die and Mfg. Co. Ltd.	454 East St., Delhi
Del-Mark Corporation Ltd.	666 Ontario St., Stratford
Dillon, E. & Mfg. Co.	741 Queen St. E., Toronto
Dingwell's Machine Shop	79 Machar Ave., Port Arthur
Disco Limited	433 Comstock Rd., Scarborough
Dodd, T.W. Machine Works	35 McGhie St., St. Catharines
Duncan Tool & Die (Galt) Ltd.	460 Franklin Blvd., Galt
Dyer and Kerst, Limited	63 Duchess St., Toronto
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.	529 George St., Cobourg
Edwards, George H. Fine Instruments	2150 Yonge St., Toronto
Edwards, Frank Machine and Tool	Midland
Electro Processes (Ont.) Ltd.	32 Chauncey Ave., Toronto
Elliott's Machine Shop	Strathroy
Elliott, Leonard Tools Ltd.	R.R. 1, Brantford
Elrose Machine Products Limited	1 Elrose Ave., Weston
Enmar	101 Crockford Blvd., Scarborough
Evans, H. Machinery Co.	316 William St., London
Feldcamp and Fraser Machine Works	North Bay
Ferraby, J.H. Machine and Repair Shop Service	1188 Frances St., London
Finkle, Wm. Machine Co.	68 Dundas W., Belleville
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
General Instrument Co.	37 Hanna Ave., Toronto
General Machine Shop Ltd.	89 York St., London
General Machine Shop K. & K.	R.R. 3 Woodstock
General Metallic Parts Ltd.	16 Milford Ave., Toronto
Geomatrix Ltd.	1120 Castlefield Ave., Toronto
Gillam Components	128 Pears Ave., Toronto
Girotti Machine Works Ltd.	288 Glendale Ave., St. Catharines
Goodwin Chuck Co. Ltd.	27 Jarvis St., Brantford
Goodwin Metal Products Ltd.	298 Edinburgh St., Peterborough
Great Lakes Boat and Machine Co. Ltd.	Midland
Great Lakes Machine and Metal Fabricators Limited	River Rd., Sault Ste. Marie
Greenleaf Company (Belleville) Ltd.	321 Coleman St., Belleville
Greville-Gattie Machine Co.	71 Kincoirt St., Toronto
Grimsby Machine Mfg. Co. Ltd.	R.R. 1 Grimsby
H. & J. Precision Industries	724 Erskin Ave., Peterborough
H. & M. Machine Co. Ltd.	149 Bonnehchere St. N., Renfrew
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.	50 Clarke St. S., Woodstock
Hansons Machine Shop Reg'd.	Dubeau St., Cyrville
Harnden & Newell Limited	271 First Ave., Timmins
Harper Machine Co.	18 Clarence St., Brantford
Harri Machine Shop	R.R. 4 Brantford
Harris Machine Co.	172 Toryork Dr., Weston
Harwil Enterprise	Cathcart
Hastie & Dupuis	R.R. 2, Pakenham
Hastings Ronald Co. Ltd.	284 Maple Leaf Dr., Toronto
Hawkins Machine Shop	Quebec St., Mitchell
Henley, A.W., Machine and Tool Co.	23 Rialside Rd., Don Mills
Henning Graphics	80 Duchess St., Toronto
Henry's Machine Shop Ltd.	42 George St., Brockville
Hep-Sur Engineering Co.	242 King St. E., Toronto
Hera Tool and Machine Co.	2533 Wharton Glen Ave., Summerville
Herculock Limited	677 Buttry, Ave., Niagara Falls
Hill-Cook Industries Ltd.	351 Leaside Ave., Stoney Creek
Hooper & Bird Machine Shop	525 High St., Orillia
Huffman Brothers	22 Cavan St., Port Hope
Humber Machine and Tool Ltd.	381 Horner Ave., Toronto
Humberstone Port Colborne Machine Works	114 Chestnut St., Port Colborne
Hunter Bridge and Boiler Works	Queen St., Kincardine
Hydraulic Jack and Lift Service Ltd.	178 Norseman St., Toronto
