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THE EAST ASIAN AUTOMOBILE INDUSTRY: OPPORTUNITY OR THREAT?

Results of a Survey of Canadian Auto Parts Manufacturers

Prepared by the Asia Pacific Foundation of Canada

Asia Pacific Fondation Foundation Asie Pacifique of Canada du Canada



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January, 2005



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Prepared by the Asia Pacific Foundation of Canada¹ January 2005

¹The Asia Pacific Foundation of Canada would like to thank Foreign Affairs Canada for funding this project, and the Auto Parts Manufacturers' Association for advice and assistance on the survey. At the Foundation, Dr. Jim Storey, Marguerite Luong, Teresa Kwan, Joyce Wan and Ho Jung Lim contributed to various aspects of the research, under the overall supervision of Yuen Pau Woo. For more information, please contact **yuenpau.woo@asiapacific.ca**

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INTRODUCTION AND EXECUTIVE SUMMARY

This report presents the results of a survey conducted by the Asia Pacific Foundation of Canada and the Auto Parts Manufacturers' Association (APMA), conducted in Fall 2004. The purpose of the survey was to gauge the perceptions of APMA members regarding developments in the automobile industry in East Asia, especially China. This survey is the first of its kind and it reflects a growing awareness in the industry of the enormous change that China's automotive market and its domestic producers will bring to the global automotive industry. As the survey points out, Canadian auto parts manufacturers are not oblivious to the changes underway. They are, to some extent, already affected by competition from China, either directly through import competition or indirectly through the relocation of production to China by traditional customers.

The main findings of the survey include:

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- Respondents view the Asian auto sector as both a source of opportunity and threat, in roughly equal measure.
- Asian facilities account for only 0.29% of respondents' auto production.
- Asian suppliers account for about 5% of respondents' input/supply needs.
- Asian buyers account for 1.6% of respondents' customers.
- 64% of respondents have been asked by major customers to initiate or expand activities in new geographic markets over the past three years to facilitate their customers' expansion plans.
- 71% of respondents are considering new business relationships with Asian-based companies. The most commonly cited types of new business relationships are to supply Asian assemblers and to outsource production.
- In the past five years, 71% of respondents were

involved in mergers or acquisitions. The top motivating factors include access to major customers, geographic positioning, and strategic fit.

- Major threats to the Canadian auto sector include the strong Canadian currency, unreasonable demands from customers, overall erosion of profit margins, declining attractiveness of Canada as an investment location, and US protectionism.
- Over 70% support policy initiatives such as funding/tax incentives for R&D and innovation, incentives to domestic investors, and transportation infrastructure upgrades.

Other findings of the survey are presented in Section 4. This report also presents a brief discussion of developments in the global auto supply chain and the role of China, as well as a snapshot of Canadian auto parts exports to Asia. The questionnaire used for this survey is found in Annex A. Annex B contains a list of news reports on recent Canadian automotive ventures in East Asia, drawn from the Foundation's Canada-Asia News archive.

THE GLOBAL AUTO SUPPLY CHAIN AND CHINA

The automobile sector is among the most globalized of manufacturing industries. In North America, domestic automakers have seen a steady decline in their share of the market. In the ten months to October 2004, the market share of Asian-owned carmakers in the US rose to a record 34.5%. American automakers, also known as assemblers or original equipment manufacturers (OEMs), are responding with a variety of cost-cutting strategies. One of these strategies involves shifting more of the production responsibility, including design and technology, to major auto parts suppliers, so that the OEMs can focus on branding, sales and distribution. As a result, the assembler-supplier relationship is rapidly changing, all the way from 3rd and 4th tier suppliers that provide raw materials, to the larger 1st and 2nd tier companies that produce finished assembly components. The in-house production of OEMs is expected to continue falling as more of the production process is "externalized" to Tier 1 and Tier 2 suppliers.

2

Another important development in the industry is in the supply chain structure. The days of linear and vertical supply chains within one geographic market are long gone, replaced today by a complex web of supply relationships that transcend national loyalties. OEMs are increasingly adopting a global perspective by demanding that suppliers be present near their plants worldwide; doing business with fewer suppliers; and delegating R&D and engineering tasks down the value chain. At the same time that American OEMs are following the Japanese practice of contracting from fewer first-tier suppliers, Japanese manufacturers (led by Nissan) are turning away from a sole reliance on suppliers within the keiretsu to the American practice of seeking the most cost-effective supplier at any given point in time.

A bright spot in the global industry is the rapid growth of the East Asian market, led by China. Over the next seven years, it is estimated that Asia will contribute about 57% of the growth in global capacity, with China alone accounting for 49%. According to a recent survey by KPMG, nine out of 10 automobile executives believe Asia and especially China will become a "major source of growth" for global automobile demand over the next 5 years.² The two major reasons cited are the growing middle class in China and greater ease of financing for automobile purchases in that market. It is no surprise therefore that automakers are rapidly expanding their presence in all parts of Asia, and China in particular. Table 1 shows the presence of supply chain operations of the top 13 automakers in Asia.

Reflecting the new growth centre in the industry, Canada's biggest auto parts supplier, Magna International Inc., has reversed its 10-year corporate "spin-off" strategy with a proposed \$1.3 billion buy-back package to privatize its three publicly traded auto parts subsidiaries – Tesma International Inc., Decoma International Inc., and Intier Automotive Inc. The new corporate strategy is believed to make Magna more competitive, improve its name recognition in Asia, and help win business from Japanese and South Korean automakers in the face of growing global competition.

Magna plans to double its business with Japanese carmakers from the present 6% to 12% of revenue within two to three years as it builds up its Asian operations. The plan includes increasing its manufacturing capabilities in China and South Korea, with potential investments in fast-growing markets in Southeast Asia as well as India.

² KPMG. *KMPG's Auto Executive Survey 2004*: KPMG LLP, 2004. 30 November 2004.

		GERMANY		ITALY			JAPAN			JAPAN/ FRANCE	KOREA	U	JS
LOCATIONS	BMW	Daimler Chrysler	VW	Fiat	Honda	Mazda	Mitsu- bishi	Suzuki	Toyota	Renault- Nissan	Hyundai /Kia	Ford	GN
Bangladesh						_							
Bhutan													
Brunei													
Cambodia													
China													
Hong Kong													
India													
Indonesia													
Japan													
Laos													
Macau													
Malaysia													
Mongolia													
Nepal													
Pakistan													
Philippines													
S. Korea													
Singapore													
Sri Lanka													
Taiwan							•			•			
Thailand													
Vietnam													

TABLE 1: ASIAN SUPPLY CHAIN PRESENCE OF TOP 13 AUTOMOTIVE GROUPS

Note:

(1) Renault holds a 44% stake in Nissan, while Nissan owns 15% of Renault shares.

(2) Hyundai's affiliate Kia does not have locations in Japan and Macau.

(3) Comprehensive information for PSA Peugeot Citroen, which ranks seventh, is unavailable.

Source: Official corporate documents, compiled by APF Canada

TABLE 2: CHINESE EXPORTS OF VEHICLES AND AUTO PARTS, 2000-2004

					Unit: US\$ m
	2000	2001	2002	2003	2004. 1-10
Motor Vehicles	98	97	136	273	434
% Increase	575%	-1%	40%	100%	96%
Auto Parts	1,121	1,350	1,840	2,413	3,456
% Increase	N/A	20%	36%	31%	78%

Note:

(1) Selected Classification HS1996

(2) Selected Commodities: Motor Vehicles includes HS 8703 - Motor Vehicles for transport of persons (except buses) and HS 8704 - Motor Vehicles for the transport of goods. Auto Parts is HS 8708 - Parts and accessories for motor vehicles

(3) % Increase is year-to-year

Source: Data for years 2000-2003, United Nations, Statistics Division, COMTRADE Database 30 November 2004 http://unstats.un.org/unsd/comtrade/

Source for 2004 data is Korea Institute for Industrial Economics and Trade

The story of China's emergence as a major growth market for automobile sales is generally well known. What is less well known is China's nascent automotive export industry. Chinese exports of vehicles and auto parts are still modest by world standards but growth rates have been impressive, as shown in Table 2. The export of auto parts from China is approaching the level of South Korean auto parts exports, valued at around \$3 billion annually. A number of domestic automakers and foreign OEMs have expressed plans to use China as a platform for export production, as shown in Table 3.

