Heavy-Duty Trucks

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Canada

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I N D U S T R Y P R O F I L E

1990–1991

HEAVY-DUTY TRUCKS

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FOREWORD

In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to growth and prosperity. Promoting improved performance by Canadian firms in the global marketplace is a central element of the mandates of Industry, Science and Technology Canada and International Trade Canada. This Industry Profile is one of a series of papers in which Industry, Science and Technology Canada assesses, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological, human resource and other critical factors. Industry, Science and Technology Canada and International Trade Canada assess the most recent changes in access to markets, including the implications of the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the profiles.

Ensuring that Canada remains prosperous over the next decade and into the next century is a challenge that affects us all. These profiles are intended to be informative and to serve as a basis for discussion of industrial prospects, strategic directions and the need for new approaches. This 1990–1991 series represents an updating and revision of the series published in 1988–1989. The Government will continue to update the series on a regular basis.

Michael H. Wilson
Minister of Industry, Science and Technology
and Minister for International Trade

Introduction

The automotive industry in Canada broadly includes the manufacturers both of motor vehicles (passenger cars, trucks, buses and specialty vehicles) and of the parts, tires and tubes that are used as original equipment in the assembly of new motor vehicles as well as for replacement parts and accessories. Most of the industry is rationalized to operate in one market that includes both Canada and the United States.

Automotive activities in 1989 generated slightly over 15 percent of the total shipments of products manufactured in Canada. They accounted for 32.5 percent of all exports of fabricated materials and end products. In 1989, automotive shipments were composed of $28.1 billion in automobile, truck and bus assembly; $14.7 billion in parts; $1.9 billion in specialty vehicles; and about $1.5 billion[1] in tires and tubes. In the same year, the industry employed 185 200 people. Of these, 55 500 were involved in assembling automobiles, trucks and buses; 96 500 in parts; 22 700 in specialty vehicles; and about 10 500[1] people worked to manufacture tires and tubes.

This profile deals only with the heavy-duty trucks industry. In addition to *Heavy-Duty Trucks*, industry profiles have been prepared covering

- *Automotive Aftermarket Parts*
- *Automotive Original Equipment Parts*
- *Automotive Tires*
- *Light Motor Vehicles*
- *Specialty Vehicles*
- *Urban and Intercity Buses*

[1]ISTC estimates.

Structure and Performance

Structure

The heavy-duty truck industry in Canada consists of manufacturers mainly engaged in assembling the largest trucks (over 15 tonnes) used in highway transport as well as off-highway trucks used by the construction, mining and forestry sectors. Small truck assemblers are covered in the industry profile on *Light Motor Vehicles*, while truck trailer and body manufacturers, who provide a customized product mounted on chassis provided by truck manufacturers, are covered in the industry profile on *Specialty Vehicles*.

In 1989, the heavy-duty truck industry employed 4 105 people to produce 26 199 vehicles having a total value of $1.9 billion (Figure 1). Nearly 70 percent of total industry shipments were exported to the United States. Imports, primarily from the United States, represented over 50 percent of the Canadian market. Figure 2 shows production and trade for on-highway vehicles only.

A significant portion of heavy-duty truck production occurs outside the automotive corridor in southern Ontario. Of the eight establishments in Canada, four are located in Ontario, one is in Quebec and three are in British Columbia (Figure 3). Although their production is not large compared with the total automotive assembly industry, the three truck manufacturers in British Columbia are particularly important to that province because they constitute its entire vehicle assembly industry.

In view of the differences in the design of trucks, their method of production and their uses, it is feasible to view on-highway and off-highway trucks as two distinct subsectors of the heavy-duty truck industry.

The on-highway subsector is specifically involved in the production of Class 8 trucks (trucks with a gross vehicle weight rating of more than 33 000 pounds or 15 tonnes). This subsector, which employed 3 655 persons in 1989, consists of five subsidiaries of foreign companies — Freightliner of Burnaby, British Columbia; Mack of Oakville, Ontario; Navistar of Chatham, Ontario; Paccar of Sainte-Thérèse, Quebec; and Western Star Trucks of Kelowna, British Columbia. These five manufacturers operate under the 1965 Canada-U.S. Automotive Products Trade Agreement (Auto Pact), which allows the duty-free trade in vehicles and original equipment parts between Canada and the United States. In order to be eligible for duty-free trade under the Auto Pact, manufacturers must achieve certain Canadian performance criteria in each model year, which runs from 1 August to 31 July. Generally, these manufacturers are required to achieve Canadian value-added in vehicle and parts production equal to

