

CENTRAL EUROPE AUTOMOTIVE REPORT™

BULGARIA CIS CZECH REPUBLIC HUNGARY
POLAND ROMANIA RUSSIA SLOVAK REPUBLIC SLOVENIA

The Source For Automotive Information On Central Europe™

February 1998

On The Web at <http://www.pear.com>™

Volume III, Issue 2

ISSN 1088-1123

Regional Market Highlights

Summary

- *New Cars Sales in Poland Up 26%*
- *Skoda Gets ISO 9001 Certification*
- *Suzuki Hungary Expands Production Capacity*
- *Dacia and Hyundai Sign Licensing Agreement*
- *New CEO at Daewoo Automobile Romania*
- *Timken Buys Romanian Bearing Manufacturer*

Poland

New Car Sales Grow By 26%

During the first 11 months of 1997, new car sales in Poland totaled 440,916 units, up

over 26% compared to the same period a year earlier. The figures, released by SAMAR, show that local production accounted for 306,384 units, and imports totaled 134,532 units.

Fiat was the best selling brand, capturing a market share of 35.09%. Daewoo held strong at the number two position with a market share of 25.72%. GM-Opel was the third best selling brand with a market share of 9.33%.

J.T. Granatelli Lubricants Signs Distribution Agreement For Central & Eastern Europe

On December 18, 1997, J.T. Granatelli Lubricants, Inc. reported that it entered into a material exclusive licensing arrangement and purchase agreement with Union Construction Enterprise, Inc. The agreement has an estimated value of \$28.8 million over a ten year period.

Pursuant to the agreement, Union is granted exclusive marketing and distribution rights for Lithuania, Poland, Belarus, and Kaliningrad. The agreement calls for certain "take-or-pay" provisions, including the posting of a performance bond by Union in the sum of the aggregate product to be purchased under the agreement.

"This agreement with Union is a culmination of eighteen months of test marketing throughout Poland, Belarus, Kaliningrad, and Lithuania," said Harry Hibler, President of J.T. Granatelli. "Union's preliminary

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1997 Automotive Executive of the Year

CEAR™ Congatulates its
1997 Central Europe Automotive
Executive of the Year:

Daewoo Group Chairman Kim Woo-Choong

This year's "CEAR™ Central Europe Automotive Executive of the Year" award is presented to Daewoo Group Chairman Kim Woo-Choong. The CEAR™ chooses Chairman Kim to receive this award because of his dynamic leadership and active involvement in Daewoo's massive investment program for the Central European automotive industry.



*Chairman
Kim Woo-Choong*

Under the guidance of Chairman Kim, Daewoo's strategic assault on Central Europe has had a profound impact on the competitive dynamics of the region's auto sector. The boldness and sheer magnitude of Daewoo's attack surprised many and has forced competitors to speed up and bolster their own activities in Central Europe.

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February 1998
Volume III, Issue 2
ISSN 1088-1123



Ronald F. Suponcic, Jr.
Publisher



Jeffrey A. Jones, Esq.
Editor-in-Chief

Editorial Assistant
Barbora Grossmannova

Research Assistant
Katarina Trginova

Design

Big Sky Creative
Caroline Bond
cetmdes@ibm.net

Web Site Design

Big Sky Creative
Ron St Clair
cetmdes@ibm.net



Reporters

Catalin Dimofte, Bucharest
Magda Sowinska, Warsaw
Valerie Dumas, Budapest
Bostjan Okorn, Ljubljana

February Columnists

Andrea E. Villanyi, Strikeman Elliot
Dr. Erzsebet Szilagyi, Reti & Antall
Denes Szabo, Ernst & Young

The CENTRAL EUROPE AUTOMOTIVE REPORT™, 4800 Baseline Rd., Suite E104-340, Boulder, CO 80303, USA, is published monthly, except August, by Central European Trade & Marketing, L.L.C. in Boulder, Colorado.

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Offices in Central Europe and the United States
Business, Editorial, Subscription, Advertising,
and Market Research Inquiries to:

CENTRAL EUROPE AUTOMOTIVE REPORT™
4800 Baseline Rd., Suite E104-340
Boulder, CO 80303 USA
Tel: +1-440-843-9658 Fax: +1-206-374-5282
Email: cetmlc@ibm.net

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marketing efforts have been extremely well received within those regions, and are further evidenced by Union's firm commitment to continue to develop and grow those emerging markets for [our] product line."

J.T. Granatelli Lubricants, Inc. manufactures, markets, sells, and distributes its proprietary line of motor oil, general household and motor vehicle lubricants, and contiguous products worldwide.

Czech Republic

Skoda Auto Receives ISO 9001 Certification; New Engineering Center Under Construction

On December 15, 1997, Skoda Auto a.s. received ISO 9001 certification. The German auditing company RW TUV Essen confirmed the quality of all processes at the company, from automobile engineering through purchasing, production, and sales. Skoda also supplies components to various plants of other VW Group subsidiaries. Skoda's Vrchlabi plant achieved the best quality in the entire VW Group in the third quarter of this year.

In December 1997, the foundation stone was laid for Skoda's new engineering center in Mlada Boleslav. The Czech Crown 200 million (\$6 million) investment will provide new workplaces totalling 3,800 sq.m. for 160 engineers and designers. Skoda's engineering staff has increased to a total of 1000.

According to plans agreed to with the VW Group, Skoda will double production to 500,000 automobiles per year by the end of the century.

Daewoo Avia Increases Production & Sales

During the first 11 months of 1997, Daewoo Avia produced 4,826 units of Avia vehicles and 876 units of vehicles from Daewoo's Lublin plant in Poland. In 1996, Avia vehicle production totaled 4,448 units. For all of 1997, the company expects to sell 5,500 Avia vehicles, with 2,800 of those units destined for export

markets.

Hungary

Suzuki Expanding Capacity

Magyar Suzuki plans to expand its yearly production capacity to 70,000 vehicles from the current capacity of 50,000 vehicles. Estimated production for 1997 is 60,000 vehicles, which was achieved through overtime production, Saturday operation, and other methods.

Suzuki currently produces the Swift model at its factory in Esztergom, Hungary. Car production at the plant began in October, 1992.

Romania

Dacia & Hyundai Enter Into Licensing Agreement

Troubled Romanian carmaker Dacia has entered into an agreement with Hyundai. Pursuant to the agreement, Dacia will assemble 50,000 Accent models, as well as 100,000 Hyundai engines per annum. According to company sources, Dacia should start assembling the Hyundai Accent in 1999. The standard model should sell in Romania for \$8,000, jeopardizing Daewoo's domestic market share.

New CEO at Daewoo

In January, Daewoo Automobile Romania will have a new CEO. Former CEO Dong-Kyu Park returns to the corporate headquarters in Seoul, Korea, while Oh Joon Kwoon will take over in Craiova.

Mr. Kwoon is considered a high flier within the Korean chaebol, where he has worked since 1972. He previously held important positions in Daewoo's overseas operations, including chairman of Daewoo Heavy Industries branches in Japan and the US.

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EDITORIAL CALENDAR

1998

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<u>Issue</u>	<u>Feature</u>	<u>Automotive Reviews</u>	<u>Special Reports</u>	<u>Ad Close Date</u>
Jan 98	Poland	Body/Chassis	1997 Year in Review/ 1998 Forecast	Dec 10, 1997
Feb 98	Hungary	Central Europe's Executive of the Year	na	Jan 10, 1998
Mar 98	Czech Republic	Components & Systems	Auto Aftermarket	Feb 10, 1998
Apr 98	Slovak Republic	Marketing & Advertising	na	Mar 10, 1998
May 98	Romania/Bulgaria	Electronics	Auto Consultants	Apr 10, 1998
Jun 98	Poland/Slovenia	OEM Special: Who Supplies Who	na	May 10, 1998
Jul 98	Hungary	Powertrain	Exporting to Central Europe	Jun 10, 1998
Aug 98	Not Published			
Sep 98	Czech Republic	Plastics	Auto Engineering	Aug 10, 1998
Oct 98	Slovak Republic	Logistics	Human Resources	Sep 10, 1998
Nov 98	Romania/Bulgaria	Interiors	Real Estate	Oct 10, 1998
Dec 98	Poland/Slovenia	Financing	na	Nov 10, 1998

Regular Monthly Columns

Feature Country - featured country market overview and news, plus updates from around the region

Profile Interview - interviews with regional automotive executives

Product News - information on new products, components, and vehicles in the market

Opportunity Spotlight - regional companies offering investment, joint venture, or partnership opportunities

Legal Advisor - updates on legislation and legal matters pertaining to the automotive industry

Focus On Investment - investment analysis of regional automotive related companies

Accounting & Finance - updates on accounting, tax, and customs changes pertaining to the automotive industry

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The Romanian media reported that the change was triggered by the low domestic market sales performance of the company — some 4,700 units during the first ten months of 1997.

However, things look vastly different from Daewoo's perspective — a company renowned for its stubbornness in pursuing long-term goals. Mr. Park — a man with a military background — may well have been the best person to lead the company through its initial development stages, which involved team building, capital investments, and meeting short deadlines.

With full speed production now underway, the focus has changed to soft management areas such as human resources, marketing, and sales. Given Mr. Kwoon's credentials as a marketing man, he may be the right person to boost company's sales. Mr. Kwoon is, however, cautious. "Our sales target for 1998 is 40,000 units — equally shared between the domestic and overseas markets," he said.

Timken Signs Quick Agreement to Buy Romanian Bearing Manufacturer

In December, the **Timken Company** signed a definitive agreement to acquire 70% of Romanian bearing manufacturer **Rulmenti Grei S.A.** Rulmenti Grei, located 60 km north of Bucharest in Ploesti, produces bearings used in a wide range of industrial applications, including steel and aluminum rolling mills, paper mills, marine systems, and oil and gas production. In addition to serving customers in Romania, Rulmenti Grei exports to customers in Eastern and Western Europe, Asia, and North America.

Timken is paying \$37 million for the Romanian government's 70% share. However, Romania's privatization process returns 60% of the purchase price back into the development of the firm. Rulmenti Grei has been 70% owned by Romania's **State Ownership Fund** and 30% by private investment groups and individuals.

"As with other acquisitions, we will be working to strengthen Rulmenti Grei by introducing advanced technology and manufacturing processes," said Robert L. Leibensperger, executive vice president and president-bearings for The Timken Company.

"Over the next five years, we will match the Romanian privatization reinvestment in the enterprise to establish Ploesti as a major technical center for the design and manufacture of bearings for industrial applications. The output will be substantially above the current level."

Timken's deal with the Romanian State Ownership Fund happened quickly, with less than 5 months elapsing from the first plant visit to the signing of the definitive agreement.

Rulmenti Grei was built in 1979 and employs some 1,000 people. It manufactures over 1,200 types and sizes of bearings, including tapered, cylindrical, spherical, and ball bearings.

New Car Sales, Exports, & Production Up In Romania During First Nine Months

New car sales in Romania during the first nine months of 1997 totaled 66,358 units, up from 65,298 units sold during the same period last year. The top selling brand was **Dacia** with 58,427 units sold, up 21% compared to 1996. **Daewoo** was the second best selling brand, with 3,520 units sold, and **Volkswagen** captured the number three position, selling 1,187 units.

