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MARKET INTELLIGENCE

IMPORT ANALYSIS

HYDRAULIC PUMPS AND MOTORS

APRIL, AUGUST AND DECEMBER 1986

Pub. No.: 89002-RR August 1989



Industry, Science and
Technology Canada

Industrie, Sciences et
Technologie Canada

Canada

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EXPLANATORY NOTES

Method

The data shown in this analysis is extracted from Revenue Canada Customs documents. These documents provide a description of the products, names of importers, exporters, quantities, dollar values, unit prices, countries of origin, provinces of entry, tariff applications and rates of exchange.

The information presented in this report is more detailed than that generally available from Statistics Canada or other publications. Data which might reveal information about individual importers is aggregated.

Valuation

Dollar values shown in this report are based on selling price F.O.B. plant, in Canadian dollars. This selling price represents the value paid by the importer, excluding all freight, packing and insurance costs when specified. All trade discounts, when applicable, are also deducted from the selling price.

Rounding

Figures may not add due to rounding.

REFERENCE SOURCES

Industry, Science and Technology Canada
Statistics Canada
Revenue Canada

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IMPORT ANALYSIS

HYDRAULIC PUMPS AND MOTORS

I. INTRODUCTION AND SCOPE

This Import Analysis is one of a series prepared in order to assist businesses and other organizations in their market research of specific products. The detailed import information provided in these reports supports studies by organizations seeking to expand existing production lines, change individual product characteristics or engage in new manufacturing investment in Canada. The coverage of an import analysis is developed in close consultation with the client, and is tailored to meet those specific requirements. It is important to emphasize that this report does not attempt any assessment as to the feasibility of competing in a particular market.

This analysis of imports of hydraulic pumps and motors is based on a detailed examination of Revenue Canada Customs import documents for the months of April, August and December 1986. The following Canadian International Trade Classification (C.I.T.C.) import commodity codes were analysed:

HYDRAULIC PUMPS

504-85-20 Pumps, Hydraulic, Vane Type, Power Transmission
504-85-30 Pumps, Hydraulic, Gear Type, Power Transmission
504-85-40 Pumps, Hydraulic, Axial Piston Type, Power Transmission
504-85-50 Pumps, Hydraulic, Radial Piston Type, Power Transmission
504-85-90 Pumps, Hydraulic, Power Transmission, Not Elsewhere Specified

HYDRAULIC MOTORS

502-99-40 Motors, Hydraulic, Radial Piston, General Purpose
502-99-44 Motors, Hydraulic, Axial Piston, General Purpose
502-99-45 Motors, Hydraulic, Gear Type, General Purpose
502-99-46 Motors, Hydraulic, Gerotor Type, General Purpose
502-99-49 Motors, Hydraulic, General Purpose, Not Elsewhere Specified

Because of the large number of documents with imports recorded under these codes, only those documents having import values of \$4 000 and over were examined to provide the information in this analysis.

Imports of hydraulic pumps have been identified in this report as gear, gerotor, piston, screw and vane types; hydraulic motors have been similarly identified (gear, gerotor, piston and vane).

II. ANALYSIS OF IMPORTS

In the three months April, August and December, 1986, imports of hydraulic pumps and motors were as follows:

<u>Product</u>	<u>Qty</u> (No.)	<u>Value</u> (\$000)	<u>Average</u> <u>Unit Price</u> (\$)
Pumps	19 590	6 154	314
Motors	16 132	4 925	305
TOTAL	35 722	11 079	

SUMMARY OF IMPORTS
HYDRAULIC PUMPS AND MOTORS - BY TYPE
APRIL, AUGUST and DECEMBER 1986

<u>TYPE</u>	<u>Pumps</u>			<u>Motors</u>			<u>Total</u>	
	<u>Qty</u> (000)	<u>Value</u> (\$million)	<u>Avg.Price</u> (\$/unit)	<u>Qty</u> (000)	<u>Value</u> (\$million)	<u>Avg.Price</u> (\$/unit)	<u>Qty</u> (000)	<u>Value</u> (\$million)
Gerotor	0.1	*	335	10.8	1.9	174	10.9	1.9
Piston	3.4	2.1	640	2.0	1.8	893	5.4	3.9
Gear	6.7	1.2	187	0.4	0.1	221	7.1	1.3
Vane	7.0	1.6	223	0.2	0.1	713	7.2	1.7
Screw	*	*	2 104	-	-	-	*	*
Not Known	2.3	1.1	462	2.7	1.0	375	5.1	2.1
TOTAL	19.6	6.2	314	16.1	4.9	305	35.7	11.1

*50 units or less / \$50 thousand or less.

During the months covered in this project, gear and vane pumps accounted for the bulk of the pump units (nearly 14 thousand pumps), their average prices being in the \$200 range. Piston pumps made up most of the rest of the pumps, but at an average price over \$600 accounted for a third of the value. Motors were dominated by the gerotor type (nearly 11000 units) averaging \$174 per unit. Piston motors average almost \$900, so the total value of this type was almost equal to Gerotor motors.

II. ANALYSIS OF IMPORTS (Cont'd)

Summary of Characteristics of Pumps

Of the 19.6 thousand units of hydraulic pumps, only 17.3 thousand units valued at \$5.1 million or 88 per cent of the total value of pumps imports during April, August and December 1986 could be identified as to type. The following provides observations on these identified hydraulic pumps according to type and are based on the detailed data found in Appendix A.

Hydraulic pumps, piston type, represented 3 352 units valued at \$2.1 million. Of these, 889 units valued at \$1.0 million had pressure ratings of 2 000 to under 5 000 pounds per square inch (PSI) and flowratings of over 30 to 100 U.S. gallons per minute (U.S. GPM).

Imports of hydraulic vane pumps consisted of 7 040 units valued at \$1.6 million. Of these, 1 611 units valued at \$0.6 million with pressure ratings of 2 000 to under 5 000 PSI and flowratings of over 30 to 60 U.S. GPM constituted 41 per cent of the total value of vane pumps. The average unit price of these 1 611 units was \$409.

Hydraulic gear pump imports totalled 6 666 units valued at \$1.2 million. Pumps with pressure ratings of 2 000 to under 5 000 PSI and flowratings up to 60 U.S. GPM represented 5 866 units valued at \$0.9 million. These units constituted 74 per cent of the total value of gear pumps and they averaged \$187 per unit.