I.X.L. Engineering Co.	2002 Dundas St. W., Toronto

List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Ontario - Continued:</b>	
Ideal Engine Repairs .....	200 Louth St., St. Catharines
Industrial Valve Service .....	2662 Midland Ave., Agincourt
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
Jig Boring Service Ltd. ....	76 McCulloch Ave., Toronto
Jim's Machine Shop .....	Queen St., Hensall
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
Kallio, Jack .....	1829 Paris St., Sudbury
Kawnick Automotive Engine Supply Ltd.	481 Dupont St., Toronto
Kelco Engineering Ltd. ....	352 Thames St., London
Kelvin-Thompson Co. Ltd., The .....	Bayly St., Ajax
Kendall Mfg. Limited .....	2918 Walker Rd., Windsor
Kennedy Machine Co. Ltd. ....	45 Niagara St., Toronto
Keough, A.E. ....	109½ Rectory St., London
Kirkland Lake Machines and Welding Ltd.	10 Station Rd., Kirkland Lake
K. K. Precision Parts .....	230 Pellatt Ave., Weston
K. L. K. Tool Die & Machine Co. Ltd.	1908 Mattawa St., Cooksville
Knight-Bolton Co. Ltd. ....	3878 McLeod Rd., Niagara Falls
L.C.S. Metals Corp. Ltd. ....	147 St. Mary St., Brantford
Lacelle Tool and Die Works .....	R. R. 2 Beaverton
Lamont's Machine Shop .....	553-8th Ave., Hanover
Lange Automotive Parts .....	185 Market St., Hamilton
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
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
M. & R. Tool Co., The .....	6534 Kingston Rd., West Hill
Machine Products .....	2 Dartnell Ave., Toronto
Machine Specialties .....	980 Roselawn Ave., Toronto
Machine Tool Service Co. ....	212 Pellatt Ave., Weston
MacLean Underfeed Stoker Co. Ltd. ....	4319 Lawrence Ave. E., West Hill
MacWood Machine Co. Ltd. ....	17 Sheard Ave., Brampton
Magna Electronics Ltd. ....	970 Broadview Ave., Toronto
Mainline Tool and Die .....	582 Eighthline N., Oakville
Mansion Tool and Die Ltd. ....	19 Mansion Ave., Scarborough
Marshall Tool and Die .....	Main St., Lucan
Marshall Precision Equipment Ltd. ....	380 Weber St. N., Waterloo
Martin Brothers .....	St. Jacobs
McCoy Machinery and Supply Co. Ltd. ....	258 Catherine St. N., Hamilton
McCrindle, A.C. Ltd. ....	300 Eugenie St., Windsor
McDermott, L. and Associates .....	63 Crockford Ave., Scarborough
McDermott Metal Products .....	481-9th Ave., Hanover
McLeod and Jessiman Engineering .....	240 Gore St. W., Fort William
McMullen-Perkins (1962) Ltd. ....	433 Laurier Ave., Ottawa
McQueen Brothers .....	270 Erie St. S., Leamington
Mecon Products .....	17 Malley Rd., Scarborough
Micro Machine and Tool Co. Ltd. ....	15 Penn Dr., Weston
Milton Machine Shop Ltd. ....	203 Mill St., Milton
Modern Aircraft Products Limited .....	29 Main St. E., Kingsville
Moore's Mfg. Co. ....	126 Willowdale Ave., Willowdale
Multi Purpose Machine & Tool Co. ....	129 Tecumseth St., Toronto
N. & L. Machinery and Equipment Co. ....	1281 Florence St., London
National Machine Products Ltd. ....	65 Torbarrie Rd., Downsview
Neison 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 .....	4242 Dundas St. N., Toronto