Passenger car exports from Romania during the first nine months totaled 14,545 units, up from 4,219 units a year earlier.

Passenger car production in Romania during the first nine months was 80,930 units, up from 65,364 units a year earlier. Light commercial vehicle production dropped from 15,559 units in 1996 to 12,485 units in 1997.

International

Visteon Appoints Vice President Of New Market Development

Visteon Automotive Systems has appointed James B. Smith III to the position of vice president of New Market Development. Smith, formerly vice president of Finance and Chief Financial Officer for **Ford Credit**, will be responsible for evaluating and pursuing new business opportunities for Visteon on a global basis.

Prior to his appointment with Ford Credit, Smith was executive vice president of Financial and Administrative Matters for **Autolatina**, the joint venture between **Ford Motor Company** and **Volkswagen AG** in Argentina and Brazil. Following dissolution of Autolatina, Smith was vice president of Financial and Administrative Matters for Ford's Argentina and Brazil operations. Smith joined Ford in 1970 and has held a variety of positions in North America, South America, and Europe ■

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Profile:

Hungary

Ford Hungaria's Alba Plant Quietly Expanding Doubles Size and Sales

Ford has found fertile land in Hungary for its component manufacturing operations. Ford Hungaria's Alba plant has grown quickly, with starter motors and air fuel charging assemblies recently added to its product mix of DIS coils and fuel pump equipment. In June 1998, production of modular fuel pumps, fuel delivery modules, and washer reservoirs are scheduled to begin.

The Alba plant is a high volume facility, producing about 90% of all fuel pumps, DIS coils, and starters used by Ford in Western Europe. Sales in 1997 totaled \$200,000,000, compared to \$100,000,000 in 1996.

John Pearn is Managing Director of Ford Hungaria Manufacturing and Sales Ltd., and has held this position since April 1996. From 1978 to 1996, Mr. Pearn held a number of manufacturing, product engineering, and business planning assignments in US plants and offices of Ford. In December of last year, the CEAR™ interviewed him in Hungary.



John A. Pearn

CEAR: You've been recently expanding your operations at the Alba plant. Can you give us an update?

Pearn: We've increased production from our original DIS coil and fuel pump equipment, which was installed back in 1991. Since then we've gone into starter motors, completed a service building expansion in March 1997, and [started] a new product line — air fuel charging assemblies, with equipment installation in June 1997. In October 1997, we completed a full manufacturing building expansion which will launch us into some new products for the future.

Today, we're at around 400,000 square feet — we started off with a building of about 200,000 sq. feet. So we've doubled in size, and that occurred in just the last two years.

In our manufacturing operations we currently have about 1,200 people, and with administration around 1,350. We

expect a moderate change from that, but nothing dramatic for the near term.

CEAR: Was all of this growth planned from the beginning?

Pearn: The only plan from the start was two products. We built the plant a little bigger in anticipation that things would go well and we'd have the opportunity to create some new products.

Then when the starter came along, that took up the extra square footage. The original building concept was for somewhere around 200,000 sq. feet and anywhere from 300-500 people. That was the complete vision. Over the past 6 years, the vision has changed dramatically, with some of it changing as late as 1996. So, some substantial growth.

CEAR: Has the local government assisted you during this expansion?

Pearn: The local government here in Szekesfehervar has been receptive and willing to work with us and has seen the benefits and the infrastructure improvements we can make.

CEAR: How is your supplier localization program progressing?

Pearn: If there's a negative side, it's the suppliers. From the original concept, we had a 3-phase integration [plan]. The first step was to integrate the product using our traditional worldwide supply base, so we imported lots of supplies from North and South America and Asia. The second phase was supposed to be localizing [supply purchases] in Europe. And the third phase was to localize purchases in Central or Eastern Europe.

We have not done well getting to the third phase. We're behind schedule from our original plan back in 1989 and 1990. Right now, about 20% of our overall production purchases, for a volume of

about \$10 million, is purchased locally, primarily from four suppliers. This is an area of opportunity that we have to focus on a lot more. In fact, we've just localized our purchasing [unit], we're putting in their office. So, more focus will be on the region.

CEAR: What was your target for local purchases by this year?

Pearn: We would have hoped to be at 60%-80% by now. Maybe we expected too much too quick. And with the slow economic growth in 1992-1993, things got pretty flat for a while. Now they're starting to take off again.

CEAR: What's the biggest problem with local suppliers? Lack of capital? Lack of partners? Not learning quick enough?

Pearn: Somewhat all of the above. Our experience has been the lack of quality standards that fulfill our quality expectations. That being the first and foremost. Second, and related to that, is the capital availability. They just don't have [access to capital]. So antiquated equipment, in some cases, just doesn't have the capability. Third has to do with attitude, delivery standards, expectations.

We've been in and out of Hungarian suppliers who, up front, appeared to have the right attitude. But come to delivery on a day to day basis, they were woefully behind. We're a three shift operation and

basically just-in-time. It's not acceptable to say "We'll get it to you tomorrow." So we've learned through that process and we set our expectations up front. Now, we do a much better job of conveying to the potential supplier

what we expect of them. So that relationship is improving.

And we continue to work with an additional 5-10 suppliers right now, improving their standards, explaining our expectations, and they have potential. We'll continue to work with them.

CEAR: How has your job been changed by the creation of Visteon, Ford's new auto parts division?

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Hungary's New Company Act

Hungary Legal Advisor

Andrea E. Villanyi, Strikeman Elliot and Dr. Erzsebet Szilagyi, Reti & Antall

The legislation currently in force in Hungary which governs the operation of companies, *Act VI of 1988 on Business Associations*, as amended (the "**Companies Act**"), will imminently be replaced by a new legislative regime - more attuned to current market realities.

The new Companies Act has been submitted to Parliament and is expected to enter into force on or around July 1, 1998 (180 days following its promulgation by Parliament). Existing companies will be granted a leniency period following the entry into force of the new Companies Act in order to satisfy its requirements, which generally will apply retroactively.

At the same time as the new Companies Act — which governs the substantive legal issues pertaining to corporate matters — takes effect, a new *Company Registration Procedures Act* is also expected to enter into force. This act regulates the procedure of the registration of business associations and the operation and supervisory role exercised by the Court of Registry

Given the dynamic nature of the legislative process, it is impossible to predict with absolute certainty the precise nature of the legislative provisions that will finally be approved by Parliament.

Highlights of the New Draft Companies Act and Company Registration Procedures Act

Certain of the fundamental legal provisions that are expected to undergo major revision, elaboration, or innovation are the following:

- a business association will come into existence upon the date of its registration in the Company Register by the Court of Registry competent in its jurisdiction not, as currently, with

retroactive effect to the date of execution of the company's constituting documents;

- a business association will be permitted to operate pending registration, as a **pre-company**, upon

the filing of its application for registration with the Court of Registry, subject to certain restrictions;

- the Court of Registry will be required to promptly register the business association in the Company Register, within 30 - 60 days of receipt of the application for registration, depending on the corporate form, abolishing the often lengthy delays currently experienced in registration;

- the Court of Registry will be required to register or reject the application for registration of a limited or unlimited partnership within 30 days, while limited liability companies and companies limited by shares must be registered within 60 days;

- the rules governing the scope of authority and the liability of senior officers (e.g. the managing director of a limited liability company, or the board of directors of a company limited by shares) will be clarified;

- the rules governing conflict of interest with respect to senior officers will be

refined and expanded;

- an individual will be permitted to be an executive officer in three companies simultaneously;

- detailed rules applying to specific corporate forms (e.g. right of pre-emption to purchase a quota, employees' quota and exclusion in the case of limited liability companies, and streamlining of regulations applying to different classes of shares in the case of

companies limited by shares) will be revised;

- the rules governing one-member limited liability companies and companies limited by shares (e.g. foundation and contribution-in-kind) will be significantly tightened;

- a separate chapter governing the area of concern law, introducing new rules in respect of limited liability companies and companies limited by shares (e.g. regulations pertaining to controlling and controlled companies), will be elaborated;

"A party acquiring a majority stake in a Hungarian company will be required to offer the same price for quotas or shares to minority shareholders."

"The new law is criticized for prescribing excessive minimum capital requirements for founding companies limited by shares and limited liability companies."

- the expanded role of chambers of commerce (e.g. issuance of tax, social welfare and Central Statistics Office identification numbers) will be envisioned;
- the office of **company manager** will be re-introduced, the company manager is a duly authorized employee charged with acting in the name of the company;
- where the quotaholders' or shareholders' equity in a limited liability company or company limited by shares, respectively, fails to meet the prescribed minimum level for two consecutive fiscal years and is not in-

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Polish Vehicle Market Segmentation (YTD November '97)

Passenger Cars & Commercial Vehicles

Segment	YTD SALES (Units)		CHANGE %	MARKET SHARE (%)		SALES IN NOVEMBER	
	1997	1996		1997	1996	1997	1996
Segment A	135,121	116,374	16.11	30.65	33.28	11,601	10,109
Segment B	106,678	77,861	37.01	24.19	22.27	6,991	5,319
Segment C	151,960	128,344	18.40	34.46	36.71	12,840	11,698
Segment C/D	39,904	23,999	66.27	9.05	6.86	1,824	1,591
Segment D/E	2,192	1,196	83.28	0.50	0.34	176	46
Segment F	197	107	84.11	0.04	0.03	10	6
Segment S	1,246	746	67.02	0.28	0.21	42	17
Segment MPV	2,910	397	633.00	0.66	0.11	295	32
Segment 4WD	708	608	16.45	0.16	0.17	55	48
Total Passenger Cars	440,916	349,632	26.11	100.00	100.00	33,834	28,866
Light Comm. Seg.	23,945	26,040	-8.05	47.77	58.49	2,080	3,296
Medium Comm. Seg.	26,183	18,484	41.65	52.23	41.51	3,131	2,376
Total Commercial Veh.	50,128	44,524	12.59	100.00	100.00	5,211	5,672

Source: SAMAR s.c., Local Manufacturers and Official Importers, ACEA

Tips For Success In Central Europe

Cooperation Between Automotive Companies



Jeff Jones

Cooperation between automotive companies is becoming more commonplace, as companies find that they can learn from and work with their competitors and achieve mutually beneficial results. The high costs of some development projects — such as those for new, sophisticated technology — almost demand that companies work together and pool their resources.

Cooperation is especially important in emerging markets such as Central Europe, where the dynamics of doing business are complicated by a culture that is still grappling with the ways of capitalism, debilitating bureaucracy, a shortage of investment capital, and poor information dissemination.

Not all companies, however, believe in the value of jointly attacking problems. The head of a western vehicle manufacturer with a factory in Central Europe remarked to me that everyone in the region tries to go it alone. “Investors must work together to solve problems,” he said.

This sounds like good advice. There’s no shortage of resource draining problems to overcome in Central Europe. Some situations, such as solving border delays or dealing with convoluted customs regulations, may require a group effort. Going solo may result only in a bandaged head.