Imports of hydraulic screw pumps totalled \$50 000 and had pressure ratings of 2 000 to under 5 000 PSI with flowratings of 30 to over 100 U.S. GPM.

Most of the imports of hydraulic gerotor pumps constituted pumps with pressure ratings of 2 000 to under 5 000 PSI and flowratings of over 15 to 30 U.S. GPM.

Summary of Characteristics of Motors

Of the 16.1 thousand units of hydraulic motors imported, only 13.4 thousand units valued at \$ 3.9 million or 80 per cent of the total value of motors imported during April, August and December 1986 could be identified as to displacement, pressure and rotational speed. The following provides observations on these. For greater detail of the following data refer to Appendix B.

Imports of gerotor type motors amounted to 10 759 units valued at \$1.9 million. Units with pressure ratings of 2 000 to under 3 000 PSI constituted 56 per cent or \$1.0 million of this value. The chief share of these motors had displacement ratings of 5 to under 15 cubic inches per revolution and rotational speed ratings of 300 to under 1 000 revolutions per minute (RPM).

Units with pressure ratings of 3 000 to under 5 000 PSI dominated the remaining shipments of hydraulic gerotor motors.

Imports of piston type motors totalled 2 041 units valued at \$1.8 million. Units with pressure ratings of 3 000 to under 5 000 PSI comprised 81 per cent or \$1.5 million of this value. Within this cluster, units with displacement ratings of 100 in.³/rev. and over and rotational speed ratings of up to 300 RPM dominated.

Hydraulic piston motors with pressure ratings of 5 000 PSI and over totalled 567 units valued at \$295 000. The average unit price was \$520 with a low of \$290 and a high of \$1 280.

Almost 500 piston type motors with pressure ratings of 2 000 to 3 000 PSI, and none with lesser pressure ratings, were found.

Imports of hydraulic vane and hydraulic gear motors constituted only 4 per cent of the total dollar value of motors. The average unit price of vane motors was \$713.

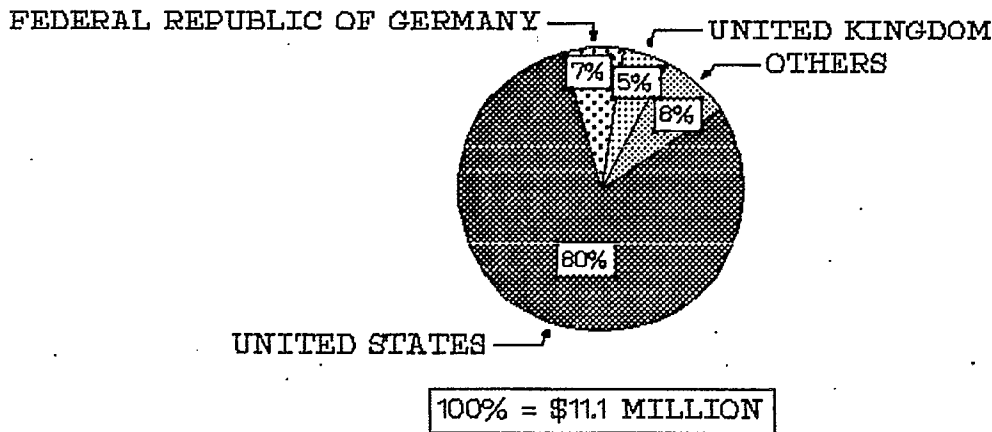
Of all identified motors, 11 362 units valued at \$2.3 million with displacement ratings of under 15 in.³/rev. represented 60 per cent of their total value.

II. ANALYSIS OF IMPORTS (Cont'd)

HYDRAULIC PUMPS AND MOTORS
APRIL, AUGUST AND DECEMBER 1986

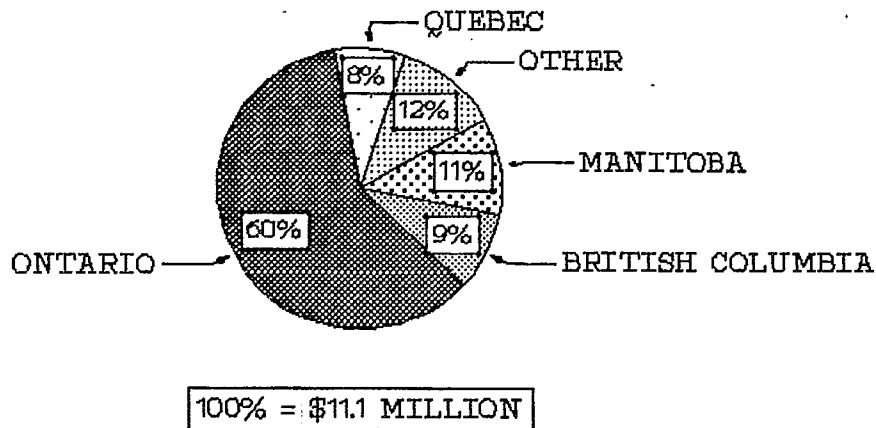
United States was the dominant source of imports of hydraulic pumps and motors during the period analysed, accounting for \$8.8 million or 80 per cent of the total import value, followed by the Federal Republic of Germany and the United Kingdom with 7 and 5 per cent respectively. Refer to Appendix C for greater detail of imports from the remaining exporting countries.

COUNTRY OF ORIGIN



Ontario was the major province of consignee accounting for \$6.6 million or 60 per cent of the total import value followed by Manitoba, British Columbia and Québec with 11, 9 and 8 per cent respectively. Appendix D gives further details of imports by province of consignee.