Oak-Burl Industries Ltd. ....	914 Appleby Line, Burlington
Oakville Iron Works .....	471 Ailan St. N., Oakville
Oakwood Machine and Tool Co. ....	618 Vaughan Rd., Toronto
Oliver, A.H. Machinery Co. ....	177 Cedar St. E., Orillia
Operating Brant Machine and Tool ..	Jefferson St., Paris
Orillia Tool & Stamping Ltd. ....	68 West St. S., Orillia
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
Page Machine Tool and Die Works Ltd. ....	40 Page St., St. Catharines
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
Patrick Farmer Limited .....	Owen Sound
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
Perkins, Frank Co. ....	201 Sophia St. S., Prescott
Peterborough Tool and Machine Co. Ltd.	138 Dalhousie St., Peterborough
Pett Machine and Supply Ltd. ....	241 Ottawa St. S., Kitchener
Poole and Co. ....	75 Duke St., Toronto
Poppleton, George Machine Works .....	207 Crawford St., South Porcupine
Post Machine Co. ....	810 Dupont St., Toronto
Precision Engineering Co. ....	545 Keele St., Toronto
Precision Machining (Barrie) Ltd. ....	160 Victoria St., Barrie
Precision Milling Co. ....	76 McCulloch Ave., Rexdale



List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Ontario - Concluded:</b>	
Presco Mfg. Co. ....	476 King St. E., Toronto
Prescott Machine and Welding Ltd. ....	River Rd. E., Prescott
Progressive Tool and Stamping Co. ....	755 Dundas St. E., Toronto
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. & Y. Tool and Die Co. Limited .....	36 Emmett Ave., Fonthill
Raceway Manufacturing Ltd. ....	118 Laird Dr., Toronto
Rae and Foster Ltd. ....	729 Third St., Port Credit
Rae Metal Products .....	R.R. 3, St. Thomas
Rechtsman Brass Works Ltd. ....	62 A Eugene St., Toronto
Rector's Machine Shop .....	728 Wellington St. N., Sault Ste. Marie
Redman Machine and Metalizing Ltd. ....	1145 Brydges St., London
Reliable Tool and Mfg. Co. ....	91 Ormond St. N., Thorold
Reliance Machine Tool Co. Ltd. ....	1624 Cawthra Rd., Port Credit
Renfrew Electric Co. Ltd. ....	349 Carlaw Ave., Toronto
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., Scarboro
Romeo Machine Shop Ltd. ....	1577 Howard Ave., Windsor
Rumball, J.E. Ltd. ....	1020 Elizabetha St., Sudbury
Sandrin Bros. Ltd. ....	177 Samuel St., Sarnia
Sauve Machine and Welding Works .....	Casselman
Scarboro Products .....	25 Civic Rd., Scarboro
Schuller Machine and Tool Ltd. ....	27 Malley Rd., Scarborough
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
Simola, A. Diesel and Welding Service .....	380 Algonquin Blvd. W., Timmins
Snobelen Enterprises Limited .....	Camden
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
Swansea Machine Repair Co. ....	9 Southport St., Toronto
Tape's Machine Shop .....	85 Rosemount Ave., Ottawa
Thered Machine Co. Ltd. ....	1 Town's Rd., Toronto
Thexton Hydraulic Co. Ltd. ....	289 Sumach St., Toronto
Thorold Welding Works Ltd. ....	183 Merritt St., St. Catharines
Thurston Machine Co. Ltd. ....	219 Fares St., Port Colborne
Tillsonburg Machine Shop Ltd. ....	100 Town Line Rd., Tillsonburg
Titan Tool and Die Limited .....	452 Charles St., Sandwich