The Chinese government's new automotive strategy, unveiled in June 2004, envisages that the domestic industry will "enter the international market in a big way" before 2010.³ According to the strategy, the development of vehicle exports will come about through rationalization of the auto industry as a whole and as well as through learning about overseas markets by the auto parts sector, which is already expanding into overseas markets. Other key features of the Auto Strategy are presented in Table 4.

Some Chinese companies are well ahead of the government's plan. Wanxiang Group, a privately owned company, is China's biggest auto parts supplier with customers like General Motors, Ford and Volkswagen in addition to strategic alliances with auto parts companies like Bosch and Visteon. Already the company has stakes in 100 companies, both in China and overseas, that deal primarily in auto parts. It has acquired, established or merged with 30 companies in eight countries, including the US, Great Britain, Germany, Canada and Australia. In recent years, Wanxiang has been on an acquisition spree, buying foreign auto parts makers to fill gaps in the company's technology, markets and brands.

As a strategy to fend off increasing competition from low-end manufacturers from India and Poland, Wanxiang acquired US firms Schiller, Universal Automotive Industries and Rockford Powertrain so that it can supply these companies with their low-value added Chinese products, move into more sophisticated products and win new customers. At a time when US auto parts suppliers are facing immense pressure from automakers to match Chinese prices, strategic alliances to take advantage of China's lower costs may help save jobs and keep the companies running. Selected examples of Chinese automotive companies' overseas expansion strategies are found in Table 5.

³ Wang, Yu. "New Auto Policy a Major Leap Forward." *China Business Weekly.* June 8, 2004.

Shanghai and Beijing Emerging as Asian Regional HQs

- Toyota Motor Corp. plans to set up regional headquarters in Beijing to supervise and coordinate sales, distribution and other operations.
- GM will shift its Asia Pacific HQ from Singapore to Shanghai by January 2005.
- Auto parts giant Visteon has moved its Asian HQ from Tokyo to Shanghai
- Volkswagen has moved its Asia Pacific regional centre to Beijing from its German HQ at Wolfsburg.

TABLE 3: EXPORT PLANS OF SELECTED DOMESTIC AND FOREIGN OEMS IN CHINA .

COMPANY	EXPORT PLANS
Volkswagen AG	 Exporting Polo model to Australia since 2003; plans to sell 600 Polos annually over the next five years Wants to make China its exporting base in Asia Pacific by 2008
GM	Exporting Buick commercial wagons to Philippines since 2001
DaimlerChrysler	Exports Chinese trucks to India, Russia, South Korea as a Daimler Chrysler - Beiqi Foton joint enterprise
Honda	JV with Donfeng Motor Corp. & Guangzhou Automobile Group to export 50,000 cars to Europe and Southeast Asia after 2005
Nissan	■ JV with Donfeng Motor Corp. to export 6,000 - 10,000 trucks a year to Africa and Asia by 2007
Chery Motors	Exporting 10,000 cars to Middle East, Central and South America in 2004
Geely	 Exports vehicles to Middle East, South America, North Africa Plans to export Uliou model to US upon approval Plans to raise exports to 5,000 from 400 last year

TABLE 4: SELECTED FEATURES OF CHINA'S NEW AUTOMOTIVE POLICY, JUNE 2004

Lee, Y. J. e-KIET, Korea Institute for Industrial Economics and Trade, October 2004.

http://www.kiet.re.kr/files/reg//20041028-e229.pdf

	2004 AUTOMOTIVE POLICY
Share structure for joint ventures (JVs) for foreign investors	 More than 50% in automobile and motorcycle JVs with Chinese partners if their JVs are established in China's export processing zones and aimed at overseas markets. The previous automotive policy only allowed a 50% maximum stake in automobile and motorcycle JVs Lifted previous limit of 50% ownership in engine and spare parts JVs with Chinese partners
Number of JVs allowed to establish by each investor	More than two JVs allowed if investor makes the same types of vehicles (passenger vehicles, commercial vehicles and motorcycles) and join forces with their existing Chinese partners to acquire other auto firms in China.
Total investment requirements	2 billion yuan (US\$241 million) which must include a R&D organization with an investment of no less than 500 million yuan (US\$60.4 million)
Barriers on domestic non-auto investors	Automakers that are unable to "maintain normal operations" are not allowed to transfer their production permits to non-auto and motorcycle enterprises and individuals
Bankruptcy	If an automaker goes bankrupt, its production permit will be removed
Other	Encourage the development of low-emission vehicles

The China Threat, from a South Korean Perspective

A recent report by the Korean Institute for Industrial Economics and Trade (KIET) warns that China will be able to compete head to head in export markets within five years. Competition is expected to be especially fierce in Asian and Middle Eastern markets. KIET advises Korean auto parts manufacturers to strengthen their technological capabilities, focus on higher value products, establish facilities in China for domestic as well as export production, and to broaden their customer base rather than supplying only South Korean OEMs.

Source: Lee, Young Joo. Autoparts Companies Must Prepare for China's Export-Driven Automotive Industrialization. Seoul: Korea Institute for Industrial Economics and Trade, 2004. http://www.kiet.re.kr/files/reg//20041028-e229.pdf.

TABLE 5: GOING GLOBAL — OVERSEAS VENTURES OF CHINESE AUTOMOTIVE COMPANIES .

COMPANY O	VERSEAS EXPANSION ACTIVITIES
Shanghai Motors	Acquiring 70% of Britain's MG Rover to establish JV
	Acquired 10% of GM Daewoo Motors, South Korea
	Acquired 48.9% of Ssangyong Motors, South Korea
Chery Motors	Plans to establish 50,000 unit factory in Iran
	Seeking to establish local manufacturing in Pakistan and Venezuela
	Plans for assembly of the QQ subcompact and B14 minivan in Malaysia
Great Wall Motors	Plans to establish car manufacturing plant in Indonesia in a joint venture with Indonesia's
	state-owned heavy equipment maker PT Bharata
Chang'an Motor	Opening a light truck assembly factory in Vietnam in 2005
Zhongxing Automobile	Opened factories in Egypt, Vietnam and Turkey (China-Taiwan joint enterprise)
	Plans to build four to five plants in North Africa and South America

 Sources: "Chinese Carmaker to Set Up Plant in Indonesia." China Daily. June 10, 2004;
 Xia, Jun. "Chinese Cars Make Inroads Abroad." China Daily. September 2, 2004;
 Mackintosh, James and Richard McGregor. "Chery Plans Factory in Eastern Europe." Financial Times. October 27, 2004;
 Lee, Y. J. e-KIET, Korea Institute for Industrial Economics and Trade, October 2004. http://www.kiet.re.kr/files/reg//20041028-e229.pdf

CANADIAN AUTO PARTS EXPORTS AND INDUSTRY PRESENCE IN ASIA

Canadian auto parts exports in 2003 ranked fourth among HS 4-digit codes, after motor vehicles, liquefied petroleum and hydrocarbon gases, and crude petroleum oils. Of the \$15 billion in total auto parts exports, 92% was shipped to the US. Over half of the remaining exports went to China. Canadian auto parts exports to the top three Asian markets — China, Japan and South Korea — have doubled in the past five years, while exports to the US have only increased by 11%. Whereas Canada runs an auto parts trade deficit with South Korea and Japan, trade with China has shown a strong surplus in recent years.⁴

3

Table 7 provides a breakdown of Canadian automotive parts exports to China, Japan and South Korea in 2003. For China and South Korea, the top export item is parts and accessories of motor vehicle bodies (in the case of China, this item largely consists of body parts for the GM Buick model that is assembled in Shanghai). In the case of Japan, road wheels are the top Canadian export, followed by safety seat belts and parts/accessories of motor vehicle bodies.