Smaller companies working in Central Europe are especially vulnerable to being overwhelmed by the region’s treacherous business landscape. Big companies often enjoy the benefit of special treatment from local governments and have substantial financial resources to help them muscle through problems.

Small companies usually have neither. Not only must they resort to ingenuity to overcome difficulties, but they should also enlist the aid of their peers and competitors. By working in unison, market challenges can be more quickly and efficiently met.

Companies must leverage each other’s knowledge and expertise and surmount the problems they face each day. Then they can get on with the more important task of succeeding in this extraordinary market.

cetmjaj@ibm.net

Romanian New Vehicle Production & Assembly (in units)

	Jan.-Sept. 1997	Jan.-Sept. 1996	% Change
Passenger Cars	80,930	65,364	23.81%
Light Commercial Vehicles	12,485	15,559	-19.75%
Commercial Vehicles (3.5-7 ton)	202	972	-79.22%
Commercial Vehicles (over 7 ton)	1,203	2,761	-56.42%
Buses	239	380	-37.10%
Up to 15 places	89	n/a	—
Over 15 places	150	380	-60.52%
TOTAL	95,059	85,036	11.78%

Source: APIA

Romanian New Vehicle Exports (in units)

	Jan.-Sept. 1997	Jan.-Sept. 1996	% Change
Passenger Cars	14,545	4,219	244%
Light Commercial Vehicles	1,187	5,409	-78.05%
Commercial Vehicles (3.5-7 ton)	—	—	—
Commercial Vehicles (over 7 ton)	18	29	-37.93%
Buses Over 15 places	15	n/a	—
TOTAL	15,765	9,657	63.24%

Source: APIA

Romanian Car Production and Assembly (in units)

Company	Model	Jan.-Sept. 1997	Jan.-Sept. 1996	% Change
ARO	10 (1.4 liter)	362	366	-1.09%
	10 (1.9 liter diesel)	744	633	17.53%
	24 (2.5 liter)	472	1094	-56.85%
	24 (2.5-3.2 liter diesel)	777	912	-14.80%
Dacia	Berlina 1.4 liter	42,404	37,482	13.13%
	Break 1.4 liter	12,801	13,268	-3.52%
	Nova 1.6 liter	5,268	n/a	—
Daewoo	Cielo 1.5 liter	16,752	11,609	44.30%
	Espero 1.5 liter	501	—	—
	Espero 1.8 liter	849	—	—
TOTAL		80,930	65,364	23.81%

Source: APIA

Romanian Car Exports (in units)

Company	Model	Jan.-Sept. 1997	Jan.-Sept. 1996	% Change
ARO	10 (1.4 liter)	190	440	-56.81%
	10 (1.9 liter diesel)	401	567	-29.27%
	24 (2.5 liter)	79	368	-78.53%
	24 (2.5-3.2 liter diesel)	256	304	-15.78%
Dacia	Berlina 1.4 liter	708	1563	-54.70%
	Break 1.4 liter	52	962	-94.59%
	Nova 1.6 liter	756	15	4,940%
Daewoo	Cielo 1.5 liter	12,103	—	—
TOTAL		14,545	4,219	244%

Source: APIA

Romanian New Vehicle Imports (in units)

	Jan.-Sept. 1997	Jan.-Sept. 1996	% Change
Passenger Cars	3,648	4,894	-25.45%
Daewoo Cielo	—	—	—
Daewoo Espero	—	—	—
Daewoo Tico	121	1,700	-92.88%
Other Makes	3,527	1,888	86.81%
Light Commercial Vehicles	527	450	17.11%
Commercial Vehicles (3.5-7 ton)	197	293	-32.76%
Commercial Vehicles (over 7 ton)	165	199	-17.08%
Buses	95	15	533%
Up to 15 places	88	n/a	—
Over 15 places	7	15	-53.33%
TOTAL	4,632	5,851	-20.83%

Source: APIA

Romanian New Vehicle Sales (in units)

	Jan.-Sept. 1997	Jan.-Sept. 1996	% Change
Passenger Cars	66,358	65,298	1.6%
Light Commercial Vehicles	11,190	10,692	4.6%
Commercial Vehicles (3.5-7 ton)	404	1,243	-67.5%
Commercial Vehicles (over 7 ton)	1,265	2,899	-56.36%
Buses	308	385	-20%
Up to 15 places	171	n/a	—
Over 15 places	137	385	-64.41%
TOTAL	79,525	80,517	-1.2%

Source: APIA

Pearn: As part of Visteon, we have a new focus which is trying to penetrate some of the outside markets. Right now as Visteon, we sell about 5% of our total business on outside sales. Our vision is to sell about 20%. I won't time bind us, because the sooner the better as far as we're concerned.

We recognize that Ford on an assembly basis has a limited capacity worldwide. We're overcapacitized from an assembly standpoint in the global market of the auto industry. But where we've supplied just the 8 million units within Ford in the past, now we see opportunity for the 50 million units that are out there. And that will be some of the focus in the future.

We're not going to create outside business at the expense of our traditional customers — Ford assembly operations. It's going to be in addition to them.

CEAR: Where do you see most of this new business coming from?

Pearn: Primarily Central Europe. Right now we ship worldwide. About 90% of our business is to Western Europe. We ship to **Mazda** in Japan, they're one of our customers for starter motors. And we ship to our Brazilian plants in South America. Soon we'll be shipping starter component sub kits to our Indian plant.

CEAR: You've created a unique organizational system at the Alba plant. Could you explain this system?

Pearn: This was a pilot started in 1990. We had the opportunity to grow from scratch and implement any organizational structure that we wanted. [Management] was very supportive of doing something unique, [implementing] some ideas that we had bounced around in North America and other worldwide locations of Ford.

We had the opportunity to pull them all together and try some real out of the box thinking, [with] unique structural relationships and attitudes. We had a brand new management team [that included] people with all different experiences.

We take an integrated system approach to organizational development by combining and really enveloping into teams the engineering, production, maintenance, and quality under one product manager. Individual product managers are responsible for all those facets of the business within certain product lines.

Work teams are empowered to make key decisions such as scheduling, allocation of manpower, and hiring. The production work teams [have] a great level of autonomy.

Our structure basically has 4 layers of organization from me to any worker in production. There are very few levels — that's purposeful and intended [to facilitate] teamwork, openness, and empowerment of employees.

All of our people work on a salary basis, so there are no time clocks. At the time of launch, we were the only all-salaried work force in the Ford Motor Company worldwide. Since then, some other plants have taken a similar approach, but on a much smaller scale.

CEAR: What's the key to making this organizational structure work?

Pearn: I would say the key point is open communication between all organizational offices. Without

communication, none of the rest would work. The flat organization is conducive to communication, operational sharing of information, and empowerment.

We meet with the entire production and administrative team once a month and we talk about open issues, the business direction of Ford Hungaria, operational challenges, and

efficiencies. It's an opportunity for two-way communication.

At all-employee camp meetings, [employees] discuss within their work teams critical plant strategy issues. Because of their empowerment and responsibility, they need time to themselves to talk about strategies — how to be more efficient, what kind of design or process issues are there. Twice a year, at a minimum, these all-employee camp meeting take place.

We have a plant newspaper published quarterly, and an in-plant email system available to all employees, [enabling] anybody to communicate with anybody in this organization. My door is 90% of the time open and I'm willing to talk with all employees. We're focused on communication, in an atmosphere of teamwork.

The vision is that we leverage each other, so that we continuously improve on new plants and new launches. And that development, I think, is what has gotten us to where we are today, and where we hope to go in the future.

CEAR: What kind of training do you offer for employees?

Pearn: We have training and language programs available to all employees when they first come into the company. We focus on safety and quality related skills — these are my two priorities. Then on to social, technical, and business practices. When starting with such a dramatic change in culture and with the Communist influence in Hungary, we need a common understanding, a baseline. And we continue to work on that and improve it.

A continuing education program is available to all employees, and that's not

locally."
 "All of our people work on a salary basis, so there are no time clocks. At the time of launch, we were the only all-salaried work force in the

Ford Hungaria Alba Plant Quality Awards & Certifications	
December 1994	Q1 Award
August 1995	Total Quality Excellence Award for Ignition Products
October 1995	Preventative Maintenance Excellence Award
November 1995*	Customer Driven Quality Award for 1.1 Kw Starter
December 1995*	Customer Driven Quality Award for Fuel Pump
January 1996	ISO 9002 Certification
July 1996	Ford Total Productivity Maintenance Checkpoint "A"
September 1996*	Customer Driven Quality Award for DIS Coil
January 1997	Piloted "Ford Production System" initial application in Europe
February 1997	FTPM Checkpoint "B"
November 1997	QS 9000

*First in Ford System

Source: Ford Hungaria

unique at the Alba plant but is [offered by] Ford worldwide.

CEAR: How do you keep your employee pay competitive?

Pearn: We are very much a competitive company and we focus on compensation surveys with updates every six months. We [conduct] salary surveys of major industries throughout Hungary, by region and even by city, to make sure we stay competitive. We don't want to drive inflation, nor can we lag behind our competitors. We want good people, we expect that, and we demand that from a pay-for-performance basis. But we also want to create a unique environment. That's what we think helps retain our employees.

We've maintained low employee turnover compared to the industry and we think a lot of that is strictly environment and our organizational structure. On a competitive wage basis, we're not significantly different from the rest

CEAR: How do you attract employees who live outside of the Szekesfehervar region?

Pearn: We have a home loan program implemented to recruit and maintain employees. In certain regions within Hungary, people are not real mobile and hesitant to move. This program is partially [targeted] at engineers and finance people we need to attract from the economic and technical universities in Budapest or Miskolc. It says "We need your talent, we want you to move locally." It's an incentive to do that, and it's worked out pretty well.

CEAR: Has the local labor market limited your growth plans?

Pearn: To date, it hasn't. But I know in Szekesfehervar unemployment is running somewhere in the 4-5% range, so it's awfully low compared to some adjacent regions, especially compared to the northeast and southeast in Hungary. I think it will be a limiting factor at some point in the future, unless we, and that includes the government, do something.

I've worked locally with the mayor here in town and with some universities, trying to [develop] the opportunities and programs that can attract new people to the region. For example, rather than forcing people to relocate who are from Miskolc or Budapest, what's the opportunity to have a satellite location

for a university to train right here from our population.

We've been talking with the university in Vespem and the technical and economic university in Budapest and it looks like we'll have some programs.

CEAR: What percentage of your administrative staff is Hungarian?

Pearn: We're now about 70% Hungarian management — we started off with 100% North American. From 13 North Americans, we quickly jumped to 26 with a one-to-one ratio between Hungarians and North Americans. After that, we ballooned, staying at the 200-300 employee level for about 4 years. Just in the last 2 years our expansion has really taken off. We've gone from a little under 600 people two years ago [to the current level of 1350].

CEAR: What's been the biggest surprise for you since starting operations in Hungary?

Pearn: The changing regulations. We have to be adaptable as quick as possible because of governmental modifications to policies, practices, and laws. Whether it's customs, consistency in legislation, or being able to predict some of the laws. That's what causes duress in our business plan. We just don't have that predictability today.