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
Triangle Die and Tool Co. Ltd. ....	240 Glendale Ave., St. Catharines
Tri-King Manufacturing Ltd. ....	30 Shepherd Rd., Oakville
Twin City Machine and Repair .....	133 Bedford Rd., Kitchener
United Iron & Machine Works (Kingston) Ltd. ....	72 Cataragui St., Kingston
Upper Canada Mfg. Ltd. ....	223 Evans Ave., Toronto
Vallancourt Machine Shop .....	235 Kitchener St., Hawkesbury
Vallencourt, A. Estate .....	Merritt & Aqueduct Sts., Welland
Viking Engine and Tool Co. Ltd. ....	310 Barlett Ave., Toronto
Vojin, Joseph and Son .....	West Lorne
W.L.C. Machine and Welding Co. ....	25A Water St. S., Galt
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. ....	14 Elrose Ave., Toronto
Western Engineering Service Ltd. ....	274 King St., Fort William
Wheeler Machine Shop .....	3012 King St. E., Kitchener
Whitaker, Ray & Son .....	Port Perry
Whitby Metal Products .....	Watson St., Whitby
Whitelaw Machinery Co. ....	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. ....	234 Ontario St., Kingston
Wright Machine and Tools Ltd. ....	127 Vine St., St. Catharines
Wunder Machine Company Ltd. ....	61 Kent Ave., Kitchener
Wyebidge Machine Co. ....	Midland
Yarmouth Machine Co. Ltd. ....	181 Woodworth Ave., St. Thomas
Yorks, N.A. Machinery Co. ....	198-30th St., Toronto
<b>Manitoba:</b>	
Acme Machine Works .....	64 Princess St., Winnipeg
Asbury, Chas. B. ....	Tupper St. N., Portage La Prairie
Bowen Machinery Ltd. ....	1560 Erln St., Winnipeg
Canadian Tool and Die Works Ltd. ....	540 Fleet Ave., Winnipeg

List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Manitoba - Concluded:</b>	
Craftsman Machine Co.	201 Princess St., Winnipeg
Crescent Electric and Machine Works	98 King St., Winnipeg 2
Darragh Machine Works	Marion & Traverse Ave., Norwood
Dauphin Machine Works	29 - 2 nd N.E., Dauphin
Donalds' Machine Shop	Lot 17 McPhillips, Old Kildonan P.O.
Erin Welding Co.	580 Erin St., Winnipeg
Fork River Machine Shop	Fork River
Friesen Machine Shop	Steinback
Hanover 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., St. Boniface
Kunec Machine Works	4 Powers St., Winnipeg
Lechner, A. & J.	205 Stephen St., Morden
Logan Machine Works	870 Logan Ave., Winnipeg
Manitoba Bearing Works Ltd.	270 St. Mary's Ave., Winnipeg
Manitoba Welding Machine Works	640 Notre Dame Ave., Winnipeg
Mechanical Welding Co. Ltd.	465½ King St., Winnipeg
Micron Diesel Limited	Brandon
Muzeen and Blythe Ltd.	187 Sutherland Ave., Winnipeg
Neepawa Machine Works	Neepawa
Piston Ring Service Supply Ltd.	1108 Wall St., Winnipeg
Precision Machine and Steel Works	23rd St. & Park Ave., Brandon
Precision Machine Works Ltd.	584 Erin St., Winnipeg
Pritchard Engineering Company Ltd.	70 Garry St., Winnipeg
Selkirk Machine Works	490 Main St., Selkirk
Shefrin Welding and Iron Works	885 Madison St., Winnipeg
Shepherd Machine Tool and Die Works Ltd.	677 Notre Dame Ave., Winnipeg
Sommers, P. 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 Machine Co. Ltd.	13 Higgins Ave., Winnipeg