PROVINCE OF CONSIGNEE



II. ANALYSIS OF IMPORTS (Cont'd)

IMPORT MARKET CONCENTRATION
HYDRAULIC PUMPS AND MOTORS
APRIL, AUGUST AND DECEMBER 1986

<u>Principal</u> <u>Consignees/Importers</u> (By Value)	<u>Cumulative</u> <u>Quantity</u> (No.)	<u>Cumulative %</u> <u>of Quantity</u>	<u>Cumulative</u> <u>Value</u> (\$000)	<u>Cumulative %</u> <u>Total Value</u>
3	13 081	37	3 140	28
6	15 081	42	4 423	40
10	19 244	54	5 558	50
15	20 938	59	6 596	60
25	26 348	74	8 077	73
40	29 859	84	9 072	82
77	33 199	93	10 296	93
All Consignees/ Importers (170)	35 722	100	11 079	100

There were 170 importers of hydraulic pumps and motors, as described in this report, during the months of April, August and December 1986. The principal three importers accounted for \$3.1 million or 28 per cent of the total analysed value. Of the 77 principal importers 25 had individual imports of over \$100 000 during that period, while each of the remaining 52 had imports of at least \$20 000. All consignees/importers are listed in alphabetical order in Appendix E.

III. CANADIAN PRODUCTION

According to industry sources, hydraulic pumps and motors as described in this report are made in Canada. However, for reasons of confidentiality, data on production or shipments by Canadian manufacturers are not available.

IV. MARKET SUMMARY

The Canadian market for hydraulic fluid power pumps and motors is estimated at \$60 million annually. Although there is a very limited manufacture of these products in Canada, there is a strong contingent of firms supplying imported products and engineered systems to a multitude of end users in many industries such as pulp and paper, automotive, oil and gas, agricultural and chemical products.

Continued growth in the use of hydraulics and hydraulic systems in industry, and the establishment of the Canada-USA Free Trade Agreement, have created opportunities to increase Canadian manufacture of hydraulic components. Several firms in Canada have expressed interest in manufacturing pumps and motors under technology transfer or licensing agreements with foreign counterparts.

Canada, with its manufacturing and marketing expertise and its proximity to major US markets (approx. 15 times the Canadian market), is an opportune place to situate manufacturing facilities to serve North American and offshore markets.

IMPORTS OF HYDRAULIC PUMPS BY FLOWRATE AND PRESSURE
APRIL, AUGUST AND DECEMBER 1986

FLOWRATE (U.S. GPM)	PRESSURE - PSI								TOTAL		AVERAGE UNIT PRICE
	UNDER 2000		2000 TO UNDER 5000		5000 AND OVER		PRESSURE NOT KNOWN				
	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	PRICE (\$)
HYDRAULIC PISTON PUMPS											
Up to 15	12	*	621	171	79	*	-	-	712	219	*
Over 15 to 30	-	-	291	122	565	124	-	-	856	246	287
Over 30 to 60	-	-	449	440	277	292	-	-	726	732	1 008
Over 60 to 100	-	-	440	530	136	213	-	-	576	742	1 289
Over 100	-	-	6	83	6	63	-	-	12	146	12 166
Flowrate Not Known	-	-	-	-	-	-	470	59	470	59	126
TOTAL	12	*	1 807	1 346	1 063	*	470	59	3 352	2 144	640
Average Unit Price		*		\$ 745		*		\$126			
HYDRAULIC VANE PUMPS											
Up to 15	24	9	3 100	454	-	-	-	-	3 124	462	148
Over 15 to 30	255	68	1 943	319	-	-	-	-	2 198	387	176
Over 30 to 60	12	*	1 611	645	-	-	-	-	1 623	*	*
Over 60 to 100	-	-	88	48	-	-	-	-	88	48	545
Over 100	-	-	2	*	-	-	-	-	2	*	*
Flowrate Not Known	-	-	-	-	-	-	5	9	5	9	1 800
TOTAL	291	*	6 744	*	-	-	5	9	7 040	1 571	223
Average Unit Price		*		*				\$1 768			
HYDRAULIC GEAR PUMPS											
Up to 15	-	-	3 583	370	4	*	-	-	3 587	*	*
Over 15 to 30	23	*	1 050	228	-	-	-	-	1 073	*	*
Over 30 to 60	438	85	1 233	322	-	-	-	-	1 671	407	244
Over 60 to 100	26	*	121	101	-	-	-	-	147	*	*
Over 100	-	-	43	69	-	-	-	-	43	69	1 605
Flowrate Not Known	-	-	-	-	-	-	145	30	145	30	207
TOTAL	487	*	6 030	1 090	4	*	145	30	6 666	1 249	187
Average Unit Price		*		\$181		*		\$207			

* Not disclosed to protect confidentiality of Canadian importers.

IMPORTS OF HYDRAULIC PUMPS BY FLOWRATE AND PRESSURE (Cont'd)
APRIL, AUGUST AND DECEMBER 1986

FLOWRATE (U.S. GPM)	PRESSURE - PSI								TOTAL	AVERAGE UNIT PRICE	
	UNDER 2000		2000 TO UNDER 5000		5000 AND OVER		PRESSURE NOT KNOWN				
	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)			Qty (No.)
HYDRAULIC SCREW PUMPS											
Over 30 to 60	-	-	18	*	-	-	-	-	18	*	*
Over 60 to 100	-	-	2	*	-	-	-	-	2	*	*
Over 100	-	-	4	*	-	-	-	-	4	*	*
TOTAL	-	-	24	50	-	-	-	-	24	50	2 104
Average Unit Price	\$2 104										
HYDRAULIC GEROTOR PUMPS											
Up to 15	1	*	42	*	-	-	-	-	43	*	*
Over 15 to 30	-	-	98	*	-	-	-	-	98	*	*
Over 30 to 60	-	-	-	-	1	*	-	-	1	*	*
TOTAL	1	*	140	42	1	*	-	-	142	48	335
Average Unit Price	*										

* Not disclosed to protect confidentiality of Canadian importers.