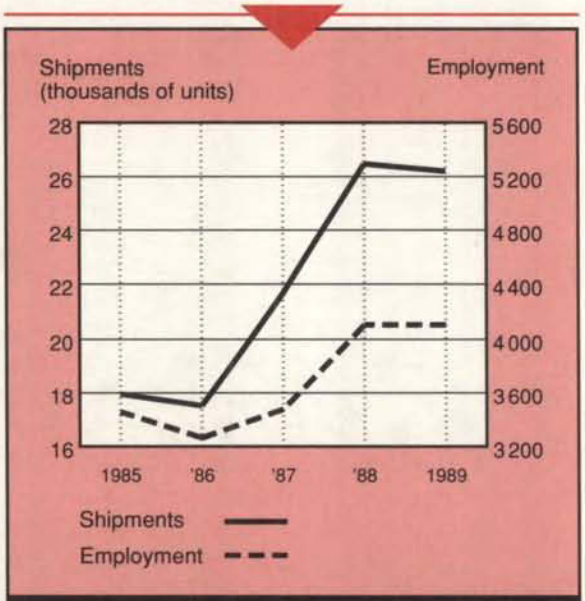

Figure 1 — Total Shipments and Employment

40 percent of the cost of vehicles sold in Canada. In addition, manufacturers must maintain a certain ratio of the sales value of vehicles produced in Canada to the sales value of vehicles sold in Canada. The ratio varies from 75:100 to 100:100, depending on the particular manufacturer.

Canadian on-highway truck producers assemble a limited range of models that are similar to those assembled in larger plants in the United States. The Auto Pact has strongly influenced the pattern of trade and investment in the heavy-duty truck industry. As a consequence, the Canadian and U.S. markets have become one large North American market. Of the 25 754 on-highway vehicles produced in Canada during 1989, with a factory sales value of $1.74 billion, approximately 17 618 vehicles were exported to the United States (about 68 percent of shipments). At the same time, some 9 405 units were imported from the United States (nearly 54 percent of the Canadian market). There are virtually no imports of Class 8 trucks from other countries.

The off-highway subsector is much smaller and produces more specialized vehicles. This subsector, which employed an estimated 450 persons in 1989, consists of three wholly owned subsidiaries of foreign firms — Komdresco of Cambridge, Ontario; VME Equipment of Guelph, Ontario; and Pacific Truck & Trailer of Vancouver, British Columbia. These firms are not limited to any one class of vehicle but rather have the capacity to produce a range of haulers for the construction, mining and forestry sectors with payloads ranging from 20 tonnes to more than 200 tonnes. Manufacturers