Universal Machine and Engineered Products Ltd.	28 Waverley St., Winnipeg
Western Engine Works Ltd.	410 Madison St., Winnipeg
Western Machine Works	307 Talbot, Winnipeg
<b>Saskatchewan:</b>	
Acme Machine and Electric Co.	150 Avenue "A" North, Saskatoon
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
Hall's Machine Shop	174 Centre Street, Shaunavon
Houser's Machinery and Welding	340-3rd Avenue W., Melville
Jacklin, Stan E., Welding Products	216 Railway Street E., Nipawin
McIntyre Manufacturing Co. Ltd.	144-3rd Avenue W., Swift Current
Melfort Machine and Welding	116 Sask. Avenue W. Melfort
Meschishnick Bros.	St. Gregor
Motive Machine Works Ltd.	1342 Lome St., Regina
Oxbow Welding & Machine Shop	Taylor & Marion St., Oxbow
Pascoe's Machine Works	412 High Street W., Moose Jaw
Peebles Machine Shop	Corner Myrtle and Smith St., Yorkton
Peters Machine Service	518-42nd A Street, Saskatoon
Precision Machine Shop	140 Avenue "C" South, Saskatoon
Railway Ave. Repairs	109 Railway Avenue, Weyburn
Regina Electric and Machine Co. Ltd.	1763 Halifax Street, Regina
Regina Mechanics and Ornamental Iron Works	1320 Hamilton Street, Regina
Saskatoon Engine Rebuilders Ltd.	621 Avenue South, Saskatoon
Swanson Industries Ltd.	417 Avenue M. S., Saskatoon
Tractor Boneyard	400 McIntyre Street, Regina
Venables Machine Works	309 Avenue "B" North, Saskatoon
Western Machine Shop	102 Sask. Avenue E., Melfort
Weyburn Iron Works	703 Railway Avenue, Weyburn
<b>Alberta:</b>	
Able Machine Works (Edmonton) Ltd.	111th Avenue & 151st Street, Jasper Place
Acro Machine and Specialty (Calgary) Ltd.	1917-10th Ave. S. W., 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 Limited	4608 Macleod Trail, Calgary
Barber Machinery Ltd.	10358-65th Avenue, Edmonton
Barrie's Engine Service & Supply Co. Ltd.	6018-22-104th Street, Edmonton
Bartman's Machine Shop	1st Street W., Hanna
Bennett & Emmott Limited	10820-119th Street, Edmonton
Brady, Al, Equipment Repairs Ltd.	15805-93rd Avenue, Jasper Place
Byer's Machine Shop	12819 Fort Road, Edmonton
Camrose Engineering and Machine Co.	Box 280, Camrose
Canadian Equipment Sales and Service Co. Ltd.	7310-99th Street, Edmonton
Central Hydraulic Manufacturing Co.	9809-62nd Avenue, Edmonton
Consort Machine Shop	Consort
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.	Black Foot Trail, 950th Ave. S.E., Calgary
Drumheller Iron Works	220-5th Street W., Drumheller
Electric Machine Service	10550-106th Street, Edmonton



List of Establishments classified to This Industry, 1963 - Continued

Name	Location
<b>Alberta - Concluded:</b>	
Gleave Machine Ltd.	Box 1,405, Stettler
Harrison's Machine Shop	4,717-496th Avenue, Lacombe
Hayden's Machine Shop	Longview
Hunt Welding Services	1,422-2nd Avenue S., Lethbridge
H-Way Machine Shop	Alix
Independent Machinery Ltd.	1,449-17th Ave. S.E., Calgary
Industrial Machine Shop, Ltd.	10,549-110th Street, Edmonton
Irma Machine Works	Irma
Jackson's Welding (Calgary) Ltd.	2,005-14th A Street S.E., Calgary
Kemell Machine Co.	Sundre
Kirk's Metallizing Works Ltd.	11,716-82nd Street, Edmonton