IMPORTS OF HYDRAULIC MOTORS BY DISPLACEMENT BY ROTATIONAL SPEED AND BY PRESSURE
APRIL, AUGUST AND DECEMBER 1986

DISPLACEMENT (in. ³ /rev.)	ROTATIONAL SPEED - RPM										TOTAL	
	UNDER 300		300 TO UNDER 1000		1000 TO UNDER 3000		3000 TO UNDER 5000		5000 AND OVER		Qty.	Value
	Qty. (No.)	Value (\$000)	Qty. (No.)	Value (\$000)	Qty. (No.)	Value (\$000)	Qty. (No.)	Value (\$000)	Qty. (No.)	Value (\$000)	(No.)	(\$000)
<u>HYDRAULIC GEROTOR MOTORS - PRESSURE - PSI UNDER 2000</u>												
Under 5	-	-	251	*	140	16	-	-	-	-	391	*
5 to Under 15	-	-	59	*	-	-	-	-	-	-	59	*
15 to Under 40	583	53	-	-	-	-	-	-	-	-	583	53
40 to Under 100	<u>1</u>	<u>*</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>*</u>
TOTAL	584	*	310	*	140	16	-	-	-	-	1 034	89
<u>HYDRAULIC GEROTOR MOTORS - PRESSURE - PSI 2000 TO UNDER 3000</u>												
Under 5	-	-	13	*	-	-	655	108	-	-	668	*
5 to Under 15	-	-	6 741	907	1	*	-	-	10	*	6 752	*
15 to Under 40	<u>61</u>	<u>26</u>	<u>7</u>	<u>*</u>	<u>6</u>	<u>*</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>74</u>	<u>*</u>
TOTAL	61	26	6 761	*	7	*	655	108	10	*	7 494	1 048
<u>HYDRAULIC GEROTOR MOTORS - PRESSURE - PSI 3000 TO UNDER 5000</u>												
Under 5	-	-	1	*	687	340	1 094	241	-	-	1 782	
5 to Under 15	32	*	54	12	-	-	10	*	-	-	96	
15 to Under 40	54	*	207	71	15	*	68	15	-	-	344	
40 to Under 100	<u>-</u>	<u>-</u>	<u>9</u>	<u>*</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>9</u>	<u>-</u>
TOTAL	86	*	271	*	702	*	1 172	*	-	-	<u>2 231</u>	<u>71</u>
GRAND TOTAL - GEROTOR MOTORS											10 759	1 85

* Not disclosed to protect confidentiality of Canadian importers.

APPENDIX B

IMPORTS OF HYDRAULIC MOTORS BY DISPLACEMENT - BY ROTATIONAL SPEED AND BY PRESSURE (Cont'd)
APRIL, AUGUST AND DECEMBER 1986

DISPLACEMENT (in. ³ /rev.)	ROTATIONAL SPEED - RPM										TOTAL	
	UNDER 300		300 TO UNDER 1000		1000 TO UNDER 3000		3000 TO UNDER 5000		5000 AND OVER		Qty (No.)	Value (\$000)
	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)		
HYDRAULIC PISTON MOTORS - PRESSURE - PSI 2000 TO UNDER 3000												
Under 5	-	-	-	-	-	-	-	-	-	-	*	*
to Under 15	-	-	-	-	-	-	-	-	-	-	-	-
15 to Under 40	-	-	-	-	-	-	-	-	-	-	*	*
TOTAL	-	-	-	-	*	*	*	*	-	-	479	52
HYDRAULIC PISTON MOTORS - PRESSURE - PSI 3000 TO UNDER 5000												
Under 5	-	-	-	-	121	61	417	141	-	-	538	202
5 to Under 15	3	*	24	*	9	24	10	12	-	-	46	*
15 to Under 40	-	-	86	67	-	-	-	-	-	-	86	67
40 to Under 100	82	218	126	264	-	-	-	-	-	-	208	482
100 and Over	<u>116</u>	<u>669</u>	<u>1</u>	<u>*</u>	-	-	-	-	-	-	<u>117</u>	<u>*</u>
TOTAL	201	*	237	*	130	85	427	153	-	-	995	1 476
HYDRAULIC PISTON MOTORS - PRESSURE - PSI 5000 AND OVER												
Under 5	-	-	-	-	-	-	75	46	385	112	460	158
5 to Under 15	-	-	-	-	-	-	<u>107</u>	<u>137</u>	-	-	107	137
TOTAL	-	-	-	-	-	-	182	183	385	112	<u>567</u>	<u>295</u>
GRAND TOTAL - PISTON MOTORS										2 041	1 823	

IMPORTS OF HYDRAULIC MOTORS BY DISPLACEMENT - BY ROTATIONAL SPEED AND BY PRESSURE (Cont'd)
APRIL, AUGUST AND DECEMBER 1986

DISPLACEMENT (in. ³ /rev.)	ROTATIONAL SPEED - RPM									
	UNDER 300		300 TO UNDER 1000		1000 TO UNDER 3000		3000 TO UNDER 5000		TOTAL	
	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)	Qty (No.)	Value (\$000)
<u>HYDRAULIC VANE MOTORS-PRESSURE - PSI 2000 TO UNDER 3000</u>										
Under 5	-	-	-	-	-	-	49	*	49	*
5 to Under 15	-	-	-	-	-	-	38	*	38	*
15 to Under 40	-	-	1	*	52	*	-	-	53	*
100 and Over	<u>1</u>	<u>*</u>	-	-	-	-	-	-	<u>1</u>	<u>*</u>
TOTAL	1	*	1	*	52	*	87	*	141	81
<u>HYDRAULIC VANE MOTORS - PRESSURE - PSI 3000 TO UNDER 5000</u>										
5 to Under 15	-	-	-	-	6	*	-	-	6	*
40 to Under 100	<u>2</u>	<u>*</u>	-	-	-	-	-	-	<u>2</u>	<u>*</u>
TOTAL	2	*	-	-	6	*	-	-	<u>8</u>	<u>13</u>
GRAND TOTAL - VANE MOTORS									149	94
<u>HYDRAULIC GEAR MOTORS - PRESSURE - PSI 2000 TO UNDER 3000</u>										
40 to Under 100	-	-	-	-	27	*	-	-	27	*
TOTAL	-	-	-	-	27	*	-	-	27	*
<u>HYDRAULIC GEAR MOTORS - PRESSURE - PSI 3000 TO UNDER 5000</u>										
Under 5	-	-	-	-	323	*	41	*	364	*
15 to Under 40	-	-	37	*	-	-	-	-	37	*
40 to Under 100	<u>-</u>	<u>-</u>	<u>1</u>	<u>*</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>*</u>
TOTAL	-	-	38	*	323	*	41	*	<u>402</u>	<u>73</u>
GRAND TOTAL - GEAR MOTORS									429	73

* Not disclosed to protect confidentiality of Canadian importers.