The other goes back to the supply base. That's a little bit of a negative surprise. Not that it doesn't have good potential — I believe it does. And we're going to place more emphasis and focus on that arena. But we're behind the original plan.

CEAR: How's the customs situation affecting your operations?

Pearn: It's improved slightly, but not to the worldwide or EU standards that we are expecting in the short-term. We continue to work with our customs officials. We are a three shift operation. We can't be serviced just on an 8-10 hour basis during the day. It's very inefficient from the trafficking patterns concept. That's an area where we could use some improvement.

CEAR: How's your logistics chain organized?

Pearn: We're primarily using road. Very

Ford Hungaria Alba Plant End Products

Product	Annual Capacity
DIS Coil	2.0 million
Fuel Pump	2.0 million
Permanent Magnet Starter I-Core	1.5 million
Twin Tower Coil	—
Air-Fuel Charging Assembly	0.5 million

Source: Ford Hungaria

little or no rail for components. We focus on trucking. We control it all here locally with our customers and key suppliers. We do use some air freight in the case of a crisis. We do a lot of sea shipment for customers in Japan or South America. We truck product to Bremen in Germany and then use sea shipments from there.

CEAR: What's the Alba plant particularly good at?

Pearn: We have a good blend here of technology and assembly-type operations. We are by no means just an assembly plant. We've spent a lot of money and effort and there's a lot of technology in this plant. Two out of our original three products are best in class products where we have superior quality in comparison to our competitors worldwide.

CEAR: Does Ford's recent executive changes in Ford of Europe affect your operations in Hungary?

Pearn: It does and it doesn't. Definitely we're all within Ford Motor Company and just last month I was at manufacturing off site with Rolf Zimmerman, our new manager. The continued focus on the Ford production system, we're all in it together from that respect. I do have some local flexibility, obviously, for our needs here in Hungary, and Mr. Zimmerman and our new officials within Ford of Europe are very much a part of it.

CEAR: What's the key to your continued success?

Pearn: We've got to look to the future, look for growth opportunities. We need to focus on making our customers successful by supplying innovative, quality products that meet and exceed their expectations ■

Chairman Kim is a man of action. In 1997, he spent a total of 233 days overseas, which included 23 business trips to 42 countries. He spent an incredible 775 hours in the air and traveled some 520,000 kilometers.

Daewoo Fortifies Position in 1997

In 1997, Daewoo fortified its activities in Central Europe with the investment of over \$1 billion into its local operations — this is money actually spent, not just promised. The investments primarily funded new equipment and buildings in Poland and Romania.

Daewoo also strengthened its sales in Central Europe during 1997. In Poland, for instance, Daewoo closed the gap with its rival **Fiat**. At the end of November 1997, Daewoo's market share in Poland was almost 26%, compared to Fiat's 35%.

Chairman Kim didn't direct Daewoo's efforts from a comfortable office suite in Korea. He traveled to Eastern European countries 18 times during the year, including visits to Poland, Romania, Hungary, Czech Republic, and Bulgaria. He also made 16 trips to CIS countries such as Uzbekistan, Ukraine, Kazakhstan, Russia, and Belarus.

\$660 Million Invested Into Warsaw Factory

In 1997, Daewoo pumped \$660 million of its planned \$1.5 billion investment into its Zeran factory in Warsaw. About \$556 million has been set aside for production of a new model for the Polish market — the Lanos — and assembly of the Nubira and Leganza.

Daewoo's investment program at the Zeran factory will fund a new press line, a new line for die stamping, welding shop modernization, construction of the

second half of the paint shop, and a new hall where the Lanos will be assembled.

\$450 Million Invested Into Engine & Transaxle Production

Daewoo's operations in Romania were hit hard by the political and economic turmoil experienced in that country in

In 1997, Daewoo also started preparing for the opening of its R&D center in the buildings of the former **State Motoring Institute** in Warsaw. So far, 200 of the 1,000 engineers planned for the center have already been hired. The center will specialize in projects for the Central and Eastern European markets.

Components Group Established

Daewoo's activities in Poland in 1997 also included the inauguration of the **Daewoo Automotive Components Group** in September. This new group should substantially improve the quality of components available to not only Daewoo but other auto makers in Central Europe.

The components group is comprised of the many sub-assembly production plants that Daewoo acquired when it purchased the **FSO** plant in 1995. By the year 2001, Korean firms are expected to have invested \$364 million into these plants in the form of joint ventures with Daewoo, sales of the companies should reach \$735 million, and total employment will rise to over 8,500 workers.

Commercial Vehicle Sales & Production Up in Czech Republic

Daewoo Avia in the Czech Republic expected to produce and sell 5,500 Avia commercial vehicles in 1997, up 23% compared to sales of 4,448 units in 1996. Some 2,800 Avia vehicles were expected to be exported, an 80% increase compared to 1996.

Is Daewoo's Pace Sustainable?

Indeed, Daewoo was busy in 1997. And certainly, Chairman Kim is not likely to slow down the company's efforts in 1998. Critics and competitors, however, wonder just how long Daewoo can keep up the furious pace, and whether there are enough consumers to buy the 1.1 million vehicles the company plans to produce in Central and Eastern Europe by the year 2000.

Daewoo Group Chairman Kim Woo-Choong

Born:

December 19, 1936, Taegu, Korea

Education:

Kyunggi High School, Seoul (1956)
Bachelor of Arts (economics), Yonsei University (1960)

Work History:

Economic Development Council (1960)
Hansung Industrial Co., Ltd. (1961 - 1967)
Daewoo Industrial Co., Ltd. (1967 - present)

Board Memberships:

Harvard Business School
Wharton School
Univ. of Michigan School of Business Administration
Hanoi School of Business

Memberships:

Foreign Investment Advisory Council to President of Ukraine
International Business Leaders' Advisory Council for the Mayor of Shanghai, China
Asia Pacific Leadership Meeting
Council of the World Economic Forum

Honors:

International Business Award, 1984
(International Chamber of Commerce)
Order with the Grade of Grand Commander
(Kingdom of Morocco)
Order of Dostlik (Uzbekistan)
Legion d'Honneur (France)
Honor Al Merito Grando Gran Cruz (Colombia)
Commander's Cross of the Order of Merit (Germany)
Commander of the Order of the Crown (Kingdom of Belgium)
Sitara-i-Pakistan (Pakistan)
Order of the Two Niles (Sudan)

Family:

Married, three children

1997. Spiraling inflation and interest rates and an unstable currency forced **Daewoo Automobile Romania** to lower its production targets for 1997 due to poor domestic sales prospects. Union troubles also rocked the company early in the year.

Despite these problems, Daewoo's assembly line revved up to full speed in 1997 and the company invested \$450 million into new machinery for in-house production of engines and transaxles.

New R&D Center In Warsaw

Interview With Executive of the Year: Daewoo Group Chairman Kim Woo-Choong

CEAR: What was it that first caught your attention about the possibilities for vehicle production in Central Europe?

Kim Woo-Choong: I was involved in trading and in many other businesses in Central Europe as early as the 1970's. This was long before Korea made diplomatic ties with Central European nations. From my point of view, the automobile plants in this region had been producing competitive models, but lost international competitiveness due to a lack of consistent investments and inefficient management.

I believe that these factories can all regain their competitiveness with the introduction of new models, renovated facilities, and a management that emphasizes product quality and efficiency. In view of these factors, I gained confidence that Daewoo was the [right] partner and so we initiated our plans for operations [in the region] as soon as we ended the joint venture with GM in 1992.

CEAR: Why is Daewoo the right company to flourish in Central Europe?

Kim Woo-Choong: The Central European region has given up Socialism and the people are eager for economic development and are well educated in fundamental technology. Daewoo, on the other hand, has accumulated experience in fast growth and is a multi-functional corporation that can support infrastructure in trade, electronics, heavy industry, and finance. With both advantages combined, I believe that we can create synergy power.

CEAR: What is the key to Daewoo's strategy in the Central European auto industry?

Kim Woo-Choong: While our competitors were hesitant to invest, Daewoo took risks and participated before others as a partner in the automobile sector. Many companies observed what we were doing

and [now] they are all competing to enter the market.

It is Daewoo's basic strategy to enter a market before others and to work with the people and the government of the host country for mutual development. This strategy is not just for the automotive sector but for all of Daewoo's business activities.

CEAR: Will Daewoo's strategy be affected by the turmoil in Asia?

Kim Woo-Choong: The current economic crisis in Asia is the result of the booming economic growth of the past couple of decades that has faced a need for structural reorganization. It has come at a time when the local currency, which has actually been overrated, is also being reevaluated.

In Korea especially, the \$23 billion trade deficit in 1996 — which comes from the sudden fall in value of the 16 megabyte DRAM semiconductor from \$50 to just \$6 — has been a major factor in this crisis. But I believe that the Asian economy will rise back to its feet soon since the basis of the Asian economy is strong.

Daewoo's overseas investments in the near future may need adjustments, but it will not affect the overall plan. In the past month, I have made a decision to establish regional head offices in 21 countries. These head offices will be responsible for all the projects within each country and by early 1998, many experienced senior executives will be dispatched to these head offices as presidents.

CEAR: What is Daewoo's current passenger car and commercial vehicle production goal for Central and Eastern Europe?

Kim Woo-Choong: Daewoo will produce 1.1 million passenger cars and commercial vehicles in Central and Eastern Europe by the year 2000. About half of this total will be manufactured in Poland. By that time, many of the foreign cars will be replaced by domestic cars and if quality goes up as planned, exports to nearby Western European

countries can also be expected.

CEAR: Some critics claim that Daewoo is building up too much capacity in a market already overcrowded and extremely competitive. How do you respond to this?

Kim Woo-Choong: The world automobile industry production capacity

is about 68 million cars a year. Daewoo's goal for car manufacturing in Korea and abroad is just 2.5 million. Moreover, the car plants that Daewoo is currently operating worldwide are actually existing plants that Daewoo has renovated. So there is a difference from the literal meaning of increase in capacity.

Also, we are concentrating on emerging markets and not mature markets where the market competition is high. I believe that our choice reduces conflicts with our competitors and also increases our competitiveness.

CEAR: Daewoo is committing massive amounts of money to vehicle production in Central Europe. How long will it be before you expect to see a return on your investments?

Kim Woo-Choong: In regions such as Central Europe where there is potential for long-term growth, cooperation for mid and long-term growth based on mutual respect and the pursuit of mutual

"While our competitors were hesitant to invest, Daewoo took risks and participated in Central Europe before others. Many companies observed what we were doing and now are all competing to enter the market."

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The following are edited excerpts from a paper prepared by Victor I. Pashkov, Head of Economic Analysis at ASM Holding in Russia. The paper was delivered last October at a supplier conference organized by IBC UK Conferences in Warsaw.

ASM-Holding is a company created by more than 160 automobile and agriculture machinery construction enterprises from Russia, CIS, and Baltic countries to represent and protect the interests of its shareholding enterprises.

In 1997, the majority of automobile construction enterprises shall pass through the lowest critical point and shall begin to increase production volume and restructure themselves while taking into account consumer requirements, their solvency, and the overall economic situation. Thus, in the first six months of 1997 there was a substantial increase in the volume of production compared to the corresponding period in 1996: 8.0% for trucks, 11.3% for passenger cars, and 17.9% for buses.