Lennox Welding and Supply Ltd.	5,734-103rd Street, Edmonton
Lethbridge Industries Ltd.	1,117-2nd Ave. "A" North, Lethbridge
Liberty Machine Works Ltd.	10,247-103rd Street, Edmonton
Linden Machine Works Ltd.	Linden
Mannville Machine Shop	Mannville
McKinney Machine Company Ltd.	9,535-63rd Avenue, Edmonton
McLennan and Rooks	Front Street, Vermilion
Medicine Hat Iron Works	690 South Railway St., Medicine Hat
Moro Machine Co. Ltd.	Peace River
Mottus, W. Machine Shop	Rocky Mountain House
Mount View Machine Co. Ltd.	424-51st Avenue S.E., Calgary
Nichols Bros Ltd.	10,103-95th Street, Edmonton
Niven Truck Equipment Ltd.	216-1st Avenue South, Lethbridge
North Edmonton Iron Works	12,804 Fort Road, Edmonton
Northern Hydraulics & Instruments Ltd.	5,310-103rd A Street, Edmonton
Oilfield Specialty Welding Ltd.	5,610-103 A Street, Edmonton
Oilwell Machine Co.	Box 358, Turner Valley
Oxford Machine and Welding Co. Ltd.	10,904-119th Street, Edmonton
Paragon Machine Co.	511-3rd Avenue S.W., Calgary
Pepper Bros. Ltd.	360-4th St. W., Drumheller
Red Deer Iron Works	4,912-52nd Street, Red Deer
Rice Machine Service Ltd.	319-38th Avenue S.E., Calgary
Saskatoon Welding and Machine Ltd.	11,519-105th Avenue, Edmonton
Steel Industries of Grande Prairie Ltd.	10,115-101st Avenue, Grande Prairie
Tappenden, Fred S. Ltd.	11,902-72nd Street, Edmonton
Taylor, Pearson and Carson (Edmonton) Ltd.	11,015-120th Street, Edmonton
Tofield Farm Equipment	Lot 33-35, Town of Tofield
Valley Tool and Machine Co.	1,504-40th Avenue S.W., Calgary
Volk Machine Shop Ltd.	4,512-6th Street N.E., Calgary
Warren Machine Works	Delburne
Western Hydraulic and Machine Ltd.	12,225 Fort Rd., Edmonton
<b>British Columbia:</b>	
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.	7,327 Duncan Street, Powell River
Alberni Engineering & Shipyard Ltd.	104 Bird Street, Port Alberni
Allweld Construction Ltd.	148 East 1st Avenue, Vancouver 10
Anderson Engineering	22,624 Trans-Canada Hwy. R.R.7, Langley
Ansell Machine Works	1,615 Franklin St., Vancouver 6
Argyle Machine Works (1962) Ltd.	10 Argyle Street, Port Alberni
Arm, W.F. Machine Works Ltd.	2,022 Main Street, Vancouver
Armstrong Machine Shop, Ltd.	Railway Avenue, Armstrong
Arrow Smith Engineering Ltd.	138 Beaver Creek Rd., Alberni
B.C. Motor Builders Ltd.	655 West 7th Avenue, Vancouver 9
B.C. Nuhult Castings Ltd.	1,175 Union Street, Vancouver 6
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.	1,529 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.	Island Highway, Campbell River
Cannon Machine Works Ltd.	626 Alexander Street, Vancouver
Capilano Engineering Co. Ltd.	1,675 West 2nd Avenue, Vancouver 9
Cariboo Drives Bearing Sales Ltd.	100 Mile House
Carter Machine Works Ltd.	71 Braid St., New Westminster
Cassidy Industrial Engineering Ltd.	95 East 3rd Avenue, Vancouver 10
Central Machine Shop	254 Ellis St., Penticton
Chapman Motor and Machine Shop Ltd.	1,680 W. 5th Avenue Vancouver 9
City Welding and Machine Shop Ltd.	44,375 Yale Rd. W., Chilliwack
Coast Machine Works Shop	1,279 E. Pender St., Vancouver 6
Coleman Machine Works Ltd.	Quesnel