APPENDIX C

IMPORTS OF HYDRAULIC PUMPS AND MOTORS - BY COUNTRY OF ORIGIN
APRIL, AUGUST AND DECEMBER 1986

<u>Country of Origin</u>	<u>Qty</u> <u>(No.)</u>	<u>Value</u> <u>(\$000)</u>	<u>% of Total</u> <u>Value</u>
United States	32 904	8 813	80
Federal Republic of Germany	848	765	7
United Kingdom	708	586	5
Others*	<u>1 262</u>	<u>915</u>	<u>8</u>
TOTAL	35 722	11 079	100

*Includes: Sweden, Japan, Italy, Denmark, Finland, Norway, Switzerland, Australia, Belgium, New Zealand, The Netherlands and France.

APPENDIX D

IMPORTS OF HYDRAULIC PUMPS AND MOTORS - BY PROVINCE OF CONSIGNEE
APRIL, AUGUST AND DECEMBER 1986

<u>Province</u>	<u>Qty</u> <u>(No.)</u>	<u>Value</u> <u>(\$000)</u>	<u>% of Total</u> <u>Value</u>
Ontario	22 208	6 608	60
Manitoba	5 543	1 265	11
British Columbia	1 356	952	9
Québec	2 088	894	8
Atlantic Provinces*	1 314	726	6
Saskatchewan	2 430	328	3
Alberta	<u>783</u>	<u>306</u>	<u>3</u>
TOTAL	35 722	11 079	100

*Consists of: New Brunswick, Nova Scotia and Newfoundland - Aggregated to protect confidentiality of Canadian importers.

CANADIAN IMPORTERS

April, August and December 1986

Importers of hydraulic pumps and motors during the period April, August and December 1986, as indicated in this report, are listed below in alphabetical order. Where the importer is not the same as the consignee (i.e. the recipient of the goods shipped), the name of the consignee rather than that of the importer is listed. The importer or consignee is not necessarily the end-user of the product.

NOTE: This list includes all importers except individuals.