The data on the relationship between volume of sales and volume of production in the first six months of 1997 provide evidence of the achievement of a process of production reconstruction in response to consumer demand. Thus, **Zil** sold 93.6% of trucks manufactured; **GAZ** sold 100% of trucks, 99.8% of passenger cars, and 98.7% of buses manufactured; **KamAZ** sold 100% of trucks and 100% of passenger cars; **UAZ** sold 105% of trucks, 99.6% of passenger cars, and 104.5% of buses; **VAZ** sold 100% of passenger cars; **Krasny Aksai** sold 108.7% of passenger cars; and the **Kurgansk Bus Plant** sold 86.1% of its production.

Unfortunately, sales of the **Moskvich** plant remain low: 30.3% of production for the first six months of 1997. But on the whole, enterprises have learned to operate in the market and, in our opinion, it can be expected that the tendency for automobile production growth shall continue for the near future.

However, the stability of this tendency shall depend on how quickly plants can improve the quality of automobile equipment produced and maintain their competitiveness.

Measures to Increase Production & Improve Quality

Traditionally, the inadequate quality of domestic automobile parts resulted from their production not being an independent sub-sector but being concentrated in the production of large automobile plants. In the 1980's, only 15 of 146 automobile parts plants were independent, with the remainder being part of large enterprises. Internal production relations in such enterprises did not aid the resolution of quality problems.

Today, the domestic auto industry's most important task is to set up the production of parts that meet international quality standards. In our opinion, this should be achieved through the implementation of a number of key measures.

Organizational Restructuring

The organizational restructuring of active plants must take place, making provision for the allocation of parts production to legally independent enterprises and facilitating the creation of a competitive environment. The restructuring of such enterprises may be initiated by changing the taxation system — primarily through regulating VAT rates — and by creating other economic conditions to ensure that restructuring is attractive.

Presently, there is an unfortunate predominance of large associations of enterprises with narrow specializations that are not capable of reacting quickly to market demands, including the demand for constant improvement of quality.

Joint Ventures Must Be Encouraged

The creation of joint ventures with foreign companies should be an effective method for improving the quality of parts production.

Investment Incentives For Domestic & Foreign Investors

A system of privileges should certainly be employed, providing state support to enterprises cooperating as part of joint ventures or independently developing high quality auto parts.

Russia is closely monitoring the experience of Uzbekistan, Belarus, and other countries that are utilizing taxation and other privileges to develop automobile construction.

Daewoo's Demands

By building automobile plants in consumer countries, the Koreans are procuring extraordinary taxation and customs privileges from country governments.

For example, during the discussion of issues related to the creation of a joint venture between **AvtoZAZ** and **Daewoo**, Daewoo's demands formed a long list:

- exemption of the joint venture from payment of VAT and profit tax;
- an amnesty for the plant with regard to debts to the budget;
- a three-year exemption from payment of all taxes and import duties on approximately 100,000 Korean-assembled cars;
- exemption from social welfare payments and extra-budgetary fund payments; and
- the adoption of severe restrictive measure against imports of other manufacturers' automobiles to Ukraine

These demands do not appear excessive if one takes into consideration that success can come only where there is speedy concentration of huge resources, and that the project itself shall be implemented in an extremely compressed time period.

Belarus Entices Ford

The Belarus government, giving priority to extricating the country from a severe investment crisis, granted the US/Belarus joint venture ("Ford-Union") considerable privileges:

- from the registration date, the joint venture was exempted from payment of customs duties, value added tax, and excise duties on machines, equipment, tools, raw materials, parts, overland transport facilities, and spare parts and accessories for these facilities imported into the territory of Belarus and intended for the production of Ford automobiles; and
- exemption from payment of tax on profit

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Watch Out! New Tax Changes in Hungary

Hungary Tax, Customs, and Finance Update

Denes Szabo, Ernst & Young

In November 1997, the Hungarian Parliament passed the 1998 tax regulation amendments. The amendments include a number of changes to the tax laws and a complete reformulating of the excise tax system. For readers of the CEAR, it may be of importance that new tax holidays are available for companies starting capital projects and that their local tax burden may be reduced.

Another significant change is the introduction of the 'branch concept' in the Hungarian tax and legal system and the reformulating of the withholding tax system. Most other amendments are, however, corrections or modifications to the already existing regulations. The 1997 tax regulations contained certain rules that were unfair or impossible to implement. Some of these rules have been amended now with retroactive effect indicated as (1997).

Tax Holidays for Investors

There are new tax holidays available until 2011 for production companies that have started or start a capital project after December 31, 1996.

A 10-year 100% tax holiday can be claimed by companies starting a capital project of at least 3 billion HUF (approx. USD 15 million) if the project is realized in an underdeveloped region of Hungary. Underdeveloped region is defined as a region a) where the unemployment rate was higher than 15% in December of any of the two preceding years, or b) mentioned as such by a government decree. An additional requirement is that the number of employees must be increased by at least 100 persons for the second year after the completion of the project.

The same 10-year 100% tax holiday is available for capital projects of at least 10 billion HUF (approx. USD 50 million) without any limitation regarding the location. Here the required increase in number of employees is 500.

These holidays can be claimed in those years when the company increases its sales revenues by at least 5% of the value of capital project.

One of the old tax holidays has been

amended and available as well. From 1998, a 5-year 50% tax holiday can be claimed for production companies that start (after December 31, 1995) a capital project of at least 1 billion HUF. Companies that have already qualified for this holiday may choose which revenue criteria they want to apply, i.e. the old export criteria of 25% year-on-year increase with a minimum of HUF 600 million or the new sales increase requirements.

Local Business Tax

The base and the maximum rate of local business tax in Hungary is regulated by law. Municipalities can levy lower rates or give credits in their jurisdictions. The maximum rate of local business tax allowed by law has been changed from 1.2% (1997) to 1.4% (1998), and to 1.7% and 2.0% (1999 and 2000 respectively).

This increase is compensated for production companies as they can decrease their tax base by one-third of the cost of products sold. This deductible portion will be increased to two-thirds and to a full deduction in 1999 and 2000 respectively. Until now no deduction was available for production companies for production cost. Trading companies will not benefit from the deduction as they can already deduct cost of goods sold from the tax base.

Branches

In the past, foreign companies could open a representation or information office in Hungary. Such offices could gather or provide information but were not allowed to actively engage in trade or business in Hungary. Consequently, foreign companies had to establish a separate Hungarian entity if they wanted to do business in Hungary.

From 1998, it is possible to set up a branch in Hungary. Foreign companies with a permanent establishment, e.g. a construction site in Hungary established before 1998, can continue their operations in their current form till December 31, 1999. After that they have to change the form of the operation into a branch. In order to reflect the new possibility many regulations (e.g. legal, accounting, tax) have to be amended or modified.

According to the new tax regulations, each branch of the foreign company is considered as a separate taxpayer but at the same time being liable for any debt of the other branches. A branch is treated as a permanent establishment of the foreign company and taxed by the general Hungarian corporate income tax rules.

Branches of the same foreign entity and the foreign entity itself are treated as related parties. Transactions between the branches or between the foreign company and its Hungarian branch have to be made on an arm's length basis regulated by the transfer pricing rules (see below). Branches are also subject to the thin capitalization rules (see below).

'Dividends' paid to the 'parent' company will be subject to the 20% dividend withholding tax. An applicable treaty may, however, override most of the above mentioned rules.

Withholding System for Non-Residents

A separate new section of the Act on Taxation Procedures deals with the withholding and reclaim procedures of personal and corporate income tax, as well as the dividend withholding tax for non-Hungarian residents. According to these regulations tax withheld from the taxable income of a non-resident must be paid to the tax authorities by the 10th of the month following the payment of income. Such withholding must be reported by May 31 of the following year.

Should an applicable treaty state that Hungary cannot tax the income in question, no tax should be withheld if the recipient of the income provides the payer with his certificate of residency before the income is paid. In case the applicable treaty allows Hungary to tax the income at a reduced rate, the normal Hungarian rate must be withheld unless the payer has received permission from the tax authorities for applying the treaty rate directly.

In case more tax has been withheld in Hungary than allowed by the treaty, a refund may be claimed from the North-Budapest Section of the Hungarian Tax Authorities.

Corrections to 1997 Rules Depreciation (1997)

According to the 1997 regulations tax

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Woo-Choong Continued from Page 13

prosperity is more important than short-term profits.

I approach matters with an attitude of investment for the future. Returns on these investments will come when Central European countries join the EU and when stock exchanges become active and thus we are able to introduce a part of the stock on the open market.

I once again would like to stress that investments are more important than returns. I am planning to reinvest all profits from this region for the near future.

CEAR: What will be the theme of Daewoo's Central European strategy after the year 2000?

Kim Woo-Choong: The present strategy of gaining price competitiveness through mass production should change. The most important factor in the 21st century automobile industry will be emissions and fuel economy. Also important will be color and design variation to meet the various needs of the customer and reducing the time it takes to get new models out. This means that R&D and marketing skills that are closely tied with the consumer will be important factors.

Daewoo already has established R&D centers in Central & Eastern Europe and has sent engineers to Daewoo's research

centers in Korea and England to receive training.

CEAR: You are known as a charismatic leader and motivator. How do you describe your leadership philosophy?

Kim Woo-Choong: The Korean people have experienced extreme poverty under the colonial era and also the Korean War. I told myself that our next generations need not go through these hardships of our past. I believe that only sacrifice makes this possible, I have worked from five to nine and not from nine to five. I have never had a holiday off and many devoted workers have understood and followed me well. I think that Poles and the people of Central European countries who have historical backgrounds similar to Korea can easily understand my thoughts.

CEAR: What are the keys to being an effective executive in today's global automotive industry?

Kim Woo-Choong: The automotive

industry in the future [will see] strong competition and active strategic alliance. This means closer relationships between

not only automobile makers but also among parts suppliers. So it will be very difficult to survive in this business with a thought of doing everything alone.

Daewoo began with just 5 employees and \$10,000 in 1967. We were able to achieve this fast growth because we made friends with our partners and pursued a common goal of mutual prosperity. Cooperation will become

even more important in the automobile industry.

CEAR: What is the essence of your business philosophy?

Kim Woo-Choong: It is my experience and my belief that if you love your job, many opportunities will open up. You have to try new things that no one has done and go places no one has gone before ■

“Daewoo's overseas investments in the near future may need adjustments, but the crisis in Asia will not affect the overall plan.”

“I am planning to reinvest all profits from this region for the near future.”

Tax, Customs Continued from Page 15

depreciation cannot exceed the one used for commercial purposes. This means that in case the company depreciates some of its assets faster for commercial than for tax purposes, these assets cannot be fully depreciated for tax because no tax depreciation can be taken at the end of the useful life when the assets have already been fully depreciated for commercial purposes.

This rule has been amended stating that when assets have been fully depreciated for commercial purposes but not yet for tax, tax depreciation can be still carried on until the assets are fully depreciated for tax as well.