Columbia Machine Works Ltd.	360 W. 4th Avenue, Vancouver 10
Coulter and March Machine Shop Ltd.	4,878 Elliott St., Ladner
Courtenay Machine Shop Ltd.	Union Bay Rd., Courtenay
Cowie Machine Co. Ltd.	362 Selby Street, Nanaimo
Cylinder Grinders Ltd.	1,216 Seymour St., Vancouver 2
Dafoe, V.M.	Foot of Rogers St., Vancouver
David Machine Shop & Welding	Box 323, Chase
Dawson Creek Industries	1,113 Alaska Ave., Dawson Creek
Derrick Machinery Co. Ltd.	9,113 McKenzie St., Fort St. John
Duncan Iron Works Ltd.	162 Government St., Duncan
Earl's Machine Shop	1,446 Clark Drive, Vancouver
Easthope Bros. Ltd.	1,225 1 Road, Steveston
Ebco Manufacturing and Plating Ltd.	235 East 5th Ave., Vancouver
Eldo Industries	1,272 West 6th Avenue, Vancouver 9
Fort Machine Shop	Fort St. James

List of Establishments classified to This Industry, 1963 - Concluded

Name	Location
<b>British Columbia - Concluded:</b>	
Gillen and Pike Ltd.	1,784 West Georgia St., Vancouver 5
Glendale Machine Shop Ltd.	Williams Lake
Golden Machine Shop Ltd.	922-11th Avenue E., Golden
Grove's Machine Shop	4,774 E. Hastings St., North Burnaby
Hafer Machine Co. Ltd.	1,720 Store Street, Victoria
Harjim Machine Works Ltd.	2,500 Rock Bay Ave., Victoria
Harvey's Machine Shop	Box 438, Oliver
Heatley Machine Works Ltd.	636 Alexander St., Vancouver 4
Hill's Machine Shop Ltd.	Marine Drive, Gibsons
Hope Machine Shop	Wallace Street Hope
Hope Manufacturing Co. Ltd.	1,995 Franklin Street, Vancouver 6
Humphrey, Art Ltd.	4,449 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
Kalso Machine Shop	Kalso
Kelowna Steel Fabricators Ltd.	864 Cowley Ave., Kelowna
Langley Welding and Machine Shop	20,272 Trans-Canada Hwy. (Box 137), Langley
Lund Machine Shop	Lund
Marpole Machine Works Ltd.	1,422 S.W. Marine Drive, Vancouver
Massey's Machine Shop Ltd.	4,915 Ghisholm St., Ladner
Master Machine Co. Ltd.	5 West 2nd Avenue, Vancouver
McConnell's Machine Shop Ltd.	Government St. P.O. Box 107, Burns Lake
Modern Engineering Co. Ltd.	1,695 West 5th Avenue, Vancouver 9
Mooney Machine Works	300 East Esplanada St. North Vancouver
Morrison Welding and Supply Ltd.	150 Terminal Avenue, Nanaimo
Murray-Latta Machine Co. Ltd.	311 W. 2nd Avenue, Vancouver 10
Muth, R. and Sons Machine Shop	17 Ave. Lougheed Hwy., Albion
Nanaimo Foundry and Engineering Works, Ltd.	100 Comox Road, Nanaimo
National Shops Ltd.	Grandville Island, Vancouver 9
Newnes Machine and Iron Works Ltd.	Front St., Salmon Arm
Narco 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
Okanagan Equipment Limited (Nash Engineering Works Div.)	870-3rd Avenue, Prince George
Okanagan Equipment Limited (Interior Machine Works Div.)	2,700-32nd Street, Vernon
Olmstead's Machine Shop	Island Highway R.R. 1, Campbell River
Paragon Equipment Mfg. Co. Ltd.	885 East Cordova St., Vancouver 4
P. & J. Machine Shop Ltd.	Athlmer
Pendozi Machine Shop	3,006 Pandosy St., Kelowna
Pentiction Engineering Works Ltd.	1,048 Westminster Ave. N., Penticton
Pinchbeck, F.W.	1,429 River St., Kamloops
Plant Service	8932 Oak St., Vancouver 14