As the export figures indicate, the Canadian auto parts industry is highly focused on the United States. Much of this trade is intra-firm, with the same products sometimes crossing the border multiple times before a vehicle is fully assembled and ready for market. The involvement of Canadian firms in similarly complex production networking outside of North America is very limited. To this extent, the Canadian industry can be described as export oriented, but not highly globalized. In recent years, however, the Auto Parts Manufacturers' Association (APMA) has led an effort to educate its members on the growing importance of the East Asian automotive market, especially China. In 2003, the APMA led its first-ever mission to the People's Republic and it has followed up with a number of other initiatives, including a Fall 2004 survey of the APMA membership jointly undertaken with the Asia Pacific Foundation of

Canada. A sample of Canadian automotive ventures in East Asia between January 2002 and November 2004 is found in Annex B.

⁴ The surplus with China may be coming to an end. Auto parts exports in the third quarter of 2004 fell by 73% and the figures for August and September 2004 show a deficit.

COUNTRIES		1999	2000	2001	2002	200
China	Exports	144,177	417,693	233,607	448,720	697,3
	Imports	69,377	79,326	77,239	104,864	132,1
	Trade Balance	74,799	338,367	156,368	343,856	565,1
S. Korea	Exports	86,003	120,909	57,941	5,660	5,4
	Imports	29,140	34,009	41,300	61,158	74,3
	Trade Balance	56864	86900	16640	(55498)	(689
apan	Exports	15,872	9,876	10,385	57,924	48,6
	Imports	1,092,553	1,236,525	1,037,756	1,152,917	1,044,0
	Trade Balance	(1076681)	(1226650)	(1027371)	(1094993)	(9953
Sub-total	Exports	246,052	548,478	301,933	512,304	751,2
	Total	1,191,070	1,349,861	1,156,296	1,318,939	1,250,
	Trade Balance	(945018)	(801383)	(854363)	(806635)	(4991
s	Exports	13,767,299	14,195,178	13,707,008	15,649,517	15,234,3
	Imports	25,044,141	24,476,824	22,555,114	24,557,988	21,767,
	Trade Balance	(11276842)	(10281646)	(8848106)	(8908471)	(653240
Other Countries	Exports	700,717	892,738	1,027,918	710,807	587,
	Imports	1,520,624	1,545,345	1,532,177	1,704,728	1,507,0
	⊤rade Balance	(819907)	(652607)	(504259)	(993921)	(9192
「otal	Exports	14,714,067	15,636,393	15,036,858	16,872,627	16,573,9
	Imports	27,755,834	27,372,029	25,243,587	27,581,655	24,524,
	Trade Balance	-13,041,767	-11,735,636	-10,206,729	-10,709,028	-7,950,8

Source: Industry Canada, Trade Data Online. 23 November 2004. http://strategis.ic.gc.ca/sc_mrkti/tdst/engdoc/tr_homep.html. Adapted from Statistics Canada website at http://statscan.ca/trade/scripts/trade_search.cgi.

HS CODE	PRODUCT	CHINA	JAPAN	SOUTH KOREA
HS 870810	Bumpers and parts thereof	277,357	32,572	27,745
HS 870821	Safety seat belts	—	7,814,263	_
HS 870829	Parts and accessories of motor vehicle bodies	694,417,434	7,733,453	2,437,945
HS 870831	Mounted brake linings	_	161,677	—
HS 870839	Brake system parts	69,150	222,906	490,276
HS 870840	Gear boxes	_	3,612	3,290
HS 870850	Drive axles with differential	149,462	419	_
HS 870860	Non-driving axles and parts thereof	_	341,362	91,870
HS 870870	Road wheels (including parts and accessories)	57,571	27,059,142	1,316
HS 870880	Suspension shock absorbers	_	271,689	425,449
HS 870891	Radiators	92,243	482	_
HS 870892	Mufflers and exhaust pipes	201	34,908	_
HS 870893	Clutches and parts thereof	35,054	41	12,273
HS 870894	Steering wheels, steering columns and steering boxes	_	738	2,290
HS 870899	Other motor vehicle parts	2,253,266	4,994,101	1,957,965
HS 8708	SUB-TOTAL	697,351,738	48,671,365	5,450,419

TABLE 7: CANADIAN AUTOMOTIVE PARTS EXPORTS TO ASIA, 2003 (\$)

Source: Industry Canada, Trade Data Online. 22 November 2004. http://strategis.ic.gc.ca/sc_mrkti/tdst/engdoc/tr_homep.html. Adapted from Statistics Canada website at http://ststcan.ca/trade/scripts/trade_search.cgi.

RESULTS OF THE APF CANADA / APMA SURVEY

The key findings of the survey are presented below. Highlights of the survey results are presented in the Executive Summary.

4

SECTOR PROFILE

1. How many employees did you have working in auto sector-related activities (on average) during 2003?

Company Size:

Total Number of Auto Sector Employees Covered in Canada by all Respondents = 33,400

Total Number of Auto Sector Employees Covered Worldwide by all Respondents = 108,237

COUNTRY/REGION	COMPANY SIZE Number of Employees – Range
Canada	15 – 21,000
United States	0 – 14,800
Latin America	0 – 8,700
Europe	0 – 28,250
Asia	0 – 2,350
Elsewhere	0 – 300

2. What were your auto sector-related revenues in 2003?

AUTO SECTOR REVENUES IN 2003:

- Total of all Respondents = C\$4,114.5 million
- Range = C\$8.5 2,040 million
- 3. What were your auto sector-related research and development expenditures in 2003?

Research & Development Expenditures in 2003: Total of all Respondents = C\$694.5 million Range = C\$0 - 600 million 4. What percentages of your firm's auto sector-related business revenues are in the following categories?⁵

AUTO SECTOR REVENUE CATEGORIES	
Rubber, plastics, glass, or textiles	29.85%
Tooling/automation equipment	18.85%
Steel or other metals	7.69%
Non-mechanical components	4.77%
Body stamping, assembly, painting	4.54%
Body panels	1.23%
Machining/assembly of engine/	
transmission components	0.77%
Final vehicle assembly	0.77%
Mechanical/electrical systems	0.62%
Electronics	0%
Forging/stamping of engine/	
transmission components	0%
Others (include consulting and	
supplying of other materials)	30.92%

5. What percentages of your auto sector-related production were accounted for by facilities in the following geographical areas (by revenues in 2003 or most recently completed fiscal year)?

GEOGRAPHICAL AREAS	
Canada	69.36%
United States	17.07%
Europe	11.86%
Latin America	1.43%
Asia	0.29%

6. What percentages of your auto sector-related non-labour input/supply needs were sourced from suppliers in the following geographical areas (by revenues in 2003 or most recently completed fiscal year)?

GEOGRAPHICAL AREAS		
Canada	51.08%	
United States	33.33%	
Europe	9.00%	
Asia	4.67%	
Latin America	1.92%	

⁵ All averages are unweighted.

CUSTOMER PROFILES / RELATIONSHIPS

7. What percentages of your auto sector customers are in the following general classes (by revenues in 2003 or most recently completed fiscal year)?