Debts forgiven (1997)

Based on the 1997 rules, a company must twice increase its tax base by the amount of debts forgiven — once under the title ‘debts forgiven’ and then under the title ‘credit loss’. This unfair rule has been amended and now there remains only one increasing item — ‘debt forgiven’.

Self revision, tax audits (1997)

Due to mismatching regulations in the accounting and tax laws, findings of self revisions and of the tax audits hit the tax base twice — once as revision of the past years and then as items booked in the year of findings. This strange treatment has been modified and now the result of such findings can be reversed when calculating the tax base in the year of findings.

Other Rules of General Interest

Although these rules are not new, they must be mentioned here since the Hungarian tax inspectors have started to focus on group transactions.

Transfer Pricing

The Hungarian Tax Authorities may make transfer pricing adjustments where transactions between related parties have not been concluded at arm's length terms. The tax base has to be adjusted by the difference between the arm's length (“market”) and the contract price. The market price must be determined by one of the following methods:

- comparable uncontrolled prices,
- resale price,
- cost-plus method, or

Continued on Page 18

Manufacturer of driving shafts, steering shafts, steering gears, and spare parts seeks foreign investor.

Wieslaw Kosieradzki
PIAST
tel: 48-22-827-8700
fax: 48-22-826-7341
Poland

Manufacturer of centrifugal oil separators, heaters, water and oil coolers for cars & trucks, water pumps for vans, trucks, and ships seeks foreign investor.

Wieslaw Kosieradzki
PIAST
tel: 48-22-827-8700
fax: 48-22-826-7341
Poland

Manufacturer of fuel supply systems for car & van engines, compressors for pneumatic braking systems for cars, buses, & farm tractors, compressor units & pneumatic fittings, & spare parts for compressors seeks foreign investor.

Wieslaw Kosieradzki

PIAST
tel: 48-22-827-8700
fax: 48-22-826-7341
Poland

Manufacturer of hydraulic cylinders, up to 32 bars pressure, 25-160 piston diameter, up to 4,000 mm length, seeks Slovak Republic commercial cooperation, offers production to order.

Jorgen Varkonda, SNAZIR
re:Rerosa s.r.o.
tel: 421-7-5335-175
fax: 421-7-5335-022
Slovak Republic

Manufacturer of exhaust flanges, light welded steel constructions, agricultural machines, and hydraulic components under Sauer Co. license seeks joint venture partner.

Jorgen Varkonda
SNAZIR
re: Topolcianske Strojarne a.s.
tel: 421-7-5335-175
fax: 421-7-5335-022
Slovak Republic

Manufacturer of car & truck air and oil filters seeks joint venture partner for production, financial, and distribution cooperation. Monthly

air filter capacity for cars of 60,000, and 6,000 for trucks
Jorgen Varkonda
SNAZIR
re: Sandrik a.s.
tel: 421-7-5335-175
fax: 421-7-5335-022
Slovak Republic

Manufacturer of pressed parts for cars, press units, electric carriages, and machine tools seeks commercial or production cooperation.

Jorgen Varkonda, SNAZIR
re: BAZ a.s.
tel: 421-7-5335-175
fax: 421-7-5335-022
Slovak Republic

U.S. partner sought for Czech producer of crankshafts (various sizes up to 2500 mm lengths) for purpose of contract manufacturing. Company is supplier to producers of engines for

trucks, tractors, ships, & stationary aggregates. 1996 turnover expected to be \$20 million.

Jan Vesely, IESC
tel: 420-2-2499-3170
fax: 420-2-2499-3176
Czech Republic

Partner sought for producer of diesel injection equipment for development, production, & sale of single and multi-cylinder in-line injection pumps for all types of diesel engines, as well as for injection systems, testing, measuring, & adjustment equipment.

1995 turnover was \$40 million.
Jan Vesely, IESC
tel: 420-2-2499-3170
fax: 420-2-2499-3176
Czech Republic

Manufacturer of plastic parts for Opel, Mercedes, VW, & Suzuki seeks equity partner who is engaged in plastic processing business.

\$5 million

Csaba Kilian, ITDH
re: Pemu
tel: 36-1-118-0051
fax: 36-1-118-3732
Hungary

Supplier of seats for Suzuki cars & spare parts for Ikarus seeks purchaser. Company undergoing privatization process.

Csaba Kilian, ITDH
re: 02/Aut/96
tel: 36-1-118-0051
fax: 36-1-118-3732
Hungary

Battery manufacturer seeks joint venture partner for processing used vehicle starter batteries. \$2.1 million

Csaba Kilian, ITDH
re: Perion
tel: 36-1-118-0051
fax: 36-1-118-3732
Hungary

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- creased as required, then the business association will be required to transform itself into another corporate form which does not stipulate minimum capital requirements or which has a lower capital requirement which the existing quotaholders' or shareholders' equity already satisfies;
- the minimum capital requirement of a limited liability company will be increased to three million Hungarian forints, from its current minimum of one million Hungarian forints;
- the minimum capital requirement of a company limited by shares will be increased to 20 million Hungarian forints, from its current minimum of 10 million Hungarian forints;
- a party acquiring a majority stake in a Hungarian company will be required to offer the same price for quotas or shares to minority shareholders;
- because no minimum capital requirements are prescribed for them, the popularity of the unlimited partnership and limited partnership will likely increase;
- with respect to companies limited by shares, the new Companies Act will abolish the restriction that foreigners are only permitted to own registered shares; and
- the classes of shares will be defined more precisely and consistently, and the issuance of the preference share, employees' share and interest-bearing share, as well as the common share will be permitted.

Summary

The primary objectives of enacting the new Companies Act and Company Registration Procedures Act include the following:

- to refine currently incomplete or inadequate regulations affecting companies, leading to a streamlined

and accelerated registration procedure in the Company Register;

- to strengthen currently ineffectual legal provisions, guaranteeing greater protection of creditors' and minority shareholders' rights; and
- to harmonize definitions applied in currently existing laws governing entrepreneurial activities with other legislation dealing with securities, taxation, accounting, and bankruptcy.

Some criticisms of the proposed new corporate legislative regime that have been made include the following:

- it prescribes excessive minimum capital requirements for founding companies limited by shares and limited liability companies;
- it does not delineate sufficiently clearly between the responsibilities and liabilities of members of the Board of Directors and other senior officers; and
- it fails to adequately guarantee protection of the rights of minority shareholders ■

Exec of Year Continued from Page 12

Chairman Kim is confident. And he says the severe economic crisis Korea is currently grappling with will not change Daewoo's plans for Central Europe. (*see interview with Chairman Kim p.13*). Time will tell. The company must overcome many obstacles before it can reap the rewards of its grand strategy for the Central European auto industry.

The Central European auto industry is a remarkable market. Billions of dollars are being plowed into the auto sector and scores of the world's leading automotive companies have established strongholds throughout the region. The market is rich with talent and expertise. Dynamic executives such as Chairman Kim ensure that the future holds great promise and excitement ■

- any other method resulting in appropriate pricing.

It is understood that these rules reflect the 1995 OECD Transfer Pricing Guidelines. However, the law does not give detailed definition of the said methods or explanation on how these methods should be applied.

Thin capitalisation

The Hungarian tax laws set a debt to equity ratio of 4:1. This means that if a related party provides a loan to a Hungarian company, a certain part of the interest paid may not be deductible. This non-deductible interest is defined as interest paid on a loan exceeding four times the net equity of the recipient. Net equity is to be calculated based on the opening balance sheet and loan means the average amount of the loan outstanding.

Because taxes are complicated, the aforementioned should not be regarded as offering a complete explanation or used for decision-making. Consult a tax professional for advice on your specific situation ■

Mr. Szabo is a Senior Manager at Ernst & Young's Budapest office.

FUTURE ISSUES

**Regional Special Report:
Automotive Aftermarket**

**Poland Sales and Production
Statistics**

**5 Q's With GM's Czech Purchasing
Manager**

Slovak Car Park Analysis

Wiring Harness Review

Dacia: Beating the Odds

Czech Republic Legislative Review

from the sale of services and its own production for five years from the time a profit is declared, including the first year of profit.

In 1997, the joint venture intends to assemble 6,000 Escorts and Transits and expects to develop the capacity to produce 20,000 vehicles a year.

Kaliningrad Attracts Automakers With Incentives

Certain state support measures have been adopted to create assembly-line production of modern passenger cars in Kaliningrad Oblast. An order of the Russian Federation Government has granted enterprises engaged in implementing the project an investment tax credit of 120 billion rubles, and the introduction of \$30 million of investment credit from foreign banks has also been permitted under state guarantees.

Substantial privileges have been granted by decisions of the Kaliningrad Oblast Duma and the Kaliningrad City Duma. For legal entities taking part in this project, incentives included:

- exemption from payment of local profit taxes for three years;
- profit taxes reduced by 75% in the fourth year and by 50% from the prescribed rate in the fifth year;
- property tax exemptions for the first two years, and a 50% reduction from the prescribed rate in the following years;
- reduction of the lease payment (land tax) rate by 50%;
- cancellation of the advertising duty and retail trading right fee for the first three years, with partial reductions in the fourth and fifth year.

Uzbek/Daewoo Joint Venture

The Uzbek/Daewoo joint venture involved establishment of a plant with a designed capacity of 200,000 automobiles per year. In 1996, 24,878 automobiles were produced (of which 96.3% were sold), and the plan for 1997 was 125,000 cars.

A significant part of the funds earned by the joint venture are earmarked for a new plant in Taskent for production of some 300,000 1.5-1.8 liter engines. To a large extent, such positive results have been

achieved through the support given to the joint venture by the state, which introduced tax privileges for five years.

Decisions to Grant Privilege Come Slowly

There is a particular need for rationalization of taxation and customs policies in order to support enterprises producing automobile components. Unfortunately, implementation of decisions to grant taxation privileges proceeds with great difficulty. For example, it would appear that there are no obstacles to implementation of the "Statute on the Procedure for Applying VAT and Excise Duties on Supplies of Goods/Services in Relation to Industrial Cooperation when Payments are Made Between Economic Subjects of CIS Member States" (the "Statute").

Introduced by the CIS Inter-State Economic Committee, the Statute was approved by the Council of CIS governments in January 1997. It provides that payments for goods (work, services) supplied by the economic subjects of CIS member states in accordance with agreements concluded on the basis of inter-state industry and inter-industry production cooperation and production specialization agreements shall be made at market prices and tariffs without value added tax or excise duties.

Implementation of this Statute would have substantially influenced the reduction of prices of manufactured products, increased the ability of consumers to pay, and would have provided an incentive to inter-state parts suppliers and increased production in CIS country enterprises. But on various pretexts, the CIS member states avoided this agreement. Evidently, interested parties — automobile manufacturers and their unions — need to show greater persistence in working with state administrative bodies and demonstrate the necessity for introducing privileges.