<u>Name</u>	<u>Address</u>
ASEA Inc.	Toronto, Ont. Vancouver, B.C.
Abacus Hydraulics Ltd.	Ile Bizard, Qué.
Active Controls Ltd.	Vancouver, B.C.
Affiliated Engineering Equipment Ltd.	Montréal, Qué.
Alfa-Laval Ltd.	Scarborough, Ont.
Amador Hydraulic Services Ltd.	Brampton, Ont.
Angus R. Alberta Ltd.	Edmonton, Alta. Grande Prairie, Alta.
Arbrobec Parts Canada Ltd.	Chomedey, Laval, Qué.
Arvid Machine Tools Ltd.	Windsor, Ont.
Basic Hydraulics and Ind. Equip. Ltd.	Welland, Ont. Dartmouth, N.S.
Blackwood Hodge Equipment Ltd.	Winnipeg, Man.
Blue Giant Equipment Canada	Brampton, Ont.
Bomag Canada, Div. Amca Int'l Ltd.	Mississauga, Ont.
Camions Pierre Thibault Inc.	Pierreville, Qué.
Canadian Kenworth Co., Div. Paccar Canada Ltd.	Ste-Thérèse, Qué.
Canterra Engineering Ltd.	Calgary, Alta.
Caterpillar of Canada Ltd.	Mississauga, Ont.
Ceco Sales Ltd.	Delta, B.C.
Champion Road Machinery Ltd.	Goderich, Ont.
Chapman Industries Ltd. (Sawmill Mach.)	Delta, B.C.
Checker Industrial Rubber & Tire Ltd.	Windsor, Ont.
Clay Mill Technical Systems Inc.	Windsor, Ont.
Coast Tractor & Equipment Ltd.	Coquitlam, B.C.
Cole Motion Inc.	Windsor, Ont.
Concord Hydraulic Corp.	Calgary, Alta.
Coulson Hydraulic Ltd.	Red Deer, Alta.
Courtney Berg Industries Ltd.	Linden, Alta.
Crown Forest Industries Ltd.	Elk Falls, B.C.
Danfoss Manufacturing Co. Ltd.	Mississauga, Ont.
Delaval Turbine Canada Ltd.	Mississauga, Ont.
Delta Hydraulic Power Ltd.	Richmond, B.C.
Design Hydraulics Inc.	Montréal, Qué.
Dowty Canada Ltd.	Ajax, Ont.
Dresser Canada Inc.	Candiac, Qué. Mississauga, Ont. Paris, Ont.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Durand-Route Industries Ltd.	New Westminster, B.C.
Dynesco Equipment Sales Ltd.	Toronto, Ont.
Eastern Hydraulics Ltd.	Concord, Ont.
Eddy E.B. Forest Products Ltd.	Espanola, Ont.
Eltec Industries Ltd.	Surrey, B.C.
Engrenage Provinciale Inc.	Québec, Qué.
Equipment Denis Inc.	Ste-Rosalie, Qué.
Euromac Imports Inc.	Port Williams, N.S.
F. Jos Lamb Company Limited	Windsor, Ont.
Falk Canada Inc.	Rexdale, Ont.
Fishery Products Int'l Ltd.	St. John's, Nfld.
Fleck Brothers Ltd. (Guillevin International Inc.)	Burnaby, B.C.
Flender Power Transmission Inc.	Scarborough, Ont.
Flo-Draulic Controls Ltd.	Markham, Ont.
Fortress Allatt Limited	Downsview, Ont.
General Motors of Canada	London, Ont.
Gir Del Hydraulic Services Ltd.	St-Eustache, Qué.
Godfrey Howden, Div. Howden Group Canada Inc.	Edmonton, Alta.
Haessler & De Way Ltd.	Lachine, Qué.
Handling Specialty Mfg. Co. Ltd.	Brampton, Ont.
Hawboldt Industries Ltd.	Grimby, Ont.
Hayes-Dana Inc.	Chester, N.S.
Hendrickson Canada Ltd.	Beamsville, Ont.
Hepburn John T. Ltd.	Stratford, Ont.
Hewett Equipment Limited	Mississauga, Ont.
Husky Injection Molding Systems Ltd.	Pointe-Claire, Qué.
Husky Marine Services, Div. of Husky Oil	Bolton, Ont.
Hyd-Mech Engr. Ltd.	Halifax, N.S.
Hydra-Lift Industries Ltd.	Woodstock, Ont.
Hydra-Tech Sales & Service Inc.	Richmond Hill, Ont.
Hydracine Fluid Power Ltd.	Calgary, Alta.
Hydratec Industries Ltd.	Downsview, Ont.
Hydraulic Systems Ltd.	Regina, Sask.
Hydraunav Inc.	Dartmouth, N.S.
Hymatic Controls Ltd.	Duberger, Qué.
Hypower Systems Inc.	Burlington, Ont.
Hytac Equipment Ltd.	Regina, Sask.
Imperial Clevite Canada Inc.	Prince George, B.C.
Industrial Equipment Co. Ltd.	Vancouver, B.C.
Inovex Marketing Corp.	Barrie, Ont.
International Controls Ltd.	Delta, B.C.
International Harvester Canada Ltd. (Navistar)	Rimbey, Alta.
International Hough (Dresser Canada Inc.)	Oldcastle, Ont.
J. I. Case Int'l (Tenneco Canada Inc.)	Chatham, Ont.
	Candiac, Qué.
	Brampton, Ont.
	Hamilton, Ont.
	Regina, Sask.
J.N. Fauver Co. Ltd.	Mississauga, Ont.
Jaeger Canada Equipment Ltd.	St. Thomas, Ont.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Jobel Industrial Tool Inc.	Downsview, Ont.
John Deere Ltd.	Welland, Ont.
Key Lake Mining Corporation	Saskatoon, Sask.
Keypower Equipment Inc.	Richmond, B.C.
King Equipment Manufacturing Corp.	Woodstock, Ont.
Kingsbury Machine Tool (Canada) Ltd.	Burlington, Ont.
Kuelkers Mfg. Ltd.	Didsbury, Alta.
Lakehead Diesel & Hydraulics Limited	Thunder Bay, Ont.
Larochelle Phil Equipement 1977 Inc.	Québec, Qué.
Laurier Mfg. Ltd.	Cambridge, Ont.
Les Industries Tanguay Ltée	Markham, Ont.
Les Mines d'Or Kiena Limitée	St-Prime, Qué.
Les Équipements Hydraulics Marcel Bernard Ltée	Val d'Or, Qué.
Lessard Machineries Inc.	Laval, Qué.
Loadmaster Industries Ltd.	St-Wenceslas, Qué.
London Machinery Company	Winkler, Man.
Longyear Canada Inc.	London, Ont.
Lucas Industries Canada Ltd.	North Bay, Ont.
	Saskatoon, Sask.
	Dartmouth, N.S.
	St-Laurent, Qué.
	Winnipeg, Man.
MGW Controls Limited	Windsor, Ont.
MP Products Inc.	Concord, Ont.
Macdon Industries Ltd.	Winnipeg, Man.
Mack Canada Inc.	Oakville, Ont.
Magnéto Hydraulique & Pneumatique Inc.	Boucherville, Qué.
Mailhot Hydraulics Ltd.	St-Jacques, Qué.
	Brampton, Ont.
Mainline Hydraulics Ltd.	Calgary, Alta.
Mandem Inc.	Montréal, Qué.
Maratime Hydraulic Rpr Ctr Ltd.	Fox Creek, N.B.
Marubeni Canada Ltd.	Vancouver, B.C.
Massey Ferguson Ind. Ltd.	Regina, Sask.
Miramichi Pulp & Paper Inc.	New Castle, N.B.
Mobil Chemical, Div. Mobil Oil Canada Ltd.	Belleville, Ont.
Nord-Sen Metal Industries Ltd.	Winnipeg, Man.
North American Plastics Co. Ltd.	Wallaceburg, Ont.
Nugget Drilling Ltd.	Edmonton, Alta.
Octoprod Enterprises Inc.	West Vancouver, B.C.
Okanagan Helicopters Ltd.	Richmond, B.C.
Oliver Industrial Supply Co. Ltd.	Calgary, Alta.
Ontario Bus Industries Inc.	Mississauga, Ont.
PSI Fluid Power Ltd.	Edmonton, Alta.
	Calgary, Alta.
Parker-Hannifin (Canada) Ltd.	Grimsby, Ont.
	Mississauga, Ont.
Peerless Engineering Sales Ltd.	Burnaby, B.C.
Pitman Manufacturing Inc.	Markham, Ont.
Princess Auto & Machinery Ltd.	Winnipeg, Man.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Pritchard Engineering Co. Ltd.	Saskatoon, Sask.
Produits Forestiers, Div. Minis Gaspé	Murdockville, Qué.
Prominent Fluid Controls Ltd.	Mississauga, Ont.
Provincial Construction Niagara Falls	Niagara Falls, Ont.
Pullmaster Winch Corp.	Surrey, B.C.
Rainbow Pipe Ltd.	Peace River, Alta.
Robbins Mining Equipment (Canada) Ltd.	Sudbury, Ont.
Rock-O-Matic Industries, (Div. of Smith Roles Ltd.)	Vonda, Sask.
Rotobec Inc.	Langevin, Qué.
Rousseau Controls Inc.	Pte-Claire, Qué.
	Rexdale, Ont.
Rucker Products Ltd.	Richmond, B.C.
	Edmonton, Alta.
	St-Laurent, Qué.
SAI Hydraulics Canada Ltd.	St-Léonard, Qué.
Saskatchewan Minerals Corp.	Fox Valley, Sask.
Scanada Slipform Systems Inc.	Montréal, Qué.
Schneider Del Hydraulics Ltd.	Prince George, B.C.
Scotia Trawler Equipment Ltd.	Lunenburg, N.S.
Sweeprite Mfg. Inc.	Regina, Sask.
T.M.G. Rock Contractors Ltd.	Kingston, Ont.
Talon Tool Corporation	Frontier, Sask.
Tamper, Div. of Canon Inc.	Toronto, Ont.
Teris Hydraulics Ltd.	Nisku, Alta.
The Dominion Metalware Industries	Mississauga, Ont.
Thomas Equipment Ltd.	Centreville, N.B.
Trican Machinery Ltd.	Richmond, B.C.
Tridel Equipment Ltd.	Richmond, B.C.
Ulstein Marine Ltd.	Burnaby, B.C.
VME Equipment of Canada Ltd.	St. Thomas, Ont.
Valmar Airflow Inc.	Winnipeg, Man.
Valmet-Dominion Inc.	Montréal, Qué.
Versatile Mfg. Company	Winnipeg, Man.
Vicker S.Y.S. Inc.	Lachine, Qué.
	Etobicoke, Ont.
Vicon Inc.	Portage La Prairie, Man.
Vulcan Equipment Company Ltd.	Scarborough, Ont.
Wainbee Ltd.	Rexdale, Ont.
Walinga Body and Coach Ltd.	Guelph, Ont.
Weldco Alberta Ltd.	Edmonton, Alta.
Weldco Ltd.	Langley, B.C.
Welded Tube of Canada Ltd.	Concord, Ont.
Wes-Park Fluid Power Ltd.	Stoney Creek, Ont.
Westinghouse Canada Inc.	Hamilton, Ont.
Wheathart Hydrostatic Machinery Ltd.	Saskatoon, Sask.
Wicor Canada Inc.	Mississauga, Ont.
Willcar Industries Ltd.	Craik, Sask.
Williams and Wilson Ltd.	Scarborough, Ont.
Wilmac Equipment Ltd.	Edmonton, Alta.
Zamboni, Frank J. & Co. Ltd.	Brampton, Ont.