Port Machine Works	707-4th Avenue North, Port Alberni
Powell Machine Works, Ltd.	32,893 Lougheed Highway, Mission City
Prince George Welding and Machine Shop	1,153-4th Avenue, Prince George
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 Horne, Cranbrook
Reliance Motor & Machine Works, Ltd.	395 Alexander St., Vancouver 4
Richards Engineering Company Ltd.	8,810 Selkirk Street, Vancouver 14
Rosedale Machine Shop Ltd.	9880 Munroe Avenue, Rosedale
Rousson's Machine Shop	10,500-135th A Street, North Surrey
Salmon Arm Machine Shop	Hudson & Ross Sts., Salmon Arm
Sig's Machine Shop	1,832 West Georgia St., Vancouver 5
Skeewa Marine Services	162-3rd Ave. E., Prince Rupert
Smith Industries (1958) Ltd.	197 East 20th Avenue, Vancouver 10
Smyth Machine Shop	98 Hwy. North, Princeton
Sooke Machine Shop Ltd.	Sooke
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	1235-1 Rd., Steveston
Stewart Bros. Repair Shop	504 Lake St., Nelson
Surrey Engineering Co.	13,495 Trans-Canada Highway, North Surrey
Tofino Marine Service Ltd.	Tofino
Trail Machine Works Ltd.	2,045 Columbia Avenue, Trail
Trail Sales and Machine Ltd.	3,160 Highway Drive, Trail
United Engineering Works, Ltd.	575 Pembroke St., Victoria
Valley Welding Shop	45,670 Yale Rd. West, Chilliwack
Vernon Machine and Equipment Ltd.	3,002-34th Street, Vernon
Viking Mfg. Co. Ltd.	1,671 East Hastings St., Vancouver 6
Wallace Machine and Manufacturing Co. Ltd.	1,663 Venables St. Vancouver 6
Warner Machine Shop	New Westminster
Welsh R.L. Ltd.	3,842 Commercial Dr., Vancouver 12
Western Machine Works Ltd.	1,705 W. Georgia St., Vancouver 5
Westview Machine Shop Ltd.	4,600 Willington Ave., Powell River
White Bros. Machining and Mfg. Co.	1,100 Comox Road, Courtenay
Whitehouse Machine Shop	2,527 Bevan Ave., Sidney
Williams Lake Machine Shop	S. Mackenzie Ave., Williams Lake
Williams & White Machine Shop Ltd.	6,280 McKay Ave., S. Burnaby
Windsor Machine Co. Ltd.	1,331 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 58 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 178 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 140 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 various 1963 reports reflect the complete implementation of these changes and enable comparisons to be made with the years 1961 and 1962. 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 activity**

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. 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. 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.). 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 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 materials and fuel and electricity consumed from the value of production (value of shipments 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

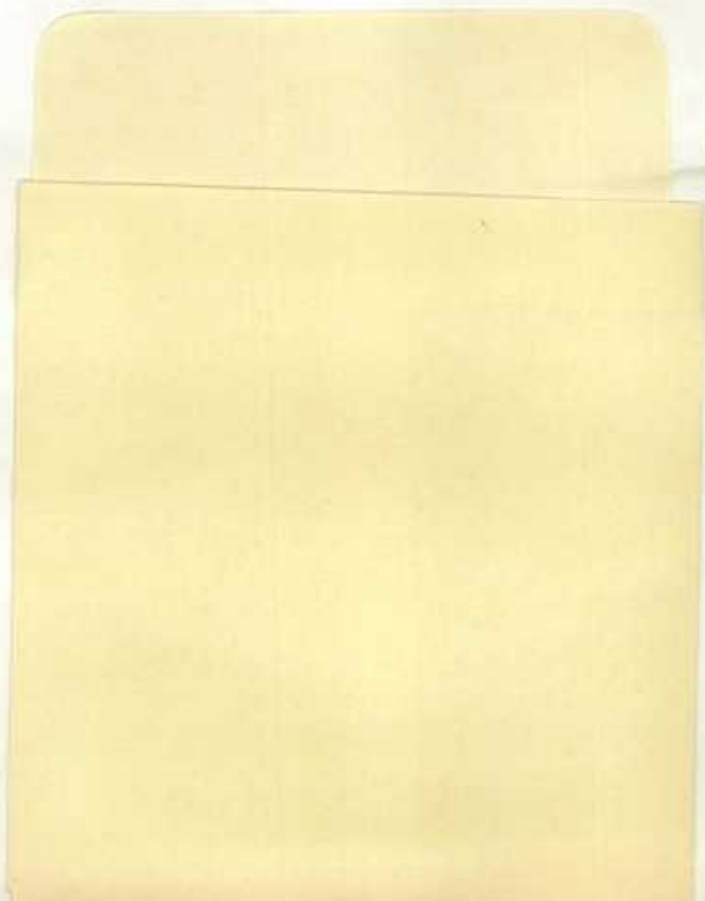
purchased for re-sale) and the cost of other materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

**(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 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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