CLASSES OF AUTO SECTOR CUSTOMERS				
Assemblers/OEMs	40.15%			
Tier I Suppliers	42.15%			
Tier II Suppliers	16.54%			
Other Tiers	1.15%			

8. What percentages of your auto sector customers are in the following geographical areas?

LOCATION OF AUTO SECTOR CUSTOMERS				
United States	54.08%			
Canada	34.83%			
Europe	6.92%			
Latin America	2.58%			
Asia	1.58%			

- 9. Did one or more of your major customers ask your firm to meet specific cost-reduction targets during 2003?
- 93% reported that one or more of their major customers asked them to meet cost-reduction targets in 2003. The cost reduction ranged from 5% to 20%, with an average of 7%.
- 10. Did one or more of your major customers ask your firm to take on additional design/ engineering functions during 2003?
- 79% have been asked by their customers to take on additional design or engineering functions.
- 11. In the last three years, has one or more of your major customers ever threatened to switch to over-seas suppliers?
- 71% have had major customers threaten to switch to overseas suppliers.

- 12. Over the past three years, has one or more of your major customers asked your firm to initiate or expand activities in new geographical markets in order to facilitate its own expansion agenda? If yes, please specify country(s).
- 64% have been asked by major customers to initiate or expand activities in new geographical markets over the past three years to facilitate the customers own expansion agenda. The top new geographical markets cited are:

United States 33%
Korea 33%
China 33%
Mexico 22%

- Other markets cited were Brazil, Egypt, France, India, Iran, South Africa, Thailand and Turkey.
- 13. Is your company considering new business relationships with Asia-based companies? (Please check all that apply.)
- 71% are considering new business relationships with Asia-based companies:

TYPES OF BUSINESS RELATIONSHIPS		
Supply Asian Assembler	60%	
Outsource Production	60%	
Joint Venture	50%	
Product Development	10%	
Technical Licensing	10%	

BUSINESS DEVELOPMENT & OUTLOOK

- 14. Please indicate the number of arms-length mergers or acquisitions your firm has undertaken in the past five years with counterparts in the following countries/regions:
- 71% have undertaken mergers or acquisitions in the past five years. Counterpart countries cited in Asia include South Korea and China.

15. Which factors have motivated your firm to engage in these mergers or acquisitions? Please mark all that apply.

FACTORS MOTIVATING MERGERS/ACQUISITION	15
Access to Important Customers	80%
Strategic Geographic Positioning	70%
Strategic Fit (acquisition of patents, R&D, staff)	70%
Cost Considerations (economies of scale, etc.)	60%
Access to Supplies or Parts	40%
Size – Bargaining Power with Customers	30%

- 16. In the past five years, what percentage of your firm's greenfield investments (by value) have been made in the following countries/regions?
- 57% have made greenfield investments in the past five years. The majority of the new investments were made in Canada, followed by Asia (South Korea, China and Japan):

COUNTRIES/REGIONS		
Canada	49%	
Asia	28%	
United States	18%	
Europe	4%	
Others	1%	

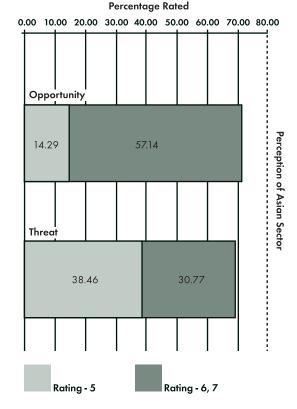
INDUSTRY CHALLENGES

17. Recently, there has been considerable discussion about the growth prospects of the automotive sector in Asia. From the perspective of your firm, please rate the following statements in terms of how strongly you agree or disagree based on the following scale:



- ____ the Asian auto sector is a fundamental source of opportunity
- ____ the Asian auto sector is a fundamental source of threat
- _____ the current attention on the Asian auto sector is unwarranted
- _____ the Asian auto sector will not have any material impact on our firm

- ____ our firm is happy with our investment return in Asia (if there is a presence)
- ____ our firm is planning to make further investments in Asia
- Respondents view the Asian auto sector as both a source of opportunity and threat. In terms of intensity, 57% strongly agree (rating of 6 or 7 on a 7-point scale) that the Asian auto sector is a source of opportunity, compared to only 30% who strongly view it as a threat:



- 84% believe that the Asian auto sector will have material impact on their firms.
- 54% plan to make further investments in Asia. Some of the barriers cited against expanding business in Asia include capital and human resources, cost competition, market knowledge, legal and taxation systems, name recognition, customer relation, culture and language.

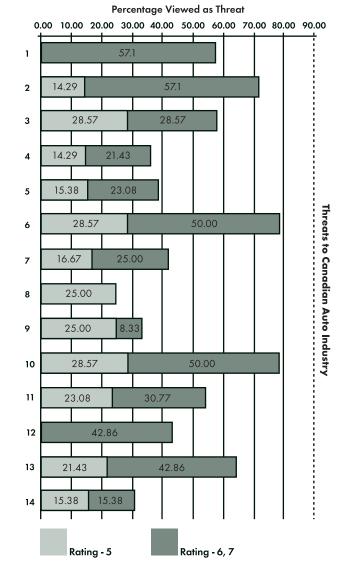
18. Aside from developments in Asia, industry observers are concerned with various potential threats to the Canadian auto sector. A number of these are listed below. From the perspective of your firm, please rate the intensity of these potential threats from 1 to 7 based on the following scale:

1	_2	_3	4	_5	6	7
extreme	/	1	moderate			extremely
low thre	at	t	threat			high threat

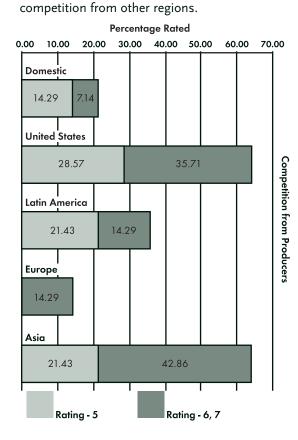
- Over 70% rated the following as threats (rating of 5, 6, or 7 on a 7-point scale) to the Canadian auto sector: unreasonable demands from customers (79%), overall erosion of profit margins (79%), and declining attractiveness of Canada as an investment location (71%).
- In terms of intensity, about 57% gave a rating of 6 or 7 (i.e. very high threats) to exchange rate changes and declining attractiveness of Canada as an investment location.

POTENTIAL THREATS:

- Bar 1 exchange rate changes
- Bar 2 declining attractiveness of Canada as an investment location
- Bar 3 maturity of the North American auto market
- Bar 4 ongoing consolidation in the domestic industry
- Bar 5 increasingly discriminating consumers
- Bar 6 unreasonable demands from assemblers or other customers
- Bar 7 access to, or overall cost of, non-labour inputs
- Bar 8 access to, or overall cost of, domestic labour inputs
- Bar 9 access to, or overall cost of, funds for expansions, acquisitions, or R&D
- Bar 10 overall erosion of profit margins
- Bar 11 domestic transportation infrastructure shortfalls
- Bar 12 border security issues
- Bar 13 protectionism in the United States
- Bar 14 costs and uncertainties associated with Kyoto Protocol implementation



— 16 —



Respondents view competition from the United States and Asia as more threatening than

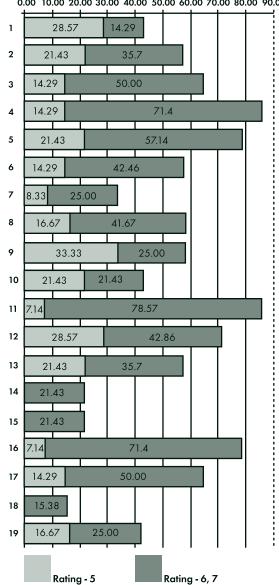
POLICY RESPONSE

19. Industry observers have suggested policies that the government could take to facilitate or enhance the growth of the Canadian auto industry. Several of those proposals are listed below. From the perspective of your firm, please rate the usefulness of these government policy proposals from 1 to 7 based on the following scale:

12	3	4	5	6_	7
extremely low	-	moderate	-		extremely high
usefulness		usefulness			usefulness

POLICY INITIATIVES 6 OR 7 ON A 7-POINT SCALE	% RESPONDENTS R	ATING
Increase funding and/or tax incent	ives for	
R&D and innovation		79%
Increase incentives to domestic inv	vestors	71%
Expedite transportation infrastruct	ure upgrades	71%
Increase incentives to foreign invest	stors	57%
Remove tax and other barriers that	slow domestic	
industry consolidation		50%
Implement electronic border cleari	ng system	
compatible with US Customs		50%

Percentage Rated Useful



0.00 10.00 20.00 30.00 40.00 50.00 60.00 70.00 80.00 90.00

POLICY INITIATIVES:

Bar 1 – Government-led marketing/branding initiatives
focusing on the auto sector
Bar 2 – Renew emphasis on government-industry
partnerships and task forces
Bar 3 – Remove tax and other barriers that slow
domestic industry consolidation
Bar 4 – Increase incentives to domestic investors
Bar 5 – Increase incentives to foreign investors
Bar 6 – Provision of capital to facilitate new
international joint ventures
Bar 7 – Facilitation of Canadian auto sector in rapidly
growing markets
Bar 8 – Change tax law to permit more rapid
depreciation of new equipment
Bar 9 – Assistance for implementing productivity-
enhancing equipment/systems
Bar 10 – Increase incentives to firms using alternative
energy
Bar 11 – Increase funding and/or tax incentives for
R&D and innovation
Bar 12 – Increase funding for Technology Partnerships
type programs
Bar 13 – Increase funding for auto-sector related
technical education
Bar 14 – Increase tax credits for firms that implement
retraining/'reskilling' programs
Bar 15 – Reduce immigration restrictions on young,
technologically skilled workers
Bar 16 – Expedite transportation infrastructure
upgrades
Bar 17 – Implement electronic border clearing system
compatible with US Customs
Bar 18 – Rescind Canadian ratification of the Kyoto
Protocol
Bar 19 – Make the use of anti-dumping/countervail

legislation easier

ANNEX A: 2004 APF CANADA/APMA AUTO INDUSTRY SURVEY

The following survey contains five sections with a total of 20 questions. Some questions contain multiple parts. It will not take long to complete but your responses are critical to better development of future trade policies. Please respond to all questions if possible.

Your individual responses to this survey will remain confidential, and will only be reported in a consolidated manner with other respondents. If you need clarification on any question, please feel free to contact Teresa Kwan at the Asia Pacific Foundation of Canada by phone at 604-684-5986 ext 3351 or by email to teresa.kwan@asiapacific.ca.

AUTO INDUSTRY DEMOGRAPHICS

1. What percentages of your firm's auto sector-related business revenues are in the following categories?

Provision/Manufacture of:

- ____% Steel or other metals
- ____% Rubber, plastic, glass, or textiles
- ____% Electronics
- ____% Body panels
- <u>%</u> Non-mechanical components (i.e., wheels, seats, exhaust systems etc)
- ____% Mechanical/electrical systems (i.e., braking, carburetors, steering, etc)
- ____% Forging/stamping of engine and/or transmission components
- ____% Machining/ assembly of engine and/or transmission components
- ____% Body stamping, assembly, painting
- ____% Final vehicle assembly
- ____% Others (please specify)
- 2. What percentages of your auto sector-related production were accounted for by facilities in the following geographical areas (by revenues in 2003 or most recently completed fiscal year)?

____% Canada ____% United States ____% Latin America (including Mexico)

____% Europe

- ____% Asia
- ____% Elsewhere (please specify)
- 3. What percentages of your auto sector-related non-labour input/supply needs were sourced from suppliers in the following geographical areas (by revenues in 2003 or most recently completed fiscal year)?
 - ____% Canada
 - ____% United States
 - ____% Latin America (including Mexico)
 - ____% Europe
 - ____% Asia
 - ____% Elsewhere (please specify)

AUTO SECTOR CUSTOMER PROFILES

- 4. What percentages of your auto sector customers are in the following general classes (by revenues in 2003 or most recently completed fiscal year)?
 - ___% Assemblers/OEMs
 - ____% Tier I
 - ____% Tier II
 - ____% Other Tiers
 - ____% Aftermarket
 - ____% Others (please specify)

5. What percentages of your auto sector customers are in the following geographical areas?

- ____% Canada
- ____% United States
- ____% Latin America (including Mexico)
- ____% Europe
- ____% Asia
- ____% Elsewhere (please specify)

- 6. Did one or more of your major customers ask your firm to meet specific cost-reduction targets during 2003?
 - Cost-reduction has not been an issue with our major customers.
 - ____ Cost-reductions have been discussed, but no explicit targets were set.
 - Explicit cost-reduction targets averaging ____% were requested.
- 7. Did one or more of your major customers ask your firm to take on additional design/ engineering functions during 2003?
 - ____Yes ____No
- 8. In the last three years, has one or more of your major customers ever threatened to switch to overseas suppliers?
 - ____Yes ____No
- 9. Over the past three years, has one or more of your major customers asked your firm to initiate or expand activities in new geographical markets in order to facilitate its own expansion agenda? If yes, please specify country(s).
 - ____Yes, in ____ ____No
- 10. Is your company considering new business relationships with Asia-based companies? (Please check all that apply.)
 - _____ Yes, in a supply relationship with an Asianbased assembler
 - Yes, in a joint venture with an Asian-based auto parts manufacturer
 - Yes, in outsourcing production to an Asian-based auto parts manufacturer
 - Yes, other relationships (please specify)

BUSINESS DEVELOPMENT & OUTLOOK

- 11. Please indicate the number of arms-length mergers or acquisitions your firm has undertaken in the past five years with counterparts in the following countries/regions:
 - Canada United States Latin America (including Mexico) Europe Asia (please specify country or countries) Elsewhere (please specify)
- 12. Which factors have motivated your firm to engage in these mergers or acquisitions? Please mark all that apply.
 - _____ Access to necessary supplies or parts (i.e., upstream focus)
 - ____ Access to important customers (i.e., downstream focus)
 - Cost considerations (e.g., economies of scale horizontal consolidation)
 - _____ Size -> access to finance
 - _____ Size -> bargaining power with customers
 - _____ Strategic fit -> acquisition of patents, R&D, staff, customers
 - ____ Strategic geographic positioning > access new markets / customers
 - _____ Others (please specify)
- 13. In the past five years, what percentage of your firm's greenfield investments (by value) have been made in the following countries/regions?
 - ____% Canada
 - ____% United States
 - ____% Latin America (including Mexico)
 - ____% Europe
 - ____% Asia (please specific country or countries)
 - ____% Elsewhere (please specify)

INDUSTRY CHALLENGES & POLICY INITIATIVES

14. Recently, there has been considerable discussion about the growth prospects of the automotive sector in Asia. From the perspective of your firm, please rate the following statements in terms of how strongly you agree or disagree based on the following scale:

12 _ strongly disagree	3456 indifferent	7 strongly agree
	the Asian auto sector is a fundamen source of opportunity	tal
	the Asian auto sector is a fundamen	tal

- source of threat
- _____ the current attention on the Asian auto sector is unwarranted
- _____ the Asian auto sector will not have any material impact on our firm
- _____ our firm is happy with our investment return in Asia (if there is a presence)
- _____ our firm is planning to make further investments in Asia

Please list barriers your firm faces in expanding its business in Asia:

15. Aside from the development in Asia, industry observers are concerned with various potential threats to the Canadian auto sector. A number of these are listed below. From the perspective of your firm, please rate the intensity of these potential threats from 1 to 7 based on the following scale:

12 _	345	;6	7		
extremely	moderate		extremely		
low threat	threat		high threat		
	Exchange rate changes Declining attractiveness of Canada as an investment location Maturity of the North American auto market Ongoing consolidation in the domestic industry				

- ____ Increasingly discriminating consumers
- _____ Unreasonable demands from assemblers or other customers
- ____ Access to, or the overall cost of, non-labour inputs
- ____ Access to, or the overall cost of, domestic labour inputs
- _____ Access to, or the overall cost of, funds for expansions, acquisitions, or R&D
- _____ Overall erosion of profit margins
- ____ Competition from domestic firms
- Competition from producers located in the United States
- ____ Competition from producers located in Latin America (including Mexico)
- Competition from producers located in Europe
- _____ Competition from producers located in Asia
- _____ Domestic transportation infrastructure
- shortfalls (i.e. roads, border crossings)
- _____ Border security issues
- _____ Protectionism in the United States
- ____ Costs and uncertainties associated with
- Kyoto Protocol implementation
- 16. Industry observers have suggested policies that the government could take to facilitate or enhance the growth of the Canadian auto industry. Several of those proposals are listed below. From the perspective of your firm, please rate the usefulness of these government policy proposals from 1 to 7 based on the following scale:

12 extremely low usefulness	3	4 moderate usefulness	5	6 extrer usefu	7 nely high Iness	
	Government-led marketing/branding initiatives focusing on the auto sector					
	Renew emphasis on government-industry partnerships and task forces					
	Remove tax and other barriers that slow domestic industry consolidation					
	Increase incentives to domestic investors					
	Increase incentives to foreign investors					
	Provision of capital to facilitate new					
	internatio	onal joint v	entures			

_____ Facilitation of Canadian auto sector in rapidly growing markets such as India, China or Central/Eastern Europe.

Please provide an example: _____

- ____ Change tax law to permit more rapid depreciation of new equipment
- _____ Assistance for implementing productivity-
- enhancing equipment/systems _____ Increase incentives to firms using alternative
- energy ____ Increase funding and/or tax incentives for R&D and innovation
- Increase funding for Technology Partnerships type programs
- Increase funding for auto-sector related technical education
- _____ Increase tax credits for firms that implement retraining / 'reskilling' programs
- _____ Reduce immigration restrictions on young, technologically skilled workers
- Expedite transportation infrastructure upgrades
- _____ Implement electronic border clearing system compatible with US Customs
- _____ Rescind Canadian ratification of the Kyoto Protocol
- _____ Make the use of anti-dump / countervail legislation easier

COMPANY INFO

- 17. How many employees did you have working in auto sector-related activities (on average) during 2003?
 - _____ employees in Canada
 - _____ employees in the United States
 - _____ employees in Latin America (including Mexico)
 - _____ employees in Europe
 - ____ employees in Asia
 - _____ employees elsewhere (please specify)

18. What were your auto sector-related revenues in 2003?

____ million Canadian dollars

19. What were your auto sector-related research and development expenditures in 2003?

____ million Canadian dollars

20. Please list below any further comments you may have on trends in the development of the East Asian automotive industry and their impact on the Canadian auto sector:

Thank you for your time in completing this survey. Please be assured that your responses will remain confidential and will only be reported in a consolidated manner with other respondents.

Please return the completed survey by September 3, 2004.

By fax: 604-681-1370 Or by mail: Asia Pacific Foundation of Canada 666-999 Canada Place Vancouver, BC V6C 3E1

ANNEX B: SELECTED NEWS REPORTS OF CANADA-ASIA AUTOMOTIVE BUSINESS $(2002 - 2004)^{1}$

Nov. 19, 2004 — Magna International to Establish Subsidiary in Japan and Open Office in Nagoya

Magna International Inc., an Ontario-based global supplier of automotive systems, components and complete modules, announced expansion plans for the Japanese market. The company will establish a subsidiary in Japan in January 2005 by upgrading the status of its Tokyo branch office. To increase its marketing to Toyota Motor Corporation and its autoparts manufacturers, Magna will also open an office in Nagoya, Aichi Prefecture.

Information summarized from: Nikkei Business Daily

Oct. 14, 2004 — SmarTire and Hyundai Autonet Launch Jointly Developed Tire Monitoring System

Vancouver-based SmarTire Systems Inc., which develops and markets proprietary advanced tire pressure monitoring and technology systems for the global automotive and transportation industries, announced that its South Korean partner, Hyundai Autonet has launched its jointly developed tire pressure monitoring system (TPMS) for the South Korean and Japanese markets. The TPMS is targeted at new car and aftermarket customers in South Korea and Japan. Under the terms of the agreement, Hyundai Autonet is permitted to market and sell the system in South Korea while SmarTire retains the sales and marketing rights to Japan and the rest of the world.

Information summarized from: SmarTire Systems Inc. Press Release

Sep. 21, 2004 — Dofasco Signs New Technology Agreement with Japan's JFE Steel

Hamilton-based steel producer Dofasco Inc. announced that the company has signed a technology cooperation agreement for automotive steels with JFE Steel Corporation of Japan. JFE will provide Dofasco with the product and process technology support to produce advanced automotive steels at DJ Galvanizing in Windsor, Ontario. Dofasco and JFE are 50/50 joint venture partners at DJ Galvanizing. A prior technology cooperation agreement, signed in 1989 between Dofasco and NKK (a predecessor of JFE), expired earlier this year.

Information summarized from: Dofasco Inc. Press Release

Aug. 27, 2004 — Magna International Signs Co-operation Agreement with China's Song Liao Automobile

Aurora, Ontario-based automotive supplier Magna International Inc. has signed a co-operation agreement with Song Liao Automobile Co Ltd. of China, a unit of Shenyang Zhongshun Automobile Co. Ltd. The agreement covers several areas including research and development, components production, production qualification and international marketing. Magna designs, develops and manufactures automotive systems, assemblies, modules and components.

Information summarized from: Xinhua Financial Network News

Aug. 26, 2004 — Japan's Musashi Seimitsu Industry Co. to Expand Operations in Canada

Musashi Seimitsu Industry Co. of Japan, which manufactures and markets automotive engine, suspension and steering parts, plans to build a second plant in Canada. The company's Canadian operation, Musashi Auto Parts Canada Inc, is located in Arthur, Ontario, and manufactures auto transmission parts and balljoints. Musashi Seimitsu primarily supplies Honda Motor Corporation but is expanding its sales base to include foreign automakers, resulting in an increased demand for engine parts.

Information summarized from: Nikkei Business Daily

¹ Extracted from *Canada-Asia News* archives, www.asiapacific.ca/news/index.cfm

Aug. 11, 2004 — Dominion Sure Seal Enters Joint Venture in Anti-Corrosive Liquid for India's Auto Sector

Dominion Sure Seal Group has formed a joint venture with PCP Technologies Pvt. Ltd., based in Kolkata, India, to market its anti-corrosive liquid product to auto companies in India. Dominion Sure Seal, headquartered in Mississauga, manufactures and distributes a range of automotive sealants, anti-corrosive materials, adhesives, body and trim tools, auto glass items, aerosols and plastic repair products.

Information summarized from: Press Trust of India Limited

Jul. 13, 2004 — Eiger Subsidiary to Acquire South Korea's Dacos Technologies

Toronto-based Eiger Technology, Inc. announced that its energy technology subsidiary, K-Tronik International Corp., has entered into an agreement to acquire 100% of Dacos Technologies, Inc. Dacos is a privately-held South Korean manufacturer of automotive TV/DVD electronics, personal media recorders, cell phone components and other electronic products. To acquire all the shares of Dacos, K-Tronik will pay US\$3M and issue a total of 10M common shares of K-Tronik to the shareholders of Dacos. Eiger Technology is a designer and manufacturer of Internetenabled electronic devices and voice-enabled services.