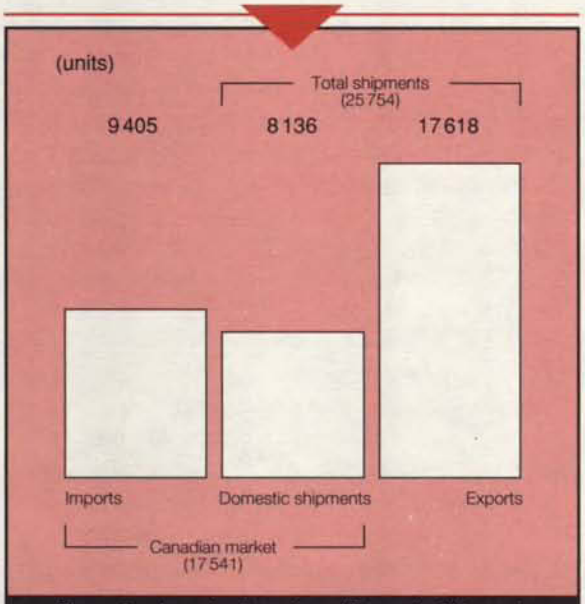

Figure 2 — Imports, Exports and Domestic Shipments of On-Highway Trucks, 1989

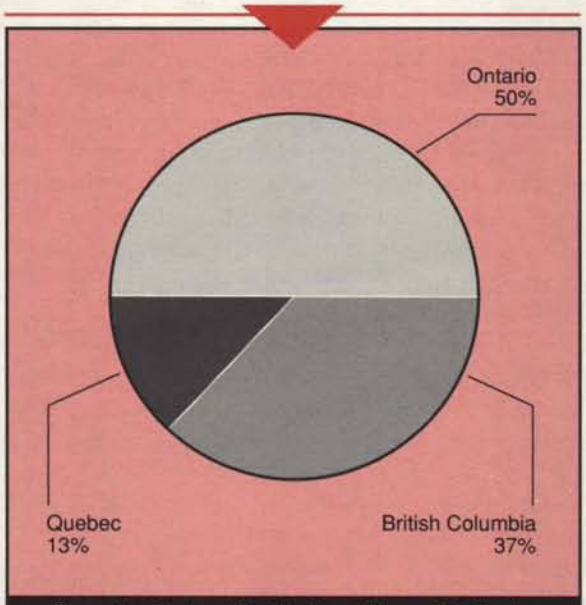

Figure 3 — Regional Distribution of Heavy-Duty Truck Establishments (average for 1986–1988)

in this subsector not only assemble but also undertake application-oriented research and development (R&D).

The off-highway subsector operates under the Off-Highway Vehicles Remission Order, which provides the same benefits and imposes the same performance requirements as the Auto Pact. In contrast to the on-highway subsector, there is significant import and export trade in off-highway trucks with countries other than the United States. Of the 445 units produced in Canada during 1989, with a factory sales value of nearly $140 million, 401 units were exported. Shipments to the United States accounted for 253 units (about 57 percent of shipments). Imports during the same period amounted to 408 units (about 90 percent of the Canadian market), of which the United States accounted for 293 units (65 percent of the Canadian market).

Performance

The growth of the North American heavy-duty truck industry peaked in the late 1970s. Between 1973 and 1980, both industry subsectors were robust due to the expansion of resource-based industries around the world. The industry, however, was dealt a severe blow during the 1981–1982 recession, when production declined by more than 50 percent. It has never fully recovered. North American factory sales of Class 8 trucks peaked at 209 708 units in 1979, regaining a level of only 163 866 units by 1989 or 78 percent of the 1979 level.

Decreased demand during this period can probably be attributed to a number of factors, including the international debt crisis, which has severely constrained sales to the developing countries; increased competition in foreign markets; deregulation of the U.S. trucking industry to provide for more efficient use of transportation equipment; and improvements in new-truck quality.

The number of manufacturers in the off-highway truck subsector has shrunk significantly because of a protracted softening of markets. Until the early 1980s, there were five Canadian manufacturers specializing in off-highway mining and construction dump trucks. By 1984, General Motors Diesel Division and Unit Rig and Equipment had closed their Canadian off-highway truck operations as a result of the collapse of overseas markets coupled with stagnation in the North American market. The two remaining companies producing off-highway dump trucks in Canada, VME Equipment and Komdresco, still export a significant portion of their production to offshore markets, but exports to the United States now predominate. The Pacific Rim represents an important market for Pacific Truck & Trailer, which manufactures Class 8 logging trucks and trailers for off-highway use.

In terms of truck production, the off-highway subsector's performance in 1989 somewhat exceeded the average annual performance over the previous eight years (i.e., 445 trucks in 1989 versus an average of 329 over the period). Because the volume of trucks produced is small, firms in the off-highway

subsector are not tied to production lines, as are Class 8 manufacturers. As a result, off-highway truck manufacturers have more flexibility and can direct their efforts to other projects when demand for their trucks is down.

While the Canadian on-highway heavy-duty truck subsector has been competitive with U.S. operations, significant adjustments will be required in the near future in order to maintain its share of the North American market and to regain a foothold in developing countries. The industry is facing increasing competition from foreign manufacturers at a time when North American markets are expected to remain flat. In order to move inventories and to maintain or increase market share, truck manufacturers have been cutting prices. This action has led to an erosion in the profit margins of all truck manufacturers and has put further pressure on the industry to reduce costs through plant rationalization and productivity improvement or a combination of both. The basic strategy of all Canadian truck manufacturers in a highly competitive market is to trim costs, round out their product lines through imported vehicles and parts and, finally, to focus their resources on those areas where they have a competitive advantage.

Strengths and Weaknesses

Structural Factors

The Canadian heavy-duty truck industry largely consists of assembly operations. What has given Canadian on-highway producers a distinct advantage is their access to the whole North American market as a result of the Auto Pact and competitive Canadian assembly costs relative to those of their U.S. counterparts. A reliable Class 8 market, lower debt burdens as well as greater economy and efficiency associated with producing one model of vehicle are additional factors contributing to their competitiveness.

Competitive assembly costs have also been important for the off-highway subsector, where assembly may take longer than 200 hours per unit. In addition, export financing from the Export Development Corporation (EDC) and aid programs provided by the Canadian International Development Agency (CIDA) facilitate export sales of trucks to developing countries. Comparable financing is available to offshore competitors.