FOREIGN EXPORTERS TO CANADA

April, August and December 1986

Major exporters to Canada of hydraulic pumps and motors, with total shipments of \$50 000 and over are listed below. Names are as shown on the shipping documents. These 32 exporters accounted for 89 per cent of the total analysed value of \$11 078 520.

<u>Name</u>	<u>Address</u>		<u>Quantity</u> (No.)	<u>Value of Imports</u> (\$000)
Eaton Corporation	Eden Prairie, MN Shawnee, OK Spencer, IA	United States) United States)* United States)	9 945	1 930
Vickers Inc.	Omaha, NE Joplin, MO Manchester, MI Searcy, AR	United States) United States) United States)* United States)	8 161	1 753
Cessna Fluid Power Division	Hutchison, KS	United States	2 542	953
Sundstrand Hydro Transmission	Ames, IA	United States	633	569
Double A Hydraulic Units Ltd.	Plymouth	United Kingdom	218	437
Abex Corp. Denison Div.	Columbus, OH Santa Maria, CA	United States) United States)*	631	416
Hagglund & Soner AB J.N. Fauver Co. Inc.	Mellansel Madison Hts, MI	Sweden) United States)*	602	486
Dana Corp. Racine Hyd. Div & Others	Various	United States	831	284
Linde Hydraulics Corporation	Canfield, OH	United States	144	224
Sta-Rite Foreign Sales Corp.	Racine, WI	United States	981	223

*Aggregated to protect confidentiality of Canadian importers.

FOREIGN EXPORTERS TO CANADA (CONT'D)

April, August and December 1986

<u>Name</u>	<u>Address</u>		<u>Quantity</u> (No.)	<u>Value of Imports</u> (\$000)
Mannesmann Rexroth AG Gould/ICC	Various Pittsburg, PA	Rep. of Germany) United States)*	299	443
KYB Corp. of America	Lombard, IL	United States	79	206
Paul Pleiger Maschinenfabrik Parker Hannifin Corp.	Witten Waverly, OH) Rep. of Germany)* United States)	1 765	382
White Hydraulics Inc.	Hopkinsville, KY	United States	1 155	185
Tyrone Hydraulics Inc. Williams Machine & Tool	Corinth, MS Omaha, NE	United States) United States)*	794	345
The Oilgear Company	Milwaukee, WI	United States	35	136
TRW Ross Gear Division	Greenville, TN	United States	484	128
The Rexroth Corporation Spencer Aircraft Ind. Inc.	Wooster, OH Seattle, WA	United States))* United States)	1 238	233
Dowty Hydraulic Units Ltd. Amfac Rucker Products Continental Hydraulics	Cheltenham Lake Forest, IL Savage, MN) United Kingdom) United States)* United States)	605	226
Brueninghaus Hydraulik GmbH Danfoss A/S Fabrik Chemie und Filter GmbH	Horb Nordberg Heidelberg) Rep. of Germany) Denmark)* Rep. of Germany)	1 080	174
SAI SPA John S. Barnes Corp. Transamerica Delaval Inc.	Modena Rockford, IL Columbia, KY	Italy) United States)* United States)	<u>799</u>	<u>155</u>
Total (32 major exporters)			33 021	9 888

* Aggregated to protect confidentiality of Canadian importers.

CANADIAN SUPPLIERS

The following lists are taken from two sources: a) the Business Opportunities Sourcing System (BOSS), a computerized data bank established by the federal Industry, Science and Technology Canada (ISTC); and b) the Canadian Trade Index, published by the Canadian Manufacturers' Association (CMA.) These lists may not include all suppliers of the products in question, as companies must themselves register in BOSS or the Canadian Trade Index. In both cases, information of Canadian products supplied is as given by the companies.

BOSS

Suppliers of Hydraulic Pumps and Motors are listed below in alphabetical order. The numbers in brackets following the names of the suppliers indicate the specific types of pumps or motors.

- Pumps Types:
- 1- Vane
 - 2- Gear
 - 3- Axial Piston
 - 4- Radial Piston
- Motor Types:
- 5- Not Specified
 - 6- Axial Piston
 - 7- Gear
 - 8- General Purpose

<u>Name</u>	<u>Address</u>
A.S. Machining Ltd. (5)	St-Laurent, Qué.
Applied Power Canada Limited (5)	Mississauga, Ont.
*Atelier American Mach. Hydraulique Ltée (5)	Rimouski, Qué.
Atlantic Hardchrome Limited (5)	Dartmouth, N.S.
*Basic Hydraulics & Industrial Equip. Ltd. (1,2,3,4,5,6,7,8)	Welland, Ont.
Buffalo Industries Ltd. (5)	Winnipeg, Man.
*Canada Tractor Ltd. (5)	Mississauga, Ont.
Del Equipment Limited (3,5)	Port Coquitlam, B.C.
Eastflo Industrial Inc. (5)	Stoney Creek, Ont.
Ebbcon Hydraulic & Pneumatic Consultants (1,2,3,4,5)	For McMurray, Alta
Gasboy of Canada Limited (5)	London, Ont.
*Hep Pumping System, Div. of Cdn. Foremost (5)	Lloydminster, Alta.
*Hydraulique S.M.S. de l'Estrie Inc. (5)	Sherbrooke, Qué.
Kaycom Incorporated (5)	St-Laurent, Qué.
Kendan Manufacturing Limited (1,2,3)	Windsor, Ont.
Lakehead Hydraulics Inc. (5,8)	Winnipeg, Man.
*Schulte Industries Ltd. (5)	Engelfeld, Sask.
Vickers S.Y.S. Inc. (1,2,3)	Etobicoke, Ont.