Information summarized from: Eiger Technology Press Release

Jun. 1, 2004 - Luxell Technologies Signs Agreement with South Korea's Hyundai LCD

Luxell Technologies Inc., a Toronto-based company that develops, manufactures and licenses flat panel display technologies for defence, avionic and consumer industries, has signed an Organic Light Emitting Diode (OLED) licence agreement with Incheon, South Koreabased Hyundai LCD Inc. Under the terms of the agreement, Hyundai LCD acquires a non-exclusive production licence to integrate Luxell's Black Layer contrast enhancement technology into Hyundai's OLED devices. Hyundai LCD will pay technology transfer fees and royalties to Luxell, based on sales of display panels. Hyundai's OLED devices include mobile phone, Personal Digital Assistant, automotive and other application devices.

Information summarized from: Luxell Technologies Inc. Press Release

Mar. 24, 2004 — Suzuki to Manufacture Largest SUV in Ontario

Suzuki Motor Corporation plans to manufacture its largest-ever SUV, a 3-litre class sport utility vehicle, at CAMI Automotive Inc. in Ingersoll, Ontario. The vehicle company hopes that the launch of this SUV will improve its sales in North America. Suzuki Motor plans to manufacture 50,000 units of this new model with the possibility of export to Australia and Japan.

Information summarized from: *Asia Pulse*

Mar. 3, 2004 — AADCO Signs Distribution Agreement for China with UIBC

Ontario-based AADCO Automotive Inc., a supplier of used auto parts, has signed a letter of intent with Toronto-based United International Business of Canada Inc. (UIBC) for an exclusive master distribution agreement for China. The agreement makes AADCO the preferred supplier of auto parts of UIBC for the China market. Joint plans include UIBC establishing of a call centre in Shandong. AADCO will assist UIBC in setting up a facility in China and AADCO will receive royalty payments for all parts sold from this plant. Payments to ADDCO from this distribution agreement will commence in December.

Information summarized from: AADCO Automotive Inc. Press Release

Jan. 14, 2004 — Andra Pradesh Government Signs MoU with Exco Technologies

The Andra Pradesh government in India has entered into a Memorandum of Understanding with Ontario-based Exco Technologies Ltd., a supplier of technologies servicing the die-cast, extrusion and automotive industries. Exco Technologies will establish a tool room project for the manufacture of toolings, moulds and dies needed for the aluminum extrusion and automotive industries with an initial investment valued at more than C\$8M.

Information summarized from: Business Standard

Jan. 9, 2004 — Japanese Auto Mould Maker Buys Canadian Company

Arrk Corporation, an Osaka-based mould maker, announced that it will buy Ontario-based Aar-Kel Moulds Ltd. for US\$8M. Aar-Kel Moulds Ltd. specializes in the design and manufacturing of plastic moulds and die casting dies and is a full service supplier to the automotive industry. Aar-Kel will become a subsidiary of the Japanese company in March 2005. Arrk has design centres, but no manufacturing facilities, in North America.

Information summarized from: Nikkei Sangyo Shimbun

Oct. 20, 2003 — Wescast Industries Opens Office in Japan

Wescast Industries Inc. announced that it has opened a sales and design office in Tokyo to support automotive customers based in the Asia Pacific region including Japan, China and South Korea. The opening of this new office coincides with the establishment of Wescast's newly formed company Wescast Japan K.K. Brantford, Ontario-based Wescast Industries Inc. is a supplier of exhaust manifolds for passenger cars and light trucks.

Information summarized from: Wescast Industries Inc. Press Release

Oct. 20, 2003 — SmarTire Signs Manufacturing Agreement with Hyundai Autonet

BC-based SmarTire Systems Inc. announced that it has signed a contract manufacturing services agreement with Hyundai Autonet Company (HACO), a South Korean automotive electronics supplier and a subsidiary of Hyundai Group. Under the terms of the agreement, HACO will manufacture the company's proprietary line of tire pressure monitoring systems for sale and distribution globally by SmarTire. Information summarized from: SmarTire Systems Inc. Press Release

Sep. 30, 2003 — Japanese Auto Makers Select Greenlight Power for Fuel Cell Testing Equipment

Hydrogenics Corporation, a Toronto-based developer and manufacturer of fuel cell products, announced that its wholly owned subsidiary, Greenlight Power Technologies, has received orders totaling US\$3M for fuel cell test stations from two Japanese automotive customers. Both are repeat orders for multiple machines. Greenlight is a supplier of testing and diagnostic equipment to the fuel cell industry.

Information summarized from: Hydrogenics Corporation Press Release

Aug. 28, 2003 — Chinese Auto Logistics Firm Chooses Descartes' Routing and Scheduling System

Descartes Systems Group Inc. announced that ANJI-TNT Automotive Logistics Co, a third-party logistics systems provider to the Chinese automotive market, has selected the Descartes Routing and Scheduling system, Descartes Fleetwise. Using this system to coordinate dispatchers, drivers and customer service, ANJI-TNT plans to strengthen its customer responsiveness through regular, on-time deliveries of vehicle parts to some of China's largest automakers. Descartes Systems Group is a logistics solutions provider based in Waterloo, Ontario.

Information summarized from: Descartes Systems Group Inc. Press Release

Aug. 13, 2003 — Intier Automotive Signs Agreement with Japan's Toyoda Gosei for Interior Technology

Intier Automotive Inc. announced that it has signed an agreement with Japan's Toyoda Gosei Co. Ltd. for the use of Intier Automotive's PUR-FECT Skin technology. PUR-FECT Skin, an alternative to PVC, is a polyurethane spray for floor consoles, instrument panels and door trims. Toyoda Gosei will first use the technology on the instrument panel for a car to be built in Japan. Intier Automotive, a division of Magna International, is an Ontario-based company that specializes in the development and manufacture of vehicle interior and vehicle closure components and systems for the global automotive industry.

Information summarized from: PR Newswire

May. 15, 2003 — TDS Automotive to Partner with BMW Group on New China CKD Program

London, Ontario-based TDS Automotive has been chosen by BMW to provide outbound logistics services for its new China project. Under the terms of the fiveyear contract, TDS Automotive will perform CKD (complete knock-down) export packing services to support production by BMW Group, and joint-venture partner Brilliance China Automotive Holdings Ltd., of BMW '3 series' vehicles in Shenyang, China. TDS automotive is a supplier of specialized, integrated and high-complexity material logistics services to the global automotive industry.

Information summarized from: TDS Automotive Press Release

Apr. 23, 2003 — Sanoh Industrial of Japan Opens New Plant in Ontario

Japanese Sanoh Industrial, a producer of automotive fuel and brake tubes, announced that HiSAN of Canada, its wholly owned subsidiary, has opened a new plant in Ontario. The plant, an investment of C\$4.4M, will employ 100 people. The company's sales target for fiscal 2003 is C\$34M.

Information summarized from: *Nikkan Jidosha Shimbun*

Mar. 20, 2003 — Canadian Aluminum Technology to be Used in Japan

Nippon Light Metal of Japan will introduce a 'flexcaster' system based on belt casting technology from Alcan to produce aluminum coil for the automotive industry at its plant in Shizuoka Prefecture in July 2004. Montreal-based Alcan and Nippon Light Metal formed a technological partnership in 2002 to jointly develop new technology for casting aluminum for the automotive industry.