The major weakness of the Canadian on- and off-highway truck industry is its lack of significant product R&D capabilities. This weakness is a result of foreign ownership and a lack of sufficient production volumes to absorb R&D costs. These same factors also inhibit the adoption of more efficient and innovative production technologies involving automation, robotics and computer-aided design.

Canada's relatively low volume of production has resulted in a lack of capacity to manufacture major components. While heavy-duty truck assemblers are able to locate body, frame, drive shaft and suspension parts production in Canada, most diesel engines, transmissions and systems are imported from the United States. The resulting level of inputs is sufficient to meet each corporation's percentage content requirements under the Auto Pact. Nevertheless, limited Canadian inputs may be of concern to individual firms regarding their ability to qualify for export financing.

Trade-Related Factors

Canada produces highly competitive on- and off-highway vehicles that have been holding their own in the North American market. The Canadian tariff on similar products imported from countries having Most Favoured Nation (MFN) status is 9.2 percent, which provides local manufacturers with a degree of protection and encourages participation under the Auto Pact. The United States levies an MFN tariff of 4 percent in the case of cab/chassis with diesel engines and truck tractors but 25 percent for most other trucks.

Under the Canada-U.S. Free Trade Agreement (FTA), bilateral tariffs on vehicles and their original equipment parts traded between the two countries will be eliminated in 10 annual, equal stages. Those on aftermarket parts will be reduced to zero in five annual stages. The FTA will also phase out the restrictions on the importation of used trucks into Canada in five annual stages. The phase-out process began with the implementation of the FTA on 1 January 1989.

The FTA will have no immediate effect on the Canadian truck manufacturing industry, as all companies are currently extended duty-free entry for trucks and original equipment parts under the Auto Pact. The Canadian provisions of the Auto Pact remain unchanged by the FTA, although only those companies listed in the FTA are eligible to participate. When bilateral tariffs are finally phased out under the FTA on 1 January 1998, Canadian truck producers will have to meet the Auto Pact performance requirements only if they want to retain eligibility for duty-free imports from third countries.

The FTA modifies the U.S. requirements under the Auto Pact, however. Vehicles produced in Canada now enter the United States duty-free if at least 50 percent of their value-added work comes from parts, labour or other material inputs originating in North America. The Rules of Origin chapter of the FTA sets a higher degree of North American content for tariff-free eligibility into the United States. Therefore, it should provide new opportunities for North American-based parts suppliers by encouraging truck assemblers to obtain parts from them rather than importing offshore parts.

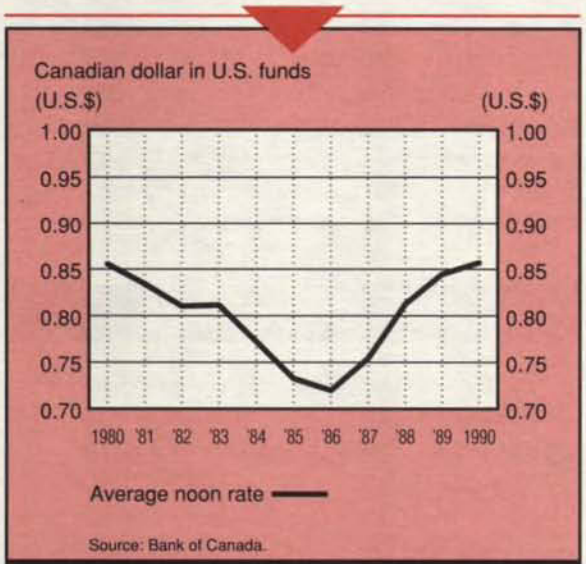

Figure 4 — Canadian–U.S. Exchange Rates

European tariff and non-tariff barriers are of little relevance to Canadian companies because there are few, if any, sales opportunities in Europe. Canadian heavy-duty trucks are generally too large for European highways and there is a scarcity of European resource-based projects requiring heavy-duty off-highway haulers.

The creation of a single, unified market in Europe after 1992 will present new opportunities for some truck manufacturers, but there may not be any significant increase in demand for the Class 8 vehicles manufactured in Canada. The removal of regulations impeding cross-border traffic in Europe should result in improved service and more efficient use of truck transportation equipment through longer hauls and possibly the employment of larger trucks. However, increased efficiency by European truck lines may stabilize the market for trucks and may have severe consequences for the truck manufacturing industry as the strongest companies attempt to increase market share at the expense of other competitors. There have been a number of recent mergers and corporate linkages between European truck manufacturers in an attempt to reduce competition and to expand their dealer and service networks to compete better in all major markets.