* Company engaged in export trade

Any enquiries and/or comments regarding the BOSS list should be directed to:
Business Opportunities Sourcing System (ABOS)
Industry, Science and Technology Canada
235 Queen Street
Ottawa, Ontario K1A 0H5
Tel: (613) 954-5031 - Telex: 053-4123

CANADIAN SUPPLIERS (CONT'D)

CANADIAN TRADE INDEX: Pumps, Hydraulic

Canadian companies are arranged in alphabetical order.

<u>Name</u>	<u>Address</u>
Applied Power Canada Ltd.	Mississauga, Ont.
Aro Canada Inc.	Rexdale, Ont.
*Basic Hydraulics & Industrial Equipment Ltd.	Welland, Ont.
Binks Manufacturing Company of Canada Limited	Toronto, Ont.
Brier Hydraulic Limited	Burlington, Ont.
Carter Controls, Canada Ltd.	Windsor, Ont.
Commercial Shearing Ltd.	Acton, Ont.
Del Equipment Limited, Division of Diesel Equipment Limited	Toronto, Ont.
Dynamic Machine Corporation	Winnipeg, Man.
Hagglunds Denison Canada Inc.	Mississauga, Ont.
Hydratec Industries Ltd.	Regina, Sask.
Hydra-Tech	Calgary, Alta.
HyPower Canada Ltd.	Saskatoon, Sask.
*Ingersoll-Rand Canada Inc.	Kirkland, Qué.
McMeekin Machine & Fabricating Limited	Owen Sound, Ont.
Miller Fluid Power (Canada) Ltd.	Mississauga, Ont.
*Monarch Industries Limited	Winnipeg, Man.
*Octopus Precision Products	West Vancouver, B.C.
Parker Hannifin (Canada) Inc. Fluid Power Operation	Toronto, Ont.
SKF Canada Limited	Scarborough, Ont.
Spotton Inc.	Mississauga, Ont.
T.R.E.L. of Sarnia Limited	Sarnia, Ont.

* Indicates firms engaged in export trade

Any enquiries and/or comments regarding the Canadian Trade Index list should be directed to:

The Canadian Manufacturers' Association
One Yonge Street
Toronto, Ontario M5E 1J9
Tel: (416) 363-7261 - Telex: 065-24693

CANADIAN AND FOREIGN TARIFFS

Hydraulic pumps and motors included in this analysis were dutiable under the following most commonly applied tariff items.

Tariff Item	Description	Tariff Treatment				
		British Preferential Tariff %	Most Favoured Nation Tariff %	General Tariff %	General Preferential Tariff %	U.K. and Ireland %
42700-01	Machines, n.o.p., and accessories, attachments, control equipment and tools for use therewith; parts of the foregoing:					
	January 1, 1986	2.5	9.9	35	2.5	9.2
	January 1, 1987	2.5	9.2	35	2.5	9.2
42701-01	Articles which otherwise would be classified under tariff items 42700-01 to 42700-04, namely: compressor sets, electricity generating sets, fork lift trucks, front-end loaders or tractor shovels, gear reducers, pumps and pump sets, motor operated valves, positive displacement blowers and vacuum pumps, metal working lathes, metal working milling machines, cutting tools for use with metal working machines, articulated folding boom-type cranes designed for mounting on trucks; accessories, attachments and control equipment for use therewith; parts of the foregoing:					
	January 1, 1986	2.6	10.0	35	2.6	-
	January 1, 1987	2.6	9.3	35	2.6	-

N.o.p.: Not otherwise provided for

CANADIAN AND FOREIGN TARIFFS (CONT'D)

Tariff Item	Description	Tariff Treatment				
		British Preferential Tariff	Most Favoured Nation Tariff	General Tariff	General Preferential Tariff	U.K. and Ireland
		%	%	%	%	%
44200-01	Articles and materials which enter into the cost of manufacture of the goods enumerated in tariff items 40900-01, 40902-01, 40904-01, 40906-01, 40908-01, 40910-01, 40912-01, 40914-01, 40916-01, 40918-01, 40919-01, 40920-01, 40922-01, 40924-01, 40926-01, 40928-01, 40930-01, 40932-01, 40934-01, 40936-01, 40938-01, 40940-01, 40942-01, 40944-01, 40948-01, 40950-01, 40956-01, 42723-01, 43915-01 and 61810-01, when imported for use in the manufacture of the goods enumerated in the aforesaid tariff items, or in the manufacture or parts thereof, under such regulations as the Minister may prescribe:					
	January 1, 1986	Free	Free	Free	Free	Free
	January 1, 1987	Free	Free	Free	Free	Free

N.o.p. - Not otherwise provided for

Tariff Arrangements and Foreign Countries of Export:

Exporting countries which qualify for the Most Favoured Nation tariff treatment: United States, Federal Republic of Germany, Sweden, Japan, Italy, Denmark, Finland, Norway, Switzerland, Australia, Belgium, New Zealand, The Netherlands and France.

Exporting country which qualifies for the Most Favoured Nation tariff treatment or U.K. and Ireland tariff treatment: United Kingdom

Enquiries concerning tariffs should be directed to the nearest Customs and Excise office or to:

TARIFF PROGRAMS
REVENUE CANADA
CUSTOMS AND EXCISE
OTTAWA, ONTARIO
K1A 0L5
TEL: (613) 954-6886

Foreign Countries

Enquiries concerning tariffs and other government trade regulations in foreign countries should be directed to:

INFO EXPORT
EXTERNAL AFFAIRS
OTTAWA, ONTARIO
K1A 0G2
TEL: (613) 993-6435 OR 1-800-267-8376