Russia and Belarus Use Tied Credit

The following companies are taking part in a well known project for the development of diesel engine production: **AO "Yaroslavl Engine Plant," AO "Tutaev Engine Plant," Yaroslavl Fuel Equipment Plant, Yaroslavl Diesel Equipment Plant, Minsk Automobile Plant, Minsk Wheeled Tractor Plant, BelAZ, and Mogilev Automobile Plant.**

The relationships between these enterprises are defined by the conditions of tied state credit of 500 billion rubles, which is granted by the Russian Federation Government to the Government of Belarus. Belarus shall use these funds to acquire engines from the "**Russian Motors Company.**" The first tranche of credit (50 billion rubles) has already been paid, signifying the commencement of the project's implementation.

Tied credit as a means for stimulating the foreign consumer's ability to pay has had very restricted use in Russia. The success of the above project is extremely important since it shall open up new opportunities to develop automobile construction in both countries, providing new Belarus automobiles with new Russian diesel engines.

International Accounting Standards Essential To Attract Investment

Serious hopes of reviving the investment process — especially foreign investment — are tied to the introduction in 1997-1998 of accounting practices complying with international standards. This permits the balance sheets of domestic enterprises to be rendered comprehensible for foreign investors.

Presently, a great volume of documents have been published regulating the activities of foreign investors in Russia. The efficiency of this regulatory base, however, is extremely low. First, because privileges granted are insubstantial, and second, because enterprises remain non-transparent to foreign investors due to the special accounting systems used by the companies.

OA O ASM-Holding has approached state administrative bodies with a request to entrust it with the organizational work of converting Russia's automobile enterprises to meet international accounting standards, especially component manufacturers.

Credits Speed Up Investments

Automobile manufacturers are looking to state administrative bodies for more precise definition and speedy implementation of a procedure for state support of the most promising investment projects on a quota basis by granting preferential credits out of budgetary funds. Up to the present time, a large number of such

Continued on Page 22

Best Selling Brands in Poland

Ranking by Retail Volume (YTD November '97)

Passenger cars

Make	Volume	Market Share
FIAT	154,718	35.09%
DAEWOO	113,414	25.72%
GM - OPEL	41,132	9.33%
SKODA	22,121	5.02%
RENAULT	20,009	4.54%
FORD	16,323	3.70%
VW	13,562	3.08%
SEAT	11,479	2.60%
PEUGEOT	8,959	2.03%
HONDA	7,887	1.79%

Commercial Vehicles

Make	Volume	Market Share
DAEWOO MOTOR POL.	12,657	25.25%
DAEWOO	10,711	21.37%
CITROEN	5,340	10.65%
FIAT	3,461	6.90%
MERCEDES	3,441	6.86%
FORD	3,412	6.81%
SKODA	2,260	4.51%
VW	1,770	3.53%
PEUGEOT	1,714	3.42%
GM - OPEL	1,178	2.35%

Source: SAMAR, s.c.

Sales Loss Leaders in Poland (YTD November '97)

Passenger cars

Make	Units	Units '97 v '96
PF 126	45,907	-10827
FSO - Polonez	46,256	-8651
Tavrija	150	-1105
Renault Megane	10,928	-809
Renault 19	0	-757
Lada	299	-646
Hyundai Accent	748	-587
Renault Clio	1,822	-307
Citroen ZX	779	-272
Peugeot 405	13	-226

Light Commercials

Make	Units	Units '97 v '96
Fiat Cinquecento Van	1,538	-4174
FSO Polonez Truck	10,449	-2767
FSO Polonez Cargo	262	-373
Fiat Uno Van	670	-325
Ford Escort Van	118	-61
Fiat Fiorino	30	-57
Peugeot 306 XA	35	-4
Renault Clio Societe	199	-1

Medium Commercials

Make	Units	Units '97 v '96
FSC - Zuk	187	-390
Iveco Daily	36	-86
Mercedes Sprinter 2	11	-38
VW Transporter	123	-36
Fiat Ducato	89	-19
Toyota Hiace	19	-18
Renault Master	3	-8
Renault Trafic	26	-7
LDV	15	-4

Source: SAMAR s.c., Local Manufacturers and Official Importers, ACEA

Exhibitions, Conferences, and Shows in 1998

1998

Feb. 23-26	Detroit, MI SAE Int'l Congress & Exposition
Feb. 26-27	Warsaw, Poland EuroForum Central & Eastern Europe Auto Conference
Mar. 5-15	Geneva, Switzerland International Motor Show
Mar. 27-April 5	Belgrade Auto Show (unconfirmed)
April 11-19	New York, NY Int'l Auto Show
April 15-19	Tallinn, Estonia Tallinn Auto Show
April 24-May 3	Turin, Italy International Auto Show
April 25-30	Poznan, Poland Int'l Fair of Auto Industry
May 12-14	Goteburg, Sweden Vehicle Industry Suppliers and Buyers Expos
May 29-June 7	Porto, Portugal Auto Show
June 3-14	Buenos Aires, Argentina Auto Show
June 6-11	Brno, Czech Republic AutoTec

June 18-20	Beijing, China Automotive Sourcing in China
June 22-27	Kiev, Ukraine Auto Show
June 23-30	Beijing, China Auto China '98
Sept. 15-20	Frankfurt, Germany Automechanika
Sept. 27-Oct. 1	Paris, France FISITA Congress
Oct. 1-11	Paris, France Int'l Paris Motor Show
Oct. 21-Nov. 1	Birmingham, UK Int'l Motor Show
Nov. 12-15	Cairo, Egypt Cairo Motor Show
Nov. 27-Dec. 6	Essen, Germany Essen Motor Show

For more information, please contact the CEAR™. To list Contact Information for your show contact Ronald Suponcic at: Tel: +1-440-843-9658, Fax: +1-206-374-5282, or Email: cetmlc@ibm.net

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Trucks, fire-fighter trucks, car frames, power steering, clutches, cardans, car frame components.
Dagi Pal
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fax: 36-24-366-911

DAIKIN-Bakany Tengelykapcsoló Gyártó Kft.
Clutch disks and structures
Banai Balazs
tel: 36-34-311-117
fax: 36-34-311-122

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Power tools, front axles, pumps, forging machines
Dr. Kosaras Csaba
tel: 36-204-5348
fax: 36-204-4356

EAST - SOLE Kft.
Processing rubber products, glues
Kiss Istvan
tel: 36-56-477-212
fax: 36-56-450-748

ECKERLE Kft. Hungary
Manufacturing electric parts for the vehicle industry
Hunyadi Istvan
tel: 36-78-311-150
fax: 36-78-311-150

ELASTICO Kft.
Rubber spare parts, rubber profiles
Kemenesi Karoly
tel: 36-400-1614
fax: 36-400-1641

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Gulyas Bela
tel: 36-76-449-155
fax: 36-76-449-100

ELCOMETAL Kft.
Special connectors for the vehicle industry (rivets to brake linings in accordance with DIN7338B)
Horvath Czako
tel: 36-62-324-333
fax: 36-62-474-333

ELTEC Elektrotechnikai Kft.
Magnet coils, electronic units
Trauner Jozsef
tel: 36-265-0649
fax: 36-265-1207

Ex Textiel Rt.
Felt for the vehicle industry, upholstery fillings, insulation materials
Revesz Piroska
tel: 36-260-7252
fax: 36-260-7252

FAKTOR 92 Kft. MOM
Komloi Gyara
Brake cylinders, brake and clutch elements
Mate Istvan
tel: 36-72-481-517
fax: 36-72-486-259

FRIMAG Szerszamgyarto Kft.
Tools for polyurethane forming
Konkoly Tibor
tel: 36-22-407-809
fax: 36-22-407-661

GANZ KAPCSOLO-es Keszulekgyarto Kft.
Low voltage devices (refrigeration & heating controllers, stop lights, fog lamps, wipers)
B. Molnar Istvan
tel: 36-260-0873
fax: 36-261-7670

Hajdu Kalman vallalkozo
Friction linings, clutches, brake pads
Hajdu Zsolt
tel: 36-334-2997
fax: 36-334-2997

HAJDU
Heating technology, motor driven household appliances, plate forming and injection molding tools
Kubinyi Sandor
tel: 36-52-384-006
fax: 36-52-384-706

HFAL Alkatreszgyarto Kereskedelmi Szolgaltato Kft.
Manufacturing brake air conduits, hoses for hydraulics and dynamometers
Horvath Jozsef
tel: 36-27-341-442
fax: 36-27-341-442

IKARUS FONIX Kft.
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tel: 36-66-371-441
fax: 36-66-371-656

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Passengers car seats, upholstery, cable strands, seats to coaches and railway cars, cable strands
Lakatos Rudolf
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fax: 36-22-407-806

IKARUS Prestechnika Kft.
Bodies, body elements, pressed steelplate products
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fax: 36-403-7458

IKARUS Szegedi Alkatreszgyarto Kft.
Coach parts: doors, ventilating panels, defrosters, accordions, hand strap systems, mirrors
Telihay Laszlo
tel: 36-62-324-088
fax: 36-62-324-449

INA Gordulocsapagy Kft.
Rotation and linear - ball bearings, rolling contact bearings and frictional bearings
Racz Jozsef
tel: 36-175-9098
fax: 36-156-7135

Individual Alarm Systems
Alarm systems, immobilisers, modules for comfort features
Bartha Lorant
tel: 36-131-1455
fax: 36-131-1455

Industry Gepgyarto Kft.
Welded and cut elements
Horvath Laszlo
tel: 36-52-223-245
fax: 36-52-372-500

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Cup-and-ball joints, air-valves, parts for implements and machines
Koronczi Laszlo
tel: 36-92-384-263
fax: 36-92-384-263

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Felegyhazi Szilvia
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tel: 36-313-0292
fax: 36-113-6090

Kozlekedesi Muszergyarto Rt.
Manufacturing and repairing measuring instruments for vehicles, retailing car parts, R&D
Bauer Dezso
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fax: 36-129-1653

KUNPLAST Muszaki Muanyagipari Rt.
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fax: 36-76-462-991

KVJ Muvek Rt.
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Kiss V. Jenő
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fax: 36-25-259-442

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fax: 36-22-350-625

MECHANIKAI MUVEK RT.
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fax: 36-227-3801

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New Product Review

Corrosion Inhibiting Packaging Benefits Suppliers

Corrosion is the bane of any metal products producer, especially makers and users of sophisticated automotive components. The traditional methods and materials for protecting parts and components, such as the use of greases and oils, are not particularly well suited for today's just-in-time auto industry. Special equipment and an expenditure of time and labor are necessary when these protective materials are used.

Modern packaging material technology offers an alternative to these traditional methods. Packaging treated with volatile corrosion inhibitors (VCIs) provides a dry, non-corrosive environment for parts and components and is easy to use.

How Does It Work?

Corrosion is initiated when moisture (electrolyte) is present on the surface of metal. When an electrolyte forms, electrons flow through the electrolyte from high energy areas of the metal (cathode) to low energy areas (anode)

and back. This corrosive effect of electrolytes can be negated by VCIs.

Some VCI packaging products contain certain proprietary chemical systems which emit a nontoxic vapor that is diffused throughout the packaging's enclosed space. VCI molecules condense in a microscopic layer on all surfaces they can reach.

So long as the metal product remains in the package, the corrosion inhibiting layer is maintained. When the product is removed, the VCI layer volatilizes from the product surface, leaving a clean, dry, and corrosion-free product.