Technological Factors

Vehicle research and development is not carried out in Canada to any significant degree, primarily because Canadian companies custom build their trucks and import most of the high-tech components.

The manufacture of power-train components for heavy-duty trucks is concentrated in the United States. There is little incentive to manufacture such items in Canada, as the broad range of variants required for Canadian production volumes is not sufficient to warrant the large capital investment required. Although there is no capacity in Canada for manufacturing diesel engines and transmissions and other power-train components for heavy-duty trucks, Canadian automotive parts producers are capable of providing many other basic components, such as frames, tires, seats, sleeper-cabs and stampings.

Most of the diesel engines used in the manufacture of heavy-duty trucks in Canada are imported from the United States and, as such, are manufactured according to emission standards set by the U.S. Environmental Protection Agency (EPA), which are currently stricter than those in Canada and are slated to become more stringent in 1993. It is Transport Canada's intention to harmonize with the U.S. criteria over time. In the interim, Canadian vehicle manufacturers are installing engines that adhere to EPA standards. This approach allows them to maintain North American market access and to contribute to the protection of the environment in Canada on a voluntary basis.

Other Factors

Import tariffs, particularly the 25 percent rate applied to a wide range of trucks by the United States, have constrained direct exports of heavy-duty on-highway vehicles to North America from overseas manufacturers. Also, there is a preference by North American truck operators for domestic components (especially engines, transmissions and rear axle assemblies) in their trucks, which has undoubtedly helped to limit the penetration of the North American market by Class 8 trucks produced overseas. Nearly all Class 8 trucks sold in the North American market are produced in North America. In order to get a foothold in the market, some overseas companies have adopted the strategy of purchasing interests in North American corporations (i.e., Renault/Mack and Mercedes-Benz/Freightliner) or forming strategic links (General Motors/ Volvo). The overseas owners are well capitalized and have the reputation and strength to challenge the traditional North American manufacturers in price, quality and service.

The industry has expressed concern about the relatively higher value of the Canadian dollar in recent periods vis-à-vis the American dollar (Figure 4). On the other hand, under certain economic conditions, it is widely recognized that a significantly lower value is likely to be inflationary. The resulting higher domestic costs and prices can erode, over time, the short-term competitive gains of such a lower-valued dollar.

Evolving Environment

At the time of writing, the Canadian and U.S. economies were showing signs of recovering from a recessionary period. During the recession, companies in the industry generally experienced reduced demand for their products. These conditions, along with excess capacity in the heavy-duty truck manufacturing industry, have led to increased competition in the North American market, which will probably be accompanied by highly competitive pricing, not only for the vehicles but also for components. Consequently, many companies are likely to experience low profitability or even losses. The result will be further restrictions and continued implementation of cost-reduction measures. In some cases, the cyclical pressures may have accelerated adjustments and restructuring. With the signs of recovery, though still uneven, the medium-term outlook will correspondingly improve. The overall impact on the industry will depend on the pace of the recovery.

The heavy-duty truck industry in North America is mature and it competes in a market that is also mature. As a consequence, the North American market for on-highway heavy-duty trucks is expected to remain flat for the next year or so and will continue to rely primarily on domestic demand to stimulate growth. In the case of off-highway haulers, while there may be an increase in demand in overseas markets, the debt problems of the developing countries will continue to constrain sales.

In January 1988, the *Motor Vehicle Transport Act* of 1977 was updated to gradually deregulate interprovincial and cross-border truck transportation over a period of three to five years. The goal was to ensure the development of a safe, productive and highly competitive trucking industry, to serve Canadian shippers in domestic markets, to promote economic growth in all regions of Canada, and to position Canadian industry to expand their markets in the United States under free trade. Concomitant with the implementation of deregulation, the federal and provincial governments agreed to the development of a National Safety Code to provide uniform maintenance and operational practices common to all trucking operations throughout Canada. In addition, under the auspices of the Roads and Transportation Association of Canada, vehicle weights and dimensions have been developed to ensure that uniform standards for the safest, most productive vehicles would apply across Canada.