Information summarized from: *Nikkan Jidosha Shimbun*

Mar. 10, 2003 — Toyota Seat Supplier Araco to Begin Operations in Ontario

Toyota Motor Corp. automotive seat manufacturer and supplier Araco Co. has announced plans to open a seat and interior door trim manufacturing plant in Ontario, in order to keep up with Toyota's recent expansion of production in Canada. The new plant is to begin production in August and will be run by Trim Masters Inc., a joint-venture of Araco and Johnson Controls Inc. Toyota will receive 100% of the plant's production. The cost of establishing the plant is estimated at US\$28M.

Information summarized from: *Asia Pulse*

Feb. 11, 2003 — Vancouver's Powertech to Oversee Automotive Fuel Cell Project

Vancouver's Powertech and NKK Corp. subsidiary, Kokan Drum Co., will oversee a research project aimed at improving the storage of hydrogen in fuel cell vehicles developed by Toyota Motor Corp., Nissan Motor Co., Hyundai Motor Co., DaimlerChrysler AG, Ford Motor Co. and PSA Peugeot Citroen Group. The project aims at finding ways to increase the mileage of fuel cell vehicles. Powertech will be in charge of evaluating parts prototypes and advising the automakers on these parts.

Information summarized from: Nihon Keizai Shimbun

Feb. 10, 2003 — BC's SmarTire Signs Agreement with Hyundai Autonet

SmarTire Systems Inc, a Richmond, BC-based developer of tire monitoring technology, has signed an agreement with the South Korean automotive electronics supplier Hyundai Autonet Co. Ltd. The two firms will together develop and distribute to the South Korean automotive market tire monitoring programs based on SmarTire's technology.

Information summarized from: SmarTire Systems Inc. Press Release

Jan. 20, 2003 — Japan's Marubeni Corp. to Use Braintech's 3D-Vision Robotics Software

North Vancouver-based Braintech, Inc., a provider of robotics technology for manufacturing, has received an order from the Japanese trading company Marubeni Corporation, for Braintech's multiple application runtime licences of its 3D-Vision Guided Robotics (3D-VGR) platform software, eVF. Marubeni plans to use this technology to provide better service to its automotive customers. Braintech and Marubeni have also signed a mutually exclusive agreement under which both companies will work together to further develop 3D-VGR.

Information summarized from: Canada NewsWire

Jan. 10, 2003 — Magna Announces Plans for Expansion into China

Magna International, a Toronto-based, global supplier of exterior and interior automotive components and systems, has announced that it is looking to 'establish a firm foothold' in the Chinese automotive market. This announcement comes in conjunction with the publication of Magna's 2003 corporate outlook.

Information summarized from: Business Daily Update

Dec. 20, 2002 — Canadian Super Seal Pro to be Sold in Japan

Ontario-based Cliplight of Canada has reached an agreement with a Japanese chemical trading company, Tokyo Zairyo, to market Cliplight's Super Seal Pro, used to mend cracks and leakage of automotive air conditioning units. Sales of Super Seal Pro are expected to commence in the summer of 2003.

Information summarized from: *Nikkan Jidosha Shimbun*

Nov. 20, 2002 — Ube Automotive to Double Production at New Ontario Wheel Plant

Japan's Ube Automotive will increase production capacity at its Sarnia plant due to strong worldwide demand for its large-radius automobile wheels. The plant, which opened last May, has a current production of 1.1 million units per year, which will be increased to 2.25 million per year by 2006. Ube Automotive plans to use the Sarnia plant as its global supply base for certain wheel types.

Information summarized from: Nikkan Jidosha Shimbun

Oct. 29, 2002 — GM of Canada to Use SUV Engines from China Plant

General Motors of Canada plans to install a sixcylinder engine from China in its newest sport utility vehicle, the Chevrolet Equinox. GM will ship the engines from a GM joint-venture facility, owned with Shanghai Automotive Industry Corp., to its Ingersoll, Ontario plant, which will install them beginning in 2004. This will be GM's first use of a Chinese-made engine in its North American operations.

Information summarized from: National Post

Aug. 28, 2002 — Japan's Futaba Industrial Opens New Plant in Ontario

Futaba Industrial Co. Ltd., a Japanese auto parts manufacturer, will officially open a new 120,000 sq. ft. plant this week in Stratford, Ontario. The new company, FIO Canada Automotive Corp., will manufacture components for the Toyota Lexus RX300. The new facility involved an investment of C\$31M.

Information summarized from: Canada NewsWire

Aug. 16, 2002 — NKK to Purchase US Company's Stake in Canada-Japan Joint Venture

Japan's NKK Corp. announced that it will purchase shares held by National Steel Corp. of Indiana in DNN Galvanizing at the end of the month. DNN is a North American automotive steel plate joint venture whose stakeholders are Dofasco with 50%, NKK with 40% and National Steel with the remaining 10%. The deal is valued at US\$4.3M.

Information summarized from: *Nihon Keizai Shimbun*

Jun. 26, 2002 — Braintech Signs Manufacturing Agreement for SE Asia and Australia with Marubeni

North Vancouver-based Braintech Inc, a developer of vision-guided robotic systems for factories, has signed a marketing and development agreement with Japanese trading company Marubeni Corp. The agreement grants Marubeni an exclusive licence to manufacture and distribute Braintech's Vision Guided Robotic systems in Southeast Asia and Australia. The two companies will initially collaborate on developing applications for the automotive powertrain sector. Braintech's system gives industrial robots 'eyes' to handle and assemble parts, ensuring consistent high quality and productivity.

Information summarized from: Braintech Inc. Press Release

Apr. 8, 2002 — Greenlight Power Technologies to Distribute Fuel Cells in Japan Through Toyo Corporation

Burnaby-based Greenlight Power Technologies, a supplier of fuel cell test and diagnostic equipment, has entered into an exclusive distribution deal with Toyo Corp. to market and service its fuel cell test products in Japan. Greenlight will use Toyo's relationships with firms in the stationary, portable and automotive fuel cell technology sectors, and its regional sales and service network.

Information summarized from: Canada NewsWire

Apr. 5, 2002 — Japan's Kyoshin to Supply EGR Valves to Canada

Auto parts manufacturer Kyoshin, has received a contract from Siemens Automotive of Canada to supply 1.5 million EGR valve sets per year for five years beginning in June. Kyoshin, based in Suwa Nagao Prefecture, has patented technology to produce the valves, which reduce emissions from cars with automatic transmissions.

Information summarized from: Nikkan Kogyo Shimbun

Feb. 27, 2002 — Tri-Way Manufacturing Announces Distribution Agreement with Marubeni Corp.

Windsor, Ontario-based Tri-Way Manufacturing Technologies Corp., a manufacturer of machine tools and systems for the powertrain industry, has reached a distribution agreement with Marubeni Corp, a Japanese global trading company. Under the agreement, Tri-Way will exclusively distribute a wide variety of Horkos machine tool products in Canada and the US. Horkos Corp. is a manufacture of machine tools for the Japanese automotive industry.

Information summarized from: PR Newswire

Feb. 19, 2002 — Uni-Ram to Distribute Recycling Equipment in Japan Through Katakura Industries

Markham-based Uni-Ram, a manufacturer of equipment for the automotive after market and for industrial applications, has selected Tokyo's Katakura Industries as its general agent in Japan. Katakura is aiming to sell 50 of Uni-Ram's machines to semiconductor manufacturing plants and auto parts facilities during the first year.

Information summarized from: *Nihon Kogyo Shimbun*

Feb. 12, 2002 — Stelco and Kawasaki Steel Extend Cooperation

Hamilton-based steelmaker Stelco and Japan's Kawasaki Steel Corp. have agreed to extend their 1990 technology collaboration agreement to form a comprehensive alliance in steel sheets and other steel products. Under the arrangement, the two companies will work together to manufacture and develop new technologies mainly in automotive sheet steel products, automotive critical bar products, and large diameter pipe for oil and gas transmission.

Information summarized from: Stelco Inc. Press Release

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