Advantages for Auto Companies

The advantage of such technology for automotive companies is obvious. The sender or receiver of metal parts packaged in VCI treated materials doesn't need any special equipment to remove the protective film — once the product is removed from the packaging, the VCI layer automatically removes itself. Parts

arrive ready for immediate use.

The VCI technology is quite versatile and can be applied to a number of different packaging forms, such as shrink and stretch film, bags, skin packaging film and treated board, vapor capsules, bubble cushioning, injection and blow molded products, and pipe and tube strips.

Northern Technologies International Corp. (NTI) of Lino Lakes, Minnesota manufactures such packaging materials under the name of Zerust. Through a network of international joint ventures, including one in Russia, the company makes its Zerust products as close as possible to customers.

NTI has developed one VCI technology that is especially useful for auto manufacturers. The company's Zerust Multimetal systems bring the advantages of dry VCI protection to assemblages of mixed metal components, such as CKD shipments of galvanized clad automotive body parts and gas and diesel engines and components ■

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Russia Continued from Page 19

projects have undergone expert examination by Russia's Ministry of Economics and have been deemed efficient. Auto parts projects under this program include:

- Organization of the production of 16-valve engines at the **Zavolzshkiy Engine Plant**;
- Creation of new types of electrical equipment (AO "Tarasov Plant," Samara);
- Creation of facilities to produce a multi-functional compact generator (AO "ATE-1," Moscow);
- Organization of production of fuel injection electric petrol pumps (**Tyumen Plant ATE**);
- Creation of compact generators and electronic locking systems for car doors (AO "ATE-2," Moscow);
- Development and organization of fuel equipment with increased injection power for bus and auto diesel engines ("YAZTA," Yaroslavl);
- Organization of production of a series

of 2-3 liter diesel engines jointly with the company "Shtaier" (AO "GAZ," Nizhny Novgorod);

- Development of lighting equipment production for automobiles (AO "OSVAR," Vyazniki);
- Creation and production of fuel injection systems (AO "PEKAR," St. Petersburg)

However, decisions on the actual allocation of preferential credit funds from the budget to implement these projects have been deferred for the time being due to a severe deficit in these funds.

More Solutions Needed For Problems

Problems which have not yet found a solution in Russia and other CIS countries include:

- Development and organization of production of modern petrol and diesel engines and anti-locking units for pneumatic and hydraulic braking

systems;

- Creation of highly efficient ignition systems for vehicles that use natural gas as a fuel;
- Creation of exhaust gas neutralizers without using precious metals;
- Development and organization of production of driving wheel hydraulic servo-control units for passenger cars, automatic gearboxes for trucks and cars, control systems micro-processors

Note:

OAO ASM-Holding, jointly with a range of scientific organizations and by commission of the Russian government, is preparing a strategy for developing Russian automobile construction, which involves interaction of state administrative bodies, direct producers of auto equipment, and investors (including foreign investors), for the purpose of ensuring a sharp rise in the standard of domestic automobile construction over the next few years ■

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Hungarian Technical College Wants to Cooperate

Company Spotlight

Company: Szechenyi Istvan College
Location: Győr, Hungary
Contact: Dr. Vince Nagy
Business: R&D/Technical Assistance

Szechenyi Istvan College in Győr is eager to be a part of the auto sector boom in Central Europe. "We're waiting for companies to come to the college and cooperate with us," said Dr. Vince Nagy, head of the college's Automotive and Railway Engineering Department ("ARED"). According to Dr. Nagy, his department can provide automotive companies with research and development services, technical advice, and quality management assistance.

The department focuses on four main areas of expertise:

- Combustion engines
- Vehicle structures and dynamics
- Vehicle electronics
- Vehicle repair and maintenance

During each semester, the department has about 100 students for automotive engineering, 25 student technical teachers, 30 technical manager students, and about 20 mechanical engineers. Some 20-30% of the students are involved in a sponsoring program which allows them to work on special R&D projects.

The department recently worked with Audi to develop a continuously variable valve timing system, and helped Audi Hungary analyze and develop a solution for black marks left on the Audi production floor by work vehicles. In the area of vehicle structure and dynamics, the department analyzed the effect of speed bumps on cars.

R&D Focus on Suppliers

Although the department has good contacts with the big vehicle manufacturers and has worked with Audi, it has encountered trouble breaking into R&D projects with the manufacturers. "We

find it a difficult area," said Nagy. "Opel or Audi, for example, have their own R&D in Germany or the US." Thus, the department is focused on suppliers. "We've found that the suppliers are the best to get involved with," he said.

Help for Suppliers to Understand OEM Requirements

In addition to R&D, the department can help suppliers understand the qualifying systems used by the main vehicle manufacturers. "Renault, Suzuki, and Opel have quite different requirements for suppliers," said Nagy. "We can share our information [about those requirements] with the suppliers and help them meet those requirements."

Service & Maintenance Assistance

The department is also targeting the service and maintenance side of the auto sector. "We think this is an important field to get involved in," said Nagy. "We can help new dealers and service stations who don't have experience in car maintenance and service." According to Nagy, students could help dealers and maintenance companies understand new technologies used in the latest models, such as new engine, transmission, or electronic control system technology.

Analysis for Cable Cover Producer

The department is currently analyzing the market for car cable covers in Hungary. According to Nagy, car cable producers in Hungary presently use French-made tubes to protect the cables. A Hungarian manufacturer who wants to start producing such tubes has asked the department to determine whether a large enough market for the tubes exists in Hungary. This research is ongoing.

ISO Qualifying Systems Developed for Busmaker Ikarus

The department produced an ISO

qualifying management system for 170 buses produced by the Hungarian busmaker Ikarus. "We applied the ISO 9000 standards and qualified the planning, development, production, materials, and suppliers," said Nagy.

Other Projects Completed by ARED:

- Developed service and diagnostic system for an electric motor test bench
- Developed maintenance systems for Hungarian bus companies
- Stress analyses of vehicle structures
- Developed computer simulation program to analyze power steering and other hydraulic equipment in cars
- Introduction of a computer managing system for a railway carriage producer
- Analyses of car and truck engine lubrication oils
- Measurement and analysis of car and truck brake systems and antilock systems

Student Internships With Vehicle Manufacturers

An important part of the educational experience for automotive engineering students is to work at vehicle companies as interns for 3-5 months. A few students have trained at the Dutch DAF company for three months, and Dutch students came to Hungary to receive training.

"This is important for our students," said Nagy. "And we see it as very important for the companies because they obtain information about our education. After such experiences they can have an influence on the education — it's important for us to know what kinds of experts and engineers they need." ■

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Fastest Sales Climbers in Poland

Passenger cars			Light Commercial			Medium Commercial		
Make	Units	Units '97 v '96	Make	Units	Units '97 v '96	Make	Units	Units '97 v '96
Daewoo Tico	37,048	26287	Skoda Pick up	2,260	1895	FSC - Lublin	10,252	3845
Skoda Felicia	22,121	8283	Citroen C15	3,767	967	Mercedes Vito	2,539	2379
Opel Astra	20,469	6578	Citroen Berlingo	930	930	Ford Transit	2,848	1372
Fiat Siena	6,500	6500	Peugeot Partner	950	811	Peugeot Boxer	694	528
Opel Corsa	14,092	6208	GM Opel Cmb. 1,	1,178	355	Fiat Ducato	1,223	476
Daew. Lanos	4,417	4417	Ford Courier Vn	446	269	Merc. Sprinter 3	801	239
VW Polo	9,946	4060	Renault Express	356	139	Citroen Jumper	608	232
Fiat Brava	7,241	3711	VW Caddy	385	120	Hyundai H100 P/V	350	221
Seat Cordoba	6,985	3679	Seat Inca	156	76	Toyota Dyna	190	188
Citroen Saxo	3,517	3517	Toyota Hilux	133	55	VW LT	189	157

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Top 10 Best Selling Cars & Commercial Vehicles in Poland (YTD November '97)

Passenger cars			Light Commercial			Medium Commercial		
Make	Units	% Change '97 v '96	Make	Units	% Change '97 v '96	Make	Units	% Change '97 v '96
Fiat Cinq.	51,658	6.96	FSO Polonez Truck	10,449	-20.94	FSC - Lublin	10,252	60.01
FSO - Polonez	46,256	-15.76	Citroen C15	3,767	34.54	Ford Transit	2,848	92.95
PF 126	45,907	-19.08	Skoda Pick up	2,260	519.18	Mercedes Vito	2,539	1486.88
Daewoo Tico	37,048	244.28	Fiat Cinquecento Van	1,538	-73.07	FSC - Zuk	2,405	-47.07
Skoda Felicia	22,121	59.86	GM - Opel Combo	1,178	43.13	Fiat Ducato	1,223	63.72
Fiat Uno	21,195	8.18	Peugeot Partner	950	583.45	VW Transporter	1,196	10.84
Opel Astra	20,469	47.35	Citroen Berlingo	930	100.00	Mercedes Sprinter 3	801	42.53
Fiat Punto	16,634	0.96	Fiat Uno Van	670	-32.66	Kia Ceres	769	11.94
Daewoo Nexia	16,253	-11.63	Ford Courier Van	446	151.98	Iveco Daily	746	-1.32
Opel Corsa	14,092	78.74	VW Caddy	385	45.28	Peugeot Boxer	694	318.07

Source: SAMAR, s.c.

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New Car Registrations Growth in Europe (YTD Nov. '97)

Country	1997	1996	% Change
Italy**	2,282,700	1,623,800	40.58
Poland*	440,916	349,632	26.11
Sweden	205,600	166,200	23.71
Greece**	148,900	131,800	12.97
Ireland**	129,100	114,300	12.95
Spain**	916,300	824,600	11.12
Finland	99,200	91,700	8.18
U.K.	2,086,100	1,947,300	7.13
Denmark**	142,100	133,500	6.44
Luxembourg	29,700	28,600	3.85
Netherlands**	467,000	462,600	0.95
Norway	117,600	117,300	0.26
Germany**	3,267,500	3,263,300	0.13
Switzerland**	256,800	256,700	0.04
Belgium	376,700	380,000	-0.87
Portugal**	192,900	197,800	-2.48
Austria**	264,800	296,200	-10.60
France	1,557,400	1,987,700	-21.65

*Grey import not included

** Provisional Figures

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Sales of New Cars and Commercial Vehicles in Poland (YTD November '97)

	Sales (Units)					Ytd November		
	1992	1993	1994	1995	1996	1997	1996	% Change
Passenger Cars								
Local								
Production	144,748	170,549	199,724	206,284	260,265	306,384	239,923	27.70
Import	54,531	71,059	50,558	58,754	114,347	134,532	109,709	22.63
Total	199,279	241,608	250,282	265,038	374,612	440,916	349,632	26.11
Commercial Vehicles								
Local								
Production	19,665	18,475	21,413	27,984	43,015	39,203	37,838	3.61
Import	3,250	5,497	2,542	3,962	7,775	10,925	6,686	63.40
Total	22,915	23,972	23,955	31,946	50,790	50,128	44,524	12.59

Source: SAMAR, s.c.