The FTA is not expected to have a significant impact on the heavy-duty truck industry over the short to medium term. Since the need to maintain vehicle assembly plants in Canada to meet the requirements of the Auto Pact will diminish when Canada-U.S. tariffs reach zero on 1 January 1998, the performance of Canadian subsidiary plants in the long term will depend on their ability to compete head-on with their U.S. counterparts. However, the ability to import vehicles and parts duty-free under the Auto Pact from suppliers outside the United States may in itself be of significant importance to some foreign-owned truck manufacturers to warrant maintaining a Canadian assembly operation.

Competitiveness Assessment

In the present economic and regulatory environment, the Canadian on- and off-highway truck industry is competitive within its market niche. However, the North American industry is faced with excess capacity, and plants in Canada often produce models similar to those built by their parent corporation in the United States where production volumes are higher. In addition, manufacturers in Europe, Japan and some developing countries have targeted North America for market share growth and may try to break into the Class 8 market. Consequently, as bilateral tariffs drop under the FTA, Canadian operations will have to demonstrate cost competitiveness and the importance of a Canadian location for responding to the specialized needs of the North American heavy-duty truck market.

For further information concerning the subject matter contained in this profile, contact

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PRINCIPAL STATISTICS

	1985	1986	1987	1988	1989
Establishments[a]	10	9	8	8	8
Employment[a]	3 456	3 263	3 476	4 105	4 105
Shipments[b] ($ billions)	N/A	N/A	1.7	1.9	1.9
Total trucks (units)	17 956	17 514	21 674	26 464	26 199
On-highway trucks (units)	17 625	17 096	21 378	26 080	25 754
Off-highway trucks (units)	331	418	296	384	445
Canadian value added[a] ($ millions)	N/A	N/A	395.5	481.4	451.7

[a]ISTC estimates based on volume data provided by the Motor Vehicle Manufacturers' Association and value data obtained from Auto Pact reports to ISTC.
[b]Factory cost of production.
N/A: not available

TRADE STATISTICS

	1985	1986	1987	1988	1989
On-highway trucks					
Exports[a] (units)	8 888	8 468	12 510	16 639	17 618
Domestic shipments (units)	8 737	8 628	8 868	9 441	8 136
Imports[a] (units)	10 078	9 823	11 176	14 697	9 405
Canadian market (units)	18 815	18 451	20 044	24 138	17 541
Exports (% of subsector shipments)	50.4	49.5	58.5	63.8	68.4
Imports (% of Canadian subsector market)	53.6	53.2	55.8	60.9	53.6
Off-highway trucks					
Exports[a] (units)	244	356	253	350	401
Domestic shipments (units)	87	62	43	34	44
Imports[a] (units)	175	169	881	408	408
Canadian market (units)	262	231	924	442	452
Exports (% of subsector shipments)	73.7	85.2	85.5	91.1	90.1
Imports (% of Canadian subsector market)	66.8	73.2	95.3	92.3	90.3

[a]Estimates based on data obtained from Auto Pact reports to ISTC.

SOURCES OF IMPORTS[a] (% of total value)

	1985	1986	1987	1988	1989
United States	99	98	98	97	96
European Community	–	–	–	1	3
Asia	1	1	1	–	–
Other	–	1	1	2	1

[a]Estimates based on data obtained from Auto Pact reports to ISTC.

DESTINATIONS OF EXPORTS[a] (% of total value)

	1985	1986	1987	1988	1989
United States	99	99	99	96	93
European Community	–	–	–	–	–
Asia	–	–	–	1	2
Other	–	–	–	3	5

[a]Estimates based on data obtained from Auto Pact reports to ISTC.

REGIONAL DISTRIBUTION[a] (average over the period 1986 to 1988)

	Atlantic	Quebec	Ontario	Prairies	British Columbia
Establishments (% of total)	–	13	50	–	37
Employment (% of total)	–	22	49	–	29
Shipments (% of total)	–	14	60	–	26

[a]ISTC estimates.

MAJOR FIRMS

Name	Country of ownership	Location of major plants
Freightliner of Canada Ltd.	Germany	Burnaby, British Columbia St. Thomas, Ontario (under construction)
Komdresco Canada Inc.	United States/Japan	Cambridge, Ontario
Mack Canada Inc.	France	Oakville, Ontario
Navistar International Corporation Canada	United States	Chatham, Ontario
Paccar of Canada Ltd.	United States	Sainte-Thérèse, Quebec
Pacific Truck & Trailer Ltd.	United Kingdom	Vancouver, British Columbia
VME Equipment of Canada Ltd.	United States	Guelph, Ontario
Western Star Trucks Inc.	Australia	Kelowna, British Columbia

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